THIS FILM MAY NOT BE USED TO REPRODUCE ADDITIONAL FILM COPIES

Use of this film in reproduction is limited to individual page reprints when occasional demands require paper copies for use and study.

Micro Photo Inc.

OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 204 - 205

JULY - AUGUST

1914

MICRO PHOTO INC. MP
CLEVELAND, OHIO

OFFICIAL GAZETTE

BANGOR PUBLIC
OCT 2 1914
LIBRARY

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CCIV.

JULY,

1914.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1914.

ERRATA.

1,103,048, page 334, first claim, line 6, after the word "and" insert the word *means*.

1,103,196, page 388, fifth claim, line 8, after the word "substantially" strike out the word "in."

1,104,087, page 736, fourth claim, line 5, strike out the word "and" and insert a comma and the words *means for*.

1,104,149, page 756, in heading, after residence of patentees, insert *assignors to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany, a Corporation of Germany*.

1,104,367, page 831, first claim, line 2, for the word "detaining," read *retaining*.

1,104,938, page 1079, second claim, line 4, for the word "and" read *with*.

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, July 7, 14, 21, 28	3, 325, 681, 1017
TRADE-MARKS PUBLISHED AND REGISTERED, July 7, 14, 21, 28	291, 651, 985, 1323
LABELS AND PRINTS REGISTERED, July 7, 14, 21, 28	317, 673, 1343
DECISIONS OF THE COMMISSIONER OF PATENTS, July 7, 14, 21, 28	319, 675, 1011, 1345
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1349
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	1

ANNOUNCEMENTS.

	Page.
ADVERSE DECISIONS IN INTERFERENCE—	
Bilyeu and Overlin, No. 985,136	322
Gaumont, No. 1,074,943	679
Hendrickson, No. 1,050,828	679
Ingram, No. 705,409	1015
Warth, No. 894,170	1015
Wolfe, No. 698,614	1015
APPLICATIONS—	
Condition of pending	2, 324, 680, 1016
COURT OF APPEALS OF THE DISTRICT OF COLUMBIA—	
Citation of decisions	678
DISCLAIMERS—	
Hoke, Harry A., and Clarence J. Barley	1014
Schlödt, Frederik Vilhelm	1014
DRAWINGS—	
Correction of—Rule 72	323
Instructions relative to preparation and mailing	1
INTERFERENCE NOTICES—	
Carlton's Blended Tea Company	322, 678
Criterion Publication Co., The	1348
Hibbs, Joseph G., Jr	678, 1014, 1348
Leib Lubricating Company	322, 678, 1014
INTERNATIONAL CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY—	
Convention of the Union of Paris	1011
OFFICIAL GAZETTE—	
Subscription price of	323
PATENTS—	
List of adjudicated	322, 1014, 1348
UNITED STATES PATENT OFFICE—	
Branch for Panama-Pacific Exposition	679, 1015

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 204—No. 1. TUESDAY, JULY 7, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 7, 1914	1
DRAWINGS	1
APPLICATIONS UNDER EXAMINATION	2
PATENTS GRANTED	3
REISSUES	276
DESIGNS	282
TRADE-MARKS—REGISTRATION APPLIED FOR	291
TRADE-MARK REGISTRATIONS GRANTED	309
TRADE-MARK REGISTRATIONS RENEWED	316
LABELS	317
PRINTS	318
COMMISSIONER'S DECISIONS—	
Rusby v. Cross	319
DECISIONS OF THE U. S. COURTS—	
Sutton, Steele, and Steele v. Wentworth	320
Cross v. Rusby	321
ADJUDICATED PATENTS	322
ADVERSE DECISIONS IN INTERFERENCE	322
INTERFERENCE NOTICES	322

ISSUE OF JULY 7, 1914.

Patents	792—No.	1,102,227 to No.	1,103,018, inclusive.
Designs	41—No.	46,040 to No.	46,080, inclusive.
Trade-Marks	238—No.	98,111 to No.	98,348, inclusive.
Labels	22—No.	17,816 to No.	17,837, inclusive.
Prints	18—No.	3,654 to No.	3,671, inclusive.
Reissues	6—No.	13,763 to No.	13,768, inclusive.
Total	1117		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	North Carolina	4	6
Arizona	2	1	North Dakota	3	.....
Arkansas	1	.....	Ohio	48	30
California	38	3	Oklahoma	5	1
Colorado	4	1	Oregon	12	2
Connecticut	24	3	Pennsylvania	65	16
Delaware	6	.....	Rhode Island	8	4
Florida	2	1	South Carolina	1	1
Georgia	5	4	South Dakota	3	1
Idaho	1	.....	Tennessee	7	4
Illinois	72	21	Texas	7	7
Indiana	25	2	Utah	2	1
Iowa	15	2	Vermont	.....	.....
Kansas	10	3	Virginia	6	4
Kentucky	3	2	Washington	5	3
Louisiana	4	3	West Virginia	6	.....
Maine	1	2	Wisconsin	22	3
Maryland	6	5	Wyoming	1	.....
Massachusetts	42	10			
Michigan	25	5	Alaska, District of	.....	.....
Minnesota	11	1	Canal Zone	.....	.....
Mississippi	4	2	District of Columbia	5	3
Missouri	14	8	Hawaii Territory	.....	.....
Montana	1	1	Philippine Islands	.....	1
Nebraska	7	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	5	1	U. S. Navy	.....	.....
New Jersey	34	18			
New Mexico	.....	1	Total to residents of the United States	832	251
New York	140	62			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	1	.....
Austria-Hungary	1	1	Newfoundland	.....	.....
Belgium	1	.....	New South Wales	2	.....
British India	.....	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	9	1	Queensland	.....	.....
Colombia	.....	1	Roumania	.....	.....
Cuba	.....	.....	Russia	1	.....
Denmark	1	.....	Scotland	2	.....
Dominican Republic	.....	.....	South Australia	.....	.....
Dutch East India	.....	.....	Spain	1	.....
England	38	3	Sweden	2	.....
France	16	.....	Switzerland	2	2
Germany	33	16	Tasmania	1	.....
Greece	.....	.....	Transvaal, South Africa	1	.....
Guatemala	.....	.....	Victoria	1	.....
Ireland	2	.....			
Italy	.....	1	Total to residents of foreign countries	117	25
Japan	.....	.....			
Mexico	1	.....			

Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorization from the applicant is filed in connection with the application. This signature must also be attested by two witnesses, each of whom should sign the drawing at the lower left-hand corner of the sheet. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 3, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 1	May 18	571
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Mar. 18	June 15	393
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	June 29	July 1	43
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Jan. 28	June 3	697
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 18	June 1	397
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 10	May 25	680
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Apr. 9	June 1	513
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 14	June 8	1069
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 25	May 29	544
235	10. Carriages and Wagons	Feb. 24	June 1	890
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 23	May 29	270
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 27	May 11	983
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 4	June 4	463
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb 27	June 5	515
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 4	June 1	963
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Feb. 21	May 12	728
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 26	May 21	189
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	May 11	May 27	230
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 11	May 22	315

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 9	May 22	365
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 27	May 16	416
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 1	June 1	245
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 11	May 9	419
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 1	June 9	508
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 28	June 2	291
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 1	835
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 25	June 1	453
65	28. Internal-Combustion Engines	Feb. 21	June 4	646
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	May 19	May 26	474
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 17	June 20	317
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 4	May 21	307
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 6	618
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 6	June 1	365
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 1	286
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Apr. 22	June 4	651
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	May 27	May 26	571
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 30	May 29	707
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 2	June 2	706
321	39. Water Distribution	Mar. 2	June 1	498
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 28	May 26	1100
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 26	June 4	495
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Mar. 16	June 5	385
282	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 3	334

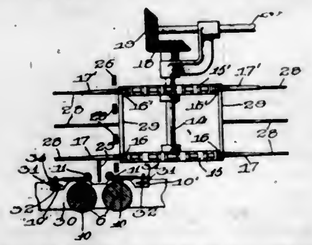
Oldest new case, Sept. 15; oldest amended, May 1.
Total number of applications awaiting action..... 22,445

Room No.				
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 13	May 14	1072
	Designs	May 25	May 6	269
	Labels and Prints	June 20	June 19	60

PATENTS

GRANTED JULY 7, 1914.

1,102,227. CORN-HARVESTING MACHINE. WILLIAM SEWARD BAIRD, Chicago, Ill., assignor to Baird Corn Husker Co., a Corporation of South Dakota. Filed Jan. 30, 1908. Serial No. 413,348. (Cl. 56—113.)



1. In a corn harvesting machine, a pair of substantially parallel rolls suitably spaced from each other, in combination with a bar positioned above, and in proximity to each roll and extending substantially parallel thereto, brackets for the bars, a downwardly projecting lug on each bar, an adjustable connection between said lug and the bracket, a lug on the bracket and an adjustable member carried by said lug and adapted to engage the bar.

2. In a corn harvesting machine, a pair of substantially parallel rolls suitably spaced from each other, in combination with means arranged above the space between the rolls and arranged to move longitudinally thereof to prevent the lodgment of material in said space, said means including a series of vertically extending fingers.

3. In a corn harvesting machine, a pair of substantially parallel rolls, suitably spaced from each other, a bar positioned above and in proximity to each roll and extending substantially parallel thereto, said bars being arranged in substantially the same horizontal plane and constructed and arranged to coöperate with said rolls to snap the ears from the stalks, in combination with a carrying member having spaced teeth overlying the inner edge of each bar and having vertical projections extending into the space between the bars and means for moving the carrying member longitudinally of the bars.

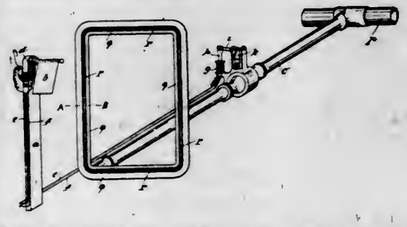
4. In a corn harvesting machine a pair of substantially parallel rolls suitably spaced from each other, in combination with a carrier extending substantially parallel to said rolls, and vertically extending means rigidly attached to said carrier, arranged above the space between the rolls and arranged to move longitudinally thereof to prevent the lodgment of material in said space.

5. In a corn harvesting machine, a pair of substantially parallel rolls suitably spaced from each other, in combination with a carrier extending substantially parallel to said rolls, a plurality of teeth rigidly attached to said carrier and adapted to bridge the space between said rolls, means mounted upon one or more of said teeth being in vertical registration with said space, and means for operating said carrier to move said teeth longitudinally of said space to prevent the lodgment of material in the space.

[Claims 6 to 28 not printed in the Gazette.]

1,102,228. APPARATUS FOR LOCALIZING THE EFFECT OF MINE EXPLOSIONS. JOHN FORDYCE BALFOUR, Edinburgh, Scotland. Filed July 5, 1912. Serial No. 707,795. (Cl. 37—51.)

1. Apparatus for localizing the effects of explosions in mines, comprising a primary operating device mounted in a locality where explosions are liable to occur and adapted to be set in motion by a sudden change of air-pressure, a system of water discharge pipes surrounding a section of a gallery situated at a distance from the primary apparatus and provided with narrow water-outlets directed toward the center of the gallery, a water-supply pipe communicating with the said water discharge-pipes, a valve interposed between the said water supply-pipe and water-discharge-pipes, and means adapted to operate the said valve under the influence of the said primary device, substantially as described.



2. In apparatus for localizing the effects of mine-explosions, the combination of a primary operating device mounted in a locality where explosions are liable to occur and adapted to be set in motion by a sudden change of pressure in the said locality, with a system of water discharge-pipes surrounding a section of a gallery at a distance from the same, and having slits arranged so as to project sheets of water toward the center of the gallery in the direction of the said primary device, a water-supply pipe communicating with the said water discharge pipes, a valve interposed between the water supply pipe and the water discharge pipes, and means for operating the said valve under the influence of the said primary device, substantially as described.

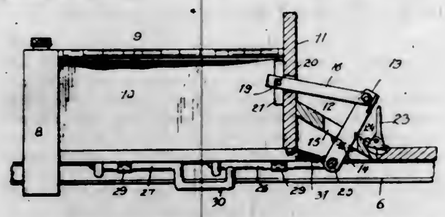
3. In apparatus for localizing the effects of mine explosions, the combination of a system of water discharge pipes surrounding a section of gallery and having narrow outlets directed toward the center of the gallery, with a water supply pipe communicating with the said discharge-pipes, a valve interposed between the water-supply-pipe and the discharge pipes, a spring adapted to open the said valve, a locking device adapted to act on the said spring so as to keep the valve in the closing position, and an electro-magnet adapted to set the said locking device out of action, substantially as described.

4. In apparatus for localizing the effects of explosions in mines by means of a primary operating device mounted in a locality where explosions are liable to occur and adapted to be set in motion by a sudden change of air pressure, a primary operating device consisting of a pair of flap-doors, mounted opposite each other in lateral recesses of a gallery, each flap-door having a pair of wings placed at an angle to each other and adapted to turn on a vertical axis at the side of the gallery, one wing being movable in a recess of the gallery under the influence of gas-pressure, and the other wing being adapted to close the adjacent half of the gallery, substantially as described.

1,102,229. LOCK FOR ENGINE-HOODS. WILLIAM BALLOU, Bellingham, Minn. Filed Mar. 21, 1913. Serial No. 755,994. (Cl. 21—90.)

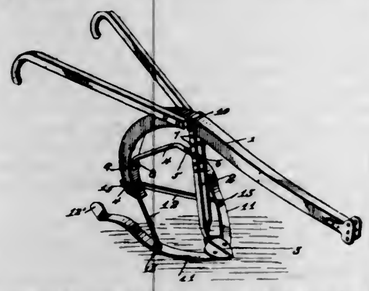
1. The combination with a motor vehicle, including an engine hood, of eye-bolts depending from said hood

through slots formed in the frame of the vehicle, sliding fasteners positioned under said frame and adapted to extend through the eye-bolts, a foot lever pivoted intermediate its ends to the foot-board of the vehicle, means connecting said lever with the sliding fasteners, spring means for holding said fasteners normally in their operative positions, and means for locking the foot lever against movement.



2. The combination with a motor vehicle, including an engine hood, of eye-bolts depending from said hood through slots formed in the frame of the vehicle, sliding fasteners positioned under said frame and adapted to extend through the eye-bolts, a foot lever pivoted intermediate its ends to the foot-board of the vehicle, means connecting said lever with the sliding fasteners, spring means for holding said fasteners normally in their operative position, a lock bar connected at one end to the foot lever and projecting into said hood, and key actuated means for engagement with said lock bar whereby the same is held against movement.

1,102,230. PULVERIZER. CHARLES A. BATES, Vernon Hill, Va. Filed Aug. 15, 1913. Serial No. 784,985. (Cl. 97—9.)

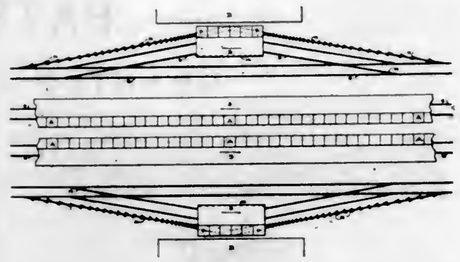


1. A pulverizer comprising a standard, means for bracing said standard, said standard provided with a forwardly extending end, a plurality of pulverizing blades pivotally secured to said forwardly extending end, said blades provided with inwardly turned shoes at their rear ends and adapted to pack the earth over the hills formed in the field, and rearwardly extending braces secured to said pulverizing blades for holding the same in a set position.

2. A pulverizer comprising a standard provided with a plurality of parallel arms, said arms provided with a plurality of apertures formed thereon, said standard provided with a forwardly extending end, a brace engaging said standard and provided with a plurality of apertures, means passing through said apertures in said brace and standard for holding said brace in an adjusted position, a plurality of pulverizing blades secured to said head and having upwardly bowed portions near the center thereof, said blades provided with inwardly extending twisted rear ends, and inwardly extending braces engaging said pulverizing blades.

1,102,231. RAILWAY SYSTEM. ALEXANDER L. W. BEGG, New York, N. Y. Filed Sept. 3, 1912. Serial No. 718,272. (Cl. 104—205.)

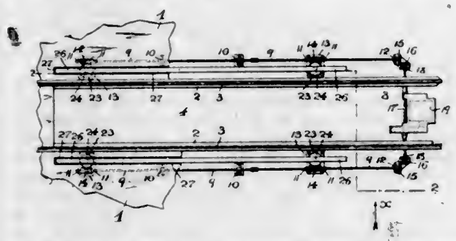
1. In a device of the character described, in combination, a traveling passenger carrier, a landing, a rotatable screw provided with threads of varying pitch, and means actuated by said screw for transporting passengers between said carrier and said landing.



2. In a device of the character described, in combination, a traveling passenger carrier, a landing, an auxiliary passenger carrier for conveying passengers between said landing and said traveling carrier, and a rotatable screw provided with threads of varying pitch operatively connected to said auxiliary carrier to actuate the same.

3. In a device of the character described, in combination, a traveling passenger carrier, a landing, an auxiliary passenger carrier for conveying passengers between said landing and said traveling carrier, and a rotatable screw provided with threads of varying pitch operatively connected to said auxiliary carrier to actuate the same, the pitch of said threads increasing as their distance from the landing increases.

1,102,232. CAR-HOIST. HERSCHEL A. BENEDICT, East Orange, N. J. Filed Mar. 26, 1914. Serial No. 827,488. (Cl. 104—64.)

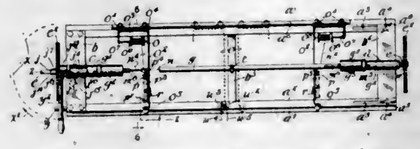


1. In a car-hoist, the combination with a foundation provided with a pit and chambers in communication with said pit, said foundation being also provided with beam-receiving channels, and railway rails, of I-beams normally located in said channels, and means in engagement with said I-beams, for raising and lowering said beams.

2. In a car-hoist, the combination with a foundation provided with a pit and chambers in communication with said pit, said foundation being also provided with beam-receiving channels, and railway rails, of I-beams normally located in said channels, guide-members connected with said foundation, screw-threaded rods guided in said guide-members, said I-beams being mounted upon said screw-threaded rods, vertical tubular receiving members into which the lower portions of said screw-threaded rods extend, a worm-wheel connected with each rod for raising and lowering said rods, a worm in engagement with each worm-wheel, and means for actuating said worms.

3. In a car-hoist, the combination with a foundation provided with a pit and chambers in communication with said pit, said foundation being also provided with beam-receiving channels, and railway rails, of I-beams normally located in said channels, guide-members connected with said foundation, screw-threaded rods guided in said guide-members, said I-beams being mounted upon said screw-threaded rods, vertical tubular receiving members into which the lower portions of the said screw-threaded rods extend, a worm-wheel connected with each rod for raising and lowering said rods, a worm in engagement with each worm-wheel, longitudinally extending shafts upon which said worms are mounted, said shafts being mounted in bearings in the chamber to either side of the pit, a laterally extending shaft, intermeshing bevel-gears upon said longitudinally extending shafts and said laterally extending shaft, and means for driving said laterally extending shaft.

1,102,233. MACHINE FOR MAKING WIRE STRINGS FOR PIANOS AND OTHER MUSICAL INSTRUMENTS. LOUIS BIAVA, New York, N. Y., assignor to National Musical String Company, New Brunswick, N. J., a Corporation of New Jersey. Filed May 31, 1913. Serial No. 770,850. (Cl. 28—6.)



1. In a machine for making wound wire strings for musical instruments, a main frame, a shaft mounted centrally and longitudinally thereover and provided at its opposite ends with cross heads having bearings in which are mounted rotatable spindles provided at their inner ends with hooks, spool carrying frames mounted on the main frame and movable toward and from the center thereof, tension devices connected with said spool carrying frames, and a wire holder mounted centrally of said shaft.

2. In a machine for making wound wire strings for musical instruments, a main frame, a shaft mounted centrally and longitudinally thereover and provided at its opposite ends with cross heads having bearings in which are mounted rotatable spindles provided at their inner ends with hooks, spool carrying frames mounted on the main frame and movable toward and from the center thereof, tension devices connected with said spool carrying frames, a wire holder mounted centrally of said shaft, means for turning said shaft and means for turning the spindles in said cross heads.

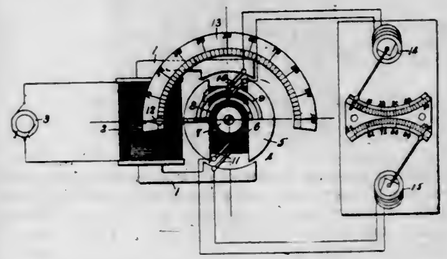
3. In a machine for making wire wound springs for musical instruments, a main frame having cross end portions one of which is adjustable toward and from the other, a shaft mounted over said frame and longitudinally thereof and provided at its opposite ends with cross heads having bearings in which are mounted rotatable spindles provided at their inner ends with hooks, spool carrying frames mounted on the main frame and movable toward and from the center thereof, tension devices connected with said spool carrying frames, a wire guide or holder mounted centrally of said shaft, means for turning said shaft, and means for turning the spindles in said cross heads, one of said cross heads and the wire guide or holder being adjustable longitudinally of said shaft.

4. In a machine for making wound wire strings for musical instruments, a main frame provided at its opposite ends with vertical stationary supports having longitudinal sleeve bearings arranged one above another, a shaft mounted in two of said bearings, rotatable spindles mounted in the bottom sleeve bearings, and means for rotating said spindles, said shaft being also provided between the bearings in which it is mounted with cross heads provided in their opposite ends with rotatable spindles having inwardly directed hooks, means whereby said spindles may be engaged by the spindles in the stationary supports, the spindles in one of the cross heads connected with said shaft being longitudinally movable and being provided with springs whereby they are normally held at the limit of their outward movement, and means for forcing said spindles inwardly in different positions of said shaft.

5. A machine of the class described, provided with a shaft, means for turning said shaft through half a revolution, cross heads connected with the opposite end portions of said shaft, and rotatable spindles mounted in the opposite end portions of said cross heads and provided at their inner ends with wire holding hooks having laterally directed supplemental wire attaching means, the spindles in one of said cross heads being provided with springs whereby they are normally held at the limit of their outward movement, and means for forcing said spindles inwardly in different positions of said shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,102,234. ELECTROMAGNETIC TELEGRAPH. DONALD M. BLISS, Stamford, Conn., assignor of two-fifths to Charles J. Henschel, New York, N. Y., and one-fifth to Frank W. Wood, Brooklyn, N. Y. Filed July 2, 1909. Serial No. 505,776. (Cl. 177—337.)



1. An electro-magnetic telegraph comprising an armature in an alternating magnetic field, means for moving the armature to any one of a number of positions in said field, two independent current collecting devices in successive operative relation to said armature, and an indicating instrument connected to each of said collecting devices.

2. An electro-magnetic telegraph comprising an armature in an alternating magnetic field, means for moving the armature to any one of a number of positions in said field, two indicating instruments, and means for successively passing current induced in said armature through both instruments.

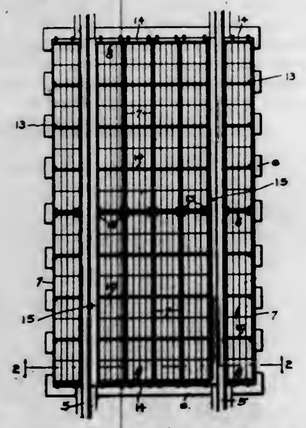
3. An electro-magnetic telegraph comprising an armature in an alternating magnetic field, means for moving the armature to any one of a plurality of positions in said field, two indicating instruments, and current collecting devices which pass current from said armature first through one indicating instrument and then through the other.

4. An electro-magnetic telegraph, comprising mechanism for producing an alternating field, a rotatable armature located within said field, means for turning said armature to any one of a number of angular positions in said field, a pair of separate sets of collecting devices associated with said armature and so positioned as to be brought successively into electrical communication therewith as said armature is thus turned, and a pair of indicating instruments each connected with one set only of said collecting devices so that said instruments are energized one after the other as said armature is turned, one of said instruments being calibrated to indicate a certain range of angular positions of said armature, and the other indicating instrument being calibrated to indicate another range thereof, said last mentioned range being practically a continuation of said first mentioned range.

5. In an electro-magnetic telegraph, an armature rotatable in an alternating magnetic field, means for moving the armature to any one of a number of positions in said field, current collecting devices in operative relation to said armature and comprising a pair of movable contacts and two pairs of fixed contacts angularly spaced apart with respect to the center of rotation of said armature, two indicators, and means connecting each indicator to a pair of fixed contacts.

[Claims 6 to 12 not printed in the Gazette.]

1,102,235. ADJUSTABLE SECTIONAL RAILROAD-CROSSING. JAMES W. BREES and OSCAR L. HUPP, Indianapolis, Ind. Filed Apr. 23, 1914. Serial No. 833,923. (Cl. 104—14.)



1. In a crossing for railways, a plurality of separately removable boxes each having metal sides and ends, partitions of softer material dividing the box into compartments, and having material filling all of said compartments.

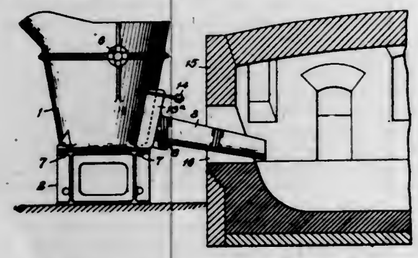
2. The combination with the rails and cross-ties of a railway, of a plurality of separately removable metal boxes, a filling of paving material within each of said boxes, and removable means for securing each box to said cross-ties.

3. The combination with the rails and cross-ties of a railway, of an elongated metal box, partitions dividing the box into smaller compartments, paving material within and filling each of said compartments, and means for removably securing the box to the cross-ties.

4. The combination with the rails and cross-ties of a railway, of a plurality of elongated metal boxes assembled together to form a roadway across the railway, partitions dividing each box into a plurality of smaller compartments, paving material within and filling each compartment, and spikes on the inside of said boxes passing through the bottoms of the boxes into the cross-ties, said spikes having heads overlapping the walls of the boxes.

5. The combination with the rails and cross-ties of a railway, of a box having hardened steel side walls, softer metal partitions dividing the box into a plurality of smaller compartments, a filling of paving material within each of said compartments, and removable means for securing the box to said cross-ties.

1,102,236. CHARGING-LADLE. DANIEL BRENNAN, Woodlawn, Pa. Filed Mar. 11, 1914. Serial No. 823,867. (Cl. 22—84.)



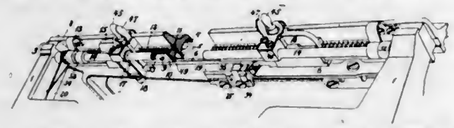
1. A movable charger for putting molten metal into furnaces, comprising a ladle, a support secured to the bottom thereof, a spout secured to the side of and extending laterally from the ladle, an orifice through the side wall of the ladle leading to the spout, and means secured to the outside of the ladle for closing said orifice to control the flow of metal therethrough.

2. A movable charger for putting molten metal into furnaces, comprising a ladle, a support secured to the bottom thereof, a spout secured to the side of and extending laterally from the ladle, an orifice through the side wall of the ladle leading to the spout, and a counterweighted arm pivoted to the outside of the ladle and provided with a stopper adapted in one position of said arm to close said orifice.

1,102,237. PROCESS FOR THE PRODUCTION OF THREADS, FILMS, OR PLATES. EMILE BRONNERT, Niedermorschweiler, near Mülhausen, Germany, assignor to the Firm of Vereinigte Glanzstoff-Fabriken A.-G., Elberfeld, Germany. Filed Apr. 9, 1913. Serial No. 759,932. (Cl. 18—54.)

In producing threads, films or plates or the like from viscose solution, the process which consists in conducting the viscose solution through a heated precipitating bath consisting of a solution of a salt of non-volatile aliphatic oxacids such as lactic, glycolic, citric, tartaric acid together with a sufficient quantity—say 15-20% of the same free acid.

1,102,238. TYPE-WRITING MACHINE. LYMAN DAVID BROUGHTON, Hartford, Conn., assignor to Underwood Typewriter Company, a Corporation of Delaware. Filed Nov. 13, 1911. Serial No. 659,948. (Cl. 197—63.)



1. In a typewriter, the combination of a carriage, a rock bar, a second bar having teeth on one vertical face, right and left hand margin stops each embracing both of said bars, said rock bar being rotatable in said stops, a swinging member on each stop, and a tooth on each swinging member to engage with said toothed bar to hold the stop.

2. In a typewriter the combination with a rock bar, of a rack bar having teeth cut on its vertical face, stops each embracing both of said bars, members pivoted to said stops and swinging in a horizontal plane, teeth on said members to engage said rack to hold the stops adjusted, handles for swinging said pivoted members, springs holding said teeth engaged, and a yoke splined on the rock bar embracing one of said stops to be moved by the carriage to swing said bar.

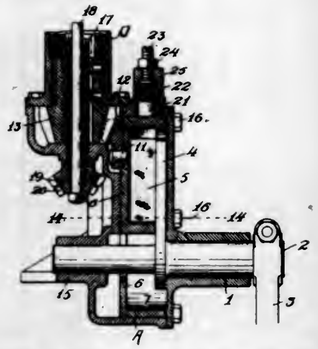
3. In a typewriting machine, the combination with a traveling carriage, of a rock bar adjacent said carriage, a stop slidable on and rotatable around said bar, a yoke embracing said stop and splined on said bar, a track on the frame on which said carriage runs, a toothed bar underlying said track and having a bearing substantially throughout its length on the under surface of said track, teeth on the face of said toothed bar adjacent said stop, and a tooth pivoted on said stop to swing in the plane in which it is slidable and arranged to lock said stop by said rack.

4. In a typewriter, the combination of a carriage, a rock bar moved by the carriage, a T-shaped bar having teeth in the vertical face of one member thereof, right and left hand margin stops, each embracing both bars and adjustable along substantially the whole length of said rock bar, teeth in said stops to engage in said T-shaped bar to hold said stops adjusted, a yoke embracing one of said stops and splined on the rock shaft, and a tappet on said yoke moved by the carriage.

5. In a typewriter, the combination with a carriage, of a fixed bar across the front of the machine upon which the carriage runs, a rack bar having teeth in its vertical front face and supported beneath said fixed bar, a rock bar, right and left hand margin stops each slidably supported on both said rock bar and said rack bar, members pivoted to said stops and revolving in a horizontal plane, and teeth on said pivoted members to engage with said rack.

[Claims 6 to 20 not printed in the Gazette.]

1,102,239. STEERING-GEAR. WALTER F. BROWN, Worcester, Mass. Filed Oct. 26, 1908. Serial No. 459,651. (Cl. 74—79.)



1. A steering mechanism comprising a steering shaft, a rocking disk operatively connected with said steering shaft and having a semicircular concentric opening, a rocking shaft eccentric to said disk passing through said opening and having a radial arm and a steering arm, a circular flange having a diameter radial to said rocking disk and mounted thereon, and means rotatable within said flange and inclosed thereby, said rotatable means being arranged to engage said radial arm diametrically to said rotatable member, thereby transmitting the rocking movement of said disk to said rocking shaft.

2. A steering mechanism comprising a rocking shaft having a radial arm and a steering arm, a steering shaft, a rocking member operatively connected with said steering shaft, said rocking member having a circular flange inclosing rotatable means, said rotatable means being provided with parallel surfaces radial to said rocking shaft, and a blade on said radial arm arranged to be engaged by said parallel surfaces.

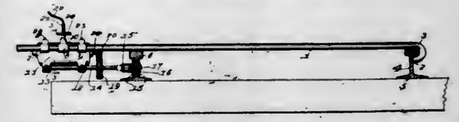
3. A steering mechanism comprising a rocking disk having a circular flange eccentric to the axis of said disk, a pair of segmental plates inclosed by said circular flange, a rocking shaft parallel with the axis of said disk and eccentric thereto, and a radial arm carried by said shaft having its free end inclosed by said segmental plates, whereby a rocking motion of said disk will be imparted to said shaft.

4. In a steering mechanism, a rocking shaft provided with a steering arm and a radial arm having a blade on one side, a rocking disk with its axis parallel to and eccentric to said rocking shaft, a fixed casing forming a bearing for said disk, a segmental rack attached to said disk, a steering shaft connected with said rack, a circular bearing in said disk eccentric to the axis of the disk and also to the axis of said rocking shaft, and segmental plates held in said circular bearing and contacting with the blade on said radial arm.

1,102,240. ELECTRIC-MOTOR WRENCH. EUGENE WOODLAND BURROUGHS, Norfolk, Va. Filed Mar. 9, 1914. Serial No. 823,451. (Cl. 81—57.)

1. In a motor-driven wrench, supports engageable with a rail, a carriage removably and adjustably mounted upon said supports in the direction of their length, an electric motor suspended from the carriage, a wrench and gearing actuated by the motor for turning the wrench.

2. In a motor-driven wrench, supports engageable with a rail, a carriage removably and adjustably mounted upon said support in the direction of their length, an electric motor suspended from the carriage, a wrench and gearing actuated by the motor for turning the wrench, and means for vertical adjustment of the motor.



3. In a motor-driven wrench, parallel supports having hooked ends to engage a rail, a carriage movably mounted upon said support in the direction of their length, a motor suspended from said carriage, a socket wrench, its shaft, and reducing gearing between said shaft and the shaft of the motor.

4. In a motor-driven wrench, parallel supports having hooked ends to engage a rail, a carriage movably mounted upon said supports, a motor suspended from said carriage, a socket wrench, its shaft, reducing gearing between said shaft and the shaft of the motor, and means for bodily adjusting said motor vertically.

5. In a motor-driven wrench, parallel supports having hooked ends to engage a rail, a carriage movably mounted upon said supports, a motor suspended from said carriage, a socket wrench, its shaft, and reducing gearing between said shaft and the shaft of the motor, said carriage being reversibly mounted upon said supports.

1,102,241. IGNITER. KEY D. CAMP, Milwaukee, Wis., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Apr. 21, 1914. Serial No. 833,390. (Cl. 158—115.)



1. In an igniter for stove burners comprising a vented reservoir, a feed-pipe therefor, and a torch-tube having its tip disposed under the reservoir; the combination of means for supplying a constant flow of gas to the torch-tube, and valve-controlled means for simultaneously supplying an increased flow of gas to said torch-tube and a full supply to the reservoir.

2. An igniter for stove burners comprising a vented reservoir, a feed-pipe therefor, a torch-tube having its tip juxtaposing the reservoir, a valve-casing having a channel in communication with the reservoir feed-pipe and a main supply duct in communication with the torch-tube, the main supply duct being provided with a by-pass duct, a valve for controlling the reservoir supply pipe channel and torch-tube, and means for supplying a constant flow of gas to the by-pass duct when the valve is closed.

1,102,242. PENCIL-HOLDER. THOMAS CARENCE, Kansas City, Mo. Filed Mar. 23, 1914. Serial No. 826,497. (Cl. 24—11.)

1. A pencil holder comprising a body, a ring carried by the body at one side thereof for receiving therethrough a pencil, and a resilient tongue extending over and carried by the body, with its free end adjacent to and in alinement with said ring, said free end having a channel on the side adjacent to the body adapted to receive and clampingly hold against the body said pencil.

2. A pencil holder comprising a sheet metal plate of resilient material, said plate having at one edge a lateral extension formed into a ring disposed at one side of the body of the plate, the plate at one end having a resilient tongue extending laterally from the body of the plate, in alinement with said ring, and then toward said ring at the same side of the plate as the ring, the free end of the

tongue having on the side adjacent to the body of the plate a channel adapted to receive and clampingly hold against the body a pencil extended through said ring.

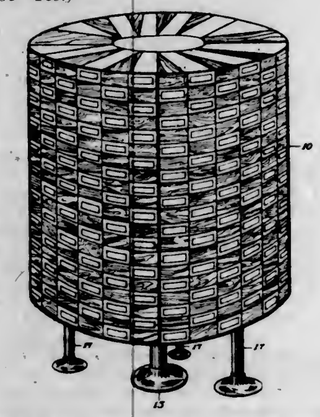


3. A pencil holder comprising a body, two rings carried by the body at one side thereof for respectively receiving two pencils, and two resilient tongues carried by the body in alinement respectively with said two rings and having their free ends at the sides adjacent to the body respectively formed into two channels adapted to respectively receive said two pencils and clampingly hold them against the body.

4. A pencil holder comprising a sheet metal plate of resilient material having at opposite edges respectively two lateral extensions formed into rings adapted to receive therethrough respectively two pencils, the plate at one end being provided with two tongues disposed respectively in alinement with said two rings, said tongues being first bent laterally and then extended respectively toward said rings, said tongues having at their free ends in the sides next to the body of the plate channels respectively for receiving said pencils.

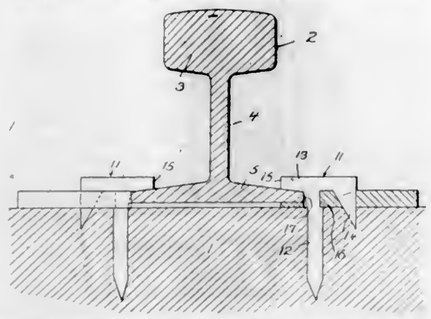
5. A pencil holder comprising a body, a ring carried thereby at one side thereof for receiving a pencil, and a resilient tongue extending laterally from one end of the body and then over the body in alinement with said ring at the same side of the body as the ring, the free end of the tongue being provided with means for embracing said pencil and holding it clamped against the body.

1,102,243. STENCIL-RACK. JOHN F. CARLSON, Des Moines, Iowa. Filed July 28, 1913. Serial No. 781,520. (Cl. 101—149.)



A stencil rack comprising in combination a drum formed of a plurality of circular trays, one above the other, each tray being provided with closed places and openings alternating around its perimeter, each alternate tray being offset, to cause the openings and closed places to alternate vertically, all of said openings having parallel sides; a standard to support said drum which is rotatably mounted thereon; a circular track in the base of said drum and standards provided with rollers to engage said track, substantially as shown and described.

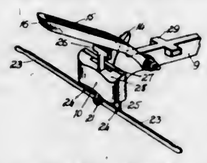
1,102,244. TIE-PLATE. BENJAMIN L. CLEVELAND, East Chattanooga, Tenn. Filed Sept. 23, 1913. Serial No. 791,435. (Cl. 238—2.)



1. In combination with tie plates comprising body portions, angular extensions formed at the ends thereof, lateral extensions formed on the opposite sides of said body portions, said lateral portions having apertures therein, spikes adapted to extend through apertures in said plates, said spikes having recesses adjacent their upper ends adapted to receive the end walls of the apertures, and reinforcing means formed integrally with the head of said spikes said reinforcing means being adapted to extend through apertures in the plates and into the tie.

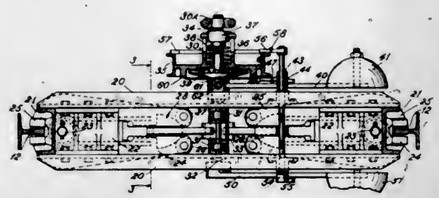
2. In a device of the character described plates, extensions formed along the lateral edges of said plates, laterally extending members formed at the opposite edges of said plates, said lateral extensions being of substantially twice the thickness of the plates and having apertures therein, spikes adapted to extend through the apertures, transversely extending heads formed at the upper extremities of the spikes, and reinforcing members formed integrally with the rear extremities of the head, and adapted to extend through the apertures in the plates and into the tie, thereby securing the whole on said tie.

1,102,245. AUTOMATIC COUPLING. JOHN CORKERY, Rockdale, New South Wales, Australia. Filed July 8, 1912. Serial No. 708,102. (Cl. 213—45.)



An automatic coupling for railway vehicles comprising in each member a draw bar head centrally depressed and immediately behind said depression provided with a cross-head recess and a rodhole leading downwardly therefrom, said bar having behind said head a rearwardly-curved hook, beyond said hook a cross bar forming a bracket, a longitudinally bent link spanning said draw bar between said cross bar and said hook and pivotally secured thereto, a rod having a cross head which has a bearing on the underside of said link at the upper end and extending downwardly through said rod-hole and levers pivotally secured to said rod at the lower end thereof and extending laterally, said levers being pivotally supported from the draw bar intermediate of their length.

1,102,246. ELEVATOR SAFETY DEVICE. ANDREW M. COYLE, New York, N. Y., assignor, by mesne assignments, to Gurney Electric Elevator Company, Honesdale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 559,303, filed May 4, 1910. This application filed July 12, 1911. Serial No. 638,187. (Cl. 187—91.)



1. In an elevator safety device, a pair of locking jaws, mechanism for forcibly moving said jaws toward each other, said mechanism comprising a plurality of weights for actuating said mechanism, and means for successively releasing said weights.

2. In an elevator safety device, a pair of locking jaws, mechanism for forcibly moving said jaws toward each other, said mechanism comprising a plurality of weights arranged to actuate said mechanism, and a rotatable member, said member being arranged to successively release the weights and to act upon said jaws cumulatively with the weights.

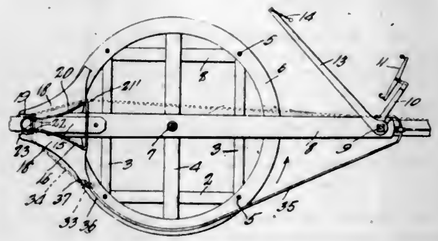
3. In an elevator safety device, a pair of locking jaws, a cam for forcibly moving said jaws toward each other, a weighted arm arranged to move the cam, and a rotary member arranged to release the weighted arm and to impart further movement to the cam.

4. In an elevator safety device, a pair of locking jaws, a cam for forcibly moving said jaws toward each other, a weighted arm arranged to move the cam, and manual means for releasing said weighted arm.

5. In an elevator safety device, a pair of locking jaws, a cam for forcibly moving said jaws toward each other, a weighted arm arranged to move the cam, a rotary member arranged to automatically release the weighted arm, and manual means for releasing the weighted arm.

[Claims 6 to 15 not printed in the Gazette.]

1,102,247. ROTARY POWER MECHANISM. WILLIAM B. CRAIG, Martinsville, Ill. Filed May 9, 1913. Serial No. 766,653. (Cl. 185—19.)



1. A rotary power mechanism, including a support, a rotatable power lever carried thereby, a hoisting cable, means carried by the lever for slidably connecting one terminal of the cable to the lever, and coöperating means carried by the lever and support for automatically engaging and releasing the cable during the rotation of the lever.

2. A rotary power mechanism, including a support, a rotatable power lever carried thereby, a hoisting cable, means carried by the lever for slidably connecting one terminal of the cable to the lever, a pivoted member mounted in one end of the lever and projecting thereabove to engage the cable intermediate of its ends during the rotation of the power lever, and means disposed in the path of said member for releasing the same and the cable.

3. A rotary power mechanism, including a support, a rotatable power lever carried thereby, a hoisting cable, a cable terminal engaging and guiding rod connected to both ends of the lever with the body portion thereof in spaced relation thereto, and coöperating means carried by the lever and the support for automatically engaging the cable intermediate its ends during a portion of the rotation of the lever and for automatically releasing the cable to gravity.

4. A rotary power mechanism, including a support, a rotatable power lever carried thereby, a hoisting cable, a cable terminal engaging and guiding rod connected to both ends of the lever and with the body portion thereof in spaced relation thereto, a hinged cable engaging member mounted in one end of the lever, and means carried by the support and in the path to engage said member to automatically release the same once each revolution of the power lever.

5. A rotary power mechanism, including a supporting frame, a circular track carried thereby, a power lever pivoted intermediate of its end to the support with portions overlying the track, a runner carried upon one end of the lever and in engagement with the track, a rod having one terminal connected with the runner and the other terminal connected to the opposite free end of the lever, a cable having one terminal slidably connected to the rod, a pivoted cable engaging member carried by the runner in the end remote from the draft end of the lever, and means disposed in the path thereof and carried by the support for releasing the pivoted member and the cable to gravity.

[Claim 6 not printed in the Gazette.]

1,102,248. CHILD'S FOLDING CARRIAGE. WILLIAM MORE DECKER, Buffalo, N. Y. Filed Dec. 7, 1912. Serial No. 735,431. (Cl. 21—83.)

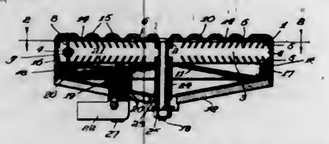


1. A folding go-cart, comprising a front axle and a rear axle, a handle frame pivoted to the front axle, depending links pivoted to the handle and connected to the rear axle, a platform-frame pivoted to the front axle at one end and supported adjacent its opposite extremity by the rear axle, and means for removably securing the platform frame on said rear axle.

2. A folding go-cart comprising a front axle, a handle pivoted to the front axle, depending links pivoted to the handle, a rear axle secured to the lower extremity of the depending links, a U-shaped frame pivoted to the front axle and adjustably secured to the rear axle.

3. A folding go-cart comprising a front and rear axle, a handle-frame pivoted to the front axle, a platform-frame pivoted to the front axle and supported adjacent to its opposite extremity by the rear axle, and means for adjusting the distance between said front and rear axles on said platform-frame.

1,102,249. ELECTRIC RESISTANCE UNIT. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1911. Serial No. 657,812. (Cl. 219—63.)



1. In an electric resistance unit, a frame having a plurality of radially extending arms, and a resistance material engaging said arms and wound on the opposite sides thereof in parallel planes.

2. In an electric resistance unit, a frame, a plurality of notched radially extending insulating strips having their ends attached to said frame, and a resistance material wound on opposite sides of said strips and resting in said notches.

3. In an electric resistance unit, a ring, a hub, a plurality of notched radially extending arms attached to said ring and hub and a resistance material wound spirally in opposite directions on the opposite edges of said strips and passing through said notches.

4. In an electric resistance unit, a ring, a hub, a plurality of notched radially extending arms having extensions extending through said ring and said hub, a resistance material wound on the opposite edges of said arms and passing through said notches, an insulating strip connecting certain of said radially extending arms, and binding posts for said resistance material carried on said strip.

5. In an electric resistance unit, a ring, a hub, a plurality of radially extending arms having projections seated in said ring and said hub and having notches in their edges, a resistance material wound spirally on the opposite edges of said arms and passing through said notches, a strip connecting certain of said arms and binding posts for said resistance material carried on said chord-like strip.

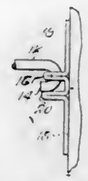
[Claims 6 and 7 not printed in the Gazette.]

1,102,250. ABDOMINAL BAND. GEORGE F. EARNSHAW, Chicago, Ill., assignor to Earnshaw Knitting Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 23, 1911. Serial No. 667,502. (Cl. 128—3.)



An article of manufacture, comprising a body band adapted for use on babies, and consisting of a strip of seamless soft elastic fabric continuous throughout its length and breadth to present an unbroken smooth inner surface, said strip being of substantial and approximately uniform width throughout, to contact with and support all portions of the body between its hips and arms when wrapped therearound, and one of the strips constituting an extension adapted to underlie to a considerable extent the intermediate portion of the strip, in combination with complementary fastening means carried by the strip adapted to be secured together on the outside of the strip over the relatively exposed portion of the extension, said fastening means comprising inelastic flexible attaching portions secured transversely of the strip one near one end of the strip and another nearer the center of the strip, and tapes carried by said attaching portions, said tapes being relatively widely spaced to engage the strip near its upper and lower edges and also at an intermediate point.

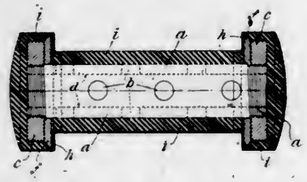
1,102,251. AWNING-FRAME AND HINGES THEREFOR. JONATHAN C. ELA, Woburn, Mass., assignor of one-fourth to James W. Grimes, Reading, Mass., and one-fourth to Herbert S. Riley, Woburn, Mass.; Edgar W. Ela administrator of said Jonathan C. Ela, deceased. Filed Jan. 22, 1914. Serial No. 813,682. (Cl. 156—15.)



1. A device of the character stated, comprising an awning frame having open hooks at its ends, hinge members adapted to be attached to supports and formed to coöperate with said hooks in permitting the frame to swing from a raised to a depressed vertical position and to be removed by an upward rectilinear movement from a depressed position, said hooks and hinge members being provided with complemental stops which positively prevent a downward rectilinear movement of the frame from a raised vertical position.

2. A device of the character stated, comprising an awning frame having open hooks at its ends, hook-engaging ears adapted to be attached to supports, the hooks and the hook engaging ears being formed to permit the frame to swing from a raised to a depressed vertical position and to be separated from the said ears by an upward rectilinear movement from a depressed position, and stop ears fixed with relation to the hook-engaging ears and located below the latter and adapted to positively support said hooks and prevent rectilinear downward movement of the frame from a raised vertical position.

1,102,252. ELECTRICAL INSULATOR. JOHN HENRY ELLIS, Prescot, England. Filed Mar. 30, 1912. Serial No. 687,331. (Cl. 173—366.)



1. As a new or improved article of manufacture, an insulator comprising a metal body or core part, having a flanged part at one end of greater diameter than the body; an insulating ring on the inside of said flange; an insulating material (i) covering the outside of the said body and flange; substantially as set forth.

2. As a new or improved article of manufacture, an insulator comprising a core or body of hard and strong material of tubular form; having a perforated wall, and an external envelop or covering of insulation in which the ends, interior and exterior of the body, are all in one without joint; substantially as set forth.

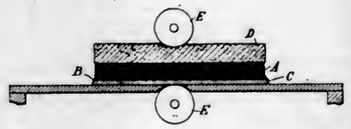
3. An insulator comprising a metal body or core part, having a flanged part at one end of greater diameter than the body; an insulating ring, as *f*, on the inside of said flange; insulating material *i* covering the outside of the said body, with the exception of the parts covered by the said insulating ring, and covering also the said flange; substantially as set forth.

4. An insulator comprising a metal body or core part, having a flanged part at one end of greater diameter than the body; an insulating ring, as *f*, on the inside of said flange; insulating material *i* covering the outside of the said body, with the exception of the parts covered by the said insulating ring, and covering also the said flange; and a metal ring on the inside face of the said insulating ring; substantially as set forth.

5. An insulator comprising a core or body *a* of metal; a flange *c* at each end of said body, and held thereon by screw threads, insulating rings *f* in contact with the inner surfaces of the said flanges *c*, and extending from the said core to beyond the periphery of the said flanges; insulation *i* covering the said body *a* between the inner parts of the inner faces of the said rings *f*, and in contact therewith; and also the periphery and outer surface of the said flanges, and ends of the insulator, and said insulation also being in contact with the outer edge or surface of the said insulating rings; substantially as set forth.

[Claim 6 not printed in the Gazette.]

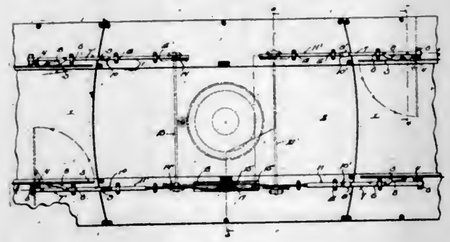
1,102,253. COMPOSITE-DISK SOUND-RECORD. VICTOR H. EMERSON, New York, N. Y., GEORGE A. MANWARING, Bayonne, N. J., and JAMES K. REYNARD, New York, N. Y., assignors to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed June 29, 1905. Serial No. 267,598. (Cl. 181—17.)



1. As an article of manufacture a sound-record consisting of a composite tablet composed of a plurality of sheets of very thin paper, the outer sheet having a facing of suitable "paint" containing celluloid and shellac in which the record proper, is impressed and all of said sheets united and impregnated with a suitable "glue."

2. As an article of manufacture, a sound-record consisting of a composite tablet composed of a plurality of sheets of very thin paper, the outer sheet having a facing of superior sound-record material in which the record proper is impressed and all of said sheets being united and impregnated with a suitable glue.

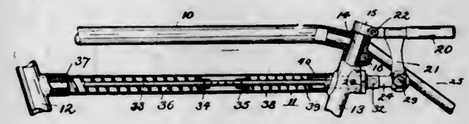
1,102,254. BRIDGE-GATES. CASPER FAUST, Oshkosh, Wis. Filed Feb. 17, 1914. Serial No. 819,264. (Cl. 14—32.)



1. The combination of a swinging bridge with its abutments, and a swinging guard gate mounted above each abutment upon diametrically opposite sides thereof, a longitudinally disposed slidable actuating rod section in operative connection with each gate, each of said rods being mounted above its corresponding abutment, a coupling member carried at the opposite end of each rod section, a pair of rod-sections slidably mounted upon the bridge at opposite sides thereof and extending in opposite directions, coupling members carried at the outer ends of the same for engagement with the coupling members of the abutment gate-actuating rod sections, a transversely disposed rock-shaft carried by the bridge and mounted thereunder, lever mechanism connecting the rock-shaft and each gate-actuating rod section of the bridge, and actuating mechanism for said bridge rod sections.

2. The combination of a swinging bridge with its abutments, and a pair of swinging gates mounted upon each abutment, a longitudinally disposed slidable actuating rod section in link connection with each gate, coupling members carried at the free ends of each rod section, slidable rod sections mounted upon the bridge each adapted to be alined with a companion abutment actuating rod, a coupling member at the outer end of each of the bridge rod sections for engagement with the corresponding member of its companion abutment rod section, a pair of rock-shafts arranged transversely of the bridge, lever mechanism connecting each rock-shaft with the diametrically opposite bridge-carried rod-sections, and means for actuating the shaft-connected actuating rods independently.

1,102,255. SEAT-SUPPORT FOR MOTOR-CYCLES. ARTHUR O. FEILBACH, North Milwaukee, Wis., assignor to Feilbach Motor Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 24, 1912. Serial No. 727,550. (Cl. 208—100.)



1. In a seat-support for motor vehicles and the like, the combination of a vehicle frame; an elbow-lever pivotally supported with reference to the frame at substantially the junction of the arms of said lever and having one arm rearwardly and horizontally disposed and adapted to support a saddle, the other arm extending downwardly; a buffer spring carried by the frame; and connections between the lower end of the downwardly-extending arm and said spring.

2. In a seat-support for motor vehicles and the like, the combination of a vehicle frame; an elbow-lever pivotally supported with reference to the frame at substantially the junction of the arms of said lever and having one arm horizontally disposed and adapted to support a saddle, the other arm extending downwardly; a buffer spring carried by the frame; and connections, involving a friction mechanism, between the lower end of the depending arm and the spring.

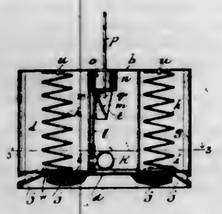
3. In a seat-support for motor vehicles and the like, the combination of a vehicle frame; a post secured thereto; an elbow-lever pivotally connected at substantially the junction of its arms to said post, with one arm thereof standing in a substantially horizontal position and the other extending downwardly; a buffer spring carried by the frame; and a link connection between said spring and the lower end of the depending arm of the elbow-lever.

4. In a seat-support for motor vehicles and the like, the combination of a vehicle frame, involving a horizontally-disposed tubular reach member; an elbow-lever pivotally supported with reference to the frame at substantially the junction of the arms of said lever and having one arm lying in a substantially horizontal plane, with the other arm extending downwardly; a buffer spring mounted in the tubular reach member; and connections between said spring and the downwardly-extending arm.

5. In a seat-support for motor vehicles and the like, the combination of a vehicle frame, involving a horizontally-disposed tubular reach member; an elbow-lever pivotally supported with reference to the frame at substantially the junction of the arms of said lever and having one arm lying in a substantially horizontal plane, with the other arm extending downwardly; a buffer spring mounted in the tubular reach member; and connections, involving a friction mechanism, between said depending arm and the spring.

[Claims 6 to 8 not printed in the Gazette.]

1,102,256. SAVINGS-BANK. CHARLES FISHER, Oak Park, Ill., assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 7, 1906. Serial No. 310,529. (Cl. 133—7.)



1. In a savings bank, a cylindrical coin receptacle having a flat transverse coin-rest and an inclined coin guide-way inside the receptacle and at an angle to the coin-rest to receive a coin through an adjacent opening in the side of the bank, the opening into said guide-way being below the plane of the coin-rest and the opening of the guide-way into the receptacle being outside of its center, and a yielding follower in the receptacle parallel with the flat coin-rest and lying across said guide-way, substantially as described.

2. In a savings bank, the combination of a base having a number of cylindrical coin receptacles mounted thereon, each formed with a longitudinal slot of less width than the diameter of the receptacle and having a flat transverse coin-rest and an inclined coin guide-way lying within the receptacle on the side where the slot is formed and at an angle to the coin-rest, the opening into each guide-way being below the plane of the coin-rest and the opening of the guide-way into the receptacle being outside of its center, a cover adapted to inclose said receptacles, and a fastening detachably securing the cover to the base, substantially as described.

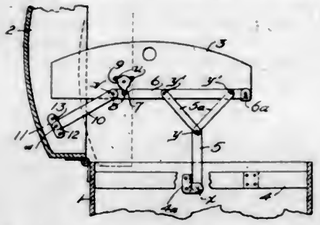
3. In a savings bank, the combination of a base having a number of cylindrical coin-receptacles provided with flat transverse coin-rests, and upwardly inclined coin guides extending obliquely into one end of said receptacles at an angle to said rests, the openings into said coin-rests being below the plane of the coin-guides and the openings of the coin-guides into the receptacles being outside of their centers, a removable cover adapted to inclose said receptacles, disks or followers loosely fitting in said receptacles above said coin-rests and across said guides, springs tending to press said disks toward one end of said receptacles, and a fastening for securing the cover to the base, substantially as described.

4. In a savings bank, the combination of a coin receptacle having a coin slot or guide entering one end thereof obliquely and an opening through the other end, a coin follower loosely fitting in said receptacle, a spiral spring attached at one end to said follower with the axial opening through the spring back of the opening of the oblique coin guide into said receptacle and at the other end to the opposite end of the receptacle around the opening therein and tending to press the follower toward the receiving end of the receptacle, said spring and the opening in the end of the receptacle being so positioned in relation to each other to permit a graduated gage to be inserted through said end opening and spring to indicate the number of coins in said receptacle, substantially as described.

5. In a savings bank, the combination of a base provided with a number of cylindrical receptacles with flat transverse coin rests at the bottom for coins of different denominations, and having coin slots or guides opening obliquely into the lower ends of the receptacles at an angle to said rests for the insertion of coins, a removable cover adapted to inclose said receptacles and having an opening over each receptacle, followers loosely fitting in said receptacles above said coin rest, and spiral springs connecting said followers with the cover around the openings therein, and out of line with the openings of the coin slots or guides into said receptacles, said springs and the openings in the ends of the receptacles being so disposed in relation to each other to permit a graduated gage to be inserted in said openings and springs to indicate the number of coins in each receptacle, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

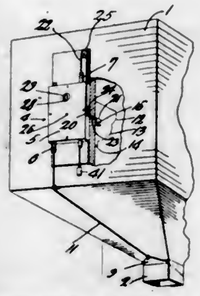
1,102,257. TRUNK. JEFF J. FOOTE, Atlanta, Ga. Filed Aug. 11, 1913. Serial No. 784,130. (Cl. 190—30.)



1. A trunk having lid-operated tray-lifting mechanism including a single swinging standard at each end pivoted to the trunk, a tray-supporting bar, diverging arms pivoted at their lower ends to the upper end of the standard and secured at their outer ends to said bar, means for engaging the tray with the bar, a lifting link pivoted to the supporting bar and to the lid, and stop lugs, one at each edge of said link, on the lid for holding the bar horizontal during its movements.

2. In a trunk, the combination with the body and hinged lid, of tray elevating mechanism at each end, comprising a tray supporting bar, a single swinging standard having diverging arms pivoted to its upper end and secured to said bar, a stop plate secured to the end of the lid and having two stop lugs spaced apart, and a lifting link pivoted to the supporting bar and to said plate between the lugs for holding the supporting bar substantially horizontal while being raised and lowered.

1,102,258. HOPPER-TALLY. JOSEPH E. FRIDGEN, Glen Ullin, N. D. Filed June 28, 1913. Serial No. 776,389. (Cl. 73—20.)



1. The combination with a hopper having a discharge opening, and a closure for the opening, of a register mechanism, means for operating the mechanism when the hopper is filled, and means operatively connected to the closure for locking the said mechanism when the said closure is opened.

2. The combination with a hopper having a discharge opening, and a closure for the opening, of a register mechanism, movable means disposed within the hopper adapted to be actuated when the hopper is filled, and operably connected to the said mechanism for moving the same when the said means is actuated, and means controlled by the said closure for locking the said mechanism and means against retrograde movement when the closure is opened.

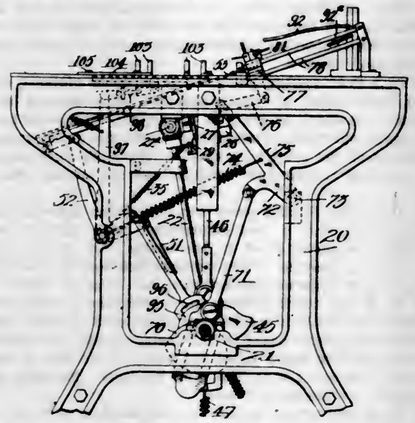
3. The combination with a hopper, of a register mechanism, a pocket secured within the hopper and having a lower discharge opening and a curved portion, a valve pivoted within the pocket having its free portion working along the said curved portion of the pocket to and from the said opening adapted to be depressed when the pocket is filled, during the filling of the hopper, and an operative connection between the said valve and mechanism whereby the mechanism is advanced when the valve is depressed.

4. The combination with a hopper having a discharge opening, and a closure for the opening, of a register mechanism including an indicator and actuating means therefor, movable means disposed within the hopper adapted to be actuated when the hopper is filled, and operatively connected to the aforesaid means for advancing the indicator when the second mentioned means is actuated, means for returning the said actuating means to normal position, and means controlled by the said closure for locking the said actuating means against returning to normal position when the closure is opened.

5. The combination with a hopper having a valve, of a register mechanism including an actuating member, means disposed within the hopper adapted to be actuated when the hopper is filled and operably connected to the said actuating member for advancing the register mechanism when the said means is actuated, means for returning the actuating member to normal position, and a detent operably connected with the valve of the hopper and engageable with the said actuating member when the said valve is opened after the hopper has been filled.

[Claims 6 to 10 not printed in the Gazette.]

1,102,259. TAG-STRINGING MACHINE. ERNEST W. T. FRODIGH and ROLAND S. G. FRODIGH, Worcester, Mass. Filed Sept. 30, 1912. Serial No. 723,034. (Cl. 93—91.)



1. In a machine of the character described, the combination of a stationary drum, a hollow shaft extending therethrough, and a hollow feed guide on the end of the shaft for receiving a flexible member directly from the shaft and adapted to rotate therewith and having an end projecting radially over the edge of the drum.

2. In a machine of the character described, the combination of a circular member having a groove therearound, a hollow shaft extending through said circular member, and a feed guide on the end of said shaft projecting into a position parallel therewith and adjacent to said groove, whereby a string can be led through said hollow shaft and guide and laid in said groove by the rotation thereof.

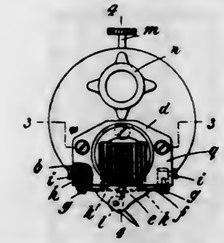
3. In a machine of the character described, the combination of a drum, a hollow shaft extending through the drum, means at one side of the drum for driving said shaft, and a feed guide on the end of said shaft opposite said means projecting into a position parallel therewith and adjacent to the edge of said drum for laying a string on the surface of the drum.

4. In a machine of the character described, the combination of a circular drum, means for drawing a string through said drum and laying it around the drum, and a binder for engaging the drum and holding the end of the string.

5. In a machine of the character described, the combination of a fixed circular drum, a hollow rotary shaft extending axially therethrough, a feed guide fixed to the end of said shaft and terminating near the circumference of said drum, said guide being adapted to rotate around the drum and lay a string thereon, a movable binder for engaging said string, and means on said shaft for holding the binder back from the string.

[Claims 6 to 49 not printed in the Gazette.]

1,102,260. SOUND-PRODUCING DEVICE. HARRY ALFRED GAYDON, Croydon, England. Filed July 31, 1911. Serial No. 641,583. (Cl. 181—11.)



1. In a sound producer, the combination of a sound box, a block secured on said box, fulcrum elements carried by said block, a comb or grating secured on the block and forming a valve seat, rotatable elements mounted in said block, a stylus carrying member, a single flat spring secured to said stylus carrying member, rotatable elements passing through the ends of said flat spring and mounted eccentrically in the aforesaid rotatable elements whereby said stylus carrying member is held adjustably against said fulcrum elements, and a comb or grating formed on the stylus carrying member constituting a valve for coöperation with the valve seat on the block to control the passage of elastic fluid producing the sound.

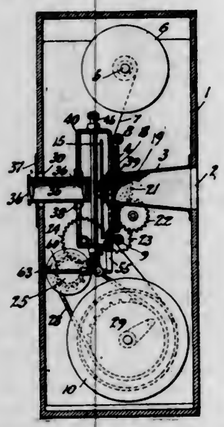
2. In a sound producer, the combination of a sound box, a block secured on said box, fulcrum elements carried by said block, a comb or grating secured on the block and forming a valve seat, rotatable elements mounted in said block, a stylus carrying member provided with a shoulder, a flat spring secured on the shoulder of the carrying member, rotatable elements passing through the flat spring and mounted eccentrically in the aforesaid rotatable elements whereby said stylus carrying member is held adjustably against said fulcrum elements, means for locking said first mentioned rotatable elements in the block, a comb or grating formed on the stylus carrying member and constituting a valve, a second spring secured on the stylus carrying member, and means operatively connected to one end of said second spring to adjust the valve in relation to the valve seat.

3. In a sound producer, the combination of a sound box, a block secured on said box, fulcrum elements carried by said box, a comb or grating secured to the block and forming a valve seat, rotatable elements mounted in the block, a stylus carrying member provided with a shoulder, a spring secured to said shoulder, rotatable elements passing through the ends of said spring and mounted eccentrically in the aforesaid rotatable elements, set screws for locking the first-mentioned rotatable elements in the block, a comb or grating formed on the stylus carrying member and constituting a valve, a second spring secured at one of its ends on the shoulder of the stylus carrying member and at its opposite end provided with a slot, and a screw spindle mounted in and extending through the sound box and having a reduced end in engagement with the slotted end of said second-mentioned spring whereby the valve may be adjusted relative to the valve seat.

4. In a sound producer, the combination of a sound box, a block secured on said box, fulcrum elements carried by

said block, a comb or grating secured on the block and forming a valve seat, rotatable elements mounted in the block, a stylus carrying member, a spring secured intermediate its ends to said stylus carrying member, rotatable elements passing through the ends of said spring and mounted eccentrically in the first mentioned rotatable elements, a comb or grating formed on the stylus carrying member and constituting a valve, a laterally perforated pipe in the sound box for the admission of the elastic fluid, and wire gauze and filtering material interposed between said pipe and the valve seat.

1,102,261. MOVING-PICTURE CAMERA. JOSEPH A. GOLDEN, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,604. Renewed May 11, 1914. Serial No. 837,926. (Cl. 88—17.)



1. In a kinetoscopic apparatus, the combination of suitable driving mechanism, a film support, a carrier mounted to reciprocate in relation to said support, a variable-leverage lever, and suitable means operatively connecting said driving mechanism and carrier with said lever, an objective mounted on said carrier, and mechanism for feeding the film at substantially the same speed as the lens during exposure.

2. In a kinetoscopic apparatus, the combination of suitable driving mechanism, a film support, a carrier mounted to reciprocate in relation to said support, a variable-leverage lever, connected at one side of its pivot to the carrier and operatively engaged at the other side of its pivot by a part of said driving mechanism, an objective mounted on said carrier, and mechanism for feeding the film at substantially the same speed as the lens during exposure.

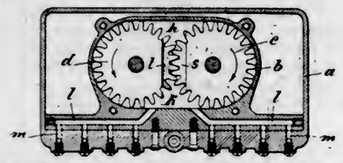
3. In a kinetoscopic apparatus, the combination of a film support, a carrier, means for reciprocating said carrier in relation to said support, the same comprising a variable-leverage lever connected at one end to the carrier, an operating crank pin carried by the driving mechanism of the apparatus connected to the other end of the lever, an objective mounted on said carrier, and mechanism for feeding the film at substantially the same speed as the lens during exposure.

1,102,262. SNAP-SEAL. GEORGE GORDON, Saginaw, Mich. Filed Dec. 1, 1911. Serial No. 663,288. (Cl. 70—99.)



In a snap seal formed of a single piece of metallic material comprising a flexible strap having one end bent to form a hook and formed at the opposite end with a base wider than said strap and provided with an opening and upwardly flanged lateral edges, a cover-member of less width than said base formed with a pocket extending beyond the end of the base and adapted to fold back upon and overlap said base, said cover-member being prolonged to form a longitudinal extension of the same width as the cover-member and adapted to fold back under said cover-member and having its free end arranged to overlie the opening in the aforesaid base and engage the hooked end of said flexible strap, the aforesaid upwardly flanged lateral edges being adapted to fold over and engage the cover-member to lock between the cover-member and the base, the aforesaid longitudinal extension and hooked end of said flexible strap, substantially as shown and described.

1,102,263. LUBRICATING DEVICE. FRIEDRICH GREINER, Schwäbisch Gmünd, Germany, assignor to Otto Schlick, Berlin, Germany. Filed Aug. 15, 1913. Serial No. 784,950. (Cl. 184—31.)



1. In a gear forcing pump for lubricating systems, the combination with a casing provided with suction and pressure chambers, of gears in the casing, said gears having means operative during a predetermined interval occurring in each revolution of the gears to periodically establish communication between the pressure chamber and the suction chamber.

2. In a gear forcing pump for lubricating systems, the combination with a casing provided with suction and pressure chambers, of gears in the casing, said gears having means operating synchrononsly with the gears during a portion of the rotation thereof to establish communication between the pressure chamber and the suction chamber.

3. In a gear forcing pump for lubricating systems, the combination with a casing provided with suction and pressure chambers, gears in the casing, the gears being cut away to provide a free passage between the suction and pressure chambers periodically, as the gears rotate.

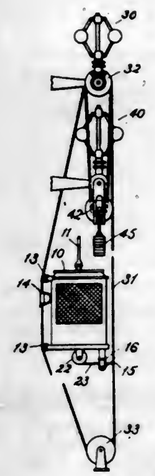
4. In a gear forcing pump for lubricating systems, the combination with a casing provided with suction and pressure chambers, gears in the casing, equal portions of the rims of the gears being cut away to provide a free passage between the suction and pressure chambers periodically, as the gears rotate.

5. In a lubricating device, the combination with an oil tank, of a gear forcing pump having its casing integral with the bottom of the said oil tank, oil passages arranged in the said bottom and connected with the pressure chamber of the said pump, a port in the said pump casing to connect the oil tank with the suction chamber of the said pump and means for periodically establishing communication between the pressure chamber and the suction chamber.

1,102,264. ACTUATING MECHANISM FOR ELEVATOR SAFETY DEVICES. HOWARD F. GURNEY, Hackensack, N. J., and WILLIAM M. CUMMISKEY, Honesdale, Pa., assignors, by direct and mesne assignments, to Gurney Electric Elevator Company, Honesdale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 559,348, filed May 4, 1910. This application filed July 12, 1911. Serial No. 638,185. (Cl. 187—91.)

1. An elevator-car, a safety device therefor, and a plurality of speed governors each arranged to cause said safety device to be actuated, said governors being arranged to act at different speeds, only one of said governors being operative during the entire travel of the car.

2. An elevator-car, a safety device therefor, and a plurality of speed governors driven by the car each arranged to cause said safety device to be actuated, said governors being arranged to act at different speeds of the car, only one of said governors being operative during the entire travel of the car.



3. An elevator-car, a safety device therefor, a speed governor driven by the car and arranged to cause said safety device to be actuated when the car reaches a predetermined speed, a second governor arranged to cause the safety device to be actuated when the car is running at lower speeds, and means for driving said second governor when the car nears the ends of its travel.

4. An elevator-car, a safety device thereon, a speed governor driven by the movement of the car throughout its travel and arranged to cause said safety device to be actuated when the car reaches a predetermined speed, a second governor arranged to cause the safety device to be actuated when the car is running at lower speeds, and means for causing the car to drive said second governor through the end portions of the car's run.

5. An elevator-car, a safety device thereon, a plurality of speed governors set to act at different speeds of the car and arranged to cause the car safety device to be actuated, a governor rope connected with the car, and means for causing a different number of said governors to be driven during different parts of the car's travel.

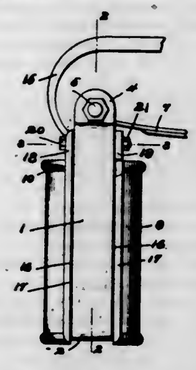
[Claims 6 and 7 not printed in the Gazette.]

1,102,265. SHOCK-ABSORBER. ALLEN E. HALL, Philadelphia, Pa. Filed June 24, 1913. Serial No. 775,453. (Cl. 21—50.)

1. A shock absorber comprising a frame, adapted to be connected to a support, a head movable relative to the frame, a spring between the lower end of the frame and the head, lugs on the head, and a plate adjustably secured to both lugs and bearing against the edge of the frame, substantially as described.

2. A shock absorber comprising a frame, adapted to be connected to a support, a head movable relative to the frame, a spring between the lower end of the frame and the head, lugs on the head, a plate adjustably secured to both lugs and bearing against the edge of the frame, and a casing carried by the head and inclosing the spring, said casing having longitudinal slots therein in which the frame is movable, substantially as described.

3. A shock absorber comprising a frame adapted to be connected at its upper end to a support, a head movable inside of the frame, upwardly projecting lugs on the head, a pin mounted in said lugs and adapted to be connected to a support, and a coiled spring located within the frame, bearing at one end against the frame, and at its other end against the head, and a plate adjustably secured to both lugs and bearing against the edge of said frame, and a casing carried by the head and inclosing the spring, substantially as described.

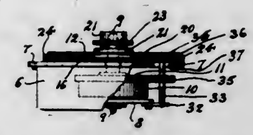


4. A shock absorber comprising a frame adapted to be connected at its upper end to a support, a head movable inside of the frame, upwardly projecting lugs on the head, a pin mounted in said lugs and adapted to be connected to a support, said pin held against longitudinal movement by the frame and a coiled spring located within the frame, bearing at one end against the frame, and at its other end against the head, and a plate adjustably secured to said lugs and bearing against said frame, substantially as described.

5. A shock absorber comprising a head adapted to be connected to a supporting device, a frame adapted to be connected to a supporting device, said frame extending below and movable relative to the head, a coiled spring inside of the frame bearing at one end against the head and at its other end against the frame, a casing integral with the head, said casing inclosing the spring and having an open bottom, and longitudinally slotted sides in which said frame is movable, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,102,266. PORTABLE WATCHMAN'S CLOCK. OTTO E. HAUSBURG, New York, N. Y. Filed Mar. 31, 1913. Serial No. 757,838. (Cl. 234—37.)



1. In a watchman's clock, a driving spring-barrel provided with an arbor, a detachable carrier-disk adapted to be directly connected upon said arbor of said spring-barrel for rotating a twelve hour report dial, a detachable carrier-disk provided with a driving-gear adapted to be rotatably mounted upon said arbor of said spring-barrel, and a reduction transmission gearing interconnecting said driving-gear of the latter carrier-disk with said spring-barrel for rotating a twenty-four hour report-dial, said respective carrier-disks being adapted to be interchangeably connected with the arbor of said spring-barrel, substantially as and for the purposes set forth.

2. In a watchman's clock, a driving spring-barrel, an arbor rotated by the same, gear teeth around the circumference of said spring-barrel, a detachable carrier-disk adapted to be directly connected upon said arbor, a twelve-hour report dial, means for connecting said twelve-hour

report dial on said carrier-disk so as to be rotated thereby, a second detachable carrier-disk having a driving gear connected therewith adapted to be rotatably mounted on said arbor, a reduction transmission gearing interconnecting said driving-gear of said second carrier-disk with said gear-teeth of said spring-barrel, a twenty-four hour report-dial, and means for connecting said twenty-four hour report dial with said second carrier-disk, said respective carrier-disks being adapted to be interchangeably connected with said arbor, substantially as and for the purposes set forth.

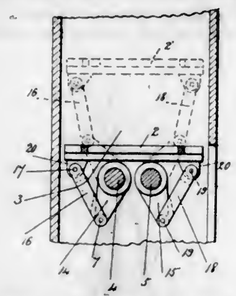
3. In a watchman's clock, a driving spring-barrel adapted to rotate once every twelve hours, an arbor rotated by said spring-barrel, gear teeth around the circumference of said spring barrel, a carrier-disk adapted to cary a twelve hour report dial, the same being detachably connected directly upon said arbor so as to rotate once every twelve hours, a second carrier-disk adapted to carry a twenty-four hour report dial, the same having a driving gear and being detachably mounted on said arbor to rotate thereon, and reduction gearing interconnecting said driving gear of said second carrier-disk with said gear-teeth of said spring-barrel so as to rotate the former once every twenty-four hours, said respective carrier-disks being adapted to be interchangeably connected with said arbor, substantially as and for the purposes set forth.

4. In a watchman's clock, a driving spring-barrel adapted to rotate once every twelve hours, an arbor rotated by said spring-barrel, gear teeth around the circumference of said spring-barrel, a carrier-disk adapted to carry a twelve hour report dial, the same being detachably connected directly upon said arbor so as to rotate once every twelve hours, a second carrier-disk adapted to carry a twenty-four hour report dial, the same having a driving gear and being detachably mounted on said arbor to rotate thereon, and reduction gearing interconnecting said driving gear of said second carrier-disk with said gear-teeth of said spring-barrel so as to rotate the former once every twenty-four hours, said reduction gearing comprising a rotatable spindle, a gear-wheel fixed on said spindle and adapted to mesh with said gear-teeth of said spring-barrel, and a pinion fixed on said spindle and adapted to mesh with said driving-gear of said second carrier-disk, said respective carrier-disks being adapted to be interchangeably connected with said arbor, substantially as and for the purposes set forth.

5. In a watchman's clock, a driving spring-barrel, an arbor rotated by the same, gear teeth around the circumference of said spring-barrel, a detachable carrier-disk adapted to be directly connected upon said arbor, a twelve-hour report dial, means for connecting said twelve-hour report dial on said carrier-disk so as to be rotated thereby, a second detachable carrier-disk having a driving gear connected therewith adapted to be rotatably mounted on said arbor, a reduction transmission gearing interconnecting said driving-gear of said second carrier-disk with said gear-teeth of said spring-barrel, said reduction gearing comprising a rotatable spindle, a gear-wheel fixed upon said spindle and adapted to mesh with said gear-teeth of said spring-barrel, a pinion fixed upon said spindle and adapted to mesh with said driving-gear of said second carrier-disk, a twenty-four hour report dial, and means for connecting said twenty-four hour report dial with said second carrier-disk, said respective carrier-disks being adapted to be interchangeably connected with said arbor, substantially as and for the purposes set forth.

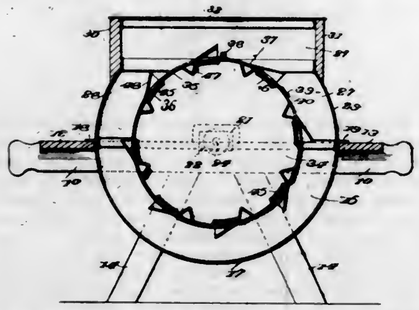
1,102,267. STOVE-GRATE. SAMUEL HENDERSON, Nekoma, Ill. Filed Mar. 20, 1914. Serial No. 826,008. (Cl. 126—154.)

The combination with a fuel chamber, and two parallel shafts journaled therein; of a grate slidable in the chamber and arranged above the said shafts, arms secured on the said shafts, links pivotally connecting the arms with the grate, toothed segments or pinions mounted to revolve with the said shafts and gearing into each other, one of the said toothed segments or pinions being slidable longitudinally on its shaft into and out of gear with the other toothed segment or pinion, and an operating handle secured to the slidable segment or



pinion and affording a means for dumping the grate by raising one side portion of it.

1,102,268. WASHING-MACHINE. CHARLES O. HOLLIDAY, Kearney, Nebr., assignor of one-half to Joseph A. Richter, Kearney, Nebr. Filed Apr. 5, 1912. Serial No. 688,730. (Cl. 68—18.)



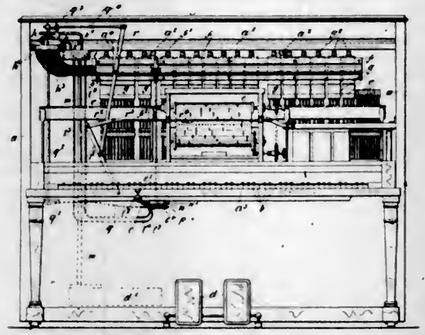
1. A drum for washing machines mounted for rotation and having a plurality of elongated openings arranged in circumferentially spaced relation to one another, guideways adjacent to three sides of said openings and foraminous shields independently insertible into said guideways to cover the adjacent openings.

2. A rotatable drum for washing machines including a pair of circular head members, a band connecting the peripheries of the head members and provided with a plurality of openings circumferentially spaced from one another and extending transversely of the band, a removable screen mounted over each of the openings, a cross sectionally V shaped deflector secured on the inner face of the drum adjacent each opening and a hood member for each opening, said hood members extending outwardly at an acute angle with respect to the screen members.

1,102,269. MECHANICAL MUSICAL INSTRUMENT. HENRY S. HORNBECK, Elizabeth, N. J. Filed June 3, 1910. Serial No. 564,601. (Cl. 84—100.)

1. A solo attachment for piano players, comprising a supporting bar, a movable rail supported thereby, a plurality of bellows movable with said rail, sectional rest rails carried by the bellows respectively, a pneumatic controller mounted on the supporting bar, connections from the controller to the plurality of bellows and from the controller to the vacuum system, means having a common actuator to swing the movable rail toward and from the strings and to shift the pneumatic controller to place one or another of the bellows in communication with the vacuum system.

2. In a mechanical musical instrument, the combination of a series of bellows, a terminal board having a series of ports to which said bellows are connected respectively, a movable head having two adjacent independent chambers adapted to register severally with adjacent ports of said series, independent connections from said chambers respectively to the vacuum system, means to shift said head, and means to control the connections between said chambers and the vacuum system whereby any of said bellows in succession may be connected with the vacuum system through one or the other of said chambers.



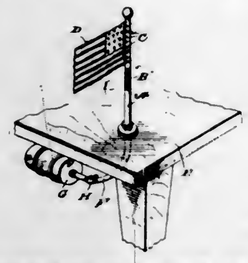
3. In a mechanical musical instrument, the combination of a series of bellows, a terminal board having a series of ports to which said bellows are connected respectively, a movable head having two chambers separated by a partition and adapted to register with said ports, said partition having formed therein a passage adapted at one end to register with said ports and communicating at the other end with one of said chambers and provided with a check valve opening toward said chamber and means to place one or the other of said chambers in communication with the vacuum system.

4. In a mechanical musical instrument, the combination of a series of bellows, a terminal board having a series of ports to which said bellows are connected respectively, a movable head having two adjacent independent chambers adapted to register severally with adjacent ports of said series and means to place one or the other of said chambers in communication with the vacuum system.

5. In a mechanical musical instrument, the combination of a series of bellows, a terminal board having a series of ports to which said bellows are connected respectively, a movable head having two chambers adapted to register with said ports, independent connections from said chambers respectively to the vacuum system, a controlling handle and connections whereby said head may be shifted, and means having operating terminals on said handle to control the connections between said chambers and the vacuum system.

[Claims 6 to 14 not printed in the Gazette.]

1,102,270. PNEUMATICALLY-OPERATED DISPLAY DEVICE. CHARLES LOWELL HOWARD, Washington, D. C. Filed Aug. 7, 1911. Serial No. 642,710. (Cl. 46—70.)



1. The combination of a hollow body with orifices therein, means for forcing air to said body and out of said orifices, and a flexible object carried by said hollow body in such proximity to said orifices as to be operated upon by the forced air, substantially as set forth.

2. The combination of a hollow body with orifices therein, means for rotating said hollow body, a whistle upon one or more orifices, means for forcing air to said hollow body and out of said orifices, and a flexible object carried by said hollow body in such proximity to said orifices as to be operated upon by the forced air, substantially as set forth.

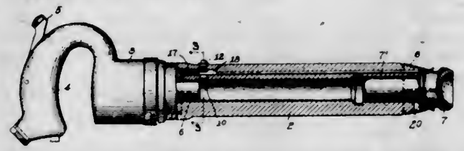
3. The combination of a hollow body with a plurality of sets of orifices therein, means for rotating said hollow body, means for forcing air to said body and out of each set of orifices, and flexible objects carried by said hollow body each in such proximity to a set of orifices as to be operated upon by the forced air, substantially as set forth.

4. The combination of a hollow body with a plurality of sets of orifices therein, means for rotating said hollow body, means for forcing air to said hollow body and out of each orifice, flexible objects carried by said hollow body each in such proximity to a set of orifices as to be operated upon by the forced air, and whistling means acted on by said air, substantially as set forth.

5. The combination of a hollow body with orifices therein, a pipe within said hollow body with orifices corresponding to those in said hollow body, means for forcing air to said pipe and out of said corresponding orifices, a flexible object carried by said hollow body in such proximity to said corresponding orifices as to be operated upon by the forced air, and whistling means acted on by said air, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,102,271. PNEUMATIC TOOL. HARRY S. HUNTER, Pittsburgh, Pa. Filed Sept. 18, 1913. Serial No. 790,418. (Cl. 121—20.)



1. The combination with the cylinder and blow-imparting piston of a portable pneumatic tool, of a lock device carried by the tool for holding the piston inoperative, and means actuated by pressure of the tool against the work for releasing the lock.

2. In a pneumatic tool, the combination of a cylinder, a blow-imparting piston movable therein, a lock device adapted to hold the piston inoperative, and lock-actuating means movable longitudinally of the cylinder and adapted to be operated by pressure of the cylinder toward the work for releasing the lock.

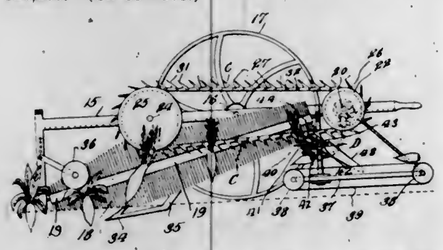
3. In a pneumatic tool, the combination of a cylinder, a blow-imparting piston movable therein, a lock device adapted to hold the piston inoperative, and lock-actuating means adapted to be operated by pressure on the cylinder toward the work for moving the lock out of piston-holding position.

4. In a pneumatic tool, the combination of a cylinder, a blow-imparting piston movable therein, a bolt adapted to project into position to engage the piston and hold it inoperative, and a backwardly movable bolt-operating device normally projecting beyond the forward extremity of the cylinder and adapted to be moved rearwardly by pressure of the cylinder toward the work and operate the bolt.

5. In a pneumatic tool, the combination of a cylinder, a blow-imparting piston movable therein, a movable device carried by the tool and adapted to be moved by pressure of the tool toward the work, a piston lock, and an operative connection between said movable device and the lock.

[Claims 6 to 15 not printed in the Gazette.]

1,102,272. BEET-HARVESTER. HANS PEDER JENSEN, San Francisco, Cal. Filed Mar. 12, 1914. Serial No. 824,200. (Cl. 55—108.)



1. In a beet harvester, coacting flexible brushes supported for rotation and operating to exert an upward sweep on the leafy tops of beet roots extracted from the ground.

2. In a beet harvester, coacting flexible brushes supported for rotation and exerting an inward and upward sweep, and an endless conveyer cooperating with said brushes.

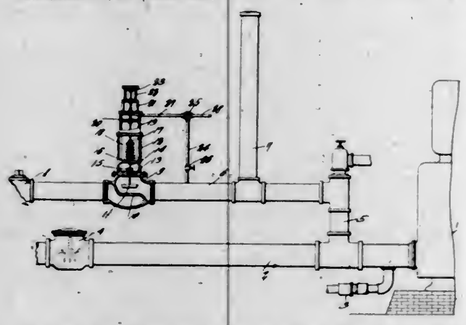
3. In a beet harvester, coacting flexible brushes supported for rotation and exerting an inward and upward sweep, an endless conveyer supported intermediate the brushes and having links provided with divergent prongs, and actuating means for the brushes and the conveyer.

4. In a beet harvester, coacting flexible brushes supported for rotation and having upwardly and rearwardly convergent axes, said brushes being tapering forwardly and rearwardly, and the lower portions of the forwardly tapering portions being substantially horizontal.

5. In a beet harvester, coacting flexible brushes supported for rotation and having an inward and upward sweep, the axes of said brushes converging upwardly and rearwardly, and said brushes having forwardly and rearwardly tapering portions, the lower portions of the forwardly tapering portions being substantially horizontal, and the rearwardly tapering portions of said brushes being substantially in contact throughout.

[Claims 6 to 12 not printed in the Gazette.]

1,102,273. RELIEF VALVE AND SYSTEM FOR MOTOR OR OTHER DRIVEN PUMPS. GEORGE WALTER JOHNSON, Lufkin, Tex. Filed Dec. 12, 1912. Serial No. 736,435. (Cl. 103—85.)



1. In a pressure relief system, a pump, a conduit leading therefrom, a check valve in said conduit, a branch conduit leading from said first conduit intermediate of the pump and check valve, a valve casing mounted in said branch conduit between the adjustable valve and the connection of the branch conduit to the main conduit, a frame carried by said valve casing, and having a cylinder mounted thereon, a stem mounted concentrically of the cylinder and projecting into the valve casing, a valve upon the lower end of the stem, a spring for normally holding the valve unseated, a piston upon the stem within the cylinder, and an auxiliary conduit connected to the branch conduit and to said cylinder, whereby the retardation of the pressure or flow of water within the branch conduit due to the adjustable valve and the passage of the fluid into the auxiliary conduit will actuate the piston to close the valve in opposition to the spring.

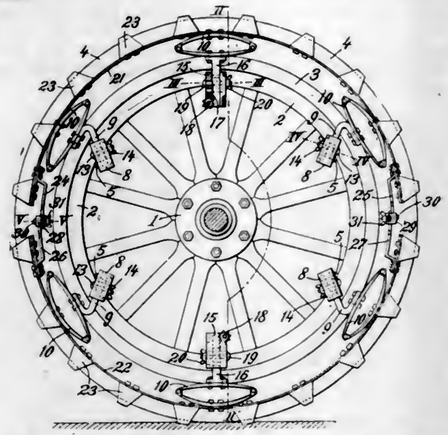
2. In a pressure relief system, a pump, a conduit leading therefrom, a check valve in said conduit, a branch conduit leading from said first conduit intermediate of the pump and check valve, a valve casing mounted in said branch conduit between the adjustable valve and the connection of the branch conduit to the main conduit, a frame carried by said valve casing and having a cylinder mounted thereon, a stem mounted concentrically of the cylinder and projecting into the valve casing, a valve upon the lower end of the stem, a spring for normally holding the valve unseated, a piston upon the stem within the cylinder, an auxiliary conduit connected to the branch conduit and to said cylinder, whereby the retardation of the pressure or flow of water within the branch conduit due to adjustable valve and the passage of the fluid into the auxiliary conduit will actuate the piston to close the valve in opposition to the spring, and a retarding means disposed upon the extreme upper end of the stem for timing the action of the opening and closing of the valve.

3. The combination with a pump, and a main conduit provided with a check valve, of a pressure relief attachment for the pump, including a branch conduit connected to the main conduit intermediate of the pump and check valve, an adjustable valve disposed in the branch conduit for regulating the flow of fluid through the branch conduit, a valve casing disposed in the branch conduit between the adjustable valve and the connection of the branch conduit to the main conduit, a valve mounted in said casing, a stem connected to said valve and extending exteriorly of the casing, a cylinder supported from the valve casing, a piston mounted in said cylinder and connected to the valve stem, a spring mounted upon the valve stem between the valve casing and cylinder, said spring normally exerting a tension to hold the valve unseated, and a valve controlled auxiliary conduit connected to the branch conduit and to the cylinder whereby the cylinder actuates the valve in opposition to the spring due to the retardation of the flow of water by the adjustable valve and the increase of pressure within the branch conduit.

4. The combination with a pump, a main conduit provided with a check valve, of a pressure relief attachment for the pump, including a branch conduit connected to the main conduit intermediate of the pump and check valve, an adjustable valve disposed in the branch conduit for regulating the flow of liquid through the branch conduit, a valve casing disposed in the branch conduit between the adjustable valve and the connection of the branch conduit to the main conduit, a valve mounted in said casing, a stem connected to said valve and extending exteriorly of the casing, a cylinder supported from the valve casing, a piston mounted in said cylinder and connected to the valve stem, a spring mounted upon the valve stem between the valve casing and cylinder, said spring normally exerting a tension to hold the valve unseated, a valve controlled auxiliary conduit connected to the branch conduit and to the cylinder, whereby the cylinder actuates the valve in opposition to the spring due to the retardation of the flow of liquid by the adjustable valve and the increase of pressure thereof within the branch conduit, a cylinder mounted upon and carried by the first cylinder, a valve stem extending concentrically thereinto, said cylinder containing a liquid, and a piston mounted in said last cylinder and constituting with the liquid therein a retarding means for the valve.

1,102,274. TRACTION DEVICE FOR VEHICLE-WHEELS. THOMAS H. KELLY, New York, N. Y. Filed Apr. 4, 1913. Serial No. 758,753. (Cl. 21—209.)

1. In a traction device for vehicle wheels, road-engaging means, a plurality of segmental straps carrying said road-engaging means, and means for mounting said straps upon a vehicle wheel and for adjusting the same radially with respect to said wheel at two diametrically opposite points and in a direction inclined to a radius at an intermediate point.



2. In a traction device for vehicle wheels, road-engaging means, a plurality of overlapping, substantially semi-circular segmental straps carrying said road-engaging means, and means for resiliently mounting said straps upon a vehicle wheel and for adjusting the same with respect to said wheel to change the area inclosed thereby without loss of circularity.

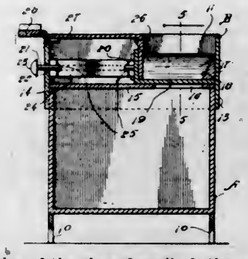
3. In a traction device for vehicle wheels, road-engaging means, a plurality of segmental straps carrying said road-engaging means, and means for resiliently mounting said straps upon a vehicle wheel substantially concentric with the periphery of the tire thereof but laterally offset therefrom, and for adjusting the same radially with respect to said wheel at two diametrically opposite points and in a direction inclined to a radius at an intermediate point.

4. In a traction device for vehicle wheels, a plurality of segmental straps, means for mounting said straps upon a vehicle wheel including brackets secured to the wheel having portions laterally offset therefrom, road-engaging members secured to said straps, and means for adjusting said members upon said brackets in a plurality of directions, some of which are inclined to a radius to cause the straps to inclose a varying area without loss of circularity.

5. In a traction device for vehicle wheels, a pair of semi-circular segmental straps, road-engaging means carried thereby, and a plurality of means for connecting each of said straps to a wheel, one of said means being located centrally with respect to said strap and being capable of adjustment radially with respect to the wheel, and another of said means being located adjacent to the end of said strap and being capable of adjustment in a direction inclined to a radius.

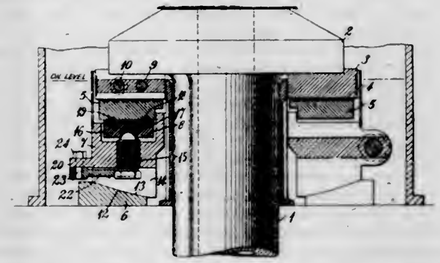
1,102,275. GARBAGE-RECEPTACLE. RALPH E. KIME, Fostoria, Ohio. Filed May 26, 1913. Serial No. 769,953. (Cl. 220—115.)

1. In a device of the class described, the combination of a receptacle including upper and lower detachable sections, the upper section having its side portions telescopically engaged over the side walls of the lower section, a bottom included in the upper section and provided with an opening said bottom engaging the upper edges of the side members of the lower section and resting thereon, a slide plate mounted in the upper section above the bottom for closing said opening, a rod having one end secured to said plate and slidable through an opening in a side wall of the upper section, a bow spring having its terminals provided with openings through which said rod is engaged, said spring bearing respectively against a side wall of the upper section against the slide plate and normally holding the latter in position to close the opening, a stripping member engaging the slide plate and adapted to remove material therefrom when said plate is moved from closing relation with respect to the opening in the bottom, and a hinge cover for closing the upper end of said upper section.



2. In a device of the class described, the combination of a receptacle, a horizontal partition in said receptacle provided with an opening, a vertical partition in the receptacle above the horizontal partition and having its lower edge spaced from the upper side of the horizontal partition, a slide mounted in the receptacle for controlling said opening and movable between the horizontal and vertical partition with its upper side in engagement with the lower edge of the vertical partition, means for normally holding said slide in position to close the opening, and a hinged cover for closing said receptacle.

1,102,276. THRUST-BEARING. ALBERT KINGSBURY, Pittsburgh, Pa. Filed July 19, 1912. Serial No. 710,496. (Cl. 64—25.)



1. A thrust bearing comprising a movable member having a bearing surface, a plurality of relatively stationary bearing shoes coöperating therewith, a supporting member therefor, and an interposed carrier for each shoe tiltingly mounted on the supporting member and arranged to prevent the distortion of the shoe.

2. A thrust bearing comprising a plurality of contact shoes, a relatively stationary base and an interposed supporting block for each shoe tiltingly mounted on the base.

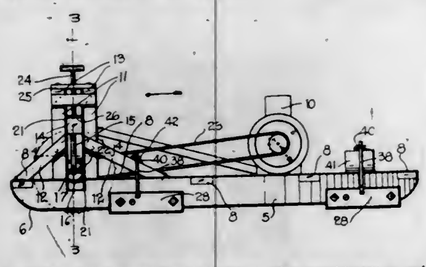
3. A thrust bearing comprising a plurality of bearing shoes, a relatively stationary base and an interposed carrier for each shoe tiltingly mounted on the base and arranged to support the shoe at a distance from its pivotal axis.

4. A bearing comprising a relatively rotatable bearing ring, a relatively stationary base, a plurality of radial shoes engaging the ring and an independently adjustable means between the base and each of the shoes, tiltingly supported on the base.

5. A bearing comprising a relatively rotatable member having a plane bearing surface, a relatively stationary base, a supporting ring pivotally mounted on the base, carrier blocks tiltingly mounted on the ring, and a plurality of radial contact shoes severally mounted on the carrier blocks, each shoe and its carrier block being independently adjustable toward and away from the bearing surface of the rotatable member.

[Claims 6 to 11 not printed in the Gazette.]

1,102,277. ICE-HARVESTING MACHINE. EUGENE LAKE, Cooperstown, N. Y. Filed Mar. 26, 1913. Serial No. 757,014. (Cl. 62—8.)



1. In an ice harvesting machine, the combination with a body, of a guide frame mounted upon said body, a beam vertically adjustable in said frame, a saw blade carrying shaft mounted upon the beam, means mounted on said frame and connected to the beam to vertically adjust the shaft carried thereby, and operating means for said shaft mounted upon the body.

2. In an ice harvesting machine, the combination with a body, of a frame mounted thereon including spaced uprights, a beam vertically movable between said uprights, bearing standards carried by the beam, a saw blade carrying shaft mounted in said standards, means mounted upon the frame and connected to said beam to vertically adjust the same, means on the standards cooperating with means on said uprights to prevent transverse shifting movement of the beam, and operating means for the shaft mounted upon said body.

3. In an ice harvesting machine, the combination with a body, of spaced pairs of uprights mounted upon said body, a transversely disposed beam vertically movable between the uprights of each pair, bearings carried by the beam, a saw blade carrying shaft mounted in said bearings, a roller mounted upon each of the bearings, a vertically disposed guide strip secured to one of the uprights of each pair engaged by said rollers, means for vertically adjusting the beam between the uprights and operating means for said shaft mounted upon the body.

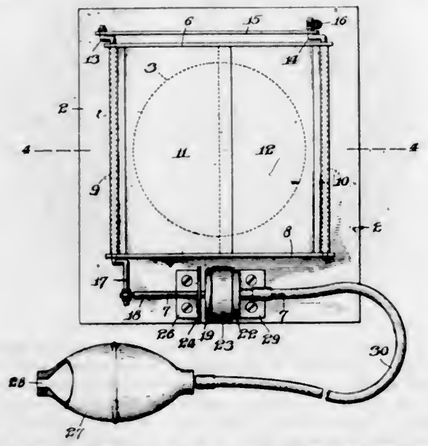
4. In an ice harvesting machine, the combination with a body, of a guide frame mounted upon said body, a transversely disposed beam vertically movable in the guide frame, bearings carried by said frame, a saw blade-carrying shaft mounted in the bearings, vertically disposed spaced metal guide strips arranged in pairs upon said frame, a grooved roller mounted upon each of the bearings to engage one of said guide strips, each bearing being also provided with a groove to receive the other guide strip, means for vertically adjusting the beam in said frame, and operating means for the shaft mounted upon the body.

1,102,278. CAMERA-SHUTTER. ALBERT E. LIPP, Philadelphia, Pa. Filed May 6, 1912. Serial No. 695,589. (Cl. 95—54.)

1. The combination of a support having an exposure opening therein, a shutter movable to and from said opening, an air chamber having a flexible wall, a rod connected to and extending from said wall and operatively connected to said shutter, means operative to introduce air to and exhaust it from said chamber, and a baffle wall adjacent said flexible wall, said flexible wall being movable into engagement with said baffle wall.

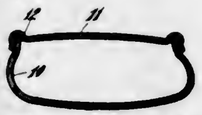
2. The combination of a support having an exposure opening therein, a shutter movable to and from said opening, an air chamber having a flexible wall, a baffle wall adjacent said flexible wall and having an opening therein, said flexible wall being movable into engagement with said baffle wall, a rod connected to said flexible wall and extending through said opening and operatively connected to said shutter, and means operative to introduce air to and exhaust it from said chamber.

3. The combination of a support having an exposure opening therein, a shutter movable to and from said opening, an air chamber having a flexible wall, a rod connected to and extending from said wall and operatively connected to said shutter, means operative to introduce air to and exhaust it from said chamber, and a concave baffle wall adjacent said flexible wall, said flexible wall being movable into engagement with said baffle wall.



4. The combination of a support having an exposure opening therein, a shutter movable to and from said opening, an air chamber having a flexible wall, a concave baffle wall adjacent said flexible wall and having an opening therein, said flexible wall being movable into engagement with said baffle wall, a rod connected to said flexible wall and extending through said opening and operatively connected to said shutter, and means operative to introduce air to and exhaust it from said chamber.

1,102,279. MOCCASIN. TEOFIL LUZENSKI, Berlin, Wis., assignor to T. Luzenski Co., Berlin, Wis., a Copartnership consisting of Herman Miller, Albert Wilcox, and Teofil Luzenski. Filed Feb. 24, 1914. Serial No. 820,384. (Cl. 36—11.)



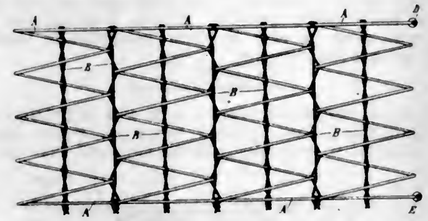
1. A moccasin having a seam in which the upper is folded around the edge of the vamp and is held thereto by stitches passing through opposite sides of the fold of the upper and through the edge of the vamp therebetween.

2. A moccasin having a seam in which the edge of the upper bends upwardly and then downwardly to form a crease with the edge of the vamp held between the bends of the upper forming the crease and a line of oblique stitches passing through the upwardly bent portion and the downwardly bent portion of the edge of the upper and through the edge of the vamp therebetween.

3. A moccasin having a seam in which the vamp has an upwardly extending edge and the upper has its edge folded upwardly and then over the edge of the vamp and then downwardly with a line of oblique stitching extending twice through the edge of the upper at its upwardly folded portion and at its downwardly folded portion and through the edge of the vamp therebetween.

1,102,280. SPRING-MATTRESS AND SPRING SEATING-SURFACE. JOHN EDMUND MARSHALL, Sandiacre, England. Filed Oct. 27, 1913. Serial No. 797,630. (Cl. 5—29.)

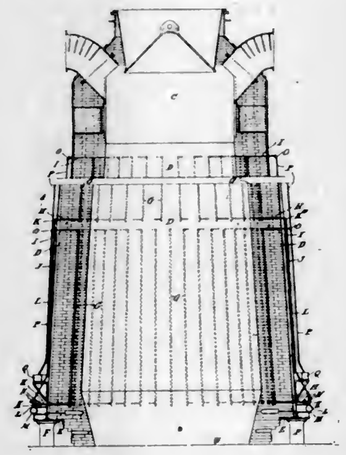
1. A spring seating surface built up of a series of vertical springs secured together by connecting the coils of each of the springs to the coils of the contiguous springs by means of a length of flexible non-metallic material engaging alternately with the coils of both springs, substantially as described.



2. A spring seating surface, comprising a series of helical springs arranged side by side, and stretches of flexible material connecting the adjacent portions of the said springs and extending longitudinally of the springs between their coils.

3. A spring seating surface built up of a series of vertical springs secured together by connecting the coils of each of the springs to the coils of the contiguous springs by means of a length of flexible non-metallic material which is first interlaced with the coils of both springs then returned and carried around itself between the coils and the two ends secured together substantially as described.

1,102,281. COOLING SYSTEM FOR BLAST-FURNACES. JOHN HUGH MEANS, Mayville, Wis. Filed June 21, 1912. Serial No. 705,057. (Cl. 122—6.)



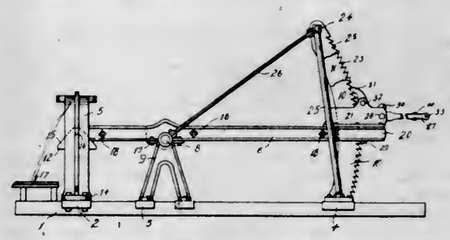
1. A cooling system for blast furnaces comprising a series of single vertically disposed jointless water cooled pipes embedded at intervals in the inwall above the bosh of a furnace and having at their lower and upper ends respectively inlet and outlet branches formed integrally therewith and extending directly outward therefrom through said inwall, the inlet branches being provided with separate valve controlled water supply connections, and the outlet branches being provided with separate discharge connections, all outside of said inwall.

2. A cooling system for blast furnaces comprising a series of vertically disposed water pipes embedded at intervals within and around the inwall of a furnace and each having inlet and outlet branches at its lower and upper ends respectively extending directly outward through the inwall, an annular water supply pipe connected with the inlet branches of the several cooling pipes outside of the furnace, an open trough encircling the furnace, and discharge pipes leading downwardly from the outlet branches outside the furnace and opening into said trough.

3. A cooling system for blast furnaces comprising single vertically disposed cooling pipes embedded at intervals within and around the inwall of a furnace, a water supply pipe having separate valve controlled connections with the lower ends of the several cooling pipes outside the furnace, an open trough surrounding the furnace, and discharge connections leading from the upper ends of the cooling pipes and opening in clear view into said trough.

4. A cooling system for blast furnaces comprising a water supply pipe surrounding the furnace, a number of series arranged one above another of separate vertically disposed cooling pipes embedded at intervals within and around the inwall of a furnace above the bosh and each having a valve controlled connection at its lower end with said supply pipe and a discharge connection at its upper end.

1,102,282. BALING-COMPRESS. ISHAM MIKEAL, Mountain Springs, Tex. Filed Apr. 16, 1913. Serial No. 761,561. (Cl. 100—4.)



1. In a baling compress, the combination of a frame, a carrier disposed in the frame, elongated levers swingingly carrying the carrier, a fulcrum support for the levers from which they extend outward, rack bars disposed at the free ends of the levers, and pawl and lever devices carried by the free ends of the levers and operating on the rack bars.

2. In a baling compress, the combination of a frame, a carrier disposed in the frame, elongated levers swingingly carrying the carrier, a fulcrum support for the levers from which they extend outward, rack bars disposed at the free ends of the levers, and pawl and lever devices carried by the free ends of the levers and operating on the rack bars, said pawl and lever devices being arranged in opposed relation whereby one is constructed for swinging the free ends of the levers upward and the other for swinging said ends downward.

3. In a baling compress, the combination of a frame, a carrier disposed in the frame, elongated levers swingingly carrying the carrier, a fulcrum support for the levers from which they extend outward, boxes mounted on the free ends of the levers, rack bars fixed vertically and received in the boxes, a lever mounted in each box, a dog carried by each lever and engaging the rack bar thereof, and a pawl mounted adjacent each box and engaging the rack bar thereof.

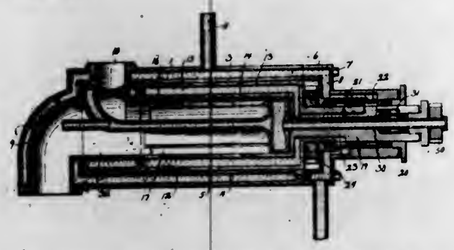
4. In a baling compress, the combination of a frame, a carrier disposed in the frame, elongated levers swingingly carrying the carrier, a fulcrum support for the levers from which they extend outward, boxes mounted on the free ends of the levers, rack bars fixed vertically and received in the boxes, a lever mounted in each box, a dog carried by each lever and engaging the rack bar thereof, and a pawl mounted adjacent each box and engaging the rack bar thereof, the elongated levers having provision for locking the dogs and pawls out of engagement with the rack bars.

5. In a baling compress, the combination of a frame, a carrier disposed in the frame, elongated levers swingingly carrying the carrier, a fulcrum support for the levers from which they extend outward, segmental vertical rack bars fixed in position, the outer ends of the levers being bifurcated and embracing the rack bars, and means mount-

ed on the bifurcated ends of the levers and engaging the rack bars for swinging the free ends of the levers up and down.

[Claims 6 and 7 not printed in the Gazette.]

1,102,283. VALVE FOR INTERNAL-COMBUSTION-ENGINE CYLINDERS. PAUL W. MILBURN, Spokane, Wash. Filed Oct. 11, 1912. Serial No. 725,236. (Cl. 123—190.)



1. A rotary valve, comprising a casing having a port therein, a sleeve rotating in said casing having a plurality of ports adapted to successively register with the port in the casing, a rotating member within the sleeve dividing the sleeve into a plurality of compartments, and means for continuously driving the sleeve and the dividing member.

2. A rotary valve comprising a casing, a sleeve rotating therein, a longitudinally disposed member dividing the sleeve into a plurality of compartments, and means for continuously rotating said sleeve and dividing member.

3. A rotary valve comprising a casing, having a port therein, a sleeve rotating in said casing having a plurality of ports therein adapted to be brought into and out of register with the port in the casing, a rotating member within the sleeve comprising a longitudinally disposed body portion having oppositely arranged lateral wings on its longitudinal edges adapted to divide the sleeve into two compartments, and means for rotating said sleeve and member.

4. A rotary valve comprising a casing, a sleeve rotatable therein, an integral spindle on the sleeve and projecting through the casing, a gear on said spindle for rotating the sleeve, a longitudinally disposed member dividing the sleeve into a plurality of compartments and rotatable within the sleeve, an integral spindle on said dividing member extending through said spindle on the sleeve and the casing, and a gear on each of said spindles for rotating the sleeve and dividing member, respectively.

5. A rotary valve comprising a casing formed of spaced walls to form a water chamber, having a water inlet pipe, a sleeve rotatable in said casing formed of spaced walls to form a water chamber, the water chamber in the sleeve being connected with the water chamber in the casing, and an outlet pipe connected with said casing.

[Claims 6 to 9 not printed in the Gazette.]

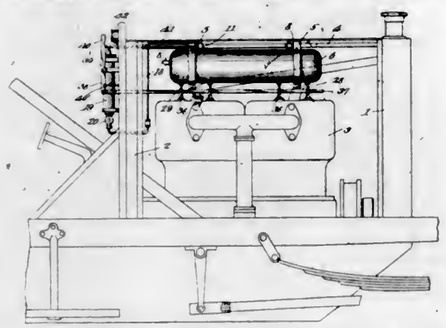
1,102,284. BRUSH HOLDER OR RECEPTACLE. GEORGE H. MILLER, Chicago, Ill. Filed Dec. 5, 1913. Serial No. 804,826. (Cl. 132—11.)



1. An open top brush depository comprising a magazine, a plurality of independent brush receptacles open only at the top removably positioned within the magazine and a perforate cover for each receptacle independently hinged to said magazine.

2. In a brush depository, the combination of a back plate, a box like structure, open at its top, secured thereto; a plurality of rectangular receptacles open only at the top, independently insertible in said structure and a notched cover for each receptacle independently hinged to said box like structure.

1,102,285. PRIMING MECHANISM FOR EXPLOSIVE-ENGINES. MARY PIERSON MITCHELL, Eaton, Ohio. Filed Mar. 6, 1913. Serial No. 752,524. (Cl. 123—180.)



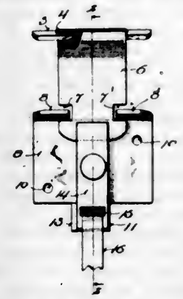
1. The combination with an explosive engine, of a priming device therefor, including a priming fluid holding reservoir, a conduit for directing a charge to the engine leading from the reservoir, a manually controlled valve mounted in the conduit, means for supplying air pressure to the reservoir, and a conduit within the reservoir forming a continuation of the first conduit, the last mentioned conduit being provided with a fluid admission port in its lower end within the reservoir and an air admitting port at its upper end, whereby a carbureted air is supplied through the conduits to the engine.

2. The combination with a multi-cylinder explosive engine, of a priming device therefor, including a priming fluid holding reservoir, a conduit for each cylinder leading from the reservoir to its respective cylinder, a valve mounted in each conduit, manually controlled means for actuating the valves in pairs so that two cylinders at a time will be charged, and a conduit within the reservoir and forming a continuation of the first mentioned conduit, there being one to each of the first mentioned conduits, said conduit within the reservoir being provided with a fluid admission port in its lower end and with an air admitting port at its upper end, whereby carbureted air is supplied through the conduits and valves to the engine.

3. The combination with an explosive engine, of a priming device therefor, including a priming fluid holding reservoir, a conduit for directing a charge to the engine leading from the reservoir, a manually controlled valve mounted in the conduit, means for supplying air pressure to the reservoir, a conduit within the reservoir forming a continuation of the first conduit, the last mentioned conduit being provided with a fluid admission port in its lower end within the reservoir and an air admitting port at its upper end, whereby carbureted air is supplied through the conduits to the engine, and a check valved conduit connected with the cylinder of the engine and the reservoir for supplying pressure from the cylinder to the reservoir.

1,102,286. BOX-FASTENER. LOBEGOTT MOLLART, Watertown, Wis., assignor to G. B. Lewis Company, Watertown, Wis. Filed Feb. 9, 1914. Serial No. 817,566. (Cl. 70—3.)

1. A fastener comprising a plate-member attachable to the lid of a box to project at one end therefrom, another plate-member attachable to the front of the box-body and having a recessed upper outer flange, a hasp-member having its upper end in swinging connection with the outer end of the box-lid plate-member and which is engageable with the recess of the flange of the box-body plate-member to extend under said flange, and a hasp-facing gravity latch-member in pivotal connection with said box-body plate member.



2. A fastener comprising a plate-member attachable to the lid of a box to project at one end therefrom, a hasp-member hung in connection with the outer end of said plate-member and having the longitudinal edges thereof angularly notched adjacent to its lower end, another plate-member attachable to the front of the box-body and having an upper outer flange provided with a recess with which the narrow portion of the hasp-member between its notches is engageable, and a hasp-facing gravity latch-member in pivotal connection with the box-body plate-member.

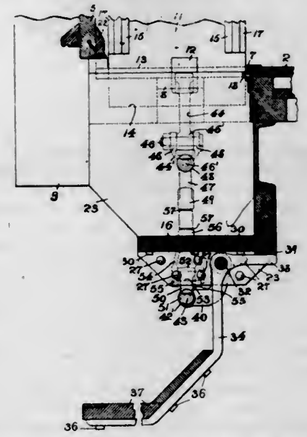
3. A fastener comprising a plate-member attachable to the lid of a box to project at one end therefrom, another plate-member attachable to the front of the box-body and having a recessed upper outer flange and a depending lug provided with an outer stop-flange; a hasp-member having its upper end in swinging connection with the outer end of the box-lid plate-member and which is engageable with the recess of the flange of the box-body plate-member to extend under said flange, and a hasp-facing gravity latch-member in pivotal connection with said box-body plate member, said stop-flange serving to limit swing of the latch-member in one direction.

4. A fastener comprising a plate-member attachable to the lid of a box to project at one end therefrom, another plate-member attachable to the front of the box-body and having a recessed upper outer flange and a depending apertured lug, a hasp-member having its upper end in swinging connection with the outer end of the box-lid plate-member and which is engageable with the recess of the flange of the box-body plate-member to extend under said flange, and a hasp-facing gravity latch-member in pivotal connection with said box-body plate member, the latch-member being provided with an aperture registrable with the one in the lug of said box-body plate.

1,102,287. COMBINATION DOOR AND DOOR-STEP FOR PLATFORMS OF CARS. EDVARD M. MOLLER, Jersey City, N. J. Filed Feb. 26, 1914. Serial No. 821,244. (Cl. 105—84.)

1. In combination with the platform of a car, said platform being provided with an opening, a trap-door pivotally mounted in said opening, a bolt slidably mounted in the frame-work of the car for normally retaining the trap-door in its closed position, means for releasing said bolt from its locked engagement with the trap-door, and a counterbalancing step coöperating with the trap-door for automatically raising the same as the step is lowered when the trap-door is released from its engagement with said bolt.

2. In combination with the platform of a car, said platform being provided with an opening, a trap-door pivotally mounted in said opening, a bolt slidably mounted in the frame-work of the car for normally retaining the trap-door in its closed position, said bolt being provided with an elongated opening, and means for releasing said bolt from its locked engagement with the trap-door, consisting of a rock-shaft, a crank mounted upon said shaft, said crank having its free end-portion extending into the opening of said bolt, a second crank also mounted upon said shaft, a lever pivotally connected with said last-mentioned crank, a link pivotally connected with said lever, said link being provided with a laterally extending member formed with an elongated opening, a spindle, a handle and a crank-arm mounted upon said spindle, and a stud on said crank-arm, said stud extending into the opening of the laterally extending member of said link, substantially as and for the purposes set forth.



3. In combination with the platform of a car, said platform being provided with an opening, a rock-shaft mounted beneath said opening, a trap-door mounted upon said rock-shaft, a second rock-shaft also mounted beneath said opening, a step carried by said second rock-shaft, and mechanism between said two rock-shafts coöperating with said shafts that when the step is lowered the trap-door is raised, and vice versa.

4. In combination with the platform of a car, said platform being provided with an opening, a rock-shaft mounted beneath said opening, a trap-door mounted upon said rock-shaft, a second rock-shaft also mounted beneath said opening, a step carried by said second rock-shaft, and mechanism between said two rock-shafts, cooperating with said shafts that when the step is lowered the trap-door is raised, and vice versa, said mechanism consisting of a crank-arm secured upon one of said rock-shafts, a link secured upon the other rock-shaft, a yoke pivotally connected with said link, a second yoke pivotally connected with said crank-arm, a third yoke pivotally connected with said first-mentioned yoke, and a connecting rod between said second and third-mentioned yokes.

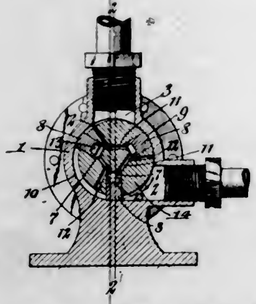
5. In combination with the platform of a car, said platform being provided with an opening, a trap-door pivotally mounted in said opening, a fixed step beneath said opening, a rock-shaft mounted beneath said fixed step, hangers suspended from said rock-shaft, a step carried by said hangers, means for rocking said shaft, and a stop-arm extending from said shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,102,288. ROTARY PUMP. JOHN H. MYERS, Buffalo, N. Y. Filed Mar. 20, 1911. Serial No. 615,453. (Cl. 103—44.)

1. A rotary pump comprising a casing having an inlet and an outlet spaced apart, a rotatable member therein, said rotatable member having a plurality of guideways, distributing passages connecting the inner ends of said guideways in a plane between the ends of said rotatable

member, a pressure port in said rotatable member extending from the periphery thereof to one of said distributing passages in the plane of the latter, and a piston or wing movable inwardly and outwardly in each of said guideways.

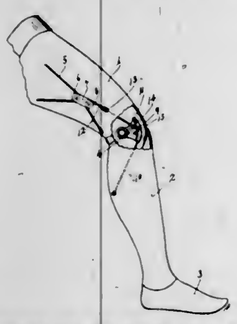


2. A rotary pump comprising a cylinder having inlet and outlet ports, a rotatable member eccentrically mounted in the cylinder and having a plurality of communicating guideways, said guideways being in communication centrally between the ends of said rotatable member, pressure ports leading inward from the periphery of said rotatable member between said guideways and being in communication with the latter, said pressure ports being arranged centrally between the ends of said rotatable member, and pistons or wings guided in said guideways and movable inwardly and outwardly therein.

3. A rotary pump comprising a cylinder having heads provided with depressions on their inner faces, a rotatable member eccentrically mounted in said cylinder and having a plurality of guideways extending inwardly from the periphery and being in communication with the depressions in said heads, pressure ports leading inwardly from the periphery of said rotatable member and having communication with the inner ends of said guideways at points centrally between said depressions, and pistons or wings movable inwardly and outwardly in said guideways.

4. A rotary pump comprising a cylinder having heads at opposite ends provided with depressions on their internal faces, a rotatable member eccentrically mounted in said cylinder and provided with a plurality of guideways in communication at opposite ends with said depressions, distributing passages connecting said guideways centrally between their ends, pressure ports leading inwardly from the periphery of said rotatable member and having their inner ends connecting with said distributing passages, and pistons or wings movable inwardly and outwardly in said guideways.

1,102,289. ARTIFICIAL LEG. ANTON M. OPSAL, Minneapolis, Minn. Filed Mar. 5, 1914. Serial No. 822,552. (Cl. 3—3.)

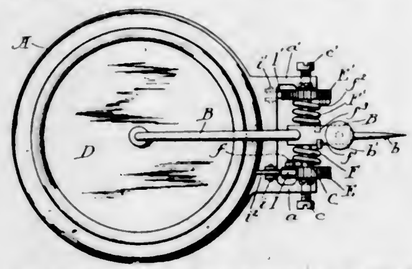


1. In an artificial leg, the combination with upper and lower leg sections connected by a knee joint, of a rocker within the artificial leg pivotally mounted at the knee joint, a connection between said rocker and the lower leg section for swinging the same forward, and a flexible strap connected to said rocker, passed outward through a perforation in the side of the upper leg section and attached to said upper leg section.

2. In an artificial leg, the combination with upper and lower leg sections connected by a knee joint, of a rocker within said leg pivotally mounted at the knee joint, a strap secured at its lower end to the back of the lower leg section, and at its upper end rocked on said rocker and secured thereto, a flexible strap passed through a perforation in the side of the upper leg section and attached at its inner and outer ends, respectively, to said rocker and to said upper leg section, and a shoulder strap connection including a sheave engaged with the looped outer portion of said latter noted strap.

3. In an artificial leg, the combination with upper and lower leg sections connected by a knee joint, of a rocker within said leg pivotally mounted at the knee joint, a strap secured at its lower end to the back of the lower leg section, and at its upper end rocked on said rocker and secured thereto, a flexible strap passed through a perforation in the side of the upper leg section and attached at its inner and outer ends, respectively to said rocker and to said upper leg section, and a shoulder strap connection including a sheave engaged with the looped outer portion of said latter noted strap, the connection between the said latter noted strap and said rocker being adjustable.

1,102,290. REPRODUCER FOR PHONOGRAPHS. SIMON D. PADDACK, New York, N. Y. Filed June 16, 1913. Serial No. 774,051. (Cl. 181—11.)



1. In a reproducer for phonographs, or the like, the combination of a sound box, a spindle mounted in cooperative relation thereto, a stylus bar pivoted on said spindle, and helical springs positioned coaxially with the spindle and coöperating with the stylus bar whereby said bar may be balanced on its axis of oscillation.

2. In a reproducer for phonographs, or the like, the combination of a sound box, a spindle mounted in coöperative relation thereto, a stylus bar pivoted on said spindle, helical springs positioned coaxially with the spindle and coöperating with the stylus bar, and means coöperating with said springs for placing them under opposed tension whereby said bar may be balanced on its axis of oscillation.

3. In a reproducer for phonographs, or the like, the combination of a sound box, a spindle mounted in cooperative relation thereto, a stylus bar pivoted on said spindle, helical springs positioned coaxially with the spindle and coöperating with the stylus bar, adjusting means coöperating with said springs for placing them under opposed tension whereby said bar may be balanced on the spindle, and means for locking said controlling means against inadvertent movement.

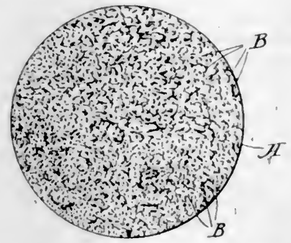
4. In a reproducer for phonographs, or the like, the combination of a sound box, a spindle mounted thereon, a stylus bar carried by said spindle, helical springs positioned coaxially with the spindle and secured to the stylus bar at their ends adjacent to said bar, adjusting means mounted on the spindle and coöperating with the

opposite ends of said springs for placing them under opposed tensions, and means independent of said spindle and coöperable with the adjusting means, whereby said adjusting means may be locked against inadvertent movement.

5. In a reproducer for phonographs, or the like, the combination of a sound box, a spindle mounted thereon, a stylus bar carried by said spindle, helical springs positioned coaxially with the spindle and secured to the stylus bar at their ends adjacent to said bar, adjusting means rotatably mounted on the spindle and coöperating with the opposite ends of said springs for placing them under opposed tensions, and means independent of said spindle and coöperable with the adjusting means, whereby said adjusting means is automatically locked against inadvertent rotation.

[Claims 6 and 7 not printed in the Gazette.]

1,102,291. SOUND-PRODUCING DIAPHRAGM. SIMON D. PADDACK, New York, N. Y. Filed June 16, 1913. Serial No. 774,052. (Cl. 181—10.)



1. As a new article of manufacture, a sound producing diaphragm consisting of a suitable base having waxy material and a hardening agent for the waxy material incorporated therein.

2. As a new article of manufacture, a sound producing diaphragm consisting of a suitable non-metallic base having waxy material and a hardening agent for the waxy material incorporated therein.

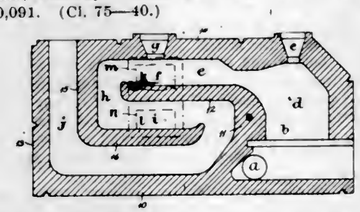
3. As a new article of manufacture, a sound producing diaphragm consisting of blotting paper having waxy material and a hardening agent for the waxy material incorporated therein.

4. As a new article of manufacture, a sound producing diaphragm consisting of a suitable base to which has been applied a composition containing wax and resin.

5. As a new article of manufacture, a sound producing diaphragm consisting of a suitable base to which has been applied a composition containing wax, resin and glue.

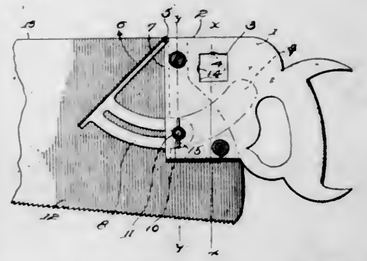
[Claims 6 to 8 not printed in the Gazette.]

1,102,292. FURNACE. CARL EMIL PEDERSEN, Christiania, Norway. Filed Feb. 21, 1914. Serial No. 820,091. (Cl. 75—40.)



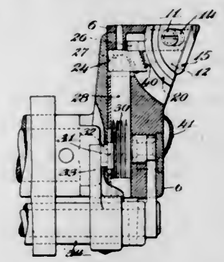
A furnace having a fire box near one end thereof and a discharge flue near the opposite end thereof, one end wall of said furnace forming one wall of said flue, an angular partition in said furnace having one branch parallel to said furnace end wall to form the opposite wall of said flue, and a second branch forming an article support extending toward but stopping short of said fire box, said second branch being between and spaced away from the base and the top of the furnace, and a second angular partition having one branch forming one wall of the fire box and a second branch forming an article support extending toward but stopping short of the first mentioned branch of said first mentioned partition, said last named article support being between and spaced away from the top of the furnace and the first mentioned article support.

1,102,293. SAW-HANDLE. HALVOR PEDERSEN, Jersey City, N. J. Filed Feb. 1, 1911. Serial No. 605,934. (Cl. 33—93.)



In a device of the class described, the combination with a handle, a saw blade carried thereby, said handle and blade provided with straight edges, of a plurality of blades carried by said handle, each blade formed from a blank and comprising a body provided with a laterally-bent flange, said flange provided at one end with a curved shoulder, said body provided with an extended portion coiled to form a pivot eye, said curved shoulder resting upon said pivot eye and forming a means for preventing the pivot eye from springing open, a pivot pin passing through said pivot eye and engaging said handle for pivotally supporting the blades, a slotted curved arm formed upon each body, said handle provided with curved pockets for the reception of said arms.

1,102,294. CHANNELING-MACHINE. FREDERICK H. PERRY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 24, 1913. Serial No. 743,912. (Cl. 12—18.)



1. A channeling machine, having, in combination, a sole support mounted to rock to accommodate itself to the surface of the shoe sole, a knife carrier mounted in the support, means for adjustably securing the channel knife in the carrier, and mechanism for advancing and retracting the knife carrier during the operation on the sole.

2. A channeling machine, having, in combination, a carrier, a sole support provided with a guideway mounted to rock in the carrier to accommodate itself to the surface of the shoe sole, a knife carrying slide mounted in the guideway in the sole support, a slide mounted in the carrier, and connections between the slides permitting the rocking movement of the sole support.

3. A channeling machine, having, in combination, carrier, a sole support mounted to rock in the carrier to ac-

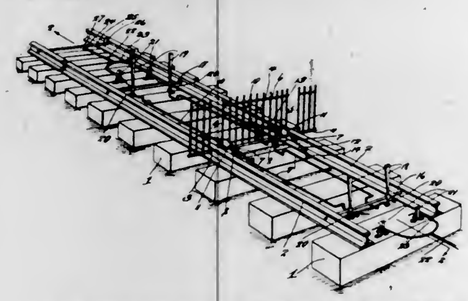
commodate itself to the surface of the sole, a slide mounted in the sole support, means for clamping a knife in the slide, a slide mounted in the carrier, and a segmental rib and slot connection between the slides.

4. A channeling machine, having, in combination, a carrier, a sole support mounted to rock in the carrier to accommodate itself to the surface of the sole, a knife carrying slide mounted in the sole support, a slide mounted in the carrier, connections between the slides permitting the rocking movement of the sole support, a transverse slot in the second slide, and a crank pin engaging the slot to advance and retract the slides.

5. A channeling machine, having, in combination, a sole support, a carrier therefor, a rock shaft in the carrier provided with a crank, a knife mounted in the sole support, and connections between the crank and the knife through which the knife is advanced and retracted by the crank.

[Claims 6 to 12 not printed in the Gazette.]

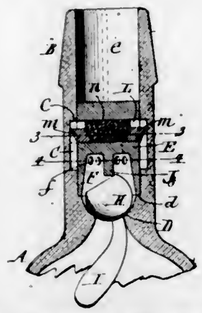
1,102,295. CATTLE-GUARD. FRANCIS M. PETTY, Swink, Okla. Filed May 22, 1913. Serial No. 769,147. (Cl. 39—42.)



1. In combination with a falling barrier disposed transversely of the rails of a railway, said barrier comprising a rock shaft having upwardly extending members and downwardly extending arms, springs connecting said members and the ties of the railing upon each side of the barrier thereby constituting means for holding the barrier in a vertical position, a pair of rock rods mounted in bearings of the rails and parallel with the barrier one upon each side thereof, each having upwardly and downwardly extending arms, and rod connections between the downwardly extending arms of the barrier and the downwardly extending arms of the rock rods, the upwardly extending arms of the rock rods adapted to be contacted with by a moving train to actuate the barrier, spring-tensioned latch members carried by the ties to be engaged by the upwardly extending arms of the rock rods to hold the barrier down, and means including a rod having a forked end connected to the latch members to release them from the arms of the rock rods to allow the barrier to return to its normal position.

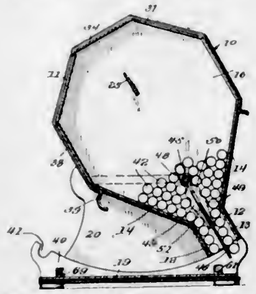
2. In combination with a falling barrier disposed transversely of the rails of a railway, said barrier comprising a rock shaft having upwardly extending members and downwardly extending arms, springs connecting said members and the ties of the railway upon each side of the barrier thereby constituting means for holding the barrier in a vertical position, a pair of rock rods mounted in bearings of the rails and parallel with the barrier one upon each side thereof, each having upwardly and downwardly extending arms, and rod connections between the downwardly extending arms of the barrier and the downwardly extending arms of the rock rods, the upwardly extending arms of the rock rods adapted to be contacted with by a moving train to actuate the barrier, devices to be engaged by the upwardly extending arms of the rock rods to hold the barrier down, and means remote from the devices to release them from the arms of the rock rods to allow the barrier to return to its normal position.

1,102,296. BOTTLE-STOPPER. JAMES SLOANE PORTER, Buffalo, N. Y. Filed Oct. 24, 1910. Serial No. 588,591. (Cl. 215—67.)



The combination of a bottle having its neck provided in the upper part of its bore with an enlargement forming a downwardly facing locking shoulder and in the lower part of its bore with a valve seat, a valve engaging said seat, a plug arranged in the bore of said neck above said seat and provided with a diametrical opening in line with said shoulder, two locking dogs arranged in opposite ends of said opening and each when in its normal position having parallel vertical sides, a horizontal top and bottom, and inclined parallel ends and each of said dogs engaging its horizontal top with said shoulder, and a spring arranged in said opening between said dogs, each of said dogs being of diamond shape in a vertical cross section and adapted to have its outer end arranged parallel with the longitudinal axis of the bottle and in engagement with the bore of its neck while placing the plug in the neck.

1,102,297. HOLDER AND DELIVERER FOR DRINKING-STRAWS. ROBERT M. REID, Colorado Springs, Colo. Filed May 15, 1913. Serial No. 767,802. (Cl. 211—8.)



1. In a straw holder and deliverer, the combination with a container supported for oscillation and having a discharge opening; of means mounted in the opening for positively discharging the straws from the container directly upon the oscillation of the latter.

2. In a holder and deliverer for soda straws and the like, the combination with a supporting device; of a container pivotally mounted thereon and having a reduced neck portion provided with an opening, and means slidably arranged within said neck portion and positively shifted upon pivoting of the container to discharge a straw from the latter.

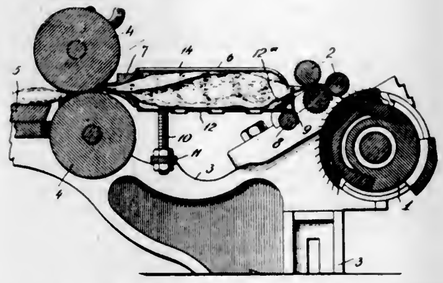
3. In a holder and deliverer for soda straws and the like, the combination with a supporting device; of a container pivotally mounted thereon and having a reduced neck portion provided with an opening, shifting means carried by the container and positively actuated from the supporting devices upon the container being pivoted, means arranged within said neck portion and connected to the shifting means to be positively shifted upon pivoting of the container to discharge a straw from the latter, and means normally preventing the escape of the straws.

4. In a straw holder and deliverer, the combination with a container supported for oscillation and having a discharge opening; of means for positively discharging the straws from the container upon the oscillation of the latter, guards having arcuate edge portions located closely adjacent to the discharge end of the container and provided with notches near their extremities for receiving a straw, and means for oscillating the container to either side of its normally vertical position.

5. In a holder and deliverer for soda straws and the like, the combination with a supporting device; of a container pivotally mounted thereon and having a reduced neck portion provided with an opening, means arranged within said neck portion and shifted upon pivoting of the container to discharge a straw from the latter, said means being adapted to agitate the straws within the container at the neck portion of the latter and forming a pair of throats through which the straws are fed in single file for distribution when the container is disposed at opposite limits of its movement.

[Claims 6 to 11 not printed in the Gazette.]

1,102,298. SLIVER-PAN FOR COMBING-MACHINES. ROBERT SCHOFIELD, New Bedford, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Sept. 13, 1911. Serial No. 649,063. (Cl. 19—6.)



1. A sliver pan for Heilman cotton combers comprising a floor portion having an integral inclined rib along its rear margin and opposite integral side walls converging toward the forward end of the pan, and a condensing device mounted on such forward end.

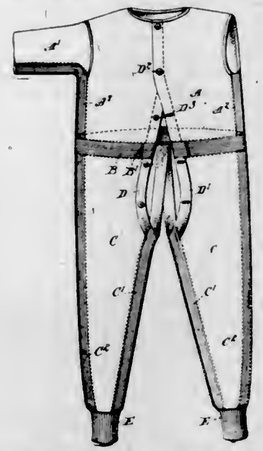
2. A sliver pan for Heilman combers comprising a generally triangular floor portion and side and end walls bent up in one piece from the floor portion and an inclined entrance rib bent up from the rear margin of the floor portion.

3. A sliver pan for Heilman combers, comprising a generally triangular pan having a floor portion, converging side walls bent up from the floor portion and an integral supporting lip along the rear margin of the floor portion having tabs struck out therefrom adapted to engage the pan support.

4. In a Heilman comber, a sliver pan adapted to be removably supported in a fixed position between the piecing and the calender rolls and consisting of a single floor portion bridging the space from one set of rolls to the other, and provided with downwardly and inwardly sloping side walls which converge toward said calender rolls, and a trumpet carried by said sliver pan at the said point of convergence.

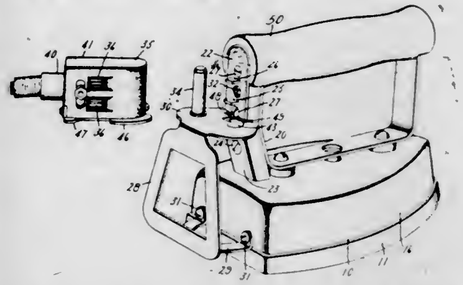
1,102,299. UNION GARMENT. JEREMIAH A. SCRIVEN, New York, N. Y. Filed May 22, 1908. Serial No. 434,238. (Cl. 2—144.)

A union garment comprising a relatively inelastic body portion and relatively inelastic leg sections, a horizontally disposed elastic waist band connecting said body portion and said leg sections, said garment having continuous longitudinal edges forming a continuous opening which at the front extends from the neck to the crotch and at the rear from the crotch to said elastic waist band, elastic insertions extending along the inside of the leg sections to said opening, and elastic insertions extending along the outside of said leg sections from the anklets to said elastic waist band and from said waist band to the arm pit region of the body portion whereby the entire garment be-



tween said waist band and said anklets and between the waist band and the arm pit region may yield in a direction transverse to the garment's length and edge strips extending along said longitudinal edges from the neck at the front to the elastic waist band at the rear and interrupted by said elastic waist band and by the elastic insertions which extend along the inside of the leg sections.

1,102,300. ELECTRIC FLAT-IRON. FRANK E. SHAILOR, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 19, 1913. Serial No. 762,217. (Cl. 219—25.)



1. The combination with an electrically heated flat-iron having fixed terminal contacts, of a vertically pivoted switch plug mounted upon said iron and carrying contacts adapted to engage said terminal contacts.

2. The combination with an electrically heated flat-iron having fixed terminal contacts, of a vertically pivoted removable switch plug supported by said iron and carrying contacts adapted to engage said terminal contacts.

3. The combination of an electrically heated flat-iron having contact terminals at the rear thereof and a switch plug freely pivoted adjacent said terminals and carrying contacts arranged to engage said terminals, whereby the switch plug is adapted to be manually operated to bring the contacts of the switch plug into or out of engagement with said terminals.

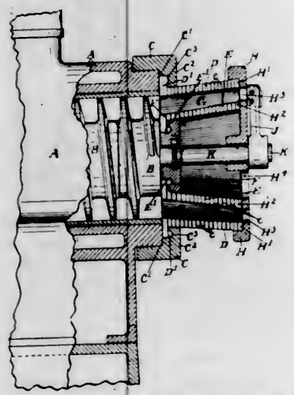
4. The combination of an electrically heated flat-iron having contact terminals mounted at the rear thereof and a switch plug pivotally supported adjacent said terminals and freely removable from the pivot in a given po-

sition with reference to the terminals and adapted in its movement to bring the contacts carried thereby into and out of engagement with the terminals, and means for preventing the removal of said switch from the pivot in closed circuit position.

5. The combination with an electrically heated flat-iron having contact terminals located at the rear of said flat-iron, a handle for said flat-iron and supports therefor, a supporting member attached to the rear handle support and a switching member pivotally supported thereby, said switching member carrying contacts adapted to engage with said terminal in one position of the said switching member.

[Claims 6 to 10 not printed in the Gazette.]

1,102,301. PRESS. ALBERT WILLIAM SIZER, Kingston-upon-Hull, England. Filed Dec. 13, 1913. Serial No. 806,492. (Cl. 100—48.)



1. In a press, the combination, with a feeding cylinder; of a removable supporting ring engaging with one end portion of the feeding cylinder, an annular and tapering press chamber having its larger end portion secured to the said ring, one of the walls of the said chamber being formed of plates arranged face to face and provided with grooves in their faces for the passage of expressed fluid, a die-plate secured to the smaller end portion of the said chamber and provided with an outlet for the passage of solid material, and means arranged in the feeding cylinder for forcing the material therefrom into the press chamber.

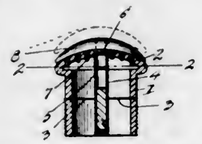
2. In a press, the combination, with a feeding cylinder; of a removable supporting ring engaging with one end portion of the feeding cylinder, a press chamber having its outer wall formed of plates arranged face to face and provided with grooves in their faces for the passage of expressed fluid, one end of each plate having a projection which engages with the said ring, a perforated die-plate secured at the outlet end of the press chamber, and means arranged in the feeding cylinder for forcing the material therefrom into the press chamber.

3. In a press, the combination, with a feeding cylinder; of a disk supported on the axis of the feeding cylinder, an annular press chamber having its inner wall formed of plates arranged face to face and provided with grooves in their faces for the passage of expressed fluid, one end of each plate having a projection which engages with the said disk, means for securing the press chamber to the feeding cylinder, a perforated die-plate secured at the outlet end of the press chamber, and means arranged in the feeding cylinder for forcing the material therefrom into the press chamber.

4. In a press, the combination, with a feeding cylinder, and feeding mechanism working therein; of a ring engaging with the feeding cylinder, a press chamber secured to the feeding cylinder at one end and having an outlet for solid material at its other end, the outer wall of the said press chamber being formed of plates which are held in place by the said ring and are provided with grooves in their faces for the passage of expressed fluid.

5. In a press, the combination, with a feeding cylinder, and a feeding worm arranged therein and provided with a shaft which projects from the said cylinder; of a disk mounted on the said shaft and provided with means for preventing it from sliding longitudinally, a ring engaging with the said cylinder, a press chamber having its inner and outer walls connected to the disk and ring respectively, said walls being formed of plates having grooves in their faces for the passage of expressed fluid, and a die plate secured to the outlet end of the press chamber.

1,102,302. STOPPER FOR CONDIMENT-HOLDERS. ISAAC S. SLADE, Stone Canon, Cal. Filed June 2, 1913. Serial No. 771,275. (Cl. 65—57.)



1. The combination with a condiment holder of a stopper including a cylindrical shell having a perforate top and adapted to be detachably secured to the condiment holder, concavo-convex closure cap for said perforate top, a plurality of cleaning pins carried by the cap and adapted to project through the perforations in said top, a tube having its lower end closed fixed centrally of the top and extending into the condiment holder, the upper end of said tube being open, a stem carried by the closure cap slidably mounted within the tube and provided with a longitudinal slot, and a pin mounted transversely of the tube and extending through the slot in the stem to limit the outward movement of said stem.

2. The combination with a condiment holder of a stopper comprising a cylindrical shell having a perforate top and adapted to be detachably secured to the condiment holder, a rectangular tube having its lower end closed mounted within the cylindrical shell centrally thereof, the upper end of said tube being open and disposed in flush relation to the outer surface of the perforate top, said perforate top being concavo-convex, a plurality of wire stays secured to and supporting said tube within the shell mounted within the shell, a concavo-convex closure cap adapted to seat against the outer face of the perforate top, a plurality of spaced cleaning pins carried by said closure cap and adapted to extend through the perforations of the top, a rectangular stem carried by the closure cap slidably mounted within the tube having a longitudinal slot therein intermediate its ends, a pin secured transversely within the tube and extending through the slot in said stem and adapted to limit the outward movement of said closure cap.

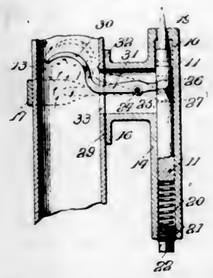
1,102,303. AUTOMATIC AUXILIARY AIR-VALVE FOR INTERNAL-COMBUSTION ENGINES. ETHAN E. SLY, Norwalk, Ohio. Filed Jan. 10, 1914. Serial No. 811,298. (Cl. 48—180.)

1. The combination with the intake manifold of an internal combustion engine, of an air valve, and a swinging baffle plate arranged in the intake manifold and operatively connected to the valve.

2. The combination with the intake manifold of an internal combustion engine, of an air valve, and operating means for the valve, said means being controlled by the velocity of the mixture passing through the manifold.

3. The combination with the intake manifold pipe of an internal combustion engine, of an auxiliary air valve, and swingingly mounted means for operating the valve, said means being arranged in the manifold pipe, whereby the impact of the mixture particles will swing the said means to open the valve when the velocity of the mixture passing through the manifold pipe has reached a pre-determined point.

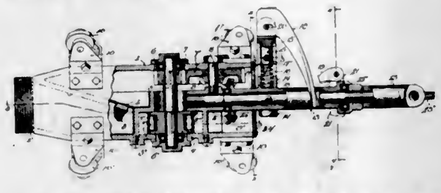
4. The combination with the intake manifold of an internal combustion engine, of a detachable auxiliary air valve, and movable means for opening the valve in response to a pre-determined velocity of the mixture particles through the manifold pipe.



5. The combination with the intake manifold pipe of an internal combustion engine, of an auxiliary air valve, yieldable means normally holding the valve in closed position, and means operatively connected to the valve and positioned in the manifold pipe for opening the valve when the velocity of the gas through the manifold pipe has reached a predetermined point.

[Claims 6 to 21 not printed in the Gazette.]

1,102,304. SEWER-CLEANER. WILLIAM J. STEVENSON, Milwaukee, Wis. Filed Dec. 23, 1913. Serial No. 808,372. (Cl. 182—2.)

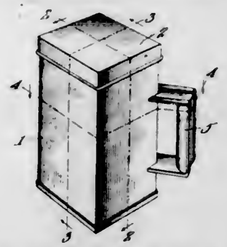


1. A cleaning and flushing device comprising an open-ended shell having a longitudinally disposed compartment extending therethrough, the same being provided with a pocket, a rotor revolubly mounted within the pocket, a fixed stem extending from the discharge end of the shell, a spider having hollow arms revolubly mounted upon the stem, plugs yieldably fitted to the spider arms, helical blades having their rear ends secured to the plugs and their forward ends secured to the spider, a gear train connecting the spider and rotor, and a hose coupling connection carried by the shell at its receiving end.

2. A cleaning and flushing device comprising a shell, a rotor mounted therein, means for admitting water to the rotor, means for exhausting water from said rotor, a revoluble spider in gear connection with the rotor, hollow arms extending from the spider, plugs slidably mounted within the arms, coiled springs seated in the hollow arms and opposed to the plugs, and helical blades having their forward ends in pivotal union with the spider, the rear ends of the blades being secured to the spring-opposed plugs.

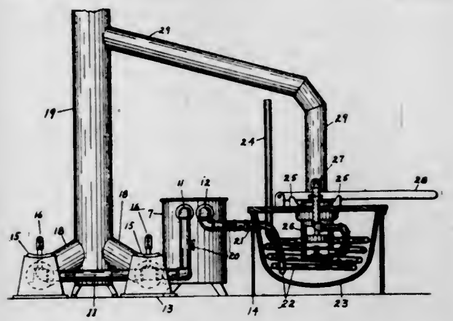
3. A cleaning and flushing device comprising an open-ended shell having a longitudinally disposed compartment extending therethrough, the same being provided with a pocket, a rotor revolubly mounted within the pocket, a fixed stem extending from the discharge end of the shell, a spider having a sleeve portion revolubly mounted upon the stem, hollow arms extending from the sleeve portion, plugs yieldably fitted to the spider arms, means for limiting the yielding movement of the plugs in both directions, helical blades having their rear ends in pivotal union with the plugs and their forward ends in pivotal union with the sleeve portion of the spider, a gear-train connecting the said sleeve portion of the spider and rotor, and a hose coupling connection carried by the shell at its receiving end.

1,102,305. COFFEE AND TEA MIXER. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Sept. 19, 1912. Serial No. 721,302. (Cl. 83—60.)



A coffee blender adapted to be carried in the hand and reciprocated, the same comprising a rectangular container and a plurality of baffles extending straight across the center of the container from the walls thereof, said baffles being crossed and extending from wall to wall, each baffle being obliquely disposed relative to the walls, each baffle being uniformly pitched from end to end.

1,102,306. APPARATUS FOR TREATING BARRELS. HARRY TORCHIANI, Chicago, Ill. Filed July 3, 1912. Serial No. 707,649. (Cl. 91—11.)



1. In an apparatus for pitching barrels, the combination of a pitch kettle, a plurality of injector nozzles, a burner, an air chamber, means for conveying air heated by said burner into the chamber, means for imparting a rapid, whirling movement to the air in said chamber, and means for conveying the air from said chamber to said kettle and to said nozzles.

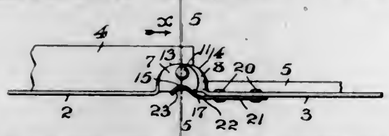
2. In an apparatus for pitching barrels, the combination of a pitch kettle, a plurality of injector nozzles, a burner, an air chamber, means for conveying the air heated by said burner into said air chamber, means for imparting a rapid, whirling movement to the air in said chamber, and pipes for conveying the air from the said chamber simultaneously to said pitch kettle and to said nozzles.

3. In an apparatus for pitching barrels, the combination of a pitch kettle, a plurality of injector nozzles, a burner, a circular air chamber, means for conveying air heated by said burner into the air chamber, a blower, a pipe extending from said blower into said air chamber, said pipe being disposed tangentially with respect to a circle concentric with the air chamber, and pipes for conveying the air from said air chamber to said pitch kettle and to said nozzles.

4. An apparatus for depitching barrels, comprising in combination, a burner, an air chamber, means for conveying the air heated by said burner, into said chamber,

means for imparting a whirling movement to said air, an injector nozzle, a barrel seat associated with said nozzle, means for conveying air from said chamber to the nozzle, and means for removing smoke from said barrel seat.

1,102,307. STAY-HINGE FOR BAG-FRAMES. HUGO TUECKMANTEL, Irvington, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Feb. 10, 1914. Serial No. 817,758. (Cl. 190—49.)

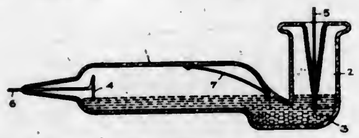


1. A bag frame comprising a pair of frame-sections, each frame-section being provided with registering hinge-members forming integral portions of the said frame-sections, said hinge-members being in the form of perforated ears bent at right angles from the end-portions of the frame-sections and extending upwardly in vertical planes at right angles to the planes of the faces of said frame-sections and longitudinally of the end-members of the said frame-sections, said ears being provided in their lower marginal edge-portions with concave receiving depressions, a pivot-pin in the registering pivot-ears of said hinge-members, and a spring-plate secured to one of said frame-sections, said spring-plate having a curved engaging member upon one of its end-portions normally in engagement with the marginal depression of one of said pivot-ears, said engaging member being adapted to be brought into slidable retaining engagement with the marginal depression of the other of said pivot-ears.

2. A bag frame comprising a pair of frame-sections, each frame-section being provided with registering hinge-members forming integral portions of the said frame-sections, said hinge-members being in the form of perforated ears bent at right angles from the end-portions of the frame-sections and extending upwardly in vertical planes at right angles to the planes of the faces of said frame-sections and longitudinally of the end-members of the said frame-sections, said ears being provided in their lower marginal edge-portions with concave receiving depressions, a pivot-pin in the registering pivot-ears of said hinge-members, a spring-plate secured to one of said frame-sections, said spring-plate having a curved engaging member upon one of its end-portions normally in engagement with the marginal depression of one of said pivot-ears, said engaging member being adapted to be brought into slidable retaining engagement with the marginal depression of the other of said pivot-ears, and a perforated separating plate mounted upon said pin and between the registering pivot-ears.

3. A bag frame comprising a pair of frame-sections, each frame-section being provided with registering hinge-members forming integral portions of the said frame-sections, said hinge-members being in the form of perforated ears bent at right angles from the end-portions of the frame-sections and extending upwardly in vertical planes at right angles to the planes of the faces of said frame-sections and longitudinally of the end-members of the said frame-sections, said ears being provided in their lower marginal edge-portions with concave receiving depressions, a pivot-pin in the registering pivot-ears of said hinge-members, a spring-plate secured to one of said frame-sections, said spring-plate having a curved engaging member upon one of its end-portions normally in engagement with the marginal depression of one of said pivot-ears, said engaging member being adapted to be brought into slidable retaining engagement with the marginal depression of the other of said pivot-ears, and a perforated separating plate mounted upon said pin and between the registering pivot-ears, the said plate being provided with a concave marginal edge-portion conforming substantially to the configuration of the concave receiving depressions of the pivot ears, substantially as and for the purposes set forth.

1,102,308. VAPOR ELECTRIC DEVICE. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 21, 1914. Serial No. 820,319. (Cl. 176—42.)



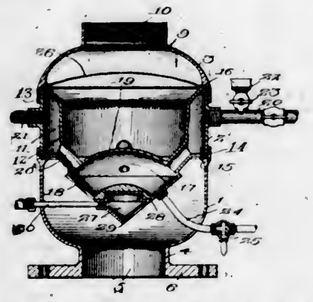
1. In a vapor electric device, the combination of an envelop, an easily vaporizable cathode, an anode, and a refractory baffle located above the cathode.

2. In a high pressure mercury arc lamp, the combination of a refractory envelop, a mercury cathode, a solid anode and a refractory plate located above said cathode and inclined at an acute angle to a line joining the cathode and anode.

3. In a high pressure mercury vapor lamp, the combination of a quartz envelop, a mercury cathode, a solid anode, and means located above the cathode in close proximity thereto to intercept the cathode blast and steady the arc.

4. A high current, high pressure mercury vapor lamp comprising a mercury cathode, and a baffle of highly refractory, gas-free material located at such distance above the cathode that an arc springing from the cathode will be depressed out of its normal position.

1,102,309. HEATER FOR GASEOUS FUEL. HERMAN B. WHITING, Palmyra, N. Y. Filed July 12, 1912. Serial No. 708,984. (Cl. 48—148.)



1. A heater for gaseous fuel comprising a casing, an annular heating device within the casing having a central passageway for the mixture, and a cone-shaped device located centrally within the casing with its apex arranged to be engaged first by the incoming mixture, the walls of said cone-shaped device being smooth and unobstructed to permit the mixture to spread over the flaring side walls which direct the mixture upon the annular heating device.

2. A heater for gaseous fuel comprising a casing, an annular chamber for a heating fluid, arranged within said casing and having a central passageway for the fuel, and a cone-shaped heating chamber arranged centrally with reference to the annular heating chamber with its apex located to be engaged first by the incoming fuel which is then spread over the flaring walls of the cone-shaped chamber and directed by the latter against the walls of the annular heating chamber.

3. A heater for gaseous fuel comprising a casing, an annular chamber for a heating fluid, arranged within said casing and having a central passageway for the fuel, and a cone-shaped heating chamber arranged centrally with reference to the annular heating chamber with its apex located to be engaged first by the incoming fuel which is then spread over the flaring walls of the cone-shaped chamber and directed by the latter against the walls of the annular heating chamber, the wall of said cone-shaped chamber in proximity to the heating device being convex,

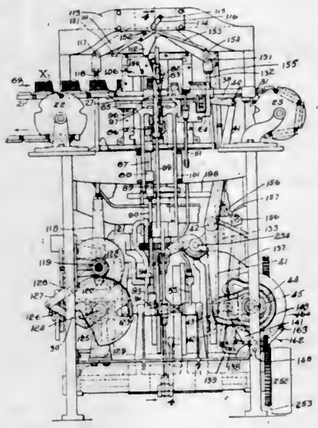
so that fine particles will not collect upon the heating device, and a dead space will not be provided above the said heating device.

4. A heater for gaseous fuel comprising a casing having a restricted inlet, a cone-shaped spreading device having its apex directed toward the inlet and arranged centrally with reference to said inlet, the base of said cone-shaped spreading device being greater in diameter than the inlet, and heating means on which the fuel is directed by the cone-shaped spreading device.

5. In a heater for gaseous fuel, the combination with a casing embodying three parts, one of which has an inlet, another of which has an outlet, and the other of which is an open-ended member, of a tubular member having outwardly-extending flanges at opposite ends coöperating with the open-ended member to provide an annular heating device within the casing.

[Claims 6 to 9 not printed in the Gazette.]

1,102,310. MACHINE FOR OPERATING ON SHOE-HEELS. ERASTUS E. WINKLEY, Lynn, Mass. Filed Aug. 26, 1910. Serial No. 579,110. (Cl. 12—87.)



1. A machine for operating on shoe-heels, having, in combination, a tool, a heel-clamp, and mechanism operating automatically to introduce a rough heel into the heel-clamp, to close the heel-clamp upon the heel, and to produce a relative movement of the heel-clamp and the tool to cause the latter to engage and operate on the heel while said heel is still held in the heel-clamp, substantially as described.

2. A machine for operating on shoe-heels, having, in combination, a tool, a rotary heel-carrier, means for feeding rough heels automatically to the heel-carrier, and means for rotating the heel-carrier automatically to bring a heel therein into engagement with the tool, substantially as described.

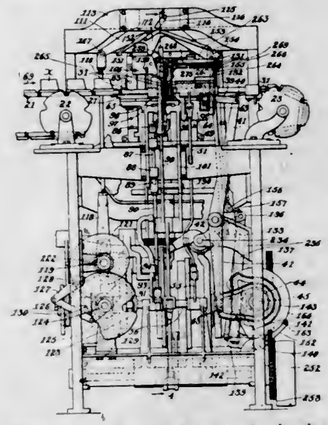
3. A machine for operating on shoe-heels, having, in combination, a tool, a heel-clamp, and mechanism operating automatically to introduce a rough heel into the heel-clamp, to close the heel-clamp upon the heel, to produce a relative movement of the heel-clamp and the tool whereby the latter is caused to engage and operate on the heel, and to produce a relative angular movement of the heel-clamp and the tool, during the operation of the tool on the heel, substantially as described.

4. A machine for operating on shoe-heels, having, in combination, a tool, a movable heel-carrier, means for feeding rough heels automatically to the heel-carrier, means for moving the heel-carrier automatically to bring a heel therein into engagement with the tool, and means for producing a relative angular movement of the heel-carrier and the tool, during the operation of the latter, substantially as described.

5. A machine for operating on shoe-heels, having, in combination, a tool, a rotary heel-carrier provided with a plurality of heel-clamps and with supporting mechanism for the clamps arranged to permit angular movement thereof, means for feeding rough heels to the heel-carrier successively, means for rotating the heel-carrier to bring the heel-clamps successivey into coöperative relation with the tool, and means operating automatically to move the heel-clamps angularly, when in such relation, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,102,311. MACHINE FOR OPERATING ON SHOE-HEELS. ERASTUS E. WINKLEY, Lynn, Mass. Filed July 11, 1911. Serial No. 637,886. (Cl. 12—87.)



1. A machine for operating on heels, having, in combination, a finger, for correcting the position of each heel operated upon to insure uniformity in all the heels produced, arranged to assume its correcting position under the influence of gravity, mechanism for raising the finger out of correcting position, a support for maintaining the finger elevated, mechanism for withdrawing the support to permit the finger to drop into correcting position, and mechanism for preventing the rebound of the finger when it drops, substantially as described.

2. A machine for operating on heels, having, in combination, an operating tool, automatic mechanism for successively presenting the heels to the tool, a conveyer for the heels provided with a plurality of breast gages, mechanism for intermittently feeding the conveyer to bring the gages one at a time into a predetermined position with relation to the automatic mechanism, and a finger arranged to drop into the path of the heel about to be delivered to the automatic mechanism and press the breast of the heel against the gage, substantially as described.

3. A machine for operating on heels, having, in combination, a link conveyer arranged to be loaded with heels, one to a link, mechanism for intermittently feeding the conveyer, and a finger arranged to move into and out of the path of movement of the heels on the conveyer, substantially as described.

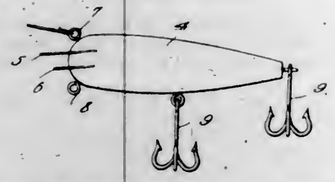
4. A machine for operating on heels, having, in combination, a link-conveyer arranged to be loaded with heels, one heel to a link, an abutment on each link acting as a breast gage for the associated heel, means to press the breast of each heel against its gage, and means for successively bringing the longitudinal axis of each heel into a definite position while its breast is pressed against the gage, substantially as described.

5. A machine for operating on heels, having, in combination, a conveyer for the heels provided with a plurality of breast gages, mechanism for intermittently feeding the conveyer to bring the gages one at a time into a prede-

termined position, a finger arranged to move into and out of the path of each heel on the conveyer, means for forcing the finger toward an approaching heel to press the latter against its gage, said means permitting the finger to yield to the advancing movement of the heel when it is pressed against its gage, substantially as described.

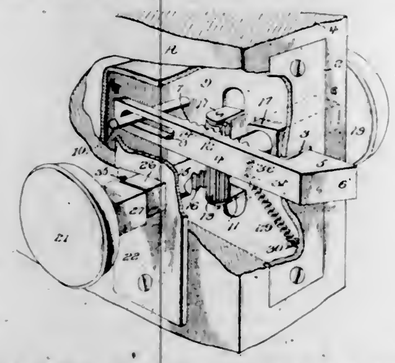
[Claims 6 to 13 not printed in the Gazette.]

1,102,312. ARTIFICIAL BAIT. ALBERT WINNIE, Traverse City, Mich. Filed Aug. 15, 1913. Serial No. 784,957. (Cl. 43—30.)



An article of the class described comprising a fish-shaped body, a plane rigidly secured thereto and inclined with the longitudinal axis thereof, fish line engaging means secured to said fish-shaped body below the said plane, and fish catching means secured to the said body.

1,102,313. DOOR-LATCH. BENJAMIN F. YATES and FRANK W. COHEN, Rochester, Minn. Filed May 1, 1913. Serial No. 764,966. (Cl. 70—42.)



1. A latching device for doors including a latching bolt, means yieldingly urging the bolt to a projected position, a gear wheel having teeth engaging with the latching bolt, and a knob spindle having teeth meshing with the gear wheel, said spindle extending at right angles to the bolt and through the door.

2. A latching device for doors including a latching bolt having a longitudinally slotted shank, a guide pin passing through the shank, a spring operatively engaging the bolt to project the same, a knob spindle passing transversely through the door and longitudinally shiftable therein, and rotatable means operatively engaging the bolt and the knob spindle whereby an actuation of the latter will cause a projection of the bolt.

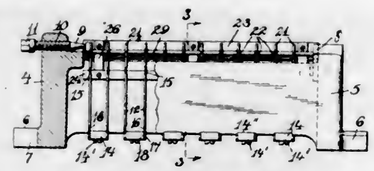
3. A latching device for doors including a latching bolt, means yieldingly urging the bolt to a projected position, a gear wheel having toothed engagement with the latching bolt, a knob spindle having teeth meshing with the gear wheel, said spindle extending at right angles to the bolt and through the door, opposed knobs on said spindle, and means on the spindle urging it in one direction.

4. A latching device for doors including a latching bolt, a spring urging the latching bolt to a projected position, a toothed barrel intermeshing with teeth on the latching bolt, a knob spindle extending at right angles to the latching bolt and through the door and operatively engaging the toothed barrel, knobs on the ends of the spindle, and a spring urging the knob spindle in one direction.

5. A latching device for doors including a latching bolt having rack teeth along one face, a toothed barrel, one end of the barrel having a relatively flat chordal face, the remainder of the barrel being longitudinally toothed, a spindle having teeth engaging with the teeth on the barrel, said spindle extending through the door, knobs on the end of the spindle, and a spring urging the spindle in one direction.

[Claims 6 to 8 not printed in the Gazette.]

1,102,314. GANG WORK-HOLDER. WILLIAM A. YERZLEY, Newark, N. J., assignor, by mesne assignments, to Nagle Re Blade Knife Company, Inc., Schenectady, N. Y., a Corporation of New York. Filed May 28, 1913. Serial No. 770,322. (Cl. 90—59.)



1. In a device of the class described, the combination of an abutment, pressure applying means opposite said abutment, and means interposed between said abutment and pressure applying means for aliining parts to be held in place therebetween with their edges projecting, substantially as and for the purposes set forth.

2. In a device of the class described, the combination of an abutment, pressure applying means and a plurality of fixed members spaced apart and interposed between said abutment and pressure applying means, substantially as and for the purposes set forth.

3. In a device of the class described, the combination of an abutment, pressure applying means and a plurality of spring members spaced apart and interposed between said abutment and pressure applying means, substantially as and for the purposes set forth.

4. In a device of the class described, the combination of a frame, an abutment at one end thereof, means at the opposite end of said frame for applying pressure toward said abutment, and a plurality of fixed members spaced apart and interposed between said abutment and pressure applying means, substantially as and for the purposes set forth.

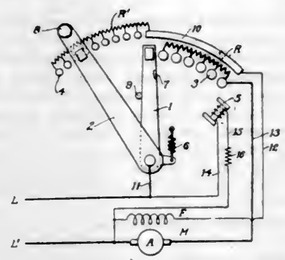
5. In a device of the class described, the combination of a frame, an abutment at one end thereof, means at the opposite end of said frame for applying pressure toward said abutment, and a plurality of spring members spaced apart and interposed between said abutment and pressure applying means, substantially as and for the purposes set forth.

[Claims 6 to 34 not printed in the Gazette.]

1,102,315. MOTOR-CONTROLLER. PAUL H. ZIMMER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 1, 1913. Serial No. 751,493. Renewed Dec. 3, 1913. Serial No. 804,484. (Cl. 172—179.)

1. A motor controller provided with an armature controlling member, and a field controlling member, the latter in its operative positions being out of the range of movement of the former and being movable in a single direction to successively return to initial position and engage and move said former member away from its initial position.

2. A motor controller provided with an armature controlling member and a field controlling member, said field controlling member being movable in one direction from its initial position to engage and move said armature controlling member for starting and in an opposite direction from its initial position for field control.



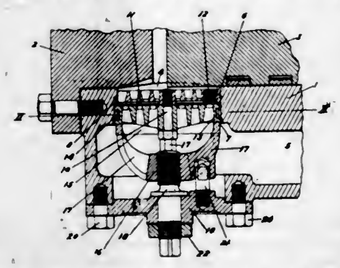
3. In a motor controller, in combination, a field resistance, an armature resistance, and two controlling elements movable in the same direction one by the other to remove said resistances successively, said field resistance controlling element being then movable in a reverse direction to regulate said field resistance and when so operated being independent of the return movement of said armature controlling element.

4. In a motor controller, in combination, an armature controlling member biased to initial position, means for retaining the same in running position, a field controlling member movable in a single direction to increase the field strength of the motor and then engage and move said armature controlling member from initial position to running position, said field controlling member being thereafter movable to a position to weaken the motor field and to be independent of the return movement of said armature controlling member.

5. In a motor controller, in combination, a series of field resistance contacts, a series of armature resistance contacts, said series of contacts extending in opposite directions, a controlling member movable over said armature resistance contacts, a member movable over said field resistance contacts and also movable to engage and operate said armature resistance controlling member, said members removing their respective resistances upon movement in the same direction.

[Claims 6 and 7 not printed in the Gazette.]

1,102,316. VALVE FOR COMPRESSORS. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed June 29, 1912. Serial No. 706,609. (Cl. 230—32.)



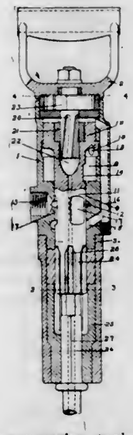
1. In a compressor, a cylinder having an inlet aperture, a valve comprising a valve plate and a valve seat therefor fitting said aperture, means for temporarily retaining said valve in said aperture and means for positively holding said valve in said aperture.

2. In a compressor, a cylinder having an inlet aperture, a valve comprising a valve plate and a valve seat therefor fitting said aperture, means for temporarily retaining said valve in said aperture and means for positively holding said valve in said aperture comprising a retaining ring, and means to force said ring against said valve.

3. In a compressor, a cylinder having an inlet aperture, a valve comprising a valve plate and a valve seat therefor fitting said aperture, means for temporarily retaining said valve in said aperture and means for positively holding said valve in said aperture comprising a retaining ring and a threaded post mounted centrally thereof for forcing said ring against said valve.

4. In a compressor, a cylinder having an inlet aperture, a valve comprising a valve plate and a valve seat therefor fitting said aperture, and a split spring ring to temporarily retain said valve in said aperture.

1,102,317. VALVELESS PERCUSSIVE TOOL. LEWIS CONDICT BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 13, 1912. Serial No. 731,061. (Cl. 121—21.)



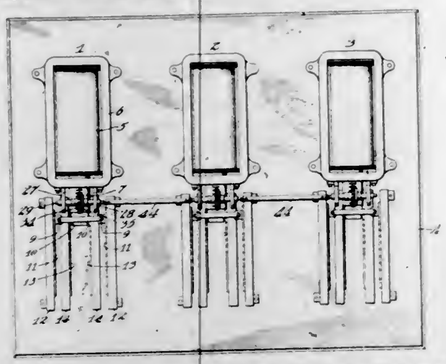
1. In a valveless percussive tool, a cylinder having a front portion of small diameter and a rear portion of larger diameter, a piston having a head fitting said large portion and a shank fitting said small portion, a single live fluid inlet opening into said smaller portion, a depression in said piston shank for connecting said fluid inlet and the forward end of said large cylinder portion only near the front end of the piston stroke, a passage leading from said cylinder at a point forward of said inlet opening to the rear end of said large cylinder portion, a depression in said piston shank for connecting said passage and said inlet opening only near the rear end of the piston stroke, and means for exhausting the cylinder.

2. In a valveless percussive tool, a cylinder having a front portion of small diameter and a rear portion of larger diameter, a piston having a head fitting said large portion and a shank fitting said small portion, a single live fluid inlet, said inlet opening into an annular port surrounding said smaller cylinder portion, a depression in said piston shank for connecting said fluid inlet and the forward end of said large cylinder portion only near the front end of the piston stroke, a passage leading from said cylinder at a point forward of said inlet opening to the rear end of said large cylinder portion, a depression in said piston shank for connecting said passage and said inlet opening only near the rear end of the piston stroke, and an exhaust port near the center of the large cylinder portion.

1,102,318. INTERLOCK. CECIL B. CALLOW, London, England, assignor to G. A. Edward Kohler, Chicago, Ill. Filed Sept. 29, 1911. Serial No. 651,937. (Cl. 172—239.)

1. In comination, a plurality of devices having separate power operating means for operating the same independently of one another and mechanical interlocking means therefor, including a revoluble shaft and pinions.

2. The combination with a plurality of devices having separate power operating means and having reciprocating parts, of means occupying a fixed bodily position for mechanically interlocking said reciprocating parts of said devices to insure synchronous operation thereof by their respective operating means.



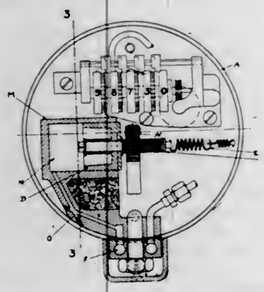
3. In combination, a plurality of devices having separate power operating means for operating the same independently of one another, a revoluble shaft, a plurality of pinions loosely mounted upon said shaft and each meshing with teeth on one of said devices and means for locking said pinions to said shaft to insure synchronous operation of said devices by their respective operating means.

4. The combination with a plurality of devices having independent operating means and having reciprocating parts, of interlocking means for said reciprocating parts occupying a fixed bodily position and having means for directly engaging said reciprocating parts to effect positive connection thereof.

5. In combination, a plurality of separately operable reciprocating members, and means for interlocking said members to move in synchronism including rotatable members directly engaging and operated by said reciprocating members and means connecting said rotatable members.

[Claims 6 to 10 not printed in the Gazette.]

1,102,319. SPEED-INDICATOR. ERNEST WILLIAM CASH, Hampton Wick, England. Filed Dec. 28, 1912. Serial No. 738,988. (Cl. 73—123.)



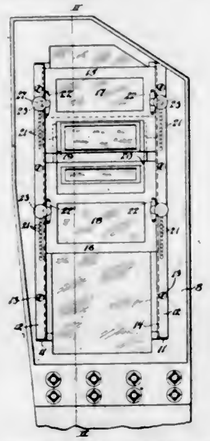
1. A speed-indicator, having, in combination with the casing thereof, a cylinder, a piston having an air-tight fit in the cylinder, a piston-stem connected to the piston, a pointer a rack-and-pinion device connected to the piston-stem to operate the pointer, a device comprising two springs connected together of different degrees of tension to provide a uniform motion for the piston over a long range, and connected to the rack at one end and to the casing at its opposite end to compensate for the travel of the piston, a needle valve device to vary the degree of rarefaction in the cylinder, whereby, when the air is exhausted from the cylinder, a balanced effect is produced on the piston.

2. A speed measuring instrument, comprising an inclosing casing, a cylinder, a piston for the cylinder composed of an alloy to compensate for the expansion and contraction of the cylinder at different temperatures, a pointer, operating means between the piston and pointer, devices attached to the operating means to balance the movements of the piston, means to vary the flow of air to the cylinder to destroy the vacuum therein, and a filtering chamber for the incoming air, as described, whereby when the air is exhausted from the cylinder a balanced effect will be produced on the piston.

3. In a speed measuring instrument, the combination with a casing, of a cylinder, a piston therein, a piston rod, a pointer, means operatively connecting the pointer with said rod comprising a rack on the piston rod, and a pinion engaging the rack, and a needle-valve to vary the flow of air to the cylinder.

4. In a speed-measuring instrument, the combination, a cylinder, a piston therein, a circular rack attached to the piston, a pointer, a pinion engaging the rack and to which the pointer is attached, a tension device consisting of two springs connected together of different degrees of tension and connected to the rack at one end and to the casing at its other end to control the movements of the piston and pointer, there being a restricted passageway to the cylinder, and a filtering chamber in communication with the passageway to the cylinder, whereby when the air is exhausted from the cylinder, the pointer will move in unison with the piston, as described.

1,102,320. LOOKOUT DEVICE FOR WINDOWS AND THE LIKE. JOSEPH CHIDLEY, Cleveland, Ohio, assignor to Le Grand Parish, New York, N. Y. Filed Dec. 26, 1912. Serial No. 738,599. (Cl. 20—40.5.)



1. A lookout device for windows and the like comprising a pair of co-acting planes arranged one above another and spaced apart and converging toward one another in a direction from the window forward and means whereby the relative vertical position of the planes with respect to each other can be varied.

2. A lookout device for windows and the like comprising a pair of co-acting planes placed one above the other and spaced apart and converging toward one another in a direction from the window forward, a mounting therefor, and means whereby the vertical position of the planes with respect to each other on the mounting may be varied.

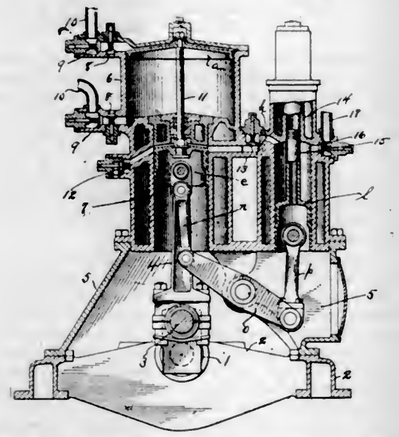
3. A lookout device for windows and the like comprising a pair of co-acting planes arranged one above the other and spaced apart and converging toward one another in a direction from the window forward, a mounting therefor, and a common means whereby the relative vertical position of the planes with respect to each other and with respect to the support may be varied.

4. A lookout device for windows and the like comprising a pair of hoods spaced apart to provide a sight opening, all exposed surfaces of the upper hood diverging upwardly from a horizontal plane in a direction substantially from the front to the rear, and all exposed surfaces on the lower hood diverging downwardly from horizontal.

5. A lookout device for windows and the like comprising a pair of hoods spaced apart to provide a sight opening, the upper and the lower surface of the upper and lower hoods respectively inclining upwardly and downwardly from the horizontal from the front to the rear, and the surfaces at the sides of the hoods inclining inwardly from the vertical toward the central portion of the hoods.

[Claims 6 to 15 not printed in the Gazette.]

1,102,321. AIR-COMPRESSOR SYSTEM FOR OIL-ENGINES. JULES COCHAUD, Zurich, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 5, 1911. Serial No. 642,435. (Cl. 123—32.)



1. In a 2-cycle oil-engine the combination with the engine crank-shaft of air compressor mechanism driven thereby and comprising a double-acting low pressure and relatively large volume cylinder with a plunger therein, a series of two or more cylinders with plungers adapted to compress air in several stages to a higher pressure and mechanism for connecting said latter plungers with the low pressure double-acting plunger to counteract and balance the effects of the momentum of the said low pressure plunger, one of said plungers being connected in coaxial alinement with the low pressure plunger, between the same and the crank driving the compressor mechanism.

2. In a 2-cycle oil-engine the combination of the engine crank shaft having a crank thereon, a pitman connected to said crank, a large volume, low pressure plunger driven by the pitman and a cylinder therefor, a series of plungers and cylinders acting to compress air in successive stages to a relatively higher pressure, said latter plungers being divided in groups and the said groups being respectively connected to the pitman to work on the up and down strokes thereof, whereby the work done by the latter plungers counteracts the momentum of the low pressure plunger in both directions of its movement, one of said groups being connected in coaxial alinement with said low pressure plunger, between the same and said pitman.

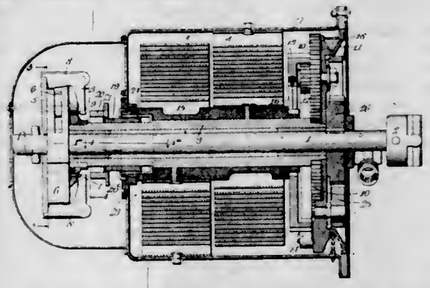
3. In a 2-cycle oil-engine, the combination with the engine crank shaft having a crank for driving air compressor mechanism, of said air compressor mechanism connected with said crank and comprising a double-acting scavenging air cylinder and a plunger therein, a plurality of cylinders arranged to compress the fuel injection air in two or more stages, and plungers in the latter cylinders connected with the plunger of the scavenging cylinder to work on the opposite strokes of the same to counteract the momentum thereof in its opposite strokes.

4. In a 2-cycle oil-engine, air compressor mechanism comprising two or more cylinders with plungers adapted for compressing air for fuel injection in a corresponding number of stages, and a scavenging air cylinder and plunger mounted coaxially with and upon one of said cylinders and its plunger, in combination with the engine crank-shaft and connections therewith for operating the said plungers, the organization of the said connections being such that the fuel injection plungers coöperate with the scavenging plunger to counteract the momentum of the latter in both its directions of movement.

5. In a 2-cycle oil-engine, air compressing mechanism comprising two or more cylinders with plungers adapted for compressing fuel injection air in a corresponding number of stages, and a scavenging cylinder mounted upon the lowest stage injection air cylinder with its plunger coaxially connected with the plunger of the latter, in combination with the engine crank-shaft, a pitman connecting the same with the aforesaid connected plungers and a rocking-lever connecting said plungers with the other plunger or plungers to cause the same to work in alternation thereto.

[Claims 6 and 7 not printed in the Gazette.]

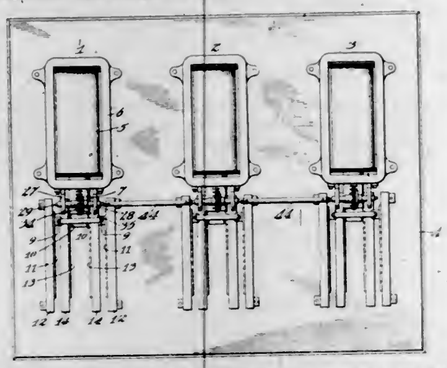
1,102,322. ENGINE-STARTER. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor to Conrad Hubert, New York, N. Y. Original application filed Mar. 29, 1907, Serial No. 365,396. Renewed July 27, 1912, Serial No. 711,918. Divided and this application filed Mar. 21, 1913. Serial No. 755,879. (Cl. 123—187.)



1. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, a dog pivoted on the dog carrier having an engaging arm adapted to be engaged by the engine-connected part to re-store the device with energy and also having a releasing arm, and a releasing device connected with the energy-storing device and acting to move the releasing arm of the dog to disengage the engaging arm of the dog from the engine-connected part upon the completion of the energy-storing operation.

2. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, an angular dog pivoted on the dog carrier having an engaging arm adapted to be engaged by the engine-connected part to re-store the device with energy and having a releasing arm projecting at an angle to the engaging arm, and a releasing device connected with the energy-storing device and acting to move the releasing arm of the dog to disengage the engaging arm of the dog

2. The combination with a plurality of devices having separate power operating means and having reciprocating parts, of means occupying a fixed bodily position for mechanically interlocking said reciprocating parts of said devices to insure synchronous operation thereof by their respective operating means.



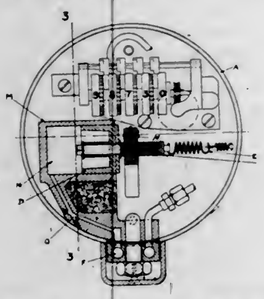
3. In combination, a plurality of devices having separate power operating means for operating the same independently of one another, a revoluble shaft, a plurality of pinions loosely mounted upon said shaft and each meshing with teeth on one of said devices and means for locking said pinions to said shaft to insure synchronous operation of said devices by their respective operating means.

4. The combination with a plurality of devices having independent operating means and having reciprocating parts, of interlocking means for said reciprocating parts occupying a fixed bodily position and having means for directly engaging said reciprocating parts to effect positive connection thereof.

5. In combination, a plurality of separately operable reciprocating members, and means for interlocking said members to move in synchronism including rotatable members directly engaging and operated by said reciprocating members and means connecting said rotatable members.

[Claims 6 to 10 not printed in the Gazette.]

1,102,319. SPEED-INDICATOR. ERNEST WILLIAM CASH, Hampton Wick, England. Filed Dec. 28, 1912. Serial No. 738,988. (Cl. 73—123.)



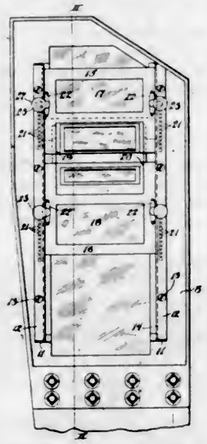
1. A speed-indicator, having, in combination with the casing thereof, a cylinder, a piston having an air-tight fit in the cylinder, a piston-stem connected to the piston, a pointer a rack-and-pinion device connected to the piston-stem to operate the pointer, a device comprising two springs connected together of different degrees of tension to provide a uniform motion for the piston over a long range, and connected to the rack at one end and to the casing at its opposite end to compensate for the travel of the piston, a needle valve device to vary the degree of rarefaction in the cylinder, whereby, when the air is exhausted from the cylinder, a balanced effect is produced on the piston.

2. A speed measuring instrument, comprising an inclosing casing, a cylinder, a piston for the cylinder composed of an alloy to compensate for the expansion and contraction of the cylinder at different temperatures, a pointer, operating means between the piston and pointer, devices attached to the operating means to balance the movements of the piston, means to vary the flow of air to the cylinder to destroy the vacuum therein, and a filtering chamber for the incoming air, as described, whereby when the air is exhausted from the cylinder a balanced effect will be produced on the piston.

3. In a speed measuring instrument, the combination with a casing, of a cylinder, a piston therein, a piston rod, a pointer, means operatively connecting the pointer with said rod comprising a rack on the piston rod, and a pinion engaging the rack, and a needle-valve to vary the flow of air to the cylinder.

4. In a speed-measuring instrument, the combination, a cylinder, a piston therein, a circular rack attached to the piston, a pointer, a pinion engaging the rack and to which the pointer is attached, a tension device consisting of two springs connected together of different degrees of tension and connected to the rack at one end and, to the casing at its other end to control the movements of the piston and pointer, there being a restricted passageway to the cylinder, and a filtering chamber in communication with the passageway to the cylinder, whereby when the air is exhausted from the cylinder, the pointer will move in unison with the piston, as described.

1,102,320. LOOKOUT DEVICE FOR WINDOWS AND THE LIKE. JOSEPH CHIDLEY, Cleveland, Ohio, assignor to Le Grand Parish, New York, N. Y. Filed Dec. 26, 1912. Serial No. 738,599. (Cl. 20—40.5.)



1. A lookout device for windows and the like comprising a pair of co-acting planes arranged one above another and spaced apart and converging toward one another in a direction from the window forward and means whereby the relative vertical position of the planes with respect to each other can be varied.

2. A lookout device for windows and the like comprising a pair of co-acting planes placed one above the other and spaced apart and converging toward one another in a direction from the window forward, a mounting therefor, and means whereby the vertical position of the planes with respect to each other on the mounting may be varied.

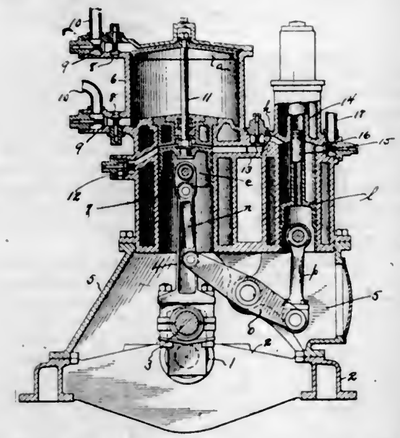
3. A lookout device for windows and the like comprising a pair of co-acting planes arranged one above the other and spaced apart and converging toward one another in a direction from the window forward, a mounting therefor, and a common means whereby the relative vertical position of the planes with respect to each other and with respect to the support may be varied.

4. A lookout device for windows and the like comprising a pair of hoods spaced apart to provide a sight opening, all exposed surfaces of the upper hood diverging upwardly from a horizontal plane in a direction substantially from the front to the rear, and all exposed surfaces on the lower hood diverging downwardly from horizontal.

5. A lookout device for windows and the like comprising a pair of hoods spaced apart to provide a sight opening, the upper and the lower surface of the upper and lower hoods respectively inclining upwardly and downwardly from the horizontal from the front to the rear, and the surfaces at the sides of the hoods inclining inwardly from the vertical toward the central portion of the hoods.

[Claims 6 to 15 not printed in the Gazette.]

1,102,321. AIR-COMPRESSOR SYSTEM FOR OIL-ENGINES. JULES COCHAUD, Zurich, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 5, 1911. Serial No. 642,435. (Cl. 123—32.)



1. In a 2-cycle oil-engine the combination with the engine crank-shaft of air compressor mechanism driven thereby and comprising a double-acting low pressure and relatively large volume cylinder with a plunger therein, a series of two or more cylinders with plungers adapted to compress air in several stages to a higher pressure and mechanism for connecting said latter plungers with the low pressure double-acting plunger to counteract and balance the effects of the momentum of the said low pressure plunger, one of said plungers being connected in coaxial alinement with the low pressure plunger, between the same and the crank driving the compressor mechanism.

2. In a 2-cycle oil-engine the combination of the engine crank shaft having a crank thereon, a pitman connected to said crank, a large volume, low pressure plunger driven by the pitman and a cylinder therefor, a series of plungers and cylinders acting to compress air in successive stages to a relatively higher pressure, said latter plungers being divided in groups and the said groups being respectively connected to the pitman to work on the up and down strokes thereof, whereby the work done by the latter plungers counteracts the momentum of the low pressure plunger in both directions of its movement, one of said groups being connected in coaxial alinement with said low pressure plunger, between the same and said pitman.

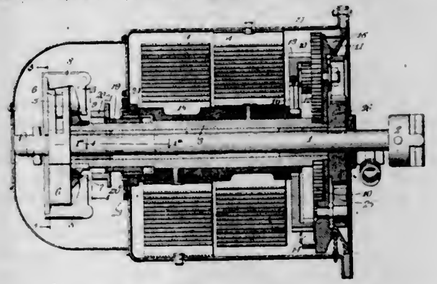
3. In a 2-cycle oil-engine, the combination with the engine crank shaft having a crank for driving air compressor mechanism, of said air compressor mechanism connected with said crank and comprising a double-acting scavenging air cylinder and a plunger therein, a plurality of cylinders arranged to compress the fuel injection air in two or more stages, and plungers in the latter cylinders connected with the plunger of the scavenging cylinder to work on the opposite strokes of the same to counteract the momentum thereof in its opposite strokes.

4. In a 2-cycle oil-engine, air compressor mechanism comprising two or more cylinders with plungers adapted for compressing air for fuel injection in a corresponding number of stages, and a scavenging air cylinder and plunger mounted coaxially with and upon one of said cylinders and its plunger, in combination with the engine crank-shaft and connections therewith for operating the said plungers, the organization of the said connections being such that the fuel injection plungers coöperate with the scavenging plunger to counteract the momentum of the latter in both its directions of movement.

5. In a 2-cycle oil-engine, air compressing mechanism comprising two or more cylinders with plungers adapted for compressing fuel injection air in a corresponding number of stages, and a scavenging cylinder mounted upon the lowest stage injection air cylinder with its plunger coaxially connected with the plunger of the latter, in combination with the engine crank-shaft, a pitman connecting the same with the aforesaid connected plungers and a rocking-lever connecting said plungers with the other plunger or plungers to cause the same to work in alternation thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,102,322. ENGINE-STARTER. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor to Conrad Hubert, New York, N. Y. Original application filed Mar. 29, 1907, Serial No. 365,396. Renewed July 27, 1912, Serial No. 711,918. Divided and this application filed Mar. 21, 1913. Serial No. 755,879. (Cl. 123—187.)



1. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, a dog pivoted on the dog carrier having an engaging arm adapted to be engaged by the engine-connected part to re-store the device with energy and also having a releasing arm, and a releasing device connected with the energy-storing device and acting to move the releasing arm of the dog to disengage the engaging arm of the dog from the engine-connected part upon the completion of the energy-storing operation.

2. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, an angular dog pivoted on the dog carrier having an engaging arm adapted to be engaged by the engine-connected part to re-store the device with energy and having a releasing arm projecting at an angle to the engaging arm, and a releasing device connected with the energy-storing device and acting to move the releasing arm of the dog to disengage the engaging arm of the dog

from the engine-connected part upon the completion of the energy-storing operation.

3. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, an L-shaped dog pivoted on the dog carrier and having a bias to the engaging position, one arm of the dog being adapted to be engaged by the engine-connected part and the other arm being a dog-actuating arm, and a dog-releasing device connected with the energy-storing device and operative to engage and move the actuating arm of the dog to disengage the dog from the engine-connected part upon the completion of the energy-storing operation and to permit the return of the dog to engaging position upon the use of the energy-storing device in an engine-starting operation.

4. An engine starter having, in combination, an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device and provided with outwardly-directed slots, L-shaped dogs pivoted on the dog carrier to move in the slots and having each an inwardly-extending dog-actuating arm and a longitudinally-extending engaging arm adapted to be engaged by the outer portion of the engine-connected part, dog-engaging springs acting to move the dogs to the engaging position in relation to the engine-connected part, and a dog-releasing device movable longitudinally and connected with the energy-storing device to be moved longitudinally thereby in one direction to move the actuating arms of the dogs and thereby disengage the dogs from the engine-connected part upon the completion of the energy-storing operation and to be moved longitudinally in the other direction to permit the dog-engaging springs to return the dogs to engaging position upon the use of the energy-storing device in an engine-starting operation.

5. An engine starter having in combination an energy-storing device, means for connecting said device with an engine to start the engine, means for connecting the engine with said device to re-store the device with energy comprising a part rotatively connected with the engine, a rotary dog carrier connected with the energy-storing device, a dog on the dog carrier arranged to be engaged by the engine-connected part to re-store the device with energy, a releasing device connected with the energy-storing device and acting to disengage the dog from the engine-connected part upon the completion of the energy-storing operation, and clearance-providing means operative to move the dog to a position of clearance in relation to the engine-connected part after the dog has been disengaged from the engine-connected part.

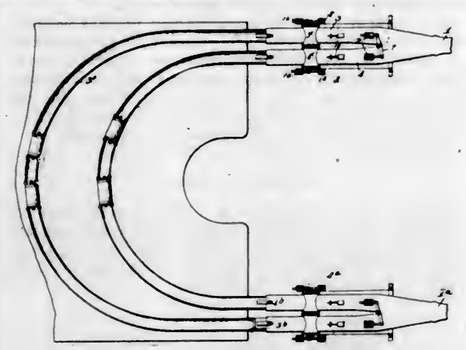
[Claims 6 to 10 not printed in the Gazette.]

1,102,323. PNEUMATIC-DESPATCH SYSTEM. RODERICK G. COLLINS, Jr., New York, N. Y. Filed Mar. 29, 1913. Serial No. 757,523. (Cl. 243—24.)

1. A pneumatic-despatch apparatus, comprising a transmitting tube provided at its terminal with plural-member terminal-branches, a plural-member table communicating with said branches, and automatic means in the path of movement of the carriers for directing said carriers alternately into said terminal branches.

2. A pneumatic despatch apparatus comprising a transmitting-tube provided at its terminal with plural-member terminal-branches, a plural-member table communicating with said branches, a switch located at the juncture of said tube and branches, and means located in the path of movement of the carriers for operating said switch to direct said carriers into said terminal branches alternately.

3. A pneumatic despatch apparatus comprising a transmitting-tube provided at its terminal with plural-member terminal-branches, a plural-member table communicating with said branches, a combined-switch-and-air-gate located at the juncture of the transmitting-tube and its terminal branches, and means, part of which are arranged in the path of travel of carriers through said branches and connected to said combined-switch-and-gate, to automatically shift the position of the latter to alternately open and close communication of said terminal branches with the transmitting-tube.

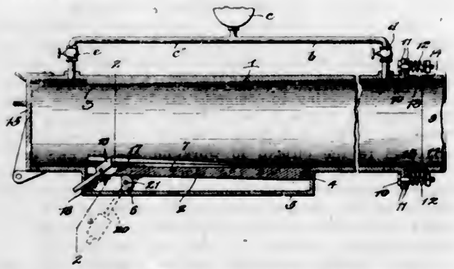


4. A pneumatic-despatch apparatus comprising a transmitting tube provided at its terminals with plural-member terminal-branches, a plural-member receiving-table communicating with said branches, a combined-switch-and-air-gate located at the juncture of the transmitting tube and the terminal branches, trips arranged in the path of travel of carriers through said branches, and means associated with said trips and combined-switch-and-gate to automatically shift the latter to alternately open and close communication of said terminal branches with the transmitting tube.

5. A pneumatic-despatch apparatus comprising a transmitting tube provided at its terminal with plural-member terminal-branches, a plural-member receiving-table communicating with said branches, a blower, a connection therefrom to the transmitting tube for transporting the carriers through said transmitting tube, trips arranged in the path of travel of the carriers through said branches, a combined-switch-and-air-gate located at the juncture of the transmitting tube and the terminal-branches and intermediate said pneumatic transporting means and trips, and means associated with said trips and combined-switch-and-air-gate to automatically shift the latter to alternately open and close communication of said terminal-branches with the transmitting tube.

[Claims 6 to 11 not printed in the Gazette.]

1,102,324. TERMINAL FOR PNEUMATIC-DESPATCH APPARATUS. RODERICK G. COLLINS, Jr., New York, N. Y. Filed Apr. 28, 1913. Serial No. 764,139. (Cl. 243—20.)



1. A terminal for pneumatic despatch apparatus yieldingly connected to the despatch tube and having a converging or restricted radially rigid interior for arresting movement of the carrier.

2. A terminal for pneumatic despatch apparatus longitudinally yieldingly connected to the despatch tube and having a gradually converging or restricted interior for arresting movement of a carrier.

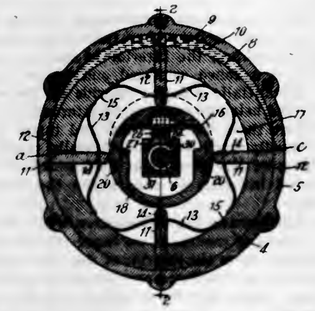
3. A terminal for pneumatic despatch apparatus yieldingly connected to the despatch tube and provided with a movable section arranged to be projected into the path of a carrier for arresting the latter, and means for rigidly holding said section in such position.

4. A terminal for pneumatic despatch apparatus yieldingly connected to the despatch tube and provided with a section pivoted at one end and the other end free to be projected into the path of a carrier for arresting the latter, and means for rigidly holding said section in such position.

5. In combination with the despatch tube of a pneumatic despatch apparatus, a terminal longitudinally yieldingly connected to said tube and the wall of which is provided with a section pivoted at one end and the other end of which is free to be projected into the path of a carrier for arresting the latter, and means for rigidly holding said section in such position.

[Claims 6 to 9 not printed in the Gazette.]

1,102,325. ROTARY BRAKE MECHANISM. WILLIAM P. COLLINS, Boston, Mass. Filed Mar. 17, 1913. Serial No. 754,695. (Cl. 188—5.)

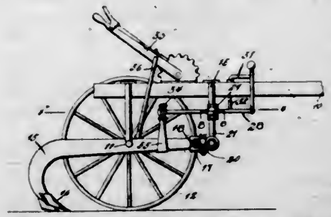


1. A brake mechanism having, in combination, a casing, a piston carrier, one of said members rotatable relatively to the other, said casing having a crescent shaped chamber formed outside of and adjacent to the periphery of said carrier, a shaft to which said carrier is secured, said shaft being journaled in said casing, a series of pistons carried by said carrier, means to normally retain said pistons with their outer ends flush with the periphery of said carrier, and means to move said pistons to project laterally from said carrier a predetermined distance into said chamber, said means including a toggle.

2. A brake mechanism having, in combination, a casing, a piston carrier, one of said members rotatable relatively to the other, said casing having a crescent shaped chamber formed outside of and adjacent to the periphery of said carrier, a shaft to which said carrier is secured, said shaft being journaled in said casing, a series of pistons carried by said carrier, means to normally retain said pistons with their outer ends flush within the periphery of said carrier, an expansible cylindrical member arranged within said casing substantially concentric with the axis of said carrier, a collar loosely mounted on said shaft, a sleeve slidable longitudinally on said shaft, a spring interposed between said collar and said sleeve to yieldingly separate the same, a toggle pivotally connected at one of its ends to said collar, said toggle being pivoted at its opposite end to said sleeve and at its middle to one portion of said expansible member, and means to reciprocate said sleeve on said shaft to collapse said toggle whereby said cylindrical member will be expanded.

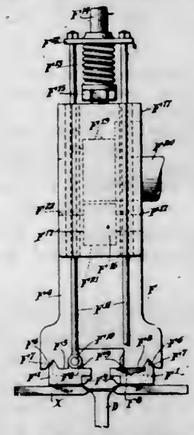
3. In a brake mechanism a casing, a piston carrier arranged to rotate within said casing, said casing having a chamber formed therein at one side of and adjacent to the periphery of said carrier, a series of pistons carried by said carrier and movable radially relatively thereto, springs adjacent opposite inner ends of said pistons adapted to normally retain said pistons within the periphery of said carrier, expansible cylindrical members arranged within the opposite ends of said carrier, means to yieldingly retain said cylindrical members contracted, and means adapted to simultaneously expand said cylindrical members to engage said pistons at opposite ends thereof and move the same outwardly in said carrier during the rotary movements of said carrier.

1,102,326. PLOW. JOHN P. DALSING, Oneida, Kans. Filed Oct. 9, 1912. Serial No. 724,831. (Cl. 97—35.)



A gang plow including a main frame, rigid hanger arms depending from the sides of said frame, a wheeled axle carried by said frame in rear of said arms, horizontally swinging links having ball and socket connections intermediate the ends with the intermediate portions of said arms, a shift lever connected to the front ends of said links for swinging said links on said connections, plows having the beams pivoted at the front ends to the lower ends of said hanger arms and upright members rigidly connected to said beams and pivotally connected at the upper ends to the rear ends of said links, actuation of said shift lever serving to swing said plows horizontally in the same direction and oppositely to the direction of said shift lever.

1,102,327. METAL CUTTING AND BENDING MACHINE. NATHAN H. DAVIS, Philadelphia, Pa., assignor to American Brake Shoe & Foundry Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 6, 1914. Serial No. 816,942. (Cl. 113—1.)



1. In a machine for converting a bar like blank having bifurcated ends and an unslitted body portion into a device in which each pair of bifurcations are parallel to the plane of the unslitted body portion and extend away from the latter in opposite directions, the combination of a revoluble blank carrier on which said blank is secured with its ends projecting at opposite sides of said blank carrier and bending and twisting dies adapted to successively engage and operate on the blank, as the latter

is rotated step by step by the blank carrier, to effect such conversion in stages.

2. In a machine for converting a bar like blank having bifurcated ends and an unslitted body portion into a device in which each pair of bifurcations are parallel to the plane of the unslitted body portion and extend away from the latter in opposite directions, the combination of a traveling blank carrier on which said blank is secured with its ends projecting at opposite sides of said blank carrier and means adapted to successively engage and operate on the blank as the latter is advanced by the blank carrier to effect such conversion in stages, said means comprising dies engaging the bifurcations to give the latter each a quarter twist about its longitudinal axis, dies engaging the bifurcations and bending them into position in which they are substantially parallel to one another and perpendicular to the unslitted body portion, and dies engaging the twisted and bent bifurcations and bending them into a plane transverse to the initial direction of the blank to cause each bifurcation to extend away from the other bifurcation of the same pair.

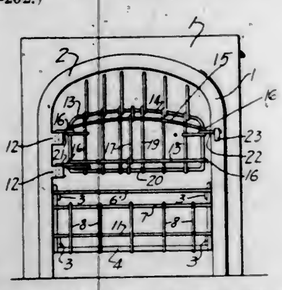
3. In a machine of the kind described, the combination of slitting and severing mechanism for severing a bar of blank material into blanks, and for slitting the ends of each blank, a blank carrier, feeding mechanism for intermittently advancing a bar of blank material to the slitting and severing mechanism and for transferring the blanks from the latter to said blank carrier, means for securing the blanks on said blank carrier with the opposite ends of each blank projecting at opposite sides of said carrier, and mechanism for operating on each blank supported by said blank carrier to set each pair of bifurcations into substantial alinement with each other and parallel to the plane of the unslitted body portion of the blank.

4. In a machine for cutting and bending articles out of a flat metallic bar the combination of cutting blades, bending mechanism, and a b. nk conveying conduit extending between said mechanism and said blades and anchored at a point removed from the cutting blades and being flexible between the cutting blades and the point of anchorage to accommodate blank movements consequent upon the operation of the cutting blades, said conduit being built up of flat metallic laminæ and provided with a passage having a substantially rectangular cross section.

5. In a machine for cutting and bending articles out of metal bars, the combination of feed rolls, bending mechanism, a conduit extending between said feed rolls and said bending mechanism, said conduit being cut away to permit the operation of the blades of slitting and severing mechanism upon the material advanced through said conduit and being made flexible to accommodate the movement of the blank material in a direction transverse to the length of the conduit, produced by the operation of the slitting and severing mechanism, and said slitting and severing mechanism.

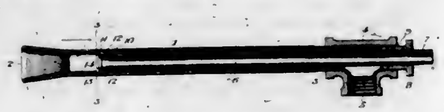
[Claims 6 to 14 not printed in the Gazette.]

1,102,328. FIREPLACE-FENDER. ALLEN DIXON, Nashville, Tenn. Filed May 5, 1913. Serial No. 765,590. (Cl. 126—202.)



In a device of the character described, the combination with a frame having spaced bearings thereon, of a fender comprising an elongated body, transverse members each having one end secured to one side of the body, the intermediate portion of each of said members being secured to the other side of the body and the free ends thereof projecting beyond the opposite side of the body, fender wires having their ends mounted upon the end portions of the body and their intermediate portions arranged in spaced relation with the same, a brace wire having its intermediate portion secured to said fender wires and its ends secured to the side portions of the body, angular rods carried by one end of the body and adapted to be mounted within said bearings, a hook member carried by the frame and a catch member carried by the body opposite the angular rods and adapted to engage said hook to movably secure the free end of the fender to the frame.

1,102,329. HYDROCARBON-BURNER. MOSES H. DUNN, Los Angeles, Cal. Filed Oct. 23, 1913. Serial No. 796,826. (Cl. 158—75.)



1. In an oil burner, the combination with an outer tube having a nozzle or mouth, of an inner tube of smaller external diameter than the interior of the outer tube and provided with a coned or flared end whose largest part or base substantially fits the interior of the outer tube, said flared end being provided with external grooves which are widest at their discharge end and taper or decrease in size inwardly until they substantially merge into the outer surface of the inner tube, said coned or flared end being located inwardly in relation to the nozzle of the outer tube.

2. In an oil burner, the combination with an outer tube having a nozzle or mouth, of an inner tube of smaller external diameter than the interior of the outer tube and provided with a coned or flared end having a cylindrical part at its largest diameter substantially fitting the interior of the outer tube, said flared end being provided with external grooves which are widest at their discharge end and taper or decrease in size until they substantially merge into the outer surface of the inner tube, the end of the inner tube having an internal bevel which provides a relatively sharp circular end thereon.

1,102,330. FINISH-REMOVER. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 4, 1907. Serial No. 405,025. (Cl. 87—5.)

1. The finish remover comprising substantially 20 parts of a 20% solution of gelatin in carbolic acid, 12 parts of benzol, 8 parts of wood alcohol and 1 part of ceresin wax.

2. The finish remover comprising approximately 20 parts of a 20% solution of gelatin in phenolic acid material, 12 parts of benzolic material, 8 parts of alcohol and 1 part of waxy material.

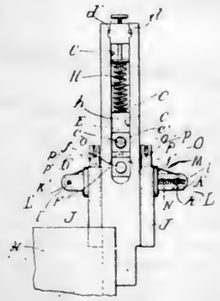
3. The finish remover comprising approximately 20 parts of a 20% solution of palliative proteid material in phenolic acid material combined with waxy material and 20 parts of volatile finish solvent material including alcoholic material.

4. The finish remover comprising a solution of proteid palliative material in phenolic acid material combined with a substantially equal proportion of volatile organic finish solvent material including an aromatic hydrocarbon.

5. The finish remover comprising a solution of proteid palliative material in carbolic acid combined with a substantially equal proportion of volatile organic finish solvent material including benzol.

[Claims 6 to 21 not printed in the Gazette.]

1,102,331. SAFETY DEVICE FOR POWER-WRINGERS. ALVA J. FISHER, Evanston, Ill., assignor to Hurley Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 13, 1912. Serial No. 709,144. (Cl. 68—32.)



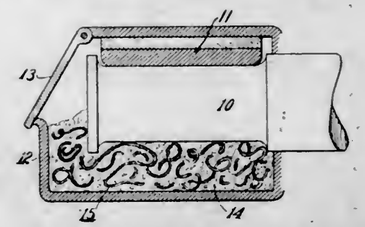
1. In a device of the character described, a clothes wringer provided with a frame having wringer rolls mounted thereon, a band passing between said wringer rolls, brackets secured to said frame at one side thereof, said brackets being provided with upwardly extending slots, a safety roller extending between said brackets above said band and having its ends mounted in said slots, said safety roller being permitted to have free upward and downward movement above said band, and means located in the path of movement of said safety roller for limiting the downward movement thereof so as to prevent said safety roller from coming in contact with said band.

2. In a device of the character described, a clothes wringer provided with a frame having wringer rolls mounted therein, an endless belt passing between and below said wringer rolls, rollers adapted to carry said band mounted on said frame at opposite sides thereof and at a distance from said wringer rolls, brackets rigidly secured to said frame at one side thereof and spaced a distance from said wringer rolls, said brackets being provided with vertical slots, the lower ends of which terminate above said band, and a safety roller extending between said brackets above said band and having its ends mounted in said slots, said safety roller being permitted to have free vertical movement above said band, but maintained slightly above and out of contact with said band when the ends of said roller contact with the lower ends of said slots.

3. In a device of the character described a clothes wringer provided with a frame embracing a pair of laterally spaced upright members, and wringer rolls extending between and having their ends mounted in guide slots in said upright members, an endless band extending between said upright members and passing between and below said wringer rolls, rollers adapted to carry said band mounted on said frame at opposite sides thereof and spaced a distance from said wringer rolls, pairs of brackets rigidly attached to and extending laterally from said frame and affording bearings for said rollers, one pair of said brackets being provided with horizontal slots, in which the ends of the associated roller are mounted, and springs on said brackets adapted to force said roller outwardly, thereby maintaining a constant tension on said band, pairs of upright brackets rigidly secured to said frame at each side thereof and spaced a distance from said wringer rollers, said upright brackets being provided with vertical slots the lower ends of which terminate above said band and a safety roller extending between each pair of upright brackets above said band and having its ends mounted in said vertical slots, each safety roller being permitted to have free vertical movement above said band, but maintained above and out of contact with said band when the ends of said safety roller contact with the lower ends of said vertical slots.

4. In a device of the character described, a clothes wringer provided with wringer rolls, a band passing between said wringer rolls, a safety roller located above said band, means for supporting said safety roller and permitting the same to have free upward and downward movement above said band and means located in the path of movement of said safety roller for limiting the downward movement thereof so as to prevent said safety roller from coming into contact with said band.

1,102,332. LUBRICATING-PACKING. GEORGE FLAWITH, Melrose Highlands, Mass. Filed Dec. 23, 1912. Serial No. 738,281. (Cl. 64—46.)



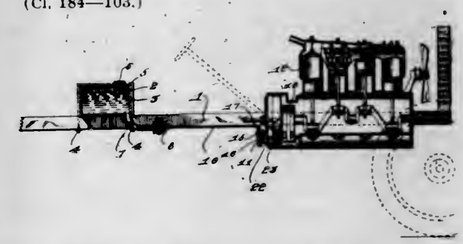
1. A composition adapted for a lubricating packing, including, in combination, leather finely divided into fibrilliform condition and gut in filiform condition intermingled therewith.

2. A composition adapted for lubricating packing, including, in combination, a mass of finely divided oil holding fibrilliform material and filiform cured intestinal tissue intermixed therewith and supporting the higher portions thereof.

3. The method of making a lubricating packing comprising the shredding of leather into finely divided fibrilliform condition; saturating it with lubricating oil; and mixing therewith filiform gut.

4. The method of making a lubricating packing comprising the curing separately of animal hide and intestinal tissue; forming separately the hide into fibrilliform condition and the intestinal tissue into filiform condition; and then saturating the fibrilliform material with a lubricant and mixing the filiform material through the mass.

1,102,333. OILER. CHARLES THOMAS GIBNEY, Laporte City, Iowa. Filed Mar. 1, 1913. Serial No. 751,528. (Cl. 184—103.)



1. In a lubricator, the combination with a crank case, of a gage receptacle in communication therewith, a supply tank, a flexible tube having its inlet end connected to the tank and its outlet end extending into the receptacle, and a clamp alidably connected to the receptacle, and provided with means for adjusting the outlet end of the tube relative to the receptacle.

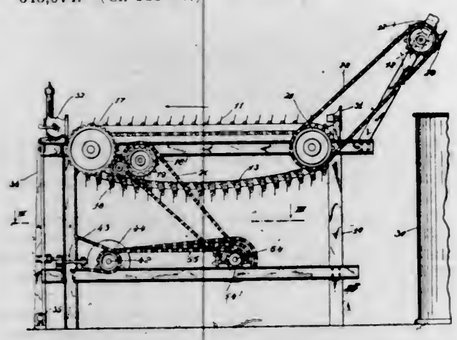
2. In a lubricator, the combination with a crank case, of a gage receptacle in communication therewith, a supply tank, a tube carried by the tank and discharging into the receptacle, and a clamp embracing the receptacle and provided with means for holding the discharge portion of the tube in an adjusted position relative to the receptacle.

3. In a lubricator, the combination with a crank case, of a gage receptacle in communication therewith, a supply tank, a flexible tube carried by the tank and having its

outlet end adjustable in the receptacle, a valve controlling the supply from the tank, and means slidably engaging the receptacle for holding the outlet end of the tube in adjusted position relative to the receptacle.

4. In a lubricator, the combination with a crank case, of a gage receptacle in communication therewith, a supply tank having a valve controlled outlet, a flexible tube having its inlet end connected to the outlet of the tank and its discharge end adjustable in the receptacle, a supporting standard, and a clamp carried by the standard and having arms embracing the receptacle and jaws for engaging the tube to hold the tube in adjusted position relative to the receptacle.

1,102,334. SPINNING OR TWISTING MACHINE. JOHN GOOD, New York, N. Y. Filed Aug. 9, 1911. Serial No. 643,074. (Cl. 118—7.)



1. In a feed regulator for spinning machines, a sliver-carrying pin-train, means for driving the same, a speed-change mechanism between the train and said driving means, comprising high, intermediate and low speed transmission mechanisms adapted to be driven simultaneously by said driving means and having over-running connections with the pin-train, and successively operated clutch mechanisms controlled by the sliver for rendering one or the other of said transmission mechanisms effective in driving the pin train.

2. In a feed regulator for spinning machines, a sliver-carrying pin-train, three separate transmission mechanisms each having an over-running connection therewith, means for driving said transmission mechanisms, a feeler engaged with the sliver and means controlled by the feeler whereby one or all of said mechanisms may be driven by said driving means.

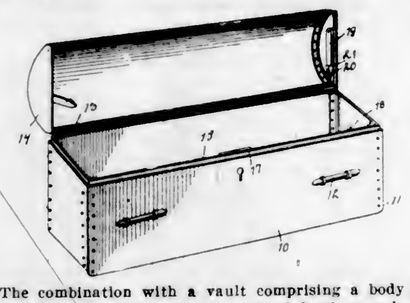
3. In a feed regulator for spinning machines, a pin-train, means for driving the same, two separate pairs of clutch disks between said pin-train and said driving means, and a sliver feeler frictionally connected with the driven clutch disks so as to disconnect one or other thereof and simultaneously break the same, and means acting in opposition to the sliver feeler to seize the clutch disks with each other.

4. In a feed regulator for spinning machines, a sliver-carrying pin-train, and a speed change mechanism for driving it, comprising separate transmission mechanisms and coöperating clutch devices, a movably monnted nipper and means controlled by the movements thereof for selectively coupling and uncoupling the clutch devices and for breaking the driven clutch devices simultaneously with their uncoupling.

5. In a feed regulator for spinning machines, a sliver-carrying pin-train, driving means for said pin train, separate transmission mechanisms between said driving means and said pin-train, a separate clutch device controlling the operation of each mechanism, an over-running device for each mechanism, means for simultaneously rendering said clutches operative and a sliver feeler operating to render one or another of said clutches inoperative.

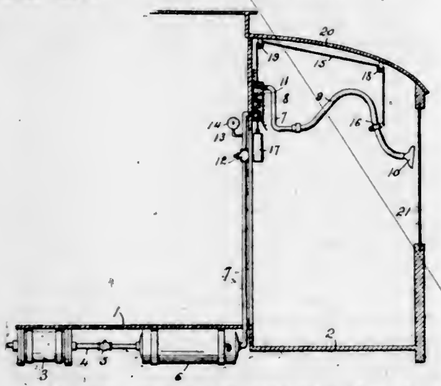
[Claims 6 to 11 not printed in the Gazette.]

1,102,335. COFFIN-FASTENER. GEORGE GOUGH, Yale, Mich. Filed Apr. 7, 1913. Serial No. 759,490. (Cl. 27—12.)



The combination with a vault comprising a body portion and a cover hinged thereto; of latches each constructed of spring metal and provided with a boss bearing against the side of the cover to permit springing of the latches to and from said sides, pivots whereby said latches are pivoted to said sides, each of said latches provided with a beveled nose facing the inside of the vault, and staples secured to the sides of the body and adapted to receive said latches when the latter are turned to operative position, the noses on the latches engaging the bights of the staples.

1,102,336. FROST-REMOVER. JOSEPH J. HEIM and WILLIAM NOTTBERG, Kansas City, Mo. Filed Dec. 12, 1912. Serial No. 736,326. (Cl. 219—39.)



1. In a frost remover, the combination with a car vestibule having a window pane, of a conductor having a flexible discharge portion movable toward and from a position in which it will discharge air against said pane, means for normally moving said flexible portion from said position, means for heating the air in said conductor, a receiver connected with said conductor, a regulating valve intermediate of the receiver and the heating means, an air pump, a conductor connecting the receiver and air pump, and a check valve in the last named conductor.

2. In a frost remover, a car, a tank carried by the car and adapted to contain air under pressure, a conductor connected with said tank and having a nozzle arranged to discharge air against a window pane, means for controlling the flow of air through said conductor, and means for heating the air which passes through said conductor.

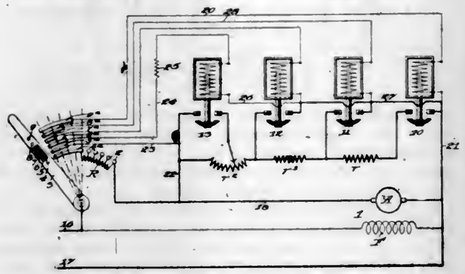
3. In a frost remover, a car, a tank carried thereby and adapted to contain air under pressure, a conductor connected with said tank and having a nozzle arranged to discharge air against a window pane, means for controlling the flow of air through said conductor, and electrical means for heating said air.

4. In a frost remover, a car, a tank carried thereby and adapted to contain air under pressure, a conductor connected with said tank and having a nozzle arranged to discharge air against a window pane, the conductor having a heating chamber, electrical means in said chamber for heating the same, and means for controlling the flow of air through said conductor.

5. In a frost remover, a car, a conductor provided with a flexible portion having a nozzle, means carried by said car for supplying said conductor with air under pressure, means for heating said air, and yielding means for normally holding the nozzle in a raised position.

[Claims 6 to 10 not printed in the Gazette.]

1,102,337. MOTOR-CONTROLLER. CHARLES E. HYATT, East Orange, N. J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 12, 1910. Serial No. 591,951. (Cl. 172—179.)



1. A motor controller comprising means operable to electrically slow down the motor, and means automatically responsive under certain load conditions to vary the electrical effect produced by said first mentioned means at the time of its operation.

2. In a controller for electric motors in combination, means for slowing down the motor, and automatic means operating independently of said first mentioned means under predetermined load conditions to augment the slow down effect on the motor, said second mentioned means operating if at all prior to full operation of said first mentioned means.

3. In a controller for electric motors, in combination, means operable to gradually slow down the motor electrically and means adapted to operate automatically during the operation of said first mentioned means under predetermined load conditions to augment the slow down effect upon the motor.

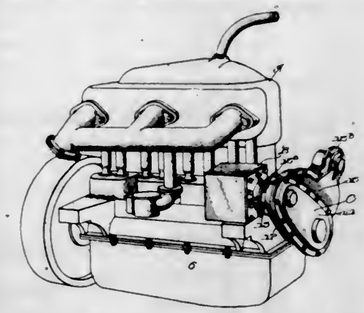
4. In a controller for electric motors, in combination, means operable to gradually slow down the motor and means adapted to operate automatically during the operation of said first mentioned means under predetermined load conditions to augment the slow down effect upon the motor, said first mentioned means being operable to its full extent without operation of said second mentioned means under predetermined load conditions.

5. In a controller for electric motors, in combination, means operable to gradually slow down the motor, and means responsive under predetermined load conditions to coöperate with said first mentioned means to increase the slow down effect on the motor, said second mentioned means operating only upon a failure of said first mentioned means to slow down the motor to the desired degree upon a predetermined operation thereof and operating if at all prior to full operation of said first mentioned means.

[Claims 6 to 16 not printed in the Gazette.]

1,102,338. CASING FOR MOTOR GEARING AND STARTER CONNECTIONS. MERRILL L. JENKINS, Harvey, Ill., assignor to Buda Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 28, 1913. Serial No. 787,108. (Cl. 123—195.)

1. In an explosion motor, the combination with a main crank shaft, a crank shaft casing having an open end, and a starter adjacent said open end, of a driving connection between the crank shaft and self starter, an end plate for closing the open end of the crank shaft casing and through which the shaft of the starter extends, and a cover plate coöperating with said end plate to form a casing for the said driving connection.



2. In combination with a motor crank case having gearing disposed in proximity to an open end thereof, of a casing or plate adapted to inclose said open end and gearing, a crank shaft in said crank case, means adjacent said open end for starting said crank shaft including as a member thereof a shaft, the ends of both shafts being adapted to extend outwardly through the web of the plate, and connections between the ends of the said shafts.

3. In combination with a motor crank case having an open end and gearing disposed in proximity thereto, of an end plate detachably mounted on said crank case and adapted to inclose the open end and gearing, a main crank shaft, starting mechanism mounted on the end plate adjacent the said open end and provided with connections to the crank shaft, the end plate being positioned between the gearing and the said connections, and means coöperating with the end plate to form a casing for the said connections.

4. In an explosion motor, the combination with a main crank shaft, a crank shaft casing having an open end, and a starter adjacent said open end, of a driving connection between the crank shaft and the shaft of the starter, an end plate for closing said open end and adapted to afford a bearing for the starter shaft, a cover plate, means for fastening the plates together, said plates coöperating to form a casing for the said driving connections.

5. In an explosion motor, the combination with a main crank shaft, a crank shaft casing having an open end, and a starter adjacent said open end, of a driving connection between the crank shaft and the shaft of the starter, a supporting means for the starter consisting of an end plate closing the open end and through which the shafts extend, and means coöperating with said end plate to box in said driving connection.

[Claims 6 to 8 not printed in the Gazette.]

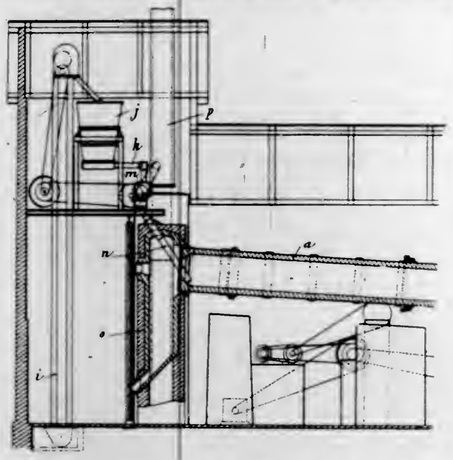
1,102,339. PROCESS FOR TREATMENT OF MINERALS AND EXTRACTING METAL. BUENAVENTURA JUNQUERA, Oviedo, Spain. Filed Dec. 18, 1908. Serial No. 468,230. (Cl. 75—14.)

1. The herein described process of smelting ores of metals which are not volatile at a temperature of 800 C., which comprises reducing such an ore, a reducing agent and a flux to impalpable powders, making an intimate mixture of these materials with the reducing agent present in at least a proportion sufficient for reducing the metal and then subjecting this mixture as a traveling stream to the action of an overlying current of fire gases at a high temperature.

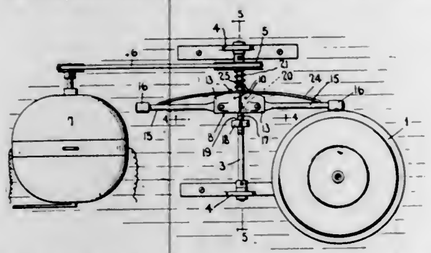
2. The process of producing metals which comprises producing a mixture of impalpably fine ore, flux and reducing carbon, transmitting said mixture as a traveling stream against a stream of fire gases substantially free from oxygen until reduction is complete, and then raising the temperature to the fusion point of the metal produced.

3. The process of producing metal which comprises pulverizing ore, fuel and flux to impalpable powder, subjecting a traveling layer of a mixture of the same to a temperature around 800° C. by means of overlying fire gases

substantially free of oxygen until reduction is complete and then bringing the reduced mixture to a molten condition by fire-heating means, said fire gases being derived from said fire heating means.



1,102,340. BELL-STRIKING DEVICE. FORREST H. KANE, Charlevoix, Mich. Filed June 13, 1912. Serial No. 703,483. (Cl. 116—40.)

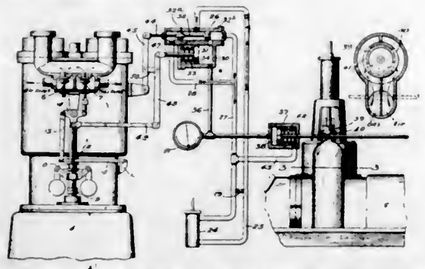


In a bell ringing device a bell adapted to be suitably mounted, a revolubly mounted supporting and operating shaft located adjacent said bell, means whereby said shaft is adapted to be driven in either direction, a clutch one member of which is adjustably carried by and adapted to be fixed to said shaft, a clapper carrying hub forming the other member of the clutch and mounted on the shaft, means carried by said shaft and hub whereby the latter may be moved longitudinally on the former and brought into and out of engagement with said fixed clutch member on the rotating of said shaft in different directions, said hub being provided with means for engaging the fixed clutch member, clapper arms pivotally secured to said hub and projecting radially and yieldingly therefrom, and a coiled spring encircling the shaft and disposed between the hub and the means for driving the shaft, whereby said hub is automatically brought into engagement with the fixed clutch member on the shaft.

1,102,341. MIXTURE-CONTROLLING MEANS FOR MOTORS. ALEXANDER T. KASLEY, Swissvale, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 4, 1910. Serial No. 575,446. (Cl. 123—97.)

1. The combination of a plurality of internal combustion engines supplied from a common source and one of which operates under a substantially constant load, of means operated upon the variation of speed of the constant load engine to vary the position of the fuel valve of another engine.

2. A mixture controlling device for low speed internal combustion engines comprising a high speed internal combustion engine, a speed responsive device for the high speed engine, an oil relay actuating means controlled by the said speed responsive device, an oil relay operated thereby, and a low speed engine mixture device controlled by the relay to vary the mixture of the charge to the low speed engine.



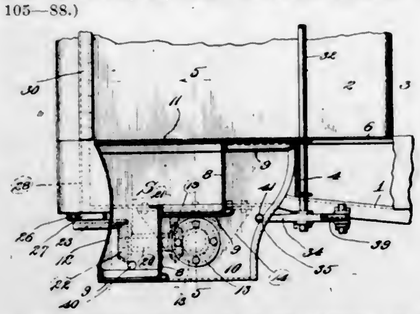
3. The combination with a low speed combustion engine, a high speed pilot engine operating under a constant load and means operated by the pilot engine upon variations in speed of said pilot engine for varying the mixture of the charge to the low speed engine.

4. The combination with a plurality of engines, one of which is a governing engine, the governing engine consisting of a high speed engine operating under constant load, a mixture valve for each of the engines other than the governing engine and mechanism operated by the change of speed of the governing engine, due to variation in the quality of gas and for varying the position of the mixing valve so as to vary the port areas of said mixing valve.

5. The combination of a combustion engine having a mixing valve, a fluid actuated device for changing the position of said mixing valve to vary the port areas thereof and means controlling the pressure for said device comprising a high speed engine working under constant load.

[Claims 6 to 9 not printed in the Gazette.]

1,102,342. PLATFORM-STEPS FOR RAILWAY PASSENGER-CARS. REGINALD W. KENDALL, Terre Haute, Ind. Filed July 28, 1913. Serial No. 781,628. (Cl. 105—88.)



1. The combination with a railway-passenger-car, including its platform-underframing and fixed platform section, of a fixedly connected series of platform-steps pivotally mounted on said car and swingable relatively to said fixed platform section from operative to inverted or inoperative position and from inverted or inoperative position to operative position, said steps, when in operative position, forming a direct continuation of said fixed platform section and the tread-portions of said steps being substantially parallel with said fixed platform section when said steps are in either operative or inoperative position, substantially as described.

2. The combination with a railway-passenger-car, including its platform-underframing and fixed platform sec-

tion, of a fixedly connected series of platform-steps pivotally mounted on said car, and means adapted to pivotally swing said steps relatively to said fixed platform section from operative to inverted or inoperative position and from inverted or inoperative position to operative position, said steps, when in operative position, forming a direct continuation of said fixed platform section and the tread-portions of said steps being substantially parallel with said fixed platform section when said steps are in either operative or inoperative position, substantially as described.

3. The combination with a railway-passenger-car, including its platform-underframing and fixed platform section, of a fixedly connected series of platform-steps pivotally mounted on said car in proper position relatively to said fixed platform section, a vestibule-door swingable on said car, and mechanism between said door and steps whereby, on said door being swung from closed to open position, said steps will be pivotally moved to operative position and, on said door being swung from open to closed position, said steps will be inverted or pivotally moved to inoperative position, the tread-portions of said steps being substantially parallel with said fixed platform section when said steps are in either operative or inoperative position, substantially as described.

4. The combination with a railway-passenger-car, including its platform-underframing and fixed platform section, of a fixedly connected series of platform-steps pivotally mounted on said car in proper position relatively to said fixed platform section, a vertically-disposed rock shaft on said car, a vestibule-door fixed to and pivotally movable with said shaft, and gearing between said shaft and said steps whereby, on said door being swung from closed to open position, said steps will be pivotally moved to operative position and, on said door being swung from open to closed position, said steps will be inverted or pivotally moved to inoperative position, the tread-portions of said steps being substantially parallel with said fixed platform section when said steps are in either operative or inoperative position, substantially as described.

5. The combination with a railway-passenger-car, including its platform-underframing and fixed platform section, of a fixedly connected series of platform-steps pivotally mounted on said car in proper position relatively to said fixed platform section, a vertically-disposed rock shaft on said car adjacent the end wall thereof, a vestibule-door fixed to and pivotally movable with said shaft, said door being swingable through an arc of 90°, and gearing between said shaft and said steps having a ratio of one to two whereby, on said door being swung from closed to open position, said steps will be pivotally swung through an arc of 180° to operative position and, on said door being swung from open to closed position, said steps will be inverted or pivotally moved through an arc of 180° to inoperative position, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

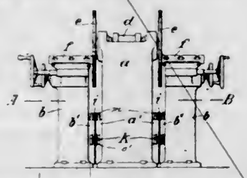
1,102,343. SPRING-HEEL. WENDEL KOVÁCS, Brantford, Ontario, Canada. Filed Dec. 8, 1913. Serial No. 805,449. (Cl. 36—38.)



1. In combination with a shoe sole having a block depending from the heel portion thereof, a heel comprising a shell to receive said block with a sliding fit therebetween, and a tread below the shell, a flexible skirt connecting the shell to the sole, and springs interposed between the tread and the block and inclosed by the shell.

2. The combination, with a shoe sole having a block depending from the heel portion thereof, of a heel comprising an upper hollow portion arranged to receive the block with a sliding fit therebetween, springs within the hollow portion connected at their ends to the block and solid portion of the heel respectively, and a flexible skirt connecting the hollow portion of the heel to the sole, said skirt having a flange conforming to the shape of the heel and a forwardly projecting portion secured to the under side of the sole.

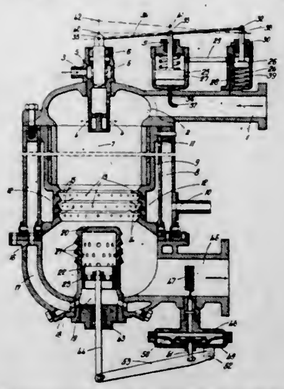
1,102,344. GRINDING-MACHINE. KARL KRUG, Fechenheim, Frankfort-on-the-Main, Germany. Filed Jan. 8, 1914. Serial No. 811,040. (Cl. 51—12.)



1. In a grinding machine the combination with separate supports for the work and for the grinding means, of devices interposed between said supports, said devices being adjustable one independent of the other to produce deflection and torsion of the work-support.

2. In a grinding machine the combination of separate juxtaposed supports for the work and the grinding means, the adjacent faces of said supports having projections each formed with a pair of internally threaded lugs, the lugs of one pair registering with the lugs of the other pair, and screws having right and left hand threads in engagement with said lugs, one set of said lugs and corresponding screw adapted to produce deflection and the other set with corresponding screw adapted to produce torsion of the work support.

1,102,345. FLASH STEAM-GENERATOR. CHARLES LEMALE, Paris, France. Filed Nov. 6, 1912. Serial No. 729,828. (Cl. 60—31.)



1. A generator comprising a combustion chamber, means to admit fuel thereto, an outlet associated with the generator through which the gases formed by the combustion of the fuel pass, and an annular series of fluid nozzles disposed between the combustion chamber and said outlet and adapted to inject fluid jets inwardly toward the axis of said generator, and a second series of fluid nozzles disposed between said combustion chamber and said outlet and adapted to inject fluid jets outwardly toward the walls of said generator.

2. A generator comprising a combustion chamber, means to admit fuel thereto, an outlet associated with the generator through which the gases formed by the combustion of the fuel pass, means disposed between the combustion chamber and said outlet to inject a plurality of fluid jets into the generator which the gases are caused to traverse after leaving the combustion chamber and while on their way to the outlet, and means to project said jets of fluid when first introduced to the generator.

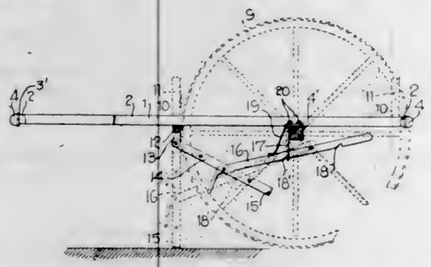
3. A steam generator comprising a combustion chamber, means to admit fuel thereto, means to inject a plurality of fluid jets into said generator, and means controlled by the temperature of the mixture leaving the generator to determine the number of such fluid jets admitted to the generator.

4. A steam generator comprising a combustion chamber, means to admit fuel thereto, an outlet associated with the generator through which the gages formed by the combustion of the fuel pass, means to inject a plurality of fluid jets into said gases after leaving said combustion chamber, said jets being injected in a direction opposite to the direction of travel of said gases, and a jacket surrounding the generator through which said fluid circulates before being injected into the generator.

5. A steam generator comprising a combustion chamber, an air conduit associated with the generator to admit air to the combustion chamber, means to admit liquid fuel to the combustion chamber and means controlled both by the velocity and pressure of the air in said conduit to regulate the admission of fuel to said combustion chamber.

[Claim 6 not printed in the Gazette.]

1,102,346. CART. EMMET M. LOHR, Kings Mountain, N. C. Filed Aug. 23, 1913. Serial No. 786,309. (Cl. 21—65.)



1. A device of the class described including a frame normally disposed in a horizontal position, an axle arranged beneath said frame at one end thereof, a transverse bar arranged beneath the central portion of the frame, a U-shaped bracket depending from said bar, a standard including spaced parallel upright bars having their upper ends pivotally mounted between the arms of said bracket, the lower ends of said bars being outturned in opposed directions, a slotted plate carried by the axle, and a lever having one end secured to the standard and the other end adjustably mounted within said plate.

2. A device of the class described including a frame normally disposed in a horizontal position, an axle arranged beneath said frame, a transverse bar arranged beneath the central portion of the frame, a U-shaped bracket depending from said bar, a standard including spaced parallel bars having their upper ends pivotally connected between the arms of said bracket, said standard being normally disposed in an upright position to support the frame, a slotted plate suspended from the axle, a retaining lever provided with spaced recesses and having one end arranged between said spaced bars of the standard and pivotally secured thereto, and the other end of said lever being adjustable within the slotted plate, and a spring member having one end secured to the axle and the other end yieldably bearing against the lever to retain the same in its effective position.

1,102,347. ACETYLATION OF DICHLORHYDROCARBONS. WALTER E. MASLAND, Wilmington, Del., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Oct. 19, 1912. Serial No. 726,602. (Cl. 23—24.)

1. The process which comprises acetylating a dichlorhydrocarbon with an acetate and acetic acid of from 70% to 99% strength.

2. The process which comprises acetylating a dichlorpentane with an acetate and acetic acid of from 70% to 99% strength.

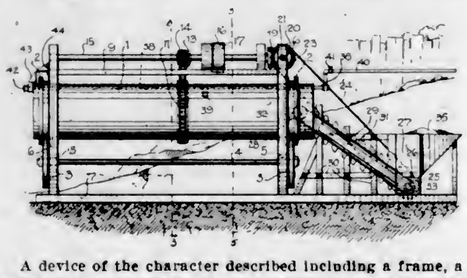
3. The process which comprises acetylating a dichlorhydrocarbon with sodium acetate and acetic acid of from 70% to 99% strength.

4. The process which comprises acetylating a dichlorpentane with sodium acetate and acetic acid of from 70% to 99% strength.

5. The process which comprises acetylating a mixture of dichlorpentane and dichlorhexane with sodium acetate and acetic acid of from 70% to 99% strength.

[Claims 6 to 9 not printed in the Gazette.]

1,102,348. MIXING-MACHINE. ALVA A. MERRILL, South Dayton, N. Y. Filed Apr. 12, 1913. Serial No. 760,703. (Cl. 83—73.)



A device of the character described including a frame, a substantial horizontally disposed cylinder having its ends open and rotatably supported by the frame, a bracket carried by the frame at a point above the rear end of cylinder, the lower extremity of the bracket being angular and depending below the upper portion thereof and adapted to contact with the top and end of the cylinder, a supply pipe directed through the cylinder and having an end portion mounted in the bracket, means for rotating the cylinder, and means for supplying material within the cylinder.

1,102,349. NON-REFILLABLE BOTTLE. MILTON MURRAY, Williams Wharf, Va. Filed May 1, 1913. Serial No. 764,850. (Cl. 215—65.)



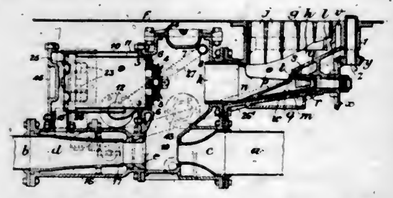
A non-refillable bottle comprising a neck, said neck provided with an outstanding circumferential portion formed integral therewith, a casing positioned within said neck and comprising a substantially inverted conical shape body, said body provided with a discharge opening at one end, said body also provided with a centrally located longitudinally extending aperture, a shield extending over each end of said aperture, legs supporting said shield in spaced relation from the ends of said aperture and constituting means for preventing the passage of an instrument through said body, a spring washer, said body provided with a notch formed upon the sides thereof, said spring washer provided with inwardly extending portions fitting in said notches of said body, said neck provided with a notch portion, and outstanding portions of said spring washer also fitting in said notch of said neck for holding said body within said neck.

1,102,350. PEN OR PENCIL HOLDER. ADOLPH MYERS and LEOPOLD MYERS, Birmingham, England. Filed July 18, 1913. Serial No. 779,703. (Cl. 24—11.)



A pen or pencil holder formed from a single sheet of metal blank free from rivets and having a plurality of spring gripping tongues each tapering inwardly to its lower extremity, a horizontally ribbed circular socket disposed above said tongues, a back plate projecting downwardly from the ribbed circular socket and bent at its free end, a gripping member bent from the upper edge of the ribbed circular socket disposed parallel to the back plate and having its lower end pointed and bent inwardly and upwardly toward said back plate, all as herein set forth.

1,102,351. APPARATUS FOR DISCHARGING ASHES, CLINKERS, OR OTHER REFUSE. WILLIAM STEEL PARSONS, Ladywell, England, assignor to J. Stone & Company Limited, Deptford, England. Filed Feb. 3, 1913. Serial No. 746,021. (Cl. 114—186.)



1. Apparatus for discharging refuse into water comprising a hydraulic ejector combination, a cylinder having one end in communication with said ejector and its opposite end in communication with a water supply, a loosely fitting differential piston in said cylinder, and a valve operatively connected with said piston and controlling the admission to said ejector.

2. Apparatus for discharging refuse into water comprising a hopper, ejector nozzles in coöperative relation, a chamber inclosing a space between said nozzles and having communication with said hopper, a cylinder having one end in communication with one of said nozzles and its opposite end in communication with a water supply, a loosely fitting piston in said cylinder, and a valve operatively connected with said piston said valve being adapted to control the communication between said hopper and said chamber.

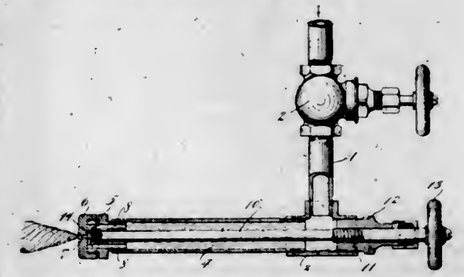
3. Apparatus for discharging refuse into water comprising a hydraulic ejector, a floating piston adapted to be moved in one direction by suction due to said ejector and by pressure due to a head of water, and to be moved in the opposite direction by such head of water, and a valve operatively connected with said piston and adapted to control admission to said ejector.

4. Apparatus for discharging refuse into water comprising a hydraulic ejector, a cylinder, loosely fitting differential piston in said cylinder, a pressure connection for said cylinder on the side of the smaller area of said piston, a connection between said ejector and said cylinder on the side of the larger area of said piston, and a valve operatively connected with said piston and adapted to control admission to said ejector.

5. Apparatus for discharging refuse into water comprising hydraulic ejector nozzles in coöperative relation, a chamber inclosing a space between said nozzles, a cylinder, a loosely fitting hollow differential piston in said cylinder, an admission port at one end of said cylinder adapted to constantly admit pressure liquid to the small area of said piston a suction and back pressure port at the other end of said cylinder, a connection between the last named port and the hydraulic ejector and a valve in operative connection with said piston and adapted to control a refuse entry opening in said chamber.

[Claims 6 to 16 not printed in the Gazette.]

1,102,352. ATOMIZER OR SPRAYING DEVICE. ERNEST H. PEABODY and DAVID J. IRISH, New York, N. Y., assignors to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 22, 1911. Serial No. 650,857. (Cl. 137—86.)



1. In an atomizer or spraying device, a supply pipe, a tip having a discharge orifice and an oil chamber, the wall of said chamber having lateral or side openings communicating with the supply pipe, and an abrupt ended member movable in said chamber and operable from without the supply pipe to control only the inlet area of said openings and to leave the discharge orifice free for the flow of the oil.

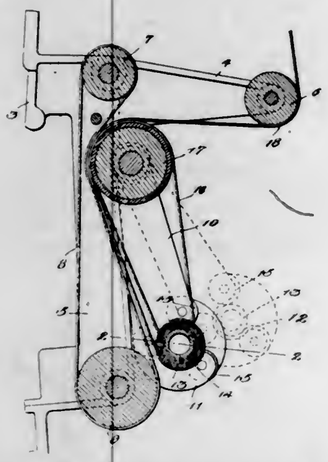
2. In an atomizer or spraying device, a supply pipe, a tip having a discharge orifice and an oil chamber, the wall of said chamber having lateral or side openings communicating with the supply pipe and tangential to said chamber, and an abrupt ended member movable in said chamber and operable from without the supply pipe to control only the inlet area of said openings and to leave the discharge orifice free for the flow of the oil.

3. In an atomizer or spraying device, a supply pipe, a tip having a discharge orifice and an extension with a central chamber, said extension having lateral or side openings therein communicating with the supply pipe and tangential to the said chamber, and an abrupt ended member movable in said chamber and operable from without the supply pipe to control only the inlet area of said openings and to leave the discharge orifice free for the flow of the oil.

4. In an atomizer or spraying device, a supply pipe, a tip having a neck with a longitudinal bore, said neck being of less diameter than the internal diameter of the supply pipe and having ducts in the wall thereof to permit the flow of liquid to the bore of the neck, and an abrupt ended member movable in said chamber to control only the inlet area of said ducts and to leave the discharge orifice free for the flow of the oil.

5. In an atomizer or spraying device, a supply pipe, a tip having a neck with a longitudinal bore, said neck being of less diameter than the internal diameter of the supply pipe and having ducts in the wall thereof tangential to said bore, a spindle seated in said bore, said spindle having an abrupt end so as to leave the discharge orifice free for the flow of the oil, and means for moving said spindle to control the inlet area of said ducts.

1,102,353. WINDING MEANS. CHARLES F. PEASE, Chicago, Ill., assignor to The C. F. Pease Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 19, 1912, Serial No. 710,472. Divided and this application filed Dec. 16, 1912. Serial No. 737,089. (Cl. 242—55.)



1. In apparatus of the character described, the combination with a plurality of spaced rolls, of a belt engaging the same and driven thereby, a feeding roll for operating the belt, a swinging structure disposed near and upon one side of the belt, a winding roll carried by the swinging structure, and a belt engaging the feeding and winding rolls.

2. In a machine of the character described, winding means including, an endless belt, means to drive the endless belt, a vertically swinging support disposed near the endless belt and movable toward and away from the same, a feeding roll disposed near the upper end of the support to be driven by the endless belt by pressing the paper passing thereabout into engagement with the endless belt, a winding roll carried by the lower end of the vertically swinging support to have the paper wound thereabout to form a paper roll increasing in diameter during the winding operation whereby the paper roll will itself engage the endless belt and be directly driven thereby, and separate means operated by the feeding roll to rotate the winding roll.

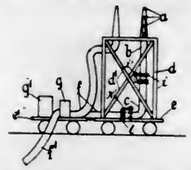
3. In a machine of the character described, means for winding paper or the like into a roll, comprising an endless conveyer structure, a feeding roll operating in engagement with the endless conveyer structure, a supporting structure movable toward and away from said endless conveyer structure, a winding roll carried by the supporting structure, and belts engaging the feeding and winding rolls.

4. In apparatus of the character described, paper feeding means, driving means therefor adapted to receive the paper between the same and the paper feeding means, a rotatable winding element arranged near the paper feeding means and bodily movable toward and away from the same, and lost motion driving connecting means between the paper feeding means and the rotatable winding element.

5. In winding means of the character described, an endless belt, means to drive the endless belt, a pivoted support disposed near the endless belt to swing in a substantially vertical plane toward and away from the same, a feeding roll disposed at the pivot point of the support, a winding roll carried by the lower end of the pivoted support to have the paper wound thereabout to form a paper roll increasing in diameter during the winding operation whereby the paper roll will itself engage the endless belt and be directly driven thereby, and belts trained about the feeding roll and the winding roll.

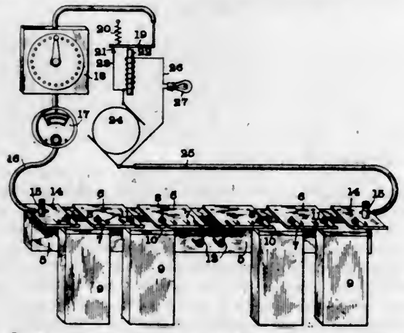
[Claims 6 to 9 not printed in the Gazette.]

1,102,354. APPARATUS FOR THE DISCHARGE OF WATER OR OTHER LIQUIDS IN A SPRAYED FORM OVER COMPARATIVELY LARGE AREAS. DESBARRIÈRES EDOUARD POUGNET, London, England. Filed Oct. 5, 1912. Serial No. 724,048. (Cl. 137—59.)



In watering apparatus, the combination of a horizontal supply pipe, a pipe rotatably mounted in said horizontal pipe and bent to a smooth curve so as to end in a vertical position, a vertical pipe rotatably mounted in said vertical portion of said bent pipe and ending in a number of smoothly curved branches of various sizes and inclinations said branches being respectively provided adjacent their extremities with flanges, watering nozzles of varying orifices provided with flanges, means adjustably securing the flanges on said nozzles to said flanges situated on said branches, said branches and nozzles being made in the form of ball and socket joints at their junctions near said flanges, and mechanism for rotating said bent pipe in said horizontal pipe and said vertical pipe in said bent pipe, whereby stretches of artificial rain extending one at a long distance and others at shorter and shorter distances from the apparatus are produced and are uniformly distributed over the area to be watered and may be directed to water over definite fixed ranges so as to cover the whole area extending from the apparatus to the maximum distance reached.

1,102,355. CONNECTOR FOR BATTERIES. GRANT I. RAWSON and LLEWELLYN B. SHULTZ, St. Louis, Mo., assignors, by mesne assignments, to said Shultz. Filed May 23, 1911. Serial No. 629,071. (Cl. 204—52.)



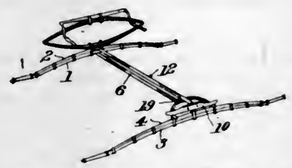
1. In a connector for secondary batteries, the combination with a plurality of contiguous contact plates provided with slots, the outer ends of said contact plates being upturned to form stops to prevent the accidental disengagement of the battery from the plates, of a battery provided with upwardly extending headed terminals adapted to engage with said slots to suspend the battery from said contact plates.

2. In a connector for secondary batteries, the combination with a plurality of contiguous contact plates provided with slots, said plates being also provided with projections, spring actuated members adapted to electrically connect said projections, and a battery provided with upwardly extending headed terminals adapted to engage with the slots in said contact plates, said battery being adapted to move said spring contact member out of operative position.

3. In a connector for secondary batteries, the combination with a plurality of contiguous contact plates each provided with a pair of slots, of a battery provided with a pair of terminals, one terminal being adapted to engage with a slot in one plate and the other terminal being adapted to engage with a slot in an adjacent plate, and automatic means for connecting the plates after the battery has been removed.

4. In a connector for secondary batteries, the combination with a plurality of contiguous contact plates each provided with a plurality of slots, of a battery provided with a pair of contacts, one of said contacts being adapted to engage with a slot in one plate and the other contact to engage with a slot in another plate, a pair of contact members carried by each plate, and a spring member adapted to bear on a pair of said contacts to electrically connect the plates, said spring member being moved out of operative position by the battery.

1,102,356. RUNNING-GEAR. CLIFFORD W. REYNOLDS, Freeport, Ill., assignor, by direct and mesne assignments, of one-fourth to Frank E. Wilcox and one-fourth to Lester E. Hickok, Mechanicsburg, Pa. Filed Nov. 20, 1912. Serial No. 732,580. (Cl. 21—39.)



1. A running gear comprising a rear axle, a front axle, a fifth-wheel, a main reach-rod connecting the rear axle and the upper member of the fifth-wheel, and a separate reach-rod, independent of the main reach-rod, extending from the rear axle and connected to the same member of the fifth-wheel.

2. A running gear comprising a rear axle, a front axle, a fifth-wheel, a main reach-rod connecting the rear axle and the upper member of the fifth-wheel, and a separate reach-rod extending from the wood of the rear axle and connected to the head block of the fifth-wheel.

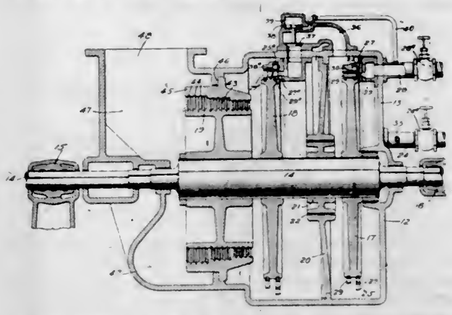
3. A running gear comprising a rear axle, a front axle, a fifth-wheel, a main reach-rod connecting the rear axle and the upper member of the fifth-wheel, and a separate resilient reach-rod extending from the rear axle and connected to the same member of the fifth-wheel.

4. A running gear comprising a rear axle, a front axle, a fifth-wheel, a main reach-rod connecting the rear axle and the upper member of the fifth-wheel, and a separate resilient reach-rod extending from the rear axle and connected to the same member of the fifth-wheel, said auxiliary reach-rod bearing on said upper member.

5. A running gear comprising a rear axle, a front axle, a fifth-wheel, a main reach-rod connecting the rear axle and the upper member of the fifth-wheel, and a separate resilient reach-rod extending from the rear axle and connected to the same member of the fifth-wheel, said auxiliary reach-rod bearing on said upper member and said main reach-rod supporting the lower member of the fifth-wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,102,357. VARIABLE-SPEED TURBINE. HENRY F. SCHMIDT, Wilkinsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Dec. 4, 1911. Serial No. 663,916. (Cl. 121—58.)



1. In combination with a turbine, a plurality of independent concentric series of blades radially offset with relation to each other, the inner series of said blades being adapted to fractionally abstract kinetic energy from the motive fluid throughout a series of separate steps and the outer series being adapted to abstract kinetic energy from the motive fluid throughout a smaller number of series of steps than the inner series.

2. In combination with a turbine, a plurality of independent concentric series of blades radially offset with relation to each other, the inner series of said blades having a greater number of annular rows than the outer series, and the number of rows in each series progressively decreasing outwardly.

3. In combination with a turbine, a plurality of concentric series of blades radially offset with relation to each other, a separate nozzle for delivering motive fluid to each separate series of blades, and a series of blades for receiving motive fluid from each of said first mentioned series of blades.

1,102,358. PROCESS OF MAKING MAGNESIUM CEMENT. WILLIAM SIEGMANN, Baltimore, Md., assignor to Mary V. Gault, Baltimore, Md. Filed Apr. 7, 1911. Serial No. 619,514. (Cl. 106—29.)

1. The herein described process for producing a composition consisting of mixing water, magnesium oxid, sodium chlorid, kieselguhr, asbestos and colophonium to produce a plastic compound and adding carbon bi-sulfid to increase evaporation of moisture and the dissolution of other ingredients.

2. The herein described process for producing a composition of matter consisting in commingling magnesium oxid, magnesium sulfate, common salt, kieselguhr, and adding water and carbon bi-sulfid thereto.

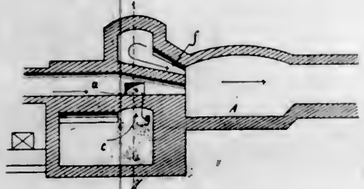
3. The herein described process for producing a composition of matter consisting in mixing oxid of magnesium, sulfate of magnesium, asbestos, colophonium, kieselguhr and common salt and in mixing the same with water and carbon bi-sulfid.

1,102,359. REGENERATIVE FURNACE. FRIEDRICH SIEMENS, Berlin, Germany. Filed Nov. 22, 1913. Serial No. 802,458. (Cl. 75—94.)

1. In a regenerative furnace, means for supplying air and means for supplying gas to the furnace hearth, one of said means being a regenerative system, and by-pass means for supplying to a portion of said system both regenerated air and gas.

2. In a regenerative furnace, means for supplying air and means for supplying gas to the furnace hearth, one of said means being a regenerative system, by-pass means for supplying to a portion of said system both air and gas, and by-pass means to supply a portion of the air from the air supply means to the gas supply means before reaching the hearth of the furnace.

3. In a regenerative furnace, a regenerative air-supply system for supplying regenerated air to the furnace hearth, gas supply means for supplying gas to the hearth, and by-pass means for returning a portion of the air and gas to a portion of the regenerative system.

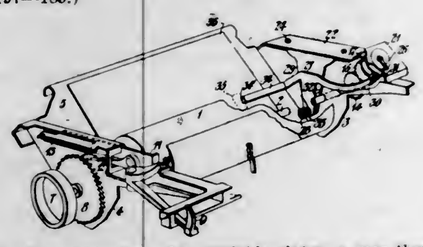


4. In a regenerative furnace, a regenerative air supply system for supplying heated air to the furnace hearth, a gas supply means for supplying gas to the hearth, by-pass means to supply a portion of the air to the gas-supply means and by-pass means to supply both air and gas for heating a portion of the regenerative system.

5. In a regenerative furnace, an air supply system and a gas supply system, both supplying regenerated air and gas media to one end of the furnace hearth under all conditions of operation, and by-pass means to supply a portion of the medium from one of said systems to the other.

[Claim 6 not printed in the Gazette.]

1,102,360. TYPE-WRITING MACHINE. STEPHEN T. SMITH, Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 8, 1913. Serial No. 766,308. (Cl. 197—189.)



1. The combination of a revoluble platen, a gear thereon, a second gear in mesh with said first-mentioned gear, a crown gear in mesh with said second gear, an index revoluble about the axis of the crown gear, a dial to coöperate with said index, a friction device connecting said index to said crown gear, and a lever extending at one end to said friction device to restrain said index and being at its oppositely-extending end restrained by a work-sheet, whereby when the sheet releases the lever, the latter releases the index.

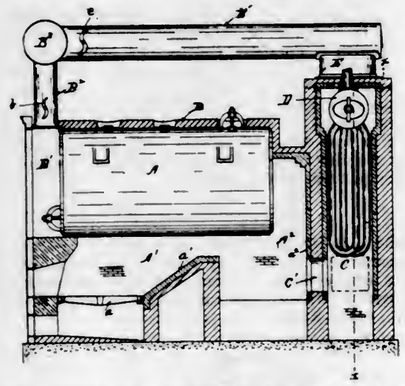
2. The combination of a revoluble platen, an index, a train of connections between the platen and index, said train comprising a pair of frictionally connected members, one of which is positively connected to the platen and the other of which is positively connected to the index, a dial to coöperate with said index, and a lever having an extension at one end to restrain said index and extending at the other end for restraint by a work-sheet in such manner that when the work-sheet releases the lever, the latter releases the index.

3. The combination with a revoluble platen and an index, of frictional means imparting movement to said index from said platen, and a lever having one end operating directly on said index to restrain its movement while the other end of said lever is restrained by a work-sheet, said lever operating to release said index when released by said work-sheet.

4. In a typewriting machine, the combination with a revoluble platen and an index, of frictional means imparting movement to said index from said platen, and a lever fulcrumed in parallelism with the platen axis and having one end operating directly on said index to restrain its movement while its other end is restrained by a work-sheet, said lever releasing said index when released by said work-sheet.

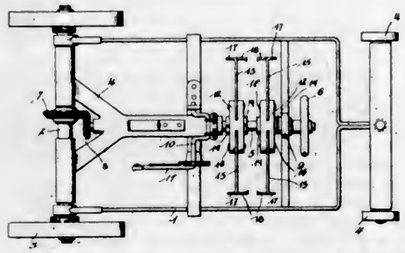
5. In a typewriting machine, the combination with a revoluble platen and an index, of frictional means exterior to the longitudinal zone of the platen for imparting movement to said index, driving means between said frictional means and platen, and a lever having one end operating directly on said index to restrain its movement while the other end of said lever is restrained by a work-sheet, said lever releasing said index when released by said work-sheet.

1,102,361. STEAM-SUPERHEATER. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Feb. 10, 1913. Serial No. 747,368. (Cl. 122—480.)



The combination in an apparatus of the character described, of a horizontal tubular boiler, a furnace thereunder to receive fuel to be burned, a transverse fire-wall, a wall adjacent to the rear end of said boiler having an opening therethrough below the upper edge of said fire-wall and forming a combustion chamber at the rear end of said tubular boiler, vertical side and end walls forming a chamber against said rear wall, a drum secured and inclosed within the upper portion of said chamber, superheater tubes secured in the shell of said drum and depending therefrom, and a draft flue leading from said chamber above said drum, substantially as set forth.

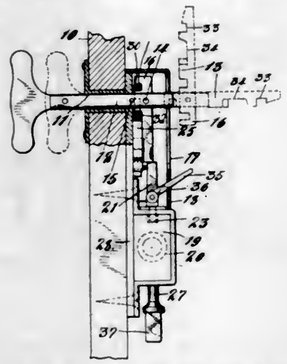
1,102,362. BLADE FOR COTTON-CHOPPERS. JOSEPH H. STONE, Okemah, Okla. Original application filed Mar. 25, 1913. Serial No. 756,809. Divided and this application filed Oct. 6, 1913. Serial No. 793,698. (Cl. 97—61.)



1. A blade for cotton choppers comprising a shank having its outer end bifurcated, the branches of the bifurcation being extended in opposite directions from the shank to form cutting members and one of said members having an inwardly turned cutting lip at its end.

2. In a cotton chopper, the combination of a chopper shaft, blade-carrying arms secured thereon and disposed in pairs, and blades secured to said arms and extending therefrom and disposed radially of the shaft and provided at their outer ends with oppositely extending cutting members, the cutting members on the opposed sides of the adjacent stems being provided with inwardly turned cutting lips at their ends.

1,102,363. LOCK. ANDREW TARASZIR, New York, N. Y. Filed July 28, 1913. Serial No. 781,691. (Cl. 70—76.)



1. In a lock, a keyhole, a barrier within the lock and partially encircling the keyhole and adapted to serve as an arcuate guideway for the butt end of the key, a bolt, means for holding the bolt in projected position, a pivoted member connecting said means adapted for engagement by the key to release the bolt, and an elongated projection extending from the bolt adapted to be engaged by the key after the holding means has been disengaged from the bolt to retract the latter from its projected position.

2. In a lock, a keyhole, a plurality of segmental barriers located within the lock and partially encircling the keyhole, a bolt, a pin engaging the bolt to hold the same in projected position, a lever connected to the pin, said lever being disposed in position to be engaged by the key to disengage the pin, and an elongated projection upstanding from the bolt adapted to be engaged by the key after the pin has been disengaged to retract the bolt.

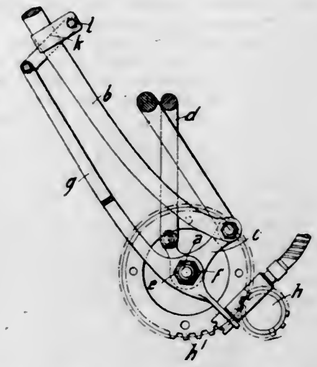
3. In a lock, a keyhole through which a key stem of small diameter may be inserted, a casing having a slot through which a long key bit may pass, a socket having a slot in a longitudinal side thereof within the casing, a bolt adapted to reciprocate in said socket, a projection extending from the bolt through said slot, a pin engaging the bolt, a member adapted to be operated by the key to disengage the pin from the bolt, said projection being also engaged by the key to retract the bolt.

4. A lock having a casing, a keyhole, a barrier at the interior of the lock disposed laterally of the keyhole, a bolt, means for engaging the bolt to hold the same in projected position, a member engaged by the key for retracting said holding means, said member being disposed at a greater distance from the axis of the keyhole than the outermost surface of the latter, and means for operating the lock from the inside comprising a lever connected to said engaging means and passing through the casing whereby said means may be retracted, and a finger piece extending from the bolt to the exterior of the casing whereby the bolt may be retracted when the engaging means has been released by the lever.

5. In a lock, a bolt, a spring for projecting the bolt, a pin for holding the bolt in projected and retracted positions, a projection extending from the bolt disposed to be engaged by the key after the pin is disengaged from the bolt for retracting the latter, said pin being also disengaged for projecting the bolt with a movement of the key in the same direction as for retracting the bolt.

[Claims 6 to 8 not printed in the Gazette.]

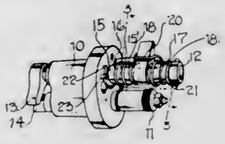
1,102,364. SPEEDOMETER FOR MOTOR-CYCLES. JOHN TAYLOR, Stoney Stratford, England. Filed June 6, 1913. Serial No. 772,032. (Cl. 235—96.)



1. In motor cycles, in combination, a front fork, a front wheel axle, a yielding connection between said axle and said fork whereby said axle may move relatively to said fork, a lever pivotally mounted intermediate its ends to said axle, speedometer driving mechanism mounted upon one end of said lever, and a yielding connection between the other end of said lever and said fork, said two yielding connections forming in combination with portions of the lever and front fork a parallel motion.

2. In motor cycles, in combination, a front fork, a front wheel axle, a yielding connection between said axle and said fork whereby said axle may move relatively to said fork, a lever pivotally mounted intermediate its ends to said axle, speedometer driving mechanism mounted upon one end of said lever, and a yielding connection between the other end of said lever and said fork, said second mentioned yielding connection being of the same length as, and parallel to said first mentioned yielding connection, said two yielding connections forming in combination with portions of the lever and front fork a parallel motion.

1,102,365. MAKE-AND-BREAK IGNITER. GILBERT O. THOMPSON, Bantry, N. D. Filed Apr. 26, 1913. Serial No. 763,851. (Cl. 123—153.)



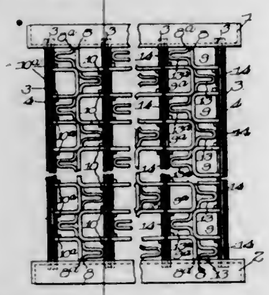
1. The combination with a make and break igniter including a body, a movable electrode and a trip finger for actuating said electrode, of springs arranged upon opposite sides of said finger and each having coils of uniform diameter closely contacting with the igniter stem, said springs being of different tensional strength, each of said springs having an enlarged terminal coil, the end of the enlarged coil of one spring being engaged with said trip finger and the end of the enlarged coil of the other spring being fixed to the body, the other ends of said springs being secured to the electrode and the trip finger respectively.

2. The combination with a make and break igniter including a body, a movable electrode and a trip finger loosely mounted upon said electrode for actuating the same, of control springs arranged upon opposite sides of said finger and movable with the electrode, each of the springs having a plurality of spaced convolutions of equal

diameter closely wound upon the electrode, one of said springs having an enlarged terminal convolution engaged with said finger, the other of said springs having an enlarged terminal convolution secured to the igniter body, and a pin projecting from said body and engaged by the enlarged convolution of said latter spring.

3. The combination with a make and break igniter including a body, a movable electrode, fixed and loose sleeves mounted upon the electrode and a trip finger on the loose sleeve; of springs arranged upon said sleeves, each of said springs including a plurality of coils intimately engaged by the sleeve and movable therewith, the corresponding ends of said springs terminating in enlarged coils, the enlarged coil of the spring on the fixed sleeve having its extremity engaged with said trip finger while the enlarged coil of the spring on the loose sleeve is fixed to the igniter body, a pin fixed in the igniter body and engaged by the enlarged coil of the latter spring, said enlarged coils being capable of expansion and contraction without moving the remaining coils upon the respective sleeves, the other terminals of said springs being secured to the electrode and trip finger respectively.

1,102,366. RADIATOR FOR AUTOMOBILES. FRANK TODD, Oak Park, Ill. Filed Oct. 14, 1911. Serial No. 654,690. (Cl. 62—28.)

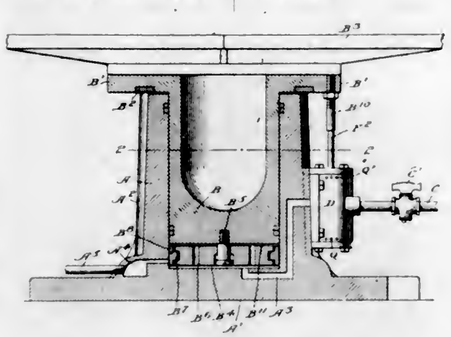


1. A radiator having a pair of headers, parallel water tubes connecting them and spaced apart to leave air passages between them, and a pair of radiating strips arranged in each of said air passages, each of said radiating strips having along its opposite edges laterally projecting portions bent to form a plurality of channels each open along one side, the open sides of all adjacent channels being presented in the same direction, the radiating strips of each pair being arranged back to back and with their channels alternating, the engaging corners of the channels being shouldered or off-set so as to bring the walls of the channels into alinement.

2. A radiator having a pair of headers, parallel water tubes connecting them and spaced apart to leave air passages between them, and a pair of radiating strips arranged in each of said air passages, each of said radiating strips having along its opposite edges laterally projecting portions bent to form a plurality of channels each open along one side, the open sides of all adjacent channels being presented in the same direction, the strips of each pair being arranged back to back and with their channels alternating, the engaging corners of the channels being shouldered or off-set so as to bring the walls of the channels into alinement, and portions connecting the channels.

3. A radiator having a pair of headers, parallel water tubes connecting them and spaced apart to leave air passages between them, a pair of radiating strips arranged in each of said air passages, each of said radiating strips having along its opposite edges portions that are bent to form channels, each open along one side, the open sides of all adjacent channels being presented in the same direction, the radiating strips of each pair being arranged back to back and with their side walls in contact with the water tubes, respectively, the edges of the side walls being flanged to provide ample bearing surface for contacting with the water tubes.

1,102,367. JARRING APPARATUS FOR PACKING GRANULAR MATERIALS. HENRY TSCHERNING, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed June 17, 1912. Serial No. 704,092. (Cl. 121—19.)



1. In apparatus of the class described, the combination with an upright cylinder having below an inlet port and an exhaust port, of a jarring piston arranged for reciprocating in said cylinder and provided with a lateral projection to engage the cylinder and abruptly arrest the downward movement of the piston before it reaches the bottom of the cylinder, an independently movable member carried by the piston for closing and opening the exhaust port, and automatic devices operating in time with the piston to admit actuating fluid through said inlet port.

2. The combination with a vertical cylinder provided with an inlet port, with a circumferential chamber communicating with the interior of the cylinder through a broad circumferential slot and with an outwardly extending exhaust passage, of a piston arranged to open and close said slot in reciprocating, and automatic means for supplying actuating fluid intermittently through said inlet port.

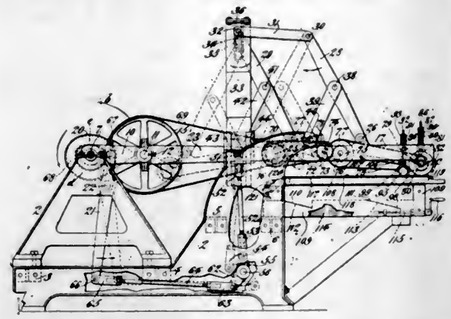
3. The combination with a cylinder provided below with inlet and exhaust ports, of a piston working in the cylinder and having at its upper end above the cylinder an external flange in position to keep the piston above the bottom of the cylinder, a plate below the piston, carried thereby, and capable of limited independent vertical movement, an exhaust-controlling spring ring carried by the plate and adapted to support its own weight and that of the plate by frictional engagement with the interior of the cylinder, and automatic means for intermittently admitting fluid under pressure at said inlet port.

4. The combination with a cylinder having below inlet and exhaust ports, of a piston working in the cylinder, independently movable means carried by the piston for opening and closing the exhaust port, automatic valve mechanism for securing admission of actuating fluid intermittently in time with the piston movements, and manually operated means for arresting the movements of the valve mechanism.

5. The combination with a cylinder having below inlet and exhaust ports, of a jarring piston working in the cylinder, means within the cylinder whereby the piston alternately opens and closes the exhaust, an external valve mechanism, allowing operating fluid to pass to the inlet periodically, comprising a reciprocating valve governing the inlet passage and a second valve normally allowing fluid to pass to the first valve, and means whereby rising of the piston causes the shifting of both valves cutting off the fluid, while the descent of the piston again shifts both valves to initial position.

[Claim 6 not printed in the Gazette.]

1,102,368. LEATHER-FINISHING MACHINE. WILLIAM B. TURNER, Wilmington, Del., assignor to W. B. Turner Machine Company, a Corporation of West Virginia. Filed Jan. 13, 1913. Serial No. 741,673. (Cl. 149—17.)



1. In a leather finishing machine, glazing means, ironing means, and devices for causing said means to reciprocate and during their travel in one direction engage with the leather being treated.

2. In a leather finishing machine, glazing means yieldingly mounted, ironing means yieldingly mounted posterior thereto, and devices for causing said means to travel over the leather being treated and simultaneously contact therewith.

3. In a leather finishing machine, a glass, a smooth roll mounted posterior thereto, means for revolving said roll, and devices for causing said glass and revolving roll to travel over the leather being treated.

4. In a leather finishing machine, a work support, glazing means movably mounted thereabove, ironing means rotatably mounted above said work support, means for revolving said ironing means, devices for relatively adjusting said work support with respect to said glazing means and said ironing means, and devices for causing said glazing means and ironing means to travel over the surface of the leather on said work support.

5. In a leather finishing machine, a work support, a movable carrier, a glazing member mounted therein, an ironing member mounted in said carrier posterior to said glazing member, means to simultaneously reciprocate said members, and cam actuated devices controlled by said means to cause said members to move into engagement with the leather at the beginning of a stroke and to move out of engagement with the leather at the end of such stroke.

[Claims 6 to 17 not printed in the Gazette.]

1,102,369. WINDING-MACHINE. BENJAMIN R. VARLEY, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 5, 1912. Serial No. 724,018. (Cl. 242—10.)

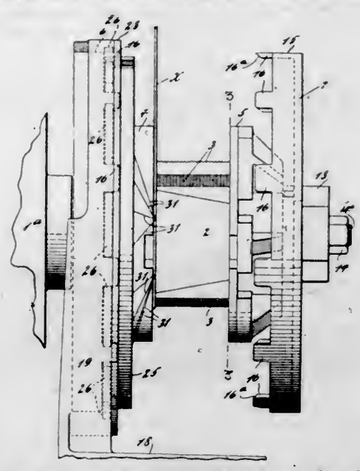
1. In combination, a winding mandrel, and means movable lengthwise of the mandrel and rotatable therewith for laying a tie band lengthwise of the mandrel over a layer of a winding on the mandrel.

2. In combination, a winding mandrel, means movable lengthwise of the mandrel for laying a tie band lengthwise of the mandrel over a layer of a winding on the mandrel, and means for causing rotation of said means with the mandrel.

3. In combination, a winding mandrel, means movable lengthwise of the mandrel for laying a tie band lengthwise of the mandrel over a layer of a winding on the mandrel, and means for connecting the said means alternately with the opposite ends of the mandrel to rotate therewith.

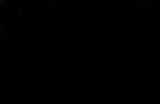
4. In combination, a winding mandrel, a support movable lengthwise of the mandrel, a tie band supply carried by said support, and means for clutching said supply alternately to opposite ends of the mandrel.

5. In combination, a winding mandrel, a support movable lengthwise of the mandrel, a plurality of spools rotatably mounted on said support, and means for clutching said spools to the mandrel.



[Claims 6 to 23 not printed in the Gazette.]

1,102,370. WAFER. WILLIAM BELL WAIT, Jr., New York, N. Y. Filed Dec. 22, 1911. Serial No. 667,398. (Cl. 24—67.)



1. A wafer for the purposes hereinabove described, comprising two sides connected by extensible folds but otherwise separated from each other each side having an exterior gum coating and an uncoated interior.

2. A wafer, comprising two separate relatively movable sides facing in opposite directions and provided with gum adapted to adhere respectively to a print and mount, and being united by their opposite adjacent edges.

3. A wafer, comprising two separate relatively movable, superposed sides united by their opposite adjacent edges, and having an adhesive coating on the exterior face of each side.

4. A wafer, comprising two separate sides, united only at their opposite adjacent edges, and each provided with a coating of adhesive material, the coating of at least one of said sides extending over a part only of said side.

5. A wafer, comprising a flat strip with its ends folded over to form one side of the wafer and having a strip of gum applied to the exterior of said side and strip of gum applied to the exterior of the opposite side.

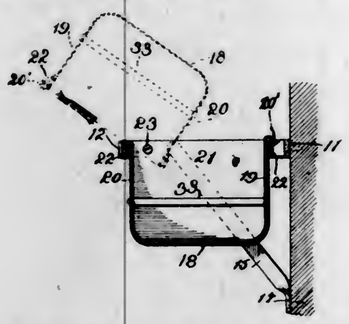
[Claims 6 to 8 not printed in the Gazette.]

1,102,371. FEED BOX OR TROUGH. GEORGE BERTRAM WARREN, Rockford, Ill. Filed Apr. 3, 1908. Serial No. 424,872. (Cl. 119—61.)

1. In a feeder, the combination of a frame including side bars and a front bar, means whereby the side bars of the frame may be secured to the wall of a stall, a feed-box having the upper end of its walls within the frame and pendent therefrom, pivotal connections between the sides of the feed-box and the sides of the frame and located at the upper portion of the feed-box and at the forward ends of the respective sides of the box and frame, whereby the box is adapted to be turned from the rear forwardly and inverted to discharge over the front bar.

2. In a feeder, the combination of a frame including side bars and a front bar, means whereby the side bars of the frame may be secured to the wall of a stall, a feed-

box having the upper ends of its walls within the frame and pendent therefrom, pivotal connections between the sides of the feed-box and the sides of the frame, said pivotal connections being located within the spaces between the sides of the frame and the sides of the box and located at the upper portion of the feed-box and at the forward ends of the respective sides of the box and frame, so that the box may be turned from rear forwardly and inverted to discharge over the front bar.



3. In a feeder, the combination of a frame including side bars and a front bar, means whereby the side bars of the frame may be secured to a wall or walls of the stall, a feed box having the upper ends of its walls within the frame and pendent therefrom, pivotal connections between the sides of the feed-box and the sides of the frame and located at the upper portion of the feed box and at the forward ends of the respective sides of the box and frame, whereby the box is adapted to be turned from the rear forwardly and inverted to a discharging position, and co-acting stop mechanism comprising hooks attached to the sides of the box and engaging the frame at the rear thereof, for holding the box in its normal position.

4. In a feeder, the combination of a frame including side bars and a front bar, means whereby the side bars of the frame may be secured to a wall or walls of the stall, a feed box having the upper ends of its walls within the frame and spaced from the frame and pendent therefrom, pivotal connections between the sides of the feed box and the sides of the frame, said pivotal connections being located within the spaces between the sides of the frame and the sides of the box, and located at the upper portion of the feed box and at the forward ends of the respective sides of the box and frame, said pivoted connections adapting the box to be turned from the rear forwardly and inverted to a discharging position, and co-acting stop mechanism comprising hooks attached to the sides of the box and engaging the frame, at the rear thereof, and located within the spaces between the sides of the frame and the sides of the box, said stop mechanism adapted for holding the box in its normal position.

5. In a feeder, the combination of a frame including side bars and a front bar, means whereby the side bars of the frame may be secured to a wall or walls of the stall, a feed box having the upper ends of its walls within the frame and spaced from the frame and pendent therefrom, pivotal connections between the sides of the feed box and the sides of the frame, said pivotal connections being located within the spaces between the sides of the frame and the sides of the box, and disposed at the upper portion of the feed box and at the forward ends of the respective sides of the box and frame, each pivotal connection consisting of a U-shaped strap having its ends secured to the side of the frame and its base or transverse member adjacent to the side of the box, and a pivot pin extending from the side of the box into the loop of the U-shaped strap and a nut on the threaded end of the pin, and located within the loop of the U-shaped strap, the said pivotal connections adapting the box to be turned from the rear forwardly and inverted to a discharging position, and co-acting stop mechanism between the sides of the box and the frame at the rear thereof, for holding the box in its normal position, each of said stop mechanisms comprising a U-shaped strap having its ends secured to the side of the frame and a base or transverse member adjacent to the side of the box, and an arm secured to the side of the box and extending upwardly and bent into hook form to engage over the base or transverse member of the U-shaped strap.

1,102,372. HINGE. WILLIAM A. WEBSTER, Galesburg, Ill. Filed Apr. 18, 1912. Serial No. 691,597. (Cl. 16—40.)



A gate-hinge member consisting of a knob-like knuckle having in one of its sides a channel adapted to receive a diagonally arranged gate-supporting element, said knuckle provided with a transverse aperture whereby the gate-supporting member may be secured thereto.

1,102,373. ARTIFICIAL TOOTH. GEORGE L. WERNET and HENRY A. COLLETT, Philadelphia, Pa. Filed June 27, 1912. Serial No. 706,131. (Cl. 32—9.)



1. An artificial tooth having its rear side hollowed out to form a concaved curved surface, the said concaved surface beginning at a point adjacent to the rear edge of the crown of the tooth and terminating at the base of the same, and the said tooth having at its opposite sides notches with outwardly inclined side walls whereby the depth of said notches decreases from their centers to their outer edges, the said notches terminating at points posteriorly of the front surface of the tooth.

2. An artificial tooth having its rear side hollowed out to form a concaved curved surface which surface begins at a point adjacent to the rear edge of the crown of the tooth and terminates at the base of the same and which tooth has at its opposite sides notches the depths of which decrease from their centers to their outer edges and the said notches terminating at points posteriorly of the front surface of the tooth and which tooth is provided with a hole which extends thereinto from the rear side thereof substantially at right angles to a plane tangent to the said concaved curved surface.

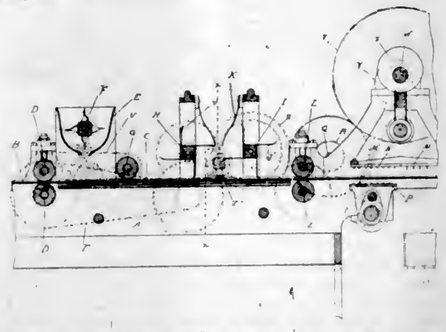
1,102,374. APPARATUS FOR FORMING MEDICINAL TABLETS. HENRY E. WHITAKER and JAMES M. MACDONALD, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 9, 1908. Serial No. 420,097. (Cl. 107—17.)

1. In an apparatus for forming medicinal tablets, a mold plate having a series of mold cavities therein, a roll extending transversely of the mold plate for depositing a uniform layer of material over the latter, a blade, and means for operating said blade to scrape and knead the material into the mold cavities.

2. In an apparatus for forming medicinal tablets, a mold plate having a series of mold cavities therein, means for depositing material upon said plate, a plurality of revolving blades, a portion of said blades being inclined in the direction of said blades' travel for pressing and scraping the material into the mold cavities.

3. The combination with a mold plate having a series of mold cavities therein, of means for depositing the material upon said plate, means for scraping the material in opposite directions over said plate, and means for removing the surplus material accumulated by said scraping means.

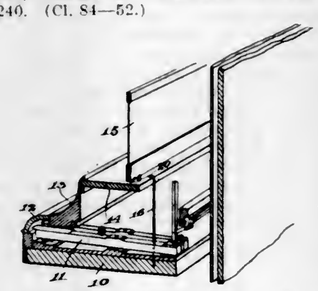
4. The combination with a mold plate having a series of mold cavities therein, of a bed over which said plate is fed, means for depositing the material upon said plate, a pair of oppositely rotating members above said bed, scrapers carried by said rotating members and moved thereby across said plate when moved over said bed to force the material on said plate into said mold cavities, and means for removing the surplus material accumulated by said scrapers.



5. The combination with a bed, of a series of mold plates adapted to be successively fed over said bed, each plate being provided with a series of mold cavities, means for depositing the material upon said plates, a revolving blade for forcing the deposited material into the mold cavities, and for removing the surplus material, and an ejector for disengaging the molded tablets from said plates.

[Claims 6 to 14 not printed in the Gazette.]

1,102,375. SHELF-SUPPORT FOR PIANOS. STANLEY W. WIDNEY, Chicago, Ill. Filed Mar. 10, 1913. Serial No. 753,240. (Cl. 84—52.)



1. In a piano, the combination with the key-bed, and music-supporting shelf, of a brace for said shelf secured at its upper end to the latter and at its lower end to the key-bed.

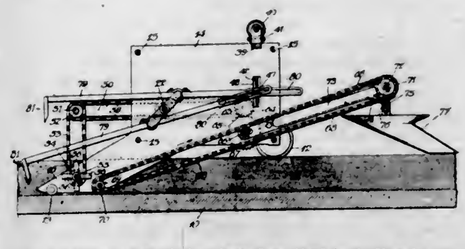
2. In a piano, the combination with the key-bed, keys, and music-supporting shelf, of a brace for said shelf consisting of a rod secured at its upper end to said shelf and at its lower end to said key-bed and extending between the keys.

3. In a piano, the combination with the key-bed, keys, and music-supporting shelf, of a brace for said shelf consisting of a metal rod secured at its upper end to said shelf, extending between said keys, and having a lower end portion of screw formation screwed into said key-bed.

4. In a piano, the combination with a key-bed, and music-supporting shelf, of a pin projecting from the rear edge of said shelf, and a metal rod having a lower end portion of screw formation screwed into said key-bed and an upper end formed with an eye engaging said pin.

5. In a piano, the combination with a key-bed, and a music-supporting shelf, of a pin having a threaded outer end portion projecting from the rear edge of said shelf, a metal rod having a lower end portion of screw formation screwed into said key-bed and an upper end formed with an eye engaging said pin, and a securing nut on the threaded outer end of said pin clamping the upper end of said rod against the rear edge of said shelf.

1,102,376. EXCAVATING AND CONVEYING APPARATUS FOR STARCH. DENZIL M. WILDER, Shabbona, Ill. Filed July 31, 1913. Serial No. 782,237. (Cl. 214—10.)



1. An apparatus of the class described including in combination a frame, a hoe-equipped-arm mounted on said frame for vertical and reciprocal movement at its front end, a vertically adjustable rod transversely and horizontally mounted on the frame and having loose connection with said arm, means to vertically adjust said rod, and means to operate said arm.

2. An apparatus of the class described including in combination a frame, a plurality of hoe-equipped-arms mounted on said frame for vertical and reciprocal movement at their front ends, a vertically adjustable rod horizontally and transversely mounted on the frame and having loose connection with said arms, means to adjust said rod, and means to operate said arms.

3. An apparatus of the class described including in combination a frame, a plurality of hoe-equipped-arms mounted on said frame for vertical and reciprocal movement at their front ends, means to regulate the stroke of said arms, a conveyer carried by the frame and extended upwardly and rearwardly from the front lower portion thereof, a kicker shaft transversely journaled on the frame in front of the forward portion of the conveyer and having radial arms thereon, and means to operate the hoe-equipped-arms, the conveyer, and the kicker shaft simultaneously.

4. An apparatus of the class described including in combination a frame, a hoe-equipped-arm mounted on said frame for vertical and reciprocal movement at its front end, means to regulate the stroke of said arm, a conveyer carried by the frame and extended upwardly and rearwardly from the lower front portion thereof, a kicker shaft transversely journaled on the frame in front of the forward portion of the conveyer and having radial arms thereon, and means to operate the hoe-equipped-arm, the conveyer and the kicker shaft simultaneously.

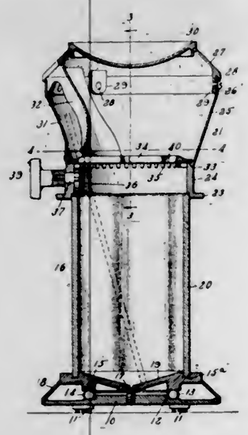
5. In an apparatus of the class described, the combination with a frame of a crank shaft transversely journaled thereon, means to drive said shaft, a plurality of hoe-equipped-arms pivotally mounted on said crank shaft and having longitudinally extended slots in their rear portions, a rod horizontally and transversely mounted for vertical adjustment on the frame and extended through said slots, a conveyer carried by the frame and extended upwardly and rearwardly from the front lower portion thereof, a rotary kicker transversely journaled on the frame in front of the forward portion of the conveyer, and gearing uniting said kicker and conveyer.

1,102,377. DISPENSING APPARATUS. RALPH P. WILTON, Wrightsville, Pa. Filed Jan. 9, 1913. Serial No. 741,006. (Cl. 211—8.)

1. An apparatus comprising a container for holding in loose bulk articles to be dispensed, said container having

an opening in its side through which said articles may be withdrawn, a revoluble dispensing member within the container to select articles singly from the bulk and deliver them in order opposite said opening, a gear ring on said dispensing member, a gear wheel carried by a shaft journaled on the container, and a finger piece on the shaft without the container for rotating the dispensing member.

2. An apparatus comprising an upright container for holding in loose bulk articles to be dispensed, a stationary base on which said container is rotatably mounted, a crown piece forming a part of said container having an open top provided with a removable cover through which the container is charged and an opening in its side through which articles may be withdrawn from the container, a revoluble dispensing member within the container to select articles singly from the bulk and deliver them in order opposite said opening, and manually operated gearing for intermittently rotating said dispensing member.



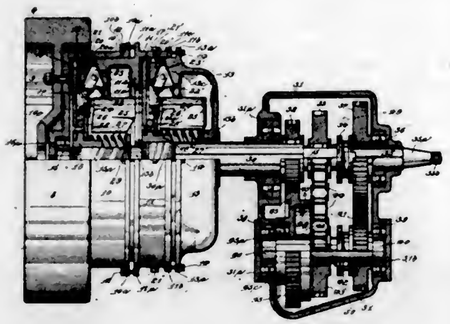
3. An apparatus comprising an upright container for holding in loose bulk articles to be dispensed, a stationary base on which said container is rotatably mounted, ball bearings between the container and the base, a revoluble dispensing member within the container to select articles singly from the bulk and deliver them in order opposite an opening in the side of said container, a gear ring on the dispensing member, a shaft journaled in the container, a gear wheel carried by said shaft for rotating said gear ring and the dispensing member, and a finger piece on the outer end of the shaft for intermittently rotating the dispensing member.

4. An apparatus comprising an upright container for holding in loose bulk articles to be dispensed, a crown piece forming a part of said container, and having an opening in its side through which said articles may be withdrawn, a horizontal supporting shoulder within said crown piece, an annular dispensing member revolubly supported on said shoulder and formed with notches in its inner periphery to select articles singly from the bulk and deliver them in order opposite said opening, a horizontal tongue projecting inwardly from the dispensing member for stirring said articles, and a gear ring on its under side, a shaft journaled in said crown piece, a gear wheel on said shaft meshing with the gear ring, and a manually operated finger piece on the exterior end of the shaft for rotating the dispensing member.

5. In a dispensing apparatus, a dispensing member therefor, comprising a substantially flat ring formed with a bearing surface and a circular row of teeth on its underside, and a plurality of spaced notches in its inner periphery for selecting singly articles to be dispensed, and an inwardly projecting tongue for stirring said articles.

[Claims 6 to 9 not printed in the Gazette.]

1,102,378. TRANSMISSION-GEARING. RAYMOND S. ZEITLER, Urbana, Ill. Filed Sept. 4, 1913. Serial No. 788,087. (Cl. 74—59.)



1. In a transmission gearing, a main driven member, casings positively connected with said member, friction clutches mounted in said casings respectively, and comprising friction rings rotatable with said casings, friction disks loosely mounted in said casings, and means adapted to effect frictional engagement between said casings, rings and disks upon said casings rotating at a predetermined speed, shafts passing through said casings and connected respectively with said disks, a third casing, two sets of intermeshing gears mounted in said casing, and means whereby motion is transmitted from said first named shafts to said sets of gears respectively, and means whereby the direction of travel of said gears may be reversed.

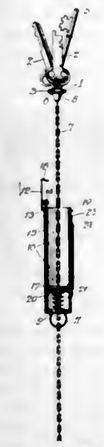
2. In a transmission gearing, a main driven member, cylindric casings positively connected with said member, complementary friction clutches arranged in said casings respectively and comprising friction rings, wedge-shaped in cross-section, rotatable with said casings, friction disks loosely arranged in said casings adjacent said rings, and means adapted to effect frictional engagement between said casings, rings and disks upon said casings rotating at a predetermined speed, said means including centrifugally operative devices and springs adapted to neutralize the action of said devices, shafts passing through said casings and connected respectively with said disks, a third casing arranged adjacent the first named casings, and having said shafts journaled therein, a counter-shaft journaled in said third casing, two sets of gears mounted on said shafts, clutches adapted to control the operation of said gears, means for manually operating said clutches, and means for reversing the direction of travel of said gears.

1,102,379. POCKET-CASE. JOSEPH ZOLLER, Chicago, Ill. Filed Aug. 11, 1913. Serial No. 784,186. (Cl. 150—40.)

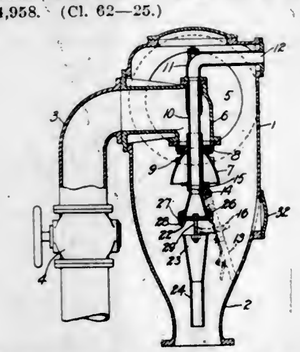
1. In a pocket receptacle of the class described, the combination with an article holder and flexible suspending member, of a receptacle slidably mounted on said suspending member and adapted to cover said holder and articles thereon, a lid for said receptacle, and connections for closing said lid arranged to be engaged and operated by said article holder when the latter is caused to enter said receptacle.

2. In a pocket receptacle of the class described, the combination with an article holder having a base convex on its lower side, a flexible suspending member secured to said holder, a receptacle slidably mounted on said suspending member and having a rigid mouth suitable for receiving and coöperating with said holder to guide the same when entering said receptacle.

3. In a pocket receptacle of the class described, the combination with an article holder consisting of a ring mounted on an elliptical base having a convex surface, a flexible suspending member secured to said holder, a receptacle slidably mounted on said suspending member and having an elliptical cross-section to be suitable for receiving and coöperating with said holder to guide the same when entering said receptacle.



1,102,380. STEAM-CONDENSER. LOUIS R. ALBERGER, Greenwich, Conn.; Blanche Dodge Alberger and Scott C. Ross, New York, N. Y., and Alvan H. Alberger, Hamburg, N. Y., executors of said Louis R. Alberger, deceased, assignors to Alberger Condenser Company, a Corporation of New York. Filed Oct. 3, 1910. Serial No. 584,958. (Cl. 62—25.)



1. In a condenser, the combination with a condensing chamber, of means for introducing the condensing water and the exhaust steam, and means for affording a second supply of water at a high velocity, together with means for entangling the air whereby said second supply is enabled to entrain the air and other gases within the condensing chamber, said air-entangling means comprising a device for subdividing the water into sheets or streams, and a second device removed a distance from the latter and operating to collect said sheets or streams, and means for withdrawing the water from the lower end of the condenser.

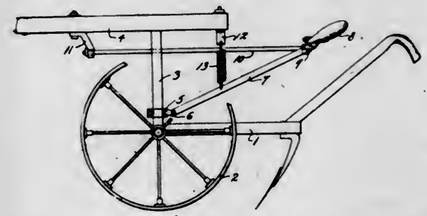
2. In a condenser, the combination with the condensing chamber, of means for introducing the condensing water and the exhaust steam, a spraying means for the condensing water, means for introducing an independent supply of water into the condensing chamber, together with air-entangling means comprising means for subdividing the water into sheets and a second device removed therefrom for collecting said sheets whereby said secondary supply is caused to entrain the air and other gases within the condensing chamber, and means for discharging the mixture to the atmosphere.

3. In a condenser, the combination with the condensing chamber, of means for introducing the condensing water and the exhaust steam, an adjustable spraying means for the condensing water, means for introducing an independent supply of water into the condensing chamber, together with means for enabling the water to trap the air, said means comprising essentially a device for subdividing the water so as to expose a large surface to the air and another device for re-collecting the subdivided water and trapped air whereby said secondary supply is caused to entrain the air and other gases within the condensing chamber, and means for discharging the water and vapor mixture to the atmosphere.

4. In a condenser, the combination with the condensing chamber, of means for introducing the condensing water and the exhaust steam, an adjustable spraying device for the condensing water comprising rows of teeth with a space between the rows, means for introducing an independent supply of water into the condensing chamber, together with means whereby the water is enabled to entangle the air, consisting of a device for subdividing the water into sheets or streams and a second device removed a distance from the other for re-collecting said water whereby said secondary supply is caused to entrain the air and other gases within the condensing chamber, and means for withdrawing the water mixture from the lower end of the condensing chamber.

5. In a condenser, the combination with the condensing chamber, of means for introducing the condensing water and the exhaust steam, a spraying device comprising an adjustable cone having teeth and a second row of teeth removed from the first row, means for introducing an independent supply of water into the condensing chamber, together with means for enabling the water to trap the air, comprising a grid having a series of parallel slots to allow the water to pass through in the form of sheets, and a collecting device below the grid for re-collecting the water whereby said secondary supply is caused to entrain the air and other gases within the condensing chamber, and means for withdrawing the water mixture from the lower end of the condensing chamber.

1,102,381. CULTIVATOR. CLARENCE H. ANDERSON, St. Peter, Minn. Filed Nov. 18, 1913. Serial No. 801,610. (Cl. 21—42.)

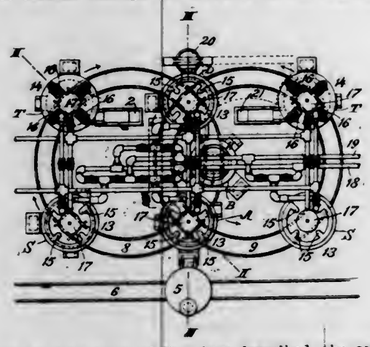


In a cultivator provided with a wheeled U-shaped axle whereby the tongue is carried, a seat, rods pivotally supported connecting said seat and axle, a flexible support carried by said tongue engaging said rods and a reach rod pivotally supported by said rods and slidably supported by said tongue and connecting said rods and said tongue.

1,102,382. APPARATUS FOR MANUFACTURING STEEL. GEORGE HILLARD BENJAMIN, New York, N. Y. Original application filed Jan. 4, 1913, Serial No. 740,103. Divided and this application filed Nov. 7, 1913. Serial No. 799,703. (Cl. 204—64.)

1. In an apparatus of the class described, the combination of a mixer, two trackways, a series of movable hearths, a series of hoods occupying fixed position on said trackways, means for heating certain of said hoods and hearths to the temperature due to the combustion of gas and air, and means for heating certain other of said hoods

and hearths to the temperature due to the passage of an electric current through the material on the hearths.



2. In an apparatus of the class described, the combination of a mixer, two trackways, a series of movable hearths, a series of hoods occupying fixed positions on said trackways, means for vertically moving said hoods, means for heating certain of said hoods and hearths to the temperature due to the combustion of gas and air, and means for heating certain other of said hoods and hearths to the temperature due to the passage of an electric current through the material on the hearths.

3. In an apparatus of the class described, the combination of a mixer, two trackways, a series of movable hearths, a series of hoods occupying fixed positions on said trackways, means for vertically moving said hoods, means for heating certain of said hoods and hearths to the temperature due to the combustion of gas and air, means for heating certain other of said hoods and hearths to the temperature due to the passage of an electric current, means for tilting said hearths to discharge their contents of slag or metal, and means for receiving the refined metal.

4. In an apparatus of the class described, the combination of a mixer, two circular trackways, a series of movable hearths, a series of hoods occupying fixed positions on said trackways, means for vertically moving said hoods, means for heating certain of said hoods and hearths to the temperature due to the combustion of gas and air, means for heating certain other of said hoods and hearths to the temperature due to the passage of an electric current through the material on said hearths, means for tilting said hearths to discharge their contents of slag or metal, and a ladle for receiving the refined metal.

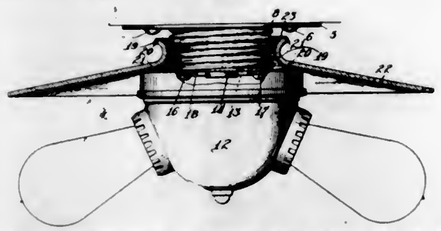
5. In an apparatus of the class described, the combination of a mixer, two circular trackways, a covering for said trackways, a series of movable hearths, a series of hoods occupying fixed positions on said trackways, means for vertically moving said hoods, means for heating certain of said hoods and hearths to the temperature due to the combustion of gas and air, means for heating certain other of said hoods and hearths to the temperature due to the passage of an electric current through the material on said hearths, means for tilting said hearths to discharge their contents of slag or metal, and a ladle for receiving the refined metal.

[Claims 6 to 8 not printed in the Gazette.]

1,102,383. SUBBASE FOR CLUSTER-SOCKETS. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1909, Serial No. 506,114. Renewed Nov. 14, 1913. Serial No. 801,053. (Cl. 240—115.)

1. The combination of a cup-shaped body having exterior screw threads, means for securing a plural lamp socket to the under side of said body, and means for holding a reflector, said means comprising a pair of threaded rings on said body having each a flange extending outward from said body, said flanges being arranged to grip the reflector between them.

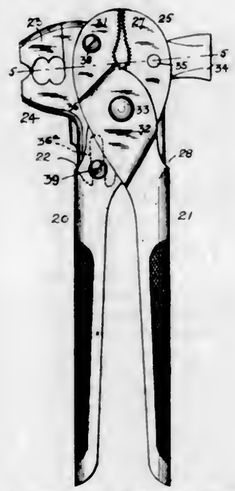
2. The combination of a threaded cup-shaped shell having an outwardly extending flange perforated for the passage of securing means, a pair of threaded rings screwed upon said shell and having each an outwardly extending flange, said flanges being adapted to receive a reflector between them, and means for securing a lamp-holding device to the under side of said shell.



3. The combination of a cup-shaped shell having an outwardly extending flange perforated for the passage of securing means, a pair of rings extending around said shell and having each an outwardly extending flange, each of said rings being mounted so as to be capable of upward and downward adjustment upon said shell, said flanges being adapted to receive a reflector between them, and means for securing a lamp-holding device to the under side of said shell.

4. The combination of a cup-shaped shell having threads rolled thereon, a flange at the upper edge of said shell, means for securing a lamp-holding device to said shell, and a pair of rings threaded upon said shell and adapted to receive a reflector between them.

1,102,384. PLIERS OR SIMILAR TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 20, 1913. Serial No. 755,656. (Cl. 81—15.)



1. Pliers or a similar tool having each of its jaws provided with a transverse wedge-shaped member at the end of the jaw, one side face of said wedge-shaped member being constituted by a concave portion on the outside of the jaw extending to the forward extremity of the latter, and the other side of said wedge-shaped member being constituted by a portion of the wall of a transverse seat in the jaw; substantially as described.

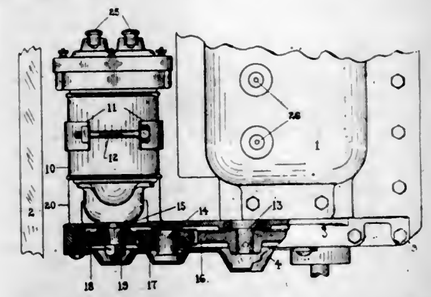
2. Pliers or a similar tool having each of its jaws provided with a transverse wedge-shaped member at the end of the jaw, one side face of said wedge-shaped member being constituted by a concave portion on the outside of the jaw extending to the forward extremity of the latter, and the other side of said wedge-shaped member being constituted by a portion of the wall of a transverse seat in the jaw, said wedge-shaped members of the respective jaws being adapted to meet each other as the jaws are brought together; substantially as described.

3. Pliers or a similar tool having each of its jaws provided with a transverse wedge-shaped member at the end of the jaw, one side face of said wedge-shaped member being constituted by a concave portion on the outside of the jaw extending to the forward extremity of the latter, and the other side of said wedge-shaped member being constituted by a portion of the wall of a transverse seat in the jaw, the wedge-shaped members of the respective jaws being provided with cutting edges movable into contact with each other as the jaws are brought together; substantially as described.

4. Pliers or a similar tool having each of its jaws provided with a plurality of seats, said seats extending transversely of the respective jaws, edged wedge-members on the respective jaws adjacent said seats and adapted to meet each other as the jaws are brought together, and means for moving the jaws toward and away from each other, while maintaining them in substantial parallelism; substantially as described.

5. Pliers or a similar tool having each of its jaws provided with a transverse wedge-shaped member at the end thereof, one side face of said wedge-shaped member being constituted by a concave portion on the outside of the jaw, said jaw also having a plurality of inner transverse seats, the wall of one of said seats being partially constituted by the other side face of said wedge-shaped member, the wedge-shaped members of the respective jaws being arranged to meet each other as the jaws are brought together, and means for moving the jaws toward and away from each other, while maintaining them in substantial parallelism; substantially as described.

1,102,385. MAGNETO-MOUNTING. ERNEST W. BRACKETT, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Oct. 28, 1913. Serial No. 797,732. (Cl. 123—198.)



1. In a device of the class described, the combination of an engine frame, a driving shaft projecting therefrom, a plate for said engine frame inclosing said driving shaft, said plate having a lug projecting rearwardly away from the face of said plate, a magneto mounted on said lug and having its shaft terminating within said plate, gears within said plate arranged to connect said driving shaft to said magneto shaft, and an auxiliary plate to cover said gears, substantially as described.

2. In a device of the class described, the combination of an engine frame, a driving shaft projecting therefrom, a plate attached to said frame and inclosing said driving shaft, gears inclosed within said plate, a lug integral with said plate, a magneto adapted to be mounted on said lug and driven by said gears and a second plate attached to said first plate to cover said gears, substantially as described.

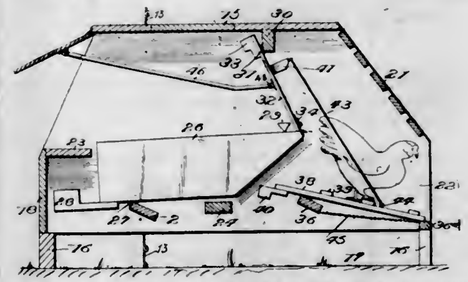
3. In combination, an internal combustion engine, a magneto for firing fuel in said engine, a plate adapted to be fastened to said engine, means for driving said magneto, said plate carrying said magneto and inclosing said magneto driving means, substantially as described.

4. In combination, an internal combustion engine, a magneto for firing the fuel in said engine, a plate adapted to be fastened to said engine, means for driving said magneto, means for putting oil in the crank case of said engine, said plate carrying both said magneto and oiling means and encompassing said magneto driving means, substantially as described.

5. In combination, an internal combustion engine, a magneto for firing the fuel in said engine cylinders, a plate adapted to be fastened to said engine, means for driving said magneto, means for putting in oil into the crank case of said engine, breathing means for allowing the air to pass freely back and forth to the interior of said engine crank case, said plate carrying the magneto, the oiling and breathing means and encompassing said magneto driving means, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,102,386. TRAP-NEST. ROBERT F. BRINER, Saratoga, Wyo. Filed Oct. 22, 1912. Serial No. 727,266. (Cl. 119—50.)



1. In a separator nest, a casing having an entrance opening and a separate exit opening, a depending nest box therein, a gravity closing entrance door, a depressible platform disposed between the nest box and the exit opening normally obstructing exit from the nest through the exit opening, means operatively connecting the depressible platform to the entrance door to cause the opening of the door upon a depression of the platform under the weight of a hen, means for holding the entrance door in an open position when no hen is in the nest box and the latter is raised, and means for releasing the door to permit it to close when the nest box is depressed.

2. In a separator nest, a casing having an entrance opening and a separate exit opening, an entrance door hinged at its upper end to the casing and movable by gravity to a closed position, a depressible nest box disposed between the entrance and exit openings, a hinged member disposed above the nest box and operatively connected to the entrance door, coacting latching devices on the hinged member and nest box whereby to latch the hinged member in position to hold the entrance door open when the nest box is raised, a depression of the nest box acting to release said hinged member to permit the entrance door to close, means normally obstructing the exit opening but movable to a position to permit the exit of the hen, and connections between said obstructing member and the entrance door to cause the opening of the entrance door upon a movement of the obstructing member out of its obstructing position.

3. In a separator nest, a casing, a hinged entrance door, a depressible nest box within the casing, a member hinged above the nest box and having its lower end engageable with the forward end of the nest box, a connecting rod between said hinged member and the entrance door, latching devices mounted upon the hinged member and the nest box to engage the hinged member with the nest box when the latter is in a raised position but disengageable when the nest box is depressed to permit the closing of the

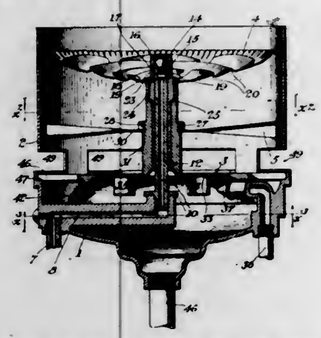
entrance door, and a depressible platform mounted in advance of the nest box and operatively connected with the hinged member to cause a rotation of the same into locking engagement with the nest box upon a depression of the platform under the weight of a hen.

4. In a separator nest, a casing having an entrance opening at one end and an exit opening at the other end, a hinged, gravity closing door controlling the entrance opening, a counterweighted platform movable independently of the entrance door disposed adjacent the exit opening and between the nest box and the exit opening and normally held in position to prevent any entrance into the casing by means of the exit opening, a depressible nest box, means normally holding the entrance door open, means actuated by a depression of the nest box for releasing said door to permit it to close and means actuated by a depression of the platform for raising said entrance door.

5. In a separator nest, an open bottomed casing having an entrance opening and an exit opening, a nest box within the casing, a balanced platform disposed adjacent the exit opening and normally supported in an upward and forwardly extending position to obstruct said exit opening, and netting disposed horizontally in the forward end of the casing above the bottom edge thereof and beneath said balanced platform.

[Claims 6 to 8 not printed in the Gazette.]

1,102,387. OIL-BURNER. WILLIAM M. BRITTEN, Los Angeles, Cal. Filed Jan. 25, 1912. Serial No. 673,677. (Cl. 158—28.)



1. In an oil burner, a casing, the upper part of which forms a combustion chamber, a vaporizing member rotatably mounted in said casing, in position to receive heat by contact with the flame in said combustion chamber, said vaporizing member having openings, a fan rotatably mounted in said casing and adapted to force a current of air past the vaporizing member and through said openings, means for supplying oil to said vaporizing member, and means for rotating said vaporizing member and fan.

2. An oil burner comprising a cylindrical casing having an air inlet, a vaporizing disk rotatably mounted in said casing and dividing the interior of the casing into a combustion chamber above the disk, and an air receiving chamber below the disk, said disk being located in position to receive heat from the flame in said combustion chamber and being provided with openings, a supporting shaft for said disk, oil supply means communicating through said shaft with the said disk to supply oil thereto, a fan connected to said shaft to rotate therewith, said fan being located between the inlet in said casing and said disk to force a current of air past and through said disk, and driving means connected to said shaft to rotate the same.

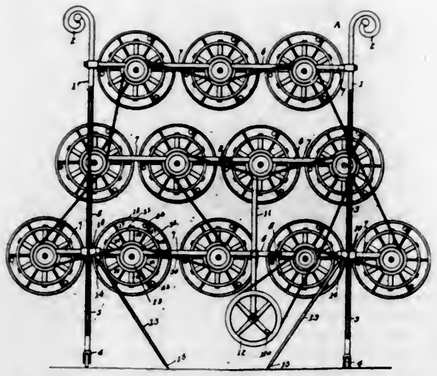
3. An oil burner comprising a cylindrical casing having an air inlet, a vaporizing disk rotatably mounted in said casing and dividing the interior of the casing into a combustion chamber above the disk, and an air receiving chamber below the disk, said disk being located in position to receive heat from the flame in said combustion chamber, and being provided with openings, a supporting shaft for said disk, oil supply means communicating through said shaft with the said disk to supply oil thereto, a fan connected to said shaft to rotate therewith, said fan being located between the inlet in said casing and said disk to force a current of air past and through said disk, and driving means connected to said shaft to rotate the same, said vaporizing disk having its portions adjacent said openings bent to act as agitators for the air and vapor.

4. An oil burner comprising a cylindrical casing having an air inlet, a vaporizing disk rotatably mounted in said casing and dividing the interior of the casing into a combustion chamber above the disk, and an air receiving chamber below the disk, said disk being located in position to receive heat from the flame in said combustion chamber and being provided with openings, a supporting shaft for said disk, oil supply means communicating through said shaft with the said disk to supply oil thereto, a fan connected to said shaft to rotate therewith, said fan being located between the inlet in said casing and said disk to force a current of air past and through said disk, and driving means connected to said shaft to rotate the same, said vaporizing disk having its portions adjacent said openings bent to act as agitators for the air and vapor, said vaporizing disk having its periphery fluted for the purpose set forth.

5. In an oil burner, a casing having an air inlet, a disk rotatably mounted in said casing and having openings arranged at different distances from the center and distributed around the disk, said disk being located within the casing and dividing the casing into a combustion chamber above the disk and an air inlet chamber below the disk, and said disk being in position to be heated by contact with the flame in the combustion chamber, a shaft carrying said disk, a fan carried by said shaft, means for rotating said shaft, and means for supplying oil to the central portion of said disk.

[Claim 6 not printed in the Gazette.]

1,102,388. MUSICAL-CHIME SUPPORT. JAMES E. COATTA, Oswego, N. Y. Filed Aug. 1, 1910. Serial No. 574,761. (Cl. 46—70.)

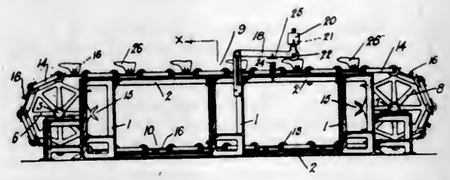


1. A musical chime support comprising spaced standards formed in sections, transverse bars connecting said standards formed in sections, rotatable elements, means for rotating said elements, illuminating means for said elements, feed wires extending through said standards and bars and connected to one terminal of said illuminating means, the said standards and bars being of conductive material and being electrically connected to the other terminal of said means, and means for bridging said wires over said jointed sections of the framework.

2. A musical chime support comprising spaced standards formed in sections, transverse bars connecting said standards, rotatable elements, bracket supports for said elements, said supports being removably mounted and adjustable to accurately space said rotatable elements apart, and means for driving said elements.

3. A musical chime support comprising vertical spaced standards, transverse tubular bars connecting said standards and formed in sections, rotatable elements mounted on said sections, electrical illuminating elements carried by said rotatable element, conducting wires in said tubular sections for transmitting current to said illuminating elements, said wires being of a length substantially equal to the length of the tubular sections through which they pass, and coupling elements for uniting the adjacent ends of said wires.

1,102,389. SOLE-ROLLING MACHINE. LE BARON C. COLT, Bristol, R. I. Filed July 2, 1908. Serial No. 441,665. (Cl. 12—34.)



1. A machine for rolling soles on rubber shoes comprising an endless belt adapted to receive a lasted shoe, and a swinging frame carrying a pressure-roller adapted to roll a sole on said lasted shoe as it is carried along by said endless belt.

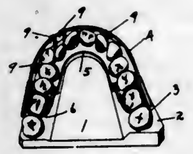
2. A machine for rolling soles on rubber shoes comprising an endless belt adapted to receive a lasted shoe and transport the same from one point to another in the same plane, and a swinging frame carrying a pressure-roller adapted to roll a sole on said lasted shoe as it is carried along by said endless belt.

3. A machine for rolling soles on rubber shoes comprising an endless belt adapted to receive a series of lasted shoes, and a swinging frame carrying a pressure-roller adapted to roll soles on said lasted shoes successively as they are carried along by said endless belt.

4. A machine for rolling soles on rubber shoes comprising an endless belt adapted to receive a series of lasted shoes and transport the same from one point to another in the same plane, and a swinging frame carrying a pressure-roller adapted to roll soles on said lasted shoes successively as they are carried along by said endless belt.

5. A machine for rolling soles on rubber shoes comprising an endless belt composed of a series of carriages adapted to receive a series of lasted shoes, and a swinging frame carrying a pressure-roller adapted to roll soles on said lasted shoes successively as they are carried along by said endless belt.

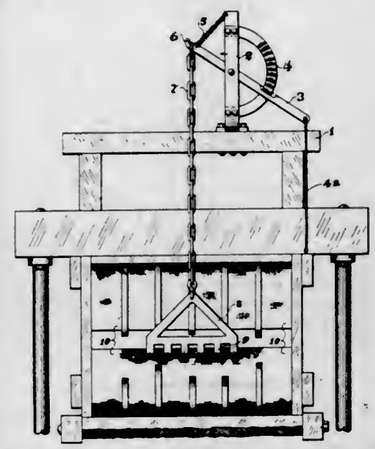
1,102,390. DENTAL MODEL. VAN BROADUS DALTON, Cincinnati, Ohio. Filed June 6, 1913. Serial No. 772,208. (Cl. 35—16.)



1. A dental model made from a hard, tough substance to simulate a series of malposed teeth from which to teach orthodontia.

2. In a dental model, a base, process and teeth formed integral, the whole formed from a tough hard substance, the teeth made irregular and malposed, to simulate a series of natural malposed teeth, to teach orthodontia.

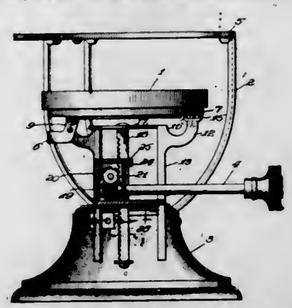
1,102,391. BAGGING-STRETCHER. WILLIAM R. DAVIS, Wills Point, Tex., assignor of one-half to P. T. Hardee, Chandler, Tex. Filed July 28, 1913. Serial No. 781,536. (Cl. 100—15.)



1. In a device of the character described, the combination with a baling press, of a hooked frame supported in front of the baling press adapted to engage the bagging of a bale within the press, and means for subjecting said frame to an upward displacement.

2. In a device of the character described, the combination with a baling press, of a lever pivotally mounted upon the top portion of the press, a flexible connection depending from one extremity of said lever, a hooked frame carried by the lower extremity of said flexible connection and formed with a row of claws adapted to engage the bagging of a bale within the press, and means for manually subjecting said lever to a pivotal displacement.

1,102,392. HEATING DEVICE. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1911. Serial No. 657,806. (Cl. 219—43.)



1. In a heating device, a base, one or more standards arranged to reciprocate with respect thereto, a heating element carried by said standards, and means including extensions on said standards having up-turned ends for preventing the conduction of heat to said standards.

2. In a heating device, a base, one or more standards arranged to reciprocate with respect thereto, a heating element carried by said standards, an insulating plate between said element and said standards, and means for preventing the downward conduction of the heat through said standards including extensions on the ends of the same having up-turned edges engaging said insulating plate.

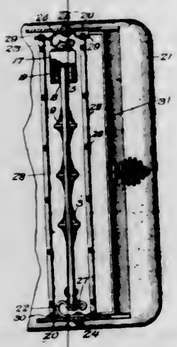
3. In a heating device, a base, one or more standards arranged to reciprocate with respect thereto, a heating

element carried upon said standards, an insulating plate between said heating element and said standards, means for preventing the downward conduction of the heat from said insulating plate through said standards, and a removable terminal carrying plate locked in position in said insulating plate.

4. In a heating device, a base having one or more openings in its top and an upwardly extending frame arranged to support a receptacle, a heating element arranged to reciprocate in said frame, standards fixed to said heating element and insulated therefrom, portions of said standards extending through said base, and means for varying the elevation of said heating element including a reciprocable rack member carried between said standards, a plurality of pinions carried upon said base, and a rotatable worm arranged to engage one of said pinions.

5. An electric heating device comprising an electrically heated disk, a base having upwardly extending arms between which said disk is movable, a utensil-supporting ring carried on said arms above said disk, standards fixed to said disk and movable therewith, said standards passing through openings in said base and guided thereby, and a rack and pinion mechanism for varying the elevation of said disk with respect to said utensil holding ring.

1,102,393. ELECTRIC RESISTANCE UNIT. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1911. Serial No. 657,809. (Cl. 219—19.)



1. In an electric resistance unit, a frame, a plurality of insulating spacing strips carried thereby, and a resistance material carried by said frame and passing alternately on opposite sides of adjacent strips.

2. In an electric resistance unit, a frame, a plurality of strips of insulating material carried thereby having notches on their opposite edges, a resistance material wound between the sides of said frame and passing alternately through notches on opposite sides of said insulating strips.

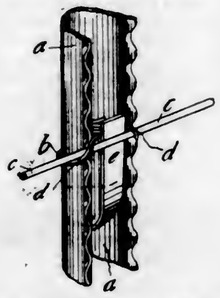
3. In an electric resistance unit, a frame having rounded edges, a plurality of spaced strips of resistance material having notched ends engaging said frame and a resistance material wound spirally upon said strips between the sides of said frame and passing alternately on opposite sides of said strips.

4. In an electric resistance unit, a frame, a plurality of strips of insulating material carried thereby and a resistance material wound across said frame passing alternately on opposite sides of adjacent strips, the convolutions of said resistance material being arranged more closely together near a portion of said frame.

5. In an electric resistance unit, a frame, a resistance material carried thereby, a holding member carried by a portion of said frame having its inner ends lying in substantially parallel planes, and a slotted strip of insulating material inclosed between said ends arranged to receive the ends of the convolutions of said resistance material.

[Claims 6 to 16 not printed in the Gazette.]

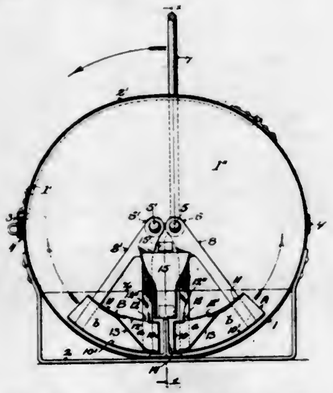
1,102,394. MEANS OF SECURING WIRE TO STANDARDS. DUDLEY DE ROS, Islington, London, England. Filed Sept. 19, 1913. Serial No. 790,743. (Cl. 256—57.)



1. The combination with a horizontal wire to be supported, of a standard of substantially U-shaped cross section and having notched edges, said horizontal wire being disposed in certain of the notches of the dropper, a wire clip surrounding the dropper and embracing the horizontal wire, and a plate interposed between said horizontal wire and said clip, said plate lying substantially within the groove of the dropper.

2. The combination with a horizontal wire to be supported, of a standard of substantially U-shaped cross section and having notched edges, said horizontal wire being disposed in certain of the notches of the dropper, a wire clip surrounding the dropper and embracing the horizontal wire, and a plate interposed between said horizontal wire and said clip, said plate lying substantially within the groove of the dropper, said plate having a wedge-like outline in elevation and having its smaller end bent so as to contact with the inner face of the dropper.

1,102,395. WASHING-MACHINE. RICHARD F. DOWNEY, Milwaukee, Wis., assignor of one-half to Hugo Loewenbach, Milwaukee, Wis. Filed Sept. 17, 1913. Serial No. 790,160. (Cl. 141—9.)



1. A washing machine comprising a drum, a porous tray detachably seated therein above the drum bottom, and a pair of oscillatory water scoops in geared connection arranged to oscillate in opposite directions from a filling point beneath the tray to a discharge point above said tray.

2. A washing machine comprising a drum, a porous tray detachably seated therein and spaced above the bottom, a pair of oscillatory water scoops suspended from the drum arranged to normally rest below the tray and to be lifted to a discharging position above said tray, separate water compartments in each scoop, and a geared connection between the scoops whereby they are actuated.

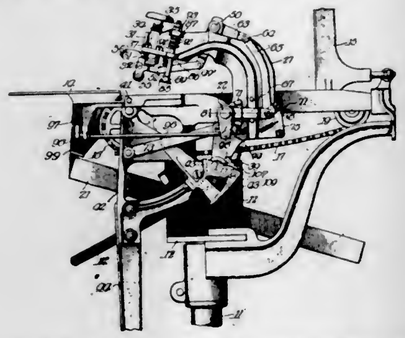
3. A washing machine comprising a water receiving drum having heads, pairs of gear connected studs mounted in each head, scoops suspended from the studs, separate open mouth compartments in each scoop whereby independent streams of water are taken up and discharged, tray-supporting means in connection with the drum heads, a porous tray arranged to be seated upon the tray supports above the scoops when the latter are at rest, and actuating means in connection with one pair of the studs.

4. A washing machine comprising a water receiving drum having heads, pairs of gear connected studs mounted in each head, scoops suspended from the studs, separate open mouth compartments in each scoop whereby independent streams of water are taken up and discharged, tray-supporting means in connection with the drum heads, a porous tray arranged to be seated upon the tray supports above the scoops when the latter are at rest, and an actuating bail secured to one pair of the studs whereby the scoops are simultaneously lifted from their position of rest under the tray to positions over said tray.

5. A washing machine comprising a water receiving drum having heads, pairs of gear connected studs mounted in each head, arms secured to the studs, scoops suspended from the arms, separate open mouth compartments in each scoop, perforated plates arranged to partially close one set of the scoop mouths, flanged brackets secured to the drum heads, a porous tray having shoes adapted to engage the flanged brackets, and an actuating bail having ends rigidly secured to one pair of the studs.

[Claim 6 not printed in the Gazette.]

1,102,396. ADDRESSING-MACHINE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1913. Serial No. 763,975. (Cl. 101—1.)



1. In an addressing machine, the combination of a rotatable platen, a presser member disposed above said platen, rollers mounted on the platen shaft, rollers mounted above said platen shaft between said platen rollers and said presser member, and means for moving said platen across the presser member to effect a printing operation, said presser member having its rear edge inclined upwardly to permit elevation of the platen from its printing plane at the end of its printing stroke.

2. In an addressing machine, the combination of a rotatable platen bearing rollers mounted co-axially with said platen, a presser member having its rear edge inclined upwardly, means for intermittently raising and lowering said presser member and platen, bearing rollers interposed between said presser member and the first mentioned bearing rollers, means for normally urging said platen toward the presser member, and means for moving said platen transversely of the presser member to effect an impression.

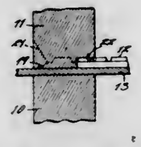
3. In an addressing machine, the combination of a platen head, a presser member carried thereby, a rotatable platen disposed beneath said presser member, anti-friction rollers positioned between the platen and the presser member, means for raising and lowering the platen head, mechanism for moving the platen rearwardly across the presser member to effect a printing operation, and means for elevating said platen at the rear end of its printing stroke and before the platen head is elevated.

4. In an addressing machine, the combination of a platen head, means for raising and lowering said head, a presser member carried by said head and having an upwardly inclined rear edge, a frame mounted to reciprocate transversely of said presser member, a platen rotatably mounted in said frame and adapted to engage the lower face of said presser member, means for moving said frame transversely of the presser member, and means for normally urging said frame upwardly to hold said rollers against said presser member.

5. In an addressing machine, the combination of a platen head, a presser member adjustably mounted thereon, a frame movable transversely of said presser member, a platen rotatably mounted in said frame, anti-friction rollers interposed between said platen and said presser member, means for raising and lowering said platen head, means for moving said frame and the platen carried thereby across said presser member, and means for elevating the platen at the end of its printing stroke relatively to the presser member.

[Claims 6 to 26 not printed in the Gazette.]

1,102,397. TYPE-DIE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1913. Serial No. 773,430. (Cl. 201—6.)



1. A die for forming printing characters in a metal plate, comprising a body provided at one end with a character-forming element, and a face positioned to overlie a previously formed character and retain the same against displacement during the operation of the die.

2. A die for forming printing characters in a metal plate, comprising a body provided at one end with a character-forming element, and means disposed at one side of said character-forming element in position to overlie a previously formed character and retain the same against displacement during the operation of the die.

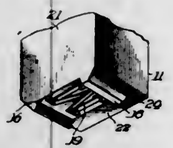
3. A die for forming printing characters in a metal plate, comprising a body having at one end a flat face provided with a character-forming element, and a ledge disposed adjacent to said face and parallel therewith to overlie a previously formed character and retain the same against displacement during the operation of the die.

4. A die for forming printing characters in a metal plate, comprising a body having at its operating end an open-ended channel provided on the bottom wall thereof with a printing character-forming element, said die being shaped to also provide a ledge parallel with the bottom wall of said channel and extending transversely of the channel in position to overlie the printing face of a previously formed printing character during the operation of the die.

5. A die for forming printing characters in a metal plate, comprising a body having at its operating end an open-ended channel provided on its bottom wall with a printing character-forming element, said die being shaped to also provide a ledge parallel with the bottom wall of said channel but more remote from the extremity of the die than said wall and extending transversely of the channel at one end thereof to overlie the printing face of a previously formed printing character during the operation of the die.

[Claims 6 to 12 not printed in the Gazette.]

1,102,398. TYPE-DIE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1913. Serial No. 774,317. (Cl. 201—6.)



1. A die for forming printing characters in a metal plate, comprising a body provided at one end with a character-forming element disposed adjacent to one side of the body, and a ledge disposed adjacent to the opposite side of the body in position to overlie a previously formed character.

2. A die for forming printing characters in a metal plate, provided at its operating end with a character-forming element positioned adjacent to one vertical side of the die, lips projecting longitudinally of the die at the top and bottom of said character-forming element, and a ledge extending from the opposite vertical side of the die toward said character-forming element.

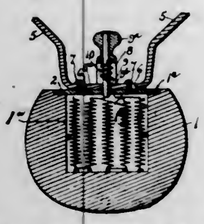
3. A die for forming printing characters in a metal plate, comprising a body having at its operating end a flat face disposed adjacent to one side of the body, said face being provided with a character-forming depression, and a ledge depressed relatively to said face and extending from said face to the opposite side of the body.

4. A die for forming printing characters in a metal plate, having parallel side walls at its operating end, a character-forming element located adjacent to one of said walls on the operating end of the die, the walls of the die at the top and bottom of said character-forming element being extended longitudinally to provide lips, and a ledge disposed between said character-forming element and the other parallel wall of the die to overlie previously formed characters during successive operations of the die.

5. A die for forming printing characters in a metal plate, provided at its operating end with a character-forming element positioned laterally with respect to the central axis of the die, and having a ledge extending on the opposite side of said central axis from the character-forming element.

[Claims 6 to 10 not printed in the Gazette.]

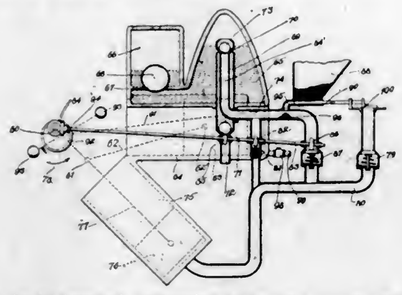
1,102,399. MILLINER'S IRON. ADOLPH J. EILAU, Chicago, Ill. Filed Nov. 29, 1913. Serial No. 803,707. (Cl. 219—21.)



1. A milliner's iron, comprising a ball-shaped body provided with a centrally located cylindrical shaped receptacle, the latter terminating at its mouth in an annular off-set portion, a supporting disk plate normally covering said receptacle and seated in said off-set portion, a heater element detachably carried on said disk plate and removably disposed within said receptacle, and a handle and handle bracket detachably connected to said disk plate.

2. A milliner's iron, comprising a ball-shaped body provided with a centrally located cylindrical-shaped receptacle terminating at one side of said body in a circular-shaped off-set portion, a circular-shaped supporting plate removably mounted within said circular-shaped off-set portion, a cylindrical-shaped heating unit detachably connected to said supporting disk plate and removably mounted within said cylindrical shaped receptacle, and a handle and handle bracket detachably connected to the top side of said supporting disk plate independently of said cylindrical shaped heating unit.

1,102,400. INTERNAL-COMBUSTION ENGINE. FREDERICK FISHER, Marlboro, Mich. Filed May 7, 1906. Serial No. 315,481. (Cl. 123—19.)



1. In an internal combustion engine, the combination of a working cylinder, a reciprocating piston therein, a fly wheel and a connecting rod connecting the piston and fly wheel, a combustion chamber communicating with said cylinder, an excess pressure relief chamber in communication with the combustion chamber, a liquid partially filling both chambers and subject to the action of said piston, inlet valve mechanism for admitting a combustible mixture to said combustion chamber, an exhaust valve controlling the exhaust from said combustion chamber, and valve mechanism for automatically opening and maintaining communication for the flow of liquid between the two chambers whenever the pressure in the combustion chamber exceeds a predetermined maximum.

2. In an internal combustion engine, the combination of a working cylinder, a reciprocating piston therein, a fly wheel and a connecting rod mechanism for connecting the piston and fly wheel, a combustion chamber communicating with said cylinder, an excess pressure relief chamber containing gas in its upper portion and in communication with the combustion chamber, a liquid partially filling both chambers and subject to the action of said piston, inlet valve mechanism for admitting a combustible mixture to said combustion chamber during an out-stroke of the piston, such combustion chamber so conformed that the inertia of the fly wheel serves upon the succeeding instroke to compress the combustible mixture to the point of ignition, an exhaust valve controlling the exhaust from said combustion chamber, valve mechanism for automatically opening and maintaining communication for the flow of liquid between the two chambers whenever the pressure in the combustion chamber exceeds a predetermined limit, the parts involved in compressing the combustible mixture being proportioned to produce substantially adiabatic compression of the combustible mixture to the point of ignition.

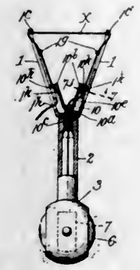
3. In an internal combustion engine, the combination of a working cylinder, a reciprocating piston therein, a fly wheel and a connecting rod mechanism for connecting the fly wheel and piston, a combustion chamber communicating with said cylinder, an excess pressure relief chamber containing gas in its upper portion and in communication with the combustion chamber, a liquid partially filling both chambers and subject to the action of said piston, inlet valve mechanism for admitting a combustible mixture to said combustion chamber during an outstroke of the piston, the inertia of the fly wheel serving upon the succeeding in-stroke to compress the combustible mixture to the point of ignition, an exhaust valve controlling the exhaust from said combustion chamber, valve mechanism for automatically opening and maintaining communication for the flow of liquid between the two chambers whenever the pressure in the combustion chamber exceeds a predetermined limit, the parts involved in compressing the combustible mixture being proportioned to produce substantially adiabatic compression of the combustible mixture to the point of ignition, and means for admitting fresh liquid to the chambers during each cycle of the engine, the excess liquid being ejected during the exhausting stroke of the piston.

4. In an internal combustion engine, the combination of a working cylinder, a reciprocating piston therein, a fly wheel and connecting rod mechanism associating the fly wheel and piston, a combustion chamber communicating with said cylinder, an excess pressure relief chamber, a liquid partially filling both chambers and subject to the action of said piston, there being an opening in the bottom of the relief chamber through which the liquid may flow between the two chambers, a valve in the opening between the combustion and relief chambers, said valve being maintained in an open condition while the pressure in the relief chamber remains above a predetermined normal pressure, inlet valve mechanism for admitting a combustible mixture to the combustion chamber, an exhaust valve controlling the exhaust from the combustion chamber, the parts subjected to the pressure of compression being so formed and related as to produce a compression pressure sufficient to ignite the combustible mixture without material loss of heat.

5. In a device of the class described, the combination of a combustion chamber, means for admitting fuel and a combustion supporting medium into said combustion chamber, a cylinder having a reciprocating piston therein, a liquid in said combustion chamber for transmitting power between said combustion chamber and said piston and from said piston to said combustion chamber for compressing the mixture in the combustion chamber, an excess pressure relief chamber, there being an opening from the lower part of the relief chamber into the combustion chamber, said opening being below the level of the liquid in said combustion chamber, a float valve for closing the opening between the chambers, said valve being floated from its seat upon an influx of liquid from the combustion chamber, the valve being floated from its seat during the period of excess pressure in the combustion chamber, the pressure in said relief chamber being maintained at such a point that the return stroke of the piston may compress the combustible mixture in the combustion chamber to the point of ignition before the float valve will open to establish communication between the two chambers.

[Claims 6 to 11 not printed in the Gazette.]

1,102,401. DENTAL FLOSS-HOLDER. FREDERICK O. GAMBLE, Chicago, Ill. Filed Dec. 28, 1912. Serial No. 738,972. (Cl. 132—12.)



1. In a device for the purpose indicated, in combination with a fork having divergent prongs and means for holding a thread extended between the tips of its prongs; a handle member for the fork having a tubular stem and a clamp for connecting the fork to the stem, said clamp device being formed to enter between the prongs of the fork and bear against the inner sides thereof and having a threaded tang, the fork having an aperture through which the tang extends, and the tubular stem being threaded to receive the tang.

2. In a device for the purpose indicated, in combination with a fork having divergent prongs and means for holding a thread extended between the tips of its prongs; a handle member for the fork having a tubular stem and a clamp for connecting the fork to the stem, said clamp device being formed to enter between the prongs of the fork and bear against the inner sides thereof and having a threaded tang, the fork having an aperture through which the tang extends, and the tubular stem being threaded to receive the tang, the clamp having its tang axially apertured for the thread and having a thread guide eye through which the thread may extend from the axial aperture to the face of the clamp device which bears against one of the fork prongs, whereby the thread is clamped to the fork when the fork is clamped to the handle.

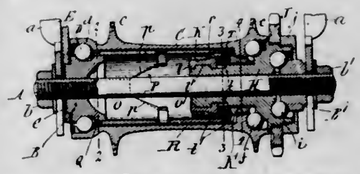
3. In a device for the purpose indicated, in combination with a fork having divergent prongs and means for holding a thread extended between the tips of its prongs; a handle member for the fork having a tubular stem and a clamp for connecting the fork to the stem, said clamp device being formed to enter between the prongs of the fork and bear against the inner sides thereof and having a threaded tang, the fork having an aperture through which the tang extends, and the tubular stem being threaded to receive the tang, the clamp being forked and the tang having an axial aperture leading into the fork gap, and one of the fork arms of the clamp having a thread eye leading to the side which bears against the inner side of the first mentioned fork.

4. In a device for the purpose indicated, in combination with a fork having divergent prongs and means for holding a thread extended between the tips of its prongs; a handle member for the fork having a tubular stem and a clamp for connecting the fork to the stem, said clamp device being formed to enter between the arms of the fork and bear against the inner sides thereof and having a threaded tang, the fork having an aperture through which the tang extends, and the tubular stem being threaded to receive the tang, the head of the clamp being forked and the tang having an axial aperture leading into the fork gap, and one of the fork arms of the clamp having a thread eye leading to the side which bears against the inner side of the prong of the first mentioned fork, the opposite prong of said fork having a thread eye between the junction of the fork prongs and the bearing of the clamp thereon.

5. In a device for the purpose indicated, a handle comprising a tubular stem and a bobbin holder having an axially-apertured and exteriorly-threaded hub adapted to be screwed into one end of the tubular stem, said bobbin holder being divided axially with respect to said hub, each member thereof comprising, in addition to one-half the hub, one-half of a shell for inclosing a bobbin, said halves having, respectively, studs projecting toward each other at their centers for centering and retaining a bobbin in the shell.

[Claim 6 not printed in the Gazette.]

1,102,402. COASTER-BRAKE. WILLIAM S. GUBELMAN, Buffalo, N. Y. Filed Apr. 6, 1907, Serial No. 366,663. Renewed Oct. 9, 1913. Serial No. 794,327. (Cl. 208—57.)



1. The combination of a barrel, two split brake sleeves arranged in said barrel and each provided with a wedge entering the slit of the other, means for holding said sleeves against turning, and means for causing relative

longitudinal movement of said sleeves, substantially as set forth.

2. The combination of a hub barrel, a driving sleeve, a clutch device interposed between said driving sleeve and hub barrel, and a brake comprising two split sleeves arranged in said hub barrel, wedges arranged on the opposing ends of said brake sleeves and each entering the slit of the other sleeve, means for holding said brake sleeves against turning, and means for moving said brake sleeves one lengthwise relatively to the other by motion from the driving sleeve, substantially as set forth.

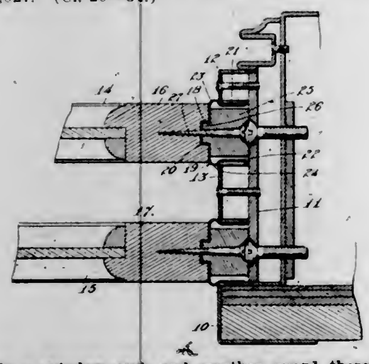
3. The combination of a hub barrel, a driving sleeve, a clutch device interposed between said driving sleeve and hub barrel, and a brake comprising two split sleeves arranged in said hub barrel, wedges arranged on the opposing ends of said brake sleeves and each entering the slit of the other sleeve, an axle arranged within the brake sleeves, means for holding said brake sleeves against turning consisting of teeth arranged on one of said brake sleeves, and a toothed member secured to the axle and having teeth interlocking with the teeth of said brake sleeves, and means for moving the other brake sleeve lengthwise by movement derived from the driving sleeve, substantially as set forth.

4. The combination of a hub barrel, a driving sleeve, a clutch device interposed between said driving sleeve and hub barrel, and a brake comprising two split sleeves arranged in said hub barrel, wedges arranged on the opposing ends of said brake sleeves and each entering the slit of the other sleeve, an axle arranged within the brake sleeves, means for holding said brake sleeves against turning consisting of teeth arranged on one of said brake sleeves, and a bearing cone for said barrel secured to the axle and provided with teeth which interlock with the teeth of said brake sleeve, substantially as set forth.

5. The combination of a hub barrel, a driving sleeve, a clutch device interposed between said driving sleeve and hub barrel, and a brake comprising two split sleeves arranged in said hub barrel, wedges arranged on the opposing ends of said brake sleeves and each entering the slit of the other sleeve, an axle arranged within the brake sleeves, means for holding said brake sleeve against turning consisting of teeth arranged on one of said brake sleeves, and a toothed member secured to the axle and having teeth interlocking with the teeth of one of said brake sleeves, a conical abutment sleeve having teeth which interlock with teeth on the other brake sleeve, a conical driven sleeve engaging with said abutment sleeve, and a driving sleeve having a screw connection with said driven sleeve, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,102,403. WINDOW-SASH AND WEATHER-GUARD THEREFOR. WILLIAM S. HAMM, Hubbard Woods, Ill., assignor to The Adams & Westlake Company, a Corporation of Illinois. Filed Mar. 25, 1912. Serial No. 686,027. (Cl. 20—54.)



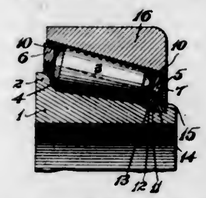
1. In a window sash and weather guard therefor, in combination, a side rail, a retaining strip secured to the edge of the rail, and adapted to engage the stile face of a casing a spring metal plate located at the side of and spaced apart from the strip and having a flange clamped between the strip and the sash rail.

2. In a window sash and weather guard therefor, in combination, a side rail, a U-shaped plate of spring metal fitted to the edge of the rail, its marginal portions projecting outwardly from the rail and being inclined away each from the other, and a retaining strip for clamping the plate to the rail and projecting beyond the edges of the marginal portions of the plate.

3. In a window sash and weather guard therefor, in combination, a side rail having a longitudinal channel in its outer edge, a spring metal plate fitted to the edge of the rail and having a rib entering its channel, the marginal portions being folded to the planes of the side faces of the rail but inclined outwardly from such planes, and a retaining strip of less width than the thickness of the rail and secured to the edge thereof over the metal plate and projecting beyond the edges of the marginal portions of the plate.

4. In a window sash and weather guard therefor, in combination, a side rail having a longitudinal channel in its outer edge, a spring metal plate fitted to the edge of the rail and having a rib entering its channel, the marginal portions being folded to the planes of the side faces of the rail but inclined outwardly from such planes, and a retaining strip of less width than the thickness of the rail and secured to the edge thereof over the metal plate and having a longitudinal rib entering the rib of the plate such strip extending beyond the edges of the marginal portions of the plate.

1,102,404. ROLLER-BEARING. REGINALD HEINZELMAN, Belleville, Ill., assignor to The Timken Roller Bearing Company, Canton, Ohio, a Corporation of Ohio. Filed July 9, 1909. Serial No. 506,744. (Cl. 64—62.)



1. A roller bearing comprising a spindle ring, a series of rollers arranged around the periphery of said spindle ring and having beveled ends, said spindle ring having an integral retaining flange whose inner face is beveled to correspond with and underlies the beveled end portions of the rollers and said spindle ring also having an annular groove adjacent to the opposite ends of the rollers, and a split spring ring fitted detachably in said annular groove and projecting beyond the bearing face of said spindle ring, said split ring having a beveled inner face corresponding with and underlying the adjacent beveled end portions of the rollers.

2. A roller bearing comprising a conical bearing sleeve having a cylindrical annular reduced peripheral portion near its smaller end and a peripheral groove adjoining said reduced portion, the bottom of said groove being cylindrical and its side walls perpendicular to the axis of the sleeve, a series of rollers arranged around the periphery of said sleeve, the ends of said rollers adjacent to said reduced cylindrical portion being beveled, a ring detachably fitted on said cylindrical reduced portion, the side of said ring adjacent to the ends of the rollers being beveled to correspond therewith, and a split spring ring of square cross section detachably fitted in said annular groove.

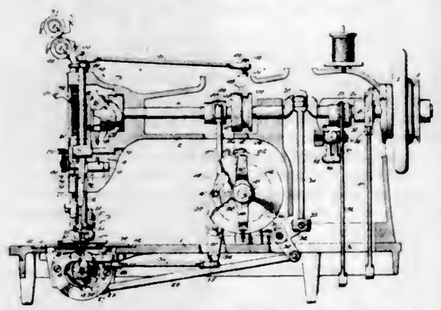
3. A roller bearing comprising a bearing sleeve, a series of rollers arranged around said bearing sleeve, said rollers having reduced end portions, an integral annular spacing cage surrounding said bearing sleeve and adapted to space said rollers apart and retain them against radial movement from said bearing sleeve, said cage comprising two rigid annular end members and spaced rigid cross connecting bars, said annular end members having undercut shoulders at the circumferential portion of their inner sides adapted to overhang the respective reduced end portions of said rollers.

4. A roller bearing comprising a conical bearing sleeve, a series of conical rollers arranged around said conical bearing sleeve, the end portions of said rollers being beveled, a conical annular spacing cage surrounding said conical bearing sleeve and adapted to space said rollers apart and retain the same against radial movement from said bearing sleeve, said cage comprising two rigid annular end members and spaced rigid cross connecting bars, said annular end members having undercut shoulders at the circumferential portion of their inner sides adapted to overhang the respective beveled end portions of said rollers.

5. A roller bearing comprising a retaining cage consisting of annular end portions and spaced bars connecting said end portions, and rollers in the respective spaces, the ends of the rollers being beveled and the end members being undercut at the ends of said spaces to overhang the beveled ends of the respective rollers.

[Claims 6 to 8 not printed in the Gazette.]

1,102,405. EMBROIDERING-MACHINE. MARTIN HEMLER, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Sept. 15, 1910. Serial No. 582,162. (Cl. 112—7.)



1. In a sewing machine, the combination with feeding mechanism and stitch-forming mechanism comprising a plurality of reciprocating needles arranged transversely to the direction of feed, of a vibratory thread-carrying lever confined to movement in a plane parallel with the direction of feed at the side of one of said needles opposite another needle, a vibratory spreader-lever movable transversely of the path of movement of the thread-carrying lever and in advance of the needles and adapted to form and present loops of the carrier-thread for passage of the needle farthest from the carrier, and means for imparting operative movements to said thread-carrying and spreader-levers.

2. In a sewing machine, the combination with feeding mechanism and stitch-forming mechanism comprising a plurality of reciprocating needles arranged transversely to the direction of feed, of a thread-carrier arranged at one side of said needles relatively to the line of feed, a spreader movable transversely of the line of feed in front of said needles and having a depending thread-engaging spur with the lower edge inclined to its path of movement and adapted to form, distend and hold a loop of the carrier-thread to embrace the path of movement of and permit the passage through said loop of the needle farthest from the carrier, and means for imparting to said spreader reciprocating movements confined to a direction transverse to and corresponding in frequency with the reciprocations of said needles.

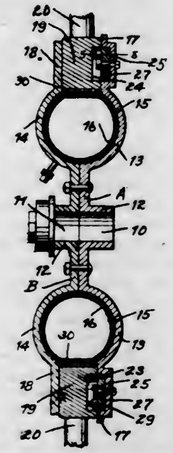
3. In a sewing machine, the combination with a throat-plate, feeding mechanism, and stitch-forming mechanism comprising a plurality of reciprocating needles arranged transversely to the direction of feed, of a thread-carrier arranged at one side of said needles relatively to the line of feed, a spreader movable transversely to the line of feed in front of said needles and having a thread-engaging spur with an edge inclined to its path of movement and adapted to form and distend loops of the carrier-thread for passage of the needle farthest from the carrier, means for sustaining said spreader and maintaining its spur permanently on the side thereof adjacent the throat-plate, and means for imparting operative movements to said carrier and spreader.

4. In a sewing machine, the combination with feeding mechanism and stitch-forming mechanism comprising a plurality of reciprocating needles arranged transversely to the direction of feed, of a thread-carrier arranged permanently at one side of said needles and laterally of the line of feed, a spreader movable upon a fixed axis substantially parallel with said needles and adapted to seize from said carrier, distend and hold loops of carrier-thread for passage of the one of said needles farthest from said carrier, and means for imparting to said spreader reciprocating movements corresponding in frequency with those of said needles.

5. In a sewing machine, the combination with stitch-forming mechanism including a reciprocating needle, of a reciprocatory thread-carrier disposed at one side of said needle, a spreader adapted to form and carry loops of the carrier-thread transversely to the direction of movement of said carrier and in advance of the needle, a fulcrum upon which said spreader moves, a rock-shaft parallel with said fulcrum, a connection between the spreader and said rock-shaft, a rock-lever, actuating means therefor, and a connection between said rock-lever and rock-shaft.

[Claims 6 to 15 not printed in the Gazette.]

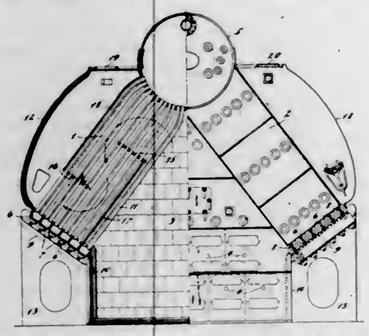
1,102,406. VEHICLE-WHEEL. WILLIAM C. HOPEN, San Francisco, Cal. Filed July 25, 1913. Serial No. 781,166. (Cl. 152—42.)



A wheel comprising a pair of circular plates connected together side to side and having central openings therein to form an axle bearing, said plates further having oppositely disposed outwardly curved circular portions the outer ends of which terminate in straight parallel spaced portions, a pneumatic tube seated in the channel formed by the outwardly curved portions of the plate, an inner rim slidably mounted between the parallel spaced portions, said inner rim being provided with circular recesses in one side thereof, and the straight portion of the plate adjacent the recessed side of the inner rim being provided with circular pockets, disks rotatably mounted in said pockets respectively, pins mounted eccentrically on said disk and projecting into respective recesses of the inner

rim, rollers journaled on said pins respectively for engagement with the side walls of respective recesses of the inner rim, an outer rim surrounding said inner rim, and spokes connecting the outer and inner rims.

1,102,407. WATER-TUBE BOILER. WILLIAM D. HOXIE, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Jan. 12, 1912. Serial No. 670,750. (Cl. 122—327.)



1. A water tube boiler comprising a bank of inclined water tubes, a steam and water drum into which the upper ends of said tubes are expanded, boxes into which the lower ends of the tubes are expanded in groups or rows, said tubes being curved at their upper ends and straight for the rest of their length, and a blow-off collector box connected to the boxes into which the tube ends are expanded.

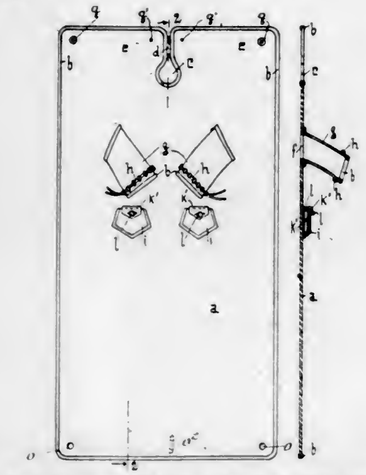
2. A water tube boiler comprising two units each consisting of a bank of water tubes inclined toward each other upwardly to form between them an A-shaped combustion chamber, a central steam and water drum into which the upper ends of the tubes of both banks are expanded, and a plurality of boxes into which the lower ends of the tubes are expanded in groups or rows, said tubes being curved at their upper ends and straight for the rest of their length, and a blow-off collector box connected to the boxes into which the tube ends are expanded.

3. A water tube boiler comprising two units each consisting of a bank of water tubes inclined toward each other upwardly to form between them an A-shaped combustion chamber, a central steam and water drum into which the upper ends of the tubes of both banks are expanded, a plurality of boxes into which the lower ends of the tubes are expanded in groups or rows, downcomers connecting the water space of said drum with said boxes, and a blow-off collector box connected to the boxes into which the tube ends are expanded.

4. In a water tube boiler comprising two units each consisting of a bank of water tubes inclined toward each other upwardly to form between them an A-shaped combustion chamber, a central steam and water drum into which the upper ends of the tubes of both banks are expanded, a plurality of boxes into which the lower ends of the tubes are expanded, in groups or rows, said tubes being curved at their upper ends and straight for the rest of their length, transverse baffles dividing each bank into a plurality of passes and longitudinal baffles extending from said boxes to the first pass and from the steam and water drum to the last pass, and a blow-off collector box connected to the boxes into which the tube ends are expanded.

1,102,408. INTERCONVERTIBLE COVERLET AND WRAPPER. IDA MARIE MAXIMILIANE ERNESTINE HÜBNER, Dresden, Germany. Filed Feb. 5, 1913. Serial No. 746,350. (Cl. 2—41.)

1. An interconvertible coverlet and wrapper comprising a substantially rectangular body adapted to cover a couch, cot or bed and provided with slits in its upper part adapted to constitute scyes and with an elongated slot extending a substantial distance inward or downward from the upper edge of said body and having an enlargement at its lower or inner end adapted to form a neck opening disposed a substantial distance below said upper edge, said enlarged elongated slot forming wings on its opposite sides adapted in the use of the article as a wrapper to constitute back flaps extending downward over the back.



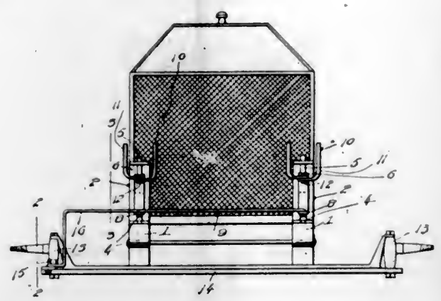
2. An interconvertible coverlet and wrapper comprising a substantially rectangular body adapted to cover a couch, cot or bed and provided with slits in its upper part adapted to constitute scyes and with an elongated enlarged slot at its upper end adapted to form back covering wings and a neck opening, and means for supporting the lower end of said body at the front thereof at the waistline and forming two front layers below the waist when the device is used as a wrapper, leaving free the feet.

3. An interconvertible coverlet for a couch, cot or bed and wrapper comprising a substantially rectangular body adapted to cover a couch, cot or bed and provided with slits in its upper part adapted to constitute scyes and with an elongated enlarged slot at its upper end adapted to form back covering wings and a neck opening, and a cover corresponding in shape to said rectangular body and provided with scye slits and a slot corresponding with the slits and slot of said body, said cover being adapted to form a lining when the article is used as a garment and a counterpane when the article is used as a coverlet.

4. An interconvertible coverlet and wrapper comprising a substantially rectangular body adapted to cover a couch, cot or bed and provided with slits in its upper part adapted to constitute scyes, with sleeves surrounding said scyes and with an elongated and enlarged slot extending downward from its upper end and adapted to form back covering wings and a neck opening, and a cover corresponding in shape to said rectangular body and provided with scye slits and a slot corresponding with the slits and slot of said body and with elongated sleeves at its scye slits, extending through the sleeves of said body and adapted to be turned back thereover, said cover being adapted to form a lining when the article is used as a garment and a counterpane when the article is used as a coverlet.

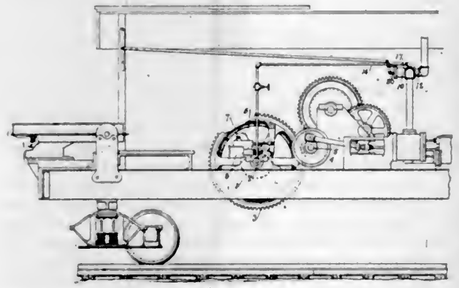
1,102,409. HEADLIGHT FOR AUTOMOBILES. BENNIE ISOM, Concord, Nebr. Filed May 20, 1913. Serial No. 768,871. (Cl. 240—62.)

1. In a device of the class described, the combination with the side bars of an automobile frame, of brackets carried thereby, vertical shafts rotatably supported by the brackets, collars engageable upon said shafts, means carried by the collars for holding the same in different adjusted positions upon said shafts, arms formed integral with the collars, and lamp supporting brackets having their lower ends adjustably connected to the first named arms.



2. The combination with the frame of an automobile, of dirigible headlight supports each comprising an upstanding arm having the lower end secured to said frame and having the upper end formed with a lateral bearing, a shaft mounted to turn in said bearing and extending downward parallel with said arm, a collar slidable on said shaft, a set screw securing said collar in adjusted positions on said shaft, a crank arm integral with said collar, and lamp holding means carried by said crank arm.

1,102,410. THROTTLE-VALVE. BENJAMIN JACOBY and CHARLES S. JOHNSON, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Nov. 14, 1913. Serial No. 801,077. (Cl. 121—120.)



1. The combination with a drum, an engine, a clutch to connect said drum with said engine and a steam operated ram to actuate said clutch, of a single throttle valve to admit steam successively to said ram and said engine.

2. The combination with a drum, an engine, a clutch to connect said drum with said engine, and a steam operated ram to actuate said clutch, of a throttle valve comprising a cylindrical valve casing having ports connected respectively with said ram and said engine and a piston mounted in said cylinder, said ports being so arranged that the movement of said piston will successively uncover the ports leading to the ram and to the engine.

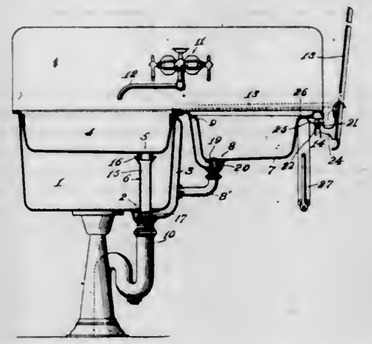
3. In a throttle valve a casing communicating with a source of steam supply and having ports leading respectively to a clutch operating device and to an engine, and a valve member to control said ports, said ports being so arranged relatively one to the other and to said valve member that the manipulation of said member will operate, first, that port leading to the clutch operating device and then the port leading to said engine.

4. A throttle valve comprising a cylindrical casing connected at one end with a source of steam supply, a port arranged near the forward end of said casing, a second port arranged beyond the first mentioned port and having its forward end overlapping the rear end of said first mentioned port, said ports being connected, respectively, with two fluid operated devices arranged for successive operation, and a piston valve to successively uncover said ports.

5. A throttle valve comprising a cylindrical casing communicating at one end with a source of steam supply and having a port provided with a portion tapered toward said source of steam supply, and having a second port also having a portion tapered toward said source of steam supply, the tapered portion of said last mentioned port overlapping the body portion of said first mentioned port, said ports being connected, respectively, with two fluid operated devices arranged for successive operation, and a piston mounted in said casing to successively uncover said ports.

[Claim 6 not printed in the Gazette.]

1,102,411. SANITARY KITCHEN, LAVATORY, AND LAUNDRY APPLIANCE. WILLARD C. JAMES, Los Angeles, Cal. Filed Dec. 26, 1905. Serial No. 293,212. (Cl. 4—36.)



1. A tub provided with an outlet and an overflow, a sink provided with an outlet detachably mounted in the tub, a discharge pipe removably seated in the outlet and arranged to receive the discharge from the sink outlet; a wash-bowl provided with an outlet and an overflow communicating with each other and with the trap of the tub through the overflow; a faucet provided with a swinging bib arranged to discharge into the wash-bowl, sink and tub alternatively, and a detachable drain-board hinged to fold over the wash-bowl and slidingly mounted to shift to escape the faucet in the act of raising and lowering.

2. A tub provided with an outlet at its lower end, a sink removably mounted in the tub and provided with an outlet, a wash bowl having an outlet, a connection between the bowl and sink outlets, and a perforated plug at the junction of said connections and positioned to drain both the sink and the bowl at the same time without draining the tub.

3. A wash-bowl, a sink mounted beside the wash-bowl, a faucet midway between the bowl and the sink and having a pivoted bib by means of which it may be swung back and forth from the bowl to the sink as desired, a drain-board to cover the wash-bowl, one end of it projecting over the sink and the other end pivotally and slidingly mounted upon a lateral pivotal rod and adapted to a forward movement to clear the faucet and an upward movement to clear the bowl.

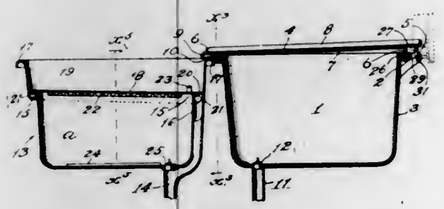
4. A sanitary kitchen lavatory and laundry appliance, comprising a tub, a wash-bowl and a drain-board and a detached hinge connecting the wash-bowl and the drain-

board, and provided with a standard for raising the upper end of the drain-board and with a hook and stop to engage the wash-bowl, substantially as and for the purpose set forth.

5. The combination with a stationary tub having an outlet at its bottom, of a sink removably mounted in the tub, and a removable connection adapted to be inserted in the outlet of the tub and to receive and carry the drainage from the sink, a wash-bowl mounted beside the tub, and a perforated drainage connection between the wash-bowl and the outlet of the tub so that the wash-bowl and the sink may be drained at the same time.

[Claims 6 and 7 not printed in the Gazette.]

1,102,412. COMBINED LAUNDRY, KITCHEN, AND PANTRY APPLIANCE. WILLARD C. JAMES, Los Angeles, Cal. Filed July 8, 1907. Serial No. 382,774. (Cl. 4—36.)



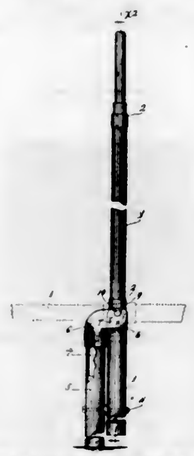
1. An article of furniture comprising two receptacles adapted to be used as wash-tubs, one being provided externally with a channel and the other internally with a gutter, the inner wall of said gutter being below the level of the tops of both receptacles, the guttered receptacle being provided with a drainage outlet leading from said gutter, a lid for one of said receptacles provided with a collar in said channel, and a washboard constructed to form a cover and to rest on said inner wall, said lid being provided with a lip extending over the cover formed by the washboard.

2. In an article of condensed furniture, a combined refrigerator, wash-tub, washboard and drain-board, comprising two abutting tubs with drainage outlets in their bottoms, one tub being provided with heat-insulated bottom and sides and with an adjustable removable cover adapted to drain water into the second tub, and the second tub being provided with a drainage channel down into its side next to the insulated tub; said channel being arranged to receive the drainage from said cover; said second tub being provided with a channeled drainage-ledge thereabout, and a movable and adjustable combined washboard and drainage-bottom adapted to seat upon the ledge around the sides of said second tub and to drain into the channel in said ledge, and to be up-ended in said tub for use as a wash-board.

3. The combination with a tub or laundry tray provided with a continuous ledge near its top, said ledge being horizontal along one end of the tub inclined along its sides, and inclined in both directions on its opposite end of a gutter extending around said ledge and sloping continuously downwardly from one end in both directions to an outlet opening in the middle of the opposite end of the tub, and a one-piece plate forming the sink bottom and extending from end to end and side to side of said tray and fixed and resting upon said ledge.

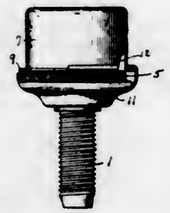
1,102,413. FLAGSTAFF. NELS A. JENSEN, Willmar, Minn. Filed Nov. 13, 1913. Serial No. 800,711. (Cl. 116—12.)

The combination with a support having a pair of horizontal laterally spaced prongs extending to one side thereof, of a flagstaff intermediately fulcrumed to said prongs for swinging movement to and from a vertical position in a plane which includes the axis of said support, said flagstaff when in a vertical position extending parallel to said



support, and means for locking the lower end of said flagstaff, when in a vertical position, to said support.

1,102,414. GREASE-CUP. CHESTER F. JOHNSON, Detroit, Mich. Filed Feb. 27, 1914. Serial No. 821,371. (Cl. 184—38.)



1. In a grease cup, the combination of a hollow threaded stem and a piston at one end thereof, a nut on the stem, a ring connected to the nut, and a receptacle for the grease adapted to connect to said ring and slide over the piston as the nut is turned.

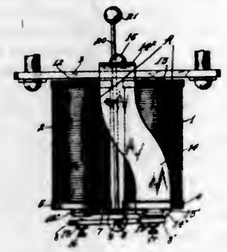
2. In a grease cup, the combination of a hollow threaded stem and a piston at one end thereof, a receptacle adapted to slide down over the piston, a nut on the stem, and means connecting the nut and receptacle, and comprising a cup shaped ring having an engagement with the nut, and having a flange in engagement with the lower edge of the receptacle.

3. In a grease cup, the combination of a hollow threaded stem and a piston at one end thereof, a cylindrical receptacle adapted to slide over said piston and having a radial flange at its lower edge, a nut on the stem, and a cup shaped ring connected to the nut and formed with an inturned flange around a portion of its outer edge to engage the flange on the receptacle.

1,102,415. BIASED POLARIZED RINGER. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1912. Serial No. 700,626. (Cl. 177—7.)

1. A device of the character described comprising a horse-shoe electromagnet, a permanent magnet attached at one end to the yoke of said electromagnet and having a free end extending to a position adjacent one of the poles of said electromagnet, an armature adapted to coöperate with the poles of said electromagnet and normally held biased by the free pole of said permanent magnet and

one of the poles of the electromagnet, and a winding for said electromagnet effective, when traversed by pulsations of current to produce a pole at the said attaching pole of the electromagnet like the free or attracting pole of said permanent magnet, to vibrate said armature.



2. A device of the character described comprising a horse-shoe electromagnet, a permanent magnet supported with one end in magnetic relation to the yoke of said electromagnet and having its other end extending to a position adjacent one of the poles of said electromagnet, a pivotally supported armature normally held biased by the adjacent poles of said permanent and electro-magnet, and a winding for said electromagnet effective, when traversed by pulsations of current adapted to produce like poles at the said biasing poles of the permanent and electro-magnet and an opposite pole at the other pole of said electromagnet to vibrate said armature.

3. A device of the character described comprising a horse-shoe electromagnet, an armature pivotally supported in operative relation to the cores of said electromagnet, a permanent magnet suitably associated with said electromagnet and armature so as to produce a normal magnetic flux in a path including said electromagnet said armature and said permanent magnet, said permanent magnet being positioned so as to produce an unvarying normal bias of said armature, and a winding for said electromagnet effective, when traversed by pulsations of current adapted to reverse said flow of magnetic flux in said electromagnet, to vibrate said armature.

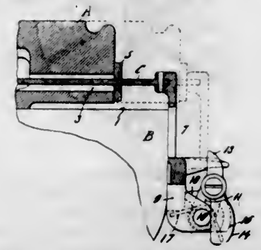
4. A device of the character described comprising a horse-shoe electromagnet, a permanent magnet attached at one end to the middle of the yoke of said electromagnet and having its free end extending obliquely to a position adjacent one of the poles of said electromagnet, a vibratile armature adapted to coöperate with the poles of said electromagnet and normally held biased by the free pole of said permanent magnet and one of the poles of the electromagnet, a winding for said electromagnet effective, when traversed by pulsations of current adapted to produce like poles at the attracting poles of the electromagnet and permanent magnet and an opposite pole at the other free pole of said electromagnet, to vibrate said armature.

5. A device of the character described comprising a horse-shoe electromagnet, an armature pivotally supported at a middle point with its opposite ends in operative relation to the free poles of said electromagnet, a permanent magnet attached at one end to the middle of the yoke of said electromagnet and having its free end adjacent an off-center portion of said armature so as to produce an unvarying normal bias of said armature.

1,102,416. EXTENSION-SLIDE. GEORGE C. KIMMEL, Cincinnati, Ohio, assignor to The Cincinnati Grinder Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 17, 1914. Serial No. 812,670. (Cl. 90—34.)

1. A machine-tool of the nature disclosed combining a reciprocating table, a slide-way therefor, a cover-plate for said slide-way mounted in extensible relation with said table, means for arresting the movement of the cover-plate in one direction, and means for arresting the movement of the cover-plate in the opposite direction until the table has reached a predetermined position.

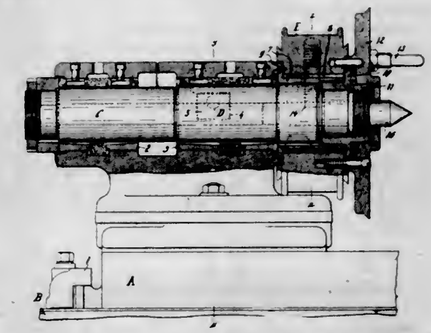
2. A machine-tool of the nature disclosed combining a reciprocating table, a slide-way therefor, a cover-plate for said slide-way mounted in extensible relation with said table, means for arresting the movement of the cover-plate in one direction, a member providing resistance against movement of the cover-plate in the opposite direction relative to the table and automatic restraining mechanism to overcome said resistance and arrest the movement of the cover-plate relative to the slide-way until positively moved by the table.



3. A machine-tool of the nature disclosed combining a reciprocating table, a slide-way therefor, a cover-plate for said slide-way mounted in extensible relation to the table, means for arresting the movement of the cover-plate in one direction, a member providing resistance against movement of the cover-plate in the opposite direction relative to the table and automatic restraining mechanism to overcome said resistance to arrest the movement of the cover-plate relative to the slide-way until the table has reached a predetermined position.

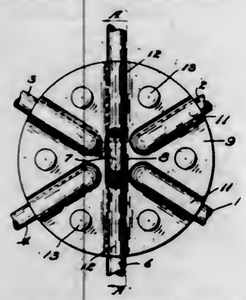
4. A machine-tool of the nature disclosed combining a reciprocating table, a slide-way therefor, a cover-plate for said slide-way mounted in extensible relation to the table, means for arresting the movement of the cover-plate in one direction when the table has reached a predetermined position, and a second means for arresting the movement of the cover-plate in the opposite direction until the table has reached a predetermined position.

1,102,417. HEAD-STOCK FOR GRINDERS. GEORGE C. KIMMEL, Cincinnati, Ohio, assignor to The Cincinnati Grinder Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 17, 1914. Serial No. 812,671. (Cl. 51—4.)



A head-stock for machines of the class described, comprising a head-stock portion formed with circumferential bearings, a spindle journaled therein and having its forward end projected beyond said head-stock portion, a driving wheel having circumferential bearings on said extended end of the spindle, and endwise bearings against the said head-stock portion, a friction clamp on said head-stock portion for holding said spindle against rotation in its bearings, a second friction clamp intermediate the driving wheel and its spindle bearings, for fixing the spindle to the driving wheel, and a work support on the spindle end adjacent the outer face of the driving wheel.

1,102,418. CANOPY-FRAME. GEORGE F. LINDSEY and GEORGE A. WILLIAMS, Birmingham, Ala. Filed June 9, 1913. Serial No. 772,615. (Cl. 5—14.)



1. A canopy frame comprising an integral cross member which extends from side to side of the canopy, a frame support rigidly attached to the center of said cross member and provided with seats, and frame members for each end of the canopy which are disposed substantially radially with respect to said support and have their inner ends connected to said support by being inserted into said seats.

2. In a canopy frame, a center support formed with diametrically opposite pairs of seats, rods forming canopy supports which are adapted to fit into said seats and be detachably held therein, one rod having a loop at its center, and means to attach said center support to said rod with the loop, which means engage said rod on each side of said loop.

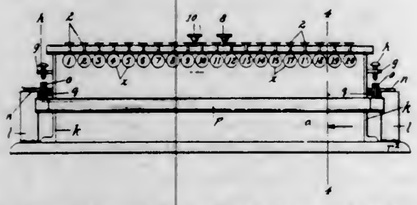
3. A canopy frame comprising a cross member having a loop or eye formed by a bend at its center, a frame support slotted to receive said loop which projects therethrough, radially disposed seats on said support, and end frame members disposed substantially radially with respect to said support and having their inner ends connected to said support by being inserted into said seats.

4. A center support for a canopy frame, which support is shaped to form radially disposed seats into which the inner ends of radially disposed end rods are insertible, and having a transverse seat adapted to receive the central portion of a cross rod of the frame, substantially as described.

5. A metallic center support for a canopy frame which has portions of its body displaced to form two pairs of oppositely disposed radial seats and to form a diametrical seat, there being a slot in line therewith in the center of the support, and means to connect said support to a frame member in said diametrical seat.

[Claim 6 not printed in the Gazette.]

1,102,419. KEY-OPERATED ACTUATING MECHANISM FOR ENGINE-GANGS. EDWARD E. MCCLURE and ANDRE J. WOLFF, Portland, Oreg., assignors to Portland Iron Works, Portland, Oreg., a Corporation of Oregon. Filed June 30, 1913. Serial No. 776,729. (Cl. 164—112.)



1. Actuating means for engine gangs comprising a master device; individual actuating mechanisms for the units of the gang of engines, such mechanisms normally non-operable by the master device; key-operated means between such master device and said individual actuating means operating to place the latter in a state for being simultaneously thrown into action by the subsequent operation of the master device; and means operating to simultaneously restore all the individual actuating mechanisms to their normal state, such means operated by the reverse movement of the master device.

2. Actuating means for engine gangs comprising a master device; individual actuating mechanisms for the units of the gang of engines, such mechanisms normally non-operable by the master device; key-operated means between such master device and said individual actuating means operating to place the latter in a state for being simultaneously thrown into action by the subsequent operation of the master device; the individual actuating mechanism being adapted to become locked against return movement, when thrown into action, until restored to its normal state; and means operating to simultaneously restore all the individual actuating mechanisms to their normal state, such means operated by the reverse movement of the master device.

3. Actuating means for engine gangs comprising a master device; individual actuating mechanisms for the units of the gang of engines, such mechanisms normally non-operable by the master device; key-operated means for operating the actuating mechanism individually; key-operated means between such master device and said individual actuating means operating to place the latter in a state for being simultaneously thrown into action by the subsequent operation of the master device; and means operating to simultaneously restore all the individual actuating mechanisms to their normal state, such means operated by the reverse movement of the master device.

4. Actuating means for engine gangs comprising a master device; individual actuating mechanisms for the units of the gang of engines, such mechanisms normally non-operable by the master device; key-operated means between such master device and said individual actuating means operating to place the latter in a state for being simultaneously thrown into action by the subsequent operation of the master device; means controlling a plurality of individual actuating mechanisms, operating to place the same, simultaneously, in a state for being thrown into action by the subsequent operation of the master device; and means operating to simultaneously restore all the individual actuating mechanisms to their normal state, such means operated by the reverse movement of the master device.

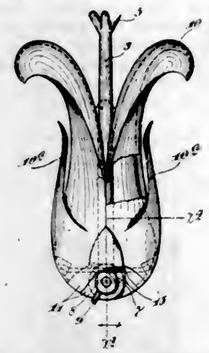
5. Actuating means for engine gangs comprising a master device; individual actuating mechanisms for the units of the gang of engines, such mechanisms normally non-operable by the master device; key-operated meahs for operating the actuating mechanism individually; key-operated means between such master device and said individual actuating means operating to place the latter in a state for being simultaneously thrown into action by the subsequent operation of the master device; the individual actuating mechanism being adapted to become locked against return movement, when thrown into action, until restored to its normal state; and means operating to simultaneously restore all the individual actuating mechanisms to their normal state, such means operated by the reverse movement of the master device.

[Claims 6 to 15 not printed in the Gazette.]

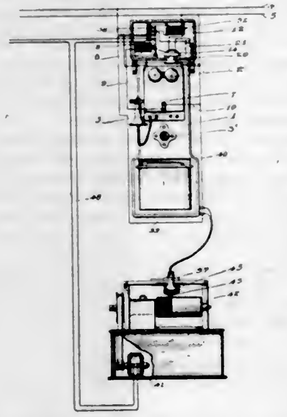
1,102,420. HAT AND COAT HANGER. EVA T. MCCORD, Chicago, Ill. Filed Apr. 29, 1912. Serial No. 693,933. (Cl. 211—13.)

1. In a device of the kind described, the combination of a support, a hub associated therewith, a pair of wings having overlapping laterally spaced flanges pivoted to the extremities of the hub, spring fingers or prongs associated with said wings and adapted to project transversely over the face of the hub, said hub having flattened surfaces associated therewith engageable with said spring fingers to hold said wings in predetermined positions.

2. In a device of the kind described, the combination of a support, a hub associated therewith, a pair of wings having laterally spaced flanges pivoted to the extremities of said hub, spring fingers or prongs secured to said wings, said hub provided with flattened surfaces at its end portions adapted to be engaged by said spring fingers to hold the wings in folded or unfolded positions.



1,102,421. TELEPHONE SIGNAL AND RECORDER. FRANCIS J. MCGOWEN, Los Angeles, Cal., assignor of one-third to Ida R. Forbes. Filed June 9, 1913. Serial No. 772,535. (Cl. 179—6.)

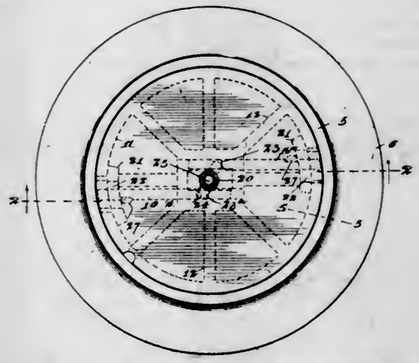


1. In combination with a telephone circuit, a subscriber's instrument connected thereto, including a call bell, a relay having operative connection with said telephone circuit, a transmitter adapted to receive sound vibrations from said call bell, an energizing circuit connection for said transmitter controlled by said relay, and a branch circuit from said telephone line controlled by said relay and in coöperative relation with said transmitter circuit to transmit to the telephone line electrical impulses corresponding to the sound vibrations produced by said call bell.

2. In combination with a telephone circuit and subscribers instrument connected thereto, including a call bell, a relay connected thereto, and adapted to be energized by the current in said circuit, a sound recording and reproducing instrument, a motor therefor, a receiver, a supply circuit connection controlled by said relay for energizing said motor, and a connection controlled by said relay for putting said receiver in communication with said telephone line, a transmitter adapted to receive sound vibrations from said call bell, an energizing circuit connection for said transmitter controlled by said relay, and means for transmitting to the telephone line electrical impulses produced by said transmitter.

3. In combination with a telephone circuit, a subscriber's instrument connected thereto including a call bell, a relay, a branch from said telephone circuit including said relay and a switch, a sound recording and reproducing instrument, a motor therefor, a supply connection controlled by said relay for energizing said motor, a receiver and a connection from said telephone line controlled by said relay for putting said receiver in communication with said telephone line, a transmitter adapted to receive sound vibrations from said call bell, and a connection controlled by said relay from said transmitter to said telephone line, for transmitting to the telephone line electrical impulses produced by said transmitter.

1,102,422. MANHOLE-COVER. JOHN MCKEON, Chicago, Ill. Filed Mar. 1, 1913. Serial No. 751,424. (Cl. 94—7.)



1. In a man-hole cover structure, the combination with a base forming a cover seat, a cover resting on said seat and having a central opening therethrough, a box-like structure cast on the cover at the center thereof, locking bars slidable at their inner ends radially through said box structure to carry their outer ends toward or away fom said base, said base having notches fo receiving the outer ends of said bars, the opposite sides of the inner ends of said bars having notches, a plate resting in said box structure with its ends engaging in said bar notches, and a polygonally ended stem cast integral with said plate and extending therefrom through said cover opening.

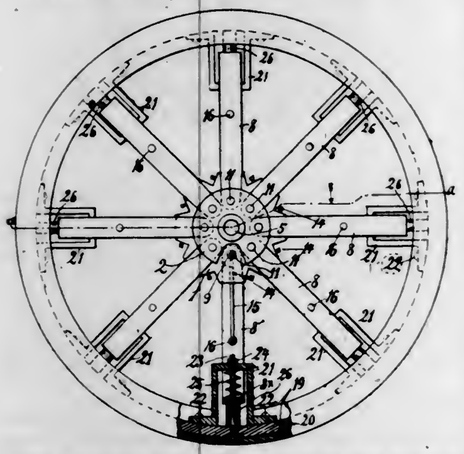
2. In a man-hole cover structure, the combination with a base comprising a vertical base ring forming a cover seat, a cover resting on said seat and having a central opening therethrough, a box-like structure cast integral with the cover on the lower side thereof, locking bars slidable at their inner ends through said box-like structure at the sides thereof, said base having openings for receiving the outer ends of the bars and the opposite sides of the inner ends of the bars having notches, an actuating key for the bars comprising a plate and a stem integral therewith, said box-like structure having a longitudinal slot in its base between the locking bars into which the key plate may be inserted and then turned into position transverse of the box structure to engage in the notches of the locking bars, the key stem extending through the cover opening, and projections on the outer ends of said bars for limiting the outward movement thereof to prevent turning of the key plate into parallelism with the box structure slot thereby to prevent escape of the key.

3. In a man-hole cover structure, the combination with an annular base having a cover seat, a cover resting on said seat, a box-like extension from the lower face of said cover at the center thereof, guide bars slidable through said box extension at the sides thereof, said base having slots for receiving the ends of said bars, the inner ends of the bars having notches, a key in said box extension engaging with its ends in said notches, said cover having an opening therethrough, a stem extending upwardly from said key through said opening having a polygonal end whereby a wrench may be applied to effect turning of the stem and key and thereby radial shifting

of the locking bars, there being a longitudinal opening through the floor of the box extension of less width than the length of said key but of sufficient length to allow insertion of the key into the box extension, said key after insertion extending substantially at right angles with said entrance opening and locking bars.

4. The combination, with the base having recesses, of a cover to rest on said base, a box formed integral with said cover having a side opening and two end openings, a plurality of integral strengthening ribs extending from substantially the periphery of said cover to said box, locking bars slidably mounted in said box at their inner ends, guide blocks integrally formed on said cover through which said locking bars slide at their outer ends, an oblong opening in one side of said box, recesses formed in said locking bars near their inner ends, a lever of less length than the opening in said box but greater in length than the width of said box and the ends of which lever are adapted to enter the recesses in said locking bars and means for actuating said lever, substantially as described.

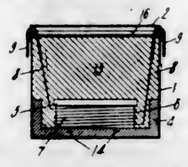
1,102,423. CUSHIONED WHEEL. GEORGE T. MCMILLAN, Bushnell, S. D. Filed July 17, 1913. Serial No. 779,640. (Cl. 152—28.)



1. In a vehicle wheel, the combination with a hub having radial sockets about midway between its ends, and other or outer radial sockets nearer the ends of the hub; a series of U-shaped spokes having their inner ends pivotally secured in said outer sockets so as to swing slightly therein, radial spring arms secured each with one end in one of the middle sockets and having its outer end pivotally secured between the arms of the adjacent spoke; a felly, arched brackets having their inner ends within the U-shaped spokes and secured to the felly, a tire about the felly, a radial bolt passed through the tire, the felly, the outer end of each spoke, and the inner end of the adjacent bracket, a nut on the inner end of said bolt, an expansion coil spring encircling the bolt between the bracket and the spoke, and a rubber cushion upon the bolt between the felly and the spoke.

2. In a wheel of the class described, a hub composed of a middle section having a central opening and radial sockets, and two disk-like side sections one at each side of the middle section and provided with holes for the vehicle axle; said side sections having upon their inner sides radial ribs or lugs bearing against the middle section, whereby radial sockets are formed between the sections, radial spring arms fixed in the sockets of the middle section, U-shaped spokes having their arms provided with conic holes, bushings fitted in the sides of the middle section and having each conic portion fitting in the conic hole in one of the arms of the spoke, a bolt passed through the three hub sections and through the bushings in the ends of the spoke, a nut on said bolt, a bolt passed through each spoke and through the outer end of one of the spring arms and provided with a nut, and collars fitted on the bolts and filling between the spring arm and the arms of the spoke adjacent each side thereof, a felly, means attaching the felly to the ends of the spokes in a manner allowing radial movement of the spokes to and from the felly, and cushioning means arranged to resist said movement.

1,102,424. ELECTRIC FUMIGATOR. WILLIAM F. MCNARB, Pittsburgh, Pa. Filed Apr. 1, 1914. Serial No. 828,828. (Cl. 219—44.)



1. A fumigator, comprising a receptacle provided with a heating element adapted to be immersed in a fumigating substance contained in said receptacle, said heating element being formed of fusible material and adapted when exposed to fuse and break the circuit.

2. A fumigator, comprising a receptacle containing volatile material, and a heating element immersed in said material and formed of fusible material, said element being adapted to fuse and break the circuit when exposed above the level of said material.

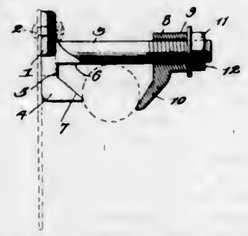
3. A fumigator, comprising a receptacle containing volatile material and provided with a fusible heating element, a circuit leading from said element to a source of current, and an indicating lamp in said circuit.

4. A fumigator, comprising a receptacle provided with a support, a heating element carried by said support, a circuit leading from said heating element to a source of current, and volatile material contained in said receptacle and in which said heating element is immersed, said element being adapted to fuse when the level of the volatile material lowers to expose the same.

5. A fumigator, comprising a receptacle provided with a support, a heating element carried by said support, a circuit leading from said heating element to a source of current, volatile material contained in said receptacle and in which said heating element is immersed, said element being adapted to fuse when the level of the volatile material lowers to expose the same, and an indicating lamp in said circuit.

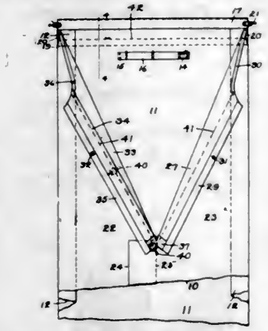
[Claims 6 and 7 not printed in the Gazette.]

1,102,425. SIGN-HOLDER. SAMUEL A. MELVIN, Meadville, Pa. Filed Apr. 7, 1913. Serial No. 759,440. (Cl. 40—128.)



The herein described sign holder comprising a sign-supporting bar, a bolt projecting rigidly therefrom, clamping lugs carried by said bar at opposite sides of the bolt, each having a pair of teeth projecting away from the bar alongside the bolt and diverging slightly from each other, a sleeve loosely mounted on the bolt and having a single tooth inclining from the bolt toward the space between said lugs, and a nut on the bolt behind said sleeve.

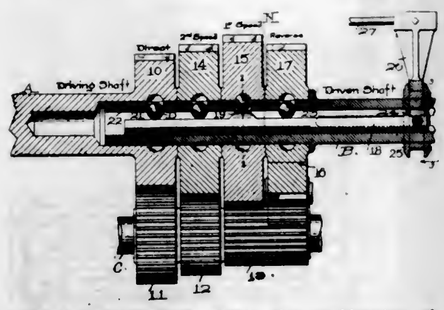
1,102,426. BAG. CHARLES C. MILLER, Fort Wayne, Ind. Filed July 12, 1912. Serial No. 708,946. (Cl. 206—7.)



1. A bag formed from a single sheet of material having a permanently closed bottom and open top, the front of the bag being permanently closed in its lower portion, an opening in the upper portion of the front extending from the top edge thereof to the said closed portion thereof, a flap on each side of the opening, an extension secured to one of the flaps along its longitudinal edge, the inner surface of which is adapted to be brought into contact with the inner surface of the other flap, the said extension and said other flap when in juxtaposition being adapted to be folded together onto said flap to close said opening, and a reinforcement secured to the closed portion of the front adjacent the said opening, said reinforcement being also secured to each flap.

2. A bag formed from a single sheet of material having a permanently closed bottom and open top, the front of the bag being permanently closed in its lower portion, an opening in the upper portion of the front extending from the top edge thereof to the said closed portion thereof, flaps on opposite sides of the opening which, collectively, are greater in width than the said closed portion of the front, a portion of the inner surface of each flap being adapted to be brought into contact with a portion of the inner surface of the other and when in juxtaposition, said flaps being adapted to be folded together onto one of the same to close the opening, and means to secure the flaps in their folded position.

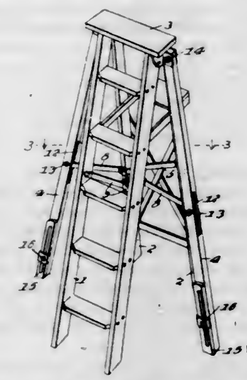
1,102,427. TRANSMISSION-GEARING. RALPH L. MORGAN, Worcester, Mass. Filed Jan. 5, 1911. Serial No. 600,922. (Cl. 74—59.)



1. In a transmission gearing, the combination of a shaft, a series of gears loosely arranged thereon and having recesses formed on the inside thereof, balls arranged in holes cut in the shaft, means for forcing any ball outwardly to engage and lock any gear to the driven shaft, and means for normally holding the balls in their innermost or retracted position.

2. In a transmission gearing, the combination of a shaft, a series of gears loosely arranged thereon and having recesses formed on the inside thereof, balls arranged in holes cut in the shaft, means for forcing any ball outwardly to engage and lock any gear to the driven shaft, and spring-pressed plungers for normally holding the balls in their retracted position.

1,102,428. STEP-LADDER. WILLIAM P. NEWMAN and HORACE P. EATON, Bucyrus, Ohio. Filed Apr. 14, 1913. Serial No. 760,883. (Cl. 228—15.)

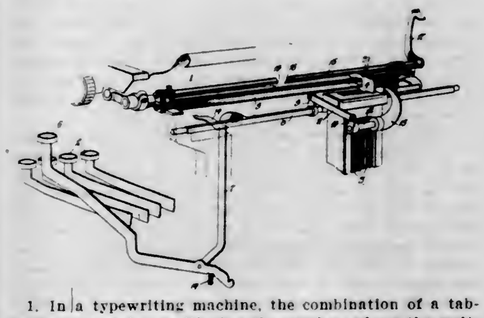


1. In a collapsible support including front and rear legs, and means to connect said legs at their tops, side braces, means to connect the side braces to the top so that said braces are movable laterally and longitudinally of the top, a pair of links for each of the said respective legs pivoted at their outer ends thereto, a link for each side brace pivoted thereto, and means to connect all of the inner ends of the links together, whereby opening and closing of the legs effects corresponding movement of the braces.

2. In a collapsible support including front and rear legs, a top, means to connect the legs to the top, side braces, means to connect the side braces to the top so that said braces are movable laterally and longitudinally of the top, and means to connect the front and rear legs and each of the braces so that when the rear legs are moved away from the front legs the side braces will be moved away from the front legs and laterally with respect thereto.

3. In a collapsible support including front and rear legs, and means to connect said legs at their tops, side braces pivotally connected to said means for lateral and longitudinal movement, and a device located substantially central of the space between the front and rear legs and the side braces and having radiating connections with each of the front and rear legs and side braces whereby movement of the rear legs will effect movement of the side braces to operative and inoperative position.

1,102,429. TYPE-WRITING MACHINE. ALEXANDRE VALÈRE NIBOUREL, Paris, France, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 25, 1913. Serial No. 775,640. (Cl. 197—179.)



1. In a typewriting machine, the combination of a tabulating device for positioning the carriage along the writing line, said device comprising a rack and stops slidably

embracing said rack, said stops being operative in a direction perpendicular to their line of movement, key-set means for moving said stops selectively from an inoperative to an operative position, and a detent bar common to all of said stops to hold them in the positions to which moved.

2. In a typewriting machine, the combination of a tabulating device for positioning the carriage along the writing line, said device comprising a rack and stops slidably embracing said rack, said stops being operative in a direction perpendicular to their line of movement, key-set means for moving said stops selectively from an inoperative to an operative position, key-controlled means to engage the front of said stops to return them to their inoperative positions, and a detent bar common to all of said stops to hold them in both their operative and inoperative positions.

3. In a typewriting machine, the combination of a tabulating device for positioning the carriage along the writing line, said device comprising a rack and stops slidably embracing said rack, said stops having notches and being operative in a direction perpendicular to their line of movement, key-set means for moving said stops selectively from an inoperative to an operative position, and a spring-pressed bar common to all said stops to engage in said notches and hold said stops in the positions to which moved.

4. In a typewriting machine, the combination of a tabulating device for positioning the carriage along the writing line, said device comprising a rack and stops slidably embracing said rack, said stops having notches and being operative in a direction perpendicular to their line of movement, key-set means for moving said stops selectively from an inoperative to an operative position, and a key-controlled rock shaft having a plate to return said stops from an operative to an inoperative position

---

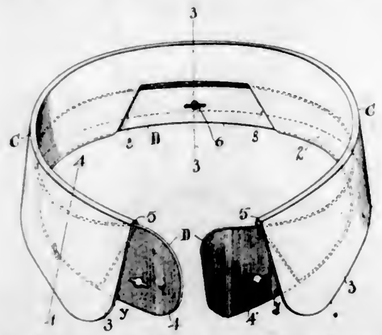
1,102,430. COOK STOVE AND RANGE. CHARLES OTTERSHAGEN, Portland, Oreg. Filed Oct. 30, 1913. Serial No. 798,240. (Cl. 126—1.)



1. The combination in a cook stove or range having a fire box and an oven, of a base plate secured at the rear of the fire box between the oven and the stove cover, for controlling drafts in the stove, and having its body intermediate the end portions recessed well toward the lower edge, a closure mounted in said recess, a spacing plate secured lengthwise in one end of said base and conforming in width thereto, and a similar plate secured transversely of the opposite end of the base.

2. The combination in a cook stove or range having a fire box and an oven, of a base plate secured at the rear of the fire box between the oven and the stove cover, having its body intermediate the end portions recessed well toward the lower edge and a supporting arm extending at right angles from one end, a closure mounted in said recess, a spacing plate conforming to the width of the base secured to said arm, a similar plate secured lengthwise in the opposite end of said base, and a closure mounted to close said recess, for controlling the position of the draft from the fire box.

1,102,431. COLLAR FOR NECKWEAR. FREDERICK WILLIAM PARSONS, Cleveland, Ohio, assignor to The Parsons & Parsons Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 22, 1908. Serial No. 439,663. (Cl. 2—67.)

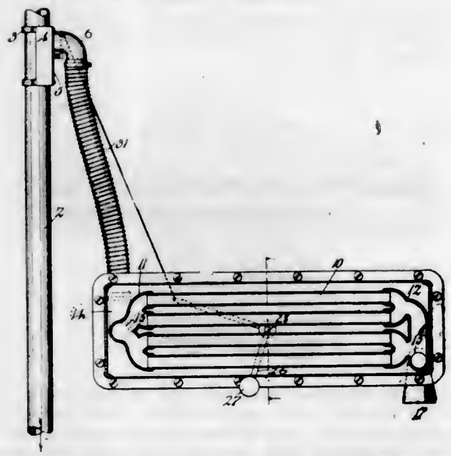


1. A lay-down collar and a separate strip secured therein of relatively narrower width at its middle than at its ends to provide widened tabs at the front of the collar and a free upper space between the folds of the collar at the rear and having buttonholes in its ends and its middle portion.

2. A collar having a lay-down portion and a strip of greater length than the collar laid between the band and the said lay-down portion and having ends of substantially the same width as the band and provided with buttonholes, the band of the collar being recessed at its middle and rear and the said strip having a buttonhole exposed in said recess.

3. A two-piece collar for neck wear comprising an inner neck band portion having an outer turn-down portion, and a supplemental strip of narrower width at its middle than at its ends secured to said inner band portion and having buttonhole ends of substantially the same width as said band portion and adapted to overlap and have free play in respect to the end edges thereof.

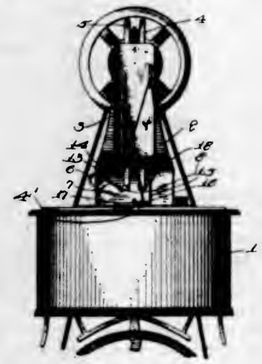
1,102,432. COMBINED FOOT-REST AND HEATER. CLYDE S. PELTON, Akron, Ohio. Filed Apr. 29, 1910. Serial No. 558,457. (Cl. 237—4.)



1. The combination, with a motor exhaust pipe, of a reversible heater having connections projecting from opposite ends thereof, a discharge elbow reversibly connected with one of said connections, a supply elbow projecting from the other connection and reversibly connected thereto, a connection between the supply pipe and the last mentioned elbow, the elbow connections permitting the heater to be reversed for connection with the exhaust pipe on either side of the vehicle.

2. The combination, with the floor of a motor vehicle, of an exhaust pipe extending beneath said floor, a heater supported by said floor and having connections projecting from opposite ends thereof, the lower ends at least of the connections being below said floor, a discharge elbow reversibly connected with one of said connections, a supply elbow projecting from the other connection and reversibly connected thereto, a flexible connection between the exhaust pipe and the last mentioned elbow, the reversible elbows permitting the heater to be reversed for connection with the supply pipe on the other side of the vehicle.

1,102,433. EMBROIDERY-FOOT ATTACHMENT. JOHN H. PETTIT, Great Falls, Mont. Filed Mar. 8, 1913. Serial No. 752,993. (Cl. 112—13.)



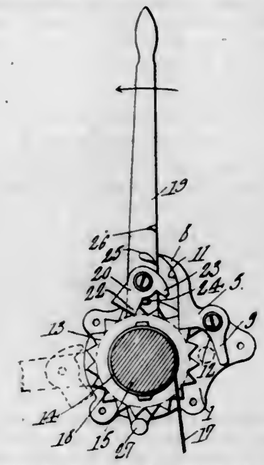
In a device of the class described, the combination with a machine provided with a supporting bar and a needle bar, an embroidery foot carried by said supporting bar, said embroidery foot comprising a coiled spring, means for attaching said spring to said supporting bar, an upwardly extending neck extending from said spring, a bridge portion extending from said neck, a downwardly bent portion extending from said bridge and terminating in a laterally bent foot, said foot terminating in an upwardly bent lip, said needle bar provided with a knob, said knob adapted to engage said bridge when the needle bar is raised for raising said foot from engagement with the support, said lip constituting a means for preventing the goods from becoming entangled with the end of the foot.

1,102,434. CONTROLLING ATTACHMENT FOR DUMPING-WAGONS. HOMER L. PHELPS, Martinsburg, W. Va. Filed Mar. 27, 1912. Serial No. 686,601. (Cl. 74—16.)

1. The combination with a ratchet wheel, of a lever mounted for oscillation, means for holding the wheel against rotation in one direction, means carried by the lever for actuating the wheel, and additional means carried by said lever for entering between the ratchet wheel and the holding means to lock said holding means in active position, and means carried by the lever for shifting said holding and actuating means out of active positions.

2. The combination with an attaching plate, and a bearing element outstanding therefrom, of a lever engaging and adapted to oscillate upon said element, a ratchet wheel mounted for rotation on said element, a pawl upon the lever, a detent mounted upon the attaching plate and normally engaging the ratchet wheel to hold it against rotation in one direction, means movable with the lever for entering between the detent and ratchet wheel to hold the detent in engagement with the ratchet wheel, and means movable with the latter for engaging the ratchet wheel to actuate it.

3. The combination with an attaching plate, and a bearing element outstanding therefrom, of a lever engaging and adapted to oscillate upon said element, a ratchet wheel mounted for rotation on said element, a detent mounted upon the attaching plate and normally engaging the ratchet wheel to hold it against rotation in one direction, means movable with the lever for entering between the wheel and one end of the detent to hold the detent in engagement with the ratchet wheel, a pawl carried by the lever and constituting means for actuating the ratchet wheel, and coöperating means upon the pawl and detent for disengaging the pawl from the ratchet wheel.

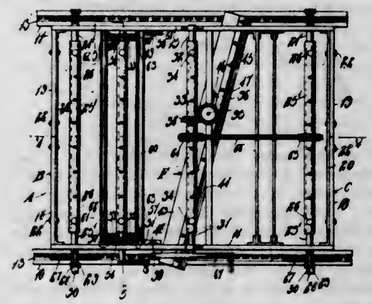


4. The combination with an attaching plate, and a bearing element outstanding therefrom, of a lever engaging and adapted to oscillate upon said element, a ratchet wheel mounted for rotation on said element, a detent mounted upon the attaching plate and normally engaging the ratchet wheel to hold it against rotation in one direction, means movable with the lever for entering between the wheel and one end of the detent to hold the detent in engagement with the ratchet wheel, a pawl carried by the lever and constituting means for actuating the ratchet wheel, means upon the pawl and coöperating with the detent for disengaging the pawl from the ratchet wheel, and coöperating means upon the lever and the detent for disengaging the detent from the ratchet wheel simultaneously with the disengagement of the pawl.

5. The combination with a ratchet wheel, of a detent normally engaging the ratchet wheel, a lever for rotating said ratchet wheel, and means movable with the lever and into position between the wheel and detent for binding the detent in engagement with the ratchet wheel.

[Claim 6 not printed in the Gazette.]

1,102,435. FINISHING-MACHINE. ANTHONY J. POWERS, Meridian, Miss. Filed May 28, 1913. Serial No. 770,492. (Cl. 94—6.)

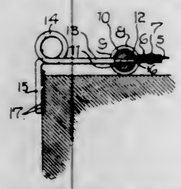


1. In a machine of the class described, the combination of a wheeled frame, a floater mounted on said frame

for movement transversely and longitudinally of the frame, an operating shaft rotatably mounted on the frame, a vertical shaft rotatably mounted on the frame and operatively connected to the operating shaft, a disk fixed on the lower end of the vertical shaft for rotation therewith, a link connecting said disk and the floater whereby rotation of the disk will move the floater both transversely and longitudinally of the frame, and means for propelling the frame.

2. In a machine of the class described, the combination of a wheeled frame, means for propelling said frame, a floater movably supported by said frame, connection between the floater and the propelling means for operating the former during the travel of the frame, yielding edge tools supported by the frame in the rear of the floater, a yieldingly supported trowel at the rear of said edge tools, and means for raising either edge of said trowel.

1,102,436. ANCHORING DEVICE FOR TAPE-MEASURES. ALONZO A. RICHARDSON, Chico, Cal. Filed July 16, 1913. Serial No. 779,330. (Cl. 33—137.)

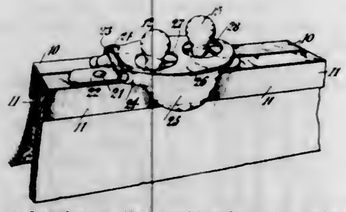


1. In combination with a tape measure, a medially and longitudinally slotted plate folded upon itself medially of the slot so as to provide a pivot bearing, a medially and diametrically apertured pivot extending through the pivot bearing, and means journaled in the aperture of the said pivot for engaging with an external object.

2. In an anchoring device for tape measures, a member including a pivot bearing and adapted to be secured to the end of the tape measure, a diametrically apertured pivot journaled in the pivot bearing, and means extending through the diametrical aperture of the pivot and rotatable therein for engaging with an external object.

3. In combination with a tape measure, an object engaging device comprising a loop and an arm and a shank substantially at right angles to the arm and tangential to the loop, said shank being pivotally connected to the free end of the tape measure and adapted to be turned in a plane at right angles to the plane of the tape measure and also adapted to be turned in a plane coincident with the plane of the tape measure.

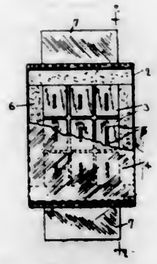
1,102,437. BAG-FRAME FASTENER. JACOB RITTER, New York, N. Y. Filed Jan. 9, 1914. Serial No. 811,161. (Cl. 70—116.)



1. In a bag-frame, the combination of a primary lock comprising two oppositely-directed spring-fasteners engaging the frames of the bag, and a secondary lock comprising a plate hinged to the top of the frame and having its side-flanges extending downwardly on both sides of the frame, and having openings in said top-plate for the primary locks to pass therethrough.

2. In a bag-frame fastener, the combination of a frame having opposite jaws adapted to be brought into contact with each other, recesses on each jaw and corresponding projections oppositely disposed thereto on the other jaws, said projections being resiliently mounted on knobs on their jaws and projecting beyond their jaws in the direction of the recesses, whereby pressure on both jaws causes said projections to rise on the opposite jaws, when they come into contact therewith, until they snap into said corresponding recesses, and a secondary lock, comprising a plate hinged to the top of the frame and having openings in said top-plate for said knobs to pass through, and having side-plates to frictionally engage said jaws.

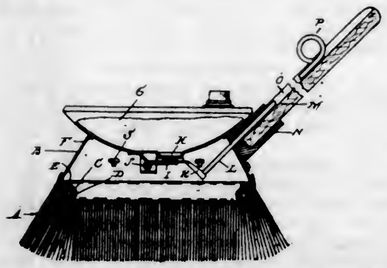
1,102,438. GARMENT-WEIGHT. MARY E. ROARKE, New York, N. Y. Filed Apr. 10, 1913. Serial No. 760,301. (Cl. 2—124.)



1. A garment weight comprising a tape having a pocket secured thereto, a series of weights secured within the pocket thus constructed and provided with openings whereby they may be secured within the pocket adjacent to one another, and a cushioning material arranged in said pocket around the edges of the series of weights.

2. A garment weight comprising a tape composed of a strip of material, a pocket secured to the same but shorter than said material, said pocket having overlapping edges which are secured together, a strip of pliable material located within the pocket adjacent to the edges thereof whereby a space is formed, rectangular shaped weights secured within the space formed by said pliable material, and means for securing the weights to the pocket and textile material.

1,102,439. FOUNTAIN DUST-MOP. CAMERON F. ROBERTS, Detroit, Mich. Filed June 28, 1913. Serial No. 776,267. (Cl. 15—47.)



1. A fountain mop, comprising a hollow head formed of sheet metal and provided with a beaded annular flange at its lower end, a mop body having a fabric band for overlapping said beaded annular flange, a clamping ring for securing said band to said flange, an oil receptacle mounted on said head and provided with an aperture in the bottom thereof, and a valve within said head for controlling the discharge of oil from said receptacle.

2. A fountain mop, comprising a hollow head formed of sheet metal and provided with a beaded annular flange at its lower end, a mop body having a fabric band for overlapping said beaded annular flange, a clamping ring for securing said band to said flange on the inner side thereof, hooks on said band for engaging bearings on the outer side of said flange, an oil receptacle having an apertured bottom, a valve controlling said aperture, a handle for actuating said mop, and a rod mounted on said handle operatively connected with said valve.

3. A fountain mop, comprising a frusto-conical hollow head, an oil receptacle mounted on said head and having an apertured bottom, a valve for closing said aperture, a resilient arm secured to said valve for holding the same to its seat, a handle for actuating said head, a rod mounted in said handle operatively connected with said resilient arm, and a mop body having a fabric band detachably secured to the lower end of said hollow body.

4. A fountain mop, comprising a hollow frusto-conical head formed of sheet metal and provided with an inturned beaded flange at its lower end, an oil receptacle having a rounded bottom, seated on said head and projecting downward therein, a valve for closing an aperture in the bottom of said receptacle, a handle secured to said head, a rod slidably secured to said handle and operatively connected to said valve, a mop body having a fabric band at its upper end, a resilient split ring secured to said band and detachably engaging said beaded flange, and hooks secured at opposite points on said band and detachably engaging apertures on the outer face of said head.

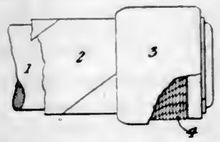
5. The combination with a head, of an open central wiper engaging the same, a liquid reservoir mounted on said head, a handle for operating said head, and means for discharging liquid from said reservoir within the space surrounded by said annular wiper, said means being controlled from said handle.

[Claims 6 to 8 not printed in the Gazette.]

1,102,440. COLLAR. RICHARD MONTGOMERY RODDEN, Montreal, Quebec, Canada. Filed Dec. 22, 1911. Serial No. 667,264. (Cl. 2—69.)

In a collar an outer flap and an inner flap connected at their upper edges, attaching tongues on the lower portion of the inner flap at the ends thereof, and a supplementary flap secured to said inner flap in position to engage said tongues, said supplementary flap being below the upper edges of said inner and outer flaps, the opposing edges of the upper portion of said outer flap being parallel, and the opposing edges of the upper portion of said inner flap being separated a gradually increasing distance from the upper edge of the collar to the upper edge of said tongues.

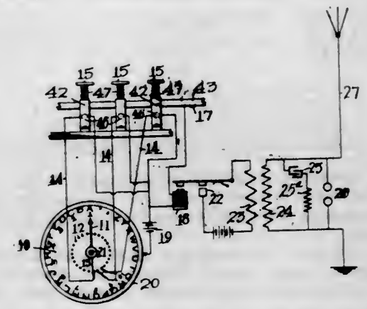
1,102,441. HANDLE OF GOLF-CLUBS, POLO-STICKS, AND THE LIKE. WILLIAM HERBERT SANDFORD, New York, N. Y. Filed July 21, 1913. Serial No. 780,357. (Cl. 46—4.)



1. A device for holding a grip member secure on the handle portion of the shaft of a golf club polo stick or the like, consisting of a ferrule of a material affording a grip to the hand of a user, said ferrule being partially divided to form an inner and outer covering and applied to the end portion of the grip member, a binding member interposed between said coverings and adapted to clamp the ferrule and the grip member to said handle portion.

2. In combination with the handle portion of the shaft of a golf club, polo stick or the like, a grip member on said handle portion, means of securing the grip member to the shaft, a partially divided ferrule of material affording a grip or hold to the hand of a user and forming inner and outer portions, means interposed between the said portions of the ferrule and adapted to bind said inner portion against the grip member and means adapted to re-unite said two portions.

1,102,442. APPARATUS FOR SELECTIVE WIRELESS TELEGRAPHING. FREDERICK G. SARGENT, Westford, Mass. Filed Nov. 21, 1913. Serial No. 802,189. (Cl. 250—8.)



1. In a wireless telegraph apparatus, the combination of a set of dials and indicators therefor, one at each station, means for rotating said dials and indicators at each station relatively to each other, synchronously and continuously, each dial being provided with a series of characters arranged thereon in the same order, a series of contacts corresponding one with each character, circuits connected with said contacts, means for closing each circuit when the indicator of that dial indicates the character corresponding to the contact connected with that circuit, manually controlled means at one station for causing a predetermined dot and dash signal to be sent while any selected one of said circuits is closed, and wireless apparatus connected with said circuits.

2. In a wireless telegraph or signaling apparatus, the combination of a set of dials and indicators, one at each station, means for relatively rotating the dial and indicator of each station synchronously with the rotation of those of the other station or stations, each dial being provided with a series of characters arranged thereon in the same order at the several stations and with a series of contacts corresponding with said characters, means for engaging said contacts in the same order at the several stations as the rotation is carried on, circuits connected with said contacts, a key-board at the sending station having push buttons, one connected with each of said circuits, and means connected with each push button of the key-board for closing and opening the circuit connected therewith to give a dot and dash signal.

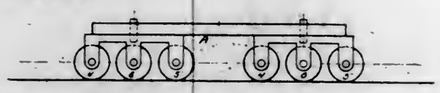
3. In a selective signaling device, the combination of a plurality of sets of sending dials and indicators, with a set of controlling push buttons arranged in connection with each sending dial and indicator, a circuit for each dial and indicator, a plurality of branch circuits connected therewith, one for each push button, means connected with the dial and indicator for closing an open contact in each branch circuit periodically, and means connected with each push button for intermittently closing and opening a second contact in each branch circuit whereby when a push button is depressed the circuit through that branch will be completely but intermittently closed during each complete operation of the device for the purpose of giving a dot and dash signal.

4. In an apparatus of the character described, the combination of a push button having a series of contacts thereon, a contact member adapted to engage said contacts in order as the push button is moved, a circuit connected with the last named contact for the purpose of giving a signal, a branch circuit, means controlled by said

branch circuit for releasing the push button and permitting it to move and make the desired contact, and automatic means for operating said releasing means.

5. In an apparatus of the character described, the combination of a reciprocable rod, a push button thereon, a spring for moving the push button and rod in one direction, a latch for holding the push button and rod in one extreme position, electromagnetic means for releasing the latch to allow the spring to act, and a contact member in position to be engaged by the rod when it moves, said rod having a series of contacts thereon for engaging the contact member.

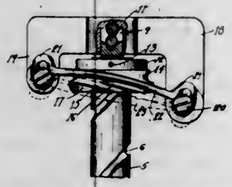
1,102,443. ROAD-ROLLER. OTTO A. SCHAMELL, Milwaukee, Wis. Filed Mar. 11, 1913. Serial No. 753,478. (Cl. 94—4.)



1. A road-roller comprising a rigid frame, a pair of independent trucks pivoted thereto, each truck having rigidly mounted therein a front and rear roller and an intermediate roller.

2. A road-roller comprising a rigid frame, a pair of independent trucks pivoted thereto, each truck having rigidly mounted therein a series of three or more alined rollers.

1,102,444. SASH-BALANCE. ERNEST SCHOENHEIT, Ambridge, Pa. Filed Mar. 6, 1914. Serial No. 822,866. (Cl. 16—114.)

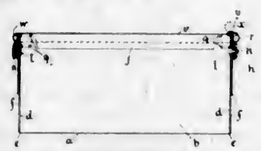


1. In a sash balance, an apertured casing, bearings secured to the inner wall of same, one of said bearings being formed with oppositely disposed depending arms, a spirally grooved rotary shaft disposed in said bearings, a bearing secured to the lower window sash and projected into the casing and encircling said shaft, a lug carried by said bearing riding in the grooved portion of said shaft, a disk secured to one end of said shaft and formed with an annular groove and with an angular groove and a flexible member, formed with elongated terminal eyes secured to the arms of one of said bearings and adapted to removably ride in the grooved portions of said disk.

2. In a sash balance, an apertured casing, bearings secured to the inner wall of the same, one of said bearings being formed with oppositely disposed depending arms, screws carried by said arms, a spirally grooved rotary shaft disposed in said bearings, a bearing secured to the lower window sash and projected into the casing and encircling said shaft, a lug carried by said bearing riding in the grooved portion of said shaft, a disk secured to one end of said shaft and formed with an annular and with an angular groove and means associated with the aforesaid screws and with said disk capable of bearing upon either of the grooved portions of the latter member to yieldingly prevent rotation of the same.

1,102,445. COLLAPSIBLE BOX. EDWARD C. SCHWAB, Milwaukee, Wis. Filed Feb. 15, 1912. Serial No. 677,769. (Cl. 229—41.)

1. A collapsible-box comprising, in combination, a rectangular cover-member of rigid sheet-material having its side-edges and one end-edge turned into channeled-flanges, and a folding-box portion which when set up has one side open and adapted to be received by said cover-member in which case said flanges pass over the edges of the open side of the box; and said box when folded being adapted to slide into the cover through the open end thereof, the side-edges of the folded box being engaged by and under said channeled flanges; said cover-member having further a movable channeled end-piece adapted to close the open end of said cover.



2. A collapsible-box comprising, in combination, a rectangular cover-member of rigid sheet-material having its side-edges and one end-edge turned into channeled flanges, and a folding-box portion which when set up has one side open and adapted to receive said cover-member in which case said flanges pass over the edges of the open side of the box; said box when folded being adapted to slide into the cover through the open end thereof, the side-edges of the folded box being engaged by and under said channeled flanges; said cover-member having further a movable channeled end-piece adapted to close the open end of said cover; and said box having at each end adjacent to the open side a pair of projections, two of which are adapted to be engaged by and under the flange on one end of said cover, and the other two by said end-piece.

3. The combination of a box-member consisting of a rectangular bottom, the sides and ends attached thereto and adapted to be folded thereover and having means for holding them upright in fixed box-relation to each other, the box so formed being narrower at the upper edge than said bottom, and a rectangular cover-member having channeled flanges formed on its opposite sides between which the side-edges at the top of the box are adapted to pass when set up and under which the side-edges of the bottom are adapted to engage when folded by reason of the greater width of said bottom.

4. The combination of a box-member consisting of a rectangular bottom, the sides and ends attached thereto and adapted to be folded thereover and having means for holding them upright in fixed box-relation to each other, the box so formed being narrower at the upper edge than said bottom, and a rectangular cover-member having rounded continuous corners and rounded channeled flanges formed on its opposite sides between which the side-edges at the top of the box are adapted to pass when set up and under which the side-edges of the bottom are adapted to engage when folded by reason of the greater width of said bottom.

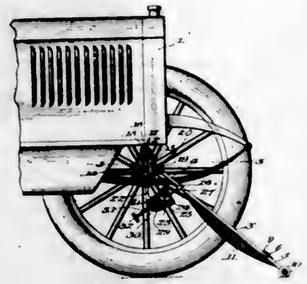
5. The combination of a box-member consisting of a single piece consisting of a bottom two side-portions and two end-portions hingedly attached to one another along creases, means for holding them in box-relation to each other, and a rigid cover provided with channel-flanged edges; the width of said box-member when folded being greater than the distance between the edges of the flanges on said cover whereby said box-member is adapted to slide between said flanges and be retained thereby in juxtaposition to said cover.

[Claims 6 to 8 not printed in the Gazette.]

1,102,446. AUTOMOBILE-FENDER. CHARLES SETZLER, Booneville, Ark. Filed Mar. 25, 1912. Serial No. 686,152. (Cl. 105—253.)

1. A fender including a frame comprising an upper and a lower section, means for pivotally connecting the side bars of said sections, shoulders formed on the inner extremities of the side bars of the lower section, a second set of shoulders formed on the ends of the bars of the upper section and adapted to normally abut against the first shoulders, and springs carried by the side bars of the upper section and having their free ends engaging the side bars of the lower section to resiliently retain the lower section in its normal position.

2. A fender including a frame comprising an upper and lower section, means for pivotally connecting the side bars of said sections, shoulders formed on the inner extremities of the side bars of the lower section, a second set of shoulders formed on the ends of the side bars of the upper section and adapted to normally abut against the first shoulders, and means for resiliently retaining said shoulders in their normal position.

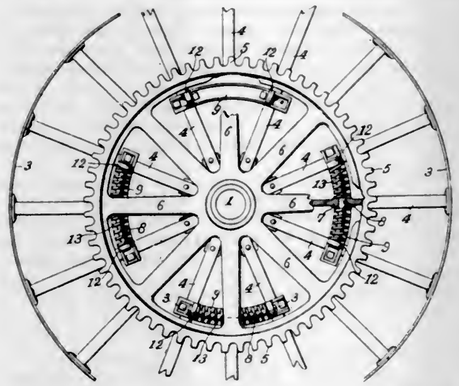


3. A device of the class described including attaching brackets, a frame pivotally connected to said brackets, arms carried by the brackets, cylinders supported by said arms, reciprocating plungers within said cylinders and rods pivotally connecting said plungers to the frame, as and for the purpose set forth.

4. A device of the class described including attaching brackets, a frame pivotally connected to said brackets, arms carried by the brackets, cylinders supported by said arms, reciprocating plungers within said cylinders, rods pivotally connecting said plungers to the frame, coil springs in the cylinders and bearing against the plungers, and adjusting screws connected to the plungers to move the same against the tension of the springs.

5. A fender for automobiles comprising brackets adapted to engage the front axle of an automobile, cylinders carried by the brackets, yieldable means in the cylinders, a basket frame pivotally mounted in the brackets, and means mounted for reciprocatory movements in the cylinders and bearing against the said yieldable means and pivotally connected with the said basket frame.

1,102,447. DRIVING-WHEEL. CLAUDE SINTZ, Detroit, Mich. Filed Aug. 14, 1912. Serial No. 715,061. (Cl. 74—29.)



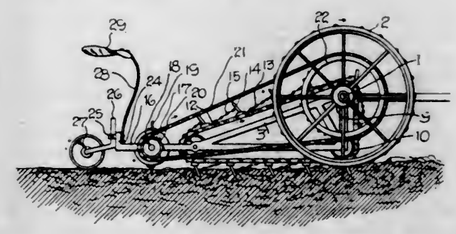
1. The combination of a traction wheel and a driving wheel arranged co-axially, the driving wheel having a limited rotary movement relative to the traction wheel and normally rotating therewith, segments fixed on one of the said wheels, the other of said wheels having lugs surrounding the segments, and springs engaging the lugs to yieldably hold the same in normal mid-position and slidable on the segments.

2. The combination of a traction wheel and a driving wheel arranged co-axially, the driving wheel having a limited rotary movement relative to the traction wheel and normally rotative therewith, segments mounted on the spokes of the traction wheel, the spokes of the driving wheel having lugs surrounding the segments and slidable thereon, and opposing springs on the segments engaging the lugs, to yieldably hold the same in mid-position on the segments.

3. The combination of a traction wheel and a driving wheel arranged co-axially, the driving wheel having a limited rotary movement relative to the traction wheel and normally rotating therewith, frames mounted on the spokes of the traction wheel, segments mounted on the frames concentric with the axis of the wheels, the respective ends of the frames having lugs supporting the segments, the spokes of the driving wheel also having lugs slidable on the segments, and opposing springs on each segment engaging the lug on the driving wheel at one end and engaging the lugs at the respective ends of the frame at the other end.

4. The combination of a traction wheel and a driving wheel arranged co-axially, the driving wheel having a limited rotary movement relative to the traction wheel and normally rotating therewith, a frame mounted on the spokes of the traction wheel, the respective ends of the frame, each provided with a lug having an opening, a segment mounted in said frame concentric with the axis of the wheel, one end of the segment having a conical portion and a key fitting in one of said openings, a wedge block engaging the end of the segment to secure it in said openings, clips to secure the frame to the spokes of the traction wheel, bolts to secure the clips and wedge block, on the driving wheel having a lug slidable on the segment, and springs on the segment between the lugs on the frame and the lug on the wheel.

1,102,448. AGRICULTURAL IMPLEMENT. ANDREW SORENSON, Malden Rock, Wis. Filed Sept. 8, 1913. Serial No. 788,737. (Cl. 55—85.)



1. A device of the class described comprising a frame, an axle mounted in said frame, traction wheels carried by said axle, a pair of shafts mounted in said frame, sprocket wheels mounted on the axle, sprocket wheels mounted on the shafts, sprocket chains engaged around the corresponding sprocket wheels on the axles and shafts, tooth bars secured to said chains, teeth projecting laterally from the tooth bars, a roller mounted in said frame, means for rotating the roller, cleaning teeth carried by said roller and adapted for engagement between the teeth of the tooth bars to clean the last mentioned teeth during operation of the device, a seat mounted on said frame, and a caster mounted on said frame to support the rear portion thereof.

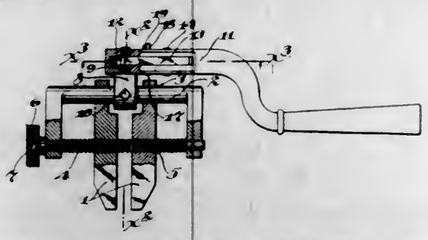
2. A device of the class described comprising a triangular frame, transverse shafts mounted in the lower angles of said frame, an axle mounted in the upper angle of said frame, traction wheels carried by the axle, a sprocket wheel carried by one of said traction wheels, a sprocket wheel mounted on said axle, sprocket wheels

mounted on the shafts, sprocket chains engaged around the corresponding sprocket wheels of the shafts and axle, tooth bars carried by said chains, harrow teeth carried by said tooth bars, connections between the harrow teeth and the adjacent tooth bars, a tongue secured to said frame, a roller mounted in said frame, a sprocket wheel carried by said roller, a sprocket chain engaged over the last mentioned sprocket wheel and over the sprocket wheel carried by one of the traction wheels, and means carried by the roller for cleaning the harrow teeth during operation of the device.

3. A device of the class described comprising a frame, shafts mounted in the frame, an axle extending through the frame, sprocket wheels mounted on the shafts, sprocket wheels mounted on the axle, sprocket chains engaged around said sprocket wheels, tooth bars carried by said chains, teeth carried by said tooth bars, connections between each tooth bar and the teeth carried by the next bar to retain said bars and teeth in their proper relative positions during engagement of the teeth with the ground, ground wheels mounted on the axle, a tongue connected with the frame, a roller mounted upon the rear portion of the frame to support the same above the ground, a cleaning member mounted for rotation in the frame during operation of the device, and cleaning teeth carried by said cleaning member for engagement between the teeth mounted on the tooth bars to clean the same.

4. A device of the class described comprising a frame, shafts mounted in the frame, an axle extending through the frame, ground wheels carried on said axle, connection between the axis and the shafts to rotate the latter, tooth carrying bars carried by said connections, teeth mounted on said bars, a roller mounted in said frame, means for rotating said roller, and combined harrow and cleaning teeth carried by said roller, the teeth carried by the bars being adapted for engagement between the combined harrow and cleaning teeth of the roller during operation of the device to clean said teeth.

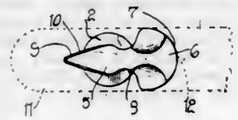
1,102,449. WRENCH. ALBERT STENSLAND, Worthing, S. D. Filed Oct. 16, 1913. Serial No. 795,446. (Cl. 81—62.)



A wrench comprising a yoke support, a pair of opposing jaws slidably mounted on the transverse portion of said support, an operating rod loosely journaled in the prongs of said support and having right and left hand screw threaded engagement with said jaws, for moving the same toward and from each other, a laterally projecting head block rotatively mounted on the transverse portion of said support, means securing said head block in different angular adjustments, with respect to said support, an operating handle rotatively mounted on said head block, and a pawl and ratchet device connecting said handle to said head block.

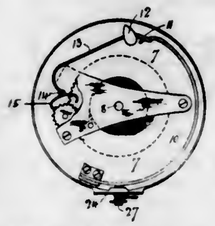
1,102,450. WHIFFLETREE-HOOK. GEORGE E. STEPHENS, Knoxville, Iowa. Filed Apr. 18, 1914. Serial No. 832,872. (Cl. 21—79.)

A whiffletree hook comprising a stem adapted for engagement in the end of a whiffletree, an end plate connected intermediate of its ends to the outer end of said stem, said end plate being disposed in a plane at right angles to the longitudinal plane of the stem, the forward end of said plate being enlarged to form a head, the portion of the plate between said head and the stem being



reduced, and the rear end of said plate being tapered from the stem to the rear extremity of said plate.

1,102,451. FIRE-ALARM. JOHN STEVENS, Launceston, Tasmania, Australia. Filed June 4, 1913. Serial No. 771,749. (Cl. 177—128.)



1. In a thermostatic fire alarm, the combination of clock-work mechanism having a pallet staff and a pallet thereon; a hammer operated from the pallet staff; a bell near the hammer; a curved bar of two metals each having a different co-efficient of expansion and having a recess in the end thereon; and means on the hammer normally engaging in said recess.

2. In a thermostatic fire alarm, the combination of clock-work having a pallet staff and a pallet thereon; a thermostatic bar; a hammer on the staff adapted to be engaged by the bar; a set-screw adapted to press upon the bar; an index finger on the set-screw; and an indicator dial associated with the finger.

3. In a thermostatic fire alarm, the combination of clock-work mechanism having a pallet staff having a pallet thereon, a hammer operated from the pallet staff, a bell near the hammer, a curved bar of two metals each having a different co-efficient of expansion, means for holding the hammer normally in the free end of the bar, a spur pinion on the main spring spindle, a toothed rack gearing with the pinion and a projection on the rack which, as the clock-work runs down in sounding an alarm, will close an electric circuit, as set forth.

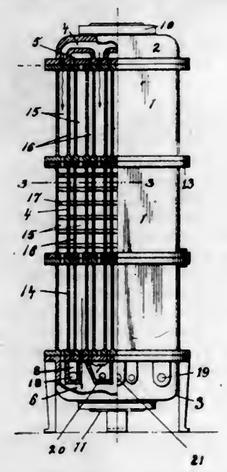
4. In a thermostatic fire alarm, the combination of clock-work mechanism, having a pallet staff having a pallet thereon, a hammer operated from the pallet staff, a bell near the hammer, a curved bar of two metals each having a different co-efficient of expansion, means for holding the hammer normally in the free end of the bar, a spur pinion on the main spriug spindle, a toothed rack gearing with the pinion and a pull wire upon the rack.

5. In a thermostatic fire alarm, the combination of an alarm, clock-work adapted when set in motion to sound the alarm, a thermostatic bar adapted to control said clock-work, a hollow set screw adapted to bear upon and press inward the thermostatic bar, and a push button within the set screw, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,102,452. HEATER. ROBERT C. STEVENS, Erie, Pa. Filed Apr. 5, 1912. Serial No. 688,662. (Cl. 62—30.)

1. In a heater, the combination of a plurality of shell sections, each comprising a plurality of parallel longitudinally disposed partitions extending from side to side thereof, integral with said shell and dividing said shell into alternating steam and water passages; of heads secured to the outer end of the extreme shell sections, each head formed with a steam opening and having a steam chamber, said chamber communicating with each of the steam passages; said head formed with integral water pockets, each of said pockets having one end in communication with one of said water passages, the opposite end of said pocket communicating with the next succeeding water passage; all of said water passages being connected in continuous series, but out of communication with the intermediate steam passages; a water inlet at one end of the series of water passages, a water outlet at the opposite end of said series; said series of passages adapted to conduct water in a thin sheet along the walls of said steam passages from one end to end of the heater, the water being guided alternately in opposite directions, for the purposes set forth.

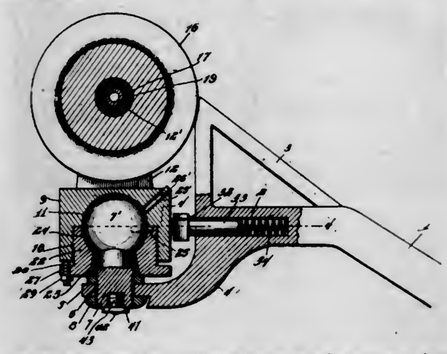


2. In a heater formed of a plurality of shell-sections arranged end-to-end and heads secured to the extreme sections; each section formed of a single piece of cast metal and comprising a rectangular outer shell and a plurality of flat partitions arranged lengthwise said sections, said partitions being parallel and extending from side to side across said shell and a plurality of transverse spacing braces caonnecting adjacent partitions and cast integral therewith.

3. In a heater formed of a plurality of shell sections arranged end to end and heads secured to the extreme sections; each section formed of a single piece of cast metal and comprising a rectangular outer shell and a plurality of flat partitions arranged lengthwise said section, said partitions being parallel and extending from side to side across said shell, and a plurality of transverse spacing braces connecting adjacent partitions and cast integral therewith; each of said heads formed with a steam opening and having a steam chamber, the steam chamber of one head communicating directly with the steam chamber of the opposite head through the passages formed between alternate pairs of said parallel partitions; each head formed with a plurality of water pockets, each pocket communicating with the water passage formed between alternate pairs of said parallel partitions, said pockets connecting the water passages in series to form a single conduit to guide water in a thin sheet along the walls of said steam passages alternately in opposite directions from end to end of the heater, for the purposes set forth.

1,102,453. TROLLEY-WHEEL MOUNT. JOSEPH R. STOTELMYER and WALTER S. HENSELL, Hagerstown, Md. Filed May 10, 1912. Serial No. 696,381. (Cl. 64—70.)

1. In a support for trolley wheels, a pole having a horizontal portion provided with a recess therein and terminating in an arm having a horizontal portion, a shank carried by and projecting upwardly from said horizontal portion of the arm, a ball carried by the shank, a socket mounted to rotate horizontally and tilt vertically upon the ball, said socket being provided with fork arms, a trolley wheel journaled in said fork arms, spaced beveled surfaces on the socket, and a spring actuated plunger movable in said recess and having a head provided with beveled surfaces extending between and coacting with the beveled surfaces on the socket to limit the rotary movement thereof.



2. In a support for trolley wheels, a pole having a horizontal portion provided with a depending arm extending parallel therewith, a shank extending upwardly from said arm and carrying a ball, a socket mounted upon the ball to rotate horizontally and tilt vertically, said socket being provided with fork arms, interengaging elements upon the socket and horizontal portion of the pole for limiting the rotary motion of the socket in either direction, and a trolley wheel journaled upon said fork arms.

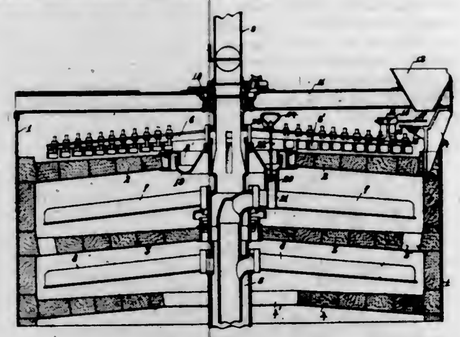
3. In a support for trolley poles, a pole having a horizontal portion provided with an arm disposed below the plane thereof and parallel therewith, a ball member rising vertically from said arm, a socket mounted to revolve horizontally and to tilt longitudinally and laterally on said ball member, a trolley wheel journaled on the socket member, spaced stops on said socket member having opposed beveled faces, and a spring projected plunger mounted upon the horizontal portion of the pole and provided with a beveled head coöperating with the beveled surfaces of the stop members to limit the opposite horizontal rotary movement of the socket member to a predetermined degree.

4. In a support for trolley poles, a pole having a horizontal portion provided with an arm disposed below the plane thereof and parallel therewith, a ball member rising vertically from said arm, a socket mounted to revolve horizontally and to tilt longitudinally and laterally on said ball member, a trolley wheel journaled on the socket member, spaced on said socket member having opposed beveled faces, a spring projected plunger mounted upon the horizontal portion of the pole and provided with a beveled head coöperating with the beveled surfaces of the stop members to limit the opposite horizontal rotary movement of the socket member to a predetermined degree, and stop elements upon the ball and socket members operative to permit the socket member to have a wider range of horizontal rotary motion and to limit such motion in the event of the passage of either of said stop members out of engagement with and beyond the head of the plunger.

1,102,454. FEEDING DEVICE FOR ROASTING-FURNACES. HARRY H. STOUT, New York, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Mar. 7, 1913. Serial No. 752,538. (Cl. 75—143.)

1. A feeding device comprising a hopper provided with a discharge orifice, a support below said hopper and spaced from said orifice, said support being variable in area and

adapted to receive and support the material discharged from said hopper, and means for removing a portion of said material from the support.



2. A feeding device comprising a support, a hopper provided with a discharge orifice spaced above said support whereby material may be discharged from said orifice to form a pile upon said support until the pile thus formed closes said orifice, said support being adjustable in area to accommodate materials of varying angles of repose, and means for removing a portion of the material from said pile.

3. In a roasting furnace, the combination of a plurality of stationary floors, a rotatable shaft extending through said floors, an annular hopper secured to and surrounding said shaft and making a sealable joint with one of said floors, said hopper having a discharge orifice spaced above the other of said floors, and means for feeding material into said hopper.

4. In a roasting furnace a stationary top and a stationary hearth therebelow, the combination of an adjustable primary feeding device for feeding ore to the top, an adjustable secondary feeding device secured to a movable part of the furnace and provided with an orifice spaced above and adapted to move over said hearth for feeding ore to and distributing it upon said hearth, and means for feeding to the secondary device the ore discharged from the primary device.

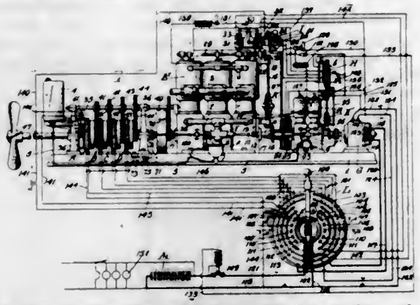
5. In a roasting furnace having a stationary top and a stationary hearth therebelow, the combination of an adjustable primary feeding device for feeding ore to the top, an adjustable secondary feeding device for feeding ore to the hearth, said secondary device being provided with a discharge orifice spaced above said hearth, means for supporting said secondary device and moving it in a direction such that the distance between said orifice and said hearth is maintained substantially constant, whereby the ore discharged by said secondary device is distributed upon said hearth, and means for feeding to the secondary device the ore discharged from the primary device.

1,102,455. STARTING AND CONTROLLING EXPLOSIVE-ENGINES. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 2, 1909. Serial No. 510,742. (Cl. 123—102.)

1. The combination with internal combustion engines, each comprising a rotatable shaft, of means for connecting the engines through said shafts, means for starting one of the engines, and means for automatically disconnecting the engines when they have accelerated to a predetermined speed.

2. The combination with a main and an auxiliary internal combustion engine, means for starting the auxiliary engine, means for automatically connecting the engines when the auxiliary engine has attained a predetermined speed, and means for automatically disconnecting the engines when the main engine has accelerated to a predetermined speed.

3. The combination of an explosive engine, an auxiliary starting engine, an electromagnetic clutch for connecting the engines together, and means controlled by the speed of said explosive engine to automatically cause the operation of said clutch to disconnect the engines when the said explosive engine has attained sufficient speed to operate independently of the auxiliary engine.

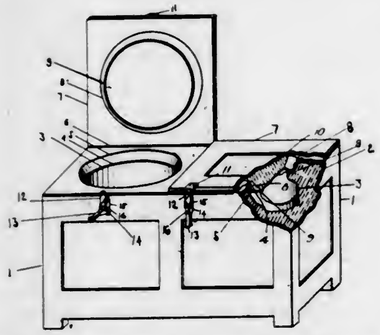


4. The combination with an explosive engine, of an auxiliary starting engine, clutch mechanism for connecting the engines, means for automatically operating the clutch mechanism to connect the engines when the auxiliary engine has attained a predetermined speed, and means for automatically operating the clutch mechanism to disconnect the engines when said explosive engine has attained a predetermined speed.

5. The combination with a main explosive engine and an auxiliary starting engine, of clutch mechanism between the engines, electrical means operated by the auxiliary engine to effect the operation of the clutch mechanism and connect the engines, and means operated by the main engine for effecting a disconnection of the engines.

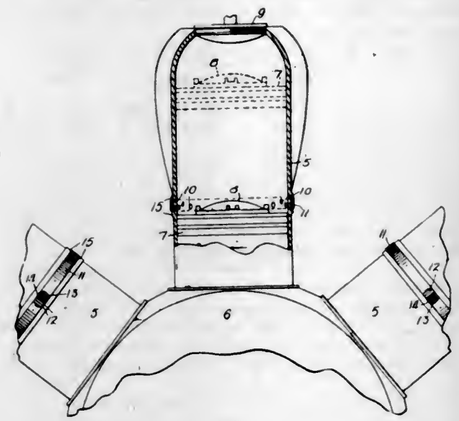
[Claims 6 to 24 not printed in the Gazette.]

1,102,456. FIRELESS COOKER. CHARLES E. SWARTZBAUGH, Toledo, Ohio. Filed Nov. 26, 1910. Serial No. 594,312. (Cl. 62—23.)



The combination with a housing having an open side, of a sheet metal lining therefor spaced from the housing to provide between said housing and lining a heat insulating chamber, said lining having an open end adjacent the open side of said housing; a sheet metal member connecting the lining and housing between the open end and open side, said member having rigid interlocking connection with the lining, an endless groove adjacent said lining opening and lying in a plane adjacent the open side of the housing, a beveled section extending away from said groove, and a plane section from the beveled section to the housing lying in a plane parallel to the plane of the groove; a closure abutting the lining plane to close the opening in the lining and having a sheet metal portion forming a rib to interfit with the groove, a beveled section to be disposed adjacent the beveled section of the member extending away from the groove, and a plane section extending from the beveled section to abut the plane section of the member, thereby providing an extended area of contact for the closure outside the interfitting rib and groove which form a liquid seal; and means for drawing and holding the closure in sealing position.

1,102,457. GAS-ENGINE. WILLARD IRVING TWOMBLY, New York, N. Y. Filed July 2, 1912. Serial No. 707,152. (Cl. 123—75.)



1. In an internal combustion engine, the combination with a cylinder, a piston to work in said cylinder and means to control the charge of fuel to and the exhaust from the cylinder, of an auxiliary exhaust to relieve the cylinder of the high pressures of combustion previous to the exhaust of the gases therefrom, comprising a plurality of ports in the cylinder normally covered by the piston and adapted to be uncovered at the end of the outward strokes of the piston; and an expansible member to normally close said ports.

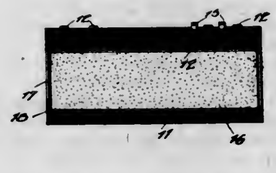
2. In an internal combustion engine, the combination with a cylinder, a piston to work in said cylinder and means to control the charge of fuel to and the exhaust from the cylinder, of an auxiliary exhaust to relieve the cylinder of the high pressures of combustion previous to the exhaust of the gases therefrom, comprising a plurality of ports in the cylinder normally covered by the piston and adapted to be uncovered at the end of the outword strokes of the piston; and an expansible band extending around the cylinder and normally closing said ports.

3. In an internal combustion engine, the combination with a cylinder, a piston to work in said cylinder and valves to control the charge of fuel to and the exhaust from the cylinder, of a plurality of auxiliary exhaust ports in the cylinder to relieve the cylinder of the high pressures of combustion previous to the exhaust of the gases therefrom, said ports normally covered by the piston but uncovered by the piston at the end of the outward strokes; an expansible member to normally close said ports, comprising a sectional band to extend around the cylinder adjacent to the ports; and springs to normally maintain the sections of the band in position to lie contiguous to the cylinder.

4. In an internal combustion engine, the combination with a cylinder, a piston to work in said cylinder and valves to control the charge of fuel to and the exhaust from the cylinder, of a plurality of auxiliary exhaust ports in the cylinder normally covered by the piston, but uncovered by the piston at the end of the outward strokes; an annular seat extending around the cylinder adjacent the ports; and an annular expansible band to engage in said seat so that there is a space between the wall of the cylinder and said band at diametrically opposite portions of the cylinder with which the ports communicate, whereby as the piston uncovers the ports at the end of the outward stroke the gases will pass through the ports expanding the band and permitting the escape thereof to the atmosphere.

5. In an internal combustion engine, the combination with a cylinder, a piston to work in said cylinder and valves to control the charge of fuel to and exhaust from the cylinder, of a plurality of auxiliary exhaust ports in the cylinder normally covered by the piston but uncovered by the piston at the end of the outward strokes; a pair of annular ribs extending around the cylinder to form an annular seat therebetween adjacent to the ports; an expansible band engaging in said seat, comprising a pair of semi-circular sections having laterally projecting ears at the ends; screws passing through openings in the ears of one of the band sections and screw threaded into the ears of the other band section; and springs confined between the heads of said screws and the ears of a band section to normally maintain the band in position to lie contiguous to the cylinder and close the ports.

1,102,458. DRY BATTERY AND METHOD OF MANUFACTURING THE SAME. HENRY UTARD, New York, and JOHN SMITH, Brooklyn, N. Y. Filed Feb. 3, 1913. Serial No. 746,081. (Cl. 204—34.)



1. The method of manufacturing dry cells, which consists in applying to a substantially flat battery element blank sheet, a substantially flat sheet containing electrolyte and of less area than the battery element sheet, simultaneously forming the two into an open-ended tube with the electrolyte sheet forming the lining thereof, securing together the opposite margins of the battery element sheet outside the electrolyte sheet closing one end of said tube, to form a cup, and introducing an electrode and a battery compound through the other end.

2. The method of manufacturing dry cells, which consists in applying to a substantially flat battery element blank sheet a substantially flat sheet containing electrolyte of less area than the same, leaving a margin of the battery blank sheet uncovered, simultaneously forming the two sheets into an open-ended tube with the electrolyte sheet forming the lining thereof, placing a closure disk in one end of the tube, bending the uncovered margin of the element sheet over said closure to form a cup, and introducing an electrode and a battery compound through the other end.

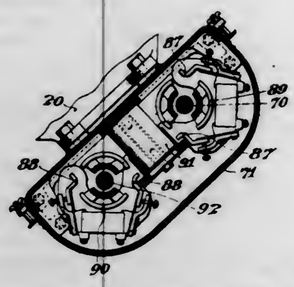
3. In a battery structure, a tubular battery element having overlapping interlocking margins in contact with each other, and an electrolyte sheet arranged within the battery element against the inner face thereof and having substantially abutting edges at the overlapping interlocked margins of the element.

4. In a battery structure, a tubular battery element having overlapping interlocked margins, one margin having openings therethrough spaced from the adjacent edge and the other margin having tongues projecting from its edge and passing through the openings.

5. In a battery structure, a metallic battery element having slots and a terminal inserted in the slots and held thereby to the element.

[Claims 6 to 8 not printed in the Gazette.]

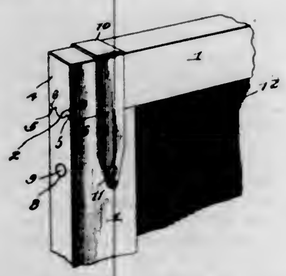
1,102,459. MOTOR-CONTROL DEVICE. HERBERT S. VALENTINE, Reading, Pa., assignor to Reading Crane and Hoist Works, Reading, Pa. Filed May 16, 1913. Serial No. 767,983. (Cl. 171—179.)



1. In a device of the character described, a controller device comprising two separate motor controllers located adjacent each other and contained in a single casing, and a common blow out coil so located as to afford a maximum magnetic field for quenching the sparks on each controller.

2. In a device of the character described, a motor controller comprising separately actuated mechanisms, each including a horizontal shaft, a miter gear mounted on the shaft, a vertical shaft having a miter gear in mesh with the gears on the shafts, bifurcated head pieces on both the horizontal and vertical shafts which head pieces are pivotally connected in pairs, means for rotating the vertical shafts to actuate the control mechanisms, and a common blow out coil for both mechanisms.

1,102,460. CORNER-JOINT FOR SCREENS AND OTHER FRAMES. FREDERICK W. VAN FLEET and RODNEY S. VAN FLEET, Forest, Ohio. Filed June 23, 1913. Serial No. 775,382. (Cl. 20—92.)



1. A joint comprising two angularly abutting bars, a clamp consisting of a loop slidably mounted on one of the bars and receiving the other bar, and means coöperating with the loop for drawing the same inwardly, whereby the bars are clamped tightly together.

2. A joint comprising two angularly abutting bars having coacting interlocking means, a clamp slidable along one of the bars and embracing and engaging the other bar, and means coacting with the clamp for drawing the same inwardly, whereby the two bars are clamped tightly in their interlocked relation.

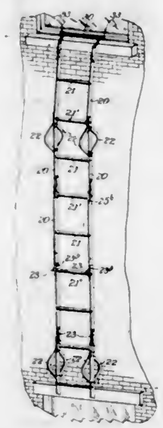
3. A joint comprising two angularly related bars fitted together, one of the bars being provided with a longitudinal slot, a clamp consisting of a loop embracing the other bar and slidable on the slotted bar and having a portion extending into the said slot, and means mounted on the slotted bar and engaging with the clamp interiorly of the slot, whereby the clamp is drawn inwardly into tight engagement with the said bars.

4. A joint comprising two angularly related bars, one of the bars being provided with a longitudinal slot and having a transverse opening intersecting the slot, a clamp embracing and engaging the other bar and slidable on the slotted bar and having a portion extending into the slot, and a wedge arranged in the said opening and engaging with the clamp interiorly of the slot for drawing the clamp inwardly into tight engagement with the said bars.

5. A joint comprising two angularly related bars, one of the bars being provided with a longitudinal slot and having a transverse opening intersecting the slot, a clamp consisting of a loop receiving the other bar and having side portions fitted against the sides of the slotted bar and covering the slot thereof, said clamp having a transverse portion connecting its sides and arranged in the said slot, and a wedge adapted to be driven into the opening into engagement with the transverse portion of the clamp, whereby the latter is drawn into tight engagement with the said bars.

[Claim 6 not printed in the Gazette.]

1,102,461. FIRE-ESCAPE LADDER. SANFORD S. VAUGHAN, Oak Park, Ill. Filed Feb. 7, 1914. Serial No. 817,097. (Cl. 228—31.)

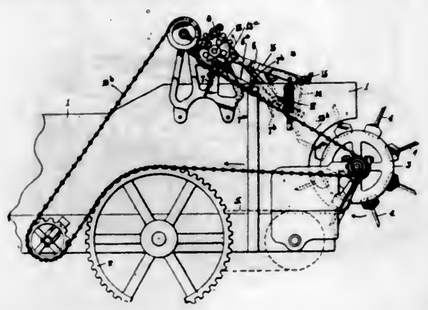


1. A fire escape ladder comprising in combination ladder sections hinged together in such manner that contiguous sections may fold one upon another in either direction from the plane of the ladder when extended, locking means comprising a spring catch adapted to lock contiguous ladder sections together substantially in a plane when unfolded in either direction from a folded position, and means for securing the ladder to a building.

2. A fire escape ladder comprising in combination a plurality of ladder sections hinged together in such manner that contiguous sections may fold upon each other in either direction from the plane of the ladder when extended, coöperating locking means on contiguous ladder sections adapted automatically to lock such contiguous sections substantially in a plane when the ladder is unfolded into operative position from a folded position, regardless of the direction in which the sections were folded together with respect to each other, ladder spacing elements on said ladder adapted to space the ladder from the wall of a building when in operative position whichever side of the ladder is presented to such wall, and means for securing the ladder to a building.

3. A fire escape ladder comprising in combination ladder sections hinged together in such manner that contiguous sections may fold one upon another from the plane of the ladder when extended, locking means comprising a spring catch adapted automatically to lock contiguous ladder sections together substantially in a plane when unfolded from a folded position, and means for securing the ladder to a building.

1,102,462. MANURE-SPREADER. MARTIN J. VINGUM, Stoughton, Wis., assignor to Moline Plow Company, a Corporation of Wisconsin. Filed Oct. 16, 1911. Serial No. 654,930. (Cl. 111—40.)



1. In a manure spreader, the combination of a distributing mechanism, means for feeding the material thereto, and a series of fore and aft longitudinally extending reciprocating bars provided at intervals in their length with depending rake teeth and arranged to act on the upper portion of the material in the general direction of its feeding movement.

2. In a manure spreader and in combination with distributing mechanism, means for feeding the material thereto, a series of fore and aft rake bars, rotary driving means connected at the upper ends of said rake bars, and suspending devices supporting said bars, in rear of the driving means.

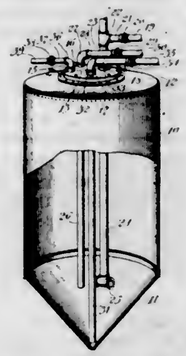
3. In a manure spreader and in combination with distributing mechanism, means for feeding the material thereto, a series of reciprocating rake bars in position to act on the material as it approaches the distributing mechanism, said rake bars being yieldable bodily to and from the distributing mechanism.

4. In a manure spreader, the combination of a frame, a distributing mechanism thereon, means for feeding the material to the action of the distributing mechanism, a series of fore and aft reciprocating rake bars arranged to act on the material in advance of the distributing mechanism, driving cranks mounted in the frame and connected with the forward ends of said rake bars, a transverse bar sustained by the frame above the rear ends of the rake bars and movable vertically, swinging links suspending the rake bars from the transverse bar, and means for holding the transverse bar down yieldingly.

5. In a manure spreader, the combination of a frame, a distributing mechanism thereon, means on the frame for feeding the manure rearwardly to the distributing mechanism, two series of fore and aft extending reciprocating rake bars provided with depending rake teeth, said bars being arranged so that their teeth will act on the upper portion of the body of manure in advance of the distributing mechanism, two sets of driving cranks connected respectively with the two series of rake bars, and means for rotating the cranks to cause the two series of rake bars to move rearwardly and downwardly and then forwardly and upwardly respectively in alternation; whereby the upper portion of the material will, as it approaches the distributing mechanism, be subjected to a combined pulverizing and feeding action.

1,102,463. SETTLING-TANK. ANDREW D. WYCKOFF, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Filed Jan. 18, 1913. Serial No. 742,763. (Cl. 210—5.)

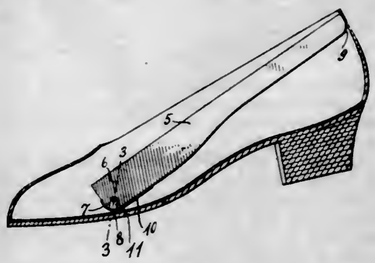
1. The combination of a tank having a downwardly concaved bottom, means within the tank adjacent the vertical center thereof and spaced from the lowest point of the bottom for discharging liquid into the tank horizontally, and means within the tank adjacent the vertical center thereof and spaced from the lowermost point of the bottom of the tank for withdrawing liquid from the tank in an approximately vertical direction.



2. The combination of a tank having a downwardly concaved bottom, means within the tank adjacent the center thereof at approximately the level of the highest part of the bottom for discharging liquid horizontally into the tank in two directions at once, and means within the tank and adjacent the center thereof and at approximately the level of the highest part of the bottom for withdrawing liquid from the tank in an approximately vertical direction.

3. The combination of a tank having a downwardly concaved bottom, means within the tank adjacent the center thereof at approximately the level of the highest part of the bottom for discharging liquid horizontally into the tank in two directions at once, means within the tank and adjacent the center thereof and at approximately the level of the highest part of the bottom for withdrawing liquid from the tank in an approximately vertical direction, and means positioned at the lowest part of the bottom for withdrawing liquid from the tank.

1,102,464. SHOE-FORM. JOHN YOUNGMAN and HARRY W. DRENAN, Portsmouth, Ohio, assignors to The Vulcan Box Toe Process Co., Portsmouth, Ohio, a Corporation of Ohio. Filed Nov. 3, 1913. Serial No. 798,933. (Cl. 12—128.)



1. A shoe form comprising a narrow elongated bar having a pin projecting obliquely and downwardly from one of its ends, and arranged to enter the insole rearwardly of the front thereof.

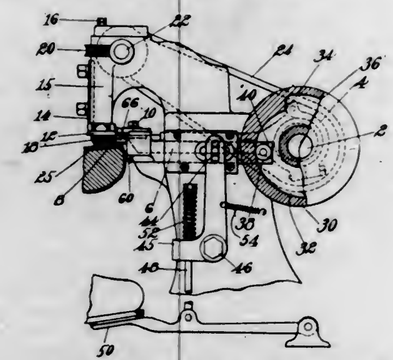
2. A shoe form comprising a narrow elongated bar of such a length as to extend slantingly between the forward portion of the insole and the top of the counter or back portion of the shoe, and a pin projecting downwardly from the forward end of the bar for insertion into the insole rearwardly of the front thereof.

3. A shoe form comprising a narrow elongated bar of such a length as to extend slantingly between the forward portion of the insole and the top of the counter or back portion of the shoe, the rear counter-engaging end of the

back being rounded, and a pin projecting downwardly from the forward end of the bar for insertion into the insole.

4. A shoe form comprising a bar having a pin projecting obliquely and downwardly from one of its ends, and a strip fastened to the bar and extending over the edge thereof at the aforesaid end, said strip having a perforation through which the pin passes, and the pin having a head seating under the strip and clamped thereby against the edge of the bar.

1,102,465. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 30, 1908, Serial No. 424,225. Divided and this application filed Oct. 27, 1911. Serial No. 657,135. (Cl. 12—51.)



1. A machine of the class described, having in combination, means for removing surplus material from the projecting edges of the vamp of a lasted shoe, a creasing tool, and connected mechanism for actuating the tool and said means.

2. A machine of the class described, having, in combination, vamp trimming means comprising a reciprocating knife, combined with a blocking tool carried by the knife and arranged to beat the side of the shoe while the knife cuts the vamp.

3. A machine of the class described, having, in combination, vamp trimming means comprising a reciprocating knife, combined with a blocking tool yieldingly carried by the knife for beating the side of the shoe below the knife.

4. A machine of the class described, having, in combination, vamp trimming means comprising a reciprocating knife, combined with a blocking tool arranged to be actuated with the knife.

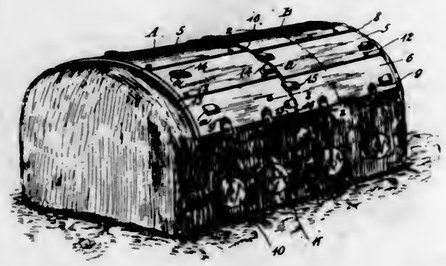
5. A machine of the class described, having, in combination, vamp trimming means comprising a reciprocating knife, combined with a blocking tool for beating the upper on the side of a shoe, and means for forcing the upper into the angle of union between the lip and feather edge of the shoe inner-sole.

[Claims 6 to 28 not printed in the Gazette.]

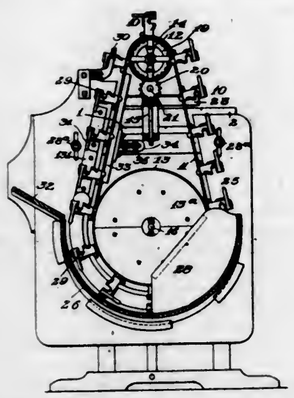
1,102,466. STACK-COVER. GEORGE W. BOLL, Wichita, Kans. Filed June 1, 1912. Serial No. 701,108. (Cl. 108—3.)

1. In a device of the class described, a plurality of separable sections, each comprising a plurality of plates, a plurality of opposed staggered hooks, a weather bead formed on each of said plates adapted to engage with the under face of an adjacent plate, said bead coöperating with said plate to produce an interiorly disposed and substantially weather tight joint, and a single binding element common to all of said hooks to retain the bead and plate in a firm contact relation.

2. In a device of the class described, a plurality of separable sections, each section comprising a plurality of plates, a plurality of opposed staggered hooks, a weather bead formed on each of said plates adapted to engage with the under face of an adjacent plate, said bead coöperating with a plate to produce an interiorly disposed weather tight joint, and to thereby form a chamber between the edges of engaging sections, and a continuous binding element adapted to engage with all of said hooks and to be positioned out of alinement with the weather bead.



1,102,467. FRUIT OR VEGETABLE SLICING MACHINE. WILLIAM H. BOUTELL, Rochester, N. Y., assignor to Boutell Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed July 13, 1907. Serial No. 383,603. (Cl. 193—6.)

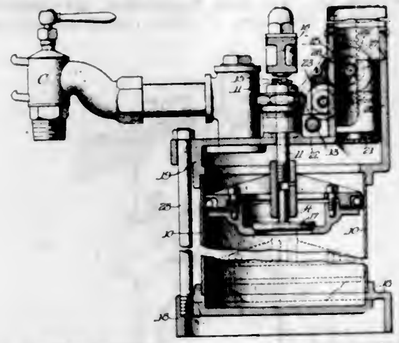


1. The combination with a table, of an elevating feeder arranged at one side of the table and embodying an endless series of carriers, each having a slot, and a finger for directing the articles to the table when the carriers shall have reached the top of the elevating feeder, the finger being arranged at one side of the feeder in proximity to the feeding point and projecting upwardly, thence laterally over the path of the carriers, and finally upwardly and inwardly so as to pass through the slots.

2. The combination with a table, and a hopper, of a feeder for conveying articles from the hopper to the table embodying an endless series of carriers each having a rearwardly extending arm projecting far enough toward the next adjacent carrier following the arm to prevent the entrance of more than one article to the same.

3. The combination, with a table and a hopper having an upright end board, of an endless feeder for the table having carriers thereon, and a plurality of overlapping blades on the end board over which the carriers pass in moving upwardly toward the table.

1,102,468. PUMP. ALLEN A. BOWSER, Fort Wayne, Ind. Filed July 30, 1913. Serial No. 782,134. (Cl. 103—79.)



1. A single acting piston pump having a valved piston, and means for increasing the normal fluid discharge thereof by an amount of fluid which shall compensate for that displaced by the insertion of parts within the pump.

2. The combination with a piston pump having a piston rod which enters and recedes from the pump during its operation, of a driving shaft, pinions upon the driving shaft, racks secured to the piston rod, said racks and pinions being in mesh to reciprocate the piston, an auxiliary casing communicating with the pump chamber, an auxiliary piston within the auxiliary casing, and means actuated by the driving shaft for reciprocating the piston and auxiliary piston synchronously in opposite directions.

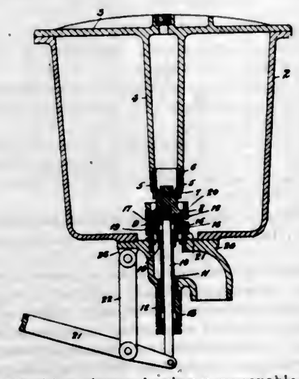
3. The combination with a piston pump of an auxiliary piston casing communicating with the pump chamber, an auxiliary piston within the auxiliary casing, a rack secured to the auxiliary piston, and means for reciprocating the rack and piston.

4. The combination with a piston pump of an auxiliary piston casing communicating with the pump chamber, an auxiliary piston within the auxiliary casing, a rack secured to the auxiliary piston and guided by the inner wall of the casing, and means for reciprocating the rack and piston.

5. The combination with a piston pump having a driving shaft, of an auxiliary piston casing communicating with the pump chamber, an auxiliary piston within the auxiliary casing, a rack secured to the auxiliary piston, and means for reciprocating the rack and piston, comprising a train of gears communicating with the driving shaft of the pump and with the rack.

[Claims 6 and 7 not printed in the Gazette.]

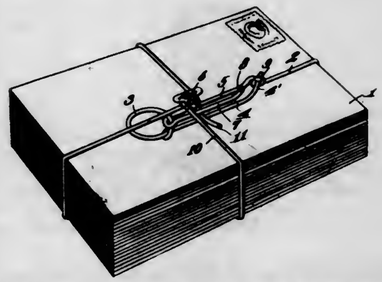
1,102,469. FLUSHING-VALVE. WILLIAM JOHN BRETT, Coventry, England, assignor to Frank Jellings, Leeds, England. Filed Mar. 18, 1913. Serial No. 755,263. (Cl. 4—5.)



1. In a flushing cistern having a removable cover and a discharge opening in its base, the combination therewith of a water inlet tube pendent from said cover and provided with a valve seat and outlet ports at its lower end, a delivery valve formed in two independently movable parts, the lower of said parts controlling the outflow through said discharge opening, having a recess in its upper face and a perforation through said part continuous with said recess, a disk for closing said recess, a spindle slidable to a limited extent through said perforation rigidly secured to said upper part for opening the same and having a projection within the recess to engage said disk to raise the lower part of the valve, and an inlet valve continuous with said upper part of the discharge valve adapted to close the outlet ports in the inlet valve pipe before the discharge is opened when the spindle is raised, and open said ports after the discharge is closed when the spindle is lowered.

2. The combination of a flushing cistern provided with a removable cover and having an opening in its base, a tubular chamber pendent from said cover and having a bushing at its lower end and provided with lateral ports, a delivery portion fixed to the base of said cistern and having an outlet passage communicating with the interior of the cistern, a gland fixed to the base of the delivery outlet, a valve seating on the top of the said outlet, a delivery valve made in two portions provided with recesses, a tubular sleeve extension piece fixed on its upper end to the lower portion of the delivery valve and its lower end being arranged to slide in the said gland, an admission and cut-off valve fixed to the upper part of the delivery valve and working in the bushing of the tubular chamber, a valve spindle fixed at its upper end to the upper portion of the delivery valve and arranged to pass through the extension sleeve and gland of the delivery outlet, a stop fixed on the spindle arranged to work in the recess of the lower portion of the delivery valve, a plate fixed to the top of the said lower portion and arranged to cover the recess therein and means for operating the said spindle and valves as described.

1,102,470. PACKAGE-BINDER. GEORGE W. BURY, Clinton, Ky. Filed Apr. 28, 1913. Serial No. 764,235. (Cl. 24—18.)



1. In a device of the class described, a single length of wire bent to form a loop, an arm extending therefrom, the said arm bent rearwardly upon itself to form two spaced side arms, one of said side arms provided with a loop portion extending upwardly therefrom, and a central arm carried by and at the extremity of the last mentioned side arms and extending between the two said side arms, the forward end of said central arm bent upwardly.

2. In a bundle securing device, a length of wire bent upon itself to form spaced side arms, an upstanding portion projecting upwardly from the plane of the side arms and carried by one of the latter intermediate of its ends, and a centrally extending arm carried by the second mentioned of the said side arms and extending therebetween and with the forward end thereof bent upwardly above the plane of the said side arms.

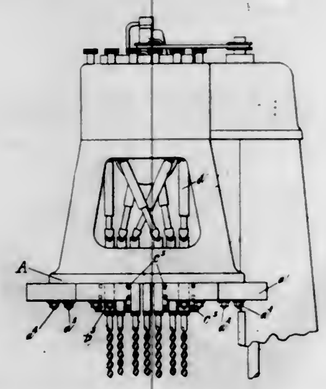
3. A bundle securing device comprising a length of wire bent to form thumb engaging means, an arm extending therefrom bent upon itself at its remote extremity to form a rearwardly extending side arm spaced a distance from the first mentioned arm and lying in a common plane therewith, an upstanding member including a shank and

enlarged head carried by one of the said arms, the last mentioned arm bent upon itself to form a centrally extending arm with the forward end thereof bent upwardly above the common plane of the side arms.

4. A cord engaging device comprising a loop, a side arm extending therefrom, a second side arm spaced from the first mentioned side arm and carried thereby, and a centrally extending arm carried by one of the said side arms and extending therebetween and with the end thereof bent above the plane of the said side arms, one of said side arms provided intermediate its ends with an upstanding portion, said loop and said side arms lying in substantially the same plane.

5. In a bundle tying device the combination of a loop, side arms extending therefrom and formed integral therewith, said side arms spaced a distance apart and a central arm formed integral with one of said side arms and extending therebetween with the front end bent above the plane of the side arms, one of said side arms provided with an upstanding portion, said loop and arms formed of a single piece of resilient wire, and a cord permanently secured to said device adapted to extend about and hold in position a bundle, and with the free end of said cord embracing the upstanding portion of the said side arm and with the end thereof extending beneath the central arm and above the side arms.

1,102,471. BEARING FOR SPINDLES FOR MULTIPLE DRILLS. EDWARD BUSCH, Dayton, Ohio, assignor to The National Automatic Tool Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 25, 1910. Serial No. 551,520. (Cl. 77—24.)

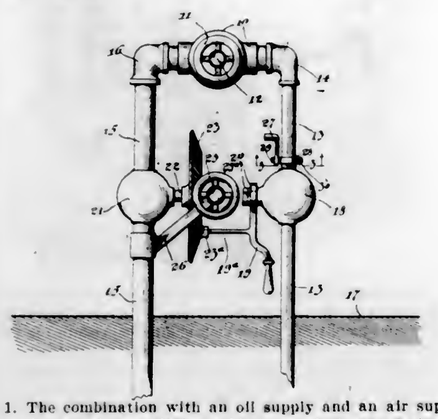


1. The combination of a rail, means for supporting the same, one end of said rail being provided with a socket having resilient side walls, a drill support, a shank on said support extending into the slotted opening of said rail, and means extending transversely across said socket for releasably clamping the resilient side walls of said rail socket to said shank.

2. The combination of a rail, means for supporting said rail, one end of said rail being provided with a dove-tailed socket having resilient side walls, a drill support, said support having a shank shaped to conform to said socket and fitted therein, and means for releasably clamping the side walls of said rail socket to said shank.

3. The combination of a bracket or rail, a stationary frame, means for adjustably securing said bracket to said frame, one end of said bracket being provided with a socket having resilient side walls, a drill support, the shank of said support being formed with slotted openings, the side walls of said socket having a plurality of openings, and means extending through the openings in said side walls and said support for clamping the side walls against said shank of said support.

1,102,472. DEVICE FOR CONTROLLING OIL-BURNERS. EDGAR M. CASKEY, Chicago, Ill., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Nov. 27, 1911. Serial No. 662,547. (Cl. 158—36.)



1. The combination with an oil supply and an air supply, of means for regulating said air supply to any desired extent, independently operatable means for regulating said oil supply to a certain extent, and means whereby the regulation of the oil supply may be limited correspondingly by the regulation of the air supply.

2. The combination with an oil supply and an air supply, of means for regulating said air supply, means for regulating said oil supply, and means whereby the regulation of the oil supply may be limited correspondingly by the regulation of the air supply.

3. The combination with an oil supply and an air supply, of means for regulating said air supply to any desired extent, and means for independently regulating said oil supply to a limited extent determined entirely by the regulation of the air supply.

4. The combination with an oil supply and an air supply, of means for independently regulating the oil supply to a limited extent and for regulating the air supply, and means whereby the regulation of the oil supply may be limited correspondingly by the regulation of the air supply.

5. The combination with an oil supply and an air supply, of means for regulating said air supply, means for independently regulating said oil supply to a limited extent, and means controlled by the air supply means whereby the regulation of the oil supply is positively limited by the regulation of the air supply, said means being also adapted to prevent the closing of the air supply without first or synchronously closing the oil supply.

[Claims 6 to 11 not printed in the Gazette.]

1,102,473. ACID-PROOF PACKING MATERIAL. MARVIN LEE CHAPPELL, Berkeley, Cal. Filed Sept. 9, 1913. Serial No. 788,959. (Cl. 106—8.)

1. A packing material containing a condensation product of phenol, formaldehyde, an unsaturated fatty acid, and a condensing agent.

2. A packing material containing a condensation product of phenol, formaldehyde, an unsaturated fatty acid, and a condensing agent consisting of an alkali salt of such unsaturated fatty acid.

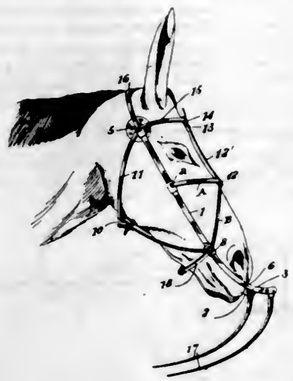
3. A packing material containing a condensation product of phenol, formaldehyde, oleic acid, and a condensing agent.

4. A packing material containing a condensation product of phenol, formaldehyde, oleic acid, and a condensing agent consisting of the ammonium salt of oleic acid.

5. A packing material containing a condensation product of phenol, formaldehyde, an unsaturated fatty acid, and a condensing agent, together with a lubricant.

[Claim 6 not printed in the Gazette.]

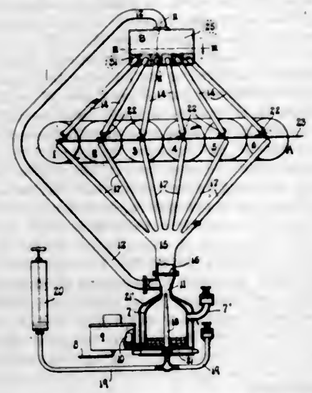
1,102,474. BRIDLE. MAURICE JULES ALEXANDRE CHEDEVILLE, Paris, France. Filed Apr. 3, 1913. Serial No. 758,707. (Cl. 54—6.)



1. A bridle of the kind described comprising in combination, metallic side bars having the lower ends thereof curved forwardly and arranged to be connected to the reins, a cross bar connecting the side bars adjacent their lower ends, a head stall, means for connecting the side bars to the head stall, flexible straps for connecting the side bars, and disk members secured to the side bars for engaging the horse's head below the ears.

2. A bitless bridle comprising rigid side bars arranged to be connected to the reins, a rigid bar for connecting the side bars adjacent the lower ends thereof, flexible straps for connecting the said bars intermediate their length, and means adjacent the uppet ends of the side bars for engaging the head of the animal to which the bridle is applied, when the reins are pulled.

1,102,475. MEANS FOR CREATING AND SUPPLYING EXPLOSIVE MIXTURE TO EXPLOSIVE-ENGINES. JOHN J. COCHRAN, St. Louis, Mo. Filed May 29, 1911. Serial No. 630,077. (Cl. 123—180.)



1. An apparatus for starting explosive engines comprising a distribution box having a main compartment, a series of passageways communicating with said main compartment, and a second compartment communicating with one of the ends of each of said passageways; pipes leading from the other ends of the passageways and adapted to communicate with the engine cylinders, valves arranged in said passageways and adapted to close either end thereof, and means for forcing an explosive mixture to said main compartment.

2. An apparatus for starting explosive engines comprising a distribution box having a main compartment, a series of passageways communicating with said main compartment and a second compartment communicating with one of the ends of each of said passageways; pipes leading from the other ends of the passageways and furnishing communication with the engine cylinders, ball valves arranged in said passageways and adapted to close either end thereof, and means for forcing an explosive mixture to said main compartment.

1,102,476. HAME-FASTENER. FRED W. COVERT, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Mar. 14, 1911. Serial No. 614,505. (Cl. 54—27.)



1. In a hame-fastener, a relatively thin body part of rigid construction comprising slightly separated side plates, a hook member having a part positioned between said plates adjacent one end thereof, rigidly secured to the latter and forming a spacing medium therefor, a lever also pivotally mounted between said side plates adjacent the opposite end thereof, means for connecting a chain or the like to said lever, and the side plates having cut out portions forming a receiving pocket for said means.

2. In a hame-fastener, a body part formed to provide a recess intermediate its sides, a lever pivoted to the body part, a hook comprising a curved body part having a flange intermediate its sides arranged to fit in said recess of the body part, means for securing the hook to the body part, a link having a pivotal connection with the lever, an auxiliary link, a chain on the auxiliary link, and means for pivotally connecting said links together whereby the chain is held in position.

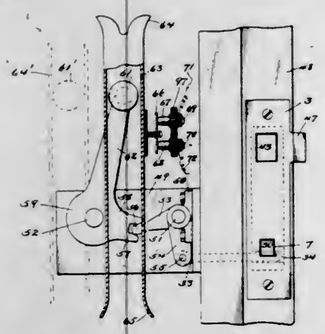
3. In a hame-fastener, a body part formed to produce a recess intermediate its sides, a lever pivoted to said body part and arranged for connection to a chain or the like, and a hook having an extended body part substantially co-extensive with one end of the first named body part and arranged to fit against the latter and a flange projecting therefrom and arranged to fit in the recess of the body part.

4. In a hame-fastener, a body part comprising oppositely disposed sides, a hook having a part projecting between the sides of the body part and secured to the latter, said projecting part of the hook being relatively thin and constituting a spacing medium for the sides of the body part, a lever having a relatively thin tongue to engage between the sides at the opposite end of the body part and mounted on the latter for pivotal movement, and a link connected with the lever intermediate its ends.

5. In a hame-fastener, a body part comprising oppositely disposed flat sides, a hook having a part projecting between the sides of the body part and secured to the latter, said projecting part of the hook being relatively thin and constituting a spacing medium for the sides of the body part, a lever having a relatively thin tongue to engage between the sides at the opposite end of the body part and mounted on the latter for pivotal movement, a link having opposite sides and a bearing part at one end, said lever having a projecting tail or lip intermediate its ends bent about said bearing part to constitute a substantially closed but loose connection for the end of the link, and a chain carrying member at the opposite end of the link.

[Claims 6 to 10 not printed in the Gazette.]

1,102,477. ELEVATOR-DOOR LOCK. ANDREW M. COYLE, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 13, 1905. Serial No. 286,984. (Cl. 187—31.)



1. The combination with a car, of a door, means for operating the car, a switch controlling said operating means, a door latch, a latch-holding device, means for operating said latch into position to engage said latch-holding device and hold the door closed, and means first to lock the latch in said holding position, and then operate said switch to start the car.

2. The combination with a car, of a door, a door latch, a manual device for operating the latch, means for operating the car, a switch carried by the car for controlling said car-operating-means, and means for first locking the door latch and then closing said switch to effect the starting of the car.

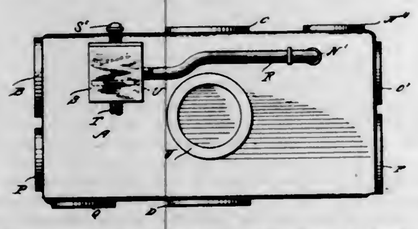
3. The combination with a car and operating means therefor, of a door, a spring latch for the door, a manual device for releasing the latch, means for locking the latch, a switch separate from the locking-means, and means for successively operating said locking-means and said switch to lock said door before the car can be operated.

4. The combination with a car and operating means therefor, of a door, a manually operable latch for the door, locking-means for said latch, a switch carried by the car, and means for operating said locking means to lock the door and thereafter operate said switch to effect the operation of the car.

5. The combination with a car, of operating means therefor, a door, means for locking said door, a switch separate from said locking-means for controlling the car-operating-means, and a magnetic cam for operating said locking means and said switch.

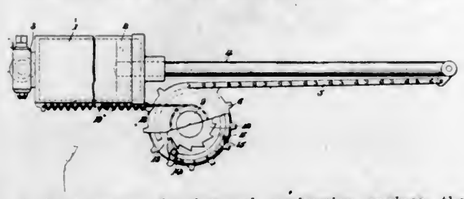
[Claims 6 to 15 not printed in the Gazette.]

1,102,478. GASEOUS-FUEL HEATER. CLARENCE A. CROWDER, Burlington, Iowa. Filed Mar. 13, 1913. Serial No. 753,998. (Cl. 48—148.)



The heater herein described, consisting of a horizontal casing adapted to be connected between the carbureter and manifold of an internal combustion engine, a plurality of inlets to any one of which the carbureter is adapted to be attached, and a plurality of outlets to any of which the manifold is adapted to be connected, horizontal partition walls forming a circuitous passage for the mixture from the carbureter, an outer shell provided with a series of openings to any two of which inlets and outlets for the exhaust gases may be respectively connected, a valve casing outside the heater, a pipe leading therefrom to the circuitous passage, a float valve in said valve casing adapted to admit water to the latter, whereby water vapor is introduced into said passage, the side wall of said heater having openings adapted to permit the application of a torch for the preliminary heating of said heater.

1,102,479. STARTER FOR INTERNAL-COMBUSTION ENGINES. BIRGE W. DAVENPORT, Minneapolis, Minn. Filed Feb. 16, 1912. Serial No. 678,060. (Cl. 123—179.)



1. In a starter for internal combustion engines, the combination, with a ratchet fast on the engine shaft, of a disk mounted loosely on said shaft, a pawl pivoted on said disk below the ratchet, another loose disk having a lug adapted to engage said pawl and throw it into contact with the ratchet when said last mentioned disk is rotated, and means to rotate said disk for the purpose specified.

2. In a starter for internal combustion engines, the combination, with a ratchet fast on the engine shaft, a disk loosely mounted on said shaft, a pawl pivoted on said disk below the ratchet and normally lying out of engagement therewith, another loose disk carrying a lug adapted to throw the pawl into contact with the ratchet when said last mentioned disk is rotated, a stop on the pawl-carrying-disk at the other side of said lug, means to rotate the lug-carrying-disk, and means to automatically return said disks to normal position after each operation.

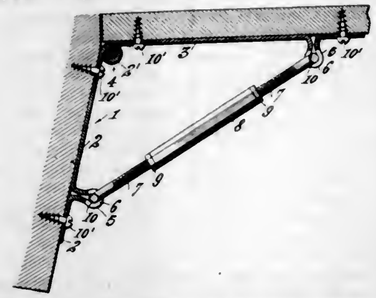
3. In a starter for internal combustion engines, the combination, with a ratchet fast on the engine shaft, of a disk loosely mounted on said shaft and having a laterally extending flange on its periphery housing said ratchet, said flange having a slot therein, a pawl pivoted in said slot and normally arranged below the ratchet, the tail of said pawl projecting outwardly through said slot, another loose disk carrying a lug adapted to engage the tail of the pawl for throwing said pawl into contact with the ratchet when said last mentioned disk is rotated, and means to rotate said disk for the purpose specified.

4. In a starter for internal combustion engines, the combination, with a ratchet fast on the engine shaft, of a disk loosely mounted on said shaft and having a laterally extending flange on its periphery, said flange having a slot therein, a pawl mounted in said slot below the ratchet and normally lying out of engagement therewith, the tail of the pawl extending outwardly through said slot, another loose disk having a lug adapted to engage the tail of the pawl for throwing said pawl into contact with the ratchet when said last mentioned disk is rotated, a stop on said pawl-carrying-disk at the other side of said lug, means to rotate said lug-carrying-disk, and means to automatically return said disk to the normal position after each operation.

5. In a starter for internal combustion engines, the combination, with a ratchet fast on the engine shaft, of a disk loosely mounted on the shaft, a pawl pivoted on said disk and normally lying out of engagement therewith, another loose disk having a projecting collar, a lug on said last mentioned disk adapted to throw the pawl into contact with the ratchet when said disk is rotated, a stop on the pawl-carrying disk at the other side of said lug, means to rotate said lug-carrying-disk, and a spring having one end secured to a fixture and the other end connected to the collar on said last mentioned disk, whereby both disks are automatically returned to normal position after each operation.

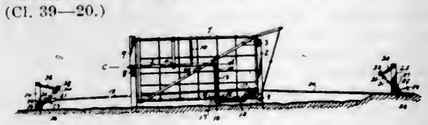
[Claim 6 not printed in the Gazette.]

1,102,480. ADJUSTABLE BRACKET. PHILIP A. DAVIS, Bisbee, Ariz. Filed Nov. 26, 1913. Serial No. 803,196. (Cl. 248—19.)



A bracket comprising a pair of flat arms pivotally connected at their inner ends and having portions of their lengths bent to form bearing loops, said loops being provided with slots, T-headed bolts having their heads journaled in said loops and their shanks projecting through said slots and oppositely threaded, and a turn buckle connecting said threaded shanks.

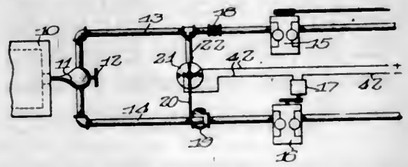
1,102,481. FARM-GATE. HERMAN H. DEUTSCHER, Carrollton, Mo. Filed Apr. 22, 1911. Serial No. 622,693. (Cl. 39—20.)



1. The combination with a swinging gate, of a rock shaft having a crank arm provided with two horizontal devices disposed at different distances from the axis of a rock shaft and adapted to be struck by a vehicle wheel so as to rock the rock shaft, and means for swinging the gate when the rock shaft is rocked.

2. The combination with a swinging gate, of a rock shaft having a crank arm provided with two horizontal devices disposed at different distances from the axis of the rock shaft and adapted to be struck by a vehicle wheel so as to rock the rock shaft, a post to which the rock shaft is pivoted, a spring connected to the crank arm and to the post for moving the crank arm from a horizontal to an inclined position, and means for swinging the gate when the rock shaft is rocked.

1,102,482. CONTROLLING DEVICE FOR FUEL-OIL SUPPLY. THOMAS D. DE VILBISS, Fort Wayne, Ind., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Feb. 14, 1912. Serial No. 677,586. (Cl. 158—36.)



1. In a device for controlling oil supply to burners, the combination with air pressure supply means, of an oil pump having connection with the burner, a valve in the air supply line, an electric motor with circuit connections for operating the oil pump, and means dependent upon the air pressure supplied to the burner through the valve to close the circuit to the motor.

2. In a device for controlling oil supply to burners, the combination with air pressure supply means, of an oil pump having connection with the burner, a valve in the air supply line, a second valve in the oil supply connection, an electric motor having circuit connections and effective to operate the pump, and a device having connection with and dependent for operation upon the air pressure admitted by the valve and effective when actuated to open the second said valve and to close the motor circuit connection.

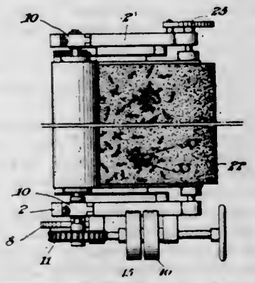
3. In a device for controlling oil supply to burners, the combination with air pressure supply means, of an oil pump having connection with the burner, a valve in the air supply line, a second valve in the oil supply connection, an electric motor having circuit connections and effective to operate the pump, and a fluid actuated device having connection with the air supply means and operative when the air is supplied to the burner through the air valve first to open the second said valve and then to close the circuit connection to the motor.

4. In a device for controlling oil supply to burners, the combination with air pressure supply means, of an oil pump having connection with the burner, a valve in the air supply line, a valve in the oil supply connection, an electric motor having circuit connections and effective to operate the pump, a device having connection with and dependent for operation upon the air pressure through the valve in the air supply line and effective when actuated to open the valve controlling the oil supply and to close the motor circuit connection, and means to restore the said device to its unoperated position after actuation when the air pressure is reduced.

5. In a device for controlling oil supply to burners, the combination with air pressure supply means, of an oil pump having connection with the burner, a valve in the air supply line, a valve in the oil supply connection, an electric motor having circuit connections and effective to operate the oil pump, and a fluid actuated device comprising a cylinder having connection at one end with the air supply line between the air valve and the burner, a piston reciprocable in said cylinder, a rod attached to the piston and having connection with the oil supply valve to open and close the valve, electrical contacts in the cylinder for the circuit connections, and a conductor bar connected to the piston and effective when the piston is moved to join the said contacts and to close an energizing circuit to the motor.

[Claims 6 and 7 not printed in the Gazette.]

1,102,483. METHOD OF PRODUCING UPON THE SURFACE OF PILE FABRICS AN IMITATION OF THE IRREGULAR CURLY APPEARANCE OF ASTRAKHAN FUR AND THE LIKE. JAMES DOBSON, Philadelphia, Pa. Filed Jan. 17, 1914. Serial No. 812,825. (Cl. 26—2.)

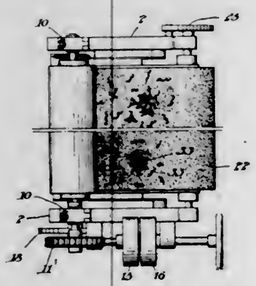


1. The method described of producing upon the surface of pile fabrics an imitation of the irregular curly

appearance of Astrakhan fur and the like, which consists in rolling under longitudinal tension a strip of plain surface pile fabric, with an interposed porous textile fabric between the convolutions of the roll, scattering thereon, as the rolling progresses, a series of sinuous or curly non-compressible elements adapted to assume by gravity a flat position, and then subjecting the roll so prepared to the action of dry steam from the interior of the roll outwardly.

2. The method of producing upon the pile surface of plain pile fabrics the sinuous and curly appearance of Astrakhan fur and the like, which consists in loosely scattering upon the pile surface to be acted on a series of non-compressible figuring devices, supporting the pile fabric and said figuring devices between porous textile fabric, under pressure, and applying dry steam to the elements so arranged.

1,102,484. MECHANISM FOR PRODUCING UPON THE SURFACE OF PILE FABRICS AN IMITATION OF THE IRREGULAR CURLY APPEARANCE OF ASTRAKHAN FUR AND THE LIKE. JAMES DOBSON, Philadelphia, Pa. Filed Jan. 17, 1914. Serial No. 812,826. (Cl. 26—2.)



1. Mechanism for producing upon the surface of plain pile fabrics an imitation of the surface appearance of Astrakhan fur and the like, comprising in combination a supporting frame, a hollow and peripherally perforated take-up and compressing roller, means for rotating said roller, means to supply a strip of pile fabric and means to supply a strip of porous fabric both adapted to be delivered to said perforated roller under tension, a series of non-compressible figuring devices of sinuous form adapted to lie flat by gravity upon the surface of the pile fabric and be pressed into the same through said porous fabric, through the action of the take-up hollow roller, and means to introduce steam to said hollow roller.

2. Mechanism of the character recited comprising in combination a supporting frame, a hollow and peripherally perforated roller, means to support it removably on the frame, means to rotate said roller, means to introduce steam to its interior thereof, means to supply a strip of pile fabric and means to supply a strip of porous fabric, to said hollow roller, under tension, and a series of non-compressible and non-oxidizable figuring devices of sinuous form, each having its sinuous curves all substantially parallel to the same plane and adapted, when loosely scattered on the pile fabric as delivered, to assume by gravity a flat position thereon.

3. Mechanism of the character recited comprising in combination a frame, means to support and let off a strip of fabric to be treated, means to support and let off a strip of porous fabric, a hollow and peripherally perforated take-up roller, means to rotate it to draw said pile fabric and porous fabric in alternating relation in each convolution of the roll and in compressed relation, and a series of non-compressible figuring devices of sinuous form adapted to lie flat by gravity and adapted to be compressed in that position between each convolution of the roll.

1,102,485. RAILROAD-SPIKE. ARTHUR W. EHLERT, Lebanon, Oreg. Filed Feb. 24, 1914. Serial No. 820,563. (Cl. 85—23.)

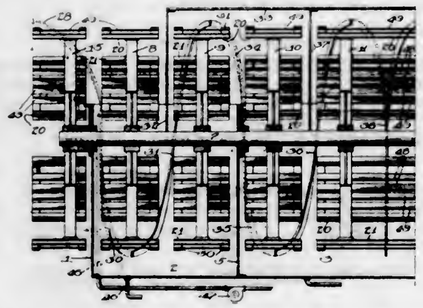


1. A device of the class described including a body having a hollow upper portion, a solid tapering lower end formed on said body, an engaging flange formed at the upper end of the body, a hinged cover adapted to close the upper end of the hollow portion, said hollow portion being provided at its lower end with opposed openings and arcuate arms arranged within the hollow portion and movably disposed within said openings, as and for the purpose set forth.

2. A device of the class described including a body having a hollow upper portion, a solid tapering lower end, the upper portion of said solid end being arcuate in form, said body being provided with opposed openings at the upper end of the solid portion, curved arms arranged within the hollow portion and adapted to be movably disposed within said openings, and a hinged cover secured to the upper end of the body and adapted to close the upper end thereof.

3. A device of the class described including a body having its upper portion hollow and provided at the lower end of said hollow portion with opposed openings, a solid tapering lower end on said body, curved arms arranged within the hollow portion and movable through said openings, an engaging flange formed at the upper end of said body, perforated ears formed on the body adjacent said flange, a transverse pin arranged within said ears, a cover having a sleeve mounted upon said pin, and engaging points formed in the lower ends of said arms, as and for the purpose set forth.

1,102,486. PASTEURIZING-MACHINE. CHARLES E. FELT, Chicago, Ill. Filed Jan. 11, 1908. Serial No. 410,354. (Cl. 126—272.)



1. In a machine of the class described, the combination of a receptacle with upwardly extending partitions forming a plurality of compartments, a hood with depending

partitions disposed intermediate the other partitions forming compartments therein, said partitions extending below the upper edges of said other partitions to form a fluid seal for said compartments, a spiral guide extending lengthwise of the receptacle through the compartments, a carrier having means to engage said guide, and means to rotate said carrier.

2. In a pasteurizer the combination of a pasteurizing compartment, a cover therefor provided with depending partitions, a spiral arranged within said compartment, and extending between said partitions and the end walls of said compartment, a carrier for carrying the object to be pasteurized through said compartment, having means for engagement with said spiral, a guide-way engaging said carrier extending lengthwise of the axis of the spiral, and means for moving said guide-way and carrier in a direction transverse to the axis of the spiral.

3. In a pasteurizer the combination of a pasteurizing compartment, a spiral arranged contiguous thereto, a cover for said compartment provided with partitions depending on either side of each end wall thereof, a series of guide-ways, a plurality of carriers for holding the objects to be pasteurized, said carriers being arranged on said guide-ways and provided with means for engagement with said spiral, and means for revolving said guide-ways in a plane transverse to the axis of the spiral.

4. In a pasteurizer the combination of the pasteurizer receptacle having a plurality of partitions forming a succession of pasteurizing compartments, a spiral arranged contiguous to said compartments, a cover for said pasteurizer provided with partitions depending therefrom on each side of each partition, a carrier having means for engagement with said spiral for carrying the object to be pasteurized, a guide-way for said carrier divided into a plurality of alined sections arranged in said compartments respectively, and means for moving the sections of said guide-way in a direction transverse to the axis of the spiral.

5. In a pasteurizer the combination of a succession of pasteurizing compartments having partition walls dividing them from each other, a spiral arranged in said succession of compartments and having its convolutions so disposed as to pass over said partitions at one or more points, the convolutions at other points being substantially without inclination lengthwise of the spiral, a cover for the pasteurizer having partitions depending therefrom adjacent the first said partitions, a carrier for the object to be pasteurized having means for engagement with said spiral, and means for moving the carrier in a direction transverse to the axis of the spiral.

[Claims 6 to 9 not printed in the Gazette.]

1,102,487. TREATMENT OF CAOUTCHOUC, GUTTA-PERCHA, AND LIKE SUBSTANCES. LÉON FÉVAL and JEAN DE LA FRESNAYE, Paris, France. Filed Aug. 11, 1913. Serial No. 784,252. (Cl. 18—50.)

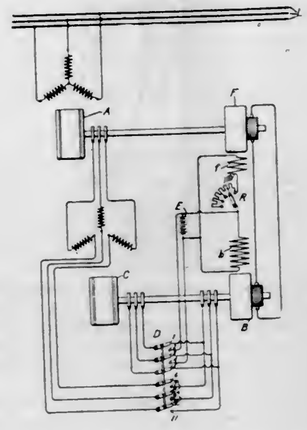
1. A process for the treatment of gutta percha, caoutchouc and other resinous gums, consisting in removing the resin by the employment of castor oil as a solvent.

2. A process for the purification of gutta percha, caoutchouc and other resinous gums, consisting in removing the resin by the employment of castor oil as a solvent and removing the other impurities and adhering oil by the use of alcohol or acetone as solvents.

3. A process for the treatment of gutta percha, caoutchouc and other resinous gums, consisting in heating a mixture of the gum and castor oil to remove the resins, and removing the water by evaporation and the remainder of the impurities and adhering oil by alcohol or acetone.

1,102,488. SYSTEM OF MOTOR CONTROL. LIONEL FLEISCHMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 3, 1912. Serial No. 694,830. (Cl. 172—274.)

1. In a system of motor control, an induction motor, and means for regulating the speed of said induction motor by utilizing energy taken from the secondary of the induction motor comprising a rotary transformer, a dynamo electric machine, and means for connecting said dynamo electric machine in cascade between said rotary transformer and said induction motor for operation of said induction motor at one speed and for connecting said rotary transformer as a simple rotary transformer for operation of said induction motor at a different speed.



2. In a system of motor control, an induction motor, and means for regulating the speed of said induction motor by utilizing energy taken from the secondary of the induction motor comprising a rotary transformer, a dynamo electric machine, and means for connecting said dynamo electric machine in cascade between said rotary transformer and said induction motor for operation of said induction motor at a low speed and for connecting said rotary transformer as a simple rotary transformer for operation of said induction motor at a high speed.

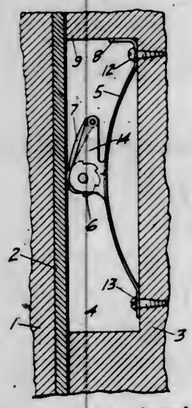
3. In a system of motor control, an induction motor, and means for regulating the speed of said induction motor by utilizing energy taken from the secondary of said induction motor comprising a rotary transformer, a dynamo electric machine, and means for connecting the dynamo electric machine in cascade or as an alternating current booster between said rotary transformer and said induction motor.

4. In a system of motor control, an induction motor, and means for regulating the speed of said induction motor by utilizing energy taken from the secondary of the induction motor comprising a rotary transformer, a dynamo electric machine, and means for connecting said dynamo electric machine in cascade between said induction motor and said rotary transformer for operation of said induction motor at a low speed and for connecting said dynamo electric machine as an alternating current booster in series with said rotary transformer for operation of said induction motor at a high speed.

5. In a system of motor control, an induction motor, means for regulating the speed of said induction motor by utilizing energy taken from the secondary of the induction motor comprising a rotary transformer for transforming alternating current into direct current, a direct current machine mechanically connected to said induction motor and supplied with current from said rotary transformer, a dynamo electric machine, and means for connecting said dynamo electric machine in cascade between said rotary transformer and said induction motor for operation of said induction motor at one speed and for connecting said rotary transformer as a simple rotary transformer for operation of said induction motor at a different speed.

[Claims 6 to 18 not printed in the Gazette.]

1,102,489. SASH-HOLDER. ROBERT S. FRARY and WALTER W. MACFARREN, Pittsburgh, Pa. Filed Feb. 5, 1913. Serial No. 746,333. (Cl. 16—54.)



1. A sash holder comprising a bowed spring adapted to be secured to the sash in a recessed portion thereof, lugs carried by said spring, two sets of holes in said lugs, a fluted roller provided with integral journals engaging one set of holes, and a pawl also provided with integral journals engaging the other set of holes.

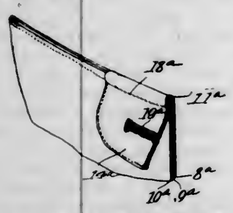
2. A sash holder comprising a bowed spring adapted to be secured to the sash in a recessed portion thereof, lugs formed integral with said spring and projecting therefrom, a fluted roller carried by said lugs, and a pivoted pawl also carried by said lugs and engaging said roller.

3. A sash holder comprising a bowed spring adapted to be secured to the sash in a recessed portion thereof, a roller carried by said spring for engaging the window frame, a pawl carried by said spring to prevent rotation of the roller in one direction, and a flange formed on the upper end of said spring to abut against the upper surface of the recess in the sash.

4. A sash holder comprising a bowed spring adapted to be secured to the sash in a recessed portion thereof, outwardly and upwardly extending lugs carried by said spring, and a roller and a pawl carried by said lugs.

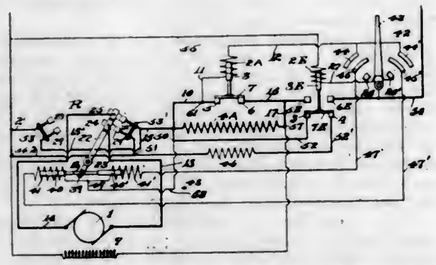
5. A sash holder comprising three members, viz., a roller, a pawl and a spring, said roller and said pawl being mounted on said spring, and means for securing the device to a window sash.

1,102,490. NECKBAND FOR GARMENTS. HARRY FRIEDMANN, Baltimore, Md., assignor of one-half to Joseph P. Dever, Baltimore, Md. Filed May 23, 1913. Serial No. 769,358. (Cl. 2—41.)



In a garment having a neck-band formed of a plurality of thicknesses of material stitched together adjacent their top edges, a flap formed integral with the inner thickness of the band, turned over to inclose the remaining thicknesses of the band, and provided with a button-hole and an inner thickness of material, said inner thickness of the flap and inclosed thicknesses of the band terminating at the top of the band, said flap being secured to the front side of the band across its top side only by the stitches which unite the top edges of the thicknesses of the band.

1,102,491. MOTOR-CONTROLLING APPARATUS. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 21, 1906. Serial No. 344,490. (Cl. 172—179.)



1. In current-controlling apparatus, the combination with a motor, of a reversing switch therefor, an electro-magnet initially in circuit with the armature of said motor for operating said switch, and means for substantially eliminating the current in said electro-magnet upon the motor attaining a predetermined speed.

2. In current-controlling apparatus, the combination with a motor, of a reversing switch of the gravity type comprising a lever, two electro-magnets for actuating said switch, means for initially placing one of said magnets in circuit with the motor armature to effect the energization of said magnet and the actuation of the switch lever to final position and hold the same in such position, and means for substantially eliminating the current in said magnet to permit gravity alone to hold said switch lever in final position.

3. In motor-controlling apparatus, the combination with a motor, of an opposition element, a reversing switch of the gravity type for said motor, two electro-magnets for operating said reversing switch to either of its stationary positions, a controlling electro-magnet, a manual switch for connecting one of said reversing switch magnets and said controlling magnet across the opposition element, and a switch operated by said controlling magnet to initially insert said opposition element in circuit with the motor and thereafter short-circuit said opposition element and substantially eliminate the current in the reversing switch magnet and in said controlling magnet.

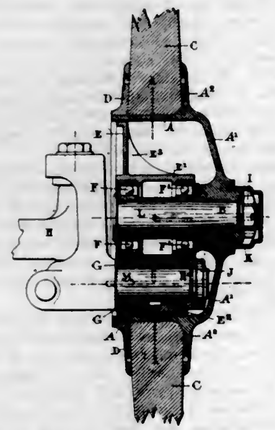
4. In motor-controlling aparatus, the combination with a motor, of starting resistance, an additional resistance in parallel with the motor-armature, means for initially inserting said starting resistance in series with the motor-armature, and thereafter automatically cutting out said resistance upon the motor attaining a predetermined speed, and means for cutting out said additional resistance and closing the main line circuit.

5. In motor-controlling apparatus, the combination with a motor, of starting resistance therefor, a reversing switch of the gravity type, electro-magnets for operating said reversing switch, and a circuit in parallel to the motor-armature to maintain either of said magnets energized while the switch is being moved from one position to another.

[Claims 6 to 20 not printed in the Gazette.]

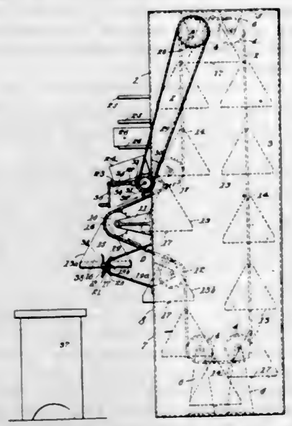
1,102,492. VEHICLE-WHEEL. MARIE JEAN FRANÇOIS GENILLON, Lyon, France. Filed Dec. 30, 1912. Serial No. 739,322. (Cl. 21—153.)

1. A vehicle wheel comprising in combination a hollow hub strengthened at its center and open at one side, means carried by said hub for supporting the wheel spokes, a double sleeve comprising an upper and a lower member projecting laterally into said hub, the upper member of said sleeve being concentric to said hub and the lower member eccentric thereto, and tangential therewith at its lowest point, a non-rotatable axle pin journaled in said eccentric sleeve member, a pivot fixed in said strengthened center of said hub and extending axially through said concentric sleeve member and ball bearings between said pivot and said last mentioned sleeve member, said pivot being capable of oscillation about the axis of said axle pin as center.



2. A vehicle wheel comprising in combination a hollow hub strengthened at its center and open at one side, a flange on the periphery of said hub, a detachable annular plate on the periphery of said hub, means for securing the wheel spokes between said flange and said annular plate and for securing the latter in position, a dust resisting plate within said hub at the open side thereof, a double sleeve comprising an upper and a lower member integral with said plate and projecting laterally therefrom within said hub, the upper member of said sleeve being concentric to said hub and the lower member eccentric thereto and tangential therewith at its lowest point, a non-rotatable axle pin journaled in said eccentric sleeve member, a pivot fixed in said strengthened center of said hub and extending axially through said concentric sleeve member and ball bearings between said pivot and said last mentioned sleeve member, said pivot being capable of oscillation about the axis of said axle pin as center.

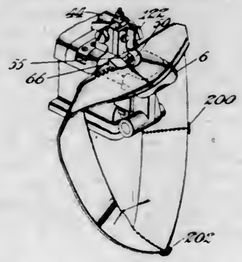
1,102,493. MACHINE FOR FACILITATING PACKING. MARIO GIANINI, New York, N. Y. Filed Jan. 25, 1912. Serial No. 673,491. (Cl. 193—2.)



1. A receptacle holding machine comprising a frame, a pair of endless chains, a plurality of carriers attached substantially equidistant on said chains, means for guiding said chains to form loops outside of said frame, said carriers having projections at the ends thereof, and means near the forward side of said frame to advance said chains, and fixed cams adapted to receive said projections when said carriers pass around said loops, and adapted to hold said carriers against swinging upon their pivots.

2. A machine for facilitating the filling of candy boxes comprising a case, a pair of endless chains, guide pulleys for said chains within said case, a pair of guide pulleys outside of said case adapted to guide said chains outwardly to form loops on the exterior of said case, a plurality of carriers pivotally supported between said chains, means for advancing said chains to advance said carriers successively into a filling position between said loops, and means near said loops for holding said carriers against swinging when the candy boxes carried thereby are being filled.

1,102,494. ART OF EDGE-FINISHING. PERLEY R. GLASS, Brookline, Mass., assignor to P. R. Glass Company, Boston, Mass., a Corporation of Massachusetts. Original application filed May 15, 1913, Serial No. 767,756. Divided and this application filed Oct. 31, 1913. Serial No. 798,528. (Cl. 12—146.)



1. The method of finishing the edge of a vamp which consists in stitching the rear ends of the vamp together so that its upper edge will prevent an endless outline, cementing said edge for its entire length, and finally folding the edge in a step-by-step manner progressing from a given starting point entirely around said edge and back to the starting point.

2. The method of finishing the edge of a vamp which consists in closing the vamp by a back seam, the edge of the vamp being unfolded, staying the back seam, applying cement to the entire upper edge of the vamp including the upper end of the stay strip, and finally folding the edge in a step-by-step manner beginning at a point on one side of the stay strip and including the end of the stay strip before the starting point is again reached.

3. The method of finishing the edge of a closed vamp which consists in cementing the entire edge, including the ends of the back and side seams, and then folding the entire edge in an uninterrupted step-by-step operation.

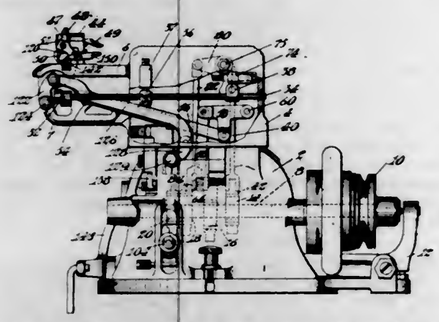
4. The method of finishing the edge of a closed vamp which consists in cementing the entire edge, separating the two sides of the vamp and locating one portion thereof in a substantially horizontal position, advancing the vamp to bring every other portion successively into that position, and simultaneously folding the edge.

5. The method of finishing the edge of a closed vamp which consists in turning the vamp inside out, cementing its upper edge, then progressively folding the entire edge beginning at a point on one side of the back seam and passing about the throat to the same point, and slitting the throat progressively one step ahead of the point where the folding is taking place.

1,102,495. EDGE-FINISHING MACHINE. PERLEY R. GLASS, Brookline, Mass., assignor to P. R. Glass Company, Boston, Mass., a Corporation of Massachusetts. Filed May 15, 1913. Serial No. 767,756. (Cl. 12—55.)

1. A folding machine having, in combination, a frame with an outwardly projecting arm provided with a sta-

tionary work supporting portion, folding instrumentalities mounted on the end of the arm, and actuating mechanism therefor connected within the arm to said folding instrumentalities.



2. A folding machine having, in combination, a frame having an outwardly projecting arm provided with a stationary work supporting portion of small cross section adapted to enter the opening of a closed vamp, folding instrumentalities mounted adjacent to the end of the arm, actuating mechanism within the frame, and connections between the actuating mechanism and the folding instrumentalities located within the arm.

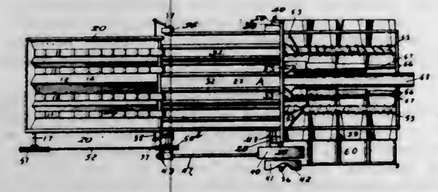
3. A folding machine having, in combination, a frame constructed to rest upon a bench and having a single arm of small cross section projecting from one side at a point above the bench greater than the length of a vamp, said arm extending free and clear of all parts of the frame in order that a closed vamp may be passed around it without dragging upon the bench, and edge folding and feeding mechanism mounted adjacent to the end of the arm.

4. A folding machine having, in combination, a frame having a substantially vertical wall and a narrow arm extending outwardly at substantially right angles to said wall and being so positioned as to support a vamp with its depending portion above the plane of the base of the frame, said arm being clear and free on all sides to permit the passage of a closed vamp, and coöperating folding devices disposed adjacent to the outer end of said arm.

5. A folding machine having, in combination, a frame carrying an outwardly extending arm at a point substantially above its base, actuating mechanism within the frame, folding mechanism mounted upon the arm, and connecting mechanism within the arm.

[Claims 6 to 11 not printed in the Gazette.]

1,102,496. APPLE-SORTER. WILLIAM H. GRAY, Eddyville, Iowa. Filed Oct. 28, 1912. Serial No. 728,242. (Cl. 130—32.)



1. In a device of the class described, a traveling conveyer, parallel rods arranged longitudinally above said conveyer in pairs, the members of each pair of rods being spaced apart from each other to receive fruit between them, means for reciprocating said rods laterally to alternately rotate the fruit upon said conveyer as it is advanced, and means for arranging fruit in parallel rows and feeding it continuously between the members of each pair of rods.

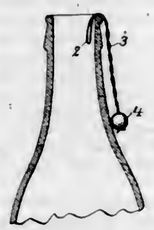
2. In a device of the class described, a traveling conveyer, a frame above said conveyer capable of transverse movement, parallel rods arranged in pairs in said frame longitudinally above said conveyer, the members of each pair of rods being spaced apart from each other to receive fruit between them, and means for reciprocating said frame transversely to alternately rotate the fruit upon said conveyer as it is advanced.

3. In a device of the class described, a traveling conveyer, a series of longitudinally arranged rods mounted above said conveyer in parallel pairs, means for reciprocating said rods laterally, and means for rotating said rods when they are so reciprocated.

4. In a device of the class described, a traveling conveyer, parallel rods arranged longitudinally above said conveyer in pairs, the members of each pair of rods being spaced apart from each other to receive fruit between them, means for reciprocating said rods laterally to alternately rotate the fruit upon said conveyer as it is advanced, and means for rotating said rods when they are so reciprocated.

5. In a device of the class described, a traveling conveyer, parallel rods arranged longitudinally above said conveyer in pairs, the members of each pair of rods being spaced apart from each other, means designed to arrange fruit in parallel rows and designed to feed it continuously between the members of each pair of rods, means for reciprocating said rods laterally to alternately rotate the fruit upon said conveyer as it is advanced, and means for rotating said rods when they are so reciprocated.

1,102,497. BOTTLE-STOPPER REMOVER. JOHN E. GREEN, Boston, Mass. Filed Aug. 26, 1912. Serial No. 717,045. (Cl. 215—53.)



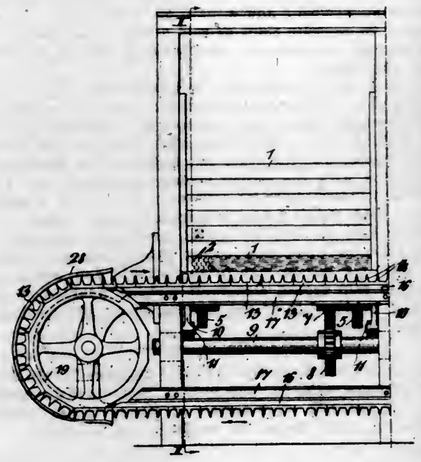
As a new article of manufacture, a bottle stopper remover comprising a wire bent to compose a loop and a handle section, the loop being disposed to present its plane substantially parallel with, but spaced from, said handle section, whereby the loop can be introduced within the mouth of a bottle with said handle section hanging without the same.

1,102,498. APPARATUS FOR DISCHARGING MATCHES. HENRY ALFRED GSELL, Paris, France. Filed June 12, 1913. Serial No. 773,312. (Cl. 144—61.)

1. In an apparatus for discharging matches, collecting receptacles arranged in parallel rows, cells for conveying the matches, means for tilting the cells for discharging the matches into the collecting receptacles of the different rows, and means for moving said tilting means of the different rows alternately into the operative and inoperative positions.

2. In an apparatus for discharging matches, collecting receptacles arranged in parallel rows, the collecting receptacles in the different rows being staggered in relation to one another and the superposed collecting receptacles in each row being separated from each other by a space approximately equal to the height of one collecting receptacle, cells for conveying the matches, means for tilting the cells for discharging the matches into the collecting receptacles of the different rows, and means for moving said tilting means of the different rows alternately into the operative and inoperative positions.

3. In an apparatus for discharging matches, a series of independent cells for conveying the matches, guides for said cells, match-feeding means discharging over said cells, means for intermittingly moving the entire series of cells as a unit, pairs of parallel chains intermittingly moved in a direction at right angles to the direction of movement of said cells, cross-bars connecting the chains in pairs, collecting receptacles for the matches supported on said bars and arranged in parallel rows, the receptacles in the different rows being staggered in relation to one another and the superposed collecting receptacles in each row being separated from each other by a space approximately equal to the height of one collecting receptacle, means for tilting the cells for discharging the matches into the collecting receptacles of the different rows, and means for moving said tilting means of the different rows alternately into operative and inoperative positions.



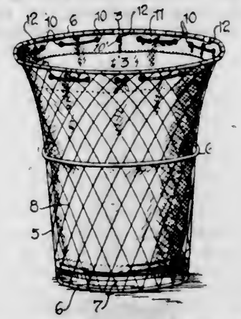
4. In an apparatus for discharging matches, a series of independent cells for conveying the matches, guides for said cells, match-feeding-means discharging over said cells, means for intermittingly moving the entire series of cells as a unit, pairs of parallel chains intermittingly moved in a direction at right angles to the direction of movement of said cells, cross-bars connecting the chains in pairs, collecting receptacles for the matches supported on said bars and arranged in parallel rows, the receptacles of the different rows being staggered in relation to one another, the superposed collecting receptacles in each row being separated from each other by a space approximately equal to the height of one collecting receptacle, means for tilting said cells for discharging the matches into the collecting receptacles of the different rows, a projection on the bottom of each collecting receptacle continually moved in the same row, and means acted upon by the projections of the receptacles for moving said tilting means of the different rows alternately into the operative and inoperative positions.

5. In an apparatus for discharging matches, cells for conveying the matches, and means for tilting the cells about an axis arranged near the topmost layer of matches in the cells.

[Claims 6 to 8 not printed in the Gazette.]

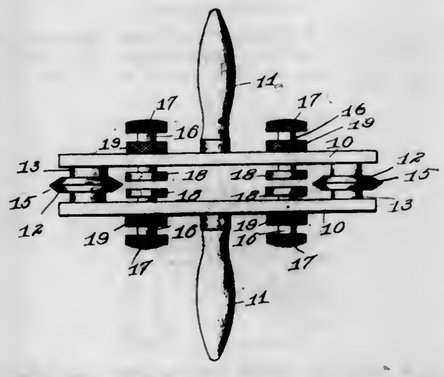
1,102,499. RECEPTACLE. WADE E. HAIST, Albia, Iowa. Filed Aug. 11, 1913. Serial No. 784,256. (Cl. 150—51.)

1. The combination with a receptacle, of a collapsible container adapted to be arranged therein, a draw-cord to close the mouth of said container, a plurality of hooks each provided with an attaching plate, said plate having a plurality of arms engageable with the receptacle to fasten the plate to the open end thereof and rigidly retain the same in its applied position, and a plurality of eyelets secured to the container at its open end for detachable engagement with the respective hooks to hold the mouth of the container open.



2. The combination with a wire basket, of a collapsible container adapted to be arranged therein, a draw cord to close the mouth of said container, a plurality of hooks, each of said hooks being mounted upon an attaching plate, said plate having spaced arms adapted to be bent around the wires of the basket to retain the hooks in place thereon, said container having means for detachable engagement with said hooks to hold the mouth of the container open.

1,102,500. SAW-SETTING TOOL. GEORGE HALINKA and FRENK ANTON, Detroit, Mich. Filed Feb. 17, 1914. Serial No. 819,205. (Cl. 76—59.)

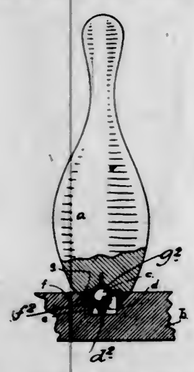


In a saw setting tool, a pair of side plates, setting rollers disposed between the plates at the ends thereof and adjacent the upper edge operating handles carried by said plates and arranged substantially centrally thereof, saw guiding members carried by said plates and extending inwardly thereof at a point below the medial line of the plates, and means for holding the saw guiding members in fixed position.

1,102,501. GAME APPARATUS. WALTER W. HALL, Brooklyn, N. Y., assignor of one-half to Joseph Boum, Brooklyn, N. Y. Filed Aug. 2, 1913. Serial No. 782,557. (Cl. 46—54.)

A game apparatus involving an alleyway and a bowling pin or pins, said alleyway and pin or pins being provided, one with a countersunk recessed plate and the other with a chamber closed by a centrally apertured and countersunk plate, a spring placed in the bottom of said chamber and a ball placed on said spring and normally pressed thereby against said apertured plate, the recess in the

recessed plate being arc-shaped in cross section and the depth thereof being approximately one-third, or less, of the diameter of said ball, the curve of the arc on which said recess is formed being the same as the curve of the circumference of said ball, and the aperture in the apertured plate being of such dimensions as to receive approximately one-third of said ball, the diameter of the ball and the transverse dimensions and the depth of said



chamber and the form and dimensions of said spring being such as to permit of the free vertical and lateral movement of said ball in said chamber a distance approximately equal to one-third of the diameter of the ball, or over, and the walls of the central aperture in the apertured plate being also beveled or curved to correspond with the curve of the arc on which the recess in the recessed plate is formed.

1,102,502. LOCK CONNECTION FOR STRUCTURAL MEMBERS. GEORGE W. HANSBROUGH, San Francisco, Cal. Filed Sept. 23, 1912. Serial No. 721,748. (Cl. 189—36.)

1. A structural member lock-connection comprising a first structural member, a pair of opposing, spaced, complemental clasps connected at one end to said structural member, said clasps having on their inner surfaces a transverse socket, a second structural member of flanged section, the body of said member fitting between the clasps with its head flange lying across the upper edges thereof, and said body having side bosses fitting in the socket of the clasps, and means connecting the other ends of said clasps with the body of said second member.

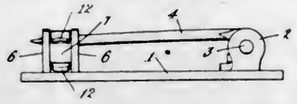
2. A structural member lock connection comprising a first structural member, a pair of opposing, spaced, complemental clasps connected at one end to said member, said clasps having on their inner surfaces a transverse socket, a second structural member of flanged section having its foot flange cut out to permit the body of said member to pass between said clasps, said second member having its body fitted between said clasps with its head flange lying across the upper edges thereof, and said body having side bosses fitting in the socket of the clasps, and means connecting the other ends of said clasps with the body of said second member.

3. In a structural-member lock-connection the combination of a pair of opposing, spaced, complemental clasps each fashioned at one end for initial connection with the first structural member, and at the other end for subsequent connection with the second structural member, and fashioned between its ends with one half of a socket portion, said clasps being arranged in their initial connection with the first structural-member at an angle to each other to taper the socket space formed by their socket portions; and a boss connected with the second structural-member adapted to enter and fashioned to fit the interclasp tapering socket.

4. In a structural-member lock-connection the combination of a first structural member; a pair of complemental clasps fashioned at one end for initial connection with the first structural member and at their other end for subsequent connection with a second structural member, said clasps being relatively disposed at an angle to each other to leave a tapering space between them; a second structural member; and a pair of complemental bosses secured on opposite sides of said second structural member adapted to enter and fashioned to fit the tapering inter-clasp space.

5. In a structural-member lock-connection, the combination of a first structural-member; a pair of separated, complemental clasps, each composed of a plate having one end fashioned for initial connection with the first structural member and the other end fashioned for subsequent connection with the second structural member and also fashioned intermediate its ends with one half of a socket space; said clasps being arranged in their initial connection with the first structural member at an angle to each other to taper said socket space from one end to the other; a second structural member; and bosses secured to said second structural member adapted to enter and fashioned to fit the tapering socket space inclosed by said clasps.

1,102,503. SAFETY-CATCH. CHARLES D. HEATON, Providence, R. I., assignor to B. A. Ballou and Company, Incorporated, a Corporation of Rhode Island. Filed Nov. 14, 1913. Serial No. 800,994. (Cl. 24—157.)

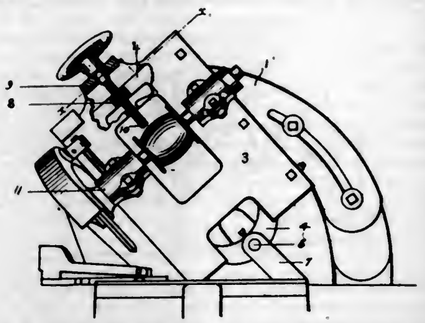


In a safety catch, a cradle comprising spaced plates, and a bar integral with said plates, said plates and bar being provided with a continuous longitudinal groove, and a clamping member having a body portion embracing the bar and rotatable thereon between said plates, and arms continuous with the clamping member either of which may be made to overlap or extend across said groove.

1,102,504. ADJUSTABLE HEAD FOR BAND-SAW GRINDERS. JOHN P. HEDSTROM, Big Rapids, Mich. Filed June 15, 1912. Serial No. 703,990. (Cl. 76—41.)

1. In an adjustable head for band saw grinders, the combination with a head plate, and a sliding gate mounted thereon, of an adjusting gate interposed between said head plate and said sliding gate, a reciprocating connecting rod having pivotal connection with the lower end of said adjusting gate, and an adjusting screw connecting the upper end of said adjusting gate with the upper end of said sliding gate, for the purpose set forth.

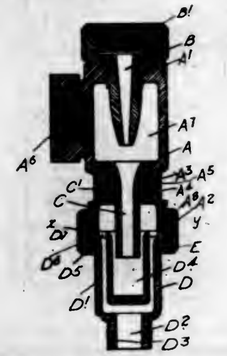
2. In an adjusting head for band saw grinders, the combination with a head plate and a sliding gate mounted thereon, of guides on the rear face of said sliding gate, an adjusting gate carried by said guides and interposed between said head plate and said sliding gate, a reciprocating connecting rod pivotally connected to the central part of the lower end of said adjusting guide, and an adjusting screw loosely received in the upper end of said sliding gate, the lower part of said sliding gate having threaded engagement with the upper end of said adjusting gate.



3. In an adjustable head for band saw grinders, the combination with the head plate, and a sliding gate provided with journal bearings mounted thereon, of an adjusting gate interposed between said head plate and said sliding gate, guides on the front face of said head plate to receive said sliding gate, and guides on the rear face of said sliding gate to receive said adjusting gate, the outer edges of said sliding gate overlapping and inclosing said guides.

4. In an adjustable head for band saw grinders, the combination with a head plate having vertical guides, a sliding gate mounted on said head plate overlapping and inclosing said vertical guides and provided with a pair of emery shaft bearings, of an adjusting gate interposed between the head plate and the sliding gate, said gate being inclosed within the sliding gate, retaining plates to permit the sliding gate of limited up-and-down movement of adjustment with relation to the adjusting gate, and a connecting rod pivotally connected to the lower end of said adjusting gate.

1,102,505. WATER-JET LIFTER. MATTHEW HENDERSON, Toronto, Ontario, Canada, assignor to The James Morrison Brass Manufacturing Company, Limited, Toronto, Ontario, Canada, a Corporation of Canada. Filed Jan. 6, 1913. Serial No. 740,474. (Cl. 162—1.)



1. A water jet lifter comprising a tubular body having an inlet orifice at one end and an outlet orifice at the opposite end, and a suction inlet leading into the side thereof, a water jet nozzle extending through the inlet orifice, a suction tube secured within the body in vertical alinement with the nozzle, and a vacuum cup secured to the casing in vertical alinement with the nozzle and suction tube, as and for the purpose specified.

2. A water jet lifter comprising a tubular body having an inlet orifice at one end, and an outlet orifice at the opposite end, and a peripheral orifice located in proximity to the upper end thereof, a water jet nozzle secured in the inlet orifice of the body, a suction tube located intermediately of the length of the lifter body in alinement with the nozzle, and a vacuum cup connected to the outlet end of the body and comprising an outer cup portion having an outlet orifice at its lower end, and an inner cup portion supported in the outer cup portion and spaced apart from the walls thereof and in to which the suction tube extends, as and for the purpose specified.

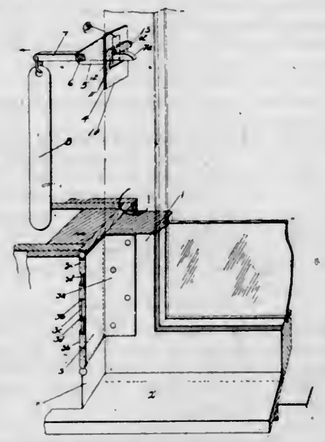
3. A water jet lifter comprising a tubular body having an inlet orifice at its upper end, an outlet orifice at its lower end and an internally threaded reduced intermediate portion, a suction tube threaded in to such intermediate portion, a nozzle secured to the inlet orifice in alinement with the suction tube and a vacuum cup removably secured against the outlet orifice of the body and comprising an outer tubular cup portion having an outlet orifice at its lower end, and an inner tubular cup portion supported within the outer cup portion and spaced apart from the walls thereof, as and for the purpose specified.

4. In a water jet lifter, a nozzle and a vacuum cup arranged in longitudinal alinement with the nozzle, as and for the purpose specified.

5. In a water jet lifter, a nozzle and a vacuum cup comprising an outer member having an exit at the bottom, and an inner member supported in the outer member and having the walls thereof spaced apart from the walls of the outer member, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,102,506. WINDOW-LIFT. WILLIAM J. HESTER, Portland, Oreg. Filed Aug. 13, 1913. Serial No. 784,632. (Cl. 20—53.)



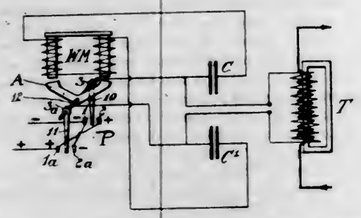
1. In combination with a window frame and window sash of the character referred to, a lifting lever pivotally mounted in said window frame, with a weight suspended upon one end thereof and having its opposite end projected into lifting engagement with the edge of the window sash, and being detachable therefrom, whereby to permit said sash to be moved away from the lifting end of said lever, substantially as described.

2. In combination with a window frame and window sash hingedly and adjustably mounted therein, a lifting lever pivotally mounted in said window frame and projecting therefrom into said window sash, said sash being provided with engaging means adapted to move on to and off of the end of said lifting lever, and a weight suspended from the opposite end of said lifting lever, substantially as shown and described.

3. In combination, a window frame, a sash hingedly and adjustably mounted in said frame, a lifting element projecting from said window frame into lifting engage-

ment with said window sash, a weight suspended from the lifting element and exerting a lift upon said sash through said lifting element, and a socket fixed in said sash and adapted to be moved into and out of lifting engagement with said lifting element, as said window is moved upon its hinges, substantially as described.

1,102,507. ELECTRIC-CURRENT TRANSFORMER. PAUL HILDEBRAND, Munich, Germany. Filed Feb. 10, 1913. Serial No. 747,218. (Cl. 171—253.)

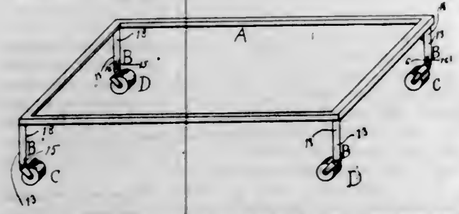


1. A current converter, embodying therein a current transformer, contact members electrically connected to a source of direct electric current, a pole changer electrically connected to said transformer and operatively related to said contacts, said pole changer adapted to convert direct current into alternating current before said current reaches the primary winding of said transformer, and an electromagnetic device energized by a pair of said alternating current and adapted to actuate said pole changer.

2. A current converter, embodying therein a circuit including a current transformer and a pole changer, contact members electrically connected to a source of direct electric current, and an electromagnetic device included in said first named circuit and adapted to actuate said pole changer to convert the direct current passing from said contact members to said transformer into alternating current.

3. A current converter, embodying therein a circuit including a current transformer, a pole changer, and condenser members, contact members electrically connected to a source of direct electric current and in operative relation to said pole changer, and an electromagnet connected to said condenser members, and adapted to receive from the latter alternating current at the same voltage as said direct current, said electromagnet being adapted to actuate said pole changer.

1,102,508. CASTER AND FITTING. AARON HILL, Los Angeles, Cal., assignor of one-fourth to Raymond Ives Blakeslee, Los Angeles, Cal. Filed Dec. 27, 1912, Serial No. 738,785. Renewed Feb. 13, 1914. Serial No. 818,607. (Cl. 16—4.)

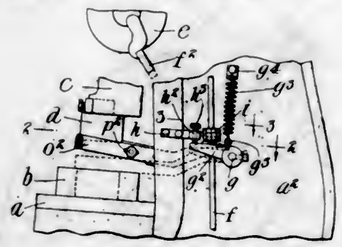


1. A caster provided with a shank bifurcated to embrace and hold a roller with the shank disposed adjacent to one end of the axis of said roller.

2. A caster provided with a shank bifurcated to embrace and hold a roller with the shank disposed adjacent to one end and at one side of the axis of said roller.

3. A bed having a caster and a roller carried thereby, and means for retaining said roller fixedly and entirely within the area of the superposed bed.

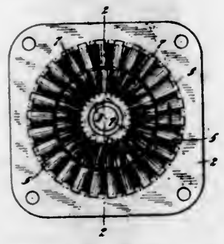
1,102,509. SAFETY ATTACHMENT FOR POWER-PRESSES. RICHARD HOELEMANN, Brooklyn, N. Y. Filed Nov. 1, 1913. Serial No. 798,639. (Cl. 164—107.)



1. In a power press of the usual construction and involving the usual pedal operated clutch rod, a safety attachment comprising a shaft mounted transversely of and rearwardly of the die bed of the press, a forwardly directed guard arm connected with said shaft, automatic means for turning said shaft so as to raise said guard arm, and means for turning said shaft to depress said guard arm onto the die bed, comprising a stop arm connected with the shaft and a part connected with the clutch rod and operating in connection with said stop arm, and a stop device connected with the frame for limiting the upward movement of said stop arm and the turning of the shaft to raise the guard arm.

2. In a power press of the usual construction and involving the usual pedal operated clutch rod, a safety attachment comprising a horizontal shaft mounted rearwardly of the die bed of the press, a forwardly directed guard arm connected with said shaft and provided at its front end with a guard, a spring for turning said shaft so as to raise the guard arm, a stop arm connected with said shaft and a stop connected with the frame of the press and in connection with which the stop arm operates to limit the said movement of said shaft, and a part connected with the clutch rod and operating in connection with said stop arm member to turn said shaft so as to depress said guard arm onto the die bed of the press.

1,102,510. APPARATUS FOR BURNING FINELY-DIVIDED FUEL. DAVID J. IRISH, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Original application filed July 15, 1911, Serial No. 638,687. Divided and this application filed Apr. 1, 1913. Serial No. 758,088. (Cl. 158—1.5.)



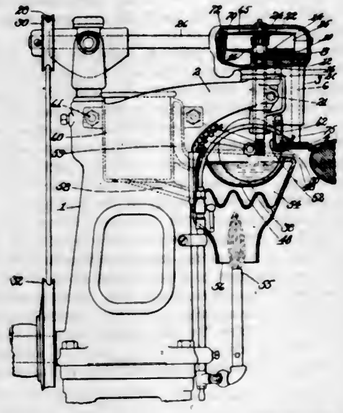
1. The combination with a burner, of an air deflecting device consisting of a substantially flat plate having a central opening and comprising concentrically arranged sets of blades, the blades in the individual sets being substantially flat from their exterior to their interior edges and spaced apart to provide apertures for the admission of air and inclined to the plane of the plate, the blades of one set inclined in a direction opposite to the direction of inclination of the blades of the adjacent set, the inner ends of the inner set of blades terminating adjacent said central opening, and said burner terminating in proximity to said opening.

2. The combination with a burner, of an air deflecting device consisting of a substantially flat plate having a central opening and comprising concentrically arranged sets of blades, said blades being spaced apart to provide apertures for the admission of air and inclined to the plane of the plate, the blades of one set inclined in a direction opposite to the direction of inclination of the blades of the adjacent set, said blades being wider at their outer than at their inner ends and the inner ends of the inner set of blades terminating adjacent said central opening, and said burner terminating in proximity to said opening.

3. The combination with a burner, of an air deflecting device consisting of a substantially flat plate having a central opening and comprising concentrically arranged sets of blades, the blades in the individual sets being substantially flat from their exterior to their interior edges and spaced apart to provide apertures for the admission of air and inclined substantially 45° to the plane of the plate, the blades of one set inclined in a direction opposite to the direction of inclination of the blades of the adjacent set, the inner ends of the inner set of blades terminating adjacent said central opening, and said burner terminating in proximity to said opening.

4. The combination with a burner, of an air deflecting device consisting of a plate having a central opening and a plurality of blades radially arranged and coaxial with said burner, said blades being divided into concentrically arranged sets and inclined to the plane of the plate and spaced apart to provide apertures for the admission of air, the blades in the individual sets being substantially flat from their exterior to their interior edges and the blades of one set inclined in a direction opposite to the direction of inclination of the blades of the adjacent set, the inner ends of the inner set of blades terminating adjacent said central opening, and said burner terminating in proximity to said opening.

1,102,511. MACHINE FOR USE IN FINISHING SHOES. WALTER JACKSON, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 16, 1908. Serial No. 438,797. (Cl. 12—77.)



1. In a shoe finishing machine, the combination with a rotary finishing tool, of means for rapidly reciprocating the tool over the work in substantially the plane of its rotation and means for imparting a relatively slow turning movement to the tool.

2. A wax finishing machine, having in combination a wax applying member, and wax supplying means comprising a wax reservoir, a wax lifting wheel and a pad relatively stationary with respect to the applying member arranged to receive the wax from the wheel and deliver it to the applying member.

3. A wax finishing machine, having in combination a wax applying tool, a wax reservoir, a wheel running in the reservoir and out of touch with the tool, a member composed of absorbent material arranged to contact with the wheel and the tool and relatively stationary with respect to the tool, and means whereby the wheel and the tool are heated to maintain in softened condition the wax on the said member of absorbent material.

4. A wax finishing machine, having in combination a wax applying member, and wax supplying means comprising a wax reservoir, a transferring wheel, a pad to deliver the wax to the applying member and means for moving the pad from and toward the wheel.

5. A top-ironing machine, having in combination a rotary tool to engage the tread face of a sole, a wax reservoir, a wax lifting wheel and a felt pad relatively stationary with respect to the tool and arranged to engage the wheel and the work rubbing the face of the tool.

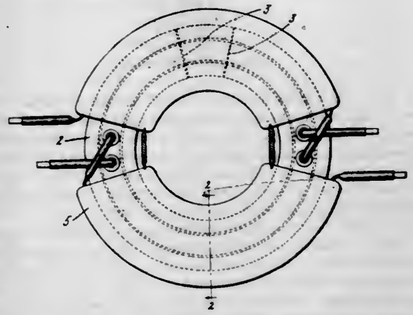
[Claims 6 to 14 not printed in the Gazette.]

1,102,512. CAR-SEAL. EDGAR E. JAMESON, Sunny Side, Miss. Filed Dec. 19, 1913. Serial No. 807,715. (Cl. 70—99.)



A seal comprising a strip having an aperture formed adjacent one end thereof, and a widened section formed at the opposite end thereof, said widened section having the opposite longitudinal portions thereof bent inward upon the body of such section to form a casing, one of said bent portions having a relatively long tongue formed therewith, said tongue having a transverse fold adjacent one end, a spur projecting in a direction opposite to the mouth of the fold, said tongue being adapted to pass through the opening in the strip when in sealing position.

1,102,513. TRANSFORMER. SVEND E. JOHANNESEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 20, 1912. Serial No. 737,875. (Cl. 171—124.)



1. In a transformer, a core, a set of primary and secondary windings thereon, and another set of primary and secondary windings also thereon and magnetically at substantially right angles to the first set of primary and secondary windings.

2. In a transformer, a core built up of laminations, a set of primary and secondary windings thereon wound in a direction substantially at right angles to the laminations, and another set of primary and secondary windings wound in a direction substantially at right angles to both the laminations and the direction of winding of the first-mentioned set of windings.

3. In a transformer, a core, a set of primary and secondary windings thereon, the primary tending to produce a flux therein in one direction, and another set of primary

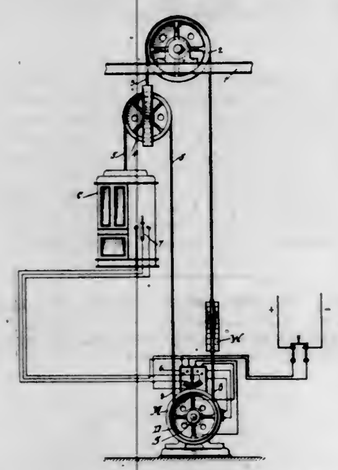
and secondary windings also thereon, the primary thereof tending to produce a flux in the core at an angle to the direction of the flux from the first-mentioned primary.

4. A transformer having a core substantially in the form of a ring, a set of primary and secondary windings thereon substantially in the plane of the core, and a set of primary and secondary windings on the core wound in a plane or planes substantially at right angles to the plane of the ring.

5. A transformer having a core substantially in the form of a ring, the core being discontinuous in a plane or planes substantially parallel to the general plane of the core and in a radial plane or planes, a set of primary and secondary windings thereon substantially in the plane of the core, and a set of primary and secondary windings on the core wound in a plane or planes substantially at right angles to the plane of the ring.

[Claim 6 not printed in the Gazette.]

1,102,514. ROPE-DRIVE ELEVATOR. GRIFFITH JOHN, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 20, 1908. Serial No. 422,281. (Cl. 187—22.)



1. The combination with a load carrying device, of a motor, and power transmitting means comprising a cable, a weight connected to said cable, a traction driving sheave or drum and only two additional sheaves, and a stationary support for one of said additional sheaves, the other of said additional sheaves being suspended from the cable and supporting the load carrying device.

2. In an elevator, the combination of a car, a motor, a driving sheave or drum, flexible power transmitting means connected to the car and associated with said driving sheave, a weight connected to said means, and only two additional sheaves associated with said means, one of said additional sheaves being carried by said power transmitting means and carrying the car.

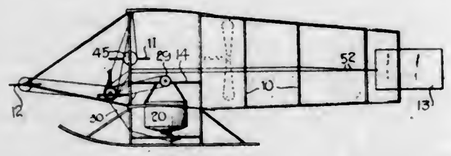
3. In an elevator, the combination with a car, of a motor, a driving drum, a single sheave mounted on fixed bearings, a loose sheave, a weight, a rope or ropes associated with said first named sheave and connected at one end to said loose sheave and at the other end to the weight, and an additional rope or ropes connected at one end to the car and at the other end to said weight, with its intermediate portion associated with said loose sheave and said driving drum.

4. In an elevator, the combination with a car and a counterweight, of a motor, a sheave journaled in stationary bearings, a driving drum connected to the motor, a loose sheave, flexible power transmitting means connected to the car, counterweight, and said loose sheave, said power transmitting means extending upwardly from the car over said loose sheave, downwardly under the driving drum, and upwardly from the counterweight over the fixed sheave to the loose sheave.

5. In an elevator, the combination with a car, of a motor, a driving sheave, a flexible member forming a direct connection between said car and one side of said sheave, a movable pulley with which said flexible member engages, a connection between said pulley and the other side of said driving sheave, and a weight for reducing the tension of the lead on said other side of the driving sheave.

[Claims 6 and 7 not printed in the Gazette.]

1,102,515. BALANCING AND STEERING DEVICE. WILLIAM R. JONES, Summitville, Ind. Filed Aug. 9, 1913. Serial No. 783,995. (Cl. 244—29.)



1. The combination with an aeroplane having an aileron and an elevator plane, of a pendulum including a gimbal, means supporting the gimbal, transmission members carried by the axes of the gimbal, means operatively connecting said transmission means with the aileron, and the elevator plane respectively, and means whereby said aileron and elevator plane may be temporarily thrown out of operative relation with the pendulum and operated manually.

2. The combination with an aeroplane having an aileron and an elevator plane, of a pendulum including a gimbal, means supporting the gimbal, transmission members carried by the axes of the gimbal, means operatively connecting such transmission means with the aileron and elevator plane respectively, and means for controlling such operative connection whereby said aileron and plane may be operated independently of the pendulum.

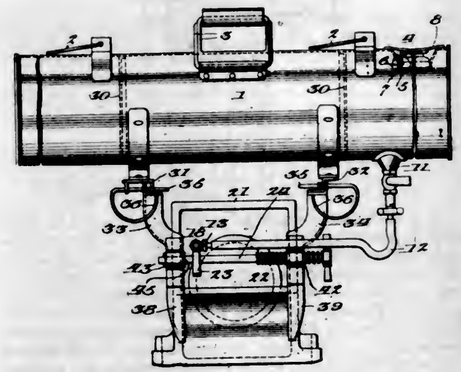
3. The combination with a body having a balancing member and an elevating member, of a pendulum including a gimbal, means supporting the gimbal, transmission members carried by the axes of the gimbal, means operatively connecting such transmission means with the balancing member and the elevating member respectively, and means for controlling such operative connection whereby such balancing member and elevating member may be operated independently of the pendulum.

4. The combination with a body having a balancing member and an elevating member, of a pendulum including a gimbal and a gyroscope, means supporting the gimbal, transmission members carried by the axes of the gimbal, means operatively connecting such transmission means with the balancing member and the elevating member respectively, and means for controlling such operative connection whereby such balancing member and elevating member may be operated independently of the pendulum.

1,102,516. JOURNAL-BOX COOLER. BARTHOLOMEW JULIEN, Omaha, Nebr., assignor to Transportation Utilities Company, a Corporation of West Virginia. Filed Nov. 23, 1912. Serial No. 733,101. (Cl. 64—28.)

1. In a journal-box cooler, the combination of a journal-box, a reservoir, and means connected with the reservoir for connecting the same with and supporting it on the journal box; the said means comprising clamping members disposed at opposite sides of the journal-box, and an adjusting screw connecting said members, a delivery tube supported by and adjustable laterally on said screw, and a conduit connecting the reservoir and the delivery tube.

2. In a journal-box cooler, clamping members adapted to be fixed against the side walls of a journal box, a reservoir disposed above and connected with and supported by said clamping members, a screw shaft engaging and extending between the clamping members and arranged to fix the same against a journal box, a delivery tube adapted to extend into the box, a flexible conduit intermediate the reservoir and said delivery tube and a support carried by the tube and bearing on the said screw shaft and adjustable lengthwise of the said shaft.



3. In a journal-box cooler, a reservoir, bars connected with and extending crosswise of the reservoir at points below the same, clamping members adapted to be fixed against a journal box and having horizontal portions disposed under the bars connected with the reservoir, pins for extending through registered apertures in the bars of the reservoir and the horizontal portions of the clamping members, curvilinear springs connecting the said pins and the clamping members, and means for fixing the clamping members against a journal box.

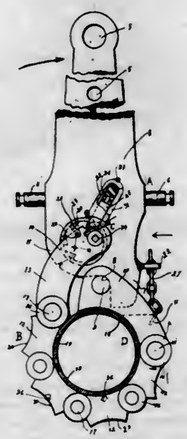
4. In a journal box cooler, the combination of a journal box, a reservoir, clamping members carried by the reservoir and disposed at opposite sides of the journal box, an adjusting screw connecting said members, a delivery tube supported by and adjustable on said screw and extending within the journal box, and a conduit connecting the reservoir and said delivery tube.

5. In a journal-box cooler, the combination of a journal box, clamping members fixed against the journal box and having horizontal portions extending in the direction of the length of the journal box, a reservoir disposed above said horizontal portions of the clamping members, bars fixed to and arranged under the reservoir and also arranged in lapped relation to the horizontal portions of the clamping members; said horizontal portions and bars having transverse apertures, pins for fastening the bars on the reservoir to the horizontal portions of the clamping members, and means for conducting liquid from the reservoir to the interior of the journal box.

1,102,517. PIPE-WRENCH. WILLIAM G. KNAPP, Alhambra, and CHARLES E. WILCOX, East Bakersfield, Cal. Filed May 24, 1913. Serial No. 769,679. (Cl. 81—66.)

1. A device of the character set forth, comprising a handle member provided at one end with a flexible member adapted to surround and grip the work, and means connecting both ends of said flexible member with such handle member at spaced points, one such means comprising a rotatable adjusting member upon the handle member and having an axis lying transversely thereof, and a member for holding said rotatable member in position of adjustment.

2. A device of the character set forth, comprising a handle member provided at one end with a flexible member adapted to surround and grip the work, and means connecting both ends of said flexible member with such handle member at spaced points, one such means comprising a rotatable adjusting member upon the handle member and having an axis lying transversely thereof, and a member for holding said rotatable member in position of adjustment; said rotatable adjusting member being provided with spaced notches, and said last named member comprising a spring pressed latch coöperating with said notches.



3. A device of the character set forth, comprising a handle member provided at one end with a flexible member adapted to surround and grip the work, and means connecting both ends of said flexible member with such handle member at spaced points; one such means comprising a rotatable adjusting member upon the handle member and having an axis lying transversely thereof, and a member for holding said rotatable member in position of adjustment; said rotatable adjusting member being provided with spaced notches, and said last named member comprising a spring pressed latch coöperating with said notches; said flexible member comprising a plurality of inter-engaged links.

4. A device of the character set forth, comprising a handle member provided at one end with a projecting nose and with a rotatable adjusting member inward of the nose, and a flexible work gripping member connected at its respective ends with the handle member at said nose and through the agency of said adjusting member; said adjusting member comprising a rotatable body upon and rotating independently of the handle member and having an axis lying transversely thereof and provided with spaced notches, there being provided a latch coöperating with said notches to hold the adjusting member in position of adjustment, and said flexible member being eccentrically connected with said rotatable body.

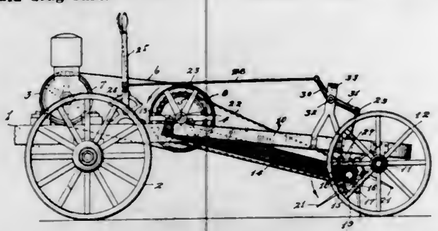
5. A device of the character set forth, comprising a handle member provided at one end with a projecting nose and with adjusting means, and a flexible work gripping member connected with said handle member at one end at said nose and at the other end with said adjusting means; said flexible member being provided with end links one of which is bifurcated to straddle said nose and the other of which is bifurcated to straddle the end of the handle member for connection with said adjusting means.

[Claims 6 to 10 not printed in the Gazette.]

1,102,518. QUACK-GRASS DIGGER. MATHIAS KUEFLER, Lake George township, Stearns county, Minn. Filed Mar. 9, 1914. Serial No. 823,477. (Cl. 97—71.)

1. In a machine of the kind described, the combination with a truck, of a supplemental frame at the rear of said truck, pivotally secured thereto, at its forward end, for vertical swinging movement, ground-engaging wheels jour-

nailed on the rear end of said supplemental frame, a pair of rearwardly projecting drag bars pivotally secured, at their forward ends, to said truck for vertical swinging movements, a cylinder, having ground-engaging teeth, journaled in the rear ends of said drag bars, means for driving said cylinder, and means connected to said supplemental frame for vertically adjusting the rear ends of said drag bars.



2. In a machine of the kind described, the combination with a truck, of a transverse shaft journaled on said truck, means for driving said shaft, a supplemental frame at the rear of said truck, pivotally secured, at its forward end, to said shaft for vertical swinging movement, ground-engaging wheels journaled on the rear end of said supplemental frame, a pair of rearwardly projecting drag bars pivotally secured, at their forward ends, to said shaft for vertical swinging movement, a cylinder, having ground-engaging teeth, journaled in the rear ends of said drag bars, driving connections from said shafts to said cylinder, and means connected to said supplemental frame for vertically adjusting the rear ends of said drag bars.

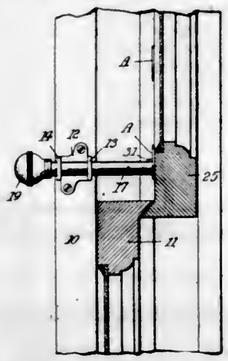
3. In a machine of the kind described, the combination with a truck having mounted thereon an explosive engine, of a transverse shaft journaled on said truck, driving connections from said engine to said shaft, a supplemental frame at the rear of said truck, pivotally secured, at its forward end, to said shaft for vertical swinging movement, ground-engaging wheels journaled on the rear end of said supplemental frame, a pair of rearwardly projecting drag bars pivotally secured, at their forward ends, to said shaft for vertical swinging movement within said supplemental frame, a cylinder, having ground-engaging teeth, journaled in the rear ends of said drag bars, driving connections from said shaft to said cylinder, and means, including a rock shaft journaled on said supplemental frame, for vertically adjusting the rear ends of said drag bars.

4. In a machine of the kind described, the combination with a truck having mounted thereon an explosive engine, of a transverse shaft journaled on said truck, driving connections from said engine to said shaft, a supplemental frame at the rear of said truck, pivotally secured, at its forward end, to said shaft for vertical swinging movement, ground-engaging wheels journaled on the rear end of said supplemental frame, a pair of rearwardly projecting drag bars pivotally secured, at their forward ends, to said shaft for vertical swinging movement within said supplemental frame, a cylinder, having ground-engaging teeth, journaled to the rear ends of said drag bars, driving connections from said shaft to said cylinder, means for vertically adjusting the rear ends of said drag bars, comprising a latch lever and latch segment on said truck, a rock shaft, having a pair of reversely projecting arms, journaled on said supplemental frame, and links connecting said latch lever and said drag bars with the arms of said rock shaft.

1,102,519. SASH-LOCK. MAX LANDE, Brooklyn, N. Y. Filed Oct. 11, 1913. Serial No. 794,642. (Cl. 16—119.)

1. A sash lock comprising a window bearing, a bolt slidable therein and having a bit, a sash, a keeper on the sash having a bit-slot and adapted to be engaged by the bolt, and means for closing said slot.

2. A sash lock comprising a window bearing, a bolt slidable therein and having a bit, a latch having a plug, and a keeper adapted to receive the bolt and having a bit-slot adapted to be closed by the plug.



3. A sash lock comprising a bolt having a bit, a latch slidable along the bolt and having a plug, a knob rotatable and axially movable upon the bolt, means for connecting the latch to the knob, and a keeper adapted to receive the bolt and having a bit-slot adapted to be closed by the plug.

4. A sash lock comprising a bolt having a bit, a latch slidable along the bolt and having a plug, a knob rotatable and axially movable upon the bolt, means for connecting the latch to the knob, and a keeper having a slot adapted to admit the bit and to be closed by the plug, and an abutment for the bit which is out of alinement with the slot.

5. A sash lock comprising a bolt having a bit, a latch slidable along the bolt and having a plug, a knob movably mounted on the bolt, means for connecting the latch to the knob, a spring engaging the knob, means for checking the movement of the knob upon the bolt, and a keeper adapted to receive the bolt and having a bit-slot adapted to be closed by the plug.

[Claims 6 to 8 not printed in the Gazette.]

1,102,520. COMBINATION-GARMENT. BLANCHE DE PINNA LEMAN, White Plains, N. Y. Filed Oct. 31, 1912. Serial No. 728,962. (Cl. 2—144.)

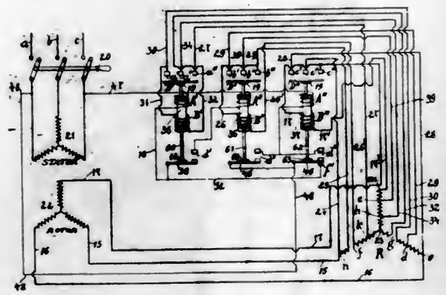


1. A combination garment comprising a tubular knit fabric body portion, and drawer legs of inelastic material secured to the lower edge of said body portion, each leg being wider than one-half of the width of the tubular body portion at its lower edge, said legs being connected together at their adjacent upper edges between the front and rear of the body portion of the garment.

2. A combination garment comprising a tubular knit fabric body portion, and drawer legs of inelastic material secured to the lower edges thereof, each of said legs being composed of a strip of material of a length greater than one-half of the width of the body portion of the garment at its lower edge, said leg portions being connected together at their adjacent upper edges at a point midway the width of the body portion.

3. A combination garment comprising a tubular knit fabric body portion having a strip stitched at one edge to the lower edge of said garment, said strip being of greater length than the circumference of the lower edge of the garment thereby providing projecting ends which are arranged intermediate of the width of the garment, said projecting ends being secured together at their upper edges, and means for detachably connecting the terminals of said connected ends to the garment at a point opposite the side of the garment from which they project.

1,102,521. ALTERNATING-CURRENT-MOTOR CONTROL. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 18, 1905. Serial No. 292,122. (Cl. 172—289.)



1. The combination with an alternating-current motor of the induction type, of coils connected to the primary source of current, additional coils connected in series with the secondary of the motor and differentially opposing said first-named coils, resistance in series with said additional coils in the secondary circuit, and means controlled by said coils for short-circuiting said resistance.

2. The combination with a multi-phase motor of the induction type, of coils connected in parallel to the primary source of current, additional coils connected in series with the secondary of the motor, resistance connected in series in the secondary circuit, and in series with said additional coils and means controlled by the differential action of said coils for short-circuiting said resistance.

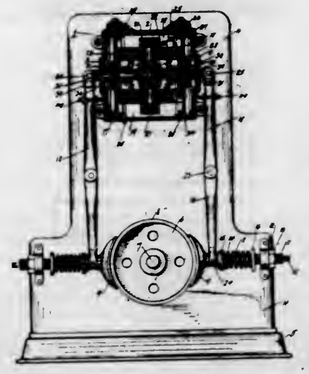
3. The combination with a multiphase motor of the induction type, of coils connected in a circuit leading from the primary source of current, resistance in the secondary circuit of the motor, additional coils in a circuit connected between one terminal of the secondary and one terminal of said resistance and arranged to oppose said first-named coils, and means for short-circuiting said resistance, said means being differentially acted upon positively by the first and second named coils, respectively.

4. The combination with an alternating current motor of the induction type, of resistance in the secondary circuit thereof, and a plurality of electro-responsive devices for successively short-circuiting said resistance as the motor increases in speed, said electro-responsive devices comprising single-phase coils connected to the primary, and additional single phase coils in a circuit connected between said resistance and the rotor secondary and arranged to oppose said first-named coils.

5. The combination with an alternating-current motor of the induction type, of resistances in the secondary circuit thereof, a plurality of electro-magnetic devices for successively short-circuiting said resistances as the motor increases in speed, said electro-magnetic devices comprising coils connected in parallel to the primary, additional coils opposing said first named coils and connected in series to the secondary, and a switch operated by the last-acting electro-magnetic device to effect the restoration to normal of the first-acting electromagnetic devices.

[Claims 6 to 11 not printed in the Gazette.]

1,102,522. ALTERNATING-CURRENT ELECTROMAGNETIC BRAKE APPARATUS. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 7, 1908. Serial No. 431,501. (Cl. 74—70.)



1. In brake apparatus, the combination with a multiphase alternating current electromagnet with its winding in stationary or fixed position, of armatures associated with said winding and movable toward and away from each other, means comprising springs under tension for limiting the movement of said armatures toward each other to compel each to move through substantially the same distance, and positive stops for limiting the movement of the said armatures toward attracted position.

2. In brake apparatus, the combination with a multiphase alternating current electromagnet having windings mounted in stationary or fixed position, of armatures movable toward each other upon excitation of said windings, and springs under tension for cushioning said movements of the armatures and compelling them each to move through substantially the same distance, and positive stops for limiting the movement of said armatures toward attracted position.

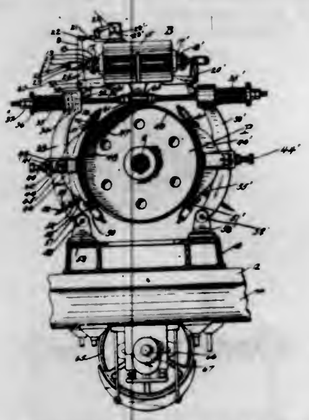
3. In brake apparatus, the combination with a multiphase alternating current electromagnet having windings mounted in substantially fixed or stationary position, of armatures acted upon by said windings when excited with electric current to move toward each other, means comprising springs under compression for positively limiting the inward movements of said armatures, appliances for retracting said armatures to initial positions when said windings are unexcited, and positive stops for limiting the movement of said armatures toward attracted position.

4. In brake apparatus, the combination with an electromagnet, of armatures movable toward and away from each other, means for retarding the movement of said armatures toward each other, appliances comprising springs under compression for limiting the last named movement, brake members positively connected to said armatures, means acting directly on said brake members for applying the brake upor the deënergization of the electro-magnet, and adjustable stops adapted to limit the movement of said armatures toward attracted position.

1,102,523. BRAKE APPARATUS FOR TRACTION-ELEVATORS. DAVID L. LINDQUIST, Yonkers, ALLEN C. SMITH, New York, and GRIFFITH JOHN, Yonkers, N. Y., assignors to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 24, 1908. Serial No. 459,346. (Cl. 74—70.)

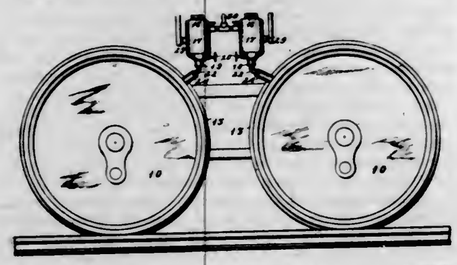
The combination with a standard or support, of a shaft having bearings therein, a brake wheel on said shaft,

brake levers, a brake-releasing magnet, a bracket on the magnet frame between said frame and the brake wheel,



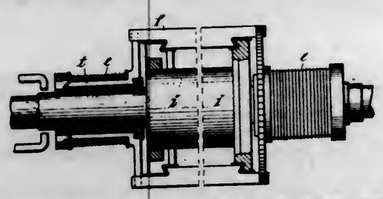
supporting rods secured to the bracket, and brake springs supported by said rods.

1,102,524. LOCOMOTIVE-WHEEL-FLANGE OILER. JOSEPH LITTLE, Oelwein, Iowa. Filed July 25, 1910. Serial No. 573,740. (Cl. 184—3.)



An improved locomotive wheel flange oiler, comprising an oil receptacle, a discharge pipe communicating with the oil receptacle and extended downwardly and laterally, a valve for controlling the passageway from the receptacle to the discharge pipe, a sleeve fitted to and slidingly mounted on the lower end of the discharge pipe, a cylindrical flexible oiling member fixed to said sleeve, and a nut detachably mounted on the lower end of the discharge pipe contained within said cylindrical oiling member to thereby provide for detaching the cylindrical oiling member from the discharge pipe.

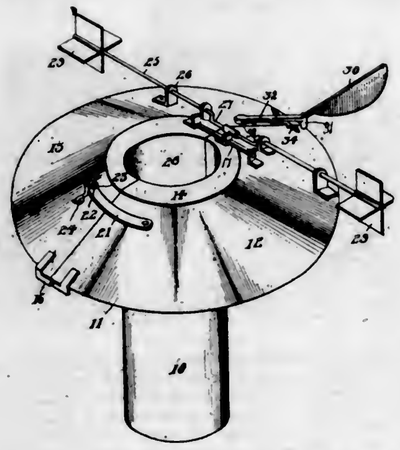
1,102,525. COMMUTATOR PROVIDED WITH SEGMENTS OR BARS AND SLIP-RINGS. BIRGER LJUNGSTRÖM, Stockholm, Sweden, assignor to Aktiebolaget Ljungströms Angturbin, Finspång, Sweden. Filed Jan. 24, 1914. Serial No. 814,140. (Cl. 171—211.)



1. A commutator provided with a series of external segments or bars, in combination with an additional commutator of less diameter similarly provided with bars electrically connected to the bars first mentioned and rings which fit on the bars of the lesser commutator and are electrically connected thereto.

2. A commutator provided with a series of external segments of bars in combination with an additional commutator of less diameter also provided with external bars and with rings surrounding the same and electrically connected thereto, the latter bars being connected by integral conductors with the bars or segments of the main commutator.

1,102,526. SWIMMING DEVICE. LADISLAS LUKI, Columbus, Ohio. Filed Apr. 20, 1914. Serial No. 833,122. (Cl. 9—18.)



A device of the class described comprising a two part float provided with a central well therethrough and an under concaved face, the parts of said float being hinged together, a retaining means for said float members, a flexible receptacle suspended beneath said float and encircling the said well, a pivoted rudder mounted upon the upper face of said float, a shaft journaled to the top of said float and having a central crank portion, propeller blades secured to the outer ends of said shaft, the said receptacle adapted for reception between said concaved surfaces when said float parts are hinged together in their folded relations

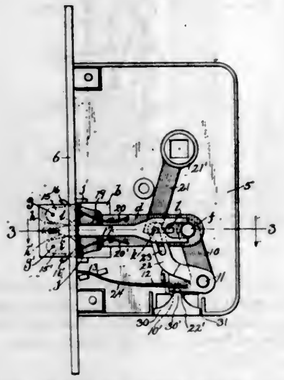
---

1,102,527. LOCKING-BOLT STRUCTURE. WILLIAM A. LURIE, Chicago, Ill. Filed Oct. 24, 1913. Serial No. 796,981. (Cl. 70—42.)

1. In a lock the combination of a locking bolt having a slot in its head, a plate pivoted in said slot and having a detent tongue extending therefrom, means tending to hold the plate to keep its tongue within the slot, a bar on said bolt normally engaging with said plate to cause the tongue to project beyond the bolt head side to block inward movement of the bolt, and bolt actuating mechanism having connection with said bar to shift said bar to release said plate before effecting inward movement of the bolt.

2. In a lock, a lock bolt, a detent pivoted to the head of said bolt, means tending to hold said detent entirely within the bolt head sides, mechanism on said bolt cooperating with said detent to effect projection thereof beyond the bolt head side to block inward movement of the bolt, and bolt actuating means adapted when actuated to coöperate first with said mechanism to effect withdrawal of the detent before effecting inward movement of said bolt.

3. In a lock, a lock bolt, a plate pivoted within the bolt head, a spring tending to hold the plate entirely within the head, a bar slidable on the lock bolt and engaging with said plate to project same beyond the bolt head side, and actuating mechanism for said lock bolt adapted when actuated to first withdraw said bar to allow said plate to enter the bolt head and then to shift said bolt inwardly.

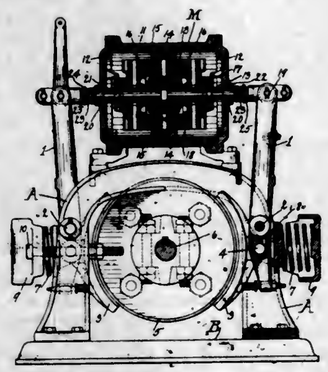


4. In a lock, a lock bolt, plates pivoted in the head of said bolt, springs tending to hold said plates entirely within said head, a wedge bar slidable on said bolt, means tending to force said bar between said plates to cause spreading thereof and extension beyond the bolt head sides, and actuating means for said bolt adapted when actuated to first withdraw said wedge bar to allow entrance of the plates into the bolt head to release the bolt and then to shift the release bolt inwardly.

5. In a lock the combination of a lock bolt, means tending to hold the bolt out detent plates pivoted in the head of said bolt, means tending to hold said plates entirely within said head, a wedge bar slidable on said bolt, means tending to hold said bar out with its wedge end between said plates to cause said plates to project beyond said bolt head, a pin extending from said bar, said bolt having a slot through which said pin extends, and an actuating arm engaging said pin to shift the bar to release the detent plates and to draw the bolt in when said pin reaches the end of said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,102,528. ELECTROMAGNETIC BRAKE MECHANISM. WILLIAM D. LUTZ, Allendale, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 9, 1909. Serial No. 532,191. (Cl. 74—70.)



1. In brake apparatus, the combination with an electro-magnet, of an armature therefor, an elastic stop limiting the inward movement of the armature, said stop being inert at the beginning to perform its intended function and under compression at the final movement of the armature to attracted position, and brake mechanism connected to said armature.

2. In brake apparatus, the combination with an electromagnet, of an armature therefor, a brake, a brake applying spring, connections between said armature and brake for releasing the latter and compressing said spring when the electro-magnet is excited, and a device yieldingly opposing the final movement of the armature toward its attracted position and maintaining an opposing pressure thereon while in such position.

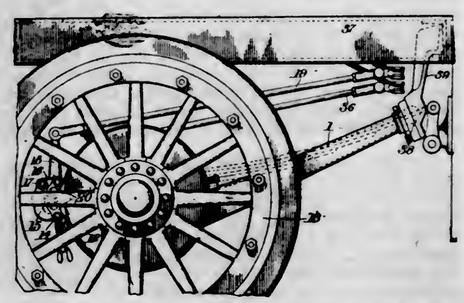
3. In brake apparatus, the combination with an electromagnet and its armature, of a brake spring opposing the movement of the armature toward its attracted position, and an additional spring inert at the beginning to perform its intended function and under compression at the final movement of the armature toward attracted position.

4. In brake apparatus, the combination with brake shoes, of brake applying springs, an electromagnet comprising magnet cores movable toward and from each other, connections between said cores and said brake shoes, and additional springs inert at the beginning to perform their intended functions and under compression at the final movement of said magnet cores toward attracted position.

5. In brake apparatus, the combination with an electromagnet having its winding in a stationary or fixed position, of armatures associated with said winding and movable toward and away from each other, elastic means under tension to perform their intended function when the armatures are in attracted position and limiting the movement of the armatures toward each other and compelling each to move through substantially the same distance, and brake mechanism connected to the armatures.

[Claims 6 to 19 not printed in the Gazette.]

1,102,529. BRAKE TORQUE-FRAME. WILLIAM MACGLASHAN, South Bend, Ind., assignor to The Studebaker Corporation, South Bend, Ind., a Corporation of New Jersey. Filed Feb. 26, 1913. Serial No. 750,712. (Cl. 21—8.)



1. In a road vehicle, an axle, a triangular torque frame connected to the axle and to the vehicle frame, a universal joint forming the latter connection, a brake carried by the torque frame and means for actuating the brake.

2. In a road vehicle, a rear axle, a triangular rigid torque member pivotally connected to the axle and to the vehicle frame at a single point near the center of gravity of the vehicle, a brake carried by the torque member, a brake drum on one wheel, and means for actuating the brake to apply friction to the drum.

3. In a road vehicle, a torque frame pivotally connected to the rear axle and having a pivotal connection with the vehicle frame at a single point near the center of gravity of the vehicle, a brake member carried by the torque frame, a coöperating rotary brake member, and means for actuating the brake.

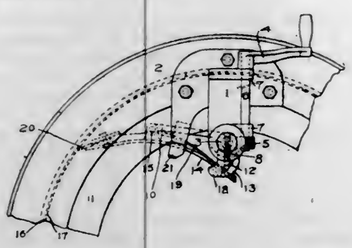
4. In a road vehicle, a rear axle housing, wheels, a rigid torque member pivotally connected to the housing and to the vehicle frame, the latter connection being at a single

point near the lateral center of the vehicle, a brake member carried by one wheel, a coöperating brake member carried by the torque frame and means for actuating the brake.

5. In a road vehicle, a rear axle housing, a rigid torque frame trunnioned on the housing and having a ball and socket connection with the vehicle frame near the center of the vehicle, a brake member carried by the torque frame, a coöperating rotary brake member, and means for actuating the brake.

[Claims 6 to 8 not printed in the Gazette.]

1,102,530. CENTRIFUGAL-MACHINE UNLOADER. EDWARD D. MACKINTOSH, New York, N. Y., assignor of one-half to S. S. Hepworth Company, New York, N. Y., a Corporation of New York. Filed Jan. 22, 1914. Serial No. 813,634. (Cl. 127—3.)



1. In an unloader for centrifugal machines, an arm, means for holding the arm in the basket of a centrifugal machine and for adapting it to be extended out partly under the top of the basket or withdrawn from thereunder, and a plow pivoted to the arm at a point where the arm is extendible under the basket top, to swing into and out of contact with the wall of the basket or the lining thereof.

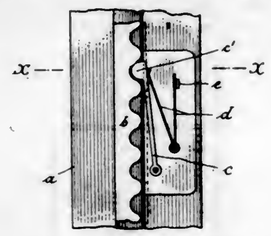
2. A bar extending into the basket of a centrifugal machine, means for supporting the bar, for preventing it from turning, and for moving it toward and from the basket bottom, an arm pivoted to the bar to swing partly under the top of the basket and away from thereunder, a stop on the arm coöperating with a stop on the bar to limit the swing of the arm outwardly under the basket top, and a plow so pivoted to such part of the arm as may be extended under the basket top as to swing into and out of contact with the wall of the basket or the lining thereof.

3. A bar extending into the basket of a centrifugal machine, means for supporting the bar, for preventing it from turning, and for moving it toward and from the bottom of the basket, an arm pivoted to the bar to swing partly under and away from under the top of the basket, and a stop on the arm, coöperating with a stop on the bar, to determine the extent to which the arm may swing outwardly under the top of the basket.

4. A bar extending into the basket of a centrifugal machine, means for supporting the bar, for preventing it from turning, and for moving it toward and from the bottom of the basket, an arm pivoted to the bar to swing partly under and away from under the top of the basket, a stop on the arm, coöperating with a stop on the bar, to determine the extent to which the arm may swing outwardly under the top of the basket, and means for varying the said extent.

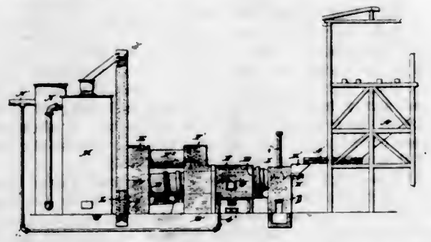
1,102,531. SASH-HOLDER FOR SLIDING SASHES. THOMAS MASON, Killarney, Ireland. Filed Mar. 7, 1913. Serial No. 752,741. (Cl. 16—19.)

In the herein described window holder for sliding sashes, the combination with the sliding stiles of the said sash, of a rack having semi-circular teeth and being fixed to the stile, a lever pivoted to the window frame and terminating in a semi-circular projection adapted to engage with the rack, and a spring mounted on the window frame and causing the said projection to keep in engagement



with the teeth of the rack, all substantially as and for the purpose specified and shown.

1,102,532. METHOD OF TREATING GARBAGE AND SEWAGE SLUDGE. ALBERT F. MATLACK, Philadelphia, Pa., assignor to Sewage & Garbage Power Co., a Corporation of Maine. Filed June 9, 1911. Serial No. 632,280. (Cl. 71—8.)



1. The method of treating garbage and sewage sludge consisting in feeding the sludge into a still and subjecting the exterior of the still to heat of a low temperature to drive off the volatile matters from the sludge without burning the solid matters, conducting the gases driven off from the still to a condensing chamber and treating the residual solid matters in a gas producer to convert the same into a combustible gas and a fertilizer.

2. The method of treating barbage and sewage sludge consisting in feeding the sludge into a still closed to the atmosphere, subjecting the solid in the still to heat of a low temperature to drive off the volatile matters from the material without burning the solid matter, condensing the volatile gases driven off from the material, separating the by-products contained in the condensation, and treating the solid residue from the still in a gas producer.

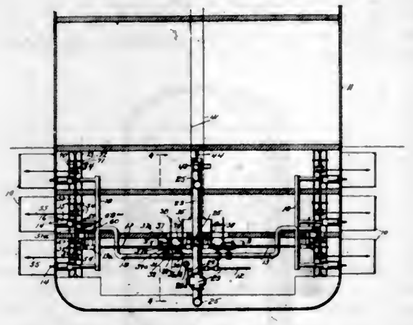
3. The method of treating garbage and sewage sludge consisting in initially subjecting the sludge to a low temperature to drive off the volatile matters therefrom, and subjecting the resultant product to treatment in a gas producer to convert the same into combustible gas and an ash.

4. The method of treating garbage and sewage sludge consisting in feeding the sludge to a continuously rotating container, subjecting the exterior of the container to heat at a low temperature to drive off the volatile matters from the material therein without burning the solid matters, and burning the resultant material in a gas producer to resolve it into a combustible gas and an ash.

5. The method of treating garbage and sewage sludge consisting in initially subjecting the sludge to a low temperature to drive off the volatile matters therefrom, conducting the volatile matters thus driven off to a condensing chamber, leading off the uncondensed gases from the condensing chamber, and treating the residual solid matters in a gas producer to convert the same into combustible gas and a fertilizer.

[Claims 6 and 7 not printed in the Gazette.]

1,102,533. SAFETY DEVICE FOR SHIPS. AMOS HENRY MATTHEW and JESSIE BERT PROUTY, Colville, Wash. Filed June 6, 1913. Serial No. 772,062. (Cl. 114—145.)



1. A safety device for marine vessels, comprising hinged wings on the exterior of the vessel, cables connected with said wings and leading to the interior of the vessel, drums for said cables, a shaft on which said drums are mounted means to hold said shaft against turning, and a fluid-actuated device for releasing said means.

2. In a safety device for marine vessels, brake wings on the exterior of the vessel hinged at their rear edges, cables attached to said wings and extending to the interior of the said vessel, winding drums for said cables, a shaft for actuating said drums, a drive shaft, means for making and breaking the driving connection between the drive shaft and the drum shaft, a device normally holding the drum shaft against turning, and fluid-controlled means for releasing said device.

3. In a safety device for marine vessels, brake wings hinged at their rear edges, cables connected with the wings and extending to the interior of the vessel, drums for winding said cables, an actuating shaft for said drums, a drive shaft, means to establish driving connection between the drive shaft and the drum shaft for winding the cables on the drums, a device normally holding the drum shaft against turning in a direction to unwind the cables, a fluid-controlled device to give an initial outward movement to the wings, a fluid-controlled means for releasing the device that holds the drum shaft, and means to supply a fluid under pressure simultaneously to both of said fluid-controlled means.

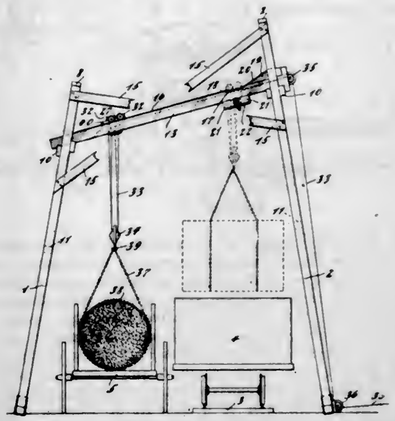
4. In a safety device for marine vessels, a series of brake wings on the exterior of the vessel, plungers carrying members to give an initial outward movement to the wings, cylinders in which said plungers have movement, a manifold communicating with said cylinders, an air pipe leading to said manifold, a standpipe, valve connections between the standpipe and the said air pipe, forwardly disposed cylinders communicating with the standpipe and rams operating in said forwardly disposed cylinders and extending forwardly beyond the bow of the vessel.

5. In a safety device for marine vessels, a series of brake wings on the exterior of the vessel, pilot rams projecting forwardly beyond the bow of the vessel, cylinders in which said rams are movable, a fluid-controlled means for giving an initial outward movement to the wings, and connections between said cylinders and said fluid-controlled means to cause said rams, when moving rearwardly in their cylinders, to exert air pressure against said fluid-controlled means.

[Claims 6 to 9 not printed in the Gazette.]

1,102,534. LOAD-TRANSFERRING APPARATUS. THOMAS SPENCER MILLER, South Orange, N. J. Filed Oct. 24, 1911. Serial No. 656,510. (Cl. 214—4.)

1. A load-transferring means, comprising a trackway having a recess, a movable track-section over the recess, a load carriage on the trackway, means whereby the movable track-section moves under the weight of the carriage and load, and means for lifting said track-section when the carriage is relieved of the load.



2. A load-transferring means, comprising a trackway having a recess, a movable track-section over the recess and movable into the same, a load carriage traveling on the trackway, and means for supporting the movable track-section under weight of the carriage but permitting the said section to enter the recess under weight of the carriage and load.

3. A load-transferring means, comprising a trackway having a recess, a movable track-section over the recess and forming a continuation of the trackway, and movable into said recess, a load carriage traveling on the trackway, and means whereby the said movable section automatically lowers the carriage into the recess under the weight of the carriage and load, and returns the track-section to normal position when the carriage is relieved of load.

4. A load-transferring means, comprising a trackway having a recess, a movable track-section over the recess and forming a continuation of the trackway, and movable into said recess, a load carriage traveling on the trackway, and spring means whereby the said movable section automatically lowers the carriage into the recess under the weight of the carriage and load, and returns the track-section to normal position when the carriage is relieved of load.

5. A load-transferring means comprising a trackway, a part arranged end to end, and in alinement with the trackway, the end of said part adjacent the end of the trackway being movable below the end of said trackway, a load carriage traveling on the trackway and means for supporting the said movable part under weight of the carriage but permitting the said section to be moved downward under weight of the carriage and load.

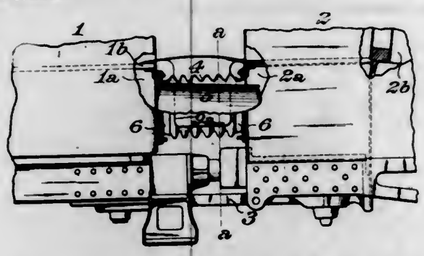
[Claims 6 to 23 not printed in the Gazette.]

1,102,535. CONNECTING-CONDUIT FOR LOCOMOTIVES AND TENDERS. JOHN E. MUHLFELD, Scarsdale, N. Y. Filed Dec. 31, 1913. Serial No. 809,698. (Cl. 105—17.)

1. The combination of a conduit of flexible material, adapted for the transfer of pulverized fuel from a tender to a locomotive, outwardly flanged frames abutting on similarly turned ends of said conduit, and means for securing said frames to a locomotive and to a tender, respectively.

2. The combination of a conduit of flexible material, adapted for the transfer of pulverized fuel from a tender to a locomotive, a rigid sleeve located within said conduit, with freedom of flexibility of the conduit relatively to the sleeve, and means for securing the opposite ends of the conduit to a locomotive and to a tender, respec-

tively, and securing one end of the sleeve relatively to the conduit.

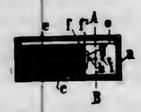


3. The combination of a conduit of flexible material, adapted for the transfer of pulverized fuel from a tender to a locomotive, and having outwardly turned ends, a rigid sleeve located within said conduit, with freedom of flexibility of the conduit relatively to the sleeve, and having an outwardly turned end abutting against one end thereof, outwardly flanged frames abutting on the similarly turned ends of the conduit, and means for securing said frames to a locomotive and to a tender, respectively.

4. The combination of a conduit of flexible material, adapted for the transfer of pulverized fuel from a tender to a locomotive, means for resisting collapse of said conduit, outwardly flanged frames abutting on similarly turned ends of said conduit, and means for securing said frames to a locomotive and to a tender respectively.

5. The combination of a conduit of flexible material, adapted for the transfer of pulverized fuel from a tender to a locomotive, outwardly flanged frames abutting on similarly turned ends of said conduit, means for securing said frames to a locomotive and to a tender, respectively, and an apron located above said conduit, and having downwardly turned side members extending opposite to and entirely clear of the sides of the conduit.

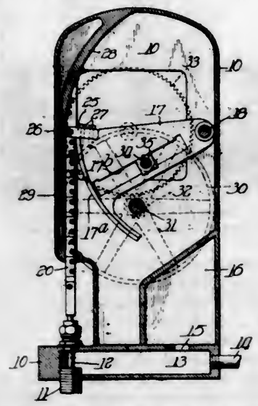
1,102,536. CONTAINER FOR STORING PHOTOGRAPHIC PLATES. ERWIN MÜLLER-BRALITZ, Berlin-Wilmersdorf, Germany. Filed Feb. 18, 1914. Serial No. 819,525. (Cl. 206—62.)



A container for storing photographic plates, comprising in combination, a three-walled casing adapted to inclose three edges of the plates to be stored and having a series of holes in its side walls, a cover on top of the casing, a downward middle projection on the inside of the cover to bear upon the fourth edge of the plates to be stored, two loose plates in said container adapted to be placed in front of the photographic plates, a loose rod transversely inserted in any position through said holes, and wedges to be clamped between said rod and said boundary plates to keep the latter in place upon the plates being inserted, substantially as and for the purpose set forth.

1,102,537. DRIVING MECHANISM FOR PUMPS. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Sept. 30, 1910. Serial No. 584,649. (Cl. 103—62.)

1. The combination in a pump, of a reciprocating piston rod, a rocking member for actuating the piston rod provided with a curved bearing surface, a connecting means secured at one extremity to the rocking member and at the other extremity to the piston rod, and coöperating with the curved bearing surface of the rocking member, said means comprise a plurality of pivotally connected links or plates provided with adjacent bearing surfaces whereby the said connecting member may be flexed out of the plane of the piston rod in one direction only to conform to the curved bearing surface of the rocking member, and is incapable of being flexed in the opposite direction out of the plane of the piston rod whereby both thrust and pull may be imparted to the piston rod from the rocking member.



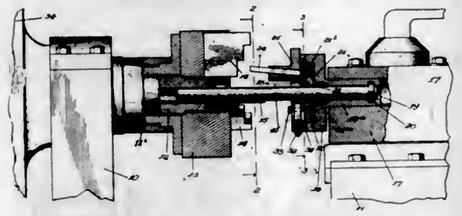
2. The combination in a pump of a reciprocating piston rod, a rocking member for actuating the piston rod being provided with a curved bearing portion, a connection between the piston rod and the curved bearing portion of the rocking member, said connection comprising a plurality of pivotally connected plates or links, the ends of which are provided with adjacent contacting portions whereby the said connection may be flexed to conform to the curved bearing portion of the rocking member, but is substantially nonflexible in all other directions, being positively connected at one end with the rocking member, and at the other end to the piston rod, a guide to prevent buckling due to a thrust upon the connection between the periphery of the rocking member and the piston rod, and means for actuating the rocking member.

3. The combination in a pump of a frame, a reciprocating piston rod, a rocking member for actuating the piston rod being provided with a curved bearing portion, a connection between the piston rod and the rocking member engaging the said curved concentric portion, said connection comprising a plurality of pivotally connected plates or links, the ends of which are provided with adjacent contacting portions whereby the said connection may be flexed to conform to the curved bearing portion of the rocking member, but is substantially nonflexible in all other directions, a stationary guide supported by the frame and being adapted to prevent the buckling of the said connection between the said curved contacting portion of the rocking member and the piston rod, when a thrust is imparted to the piston rod from the rocking member through the connection.

4. The combination in a pump, of a piston rod, a rocking member for actuating the piston rod provided with a convex bearing portion, a flexible connection between the rocking member and the piston rod, said flexible connection coöperating for a portion of said length with the curved bearing portion of the rocking member and being adapted for flexing in one plane only to conform to the convexed portion of the rocking member and being rigid against flexing in all other planes, and a stationary guide to prevent buckling of the said flexible connection between its connection on the rocking member and its connection with the piston rod when a thrust or down stroke is imparted by the rocking member through the connection to the piston rod.

5. The combination in a pump, of a reciprocating piston rod, a rocking member for actuating the piston rod provided with a curved bearing surface, a connecting means secured at one extremity to the rocking member, and at the other extremity to the piston rod and coöperating with the curved bearing surface of the rocking member, said connecting means comprising a plurality of pivotally connected links and plates each provided with adjacent abutting surfaces whereby the said connecting member may be flexed out of the plane of the piston rod in one direction only to conform to the curved bearing surface of the rocking member and is incapable of being flexed in the opposite direction out of the plane of the piston rod whereby both thrust and pull may be imparted to the piston rod from the rocking member, and a stationary guide to prevent buckling of the flexible member upon a thrust being imparted to the same by the curved rocking member, said stationary guide comprising a guide member provided with a substantially plane surface for engaging the connecting member to prevent buckling of the same between the periphery of the rocking member and the piston rod, and a portion provided with a curved surface approximately parallel and concentric with the path of travel of the curved bearing surface of the rocking member to prevent buckling of that portion of the connecting member in contact with the rocking member.

1,102,538. BORING-TOOL. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Dec. 20, 1911. Serial No. 666,924. (Cl. 82—19.)



1. In a boring tool, for boring meter casings and the like, the combination with a rotating chuck spindle, of a boring tool, means permitting a feeding movement of the boring tool longitudinally of the axis of the chuck spindle comprising a tool supporting member, a stationary housing to which the said tool supporting member is secured to reciprocate at approximately right angles to the axis of the chuck spindle, a shaft secured to rotate with the chuck spindle and having a portion thereof journaled in the axis of the said housing, a pattern member supported by the said shaft within the housing and rotatably secured thereto, said pattern member being provided with a cam groove, and means secured to the said tool supporting member adapted to coöperate with the groove of the said pattern member whereby the position of the tool may be varied from the axis of the chuck spindle synchronously with the rotation thereof.

2. In a boring tool for boring meter casings and the like, the combination with a rotating chuck spindle, of a boring tool, means for adjustably supporting the boring tool whereby it may be moved longitudinally of the axis of the chuck spindle, and means for varying the distance of the boring tool from the axis of the chuck spindle synchronously with the rotation of the chuck spindle, said means comprising a shaft rotatably secured to the said chuck spindle and mounted to rotate independently of the means for supporting the boring tool, a pattern cam secured to the said shaft and rotatable therewith, and means on said support for the boring tool adapted to engage the said pattern cam.

3. In a boring tool for boring meter casings and the like, the combination with a rotating chuck spindle, of a boring tool, means for supporting the boring tool comprising a member mounted to move at approximately right angles to the axis of the chuck spindle and permitting a feeding movement longitudinally of the chuck spindle, a shaft rotatably secured to the chuck spindle, a pattern cam rotatably secured to said shaft, and means on the tool support adapted to engage the said pattern cam whereby the distance of the boring tool from the axis of the chuck spindle may be varied synchronously with the rotation thereof.

4. In a boring tool for boring meter casings and the like, the combination with a rotating chuck spindle, of a shaft rotatably secured to rotate therewith but adapted to have longitudinal movement in relation thereto, a casing in which the said shaft is rotatably secured and being adapted to have a longitudinal feeding movement in relation to the chuck spindle, a pattern member loosely journaled in the said casing and being secured to rotate with the shaft, the said pattern member being provided with a pattern groove, a boring tool adapted to bore an object secured to rotate with the chuck spindle, a support for the boring tool movably mounted on the casing to move in a plane approximately at right angles to the axis of the said chuck spindle and the shaft, the said movable supporting member for the tool being in engagement with the said pattern cam whereby the distance of the boring tool from the axis of the chuck may be varied by the rotation of the chuck spindle.

5. In a boring tool for boring meter casings and the like, the combination with a rotating chuck spindle, of a boring tool, a support for the boring tool adapted to have a feeding movement longitudinally of the chuck spindle, a fixed casing adapted to furnish a sliding support for the member supporting the boring tool, a shaft secured to the chuck spindle and journaled within the said casing, a pattern within the casing rotatably secured to the shaft, the said pattern being provided with a cam groove, and a roller on the tool support in engagement with the said cam groove.

[Claims 6 to 12 not printed in the Gazette.]

1,102,539. PROCESS OF PRODUCING HYDROCHLORIC ACID. JOHN H. NIELD, Hackensack, N. J., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Aug. 21, 1909. Serial No. 514,629. (Cl. 23—1.)

1. The process of making hydrochloric acid which comprises treating with sulfuric acid, a mixture of common salt and a pulverulent, substantially inert material; the latter being in amount sufficient to prevent any substantial amount of liquefaction of the reacting materials at any stage of the process.

2. The process of making hydrochloric acid which comprises causing liquid sulfuric acid to act upon common salt in the presence of an amount of salt cake sufficient to substantially prevent fusion of the mass at any stage of the process.

3. The process of making hydrochloric acid which comprises causing sulfuric acid to act at successively increasing temperatures, upon a mixture of substantially equal parts of common salt and salt cake, until the conversion of the common salt and sulfuric acid into normal sodium sulfate and hydrochloric acid is substantially complete and while substantially avoiding liquefaction of the mass at any stage of the process.

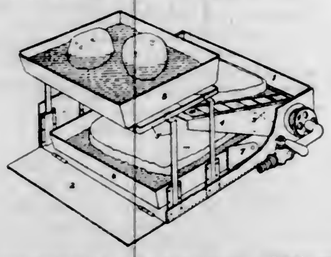
4. The improvement in the art of manufacturing hydrochloric acid from common salt and sulfuric acid which consists in heating to the requisite temperature a mixture of such substances and a neutral substance, thus permitting substantially all of the sulfuric acid and of the common salt to react with each other, to form salt cake, and hydrochloric acid, and thereby avoiding the formation of a pasty mass and the consequent stoppage of the operation, substantially as and for the purpose described.

5. The improvement in the art of manufacturing hydrochloric acid from common salt and sulfuric acid which consists in heating to the requisite temperature a mixture of such substances and salt cake, thus permitting substantially all of the sulfuric acid and of the common salt to react with each other, to form salt cake and hydrochloric acid, and thereby avoiding the formation of a pasty mass

and the consequent stoppage of the operation, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,102,540. COMBINATION COOKING APPARATUS. JOHN THOMAS ONIONS, Albany, N. Y. Filed Nov. 11, 1913. Serial No. 800,417. (Cl. 126—41.)

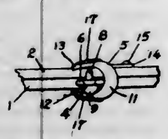


1. In combination a heat generator, a heat conductor located above the heat generator at an angle to the plane of the generator and pivotally attached thereto means for supporting cooking utensils above the heat conductor and means for roasting or broiling meats below the flame under the conductor, substantially as described.

2. In a cooking apparatus a heat generator, a heat conductor attached to said heat generator above the flame thereof and at an angle to the plane of the heat generator, standards adapted to support cooking utensils above the heat conductor, a pan adapted to contain meat below said heat conductor and means for toasting bread above the heat conductor.

3. In a cooking apparatus a container having a cover adapted to be removed, the front side of said container hinged to the bottom thereof, a heat conductor pivoted to the back of said container, means for conducting and burning gas or oil under said conductor, means for supporting said heat conductor at an angle to the bottom of said conductor, means for supporting cooking utensils above said conductor and above the flame under said conductor, a pan adapted to be located under the flame under said conductor and means for closing the opening around said pan under said heat conductor, substantially as described for the purposes set forth.

1,102,541. FASTENER FOR HAND-BAGS AND THE LIKE. KARL OSWALD, Irvington, N. J., assignor to David Morgenstern and Max Brill, Partners under firm-name of Morgenstern & Brill. Filed June 20, 1913. Serial No. 774,759. (Cl. 70—116.)



1. The combination with a pair of hinged frame sections, of a shoulder on one of said sections, a notched knob adapted to resiliently engage said shoulder and retain said sections together, and a secondary locking member for preventing said knob from being released, said secondary locking member being retained from opening by said knob.

2. The combination with a pair of hinged frame sections, of a shoulder on one of said sections, a notched knob adapted to resiliently engage said shoulder and retain said sections together, and a pivoted yoke preventing said knob from being released, said pivoted yoke being retained from opening by said knob.

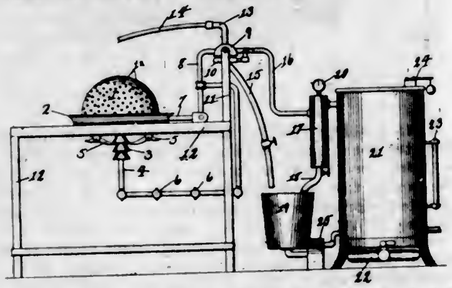
3. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke secured to the bag frame and adapted to lie with its closed end transversely across the tops of the bag frame sections at one end of the primary locking members when closed and its arms extending longitudinally of said sections on opposite sides of said primary locking members, said secondary locking member being hinged to one of the bag frame sections so as to swing upwardly away from the primary locking members with the extremities of its arms moving in a path whose radius is less than the distance from its center to the opposite side of the primary locking members.

4. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke hinged to the bag frame to close down upon the top thereof with its arms lying on opposite sides of the said primary locking members the closed end of said yoke being reinforced, and the arms increasing in resiliency toward their ends.

5. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke adapted to lie with its closed end transversely across the tops of the bag frame sections at one end of the primary locking members when closed and its arms extending longitudinally of said sections on opposite sides of said primary locking members, said secondary locking member being hinged to one of the bag frame sections so as to swing upwardly away from the primary locking members and having one of its arms adapted to enagge one of the primary locking members and resiliently snap past the same.

[Claims 6 to 9 not printed in the Gazette.]

1,102,542. STEAM HAT-BLOCKING MACHINE. ODER C. PENDLETON, Okmulgee, Okla. Filed Dec. 18, 1913. Serial No. 807,437. (Cl. 223—31.)

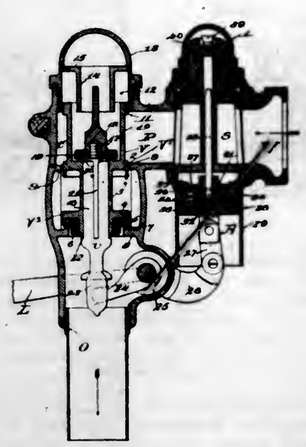


In combination a perforate hat-block, a bottom closing said perforate block, a hollow flange extending around said block, a table upon which said block is mounted, a steam-conveying pipe connected to the bottom of said hat-block, a plurality of stops carried by said steam-conveying pipe, means whereby said pipe is adjustable, releasable props engageable with said stops to adjustably support said hat block, a pipe connected to said flange, and a unitary source of fluid supply communicating with said first and second-mentioned pipes.

1,102,543. FLUSHING-VALVE FOR WATER-CLOSETS. CHARLES H. PHILLIPS, Maplewood, Mass., assignor to Phillips Flushing Tank Company, Portland, Me., a Corporation of Maine. Filed Apr. 10, 1908. Serial No. 426,234. (Cl. 137—93.)

1. A flushing valve, having, in combination, a main valve having a surface exposed to water under pressure tending to close the valve, a restricted passage for carrying water under pressure to said surface, a relief valve having an opening larger than said restricted passage for relieving the water pressure on said surface, means for opening the relief valve before the opening of the main valve and for preventing the relief valve from closing before the closing of the main valve, substantially as described.

2. A flushing valve having, in combination, a main valve adapted to be normally closed by the pressure of the water, a throttling valve connected with the main valve to move therewith and adapted to always allow a slight flow of water to the main valve and to allow a relatively large flow of water to the main valve when the main valve is entirely open, a relief valve constructed to allow a preliminary flow of water before the opening of the main valve, means permitting a restricted flow of water to the relief valve, and means for insuring a slow closing of the main valve operating to retain the relief valve in its open position during the closing of the main valve, substantially as described.



3. A flushing valve, having, in combination, a piston carrying a main valve, a chamber for receiving one end of the piston, a restricted passage for carrying water under pressure into said chamber, the water pressure tending to close the main valve, a relief valve adapted to discharge water from said chamber, means for opening the relief valve before the opening of the main valve and for preventing the relief valve from closing until after the closing of the main valve, substantially as described.

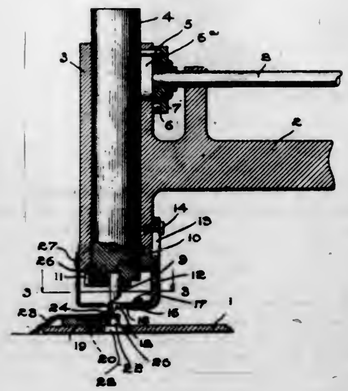
4. A flushing valve, having, in combination, a piston carrying a main valve, one end of the piston being exposed to water under pressure tending to close the main valve, means permitting a restricted flow of water under pressure to said piston end, a relief valve constructed to allow a preliminary flow of water before the opening of the main valve to relieve the pressure on said piston end, and means for insuring a slow closing of the main valve, said means being adapted to retain the relief valve in its open position during the closing of the main valve, substantially as described.

5. A flushing valve, having, in combination, a main valve, a water check comprising a hollow piston connected to and moving with the main valve, a downwardly opening piston chamber closed at the top and loosely receiving the piston, a thimble secured in said chamber having its upper end imperforately closed by the top of the piston chamber and forming with the side walls of the chamber an annular piston receiving space and with the top of the chamber an air-retaining space entirely closed at the top and sides and opening downwardly within the hollow piston, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,102,544. EMBROIDERY-TRIMMING APPARATUS. FREDERICK PRICE, Philadelphia, Pa. Filed Sept. 3, 1913. Serial No. 787,827. (Cl. 164—47.)

1. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a cutter adapted to move through the guide and cut the goods against the wall of the notch, substantially as described.



2. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a cutter conforming in shape to the shape of the guide and also conforming in shape to the shape of the notch, said cutter movable through the guide and adapted to cut the goods against the wall of the notch, substantially as described.

3. An embroidery trimming apparatus comprising a support for goods to be cut having a V-shaped notch in one edge, a triangular guide positioned above the support a distance approximately the thickness of the goods to be cut, and of a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a triangular cutter adapted to reciprocate through the guide and cut the goods against the wall of the notch, substantially as described.

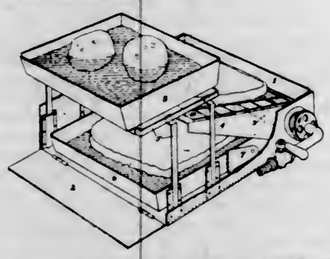
4. An embroidery trimming apparatus, comprising a base plate having an opening therein, a supporting frame, a cylindrical guide on the supporting frame, a reciprocating plunger in the guide, a cutter in the lower end of the plunger in line with the opening in the base plate, a cutter bar adjustable on the base plate and having a plurality of notches to its edge, said plate adapted to be moved to position any of said notches in line with the cutter, a guide through which the cutter reciprocates, said guide positioned between the cutter and the cutter blade and adapted to rest at its lower edge upon the goods to be cut and engage the embroidery, means for reciprocating the plunger, and a guard on the guide located in front of the cutter, substantially as described.

5. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, a cutter adapted to reciprocate through the guide, and said guide and said cutter of the same shape in cross section, said cutter adapted to cut the goods against the notched edge of the support, substantially as described.

and the consequent stoppage of the operation, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,102,540. COMBINATION COOKING APPARATUS. JOHN THOMAS ONIONS, Albany, N. Y. Filed Nov. 11, 1913. Serial No. 800,417. (Cl. 126—41.)

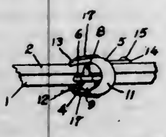


1. In combination a heat generator, a heat conductor located above the heat generator at an angle to the plane of the generator and pivotally attached thereto means for supporting cooking utensils above the heat conductor and means for roasting or broiling meats below the flame under the conductor, substantially as described.

2. In a cooking apparatus a heat generator, a heat conductor attached to said heat generator above the flame thereof and at an angle to the plane of the heat generator, standards adapted to support cooking utensils above the heat conductor, a pan adapted to contain meat below said heat conductor and means for toasting bread above the heat conductor.

3. In a cooking apparatus a container having a cover adapted to be removed, the front side of said container hinged to the bottom thereof, a heat conductor pivoted to the back of said container, means for conducting and burning gas or oil under said conductor, means for supporting said heat conductor at an angle to the bottom of said conductor, means for supporting cooking utensils above said conductor and above the flame under said conductor, a pan adapted to be located under the flame under said conductor and means for closing the opening around said pan under said heat conductor, substantially as described for the purposes set forth.

1,102,541. FASTENER FOR HAND-BAGS AND THE LIKE. KARL OSWALD, Irvington, N. J., assignor to David Morgenstern and Max Brill, Partners under firm-name of Morgenstern & Brill. Filed June 20, 1913. Serial No. 774,759. (Cl. 70—116.)



1. The combination with a pair of hinged frame sections, of a shoulder on one of said sections, a notched knob adapted to resiliently engage said shoulder and retain said sections together, and a secondary locking member for preventing said knob from being released, said secondary locking member being retained from opening by said knob.

2. The combination with a pair of hinged frame sections, of a shoulder on one of said sections, a notched knob adapted to resiliently engage said shoulder and retain said sections together, and a pivoted yoke preventing said knob from being released, said pivoted yoke being retained from opening by said knob.

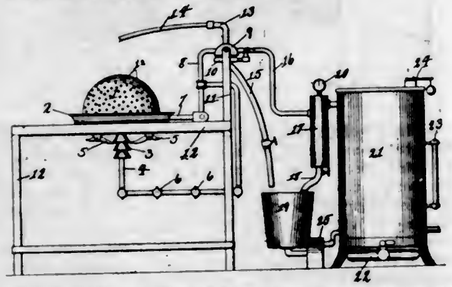
3. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke secured to the bag frame and adapted to lie with its closed end transversely across the tops of the bag frame sections at one end of the primary locking members when closed and its arms extending longitudinally of said sections on opposite sides of said primary locking members, said secondary locking member being hinged to one of the bag frame sections so as to swing upwardly away from the primary locking members with the extremities of its arms moving in a path whose radius is less than the distance from its center to the opposite side of the primary locking members.

4. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke hinged to the bag frame to close down upon the top thereof with its arms lying on opposite sides of the said primary locking members the closed end of said yoke being reinforced, and the arms increasing in resiliency toward their ends.

5. The combination with a bag frame comprising hinged sections, and primary locking members therefor, of a secondary locking member consisting of a U-shaped yoke adapted to lie with its closed end transversely across the tops of the bag frame sections at one end of the primary locking members when closed and its arms extending longitudinally of said sections on opposite sides of said primary locking members, said secondary locking member being hinged to one of the bag frame sections so as to swing upwardly away from the primary locking members and having one of its arms adapted to enagge one of the primary locking members and resiliently snap past the same.

[Claims 6 to 9 not printed in the Gazette.]

1,102,542. STEAM HAT-BLOCKING MACHINE. ODER C. PENDLETON, Okmulgee, Okla. Filed Dec. 18, 1913. Serial No. 807,437. (Cl. 223—31.)

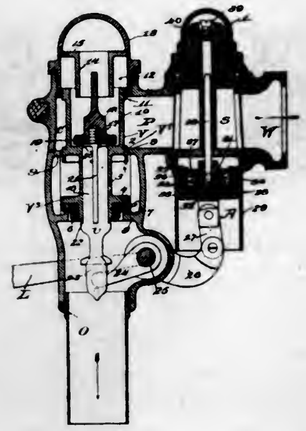


In combination a perforate hat-block, a bottom closing said perforate block, a hollow flange extending around said block, a table upon which said block is mounted, a steam-conveying pipe connected to the bottom of said hat-block, a plurality of stops carried by said steam-conveying pipe, means whereby said pipe is adjustable, releasable props engageable with said stops to adjustably support said hat block, a pipe connected to said flange, and a unitary source of fluid supply communicating with said first and second-mentioned pipes.

1,102,543. FLUSHING-VALVE FOR WATER-CLOSETS. CHARLES H. PHILLIPS, Maplewood, Mass., assignor to Phillips Flushing Tank Company, Portland, Me., a Corporation of Maine. Filed Apr. 10, 1908. Serial No. 426,234. (Cl. 137—93.)

1. A flushing valve, having, in combination, a main valve having a surface exposed to water under pressure tending to close the valve, a restricted passage for carrying water under pressure to said surface, a relief valve having an opening larger than said restricted passage for relieving the water pressure on said surface, means for opening the relief valve before the opening of the main valve and for preventing the relief valve from closing before the closing of the main valve, substantially as described.

2. A flushing valve having, in combination, a main valve adapted to be normally closed by the pressure of the water, a throttling valve connected with the main valve to move therewith and adapted to always allow a slight flow of water to the main valve and to allow a relatively large flow of water to the main valve when the main valve is entirely open, a relief valve constructed to allow a preliminary flow of water before the opening of the main valve, means permitting a restricted flow of water to the relief valve, and means for insuring a slow closing of the main valve operating to retain the relief valve in its open position during the closing of the main valve, substantially as described.



3. A flushing valve, having, in combination, a piston carrying a main valve, a chamber for receiving one end of the piston, a restricted passage for carrying water under pressure into said chamber, the water pressure tending to close the main valve, a relief valve adapted to discharge water from said chamber, means for opening the relief valve before the opening of the main valve and for preventing the relief valve from closing until after the closing of the main valve, substantially as described.

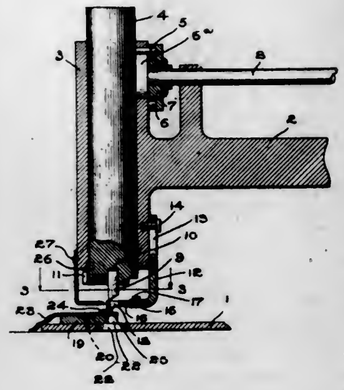
4. A flushing valve, having, in combination, a piston carrying a main valve, one end of the piston being exposed to water under pressure tending to close the main valve, means permitting a restricted flow of water under pressure to said piston end, a relief valve constructed to allow a preliminary flow of water before the opening of the main valve to relieve the pressure on said piston end, and means for insuring a slow closing of the main valve, said means being adapted to retain the relief valve in its open position during the closing of the main valve, substantially as described.

5. A flushing valve, having, in combination, a main valve, a water check comprising a hollow piston connected to and moving with the main valve, a downwardly opening piston chamber closed at the top and loosely receiving the piston, a thimble secured in said chamber having its upper end imperforately closed by the top of the piston chamber and forming with the side walls of the chamber an annular piston receiving space and with the top of the chamber an air-retaining space entirely closed at the top and sides and opening downwardly within the hollow piston, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,102,544. EMBROIDERY-TRIMMING APPARATUS. FREDERICK PRICE, Philadelphia, Pa. Filed Sept. 3, 1913. Serial No. 787,827. (Cl. 164—47.)

1. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a cutter adapted to move through the guide and cut the goods against the wall of the notch, substantially as described.



2. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a cutter conforming in shape to the shape of the guide and also conforming in shape to the shape of the notch, said cutter movable through the guide and adapted to cut the goods against the wall of the notch, substantially as described.

3. An embroidery trimming apparatus comprising a support for goods to be cut having a V-shaped notch in one edge, a triangular guide positioned above the support a distance approximately the thickness of the goods to be cut, and of a distance appreciably less than the combined thickness of the goods and the embroidery, said guide having at its free end a downwardly extending V-shaped bearing adapted to rest directly upon the goods, and a triangular cutter adapted to reciprocate through the guide and cut the goods against the wall of the notch, substantially as described.

4. An embroidery trimming apparatus, comprising a base plate having an opening therein, a supporting frame, a cylindrical guide on the supporting frame, a reciprocating plunger in the guide, a cutter in the lower end of the plunger in line with the opening in the base plate, a cutter bar adjustable on the base plate and having a plurality of notches to its edge, said plate adapted to be moved to position any of said notches in line with the cutter, a guide through which the cutter reciprocates, said guide positioned between the cutter and the cutter blade and adapted to rest at its lower edge upon the goods to be cut and engage the embroidery, means for reciprocating the plunger, and a guard on the guide located in front of the cutter, substantially as described.

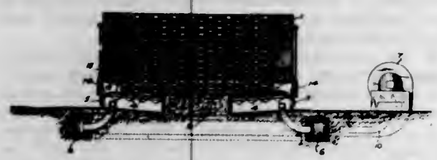
5. An embroidery trimming apparatus comprising a support for goods to be cut having a notch in one edge, a guide positioned above the support a distance approximately the thickness of the goods to be cut, and a distance appreciably less than the combined thickness of the goods and the embroidery, a cutter adapted to reciprocate through the guide, and said guide and said cutter of the same shape in cross section, said cutter adapted to cut the goods against the notched edge of the support, substantially as described.

1,102,545. TROUSERS-HANGER. EDGAR I. PROUTY, Albany, Oreg. Filed Jan. 5, 1912. Serial No. 669,522. (Cl. 211—13.)



A device of the character described, comprising a member made of a single length of spring wire bent midlength to form a spring coil from which extend in spaced relation two resilient stems each being continued in an obliquely extending crooked arm said crooked arms passing one another and held in juxtaposition, the lower ends of said crooked arms being normally held in parallel relation, each crooked arm ending in an oblong spring loop said loops extending at right angles to said stems each loop terminating in a counter-part crooked arm ending in a securing coil wound about the base of its connected stem, so that each loop is connected to its stem by a crooked arm of double thickness, in combination with two wooden jaws each having a skirting rabbet into which said loops are sprung, and means to hold said loops to said jaws.

1,102,546. METHOD OF BURNING BRICKS. JOHN C. QUINN, New York, N. Y., assignor to The Acme Furnace Equipment Company, New York, N. Y., a Corporation of New York. Filed Jan. 15, 1913. Serial No. 742,203. (Cl. 25—157.)



1. In the manufacture of bricks the process which consists in building and maintaining restricted fires substantially under the quarters of a stack of bricks in a kiln, utilizing for such purpose a portion only of the normal grate area of the kiln, and then enlarging such fires over the whole of the grate surface and quickening the same for normal firing.

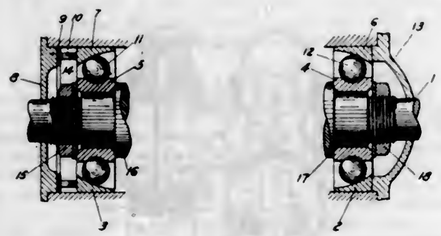
2. In the manufacture of bricks, the process which consists in water-smoking a stack of green bricks in a kiln by passing heated gas therethrough, heating such stack by means of slow fires disposed inwardly of the head ends of the stack and then heating the stack by larger and quicker fires to the point required for normal firing.

3. In the manufacture of bricks, the process which consists in water-smoking a stack of green bricks in a kiln by passing a heated gas therethrough, heating such stack by means of restricted fires disposed substantially beneath the quarters of the stack and then enlarging and quickening such firea to effect the burning of the clay.

4. In the manufacture of bricks, the process which consists, first, in water-smoking a stack or green bricks by means of heated gas under pressure above atmosphere, second, by moderately heating such stack by means of one or more fires disposed inwardly of the head ends of the stack, and, third, by highly heating the stack to burn the clay.

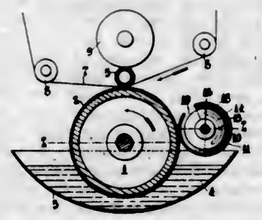
5. In the manufacture of bricks, the process which consists, first, in water-smoking a stack of green bricks by means of heated gas under pressure above atmosphere, second, by moderately heating such stack by means of one or more fires disposed substantially under the quarters thereof, and, third, by highly heating the stack by one or more fires which are operated with a forced-draft containing combustion gases.

1,102,547. ANTIFRICTION-BEARING. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Oct. 18, 1912. Serial No. 726,453. (Cl. 64—36.)



In an antifriction bearing, the combination with an inner and an outer race member and antifriction members therebetween, one of such race members having an oblique race way, of an annulus of resilient material of substantially the diameter of the race member having the oblique race way and provided with tongues projecting from the body of said annulus, and a support adjacent but spaced from said race member, said annulus being received between said support and said race member with its tongues under compression therebetween and acting to force said race member toward the antifriction members; substantially as described.

1,102,548. DEVICE FOR WIPING THE PRINTING-SURFACES OF INTAGLIO-PRINTING PRESSES. KARL RÖGER, Berlin, Germany, assignor to Linotype and Machinery Limited, London, England. Filed Mar. 28, 1914. Serial No. 827,798. (Cl. 101—104.)



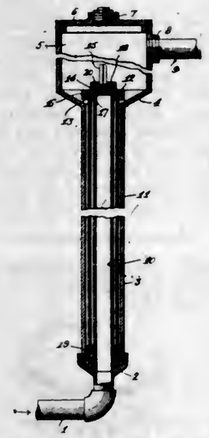
1. In a device for wiping an intaglio printing surface, the combination with a shell in the form of part of a cylinder, of a rigid frame to which the shell is attached at one of its longitudinal edges, and a shaft concentric with the shell and to which the frame is attached.

2. In a device for wiping an intaglio printing surface, the combination with a shell in the form of part of a cylinder, of a rigid frame to which the shell is attached at one of its longitudinal edges, a shaft concentric with the shell and to which the frame is attached, and means adapted to vary the resistance opposed to the movement of the shell toward the shaft.

3. In a device for wiping an intaglio printing surface, the combination with a shell in the form of part of a cylinder, of a rigid frame to which the shell is attached at one of its longitudinal edges, a shaft concentric with the shell, and on which the frame is angularly adjustable, and means for effecting such adjustment.

4. In a device for wiping an intaglio printing surface, the combination with a shell in the form of part of a cylinder, of a rigid frame to which the shell is attached at one of its longitudinal edges, a shaft concentric with the shell, and on which the frame is angularly adjustable, means for effecting such adjustment, and locking means for securing the frame and shell in adjusted position.

1,102,549. RELIEF-VALVE. HARRY J. RUMPF, Halethorp, Md., assignor of one-half to Lewis H. Phelps, Westfield, N. J. Filed May 9, 1912. Serial No. 696,273. (Cl. 137—53.)



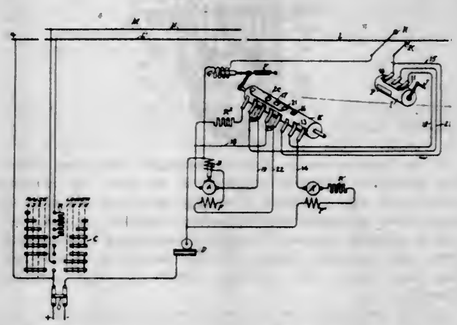
1. A relief valve comprising a casing having a body portion and an upper enlarged chamber connected thereto by an inclined wall, a water inlet pipe extending concentrically through the body portion and terminating slightly above the lower edge of said inclined wall, a bell normally resting on said inlet pipe and terminating near the bottom of the casing and forming, with the casing and inlet pipe, concentric annular chambers which connect the pipe with the upper enlarged chamber, a mercury seal in the bottom of the casing normally closing communication between said annular chambers, said bell having a head extending over the lower portion of the inclined wall and coöperating with the latter to return mercury forced from the casing back to the latter.

2. A relief valve comprising a casing having a body portion and an upper enlarged chamber connected thereto by an inclined wall, a water inlet pipe extending concentrically through the body portion and terminating slightly above the lower edge of said inclined wall, a bell normally resting on said inlet pipe and terminating near the bottom of the casing and forming, with the casing and inlet pipe, concentric annular chambers which connect the pipe with the upper enlarged chamber, a mercury seal in the bottom of the casing normally closing communication between said annular chambers, said bell being provided with a head overhanging the lower portion of the inclined wall, the underface of the head being inclined downwardly and outwardly from the bell for the purpose specified.

1,102,550. HOISTING-CONVEYANCE. CARL SCHIEBELER, Wilmersdorf, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 25, 1911. Serial No. 623,192. (Cl. 212—132.)

1. A carrier system having a hoisting and lowering station, trolley wire sections located at said station, a hoisting and lowering motor and a traveling motor energized from one of said sections, a reverser for the hoisting and lowering motor having actuating means energized by another of said sections, a single controller for the circuits of said motors and means in said circuits for preventing traveling motor from operating irrespective of the position of the controller when the load holding means is in other than its highest position.

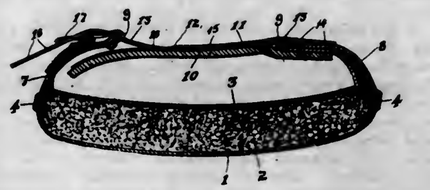
2. A carrier system comprising a hoisting and lowering motor, a controller therefor movable in opposite directions from the off position for raising and lowering respectively, a traveling motor, a reverser biased to one position, electromagnetic means energized through the controller for moving it to the opposite position, and connections whereby the traveling motor will be energized in only one position of the reverser and the hoisting and lowering motor reversed in the opposite positions thereof.



1,102,551. MANUFACTURE OF FOOD FATS MORE PARTICULARLY FOR THE PREPARATION OF PASTRIES AND THE LIKE. PETER ADAM SCHMITT, Hamburg, Germany. Filed July 10, 1913. Serial No. 778,401. (Cl. 99—13.)

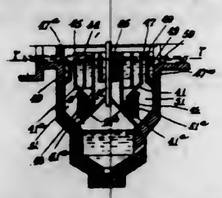
Process of treating vegetable fats in order to adapt them for baking purposes, which consists in adding to a mixture of the vegetable fats with milk a solution of casein and an albumen, at a temperature which precludes the coagulation of the albumen.

1,102,552. GLOVE. WILLIAM E. SELL, Canton, Ohio, assignor to The Sell Horse Goods Company, Canton, Ohio, a Corporation of Ohio. Filed Jan. 12, 1914. Serial No. 811,577. (Cl. 2—195.)



In a glove provided with a hand pocket having a cut-away portion providing a back wrist opening and lateral wrist flaps at the sides of said opening, means for retaining the glove on the hand, comprising a wrist pad, a buckle and a strap, said wrist pad comprising an inner, soft, flexible lining member and an outer back member, both of a length adapted to extend beyond the inner edges of said wrist flaps, said lining and said outer back member fixedly connected to and including between them one of said lateral wrist flaps, said strap extending through an aperture in said outer back member intermediate the ends thereof and having one end fastened to one of said lateral wrist flaps, under said outer back member, said buckle connected to the other lateral wrist flap upon the outer side thereof, the free end of said strap adapted for connection to said buckle, and the free end of said wrist pad, including the lining member and back member, extending beneath one of said lateral wrist flaps.

1,102,553. SEWAGE-TANK FOR THE PURIFICATION OF SEWAGE. EUGEN SEUBERT, Munich, Germany. Filed Nov. 11, 1912. Serial No. 730,777. (Cl. 210—5.)



1. An apparatus for treating sewage, embodying a casing having a sediment chamber in its base, an inclined cover over said chamber, a sewage receiving chamber on said cover arranged approximately centrally of said casing, a sinuous course or raceway extending continuously from said receiving chamber to the periphery of said casing, and means for feeding sewage to said receiving chamber.

2. An apparatus for treating sewage, embodying a casing having a sediment chamber in its base, an inclined cover over said chamber provided with openings for the passage of sediment into said chamber, a sewage receiving chamber on said cover arranged approximately centrally of said casing, a sinuous course or raceway in communication with said receiving chamber and extending continuously therefrom to the periphery of said casing, and means for feeding sewage to said receiving chamber.

3. An apparatus for treating sewage, embodying a casing having a sediment chamber in its base and its walls inclined above said sediment chamber, an inclined cover over said chamber and having its lower edges terminating near the lower ends of said inclined walls, a sewage receiving chamber on said cover arranged approximately centrally of said casing, a sinuous course or raceway extending continuously from said receiving chamber to the periphery of said casing, and means for feeding sewage to said receiving chamber.

4. An apparatus for treating sewage, embodying a casing having a sediment chamber in its base, an inclined cover over said chamber, a plurality of curved vertical partitions on said cover, said partitions having formed therebetween a central sewage receiving chamber and a continuous course or raceway extending from said receiving chamber to the periphery of said casing, and means for feeding sewage to said sewage receiving chamber.

5. An apparatus for treating sewage, embodying a casing having a sediment chamber in its base, an inclined cover over said chamber, brackets or pedestals carried by the walls of said casing, angle iron bars carried by the lower edges of said cover and connected to said pedestals to provide orifices through which sediment may pass into said sediment chamber, a sewage receiving chamber on said cover arranged approximately centrally of said casing, a sinuous course or raceway extending continuously from said receiving chamber to the periphery of said casing, and means for feeding sewage to said sewage receiving chamber.

[Claims 6 to 10 not printed in the Gazette.]

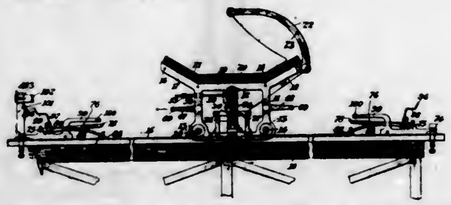
1,102,554. DANDY-ROLL. HENRY M. SPENCER, South Hadley Falls, Mass. Filed Aug. 5, 1912. Serial No. 713,450. (Cl. 92—48.)



1. A dandy roll consisting of a central shaft having a longitudinal rib, several pairs of heads or ring frames slidably engaged with the shaft, and having recesses in which the rib of the shaft is engaged, a plurality of openwork annular frames, each comprising truss wires, longitudinal wires and winding wires, the latter being longitudinally recessed along the length of the annular frame, a plurality of outer woven wire cylindrical coverings slidably engaged about, and inclosing, the annular frames, and each having a rib longitudinally at its inner side in engagement with the recesses in the winding wire of the annular frame inclosed thereby, and nuts screwing on the end portions of the shaft and having engagements with the proximate ring frames.

2. In a dandy roll, a central support comprising a comparatively long axially located longitudinally extending shaft, a plurality of openwork annular frames each of less length than said shaft, longitudinally slidably engageable with said central support, means for preventing rotative movement of said annular frames relatively to the central support, means for confining the several annular frames in endwise proximity and against longitudinal displacement, and a plurality of outer woven wire coverings inclosing and slidably engageable on the respective annular frames, and having rib and groove rotative motion-preventing engagements with the latter.

1,102,555. CLOTH-LAYING MACHINE. CHARLES J. SUSSMAN, Corona, N. Y. Filed Feb. 3, 1914. Serial No. 816,162. (Cl. 223—3.)



1. In a cloth laying machine the combination with a cutting table and a carriage movable from end to end thereof, of a frame, hangers in pairs pivotally connected at opposite sides of the said frame, a presser bar extending between and connected to each pair of hangers, an auxiliary member having notches in one edge thereof associated with each presser bar, means operative when the carriage is adjacent the ends of its travel for engaging the forward pair of hangers to raise their presser bar and associated auxiliary member out of position, a pair of superimposed cross bars, gripping devices associated with the lower cross bar, devices for normally connecting the said cross bars, and means operative when the carriage is at the end of its travel in either direction for raising the upper cross bar and with it the lower cross bar and then releasing the lower cross bar with which the said gripper devices are associated, permitting it to fall to co-act with the other presser bar to form a loop in the cloth and to cause the said gripper devices to engage the cloth and hold the same in position.

2. In a cloth laying machine the combination with a cutting table and a carriage movable from end to end thereof, of a frame, hangers in pairs pivotally connected at opposite sides of the said frame, a presser bar extending between and connected to each pair of hangers, an auxiliary member having notches in one edge thereof associated with each presser bar, means operative when the carriage is adjacent the ends of its travel for engaging the forward pair of hangers to raise their presser bar and associated auxiliary member out of position, a pair of cross bars superimposed, one on the other, a series of teeth extending from the under surface of the lower cross bar, devices for normally maintaining the said cross bars together, means for raising the upper cross bar and with it the lower cross bar when the carriage is at the end of its travel, and means also operative when the carriage is at the end of its travel for releasing the lower cross bar, permitting the same to drop to co-act with the other presser bar to form a loop in the cloth and at the same time cause the said teeth to pass through the cloth into the notches in the auxiliary member associated with the said other presser bar to hold the cloth in position.

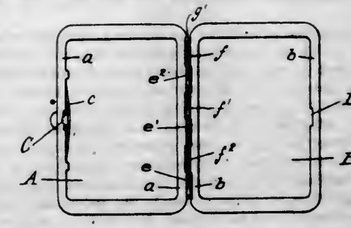
3. In a cloth laying machine the combination with a cutting table and a carriage movable from end to end thereof, of a frame, hangers in pairs pivotally connected at opposite sides of the said frame, a presser bar extending between and connected to each pair of hangers, an auxiliary member having notches in one edge thereof associated with each presser bar, means operative when the carriage is adjacent the ends of its travel for engaging the forward pair of hangers to raise their presser bar and associated auxiliary member out of position, a pair of cross bars superimposed one on the other, a series of teeth extending from the under surface of the lower cross bar, a latch for normally connecting the cross bars, means operative when the carriage is at the end of its travel for raising the upper cross bar and with it the lower cross bar, and means also operative when the carriage is at the end of its travel for releasing the said latch, permitting the under cross bar to fall to coöperate with the other presser bar to form a loop in the cloth, and to permit the said teeth to pass through the goods into the notches in the auxiliary member associated with the said other presser bar to hold the cloth in position.

4. In a cloth laying machine the combination with a cutting table and a carriage movable from end to end thereof, of a frame, hangers in pairs pivotally connected at opposite sides of the said frame, a presser bar extending between and connected to each pair of hangers, an auxiliary member having notches in one edge thereof associated with each presser bar, means operative when the carriage is adjacent the ends of its travel for engaging the forward pair of hangers to raise their presser bar and associated auxiliary member out of position, a rocker shaft, arms fixed at one end on the said rocker shaft, a cross bar extending between the other ends of the said arms, arms loosely mounted at one end on the said rocker shaft, a cross bar extending between the free ends of the said loosely mounted arms, and normally lying beneath the aforesaid cross bar, a series of teeth extending from the under surface of the said lower cross bar, means for normally maintaining the cross bars together, means operative when the carriage is adjacent the end of its travel for actuating the said rocker shaft to raise the said arms fixed thereto, together with their cross bar and the lower toothed cross bar connected thereto, and means also operative when the carriage is at the end of its travel for releasing the said lower cross bar, permitting the same to drop to coöperate with the other presser bar to form a loop in the cloth, and to simultaneously cause the said teeth to pass through the cloth into the notches in the auxiliary member associated with the said other presser bar to hold the cloth in position.

5. In a cloth laying machine the combination with a cutting table and a carriage movable from end to end thereof, of a frame, hangers in pairs pivotally connected at opposite sides of the said frame, a presser bar extending between and connected to each pair of hangers, an auxiliary member having notches in one edge thereof associated with each presser bar, means operative when the carriage is adjacent the ends of its travel for engaging the forward pair of hangers to raise their presser bar and associated auxiliary member out of position, a rocker shaft, a pair of arms fixed at one end to the said rocker shaft, a cross bar connected to and extending between the free ends of the said arms, a pair of arms loosely mounted at one end on the said rocker shaft, a cross bar extending between and connected to the free ends of the said loosely mounted arms, a series of teeth in spaced positions extending from the lower surface of the under cross bar, a latch pivoted to the upper cross bar, a pin connected to the lower cross bar and adapted normally to be engaged by the said latch to connect the said cross bars together, a stop arm connected to the said rocker shaft, a bracket connected to the end of the carriage, a roller at the end of the said bracket, and adapted when the carriage is at the end of its travel to strike the said stop arm partially revolving the said rocker shaft to raise the said cross bars, and a trip adapted to engage the said latch when the carriage is at the end of its travel to release the said under cross bar to permit the same to fall to coöperate with the other presser bar to form a loop in the cloth, and at the same time cause the said teeth to pass through the cloth into notches in the auxiliary member associated with the said other presser bar to hold the cloth in position.

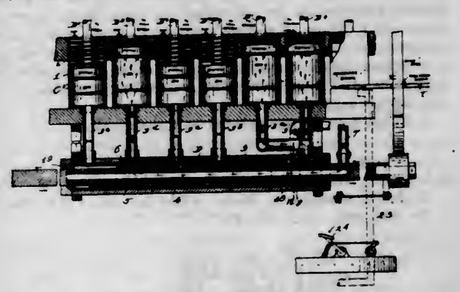
[Claim 6 not printed in the Gazette.]

1,102,556. SPRING-HINGE. FRED M. SWARTZ, Providence, R. I., assignor of one-half to Charles Manshel, Providence, R. I. Filed Sept. 11, 1913. Serial No. 789,245. (Cl. 16—25.)



Two members, spaced knuckles upon one member, one of said knuckles being provided with a slot, spaced knuckles upon the other member alternating with the first-named knuckles, a resilient, torsional pintle traversing all of the knuckles and fixed in one of the knuckles of the second member with an end concealed within one of said knuckles, and a lateral extension upon said pintle extending into said slot.

1,102,557. CONTROL SYSTEM FOR POWER-TRANSMISSION MECHANISM. NICHOLAS TAYLOR, Muskogee, Okla., assignor of one-eighth to Frank Stroupe, one-fifth to George Updegraff, and one-eighth to E. A. Edmondson. Filed Sept. 14, 1912. Serial No. 720,391. (Cl. 74—59.)



1. In a system of control for power transmission mechanism; a series of fluid-pressure driven selective actuators, each adapted to control a selective power-transmitting element, an independent fluid-pressure driven master actuator adapted to control a master driving element, a selecting valve adapted to determine the supply of fluid-pressure medium in all of the selective actuators, and a master valve adapted to determine the supply of fluid-pressure medium in the master actuator, and also the flow of fluid-pressure medium through the selecting valve.

2. In a system of control for power transmission mechanism; a series of fluid-pressure driven selective actuators, each adapted to control a selective power-transmitting element, an independent fluid-pressure driven master actuator adapted to control a master driving element, a selecting valve adapted to determine the supply of fluid-pressure medium in all of the selective actuators, and a master valve adapted to determine the supply of fluid-

pressure medium in the master actuator, and also the flow of fluid-pressure medium through the selecting valve, and a common manual control-element for both of said valves.

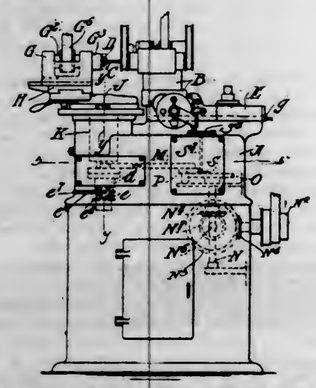
3. In a system of control for power transmission mechanism; a series of fluid-pressure driven selective actuators, each adapted to control a selective power-transmitting element, an independent fluid-pressure driven master actuator adapted to control a master driving element, a selecting valve adapted to determine the supply of fluid-pressure medium in all of the selective actuators, and a master valve adapted to determine the supply of fluid-pressure medium in the master actuator, and also the flow of fluid-pressure medium through the selecting valve, and a common manual control-element for both of said valves having one movement for adjusting the selecting valve and an independent movement for adjusting the master valve.

4. In a system of control for power transmission mechanism; a series of fluid-pressure driven selective actuators, each adapted to control a selective power-transmitting element, an independent fluid-pressure driven master actuator adapted to control a master driving element, a selecting valve adapted to determine the supply of fluid-pressure medium in all of the selective actuators, and a master valve adapted to determine the supply of fluid-pressure medium in the master actuator, and also the flow of fluid-pressure medium through the selecting valve, a common manual control-element for both of said valves having one movement for adjusting the selecting valve and an independent movement for adjusting the master valve, and a barrier encountered by said manual control element in moving the master valve to throw in the master driving element and preventing said manual control element from moving the selecting valve until after it moves the master valve to throw out the master driving element.

5. In a system of control for power transmission mechanism; a series of selective actuators, each adapted to control a distinct power transmitter, conduits adapted to deliver fluid-pressure medium to each of the selective actuators in the direction to cause it to throw in its power transmitter, a spring for each selective actuator adapted to move it in the direction to throw out its power transmitter, a master actuator adapted to control a master driver, a conduit supplying fluid-pressure medium to the master actuator in the direction to cause it to throw in the master driver, a spring adapted to move said master actuator in the direction to throw out the master driver, a selecting valve controlling the conduits of the selective actuators, and a master valve controlling the conduit of the master actuator.

[Claims 6 to 28 not printed in the Gazette.]

1,102,558. GRINDING-MACHINE. CHARLES E. VAN NORMAN, Springfield, Mass. Filed Jan. 30, 1914. Serial No. 815,368. (Cl. 51—4.)



1. In a machine of the character described, in combination, a spindle carrying a rotary tool and means for rotatively driving it, a work carrying head mounted for oscillation on an axis angular to the axis of the tool spindle, means for imparting oscillatory movement to said head which is adapted to be connected with and disconnected from the latter, and means located on a fixed part of the machine and adapted to control the action of the connecting and disconnecting means.

2. In a machine of the character described, in combination, a spindle carrying a rotary tool and means for rotatively driving it, a work carrying head located for oscillation on an axis angular to the axis of the tool spindle, a member adapted to move in coöperative axial relation with said head, means for adjusting the field of oscillation of said member and head, means for imparting oscillatory movement to said member, means for disconnecting said member and oscillation imparting mechanism and for re-connecting at the proper location, and means located on a fixed part of the machine and adapted to control the action of the connecting and disconnecting means while the oscillation imparting mechanism is in motion.

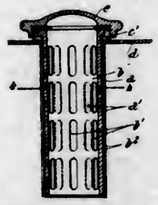
3. In a machine of the character described, in combination, a spindle carrying a rotary tool and driving means therefor, a head mounted for oscillation, a vertical pivotal post connected with said head, a spindle journaled in said head, and means for imparting oscillatory movement to the head, a bed on the top of which the base of said head has a surface contacting bearing support, a supporting portion of such contact surface having a location directly under a substantial bearing portion of the length of the spindle journaled in said head, and means for constituting a journal bearing for the said vertical post.

4. In a machine of the character described, in combination, a horizontal rotary tool carrying spindle and means for driving it, a head arranged for oscillation on a vertical axis, and having a journal support, in which a rotary work carrying shaft is mounted, a bed on the top of which the base of said head has a surface contacting bearing support, a supporting portion of such contact surface having a location directly under a substantial portion of the length of the spindle journaled in said head, means for imparting oscillatory motion to said head, and means for disconnecting the head and the motion imparting means therefor, and for reconnecting them in proper relation which means are operable during the action of the oscillation motion imparting means.

5. In a machine of the character described in combination, a bed, a feed-slide, having a horizontal tool carrying spindle movably mounted on the bed, a vertical post, to be oscillated, having bearing supports within the bed, a head having a horizontal work-carrying shaft, the base of which head is connected to an upper portion of said post, an annular member, surrounding, and revolubly movable relatively to, the post, a member affixed to the post adjacent the annular member, means for detachably locking said members together, while the means for oscillating the annular member are in motion.

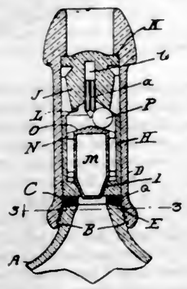
[Claims 6 to 32 not printed in the Gazette.]

1,102,559. SAFETY-PLUG FOR VESSELS CONTAINING INFLAMMABLE LIQUIDS. EGISTE VERNEUIL, Paris, France, assignor to Societe Henri Gras & Cie., Paris, France, a Corporation of France. Filed Oct. 20, 1913. Serial No. 796,362. (Cl. 220—121.)



In a safety or flame stopping plug adapted to fit the opening of a receptacle or conduit for inflammable liquids, the combination of two tubes fitting into, and secured to each other, each tube being provided with openings arranged in staggered relationship with those on the other tube, the inner tube being screw-threaded on its outer face so as to form conduits or passages of very small cross-section which establish communication between the staggered openings of the tubes, means being provided for securing the device to the receptacle or conduit to which it is fitted.

1,102,560. NON-REFILLING BOTTLE. SAMUEL S. WILLIAMSON, Philadelphia, Pa. Filed Mar. 25, 1910. Serial No. 551,536. (Cl. 215—62.)



1. In a non-refilling device consisting of a buoyant valve, a valve seat to which said valve is fitted, a ball normally resting upon said valve, and a plunger fitted to slide in a straight line adapted to automatically lock the ball upon the valve.

2. In a device of the character described, a valve casing, a valve seat formed therein, a buoyant valve fitted to slide in said casing, a ball normally resting on the top of the valve, and a keeper fitted over the ball and a plunger fitted to slide in the keeper on the axial line of the valve and automatically lock and unlock the ball by the change of position of the device.

3. In a non-refillable receptacle, the combination of a valve seat therein, a valve adapted to co-act with said seat, a keeper mounted above the valve and having a straight bore in its vertical center open at its inner end, a plunger snugly fitted in said bore so as to move only on said vertical center, and a ball disposed between the keeper and valve, and adapted to coöperate with the valve and plunger.

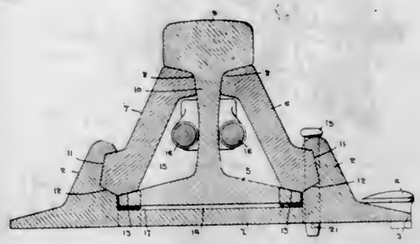
4. A non refilling bottle comprising a body, a neck, a valve case secured in said neck, a buoyant valve adapted to close upon a valve seat formed in the case, a keeper also secured in the neck and having a conical shaped recess formed in its under side, a ball adapted to wedge in the space formed between the valve and keeper and a sliding pin moving in a straight axial line with the valve adapted to automatically lock the ball in contact with the valve when the bottle is in certain positions and release said ball when the bottle is in certain other positions.

5. In a bottle, a non refilling device consisting of a valve seat, a valve, a ball adapted to contact with said valve and a vertical sliding plunger adapted to automatically lock said ball in contact with the valve, when the device is in certain positions and release said ball when the device is in certain other positions.

[Claims 6 to 10 not printed in the Gazette.]

1,102,561. SAFETY BOLTLESS RAIL-JOINT. JEFFERSON D. YOUNG, Chattanooga, Okla., assignor to The Boltless Rail Joint Company, Wilmington, Del., a Corporation. Filed Feb. 5, 1913. Serial No. 746,331. (Cl. 239—6.)

1. A herein described rail joint comprising a chair member, vertical and parallel flanges formed on the sides of said chair, a rail to be received between said flanges and spaced from the bottom of a chair, said flanges extending above said base of the rail, a pair of straight bracing sections having one edge fitted directly under the head of the rail and in contact with the contiguous portion of the web thereof, said sections diverging downwardly and having the lower edge thereof enlarged and substantially hexagonal in transverse cross sections and provided with five faces having substantially the relation to each other of the five faces of a hexagon, said flanges of the chairs having upwardly over hanging edges each forming a recess having faces to receive three of said hexagonal faces while another of said hexagonal faces rests upon the base of the rail, and one of the faces of the flanges and braces being at right angles to the line of compression strain so that the weight exerted upon the tread of the rail will be fully received upon said face and sole supported by the chair.



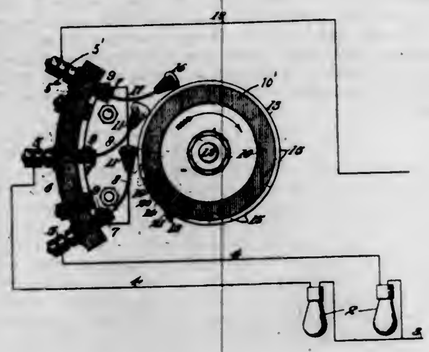
2. The herein described rail joint comprising a chair member, vertical and parallel flanges formed on the sides of said chair, the rail to be received between said flanges and spaced from the bottom of said chair, said flanges extending above the base of said rail, a pair of straight bracing sections having one edge fitted directly under the head of the rail in contact with a contiguous portion of the web thereof, said sections diverging downwardly and having their lower edges enlarged and substantially hexagonal in transverse cross sections, and formed with five hexagonal faces, said flanges of the chairs having inwardly over hanging edges each forming a recess and a vertically extending aperture therein extending through the base of the chair and communicating with said recess, said flanges having faces to receive three of said faces of said brace while the other of the faces thereof rests upon the base of the rail, the outer edge of said enlarged edge of the brace being notched and adapted to register with the apertures through the flange and chair, one of said faces of the flanges and braces being at right angles to the line of compression strain so that the weight applied upon the rail will be directly transmitted to said face, and a pin adapted to extend through and be secured in said apertures for holding said brace members rigidly in the position set forth, thus preventing any longitudinal, lateral or vertical movement of the brace members.

1,102,562. ELECTRIC SWITCH. NILS O. ANDERSON, San Francisco, Cal. Filed June 23, 1913. Serial No. 775,355. (Cl. 177—348.)

1. An electric switch for intermittently opening and closing electric circuits, comprising a rotary cylindrical conductor with a series of circumferentially alined apertures, a driving device and support for the conductor, an arcuate bearing concentrically arranged about the cylinder, a series of radial binding posts inserted in said bearing, with clamps at their inner ends, and curved flexible switch blades mounted in the clamps and bearing tangentially on the cylinder in the plane of said apertures, and a switch blade and its clamp mounted on the bearing and engaging an imperforate part of the cylinder for constantly electrifying the same.

2. An electric switch for intermittently opening and closing electric circuits, comprising a rotary cylindrical conductor with a series of circumferentially alined apertures, a driving device and support for the conductor, an arcuate bearing concentrically arranged about the cylinder, a series of radial binding posts inserted in said bearing, with clamps at their inner ends, and curved flexible

switch blades mounted in the clamps and bearing tangentially on the cylinder in the plane of said apertures, and a switch blade and its clamp mounted on the bearing and engaging an imperforate part of the cylinder for constantly electrifying the same, said support being a non-conductor and having depressions into which the ends of the flexible blades snap through the apertures.



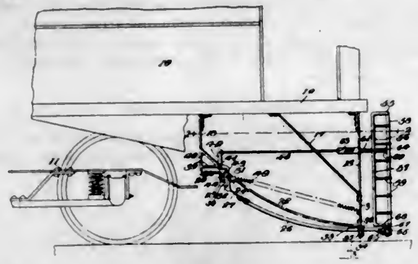
3. An electric switch for intermittently opening and closing electric circuits, comprising a rotary cylindrical conductor with a series of circumferentially alined apertures, a driving device and support for the conductor, an arcuate bearing concentrically arranged about the cylinder, a series of radial binding posts inserted in said bearing, with clamps at their inner ends, and curved flexible switch blades mounted in the clamps and bearing tangentially on the cylinder in the plane of said apertures, and a switch blade and its clamp mounted on the bearing and engaging an imperforate part of the cylinder for constantly electrifying the same, said support being a non-conductor and having depressions into which the ends of the flexible blades snap through the apertures, the bottoms of said depressions being curved upwardly and outwardly above the apertures.

4. An electric switch for intermittently opening and closing electric circuits, consisting of a body formed of insulating material and a shell formed of conducting material and placed over said body, said body and shell having registering apertures, said body also having shoulders which lead from the apertures of the body and project through the shell and extend beyond the periphery of the shell, and a bearing having spring arms thereon the free ends of which arms are for engagement in said apertures and with the shoulders.

5. An electric switch for intermittently opening and closing electric circuits, consisting of a body formed of insulating material and a shell formed of conducting material and placed over said body, said body and shell having registering apertures, and a bearing having spring arms thereon the free ends of which arms are for engagement in said apertures, said arms and apertures being so proportioned that the sides of the free ends of the arms when in said apertures will be in spaced relation to the side walls which the apertures in the shell define.

1,102,563. SAFETY STREET-CAR FENDER. VANCE J. ANDERSON, Chicago, Ill. Filed Jan. 9, 1913. Serial No. 741,037. (Cl. 105—255.)

1. A car fender including a supporting frame having spaced apart downwardly and forwardly inclined tracks provided adjacent their forward ends with roller bearings, a fender mounted for movement along said tracks and resting upon said roller bearings, additional roller bearings carried by the rear end of the fender and bearing above and below the tracks, springs tending to normally hold the fender in advanced position upon the tracks, a trigger carried by the frame and engaging the fender to hold the same in retracted position, a buffer, and means operable by impact against the buffer for releasing the trigger.

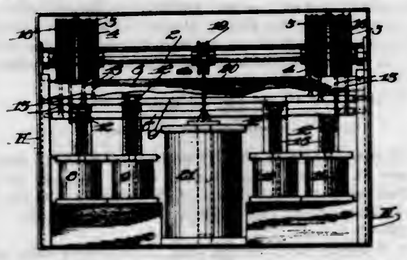


2. A car fender including a supporting frame having forwardly and downwardly inclined tracks and a cross brace, a fender mounted for movement along the tracks, a buffer mounted in advance of the cross brace, rearwardly directed sleeves carried by the cross brace, rods carried by the buffer and extending through the sleeves, said rods being provided at their free ends with heads to limit the forward movement of the buffer, springs bearing between the cross brace and buffer to normally hold the same in forward position, a trigger for normally holding the fender in rearward position, a rod connected to the trigger and passed through the cross brace, the free end of the rod having a head extending in the path of the buffer when the latter moves rearwardly, and a spring surrounding the rod and bearing between the head and cross brace to normally hold the rod in advanced position.

3. A car fender including a supporting frame, a buffer carried by the frame and mounted for rearward movement, a fender carried by the frame and mounted for forward movement, means normally holding the fender in rearward position, means operable by rearward movement of the buffer for releasing the fender holding means, and means interposable between the fender holding means and buffer to prevent release of the fender upon rearward movement of the buffer.

4. A car fender including a supporting frame having spaced apart downwardly and forwardly inclined tracks provided adjacent their ends with horizontally and vertically disposed roller bearings, a fender mounted for movement along said tracks and resting upon the horizontal bearings and engaging between the vertical bearings, spaced horizontal roller bearings carried by the rear end of the fender and engaging the upper and lower faces of the tracks, means normally tending to hold the fender in advance position, means carried by the frame for holding the fender in retracted position, a buffer, and means operable by impact against the buffer for releasing the latter holding means.

1,102,564. SIGNAL-SIGN FOR VEHICLES. FRANK W. AYRES and ROBERT A. BARNETT, Fruitvale, Cal. Filed Apr. 15, 1913. Serial No. 761,160. (Cl. 177—337.)



1. The combination in a signal device, of a casing, a plurality of display signs in said casing, a shaft in the casing, a pair of pulleys for each sign loosely mounted on said shaft, chains attached to the pulleys from which the signs are hung, means for locking the pulleys when the signs are retracted from display position, means for releasing the pulleys from the locked position to permit the lowering of a sign into display position, and means for preventing the release of more than one pair of pulleys at one time.

2. The combination in a signal device, of a casing, a plurality of display signs in said casing, a shaft in the casing, a pair of pulleys for each sign loosely mounted on said shaft, chains attached to the pulleys from which the signs are hung, stop lugs formed on the outer peripheries of the pulleys, latch arms adapted to engage with said lugs to retain the display signs in their retracted positions, means for throwing the latch arms out of engagement with the stop lugs to permit revolution of the pulleys to lower a sign into display position, and means for preventing the release of more than one pair of pulleys at one time.

3. The combination in a signal device, of a casing, a plurality of display signs in said casing, a shaft in the casing, a pair of pulleys for each sign loosely mounted on said shaft, chains attached to the pulleys from which the signs are hung, stop lugs formed on the outer peripheries of the pulleys, latch arms adapted to engage with said lugs to retain the display signs in their retracted positions, rocker-shafts to which said latch arms are secured, rocker arms secured to said shafts, magnets connected with said rocker arms adapted to be energized for the purpose of rocking said arms, shafts and connected latch arms to throw the latch arms out of engagement with the stop lugs to permit revolution of the pulleys to lower a sign into display position, and means for preventing the energization of more than one magnet to prevent the release of more than one pair of pulleys at one time.

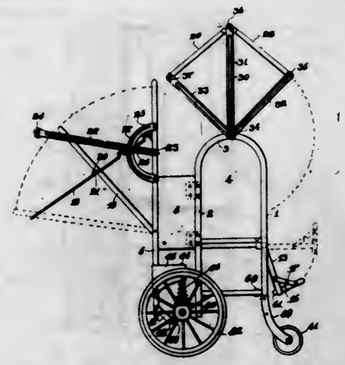
4. The combination in a signal device, of a casing, a plurality of display signs in said casing, a shaft in the casing, a pair of pulleys for each sign loosely mounted on said shaft, chains attached to the pulleys from which the signs are hung, stop lugs formed on the outer peripheries of the pulleys, latch arms adapted to engage with said lugs to retain the display signs in their retracted positions, rocker-shafts to which said latch arms are secured, rocker arms secured to said shafts, magnets connected with said rocker arms adapted to be energized for the purpose of rocking said arms, shafts and connected latch arms to throw the latch arms out of engagement with the stop lugs to permit revolution of the pulleys to lower a sign into display position, means for raising the signs into elevated retracted position, and means for preventing the energization of more than one magnet to prevent the release of more than one pair of pulleys at one time.

5. The combination in a signal device, of a casing, a plurality of display signs in said casing, a shaft in the casing, a pair of pulleys for each sign loosely mounted on said shaft, chains attached to the pulleys from which the signs are hung, stop lugs formed on the outer peripheries of the pulleys, latch arms adapted to engage with said lugs to retain the display signs in their retracted positions, rocker-shafts to which said latch arms are secured, rocker arms secured to said shafts, magnets connected with said rocker arms adapted to be energized for the purpose of rocking said arms, shafts and connected latch arms to throw the latch arms out of engagement with the stop lugs to permit revolution of the pulleys to lower a sign into display position, means for raising the signs into elevated retracted position, and means controlled by the sign elevating means for preventing the energization of more than one magnet to prevent the release of more than one pair of pulleys at one time.

1,102,565. FOLDING CARRIAGE AND INVALID-CHAIR. CLAUS F. G. BEHR, New York, N. Y. Filed Apr. 22, 1913. Serial No. 762,790. (Cl. 21—83.)

1. A device of the character described having a plurality of side members and a vertical member secured together, a handle member pivoted to said vertical member and secured to said vertical member a quadrant adapted to assist in the adjustment of said handle member as herein specified.

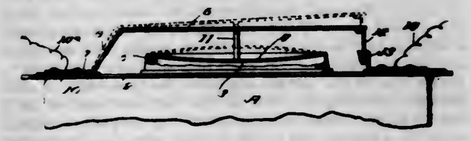
2. In a folding chair or carriage a plurality of side frames and a back frame, a plurality of blocks secured to said back frame and hingedly connected to said side frames, a seat pivoted in said blocks and a leg and foot rest in series hinged to each other and to said seat, and a back rest pivoted in said back frame and adapted to be reclined at a desired angle, and means for retaining said leg-rest in a depressed or elevated position at will as herein specified.



3. A folding carriage having a vertical back member blocks secured thereto and projecting therefrom and side members hinged to said blocks and adapted to fold vertically against said back member and within the line of said blocks as herein specified.

4. A folding chair or carriage having a vertical back member, a plurality of spring supported wheels secured thereto and adjustable handle member secured thereto, an adjustable back member pivoted thereto and means for supporting said back member in a desired position, a plurality of blocks permanently secured to said back member, a plurality of side members hingedly engaged with said blocks and a foldable top adjustably secured to said side members, a seat pivoted in said blocks and provided with a plurality of downwardly depending lips, a leg-rest hingedly engaged with said seat member and provided with a plurality of downwardly depending lips and levers for supporting said leg-rest, and a foot rest hingedly engaged with said leg-rest and provided with links for retaining in operable position and loops upon said side members for the reception of all of said downwardly depending lips, the whole combined for joint operation as herein specified and for the purpose set forth.

1,102,566. THERMOSTATIC CIRCUIT-CONTROLLER. LEWIS S. BESLEY, Salt Lake City, Utah. Filed Jan. 29, 1912. Serial No. 674,124. (Cl. 177—128.)

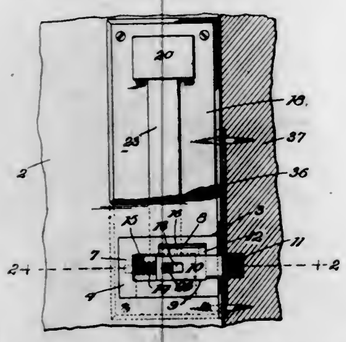


1. A thermostatic circuit controller including in its organization a fluid inclosing chamber having its opposite sides formed, each by a resilient diaphragm, outwardly yieldable as the fluid within the chamber expands but movable inward as the fluid within the chamber contracts, said plates having different moduli of elasticity.

2. A thermostatic circuit controller including a support, a fluid inclosing chamber carried by the support and having a resilient buckling diaphragm adapted to buckle both inwardly and outwardly, but prevented by its own resiliency from remaining in a medial position, an electric contact member extending over said diaphragm and constantly engaging the same, said member having a lateral terminal, and a second contact member having a terminal adapted to receive the terminal of the first, said co-acting terminals

when in engagement being arranged to bear against each other to provide sufficient frictional contact to prevent disengagement during the early movement of the diaphragm.

1,102,567. DOOR LATCH AND LOCK. JOSEPH BRANSFORD, Bakersfield, Cal. Filed Aug. 20, 1913. Serial No. 785,715. (Cl. 70—42.)



1. A door latching mechanism including a bolt casing, a sliding bolt mounted therein, oppositely disposed handles rotatable upon their longitudinal axes and mounted upon the bolt casing, and oppositely disposed independently operable levers operatively engaged at one end by the handles and at the other end engaging with said bolt.

2. A door latching mechanism including a bolt casing, upper and lower handle supports projecting from the bolt casing, a vertical rotatable handle mounted between the supports and rotatable on its longitudinal axis, a sliding bolt mounted within the bolt casing, and a lever pivotally mounted in one of said supports, one end of the lever engaging the bolt and the other end thereof being engaged by the lower end of the rotatable handle whereby upon a rotation of the handle the lever shall be shifted to project the bolt.

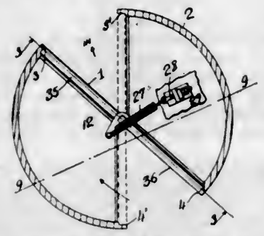
3. A door latching mechanism including a bolt casing, upper and lower outwardly projecting handle supports formed upon the bolt casing, one of said supports being hollow, a vertically disposed handle rotatably mounted between the supports, the lower end of said handle being formed with an offset lug, a bolt mounted within the bolt casing, an operating lever therefor pivoted within the hollow support, one end of said lever engaging a slot in the bolt and the other end of said lever being engaged by the offset lug on the end of the handle.

4. A door latching mechanism including a bolt casing, oppositely disposed, upper and lower handle supports, vertically disposed handles mounted one between each pair of said supports and rotatable on its longitudinal axis, a sliding bolt mounted within the casing and having a slotted rear end, and bolt operating members pivoted each within one of the handle supports, the inner end of each member engaging the slot in the bolt, one end of each handle being formed with an offset lug adapted to engage with the adjacent end of the corresponding bolt actuating member.

5. A door latching mechanism including oppositely disposed casing plates, one of said plates being formed with a bolt supporting frame, this frame having upper and lower parallel arms, one of said arms being recessed, a filling piece removably disposed in said recess and having a longitudinal guide slot, a bolt mounted between the arms of the frame and removable therefrom, said bolt having a stud extending into the recess of the filling piece, the rear end of the bolt being formed with a transverse slot, upper and lower handle supports mounted on the casing plates, vertically disposed handles mounted between said supports and rotatable therein, and operative connections between both of said handles and said bolt whereby the bolt may be retracted upon a rotation of either of said handles.

[Claim 6 not printed in the Gazette.]

1,102,568. OSCILLATING DOOR. DANIEL B. BRYAN, Flushing, N. Y.; Mary B. Bryan administratrix of said Daniel B. Bryan, deceased. Filed Jan. 17, 1913. Serial No. 742,619. (Cl. 20—18.)



1. In a door structure, the combination with a stationary framework containing a passageway, of a centrally-pivoted door mounted in said passageway and adapted and constructed to close the same when extending diagonally thereacross, and to swing about its pivot through an arc of less than 90 degrees from one position of contact with the walls of said passageway to another position in which the edges of said door contact the opposite walls of said passageway from those contacted in the first position, but not to swing beyond said positions of contact, and yielding means for holding said door in either position of contact.

2. In a door structure, the combination with a frame protecting a doorway and constituting a vestibule, of a centrally pivoted door within said frame adapted to oscillate through an arc of less than 180 degrees between two positions of contact with door-seats formed on said frame, in both of which positions it obstructs passage through the doorway and extends diagonally across the same, and means yieldingly pressing said door toward either position of rest until it has moved part way therefrom toward its other position of rest, and thereafter pressing said door toward such other position.

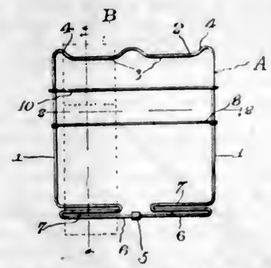
3. In a door structure, the combination with a stationary framework containing a passageway and having two pairs of door seats, of vertical pivot means, a door centrally mounted thereon to oscillate between positions of positive contact with said pairs of door seats respectively, in each of which positions the door extends diagonally across said passageway at an acute angle therewith, and a spring secured to said door and to said framework at points so chosen that said spring resists movement of said door from either position of rest until a part of the distance to the other position of rest has been covered, and thereafter aids movement of said door toward said second position of rest.

4. A collapsible door comprising a door section, pivot means mounted therein adjacent one edge of said section, a second section having lugs or arms thereon extending beyond one edge rotatably mounted on said pivot means, said sections being normally in alinement with their adjacent edges contacting, interlocking clutch members on the two sections adjacent said edges for normally holding said sections in alinement, and spring means for normally holding said clutch members in contact.

5. In a door structure, the combination with a frame protecting a doorway and constituting a vestibule, of a pivoted door within said frame adapted to oscillate through a limited arc between two positions of contact with door seats formed on said frame, in both of which positions it obstructs passage through the doorway, said door comprising two sections pivoted together with their adjacent edges in contact, and means for normally holding said sections in alinement, yieldable under abnormal pressure upon both of said sections to cause said sections to move pivotally with respect to each other.

[Claims 6 to 17 not printed in the Gazette.]

1,102,569. NECKTIE-PRESSER. JAMES E. BURDETT, Claremont, N. H., assignor of one-half to John T. Dwyer, Claremont, N. H. Filed Sept. 12, 1913. Serial No. 789,560. (Cl. 100—57.)



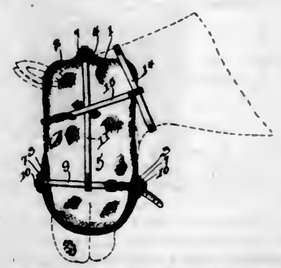
1. A device of the class described comprising a frame member provided with a holding loop at one side thereof, and a depression formed in the opposite side of the frame, a central bar extending across the frame and a sliding retaining bar for binding a tie upon the frame.

2. A device of the class described comprising a frame formed of a single piece of wire bent into approximately rectangular form, the lower side of the frame having a depressed portion, a central bar extending transversely between the side members of the frame, and a sliding retaining loop movable upon the side members of the frame for holding the tie stretched upon the frame.

3. A device of the class described comprising a wire frame including a transverse top bar, a transverse bottom bar provided with a compound retaining loop and a sliding loop bar movable over the side members of the frame and adapted to bind a tie upon said frame.

4. A device of the class described comprising a frame formed from a single piece of wire bent into approximately rectangular form, the meeting end of the wire at the lower side of the frame being connected by a sleeve, said wire at the lower side being bent to form a plurality of retaining loops, a transversely extending double bar connected to the side members of the frame, the top of the frame being bent to provide depressed sections separated by an outwardly bowed portion, and a sliding tie retaining member carried by the frame.

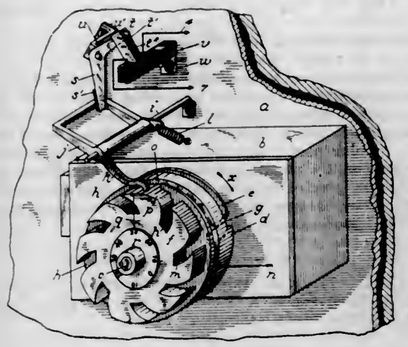
1,102,570. CUSHION DEVICE. JAMES J. CALLAHAN, Fort Kent, Me. Filed Aug. 13, 1912. Serial No. 714,925. (Cl. 119—143.)



1. A device of the character described comprising a T-shaped member having apertures in the ends of each of its arms, the ends of each said arms being bent upwardly to form angular extensions, a pad adapted to lie intermediate the ends of the arms, straps extending through the apertures of each of the arms, the straps in the oppositely extending arms being connected and the other strap being connected intermediate the arms of the aforesaid straps and means secured to the pad independently of the straps to assist in holding the device in place.

2. A cushion device comprising a T shaped member, angular extensions formed at each extremity of the arms of the T shaped member, said angular extensions having apertures adjacent their ends, straps connected to the oppositely disposed arm, a pad adapted to lie in the frame formed by the T-shaped member, a strap secured to the connecting straps and the base of the T-shaped member and means connected to the pad to assist in holding the device in place.

1,102,571. ALARM FOR PROTECTING PERMUTATION-LOCKS. ALSON B. COLBY, Portland, Oreg., assignor to Electric Security Company, Portland, Oreg., a Corporation of Oregon. Filed Apr. 22, 1911. Serial No. 622,830. (Cl. 177—203.)



1. The combination with a permutation lock including a rotatable spindle of an alarm mechanism including a pivoted member, located adjacent the lock spindle, by the tilting of which pivoted member the alarm mechanism is placed in action; means carried by the lock spindle adapted to tilt said pivoted member of the alarm mechanism when the lock spindle is rotated otherwise than as required for opening the lock; and said means including a circular piece, mounted on said spindle, provided with peripheral notches, and said pivoted member having a portion bearing upon the periphery of said circular piece.

2. The combination with a permutation lock including a rotatable spindle of an alarm mechanism including a pivoted member, located adjacent the lock spindle, by the tilting of which pivoted member the alarm mechanism is placed in action; means carried by the lock spindle adapted to tilt said pivoted member of the alarm mechanism when the lock spindle is rotated otherwise than as required for opening the lock; and said means including a circular piece, mounted on said spindle, provided with peripheral ratchet teeth, and said pivoted member having a portion bearing upon the periphery of said circular piece.

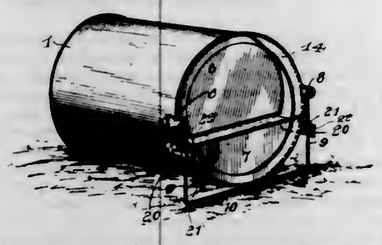
3. The combination with a permutation lock including a rotatable spindle of an electric alarm mechanism including a spring-controlled pivoted switch member, located adjacent the lock spindle, by the tilting of which pivoted member the alarm mechanism is placed in action; and a circular piece, mounted on said spindle, provided with peripheral ratchet teeth, and said pivoted member having a portion bearing upon the periphery of said circular piece.

4. The combination with a permutation lock including a rotatable spindle of an alarm mechanism including a pivoted member, located adjacent the lock spindle, by the tilting of which pivoted member the alarm mechanism is placed in action: of a circular disk, mounted on said spindle, provided with a spiral peripheral groove, and a pocket at the inner end of such groove; a circular piece at the outer side of such disk, arranged concentric with the latter, the diameter of said circular piece being equal to the inner circle of said groove, and said circular piece being made with peripheral notches; said pivoted member of the alarm mechanism being made with an arm adapted to ride on the periphery of said circular disk and said circular piece; a spring controlling said pivoted member

of the alarm mechanism, whereby the arm thereof is held against the periphery of said circular disk and of said circular piece; and the parts being arranged to cause the arm of the pivoted member to enter said notches when the lock spindle is rotated otherwise than as required for opening the lock.

5. The combination with a permutation lock including a rotatable spindle of an alarm mechanism including a pivoted member, located adjacent the lock spindle, by the tilting of which pivoted member the alarm mechanism is placed in action; of a circular disk, mounted on said spindle, provided with a spiral peripheral groove, and a pocket at the inner end of such groove; a circular piece at the outer side of such disk, arranged concentric with the latter, the diameter of said circular piece being equal to the inner circle of said groove, and said circular piece being made with peripheral notches; said pivoted member of the alarm mechanism being made with an arm adapted to ride on the periphery of said circular disk and said circular piece; a spring controlling said pivoted member of the alarm mechanism, whereby the arm thereof is held against the periphery of said circular disk and of said circular piece; said pivoted member being laterally movable on its pivot, and said spring also arranged to draw said pivoted member inward, whereby the arm of said pivoted member is caused to enter the outer end of said peripheral groove of said circular disk.

1,102,572. THERMO POULTRY-FOUNTAIN. WILLIAM H. COTTON, Salem, N. Y. Filed Mar. 22, 1913. Serial No. 756,210. (Cl. 119—73.)

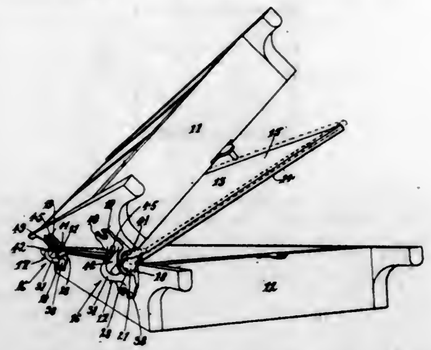


A drinking fountain for fowls comprising an outer cylindrical casing, an inner casing carried by said outer casing, said inner casing provided with converging sides so as to form a dead air space between said casings, said inner casing provided with means for preventing the water contained therein from overflowing, a ring positioned upon the outer ends of said casings for holding the same in position, a plurality of ears carried by said outer casing, each of said ears provided with a shoulder portion, said shoulder portion fitting upon said ring for holding said ring upon said casing, and a bail carried by the outer end of said ears and adapted to rest upon a support for preventing the rotation of said fountain after the same has been placed upon the support.

1,102,573. HINGE FOR MOLDERS' FLASKS. WILLIAM J. DOYLE, Cincinnati, Ohio, assignor to The Monitor Stove and Range Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 15, 1912. Serial No. 690,818. (Cl. 22—105.)

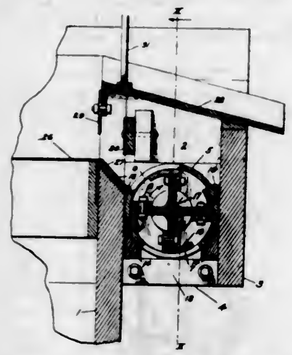
1. A flask-hinge comprising a drag-member, a cope-member, and a match-plate member, the said match-plate member comprising spaced-apart bearing-disks having peripheral bearing surfaces and a trunnion therebetween of substantially less diameter than said bearing-disks, said drag-member provided with spaced-apart bearing-recesses for said bearing-disks, and the said trunnion and drag-member provided with a sand-clearance recess located between said bearing-disks when said hinge is assembled.

2. A flask-hinge comprising a drag-member, a cope-member, and a match-plate member, the said match-plate member comprising spaced-apart bearing-disks and a trunnion therebetween of substantially less diameter than said bearing-disks, the said drag-member provided with spaced-apart bearing-recesses for said bearing-disks, an intermediate channel for said trunnion and in rear thereof with a bearing-slot having sloping recesses at the sides thereof connecting with said channel forming sand-clearance connections therebetween, and said cope-member provided with a pivot-pin for said bearing-slot.



3. A flask-hinge comprising a drag-member, a cope-member, and a match-plate member, the said match-plate member comprising spaced-apart bearing-disks and a trunnion therebetween of substantially less diameters than said bearing-disks, the said drag-member provided with spaced apart bearing recesses for said bearing-disks and a channel between said bearing-recesses for said trunnion, said trunnion provided with an intermediate interruption forming a sand-clearance space in said channel.

1,102,574. JIG. GUY H. ELMORE, Swarthmore, Pa., and OSCAR H. BOHM, Birmingham, Ala. Filed Nov. 11, 1912. Serial No. 730,674. (Cl. 83—79.)



1. The combination with a jig including the usual tank, screen and overflow for the lighter materials, of a discharge mechanism for the heavier materials comprising a cylindrical valve chamber having lateral ports for the passage of such material; a vaned valve member, rotatably mounted in said chamber, adapted to make close contact with the inner walls thereof, and having rearwardly extending guard plates at the vane extremities; and means for rotating the valve member.

2. The combination with a jig including the usual tank, screen and overflow for the lighter materials, of a discharge mechanism for the heavier materials comprising a cylindrical valve chamber having lateral ports for the passage of such material; a vaned valve member, rotatably mounted in said chamber, adapted to make close contact with the inner walls thereof, and having rearwardly extending guard plates at the vane extremities; a barrier plate adapted to restrict the depth of solid material flowing to said discharge mechanism; and means for rotating said valve member.

3. The combination with a jig including a tank, screen, and overflow for the lighter materials, of a discharge mechanism for the heavier materials comprising a cylindrical valve chamber having lateral ports; a vaned valve member rotatably mounted in said chamber; rearwardly extending guard plates radially adjustable on said vanes to make sealing contact with the walls of said chamber; and means for rotating the valve member.

4. The combination with a jig including a tank, screen, and overflow for the lighter materials, of a discharge mechanism for the heavier materials comprising a cylindrical valve chamber having lateral ports; a vaned valve member rotatably mounted in said chamber; rearwardly extending guard plates radially adjustable on said vanes to make sealing contact with the walls of said chamber; a barrier plate to restrict the depth of flow of solid material to said discharge mechanism; and means for rotating the valve member.

5. The combination with a jig including a tank, screen, and an overflow for the lighter materials, of a discharge mechanism for the heavier materials comprising a cylindrical valve chamber having lateral ports; a pocketed valve rotating therein, the openings to said pockets being restricted in area sufficiently to prevent complete filling of said pockets in the normal operation of the valve; and means for rotating said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,102,575. PYROPHORIC ALLOY. PAUL FAEHR, Bitterfeld, Germany, assignor to Electrochemische Werke, G. M. B. H., Berlin, Germany. Filed Mar. 27, 1912. Serial No. 686,667. (Cl. 75—1.)

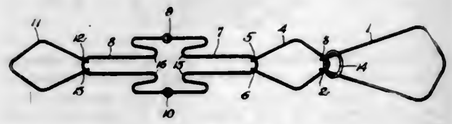
1. A metal alloy containing a metal of the rare earth group and one or more of the metals, zinc, cadmium, tin, or lead in such proportions as to make the alloy pyrophoric.

2. A metal alloy containing a metal of the rare earth group and one or more of the metals, zinc, cadmium, tin, or lead in such proportions as to make the alloy pyrophoric, with the addition of another metal for the purpose of modifying the character of the sparks.

3. A metal alloy containing cerium and one or more of the metals, zinc, cadmium, tin, or lead in such proportions as to make the alloy pyrophoric.

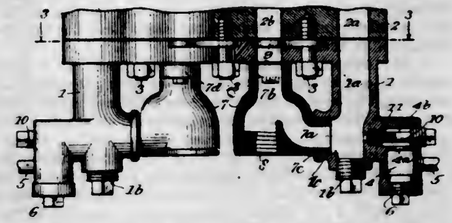
4. A metal alloy containing cerium and one or more of the metals, zinc, cadmium, tin, or lead in such proportions as to make the alloy pyrophoric, with the addition of another metal for the purpose of modifying the character of the sparks.

1,102,576. PUZZLE. DAVID E. FOLLEY, Medford, Mass. Filed Mar. 23, 1914. Serial No. 826,481. (Cl. 46—41.)



In a puzzle having five U-shaped wire links with a ring on one extreme end link, said ring being of somewhat smaller diameter than the link on which it is held, each link having the ends of its U-shaped arms pivotally united with the adjacent link and adapted to slide on the said link, excepting the two intermediate links, which said two links are of U form with their ends extended in S shape and with said adjacent ends pivotally united to each other permitting a pivotal action thereon only, whereby four of said links may be folded together and the ring removed by manipulating the same around the arms of both S shaped ends and the respective adjacent U-shaped links simultaneously.

1,102,577. TRACK-SANDING DEVICE. JOHN GAPP, Scranton, Pa. Filed Dec. 8, 1913. Serial No. 805,192. (Cl. 105—263.)



1. In a track sanding device, the combination with a sand box having a plurality of sand outlets, of an air sander having a sand receiving chamber communicating with one of said outlets, and a gravity discharge passage communicating with another of said outlets, and a sand valve located outside of said sand box and controlling the gravity discharge passage.

2. In a track sanding device, the combination with a sand box having a plurality of sand outlets, of an air sander having a sand receiving chamber communicating with one of said outlets and a gravity discharge passage communicating with another of said outlets, and a sliding valve located outside the sand box and between the same and the gravity discharge passage.

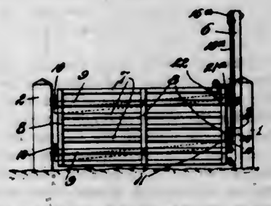
3. In a track sanding device, the combination with a sand box having a bottom casting with a downwardly projecting said flange containing a plurality of sand outlet openings, an air sander section having a flange bolted to said sand box flange and containing a sand receiving chamber communicating with one outlet and a gravity discharge passage communicating with another outlet, and a sliding valve located between said flanges for controlling the gravity discharge passage.

4. In a track sanding device, the combination of a section containing a sand receiving chamber and having an air jet connection, and a sand delivery section having a gravity discharge passage, and a nipple connected to the air section by a sliding joint, the delivery section being provided with a flange for fastening said section in position.

5. In a track sanding device, the combination of a section containing a sand receiving chamber and having an air jet connection, and a delivery section having a flange detachably fastened to said air section and a nipple connected to said air section by a sliding joint, said delivery section containing a gravity discharge passage, and a delivery passage extending from the sand receiving chamber through said nipple to the gravity discharge passage.

[Claims 6 to 9 not printed in the Gazette.]

1,102,578. FARM-GATE. WILLIAM F. GATEWOOD, Pierce City, Mo. Filed Aug. 8, 1913. Serial No. 783,672. (Cl. 39—14.)



1. The combination with a pair of posts, of a gate hinged to one of said posts, a pair of rails fulcrumed on said gate, the ends of which rails project beyond the ends of the gate, latches on the post against which the free end of the gate swings, which latches are adapted to engage the projecting ends of the rails at the free end of the gate, a vertically disposed bar connecting the projecting ends of

the rails at the rear end of the gate, which bar is provided with a notch, a rod adapted to engage against the shoulder at the end of the notch in said bar, and gate operating means connected to the ends of said rod, parts of which operating means are connected to the rear portion of the gate for actuating the same at the same time the bar engaging rod is actuated.

2. The combination with a pair of posts, of a gate hinged to one of said posts, a pair of rails fulcrumed on said gate, the ends of which rails project beyond the ends of the gate, latches on the post against which the free end of the gate swings, which latches are adapted to engage the projecting ends of the rails at the free end of the gate, a vertically disposed bar connecting the projecting ends of the rails at the rear end of the gate, which bar is provided with a notch, a rod adapted to engage the shoulder at the end of the notch in said bar, posts located on opposite sides of the post to which the gate is hinged, levers fulcrumed on said last mentioned posts, and connections between said levers and the bar engaging rod and the gate.

3. The combination with a pair of posts, of a gate hinged to one of said posts, a pair of rails fulcrumed on said gate, the ends of which rails project beyond the ends of the gate, latches on the post against which the free end of the gate swings, which latches are adapted to engage the projecting ends of the rails at the free end of the gate, a vertically disposed bar connecting the projecting ends of the rails at the rear end of the gate, which bar is provided with a notch, a rod adapted to engage the shoulder at the end of the notch in said bar, posts located on opposite sides of the post to which the gate is hinged, levers fulcrumed on said last mentioned posts, and means connected to the gate and to the bar engaging rod and actuated by said fulcrumed levers for simultaneously actuating the bar and moving the gate.

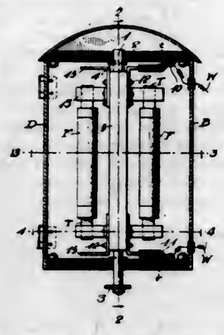
4. The combination with a post, of a gate hinged thereto, rails fulcrumed on said gate, means for engaging said rails to hold the gate in closed and open position, a bar connected to the rear ends of said rails, a rod positioned behind said bar, means on said bar which is adapted to be engaged by the rod when the same is moved, and gate operating means arranged on opposite sides of the gate, portions of which operating means are connected to the rod and other portions being connected to the gate.

5. The combination with a post, of a gate hinged thereto, a pair of rails fulcrumed on the gate, the rear ends of which rails project beyond the rear end of the gate, means for engaging the fulcrumed rails near the free end of the gate for holding the same in closed and open position, a bar connecting the projecting rear ends of the rails, which bar is provided with a notch, a pair of pins projecting from opposite sides of said bar, a rod passing behind said bar, which rod is adapted to engage against the shoulder at the end of the notch and against either one of the pins carried by said bar, and gate operating means arranged on opposite sides of the gate, a portion of which operating means is connected to the rod and a portion being connected to the gate.

1,102,579. ELECTRIC-FUSE CUT-OUT. EARL J. GIBBS, Evansville, Wis., assignor of one-half to Edwin S. Cary, Evansville, Wis. Filed Jan. 27, 1913. Serial No. 744,528. (Cl. 175—278.)

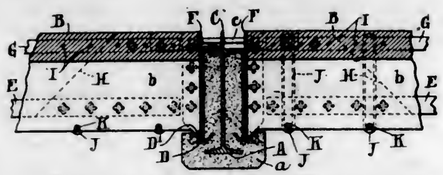
1. The combination with a casing, an upright shaft rotatably mounted therein and carrying an insulating plate of a size to fit transversely within said casing, and means for turning the shaft and plate; of a pair of line wires, a pair of forks within the casing connected with said wires, a pair of connectors secured to each face of the plate and adapted to be thrown into connection with the line wire forks by the turning of said plate, and fuses connecting the members of each pair of connectors.

2. The combination with a casing having an open front, an upright shaft rotatably mounted therein and carrying an insulating plate of a size to fit transversely within said casing and whose upper and lower ends are spaced from the top and bottom thereof respectively, means for turning said shaft and plate, and a pair of fuses; of a pair of line wires led through the rear of the casing, a pair of forks connected with their terminals at points above and below the upper and lower ends of said plate and behind it, and a pair of connectors on each face of said plate, each connector comprising an upright arm having a fork adapted to receive one terminal of the fuse and a horizontal arm standing in a plane beyond the end of said insulating plate and comprising a blade adapted to be turned between the arms of the line wire fork.



3. In a fuse box cut-out, the combination with a box-like casing having a door in its front and journals in its top and bottom, the line wires led through the rear of the box, and terminal members respectively connected with them and carried by the top and bottom of the box; of a plate of insulating material of less length than the internal height of the box and of a width corresponding with the width of the box, trunnions at the centers of its upper and lower ends projecting through said journals, pins through said trunnions holding the plate centered between the top and bottom of the box, a handle on the lower trunnion, a pair of fuses, and for each fuse a pair of connectors of L-shape whereof one arm detachably receives the bared terminal of the fuse and the other arm projects beyond the end of said insulating plate and is adapted to make contact with a wire-terminal, for the purpose set forth.

1,102,580. CONCRETE STRUCTURE. CHARLES BENEDICT GRADY, West Orange, N. J. Filed Apr. 13, 1908. Serial No. 426,669. (Cl. 72—68.)



1. A floor comprising opposite girders, concrete slabs set between said girders, each slab having embedded therein at least one metallic structure, each of said metallic structures comprising an end member as F secured to said girders, a horizontal tension member as E and plates as H connecting members E and F together.

2. A floor comprising opposite girders, concrete slabs set between said girders, each slab having embedded therein at least one metallic structure, each of said metallic structures comprising an end member as F secured to said girders, a horizontal tension member as E and plates as H connecting members E and F together, and a depending concrete rib inclosing the lower portion of each metallic structure.

3. A floor comprising opposite girders, concrete slabs set between said girders, each slab having embedded therein at least one metallic structure, each of said metallic structures comprising an end member as F, engaging said girders, a horizontal tension member as E, and a horizontal top member as G placed above and parallel to E, and bolts fastening members E, F and G together.

4. A floor comprising opposite girders, concrete slabs set between said girders, each slab having embedded therein at least one metallic structure, each of said metallic structures comprising an end member as F, engaging said girders, a horizontal tension member as E, and a horizontal top member as G placed above and parallel to E, and means for fastening members E, F and G together, and a depending concrete rib inclosing the lower portion of each metallic structure.

5. A floor comprising opposite girders, concrete slabs set between said girders, each slab having embedded therein at least one metallic structure, each of said metallic structures comprising an end member as F, engaging said girders, a horizontal tension member as E, a horizontal top-member as G placed above and parallel to E and plates as H connecting members E, F and G together.

1,102,581. VALVE-GRINDER. OSCAR D. HARGOOD, Orange, Mass., assignor to Goodell-Pratt Company, Greenfield, Mass., a Corporation of Massachusetts. Filed Apr. 7, 1914. Serial No. 830,122. (Cl. 51—4.)



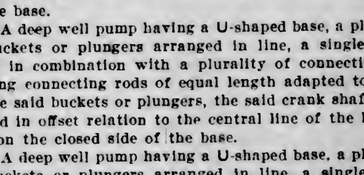
In a valve grinder, in combination, a handle provided with a socket in its lower end, said socket being provided with oppositely disposed slots extending through its wall, a spindle oscillatingly mounted in said socket and provided with oppositely disposed lateral projections extending through said slots, a valve engaging member carried by said spindle, a rotatable shaft extending through said handle transversely with respect to said spindle, disks secured to said shaft and positioned outside the said handle and on opposite sides thereof and radially extending lugs carried by said disk and adapted to engage said projections as said shaft is rotated, the lugs carried by one of said disks being in staggered relation to the lugs carried by the other of said disks.

1,102,582. STEEL BACK AND LUG FOR BRAKE-SHOES. WILLIAM H. HARING, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed June 11, 1913, Serial No. 772,964. Renewed May 14, 1914. Serial No. 838,621. (Cl. 188—82.)

1. A steel back comprising a single strip of metal for forming the body of the steel back, and a winding of metal for forming a lug reinforcement.

2. A back for a brake shoe formed with a strip of metal provided substantially centrally with a transverse winding of metal.

3. A back for brake shoes formed from a ductile plate having a raised central portion, and a winding of ductile metal encircling said raised portion and with portions thereof spaced therefrom for providing a lug reinforcement.

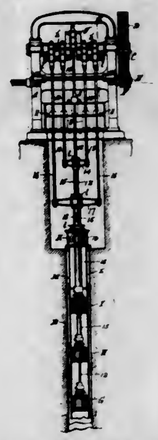


4. A back for brake shoes formed from a single plate of ductile metal, and a transverse winding of ductile strips of metal, said transverse winding presenting a lug reinforcement.

5. A back for brake shoes formed from a strip of ductile metal having a reduced pressed out portion and a substantially ring member encircling said pressed out portion said ring member comprising a plurality of windings of a strip of metal.

[Claims 6 to 9 not printed in the Gazette.]

1,102,583. DEEP-WELL PUMP. WILLIAM B. HEWITT, Holyoke, Mass., assignor to International Steam Pump Company, a Corporation of New Jersey. Filed May 11, 1912. Serial No. 696,597. (Cl. 103—82.)



1. A deep well pump having a U-shaped base, three buckets or plungers arranged in line, a three throw crank shaft and connections to reciprocate said buckets or plungers, the said crank shaft being placed in offset relation to the central line of the buckets and on the closed side of the base.

2. A deep well pump having a U-shaped base, a plurality of buckets or plungers arranged in line, a single crank shaft in combination with a plurality of connections including connecting rods of equal length adapted to reciprocate said buckets or plungers, the said crank shaft being placed in offset relation to the central line of the buckets and on the closed side of the base.

3. A deep well pump having a U-shaped base, a plurality of buckets or plungers arranged in line, a single crank shaft located in offset relation to the central line of the buckets and on the closed side of the base, connections including crossheads for reciprocating said buckets or plungers, opposed crosshead guides symmetrically located with respect to the central line of the buckets, the said guides located on the open side of the base being detachable, substantially as shown and described.

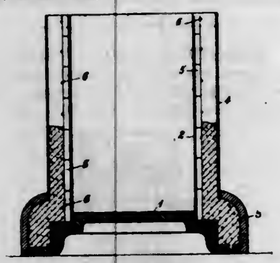
4. A deep well pump having three balanced buckets or plungers arranged in line, concentric sucker rods for the buckets, yokes attached to the two outer sucker rods, a three throw crank shaft, cranks for the respective buckets set 120° apart, cross-heads and cross-head guides, connect-

ing rods between the cranks and cross-heads adapted to communicate an equal range of movement to the cross-heads, and connections between the cross-heads and the center sucker rod and yokes, whereby the yokes and buckets may be reciprocated vertically without exerting side thrust.

5. A deep well pump including a frame, a three throw crank shaft mounted in the upper part of the frame, a group of opposed cross-head guides mounted in the lower part of the frame in parallel relation to the crank shaft, cross-heads, connecting rods of equal length attached to the crank shaft and cross-heads, three balanced sucker rods and buckets, and balanced connections between the sucker rods and the cross-heads.

[Claims 6 to 8 not printed in the Gazette.]

1,102,584. MANUFACTURE OF CONCRETE PIPE. ALLAN M. HIRSH, Montclair, N. J., and JOHN C. MITCHELL, Newport News, Va. Filed Oct. 20, 1908. Serial No. 458,734. (Cl. 18—60.)



1. The hereindescribed method of constructing a concrete pipe, which consists in placing elastic wires around an inner cylindrical form or core, arranging the lining pieces against an arc or section of said core and binding the same thereon with said elastic wires, inclosing the inner form in an outer form of the same contour and spaced therefrom, supporting a continuous reinforcing fabric between the inner and outer cylindrical mold sections, and upon the base of the mold, and filling the spaces between the inner and outer mold sections with concrete.

2. The herein described method of constructing a concrete pipe which consists in setting an inner substantially cylindrical form or core in substantially a vertical position, placing elastic wires around said cylindrical form or core, arranging the lining pieces against an arc or section of said vertically placed core and under said elastic wires whereby the pieces are held firmly in position on the core, inclosing the inner cylindrical form in an outer vertically arranged form of substantially the same contour and spaced therefrom, and filling the spaces between the inner and outer mold sections with concrete.

3. The hereindescribed method of constructing a concrete pipe which consists in setting an inner substantially cylindrical form or core in substantially vertical position upon the base of the mold, placing elastic members around said cylindrical form or core, arranging the lining pieces against an arc or section of said vertically placed core and under said elastic members whereby the pieces are held firmly in position on the core, inclosing the inner cylindrical form in an outer form of substantially the same contour and spaced therefrom, supporting a continuous reinforcing fabric between the inner and outer mold sections and upon the base of the mold, and filling the spaces between the inner and outer mold sections with concrete.

4. The herein described method of constructing a concrete pipe which consists in setting an inner substantially cylindrical form or core in substantially vertical position, placing wires having yielding sections connecting the ends thereof around said cylindrical form or core, arranging the lining pieces against an arc or section of said vertically placed core and under said wires whereby the pieces are held in position on said core, removing the yielding sections and connecting the ends of the wires together, inclosing the inner cylindrical form in an outer form of substantially the same contour and spaced therefrom, supporting a continuous reinforcing fabric between the inner and outer mold sections and upon the base of the mold, and filling the spaces between the inner and outer mold sections with concrete.

1,102,585. UPENDING BED. LAWRENCE HOLMES, Los Angeles, Cal. Filed Aug. 27, 1913. Serial No. 786,995. (Cl. 5—18.)



1. A bed comprising an upright frame, a bedstead section pivoted near one end to said frame, a head-board pivotally connected to said end and movable up and down in said frame, and spring means connecting the head-board with a portion of said frame below the head-board, whereby the upward movement of the head-board as the bedstead section is lowered on its pivots extends the springs.

2. The combination of an upright frame; a bedstead section pivotally mounted near one end on said frame; a head-board section pivotally connected to said end and movable up and down in said frame, helical springs connected at the upper ends with the head-board and at the lower ends with the frame; and upper guide means in the frame to guide the upper end of the head-board; the tension of the springs tending to hold the head-board down thereby to assist in up-ending the bedstead section.

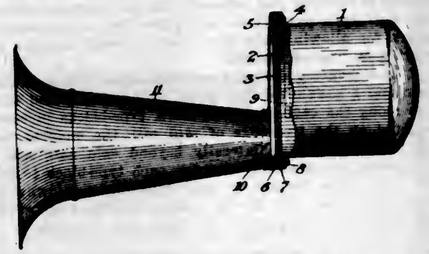
3. The combination with a frame comprising two standards having forward extensions at their bases; and means connecting vertical guides on said extensions; legs mounted in said guides; a bedstead section pivotally mounted near one end on said standards; cams on said bedstead section to engage said legs to depress the same; and spring means in operative connection with said bedstead section and said frame to coöperate with said cam to resist lowering the bedstead section to horizontal position.

4. The combination of an upright bedstead section, an up-endable bedstead section pivotally mounted thereon, a head-board in pivotal relation to the up-endable bedstead section and movable up and down in the upright section, a guide for the upper end of the head-board; and spring means connecting the head-board with the lower portion of the upright bedstead section.

5. An upright bedstead section, an up-endable bed section pivoted to the upright section, a head-board in pivotal relation to the up-endable bedstead section, and a bedding guard pivoted to the bedstead section, said head-board and bedding guard moving up and down in the bedstead section.

[Claims 6 to 9 not printed in the Gazette.]

1,102,586. HORN OR SIGNALING DEVICE. MILLER REESE HUTCHISON, New York, N. Y., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed June 7, 1910. Serial No. 565,565. (Cl. 116—1.)



1. In a device of the class described, a diaphragm and operating mechanism therefor, a tight case on one side of the diaphragm for protecting the operating mechanism, a diaphragm case secured over the front face of said diaphragm and formed so as to afford a passage for the escape of the sound waves, said opening being located eccentrically of said diaphragm case near the periphery thereof so as to afford drainage by gravity through the horn opening when the diaphragm is approximately vertical.

2. In a device of the class described, a diaphragm case formed so as to afford an opening for escape of the sound, a horn or projector arranged over said opening, said opening being arranged adjacent the periphery of said case, together with means for securing the device with the diaphragm in an approximately vertical position and with said opening located adjacent the lowermost portion of the space between the diaphragm and case.

3. In a device of the class described, a diaphragm case formed so as to afford an opening for escape of the sound, a horn or projector arranged over said opening, said opening having a portion of its periphery arranged adjacent the periphery of said case, together with means for securing the device so that the diaphragm is in an approximately vertical position with the lowermost portion of the opening adjacent the lowermost portion of the unclamped front face of the diaphragm.

4. In a device of the class described, a diaphragm, an operating mechanism therefor, a tight case on one side of the diaphragm for protecting the operating mechanism, a diaphragm case secured over the front face of said diaphragm and provided with an opening for the escape of the sound waves and means for supporting said device with said diaphragm approximately vertical, the said opening being so located as to afford drainage by gravity therethrough when said diaphragm is in said vertical position.

5. In a device of the class described, a diaphragm, an operating mechanism therefor, a tight case for protecting the operating mechanism and provided with a clamping member for one side of said diaphragm, a diaphragm clamp for the other side of said diaphragm and having a horn or projector secured thereto for the escape of the sound waves and means for supporting said device with said diaphragm in an approximately vertical position, said horn being located so as to afford drainage by gravity therethrough when said diaphragm is in said vertical position.

[Claims 6 and 7 not printed in the Gazette.]

1,102,587. HYDRAULIC-ELEVATOR STOP MECHANISM. KARL E. OSSIAN JANSSON, Flushing, N. Y., assignor to Standard Plunger Elevator Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 22, 1908. Serial No. 428,655. (Cl. 187—37.)

1. The combination with an elevator car, a counterweight, and separate terminal stop devices for the respective ends, of a plurality of ropes connected between the car and the counterweight, stationary means at the bottom of the hatchway for causing a deflection of one of said ropes when the car and counterweight are respectively at the bottom, a plurality of weighted sheaves, one of which is lifted by a loop of each rope when deflected by the car or counterweight, and lever actuating connections between said weighted sheaves and the respective terminal stop devices.



2. The combination with a car and a counterweight, of a stop valve having separate supply and exhaust passages, separate valves for each passage, independent actuating connections for each valve including each a movable sheave, a plurality of ropes connected between the car and counterweight and each looped around one of said sheaves, and stationary deflecting means for each rope at the bottom of the hatchway, whereby one or the other of said ropes will be deflected by the car or counterweight at the bottom.

3. The combination with an elevator car and a counterweight, of a terminal stop device, a stationary deflecting device, a movable sheave disposed at the bottom of the hatchway, and a rope connected to said counterweight and extending therefrom at an angle downwardly around said stationary deflecting device, thence looped around said movable sheave, and thence vertically and connected at the other end to the car.

4. The combination with an elevator car and a counterweight, of separate terminal stop devices for the respective ends, a plurality of stationary deflecting devices, distinct movable sheaves for said stop devices, a plurality of ropes connected between the car and counterweight and each looped around one of said movable sheaves, one of said ropes being inclined downwardly from the car around one of said stationary deflecting devices, and the other being inclined downwardly from the counterweight around another of said stationary deflecting devices.

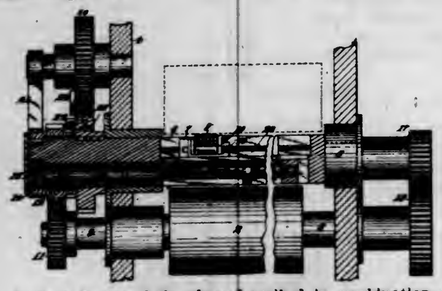
5. The combination with a car, a counterweight, and a pair of stop valves, of means for actuating one of said stop valves at the respective ends of travel of the car and counterweight, said means comprising a movable sheave for each valve, a pair of downwardly looped ropes connected between the car and the counterweight and each running around one of said sheaves, one of said ropes being inclined downwardly from the car and the other inclined downwardly from the counterweight, and a stationary sheave engaging with the inclined portion of each rope.

[Claims 6 and 7 not printed in the Gazette.]

1,102,588. NUMBERING-MACHINE. CLARENCE L. JOHNSTON, Oakland, Cal. Filed Sept. 3, 1912, Serial No. 718,267. Renewed Dec. 15, 1913. Serial No. 806,881. (Cl. 101—183.)

1. In a device of the class described in combination, a numbering device, a rotary carrier upon which said num-

bering device is mounted, an impression cylinder over which a web may travel and adapted to coincide for peripheral contact with the numbering device, an actuator operating with said numbering device to change the numbers adapted to be printed thereby, and means for driving said actuator, said driving mechanism including a differential gearing coöperating with an eccentrically mounted shaft carried by the said rotary carrier carrying the numbering device.



2. In a device of the class described in combination, a numbering device, a rotary carrier upon which said numbering device is slidably mounted, an impression cylinder arranged to coöperate with said numbering device and having the same peripheral speed as the rotary carrier for the numbering device, an actuator for the numbering device, an eccentrically mounted shaft adapted to operate said actuator, said eccentrically mounted shaft being mounted within and carried by the rotary carrier for the numbering device, and differential gearing controlled by the rotation of said rotary carrier whereby the eccentrically mounted shaft is operated at predetermined intervals to change the printing face numbers in the numbering device.

3. A device of the class described in combination, a numbering device, a rotary carrier upon which said numbering device is slidably mounted, an actuator for said numbering device to change the printing face numerals, an eccentric shaft adapted to drive said actuator and mounted within said rotary carrier, gear members adapted to drive said eccentric shaft, a pair of gears provided with a hunting tooth, and means controlled by said hunting tooth gears for determining when the driving gears for said eccentric shaft will be operated.

4. In a device of the class described, a numbering device, a rotary carrier upon which said numbering device is mounted, an actuator for changing the printing faces of said numbering device, an eccentrically mounted shaft within said rotary carrier, a driving gear operatively connected with said eccentrically mounted shaft, a sleeve rotatively mounted upon said rotary carrier, an internal gear formed upon said sleeve and adapted to coöperate with said driving gear, an external gear also formed upon said sleeve, and timing mechanism controlled by the rotation of said rotary carrier for controlling the operation of said driving gear.

1,102,589. PRINTING DEVICE. JOHN J. A. JONES, Green Island, N. Y. Filed Mar. 27, 1914. Serial No. 827,584. (Cl. 101—58.)

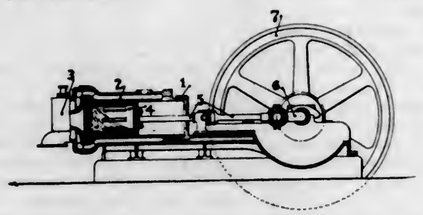


1. In a printing device, a base carrying a grooved rail, a type block, the middle portion of said type block engaging the free edge of said rail and adapted to rock laterally thereon, and a spring clip secured midway between the ends of said type-block, said clip having spaced flexible arms straddling said rail, one of said arms bent V-shaped and engaging the grooves in said rail, for preventing the accidental detachment of the type-block when the latter is rocked during the printing operation.

2. The combination of a type-holder comprising a plate and a rail disposed edgewise on said plate, said rail having a longitudinal groove, a type-block slidably resting on the free edge of said rail, and a fastening clip carried by said type-block, said clip having spaced flexible arms adapted to straddle and grip said rail for normally holding said type-block parallel to said plate, said arms adapted to flex for allowing said type block to rock laterally for printing on uneven surfaces.

3. In a printing device, the combination with a holder-plate and a handle for said plate, of a rail disposed edgewise along the center of said plate, type-blocks pivotally mounted on the free edge of said rail, the ends of said type-blocks projecting laterally beyond said rail, and a spring-clip for adjustably securing each type-block to said rail, said clips secured to said type-blocks midway between their ends and having spaced flexible arms which grip said rail, substantially as shown and described.

1,102,590. PISTON OF ENGINES, COMPRESSORS, MOTORS, AND OTHER MACHINES HAVING RECIPROCATING PISTONS. HUGO JUNKERS, Aix-la-Chapelle, Germany. Filed Nov. 30, 1912. Serial No. 734,254. (Cl. 123—176.)



1. In an engine, a cylinder, a piston reciprocating in the cylinder and having a cavity formed therein which is completely closed, and a liquid in the cavity, which liquid, by its movement in the cavity, in the piston, transmits heat from the highly heated portions to the less heated portions of the piston; substantially as described.

2. In an engine, a cylinder, a piston reciprocating in the cylinder and having a cavity formed therein which is completely closed, a liquid within the cavity, and means for causing circulation of the liquid within the cavity as the cylinder is reciprocated; substantially as described.

3. In an engine, a cylinder, a hollow piston reciprocating therein, a liquid confined within but not filling the hollow piston, and ribs formed on the interior walls of the hollow piston; substantially as described.

1,102,591. MAKING WASTE WOOD OBTAINED IN FORESTRY INTO BRIQUETS. FRIEDRICH VON KALITSCH, Baerentzoren, near Dobritz, Germany. Filed Oct. 29, 1913. Serial No. 798,036. (Cl. 44—1.)

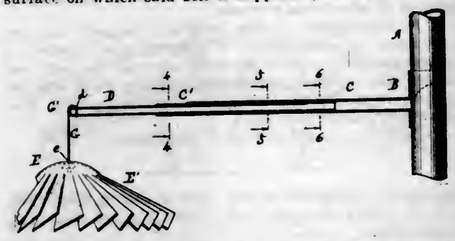
1. A process of working up waste forest wood obtained in forestry, consisting in disintegrating the waste wood, in mixing it with wood charcoal, and in forming the mixture into briquets.

2. A briquet composed of disintegrated waste wood obtained in forestry mixed with wood charcoal.

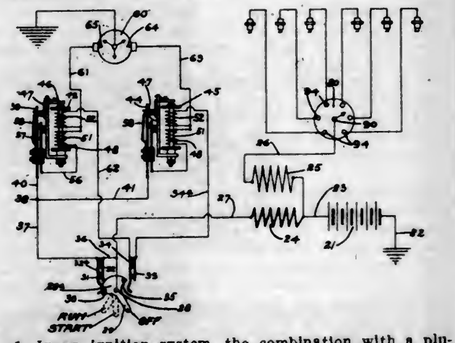
1,102,592. BELL FOR GAS-LIGHTS. JOHN D. KANTRO, New York, N. Y. Filed Nov. 25, 1912. Serial No. 733,309. (Cl. 240—120.)

1. A gas bell having screw wings thereon and an aperture in its top, a supporting rod for the bell extending loosely through such aperture, the rod being provided with a head having a bearing surface thereon, a plano-convex washer resting on the bearing surface of the head and provided with a hole through which the supporting rod is passed, the concaved surface of the bell and the aperture therein allowing the bell to rotate freely and to be inclined during its rotation on the convex surface of the washer.

2. A gas bell having screw wings, and an aperture in its top, a suspension rod passed loosely through said aperture, a washer carried by said rod and having a convex surface on which said bell is supported, means for retaining said washer upon the rod, said bell being freely rotatable and also free to be inclined during its rotation, and means for sustaining said rod.



1,102,593. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed May 22, 1911. Serial No. 628,812. (Cl. 123—148.)



1. In an ignition system, the combination with a plurality of current interrupters; of a single induction coil; and means alternately and operatively connecting each of said interrupters with said coil during a given cycle of operation.

2. In an ignition system, the combination with an ignition circuit; of a plurality of current interrupters; and means for introducing said interrupters into said circuit in a predetermined and recurrent sequence.

3. In an ignition system, the combination with an electric circuit having a plurality of current interrupters; of a main operating member constructed to alternately actuate each of said interrupters.

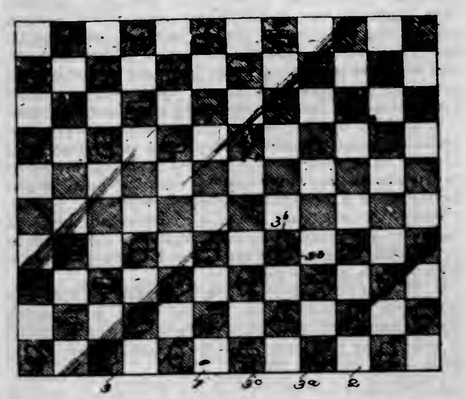
4. In an ignition system, the combination with an electric circuit having a pair of current interrupters therein; of a main operating member, comprising a three-point cam constructed to alternately actuate each of said interrupters.

5. In an ignition system, the combination with an electric circuit; of a plurality of current interrupters therein; having a pivoted armature electrically connected to each of said interrupters, and included in said circuit, said circuit being common to each of said interrupters; of a main operating member constructed to alternately actuate said interrupters, whereby the pivoted armature of the respective interrupters will be alternately operated to open and close said circuit.

[Claims 6 to 15 not printed in the Gazette.]

1,102,594. GAME-BOARD. FRED KIEFER, Scranton, Pa., assignor of one-half to George D. Fuchs, Scranton, Pa. Filed Apr. 4, 1913. Serial No. 758,981. (Cl. 46—64.)

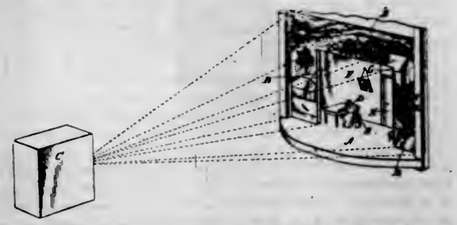
1. In game apparatus, a game-board having its surface divided into a number of squares having indicia denoting the States of the Union and the number of electoral votes to which each particular State is entitled, and a number of game-pieces each having indicia corresponding to one of the squares.



2. In game apparatus, a game-board having its surface divided in to a number of squares certain of the squares having indicia denoting the States of the Union and the number of electoral votes to which each State is entitled in a presidential election, and a number of game-pieces having indicia corresponding to the indicia of the squares and being further provided with indicia presenting the name of the capital of the State represented by each particular game-piece.

3. In a game apparatus, a game-board having its surface divided into a number of squares, certain of the squares having indicia denoting the States of the Union and the number of electoral votes to which each particular State is entitled, and a number of game-pieces adapted for movement over the board and each bearing indicia corresponding to the indicia of the squares upon which they are to be initially placed.

1,102,595. COMPOSITE DRAMATIC PRODUCTION. HERBERT KNIGHT, New York, N. Y. Filed Apr. 14, 1913. Serial No. 760,847. (Cl. 88—16.)



1. The art of simultaneously displaying on the stage of a theater two correlating scenes one of which is a moving picture spectacle projected upon a suitable screen and the other a physical scene, which scenes are continuous one with the other, each being the lateral extension of the other, and limiting each scene to its own field of display.

2. The art of producing a composite drama in conjunction with a stage setting and a screen both of which are placed within the proscenium of a theater, which consists in displaying therein two independently and simultaneously illuminated coördinating dramatic activities, both visible to the spectator and embraced in a single field of view side by side but not intruding one upon the other, one of said scenes being a moving picture spectacle, and the other an enacted scene portrayed by living characters in the stage setting.

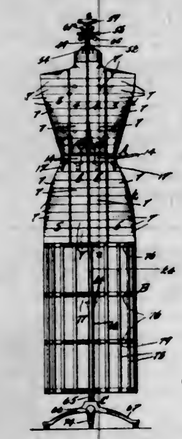
3. The art of producing a composite drama in conjunction with a stage setting and a screen both of which are placed within the proscenium of a theater, which consists in displaying therein two independently and simultaneously illuminated coördinating dramatic activities, both visible to the spectator and embraced in a single field of view side by side but not intruding one upon the other, one of said scenes being a moving picture spectacle, and the other an enacted scene portrayed by living characters in the stage setting, and translating characters from the moving picture scene to the living and vice versa.

4. The art of producing a composite theatrical representation which consists in displaying in a single field of view an enacted scene performed by living characters in a stage setting, extending the scene laterally by projecting upon a continuous screen a correlating picture, whereby the adjoining scenes are continuous one with the other and transferring and translating characters by an apparent continuity of movement from the real to the picture scene, or vice versa.

5. The art of producing in a single field of view two contiguous dramatic scenes, one of which is a moving picture scene, and the other a living scene, which consists in translating characters from the moving picture to the living scene, and vice versa.

[Claims 6 to 9 not printed in the Gazette.]

1,102,596. ADJUSTABLE GARMENT-FORM. ISAAC LEVIN, Brooklyn, N. Y. Filed Nov. 25, 1912. Serial No. 733,282. (Cl. 223—18.)



1. A garment-form comprising a bust-portion consisting of a plurality of sections and a waist-portion consisting of a plurality of sections, all of said sections being made up of a plurality of juxtaposed rigid blocks arranged in parallelism, a pliable element connecting said blocks, said blocks being secured to said pliable element independently of each other, and means for adjustably connecting said sections.

2. A garment-form comprising a bust-portion consisting of a plurality of sections, a hip portion also comprising a plurality of sections, an independent waist-portion consisting of a plurality of sections, a pivotal joint connecting each hip section with an adjacent waist-section, a rod pivotally connected to each bust-section, and means carride by each waist-section adapted to engage an adjacent rod.

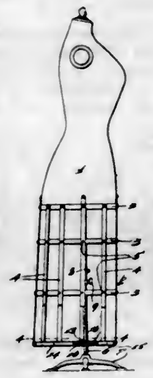
3. A garment-form comprising a plurality of bust-sections, a plurality of hip-sections, and a plurality of waist-sections, means for pivotally connecting each hip-section with an adjacent waist-section, and means for pivotally mounting said bust-sections on said waist-sections.

4. In combination, a garment-form, a support therefor, a retainer for said support, a base for said retainer, a threaded spindle carried by said retainer adapted to impinge upon said support, and means carried by said base adapted to actuate said spindle.

5. In combination, a garment-form, a support therefor, a retainer for said support, a base for said retainer, a threaded spindle carried by said retainer, an arm carried by said spindle, a vertically movable table adapted to actuate said arm, and means carried by said base adapted to actuate said table.

[Claims 6 to 11 not printed in the Gazette.]

1,102,597. GARMENT-FORM. ISAAC LEVIN, New York, N. Y. Filed Dec. 20, 1913. Serial No. 807,861. (Cl. 223—18.)



1. A dress-form having a yieldable lower band-member, and a plurality of independent braces extending across said band-member from end to end, a supporting-rod and means to releasably lock said braces in engagement with the supporting-rod.

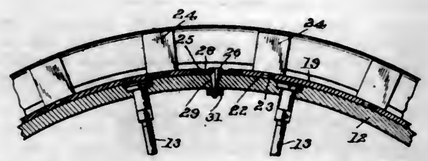
2. In combination with a skirt-form, a supporting rod therefor, a plurality of adjustable braces extending across the form from end to end, in a horizontal plane and secured at their ends to the skirt-form, and means for locking the braces together in engagement with the supporting rod of the form.

3. In combination with a skirt form and a supporting rod therefor, means carried by said skirt form adapted to releasably engage said rod, said means consisting of a plurality of yieldable frame members extending across the form from end to end and provided with sockets in alinement, said sockets being eccentric to the center of said form and a releasable latch adapted to lock said frame members together after the sockets therein have been caused to engage said supporting rod.

4. In combination with a tiltable skirt-form and a supporting rod therefor, a plurality of resilient braces extending across said skirt form on opposite sides of the supporting rod, said braces being provided with sockets adapted to engage said rod, said sockets being located eccentric to the center of the skirt form, said skirt form being free to be tilted until said sockets engage said supporting rod.

5. A dress-form comprising a plurality of vertical members and a plurality of band-members pivotally connected thereto, the lower band-member being yieldable and provided with a bracing frame consisting of a plurality of separable socketed members embracing the supporting-rod of the form, the free ends of said members being secured to the said lower band-member, and releasable means for locking the said socketed members together.

1,102,598. NON-SKID VEHICLE-WHEEL. JOHN LISKA, Natrona, Pa., assignor of one-half to Andy Klapan, Natrona, Pa. Filed Mar. 16, 1914. Serial No. 825,057. (Cl. 152—2.)



1. In combination with a wheel rim having annular peripheral seats, a calk band positioned within one of said seats and provided with perforations therethrough, calks outwardly projecting and secured in said perforations, coöperating wedge plugs flattened on their inner sides and having perforated heads, links connecting said heads to the free ends of said band, said plugs being tapered and having their smaller ends screw-threaded, said rim provided with a tapered perforation therethrough adapted for the receptiton of said plugs with their threaded ends projecting therefrom, and a lock nut mounted upon said threaded ends.

2. In combination with a wheel rim having parallel annular ribs therearound forming an intermediate annular seat, of a metallic strip positionable upon said seat, a plurality of outwardly extending calks upon said strip, coöperating wedge plugs linked to the free ends of said strip and unitedly forming a tapered plug, said rim provided with a tapered perforation therethrough adapted for the wedging reception of said tapered plug and locking means mounted upon the projecting end of said plug and engaging the inner face of the said rim.

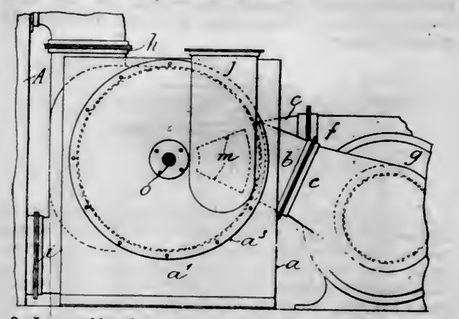
3. A device of the class described comprising a wheel rim, annular peripheral ribs carried thereby, a cushion tire positioned upon said rim and seated between two adjacent ones of said ribs, a metallic strip seated upon said rim between two of said ribs, calks carried by said strip and outwardly projecting a less distance than said tire, a tapered perforation through said rim positioned centrally between the strip positioning ribs, separate flat faced plugs linked to the free ends of said strip and unitedly forming a tapered plug receivable within said perforation with projecting ends lying inwardly of the rim, a lock nut screw-threaded upon said projecting ends.

4. A device of the class described comprising the rim having annular seats, a cushion tire positioned in one of said seats, a metallic strip seated in another one of said seats, the strip receiving seat provided with a plurality of sockets, headed bolts secured through said strip and having their heads adapted for reception within said sockets, calks mounted upon said strip and secured to said bolts, and a plug tensioning device for retaining said strip upon said rim and coöperating with said bolts to hold said strip against peripheral movement.

1,102,599. APPARATUS SUITABLE FOR DRYING, HEATING, COOLING, OR VENTILATING. THOMAS GIBBONS MARLOW, London, England, assignor to The Pulsometer Engineering Company Limited, Reading, England. Filed Apr. 11, 1912. Serial No. 690,210. (Cl. 230—11.)

1. In combination, an operating chamber, a fan, and controlling means adapted, in one position, to connect the delivery of the fan to the operating chamber to establish a plenum therein, and, in another position, to maintain the delivery connection as aforesaid while connecting the inlet of the fan to the operating chamber to circulate the medium in a state of plenum.

2. In combination, an operating chamber, a fan, and controlling means adapted, in one position, to connect the inlet of the fan to the operating chamber to produce a rarefaction therein, and, in another position, to maintain the suction connection as aforesaid while connecting the delivery of the fan to the operating chamber to circulate the medium in a state of rarefaction.



3. In combination, an operating chamber, a fan, and controlling means adapted, in one position, to connect the delivery of the fan to the operating chamber to establish a plenum therein, in another position to maintain the delivery connection as aforesaid while connecting the inlet of the fan to the operating chamber to circulate the medium in a state of plenum, in a further position to disconnect the delivery of the fan from the operating chamber while maintaining the inlet connection as aforesaid to produce a rarefaction in the operating chamber and in a still further position to again connect the delivery of the fan to the operating chamber while maintaining the inlet connection to circulate the medium in a state of rarefaction.

4. In combination, an operating chamber, a fan adapted to have its suction and delivery connected to different parts of the chamber and controlling means adapted, in one position, to connect the delivery of the fan to one part of the chamber while disconnecting the suction therefrom in order to establish a plenum in the chamber, in another position to connect both the delivery and suction to the chamber to circulate the medium in a state of plenum in the same direction as that adopted in establishing the plenum, and in yet another position to reverse the connection of the delivery and suction of the fan to the parts of the chamber in order to reverse the direction of such circulation.

5. In combination, an operating chamber, a fan adapted to have its suction and delivery connected to different parts of the chamber and controlling means adapted, in one position to connect the delivery of the fan to one part of the chamber while disconnecting the suction therefrom in order to establish a plenum in the chamber, in another position to connect both the delivery and suction to the chamber to circulate the medium in a state of plenum in the same direction as that adopted in establishing the plenum; in a third position to reverse the connection of the delivery and suction of the fan to the parts of the chamber in order to reverse the direction of such circulation; in a fourth position to disconnect the delivery of the fan from the operating chamber while maintaining the inlet connection last referred to in order to produce a rarefaction in the operating chamber, in a fifth position to again connect the delivery of the fan to the operating chamber, while maintaining the inlet connection, to circulate the medium in a state of rarefaction and in a final position to reverse the connections of the delivery and suction of the fan to the delivery chamber to reverse the direction of circulation of the fluid medium in a state of rarefaction.

[Claims 6 to 12 not printed in the Gazette.]

1,102,600. TELEPHONE-TRANSMITTER. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 1, 1911. Serial No. 611,631. (Cl. 179—122.)

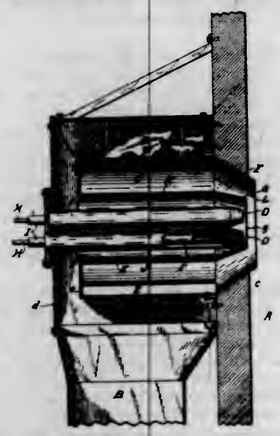
1. In a telephone transmitter the combination with the electrodes forming the front and rear walls of a chamber

and current conducting granules in said chamber, of a relatively large block of good heat conducting material surrounding said chamber and forming the side walls thereof said block having prongs extending to the interior of said chamber.



2. In a telephone transmitter the combination with the electrodes forming the front and rear walls of a chamber and current conducting granules in said chamber, of a relatively large block of good heat conducting material surrounding said chamber and forming the side walls thereof, and a plurality of heat conducting prongs generally conical in shape extending from the middle portion of said chamber to said block.

1,102,601. PROCESS FOR OBTAINING THE SOLIDS FROM LIQUIDS. IRVING S. MERRELL and OLIVER EDWARD MERRELL, Syracuse, N. Y., assignors to Merrell-Soule Company, a Corporation of New York. Original application filed Apr. 4, 1910, Serial No. 553,444. Divided and this application filed Feb. 16, 1912. Serial No. 678,117. (Cl. 99—5.)



1. The process of desiccating liquids which consists in creating a whirling current of air within a desiccating chamber; forcibly injecting within such whirling air, in the same general longitudinal direction as the whirling body of air moves, the liquid in a finely divided condition.

2. The process of desiccating liquids which consists in creating a whirling current of air within a desiccating chamber; introducing within such whirling air, in the same general longitudinal direction as the whirling body of air moves, the liquid in a finely divided condition.

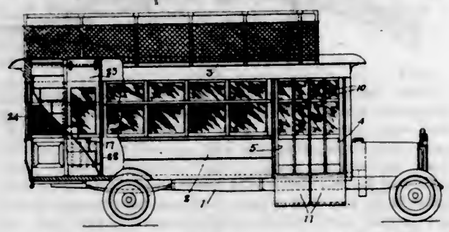
3. The process of desiccating liquids which consists in creating a whirling body of air within a desiccating chamber; injecting within such whirling air the liquid in a sprayed condition; and also blowing a direct current of air surrounding its spray into said whirling body of air.

4. The process of desiccating liquids which consists in introducing a body of air within a desiccating chamber; injecting within such body of air the liquid in a sprayed condition; imparting a whirling movement to said spray; and also blowing a direct current of air surrounding the spray into said body of air.

5. The process of desiccating liquids which consists in injecting into a desiccating chamber the liquid in a sprayed condition; imparting a whirling movement to said spray; and also blowing a direct current of air surrounding the spray into said body of air.

[Claims 6 and 7 not printed in the Gazette.]

1,102,602. DOUBLE-DECK VEHICLE. PHILIP J. MITTEN, Philadelphia, Pa., assignor to The Near Side Car Company, New York, N. Y., a Corporation of New York. Filed Jan. 13, 1913. Serial No. 741,710. (Cl. 105—199.)



1. A vehicle comprising a lower deck and an upper deck, the lower deck having at one end both an entrance passageway and an exit passageway, a stairway arranged within the vehicle at the other end of said lower deck, and a passageway connecting said entrance and exit passageways with said stairway.

2. A vehicle comprising a lower deck and an upper deck, the lower deck having at one end both an entrance passageway and an exit passageway and having its other end closed, a stairway arranged within said vehicle at the closed end of said lower deck, and a passageway connecting said entrance and exit passageways with said stairway.

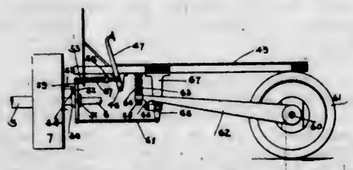
3. A vehicle comprising a lower deck and an upper deck, the lower deck being provided at one end with both an entrance and an exit and having its other end closed, a stairway arranged at the closed end of said lower deck and at one side of the center thereof, and a passageway connecting said stairway with said entrance and said exit.

4. A vehicle comprising a lower deck and an upper deck, the lower deck being provided at one end with both an entrance and an exit and having its other end closed, a stairway arranged at the closed end of said lower deck and at one side of the center thereof, and a seat extending across the closed end of said lower deck and along that side thereof opposite said stairway, and a passageway connecting said stairway with said entrance and said exit.

5. A vehicle comprising a lower deck and an upper deck, said lower deck being provided at its front end with an entrance and an exit, doors to open and close said entrance and said exit, a stairway at the rear end of said lower deck leading to the upper deck, and a door to close said stairway, thus enabling said lower deck to be entirely closed.

[Claims 6 to 11 not printed in the Gazette.

1,102,603. TRANSMISSION MECHANISM. LOREN C. MORGAN, Coffeyville, Kans., assignor of one-half to Robert N. King, Dayton, Ohio. Filed Jan. 27, 1913. Serial No. 744,346. (Cl. 74—34.)



1. The combination, with a drive shaft and a driven shaft, of a planetary transmission gearing connecting said shafts including fluid-controlled means for controlling the speed of the driven shaft, and means to automatically control the fluid controlling means through the resistance of the load.

2. In a motor driven vehicle, the combination, with a drive shaft, a driven shaft, and an axle connected with said driven shaft, of a fluid controlled transmission mechanism for gradually varying the speed of said driven shaft, and a device actuated by the resistance offered to the rotation of said axle to regulate said fluid-controlled transmission mechanism.

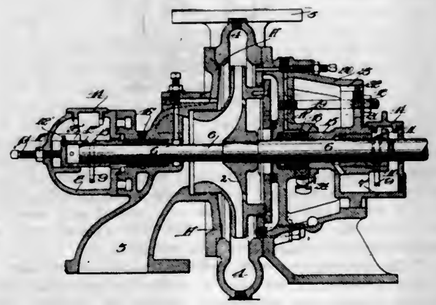
3. In a motor driven vehicle, the combination, with a drive shaft, a driven shaft, and an axle connected with said driven shaft, of a fluid controlled transmission mechanism for gradually varying the speed of said driven shaft, and a torque arm connected with said axle and said transmission mechanism to control the latter.

4. In a motor driven vehicle, the combination, with a drive shaft, a driven shaft, and an axle connected with said driven shaft, of a fluid-controlled transmission mechanism for gradually varying the speed of said driven shaft, a torque arm connected with said axle and extending forwardly therefrom, a resilient device to resist the upward movement of the forward end of said torque arm, and a lever connection between the forward end of said torque arm and said transmission mechanism, whereby said transmission mechanism will be controlled by the vertical movement of the forward end of said torque arm.

5. The combination, with a drive shaft and a driven shaft, of a planetary transmission gearing connecting said shafts including a sun gear on the drive shaft, fluid-controlled means for variably connecting the sun gear to the drive shaft, and means for automatically controlling the said fluid-controlled means to control the speed of the driven shaft through the resistance of the load.

[Claims 6 to 47 not printed in the Gazette.]

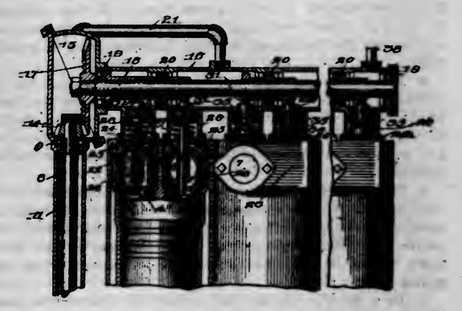
1,102,604. BEARING FOR CENTRIFUGAL PUMPS. ALBERT C. PAULSMEIER, Alameda, Cal., assignor to Byron Jackson Iron Works, West Berkeley, Cal., a Corporation of California. Filed Nov. 9, 1911. Serial No. 659,358. (Cl. 64—10.)



1. The combination with a shaft, of a bearing, a machine casing through which said shaft extends, an annular projection on said casing forming a pocket surrounding the shaft, an oil casing surrounding the bearing, a projection on said bearing forming a gland and fitting in said pocket, a circular seat on said bearing, a guide flange for said seat, a guideway in said flange, a pin carried by the bearing and sliding in said guideway, and means for sliding said bearing longitudinally upon the shaft.

2. The combination with a shaft, of a bearing, a machine casing through which said shaft extends, an annular projection forming a pocket surrounding said shaft, packing in said pocket, a second projection forming a guide flange, a projection from said bearing forming a gland and telescoping in said pocket, an annular projection on said bearing fitting said guide flange, an oil housing formed integral with the bearing and removable therewith, and means for slidably moving said bearing on the shaft to compress the packing in the pocket.

1,102,605. VALVE MECHANISM. CHARLES J. PEMBROKE, Rochester, N. Y. Original application filed Aug. 3, 1910, Serial No. 575,282. Divided and this application filed Dec. 30, 1912. Serial No. 739,188. (Cl. 121—115.)



1. The combination with an explosive engine having a cylinder, a valve casing and a valve stem projecting therefrom, of a cam shaft for actuating the valve stem and an oil holding jacket inclosing the cam shaft and valve stem, the engine cylinder arranged exteriorly of said jacket.

2. The combination with an explosive engine having a valve casing and a valve stem projecting therefrom, of a cam shaft for actuating the valve stem, an oil holding jacket inclosing the shaft and supporting the bearings thereof and a collar on the jacket inclosing the valve stem and connected to the valve casing to support the jacket thereon.

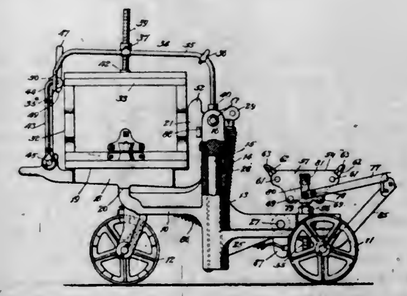
3. In an explosive engine, the combination with a valve casing, a chamber adjacent thereto and an oil reservoir communicating with the chamber, of a valve stem projecting from the casing into the chamber and a piston thereon for maintaining a circulation of oil between the chamber and reservoir.

4. In an explosive engine, the combination with a valve casing, a chamber adjacent thereto and an oil reservoir communicating with the chamber, of a valve stem projecting from the casing into the chamber, a piston thereon for maintaining a circulation of oil between the chamber and reservoir and a valve spring interposed between the piston and valve casing.

5. In an explosive engine, the combination with a valve casing, and an oil chamber adjacent thereto, of a valve stem projecting from the casing and extending through the chamber being guided in the opposite wall thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,102,606. MOLDING-MACHINE. EDWARD A. PRIDMORE, Chicago, Ill. Filed Oct. 26, 1912. Serial No. 727,857. (Cl. 22—33.)



1. In a flask-receiving and supporting device, the combination of a base, a plurality of independently adjustable flask-engaging members fulcrumed thereon to rock up and

down and each adapted to contact at one end only with a flask seating thereon, and means for holding said members in independently adjusted positions.

2. Flask-receiving and supporting means comprising in combination a base, a plurality of flask-engaging members fulcrumed thereon to rock up and down and each adapted to contact at one end only with a flask resting thereon, and means for yieldingly holding said members in raised position.

3. Flask-receiving and supporting means comprising in combination a base, a plurality of flask-engaging members fulcrumed thereon to rock up and down and each adapted to contact at one end only with a flask resting thereon, and springs for yieldingly holding said members in raised position.

4. Flask-receiving and supporting means comprising, in combination, a base, a plurality of yieldable flask-engaging members fulcrumed thereon to rock up and down, and means for releasably securing said members in the positions to which they are automatically moved when engaged by the flask.

5. In a flask-receiving and supporting device, the combination of a base, a plurality of independently adjustable flask-engaging members fulcrumed thereon to rock up and down and each adapted to contact at one end only with a flask seating thereon, and means for lifting the flask-engaging ends of said members and yieldingly holding them in raised condition.

[Claims 6 to 25 not printed in the Gazette.]

1,102,607. FOOD COMPOUND. SALIM NICHOLAS SAMAHA and HALIM NICHOLAS SAMAHA, Washington, D. C. Filed Nov. 25, 1913. Serial No. 802,898. (Cl. 99—11.)

1. A food compound consisting of cooked figs and sugar and nut kernels mixed together in suitable proportions.

2. A food compound consisting of divided and cooked figs and nut kernels mixed and incorporated in saccharin food material.

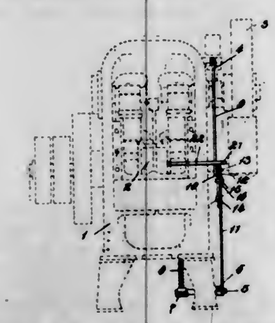
3. A food compound consisting of divided and cooked figs and cooked in saccharin liquid, and snobar nut kernels mixed with the said figs and saccharin liquid.

4. In a food compound a cooked mixture of figs and saccharin matter and nut kernels.

5. In a food compound, a cooked mixture of divided figs and saccharin matter, and undivided nut kernels intermixed with said cooked mixture.

[Claim 6 not printed in the Gazette.]

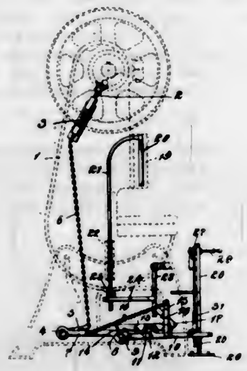
1,102,608. SAFETY DEVICE FOR CLUTCH-CONTROLLED MACHINES. ALBERT G. SCHEER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 10, 1913. Serial No. 747,289. (Cl. 74—46.)



1. A safety control device for reciprocating clutch controlled machines, comprising in combination with a reciprocating clutch controlled machine a rod adapted to be secured to the clutch control, and having an offset shoulder on the other end thereof, another rod adapted to engage said offset shoulder, and an arm pivoted to one of said rods and adapted to swing between the engaging portions of said rods so as to disengage them, a treadle for operating said last mentioned rod, and a member carried by the reciprocating portion of said machine and adapted to actuate said pivoted arm.

2. A safety device for reciprocating clutch controlled machines, comprising in combination with a reciprocating clutch controlled machine a rod adapted to be secured to the clutch control and having an offset shoulder upon the other end thereof, another rod adapted to engage said offset shoulder, an arm pivoted to one of said rods and adapted to swing between and disengage said rods, a treadle for operating said last mentioned rod, a member carried by the reciprocating portion of said machine and adapted to actuate the said pivoted arm, and a spring for causing the reëngagement of said rods after the treadle has been released.

1,102,609. SAFETY DEVICE FOR CLUTCH-CONTROLLED MACHINES. ALBERT G. SCHEER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 10, 1913. Serial No. 747,290. (Cl. 74—81.)



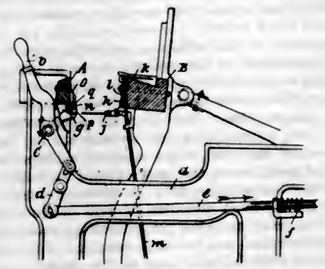
1. In combination with a clutch controlled machine, a treadle of two parts pivoted at one end and hinged at the center, a catch for maintaining the two parts of the treadle in alinement, a lever for disengaging said catch, and a detent carried by the moving part of said machine for actuating said lever whereby said treadle will be broken at each operation of said machine.

2. In combination with a clutch controlled machine, a clutch disengaging member, a spring for operating said clutch disengaging member, a treadle for moving said clutch disengaging member against the action of said spring, said treadle comprising two members pivoted to each other, and a catch for holding said members in operative relation, and means for disengaging said catch so as to permit said spring to operate said clutch disengaging member, and a detent carried by the moving part of said machine for actuating said catch disengaging means.

3. In combination with a clutch controlled machine, a treadle arm for controlling the clutch, comprising two pivoted members and a catch for holding said members in operative relation, a rod secured to a moving part of said machine, and a lever arm co-acting with said rod for disengaging said catch.

4. A safety treadle for controlling clutch operated machines, comprising two parts, a pivotal connection between said parts, a catch pivoted to one of said parts and engaging the other of said parts so as to engage said parts in operative relation, a lever adapted to be secured to said machine for disengaging said catch, and means operable by the motion of said machine for actuating said last mentioned lever.

1,102,610. WEFT STOP-MOTION FOR LOOMS. EMIL STAHL, East Stroudsburg, Pa. Filed Sept. 16, 1913. Serial No. 790,005. (Cl. 139—54.)

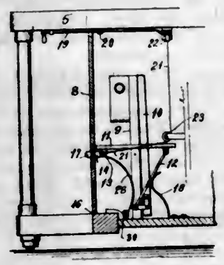


1. The combination, with a fixed part of the loom, the rock-shaft journaled therein, power controlling mechanism controlled by the rock-shaft, the batten, the dagger movable in the batten and weft-controlled means for controlling the dagger, of means to transmit movement from the dagger to said rock-shaft including a dagger-impact-receiving member revoluble on said shaft and elastic means to cushion the rotary movement of said member on said shaft, substantially as described.

2. The combination, with a fixed part of the loom, the rock-shaft journaled therein, power controlling mechanism controlled by the rock-shaft, the batten, the dagger movable in the batten and weft-controlled means for controlling the dagger, of means to transmit movement from the dagger to said rock-shaft including a dagger-impact-receiving member having a dagger-impact-receiving notch disposed eccentrically of said shaft, said member being revoluble on said shaft, and elastic means to cushion the rotary movement of said member on said shaft, substantially as described.

3. The combination, with a fixed part of the loom, of the rock-shaft journaled therein, a lever fulcrumed on the rock-shaft and having an arm adapted to bear against said part of the loom and a dagger-impact-receiving arm relatively opposite the first arm, a spring connecting said lever with and cushioning the movement thereof on said rock-shaft, the batten, the dagger movable in the batten and against the second arm of said lever, weft-controlled means for controlling the dagger, and setable power-controlling mechanism controlled by the rock-shaft and normally holding the same in the position where the first-named arm of said lever bears against said fixed part of the loom, substantially as described.

1,102,611. PLAYER-PIANO. THOMAS SWENSEN, New York, N. Y. Filed May 20, 1913. Serial No. 768,707. (Cl. 84—169.)



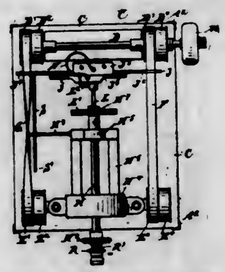
1. In a player piano, a key-bed, keys thereon, a lower panel having an opening therein, a board pivotally mounted at the lower edge of said opening, two pedals pivotally mounted on said board, two bellows, connecting rods connecting the pedals to said bellows, a spring connected to said board for turning the same to the position for closing said opening, an operating device mounted on the key-bed, a flexible connection from the operating device to said board, and a latch for the operating device, substantially as set forth.

2. In a player piano, a casing having an opening therein above the toe-rail thereof, a board pivotally mounted at one edge thereof upon the toe-rail, two pedals pivotally mounted on said board near its opposite edge, two bellows within the casing, a connecting rod connecting each pedal to a bellows, a spring connected to said board for turning the same to a position for closing said opening, and a flat spring mounted on the bottom of the casing and projecting upwardly therefrom in position to be engaged by the pedal mechanism when the latter is moved by said first-named spring, substantially as set forth.

3. In a player piano, a casing having an opening therein above the toe-rail thereof, a board pivotally mounted at one edge thereof on the toe-rail, a pivot shaft mounted on said board near its opposite edge, two pedals pivotally mounted on said shaft, two bellows, a connecting rod connecting each pedal to a bellows, a flat spring having one end mounted within the casing and having the other end in engagement with said pivot shaft, a flat spring mounted on the bottom of the casing and projecting upwardly therefrom in postion to be engaged by one of said connecting rods when said board is moved to close said opening, and operating devices for turning said board on its pivot, substantially as set forth.

4. In a player piano, a key-bed, keys thereon, a casing including a lower panel having an opening therein, a board pivotally mounted at the lower edge of said opening, two pedals pivotally mounted on said board, two bellows, connecting rods connecting the pedals to said bellows, a flat spring having one end mounted within the casing of the piano and the other end connected to said board for turning the board to the position for closing said opening, a flat spring mounted on the bottom of the casing and projecting upwardly therefrom in position to be engaged by one of said connecting rods, an operating device mounted on the key-bed, a flexible connection from the operating device to said board, and a latch for the operating device, substantially as set forth.

1,102,612. BELT-SHIFTER. LIGH S. TIGH, Hoboken, N. J. Filed Nov. 21, 1913. Serial No. 802,207. (Cl. 64—4.)



1. In an apparatus of the character set forth, a drive shaft and a driven shaft, fast and loose pulleys on said shafts, arranged in pairs and carrying open and crossed belts, a belt-shifter engaged with said belts, a guide in which said belt-shifter is slidably mounted, means actuated by said driven shaft for moving said belt-shifter alternately in opposite directions and correspondingly changing the direction of rotation of said driven shaft, a stud fixed on said guide, a stud on said belt-shifter, a spring carried by said studs and tending to separate the latter, said spring arranged to accelerate and complete the movement of said belt-shifter in either direction by the movement of such shifter-stud in the same direction past said fixed stud, and connections from said driven shaft to a rotatable member.

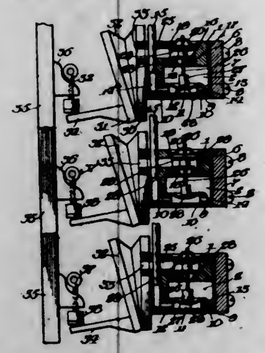
2. In an apparatus of the character set forth, a drive shaft and a driven shaft, fast and loose pulleys on said shafts, arranged in pairs and carrying open and crossed

belts, a belt-shifter engaged with said belts, a pin on said belt-shifter, a worm on said driven shaft, a wormwheel driven by said worm, a wormwheel shaft, a pinion thereon, a gear-wheel in mesh with said pinion, a shaft for said gear-wheel, a crank slidably mounted on such gear-wheel shaft arranged to strike said pin and shift said belt-shifter alternately in opposite direction, and thereby reverse the direction of rotation of said wormwheel-shaft, connection from the latter to a rotatable member, said crank arranged to be moved out of line of contact with said pin and permit sad driven shaft to be rotated continuously in one direction.

3. In an apparatus of the character set forth, a drive shaft and a driven shaft, fast and loose pulleys on said shafts arranged in pairs and carrying open and crossed belts, a worm upon the driven shaft, a shaft at right angles to and above said driven shaft, a worm wheel thereon engaging said worm, a shifter-bar having downwardly projecting pins in engagement with said belts near the driving shaft, a guide in which said shifter-bar is slidably mounted, a head on said bar having grooves on its upper and lower faces, lips on said guide received in said grooves, a pin projecting from the lower face of said head, and an oscillating crank movable in the path of sad last-named pin.

4. In an apparatus of the character set forth, a drive shaft and a driven shaft, fast and loose pulleys on said shafts arranged in pairs and carrying open and crossed belts, a worm upon the driven shaft, a shaft at right angles to and above said driven shaft, a worm wheel thereon engaging said worm, a shifter-bar having downwardly projecting pins in engagement with said belts near the driving shaft, a guide in which said shifter-bar is slidably mounted, a head on said bar having grooves on its upper and lower faces, lips on said guide received in said grooves, a pin projecting from the lower face of said head, an oscillating crank movable in the path of said last-named pin, a stud fixed centrally on said guide, a stud at substantially the midlength of the head and forming an upright extension of said last-named pin, and a flat substantially semicircular spring exerting its force to separate said studs.

1,102,613. PIANO-PLAYER. EUGENE T. TURNEY, Davenport, Iowa, assignor, by mesne assignments, to American Player Action Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1911. Serial No. 655,076. (Cl. 84—233.)

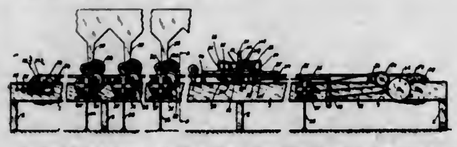


1. A player piano including in combination vertical stickers for transmitting the movements of the keys, a vacuum chest having a vacuum chamber therein, bellows mounted in vertical positions on the back of said vacuum chest, valves for connecting said bellows with said chamber and with the atmosphere alternately, said valves being located in the top wall of said chest, diaphragms and diaphragm chambers communicating with the tracker board and located in the lower wall of said chest for operating said valves, said diaphragm chambers communicating through bleed holes with said vacuum chamber, said bleed holes being in a horizontal position with one end toward the front of the chest, said chest having a readily removable front wall to permit access to said diaphragms and bleed holes and arms projecting substantially horizontally from the hinge ends of the movable members of said bellows, said arms having free ends engaging the undersides of projections on said stickers and being shorter than the movable members of the bellows so as to bring said bellows close to the stickers and to act on said stickers with a more powerful stroke than that of said movable members.

2. A player piano including in combination vertical stickers for transmitting the movements of the keys, a vacuum chest in front of the stickers, bellows mounted in a vertical position on the back of said vacuum chest and arms projecting substantially horizontally from the hinge ends of the movable members of said bellows, said arms having free ends engaging projections on said stickers and being shorter than the movable members of the bellows so as to bring said bellows close to the stickers and to act with a more powerful stroke than that of said movable members.

3. A player piano including in combination vertical stickers for transmitting the movements of the keys, a plurality of separated wind chests at different levels, tracker tubes entering the tops of the different wind chests, a removable front wall for each of said wind chests, bellows mounted in vertical positions on the back of said wind chests and arms mounted on the movable members of said bellows and having free ends adapted to engage the undersides of projections on the stickers, so as to bring said bellows close to said stickers and to facilitate the introduction of the pneumatic mechanism in a limited space.

1,102,614. MACHINE FOR MAKING BISCUITS OF SHREDDED CEREAL. RALPH E. VALENTINE, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., Battle Creek, Mich. Filed Jan. 12, 1914. Serial No. 811,609. (Cl. 107—2.)



1. In a machine of the class described, the combination of a frame, sprocket wheels suitably journaled thereon, a conveyer belt carried by said sprocket wheels and adapted to carry baking pans through the machine, means for driving said sprocket wheels, a plurality of sets of shredding rolls journaled on said frame and adapted to deliver layers of shredded material to said baking pans, independent means for driving each set of shredding rolls, a device for pressing covers on said pans, a cam wheel, means for driving the same operatively connected with said sprocket driving means, and a pitman rod connected to said device for reciprocating the same, reciprocatory motion being communicated to said pitman rod by means of the cam wheel, all coacting as specified.

2. In a machine of the class described, the combination of a frame, sprocket wheels suitably journaled thereon, a conveyer belt carried by said sprocket wheels and adapted to carry baking pans through the machine, means for driving said sprocket wheels, a plurality of sets of shredding rolls journaled on said frame and adapted to deliver layers of shredded material to said baking pans, means for driving said shredding rolls, a device for pressing covers on said pans, a cam wheel, means for driving the same, and a pitman rod connected to said device for reciprocating the same, reciprocatory motion being communicated to said pitman rod by the cam wheel, all coacting substantially as described for the purpose specified.

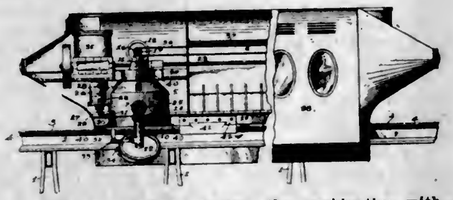
3. In a machine of the class described, the combination of a frame, sprocket wheels suitably journaled thereon, a conveyer belt carried by said sprocket wheels and adapted to carry baking pans through the machine, means for driving said sprocket wheels, a plurality of sets of shredding rolls journaled on said frame and adapted to deliver layers of shredded material to said baking pans, means for driving said shredding rolls, a device for pressing covers on said pans, and means for reciprocating said device, all coacting substantially as described for the purpose specified.

4. In a machine of the class described, the combination of a frame, a conveyer belt adapted to carry baking pans through the machine, and a device for pressing covers on said pans, comprising a base plate carried above said conveyer belt and provided with side members, rollers journaled on said side members, tracks secured to said frame on which said rollers travel, a housing provided on said base plate, a piston chamber in said housing, an air passage communicating with the bottom of said piston chamber, a piston reciprocating in said piston chamber and provided with a piston rod, a collar slidably mounted on said piston rod and resting on a shoulder thereon, links pivoted to the ends of said base plate, levers having forked outer ends pivoted to the upper ends of said links, the inner ends of said levers being pivotally connected to said collar, a presser plate disposed beneath said conveyer belt, rods pivotally connected to said levers and secured to said presser plate, lugs on the side members of said base plate through which said rods pass, a valve controlled by the forward movement of said device, for admitting compressed air to said air passage, means, adapted to be actuated by the covers on the baking pans, for admitting compressed air to said valve, and means for reciprocating said device.

5. In a machine of the class described, the combination of a frame, a conveyer belt adapted to carry baking pans through the machine, and a device for pressing covers on said baking pans, comprising a base plate carried above said conveyer belt and provided with side members, a housing provided on said base plate, a piston chamber in said housing, an air passage communicating with the bottom of said piston chamber, a piston reciprocating in said piston chamber and provided with a piston rod, a collar slidably mounted on said piston rod and resting on a shoulder thereon, links pivoted to the ends of said base plate, levers having forked outer ends pivoted to the upper ends of said links, the inner ends of said levers being pivotally connected to said collar, a presser plate disposed beneath said conveyer belt, rods pivotally connected to said levers, and secured to said presser plate, lugs on the side members of said base plate through which said rods pass, a valve controlled by the forward movement of said device for admitting compressed air to said air passage, means, adapted to be actuated by the covers on the baking pans, for admitting compressed air to said valve, and means for reciprocating said device.

[Claims 6 to 18 not printed in the Gazette.]

1,102,615. MONORAILWAY SYSTEM. WALTER D. VALENTINE, Altadena, Cal., assignor to National Rapid Transit Company, Seattle, Wash., a Corporation of Washington. Filed Jan. 20, 1908. Serial No. 411,571. Renewed Sept. 18, 1909. Serial No. 518,431. (Cl. 105—235.)



1. In a monorailway system, the combination with a rail, the head of which has a tread surface on top and inwardly and laterally inclined tread surfaces beneath, of a car truck provided with supporting and driving wheels arranged to engage said surfaces, and means to move the wheels engaging said inclined surfaces toward and away from the same.

2. In a monorailway system, the combination with a rail, the head of which has a single tread surface on top and a pair of opposite downwardly converging tread surfaces beneath, of a truck having wheels grouped about said head and adapted to have traction contact with its treads, and a motor driving means for all of said wheels.

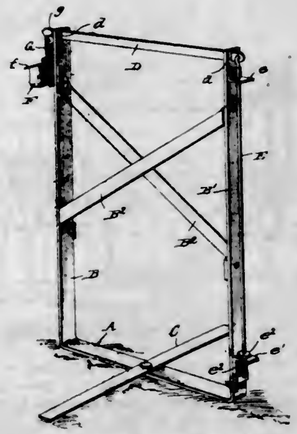
3. In a monorailway system, the combination with a rail, the head of which has a tread surface on top and inwardly and laterally inclined tread surfaces beneath, of a car truck provided with a supporting and driving wheel engaging said top tread surface and with lateral wheels adapted to engage said inclined surfaces but normally out of engagement therewith, and means to move said lateral wheels into and out of engagement with said surfaces.

4. In a monorailway system, the combination with a rail having a head with treads upon upper and under surfaces of the rail, of a truck having wheels grouped about said head and adapted to have traction contact with its treads, said truck having side bearings for the axle of the superior tread wheel, brackets pivotally mounted on the exterior of the said side bearings, said brackets having bearings for the axles of the inferior tread wheels, means for moving said brackets on their pivotal centers to throw the inferior tread wheels into and out of traction contact with the inferior treads, a motor and connections therefrom to drive the axle of the superior tread wheel, consisting of the opposing gears loose on the axle, the clutches for said gears, the levers for operating the clutches and the screw-shaft and nuts for operating said levers, the motor shaft with its gear, and the gear hub between said motor-shaft-gear and the axle gear, and gears between the ends of said axle and the axles of the inferior tread wheels to drive said wheels.

5. In a monorailway system, the combination with a rail having a head with plural treads, of a truck having a hollow body-casting mounted to swivel in suitable exterior guides, said casting having mounted within it the main supporting axle and wheel and the driving connections therefor, and having pivotally supported from its sides the lower axles and their wheels and driving connections therefor, and means for throwing the lower wheels into and out of traction contact with their corresponding rail-head-treads.

[Claims 6 and 7 not printed in the Gazette.]

1,102,616. AUTOMATIC SMUDGE-KINDLER. ISAAC GIDEON VAN NEST and ANDREW JOSEPH KILLEEN, Los Angeles, Cal. Filed May 29, 1913. Serial No. 770,805. (Cl. 44—6.)



1. A device of the character described embodying a self-supporting frame having uprights, a movable igniter carrier mounted on one of said uprights, a retaining lever for holding said igniter carrier normally in inoperative

position, and a thermostatic bar pivotally connected with said lever and extending parallel with the other upright.

2. A device of the character described embodying a vertically arranged frame, an igniter carrier pivotally mounted on said frame, a lever for retaining said igniter carrier normally in inoperative position, and a thermostat for moving said lever to release the igniter carrier when the temperature drops to a predetermined degree.

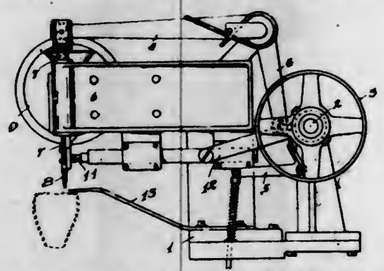
3. A device of the character described embodying a vertically arranged frame, an igniter carrier pivotally mounted on the upper portion of said frame, a lever extending transversely of and pivotally mounted on the frame and coöperating with the carrier to hold the same in inoperative position, and a thermostatic bar connected with said lever at its upper end and adjustably connected with the frame at its lower end for moving said lever to release the carrier when the temperature drops to a predetermined degree.

4. In a device such as described, the combination with the frame embodying the uprights and base piece, a transversely extending foot piece pivotally mounted on the base piece, and braces rigidly connecting the uprights, of a lever pivotally mounted on one upright and guided by the other to swing vertically, a thermostatic bar connected with one end of said lever and adjustably connected with one upright, an igniter carrier pivotally mounted on the other upright and coöperating with the lever whereby it is retained in inoperative position, the arrangement being such that the lever is moved to release said igniter carrier by the contraction of the thermostatic bar due to a drop in temperature.

5. In a device such as described, the combination with the frame embodying uprights and base piece, a transversely extending foot pivotally connected with the base piece whereby it may be folded into substantial parallelism therewith, a brace rigidly connecting the uprights, an igniter carrier pivotally mounted on one of said uprights to swing downwardly by gravity, and a lever extending transversely between the uprights and coöperating with the igniter carrier to hold the same in inoperative position, of a thermostatic bar pivotally connected with one end of the lever, a bracket in which said thermostatic bar is mounted, and an adjustable connection between the lower end of the thermostatic bar and frame, substantially as described.

[Claim 6 not printed in the Gazette.]

1,102,617. MACHINE FOR TACKING THE SHOE UPPER AND COUNTER. JAMES F. WAID, Cincinnati, Ohio, assignor of one-third to Charles H. Krippendorf and one-third to William Fowler, Cincinnati, Ohio. Filed Dec. 24, 1906. Serial No. 349,352. (Cl. 12—67.)



1. A machine for gathering in and holding the upper and counter at the inner ends of the heel seats of a welt shoe while they are being tacked, consisting of a tacking device, and a resilient tucker blade, the free end of which lies under and immediately adjacent to the tack driver in position to push inwardly the material to be tacked as the shoe is presented by the hand of the operator, substantially as described.

2. A machine for gathering in and holding the upper and counter at the inner ends of the heel seats of a welt shoe while they are being tacked, consisting of a tacking device, and a resilient tucker blade, the inner end of which is supported by the frame of the machine, and the outer end of which lies under and immediately adjacent to the tack driver in position to push inwardly the material to be tacked when the shoe is presented by the hand of the operator, substantially as described.

3. A machine of the class described, comprising a projecting arm secured to the machine and adjustable lengthwise, and tacking mechanism, the engaging end of said arm and the delivery point of said tacking mechanism approximately coinciding, said engaging end of the arm being in position to permit a lasted shoe upper and welt to be pushed thereover for stretching a loose portion of the upper tightly over a last in position to receive a tack from said tacking mechanism while so held stretched.

4. A machine for gathering in and holding the upper of a lasted welt shoe at the inner ends of the heel seats while they are being tacked, consisting of a tacking device, a frame, and a resilient arm mounted on the frame, the free end of said arm being in position to permit a lasted shoe upper and welt to be pushed thereover for stretching the upper over a last in position to receive a tack from said tacking mechanism while so held stretched.

5. A machine of the class described, comprising stationary positioning means to engage the shoe between the welt and upper in position to press against the adjacent line of stitches and stretch the upper over the last, and means for driving a tack to retain the upper while held thus stretched.

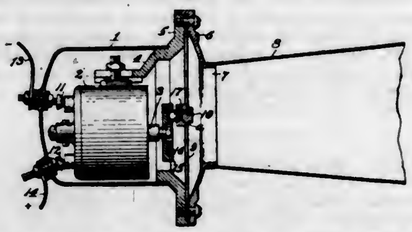
[Claims 6 to 11 not printed in the Gazette.]

1,102,618. METAL ALLOY. SAMUEL WEIN, New York, N. Y., assignor to Jerome A. Strauss, trustee. Filed Oct. 6, 1913. Serial No. 793,499. (Cl. 75—1.)

1. An alloy consisting of aluminum, zinc and tellurium.

2. An alloy comprising aluminum, zinc and tellurium in the following proportions:—aluminum, 50 to 85% and tellurium ½% to 1%, the difference between the sum of these percentages and 100% consisting of zinc.

1,102,619. ACTUATING MECHANISM FOR SIGNALS, &c. ALEXANDER WEINBERG, Pittsburgh, Pa. Filed July 24, 1912. Serial No. 711,265. (Cl. 116—1.)



1. A device of the character described comprising an agitator member consisting of a motor driven rotary disk having a series of depressions in its face, a vibratory member mounted adjacent thereto, but spaced therefrom, and a transmitter member mounted between said agitator member and said vibratory member normally resting in a depression in said vibratory member and held therein solely by said disk and ararnged in the path of the depressions in the disk of said agitator member, substantially as set forth.

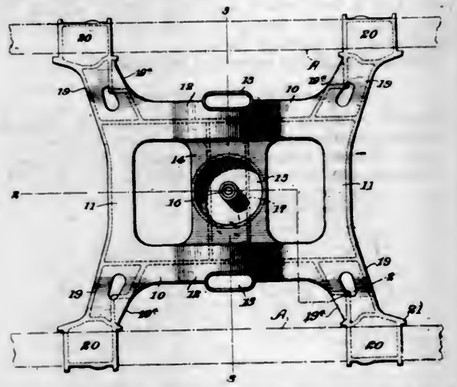
2. A device of the character described comprising an agitator member consisting of a motor driven rotary disk having a series of depressions in its face arranged in a circular path surrounding its axis, a vibratory member adjacent to said disk to one side of its axis, a member loosely interposed between said agitator member and said vibratory member resting in a depression in said vibratory member and retained therein solely by said disk and in the path of the depressions in said disk, substantially as set forth.

3. A device of the character described comprising a motor driven agitator consisting of a rotary disk having a face with alternate depressions and ridges, a vibratory diaphragm mounted adjacent thereto and having a central impact member laterally disposed in relation to the axis of said disk and spaced therefrom, a transmitter member loosely mounted in a depression in said impact member and retained therein solely by said disk and normally in contact with both, and means for operating said agitator member, substantially as set forth.

4. In a device of the character described the combination of a motor driven rotary disk having a face formed to impart motion to a spherical body supported in contact therewith, a vibratory member adjacent thereto, a spherical member loosely supported in a pocket in said vibratory member and retained therein solely by said disk, and means for adjusting the normal distance between said disk and said vibratory member, substantially as set forth.

5. A device of the character described comprising a motor driven disk, the face whereof is formed outside its axis with an annular roughened face adapted to impart motion to a member supported in contact therewith, a vibratory member adjacent thereto, a spherical member loosely supported in a pocket in said vibratory member in the path of the roughened face of said disk and retained in position in said pocket solely by said disk, whereby said spherical member is permitted free revoluble motion in said pocket, but is retained in contact with said roughened surface of said disk, substantially as set forth.

1,102,620. CENTER-BOLSTER FOR SIX-WHEEL CAR-TRUCKS. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 11, 1913. Serial No. 784,246. (Cl. 105—244.)



1. A center bolster for six wheel trucks comprising a rectangular frame the central portion of which is arched to accommodate the center axle of the truck, and arms projecting laterally from the corners of said frame, which arms are box-shape in cross section, and the outer ends of which are adapted to coöperate with the wheel pieces of the truck frame.

2. A bolster for six wheel trucks comprising a body formed of pairs of flanged side and end members the central portions of which side members are arched to accommodate the center axle of the truck, and arms integral with and projecting outwardly from the ends of said body, which arms are box-shape in cross section.

3. A center bolster for six wheel trucks comprising a pair of longitudinally disposed parallel flanged members the central portions of which members are arched to accommodate the center axle of the truck, a pair of transversely disposed parallel flanged members, the arms integral with and projecting outwardly from the end portions of said pairs of parallel members and which arms are box-shape in cross section.

4. A center bolster for six wheel trucks comprising a pair of longitudinally disposed members which are of I-beam shape in cross section the central portion of which members are arched to accommodate the center axle of the truck, a pair of transversely disposed members integral with the ends of said longitudinally disposed members, which transverse members are channel shape in cross section and arms projecting outwardly from the connected ends of said pairs of members, which arms are box-shape in cross section.

5. A center bolster for six wheel truck frames cast in a single piece and comprising a rectangular frame, the sides of which are arched to accommodate the center axle of the truck, an inverted U-shaped member connecting the arched portions of the sides of said frame, arms projecting laterally from the corners of said frames, which arms are box-shape in cross section, and hollow members integral with the outer ends of said arms, which hollow members coöperate with the wheel pieces of the truck frame.

[Claims 6 to 14 not printed in the Gazette.]

1,102,621. WATCHCASE-RECEIVER. HARRY B. WIER, Jersey City, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Apr. 16, 1912. Serial No. 691,125. (Cl. 179—117.)

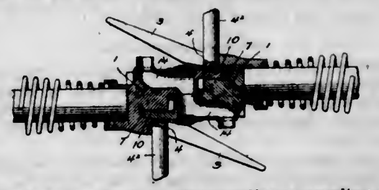


1. In a telephone receiver of the class described, a magnet system, a receiver shell therefor, and a plate embedded in said shell for supporting the magnet system in the receiver.

2. In a telephone receiver of the class described, two right-angled permanent magnets, a soft iron core, a magnet spool, like poles of one polarity of the permanent magnets welded to one end of the soft iron core, the other poles of like polarity having their faces in the same plane with the face of the free end of the soft iron core, the magnet spool surrounding the soft iron core, a receiver shell surrounding the magnet system, and means embedded in the shell for supporting the magnet system in the receiver.

3. In a telephone receiver of the class described, right-angled permanent magnets radially disposed, a soft iron core, a magnet spool, the poles of one polarity welded to one end of the soft iron core, the faces of the free poles in the plane of the face of the free end of the soft iron core, the magnet spool surrounding the soft iron core, a receiver shell, a clamping plate embedded in the receiver shell supporting the magnet system, means embedded in the shell for supporting the receiver, and clamping means embedded in the shell for attaching the conductor leads.

1,102,622. FLUID-PRESSURE COUPLING FOR TRAIN-PIPES. LEONIDAS D. WOODRUFF, Hattiesburg, Miss. Filed July 26, 1913. Serial No. 781,443. (Cl. 188—13.)



1. In an automatic train pipe coupling, a coupling member comprising a perforated coupler head having a pair of divergent guiding arms both located on the same side of the longitudinal axis of the head and both inclined in the same direction away from said axis, there being a socket having top, bottom and side walls at the base of said arms for receiving a tongue on the companion coupling, a broad forwardly projecting tongue on the opposite

side of the head from, but of less length than, said arms, adapted to seat in the socket in and be guided by the arms on the companion head, and a guiding pin projecting transversely from the outer face of said tongue for cooperation with the arms on the companion head.

2. An automatic train pipe coupling embodying opposite heads of corresponding construction, each head having on one side of its longitudinal axis, divergent guiding arms both inclined in the same direction away from said axis, a recess between said arms and a vertically elongated socket extending inwardly beyond the base of the arms, and having top, bottom and side walls, each head also having on the opposite side of its longitudinal axis a broad tongue projecting beyond the base of, but of less length than the arms, to seat in the socket in the coöperating head, and a pin projecting laterally to coöperate with the divergent arms and seat in the recess between the arms on the coöperating head, the recess and pin on each head being out of alinement with each other transversely of the head, whereby relative pivotal movement of coupled heads is prevented.

3. In an automatic train pipe coupling, a coupling member comprising a coupler head provided with an air passage therethrough and having upon one side of its longitudinal axis diverging guiding arms with a recess intermediate the inner ends thereof, a socket extending inwardly beyond the base of the arms and having top, bottom and side walls; a broad forwardly extending tongue on the opposite side of the longitudinal axis from the divergent arms, formed to seat in the socket in the companion head, and a laterally extending guide pin on the outer side of the tongue positioned out of transverse alinement with the recess between the arms on the opposite side of the head and formed to seat in the recess between the arms of the companion head and out of transverse alinement with the corresponding pin thereon.

4. An automatic train pipe coupling comprising companion coupler heads, each having upon one side of its longitudinal axis diverging guiding arms with a recess intermediate the inner ends thereof, each head having a socket formed by a slot with closed top and bottom adjacent to said recess and extending inwardly beyond the inner end of the latter, a forwardly projecting tongue with laterally extending integral guide pin upon its outer face, said tongue conforming to and adapted to engage the sides and top and bottom walls of the slot, and said pin adapted to interlock with the recess when two heads are coupled together, as set forth.

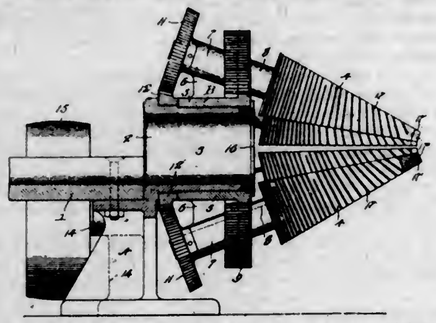
5. An automatic train pipe coupling comprising companion coupler heads, each having upon one side of its longitudinal axis diverging guiding arms with a recess intermediate the inner ends thereof, each head having a vertically elongated socket formed by a vertical slot with closed top and bottom which are inclined and which slot extends inwardly beyond the inner end of said recess, a broad tongue projecting from each head and inclined upon its upper and lower edges, adapted when interlocking with the slot to have wedging action against the inclined top and bottom of the slot, and guide pins on the tongues adapted to engage said recesses and coöperating with the tongue to securely hold the coupler heads against relative axial, lateral and vertical movements, as set forth.

[Claim 6 not printed in the Gazette.]

1,102,623. CANDY-SPINNING MACHINE. CHARLES H. WORSEY, Wilkinsburg, Pa., assignor to E. R. Knott Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 6, 1910. Serial No. 553,760. (Cl. 107—10.)

1. An apparatus of the class described comprising a combined stationary candy guide and bearing, a rotary carrier surrounding and revolving on the bearing, a plurality of conical combined reducing and drawing rolls mounted on the carrier and converging to a common point, and means for rotating the rolls as they rotate with the carrier.

2. An apparatus of the class described comprising a stationary tubular candy guide forming a bearing, a carrier rotatably mounted on the bearing, a plurality of shafts mounted on the carrier and converging to a common point, combined reducing and drawing rolls mounted on the shafts, pinions on the shafts, and a fixed circular gear with which all the pinions mesh for causing the rotation of the rolls through the rotation of the carrier.



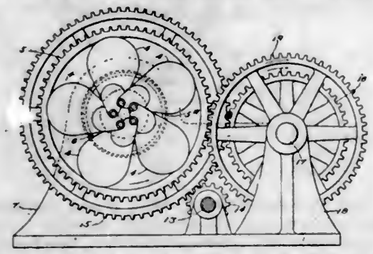
3. An apparatus of the class described comprising a stationary cylindrical candy guide, a carrier rotatably mounted on and surrounding the guide, a circular rack fixed on the guide, a plurality of combined reducing and conical drawing rolls mounted on the carrier and disposed at one end of the guide with their axes extending in the general direction of travel of the candy between the rolls, pinions connected with the carrier and meshing with the circular rack, and means for rotating the carrier.

4. A drawing roll for candy machines comprising a combined drawing and reducing cone, and means of uniform varying pitch extending spirally around the cone for effecting a drawing action on the candy.

5. A drawing roll for candy machines comprising a cone, and a feed groove extending spirally around the cone, said groove having a pitch varying uniformly throughout the length of the cone.

[Claims 6 to 15 not printed in the Gazette.]

1,102,624. CANDY-SPINNER. CHARLES H. WORSEY, Pittsburgh, Pa., assignor to E. R. Knott Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed May 19, 1911. Serial No. 628,149. (Cl. 107—10.)

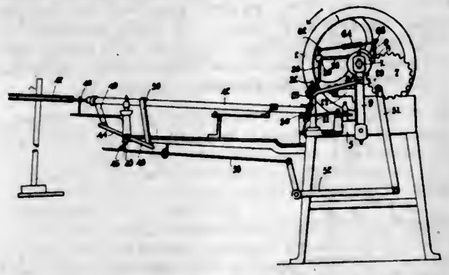


1. In a candy-making machine, in combination, a nest of cones around a cone-shaped space through which the batch is fed, a carrier for said cones supporting the latter by one end only, the other end being unsupported and free, a central bearing-support for said carrier constituting a non-rotating guide through which the batch enters the said space, pinions in connection with the respective cones, a wheel turning on said central support and in driving engagement with said pinions, and means for rotating the carrier and the said wheel respectively.

2. In a candy-making machine, a rotary batch-spinner comprising a nest of reducing and feeding cones, and a carrier for said cones located wholly at the large ends thereof, leaving the other ends thereof free and unsupported, said carrier having for each cone an elongated sleeve-bearing extending within the cone for a portion of the length of the latter.

3. In a candy-making machine, a rotary batch-spinner comprising a nest of cones, a carrier for said cones located wholly at the large ends thereof, leaving the other ends thereof free and unsupported, and an elongated sleeve-and-pintle bearing-support for each cone, having one element thereof combined with the carrier and the other element thereof combined with the cone, the said bearing-support extending within the cone a portion of the length of the latter.

1,102,625. AUTOMATIC FEEDING DEVICE FOR TACK-MACHINES. THOMAS HENRY WYNN, Hamilton, Ontario, Canada, assignor of one-half to John Inglis McLaren, Hamilton, Ontario, Canada. Filed Mar. 17, 1914. Serial No. 825,283. (Cl. 10—177.)



1. In an automatic feeding device for tack machines adapted to cut the material for the tack blanks transversely, the combination with means for turning the strip of material over in the opposite direction after the shearing of each tack blank from the same, of means for gripping the strip of material on the narrow faces or side edges of the strip and reciprocating means for feeding the strip so gripped into the machine.

2. In an automatic feeding device for tack machines adapted to cut the material for the tack blanks transversely, the combination with means for turning the strip of material over in the opposite direction after the shearing of each tack blank from the same, of a pair of jaws gripping the narrow faces or edges of the strip of material, and reciprocating means for actuating the jaws and feeding the material into the machine.

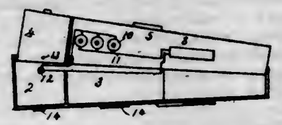
3. In an automatic feeding device for tack machines adapted to cut the material for the tack blanks transversely, the combination with means for turning the strip of material over in the opposite direction after the shearing of each tack blank from the same, of a pair of jaws, said strip of material adapted to be gripped between the jaws on the narrow faces or edges thereof, reciprocating means for simultaneously actuating the jaws and one of the jaws being capable of oscillating laterally.

4. In an automatic feeding device for tack machines adapted to cut the material for the tack blanks transversely, the combination with a guiding tube adapted to turn in the opposite direction after the shearing of each tack blank from the strip, of means for gripping the strip of material on the narrow faces or edges thereof, said means situated between the shearing mechanism of the tack machine and the guiding tube and independent of the latter, and reciprocating means for feeding the strip so gripped into the machine.

5. In an automatic feeding device for tack machines adapted to cut the material for the tack blanks transversely, the combination with a guiding tube through which the material is fed, said guiding tube adapted to turn in the opposite direction after the shearing of each tack blank from the strip, of means for gripping the strip of material on the narrow faces or edges thereof, said means situated between the shearing mechanism of the tack machine and the guiding tube and independent of the latter, reciprocating means for feeding the strip so gripped into the machine, and means connected to the strip for preventing retrograde movement thereof.

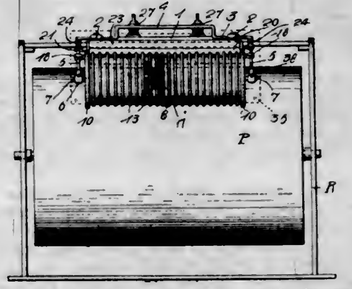
[Claims 6 to 15 not printed in the Gazette.]

1,102,626. COFFIN. STANISLAW ZERAŃSKI, Warsaw, Russia. Filed Dec. 3, 1913. Serial No. 804,523. (Cl. 27—3.)



A coffin or burial case provided with inner transparent covers or windows, supplemental opaque covers above said transparent covers, an electric illuminant and a battery secured to one of said supplemental covers, and the other supplemental cover arranged to make and break the electric circuit in opening and closing said cover.

1,102,627. PRINTING ATTACHMENT FOR WRAPPING-PAPER REELS. SOLOMAN ALEXANDER, Longbeach, Cal., assignor to Automatic Printer Company, Los Angeles county, Cal. Filed May 19, 1913. Serial No. 768,576. (Cl. 211—30.)



In a printing attachment for paper reels, the combination of an attaching plate adapted to be secured to a reel frame, bearing brackets secured to said plate, a roller supporting frame pivotally mounted in said brackets and having formed therein a crank loop, a printing roller revolubly mounted in said frame, ink applying and distributing rollers carried by said roller frame, apertured spring attaching brackets secured to said attaching plate, springs having one end engaged with the apertures in said spring attaching brackets and having their opposite ends engaged with the crank loop of said roller supporting frame, spring holding and adjusting screws secured in said attaching plate, and clamping nuts on said screws adapted to be screwed down into engagement with said springs whereby the pressure thereof is regulated to hold said printing roller in continuous engagement with a roll of paper in a reel with greater or less force.

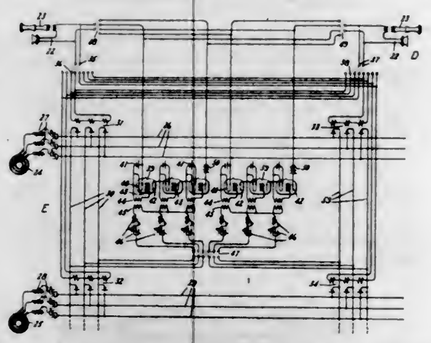
1,102,628. TELEPHONE SYSTEM. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 14, 1913. Serial No. 760,976. (Cl. 179—15.)

1. In a telephone system, a transmitting circuit adapted to carry a pulsating telephone current, means for producing a polyphase alternating current proportional to said telephone current, polyphase transmission conductors arranged to carry said alternating current, means for rectifying said polyphase alternating current, and a receiving circuit adapted to carry the rectified current.

2. In a telephone system a transmitting circuit, a receiving circuit, a telephone relay comprising a polyphase alternator operatively connected to said transmitting circuit, a polyphase current rectifying detector operatively connected to said receiving circuit, and polyphase transmission conductors between said relay and said rectifying detector.

3. In a multiplex telephony system, a plurality of transmitting circuits each adapted to carry a pulsating

telephone current, means for producing a polyphase alternating current proportional to each of said telephone currents, each of said alternating currents so produced being of a different frequency, polyphase transmission conductors arranged to simultaneously carry all of said alternating currents, means for selectively rectifying each of said polyphase alternating currents, and a plurality of receiving circuits each adapted to carry a rectified current.

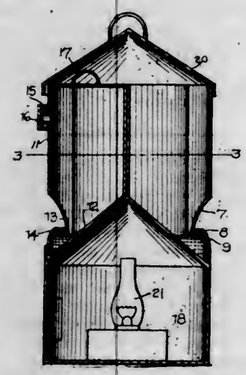


4. In a telephone system, a plurality of subscriber's circuits, a central exchange, a plurality of telephone relays each comprising a polyphase alternator of different frequency, and means controlled at the central station for operatively connecting any relay to any subscriber's circuit.

5. In a telephone system, a calling station and an answering station, each station having a transmitting circuit and a receiving circuit, a telephone relay comprising a polyphase alternator operatively connected to the transmitting circuit of each station, polyphase transmission conductors between said stations and operatively connected to said relays, and polyphase current rectifying detectors operatively connected to the receiving circuit of each station and to the transmission conductors.

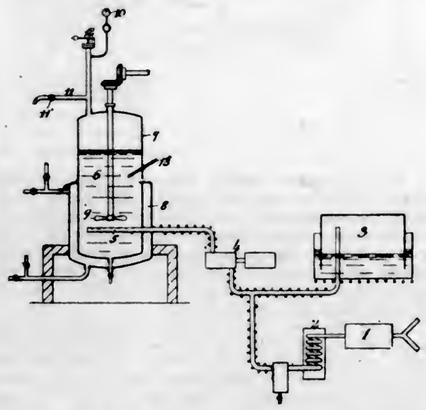
[Claims 6 to 8 not printed in the Gazette.]

1,102,629. COMBINED FEEDER, FOUNTAIN, AND HEATER. LEO M. ANDERSON and MAY L. ANDERSON, Ramsey, N. J. Filed Jan. 16, 1913. Serial No. 742,449. (Cl. 119—52.)



A combination feeder, fountain, and heater, comprising a casing divided into a plurality of vertically elongated compartments formed with outwardly and downwardly inclined bottoms, sundry of said compartments being formed near their lower ends with inwardly depressed portions and with troughs at their lower ends, the depressed portions having outlets which are disposed below the upper edges of the troughs, for the purpose specified, the remaining compartment of the device being formed with an opening and with longitudinally extending flanges defining the sides of said opening and with a bottom flange projecting upwardly above the outer edge of its floor, a water tank receivable in the last named compartment and formed with a downwardly and outwardly sloping floor and an inwardly depressed portion just above said floor and with a trough which fits down behind the upwardly projecting flange and for which the depressed portion constitutes an outlet, said longitudinal flanges extending over said water tank at the sides thereof, and a lid for said compartments.

1,102,630. COMPOSITION AND PROCESS OF MANUFACTURING THE SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by direct and mesne assignments, to Condensite Company of America, East Orange, N. J., a Corporation of New Jersey. Filed May 14, 1909. Serial No. 496,060. (Cl. 106—22.)



1. The process of forming a hard infusible product consisting in incorporating with a fusible phenol resin a formaldehyde compound having the formula $(CH_2O)n$ where n is a number less than 4, of a quantity just sufficient to combine with substantially all of the same, and heating the mass sufficiently to cause the reaction to ensue and the mass to be transformed into a hard infusible chemically inert product, substantially as described.

2. The process of forming a hard infusible product consisting in forming an anhydrous fusible phenol-formaldehyde condensation product containing no uncombined formalhehyde, incorporating therewith a formaldehyde compound having the formula $(CH_2O)n$ where n is a number less than 4, of a quantity just sufficient to combine with substantially all of the same, and heating the mass sufficiently to cause the reaction to ensue and the mass to be transformed into a hard infusible chemically inert product, substantially as described.

3. The process of forming a hard infusible product consisting in determining the percentage of uncombined phenol in a fusible phenol resin incorporating therewith a quantity of formaldehyde compound having the formula $(CH_2O)n$ where n is a number less than 4, calculated to be in proper proportion to cause the combination of the formaldehyde compound upon application of sufficient heat, with substantially all of the resin and uncombined phenol contained therein to form the desired substance, and heating the mass to a temperature, and for a length of time sufficient to cause a complete hardening reaction between the said ingredients, said temperature not to exceed 350° F., substantially as described.

4. The process of forming a hard infusible, insoluble product, consisting in incorporating with a fusible anhydrous phenol resin, an anhydrous formaldehyde compound having the formula $(CH_2O)n$ where n is a number less than 4, in an amount the variation of which is determined by the ascertained percentage of uncombined phenol in the resin to be a sufficient amount to form a hard infusible, insoluble product, and applying heat sufficient to cause a condensation reaction between the resin and the said formaldehyde compound, forming the desired hard infusible product, substantially as described.

5. The process of forming a hard infusible product consisting in incorporating with a fusible anhydrous phenol resin, a formaldehyde compound having the formula $(CH_2O)n$ where n is a number less than 4, in an amount determined by the percentage of uncombined phenol in the resin to be the proper amount to entirely enter into combination with substantially all of the resin, and uncombined phenol contained therein, on application of sufficient heat, and applying heat sufficient to cause a condensation reaction between the ingredients forming the desired hard infusible product substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,102,631. PLASTIC COMPOSITION AND METHOD OF MAKING SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by direct and mesne assignments, to Condensite Company of America, East Orange, N. J., a Corporation of New Jersey. Filed Aug. 6, 1910. Serial No. 575,970. (Cl. 106—22.)

1. The process of forming hard phenolic condensation products, which consists in mixing thoroughly together a filling body consisting of a hard, infusible final phenol-methylene condensation product in comminuted condition with a binder comprising a fusible phenol-methylene condensation product and a methylene-containing hardening agent for said fusible product, and heating the mass under conditions suitable to cause the final hardening reaction between said fusible product and hardening agent and the formation of a homogeneous mass in which said filling body is integrally bound, substantially as described.

2. The process of forming hard phenolic condensation products, which consists in mixing thoroughly together a filling body consisting of a hard, infusible final phenol-methylene condensation product in comminuted condition with a binder comprising fusible phenolic and methylene-containing ingredients adapted to form, upon sufficient heating, a final infusible condensation product of the same character as the said filling body, and heating the mass under conditions suitable to cause the final hardening reaction between the ingredients of the binder and the formation of a homogeneous uniform hard infusible product including said filling body, substantially as described.

3. The process of forming hard phenolic condensation products, consisting in incorporating a hard infusible phenolic condensation product in comminuted condition with a fusible phenolic condensation product and hexa-methylene-tetra-amin and a plasticity agent, heating the mixture and causing the final hardening reaction between the active components of the mass to take place, substantially as described.

4. The process of forming hard phenolic condensation products, consisting in comminuting to powder a hard infusible insoluble phenolic condensation product having a plasticity agent included therein, thoroughly mixing the same with a fusible phenolic condensation product and a small percentage of a methylene-containing substance, heating the mixture and causing the final hardening reaction between the fusible product and the said substance to take place, substantially as described.

5. The process of forming sound records, which consists in mixing together a fusible phenolic condensation product, a small percentage of a methylene-containing substance, and a hard infusible final phenolic condensation product in comminuted condition, and molding the mass with application of sufficient heat to cause the fusible product to become plastic and take the impression of the mold, heating further sufficiently to cause the final hardening reaction, cooling, and removing the record from the mold, substantially as described.

1,102,632. ENAMEL LACQUER OR VARNISH COMPOSITION. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Filed July 22, 1911. Serial No. 639,944. (Cl. 134—26.)

1. An enamel or varnish composition, comprising a solution of a fusible phenol resin and a methylene-containing hardening agent therefor, a fluid thinning ingredient, and acetylene-tetra-chlorid, substantially as described.

2. An enamel or varnish composition, comprising a solution of an anhydrous fusible soluble phenol resin and an anhydrous methylene-containing hardening agent therefor, in a water-free solvent for both of the above which volatilizes readily, but does not boil at the reaction temperature of the phenol resin and the said hardening agent therefor, substantially as described.

3. An enamel or varnish composition, comprising a solution of a fusible phenol resin, a small percentage of methylene-containing hardening agent therefor, and of free phenol, and a solid solvent element, all dissolved in a water-free non-inflammable volatile solvent therefor, substantially as described.

4. An enamel or varnish composition, comprising a solution of phenolic and methylene-containing substances of such a nature and in such proportion as to be adapted to react upon application of sufficient heat to form an infusible phenolic condensation product, a fluid thinning ingredient and acetylene-tetra-chlorid, substantially as described.

5. An enamel or varnish composition, comprising a solution of fusible phenol resin, a small percentage of hexa-methylene-tetra-amin and of free phenol, all dissolved in acetylene-tetra-chlorid, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,102,633. INSULATING COMPOSITION. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Filed Jan. 2, 1912. Serial No. 668,941. (Cl. 106—15.)

1. An insulating composition comprising a fusible varnish gum and a solid, non-volatile-crystalloid of high melting point, the said composition having a setting or congealing point not lower than 240° F. and being thinly fluid when molten, substantially as described.

2. An insulating composition comprising approximately 100 parts of Manila gum and 20 to 70 parts of phenyl phthalimid, substantially as described.

3. An insulating composition which is slightly flexible when cold, has a congealing or setting point between 240° F. and 320° F., and is thinly fluid when molten, comprising a varnish gum, an oily substance, and a solid, non-volatile crystalline body, substantially as described.

4. An insulating composition comprising a fusible varnish gum, a crystalline body of high melting point and slight solubility in hydro-carbon oil and insoluble in water, and a substance for imparting flexibility to the composition when cold, substantially as described.

5. An insulating composition comprising substantially 100 parts of Manila gum, 20 to 70 parts of phenyl phthalimid, and from 10 to 30 parts of castor oil, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,102,634. PLASTIC PHENOLIC CONDENSATION PRODUCT AND PROCESS FOR FORMING THE SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Glen Ridge, N. J., a Corporation of New Jersey. Original application filed June 2, 1911, Serial No. 630,893. Divided and this application filed Mar. 18, 1912. Serial No. 684,610. (Cl. 106—22.)

1. As a new composition of matter, a solid solution of a phenolic infusible insoluble condensation product and benzoic acid, and free from any hydro-halogen acid.

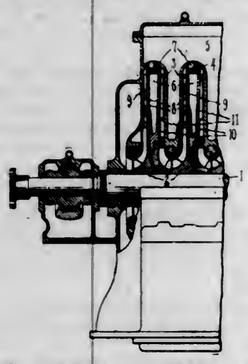
2. As a new composition of matter, an anhydrous solid solution of a phenol formaldehyde condensation product, and benzoic acid.

3. As a new composition of matter, a hard anhydrous infusible body comprising a condensation product of a fusible anhydrous phenol resin and an anhydrous methylene-containing substance, associated with benzoic acid.

4. As a new composition of matter, a solid body comprising a resinized phenol ultimate reaction product and containing benzoic acid and benzoic anhydrid, the said body being tough and infusible and insoluble in alcohol or water, and plastic at elevated temperatures.

5. The process of forming an anhydrous plastic composition which consists in incorporating together fusible phenol resin, a methylene-containing hardening agent therefor, and a suitable amount of benzoic anhydrid, and heating the mass sufficiently to cause a hardening reaction to ensue, whereby any water evolved combines with the anhydrid, and the mass is rendered infusible.

1,102,635. TURBO-COMPRESSOR. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 4, 1912. Serial No. 718,576. (Cl. 230—1.)



1. In a turbo-compressor, compressing wheels, an interposed diaphragm, means for passing the fluid being compressed from one wheel to the next wheel outwardly and inwardly along the front and back of the diaphragm, means for diffusing the fluid to reduce its velocity and for reducing the temperature of the fluid as it passes outwardly from one compressing wheel along the front of the diaphragm and means consisting of heat conducting material for further reducing the temperature of the fluid as it passes inwardly along the back of the diaphragm to the next compressing wheel.

2. In a turbo-compressor, compressing wheels, an interposed diaphragm, means for passing the fluid being compressed from one wheel to the next wheel outwardly and inwardly along the front and back of the diaphragm, means for diffusing the fluid being compressed to reduce its velocity as it passes outwardly from one compressing wheel along the front of the diaphragm and heat conducting vanes arranged to finely subdivide the fluid to reduce its temperature as it passes inwardly along the back of the diaphragm to the next compressing wheel.

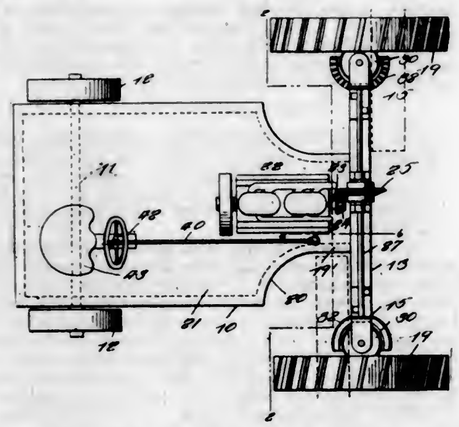
3. A turbo-compressor including a casing, compressing wheels and an interposed diaphragm, the walls of said casing extending along the front and back of the diaphragm, and cooling vanes in the space between the walls of the casing and the diaphragm along the front and back of the diaphragm.

4. A turbo-compressor including a casing, compressing wheels and an interposed diaphragm, the walls of said casing extending along the front and back of said diaphragm, outwardly diverging diffusing vanes in the space between the walls of the casing and the front of the diaphragm, and cooling vanes located between the outer portions of said diffusing vanes.

5. A turbo-compressor including a casing, compressing wheels and an interposed diaphragm, the walls of said casing extending along the front and back of said diaphragm, outwardly diverging diffusing vanes in the space between the walls of the casing and the front of the diaphragm, cooling vanes located between the outer portions of said diffusing vanes, and cooling vanes in the space between the walls of the casing and the back of the diaphragm.

[Claims 6 to 13 not printed in the Gazette.]

1,102,636. MOTOR. MARION M. BARNES, Lovilia, Iowa. Filed Apr. 11, 1913. Serial No. 760,495. (Cl. 21—114.)



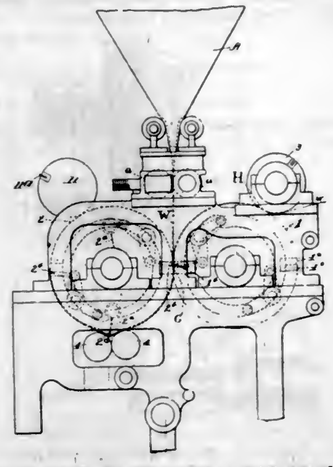
In a device of the kind described, a frame, a pair of vertical shafts journaled at the front of said frame and each provided with a steering axle, a traction and steering wheel on each stub axle, means to drive said wheels, a segmental bevel gear provided with a hub having a slot engaging on each vertical shaft, a pin passing through each hub and vertical shaft, a transverse shaft journaled to said frame, a bevel pinion on each end of said shaft meshing with a respective segmental gear, one of said gears engaging the upper side of one pinion and the other gear engaging the lower side of the other pinion, and means to rotate said shaft.

1,102,637. ASSOCIATING, CUTTING, AND FOLDING APPARATUS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Aug. 15, 1910. Serial No. 577,252. (Cl. 107—120.)

1. In associating and folding mechanism for printing presses, the combination of a folding cylinder and co-acting cutting cylinder, means for directing a web or webs between said cylinders to be cut thereby, means for directing another web or webs to and between said cylinders, and means co-acting with said cutting cylinder for separately severing the other web or webs independently of the said folding cylinder.

2. In associating and folding mechanism for printing presses, the combination of a folding cylinder, a cutting cylinder co-acting therewith, means for directing a web or webs between said cylinders to be cut thereby; means for directing a second web or group of webs to and between said cylinders, and a second cutting cylinder cooperating with the first cutting cylinder for severing the second web or webs.

3. In combination, folding rolls, a folding and cutting cylinder coöperating with said rolls, a cutting cylinder cooperating with said folding and cutting cylinder for severing a web or webs, means for directing a second web or webs to said cutting cylinder, and means co-acting with said cutting cylinder for severing the second web or webs independently of the first web or webs.

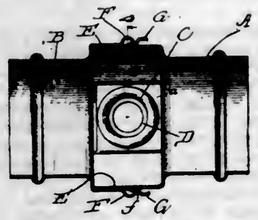


4. In combination, folding rolls, a folding and cutting cylinder coöperating with said rolls, a cutting cylinder cooperating with said folding and cutting cylinder for severing a web or webs; means for directing a second web or webs to said cutting cylinder, means in said cutting cylinder for directing the second web or webs to the point of association with the first web or webs, and means coacting with said cutting cylinder for severing the second web or webs independently of the first web or webs.

5. In combination, a folding mechanism, a folding and cutting cylinder adapted to deliver associated sheets to said folding mechanism, a cutting cylinder co-acting with said cutting and folding cylinder, means for directing a web or webs between said cylinders to be severed thereby, means for directing another web or webs between said cylinders to be associated with the first web or webs, and means co-acting with said cutting cylinder to sever the other web or webs independently of the cutting and folding cylinder.

[Claims 6 to 15 not printed in the Gazette.]

1,102,638. INCANDESCENT-ELECTRIC-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1907. Serial No. 399,553. (Cl. 173—362.)



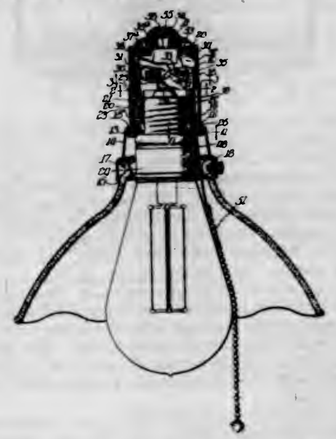
1. In an incandescent electric lamp socket, a pair of telescoping shells, the inner of which is formed to receive at one end an incandescent lamp, a tongue carried by said inner shell and extending toward the lamp-receiving end of said shell, an inclined projection on said tongue extending radially with respect to the shell, coöperating means on the outer of said shells, and a portion of reduced width carried by said tongue and extending beyond the edge of said outer shell.

2. In an incandescent lamp socket, a pair of telescoping shells, the inner of which is formed to receive at one end an incandescent lamp, a tongue carried by said inner shell and extending toward the lamp receiving end of said shell, an inclined projection on said tongue extending radially with respect to the shell, coöperating means on the outer of said shells, and a portion carried by said tongue and extending beyond the edge of said outer shell.

3. In an incandescent electric lamp socket, an outer casing comprising a pair of telescoping shells, one of said shells being provided with a projection, and the other of said shells having the material thereof modified to form a spring latch having an outwardly extending portion arranged to pass beyond and engage behind the projection of said first-named shell upon the shells being thrust together, and said latch having an accessible portion for permitting manipulation thereof to enable the shells to be disconnected.

4. In an incandescent electric lamp socket, an outer casing comprising a pair of telescoping shells, one of said shells being provided with a projection, and the other of said shells having the material thereof modified to form a spring latch extending rearwardly with relation to the edge of the shell and having an outwardly extending portion arranged to pass beyond and engage behind the projection of said first-named shell upon the shells being thrust together, and said latch having a portion extending beyond the end of said first-named shell when the shells are connected together, for the purposes set forth.

1,102,639. PULL-SWITCH SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1910. Serial No. 590,501. (Cl. 173—354.)



1. In combination, a lamp socket, a shade carried thereby, a switch associated with said socket, and a switch-operating member connected with said switch and passing through the upper part of said shade to a position between the shade and the lamp, whereby vibration of the socket, due to pressure by the switch-operating member on the outer part of the shade, is avoided.

2. In combination, a lamp socket, a shade carried thereby, a pull-operated switch mounted in said socket, an operating member connected at its upper end with said switch, and means for guiding said operating member past the mouth of said shade so that said operating member is disposed between said shade and the lamp carried by the socket, whereby vibration of the socket, due to pressure of the switch-operating member on the outer part of the shade, is avoided.

3. A switch lamp socket comprising an insulating base, lamp contacts associated with said base, a pull-operated switch carried by said base, a casing surrounding said base, lamp contacts, and switch, and an operating member

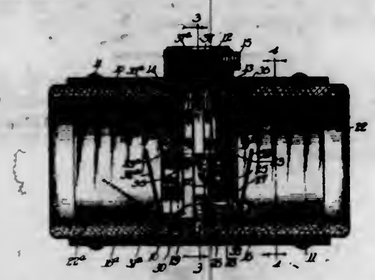
for said switch disposed between said lamp contacts and the casing, for the purposes set forth.

4. A switch lamp socket comprising an insulating base, lamp contacts carried by said base, a pull-operated switch associated with said contacts, a casing surrounding said base and switch and a switch operating member connected to said switch and extending downward and out through the end of said casing, said member being disposed between said base and the casing.

5. In combination, a pair of lamp contacts, a support therefor, a switch associated with said contacts, a casing surrounding said support and said switch, and having an opening through which a lamp may be inserted to make connection with said contacts, and an operating member for said switch, said operating member being partly inclosed in said casing and extending outward through the opening of said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,102,640. MOISTURE-PROOF TWIN SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 14, 1912. Serial No. 720,395. (Cl. 173—337.)



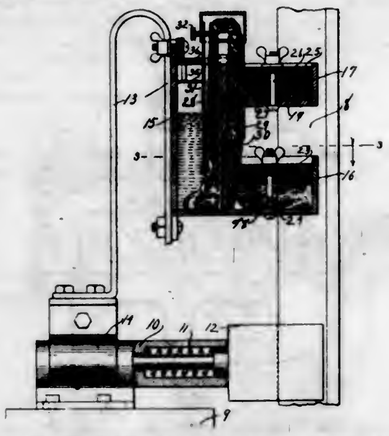
1. In a moisture proof twin socket, the combination with a tubular open-ended metallic casing, of two threaded lamp-receiving contacts arranged back to back, two center contacts arranged back to back, and vitreous means for supporting said contacts, said means being disposed between said contacts and surrounding said threaded contact so as to insulate the same from said casing.

2. In a moisture proof twin socket, the combination with a tubular open-ended casing having a projection therein, of a pair of lamp receptacles mounted therein, each of said lamp receptacles including a cup-shaped member formed of vitreous material and a threaded contact and a center contact contained therein, and means for securing said receptacles back to back so as to clamp said projection between them, thereby to retain said receptacles in said casing.

3. In a moisture proof twin socket, the combination with a tubular open-ended casing, of a pair of cup-shaped insulating members mounted therein, each of said members having a passage formed through the rear wall thereof, a pair of center contacts secured to the rear side of the rear wall of one of said members, one of said center contacts passing through each of said passages and entering said members, a threaded lamp-receiving contact carried by each of said members, and means for making electrical connection between said last named contacts.

1,102,641. LUBRICATOR FOR ELEVATOR-GUIDES. OTTO BERGER, New York, N. Y. Filed Mar. 21, 1913. Serial No. 755,829. (Cl. 184—22.)

1. In a lubricating device for elevator guides, an oil reservoir; a swab of absorbent material carried by said reservoir and adapted to contact with a guide to be lubricated; a wiper of absorbent material independent of and located above said swab and carried by said reservoir; a tubular U-shaped oil feeding member the upper end of which lies above the level of oil in said reservoir and one leg of which depends thereinto, and the other leg of which member terminates adjacent said swab; and a wick of absorbent material within said oil feeding member and through which oil is supplied to said swab.



2. In a lubricating device for elevator guides, an oil reservoir having two recessed extensions provided each with a slot in its bottom wall, and which slots are adapted to receive an elevator guide; a swab of absorbent material located in one of said extensions and adapted to contact with the guide; a wiper of absorbent material located within the other of said extensions and adapted to contact with the guide; a tubular U-shaped oil feeding member, the upper end of which lies above the level of oil in said reservoir and one leg of which depends thereinto, and the other leg of which member terminates adjacent said swab; and a wick of absorbent material within said oil feeding member and through which oil is supplied to said swab.

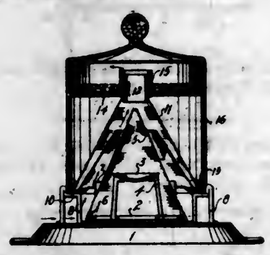
3. In a lubricating device for elevator guides, an oil reservoir having two recessed extensions provided each with a slot in its bottom wall, and which slots are adapted to receive an elevator guide; a swab of absorbent material located in the lower of said extensions and adapted to contact with the guide; a wiper of absorbent material located within the upper of said extensions and adapted to contact with the guide; a tubular U-shaped oil feeding member, the upper end of which lies above the level of oil in said reservoir, and one leg of which depends thereinto, and the other leg of which member extends through the upper of said extensions and terminates adjacent said swab; and a wick of absorbent material within said oil feeding member and through which oil is supplied to said swab.

4. In a lubricating device for elevator guides, an oil reservoir having two recessed extensions provided each with a slot in its bottom wall, and which slots are adapted to receive an elevator guide; a swab of absorbent material located in one of said extensions and adapted to contact with the guide; a wiper of absorbent material located within the other of said extensions and adapted to contact with the guide; a tubular oil feeding member, one end of which depends into said reservoir and the other end of which terminates adjacent said swab; and a wick of absorbent material within said oil feeding member and through which oil is supplied to said swab.

5. In a lubricating device for elevator guides, an oil reservoir having two recessed extensions provided each with a slot in its bottom wall, and which slots are adapted to receive an elevator guide; an upwardly projecting ledge extending about the slot in the bottom wall of one of said extensions, whereby an oil retaining space is provided in the lower portion of said extension; a swab of absorbent material located within said last mentioned extension and adapted to contact with the guide; a wiper of absorbent material located within the other of said extensions, and adapted to contact with the guide; a tubular oil feeding member one end of which depends into said reservoir and the other end of which terminates adjacent said swab; and a wick of absorbent material within said oil feeding member and through which oil is supplied to said swab.

[Claims 6 and 7 not printed in the Gazette.]

1,102,642. FLY-TRAP. THOMAS E. BROWN, Pecos, Tex. Filed May 27, 1913. Serial No. 770,104. (Cl. 43—22.)



1. In a fly trap, the combination with a wire screen cone, of a vessel within the cone to receive the bait, a frusto-conical wire screen structure having its wall outwardly spaced from that of said cone and having its bottom edge raised above the surface supporting said cone, a vertical tube communicating with the top of the frusto-conical structure, a pan containing a fluid surmounted upon the frusto-conical structure, said pan being centrally apertured and formed with a flange bordering said aperture and receiving said tube, and a glass casing inclosing said parts having its edge spaced from the surface supporting the cone and having its wall fitting that of said pan.

2. A fly trap comprising a wire screen cone, a shallow vessel mounted in the bottom portion of said cone, a smaller shallow vessel centrally disposed at an elevation above the first mentioned vessel and containing bait, a frusto-conical wire screen structure having its wall spaced outwardly from that of said cone and having its bottom edge elevated above the surface supporting the cone, a tube communicating with the top of the frusto-conical structure, a pan containing a fluid supported by the frusto-conical structure with the center of which pan said tube communicates, and a glass casing closed at its top and open at its bottom inclosing said parts, the bottom of said casing being spaced from the surface supporting said cone and the wall of the casing being formed to closely fit the wall of said pan.

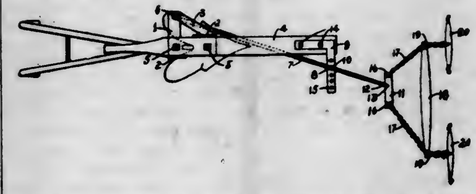
3. In an insect trap, a support, brackets mounted on the support, a ring carried by the brackets, a plurality of concentric wire screens carried by said ring in a spaced relation, a pan having communication at its center with the top of the outermost wire screen, a conical screen member disposed within the wire screens and spaced therefrom, a shallow vessel over which the screen member is mounted and a smaller vessel mounted within the conical screen member above the shallow vessel.

4. A fly trap comprising a wire screen cone, a shallow vessel centrally mounted in the bottom portion of said cone, a smaller shallow vessel centrally supported at an elevation above the first shallow vessel within said cone, the last named vessel being a bait receptacle, a ring mounted upon the intermediate portion of the cone and extending upwardly therefrom, a frusto-conical structure having its wall spaced from that of the cone and having its bottom edge elevated above the surface supporting the cone, a vertical tube communicating with the top of the frusto-conical structure, a centrally apertured pan surmounted upon the frusto-conical structure, and a flange inclosing the central aperture of the pan receiving said tube, and a glass casing open at its top and closed at its bottom inclosing said parts, the lower edge of said casing being elevated above the surface supporting the cone, and the wall of the casing fitting the wall of the pan.

5. A fly trap comprising a wire screen cone, a frusto-conical open topped wire screen structure having its wall spaced outwardly from that of said cone and having its lower edge elevated above the surface supporting the cone, an annular metal plate secured to the bottom edge of said frusto-conical structure, a second frusto-conical structure resting upon said metal plate having its wall spaced outwardly from the first named frusto-conical structure, a vertical tube communicating with the last mentioned frusto-conical structure, a centrally apertured pan surmounted upon the last mentioned frusto-conical structure, a collar inclosing the central aperture of the pan and receiving said tube, and a glass casing inclosing said parts having its top closed and its bottom open, the lower edge of said casing being spaced from the surface supporting the cone, and the wall of said casing being made to fit that of said pan.

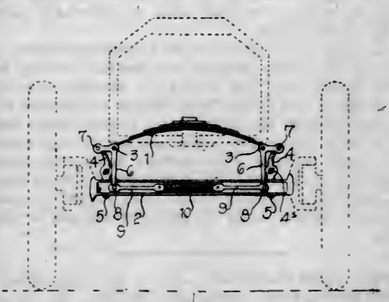
[Claims 6 and 7 not printed in the Gazette.]

1,102,643. TRIPLE OFFSET FOR PLOWS. WILLIAM F. BUBB, Mountain View, Cal. Filed Apr. 18, 1914. Serial No. 832,849. (Cl. 97—4.)



In a triple offset for plows, the combination of an angle iron offset having upturned flanges thereon and a brace attached thereto, means by which said angle iron offset is attached to the under side of a plow beam, a draft chain or wire rope attached to said angle iron offset extending forward and under said plow beam, an angle iron offset fastened on the top and near the outer end of said plow beam, a plurality of holes bored through said offset portion of said angle iron adapted to engage an eye-bolt through which a chain or wire rope passes connecting with an offset plate to which is connected at its ends by offset draft chains of different lengths, said chains connecting with a swingle-tree, means by which said swingle-tree is connected to whiffletrees, as and for the purpose described.

1,102,644. SHOCK-ABSORBER. RAYMOND H. CARR and JOHN C. MADDUX, Kingman, Ariz., assignors of one-fourth to said Carr, one-half to said Maddux, and one-fourth to Alvah John McKelvey, Kingman, Ariz. Filed Feb. 26, 1914. Serial No. 821,255. (Cl. 21—101.)



1. In a vehicle and in combination with the body spring and axle thereof, angular levers pivotally supported upon the axle at one end and pivotally connected at their elbows to the body spring, and a contractile spring operatively connected to the other end of said levers and tending to draw the same together.

2. In a vehicle and in combination with the body spring and axle thereof, posts connected to the axle, and extending upwardly therefrom, angular levers fulcrumed at one end on the upper end of said posts and pivotally connected to the body spring at their elbows, link rods pivotally connected to the other extremity of said levers, and a contractile spring operatively connected to said link rods tending to draw the same together.

1,102,645. CHAIN. HERBERT COCKSHAW, New York, N. Y. Filed Apr. 29, 1913. Serial No. 764,308. (Cl. 59—80.)



1. A chain comprising hollow sections longitudinally linked together by interlocking links having portions secured to the inside of said sections and enlarged portions partly seated in the ends of said sections, and means for securing said portions inside said sections.

2. A chain comprising hollow sections having enlarged ends, linking means consisting of spaced arms positioned inside said sections and loops of larger diameter extending without said sections, said linking means being shaped to conform to said ends, and means for securing the spaced arms in said sections.

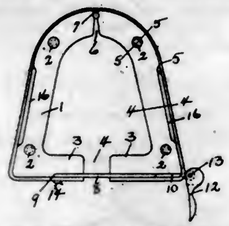
3. A chain comprising hollow sections having enlarged ends, linking means consisting of spaced arms positioned inside said sections and loops of larger diameter extending without said sections, said linking means being shaped to conform to said ends, and means for securing the spaced arms in said sections, said last mentioned means being shaped to conform to said ends whereby said sections may be closely linked.

4. A chain comprising hollow longitudinal linked sections, linking means between the sections having interlocking looped ends, and means for securing the looped ends in place, said means being shaped to conform to the said ends, whereby the said sections may be closely linked.

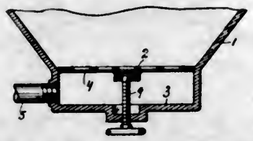
5. A chain comprising hollow sections having enlarged ends, means between such sections having interlocking looped ends, and means for securing the looped ends in place, said last mentioned means being shaped to conform to the said ends, whereby the said sections may be closely linked.

1,102,646. ICE-CREEPER. CLARK M. COLE, Erie, Pa. Filed Feb. 4, 1913. Serial No. 746,131. (Cl. 36—64.)

In an ice creeper, the combination of a base plate having an opening therein at the front and at the rear and having downwardly extending spurs and flanges of resilient metal extending upwardly therefrom and forming a flexible portion at the rear opening of the base plate through the resilient quality of the upwardly extending flange; and means at the front of the creeper for drawing the front ends of the plates toward each other to clamp the side flanges on a heel.



1,102,647. BREWING APPARATUS, &c. CHARLES B. DAVIS, New York, N. Y. Filed Aug. 12, 1912. Serial No. 714,566. (Cl. 210—16.)



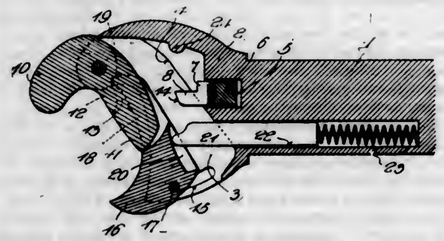
1. Apparatus for separating a liquid from solids comprising a sieve, and a member adapted to come into flat contact with said sieve to close its perforations, and means for moving said sieve and member toward and away from each other.

2. Apparatus for separating a liquid from solids comprising a sieve, a member in superposed relation to the sieve, and means for causing relative movement between the sieve and the member to space them apart or bring them close together in such superposed relation.

3. In apparatus of the kind described, a sieve and a controlling member in superposed relation, one fixed and the other movable, whereby the sieve and the member may be brought into close contact or spaced apart in such superposed relation.

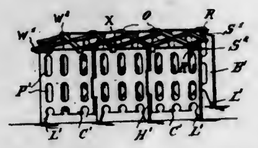
4. In apparatus of the kind described, a sieve and a controlling member having portions in superposed relation, and means for approaching such portions more or less closely toward each other.

1,102,648. CAR-COUPLING. CALVIN O. DERFLINGER, Riverton, Va., assignor of one-half to John W. Morgan, Riverton, Va. Filed July 1, 1913. Serial No. 776,763. (Cl. 213—65.)



A car coupler, comprising a head provided with a recess and longitudinally extending slots, a knuckle pivotally mounted within one side of the recess and provided with a laterally extending tail and shoulders arranged upon opposite sides of the tail adjacent the base thereof, locking means to detachably engage the tail, a complementary knuckle provided with spaced laterally extending fingers receiving the tail therebetween and having extremities engaging said shoulders, a pin passing transversely through the complementary knuckle and mounted in the slots to turn therein and move longitudinally thereof, a plunger longitudinally movably mounted in the head with its free end slidably engaging the complementary knuckle inwardly of the pivot thereof, and resilient means engaging the plunger to move it outwardly toward the complementary knuckle.

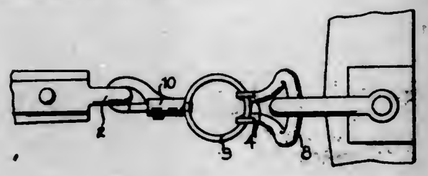
1,102,649. COLLAPSIBLE GRATE. SAMUEL CHARLES HEWLINGS DIX, Cheltenham, England. Filed Jan. 17, 1912. Serial No. 671,760. (Cl. 126—29.)



1. A collapsible grate comprising in combination, parallel walls, each comprising wall sections pivoted together vertically, so as to fold to lie in juxtaposed relation to each other, and a trellis-like top grid having pivotal connection with said walls at one end thereof, said top grid including a plurality of cross strips having their ends turned downwardly at substantially right angles to the body of the strip, said down turned ends being disposed in coacting pairs and adapted to lie one at the inner side and the other at the outer side and against said wall sections, to retain said walls in spaced apart parallel relation to each other.

2. A collapsible grate comprising in combination, parallel walls each comprising wall sections pivoted together vertically, so as to fold to lie in juxtaposed relation to each other, and a trellis-like top grid including a plurality of cross strips having their ends turned downwardly at substantially right angles to the body of the strip, said down turned ends being disposed in coacting pairs and adapted to lie one at the inner side and one at the outer side and against said wall sections, to retain said walls in spaced apart parallel relation to each other.

1,102,650. VEHICLE TONGUE ATTACHMENT. JOSEPH W. ENSOR, Marcus, S. D. Filed Sept. 19, 1913. Serial No. 790,664. (Cl. 21—92.)

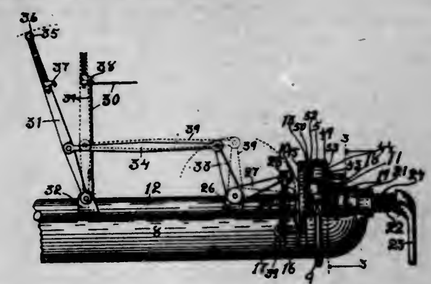


1. An attachment for vehicle tongues comprising a hook formed of a single piece of metal looped intermediate of its ends and bent intermediate the free ends of the metal and the crown of the loop, and means connecting the free ends of the metal forming one end of the hook.

2. A hook of the class described formed of a single piece of metal looped intermediate of its ends and bent intermediate the free ends of the metal and the crown of the loop, the arms of the hook at the point of bending tending to converge to form a neck-like portion on the hook, and means connecting the free ends of the arms forming one end of the hook.

3. A hook member of the class described formed of a single piece of metal looped intermediate of its ends and bent at points intermediate the free ends of the metal and the crown of the loop, a ring member engaged with the free ends of the arm forming one end of the hook, and a snap hook swiveled to said ring member whereby to removably secure the device to an object.

1,102,651. AUTOMOBILE ENGINE-STARTER. HARRY B. FENNER, Omaha, Nebr. Filed Nov. 27, 1912. Serial No. 733,786. (Cl. 123—185.)



1. An automobile engine starter, comprising a peripherally toothed head mounted rigidly on the engine shaft, a stationary circular support disposed around and spaced away from said toothed head, a cylindrical rockable sleeve disposed in the annular space between the support and head and having an exterior annular groove to slidingly travel on the inner periphery of the stationary circular support, a pawl disposed on said sleeve to engage the peripheral teeth on said head, a guide-lug on the pawl, an inclined plane on the stationary support to engage the guide-lug and throw the pawl out of engagement with said teeth, and a curved guide-rib on the stationary support to slidingly carry the guide-lug and retain the pawl out of engagement with said toothed head.

2. An automobile engine starter, comprising a clutch-head mounted rigidly on the engine shaft and having a pair of radial teeth disposed diametrically opposite, a circular support disposed around and spaced away from said clutch-head, a rocking sleeve disposed in the annular space between the head and support and having an exterior annular groove to engage and travel on the inner periphery of the circular support and loosely around the clutch-head, and three spring pawls spaced evenly around on the sleeve and disposed to engage the radial teeth on the clutch-head.

3. An automobile engine starter, comprising a cylindrical cup-shaped clutch-head mounted rigidly on the forward end of the engine shaft and having a cross-pin disposed through the cup and the ends of the pin shaped to form a pair of diametrically opposite hooked teeth on the periphery of the head, a circular yoke disposed concentrically around the base of said clutch-head, spaced away therefrom and fastened stationarily on the engine bed, a cylindrical rocking sleeve disposed in the annular space between said yoke and head and having an exterior groove to engage and travel on the inner periphery of the yoke and loosely around the head, and three spring pawls spaced equally around on the sleeve to engage said hooked teeth on the head.

4. An automobile engine starter, comprising a cylindrical cup-shaped clutch-head mounted at its base on the front end of the engine shaft, a pin disposed diametrically through the cup and its ends projected to form peripheral teeth on the head, a circular yoke disposed concentrically around and spaced away from the periphery of the base of the head and seated stationarily on the engine bed, a cylindrical sleeve disposed in the annular space between the head and the yoke and having an exterior groove to engage and slide on the inner periphery of the yoke to rock loosely around the base of the head, longitudinal projecting arms on the forward end of the sleeve, and spring pawls having their bases fastened to said arms, bent to normally lie against the periphery of the clutch-head and their free ends looped to engage the peripheral teeth.

5. An automobile engine starter, comprising a cupped clutch-head mounted on the forward end of the engine shaft for ordinary cranking a cross-pin disposed through the cupped head and the ends of the pin projected to form a pair of diametrically opposite teeth on the periphery of the head, a stationary circular yoke of larger internal

diameter than the outer diameter of the clutch-head, disposed concentrically around the base of the cupped head and fastened to the engine bed, a cylindrical rocking sleeve disposed in the annular space between the base of the cupped clutch-head and the surrounding circular yoke and having an annular groove to slidably seat on the inner curve of the yoke, longitudinally projected arms on the forward end of the rockable sleeve, spring pawls on the arms to engage the teeth on the clutch-head, guide-lugs on the pawls, and concentrically curved guide-ribs on the yoke to engage the guide-lugs.

[Claims 6 to 14 not printed in the Gazette.]

1,102,652. DRIVING AND EXTRACTING PILES, POSTS, AND THE LIKE. ALEXANDER GIBB, St. Martin's Abbey, THOMAS GRAHAM MENZIES, Ferry Craig, North Queensferry, and ROBERT CHALMERS, Rhufaada, Newport, Scotland. Filed Aug. 14, 1912. Serial No. 715,069. (Cl. 61—39.)



1. In apparatus for driving and extracting piles and the like, a vibrating hammer, means for attaching same to the pile, striking surfaces for said hammer, and means whereby said hammer may be reversed and operated to deliver blows upon either of said striking surfaces at will substantially as described.

2. In apparatus for driving and extracting piles and the like an anvil and means for attaching same to the pile, a vibrating hammer slidably mounted upon said anvil-attaching means and means whereby said hammer may be reversed and operated to deliver blows in the proper direction substantially as described.

3. In apparatus for driving and extracting piles and the like an anvil and means for attaching same to the pile, a vibrating hammer trunnions carried thereby cheek pieces slidably mounted upon said anvil-attaching means and in which said trunnions are adapted to engage and means whereby said hammer may be operated to deliver blows in the proper direction substantially as described.

4. In apparatus for driving and extracting piles and the like an anvil and means for attaching same to the pile, a vibrating hammer trunnions carried thereby cheek pieces slidably mounted upon said anvil-attaching means and in which said trunnions are adapted to engage and means whereby said hammer may be operated to deliver blows in the proper direction and cushioning means for the hammer substantially as described.

1,102,653. ROCKET APPARATUS. ROBERT H. GODDARD, Worcester, Mass. Filed Oct. 1, 1913. Serial No. 792,707. (Cl. 102—2.)

1. In a rocket apparatus, in combination, a primary rocket, comprising a combustion chamber and a firing tube, a secondary rocket mounted in said firing tube, and means for firing said secondary rocket when the explosive in the primary rocket is substantially consumed.

2. In a rocket apparatus, in combination, a combustion chamber containing an explosive and a rearwardly extended tapered tube connected with said chamber through which the gaseous products of combustion are discharged, said tube being in the form of a truncated cone of slight taper and having its length equal to not less than three times its longest diameter.



3. In a rocket apparatus, in combination, a primary rocket having a firing tube, a secondary rocket mounted in said firing tube, and adapted to be fired therefrom, means in said primary rocket for causing initial rotation of said rockets, and means in said secondary rocket for thereafter maintaining said secondary rocket in rotation.

4. In a rocket apparatus, in combination, a casing, means in said casing for propelling said rocket apparatus, and additional means in said casing for rotating said apparatus, said latter means comprising a plurality of substantially radial transverse tubes backwardly curved with relation to the direction of rotation of the rocket apparatus and containing explosive material together with heating elements embedded therein by which the explosive material in all of the tubes may be fired simultaneously.

5. In a rocket, in combination, means for producing initial rotation of the rocket, a casing, a chamber therein containing a charge of propelling explosive, a plurality of substantially radial curved tubes in said casing also containing an explosive, and firing means connecting said explosives by which the explosive in the radial tubes is ignited when the propelling explosive is consumed to a predetermined extent and acts to restore the initial speed of rotation of the rocket.

[Claims 6 to 8 not printed in the Gazette.]

1,102,654. PRODUCING 2.3-DIHALOGEN-2-METHYL-BUTANE AND HOMOLOGUES THEREOF. OTTO GRAUL, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Sept. 5, 1912. Serial No. 718,714. (Cl. 23—24.)

1. The process of producing a dihalogen hydrocarbon of the homologous series of which 2.3-dihalogen-2-methyl-butane is a member and which contains at least four carbon atoms, by treating with chlorin a vaporized monohalogen hydrocarbon of the homologous series of which 2-halogen-2-methyl-butane is a member and which contains at least four carbon atoms.

2. The process of producing a dihalogen hydrocarbon of the homologous series of which 2.3-dihalogen-2-methyl-butane is a member and which contains at least four carbon atoms, by treating with chlorin a vaporized monohalogen hydrocarbon of the homologous series of which 2-halogen-2-methyl-butane is a member and which contains at least four carbon atoms, while carrying out the treatment under reduced pressure.

3. The process of producing a dihalogen hydrocarbon of the homologous series of which 2.3-dihalogen-2-methyl-butane is a member and which contains at least four carbon atoms, by treating with chlorin a vaporized monohalogen hydrocarbon of the homologous series of which 2-halogen-2-methyl-butane is a member and which contains at least four carbon atoms while well mixing the gases.

4. The process of producing a dihalogen hydrocarbon of the homologous series of which 2.3-dihalogen-2-methyl-butane is a member and which contains at least four carbon atoms, by treating with chlorin a vaporized monohalogen hydrocarbon of the homologous series of which 2-halogen-2-methyl-butane is a member and which contains at least four carbon atoms while well stirring and subjecting the mixture to the action of actinic rays.

5. The process of producing a dihalogen hydrocarbon of the homologous series of which 2.3-dihalogen-2-methyl-butane is a member and which contains at least four carbon atoms, by treating with chlorin a vaporized monohalogen hydrocarbon of the homologous series of which 2-halogen-2-methyl-butane is a member and which contains at least four carbon atoms, then removing the dihalogenated product from the monohalogenated product and subjecting the monohalogenated product in the form of vapor again to the action of chlorin.

[Claim 6 not printed in the Gazette.]

1,102,655. PRODUCING ISO-OLEFINS. OTTO GRAUL, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Mar. 13, 1913. Serial No. 754,147. (Cl. 23—24.)

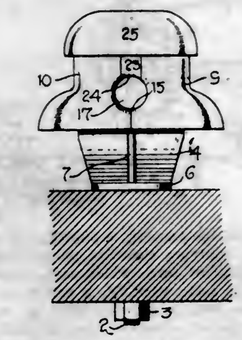
1. The process of producing iso-olefins by heating normal olefins containing at least 5 carbon atoms to a high temperature.

2. The process of producing iso-olefins by heating normal olefins containing at least 5 carbon atoms to a high temperature in the presence of a catalytic agent.

3. The process of producing iso-olefins by heating normal olefins containing at least 5 carbon atoms to a high temperature in the presence of a catalytic agent and under reduced pressure.

4. The process of producing isopentene by passing vaporized normal pentene over aluminium oxid at a high temperature.

1,102,656. INSULATOR. ROBERT B. HADEN, Cincinnati, Ohio. Filed Dec. 15, 1913. Serial No. 806,896. (Cl. 173—314.)



1. A device of the class described including a supporting pin, a web member formed integral therewith, flanges formed at the upper and lower ends of said web member, spaced posts mounted upon the upper end of said web member and removable insulator sections mounted upon said posts, as and for the purpose specified.

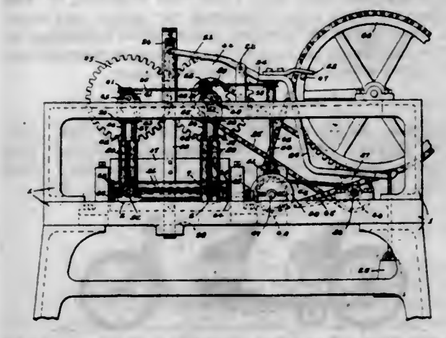
2. A device of the class described including a supporting pin, a web member formed integral with one end thereof, flanges formed upon the upper and lower ends of said web member, spaced posts mounted upon the upper end of said web member, removable insulator sections mounted upon said posts and having recesses to receive the upper flange of the web, and a removable cover mounted upon the top of said insulator sections, as and for the purpose set forth.

3. A device of the class described including a supporting pin, a web formed integral therewith, outwardly projecting flanges formed on said web, a sectional insulator removably mounted upon the upper end of said web, said sections being provided with arcuate recesses to form a circular opening, a cover mounted upon said insulator sections and means for removably securing the cover in position.

4. A device of the class described including a supporting pin, a web formed integral therewith, insulator sections having recesses to receive the upper end of said web, posts mounted upon said web upon which the insulator sections are removably mounted, a plate connecting the upper ends of said posts and nuts threaded upon the upper ends of said posts to retain the sections in position, a cover removably engaged over the upper ends of said insulator sections having a socket member and a spring member carried by said plate and adapted to be removably engaged within said socket to retain the cover in position.

5. A device of the class described including a sectional insulator having a recess in the upper end of each of the sections and an opening between said sections, shoulders formed upon said sections within said opening and a removable block arranged within said opening and having shoulders adapted to engage the shoulders on said sections to support the block and said insulator being provided with a transverse opening, as and for the purpose specified.

1,102,657. BARK-ROSSING MACHINE. WILLIAM G. HAFNER, Clay, N. Y. Filed Dec. 18, 1912. Serial No. 737,383. (Cl. 144—207.)



1. A bark rossing machine comprising a rotating member having an axial passage through which the branches are passed, and jaws carried by the member and projecting into the passage and movable substantially radially in opposite directions relatively thereto, the jaws having inclined faces facing the entrance of the passage, these faces providing on the jaws opposing comparatively sharp edges for engaging the branches, the edges normally meeting in a straight line and the faces serving as a funnel to engage the ends of the branches and guide the same between the jaws, substantially as and for the purpose described.

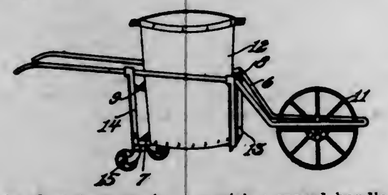
2. A bark rossing machine comprising a member formed with a passage through which the branches are passed, means for removing the bark from the branches while passing through the passage, jaws movable crosswise of the member for gripping the removed bark at the entrance end of the passage after the branches have passed through the passage and moving the bark to one side of the passage and releasing the same, and means for operating the jaws, substantially as and for the purpose specified.

3. A bark rossing machine comprising a rotating member formed with a passage through which the branches are passed, means associated with said member for removing the bark from the branches passing through said passage, and means movable across the face of said mem-

ber and across the entrance end of said passage for engaging the removed bark accumulating at the entrance end of the passage and carrying the same to one side of the passage, substantially as and for the purpose set forth.

4. A bark rossing machine comprising a member having a passage through which the branches are passed, means for removing the bark from the branches while passing through the passage, means for carrying away the removed bark from one end of the passage, the last-mentioned means comprising a pair of jaws located on opposite sides of the passage, and means for moving one jaw across the passage toward the other jaw, and moving both jaws simultaneously to carry the bark gripped thereby to one side of the passage, and for opening the jaws, and then returning the same to their normal position, substantially as and for the purpose specified.

1,102,658. CARRIER OR TRUCK FOR CANS. GUSTAV H. HANNA, JAMES D. FILBIN, and FRED AMSDEN, Cleveland, Ohio. Filed June 7, 1913. Serial No. 772,281. (Cl. 21—68.)



A hand cart or carrier comprising spaced handle bars with a wheel at the front thereof, front and rear hangers depending from said bars, a platform supported by said hangers, a cross piece connecting the handle bars above the front end of the platform, a detachable connection between the handle bars above the rear end of the platform, and caster wheels carried by the rear hanger.

1,102,659. ATTACHMENT FOR MOTOR-CYCLES. ROBERT HANSEN, Stockton, Cal., assignor to National Auto Cycle Company, Stockton, Cal., a Corporation. Filed Jan. 2, 1913. Serial No. 739,713. (Cl. 208—78.)



A device of the character described comprising the combination with a motor cycle having a single forward and rear wheel, of auxiliary wheels mounted on the frame of such motor cycle, such auxiliary wheels each having a shaft journaled in the frame of said motor cycle, a sleeve on said shafts, a resilient means carried by said sleeve, means connecting each shaft with said resilient means, and means for turning said sleeve, as described.

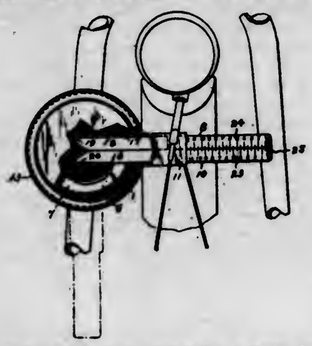
1,102,660. LOCK. EUGENE N. HEARD, Oakland, Cal. Filed Nov. 29, 1912. Serial No. 734,070. (Cl. 70—90.)

1. A permutation lock comprising a concentric base adapted to be fastened adjacent to a vehicle wheel, a stop depressible below the plane of said base, slide bars rotatable across said base and locked between two spokes of said vehicle wheel by said stop.

2. A permutation lock comprising a base, a stop depressible below the plane of said base, slide bars rotatable across said base, gaps in said slide bars larger than the cross section of said stop.

3. A permutation lock comprising a concentric base, a spring stop fixed in said base, graduated slide bars slidable in a casing rotatable on said base, gaps in said slide bars adapted to pass said spring stop.

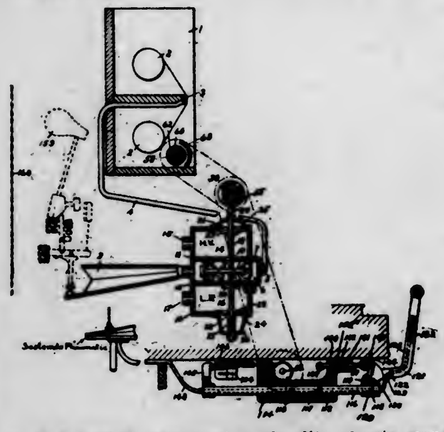
4. A permutation lock comprising a concentric base with attaching means thereon, a spring stop fixed in said base, graduated slide bars slidable in a casing rotatable on said base, a stop pin fixed in said base spaced from said spring stop the width of said slide bars, and gaps in said slide bars adapted to pass said spring stop.



5. A permutation lock comprising a base, bars slidable on each other and rotatable across the plane of said base, a fixed stop and a movable stop fixed to said base and interposed in the path of said bars.

[Claims 6 to 12 not printed in the Gazette.]

1,102,661. EXPRESSION DEVICE FOR PLAYER-PIANOS AND THE LIKE. CHARLES P. HIDDEN, New York, N. Y. Filed Feb. 8, 1910. Serial No. 542,766. (Cl. 84—160.)



1. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, a series of devices for varying the intensity of force exerted by some of said elements as compared to others, and manually controlled means for actuating said devices, said means including two controlling elements movable with respect to each other and also movable together, means for moving said elements with respect to each other, and supplemental means for moving said elements together.

2. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, a series of devices for varying the intensity of force exerted by some elements as compared to others, and manually controlled means for actuating said devices, said means including a handle, two controlling elements movable with respect to each other and also movable together, means, including connections to said handle, for moving said elements with respect to each other, and supplemental means, including connections to the same handle, for moving said elements together.

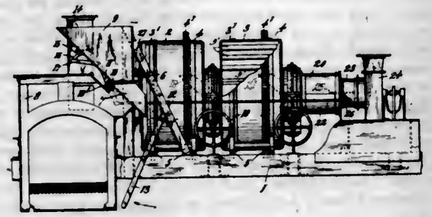
3. In a musical instrument, a plurality of note-sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, a series of devices for varying the intensity of force exerted by some of said elements as compared to others, manually controlled means for actuating said devices, said means comprising a manipulating part, mechanism controlled by said part adapted to actuate materially variable numbers of devices in said series, and auxiliary co-acting mechanism for disposing said variable numbers wherever desired in the series, said co-acting mechanism also being controlled by said manipulatable part, said part being normally substantially equally free to yield to pressure exerted against portions thereof from a plurality of directions substantially at right angles to each other and to actuate the first mentioned mechanism when pressure from but one of said directions is exerted one portion, while leaving said co-acting mechanism undisturbed, and to actuate the latter while leaving the first mechanism undisturbed when a pressure at substantially right angles to said one is exerted thereagainst, both said first mentioned mechanism and said co-acting mechanism being adapted also to be simultaneously actuated by said part.

4. In a pneumatically operated musical instrument, a series of note sounding parts, a series of pneumatics therefor, a high vacuum exhaust trunk and a low vacuum exhaust trunk, a series of valves controlling communication between said pneumatics and said trunks, and means for actuating said valves at will, said means comprising a handle and mechanism, controlled by said handle, having two valve-controlling elements movable with respect to each other, and means for moving said elements together.

5. In an expression device for automatic and semi-automatic instruments having a single manual, accenting means comprising a series of movable elements, a selective appliance coöperating therewith, said appliance having means for effecting successive displacements of said elements from their normal positions and means for materially varying the number of said elements operatively displaced, and means for simultaneously indicating said number.

[Claims 6 to 36 not printed in the Gazette.]

1,102,662. DRYING APPARATUS. JAMES EDGAR HOBBS, Coulsden, England, assignor to Ransome-verMehr Machinery Company, Limited, London, England, a Corporation of Great Britain. Filed Oct. 21, 1912. Serial No. 727,016. (Cl. 34—5.)



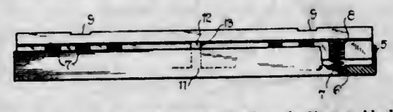
1. A drying apparatus comprising the combination with a furnace and a suction device, of a drying drum, a hopper for charging material into said drum, means located within said drum whereby the material may be moved about within said drum, means for discharging the dried material from the drum, and means for interrupting the flow of the furnace gases during the charging and discharging operations.

2. A drying apparatus comprising the combination with a furnace, of a plurality of revoluble drying drums having deflecting surfaces therein, means for rotating said drums, a hopper for charging a batch of material into the first of said drums, chutes for transferring the material from one drum to the next, means for causing the gases from the furnace to flow through said drums, means for discharging the dried material from the last drum, and means for interrupting the flow of furnace gases during the charging and discharging operations.

3. A drying apparatus comprising the combination with a furnace provided with a by-pass and a suction device, of a plurality of revoluble drums having means therein whereby the material may be moved about within them, means for rotating said drums, a hopper for charging a batch of material into the first of said drums, a door for said hopper, and means whereby said door may be so positioned that during the charging and discharging operations the gases from the furnace will be prevented from passing into the drying drums, means co-acting with the actuating mechanism for said door whereby communication between the drying drums and the suction device will be interrupted and the by-pass for the furnace gases opened substantially as described.

4. In a drying apparatus, the combination with a furnace provided with a by-pass, a plurality of drums and a suction device, said furnace, drums and suction device being arranged in series and communicating with each other, of a valve between the furnace and drums, a second valve between the drums and suction device, a third valve controlling the bypass, and a lever and link mechanism to simultaneously operate all of said valves.

1,102,663. RAILWAY CROSS-TIE. DAVID WALTER HOSTETLER, Thompsontown, Pa. Filed Mar. 9, 1914. Serial No. 823,520. (Cl. 238—5.)



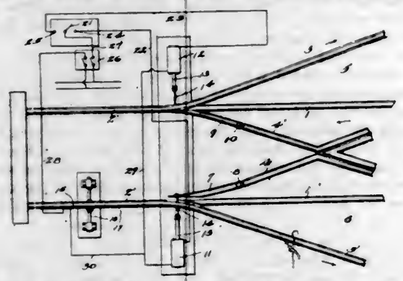
1. A device of the class described including a U-shaped body member having closed ends, a plurality of spaced recesses formed in the bottom of said body, coil springs mounted within the recesses at the ends of the body, a retaining pin within the central recess, a top plate, a downwardly projecting web formed upon the upper end thereof having a plurality of recesses adapted to receive the upper ends of the coil springs and the stop pin as and for the purpose set forth.

2. A device of the class described including a U-shaped body member having closed ends, said body member having spaced recesses formed at each end thereof and further provided with a central recess, coil springs arranged within the recesses at the ends of the body, and a removable stop pin arranged within the central recess, a top plate, a downwardly projecting tongue member formed upon the inner face thereof, having spaced recesses formed in its ends, and a central recess, the upper ends of said coil springs being arranged within the recesses at the ends of the tongue and so disposed that the central coil spring is arranged directly beneath the track rail, and the upper end of the stop pin being disposed within the central recess in the tongue to prevent longitudinal movement of the top plate.

1,102,664. ELECTRIC RAILWAY-SWITCH. HINTON AUSTIN JACKSON, Clinton, Ind., assignor of one-half to Duncan B. Medill, Clinton, Ind. Filed Mar. 27, 1914. Serial No. 827,590. (Cl. 104—155.)

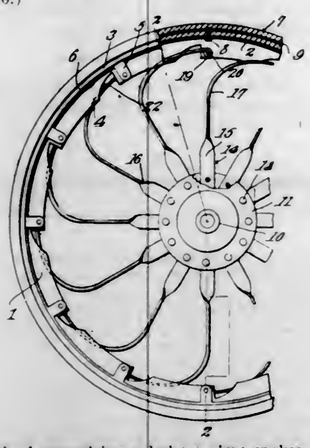
1. In an electrically controlled switching mechanism, the combination with a straight track, a pair of divergent tracks, and a pair of switch tongues between the rails of the straight track, of an electromagnet at each side of the straight track having an armature connected to the switch tongue, a double throw switch controlling said magnets, and a weighted lever actuated by the movement of a car for closing the circuit to operate either of said switches.

2. In an electrically operated switching mechanism, the combination with three tracks, and intermediate double switching tongues, of electromagnets each having an armature linked to one of said tongues, a single pole



double throw switch for operating selectively either of said magnets, and a circuit closer comprising a weighted lever to be operated by a passing car.

1,102,665. AUTO-WHEEL. FREDERICK H. JOHN, Middleport, Pa. Filed Feb. 8, 1913. Serial No. 747,192. (Cl. 152—50.)

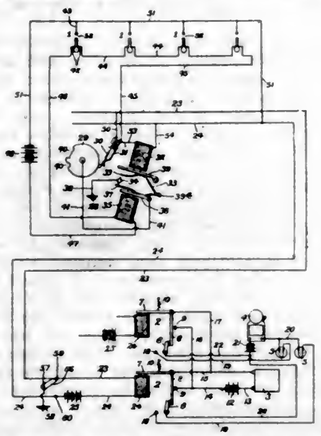


1. A wheel comprising a hub; a rim; spokes each comprising a straight portion disposed radially of the hub and secured to the hub, and a curved portion disposed circumferentially of the rim; and connections uniting the curved portions of the spoke with the rim, each connection constituting an abutment for the curved portion of an adjoining spoke when the adjoining spoke is under compression, and the straight portion of each spoke being alined radially with the connection between the curved portion of an adjoining spoke and the rim.

2. A wheel comprising a rim including a body and flanges; a hub; curved spring spokes secured to the hub; connections uniting the spokes to the flanges, each connection constituting an abutment adapted to receive an adjacent spoke when the adjacent spoke is under compression, the flanges being provided upon their side faces with radial reinforcing ribs receiving the connections.

1,102,666. AUTOMATIC AND ELECTRIC FIRE-ALARM SYSTEM. JOHN M. JOHNSON, Kansas City, Kans. Filed May 1, 1912. Serial No. 694,491. (Cl. 177—358.)

1. In a system of the kind described, a signal box containing a starting magnet, a thermostatic circuit closer having normally open contacts connected in shunt around the terminals of said magnet, a battery and a normally closed circuit for said magnet, a line circuit connected with said magnet and shunt connection, a line circuit battery, and a switchboard relay operated by said signal box over the line circuit.



2. In a system of the kind described, a mercury thermostatic circuit closer having an open terminal and two mercury-connected terminals, a battery connected with said open terminal, an electromagnet, a switch operated by said magnet, wires connecting said battery and magnet in series with said mercury-connected terminals, a line circuit, a connection between the line circuit and said open terminal, and a switchboard relay and battery in the line circuit.

3. In a system of the kind described, a mercury thermostatic circuit closer having an open terminal and two mercury-connected terminals, a battery connected with said open terminal, an electromagnet, a switch operated by said magnet, a ground to said switch, wires connecting said battery and magnet in series with said mercury-connected terminals, a line circuit, a connection between the line circuit and said open terminal, and a switchboard relay battery in the line circuit, and a ground connection to the line circuit adjacent said relay.

4. In a system of the kind described, a plurality of mercury thermostatic circuit closers, each having an open terminal and two mercury-connected terminals, a battery wire tapped to the open terminal of each thermostatic circuit closer, wires connecting the mercury-connected terminals of the several thermostatic circuit closers in series, a battery in series with said wires, a line circuit, a connection between the line circuit and said battery wire, and a switchboard relay and battery in the line circuit.

5. In a system of the kind described, a plurality of mercury thermostatic circuit closers, each having an open terminal and two mercury-connected terminals, a battery wire tapped to the open terminal of each thermostatic circuit closer, wires connecting the mercury-connected terminals of the several thermostatic circuit closers in series, a battery and electromagnet in series with said wires, a switch operated by said magnet, a ground connection to said switch, a line circuit, a connection between the line circuit and said battery wire, a switchboard relay and battery in the line circuit, and a ground connection to the line circuit adjacent said relay.

[Claims 6 and 7 not printed in the Gazette.]

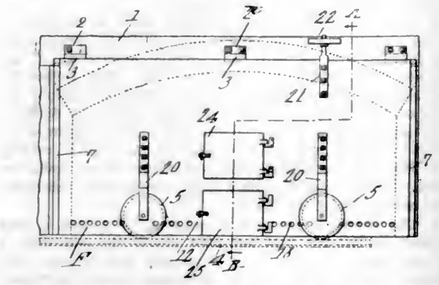
1,102,667. GUN-BARREL. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 2, 1914. Serial No. 815,989. (Cl. 42—76.)



A gun-barrel having a ventilated, integral sighting-rib supported throughout its length by a single symmetrically

arranged series of diamond-shaped struts the long axes of which are coincident with the central longitudinal axis of the rib.

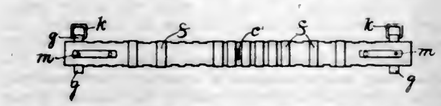
1,102,668. DOOR FOR CREMATORIES. EDWARD M. JONES, Macon, Ga. Filed Dec. 18, 1913. Serial No. 807,516. (Cl. 110—180.)



1. The combination with a structure having a door opening, of brackets extending outwardly from the structure and above the opening, said brackets having depending lips, all of the lips converging in one direction toward the structure, said brackets being of different widths, a door movable into and out of position across the opening and having upstanding wedging blocks movable simultaneously into engagement with the respective lips to bind the door against the structure.

2. The combination with a structure having a door opening and a face plate secured along the top of the opening and formed with a recess, of brackets extending outwardly from the face plate and having depending lips, all of said lips converging in one direction toward the face plate, said brackets being of different widths, a door movable into and out of position across the opening and including a frame having an upstanding flange, said flange being movable between the face plate and the lips, wedging blocks carried by the frame and movable simultaneously into engagement with the respective lips to bind the frame against the face plate, there being a recess in the face plate, and a horizontally revoluble wheel connected to and extending over the door and movable into the recess during such binding action.

1,102,669. LOOM PATTERN-CHAIN. JOSEPH KAY, Windhill, Shipley, England, assignor to George Hodgson, Limited, Bradford, England, a Firm. Filed Sept. 7, 1912. Serial No. 719,050. (Cl. 139—42.)



1. A sheet metal lag for loom pattern chains, comprising a strip having its edge portions bent downwardly and presenting flanges at an abrupt angle to the middle portion, said flanges having slots below their angular junctions with the middle portion, and arched strips of spring metal having inwardly bent ends sprung into said slots.

2. A sheet metal lag for loom pattern chains, comprising a strip having its edge portions bent downwardly and presenting flanges at an abrupt angle to the middle portion, said flanges having slots below their angular junctions with the middle portions, cross pieces secured between the flanges to strengthen the lag, and arched strips of spring metal having inwardly bent ends sprung into said slots.

3. A sheet metal lag for loom pattern chains, comprising a strip having its edge portions bent downwardly and presenting flanges at an abrupt angle to the middle portion, said flanges having openings near their ends and having slots intermediate said openings, said openings and slots being below the plane of the middle portion, arched strips of spring metal having inwardly bent ends sprung into the slots, and strips extending through the openings near the ends of the flanges, the last mentioned strips being adapted to be connected to similar strips of other lags to compose the pattern chain.

4. A sheet metal lag for loom pattern chains, comprising a strip having its edge portions bent downwardly and presenting flanges, said flanges having openings near their ends, strips extending through said openings, said strips having bent ends, and links having rectangular openings connected with the bent ends of said strips.

1,102,670. PROCESS FOR PRODUCING SULFURIC-ACID ANHYDRID ACCORDING TO THE CONTACT PROCESS. HERMANN VON KÉLER and ANTON WEINDEL, Leverkusen, Germany, assignors, by mesne assignments, to General Chemical Company, New York, N. Y., a Corporation of New York. Filed June 23, 1913. Serial No. 775,363. (Cl. 23—1.)

1. The process of subjecting a mixture of gases, capable of reacting under the influence of a catalytic, to the action of a contact substance comprising a contact support impregnated with a silver-vanadium compound.

2. The process of subjecting a mixture of gases, capable of reacting under the influence of a catalytic, to the action of a contact substance comprising an asbestos support impregnated with a silver-vanadium compound.
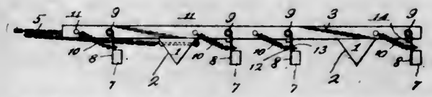
3. The process of subjecting a mixture of gases, capable of reacting under the influence of a catalytic, to the action of a contact substance comprising a contact support impregnated with silver vanadate.

4. The process of subjecting a mixture of gases, capable of reacting under the influence of a catalytic, to the action of a contact substance comprising an asbestos support impregnated with silver vanadate.

5. The process of subjecting a mixture of gases, capable of reacting under the influence of a catalytic, to the action of a contact substance comprising an asbestos support impregnated with about 20% silver vanadate.

[Claims 6 to 11 not printed in the Gazette.]

1,102,671. ROAD-GRADER. DAVID WARD KING, Maitland, Mo. Filed Jan. 19, 1911. Serial No. 603,472. (Cl. 37—57.)



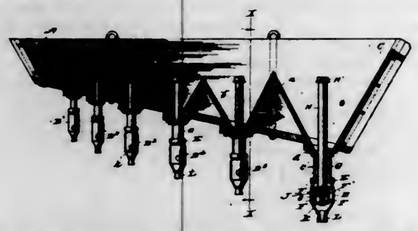
1. A grader consisting of a plurality of bars, a plurality of scrapers, arms fixed to said scrapers and pivotally connected to the bars so that said scrapers may swing backward, stops on the bars in the path of the arms to limit the forward movement of the scrapers, and resilient means between the bars and the scrapers to resist the backward movement of the latter.

2. A grader consisting of a plurality of bars, primary scrapers fixed to said bars, each of said scrapers consisting of a bar, of triangular cross section, extending the full width of the grader; and secondary scrapers pivotally connected to said bars, each of the latter being a bar, of rectangular cross section, extending the full width of the grader.

1,102,672. HYDRAULIC CLASSIFIER. MORRIS PAUL KIRK, Salt Lake City, Utah, assignor of one-half to John H. Leavell, Salt Lake City, Utah. Filed Aug. 4, 1913. Serial No. 782,838. (Cl. 83—82.)

1. In a hydraulic classifier, a sorting column comprising concentric spaced members between which the fluid ascends, and a member at the lower end of the column having fluid channels inclined between the horizontal and vertical and opening upwardly directly into the base of

the column and adapted to impart a circular or whirling action to the fluid at the point where it discharges from the channels.



2. In a hydraulic classifier, the combination with a tank, of a sorting column communicating with the base of said tank and comprising concentric spaced members between which the fluid ascends, one of said members being longer than the other and extending a substantial distance up into the tank and above the discharge of the latter into the sorting column, and a member at the lower end of the column having fluid channels inclined between the horizontal and vertical and opening upwardly directly into the base of said column, and adapted to impart a circular or whirling action to the fluid at the point where it discharges from the channels into said column.

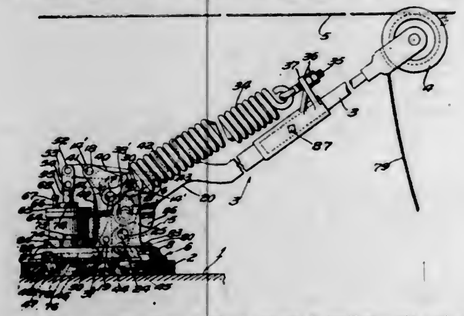
3. In a hydraulic classifier, the combination with a tank, of a sorting column communicating with the base thereof, means for producing whirling currents in the column, said column including a centrally-disposed pipe which extends a substantial distance up into the tank and above the discharge of the latter into the sorting column.

4. In a hydraulic classifier, a sorting column comprising tubular members arranged one within the other, one of said members extending a substantial distance above the other and above the inlet thereto, and having means for producing whirling currents in said column.

5. In a hydraulic classifier, a sorting column comprising a pipe, a spigot on the lower end thereof having double spaced walls and an internal chamber bounded by the innermost of said walls, and a pipe within said first-named pipe and extending above the same, and spaced therefrom to form an intervening chamber in which the column of fluid ascends, said second-named pipe being fitted to the upper end of said internal chamber and provided with a spirally grooved lower end, means for admitting water to said internal chamber below the spirally grooved end of said pipe, whereby the spiral grooves induce a circular or whirling action to the fluid as it enters the column, and means permitting the withdrawal of the particles settling in said spigot outside of said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,102,673. RETRIEVING-TROLLEY. CHARLES E. LANG, Los Angeles, Cal., assignor to Wasson Engineering & Supply Co., Petaluma, Cal., a Corporation of California. Filed June 20, 1910. Serial No. 567,990. (Cl. 191—88.)



1. The combination with a pivoted trolley pole, of a spring to uphold the trolley pole, a normal fulcrum for the trolley pole, said fulcrum being shiftable to increase the tension of the spring on the trolley pole, a latch to hold said fulcrum in the position of increased tension, a fulcrum lever contacting with the trolley pole, rearward from the normal fulcrum of the trolley pole, and means connecting the fulcrum lever and latch; said means operating to release the latch upon sudden movement of the lever and being inoperative to release the latch upon relatively slow movement of the lever.

2. The combination with a trolley pole, of a fulcrum in one end of the trolley pole, links shiftably supporting and limiting the forward and upward movement of the fulcrum pin, springs to move the trolley pole forwardly endwise and upward, means to hold said links against the force of the spring, a lever contacting with and forming a secondary fulcrum for the trolley pole, and means operatable by sudden upward movement of the lever to release said link holding means, said operatable means being inoperative to release the link holding means upon relatively slow movement of the lever.

3. The combination with a support, of a pin, a link pivoted on the pin and provided below the pin with a tip and above the pin with a vertical slot, a stay link pivoted to the support and extending aslant therefrom to a point above said pin and there provided with a slot registering with the slot in the first named link, a supporting link pivoted to the support and extending downward from its pivot and provided with a slot registering with the slots of the aforesaid links, a fulcrum pin extending through the slots, a trolley pole fulcrumed on the fulcrum pin, a spring pivoted to the support, the pivot thereof lying in a horizontal plane that extends between the horizontal planes of the fulcrum pin and the pivot of the supporting link, said spring being connected to the trolley pole, and adapted to swing with the trolley pole to bring its draft line above the supporting link pivot when the trolley pole is up and below such pivot when the trolley pole is down, thus to reduce the leverage between the spring and the trolley pole when the trolley pole is down and to increase such leverage when the trolley pole is up.

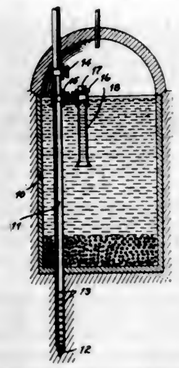
4. The combination with a trolley base, of a trolley pole, a pin supporting the trolley pole, a pivoted link to support the pin, means to move the trolley pole upward and forward, a latch to catch the pivoted link, a lever in alidable engagement with the pole and adapted to be operated thereby as the pole rises, a spring between the lever and the latch to hold the latch in catching position and the lever and pole in engaging position, mechanism between the lever and the latch to release the latch when the lever is operated by the pole and means to limit the upward and forward movement of the pole.

5. The combination with a trolley pole, of a primary fulcrum normally in commission to fulcrum the trolley pole at one end, a spring connected at one end to the trolley pole, means to hold the other end of the spring, means to hold the primary fulcrum in commission, and means including a normally inactive secondary fulcrum to fulcrum the trolley pole intermediate its ends, said means being only operatable by sudden upward movement of the trolley pole to put the primary fulcrum out of commission and the secondary fulcrum into commission.

[Claim 6 not printed in the Gazette.]

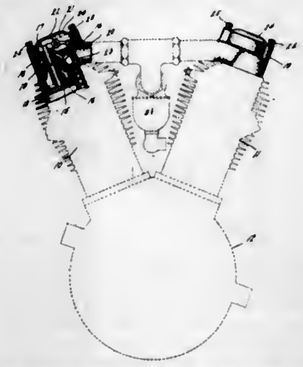
1,102,674. CESSPOOL. EDWIN OSCAR LAWRENCE, Port Jefferson Station, N. Y. Filed June 28, 1913. Serial No. 776,286. (Cl. 210—18.)

The combination with a cess pool for sewerage of an outlet pipe extending vertically through the cess pool and terminating at the lower end below the cess pool and being there provided with outlet openings, an intake pipe adapted to be submerged in the contents of the cess pool and having a horizontal pipe connection at the upper end with said outlet pipe, the intake end of said intake pipe being disposed at about the center of said cess pool and said horizontal pipe connection at about the normal high water level of said cess pool whereby liquid enters said intake pipe from the center of the cess pool and escapes through said pipe connection into said outlet pipe, the solid matter accumulating in the bottom of said cess pool below said intake pipe while the grease accumulates on the water surface of said cess pool and facilitates the



microbes destroying said solid contents whereby said cess pool never becomes full of solid matter, and a vent pipe connected to said outlet pipe and having an intake opening above the liquid level of said cess pool.

1,102,675. INTERNAL-COMBUSTION ENGINE. JOHN D. LOWE, Indianapolis, Ind., assignor to The F. W. Spacke Machine Company, Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 13, 1913. Serial No. 741,724. (Cl. 123—188.)

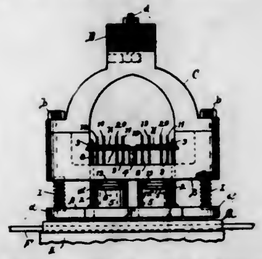


1. In an internal combustion engine, the combination of a valve chamber, an inlet valve opening thereinto and provided with a stem, a cap-piece provided with a fuel supply passage and with a lubricant chamber into which the valve stem projects, means located in said lubricant chamber for transmitting motion to said valve stem, and a removable cover for said lubricant chamber.

2. In an internal combustion engine, the combination of a valve chamber, an inlet valve opening thereinto and provided with a stem, a cap piece provided with a fuel supply passage and with a lubricant chamber into which the valve stem projects, means located in said lubricant chamber for transmitting motion to said valve stem, a removable cover for said lubricant chamber, and a screw for holding said cover in place, the hole for said screw extending into the fuel supply passage.

3. In an internal combustion engine, the combination of a valve chamber having a fuel supply passage and a lubricant chamber, a valve between the valve chamber and the fuel supply passage, means located in the lubricant chamber for transmitting motion to said valve, a removable cover for said lubricant chamber, and a screw for holding said cover in place, the hole for said screw communicating with the fuel supply passage.

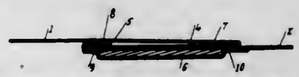
1,102,676. CRACKER-CUTTER. HIRAM F. MCNUTT and CHARLES E. BALLINGER, Richmond, Ind., Filed Feb. 17, 1913. Serial No. 748,835. (Cl. 107—26.)



1. In a cracker cutting machine, a face-plate having an aperture formed therethrough, a body-plate located above and spaced from the said face-plate, a die-plate located above and spaced from the body-plate and having two pairs of slots therethrough which are parallel with each other, a cutter fitting said aperture in the face-plate and extending up and secured to the body-plate, clearers fitting inside the cutter, stems extending upward from the clearers and contacting with the die-plate, tongues projecting up from the stems through and beyond the slots in the die-plate, a plunger located inside the curvature of the clearers, arms extending up from the plunger through the body-plate to the die-plate, tongues extending up from the arms through and beyond their slots in the die-plate, and a single pin passing through corresponding apertures in the tongues and resting flat on the surface of the die-plate, all substantially as set forth.

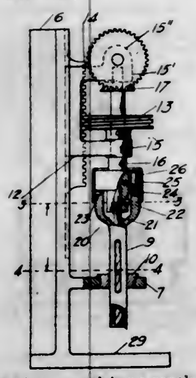
2. In a cracker cutting machine, a face-plate having an aperture therethrough, a body-plate located above and spaced from the face-plate, a die-plate located above and spaced from the body-plate and having two sets of slots therethrough, a cutter fitting the said aperture in the face-plate and extending upward and secured to the body-plate, a pair of clearers fitting inside the cutter, a stem extending upward from each clearer and normally contacting with the under-face of the die-plate, tongues extending up from said stems through and beyond their respective slots in the die-plate, a plunger located inside the clearer, a pair of arms extending up from the plunger through the body-plate to the die-plate, tongues extending up from said arms through and extending beyond their respective slots in the die-plate, and a cotter-pin passing horizontally and removably through corresponding apertures formed through all of the said tongues which project above the die-plate with the said cotter-pin resting flat on the top of the die-plate and adapted to retain the clearers and the plunger in operative position, all substantially as set forth.

1,102,677. STAY-POCKET. PAULINE SHULTZ MCOMBER, Hastings, Mich. Filed Jan. 29, 1914. Serial No. 815,146. (Cl. 2—73.)



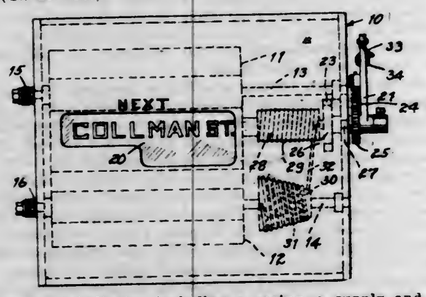
In a garment of the class described comprising body sections, a stay pocket at the seam of two body sections, the meeting edges of the sections being folded inwardly and overlapped, and a pocket strip disposed upon one of the sections with one of its edges folded inwardly over the folded edge of the section on which it is disposed and its other edge opposite the folded edge of the other section, there being rows of stitches passing through the said folded and overlapped edges of said body sections and pocket strip, substantially as described.

1,102,678. MORTISING-MACHINE. DAVID CONSTANTINE NIEMI, Glassport, Pa. Filed Oct. 21, 1913. Serial No. 796,414. (Cl. 144—78.)



A mortising machine comprising a revolving spindle carrying an auger, means for revolving the spindle and feeding it longitudinally, a series of chisels forming a hollow cutter surrounding the auger and having each an inclined upper end, and a roller mounted in the revolving spindle and acting in succession on the series of chisels.

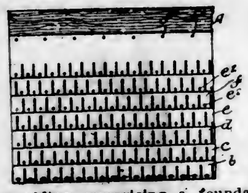
1,102,679. STREET-INDICATOR. GEORGE OKUYAMA, Madison, Wis. Filed Oct. 14, 1913. Serial No. 795,093. (Cl. 40—87.)



A street indicator including a casing, a supply and a receiving roll therein, a band wound upon said supply roll and secured to be taken up by said receiving roll, a ratchet and pawl actuating means, a cylindrical drum having a spirally grooved periphery, said drum being actuated by said ratchet and pawl means, a substantially frusto-conical drum on the shaft of said receiving roll having the large end directed toward said receiving roll, said frusto-conical drum being provided with a spiral groove, a cord wrapped about said frusto-conical drum in said groove and being directed from the small end of said drum and secured in the groove of said cylindrical drum, said cord being wound upon said cylindrical drum during actuation thereof and serving to rotate said receiving roll through a constantly increasing arc of movement at each step actuation.

1,102,680. METHOD OF LAYING WATERPROOF ROOFING. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Jan. 3, 1912. Serial No. 669,224. (Cl. 108—7.)

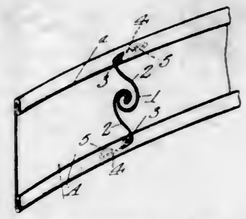
1. The herein described method of laying elongated strips of waterproof and weatherproof flexible material upon a foundation, which consists in overlapping said strips in sequence, securing the upper edge of each strip directly to the foundation, and securing the free edge of each strip to the body of the next lower strip by fastening which are located above an unperforated body portion of an underlying third strip.



2. A roof or siding comprising a foundation, a plurality of strips of prepared flexible weatherproof waterproof material arranged with each strip overlapping two adjacent lower strips, fasteners securing the upper edge of each strip directly to said foundation, fasteners passed through the lower edge of each strip and through the body of the next overlapped lower strip without penetrating the third overlapped strip.

3. A roof or siding comprising a foundation, a plurality of layers of waterproof material each having an edge formed with projections, said layers being arranged with each layer overlapped by two superimposed layers and with each layer having at its exposed lower edge portion said projections, fasteners securing the upper edge of each layer to the foundation, and fasteners located above the body of each lower layer and securing together the body and the projections of the lower edge portion respectively of the two superimposed layers, so that the projections of the exposed edge portion of each layer are secured by fasteners to the body portion of the layer immediately beneath it with an unperforated portion of the lowest layer below the fastener.

1,102,681. COLLAR-SUPPORT. LUDELLA PENNY, Wilson, N. C. Filed Nov. 7, 1911. Serial No. 659,068. (Cl. 2—91.)

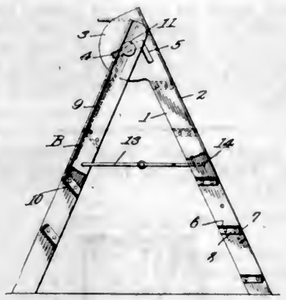


A supporter for lace collars and the like, formed in a single length of spring wire and comprising upper and lower fingers substantially parallel, a coil at one end of each finger, a loop at the other end of each finger, an arm extending from each coil, said arms being similar and oppositely disposed and each forming a compound curve, the said arms merging in a coiled loop equidistant from the fingers and disposed in the same plane with the arms and fingers, the said fingers being extended in opposite directions from their respective coils.

1,102,682. CONVERTIBLE LADDER. ROBERT G. PING, Audubon, Iowa, assignor of one-half to Eugene N. Taggart, Audubon, Iowa. Filed May 21, 1913. Serial No. 769,058. (Cl. 228—12.)

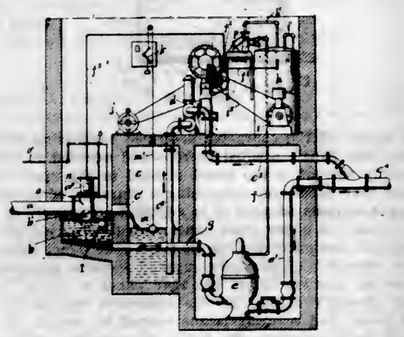
A ladder including a section having laterally extending longitudinal flanges, an enlargement upon each side of said section and provided with a slot, said slot having an inner portion parallel with the adjacent flange and an outer or upper portion at right angles thereto, the flanges being extended past the slots, an upper section having one end straddling the lower section, said upper section being adjustable angularly relative to the lower section and having a laterally extending longitudinal flange along one edge of each side thereof, and means upon the upper section and slidable within the slot for holding said sections together under all conditions, said upper section being shiftable to bring said holding means from the upper

portions of the slots into the lower portions of the downwardly extending parts of the slots and to bring the flanges of the upper section against the back faces of the flanges of



the lower section, thereby to hold said upper section against swinging movement relative to the lower section.

1,102,683. PROCESS OF ELEVATING LIQUIDS. ALBERT PRIESTMAN, Philadelphia, Pa. Filed Apr. 27, 1912. Serial No. 693,691. (Cl. 103—79.)



1. The method of elevating sewage and like fluids containing solid matter in suspension, which consists in first separating part of the solid matter from the liquid, then separately raising the sludge and liquids after separation to the desired level and controlling the raising of the sludge and liquids by the liquid level.

2. The method of elevating sewage and like fluids containing solid matter in suspension, which consists in delivering the sewage to a well at a low level, separating part of the solids from the liquid in said well, discharging the liquid into a second well, withdrawing the separated liquid from said second well and discharging it at a higher level, and discharging the separated sludge from the first well.

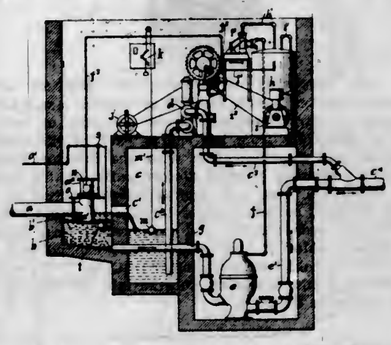
3. The method of elevating sewage and like fluids containing solid matter in suspension, which consists in delivering the sewage to a well at a low level, separating part of the solids from the liquid in said well, discharging the liquid into a second well, withdrawing the separated liquid from said second well and discharging it at a higher level, and withdrawing the separated sludge from the first well and discharging it at a higher level.

4. The method of elevating sewage and like fluids containing solid matter in suspension, which consists in separating part of the solids from the liquid, pumping the separated liquid and discharging it at a higher level, discharging the separated sludge and automatically controlling the discharge of the sludge by the liquid level.

5. The method of elevating sewage and like fluids containing solid matter in suspension, which consists in first separating part of the solid matter from the liquid, pumping out the separated liquid, ejecting the separated sludge by air pressure and controlling the air pressure by the level of the liquid.

[Claims 6 to 12 not printed in the Gazette.]

1,102,684. APPARATUS FOR ELEVATING LIQUIDS. ALBERT PRIESTMAN, New York, N. Y. Original application filed Apr. 27, 1912, Serial No. 693,691. Divided and this application filed July 17, 1913. Serial No. 779,411. (Cl. 103—79.)



1. In apparatus for elevating sewage and like fluids containing solid matter in suspension, the combination of a well to receive the sewage, a second well having communication with the upper part of the first well to receive the liquid from the top of the sewage therein, a receptacle having communication with the bottom of the first well to receive the sludge therefrom, means to withdraw the liquids from the second well, and means to discharge the sludge from the sludge receptacle.

2. In apparatus for elevating sewage and like fluids containing solid matter in suspension, the combination of a well to receive the sewage, a second well having communication with the upper part of the first well to receive the liquid from the top of the sewage therein, a receptacle having communication with the bottom of the first well to receive the sludge therefrom, means to withdraw the liquids from the second well, means to discharge the sludge from the sludge receptacle, and a main placed at a higher level, into which the liquids and sludge are discharged.

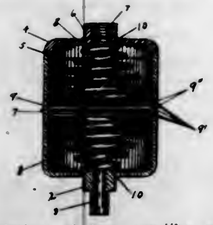
3. In apparatus for elevating sewage and like fluids containing solid matter in suspension, the combination of a well to receive the sewage, a second well having communication with the upper part of the first well to receive the liquid from the top of the sewage therein, a receptacle having communication with the bottom of the first well to receive the sludge therefrom, means to withdraw the liquids from the second well controlled by the level of the liquid therein, and means to discharge the sludge from the sludge receptacle.

4. In apparatus for elevating sewage and like fluids containing solid matter in suspension, the combination of a well to receive the sewage, a screen in said well, an inlet pipe for sewage leading to said well below the screen, a second well communicating with the first well above the screen, means to withdraw the liquid from said second well, a receptacle communicating with the first well below the screen, and means to discharge the contents of said receptacle.

5. In apparatus for elevating sewage and like fluids containing solid matter in suspension, the combination of a well to receive the sewage, a screen in said well, an inlet pipe for sewage leading to said well below the screen, a second well communicating with the first well above the screen, a pump to withdraw the liquid from said second well, a receptacle communicating with the first well below the screen, and means to discharge the contents of said receptacle.

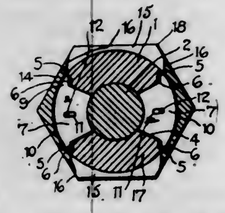
[Claims 6 to 21 not printed in the Gazette.]

1,102,685. FILTER. JAMES R. PROPER, Los Angeles, Cal., assignor to Joseph H. Proper, Los Angeles, Cal. Filed June 12, 1913. Serial No. 773,365. (Cl. 210—16.)



A filter consisting of two cup-like members screw-threaded together to form a hollow cylindrical case, a screw-threaded tubular connection located centrally of, and extending outwardly from the end of each of the cup-like members, and communicating with the interior thereof, a disk-like filtering element diametrically located within said cylindrical case, and approximately central of the length thereof, conical springs in said case and seating against the ends thereof, and arranged to bear against the opposite sides of and compress and expand said element, and to hold the said element resiliently in position, all arranged and operating substantially as shown and for the purpose set forth.

1,102,686. NUT. WILLIAM RANDOLPH, Crows Landing, Cal. Filed Mar. 10, 1913. Serial No. 753,416. (Cl. 151—25.)

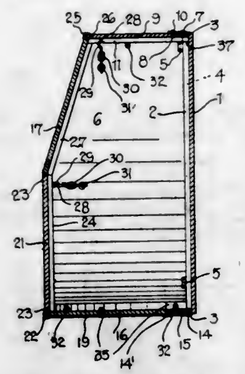


1. A nut comprising a body portion having a longitudinal bolt receiving bore and transverse openings communicating with said bore, said nut having a rigid flange at one end and a removable flange at its opposite end, thread engaging members positioned in said openings, a member engaged around the body portion between the flanges and having openings separated by solid portions, said member being adapted when in operative position to retain the thread engaging members in engagement with the bolt positioned in the bore of the nut, and means for resiliently forcing the thread engaging members outwardly when the member between the flanges is in inoperative position.

2. A nut comprising a body portion having a longitudinal bolt receiving bore and transverse openings communicating with said bore, said nut having a rigid flange at one end and a removable flange at its opposite end, thread engaging members positioned in said openings, a sleeve engaged around the body portion between the flanges and adapted to be rotated for a limited distance in either direction, said sleeve having transverse openings with solid portions between said openings, means for resiliently forcing the thread engaging members outwardly when the sleeve is in one position with its openings opposite the transverse openings in the body portion of the nut, and means for limiting outward movement of the thread engaging members.

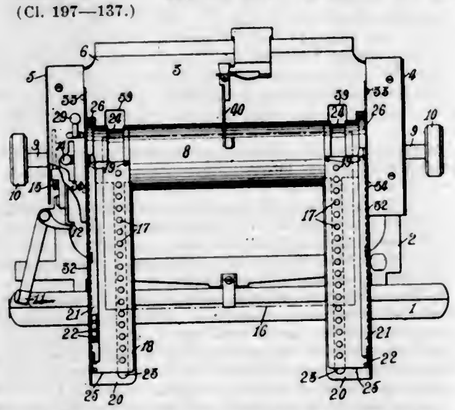
3. A nut comprising a body portion having a longitudinal bolt receiving bore and transverse openings communicating with said bore, said nut having a rigid flange at one end and a removable flange at its opposite end, thread engaging members positioned in said openings, a sleeve rotatably engaged around the body portion between the flanges and having transverse openings with solid portions between said openings, said sleeve being adapted to retain the thread engaging members in their innermost positions and in engagement with a bolt positioned in the bore when the solid portions of said sleeve are opposite said members, means for resiliently forcing the members outwardly when the openings in the sleeve are opposite said members, means for limiting movement of the sleeve in either direction around the body portion, and means for limiting inward and outward movements of the thread engaging members.

1,102,687. PACKING-BOX. PERRY L. REARICK, Logansport, Ind. Filed Aug. 30, 1913. Serial No. 787,495. (Cl. 217—14.)



A device of the character described comprising a rear panel, side panels pivoted thereto and adapted to swing inwardly thereof, a top panel pivoted to the upper edge of the rear panel and comprising a plurality of pivotally engaged sections adapted to be adjusted rearwardly of the rear panel, an upper front panel pivotally carried by the outermost section of the top panel, a base panel comprising a plurality of pivotally engaged sections adapted to be swung rearwardly of the rear panel, a lower front panel pivotally carried by the outermost section of the base panel, and coacting means carried by certain of the panels for maintaining the device in operative position.

1,102,688. TYPE-WRITING MACHINE. FRANK A. ROBINSON, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 28, 1912. Serial No. 700,144. (Cl. 197—137.)



1. In a typewriting machine, the combination with a rotatable platen, of an extension fast to said platen and wound on said platen by rotating the platen in line spacing direction, a table onto which the free end of said extension slides when the platen is reversely rotated, and a detent positively arresting said platen in its reverse rotation.

2. In a typewriting machine, the combination with a rotatable platen, of an extension attached at one end to said platen and forming part of the receiving surface of the platen, said extension arranged to extend substantially around the circumference of the platen, and pins on said extension set at intervals such that when said extension is wound on the platen, said pins are uniformly spaced around its entire circumference.

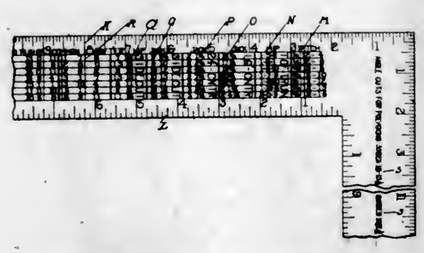
3. The combination with a revoluble platen, of an extension connected at one of its ends to said platen to wrap once only therearound, and form part of the work-sheet holding surface of the platen, and work-carrying devices upon said extension.

4. The combination with a revoluble platen, of an extension connected at one of its ends to said platen to wind therearound, work-carrying devices upon said extension, and a table whereon said extension may be extended when unwound from the platen by a reverse rotation of the platen.

5. The combination with a revoluble platen, of an extension connected at one of its ends to said platen to wind therearound, work-carrying devices upon said extension, a table whereon said extension may be extended when unwound from the platen by a reverse rotation of the platen, and a guiding device for said extension extending along said table.

[Claims 6 to 36 not printed in the Gazette.]

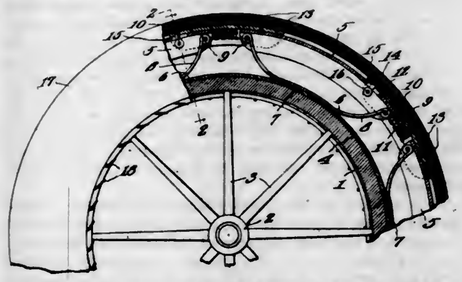
1,102,689. FRAMING-SQUARE. HENRY B. SARGENT, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 10, 1911. Serial No. 637,700. (Cl. 33—113.)



1. A carpenter's square having a plurality of graduations along the edge of one arm, to denote inches, a transverse column of figures on said arm, indicating different pitches, transversely arranged tables or columns of side cuts for the hip and jack rafters arranged parallel to the pitch column under the lower inch graduations, and tables or columns of rafter lengths, arranged parallel to the aforesaid columns, under the higher inch graduations, such higher inch graduations corresponding to the length of certain rafter runs; substantially as described.

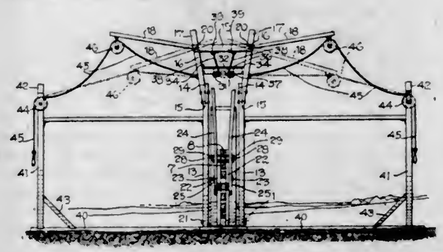
2. A carpenter's square having graduations along the edge of one arm, numerals associated with said graduations to denote inches, a transverse column of figures adjacent one end of the arm to indicate different pitches, transversely arranged columns or tables of figures parallel to the pitch column under the numerals respectively of the higher inch graduations, to indicate hip or valley rafter lengths corresponding to the runs of common rafters, said last named numerals corresponding to the runs of common rafters referred to by said tables, and transversely arranged columns of figues parallel to the pitch column in association with the lower inch graduation numerals, giving measurements of other rafters, and intended for use in connection with said first named tables or columns of figures; substantially as described.

1,102,690. VEHICLE WHEEL-TIRE. ISAAC MORGAN SARTAIN, Tracy City, Tenn. Filed Dec. 1, 1913. Serial No. 804,075. (Cl. 152—8.)



In a vehicle wheel, a rim, a series of arcuate tire sections surrounding the same, a series of semi-elliptical springs having their central portions secured to the rim and having their ends pivoted to the ends of the respective tire sections, a supplemental arcuate tire section having one end secured to one end of each of the aforesaid tire sections, and having its other end overlapping the end of the adjoining tire section, the first mentioned tire sections having longitudinal slots, inwardly projecting T-shaped members secured to the free ends of the supplemental tire sections and working through the said slots, and stud rollers journaled upon the arms of the said members and working against the interior of the first mentioned tire sections.

1,102,691. GATE. CHARLEY S. SAVAGE, Burfield, Ky.; J. C. Huffaker administrator of said Charley S. Savage, deceased. Filed July 28, 1913. Serial No. 781,618. (Cl. 39—13.)



1. A device of the class described including a base, spaced upright posts mounted thereon, a gate mounted for swinging movement so that the entire gate will swing between the posts, a latch bar normally retaining the gate in its closed position, rollers disposed upon opposite sides of the gate and secured to the latch bar, movable arms arranged upon opposite sides of the gate and loosely connected thereto, means for actuating said arms to open the gate, said arms engaging the rollers carried by the latch bar to release the gate from its locked position.

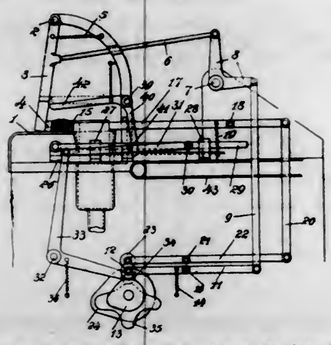
2. A device of the class described including a base, spaced upright posts mounted thereon, a gate mounted for swinging movement between said posts, a latch bar carried by the gate to normally lock the same in its closed position, rollers carried by the latch bar and arranged upon opposite sides thereof, a transverse bolt carried by the gate, movable arms having slots in their lower ends to receive the ends of said bolt, beveled portions formed on said arms and engaging the rollers on the latch bar, means for actuating said arms to release the latch bar and impart movement to the gate to swing the same between said posts.

3. A device of the class described including a base, spaced upright posts thereon, a gate mounted for swinging movement between said posts, a latch bar normally retaining the same into locked position, rollers carried by

said latch bar, brackets secured to said posts adjacent the upper end thereof, a transverse bar pivotally mounted therein, a longitudinal bar secured to the same and extending between said posts, a second transverse longitudinal bar secured to the opposite end of the first bar, spaced arms having their upper ends pivotally connected to the ends of the second transverse bar and having slots formed in their lower ends, beveled portions formed on said arms and adapted to engage said rollers, a transverse bolt carried by the gate and having its ends arranged in said slots, and means for raising and lowering the longitudinal bar for actuating said arms to release the latch bar and impart movement to the gate to swing the same between said posts.

4. A device of the class described including spaced upright posts, a gate having one end arranged between the post and pivotally mounted at its lower side for swinging movement between the posts, a resiliently retained latch bar normally holding the gate in its locked position, a frame arranged between said posts and mounted at one end for pivital movement, movable arms having one end pivotally connected to the other end of the frame, and the opposite ends of said arms being loosely connected to the gate, means for imparting movement to said frame to actuate the gate and means carried by the latch bar and engaged by said arms to release said latch bar.

1,102,692. DEVICE FOR FEEDING THE TOBACCO IN CIGAR-BUNCHING MACHINES. RUDOLF SCHMITT, Frankfort-on-the-Main, Germany, assignor to The Firm of Maschinenfabrik Schnarr & Schmitt, Frankfort-on-the-Main, Germany. Filed Mar. 8, 1913. Serial No. 752,948. (Cl. 131—39.)



1. In devices for feeding the tobacco in cigar bunching machines the combination of the tobacco presser with a fore-mold made of two portions, of which the one moves up and down with the pressure jaw, while the other one rocks to and fro over the hopper of the press substantially as and for the purpose described.

2. In devices for feeding the tobacco in cigar bunching machines the combination of the tobacco presser with a fore-mold automatically discharging the tobacco into the hopper, which fore-mold is made of two portions, of which the one moves up and down with the pressure jaw, while the other one rocks to and fro over the hopper of the press substantially as and for the purpose described.

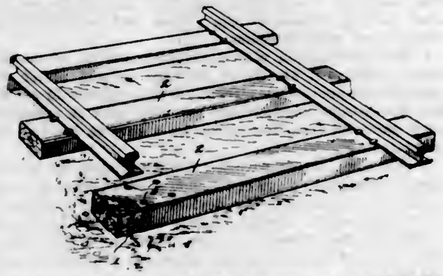
3. In devices for feeding the tobacco in cigar bunching machines the combination of the tobacco presser with a fore-mold automatically discharging the tobacco into the hopper, which fore-mold is made of two portions, of which the one moves up and down with the pressure jaw, while the other one rocks to and fro over the hopper of the press moved by a cam or the like substantially as and for the purpose described.

4. In devices for feeding the tobacco in cigar bunching machines the combination of the tobacco presser with a fore-mold automatically discharging the tobacco into the hopper, which fore-mold is made of two portions, of which the one moves up and down with the pressure jaw, while the other one rocks to and fro over the hopper of the press moved by a cam or the like, and a checking device for preventing the movement of the one portion of the fore-mold substantially as and for the purpose described.

5. In devices for feeding the tobacco in cigar bunching machines the combination of the tobacco presser with a fore-mold and a checking device consisting of a bell-crank lever for preventing the movement of the fore-mold substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,102,693. RAILROAD-TIE. CHARLES LYNN SEYLER, Academy, W. Va. Filed Nov. 15, 1913. Serial No. 801,196. (Cl. 238—5.)

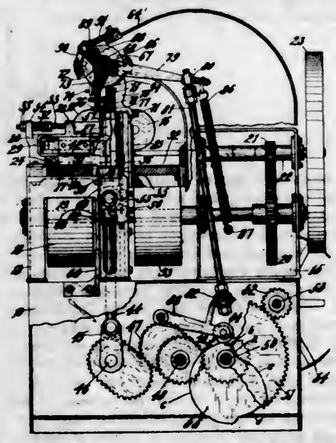


1. A railroad tie comprising a wooden core, and a metallic jacket shrunk upon said core.

2. A railroad tie comprising a wooden core treated with a preservative, and a metallic jacket shrunk upon said core.

3. A railroad tie comprising a wooden core having an exterior charred surface and a creosoted portion immediately beneath said charred surface, and a metallic jacket adapted to lie contiguous said surface.

1,102,694. END-MATCHER. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Aug. 18, 1911. Serial No. 644,834. (Cl. 144—91.)



1. An end matcher, comprising a work support, a reciprocating work lifter having a laterally movable finger for engaging the work and lifting it from the work support, means for moving said finger, guides through which the work travels when carried by the work lifter, and a cutter in the path of the work as it travels through the guides.

2. An end matcher, comprising work guides between which the work may pass, work feeding means capable of movement into or out of position for forcing the work through the guides, means engaged by the work when the work is in position to pass through the guides for moving said work feeding means into position for engaging the work, and a cutter in the path of the work in its travel through the guides.

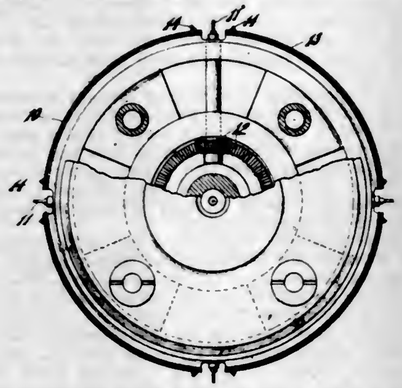
3. An end matcher, comprising guides, a movable work support, a work feeding means having a part capable of being moved into or out of position for engagement with the work to feed it from the work support through the guides, means dependent upon the movements of the work support for effecting the movements of such engaging part of the work feeding means, and a cutter in the path of the work in its travel through the guides.

4. An end matcher, comprising guides, a movable work support, a reciprocating work feeding means having a finger capable of being moved into or out of position for engagement with the work to feed it from the work support through the guides, means dependent upon the movement of the work support for causing the movements of the finger, and a cutter in the path of the work in its travel through the guides.

5. An end matcher, comprising a slidable work support, a projection thereon to be engaged by the work for sliding the work support, a work feeding means having fingers capable of moving into and out of position for engaging the work to move it from the work support, means controlled by the position of the work support for effecting the movement of the fingers of the work feeding means, guides between which the work travels when carried by the work feeding means, and a cutter in the path of the work in its travel between the guides.

[Claims 6 to 18 not printed in the Gazette.]

1,102,695. BORING-MACHINE. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Nov. 3, 1911. Serial No. 658,297. (Cl. 144—109.)

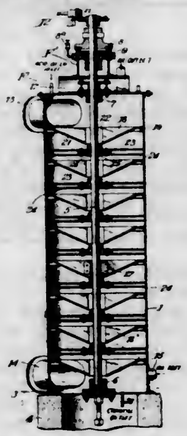


1. A rotatable drill head for boring machines provided with a suitably driven radial drill, with a projecting unyielding spur on the drill head adapted to engage the work at the time the drill engages the work and to be forced into the work by the turning movement of the drill head to relieve the drill from lateral pressure incident to the feed of the work.

2. A rotatable drill head for boring machines adapted to be rotated by the engagement of the moving work therewith, a suitably driven radial drill carried by the drill head, and a pair of unyielding spurs on the edge of the drill head, one positioned directly in front of the drill and the other positioned directly behind the drill for engaging the work and adapted to be forced into the work by the turning movement of the drill head and relieving the drill from the feeding pressure thereof.

3. A rotatable drill head for boring machines having an angular knurled edge to engage the rebbeted edge of a strip of flooring or the like work and adapted to be rotated through such engagement by the feeding movement thereof, a radial drill carried by the drill head for entering the work, and unyielding spurs projecting from the edge of the drill head in front of and at the rear of the drill and provided with pointed ends forming opposite knife edges forced into the work by the turning movement of the drill head to cut into the surfaces of the work forming the rabbet and constitute a positive driving connection between the work and the drill head to relieve the drill from lateral pressure.

1,102,696. APPARATUS FOR MIXING OIL WITH CHEMICALS. OLIVER J. SHINER, deceased, Bayonne, N. J., by Maud E. Shiner, administratrix, Bayonne, N. J. Original application filed May 27, 1913, Serial No. 770,208. Divided and this application filed Feb. 2, 1914. Serial No. 816,126. (Cl. 196—26.)

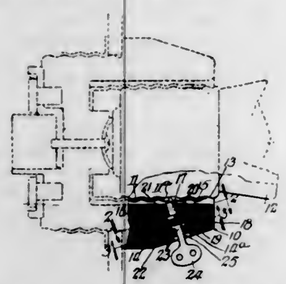


1. A mixer, comprising a container provided with an oil inlet at the bottom and an inlet at the top for a chemical with which the oil is to be treated and provided also with an oil outlet at the top and a chemical outlet at the bottom, a rotatable shaft extending vertically through said container, a series of pairs of perforated plates arranged in series one above the other within the container and attached to said rotatable shaft, and a series of stationary pans within the container one above each pair of plates and which deliver to the central portion of the plates, substantially as described.

2. A mixer, comprising a container provided with an oil inlet at the bottom and an inlet at the top for a chemical with which the oil is to be treated and provided also with an oil outlet at the top and a chemical outlet at the bottom, a rotatable shaft extending vertically through said container, a series of pairs of perforated plates arranged in series one above the other within the container and attached to said rotatable shaft with the plates of each pair placed relatively close together and provided with perforations of different sizes and a series of stationary pans within the container one above each pair of plates each of which pans has a sloping bottom and a delivery opening above the central portion of a pair of plates.

3. A mixer for use in a continuous process for treating oil, comprising a container provided with an oil inlet at the bottom and an inlet at the top for a chemical with which the oil is to be treated and provided also with an oil outlet at the top and a chemical outlet at the bottom, a vertically arranged rotatable shaft extending through said container, a series of pairs of perforated plates arranged in series one above the other within the container attached to said rotatable shaft and extending radially therefrom close to the walls of the container and a series of stationary pans within the container one above each pair of plates, each of which pans has a bottom sloping from its periphery toward its center and is formed with a delivery opening above the central portion of a pair of plates.

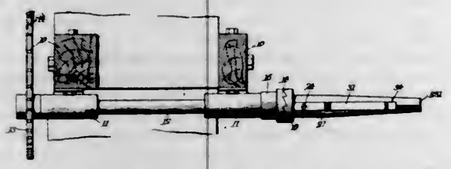
1,102,697. LOCKING DEVICE FOR LAMP-SOCKETS. GUSTAF I. SILBERT, Chicago, Ill. Filed Oct. 18, 1912. Serial No. 726,448. (Cl. 173—356.)



1. A locking device for lamp bulbs comprising, in combination with a socket, a recessed shell contact fixed therein provided with an aperture, a lamp bulb having a threaded shell contact adapted to be screwed into the shell contact of said socket, a set-screw having threaded engagement within said socket and projecting through the aperture in said socket contact shell, said set screw being adapted for engagement with the said threaded shell contact of the lamp, a key adapted to be inserted in the outside of said socket to rotate said set-screw, and means providing insulation between said set-screw, socket and key.

2. A locking device for lamp bulbs comprising, in combination with a socket, a recessed shell contact fixed therein, provided with an aperture, a lamp bulb having a threaded shell contact adapted to be screwed into the shell contact of said socket, an internally threaded sleeve fixed to said socket adjacent said recess, a recessed plug threaded into said sleeve, a pin fixed in said plug so as to move therewith, means insulating said pin from said plug, and a key adapted to be inserted through the outer end of said sleeve and to be engaged against the outer end of said plug to bring said pin into engagement through the aperture in said socket shell with said contact shell of the lamp.

1,102,698. CAKE-STRIPPER. CHARLES E. SNYPP, Gretna, La. Filed May 4, 1914. Serial No. 836,301. (Cl. 100—52.)



1. In a device for stripping the cover from compressed cakes, the combination of a rotatable shaft, cover gripping means movable longitudinally of the shaft, and means for coupling the gripping means to said shaft.

2. In a device for stripping cloths from compressed cakes, the combination of a rotatable shaft, means for gripping a cloth and for supporting the same as it is stripped from the cake, said means having limited longitudinal movement on said shaft, and means whereby said gripping and supporting means may be coupled to rotate with said shaft by moving the same longitudinally of the shaft in one direction and uncoupled by moving the same along the shaft in the opposite direction.

3. In a stripping device of the class described, the combination of a rotatable shaft, a sleeve slidable longitudinally thereof, a gripper movable with said sleeve, and means for coupling the sleeve to the shaft.

4. In a stripping machine of the class described, the combination of a shaft rotatable continuously while the machine is in use, gripping means movable longitudinally of the shaft while the latter is rotating, and means whereby said gripping means may be coupled to and uncoupled from said rotating shaft as said gripping means is moved longitudinally in one direction or the other.

5. In a stripping machine of the class described, the combination of a shaft constantly rotative while the machine is in use, a sleeve mounted so as to be slidable longitudinally of the shaft while the latter is rotating, gripping means on said sleeve, means for coupling said sleeve to said shaft, and means for limiting the movement of said sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,102,699. BOTTLE-STOPPER. OSCAR SONDHELM, New York, and HARRY M. VEIT, Brooklyn, N. Y., assignors to Carl Bomeisler, New York, N. Y. Filed May 28, 1912. Serial No. 700,182. (Cl. 215—54.)



1. A bottle-stopper comprising a centrally perforated cap, a centrally perforated cork secured to the under side of the cap, a tubular member formed on the cap in alinement with the perforation therein and extending above the cap to form a pouring spout and below the cap into contact with the cork and a closing plug having a shank adapted to enter the tubular member and perforated cork and a recess around the upper end of the shank adapted to receive the pouring spout, substantially as set forth.

2. A bottle-stopper comprising a centrally perforated cap, a centrally perforated plate secured to the under side thereof, a perforated cork secured to said plate, a tubular member extending upwardly from the cap and forming a pouring spout, and a plug having a shank adapted to enter said member and cork and a recess around the upper end of the shank to receive the pouring spout, substantially as set forth.

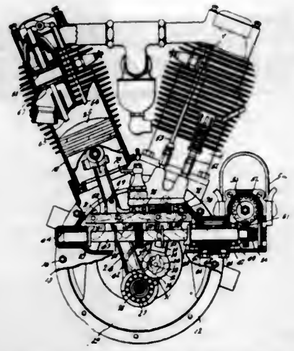
3. A bottle-stopper comprising a cap and a clamping plate both centrally perforated and secured together by having the material of one about its central perforation turned over the edge of the other about its central perforation, clamping means formed in said plate, a perforated cork secured to the plate and cap by said clamping means, a tubular member rising from the cap about the central perforation therein and forming a pouring spout, and a plug having a shank adapted to enter said member and cork and a recess about the upper end of the shank to receive the pouring spout, substantially as set forth.

4. A bottle-stopper, comprising a cap and a clamping-plate both centrally perforated and secured together by having the material of one about its central perforation turned over the edge of the other about its central perforation, clamping means formed in said plate, and a cork secured to the plate and cap by said clamping means, substantially as set forth.

5. A bottle-stopper, comprising a cap and a clamping-plate both centrally perforated and secured together by having the material of one about its central perforation turned over the edge of the other about its central perforation, said cap extending outwardly beyond said plate, clamping means formed in said plate at the periphery thereof, a centrally perforated cork secured to the plate and cap by said means, and a plug the stem of which is adapted to be received in said perforations, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,102,700. INTERNAL-COMBUSTION ENGINE. FRED W. SPACKE, DALMAR T. BROWNLEE, and WILLIAM SPACKE, Indianapolis, Ind., assignors to The F. W. Spacke Machine Company, Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 13, 1913. Serial No. 741,719. (Cl. 123—55.)



1. In an internal combustion engine, the combination of cylinders, inlet and exhaust valves therefor, and a cam shaft for operating said valves, said cam shaft having a separate cam for each valve, the cam faces of the cams acting axially of the cam shaft and part in one direction and part in the other.

2. In an internal combustion engine, the combination of inlet and exhaust valves, a cam shaft for operating said valves, said cam shaft having a separate cam for each valve, the cams having cam faces on the sides, said cam faces facing part toward one end of the axis of the cam shaft and part toward the other end thereof.

3. In an internal combustion engine, the combination of inlet and exhaust valves, valve-operating rods, bell-crank levers for operating said rods, and a cam shaft having cams for operating said bell-crank levers, said bell-crank levers bearing against the sides of the cams part in one direction and part in the other axially of the shaft, and said cams having cam faces on the sides against which said bell-crank levers bear.

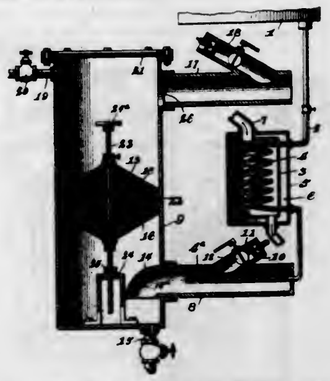
4. In an internal combustion engine, the combination of inlet and exhaust valves, valve-operating rods, bell-crank levers for operating said rods, and a cam shaft having cams for operating said bell-crank levers, said bell-crank levers bearing against the sides of the cams, and said cams having cam faces on the sides against which said bell-crank levers bear.

5. In an internal combustion engine, the combination of a plurality of cylinders, inlet and exhaust valves therefor, valve-operating rods, bell-crank levers for operating said rods, a cam shaft having cams for operating said bell-crank levers, said bell-crank levers bearing against the sides of the associated cams part in one direction and part in the other, and said cams having cam faces on the sides, against which cam faces the associated bell-crank levers bear, and unitary means for operating the bell-crank levers for the exhaust valves of a plurality of cylinders to open such valves independently of the cam shaft.

[Claims 6 to 21 not printed in the Gazette.]

1,102,701. PROCESS OF CARBURETING AIR. CHARLES V. STUART, Memphis, Tenn., assignor, by direct and mesne assignments, to Stuart American Products Company, Memphis, Tenn., a Corporation of Tennessee. Filed Sept. 8, 1913. Serial No. 788,718. (Cl. 48—212.)

1. The process of carbureting air with the lower hydrocarbon oils, which consists in vaporizing the oil, adding air, passing the admixture to a settling chamber, and causing the admixture to rise to a filtering medium at a velocity insufficient to lift the heavier unvolatilized ingredients to said medium whereby the lighter vapor passes through the medium and is filtered and the heavier ingredients are precipitated.



2. The process of carbureting air with the lower hydrocarbon oils, which consists in vaporizing the oil by the application of heat, adding heated air, passing the resultant mixture to a settling chamber and causing the admixture to rise to a filtering medium at a velocity insufficient to lift the heavier unvolatilized ingredients to said medium, whereby the lighter vapor passes through the medium and is filtered and the heavier ingredients are precipitated.

3. The process of carbureting air with the lower hydrocarbon oils, which consists in vaporizing the oil by the application of heat in the absence of air, adding heated air in controllable quantities, passing the admixture to a settling chamber and causing it to rise to a filtering medium at a velocity insufficient to lift the heavier unvolatilized ingredients to said medium, whereby the lighter vapor passes through the medium and is filtered and the heavier ingredients are precipitated.

4. The process of carbureting air with the lower hydrocarbon oils, which consists in vaporizing the oil, adding air thereto, passing the admixture forcibly against a baffle element, and thence to an enlarged settling chamber whereby the velocity of the admixture is reduced, and causing the mixture to travel in an upward direction to a filtering medium at a velocity insufficient to lift the heavier unvolatilized ingredients to said medium, whereby the lighter particles of the mixture may pass through the filtering medium while the heavier unvolatilized ingredients are precipitated.

5. The process of carbureting air with the lower hydrocarbon oils, which consists in vaporizing the oil, causing the vapor to travel along the conduit, adding air to the vapor in the conduit, introducing the admixture to a relatively large filtering and settling chamber whereby the velocity of the mixture is reduced, and presenting the mixture to a filtering medium at a velocity sufficient to carry the substantially volatile particles therethrough, but insufficient to lift the heavier unvolatilized ingredients to the medium.

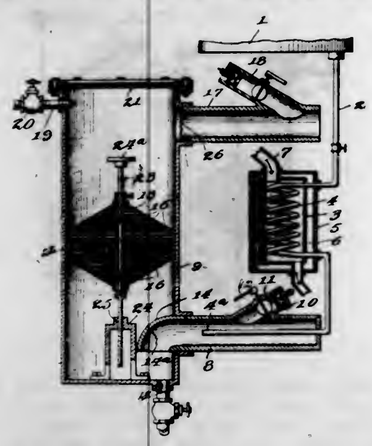
[Claims 6 and 7 not printed in the Gazette.]

1,102,702. APPARATUS FOR CARBURETING AIR. CHARLES VIVION STUART, Memphis, Tenn. Filed Jan. 15, 1914. Serial No. 812,277. (Cl. 48—107.)

1. An apparatus of the class described comprising means for causing an admixture of air and oil vapor, a conduit for conveying said mixture, a settling chamber carrying a filtering medium and communicating with said conduit, and means for varying the distance between said medium and the point of communication between said chamber and conduit.

2. An apparatus adapted for attachment to a gas engine of the class described comprising a conduit adapted to convey an admixture of air and oil vapor, at a relatively high velocity, an adjustable filtering medium in

the path of said mixture, and means for reducing the velocity of said mixture before it reaches said medium.



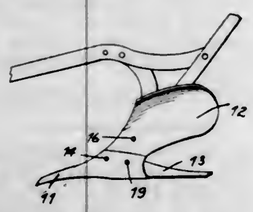
3. An apparatus of the class described comprising a conduit adapted to convey an admixture of air and oil vapor, an enlarged chamber in the path of said mixture and communicating with said conduit, an adjustable filter in said chamber, and means for varying the distance between said filter and the point of communication between said conduit and said chamber.

4. An apparatus of the class described comprising a conduit, means for causing an admixture of air and oil to pass therethrough, means for partially atomizing said admixture, a relatively large chamber in communication with said conduit, a filter in said chamber, and means for varying the distance between said filter and the point of communication between said chamber and said conduit.

5. An apparatus of the class described comprising a conduit, means for causing an admixture of air and oil to pass therethrough, a baffle element in the path of said admixture, a relatively large chamber in communication with said conduit, a filter in said chamber, and means for varying the distance between said filter and the point of communication between said chamber and said conduit.

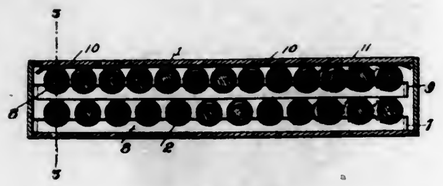
[Claims 6 to 17 not printed in the Gazette.]

1,102,703. WEED-CUTTER FOR PLOWS. WILLIAM J. UNDERWOOD, Shafter Lake, Tex. Filed Jan. 21, 1914. Serial No. 813,527. (Cl. 97—9.)



The combination with a double moldboard plow, of wings pivotally secured to the bottom face of the frog of the plow and extending laterally from opposite sides thereof, each of the wings having a longitudinal slot adjacent the pivot end, a link pivotally connected to each of the moldboards, the lower end of said link having a longitudinal slot the slotted ends of the link being disposed transversely of the slotted portion of the wing, and a clamping bolt passed through the said slots.

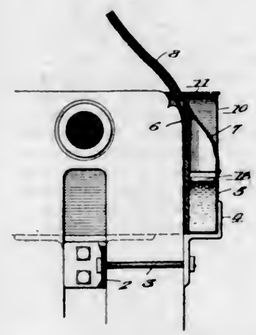
1,102,704. CIGAR-BOX. EUGENE VALLENS, New York, N. Y. Filed June 21, 1913. Serial No. 775,088. (Cl. 131—11.)



1. A cigar package comprising individual containers for said cigars, an outer box or casing in which said containers are arranged in layers, and racks adapted to receive the containers in each layer, said racks being recessed to support said containers, and hold each container in a definite and constant position in said box.

2. A cigar package comprising individual containers for said cigars, an outer box or casing in which said containers are arranged in layers, and racks to support said containers, and hold each container in a definite and constant position in said box, the rack supporting an upper layer being supported on the containers in the next layer below.

1,102,705. RADIATOR ATTACHMENT. DE WITT C. WEBB, Boston, Mass. Filed Sept. 1, 1911. Serial No. 647,242. (Cl. 98—44.)



1. A radiator attachment comprising an evaporating tank having a perforated extended wall adjacent the radiator to which it is attached to form a deflector, a wick arranged over said deflector, a feed tank, and means for supporting said tanks at right angles to each other on the side and end of the radiator respectively.

2. A radiator attachment comprising an evaporating tank having an extended perforated inner wall to form a deflector, and a wick supported within said tank extending onto said deflector.

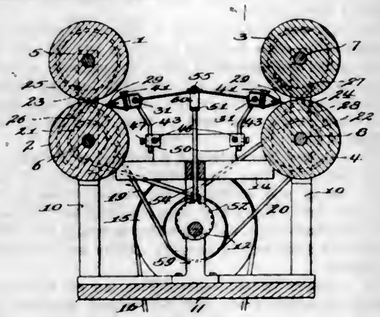
3. A radiator attachment comprising an evaporating tank provided with a deflector extending upward therefrom having spaced perforated walls, and a wick arranged between said perforated walls.

4. A radiator attachment comprising an evaporating tank having an extended corrugated and perforated wall forming a deflector, and a wick arranged in said tank extending over said deflector.

5. An attachment for radiators comprising an evaporating tank having an extended end portion, a feed tank having an overhanging portion, the abutting walls of said tanks being provided with registering openings forming a port, a valve for closing said port, and a float mounted in said evaporating tank for actuating said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,102,706. RAZOR-SHARPENING MACHINE. ALBERT WINTER, Birmingham, Ala., assignor to Peter Fehrentz, Birmingham, Ala. Filed Nov. 29, 1912. Serial No. 734,168. (Cl. 15—16.)



1. In a sharpening machine, the combination, with spaced pairs of honing and stropping rollers, and mechanism for rotating both pairs of rollers in unison and the rollers of each pair in opposite directions; of an oscillatory shaft associated with each pair of rollers; a blade holder carried by each shaft; a vertically reciprocatory frame disposed between said shafts and connected with the same; and means for operating said frame, to oscillate both shafts and their holders in unison and bring the edge of each blade into contact with the adjacent pair of rollers alternately.

2. In a sharpening machine, the combination, with a pair of spaced sharpening rollers, and means for driving the same in unison; of an endwise movable shaft associated with each roller; a blade holder carried by each shaft; a horizontally reciprocatory frame disposed between said shafts and connected with the same; and means for operating said frame, to move said shafts forward and backward in unison and draw the edge of each blade along the surface of the adjacent roller.

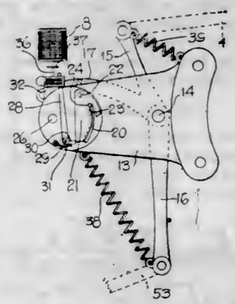
3. In a sharpening machine, the combination, with spaced pairs of honing and stropping rollers and mechanism for rotating both pairs of rollers in unison and the rollers of each pair in opposite directions; of an oscillatory and endwise movable shaft associated with each pair of rollers; a blade holder carried by each shaft; separate vertically and horizontally reciprocatory frames disposed between said shafts and connected with the same; means for operating the vertically reciprocatory frame to oscillate both shafts and their holders in unison; and additional means for operating the horizontal reciprocatory frame to move both shafts, with their holders, forward and backward endwise in unison.

4. In a sharpening machine, the combination, with spaced pairs of honing and stropping rollers, and mechanism for rotating both pairs of rollers in unison and the rollers of each pair in opposite directions; of an oscillatory shaft associated with each pair of rollers; a blade holder carried by each shaft, a vertically reciprocatory frame disposed between said shafts and provided with a rotatably mounted bar having a pair of openings formed therein; a rod connected at one end to each shaft and having its other end loosely engaged in one of the openings in said bar; and means for operating said frame, to oscillate both shafts and their holders in unison and bring the edge of each blade into contact with the adjacent pair of rollers alternately.

5. In a sharpening machine, the combination, with spaced pairs of honing and stropping rollers, and mechanism for rotating both pairs of rollers in unison and the rollers of each pair in opposite directions; of an oscillatory and endwise movable shaft associated with each pair of rollers; a blade holder carried by each shaft; a vertically reciprocatory frame disposed between said shafts and provided with a rotatably mounted bar having a pair of alining longitudinal slots formed therein; a rod connected at one end to each shaft and having its other end extending loosely into one of said slots; means for operating said frame, to oscillate both shafts and their holders in unison; and mechanism connected with said shafts for shifting the same forward and backward endwise in unison during their oscillatory movements.

[Claim 6 not printed in the Gazette.]

1,102,707. AUTOMATIC STOP DEVICE. ROBERT C. WOOTTEN, Danville, Va. Filed Sept. 2, 1913. Serial No. 787,769. (Cl. 246—58.)



1. In an automatic train stop device, the combination with the steam cut off and air release valves, of a lever having a pair of arms connected to the respective valves, a spring controlled arm, means movable with said arm to hold the lever against movement, a latch plate to hold said spring controlled arm against movement under the action of the spring, a lever to engage the latch plate and hold the same against movement, a gravity movable trigger to engage said lever, and release the latch plate, means for supporting the trigger against gravity movement, an electromagnet adapted to actuate said supporting means when the magnet is energized to release the trigger for gravity movement, and means for operating said first named lever when the spring controlled arm is released by the latch plate, whereby the steam cut off valve and the air release valve are simultaneously operated.

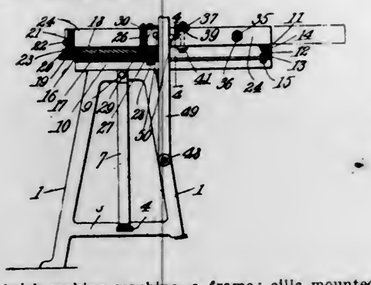
2. In an automatic train stop device, the combination with the steam cut off and air release valves, of a lever fulcrumed intermediate of its ends, connections between the opposite ends of said lever and the respective valves, said lever being provided with an arm, a spring actuated rock shaft, a stud on the lever arm, means on the rock shaft to engage said stud and hold the lever against movement, means for holding said shaft against rocking movement and its spring under tension, said means including a lever, a gravity movable trigger member to engage said lever, an armature, a pin fixed to the armature to support the trigger against gravity movement, an electromagnet to attract said armature, an electric circuit for said magnet, and means to actuate said lever when the same is released, whereby the steam cut off and air release valves are simultaneously operated.

3. In an automatic train stop device, the combination with the steam cut off and air release valves, of a lever fulcrum intermediate of its ends, connections between the opposite ends of said lever and the respective valves, said lever being provided with an arm, a shaft, a spring on said shaft, an arm fixed to the shaft, a stud on said last named arm, a pivoted latch plate to engage said stud and hold the spring under tension, a lever to engage the latch plate, a member fixed upon the shaft, a stud on the lever arm engaged by said member whereby the first named lever is held against movement, means for actuating said second named lever to release the latch plate, an electromagnet to actuate the lever releasing means, a circuit therefor, and a spring to actuate said first named lever when the same is released, whereby the steam cut off and air release valves are simultaneously operated.

4. In an automatic train stop device, the combination with the steam cut off and air release valves, of a lever fulcrumed intermediate of its ends, connections between

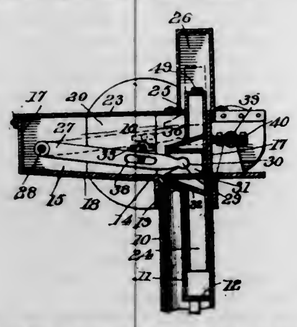
the opposite ends of said lever and the respective valves, springs connected to the opposite ends of the lever to actuate the same, said lever being provided with an arm, a spring actuated arm, a stud carried thereby, a latch plate provided with a recess to receive said stud, a lever to engage said latch plate and hold the same against movement, a stud on the lever arm, a member operable with said spring controlled arm adapted to engage said stud and hold the first named lever against movement, a gravity movable trigger to actuate the second named lever and release the latch plate, an electromagnet, an armature therefor, a pin fixed to the armature to support said trigger against gravity movement, and an electric circuit for said magnet, whereby the first named lever is released when said magnet is energized and the steam cut off and air release valves simultaneously operated.

1,102,708. BRICK-MACHINE. WILLIAM YEOCUM, Dallas City, Ill., assignor to Star Cement Block Machine Company, Dallas City, Ill. Filed June 27, 1910. Serial No. 569,193. (Cl. 25—41.)



In a brick making machine, a frame; sills mounted on the frame; a table mounted on the sills; a pallet supported on the table; a gate bar pivoted to the table and resting on the same for horizontal swinging movement to aline the upper edge of the gate bar with the upper face of the pallet; a set of spaced end walls secured to the gate bar; a set of fixed, spaced end walls coöperating with the pallet; connected inner and outer side walls mounted to slide across the pallet and across the gate bar between the walls of the respective sets; ribs secured to the outer side walls; guides overhanging the ribs; a cross bar disposed above the sills and constituting a support for the slidable side walls; and adjusting members connected with the sills and with the cross bar to effect a rising and lowering of the cross bar thereby to level the slidable side walls with respect to the pallet and the gate bar, the guides being retained by the adjusting members.

1,102,709. POWER TRANSMISSION AND LUBRICATOR THEREFOR. NOAH M. ALBRIGHT, Washington, D. C. Filed Mar. 6, 1913. Serial No. 752,473. (Cl. 184—4.)



1. In a power transmission, a casing, a second casing communicating with the first casing, a bar slidable in the second casing, means disposed in the first casing and connected to the bar for reciprocating the same, means for connecting the bar to a pump rod, said means being disposed exteriorly of the casings, and said casings coacting to form a lubricant well.

2. In a power transmission, a casing, a second casing communicating with the first casing, a bar slidable in the second casing and extending above the casings, a rock link pivoted in the first casing and engaging the bar to reciprocate the same, actuating means for the rock link disposed in the first casing and said casings coacting to form a lubricant well.

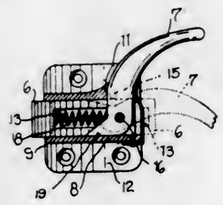
3. In a power transmission, a casing, a vertical second casing communicating therewith, a bar slidable in the second casing and extended thereabove, means carried within the first casing and engaging the bar for reciprocating the same and a rod extending laterally from the bar and directed downwardly parallel thereto and exteriorly of the casings.

4. In a power transmission device, an oil tight casing, a sleeve extending from said casing and provided at its free end with a peripheral flange, a shaft rotatable in the sleeve and extending therebeyond, a hub member fixed to the free end of the shaft, a cup formed on said hub member and receiving the flanged end of the sleeve, a following ring on the sleeve threadedly engaging the outer end of the cup and packing disposed in the cup between the ring and the flange of the sleeve.

5. In a power transmission device, an oil carrying casing, a vertically movable bar supported by the casing, a transverse boxing carried by the intermediate portion of the bar, a block slidable in the boxing, a rock link having its free end pivotally connected to the block, and means for rocking the link.

[Claims 6 and 7 not printed in the Gazette.]

1,102,710. SASH-LOCK. JESSE D. BARR, Dallas, Ga. Filed Aug. 30, 1913. Serial No. 787,436. (Cl. 16—52.)

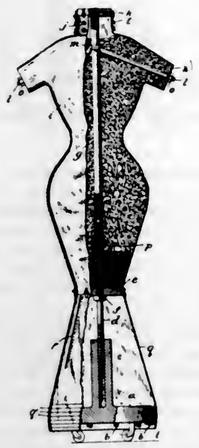


A device of the class described including notched strips secured to the upper sash and casing of a window, a lock including a casing secured to the lower sash, a spring actuated locking bolt slidably mounted therein and normally engaging the strip on the sash, a lug carried by said locking bolt, a pivoted operated lever, a hook carried by the operating lever and adapted to engage the lug on the bolt to actuate said bolt, said lever having its outer end normally engaging the strip on the casing and its inner end provided with a tapering portion adapted to bear against one wall of the casing to limit the retarding movement of the locking bolt, and means secured to said lever whereby to actuate the locking bolt and release the sash for movement.

1,102,711. DRESS-FORM. ANNA DEANE BAILEY, New York, N. Y. Filed Aug. 17, 1912. Serial No. 715,674. (Cl. 223—18.)

1. In a device of the class set forth, a dress form shaped approximately to the human body from the neck to the knee, a base plate and means for supporting the form on said base plate, said base plate having a diameter greater than that of the lower end of the form, a tubular fabric apron detachably connected to the lower end of the form and slitted vertically for a portion of its length, and means for detachably connecting the apron to the edge of the base plate, for the purpose set forth.

2. In a device of the class set forth, the combination of a support, a dummy or lay figure supported thereon and embodying an exterior textile fabric casing and a filling of comminuted frictional packing material, said casing being flexible and said filling material being packed to firmness only and being capable of local permanent readjustment by exterior manual manipulation in the manner of plastic material, and a standard extending through the mass of packing material and serving as an interior support therefor.



3. In a device of the class set forth, the combination of a support, a dummy or lay figure supported thereon and embodying an exterior textile fabric casing and a filling of comminuted frictional packing material, said casing being flexible and said filling material being packed to firmness and being capable of local readjustment by exterior manual manipulation in the manner of plastic material, and an extensible supporting rod within the dummy whereby the height of the dummy may be varied.

4. In a device of the class set forth, the combination of a base, a dress form supported thereon and approximating the human figure said form consisting of an outer casing of textile fabric, a filling of comminuted cork, said filling being capable of local permanent displacement and readjustment by exterior manual manipulation, said cork filling being packed to firmness only.

5. In a device of the class set forth, the combination of a base, a dress form supported thereon and approximating the human figure, said form consisting of an outer casing of textile fabric, a filling of comminuted frictional material capable of local displacement and readjustment, a supporting rod embedded in the packing material, a removable screw rod entering the bottom of the form and engaging the lower end of said rod, and a flexible protecting tube for said screw rod.

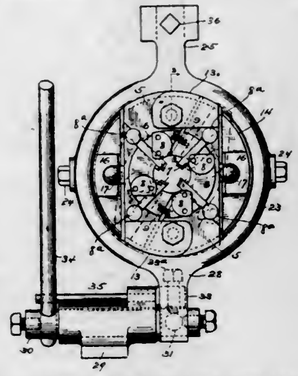
[Claims 6 to 12 not printed in the Gazette.]

1,102,712. DIE-HEAD. JAMES A. BECHER, Chicago, Ill. Filed July 3, 1913. Serial No. 777,362. (Cl. 10—100.)

1. The combination with a support, of die-carrying jaws pivotally attached to said support, a guide plate attached to each jaw and projecting over the other, and means for operating said jaws.

2. The combination with a barrel provided at one end with a head, of sleeves secured to said head and projecting beyond the same, die-carrying jaws loosely mounted on said sleeves, and bolts passing through said sleeves, each of said bolts provided at its ends with heads, one of which is removable.

3. The combination with a barrel having a head at one end and sleeves secured to and projecting beyond said head, of die-carrying jaws pivotally mounted on said sleeves and bearing against said head, bolts passing through said sleeves, and guide plates for the jaws held in place by said bolts.



4. The combination with a die head, dies carried thereby, operating means for said dies, and a fixed arm, of a yoke embracing said operating means and pivotally connected therewith, said yoke having an arm provided with wings, loosely embracing said fixed arm, a set screw passing through said yoke arm and engaging the fixed arm, said yoke having another arm, and a lever coöperating with said last-mentioned arm to move the yoke.

5. The combination with a die head, dies carried thereby, operating means for said dies, and a fixed arm, of a yoke embracing said operating means and pivotally connected therewith, said yoke having an arm projecting in one direction therefrom and coöperating with the fixed arm, said yoke having another arm, a shaft, an arm projecting from said shaft and adapted to engage the last-mentioned yoke arm, a lever secured to said shaft, and a stop for said lever.

1,102,713. TAPER-THREAD-CUTTING TOOL. BRADFORD BORDEN, Warren, Ohio, assignor, by mesne assignments, to The Hart Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 23, 1907. Serial No. 398,819. (Cl. 10—120.)



1. As an article of manufacture, a chaser die for a screw-cutting device, said die being formed with a cutting face having a main portion of one taper and another portion, constituting the throat of the die, of another and more abrupt taper, a series of regular cutting threads being cut on such main portion of the die-face and a series of short, shallow threads for initially gripping the stock being cut on such more abruptly tapered portion of the die-face.

2. As an article of manufacture, a chaser die for a screw-cutting device, said die being formed with a cutting face having a main portion of one taper and another portion, constituting the throat of the die, of another and more abrupt taper, a series of regular cutting threads being cut on such main portion of the die-face and a series of short, shallow threads for initially gripping the stock being cut on such more abruptly tapered portion of the die-face, such last-named threads being of graduated lengths.

3. As an article of manufacture, a chaser die for a screw-cutting device, said die being formed with a cutting face having a main portion of one taper and another portion, constituting the throat of the die, of another and more abrupt taper, a series of regular cutting threads being cut on such main portion of the die-face and a series of short, shallow threads for initially gripping the stock

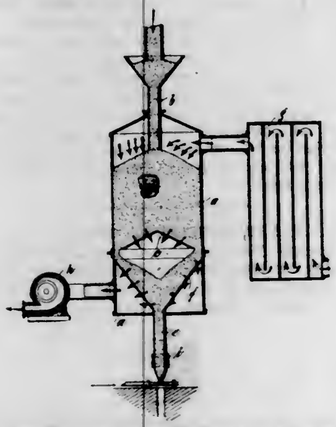
being cut on such more abruptly tapered portion of the die-face, such last-named threads being of graduated lengths and each such thread extending a distance less than the full width of the die-face.

4. As an article of manufacture, a chaser die for a screw-cutting device, said die being formed with a cutting face having a main portion of one taper and another portion, constituting the throat of the die, rounded off on another and more abrupt taper, a series of regular cutting threads being cut on such main portion of the die-face and a series of short, shallow threads for initially gripping the stock being cut on such rounded portion of the die-face.

5. As an article of manufacture, a chaser die for a screw-cutting device, said die being formed with a cutting face having a main portion of one taper and another portion, constituting the throat of the die, rounded off on the arc of a circle so as to be of another and more abrupt taper, a series of regular cutting threads being cut on such main portion of the die-face and a series of short, shallow threads for initially gripping the stock being cut on such rounded portion of the die-face.

[Claims 6 to 8 not printed in the Gazette.]

1,102,714. PROCESS FOR DRYING OR COOLING GRANULAR MATERIALS. ERNST BORNMANN, Erfurt, Germany, assignor to The Firm of J. A. Topf & Soehne, Erfurt, Germany. Filed Oct. 29, 1913. Serial No. 798,033. (Cl. 34—24.)



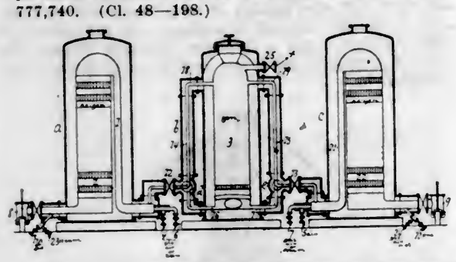
A process for treating granular material consisting in continuously passing material *en masse* through an inclosed column, maintaining a mass of substantially uniform depth and body during the passage of the material through the column, introducing a drying medium into the mass of material at the beginning of the travel of the mass and causing said medium to travel continuously through the mass in the direction of travel of the latter.

1,102,715. PURIFICATION OF MIXTURES CONTAINING NITRIDS. CARL BOSCH and ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Baden. Filed June 20, 1910. Serial No. 567,928. (Cl. 23—13.)

1. The process of purifying mixtures containing silicon nitrid by oxidizing such mixtures with air at a raised temperature while practically avoiding the formation of ammonia substantially as hereinbefore described.

2. The process of purifying mixtures containing silicon nitrid by oxidizing such mixtures with air at a raised temperature and then treating the resulting product with dilute sulfuric acid, while practically avoiding the formation of ammonia substantially as hereinbefore described.

1,102,716. PRODUCING HYDROGEN AND APPARATUS THEREFOR. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Baden. Filed July 7, 1913. Serial No. 777,740. (Cl. 48—198.)



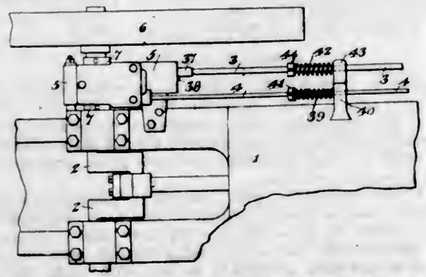
1. The process of producing hydrogen by alternately passing steam and a purified reducing gas over a ferruginous mass and passing the steam and the reducing gas before they enter the reaction furnace through regenerators situated outside the furnace and passing the reducing gas, after it leaves the said furnace, in admixture with oxygen, through one of the said regenerators, thereby raising the temperature of the said regenerator.

2. The process of producing hydrogen by alternately passing steam and a purified reducing gas over a ferruginous mass and passing the steam and the reducing gas before they enter the reaction furnace through regenerators situated outside the furnace and passing the reducing gas, after it leaves the said furnace, in admixture with oxygen and other combustible gas, through one of the said regenerators, thereby raising the temperature of the said regenerator.

3. The cyclic process of producing hydrogen by passing purified reducing gas through a hot first regenerator, then through a reaction furnace containing iron oxid, then adding oxygen to the gases leaving the said furnace and passing the mixed gases through a second regenerator, then passing steam through the first regenerator and then through the furnace, whereby the iron is oxidized and hydrogen is set free, then passing purified reducing gas through the second regenerator, then through the furnace, and then, after admixture with oxygen, through the first regenerator and then passing steam through the second regenerator and then through the furnace.

4. Apparatus for the production of hydrogen comprising a furnace containing ferruginous material, a plurality of regenerators, and suitable connections for leading gas to and from the said furnace and regenerators.

1,102,717. VALVE-ACTUATING GEAR FOR EXPLOSION-ENGINES. JAMES ANDREW BROWN, Cedar Rapids, Iowa, assignor to W. F. Cox, Cedar Rapids, Iowa. Filed Mar. 5, 1913. Serial No. 752,138. (Cl. 123—93.)



1. In an explosion engine, means for actuating the exhaust valve and the igniting devices directly from the crank shaft of the engine, comprising crossed guides on the crank shaft, one of said guides including a cam out-

standing with relation to the axis of rotation of the crank shaft and spaced from the crossing of the guides in a direction circumferential of the crank shaft, another cam on and rotating with the crank shaft, a reciprocatory and oscillatory member having means engaged by the crossed guides and by the cam included therein to be oscillated by the guides and reciprocated by the cam, a rockable member in position to be engaged by the second-named cam of the crank shaft to actuate the igniting devices, carrying means for the devices engaged by the cam and guides and mounted for movement in a direction lengthwise of the crank shaft, and means for actuating the exhaust valve of the engine, said means being responsive to a movement of the reciprocatory and oscillatory member when engaged by the cam forming part of the guides.

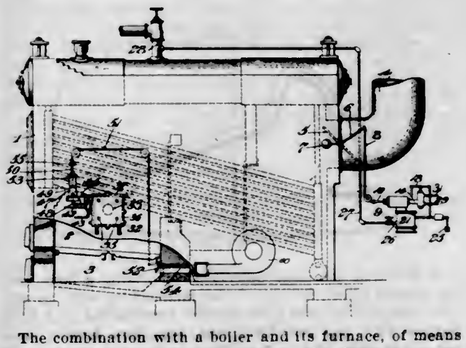
2. In an explosion engine of the four cycle type, a carrier movable in the direction of the length of the engine shaft, a member on the carrier movable in a direction perpendicular to the length of the shaft, another member controlled by the carrier and movable in a direction perpendicular to the length of the shaft, guides on the shaft for imparting to the carrier and to the parts controlled thereby a movement parallel with the axis of the shaft, said guides including a cam active to the member on the carrier to move the latter perpendicular to the axis of the shaft, a cam on the shaft active to the member engaged by the carrier and movable therewith, and means for transmitting movements of the member on the carrier and the member controlled by the carrier when said members are moved perpendicular to the axis of the shaft for actuating the exhaust valve and igniting mechanism of the engine in timed relation.

3. In an explosion engine of the four cycle type, a carrier movable in the direction of the length of the engine shaft, a member on the carrier movable in a direction perpendicular to the length of the shaft, another member controlled by the carrier and movable in a direction perpendicular to the length of the shaft, guides on the shaft for imparting to the carrier and to the parts controlled thereby a movement parallel with the axis of the shaft, said guides including a cam active to the member on the carrier to move the latter perpendicular to the axis of the shaft, a cam on the shaft active to the member engaged by the carrier and movable therewith, and means for transmitting the movement of the member on the carrier and the member controlled by the carrier when said members are moved perpendicular to the axis of the shaft for actuating the exhaust valve and igniting mechanism of the engine in timed relation; said carrier, guides and cams being provided with a casing adapted to hold lubricant in immersing relation to the moving parts inclosed thereby.

4. In an explosion engine of the four cycle type, a crank shaft provided with axially spaced flanges circumferential of the shaft and incomplete in their continuity and at their ends shaped to constitute a switch-over device, one of said flanges being radially extended to form a cam, another cam on the shaft in axially spaced relation to the flanges, a lubricant receptacle constituting a casing for the flanged portion of the shaft, a carrier mounted in the casing for movement longitudinally of the shaft in parallel relation thereto, a shank or pin mounted in the carrier for oscillation and reciprocation and provided with a fork or guide shoe at one end for engagement with the flanges, a rock arm engaged by the carrier and movable therewith in a direction parallel with the axis of rotation of the crank shaft, said rock arm being provided with a nose movable into and out of the path of the second-named cam, and with a finger elongated in the direction of travel of the carrier, and valve and igniter actuating means entering the casing into the paths of the shank or pin and the elongated finger.

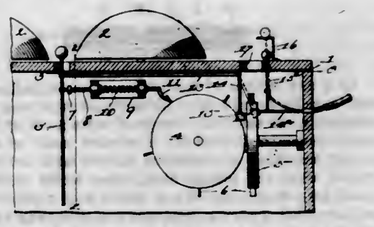
5. In an explosion engine of the four cycle type, a lubricant tight casing in surrounding relation to a portion of the crank shaft of the engine, spaced guide members on the shaft within the casing provided with a cross-over structure, one of said guide members including a radially extended cam, another radially extended cam within the casing and carried by the crank shaft, spaced supporting members within the casing at one side of the crank shaft, a yoke or carrier mounted on said supporting members for movement parallel with the axis of the crank shaft, a shank or pin mounted in the yoke or carrier and provided with a head or guide shoe adapted to the guides on the crank shaft, said shank or pin being provided with a spring for holding it in engagement with the guides and said shank having both longitudinal and rotative movements in the carrier, a slidable rock arm mounted on one of the supporting members for the carrier, said rock arm having an elongated finger and a nose on opposite sides, said nose being movable into and out of active relation to the second cam on the crank shaft, slidable connections between the rock arm and the carrier for the movement of the arm with the carrier parallel to the longitudinal axis of the shaft, and valve and igniter actuating connections in position to be engaged by the shank or pin, and by the finger of the rock arm, the cams on the crank shaft being reinted to cause timed operations of the igniter mechanism and exhaust valve.

1,102,718. APPARATUS FOR REGULATING COMBUSTION IN FURNACES. JOSEPH F. CANADY, Jersey City, N. J. Filed Sept. 21, 1909. Serial No. 518,812. (Cl. 110—54.)



The combination with a boiler and its furnace, of means for supplying air under pressure to the furnace, means controlled by the boiler pressure for regulating the discharge from the furnace of the products of combustion, and means controlled by the variations in furnace pressure for controlling the admission to the furnace of air from the air-supplying means in correspondence with the variations in the discharge of the products of combustion.

1,102,719. TELEPHONE-INDICATOR. HANS CHRISTENSEN, Seattle, Wash. Filed Feb. 13, 1913. Serial No. 748,190. (Cl. 177—325.)



1. In a telephone, the combination with a vibrating arm of a signal device, a rotatable disk having a cut-out portion a normally open circuit, and a freely swinging pendulum supported from said vibrating arm and adapted to swing through the opening in said disk and bridge the gap in said circuit.

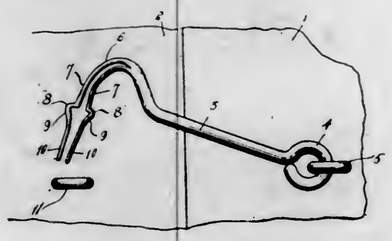
2. The combination with a telephone having a vibrating call signal member, of a disk having a portion removed

therefrom, a circuit making and breaking device supported from said vibrating member and adapted to swing through the cut out portion of said disk when said disk is in a predetermined position, and means operated by movement of said vibrating member for rotating said disk.

3. In a telephone box a vibrating signal member, a pendulum supported therefrom, a contact block carried by the pendulum, electric conductors spaced apart and adapted to be simultaneously engaged by said block upon swinging of the pendulum, and means for moving one of said conductors into inoperative position.

4. The combination with a vibrating member of a signal device, a swinging pendulum operatively connected to said member, a normally open circuit adapted to be completed and broken by the swinging of said pendulum, a rotatable disk interposed between the members of said circuit and said pendulum, said disk having a cut-out portion, and means operatively connected to said vibrating member for moving the cut-out portion of said disk into alinement with the said pendulum and circuit members upon the sounding of said signal devices a predetermined number of times.

1,102,720. HASP-HOOK. LEON L. CILLEY and SAMUEL J. BRION, Addison, N. Y. Filed Apr. 9, 1913. Serial No. 760,027. (Cl. 70—83.)



A device of the class described comprising a body having formed at one end an eye for interlocking with an eye, the other end of said body portion terminating in a hook formed with resilient furcations, shoulders formed upon the lower ends of the furcations and terminating in inclined arms which in turn terminate in normally spaced fingers, a keeper through which the normally spaced fingers pass, said keeper when engaging the inclined arms force the fingers together to permit the shoulders to move toward each other to pass through the keeper for engagement therewith.

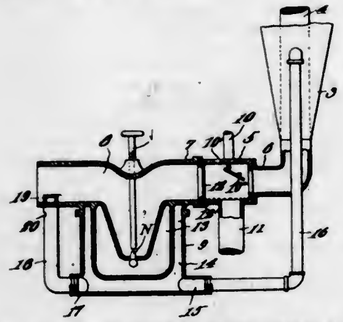
1,102,721. INKING-PAD. WILLIAM ELMO CLARKE, Toronto, Ontario, Canada. Filed Feb. 5, 1914. Serial No. 816,675. (Cl. 101—75.)



1. As a new article of manufacture, an inking pad comprising a refill formed of a plurality of separable leaves, substantially the same size, made of suitable fabric, superimposed one upon the other; a member made of suitable absorbent material, co-extensive in size with said leaves, saturated with the inking fluid, upon which said superimposed leaves are placed; a metal box rectangular in shape, provided with an open top and overhanging downwardly-inclined side and end flanges which overlap the end and sides of said leaves which extend thereunder, the topmost leaf being below the top of said box; a removable plate substantially co-extensive in size with said ink saturated member, and means whereby said plate is removably supported within said box to hold said ink saturated member against said leaves and to cause the ends and sides of said leaves to be clamped underneath said flanges.

2. As a new article of manufacture, an inking pad comprising a refill formed of a plurality of separable leaves, substantially the same size, made of suitable fabric, superimposed one upon the other; a member made of suitable absorbent material, co-extensive in size with said leaves, saturated with the inking fluid, upon which said superimposed leaves are placed; a metal box rectangular in shape, provided with an open top and overhanging downwardly-inclined side and end flanges which overlap the ends and sides of said leaves which extend thereunder, the topmost leaf being below the top of said box, and further provided with downward-outward flared sides and ends which terminate in inwardly-extending horizontal flanges; a removable plate substantially co-extensive in size with said ink saturated member, and a strap spring supported at each end by the said horizontal flanges for the purpose of holding the parts of said refill within said box, as set forth.

1,102,722. CARBURETER. LUTHER COBB, Bedford, Ind., assignor to James D. Martin, Bedford, Ind. Filed Oct. 13, 1913. Serial No. 794,973. (Cl. 48—155.1.)



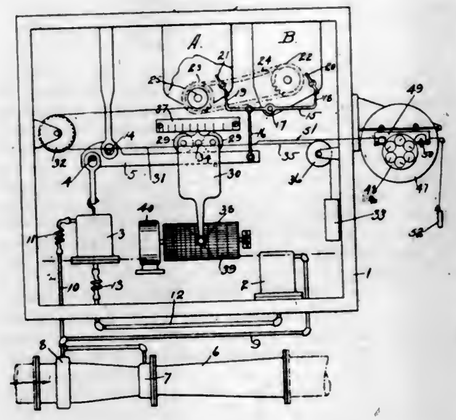
1. A carbureter, including a mixing chamber for a volatile priming fuel, said chamber being provided with an air inlet and a carbureted air outlet, a float chamber for the less volatile fuel, a valve controlled nozzle leading therefrom, an air directing tube into which said nozzle projects, said tube having its outlet in communication with the volatile fuel mixing chamber, and a valve for closing the carbureted air outlet of the tube and for opening the air inlet of the less volatile fuel mixing chamber, or vice versa.

2. A carbureter, including a less volatile fuel containing float chamber, an air admitting tube carried thereby, a fuel nozzle leading from the float chamber into the tube, a volatile fuel mixing chamber in communication with the outlet of the tube, a fuel inlet for the latter chamber, an air directing pipe also for the latter chamber, a baffle plate disposed in the latter chamber for receiving the fuel and directing the same into the air current led from the air directing pipe thereof, and a valve mounted at the intersection of the volatile fuel mixing chamber and the outlet of the tube for closing the outlet of the tube or the air directing pipe of the volatile fuel mixing chamber.

1,102,723. INTEGRATING AND RECORDING APPARATUS FOR METERS. FREDERICK N. CONNET, Providence, R. I., assignor to Builders Iron Foundry, Providence, R. I. Filed May 29, 1907. Serial No. 376,306. (Cl. 73—167.)

1. In an apparatus of the character described, the combination of a conductor pipe, a scale beam system including a hollow member, means whereby the weight of the contents of said member may be automatically varied by a change of the flow through said conductor, counterbalance weight means on said system, and means whereby said weight means is automatically adjusted with reference to said system to accurately counterbalance any change in weight of the contents of said member.

2. In an apparatus of the character described, the combination of a conductor pipe, a scale beam, a hollow member supported by said beam, means whereby the weight of the contents of said member may be automatically varied by a change of the flow through the conductor, a counter balance weight on said beam, means whereby said counterbalance is automatically moved along said beam a proportional distance to counterbalance each change in weight of the contents of said supported member, an integrating mechanism, and means whereby said mechanism is operated at a speed in proportion to the distance of said counterbalance from its zero or starting position.



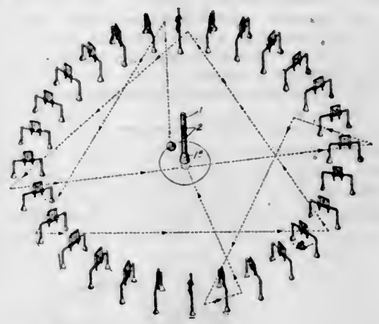
3. In an apparatus of the character described, the combination of a conductor pipe, a scale beam system including a hollow member, means for automatically varying the weight of the contents of said member by a change of the flow through said conductor; counterbalance weight means on said system, a motor, means whereby said system by its position controls the action of said motor, and means whereby the said motor controls the movement of said weight means with reference to said system to accurately counterbalance any change in weight of the contents of the said member.

4. In an apparatus of the character described, the combination of a conductor pipe, a scale beam, a hollow member supported by said beam, means for automatically varying the weight of the contents of said member by a change of the flow through said conductor, a counterbalance weight on said beam, a motor, means whereby the position of said beam controls the action of said motor, and means whereby the action of said motor controls the movement of said weight along said beam to accurately counterbalance any change in weight of the contents of the supported member, and integrating mechanism, and means whereby said mechanism is operated at a speed in proportion to the distance of said counterbalance from its zero or starting position.

5. In an apparatus of the character described, the combination of a main supply pipe, a scale beam, a receptacle supported by said beam, means for automatically varying the weight of the contents of said receptacle by a difference between the pressure at two points in said pipe, a counterbalance weight on said beam, means whereby said counterbalance is automatically moved along said beam a distance sufficient to counterbalance each change in weight of the contents of said receptacle, an integrating mechanism, and means whereby said mechanism is operated at a speed in proportion to the distance of said counterbalance from its zero or starting position.

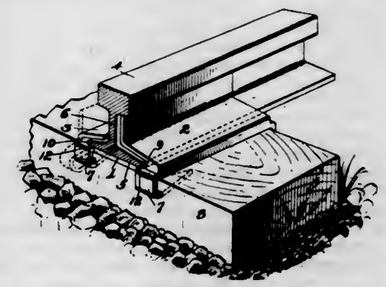
[Claims 6 to 8 not printed in the Gazette.]

1,102,724. GAME APPARATUS. LORETTO CORY, Shelbyville, Ind. Filed Dec. 26, 1912. Serial No. 738,622. (Cl. 46—61.)



In a game apparatus, the combination of a center starting and finishing stake; a plurality of arches radially disposed and arranged in a circle about the center stake and equally distant therefrom, each of said arches constructed of wire bent to provide parallel members, and a cross member, and said cross member being formed with a pair of circular loops; plates adapted to be marked with alphabetical letters; a pair of rods secured to said plates and fitting in said loops and holding the plates in upright positions; a metal base piece fixed to the lower end of each parallel member for supporting the arch upright on a flat surface; and a ball adapted to be driven through the lettered arches in its travel away from and returning to said stake.

1,102,725. COMBINED RAIL-BRACE AND TIE-PLATE. OLIVER H. COURSON, Memphis, Tenn. Filed Apr. 12, 1912. Serial No. 690,406. (Cl. 238—2.)



1. A combined tie plate and rail brace provided with members adapted to brace either side of a rail and having bendable projections adapted to be driven into the sides of a cross-tie.

2. A combined tie plate and rail brace made of a single piece of material and provided with members adapted to brace either side of a rail, and with bendable projections or spurs integral with the plate and adapted to being driven into either side of a cross-tie.

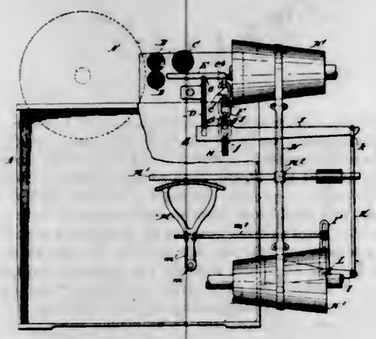
3. A tie plate and rail brace formed of a single piece of metal, and having a plurality of integrally formed bendable projections adapted to be driven into the sides of a cross-tie.

4. A combined tie plate and rail brace comprising a plate provided with braces adapted to engage a rail, and bendable projections adapted to be driven into the sides of a tie, said projections extending under and partially supporting said rail.

5. The herein described improvement in combined tie plates and rail braces, consisting of a plate provided on one side with an integral flange bent to the contour of and adapted to contact with a rail, and upon the other side with an upwardly extending flange adapted to be bent downwardly to engage a rail, said plate being also provided with a plurality of projections adapted to be driven into the sides of a cross-tie.

[Claims 6 to 8 not printed in the Gazette.]

1,102,726. EVENER. ROBERT S. CURLEY and JOSEPH MOSS, Newton, Mass., assignors to Saco-Lowell Shops, Boston, Mass., a Corporation of Massachusetts. Filed July 3, 1913. Serial No. 777,361. (Cl. 19—20.)



1. In a machine of the kind described, an evener mechanism comprising a girt, a series of plates mounted thereon, a ticing roll mounted above said plates, cone pulleys, a belt shifter therefor, and means comprising a lever one end of which is connected to said belt shifter, the other end engaging said girt and intermediate connections connecting said lever with said plates whereby said plates may cause the operation of said belt shifter.

2. In a machine of the kind described, a feed mechanism and an evener mechanism comprising a girt, a series of plates mounted thereon, a ticing roll mounted above said plates, a belt shifter and connections between said belt shifter and said plates comprising a lever one end of which is fulcrumed on the under side of said girt, means for connecting the other end of said lever with said belt shifter and connections intermediate the two ends of said lever connecting said lever and said plates whereby the movement of said plates will cause the operation of the belt shifter and the changing of the speed of the feed.

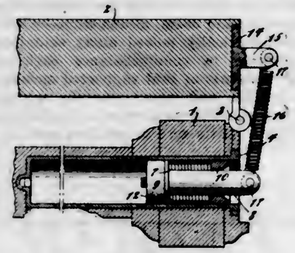
3. In a machine of the kind described, a feed mechanism and an evener mechanism comprising a ticing roll, plates located thereunder, means for supporting said plates comprising a girt and means for balancing said plates on said girt comprising a lever one end of which engages the under side of said girt, means for connecting the other end of said lever to a belt shifter and means engaging the lever between its ends for connecting said lever with said plates, whereby upon the depressing of the ends of the plates under the ticing roll said lever will be lifted and the belt shifter operated.

4. In an evener mechanism, a pedal having an integral downwardly-projecting flange upon its rear end, its other end being adapted to lie under a ticing roll, said pedal having on its under side means to hold it in place upon a support.

5. In a machine of the kind described, an evener mechanism comprising a girt, a plurality of short plates fulcrumed upon the girt, a ticing roll coöperating with the plates upon one side of their fulcrums, a reducing motion connected directly with the plates upon the other side of their fulcrums, and a belt shifter mechanism operated by the reducing motion.

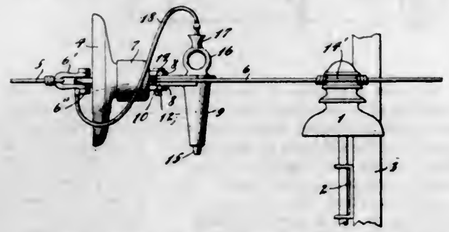
[Claim 6 not printed in the Gazette.]

1,102,727. DOOR-CHECK. JOHN J. DALY, New Brunswick, N. J., assignor to Edward W. McCarty, New York, N. Y. Filed Nov. 22, 1913. Serial No. 802,346. (Cl. 16—87.)



In a door check, a cylinder adapted to be inserted in the jamb of the door, a piston and a piston-rod connected thereto in said cylinder, a member adapted to be fastened to the edge of the door which abuts the face of the jamb when the door is closed, a resilient extensible link pivotally connecting said rod and said member, and a spring of less resiliency than said link acting against said piston-rod to maintain the door closed, said member projecting beyond the edge of the door sufficiently to maintain said resilient link straight and at an obtuse angle to the piston-rod when the edge of the door lies in the plane of the face of the jamb.

1,102,728. HIGH-TENSION SWITCH. ROBERT J. M. DANLEY and HENRY S. BOLTON, Toluca, Mexico. Filed Jan. 9, 1914. Serial No. 811,143. (Cl. 175—282.)



1. A high tension disconnecting switch comprising an insulator interposed in a length of line at an unsupported point, said insulator being mechanically connected to the two alining wires of the line, a switch element supported by said insulator and electrically insulated from one of said wires and a second switch element electrically and mechanically connected to that one of said line wires from which the first named switch element is insulated.

2. A high tension disconnecting switch comprising a conductive socket interposed in a length of line, said socket being mechanically connected to the two alining wires of the line and electrically insulated from one of them, a plug adapted to fit into said socket, and means for electrically and mechanically connecting said plug to that one of the line wires from which said socket is insulated.

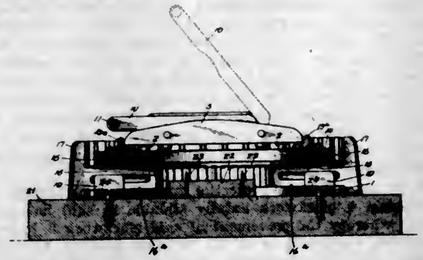
3. A high tension disconnecting switch comprising a conductive socket interposed in a length of line, said socket being supported in vertical position between the two alining line wires of the line and electrically connected to one of said wires and insulated from the other, a plug adapted to fit into said socket, and means for electrically and mechanically connecting said plug to said other of said line wires.

4. A high tension switch comprising a conductive socket open at both ends interposed in a length of line, said socket being supported in substantially a vertical position between the two alining wires of the line and means for electrically connecting said socket to one of said wires and for insulating it from the other and a conductive plug greater in length than said socket adapted to fit therein, said plug being electrically and mechanically connected to said other of the line wires.

5. A high tension disconnecting switch comprising a conductive socket interposed in a length of line, and means for electrically connecting said socket to one of the two alining wires of the line and for insulating it from the other, a solid conductive plug and means for electrically and mechanically connecting said plug to said other of said wires, said plug being adapted to fit snugly in said socket and to maintain good electrical contact therewith due to its own weight.

[Claims 6 and 7 not printed in the Gazette.]

1,102,729. FORMILLION. HERBERT M. DARMSTADTER, Chicago, Ill. Filed Dec. 16, 1911. Serial No. 666,194. (Cl. 223—33.)

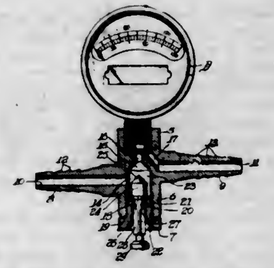


1. A device of the kind specified, comprising a base, an elliptical member mounted thereon, a plurality of guide posts projecting from the upper face of said member, a channeled elliptical member vertically movable on said posts, the channel thereof carrying a ring of yielding material projecting therefrom and opposing said first-named member, a frame rigidly supported upon the upper ends of said posts, a plurality of members pivotally mounted on said frame and adapted when turned in one direction to bear upon and depress said movable elliptical member relatively to said frame, a single manually operable lever for simultaneously actuating said members, a plurality of radially disposed vertical guide ribs on said first-named member, a plurality of radially movable heads coacting to provide a substantially vertical elliptical surface and provided with a shank projecting between said elliptical members, each of said shanks longitudinally slotted to receive said ribs and adapted to be guided thereby, said shanks adapted to be held against radial movement as said movable elliptical member is depressed.

2. A device of the kind specified, comprising a base, an elliptical member mounted thereon, a plurality of guide posts projecting from the upper face of said member, a channeled elliptical member vertically movable on said posts, the channel thereof carrying a ring of yielding material projecting therefrom and opposing said first-named member, a frame rigidly supported upon the upper ends of said posts, a plurality of members pivotally mounted on said frame and adapted when turned in one direction to bear upon and depress said movable elliptical member relatively to said frame, a single manually operable lever for simultaneously actuating said members, a plurality of radially disposed vertical guide ribs on said first-named member, a plurality of radially movable heads coacting to provide a substantially vertical elliptical surface and provided with a shank projecting between said elliptical members, said shanks having converging upper and lower edges and each thereof having a longitudinal slot in its lower face for receiving said guide ribs, said shanks adapted to be held against radial movement as said movable elliptical member is depressed, and said converging edges adapted to increase resistance of said heads to inward movement relatively to said elliptical members.

3. In a device of the kind specified, the combination with a plurality of adjustable heads adapted to receive the hat for shaping the same, shanks thereon, a ring having ribs for guiding said shanks radially relatively thereto, posts on said ring, a second ring vertically movable on said posts, shanks projecting between said rings, springs normally supporting said last-named ring at the upper limit of its movement relatively to the first-named ring, a pair of parallel channels rigid with said posts, a plurality of levers pivotally mounted on the flanges of said channels and carrying rollers for bearing upon and depressing the movable ring when said levers are turned in one direction, and a single operating member connected with all of said levers for simultaneously turning the same to depress said ring upon the shanks of said heads.

1,102,730. CONTROLLING-VALVE FOR PRESSURE-GAGES. JOHN DESMOND, Wilmette, Ill., assignor to William S. Potwin, Chicago, Ill. Filed Aug. 19, 1912. Serial No. 715,744. (Cl. 137—26.)



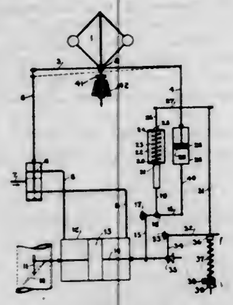
1. A controlling valve for pressure gages to be interposed between a compressor and air receiver, comprising a casing, having an interior chamber, formed with a valve seat at each end thereof; a movable valve member, within the chamber adapted to seat on either one of the two valve seats; a duct, leading from the said chamber and adapted to communicate with the air compressor; a duct, leading from the center of each of the valve seats; a valve stem, extending through one of the last mentioned ducts, and having a cross sectional area less than that of the duct, the other duct communicating with a recess in the casing; a pressure indicating device connected to the said recess and a duct, adapted to communicate with the air receiver and extending into the recess to which the pressure indicating device is connected.

2. A controlling valve for pressure gages to be interposed between a compressor and air receiver, comprising a casing having an interior chamber formed with a conical valve seat at each end thereof; a movable valve member cone shaped at each end, within the chamber adapted to seat on either one of the two valve seats; a duct, leading from the said chamber and adapted to communicate with the air compressor; a duct, leading from the center of each of the valve seats; a longitudinally ribbed valve stem, extending through one of the last mentioned ducts and having a cross sectional area less than that of the duct, the other duct communicating with a recess in the casing; a pressure indicating device connected to the said recess and a duct, adapted to communicate with the air receiver and extending into the recess to which the pressure indicating device is connected.

1,102,731. TIME-ELEMENT POWER-LIMITING DEVICE. JOHN ELOV ENGLESSON, Kristinehamn, Sweden, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 17, 1913. Serial No. 755,544. (Cl. 121—112.)

1. In an indirect governor for a prime mover, a speed responsive means, a motor for actuating the main valve of the prime mover, a means for controlling said motor, said means being governed by said speed responsive

means, and means for finally returning said valve to a predetermined limiting position from a temporary position beyond.



2. In an indirect governor for a prime mover, a speed responsive means having a collar, a motor for actuating the main valve of the prime mover, a means for controlling said motor, said means being governed by said speed responsive means, a compensation means, means connecting said motor and said compensation means for temporarily first permitting said valve to assume a position beyond a predetermined limiting position, and a stop for the collar of said speed responsive means coacting with said compensation means for causing the positioning of said valve in said predetermined position.

3. In an indirect governor for a prime mover, a speed responsive means having a collar, a motor for actuating the main valve of the prime mover, a means for controlling said motor, said means being governed by said speed responsive means, a primary compensation means for normally returning said controlling means to mid position, a secondary compensation means, means connecting said motor and said secondary compensation means for temporarily first permitting said valve to assume a position beyond a predetermined limiting position, and a stop for the collar of said speed responsive means coacting with said compensation means for causing the positioning of said valve in said predetermined position.

4. In an indirect governor for a prime mover, a speed responsive means, a motor for actuating the main valve of the prime mover, a means for controlling said motor, said means being governed by said speed responsive means, primary and secondary compensating means, said primary compensation means being adapted to normally return said controlling means to mid position, motor affected means connecting at two points to said secondary compensating means for opposite effect thereon, and a stop for said speed responsive means.

1,102,732. FUSE FOR PROJECTILES. ERNST FABER, Berlin, Germany. Filed July 3, 1913. Serial No. 777,210. (Cl. 102—36.)



1. In an ordnance projectile fuse the combination of a housing, a clockwork axially slidable in said housing, means whereby the movement of said clockwork is locked when the clockwork is in its forward position and unlocked when the clockwork is in its rearward position, automatic firing mechanism including a spring which is compressed by rearward movement of the clockwork, and regulatable means whereby said clockwork is enabled to release said detonator mechanism.

2. In an ordnance projectile fuse the combination of a housing having a rotatable cap, a clockwork axially slidable in said housing, means whereby the movement of said clockwork is locked when the clockwork is in its forward position and unlocked when the clockwork is in its rearward position, automatic firing mechanism, including a spring which is compressed by rearward movement of the clockwork, a device adjustable by rotation whereby said clockwork is enabled to release said firing mechanism, and means whereby the last mentioned device is engaged with said cap when the clockwork is in its forward position.

3. In an ordnance projectile fuse the combination of a housing, a clockwork axially slidable in said housing, means whereby the movement of said clockwork is locked when the clockwork is in its forward position and unlocked when the clockwork is in its rearward position, automatic firing mechanism including an actuating spring which is compressed by rearward movement of said clockwork, regulatable means whereby said clockwork is enabled to release said firing mechanism, and means actuatable by centrifugal force for retaining said clockwork in its rearward position.

4. In an ordnance projectile fuse the combination of a housing, a clockwork axially slidable in said housing, means whereby the movement of said clockwork is locked when the clockwork is in its forward position and unlocked when the clockwork is in its reaward position, automatic firing mechanism including a spring compressed by rearward movement of the clockwork, and regulatable means whereby said clock is enabled to release said firing mechanism, the means for locking the clockwork movement comprising a device which locks the spring casing and a device which locks the escapement.

5. In an ordnance projectile fuse the combination of a housing, a clockwork axially slidable in said housing, means whereby the movement of said clockwork is locked when the clockwork is in its forward position and unlocked when the clockwork is in its rearward position, automatic firing mechanism including a spring compressed by rearward movement of the clockwork, and regulatable means whereby said clockwork is enabled to release said firing mechanism, said clockwork having an escapement which comprises an escape wheel whereof the outline is a closed harmonic curve and a weighted rocking lever having projections whereby it is engaged with said wheel.

[Claim 6 not printed in the Gazette.]

1,102,733. SYSTEM OF ELECTRICAL DISTRIBUTION. SAMUEL FERGUSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed July 13, 1903, Serial No. 165,201. Divided and this application filed May 16, 1908. Serial No. 433,165. (Cl. 176—48.)

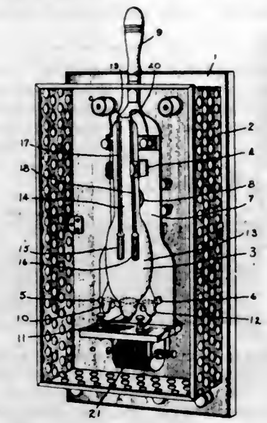
1. The combination of a base-plate or member, a support pivoted thereto, a handle for rocking said support, and a vapor conductor carried by said support.

2. The combination of a base-plate or member, a support pivoted thereto, a handle for rocking said support, a vapor conductor carried by said support, and a cut-out also carried by said support.

3. The combination of a base-plate or member, a support pivoted thereto, a handle for rocking said support, a vapor conductor carried by said support, and a cut-out also carried by said support and located below the pivotal point of said support.

4. The combination of a pivoted support, a vapor conductor carried thereby, binding posts carried by said support, and leads extending from said binding posts to said vapor conductor.

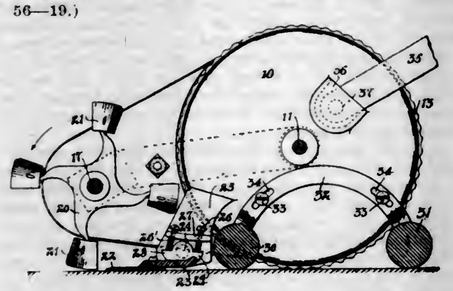
5. The combination with a vapor electric device, of a frame upon which the same is mounted, a standard, a pivotal connection between the standard and the back of the frame, the said pivotal connection permitting a



radial motion of the frame on the said standard.

[Claim 6 not printed in the Gazette.]

1,102,734. LAWN-MOWER. GEORGE F. GEB, Franklin, Mass. Filed May 31, 1911. Serial No. 630,510. (Cl. 56—19.)



1. A lawn mower comprising ground wheels, side plates upon which said ground wheels are journaled and located between the latter, side bars attached to said side plates and located outside of said wheels, a stationary blade secured to said side plates at a point between said wheels, rotary cutters journaled in said side bars, said stationary blade and said rotary cutters having their ends located directly in front of said ground wheels, and power transmitting gearing for transmitting power from one of said ground wheels to said rotary cutters and located outside of said ground wheels.

2. In a lawn mower, ground wheels, side frames between said ground wheels and having outwardly projecting trunnions on which the ground wheels are journaled, side bars secured to said trunnions, said wheels being between said side bars and said side frames, a rotary cutter shaft journaled in said side bars and having cutters, and a stationary blade secured to said side frames at a point between said wheels, the ends of said cutters and said stationary blade being located directly in front of said ground wheels.

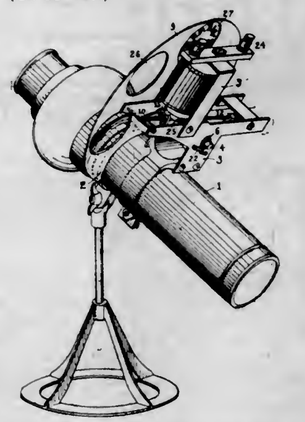
3. A lawn mower comprising axially alined ground wheels, a fixed blade, rotary cutters, a ground roll in the rear of the axis of the ground wheels, a ground roll in front of said axis, and curved supports for said rolls adjustable in arcuate paths.

4. A lawn mower comprising axially alined ground wheels, cutting mechanism including a fixed blade and rotary cutters, side plates inside said ground wheels, rolls located respectively in front and in rear of the axis of the ground wheels, and supports for said rolls attached to the side plates and adjustable to move said rolls simultaneously and thereby to vary the height of the cutting mechanism from the ground.

5. A lawn mower comprising a frame, a fixed cutting blade, a cutter shaft having cutters in shearing relation to said fixed blade, a dished driving wheel located in the rear of the cutters, a fixed gear axially alined with the ground wheel, a planetary gear carried therearound by and mounted on said driving wheel, a power-transmitting member in axial alinement with the driving wheel, said planetary gear and said member being located within the rim of the ground wheel, means for transmitting power from the planetary gear to said power-transmitting member, and means for transmitting power from said power-transmitting member to said cutter shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,102,735. DISPLAYING APPARATUS. LESTER J. GODDARD, Ravenna, Ohio. Filed Nov. 16, 1911. Serial No. 660,578. (Cl. 88—27.)



1. In an advancing and holding mechanism for displaying-apparatus the combination of a mounting, a shaft journaled therein, a propelling ratchet mounted on the shaft, a pawl in engagement with the propelling ratchet, an armature with which the pawl is pivotally connected, an electro-magnet for intermittently actuating the armature, an arresting ratchet facing in opposite direction to the propelling ratchet, and a pawl pivoted to the mounting and pivotally connected to the armature in such a manner as to be brought into engagement with the arresting ratchet by the movement of the armature, substantially as described.

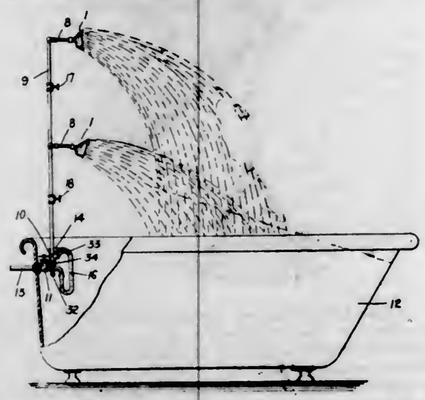
2. In an advancing and holding mechanism for displaying-apparatus the combination of a mounting, a shaft journaled therein, a propelling ratchet mounted on the shaft, a pawl in engagement with the propelling ratchet, an armature with which the pawl is pivotally connected, an electro-magnet for intermittently actuating the armature, an arresting ratchet facing in opposite direction to the propelling ratchet, a pawl pivoted to the mounting and pivotally connected to the armature in such a manner as to be brought into and out of engagement with the arresting ratchet by the movement of the armature, a holding ratchet mounted on the shaft and facing in the same direction as the propelling ratchet, and a pawl in engagement therewith, substantially as described.

3. In an advancing and holding mechanism for displaying-apparatus the combination of a mounting, a shaft journaled therein, plates supported from the shaft, a propelling ratchet mounted on the shaft, a pawl in engagement with the propelling ratchet, an armature with which the pawl is pivotally connected, an electro-magnet for intermittently actuating the armature, a wheel provided

with teeth equal in number to the plates mounted on the shaft, a pawl in engagement therewith, an arm to which the pawl is pivotally mounted, said arm being adjustably attached to the mounting, substantially as described.

4. In an advancing and holding mechanism for displaying-apparatus the combination of a mounting, a shaft journaled in the mounting, plates supported from the shaft, a propelling ratchet mounted on the shaft, a pawl in engagement with the propelling ratchet, an armature with which the pawl is pivotally connected, an electro-magnet for intermittently actuating the armature, a holding ratchet mounted on the shaft and facing in the same direction as the propelling ratchet, a pawl in engagement therewith, an arresting ratchet mounted on the shaft and facing in opposite direction to the propelling ratchet, a pawl pivoted to the mounting and pivotally connected to the armature in such a manner as to be brought into and out of engagement with the arresting ratchet by the movement of the armature, a wheel provided with teeth equal in number to the plates mounted on the shaft, a pawl in engagement therewith, and an arm to which the pawl is pivotally mounted, said arm being adjustably attached to the mounting, substantially as described.

1,102,736. BATH-SPRAY. HANS E. GRABAU, New York, N. Y., assignor of one-half to Morris Wallach and one-half to Louis Drosin, New York, N. Y. Filed Jan. 16, 1914. Serial No. 812,458. (Cl. 4—26.)

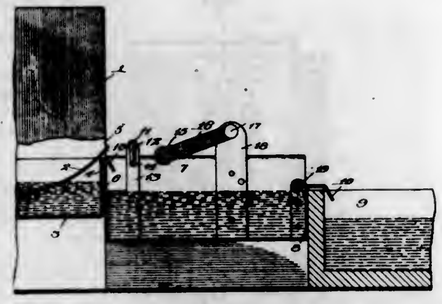


1. A bath-spray comprising a spray-nozzle and a pipe for supplying water thereto, the said spray-nozzle being elongated and of considerable width and having its front face curved or bent to form it into a series of substantially flat plane surfaces forming angles with each other and each flat surface being provided with a group of spray-holes, the said groups of spray-holes being adapted to project their sprays at angles to each other but in a converging direction to confine the sprays within the bath-tub, substantially as described.

2. A bath-spray comprising a spray-nozzle and a pipe connected with said nozzle and supplying water thereto, the said spray-nozzle being elongated and provided with a series of spaced groups of spray-holes disposed substantially in a vertical arc form and each disposed in substantially a different plane from the others, substantially as described.

1,102,737. PHOTOGRAPHIC-PRINT-TREATING APPARATUS. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 7, 1912. Serial No. 682,195. (Cl. 95—89.)

1. In an apparatus of the character described, the combination with a suitable receptacle for the fluid bath, of supporting links pivoted to the receptacle on opposite sides thereof at points above the surface level, and a transversely extending immersing member carried by the lower ends of the links in a normal position below the surface level.



2. In an apparatus of the character set forth, the combination with a suitable receptacle for the fluid bath, of a transversely extending receiving guide at one end of the receptacle arranged above the rim thereof, supporting links pivoted at opposite sides of the receptacle at points above the surface level and a transversely extending immersing member carried by the lower ends of the links in a normal position below the surface level but adapted to swing upwardly to a position adjacent to the receiving guide.

3. In an apparatus of the character described, the combination with a suitable receptacle for the fluid bath, of a pair of transversely extending alined receiving guides at one end of the receptacle having a space between them, a transversely extending immersing member mounted on the receptacle having a normal position below the surface level and means for moving the immersing member from its said normal position upwardly to a position adjacent to the receiving guides.

4. In an apparatus of the character described, the combination with a suitable receptacle for the fluid bath, of a transversely extending bail at one end of the receptacle provided with an offset intermediate portion, guide rolls journaled on the end portions of the bail, a transversely extending immersing member mounted on the receptacle having a normal position below the surface level and means for moving the immersing member from its said normal position upwardly to a position adjacent to the guide rolls and above the offset portion of the bail.

1,102,738. ORE CONCENTRATION. HENRY HOWARD GREENWAY, Clare, South Australia, and ALFRED HENRY PIPER LOWRY, Prahran, Victoria, Australia. Filed May 17, 1913. Serial No. 768,374. (Cl. 83—85.)

1. A process of concentrating metalliferous ores, which consists in subjecting the ore to the action of a chromium salt and to flotation separation whereby products are obtained relatively high in certain values and other products are obtained relatively high in other values.

2. A process of concentrating metalliferous ores, which consists in subjecting the ore to the action of a chromium salt and to agitation with a frothing agent to produce a froth relatively high in certain values of the ore.

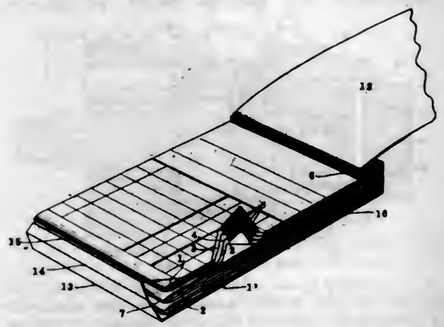
3. A process of concentrating metalliferous ores, which consists in subjecting the ore to digestion in a solution of a chromium salt, and then to flotation separation, whereby products are obtained relatively high in certain values and other products are obtained relatively high in other values.

4. A process of concentrating metalliferous ores, which consists in subjecting the ore to digestion in a solution of a chromium salt, and then to agitation with a frothing agent to produce a froth relatively high in certain values of the ore.

5. A process of concentrating ores, which consists in subjecting an ore containing zinc and lead sulfids to the action of a chromium salt and to a flotation separation, whereby there is produced a flotation product relatively high in zinc and low in lead and a residue relatively high in lead and low in zinc.

[Claims 6 to 8 not printed in the Gazette.]

1,102,739. MANIFOLDING SALES-BOOK. WALTER GREIG, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario. Filed Aug. 22, 1913. Serial No. 786,064. (Cl. 11—23.)



1. In a manifolding sales book, in combination, a pad comprising a plurality of sets of leaves bound together at one end, the top and bottom leaf of each set being connected at one edge opposite the binding, and a plurality of leaves between said top and bottom leaves, said top and intermediate leaves being coated with manifolding material on their under surfaces, and a single strip of relatively heavy material secured intermediate its ends to the pad by the binding means of the pad to form a top and bottom cover and separator plate, said strip being scored a plurality of times transversely between the separator and the bottom cover, and the adjacent corner of the top cover and separator plate being cut away adjacent the unbound edges of the leaves whereby the top cover and separator plate will be moved upwardly as the exposed corner of the top set is grasped by the operator and raised.

2. In a manifolding sales book, in combination, a pad comprising a plurality of leaves bound together along one edge, the backs of some of said leaves being carbonized to transfer the inscription to a lower leaf, and a single strip of material adapted to form a bottom cover and separator to be placed beneath the first uncarbonized leaf to prevent reproducing the record on the leaves therebeneath, the connecting portion of said strip between the bottom cover and separator being scored by a plurality of transverse lines.

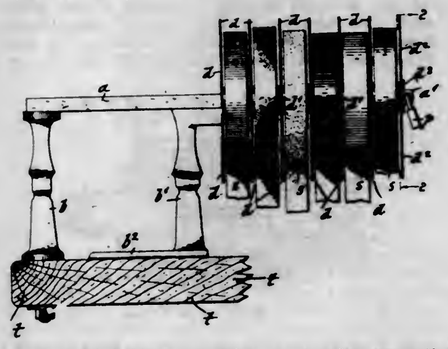
3. In a manifolding sales book, in combination, a pad comprising a plurality of sets of leaves bound together along one edge, each set comprising four leaves and backs of the upper three of said leaves being carbonized to transfer the inscription to a lower leaf of the set, and a single strip of material adapted to form a bottom cover and separator to be placed beneath the bottom leaf of the set to prevent reproducing the record on the leaves therebeneath, the connecting portion of said strip between the bottom cover and separator being scored transversely through the middle.

4. In a manifolding sales book, in combination, a pad comprising a plurality of sets of leaves, each set of which comprises a sheet folded upon itself into two leaves and having its free ends bound at the bound end of the pad, and a plurality of leaves free from said first sheet and interposed between the leaves of said first sheet and having their ends bound between the bound ends of said first sheet, the under surface of the upper leaf of each set and the under surface of each interposed leaf being coated with a transferring medium.

5. In a manifolding sales book, in combination, a pad comprising a plurality of sets of leaves, each set comprising a sheet folded back upon itself to form an original and one multiplicate leaf and a plurality of multiplicate leaves therebetween, all of said leaves being bound together along one edge only the upper leaves of each set being carbonized whereby the recording of the transaction may be transmitted to the bottom leaf of the set, and a single strip of material secured to the bound end of the pad and extending along the back of the pad and thence upwardly over the free ends of the leaves to form a separator.

[Claim 6 not printed in the Gazette.]

1,102,740. HOLDER FOR SPOOLS. SAMUEL HAAS, New York, N. Y. Filed May 2, 1913. Serial No. 765,073. (Cl. 242—139.)

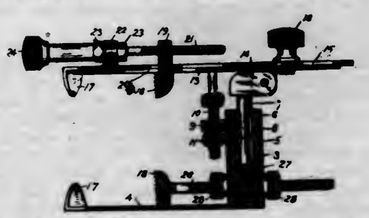


1. A spool holder comprising an angular supporting shaft and a plurality of spool separating partitions removably disposed on said shaft and provided with hubs having angular bores to fit said shaft and rounded exteriors adapted to serve as journals for the spools.

2. A spool holder comprising an angular supporting shaft, a plurality of spools separating partitions removably disposed on said shaft and provided with hubs having angular bores to fit said shaft and rounded exteriors adapted to serve as journals for the spools, and a locking means at the outer end of said shaft.

3. A spool holder comprising a post attachable to a table, a horizontally swiveling shaft connected with said post and provided with an auxiliary movable post having a sliding shoe at its lower end adapted to move on the table, and a series of spool separating partitions strung on said shaft.

1,102,741. DENTAL ARTICULATOR. ROBERT HARDIE, Ashfield, near Sydney, New South Wales, Australia. Filed Feb. 4, 1914. Serial No. 816,421. (Cl. 32—1.)

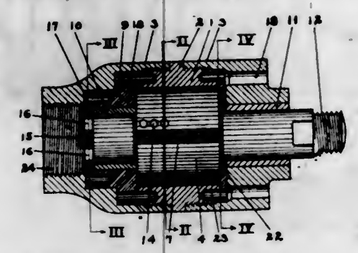


1. In dental articulators the combination with a hinged arm spread at its free end and having inwardly directed lugs with a movable clamping piece of a lug on said clamping piece in a slot through said arm and having a female screw a screwed stem passing through said female screw and having two collars and a lug upon the arm to form abutments for said collars substantially as hereindescribed and explained.

2. In dental articulators the combination with a fixed lower arm spread at its free end and having inwardly directed lugs of a clamping piece carried on a screwed stem passing through the fixed support of said arm and adapted to be held by jam nuts substantially as herein described and explained.

3. In dental articulators, in combination, a distance pillar, a fixed lower arm carried thereby, said arm being spread at its free end and having inwardly directed lugs, a threaded stem passing through said pillar, means for holding said stem in position, a clamping piece carried by said stem, a hinged arm supported upon said pillar, said arm being spread at its free end and having inwardly directed lugs, a clamping piece movably supported on said hinged arm, and means carried by said hinged arm for moving said last mentioned clamping piece.

1,102,742. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed June 2, 1911. Serial No. 630,787. (Cl. 121—77.)



1. In a rotary motor, a rotary motor member with a rear journal of less diameter than the body thereof and having an inlet port entering through the rear end of said journal portion, a stationary member having an opening therethrough with a removable bushing therein forming a bearing for said journal, and a stationary ported plate abutting the rear end of said journal portion of the rotary motor member.

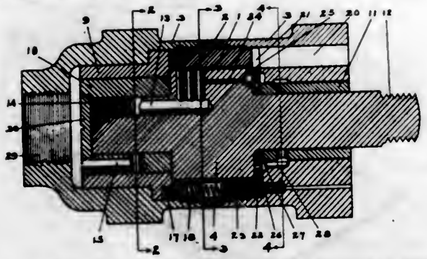
2. In a rotary motor, a motor cylinder, a rotary motor member with a rear journal of less diameter than the body thereof and having an inlet port entering through said journal portion, a casing removably secured to said cylinder having an integral head, a removable bearing for said journal inserted through the open end of said casing and means to supply the motive agent to said port.

3. In a rotary motor, a motor cylinder, a rotary motor member with a rear journal of less diameter than the body thereof and having an inlet port entering through the rear end of said journal portion, a casing secured to said cylinder and having an integral rear head with an opening for the motive agent supply, a bearing member having an opening therethrough with a removable bushing therein for said journal, and a ported plate abutting the rear end of said journal.

4. In a rotary motor, a motor cylinder, a rotary motor member with a rear journal of less diameter than the body thereof and having an inlet port entering through the rear end of said journal portion, a casing secured to said cylinder and having an integral head at its rear end with a supply opening, a bearing member secured against rotation to said cylinder and having a removable bushing for said journal, a ported plate secured against rotation to said bearing member and abutting the rear end of said journal portion.

5. In a rotary motor, a motor cylinder, a rotary motor member with a rear journal of less diameter than the body thereof and having an inlet port entering through the rear end of said journal portion, a casing having a head at its outer end with a supply opening parallel to the axis of the motor, a bearing for said journal having a ported plate at its rear end, said bearing and plate being seated in said casing against said head, said plate forming the inner wall of said supply opening and the port therethrough being adapted to periodically register with the port in said journal, the inner end of said bearing terminating outside of said cylinder and forming an end wall of the cylinder chamber, the inner end of said casing extending beyond said bearing over said cylinder and being screw-threaded thereto, substantially as described.

1,102,743. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 18, 1911. Serial No. 666,517. (Cl. 121—74.)



1. In a rotary motor, a motor cylinder having an abutment on the outer surface thereof, a two-part casing having heads at its outer ends and screw-threaded to said cylinder with its inner ends against said abutment, and a rotary motor member having radially moving blades operative within said cylinder, said member being journaled in the respective heads of said casing, substantially as described.

2. In a rotary motor, a motor cylinder having an abutment on the outer surface thereof, a two-part casing having heads at the outer ends thereof and screw-threaded to said cylinder with its inner ends against said abutment, one of said heads having exhaust openings therethrough, a ported plate secured against rotation at one end of said cylinder and held in place by said exhaust head and a rotary motor member having radially moving blades operative within said cylinder, said member being journaled in the respective heads of said casing, substantially as described.

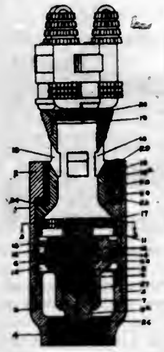
3. In a rotary motor, a motor cylinder having an abutment on the outer surface thereof, a two-part casing having heads at the outer ends thereof and screw-threaded to said cylinder with its inner ends against said abutment, one of said heads having a supply opening for the motive agent, a removable bearing secured against rotation at one end of said cylinder and held in place by said supply head, and a rotary motor member having radially moving blades operative within said cylinder, said member having a journal in said removable bearing, substantially as described.

4. In a rotary motor, a motor cylinder having an abutment on the outer surface thereof, a two-part casing having heads at the outer ends thereof and screw-threaded to said cylinder with its inner ends against said abutment, one of said heads having a supply opening and the other exhaust openings for the motive agent, a ported plate at one end of said cylinder and a removable journal bearing member at the other end, said plate and bearing member being secured against rotation to said cylinder and tightened and held in place by said casing, substantially as described.

5. In a rotary motor, a motor cylinder having an abutment on the outer surface thereof, a two-part casing having heads at its outer ends and screw-threaded to said cylinder with its inner ends against said abutment, said heads having removable bearings therein, a rotary motor member journaled in said bearings, one of said heads having a supply opening and the other exhaust openings for the motive agent, a ported plate secured against rotation to said cylinder and tightened and held in place by one end of said casing, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,102,744. TURBINE. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 22, 1911. Serial No. 667,378. (Cl. 138—7.)



1. In a turbine, a wheel having a hollow shaft forming a shroud for said wheel and projecting therefrom to carry the discharge from said wheel.

2. In a turbine, a casing having an integral front head with an opening therethrough, a bush bearing in said opening, a wheel having a hollow shaft journaled in and projecting through said bearing with openings to discharge the motive agent in front of said bearing from the wheel.

3. In a turbine, a casing having a front head with an opening therethrough, a bush bearing in said opening, a wheel having a hollow shaft journaled in and projecting through said bearing with openings to discharge the motive agent in front of said head from the wheel and a thrust bearing between said head and a shoulder on said shaft.

4. In a turbine, a casing having a front head, a wheel having a hollow shaft projecting forwardly from said wheel through an opening in said head and journaled therein, a tool secured to said shaft having openings for the discharge of the motive agent from the wheel.

5. In a turbine, a casing having an integral front head and a removable rear head, a wheel having a forwardly and rearwardly extending shaft, front and rear bearings for said shaft, the forwardly projecting shaft being hollow and having openings to discharge the motive agent from the wheel in front of said front head and means to lubricate said front and rear bearings.

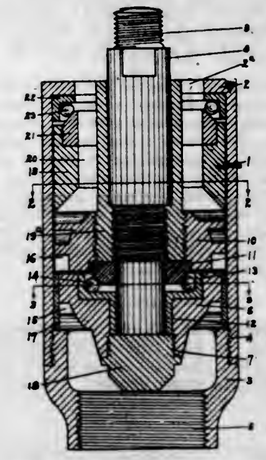
[Claims 6 to 9 not printed in the Gazette.]

1,102,745. TURBINE. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 26, 1911. Serial No. 667,880. (Cl. 138—7.)

1. In a turbine, a casing having a head with an opening therethrough, a wheel having a forward extension journaled peripherally in said casing, with a centrally disposed portion adapted to attach the tool to be driven, said extension having openings exterior to said centrally disposed portion and radially inside the circle of said journal for the discharge of the motive agent from the wheel buckets through the opening in said head.

2. In a turbine, a casing having a head with an opening therethrough, a wheel having a forward extension journaled peripherally in said casing, with a centrally disposed shaft adapted to attach the tool to be driven, said wheel extension having openings or conduits therethrough exterior to said shaft and radially inside the circle of said journal for the discharge of the motive agent from the wheel buckets through the opening in said head.

3. In a turbine, a casing having a head with an opening therethrough, a wheel having a forward extension with a centrally disposed shaft adapted to attach the tool to be driven, a journal and thrust bearing interposed between said wheel extension and casing to carry and take the thrust of said wheel, said wheel extension having openings or conduits therethrough exterior to said shaft and radially inside the circle of said bearing for the discharge of the motive agent from the wheel buckets.

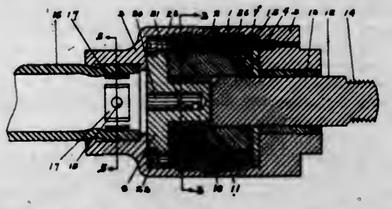


4. In a turbine, a casing having a front head with an opening therethrough, a wheel having a forward extension journaled peripherally in said casing, a shaft on which said wheel is mounted and a bearing for said shaft in the rear of said wheel, said wheel extension having openings or conduits therethrough exterior to said shaft and radially inside the circle of said journal for the discharge of the motive agent from said wheel buckets through the opening in said head.

5. In a turbine, a casing having a front head with an opening therethrough, a wheel having a forward extension journaled peripherally in said casing, a shaft on which said wheel is mounted and a journal and thrust bearing for said shaft in the rear of said wheel, said wheel extension having openings or conduits therethrough exterior to said shaft and radially inside the circle of said peripheral journal for the discharge of the motive agent from the wheel buckets.

[Claims 6 and 7 not printed in the Gazette.]

1,102,746. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 18, 1912. Serial No. 672,009. (Cl. 121—74.)

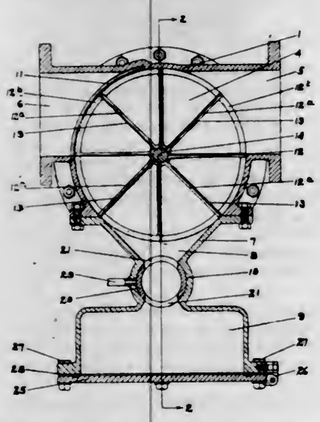


1. In a rotary motor, a casing having a supply head at its rear end and an exhaust head at its front end, a disk or partition having a stationary forwardly extending projection secured in front of said supply head, a rotary motor member having an axial recess into which said projection extends and forms a bearing therefor, said rotary motor member also having a forwardly extending shaft journaled in and projecting through an opening in said exhaust head and adapted to attach the tool to be driven.

2. In a rotary motor, a casing having oppositely disposed supply and exhaust heads, a disk or partition having a stationary projection extending therefrom with ports therethrough secured in front of said supply head, a rotary motor member having an axial recess into which said projection extends forming a bearing therefor, said rotary motor member also having ports adapted to register with the ports in said projection and a forwardly projecting shaft journaled in and extending through an opening in the exhaust head and adapted to attach the tool to be driven.

3. In a rotary motor, a motor cylinder having an abutment, a rotary motor member, a two-part casing having heads at its outer ends, secured over said cylinder against said abutment, said rotary motor member having a projection journaled in an opening in one of said heads, the other head having a supply opening with a disk or partition seated therein having a projection extending into a recess in said rotary motor member forming a bearing therefor, said disk or partition and its projection having ports therethrough adapted to register with ports extending through said rotary motor member.

1,102,747. STRAINER. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Nov. 11, 1912. Serial No. 730,727. (Cl. 210—14.)



1. In a strainer, a casing, a stationary and a movable strainer element, one of said strainer elements in its normal straining operation being in contact with and adapted to clean the other.

2. In a strainer, a casing, a stationary and a movable strainer element, said movable strainer element being in contact with and adapted to clean said stationary strainer element by the flow of the fluid being transmitted.

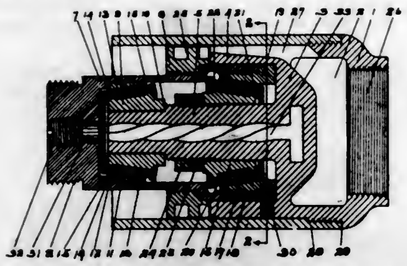
3. In a strainer, a casing, a stationary and a movable strainer element, one of said strainer elements in its normal straining operation being in contact with and adapted to clean the other and means to hold and move said movable strainer element at will.

4. In a strainer, a casing, a stationary and amovable strainer element, said movable strainer element being in contact with and adapted to clean said stationary strainer element by the flow of the fluid being transmitted and means to hold and move said movable strainer element at will.

5. In a strainer, a casing having a straining and a cleaning chamber, a stationary and a movable strainer element, said movable strainer element in its normal straining operation being in contact with and adapted to clean said stationary strainer element and to carry the refuse from said straining chamber to said cleaning chamber by the flow of the fluid being transmitted.

[Claims 6 to 13 not printed in the Gazette.]

1,102,748. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Aug. 1, 1913. Serial No. 782,439. (Cl. 121—57.)



1. In a rotary motor, a supply head having a forwardly projecting stationary shaft, a rotary motor member having a bearing on said shaft arranged to both carry and take the end thrust of said member and means to maintain said member in operative position, said means abutting said bearing and arranged to take up the wear from both the radial and end thrust in said bearing, substantially as described.

2. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head, a rotary motor member having a forwardly and rearwardly extending cylinder with removable bearings for the respective ends thereof mounted on said shaft and means to adjust one of said bearings to take up wear, substantially as described.

3. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a forwardly and rearwardly extending cylinder with removable bearings for the respective ends thereof mounted on said shaft and means to maintain the same thereon, substantially as described.

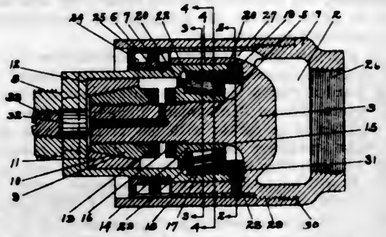
4. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a forwardly and rearwardly extending cylinder with removable bearings for the respective ends thereof mounted on said shaft and means to maintain the same thereon, said bearings being arranged to both carry and take the end thrust of said rotary motor member, substantially as described.

5. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a forwardly and rearwardly extending cylinder with roller bearings for the respective ends thereof mounted on said shaft, one of said bearings being arranged to take the end thrust in one direction and the other bearing being arranged to take the end thrust in the opposite direction and means to maintain said rotary member in operative position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,102,749. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 28, 1914. Serial No. 815,069. (Cl. 121—57.)

1. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integral with said head and a rotary motor member having a bearing on said shaft, said bearing comprising a cone secured to said shaft and a sleeve or bushing bored to fit and have a sliding contact with the surface of said cone, substantially as described.



2. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a forwardly and rearwardly extending cylinder with removable bearings for the respective ends thereof mounted on said shaft and means to maintain the same thereon, one of said bearings being a bush bearing arranged to both carry and take the end thrust of said rotary motor member, substantially as described.

3. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a forwardly and rearwardly extending cylinder with a bush bearing at one end and a roller bearing at the opposite end mounted on said shaft, said bush bearing arranged to take the end thrust in one direction and said roller bearing being arranged to take the end thrust in the opposite direction, one of said bearings being secured to the shaft and arranged to hold the other bearing thereon and maintain said rotary motor member in operative position, substantially as described.

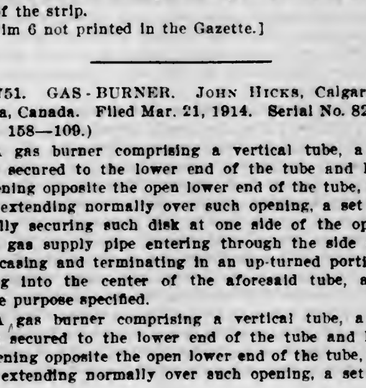
4. In a rotary motor, a supply head having a chamber with a wall in front of said chamber having ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head and a rotary motor member having a bearing on said shaft, said bearing comprising two members one of which is secured to said shaft and the other having a sliding contact therewith at an inclination to the axis of the motor, substantially as described.

5. In a rotary motor, a supply head having a chamber with a wall in front of said chamber with ports therethrough and a central forwardly projecting shaft, said wall and shaft being formed integrally with said head, a rotary motor member having a forwardly and rearwardly extending cylinder with removable bearings for the respective ends thereof mounted on said shaft and means to adjust the front bearing to take up wear, substantially as described.

1,102,750. FOLDING PAPER-BOARD BOX AND STAY THEREFOR. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 9, 1912. Serial No. 714,152. (Cl. 229—49.)

1. A folding box of paper-board or like material, comprising a blank scored and cut to form a plurality of walls two of which are adapted to be folded down onto each other to positions in which they are in planes substantially perpendicular to the planes of two adjoining walls, in combination with a stay comprising a strip of sheet material having a longitudinally bifurcated end the opening in which is substantially U-shaped with the closed end of the opening faced inward and located substantially at the corner of said four walls and the forks of said bifurcated end adhering to the two walls which are adapted to be folded down onto each other and with the body portion of the strip adhering to the other two walls.

2. A folding box of paper-board or like material, comprising a blank scored and cut to form a plurality of walls two of which are adapted to be folded down onto each other to positions in which they are in planes substantially perpendicular to the planes of two adjoining walls, in combination with a stay comprising a strip of textile fabric having a longitudinally bifurcated end the opening in which is substantially U-shaped with the closed end of the opening facing inward and located substantially at the corner of said four walls and running in the general direction of the woof of the strip and with the forks of said bifurcated end adhering to the two walls which are adapted to be folded down onto each other and with the body portion of the strip adhering to the other two walls.



3. A folding box of paper-board or like material, comprising a blank scored and cut to form a plurality of walls two of which are adapted to be folded down onto each other to positions in which they are in planes substantially perpendicular to the planes of two adjoining walls, in combination with a stay comprising a strip of textile fabric having a longitudinally bifurcated end the opening in which is substantially semi-elliptical with the longitudinal axis of the opening running in the general direction of the warp of the strip and the rounded end of the opening facing inward and located substantially at the corner of said four walls and running in the general direction of the woof of the strip and with the forks of said bifurcated end adhering to the two walls which are adapted to be folded down onto each other and with the body portion of the strip adhering to the other two walls.

4. A fastening or joining stay for paper-board boxes, said stay comprising a strip of sheet material having a longitudinally bifurcated end the opening in which is substantially U-shaped with the closed end of the opening facing inward.

5. A fastening or joining stay for paper-board boxes, said stay comprising a strip of textile fabric having a longitudinally bifurcated end the opening in which is substantially U-shaped with the closed end of the opening facing inward and running in the general direction of the woof of the strip.

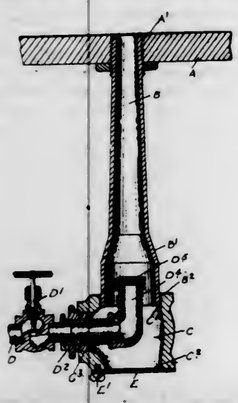
[Claim 6 not printed in the Gazette.]

1,102,751. GAS-BURNER. JOHN HICKS, Calgary, Alberta, Canada. Filed Mar. 21, 1914. Serial No. 826,188. (Cl. 158—109.)

1. A gas burner comprising a vertical tube, a valve casing secured to the lower end of the tube and having an opening opposite the open lower end of the tube, a disk valve extending normally over such opening, a set screw pivotally securing such disk at one side of the opening, and a gas supply pipe entering through the side of the valve casing and terminating in an up-turned portion extending into the center of the aforesaid tube, as and for the purpose specified.

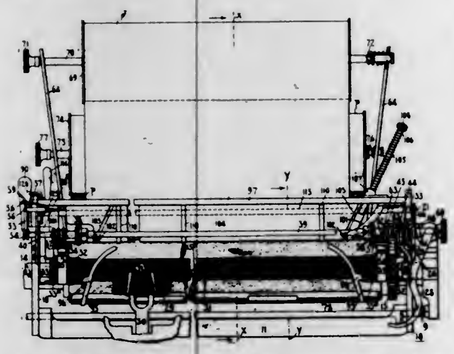
2. A gas burner comprising a vertical tube, a valve casing secured to the lower end of the tube and having an opening opposite the open lower end of the tube, a disk valve extending normally over such opening, a set screw

pivotally securing such disk at one side of the opening, a gas supply pipe entering through the side of the valve casing and terminating in an up-turned portion extending



into the center of the aforesaid tube, and a perforated cap extending over the open end of such up-turned portion, as and for the purpose specified.

1,102,752. TYPE-WRITING MACHINE. HARRY WILLIAM HIGHAM, Sanderstead, and PHILEMON RISLEY, Gunnersbury, England, assignors to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Mar. 24, 1914. Serial No. 826,847. (Cl. 197—153.)



1. In a typewriting machine, the combination of a carriage, a platen thereon, means for advancing a plurality of superposed paper webs over said platen, a ribbon cooperative with one of said paper webs, a second ribbon coöperative with the other paper web, and automatic means for rendering one of said ribbons inoperative on its associate paper web.

2. In a typewriting machine, the combination of a carriage, a platen thereon, means for advancing a work sheet thereover, means for advancing a second work sheet thereover, ribbon mechanism comprising a ribbon coöperative with one of said work sheets, other ribbon mechanism comprising a second ribbon coöperative with the second of said work sheets, and means operating automatically for throwing one of said ribbons out of use so that it is inoperative on the associate work sheet, the other ribbon being independent of said last named means.

3. In a typewriting machine, the combination of a carriage, a platen thereon, means for advancing a work sheet thereover, means for advancing a second work sheet thereover, a vibratory ribbon coöperative with one of said work sheets, ribbon mechanism comprising a second ribbon that is normally maintained opposite the printing line on the platen and is adapted to coöperate with the other of said work sheets, and automatic means for moving said second ribbon so as to uncover the printing line, thus rendering said second ribbon ineffective.

4. In a typewriting machine, the combination of a carriage, a platen thereon, a plurality of superposed work sheets, hand actuated means for variably controlling said work sheets, ribbon mechanism including ribbon plies each adapted to coöperate with one of said work sheets, and means operative automatically by said controlling means for throwing one of said ribbon plies out of use so that it will be ineffective on its associate work sheet, the other ribbon ply being independent of said means.

5. In a typewriting machine, the combination of a carriage, a platen thereon, means for advancing a plurality of superposed paper webs over said platen, hand actuated devices for variably controlling said paper advancing means, a ribbon coöperative with one of said paper webs, a second ribbon coöperative with the other paper web, means connected with said hand actuated devices for rendering one of said ribbons inoperative on its associate paper web, and severing means for cutting both said paper webs after they have been printed on by said ribbons.

[Claims 6 to 38 not printed in the Gazette.]

1,102,753. DEVICE FOR SHAPING DENTAL WOODEN STICKS, &c. JAMES W. IVORY, Philadelphia, Pa. Filed Mar. 31, 1913. Serial No. 758,008. (Cl. 120—94.)



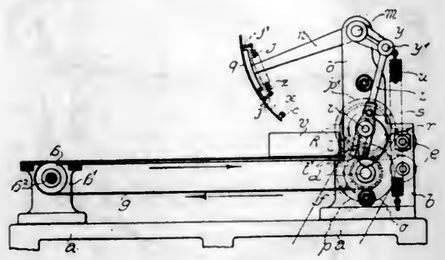
1. A device for shaping an object in the manner specified, comprising a longitudinally-slitted tubular member to hold the object, a stock slidably mounted on said member, a blade therein with its cutting edge extending in said member, a handle fixed to said stock for reciprocating it, and means on the tubular member movable therewith and slidably connected with said handle and limited in its movements toward the blade.

2. A device for shaping an object in the manner specified, comprising a longitudinally slitted tubular member to hold the object, a stock slidably mounted on said member, a blade adjustably mounted on said stock with its cutting edge extending into said member, said member being provided at one end with an angular portion forming a stop, a handle fixed to said stock for reciprocating it, and means for limiting the reciprocation of the stock slidably connecting said handle and angular portion.

3. A device for shaping an object in the manner specified, comprising a longitudinally slitted tubular member to hold the object, a stock slidably mounted on said member, a blade adjustably mounted on said stock with its cutting edge extending into said member, said member being provided at one end with an angular portion forming a stop, a handle fixed to said stock for reciprocating it, a lip on said handle, and a rod for limiting the reciprocation of the stock slidably connecting said lip and angular portion beneath the former.

4. A device for shaping an object in the manner specified, comprising a compressible object-receiver, a member slidable lengthwise thereon, a blade mounted on said member, means at an angle to said receiver forming a stop for the object to be sharpened, means for holding said blade at different angles with relation to the receiver, a lip depending from the said member, and a rod for limiting the reciprocation of the stock slidable through said lip and connected with said receiver.

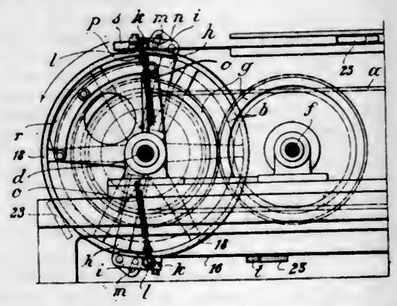
1,102,754. DEVICE FOR FLATTENING FINISHED PAPER BAGS. EMIL JAGENBERG, Dusseldorf, Germany. Filed Oct. 18, 1913. Serial No. 795,835. (Cl. 93—8.)



1. A machine of the character described, comprising a standard, a pair of folding rollers journaled therein and adapted to engage a paper bag, one of said rollers having a slightly rounded face, an oscillative plate pivoted to the standard, a shoe pivoted to said plate, a cam that is adapted to operatively engage the shoe and press the same against the bag bottom, and a pair of pressure rollers arranged back of the folding rollers.

2. Device for flattening finished paper bags, boxes, and the like, comprising a belt conveyer adapted to convey the bag between two flattening rollers, and a flattening slide, the said flattening slide adapted to rock and settle down about the middle of the bag, and to compress the bag partly while sliding toward its bottom in consequence of its rocking motion and feed it between the said rollers, the upper one of said rollers having a slightly rounded face, means for pressing down the slide completely on the conveyer belt and advancing it into the gap between the said rollers, behind the first said pair of rollers a second pair of pressing rollers for the flattened bags.

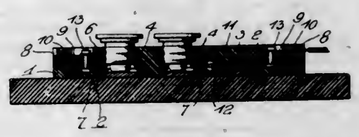
1,102,755. MACHINE FOR MAKING BOXES. EMIL JAGENBERG, Dusseldorf, Germany. Filed Mar. 10, 1914. Serial No. 823,673. (Cl. 93—44.)



1. A device of the character described, comprising a rotatable wheel, a carrier band engaging the same, cores movably mounted on the band, arms rotatably arranged at both sides of the wheel, means for imparting to said arms a higher speed than the band-speed, levers pivoted to the arms, grippers pivoted to the levers and adapted to engage the boxes carried by the cores, and means for rocking said levers outwardly.

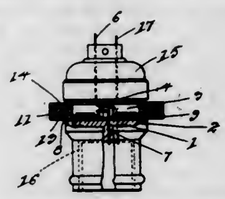
2. A device of the character described comprising a rotatable wheel, a carrier band engaging the same, cores mounted on the band and having beveled faces, arms rotatably arranged at both sides of the wheel, means for imparting to said arms a higher speed than the band-speed, levers pivoted to the arms, and grippers revolubly and slidably secured to the levers and adapted to engage the beveled core-faces.

1,102,756. FUSE-BLOCK. CHESTER N. JOHNSON, Chicago, Ill. Filed Sept. 17, 1913. Serial No. 790,209. (Cl. 175—274.)



A fuse block comprising a body provided upon its underside with transversely disposed grooves, bus bar sections located in said grooves, said body having openings passing transversely therethrough and communicating at their inner ends with said grooves, rings located in the openings and having shanks which are embedded in the block, strips connected with the shanks of the innermost rings and also embedded in the block, and means for connecting said strips and the shanks of the outermost ring with terminals at the outer side of the block.

1,102,757. ELECTRIC-LAMP SOCKET. GERALD S. JOYCE, Gloucester, Mass. Filed July 31, 1913. Serial No. 782,334. (Cl. 173—349.)



1. In an electric lamp socket, a base, a tubular member fitted within said base, spring pressed plungers slidable within the tubular member and insulated from each other, a rotatable ring surrounding the base, the plungers bearing against the inner edge of said ring, and a plurality of electrically connected contact points formed upon said inner edge, a rotation of the ring causing the plungers to be engaged with, or disengaged from said contact points.

2. In an electric lamp socket, a base, a tubular member supported in said base, said tubular member being of a non-conducting material, a pair of metallic linings fitted within the tubular member and spaced from one another, current conducting wires connected to said linings, spring pressed plungers movable within the linings, a ring rotatable about the base and engaged upon its inner edge by said plungers, and a plurality of electrically connected contact members carried upon the inner edge of said ring, a rotation of the ring causing the plungers to engage said contact members or to be disengaged therefrom.

3. In a device of the character described, a base, a tubular member fitted within said base and divided into two sections, a metallic lining fitted within each of said sections, a current conducting wire connected to each of said linings, spring pressed plungers operable within the linings and insulated from each other, a rotatable ring revoluble about the base, a continuous wire embedded within the ring, and a plurality of contact lugs secured to said wire and adapted to be engaged by said plungers.

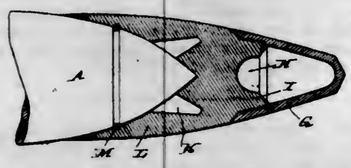
4. In an electric lamp socket, a base, a pair of spring pressed plungers operable within the base and projecting beyond the periphery thereof said plungers being insulated from each other, a ring rotatable about the base and having notches formed upon its inner edge, a continuous wire embedded within the ring, a plurality of contact members connected to said wire and opening upon their inner edge of the ring between the said notches, and means for connecting the plungers in circuit, a rotation of the ring causing the plungers to engage a pair of said contact mem-

bers, whereby a circuit is closed and a further rotation of the ring causing the plungers to engage a pair of said contact members, whereby a circuit is closed and a further rotation of the ring causing the plungers to engage in a pair of notches, whereby the circuit is opened.

5. In an electric lamp socket, a base, a ring rotatable around said base and longitudinally movable means coacting with the ring for making and breaking a circuit as the ring is rotated.

[Claims 6 to 8 not printed in the Gazette.]

1,102,758. ARMOR-PIERCING PROJECTILE. WILLIAM HERBERT KEEN, Washington, D. C., assignor to Washington Steel & Ordnance Company, Washington, D. C., a Corporation of West Virginia. Filed Mar. 16, 1914. Serial No. 824,997. (Cl. 102—28.)



1. An armor piercing projectile embodying a pointed body, a broad-ended cap on the pointed end of the body having a concavity in its outer portion in line with the axis of the projectile, and a massive body of metal forward of said point and around said concavity, said cap having an annular cavity in rear of said massive body of metal, whereby the impact area of the cap will be increased and impact will cause the cap to spread forward of the point of the body and rearwardly into said annular cavity.

2. An armor piercing projectile, embodying a pointed body, a broad-ended cap on the pointed end of the body and having a massive body of metal forward of said point, said cap having an annular cavity in its inner portion around the body of the projectile adjacent the point into which the metal of the cap will flow under the pressure due to impact.

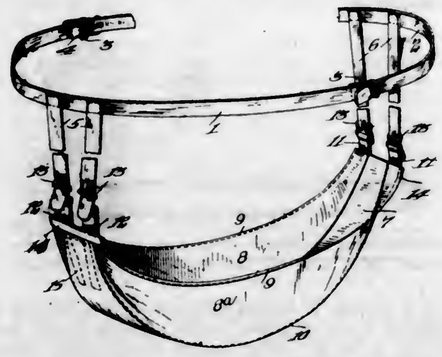
3. An armor piercing projectile embodying a pointed body, a broad-ended cap on the pointed end of the body, having a massive body of metal beyond said point, said cap having an annular cavity in its inner portion adjacent to and extending entirely around the body of the projectile in rear of the point and into which cavity the metal of the cap will flow under the pressure due to impact.

4. An armor piercing projectile embodying a pointed armor piercing body and a contour cap affixed to the pointed end of the body and having a massive body of metal located forward of the point with its leading portion for first contact of annular form around the axis of the projectile, and an annular cavity in the cap around the body in rear of the point into which cavity the metal of the cap will flow under the pressure of impact.

5. An armor piercing projectile embodying a pointed armor piercing body and a contour cap affixed to the pointed end of the body with a massive body of metal forward of the said point, there being a rearwardly extending concavity in the said body of metal whereby the leading portion of the cap metal is of annular form and there also being an annular cavity in the interior of the base of the cap extending around the body of the projectile in rear of its point.

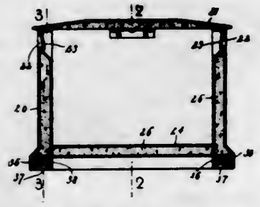
1,102,759. SANITARY SHIELD. JULIA C. KNIPER, Atlantic City, N. J. Filed Apr. 19, 1913. Serial No. 762,199. (Cl. 128—5.)

A device of the character specified, comprising a receptacle composed of a central and lateral strips, the strips gradually decreasing in width toward their ends, the inner edges of the lateral strips being secured to the adjacent side edges of the central strip, said lateral strips at each end of the said receptacle being folded in upon the



upper face of the central strip and secured thereto, and tabs connected with each end of the said receptacle.

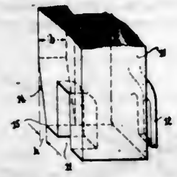
1,102,760. LETTER-BOX AND COLLECTING-POUCH. STEPHEN A. KISS, Yonkers, N. Y. Filed Apr. 6, 1914. Serial No. 829,900. (Cl. 232—32.)



1. In an apparatus for receiving and collecting mail, the combination with a letter box having a hinged bottom, of a plurality of locking bolts in said box engaging said bottom for holding the same in closed position, the side walls of said box being provided at their lower ends with grooves extending therethrough, a stop disposed in each groove, a mail bag comprising a frame, the side portions of which are adapted to be seated in said grooves, a bar shiftably disposed in each of said side portions provided with lugs, a cover upon said bag held in closed positions by said lugs, said lugs being automatically disengaged from said coved by the said stops acting upon said bars when the side portions of said frame are pushed into the grooves in said side walls, and means upon said bag frame for retracting said locking bolts when said bag is in proper position upon said box.

2. In an apparatus for receiving and collecting mail, the combination with a letter box having a hinged bottom, of a plurality of locking bolts in said box engaging said bottom for holding the same in closed position, actuating pins connected with said locking bolts, the side walls of said box being provided at their lower ends with grooves extending therethrough, a stop disposed in each groove, a mail bag comprising a frame, the side portions of which are adapted to be seated in said grooves, a bar shiftably disposed in each of said side portions provided with lugs, a cover upon said bag held in closed positions by said lugs, said lugs being automatically disengaged from said cover by the said stops acting upon said bars when the side portions of said frame are pushed into the grooves in said side walls, a plurality of shiftable pins upon said bag frame in registering position with said actuating pins when sard bag is in proper poston upon said box, and means for shifting the pins upon said bag frame and thereby said actuating pins, whereby said locking bolts are retracted.

1,102,761. CUTTING AND PUNCHING MACHINE. HERMANN KOEPPLINGER, Vienna, Austria-Hungary. Filed June 20, 1912. Serial No. 704,824. (Cl. 164—58.)



1. A machine for cutting and punching interlocking frame members from the same metal blank, including a supporting frame and a reciprocating plunger carrying a cutting tool, said cutting tool having a cutting edge for dividing the blank into frame members and a punch element for simultaneously forming adjacent interlocking end portions thereon.

2. A machine for cutting and punching interlocking frame members from a single metal blank including a supporting frame and a reciprocating plunger, a shearing and punching tool carried by said plunger, said tool having a cutting edge for dividing the metal blank into frame members, punch elements for simultaneously forming adjacent interlocking end portions, and means for advancing the metal stock to the tool.

3. A machine for cutting and punching interlocking frame members from the same metal blank, including a supporting frame and a reciprocating plunger, a tool carried by said reciprocating plunger, said tool having a cutting portion for dividing the frame members, and also having a tongue forming recess in its lower face, and a punch element for simultaneously forming tongue receiving openings in an adjacent frame member.

4. A machine for cutting and punching interlocking frame members from metal stock including a supporting frame and a reciprocating plunger, a tool carried by the latter, a bed plate mounted upon the supporting frame, a top plate removably attached to the said bed plate, a removable wear plate insertible between the top and bed plate, and means for holding the metal stock in position against the wear plate to be operated upon by the tool.

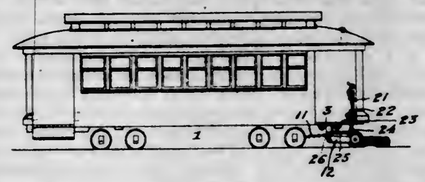
5. A machine for cutting and punching interlocking frame members from metal stock including a supporting frame and a reciprocating plunger, a punching and shearing tool carried by the latter, a swage comprising a bed plate having an opening, a top plate removably attached to the bed plate having a central opening and wedge-shaped recesses, an angled removable wear plate insertible between the top and bed plates, and also having an opening to accommodate the passage of the tool, and means for entering the wedge-shaped recesses in the top plate for forcing and holding the stock against the removable wear plate.

1,102,762. SAFETY-STIRRUP. GUSTAV KORITTKE, New York, N. Y. Filed Dec. 22, 1913. Serial No. 808,137. (Cl. 54—49.)



A stirrup comprising a strap member in the form of a plate provided with a downwardly extending lug having an inwardly extending projection, a foot receiving member formed with a hanger having an inwardly extending projection adapted to rest on the projection of said lug, the lower portions of the faces of the projection of said hanger being tapered toward their lower edges, springs attached to said strap member normally maintaining said projections in engagement with each other but yieldable to an abnormally directed force, and shoulders on said strap member and said foot receiving member for preventing a disengagement in lateral directions of said two members.

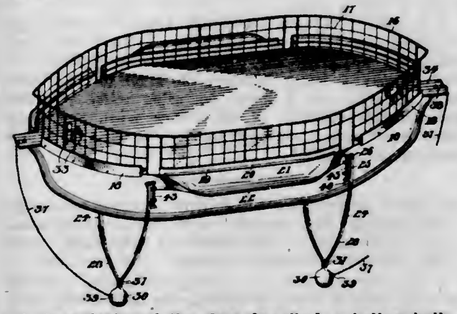
1,102,763. STREET-CAR FENDER AND SNOW-SWEEPER. CHARLES KOSHALKO, Johnstown, Pa., assignor of one-half to Joseph Caumiel, Johnstown, Pa. Filed Mar. 21, 1914. Serial No. 826,224. (Cl. 105—129.)



1. In a fender and snow sweeper for cars, the combination with a pivoted car truck, of a laterally swinging frame operatively connected to the truck so that it will swing laterally therewith, a vertically movable frame carried by the laterally movable frame, traction wheels for supporting said vertically movable frame, a fender carried by said vertically movable frame, and means for raising and lowering the vertically movable frame when in any position to which it may be turned laterally by the swinging of the laterally movable frame.

2. In a fender and snow sweeper for cars, the combination with a pivoted car truck, of a laterally swinging frame operatively connected to the truck so that it will swing laterally therewith, a vertically movable frame carried by the laterally movable frame, a rotary brush carried by the vertically movable frame, traction wheels which support the vertically movable frame, means for driving the brush from the traction wheels, and means for raising and lowering the vertically movable frame in whatever position it may be turned laterally by the laterally movable frame.

1,102,764. LIFE-BOAT. STANISLAW KRAWCZYK, Buffalo, N. Y. Filed Apr. 10, 1914. Serial No. 830,884. (Cl. 9—8.)



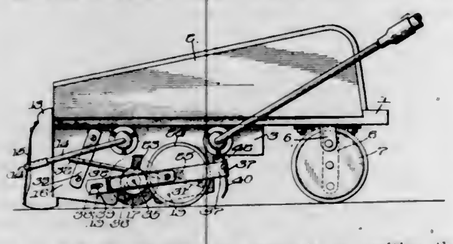
1. In a device of the class described, a hollow hull, a grating railing surrounding the deck portion of the hull, oppositely-arranged T-shaped hand hold members outwardly projecting from the railing at both ends of the hull, hollow wave deflecting wings oppositely arranged between said hand-hold members, adjustable bails extending beneath the hull and pivoted to the latter at opposite points between said wings and hand-hold members, ballast-balls removably secured to the lower ends of said bails, hoisting chains connected between said bails and the ends of said hull, and normally-positioning spring latches carried by the hull and adapted for engaging said bails in their lowered positions.

2. A device of the class described, comprising an air-tight hull, a grating railing extending around the same, outwardly-extending hollow wave deflecting wings oppositely positioned upon the middle portion of said hull, said wings having downwardly sloping upper and convex lower faces, and T-shaped hand-hold bars secured to said railing and adjacent to each end thereof.

3. A device of the class described, comprising in combination with a hollow hull having deck extensions at each end thereof, of bails adjustable in length having their ends pivoted to opposite sides of the hull, ballast weights removably secured to said bails, chain connections between said weights and deck extensions, projecting perforated lugs upon said bails and spring-pressed latches upon the hull adapted for engagement with the perforations of said lugs upon the lower operative positions of said bails.

4. A device of the class described, comprising an air-tight hull, a grating railing extending around the same, outwardly-extending hollow wave deflecting wings oppositely positioned upon the middle portion of said hull, said wings having downwardly sloping upper and convex lower faces, T-shaped hand-hold bars secured to said railing and adjacent to each end thereof, and vertically-adjustable ballast devices carried by the hull.

1,102,765. CLEANER. LOUIS J. KUCKI, Chicago, Ill. Filed Dec. 18, 1913. Serial No. 807,370. (Cl. 15—60.)



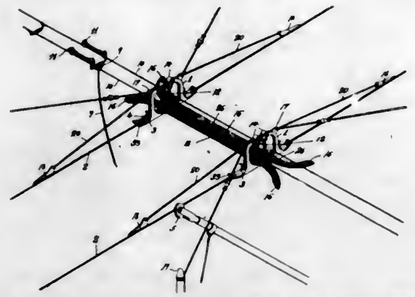
1. A cleaner including two supports to position the same while in operation; a rotary brush; a swingingly supported bail upon which the rotary brush is mounted; means for adjusting the bail in different positions to which it may be swung to adapt the brush to the surface being cleaned; and a brush operating roller structure mounted independently of the rotary brush and maintained in actuating relation thereto in the different adjustments of the brush.

2. A cleaner including a rotary brush; a swingingly supported bail upon which the rotary brush is mounted; means for adjusting the bail in different positions to which it may be swung to adapt the brush to the surface being cleaned; and a brush operating roller structure mounted independently of the rotary brush and maintained in actuating relation thereto in the different adjustments of the brush.

1,102,766. OVERHEAD CROSSING. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Trackless Trolley Company of America, a Corporation of New York. Filed Sept. 27, 1909. Serial No. 519,848. (Cl. 191—37.)

1. An overhead trolley crossing, comprising a frame, the lower edge of which is transversely slotted and longitudinally grooved, said slot being of less width than the diameter of the trolley wheel, said frame being provided with means for securing it to a support, means for detachably securing the ends of a trolley wire to said frame, insulators mounted in the top of said frame, brackets secured to and depending from said insulators, said brackets being provided with angle ears to support current-conducting wires independent of said trolley wire and passing through said frame, said ears and conducting wires being arranged to permit of the passage of trolley wheels along the upper surface of said conducting wires.

2. In an overhead trolley crossing, the combination with a pair of yokes with their arms extending downward and each yoke being arranged to support an independent trolley wire secured to its lower edge, of a pair of substantially parallel bars connecting said yokes together and maintaining said yokes in a predetermined spaced relation and being arranged to serve as trolley guides.

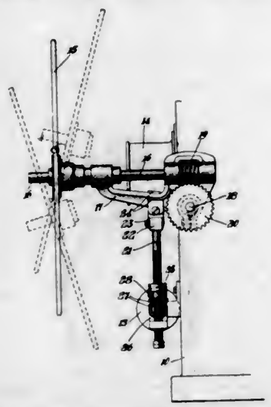


3. In an overhead crossing, the combination with a plurality of yokes with their arms extending downward and each yoke being arranged to support an independent trolley wire secured to its lower edge and a plurality of current-conducting wires crossing above said trolley wires and through each yoke, of means adapted to guide and maintain a trolley carrier on said conducting wires and to rigidly secure said yokes together.

4. In an overhead trolley crossing, the combination with a plurality of supporting devices, each adapted to allow the free passage of a trackless trolley carrier therethrough and of an independent trolley wheel thereunder, and comprising means for securing independent trolley wires and current-conducting wires crossing above said trolley wires to each device, of means for rigidly securing said devices together, said means being adapted to guide and maintain a trolley carrier in operative relation to said conducting wires.

5. In an overhead crossing, the combination with a pair of frames to support a trolley wire secured to the lower side of each and a plurality of independent trolley wires crossing above said first-mentioned trolley wire at an angle and passing through said frames, of means for rigidly securing said frames parallel to each other, said means acting as a guide to the cable of a trolley carrier passing along said independent trolley wires and preventing the displacement of the trolley carrier between said frames.

1,102,767. KINETOSCOPE - SHUTTER - SETTING DEVICE. JEAN A. LE ROY, New York, N. Y. Filed Jan. 16, 1914. Serial No. 812,376. (Cl. 88—19.3.)



1. In a kinetoscope: the combination with a shutter, and a lens with which it is adapted to coöperate; of means to effect an angular displacement between the said lens and the plane of said shutter.

2. In a kinetoscope: the combination with a rotary shutter, and a lens with which it is adapted to coöperate; of means to effect an angular displacement between the said lens and the plane of said shutter.

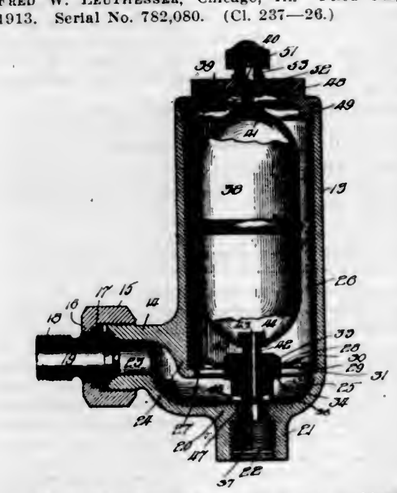
3. In a kinetoscope: the combination with a pivotally supported shutter, and a lens with which it is adapted to coöperate; of means to tilt said shutter relatively to said lens.

4. In a kinetoscope: a suitable frame; a shutter, and a support therefor pivotally secured to said frame; a lens secured to said frame and adapted to coöperate with said shutter; and means to swing said shutter support.

5. In a kinetoscope: a suitable frame; a shutter pivotally secured thereto; a lens secured to said frame and adapted to coöperate with said shutter; and means mounted on said frame to swing said shutter relatively to said lens.

[Claims 6 to 8 not printed in the Gazette.]

1,102,768. STEAM, AIR, AND WATER TRAP VALVE. FRED W. LEUTHESSER, Chicago, Ill. Filed July 30, 1913. Serial No. 782,080. (Cl. 237—26.)



1. In a valve of the class described, the combination of a shell or casing consisting of a chambered body portion merging into an enlarged chambered base portion, an inlet and an outlet for water of condensation located in the base portion, a member dividing the interior of the casing into an upper compartment and a lower compartment and formed to provide a communicating passage between said compartments for the water of condensation, a float in the upper compartment, a valve carried by the float and controlling the outlet, and the walls of said body portion continuing into said base portion and forming a weir surrounding said dividing member, and means for venting air from a casing, substantially as described.

2. In the valve of the class described, the combination of a shell or casing consisting of a chambered body portion merging into an enlarged chambered base portion, an inlet and an outlet for the water of condensation formed in the base portion, means for dividing the interior of the casing into an upper compartment and a lower compartment, said means being formed to provide a communicating passage between said compartments fo rthe water of condensation, a float in the upper compartment, a valve carried by the float and controlling the flow of water from the interior of said casing to the outlet, and a depending wall in the interior of said base portion forming a weir surrounding the dividing means, that portion of the base chamber lying above the lower edge of said weir constituting an air chamber within said base portion, substantially as described.

3. In a valve of the class described, the combination of a shell or casing consisting of a chambered body portion merging into a chambered base portion, the chamber of said base portion being of greater width than the chamber of the body portion, means dividing the interior of the casing structure into an upper compartment and a lower compartment, said means being formed to provide a communicating passage between said compartments for water of condensation, a float in the upper compartment, an inlet and an outlet for the water of condensation in the lower compartment, a valve carried by the float and controlling communication between the interior of the casing structure and the outlet, a weir depending in the chamber of the base portion and spaced away from the side walls thereof, that portion of the chamber of the base portion lying above the weir constituting an air chamber and the point of communication between the chamber of the base portion, and the outlet being approximately flush with the floor line of the base portion, substantially as described.

4. In a valve of the class described, the combination of a shell or casing having an inlet and an outlet for water of condensation, a horizontal cross plate dividing the interior of the shell or casing into an upper compartment and a lower compartment, a float within the upper compartment, said plate being adapted to furnish a direct vertical communicating passage between the two compartments and having a line of communication in a plane outside of a vertical plane coincident with the exterior of the float within the upper compartment to prevent direct impact of the water against the bottom of said float, the inlet of the shell or casing opening into the lower compartment, a plug having a water discharge passage opening direct into the lower compartment and controlled by the rise and fall of the float in the upper compartment, and means for venting air from the casing, substantially as described.

5. In a valve of the class described, the combination of a shell or casing having an inlet and an outlet for water of condensation, a horizontal cross plate dividing the interior of the shell or casing into an upper compartment and a lower compartment, a float within the upper compartment, said plate presenting an imperforate body below the bottom of the float and having a configuration furnishing a direct vertical passage of communication between the two compartments in a plane outside of a vertical plane coincident with the exterior of the float, said communicating passage constituting a passage for water of condensation between the compartments for water to enter the upper compartment without direct impact against the bottom of the float, said casing being provided with a water discharge passage communicating with the outlet for the water to condensation and with the lower compartment of the shell or casing, said passage being controlled by the rise and fall of the float in the upper compartment, and means for venting air from the casing, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

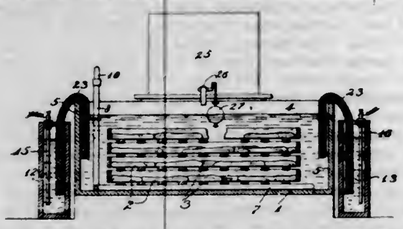
1,102,769. APPARATUS FOR PRESERVING. JOHN C. LINCOLN, East Cleveland, Ohio, assignor to The Electric Meat Curing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 14, 1908. Serial No. 467,384. (Cl. 175—311.)

1. An apparatus for preserving comprising a tank, means for maintaining an outward flow of the preservative liquid therefrom, electrodes separated from such preservative agent, capillary conductors between the electrodes and agent, and means for passing an electric current through the agent via said capillary conductors.

2. An apparatus for preserving comprising a vessel, wicks leading from opposite ends thereof and arranged to constitute outgoing liquid carriers, and means for passing electric current through such wicks and the contents of the vessel.

3. An apparatus for preserving comprising a tank, trays or racks therein for holding articles for preservation, electrodes placed in vessels outside of the tank, and

wicks extending from the tank to the vessels and arranged to constitute outgoing capillary siphons.

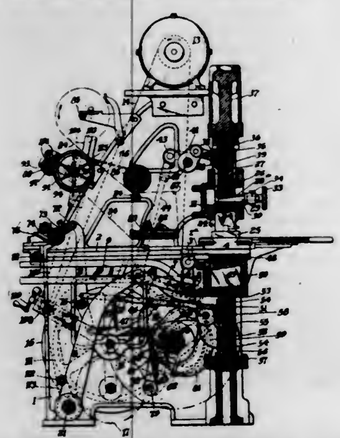


4. A preserving apparatus consisting of a vessel adapted to contain the article to be preserved, a liquid preservative agent, an electrode separated from such agent, a capillary conductor for the electric current between the liquid about the electrodes and the contents of the vessel, said conductor constituting also an outgoing siphon, and means for supplying fresh preservative liquid to the vessel to maintain the same at a substantially constant level and cause an outward flow of such liquid through the capillary conductor.

5. A preserving apparatus having a preserving tank, separated electrodes, capillary conductors between the liquid about the electrodes and the tank contents, and means for causing an outward flow of liquid preservative agent along such conductors, and means for maintaining the level of the liquid in the tank.

[Claim 6 not printed in the Gazette.]

1,102,770. EMBOSSING AND PRINTING PRESS. EDWARD M. LOCKWOOD, Philadelphia, Pa. Filed Feb. 5, 1914. Serial No. 816,661. (Cl. 101—105.)



1. In an embossing and printing press, the combination of a reciprocable die actuating plunger, an abutment for receiving the thrust of the plunger, power devices for reciprocating said plunger, means having oscillating parts for transmitting thrust from said devices to said plunger, and means for automatically renewing the surfaces subjected to thrust pressure between said transmitting means and said plunger, whereby different wearing surfaces of said transmitting means are, during periods intermediate of the printing periods, successively brought into position to receive the thrust.

2. In an embossing and printing press, the combination of a reciprocable plunger, an abutment for receiving the thrust of said plunger, power devices for reciprocating said plunger, a pin rotatably mounted and forming a power transmitting means between said power devices and said plunger, and means for automatically causing an intermittent positive rotary motion to said pin, whereby different wearing surfaces of said pin are successively brought into position to receive the thrust.

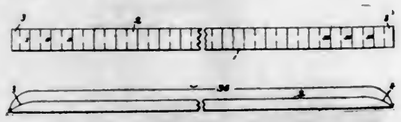
3. In an embossing and printing press, the combination of a reciprocable plunger, an abutment for receiving the thrust of said plunger, power devices embodying a toggle for reciprocating said plunger, a pin rotatably mounted and forming a connection for the members of said toggle, and means for automatically causing an intermittent rotary movement of said pin whereby different wearing surfaces of said pin are successively brought into position to receive the thrust.

4. In an embossing and printing press, the combination of a reciprocable plunger, an abutment for receiving the thrust of said plunger, power devices embodying a toggle for reciprocating said plunger, a pin rotatably mounted and forming a hinge connection for the members of said toggle, and means operable intermittently for automatically causing a partial rotation of said pin whereby the wearing surface of said pin subjected to thrust is varied.

5. In an embossing and printing press, the combination of a reciprocable plunger, an abutment for receiving the thrust of the plunger, a two part toggle power device for reciprocating said plunger having a plurality of rotatably mounted pins forming thrust connections between said plunger and said toggle and between the parts of the toggle, and means for automatically causing a partial rotation of each of said pins when the toggle is broken, whereby the wearing surfaces of said pins subjected to thrust are intermittently varied.

[Claims 6 to 12 not printed in the Gazette.]

1,102,771. MEASURING DEVICE. JAMES W. LOUGHLIN, Jamaica Plain, Mass. Filed Aug. 1, 1911. Serial No. 641,729. (Cl. 33—107.)

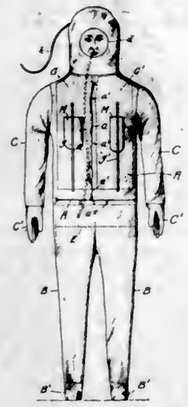


A measuring member having a flat, scaled, rigid-material-measuring lower face one unit in length, a scaled, flexible-material-measuring upper face substantially parallel with the lower face and but slightly spaced therefrom throughout the greater portion of its length, said upper face terminating in downwardly sloping ends, the length of the upper face and its downwardly sloping ends exceeding that of the lower face by a slight extent constituting a predetermined divisional portion of such unit whereby the lower face may be used to measure a unit of length of rigid material and the upper face may be used to measure a predetermined longer portion of flexible material.

1,102,772. LIFE-PRESERVER. DON LYMAN, Twin Falls, Idaho, assignor of one-fourth to F. Harvey Hartwell and one-fourth to Ruth Wolfe, Twin Falls, Idaho. Filed Dec. 11, 1913. Serial No. 805,949. (Cl. 9—20.)

1. A life preserving garment of the character described comprising a body portion having a front opening provided with lapped edges and with fastening members for securing the edges together in closed position, a hood projecting upwardly from the body, legs and sleeve depending from the lower and side portions of the body and respectively provided with foot and hand coverings, and a flexible lining of tubular form secured at its inner end around the front opening of the body and adapted to be extended through said opening when the lapped edges are disconnected, for the purpose described.

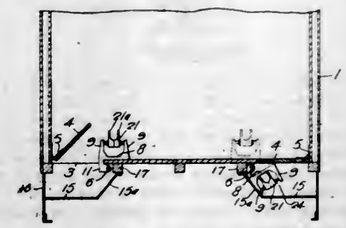
2. A life preserving garment of the character described comprising a body portion having a front opening provided with lapped edges and with fastening members for securing the edges together in crossed position, a hood projecting upwardly from the body, legs and sleeves depending from the lower and side portions of the body and respectively provided with foot and hand coverings, a flexible lining of tubular form secured at its inner end around the front opening of the body and adapted to be extended through said opening when the lapped edges are disconnected, and a flexible tie member for closing the outer end of the tubular lining, all for the purpose described.



3. A life preserving garment of the character described comprising a body portion and a hood, sleeves and leg portions extending from the body portion, the body portion having a front opening and a substantially increased fullness adjacent its lower end and the lower end of the opening, fastening members for securing the edges of the opening in lapped relation, and fastening members secured to the lower front of the body portion whereby the fullness may be taken up in the form of a plait when the garment is in use.

4. A life preserving garment of the character described, comprising a body portion having a front opening provided with lapped edges and with fastening members for securing the edges together in closed position, a hood projecting upwardly from the body, legs and sleeves depending from the lower and side portions of the body and respectively provided with foot and hand coverings, a flexible tubular lining secured at its inner end around the front opening of the body and adapted to be extended through the body opening when the lapped edges thereof are disconnected, and a plurality of air containers, certain of which are arranged in the hood and in the body of the garment in order to protect the wearer in water and provide the necessary buoyancy.

1,102,773. AUTOMOBILE ATTACHMENT. EMILE FREDERICK MARTIN, New Orleans, La. Filed Apr. 21, 1914. Serial No. 833,431. (Cl. 105—15.)



1. The combination with a freight car having a longitudinally extending opening through the floor at each side thereof, and the series of doors for closing each opening and hinged to the adjacent side wall of the car, of a shaft or rod extending longitudinally of the car at the inner side of each opening and below the floor, a series of wheel supports mounted on each rod, and arranged to be swung through the adjacent opening to a position on the floor of a car at the inner side of the adjacent opening, or to a position below the level of the floor, said supports being arranged in pairs and the members of each pair being adapted to engage a wheel in front and in rear thereof, a clamping member mounted on the rod between each pair of supports and arranged to swing through the adjacent openings, the car having means for supporting the supports and the clamping members below the floor, each of the said supports comprising a substantially U-shaped member consisting of a body adapted to rest upon the floor of the car when in operative position, and arms extending upwardly from the ends of the body, a threaded rod supported longitudinally of the body at the upper ends of the arms and detachably connected with the arms, a substantially U-shaped gripping member arranged on each rod, each of the said gripping members being sectional and comprising a hub journaled on the rod, and an arm extending radially from the outer end of the hub, said arms coöperating to grasp opposite faces of the tire, lock nuts on the rod at the outer side of each section, the body having at its outer end a depending lug, and each lug having a pair of inwardly extending bearing arms journaled on the adjacent rod, said arms being spaced apart longitudinally of the rod, an eye-bolt engaging the rod between the arms, the lug having an opening through which the eye-bolt extends, said bolt having a head at the opposite side of the lug from the rod, a nut threaded on to the rod for clamping the support to the rod, each of the clamping devices comprising a threaded rod having at one end a head, and having at the other a laterally extending bearing arm journaled on the adjacent rod, a bar provided at one end with an opening through which the rod extends, and having on its under face depending lugs for engaging opposite sides of the wheel, said bar being shaped to extend between adjacent spokes, and lock nuts above and below the bar.

2. The combination with a freight car having a longitudinally extending opening through the floor at each side thereof, and the series of doors for closing each opening and hinged to the adjacent side wall of the car, of a shaft or rod extending longitudinally of the car at the inner side of each opening and below the floor, a series of wheel supports mounted on each rod, and arranged to be swung through the adjacent opening to a position on the floor of a car at the inner side of the adjacent opening, or to a position below the level of the floor, said supports being arranged in pairs and the members of each pair being adapted to engage a wheel in front and in rear thereof, a clamping member mounted on the rod between each pair of supports and arranged to swing through the adjacent opening, the car having means for supporting the supports and the clamping members below the floor, each of the said supports comprising a substantially U-shaped member consisting of a body adapted to rest upon the floor of the car when in operative position, and arms extending upwardly from the ends of the body, a threaded rod supported longitudinally of the body at the upper ends of the arms and detachably connected with the arms, a substantially U-shaped gripping member arranged on each rod, each of the said gripping members being sectional and comprising a hub journaled on the rod, and an arm extending radially from the outer end of the hub, said arms coöperating to grasp opposite faces of the tire, lock nuts on the rod at the outer side of each section, the body having at its outer end a depending lug, and each lug having a pair of inwardly extending bearing arms journaled on the adjacent rod, said arms being spaced apart longitudinally of the rod, an eye-bolt engaging the rod between the arms, the lugs having an opening through which the eye-bolt extends, said bolt having a head at the opposite side of the lug from the rod, and a nut threaded on to the rod for clamping the support to the rod.

3. The combination with a freight car having a longitudinally extending opening through the floor at each side thereof, and the series of doors for closing each opening and hinged to the adjacent side wall of the car, of a shaft or rod extending longitudinally of the car at the inner side of each opening and below the floor, a series of wheel supports mounted on each rod, and arranged to be swung through the adjacent opening to a position on

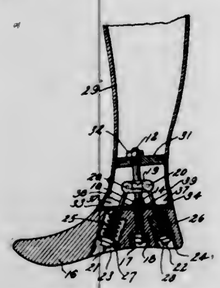
the floor of the car at the inner side of the adjacent opening, or to a position below the level of the floor, said supports being arranged in pairs and the memebrs of each pair being adapted to engage a wheel in front and in rear thereof, a clamping member mounted on the rod between each pair of supports and arranged to swing through the adjacent openings, the car having means for supporting the supoprts and the clamping members below the floor.

4. The combination with a freight car having a longitudinally extending opening through the floor at each side thereof, and the series of doors for closing each opening and hinged to the adjacent side wall of the car, of a shaft or rod extending longitudinally of the car at the inner side of each opening and below the floor, a series of wheel supports mounted on each rod, and arranged to be swung through the adjacent opening to a position on the floor of a car at the inner side of the adjacent opening, or to a position below the level of the floor, said supports being arranged in pairs and the members of each pair being adapted to engage a wheel in front and in rear thereof, and a clamping member mounted on the rod between each pair of supports and arranged to swing through the adjacent openings.

5. The combination with a freight car having a longitudinally extending opening through the floor at each side thereof, and the series of doors for closing each opening and hinged to the adjacent side wall of the car, of a shaft or rod extending longitudinally of the car at the inner side of each opening and below the floor, a series of wheel supports mounted on each rod, and arranged to be swung through the adjacent opening to a position on the floor of the car at the inner side of the adjacent opening, or to a position below the level of the floor, said supports being arranged in pairs and the members of each pair being adapted to engage a wheel in front and in rear thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,102,774. ARTIFICIAL LEG. STEPHAN MARTINCHEK, Posen, Ill. Filed Aug. 13, 1913. Serial No. 784,513. (Cl. 3—3.)

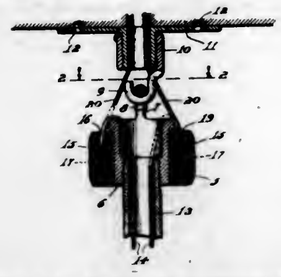


1. In artificial legs, the combination, of a hollow leg portion having a transverse brace near its lower end; an artificial foot; mechanism movably connecting said leg portion and foot, said mechanism being joined to said leg portion by means of a rod suitably connected to said brace; and members movably joined to said rod and bearing on resilient members located in the foot, substantially as and for the purpose described.

2. As a new article of manufacture, mechanism for movably connecting the leg portion and the foot of an artificial leg, comprising rods, movably joined together and having nuts threaded on their free ends, in combination with auxiliary members movably joined to one of said rods and having nuts threaded on their free ends, substantially as and for the purpose described.

3. As a new article of manufacture, a substantially semicircular cap, provided with a suitable rim along its rounded edge, adapted to fit the top of an artificial foot, and adapted to be trimmed down, especially along its straight edge, substantially as and for the purpose described.

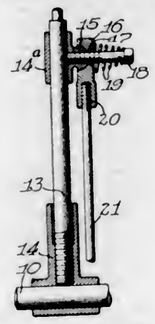
1,102,775. INSULATING-JOINT. HENRY P. MCBRIDE, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,232. (Cl. 173—365.)



1. A device of the kind described comprising an insulating block having recesses in its outer side and an opening leading inwardly from each recess; a fixture connector embedded in said insulating block; a plurality of electric wire connectors embedded in said insulating block; each wire connector having a line wire socket and a fixture wire socket therein; and a binding screw threaded in each socket extending through an opening in said block and having its head disposed in one of the recesses in said block, substantially as described.

2. A device of the kind described comprising an annular insulating block having recesses in its top side leading downwardly, recesses in its periphery and openings leading from said peripheral recesses to said downwardly extending recesses; electric wire connectors in said downwardly extending recesses; screws extending through said openings, threaded in said connectors and having their heads disposed in said peripheral recesses; and a fixture connector fitted in said block, substantially as described.

1,102,776. LINK-AND-LEVER CONNECTION. JOHN F. MCCANNA, Chicago, Ill., assignor to Imperial Brass Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Apr. 20, 1912, Serial No. 692,092. Divided and this application filed June 20, 1912. Serial No. 704,729. (Cl. 74—17.)

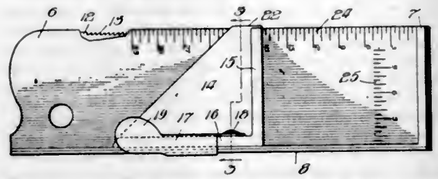


In a pitman connection, the combination with a socket member having an aperture at the bottom of the concavity, of a semispherical ball member coöperating therewith, a sleeve to which the ball member is attached, a rod passed through the sleeve, a headed pin extending through the aperture in the socket member and screwed through the ball member and sleeve until it engages the rod, and an expanding spring interposed between the socket member and the head of the pin.

1,102,777. COOLING MEDIUM FOR INTERNAL-COMBUSTION ENGINES. JAMES N. MCCOY, Vincennes, Ind. Filed Jan. 26, 1912. Serial No. 673,534. (Cl. 252.)

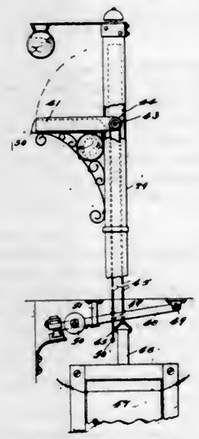
A composition of matter for cooling explosion engine cylinders, said composition consisting of the liquid formed by the combination of water, sodium thiosulfate and potassium permanganate, the composition being capable of withstanding inordinately low degrees of cold without freezing.

1,102,778. COMPOSING-STICK. CHARLES F. MECHLER, Chicago, Ill. Filed May 1, 1914. Serial No. 835,588. (Cl. 101—26.)



In a composing stick, in combination, a body portion comprising a base plate having secured thereon an end wall and a back wall, the latter having a row of locking teeth at its forward side, said base plate having a row of locking teeth adjacent to its forward edge, the sides of all of said teeth which face said end wall being straight and parallel to said end wall and the opposite sides of said teeth being inclined, and a knee member movably mounted on said body portion and having locking teeth at its forward and rear edges complementary in shape to the first mentioned locking teeth and adapted to cooperate therewith, and a clip mounted on the knee member and adapted to engage said body portion to hold the knee member in position with the straight walls of said locking teeth in engagement with each other at the forward and rear side of the stick.

1,102,779. ELECTRICALLY-OPERATED RAILWAY SIGNAL MEANS. GEORGE F. MERGELL, Los Angeles, Cal. Filed Nov. 20, 1911. Serial No. 661,401. (Cl. 246—21.)

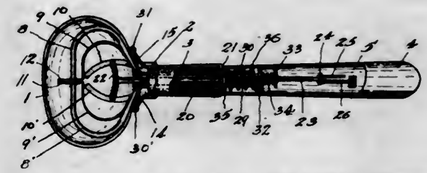


1. In electrically operated railway signal means, the combination with a hollow supporting post and a stationary signal arm, of a hollow signal arm pivoted in the post and formed with a wheel portion, a pull cord passed over said wheel, a solenoid having its core connected to one end of said cord for holding the movable arm in the hollow post, and a weighted lever attached to the other end of the cord for moving the movable arm to obscure the stationary arm, when said solenoid is deënergized.

2. In electrically operated railway signal means, the combination with a supporting post of a stationary signal arm and a movable signal arm U-shaped in cross section and adapted to incase the stationary arm, electrical means adapted to hold said movable arm out of operative position, and means for swinging the movable arm to position to obscure the stationary arm when the electrical means is deënergized.

3. In electrically operated railway signal means, the combination with a hollow supporting post of a stationary signal arm and a movable signal arm U-shaped in cross section and adapted to incase the stationary arm, mechanism for moving the movable arm to obscure the stationary arm, and electrical means to hold the movable arm out of operative position, and said mechanism comprising a cord attached to the movable arm and to said electrical means.

1,102,780. EGG-BREAKER. WILLIAM MEZEI and FRANK PODMANICKY, East Pittsburgh, Pa. Filed Dec. 18, 1913. Serial No. 807,473. (Cl. 65—12.)



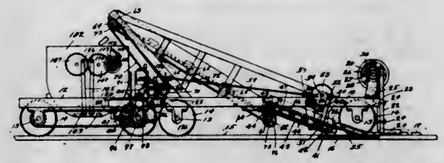
1. The combination with a separable basket comprising pivoted arms formed with pronged holding members adapted to engage and enter an egg shell, of a clamping head and push bar, means for actuating the push bar to clamp the egg and additional means co-acting therewith for subsequently separating the pivoted arms for tearing apart the egg shell.

2. The combination with a receptacle of a separable basket comprising pivoted arms formed with pronged holding members, a clamping head and push bar, means for actuating the push bar to clamp an egg between said members and head and additional means co-acting therewith for subsequently separating the pivoted arms to cause the pronged members to rend the egg shell.

3. The combination with a separable basket adapted to break an egg, of a clamping head and push bar, a pair of pivoted handles to actuate said bar, and means operated from said bar to subsequently separate the basket.

4. The combination with a receptacle of a separable sectional basket having pronged members, a push bar and clamping head, a support attached to the receptacle, handles pivoted to the support, lever arms connecting the handles and push bar to move the push bar, and means adapted to receive delayed action from said bar to separate the basket sections.

1,102,781. APPARATUS FOR PICKING UP PEAT-BLOCKS. THOMAS A. MIGHILL, Cambridge, Mass. Filed Apr. 20, 1911. Serial No. 622,256. (Cl. 214—1.)



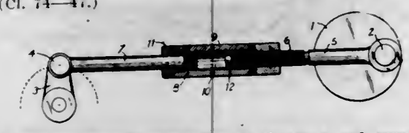
1. In an apparatus for picking up peat blocks and transporting them, a power car for the transportation of the blocks, a conveyer car, pick-up mechanism carried by said conveyer car, a power-driven element on the power car, an actuating element on the conveyer car and operatively connected to the pick-up mechanism, and means for guiding both cars in movement to automatically connect the power-driven element and actuating element when the cars are in predetermined arrangement.

2. In an apparatus for picking up peat blocks and transporting them, a power car for the transportation of the blocks, a conveyer car, pick-up mechanism carried by said conveyer car, a power-driven gear on the power car, an

actuating gear on the conveyer car and operatively connected to the pick-up mechanism, and tracks for guiding both cars in movement to automatically connect said gears when the cars are in predetermined arrangement.

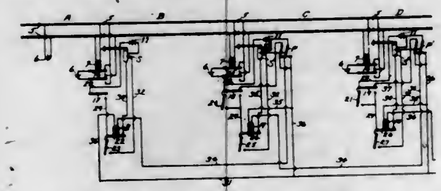
3. In an apparatus for picking up peat blocks and transporting them, a power car for the transportation of the blocks, a conveyer car, pick-up mechanism carried by said conveyer car, a power-driven gear on the power car, an actuating gear on the conveyer car and operatively connected to the pick-up mechanism, tracks for guiding both cars in movement to automatically connect said gears when the cars are in predetermined arrangement, and a means for connecting the respective cars to maintain them in such predetermined arrangement.

1,102,782. CONNECTING-ROD. JAMES MILLS, Cincinnati, Ohio, assignor to The Smith & Mills Company, Cincinnati, Ohio. Filed Nov. 29, 1912. Serial No. 734,013. (Cl. 74—47.)



A connecting-rod comprising, a sleeve, a rod screwed into one end of the sleeve and adapted to be adjusted for a greater or less projection into the sleeve, a hollow plug screwed into the opposite end of the sleeve and having a bore less in diameter than the interior of the sleeve, a rod adapted to reciprocate in the bore of the plug, and a collar firmly secured to the inner end of the last-mentioned rod and adapted to make contact alternately with the inner end of said plug and the inner end of the first-mentioned rod as one of the rods is reciprocated, whereby the relative degree of reciprocating motion of the two rods may be adjusted, combined substantially as set forth.

1,102,783. RAILWAY SIGNALING SYSTEM. WILLIAM V. MOAK, Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, a Corporation of Pennsylvania. Filed Mar. 8, 1912. Serial No. 682,344. (Cl. 246—30.)



1. In a railway signaling system, three successive block sections, a signal for the third section adapted to indicate danger and caution, a signal for the second section adapted to indicate danger and clear; a track circuit for each block section each including a source of current and a track relay, a pole-changer inclined in the second track circuit and comprised in the relay of the first track circuit, a polarized armature included in the relay of the second track circuit and responsive to changes of polarity in the second track circuit, a signal relay for the signal of the third block section, a circuit for said signal relay including a source of current and an armature contact of the track relay for the third block section, a caution indication circuit for the signal of the third block section, which circuit includes a contact of the said signal relay and a contact of the said polarized armature of the track relay for the second track circuit, a signal relay for the signal of the second block section and including a polarized armature; a circuit for the last named relay including a source of current, a neutral armature contact of the track relay for the second track circuit and a pole-changer operated by the signal for the third block section; and a clear indication circuit for the signal of the second block section which circuit includes a contact of the said polarized armature of the corresponding signal relay and a back contact of the track relay for the first track circuit.

2. In a railway signaling system, a plurality of successive block sections, a track circuit for each section each including a source of signaling current and a track relay, each of said track relays comprising a neutral and a polarized armature, a pole-changer included in each track circuit and comprised in the track relay for the track circuit in the rear, a signal for each block section each adapted to indicate danger, caution and clear; a pole-changer operated by each signal; a signal relay for each signal each comprising a neutral armature and a polarized armature; a controlling circuit for the caution indication of each signal each including the neutral armature of the corresponding signal relay, and a polarized contact of the track relay for the block section in the rear; a controlling circuit for the clear indication of each signal each including the polarized armature of the corresponding signal relay and a back contact of the neutral armature of the track relay for the block section in the rear; and a circuit for each signal relay each including a source of current, a neutral armature contact of the track relay for the corresponding block section, and the pole-changer of the signal next in advance.

1,102,784. SAFETY APPLIANCE FOR RAILWAY-CARS. CHARLES M. MOCK and ARTHUR U. GERBER, Chicago, Ill. Filed Jan. 22, 1913. Serial No. 743,632. (Cl. 188—81.)



1. A safety appliance for a railway car equipped with an air-brake, comprising an outlet for the air of the air-brake system, and a vent controlling the outlet; the said vent comprising a detachable cup of fragile material, a manually operable valve carried by the said cup; the said valve being disposed in proximity to the track system and adapted upon derailment of the car to contact with a portion of the track system to effect a breakage of the said fragile cup.

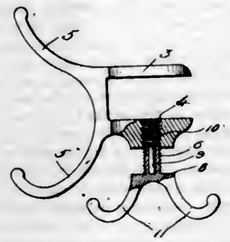
2. A safety appliance for a railway car equipped with an air-brake, comprising an outlet for the air of the air-brake system, and a vent controlling the outlet; the said vent comprising a detachable transparent and fragile cup, a threaded coupling for securing the same to a portion of the air-brake system, and a manually operable cock carried by the glass cup; the said cock being disposed in proximity to the track system and adapted upon derailment of the car to contact with a portion of the track system to effect a breakage of the glass cup.

1,102,785. GARMENT-HOOK. JOHN MOHLBERG, Brooklyn, N. Y. Filed Aug. 23, 1912. Serial No. 716,779. (Cl. 248—22.)

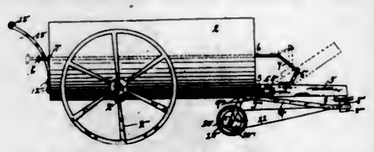
1. A garment support adapted to be applied to the edge of a shelf, a main body portion having hooks extending forwardly therefrom and a bifurcated portion for embracing the shelf, of a clamping screw member having a threaded engagement with one of the arms of the bifurcated portions, said member being provided with a hollow threaded stem part and a yielding plug inserted in the stem part and projecting beyond the end thereof.

2. A garment support adapted to be applied to the edge of a shelf, a main body portion having hooks extending forwardly therefrom and a bifurcated portion embracing

the shelf, of a clamping member for securing the body portion in place, said member being provided with a hollow portion, and a yielding member inserted in the hollow portion of a clamping member and projecting beyond the end thereof, said clamping member provided with a shoulder for limiting the inward travel of the same.



1,102,786. WHEELED BROADCASTING APPARATUS. FRANCIS P. MURPHY, Oakville, Conn. Filed Aug. 6, 1913. Serial No. 783,252. (Cl. 111—38.)



1. A broadcasting apparatus comprising a charger provided with opposite carrying-wheels, and, at its forward end, with a discharge-spout, said charger inclined forwardly and downwardly; an element for opening and closing said discharge-spout; and a connection extending from the element aforenamed in a direction generally rearward along said charger, and whereby said element may be actuated.

2. A broadcasting apparatus comprising a charger provided with opposite carrying-wheels, and, at its forward end, with a sectional discharge-spout, said charger inclined forwardly and downwardly, said spout-sections being jointedly assembled, and one thereof, when duly actuated, controlling the opening and closing of the other; and a connection extending from such controlling section of said discharge-spout in a direction generally rearward along said charger, and whereby said controlling spout-section may be actuated.

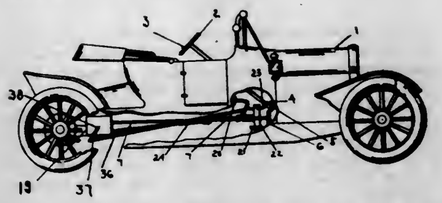
3. A broadcasting apparatus comprising a charger provided with opposite carrying-wheels, and, at its forward end, with a sectional discharge-spout, one of the sections of said discharge-spout being movable relatively to, and controlling, the other; and an operating-rod, the latter extending from said movable discharge-spout section in a direction generally rearward along said charger, lying mainly therein, and bearing essentially in the rear wall thereof.

4. A broadcasting apparatus comprising a charger provided with opposite carrying-wheels, and, at its forward end, with a sectional discharge-spout, one of the sections of said discharge-spout being movable into and out of alinement with the other, for controlling the opening and closing thereof, accordingly; and means for actuating said movable, discharge-spout section, said means embodying an operating part extending from the latter in a direction generally rearward along the charger aforenamed.

5. A broadcasting apparatus comprising a charger provided with opposite carrying-wheels, and, at its forward end, with a sectional discharge-spout, one section of the latter projecting fixedly from said charger, and the other thereof conjoined with said fixed section in a manner to be movable, pivotally, into and out of alinement therewith, the contiguous ends of said sections, at the joint therebetween, being, each, partially bridged, and having, each, a general transverse curvature concentric to the axis of movement of said movable section, whereby communication between said sections is established and checked accordingly as said movable section is brought into or out of alinement with said fixed section; and means for duly actuating said fixed section.

[Claims 6 to 8 not printed in the Gazette.]

1,102,787. GEAR-SHIFTING MECHANISM. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Dec. 8, 1913. Serial No. 805,281. (Cl. 74—58.)



1. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween including a multiple cranked selector embodying a plurality of rigidly connected independently active cranks, and actuating means controlled by the selector.

2. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween including a selector embodying a rotatable shaft provided with a crank for each driving relation, and actuating means controlled by the selector.

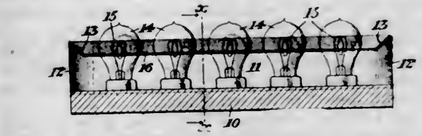
3. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween including a selector embodying a plurality of reciprocable plungers, and actuating means controlled by the selector embodying pairs of members connected by the plungers.

4. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween including a selector embodying a cranked shaft, plungers disposed to be thrown by cranked shaft rotation, and actuating means controlled by the selector.

5. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween including a selector embodying a cranked shaft, a plunger for each driving relation disposed to be thrown by cranked shaft rotation, and actuating means controlled by the selector.

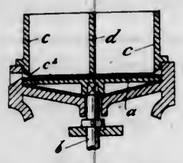
[Claims 6 to 12 not printed in the Gazette.]

1,102,788. ELECTRIC SIGN. MORTIMER NORDEN, New York, N. Y., assignor to Joseph Norden, New York, N. Y. Filed Apr. 5, 1913. Serial No. 759,008. (Cl. 40—130.)



An electric sign comprising a base, an open sided frame connected to the said base and forming a character to be displayed, an inwardly extending flange secured to the outer edge of the said frame and a plurality of lamps fixed in the base within the frame in such positions that the ends of the lamp filaments are substantially on a line with the free edge of the frame, and the central portions of the lamp filaments substantially on a line with the free edge of the said flange.

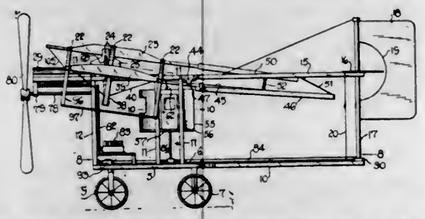
1,102,789. APPARATUS FOR CUTTING, GRINDING, MINCING, OR PULVERIZING RUBBER, LEATHER, CEREALS, OR OTHER SUITABLE SUBSTANCES. JOSEPH OGDEN, Manchester, England, assignor to Arthur Denton, Ingleside, Marple, county of Chester, England. Filed May 20, 1912. Serial No. 698,379. (Cl. 83—6.)



1. An apparatus for cutting, grinding, mincing and pulverizing rubber, leather and other similar substances, comprising an open-ended container, abutments in said container, a cutting disk situated below the lower end of the container so as to leave a small clearance space between the same and the walls of the container, said cutting disk being formed with sharp cutting edges leaving grooves between the same which do not extend as slots through the disk, and said cutting disk being adapted to be rotated at a high speed in order to cut the material in the container into very fine pieces and to discharge these fine pieces by centrifugal action through the clearance space.

2. An apparatus for cutting, grinding, mincing and pulverizing rubber, leather and other similar substances, comprising an open-ended container, vertical abutments in said container, said abutments extending approximately to the bottom of the container, an imperforate cutting disk below the lower end of the container, leaving a small clearance space between the same and the walls of the container, said cutting disk being formed of a support and a plurality of separate removable blocks carried thereby, on which blocks sharp parallel cutting edges are formed, said cutting disk being adapted to exert a cutting action on the material in the container when it is rotated at a high speed, and to discharge the finely cut up material by centrifugal action through the clearance space.

1,102,790. AEROPLANE. GEORGE L. OLIVER, La Grande, Oreg. Filed Jan. 26, 1914. Serial No. 814,523. (Cl. 244—29.)



1. In a flying machine, a longitudinally shiftable sustaining plane, a pivotally mounted tail plane, a slidable connection between said planes, means connected to the tail plane whereby the same may be disposed at an inclination longitudinally of the machine, and means for shifting the sustaining plane longitudinally of the machine with respect to the tail plane.

2. In a flying machine, a sustaining plane pivotally mounted for tilting movement transversely and longitudinally of the machine, a pivotally mounted tail plane, a slidable connection between the sustaining plane and the tail plane, and means for simultaneously positioning said planes at a longitudinal inclination with respect to the line of flight.

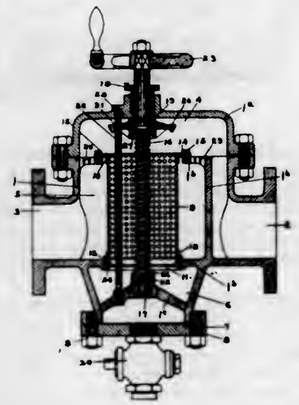
3. In a flying machine, a longitudinally shiftable sustaining plane, a tail plane, a slidable connection between the sustaining plane and the tail plane, and means for shifting the sustaining plane with respect to the tail plane to position the same with respect to the gravity center of the machine.

4. In a flying machine, a frame structure, a sustaining plane mounted upon said frame structure for longitudinal shifting movement with respect thereto, a passenger car vertically movable in the frame structure, means connecting said car to the sustaining plane whereby the plane is longitudinally moved upon the descent of the car under the weight of a passenger and positioned with respect to the gravity center of the machine, means for locking the plane in its shifted position, and additional means for locking said movable car in the frame structure.

5. In a flying machine, a frame structure, a vertically movable passenger car mounted in said frame structure, a sustaining plane longitudinally movable upon the frame structure, means normally holding the sustaining plane in position forwardly of said car, and means connecting the car to said plane whereby, in the descent of the car under the weight of a passenger, said holding means is overcome and the plane moved rearwardly and positioned with respect to the gravity center of the machine.

[Claims 6 to 16 not printed in the Gazette.]

1,102,791. STRAINER. CHARLES F. OVERLY, Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Nov. 11, 1910. Serial No. 591,759. (Cl. 210—16.)



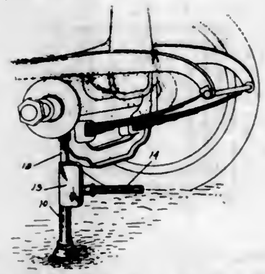
1. In a strainer, a casing having a straining and a cleaning chamber and an inlet passage opening to said straining chamber, two strainer elements, means to clean one of said elements, said means being operative from said inlet passage to an opening from said straining to said cleaning chamber and arranged to close said opening, the other strainer element affording a passage for the fluid when said means is passing from said inlet to the straining chamber, substantially as described.

2. In a strainer adapted to be connected in a pipe line to remove foreign matter from liquid being transmitted under pressure without interrupting the flow thereof, the combination of a casing having partitions forming an inlet and outlet and a straining and a cleaning chamber, said cleaning chamber having an access opening with a closure for same, a cylindrical strainer element in said straining chamber extending from an opening from said inlet to an opening to said cleaning chamber, a valve movable from said inlet through said strainer to close the opening to said cleaning chamber when the closure for said access opening is removed, the partition between said inlet and straining chamber having perforations to pass and strain the liquid while the valve is passing through the opening in said partition, substantially as described.

3. In a strainer adapted to be connected in a pipe line to remove foreign matter from liquid being transmitted under pressure without interrupting the flow thereof, the combination of a vertical casing with horizontally extending inlet and outlet adapted to be connected in a pipe line and having partitions forming an inlet passage, a straining chamber and a cleaning chamber, said inlet, outlet and partitions being formed integrally with said casing, a removable cover for said casing adapted to connect said passage with an opening to said straining chamber, a stationary cylindrical strainer element extending from said opening to an opening in said cleaning chamber, a valve adapted to pass through said strainer element from the inlet passage to close the opening to said cleaning chamber, the partition between said inlet passage and straining chamber having perforations therethrough and said cleaning chamber having an access opening with a closure for same, substantially as described.

4. In a strainer, the combination of a casing with an inlet and outlet and having partitions forming a straining and a cleaning chamber with an opening from said straining chamber to said cleaning chamber, a valve and a spindle screw-threaded through an opening in said valve to operate the same to close said opening between the straining and cleaning chamber, and means to prevent leakage through said screw-threaded opening in the valve, substantially as described.

1,102,792. LIFTING-JACK. RALPH CLIFTON PATTON, Providence, R. I. Filed Mar. 24, 1913. Serial No. 756,348. (Cl. 57—118.)



1. A lifting jack comprising a standard, an extending member therein, a supporting base, a clamping member within said base, and means exterior of said base for operating said clamping member for locking said base and standard together at any desired angle.

2. A lifting jack comprising a standard, an extending member therein, a supporting base, a clamping member within said base, a clamping member exterior of said base and coöperating with said first mentioned member to lock said standard and base together at any desired angle.

3. A lifting jack comprising a standard, an extending member therein, a supporting base, a clamping member within said base, a clamping member exterior of said base and coöperating with said first mentioned member, and a lever for operating said exterior member to lock said base and standard together at any desired angle.

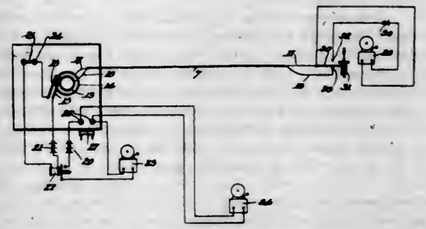
4. A lifting jack comprising a standard, an extending member in said standard, a supporting base member, means whereby said standard may receive a universal movement relative to said base, and a cam for locking said base and standard together in any desired relative position.

5. A lifting jack comprising a standard, an extending member in said standard, a base member, means whereby said standard may receive a universal movement relative to said base, and a readily adjustable cam collar for locking said base and standard together in any desired relative position.

[Claims 6 to 10 not printed in the Gazette.]

1,102,793. PORTABLE SIGNAL APPARATUS FOR MINES. JAMES W. PAUL, Davis, W. Va. Filed May 5, 1914. Serial No. 836,586. (Dedicated to the public.) (Cl. 177—311.)

1. A circuit including a portable switch, a source of current and a translating device, means for coiling and uncoiling a portion of the circuit between the switch and translating device, said switch being biased to move to one position and a signal controlled by said translating device and rendered active when the switch is in its biased position.



2. A signaling apparatus comprising a metallic circuit including a portable switch and a translating device, means for coiling and uncoiling the conductors forming a portion of the two sides of the circuit between the switch and translating device, said switch being biased to move to one position and being adapted to be carried by an operator and to be normally held by him away from its biased position, and a signal controlled by said translating device and rendered active upon movement of the switch to its biased position.

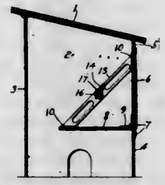
3. A signaling apparatus comprising a metallic circuit including a portable switch, a battery and a magnet, means for winding the conductors forming a portion of the two sides of the circuit in a coil, said winding means being between the switch and magnet, whereby the distance between the same may be varied at will, said switch being adapted to be carried by an operator and to be held by him in position to close said circuit, means for automatically moving the switch when released, to open the circuit, and a signal rendered active upon deënergization of said magnet.

4. A signaling apparatus comprising a reel, a pair of insulated conductors arranged side by side and wound on the reel, a portable switch adapted to be manually held in position to connect the free ends of the conductors, but biased to move away from such position when released, normally closed electrical connections between the other ends of said conductors, said connections including a magnet, and a signal actuated upon deënergization of said magnet.

5. A signaling apparatus comprising a reel, a pair of insulated conductors wound on the reel and forming a portion of the two sides of an electrical circuit, a portable switch connected with the outer ends of said conductors, and adapted to be normally held in position to connect said ends, but biased to move away from such position when released, normally closed connections between the inner ends of said conductors, said connections including a translating device, a source of energy for the normally closed circuit formed by said conductors, switch, and electrical connections, and a signal rendered active upon the opening of said circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,102,794. ROOST AND DROPPING-BOARD FOR HEN-HOUSES. EBEN PERKINS, Bridgewater, Mass. Filed Nov. 29, 1912. Serial No. 734,174. (Cl. 119—22.)



1. A hen house having an opening in one of its walls, and provided with a dropping board pivotally connected

with said house, of substantially the same area as said opening and adapted to be extended laterally from said wall within the house, or to be arranged in line with said wall and serve as a closure for said opening, and a roost mounted above said dropping board and extending longitudinally of said boards.

2. A hen house having an opening in one of its walls, and provided with a dropping board and a back board arranged at an angle to each other, and freely connected with said house at said opening so as to enable either said back board or dropping board to serve for a closure for said opening, and a roost mounted above said dropping board and extending longitudinally thereof.

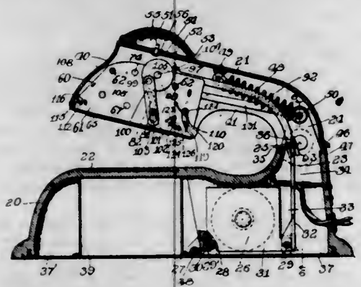
3. A hen house having an opening in one of its walls, and provided with a dropping board and a back board flexibly connected with said house at said opening, and having brace-bars connected at their ends with said dropping board and back board respectively, and provided with a bar serving as a roost extending longitudinally of said boards.

4. A hen house having an opening in one of its walls, and provided with a dropping board and a back board hinged together, said boards being flexibly connected to said house at said opening, and provided with a brace detachably connected at its ends to said dropping board and back board.

5. A roost and dropping board for hen houses comprising a dropping board, a back board arranged at substantially a right angle to said dropping board, braces detachably secured to said dropping board and back board, and a roost supported on said braces.

[Claim 6 not printed in the Gazette.]

1,102,795. STAMP. GEORGE ELLIOT PERRY, Chicago, Ill. Filed Oct. 7, 1908. Serial No. 456,620. (Cl. 234—53.5.)



1. In a stamp, a base, a movable head having a printing opening, an impression rosette therein, a ratchet connected therewith, a pawl therefor, movable about two centers of oscillation, one movement for engagement and disengagement with the ratchet, the other movement for advancing the engaged ratchet, and means operable from without the head for positively imparting both said oscillations to the pawl.

2. In a stamp, a base, a movable head having a printing opening, an impression rosette therein, a ratchet connected therewith, a pawl therefor movable about two centers of oscillation, one movement for engagement and disengagement with the ratchet, the other movement for advancing the engaged ratchet, a prime mover without said head, and positive connections from said base to said head whereby said prime mover in a cycle of operation positively imparts both said oscillations to the pawl.

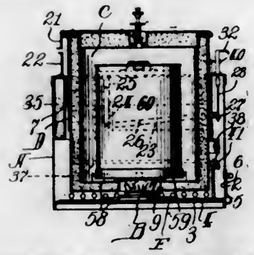
3. In a stamp, a base, a movable head having a printing opening, an impression rosette therein, a ratchet connected therewith, a shaft carrying said pawl mounted for oscillation eccentrically to the ratchet, a carrier for said pawl shaft mounted for oscillation concentrically with the ratchet, a prime mover in the base and positive connections to the head whereby movement of said part positively moves the carrier and pawl in one direction out of engagement with the ratchet, throws the pawl into engagement with the ratchet, and moves the carrier and pawl to advance the ratchet.

4. In a stamp, a base, a movable head having a printing opening, an impression rosette therein, a ratchet connected therewith, a pawl therefor movable about two centers of oscillation, one for engagement and disengagement with the ratchet, the other for advancing the engaged ratchet, a single reciprocable part, and positive connections between said reciprocable part and the pawl, for positively imparting both said oscillations to the pawl.

5. In a stamp, a base, a movable head having a printing opening, an impression rosette therein, a ratchet connected therewith, a carrier oscillating about the ratchet axis, a pawl mounted for oscillation on said carrier, a single prime mover without the head and positive connections between said prime mover and pawl whereby said prime mover in a cycle of movement oscillates the pawl in the carrier for proper engagement and disengagement with the ratchet, and oscillates the carrier through its connection with the pawl while the pawl is in engagement with the ratchet, to advance said ratchet.

[Claims 6 to 25 not printed in the Gazette.]

1,102,796. COOKING APPARATUS. ROSS M. G. PHILLIPS, Minneapolis, Minn. Filed July 20, 1912. Serial No. 710,630. (Cl. 126—23.)



1. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater, one of the said parts being movable with respect to the other for the creation and closure of a draft-space between them, a spacing mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the said spacing mechanism.

2. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages and adapted to receive a radiator, of a preheater, one of the said parts being movable with respect to the other for the creation and closure of a draft-space between them, spacing-mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the spacing-mechanism.

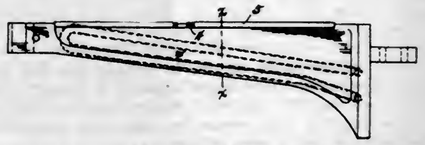
3. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress passage, the said parts being movable with respect to each other for the creation and closure of a draft-space between them, spacing mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the said spacing-mechanism.

4. In a cooking apparatus, the combination with a vertically movable food-container formed at its lower end with an ingress draft-passage, of a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the food-container above the preheater in spaced relation thereto, and means for automatically controlling the function of the spacing-mechanism in releasing the container which descends upon the preheater for the closing of its said shaft ingress passage.

5. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the spacing mechanism, and means for automatically closing the said egress draft-passage when the container and preheater are moved together.

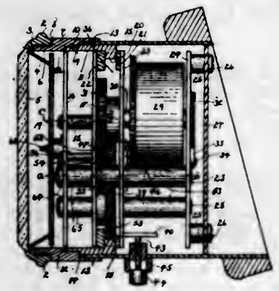
[Claims 6 to 23 not printed in the Gazette.]

1,102,797. ELECTRIC WELDING-MACHINE. ROBERT CLARK PIERCE, Cincinnati, Ohio, assignor to The Toledo Electric Welder Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 31, 1913. Serial No. 809,643. (Cl. 219—4.)



In an electric welding machine, a die carrying horn forming an electrical conductor and having a surface thereof provided lengthwise of its side edges with laterally protuberant beads, an insulating strip covering such surface and embracing said beads, and a guard sheet of stiff material covering said insulating material and having its side edges embracing said beads and coöperating therewith to retain it and the insulating strip in position on the horn.

1,102,798. RIM-WINDING KEYLESS CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Mar. 19, 1913. Serial No. 755,539. (Cl. 58—46.)



1. In a rim-winding keyless clock, the combination with the case thereof, of an independently organized time-train located in the said case and having front and rear movement-plates, a power train located in the said case and having front and rear movement-plates, a predetermined space being formed between the adjacent plates of the respective trains, an internal winding-and-setting gear having rotary bearing upon the edges of the front and rear plates of the said independently organized time-train and having its teeth entered into the said space; and connections between the said gear and time- and power-trains.

2. In a rim-winding keyless clock, the combination with the case thereof, of an independently organized time-train located in the forward portion of the said case and having front and rear movement-plates, a power-train located within the rear portion of the said case and having front and rear movement-plates, a predetermined space being formed between the adjacent plates of the respective trains; a ring gear having rotary bearing upon the edges of the plates of the time-train and having its teeth entered into the said space, spacing rings located within the said space and arranged on opposite sides of the said teeth for preventing the said gear from lateral movement in the said space, and connections between the teeth of the said gear and the time- and power-trains.

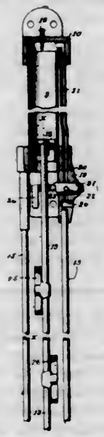
3. In a rim-winding keyless clock, the combination with the case thereof, of an independently organized time-train located therein and having front and rear movement-plates, a power-train located in the said case and having front and rear movement-plates, the adjacent plates of the said trains being separated from each other by a predetermined space; universal binding pillars mounted in the rear plate of the said power-train and extending through all of the said plates for binding the trains together, a ring gear having rotary bearing upon the edges of the plates of the said time-train and having its teeth entered into the said space, and connections between the said gear and time and power-trains.

4. In a rim-winding keyless clock, the combination with the case thereof, of an independently organized time-train located in the forward portion of the said case and having front and rear movement-plates, a power-train located in the rear portion of the said case and having front and rear movement-plates, the adjacent plates of the said trains being separated by a predetermined space; a manually operable ring gear having rotary bearing upon the edges of the plates of the said time-train and having its teeth entered into the said space, and connections located in the said space, between the said time- and power-trains and the said gear.

5. In a rim-winding keyless clock, the combination with the case thereof, of a rear movement-plate secured to the back of the case, universal binding pillars secured at their rear ends to the said plate, spacing-sleeves encircling the rear portions of the said pillars, a front movement-plate bearing upon the front ends of the said sleeves, spacing sleeves bearing upon the front face of the said front movement-plate, a separately organized time-movement adapted to be applied as one structure to the outer ends of the said pillars with its rear movement-plate resting upon the forward ends of the said sleeves last mentioned which create a predetermined space between the time and power-trains of the movement, a ring gear having rotary bearing upon the movement-plates of the time-movement and having its teeth entered into the said space, and connections between the said gear and trains with means for shifting the connection from one train to the other, and vice versa.

[Claim 6 not printed in the Gazette.]

1,102,799. AUTOMATIC CHECK FOR ELEVATOR-DOORS. ANDREW CURTIS PREBLE, Chicago, Ill. Filed Aug. 22, 1912. Serial No. 716,366. (Cl. 74—69.)



1. In a retarding mechanism for counter-balanced doors of elevator wells, the combination of a retarding cylinder having an outlet passage at one end, a piston and piston

rod associated with said cylinder and provided with means for intermittent operative engagement with a moving part of a counter-balanced well door, a valve disposed in the aforesaid passage of the retarding cylinder, and means carried by said piston rod for operating said valve to relieve the cylinder of compression as the piston nears the end of its stroke in one direction, substantially as set forth.

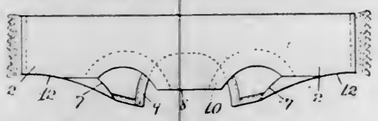
2. The combination of a retarding cylinder provided with a passage at one end, a valve controlling said passage and having a movable valve member provided with a pair of angularly disposed crank arms, a piston in said cylinder, a piston rod attached to said piston and having a pair of vertically separated tappets adapted for alternate operative engagement with aforesaid crank arms, and a cross-head carried by said piston rod and adapted for operative engagement with a moving part of a counterbalanced well door, substantially as set forth.

3. The combination of a retarding cylinder provided with a passage at one end, a valve controlling said passage and having a movable valve member provided with a pair of angularly disposed crank arms, a piston in said cylinder, a piston rod attached to said piston and having a pair of vertically separated tappets adapted for alternate operative engagement with aforesaid crank arms, and a cross-head carried by said piston rod and adapted for intermittent operative engagement with the intermediate counterbalancing connection of a well door, substantially as set forth.

4. The combination of a retarding cylinder provided with a passage at one end, a valve controlling said passage, a vent valve in the same end of the cylinder, a piston in said cylinder, a piston rod attached to said piston and adapted for intermittent operative connection with said controlling valve, and a cross-head carried by said piston, and adapted for operative engagement with a moving part of a well door, substantially as set forth.

5. The combination of a retarding cylinder provided with a passage at one end, a valve controlling said passage, a piston in said cylinder, a piston rod attached to said piston and adapted for intermittent operative connection with said controlling valve, a cross-head carried by said piston rod and adapted for intermittent operative engagement with a tappet carried by the intermediate counter-balancing connection of an elevator well door substantially as set forth.

1,102,800. WOMAN'S CURTAIN-DRAWERS. MARTHA M. PRINDALL, Lynn, Mass. Filed Mar. 28, 1913. Serial No. 757,458. (Cl. 2—122.)

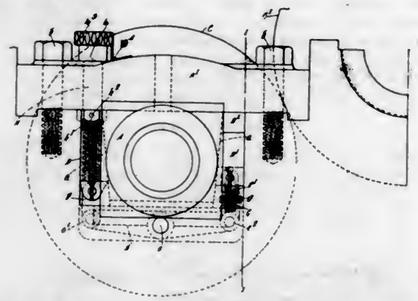


A pair of drawers, including a solid middle portion and oppositely extending leg portions, and having a continuously rectilinear fold of said middle portion and leg portions, a waist bay entirely in front of said fold, and having its ends substantially at right angles to the line of said fold, a curtain portion, lateral indentations in connection therewith, and plackets, parallel to the line of said fold, and connecting the ends of the waist bay to the ends of said indentations, at the ends of the leg seams.

1,102,801. MOVABLE JOURNAL-BOX. OTTO LEONARD RAABE, Hayes, England, assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,443. (Cl. 64—52.)

1. In an adjustable bearing or journal box, the combination with movable wedges arranged on opposite sides of the bearing, of a pivoted arm coupling said wedges together and means for imparting movement to said arm.

2. In an adjustable bearing or journal box, the combination with movable wedges situated on opposite sides of the bearing, of a centrally pivoted arm coupling said wedges together, and means for imparting rocking movement to said arm.



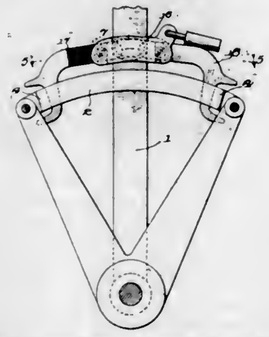
3. In an adjustable bearing or journal box, the combination with movable wedges situated on opposite sides of the bearing, of a centrally pivoted arm coupling said wedges together and means for imparting longitudinal movement to one of said wedges.

4. In an adjustable bearing or journal box, the combination with movable wedges situated on opposite sides of the bearing, of a pivoted arm coupling said wedges together, a screw threaded member mounted in the bearing box and engaging a corresponding screw threaded portion of one of the said wedges and means for imparting rotary movement to said screw threaded member.

5. In an adjustable bearing or journal box, the combination with movable wedges situated on opposite sides of the bearing, of a pivoted arm coupling said wedge together, a screw threaded member mounted in the cover of the bearing box and engaging a corresponding screw threaded portion of one of said wedges, means for imparting rotary movement to said screw threaded member and means for locking said member.

[Claims 6 to 11 not printed in the Gazette.]

1,102,802. LEVER-LOCKING DEVICE. ROBERT REINKE, Chicago, Ill. Filed Aug. 16, 1912. Serial No. 715,328. (Cl. 70—90.)



1. In a lever locking device a single slotted lever guide; a lever movable therein; two pivotally connected members adapted to embrace the said lever and having forked ends adapted to bear internally against the ends of said guide; and means to lock the said members in a closed position.

2. In a lever locking device, a single slotted lever guide; a lever movable therein; two pivotally connected extensible members adapted to embrace the said lever and having forked ends adapted to bear internally against the ends of said guide; and means for locking the said members in a closed position.

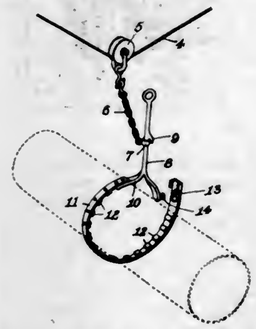
3. In a device of the class described, in combination, a lever; a guide frame having a slot in which said lever moves; two pivotally connected extensible members having forked ends adapted to bear against the end walls of the said guide frame at opposite ends of the said slot, said members being adapted to embrace the said lever and hold it in a position midway of the said slot; and means for locking said members in position.

4. In a device of the class described, a slotted lever guide; a lever movable therein; a pivoted frame adapted to be clasped about said lever; means for locking said frame in a closed position; two forked arms extensibly connected with said frame and adapted to bear against opposite ends of said lever guide; means for extending said arms, said means being so disposed as to be inaccessible while the said frame is locked in a closed position.

5. In a device of the class described, a lever; a guide frame having a slot in which said lever moves; two pivotally connected extensible members having forked ends adapted to bear against the opposite end walls of said slot; blocks forming with said members a frame adapted to embrace the said lever; lugs on said members having apertures which register when the said frame is in a closed position; and means for locking said lugs together.

[Claims 6 to 9 not printed in the Gazette.]

1,102,803. TAKE-DOWN SLING FOR HANDLING GLASS CYLINDERS. JOHN H. ROADMAN, Monongahela, and WILLIAM M. DRAVO, Belle Vernon, Pa., assignors to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 20, 1909. Serial No. 497,296. (Cl. 57—9.)



1. Apparatus for taking down glass cylinders, comprising a strap adapted to be passed around a glass cylinder to be taken down and having means for effecting a separable connection of its ends, a handle fixed to said strap and projecting radially therefrom, and a suspending device for the handle, said handle and strap being substantially rigid when moved in the direction of the axis of the cylinder to be taken down, substantially as described.

2. In apparatus for taking down glass cylinders, a strap adapted to surround the cylinder to be taken down and having means for effecting a separable connection of its ends, a rigid handle fixed to said strap near one end thereof and projecting therefrom, and a supporting device attached to the handle intermediate of its ends, whereby the handle and strap may be turned from a vertical to a horizontal position, the handle and strap being substantially rigid when moved in the direction of the axis of the cylinder, substantially as described.

3. In apparatus for taking down glass cylinders, a strap adapted to surround the cylinder to be taken down, a handle connected to said strap and extending radially therefrom, and a supporting device having a slidable engagement with the handle, the handle having means for limiting the sliding movement, and said handle and strap being rigidly connected with respect to movement in the direction of the axis of the cylinder to be taken down, substantially as described.

4. Apparatus for taking down glass cylinders, comprising a flexible metal strap adapted to surround the cylinder to be taken down and having a non-metallic inner portion for contact with the cylinder, a handle fixed to said strap and extending vertically therefrom, and supporting means connected to the handle, the handle and strap being substantially rigid when moved in the direction of the axis of the cylinder, substantially as described.

5. A device for taking down glass cylinders, comprising a sling having separable ends and adapted to surround the glass cylinder, a handle fixed to the cylinder near one of its ends, and a suspending device having swing connection with the handle, said handle and sling being constructed and connected to be substantially rigid when moved in the direction of the axis of the cylinder, substantially as described.

[Claim 6 not printed in the Gazette.]

1,102,804. HOSE-SUPPORTER. FREDERICK AUGUSTUS ROWE, North Vancouver, British Columbia, Canada, assignor of one-half to Edward Winthrop Pelton, Vancouver, Canada. Filed June 20, 1913. Serial No. 774,848. (Cl. 24—246.)



1. In a garment supporter, a depending member, and a co-acting supporting plate having means for retaining the fabric at one side in such a position that it passes over the upper edge in a fold and hangs unobstructed downwardly upon the opposite side.

2. A hose supporter comprising a depending member and a relatively movable co-acting plate normally held under strain parallel to the member and means for normally holding the fabric between it and the member and yet allow of such fabric passing upwardly between the plate and member and folding over the top edge of the plate and hanging directly therefrom, so that the strain on the fabric is equally divided on both sides of the upper edge of the plate and the tearing of the fabric is prevented as specified.

3. A hose supporter comprising a vertically slotted member and a co-acting plate normally held under strain and means coöperating with the slotted member for holding the fabric between it and the slotted member and yet allowing of such fabric passing upwardly between the plate and the slotted member and folding over the top edge of the plate and hanging freely behind the plate from such edge as specified.

4. A hose supporter comprising a depending member and a co-acting plate normally held under strain parallel to the member and means for adjustably connecting it to the member, whereby its relative position to the member may be primarily changed, so as to receive the fabric and means for normally holding the fabric between it and the member, and yet allow of such fabric passing upwardly between the plate and the member and folding over the top edge of the plate and hanging directly therefrom, so that the strain on the fabric is equally divided on both sides of the upper edge of the plate and the tearing of the fabric is prevented as specified.

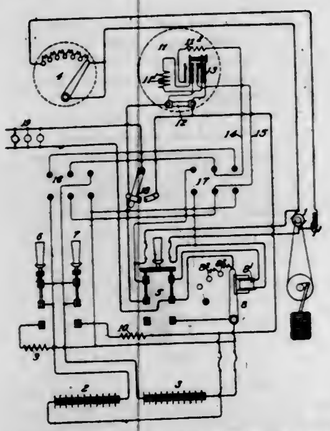
5. A hose supporter comprising a depending member and a co-acting member provided with a yielding upper edge secured adjacent to the depending member, and means for gripping the fabric between the two members, so that the fabric passes from the gripping point upwardly and folds over and passes downwardly from the top and on the opposite side of the co-acting member as specified.

[Claims 6 to 14 not printed in the Gazette.]

1,102,805. ELECTRIC LIGHT AND POWER SWITCHBOARD. FRANK W. SCHARF, Sioux City, Iowa, assignor to Interstate Electric & Mfg. Co., Sioux City, Iowa, a Corporation of Iowa. Filed Mar. 22, 1911. Serial No. 616,222. (Cl. 171—313.)

1. In a power plant switchboard system; a generator, a storage battery, service mains, a main switch adapted to

connect either said generator or said storage battery across said mains and an automatic circuit-breaker adapted also to connect said storage battery across said service mains when said main switch is thrown to connect said generator across said mains, said automatic circuit breaker having a release coil in said generator circuit, substantially as described.



2. In a power plant switchboard system; a generator, a storage battery, service mains, a main switch adapted to connect either said generator or said storage battery across said mains and an automatic circuit-breaker adapted also to connect said storage battery across said service mains when said main switch is thrown to connect said generator across said mains, and a holding coil for said circuit-breaker adapted to release said circuit-breaker to disconnect said battery when said generator becomes deenergized, substantially as described.

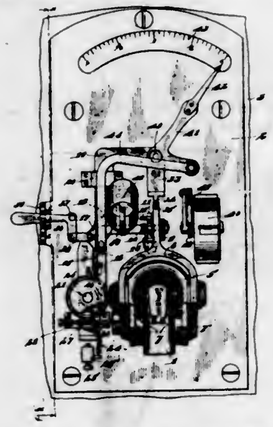
3. In a power plant switchboard system; a generator, a storage battery, service mains, a main switch adapted to connect either said generator or said storage battery across said mains and an automatic circuit-breaker adapted also to connect said storage battery across said service mains when said main switch is thrown to connect said generator across said mains, and switches adapted to divide said storage battery and to connect its subdivided portions across said service mains, substantially as described.

4. In a power plant switchboard system; a generator, a storage battery, service mains, a main switch adapted to connect either said generator or said battery with said service mains, a pair of charging resistance units, a pair of battery switches each adapted to subdivide said battery and to connect the corresponding portions of said battery across said service mains in series with one of said charging resistances and an automatic circuit-breaker adapted to connect said battery across said mains, when said main switch is thrown to connect said generator across said mains, substantially as described.

1,102,806. AUTOMATIC LIQUID-MEASURING DEVICE. FRANK SCHORIK and FRANK F. MARSHALL, Chicago, Ill. Filed Mar. 28, 1913. Serial No. 757,340. (Cl. 221—101.)

1. A liquid measuring device comprising a faucet having a controlling valve therein; means for yieldingly holding said valve normally in closed position; a detent for releasably holding said valve in open position; a trigger for tripping said detent; means for actuating said trigger; a water wheel operable by the liquid passing through said faucet; means operative through rotation of said water wheel for operating said actuating means to actuate said trigger; means for breaking the operative connection between said water wheel and said actuating means upon tripping of said detent and movement of said valve to closing position, substantially as described.

2. A liquid measuring device comprising a faucet having a controlling valve therein; means for yieldingly holding said valve normally in closed position; a detent for releasably holding said valve in open position; a trigger for tripping said detent; means for actuating said trigger; a water wheel operable by the liquid passing through said faucet; means operative through rotation of said water wheel for operating said actuating means to actuate said trigger; means for breaking the operative connection between said water wheel and said actuating means upon tripping of said detent and movement of said valve to closing position; and means for establishing said operative connection between said water wheel and said actuating means upon movement of said valve to open position, substantially as described.



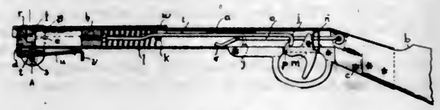
3. A liquid measuring device comprising a faucet having a controlling valve therein; means for yieldingly holding said valve normally in closed position; a detent for releasably holding said valve in open position; a trigger for tripping said detent; means for actuating said trigger; a water wheel operable by the liquid passing through said faucet; means operative through rotation of said water wheel for operating said actuating means to actuate said trigger; means for breaking the operative connection between said water wheel and said actuating means upon tripping of said detent and movement of said valve to closing position; and resilient means for establishing said operative connection between said water wheel and said actuating means upon movement of said valve to open position, substantially as described.

4. A liquid measuring device comprising a faucet having a controlling valve therein; means for yieldingly holding said valve normally in closed position; a detent for releasably holding said valve in open position; a trigger for tripping said detent; means for adjusting said trigger to vary the interval at the expiration of which said trigger will be actuated by said actuating means; a water wheel operable by the passage of liquid through said faucet; and means operative through rotation of said water wheel for operating said actuating means to actuate said trigger, substantially as described.

5. A liquid measuring device comprising a faucet having a controlling valve therein; means for yieldingly holding said valve normally in closed position; a detent for releasably holding said valve in open position; a trigger for tripping said detent; means for actuating said trigger, said actuating means comprising a rotatable member; a plurality of contact points on said rotatable member arranged at varying distances from the center of rotation of said member and spaced circumferentially, said points being adapted, upon rotation of said member, to contact with said trigger to effect actuation thereof; means for adjusting said trigger to position the same for engagement by any one of said points of contact; and means operable by the passage of liquid through said faucet for positively operating said rotatable member, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,102,807. FILM-BURSTER. CHARLES P. SHAW, Detroit, Mich. Filed Dec. 29, 1913. Serial No. 809,149. (Cl. 46—46.)



1. In a pop-gun, the combination of a barrel provided with a lateral hole near its outer end, a plug fixed in the outer end, means for forcing the air out through said lateral hole, and means for clamping paper about said lateral hole substantially as described.

2. In a pop-gun, the combination of a barrel provided with a lateral hole near its outer end, a plug fixed in the outer end provided with an axial passageway and a lateral passageway registering with the lateral hole of the barrel, a plunger within said barrel for forcing air out through said lateral hole, the said plug acting as a stop to said plunger, and means for clamping paper upon the outside of the barrel adjacent the said lateral hole, substantially as described.

3. In a pop-gun, the combination of a barrel provided with a lateral opening, a plug in the end of the barrel, means for forcing air through the lateral opening, and a paper holder for clamping paper upon the barrel adjacent said opening, the said paper holder comprising a band and means for loosening and tightening said band, substantially as described.

4. In a pop-gun, the combination of a barrel provided with a lateral opening, a plug in the end of the barrel, means for forcing air through said lateral opening, and a holder for clamping paper about said lateral opening comprising a band and a cam roll engaging with the bottom of the barrel to loosen or tighten the band upon the paper, substantially as described.

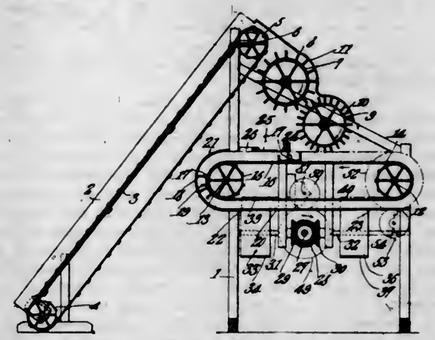
5. In a pop-gun, the combination of a barrel provided with a lateral opening, a plug in the end of the barrel, means for forcing air through said lateral opening and means for clamping the paper about said lateral opening comprising a band, a cam roll journaled in said band, and provided with a cutaway portion, said cam roll being located in a recess in the bottom of the barrel, and a crank arm on the end of the cam roll whereby turning the crank arm the band is loosened or tightened, substantially as described.

1,102,808. MACHINE FOR SNIPPING BEANS. FRED A. SHOMAN, Milwaukee, Wis., assignor to The Phinney Engineering Co., Chillicothe, Ohio, a Corporation of Ohio. Filed Mar. 27, 1909, Serial No. 486,282. Renewed Mar. 10, 1913. Serial No. 753,418. (Cl. 146—11.)

1. A machine for snipping beans comprising a carrier mounted for orbital movement and having cups to receive the beans, a table over which the lower run of the carrier passes, means for supplying the beans to be snipped to said cups while the latter are on the upper run of said carrier, endless belts having upper runs located in the plane of the table, said belts moving in directions opposite to each other, and cutters located behind each belt.

2. A machine for snipping beans comprising a carrier mounted for orbital movement, a table located below the carrier, a bean feeding device arranged above the carrier, endless belts having upper runs located in the plane of the table, means for moving the said belts in opposite directions, an adjustable gage mounted above the upper run of each belt, and a cutter located behind each belt.

3. A machine for snipping beans comprising an endless carrier mounted for orbital movement, a table located below the carrier, means for projecting the beans alternately beyond the opposite sides of the carrier, means for removing the projecting ends of the beans, a drum located above the carrier and having pockets provided upon its periphery, an elevator for supplying beans to the drum, and a flexible material resting upon the upper portion of the drum.

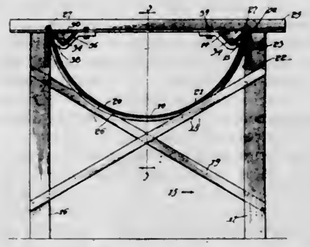


4. A bean snipper comprising a main carrier adapted to move the beans and having an upper run and a lower run, means for supplying beans to the upper run of said carrier, a belt adapted to move the beans transversely of the lower run of the main carrier, and a cutter for removing the ends of the beans arranged on that side of the main carrier toward which the beans are moved by said belt.

5. A bean snipper comprising a main carrier adapted to move the beans and having an upper run and a lower run, means for supplying beans to the upper run of said carrier, a belt adapted to move the beans transversely of the lower run of the main carrier, a gage against which the beans are carried by said belt, and a cutter for removing the ends of the beans arranged on that side of the main carrier toward which the beans are moved by said belt.

[Claim 6 not printed in the Gazette.]

1,102,809. FLUME CONSTRUCTION. PARKE T. SNYDER, Chicago, Ill., assignor of one-half to Ross J. Beatty, Chicago, Ill. Filed June 20, 1913. Serial No. 774,732. (Cl. 61—5.)



1. A flume supporting structure for a transversely curved trough-like flume with its longitudinal edges bent to form marginal ribs comprising a transversely-disposed bar overlying the top of the trough and projecting therebeyond at each end; a supporting rod curved substantially upon the same radius as the flume and underlying the under surface thereof, attached at both ends to said bar; means contacting with the marginal ribs of said trough for connecting with said bar and means for supporting the projecting ends of said bar.

2. A supporting structure for a flume having its longitudinal edges bent to form marginal strengthening ribs, comprising a transversely-disposed bar overlying the upper surfaces of said ribs; a supporting rod, bent to conform substantially with the transverse contour of said flume and underlying the bottom surface thereof, connected at its ends to said bar; clips securing said ribs to said bar and supporting means underlying the projecting ends of said bar.

3. A supporting structure for a curved trough-like flume having its longitudinal edges bent to form integral marginal strengthening ribs, comprising a transversely-disposed bar overlying the upper surface of said ribs, and projecting therebeyond; a supporting rod curved to conform with the transverse contour of said flume and underlying the bottom surface thereof, having its ends passing through said bar and adjustably secured thereto by screw threaded nuts; clips underlying said ribs for securing them to said bar and supporting means underlying the projecting ends of said bar.

4. A supporting structure for a flume having its longitudinal edges bent inwardly and downwardly, then upwardly in angular relation to form integral, inverted, marginal, strengthening ribs, consisting of a transversely disposed supporting bar overlying said strengthening ribs and in contact therewith and having its ends projecting therebeyond; blocks tapered to conform with the taper of said ribs, and within the ribs formed thereby and having means for preventing their displacement; clips secured to said bar in contact with the lower surface of said ribs and located under said blocks, and means underlying the projecting ends of said bar for supporting the flume.

5. A supporting structure for a flume, comprising a series of bents located at intervals, each bent consisting of vertically disposed posts, one on each side of said flume, and transversely extending connecting means attached to said post and in direct supporting relation with said flume, longitudinally extending, vertically disposed running boards parallel with the edges of said flumes and connecting said bents and transversely disposed bars superposed above said flume, connected thereto and having ends projecting therebeyond resting on said oppositely disposed posts.

[Claim 6 not printed in the Gazette.]

1,102,810. FLUME. PARKE T. SNYDER, Chicago, Ill., assignor of one-half to Ross J. Beatty, Chicago, Ill. Filed Aug. 11, 1913. Serial No. 784,106. (Cl. 61—5.)



1. A flume comprising a series of sheets interlapped at their ends, having their longitudinal edges folded upon themselves and bowed into cylindrical form, and connected, to mutually hold the structure in shape.

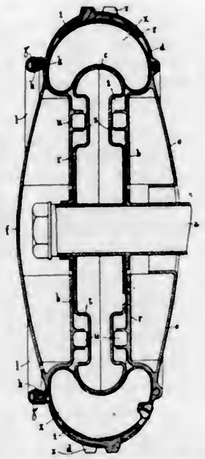
2. A flume comprising a series of sheets, each having its longitudinal edges folded back upon itself, the ends of adjacent sheets interlapped, one within the other, to provide joints therebetween, and bowed into cylindrical shape, and means for connecting the longitudinal edges to mutually hold the structure in shape.

3. A flume comprising a series of sheets, each having its longitudinal edges folded back upon itself, the ends of adjacent sheets interlapped one within the other to provide joints therebetween, and bowed into cylindrical shape, and cleats engaging the folded edges to hold the structure in shape.

1,102,811. ELASTIC TIRE FOR VEHICLES. JACOBUS SPYKER, Amsterdam, Netherlands. Filed Dec. 8, 1913. Serial No. 805,455. (Cl. 152—34.)

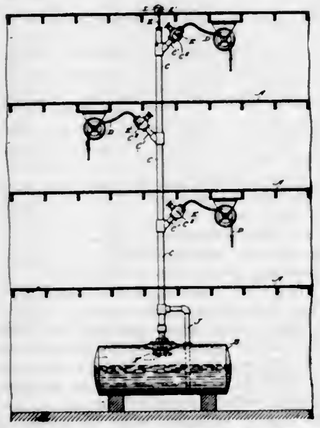
1. In a yieldable wheel structure for vehicles, in combination, a hub and inner wheel structure thereon having a rounded periphery, a rigid outer wheel structure comprising substantially symmetrical, outwardly-dished side plates and a rounded tread portion provided with peripheral apertures, movable tread studs passing through the apertures and a pneumatic cushion engaged between the periphery of the inner wheel structure and the tread and engaging the bases of said studs, said cushion extending laterally beyond the inner wheel structure and engaging outwardly-facing, annular seats carried by the outer rigid wheel structure, the parts being constructed and arranged so that the parts of the wheel are held in operative relation to each other by pressure of said pneumatic cushion.

2. In a yieldable wheel for vehicles, the combination of a hub, a rigid inner wheel member thereon, a rigid outer member comprising a rounded tread portion and an outwardly-dished web portion provided with an aperture to embrace the hub, said tread portion being apertured on its periphery, studs passing through said apertures, a pneumatic cushion interposed between the inner structure and the bases of the studs and said tread, a cover plate outwardly-dished and interlocking devices carried by said tread portion and said cover plate for removably securing the cover plate in position to form a complete closure for the outer side of the wheel, the parts being constructed and arranged so that said pneumatic cushion is subject, when the wheel is loaded, to double compression, applied to the cushion both upon its outer and inner sides.



3. In a yieldable wheel structure for vehicles, the combination of a hub, an inner rigid wheel member, an outer rigid tread member, cushion means between said members, a cover plate, flanges on said tread member and cover plate, and interlocking devices on said flanges whereby the cover plate is removably secured in position by rotating it in relation to the tread member.

1,102,812. FIRE-EXTINGUISHING APPARATUS. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed May 8, 1914. Serial No. 837,147. (Cl. 169—24.)



1. In apparatus of the class described, the combination with a standpipe system arranged to provide for free downward passage of actuating weights and connected with a reservoir below, means for releasing weights within the pipes of said system, and means actuated by the weights for causing gas producing chemicals to react and force liquid out of the reservoir into said system.

2. The combination with a reservoir for liquid, of a pipe extending upwardly therefrom and having a distant discharge opening, means for creating gas pressure in the reservoir, a weight normally held at a distance from the reservoir and adapted to fall within said pipe by gravity, means for releasing the weight, and means operated by the descending weight for putting said pressure-creating means into action.

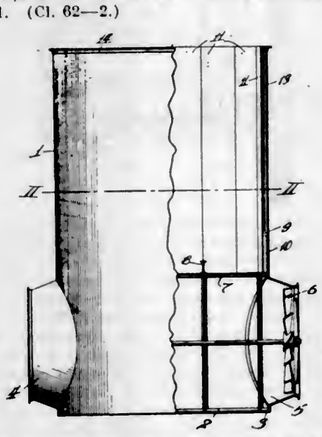
3. The combination with a liquid containing reservoir, of a pipe extending upwardly therefrom and adapted for discharging said liquid at a distant point, a weight within said pipe, normally held in raised position and adapted to fall therein by gravity, means for releasing the weight, and means whereby the released weight causes the generation of gas pressure in the reservoir.

4. The combination with a liquid containing reservoir, of a pipe extending upwardly therefrom and having an upwardly inclined valve controlled branch at a distance from the reservoir, a weight normally held in said branch and arranged to be released by opening the valve, and means operated by the released weight for creating gas pressure in the reservoir.

5. The combination with a liquid containing reservoir and a pipe leading upwardly therefrom and provided with upwardly inclined valve controlled branches at various heights, of a series of valve released weights normally held in the branches, respectively, and a chemical container arranged to be discharged by any of said weights, in falling, and thereby to create gas pressure in said reservoir.

[Claims 6 to 8 not printed in the Gazette.]

1,102,813. COOLING-TOWER CONSTRUCTION. GEORGE J. STOCKER, St. Louis, Mo. Filed Apr. 10, 1911, Serial No. 620,244. Renewed Mar. 16, 1914. Serial No. 825,161. (Cl. 62—2.)



1. In a fluid cooling tower, the combination with an outer metallic shell, of an inner non-corrosive shell constructed in sections adjoining along vertical joints, and beams extending longitudinally of said joints, said beams being rigidly supported by said outer shell and forming a rigid reinforcement to said joint.

2. In a device of the character described, the combination with an inner non-corrosive wall constructed in sections having their joints disposed vertically, of beams secured to the outside walls of said sections along said joints, a channel beam disposed with its channel embracing the outer face and adjacent corners of each of the first said beams, and an outer tubular shell rigidly supporting said channel beams.

3. In a cooling tower, an inner polygonal wall comprising wooden sections arranged in abutment along straight line joints, a post extending longitudinally of each joint and overlapping the sections on their outer surfaces, a channel with its web and flanges contacting respectively with three faces of said post, and a rigid band clamping said channels over said posts and holding the latter in supporting relation to said joints.

1,102,814. SCYTHE. GABRIEL STUEIT, Steissligen, Baden, Germany. Filed Dec. 17, 1912. Serial No. 737,264. (Cl. 56—27.)

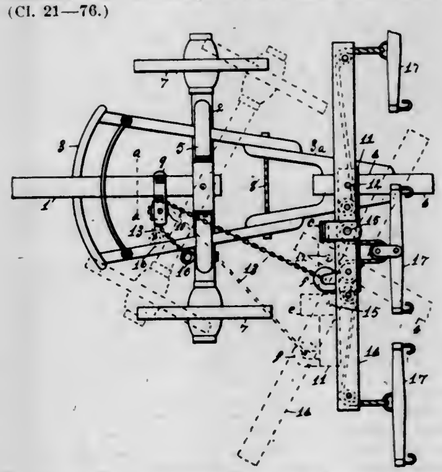


1. An improved fastening ring for scythes, comprising in combination a yoke, an eccentric roller journaled in the ends of said yoke and an eccentric mounted on said roller, substantially as set forth.

2. An improved fastening ring for scythes, comprising in combination a yoke, an eccentric roller journaled between the ends of said yoke, an eccentric sleeve around said roller, and bearing surfaces on said sleeve and arranged at different distances from the center of the eccentric roller, substantially as and for the purpose set forth.

3. An improved fastening ring for scythes, comprising in combination a yoke an eccentric roller journaled between the ends of said yoke, an eccentric sleeve around said roller, and flat bearing surfaces on said sleeve, said surfaces being arranged at different distances from the center of the eccentric roller, substantially as set forth.

1,102,815. EQUALIZER-HOLDER. LOUIS C. STRUENSEE, Oshkosh, Wis. Filed Sept. 6, 1913. Serial No. 788,430. (Cl. 21—76.)

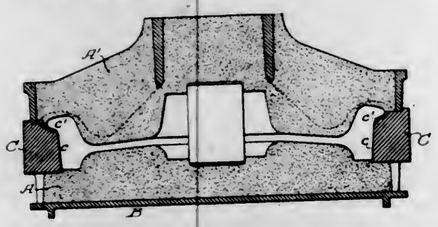


1. An equalizer holder for use upon a vehicle having a tongue and reach, consisting of a device adapted to be

pivotally connected to a vehicle tongue at one end thereof, means for connecting a flexible member, such as a chair to the other end, means for pivotally mounting an equalizer bar intermediate its ends, in combination with a flexible member and a sheave pulley, the latter being mounted for revolution upon the vehicle reach and the former passed around said pulley and being connected with the vehicle axle.

2. An equalizer holder for use upon a vehicle having a reach and a tongue, consisting of the spaced apart leaves *b*, *c*, adapted to receive a vehicle tongue between them and be pivotally mounted thereon, the seat *d*, the U-shaped part *e*, extending over said seat and being adapted to have an equalizer bar pivotally mounted between it and said seat, and the hook *f*, at the free end of the holder.

1,102,816. METHOD OF HARDENING THE FLANGES OF CAST-STEEL WHEELS. JOSEPH STUART, Wilmington, Del., assignor to Lobdell Car Wheel Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 17, 1912. Serial No. 691,274. (Cl. 22—215.)

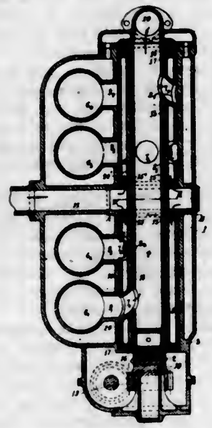


1. The method herein described of hardening the flange of a wheel, said method consisting in first producing a mold of sand with an annular metallic chill, said chill having an annular recess in that portion thereof in which the flange of the wheel is cast, placing a hardening agent in the recess so that it will have a continuous surface, then pouring the metal in the mold, the metal, as it flows over the portion of the chill in which the hardening agent is located, taking up the hardening agent which is incorporated in the metal, producing a wheel with an annular hardened flange and a chilled tread.

2. The method herein described of manufacturing flanged cast steel car wheels; said method consisting in making a sand mold and a chill; recessing the chill and placing in said recess a hardening composition consisting of sand, powdered manganese and molasses water; baking the same in said chill whereby the hardening material will form a continuation of the surface of the chill; casting the steel in the mold thus formed and, as the steel flows over the surface of the hardening material, it will take up the said hardening material, which will be incorporated in the face of the flange of the wheel, the chill hardening the surface of the wheel.

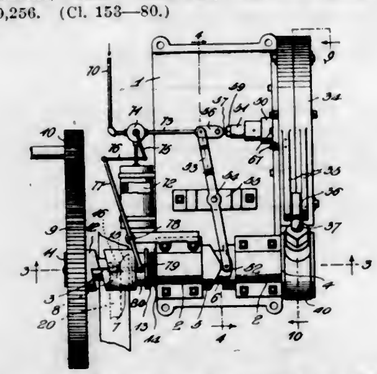
1,102,817. ROTARY DISTRIBUTER FOR FOUR-CYCLE INTERNAL-COMBUSTION ENGINES. EUGÈNE HENRI TARTRAIS, Montmorency, France. Filed June 15, 1912. Serial No. 703,851. (Cl. 123—190.)

In a valve for multiple cylinder internal combustion engines, a cylindrical casing provided with a series of ports communicating with the cylinders of the engine, said casing being further provided with an annular inlet channel in communication with an inlet passage, a cylindrical member revoluble in said casing and provided with a port in constant communication with said channel and with inlet and outlet ports arranged for successive communication with the first series of ports, a second cylindrical member, said members being attached at their respective ends to provide an annular inlet passage, said second member having extensions forming ports communicating with the outlet ports of the first member, and a third cylindrical member within the second member, said third member forming heat nonconductor and fire proof lining and having ports adapted for communication with



the ports of the second member, and an exhaust passage in constant communication with said third member.

1,102,818. BOILER-FLUE SWAGE. JOE CEPHAS TASSEY, Nashville, Tenn. Filed May 22, 1913. Serial No. 769,256. (Cl. 153—80.)



1. In a swaging machine, the combination with dies, means for moving the same, a main shaft, and connections between said shaft and means; of a collar fast on the shaft, a clutch element splined on the shaft and having teeth in one end, a gear loose on the shaft and having teeth adapted to engage those on said element, means for throwing the clutch teeth normally into engagement, manually controlled means for disengaging them, a three-way valve whose inlet communicates with a source of compressed air supply and whose outlets are led respectively to a tank and to the tool, an arm on the valve stem, a rock lever pivoted on a support and actuated by the longitudinal movements of said clutch element, and a link connecting the lever with said arm on the valve stem, for the purpose set forth.

2. In a swaging machine, the combination with dies, means for moving the same, a main shaft, and connections between said shaft and means for actuating the latter; of a collar fast on the shaft, a clutch element splined on the shaft and having teeth in one end and a cam face on its periphery, a gear loose on the shaft and having teeth adapted to engage those on said element, an expansive spring between said collar and clutch element for throwing the clutch teeth normally into engagement, a pin adapted to be projected into the path of said face for disengaging said clutch teeth, a three-way valve whose inlet

communicates with a source of compressed air supply and whose outlets are led respectively to a tank and to the tools, an arm on the valve stem, a rock lever pivoted on a support and having a roller at one end, said clutch element being provided with a groove engaging this roller, and a link connecting the other arm of this lever with said arm on the valve, for the purpose set forth.

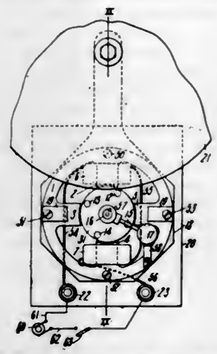
3. In a flue swaging machine, the combination with a series of internal dies having die faces on their outer sides and their inner sides beveled, a sleeve inclosing the dies, springs pressing the dies normally inward, and a tapered bolt for spreading said dies; of a casing secured to the sleeve and having radial guides, a series of external dies movable in said guides, actuating mechanism for forcing said dies inward or retracting them, a main shaft having a cam and an eccentric, connections between said cam and tapered bolt, and connections between said eccentric and the actuating mechanism for moving all the dies simultaneously.

4. In a flue swaging machine, the combination with a series of internal dies having die faces on their outer sides and their inner sides beveled, a sleeve inclosing the rear ends of said dies, springs in the latter bearing outward within the sleeve and pressing the dies normally inward, and a tapered bolt for distending said dies; of a casing secured to the sleeve and having radial guides, a series of external dies movable in said guides, actuating mechanism for forcing said dies inward or retracting them, a main shaft having a cam and an eccentric, connections between said cam and tapered bolt, connections between said eccentric and the actuating mechanism for moving all the dies simultaneously, a power gear, a large gear meshing therewith and loose on said shaft, its hub having clutch teeth, a clutch member splined on said shaft and having teeth adapted to engage those on said hub, and means for moving this member.

5. In a flue swaging machine, the combination with an upright casing having an axial hole and radial guides offset at their outer ends, a series of dies slidably mounted in said guides, and a link pivoted to the outer end of each die; of a ring rotatably mounted around said casing and pivotally connected with the outer end of each link, and means for oscillating the ring.

[Claims 6 to 11 not printed in the Gazette.]

1,102,819. ELECTRIC MOTOR. JOHN D. TAYLOR, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 8, 1912. Serial No. 682,343. (Cl. 172—275.)



1. An electric motor comprising an oscillator having a closed electric circuit, and means for passing alternating magnetic flux through said oscillator, whereby a transformer torque is exerted on said circuit which tends to swing the oscillator to a middle position in which none of said flux passes through said circuit and whereby the current induced in said circuit by its motion through the flux reacts on said flux to produce a speed torque which tends to continue the movement of the oscillator beyond said middle position, the parts being so proportioned that after the oscillator has swung beyond said middle position the reversed transformer torque tending to return it to the middle position balances the sum of the speed torque, the momentum and all other forces before the oscillator reaches such position that the transformer torque again reverses and tends to continue the rotation.

2. An electric motor comprising an oscillator having a closed electric circuit, means for passing alternating magnetic flux through said oscillator, means for biasing said oscillator to such position that a portion of said flux passes through said circuit, whereby a transformer torque is exerted on said circuit which tends to swing the oscillator to a middle position in which none of said flux passes through said circuit, and whereby the current induced in said circuit by the motion of the circuit through the flux reacts on said flux to produce a speed torque which tends to continue the movement of the oscillator beyond said middle position, the parts being so proportioned that after the oscillator has swung beyond said middle position the reversed transformer torque tending to return it to the middle position balances the sum of the speed torque, the momentum and the biasing means before the oscillator reaches such position that the transformer torque again reverses and tends to continue the rotation.

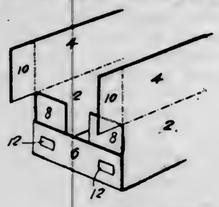
3. An electric motor comprising an alternating current electromagnet, an oscillator mounted between the pole-pieces of said magnet and having a closed electric circuit whereby the flux passing through said oscillator produces a transformer torque on said closed circuit tending to swing the oscillator to a middle position in which none of said flux passes through said circuit and whereby the current induced in said circuit by the motion of the circuit through the flux reacts on said flux to produce a speed torque which tends to continue the movement of the oscillator beyond said middle position, the relation of the length of arc of the pole-pieces and of the space between pole-pieces being such that after the oscillator has swung beyond said middle position the reversed transformer torque tending to return it to the middle position balances the sum of the speed torque, the momentum and all other forces before the oscillator reaches such position that the transformer torque again reverses and tends to continue the rotation.

4. An electric motor comprising a field member of magnetizable material having four inwardly projecting pole-pieces disposed substantially in quadrature, windings or an oppositely located pair of said pole-pieces, for passing alternating magnetic flux between the last-mentioned pole-pieces, an oscillator mounted between said pole-pieces and comprising a core of magnetizable material having two closed electric circuits disposed substantially in quadrature relation, means for biasing said oscillator to such position that the plane of one of said closed circuits makes a smaller angle with the direction of the said flux than does the plane of the other circuit, whereby the transformer torque exerted on said circuits by said flux acts to swing the oscillator to a middle position in which none of the said flux passes through the first-mentioned closed circuit, and whereby the speed current induced in said first-mentioned circuit causes an alternating magnetic flux to flow through the oscillator and the two pole-pieces not provided with windings, which flux reacts on the transformer current induced in the second of said closed circuits to produce a speed torquee which tends to continue the movement of the oscillator beyond said middle position, the parts being so proportioned that before the oscillator has swung forty-five degrees from said middle position the reverse transformer torque tending to return the oscillator to the said middle position balances the said speed torque and the momentum and the said biasing torque.

1,102,820. SHIPPING-PACKAGE. HEZEKIAH THOMPSON, Windsor, Mo. Filed Jan. 22. 1913. Serial No. 743,558. (Cl. 229—16.)

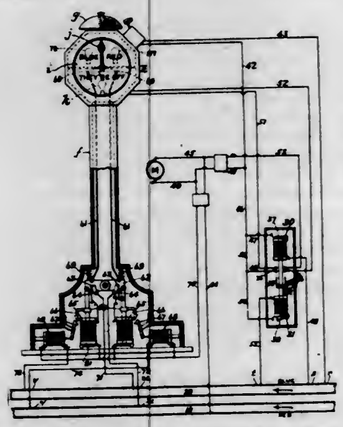
A broom package comprising an elongated box-like form having its ends formed of opposite side flaps folded

inward, the bottom flap folded over and upon said side flaps, staples securing the three flaps permanently to-



gether, and top flaps folding down over the said side flaps, and sealing tapes applied across the end of the package, as described.

1,102,821. SIGNALING DEVICE FOR RACING-COASTERS. LA MARCUS A. THOMPSON, New York, N. Y., assignor to The L. A. Thompson Scenic Railway Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 1, 1913. Serial No. 798,660. Cl. 246—30.)



1. In a racing coaster, the combination with a pair of tracks providing a course on which cars are adapted to race, of a starting signal, a signal adapted to announce the winning car, means controlled by cars passing one point in the course to actuate the starting signal, and means controlled by either car, upon its arrival ahead of a competing car at another point in the course, to actuate the announcing signal to announce its arrival, the last named means including means adapted to render the other car inoperative to effect the actuation of the announcing signal.

2. In a racing coaster, the combination with a pair of tracks providing a course on which cars are adapted to race, of signaling means for announcing the winning car, electric circuits controlling the signaling means and respectively adapted to cause the signaling means to announce the respective cars, means controlled by the cars on the two tracks to govern the passage of current through the respective circuits, and means controlled by each circuit to render the other circuit inoperative to control the signaling means.

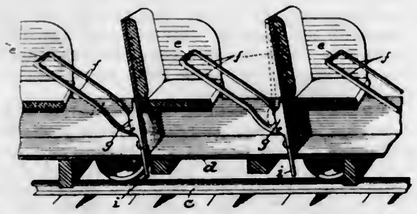
3. In a racing coaster, the combination with a pair of tracks providing a course on which cars are adapted to race, of signaling means to announce the winning car, means controlled by either car, upon its arrival ahead of a competing car at a given point in the course, adapted to actuate the signaling means to announce its arrival and to render the other car inoperative to effect the announcement of its own arrival at said point.

4. In a racing coaster, the combination with a pair of tracks providing a course on which cars are adapted to race, of a starting signal, signaling means to announce the winning car, means controlled by cars passing along one stretch in the course to actuate the starting signal, and means controlled by a car on either track, upon its arrival ahead of a competing car at a given point in the course, adapted to actuate the last named signaling means to announce its arrival and to render the other car inoperative to effect the announcement of its own arrival at said point.

5. In a racing coaster, the combination with a pair of tracks providing a course in which cars are adapted to race, of an audible starting signal, a visible starting signal, a signaling means to announce the winning car, means controlled by cars passing along one stretch in the course to actuate the starting signals, and means controlled by a car on either track, upon its arrival ahead of a competing car at a given point in the course, adapted to actuate the last named signaling means to announce its arrival and to render the other car inoperative to effect the announcement of its own arrival at said point.

[Claims 6 and 7 not printed in the Gazette.]

1,102,822. SAFETY DEVICE FOR PLEASURE-RAILWAY CARS. LA MARCUS A. THOMPSON, New York, N. Y., assignor to The L. A. Thompson Scenic Railway Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 10, 1914. Serial No. 831,068. (Cl. 105—111.)



1. In a pleasure railway, the combination with a car, of a safety device movable thereon for locking the passengers to their seats, and a vertically extending locking bar slidable in the direction of its length and adapted to be upheld by the safety device when the later is in locking position and to slide down by gravity, as the safety device is moved into locking position, into position to lock the safety device from returning.

2. In a pleasure railway, the combination with the car, of a movable safety device for locking the passengers in their seats including a pivoted arm having a cam, and a locking bar having a cam adapted, when the safety device is moved away from its locking position, to move in front of the cam on the arm and thereby lock the safety device from being returned to its unlocking position.

3. In a pleasure railway, the combination with the car, of a movable safety device for locking the passengers in their seats including a pivoted arm having a cam, a slidable locking bar provided with a cam adapted, when the safety device is moved into locking position, to slide down with the bar and move in front of the cam on the arm to lock the safety device in such position, but adapted, when moved up, to recede from the car on the arm and thus free the safety device and permit it to be moved into unlocking position.

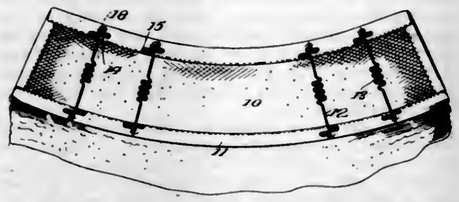
4. In a pleasure railway, the combination with the car, of a movable safety device for locking the passengers in their seats including a pivoted arm, a locking bar slidable vertically and provided with a member having a cam face and a shoulder, said arm having a cam adapted, when the locking bar is raised to a determinate height, to engage said cam face in the movement of the safety device away from its locking position and thereby still further lift the locking bar and move under said shoulder, thereby holding the locking bar up.

5. In a pleasure railway, the combination with the car, of a movable safety device for locking the passengers

in their seats including a pivoted arm, a locking bar slidable vertically and provided with a member having a cam face and a shoulder, said arm having a cam adapted, when the locking bar is raised to a determinate height, to engage said cam face in the movement of the safety device away from its locking position and thereby still further lift the locking bar and move under said shoulder, thereby holding the locking bar up, and a spring tending to move the locking bar down, whereby the safety device is held in its unlocking position but is free to be moved toward its locking position against the action of the spring.

[Claims 6 to 21 not published in the Gazette.]

1,102,823. COLLAR-SUPPORT. MARY E. TOWLER, Hubbard, Tex. Filed Apr. 23, 1912. Serial No. 692,749. (Cl. 2—91.)

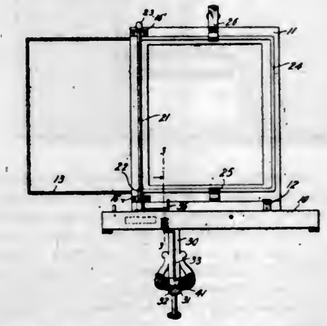


1. A collar supporter formed from a single length of resilient wire having its intermediate portion bent to form a plurality of superposed transversely disposed loops and its opposite ends bent to form single transverse loops of greater length than the intermediate loops, the wire after the single loops are formed being bent in a horizontal plane to produce terminal hooks the bills of which are extended in opposite directions and sharpened.

2. A collar supporter formed from a single length of resilient wire having its intermediate portion bent to produce expansible loops, the wire after the loops are formed being extended in a substantially straight line and thence bent laterally upon itself to form terminal transversely disposed single loops, the wire constituting the end of each single loop being bent to produce a horizontally disposed hook, the bills of said hooks being extended in opposite directions and sharpened.

3. A collar supporter comprising a resilient body portion formed of a single length of metal free to expand in the direction of its length and provided with terminal substantially S-shaped hooks the bills of which are extended horizontally in opposite directions and provided with piercing points.

1,102,824. SHEET-MUSIC TURNER. ROBERT V. TOWNSEND, Riverside, R. I., assignor of one-half to John Dunn, Providence, R. I. Filed Aug. 30, 1913. Serial No. 787,449. (Cl. 84—135.)

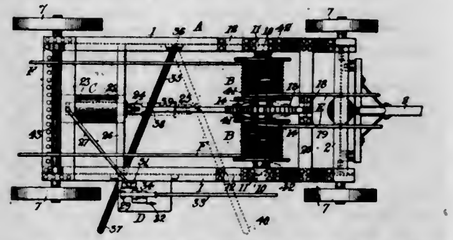


1. A music leaf turner comprising a support, a shaft mounted thereon, said shaft having a leaf holding frame formed thereon and terminating in a hollow extremity, operating means for said shaft extending into said hollow extremity, an arm carried by said operating means, a retaining pawl normally engaging the arm aforesaid to hold the leaf holding frame in inoperative position, and an operating lever connected to the retaining pawl for depression of the same to release the arm of the operating means aforesaid and permit rotation of the frame and its shaft.

2. A music leaf turner comprising a support, brackets on said support, a shaft journaled at one end in one of said brackets and including a leaf holding frame, an operating member for said frame constituting a pivot for the lower end of said shaft, said member being journaled in the other of the brackets aforesaid, an arm projecting laterally from the operating member, a retaining pawl pivotally mounted on the support and normally engaging the arm to hold the frame in inoperative position, an operating lever connected to the retaining pawl for movement of the latter on its pivot to disengage the arm aforesaid and permit rotation of the frame and its shaft, and tension means for said operating member whereby to actuate the same to rotate the frame upon the release of the arm aforesaid.

3. A music leaf turner comprising a support, brackets on said support, a shaft journaled at one end in one of said brackets and including a leaf holding frame, an operating member for said frame constituting a pivot for the lower end of said shaft, said member being journaled in the other of the brackets aforesaid, an arm projecting laterally from the operating member, a retaining pawl pivotally mounted on the support and normally engaging the arm to hold the frame in inoperative position, an operating lever connected to the retaining pawl for movement of the latter on its pivot to disengage the arm aforesaid and permit rotation of the frame and its shaft, tension means for said operating member whereby to actuate the same to rotate the frame upon the release of the arm aforesaid, a spring coöperating with the operating lever for the retaining pawl to hold the latter normally engaging the arm on said operating member, and an auxiliary frame carried by the support and adapted to be impinged by the leaf holding frame upon release of the latter.

1,102,825. HYDRAULIC JACK FOR STUMP-PULLERS. CHARLES J. TRINKAUS, Chicago, Ill. Filed May 10, 1912. Serial No. 696,412. (Cl. 138—9.)

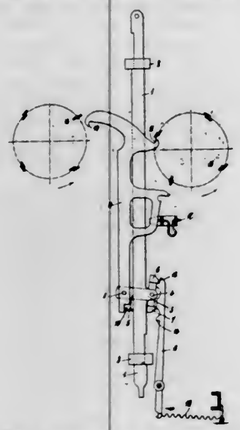


1. The combination of a four-wheel truck, a hydraulic cylinder jack mounted thereon, mechanism mounted on said truck to be driven by said jack, a piston rod, a connecting rod pivotally attached to the piston rod and connecting said rod with said mechanism, a pump for applying pressure to said jack to move the piston in one direction, and a horizontal piston return lever fulcrumed on said truck to move in a horizontal plane extending across and having a jointed connection with said connecting rod, said pump embodying a hand lever operable at the same side of the truck as said piston return lever.

2. The combination of a four-wheel truck, a hydraulic cylinder and piston jack mounted on said truck, a piston rod, a connecting rod jointed to the piston rod, mechanism on said truck driven by said connecting rod, a hand operated piston return lever fulcrumed on one side of the truck extending transversely of the latter and projecting

from the opposite side thereof, a jointed connection between said lever and rod whereby the piston is moved on its return stroke by said hand lever, and a pump mounted on said truck connected with the jack for supplying fluid under pressure thereto to effect the forward stroke of the piston, said pump having an operating lever disposed at the same side of the truck as the free end of the piston return lever.

1,102,826. ARRANGEMENT FOR DOBBY AND JACQUARD MECHANISMS WEAVING WITH OPEN SHED. PAUL TURLUR, Wattrelos, France. Filed Dec. 4, 1912. Serial No. 734,861. (Cl. 139—79.)



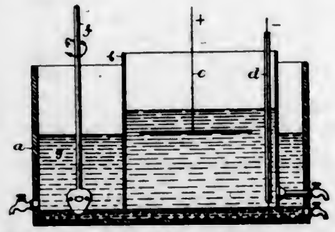
1. In a dobby mechanism for looms, a movable jack adapted to be connected to the harness of a heddle frame, a member pivotally connected to said jack, a locking lever having interengaging parts for locking the jack in either its raised or lowered position, a jack-hook pivotally connected to the end of said member, and means for raising and lowering said jack-hook whereby the member is first released from locking engagement with said locking lever and thereafter the jack-hook and jack are both bodily moved.

2. A dobby mechanism for looms, a movable jack adapted to be connected to the harness of a heddle frame, means for moving and holding said jack in its raised or lowered position comprising a member pivotally mounted on the jack, a locking lever, said member and locking lever having interengaging parts to hold the lever in its raised or lowered position, a jack-hook pivotally mounted on said member, separate means for engaging with said hook to raise and lower the same whereby the raising or lowering of said jack-hook will first move one of said interengaging parts carried by the member out of engagement with the locking lever and the other of said parts into a position to be engaged by the locking lever after it has been carried to its moved position and thereafter move the jack bodily to its moved position, and means controlled by the needle of a jacquard mechanism for controlling the engagement of said jack-hook with the means for raising and lowering it.

1,102,827. PROCESS OF PRODUCING SULFONIC ACIDS. AUGUST VAGT, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 6, 1911. Serial No. 664,204. (Cl. 204—9.)

1. The process of splitting off sulfonic groups from aromatic sulfonic acids which comprises continuously producing an amalgam of an alkali-forming metal and circulating such freshly prepared amalgam into contact with the aromatic sulfonic acids.

2. The process of splitting off sulfonic groups from aromatic sulfonic acids which comprises continuously producing sodium amalgam and circulating such freshly prepared amalgam into contact with the aromatic sulfonic acids.



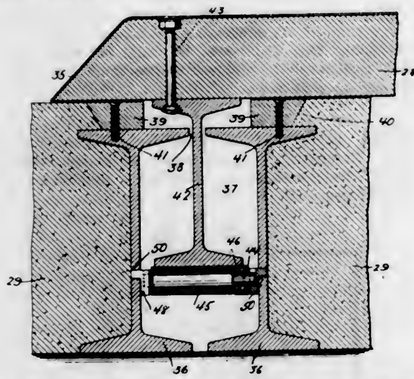
3. The process of splitting off sulfonic groups from aromatic sulfonic acids which comprises producing an amalgam of an alkali-forming metal electrolytically, circulating such electrolytically prepared amalgam in contact with the aromatic sulfonic acids, and continuing the electrolytic production of the amalgam and the reduction of the sulfonic acids by circulating the same amalgam alternately into reactive relation with the electrolytic bath and with the acid.

4. The process of producing aromatic sulfonic acids from aromatic poly-sulfonic acids containing a larger number of sulfonic acid groups which comprises circulating in contact with such acids electrolytically prepared amalgam of an alkali-forming metal in which amalgam the alkali-forming metal is replaced continuously as the reaction progresses.

5. The process of splitting off sulfonic groups from aromatic poly-sulfonic acids and of producing aromatic sulfonic acids containing a smaller number of sulfonic acid groups which comprises producing an amalgam of an alkali-forming metal electrolytically and circulating such freshly prepared amalgam into contact with the aromatic poly-sulfonic acid continuously, the alkali-forming metal of the amalgam being replaced continuously in the amalgam and the strength of the amalgam being thereby maintained approximately constant.

[Claim 6 not printed in the Gazette.]

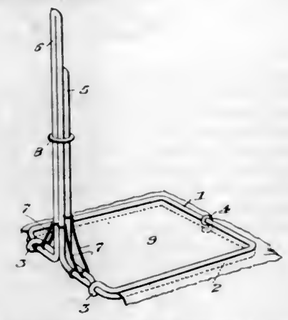
1,102,828. GARAGE. JAMES A. VARIAN, Norwalk, Conn. Filed Aug. 29, 1913. Serial No. 787,302. (Cl. 72—1.)



1. The combination with a reinforced concrete flooring of a building and spaced pairs of beams extending longitudinally thereof; of bearings carried by the opposed pairs of beams, rollers removably mounted in said bearings, a carrying floor having inclined side portions communicating with spaces at opposite sides thereof, and beams depending from said floor and movably supported on the rollers, said beams being operable between the first named pairs of beams.

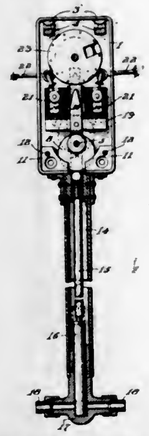
2. The combination with a reinforced concrete flooring of a building and sustaining means therefor located in spaced relation providing a passageway; of spaced longitudinal reinforcing members adjacent the sides of the passageway and having an interior space communicating with the exterior by a restricted throat, rollers removably carried by the longitudinal reinforcing members between the pairs of the latter, reinforcing strips secured to said reinforcing members inwardly of said throats to provide intermediate spaces, and a carrying floor movable along the passageway and having depending beams secured thereto for supporting the same on the rollers.

1,102,829. INSECT-CATCHER. GEORGE O. WALKER, Walker, Oreg. Filed Apr. 15, 1913. Serial No. 761,229. (Cl. 43—1.)



An insect catcher consisting of relatively movable open wire frames hinged together at one side in direct contact with each other and at their opposite sides provided with means for fastening them together in direct contact, wire handles rigidly connected to the hinged sides of the respective frames in fixed angular relation thereto and adapted to close together when the frames are closed, and a sticky sheet detachably held between said frames.

1,102,830. SAFETY-LOCK. WILLIAM F. WALKER, Chicago, Ill., assignor of one-eighth to Matthew Borwick, Cicero, Ill., and one-fourth to Charles F. Dusman and one-eighth to Archibald B. Cameron, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,681. (Cl. 123—198.)



1. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for stopping an engine and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

2. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for breaking an electric circuit and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

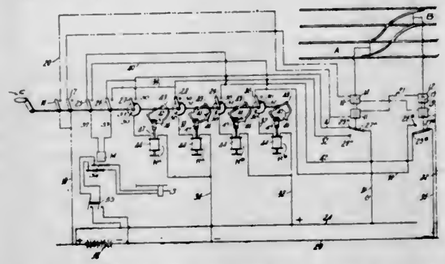
3. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for breaking an electric circuit, closing a fuel valve and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

4. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for closing a fuel valve and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

5. A device of the class described comprising a casing; a reciprocatory bolt in said casing; a lock arranged to prevent reciprocation of said bolt; a circuit breaker operatively connected with said bolt; an operating shaft carried by said closure; an eccentric on said shaft and having an operative connection with said bolt; and an engaging shoulder in said casing arranged to engage said ecccentric when said bolt is thrown to position to break said circuit and lock said closure against removal, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,102,831. APPARATUS FOR GOVERNING THE PASSAGE OF CARS OR VEHICLES ALONG A RAILWAY AND THE CONTROL THEREOF. HERBERT A. WALLACE, New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 23, 1912. Serial No. 692,613. (Cl. 246—53.)



1. In combination, two switches of a crossover, means for moving the switches, a control lever for the control of said means and having two control positions corresponding to the two extreme positions of the switches, a pair of contacts for each switch, one contact or the other of each pair being closed according to whether the switch is in one or the other of its extreme positions, a source of current, line wires connected with said source and extending from the switches to the control lever, four indication wires extending from the switches to the lever and each including a switch contact, the two wires for one switch being alternately connected with a line wire of one polarity adjacent the switch and with a line wire of the opposite polarity adjacent the lever, and the two wires for the other switch being alternately connected with the line wire of the last mentioned polarity adjacent the switch and with the line wire of the other polarity adjacent the control lever, indication devices connected with said indication wires for governing the control lever, a relay, a circuit controlled thereby, two circuits for the relay winding one comprising the two indication wires which are closed when the switches are in one position and the other comprising the two indication wires closed when the switches are in the other position, and contacts operated by the lever for connecting the relay with one pair of indication wires or the other according to the

position of the lever the two said pairs being respectively the pairs which include the closed contacts when the switches occupy the positions corresponding to the positions of the lever.

2. In combination, a railway crossover comprising two switches each capable of a normal and a reverse position, means for moving said switches, a control lever for controlling said means and having a normal and a reverse position corresponding to the positions of the switches, a source of current, four wires two for each switch and each extending from the control lever to the switch; a contact device operatively connected with one switch for connecting one or the other of the wires for the switch with one pole of the said source according as the switch occupies its normal or reverse position, a contact device operatively connected with the other switch for connecting one or the other of the wires for the switch with the other pole of the source according as the switch occupies its normal or reverse position; a relay, a circuit controlled thereby; and contacts connected with the control lever and operating when the lever is in normal position to connect the relay with the two said wires which are connected with the source when the switches are both in normal position, said contacts operating when the lever is in reverse position to connect the relay with the other two of said wires.

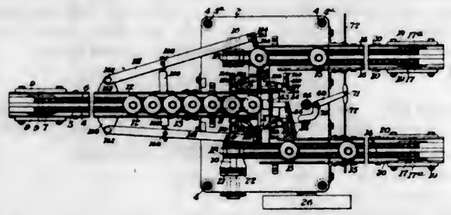
3. In combination, a railway crossover comprising two switches, means for moving said switches, a lever for controlling said means, a source of current, two pairs of wires one pair for each switch; means controlled by the switches for connecting one wire of one pair and one wire of the other pair with the two terminals of the source respectively when both switches are in one extreme position, and for connecting the remaining two wires with the respective terminals of the source when both switches are in the other extreme position; a relay, a circuit controlled thereby; and contacts controlled by said lever and operating when the lever is in either extreme position to connect the relay with the two wires which are connected with the source when both switches are in the extreme positions corresponding to the position of the lever.

4. In combination, a railway crossover comprising two switches, means for moving said switches, a lever for controlling said means, a source of current, line wires 23 and 24 connected with said source and extending from the switches to the lever, two pairs of indication wires one pair for each switch; contacts controlled by one switch for connecting one or the other of the indication wires for that switch with one line wire 24 adjacent the switch according as the switch occupies one position or the other, contacts controlled by the lever for alternately connecting said latter indication wires with the other line wire 23 adjacent the lever; contacts controlled by the other switch for connecting one or the other of the corresponding indication wires with the line wire 23 adjacent the switch according as the switch occupies one position or the other, contacts controlled by the lever for alternately connecting said two last-mentioned indication wires with line wire 24 adjacent the lever; indication devices connected with said indication wires; a relay, a circuit controlled thereby; and contacts controlled by the lever and operating when the lever is in either extreme position to connect the relay with the two indication wires which are connected with the line wires at the switches when the switches are in the positions corresponding to the position of the lever.

1,102,832. LABELING-MACHINE. EARL PORTER WETMORE, Toledo, Ohio. Filed Nov. 15, 1912. Serial No. 731,643. (Cl. 216—13.)

1. A labeling machine, comprising a feed-in mechanism, an article-transfer device for moving the articles laterally from the delivery of the feed-in mechanism to a labeling station, a label-applying mechanism, a trip device for contact with the articles, and connections operated by the trip device for controlling the time of operation of the transfer device, substantially as described.

2. A labeling machine, comprising a feed-in mechanism, an article transfer device, a label-applying mechanism, a trip device arranged for contact with the article, and connections operated by the trip device for controlling the time of operation of the transfer device and of the label-applying mechanism, substantially as described.



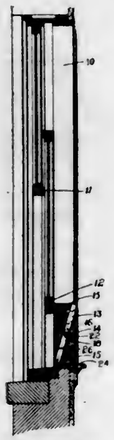
3. A label-applying machine, comprising a feed-in conveyer, a trip device arranged to be operated by the articles to be labeled at a certain point in their feed-in movement, a label-applying mechanism, a transfer device for carrying the articles to the action of the labeling mechanism, and connections controlled by the trip device for controlling the time of operation of the transfer device, substantially as described.

4. A machine for applying labels, comprising a feed-in conveyer and two feed-out conveyers, two sets of label-applying mechanisms, and a distributing device for distributing the articles to be labeled alternately to the two label-applying mechanisms and thence to the respective feed-out conveyers, substantially as described.

5. A label-applying machine, comprising a centrally arranged feed-in conveyer and two feed-out conveyers arranged at opposite sides of the line of action of the feed-in conveyer, two sets of label applying mechanisms, and a distributing device for moving successive bottles alternately to the action of one or the other of the label-applying mechanisms, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,102,833. VENTILATOR. SAMUEL H. WHEELER, Fairfield, Conn. Filed Mar. 13, 1914. Serial No. 824,451. (Cl. 98—3.)

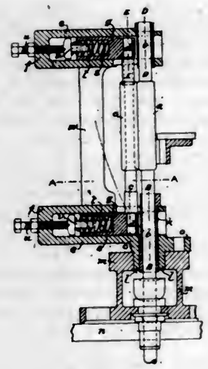


1. A window ventilator comprising a deflector having a centrally placed pin at one end and a centrally placed spring bolt at the other end, and end pieces adapted for attachment to a window casing and provided with vertical slots adapted to receive the pin and bolt on the deflector and permit vertical movement of the deflector when it is required to swing the lower edge thereof inward or outward.

2. A window ventilator comprising a deflector having a centrally placed pin at one end and a centrally placed spring bolt at the other end, a bottom piece adapted for attachment to a window sill and end pieces resting on the bottom piece and adapted for attachment to a window casing and provided with vertical slots adapted to receive the pin and bolt on the deflector and permit vertical movement of the deflector, substantially as described, for the purpose specified.

3. A window ventilator comprising a deflector having a centrally placed pin at one end and a centrally placed spring bolt at the other end, end pieces adapted for attachment to a window casing and provided with vertical slots adapted to receive the pin and bolt on the deflector and permit vertical movement of the deflector when it is required to swing the lower edge thereof inward or outward, and a stop for limiting the outward movement of the lower edge of the deflector.

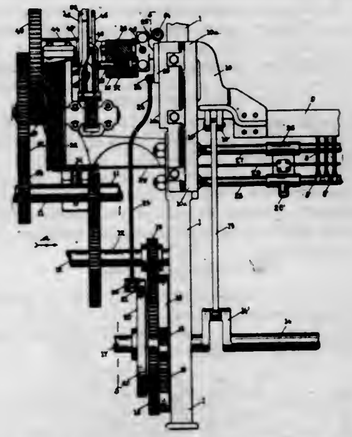
1,102,834. BEARINGS FOR THE DRAWING-OFF ROLLERS OF NOBLE'S COMBING-MACHINES. JOHN HENRY WHITEHEAD, WILLIAM EDWARD LAYLAND, and GEORGE GALLOWAY, Leeds, England. Filed May 5, 1913. Serial No. 765,561. (Cl. 19—24.)



In combination with a pair of drawing off rollers for a combing machine and means for driving guides at right angles to said rollers, each guide being provided with a tubular extension and a pair of opposite openings in the side-wall thereof, pair of cylindrical bearings for the journals of the driving roller, each of said bearings being fitted into a pair of said openings, a pair of cylindrical slides movable respectively lengthwise in said guides recessed in their rear end and provided at their lower ends with bearings, for the driven roller of said pair, springs fitting into the rear recesses of the slides bearing against the latter, thrust pins bearing against the rear ends of said springs and adjusting screws working through the rear ends of said guides and bearing against said thrust pins, substantially as and for the purpose set forth.

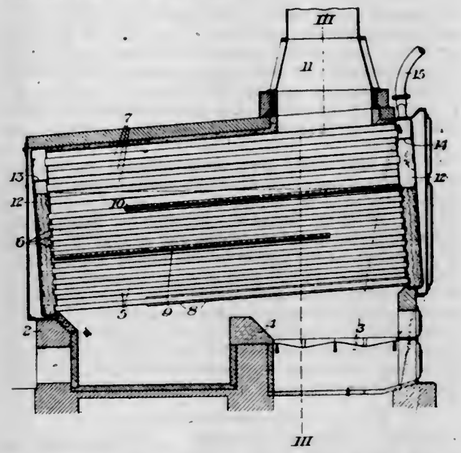
1,102,835. LOOM FOR WEAVING TUFTED OR CHENILLE FABRICS OR CARPETS. FRED A. WHITMORE, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar. 26, 1912. Serial No. 686,396. (Cl. 139—23.)

In a loom of the type referred to, a chenille weft carrier, a guide for the same, a flexible connection from the carrier to a drum, and said drum, means for operating said drum, said means including a crank shaft, a crank thereon, gearing connected to the drum, and a connection from said crank to said gearing, means to operate said crank shaft, said means including a member fast on said shaft, and a driven member loose on said shaft, and connections intermediate said members, to cause them to



move in unison to rotate said crank shaft and said drum, at predetermined times.

1,102,836. SUPERHEATER-BOILER. JOHN E. WHITTLESEY, Pittsburgh, Pa. Filed Mar. 11, 1912. Serial No. 683,136. (Cl. 122—461.)



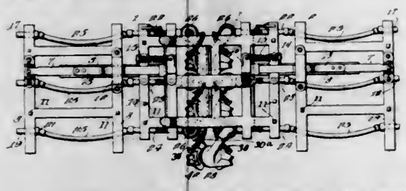
1. A drumless superheater boiler having a plurality of banks of water tubes arranged one above another in successive passes of the gases, a bank of superheating tubes arranged above the water tubes and in the last pass of the gases, together with two headers in which the ends of the superheated tubes are secured, said headers forming equalizing chambers for the steam from the superheater tubes, and a single off-take connection leading from one of said headers; substantially as described.

2. A drumless superheater boiler having a plurality of banks of water tubes arranged one above another in successive longitudinal passes of the gases, a bank of superheating tubes arranged above the water tubes in the last pass of the gases, a box header at each end of the boiler, all of said water tubes opening into and connecting the two headers, the superheating tubes all being connected to at least one of said headers, a partition in said last mentioned header, there being an equal-

izing chamber formed in said header above said partition, and a single off-take connection leading from one of said equalizing chambers; substantially as described.

3. A drumless superheater boiler having a plurality of banks of water tubes arranged one above another in successive longitudinal passes of the gases, a bank of superheating tubes arranged above the water tubes in the last pass of the gases, a box header at each end of the boiler, all of said water and superheater tubes opening at their ends into the said headers, the headers having baffling between the successive rows of superheater tubes whereby the steam is compelled to pass in parallel through the tubes of each horizontal row but in series with successive rows, the last rows of tubes opening into an equalizing chamber in one of the headers, and a delivery pipe leading from said equalizing chamber; substantially as described.

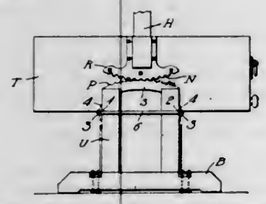
1,102,837. TRAIN-PIPE COUPLING. WILLIAM D. WIDDERS, deceased, Exeter, Mo., by Gatsie H. Widders, widow, Exeter, Mo. Filed Jan. 3, 1912. Serial No. 669,279. (Cl. 188—13.)



1. In a mechanism of the class described, the combination with mounting devices adapted to be secured upon the opposite cars to be connected, frames connected to said mounting devices for vertical and lateral movement, means for holding the frames normally in coupling position, a plurality of train pipes secured to the frames, coupling elements carried by the frames and having a valved and pivoted connection with said pipes and means to interengage the elements and the frames of the separate cars.

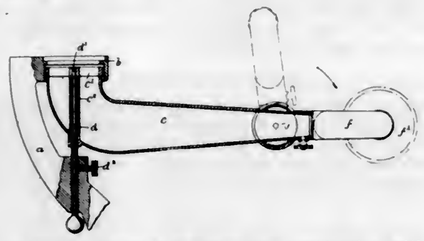
2. In a mechanism of the class described, the combination with supporting devices, frames slidably mounted on and connected to the supporting devices, for vertical and lateral movement, means for holding the frames resiliently separated from the supporting devices, a plurality of coupler elements carried by the frames, a plurality of train pipes secured to the mounting devices, valved and pivoted connections between the pipes and the coupler elements, means to interengage the frames of the separate cars, means to connect the coupler elements of the separate cars when the frames are interengaged, and means to operate the coupler elements to close the valves when the frames are disconnected.

1,102,838. LOCKING DEVICE. LARS M. WIDTH, Duluth, Minn. Filed Sept. 12, 1912. Serial No. 720,080. (Cl. 68—21.)



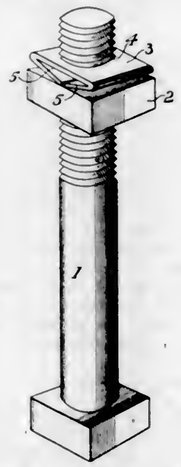
The herein described locking device comprising an upright support, a rocking body thereon, horizontally spaced tubular keepers on said support and disposed beneath the plane of the bottom of the body when the latter is horizontal, a pair of slidable bolts in said keepers and each consisting of inner and outer members hingedly connected, the inner members being of less length than the keepers and retractable into the same and out of the path of said rocking body, and a cross bar disposed horizontally at one side of the support and having its ends integrally united with the outer ends of said outer members, the latter being of greater length than the keepers, whereby when said outer members are in the keepers and said cross bar engages the side of the support, the inner ends of the outer members will project under the body to hold it stationary.

1,102,839. SOUND REPRODUCING AND RECORDING INSTRUMENT. HENRY GEORGE WIEDER, London, England. Filed Sept. 11, 1912. Serial No. 719,854. (Cl. 181—3.)



In sound producing machines the combination with a supporting arm provided with a trumpet-carrying ring having an interior flange intermediate the ends thereof, of a tone arm having one end formed with an elbow fitted for vertical adjustment in said ring below the flange, an open-ended tube passing through the wall of said tone arm vertically and centrally with the opening in said elbow and terminating flush with the end of the tone arm, a pointed spindle adjustably mountd in said supporting arm and fitting said tube, and a removable bearing threaded in the upper end of said tube and receiving the pointed end of said spindle.

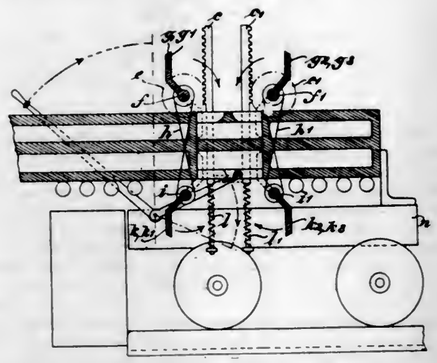
1,102,840. NUT-LOCK. FREDERICK W. WOLF, Chicago, Ill. Filed Dec. 22, 1911. Serial No. 667,393. Renewed Apr. 17, 1914. Serial No. 832,635. (Cl. 151—15.)



1. In a nut lock, the combination of a bolt and a nut threaded thereon; a resilient plate threaded upon said bolt and positioned adjacent said nut; and inclined inwardly turned opposing flanges on said plate for engagement with said nut for forcing the inner ends of said flanges into engagement with the opposite sides of said bolt, the engaging edges of said flanges being recessed to accommodate said bolt, the recesses being threaded to engage with the threads of said bolt, substantially as described.

2. In a nut lock, the combination of a bolt and a nut threaded thereon; a resilient plate threaded upon said bolt and positioned adjacent said nut; and inclined inwardly turned flanges at opposite edges of said plate, the inner ends of said flanges being adapted to engage said nut and be forced thereby into clamping engagement with the opposite sides of said bolt, the engaging edges of said flanges being provided with semi-circular recesses to snugly fit the opposite sides of the bolt, said recesses being provided with screw threads for engagement with the threads of the bolt, substantially as described.

1,102,841. APPARATUS FOR MAKING HOLLOW BRICKS WHICH ARE CLOSED ON ALL SIDES. JOSEPH WÖLFL, Hildesheim, Germany. Filed Nov. 29, 1913. Serial No. 803,644. (Cl. 25—110.)



1. In presses for making closed hollow bricks from a hollow stream of clay, the combination with a shearing table for the clay comprising a front brick-receiving portion, of two shearing pressure members journaled immediately at the rear of said portion and adapted to move oppositely to each other in the path of said stream but normally positioned out of said path, and means for rotating said members into said path.

2. In presses for making closed hollow bricks from a hollow stream of clay, the combination with a shearing table for the clay comprising a front brick-receiving portion of two sets of shearing pressure members journaled immediately at the rear of said portion, the members of each set being adapted to move in the path of said stream oppositely to the members of the other set but all the members being normally positioned out of said path, and means for rotating said members into said path.

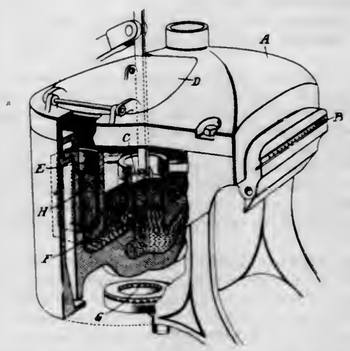
3. In presses for making closed hollow bricks from a hollow stream of clay, the combination with a shearing table for the clay comprising a front brick-receiving portion, of two shearing pressure members journaled immediately at the rear of said portion and adapted to move oppositely to each other in the path of said stream but normally positioned out of said path, and means comprising toothed gearing for rotating said members into said path.

4. In presses for making closed hollow bricks from a hollow stream of clay, the combination with a shearing table for the clay comprising a front brick-receiving portion, of two shearing pressure members journaled immediately at the rear of said portion and adapted to move oppositely to each other in the path of said stream but normally positioned out of said path, and manually operated means for rotating said members into said path.

5. In presses for making closed hollow bricks from a hollow stream of clay, the combination with a shearing table for the clay comprising a front brick-receiving portion, of two pairs of shearing pressure members journaled immediately at the rear of said portion, each pair consisting of a member mounted above and a member mounted below the path of said stream, the members of each pair being adapted to move in the path of said stream oppositely to the members of the other pair but all the members being normally positioned out of said path, and means comprising two interconnected racks, each geared to a pair of members, for rotating said members into said path.

[Claims 6 and 7 not printed in the Gazette.]

1,102,842. TYPOGRAPHICAL CASTING-MACHINE. WILLIAM MILNER WOOD, New York, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 5, 1913. Serial No. 771,786. (Cl. (22—80.)

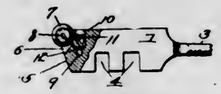


1. A casting pot having a main chamber for the molten metal and provided with an auxiliary pocket or chamber to contain a metal pig, the said pocket being located wholly within the main chamber and communicating therewith; whereby the entire surface of the pig will be subject to the influence of the heat within the pot.

2. A casting pot having a main chamber for the molten metal and provided with an auxiliary pocket or chamber to contain a metal pig, the said pocket being located wholly within the main chamber and open at its top and formed at its bottom with an opening communicating with said chamber; whereby the pig will be subject to the melting influence of the heat in the upper part of the pot and the heat of the molten metal in the lower part thereof.

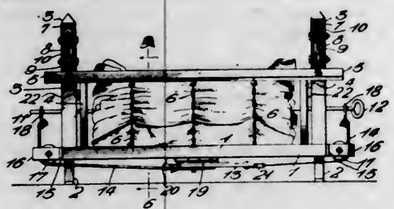
3. A casting pot having a main chamber for the molten metal and formed on the inner side of said chamber with a pocket to contain a metal pig, said pocket being open at its top and formed with an opening at its bottom, and so located as to stand with its lower portion immersed within the mass of molten metal in the main chamber and with its upper portion above the level of the molten mass; whereby the pig will be subject to the melting influence of the heat in the upper part of the pot and the heat of the molten metal in the lower part thereof.

1,102,843. GLASS-CUTTER. FRANK R. WOODWARD, Hill, N. H., assignor of one-half to Smith & Hemenway Company, New York, N. Y., a Corporation of New York. Filed Apr. 6, 1912. Serial No. 688,976. (Cl. 49—52.)



A glass cutter having a bifurcated head in which is revolubly mounted a cutting wheel, a swab chamber formed in said head intersecting said bifurcation, an oil chamber formed at the bottom of said swab chamber, and absorbent material arranged within said swab chamber closing the oil chamber and engaging the cutter for supplying lubricant thereto.

1,102,844. BUNDLING-MACHINE. ALVA B. WRIGHT, Ramsey, Ill. Filed Mar. 12, 1914. Serial No. 824,208. (Cl. 100—31.)



1. In a bundling machine, a stationary element, a vertically movable element, and a binding element movable around said last mentioned element for coöperation therewith.

2. In a bundling machine, a stationary element, an element movable vertically with respect thereto, and binding elements on the base movable partially around said vertically movable element and simultaneously with the latter.

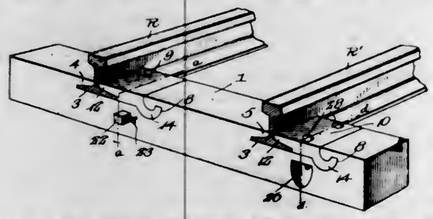
3. In a bundling machine, a stationary element, an element movable vertically with respect thereto, and binding elements movable partially around said last mentioned element in opposite directions thereto and simultaneously therewith.

4. In a bundling machine, a base, a dividing bar movable vertically with respect thereto, upwardly movable bending arms on the base for coöperation with said dividing bar, and means for raising said arms to their operative positions simultaneously with the lowering of said bar.

5. In a bundling machine, a base, dividing bar movable vertically with respect thereto; upwardly movable bending arms carried on the base for coöperation with said bar, spring means in connection with said arms to normally retain the latter in their lowered and inoperative positions, and means for raising and lowering said arms simultaneously upon the lowering and raising of said bar.

[Claims 6 to 10 not printed in the Gazette.]

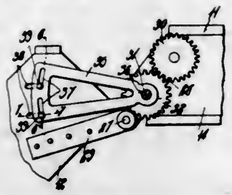
1,102,845. RAIL-TIE. JOHN WYSOCKI, Kewanee, Ill. Filed Nov. 4, 1913. Serial No. 799,195. (Cl. 238—5.)



1. A rail tie having depressions forming seats for rails, one of the side walls of each of the depressions being inclined to agree with the base flange of the rail which is adapted to be engaged thereby, the opposite wall of each of the depressions being vertically straight, the sides of the tie adjacent the vertically straight portions having curved recesses which communicate with both the vertical walls and the horizontal wall of the depression, rail locking blocks each comprising a bottom having a rail flange engaging lip upon one of its ends, its second end vertically straight and its sides adjacent the said end having curved hooks which are adapted to be received within the curved recesses of the tie to guide the rail locking members to bring their lips into engagement with the base flanges of the rails, and means for removably securing the rail locking members upon the tie.

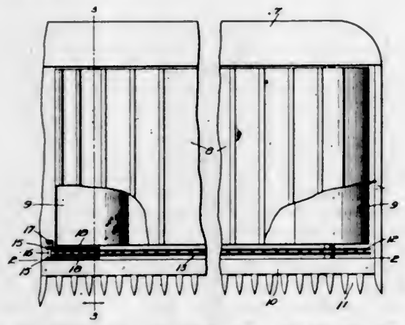
2. A rail tie having a depressed rail seat and provided with an inclined wall adapted to engage with the base flange upon one side of the rail when the said rail is arranged upon the seat, the tie upon its opposite sides, and adjacent the non-rail engaging wall of the seat having curved recesses which communicate with the seat and with the said wall, a rail locking member having one of its ends formed with a rail base engaging lip and its opposite end formed upon its sides with extending curved hooks, said member adapted to be swung to fill the rail receiving depression and to bring its lip into engagement with the base flange of the said rail, and means passing through the locking member and through the tie for removably securing the locking member upon the tie.

1,102,846. ELEVATOR FOR BINDERS. MATHEW YOUNG, Beatrice, Nebr. Filed June 11, 1913. Serial No. 773,089. (Cl. 193—14.)



The combination with a support including opposite sides, of an elevator hinged to said sides, means for rocking the elevator upwardly and downwardly, a drive shaft for the elevator, a shaft below said drive shaft carried by said sides and operatively connected to said elevator and forming a pivot upon which the elevator is rocked upwardly and downwardly, a bracket journaling said drive shaft and disposed above said pivot shaft, there being alined slots formed in said bracket, there being furthermore parallel slots formed in said sides at right angles to said bracket slots, and pins passed through said bracket slots and said slots of the sides and permitting of said bracket moving in an arc during rocking of said elevator, said bracket reinforcing said bracket shaft against distortion.

1,102,847. HARVESTER AND BINDER. HENRY W. ZAHN, Syracuse, Nebr. Filed July 29, 1913. Serial No. 781,819. (Cl. 193—2.)



1. In a device of the class described, an endless conveyer, rollers over which the conveyer is trained, and an auxiliary endless element trained over the rollers adjacent to one edge of the conveyer, said auxiliary endless element being provided at intervals with lugs projecting substantially at right angles to the plane of the endless conveyer.

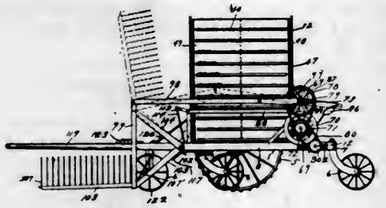
2. In a device of the class described, a platform having rollers, an apron guided over said rollers, sprocket wheels on the rollers adjacent to one edge of the apron, and a chain guided over the sprockets, the links of said chain being provided at intervals with lugs extending substantially at right angles to the plane of the apron.

3. In a device of the class described, a platform having rollers, and an apron guided over said rollers, sprockets mounted on the forward ends of the rollers, said sprockets being of a diameter slightly exceeding that of the rollers, and a chain guided over the sprockets, the links of said chain being provided at intervals with lugs extending substantially at right angles thereto.

4. In a device of the class described, a platform having rollers, an apron guided over the rollers, sprockets on the front ends of said rollers, a chain guided over the sprockets adjacent to the front edge of the apron, the links of said chain being provided at intervals with lugs extending substantially at right angles thereto, and a stripping member having fingers between which the chain is guided.

5. In a device of the class described, a platform having rollers, an apron guided over the rollers, sprockets on the front ends of the rollers, a chain guided over the sprockets and provided at intervals with lugs extending from the links thereof, and a stripping member supported adjacent to one of the apron carrying rollers and comprising suitably connected arms having terminal stripping fingers positioned adjacent to opposite sides of the chain.

1,102,848. SHOCK-LOADER. PAUL T. ZOLLARS, Olathe, Kans. Filed Feb. 19, 1912. Serial No. 678,439. (Cl. 56—62.)
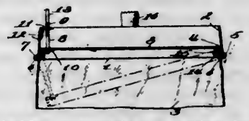


1. A shock loader comprising a carrying frame, a fork movably mounted on said frame, a driving mechanism comprising a normally inert shaft having operative connection with the fork, a driving clutch loose on said shaft, a driven clutch keyed on said shaft and yieldingly tensioned toward the driving clutch, a lever adapted for retaining said keyed clutch out of contact with its mate, manually controlled means for moving the lever to release said clutch, and worm members on the clutch and lever for returning the clutch to inactive position.

2. A shock loader comprising a carrying frame, a fork movably mounted on said frame, a driving mechanism comprising a normally inert shaft having operative connection with the fork, a driving clutch loose on said shaft, a driven clutch keyed on said shaft and yieldingly tensioned toward the driving clutch, a flange on said clutch having a worm groove, a lever having a tooth adapted for engagement with said flange to hold the clutch against its tensioning means and for travel in the flange groove to return said clutch, means for yieldingly tensioning said lever toward its holding position, and manually controlled means for rocking said lever.

3. A shock loader comprising a carrying frame, a fork movably mounted on said frame, a driving mechanism comprising a normally inert shaft having operative connection with the fork, a driving clutch loose on said shaft, a driven clutch keyed on said shaft and yieldingly tensioned toward the driving clutch, a flange on said tooth having a worm groove, a lever having a tooth adapted for engagement with said flange to hold the clutch against its tensioning means and for travel in the flange groove to return said clutch, a rod pivotally connected with said lever, a spring for yieldingly holding said rod and lever in lowered position, a tripping rod having a dog adapted for lifting said lever rod, a spring for holding said lever rod in position for engagement by the dog, and a pedal for operating the tripping rod.

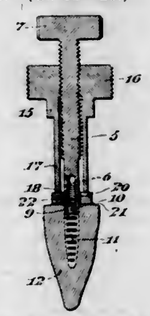
1,102,849. MOP-HOLDER. ROBERT E. ANDREWS and GEORGE R. ANDREWS, Mount Gilead, N. C. Filed Dec. 7, 1912. Serial No. 735,557. (Cl. 15—56.)

1. A mop holder comprising a pair of coacting clamping rings hinged together, one of which is adapted to swing into and out of position in the other and to carry the mop, and means for retaining the swinging ring in such position.



2. A mop holder comprising co-acting inner and outer clamping members, the former of which is adapted to carry the mop, a bracket hinged to the outer member and provided with a longitudinal slot, a connecting bolt between the inner member and said bracket extending loosely through said slot, a bracket secured to said inner member opposite the first-named bracket, a latch carried by the second-named bracket, and a keeper secured to said outer member above said second-named bracket for coaction with said latch.

1,102,850. DENTAL CROWN-POST EXTRACTOR. THOMAS RAYMOND ARDEN, Philadelphia, Pa., assignor to The S. S. White Dental Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 25, 1914. Serial No. 827,108. (Cl. 32—10.)



1. A crown-post extractor comprising a member having threaded means for engaging a crown-post embedded in a tooth, and means for forcing said member from the tooth and thereby withdrawing said crown-post.

2. A crown-post extractor comprising a member having an internally threaded socket arranged to engage a crown-post embedded in a tooth, and means tending to bear upon said tooth to force said member from said tooth and thereby withdraw said crown-post.

3. A crown-post extractor comprising a member having an internally threaded socket for engaging a crown-post embedded in a tooth, and means connected with said member and movably supported upon said tooth to force said member from said tooth and withdraw said crown-post.

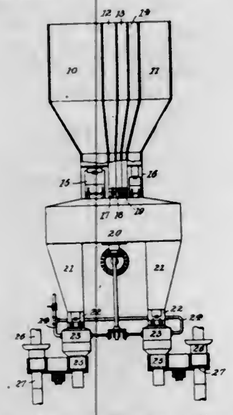
4. A crown-post extractor comprising a member having an internally threaded socket arranged to be engaged with said crown-post in threaded relation therewith, and means rotatably connected with said member arranged to force it from said tooth and thereby withdraw said crown-post.

5. A crown-post extractor comprising an externally threaded stem having an internally threaded socket arranged to be engaged in threaded relation with a crown-post embedded in a tooth, and a nut rotatably engaged with said external screw-threads, rotatable thereon to force said stem from said tooth and thereby withdraw said crown-post.

1,102,851. METHOD OF MANUFACTURING ARTIFICIAL STONE. MOIS H. AVRAM, New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Filed Apr. 5, 1909. Serial No. 487,920. Renewed Dec. 6, 1912. Serial No. 735,316. (Cl. 106—44.)

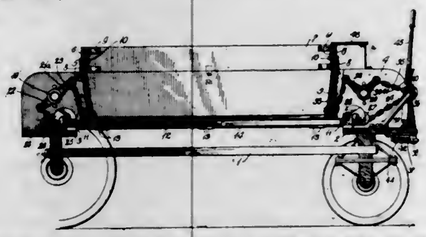
1. Method of manufacturing sand lime bricks which consists in mixing dried bodies of sand, hydrated lime

and cement in sufficient quantities to form a plurality of bricks, the quantity of cement being materially less than that of the lime, consecutively segregating from the dry mixture fixed smaller bodies, each sufficient for making a single brick only, admitting to each segregated body a predetermined quantity of hot moisture and simultaneously thoroughly agitating said body, so as to form a plastic mass, compressing said mass into the shape desired whereby the cement effects a preliminary binding of the constituents of the compressed mass, and steam-indurating said compressed mass to effect a thorough silication of the same.



2. Method of manufacturing sand lime bricks which consists in mixing dried bodies of sand and hydrated lime in sufficient quantities to form a plurality of bricks, repeatedly segregating from the dry mixture a multitude of fixed smaller bodies, each of said bodies being sufficient for making a single brick only, admitting to said segregated bodies predetermined quantities of moisture and simultaneously agitating the same, so as to form plastic masses, compressing said masses into the shape desired, and steam-indurating said compressed masses.

1,102,852. DUMP-WAGON. ANDREW C. BAKER, Albion, Mich. Filed Oct. 18, 1913. Serial No. 795,918. (Cl. 21—20.)



1. In a dump wagon, a box, a tubular hinge member longitudinal of said box, hinged center doors carried thereby, side doors carried by said box and coöperating with said center doors in forming the bottom of said box, rock crank shafts at the ends of said box and having connections with said doors, and an operatable yoke at the end of said box and connected to said crank shafts with one of its connections extending through said member whereby the doors can be evenly moved.

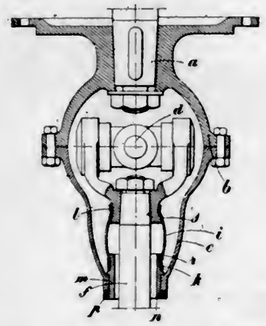
2. In a dump wagon, a box, platforms at the ends of said box, a tubular hinge member supported by said platform, hinged center bottom doors carried by said member, hinged side bottom doors carried by said box, rock crank shafts connected to said doors, and a pivoted yoke supported by one of said platforms and having connection with said crank shafts with one of said connections extending through said member.

3. In a dump wagon, a box, a tubular hinge member arranged longitudinally of said box, discharge doors hinged thereon, side doors carried by the said box and co-operating with said discharge doors in forming the bottom of said box, and means operatable at one end of said box with a connection through said member to the opposite end of said box for evenly moving the ends of the said doors.

4. In a dump wagon, a box, a tubular hinge member arranged longitudinally of said box, discharge doors hinged thereon, and means operatable at one end of said box with a connection through said member to the opposite end of said box for evenly moving the ends of said doors.

5. In a door operating mechanism, hinged doors, a tubular member forming a hinge for some of said doors, and rock crank shafts at the ends of said member and having connections with all of said doors and a connection with each other that extends through said member.

1,102,853. CASING FOR CARDAN JOINTS. MARIUS BARBAROU, St.-Denis, France, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed Dec. 8, 1910. Serial No. 596,212. (Cl. 74—19.)

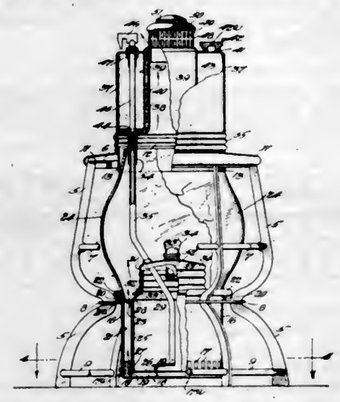


1. In a Cardan joint, the combination of a shaft, an open ended casing secured thereto, means to trausmit motion from said shaft and casing comprising a second shaft and means for connecting said second shaft for universal movements within the casing, a piece of flexible material secured at one edge to said means to transmit motion, said second shaft extending through the end opening of said casing and having free play therein, and an annular member detachably secured in said end opening and having a projecting portion extending into the casing, said piece of flexible material being bulged inwardly with reference to the casing and secured at its other edge to that side of said member which faces the casing.

2. In a Cardan joint, the combination of a shaft, a cross connected therewith, a second shaft, an open ended casing inclosing the cross and connected with said second shaft, a sleeve fixed within the open end of said casing around the first shaft, a collar around said first shaft in the inner part of the casing, and a substantially cylindrical piece of flexible material connecting said sleeve and said collar and bulged inwardly with respect to the lubricant chamber constituted by the interior of the casing.

1,102,854. LANTERN. JOSEPH BARTON, JESSE MELBOURN, FOREST NEEDHAM, and JOHN G. GREEN, Cle Elum, Wash. Filed June 23, 1913. Serial No. 775,335. (Cl. 240—38.)

1. In a lantern adapted for acetylene gas, the combination of a lantern frame, a holder mounted thereon and having a general annular form for supporting the carbid container, said holder being provided with tongues bent inwardly and upwardly, a carbid container provided with a rounded annular portion for engaging said tongues, a drop pipe connected with said carbid container, a water tank connected with said drop pipe and removable with said drop pipe, and means for securing said water tank upon said lantern frame.



2. A lantern adapted for acetylene gas, comprising a lantern frame, a support ring mounted thereupon and provided with an annular flange having a thread, a water tank having a substantially annular form and provided with an annular flange having a thread mating said first mentioned thread, a water tank having a double inner wall, heat-insulating material located within said double wall, a ventilation dome carried by said double inner wall and provided with openings, a drop pipe connected with said water tank, and a carbid container connected with said drop pipe.

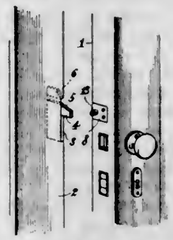
3. A lantern for acetylene gas, comprising a lantern frame, a holder carried thereby and having a general annular form, said holder being provided with ventilation holes and with tongues bent upwardly, a carbid container provided with a rounded portion for engaging said tongues in order to provide a spring seat for said carbid container, a drop pipe connected with said carbid container, a water tank connected with said drop pipe and removable with said drop pipe and said carbid container as a unit, said water tank being provided with an annular threaded portion, and a supporting ring mounted upon said lantern frame and provided with an annular threaded portion mating said annular threaded portion of said water tank.

4. In a lantern adapted for acetylene gas, the combination of a lantern frame, a carbid container, a holder mounted upon said frame and having a general annular form for supporting the carbid container, a globe carried by the frame above said carbid container, a water tank disposed above said globe, and a drop pipe rigidly secured to said water tank and to said carbid container and extending within the latter, said water tank, drop pipe and carbid container being removable as a unit.

5. In a lantern adapted for acetylene gas, the combination of a lantern frame, a carbid container, a holder mounted upon said frame and having a general annular form for supporting the carbid container, a globe carried by the frame above said carbid container, a water tank disposed above said globe, a drop pipe secured to said water tank and extending downwardly through said globe and being secured to said carbid container, and a burner carried by said carbid container, the upper end of the globe being of sufficient size to permit the removal of the carbid container and drop pipe, when the water tank is removed.

1,102,855. DOOR-SUPPORT. FRANK J. BECKER, Independence, Mo. Filed Mar. 18, 1914. Serial No. 825,569. (Cl. 70—16.)

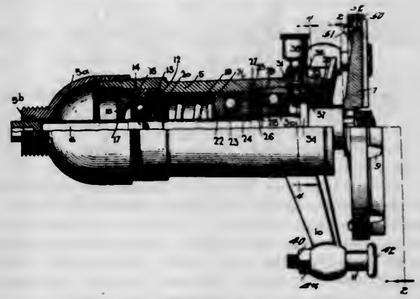
1. The hereindescribed door support comprising a keeper for attachment to a jamb and having an inclined cam surface to project beyond one side of the jamb, in combination with a frame for attachment to the free side of the door and a bolt projecting from said frame to engage and ride up on the cam of the keeper when the door closes and thereby raise and support the free side of the door, and means to adjust said bolt in the frame so that it may be caused to project to any desired extent from the free side of the door.



2. The herein described door support comprising a keeper for attachment to a jamb and having an inclined cam surface to project beyond one side of the jamb, in combination with a frame for attachment to the free side of the door and a bolt projecting from said frame to engage and ride up on the cam of the keeper when the door closes and thereby raise and support the free side of the door, and means to adjust said bolt in the frame so that it may be caused to project to any desired extent from the free side of the door, and a sleeve roller on the said bolt and adjustable therewith in the said frame.

3. The herein described door support comprising a keeper for attachment to a jamb and having an inclined cam surface to project beyond one side of the jamb, in combination with a frame for attachment to the free side of the door and provided with a guide bore and also with a side wall having a longitudinal slot, a bolt arranged in said bore means to adjust said bolt in the bore to cause the outer end of the bolt to project beyond the face end of the frame, a sleeve roller on the outer end of the said bolt and adjustable therewith in said bore and an operating and securing head bearing on the outer side of said frame and movable thereon, said head having a threaded stud engaging a transverse threaded opening inn the bolt.

1,102,856. TOOL FOR TREATING ARTIFICIAL STONE. JOHN OTTO BERG, New York, N. Y. Filed Jan. 2, 1913. Serial No. 739,662. (Cl. 125—6.)



1. In a tool for treating artificial stone, a head having a rear portion with threaded orifices and a face with grooves extending to the periphery of the head, the side walls of the grooves diverging inward from the face, knives slidably disposed in the grooves, a member having a flange disposed around the periphery of the head, the member extending at the rear of the head and being provided with orifices, and screws disposed in the last-mentioned orifices and meshing in the threaded orifices.

2. In a tool for treating artificial stone, a head having a rear portion with threaded orifices and a face with

grooves extending to its periphery, the side walls of the grooves diverging inward from the face, knives slidably disposed in the grooves, a member having a flange disposed around the periphery of the head and the outer ends of the knives to serve as a guard, the member extending at the rear of the head and being provided with orifices, and screws disposed in the last-mentioned orifices and meshing in the threaded orifices.

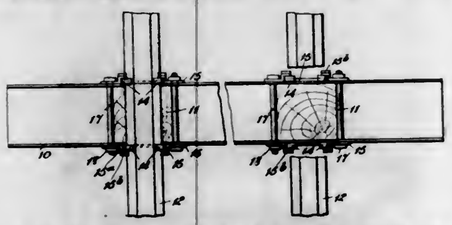
3. In a tool for treating artificial stone, a casing having a threaded end and an inner shoulder spaced therefrom, a collar having lubricant openings disposed in the casing adjacent the threaded end and spaced from the inner wall of the casing, means engaging the shoulder and one end of the lubricant collar, a screw having an opening and meshing with the threaded end of the casing for pressing the lubricant collar against the said means, a shaft disposed in the collar and extending through the opening in the screw, an offset on the shaft at the screw and a cutting head on the shaft.

4. In a tool for treating artificial stone, a casing having a threaded end and an inner shoulder spaced therefrom, a collar having lubricant openings disposed in the casing adjacent the threaded end and spaced from the inner walls of the casing, means engaging the shoulder and one end of the lubricant collar, a screw having an opening and meshing with the threaded end of the casing for pressing the lubricant collar against the said means, a shaft disposed in the collar and extending through the opening in the screw, and a cutting head on the shaft.

5. In a tool for treating artificial stone, a casing having a shoulder and provided with an inner threaded surface adjacent the shoulder, a collar disposed against the shoulder, a threaded member meshing with the threaded surface for holding the collar against the shoulder, a shaft in the casing disposed through the collar, and having a shoulder, a spring disposed against the collar, means connecting the last shoulder with the spring, a collar having lubricant openings spaced apart therein, and disposed within the casing around the shaft, means to limit the inward movement of the lubricant collar, there being an inner thread in the casing at the lubricant collar, and a threaded member meshing with the last thread in the casing for pressing the lubricant collar inwardly.

[Claim 6 not printed in the Gazette.]

1,102,857. RAILWAY-TIE AND RAIL-FASTENER. HENRY A. BERQUIST, St. Croix Falls, Wis. Filed Mar. 4, 1914. Serial No. 822,300. (Cl. 238—4.)



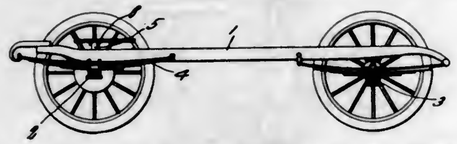
1. In rail-fastening means, rail-engaging devices having heads and shanks that taper upwardly toward the heads; and clamps securable to a tie at the sides thereof, said clamps having three-sided sockets presenting openings at top and bottom and at the inner side to receive the said tapered shanks, the said sockets tapering upwardly to conform to the shape of the shanks.

2. The combination with a channel tie, of blocks therein to sustain railway rails, rail-engaging devices comprising heads and tapered shanks, clamps attachable to opposite sides of the tie and formed with tapered sockets to receive the said tapered shanks, and transverse bolts passing through the said clamps and transversely through the tie at opposite sides of the said blocks.

3. In rail-fastening means, rail-engaging devices comprising heads and shanks tapered in an upward direction, and clamps securable to the tie and formed with sockets to engage the said tapered shanks.

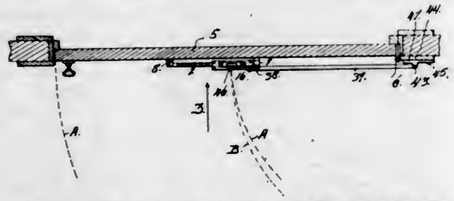
4. In rail-fastening means, rail-engaging devices comprising heads and shanks, the said shanks having inner perpendicular edges and outer beveled edges, the perpendicular edges being adapted to lie flat against the sides of a tie, and clamps securable to the tie and having sockets presenting outer walls tapered to correspond with the beveled edges of the said shanks.

1,102,858. SHOCK-ABSORBER. JOHN G. BETHUNE and FRANK H. BABCOCK, Punxsutawney, Pa. Filed Nov. 23, 1912. Serial No. 733,163. (Cl. 21—105.)



The combination with the axle and body of a vehicle, of laminated cushioning springs each secured at its center to the axle and at its ends to the body, and a bowed laminated shock absorbing spring in the same vertical plane with the axle and secured to the body and axle, said shock absorbing spring being between and spaced from the cushioning springs and all of the springs being constantly under tension, the short laminæ of the shock absorbing spring forming the concave surface of said spring, and the short laminæ of said cushioning springs forming the convex surfaces of said springs.

1,192,859. DOOR-HOLDER. WELLINGTON P. BLACKWELL, Denver, Colo. Filed May 10, 1913. Serial No. 766,789. (Cl. 16—6.)



1. The combination with a door suitably hinged and a support adjacent thereto, of a ratchet bar secured to the door, a block normally slidable on the bar during the opening movement of the door, the bar being toothed and the block carrying a vertically movable pawl toothed to coöperate with the toothed part of the bar, an operative connection between the lock and the said stationary support to cause the block to move with relation to the bar during the movement of the door, and means carried by the pawl and coöperating with the block to support the pawl out of operative relation with the toothed part of the bar, substantially as described.

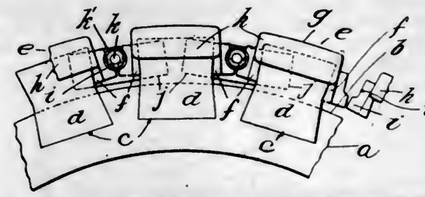
2. The combination with a hinged door and a stationary part adjacent thereto, of a bar secured to the door and having ratchet teeth formed on its upper surface, a block slidable on the bar, a vertically movable pawl carried by the block and having its lower extremity toothed to cooperate with the toothed face of the bar, a cam pivotally mounted on the pawl above the block and adjustable to support the pawl out of engagement with the toothed face of the bar, and an operative connection between the block and the stationary support adjacent the door to cause the block to move in respect to the bar during the movement of the door, substantially as described.

3. The combination with a door, of a bar secured to the door and having its upper face provided with ratchet teeth, a pawl vertically movable in the block and having its lower extremity toothed to coöperate with the teeth of the bar, means carried by the block independent of the pawl for retarding the movement of the block on the bar, and means connected with the block for causing the latter to move in respect to the bar during the movement of the door, substantially as described.

4. The combination with a door and a stationary support adjacent the latter, the door being suitably hinged, of a bar secured to the door and having its upper face provided with ratchet teeth, a pawl carried by the block and coöperating with the teeth of the latter, a friction plate carried by the block and movable toward and away from the lower face of the bar, a set screw threaded in the block for adjusting said plate and an arm pivotally connected with the block at one extremity and with the stationary support adjacent the door at its opposite extremity and beyond the axis of the door's hinges, substantially as described.

5. The combination with a swinging member, of a bar secured to the member and having its upper face provided with ratchet teeth, a pawl vertically movable in the block and having its lower extremity toothed to coöperate with the teeth of the bar, means carried by the block independent of the pawl for retardng the movement of the block on the bar, and means connected with the block for causing the latter to move in respect to the bar, during the movement of the member, substantially as described.

1,102,860. TIRE FOR WHEELS. WILLIAM H. BLAKE, Jersey City, N. J. Filed Dec. 3, 1910. Serial No. 595,340. (Cl. 152—3.)



1. A vehicle wheel having a rim; a pair of resilient blocks mounted therein; open-ended shoes which are mounted on the tread portions of said blocks; and a retaining device which is fastened to said shoes and the ends of which project over the open ends of the latter and over the ends of the blocks adjacent or corresponding to said open ends.

2. A vehicle wheel having a rim; a pair of resilient blocks mounted therein; open-ended shoes which are mounted on the tread portions of said blocks and which are formed with lugs; and a retaining device which is fastened to said lugs and the ends of which project over the open ends of said shoes and over the ends of the blocks adjacent to said open ends.

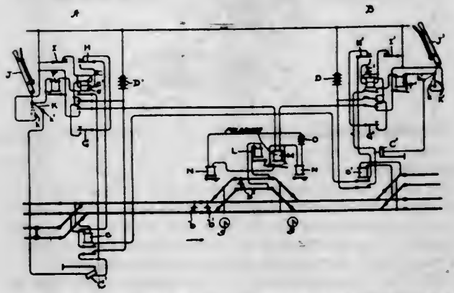
3. A vehicle wheel having a rim; a pair of resilient blocks mounted therein; open-ended shoes which are mounted on the tread portions of said blocks and the lateral faces of which are converging; and a retaining device which is fastened to said shoes and the ends of which project over the open ends of the latter and over the ends of the blocks adjacent thereto.

4. A vehicle wheel having a rim formed with a pair of open-ended pockets which extend transversely of the tread face of the rim; a pair of resilient blocks mounted in said pockets; channeled shoes which are mounted on the tread portions of said blocks and extend transversely of the tread face of the rim; said shoes being closed at one end and open at the opposite end; and retaining means which connect the open ends of said shoes and retain the same against displacement lengthwise of said blocks; the open ends of said shoes being opposite the open ends of said pockets.

5. A vehicle wheel having a rim formed with a pair of recesses which extend transversely with the tread face of the rim and the ends of which at the side of the rim are open, the opposite ends being closed; a pair of resilient blocks mounted in said recesses; channeled shoes which are mounted on the tread portions of said blocks and extend transversely of the tread face of the rim; said shoes being closed at one end and open at the opposite end; and retaining means which connect the open ends of said shoes and retain the same against displacement lengthwise of said blocks; the open ends of said shoe being opposite the open ends of said recesses.

[Claims 6 to 9 not printed in the Gazette.]

1,102,861. SIGNAL SYSTEM. ELMER F. BLISS, Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, a Corporation of Pennsylvania. Filed Aug. 26, 1909. Serial No. 514,682. (Cl. 246—33.)



1. In combination, a section of single track between stations, a signal-controlling circuit at one station, a closing circuit operable only by the coöperation of the operators at both stations for closing said signal-controling circuit, a track circuit for the section including a track relay for controlling said closing circuit, said signal-conrtolling circuit when closed remaining closed independently of the opening of the closing circuit by said track relay, and a signal at said station controlled by said signal-controlling circuit.

2. In a block signal system for single track sections between stations, a stick relay at one station, a circuit controlling the energization of said relay arranged to be closed only by the coöperation of the operators at both stations, a maintaining circuit for said relay arranged to be opened only by the operator at the first-mentioned station, and a signal at said station controlled by said relay.

3. In a block signal system for single track sections between stations, a stick relay at one station, a circuit controlling the energization of said relay extending through the block and including two normally open, manually controlled, contacts at the two stations respectively, a maintaining circuit for said relay including as contacts only the relay contacts and a normally closed, manually controlled contact at the first mentioned station, and a signal at said station controlled by said relay.

4. In a block signal system for single track sections between stations, a stick relay at one station having one winding controlled by normally open, manually controlled, contacts at both stations and a second winding controlled only by a normally closed manually controlled contact at the first mentioned station, and a signal at said station controlled by said relap.

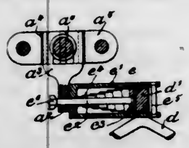
5. In a block signal system for single track sections between stations, a circuit at one station, means for closing said circuit operable only by the coöperation of the operators at both stations, means for opening said circuit operable only by the operator at the first mentioned station, a second circuit at said station controlled by the first, means controlled by a train in the block for opening said second circuit, and a signal at said station controlled by said second circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,102,862. CENTERING DEVICE FOR CAR-COUPLINGS. LOUIS BOIRAULT, Paris, France. Filed Aug. 22, 1913. Serial No. 786,109. (Cl. 213—42.)

1. A device for the purpose of directing the coupling apparatus of a bogie car comprising the combination of

an arm adapted to be secured by the bogie of a car and a spring telescopic connection, one end of which is attached to the said arm and the opposite end of which is adapted to be attached to the coupling apparatus of the car, the said connection comprising a cap, a rod slidable through the bottom of the cap according to the axis of such cap and having a head, a piston on such rod, a spring compressed between the piston and the bottom of the cap, and a bolt across the opening of the cap, the said arm being engaged between the said piston and the said bolt.



2. The combination of a railway car having a coupling apparatus pivoted to the main chassis and to the bogie, an arm secured to the bogie in such a manner that its end lies at a certain distance on one side of the axis of the draft, and a spring telescopic connection, the ends of which are attached to the said arm and to the coupling apparatus and of which the longitudinal axis is directed transversally to the axis of the coupling apparatus.

3. The combination of an arm having a flat end provided with spaced projections, a U shaped cap the branches of which extend between the projections of the said end of the arm, a piston slidable between the branches of the cap, a spring between such piston and the bottom of the cap, and a bolt in the open end of the cap, the flat end of the arm being located between such bolt and the said piston.

4. The combination of a car coupling head, a vertical plate secured to such head and hanging below the latter, a vertical and flat eyelet at the lower end of such plate, the plane of such eyelet being vertical and parallel to the longitudinal axis of the said coupling head, an arm one end of which is adapted to be secured to a car bogie and the other end of which is flat, and a spring telescopic connection connecting the flat end of such arm with the flat eyelet of the said plate, the ends of such connection being adapted to bear flatly against the said end and the said eyelet for the purpose specified.

1,102,863. WRENCH. FRANK JOSEF BOJAS, Detroit, Mich. Filed Mar. 27, 1914. Serial No. 827,693. (Cl. 81—121.)



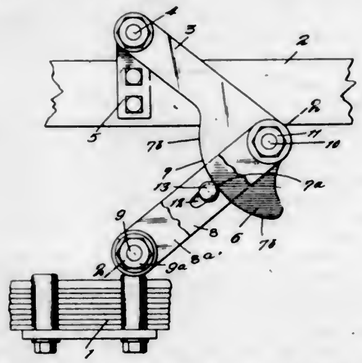
1. A wrench including a shank, a socket member, a universal connection between the shank and socket member, a sleeve, and means for connecting the sleeve with the socket.

2. In a wrench of the class set forth, a shank, a socket, a link pivotally connected with the shank, a pin having a bit connecting the socket with the link, a spring between the pin and the spring, said spring adapted to lock the pin upon the link and to automatically remove the pin from the link when the pin is rotated upon the link in one direction, and a movable sleeve upon the shank adapted to engage with the socket to lock the socket to sustain the same longitudinally of the shank.

3. In a wrench of the class set forth, a shank, a sleeve upon the shank, a link pivotally connected with the shank, a socket pivotally connected with the link, laterally extending lugs upon the socket, and a sleeve having bayonet slots adapted to receive the said lugs to lock the socket upon the sleeve.

4. A wrench including a shank, a flange adjacent one end of the shank, a spring upon the shank and contacting with the flange, a sleeve having a reduced portion forming a shoulder arranged upon the shank and having said shoulder contacted by the spring, a stop collar removably connected with the shank for limiting the movement of the sleeve by the spring, said sleeve having its end provided with bayonet slots, a socket having lateral lugs, a universal connection between the end of the shank and the socket, and the said lugs being arranged to be received within the bayonet slots of the sleeve.

1,102,864. SHOCK-ABSORBER. HARRISON HURLBERT BOYCE, Oyster Bay, N. Y., assignor to Edward V. Hartford, Deal, N. J. Filed Sept. 5, 1912. Serial No. 718,663. (Cl. 21—105.)



1. A shock absorber for vehicles provided with spring suspension means, comprising a cam-shaped member adapted to be attached to the vehicle body, a member of bifurcated construction adapted to be attached to the running gear, a spherical bearing part mounted and retained between and by the bifurcated bearing part, said member being adapted to coöperate with the cam-shaped member and the bifurcated member to produce a variable drag between the parts upon the operation of the same.

2. In a shock absorber for vehicles having spring suspension means, the combination of a cam-shaped member adapted to be attached to the vehicle body, a member attached to said cam-shaped member and adapted to be attached to the running gear, a spherical resistant member carried by said latter member, said spherical resistant member coöperating with the cam-shaped member to produce a drag to modify the normal action of the spring suspension means.

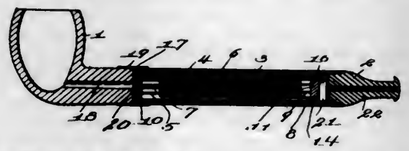
3. A shock absorber for vehicles having spring suspension means, comprising an arm adapted to be attached to the body of the vehicle, said arm being provided with a cam shaped extremity, a flexible member of bifurcated construction straddling and attached to said arm, said bifurcated member being adapted to be attached to the running gear of the vehicle, a cam engaging member interposed and held between and partly within the parts forming the bifurcated member, said cam engaging member being adapted to flex the parts of the bifurcated member when operated by the cam, and producing a variable drag between the parts to modify the normal action of the spring suspension means.

4. A shock absorber for vehicles having spring suspension means, comprising a member adapted to be attached to the body of the vehicle, a member adapted to be attached to the running gear of the vehicle, both members being attached together by means of a common pivot connection, and both members being adapted to oscillate, one of said members having a cam like formation and the other member being provided with a yieldably mounted spherical cam engaging member coöperatively associated with the members and adapted to produce an increasing drag as the parts are moved from the normal to modify the action of the spring suspension means.

5. In a shock absorber for vehicles having spring suspension means, the combination of an arm provided with a cam shaped extremity, said arm being adapted to be attached to the body of the vehicle, a pair of flexible arms adapted to be attached to the running gear of the vehicle, a common pivot connection for all of the arms, a ball seated and held between the flexible arms, said cam shaped extremity of said first arm being also positioned between the flexible arms and contacting with said ball and adapted to move said ball in opposition to the tension of the flexible arms to produce a drag between the ports.

[Claims 6 and 7 not printed in the Gazette.]

1,102,865. TOBACCO-PIPE STEM. HUGH M. BROWNE, Cheyney, Pa. Filed Aug. 21, 1913. Serial No. 785,866. (Cl. 131—12.)



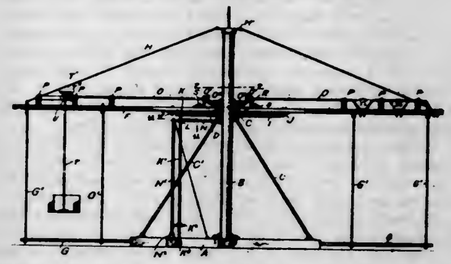
A tobacco pipe having a bodily removable stem comprising a tubular outer member, and an inner member which is removably fitted in the bore of said outer member and which is provided with front and rear caps and behind the second-named cap with a closed end having a nipple leading therefrom, said caps having inlet and outlet apertures, respectively, for the smoke and the front cap having a continuous, peripheral flange which projects across the front edge of the outer stem member to prevent the entrance of smoke between said outer member and the inner member, and a mouth-piece removably connected to the rear end of the said outer member and having its front end abutting against the closed rear end of the said inner member and its bore receiving the said nipple.

1,102,866. KNOCKDOWN CAROUSEL. SETH WILLIS BRUNDAGE, Leavenworth, Kans., assignor to Charles W. Parker, Leavenworth, Kans. Filed June 13, 1913. Serial No. 773,411. (Cl. 46—27.)

1. In a carousel, the combination of a revoluble superstructure provided with sockets, a pin wheel having sundry of its pins provided with heads engaging the said sockets, and clamping devices removably held on the superstructure and engaging the pin wheel to clamp the latter to the superstructure.

2. In a carousel, the combination of a revoluble superstructure provided with sockets, a pin wheel having sundry of its pins provided with heads engaging the said sockets, and clamping devices removably held on the superstructure and engaging the pin wheel to clamp the latter to the superstructure, each clamping device consisting of a bolt held on the superstructure, a cam lever fulcrumed on the bolt, and a clamping block through which passes the bolt and engaged by the said cam lever.

3. In a carousel, a sectional pin wheel comprising sectional rings, pins connecting the ring sections with each other, the end pins being provided with heads, and splice bars on the ends of the ring sections and projecting beyond the same, the projecting portions of the splice bars having openings engaging the said heads.



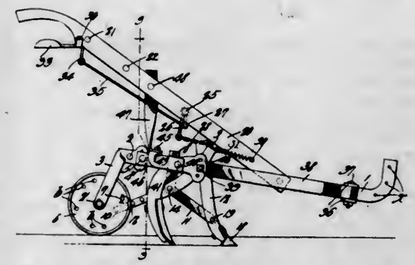
4. In a carousel, a sectional pin wheel comprising sectional rings, pins connecting the ring sections with each other, the end pins being provided with heads, the heads at adjacent ends of the ring sections being located one on the top ring of one section and the other on the bottom ring of the other ring section, and top and bottom splice bars secured to the top and bottom rings of the adjacent ring sections and projecting beyond the same, the top splice bars engaging the said top ring head and the bottom splice bar engaging the said bottom ring head.

5. In a carousel, a sectional pin wheel comprising sectional rings, pins connecting the ring sections with each other, the end pins being provided with heads, the heads at adjacent ends of the ring sections being located one on the top ring of one section and the other on the bottom ring of the other ring section, and top and bottom splice bars secured to the top and bottom rings of the adjacent ring sections and projecting beyond the same, the top splice bar engaging the said top ring head and the bottom splice bar engaging the said bottom ring head, the said top ring heads projecting above the top splice bar.

[Claims 6 to 10 not printed in the Gazette.]

1,102,867. [WITHDRAWN.]

1,102,868. COTTON-CHOPPER. WASHINGTON L. CALHOUN, Tarrytown, Ga. Filed May 6, 1913. Serial No. 765,877. (Cl. 97—45.)



1. The combination in a cotton chopper, of a drag bar having a terminal opening, a pivot bolt within said opening, two carrying arms held upon said bolt each having an apertured head, a securing bolt passing through said heads to adjustably secure said arms to said bar, supporting wheels secured to said arms, a striker pin carried by one of said wheels, a hanger bar adjustably secured to said drag bar, a yoke pivotally secured to said hanger bar having a striker head normally held in the path of said pin, a brace bar adjustably secured to said hanger bar, and a colter bar adjustably secured at one end to said yoke and near its other end to said bar.

2. The combination in a cotton chopper, of a drag bar having a terminal bolt opening, a pivot bolt within said opening, two carrying arms held upon said bolt each having an apertured head, a securing bolt passing through said heads to adjustably secure said arms to said bar, supporting wheels secured to said arms, a striker pin carried by one of said wheels, a hanger bar adjustably secured to said drag bar, a yoke pivotally secured to said hanger bar having a striker head normally held in the path of said pin, a brace bar adjustably secured to said hanger bars, a colter bar adjustably secured at one end to said yoke and near its other end to said brace bar, and a stop pin limiting downward movement of said yoke.

3. The combination in a cotton chopper, of a drag bar having a terminal bolt opening, a pivot bolt within said opening, two carrying arms held upon said bolt each having an apertured head, a securing bolt passing through said heads to adjustably secure said arms to said bar, supporting wheels secured to said arms, a striker pin carried by one of said wheels, a hanger bar adjustably secured to said drag bar, a yoke pivotally secured to said hanger bar having a striker head normally held in the path of said pin, a brace bar adjustably secured to said hanger bar and a colter bar adjustably secured at one end to said yoke and near its other end to said brace bar, a stop pin to limit the downward movement of said yoke and a spring to normally force said yoke in one direction.

4. The combination in a cotton chopper, of a drag bar having a terminal bolt opening, a pivot bolt within said opening, two carrying arms held upon said bolt each having an apertured head, a securing bolt passing through said heads to adjustably secure said arms to said drag bar, supporting wheels secured to said arms, a striker pin carried by one of said wheels, a hanger bar adjustably secured to said drag bar, a yoke pivotally secured to said hanger bar having a striker head normally held in the path of said pin, a brace bar adjustably secured to said hanger bar, and a spring to normally force said yoke in one direction.

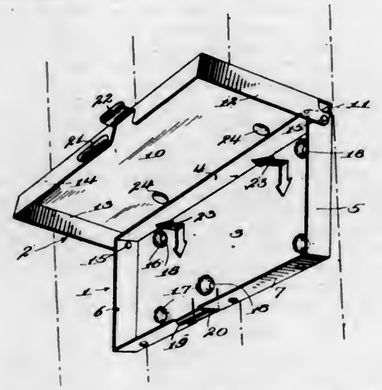
5. The combination in a cotton chopper, of a drag bar having a terminal bolt opening, a pivot bolt within said opening, two carrying arms held upon said bolt each having an apertured head, a securing bolt passing through said heads to adjustably secure said arms to said bar, supporting wheels secured to said arms, a striker pin carried by one of said wheels, a hanger bar adjustably secured to said drag bar, a yoke pivotably secured to said hanger bar having a striker head normally held in the path of said pin, a brace bar adjustably secured to said hanger bar, handle bars extending from said drag bar, a trip lever secured to one of said handle bars, and a connection extending from said lever to said yoke.

1,102,869. RAILWAY CARD-HOLDER. JAMES R. CARMER, Wilmington, Del., and CHARLES O. KEAGY, Philadelphia, Pa. Filed July 14, 1913. Serial No. 779,033. (Cl. 232—1.)

1. A railway card holder for attachment to car walls having its back provided adjacent the top and bottom edges thereof with rearwardly-projecting feet adapted to contact with the car wall, to dispose said back away from said car wall when the holder is attached thereto, the lower feet having a greater length than the upper feet, whereby the distance between the lower portion of the holder back and the car wall is greater than that between the upper portion of said back and said car wall.

2. A railway card holder for attachment to car walls comprising pivotally-connected body and cover elements, the back of said body element having its inner face indented adjacent the upper and lower edges thereof, to form rearwardly-projecting feet adapted to contact with the car wall, to dispose said back away from said car wall when the holder is attached thereto, the lower feet having a greater length than the upper feet, whereby the distance between the lower portion of the holder back and the car wall is greater than that between the upper portion of said back and said car wall.

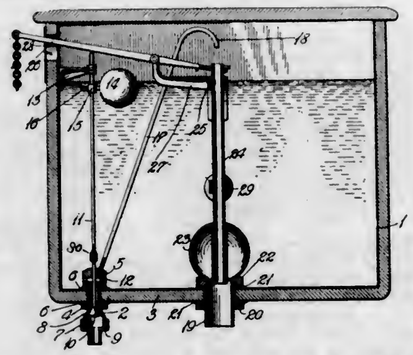
3. A railway card holder for attachment to car walls comprising pivotally-connected body and cover elements, the back of said body element having its inner face indented adjacent the upper and lower edges thereof, to form rearwardly-projecting feet adapted to contact with the car wall, to dispose said back away from the car wall when the holder is attached thereto, the lower feet having a greater length than the upper feet, whereby the distance between the lower portion of said back and the car wall is greater than that between the upper portion of said back and said car wall, certain of said feet being apertured to permit the fastening devices to be passed therethrough.



4. A railway card holder for attachment to car walls having its back provided with upper and lower rearwardly projecting feet adapted to contact against the car wall, to dispose said back away from the car wall when the holder is attached thereto, the lower feet having a greater length than the upper feet, whereby the space between the lower portion of said back and the car wall is greater than that between the upper portion of said back and said car wall, the top member of said holder being inclined upwardly and forwardly, to discharge water, snow and cinders falling thereon into the space between said back and car wall.

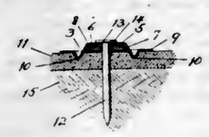
5. A railway card holder for attachment to car walls having its back provided with upper and lower rearwardly projecting feet adapted to contact against the car wall, to dispose said back away from the car wall when the holder is attached thereto, the top member of said holder being inclined upwardly and forwardly, to discharge water, snow and cinders falling thereon into the space between said back and car wall.

1,102,870. FLUSH-TANK. CHARLES CARREYN, Detroit, Mich. Filed May 5, 1913. Serial No. 765,449. (Cl. 137—104.)



The combination with a flushing tank, of a hollow casing having a tubular stem extending through the bottom of said tank, a ported fitting mounted upon the inner end of the tubular stem of said casing for detachably retaining the stem of said casing in engagement with said tank, said fitting having lateral oppositely disposed ports, a vertical port and an angularly disposed port adapted to accommodate a dribble pipe, said casing having a valve seat in the outer end thereof and the outer walls of said casing screw-threaded and adapted to receive a cap, and a valve housed within said casing and adapted to engage said valve seat, said valve having a rod extending through said stem and guided by the vertical port of said fitting.

1,102,871. PLATE FOR SECURING WEATHERPROOFING. CHARLES J. CARROLL, Baltimore, Md. Filed Apr. 2, 1913. Serial No. 758,289. (Cl. 108—7.)



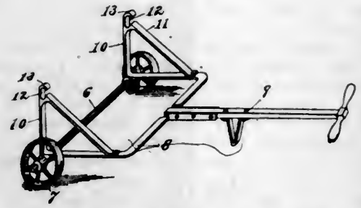
1. A securing cleat for weatherproofing material comprising a single-thick plate having a central portion with an exposed nail-receiving perforation therein and a lateral flange portion which bounds the central portion and said plate having an endless sealing projection on the under side thereof between the central portion and the rim edge of the lateral flange portion, which endless sealing projection extends entirely around the central portion and the perforation therein and projects below the said flange portion.

2. A securing cleat for weatherproofing material comprising a single-thick plate having a central raised portion with an exposed nail-receiving perforation therein and a lateral flange which entirely bounds the said central raised portion and perforation and said plate also having a sealing projection around the base of the central raised portion and between said raised portion and the rim-edge of the plate flange.

3. A sealing cleat for weatherproofing material comprising a strip of sheet metal having a series of spaced-apart perforations therein and said metal strip having an endless sealing projection around each perforation each projection extending below the lowermost side of the cleat.

4. A sealing cleat for weatherproofing material comprising a strip of sheet metal having a series of spaced-apart crosswise weakening indentations with a perforation in the strip between each two of said indentations and said metal strip also having a sealing projection extending below its lowermost side between each two of said indentations and each sealing projection extending all the way around a perforation.

1,102,872. HAND-TRUCK. JAMES J. CERNEY and JOSEPH F. CERNEY, Cleveland, Ohio. Filed Mar. 9, 1914. Serial No. 823,341. (Cl. 21—65.)



1. A truck having an axle, a yoke frame connected thereto, a removable platform having bottom and end boards, and angular irons to which said boards are secured, said irons having depending lugs between which the axle fits and hooks engaging the frame.

2. A truck having a frame provided with uprights at its sides having recesses adapted to engage trunnions on the ends of a box, and a removable platform fitting between the uprights and having devices on its underside to engage the frame.

1,102,873. ORE CONCENTRATION. GEORGE ALBERT CHAPMAN and STANLEY TUCKER, London, England, assignors to Minerals Separation Limited, London, England. Filed Dec. 26, 1912. Serial No. 738,586. (Cl. 83—85.)

1. A process for concentrating ores, which consists in first agitating a quantity of water with a modifying agent out of contact with the ore so as to form an air emulsion and thereafter adding to the water the ore to be treated and agitating the same therewith so as to form a froth and separating the froth.

2. A process for concentrating ores, which consists in first agitating a quantity of water with a modifying agent out of contact with the ore so as to form an air emulsion and thereafter adding to the water the ore to be treated together with a mineral-frothing agent and agitating the same therewith so asto form a froth and separating the froth.

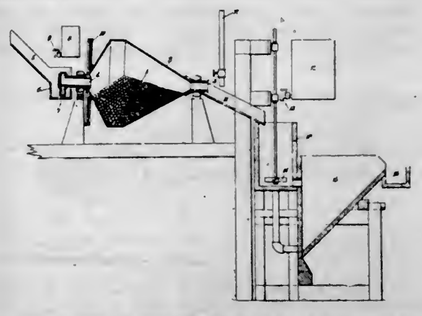
3. A process for concentrating ores, which consists in first violently agitating a quantity of water with an air-emulsifying agent out of contact with the ore and thereafter adding to the water the ore to be treated and agitating the same therewith so as to form a froth and separating the froth.

4. A process for concentrating ores, which consists in first violently agitating a quantity of water with an air-emulsifying agent out of contact with the ore and thereafter adding to the water the ore to be treated together with a mineral-frothing agent and agitating the same therewith so as to form a froth and separating the froth.

5. A process for concentrating ores, which consists in first agitating a quantity of water with cresol out of contact with the ore so as to form an air emulsion and thereafter adding to the water the ore to be treated and agitating the same therewith so as to form a froth and separating the froth.

[Claims 6 to 8 not printed in the Gazette.]

1,102,874. ORE CONCENTRATION. GEORGE A. CHAPMAN, London, England, assignor to Minerals Separation, Limited, London, England, a Corporation of England. Filed May 8, 1913. Serial No. 766,250. (Cl. 83—85.)



1. A process for concentrating ores, which consists in grinding the ore with water, in the presence of an agent for modifying the water, so that the agent modifies the physical characteristics of the water, and separating the floating mineral.

2. A process for concentrating ores, which consists in grinding the ore with water, in the presence of an agent for modifying the water, so that the agent modifies the physical characteristics of the water, and then agitating he pulp to form a froth and separating the froth.

3. A process for concentrating ores, which consists in grinding the ore with water containing a water modifying agent so as to modify the physical characteristics of the

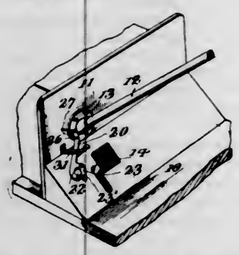
water, and then adding to the pulp a frothing agent and agitating to form a froth and separating the froth.

4. A process for concentrating ores, which consists in grinding the ore with water containing an air emulsifying agent so as to form an air emulsion, and separating the floating mineral.

5. A process for concentrating ores, which consists in grinding the ore with water containing an air emulsifying agent so as to form an air emulsion, and then agitating the pulp to form a froth and separating the froth.

[Claims 6 to 18 not printed in the Gazette.]

1,102,875. LOCK FOR CLUTCH-PEDALS. EDSON D. CLARAGE, Cleveland, Ohio. Filed Oct. 3, 1912. Serial No. 723,750. (Cl. 70—90.)

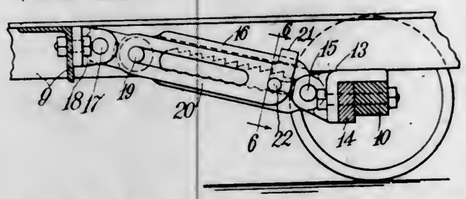


1. A pedal lock for motor vehicles comprising a supporting block, and a locking bar having a pivot stud rigidly secured to one end thereof and removably engaging said supporting block, whereby the locking bar is pivotally supported, said supporting block and pivot stud being provided with complemental interlocking means.

2. A pedal lock for motor vehicles comprising a supporting block provided with a recess having an offset portion and a counterbored portion, and a locking bar having a pivot stud rigidly secured to one end thereof and extended into said recess, said stud being provided with a locking lug.

3. A pedal lock for motor vehicles comprising a supporting block, provided with a threaded bolt-like extension, and a locking bar having a pivot stud rigidly secured to one end thereof and removably engaging said supporting block, whereby said locking bar is pivotally supported.

1,102,876. ELEVATING-TRUCK. GEORGE E. CLARK, Windsor Locks, Conn., assignor to George P. Clark Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed Mar. 16, 1914. Serial No. 824,867. (Cl. 21—118.)



1. In an elevating truck, the combination of a wheel supported truck frame together with a load supporting member and mechanism to raise and lower said member, an automatic mechanically operable means to check the lowering of the said member beyond a predetermined speed.

2. In an elevating truck, the combination of a wheel supported truck frame, together with a load supporting member and mechanism to raise and lower said member, and means operable by the movement of said member beyond a predetermined speed to automatically lock said member against downward movement.

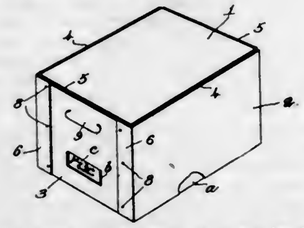
3. In an elevating truck the combination of a wheel supported truck frame, together with a load supporting member and mechanism to raise and lower said member, means operably connected to said member to lock the latter, whenever it is lowered beyond a predetermined speed, all constructed and arranged so that an upward movement of the member will automatically unlock said means.

4. An elevating truck, comprising in combination, a wheel supported truck frame together with a load supporting member and mechanism to raise and lower said member, means to automatically lock said member in one or more of its elevated positions, said means being operably connected to said member and controlled by the speed of said member.

5. An elevating truck comprising in combination, a wheel supported member and mechanism to raise and lower said member, means to automatically lock said member in one or more of its elevated positions, said means being operably connected to said member and controlled in its locking operation by the speed of the member in one direction and in its unlocking operation by a movement of the member in another direction.

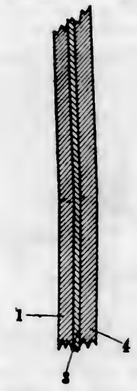
[Claims 6 to 8 not printed in the Gazette.]

1,102,877. COVER FOR BEER-CASES AND THE LIKE. PETER T. CLARK, Roxbury, Mass. Filed Dec. 14, 1912. Serial No. 736,673. (Cl. 229—43.)



As an article of manufacture, a cover for beer cases comprising a rectangular top, side and end flaps, adjustable and flexible connecting means between said top and each flap which permits said flaps to be folded down upon the sides and ends of a case to which the cover is to be applied and which also permits the opposite flaps to be adjusted toward and from each other to fit the case, and extensions on the ends of a pair of opposite flaps foldable upon the intervening flaps when the cover is in place upon the case.

1,102,878. COLORED KINEMATOGRAPHIC FILM. SILVIO COCANARI, Vieux-Dieu, Belgium. Filed Jan. 8, 1912. Serial No. 670,092. (Cl. 95—9.)



Positive kinematographic film colored before it is printed the sensitive emulsion being laid onto an ordinary film coated with a colored sheet.

1,102,879. CLOSURE FOR CONDIMENT-HOLDERS AND THE LIKE. CHARLES A. CONGER, Oakland, Cal. Filed June 16, 1913. Serial No. 773,987. (Cl. 215—25.)



1. A closure comprising a body that is adapted to be seated against the face of a plate over an aperture therein, and a clasp having a plurality of arms which are maintained in fixed relations to each other engaging with the inner face of the plate and holding the closure in position the clasp being freely movable through the closure to permit the arms to be either brought into engagement with the said plate or separated therefrom.

2. A closure comprising a body that is adapted to be seated against the face of a plate over an aperture therein, and a freely movable spring-actuated clasp passing through the body and having a plurality of arms maintained in fixed relations to each other, arranged to engage with the inner face of the plate for holding the closure in position.

3. A closure comprising a body that is adapted to be seated against the face of a plate over an aperture therein, and a spring-actuated clasp passing through and freely movable in the said body, having laterally extending free ends hook-shaped arms maintained in fixed relations to each other and arranged to engage with the inner face of the plate for holding the closure in position.

4. A closure comprising a body that is adapted to be seated against the face of a plate over an aperture therein, having a short inner end portion of a size adapted to enter the aperture and serving to center the closure relative thereto, and a movable clasp having a plurality of laterally extending arms maintained in fixed relations to each other and beyond the inner face of the said short, centering portion of the closure, arranged to engage with the inner face of the plate to hold the closure in position.

5. A closure comprising a hollow body that is adapted to be seated against the face of a plate over an aperture therein, a movable clasp passing through the body, having a plurality of laterally extending arms that are maintained beyond the inner end of the closure and are arranged to engage with the inner face of the plate to hold the closure in position, a part to which the said clasp is secured, and a spring arranged within the hollow body of the closure bearing against the clasp-carrying part.

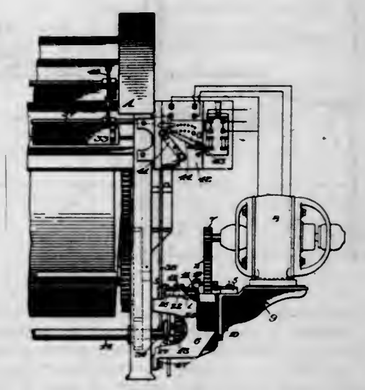
[Claims 6 to 8 not printed in the Gazette.]

1,102,880. STOP MECHANISM FOR MACHINERY. DANIEL M. COOPER, Rochester, N. Y., assignor, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 30, 1909. Serial No. 535,566. (Cl. 74—46.)

1. A stop mechanism comprising a shifter for disconnecting a driven from a driving member, a movable member having a cam surface thereon coöperating with the shifter, a dog pivotally mounted on the movable member and adapted to be moved independently thereof, a member moving with the machine to be stopped, and means for moving the dog into connection with said member to effect the movement of the shifter.

2. The combination with a shifter for effecting disconnection between a driven and a driving member, of mechanism for effecting the movement of the shifter embodying a slide having a cam surface thereon coöperating with the shifter and a dog pivotally mounted on the slide and adapted to be moved independently thereof, a part moving with the machine to be stopped, and means for connecting said dog with the moving part to cause the latter to shift the slide.

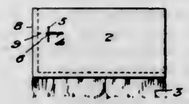
3. The combination with a shifter for effecting disconnection between a driven and a driving member, of mechanism for effecting the movement of the shifter embodying a gravity controlled slide having a cam surface thereon coöperating with the shifter and a dog pivotally mounted on the slide and adapted to be moved independently thereof, a rotary member moving with the machine to be stopped having a projection thereon, and means for moving said dog into the path of the projection.



4. The combination with a shifter for effecting disconnection between a driven and a driving member, of mechanism for effecting the movement of the shifter embodying a member having a cam surface thereon coöperating with the shifter and a dog pivotally mounted on said member and adapted to be moved independently thereof, a member moving with the machine to be stopped, and a finger board having pivotal connection with the dog to move the latter into the path of the moving member.

5. The combination with a shifter for effecting disconnection between a driven and a driving member, of mechanism for effecting the movement of the shifter embodying a gravity controlled slide having a cam surface thereon coöperating with the shifter and a dog carried by the slide, a member moving with the machine to be stopped, a finger board, and a pull bar connected to the finger board, and pivotally connected to the dog to move the latter into the path of the moving member.

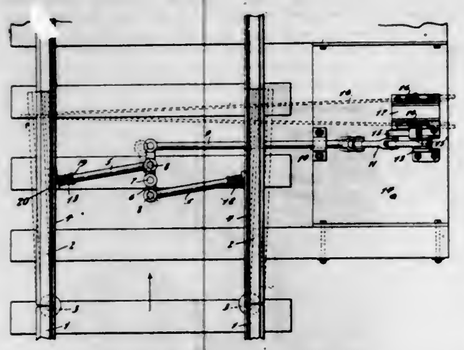
1,102,881. BUTTONHOLE FOR ARTICLES OF WEARING-APPAREL. CHARLES W. T. DAVIES, New York, N. Y. Filed Sept. 10, 1913. Serial No. 789,085. (Cl. 2—79.)



1. A double folding cuff, the relatively foldable parts or folds of which are provided with link-holding buttonholes intermediate their upper and lower edges which are arranged so that only a substantially terminal portion of one buttonhole overlaps a portion of the other buttonhole when the folds are in overlying relation.

2. A soft, double, folding cuff having separate, single buttonholes, each extending right through the body of the cuff in the upper and lower folds thereof adjacent its outer and intermediate of its upper and lower edges, said buttonholes being so arranged in relation to each other that when the two folds of said cuff are in overlying relation one of said buttonholes transversely overlaps both sides of, and lies in direct juxtaposition to, the other buttonhole at only a substantially terminal point of the last-named buttonhole.

1,102,882. AUTOMATIC CAR STOP AND DERAILER. BEMISS N. DAVIS, New Orleans, La. Filed Nov. 18, 1913. Serial No. 801,588. (Cl. 104—127.)



1. The combination with a main track, of a section of track forming a continuation thereof in the direction of the line of travel, the rails of said section being relatively movable, and means for effecting the movement of the said rails to a position where the gage of the track section varies gradually in the direction of the line of travel and for holding said rails in their moved position against the pressure created by the wheels of a car passing over said rails.

2. The combination with a main track, of a section of track forming a continuation of the main track in the direction of the line of travel, the rails of said section being relatively movable, traffic controlling means for controlling the movement of the said rails to a position where the gage of the track section varies gradually in the direction of the line of travel and means for holding said rails in their moved position against the pressure created by the wheels of a car passing over said rails.

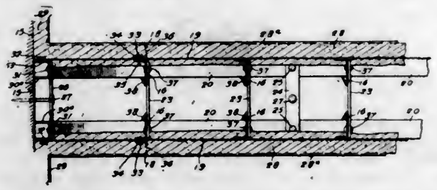
3. The combination with a main track, of a section of track forming a continuation of the main track in the direction of the line of travel, the rails of said section being relatively movable, and means for effecting the movement of the said rails to a position where the gage of the track section varies gradually in the direction of the line of travel and for holding said rails in their moved position against the pressure created by the wheels of a car passing over said rails, said means comprising a traffic controlling device, a toggle joint operated therefrom and connections from said joint to at least one of the said rails.

4. The combination with a main track, of a section of track forming a continuation thereof in the direction of the line of travel, the rails of said section being relatively movable, and means for effecting the movement of the said rails to a position where the gage of the track section varies gradually in the direction of the line of travel and for holding said rails in their moved position against the pressure created by the wheels of a car passing over said rails, said means comprising a traffic controlling device, a toggle joint operated therefrom, connections from said joint to at least one of the said rails, and a resilient member interposed in said connections.

5. The combination with a main track, of a section of track forming a continuation thereof in the direction of the line of travel, the rails of said section having flanges adapted for engagement with the flanges of the car wheels, said rails relatively movable and means for effecting the movement of the said wheels to a position where the gage of the track section increases gradually in the direction of the line of travel and for resiliently holding said rails in their moved positions against the pressure caused by the gripping engagement of the flanges of the car wheels with the flanges of the rails.

[Claims 6 to 10 not printed in the Gazette.]

1,102,883. FIREPROOF PARTITION. MOSE DAWSON, Los Angeles, Cal. Filed July 26, 1913. Serial No. 781,385. (Cl. 72—46.)



1. A fire proof partition comprising floor plates and ceiling plates, a plurality of screeds connected with a floor plate and a ceiling plate, each of said screeds being provided with a longitudinal reverting edge engaging the adjacent side surface of the floor plate and the ceiling plate, a plurality of tie plates each extending from one of said screeds to another, and a metallic lath mounted upon said screeds, and supported thereby.

2. A device of the character described, comprising a ceiling plate, a screed connected with the ceiling plate, said screed being substantially L-shaped in cross section and having a longitudinal reverting edge along one angular portion thereof engaging the adjacent side of the ceiling plate, a tie plate engaging said screed, and a metallic lath connected with the other angular portion of the screed, substantially as described.

3. In a fire proof partition, the combination of a pair of ceiling plates each having a substantial U-form in cross section, a tie plate extending from one of said ceiling plates to another, means for securing said tie plate to said ceiling plates, screeds having longitudinal reverting edges engaging the inner side surfaces of said ceiling plates, and metal laths mounted upon said screeds.

4. In a fire proof partition, the combination of a screed substantially L-shaped in cross section and one angular portion of which has a free angular reverting edge extending longitudinally therealong for engagement with a floor or ceiling plate, a metallic lath engaging the other angular portion of the screed, a second screed, and means for connecting the said second screed with said lath and with the first mentioned screed.

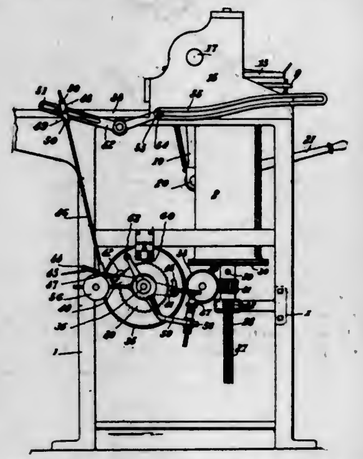
5. In a fire proof partition, the combination of a pair of ceiling plates each having a substantial U-form in cross section, a tie plate extending from one of said ceiling plates to another, for connecting the ceiling plates, screeds having inner longitudinal reverting edges engaging the inner side surfaces of the ceiling plates, and having outer L-shaped portions, and metal laths mounted upon the L-shaped portions of the screeds.

[Claims 6 to 8 not printed in the Gazette.]

1,102,884. MACHINE FOR PRINTING IN RELIEF. LAZARE SEVERIN DELEUIL, Paris, France. Filed Apr. 9, 1913. Serial No. 760,035. (Cl. 101—132.)

1. In a machine for printing in relief, the combination with a main frame, of a cylindrical ink reservoir mounted thereon, a piston tightly sliding in said reservoir and forming a movable bottom therefor, a cup-shaped member on said reservoir, a grate on said cup, a stencil on said grate, a plurality of vertical posts mounted on said cup, coil springs inclosing said posts, a frame supported by said springs, crosswise strips on said frame adapted to support a sheet to be printed, a movable carriage traveling on said main frame, means for actuating said carriage, a reciprocating press plate above the sheet holding means, means for operating said press plate, and means for automatically controlling the reciprocatory movement of the sliding piston from the movable carriage.

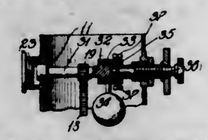
2. A machine for printing, comprising a frame, an ink reservoir, a piston slidably mounted in said reservoir, controlling means for said piston, means for holding a sheet to be printed above said reservoir, a movable carriage, means for operating said movable carriage comprising a downwardly projecting bracket on said carriage, an angular lever pivotally mounted in said bracket and having two arms, a handle on one of said arms, an adjustable rod pivotally mounted upon said second arm, a reciprocating press plate adapted to slide in slots in said carriage, a crank shaft mounted on said carriage, a link connecting said press plate and said crank shaft, means for connecting said adjustable rod and said crank shaft to operate the press plate by means of the handle, and a spring for returning the handle to normal position.



3. A machine for printing, comprising a main frame, an ink reservoir thereon having a cup-shaped mouth, means mounted above said reservoir for holding a sheet to be printed, a movable carriage having a press plate adapted to coöperate with said sheet holding means, means for operating said carriage, a piston adapted to reciprocate in said ink reservoir, means for controlling the movement of said piston, said means comprising a threaded rod on said piston and having a longitudinal groove therein, a pin adapted to engage said groove, a nut threaded on said rod, means for preventing a vertical movement of said nut, a worm wheel integral with said nut, a shaft, a connecting gear between the worm wheel and the shaft, a toothed wheel on said shaft, arms loosely mounted on said shaft, a pawl on each of said arms adapted to engage said toothed wheel, an extension provided with a plurality of slots on one of said pawls, a counter-weight adjacent said extension, and means for actuating said arms to cause the pawls to engage the toothed wheel, said actuating means including an adjustable rod adapted to be connected with said extension in any one of the slots thereof.

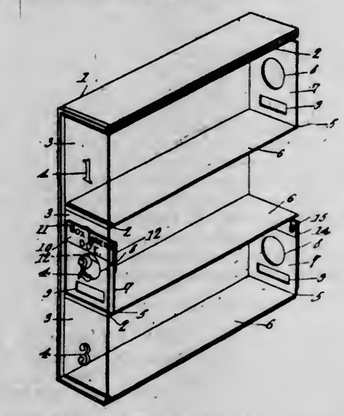
4. A machine for printing, comprising a main frame, an ink reservoir thereon having a cup-shaped mouth, means mounted above said reservoir for holding a sheet to be printed, a movable carriage having a press plate adapted to coöperate with said sheet holding means, means for operating said carriage, a piston adapted to reciprocate in said ink reservoir, means for controlling the movement of said piston, said means comprising a threaded rod on said piston and having a longitudinal groove therein, a pin adapted to engage said groove, a nut threaded on said rod, means for preventing a vertical movement of said nut, a worm wheel integral with said nut, a shaft, a connecting gear between the worm wheel and the shaft, a toothed wheel on said shaft, arms loosely mounted on said shaft, a pawl on each of said arms adapted to engage said toothed wheel, an extension provided with a plurality of slots on one of said arms, a counter-weight on said arm, means for actuating said arms to cause the pawls to engage the toothed wheel, said means comprising an adjustable connecting rod pivoted to said slotted extension, a crank lever having one arm connected to said rod, the other arm engaging a slotted bar on said movable carriage, a member carrying means comprising a spring finger adapted to kick in said second named pawl, and means for governing the movement of said toothed wheel.

1,102,885. MASSAGE-VIBRATOR. FRANK C. DORMENT, Detroit, Mich., assignor to Wireless Vibrator Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 15, 1913. Serial No. 761,136. (Cl. 128—16.)



In an appliance for imparting mechanical vibrations, a hollow closed casing, a manually driven shaft revolubly supported transversely of the outer end thereof, a weight member loosely suspended on the shaft, means operable from the outside of the casing for securing the member to the shaft to revolve out of balance, a sleeve connected to the outer side of said casing and disposed at right angles thereto, a shaft arranged longitudinally of said sleeve and movably held at the outer end of said sleeve, said shaft having the inner end thereof loosely mounted in said driven shaft at a point eccentric to the longitudinal axis thereof, and a massage member detachably mounted upon the outer end of the last mentioned shaft.

1,102,886. POSTAL-CALL-BOX SYSTEM. FRANK E. DRAKE, Radcliffe, Iowa. Filed Jan. 20, 1914. Serial No. 813,302. (Cl. 211—36.)



The combination with a postal mail cabinet, including pigeon holes having transparent closures at their outer ends, of reversible drawer slides insertible into the pigeon holes and each including a sheet metal bottom plate of a length approximately the same as the length of the pigeon holes and having a rigid upturned end piece at one end, the end piece having a sight opening therein, and being arranged to support notice slips thereon, and the slides being insertible into the pigeon holes in reversed positions, whereby when the slides are inserted into the pigeon holes in one position, the end pieces will close the inner ends of the pigeon holes and will be held in place by the bottom plates resting against the closures of the pigeon holes, and whereby when the slides are inserted into the pigeon holes in the other position, the end pieces will rest against the pigeon hole closures to leave the inner ends of the pigeon holes open for the insertion of mail matter onto the bottom plates within the pigeon holes.

1,102,887. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 4, 1912. Serial No. 688,571. (Cl. 246—20.)



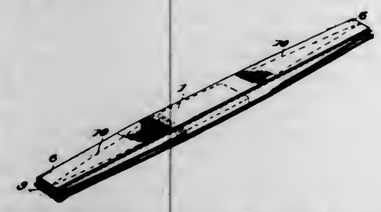
1. A railway signal torpedo, comprising a paper explosive containing case, a strap supporting clip located outside of and attached to the case, a rail-engaging strap adjacent the said clip, the said strap and clip having respectively an interlocking projection, and slot and a plate situated adjacent to the bottom of the said case and the strap, whereby the said strap is prevented from disengagement with the slot in the clip for the purpose described.

2. A railway signal torpedo, comprising a paper explosive containing case, a strap attaching clip attached to the case, a plate located between the case and the clip, a rail-engaging strap passing between the plate and the clip, the plate and clip adapted to prevent the endwise movement of the strap for the purpose described.

3. The combination with a railway signal torpedo, comprising a paper explosive containing case, of a plate situated adjacent to and completely covering the bottom of the said case, a strap supporting clip located outside of and attached to the case, a rail-engaging strap between the plate and the clip, the said strap and clip having respectively an interlocking projection and slot, the said plate and clip together adapted to prevent the strap from movement.

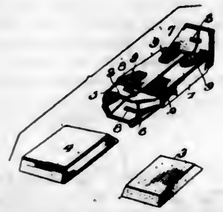
4. The combination with a railway signal torpedo, comprising a paper explosive containing case, of a plate situated at the bottom of the said case and entirely covering said bottom, and attaching clip having its ends bent upwardly forming clamping flanges; a rail engaging strap between the plate and the clip, the said flanges of a width sufficient to admit the thicknesses of the plate and the ends of the explosive containing case; whereby the flanges when clamped will embrace the ends of the case and the plate for the purpose described.

1,102,888. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 4, 1912. Serial No. 688,573. (Cl. 246—20.)



A railway signal torpedo, comprising a paper explosive containing case, a metallic sheet covering wrapped around the case and having its ends projecting beyond the case to form rail-engaging members, the edges of the extensions pressed inward into bellows-like folds which increase in width from the ends of the case to the ends of the extensions for the purpose described.

1,102,889. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 8, 1912. Serial No. 702,594. (Cl. 246—20.)



1. A railway signal torpedo, comprising an explosive compound and a case therefor consisting of a sheet having its sides and ends folded therearound and overlapping each other, the folded ends provided with alined openings having surrounding walls and a rail-engaging strip passing through said openings.

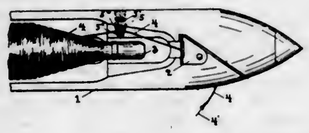
2. A railway signal torpedo, comprising an explosive compound, a case therefor consisting of a sheet having its sides and ends folded therearound and overlapping the folded ends of the sheet located outside of the folded sides, the overlapping ends provided with alined openings when folded and having surrounding walls and a rail-engaging strip passing through said openings.

3. A railway signal torpedo comprising an explosive compound, an inclosing case therefor, consisting of a sheet folded over the compound with overlapping edges, the sides of the ends of the sheet folded inward, said ends of the sheet folded transverse the first-mentioned folds and over the body of the case and cemented thereto and having strip-receiving openings, and a rail-engaging strip passing through said openings.

4. A railway signal torpedo, comprising an explosive compound, an inclosing case therefor consisting of a sheet folded over the compound with overlapping edges, the sides of the ends of the sheet folded inwardly and the folded ends folded over upon the body of the case and cemented thereto, and a rail-engaging strap passing through the folded ends longitudinally thereof and longitudinal of the torpedo.

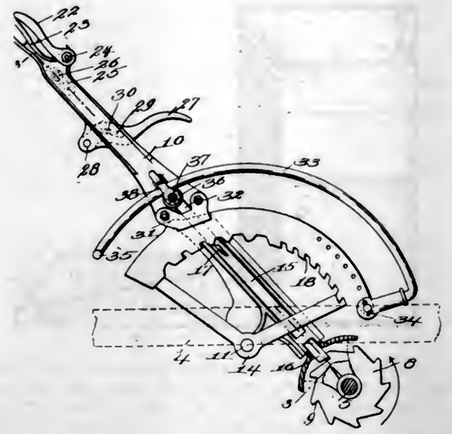
5. A railway signal torpedo, comprising an explosive compound, an inclosing case therefor, consisting of a sheet folded over the compound with over-lapping edges, the sides of the ends of the sheet folded inwardly, said folded ends resting upon the body of the case and cemented thereto, and a rail-engaging strap interlocking with the folded ends and securing the same together substantially as shown and described.

1,102,890. SHUTTLE. WILLIE G. EATON, Nashua, N. H., assignor to Nashua Manufacturing Company, a Corporation of New Hampshire. Filed July 10, 1913. Serial No. 778,312. (Cl. 139—90.)



The combination with a shuttle for handling a reinforced yarn or filling, of a detecting device in one side of the discharging end of the shuttle, and at one end of the tip end of the cop or bobbin in the shuttle, said device having a slot or cut therein which will not receive the yarn or filling when it is in its normal condition, as it is unwound from the cop or bobbin, but will receive it in its abnormal condition, as it is unwound from the cop or bobbin, and prevent the further unwinding of said yarn or filling from the cop or bobbin.

1,102,891. SULKY-PLOW. OSCAR H. EDDY, Greenwich, N. Y., assignor to W. Eddy Plow Company, Greenwich, N. Y., a Corporation of New York. Filed July 11, 1913. Serial No. 778,606. (Cl. 97—55.)



1. In a sulky plow, the combination of a plow beam, a lever shiftable to lift the beam, a member on said lever for connecting the latter to one of the ground wheels, and an operating pedal having an arc-shaped portion coöperative with said member on the lever as the latter swings to lift or lower the plow beam.

2. In a sulky plow, the combination of a plow beam, a lever shiftable to lift the beam, a member on said lever for connecting the latter to one of the ground wheels, and a pedal having an arc-shaped portion coöperative with said member on the latter irrespective of the shifting movements of said lever.

3. In a sulky plow, the combination of a plow beam, a lever shiftable to lift the beam, a member on said lever for connecting the latter to one of the ground wheels, a roller on said member, an operating pedal having an arc-shaped portion bearing on said roller, and a guard retaining the pedal and roller in coöperative relation.

1,102,892. PRODUCTION OF CYANAMID. MAX ENGELMANN and BENEDIKT MERKEL, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 27, 1912. Serial No. 680,342. (Cl. 23—13.)

1. The process of isolating cyanamid from the reaction product of nitrogen upon calcium carbid which comprises treating the reaction product with an acid which forms an insoluble calcium compound, removing such compound, and precipitating the cyanamid from the resulting solution by treatment with a lead compound soluble in alkali solutions in the presence of such alkali.

2. The process of isolating cyanamid from the reaction product of nitrogen upon calcium carbid which comprises treating such reaction product with sulfuric acid, filtering, and precipitating the cyanamid from the resulting filtrate in the form of its lead compound, by treatment with a lead compound soluble in alkali solutions in the presence of such alkali.

3. The process of isolating cyanamid from the reaction product of nitrogen upon calcium carbid which comprises treating such reaction product with sulfuric acid, filtering, and precipitating the cyanamid from the resulting filtrate in the form of its lead compound by treatment with a lead salt soluble in ammoniacal solutions in the presence of such solutions.

4. The process of isolating cyanamid from the reaction product of nitrogen upon calcium carbid which comprises treating the reaction product with an acid capable of setting free the cyanamid and precipitating the cyanamid from the resulting solution by treatment with a lead compound soluble in alkali solutions in the presence of such alkali.

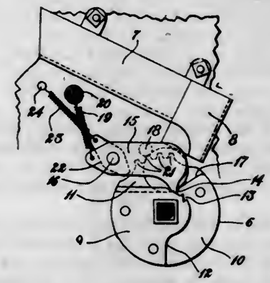
1,102,893. CYLINDER-LOCK. ELI EPSTEIN, Boston, Mass. Filed Feb. 13, 1914. Serial No. 818,581. (Cl. 70—47.)



1. In a cylinder lock, the combination with a casing, of a cylinder within said casing, said cylinder and casing having tumbler-pin-receiving recesses, two-part spring-actuated tumbler pins in said recesses, said cylinder having a peripheral groove of varying depth extending partially therearound, and a spring-pressed pin carried by the casing and occupying said groove thereby preventing a lock-picking implement from being inserted between the cylinder and the wall of the bore in line with said tumbler pins.

2. In a cylinder lock, the combination with a casing, of a cylinder within said casing, said cylinder and casing having a plurality of tumbler-pin-receiving recesses, two-part spring-actuated tumbler-pins in said recesses, said cylinder having a peripheral groove situated between the two end recesses, and means carried by the casing and occupying said groove thereby preventing a lock-picking implement from being inserted from either end of the lock between the cylinder and the wall of the bore in line with said tumbler-pins.

1,102,894. CHECK-CONTROLLED APPARATUS. HERBERT E. ERWIN, New Britain, and HATHAWAY M. GORSLINE, Bristol, Conn., assignors to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Original application filed Apr. 21, 1913. Serial No. 762,464. Divided and this application filed Oct. 17, 1913. Serial No. 795,680. (Cl. 194—63.)

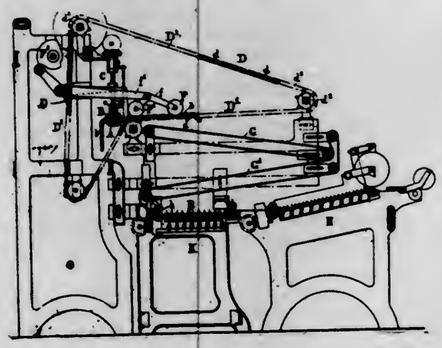


1. The combination of an oscillatory disk, consisting of several plates rigidly connected together, the intermediate plate being notched and the outer plates overlying the notch, the notch constituting a coin seat, and a locking member for the disk, one of the outer plates being toothed to coöperate with said locking member to prevent full advancing movement of the disk, the locking member having a projection extending across the notched portion of the intermediate plate and in the path of the coin in said seat, the other outside plate having teeth to present a rack, and a detent to coöperate with said rack to prevent backward movement of the disk.

2. The combination of an oscillatory disk, consisting of several plates rigidly connected together, the intermediate plate being notched and the outer plates overlying the

notch, the notch constituting a coin seat, a locking member for the disk, one of the outer plates being toothed to coöperate with said locking member to prevent full advancing movement of the disk, the locking member having a projection extending across the notched portion of the intermediate plate and in the path of the coin in said seat, the operative portion of the locking device being normally spaced from said toothed portion, the other outside plate having peripheral teeth to present a rack, and a detent to coöperate with said rack to prevent backward movement of the disk.

1,102,895. MACHINE FOR HACKLING AND SPREADING FLAX AND OTHER LONG-STAPLED FIBERS. JOSHUA VALENTINE EVES, Belfast, Ireland. Filed Sept. 17, 1909. Serial No. 518,273. (Cl. 13—21.)



1. The combination with a machine for hackling flax and other long staple fibers provided with vertical, opposed hackling sheets, of the transverse channel, flax holders placed thereon and having separably connected parts, mechanism for separating the parts of said holders, and means for removing the completely hackled flax from the holders after the parts thereof have been separated and delivering it at a distance therefrom, substantially as described.

2. In a machine for hackling flax and other long staple fibers, the combination with the transverse channel, the screw-clamped flax holders, and mechanism for unscrewing the holders, of means for removing the completely hackled flax from said holders and delivering same at a distance therefrom, substantially as described.

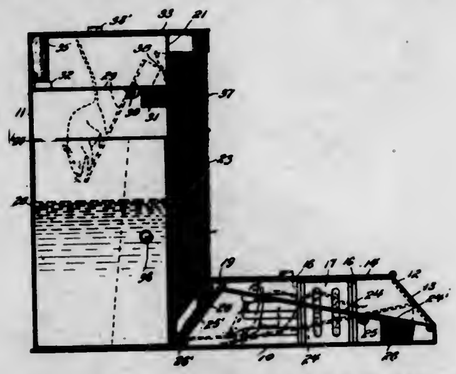
3. In a machine for hackling flax and other long staple fibers, the combination with the transverse channel, the screw-clamped flax holders placed thereon, and the mechanism for unscrewing the holders, of mechanism to seize the completely hackled flax, draw it from the holders and deliver it from said holders, substantially as described.

4. In a machine for hackling flax and other long staple fibers, the combination with the transverse channel, the screw-clamped flax holders placed thereon, and the mechanism for unscrewing the holders, of a traveling table made in sectional lengths, gripping devices operating therewith, a cam to control the gripping devices, and means for removing the flax and delivering it elsewhere, substantially as described.

5. In a machine for hackling flax and other long staple fibers, the combination with the transverse channel, the screw-clamped flax holders placed thereon, and the mechanism for unscrewing the holders, of a traveling table constructed in sectional lengths and provided with open spaces between the sections, the gripping rollers, pivoted levers by which the rollers are supported, a cam to control the gripping rollers, and a traveling delivery apron to receive the flax from the table, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

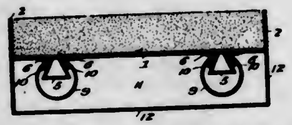
1,102,896. TRAP. HENRY T. G. FISCHER, Indianapolis, Ind. Filed Sept. 13, 1912. Serial No. 720,263. (Cl. 43—24.)



1. The combination with a trap having an entrance section and a tower section, the said tower and entrance sections being provided with openings, a tubular runway projected into the opening in the entrance section and detachably connected with the tower section for communication with the opening therein, gates hinged within the entrance section for closing the outer end thereof and the end of the runway projected into the same, and a single platform rigid throughout its area pivoted between the said gates and being of a length to have its ends project into the path of the doors to alternately open and close the same on the rocking of said platform during a single prescribed movement thereof.

2. In a trap having an entrance section provided with spaced doorways, doors pivoted within the entrance section for opening and closing the doorways, a platform mounted within the entrance section and having its ends projected into the path of the doors for automatically swinging the same alternately in open and closed positions, and a weight carried by the platform to normally hold the same in a position to close one of the doors while the other remains open.

1,102,897. MANTEL. WILLIAM C. FISCHER, East Hampton, Conn. Filed May 28, 1913. Serial No. 770,386. (Cl. 20—73.)



1. In a mantel of the class described, the combination with a back plate, of hollow column and shelf supporting members secured thereto, columns, said columns and supporting members having coöperating means for interlocking engagement, a shelf, and means depending from said shelf for insertion in said hollow column and shelf supporting members to detachably connect said shelf with the upper ends of said members.

2. In a mantel the combination with a back plate, of column and shelf supporting members secured thereto, columns having an interlocking detachable engagement with said members, shelf attaching members arranged thereon and adapted to telescopically engage with said shelf and column attaching members of the back plate to detachably support the shelf in position.

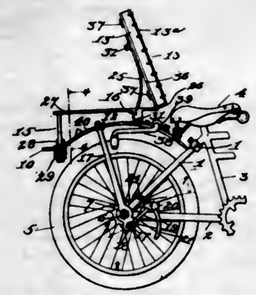
3. In a fire proof mantel the combination with a metal back plate, combined shelf and column supporting members comprising dovetail shaped plates having on their inner edges attaching flanges adapted to be rigidly secured to the back plate, sheet metal columns open at their rear edges whereby they may be engaged with said shelf and column supporting members, flanges formed on said edges of the column to slidably engage said members, a shelf having on its outer side and ends depending flanges, studs secured to the lower side of the shelf and adapted to be engaged with the upper open ends of the combined shelf and column supporting members of the back plate whereby the shelf is detachably secured in place.

4. In a mantel, the combination with a back plate, combined shelf and column supporting members comprising dovetail shaped plates secured to said back plate, columns open at their rear edges whereby they may be engaged with said shelf and column supporting members, and a shelf having studs on its lower face adapted to engage the upper open ends of the combined shelf and column supporting members of the back plate.

1,102,898. PROCESS FOR DYEING WITH ANILIN-BLACK. HARTLEY FLETCHER, Thaon-les-Vosges, France, assignor to Alphonse Emile Vergé, Vincennes, France. Filed July 21, 1913. Serial No. 780,371. (Cl. 8—5.)

The process of dyeing textile material with anilin black by oxidation in the air, which consists in impregnating the material in a bath composed of 5 grams of anilin, 6 grams of paraphenylene diamin, 35 grams of hydrochloric acid, 10 grams of 90% formic acid, 6 grams of copper sulfate, 3 grams of dry sodium bisulfite, and water to complete one liter; drying the impregnated material; and finally subjecting said material to a finishing treatment.

1,102,899. SUPPLEMENTAL SEAT ATTACHMENT FOR MOTOR-CYCLES AND THE LIKE. JOSEPH C. FOX, Seattle, Wash. Filed Dec. 7, 1910. Serial No. 596,124. (Cl. 208—24.)



1. A supplemental seat attachment for bicycles and the like including a seat support comprising a lever member adapted to be connected to the frame of the machine, an adjustable fulcrum for said lever member, and a seat mounted on said lever member to move therewith in its swinging movement.

2. A supplemental seat attachment for bicycles and the like including a seat support comprising a lever member adapted to be connected at one end portion to the frame of the machine and having its opposite end portion free for vertical movement, a seat mounted on the last named end portion of said lever member, and a fulcrum for said lever member adapted to be mounted on the frame of the machine for adjustment toward and from the last named end portion of said member.

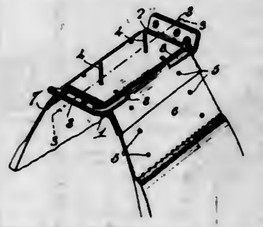
3. A supplemental seat attachment for bicycles and the like including a seat support comprising a lever member adapted to be connected at one end to the frame of the machine and having its opposite end portion free for vertical movement, a seat mounted on the last named end portion of said lever, a fulcrum for said lever, and means for supporting said fulcrum for adjustment lengthwise of said lever, said means being adapted to be mounted on the axle of the rear wheel of the machine for rotary adjustment thereon.

4. A supplemental seat attachment for bicycles and the like including a seat support consisting of a spring metal member adapted to be secured at one end to the frame of the machine, a seat mounted on the opposite end portion of said member, and a bearing for said member engaged therewith intermediate its ends and adjustable lengthwise thereof.

5. A supplemental seat attachment for bicycles and the like including a seat support consisting of a spring metal member adapted to be connected at one end portion to the frame of the machine, a seat connected with said member for adjustment lengthwise thereof, and a bearing for said member engaged therewith intermediate its ends.

[Claims 6 to 24 not printed in the Gazette.]

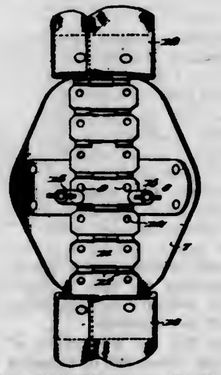
1,102,900. HORSE-COLLAR. JOHN G. FRIBERG, Maiden Rock, Wis., assignor to Adjustable Horse Collar Co., Maiden Rock, Wis., a Corporation of Wisconsin. Filed May 24, 1912. Serial No. 699,433. (Cl. 54—19.)



1. The combination with a collar having flexible apertured ends, of a detachable neck pad, a sheet metal plate secured thereto and having end portions, pins projecting vertically from the plate and arranged to engage within the apertures in the flexible ends, and means formed on and integral with the said plate and to one side of the pins for holding the ends in engagement with said pins, each of the members of said means terminating in a vertical plane passing through one of said pins and parallel with the edges of the end portions of said plate.

2. The combination with a collar having flexible ends provided with apertures, of a detachable neck pad, a sheet metal plate secured thereto and having end portions, pins projecting vertically from the plate and arranged to engage within the apertures in said ends, and flat elongated fingers stamped from the plate and extending in a longitudinal plane therewith and parallel to one side of one longitudinal edge of the plate, said fingers extending toward each other and having their free ends separated and disposed in spaced relation to the plate and arranged to hold the flexible ends down upon the plate and in engagement with the pins, each of said fingers terminating in a vertical plane passing through one of said pins and parallel with the end portions of said plate.

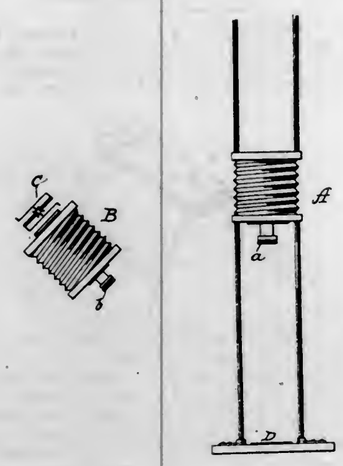
1,102,901. NECK-PAD. JOHN G. FRIBERG, Maiden Rock, Wis. Filed June 21, 1913. Serial No. 775,091. (Cl. 54—21.)



A pad comprising a body having upstanding studs, a collar provided at each end with a series of leaves hingedly

connected together, said leaves having apertures adapted to receive the studs, and buttons turnably mounted upon the body beyond the studs and arranged to engage over the end portions of the leaves.

1,102,902. THREE-COLOR PHOTOGRAPHY FOR PRINTING-SURFACES, MAKING TRANSPARENCIES, AND THE LIKE. EDWARD HENRY GAMBLE, London, England. Filed Apr. 1, 1912. Serial No. 687,831. (Cl. 95—2.)



1. The hereindescribed process which consists in placing a colored picture in position to be photographed, illuminating said picture by light projected thereonto through a negative thereof and photographing said picture while so illuminated.

2. The hereinbefore described process which consists in placing a colored picture in position to be photographed, illuminating said picture by light projected thereonto through a negative thereof, illuminating the picture from other sources in the ordinary manner and then photographing the picture while so illuminated.

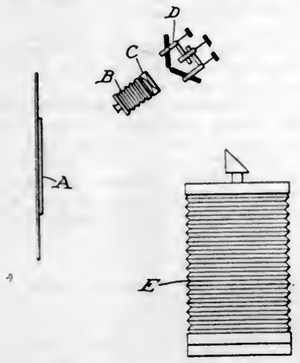
3. The hereinbefore described process consisting in placing a colored picture in position to be photographed, illuminating said picture by light projected thereonto through a negative thereof (the said negative having been taken through a lighting filter of appropriate color), and then photographing said picture through an appropriate colored screen or light filter while so illuminated, substantially as described.

1,102,903. PROCESS FOR THE PRODUCTION OF PHOTOMECHANICAL-PRINTING SURFACES. EDWARD HENRY GAMBLE, London, England. Filed June 26, 1913. Serial No. 775,958. (Cl. 95—5.)

1. A process for the production of photomechanical printing surfaces consisting in exposing a picture to the action of a copying camera while it is illuminated by light projected onto it through a positive transparency of itself.

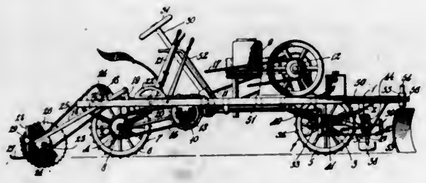
2. A process for the production of photomechanical printing surfaces consisting in exposing a picture to the action of a copying camera while it is illuminated by light projected onto it through a positive transparency of itself registering therewith, the picture being subjected to such illumination for only a portion of the full exposure required, ordinary lighting being employed for the other portion of the exposure.

3. A process for the production of photomechanical printing surfaces consisting in exposing a picture to the action of a copying camera while it is illuminated by light projected onto it through a positive transparency of itself registering therewith, and omitting from the copying



camera the usual half tone screen during said exposure of the picture, substantially as described.

1,102,904. ICE-CUTTING MACHINE. FRANK GEHRKE, Rochester, Mich. Filed Mar. 25, 1912. Serial No. 685,912. (Cl. 62—8.)



1. In an ice cutting machine, a main frame supported on steering and traction wheels, a motor on the frame operatively connected to the traction wheels, controlling mechanism for governing the motor, rotatable ice cutters adjustably mounted on the frame and operatively connected to the motor, means for automatically guiding the machine, springs for holding the guiding means normally inoperative, and manually operable means for throwing the guiding means into engagement with a kerf in the ice.

2. In an ice cutting machine, a main frame mounted on steering and traction wheels a motor on the frame operatively connected to the traction wheels, an auxiliary frame adjustably secured on the main frame, ice cutters mounted on the auxiliary frame, mechanism operatively connecting the motor and cutters, manually operable steering means, automatic means for controlling the steering means independently of the manual control, spring members for normally holding the automatic steering control members in inoperative position and manually operable means for throwing the automatic guiding means into engagement with a kerf in the ice.

3. In an ice cutting machine, a main frame mounted on steering and traction wheels, a motor on the frame operatively connected to the traction wheels, a saw frame angularly adjustable on the main frame, a gage for regulating the position of the auxiliary frame, rotatable ice cutters mounted on the auxiliary frame and operatively connected to the motor, means for automatically controlling the steering wheels to guide the machine and manually operable means for throwing the automatic controlling means into engagement with a kerf in the ice.

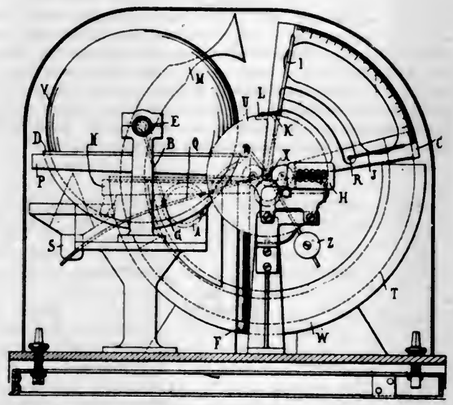
4. In an ice cutting machine, a main frame, steering and traction wheels supporting the main frame, a motor on the frame operatively connected to the traction wheels, a saw frame pivoted on the main frame, a gage adjustably secured to the saw frame for supporting the free end of the latter, rotatable cutters mounted on the saw frame

and operated by the motor, manually operable means controlling the steering wheels, means for automatically controlling the steering mechanism when moved into engagement with a groove in ice traversed by the machine, spring means for normally holding the automatic controlling means clear of the ice and means for throwing such controlling means into such engagement.

5. In an ice cutting machine, a main frame mounted on steering and traction wheels, a motor for driving the traction wheels, a saw frame pivoted on the main frame to trail on ice traversed by the machine, ice cutters on the free end portion of the saw frame, means operatively connecting the motor to the cutters to rotate the latter, means for raising the saw frame and cutters into inoperative position, manually operable means for steering the machine adapted to operate automatically when thrown into engagement with grooves in ice traversed by the machine, means for throwing such steering gear into such engagement and spring members normally holding the guiding means in disengaged relation to the surface traversed by the machine.

[Claims 6 and 7 not printed in the Gazette.]

1,102,905. ALCOÖMETER. ETIENNE GIBAUDAN, Chateau de-la-Coupe, near Narbonne, and ALPHONSE JEAN FRAGER, Paris, France. Filed July 24, 1911. Serial No. 640,198. (Cl. 73—45.)



1. In an alcoömeter the combination of a vessel containing the liquid, whose alcoholic strength is to be measured, a toric float immersed in said vessel, an axis supporting said float, means for maintaining the level of the liquid in the horizontal plane of the axis, a counterweight fixed to the float, a dial, and a pointer fixed to the float and moving in front of said dial, substantially as described.

2. In an alcoömeter of the class described, a rotary volumetric volant for receiving the liquid, a receptacle surrounding said volant and arranged to permit the liquid to overflow its horizontal edges, a channel surrounding said receptacle for receiving the overflow, an alcoömetric vessel communicating with said overflow, two bearings supporting the axis of the volant, one of which is hollow and serves to feed the liquid to the volant, an arm provided with a roller fixed to said volant, and indicating means actuated by said arm and roller, substantially as described.

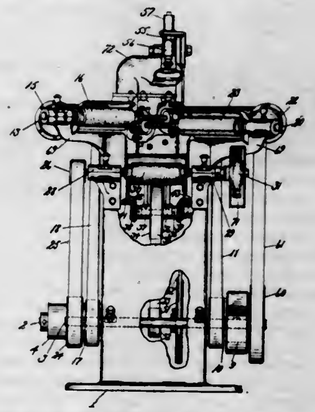
3. In an alcoömeter of the class described, a float adapted to move around a fixed axis a pointer fixed to the float, an independent pointer oscillating about the same axis as the float and adapted to rest on the first named pointer, a volant, an arm having a roller fixed to the volant and adapted to act on each revolution upon the independent pointer in order to oscillate it, a pawl carried by the independent pointer, a ratchet wheel actuated by said pawl, and an indicator operated by said ratchet wheel, substantially as described.

4. In an alcoömeter of the class described, a vessel for containing the liquid, a thermometric body attached to said vessel within it, a dial movable about the same axis as the alcoömeter, a connection between the thermometric body and said dial, an independent pointer mounted concentrically with the alcoömeter, a pawl thereon, and means on said dial adapted to raise the pawl on the pointer at each passage of the latter before the zero of the dial, substantially as described.

5. In an alcoömeter, the combination of a vessel containing the liquid whose alcoholic strength is to be measured, a toric float immersed in said vessel, an axis supporting said float, means for maintaining the level of the liquid in the horizontal plane of the axis, a balance weight attached to said float, a pointer connected to the float a dial for said pointer, a ratchet mechanism, means connecting said pointer to said ratchet mechanism for operating the latter, indicating means actuated by said ratchet mechanism, and an inlet and an outlet to said vessel, substantially as described.

[Claim 6 not printed in the Gazette.]

1,102,906. BUFFING-MACHINE. WILLIAM GORDON, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 1, 1906, Serial No. 303,719. Renewed May 20, 1914. Serial No. 839,896. (Cl. 51—17.)

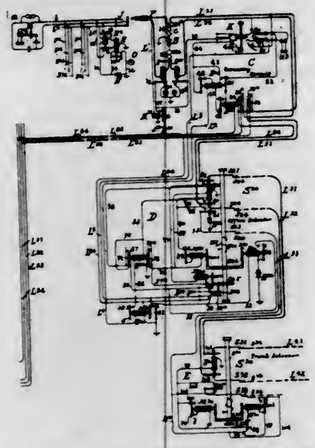


1. A machine for buffing shoes having, in combination, a plurality of buffing rolls the axes of which are arranged at an angle to each other, the space beneath said rolls as well as that included in the angle between them being free and unobstructed whereby a shoe may readily be moved from contact with the under portion of one roll into contact with the under portion of the other, means for rotating said rolls, and means for reciprocating said rolls longitudinally of their axes.

2. A machine for buffing shoes having, in combination, a buffing roll to which a shoe is to be manually presented, a second roll having its axis arranged at an angle to that of the first, the space beneath said rolls, as well as that included in the angle between them being free and clear whereby a shoe may be moved directly from contact with the under portion of one roll into contact with the under portion of the other at will, and means for rotating said rolls.

3. A machine of the class described having, in combination, a roughing roll and a finishing roll mounted at an angle to each other, the space included in the angle between said rolls being free and unobstructed whereby a shoe may be brought into operative relation with said rolls alternately at will, means for rotating said roughing roll, and means for rotating said finishing roll faster than said roughing roll.

1,102,907. TELEPHONE CENTRAL SWITCHING SYSTEM. ERNEST A. GRAY, Boston, and EDWARD C. MOLINA, Arlington, Mass., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed May 17, 1907. Serial No. 374,224. (Cl. 179—27.)



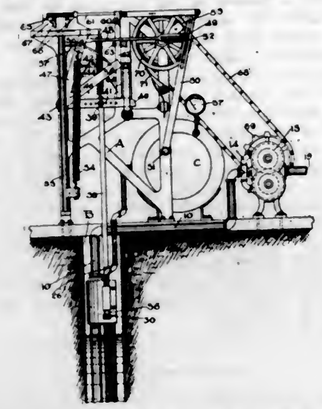
1. In a telephone line switching system, the combination with answering jacks and mechanical switching apparatus, of a cord circuit terminating in a plug for cooperation with the jacks and in a movable member of the mechanical switching apparatus, and means operating when the plug is removed from a jack for restoring the movable member to it snormal position.

2. A telephone system comprising a central station with substation lines extending thereto, a connection circuit adapted for connection with substation line at the central station, a plurality of extension circuits to any one of which said connection circuit is adapted to be connected, an electro-mechanical switch forming a part of the connection circuit and adapted to connect the latter to one of said extension circuits, other extension circuits, and a second electromechanical switch adapted to be automatically set into operation upon the connection of the connection circuit to one of said first named extension circuits and to thereupon operate free of control by an operator to automatically select an idle one of said other extension circuits and to connect said first-named extension circuit thereto.

3. An exchange system comprising central stations with substation lines extending thereto and groups of trunks between the central stations, circuits at the central stations for connection with substation lines, an electromechanical switch individual to each connecting circuit and provided with groups of terminals and being under the control of an operator to select a group of said terminals, said switch upon selection of a group of terminals being adapted to operate automatically to hunt for an idle terminal in the selected group, and other electromechanical switches connected with the terminals in each of said groups and to corresponding trunk groups and adapted to operate free of control by said operator to automatically pick out an idle trunk in the selected group of trunks.

1,102,908. DEEP-WELL PUMP. GEORGE A. GRIFFIN, Felton, Minn. Filed Sept. 9, 1912. Serial No. 719,345. (Cl. 103—8.)

1. In combination with a well, a pumping apparatus therefor comprising water chambers submerged in said well, a compressed air reservoir connected with said chambers, a controlling valve for said connection, a discharge outlet for said chambers, means for actuating said valve comprising a water turbine included within the discharge outlet, an elbow lever operatively connected with said turbine, spring means for carrying said elbow lever from dead center to extreme positions, and spring controlled lifting means for the valve operative from said lever.



2. In combination with a well, a pumping apparatus therefor comprising water chambers submerged in said well, a compressed air reservoir connected with said chambers, controlling valve mechanism for said connection, a discharge outlet for said chambers, means for actuating said valve comprising a water turbine included within the discharge outlet, an elbow lever operatively connected with said turbine, spring means for carrying said elbow lever from dead center to extreme position, spring controlled lifting means for said valve operative from said lever, a locking device for said lifting means actuated from said elbow lever for disengaging said locking device.

1,102,909. EYEGLASSES. BENJAMIN M. HANNA, Pittsburgh, Pa. Filed Jan. 29, 1914. Serial No. 815,126 (Cl. 88—43.)



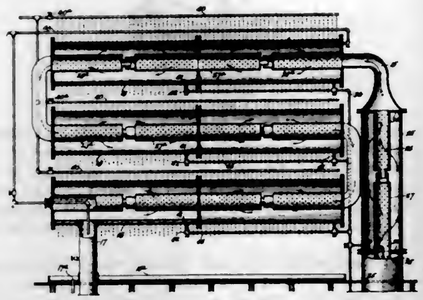
1. In a pair of eyeglasses the combination of a bi-focal lens and an expansible and contractible support, such support in its alternate positions sustaining the said lens when in use with its alternate lens areas in line with the eye of the wearer.

2. A pair of bi-focal eyeglasses provided with an expansible and contractible nose-piece, such support in its alternate positions sustaining the glasses when in use with their alternate lens-areas in line with the eyes of the wearer, means for holding the nose-piece normally in expanded position, and a manually operable catch for holding said nose-piece in contracted position.

3. In a pair of spectacles the combination of a frame, a bi-focal lens carried in said frame and a nose-rest movable vertically with respect to said farme to alternate positions in which when the spectacles are in use the alternate lens areas are in line with the eye of the wearer.

1,102,910. DISTILLING APPARATUS. CYRUS T. HANNA, Philadelphia, Pa. Original application filed Oct. 14, 1909, Serial No. 522,640. Divided and this application filed Apr. 12, 1912. Serial No. 690,228. (Cl. 195—13.)

1. In a distilling apparatus, the combination of a source of spirit vapor, a vapor conductor leading therefrom, said conductor consisting of a series of cylindrical shells coupled end to end, a series of foraminous shells within said vapor conductor and into which said vapor passes, said shells having closed upper ends and flanges which form chambers within the vapor conductor, each chamber having an upper and lower portion of said shells whereby the vapor entering therein must pass in and out of said foraminous shells, the high temperature condensation products remaining behind and collecting at the bottom of said shell and chambers, and means for conducting and condensing the low temperature condensation products of such vapor.



2. In a distilling apparatus, the combination of a source of spirit vapor, a vertically disposed vapor conductor leading therefrom, said conductor consisting of a series of cylindrical shells coupled end to end, a series of foraminous shells within said vapor conductor and into which said vapor passes, said shells having closed upper ends and flanges which form chambers within the vapor conductor, each chamber having an upper and lower portion of said shells whereby the vapor entering therein must pass in and out of said foraminous shells, the high temperature condensation products remaining behind and collecting at the bottom of said shell and chambers, a horizontal conductor having a series of chambers in vapor communication with said vertical conductor, foraminous shells disposed in said horizontal conductor for the passage of vapor,, means for cooling said horizontal conductor, and a condenser for the spirit vapor delivered by said conductor.

3. In a distilling apparatus, the combination of a source of vapor, a vertical conductor leading therefrom, said conductor consisting of a series of cylindrical shells coupled end to end and forming chambers, a series of foraminous shells within said conductor and forming entangling means, said shells having flanges forming the tops and bottoms of the conductor chambers, the tops of said foraminous shells being closed while the bottoms are open, and cupped tops carried by the foraminous shells and forming liquid seals for the open bottoms of the succeeding shells.

4. In a distilling apparatus, the combination of a source of vapor, a vertical conductor leading therefrom, said conductor consisting of a series of cylindrical shells coupled end to end and forming chambers, a series of foraminous shells within said conductor, said shells having flanges forming the tops and bottom of the conductor chambers, the tops of said foraminous shells being closed while the bottoms are open, cupped tops carried by the foraminous shells and forming liquid seals for the bottoms of said shells, pipes for draining the chambers, and pipes for draining the foraminous cylinders.

5. In a distilling apparatus, the combination of a still, a vapor conductor leading therefrom, partitions dividing said conductor into chambers, a series of foraminous shells within said vapor conductor and into which said vapor passes, said shells being disposed in said chambers and arranged to give the vapor a circuitous path, a series of horizontal vapor conductors, partitions dividing said conductors into chambers, foraminous shells therein for the passage of the vapor in a circuitous path, means for cooling said horizontal conductors, and a condenser for the spirit vapor.

[Claims 6 to 11 not printed in the Gazette.]

1,102,911. PROCESS OF PRODUCING SULFUR AND SULFATES. CHRISTIAN HANSEN, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 30, 1913. Serial No. 776,581. (Cl. 23—10.)

1. The process for producing sulfur and sulfates, which comprises heating solutions of a sulfite with a polythionate, substantially as described.

2. The process for producing sulfur and sulfates, which comprises heating solutions of a sulfite with a polythionate and a thiosulfate, substantially as described.

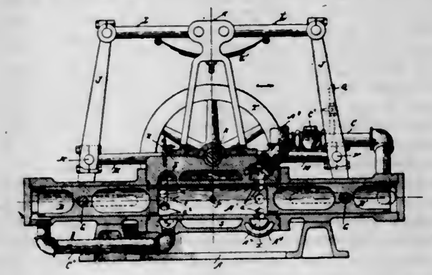
3. The process for producing sulfur and sulfates, which comprises heating solutions of a bisulfite with a polythionate, substantially as described.

4. The process for producing sulfur and sulfates, which comprises heating solutions of a bisulfite with a polythionate and a thiosulfate, substantially as described.

5. The process for producing sulfur and sulfates, which comprises heating solutions of a mixture of a sulfite and a bisulfite with a polythionate, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,102,912. INTERNAL-COMBUSTION MOTOR. EDWARD J. HARRINGTON, North Girard, Pa. Filed Sept. 15, 1913. Serial No. 789,799. (Cl. 123—51.)



1. In an internal combustion motor, a cylinder having exhaust ports, and air and fuel intake ports, heads on the ends of said cylinder, pistons in said cylinder adapted to cover and uncover said ports during their reciprocations therein, and to compress air between them and the heads of said cylinder, a fuel chamber adjacent to said exhaust ports and communicating with said fuel intake ports, tubular communication between one end of said cylinder and said fuel chamber, means to introduce fuel oil thereinto, and tubular connections from the other end of said cylinder and said air intake ports, substantially as set forth.

2. The combination in an internal combustion motor, of a cylinder having exhaust ports and fuel intake ports, heads on the ends of said cylinder, pistons in said cylinder adapted to cover and uncover said ports during their reciprocations and to compress air between one of said pistons and one of the heads of said cylinder, a fuel chamber adjacent to said exhaust ports and communicating with said fuel intake ports, a tubular connection between one end of said cylinder and said fuel chamber adapted to conduct air from said cylinder to said fuel chamber, a check valve therein, means to introduce fuel oil into said fuel chamber, a crank-shaft, a fly-wheel thereon, lever mechanism connected to said pistons, and pitmen pivoted to the cranks in said crank-shaft, and to said lever mechanism, substantially as set forth.

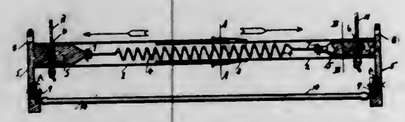
3. The combination in an internal combustion motor, of a cylinder having exhaust ports, fuel intake and air intake ports, in the intermediate portion thereof, and slots through the walls of the end portions thereof, said air intake ports being located nearer the middle of the cylinder than said fuel intake ports, pistons in said cylinder adapted to cover and uncover said ports during their reciprocations, trunnion-pins secured in said pistons and extending outwardly through said slots in the walls of said cylin-

der, lever mechanism pivoted to said trunnion pins, means to support said lever mechanism, a crank-shaft, pitmen pivoted to said lever mechanism and the cranks in said crank-shaft, a fly-wheel on said shaft, a fuel chamber adjacent to said exhaust ports and communicating with said fuel intake ports, a tubular connection between one end of said cylinder and said fuel chamber, a check-valve therein, means to introduce fuel oil into said chamber, and a tubular connection between the other ends of said cylinder and said air intake ports, substantially as set forth.

4. The combination in an internal combustion motor, of a cylinder having exhaust ports, fuel intake and air intake ports in the intermediate portion thereof, and slots through the walls of the end portions thereof, said air intake ports being located nearer the middle of the cylinder than said fuel intake ports, an annular exhaust-chamber around said cylinder inclosing said exhaust ports, an annular fuel chamber around said exhaust chamber and communicating with said fuel intake ports, a tubular connection between one end of said cylinder and said fuel chamber, a check-valve therein, means to introduce fuel oil into said fuel chamber, a tubular connection between the other end of said cylinder and said air intake ports, pistons in said cylinder adapted to cover and uncover said ports during their reciprocations, trunnion-pins secured in said pistons and extending outwardly through said slots, levers pivoted to said trunnion-pins, means to support the opposite ends of said levers, a crank-shaft, a fly-wheel thereon, pitmen pivoted to the cranks in said shaft and to said levers, and means to counter-balance the weight of said levers, pitmen and pistons, substantially as set forth.

5. The combination in an internal combustion motor, of a cylinder having exhaust ports, and air and fuel intake ports in the intermediate portions and longitudinal slots in the end portions thereof, a fuel chamber adjacent to said exhaust ports, a tubular connection between said fuel chamber and said fuel intake ports, a regulating valve in said connection whereby the volume of fuel mixture flowing to said intake ports may be regulated, a tubular connection between one end of said cylinder and said fuel chamber, a fuel oil supply pipe leading into said tubular connection, a valve in said fuel supply pipe whereby the flow of oil therethrough may be regulated, a check valve in said tubular connection between said fuel-oil supply pipe and said fuel-chamber, a tubular connection between the other end of said cylinder and said air intake ports, a crank-shaft, a fly-wheel on said shaft, pistons in said cylinder adapted to cover and uncover said ports, trunnion pins secured in said pistons and extending outwardly through said slots, levers pivoted on said trunnion pins, means to support the upper ends of said levers, and pitmen pivoted on the cranks in said crank-shaft, and to said levers, substantially as set forth.

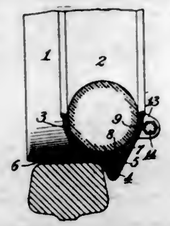
1,102,913. CARRIER OR CONVEYER. LOUIS HASSELBUSCH, Philadelphia, Pa. Filed Jan. 29, 1914. Serial No. 815,161. (Cl. 156—27.)



1. A conveyer and support for window shades comprising an adjustable tubular member, brackets applied to the ends of said member and having sockets for reception of a shade roller, and a spring connecting said brackets, as described.

2. A conveyer and support for window shades comprising telescoped tubes, right angular brackets whose horizontal arms enter the outer ends of the tubes, a spring arranged in the telescoped tubes and connecting the said brackets, the vertical or pendent arms of the brackets having their lower ends provided with open slots serving as sockets for reception of a curtain-roller, as described.

1,102,914. SUPPLEMENTAL TIRE FOR VEHICLE-WHEELS. CLIVE HASTINGS, Atchison, Kans. Filed Apr. 29, 1914. Serial No. 835,184. (Cl. 105—182.)



1. A supplemental tire for vehicle wheels comprising two separable members adapted to fit over the tread of the vehicle wheel tire, one of said members consisting of an annulus having a flange and a tread, and the other consisting of an annulus adapted to be attached to the aforesaid annulus, and means to clamp the said members together.

2. A supplemental tire for vehicle wheels comprising two separable members adapted to fit over the tread of the vehicle wheel tire, one of said members consisting of a one-part annulus having a flange and a tread, and the other consisting of a sectional annulus adapted to be attached to the aforesaid one-part annulus, and means to clamp said members together.

3. A supplemental tire for vehicle wheels comprising two separable members adapted to fit over the tread of the vehicle wheel tire, one of said members consisting of an annulus having a flange and a tread and a groove extending around its interior surface, and the other member consisting of an annulus with a tongue extending around its exterior surface, and means for forcing the two members together.

4. A supplemental tire for vehicle wheels comprising two separable members adapted to fit over the tread of a vehicle wheel tire, one of said members consisting of an annulus having a flange and a tread and a groove running around its interior surface and the other member consisting of a sectional annulus with a tongue running around its exterior surface, and means for forcing the two members together.

5. A supplemental tire for vehicle wheels comprising two separable members adapted to fit over the tread of the vehicle tire, one of said members consisting of an annulus having a flange and a tread and a groove running around its interior surface, and the other member consisting of a sectional annulus having a tongue running around its exterior surface, and means upon the sectional annulus for forcing said sections apart so as to make a firm tongue and groove connection between the two members when in engagement.

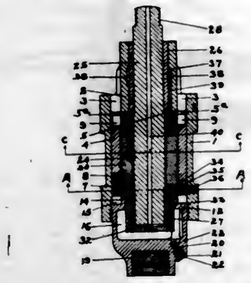
1,102,915. ROTARY MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 16, 1911. Serial No. 602,786. (Cl. 121—74.)

1. In a rotary motor, a casing and a head therefor having a hollow rearward extension, the circumferential walls of which have inwardly projecting ribs with inlet ports therethrough for the motive agent, substantially as described.

2. In a rotary motor, a casing, a journal block seated therein and a head for said casing having a hollow rearward extension closed at its outer end, the circumferential walls of which form with said closed end and said block a lubricating chamber, said circumferential walls having inwardly projecting ribs with inlet ports therethrough for the motive agent, substantially as described.

3. In a rotary motor, a casing having a working chamber, a journal block seated in said casing and having ports communicating with said working chamber, a head screw threaded to said casing and having a reduced portion

of less diameter than the bore of the casing, seated against said block and forming with said block and casing an annular chamber into which said ports open, said head having a hollow rearward extension, closed at its outer end, the circumferential walls of which have inwardly projecting ribs with inlet ports therethrough to said annular chamber, substantially as described.

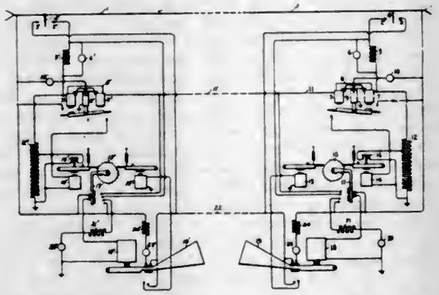


4. In a rotary motor, a casing having a bearing closed at one end and a piston having a shaft journaled in said bearing, said shaft having a conduit with a free vent opening to the atmosphere to relieve the pressure at the end of the shaft in said bearing, substantially as described.

5. In a rotary motor, a casing having oppositely disposed inlet and discharge ends, a through bearing in said discharge end and a socket bearing in said inlet end, a piston having a shaft journaled in said bearings and projecting through said discharge end, said shaft having a conduit with a free vent opening to the atmosphere to relieve the pressure at the rear end of said shaft, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,102,916. SIGNAL SYSTEM. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, a Corporation of Pennsylvania. Filed Nov. 29, 1907. Serial No. 404,211. (Cl. 246—36.)



1. In a signal system for electric railways, a line-wire extending through a single-track section, a polarized magnet connected to each end of said line-wire, a resistance connected between each magnet and ground, a contact at each end of the section connected to the connection between the magnet and resistance at that end of the section and arranged to be connected to the source of power current when a car enters the section at that end, and signal mechanisms controlled by said magnets.

2. In a signal system for electric railways, a line-wire extending through a single-track section, a polarized magnet connected to each end of said line-wire, a resistance connected between each magnet and ground, a contact at each end of the section connected to the connection between the magnet and resistance at that end of the section and arranged to be connected to the source of power-current when a car enters the section at that end, a step-by-step device controlled by each magnet, and a signal controlled by each device.

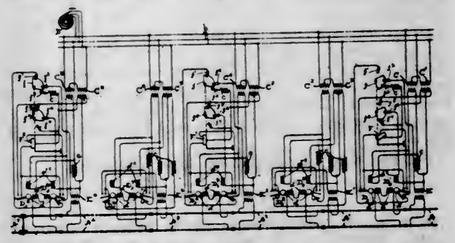
3. In a signal system for electric railways, a line-wire extending through a single-track section, a polarized magnet connected to each end of said line-wire, a resistance connected between each magnet and ground, a contact at each end of the section connected to the connection between the magnet and resistance at that end and arranged to be connected to the source of power-current when a car enters the section at that end, signal mechanisms controlled by said magnets, and means controlled by each signal mechanism for establishing a connection from the contact at that end of the section to the line-wire at a point between said magnets.

4. In a signal system for electric railways, a line-wire extending through a single-track section, a polarized magnet connected to each end of said line-ware, a resistance connected between each magnet and ground, signal mechanisms controlled by said magnets, and means for supplying current to the connection between the magnet and the resistance at either end of the section when a car enters the section at that end.

5. In a signal system for electric railways, a line-wire extending through a single-track section, a polarized magnet connected to each end of said conductor, a resistance connected between each magnet and ground, signal mechanisms controlled by said magnets, means for supplying current to the connection between the magnet and the resistance at either end of the section when a car enters the section at that end, and means controlled by the signal mechanisms for supplying current directly to the line-wire when a signal at one end of the section is at danger and a car enters the section at that end.

[Claims 6 to 19 not printed in the Gazette.]

1,102,917. BLOCK-SIGNAL SYSTEM. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, a Corporation of Pennsylvania. Filed Aug. 7, 1909. Serial No. 511,665. (Cl. 246—30.)



1. In a block signal system, track circuits for the blocks, sources of alternating current for the track circuits, means controlled by a moving train for causing the current supplied to a track circuit to assume three distinct characters successively as the train passes through the blocks in advance, and means responsive in three different ways to the three characters of the track current, said means including a plurality of track relays for said track circuit, the several relays of said track circuit being differently responsive to variations of character of the track current.

2. In a block signal system, track circuits for the blocks, sources of alternating current for the track circuits, means controlled by a moving train for causing the current supplied to a track circuit to assume three distinct characters successively as the train passes through the blocks in advance, and means responsive in three different ways to the three characters of the track current, said means including a plurality of track relays for said track circuit, said first-named means including a like plurality of relays in each of the blocks in advance, the several relays of any one track circuit being differently responsive to variations of character of the track

current, signals for the blocks arranged to indicate danger, caution and clear, and control circuits for said signals controlled by the different combinations of track relays pertaining to the corresponding blocks, whereby three signals behind a train are held in danger and caution positions, one in one of said positions and two in the other.

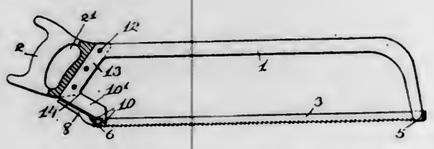
3. In a block signal system, track circuits for the blocks, sources of alternating current for the track circuits, means controlled by a moving train for causing the current supplied to a track circuit to assume three distinct characters successively as the train passes through the blocks in advance, and a plurality of track relays for said track circuit each having a winding supplied with current from the track and a second coöperating winding supplied with alternating current from a source aside from the track, the currents in said second winding differing in character in the several relays for said track circuit.

4. In a block signal system, track circuits, sources of polyphase alternating current for the track circuits, means controlled by a moving train for shifting the phase of the current supplied to a track circuit to three distinct positions, whereby said current has three different phases successively as the train passes through the blocks in advance, and means responsive in three different ways to the three phases of the track current, said means including a plurality of track relays for said track circuit, the several relays of said track circuit being differently responsive to variations of phase of the track current.

5. In a block signal system, track circuits for the blocks, sources of polyphase alternating current for the track circuits, means controlled by a moving train for shifting the phase of the current supplied to a track circuit to three distinct positions, whereby said current has three different phases successively as the train passes through the blocks in advance, and means responsive in three different ways to the three phases of the track current, said means including a plurality of track relays for said track circuit, and said phase-shifting means including a like plurality of relays for each of the three blocks in advance, the several relays of any one track circuit being differently responsive to variations of phase of the track current, signals for the blocks arranged to indicate danger, caution and clear, and control circuits for said signals controlled by the different combinations of track relays pertaining to the corresponding blocks whereby three signals behind a train are held in danger and caution positions, one in one of said positions and two in the other.

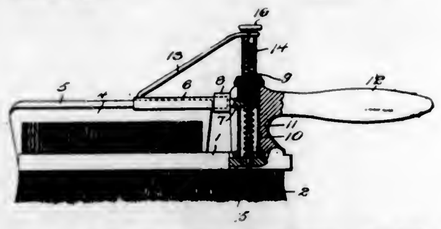
[Claims 6 to 14 not printed in the Gazette.]

1,102,918. HANDSAW. GOAH W. HECTOR, Charleston, Mo. Filed July 14, 1913. Serial No. 779,025. (Cl. 145—33.)



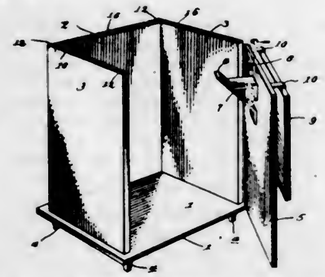
In a saw, a bow frame having a handle end inclined downwardly toward the opposite frame end at a low angle of about thirty degrees to the horizontal and provided in its lower edge with a series of notches extending in line, a ribbon saw blade having pivotal connection with the opposite end of said frame, and a straight handle lever having a locking position parallel with and against the lower edge of said handle end, said lever having at one end fulcrum engagement with any one of said notches and intermediately of its length a pivotal connection with said blade.

1,102,919. COMBINED COMB AND BRUSH. JAMES I. HIETT, Rockmart, Ga. Filed Nov. 17, 1911, Serial No. 660,835. Renewed Dec. 10, 1913. Serial No. 805,860. (Cl. 15—29.)



As an article of manufacture, a brush the back of which is formed with a longitudinal slot open at one end, a slotted tube, a comb detachably mounted in said tube and projecting through the slot in the brush back, a hollow post mounted upon the brush back, a standard slidably mounted upon said post and carrying said tube, and a spring mounted in the post and bearing against the standard.

1,102,920. CABINET. CYRUS HILL and JOHN HENSCHEN, Iona, Fla. Filed May 23, 1913. Serial No. 769,482. (Cl. 45—38.)



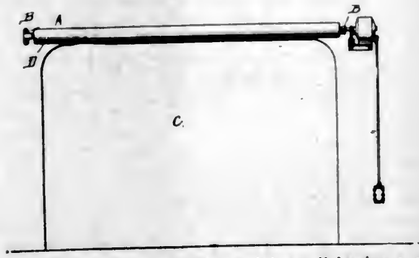
1. The herein described cabinet open at its top and front end provided with a door to close the front, said door being hinged at one side, and with a cover carried by the door, the said cover being hinged at one side to the upper side of the door so that the cover can be arranged on the front side of the door, or closed over the top of the cabinet when the door is in closed position, the door being provided on its inner side with a bracket to support the cover in horizontal position when the door is open.

2. The herein described cabinet open at its front and also at its top and provided with a hinged door to close the front, the said door being hinged at one side and with a cover hinged to the upper end of the door and carried by the door and arranged to be folded outwardly on the front side of the door or to be closed over the top of the cabinet when the door is in closed position, the cabinet being provided at the upper sides of its walls with antifriction rollers and the cover being provided on its under side with curved guide grooves to engage the said rollers, said guide grooves having deepened end portions to permit the cover to drop tightly when the door is in fully closed position.

1,102,921. RAISING AND LOWERING MECHANISM FOR CURTAINS. IRENE HODGES, San Francisco, Cal. Filed Jan. 14, 1914. Serial No. 812,078. (Cl. 156—46.)

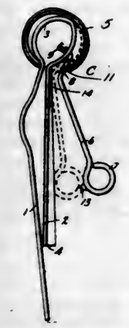
1. The combination with a revolubly mounted roll and a curtain wound thereon, of electrically controlled means for respectively winding and unwinding the curtain, and means automatically operated on adjustment of the curtain to a predetermined position for holding the supporting roll thereof against rotation and comprising means actuated directly through the said electric circuit.

2. The combination with a revolubly mounted roll and a curtain wound thereon, of electrically controlled means for respectively winding and unwinding the curtain, and means automatically operated on adjustment of the curtain to a predetermined position for holding the supporting roll thereof against rotation and comprising means actuated directly through the said electric circuit having normally active shoes engaging the axis of the roll and movable to inactive positions on closing the circuit.



3. The combination with a revolving roll having a curtain wound thereon, of electrically operated means for respectively winding the curtain onto and off of the roll and consisting of a motor connected with the roll, an electric circuit connected with the motor, means for determining the direction of movement of the current through the circuit to cause the curtain to be respectively wound onto and unwound from said roll, and a solenoid in the circuit, a brake wheel on the axis of the motor and shoes coöperating with the wheel and controlled through the solenoid.

1,102,922. POCKET-CLIP FOR RETAINING ARTICLES. WILLIS L. HOFFMAN, Jersey City, N. J. Filed July 10, 1913. Serial No. 778,285. (Cl. 24—81.)



1. An article-holding device of the class described, comprising a pair of jaws, a third jaw having its inner end associated with the inner ends of the first-mentioned jaws, and a single element holding the inner end of the third jaw in operative relation with the first-mentioned jaws and constituting a spring common to all the jaws for maintaining the same closed and permitting independent opening movement of any jaw.

2. A device of the class described comprising three jaws, and a split cylindrical spring engaged over the inner ends of the jaws for maintaining the said jaws closed.

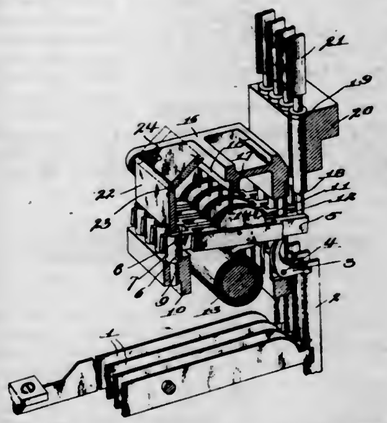
3. A device of the class described comprising a pair of article-gripping jaws, a third jaw connected with the first-mentioned jaws, and a split cylindrical spring embracing the inner portions of the first-mentioned jaws and one end of the third jaw to hold the jaws in closed position.

4. A device of the class described comprising article-gripping jaws, a pocket-gripping jaw coöperating with one of the first-mentioned jaws to secure the holder in a pocket, and a spring arranged to embrace the inner portions of the first-mentioned jaws and engage the last mentioned jaw for holding all the jaws closed and for maintaining the last mentioned jaw attached to the first mentioned jaws.

5. A device of the class described comprising a pair of article-gripping jaws having a resilient connecting portion provided with a slot, a pocket-gripping jaw having a tongue extending into the slot, and a spring engaging and disposed exteriorly to the said connecting portion and the last mentioned jaw for holding the jaws closed and for maintaining the tongue in the said slot.

[Claim 6 not printed in the Gazette.]

1,102,923. KEYBOARD MECHANISM FOR LINE-COMPOSING MACHINES. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 11, 1913. Serial No. 753,593. (Cl. 199—7.)



1. Keyboard mechanism for line composing machines embodying, in combination, a frame, a plurality of key-controlled power-actuated devices, a plurality of bearings pivoted to the corresponding power-actuated devices and mounted in the frame, each of said devices and its corresponding bearing being removable as a unit from the frame independently of the remainder.

2. Keyboard mechanism of the class described embodying a frame, a series of cam yokes, and a series of bearings each pivotally connected individually to a corresponding cam yoke of the series and mounted on said frame, each of said bearings being removable from the frame independently of the other bearings.

3. Keyboard mechanism of the class described embodying a frame, a cam yoke, and a bearing individually and pivotally connected to said cam yoke and removably fitted to said frame, the yoke and its bearing being removable as a unit.

4. Keyboard mechanism of the class described embodying a frame, a series of cam yokes, a series of bearings pivotally connected to the corresponding yokes of the series and capable of removal individually with the respective cam yoke from said frame, and means for preventing removal of the bearings from the frame.

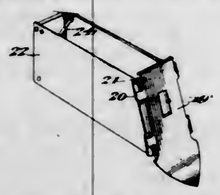
5. Keyboard mechanism of the class described embodying a frame having a socket, a cam yoke, and a bearing having a portion removably fitting said socket in the frame and pivotally connected to the cam yoke.

[Claim 6 not printed in the Gazette.]

1,102,924. ATTACHMENT FOR SEED-PLANTERS. JESSE J. HOOKS, Run, Tex. Filed July 23, 1913. Serial No. 780,739. (Cl. 111—11.)

1. The combination with a standard having flat substantially parallel side faces and an inclined front face,

of a bolt extending through said standard, a furrow opener mounted on the bolt, a plate mounted on the bolt between the standard and the furrow opener and having a bolt engaging slot to permit vertical adjustment, and wings extending rearwardly from said plate, said wings engaging the side faces of the standard and spaced apart thereby.



2. The combination with a standard having flat substantially parallel side faces, of a plate engaging the front face of the standard, wings hingedly connected with the plate and extending rearwardly adjacent to the side faces of the standard being thereby spaced apart, and means for connecting together the rearward ends of the wings.

1,102,925. HOLDER FOR CIGARS AND CIGARETTES. PIERRE HUBERT HOUNGET, Vonda, Saskatchewan, Canada. Filed Mar. 22, 1912. Serial No. 685,474. (Cl. 131—22.)



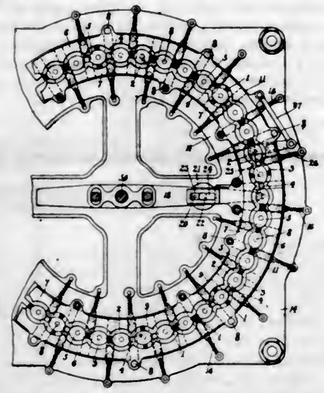
1. In a device of the class described, the combination with a holder provided with a mouthpiece, of a container on the said holder and adapted to receive a smokable article, a spring carried in the holder and extending into the container to engage an end of the smokable article, a bead at one end of the container, and a split spring-like retaining sleeve for removable engagement with the container, the said sleeve being engaged by the said bead to retain the sleeve in engagement with the container.

2. In a device of the class described, the combination with a holder, of a container for removable connection therewith, a spring in the holder and extending into the container, and a split spring-like retaining sleeve for removable engagement with the free end of the said container, the spring-like action of the split sleeve being adapted to normally retain the same in connection with the container.

1,102,926. BRAIDING-MACHINE FOR MAKING BRAIDED AND PLAITED LACE. ERNEST JARDINE and JOHN ARCHER, Nottingham, England. Filed July 8, 1912. Serial No. 708,301. (Cl. 28—4.)

1. In a lace braiding machine, the combination of two races having communicating spaces; bobbin carriers traveling in said races; two reciprocating driving rings adapted to engage with and move the bobbin spindles along the races, said rings being disposed concentrically one within the other on the inner and outer sides, respectively, of the bobbin carriers and having a space therebetween so as not to engage with the bobbin carriers in the communicating spaces; and means for moving the bobbin carriers out of said spaces and into engagement with either of said driving rings, substantially as described.

2. In a lace braiding machine, the combination of two races having a plurality of communicating spaces; bobbin carriers traveling in said races; two reciprocating driving rings adapted to engage with and move the bobbin spindles along the races, said rings being disposed concentrically one within the other on the inner and outer sides, respectively, of the bobbin carriers, and having a space therebetween so as not to engage with the bobbin carriers in the communicating spaces; and radial slides for moving the bobbin carriers out of said spaces and into engagement with either of said driving rings, substantially as described.



3. In a lace braiding machine, the combination of two races having communicating spaces; bobbin carriers traveling in said races; two reciprocating driving rings adapted to engage with and move the bobbin spindles along the races, said rings being disposed concentrically one within the other on the inner and outer sides, respectively, of the bobbin carriers, and having a space therebetween so as not to engage with the bobbin carriers in the communicating spaces; projections on said driving rings; radial slides for moving the bobbin carriers out of said spaces and into engagement with either of said driving rings; and spring actuated levers pivoted on said slides for returning the bobbin carriers into the communicating spaces, substantially as described.

4. In a lace braiding machine, the combination of two races having communicating spaces; bobbin carriers traveling in said races; two reciprocating driving rings adapted to engage with and move the bobbin spindles along the races, said rings being disposed concentrically one within the other on the inner and outer sides, respectively, of the bobbin carriers, and having a space therebetween so as not to engage with the bobbin carriers in the communicating spaces; projections on said driving rings disposed so that one ring engages with the bobbin carriers at every alternate communicating space and the other ring with those bobbin carriers at the remaining communicating spaces; means for reciprocating the driving rings one in the reverse direction to the other; radial slides for moving the bobbin carriers out of the communicating spaces and into engagement with either one driving ring or the other; and spring actuated levers pivoted on said slides for returning the bobbin carriers into the communicating spaces, substantially as described.

1,102,927. METHOD OF MAKING ROAD-BEDS AND PAVEMENTS. JOHN A. JOHNSTON, Worcester, Mass. Filed Feb. 24, 1912. Serial No. 679,691. (Cl. 94—1.)

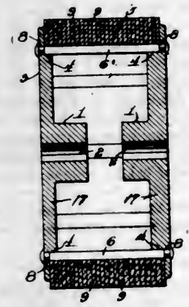
1. A method of making uniform road-ways and pavements which consists in providing a foundation, spreading thereon a thin layer of broken stone, applying to the broken stone a body of molten bitumen sufficient to fill the voids of the broken stone and to cover the same, then applying the remainder of the layer of broken stone of the same character on the top of the bitumen and rolling it in to force the upper parts of the bitumen up into the voids in the part of the stone layer latest applied, and finally applying molten bitumen on the top of the stone to permit it to flow down to fill the voids therein, and to come into contact with the first mentioned layer of bitumen.

2. A method of making road-ways and pavements which consists in providing a hard foundation having rolled broken stone at the top, spreading thereon a thin layer of unrolled broken stone, applying to the thin layer of broken stone a body of molten bitumen sufficient to fill the voids and to cover the same, then applying the remainder of the layer of broken stone on the top of the bitumen and rolling it in, applying molten bitumen on the top of the stone to permit it to flow down to fill the voids therein, and to come while molten into contact with the first mentioned layer of bitumen while still warm, whereby the two bodies of bitumen become homogeneously united and the entire mass becomes uniform from bottom to top, and spreading a thin layer of grit over the top thereof.

3. A method of making road-ways and pavements which consists in providing a foundation, spreading thereon a thin layer of broken stone, wetting it, applying to the broken stone a body of molten bitumen sufficient to fill the voids of broken stone and to cover the same, applying a layer of coarse clean sand, then applying the remainder of the layer of broken stone on the top of the bitumen and rolling it to smooth its surface but not sufficiently to close up the voids, wetting the stone, and finally applying molten bitumen on the top of the stone to permit it to flow down to fill the voids therein, and to come into contact with the first mentioned layer of bitumen and sand.

4. A method of making road-ways and pavements which consists in providing a foundation, spreading thereon a thin layer of broken stone, spraying on the broken stone a body of heated molten bitumen under pressure, then applying the remainder of the layer of broken stone on the top of the bitumen and rolling it to form a smooth surface, and finally spraying molten bitumen under such pressure on the top of the stone so as to force it to flow down to fill the voids therein, and to come into contact with the first mentioned layer of bitumen.

1,102,928. PULLEY. JOHN C. KAMP and ALBERT E. FINCH, Buffalo, N. Y. Filed Dec. 18, 1912. Serial No. 737,474. (Cl. 64—17.)

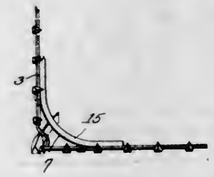


1. A built up pulley comprising a hub, flanges at opposite ends of the hub, a rim held between said flanges, and rim supporting keys of dovetail shape embedded in the inner face of said rim and having end shoulders bearing against said flanges, and studs projecting beyond said shoulders through said flanges.

2. A built up pulley comprising a hub, flanges at opposite ends of the hub, a rim held between said flanges, and rim supporting keys of dovetail shape embedded in the inner face of said rim and having end shoulders bearing against said flanges, and studs projecting beyond said shoulders through said flanges, said flanges being fastened on said studs.

3. A built up pulley comprising a hub, flanges at opposite ends of the hub, a rim held between said flanges, and rim supporting keys of dovetail shape embedded in the inner face of said rim and having end shoulders bearing against said flanges and studs projecting beyond said shoulders through said flanges, said studs being supported by said flanges.

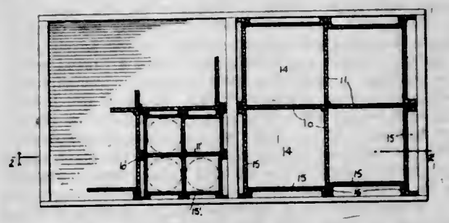
1,102,929. MOWING-MACHINE. OTTO KLUGE, Golconda, Ill. Filed Apr. 10, 1913. Serial No. 760,314. (Cl. 56—30.)



1. A mowing machine including horizontally and vertically disposed finger bars, cutter bars movable upon the respective finger bars and each adapted to cut across the path of the other, and means for transmitting motion from one cutter bar to the other, said means including a series of detachably connected links, having interfitting hooked ends, outstanding lugs upon the cutter bars, the end links of the series having recesses to receive the lugs, and means extending longitudinally over the links for holding the links together and in engagement with the lugs.

2. The combination with horizontally and upwardly extended finger bars and cutter bars mounted to reciprocate upon the respective finger bars, of an arcuate channeled guide connecting the finger bars and constituting a brace, an arcuate housing straddling said channeled guide and secured to the finger bars, connecting lugs extending at right angles from the respective cutter bars and movable into the housing with the cutter bars, bars slidably mounted in the end portions of the housing and having recesses for the reception of the respective lugs, said bars being detachable from the lugs, and interfitting links detachably connected to each other and to said detachable bars, said links and detachable bars being mounted to work within the housing and being held together and to the lugs by the housing.

1,102,930. SHIPPING-CRATE. HENRY B. KOPF, New Haven, Conn. Filed Nov. 23, 1912. Serial No. 733,111. (Cl. 217—18.)

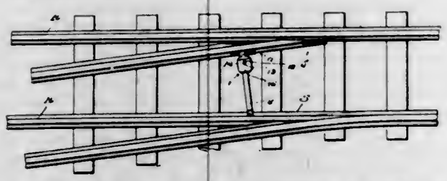


1. The herein described shipping crate comprising a filler including a pair of vertically arranged partition strips, means connecting said strips together along a median line with their wings directed outwardly therefrom at right angles to one another, dividing the main compartment into four equal rectangular cells, and means locking the free vertical edges of the wings in proper position with respect to the rigid walls of the crate and serving as lateral cushioning members, said locking means comprising a plurality of flat brace members having right angularly disposed flanges serving to space the flat members from said rigid walls, and the flanges of the several members being of varying widths, substantially as and for the purposes set forth.

2. In a crate of the character set forth, the combination with a main container having vertical walls, of a filler therefor comprising a pair of vertically arranged packing strips, means connecting said strips to each other along a vertical median line, the free edges of said strips being directed outwardly from said line and each dividing the adjacent rigid wall into two equal parts and

said pair of strips forming four substantially equal compartments, a plurality of packing braces in each compartment, each spanning the corresponding wall part and spaced therefrom, the braces of each compartment being of various widths and serving to lock the free edges of the vertical partition strips adjacent thereto in fixed position and also serving to provide a cushioning space adjacent the inner surfaces of said walls, and other packing strips and packing braces associated therewith in the manner above described serving to subdivide one or more of the aforesaid compartments, substantially as set forth.

1,102,931. SWITCH-LUG. JOHN W. LATTA, Lecompte, La., assignor of one-half to John C. Barnes, Lecompte, La. Filed Feb. 4, 1914. Serial No. 816,432. (Cl. 104—96.)



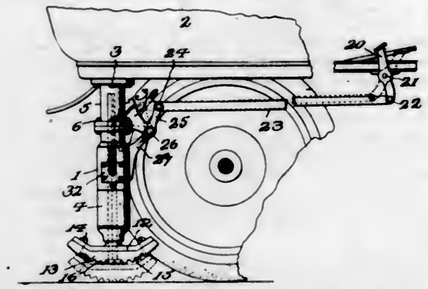
1. A lug of the class set forth, including a body provided with a compartment, a bridle rod having an opening passing through the compartment, an adjustable plate having spirally arranged openings within the compartment and frictionally engaging the walls thereof, and a bolt passing through the bridle rod, the lug and one of the openings in the adjustable plate.

2. In a device for the purpose set forth, a lug including an attaching plate, an arm arranged angularly of the plate, a body connected with the arm, said body having a compartment, a removable plate having spirally arranged openings within the compartment and frictionally engaging the walls thereof, a bridle rod, and a bolt passing through one of the openings of the plate and connected with the bridle rod.

3. In a device for the purpose set forth, a lug, said lug including an attaching plate, a body connected with the plate, said body having a compartment, the body being provided with a passage which intersects the compartment, the lower wall of the passage having an elongated opening, a bridle rod having an opening arranged within the passage, a removable plate within the compartment, said plate having spaced openings, certain of which being arranged nearer the center of the plate than the remaining openings and all of the said openings being spaced at different distances from the periphery of the plate, one of said openings adapted to register in the opening provided by the channel with the opening in the rod, a cover for the compartment, said cover having an opening which is adapted to aline with the registering openings, a bolt passing through the registering openings, a nut for the bolt, said nut adapted to engage with the closure.

4. A lug for the purpose set forth including an attaching plate, an angular arm connected with the plate, a body formed upon the arm and having its upper open face disposed below the arm to provide a shoulder between the said body and arm, the said body being further provided with an upstanding lug, the body being provided with a channel communicating with the interior of the body, the said channel being provided with an elongated opening, a bridle rod being disposed in the channel to fully close the channel and to have its opening register with the opening provided in the channel, a removable plate filling the compartment of the body, said plate being provided with spaced openings, each of the said openings being arranged upon the plate at varying distances from the perimeter of the plate and one of the openings adapted to register with the openings in the bridle rod and the channel, a closure adapted to abut with the shoulder having depressions to receive the lugs of the body, said closure having an elongated opening which communicates with the registering openings in the plate, bridle rod and channel, a bolt passing through the registering opening, a nut for the bolt, said nut adapted to engage with the outer face of the closure.

1,102,932. ANTISKIDDING OR EMERGENCY BRAKE FOR AUTOMOBILES. JEREMIAH C. LAUTENBACHER and ALBERT GEARY, Schuylkill Haven, Pa. Filed Aug. 21, 1913. Serial No. 785,972. (Cl. 21—8.)



1. An anti-skidding or emergency brake for automobiles including in combination a supporting casing, a rod adapted to reciprocate vertically in said casing, a brake shoe fixed to said rod, said casing having means for holding said rod from rotating in the casing, a spring located in said casing and normally holding said rod raised, a swinging member extending into said casing and directly connected with said rod for reciprocating the same, and means for operating said swinging member to positively force the brake shoe into contact with the road surface.

2. An anti-skidding or emergency brake for automobiles including in combination, a supporting frame, a rod adapted to reciprocate vertically in said supporting frame, a brake shoe fixed to said rod, a spring for normally holding said rod raised, said rod having a rack formed thereon, a segmental rack adapted to engage the rack on the rod carrying the brake shoe, a foot lever, and means for positively connecting said foot lever to the segmental rack.

3. An anti-skidding or emergency brake for automobiles, including in combination, a supporting frame, a rod adapted to reciprocate vertically in said supporting frame, a brake shoe fixed to said rod, a spring for normally holding said rod raised, said rod having a rack formed thereon, a segmental rack adapted to engage the rack on the rod carrying the brake shoe, a foot lever, means for positively connecting said foot lever to the segmental rack, and a spring for cushioning the upward movement of the brake shoe.

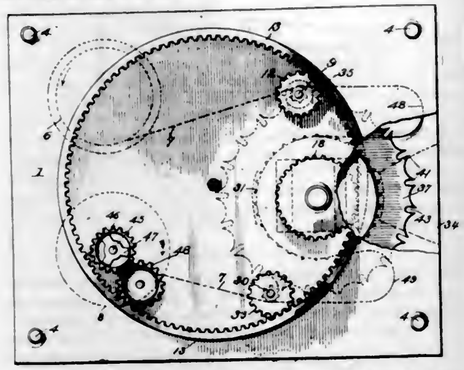
1,102,933. MOVING-PICTURE MACHINE. JOHN EDISON LEONARD, Portland, Oreg. Filed Mar. 3, 1911, Serial No. 612,126. Renewed Apr. 9, 1914. Serial No. 830,796. (Cl. 88—18.)

1. A moving picture machine, comprising a lens, a shutter surrounding the lens and having oppositely arranged openings, a film passing around the shutter and means for intermittently driving the film.

2. A moving picture machine comprising a lens, a rotary shutter surrounding the lens and having oppositely arranged openings, members loosely mounted upon the shutter, a film passing around said members and means for intermittently driving the members, substantially as shown and described.

3. A moving picture machine, comprising a lens, a cylindrical shutter surrounding the lens and having two oppositely arranged openings, spools loosely mounted upon the ends of the shutter, a film passing over said spools and means for intermittently driving said spools.

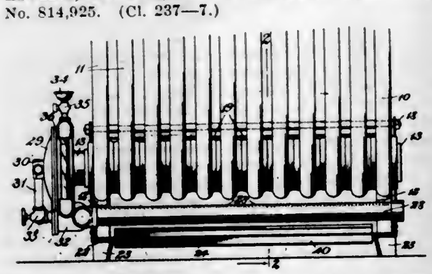
4. A moving picture machine, comprising a lens, a rotary cylindrical shutter having two oppositely arranged openings opposite the lens, spools rotatably mounted on the ends of the shutter, a film passing around the shutter and means for intermittently driving the spools for feeding the film forward when the openings in the shutter are not registering with the lens.



5. A moving picture machine, comprising a lens, a cylindrical shutter having oppositely arranged openings in opposite walls thereof in a line with the lens, spools rotatably mounted on the ends of the shutter, a film passing over said spools and driven thereby, outwardly extending flanges carried by the outer ends of the spools and means engaging said flanges for intermittently driving the spools for feeding the film.

[Claims 6 to 21 not printed in the Gazette.]

1,102,934. PORTABLE RADIATOR-HEATER. MILDRED LEWLESS, New York, N. Y. Filed Jan. 28, 1914. Serial No. 814,925. (Cl. 237—7.)



1. A portable radiator heater adapted for application to ordinary radiators having the usual legs, comprising a casing adapted to removably inclose and support the lower portion of a radiator therein, and a burner mounted in said casing between said legs.

2. A portable radiator heater adapted for application to ordinary radiators having supporting legs, comprising a casing adapted to inclose the legs and lower portion of a radiator, supports for said casing upon which the radiator legs are adapted to rest whereby the radiator is supported in spaced relation to the floor, a burner extending longitudinally of the casing and supported in the ends thereof beneath said radiator, and means for controlling the supply of fuel to the burner.

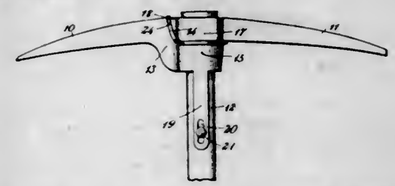
3. A portable base for radiators having supporting legs, comprising a casing having closed side and end walls, extensions carried by the casing for disposal between the sections of the radiator to close the spaces therebetween, said radiator being provided with supply means for water, means for supplying heat to the casing beneath the radiator, and a bottom for the base having end flanges upon which said radiator is supported through the instrumentality of said legs.

4. A portable heater of the class described, comprising a casing of substantially rectilinear contour, having open top and bottom portions, means at the top portion of the casing to form a tight joint with a water-carrying element mounted in the casing, feet for the casing near the ends thereof to sustain the weight of the element, means above the feet to sustain and carry the radiator and a bottom for the casing having side draft openings.

5. A portable heater of the class described, comprising a casing of substantially rectilinear contour having open top and bottom portions, means at the top portion of the casing to form a tight joint with a water-carrying element mounted in the casing, feet for the casing near the ends thereof to sustain the weight of the element, flanges attached to the ends of the casing and carrying said feet, a main bottom supported upon said flanges between the element and the flanges, said bottom having up-turned side portions producing draft openings and regulators therefor, and an auxiliary bottom suspended from said up-turned portions in spaced relation to the main bottom.

[Claims 6 and 7 not printed in the Gazette.]

1,102,935. NON-SHORT-CIRCUITING PICK. NAHTEN LIPOFF, New York, N. Y. Filed Nov. 28, 1913. Serial No. 803,558. (Cl. 125—19.)



1. A non-short-circuiting pick embodying a handle, and insulated sections secured thereto.

2. A non-short-circuiting pick consisting of a head having sections electrically separated.

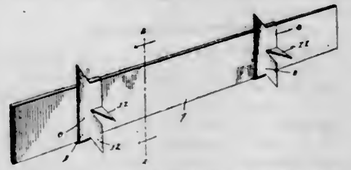
3. A pick embodying a pair of sections, said sections each having sleeve portions, a handle on which said sleeve portions are mounted, and an insulating member between the said sleeve portions and encircling the handle.

4. A pick embodying a pair of sections, said sections each having sleeve portions, a handle on which said sleeve portions are mounted, and an insulating member between the said sleeve portions and encircling the handle, one of said sleeve portions having an interior recess in which said insulation projects.

5. A non-short-circuiting track pick comprising sections including a digging member and a tamper, one of the sections having an off-set sleeve, a handle on which said sleeve is engaged, the other section having a sleeve also engaged on the handle outwardly of the first mentioned sleeve and having an extension disposed in juxtaposition to the off-set, an insulating member comprising a washer mounted on the handle between the sleeves and having curved extensions between said juxtapositioned parts, said first-mentioned sleeve having side strips disposed along opposite sides of the handle, and a connector carried by the handle relative to which said extensions are movable.

[Claim 6 not printed in the Gazette.]

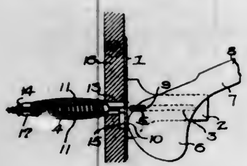
1,102,936. FENCE. JACOB LUEPKER, Millstadt, Ill. Filed Oct. 18, 1913. Serial No. 795,933. (Cl. 256—7.)



Fencing material consisting of a metallic strip and barb members secured thereon, each barb member consisting of a metallic strip having a terminal barb at one end bent substantially at right angles to said strip, a barb

intermediate its ends also bent at right angles to the strip, and barbs intermediate the last mentioned barb and the ends of the strip, said last mentioned intermediate barbs being disposed in the plane of the strip, and said barb strip being folded about the fence strip on lines coincident with the bases of the intermediate barbs, thereby positioning two barbs adjacent to the upper and lower edges of the strip and in the plane thereof and the remaining two barbs adjacent to opposite side faces of the fence strip in a common plane between the upper and lower edges of the fence strip and substantially perpendicular thereto so as to project in opposite directions therefrom.

1,102,937. COLLAPSING TOOL. IRA B. MALABY, Philadelphia, Pa., assignor to Norman Mellor, Philadelphia, Pa. Filed July 9, 1913. Serial No. 778,113. (Cl. 81—15.)



1. A collapsing tool consisting of a frame having a base plate and two side members projecting therefrom; a handle guided by said side members and having two similar cams operative on the base plate; an anchor-engaging member bodily movable through the plate; and a pivot connecting the anchor member with the cams of the handle.

2. A collapsing tool consisting of a frame having a base plate and a U-shaped yoke piece projecting therefrom, there being slots in the side members of said yoke piece; a screw bodily movable through the base plate; and a pivot pin for the screw extending through and beyond the side members of the yoke piece; with a handle terminating in two parallel cam plates respectively adjacent to the side members of the yoke piece and operatively mounted on the pivot pin.

3. The combination in a collapsing tool of a frame including a base plate; an anchor-engaging member movable bodily through said plate; and a handle guided on the frame and pivotally connected to said member; said handle having a cam operative on the plate and formed with a relatively steep "breaking" portion and a less steep collapsing portion.

4. The combination in a collapsing tool of a frame having a base plate and two slotted guides; a handle having two cams operative on the base plate; and a pivot pin extending between said cams and slidable in the slots; with an anchor engaging member suspended from said first pin and operative through the plate.

5. The combination in a collapsing tool of a base plate; a yoke piece fixed to said plate and having two parallel slots; an anchor-collapsing member; a pivot pin for said member; and a handle formed of a piece of sheet material, said handle having two parallel and integral side members formed to receive the yoke between them and constructed with their edges in the form of cams acting on the adjacent face of the base plate.

1,102,938. BLOW-OUT PATCH. JOSHUA H. MARVIL OF V. and ISAAC H. DOWNS, Laurel, Del., assignors of one-third to Joshua D. Marvil and two-thirds to Sirman D. Marvil, Laurel, Del.; Sallie L. Marvil and Frank B. Sirman, executors of said Joshua D. Marvil, deceased. Filed Dec. 13, 1913. Serial No. 806,507. (Cl. 152—24.)

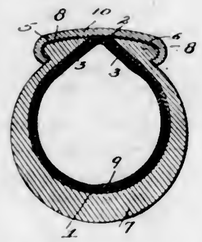
1. A repair patch for pneumatic tires comprising a blow-out covering section, a flap extending from one side thereof, and a band extending from the opposite side thereof and diminishing in width in a direction from said section toward its free end.

2. A repair patch for pneumatic tires comprising a blow-out covering section, a flap extending from one side thereof, a band extending from the opposite side thereof, and an adhesive applied to one side of said section and band.



3. A repair patch for pneumatic tires comprising a blow-out covering section, a flexible band extending therefrom, one side of said section and band being adhesive, and a flap smaller in dimension than said section and extending from an edge of said section and foldable upon the adhesive side thereof.

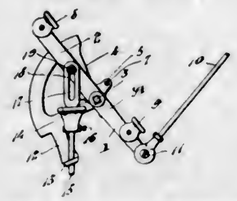
1,102,939. TIRE-REPAIR PATCH. JOSHUA H. MARVIL OF V., Laurel, Del., assignor, by direct and mesne assignments, of one-third to Joshua D. Marvil and two-thirds to Sirman D. Marvil, Laurel, Del.; Sallie L. Marvil and Frank B. Sirman, executors of said Joshua D. Marvil, deceased. Filed Dec. 13, 1913. Serial No. 806,508. (Cl. 152—24.)



1. A repair patch for pneumatic tires comprising a body adapted to be inserted between an outer casing and inner tube, and means for holding the body in position embodying hooks secured to one side of the body and adapted to fasten upon the adjacent bend of the casing, and flat clips secured to the opposite side of the body and adapted to lie between the bend of the casing and the wheel rim.

2. A repair patch for pneumatic tires comprising a body, a flexible flap secured at one end to said body at one side of the latter and of a length to encircle an inner tube and form an interior lining for said body, hooks at one side of said body adapted to coöperate with an edge of the casing, and clips at the opposite side of the body and adapted to coöperate with the opposite edge of the casing.

1,102,940. FOOT CONTROL FOR MOTOR-CYCLES. CHARLES MERCHANT, Ottawa, Kans. Filed July 29, 1913. Serial No. 781,823. (Cl. 74—81.)



1. A foot control for motorcycles, embodying a two armed lever, a pedal on each arm of said lever, a clutch-operating rod attached to one arm of said lever, an auxiliary starting pedal, and a link connecting the last named pedal with said lever, said link and lever having a limited amount of free relative play for the purpose specified.

2. A foot control for motorcycles, embodying a two armed lever, a pedal on each arm of said lever, a clutch-operating rod attached to one arm of said lever, an auxiliary starting pedal, a link connecting the last named pedal with said lever, said link and lever having a limited amount of free relative play for the purpose specified, a stop for said starting pedal, and means for regulating the throw of said starting pedal.

3. A foot control for motorcycles, embodying a two armed lever, a pedal on each arm of said lever, a clutch-operating rod attached to one arm of said lever, an auxiliary starting pedal, a link connecting the last named pedal with said lever, said link and lever having a limited amount of free relative play for the purpose specified, a combined guide and stop for said starting pedal, and means for regulating the throw of said starting pedal.

4. A foot control for motorcycles embodying a two armed lever, a pedal on each arm of said lever, a clutch operating rod attached to one arm of said lever, an auxiliary starting pedal, a link connecting the last named pedal with said lever, said link and lever having a limited amount of relative play for the purpose specified, a combined guide and stop for said starting pedal, means for regulating the throw of said starting pedal and a bracket or device for holding the foot clutch to the engine.

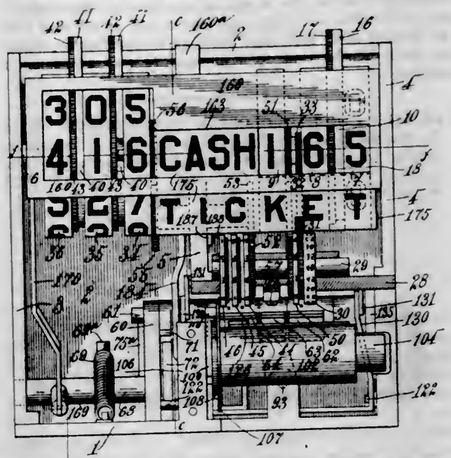
1,102,941. AUTOMATIC UNCOUPLER FOR CAR-COUPLINGS. JOHN P. MONGAN, Minneapolis, Minn. Filed Dec. 13, 1913. Serial No. 806,438. (Cl. 213—59.)

1. The combination with a car coupler of the M. C. B. type, of a lever-equipped rock shaft having a crank arm, a spring connection between the lock dog of said coupler and said crank arm, a pawl and ratchet device, for holding said rock shaft in a position to set said spring connection under tension, to lift said lock dog out of engagement with the tail of the knuckle of said coupler, when the frictional contact between said tail and said dog is removed, and a trip actuated by the movement of the knuckle of said coupler for automatically releasing said pawl from said ratchet, to permit said lock dog to return to an operative position.

2. The combination with a car coupler of the M. C. B. type, of a lock dog lifting device arranged to be set to automatically lift said lock dog out of engagement with the tail of the knuckle of said coupler, when the frictional contact between said tail and said dog is removed, and a trip actuated by the movement of the knuckle of said coupler, for automatically releasing said lock dog, when in an inoperative position, to permit the same to return to an operative position.

3. The combination with a car coupler of the M. C. B. type, of a lever-equipped rock shaft having a crank arm, a spring connection between the lock dog of said coupler and said crank arm, a pawl and ratchet device for holding said rock shaft in a position to set said spring connection under tension, to lift said lock dog out of engagement with the tail of the knuckle of said coupler, when the frictional contact between said tail and said dog is removed, and a flexible connection between the knuckle of said coupler and said pawl, for releasing said pawl from said ratchet, by the opening movement of said knuckle, said flexible connection being of a length sufficient to permit normal movement of said knuckle when said pawl is in an inoperative position.

1,102,942. FARE-RECORDING MACHINE. OTTO N. MOORE, Indianapolis, Ind., assignor to Ohmer Fare Register Company, Rochester, N. Y. Filed Oct. 16, 1911. Serial No. 655,090. (Cl. 234—4.)



1. In a machine of the type specified, selective platen mechanism, and a fare denomination indicator actuated by said platen mechanism.

2. In a machine of the type specified, selective platen mechanism, and a fare denomination indicator suitably connected to said platen mechanism and actuated thereby.

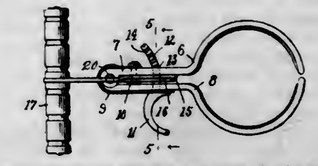
3. In a machine of the type specified, recording mechanism, a fare denomination indicator, a member resiliently attached to said indicator, and connecting means between said member and said recording mechanism.

4. In a machine of the type specified, a fare denomination indicator, arms resiliently connected thereto, an actuating member in operative relation with said arms, and actuating means connected to said actuating member.

5. In a machine of the type specified, a fare denomination indicator having a projection thereon, arms lying on either side of said projection, a spring connecting said arms, an actuating member lying between said arms, and operating means for said actuating member.

[Claims 6 to 20 not printed in the Gazette.]

1,102,943. POLICE-NIPPER. JAMES MURPHY, Bridgeport, Conn. Filed Jan. 17, 1914. Serial No. 812,683. (Cl. 70—24.)

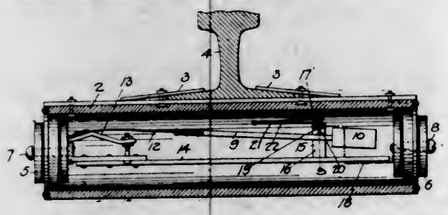


1. A police nipper of the class described, the same comprising a pair of jaws pivotally connected together, a spring for normally holding the said jaws in a closed position, a rack secured to one of the said jaws, a pair of handles connected to the other jaw and having means to engage the said rack and hold said jaw in an open position against the action of the spring.

2. A police nipper of the class described, the same comprising a pair of jaws pivotally connected together, a spring for holding the same in a closed position, a pair of handles pivotally connected to one of the said jaw members, a trigger secured to the other jaw for operating the same, a rack secured to one jaw and adapted to engage the other jaw in a way to hold the jaws in an open position when the handles are clasped.

3. In a police nipper of the class described, the combination of a pair of jaws pivotally connected together, a spring for normally holding the same in a closed position, a trigger and rack secured to one of said jaws, said rack extending through the shank of the other of said jaws, a pair of handles pivotally connected to one of the said jaws and having their free edge portions in position to engage the teeth of the rack in a manner to lock the same in position.

1,102,944. CIRCUIT-CLOSING INSTRUMENT. WILL C. NEAHR, Denver, Colo., assignor, by mesne assignments, to The Protective Signal Manufacturing Company, a Corporation of Colorado. Filed Apr. 17, 1912. Serial No. 691,444. (Cl. 246—35.)



1. In a circuit closing instrument, a vibratory element, a contact member disposed in the path of said element to be lifted during vibrating movement of the same, a support for said member, a resilient blade on said support, a spring on said blade in engagement with said member to yieldingly oppose upward motion thereof, and means for connecting said spring and said element at opposite sides of an electric circuit.

2. In a circuit closing instrument, a resilient element fixed at one of its ends to vibrate in a vertical plane, a contact member normally held against gravitation in the path of said element, to be lifted by upward movement of the same, a spring engaging said member to yieldingly oppose upward movement thereof, and a resilient support for said spring, said element and said member being adapted for connection in opposite sides of an electric circuit.

3. In a circuit closing instrument, a support, a resilient conductive element mounted thereon to vibrate by a jarring motion of said support, and a contact member disposed to be engaged by said element during its movement in one direction and adapted to move with said element to prolong said engagement, said element and said member being adapted for connection in opposite sides of an electric circuit.

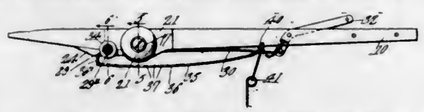
4. In a circuit closing instrument, a support, a resilient conductive element mounted theeron to vibrate by a jarring motion of said support, a contact member disposed to be engaged by said element during its movement in one direction and adapted to move with said element to prolong said engagement, and a spring adapted to yieldingly oppose the said movement of the contact member, said element and said member being adapted for connection in opposite sides of an electric circuit.

5. In a circuit closing instrument, a support, a resilient conductive element mounted thereon to vibrate by a jarring motion of said support, and a loosely suspended contact member normally separated from said element and disposed to be lifted by the same during its upward motion, said element and said member being adapted for connection in opposite sides of an electric circuit.

[Claim 6 not printed in the Gazette.]

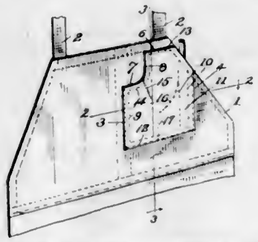
1,102,945. APPARATUS FOR HANDLING SEINES. PETER NEGOVATICH, Biloxi, Miss., assignor of one-third to Isidore Heidenheim and one-third to Jacob Stanovich, Biloxi, Miss. Filed Oct. 24, 1911. Serial No. 656,415. (Cl. 43—9.)

Apparatus of the class described including a beam, rollers supported thereby, a block secured to the beam, a shaft supported between the block and beam, means for moving the shaft longitudinally of the beam, rollers carried by the shaft, and a guard including a net supported



frame, the end portions of the frame being secured to the block and the intermediate portion of the frame to the beam.

1,102,946. SAFETY-POCKET. ROBERT G. NICHOLAS, Clyde, Kans. Filed Apr. 30, 1912. Serial No. 694,118. (Cl. 2—15.)



A pocket having a laterally presented vertically disposed opening at its upper end and a lateral extension below said opening, the walls of the pocket being stitched together on a line extending downwardly from the upper inner corner of the lateral extension toward the opposite wall of the pocket, the walls being further stitched together on a line extending downward from the upper end of the pocket and approximately parallel to but spaced from said opening, the stitching at a point approximately in line with the lower end of said opening then extending downward and toward the lateral extension to a point spaced from but substantially in line beneath the lower end of the first line of stitching, said second line of stitching then extending downward to the bottom of the pocket approximately parallel with the side wall of said lateral extension.

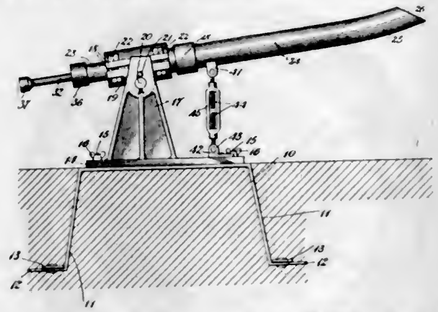
1,102,947. MECHANICAL SCREW-DRIVER AND DRILLING-MACHINE. JEPPE PETER NISSEN, Odense, Denmark. Filed Sept. 23, 1912. Serial No. 721,995. (Cl. 77—34.)



In a mechanical screw driving and drilling machine, the combination with a metal casing having oppositely disposed and oblique slots near its lower end, of metal bushes

fixed at and closing each end of said casing, an axle consisting of two parts mounted in and guided by the bushes, a friction coupling adapted to connect the said two parts, a tube arranged within the lower portion of the casing and adapted to move therein, two oppositely disposed bolts screwed into the said tube and projecting through the oblique slots in the casing, a ring having holes and mounted on the casing, the said holes snugly embracing the bolts, and means to transmit motion to the apparatus, all substantially as and for the purpose set forth.

1,102,948. LAWN GAME. JOHN NORTON, New York, N. Y. Filed Nov. 14, 1913. Serial No. 800,984. (Cl. 124—1.)



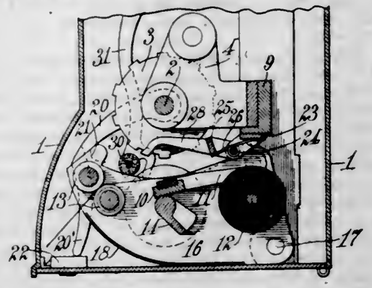
1. In a lawn game apparatus, the combination with an anchor embedded in the ground, of a projecting apparatus mounted therein, said projecting apparatus including a base removably secured to the anchor and having spaced vertical bearings, a carriage pivoted in the bearings, a barrel supported by the carriage and having a spring plunger therein adapted to project an object by forcive action thereagainst, and means within the barrel to cushion the movements of the plunger.

2. In a lawn game apparatus, the combination with an anchor embedded in the ground, of a projecting apparatus mounted therein, said projecting apparatus including a base removably secured to the anchor and having spaced vertical bearings, a carriage pivoted in the bearings, a barrel supported by the carriage and having a spring plunger therein adapted to project an object by forcive action thereagainst, and means connecting the base and barrel to adjust the latter at various inclinations.

3. A lawn game comprising a ground anchor, a pivotally supported carriage secured thereto against displacement, a barrel embodying a pair of sections coupled together, an apertured cushioning member between the sections, a plunger movable through said cushioning member, a coil spring on the plunger between the cushioning member and the inner end of the inner section of the barrel, the spring being held from movement inwardly of the plunger and the plunger being normally projected from said end, the outer end of the barrel being directed upwardly and beveled at its top portion, and an adjustable connection between the outer barrel section and the support.

4. A lawn game comprising a ground anchor, a pivotally supported carriage secured thereto against displacement, a barrel embodying a pair of sections coupled together, an apertured cushioning member between the sections, a plunger movable through said cushioning member, a coil spring on the plunger between the cushioning member and the inner end of the inner section of the barrel, the spring being held from movement inwardly of the plunger and the plunger being normally projected from said end, a plunger head on the free end of the plunger, said plunger head and the outer end of the spring being designed to contact with the cushioning member at the opposite limits of the movements of the plunger in moving outward against the action of the spring and in retracting and balls designed to be positioned in the barrel to be projected.

1,102,949. PRINTING MECHANISM FOR RECORDERS. JOHN F. OHMER, Dayton, Ohio, assignor to Ohmer Fare Register Company, Dayton, Ohio, a Corporation of New York, (incorporated in 1902.) Filed Dec. 20, 1911. Serial No. 666,926. (Cl. 234—4.)

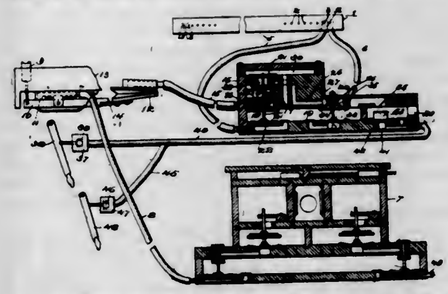


1. In a recording machine, the combination with record printing members including an identification member which indicates upon each record by whom each record is taken, means coöperating with the aforesaid printing members for taking such records, and a hinged support upon which said coöperating means are mounted, of an impression device arranged to be actuated when said hinged support is moved.

2. In a recording machine, the combination with record printing devices, a printing member operatively associated therewith for ascertaining by whom a record is taken, impression devices coöperating with said printing devices for taking said records, and a hinged support upon which said coöperative impression devices are supported, of a marker arranged to engage the record sheet to mark the same whenever said hinged support is moved to permit of the inspection or removal of a record, said marker being actuated by said hinged support.

3. In a recording machine, the combination with printing mechanism for obtaining records, including an identification device for identifying the person taking a record with said record, and a hinged support upon which the impression members of said mechanism are mounted, of an arm arranged to engage the record sheet to mark the same, a cam on said arm arranged to be engaged by said hinged support when the latter is actuated to permit of the inspection or removal of a record from the machine, and whereby said record is marked by said arm.

1,102,950. ACCENTING DEVICE. JOHN HENRY PARNHAM, New York, N. Y., and JUSTUS HATTEMER, West New York, N. J., assignors to Hardman, Peck & Company, New York, N. Y., a Corporation of New York. Filed Mar. 2, 1911. Serial No. 612,248. (Cl. 84—168.)

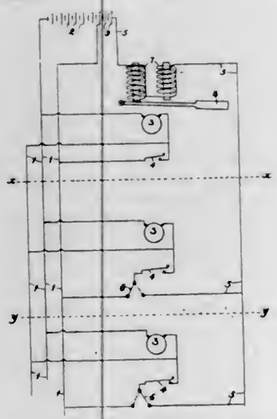


1. The combination with an expression device, a manual for controlling it, and a pneumatic for actuating the manual; of a stem, two oppositely facing valves thereon, a housing having a valve chamber provided with ports alternately closed by the valves, one port communicating through a passage with the exhaust trunk and the other

through an air passage with the atmosphere, an air inlet valve controlling the passage, a tube connecting the chamber with said pneumatic, a pouch on the stem beneath the exhaust passage, means for admitting air below said pouch from the tracker bar, and a second pouch on the stem above said air passage, the housing having a suction passage leading from said valve chamber to a point above the last named pouch.

2. The combination with an expression device, a manual for controlling it, and a pneumatic for actuating the manual; of a stem, two oppositely facing valves thereon, a housing having a valve chamber provided with ports alternately closed by the valves, one port communicating through a passage with the exhaust trunk and the other through an air passage with the atmosphere, an air inlet valve controlling this passage, a tube connecting the chamber with said pneumatic, a pouch on the stem beneath the exhaust passage, means for admitting air below said pouch from the tracker bar, a third pouch impelled by said exhaust to close said air inlet valve, and means for admitting air from the tracker bar for permitting the normal action of this pouch.

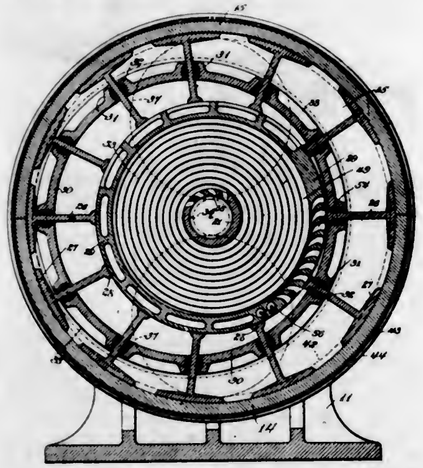
1,102,951. SIGNALING SYSTEM FOR MINES AND THE LIKE. GEORGE THOMAS PLUMB, Johannesburg, Transvaal. Filed May 18, 1908. Serial No. 433,541. (Cl. 177—311.)



1. In combination, a signal receiving station, a signal transmitting station, a signal device and a circuit closer at the transmitting station, a source of current, a connection from one side of said source to the signal device, a connection from the other side of said source to the circuit closer, a common conductor extending from the receiving station to the transmitting station, the other side of the device and circuit closer at the transmitting station being connected to the common conductor, an auxiliary conductor extending from the second named side of the battery to the transmitting station, a magnetically controlled indicator in the auxiliary conductor at the receiving station, a two-way switch at the transmitting station, said switch in one position being in the connection from the source of current to the circuit closer, and in the other position arranged to open such connection and connect the circuit closed to the auxiliary conductor.

2. In combination, a signal receiving station, a plurality of signal transmitting stations, a signal bell and a circuit closer at each station, a source of current, a connection from one side of said source to each bell, a connection from the other side of said source to each circuit closer, a common conductor extending from the receiving station to the transmitting stations, the other sides of the bells and circuit closers at each station being connected to the common conductor, an auxiliary conductor extending from the second named side of the battery to each station, a magnetically controlled indicator in the auxiliary conductor at the receiving station, a two-way switch at each transmitting station, said switch in one position being in the connection from the source of current to the respective circuit closer, and in the other position arranged to open such connections and connect the circuit closer to the auxiliary conductor.

1,102,952. ENGINE. GUSTAV PROCHAZKA, New York, N. Y., assignor of one-half to Frank Brodsky, New York, N. Y. Filed Aug. 8, 1913. Serial No. 783,705. (Cl. 123—8.)



1. In a rotary engine in combination, a stator; a rotor about the stator including means forming a motive fluid chamber of variable capacity intermediate said rotor and stator; and a turbine element within the stator communicating with said chamber.

2. In a rotary engine in combination, a stator; a rotor associated with said stator including means forming with said stator a motive fluid chamber; and a turbine element within the stator and adapted to communicate with said chamber intermittently.

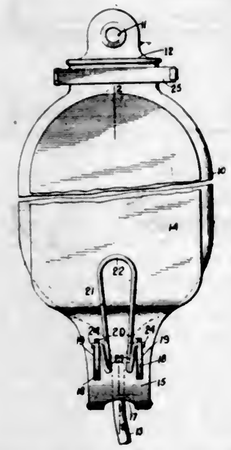
3. In a rotary engine, a rotary casing; a stator concentric with said casing, movable members intermediate said stator and casing and dividing the space therebetween into a series of chambers; a rotor intermediate said stator and casing engaging said movable members, said rotor dividing said chambers into cooling and working chambers, said working chambers being positioned intermediate the rotor and the stator; said rotor having an eccentric path of movement with respect to that of said stator and whereby the capacity of said chambers formed by the rotor with the stator and the casing is varied; a rotary turbine element within said stator, said stator having means establishing communication between said working chambers and said turbine element, when said chambers are at substantially minimum capacity; means for introducing motive fluid into the working chambers; means for exhausting the fluid from the turbine; gearing connecting the turbine element with the casing; and gearing, connecting the casing with the rotor.

4. In a rotary engine, a stator; a rotary casing about said stator including means for forming a chamber therebetween; a member associated with the casing and dividing said chamber into a cooling and working chamber, said rotary casing having means for guiding the movement of said member, whereby the capacity of said working and cooling chamber is varied; and a turbine element within said stator and adapted to communicate with said working chamber at predetermined intervals.

5. In a rotary engine, a stator; a rotary casing about said stator including means forming a constant chamber therebetween; a member within said chamber adapted to move in a predetermined curved path and dividing said constant chamber into a working and a cooling chamber of variable capacity, the working chamber being at the stator and a turbine element within said stator adapted to communicate with said working chamber when the same is at substantially minimum capacity.

[Claims 6 to 15 not printed in the Gazette.]

1,102,953. FOUNTAIN-SYRINGE PRESSURE-CLAMP. MILFORD J. RABAT, New York, N. Y. Filed Oct. 30, 1912. Serial No. 728,574. (Cl. 128—47.)



1. The combination of a flexible fountain syringe bag, containing a liquid, having a closed mouth and a controlled conveyer tube extending from end of bag, two facing plates having their lower ends constricted and hinged, engaging said bag, said constriction forming a resilient portion of said plates, and a cam co-acting with said resilient portion whereby the liquid in said bag is subjected to a predetermined pressure.

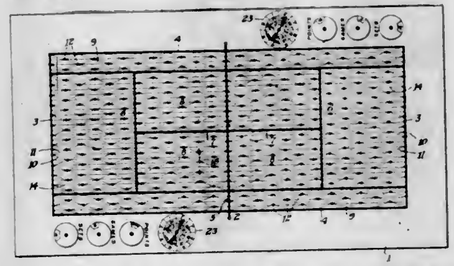
2. The combination of a flexible fountain syringe bag, containing a liquid, having a closed mouth and a controlled conveyer tube extending from end of bag, two facing plates having their lower ends constricted and hinged at the extremities of said constrictions and having an aperture common thereto, said plates engaging said bag, having said conveyer tube projecting through said aperture, said constriction forming a resilient portion of said plate, and a cam associated with said plates and co-acting with said resilient portions, whereby a predetermined pressure is produced by said plates on said bag.

3. In a fountain syringe, the combination with the flexible bag of two facing plates, constricted at their lower ends and hinged at the extremities of said constrictions, said plates engaging said bag, the constricted portions being resilient, one of said constricted portions having standards, said standards projecting out of the other of said constricted portions, and a cam pivoted in said standards and co-acting with said constricted portion whereby a pressure is produced by said plates on said bag.

4. In a fountain syringe, the combination with the flexible bag of two facing plates, constricted at their lower ends and hinged at the extremities of said constrictions, and having a central common aperture in said hinge, said plates engaging said bag, having its conveyer tube projecting through said aperture, said constricted portions being made to bulge outwardly, and one of said constricted portions being centrally provided on its inner surface with two standards, means in the other of said constricted portions for said standards to project through, and a resilient cam member positioned in the projecting end of said standards and adapted to revolve in said ends, said resilient cam member co-acting with said constricted portions, whereby the contact of said cam member with said portion produces a predetermined pressure by said plates on the said bag.

5. The combination of a flexible fountain syringe bag, containing a liquid, having an open mouth, closed by a convenient clamp or clip, and a controlled conveyer tube extending from the end of said bag, two facing plates, having constricted ends and hinged to each other, and having a common central aperture in said hinge, said plates engaging the bag, the conveyer tube projecting through said aperture, said constricted ends bulging outwardly and constituting a resilient portion of the plate, two standards positioned centrally on the inner surface of one of said constricted ends, means in the other of said constricted ends to allow the said standards to project through the same, said standards being offset toward the major part of said plates and provided thereby with bearings, a resilient cam member positioned in said bearings and rotating in same and co-acting with said bulging portions, whereby said plates may be made to engage or disengage the said bag and produce a pressure, when engaging same, on the contents to form a flow of a predetermined force.

1,102,954. GAME APPARATUS. HARRY W. RIES, Collingswood, N. J., and LANDY B. BROWN, Philadelphia, Pa. Filed Nov. 12, 1913. Serial No. 800,428. (Cl. 46—63.)



1. In a device of the character stated, a base having a representation of a tennis court thereon, said court having a plurality of intersecting lines or markings forming a plurality of points representing respective positions of a ball or player under certain conditions, a dummy object to represent a ball, dummy objects to represent players, and means to determine by chance the position of said ball and said players upon said court under a certain condition of play.

2. In a device of the character stated, a base having a representation of a tennis court, provided with a plurality of openings, said court having a plurality of lines or markings thereon intersecting the respective openings, a dummy object to represent a ball adapted to seat in any of said openings, dummy objects to represent players also adapted to seat in any of said openings, and means to determine by chance the particular opening in which said ball and player are adapted to seat under a certain condition of play.

3. In a device of the character stated, a base having a representation of a tennis court provided with a plurality of openings, said court having a plurality of lines or markings intersecting the respective openings, a dummy object to represent a ball adapted to seat in any of said openings, dummy objects to represent players also adapted to seat in any of said openings, a dial suitably sub-divided and provided with means for indicating the openings in which said ball and player are to seat under a certain condition of play, and means to select one of said dial sub-divisions to determine the play to be made.

4. In a device of the character stated, a base having a representation of a tennis court thereon, said court having a plurality of intersecting lines or markings forming a plurality of points representing respective positions of a ball or player under certain conditions, a dummy object to represent a ball, dummy objects to represent players, a dial suitably sub-divided and provided with means for indicating the point position which said ball and player are to assume under a certain condition of play, and means to select one of said dial sub-divisions to determine the play to be made.

5. In a device of the character stated, a base having a representation of a tennis court provided with a plurality of openings, said court having a plurality of lines or markings thereon intersecting the respective openings, a dummy object to represent a ball adapted to seat in any of said openings, dummy objects to represent players also adapted to seat in any of said openings, a dial suitably sub-divided and provided with means for indicating a particular opening in which said player is to seat under a certain condition of play, and means to select by chance one of said dial sub-divisions to determine the openings to be used.

[Claims 6 to 14 not printed in the Gazette.]

1,102,955. VENTILATOR-WINDOW. GEORGE B. ROBERTS, New York, N. Y., assignor of forty-nine one-hundredths to Mark T. Flanagan, North Tarrytown, N. Y. Filed Jan. 8, 1913. Serial No. 740,803. (Cl. 20—53.)

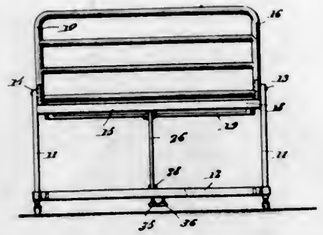


In a ventilating device of the character described, a movable sash, a sector-shaped plate having a bent-over end, a rack bar arranged on the inner face of said plate, and a catch carried by said sash, said catch being adapted to engage said rack for holding said sash in various adjusted positions in respect to said plate, said sash being formed with a saw cut to receive the bent-over end of said plate when the sash is at the limit of its movement with respect to said plate, said catch then serving to engage the bent-over end of said plate.

1,102,956. BEDSTEAD. EDWARD J. ROBISON, Chillicothe, Mo. Filed Sept. 9, 1913. Serial No. 788,860. (Cl. 5—12.)

1. In a bedstead, the combination with a frame, of head and foot sections independently mounted to swing on the frame, vertically movable rack members carried by the frame and having connection with the said head and foot sections to normally hold the same rigid relatively to the frame, and means for actuating the said vertically movable rack members to disengage the head and foot sections simultaneously or independently from locked engagement with the frame to permit of swinging and adjusting the head or foot sections relatively to the frame.

2. In a bedstead, the combination with a frame, of head and foot sections mounted to swing thereon and independently adjustable into various positions on the frame, a vertically movable rack member on the frame, one of the said rack members being provided for each of the said sections, means connecting the rack members with the sections, and means operable on the frame and having connection with the said rack members to actuate the same independently or simultaneously and unlock the head section, foot section or both the head and foot sections relatively to the frame to permit of adjusting the head and foot sections independently or simultaneously on the frame.



3. In a bedstead, the combination with a frame, of a centrally arranged member carried by the frame and constituting a track, a plurality of similar sections mounted to swing on the frame, slides mounted to operate over the said track, rack members movable in the track and normally engaging the said slides, a connection between the slides and the said sections for holding the sections in locked engagement with the frame when the said rack members engage the said slides, and means for moving the rack members out of engagement with the slides to unlock the said sections relatively to the said frame and permit of adjusting the same thereon.

4. In a bedstead, the combination with a frame, of a member on the frame and forming a track, a section mounted to swing on the frame, a slide mounted to operate over the track, a rack member movably supported in the track, a pawl carried by the slide and normally engaged by the rack member, a rod connecting the slide with the section, and means operable on the frame for moving the rack member out of engagement with the pawl of the slide to permit of adjusting the said section relatively to the said frame.

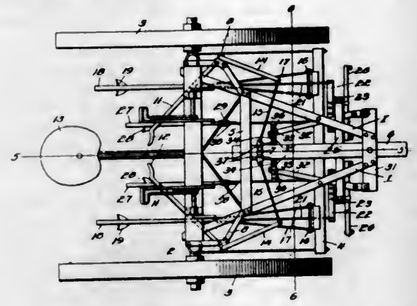
5. In a bedstead, the combination with a frame, of a member on the frame and forming a track, a section mounted to swing on the frame, a slide mounted to operate over the track, a rack member movably supported in the track, a pawl carried by the slide and normally engaged by the rack member, a rod connecting the slide with the section, and a pedal mounted to swing on the frame and having connection with the said rack member for moving the same out of engagement with the pawl of the slide to permit of adjusting the said section relatively to the said frame.

1,102,957. CULTIVATOR. CHARLES E. RODGERS, Shepherdsville, Ky. Filed Jan. 21, 1914. Serial No. 813,477. (Cl. 97—35.)

1. A cultivator comprising a wheel mounted frame, a tongue pivoted upon the frame for swinging movement transversely of the line of draft, shafts journaled upon the frame and provided at their lower ends with inwardly disposed arms, said shafts having at their upper ends forwardly disposed crank arms, means operatively connecting the crank arms with the tongue, cultivator beams located below the tongue, means pivotally connecting the beams with the frame, and means connecting the forward portions of the beams with the rear portion of the tongue to cause the said beams to move transversely of the line of draft simultaneously with the tongue.

2. A cultivator comprising a wheel mounted frame, a tongue pivoted on the frame for movement transversely

on the line of draft, draft means carried at the forward portion of the frame, inner cultivator beams pivotally connected with said draft means, shafts journaled at the side portions of the frame and provided at their lower ends with inwardly disposed arms and having at their upper ends forwardly disposed arms, beams operatively connecting the said forwardly disposed arms with the rear portion of the tongue, bars pivoted at their forward ends to the frame at the opposite sides of the tongue, means operatively connecting the rear portions of the said bars with the tongue, and means operatively connecting the intermediate portions of the bars with the forward end portions of the innermost beams.



3. A cultivator comprising a wheel mounted frame, a tongue pivoted upon the frame for swinging movement transversely of the line of draft, draft means carried at the forward portion of the frame, inner cultivator beams pivotally connected with said draft means, bars pivotally connected with the frame at the opposite sides of the tongue, a cross piece carried at the rear portion of the tongue and receiving the rear ends of the bars, means operatively connecting the intermediate portions of the said bars with the forward end portions of the innermost beams, and means mounted upon the frame for swinging the tongue.

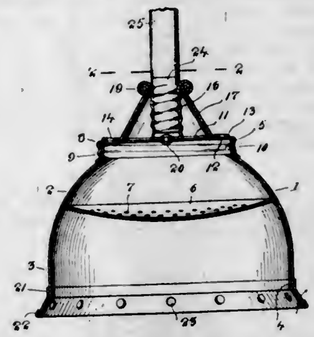
4. A cultivator comprising a wheel mounted frame, a tongue pivoted upon the frame for swinging movement transversely of the line of draft, draft means carried by the frame, inner cultivator beams pivotally connected at their forward ends with the draft means, means mounted upon the frame for swinging the tongue, bars pivotally connected at the forward portion of the frame at the opposite sides of the tongue and provided at their rear ends with slots, a cross piece attached to the tongue and receiving the slotted ends of the bars, pins passing transversely through the cross piece and the slots of the bars and means operatively connecting the intermediate portions of said bars with the forward end portions of the innermost beams.

5. A cultivator comprising a wheel mounted frame, a tongue pivoted upon the frame for swinging movement transversely of the line of draft, a cross piece carried at the rear portion of the tongue, bars pivotally mounted upon the frame at the opposite sides of the tongue and adjustably connected to the cross piece, means mounted upon the frame for swinging the tongue, draft means carried by the frame, inner cultivator beams pivotally connected at their forward ends with the draft means, and bars pivotally connecting the intermediate portions of the first mentioned bars with the forward portions of the innermost beams.

[Claim 6 not printed in the Gazette.]

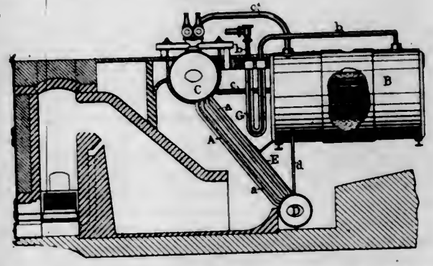
1,102,958. CLOTHES-WASHER. GEORGE P. ROGERS, Atlantic City, N. J. Filed Oct. 18, 1013. Serial No. 795,961. (Cl. 68—5.)

A clothes washer comprising a head open at its lower end and provided with an outwardly flared foraminous flange, a closure removably fitting the upper end of the head, said closure being provided with a plurality of perforations, and a valve mounted for rotation on the head



and having perforations alining with the perforations of the head on one adjustment of the valve.

1,102,959. STEAM-GENERATOR. FRANK PERCY RUDDER, Derby, England, assignor to George Fletcher and Company Limited, Litchurch, Derby, England. Filed June 1, 1912. Serial No. 700,996. (Cl. 122—190.)



1. In a steam generator, the combination with a furnace having a flue leading from the combustion chamber thereof, of a fire tube boiler unit having its tubes connected to receive the heated gases from said flue, a water tube boiler unit interposed between the fire tube boiler unit and said combustion chamber, the tubes of the water tube boiler unit extending transversely across said flue, and means for causing the heated gases in the flue to flow along the tubes of the water tube boiler unit and thence transversely between such tubes and for protecting the shell of the fire tube boiler unit.

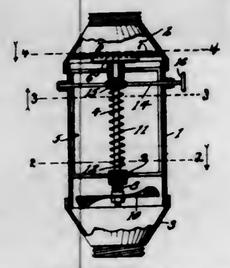
2. In a steam generator, the combination with a furnace having a flue leading from the combustion chamber thereof, of a fire tube boiler unit having its tubes communicating with said flue, an upright water tube boiler interposed between the fire tube boiler unit and said combustion chamber and having its tubes extending transversely across said flue, water circulating connections between the lower and upper portions of the water tube boiler unit and the fire tube boiler unit, and means for directing the gases along the tubes of the water tube boiler unit and thence transversely between said tubes and into the tubes of the fire tube boiler unit and for protecting the shell of the latter unit.

3. In a steam generator, the combination with a furnace having a flue leading from the combustion chamber thereof, of a fire tube boiler unit having its tubes communicating with said flue, an upright water tube boiler unit interposed between the fire tube boiler unit and said combustion chamber and having its tubes extending transversely across said flue, the water tube unit having upper and lower water circulating drums, water circulating connections between the upper and lower drums of the water tube boiler unit and the water space of the

fire tube boiler, a steam connection between the upper drum and the steam space of the fire tube boiler unit, and a steam outlet pipe leading from the fire tube boiler unit.

4. A steam generator comprising in its construction three separate units: an external furnace, a water tube unit with independent circulation, upon the tubes of which the hot gases first impinge, and a fire tube unit placed beyond the water tube unit, circulating pipes connecting the water space and the steam space thereof, and a steam superheater placed between the water tube unit and the fire tube unit.

1,102,960. GOVERNOR FOR EXPLOSIVE-ENGINES. JOHN L. SCHINDLER, Friend, Oreg. Filed Sept. 23, 1913. Serial No. 791,306. (Cl. 50—14.)



1. A governor for explosive engines comprising a casing, a valve in said casing, a fan governor normally inactive, a shaft connecting the valve with the governor, and means for imparting longitudinal movement to the shaft to cause seating of the valve upon rotation of the fan governor by excess pressure of suction through the casing.

2. A governor for explosive engines comprising a casing, a valve in said casing, a fan governor, a shaft connecting the valve with the governor, means for imparting longitudinal movement to the shaft to cause seating of the valve upon rotation of the fan governor by suction through the casing, and means for tensioning the shaft to control operation of the governor and maintain the same normally inactive.

3. A governor for explosive engines comprising a casing, a threaded shaft journaled in said casing, a valve at one end of said shaft, a seat for said valve, a rotary governor mounted on said shaft, and means coöperating with the threaded portion of the shaft whereby to impart longitudinal movement to the latter tending to seat the valve upon rotation of the governor.
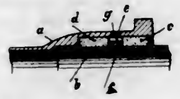
4. A governor for explosive engines comprising a casing, a shaft in said casing having a threaded portion adjacent one end, a valve on said shaft, a fan governor also mounted on said shaft, and a threaded journal for said shaft for coöperation with the threaded portion of the shaft whereby to impart longitudinal movement to the latter tending to seat the valve upon rotation of the governor.

5. A governor for explosive engines comprising a casing, a frame disposed in said casing, a shaft journaled in said frame and having a threaded portion coöperating with a correspondingly threaded journal, a valve carried by said shaft, and a rotary governor connected to said shaft for rotating the latter to thereby impart longitudinal movement to the shaft whereby to cause seating of the valve and closure of the passage through said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,102,961. PIPE-JOINT PACKING. LUDWIG SCHOMBURG, Gelsenkirchen, Germany, assignor to The Firm of Mannesmannröhren-Werke, Dusseldorf, Germany. Filed Oct. 24, 1912. Serial No. 727,614. (Cl. 137—28.)

1. A pipe joint having an outer and an inner absorbent packing, spaced apart in combination with a fluid between said packings, said fluid being of a character not only to maintain said packings moist and in good condition, but also to serve as a fluid packing, substantially as described.



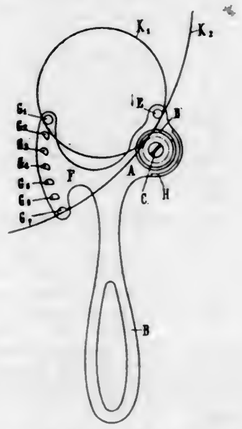
2. A pipe joint having an outer and an inner absorbent packing spaced apart in combination with a fluid under pressure between said packings, said fluid being of a character not only to maintain said packings moist and in good condition, but also to serve as a fluid packing, substantially as described.

3. A pipe joint comprising a bell end and a spigot end inserted therein, an inner and an outer absorbent packing arranged between said pipe ends and spaced longitudinally apart to form a testing chamber, in combination with a body of fluid between said packings, said fluid being of a character not only to maintain said packings moist and in good condition but also to serve as a fluid packing, substantially as described.

4. A pipe joint of the bell and spigot type, an inner and an outer absorbent packing arranged between said pipe ends and spaced longitudinally apart to form a testing chamber, said bell end being apertured in register with said chamber to admit a testing appliance, in combination with a body of fluid between said packings, said fluid being of a character not only to maintain said packings moist and in good condition but also to serve as a fluid packing, substantially as described.

5. A pipe joint having an inner and outer absorbent packing spaced apart to form a testing chamber, a port opening to this chamber for the reception of a testing appliance, in combination with a body of fluid between said packings, said fluid being of a character not only to maintain said packings moist and in good condition but also to serve as a fluid packing, substantially as described.

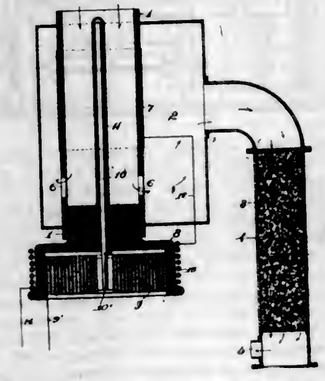
1,102,962. DEVICE FOR OPENING TINS. FERDINAND SCHÖNFELD, Zurich, Switzerland. Filed Apr. 25, 1913. Serial No. 763,529. (Cl. 30—3.)



1. An opener for cans having a beaded seam, comprising a cutter to engage the outer side of the can; a pin to engage the inner side of the bead adjacent the cutter; and a plurality of fixed tines one of which is adapted to engage the inner side of the bead, said tines being so arranged relative to the pin and cutter that circles of different diameters passing between said pin and the cutter will come within the innermost and outermost tines to adapt the opener to different sized cans.

2. An opener for cans having a beaded seam, comprising a handle having a pair of laterally projecting arms; a rotary cutter carried by one of the arms to engage the outer side of the can; a pin carried by said arm adjacent the cutter to engage the inner side of the bead; and a plurality of tines carried by the other arm one of which is adapted to engage the inner side of the bead, substantially as and for the purpose specified.

1,102,963. OZONE APPARATUS. JAMES E. SEELEY, Los Angeles, Cal., assignor to Vulcan Coil Co., Los Angeles, Cal., a Corporation of California. Filed Aug. 17, 1911, Serial No. 644,666. Renewed Nov. 28, 1913. Serial No. 803,601. (Cl. 204—32.)



1. In ozone apparatus, a resonator, a dielectric tube mounted thereon, and an axially-disposed metallic terminal within the dielectric tube connected up electrically with the resonator, and surrounded with a dielectric tube.

2. In ozone apparatus, a resonator, a dielectric tube mounted thereon, and provided with an exterior coating of metal, and an axially-disposed metallic terminal within the dielectric cylinder, electrically connected with said resonator.

3. In ozone apparatus, a resonator, a dielectric cylinder mounted thereon, with an exterior metallic coating of metal, and an axially-disposed metallic terminal within the dielectric cylinder, electrically connected with the resonator, and a dielectric coating around said inner metallic terminal.

1,102,964. EXPLOSIVE. OSWALD SILBERRAD, Buckhurst Hill, England. Original application filed June 3, 1912. Serial No. 702,242. Divided and this application filed Nov. 23, 1912. Serial No. 733,196. (Cl. 52—3.)

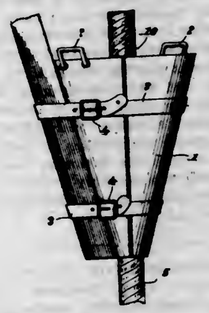
1. A plastic explosive containing as an ingredient a liquid nitro product consisting essentially of nitro-derivatives of methylated naphthalenes, as set forth.

2. A plastic explosive containing as an ingredient a liquid nitro product consisting essentially of dinitro derivatives of methylated naphthalenes, as set forth.

3. A plastic explosive containing the following ingredients, viz., liquid nitro derivatives of methylated naphthalenes, highly nitrated hydrocarbons of the benzene series, soluble nitro-cellulose, and oxygen bearing salts, as set forth.

1,102,965. ROPE OR CABLE LUBRICATOR. GEORGE D. SMITH, Bicknell, Ind. Filed Mar. 4, 1914. Serial No. 822,486. (Cl. 184—16.)

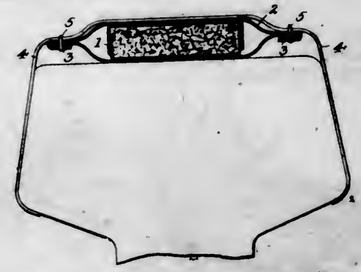
1. A rope or cable lubricator comprising a conical vessel provided with lubricating means therein, said vessel having at one side a longitudinally extending slot, whereby it is adapted to be applied by relative lateral motion to and from the cable, a member for slidable engagement with the vessel adapted to close said slot, and means for holding the vessel contracted to dispose the walls of the slot for engagement with said closure member, said means being adapted for securing the vessel to a suitable support.



2. A rope or cable lubricator comprising a conical vessel containing lubricating means and formed of a single piece of resilient material, said vessel being provided at one side thereof with a longitudinal slot and guideways at opposite sides thereof, a closure plate engageable with said guideways, and means for holding the vessel contracted and securing the same to a support.

3. A device for lubricating ropes or cables comprising a conical vessel provided with lubricating means therein, said vessel being formed in one of its sides with a longitudinally extending slot, said slot having rigid walls bent to form guide ways, a closure member adapted for sliding engagement with said guide ways and extending the length thereof to close said slot and means for securing the container to a support.

1,102,966. RAILWAY-TORPEDO. CLARA B. SNYDER, Fostoria, Ohio, assignor to American Fog Signal Company, Pittsburgh, Pa. Filed June 17, 1910. Serial No. 567,454. (Cl. 246—20.)



1. A railway signal torpedo comprising an inner case and an outer inclosing case, the ends of the outer case projecting considerably beyond the inner case, and a rail-engaging means attached to the said extending ends of the outer case.

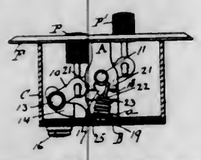
2. A railway signal torpedo comprising an inner case composed of fibrous material, an outer inclosing case composed of flexible fibrous material, the ends of the outer case projecting considerably beyond the inner case, and a rail-engaging means extending across the extended ends of the outer case, and means for closing the extended end of the outer case, and simultaneously securing the rail-engaging means thereto.

3. A railway signal torpedo comprising an inner case, composed of fibrous material, an outer inclosing case composed of flexible fibrous material, the ends of the outer case projecting considerably beyond the inner case, a rail-engaging strap extending across the projecting ends of the outer case, and means passing through the projecting ends of the outer case and through the rail-engaging strap, whereby the extended end of the outer case is closed, and the rail-engaging strap simultaneously secured thereto.

4. A railway signal torpedo comprising an inner case composed of fibrous material, an explosive compound within the said inner case, an outer inclosing case composed of flexible fibrous material, the ends of the outer case projecting considerably beyond the inner case, and terminating in abutting edges, the said abutting edges doubled, a rail-engaging strap passing across said doubled ends of the outer case, and means passing through the doubled edges of the outer case, and the rail-engaging strap, whereby the doubled end of the outer case is securely closed and the rail-engaging strap simultaneously attached thereto.

5. A railway torpedo, comprising an inclosing case, an explosive mixture within the inclosing case, the ends of said case projecting considerably beyond the explosive mixture and a rail-engaging means attached to the said extending ends of the case.

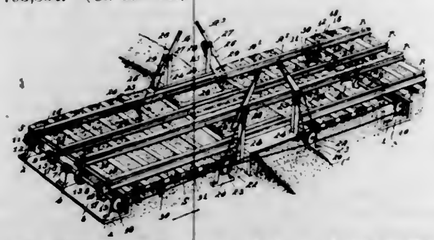
1,102,967. PUSH-BUTTON SWITCH. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 14, 1913. Serial No. 778,987. (Cl. 175—293.)



1. In a push button switch, a frame and a switch lever pivoted thereon, said switch lever having a jawed arm in combination with a rod having a jawed end to coöperate with said arm and a coiled spring on said rod and pressing the latter against the arm.

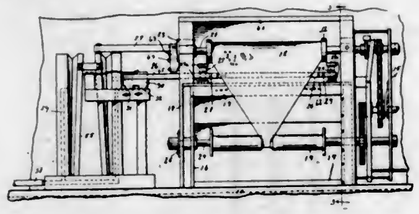
2. In a push button switch, a frame and a switch lever pivoted thereon, said switch having an arm in combination with a rod having a jawed end to coöperate with said arm, stops on the frame to coöperate with jaws on the rod, and a coiled spring to act upon the rod.

1,102,968. RAILWAY-CROSSING GATE. JOHN TÓTH, Phoenixville, Pa. Filed Oct. 7, 1913. Serial No. 793,834. (Cl. 39—35.)



The combination with two pairs of railway-crossing gates adapted to be disposed on opposite sides of a double-track road, each of said gates being adapted to move in unison with a corresponding gate located at the opposite side of the road, and means for opening and closing said gates by trains moving in either direction on each of said tracks, comprising a pair of continuous parallel shafts extending across both tracks, and supported in suitable bearings, a pair of posts at each side of the road, a sheave mounted on each of said posts, sheaves on the ends of said parallel shafts, ropes connecting the post sheaves with the sheaves on the parallel shafts, a pair of horizontal shafts at each side of the crossing, each of said shafts having mounted thereon two contact-devices adapted to be operated by a moving train, a sheave on the outer end of each of said horizontal shafts, a rope connecting said last-named sheave with the sheave on the parallel shaft located on the opposite side of the crossing, the said contact devices on each of said horizontal shafts being in angular relation to each other and so disposed that a train moving in one direction closes the gates at each side of the road, through one of said contact devices before reaching the crossing, and opens the same gates through the contact device on the opposite side of the crossing after passing the crossing.

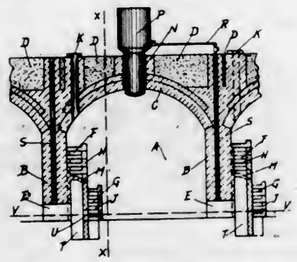
1,102,969. NOTE-SHEET CONTROLLER. MICHAEL VERSTRAELEN, Inglewood, Cal., assignor of one-half to John H. Burton, Oceanpark, Cal. Filed May 19, 1913. Serial No. 768,522. (Cl. 84—161.)



1. A note sheet controller for automatic players comprising a frame slidably mounted for endwise movement longitudinally of the tracker board; a music roll and a takeup roll revolubly mounted in said frame and movable therewith; pneumatically operated means for moving said frame endwise; and means operated and engaged and moved by the note sheet on leaving its correct position to set in action the frame moving means, said mechanism being adapted to stop the action of the frame moving means upon the return of the note sheet to its correct position.

2. A note sheet controller comprising a justifying bar; brackets secured thereto; a valve secured to and operated by said bar; primary pneumatics having channels controlled by said valve; secondary pneumatics having channels controlled by the primary pneumatics; rectifying bellows controlled by said secondary pneumatics; a movable case; a music roll and a takeup roll mounted in said case and movable therewith; and a connection from said case to said rectifying bellows.

1,102,970. DOUBLE-STAIR-GRATE CONTINUOUS KILN. ALOIS WILLIAM FRANCIS WEYERS, New Westminster, British Columbia, Canada. Filed Apr. 10, 1913. Serial No. 760,176. (Cl. 25—137.)



1. In a continuous kiln, a number of independent adjoining apartments with intervening walls between them, passages in said walls to connect said adjoining apartments with each other, openings in the roofs of said apartments for escape of fuel gases, pipes connecting said openings to a main flue, two sets of stair grates in staggered relation in each of said apartments and means for supplying fuel to said grates, all substantially as set forth

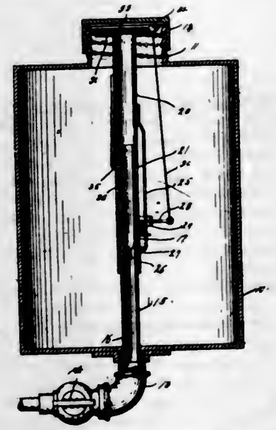
2. In a continuous kiln, a number of independent adjoining apartments with intervening walls between them, side flues connecting a series of said adjoining apartments with another series of adjoining apartments, a series of upper stair grates contained within each said independent adjoining apartments, a series of lower stair grates contained within each said independent adjoining apartment, said lower stair grates being adjacent to said upper stair grates, but separable therefrom and set in staggered relation thereto, feed openings for supplying fuel to said upper and lower stair grates, all substantially as set forth.

3. In a continuous kiln, independent adjoining apartments with intervening walls between them, upper and lower stair grates in staggered relation in each of said apartments, steps for said grates adapted to be detachably supported in step-receiving notches formed in the supporting walls of said grates, and means for supplying fuel to said steps, as and for the purpose specified.

4. In a continuous kiln, independent adjoining apartments with intervening walls between them, upper and lower stair grates in staggered relation in each of said apartments, steps for said grates adapted to be detachably supported in step-receiving notches formed in the supporting walls of said grates, means for preventing longitudinal displacement of said steps, and means for supplying fuel to said steps, as and for the purpose specified.

5. In a continuous kiln, independent adjoining apartments with intervening walls between them, upper and lower stair grates in staggered relation in each of said apartments, said grates having step-receiving notches formed in their supporting walls, steps for said grates adapted to be slidably engaged into the said notches, the said steps having their outer ends upwardly turned whereby the fuel may be prevented from spilling over the ends of the said steps, and means for supplying fuel to said steps, as and for the purpose specified.

1,102,971. RESERVE ATTACHMENT FOR FUEL-TANKS. WILLIAM W. WILLIAMS, Indianapolis, Ind., assignor of one-half to William P. Carpenter, Indianapolis, Ind. Filed Aug. 6, 1913. Serial No. 783,293. (Cl. 158—46.5.)



1. In combination, a liquid reservoir having a filling opening and a discharge outlet, a tube from which liquid from the tank is supplied to said discharge outlet, said tube communicating with the interior of the reservoir at two different levels, a tube telescoping with the first tube and movable to cover and uncover the opening at the lower level in the first tube, and means on the second tube for obstructing the filling opening when said second tube uncovers the opening at the lower level in the first tube.

2. In combination, a liquid reservoir having a filling opening and a discharge outlet, and means movable to obstruct or leave free said filling opening and in its movements varying the lowest level to which the discharge outlet may withdraw the liquid in said reservoir, said obstructing means having a concave upper surface and being perforated so that it serves as a strainer.

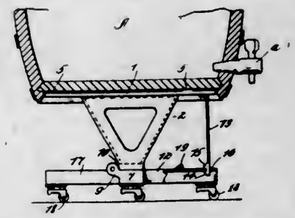
3. In combination, a liquid reservoir having a filling opening and a discharge outlet, a tube from which liquid from the tank is supplied to said discharge outlet, said tube communicating with the interior of the reservoir at two different levels, a tube telescoping with the first tube and movable to cover and uncover the opening at the lower level in the first tube, and means on the second tube for obstructing the filling opening when said second tube uncovers the opening at the lower level in the first tube, said obstructing means having a concave upper surface and being perforated so that it serves as a strainer.

4. In combination, a liquid reservoir having a filling opening and a discharge outlet, a tube from which liquid from the tank is supplied to said discharge outlet, said tube communicating with the interior of the reservoir at two different levels, a tube telescoping with and slidable freely longitudinally of the first tube and movable to cover and uncover the opening at the lower level in the first tube, and resilient means for preventing accidental displacement of said sliding tube when it is in position to uncover the opening at the lower level in the first tube.

5. In combination, a liquid reservoir having a filling opening and a discharge outlet, a tube from which liquid from the tank is supplied to said discharge outlet, said tube communicating with the interior of the reservoir at two different levels, a tube telescoping with and slidable freely longitudinally of the first tube and movable to cover and uncover the opening at the lower level in the first tube, and resilient means releasable by longitudinal pressure on the sliding tube for preventing accidental displacement of said sliding tube when it is in position to uncover the opening at the lower level in the first tube.

[Claims 6 and 7 not printed in the Gazette.]

1,102,972. BARREL-STAND. ROLLO E. WOODWORTH, Cleveland, Ohio. Filed Mar. 31, 1913. Serial No. 757,843. (Cl. 248—16.)



1. In a barrel or keg supporting stand, in combination, a supporting ring, a pair of side brackets secured thereto and terminating at their lower ends in bearing plates which have lugs, a cross-shaped base upon the transverse arms of which are adapted to normally rest the bearing plates and having lugs to which the aforesaid lugs are pivoted, and a spring member depending from the forward portion of the supporting ring and adapted to coöperate with the forwardly extending arm of the base to retain the parts in normal position.

2. In a barrel or keg supporting stand, in combination, a supporting ring, a pair of side brackets secured thereto and terminating at their lower ends in bearing plates which have lugs, a cross-shaped base upon the transverse arms of which are adapted to normally rest the bearing plates and having lugs to which the aforesaid lugs are pivoted, a spring member depending from the forward portion of the supporting ring and having a shoulder, said base having a lip which is adapted to be engaged by said shoulder, and an abutment upon the base spaced from said lip in the direction toward which the spring member tends to move for the purpose specified.

3. In a barrel or keg supporting stand, in combination, a supporting ring, a pair of side brackets secured thereto and formed at their lower ends with bearing surfaces substantially parallel to the plane of the ring, a cross-shaped base upon the transverse arms of which said bearing surfaces are adapted to normally rest, means pivotally con-

necting the adjacent portions of the base and the brackets, and a spring member depending from the supporting ring and adapted to coöperate with one of the longitudinal arms of the base to retain the ring in horizontal position.

1,102,973. LADY'S HOUSE-DRESS. MOSES ALSHULER, Waukegan, Ill.; Damon T. Alshuler, Clarence S. Alshuler, and Cora A. Rubovits executors of said Moses Alshuler, deceased. Filed Nov. 8, 1912. Serial No. 730,189. (Cl. 2—54.)



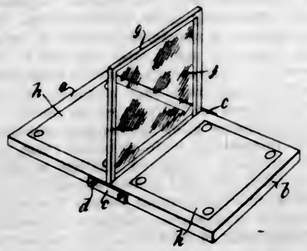
1. The herein described woman's house dress open in front from top to bottom, and having opposed front portions adapted to be lapped either over the other; a belt attached to the waist portion of the garment and exending from the outer edge of one front portion to the outer edge o' the other front portion, and having its end portions adapted to be lapped either over the other like the said front portions, a fastening device on each end of each lapping portion of the belt, a pair of fastening devices on the outer and inner sides of the garment attached to the belt adjacent the junction of each front portion with the body of the garment; the fastening device on the end of the inner lapped belt portion being adapted to engage the inner fastening device on the opposite outer lapped portion of the belt; and the fastening device on the end of the outer lapped belt portion being engaged with the outer fastening device on the inner lapped belt portion, substantially as described.

2. The herein described house drss having opposed front portions adapted to be lapped either over the other and provided with button holes near their outer ends adjacent the waist line of the garment, a pair of buttons on the outer and inner sides of the garment attached thereto adjacent the junction of each front portion with the body of the garment by means of threads passing through the garment and engaging the eyes of both buttons; either inner lapped front portion being adapted to be buttoned to the inner button on the opposite front portion, and the latter front portion being adapted to be buttoned to the ouer button on the inner lapped front portion, substantially as described.

1,102,974. DRAWING APPLIANCE. LEONORA BINKO, London, England. Filed July 1, 1912. Serial No. 706,992. (Cl. 88—1.)

1. In a drawing appliance, a base comprising two boards, a pair of fittings connecting said boards along opposite side edges leaving a space between the ends thereof, each of said fittings being provided with an angle portion extending inwardly beneath the space between said boards, and a sheet of glass fitting the space between said boards, and resting on the angle portions on said fittings.

2. In a drawing appliance, a base comprising two boards, pins projecting laterally from the side edges adjacent the proximal end of one of said boards, a pair of spring fittings secured at one end along the side edges of the other of said boards and provided with perforations at their outer ends for engaging said pins to connect the boards so as to leave a space between the ends thereof, angle portions extending inwardly from each of said fittings beneath the space between said boards, and a sheet of glass fitting the space between said boards and resting on said angle portions.



3. In a drawing appliance, a base comprising two boards, pins projecting laterally from the side edges adjacent the proximal end of one of said boards, a pair of spring fittings secured at one end along the side edges of the other of said boards and provided with perforations at their outer ends for engaging said pins to connect the boards so as to leave a space between the ends thereof and deflected free ends beyond the perforations for encountering said pins and moving said fittings into engagement therewith, angle portions extending inwardly from each of said fittings beneath the space between said boards, and a sheet of glass fitting the space between said boards and resting on said angle portions.

1,102,975. PRESS-BUTTON. JOSEPH BOREL and FRANÇOIS GRANGE, Annecy, France. Filed Mar. 16, 1912. Serial No. 684,217. (Cl. 24—218.)

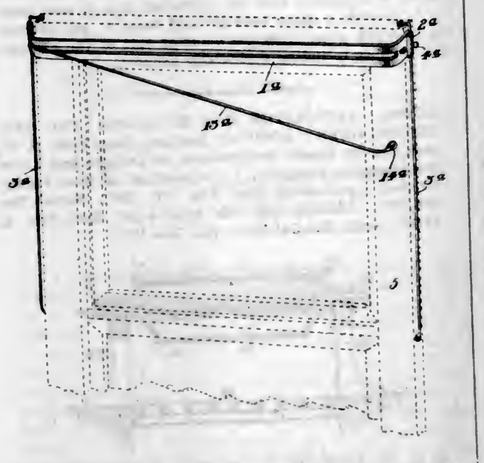


1. In a press button, a cap having a central recess surrounded by an annular recess, an undercut nipple having a conical crown and adapted to enter the central recess, a retaining eyelet adapted to be forced into the annular recess and to retain the central nipple, a socket adapted to contain a hand-operating spring, and having a cylindrical upper part adapted to enter the central nipple, to engage the conical crown thereof, and to be spread or flanged outwardly thereby, whereby said socket is securely fixed to the cap.

2. In a press button, a cap having a central recess surrounded by an annular recess, an undercut nipple having a conical crown and adapted to enter the central recess, a retaining eyelet adapted to be forced into the annular recess and to retain the central nipple, a socket provided with a slot and having a cylindrical upper part adapted to be spread outward and be secured within the central nipple by means of the conical crown thereof, a flange extending laterally from the lower edge of said socket, lugs on said flange, a spring having a U-bend, secured and retained on said flange by said lugs and protruding through the slot in the socket, a protruding finger piece on said spring, and said spring being so secured that when the finger piece is operated to withdraw the spring from the slot, the two arms of the U-bend are moved together.

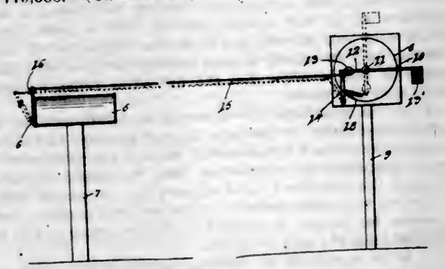
1,102,976. CURTAIN-FIXTURE. IDA E. CAPEHART, New Brighton, Pa. Filed Jan. 16, 1913. Serial No. 742,519. (Cl. 156—19.)

A curtain fixture comprising a supporting bar having each of its ends bent to extend inwardly, each of said ends provided with a vertically disposed integral sleeve, said bar further provided with a longitudinal slot extending from one of said inturned ends to the other, guide rods passing through said sleeve, a clamping rod having each of its ends inturned and having one of its inturned ends connected to the inner face of one of the inturned ends of said bar, said rod adapted to extend through said slot and



having its other inturned end connected to the outer face of the other inturned end of said bar whereby a curtain will be clamped to the bar, and means carried by said sleeves for holding said bar relatively to said guide rods.

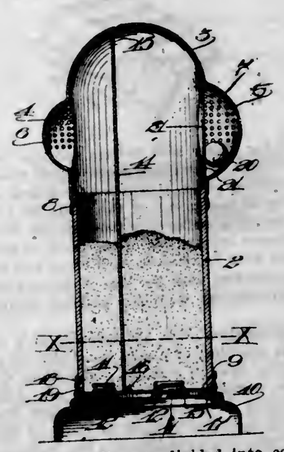
1,102,977. MAIL-BOX SIGNAL. GEORGE W. CARVER, Charleston, S. C. Filed July 17, 1913. Serial No. 779,588. (Cl. 232—35.)



1. The combination with a mail box having a swinging door, of a support spaced a considerable distance from said box, a signal arm pivotally secured intermediate its ends to said support, a weight secured to one end of said arm, whereby the latter is held normally in a vertical position, a trigger pivoted to said support to engage under the weighted end of the signal arm to hold said arm in a horizontal position, and a connection between said trigger and mail box door, whereby, when the door is opened, the trigger will be pulled from engagement with the weighted end of the signal arm.

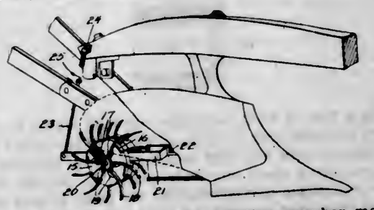
2. The combination with a mail box having a swinging door, of a support spaced from said box, a signal arm pivoted intermediate its ends to said support, a weight secured adjacent one end of the signal arm whereby the arm tends to assume a vertical position, a trigger pivoted at its lower end to said support and adapted to engage the weighted end of the swinging arm to hold said arm in a horizontal position, and a flexible connection secured at one end to the free end of the trigger and at its other end to the door of the mail box, the opening of said door withdrawing the trigger from engagement with the signal arm.

1,102,978. SALT AND PEPPER SHAKER. CHARLES A. CONGER, Oakland, Cal., assignor of one-half to John P. Clark, Alameda, Cal. Continuation of application Serial No. 634,207, filed June 20, 1911. This application filed Aug. 12, 1911. Serial No. 643,643. (Cl. 65—45.)



A container for condiments divided into compartments by a vertical partition and having substantially vertical side walls, an imperforate top, and semi-spherical protuberances upon the side walls, which protuberances are perforated in their upper portions but imperforate in their lower portions, and communicate respectively with the compartments of the container through openings in the side walls thereof.

1,102,979. TILLING-MACHINE. GEORGE W. CONNOR, Bear Wallow, N. C., assignor, by direct and mesne assignments, of one-half to A. H. Sims, Shelby, N. C., and one-half to R. P. Robinson, Forest City, N. C. Filed Feb. 25, 1914. Serial No. 820,975. (Cl. 97—62.)



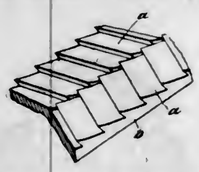
1. In a spading device, a supporting member mounted for rotation and having laterally extending circumferentially disposed spaced lugs, spading members pivoted on the supporting member and extending radially between the lugs, and springs whereby the spading members are forced forwardly into engagement with the lug in advance of each spading member.

2. A disk member supported for rotation and having laterally extending spaced lugs, spading members pivoted on the disk member, and means whereby each tooth is resiliently held in engagement with the lug in advance thereof.

3. A disk member supported for rotation and having opposite laterally extending lugs disposed in staggered relation, spading members pivoted on opposite sides of the disk and extending between the lugs, and means whereby each spading member is forced resiliently into engagement with the lug in advance thereof.

4. In a device of the class described, the combination with an axial member, of a spading unit supported thereon for rotation and consisting of a disk having circumferentially disposed laterally extending spaced lugs, spading members pivoted on the disk and extending between the lugs, and spring means engaging the spading members.

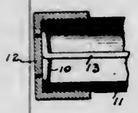
1,102,980. RASP FOR CLOVER-HULLERS AND THE LIKE. OVID CREPEAU, South Bend, Ind. Filed Dec. 13, 1913. Serial No. 806,464. (Cl. 130—2.)



1. A rasp for clover seed hullers and the like, embodying parallel rows of straight edged chisel shaped hulling teeth the working edges of which are oblique to the general direction of movement of the seed, the teeth of one row being reversely oblique to those of the adjacent row, and the adjacent extremities of the teeth of said rows being staggered with relation to each other and terminating in a plane coincident with the line of division between the rows and intersecting said line without overlapping the same.

2. The combination with the cylinder of a clover seed huller or like machine, of a rasp consisting of a strip embodying parallel rows of straight edged chisel shaped hulling teeth, the working edges of which are oblique to the general direction of movement of the seed, the teeth of one row being reversely oblique to those of the adjacent row, and the adjacent extremities of the teeth of said rows being staggered with relation to each other and terminating in a plane coincident with the line of division between the rows and intersecting said line without overlapping the same, said strip extending spirally of the cylinder and the intersection line of the teeth also extending spirally of the cylinder.

1,102,981. FUSE. ALBERT F. DAUM, Pittsburgh, Pa. Continuation in part of application Serial No. 702,599, filed June 8, 1912. This application filed Mar. 24, 1913. Serial No. 756,544. Renewed Feb. 24, 1914. Serial No. 820,662. (Cl. 175—273.)



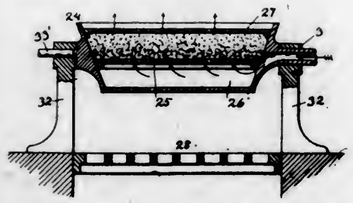
1. In a fuse, a shell, a member through which the fuse element extends, and an end cap adapted to contact with the element, said cap and member having opposing element-contacting faces relatively shaped to provide an increase of distance therebetween at the point of exit of the element from said member, whereby relative movement of the end cap and member to provide a wiping contact will be least effective to change the cross-sectional area and form of the element at such point of exit.

2. In a fuse, a shell, a member through which the fuse element extends, an end cap adapted to contact with the element, said cap and member having opposing element-contacting faces relatively shaped to provide an increase of distance therebetween at the point of exit of the element from said member, whereby relative movement of the end cap and member to provide a wiping contact will be least effective to change the cross-sectional area and form of the fuse element at such point of exit, said distance increase being gradual from a point approximating the periphery of the member.

3. In a fuse, a shell, a member having a substantially central opening through which the fuse element is adapted to extend, and an end cap adapted to contact with the fuse element, said member having a face depressed at the point of element exit, said end cap having its inner face shaped to coöperate with the depressed face of said member to provide a space between said faces at and decreasing in depth away from the point of exit of the element.

4. In a fuse, a shell, a member having a substantially central opening through which the fuse element is adapted to extend, and an end cap adapted to contact with the fuse element, said member having a face depressed at the point of element exit, said end cap having its inner face shaped to coöperate with the depressed face of said member to provide a space between said faces at and decreasing in depth away from the point of exit of the element, said member including a yieldable support.

1,102,982. APPARATUS FOR ROASTING AND SINTERING ORES. ARTHUR S. DWIGHT, New York, N. Y., assignor, by mesne assignments, to Dwight and Lloyd Metallurgical Company, a Corporation of New Jersey. Original application filed Apr. 17, 1907, Serial No. 368,675. Divided and this application filed Feb. 2, 1910. Serial No. 541,506. (Cl. 75—134.)



1. In an apparatus for roasting or sintering ore, a holder or receptacle for the ore, having an open top and a perforated support upon which the ore rests, said holder being supported so it may be tilted for discharging, in combination with a perforated restraining device flanged at its edges and arranged to rest upon the top of the ore mass in the holder, and means for causing air to pass upward through the perforated support of the holder and the ore supported thereon, substantially as described.

2. In an apparatus for sintering or agglomerating metalliferous ores, a receptacle for the ore having a bed pervious to air for holding the ore, and a passageway below said bed, whereby air or similar supporter of combustion may be caused to pass through said bed and passageway, and a sifter for the ore after being dumped from said receptacle.

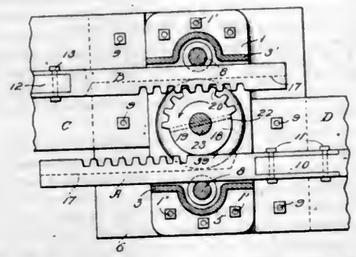
3. In an apparatus for sintering metalliferous ore, a receptacle for the ore having a support pervious to air for holding the ore and a passageway below the support whereby a supporter of combustion may be caused to pass through the passageway and support, the receptacle being invertible to permit dumping of the sintered product, and a screen for the ore in position to receive the ore as it is dumped from the said receptacle.

4. In an apparatus for forming relatively thin cakes of sintered ore from a mass initially containing a metal-bearing material and a combustible, the combination of a holder tiltable about a fixed axis of support and arranged to support a layer or stratum of the said mass, means for causing currents of air to pass transversely through the stratum, and means for positively restraining the ore particles from agitation at that surface of the stratum where the air escapes, the sinter cake being separated from the holder after it is thoroughly sintered by tilting the holder.

5. In an apparatus for forming relatively thin cakes of sintered ore from a mass initially containing a metal-bearing material and a combustible substance, the combination of a tiltable holder having inclosing sides, an open top, and a perforated partition, the said partition being disposed between an upper chamber adapted to hold a thin layer of the said ore mass, and a lower air or gas chamber, and serving to restrain the lower surface of the said mass which rests thereon, means connected with the said lower chamber for causing currents of air to pass transversely through the layer of the ore mass, and means for positively restraining the particles of the ore mass from agitation at its upper surface.

(Claim 6 not printed in the Gazette.)

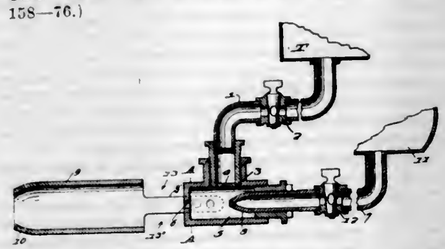
1,102,983. DUPLEX HAY-PRESS. WILLIAM Y. FREE, Carr, Fla., assignor of one-half to George F. Tucker, Blountstown, Fla. Filed June 29, 1912. Serial No. 706,747. (Cl. 100—7.)



1. In combination, a base plate having a centrally positioned bearing boss and an upstanding frame with a bearing in alinement with said boss, said frame having two oppositely positioned bearing boxes, a flanged bearing roller within each bearing box, a power shaft revolubly held within said boss and bearing, a segment gear secured to said shaft having a centrally positioned circumscribing outstanding flange, an active surface located between the end teeth of said gear, two oppositely positioned plunger heads, a rack bar secured to each plunger head each bar having a lengthwise running groove for co-action with said gear flange, said bars held upon the flanges of said bearing rollers, said active surface at times engaging said rack teeth, and springs to normally draw said rack bars in opposite directions.

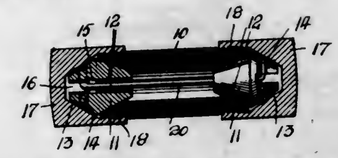
2. In combination, a base plate having a centrally positioned bearing boss and an upstanding frame with a bearing in alinement with said boss, said frame having two oppositely positioned bearing boxes a flanged bearing roller within each bearing box, a power shaft revolubly held within said boss and bearing, a segment gear secured to said shaft having a centrally positioned circumscribing outstanding flange, an active surface located between the end teeth of said gear, two oppositely positioned plunger heads, a rack bar secured to each plunger head each bearing having a lengthwise running groove for co-acting with said gear flange, said bars held upon the flanges of said bearing rollers, said active surface at times engaging said rack teeth, springs to normally draw said rack bars in opposite directions, and a sweep secured to said power shaft.

1,102,984. BLOWPIPE. FRANKLIN GLEICH, Alliance, Ohio. Filed July 18, 1913. Serial No. 779,849. (Cl. 158—76.)



A blow pipe comprising in combination, a mixing chamber having threaded openings therein for the insertion of oil and air supply tubes, and a reduced discharge orifice in one end thereof; an adjustable and regulated oil supply tube threaded into one of said openings, said tube having a closed end with small discharge orifices therein leading into said mixing chamber, a longitudinally adjustable and regulated air supply tube inserted into the other of said mixing chamber openings; and a flame directing device having a reduced nozzle end, and so constructed as to form an auxiliary air mixing chamber between said device and said mixing chamber, said device being attached to the front of the discharge orifice of said mixing chamber.

1,102,985. FUSE. PAUL E. GOLDMANN and ALBERT F. DAUM, Pittsburgh, Pa., assignors to A. F. Daum Company, Pittsburgh, Pa., composed of Albert F. Daum and E. A. Sesler. Filed Jan. 24, 1912. Serial No. 673,137. (Cl. 175—273.)



1. In a refillable fuse, a shell, a plug seated at an end of said shell, said plug having a tapered forward portion formed with an annular groove, a passage-way through said plug and leading laterally to afford passage for a fuse element therethrough into said groove, and a cap adapted to be secured directly to said shell and having an internal configuration to provide a wiping contact with the element when the latter is in position within the groove, the depth of the groove preventing severance of the element during its change in cross-sectional configuration provided by the wiping action.

2. In a refillable fuse, a shell of insulating material, a plug seated within the end of the shell, said plug having an axial passage-way leading therethrough and also provided with a radial recess leading inwardly from the forward end of the plug, said plug having an annular groove intersecting said recess in advance of its inner end, and a cap adapted to be secured directly to said shell and having a configuration to provide a wiping contact with a fuse element extending through said passage-way and into said groove, the depth of the groove preventing a severance of the element during its change in cross-sectional configuration provided by the wiping action.

3. In a refillable fuse a shell, a plug carried by said shell and having its forward end tapered, said plug having an axial passageway to accommodate a fusible element and also having a peripheral groove to receive said fuse element, and an end cap adapted to be secured directly to the shell and being formed to provide a wiping contact with the fuse element, the depth of said groove preventing severing of the fuse element during its change in cross-sectional configuration provided by the making of such contact.

4. A plug for fuse cartridges comprising a metallic member having an axial opening and having its inner end tapered inwardly, said tapered portion being slotted longitudinally.

5. A plug for fuse cartridges comprising a member having an axial opening and having its exterior tapered toward its ends in opposite directions, the inner tapered portion being slotted longitudinally, the outer tapered portion having a diametrical kerf intersecting the axial opening, and also having a peripheral groove intersecting the kerf.

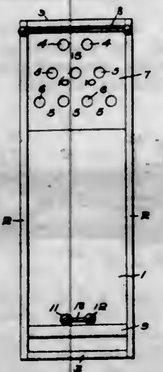
[Claim 6 not printed in the Gazette.]

1,102,986. GAME APPARATUS. JAMES A. HEALEY, Wakefield, Mass., assignor to Parker Brothers, Incorporated, Portland, Me., a Corporation of Maine. Filed Apr. 2, 1914. Serial No. 829,146. (Cl. 46—62.)

1. A game apparatus consisting of a base having a plurality of sockets or receptacles, and a plurality of connected units adapted to be propelled or projected thereinto.

2. A game apparatus consisting of a base having a plurality of sockets or receptacles, and a plurality of connected rolling units adapted to be propelled or projected thereinto.

3. A game apparatus consisting of a base having a plurality of sockets or receptacles, and a pair of substantially spherical, connected members adapted to be propelled or projected thereinto.

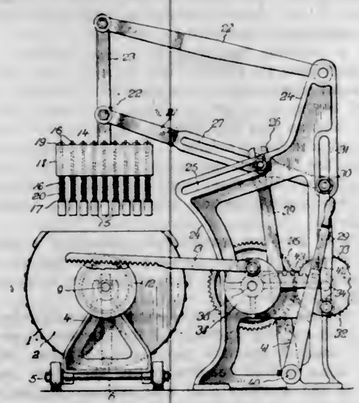


4. A game apparatus consisting of a base having a plurality of sockets or receptacles, and a pair of spaced or connected, substantially spherical members adapted to be propelled or projected thereinto.

5. A game apparatus consisting of a base having a plurality of receptacles or sockets and a pair of spherical members rigidly connected by a spacing bar and adapted to be propelled or projected into said sockets or receptacles.

[Claims 6 to 11 not printed in the Gazette.]

1,102,987. WASHING-MACHINE. JOHN V. KRANEBIEL, Williamsville, N. Y. Filed Nov. 18, 1912. Serial No. 731,931. (Cl. 68—19.)



1. In a washing machine, the combination of a tub, an agitator within the tub adapted to sweep the bottom thereof, a fixed frame independent of the tub, a beater adapted to enter said tub, means on the frame for supporting and actuating the beater, drive mechanism on the frame for actuating said means, and a member actuated by the driving mechanism adapted to be brought into driving relation with said agitator to actuate the same.

2. In a washing machine, the combination of a tub, an agitator in the tub adapted to sweep across the bottom thereof, a beater movable upwardly and downwardly in the tub, and means for actuating the beater and agitator in timed relation to each other.

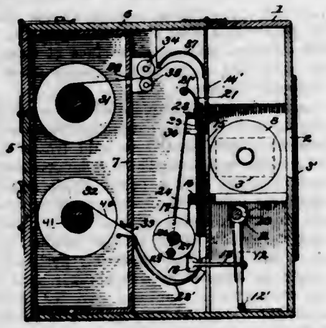
3. In a washing machine, the combination of a tub having an open top, a beater movable in the tub through the open top, a rocker member for actuating the beater, means for rocking said member, and a shiftable fulcrum for said rocker member to change the length of stroke of movement of the beater.

4. In a washing machine, the combination with a tub having an open top, of a beater adapted to be passed into the open top of the tub, a supporting frame, a rocker bar pivotally supported upon the frame, a vertical standard on the beater to which the rocker bar is pivotally attached at one end, a link bar extending substantially parallel to the rocker bar and pivotally attached at its ends to the standard and frame, and driving mechanism on the frame for actuating the rocker bar.

5. In a washing machine, the combination with a tub open at its top, of a beater reciprocable into and out of the tub, a vertical standard on the beater, a supporting frame having inclined bearing slots, a fulcrum shaft movable in the bearing slots, a rocker bar having a longitudinal slot through which the fulcrum shaft extends and pivotally attached at one end to the standard of the beater, means on the frame for actuating the rocker bar, and means for adjusting the fulcrum shaft in its bearing slots in the frame.

[Claims 6 to 11 not printed in the Gazette.]

1,102,988. MOVING-PICTURE MACHINE. JOHN E. LEONARD, Portland, Oreg. Filed Mar. 28, 1912. Serial No. 686,908. (Cl. 88—18.4.)



1. A moving picture machine comprising a lens, a film exposed to said lens, a shutter between the lens and film, a reciprocating member through which the film passes, a pitman for reciprocating said member and a film engaging member means for reciprocating the pitman carried by the pitman for clamping the film in the reciprocating member on its downward movement.

2. A moving picture machine comprising a lens, a film exposed to said lens, a shutter between the lens and film, a reciprocating member through which the film passes and having an elongated opening exposing the film, a pitman connected to the upper end of the reciprocating member and having an elongated opening to correspond to that of the said member, and a film engaging member carried by the pitman for engaging the film and locking it to the reciprocating member on its downward movement.

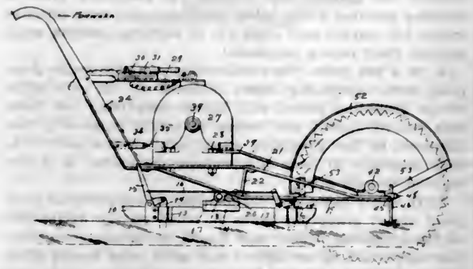
3. A moving picture machine comprising a lens, a film exposed to the lens, a shutter between the lens and the film, a reciprocating member, a pitman for reciprocating the member, means carried by the pitman for clamping the film to the reciprocating member on its downward movement, and means for operating said pitman.

4. A moving picture machine, comprising a reciprocating member having a film exposing opening therein, a pitman for reciprocating the said member, and means carried by the pitman for frictionally holding the film against the member on its downward movement.

5. A moving picture machine comprising a reciprocating member having a film exposing opening, a pitman connected to the upper end of the reciprocating member and having an opening corresponding to the said opening in the reciprocating member, means for imparting a reciprocating and oscillating movement to the pitman, and means carried by the pitman for engaging the film and frictionally holding it to the reciprocating member on its downward movement.

[Claims 6 to 16 not printed in the Gazette.]

1,102,989. ICE-CUTTING MACHINE. LUNA M. MACY, Adel, Iowa. Filed June 20, 1907. Serial No. 379,887. (Cl. 62—8.)



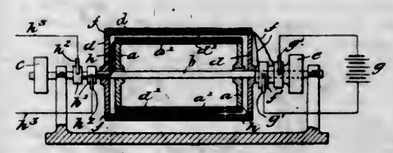
1. In an ice cutting machine the combination of a pair of spaced runners, a frame pivotally mounted upon said runners, said frame comprising a pair of side members having substantially a parallelogram configuration, bearings carried by the rearward end of the side members, a saw operatively mounted within said bearings, transverse bars for connecting the side members and handle bars carried by the front end of the side members for the purpose specified.

2. In an ice cutting machine, the combination with the pair of spaced runners, of a frame pivotally mounted upon said runners, said frame comprising a pair of side members and cross bars rigidly connecting the side members, said side members each consisting of upper and lower parallel bars, the opposite ends of said bars being bent diagonally and connected adjacent their extremities to the opposite bar, a diagonal bar connecting the upper and lower bars of each side member, a pair of bearings mounted upon the diagonal portions of the lower bars and adjacent the lower ends of said diagonal portions, a shaft carried by the runners and extending through said bearings to form a pivot connection between the runners and the frame, a pair of bearings carried by the rear ends of said side members, a saw operatively mounted within said bearings and handle bars secured within the front extremities and the upper and lower bars of the side members substantially for the purpose specified.

3. In an ice cutting machine the combination with a pair of runners, a saw operatively mounted upon said runners, of a pair of spaced brackets carried by the outer face of each runner, a vertical bar slidably mounted within each bracket, a bell crank pivotally mounted upon each bracket, means for pivotally connecting the upper end of the vertical bars with the said bell cranks and a bar connecting the bell cranks on each runner for the purpose specified.

4. In an ice cutting machine the combination with a pair of spaced runners, of a frame, said frame comprising side members and cross bars rigidly connecting the side members, said side members each consisting of an upper and lower bar being connected adjacent their reaward ends, means for pivotally mounting the lower bars upon the said runners, the upper bars each having a pair of elongated slots formed therein adjacent their front ends, means adjustably mounted within said slots for connecting a motor, means for adjustably connecting the rearward end of the side members with the motor, means for adjustably connecting the front end of the frame with the motor and a saw operatively mounted upon the rearward end of the frame substantially for the purpose specified.

1,102,990. MEANS FOR GENERATING ALTERNATING ELECTRIC CURRENTS. GUGLIELMO MARCONI, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Jan. 27, 1914. Serial No. 814,666. (Cl. 171—252.)



1. In a high frequency electric alternator, the combination of a cylinder, equally spaced inwardly projecting ridges formed on its interior surface along generating lines, a winding comprising a number of parallel wires lying between the ridges, a second cylinder mounted within and coaxially with the first cylinder, equally spaced inwardly projecting ridges formed upon the second cylinder along generating lines, a second winding comprising a number of parallel wires lying between the ridges of the second cylinder, one of said windings being adapted to be excited by a direct current, and the other of said windings having terminals adapted to be connected to an external circuit, and means whereby one of the cylinders may be rotated.

2. In a high frequency electric alternator, the combination of a cylinder, equally spaced projecting ridges formed on its interior surface along generating lines, a winding comprising a number of parallel wires lying between the ridges, a second cylinder, mounted within and coaxially with the first cylinder, equally spaced inwardly projecting ridges formed on the interior surface of the second cylinder along generating lines, a second winding comprising a number of parallel wires lying between the ridges of the second cylinder, one of said windings being adapted to be excited by a direct current, and the other of said windings having terminals adapted to be connected to an external circuit, and means whereby the two cylinders may be rotated in opposite directions.

3. In a high frequency electric alternator, the combination of a cylinder, equally spaced projecting ridges formed on its interior surface along generating lines, a winding comprising a number of parallel wires lying between the ridges, a second cylinder, mounted within and coaxially with the first cylinder, equally spaced inwardly projecting ridges formed on the interior surface of the second cylinder along generating lines and equal in number to those of the first cylinder, a second winding comprising a number of parallel wires lying between the ridges of the second cylinder, one of said windings being adapted to be excited by a direct current, and the other of said windings having terminals adapted to be connected to an external circuit, and means whereby the two cylinders may be rotated in opposite directions.

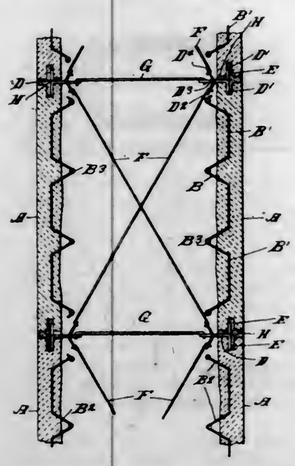
1,102,991. CONCRETE CONSTRUCTION. JOSEPH H. MCKENNEE, New York, N. Y. Filed June 5, 1912. Serial No. 701,734. (Cl. 72—44.)

1. A building block formed of molded material, continuous substantially parallel wire strands embedded therein, said strands being formed with a plurality of loops projecting from the exterior surface of the material, and transverse strands disposed at the exterior of the blocks and connecting the projecting loops of the adjacent embedded strands.

2. A wall comprising spaced blocks formed of molded material, continuous substantially parallel wire strands embedded in the blocks said strands being formed with a plurality of loops projecting from the exterior of the blocks and rods connecting the projecting loops of the adjacent embedded strands.

3. A wall comprising blocks of molded material spaced apart from each other, each of which is provided with substantially continuous wire strands embedded therein.

portions of which extend beyond one face side thereof, and wires connecting said portions of adjacent strands forming a network, each of the blocks being provided with a recess in its edge portions, tie clips held in said recesses, and tie rods connecting said clips.

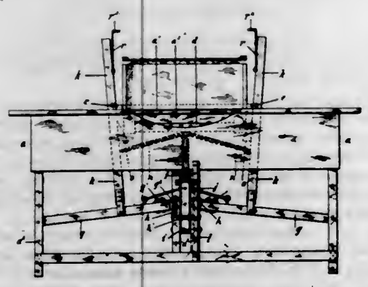


4. A wall comprising blocks of molded material spaced apart from each other, each of which is provided with substantially continuous wire strands embedded therein, portions of which extend beyond one side thereof, wires connecting said portions of adjacent strands forming a network, each of the blocks being provided with a recess in its edge portions, tie clips held in said recesses, tie rods connecting said clips, and a concrete filling material located between said blocks and engaging with said wire strands.

5. A wall comprising spaced sets of blocks, tie plates connecting said blocks, said plates having projecting portions extending into recesses formed in adjacent edges of the blocks and a plurality of outwardly extending projections, horizontal tie wires connecting the directly opposite plates by engagement with their projections, and diagonal upstanding wires connecting the diagonally opposite plates, and a plastic filling material between the blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,102,992. BOX-NAILING PRESS. WILLIS G. SNOW, Hood River, Oreg. Filed Oct. 1, 1913. Serial No. 792,910. (Cl. 100—57.)



1. In a box press, the combination of reciprocable grappling arms also adapted for being moved laterally; manually operated means for operating said arms; means for placing and holding the grappling arms in working position while being operated; and cam actuated means for moving said arms out of working position while making their return movement.

2. In a box press, the combination of reciprocable grappling arms also adapted for being moved laterally; a treadle and connections for operating said arms; means for placing and holding the grappling arms in working position while being operated; and cam actuated means for moving said arms out of working position while making their return movement.

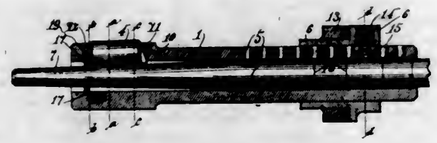
3. In a box press, the combination of reciprocable grappling arms also adapted for being moved laterally; a treadle and connections for operating said arms; a spring element for placing and holding the grappling arms in working position while being operated; and cam actuated means for moving said arms out of working position while making their return movement.

4. In a box press, the combination of reciprocable grappling arms; grappling hands fastened on the extremities of the grappling arms; said hands comprising two members spaced apart; and means pivotally connecting said members to the grappling arms, said means permitting said members to have independent movement in a line parallel to said arms.

5. In a box press, the combination of reciprocable grappling arms; grappling hands fastened on the extremities of the grappling arms; said hands comprising two members located on either side of said arms; and means pivotally connecting said members to the grappling arms, said means permitting said members to have independent movement in a line parallel to said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,102,993. TUBE-EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed Nov. 13, 1913. Serial No. 800,872. (Cl. 153—82.)

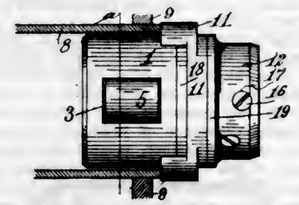


1. A tube expander, comprising an elongated cylindrical body terminating at one end in a head provided with the necessary roller apertures, the rearward end walls of said apertures being tapered outwardly and having inwardly lying shoulders extending therefrom, a series of expanding rollers confined within said apertures, the rearward ends of which lie between said shoulders and the outer longitudinal edges of the apertures, a pin extending from one end of each of said rollers, and means in the head in a position to be engaged by said pins and supporting the outer ends of said rollers.

2. A tube expander, comprising a cylindrical body terminating at one end in a head provided with roller openings, the rearward walls of said openings being tapered and the rearward sides having shoulders extending inwardly therefrom, a series of expanding rollers within the openings in said head, an axial pin extending from one end of each of said rollers, said head being provided with pockets at the ends of said openings to receive said pins, and means in said head in a position to be engaged by said pins and supporting the outer ends of said rollers.

3. A tube expander, comprising a cylindrical body terminating at one end in a head provided with roller openings, the rearward walls of said openings being tapered and the rearward sides of said openings having shoulders extending inwardly therefrom, a series of expanding rollers mounted therein, an axial pin extending from one end of each of said rollers, said head being provided with pockets at the ends of said openings to receive said pins, and a resilient ring mounted in said head in a position to be engaged by said pins and adapted to support the outer ends of said rollers.

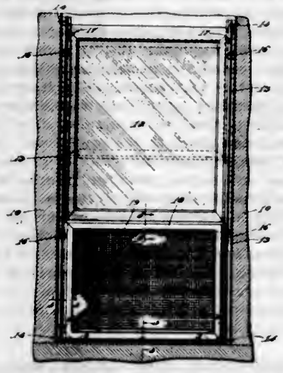
1,102,994. TUBE-EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed Jan. 10, 1914. Serial No. 811,297. (Cl. 153—82.)



1. In a device of the type specified, a cage having a mandrel opening and roller openings, rollers mounted in said roller openings, a mandrel mounted in said mandrel opening, an annular projection extending from said cage, a reversible sleeve adjustably mounted on said projection, means for securing said sleeve to said projection, a double faced guard mounted on said sleeve, and thrust-collars mounted on said sleeve and between which the guard is mounted.

2. In a device of the type specified, a cage having a mandrel opening and roller openings, rollers mounted in said roller openings, a mandrel mounted in said mandrel opening, an annular projection extending from said cage, a reversible sleeve adjustably mounted on said projection, means for securing said sleeve to said projection, a double faced guard mounted on said sleeve, and thrust-collars integral with and mounted on said sleeve and between which the guard is mounted.

1,102,995. WINDOW-SCREEN. FREDERICK AHLSTROM and JOSEPH F. OELERICH, Chicago, Ill. Filed Sept. 29, 1913. Serial No. 792,316. (Cl. 156—14.)



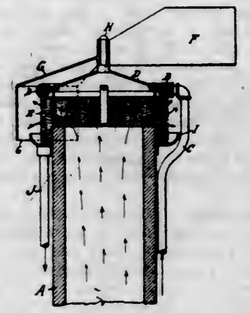
1. A device of the kind described comprising a screen frame made up of sheet metal sections secured together at adjacent ends, said sections being bent to substantially rectangular form in cross section with their edge portions overlapped at the inner side of the frame; and a screen fabric stretched across said frame with its edge portions held between said overlapping edge portions, the edge portions of said screen fabric being rebent to prevent slipping in the frame, substantially as described.

2. A device of the kind described comprising two angular sections of sheet metal secured together at adjacent ends forming a rectangular frame, said sections being substantially rectangular in cross section with their longitudinal edges overlapped; and a screen fabric in said frame with its edge portions between said overlapping edges, the edge portions of said screen fabric being rebent and such rebent portions soldered together, substantially as described.

3. A device of the kind described comprising a screen frame formed of sheet metal sections secured together, the lateral edges of each section being overlapped; and a screen fabric in said frame with its edge portions between the overlapping edges of said frame sections, the edge portions of said screen fabric being rebent and soldered thereby locking them between said overlapping edges of the frame sections, substantially as described.

4. A device of the kind described comprising two angular sections of sheet metal secured together at adjacent ends forming a rectangular frame, said sections being substantially rectangular in cross section with their longitudinal edges overlapped; a screen fabric in said frame with its edge portions held between said overlapping edges, the edges of said screen fabric being rebent and soldered to prevent slipping in said overlapping portions of the frame; and screws threaded through said overlapping edges and screen fabric, substantially as described.

1,102,996. SMOKE-WASHER. LEOPOLD BOTTENSTEIN, Albany, N. Y. Filed Feb. 9, 1914. Serial No. 817,432. (Cl. 110—147.)



1. In a device for washing the soot and dirt from smoke, a spray pipe above the top of a chimney, a cover over said chimney, a weather-vane located at the top of said chimney, a shield attached to said weather-vane which shield is adapted to protect the spray from the force of the wind.

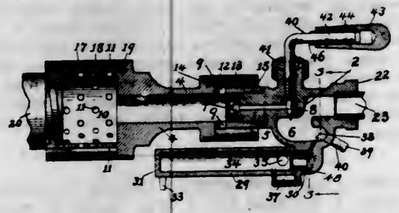
2. In a device for washing the soot and dirt from smoke, a spray pipe above the top of a chimney, a cover over said chimney, a weather-vane located at the top of said chimney, a shield attached to said weather-vane which shield is adapted to protect the spray from the force of the wind, a water pipe to conduct water to said spray and a waste pipe to conduct the same away.

3. In a device for washing the soot and dirt from smoke, a spray pipe above the top of a chimney, a cover over said chimney, a weather-vane located at the top of said chimney, a shield attached to said weather-vane which shield is adapted to protect the spray from the force of the wind, a water pipe to conduct water to said spray pipe, a gutter to collect the water from said spray, a waste pipe to conduct the same away, a slide on the outside of said spray pipe whereby the size of the openings in said pipe may be partially closed, substantially as described for the purposes set forth.

1,102,997. SELF-HEATING SOLDERING-IRON. GEORGE J. CLAUTICE, Baltimore, Md., assignor to Lyon, Conklin & Company, Baltimore, Md., a Corporation of Delaware. Filed June 30, 1913. Serial No. 776,489. (Cl. 158—27.)

1. The combination in a self-heated soldering iron of a valve-case having in its lowermost part a screw-threaded socket; a gas-discharge nozzle; an air-and-gas mixing tube one end of which covers the said nozzle; and a heater tube parallel with and below the said nozzle and mixing tube and provided along its length with jet-flame holes and having an open screw-neck which is coupled into said screw-threaded socket.

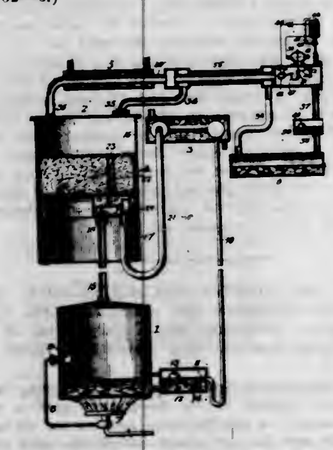
2. The combination in a self-heated soldering iron of an air and gas mixing tube, 4; a gas-discharge nozzle connected with one end of said tube; a valve-case connected to said gas-discharge nozzle and provided at its lower part with a socket that opens at the side—said three parts being in horizontal alinement; a horizontal heater-tube below the said three parts and having a screw threaded neck, 30, coupling into said socket and said tube provided with feet, 33.



3. The combination in a self-heated soldering iron of an air-and-gas mixing tube; a gas-discharge nozzle; a valve-case having a downward extending portion provided at its side with a socket-opening, 48; a heater tube having one end entered into said socket-opening and the body of the tube extending horizontally, and a segment-shaped cup having one of its sides attached to said downward portion of the valve-case and the other side of the cup projecting laterally and forward of said socket with its concave edge upward and contacting with the heater tube and serving to brace and sustain the latter.

4. The combination in a self-heated soldering iron of an air-and-gas mixing tube; a gas-discharge nozzle; a heater tube to preliminarily heat said parts; a valve-case provided with a gas-passage leading to the gas-discharge nozzle, and a fluid-passage leading to the heater tube; a valve in said case to control the flow of gas, and a second valve in the same case to control the flow of the liquid; and a tubular-shaped handle of non-heat conducting material to engage the stems of either of said valves and open or close same.

1,102,998. REFRIGERATING APPARATUS. CLYDE J. COLEMAN, New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation, a Corporation of Virginia. Filed Oct. 22, 1901, Serial No. 79,502. Renewed July 26, 1913. Serial No. 781,381. (Cl. 62—6.)



1. A refrigerating system comprising a condenser, a cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber and in a closed cycle and for establishing difference of pressure between the condenser and cooling chamber, pressure actuated means exposed to the pressure of the condenser and temperature actuated means exposed to the temperature of the condenser, and means for the removal of uncondensable gases from the system controlled by the coaction of such devices.

2. A refrigerating system, comprising a condenser having a chamber at the exit end thereof, a cooling chamber, a conduit from the exit chamber of the condenser to the cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber and for establishing difference of pressure between the condenser and cooling chamber, means connected with the exit chamber of the condenser for the removal of uncondensed gases automatically operable on the attainment of a predetermined pressure and electrically operable supplemental actuating means therefor, and temperature operative means and pressure operative means adapted to coact with each other to control the electrically operable means.

3. A refrigerating system, comprising a condenser having a chamber at the exit end thereof, a cooling chamber, a conduit from the exit chamber of the condenser to the cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber and for establishing difference of pressure between the condenser and cooling chamber, means connected with the exit chamber of the condenser for the removal of uncondensed gases automatically operable on the attainment of a predetermined pressure and electrically operable supplemental actuating means therefor, and temperature operative means and pressure operative means adapted to coact with each other to control the electrically operable means.

4. A refrigerating system comprising a condenser, a cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber and in a closed cycle and for establishing difference of pressure between the condenser and cooling chamber, pressure actuated means exposed to the pressure of the condenser and temperature actuated means exposed to the temperature of the condenser near the exit end thereof, and means for the removal of uncondensable gases from the system controlled by the coaction of such devices.

5. In a refrigerating apparatus, in combination, a condenser, a cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber and establishing a difference of pressure between the condenser and cooling chamber, a pressure actuated device exposed to the pressure of the condenser, a thermostat exposed to the temperature of the condenser, circuit closing means controlled by such devices for closing an electric circuit by the relative movements thereof, and electrically operated means for the removal of gases from the condenser controlled by such circuit.

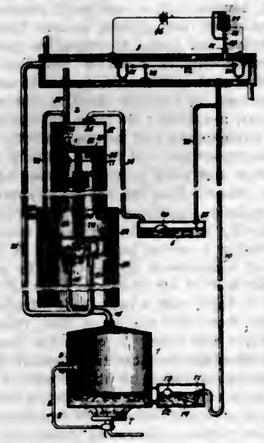
[Claims 6 to 8 not printed in the Gazette.]

1,102,999. REFRIGERATING APPARATUS. CLYDE J. COLEMAN, New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation, a Corporation of Virginia. Filed Nov. 14, 1901, Serial No. 82,172. Renewed July 26, 1913. Serial No. 781,382. (Cl. 62—6.)

1. A refrigerating apparatus comprising a condenser, a cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber, and two temperature controlled devices exposed to the temperatures of different parts of the condenser, and means for the removal of foreign gases from the apparatus controlled by the coaction of the two temperature controlled devices.

2. A refrigerating apparatus having a condenser for the refrigerant medium, in combination with a plurality of temperature controlled devices exposed to the temperatures of different parts of the condenser, and means for the removal of foreign gases from the apparatus controlled by the coaction of the temperature controlled devices.

3. A refrigerating apparatus having a condenser for the refrigerant medium, in combination with a temperature-controlled device located in proximity to the exit end of the condenser, temperature-controlled means located in the condenser at a distance from the exit end thereof and adapted to coöperate with the temperature-controlled device, and means for the removal of foreign gases from the apparatus controlled by the coaction of the temperature-controlled device and its coöperating means.



4. A refrigerating apparatus comprising a condenser, a cooling chamber, means for circulating a refrigerant medium through the condenser and cooling chamber, a temperature-controlled device located in the condenser out of the path of the refrigerant medium circulated therein, temperature-controlled means located in the condenser at a distance from the exit end thereof and adapted to coöperate with the temperature-controlled device, and means for the removal of foreign gases from the apparatus controlled by the coaction of the temperature-controlled device and its coöperating means.

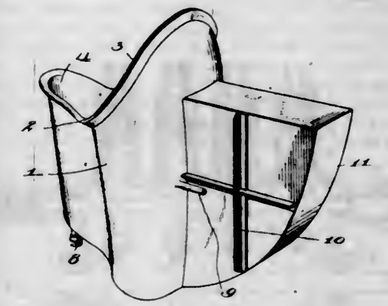
5. A closed cycle refrigerating apparatus having a condenser for the refrigerant medium, a temperature-controlled device exposed to the temperature of the condenser in proximity to the exit end thereof, another temperature-controlled device exposed to the temperature of the condenser in advance of the exit end thereof, and means for the removal of foreign gases from the apparatus controlled by the coaction of the two temperature-controlled devices.

[Claims 6 to 13 not printed in the Gazette.]

1,103,000. THERAPEUTIC APPARATUS. THOMAS J. FARRELL, Nadeau, Kans., assignor to Albert Constable, trustee, Elkton, Md. Filed May 20, 1913. Serial No. 768,848. (Cl. 128—9.)

1. In an apparatus of the character described, an upright water containing receptacle having an open upper end shaped to conformably and uniformly fit the body adjacent the male genitalia and proportioned to receive both the scrotal sack and the penis, the said upper end having a relatively narrow rearwardly direction portion which fits between the thighs and extends toward the rectum and incloses the sectual tract, the receptacle having a forwardly projecting relatively narrow centrally located vertical extension in open communication therewith and proportioned to receive and guide the penis, the extension communicating with the receptacle below the upper edge of the latter and being closed except for its communication with said receptacle, the receptacle also having a suitably located nipple to provide for the connection of said receptacle to a vacuum apparatus.

2. In an apparatus of the character described, an upright water containing receptacle having an open upper end shaped to conformably and uniformly fit the body adjacent the male genitalia and proportioned to receive both the scrotal sack and the penis, the said upper end having a relatively narrow rearwardly directed portion which fits between the thighs and extends toward the rectum and incloses the sexual tract, the receptacle having a forwardly projecting relatively narrow centrally located vertical extension in open communication therewith and proportioned to receive and guide the penis, the extension communicating with the receptacle below the upper edge of the latter and being closed except for its communication with said receptacle, the receptacle also having an electrode receiving nipple suitably located in its lower portion.



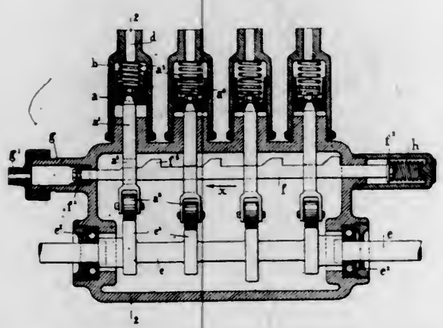
3. In an apparatus of the character described, an upright water containing receptacle having an open upper end shaped to conformably and uniformly fit the body adjacent the male genitalia and proportioned to receive both the scrotal sack and the penis, the said upper end having a relatively narrow rearwardly directed portion which fits between the thighs and extends toward the rectum and incloses the sexual tract, the receptacle having a forwardly projecting relatively narrow centrally located vertical extension in open communication therewith and proportioned to receive and guide the penis, the extension communicating with the receptacle below the upper edge of the latter and being closed except for its communication with said receptacle, the front wall of the extension having a downward and inward curvature and merging regularly into the bottom wall of the receptacle.

4. In an apparatus of the character described, an upright water containing receptacle having an open upper end shaped to conformably and uniformly fit the body adjacent the male genitalia and proportioned to receive both the scrotal sack and the penis, the said upper end having a relatively narrow rearwardly directed portion which fits between the thighs and extends toward the rectum and incloses the sexual tract, the receptacle having a forwardly projecting relatively narrow centrally located vertical extension in open communication therewith and proportioned to receive and guide the penis, the extension communicating with the receptacle below the upper edge of the latter and being closed except for its communication with said receptacle, the bottom wall of the receptacle having a forward and downward inclination and being formed at its rear end to receive an electrode and the front wall of the extension having a downward and inward curvature and merging regularly into said bottom wall.

5. In an apparatus of the character described, an upright water containing receptacle having an open upper

end shaped to conformably and uniformly fit the body adjacent the male genitalia and proportioned to receive both the scrotal sack and the penis, the said upper end having a relatively narrow rearwardly directed portion which fits between the thighs and extends toward the rectum and incloses the sexual tract, the receptacle having a forwardly projecting relatively narrow centrally located vertical extension in open communication therewith and proportioned to receive and guide the penis, the extension communicating with the receptacle below the upper edge of the latter and being closed except for its communication with said receptacle, the bottom wall of the receptacle having a forward and downward inclination and being formed at its rear end to receive an electrode.

1,103,001. DISTRIBUTING DEVICE FOR AUTOMATIC COMPRESSED-AIR STARTING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. MARCEL GENDRON, Paris, France. Filed Nov. 27, 1912. Serial No. 733,875. (Cl. 123—181.)



1. In an explosion engine, a starting device comprising a chamber having a port adapted to be connected to an explosion cylinder, a second port adapted to be connected to a source of compressed air, a valve in said chamber controlling the flow of air from one port to the other in said chamber, a valve rod, a cam shaft adapted to be constantly driven from the engine, a cam thereon against which said valve rod bears in operative position and a bar with cam shoulder movable transversely to said valve rod and engaging the same to lift and hold it out of engagement with the cam on the cam shaft, during the normal operation of the engine substantially as described.

2. In an explosion engine, a starting device comprising a series of chambers each having a port adapted to be connected to an explosion cylinder and a second port adapted to be connected to a source of compressed air, a valve in each chamber controlling the flow of air from one port to the other in said chamber, a valve rod for each valve, a cam shaft adapted to be constantly driven from the engine, a series of differently arranged cams thereon one for each valve rod and against which said rods bear in operative position, and a bar with a series of cam shoulders one for each valve rod, said bar being movable transversely to the valve rods and engaging the latter to lift and hold the same out of engagement with their respective cams on the cam shaft, during the normal operation of the engine substantially as described.

3. In an explosion engine, a starting device comprising a chamber having a port adapted to be connected to an explosion cylinder, a second port adapted to be connected to a source of compressed air, a valve in said chamber controlling the flow of air from one port to the other in said chamber, a valve rod, a cam shaft adapted to be constantly driven from the engine, a cam thereon against which said valve rod bears in operative position and a bar with cam shoulder movable transversely to said valve rod and engaging the same to lift it out of engagement with the cam on the cam shaft, a piston at one end of said bar and a spring at the other end of said bar, and means in connection therewith for moving said bar in opposite directions transversely of the valve rods.

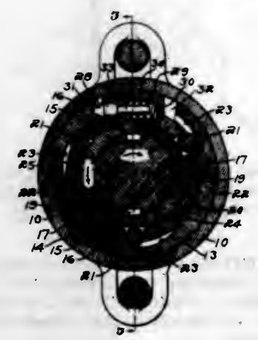
4. In an explosion engine, a starting device comprising a chamber having a port adapted to be connected to an explosion cylinder, a second port adapated to be connected to a source of compressed air, a valve in said chamber controlling the flow of air from one port to the other in said chamber, a valve rod, a cam shaft adapted to be constantly driven from the engine, a cam thereon against which said valve rod bears in operative position and a bar with cam shoulders movable transversely to said valve rod and engaging the same to lift it out of engagement with the cam on the cam shaft, a piston on one end of said cam bar, a cylinder therefor, in combination with an operating valve device and means controlled thereby for admitting compressed air first to the cylinder of the transverse bar piston and then to the chamber having a port adapted to be connected to the explosion engine.

5. In an explosion engine, a starting device comprising a chamber having a port adapted to be connected to an explosion cylinder, a second port adapted to be connected to a source of compressed air, a valve in said chamber controlling the flow of air from one port to the other in said chamber, a valve rod, a cam shaft adapted to be constantly driven from the engine, a cam thereon against which said valve rod bears in operative position and a bar with cam shoulder movable transversely to said valve rod and engaging the same to lift it out of engagement with the cam on the cam shaft, a piston on one end of said cam bar, a cylinder therefor, in combination with an operating valve device comprising communicating chambers to one of which a connection is adapted to be made from a source of compressed air, independent valves controlling the communication between the chambers on the one hand and the admission of air from the source of supply to one of said chambers on the other hand, said chambers each having a discharge port, one adapted to be connected to the cylinder of the cam bar piston and the other to the chamber connected to the explosion cylinder, and a push device for opening said valves consecutively to admit compressed air first to the cylinder of the cam bar piston and then to the chamber connected to the explosion cylinder.

1,103,002. DRILL-BIT-ROTATING DEVICE. GEORGE H. GILMAN and LEE A. KNIGHTS, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 21, 1913. Serial No. 802,299. (Cl. 121—20.)

1. In a rock drill, the combination with a cylinder and piston, of a drill chuck, and means for rotating said chuck, said means including inner and outer members one of which is provided with an inclined concavity and the other with an opposed cylindrical surface, a retainer interposed between said members, a rolling body carried by said retainer and interposed between said inner and outer members and coöperating with said cylindrical surface and concavity, yielding means tending to rotate said retainer and thereby urge said rolling body up the incline of said concavity into gripping engagement with the opposed surfaces of said inner and outer members, and means for causing the reciprocation of said piston to impart a rotary movement to one of said members.

2. In a rock drill, the combination with a cylinder and a piston having a reduced forward extension, of a drill chuck, and means for rotating said drill chuck, said means including inner and outer members one of which is provided with an inclined concavity and the other with an opposed cylindrical surface, a retainer interposed between said members, a rolling body carried by said retainer and interposed between said inner and outer members and coöperating with said cylindrical surface and concavity, yielding means tending to rotate said retainer and thereby urge said rolling body into gripping engagement with the opposed surfaces of said inner and outer members, said piston extension and inner member being provided one with a helical groove and the other with a tooth engaging therewith, whereby the reciprocation of the piston extension imparts a rotary movement to said inner member.



3. In a rock drill, the combination with a cylinder and piston having a reduced forward extension, of a drill chuck, and means for rotating said drill chuck, said means including inner and outer members one of which is provided with a plurality of inclined concavities and the other with an opposed cylindrical surface, a ring constituting a cage interposed between said members, a plurality of rolling bodies carried by said ring and interposed between said inner and outer members and coöperating with said cylindrical surface and concavities, yielding means tending to rotate said ring and thereby urge said rolling bodies into gripping engagement with the opposed surfaces of said inner and outer members, said piston extension and inner member being provided one with a helical groove and the other with a tooth engaging therewith whereby the reciprocation of the piston extension imparts an oscillatory movement to said inner member.

4. In a rock drill, the combination with a cylinder and piston, of a drill-bit, and means for utilizing the reciprocative movement of said piston to cause a step-by-step rotative movement to said drill-bit, said means including a roller clutch having a roller gage, a roller, coöperating members engaged by said roller, yielding means tending to rotate said cage in one direction thereby to cause gripping engagement of said clutch, and means operated by reciprocative movement of said piston for causing rotation of one of said coöperating members.

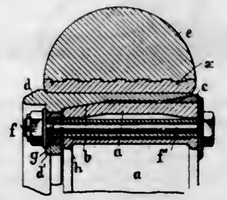
5. In a rock drill, the combination with a cylinder and piston, of a drill-bit, and means for utilizing the reciprocative movement of said piston to cause a step-by-step rotative movement of said drill-bit, said means including a roller clutch comprising one or more rolling bodies, a retainer for said body or bodies, and yielding means tending to rotate said retainer in one direction.

[Claims 6 and 7 not printed in the Gazette.]

1,103,003. DETACHABLE WHEEL-RIM. RUDOLF HAUPT, Hanover, Germany. Filed Dec. 16, 1912. Serial No. 737,018. (Cl. 152—7.)

1. In a detachable rim device for wheels, a fixed rim and a detachable rim and interposed between the same a wedge ring transversely slotted from opposite edges of the ring at a plurality of points spaced around the same, and means for forcing said wedge ring into locking position between said fixed and detachable rims.

2. In a detachable rim device for wheels, a fixed rim and a detachable rim and interposed between the same a wedge ring transversely slotted alternately from opposite edges of the ring at a plurality of points spaced around the same, and means for forcing said wedge ring into locking position between said fixed and detachable rims.



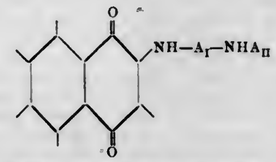
3. In a detachable rim device for wheels, a fixed rim and a detachable rim and interposed between the same a wedge ring transversely slotted at a plurality of points spaced around the same, a radially-inward-extending abutment at the side of said wedge ring, a centrally perforated releasing screw threaded in said abutment and adapted to bear against the fixed rim, a securing bolt passing through the fixed rim and said releasing screw without engaging the latter, and a nut threaded on the end of said bolt and engaging said abutment on the wedge ring beyond the edges of said releasing screw.

4. In a detachable rim device for wheels, a fixed rim, a detachable rim and interposed between the same a wedge ring having a radially-inward-extending abutment at the side thereof, means for securing said wedge ring in position, a centrally perforated releasing screw threaded in said abutment, a straight bolt forming a portion of said wedge-ring securing means and passing through said fixed rim and said releasing screw without engaging the latter and a nut threaded on the end of said bolt and engaging said abutment on the wedge ring beyond the edges of said releasing screw.

1,103,004. RED VAT DYESTUFFS AND PROCESS OF MAKING SAME. RICHARD HERZ, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, a Corporation of New York. Filed July 23, 1913. Serial No. 780,698. (Cl. 8—1.)

1. The manufacture or production of fast vat dyestuffs of the anthraquinone series, which consists in condensing alphanaphthoquinone with diaminoanthraquinones and treating the products thus obtained with suitable halogenanthraquinones, substantially as described.

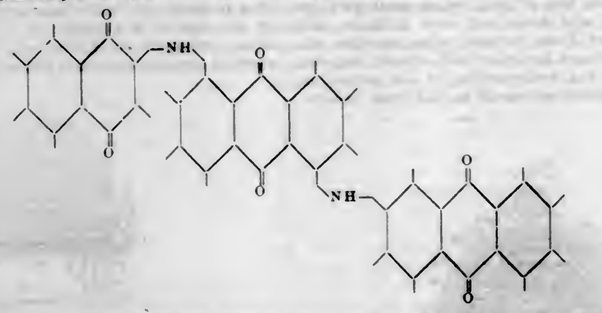
2. As a new article of manufacture the fast vat dyestuff of the anthraquinone series, derived from alphanaphthoquinone by condensing it with diaminoanthraquinones and treating the products thus obtained with suitable halogenanthraquinones, having probably the following nucleus:



(where A_I means: the residue from one anthraquinone molecule and A_{II}: the residue from another anthraquinone molecule,) being in a dry state brick red to dark red powders, insoluble in dilute acids and alkalis with difficulty soluble in the usual organic solvents, forming in an alkaline hydrosulfite solution brownish red vats which dye cotton claret red to deep red shades, fast to washing, light and chlorin, substantially as described.

3. As a new article of manufacture the fast vat dye-

stuff resulting from alphanaphthoquinone by first condensing it with 1.5-diaminoanthraquinone and treating the product thus obtained with betachloranthraquinone having probably the following chemical constitution:



being in a dry state a dark red powder soluble in concentrated sulfuric acid with a brownish purple color forming with alkaline hydrosulfite solution a brownish red vat which dyes cotton claret red shades fast to washing, light and chlorin, substantially as described.

1,103,005. MAKING STENCILS. JOSEPH H. LANGROCK, New York, N. Y., assignor to Langrock Bros. Company, a Corporation of New York. Filed Jan. 18, 1913. Serial No. 742,972. (Cl. 101—131.)



1. The herein described process of making stencils, which consists in coating a foraminous fabric with a pigmentary vehicle, removing the excess of such vehicle from the side of the fabric and forcing portions thereof through the meshes to the other side of the fabric, removing such forced-through portions, subjecting the stencil base to a damp heat, and applying the face of the fabric to a relief design surface and forcing by the raised portions thereof the pigmentary vehicle through the mesh of the fabric to the other side thereof and finally removing the excess of such pigmentary vehicle.

2. The process of making stencils herein set forth, consisting in coating a taut foraminous fabric with a pigmental vehicle, removing the excess thereof from the face and back of the fabric, applying the face of the latter to a relief design block or plate the depressed portions of which contain a powder adapted to assimilate with the pigmental vehicle, applying pressure in such manner that the raised portions of the design force the pigmental vehicle through the mesh to the back thereof, removing the excess of pigmental material from the back and forcing a portion of it through the mesh and into the depressed portions of the design surface, whereby a relief stencil is formed substantially as herein set forth.

3. The herein described process of making stencils, which consists in coating a foraminous fabric with a pigmentary vehicle, removing the excess of such vehicle from one side of the fabric and forcing portions thereof through the meshes to the other side of the fabric, removing such forced-through portions, and applying the face of the fabric to a relief design surface and forcing by the raised portions thereof the pigmentary vehicle through the mesh of the fabric to the other side thereof and finally removing the excess of such pigmentary vehicle.

1,103,006. SWIVELED ATTACHMENT-PLUG. FRANK E. SEELEY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 8, 1908. Serial No. 442,504. (Cl. 173—343.)



1. The combination of a detachable swiveling attachment plug with an open ended receiving socket, comprising spring contact fingers to receive and hold the swiveling plug, a screw shell, an insulating ring secured on the outside of the open end of the shell and an insulating button closing the opposite end, said button carrying a central contact with inner and outer contact faces.

2. The combination of a swiveling attachment plug having a central contact and a receiving socket comprising a screw shell, an insulating ring secured on the outside of the open end of the shell and an insulating button closing the opposite end, said button carrying spring fingers and also a central contact with inner and outer contact faces.

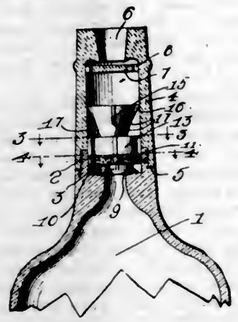
3. An attachment plug, comprising a hollow insulating body with a metallic segment therein, an outer contact shell, securing means for the latter entering the segment, and a binding screw also threaded into the segment, and central contact on the plug.

4. An attachment plug comprising a hollow insulating body with a longitudinal opening for a wire and having a side contact with binding screw and a central end contact in the form of a binding screw for the wire through the longitudinal opening in the body.

1,103,007. NON-REFILLABLE BOTTLE. DAVID M. SHERMAN and CHARLES P. KLEEBAUER, New York, N. Y., assignors to The Kleeboe Company, Inc., a Corporation of New York. Filed Sept. 8, 1913. Serial No. 788,692. (Cl. 215—62.)

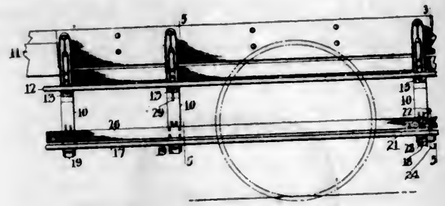
1. A non-refillable bottle comprising a neck, a float valve carried thereby, a valve seat formed in said neck, a weight engaging said valve for forcing the same tightly upon its seat, a tumbler positioned within said neck and engaging said weight for limiting the sliding movement of said weight and preventing the same from swinging within said neck, said tumbler provided with beveled sides and adapted to lie snugly against one side of said neck for allowing the free passage of liquid therethrough.

2. A non-refillable bottle comprising a neck, a cork valve, a valve seat adapted to be engaged by said cork valve, a weight for forcing said valve upon said valve seat, a tumbler engaging said weight for driving said weight



tightly upon said cork valve, said tumbler comprising a substantially inverted cone-shaped body, and means formed upon said tumbler, weight and valve for spacing the same from the inner face of said neck.

1,103,008. DOUBLE-FOLDING CAR-STEP. WILBUR G. CORY, New York, N. Y., assignor to Standard Motor Truck Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 25, 1914. Serial No. 827,215. (Cl. 105—86.)



1. A double folding car step, comprising an upper step, a lower step, means to hold the lower step in partially raised position, and means to hold the lower step in extreme upper position, said lower step in the latter position also supporting the upper step in raised position.

2. A double folding car step, comprising an upper step, a lower step, and means to hold the lower step in partially raised or intermediate position while the upper step remains in operative position.

3. A double folding car step comprising an upper step, a lower step, means to automatically latch the lower step in partially raised or intermediate position, and additional means to automatically lock both steps in raised position.

4. A double folding car step, comprising an upper step, a lower step, and a latch for holding said lower step in raised position, said latch being normally located in inoperative position and being moved into position to engage the lower step by movement of the upper step to raised position.

5. A double folding car step comprising an upper step, a pivoted bracket supporting said step, a lower step, and a latch for holding said lower step in raised position, said latch and said bracket being pivoted to turn about the same axis, said latch having a recess in its hub, and said bracket having a projection coöperating with said recess and effective to raise said latch to operative position when the upper step is raised but permitting further upward movement of the latch relative to said bracket.

[Claims 6 to 11 not printed in the Gazette.]

1,103,009. CHUCK-RETAINING DEVICE. GEORGE H. GILMAN, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed May 13, 1907. Serial No. 373,319. (Cl. 121—10.)



1. An apparatus of the type described provided with a cylinder having an axial recess presenting an enlarged portion of greater diameter at one end thereof and an interior shoulder, an axially apertured bushing loosely received in said enlarged portion and abutting said shoulder, said bushing and an adjacent portion of said cylinder together presenting a recess, a part thereof being in each, a locking member arranged in said recess, and a sleeve for retaining the locking member, said sleeve being provided with means to clamp the same on the end of the cylinder, said sleeve also having an axial aperture to permit free longitudinal reciprocatory movement of a tool therein.

2. A device of the class described having a tool receiving end provided with a longitudinally extending recess forming an interior shoulder, a bushing having angular faces on the interior thereof, mounted in said recess and seated against said shoulder, the tool receiving end and said bushing having opposed recesses, locking means arranged in said recesses for preventing rotary movement of said bushing relative to said end, a tool having angular faces formed to fit the interior of said bushing and an apertured cap clamped to the end of said device to prevent longitudinal movement of said bushing and said locking means relative to said end and to permit free sliding movement of said tool therein.

3. An apparatus of the type described provided with a cylinder having an exteriorly threaded end, a tool receiving bushing permitting longitudinal movement of the said tool therein and having means to prevent rotation of the tool therein, an interiorly threaded sleeve positioned upon the threaded end of said cylinder for preventing outward endwise movement of the bushing, and holding means coöperating with the cylinder, the sleeve and the bushing and engaging the bore of the cylinder and the outer walls of the bushing for rigidly holding the latter within said cylinder to prevent rotary movement of said bushing therein.

4. An apparatus of the type described, comprising in combination, a cylinder, a tool, a piston hammer adapted to strike repeatedly the end of said tool, a bushing mounted in the end of said cylinder adapted to be inserted by a longitudinal sliding movement thereof, said bushing having a non-circular opening in which said tool is non-rotatable but slidably mounted, and means including a part clamped on the end of said cylinder for preventing both longitudinal and rotary movement of the bushing therein.

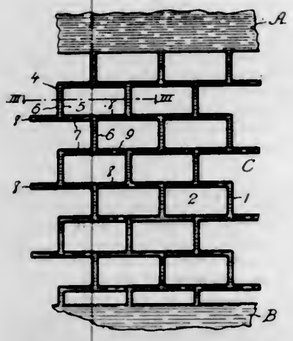
5. An apparatus of the type described, provided with a cylinder having within one end thereof a bushing for receiving a reciprocatory tool therein, said tool being non-rotatably held by the bushing, and means to lock said bushing against rotative and lengthwise movement including an interiorly threaded split cap for holding said bushing within said cylinder, and clamping means to clamp the cap to said cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,103,010. RADIATOR. WILLIAM J. HAMILTON, Flint, Mich. Filed Feb. 13, 1913. Serial No. 748,069. (Cl. 62—28.)

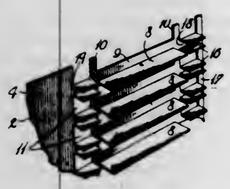
1. A radiator core comprising a plurality of flat tubes forming vertically extending tortuous water passages, each tube comprising two parallel plates formed with right angle bends to provide straight vertical and horizontal

portions, one of said plates being bent laterally and folded upon itself opposite each alternate horizontal portion of the tube to form a lateral extension of said portion corresponding in length to the horizontal portions and the other plate being bent at right angles and folded upon itself to form lateral extensions opposite the ends of the horizontal portions of the tube which alternate with those portions having the lateral extensions formed by the other plate and extending in the opposite direction and corresponding in length thereto; said tubes being assembled side by side with the laterally extending portions on one tube in abutting engagement with the vertical portions on the next adjacent tube, said horizontally and laterally extending portions of the several tubes being arranged in horizontal alinement across the core.



2. A radiator core comprising a series of tubular members forming tortuous water passages, each tube comprising spaced parallel plates formed with right angle bends, straight vertical portions and horizontal portions, each plate having staggered vertical portions connecting horizontal portions having lateral extensions provided with return portions forming two walled ends corresponding in length to the horizontal portions, the two-walled ends of one plate alternating with the two walled ends of an adjoining plate and thereby providing the two with staggered dead chambers in the same plane as the horizontal portions of the tube.

1,103,011. RADIATOR. HENRI DE BOISCHEVALIER, Detroit, Mich., assignor of one-third to Louis Chevrolet, Detroit, Mich. Filed Dec. 23, 1912. Serial No. 738,167. (Cl. 62—28.)



1. A fin construction for radiators having spaced tubular members, comprising a structure having horizontal spaced walls extending across the space between said tubes and dividing the same into a plurality of air passages extending between said members, and an integral vertical portion extending across the space between said tubular members adjacent to one end of said horizontal walls and formed with openings opposite the ends of said air passages.

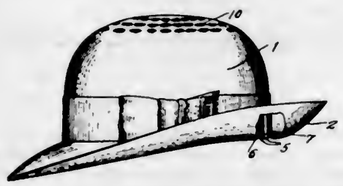
2. In a fin construction for radiators having spaced tubular members, each provided with a plurality of horizontally extending walls, having partially severed portions turned at right angles to the body of the blank to form flanges extending across said space between the tubes and dividing said space into a plurality of horizontal air passages extending between said tubular members, and having end portions bent to extend across said space between the tubes at the end of said walls.

3. A fin construction for radiators having spaced tubular members, comprising a fin member formed of portions extending laterally to form horizontal walls, and having vertical strips and horizontal bars integral with said strips, said bars being extended across the space between the tubes.

4. A fin construction for radiators having spaced tubular members, comprising portions extending laterally to form horizontal walls spaced apart and extending across the space between said tubular members, and having vertical members adjacent to the ends of the horizontal walls formed with transverse bars opposite said ends of said walls with openings between the bars to form air passages between said tubular members open at each end, said bars being each formed with inwardly extending flanges embracing the ends of the horizontal walls.

5. In a radiator, a core comprising a series of tubular members having parallel side walls and fin members between the tubular members each formed integral with one of the adjacent tubular members, each tubular member and its fin member being formed from a single sheet of metal, a portion of the sheet being folded upon itself to form the tubular member and a second portion extending laterally from one wall of the tubular member to form an end face of the fin member, a third portion of said sheet extending at right angles to said end face to form one side of the fin member extending parallel with said wall of the tube and a fourth portion extending at right angles thereto to form the other end face of the fin member.

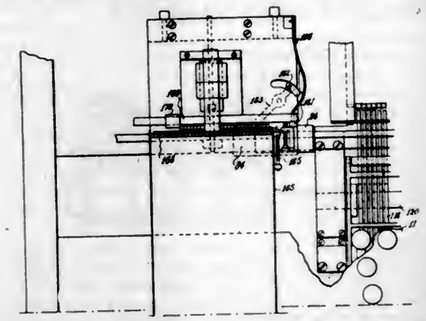
1,103,012. VENTILATED HAT. JOHN E. SMITH, Laurel, and WILLIAM F. SULT, Gilman, Iowa, assignors to Sunlight Hat Co., Marshalltown, Iowa. Filed Apr. 11, 1912. Serial No. 689,971. (Cl. 2—114.)



1. In a ventilated hat, the combination, with a crown, of a sweat band arranged therein and a fluted strip disposed between the sweat band and the crown and folded into successive compound convolutions, the folds of the convolutions being spaced for forming a double passage-way at the points of the fold and leaving passage-ways at each side of the strip between the points of the respective folds, the strip and band being formed with apertures permitting free circulation through and about all passage-ways formed by the material of the strip and between the strip and adjacent parts.

2. A ventilated hat, comprising a crown and a sweatband turned upwardly at its lower edge, said upwardly turned portion being attached to said crown, said sweatband being provided with a plurality of openings at the edge where it is turned, and having an additional row of openings located above said edge, and a strip disposed between the sweatband and the adjacent portion of the crown, said strip being folded upon itself at intervals to afford several spaced thicknesses of material at such folded places for affording a series of tubular passages which communicate with said first named openings, and also affording a series of pairs of oppositely disposed chambers located between said tubular passages and having communication with said second named openings, said strip being provided with openings to afford communication between the chambers of each pair.

1,103,013. TYPE SETTING AND DISTRIBUTING MACHINE. ARTHUR WILLARD RANGER, London, England. Filed Dec. 13, 1913. Serial No. 806,434. (Cl. 101—130.)

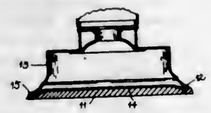


1. In a typesetting or distributing machine comprising a magazine, a key operated carriage movable between the said magazine and an assembled line of type, an auxiliary carriage supported on the main carriage, a selector mounted on the said auxiliary carriage and means whereby said selector is operated to receive or deposit a type by relative movement of the main and auxiliary carriages.

2. A type setting machine comprising a common pivoted frame, a keyboard, type magazines, a type selector, means for moving said selector into relation with the channels of the magazine upon the operation of any key, means for stopping said selector in register with the channel corresponding to the key operated in which the depression of any key swings said common pivoted frame, which causes the movement of the selector, a series of loose sliding members and a pivoted frame carrying the same, the arrangement being such that during composing the motion of the key levers is transmitted to the first type in the magazine channels by said series of loose sliding members carried in said pivoted frame which can be swung out of operative position when it is desired to employ the machine for distributing.

3. In a machine for composing and distributing type comprising a keyboard, type magazines, a type selector and a carirage movable between an assembled line and the channels of the type magazine, a distributing galley in which the moving selector operates and a plunger by which the end type is pushed into the said selector, substantially as described.

1,103,014. BASE FOR LANTERNS. JOSEPH ABETZ, New Britain, Conn. Filed Sept. 17, 1913. Serial No. 790,198. (Cl. 240—50.)



A lantern comprising a font and a flange at the lower end thereof the said flange extending downwardly and outwardly relatively to the said font and serving as a support therefor, and an auxiliary base of lead positioned at the lower end of the said flange, and the extreme lower and outer portion of the said flange being embedded in the said auxiliary base.

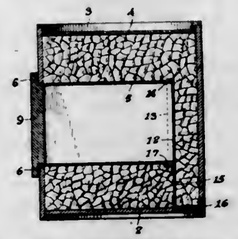
1,103,015. LOCK FOR MAIL-BAGS. BURTON L. ANDRUS, Washington, D. C. Filed June 8, 1914. Serial No. 843,828. (Dedicated to the public.) (Cl. 70—107.)

1. In a padlock, the combination of a case having a U-shaped recess therein, a centrally pivoted shackle carrying a locking arm adapted to be projected across the recess, a series of pivoted tumblers provided with notches, a tongue carried by the shackle, an arm carried on the lower end of the shackle adapted to engage the notches in the tumblers, and springs to throw the shackle to an unlocking position when the tumblers are alined.



2. In a padlock, the combination of a case having a U-shaped recess therein, a centrally pivoted shackle carrying a locking arm adapted to be projected across the recess, a series of pivoted tumblers provided with notches, a tongue carried by the shackle, an arm carried on the lower end of the shackle adapted to engage the notches in the tumblers, a swing plate adapted to engage the under side of the tongue and springs attached to said tumblers adapted to engage the under side of said plate.

1,103,016. REFRIGERATING-PAIL. WILLIAM L. DALY, Schenectady, N. Y. Filed Mar. 5, 1912. Serial No. 681,815. (Cl. 62—10.)



A refrigerating pail comprising an outer vessel having a fixed bottom and a removable cover, the said receptacle having an opening at one side, an inner vessel extending into the outer vessel and through the opening and provided at its inner end with a cap, a brace secured to the bottom of the outer vessel and forming an integral part of said cap, and a swinging closure mounted exteriorly of the outer vessel and closable over the open end of the inner vessel and having a portion fitting thereinto when the closure is in a closed position.

1,103,017. OXIDATION PROCESS. CARLETON ELLIS, Montclair, N. J., assignor of two-thirds to Ellis-Foster Company, a Corporation of New Jersey, and one-third to Charles L. Parsons, Washington, D. C. Filed Sept. 16, 1912. Serial No. 720,497. (Cl. 23—1.)

1. The process of oxidizing sulfur dioxid and forming sulfuric acid which comprises bringing a mixture comprising sulfur dioxid and oxygen into contact with essentially a non-acid, non-metallic catalytic body consisting substantially of metalloidal bodies; said catalytic body being substantially unaffected in its catalytic action in the conversion of sulfur dioxid into sulfur trioxid in the presence of small quantities of bodies toxic to metallic catalyzers.

2. In the process of making sulfuric acid, the step of oxidizing sulfur dioxid which comprises contacting moist sulfur dioxid with tellurium containing material in the presence of regulated quantities of oxygen.

3. The process of making sulfuric acid which comprises bringing a mixture comprising sulfur dioxid, oxygen and

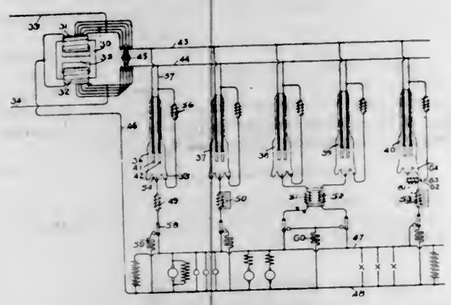
water vapor into contact with a tellurium containing catalyzer carrying traces of a selenium activator.

4. The process of making sulfuric acid which comprises bringing a mixture comprising sulfur dioxid, oxygen and water vapor, all in an unpurified condition but free from dust, into contact with a catalyzer of tellurium containing material carrying traces of a selenium activator.

5. The process of making sulfuric acid which comprises bringing a mixture comprising sulfur dioxid, oxygen and water vapor, all in an unpurified condition but free from dust, into contact with a heated tellurium containing catalyzer carrying traces of a selenium activator.

[Claims 6 to 13 not printed in the Gazette.]

1,103,018. SYSTEM OF ELECTRICAL DISTRIBUTION. SAMUEL FERGUSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1903. Serial No. 165,201. (Cl. 171—253.)



1. The combination of alternating current supply means, inductance coils connected respectively to the supply mains and joined together at a common point, and a plurality of vapor electric conductors having electrodes connected some to the supply mains and some in multiple to a circuit leading to said common point.

2. The combination of alternating current supply mains, a plurality of inductance coils connected to said mains and located on a single magnetic core, the magnetic circuit of one coil being non-identical with that of another coil, and a vapor electric lamp or rectifier connected to said mains and to said inductance coils.

3. The combination of a vapor rectifier, a load which is to be supplied with rectified current, a starting resistance, and a switch for connecting the resistance first in circuit with the rectifier, then connecting the load in multiple with the resistance, and then cutting out the resistance.

4. The combination with a vapor electric device, of a set of inductance coils mounted on the same core and each provided with a magnetic circuit non-identical with that of another of said coils, and connections between said vapor device and said set of inductance coils.

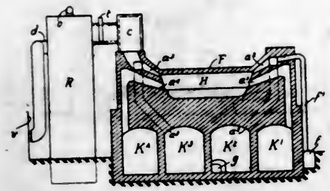
5. The combination of a plurality of exhausted envelops each provided with a cathode and a plurality of anodes, single phase supply mains, connections from the anodes of each envelop across said supply mains, a return conductor extending from said single phase system, and a circuit including an inductance coil, extending from each cathode to said return conductor.

[Claims 6 to 10 not printed in the Gazette.]

REISSUES.

13,763. OPEN-HEARTH FURNACE. KURT ALBERT, Wiesbaden, Germany. Filed Jan. 29, 1914. Serial No. 815,322. Original No. 1,073,653, dated Sept. 23, 1913, Serial No. 737,110. (Cl. 75—94.)

1. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals, the combination with the hearth chamber thereof, of a place of recovery of the volatile metals during the volatilization period and means for causing the gases of combustion to flow and pass from said hearth chamber to said place of recovery during said volatilization period.



2. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals, the combination with the hearth chamber thereof of a place of recovery of the volatile metals during the volatilization period, of a flue or passage affording connection between the hearth chamber and said place of recovery, and means for causing the gases of combustion to flow through said flue or passage during said volatilization period.

3. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals, the combination with the hearth chamber thereof, of a place of recovery of the volatile metals during the volatilization period, passages leading from said hearth chamber to said place of recovery, means for causing the gases of combustion to flow through said passages from the hearth chamber to the place of recovery during the volatilization period and means for closing said passages during the operation of the furnace in the usual way.

4. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals in combination with the hearth chamber thereof, of a place of recovery of the volatile metals during the volatilization period, communicating passageways therebetween, a heat recovering apparatus in communication with said passageways for recovering the heat from the gases passing therethrough during said volatilization period and means for cutting off or closing said passageways during the working of the furnace in the usual way.

5. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals in combination with the hearth chamber thereof, a place of recovery for the volatile metals, an intermediate heat recovering apparatus, a communicating passage between the hearth chamber, heat recovering apparatus and the place of recovery of the volatile metals, and means for causing the passage of the gases of combustion from the hearth chamber through said communicating passage to the heat recovering apparatus and the place of recovery of the volatile metals during the volatilization period.

6. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals in combination with the hearth chamber thereof, a place of recovery for the volatile metals, an intermediate heat recovering apparatus, a valve controlled communicating passage between the hearth chamber, heat recovering apparatus and the place of recovery of the volatile metals, and means for causing the passage of the gases of combustion from the hearth chamber through said valve controlled communicating passage to the heat recovering apparatus and the place of recovery of the volatile metals during the volatilization period.

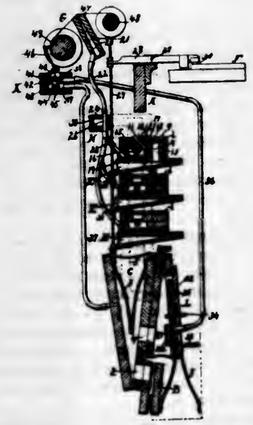
7. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals, in combination with the hearth chamber thereof, of a place of recovery of the volatile metals during the volatilization period, a valve controlled flue communicating between the hearth chamber and the place of recovery, means for causing the gases of combustion to flow or pass through said valve controlled flue during said period, a recuperator communicating with said valve controlled flue for recovering the heat from the gases passing therethrough, a valve controlled flue connecting said recuperator with the hearth chamber for supplying heated air to said hearth chamber, and means for cutting off said valve controlled flue during the working of the furnace in the usual way.

8. In an open hearth furnace for working masses containing iron or ferric oxid and volatile metals, in combination with the hearth chamber thereof, of a place of recovery of the volatile metals during the volatilization period, a valve controlled flue communicating between the hearth chamber and the place of recovery, means for causing the gases of combustion to flow or pass through said valve controlled flue during said period, a recuperator communicating with said valve controlled flues for recovering the heat from the gases passing therethrough, a valve controlled flue connecting said recuperator with the hearth chamber for supplying heated air to said hearth chamber, and means for cutting off said valve controlled flue during the working of the furnace in the usual way.

9. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals the combination with a hearth chamber, air chambers and gas chambers, flues connecting the air chambers and gas chambers, flues connecting the air chambers and gas chambers with the hearth chamber, additional regenerative chambers for recovering the heat from the waste gases, flues connecting said hearth chamber with said additional regenerative chambers and means for causing the gases of combustion to flow through said regenerative chambers during the volatilization period.

10. In an open hearth furnace for working up masses containing iron or ferric oxid and volatile metals in combination with the hearth chamber thereof, a plurality of regenerative chambers independent of the ordinary chambers of the furnace, flues connecting the hearth chamber with said independent regenerative chambers, a place for recovering the volatile metals carried by the waste gases, communicating flues connecting said place of recovery with said independent regenerative chambers, means for guiding the gases during the volatilization period from the hearth chambers into the additional regenerative chambers to permit of the abstraction and recovery of the thermal heat units from the waste gases and thence to the place of recovery of the volatile metals and means for controlling the working of the furnace in the usual way.

13,764. SELF-PLAYING MUSICAL INSTRUMENT. LEWIS B. DOMAN, Syracuse, N. Y., assignor to The Amphion Piano Player Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 25, 1910. Serial No. 594,228. Original No. 927,454, dated July 6, 1909, Serial No. 212,674. (Cl. 84—178.)



1. In a pneumatic action for musical instruments, the combination with sound-producing or key pneumatics, of means for exhausting said pneumatics, a pneumatic connected to said key pneumatics and said exhausting means, a second pneumatic carried by the movable member of the aforesaid pneumatic, and means for alternately connecting said second pneumatic with said exhausting means and with the atmosphere, substantially as described.

2. In a pneumatic action for musical instruments, the combination with sound-producing or key pneumatics, of means for exhausting said pneumatics, a pneumatic connected to said key pneumatics and said exhausting means, a second pneumatic carried by the movable member of the aforesaid pneumatic, and means for controlling the tension in said second pneumatic, substantially as described.

3. In a pneumatic action for musical instruments, the combination with sound-producing or key pneumatics, of means for exhausting said pneumatics, a pneumatic connected to said key pneumatics and said exhausting means, a second pneumatic carried by the movable member of the aforesaid pneumatic, means for controlling the tension in said second pneumatic, and a valve controlling the connection between the first said pneumatic and said exhausting means and carried by the movable member of said second pneumatic, substantially as described.

4. In a pneumatic action for musical instruments, the combination with a tracker-board, of sound-producing or key pneumatics and air chests therefor, pipes connecting said tracker-board and air chests, a separate chest located between said tracker-board and air chests, through which said pipes pass, said pipes having openings within said separate chest, and means for exhausting said separate chest, substantially as described.

5. In a pneumatic action for musical instruments, the combination with a tracker-board, of sound-producing or key pneumatics, of air chests therefor, pipes connecting said tracker-board and air-chests, each of said pipes comprising flexible sections and a metal section, a separate chest located between said air-chests and said tracker-board, and inclosing said metal sections, said metal sections having holes opening within said separate chest, and means for exhausting said chest, substantially as described.

6. In a self-playing musical instrument, a wind-inducing device and a sound-producing action connected thereto, a valve and a pneumatic actuator therefor for regulating the air tension in the sound producing action, and separate means for operating the valve.

7. In a pneumatic action for musical instruments, the combination with a normally distended pressure regulating pneumatic and means to exhaust the air therefrom, of a key action having an exhaust chest in communication with said pneumatic, a second pneumatic within the first named pneumatic for partially cutting off communication of said first named pneumatic with the exhausting means, and additional means to alternately connect the second pneumatic with said chest and with the atmosphere.

8. In a self-playing musical instrument, a wind-inducing device and a sound-producing action connected thereto, a tension regulating pneumatic communicating with the wind-inducing device, a valve actuated by said pneumatic for controlling the air tension in the sound-producing action, and means including an accenting pneumatic for operating said valve independently of the tension-regulating pneumatic.

9. In a self-playing musical instrument, a wind-inducing device and a sound-producing action connected thereto, a tension regulator pneumatic forming a part of such connection, and an accenting pneumatic within the tension regulating pneumatic.

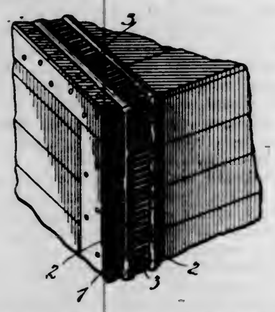
10. In a self-playing musical instrument, the combination with a sound-producing action, of means for regulating the air tension therein, including separately operable pneumatics one within the other.

11. In a self-playing musical instrument, a wind-inducing device and a sound producing action connected thereto and including therein an equalizer having an air port, a pneumatic covering said port and actuated by varying air tensions in said connection, a valve for the port actuated by said pneumatic and a separate accenting pneumatic for operating said valve independently of the first named pneumatic.

12. In a self-playing musical instrument, a wind-inducing device and a sound-producing action connected thereto, a valved air port communicating with the wind-inducing device, a valve for said port, an accenting pneumatic for actuating the valve and an additional pneumatic covering said port and operating under varying air tensions to additionally operate said valve.

13. In a self-playing musical instrument, a sound-producing action, a wind-inducing device having an equalizer connected to the sound-producing action, said equalizer being provided with an air port, a valve for the port, a pneumatic regulator covering the port and operating under varying air tensions to operate the valve, and an accenting pneumatic also acting upon the same valve.

13,765. BOX-STRAPPING. LEON S. HOWE, Hartford, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 21, 1914. Serial No. 826,397. Original No. 1,043,771, dated Nov. 5, 1912, Serial No. 684,509. (Cl. 217—67.)



1. A metallic box-strap for packing cases and the like, comprising a main body of strip form, both faces of said strip being embossed to increase the overall thickness along the median portion, the shoulders formed by said embossing being adapted to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to the strip to take up slack therein in the act of applying the same, the borders of said strip being relatively smooth to prevent stretching the embossed median portion.

2. A metallic box-strap for packing cases and the like, comprising a main body of strip form, both faces of said strip being embossed to increase the overall thickness along the median portion, the shoulders formed by said embossing being adapted to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to the strip to take up slack therein in the act of applying the same, the borders of said strip being relatively smooth to prevent stretching the central portion, said borders being shaped to form raised bearings extending along the opposite edges of said strip.

3. A metallic box-strap for packing cases and the like, comprising a main body of strip form, both faces of said strip being embossed to increase the overall thickness along the median portion, the shoulders formed by said embossing being adapted to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to the strip to take up slack therein in the act of applying the same, the borders of said strip being relatively smooth to prevent stretching of the embossed central portion, said borders being longitudinally corrugated to form raised bearings from a single thickness of metal.

4. A metallic box-strap for packing cases and the like, comprising a strip, transverse corrugations formed along the median portion thereof to produce substantially roughened surfaces on each face of the strip and to increase the overall thickness thereof along said median portion, the shoulders formed thereby being arranged to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to said strip to take up slack therein in the act of applying the same, that part of the strip at opposite edges of said corrugated portion being relatively smooth to prevent stretching the central corrugated portion of said strip.

5. A metallic box-strap for packing cases and the like, comprising a strip, transverse corrugations formed along the median portion thereof to produce substantially roughened surfaces on each face of the strip and to increase the overall thickness thereof along said median portion, the shoulders formed by said corrugations being arranged to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to said strip to take up slack therein in the act of applying the same, that part of the strip at opposite edges of said corrugated portion being relatively smooth and provided with raised bearings.

6. A metallic box-strap for packing cases and the like, comprising a strip, transverse corrugations formed along the median portion thereof to produce substantially roughened surfaces on each face of the strip and to increase the overall thickness thereof along said median portion, the shoulders formed by said corrugations being arranged to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to said strip to take up slack therein in the act of applying the same, that part of the strip at the opposite edges of said corrugated portion being relatively smooth and provided with raised bearings, said raised bearings being formed by longitudinal corrugations.

7. A metallic box-strap for packing cases and the like, comprising a strip, transverse corrugations formed along the median portion thereof to produce substantially roughened surfaces on each face of the strip and to increase the overall thickness thereof along said median portion, the shoulders formed by said corrugations being arranged to hold the point of a nail to prevent slippage thereof whereby said nail may be driven at an angle relatively to said strip to take up slack therein in the act of applying the same, that part of the strip at the opposite edges of said corrugated portion being relatively smooth and provided with raised bearings, said bearings being sufficiently raised to extend above the adjacent corrugated median portion of the strip sufficiently to guard the head of a nail driven through said median portion.

13,766. METHOD AND BATCH OR MIXTURE FOR MAKING ILLUMINATING-GLASS. GEORGE A. MACBETH, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 843,921. Original No. 1,097,600, dated May 19, 1914, Serial No. 766,561. (Cl. 49—90.)

1. The herein described method of manufacturing illuminating glass, which consists in fusing together a foundation mixture capable of making substantially colorless clear glass with an aluminum oxid compound, and a fluorid, the quantity of the aluminum oxid compound by weight being greater than that of the fluorid, and the amount of aluminum by weight contained in the aluminum oxid compound being greater than that of the fluorin contained in the fluorid, and the heating operation being stopped before the glass returns to a clear glass stage and before the specks are eliminated.

2. The herein described method of manufacturing illuminating glass, which consists in fusing together a foundation mixture capable of making substantially colorless clear glass and including a chlorid, with an aluminum compound and a fluorin compound, the quantity by weight of the aluminum contained in the aluminum compound being greater than that of the fluorin contained in the fluorin compound, and the heating operation being stopped before the glass returns to a clear glass stage and before the specks are eliminated.

3. The herein described mixture for manufacturing illuminating glass, which consists in a foundation mixture capable of making substantially colorless clear glass, oxid of aluminum and a fluorid, in the following quantities by weight—150 parts of the foundation mixture, 9 to 15 parts of oxid of aluminum, and 3 to 8 parts of the fluorid.

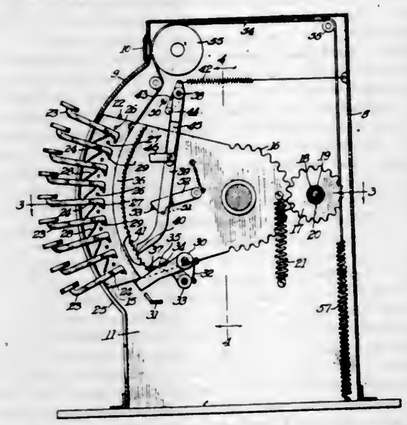
4. The herein described mixture for manufacturing illuminating glass, which consists in a batch containing 150 parts by weight of the foundation mixture capable of making substantially colorless clear glass, a compound containing aluminum and a compound containing fluorin, the quantity of the aluminum in the batch by weight being frmo 4 to 8 parts, and the quantity of fluorin in the batch by weight ranging from 2 to 4 parts.

5. The herein described mixture for manufacturing illuminating glass, which consists in a foundation mixture capable of making substantially colorless clear glass and including a chlorid, an aluminum compound, and a fluorin compound, the amount of aluminum by weight contained in the aluminum compound being greater than that of the fluorin contained in the fluorin compound, and the weight of the aluminum and fluorin combined being at least 1% of that of the entire mixture.

6. The herein described mixture for manufacturing illuminating glass, which consists in a foundation mixture capable of making substantially colorless clear glass, an aluminum compound and a fluorin compound, the amount of fluorin by weight contained in the fluorin compound being less than 61% of that of the aluminum contained in the aluminum compound, and the weight of aluminum and fluorin compound combined being at least 1% of that of the entire mixture.

7. The herein described mixture for manufacturing illuminating glass, which consists in a foundation mixture capable of making substantially colorless clear glass, an aluminum compound and a fluorin compound, the amount of aluminum by weight contained in the aluminum compound being greater than that of the fluorin contained in the fluorin compound, and the weight of the aluminum and fluorin combined being at least 1% of the entire mixture.

13,767. CASH-REGISTER. EMIL SINNER, Milwaukee, Wis., assignor to The La Salle Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 9, 1914. Serial No. 823,593. Original No. 1,068,012, dated July 22, 1913, Serial No. 640,980. (Cl. 235—14.)



1. In a cash register, a pivoted actuator, a plurality of adjustable digit stops thereon, relatively fixed means arranged to be engaged by any adjusted digit stop to provide for a differential movement of said actuator by limiting the advance thereof to various successive positions and means for maintaining the engagement between the adjusted stop and said fixed means to prevent restoration of said stop, whereby said actuator is positively locked against movement either forward or backward.

2. In a cash register, a pivoted actuator, a plurality of extensible digit stops mounted thereon in the arc of a circle, a relatively fixed stop mounted so as to be engaged by any one of said digit stops when extended, thereby providing for a differential throw of said actuator to any one of a number of successive angular positions, and means for positively locking the extended stop against said fixed stop after engagement therewith, whereby said actuator is positively locked against movement either forward or backward.

3. In a cash register, a pivoted actuator having a plurality of pivotal supports thereon arranged in the arc of a circle, a plurality of digit key levers each pivotally mounted on one of said supports, a digit key carried by each of said levers whereby upon actuation of any key, the inner end of said lever may be projected inwardly, a relatively, fixed stop arranged to be engaged by the inwardly projected ends of said key levers to limit the forward movement of said actuator and a pawl and ratchet coöperating with said actuator to lock the projected key lever against said fixed stop thereby preventing return movement of said actuator whereby the latter is positively locked against movement in either direction.

4. In a cash register, a pivoted actuator, digit keys thereon, a relatively fixed stop to be engaged by said keys to limit the forward movement of said actuator, a pawl and ratchet associated with said actuator to prevent return movement thereof, a release key for disengaging said pawl and ratchet to permit restoration of said actuator to initial position and means for maintaining said disengagement until initial position has been reached.

5. In a cash register, a pivoted actuator, digit keys thereon, a relatively fixed stop, a pawl and ratchet associated with said actuator to prevent return movement thereof, a release key for disengaging said pawl and ratchet to permit said return movement to initial position, a latch rendered operative by said release key for holding said pawl and ratchet out of engagement with each other during said return movement and means on said actuator for automatically tripping said latch when initial position is reached to permit reëngagement of said pawl and ratchet.

6. In a cash register, a pivoted actuator, digit keys thereon, a relatively fixed stop for limiting the forward movement of said actuator, a pawl and ratchet mechanism associated with said actuator, said mechanism being normally rendered inoperative by said stop to permit forward movement of said actuator, but being rendered operative when said stop is engaged by a digit key, whereby said mechanism operates to prevent reactuation of said actuator until it is fully restored to initial position and means for again rendering said mechanism inoperative when initial position is reached.

7. In a cash register, a pivoted actuator, a ratchet movable therewith, a movable stop lever for limiting the forward movement of said actuator, a pawl arranged, when in engagement with said ratchet, to prevent forward movement of said actuator, but to permit return movement thereof, said stop lever constituting a latch for normally holding said pawl out of engagement with said ratchet, means on said actuator for moving said stop lever to unlatch said pawl at the end of the forward movement of said actuator and means for causing a reengagement with said latch to hold it in operative position after restoration of said actuator to starting position.

8. In a cash register, a pivoted actuator having a differential movement, a double pawl and ratchet mechanism associated therewith, one pawl and ratchet operating to prevent movement of said actuator in a forward direction and the other pawl and ratchet mechanism operating to prevent movement of said actuator in a return direction, a latch for each pawl whereby it may be held in inoperative position, means for tripping one latch at the end of the forward movement of said actuator and means for tripping the other latch at the end of the return movement of said actuator to compel the full desired movement in both directions, said means being controlled by said actuator to operate for any of the differential movements thereof.

9. In a cash register, a pivoted actuator, having a pair of arc shaped ratchets thereon with the teeth arranged in opposite directions, a pair of pawls, each arranged to engage one ratchet to permit movement of said actuator

in one direction but not in the other and means controlled by said actuator at the limit of its stroke in either direction to render one or the other pair of pawls and ratchets operative to insure full movement of said actuator on the next succeeding stroke thereof regardless of the amplitude of said stroke.

10. In a cash register, an actuator, pawl and ratchet mechanism for preventing movement of said actuator in one direction, one member of said mechanism being movable with said actuator and another member thereof being relatively stationary, digit stops for moving the actuator in another direction, having an independent movement to extend said digit stops, a fixed stop engaged by the digit stops in the extended position for arresting movement of the actuator, said pawl and ratchet mechanism coöperating with the fixed stop to retain the digit stop in extended position to lock the actuator against movement in both directions.

11. In a cash register, an actuator having forward and return movement, controlling means allowing forward movement of said actuator, means to arrest the actuator, said controlling and said arresting means operating to lock the actuator, a second controlling means allowing return movement of said actuator, said second controlling means being rendered operative by said arresting means.

12. In a cash register, an actuator having forward and return movement, controlling means allowing forward movement of said actuator, means to arrest the actuator, said controlling and said arresting means operating to lock the actuator, a second controlling means allowing return movement of said actuator, said second controlling means set into operative condition by said arresting means, and means for rendering said first controlling means inoperative.

13. In a cash register, an actuator having a differential forward and return movement, controlling means operative during forward movement to prevent return movement of the actuator, a second controlling means inoperative during the forward movement to prevent forward movement, means to arrest the actuator and to render the second controlling means operative and means for rendering the first means inoperative during return movement of the actuator.

14. In a cash register, an actuator having a differential forward and return movement, controlling means operative during forward movement to prevent return movement of the actuator, a second controlling means inoperative during the forward movement to prevent forward movement, means to arrest the actuator and means to render the first controlling means inoperative and means for rendering the first means inoperative during return movement of the actuator, means for again rendering the first controlling means operative and means for again rendering the second means inoperative when the return movement of the actuator is completed.

15. In a cash register, an actuator having a differential movement, means to move said actuator forward, means coöperating therewith to arrest said actuator, controlling means governing the forward movement of said actuator, means to return said actuator to initial position, a second controlling means governing the return movement of said actuator, and release means to render said first controlling means inoperative and said arresting means rendering said second controlling means operative.

16. In a cash register, an actuator having forward and return movement, controlling means normally operative during the forward movement of the actuator, arresting means for arresting forward movement of said actuator, said controlling means and said arresting means coöperating to lock the actuator in arrested position, means to place the first controlling means in inoperative condition, and a second normally inoperative controlling means put into operative condition by the arresting means to control the actuator during return movement.

17. A cash register comprising a plurality of actuators provided with ratchet bars, a plurality of digit stops pivoted to the actuators and having a movement preliminary to the movement of the actuators, pawl mechanisms engaged by the digit stops to cause said mechanisms to engage the ratchet bars, stops engaged by the pawl mechanisms for limiting the movement of the actuators, pawls yieldingly engaging the actuators for preventing return movement of said actuators before the movements are completed and also for temporarily holding the actuators at the end of their movements.

18. A cash register comprising a plurality of actuators provided with ratchet bars, a plurality of digit stops pivoted to each actuator and each stop having a movement preliminary to the movement of the actuator to which it is connected, stops for limiting the movement of said digit stops with relation to the actuators, pawl mechanisms engaged by the digits stops to cause the pawl mechanisms to engage the ratchet bars, stops engaged by the pawl mechanisms for limiting the movements of the actuators, pivoted pawls engaging the ratchet bars, means for simultaneously moving all of said pawls out of engagement with the ratchet bars, means for locking said pawls in ratchet disengaging positions and means for automatically releasing the pawls from locking positions.

19. A cash register, comprising a plurality of actuators provided with ratchet bars, a plurality of digit stops pivoted to each actuator and each stop having a movement preliminary to the movement of the actuator to which it is connected, stops for limiting the movement of said digit stops with relation to the actuators, pawl mechanisms engaged by the digit stops to cause them to engage the ratchet bars, stops engaged by the pawl mechanisms for limiting the movement of the actuators, pivoted pawls yieldingly and independently engaging the ratchet bars, a shaft on which said pawls are pivoted, short arms carried by the shaft for engaging all of the pivoted pawls simultaneously, a key for locking said shaft, latches for locking said pivoted pawls in ratchet disengaging positions, and means for automatically releasing the pawls from locked position when the actuators are swung to their normal positions.

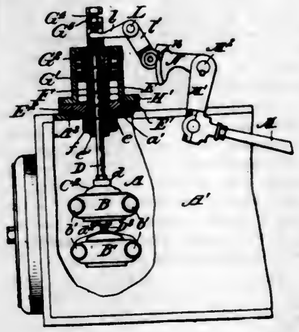
20. A cash register, comprising a plurality of pivoted actuators provided with segmental ratchet bars positioned concentrically with relation to the axial line of the pivoted connection of the actuators, a plurality of digit stops pivoted to each actuator and having their pivoted connections arranged in an arc which is also concentric with relation to the axial line, said digit stops having projecting fingers, stops for limiting the movement of the digit stops independently of the movements of the actuators, stop brackets, pawl mechanisms adapted to be engaged by digit stops which are depressed to move the pawls into engagement with the ratchet bars and other parts of the pawl mechanism into engagement with the stop brackets, a rock shaft provided with short arms, depending pawls loosely mounted on the shaft and having their lower ends engaging the ratchet bars, spring means for yieldingly holding the depending pawls in engagement with the ratchet bars, a releasing key connected to the rock shaft for causing the short arms to move the depending pawls out of engagement with the ratchet bars, latches for locking the depending pawls in ratchet disengaging positions, and projections carried by the actuators for automatically releasing said pawls from said latches.

21. A cash register having a plurality of pivoted actuators, each provided with a series of digit levers arranged thereon in an arc, a yieldingly mounted stop and a fixed abutment, said key levers being arranged to normally clear said yielding stop but adapted to engage the same when depressed to move said actuator, said engagement serving to move said yielding stop against said abutment whereby the movement of said actuator is positively limited by the latter.

22. In a cash register, a pivoted actuator, an arc shaped ratchet movable therewith, a pawl for normally preventing a return movement of said actuator, means for limiting the throw of said actuator to any one of nine successive positions, a release key for disengaging said pawl from said ratchet to permit restoration of said actuator, a latch for holding said pawl in disengaged position and a projection on said actuator for tripping said latch when said actuator is restored to initial position.

23. In a cash register, a plurality of pivoted actuators, nine key-levers pivoted to each actuator along an arc of a circle, a digit key carried by each lever, pins adjacent the inner ends of said levers, springs connecting adjacent levers, each serving to hold the lever above it against its stop to maintain said lever in normal position and each pin serving also to limit the movement of the adjacent lower lever about its pivot when the corresponding key is depressed.

13,768. STEAM-ENGINE VALVE MECHANISM. LE GRAND SKINNER, Erie, Pa. Filed Apr. 25, 1914. Serial No. 834,431. Original No. 1,033,204, dated July 23, 1912, Serial No. 661,632. (Cl. 136—6.)



1. In a double-seat engine valve a valve-body, an annular valve surface around the lower end thereof, and a valve-ring telescopically mounted on the upper end of said valve-body, substantially as and for the purpose set forth.

2. In a double-seat engine valve a valve-body, an annular valve surface around the lower end thereof, a valve-ring telescopically mounted on the upper end of said valve-body, a valve-stem rigidly secured in said valve-body, and means on said valve-stem to limit the movement of said telescopic valve-ring, substantially as and for the purpose set forth.

3. In a valve for steam engines, the combination of a valve-stem, a valve body, rigidly secured on said valve-stem, an annular valve surface around the lower end of said valve-body, a valve-cover slidably mounted on said valve-stem above said valve-body, a depending annular flange on said cover telescopically mounted upon the upper end of said valve-body, and an annular valve-surface around the lower edge thereof, substantially as and for the purpose set forth.

4. In a double-seat engine valve, a valve-stem, a valve-body rigidly secured thereon, guides depending from the lower end of said valve-body, an annular valve surface around the lower end of said valve body, a valve-cover having openings in the top thereof and provided with a limited movement on said valve-stem, an annular depending valve ring on said cover telescopically mounted on the upper end of said valve-body, and an annular valve surface around the lower edge of said valve-ring, substantially as and for the purpose set forth.

5. In an engine a flattened hollow casing adapted to be removably secured against the side of the cylinder within the steam-chest so that the cavity therein communicates with the cylinder ports, and having valve-seats in the flattened sides thereof communicating with cavity in said casing, substantially as set forth.

6. In a steam engine a hollow valve casing having a valve-seat opening in one wall thereof and an annular valve-seat upon the interior surface of the opposite wall thereof, adapted to be removably secured to an engine cylinder within the steam-chest so as to cover and communicating with the ports of the engine-cylinder, substantially as set forth.

7. In an engine a flattened hollow casing adapted to be bolted against the side of the cylinder within the steam-chest so that the cavity therein will communicate with the cylinder parts, and having valve-seat openings in the opposite flattened walls thereof, substantially as set forth.

8. In an engine-valve mechanism, an engine cylinder having port openings, a flattened hollow casing adapted to be bolted on the side of said cylinder within the steam-chest so that the cavity therein will communicate with a cylinder port, valve seats on the flattened sides thereof, and a valve adapted to seat down upon both of said seats substantially as set forth.

9. The combination in an engine-valve mechanism of a flattened hollow casing adapted to be removably secured to an engine cylinder within the steam-chest so that the cavity therein will communicate with a cylinder port, valve-seat openings in the opposite flattened walls thereof, and a double-seat valve adapted to seat down upon each of said valve-seat openings, substantially as set forth.

10. The combination in an engine-valve mechanism of two or more valve-seats arranged on an axial line vertically transverse to a radius of the engine cylinder, a valve-stem, one or more double-seat valves mounted in tandem upon said valve-stem so as to seat down upon all of said valve-seats in unison, and mechanism on said valve-stem between the valves thereon adapted to compensate for expansion and contraction in the coöperative parts of said valve mechanism, substantially as set forth.

11. The combination in a steam engine valve mechanism of a series of pairs of valve-seats arranged on the same axial line, a valve-stem, two or more double-seat valves mounted in tandem on said valve-stem and adapted to seat down upon each pair of said valve seats, one of said valves being rigidly secured to said valve-stem, and the rest of said valves having longitudinal movement on said valve-stem, a spring on said valve-stem, and means on said valve-stem adapted to press said spring against the movable valve on said valve-stem, substantially as set forth.

12. The combination in a steam engine valve mechanism of a series of valve-seats arranged in pairs on the same axial line, a valve stem, a valve-body rigidly secured on said valve-stem, an annular valve surface on the lower end thereof adapted to seat down upon the lower end of one pair of said valve-seats, an annular valve surface on the lower end thereof adapted to seat down upon the lower end of one pair of said valve-seats, an annular valve-ring telescopically mounted on the upper end of said valve-body, an annular valve surface on the lower edge of said valve-ring adapted to seat down upon the upper one of said pair of valve-seats, a stop on said valve stem above said valve-body adapted to limit the movement of said valve-ring on said valve-body, another valve-body slidably mounted on said valve-stem, an annular valve surface around the lower end of said slidable valve-body adapted to seat down upon the lower one of another pair of valve-seats, means on said valve-stem to limit the movement of said slidable valve-body thereon, a sleeve on said valve-stem above said slidable valve-body, a valve-ring telescopically mounted on the upper end of said slidable valve-body adapted to seat down upon the upper one of said second pair of valve-seats, means on said sleeve adapted to limit the movement of said valve-ring on said valve-body, a spring on said valve-stem, means on said valve-stem adapted to press said spring against said sleeve, substantially as and for the purpose set forth.

13. In a double seat valve the combination of a valve-stem, a valve body fixed thereon and having a seating-surface around one end thereof, and a valve cover slidably mounted on said stem and having a flange telescopically mounted on the other end of said body, said flange having a seating surface around the same.

14. In a double seat valve, the combination of a valve body having a seating-surface at one end thereof, and a valve cover on the other end of said body, said cover having a seating-surface, and also having openings to admit pressure to the valve body.

15. In a double seat valve, the combination of a valve body having a seating-surface at one end thereof and a valve cover on the other end of said body, said cover

having a seating-surface, and also having openings to admit pressure to the valve body, said cover having limited movement with respect to said body, to permit variations in distance between the seating-surfaces.

16. A double seat valve comprising two seating-parts relatively movable to compensate for expansion or contraction, both of said parts being exposed to pressure in the same direction tending to keep the same seated.

17. The combination with a double-ported valve casing, of a double seat valve comprising two seating parts relatively movable to compensate for expansion or contraction, one of said parts having a seating-surface cooperating with one part of the casing and having a pressure surface of greater area than said part, and the other part having a seating-surface coöperating with the other port and also having an opening to admit pressure to said pressure surface of the first mentioned part.

18. The combination with a double-ported valve casing, of a double seat valve comprising a body controlling one port and having a pressure surface exposed at the other port, and a cover mounted on said body, said cover controlling said other port and having an opening to admit pressure to said body.

19. The combination with a valve casing having double ports of different areas, of a double seat valve comprising two parts relatively movable to compensate for expansion or contraction, one of said parts controlling the smaller port and having a pressure surface exposed at the larger port and of greater area than the smaller port, whereby the pressure tends to hold said part seated and the other of said parts controlling said larger port.

20. In an engine valve mechanism, the combination with a plurality of multiple valve seats, of a valve stem, a plurality of multiple-seat valves mounted on said stem and coöperating with said seats, and means to compensate for expansion or contraction, in the coöperative parts of said mechanism.

21. In an engine valve mechanism, the combination with a plurality of multiple valve seats, of a valve stem, and a plurality of multiple-seat valves mounted on said stem, and coöperating with said seats, one of said valves being movable relative to the other, to compensate for expansion or contraction.

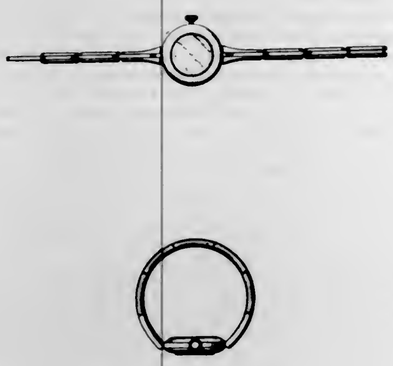
22. In an engine valve mechanism, the combination with a plurality of multiple valve seats, of a valve stem, a plurality of multiple-seat valves mounted on said stem and coöperating with said seats, said valves being relatively movable to compensate for expansion or contraction, and each valve comprising two parts also relatively movable to compensate for expansion or contraction.

23. A double seat valve of the hollow spool tpye, comprising two seating parts with a peripheral joint therebetween permitting relative movement of said parts.

24. A double seat valve of the spool type, comprising a recessed body having a seating-surface around one end thereof, and a cover having limited movement on the other end of said body, said cover having openings to admit fluid to the interior of said body.

DESIGNS.

46,040. WATCH-BRACELET OR SIMILAR ARTICLE. GEORGE B. AUSTIN, Attleboro, Mass., assignor to Austin and Stone, Inc., Attleboro, Mass., a Corporation of Rhode Island. Filed Apr. 9, 1914. Serial No. 830,814. Term of patent 7 years.



The ornamental design for a watch bracelet or similar article, as shown.

46,041. FONT OF TYPE. MORRIS FULLER BENTON, Plainfield, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 18, 1913. Serial No. 762,131. Term of patent 14 years.

ABCDEFGHIJKLMNO
PQRSTUVWXYZ&
$1234567890
abcdefghijklmnopqrs
tuvwxyz ,;:.-"!?

The ornamental design for a font of type shown in the accompanying drawing.

46,042. BACK FOR MIRRORS, BRUSHES, OR SIMILAR TOILET ARTICLES. GEORGE H. BERRY, Shelton, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed May 4, 1914. Serial No. 836,370. Term of patent 7 years.



The ornamental design for a back for mirrors, brushes, or similar toilet articles, as shown.

46,043. BACK FOR MIRRORS, BRUSHES, OR SIMILAR TOILET ARTICLES. GEORGE H. BERRY, Shelton, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed May 4, 1914. Serial No. 836,371. Term of patent 7 years.



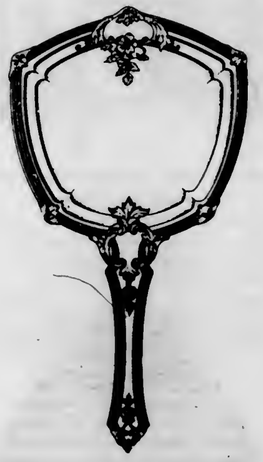
The ornamental design for a back for mirrors, brushes, or similar toilet articles, as shown.

46,044. BACK FOR MIRRORS, BRUSHES, OR SIMILAR TOILET ARTICLES. GEORGE H. BERRY, Shelton, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed May 4, 1914. Serial No. 836,372. Term of patent 7 years.



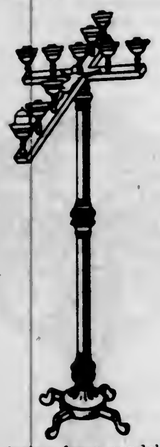
The ornamental design for a back for mirrors, brushes, or similar toilet articles, as shown.

46,045. BACK FOR MIRRORS, BRUSHES, OR SIMILAR TOILET ARTICLES. GEORGE H. BERRY, Shelton, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed May 4, 1914. Serial No. 836,373. Term of patent 7 years.



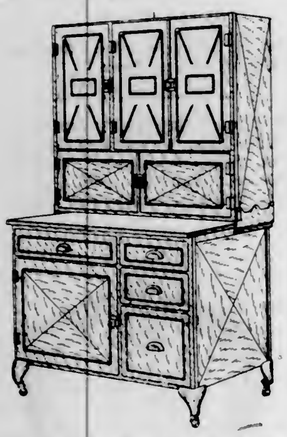
The ornamental design for a back for mirrors, brushes, or similar toilet articles, as shown.

46,046. CANDELABRUM. WILLIAM H. COSTIGAN, Saugquoit, N. Y. Filed Apr. 14, 1914. Serial No. 831,832. Term of patent 3½ years.



The ornamental design for a candelabrum as shown.

46,047. KITCHEN-CABINET. DWIGHT R. CURTENIUS, Kalamazoo, Mich., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Filed May 2, 1914. Serial No. 836,035. Term of patent 14 years.



The ornamental design for a kitchen cabinet, as shown.

46,048. WATER-HEATER. PETER A. DEASY, Oakland, Cal., assignor to Deasy Utilities Company, Oakland, Cal., a Corporation. Filed May 9, 1913. Serial No. 766,610. Term of patent 3½ years.



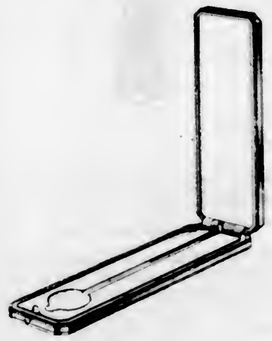
The ornamental design for a water heater, as shown.

46,049. BADGE. CHARLES J. DIEGES, New York, N. Y. Filed May 11, 1914. Serial No. 837,947. Term of patent 7 years.



The ornamental design for a badge, as shown.

46,050. BOX OR CASE FOR HOLDING AND DISPLAYING WATCH-BRACELETS. GEORGE FIESELER, Bellmore, N. Y., assignor to Hayden W. Wheeler and Co., New York, N. Y., a Corporation of New York. Filed Apr. 8, 1914. Serial No. 830,547. Term of patent 7 years.



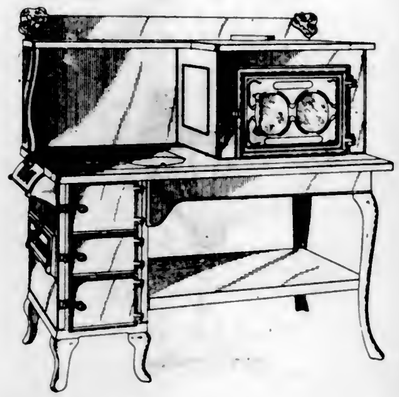
The ornamental design for a box or case for holding and displaying a watch bracelet, as shown.

46,051. ELECTRIC-LANTERN BASE. FREDERICK A. FISCHBUPP, Whiting, Ind. Filed Apr. 20, 1914. Serial No. 833,311. Term of patent 7 years.



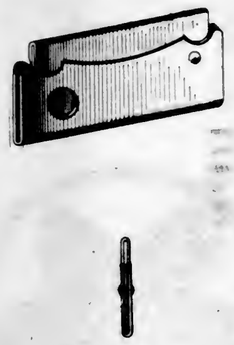
The ornamental design for an electric lantern base, as shown.

46,052. COOKING-RANGE. JOSIAH JEWETT, Jr., Buffalo, N. Y. Filed Apr. 24, 1914. Serial No. 834,214. Term of patent 14 years.



The ornamental design for a cooking range, as shown.

46,053. CIGAR-CUTTER. JOSEPH KAUFMAN, New York, N. Y. Filed May 8, 1914. Serial No. 837,343. Term of patent 3½ years.



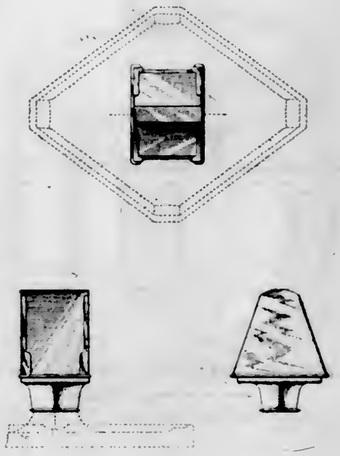
The ornamental design for a cigar cutter, as shown.

46,054. STOOL. EDWIN O. KLEMM, Saginaw, Mich., assignor of one-half to Edwin W. Schreiber, Yuma, Ariz. Filed May 5, 1914. Serial No. 836,554. Term of patent 14 years.



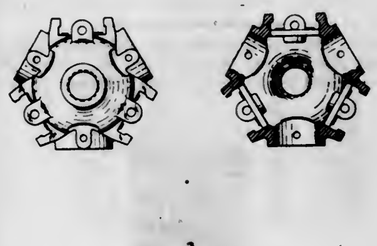
The ornamental design for a stool as shown.

46,055. HOLDER FOR BOOK OR CARD MATCHES AND THE LIKE. EDWIN A. MERRITT, New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1914. Serial No. 836,374. Term of patent 14 years.



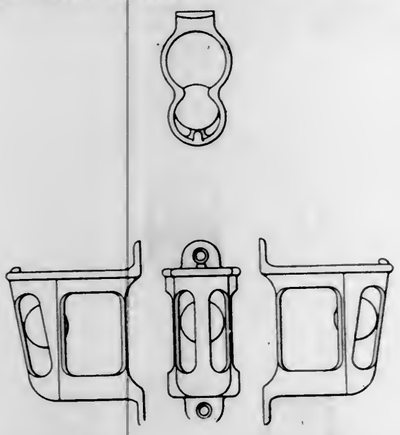
The ornamental design for a holder for book or card matches and the like substantially as shown.

46,056. DIE-HOLDER. JOHN B. MARTENS, Cleveland, Ohio. Filed Mar. 13, 1914. Serial No. 824,558. Term of patent 14 years.



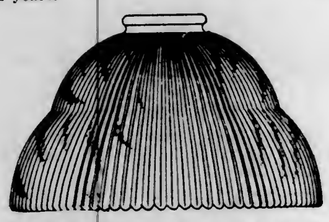
The ornamental design for a die holder substantially as shown in the drawings hereof.

46,057. BROOM-HOLDER. RAYMOND E. MCKEE, Chicago, Ill. Filed Apr. 30, 1914. Serial No. 835,539. Term of patent 3½ years.



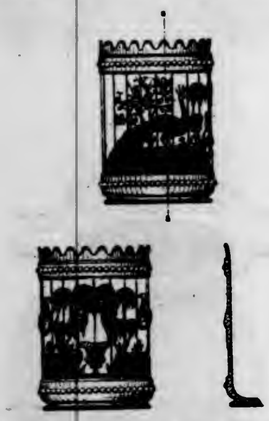
The ornamental design for a broom holder, as shown.

46,058. CORRUGATED PRESSED-GLASS SHADE OR REFLECTOR. OTIS A. MYGATT, New York, N. Y. Filed July 1, 1909. Serial No. 505,511. Term of patent 14 years.



The ornamental design for a corrugated pressed glass shade or reflector, substantially as shown and described.

46,059. SPOON-HOLDER OR SIMILAR ARTICLE. HARRY NORTHWOOD, Wheeling, W. Va. Filed Feb. 7, 1914. Serial No. 817,358. Term of patent 3½ years.



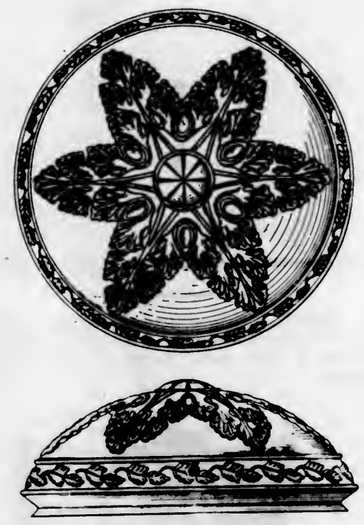
The ornamental design for a spoon holder or similar article as shown.

46,060. GOBLET. CHARLES W. OLDHAM, Steubenville, Ohio, assignor to Imperial Glass Company, Bellaire, Ohio, a Corporation of West Virginia. Filed Apr. 4, 1914. Serial No. 829,715. Term of patent 14 years.



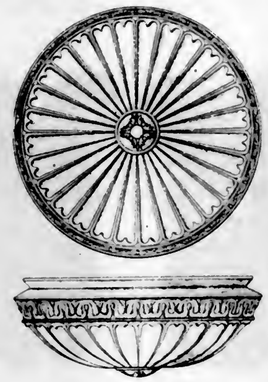
The ornamental design for a goblet as shown and described.

46,061. ARTIFICIAL-LIGHT INCLOSURE. CHARLES B. OTT, Echo Point, W. Va. Filed May 8, 1914. Serial No. 837,346. Term of patent 3½ years.



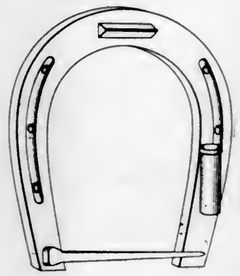
The ornamental design for an artificial light inclosure, as shown.

46,062. ARTIFICIAL-LIGHT INCLOSURE. CHARLES B. OTT, Echo Point, W. Va. Filed May 8, 1914. Serial No. 837,347. Term of patent 3½ years.



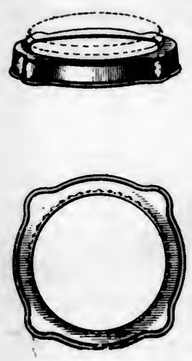
The ornamental design for an artificial light inclosure, as shown.

46,063. NECKTIE-HOLDER. SETH ESRA PEDERSON, Jud, N. D. Filed Apr. 15, 1914. Serial No. 832,138. Term of patent 3½ years.



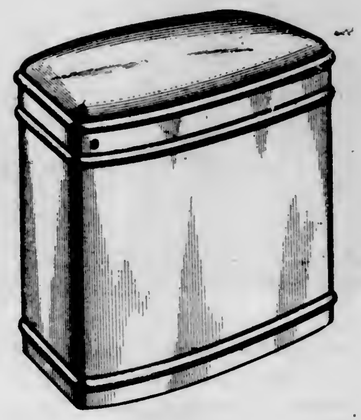
The ornamental design for a necktie holder substantially as shown.

46,064. SEAT-FRAME FOR BARBERS' CHAIRS. CHARLES PFANSCHMIDT, Chicago, Ill., assignor to Theo. A. Kochs Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 12, 1913. Serial No 806,350. Term of patent 7 years.



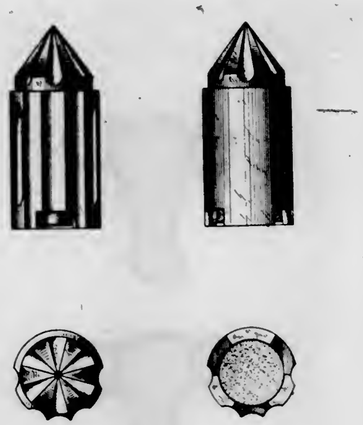
The ornamental design for a seat frame for barbers' chairs, substantially as shown.

46,065. TANK. CHARLES PFAU, Cincinnati, Ohio. Filed Apr. 11, 1914. Serial No. 831,120½. Term of patent 14 years.



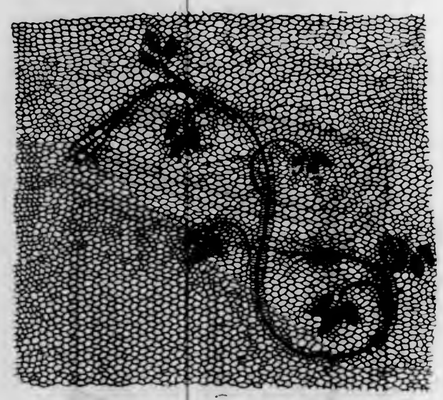
The ornamental design for a tank, substantially as shown.

46,066. BOTTLE. ALBERT E. PICKARD, Roslyn, N. Y. Filed Apr. 20, 1914. Serial No. 833,320. Term of patent 14 years.



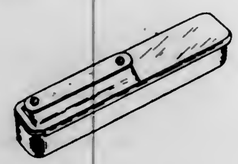
The ornamental design for a bottle as shown and described.

46,067. NET VEILING. ZEALIE VAN RAALTE, New York, N. Y. Filed May 8, 1914. Serial No. 837,345. Term of patent 3½ years.



The ornamental design for a net veiling as shown herein.

46,068. PENCIL-SHARPENER. JOHN R. SEARIGHT, Detroit, Mich. Filed Apr. 13, 1914. Serial No. 831,650. Term of patent 14 years.



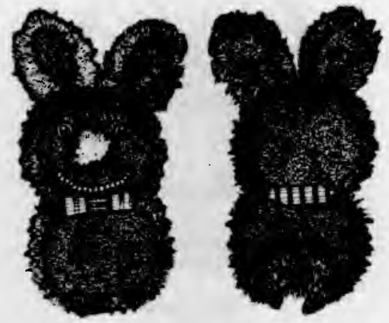
The ornamental design for a pencil sharpener, substantially as shown.

46,069. TOY. WALTER SCOLES, London, England, assignor to The Firm of J. K. Farnell, London, England. Filed Aug. 4, 1913. Serial No. 782,956. Term of patent 3½ years.



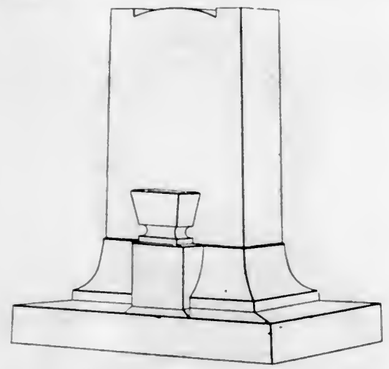
The ornamental design for a toy as shown.

46,070. TOY. WALTER SCOLES, London, England, assignor to The Firm of J. K. Farnell, London, England. Filed Aug. 4, 1913. Serial No. 782,957. Term of patent 3½ years.



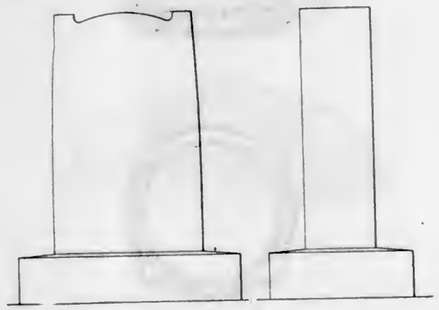
The ornamental design for a toy as shown.

46,071. MONUMENT. WALTER R. TRIGG, Rockford, Ill. Filed May 8, 1914. Serial No. 837,332. Term of patent 3½ years.



The ornamental design for a monument, as shown.

46,072. MONUMENT. WALTER R. TRIGG, Rockford, Ill. Filed May 8, 1914. Serial No. 837,334. Term of patent 3½ years.



The ornamental design for a monument, as shown.

46,073. ARTICLE OF MANUFACTURE. FREDERICK THOMAS WALKLETT, Tunstall, England, assignor to Rudolf Gaertner, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,763. Term of patent 3½ years.



The ornamental design for an article of manufacture, as shown.

46,074. ARTICLE OF MANUFACTURE. FREDERICK THOMAS WALKLETT, Tunstall, England, assignor to Rudolf Gaertner, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,764. Term of patent 3½ years.



The ornamental design for an article of manufacture, as shown.

46,075. ARTICLE OF MANUFACTURE. FREDERICK THOMAS WALKLETT, Tunstall, England, assignor to Rudolf Gaertner, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,765. Term of patent 3½ years.



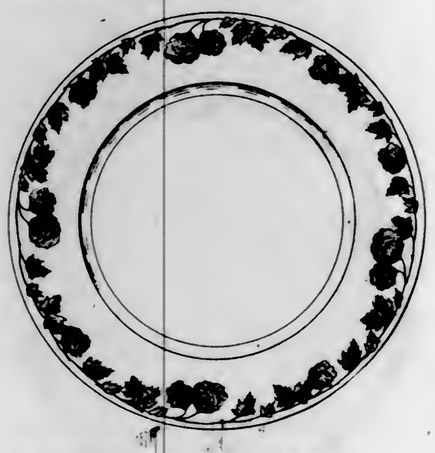
The ornamental design for an article of manufacture, as shown.

46,076. ARTICLE OF MANUFACTURE. FREDERICK THOMAS WALKLETT, Tunstall, England, assignor to Rudolf Gaertner, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,766. Term of patent 3½ years.



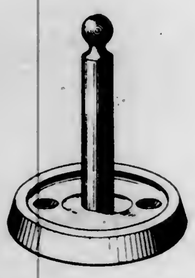
The ornamental design for an article of manufacture, as shown.

46,077. PLATE. ELMER E. WALTER, Syracuse, N. Y., assignor to Onondaga Pottery Company, Syracuse, N. Y., a Corporation. Filed May 22, 1914. Serial No. 840,391. Term of patent 7 years.



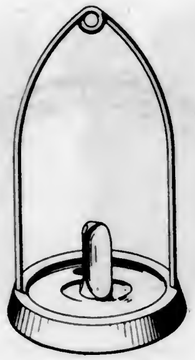
The ornamental design for a plate as shown.

46,078. TWINE-HOLDER. SIMON W. WARDWELL, Providence, R. I., assignor to Wardwell Braiding Machine Company, Portland, Me., a Corporation of Maine. Filed Apr. 17, 1914. Serial No. 832,651. Term of patent 14 years.



The ornamental design for a twine-holder as shown.

46,079. TWINE-HOLDER. SIMON W. WARDWELL, Providence, R. I., assignor to Wardwell Braiding Machine Company, Portland, Me., a Corporation of Maine. Filed Apr. 17, 1914. Serial No. 832,652. Term of patent 14 years.



The ornamental design for a twine-holder as shown.

46,080. TOY. JOHN VAL. KLEIN, Battle Creek, Nebr. Filed Feb. 24, 1914. Serial No. 820,767. Term of patent 14 years.



The ornamental design for a toy, as shown.

TRADE-MARKS

PUBLISHED JULY 7, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 56,469. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHAS. K. GLEASON, Philadelphia, Pa. Filed May 19, 1911.

Lin-None

Particular description of goods.—Mercerized Cotton Piece Goods.
Claims use since Aug. 3, 1910.

Ser. No. 60,876. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FRANCIS A. WOODS, Chicago, Ill., assignor to Woods Mobilette Company, Chicago, Ill., a Corporation of Arizona. Filed Jan. 17, 1912.

MOBILETTE

Particular description of goods.—Automobiles.
Claims use since the 28th day of March, 1911.

Ser. No. 62,697. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY A. WISE WOOD, New York, N. Y. Filed Apr. 6, 1912.

SAFETY

Particular description of goods.—Shaving-Cream.
Claims use since March, 1912.

Ser. No. 62,857. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOLOMON F. JOWERS, Rockford, Ala. Filed Apr. 12, 1912.

GEM

Particular description of goods.—Remedies for Neuralgia.
Claims use since Feb. 1, 1912.

Ser. No. 64,064. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FEDERAL MILLING COMPANY, Lockport, N. Y. Filed June 8, 1912.

LUCKY

Particular description of goods.—Wheat-Flour.
Claims use since May 20, 1907.

Ser. No. 64,120. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARTIN HONAKER, Sen., Honaker, Va. Filed June 11, 1912.



Which is a portrait of the applicant. I make no claim to the words "Honaker's Balm."
Particular description of goods.—A Remedy for Venereal Diseases.
Claims use since the 5th day of June, 1912.

Ser. No. 64,304. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) OAKVILLE COMPANY, Waterbury, Conn. Filed June 21, 1912.

DAMASCUS

Particular description of goods.—Safety-Pins.
Claims use since September, 1904.

Ser. No. 64,699. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEV-A-HONE RAZOR STROP COMPANY, New York, N. Y. Filed July 13, 1912.

NEV-A-HONE

Particular description of goods.—Razor-Strops.
Claims use since the early part of the year 1906.

Ser. No. 67,492. (CLASS 15. OILS AND GREASES.) E. F. HOUGHTON & COMPANY, Philadelphia, Pa. Filed Dec. 19, 1912.

COSMIC

Particular description of goods.—A Preventive of Oxidation.
Claims use since 1880.

Ser. No. 67,622. (CLASS 17. TOBACCO PRODUCTS.) DORR CIGAR FACTORY, Augusta, Ga. Filed Dec. 28, 1912.

1920

The word "Club" is not claimed as a feature of the mark.
Particular description of goods.—Cigars, Cheroots, Cigarettes, and Chewing and Smoking Tobaccos.
Claims use since about Jan. 1, 1911.

Ser. No. 68,045. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH MANUFACTURING CO., Atlanta, Ga., and Jacksonville, Fla. Filed Jan. 21, 1913.

Particular description of goods.—A Medicinal Remedy for Heartburn, Dyspepsia, and other Digestive Ailments, Also Cold-Cream and Remedies for Dandruff and Rheumatism.
Claims use since 1909.

Ser. No. 70,020. (CLASS 39. CLOTHING.) CHARLES BROADWAY ROUSS, New York, N. Y. Filed Apr. 23, 1913.

BROADWAY

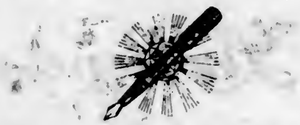
The border surrounding the word "Broadway" is produced in red in the trade-mark.
Particular description of goods.—Sweaters.
Claims use since July 1, 1912.

Ser. No. 70,348. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) ESTATE OF CHARLES F. GOEPEL, New York, N. Y.; Fannie J. Goepel executrix of Charles F. Goepel, deceased. Filed May 10, 1913.

QUALITY EFFICIENCY

No claim is made for the exclusive use of the words "Quality," "Established," or "Efficiency" appearing in the drawing.
Particular description of goods.—Bridge and Similar Pins; Rubber Buttons; Nails; Felt, Cloth, Paper, and Metallic Washers; Screws; Hinges; Wood and Metal Knobs and Similar Supplies, All Especially Adapted for Exclusive Use in the Making of Pianos and other Musical Instruments.
Claims use since about Dec. 3, 1912.

Ser. No. 70,658. (CLASS 37. PAPER AND STATIONERY.) GEM FOUNTAIN PEN CORPORATION, New York, N. Y. Filed May 26, 1913.



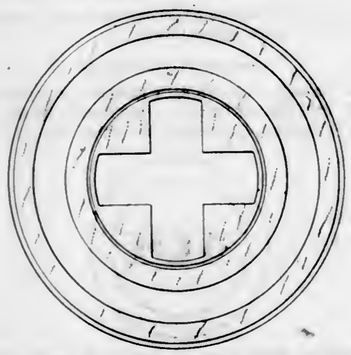
No claim being made for the exclusive use of the pictorial representation of the fountain-pen shown in said drawing.
Particular description of goods.—Fountain-Pens and the Parts Thereof.
Claims use since on or about Jan. 20, 1913.

Ser. No. 70,659. (CLASS 37. PAPER AND STATIONERY.) GEM FOUNTAIN PEN CORPORATION, New York, N. Y. Filed May 26, 1913.

GEM

Particular description of goods.—Fountain-Pens and the Parts Thereof.
Claims use since on or about Jan. 20, 1913.

Ser. No. 70,661. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE HILL-CANTON DRYER COMPANY, Canton, Ohio. Filed May 26, 1913.



Particular description of goods.—Drying-Cabinets.
Claims use since the year 1905.

Ser. No. 70,936. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



The picture being fanciful.
Particular description of goods.—Blackberry Cordial.
Claims use since Apr. 26, 1901.

Ser. No. 70,939. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Blackberry Cordial.
Claims use since Apr. 26, 1901.

Ser. No. 70,941. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Blackberry Cordial.
Claims use since Apr. 26, 1901.

Ser. No. 70,942. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



Consisting of a red cross.
Particular description of goods.—Furniture-Polish.
Claims use since Apr. 26, 1901.

Ser. No. 70,943. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.

RED

Particular description of goods.—Furniture-Polish.
Claims use since Apr. 26, 1901.

Ser. No. 70,944. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



The picture being fanciful.
Particular description of goods.—Furniture-Polish.
Claims use since Apr. 26, 1901.

Ser. No. 70,950. (CLASS 15. OILS AND GREASES.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Machine-Oil.
Claims use since Apr. 26, 1909.

Ser. No. 70,952. (CLASS 15. OILS AND GREASES.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.



The picture being fanciful.
Particular description of goods.—Machine-Oil.
Claims use since Apr. 26, 1901.

Ser. No. 70,953. (CLASS 15. OILS AND GREASES.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, Jackson, Tenn. Filed June 7, 1913.

RED

Particular description of goods.—Machine-Oil.
Claims use since Apr. 26, 1901.

Ser. No. 71,081. (CLASS 39. CLOTHING.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed June 12, 1913.



Particular description of goods.—Rubber Boots and Shoes.
Claims use since 1910.

Ser. No. 71,513. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOT SPRINGS CHEMICAL COMPANY, Chicago, Ill., assignor to Chemical Specialty Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1913.

NU-BO-KAY

The word "Nu-Bo-Kay."

Particular description of goods.—Perspiration-Powders, Talcum Powders, Toilet Creams, Hand-Lotions, and Bath-Salts.

Claims use since Mar. 1, 1913.

Ser. No. 71,776. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX PHILIPP REINHARDT, London, England. Filed July 16, 1913.

Renal

Particular description of goods.—A Compound to Free Boilers and Their Supply-Water of All Kinds of Sediments.

Claims use since Apr. 9, 1911.

Ser. No. 71,845. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed July 18, 1913.

Zellstyl

Particular description of goods.—Buttons, Handles for Office Requisites, Combs for the Hair, Napkin-Rings, Artificial Flowers and Fruits, Fans for Personal Use, Button-Hooks, Thimbles, Hat-Pins, Buckles for Belts for Personal Wear, Chains, Rings, Beads, Hat-Trimmings, Crosses, Medals, Collar-Studs, Basket-Work, All These Goods Made of Acetyl-Cellulose in Form of a Mass Like Ivory, Wood, Bone, Horn, Jet, Mother-of-Pearl, or Amber.

Claims use since Dec. 6, 1909.

Ser. No. 71,944. (CLASS 33. GLASSWARE.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed July 24, 1913.

SUDAN

Particular description of goods.—Glass Lamps, Glass Columns, Glass Bases, Glass Supports, Glass Globes, Glass Shades, Glass Reflectors, and Glass Bowls for Illuminating Purposes.

Claims use since Apr. 1, 1913.

Ser. No. 72,010. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR B. MORSE, Indianapolis, Ind., assignor to Hoosier Remedy Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 28, 1913.

LAXA-PIRIN

Particular description of goods.—Remedies for Colds, Headache, and La Grippe.

Claims use since July 26, 1913.

Ser. No. 72,159. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) QUEEN CITY SPECIALTY COMPANY, Buffalo, N. Y. Filed Aug. 4, 1913.

HOME BRIGHT

Particular description of goods.—Furniture and Automobile Polishes.

Claims use since July 22, 1913.

Ser. No. 72,465. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FLINT VARNISH WORKS, Flint, Mich. Filed Aug. 21, 1913.

Flint-tone

Particular description of goods.—Varnish, Driers, and Enamel.

Claims use since August, 1912.

Ser. No. 74,259. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Nov. 29, 1913.

J-M

Particular description of goods.—Water-Closet Bowls and Tanks, Lavatory-Urinal, Bath-Tub, Sink, Faucets, Metallic Valves, Float-Ball, Hinges, Water-Closet Seats and Covers, and Cast-Iron Fittings.

Claims use since the 11th day of December, 1912.

Ser. No. 74,747. (CLASS 17. TOBACCO PRODUCTS.) RANDOLPH ROSE, Chattanooga, Tenn. Filed Dec. 20, 1913.

ARMOR

Particular description of goods.—Cigars.

Claims use since Mar. 26, 1913.

Ser. No. 74,828. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) PALMER & SINGER MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 24, 1913.

Particular description of goods.—Motor-Vehicles.

Claims use since the 15th day of November, 1913.

Ser. No. 75,179. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HISCOX BROS. CO., Patchogue, N. Y. Filed Jan. 14, 1914.

CLYCOLEN

Particular description of goods.—Toilet Preparation Used as a Liquid Soap for Shampooing the Hair and Bathing Purposes.

Claims use since Dec. 30, 1913.

Ser. No. 75,315. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Jan. 20, 1914.

COAGULEN CIBA

No claim being made to the word "Coagulen."

Particular description of goods.—A Pharmaceutical Product Prepared from the Blood of Animals or Animal Substance and Particularly Applicable in Stanching, Where It Improves and Accelerates the Coagulation of the Blood.

Claims use since Jan. 21, 1913.

Ser. No. 75,382. (CLASS 33. GLASSWARE.) ALBERT H. FRANKEL, New York, N. Y. Filed Jan. 23, 1914.

The word "Holdfoam."

"HOLDFOAM"

Particular description of goods.—Covered Glass Containers—viz., Pitchers, Bottles, Jugs, Jars, and Tankards.

Claims use since about Jan. 1, 1914.

Ser. No. 75,674. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOS. A. GOODMAN, St. Louis, Mo. Filed Feb. 4, 1914.

Renoware

The word "Trade-Mark" being disclaimed.

Particular description of goods.—Cold-Cream, Massage Greaseless Cream, Face-Powder, and Peroxid of Hydrogen.

Claims use since July, 1912.

Ser. No. 75,813. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY L. BLOW, Tuckerton, N. J. Filed Feb. 10, 1914.

HEALO

Particular description of goods.—An Ointment.

Claims use since Jan. 1, 1913.

Ser. No. 75,825. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRICE FLAVORING EXTRACT COMPANY, Chicago, Ill. Filed Feb. 10, 1914.



The picture shown being fanciful, no claim being made to the words "Dr. Price's Delicious Flavoring Extract of True Vanilla."

Particular description of goods.—Flavoring Extracts for Foods.

Claims use since Jan. 19, 1914.

Ser. No. 75,901. (CLASS 12. CONSTRUCTION MATERIALS.) MARQUETTE CEMENT MANUFACTURING CO., Chicago, Ill. Filed Feb. 14, 1914.



"Marquette Cement Manufacturing Co., Chicago," being shown in blue letters in a peripheral white band edged with red lines, "Marquette Cement" being shown in white letters upon a concentric blue field immediately within the white peripheral band aforesaid, "Portland" being shown in a blue scroll extending substantially horizontally from opposite points in the concentric blue field, and the center being red. In the portion of the center below the blue scroll appears "Works, La Salle, Ill.," in blue letters, and in the portion above the center of the blue scroll are geometrical designs in while edged in blue. Exclusive right to the legends "Marquette Cement Manufacturing Co., Chicago," and "Marquette Portland Cement" and "Works, La Salle, Ill.," as a trade-mark is disclaimed.

Particular description of goods.—Portland Cement.

Claims use since the 1st day of January, 1897.

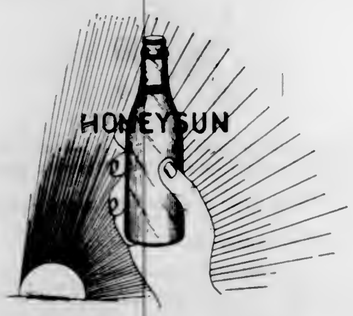
Ser. No. 76,000. (CLASS 33. GLASSWARE.) IMPERIAL GLASS COMPANY, Bellaire, Ohio. Filed Feb. 18, 1914.



Particular description of goods.—Glassware. This Glassware is What is Commonly Called Table-Glassware, Such as Tumblers, Goblets, Vases, Butter-Dishes, Water-Jugs, Punch-Bowls, and Similar Glass Articles Used on the Table.

Claims use since Jan. 12, 1914.

Ser. No. 76,139. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE A. HAGENI, New Orleans, La. Filed Feb. 25, 1914.



Particular description of goods.—Syrups for Table Use.
Claims use since the 1st day of November, 1913.

Ser. No. 76,229. (CLASS 20. LINOLEUM AND OILED CLOTH.) ARMSTRONG CORK & INSULATION COMPANY, Pittsburgh, Pa. Filed Feb. 28, 1914.

LINOTILE

Particular description of goods.—Composition Floor-Tiles of Linoleum or other Material Containing Cork or Wood-Pulp.
Claims use since the 20th day of February, 1914.

Ser. No. 76,364. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. D. KENNY CO., Baltimore, Md. Filed Mar. 5, 1914. Under ten-year proviso.

CHEON

Particular description of goods.—Tea.
Claims use since 1881.

Ser. No. 76,432. (CLASS 32. FURNITURE AND UPHOLSTERY.) FLINT FINE FURNITURE COMPANY, INC., New York, N. Y. Filed Mar. 7, 1914.

"BUY OF THE MAKER"
FFF *Flint Fine Furniture Co.*
Incorporated

The phrase "Buy of the Maker" being disclaimed. The words "Flint Fine Furniture Co. Incorporated" is a facsimile of the name of the corporation as written by William B. Lawrence, the president thereof.
Particular description of goods.—Tables, Cabinets, Upholstered Chairs, Seats, and Bookcases.
Claims use since Mar. 6, 1914.

Ser. No. 76,525. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ABOLISHER CHEMICAL COMPANY, Buffalo, N. Y. Filed Mar. 11, 1914.



Particular description of goods.—Powder for Cleaning Floors and other Woodwork, Marble, Tile, Brass, Porcelain, Bath-Tubs, &c.
Claims use since 1902.

Ser. No. 76,579. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE EAGLE KANT-SLIP PATCH CO., Cleveland, Ohio. Filed Mar. 12, 1914.



Our trade-mark consists of an eagle carrying a tire in its claws.
Particular description of goods.—Rubber Adhesive Patches for Rubber, Leather, and the Like Material.
Claims use since the 12th of February, 1914.

Ser. No. 76,686. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY B. KLEINE, Covington, Ky. Filed Mar. 16, 1914.

ROYAL

Particular description of goods.—Squabs.
Claims use since approximately March, 1908.

Ser. No. 76,707. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) RUBBER SUNDRIES COMPANY, Cleveland, Ohio. Filed Mar. 16, 1914.



The trade-mark comprising a black band extending diagonally across the body of the receptacle and the words "Black Band" appearing in a space in said band, the representation of the water bottle itself being disclaimed.
Particular description of goods.—Rubber Water-Bottles, Fountain-Syringes, and Ice-Caps.
Claims use since October, 1911.

Ser. No. 76,716. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEFFERSON D. NIFONG, Colorado Springs, Colo. Filed Mar. 17, 1914.



Particular description of goods.—Preparations for the Prevention of Venereal Diseases.
Claims use since Mar. 1, 1914.

Ser. No. 76,796. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE KEYLESS LOCK CO., Indianapolis, Ind. Filed Mar. 20, 1914.

MET-L-KRAFT

Particular description of goods.—Steel Furniture.
Claims use since Jan. 20, 1914.

Ser. No. 76,865. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEYER, FOOTE & DAYTON CO., Rochester, N. Y. Filed Mar. 23, 1914. Under ten-year proviso.

FOOTE'S

Particular description of goods.—Coffee and Tea.
Claims use since May 1, 1893.

Ser. No. 76,880. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SNOW FLAKE CANNING CO., Brunswick, Me. Filed Mar. 23, 1914.

Snow Flake

Particular description of goods.—Canned Corn.
Claims use since Aug. 20, 1885.

Ser. No. 76,921. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CURNES AND HOOD CONFECTIONERY CO., Chicago, Ill. Filed Mar. 25, 1914.

Punch's

Particular description of goods.—Salted Peanuts, Pistachio-Nuts, Salted Almonds, Stuffed Dates, and Filberts.
Claims use since Feb. 5, 1914.

Ser. No. 76,923. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLGATE & CO., Jersey City, N. J., and New York, N. Y. Filed Mar. 25, 1914.

RADIANT

Particular description of goods.—Liquid and Powdered Perfumes.
Claims use since the 20th day of March, 1914.

Ser. No. 77,163. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF LOUISIANA, Baton Rouge, La. Filed Apr. 2, 1914.



No claim is made to the use of the words "Standard Oil Company of Louisiana" or to the use of the words "Trade Mark."
Particular description of goods.—Gasolene; Naphtha; Refined Oil for Illuminating, Heating, and Power Purposes; Lubricating-Oil, Fuel-Oil, and Engine-Distillate.
Claims use since Dec. 23, 1913.

Ser. No. 77,185. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) McBRIDE, EARL & POLLARD, Detroit, Mich. Filed Apr. 3, 1914.



Our trade-mark consists of the word "Tango." No claim is made to the words "Refreshing, Invigorating, Sparkling, Healthful," "McBride, Earl & Pollard," and "Harmless Color Added," or to the colors and representation of the diamond figure as shown in connection with the word "Tango."

Particular description of goods.—Soft Drinks—Namely, Ginger-Ale, Pop, and Soda-Waters.

Claims use since the month of November, 1913.

Ser. No. 77,268. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM F. CUTLER, San Francisco, Cal. Filed Apr. 7, 1914.



In which the portrait is that of Louis Pasteur, deceased.

Particular description of goods.—Antitoxin Chewing-Gum.

Claims use since Mar. 10, 1914.

Ser. No. 77,303. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE DART MANUFACTURING COMPANY, Waterloo, Iowa. Filed Apr. 8, 1914.



Particular description of goods.—Motor-Trucks.

Claims use since on or about Apr. 1, 1914.

Ser. No. 77,351. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) MILWAUKEE SALES CO., Milwaukee, Wis. Filed Apr. 9, 1914.



Particular description of goods.—Floor Cleaning and Polishing Devices—Namely, Oil-Mops and Floor-Polishing Brushes.

Claims use since March, 1909, for oil-mops; since March, 1911, for floor-polishers.

Ser. No. 77,390. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) PRESSED METAL RADIATOR COMPANY, Pittsburgh, Pa. Filed Apr. 10, 1914.

Presto

Particular description of goods.—Steam and Hot-Water Boilers and Radiators.

Claims use since about May 9, 1910.

Ser. No. 77,488. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOOS-OLENE CO., Superior, Wis. Filed Apr. 15, 1914.



Particular description of goods.—A Remedy for Sore Throats, Stiff Necks, and Pains in the Chest.

Claims use since prior to Oct. 1, 1913.

Ser. No. 77,492. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) KATZ BROTHERS LEATHER GOODS CO., New York, N. Y. Filed Apr. 15, 1914. Under ten-year proviso.



Particular description of goods.—Dress-Suit Cases and Traveling-Bags.

Claims use since the 1st day of January, 1893.

Ser. No. 77,517. (CLASS 39. CLOTHING.) BYCK BROS. & CO., Louisville, Ky. Filed Apr. 17, 1914. Under ten-year proviso.



Particular description of goods.—Leather Shoes.

Claims use since the 15th day of March, 1893.

Ser. No. 77,542. (CLASS 39. CLOTHING.) OUTING SHOE CO., Boston, Mass. Filed Apr. 17, 1914.

UNICO

Particular description of goods.—Footwear—Namely, Leather, Cloth, and Felt Shoes and Slippers.

Claims use since Mar. 20, 1899.

Ser. No. 77,552. (CLASS 39. CLOTHING.) CHARLES A. POWELL, Whitesboro, N. Y. Filed Apr. 17, 1914.

Belle-Fay

Particular description of goods.—Ladies' and Children's Ribbed Cotton Knitted Vests, Pants, Union Suits, and Corset-Covers.

Claims use since July 1, 1912.

Ser. No. 77,557. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DULLENE MFG. COMPANY, Philadelphia, Pa. Filed Apr. 18, 1914.



Particular description of goods.—A Dressing for All Dull Leather.

Claims use since about Mar. 16, 1914.

Ser. No. 77,567. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HORACE T. POTTS & Co., Philadelphia, Pa. Filed Apr. 18, 1914.

TROJAN

Particular description of goods.—Tool-Steel.

Claims use since the year 1909.

Ser. No. 77,596. (CLASS 39. CLOTHING.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Apr. 20, 1914.

AMERICAN MECHANIC

Particular description of goods.—Men's and Boys' Hosiery.

Claims use since Apr. 1, 1914.

Ser. No. 77,634. (CLASS 39. CLOTHING.) PACIFIC COMMERCIAL COMPANY, Manila, Philippine Islands, and New York, N. Y. Filed Apr. 21, 1914.



Particular description of goods.—Straw Hats.

Claims use since Feb. 19, 1914.

Ser. No. 77,675. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE R. M. HOLLINGSHEAD CO., Camden, N. J. Filed Apr. 23, 1914.

SHULIFE

Particular description of goods.—Polishes, Dressers, and Cleansers for Shoes of Leather, Canvas, and other Materials.

Claims use since about May 18, 1908.

Ser. No. 77,741. (CLASS 32. FURNITURE AND UPHOLSTERY.) CARROM-ARCHARENA CO., Ludington, Mich. Filed Apr. 25, 1914.

ACME

Particular description of goods.—Tables.

Claims use since July 1, 1908.

Ser. No. 77,768. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CONSOLIDATED DRUG CO. INC., Washington, D. C. Filed Apr. 27, 1914.



Particular description of goods.—Arnica Salve, Carbolic Salve, Corn-Paint, and Corn-Plaster.

Claims use since December, 1913.

Ser. No. 77,777. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE JOSEPH HENSLER BREWING COMPANY, Newark, N. J. Filed Apr. 27, 1914.



Particular description of goods.—Malt Beverages.

Claims use since 1908.

Ser. No. 77,809. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NUWAY MANUFACTURING CO., Souderton, Pa. Filed Apr. 27, 1914.

NUWAY

Particular description of goods.—Soap.

Claims use since Oct. 13, 1913.

Ser. No. 77,832. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) HIBBARD, SPENCER, BARTLETT & Co., Chicago, Ill. Filed Apr. 28, 1914.



Particular description of goods.—Lanterns, Kerosene-Lamps, Gasolene-Lamps, Vapor-Lamps, Lamp-Mantles, Steel Ranges, Lamp-Burners, and Heating Stoves and Ranges, Not Electrical.
Claims use since 1907 as to lanterns; 1910 as to kerosene-lamps, gasolene-lamps, vapor-lamps, lamp-mantles; 1911 as to steel ranges and stoves; February, 1913, as to lamp-burners.

Ser. No. 77,846. (CLASS 31. FILTERS AND REFRIGERATORS.) THE PIPER COOLING AND PRESERVING COMPANY, Jackson, Mo. Filed Apr. 28, 1914.



Particular description of goods.—Refrigerators.
Claims use since about Jan. 1, 1914.

Ser. No. 77,849. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE TIMBER FIREPROOFING COMPANY, LIMITED, London, England. Filed Apr. 28, 1914.

OXYLENE

Particular description of goods.—Fireproof Timber.
Claims use since November, 1913.

Ser. No. 77,879. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) FAIRBANKS, MORSE & COMPANY, Chicago, Ill. Filed Apr. 30, 1914.

ECLIPSE

Particular description of goods.—Laundry-Washing Machines.
Claims use since about the month of February, 1914.

Ser. No. 77,895. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SOLON PALMER, New York, N. Y. Filed Apr. 30, 1914.

GARDENGLO

Particular description of goods.—Toilet Soap.
Claims use since Jan. 24, 1913.

Ser. No. 77,905. (CLASS 37. PAPER AND STATIONERY.) WHITING PAPER COMPANY, Holyoke, Mass. Filed Apr. 30, 1914.

REGIONAL BANK BOND

No claim being made to the word "Bond."
Particular description of goods.—Ledger-Paper and Writing-Papers.
Claims use since on or about Apr. 1, 1914.

Ser. No. 77,957. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CHRISTINA J. HIGLEY, New York, N. Y. Filed May 2, 1914. Under ten-year proviso.

"HALEY"

Particular description of goods.—Hose-Supporters.
Claims use since 1894.

Ser. No. 78,005. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 5, 1914.



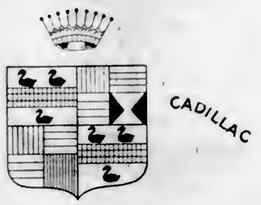
Particular description of goods.—Handkerchiefs.
Claims use since November, 1913.

Ser. No. 78,008. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 5, 1914.

Hoosier

Particular description of goods.—Handkerchiefs.
Claims use since November, 1913.

Ser. No. 78,009. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 5, 1914.



Particular description of goods.—Handkerchiefs.
Claims use since May, 1911.

Ser. No. 78,010. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 5, 1914.

EUREKA

Particular description of goods.—Handkerchiefs.
Claims use since Nov. 1, 1913.

Ser. No. 78,011. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 5, 1914.

PRINSEX

Particular description of goods.—Handkerchiefs.
Claims use since Nov. 1, 1913.

Ser. No. 78,025. (CLASS 39. CLOTHING.) KEIFFER BROS. Co., New Orleans, La. Filed May 6, 1914.



Particular description of goods.—Leather Shoes.
Claims use since Apr. 25, 1914.

Ser. No. 78,031. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MASON & HANSON, New York, N. Y. Filed May 6, 1914.



Particular description of goods.—Woolen Piece Goods and Tailors' Trimmings—viz., Linings.
Claims use since 1803.

Serial No. 78,037. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY M. SPAHR, Baltimore, Md. Filed May 6, 1914.



The word "Bluing" shown in the accompanying drawing forms no part of my trade-mark, and the use thereof is hereby disclaimed.
Particular description of goods.—Laundry Bluing.
Claims use since Apr. 22, 1914.

Ser. No. 78,051. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) AMERICAN SYRUP & EXTRACT Co., Memphis, Tenn. Filed May 7, 1914.

Tango

Particular description of goods.—A "Soft" Drink Containing Grape Acid and Simple Syrup.
Claims use since March, 1914.

Ser. No. 78,054. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & Co., New York, N. Y. Filed May 7, 1914.

USIT

Particular description of goods.—Handkerchiefs.
Claims use since Nov. 1, 1913.

Ser. No. 78,073. (CLASS 38. PRINTS AND PUBLICATIONS.) MAX GREENBERG & Co., New York, N. Y. Filed May 7, 1914.



Particular description of goods.—A Monthly Publication.
Claims use since Apr. 2, 1914.

Ser. No. 78,087. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MASON & HANSON, New York, N. Y. Filed May 7, 1914.



Particular description of goods.—Woolen Piece Goods and Tailors' Trimmings—viz., Linings.
Claims use since 1899.

Ser. No. 78,118. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WEEBER & DON, New York, N. Y. Filed May 7, 1914.

Bonnieseed

The word "Bonnieseed."
Particular description of goods.—Grass, Vegetable, Flower, and Farm Seeds.
Claims use since the 1st day of February in the year 1914.

Ser. No. 78,129. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDIANA CHEMICAL COMPANY, Jonesboro, Ind. Filed May 8, 1914.

CERVAL

The trade-mark consists of the word "Cerval."

Particular description of goods.—Liniment; Hair-Tonic; Corn Remedy; Toothache Remedy; Toilet Cream; Salve; Remedy for Cold and Coughs; Headache Remedy; and Paste Used for Allaying Inflammation.

Claims use since prior to Feb. 1, 1914.

Ser. No. 78,171. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FREDERICK W. LIPPS COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed May 9, 1914.

TERRAPIN



Particular description of goods.—Candy.

Claims use since Apr. 29, 1914.

Ser. No. 78,175. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) PAUL J. SPEICHER, Gaston, Ind. Filed May 9, 1914.

LAWN PARK

Particular description of goods.—A Brood-Coop.

Claims use since Jan. 2, 1914.

Ser. No. 78,231. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GEORGE W. BARLOW, Jr., New York, N. Y. Filed May 13, 1914.



Particular description of goods.—Ladies' Neckwear and Neckscarfs.

Claims use since Mar. 1, 1913.

Ser. No. 78,233. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 13, 1914.

OLGUANCO

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,234. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 13, 1914.

TOPAZ

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,235. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 13, 1914.

PELICAN

Particular description of goods.—Fertilizers.

Claims use since 1904.

Ser. No. 78,236. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 13, 1914.

CURLEW

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,237. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 13, 1914.

CHUCKATUCK

Particular description of goods.—Fertilizers.

Claims use since 1910.

Ser. No. 78,258. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 13, 1914.

TOURAINE

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,259. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 13, 1914.

DESOTO

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,260. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 13, 1914.

PRESTO

Particular description of goods.—Fertilizers.

Claims use since 1910.

Ser. No. 78,261. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 13, 1914.

RUSSET

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,302. (CLASS 27. HOROLOGICAL INSTRUMENTS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed May 15, 1914.

EKKO

Particular description of goods.—Alarm-Clocks.

Claims use since May 6, 1914.

Ser. No. 78,321. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES TIEDEMANN MILLING CO., O'Fallon, Ill. Filed May 15, 1914.

SILVERTIP

Particular description of goods.—Wheat-Flour.

Claims use since about Apr. 13, 1889.

Ser. No. 78,397. (CLASS 39. CLOTHING.) WILLIAM ROSENFIELD, Philadelphia, Pa. Filed May 19, 1914.

THE ALERT FRAME

The words "The" and "Frame" are hereby specifically disclaimed.

Particular description of goods.—Women's Hat and Bonnet Frames Made of Wire; Willow; Buckram; Hat-Net; Sparterette; Mercerized Silk; Mercerized Cotton, and Wire Covered with Any of the Aforenamed Materials.

Claims use since Feb. 1, 1912.

Ser. No. 78,435. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 21, 1914.

CORALINE

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,441. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MOSE H. LAND MILLING COMPANY, Marshall, Mo. Filed May 21, 1914.



Particular description of goods.—Self-Rising Flour.

Claims use since Feb. 24, 1914.

Ser. No. 78,445. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

DELIGHT

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,447. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

YELLOW BARK

Particular description of goods.—Fertilizers.

Claims use since 1911.

Ser. No. 78,448. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

BONANZA

Particular description of goods.—Fertilizers.

Claims use since 1902.

Ser. No. 78,449. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

SOVEREIGN

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,451. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

GOLDEN ROD

Particular description of goods.—Fertilizers.

Claims use since 1911.

Ser. No. 78,454. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

GOLD SEAL

Particular description of goods.—Fertilizers.

Claims use since 1911.

Ser. No. 78,455. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

RIALTO

Particular description of goods.—Fertilizers.

Claims use since 1914.

Ser. No. 78,456. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

BIG CHIEF

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,457. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

SPARTAN

Particular description of goods.—Fertilizers.
Claims use since 1910.

Ser. No. 78,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHORN & BROWER, New York, N. Y. Filed May 21, 1914.

EARLY BLOSSOM

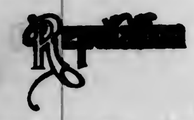
Particular description of goods.—Tea.
Claims use since the year 1904.

Ser. No. 78,463. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX I. BRANDT, New York, N. Y. Filed May 22, 1914.

INTESTOL

Particular description of goods.—A Medicine for Disorders of the Digestive Tract.
Claims use since May 1, 1914.

Ser. No. 78,475. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOVELL & COVEL COMPANY, Boston, Mass. Filed May 22, 1914.



Particular description of goods.—Candies.
Claims use since May 1, 1900.

Ser. No. 78,476. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOVELL & COVEL COMPANY, Boston, Mass. Filed May 22, 1914.



Particular description of goods.—Candies.
Claims use since Jan. 1, 1907.

Ser. No. 78,477. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOVELL & COVEL COMPANY, Boston, Mass. Filed May 22, 1914.



Particular description of goods.—Candies.
Claims use since Jan. 1, 1903.

Ser. No. 78,480. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. W. MORRIS CO., New York, N. Y. Filed May 22, 1914.



Particular description of goods.—Dates.
Claims use since the 20th day of May, 1914.

Ser. No. 78,481. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SUCCESS NOVELTY ADS CO., INC., New York, N. Y. Filed May 22, 1914.

PRINCESS

Particular description of goods.—Needles for Hand-Sewing.
Claims use since Apr. 22, 1914.

Ser. No. 78,485. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROY WANGENHEIM, Buffalo, N. Y. Filed May 22, 1914.

Divinity

Particular description of goods.—Candy.
Claims use since September, 1913.

Ser. No. 78,498. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Filed May 23, 1914.

GUADARALI

Particular description of goods.—Coffee.
Claims use since Nov. 1, 1896.

Ser. No. 78,508. (CLASS 10. FERTILIZERS.) THE ROBERT A. WOOLDRIDGE COMPANY, Baltimore, Md. Filed May 23, 1914.



Particular description of goods.—Fertilizers.
Claims use since 1896.

Ser. No. 78,516. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CASERTA WINE CO., New York, N. Y. Filed May 25, 1914.



Particular description of goods.—Olive-Oil.
Claims use since December, 1912.

Ser. No. 78,541. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNIVERSAL WINDING COMPANY, Providence, R. I., and Boston, Mass. Filed May 25, 1914. Under ten-year proviso.

UNIVERSAL WINDING MACHINES

Particular description of goods.—Winding-Machines and Parts Thereof for Winding Yarn, Thread, and other Material in Cones, Cops, Bobbins, and Packages.
Claims use since July 1, 1893.

Ser. No. 78,559. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ABRAHAM LEVY, New York, N. Y. Filed May 26, 1914.



No claim being made to the words "Ever Wear Silver."
Particular description of goods.—Brass, Copper, Gold, and Silver.
Claims use since Jan. 1, 1914.

Ser. No. 78,561. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MULCONROY COMPANY INCORPORATED, Philadelphia, Pa. Filed May 26, 1914.

SAFETY-FIRST

Particular description of goods.—Hose-Fittings.
Claims use since about May 18, 1914.

Ser. No. 78,569. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WIEBUSCH & HILGER, LIMITED, New York, N. Y. Filed May 26, 1914.

CHALLENGE

Particular description of goods.—Flat and Round Nose Pliers, Side-Cutting Pliers and Cutting-Nippers, Blacksmiths' Pliers and Nippers, Carpenters' Pincers, Wrenches, Trowels.
Claims use since about 1900.

Ser. No. 78,571. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) C. H. WHEELER MANUFACTURING COMPANY, Philadelphia, Pa. Filed May 26, 1914.

MULTIFLEX

Particular description of goods.—Valves, and More Particularly Atmospheric Exhaust Relief-Valves.
Claims use since on or about July 1, 1912.

Ser. No. 78,574. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD-OWSLEY CO., Aberdeen, S. D. Filed May 26, 1914.

CHONUT

Particular description of goods.—Candy.
Claims use since Jan. 5, 1914.

Ser. No. 78,582. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa. Filed May 27, 1914.

PEER

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since about January, 1890.

Ser. No. 78,584. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Boston, Mass. Filed May 27, 1914.

JAVAMEL

Particular description of goods.—Biscuit.
Claims use since May 8, 1914.

Ser. No. 78,599. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CANADIAN MILL AND ELEVATOR COMPANY, El Reno, Okla. Filed May 28, 1914.

HONEST ABE

Particular description of goods.—Wheat-Flour.
Claims use since Apr. 1, 1914.

Ser. No. 78,610. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JESSE M. HUTCHINS, Lake Charles, La. Filed May 28, 1914.



The same being a portrait of myself.
Particular description of goods.—A Preparation for the Treatment of Consumption and Diseases of the Throat and Lungs.
Claims use since May 19, 1914.

Ser. No. 78,622. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SHELBY CANDY & MFG. CO., Shelby, Ohio. Filed May 28, 1914.



Particular description of goods.—Candies.
Claims use since on or about May 20, 1914.

Ser. No. 78,629. (CLASS 37. PAPER AND STATIONERY.) HENRY TRENCHARD, Jr., New York, N. Y. Filed May 28, 1914. Under ten-year proviso.

TENSION

Particular description of goods.—Envelops.
Claims use since about the year 1883.

Ser. No. 78,630. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALIER & SPIES MILLING CO., St. Louis, Mo. Filed May 28, 1914.

CLEMATIS

Particular description of goods.—Wheat-Flour.
Claims use since Nov. 14, 1893.

Ser. No. 78,646. (CLASS 10. FERTILIZERS.) COBB COUNTY CHEMICAL MINING CO., Atlanta, Ga. Filed May 29, 1914.

FELSPOTASH

Particular description of goods.—Chemical Drier for Fertilizers.
Claims use since Aug. 15, 1912.

Ser. No. 78,652. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY FORD, Detroit and Dearborn township, Wayne county, Mich. Filed May 29, 1914.

WILDWOOD

Particular description of goods.—Butter.
Claims use since June 24, 1909.

Ser. No. 78,655. (CLASS 20. LINOLEUM AND OILED CLOTH.) GERMANIA IMPORTING CO., New York, N. Y. Filed May 29, 1914.



Particular description of goods.—Linoleums.
Claims use since Jan. 1, 1904.

Ser. No. 78,672. (CLASS 37. PAPER AND STATIONERY.) BINNEY & SMITH COMPANY, East Orange, N. J., and New York, N. Y. Filed June 1, 1914.

CERATA

Particular description of goods.—Crayons.
Claims use since May 1, 1914.

Ser. No. 78,674. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1 1914.

Beacon

Particular description of goods.—Napped Cotton Goods and Napped Cotton Goods of Blanket Construction.
Claims use since April, 1905.

Ser. No. 78,676. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1, 1914.

Beacon

Particular description of goods.—Quilts.
Claims use since the 1st day of April, 1912.

Ser. No. 78,678. CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1, 1914.

Beacon

Particular description of goods.—Cotton Rugs and Textile Bath-Mats.
Claims use since the 1st day of April, 1912.

Ser. No. 78,680. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1, 1914.

Beacon

Particular description of goods.—Robe-Flannel in the Piece.
Claims use since April, 1905.

Ser. No. 78,725. (CLASS 10. FERTILIZERS.) THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va. Filed June 2, 1914.

ACCO

Particular description of goods.—Fertilizers.
Claims use since 1912.

Ser. No. 78,734. (CLASS 39. CLOTHING.) BORGENICHT, KORNREICH & Co., New York, N. Y. Filed June 2, 1914.



Particular description of goods.—Dresses for Children, Juniors, and Misses.
Claims use since May 25, 1914.

Ser. No. 78,745. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN GRAF COMPANY, Milwaukee, Wis. Filed June 2, 1914. Under ten-year proviso.



"THE BEST WHAT GIVES"

The portrait being that of John Graf, president of the corporation, the applicant.
Particular description of goods.—Weiss Beer, Soda-Waters, Seltzer Waters, Ginger-Ales, Mineral Waters.
Claims use since Jan. 1, 1895.

Ser. No. 78,753. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed June 2, 1914.

RHYME

Particular description of goods.—Fertilizers.
Claims use since 1914.

Ser. No. 78,779. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE REYNOLDS CORPORATION, Bristol, Tenn. Filed June 3, 1914.

SPOTLESS

Particular description of goods.—Cleanser
Claims use since August, 1912.

Ser. No. 78,803. (CLASS 39. CLOTHING.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

Kingly

Particular description of goods.—Men's and Boys' Trousers.
Claims use since January, 1907.

Ser. No. 78,820. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WILLIAM JOHN YEOELL, Philadelphia, Pa. Filed June 4, 1914.



Particular description of goods.—Printing-Plates.
Claims use since Apr. 1, 1914.

Ser. No. 78,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MATHIAS CHILA, Whiting, Ind. Filed June 5, 1914.



Comprising a portrait of myself.
Particular description of goods.—A Remedy for Disorders of the Stomach and Bowels.
Claims use since May 1, 1914.

Ser. No. 78,846. (CLASS 39. CLOTHING.) REVERE RUBBER COMPANY, Providence, R. I., and Chelsea, Mass. Filed June 5, 1914.

SPRING-STEP

Particular description of goods.—Rubber Soles for Boots and Shoes.
Claims use since Apr. 25, 1913.

Ser. No. 78,853. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE AUTOMATIC CRADLE MFG. CO., Stevens Point, Wis. Filed June 6, 1914.

LULLABYE

Particular description of goods.—Self-Swinging Cradles.
Claims use since Apr. 4, 1913.

Ser. No. 78,886. (CLASS 39. CLOTHING.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 6, 1914.

INDESTRUCTO

Particular description of goods.—Gloves.
Claims use since July, 1909.

Ser. No. 78,907. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed June 8, 1914.

SEASIDE

Particular description of goods.—Rubber Boots and Shoes and Rubber-Soled Shoes.
Claims use since July 22, 1913.

Ser. No. 78,936. (CLASS 39. CLOTHING.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed June 9, 1914.

SEALO

Particular description of goods.—Women's, Children's, and Infants' Coats, Cloaks, Wraps, and Capes.
Claims use since about Mar. 1, 1914.

Ser. No. 78,990. (CLASS 37. PAPER AND STATIONERY.) THE AGASOTE MILLBOARD CO., Trenton, N. J. Filed June 11, 1914.

VEHISOTE

Particular description of goods.—Millboards.
Claims use since Apr. 8, 1914.

Ser. No. 78,998. (CLASS 37. PAPER AND STATIONERY.) THE ESTES TITLE INDEXES COMPANY, Little Rock, Ark. Filed June 11, 1914.

A. W. Estes

The same being the facsimile signature of A. W. Estes.
Particular description of goods.—Blank Forms for Use in Making Up Abstracts of Title to Real Estate.
Claims use since May 15, 1914.

Ser. No. 79,002. (CLASS 37. PAPER AND STATIONERY.) KANSAS CITY PAPER HOUSE, Kansas City, Mo. Filed June 11, 1914.

CLOVER MILL

Particular description of goods.—Writing-Paper and Envelops.
Claims use since on or about Jan. 1, 1904.

Ser. No. 79,004. (CLASS 39. CLOTHING.) J. W. LANDENBERGER & Co., Philadelphia, Pa. Filed June 11, 1914.

JOY

Particular description of goods.—Hosiery.
Claims use since May 28, 1914.

Ser. No. 79,005. (CLASS 39. CLOTHING.) J. W. LANDENBERGER & Co., Philadelphia, Pa. Filed June 11, 1914.

FROLIC

Particular description of goods.—Hosiery.
Claims use since May 28, 1914.

Ser. No. 79,006. (CLASS 39. CLOTHING.) J. W. LANDENBERGER & Co., Philadelphia, Pa. Filed June 11, 1914.

"MAKE YOUR FEET HAPPY"

Particular description of goods.—Hosiery.
Claims use since May 28, 1914.

Ser. No. 79,007. (CLASS 39. CLOTHING.) J. W. LANDENBERGER & Co., Philadelphia, Pa. Filed June 11, 1914.

CHUMS

Particular description of goods.—Hosiery.
Claims use since May 28, 1914.

Ser. No. 79,014. (CLASS 48. MALT EXTRACTS AND LIQUORS.) STANDARD BREWING CO., New Orleans, La. Filed June 11, 1914.

Particular description of goods.—Beer.
Claims use since about the 14th day of July, 1902.

Ser. No. 79,090. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ARNOLD SCHONEGO, Ambridge, Pa. Filed June 13, 1914.

Particular description of goods.—Beer.
Claims use since May 15, 1914.

TRADE-MARK REGISTRATIONS GRANTED

JULY 7, 1914.

98,111. FLAVORING EXTRACTS FOR FOODS. THE ARTHUR CHEMICAL CO., New Haven, Conn.
Filed February 3, 1914. Serial No. 75,642. PUBLISHED APRIL 28, 1914.

98,112. CERTAIN NAMED BURNING OILS, LUBRICANTS, CANDLES, NIGHT-LIGHTS, AND MINERAL WAX. THE ASIATIC PETROLEUM COMPANY, LIMITED, London, England.
Filed March 23, 1914. Serial No. 76,833. PUBLISHED MAY 5, 1914.

98,113. ECZEMA-OINTMENT. JOHN H. ATTIG, Los Angeles, Cal.
Filed March 25, 1914. Serial No. 76,915. PUBLISHED MAY 5, 1914.

98,114. CERTAIN NAMED TOILET PREPARATIONS. AUBRY SISTERS, INC., New York, N. Y.
Filed March 12, 1914. Serial No. 76,573. PUBLISHED APRIL 28, 1914.

98,115. POULTRY FEED. J. J. BADENOCH CO., Chicago, Ill.
Filed February 18, 1913. Serial No. 68,601. PUBLISHED APRIL 28, 1914.

98,116. ANTISEPTIC WASH FOR THE TREATMENT OF PYORRHEA ALVEOLARIS, SORE, BLEEDING, AND RECEDING GUMS. P. T. BARBER, Omaha, Nebr.
Filed March 7, 1914. Serial No. 76,421. PUBLISHED APRIL 28, 1914.

98,117. COUGH-SYRUP POWDER. ALFRED GRIFFITH BARNES, Ravenna, Ohio.
Filed December 9, 1913. Serial No. 74,462. PUBLISHED MAY 5, 1914.

98,118. REMEDY FOR SORE HEADS OF CHICKENS. BAUM & COMPANY, Beaumont, Tex.
Filed March 9, 1912. Serial No. 62,088. PUBLISHED APRIL 28, 1914.

98,119. CERTAIN LIQUID PROTECTIVE COATING. BAYWAY CHEMICAL COMPANY, Elizabeth, N. J.
Filed December 13, 1913. Serial No. 74,555. PUBLISHED APRIL 28, 1914.

98,120. TOPPING FOR FRUIT, JELLY, AND ICE-CREAM. PAUL F. BEICH COMPANY, Bloomington, Ill.
Filed October 15, 1913. Serial No. 73,370. PUBLISHED APRIL 28, 1914.

98,121. ADHESIVE PLASTERS AND WOUND-SALVES. JAKOB BENARIO, Frankfort-on-the-Main, Germany.
Filed February 10, 1914. Serial No. 75,816. PUBLISHED MAY 5, 1914.

98,122. TOILET POWDER. J. J. BEYERLE MFG. CO., Brooklyn, N. Y.
Filed March 11, 1914. Serial No. 76,531. PUBLISHED APRIL 28, 1914.

98,123. CERTAIN NAMED TOOLS. BOETTICHER & KELLOGG CO., Evansville, Ind.
Filed December 4, 1913. Serial No. 74,352. PUBLISHED APRIL 28, 1914.

98,124. POCKET-KNIVES, SCISSORS, AND SHEARS, STEEL TABLE AND KITCHEN KNIVES. GEO. BORGFELDT & CO., New York, N. Y.
Filed September 10, 1913. Serial No. 72,759. PUBLISHED APRIL 28, 1914.

98,125. CASTOR-OIL. ALBERT E. BROWN, Mobile, Ala.
Filed October 26, 1912. Serial No. 66,539. PUBLISHED MAY 6, 1913.

98,126. LUBRICATING COMPOUNDS, OILS, AND GREASES. CALEDONIAN OIL CO. INC., New York, N. Y.
Filed November 19, 1913. Serial No. 74,076. PUBLISHED APRIL 28, 1914.

98,127. OPTICAL MACHINERY, TOOLS, AND SUPPLIES USED IN THE PREPARATION, MOUNTING, AND FITTING OF LENSES. CENTRAL OPTICAL CO., Southbridge, Mass.
Filed September 25, 1913. Serial No. 73,042. PUBLISHED MARCH 17, 1914.

98,128. PREPARATIONS FOR THE TREATMENT OF CERTAIN NAMED DISEASES. CLARKSVILLE MEDICINE COMPANY, Clarksville, Tenn.
Filed January 14, 1914. Serial No. 75,175. PUBLISHED APRIL 28, 1914.

98,129. SCISSORS AND SHEARS. CLAYTON BROS., INC., Bristol, Conn.
Filed January 16, 1914. Serial No. 75,222. PUBLISHED MAY 5, 1914.

98,130. TEA. THE WOODLEY YERBA MATE TEA CO., Shamrock, Tex.
Filed December 29, 1913. Serial No. 74,888. PUBLISHED APRIL 28, 1914.

98,131. EMOLLIENT COMPOUND FOR TREATING DYED FABRICS. THE O. F. ZURN CO., Philadelphia, Pa.
Filed January 23, 1914. Serial No. 75,394. PUBLISHED APRIL 28, 1914.

98,132. LOTION FOR DESTROYING ODOR OF PERSPIRATION. NAN C. CRAWFORD, New York, N. Y.
Filed March 7, 1914. Serial No. 76,424. PUBLISHED APRIL 28, 1914.

98,133. HAIR-TONIC. GERTRUDE M. CROOKER, Elmira, N. Y.
Filed March 18, 1914. Serial No. 76,729. PUBLISHED MAY 5, 1914.

98,134. WOOD-POLISH. FREDERICK W. CURTIS, Akron, Ohio.
Filed February 18, 1914. Serial No. 75,983. PUBLISHED MAY 5, 1914.

98,135. SALVE. MATTIE M. DUEBENDORF, St. Paul, Minn.
Filed February 9, 1914. Serial No. 75,801. PUBLISHED APRIL 28, 1914.

98,136. PHOTOGRAPHIC-SHUTTER SCALES. EASTMAN KODAK COMPANY, Rochester, N. Y.
Filed January 15, 1910. Serial No. 47,142. PUBLISHED MAY 5, 1914.

98,137. CERTAIN NAMED TOOLS AND PARTS THEREOF. ELSÄSSISCHE WERKZEUGFABRIK ZORNHOFF VORMALS GOLDENBERG & CO., Zornhoff, near Zabern, Germany.
Filed November 24, 1913. Serial No. 74,161. PUBLISHED APRIL 28, 1914.

98,138. CERTAIN NAMED CUTLERY AND TOOLS AND PARTS THEREOF. ELSÄSSISCHE WERKZEUGFABRIK ZORNHOFF VORMALS GOLDENBERG & CO., Zornhoff, near Zabern, Germany.
Filed November 24, 1913. Serial No. 74,162. PUBLISHED MAY 5, 1914.

98,139. CERTAIN NAMED CUTLERY AND TOOLS AND PARTS THEREOF. ELSÄSSISCHE WERKZEUGFABRIK ZORNHOFF VORMALS GOLDENBERG & CO., Zornhoff, near Zabern, Germany.
Filed November 24, 1913. Serial No. 74,163. PUBLISHED MAY 5, 1914.

98,140. VARIOUS METALS IN CERTAIN NAMED FORMS, AND WIRE. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mulheim-on-the-Rhine, Germany.
Filed July 17, 1912. Serial No. 64,776. PUBLISHED MAY 5, 1914.

98,141. TOOL-STEEL. PETER A. FRASSE & CO. INC., New York, N. Y.
Filed March 16, 1914. Serial No. 76,678. PUBLISHED MAY 5, 1914.

98,142. TOOL-STEEL. PETER A. FRASSE & CO. INC., New York, N. Y.
Filed March 16, 1914. Serial No. 76,679. PUBLISHED MAY 5, 1914.

98,143. CERTAIN NAMED MACHINES AND PARTS. FRIED. KRUPP, AKTIENGESELLSCHAFT, GRUSONWERK, Magdeburg-Buckau, Germany.
Filed October 30, 1912. Serial No. 66,618. PUBLISHED APRIL 14, 1914.

98,144. ILLUMINATING-GLASSWARE COMPRISING REFLECTOR-SHADES, SHADES, GLOBES, AND REFLECTORS. GILL BROTHERS COMPANY, Steubenville, Ohio.
Filed February 24, 1914. Serial No. 76,110. PUBLISHED APRIL 28, 1914.

98,145. MOUNTINGS FOR SPECTACLES AND EYE-GLASSES. F. A. HARDY & Co., Chicago, Ill.
Filed February 12, 1914. Serial No. 75,871. PUBLISHED MAY 5, 1914.

98,146. LUBRICATING-OILS. A. W. HARRIS OIL CO., Providence, R. I.
Filed March 2, 1914. Serial No. 76,278. PUBLISHED MAY 5, 1914.

98,147. REMEDY FOR HOG DISEASES. THE H. G. HARTER CO., Toledo, Ohio.
Filed May 21, 1913. Serial No. 70,532. PUBLISHED APRIL 28, 1914.

98,148. LAUNDRY BLUING AND LAUNDRY COLORS. B. HELLER & CO., Chicago, Ill.
Filed February 7, 1914. Serial No. 75,760. PUBLISHED MAY 5, 1914.

98,149. REMEDY AND PREVENTIVE FOR CERTAIN NAMED AFFECTIONS. H. L. ROMAN E HIJOS, Cartagena, Colombia.
Filed January 7, 1914. Serial No. 75,013. PUBLISHED MAY 5, 1914.

98,150. TEA, COFFEE, SPICES, AND FLAVORING EXTRACTS FOR FOODS. FRANK J. HORTON, Youngstown, Ohio.
Filed October 18, 1912. Serial No. 66,358. PUBLISHED APRIL 28, 1914.

98,151. CERTAIN NAMED FOODS. ALEXANDER J. HOWELL, Syracuse, N. Y.
Filed January 24, 1913. Serial No. 68,094. PUBLISHED APRIL 28, 1914.

98,152. WHEAT-FLOUR. THE HUSLER MILLING & ELEVATOR COMPANY, Salt Lake City, Utah.
Filed May 3, 1913. Serial No. 70,206. PUBLISHED APRIL 28, 1914.

98,153. MEDICINES USED FOR NERVOUS AFFECTIONS. INTER-AMERICAN PHARMACAL CORPORATION, New York, N. Y.
Filed July 3, 1913. Serial No. 71,514. PUBLISHED MAY 5, 1914.

98,154. CONCENTRATED WASTE LYES OF THE SULFITE-CELLULOSE MANUFACTURE. INTERNATIONAL PAPER COMPANY, New York, N. Y.
Filed March 12, 1914. Serial No. 76,583. PUBLISHED MAY 5, 1914.

98,155. TORCHES FOR USE IN OXO-HYDRIC AND OXO-ACETYLENE CUTTING AND WELDING. INTERNATIONAL OXIGEN COMPANY, Waverly, N. J., and New York, N. Y.
Filed May 28, 1912. Serial No. 63,863. PUBLISHED APRIL 28, 1914.

98,156. CRACKERS, COOKIES, BISCUITS, AND CAKES. L. ITEN & SONS, Clinton, Iowa.
Filed August 20, 1912. Serial No. 65,354. PUBLISHED APRIL 28, 1914.

98,157. METAL ALLOY. MORRIS L. JACOBS, New York, N. Y.
Filed March 20, 1914. Serial No. 76,795. PUBLISHED MAY 5, 1914.

98,158. APPARATUS FOR USE IN PREPARING COPYING-CLOTHS. C. W. JEAN COMPANY, New York, N. Y.
Filed June 15, 1912. Serial No. 64,216. PUBLISHED MAY 5, 1914.

98,159. ELECTRIC MOTORS, ELECTRIC GENERATORS, AND DYNAMO-MACHINES. JUNGHANNS & KOLOSCHE, Leipzig, Germany.
Filed December 15, 1913. Serial No. 74,612. PUBLISHED APRIL 28, 1914.

98,160. DOMESTIC RECTIFIED SPIRITS. LOUIS B. KATZ, New York, N. Y.
Filed March 25, 1914. Serial No. 76,937. PUBLISHED APRIL 28, 1914.

98,161. PERFUMES, TOILET WATERS, AND SACHET-POWDERS. KATZ & BESTHOFF, LTD., New Orleans, La.
Filed February 18, 1914. Serial No. 76,001. PUBLISHED APRIL 28, 1914.

98,162. PERFUMES AND FACE, TALCUM, AND SACHET POWDERS. KATZ & BESTHOFF, LTD., New Orleans, La.
Filed February 18, 1914. Serial No. 76,002. PUBLISHED APRIL 28, 1914.

98,163. PERFUMES, TOILET WATERS, AND FACE, TALCUM, AND SACHET POWDERS. KATZ & BESTHOFF, LTD., New Orleans, La.
Filed March 10, 1914. Serial No. 76,502. PUBLISHED APRIL 28, 1914.

98,164. PREVENTIVE OR PROTECTIVE REMEDY FOR VENEREAL DISEASES. THOMAS F. KELLEGHAN, New York, N. Y.
Filed March 11, 1914. Serial No. 76,551. PUBLISHED APRIL 28, 1914.

98,165. REMEDY FOR CERTAIN NAMED STOMACH TROUBLES. JOHN A. KELLY, Forsyth, Mont.
Filed February 28, 1914. Serial No. 76,247. PUBLISHED APRIL 28, 1914.

98,166. LACQUER, WOOD-FILLER, VARNISH, LIQUID VEHICLE FOR PAINT-PIGMENTS, AND READY-MIXED PAINTS. LACQUER-ALL MANUFACTURING COMPANY, Dallas, Tex.
Filed November 30, 1912. Serial No. 67,176. PUBLISHED MAY 5, 1914.

98,167. MEDICAMENTS FOR PREPARATORY TREATMENT OF NERVOUS AILMENTS. CHARLES E. LEACH, Providence, R. I.
Filed January 28, 1914. Serial No. 75,502. PUBLISHED MAY 5, 1914.

98,168. REMEDY FOR SCALP AND SKIN DISEASES. MERRITT M. LOGAN, Springfield, Mo.
Filed April 24, 1913. Serial No. 70,037. PUBLISHED MAY 5, 1914.

98,169. NEUTRALIZER AND ELIMINANT FOR THE TREATMENT OF CERTAIN DISEASES. LUYTIES PHARMACY COMPANY, St. Louis, Mo.
Filed March 18, 1914. Serial No. 76,744. PUBLISHED MAY 5, 1914.

98,170. CANNED SALMON. THE MACLEAY ESTATE CO., Portland, Oreg.
Filed February 2, 1914. Serial No. 75,621. PUBLISHED APRIL 28, 1914.

98,171. CERTAIN NAMED LOGGING TOOLS, MACHINES, AND APPLIANCES. F. B. MALLORY, Portland, Oreg.
Filed May 22, 1912. Serial No. 63,718. PUBLISHED MAY 5, 1914.

98,172. LINIMENT. HARVEY CLINTON MARCUM, Arthur, Tenn.
Filed March 10, 1914. Serial No. 76,512. PUBLISHED MAY 5, 1914.

98,173. HINGES OF ALL KINDS, COCKS, METALLIC VALVES, TURNBUCKLES, AND BELLS OTHER THAN ELECTRIC. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed January 19, 1912. Serial No. 60,930. PUBLISHED MAY 5, 1914.

98,174. SPARK-PLUGS. CHARLES A. MEZGER, Brooklyn, N. Y.
Filed March 25, 1913. Serial No. 69,327. PUBLISHED APRIL 28, 1914.

98,175. [WITHDRAWN.]

98,176. LINIMENT AND ANTISEPTIC. MOUNT BARTON CHEMICAL CO., Meridian, Miss.
Filed February 28, 1914. Serial No. 76,248. PUBLISHED MAY 5, 1914.

98,177. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,683. PUBLISHED APRIL 28, 1914.

98,178. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,684. PUBLISHED APRIL 28, 1914.

98,179. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,685. PUBLISHED APRIL 28, 1914.

98,180. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,686. PUBLISHED APRIL 28, 1914.

98,181. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,687. PUBLISHED APRIL 28, 1914.

98,182. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 4, 1914. Serial No. 75,688. PUBLISHED APRIL 28, 1914.

98,183. CANDY. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 5, 1914. Serial No. 75,711. PUBLISHED APRIL 28, 1914.

98,184. PAINTS FOR METAL SURFACES. THE NATIONAL PAINT & VARNISH COMPANY, Cleveland, Ohio.
Filed July 2, 1913. Serial No. 71,484. PUBLISHED APRIL 28, 1914.

98,185. MEDICINAL PREPARATION FOR STIMULATING AND DEVELOPING THE MAMMARY GLANDS. EVA NIEMAN, Cincinnati, Ohio.
Filed February 6, 1913. Serial No. 68,360. PUBLISHED APRIL 28, 1914.

98,186. CHOCOLATES, BONBONS, CANDIES. NORRIS, INCORPORATED, Atlanta, Ga.
Filed November 17, 1913. Serial No. 74,037. PUBLISHED APRIL 28, 1914.

98,187. CHOCOLATES, BONBONS, CANDIES. NORRIS INCORPORATED, Atlanta, Ga.
Filed November 17, 1913. Serial No. 74,038. PUBLISHED APRIL 28, 1914.

98,188. CANDY. THE OHIO CONFECTION COMPANY, Cleveland, Ohio.
Filed February 2, 1914. Serial No. 75,628. PUBLISHED APRIL 28, 1914.

98,189. METALLIC VALVES AND HOSE-COUPLINGS. THE OKADEE COMPANY, Chicago, Ill.
Filed December 8, 1913. Serial No. 74,451. PUBLISHED APRIL 28, 1914.

98,190. ADHESIVE MATERIAL RESEMBLING SOLDER. OLD ROMAN SOLDER CO., New York, N. Y.
Filed March 18, 1914. Serial No. 76,750. PUBLISHED MAY 5, 1914.

98,191. DRY AND READY-MIXED PAINTS, LACS, WALL-PAINTS, ENAMELS, STAINS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed March 11, 1914. Serial No. 76,561. PUBLISHED MAY 5, 1914.

98,192. CEMENT CONTAINING OIL FOR ROOF-REPAIRING AND FOR RENDERING STRUCTURES WATERPROOF. PECORA PAINT CO., Philadelphia, Pa.
Filed February 27, 1914. Serial No. 76,221. PUBLISHED MAY 5, 1914.
Jersey City, N. J., and New York, N. Y.

98,193. INSECTICIDES. WILLIAM PETERMAN INC.,
Filed March 20, 1914. Serial No. 76,801. PUBLISHED MAY 5, 1914.

98,194. FURNITURE-POLISH. WILLIAM PLUMMER, Camden, N. J.
Filed February 7, 1914. Serial No. 75,769. PUBLISHED MAY 5, 1914.

98,195. DISINFECTANTS. PROVIDOL GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed February 9, 1914. Serial No. 75,809. PUBLISHED MAY 5, 1914.

98,196. PREVENTIVE OF VENEREAL DISEASES. PRU-VA CHEMICAL CO., St. Louis, Mo.
Filed May 1, 1913. Serial No. 70,158. PUBLISHED APRIL 28, 1914.

98,197. COLIC, AZOTURIA, DISTEMPER, GALL CURE, AND HEALING-POWDER FOR FRESH CUTS AND WOUNDS. THE DR. PYLE VETERINARY REMEDY CO., New Philadelphia, Ohio.
Filed January 28, 1914. Serial No. 75,508. PUBLISHED MAY 5, 1914.

98,198. CERTAIN MEDICINAL AND PHARMACEUTICAL PREPARATIONS FOR CERTAIN NAMED DISEASES AND AFFECTIONS. REGESAN LTD., London, England.
Filed July 2, 1913. Serial No. 71,489. PUBLISHED APRIL 28, 1914.

98,199. POULTICE-POWDER ANTISEPTIC ABSORBENT FOR EXTERNAL APPLICATION FOR ALLAYING INFLAMMATION. A. H. RICHARDSON, Fond du Lac, Wis.
Filed November 26, 1910. Serial No. 52,963. PUBLISHED JANUARY 20, 1914.

98,200. PAINT-REMOVERS, CAR-PAINT CLEANERS, FRONT-END PAINT FOR ENGINES. THE SANITATION & SUPPLY CO., New York, N. Y.
Filed March 19, 1914. Serial No. 76,779. PUBLISHED MAY 5, 1914.

98,201. OLIVE-OIL. FERNANDO R. SARI, Washington, D. C.
Filed September 19, 1913. Serial No. 72,960. PUBLISHED APRIL 28, 1914.

98,202. INSECTICIDE. JOHN SCHNARR, Orlando, Fla.
Filed February 2, 1914. Serial No. 75,632. PUBLISHED APRIL 28, 1914.

98,203. OINTMENT FOR THE TREATMENT OF PILES. CECIL E. SMITH, Detroit, Mich.
Filed February 18, 1913. Serial No. 68,606. PUBLISHED MAY 5, 1914.

98,204. CERTAIN PHARMACEUTICAL PRODUCT. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed April 4, 1914. Serial No. 77,220. PUBLISHED MAY 5, 1914.

98,205. PHARMACEUTICAL PRODUCT MADE OF RICE-BRAN. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed April 4, 1914. Serial No. 77,221. PUBLISHED MAY 5, 1914.

98,206. BAKING-POWDER. THE SOUTHERN MANUFACTURING CO., Richmond, Va.
Filed April 29, 1913. Serial No. 70,117. PUBLISHED JUNE 17, 1913.

98,207. VACUUM-TESTERS. THE SPENCER TURBINE CLEANER COMPANY, Hartford, Conn.
Filed March 4, 1912. Serial No. 61,927. PUBLISHED APRIL 28, 1914.

98,208. REMEDY FOR CATARRH, HAY-FEVER, AND COLD IN THE HEAD. SPURLOCK-NEAL CO., Nashville, Tenn.
Filed March 25, 1914. Serial No. 76,948. PUBLISHED MAY 5, 1914.

98,209. MEDICATED PURGATIVE CONFECTIONS. DR. FRANZ STOHR, Vienna, Austria-Hungary.
Filed December 20, 1913. Serial No. 74,763. PUBLISHED APRIL 28, 1914.

98,210. INSECT-DESTROYER. JAMES H. STONECYPHER, Westminster, S. C.
Filed March 10, 1914. Serial No. 76,517. PUBLISHED APRIL 28, 1914.

98,211. MEDICINAL, DIETETIC, AND PHARMACEUTICAL PREPARATIONS OF COD-LIVER OIL AND OIL EMULSIONS. JOHANN EMIL STROSCHEIN, Berlin, Germany.
Filed October 17, 1913. Serial No. 73,456. PUBLISHED APRIL 28, 1914.

98,212. LIGHTNING-RODS AND PARTS THEREOF AND ACCESSORIES THEREFOR. THE STRUTHERS CO., Peoria, Ill.
Filed March 7, 1912. Serial No. 61,992. PUBLISHED APRIL 28, 1914.

98,213. CANNED HERRING. THE SUNSET PACKING COMPANY, West Pembroke, Me., and New York, N. Y.
Filed February 6, 1914. Serial No. 75,738. PUBLISHED APRIL 28, 1914.

98,214. PAINT FOR INTERIOR DECORATING. THE TROPICAL OIL CO., Cleveland, Ohio.
Filed February 11, 1914. Serial No. 75,856. PUBLISHED MAY 5, 1914.

98,215. PAINT WHICH IS USED ON CONCRETE, PLASTER, BRICK, OR STONE. THE TROPICAL OIL CO., Cleveland, Ohio.
Filed February 11, 1914. Serial No. 75,857. PUBLISHED MAY 5, 1914.

98,216. INSIDE FLAT OIL-PAINT. THE TROPICAL OIL CO., Cleveland, Ohio.
Filed February 11, 1914. Serial No. 75,858. PUBLISHED MAY 5, 1914.

98,217. PAINT FOR MENDING LEAKS. THE TROPICAL OIL CO., Cleveland, Ohio.
Filed February 11, 1914. Serial No. 75,859. PUBLISHED MAY 5, 1914.

98,218. REMEDY FOR RHEUMATISM. MARY E. TRUE, Epping, N. H.
Filed February 9, 1914. Serial No. 75,795. PUBLISHED MAY 5, 1914.

98,219. OINTMENTS. TRYOL PRODUCTS COMPANY, INC., Buffalo, N. Y.
Filed March 20, 1914. Serial No. 76,805. PUBLISHED MAY 5, 1914.

98,220. COLORING-MATTERS FOR USE AS INGREDIENTS IN FOOD. UNGEMACH, A.-G. ELS. CONSERVEN-FABRIK & IMPORT-GESELLSCHAFT, Strassburg, Germany.
Filed January 16, 1914. Serial No. 75,241. PUBLISHED MARCH 31, 1914.

98,221. GAS OR GASOLENE ENGINES. UNION GAS ENGINE COMPANY, San Francisco, Cal.
Filed December 27, 1913. Serial No. 74,868. PUBLISHED MAY 5, 1914.

98,222. CERTAIN NAMED LIGHTING AND STARTING SYSTEMS AND STORAGE BATTERIES AND PARTS THEREOF AND SUPPLIES THEREFOR. THE UNITED STATES LIGHT & HEATING COMPANY, Portland, Me., and New York, N. Y., assignor to Central Trust Company of New York, trustee, a Corporation of New York.
Filed January 4, 1913. Serial No. 67,732. PUBLISHED MAY 5, 1914.

98,223. PIPES, PIPE-CLEANERS, AND CIGARETTE-STEMS. ARSÈNE J. VAN EXEM, New York, N. Y.
Filed January 15, 1914. Serial No. 75,208. PUBLISHED MAY 5, 1914.

98,224. OINTMENT FOR USE ON SPRAINS, SKIN ERUPTIONS, BURNS, AND CUTS. THE VASA COMPANY, Henderson, Ky.
Filed February 14, 1914. Serial No. 75,907. PUBLISHED APRIL 28, 1914.

98,225. TOILET CREAM. CONRAD YOUNG WAGGENER, Salida, Colo.
Filed March 27, 1914. Serial No. 77,012. PUBLISHED MAY 5, 1914.

98,226. CANDY. WESTMORELAND CANDY COMPANY, Richmond, Va.
Filed January 8, 1913. Serial No. 67,793. PUBLISHED APRIL 28, 1914.

98,227. SEWING-MACHINES AND PARTS. WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.
Filed September 13, 1912. Serial No. 65,737. PUBLISHED APRIL 28, 1914.

98,228. METAL FORGINGS. J. H. WILLIAMS & CO., New York, N. Y.
Filed April 5, 1912. Serial No. 62,669. PUBLISHED FEBRUARY 10, 1914.

98,229. CITRUS FRUIT—VIZ., GRAPE-FRUIT. JARVIS A. WOOD, Philadelphia, Pa., and Miami, Fla.
Filed February 3, 1914. Serial No. 75,665. PUBLISHED APRIL 28, 1914.

98,230. REMEDY FOR USE IN TREATMENT OF THE SMOKING HABIT. WOOD-LANE DRUG CO., Newbern, N. C.
Filed March 18, 1914. Serial No. 76,755. PUBLISHED MAY 5, 1914.

98,231. CERTAIN NAMED FURNITURE. THE ADJUSTABLE TABLE COMPANY, Grand Rapids, Mich.
Filed July 11, 1911. Serial No. 57,586. PUBLISHED MAY 5, 1914.

98,232. SKIMMED POWDERED MILK. AMERICAN MILK COMPANY, Chicago, Ill.
Filed December 8, 1913. Serial No. 74,438. PUBLISHED APRIL 28, 1914.

98,233. WATCHES AND CLOCKS. ANSONIA CLOCK COMPANY, New York, N. Y.
Filed March 20, 1914. Serial No. 76,785. PUBLISHED MAY 5, 1914.

98,234. CERTAIN CIGAR AND CIGARETTE LIGHTING DEVICES. LOUIS V. ARONSON, Newark, N. J.
Filed January 16, 1914. Serial No. 75,221. PUBLISHED APRIL 28, 1914.

98,235. GASOLENE, NAPHTHA, BENZIN, KEROSENE, LUBRICATING OILS AND GREASES. THE ASIATIC PETROLEUM COMPANY, LIMITED, London, England.
Filed September 8, 1913. Serial No. 72,712. PUBLISHED MAY 5, 1914.

98,236. CANDLES, NIGHT-LIGHTS, AND MINERAL WAX FOR ILLUMINATING AND HEATING PURPOSES. THE ASIATIC PETROLEUM COMPANY, LIMITED, London, England.
Filed September 8, 1913. Serial No. 72,713. PUBLISHED MAY 5, 1914.

98,237. CANNED VEGETABLES. ATLANTA CANNING COMPANY, Atlanta, N. Y.
Filed February 24, 1914. Serial No. 76,096. PUBLISHED MAY 5, 1914.

98,238. MACARONI. THE ATLANTIC MACARONI CO., Long Island City, N. Y.
Filed February 11, 1914. Serial No. 75,830. PUBLISHED MAY 5, 1914.

98,239. CYCLES. DE WITT C. BAKER, New York, N. Y.
Filed February 7, 1914. Serial No. 75,747. PUBLISHED MAY 5, 1914.

98,240. RHEUMATISM REMEDIES. DAVID BARR, Chicago, Ill.
Filed January 31, 1914. Serial No. 75,566. PUBLISHED APRIL 28, 1914.

98,241. WHEAT-FLOUR. BECKER & LANGENBERG MILLING COMPANY, Republic, Mo.
Filed February 2, 1914. Serial No. 75,601. PUBLISHED APRIL 28, 1914.

98,242. HOSE SUPPORTERS AND SUSPENDERS. LEE E. BEREBAUM, Chicago, Ill.
Filed August 31, 1912. Serial No. 65,537. PUBLISHED MAY 5, 1914.

98,243. STOCK AND BOND REGISTERS IN PRINTED BLANK FORM. GEORGE I. BOLES, Philadelphia, Pa.
Filed January 22, 1914. Serial No. 75,349. PUBLISHED MAY 5, 1914.

98,244. PRINTS, PUBLICATIONS, PICTORIAL ILLUSTRATIONS, AND BOOKS. BONNET-BROWN SALES SERVICE, Chicago, Ill.
Filed August 14, 1913. Serial No. 72,328. PUBLISHED APRIL 28, 1914.

98,245. STRAIGHT DRY GINS. BOOTH'S DISTILLERY LIMITED, London, England.
Filed April 9, 1908. Serial No. 33,978. PUBLISHED JANUARY 12, 1909.

98,246. HEATING AND COOKING STOVES. PORTE MCKEEN BRADLEY, Joplin, Mo.
Filed April 16, 1913. Serial No. 69,819. PUBLISHED APRIL 28, 1914.

98,247. COMPOSITION ROOFING AND SIDING. THE PHILIP CAREY MANUFACTURING COMPANY, Lockland, Ohio.
Filed February 2, 1914. Serial No. 75,606. PUBLISHED MAY 5, 1914.

98,248. REMEDY FOR CERTAIN NAMED DISEASES AND AFFECTIONS. THE CHESMAN-REINBOLT CO., Deerfield, Mich.
Filed February 28, 1914. Serial No. 76,233. PUBLISHED APRIL 28, 1914.

98,249. TEA. CONSUMERS IMPORTING CO., Newark, N. J.
Filed May 20, 1913. Serial No. 70,503. PUBLISHED MAY 5, 1914.

98,250. PNEUMATIC TIRES. CONTINENTAL RUBBER WORKS, Erie, Pa.
Filed February 21, 1914. Serial No. 76,070. PUBLISHED APRIL 28, 1914.

98,251. RUBBER TUBES FOR PNEUMATIC TIRES. CONTINENTAL RUBBER WORKS, Erie, Pa.
Filed February 21, 1914. Serial No. 76,072. PUBLISHED APRIL 28, 1914.

98,252. COAL, WOOD, GAS, AND OIL RANGES, STOVES, AND HEATERS. ABRAM COX STOVE COMPANY, Philadelphia, Pa.
Filed February 9, 1914. Serial No. 75,780. PUBLISHED APRIL 28, 1914.

98,253. CERTAIN NAMED TEXTILE FABRICS. CROMPTON COMPANY, Crompton, R. I.
Filed June 2, 1913. Serial No. 70,823. PUBLISHED AUGUST 12, 1913.

98,254. HAIR-NETS. HENRI DAUMAS, New York, N. Y.
Filed March 16, 1914. Serial No. 76,671. PUBLISHED MAY 5, 1914.

98,255. COFFEE, TEA, AND OLIVE-OIL. DAVIES & SULLIVAN COMPANY, New York, N. Y.
Filed January 17, 1914. Serial No. 75,246. PUBLISHED MAY 5, 1914.

98,256. INSTRUCTIVE LITERARY COMPOSITIONS PUBLISHED SERIALLY. URIEL DAVIS, New York, N. Y.
Filed January 26, 1914. Serial No. 75,450½. PUBLISHED APRIL 28, 1914.

98,257. ARTIFICIAL FLAVORS AND FLAVORING EXTRACTS FOR BEVERAGES. PRIMROSE R. DE VORE, Columbus, Ohio.
Filed February 28, 1912 Serial No. 61,780. PUBLISHED MAY 5, 1914.

98,258. CERTAIN NAMED FOODS. THOS. P. DEITRICK, Richmond, Va.
Filed October 16, 1912. Serial No. 66,314. PUBLISHED MAY 5, 1914.

98,259. ARTIFICIAL TEETH. THE DENTISTS' SUPPLY COMPANY, New York, N. Y.
Filed February 6, 1913. Serial No. 68,345. PUBLISHED MAY 5, 1914.

98,260. STEAM AND HYDRAULIC PACKINGS COMPOSED OF CERTAIN NAMED MATERIALS. STEWART DICKSON & CO., INC., New York, N. Y.
Filed December 22, 1913. Serial No. 74,774. PUBLISHED APRIL 28, 1914.

98,261. BREAD AND BREAD-STICKS. THE DIETETIC FOOD COMPANY, Baltimore, Md.
Filed December 16, 1913. Serial No. 74,631. PUBLISHED APRIL 28, 1914.

98,262. BRAN BISCUITS AND CRACKERS. THE DIETETIC FOOD COMPANY, Baltimore, Md.
Filed December 16, 1913. Serial No. 74,632. PUBLISHED APRIL 28, 1914.

98,263. TEN-CARAT-GOLD WATCHCASES. THE DUEBER WATCH CASE MFG. CO., Canton, Ohio.
Filed November 30, 1912. Serial No. 67,183. PUBLISHED JANUARY 20, 1914.

98,264. EIGHTEEN-CARAT-GOLD WATCHCASES. THE DUEBER WATCH CASE MFG. CO., Canton, Ohio.
Filed November 30, 1912. Serial No. 67,184. PUBLISHED MARCH 3, 1914.

98,265. CIGARS. THEE. WILLARD EDWARDS, Columbus, Miss.
Filed January 29, 1914. Serial No. 75,526. PUBLISHED APRIL 28, 1914.

98,266. WHEAT-FLOUR. EISENMAYER MILLING COMPANY, Springfield, Mo.
Filed November 26, 1913. Serial No. 74,207. PUBLISHED APRIL 28, 1914.

98,267. CERTAIN NAMED TOOLS, MACHINE PARTS, AND MILLS. ELSÄSSISCHE WERKZEUGFABRIK ZORNHOFF VORMALS GOLDENBERG & CO., Zornhoff, near Zabern, Germany.
Filed December 10, 1913. Serial No. 74,490. PUBLISHED APRIL 28, 1914.

98,268. MATTRESSES. EMPIRE MATTRESS COMPANY, Chicago, Ill.
Filed March 7, 1914. Serial No. 76,427. PUBLISHED MAY 5, 1914.

98,269. HAIR-NETS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed July 23, 1913. Serial No. 71,901. PUBLISHED MAY 5, 1914.

98,270. WASHING COMPOUND. FITZPATRICK BROS., Chicago, Ill.
Filed September 10, 1912. Serial No. 65,671. PUBLISHED APRIL 28, 1914.

98,271. WASHING COMPOUND FITZPATRICK BROS., Chicago, Ill.
Filed October 3, 1913. Serial No. 73,197. PUBLISHED APRIL 28, 1914.

98,272. OLIVE-OIL. P. FORTUNA & DEL MAGRO, Lucca, Italy.
Filed December 17, 1913. Serial No. 74,652. PUBLISHED MAY 5, 1914.

98,273. SHOCK-ABSORBING DEVICES. CLAUD H. FOSTER, Cleveland, Ohio.
Filed October 25, 1913. Serial No. 73,600. PUBLISHED MAY 5, 1914.

98,274. APPARATUS FOR LIGHTING PUBLIC HALLS BY INDIRECT LIGHT REFLECTED AND DIFFUSED FROM PANELS. FOWLER SIGN COMPANY, Tacoma, Wash.
Filed July 13, 1912. Serial No. 64,707. PUBLISHED APRIL 28, 1914.

98,275. DISINFECTANTS. FULTON BAG & COTTON MILLS, Atlanta, Ga.
Filed April 6, 1914. Serial No. 77,236. PUBLISHED MAY 5, 1914.

98,276. OLIVE-OIL. PASQUALE GIUNTA AND SON, Philadelphia, Pa.
Filed January 2, 1914. Serial No. 74,943. PUBLISHED APRIL 28, 1914.

98,277. MEN'S NEGLIGÉE AND WORK SHIRTS. GOODMAN, COHEN & Co., New York, N. Y.
Filed May 31, 1913. Serial No. 70,781. PUBLISHED MAY 5, 1914.

98,278. COUGH-SYRUP. THOMAS GOSS, Wilkes-Barre, Pa.
Filed March 30, 1914. Serial No. 77,056. PUBLISHED MAY 5, 1914.

98,279. TIRE-HEALING COMPOUND. HENRY S. GRISWOLD, Phoenix, Ariz.
Filed March 28, 1914. Serial No. 77,021. PUBLISHED MAY 5, 1914.

98,280. CHANDELIERS AND OTHER SUPPORTING-FIXTURES FOR LIGHTS. EDWIN F. GUTH, St. Louis, Mo.
Filed November 28, 1913. Serial No. 74,235. PUBLISHED APRIL 28, 1914.

98,281. WRITING-PAPER AND PRINTING-PAPER. JOSEPH P. HEILBRONN, Manila, Philippine Islands.
Filed November 11, 1913. Serial No. 73,908. PUBLISHED MAY 5, 1914.

98,282. CERTAIN NAMED SELF-PROPELLED VEHICLES AND PARTS THEREOF. HENDEE MANUFACTURING COMPANY, Springfield, Mass.
Filed March 5, 1914. Serial No. 76,373. PUBLISHED MAY 5, 1914.

98,283. CHANDELIERS, BRACKETS, AND PEDESTALS FOR HOLDING AND SUPPORTING GAS AND ELECTRIC LIGHTS. HOLOPHANE GLASS CO., New York, N. Y.
Filed April 10, 1908. Serial No. 33,999. PUBLISHED APRIL 28, 1914.

98,284. TONIC FOR THE NERVES, BLOOD, AND BRAIN. C. I. HOOD Co., Lowell, Mass.
Filed April 11, 1911. Serial No. 55,682. PUBLISHED APRIL 28, 1914.

98,285. PORTABLE VAPOR-LAMPS. HYDRO CARBON COMPANY, Wichita, Kans.
Filed May 4, 1912. Serial No. 63,352. PUBLISHED DECEMBER 23, 1913.

98,286. COMPOSITE VEGETABLE FOOD PRODUCT FOR USE AS A COCOA-BUTTER SUBSTITUTE. INDIA REFINING COMPANY, Philadelphia, Pa.
Filed January 16, 1914. Serial No. 75,227. PUBLISHED MARCH 31, 1914.

98,287. WATERPROOFING MATERIAL FOR INCORPORATING IN CONCRETE, CEMENT, OR THE LIKE. INTEGRAL WATERPROOFING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 7, 1914. Serial No. 75,763. PUBLISHED MAY 5, 1914.

98,288. LARD SUBSTITUTE COMPOSED OF COTTONSEED OIL AND OLEO-STEARIN. INTERSTATE COTTON OIL REFINING Co., Sherman, Tex.
Filed February 13, 1914. Serial No. 75,887. PUBLISHED MAY 5, 1914.

98,289. OLIVE-OIL. ITALIAN IMPORTING COMPANY, Des Moines, Iowa.
Filed November 17, 1913. Serial No. 74,034. PUBLISHED MAY 5, 1914.

98,290. CLEANER PUT UP IN PASTE AND BAR FORM. JOY-O CHEMICAL COMPANY, Toledo, Ohio.
Filed January 10, 1914. Serial No. 75,092. PUBLISHED APRIL 28, 1914.

98,291. WHEAT-FLOUR. KANSAS MILLING COMPANY, Wichita and St. John, Kans.
Filed February 9, 1914. Serial No. 75,805. PUBLISHED MAY 5, 1914.

98,292. CERTAIN NAMED MELONS, CANTALOUPS, AND FRESH CELERY. W. H. J. KAVANAGH, Chicago, Ill.
Filed February 26, 1914. Serial No. 76,184. PUBLISHED MAY 5, 1914.

98,293. TOASTED CORN FLAKES, TOASTED WHEAT-BISCUIT, KRUMBLES, TOASTED WHEAT-FLAKES. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed February 4, 1914. Serial No. 75,678. PUBLISHED MAY 5, 1914.

98,294. COFFEE-MAKING APPARATUS, (GLASS.) KRAUSSE & AUERBACH, London, England.
Filed February 2, 1914. Serial No. 75,615. PUBLISHED APRIL 28, 1914.

98,295. WHEAT-FLOUR. THE LARABEE FLOUR MILLS COMPANY, Hutchinson, Kans.
Filed October 28, 1913. Serial No. 73,645. PUBLISHED APRIL 28, 1914.

98,296. MIXED FEED FOR DAIRY-CATTLE. THE LARROWE MILLING Co., Cohocton, N. Y., and Detroit, Mich.
Filed February 16, 1914. Serial No. 75,939. PUBLISHED MAY 5, 1914.

98,297. LEATHER. A. C. LAWRENCE LEATHER Co., Boston, Mass.
Filed February 2, 1914. Serial No. 75,619. PUBLISHED APRIL 28, 1914.

98,298. PREPARATIONS FOR THE TREATMENT OF CERTAIN NAMED DISEASES. LOOKOUT MEDICINE COMPANY, Chattanooga, Tenn.
Filed January 21, 1914. Serial No. 75,338. PUBLISHED APRIL 28, 1914.

98,299. MONTHLY MAGAZINE. THE LOUISVILLE COURIER-JOURNAL COMPANY, Louisville, Ky.
Filed February 12, 1914. Serial No. 75,874. PUBLISHED APRIL 28, 1914.

98,300. FERTILIZERS. FREDERICK LUDLAM Co., New York, N. Y.
Filed March 16, 1914. Serial No. 76,688. PUBLISHED MAY 5, 1914.

98,301. FERTILIZERS. FREDERICK LUDLAM Co., New York, N. Y.
Filed March 16, 1914. Serial No. 76,689. PUBLISHED MAY 5, 1914.

98,302. CHEESE. MACLAREN IMPERIAL CHEESE Co., LTD., Toronto, Ontario, Canada, and Detroit, Mich.
Filed December 20, 1913. Serial No. 74,730. PUBLISHED MAY 5, 1914.

98,303. BISCUITS. MANCHESTER BISCUIT Co., Sioux Falls, S. D.
Filed February 9, 1914. Serial No. 75,807. PUBLISHED MAY 5, 1914.

98,304. PIANOS AND ORGANS. MASON & HAMLIN Co., Cambridge and Boston, Mass.
Filed March 5, 1914. Serial No. 76,369. PUBLISHED MAY 5, 1914.

98,305. SARDINES. MENZEL & Co., New York, N. Y.
Filed January 28, 1914. Serial No. 75,504. PUBLISHED MAY 5, 1914.

98,306. OLIVES, SARDINES, PEANUT-BUTTER, AND SALAD-DRESSING. MEYER & CARMODY IMPORT Co., INC., New York, N. Y.
Filed November 15, 1913. Serial No. 74,015. PUBLISHED MAY 5, 1914.

98,307. UNDERWEAR. THE MALINE MILLS, Winston-Salem, N. C.
Filed March 26, 1914. Serial No. 76,964. PUBLISHED MAY 5, 1914.

98,308. PRINTING AND LITHOGRAPHING INK, DRY COLORS, AND CARBON USED IN MANUFACTURING SAME. GEO. H. MORRILL Co., Boston, Mass.
Filed December 1, 1913. Serial No. 74,290. PUBLISHED MAY 5, 1914.

98,309. POWDERED LYE. E. MYERS LYE Co., St. Louis, Mo.
Filed March 29, 1912. Serial No. 62,493. PUBLISHED JUNE 4, 1912.

98,310. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 1, 1912. Serial No. 64,492. PUBLISHED AUGUST 12, 1913.

98,311. CLEANING COMPOUND. THE NEW IDEAS COMPANY, Newark, Ohio.
Filed January 23, 1914. Serial No. 75,388. PUBLISHED APRIL 28, 1914.

98,312. MILK AND CREAM. NEW YORK DAIRY DEMONSTRATION Co., New York, N. Y.
Filed May 10, 1913. Serial No. 70,355. PUBLISHED MAY 5, 1914.

98,313. CIDER VINEGAR. OAKLAND VINEGAR & PICKLE Co., Saginaw, Mich.
Filed February 9, 1914. Serial No. 75,787. PUBLISHED MAY 5, 1914.

98,314. CARBONATED SODA-FOUNTAIN BEVERAGE AND SYRUP FOR MANUFACTURING THE SAME. CHARLES T. O'BRIEN, Anderson, Ind.
Filed February 20, 1912. Serial No. 61,622. PUBLISHED MAY 5, 1914.

98,315. CERTAIN GARMENT-FOLDERS OR FLAT FORMS TO KEEP GARMENTS FROM CREASING. PAC-RITE COMPANY, INC., New York, N. Y.
Filed December 13, 1912. Serial No. 67,389. PUBLISHED APRIL 28, 1914.

98,316. INSECTICIDES. WILLIAM PETERMAN INC., Jersey City, N. J., and New York, N. Y.
Filed March 20, 1914. Serial No. 76,800. PUBLISHED MAY 5, 1914.

98,317. PAPER TOWELS, PAPER DIAPERS, AND NAPKINS. AARON PETERS LABORATORIES, INC., Washington, D. C.
Filed March 16, 1914. Serial No. 76,664. PUBLISHED MAY 5, 1914.

98,318. RUBBER ERASERS. JOHN S. RAPSON, Elkins Park, Pa.
Filed February 27, 1914. Serial No. 76,222. PUBLISHED MAY 5, 1914.

98,319. [WITHDRAWN.]

98,320. CERTAIN NAMED FOOD OILS. H. SCHLINCK & CIE. A. G., Hamburg, Germany.
Filed November 13, 1913. Serial No. 73,965. PUBLISHED MAY 5, 1914.

98,321. CERTAIN NAMED FOODS. LEO E. SCHOENFELD, Chicago, Ill.
Filed March 20, 1912. Serial No. 62,299. PUBLISHED MAY 5, 1914.

98,322. CHEWING-GUM. SCOUT GUM Co. INC., Rochester, N. Y.
Filed November 13, 1913. Serial No. 73,958. PUBLISHED APRIL 28, 1914.

98,323. SALVE. GEORGE F. SMITH, Woodsboro, Md.
Filed April 8, 1914. Serial No. 77,317. PUBLISHED MAY 5, 1914.

98,324. WATER-SOFTENING COMPOUND. THE SOFTENE COMPANY, Canton, Ohio.
Filed November 17, 1913. Serial No. 74,044. PUBLISHED APRIL 28, 1914.

98,325. CANNED PEAS. SPRAGUE, WARNER & COMPANY, Chicago, Ill.
Filed February 11, 1914. Serial No. 75,855. PUBLISHED MAY 5, 1914.

98,326. ENGINE-DISTILLATE OF PETROLEUM. STANDARD OIL COMPANY, Richmond, Cal.
Filed February 14, 1914. Serial No. 75,905. PUBLISHED APRIL 28, 1914.

98,327. KEROSENE-LAMPS. STANDARD OIL Co. OF NEW YORK, New York, N. Y.
Filed March 6, 1914. Serial No. 76,415. PUBLISHED APRIL 28, 1914.

98,328. BLOTTING-PAPER. STANDARD PAPER MFG. Co., Richmond, Va.
Filed September 6, 1913. Serial No. 72,709. PUBLISHED DECEMBER 2, 1913.

98,329. CARBONATED SODA-FOUNTAIN BEVERAGE AND SYRUP FOR MANUFACTURING THE SAME. EMIL E. STEINER, Lowell, Wash.
Filed March 10, 1914. Serial No. 76,515. PUBLISHED MAY 5, 1914.

98,330. GARBAGE AND REFUSE RECEPTACLES. CHARLES H. STEPHENSON, Lynn, Mass.
Filed July 14, 1913. Serial No. 71,692. PUBLISHED MAY 5, 1914.

98,331. MOUTH-HARMONICAS. STRAUSS BROS. & Co., New York, N. Y.
Filed March 5, 1914. Serial No. 76,380. PUBLISHED MAY 5, 1914.

98,332. MIXED WOOLEN PIECE GOODS. ELBRIDGE S. STROUT, New York, N. Y.
Filed December 12, 1913. Serial No. 74,537. PUBLISHED MAY 5, 1914.

98,333. GAS-HEATED SAD-IRONS AND METAL SUPPORTS FOR SAID IRONS. MONROE SUNSHINE, New York, N. Y.
Filed April 3, 1912. Serial No. 62,616. PUBLISHED MAY 5, 1914.

98,334. NURSING-BOTTLES. SWINDELL BROTHERS, Baltimore, Md.
Filed February 18, 1914. Serial No. 76,023. PUBLISHED MAY 5, 1914.

98,335. MINCE-MEAT, TOMATO CATCHUP, CORN-STARCH, AND TABLE-SYRUP. DOWNING TAYLOR Co., Springfield, Mass.
Filed February 20, 1914. Serial No. 76,049. PUBLISHED MAY 5, 1914.

98,336. WHEAT-FLOUR. CHARLES TIEDEMANN MILLING Co., O'Fallon, Ill.
Filed February 27, 1914. Serial No. 76,225. PUBLISHED MAY 5, 1914.

98,337. LAMP-CHIMNEYS. C. C. TRUAX & COMPANY, Toledo, Ohio, assignor to United Grocers Company, Toledo, Ohio, a Corporation of Delaware.
Filed August 9, 1913. Serial No. 72,265. PUBLISHED APRIL 28, 1914.

98,338. FRESH APPLES, PEARS, PEACHES, PLUMS, CHERRIES, STRAWBERRIES, RASPBERRIES, AND CANTALOUPS. JAMES TURNBULL, Roswell, N. Mex.
Filed November 25, 1913. Serial No. 74,197. PUBLISHED APRIL 28, 1914.

98,339. COMPOUNDS OR PREPARATIONS OF MEDICINE AS A REMEDY FOR STOMACH DISORDERS AND DIGESTIVE TROUBLES. CHARLES ATWILL TYNDALL, New York, N. Y.
Filed April 29, 1912. Serial No. 63,186. PUBLISHED DECEMBER 2, 1913.

98,340. SCALP AND HAIR TONIC. THE VOLA-VITA COMPANY, Muskogee, Okla.
Filed April 6, 1914. Serial No. 77,259. PUBLISHED MAY 5, 1914.

98,341. MONTHLY PUBLICATIONS. HENRY VON GLAHN & SON, Brooklyn, N. Y.
Filed May 23, 1912. Serial No. 63,745. PUBLISHED APRIL 28, 1914.

98,342. LAXATIVE. CLYDE L. WAMSLEY, West Union, Ohio, and Sayre, Okla.
Filed April 4, 1914. Serial No. 77,223. PUBLISHED MAY 5, 1914.

98,343. DRIED APPLES. WAYNE COUNTY DRIERS & PACKERS FRUIT COMPANY, Rochester, N. Y.
Filed February 10, 1913. Serial No. 68,490. PUBLISHED NOVEMBER 4, 1913.

98,344. LEAD AND COLORED PENCILS, AUTOMATIC LEAD-PENCILS, INK AND SCREW PENCILS. FREDERICK WEBER, Philadelphia, Pa., sole owner of F. Weber & Co.
Filed March 10, 1914. Serial No. 76,521. PUBLISHED MAY 5, 1914.

98,345. MEN'S AND BOYS' HATS. WEBER & HEILBRONER, New York, N. Y.
Filed March 13, 1914. Serial No. 76,621. PUBLISHED MAY 5, 1914.

98,346. WHISKY. THE JOHN WEDDERBURN CO., Washington, D. C.
Filed November 13, 1913. Serial No. 73,967. PUBLISHED MAY 5, 1914.

98,347. CERTAIN NAMED PARTS FOR CHANDELIERS AND LIGHTING-FIXTURES. J. H. WHITE MFG. CO., New York, N. Y.
Filed December 30, 1913. Serial No. 74,899. PUBLISHED APRIL 28, 1914.

98,348. SOAP. THE WILCOX COMPANY, Providence, R. I.
Filed March 4, 1912. Serial No. 61,926. PUBLISHED APRIL 28, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,163. WATCHES. THE WATERBURY WATCH COMPANY, Waterbury, Conn., now The New England Watch Co.
Registered May 6, 1884. Renewed May 6, 1914.

11,556. CERTAIN MEDICAL AND SURGICAL APPLIANCES. ALFRED A. MCLEAN, San Francisco, Cal.
Registered October 7, 1884. Renewed October 7, 1914.

LABELS

REGISTERED JULY 7, 1914.

17,816.—*Title:* "FUM-A-DOR." (For a Deodorizer.) ADALE CHEMICAL CO., New York, N. Y. Filed May 23, 1914.

17,817.—*Title:* "LOUIS' DOUBLE WRAPPED 5¢ CIGAR." (For Cigars.) L. CHODAT COMPANY, Decatur, Ill. Filed May 6, 1914.

17,818.—*Title:* "CIMOROSI BRAND GRAND SILVER SIZZLE." (For Pyrotechnic Novelties.) ALBERTO CIMOROSI, Glassboro, N. J. Filed May 28, 1914.

17,819.—*Title:* "EBELING'S EXTRACT OF MALT & HOPS A LIFE PRESERVER." (For Extract of Malt and Hops.) THE EBELING BREWING COMPANY, New York, N. Y. Filed June 12, 1914.

17,820.—*Title:* "OUR BEST." (For Macaroni.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

17,821.—*Title:* "COMET." (For Spaghetti.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

17,822.—*Title:* "DR. WELLS GALVANIC SALVE CO." (For Salve.) NATHAN B. GLADDING, Cleveland, Ohio. Filed May 18, 1914.

17,823.—*Title:* "KEYSTONE POLISH CO." (For a Furniture Polish and Cleanser.) KEYSTONE POLISH CO., Philadelphia, Pa. Filed December 1, 1913.

17,824.—*Title:* "LA FAMOSA." (For Canned Pears.) HENRY F. C. KILIAN, New York, N. Y. Filed June 19, 1914.

17,825.—*Title:* "REGIONAL BANK." (For Cigars.) KRAUSS & CO., Baltimore, Md. Filed June 16, 1914.

17,826.—*Title:* "MENNEN'S CREAM DENTIFRICE." (For a Cream Dentifrice.) G. MENNEN CHEMICAL COMPANY, Newark, N. J. Filed June 15, 1914.

17,827.—*Title:* "MENNEN'S SHAVING CREAM." (For Shaving-Cream.) G. MENNEN CHEMICAL COMPANY, Newark, N. J. Filed June 15, 1914.

17,828.—*Title:* "VITELLO BRAND." (For Macaroni.) MONICO-ALLES COMPANY, New Castle, Pa. Filed June 13, 1914.

17,829.—*Title:* "MOUTH HYGIENE TOOTH PASTE." (For Tooth-Paste.) MOUTH HYGIENE CO., Wilkinsburg, Pa. Filed May 23, 1912.

17,830.—*Title:* "MOUTH HYGIENE TOOTH POWDER." (For Tooth-Powder.) MOUTH HYGIENE CO., Wilkinsburg, Pa. Filed May 23, 1912.

17,831.—*Title:* "OLYMPIA MALT TONIC." (For a Tonic.) OLYMPIA BREWING CO., Olympia, Wash. Filed April 23, 1914.

17,832.—*Title:* "INSTO TIRE FIX." (For a Material for Repairing Pneumatic Tires.) CHARLES H. MILLS, Toledo, Ohio. Filed May 13, 1914.

17,833.—*Title:* "GUARDIAN." (For Dog-Soap.) POTTER & WRIGHTINGTON, Boston, Mass. Filed June 6, 1914.

17,834.—*Title:* "SALZER SEEDS." (For Seeds.) JOHN A. SALZER SEED CO., La Crosse, Wis. Filed May 9, 1914.

17,835.—*Title:* "DRINK GRAY APE GRAPE SYRUP." (For Grape-Syrup.) WILLIAM SCOTT, New York, N. Y. Filed April 15, 1914.

17,836.—*Title:* "FIRST NATIONAL BANK." (For Metal-Polish.) ARTHUR WAHRMANN, Houston, Tex. Filed August 19, 1913.

17,837.—*Title:* "FLORENTINE IVORY." (For Fine Stationery.) WHITE & WYCKOFF MFG. CO., Holyoke, Mass. Filed June 12, 1914.

PRINTS

REGISTERED JULY 7, 1914.

3,654.—*Title:* "500 SHAVES GUARANTEED FROM 12 BLADES THE RAZOR THAT TAKES THE 'H' OUT OF SHAVE." (For Safety-Razors.) AUTO STROP SAFETY RAZOR CO., New York, N. Y. Filed May 2, 1914.

3,655.—*Title:* "BROOKE'S LEMOS." (For Lemonade.) C. M. BROOKE & SONS, New York, N. Y. Filed April 14, 1914.

3,656.—*Title:* "THE BEST WINTER FOOD IS BREAD." (For Bread and Yeast.) THE FLEISCHMANN COMPANY, Cincinnati, Ohio, and New York, N. Y. Filed June 17, 1914.

3,657.—*Title:* "FOLLOW THE LEADER." (For Bread and Yeast.) THE FLEISCHMANN COMPANY, Cincinnati, Ohio, and New York, N. Y. Filed June 17, 1914.

3,658.—*Title:* "BREAD MAKES A HIT." (For Bread and Yeast.) THE FLEISCHMANN COMPANY, Cincinnati, Ohio, and New York, N. Y. Filed June 17, 1914.

3,659.—*Title:* "WOMEN VOTE." (For Bread and Yeast.) THE FLEISCHMANN COMPANY, Cincinnati, Ohio, and New York, N. Y. Filed June 17, 1914.

3,660.—*Title:* "OLD STYLE LAGER." (For Beer.) G. HEILEMAN BRG. CO., La Crosse, Wis. Filed May 13, 1914.

3,661.—*Title:* "ECONOMY BRICK ARCHES." (For Arch-Bricks.) LOCOMOTIVE ARCH BRICK COMPANY, Chicago, Ill. Filed June 13, 1914.

3,662.—*Title:* "PICTURE PASTERS." (For Picture-Pasters.) PICTURE PASTER PUBLICITY CO. INC., New York, N. Y. Filed April 10, 1914.

3,663.—*Title:* "JUST ABOUT TIME YOU GOT *YOURS*." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,664.—*Title:* "YOU LAY A BET ON P. A. MAKIN'S." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,665.—*Title:* "IT'S TIME YOU ROLLED 'EM!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,666.—*Title:* "YOU CAN'T GET AWAY FROM." (For Chewing-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 17, 1914.

3,667.—*Title:* "A CASE OF GOOD HEALTH." (For a Tonic.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed May 23, 1914.

3,668.—*Title:* "'THE HOME OF SHREDDED WHEAT' WINDOW DISPLAY." (For Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed June 8, 1914.

3,669.—*Title:* "THE SHREDDED WHEAT MAN." (For Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed June 8, 1914.

3,670.—*Title:* "TAKE S. S. S. FOR THE BLOOD." (For a Blood Remedy.) SWIFT SPECIFIC COMPANY, Atlanta, Ga. Filed February 28, 1914.

3,671.—*Title:* "KOH-I-NOOR COUNTER CABINET DISPLAY CASE." (For Display-Cases.) WALDES & COMPANY, New York, N. Y. Filed June 10, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

RUSBY *v.* CROSS.

Decided November 21, 1913.

INTERFERENCE—PRIORITY—RES ADJUDICATA.

Where after a decision in favor of R. in an interference involving applications of R. and C. a second interference was declared between the same application of R. and a patent of C. having an earlier filing date, the issue of which was clearly readable upon the application of C. involved in the prior interference, *Held* that priority in the second interference was properly awarded to R., as the question was *res adjudicata* between R. and C.

APPEAL from Examiners-in-Chief.

REGULATOR FOR GAS-SUPPLY SYSTEMS.

Mr. A. B. Stoughton for Rusby.

Messrs. Barthel & Barthel and *Mr. Arthur E. Merkel* for Cross.

EWING, *Commissioner:*

This is an appeal by Rusby from the decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences awarding priority to Cross.

The Examiner of Interferences granted a motion by Rusby for judgment on the ground that the question involved herein was *res adjudicata* by reason of a final decision on priority in a former interference between the same parties. The Examiners-in-Chief held that there could not be a second consideration on the merits; but they held that since Cross had a patent the only question involved in this interference was Rusby's right to a patent, and that he had lost that right by failure to present the claims in the prior interference. They said that while they might have recommended that the interference be dissolved it was thought better procedure to award priority to Cross, since the ultimate effect would be the same in both cases—namely, the denial of a patent to Rusby.

The facts leading up to this interference are as follows:

On July 6, 1909, Cross filed application No. 506,147, upon which Patent No. 974,555 was granted November 1, 1910. It is this patent which is involved in the present interference. On October 12, 1909, Rusby filed application No. 522,326, and on March 12, 1910, Cross filed a second application, No. 548,901. On June 14, 1910, interference No. 32,030 was declared, involving Rusby's application, the later application of Cross, and an application of a third party. That interference was decided in favor of Rusby by the three tribunals of this Office. The Commissioner's decision was rendered November 1, 1912, and no appeal was taken therefrom.

On October 14, 1912, Rusby filed a petition requesting that an amendment be entered in his application containing two claims copied from Cross's Patent No. 974,555 and that an interference be declared therewith. The First Assistant Commissioner on October 21, 1912, granted this petition to the extent that the Examiner was directed to enter the amendment and if he found that Rusby could make the claims to declare the interference. (184 O. G., 522.) Cross's patent issued after the declaration of interference No. 32,030, and Rusby did not request an interference with this patent until nearly two years after its issue.

It is not contended on behalf of Cross that the counts of the present interference will not read on Rusby's application, nor is it apparent how such a contention could be made, since the counts are admittedly broader than the counts of the prior interference.

The Examiner of Interferences held that under the doctrine of *res adjudicata*, as laid down in *Blackford* v. *Wilder* (127 O. G., 1255; 1907, C. D., 491; 28 App. D. C., 535) and *Horine* v. *Wende*, (129 O. G., 2858; 1907, C. D., 615; 29 App. D. C., 415) the question of priority as to the counts of the present interference was *res adjudicata*, since it might have been presented and determined in the former interference.

As stated above, the Examiners-in-Chief reversed the Examiner of Interferences on the ground that while a second interference was not proper between these two parties as to the subject-matter here involved Rusby had lost his right to a patent.

Under the practice of the Office, as announced in *ex parte McCormick*, (113 O. G., 2508; 1904, C. D., 575,) it would seem that the patent to Cross was inadvertently issued, since the counts are admittedly broader than the counts of the prior interference, and the applications of the two parties should have been considered prior art so far as Cross's application not involved in interference was concerned. Had Cross's patent not issued prior to the declara-

tion of this interference and the counts of the present interference been presented therein those claims should have been rejected. (*In re Marconi*, 179 O. G., 577; 1912, C. D., 483; 38 App. D. C., 286; *The New Departure Manufacturing Company* v. *Robinson*, 188 O. G., 1055; 1913, C. D., 332; 39 App. D. C., 504.)

It is difficult to see how Cross is placed in any better position by the inadvertent issue of his patent. The question of priority of these counts is either *res adjudicata* or it is not. If it is *res adjudicata*, priority should have been awarded to Rusby. If it is not *res adjudicata*, the present interference was properly declared and the parties should be given an opportunity to take testimony therein.

The counts of the earlier interference could not have been made in the application upon which Cross's patent issued; but that is immaterial. Both of Cross's applications could have been put into the earlier interference or an interference involving Cross's application upon which his patent was granted and Rusby's application could have been declared and tried at the same time as the prior interference. That one of the parties had two applications, while the other had only one, is immaterial in considering whether the question of priority in the second interference was *res adjudicata* in view of the decision in the first. (*The New Departure Manufacturing Company* v. *Robinson*, *supra*.)

It is true that Rusby had constructive notice of the Cross patent upon its issuance and that he could have copied the claims and asked for the interference before the decision of the Examiner of Interferences in the earlier interference; but it is also true that Cross could have presented these same claims and that he was aware of the Rusby application before his patent issued. He contested the earlier interference, knowing that under the practice of the Office the winning party would be entitled to present broader claims, and it is not seen how Rusby can be deprived of that right by the fact that a patent was granted on the earlier Cross application. Had Cross presented the claims here in issue in his later application, after the termination of the first interference, they would have been at once rejected on the ground that the question of priority as to these claims was *res adjudicata* between himself and Rusby. The fact that these claims were presented in another application puts him in no better position.

Cross not having had his application No. 506,147 placed in interference with Rusby and having contested the interference with Rusby on his (Cross's) later application and the narrower claims and that interference having been decided in favor of Rusby, the question of priority as to any claims which were or might have been included in that interference is *res adjudicata*. (*Blackford* v. *Wilder*; *The New Departure Manufacturing Company* v. *Robinson*.)

The decision of the Examiners-in-Chief is reversed, and priority is awarded to John M. Rusby, the junior party.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

SUTTON, STEELE, AND STEELE *v.* WENTWORTH.

Decided March 2, 1914.

INTERFERENCE—PRIORITY—RES ADJUDICATA.

Where after a decision by the Examiners-in-Chief in an interference proceeding involving the applications of W. and S., S., and S., awarding priority to W. for the reason that S., S., and S. could not make the claim, and no appeal was taken therefrom, another interference was declared between the same applications on a count suggested by the Examiners-in-Chief in their decision, but which was not adopted by S., S., and S. until after the limit of appeal had expired, *Held* that the question of priority as between W. and S., S., and S. is *res adjudicata*.

Mr. A. S. Pattison for the appellants.

Mr. Odin Roberts for the appellee.

SHEPARD, *C. J.*:

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding having the following issue:

The method of separating differentiated particles of comminuted material, which consists in passing them through an electro static field in contact with an electrode surface, directing upon a part of the electrode surface a diffused spray discharge, and shielding another part of said surface by intercepting a portion of the effective spray discharge to allow a separation of the differentiated particles in accordance with the nature of their differentiations.

The case turns upon the effect of a former decision in an interference between the same parties. An earlier interference between the same parties had an issue in the counts of which the following is representative:

1. The method of separating particles of comminuted material differentiated as to electrical conductivity, which consists in directing a spray discharge of electricity of one sign to a surface charged oppositely, converting a portion of the spray discharge into static charge, meanwhile conducting the mixed particles in contact with the surface first through the spray affected region thereon, and thence into the region affected by static stress solely and thereafter separately collecting the separated materials.

Both parties admitted that this issue was anticipated by the prior art, and the interference was dissolved. After this dissolution a claim corresponding to the issue in the second interference was suggested from Wentworth's application to Sutton and the Steeles, which they declined to make, but made three claims of somewhat broader scope.

The claim was again suggested and they amended, adopting the suggestion. The second interference was then declared with that claim as the issue. It reads as follows:

The method of separating particles of comminuted material differentiated as to electrical conductivity, which consists in passing them through an electrostatic field in contact with an electrode surface, opposing the repellent effort of part of the electrode surface by directing thereon a diffused spray discharge, and shielding another part of said surface by intercepting a portion of the effective spray discharge, thus allowing the repelling effort on the shielded part of the surface to set free the more conductive particles, and thereafter separately collecting the differentiated components of the material.

The date of conception alleged in Wentworth's preliminary statement was subsequent to Sutton, Steele, and Steele's filing date, and he was notified that judgment of priority would be rendered against him on the record unless good cause be shown why the same should not be done. Wentworth moved to

dissolve on several grounds, one of which was that Sutton and Steele had no right to make the claim. The motion was denied but the question was raised on the hearing before the Examiner of Interferences, who decided priority in favor of Wentworth on the ground that his opponents had no right to make the claim. Sutton and Steele appealed to the Examiners-in-Chief, who affirmed the decision. As permitted by Rule 126, they added to their decision a recommendation to the Commissioner to the effect that the claim of the issue was not patentable in view of the prior art. They recommended a claim in different words as a proper patentable one. On Wentworth's application they granted a rehearing, and decided that the recommended claim could not properly be made by Sutton and Steele, and that it did not define a patentable invention. They withdrew the recommended claim and substituted another which is the same substantially with the issue in this, the third, interference, that was subsequently declared. Sutton and Steele presented no claim corresponding to the suggestion and took no appeal to the Commissioner.

The Commissioner referred the recommendation of the Examiners-in-Chief to the Primary Examiner for action thereon. He also made a brief statement of their proceedings and the failure to adopt the suggested claim; or to appeal therefrom and added:

This interference is therefore finally determined adversely to Sutton, Steele and Steele.

Upon return to the Primary Examiner, he rejected the claim of Sutton and Steele which corresponded to the issue of said proceeding because of the judgment of priority to Wentworth, and the claim was canceled. Sutton and Steele amended by adding the claim that had been suggested in the decision of the Examiners-in-Chief. He allowed the claim and suggested it to Wentworth who also added it and the present interference was declared with that as the issue. Responding to a notice to show cause why judgment should not be entered against him on the record, Wentworth moved to dissolve on several grounds, the chief of which was that his opponents were precluded from making the claim by reason of the former adjudication of priority in his favor. The Examiner of Interferences sustained the view of Wentworth and awarded him priority. The Examiners-in-Chief reversed him and awarded priority to Sutton, Steele and Steele. The Commissioner reversed them and made the final award to Wentworth.

The several tribunals of the Office have discussed the application of the doctrine of *res adjudicata* in opinions which indicate research and display strong reasoning power. The views of the Examiners-in-Chief, which sustain the contention of the appellants, have been presented with much ability. They leave nothing to be said upon that side. We are, however, not satisfied with their conclusion. The decision of the Commissioner is, in our opinion, sustained by our former decisions. (See *Blackford* v. *Wilder*, 28 App. D. C., 535, 543; *Horine* v. *Wende*, 29 Id., 415, 426; *Carroll* v. *Hallwood*, 31 Id., 165; *Newcomb Motor Co.* v. *Moore*, 30 Id., 464.) The principle of *res adjudicata* is fully discussed in those cases in application to similar conditions, and its limitations pointed out.

There is no occasion to add anything to the discussion.

The decision is affirmed; and the clerk will certify this decision to the Commissioner of Patents as the law requires.

Affirmed.

Court of Appeals of the District of Columbia.

CROSS *v.* RUSBY.

Decided May 22, 1914.

INTERFERENCE—PRIORITY—RES ADJUDICATA.

Held that the question of priority was *res adjudicata* between C. and R. and priority was properly awarded to R.

Mr. Melville Church for the appellant.

Mr. A. B. Stoughton for the appellee.

ROBB, *J.*:

Appeal from concurrent decision of the Patent Office in an interference proceeding in which priority of invention was awarded to Rusby, appellee here, upon the ground that the question involved was *res adjudicata* by reason of a final decision for the appellee in a former interference between the same parties.

On July 6, 1909, Cross filed patent application No. 506,147, upon which the patent involved in the present interference was granted November 1, 1910. The counts in that application read as follows:

Count 1. In apparatus of the class described, the combination of a gas generating apparatus; means for supplying air; a duct connecting the latter and said generating apparatus and means for automatically maintaining a flow of a constant volume of air per unit of time past a given point in said duct.

Count 2. In apparatus of the class described, the combination of a gas producer; means for supplying air to the latter; and means in connection with said air supplying means for automatically and continuously maintaining a flow of a constant volume of air per unit of time past a given point in said producer, independently of the area of opening of the latter.

On October 12, 1909, Rusby filed application No. 522,326 and on March 12, 1910, Cross filed a second application, No. 548,901. On June 14, 1910, while the first Cross application was still pending, an interference was declared involving Rusby's application, the later application of Cross, and an application of a third party. The counts of that interference read as follows:

1. In apparatus for use in the manufacture of gas, the combination of a gas producer; means for supplying the primary air to the producer; means for supplying the secondary air to the apparatus; and means for automatically regulating the flow of such secondary air so as to maintain a flow of a constant volume per unit of time past a given point in the secondary air duct.

2. In apparatus for use in the manufacture of gas, the combination of a gas producer; means for supplying the primary air to the latter; means for supplying the secondary air to the apparatus; and means for automatically regulating the flow of such primary and secondary air, so as to maintain a flow of a constant volume of air per unit of time past a given point in their respective ducts.

Cross then contended that the patent involved in that interference resided in the—

means for automatically maintaining a constant supply of air to the retort bench (furnace) or other apparatus for use in the manufacture of gas or other purposes,

and it appears that his plant, which he contended embodied the invention, was arranged so that primary

and secondary air could be supplied *and that an automatic regulator was provided for each of the air-supplies.* The three tribunals of the Patent Office successively decided the question of priority in favor of Rusby, and no appeal was taken from the Commissioner's decision, which was rendered November 1, 1912. Rusby filed a petition requesting that an amendment be entered in his application containing the said two claims of the Cross patent, and either that said claims be included in the claims of the first interference or that a second interference be declared. In his petition Rusby contended that the Cross patent ought not to have issued because its claims cover substantially the same subject-matter as the counts of the first interference. This petition was followed by the declaration of the second interference, with the result above set forth.

The question for determination is whether the second interference related to substantially the same cause of action as the prior interference. If it did, the decision in the first is conclusive in the second as to every question which was or might have been presented or determined in the first. (*Blackford* v. *Wilder*, 28 App. D. C., 535; 127 O. G., 1255; 1907, C. D., 491; *Horine* v. *Wende*, 29 App. D. C., 415; 129 O. G., 2858; 1907, C. D., 615.) In *Blackford* v. *Wilder* the unsuccessful party in a former interference, upon the cause going back to the Patent Office, amended and broadened his claims, but it was held that the decision in the prior interference was conclusive of his rights because he might have made the broader claims in that interference. In that case the amendment was to the same application involved in the first interference, but that is of no importance if, in fact, the subject-matter disclosed in the two applications is substantially the same. (*New Departure Mfg. Co.* v. *Robinson*, 39 App. D. C., 504; 188 O. G., 1055; 1913, C. D., 332.) The Patent Office tribunals have successively ruled that the second interference relates to substantially the same cause of action as the first. In his decision the Commissioner said:

> He (Cross) contested the earlier interference, knowing that under the practice of the Office the winning party would be entitled to present broader claims and it is not seen how Rusby can be deprived of that right by the fact that a patent was granted on the earlier Cross application. Had Cross presented the claims here in issue in his later application after the termination of the first interference, they would have been at once rejected on the ground that the question of priority as to these claims was *res adjudicata* between himself and Rusby. The fact that these claims were presented in another application puts him in no better position.

Assuming, for the purposes of this decision, that the claims of the second interference are slightly broader than those of the former, although there is much force in the contention of counsel for Rusby that the difference is one of expression rather than of fact, we concur in the Commissioner's conclusions.

Decision affirmed.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Goodwin patent, No. 610,861, for a photographic film, *Held* valid and infringed. *Goodwin Film & Camera Co.* v. *Eastman Kodak Co.*, 213 Fed. Rep., 231.

(U. S. C. C. A.) The Hood patent, No. 858,070, for a burial-crypt, *Held* not void on its face on the theory that the elements as a matter of law did not coöperate to produce a new, final, and unitary result. *International Mausoleum Co.* v. *Sievert*, 213 Fed. Rep., 225.

Adverse Decisions in Interference.

PATENT No. 985,136.

On June 13, 1914, a decision was rendered that Thomas Bilyeu and William S. Overlin were not the first inventors of the subject-matter covered by claims 4 and 6 of their Patent No. 985,136, subject, "Change-making machines," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 2, 1914.

The Leib Lubricating Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William E. Benson, 353 Minnesota street, St. Paul, Minn., for registration of a trade-mark and trade-mark registered March 13, 1883, No. 10,114, to The Leib Lubricating Company, 196–198 Chicago street, Buffalo, N. Y., and a notice of such declaration sent by registered mail to said The Leib Lubricating Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Leib Lubricating Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 26, 1914.

Carlton's Blended Tea Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The G. B. Farrington Company, New York, N. Y., for registration of a trade-mark and trade-mark registered April 15, 1890, No. 17,770, to Carlton's Blended Tea Company, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Carlton's Blended Tea Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Carlton's Blended Tea Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 204—No. 2. TUESDAY, JULY 14, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 14, 1914	323
THE OFFICIAL GAZETTE	323
CORRECTION OF DRAWINGS	323
APPLICATIONS UNDER EXAMINATION	324
PATENTS GRANTED	325
REISSUES	639
DESIGNS	644
TRADE-MARKS—REGISTRATION APPLIED FOR	651
TRADE-MARK REGISTRATIONS GRANTED	669
TRADE-MARK REGISTRATIONS RENEWED	672
LABELS AND PRINTS	673
DECISIONS OF THE U. S. COURTS—	
Cincinnati Traction Co. v. Pope	675
INTERFERENCE NOTICES	678
CITATION OF DECISIONS	678

ISSUE OF JULY 14, 1914.

Patents	907	No. 1,103,019 to No. 1,103,925,	inclusive.
Designs	23	No. 46,081 to No. 46,103,	inclusive.
Trade-Marks	103	No. 98,349 to No. 98,451,	inclusive.
Labels	26	No. 17,838 to No. 17,863,	inclusive.
Prints	8	No. 3,672 to No. 3,679,	inclusive.
Reissues	6	No. 13,769 to No. 13,774,	inclusive.
Total	1073		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	.....	1	North Carolina	6	1
Arizona	.....	.....	North Dakota	4	.....
Arkansas	.....	.....	Ohio	68	6
California	46	2	Oklahoma	2	.....
Colorado	13	.....	Oregon	4	.....
Connecticut	48	6	Pennsylvania	61	8
Delaware	1	3	Rhode Island	9	1
Florida	3	.....	South Carolina	2	.....
Georgia	8	1	South Dakota	3	1
Idaho	5	.....	Tennessee	3	.....
Illinois	75	13	Texas	14	4
Indiana	13	2	Utah	3	.....
Iowa	11	.....	Vermont	4	.....
Kansas	14	.....	Virginia	3	.....
Kentucky	6	1	Washington	10	2
Louisiana	4	.....	West Virginia	5	.....
Maine	3	1	Wisconsin	18	4
Maryland	8	7	Wyoming	1	.....
Massachusetts	60	6			
Michigan	35	1	Alaska, District of	.....	.....
Minnesota	16	5	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	7	.....
Missouri	25	4	Hawaii Territory	.....	.....
Montana	4	1	Philippine Islands	.....	.....
Nebraska	7	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	42	8			
New Mexico	3	.....	Total to residents of the United States	832	122
New York	150	33			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	.....	9	Newfoundland	.....	.....
Belgium	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	8	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	14	.....	Queensland	.....	.....
Colombia	.....	.....	Roumania	.....	.....
Cuba	.....	.....	Russia	1	.....
Denmark	1	.....	Scotland	5	.....
Dominican Republic	.....	.....	South Australia	.....	.....
Dutch East India	.....	.....	Spain	.....	.....
England	11	3	Sweden	2	.....
France	10	1	Switzerland	3	.....
Germany	34	2	Transvaal, South Africa	.....	.....
Greece	.....	.....	Victoria	.....	.....
Guatemala	.....	.....	Western Australia	1	.....
Ireland	.....	.....	Total to residents of foreign countries	97	15
Italy	4	.....			
Japan	.....	.....			
Mexico	1	.....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Correction of Drawings.

RULE 72. • • • • •

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

and secondary air could be supplied *and that an automatic regulator was provided for each of the air-supplies.* The three tribunals of the Patent Office successively decided the question of priority in favor of Rusby, and no appeal was taken from the Commissioner's decision, which was rendered November 1, 1912. Rusby filed a petition requesting that an amendment be entered in his application containing the said two claims of the Cross patent, and either that said claims be included in the claims of the first interference or that a second interference be declared. In his petition Rusby contended that the Cross patent ought not to have issued because its claims cover substantially the same subject-matter as the counts of the first interference. This petition was followed by the declaration of the second interference, with the result above set forth.

The question for determination is whether the second interference related to substantially the same cause of action as the prior interference. If it did, the decision in the first is conclusive in the second as to every question which was or might have been presented or determined in the first. (*Blackford* v. *Wilder*, 28 App. D. C., 535; 127 O. G., 1255; 1907, C. D., 491; *Horine* v. *Wende*, 29 App. D. C., 415; 129 O. G., 2858; 1907, C. D., 615.) In *Blackford* v. *Wilder* the unsuccessful party in a former interference, upon the cause going back to the Patent Office, amended and broadened his claims, but it was held that the decision in the prior interference was conclusive of his rights because he might have made the broader claims in that interference. In that case the amendment was to the same application involved in the first interference, but that is of no importance if, in fact, the subject-matter disclosed in the two applications is substantially the same. (*New Departure Mfg. Co.* v. *Robinson*, 39 App. D. C., 504; 188 O. G., 1055; 1913, C. D., 332.) The Patent Office tribunals have successively ruled that the second interference relates to substantially the same cause of action as the first. In his decision the Commissioner said:

> He (Cross) contested the earlier interference, knowing that under the practice of the Office the winning party would be entitled to present broader claims and it is not seen how Rusby can be deprived of that right by the fact that a patent was granted on the earlier Cross application. Had Cross presented the claims here in issue in his later application after the termination of the first interference, they would have been at once rejected on the ground that the question of priority as to these claims was *res adjudicata* between himself and Rusby. The fact that these claims were presented in another application puts him in no better position.

Assuming, for the purposes of this decision, that the claims of the second interference are slightly broader than those of the former, although there is much force in the contention of counsel for Rusby that the difference is one of expression rather than of fact, we concur in the Commissioner's conclusions.

Decision affirmed.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Goodwin patent, No. 610,861, for a photographic film, *Held* valid and infringed. *Goodwin Film & Camera Co.* v. *Eastman Kodak Co.*, 213 Fed. Rep., 231.

(U. S. C. C. A.) The Hood patent, No. 858,070, for a burial-crypt, *Held* not void on its face on the theory that the elements as a matter of law did not coöperate to produce a new, final, and unitary result. *International Mausoleum Co.* v. *Sievert*, 213 Fed. Rep., 225.

Adverse Decisions in Interference.

PATENT No. 985,136.

On June 13, 1914, a decision was rendered that Thomas Bilyeu and William S. Overlin were not the first inventors of the subject-matter covered by claims 4 and 6 of their Patent No. 985,136, subject, "Change-making machines," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 2, 1914.

The Leib Lubricating Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William E. Benson, 353 Minnesota street, St. Paul, Minn., for registration of a trade-mark and trade-mark registered March 13, 1883, No. 10,114, to The Leib Lubricating Company, 196–198 Chicago street, Buffalo, N. Y., and a notice of such declaration sent by registered mail to said The Leib Lubricating Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Leib Lubricating Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 26, 1914.

Carlton's Blended Tea Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The G. B. Farrington Company, New York, N. Y., for registration of a trade-mark and trade-mark registered April 15, 1890, No. 17,770, to Carlton's Blended Tea Company, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Carlton's Blended Tea Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Carlton's Blended Tea Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 204—No. 2. TUESDAY, JULY 14, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 14, 1914	323
THE OFFICIAL GAZETTE	323
CORRECTION OF DRAWINGS	323
APPLICATIONS UNDER EXAMINATION	324
PATENTS GRANTED	325
REISSUES	639
DESIGNS	644
TRADE-MARKS—REGISTRATION APPLIED FOR	651
TRADE-MARK REGISTRATIONS GRANTED	669
TRADE-MARK REGISTRATIONS RENEWED	672
LABELS AND PRINTS	673
DECISIONS OF THE U. S. COURTS—	
Cincinnati Traction Co. *v.* Pope	675
INTERFERENCE NOTICES	678
CITATION OF DECISIONS	678

ISSUE OF JULY 14, 1914.

Patents	907—No.	1,103,019 to No.	1,103,925, inclusive.
Designs	23—No.	46,081 to No.	46,103, inclusive.
Trade-Marks	103—No.	98,349 to No.	98,451, inclusive.
Labels	26—No.	17,838 to No.	17,863, inclusive.
Prints	8—No.	3,672 to No.	3,679, inclusive.
Reissues	6—No.	13,769 to No.	13,774, inclusive.
Total	1073		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	.....	1	North Carolina	6	1
Arizona	.....	.....	North Dakota	4	.....
Arkansas	.....	.....	Ohio	68	6
California	46	2	Oklahoma	2	.....
Colorado	13	.....	Oregon	4	.....
Connecticut	48	6	Pennsylvania	61	8
Delaware	1	3	Rhode Island	9	1
Florida	3	.....	South Carolina	2	.....
Georgia	8	1	South Dakota	3	1
Idaho	5	.....	Tennessee	3	.....
Illinois	75	13	Texas	14	4
Indiana	13	2	Utah	3	.....
Iowa	11	.....	Vermont	4	.....
Kansas	14	.....	Virginia	3	.....
Kentucky	6	1	Washington	10	2
Louisiana	4	.....	West Virginia	5	.....
Maine	3	1	Wisconsin	18	4
Maryland	8	7	Wyoming	1	.....
Massachusetts	60	6			
Michigan	35	1	Alaska, District of	.....	.....
Minnesota	16	5	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	7	.....
Missouri	25	4	Hawaii Territory	.....	.....
Montana	4	1	Philippine Islands	.....	.....
Nebraska	7	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	42	8			
New Mexico	3	.....	Total to residents of the United States	832	122
New York	150	33			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	.....	9	Newfoundland	.....	.....
Belgium	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	8	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	14	.....	Queensland	.....	.....
Colombia	.....	.....	Roumania	.....	.....
Cuba	.....	.....	Russia	1	.....
Denmark	1	.....	Scotland	5	.....
Dominican Republic	.....	.....	South Australia	.....	.....
Dutch East India	.....	.....	Spain	.....	.....
England	11	3	Sweden	2	.....
France	10	1	Switzerland	3	.....
Germany	34	2	Transvaal, South Africa	.....	.....
Greece	.....	.....	Victoria	.....	.....
Guatemala	.....	.....	Western Australia	1	.....
Ireland	.....	.....			
Italy	4	.....	Total to residents of foreign countries	97	15
Japan	.....	.....			
Mexico	1	.....			

The Official Gazette.

THE OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Correction of Drawings.

RULE 72. • • • • •

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 11, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 12	May 20	575
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Mar. 18	June 16	388
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 3	July 1	61
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Jan 28	June 13	680
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 18	June 4	396
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar 24	June 1	668
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 4	June 3	515
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 14	June 11	1096
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 4	May 29	562
235	10. Carriages and Wagons	Feb. 28	June 1	925
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 25	May 27	271
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 2	May 22	947
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 4	June 11	466
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar 2	June 13	544
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 9	June 10	942
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Feb 25	May 15	743
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 7	May 26	221
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	May 11	May 27	294
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr 17	May 2	333

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 10	June 4	340
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 27	May 27	423
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 4	June 1	245
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 19	May 9	470
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 6	June 9	547
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 28	June 8	289
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 6	852
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 29	June 1	463
65	28. Internal-Combustion Engines	Mar. 10	June 9	630
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	May 25	June 6	471
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 17	June 23	311
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 5	May 23	327
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 6	652
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 6	June 10	335
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 1	322
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Apr. 25	June 11	604
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 1	June 3	595
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 30	June 4	724
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Jan. 23	June 11	653
321	39. Water Distribution	Mar. 12	June 8	486
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 28	June 1	1069
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 29	June 11	481
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 1	June 6	395
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 3	346

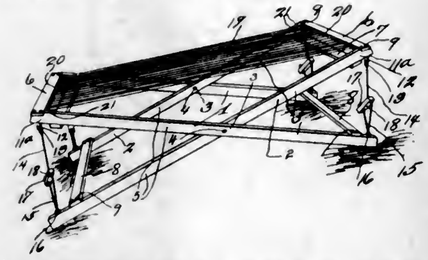
Oldest new case, Sept. 15; oldest amended, May 2.
Total number of applications awaiting action..... 22,657

Room No.		Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 15	June 15	993
	Designs	June 19	June 20	235
	Labels and Prints	June 3	May 6	101

PATENTS

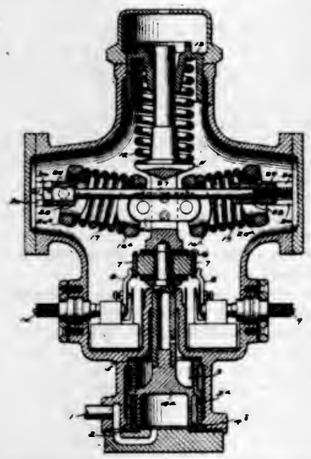
GRANTED JULY 14, 1914.

1,103,019. SUPPORT FOR RUGS TO BE CLEANED. FRANK M. ARNOLD, Clarion, Pa. Filed Aug. 9, 1913. Serial No. 783,898. (Cl. 15—8.)



In combination, a pair of rectangular frames arranged to intersect one another and pivoted together at their intersection, each frame comprising a head portion including a transversely arranged bar and having a series of eyes and legs formed by the side bars of each frame, a single length of rope passing back and forth through the eyes from one head to the other and arranged longitudinally with each end fixed to one end eye of each head, and adjustable rope connections between the head of each frame and the legs of the other frame whereby the first rope may be stretched.

1,103,020. FLUID-PRESSURE-REGULATING MECHANISM. WALTER M. AUSTIN, Swissvale, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 8, 1907. Serial No. 361,264. (Cl. 230—24.)
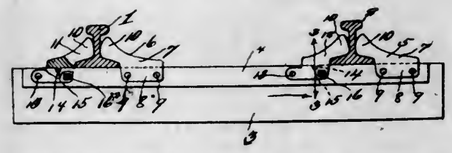


1. In a fluid pressure mechanism, the combination with a controlling device, of a piston for operating said device and having a surface exposed to fluid pressure when off its seat which is equal in area to the area exposed to fluid pressure in seated position, and means for seating said pistons at opposite ends of its stroke.

2. In a fluid pressure mechanism, the combination with a controlling device, and a piston for operating the same, of a seat for said piston at each end of its stroke, and a flange on said piston which forms a surface of the same area exposed to fluid pressure when the piston is unseated as is exposed when the piston is seated.

3. In a fluid pressure mechanism, the combination with a controlling device, and a piston for operating the same, of a diaphragm subject to differential fluid pressures and having lost motion connection with said piston.

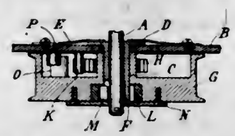
1,103,021. ANTI-RAIL-SPREADING DEVICE. JAMES MONROE BARROW, Athens, La. Filed May 1, 1914. Serial No. 835,755. (Cl. 238—5.)



1. In combination, a bar having a pair of stationary rail clamps, one to clamp against the outer face of one rail, the other to clamp against the inner face of the opposite rail, a pair of additional rail clamps pivoted to said bar, each of which adapted to coöperate with each of the other clamps for holding and bracing each rail, and means for holding each pivoted clamp downwardly and against the rail, and means for relieving the strain upon the bolts of the pivoted clamps.

2. In combination, a bar having a pair of stationary rail clamps, one to clamp against the outer face of one rail, the other to clamp against the inner face of the opposite rail, a pair of additional rail clamps pivoted to said bar, each of which adapted to coöperate with each of the other clamps for holding and bracing each rail, and means for holding each pivoted clamp downwardly and against the rail, said bar having grooves adjacent the pivoted clamps, said pivoted clamps having tongues or ribs to engage said grooves, and constituting means to relieve the strain upon the bolts of the pivoted clamps.

1,103,022. CLUTCH MECHANISM. CLARENCE E. BEACH, Binghamton, N. Y., assignor to George O. Knapp, New York, N. Y. Filed June 30, 1913. Serial No. 776,604. (Cl. 74—55.)



1. In a clutch, the combination of a supporting frame, a rotatable flanged sleeve mounted in said frame and having projections along its axis, a friction spring adapted to bear on the flange of said sleeve, a shaft extending through said sleeve, driving members located between said projections and adapted to engage said shaft, a pulley mounted upon said sleeve and having recesses adjacent to said projections and adapted to engage said driving mem-

bers, means adapted to rotate the pulley in one direction, means adapted to rotate the pulley in the opposite direction, and means adapted to limit the rotation of the pulley in either direction.

2. In a clutch, the combination of a supporting frame, a rotatable flanged sleeve mounted in said frame and having projections along its axis, a friction spring adapted to bear on the flange of said sleeve, a shaft extending through said sleeve, driving members located between said projections and adapted to engage said shaft, a pulley mounted upon said sleeve and having recesses whose walls gradually approach said shaft adjacent to said projections and adapted to engage said driving members, means adapted to rotate the pulley in one direction, means adapted to rotate the pulley in the opposite direction, and means adapted to limit the rotation of the pulley in either direction.

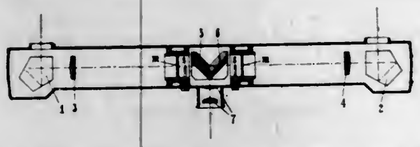
3. In a clutch, the combination of a supporting frame, a rotatable sleeve mounted in said frame and having projections along its axis, a friction spring mounted on said frame and adapted to bear on said sleeve, a shaft extending through said sleeve, driving members located between said projections and adapted to engage said shaft, a pulley mounted upon said sleeve and having recesses adjacent to said projections and adapted to engage said driving members, means adapted to rotate the pulley in one direction, means adapted to rotate the pulley in the opposite direction, and means adapted to limit the rotation of the pulley in either direction.

4. In a clutch, the combination of a supporting frame, a rotatable sleeve mounted in said frame and having projections along its axis, a friction spring mounted on said frame and adapted to bear on said sleeve, a shaft extending through said sleeve, driving members located between said projections and adapted to engage said shaft, a pulley mounted upon said sleeve and having recesses whose walls gradually approach said shaft adjacent to said projections and adapted to engage said driving members, means adapted to rotate the pulley in one direction, means adapted to rotate the pulley in the opposite direction, and means adapted to limit the rotation of the pulley in either direction.

5. In a clutch, the combination of a supporting frame, a rotatable sleeve having frictional resistance to rotation in relation to said frame and having projections along its axis, a shaft extending through said sleeve, driving members located between said projections and adapted to engage said shaft, a pulley mounted upon said sleeve and having recesses adjacent to said projections and adapted to engage said driving members, means adapted to rotate the pulley in one direction, means adapted to rotate the pulley in the opposite direction, and means adapted to limit the rotation of the pulley in either direction.

[Claims 6 to 12 not printed in the Gazette.]

1,103,023. BASE-LINE TELEMETER. PAUL BECK, Munich, Germany. Filed Dec. 30, 1910. Serial No. 600,090. (Cl. 88—2.7.)

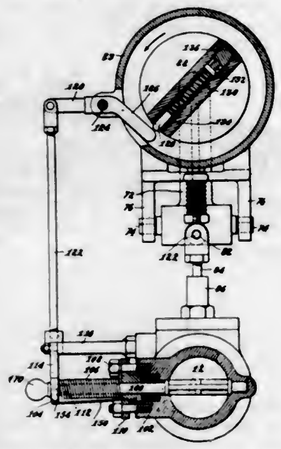


1. A base-line telemeter comprising two telescopes provided with controlling points arranged in planes corresponding to the image planes of objects situated nearer to the telemeter than those objects the distance of which is to be measured by the telemeter.

2. A base-line telemeter comprising two telescopes provided with controlling points arranged in planes different from the image planes of the telescopes where the images of the objects the distance of which is to be measured are formed the controlling point carrying members being adjustable from outside the instrument.

3. A base-line telemeter comprising two telescopes each provided with a pin adjustably inserted in its casing and located at a plane different from the image plane where the images of the objects the distance of which is to be measured are formed.

1,103,024. GOVERNOR. OLIVER D. H. BENTLEY, Boston, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 17, 1912. Serial No. 691,315. (Cl. 121—112.)



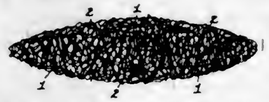
1. In an emergency governor, the combination with a rotary member having a transverse chamber, of a striker having a straight shank and an enlarged head mounted to slide in the chamber, a compression spring coiled around the shank of the striker and abutting against the enlarged head of the striker, an abutment for the other end of the spring at one end of the chamber, and a screw threaded member in the other end of the chamber bearing against the head of the striker for adjusting the position of the striker in the chamber, substantially as described.

2. In an emergency governor, the combination with a rotary member having a transverse chamber, of a striker loosely mounted to slide in the chamber, a spring connected to the striker, and a member threaded in the end of the chamber and engaging the striker for adjusting its position in the chamber, substantially as described.

3. In an emergency governor, the combination with a rotary member having a transverse chamber therein, of a striker having a straight shank and an enlarged head mounted to slide in the chamber, a compression spring coiled around the shank, a bushing threaded in one end of the chamber, loosely surrounding the shank and forming an abutment for the other end of the spring, and a plug threaded in the other end of the chamber and engaging the head of the striker to adjust its position in the chamber, substantially as described.

4. In an emergency governor, the combination with a rotary member having a transverse chamber therein, said chamber having its ends internally threaded and having its middle portion smooth, of a striker having a straight shank and having an enlarged head fitting in and arranged to slide in the smooth middle portion of the chamber, a compression spring coiled around the striker shank and abutting against the head of the striker, a bushing threaded in one end of the chamber, loosely surrounding the shank of the striker and forming an abutment for the other end of the spring, and an adjustable plug threaded in the other end of the chamber and having on its inner end a reduced portion or projection extending into the smooth middle portion of the chamber and engaging the head of the striker to adjust the position of the striker, substantially as described.

1,103,025. PACKING FOR JOURNAL-BOXES. FRANK B. BIRCH, Philadelphia, Pa. Filed Oct. 15, 1912. Serial No. 725,845. (Cl. 64—40.)

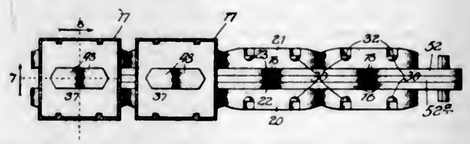


1. A journal box packing consisting of a hollow-cored mass of textile fibers disposed in successive superposed layers, each bound by a coil of wire extending throughout its length and having the same longitudinal axis as the mass of fibers.

2. A journal box packing consisting of a mass of textile fibers disposed in successive superposed layers, each bound by a coil of wire extending throughout its length and having the same longitudinal axis as the mass of fibers, the convolutions of some of the coils being wound in one direction and those of the alternate coils being wound in the opposite direction.

3. A journal box packing consisting of a hollow-cored mass of textile fibers disposed in successive superposed layers, each bound by a coil of wire extending throughout its length and having the same longitudinal axis as the mass of fibers, the diameter of the fibrous mass and of the series of coils decreasing from the center toward each end of the mass.

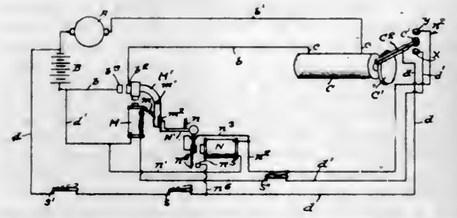
1,103,026. METALLIC LINK CHAIN. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to Peerless V. Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1911. Serial No. 663,840. (Cl. 74—64.)



1. A link chain including a link member composed of three parallel plates, provided with a hole therethrough and a pivot pin inserted through said hole in the link, said pin being of less cross sectional area than said hole in the link and secured to said link member by engagement with non-circular portions of the edge of said hole, the configuration of the non-circular portion of the hole in the middle member of the link being different from the configuration of the openings in the outside members of the link and the middle portion of the pin being of corresponding different cross section for the purpose set forth.

2. A link chain including a link member made up of three plates provided with an opening therethrough, and a pivot pin inserted through said opening in said link, the opening through the middle plate of the link being of a different diameter from the openings in the outer plates, and said pin having a correspondingly different cross section at its central portion.

1,103,027. MOTOR CONTROL. BRUCE BORLAND, Chicago, Ill. Filed May 31, 1913. Serial No. 770,853. (Cl. 172—179.)



1. The combination of an electric motor, a current-supply circuit therefor, an electrically-operated switch for the supply-circuit, an electro-responsive actuator therefor, a control circuit in which said actuator is included, an electrically-operated lock normally holding the switch open, a controller and electrical means operating to withdraw said lock and permit said switch to be closed when the controller passes from neutral to speed position.

2. The combination of an electric motor, a current-supply circuit therefor, an electrically operated switch for the supply-circuit, a control circuit in which actuating means for the switch is included, an electrically-operated lock holding the switch open, a controller, electrical devices for withdrawing said lock and for closing the switch when the controller passes from neutral to speed position, a shunt-circuit including an actuating device for holding the lock closed, and a switch to open the supply circuit.

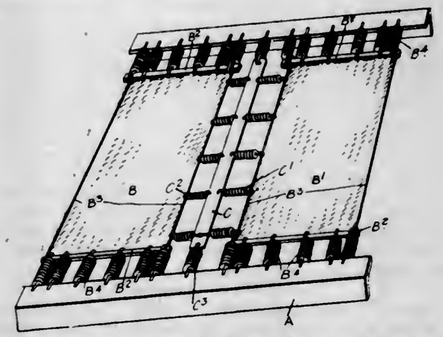
3. The combination of an electric motor, a current-supply circuit therefor, an electrically operated switch for the supply-circuit normally held open by spring tension, a control circuit having an electro-magnet to close the switch of the supply-circuit, a second electro-magnet having an armature to block the closing of the switch when the magnet is deënergized, conductors leading from the control-circuit to the second magnet, a controller and means to cause both magnets to be energized when the controller passes from neutral to speed position.

4. The combination of an electric motor, a current-supply circuit therefor, a switch for the supply-circuit comprising an electro-magnet whose armature is normally held open by a spring, a control circuit in which the magnet is included, a second electro-magnet whose armature blocks the closing of the armature of the first magnet when the second magnet is deënergized, conductors leading from the control circuit to the second magnet, a shunt circuit including said second magnet, a controller, means actuated by the controller to cause both magnets to be energized when the controller passes from neutral to speed position, and a switch to open the supply circuit.

5. The combination of an electric motor, a current-supply therefor, a switch for the supply-circuit, means tending to open said switch, a control circuit including actuating means to close the switch, an electrically-operated lock in a shunt to the control circuit to normally hold the switch open, and electrical means releasing the lock and permitting the switch to be closed upon the closing of a switch in the control circuit.

[Claims 6 to 17 not printed in the Gazette.]

1,103,028. SPRING-MATTRESS. RICHARD BRADSHAW, Toronto, Ontario, Canada. Filed Jan. 30, 1914. Serial No. 815,429. (Cl. 5—65.)

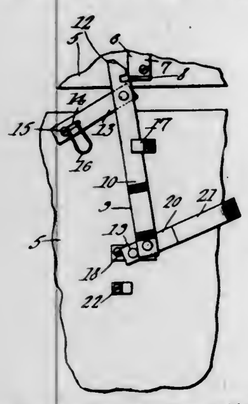


1. In a spring mattress, the combination with the main frame, of a pair of independent spring mattress sections resiliently supported at their ends in the main frame and spaced apart, a resilient bar extending longitudinally and centrally between the mattress sections and connecting means between the ends of the bar and the main frame, and tension springs connected to each side of the resilient bar and to the inner side of each mattress section, as and for the purpose specified.

2. In a spring mattress, the combination with the main frame, of a pair of mattress sections resiliently supported at their ends in the main frame and suitably spaced apart,

a spring bar extending longitudinally and centrally between the mattress sections, tension springs connecting the ends of the spring bar to the main frame and tension springs connecting each side of the spring bar to the inner sides of the mattress section, as and for the purpose specified.

1,103,029. COMBINATION TABLE-LOCK AND OPENER. GEORGE T. BUDDLE, Chicago, Ill. Filed June 25, 1913. Serial No. 775,824. (Cl. 45—9.)



1. A lock and opener for extension tables comprising a catch plate including a flange, a beveled notch-ended link, an arm pivotally secured to the notched end thereof, the remote end of said arm provided with a slot therein in engagement with a post rigidly secured to one portion of the said extension table, resilient means secured to said post and said arm adapted to force the notch of said link into engagement with the flange of the said catch plate when the same are in alinement, an actuating link pivotally secured to said extension table, and pivotally engaging the link, the said pivotal connection between the link and actuating lever positioned intermediate the ends of the latter, means for limiting the rotation of said actuating lever, said link adapted to hold the members of the extension table in forced contact, and to force the same apart.

2. A device of the class described comprising a catch plate, a link with means carried at the end thereof adapted to engage the said catch plate for the advancement and retraction thereof when in contact therewith, a post rigidly secured to a supporting structure, an arm pivotally secured to the engaging end of the said link and with the remote end thereof provided with a slot therein in engagement with said post, resilient means secured to said post and said arm forcing the engaging end of the link into engagement with the said catch plate, an actuating link pivotally secured to the said supporting structure and pivotally engaging the link, said link adapted to advance and retract said catch plate when in contact therewith, the said slotted arm adapted to move the said link out of engagement with the catch plate and allowing for the further advancement of said catch plate independent of said link.

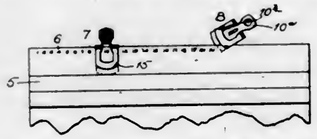
1,103,030. SOUNDING-WHEEL TOY. ANTHONY CAFFERTY, Mahanoy City, Pa. Filed July 12, 1913. Serial No. 778,722. (Cl. 46—47.)

1. In a sounding wheel toy, a handle member having a recess at one end upon one side and including a single fork on the opposite side of the same end, a plate secured in said recess constituting a second fork opposite the first fork, said handle member adjacent said forks having spaced recesses, a pair of blades having enlargements provided with slots arranged in said spaced recesses, a wheel located between the two blades and provided with oppositely arranged cog wheels, one upon each side adapted to be engaged by the blade to create sound as the cogs revolve with the wheel, pintles carried by the cog wheels mounted in bearings of the extremities of said fork, and means extending through the slots of the enlargement for adjustably securing said enlargements and blades in adjusted positions, in order that the sound of one blade or the other may be increased or decreased.



2. In a sounding wheel toy, a handle member having a recess at one end including an adjoining single fork, a plate secured to the handle member with a portion constituting a second fork opposite the first fork, said handle member adjacent said forks having spaced recesses, a pair of blades having enlargements secured in said spaced recesses, a wheel located between the two blades and provided with oppositely arranged cog wheels, one upon each side adapted to be engaged by the blades, the teeth of one cog wheel being arranged in staggered relations with the teeth of the opposite cog wheel so as to produce double sounds, and pintles carried by the cog wheels mounted in bearings of the extremities of said forks, and means whereby one or the other of said blades may be adjusted, in order to increase or decrease the sounds.

1,103,031. MARKER OR CLIP. CHAPEL S. CARTER, Ansonia, Conn., assignor to The H. C. Cook Company, Ansonia, Conn., a Corporation of Connecticut. Filed June 20, 1913. Serial No. 774,920. (Cl. 24—259.)



1. A marker or signal for card indexes comprising a metal plate having integral tongues struck out of the same, and pointing in the same general direction, one of said tongues being wider than the other, the metal around the wide tongue being bent back or folded over relative to the main portion of the plate, whereby said tongue serves as a tab, the bent over portion of metal struck from around said tab being in close proximity to the main body portion of the plate at the same side of the plate as the narrow tongue, and having its opening in line with the narrow tongue, whereby the latter may act as a gripping member, the active portion of such gripping member being located wholly within said opening, so as to press the card, or other article, into contact with the edges of said opening; substantially as described.

2. A marker or clip comprising a metal plate doubled on itself to present a front leg and a rear leg, one of said legs having its lower edge normally in substantial contact with the face of the other leg substantially throughout

the length of such lower edge, and said first named leg having an upturned or flared corner at its lower part located above the lowermost extremity of said leg, said flared corner being spaced from the opposing face of the other leg so that a card, or the like, may be interposed between the normally contacting portion of the legs; substantially as described.

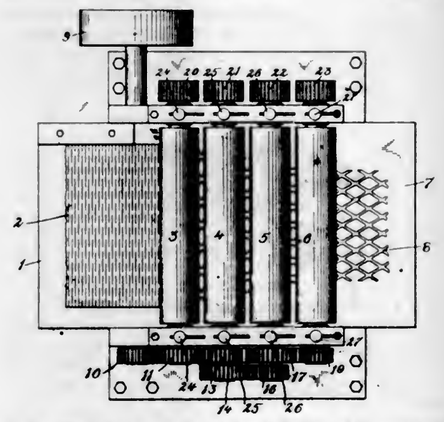
3. A marker or clip, comprising a metal plate doubled on itself to present two legs or members, the front leg having the lower edge or extremity thereof normally in substantial contact with the rear leg, above the lower edge of such rear leg, said front leg having an upturned or flared portion at a lower corner thereof, and the lower edge of said front leg being extended downward beyond the upturned or flared corner so that a card or the like will ride over the front leg without catching in such upturned or flared corner; substantially as described.

1,103,032. FLY-KILLING DEVICE. CLARENCE P. CHILDRESS, Schuyler, Nebr. Filed June 14, 1912. Serial No. 703,634. (Cl. 43—22.)



A fly killing device comprising a substantially flat hollow space having upper and lower walls and the upper wall having a plurality of long narrow wick-receiving slots disposed in widely spaced relation with respect to each other, strip-like wicks in said slots, and a handle reservoir having side walls extending through the upper wall of said base in widely spaced relation with respect to said wicks and downwardly into engagement with the bottom wall of said base and having orifices disposed between the upper and lower walls of said base for supplying the latter with poisonous liquid, and said handle reservoir having a filling cap, substantially as and for the purposes set forth.

1,103,033. APPARATUS FOR MANUFACTURING EXPANDED METAL. NORRIS ELMORE CLARK, Plainville, Conn., assignor to The National Metal Fabric Company, New York, N. Y., a Corporation of New York. Filed Jan. 12, 1906. Serial No. 295,810. (Cl. 164—6.6.)



1. A machine for forming expanded metal, consisting of means for continuously feeding a slitted strip, and means for frictionally engaging and continuously operating upon the strip to open the slits in a single plane.

2. A machine for forming expanded metal, consisting of rolls for feeding a slitted strip, and means for simultaneously opening all the slits of a single row and retaining the bonds and strands in a single plane.

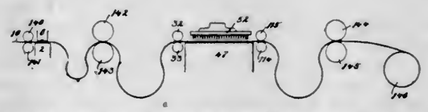
3. A machine for forming expanded metal, including a plurality of pairs of rolls for frictionally engaging the surfaces of a slitted strip and opening the slits laterally in a single plane.

4. A machine for forming expanded metal, including a plurality of pairs of rolls for frictionally engaging the surfaces of a slitted strip and opening the slits laterally, one of said pairs of rolls having a different surface speed.

5. In a machine for expanding sheet metal, means for slitting the metal, rolls for rolling and flattening the slitted stock, means for continuously operating upon the slitted stock to open the slits and at the same time retain the bonds and strands in a single plane.

[Claims 6 to 28 not printed in the Gazette.]

1,103,034. MACHINE FOR MAKING EXPANDED METAL. NORRIS ELMORE CLARK, Plainville, Conn., assignor to The National Metal Fabric Company, New York, N. Y., a Corporation of New York. Filed Feb. 23, 1906. Serial No. 302,406. Renewed Jan. 17, 1914. Serial No. 812,815. (Cl. 164—6.5.)



1. In a machine for forming expanded metal, means for slitting a strip of metal longitudinally, means for flattening it, and means for opening the slits and maintaining all the bonds in a single plane.

2. In a machine for forming expanded metal from slitted strips, means for partially opening the slits laterally in the original plane and maintaining all the bonds in a single plane, and means for further extending the openings to give a permanent set to the metal.

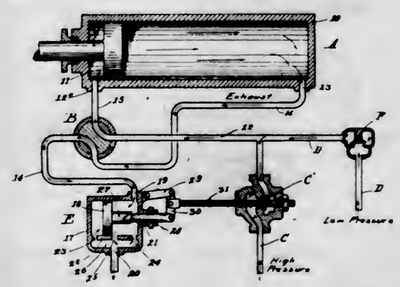
3. In a machine for forming expanded metal, means for laterally expanding a slitted strip and means for rolling down and flattening the expanded strip.

4. In a machine for metal working, means for intermittently feeding a strip of sheet metal step by step, a press and reciprocating punches carried thereby for intermittently expanding the metal laterally of the line of feed.

5. A machine for expanding a longitudinally slitted sheet, including means for flattening and setting a slitted sheet, means for expanding it laterally and means for feeding away the expanded sheet.

[Claims 6 to 75 not printed in the Gazette.]

1,103,035. CONTROLLING MECHANISM FOR HYDRAULIC PRESSES AND THE LIKE. WALTER R. CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 7, 1912. Serial No. 702,273. (Cl. 138—17.)



1. The combination with the prime mover of a hydraulic press or other machine, of a source of high pressure water, a source of low pressure water, means connecting said sources with said prime mover, and means actuated by a decrease in velocity of the liquid in the system, due to an

increase in the resistance encountered by the prime mover, to cut off the low pressure source from said prime mover and cut in the high pressure source; substantially as described.

2. The combination with a prime mover operated by liquid pressure and having an inlet connection and an exhaust connection, of a pressure main in communication with said inlet connection, a valve in said main, and a valve operating device actuated by the pressure of liquid in the system to normally hold said valve closed but operated to open said valve by a drop in the velocity of the liquid flowing in the system; substantially as described.

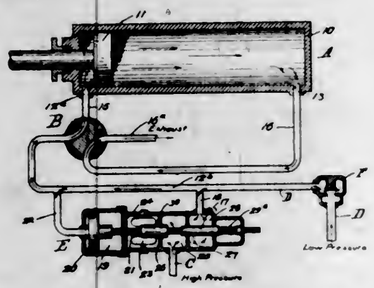
3. The combination with a prime mover for a hydraulic press or the like, comprising a cylinder with oppositely located ports and a piston to reciprocate in said cylinder, of high and low pressure mains respectively, a connection between said mains and said cylinder whereby they are placed in communication with either of said ports to actuate the piston in either direction, and means actuated by a decrease of velocity of the liquid in the system, due to the retarding of the piston, to establish communication of the cylinder with the high pressure main and to cut off the cylinder from the low pressure main; substantially as described.

4. The combination with the prime mover of a hydraulic press or other machine, of a source of high pressure fluid to operate said prime mover, a second source of fluid pressure, of less degree than the first but likewise capable of operating said prime mover, means connecting said sources with said prime mover, and means actuated by a decrease in the velocity of the fluid flowing through the system, due to an increase in the resistance encountered by the prime mover, to cut off the low pressure source from said prime mover and cut in the high pressure source, said last named means including a movable element having opposite surfaces acted on by different portions of a stream of fluid involved in the operation of said prime mover; substantially as described.

5. In controlling mechanism for hydraulic presses and the like, a prime mover, a low pressure source normally connected with said prime mover to operate the same, a high pressure source, and means actuated by a change in velocity of the flow of fluid in the system to cut out the low pressure source and cut in the high pressure source; substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,103,036. CONTROLLING MECHANISM FOR HYDRAULIC PRESSES AND THE LIKE. WALTER R. CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 7, 1912. Serial No. 702,274. (Cl. 138—17.)



1. In controlling mechanism for hydraulic presses and the like, the combination with a prime mover, of a source of high pressure fluid to operate said prime mover, a second source of pressure fluid, of less degree than the first but likewise capable of operating said prime mover, means connecting said sources with said prime mover, and means actuated by variations in the pipe friction at one or more points in the system to cut off the low pressure source from said prime mover and cut in the high pressure source; substantially as described.

2. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a conduit connected with said prime mover to supply the same with high pressure motive fluid, a second conduit connected with said prime mover to supply the same with motive fluid under lower pressure but which is likewise capable of operating said prime mover, said low pressure conduit being in communication with the prime mover under ordinary conditions for operating the same, and automatic means actuated by variations of pipe friction in the system for cutting out the low pressure conduit and cutting in the high pressure conduit when the prime mover encounters a predetermined amount of resistance; substantially as described.

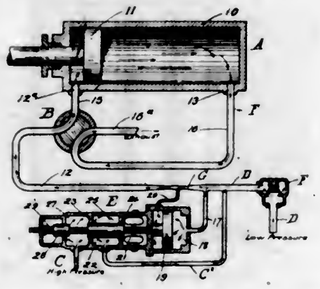
3. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a high pressure conduit, a low pressure conduit, a common supply conduit connecting both of said first named conduits with said prime mover, and means actuated by variations of pipe friction in said common supply conduit to cut off communication of said low pressure conduit with said prime mover and establish communication of the prime mover with the high pressure conduit; substantially as described.

4. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a comparatively long supply conduit of substantially uniform cross-section connected therewith to convey motive fluid to said prime mover, a valve to control the passage of fluid to said prime mover through said conduit, and a motor device for said valve having a branch connection with said conduit and operated by variations of pipe friction therein; substantially as described.

5. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a high pressure conduit, a low pressure conduit, a common supply conduit connecting said first named conduits with said prime mover, a valve to control one of said first named conduits, and a motor device for said valve having a movable element acted upon by portions of fluid derived from said last named conduit and from said common supply conduit respectively; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,103,037. CONTROLLING MECHANISM FOR HYDRAULIC PRESSES AND THE LIKE. WALTER R. CLARK, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 7, 1912. Serial No. 702,275. (Cl. 138—17.)



1. In controlling mechanism for hydraulic presses and the like, the combination with a prime mover, of a source of high fluid pressure to operate said prime mover, a second source of fluid pressure of less degree than the first but likewise capable of operating said prime mover, means connecting said sources with said prime mover, and means including a Venturi tube located at one point in the system to cut off the low pressure source from said prime mover and cut in the high pressure source; substantially as described.

2. In controlling mechanism for hydraulic presses and the like, the combination with a prime mover, of a source of high fluid pressure to operate said prime mover, a second source of fluid pressure of less degree than the first but likewise capable of operating said prime mover, a conduit connecting said sources with said prime mover, and means including a Venturi device in said conduit to cut off the low pressure source from said prime mover and cut in the high pressure source as the resistance to the prime mover increases; substantially as described.

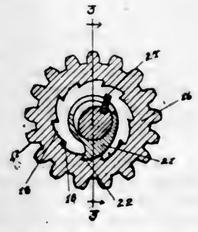
3. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a conduit connected with said prime mover to supply the same with high pressure motive fluid, a second conduit connected with said prime mover to supply the same with motive fluid under lower pressure but which is likewise capable of operating said prime mover, said low pressure source being in communication with said prime mover under ordinary conditions for operating the same, and automatic means including a Venturi device located at one point in the system for cutting out the low pressure source and cutting in the high pressure source when the prime mover encounters a predetermined amount of resistance; substantially as described.

4. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a high pressure conduit, a low pressure conduit, a common supply conduit connecting both of said first named conduits with said prime mover and having a Venturi portion therein, a valve for one of said conduits, and a fluid pressure motor for said valve connected with the Venturi portion of said common supply conduit; substantially as described.

5. In controlling mechanism for hydraulic presses and the like, the combination of a prime mover, a high pressure conduit, a low pressure conduit, a common supply conduit connecting both of said first named conduits with said prime mover, a valve for controlling said high pressure conduit, a fluid operated motor device for said valve comprising a piston and a casing therefor, and means connecting the spaces at opposite sides of the piston with restricted and unrestricted portions respectively of said common supply conduit; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

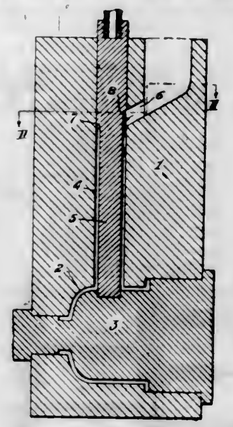
1,103,038. LOAD-HOLDING DEVICE FOR HOISTS AND THE LIKE. AUGUST CLEMENS, Alliance, Ohio. Filed Sept. 24, 1913. Serial No. 791,491. (Cl. 74—13.)



In a device of the character described, a casing having connected thereto a non-rotatable bar, said bar provided intermediate its ends with an eccentric portion, a locking dog mounted upon the eccentric portion of the fixed shaft, said locking dog provided with an elongated slot, a pin carried by the fixed shaft adapted to limit the movement of the locking dog, said locking dog provided with a lip, a locking wheel provided with internal teeth and the lip of the locking dog adapted for engagement with said internal teeth.

1,103,039. MEANS FOR POURING METAL INTO CORE-MOLDS. FRANK E. CUDELL, Cleveland, Ohio. Filed Oct. 10, 1913. Serial No. 794,407. (Cl. 22—152.)

1. In means for pouring metal into core-molds, the combination of a mold provided with a mold-form, a core positioned in the latter, said mold furthermore provided with a gate communicating with said mold-form laterally of said core, and means for restricting such communication on opposite sides of the gate for the useful purpose specified.



2. In means for pouring metal into core-molds, the combination with a mold having a mold-form and a gate above the mold-form, said mold being furthermore formed with a duct connecting said gate and mold-form, and means for constricting said mold-form on each side of said duct outlet for the useful purpose specified.

3. In means for pouring metal into core-molds the combination with a mold having an upwardly extending mold-form provided with a core having a guide above said mold-form, said guide provided with a recess forming in conjunction with said mold a duct in communication with said mold-form, said mold being provided with a gate in communication with said duct.

4. In means for pouring metal into core-molds, the combination with a mold having an upwardly extending mold-form provided with a core having a guide snugly interposed between said mold and the upper end of said mold-form, said guide provided with a recess forming in conjunction with said mold a duct in communication with the upper end of said mold-form, said mold being provided above said mold-form with a lateral gate in communication with the upper end of said duct.

5. In means for pouring metal into core-molds, the combination with a mold having an upwardly extending mold-form and a gate above the latter a core in said mold-form, a guide surrounding said core between said mold-form and gate and partially covering the upper end of said mold-form, said guide being provided with a cut-out portion opposite said gate opening whereby communication between said gate and mold-form is established.

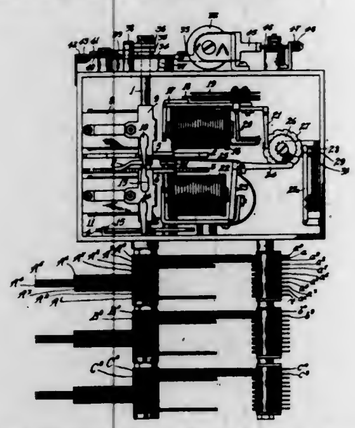
[Claims 6 to 13 not printed in the Gazette.]

1,103,040. AUTOMATIC SWITCH FOR TELEPHONE SYSTEMS. ALFRED H. DYSON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 20, 1905, Serial No. 270,492. Divided and this application filed May 5, 1911. Serial No. 625,280. (Cl. 179—27.5.)

1. In an electrical switching mechanism, the combination with passive switching contacts arranged radially in rows, of movable contact arms for making connection with said contacts, one for each row, means for suitably supporting said arms whereby they are adapted to be moved to wipe successively their respective rows, and apparatus for moving said arms to wipe a portion of said contacts to cause an arm to select a contact of its row.

2. In an electrical switching mechanism, the combination with passive switching contacts arranged in rows, of movable contact arms for making connection with said contacts, one for each row, means for suitably support-

ing said arms whereby they are adapted to be moved to wipe successively their respective rows, apparatus for moving said arms to wipe a portion of said contacts to cause an arm to select a contact of its row, and apparatus for moving said arms to wipe the remainder of said contacts to return said arms to normal.



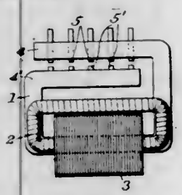
3. In an electrical switching mechanism, the combination with immovable switching contacts arranged in rows, of movable contact arms for making connection with said contacts, means for causing said arms to wipe a portion of said rows to select a row, and apparatus for causing an arm to wipe along its row to select a contact.

4. In an electrical switching mechanism, the combination with immovable switching contacts arranged in rows, of movable contact arms for making connection with said contacts, means for causing said arms to wipe a portion of said rows to select a row, apparatus for causing an arm to wipe along its row to select a contact, and apparatus for causing said arms to wipe the remainder of said rows to return to normal.

5. In an electrical switching mechanism, the combination with passive switching contacts arranged in rows, of a rotatable switch shaft, wipers controlled thereby, one for each row, means for suitably supporting said wipers whereby they are adapted to successively wipe their rows when the shaft is rotated and apparatus for controlling rotation of said shaft to select a contact.

[Claims 6 to 34 not printed in the Gazette.]

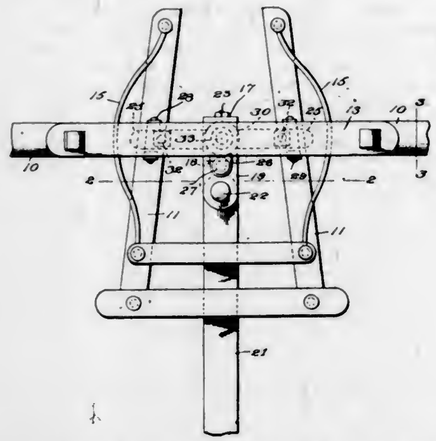
1,103,041. MULTIWELD SECONDARY. EDWARD FULDA, New York, N. Y. Filed Feb. 18, 1914. Serial No. 819,310. (Cl. 219—13.)



1. In a multi-electrode electric metal working apparatus, a pair of transformer secondary terminal bars extended parallel to one another but in opposite directions and having two or more pairs of work-engaging electrodes as and for the purpose described.

2. In a multi-electrode electric metal working apparatus, a pair of transformer terminal bars extended parallel to one another but in opposite directions, combined with two or more primary coils acting on the secondary to produce electromotive forces acting in series or tending to reinforce one another so as to produce an increased potential across the transformer terminal bars.

1,103,042. COUPLING FOR WAGONS. LEONIDAS W. GRAY and GEORGE H. KNOWLES, Rushville, Ill. Filed Oct. 25, 1912. Serial No. 727,792. (Cl. 21—39.)



1. In a device of the class described, a bearing member adapted to be disposed between the axle and sand-board of a vehicle, vertical webs extending from said member and adapted to engage against the axle and sand-board, fastening devices adapted to connect said webs to the sand-board, another bearing member adapted to engage the sand-board, means for connecting said bearing members, and means adapted to couple said last-mentioned bearing member to the running gear of a vehicle.

2. In a device of the class described, a plate adapted to engage between the axle and sand-board of a vehicle and including a vertical web adapted to engage against the rear face of the sand-board, projections spaced apart and extending from said web and adapted to support a reach, another plate adapted to engage the running gear of a vehicle, means for connecting said first mentioned plate to one of said projections, and means adapted to connect said last mentioned plate to the running gear of a vehicle.

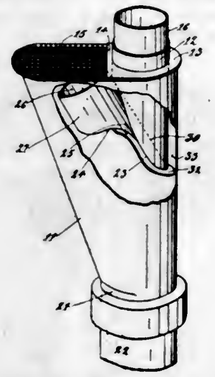
3. The combination with a vehicle including a forward axle forward hounds forward sand-board and forward bolster, of a lower member bearing between the axle and the sand-board and having rearward extensions, an upper member bearing upon the sand-board and provided with a rearward extension engaging the rearward extension of the lower bearing member, fastening devices connecting said extensions, an upwardly directed pin carried by said upper bearing member, and another bearing member connected to said bolster and having an aperture to receive said pin.

4. The combination with a vehicle including a forward axle forward hounds forward sand-board and forward bolster, of a lower plate bearing between the axle and the sand-board and having rearward extensions, an upper plate bearing upon the sand-board and provided with a rearward extension engaging the rearward extension of the lower plate, fastening devices extending through said engaging extensions, an upwardly directed pin carried by said upper plate, and a plate connected to said bolster and having an aperture to receive said pin.

1,103,043. AUTOMATIC GAS-VALVE FOR DOWN-SPOUTS. EDWARD GRUENINGER, Cincinnati, Ohio, assignor of one-half to Fred J. Treuheit and Guy E. Forster, Cincinnati, Ohio. Filed Sept. 29, 1913. Serial No. 792,385. (Cl. 4—21.)

1. In an automatic gas valve for down-spouts, the combination of a casing, an inlet-pipe arranged in said casing, said inlet-pipe having a downwardly tapering lower end which forms a valve-seat, and a valve in said casing for

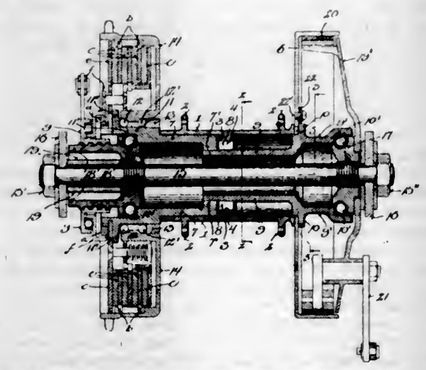
said valve-seat having a downwardly tapering lip provided with a transversely bulging downwardly sloping water deflecting upper surface coacting with said valve-seat and a transversely channeled downwardly sloping gas deflecting lower surfaces, said valve being counterweighted for normally urging said lip toward said valve-seat.



2. In an automatic gas valve for down-spouts, the combination of a casing, a cover therefor, an inlet-pipe arranged in said casing, said inlet-pipe provided with a downwardly slanting lower end forming a valve-seat, and a valve-pipe whose upper end is pivoted adjacent the upper end of said slanting lower end of said inlet-pipe, said valve-pipe having a tapering lower end for forming a lip coacting with said valve-seat, said lip provided with an outwardly extending peripheral flange below said valve-seat, said cover being at one end thereof imperforate above said valve-seat, lip and pivotal connection and formed as a grated opening at the other end of said cover, and the bore of said valve-pipe opening upwardly below said grated opening, substantially as described.

3. In a device of the character described, the combination of a case, an inlet-pipe provided with a valve-seat within said case, and a valve-pipe pivoted within said case to said inlet-pipe and arranged to contact said seat, said valve-pipe provided with a flange arranged to coact with the walls of said case for forming a protective chamber within said case above said flange for protecting said valve-seat on said inlet-pipe, said valve-pipe having an upper end opening upwardly above said seat, and said case provided with a grated opening above said upper end of said valve-pipe, substantially for the purpose set forth.

1,103,044. BEARING. WILLIAM S. HARLEY, Milwaukee, Wis. Filed Mar. 8, 1913. Serial No. 752,966. (Cl. 308—11.)

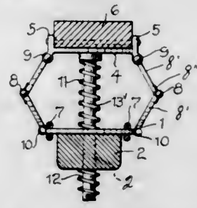


1. A wheel-hub comprising a barrel having internal locking means, a ball-cup bushing fitted within one end of the barrel having a threaded aperture at its inner end, means extending from the inner end of the bushing for engagement with the barrel locking means, a flanged ball-cup sleeve fitted into the opposite end of said barrel having a threaded inner end in engagement with the threaded aperture of the bushing, the sleeve flange being adapted to impinge against the adjacent end of the aforesaid barrel whereby the several parts are drawn together to constitute a unitary assemblage.

2. A wheel-hub comprising a barrel having an internal web, a ball-cup bushing fitted into one end of the barrel having a threaded aperture at its inner end, an interlocking connection between the inner end of the bushing and barrel web, and a flanged ball-cup sleeve fitted into the opposite end of the barrel having a threaded inner end in engagement with the threaded aperture of the bushing.

3. A wheel-hub comprising a barrel having an internal web provided with notches, a ball-cup bushing fitted into one end of the barrel having a threaded aperture at its inner end, teeth extending from the said inner end of the bushing in interlocking engagement with the web notches, and a flanged ball-cup sleeve fitted into the opposite end of the barrel having a threaded inner end in engagement with the threaded aperture of the bushing.

1,103,045. SPRING-WHEEL. THORNTON WOODROW HAWLEY, Oakland, Cal. Filed Mar. 24, 1913. Serial No. 756,529. (Cl. 152—8.)



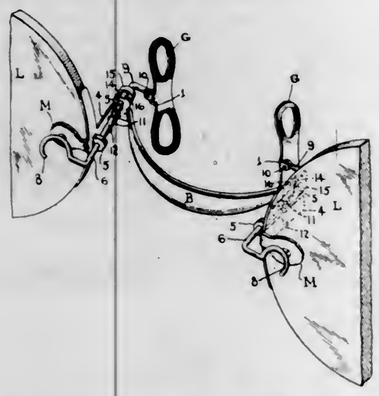
A spring wheel comprising the combination with a rim, of transverse inner plates positioned across the rim, chains upon opposite sides of the rim for connecting the inner plates, the ends of each inner plate being extended through the links of the chains, with outer plates having upstanding flanges at their opposite ends, the lower edges of the flanges extending slightly below the outer plates, jointed hinge plates secured to the outer extremities of the inner plates and the depending edges of the flanges at the opposite ends of the outer plates, a tread member engaged upon the outer plates between the flanges thereof, pins carried by the outer plates and engaged through the inner plates and the rim, and springs engaged around the pins and bearing against the inner face of the rim and the outer faces of the inner plates.

1,103,046. EYEGLASSES. JOSEPH E. HIGGINS, Grand Island, Nebr. Filed July 10, 1913. Serial No. 778,405. (Cl. 88—50.)

1. The combination with a hose-bridge having at each end a lens-mounting, the guards, and a curved supporting arm for each guard connected with its mounting on an upright pivot; of a pair of horizontally disposed spring-actuated crank shafts carried by said mountings with their cranks moving through substantially vertical planes and disposed within said curved arms, and means for turning said shafts manually.

2. The combination with a hose-bridge having at each end a lens-mounting; of bearings on said mounting, a horizontally disposed rock shaft mounted in said bearings and having its forward end deflected laterally into a finger piece and its rear end cranked, the guard, an arm integral therewith and bent around behind it so as to loosely embrace said crank, an upright pivot connecting the remote end of said arm with the mounting, and a spring normally turning said shaft in a direction to bear the guard toward the center of the bridge.

3. The combination of a nose bridge having at each end a lens-mounting, bearings on the same having arc-shaped recesses, forwardly and rearwardly extending rock shafts mounted in said bearings and having finger pieces at their front ends, guards movable toward and from the bridge and actuated by the cranks on the inner ends of said shafts, collars fixed on said shafts and having laterally projecting pins to work in the arc-shaped recesses of said bearings, said pins having sockets in their ends and springs coiled on said shafts and each having one of its ends anchored to one of the mountings and its other end inserted in the socket in one of said pins.



4. The combination with a nose-bridge having at each end a lens-mounting; of a pair of bearings on said bridge near each end, one of which has a recess, a horizontally disposed rock shaft mounted in said bearings and having a finger piece at its forward end and its rearward end cranked, a guard, a tongue projecting therefrom and pivoted to the mountings, said tongue being loosely engaged by said crank, a spring turning the shaft so that its crank presses the guard normally toward the center of the bridge, and a collar fast on said rock shaft and having a pin moving in said recess.

5. The combination with a nose-bridge having at each end a lens-mounting; of a pair of bearings on said bridge near each end, one of which has an arc-shaped recess, a horizontally disposed rock shaft mounted in said bearings and having its forward end deflected into a finger piece and its rearward end cranked, a guard movably connected with said crank, a spring bearing the guard normally toward the center of the bridge, and a collar fast on said rock shaft and having a pin moving in said recess.

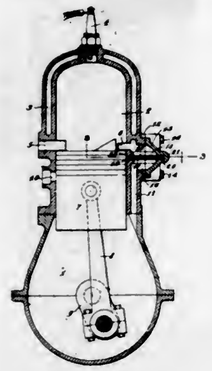
[Claim 6 not printed in the Gazette.]

1,103,047. INTERNAL-COMBUSTION ENGINE. GEORGE HOLLOWAY, Sandusky, Ohio. Filed Nov. 14, 1912. Serial No. 731,262. (Cl. 123—73.)

1. The combination, with the cylinder and crank case of a two-cycle engine, of a by-pass communicating at one of its ends with the cylinder and at its opposite end with the interior of the crank case, said by-pass having an opening in its side, a cover for said opening, there being a groove about the walls of the by-pass adjacent said opening and within the inner face of the cover, and a screen the edges of which are adapted to be received by said groove.

2. The combination, with the cylinder and crank case of a two-cycle engine, of a by-pass communicating at one of its ends with the cylinder and at its opposite end with the interior of the crank case, the by-pass having an opening in its side, a cover for said opening, there being a groove about the walls of the by-pass adjacent the said opening and within the inner face of the cover, and one or more screens extending across the by-pass and having their edges supported within said groove.

3. The combination, with the cylinder and crank case of a two-cycle engine, of a by-pass communicating at one of its ends with the cylinder and at its opposite end with the interior of the crank case, the by-pass having an opening in its side, a cover for said opening, a pair of flanges extending horizontally about the by-pass and forming a groove therebetween and the cover having a groove coincident with said groove, and a screen having its edges supported within said groove.



4. The combination, with the cylinder and crank case of a two-cycle engine, of a by-pass formed with the outer surface of the cylinder wall and communicating at one end with the cylinder and at its opposite end with the crank case, the cylinder being provided with a pair of spaced flanges projecting from the outer cylinder wall and the lateral walls of the by-pass and forming therebetween a groove, one or more screens fitted in said groove, and a cover removably applied to the by-pass and extending across the plane of said groove.

5. The combination, with the cylinder and crank case of a two-cycle engine, of a by-pass formed with the outer surface of the cylinder wall and communicating at one end with the cylinder and at its opposite end with the crank case, the cylinder being provided with a pair of spaced flanges projecting from the outer cylinder wall and the lateral walls of the by-pass and forming therebetween a groove, one or more screens fitted in said groove, and a cover removably applied to the by-pass and extending across the plane of said groove and itself having a groove adapted to register with the groove within the by-pass and to receive the outer edge of the screen or screens therewithin.

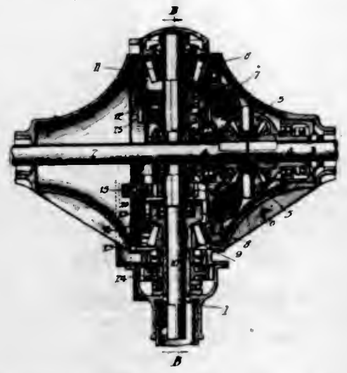
[Claims 6 and 7 not printed in the Gazette.]

1,103,048. DIFFERENTIAL TRANSMISSION MECHANISM. CARL AUGUST JANSON, Rockford, Ill., assignor of one-fifth to Axel R. Newberg, Chicago, Ill. Filed Nov. 20, 1912. Serial No. 732,510. (Cl. 74—58.)

1. In a transmission mechanism, the combination with a drive shaft, of a gear loose thereon, a driven shaft, a gear having connections for driving said driven shaft and meshing with said first mentioned gear, speed changing gears, means for connecting the gear loose on the drive shaft directly thereto or to the speed changing gears and coöperating with certain of the above-named elements whereby said drive shaft may operate the driven shaft in a reverse direction.

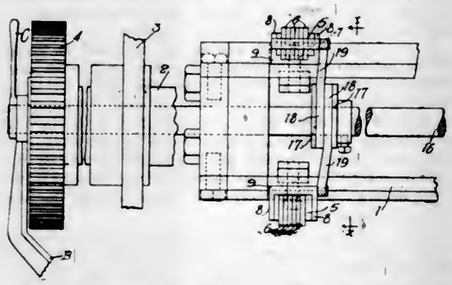
2. In a transmission mechanism, the combination with a drive shaft, of a gear loose thereon, a driven shaft, a gear having connections for driving said driven shaft and meshing with said first mentioned gear, speed changing gears, means for connecting the gear loose on the drive shaft directly thereto or to the speed changing gears, and a counter shaft in alinement with said drive shaft having connections for driving said driven shaft in a reverse direction.

3. The combination of a driving shaft, a quill surrounding the same and rotatable thereon, a countershaft journaled in parallel relation to said driving shaft, means cooperating with said counter-shaft to connect said driving shaft to said quill, a pair of driven shafts, differential



gearing connecting said quill to said driven shafts, said means including a shiftable member located between said quill and said driven shafts and movable between a position for connecting said driving shaft directly to said quill and a position for connecting said driving shaft and said countershaft.

1,103,049. NUMBERING MECHANISM. HANS LOUIS JENSEN, Dayton, Ohio, assignor to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 2, 1912. Serial No. 668,867. (Cl. 101—183.)



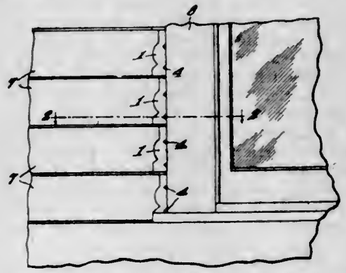
1. In combination, with a revolving support, and two numbering devices carried by said support on opposite sides thereof, said numbering devices being provided with alternate numerals to cause them to print consecutive numbers, of a normally fixed bearing portion arranged eccentrically with relation to the axis of said support, and arms mounted on said eccentric bearing portion and connected with the respective numbering devices, whereby the movement of said support relative to said fixed bearing will cause each of said numbering devices to be actuated once upon each revolution of said support.

2. The combination, with a main frame, of a shaft eccentrically supported in said frame, a supporting frame journaled in the main frame about said shaft, a numbering device carried by said supporting frame, an operative connection for the device including an eccentric fixed on the shaft, and means for shifting the shaft to cause the axis of said eccentric to coincide with the axis of the support and thereby render said connection inoperative.

3. The combination, with a revolving support, and a numbering device carried by said support, of a normally fixed member having a bearing portion arranged eccentrically with relation to said support, a band mounted on said bearing portion and adapted to move with said support, a connection between said band and said numbering device to actuate the latter, and means for shifting said normally fixed member to cause the axis of said bearing portion to coincide with the axis of said support, thereby rendering the connection between said fixed member and said numbering device inoperative.

4. The combination, with a shaft, a revolving support mounted to rotate about said shaft, and a numbering device carried by said support, of an operative connection between said shaft and said numbering device including an eccentric rigidly mounted on the shaft, and means to change the position of said shaft to cause the axis of said eccentric to coincide with the axis of said support and thereby render said connection inoperative.

1,103,050. END FIXTURE FOR SIDING-CLAPBOARDS. FREDERICK DANIEL KEES, Beatrice, Nebr. Filed Feb. 2, 1914. Serial No. 816,081. (Cl. 20—5.)



1. An end fixture for siding clap-boards embodying an angle member, one flange of which is adapted to overlap the face of the clap-board, and the other flange of which is adapted to abut against a window or door casing, the last mentioned flange having an aperture for the passage of a securing member, the first mentioned flange having an opening for the complete passage of the securing member therethrough, and the first mentioned flange having means for closing said opening.

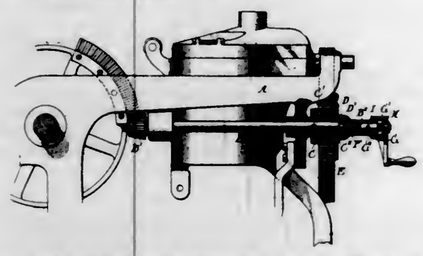
2. An end fixture for siding clap-boards embodying an angle member, one flange of which is adapted to overlap the face of the clap-board, and the other flange of which is adapted to abut against a window or door casing, the last mentioned flange having an aperture for the passage of a securing member, the first mentioned flange having an opening for the complete passage of the securing member therethrough, and the first mentioned flange having an outstanding ear adapted to be bent into the said opening to close the same.

3. An end fixture for siding clap-boards embodying an angle member, one flange of which is adapted to overlap the face of the clap-board, and the other flange of which is adapted to abut against a window or door casing, the first mentioned flange having an ear struck therefrom at the elbow of the angle member and lying in the plane of the second mentioned flange to provide an opening in the first mentioned flange for the passage of a securing member, the second mentioned flange having an aperture adjoining the said ear, and the ear being adapted to be bent into the said opening to close the same after the securing member has been driven through the said aperture.

1,103,051. TYPOGRAPHICAL COMPOSING-MACHINE. DAVID SHERWOOD KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 8, 1912. Serial No. 689,130. Renewed May 27, 1914. Serial No. 841,367. (Cl. 199—13.)

1. In a typographical machine, the combination of a movable mold carrier, driving means therefor comprising a driving shaft and an actuating pinion, and rotary devices mounted upon the shaft and normally disconnected from the pinion but adapted to be connected therewith at will, the said devices acting in their rotary movement first

to break the actuating connection between the pinion and shaft, and thereafter to turn the pinion to adjust the mold carrier to a different position.



2. In a typographical machine, the combination of a movable mold carrier, driving means therefor, and rotary devices mounted concentrically to the driving means and normally disconnected therefrom but adapted to be connected thereto at will, the said devices acting in their rotary movement first to break the driving connection between the carrier and driving means, and thereafter to adjust the latter to alter the position of the carrier.

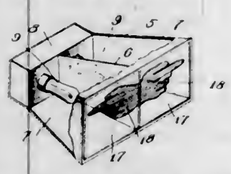
3. In a typographical machine, the combination of a movable mold carrier, driving means therefor comprising a driving shaft and an actuating pinion, and manual devices mounted upon the shaft and serving by their continued movement in one direction first to break the connection between the shaft and pinion, and thereafter to turn the latter to adjust the mold carrier to a different position.

4. In a typographical machine, the combination of a movable mold carrier, driving means therefor comprising a driving shaft and an actuating pinion, and rotary manual devices turning about the axis of the shaft and rotatable both relatively to and conjointly with the actuating pinion, and adapted by the relative rotation to break the actuating connection between the pinion and shaft, and by the conjoint rotation to operate the pinion to adjust the mold carrier to a different position.

5. In a typographical machine, the combination of a movable mold carrier, driving means therefor comprising a driving shaft and an actuating pinion, and manual devices capable of both an axial and rotary movement relative to the shaft, and adapted by their axial movement to engage the driving pinion, and by their rotary movement to break the connection between the shaft and pinion and turn the latter to adjust the mold carrier to a different position.

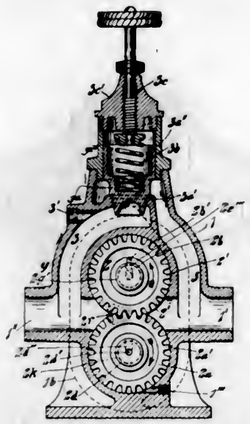
[Claims 6 to 9 not printed in the Gazette.]

1,103,052. SIGNAL. JOHN KERTÉSZ, Woodbridge, N. J. Filed Oct. 10, 1913. Serial No. 794,447. (Cl. 40—132.)



A signal device comprising a box consisting of an opaque top and bottom, opaque side walls outwardly inclined in opposite directions, and having their top edges inclined downward from front to rear and their bottom edges inclined upward from front to rear, a longitudinal partition disposed centrally between said sides, corresponding in shape to said sides to provide two compartments flared at their front ends, said sides, top and bottom having integral rear extensions forming the rear end of the box, a lamp block supported between said extensions, lamps supported by said block, and a transparent front for the box.

1,103,053. FLUID PUMP OR MOTOR. KARL KIEFER, Cincinnati, Ohio. Filed Jan. 9, 1911. Serial No. 601,599. (Cl. 103—44.)



1. In a pump or motor pistons consisting of intermeshed helical gears, respective teeth of which have continuous contact from end to end during rotation thereof through a certain angle, and each of which teeth advances, from end to end, through an angle not exceeding the aforementioned angle.

2. In a pump or motor, pistons consisting of intermeshed gears, each with teeth advancing helically thereon, respective teeth of which have continuous contact from end to end of the helical advance of the respective teeth during rotation of each gear through a certain angle, and said helical advance of each tooth being through an angle not exceeding said angle of rotation.

3. In a pump or motor having an inlet and an outlet, pistons consisting of intermeshed gears, each with teeth advancing helically thereon, respective teeth of which have continuous contact from end to end of the helical advance of the respective teeth during rotation of each gear through a certain angle, and said helical advance of each tooth being through an angle not exceeding said angle of rotation, the outlet means having communication at the ends of the gears with the spaces between the teeth where the gears mesh.

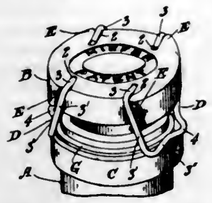
4. In a pump or motor pistons consisting of intermeshed gears, each having inversely arranged helical teeth forming angles midway of the length of the gear, the respective teeth of said gears having continuous contact from end to end during revolution thereof through a certain angle, and the angle of advance of each tooth, from the end of the gear to its angle midway of the length of the gear, being not in excess of the aforementioned angle.

5. In a pump or motor, pistons consisting of intermeshed gears, each with teeth advancing helically thereon inversely and forming angles intermediate of the length of the gear, respective teeth of the gears having continuous contact from end to end of the helical advance of the respective teeth during rotation of each gear through a certain angle, and said helical advance of each tooth being through an angle not exceeding said angle of rotation.

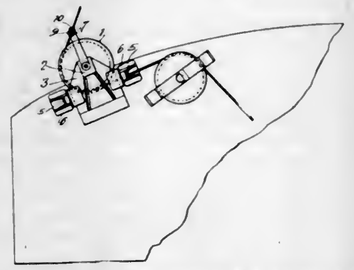
[Claims 6 to 8 not printed in the Gazette.]

1,103,054. CLOSURE FOR CONTAINERS. KARL KIEFER, Cincinnati, Ohio. Filed Jan. 9, 1911. Serial No. 601,600. (Cl. 215—87.)

In a closure for containers, a neck, and a cap having a convex outer surface or periphery, and a substantially flat upper surface with upwardly open recesses therein adjacent to the periphery, and a clip having hooks engaging in the upwardly open recesses and having members extending down and embracing a segmental part of the cap, and lugs on the cap having surfaces adjacent to the downwardly extending members of the clip that are inclined away from said members from said recesses downward, so that the members have a limited swinging movement, with their hooks acting pivotally in said recesses.

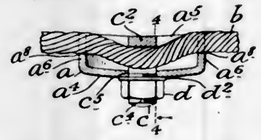


1,103,055. GUIDE FOR BOWLINES. CHARLES B. KING and JACOB W. FELLMETH, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Sept. 28, 1910. Serial No. 584,203. (Cl. 57—34.)



A fair-lead for bow lines comprising a bracket, a sheave rotatably mounted on said bracket, said bracket being provided with a hollow trunnion extending substantially tangentially to the periphery of said sheave, a bearing for said trunnion, and a line guide carried by said bracket and extending beyond the periphery of said sheave, and a counterweight connected with said bracket and arranged on that side of the axis thereof opposite said sheave.

1,103,056. LINE OR CABLE CLAMP. FRANK P. KOBERT, Fairhaven, Conn., assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn., a Corporation of Connecticut. Filed July 2, 1912. Serial No. 707,245. (Cl. 24—135.)

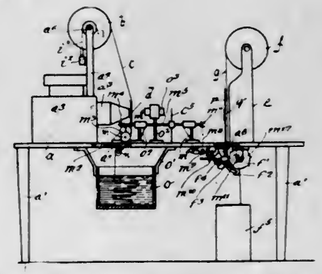


1. In a clamp of the class described, a hollow body formed of thin metal and having a bottom and struck-up lateral and end walls forming reinforcements for the bottom and stiffening the hollow body longitudinally and transversely, the end walls being provided with recesses of less depth than said walls, a clamping bolt extending through the bottom plate at a considerable distance from both the recessed end walls and having a head disposed transversely of the body and lying within the lateral walls, and at a considerable distance from each end wall, whereby said head will engage the strands of a cable and deflect them out of a straight line, and the recesses in the end walls will hold the cable strands against lateral displacement.

2. In a clamp of the class described, a hollow body formed of thin metal and having a bottom, and lateral and end walls, the end walls being provided with recesses of less depth than said walls, said body having its greatest length between said recessed walls and a clamping bolt extending through the bottom plate, at a considerable distance from both the recessed end walls, and having a head disposed transversely of the body, and lying within the lateral walls, the end faces of said head engaging the inner faces of the said lateral walls to prevent the rotation of the bolt with respect to the said body, and a nut on said bolt whereby said head will engage the strands of a cable at a considerable distance from the points of engagement of the end walls therewith, and deflect the same toward the bottom of said hollow body.

3. In a clamp for rope or cable, the combination with a hollow body having a bottom and side and end portions, the end portions being provided with recesses of less depth than said end portions, said bottom being provided with a central transverse raised portion, of a bolt passing through said bottom on each side of said raised portion, and located at a distance therefrom and from the adjacent end portion, said bolts having clamping heads extending transversely of the hollow body, and having flat end portions in guiding engagement with the side portions of said hollow body, and nuts on said bolts whereby the heads of said bolts will engage the cable strands at considerable distances from said end portions, and from said centrally transverse raised portion, and will readily deflect them toward the bottom of said hollow body.

1,103,057. ARRANGEMENT FOR MAKING LIVING PICTURES. STANISLAUS KUCHARSKI, Berlin, Germany. Filed Dec. 13, 1911. Serial No. 665,555. (Cl. 88—24.)



1. Apparatus for printing a succession of pictures comprising a projecting device, means for supporting and feeding a band of wet film, said means consisting of a roller on which the film is wound in such a manner that one portion of its surface will not contact with another portion thereof, means for feeding said film off said roller in a path substantially in alinement with the face of said projecting device, and means to feed a strip of positive material in position to receive the images projected by said projecting device.

2. Apparatus for printing a succession of pictures comprising a projecting device, means adapted to support and feed a band of wet film, said means consisting of an axially movable roller on which the film is wound in such a manner that one portion of its surface will not contact with another portion thereof, and means for moving laterally said film supporting member to feed said film in determined relation to said projecting device, in combination with means to feed a strip of positive material in position to receive the images projected by said projecting device.

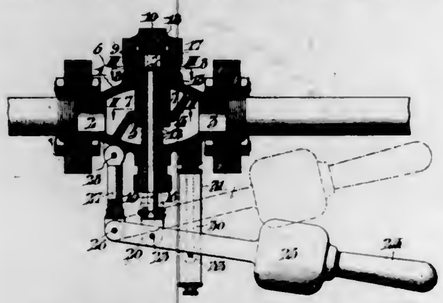
3. An apparatus for printing a succession of pictures comprising in combination an axially movable roller, means for moving said roller axially to feed a band of negative film in determined relation to a projecting device, feeding means for said negative film, means for feeding a band of positive material in position to receive

the images projected by said projecting device, and means for driving both of said driving means in synchronism.

4. An apparatus for printing a succession of pictures, comprising the combination of an axially movable roller, a screwed shaft rigidly connected thereto, a finger engaging with the threads on said shaft, and means for driving said shaft to move said rollers axially.

5. An apparatus of the kind described comprising a projecting device, a roller dimensioned to receive a determined length of film wound spirally thereon, and means adapted to feed a film off said roller in a determined path relative to said projecting device.

1,103,058. AUTOMATIC STOP-VALVE. JAMES D. LALOR and FREDERICK L. JAHN, Philadelphia, Pa.; said Jahn assignor, by mesne assignments, to said Lalor. Filed Aug. 27, 1910. Serial No. 579,236. (Cl. 137—4.)



1. In an automatic stop valve, a partition in the fluid channel; an orifice in the partition; a hollow valve cylinder closed at the top and adapted to reciprocate in the orifice; an aperture in the side of the cylinder permitting fluid to flow through the valve only when the valve cylinder is so far advanced within the orifice that said aperture has cleared the partition; a spring whereby said valve cylinder is held in said advanced position; and means allowing the fluid pressure on both sides of the partition to have equal access to the valve, whereby excess of pressure on the inlet side automatically retracts the valve cylinder within its orifice against the pressure of said spring with closure of the valve.

2. In an automatic stop valve a partition having a horizontal component, with valve orifice therein, interposed within the channel of fluid communication; a hollow cylindrical valve, closed at top and open at bottom, occupying said orifice with capacity for axial reciprocation therein, and receiving on its upper surfaces the fluid pressure of the inlet side of the valve, and on its lower surfaces the fluid pressure of the outlet side of the valve; a spring pressing the hollow cylindrical valve upward with sufficient strength to counterbalance the specific gravity of the cylindrical valve in the liquid which fills the valve; apertures in the side of the cylinder adapted to establish free communication between the inlet side of the valve and the interior of the valve cylinder, and thence to the outlet side of the valve, when the valve cylinder is in its upper position, but adapted to be moved to a position within the valve orifice, with closure of the valve, when the latter is in its lower position; whereby under conditions of equal fluid pressure on both sides of the valve cylinder, it is held in its upper and open position, but is depressed and the valve closed upon the establishment of an excess of pressure on the inlet side.

3. In an automatic stop valve provided with a valve orifice, a hollow cylindrical valve reciprocating within said orifice, and floating within the fluid passing through the valve, whereby it is driven down and closed by excessive pressure of fluid on the inlet side of the valve; said cylinder being apertured at the side so as to permit the flow of fluid through it when the valve is in its open position, and being free from positive connection with any moving part which extends without the valve casing.

4. In an automatic stop valve, the combination of the valve; means whereby the valve which is normally open when the fluid pressures on either side are substantially equal, is automatically closed by excess of fluid pressure on the inlet side, a weighted lever without the valve casing and a nonpositive connection between said weighted lever and the valve whereby the raising of the weighted lever opens the valve when it is closed although its subsequent lowering does not close the valve.

1,103,059. PROCESS OF RENDERING SOLUBLE INSOLUBLE PHOSPHATES. WALTER S. LANDIS, Niagara Falls, Ontario, Canada, assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed July 12, 1913. Serial No. 778,729. (Cl. 71—7.)

1. The process of producing available phosphoric acid which consists in providing a finely divided mixture of phosphate rock, a soluble salt of sodium, water and carbon, and burning the same before the sodium salt has had time to crystallize to a substantial degree, substantially as described.

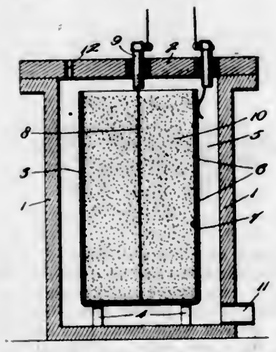
2. The process of producing available phosphoric acid which consists in providing a finely divided mixture of phosphate rock, a soluble salt of sodium, water and carbon, and burning the same before said salt crystallizes to a substantial extent and while blowing air through the mixture.

3. The process of producing available phosphoric acid which consists in providing a finely divided mixture of phosphate rock, a soluble salt of sodium, water and carbon; burning the same before the said salt has time to crystallize to a substantial extent; and finely dividing the resulting product, substantially as described.

4. The process of producing available phosphoric acid which consists in providing a finely divided mixture of phosphate rock, a soluble salt of sodium, water and carbon; burning the same before the said salt has time to crystallize; blowing air through the mass during the burning operation, and finely dividing the resulting product, substantially as described.

5. The herein described new composition of matter suitable for igniting on a perforated grate consisting of a finely divided mixture of phosphate rock, a soluble salt of sodium and carbon and water, substantially as described.

1,103,060. METHOD AND MEANS FOR FIXING NITROGEN. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed Apr. 3, 1914. Serial No. 829,385. (Cl. 204—64.)



1. The process of fixing atmospheric nitrogen which consists in providing a carbid charge; feeding nitrogen to said charge; providing a plurality of free passages for said nitrogen to said charge at its sides and equally distant from its center, and suitably igniting said charge, substantially as described.

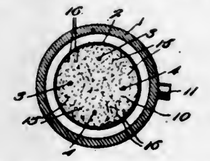
2. The process of fixing atmospheric nitrogen which consists in providing a charge of calcium carbid; feeding nitrogen to said charge; providing a plurality of passages for said nitrogen to said charge equally distant from a line passing through its center; and electrically heating a portion of said charge to the point of ignition, substantially as described.

3. In an apparatus for fixing atmospheric nitrogen the combination of an outer vessel; an inner perforated vessel, adapted to contain a charge of calcium carbid; means for feeding nitrogen to the perforations in said inner vessel; foraminous means associated with said inner vessel to prevent said carbid from passing through said perforations; and means to ignite said charge.

4. In an apparatus for fixing atmospheric nitrogen the combination of an outer vessel; an inner perforated vessel, adapted to contain a charge of calcium carbid; means for feeding nitrogen to the perforations in said inner vessel; foraminous means comprising a fabric associated with said inner vessel to prevent said carbid from passing through said perforations; and means comprising a resistor to ignite said charge, substantially as described.

5. In an apparatus for fixing atmospheric nitrogen the combination of an outer vessel provided with means for admitting nitrogen thereto; an inner vessel having perforations through its walls; a porous fabric inside said inner vessel closing said perforations and adapted to prevent a charge of carbid from passing through said perforations; and a resistor adapted to be embedded in said charge and provided with an enlarged upper portion, substantially as described.

1,103,061. PROCESS AND APPARATUS FOR FIXING ATMOSPHERIC NITROGEN. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed Apr. 3, 1914. Serial No. 829,386. (Cl. 204—64.)



1. The process of fixing atmospheric nitrogen which consists in providing a charge of carbid; feeding nitrogen to said charge; burying directly in said charge a plurality of resistors; and raising said resistors to the temperature necessary to bring about the desired reaction, substantially as described.

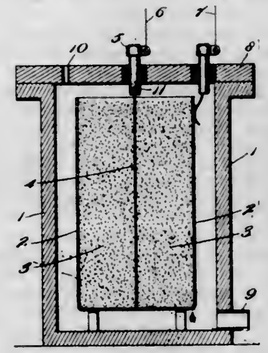
2. The process of fixing atmospheric nitrogen which consists in providing a charge of carbid; feeding nitrogen to said charge; burying directly in said charge a plurality of resistors; preventing oxidizing effects from destroying the exposed portions of said resistors not so buried; and raising said resistors to the temperature necessary to bring about the desired reaction, substantially as described.

3. In an apparatus for fixing atmospheric nitrogen the combination of an outer vessel; an inner vessel adapted to hold a charge of carbid; means for feeding nitrogen to said charge; and a plurality of resistors directly buried in said charge, substantially as described.

4. In an apparatus for fixing atmospheric nitrogen the combination of an outer vessel; an inner vessel adapted to hold a charge of carbid; means for feeding nitrogen to said charge; and a plurality of resistors provided with enlarged upper ends and directly buried in said charge, substantially as described.

1,103,062. METHOD OF AND APPARATUS FOR FIXING NITROGEN. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed Apr. 3, 1914. Serial No. 829,387. (Cl. 204—64.)

1. The process of forming nitrogen compounds through the reaction of nitrogen upon carbid, which consists in burying the resistor used for supplying heat to the charge directly in the mass of the said carbid, and out of direct contact with the circulating excess nitrogen in said charge; and raising said resistor to a temperature sufficient to cause the desired reaction, while feeding nitrogen to the charge, substantially as described.

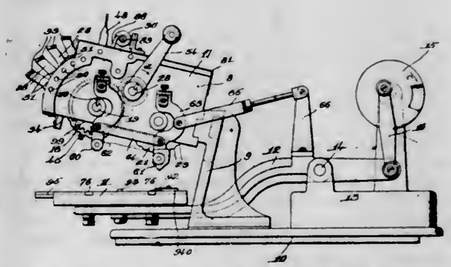


2. The process of fixing nitrogen which consists in providing a suitable charge of calcium carbid; burying a resistor directly in the mass of said charge and out of direct contact with the circulating excess of nitrogen through the said charge; preventing destruction through oxidizing effects of said resistor outside of said charge; and raising said resistor to a temperature sufficient to cause the desired reaction, while feeding nitrogen to the charge, substantially as described.

3. In an apparatus for fixing atmospheric nitrogen, the combination of a suitable container adapted to hold a charge of carbid; a resistor entering said container and adapted to be directly buried in said charge out of direct contact with the circulating excess of nitrogen through the interstices of said charge; means for decreasing the rate of destruction of said resistor outside of said charge through oxidizing actions; means for passing a current of electricity through said resistor; and means for feeding nitrogen to said charge, substantially as described.

4. The process of fixing nitrogen which consists in providing a suitable charge of calcium carbid; burying a resistor directly in the mass of said charge and out of direct contact with the circulating excess of nitrogen through the said charge; preventing the destruction through oxidizing effects of said resistor outside of said charge; raising said resistor to a temperature sufficient to cause the desired reaction, while feeding nitrogen to the charge; and continuously supplying heat from an outside source to said mass during the process of nitrification, substantially as described.

1,103,063. PRINTING-MACHINE. GEORGE H. LANG, Boston, Mass. Filed Sept. 20, 1910. Serial No. 582,836. (Cl. 101—83.)



1. In a printing machine, the combination with a plurality of independently-settable quantity-indicating print-

ing members, each having a plurality of printing characters to designate different quantities, of a corresponding number of price-indicating printing members situated in line with the quantity-indicating printing members, gearing to connect each price-indicating printing member to its quantity-indicating printing member whereby said members move in unison, each price-indicating member having the same number of printing characters thereon as are on the corresponding quantity-indicating printing member and each of said printing characters indicating the proper price for the number indicated by the corresponding quantity-indicating printing character on the corresponding quantity-indicating printing member, and means to move any price-indicating printing member and its corresponding quantity-indicating printing member simultaneously so as to bring into printing position in the same line and at the same time any quantity-indicating printing character and the corresponding price-indicating printing character.

2. In a printing machine, the combination with a plurality of independently-settable quantity-indicating printing members, each having a plurality of printing characters thereon to designate different quantities, of means to move each printing character to bring any printing character thereon into printing position, means to cause an impression to be made of the characters that are in printing position, and means controlled by each printing member to cause an impression to be made of the price corresponding to the printing character thereon which is in operative position simultaneously with the making of the impression by said character and in the same line as said impression.

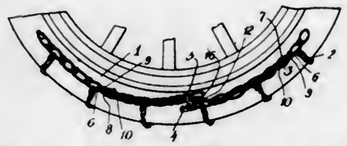
3. In a printing machine, the combination with a plurality of movable quantity-indicating printing members having printing characters thereon to indicate quantity, of a corresponding number of movable price-indicating printing members situated in line with the quantity-indicating members and having printing characters thereon to indicate price, means to set each quantity-indicating printing member to bring any printing character thereon into printing position, means connecting each price-indicating printing member to the quantity-indicating printing member which is in line therewith so that when any quantity-indicating printing member is set to bring any quantity-indicating printing character thereon into operative or printing position the corresponding price-indicating printing member will be set so as to bring the corresponding price-indicating printing character into printing position in line with the operative quantity-indicating printing character, a platen, means to move the printing head and platen relative to each other to cause an impression to be made, and means to lock the printing members from movement in either direction while the impression is being made.

4. In a printing machine, the combination with a plurality of movable quantity-indicating printing members having printing characters thereon to indicate quantity, of a corresponding member of movable price-indicating printing members, situated in line with the quantity-indicating printing members and each having printing characters thereon to indicate the proper prices for the quantities represented by the printing characters of the corresponding quantity-indicating printing member, means to set each quantity-indicating printing member to bring any printing character thereon into printing position, means connecting each price-indicating printing member to its quantity-indicating printing member so that when any quantity-indicating printing member is set to bring any character thereon into printing position the corresponding price-indicating printing member will be set so as to bring the corresponding price-indicating character into printing position, a platen, means to move the printing head and platen relative to each other to cause an impression to be made, and means controlled by the platen to lock the printing members from movement while the impression is being made.

5. In a printing machine, the combination with a printing head having a plurality of independently-settable type wheels, of a platen, means to move the printing head and platen relative to each other to cause an impression to be made, normally inoperative locking means for the printing wheels and platen-controlled means to render said locking means operative while the impression is being made.

[Claims 6 to 30 not printed in the Gazette.]

1,103,064. CHAIN-GRIP-ATTACHING DEVICE. WALTER B. LASHAR, Bridgeport, Conn., assignor to Weed Chain Tire Grip Company, Bridgeport, Conn., a Corporation of New York. Filed May 28, 1913, Serial No. 770,287. Renewed June 3, 1914. Serial No. 842,794. (Cl. 152—14.)

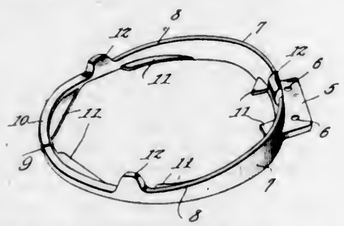


1. The combination with a vehicle wheel having a resilient tire, of a tire grip having tread chains and coöperating side chains each provided with connectors to connect their ends and a temporary attaching device for the ends of each of said side chains comprising a flexible attacher cable and narrow rigid hooks permanently connected to both ends of said cable, said hooks being hooked into links on one end of said side chains and said cable being threaded through links adjacent both ends of said side chains to maintain substantial alinement thereof.

2. The combination with a vehicle wheel having a resilient tire, of a tire grip having tread members and coöperating side members each provided with connectors to connect their ends and a temporary attaching device for the ends of each of said side members comprising a flexible attacher and attacher grips permanently connected to both ends thereof, the attacher grips engaging in said side members and said attacher being threaded through portions of said side members adjacent their ends to maintain substantial alinement thereof.

3. The combination with a vehicle wheel having a resilient tire, of a tire grip having tread chains and coöperating side chains each provided with connectors to connect their ends and a temporary attaching device for the ends of said side chains comprising a flexible attacher and gripping means connected thereto, said attacher and gripping means coöperating with the side chain ends and said attacher being threaded through said grip chains to hold the grip in operative position on the tread of the tire.

1,103,065. OIL-CAN HOLDER. FRED L. LONGYEAR, Lansing, Mich. Filed Sept. 8, 1913. Serial No. 788,775. (Cl. 248—41.)

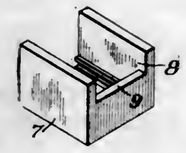


1. An oil can holder comprising supporting plate provided with apertures therethrough for the securing of the same to a supporting structure, semicircular arms with spring portions intermediate their ends carried by said supporting plate, inwardly extending ledges carried by the said arms for the reception of the base of an oil can thereon, prongs carried by the said arms with the inner faces thereof beveled from a central point upwardly and outwardly and downwardly and inwardly, said prongs adapted to engage the side walls of an oil can and hold the same securely upon the said supporting ledges.

2. An oil can holder comprising a split ring, a supporting plate carried thereby and diametrically opposed to the split portion of said ring, inwardly extending ledges carried by the said split ring and adapted to support an oil can thereon, prongs juxtaposed said supporting plate and spaced a distance therefrom adapted to resiliently engage the flaring side wall and ledge of an oil can and with portions of said ring juxtaposed said supporting plate of relatively wide and thin dimensions to lend resiliency to said ring.

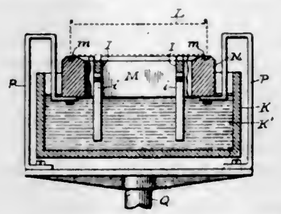
3. An oil can holder comprising a split ring, with the portions of the ring substantially diametric to the said split, of relatively wide and thin dimensions to lend resiliency to said ring, a supporting plate carried by said ring for the securing of the same to a supporting structure, inwardly extending ledges carried by the ring and adapted to support an oil can thereon, prongs carried by the said ring and with their inner faces beveled from a central point upwardly and outwardly, and downwardly and inwardly, said prongs adapted to resiliently engage the side walls of an oil can to hold the same securely upon the said supporting ledges.

1,103,066. GLASS-MELTING-TANK ACCESSORY. LEOPOLD MAMBOURG, Columbus, Ohio, assignor of one-third to William O. Taylor and one-third to Sylvio Casparis, Columbus, Ohio. Filed Feb. 2, 1912. Serial No. 675,020. (Cl. 49—61.)



A glass melting tank accessory consisting of a settling chamber disposed at the outlet from the tank and adapted to isolate molten glass from the general mass within the tank, and having that one of its walls farthest from the outlet lower than the side-walls so as to form a dam, substantially as set forth.

1,103,067. SOLDERING-MACHINE. FRANCIS P. MCCOLL, St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 17, 1910. Serial No. 597,793. (Cl. 113—78.)



1. In a soldering machine, a solder bath, a track lying above the bath for supporting a can, a soldering iron within said bath having in its upper face an annular channel of the same configuration as the bottom edge of the can, means for raising and lowering the iron so as to move it between a position wherein it is submerged to a position wherein the bottom edge of the can lies in said channel, said iron having a groove across the same to receive the track so as to permit the upper surface of the iron to pass the track.

2. In a soldering machine, a solder bath, a track lying above the bath for supporting a can, a soldering iron within said bath having in its upper face a channel of the same configuration as the bottom edge of the can, means for raising and lowering the iron so as to move it from a position wherein it is submerged to a position wherein the bottom edge of the can lies in said channel, said iron having a groove across the same to receive the track so as to permit the upper surface of the iron to pass the track and means for closing the ends of the channel where they are intersected by the said groove while the upper surface of the iron lies below the track.

3. In a soldering machine, a solder bath, a track lying above the bath for supporting a can, a soldering iron within said bath having at the top thereof a soldering portion of the same configuration as the bottom edge of the can, means for raising and lowering the iron so as to move it between a position wherein it is submerged and a position wherein said soldering portion is in operative relation to the bottom edge of the can, said iron having a groove across the same to receive the track so as to permit the said soldering portion to rise to or above the top of the track, and means for guiding the iron in the vertical direction.

4. In a soldering machine, a solder bath, a track lying above the bath for supporting a can, a soldering iron within said bath having in its upper face an annular channel of the same configuration as the bottom edge of the can, means for raising and lowering the iron so as to move it between a position wherein it is submerged and a position wherein the bottom edge of the can lies in said channel, said iron having a groove across the same to receive the track so as to permit the upper surface of the iron to pass the track, said iron having vertical grooves extending from the track receiving groove, said vertical grooves having a depth measured lengthwise of the track sufficient to carry them across the adjacent ends of the solder-receiving channel, and members projecting from said track and fitting into said vertical grooves so as to guide the iron and at the same time close the ends of the solder-containing channel while the top of the iron lies below the top of the track.

5. In a soldering machine, a solder bath, a track lying above the bath for supporting a part to be soldered, means for moving a part to be soldered along said track, a soldering iron having a solder-containing channel, and means for moving said iron between a position in which the channel is submerged in the bath and a position wherein said channel is in operative relation to the part to be soldered, said iron having a groove cut across said channel and registering with the track so as to permit the top of the iron to be rasied above the top of the track.

[Claim 6 not printed in the Gazette.]

1,103,068. CASH-REGISTER. JOHN H. MCCORMICK, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Jan. 3, 1900. Serial No. 275. (Cl. 235—6.)

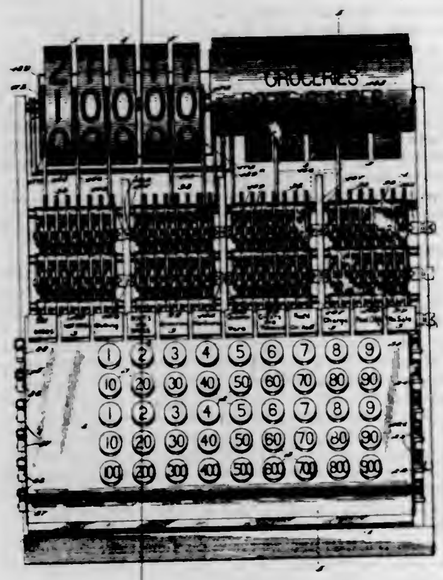
1. In a cash register, the combination with an operating mechanism of a series of amount keys, a series of department keys normally depressible but ineffective in connection with the operating mechanism, a special key normally effective, and means operated by the amount keys for rendering the department keys effective and the special key ineffective.

2. In a cash register, the combination with a register operating mechanism, of a series of independent counters mounted in movable frames, a grand total counter similarly mounted, and a series of keys arranged when operated to set one of the independent counters and the grand total counter for operation.

3. In a cash register, the combination with a register operating mechanism, of a series of independent counters, a totalizing counter, spring means for bringing the counters and the operating mechanism together, and a series of keys arranged when operated to put the spring means of one of the independent counters and that of the totalizing counter under tension.

4. In a cash register, the combination with a register operating mechanism, of a series of independent counters, a totalizing counter, spring devices for throwing the re-

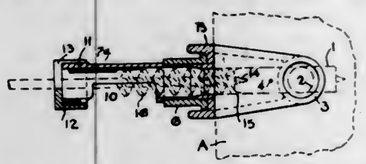
spective counters into coöperative relation with the operating mechanism, and a series of keys arranged when operated to put the spring devices of one of the independent counters and of the totalizing counter under tension.



5. In a cash register, the combination with a series of amount or value keys, of a counter, a series of rack-bars for operating said counter, segmental racks gearing with the rack bars, and a series of graduated registering stops coöperating with said segments and arranged to coact with the operated keys.

[Claims 6 to 185 not printed in the Gazette.]

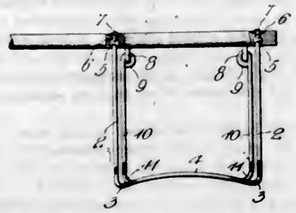
1,103,069. TOOL FOR BORING LOCK-MORTISES. JOHN MONTGOMERY, Toronto, Ontario, Canada. Filed Apr. 16, 1913. Serial No. 761,557. (Cl. 77—62.)



A lock mortise boring-tool guide, having in combination a sleeve that may be removably affixed to the door and which has a cut-away portion, and a cap provided with a slot which is fitted over the end of the sleeve, whereby the shank of the tool may be dropped into the slot of the cap and the said cap then turned so that the slot is in position of non-registry with the open portion of the sleeve and thereby forms a confining band for the bit, substantially as described.

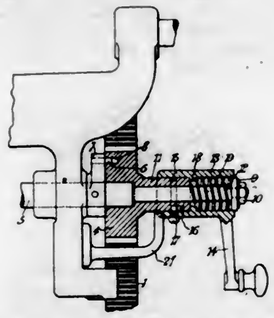
1,103,070. PLATE-LIFTER. WILLIAM MOSER, Alamosa, Colo. Filed Aug. 19, 1912. Serial No. 715,817. (Cl. 65—32.)

In a device of the character described a staff having two parallel running openings, in combination with a wire member having two parallel stems each near its end being flat to provide a circular outstanding spur, said ends passing through said openings, said spurs being driven into said staff, and washers upon said projecting ends, said



ends being flanged over said washers, as and for the purpose set forth.

1,103,071. TYPOGRAPHICAL CASTING-MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Sept. 26, 1912. Serial No. 722,397. (Cl. 199—13.)



1. In a typographical casting machine, the combination of a mold carrier capable of turning about a stationary axis, a pinion meshing with the said mold carrier, a driving shaft on which the pinion is independently rotatable and axially slidable, means normally locking the pinion to the shaft, manual means operative to turn the pinion for adjusting the mold carrier thereby, and resilient means operative to maintain the said manual means normally out of turning connection with the pinion, and in connection with a stop to prevent its rotation.

2. In a typographical casting machine the combination of a mold carrier capable of turning about a stationary axis, a pinion meshing with the said mold carrier, a driving shaft on which the pinion is independently rotatable and axially slidable, means locking the pinion to the shaft, resilient means normally maintaining this locking of the pinion to the shaft, but capable of yielding to permit of their unlocking, manual means operative to turn the pinion for adjusting the mold carrier thereby, and resilient means operative to maintain the said manual means normally out of turning connection with the pinion but capable of yielding to permit of such connection.

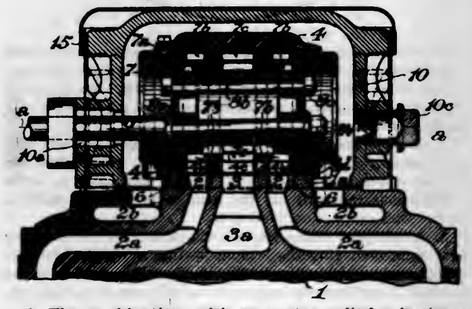
3. In a typographical casting machine the combination of a mold carrier capable of turning about a stationary axis, a pinion meshing with the said mold carrier, a driving shaft on which the pinion is independently rotatable and axially slidable, means locking the pinion to the shaft, a spring normally maintaining this locking of pinion to shaft, a handle operative to turn the pinion for adjusting the mold carrier thereby, and a second spring operative to maintain the said handle normally out of turning connection with the pinion but capable of yielding to permit of such connection.

4. In a typographical casting machine the combination of a mold carrier capable of turning about a stationary axis, a pinion meshing with the said mold carrier, a driving shaft on which the pinion is independently rotatable and axially slidable, means locking the pinion to the shaft, a spring normally maintaining this locking of pinion to shaft, a handle operative to turn the pinion for adjusting the mold carrier thereby, a stop normally retaining this handle against rotation, and a second spring operative to maintain the said handle normally out of turning connection with the pinion, and in connection with the stop.

5. In a typographical casting machine the combination of a mold carrier capable of turning about a stationary axis, a pinion meshing with the said mold carrier, a rotatable shaft on which the pinion is independently rotatable and axially slidable, means locking the pinion to the shaft, a spring normally maintaining this locking of pinion to shaft, a collar on the shaft, against which the said spring bears, a handle operative to turn the pinion and provided with a boss, the said spring being comtained within said boss, and a second spring encircling the first one and bearing against the collar and boss to maintain the handle normally out of turning connection with the pinion.

[Claims 6 to 24 not printed in the Gazette.]

1,103,072. STEAM-ENGINE VALVE-CHEST. JOHN E. MUHLFELD, Scarsdale, N. Y., and HAL R. STAFFORD, Plainfield, N. J. Filed Mar. 28, 1914. Serial No. 827,809. (Cl. 136—5.)



1. The combination, with an engine cylinder having a transversely ported valve face, of a valve chamber of segmental transverse section, having ports registering with the cylinder ports, a piston distribution valve fitted to reciprocate in the valve chamber and controlling the ports thereof, bolts engaging the cylinder and securing the valve chamber detachably thereto, an integral valve chest, of substantially similar transverse section to the valve chamber, and inclosing said chamber, and bolts securing said valve chest to the cylinder, independently of the valve chamber.

2. The combination, with an engine cylinder having a transversely ported valve face, of a valve chamber of segmental transverse section, having ports registering with the cylinder ports, bolts securing said valve chamber detachably to the cylinder, lips on said valve chamber engaging the ends of the valve face, a piston distribution valve fitted to reciprocate in the valve chamber and controlling the ports thereof, and an integral valve chest, of substantially similar transverse section to the valve chamber, which incloses said chamber and is secured to the cylinder, independently thereof.

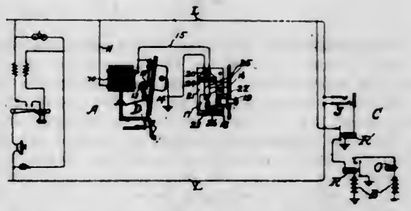
3. The combination, with an engine cylinder having a transversely ported valve face, of a valve chamber having ports registering with the cylinder ports, joint gaskets interposed between the valve chamber and the valve face, one of said joint gaskets surrounding each cylinder port and another inclosing the outer sides and ends of the set of cylinder ports, connections securing the valve chamber detachably to the cylinder, a piston distribution valve fitted to reciprocate in the valve chamber and controlling the ports thereof, and an integral valve chest which incloses the valve chamber and is secured to the cylinder.

4. The combination, with an engine cylinder having a transversely ported valve face, of a valve chamber of segmental transverse section, having ports registering with the cylinder ports, connections securing said valve chamber detachably to the cylinder, a piston distribution valve fitted to reciprocate in the valve chamber and controlling the ports thereof, an integral valve chest, of substantially similar transverse section to the valve chamber, which incloses said chamber and is secured to the cylinder, and set screws engaging said valve chest and bearing on the opposite sides of the valve chamber, in substantially the vertical planes of the joints thereof with the valve face.

5. The combination, with an engine cylinder having a transversely ported valve face, of a valve chamber of segmental transverse section, having ports registering with the cylinder ports, a distribution valve comprising two end pistons and an intermediate spool of vertically elongated and transversely reduced transverse section, and fitted to reciprocate in the valve chamber and control the ports thereof, and an integral valve chest which incloses the valve chamber and is secured to the cylinder.

[Claim 6 not printed in the Gazette.]

1,103,073. EMERGENCY SIGNALING SYSTEM FOR TELEPHONE TOLL-COLLECTING APPARATUS. JOSEPH J. O'CONNELL, Chicago, Ill., assignor to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed July 18, 1912. Serial No. 710,277. (Cl. 177—10.)

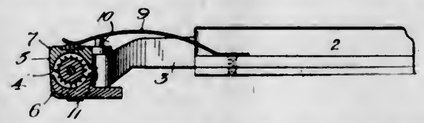


1. A circuit controlling device for giving emergency signals comprising a pivotally supported key-operated member yieldingly held against movement by operation of the key, a pair of normally open contacts yieldingly supported on said member, one of said contacts consisting of a pendulous weight adapted to oscillate by an impulse given said key and thereby rapidly make and break the circuit.

2. A circuit controlling device for giving emergency signals comprising a pivotally supported member, a pair of normally open contacts supported by said member, one of said contacts consisting of a pendulous weight having a spring support, and a key acting on said support for setting said weighted contact into vibration to rapidly make and break the circuit.

3. A circuit controlling device for giving emergency signals comprising a key-actuated swinging contact supporting member, yielding means normally restrainting said member from movement in one direction, vibratory contacts on said member one of which is weighted and has a spring support, and stop means in the path of said weighted contact and said supporting member.

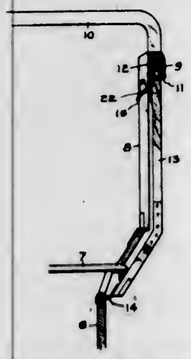
1,103,074. TEMPLE. CHARLES E. OWENS, Graham, N. C., assignor of one-half to J. Harvey White, Graham, N. C. Filed Dec. 8, 1913. Serial No. 805,244. (Cl. 139—36.)



In a temple, a casting, a spring pressed bar slidably mounted in said casting, the lower jaw fixed to said bar, an upper jaw slidably mounted on said bar and provided with a roller, and a leaf spring secured to said casting and

pressing said upper jaw against the lower jaw, so that when the temple is in use and undue thickness of cloth passes between the jaws, the upper jaw may be raised, or when the device is to be cleaned the spring may be raised and the upper jaw removed.

1,103,075. STORM-VEHICLE-DOOR LOCK. THOMAS H. PARRY, Indianapolis, Ind., assignor to Parry Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 15, 1912. Serial No. 709,436. (Cl. 21—125.)



1. The combination of a panel of a vehicle box-body, a top-deck member rabbeted at its lower inner edge, an angle-iron track having one flange secured to the deck-member and another flange entering the rabbet of the deck-member, a door, means on the door slidingly engaging the top of the panel of the body and holding the lower end of the door in constant close relation to the panel, hook-shaped hangers on the door loosely embracing the track, and means for swinging the top of the door into clamping engagement of its hangers with said track.

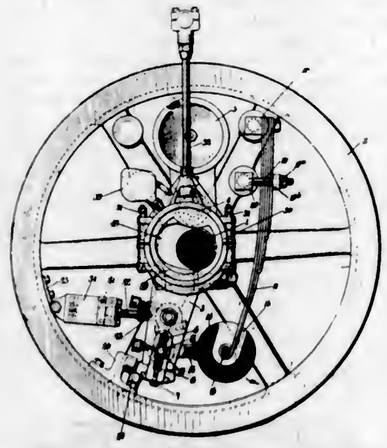
2. The combination of a panel of a vehicle-body, a top-deck member rabbeted at its lower inner edge, a top pillar supporting said deck from the vehicle-body, an angle-iron track having one flange secured to the deck-member and another flange entering the rabbet of the deck-member, a door, a hook on the door slidingly engaging the top of the panel of the body and holding the lower end of the door in constant close relation to the panel, hook-shaped hangers on the door loosely embracing the track, ball bearings between the hangers and the top of the track, and means secured to the pillar for swinging the top of the door into clamping engagement of its hangers with said track.

1,103,076. DEVELOPING-TRAY. FREDERICK W. QUIDAS, Brooklyn, N. Y. Filed June 18, 1913. Serial No. 774,405. (Cl. 95—95.)



A photographic tray having one of its end walls inclined toward the bottom and with the adjacent sides and bottom forming a reservoir, substantially as described.

1,103,077. ENGINE-GOVERNOR. CLIFTON REEVES, Trenton, N. J., assignor of one-half to William P. Cubberley, Robbinsville, N. J. Filed Mar. 22, 1913. Serial No. 756,117. (Cl. 121—102.)



1. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located on the arm to adjust the position of the link connection therewith.

2. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally on the arm to adjust the position of the link connection therewith.

3. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally in a slot on the arm to adjust the position of the link connection therewith.

4. A governor comprising a shaft, a weighted valve controlling arm connected thereto, having means for attaching additional weights thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located on the arm to adjust the position of the link connection therewith.

5. A governor comprising a shaft, a weighted valve controlling arm connected thereto, having means for attaching additional weights thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally on the arm to adjust the position of the link connection therewith.

[Claim 6 not printed in the Gazette.]

1,103,078. MANUFACTURE OF BRIQUETS AND OTHER ARTICLES. CHARLES M. REYNOLDS, Sparks, Nev. Filed June 29, 1912. Serial No. 706,788. (Cl. 44—1.)

1. The process of making briquets from wood waste, which comprises carbonizing said material, mixing the same with a suitable proportion of a volatile binder, comprising a part at least, of the material driven off during said carbonizing step, compressing the mixture into form, heating the same to a temperature sufficient to drive off the volatile constituents of the binder, and to harden the briquets.

2. The process of making briquets from waste wood, which comprises carbonizing said wood, mixing therewith a suitable proportion of a volatile binder including the tar driven off in said carbonizing step, compressing the mixture into form, heating the same to a temperature sufficient to drive off a part at least of the binder, and to harden the briquets.

1,103,079. COIL-CASES FOR INSERTION IN CABLES. FREDERICK L. RHODES, Short Hills, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Feb. 7, 1911. Serial No. 607,177. (Cl. 173—268.)



1. The combination with a main cable including conductors and a protective covering, of a casing structure carried by the main cable and including a main case, terminal conductors extending from within and projecting on the exterior of said main case and being joined to the main cable conductors, and means for connecting the protective covering to the casing structure.

2. The combination with a main cable including conductors and armor wires, of a casing structure carried by but independent of the main cable structure and including a main case, and terminal conductors extending from within and projecting on the exterior of said main case and being joined to the cable conductors of the main cable, the armor wires of said main cable being extended over the casing structure.

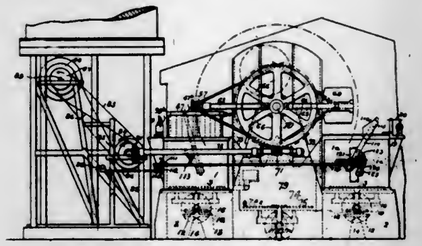
3. The combination with a main cable, of a casing structure carried by said main cable and including a main case, a terminal cable extending from within said main case through the wall thereof and being connected to the main cable, and an auxiliary case constituting part of the casing structure, said auxiliary case being joined to the main case and surrounding the connection between the cables.

4. The combination with a main cable, of a casing structure carried by the main cable and including a main case, a terminal cable leading from within said case through the end wall thereof, a seal at the juncture between the cable terminal and main case, a splice connecting the main and terminal cables, and means for protecting said splice carried by said main case and constituting part of the casing structure.

5. The combination with a cable including conductors and a covering therefor constituting part of the cable, of a case independent of the cable structure, a portion of said covering extending into the case and another portion of said covering extending over the outside of the case.

[Claims 6 to 10 not printed in the Gazette.]

1,103,080. FILTER FOR SLIMES PULP AND THE LIKE. GEORGE RIDGWAY, Kalgoorlie, Western Australia, Australia. Filed Feb. 3, 1912. Serial No. 675,322. (Cl. 75—86.)



1. In a slimes-filter, a plurality of tanks, agitators operating therein, filter frames, rocking arms adapted to carry said filter frames from tank to tank, gear for transmitting power from a counter-shaft to said rocking arms, a residue tank having an agitator operating therein, automatic reversing gear and belt-shifting devices, and valve and pipe connections communicating with a vacuum valve and a compressed air-valve for actuating the same and a vacuum pump, substantially as and for the purpose specified.

2. In a slimes filter, pulp and wash tanks, valves for regulating the supply of pulp thereto, a residue tank, agitators operating in said tanks, rocking arms for transferring filter-frames from tank to tank, gearing for transmitting motion to said rocking arms, a tubular beam connecting said rocker arms, filter-frames suspended from said beam and connections adapted to apply vacuum and compressed air to the interior of said filter frames, substantially as and for the purpose specified.

3. In a slimes-filter, pulp and wash tanks, filter-frames adapted to be immersed in said tanks, reciprocating arms carrying said filter-frames and the actuating devices therefor for immersing said filter-frames and transferring the same continuously from tank to tank, automatic reversing gear- and belt-shifting devices and means for shutting off the vacuum for a short period, and supplying compressed air to the filter-frames, substantially as and for the purpose specified.

4. In a slimes-filter, pulp and wash tanks, filter frames adapted to be immersed in said tanks and to be lowered and raised therein, a hopper 73 between said tanks discharging into a residue tank 74, agitators 3 and 75 operating in said tank, and a valve adapted to maintain the level of pulp and washwater in their respective tanks, and means operated by lowering and raising the filter frames for opening and closing said valve.

5. In a slimes-filter, pulp and wash tank, a plurality of filter plate frames 33 adapted to be immersed in and transferred from tank to tank, a tubular beam 46 from which said filter-frames are suspended, closed at one end and provided on its underside with holes, carrying short lengths of pipe 52 and flexible connection communicating with the interior of said filter-frames, the end of said beam having vacuum and compressed air-connections, reciprocating arms carrying said beam and its operating mechanism, substantially and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,103,081. PROCESS OF RECOVERING SULFUR IN ELEMENTARY FORM FROM PYRITE. GILBERT RIGG, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 27, 1911. Serial No. 617,210. (Cl. 75—17.)

1. The process of converting pyrite into pyrrhotite, which consists in expelling by heat, in the absence of air, a portion of the sulfur from the pyrite at temperatures maintained below the fusion point of the pyrite until the pyrite is converted into pyrrhotite, that is to say, into magnetic sulfid; substantially as described.

2. The process of converting pyrite into pyrrhotite, which consists in expelling by heat in the absence of air, a portion of the sulfur from the pyrite at temperatures maintained below the fusion point of the pyrite until the pyrite is converted into pyrrhotite, that is to say, into magnetic sulfid, said temperatures ranging from 600° C. to 800° C.; substantially as described.

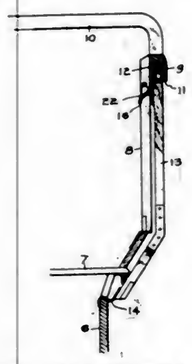
1,103,082. PROCESS OF PREPARING PYRITIFEROUS ZINC-BLENDE FOR MAGNETIC SEPARATION. GILBERT RIGG, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 27, 1911. Serial No. 617,211. (Cl. 75—60.)

1. The process of treating zinc blende associated with pyrite, so as to render said constituents capable of magnetic separation, which consists in expelling a portion of the sulfur of the pyrite by heating the pyritiferous ore at a temperature below the fusing point of the pyrite and below the dissociation point of the zinc blende, thereby converting the pyrite constituent of the ore into a magnetic condition as pyrrhotite, and without altering the zinc blende constituent; substantially as described.

2. The process of treating zinc blende associated with pyrite, so as to render said constituents capable of magnetic separation, which consists in heating the pyritiferous ore, with the exclusion of air, thereby expelling a portion of the sulfur of the pyrite constituent of the ore and converting it into a magnetic condition as pyrrhotite, the heating operation being conducted at a temperature below the

pressing said upper jaw against the lower jaw, so that when the temple is in use and undue thickness of cloth passes between the jaws, the upper jaw may be raised, or when the device is to be cleaned the spring may be raised and the upper jaw removed.

1,103,075. STORM-VEHICLE-DOOR LOCK. THOMAS H. PARRY, Indianapolis, Ind., assignor to Parry Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 15, 1912. Serial No. 709,436. (Cl. 21—125.)



1. The combination of a panel of a vehicle box-body, a top-deck member rabbeted at its lower inner edge, an angle-iron track having one flange secured to the deck-member and another flange entering the rabbet of the deck-member, a door, means on the door slidingly engaging the top of the panel of the body and holding the lower end of the door in constant close relation to the panel, hook-shaped hangers on the door loosely embracing the track, and means for swinging the top of the door into clamping engagement of its hangers with said track.

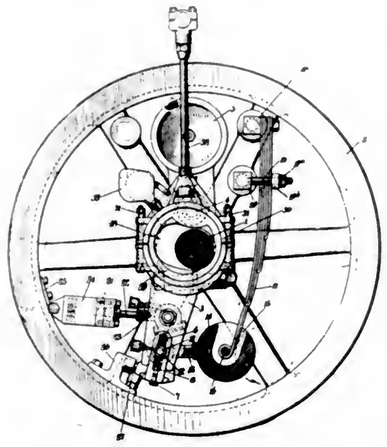
2. The combination of a panel of a vehicle-body, a top-deck member rabbeted at its lower inner edge, a top pillar supporting said deck from the vehicle-body, an angle-iron track having one flange secured to the deck-member and another flange entering the rabbet of the deck-member, a door, a hook on the door slidingly engaging the top of the panel of the body and holding the lower end of the door in constant close relation to the panel, hook-shaped hangers on the door loosely embracing the track, ball bearings between the hangers and the top of the track, and means secured to the pillar for swinging the top of the door into clamping engagement of its hangers with said track.

1,103,076. DEVELOPING-TRAY. FREDERICK W. QUIDAS, Brooklyn, N. Y. Filed June 18, 1913. Serial No. 774,405. (Cl. 95—95.)



A photographic tray having one of its end walls inclined toward the bottom and with the adjacent sides and bottom forming a reservoir, substantially as described.

1,103,077. ENGINE-GOVERNOR. CLIFTON REEVES, Trenton, N. J., assignor of one-half to William P. Cubberley, Robbinsville, N. J. Filed Mar. 22, 1913. Serial No. 756,117. (Cl. 121—102.)



1. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located on the arm to adjust the position of the link connection therewith.

2. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally on the arm to adjust the position of the link connection therewith.

3. A governor comprising a shaft, a valve controlling arm connected thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally in a slot on the arm to adjust the position of the link connection therewith.

4. A governor comprising a shaft, a weighted valve controlling arm connected thereto, having means for attaching additional weights thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located on the arm to adjust the position of the link connection therewith.

5. A governor comprising a shaft, a weighted valve controlling arm connected thereto, having means for attaching additional weights thereto, a band spring, a weight thereon, a link connecting the weight to the arm, and a screw located longitudinally on the arm to adjust the position of the link connection therewith.

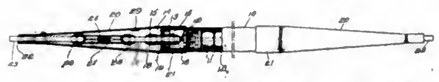
[Claim 6 not printed in the Gazette.]

1,103,078. MANUFACTURE OF BRIQUETS AND OTHER ARTICLES. CHARLES M. REYNOLDS, Sparks, Nev. Filed June 29, 1912. Serial No. 706,788. (Cl. 44—1.)

1. The process of making briquets from wood waste, which comprises carbonizing said material, mixing the same with a suitable proportion of a volatile binder, comprising a part at least, of the material driven off during said carbonizing step, compressing the mixture into form, heating the same to a temperature sufficient to drive off the volatile constituents of the binder, and to harden the briquets.

2. The process of making briquets from waste wood, which comprises carbonizing said wood, mixing therewith a suitable proportion of a volatile binder including the tar driven off in said carbonizing step, compressing the mixture into form, heating the same to a temperature sufficient to drive off a part at least of the binder, and to harden the briquets.

1,103,079. COIL-CASES FOR INSERTION IN CABLES. FREDERICK L. RHODES, Short Hills, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Feb. 7, 1911. Serial No. 607,177. (Cl. 173—268.)



1. The combination with a main cable including conductors and a protective covering, of a casing structure carried by the main cable and including a main case, terminal conductors extending from within and projecting on the exterior of said main case and being joined to the main cable conductors, and means for connecting the protective covering to the casing structure.

2. The combination with a main cable including conductors and armor wires, of a casing structure carried by but independent of the main cable structure and including a main case, and terminal conductors extending from within and projecting on the exterior of said main case and being joined to the cable conductors of the main cable, the armor wires of said main cable being extended over the casing structure.

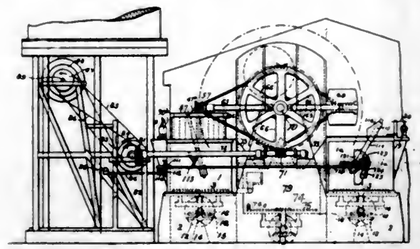
3. The combination with a main cable, of a casing structure carried by said main cable and including a main case, a terminal cable extending from within said main case through the wall thereof and being connected to the main cable, and an auxiliary case constituting part of the casing structure, said auxiliary case being joined to the main case and surrounding the connection between the cables.

4. The combination with a main cable, of a casing structure carried by the main cable and including a main case, a terminal cable leading from within said case through the end wall thereof, a seal at the juncture between the cable terminal and main case, a splice connecting the main and terminal cables, and means for protecting said splice carried by said main case and constituting part of the casing structure.

5. The combination with a cable including conductors and a covering therefor constituting part of the cable, of a case independent of the cable structure, a portion of said covering extending into the case and another portion of said covering extending over the outside of the case.

[Claims 6 to 10 not printed in the Gazette.]

1,103,080. FILTER FOR SLIMES PULP AND THE LIKE. GEORGE RIDGWAY, Kalgoorlie, Western Australia, Australia. Filed Feb. 3, 1912. Serial No. 675,322. (Cl. 75—86.)



1. In a slimes-filter, a plurality of tanks, agitators operating therein, filter frames, rocking arms adapted to carry said filter frames from tank to tank, gear for transmitting power from a counter-shaft to said rocking arms, a residue tank having an agitator operating therein, automatic reversing gear and belt-shifting devices, and valve and pipe connections communicating with a vacuum valve and a compressed air-valve for actuating the same and a vacuum pump, substantially as and for the purpose specified.

2. In a slimes filter, pulp and wash tanks, valves for regulating the supply of pulp thereto, a residue tank, agitators operating in said tanks, rocking arms for transferring filter-frames from tank to tank, gearing for transmitting motion to said rocking arms, a tubular beam connecting said rocker arms, filter-frames suspended from said beam and connections adapted to apply vacuum and compressed air to the interior of said filter frames, substantially as and for the purpose specified.

3. In a slimes-filter, pulp and wash tanks, filter-frames adapted to be immersed in said tanks, reciprocating arms carrying said filter-frames and the actuating devices therefor for immersing said filter-frames and transferring the same continuously from tank to tank, automatic reversing gear- and belt-shifting devices and means for shutting off the vacuum for a short period, and supplying compressed air to the filter-frames, substantially as and for the purpose specified.

4. In a slimes-filter, pulp and wash tanks, filter frames adapted to be immersed in said tanks and to be lowered and raised therein, a hopper 73 between said tanks discharging into a residue tank 74, agitators 3 and 75 operating in said tank, and a valve adapted to maintain the level of pulp and washwater in their respective tanks, and means operated by lowering and raising the filter frames for opening and closing said valve.

5. In a slimes-filter, pulp and wash tank, a plurality of filter plate frames 33 adapted to be immersed in and transferred from tank to tank, a tubular beam 46 from which said filter-frames are suspended, closed at one end and provided on its underside with holes, carrying short lengths of pipe 52 and flexible connection communicating with the interior of said filter-frames, the end of said beam having vacuum and compressed air-connections, reciprocating arms carrying said beam and its operating mechanism, substantially and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,103,081. PROCESS OF RECOVERING SULFUR IN ELEMENTARY FORM FROM PYRITE. GILBERT RIGG, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 27, 1911. Serial No. 617,210. (Cl. 75—17.)

1. The process of converting pyrite into pyrrhotite, which consists in expelling by heat, in the absence of air, a portion of the sulfur from the pyrite at temperatures maintained below the fusion point of the pyrite until the pyrite is converted into pyrrhotite, that is to say, into magnetic sulfid; substantially as described.

2. The process of converting pyrite into pyrrhotite, which consists in expelling by heat in the absence of air, a portion of the sulfur from the pyrite at temperatures maintained below the fusion point of the pyrite until the pyrite is converted into pyrrhotite, that is to say, into magnetic sulfid, said temperatures ranging from 600° C. to 800° C.; substantially as described.

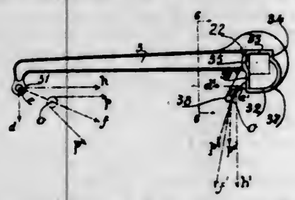
1,103,082. PROCESS OF PREPARING PYRITIFEROUS ZINC-BLENDE FOR MAGNETIC SEPARATION. GILBERT RIGG, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 27, 1911. Serial No. 617,211. (Cl. 75—60.)

1. The process of treating zinc blende associated with pyrite, so as to render said constituents capable of magnetic separation, which consists in expelling a portion of the sulfur of the pyrite by heating the pyritiferous ore at a temperature below the fusing point of the pyrite and below the dissociation point of the zinc blende, thereby converting the pyrite constituent of the ore into a magnetic condition as pyrrhotite, and without altering the zinc blende constituent; substantially as described.

2. The process of treating zinc blende associated with pyrite, so as to render said constituents capable of magnetic separation, which consists in heating the pyritiferous ore, with the exclusion of air, thereby expelling a portion of the sulfur of the pyrite constituent of the ore and converting it into a magnetic condition as pyrrhotite, the heating operation being conducted at a temperature below the

fusing point of the pyrite, whereby said conditions of the operation insure against such desulfurization as would carry the pyrite beyond the magnetic condition; substantially as described.

1,103,083. CLOTHES-LINE SUPPORT. CARROLL L. RIKER, Jr., New York, N. Y. Filed Sept. 4, 1913. Serial No. 788,046. (Cl. 68—3.)



1. A swivel bracket for endless lines comprising a frame formed of a swiveling bar and an attachment stem substantially at right angles to one another and adapted to be attached to a structure in an opening through a wall thereof; a stock swiveled and adapted to be fixed on said frame and a polygonal shank thereof substantially perpendicular thereto; and an arm swiveled on said shank; said arm being formed with a mutilated socket adapted to be engaged with said shank when said arm is horizontal and when it is vertical and to be fixed in such engagements by stress in the line.

2. A swivel bracket for endless lines comprising a frame formed of a swiveling bar and attachment stema substantially at right angles to said bar and adapted to be attached to a structure in an opening through a wall thereof, a stock swiveled and adapted to be fixed on said bar, a polygonal shank thereof substantially perpendicular thereto, an arm swiveled on said shank; said arm being formed with a mutilated socket adapted to be engaged with said shank when said arm is horizontal and when it is vertical, and to be fixed in such engagements by stress in the line.

3. A swivel bracket for endless lines comprising a frame formed of a swiveling bar and an attachment stem substantially at right angles to one another and adapted to be attached to a structure in an opening through a wall thereof, a stock swiveled and adapted to be fixed on said frame, a polygonal shank thereof substantially perpendicular thereto, a terminal stop on said shank and an arm swiveled on said shank; said arm being formed with a mutilated socket adapted to be engaged with said shank when said arm is horizontal and when it is vertical, and to be fixed in such engagements by stress in the line.

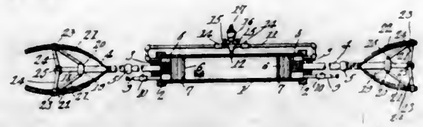
4. A swivel bracket for endless lines comprising a frame formed of a bent tube with holes therethrough, a stock swiveled on and adapted to be pinned to said frame and a polygonal shank thereof substantially perpendicular thereto, an arm swiveled on said shank; said arm being formed with a mutilated socket adapted to be engaged with said shank when said arm is horizontal and when it is vertical, and to be fixed in such engagements by stress in the line.

5. A swivel bracket for endless lines comprising a frame formed of a bent tube with series of holes at right angles to one another therethrough, a stock swiveled on and adapted to be pinned to said frame and a polygonal shank thereof substantially perpendicular thereto, a terminal stop on said shank, an arm swiveled on said shank; said arm being formed with a mutilated socket adapted to be engaged with said shank when said arm is horizontal and when it is vertical and to be fixed in such engagements by stress in the line.

[Claims 6 and 7 not printed in the Gazette.]

1,103,084. AUTOMATIC AIR-CUSHION AND SHOCK-ABSORBER. MATHEW VARNER RUFF, Smyrna, Ga. Filed Dec. 16, 1913. Serial No. 807,104. (Cl. 21—105.)

1. In a device for cushioning the movement of a vehicle body; a cylinder; piston structures operating in the cylinder; primary links pivoted to the ends of the piston structures; cross heads slidable upon the piston structures; means for limiting the movement of the cross heads; and secondary links connecting the cross heads with the primary links.



2. In a device for cushioning the movement of a vehicle body; a cylinder; a piston structure operating in the cylinder; primary links pivoted to the ends of the piston structure; a cross head slidable upon the piston structure; means for limiting the movement of the cross head; and a secondary link connecting the cross head with the primary link.

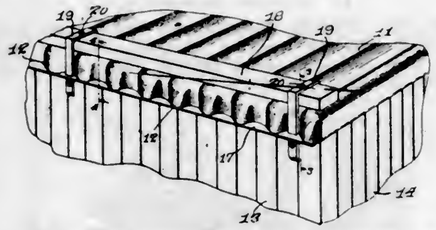
3. In a device for cushioning the movement of a vehicle body, a cylinder; piston structures operating therein; and a conduit opening into the cylinder between the ends of the cylinder and the piston structures, the conduit including a branch which opens into the cylinder between the piston structures.

4. In a device for cushioning the movement of a vehicle body, a cylinder; piston structures operating therein; a conduit opening into the cylinder between the ends of the cylinder and the piston structures, the conduit including a branch which opens into the cylinder between the piston structures; and a safety valve communicating with the space between the piston structures.

5. In a device for cushioning the movement of a vehicle body, a cylinder; piston structures operating therein; a conduit opening into the cylinder between the ends of the cylinder and the piston structures, the conduit including a branch which opens into the cylinder between the piston structures; check valves in the conduit upon opposite sides of the branch; inlets at the ends of the cylinder; and check valves controlling the inlets.

[Claim 6 not printed in the Gazette.]

1,103,085. CAR-ROOF. THOMAS N. RUSSELL, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1914. Serial No. 821,399. (Cl. 108—5.)

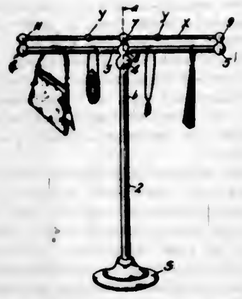


1. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of such sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned portion, means for securing such roofing sheet in place, and a flanged strip secured to the side of the car and projecting beneath the edge of the turned portion of the sheet to close the channels therein.

2. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of said sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned position, a stringer resting on the roofing-sheet adjacent to the side of the car, and a bracket engaging said stringer and extending down in one of the outer channels of the said turned portion of the sheet, and means for securing the bracket to the side of the car.

3. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of said sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned portion, a stringer resting on the roofing-sheet adjacent to the side of the car, a strip attached to the side of the car and arranged below the edge of the turned portion of the corrugated sheet to close the channels therein, and a bracket engaging said stringer and extending down in one of the channels of the said turned portion of the sheet and passing through an opening in said closure strip, and means for securing the bracket to the side of the car.

1,103,086. DISPLAY-STAND. FREDERICK GEORGE SCHMEHL, East Orange, N. J. Filed Nov. 24, 1913. Serial No. 802,630. (Cl. 211—24.)



1. In a display stand the combination of a vertical supporting rod, a casting having two adjacent perforations, said casting being fixed to the upper end of said vertical rod, a horizontal rod fixed in one of said perforations at a substantially right angle to said vertical rod, a second rod arranged parallel with the first rod, sliding in the second perforation in said casting, and fixed stops on said second rod to limit the extent of reciprocating movement of said rod.

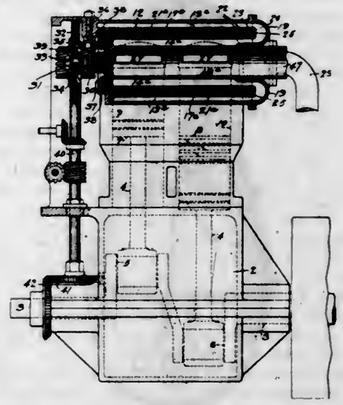
2. In a display stand, the combination of vertical supporting means, a casting fixed to the upper portion of said supporting means, a horizontal rod fixed to said casing, a second horizontal rod arranged to slide in a perforation in said casting, means for limiting the extent of sliding movement in each direction and means for housing the terminals of said second rod fixed to the terminals of the first rod.

3. In a display stand, the combination of vertical supporting means, a casing fixed to the upper portion of said supporting means, a horizontal rod fixed to said casting, a second horizontal rod arranged to slide in a perforation in said casting, stops fixed to said rod on opposite sides of said casting to limit the extent of sliding movement, and perforated castings carried by the first named rod at opposite terminals thereof, said castings having perforations through which the second rod may slide and be housed or hidden.

1,103,087. VALVE MECHANISM FOR MOTORS. AUGUSTUS F. SCHMIDT, Pittsburgh, Pa. Filed Mar. 13, 1912. Serial No. 683,643. (Cl. 123—190.)

1. The combination of a cylinder, a casing, an inner rotary valve sleeve in said casing, an outer rotary valve sleeve in said casing, a stationary core-piece within said inner sleeve, said stationary core-piece having a passage therein, said sleeves having ports and means for rotating said sleeves in opposite directions whereby the ports in said sleeves are adapted to register with a port in said cylinder and with a port in said core leading to said passage to form communication between said cylinder and said passage.

2. The combination of a cylinder, a casing, a rotary valve sleeve in said casing, a core within said sleeve having a passage therein and a port in communication therewith, means for admitting gas to said passage, means for cooling said core piece, said sleeve having a port adapted to register with a port leading to said cylinder and with the port in said core piece, and means for rotating said sleeve.



3. The combination of a cylinder, a casing, a rotary valve sleeve in said casing having ports adapted to register with a port in said cylinder, a stationary core-piece within said rotary sleeve having an exhaust passage, said exhaust passage communicating with said cylinder when said ports are in register, said core-piece having a port communicating with said passage, and said cylinder having a port at the lower end communicating with said passage.

4. The combination of a cylinder, a piston, piston rod, crank shaft, an inner rotary valve sleeve having ports, a worm wheel connected to said valve sleeve, an outer rotary valve sleeve having ports adapted to coincide with the ports of said first mentioned sleeve, connections between said worm wheel and said outer rotary sleeve, and between said inner rotary sleeve and said worm wheel to rotate said inner sleeve in an opposite direction, a worm engaging said worm wheel, a vertical shaft on which said worm is mounted, and connections between said vertical shaft and crank shaft.

5. The combination of a cylinder, a piston, a piston rod, crank shaft, an inner rotary valve sleeve having ports, a worm wheel connected to said valve sleeve, bevel gearing on said worm wheel, a bevel pinion engaged by said gear, an outer rotary valve sleeve having ports, a bevel pinion carried thereby engaged by said intermediate bevel pinion, a worm engaging said worm wheel, a vertical shaft supporting said shaft, connections between said crank shaft and said vertical shaft.

[Claims 6 to 8 not printed in the Gazette.]

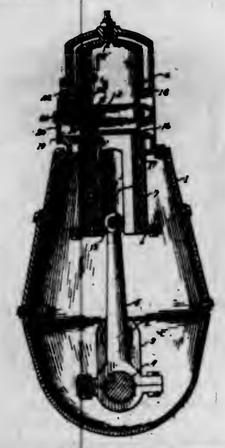
1,103,088. DENTAL PATTERN-WAX. HEINRICH SCHWEITZER, New York, N. Y. Filed July 17, 1913. Serial No. 779,640. (Cl. 22—164.)

Compound wax bodies for making patterns for dental metal castings composed of wax and metal dust with an excess of metal dust on the surface of said bodies.

1,103,089. INTERNAL-COMBUSTION ENGINE. LELAND SCOTT, St. Joseph, Mo., assignor of one-half to Louis Huggins, St. Joseph, Mo. Filed Oct. 22, 1912. Serial No. 727,193. (Cl. 123—65.)

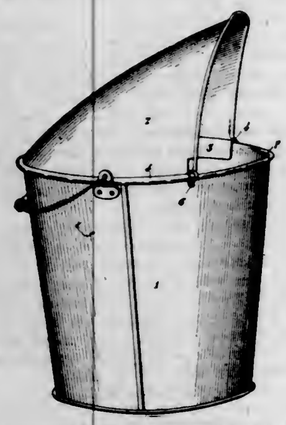
In an explosive engine, a cylinder, a head rigidly mounted in the cylinder, an inverted cup-shaped piston slidably mounted between the cylinder and said head, and provided with apertures in the sides thereof, said cylinder being provided with an air duct, a valve rotatably mounted in the cylinder and controlling the passage of air through said air duct, said air duct being adapted to admit air

to the cylinder to clean it of burned gases and to cool it internally, means for actuating said valve, said cylinder being also provided with intake and exhaust ports in



one of its sides, and by a by-pass opposite thereto, the intake port being adapted to register with one of the apertures in the piston and the by-pass with the other.

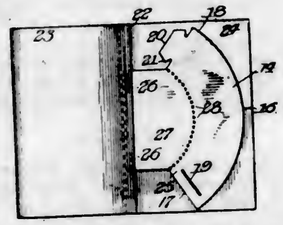
1,103,090. MILK-PAIL. WILLIAM E. SHERLOCK, Canton, Ohio. Filed May 22, 1911. Serial No. 628,697. (Cl. 31—14.)



As an improved article of manufacture, a milk pail consisting of the combination of a pail provided with a bead at its upper end, a detachable hood provided with downward extending spaced flanges, the inner flange of said flanges adapted for contact with the inner surface of the pail and the other of said spaced flanges adapted to lie over and upon the bead of the pail, said last mentioned flange provided with a groove adapted to fit the bead upon the upper end of the pail, spring clips secured to the hood and adapted for engagement with the bead and a hook located at the rear portion of said hood and adapted for contact with the bead of the pail, said hood having a downward and outward extension normally spaced from the body of the pail.

1,103,091. GOLF-TEE. ERNEST C. SMITH, Hoosick Falls, N. Y. Filed Aug. 30, 1913. Serial No. 787,410. (Cl. 46—4.)

1. A sheet for constructing a golf tee in the form of a hollow truncated cone comprising a stub and a strip having curved sides and ends of complementary hooked shape, the said two parts being connected upon a perforated line coincident with one of the curved sides of the strip.



2. A packet for constructing golf tees in the form of a hollow truncated cone made from a paper strip adapted for sale in vending machines and the like comprising a plurality of sheets bound together along one edge in book form each sheet consisting of a stub and a strip having curved sides and ends of complementary hooked shape, the said two parts of each sheet being connected upon a perforated line coincident with one of the curved sides of the strip.

3. A packet for constructing golf tees in the form of a hollow truncated cone made from a paper strip adapted for sale in vending machines and the like comprising a plurality of sheets and a pair of covers bound together along one edge in book form each of the said sheets consisting of a stub and a strip having curved sides and ends of complementary hooked shape, the said two parts of each sheet being connected upon a perforated line coincident with one of the curved sides of the strip.

1,103,092. COMPOUND FOR EXTINGUISHING FIRES. WALTER O. SNELLING, Pittsburgh, Pa., assignor to Frank L. Dyer, Montclair, N. J., and Jonas W. Aylsworth, East Orange, N. J. Filed June 7, 1912. Serial No. 702,195. (Cl. 23—5.)

1. A fire extinguishing compound comprising a non-inflammable solvent, a carbon compound of the aliphatic series dissolved therein and having more carbon atoms in its molecule than the solvent.

2. A fire extinguishing compound comprising a non-inflammable solvent, a carbon compound if the aliphatic series dissolved therein, having more than one carbon atom in its molecule, and having a higher boiling point than the solvent.

3. A fire extinguishing compound, comprising a non-inflammable solvent, a carbon compound of the aliphatic series dissolved therein, having more carbon atoms in its molecule than the solvent, and having a higher boiling point than the solvent.

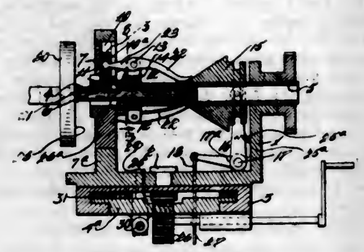
4. A fire extinguishing compound comprising a non-inflammable solvent, a non-inflammable carbon compound of the aliphatic series dissolved therein having more carbon atoms in its molecule than the solvent, said dissolved compound containing a halogen in its molecule.

5. A fire extinguishing compound comprising a non-inflammable solvent, a non-inflammable carbon compound of the aliphatic series dissolved therein having a higher boiling point than the solvent, and containing a halogen in its molecule.

[Claims 6 to 21 not printed in the Gazette.]

1,103,093. GLASS-GRINDING MACHINE. ERNEST STALZER, New York, N. Y. Filed Apr. 11, 1914. Serial No. 831,119. (Cl. 51—3.)

1. A glass grinding and beveling machine consisting of a standard, a slidable plate carried thereby, a frame pivotally supported by said plate, means to slide said plate, an adjustable stop carried by said standard adapted to limit the inward movement of said plate, a head carried by said pivoted frame, a rotary carrier located therein, a plurality of clutch jaws carried by said carrier adapted to grip a glass rod, means to actuate said jaws and a grinding element.



2. In a glass grinding machine, the combination of a slidable plate with a frame pivoted thereon, means for sliding said plate, an adjustable stop for limiting the inward movement of said plate, clutch jaws adapted to grip a glass rod, means for rotating said jaws and rod, a grinding element held in position for contact with said rod and means for sliding said plate.

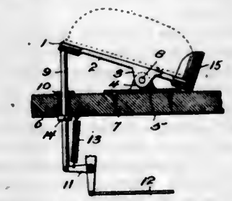
3. In a glass grinding machine, the combination of a stationary grinding element with a tubular shaft adapted to contain a glass rod and arranged to present it to the said grinding element, means carried by said shaft for clutching said rod, means for rotating said shaft, means for varying the inclination of said shaft with respect to said grinding element, means for feeding said shaft toward said grinding element and an adjustable stop for limiting the movement of said shaft.

4. In a glass grinding machine, the combination of a stationary grinding element with a tubular shaft adapted to contain a glass rod and arranged to present it to said grinding element, clutching jaws for said rod turning with said shaft, means for closing said jaws on said rod, means for rotating said shaft and jaws, means for varying the angular pisition of said rod with respect to said grinding element and means for moving said shaft and rod toward and from said element.

5. A glass grinding and beveling machine consisting of a standard, a slidable plate carried thereby, a frame pivotally supported by said plate, means to slide said plate, an adjustable stop carried by said standard adapted to limit the inward movement of said plate, an auxiliary stop for said plate also carried by said standard, a head carried by said pivotal frame, a rotary carrier located therein, a plurality of clutch jaws carried by said carrier adapted to grip a glass rod, means to actuate said jaws, and a grinding element.

[Claims 6 and 7 not printed in the Gazette.]

1,103,094. FOOT-OPERATED CONTROL DEVICE FOR AUTOMOBILES. JOHN A. STAPLES, Newburgh, N. Y. Filed Sept. 26, 1912. Serial No. 722,522. (Cl. 74—81.)



1. A foot operated control device for automobiles comprising a rocking pedal, a horizontally disposed pivotal support for the same, having its axis located beneath the foot engaging portion of the pedal, between opposite edges of the pedal and extending longitudinally of the operator's foot, said pivotal support sustaining at all times the weight and pressure of the engaged portions if the foot, and means adapted to connect said pedal to the part to be controlled, whereby said pedal may be operated by depressing one of said opposite edges thereof with respect to the other without moving the foot with respect to the pedal, or varying the weight and pressure of the foot supported thereby.

2. A foot operated control device for automobiles comprising a rocking pedal, a horizontally disposed pivotal support for the same, having its axis located beneath the pedal, between opposite edges thereof and extending longitudinally of the operator's foot, said pivotal support sustaining at all times the weight and pressure of the engaged portion of the foot, said pedal being provided with lateral foot engaging means for retaining the foot in operative relation therewith, and means adapted to connect said pedal to the part to be controlled, whereby said pedal may be operated by depressing one of said opposite edges thereof with respect to the other without moving the foot with respect to the pedal, or varying the weight and pressure of the foot supported thereby.

3. A foot operated control device for automobiles, comprising a rocking pedal, adapted to engage the sole portion of the foot of the operator and be of less length than the foot to permit the heel of the foot to rest upon and be supported by the adjacent flooring in the rear of the pedal, a pivotal support for said pedal having its axis disposed horizontally, located beneath the pedal and between the lateral edges thereof and extending longitudinally of the operator's foot, and means adapted to connect the said pedal to the part to be controlled, whereby the said pedal may be operated by depressing one of said opposite edges with respect to the other while the entire weight and pressure of the foot is supported at all times by said pivotal support and the heel engaging portion of the flooring.

4. A foot operated control device for automobiles, comprising among its members a rocking pedal for engaging the sole of the foot, said pedal being of less length than the foot to permit the heel of the foot to engage the flooring in rear of said pedal, a pivotal support for said pedal having its axis horizontally disposed, located beneath the pedal and between the opposite lateral edges thereof and extending longitudinally of the operator's foot, said pedal being provided with means for preventing the longitudinal movement of the foot with respect thereto, and means adapted to connect said pedal to the part to be controlled, whereby said pedal may be operated by rocking the same transversely of the foot while the entire weight of the foot is supported by said pivotal support and the heel engaging portion of the flooring.

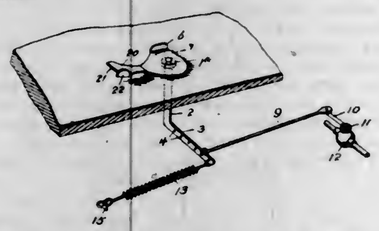
5. A foot operated control device for automobiles, comprising among its members a rocking pedal for engaging the sole of the foot, said pedal being of less length than the foot to permit the heel of the foot to engage the flooring in rear of said pedal, a pivotal support for said pedal having its axis horizontally disposed, located beneath the pedal and between the opposite lateral edges thereof and extending longitudinally of the operator's foot, said pedal being provided adjacent to one of its lateral edges with a flange for engaging the foot and preventing it from moving laterally, said flange being curved outwardly to prevent the longitudinal movement of the foot with respect to the pedal, and means adapted to connect said pedal to the part to be controlled, whereby said pedal may be operated by rocking it transversely of the foot while the entire weight and pressure of the foot is supported by said pivotal connection and the heel engaging portion of the flooring.

[Claims 6 and 7 not printed in the Gazette.]

1,103,095. FOOT-CONTROL DEVICE FOR AUTOMOBILES. JOHN ATKINSON STAPLES, Newburgh, N. Y. Filed May 2, 1913. Serial No. 765,090. (Cl. 74—81.)

1. In a foot operated control device, the combination with a pedal, provided with a supporting surface to receive the sole portion of the foot of the operator, of a pivotal support for the pedal located beneath and having its axis disposed substantially perpendicularly to the said supporting surface, and means adapted to connect the pedal

with a part to be controlled, said pedal being of less length than the foot to permit the heel of the operator's foot to frictionally engage the adjacent flooring, and to be moved laterally on a circle concentric with said pivotal support to operate said plate without lifting any portion of the foot, said pedal having a lateral projection to engage one side of the sole portion of the foot, and having the supporting surface opposite said projection unobstructed, and means for connecting the pedal at a point in rear of said projection with the operator's foot for joint movement therewith.



2. In a foot operated control device, the combination with a pedal provided with a supporting surface to receive the sole portion of the foot of the operator, of a pivotal support for the pedal located beneath and having its axis disposed substantially perpendicularly to the said supporting surface, and means adapted to connect the pedal with a part to be controlled, said pedal being of less length than the foot to permit the heel of the operator's foot to frictionally engage the adjacent flooring, and to be moved laterally on a circle concentric with said pivotal support to operate said plate without lifting any portion of the foot, said pedal having a lateral projection to engage one side of the sole of the foot, and having its supporting surface opposite thereto unobstructed, and an actuating projection located at the opposite side of the pedal, in rear of said first mentioned projection.

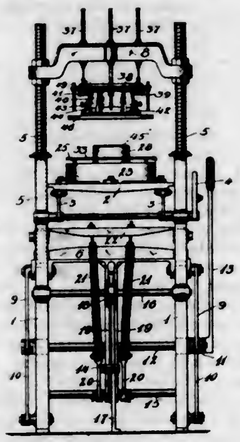
3. In a foot operated control device, the combination with a pedal provided with a supporting surface to receive the sole portion of the foot of the operator, of a pivotal support for the pedal located beneath and having its axis disposed substantially perpendicularly to the said supporting surface, and means adapted to connect the pedal with a part to be controlled, said pedal being of less length than the foot to permit the heel of the operator's foot to frictionally engage the adjacent flooring, and to be moved laterally on a circle concentric with said pivotal support to operate said plate without lifting any portion of the foot, said pedal having a projection at one side of its sole engaging portion and an actuating projection on the opposite side of the pedal located in rear of said first mentioned projection, the upper surface of the pedal opposite each of said projections being unobstructed.

4. In a foot operated control device, the combination with a pedal, provided with a supporting surface to receive the sole portion of the foot of the operator, of a pivotal support for the pedal located beneath and having its axis disposed substantially perpendicularly to the said supporting surface, and means adapted to connect the pedal with a part to be controlled, said pedal being of less length than the foot to permit the heel of the operator's foot to frictionally engage the adjacent flooring, and to be moved laterally on a circle concentric with said pivotal support to operate said plate without lifting any portion of the foot, said pedal being provided with means for preventing the longitudinal movement of the foot with respect to the pedal, and having projections located at different points longitudinally of the pedal and on opposite sides thereof to engage the side of the foot, the upper surface of the pedal opposite each of said projections being unobstructed.

5. In a foot operated control device, the combination with a pedal provided with a supporting surface to receive the sole portion of the foot of the operator, of a pivotal support for the pedal located beneath and having its axis disposed substantially perpendicularly to the said supporting surface, and means adapted to connect the pedal with a part to be controlled, said pedal being of less length than the foot to permit the heel of the operator's foot to frictionally engage the adjacent flooring, and to be moved laterally on a circle concentric with said pivotal support to operate said plate without lifting any portion of the foot, said pedal having a rearwardly extending portion for engaging the front face of the heel, and having its sole engaging portion provided with a projection at one side thereof to engage the side of the foot, and said rearwardly extending portion provided with a projection on the opposite side to engage the side of the foot, the upper surface of the pedal opposite said projections being unobstructed.

[Claims 6 to 15 not printed in the Gazette.]

1,103,096. HAT SHAPING AND FORMING MACHINE. HERBERT L. STEVENS, Glen Ridge, N. J. Filed Apr. 10, 1913. Serial No. 760,195. (Cl. 223—31.)



1. In a device of the character described, the combination of a lower die support, a lower die member thereon, an upper die support, an upper die member carried by said support and including a plurality of die sections mounted for movement relative to said support, means for moving one of said die members relative to and in operative engagement with the other, a brim clamping plate centrally apertured and encircling said upper die sections, said plate being loosely suspended from said sections and being movable relative thereto, the adjacent edges of said die sections and plate coöperating, whereby when said die members are moved into coöperating engagement, said plate moves relative to said die sections, thereby forcing said die sections into assembled shaping position relative to the lower die member.

2. In a device of the character described, the combination of a support, a lower die member thereon, an upper die support, an upper die member supported thereby and comprising a plurality of die sections movable relative thereto, a clamping plate inclosing said die sections and movable relative thereto, means for moving one of said die members relative to and into operative engagement with the other, coöperating parts on said plate and said die sections, adapted, when said die members are so moved, to force said die sections into assembled shaping position, and means automatically stripping a formed article from a die when said die members are disengaged.

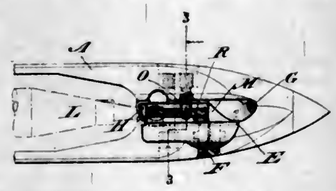
3. In a device of the character described, the combination of a support, a lower die member secured thereto, an upper die support, an upper die member carried thereby and comprising a plurality of movable die sections having their exterior faces beveled, a relatively movable gripping and pressing plate associated with said die sections recessed to inclose the same and having its edges adjacent said recess correspondingly beveled and coöperating with said die sections, means for moving one of said die members relative to the other and into operative engagement therewith, and means automatically stripping the shaped article from a die member upon the disengagement of said die members.

4. In a device of the character described, the combination of a support, a lower die member secured thereto, an upper die support, an upper die member carried thereby and comprising a plurality of movable die sections pivotally supported and having their lower exterior faces beveled, a relatively movable gripping and pressing plate connected with said die sections and centrally recessed to inclose the lower beveled portion of the same and having its edges adjacent said recess correspondingly beveled and coöperating with said die sections, means for moving one of said die members relative to the other and into operative engagement therewith, means for applying pressure to said pressing plate, and means automatically stripping the shaped article from a die member upon the disengagement of said die members.

5. In a device of the character described, the combination of a stationary support, a lower die member secured thereto, an upper die support, a plurality of die sections pivotally supported thereby and having their lower exterior faces beveled, a relatively movable gripping and pressing plate connected to said die sections centrally recessed to inclose the same and having its adjacent edges correspondingly beveled and coöperating with said die sections, pressure applying connections between said movable support and said pressure plate, a top shaping plate within said die sections, means for moving said upper die sections and their connected parts relative to and into operative engagement with said lower die member, and means automatically stripping the shaped article from said lower die member when said upper die sections are moved from engaging position.

[Claims 6 to 11 not printed in the Gazette.]

1,103,097. TENSION FOR LOOM-SHUTTLES. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 2, 1912. Serial No. 712,878. (Cl. 139—46.)



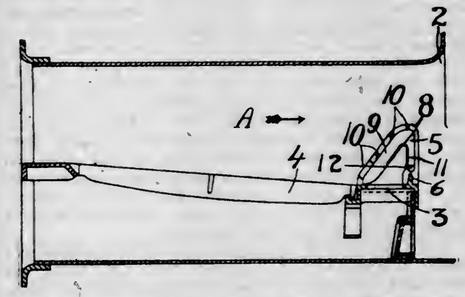
1. An automatically threading shuttle having, in combination, a sheet metal threader having a longitudinal thread passage with a slot in its side wall opposite the slotted shuttle eye; a longitudinally channeled tension block fitting in said thread passage with a guide groove in its wall opposite the shuttle eye and registering with the slot in the threader wall, said tension block also having an abutment on the side adjacent to the shuttle eye and a vertical recess in the abutment facing the guide groove; a spring-pressed presser fitting in said guide groove and in the slot of the threader and adapted to press the thread against the abutment and into the vertical recess thereof, the top of said presser being adapted to direct the thread toward the abutment; a nut in a recess in the shuttle body opposite the presser; an adjusting screw fitting in said nut; a spring between the screw and the presser; and a single transverse bolt passing through both the threading device and the tension block and holding them in place.

2. An automatically threading shuttle having, in combination, a threader having a longitudinal thread passage with a slot in its side wall opposite the slotted shuttle eye; a longitudinally channeled tension block fitting in said thread passage with a guide groove in its wall opposite the shuttle eye and registering with the slot in the threader wall, said tension block also having an abutment on the side adjacent to the shuttle eye and a vertical recess in the abutment facing the guide groove; a spring-pressed presser fitting in said guide groove and in the slot of the threader adapted to press the thread against the abutment and into the vertical recess thereof; and a single transverse bolt passing through both the threading device and the tension block and holding them in place.

3. An automatically threading shuttle having, in combination, a threader having a longitudinal thread passage with a slot in its side wall opposite the slotted shuttle eye; a longitudinally channeled tension block fitting in said thread passage with a guide groove in its wall opposite the shuttle eye and registering with the slot in the threader wall, said tension block also having an abutment on the side adjacent to the shuttle eye and a vertical recess in the abutment facing the guide groove; and a spring-pressed presser fitting in said guide groove and in the slot of the threader adapted to press the thread against the abutment and into the vertical recess thereof.

4. An automatically threading shuttle having, in combination, a threader having a longitudinal thread passage with a slot in one of its side walls; a longitudinally channeled tension block fitting in said thread passage with a guide groove in its wall registering with the slot in the threader wall, said tension block also having an abutment opposite said groove; and a spring-pressed presser fitting in said guide groove and in the slot of the threader and adapted to press the thread against the abutment.

1,103,098. FURNACE FOR BOILERS. ROBERT FINDLAY STURROCK, Dundee, Scotland. Filed Mar. 12, 1912. Serial No. 683,353. (Cl. 110—73.)

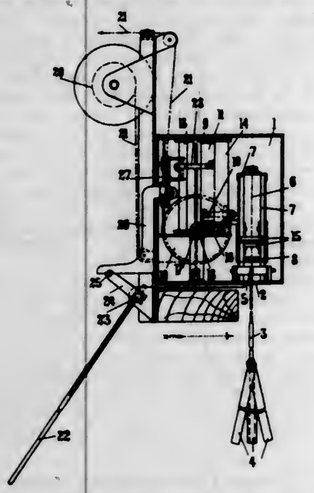


In a furnace bridge, in combination, a plate provided with a horizontal upper surface, and a plurality of inverted U-shaped bridge bars arranged side by side and having their lower ends engaging said plate, the front limbs of said bars being provided with air passages, the rear limbs of said bars being free from air passages, the rear limbs of said bars and said plate being provided with co-acting locking means to hold said rear limbs against movement transversely of said plate, the front limbs of said bars and said plate being free from co-acting locking means, whereby said front limbs are free to move transversely of said plate, each of said bars being provided with a lateral recess and a laterally extending projection, the projections engaging the recesses of adjacent bars to lock the bars together.

1,103,099. INDICATOR FOR DETERMINING AND RECORDING THE CURRENT VELOCITIES AND THE CROSS-SECTIONS OF RIVERS AND THE LIKE. CHARLES THEUNE, Berlin, Germany. Filed Nov. 25, 1912. Serial No. 733,259. (Cl. 234—8.)

1. An indicator of the character set forth comprising a casing, a pendulum rod hanging down out of the casing, and formed on the lower end with a pressure surface consisting of fan-like collapsible plates so that the size of the same can be regulated, oppositely extending transverse arms on the upper end of the pendulum, a carriage, upright guides between which the carriage is movable, ropes connecting the carriage with the transverse arms on the

pendulum so that through the movements of the pendulum rod, which are effected on one side or the other according to the current, the carriage is adjusted, a recording device on the carriage and a recording cylinder, with paper strip upon which a record is made by the recording device.



2. An indicator of the character set forth comprising a casing, a pendulum rod hanging down out of the casing, and formed on the lower end with a pressure surface, oppositely extending transverse arms on the upper end of the pendulum, a carriage, upright guides between which the carriage is movable, ropes connecting the carriage with the transverse arms on the pendulum so that through the movements of the pendulum rod, which are effected on the one side or the other according to the current, the carriage is adjusted, weights 15 arranged above the carriage and between the guides so that when the carriage moves upward the weights come automatically on to or off the latter, a recording device on the carriage, and a recording cylinder, with paper strip upon which a record is made by the recording device.

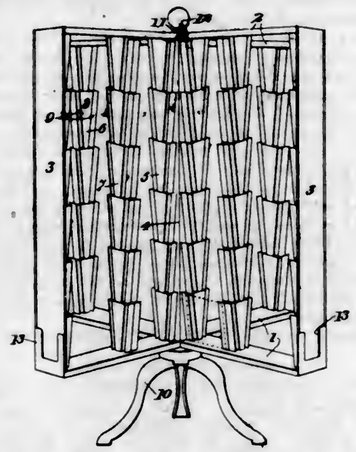
3. An indicator of the character set forth comprising a casing, a pendulum rod suspended from said casing and provided at its lower end with a pressure surface, oppositely extending transverse arms on the upper end of the pendulum, a carriage, upright guides between which said carriage is movable, ropes connecting the carriage with the said transverse arms on the pendulum whereby, through the movements of the pendulum rod, which are effected on one side or the other, according to the current, the carriage is adjusted, a recording device on the carriage and a recording cylinder having a flexible strip upon which a record is made by the movement of the recording device.

4. An indicator of the character set forth comprising a casing, a pendulum rod suspended from said casing and provided at its lower end with a pressure surface, oppositely extending transverse arms on the upper end of the pendulum, a carriage, upright guides between which said carriage is movable, ropes connecting the carriage with the said transverse arms on the pendulum whereby, through movements of the pendulum rod, which are effected on one side or the other, according to the current, the carriage is adjusted, a recording device on the carriage and a recording cylinder having a paper strip upon which a record is made by the movement of the recording device, and a depending rod or feeler whereby the outline of a river bed may be recorded on the recording cylinder by a recorder which is connected with, or operated by said feeler.

5. An indicator of the character set forth comprising a casing, a pendulum rod suspended from said casing and provided at its lower end with a pressure surface, oppositely extending transverse arms on the upper end of the pendulum, a carriage, upright guides between which said carriage is movable, ropes connecting the carriage with the said transverse arms on the pendulum whereby, through the movements of the pendulum rod, which are effected on one side or the other, according to the current, the carriage is adjusted, a recording device on the carriage, and a recording cylinder having a paper strip upon which a record is made by the movement of the recording device, a measuring wheel connected with the recording cylinder, and a measuring line cylinder a measuring line wound thereon and adapted to be wound off said cylinder and onto the recording wheel so as to determine the width of a river or the like.

[Claims 6 and 7 not printed in the Gazette.]

1,103,100. CARD-RACK. HARRY H. THOMPSON, Hagerstown, Md. Filed Mar. 13, 1914. Serial No. 824,435. (Cl. 40—68.)



1. A card rack, having a base and a top, composed of radial arms, a central connecting column, outside connecting strips, pockets arranged on the central column and on the inner sides of the outside strips, and a tier of double pockets arranged on the arms between the central and outer pockets, said pockets adapted to display objects on opposite sides.

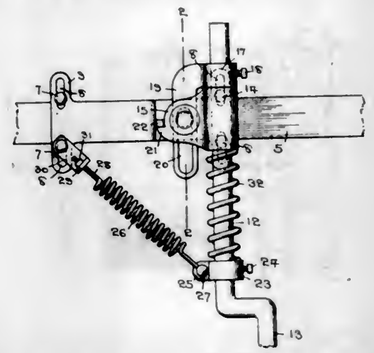
2. A card rack, comprising a cruciform base, a cruciform top, a central column connecting the base and top, outer strips likewise connecting the base and top, tapering pockets arranged about the central column in line with the arms of the cruciform base and top, similar pockets arranged on the outer strips, and pairs of pockets arranged in tiers on each arm between the central column and the outer strips, the several pockets of wedge form and arranged to provide card holders on opposite sides.

3. A card rack, comprising a cruciform base, a cruciform top, a central column connecting the base and top, outer strips likewise connecting the base and top, tapering pockets arranged about the central column in line with the arms of the cruciform base and top, similar pockets arranged on the outer strips, and pairs of pockets arranged in tiers on each arm between the central column and the outer strips, the several pockets of wedge form and arranged to provide card holders on opposite sides, and a foot on which the parts are arranged and capable of being turned.

4. In a card rack, a card pocket provided with a wedge-shaped central portion and sloping recesses on opposite sides of this central portion, the pockets adapted to be arranged in vertical tiers so that the wider portion of the subjacent pocket will serve as the bottom for the superposed pocket.

5. A card rack, comprising a cruciform base, a cruciform top, a central column connecting the base and top, outer strips likewise connecting the base and top, tapering pockets arranged about the central column in line with the arms of the cruciform base and top, similar pockets arranged on the outer strips, and pairs of pockets arranged in tiers on each arm between the central column and the outer strips, the several pockets of wedge form and arranged to provide card holders on opposite sides, the several parts constructed of sheet metal, and a foot on which the parts are arranged and capable of being turned.

1,103,101. SPRING-TENSIONED ROLLING CUTTER. MILO C. THOMPSON, Salem, Iowa. Filed Oct. 10, 1913. Serial No. 794,455. (Cl. 97—43.)



1. In combination, a plow beam, a cutter standard pivotally and slidably connected therewith, resilient means for normally holding said standard in vertical lowered position, and adjustable means for preventing twisting of said standard.

2. In combination, a plow beam, a cutter standard means for pivotally and slidably connecting said standard with said beam, resilient means for holding said standard in normal position, and adjustable means for resisting torsional strain on said standard.

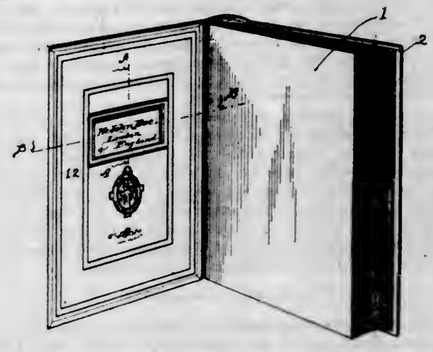
3. In combination, a plow beam, a cutter standard, means pivotally and slidably connecting said standard with said beam, resilient means for holding said standard in normal position, and adjustable means connecting said standard with said connecting means for preventing twisting of said standard.

4. In combination, a plow beam, a cutter standard, a sleeve pivoted to said beam and slidably receiving said standard, a collar adjustably secured to said standard, an arm on said collar movably secured at the pivotal axis of said sleeve, and means for normally holding said standard in lowered position.

5. In combination, a plow beam, plates secured thereto, a cutter standard, a sleeve slidably positioned on said standard, a pin pivotally connecting said sleeve and one of said plates, a collar adjustably secured to said standard, an arm on said collar, said arm being held in parallel position with said beam for preventing twisting of said standard, means for normally holding said standard in lowered position, a spring connecting said standard with one of said plates for normally preventing rotation of said standard on its pivot in one direction and stop means for limiting rotation of said standard on its pivot in the opposite direction.

1,103,102. BOOK-COVER. CHARLES W. THURSTON and SARAH EMERY DUDLEY, London, England. Filed Apr. 15, 1913. Serial No. 761,151. (Cl. 11—18.)

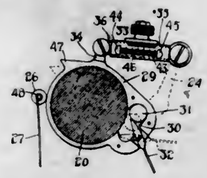
1. A book cover having in combination, a cover board provided with an elongated depression on the inner side thereof, an edging frame over said depression and provided with a sight opening of a size less than said depression whereby the edges of said edging frame extend over a portion of said opening forming an annular pocket, an inner facing over said edging frame, said inner facing being provided with an opening larger than the opening in said edging frame to expose the inner edge portion of said edging frame, and heavy line beading upon said inner facing with a slit opening through said beading leading through and under said edging frame to permit the introduction of a card beneath said edging frame to expose the face of said card through the opening in the edging frame.



2. A book cover having in combination, a cover board provided with an elongated depression on the inner side thereof, an edging frame over said depression, an inner facing sheet provided with an opening therein covering a portion of said edging frame, and heavy line beading upon said inner facing with a slot through said heavy line beading, said opening leading through and under said edging frame.

3. A book cover having in combination, a cover board, a depression on the inner side of said cover board, an edging frame over said depression, said edging frame being provided with a sight opening of lesser size than said depression thus forming an annular pocket between said edging frame and said board, and heavy line beading with a slot through said beading and leading to said annular pocket whereby a card may be inserted under the said edging frame into said depression.

1,103,103. LINE-SPACING ATTACHMENT FOR WRITING-MACHINES. PHILO B. TINGLEY, New York, N. Y. Filed July 9, 1913. Serial No. 778,160. (Cl. 197—114.)



1. A line spacing attachment for a writing machine platen comprising an oscillatory collar having a projecting arm and an enlargement with a socket widest at its upper end, a roller adapted to wedge between the wall of the socket and the platen, for the purpose set forth, and a reciprocating link pivoted to the arm for oscillating said collar.

2. A line spacing attachment for a writing machine platen comprising an oscillatory collar having an enlargement with a socket widest at its upper end, a roller adapted to wedge between the wall of the socket and the platen and a link for oscillating the collar comprising a tubular member, a toothed slide therein and a scroll wheel on the tubular member which engages the slide.

3. A line spacing attachment for a writing machine platen, comprising an oscillatory collar having an enlargement with a socket widest at its upper end, a roller adapted to wedge between the wall of the socket and

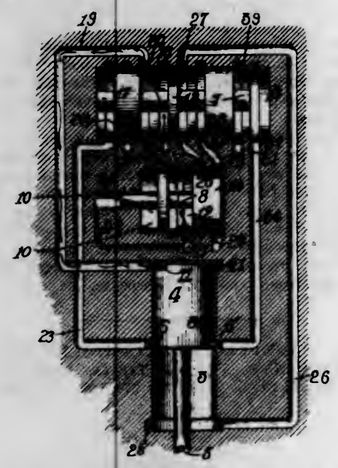
the platen and a link comprising a tubular member having a slot with a projection at one end thereof, a toothed slide having a projection passing through the slot and a scroll wheel engaging the slide, whereby the space between the projections is caused to indicate the extent of the line space.

4. The combination with the platen and spacing mechanism of a writing machine, of an oscillatory collar on the platen, said collar having an enlargement with a socket widest at its upper end, a roller adapted to wedge between the wall of the socket and the platen and a link for oscillating the collar comprising a tubular member, a toothed slide therein and a scroll wheel on the tubular member which engages the slide.

5. A line spacing attachment for a writing machine platen comprising an oscillatory collar having an enlargement with a socket widest at its upper end, a roller adapted to wedge between the wall of the socket and the platen, for the purpose set forth, a lug on the collar, a fixed stop adapted to be engaged by the lug and an adjustable link pivoted to the collar for oscillating the same and determining the extent of the spaces between the lines.

[Claims 6 and 7 not printed in the Gazette.]

1,103,104. FLUID-PRESSURE ENGINE. PAUL G. TISMER, New York, N. Y. Filed Aug. 2, 1913. Serial No. 782,618. (Cl. 136—10.)



1. In mechanism of the character described, the combination of a cylinder, a reversing valve, and a fluid pressure controlled valve independent of said reversing valve to control the inflow of motive fluid to said cylinder.

2. In mechanism of the character described, the combination of a cylinder, a piston therein, a reversing valve, a fluid pressure controlled valve independent of said reversing valve to control the inflow of motive fluid to said cylinder and means for controlling the fluid pressure which controls said last named valve.

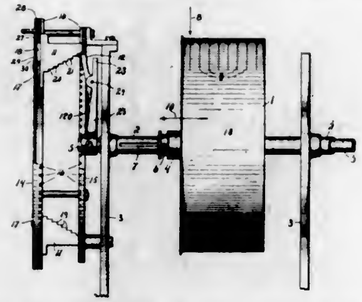
3. In mechanism of the character described, the combination of a cylinder, a piston therein, a reversing valve, a fluid pressure controlled valve independent of said reversing valve to control the inflow of motive fluid to said cylinder and hand-operated means for controlling the fluid pressure which controls said last named valve.

4. In mechanism of the character described, the combination of a cylinder having inlet ports near each end and exhaust ports near the middle of the cylinder to secure unidirectional flow of the pressure fluid in the cylinder, a piston in said cylinder, a reversing valve and a fluid pressure controlled valve to control the inflow of motive fluid to the cylinder.

5. In mechanism of the character described, the combination of a cylinder having inlet ports near each end and exhaust ports near the middle to secure unidirectional flow of the pressure fluid in the cylinder, the latter ports connected to actuate the reversing valve by the exhaust from the cylinder, a reversing valve, and a fluid pressure controlled valve to control the inflow of motive fluid to the cylinder.

[Claims 6 to 15 not printed in the Gazette.]

1,103,105. TIME-RECORDER. CHARLES E. TOMLINSON, Syracuse, N. Y., assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Aug. 27, 1908. Serial No. 450,469. (Cl. 234—46.)



1. An employees' time recorder embodying a blank carrier and an impression making element, the blank carrier being movable different distances in a given path relative to the impression making element, and means controlled by separate recording operations of the time recorder by an employee for stopping the blank carrier in different positions in said path, which positions correspond to such operations, substantially as and for the purpose described.

2. In a time recorder, the combination of a rotatable and axially movable drum adapted to support a record sheet, means consisting of an annular series of radially movable abutment plates, each having an inclined series of shoulders on one of its edges, and other means comprising a part facing said series of abutment plates, one of said means being rotatable and movable axially in company with the drum, and a pivoted member carried by said part for coöperating with the shouldered edges of said abutment plates singly to shift the same radially step by step, substantially as and for the purpose specified.

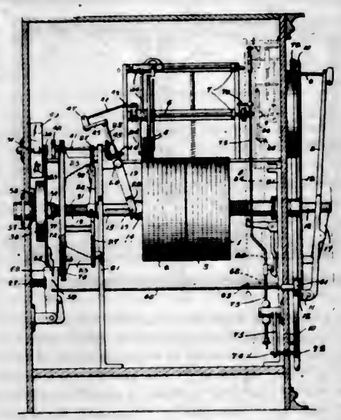
3. In a time recorder, a rotatable and axially movable drum adapted to support a record sheet, a device connected with the drum to revolve and move axially therewith, an annular series of radially movable and axially stationary abutment plates, each having on one of its edges an inclined series of shoulders, and a finger pivoted on the said device for coöperating with the abutment plates singly to shift the same radially step by step, substantially as and for the purpose set forth.

4. In a time recorder, a rotatable and axially movable drum adapted to support a record sheet, an imprint making element a device connected with the drum to revolve and move axially therewith, said device including a rigid member and a pivoted member, and an annular series of radially movable and axially stationary abutment plates, each having on one of its edges an inclined series of shoulders, said movable member coöperating with the shoulders of said abutment plates singly for shifting the same radially step by step, substantially as and for the purpose described.

5. In a locating mechanism and in combination, a shiftable member having operating surfaces disposed at an angle to each other, and a coöperating member movable toward and from the first-named member and having its movement arrested by one of said operating surfaces and coöperating with the other operating surface for shifting said member for carrying the first-named operating surface out of the path traversed by the second member in the succeeding operation thereof, substantially as and for the purpose specified.

[Claims 6 to 78 not printed in the Gazette.]

1,103,106. TIME-RECORDING MACHINE. CHARLES E. TOMLINSON, Syracuse, N. Y., assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed July 27, 1911. Serial No. 640,754. (Cl. 234—46.)



1. In a recording machine, a printing couple including two elements having relative shifting movement laterally into successive transverse relative positions, and the elements having relative lateral displacing movements in reverse directions a distance equal to a plurality of the successive lateral shifting movements, shiftable means for determining the successive transverse relative positions of said elements, and means for resetting the first-mentioned means and automatically effecting the relative displacing movement of said elements in reverse directions at one operation, substantially as and for the purpose described.

2. In a recording machine, a printing couple including elements having relative positioning movements into longitudinal and successive transverse positions, said elements also having relative lateral displacing movements in reverse directions a distance equal to a plurality of the relative successive lateral shifting movements in one longitudinal position, means for effecting relative movement of said elements in longitudinal and transverse directions, means for determining the successive transverse relative positions of said elements including a series of successively effective shoulders for each of the relative longitudinal positions assumed by said elements, and means for resetting the position determining means and automatically effecting either of the relative displacing movements of said elements in one operation, substantially as and for the purpose specified.

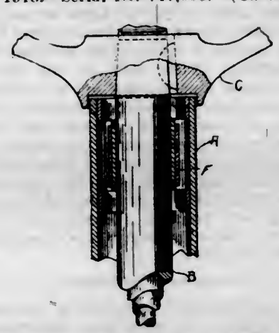
3. In a recording machine, a printing couple including an element consisting of a rotatable drum for supporting two record sheets side by side on its periphery, and a type carrying element, said elements having relative shifting movement laterally into successive transverse positions, and the elements having relative lateral displacing movement a distance equal to a plurality of the successive lateral shifting movements, means for rotating the drum and shifting the shiftable element laterally, means for determining the successive transverse positions including a series of successively effective shoulders, and means for resetting the position-determining means and for effecting the relative displacing movement of said elements at one operation, substantially as and for the purpose set forth.

4. In a recording machine, a printing couple including an element for supporting a record sheet and movable into a plurality of positions for bringing a plurality of longitudinal spaces on said sheet into printing position, a second element shiftable laterally from an initial position into successive transverse positions and having a displacing movement a distance equal to a plurality of said lateral movements for changing the location of the initial position of the second element, means for determining the extent of said lateral movements including a series of shoulders for each of said plurality of positions of the first-named element, and means for resetting the position determining means and effecting displacing movement of said second element in one operation, substantially as and for the purpose described.

5. In a recording machine, a printing couple including elements having relative positioning movements into longitudinal and successive transverse positions, said elements also having relative lateral displacing movement a distance equal to a plurality of the relative successive lateral shifting movements in one longitudinal position, means for effecting relative movement of said elements in longitudinal and transverse directions including a handle, means for determining the successive transverse relative positions of said elements including a series of successively effective shoulders for each of the relative longitudinal positions assumed by said elements, means for resetting the position determining means and effecting the relative displacing movement of said elements in one operation, the last-named means including a motor spring and power-transmitting parts actuated by the spring, and coacting with the position determining means and the laterally displaceable element, and connections between the handle and spring whereby the motor spring is tensioned by said handle, substantially as and for the purpose specified.

[Claims 6 to 31 not printed in the Gazette.]

1,103,107. BUSHING. WILLIAM C. VAN DRESSER, Detroit, Mich., assignor to Gemmer Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 11, 1913. Serial No. 747,668. (Cl. 64—48.)



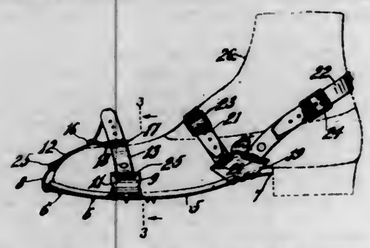
1. A bushing comprising annular spacing sections composed of separated spacing rings, a resilient bearing composed of opposed segmental portions having their ends free from the spacing sections, and a connection between the spacing sections and the sides of the segmental bearings, said parts being formed of a single piece of metal.

2. A bushing comprising separated spacers connecting portions integral with the spacers, and opposed resilient segmental bearing portions having their longitudinal edges integral with the connecting portions and their opposite transverse ends free from the spacers.

3. A bushing comprising spaced endless bands, a plurality of connected portions extending between said bands, the outer faces of the connecting portions lying in the plane of the band at the point of connection therewith, and opposed segmental bearing portions arranged intermediate the bands and having their side edges integral with the connecting portions and their opposite ends free from the bands, said segmental portions forming a bearing of lesser diameter than the diameter of the bands.

4. A bushing comprising separated spacers, connecting portions integral with the spacers, and opposed resilient bearing portions having their longitudinal edges integral with the connection portions and their transverse ends free from the spacers, and segmental lining plates for the bearing portions.

1,103,108. ROOF-SHOE. ARTHUR EUGENE VAN WIE, Kenosha, Wis. Filed June 13, 1912. Serial No. 703,455. (Cl. 36—62.)



1. A roof shoe, comprising a sole plate provided with protuberances, hinge leaves pivoted to the front and side edges thereof, a buckle member positioned above the plate, straps connected to some of the hinge leaves and engaged by the buckle member, and ankle and heel straps connected to the remaining hinge leaves.

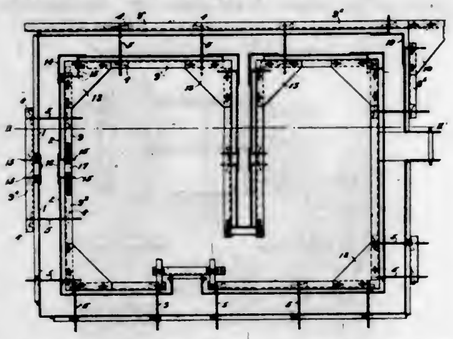
2. A roof shoe, comprising a sole plate provided with projecting spikes and with an instep portion, curved hinge leaves connected to the front and side edge portions of the plate, a buckle member positioned above the plate, straps connected to the front and side edge hinge leaves and engaging the buckle member, other hinge leaves connected to the side edges of the plate at points adjacent to the instep portion of the plate, and ankle and heel straps connected to said last mentioned hinge leaves.

3. A roof shoe, comprising a sole plate provided with projecting spikes and with an instep portion and with elongated slots adjacent to the edges of the plate, the edges of said plates being bent upwardly and folded over upon the body portion to reinforce the portions of the plate extending alongside of the slots of said plate, curved hinge leaves looped around some of the reinforced edge portions of said plate and having elongated slots formed in their upper portions, straps looped through the slots of the hinge leaves, a buckle member positioned above the plate and engaging the straps, other hinge leaves looped around the remaining reinforced edge portions of the plate, said last mentioned hinge leaves each provided with a pair of angularly disposed elongated slots near their upper edges, and ankle and heel straps extending through said last mentioned slots.

1,103,109. WALL-MOLD. WILLIAM M. VENABLE, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 9, 1912. Serial No. 724,726. (Cl. 25—131.)

1. In a mold, a side wall comprising a series of metal panels having their side edges provided with abutting flanges, means for detachably securing the flanges together, an opposing side wall, space bars secured to said opposing side wall, space bars secured to said opposing side wall and extending between the said abutting flanges and out past such flanges, a perforated liner bar extending across the faces of the said series of metal plates and resting against the edges of the said abutting flanges with the ends of the space bars extending through the said perforations in the liner bar, and releasable clamping means for securing the outwardly projecting ends of the said space bars to the liner bar.

2. In a mold, a side wall in two sections with the ends of such sections adjacent and each comprising a series of metal panels having their side edges provided with abutting flanges, means for detachably securing the abutting flanges together, a lap filler plate between the two sections of the side wall, a liner bar for each section extending across the faces of the panels of its section of the side wall, an opposing side wall spaced away from the first side wall, space bars secured detachably to said opposing side wall and extending between the said abutting flanges and to the liner bars, means for detachably securing the space bars to the liner bars, and an adjustable connection between the opposing ends of the liner bars carried by the two sections whereby such bars and the two sections of the side wall are secured together.



3. In a mold, a side wall section consisting of a plurality of panels secured together at their edges, a second side wall section consisting of a plurality of panels secured together at their edges with the end of such section adjacent the end of the first section, a lap filler plate between the two side wall sections, a liner bar for each section extending across the faces of the panels of its section and rigidly secured against such panels to hold them in alinement, and an adjustable connection between the adjacent ends of the liner bars.

4. In a mold, a side wall section consisting of a plurality of panels secured together at their edges, a second side wall section consisting of a plurality of panels secured together at their edges with the end of such section adjacent the end of the first section, a lap filler plate between the two side wall sections, a liner bar for each section extending across the faces of the panels of its section and rigidly secured against such panels to hold them in alinement, a splice plate overlapping the adjacent ends of the liner bars, a vernier arrangement of perforations being provided in the plates and bars, and securing means extending through registering perforations in the liner bars and splice plates.

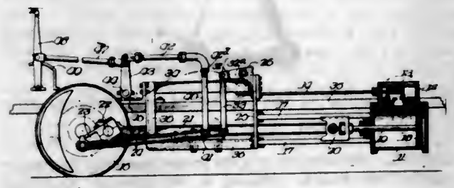
5. In a mold comprising a pair of opposing side walls each consisting of a plurality of metal plates, of a space bar extending between the two walls and provided with a plurality of perforations to receive fastening means for securing connection to the walls so as to prevent inward or outward movement of either wall independent of the other, insertible fastening means for said perforations, and a sheet metal guard open at one side and adapted to be slipped over the space bar after it is secured to the two walls, and fitting the sides of such space bar so as to prevent access of concrete to the perforations.

[Claim 6 not printed in the Gazette.]

1,103,110. VALVE-GEAR FOR STEAM-ENGINES. HARRY VISSERING, Chicago, and PAUL CARPENTER, Glenview, Ill., assignors to William S. Murrian, trustee, Knoxville, Tenn. Filed May 23, 1913. Serial No. 769,453. (Cl. 121—99.)

1. A valve gear comprising, in combination, a frame, an L-shaped member supported thereby, a pivoted arm carried by said member, an auxiliary connecting rod, means for transmitting motion to the rod, a connection pivoted to the rod and to the arm, and means for connecting the rod to the valve for the operation thereof.

2. A valve gear comprising, in combination, a frame, an L-shaped member supported thereby, an arm support carried by said member, a pivoted arm carried by the support, an auxiliary connecting rod, means for transmitting motion to the rod, a connection pivoted to the rod and to the arm, and means for connecting the rod to the valve for the operation thereof.



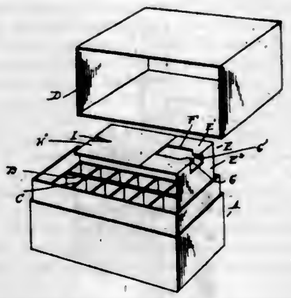
3. A valve gear comprising, in combination, a frame, an L-shaped member supported thereby, a pivoted arm carried by said member, an auxiliary connecting rod, means for transmitting motion to the rod, a connection pivoted to the rod and to the arm, and means for connecting the rod to the valve for the operation thereof, said frame and L-shaped member being disposed for relative movement and provided with means for securing them in predetermined position.

4. A valve gear comprising, in combination, a frame, an L-shaped member supported thereby, a pivoted arm carried by said member, an auxiliary connecting rod, means for transmitting motion to the rod, a connection pivoted to the rod and to the arm, and means for connecting the rod to the valve for the operation thereof, one of said frame and L-shaped members being provided with an elongated aperture and the other with means engaging therewith whereby they may be secured in predetermined position.

5. A valve gear comprising, in combination, a frame, an L-shaped member supported thereby, a pivoted arm carried by said member, an auxiliary connecting rod, means for transmitting motion to the rod, a connection pivoted to the rod and to the arm, and means for connecting the rod to the valve for the operation thereof, said frame and L-shaped members being provided with means for varying their relation vertically.

[Claims 6 to 9 not printed in the Gazette.]

1,103,111. AMPUL-HOLDER. FREDERICK WACHTER, Detroit, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed May 18, 1912. Serial No. 698,232. (Cl. 206—12.)



1. The combination with a package for a plurality of liquid containers, said package including a bottom and side and end walls, of an angle strip secured to the body of the package and extending above the side walls thereof, said strip having means for holding a container above and free from the side and end walls of the body of the package in position for withdrawing the fluid contents therefrom.

2. The combination with a package for a plurality of liquid containers including a bottom, side and end walls, and a removable cover, of an angle strip secured to the body of the package, said angle strip extending above the body portion of the package and lying adjacent to the side and top of the cover, the strip being apertured to form a seat to support a container above the space within the package for the containers in a position for withdrawing the fluid contents.

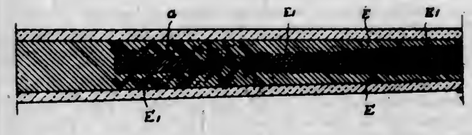
3. The combination with a package for liquid containers and a removable cover therefor of a strip having an upright portion adjacent to one end of the body of said package and an angle portion flexibly hinged to said upright portion and lying adjacent to the top of said cover, said portions being apertured to form a retaining seat for a container in a position for withdrawing the fluid contents thereof.

4. The combination with a package comprising a rectangular box having partitions dividing same into a plurality of compartments for individually holding liquid containers and a removable cover for said box, of a strip having an upright portion lying adjacent to one end of said package and an angle portion overlying said containers adjacent to the top of said cover, said angle portion being connected to said upright portion by a flexible bend and being also provided with a second flexible bend permitting a portion thereof to be arranged parallel to said upright portion with its lower end in engagement with said partitions, said strip being apertured to form a retaining seat for a container in position for withdrawing the fluid contents.

5. The combination with a package for containers, of an angular supporting member secured to one end of the package, slots narrowing at the angle or bend of said supporting member to form oppositely disposed lugs to hold the container in inverted position.

[Claims 6 to 9 not printed in the Gazette.]

1,103,112. PROCESS AND APPARATUS FOR THE TREATMENT OF COAL, SHALE, OR THE LIKE IN VERTICAL RETORTS. ALEXANDER WADDELL, Dunfermline, Scotland. Filed Sept. 11, 1913. Serial No. 789,306. (Cl. 202—8.)



1. The hereindescribed improvement in the art of retorting coal, shale and the like, consisting in enveloping and supporting a section of the central portion of the materials in the retort and simultaneously withdrawing a portion of the material at the bottom of the retort, so as to cause the section of the central portion located above the enveloped section to approach nearer to the walls of the retort and to commingle with the exterior portion, without substantial displacement of the enveloped section.

2. The hereindescribed improvement in the art of retorting coal, shale and the like, consisting in enveloping and supporting a section of the central portion of the materials being retorted and simultaneously withdrawing a portion of the material below the supported section, so as to cause the material above the enveloped section to fall and fill up the space surrounding the enveloped section and to cause the section of the central portion above the enveloped section to approach nearer to the walls of the retort and to commingle with the exterior portion, without substantial displacement of the enveloped section.

3. The herein-described improvement in the art of retorting coal, shale and the like, consisting in enveloping and supporting a section of the central portion of the ma-

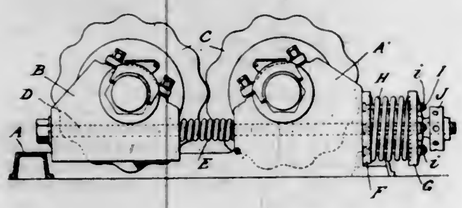
terials in the retort, the enveloped section having vertical sides spaced a short distance from, and substantially parallel with, the side walls of the retort, and withdrawing a portion of the materials at the bottom of the retort while said section continues to be enveloped and supported so as to cause the section of the central portion located above the enveloped section to approach nearer to the walls of the retort and to commingle with the exterior portion, the commingled product filling the space between the vertical sides of the enveloped section and the side walls of the retort.

4. The combination with a vertical retort having an apertured wall of a core-sustaining device movable through the aperture transversely of the retort, said device being of open-ended box form and adapted when inserted into the retort to envelop a section of the core, and so dimensioned as to leave spaces between its sides and the walls of the retort.

5. The combination with a vertical retort having an apertured wall, of a core-sustaining and enveloping device movable through the aperture transversely of the retort, and of less cross sectional area than the retort, said device being provided with rack teeth, and a pinion engaging said rack teeth and adapted when rotated to reciprocate said device.

[Claims 6 and 7 not printed in the Gazette.]

1,103,113. ROLL-ADJUSTING MECHANISM. ENOS A. WALL, Salt Lake City, Utah. Filed Mar. 20, 1914. Serial No. 825,987. (Cl. 83—12.)



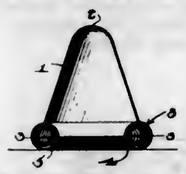
1. The combination with a pair of rolls one of which is movable toward and from the other, the adjusting rods and tension springs, of lighter expansion springs between the said rolls and acting to force them apart, and means for effecting independent adjustment of said tension and expansion springs substantially as described.

2. The combination with a pair of rolls and their adjusting rods and tension springs, of lighter spiral expansion springs on the rods between the rolls and tending to force them apart, and means for effecting independent adjustment of said tension and expansion springs substantially as set forth.

3. The combination with a pair of rolls, adjusting rods, and spiral expansion springs on the rods between the rolls to force them apart, of lighter spiral tension springs on the outer ends of the rods, loose tension plates on the rods against which the outer ends of the tension springs bear, adjusting nuts for the expansion springs, mounted on the rods at the outer sides of the tension plates, a plurality of fixed bolts parallel with the rods and passing through said tension plates, and nuts on the bolts for setting up the tension plates and adjusting the tension of the springs; the inner ends of the tension springs bearing on a fixed part of the frame.

1,103,114. SUPPORTER. JEMIMA WARREN, McComb, Ohio. Filed Dec. 13, 1913. Serial No. 806,463. (Cl. 128—21.)

A supporter of the class described comprising a flexible body formed of rubberized silk, a rubber tube formed around the lower edge of said body, a coil spring positioned within said tube for holding said tube in engagement with a support, and a removing cord passing around the interior of said coil spring and projecting from said



tube for facilitating the removal of said supporter from the wearer thereof.

1,103,115. FERTILIZER AND PROCESS FOR PRODUCING THE SAME. FRANK S. WASHBURN, Nashville, Tenn. Filed Mar. 13, 1914. Serial No. 824,517. (Cl. 71—7.)

1. The process of rendering available as a plant food the phosphoric acid contained in phosphate rock which consists in treating said rock with sulfuric acid to obtain a crude solution of phosphoric acid and then feeding said crude solution to a second solution containing an excess of ammonia, substantially as described.

2. The process of rendering available as a plant food the phosphoric acid contained in phosphate rock which consists in treating said rock with sulfuric acid to form a crude solution of phosphoric acid; and then feeding said crude solution to a solution containing di-ammonium phosphate, substantially as described.

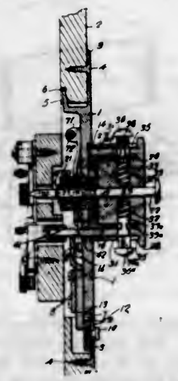
3. The process of rendering available as a plant food the phosphoric acid contained in phosphate rock which consists in treating said rock with sulfuric acid to form a crude solution of phosphoric acid; and then feeding said crude solution to a solution of mono-ammonium phosphate containing di-ammonium phosphate, substantially as described.

4. The herein described new fertilizer consisting substantially of an amorphous light colored material containing phosphates of ammonia and iron and substantially devoid of constituents unavailable as a plant food, substantially as described.

5. The herein described new fertilizer substantially devoid of constituents not available as a plant food, consisting essentially of ammonium phosphate mixed with small quantities of aluminum and iron phosphate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,103,116. PERMUTATION-LOCK. GEORGE A. WEHNER, Savannah, Ga. Filed Mar. 17, 1913. Serial No. 754,848. (Cl. 70—54.)



1. A lock of the character specified, comprising a plate having a central opening, a sleeve having a plurality of series of longitudinally extending alined slots, each slot having a substantially circular enlargement intermediate

its ends, said sleeve having a hub received in the opening of the plate, a pin passing through the hub, a knob comprising a body received within the sleeve and having an annular radially offset flange fitting outside the sleeve, the said body having an opening for the pin, said body and flange having alined circular openings adapted to register with the enlargements of the slots, push pins in the openings, a spring normally pressing each of the said push pins outward, each of the said pins having a head for limiting the inward movement thereof, and having transversely flattened portions for moving in the slots of the sleeve to permit the knob to move angularly with respect to the sleeve when the said push pins are in predetermined positions with respect to the sleeve, the flange having an inwardly extending pin, and the plate having an arc-shaped slot through which the pin extends, the said flange having on its outer face a plurality of undercut recesses, said recesses intersecting the openings, curved plates having beveled edges fitting the recesses and having slots extending transversely of the flange and registering with the openings thereof, each of the said push pins having a transversely flattened portion adjacent to the head and fitting a slot of a plate to limit the outward movement of the pin, mechanism adapted to be operated by the movement of the pin of the flange, and releasing mechanism adapted to be operated by the pin of the hub.

2. A lock of the character specified, comprising a plate having a central opening, a sleeve having a plurality of series of longitudinally extending alined slots, each slot having a substantially circular enlargement intermediate its ends, said sleeve having a hub received in the opening of the plate, a pin passing through the hub, a knob comprising a body received within the sleeve and having an annular radially off set flange fitting outside the sleeve, the said body having an opening for the pin, said body and flange having alined circular openings adapted to register with the enlargements of the slots, push pins in the openings, a spring normally pressing each of the said push pins outward, each of the said pins having a head for limiting the inward movement thereof and having transversely flattened portions for moving in the slots of the sleeve to permit the knob to move angularly with respect to the sleeve when the said push pins are in predetermined positions with respect to the sleeve, the flange having an inwardly extending pin and the plate having an arc-shaped slot through which the pin extends, and mechanism adapted to be operated by the movement of the pin of the flange, and means on the said mechanism for engagement by the pin of the hub to return the said mechanism to its original position.

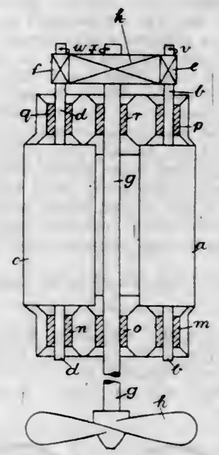
3. A lock of the character specified, comprising a plate having a central opening, a sleeve having a plurality of series of longitudinally extending alined slots, each slot having a substantially circular enlargement intermediate its ends, said sleeve having a hub received in the opening of the plate, a knob comprising a body received within the sleeve and having an annular radially offset flange fitting outside the sleeve, said body and flange having alined circular openings adapted to register with the enlargements of the slots, push pins in the openings, a spring normally pressing each of the said push pins outward, each of the said pins having a head for limiting the inward movement thereof, and having transversely flattened portions for moving in the slots of the sleeve to permit the knob to move angularly with respect to the sleeve when the said push pins are in predetermined positions with respect to the sleeve, the flange having an inwardly extending pin and the plate having an arc-shaped slot through which the pin extends, and mechanism adapted to be operated by the pin.

4. A lock of the character specified, comprising a fixed sleeve having a plurality of series of circumferentially extending alined slots having a substantially circular enlargement intermediate its ends, a knob received within the sleeve, said knob having a radial opening registering with each slot of the sleeve, push pins in the opening, each of the said pins having a transversely flattened portion for engaging and moving in the adjacent slot, and springs for holding the pins in a predetermined position.

5. A lock of the character specified, comprising a fixed sleeve having a plurality of series of circumferentially extending alined slots having a substantially circular enlargement intermediate its ends, a knob received within the sleeve, said knob having a radial opening registering with each slot of the sleeve, push pins in the opening, each of the said pins having a transversely flattened portion for engaging and moving in the adjacent slot, and means for holding sundry of the pins with the flattened portions out of register with the slots.

[Claims 6 and 7 not printed in the Gazette.]

1,103,117. GEARED PROPELLER-DRIVE FOR SHIPS. JAMES GEORGE WEIR, Glasgow, Scotland. Filed Mar. 5, 1914. Serial No. 822,653. (Cl. 115—34.)



1. In combination with a ship, a prime mover adapted to propel the ship and comprising a fixed casing and a rotatable shaft, a propeller shaft extended forward alongside said prime mover, a gear wheel on said prime mover shaft forward of said prime mover casing, a gear wheel on said propeller shaft adapted to mesh with said gear wheel on said prime mover shaft, bearings for said prime mover shaft and said propeller shaft at the forward end of said prime mover casing and adjacent to said gear wheels, these bearings being rigidly connected together, and bearings for said prime mover shaft and said propeller shaft at the aft end of said prime mover casing, these bearings also being rigidly connected together.

2. In combination with a ship, a pair of prime movers adapted to propel the ship, and each comprising a fixed casing and a rotatable shaft, a propeller shaft extended forward alongside and between said prime movers, gear wheels on said prime mover shafts forward of said prime mover casings, a gear wheel on said propeller shaft adapted to mesh with said gear wheels on said prime mover shafts, bearings for said prime mover shafts and said propeller shaft at the forward ends of said prime mover casings and adjacent to said gear wheels, these bearings being rigidly connected together, and bearings for said prime mover shafts and said propeller shaft at the aft ends of said prime mover casings, these bearings also being rigidly connected together.

3. In combinatuion with a ship, a prime mover adapted to propel the ship and comprising a fixed casing and a rotatable shaft, a propeller shaft extended forward alongside said prime mover, a gear wheel on said prime mover shaft forward of said prime mover casing, a gear wheel on said propeller shaft adapted to mesh with said gear wheel on said prime mover shaft, bearings for said prime mover shaft and said propeller shaft rigidly connected to each other and to the forward end of said prime mover casing and situated adjacent to said gear wheels, and bear-

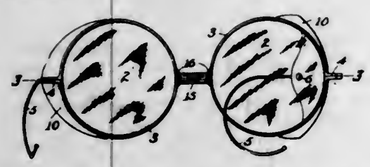
ings for said prime mover shaft and said propeller shaft rigidly connected to each other and to the aft end of said prime mover casing.

4. In combination with a ship, a pair of prime movers adapted to propel the ship, and each comprising a fixed casing and a rotatable shaft, a propeller shaft extended forward alongside and between said prime movers, gear wheels on said prime mover shafts forward of said prime mover casings, a gear wheel on said propeller shaft adapted to mesh with said gear wheels on said prime mover shafts, bearings for said prime mover shafts and said propeller shaft rigidly connected to each other and to the forward ends of said prime mover casings and situated adjacent to said gear wheels, and bearings for said prime mover shafts and said propeller shaft rigidly connected to each other and to the aft ends of said prime mover casings.

5. In combination with a ship, a prime mover adapted to propel the ship and comprising a fixed casing and a rotatable shaft, a propeller shaft extended forward alongside said prime mover, a gear wheel on said prime mover shaft forward of said prime mover casing, a gear wheel on said propeller shaft adapted to mesh with said gear wheel on said prime mover shaft, bearings for said prime mover shaft and said propeller shaft between the said gear wheels and the forward end of said prime mover casing, these bearings being rigidly connected together, bearings for said prime mover shaft and said propeller shaft at the aft end of said prime mover casing, these bearings also being rigidly connected together, and an additional bearing for said propeller shaft forward of said gear wheels.

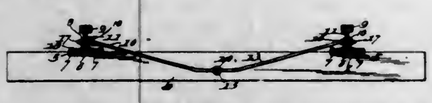
[Claims 6 and 7 not printed in the Gazette.]

1,103,118. GOGGLES. FREDERICK WILLSON and NUMA BOURQUIN, Reading, Pa., assignors to T. A. Willson & Co., Incorporated, Reading, Pa., a Corporation of Pennsylvania. Filed Sept. 10, 1912. Serial No. 719,524. (Cl. 88—41.)



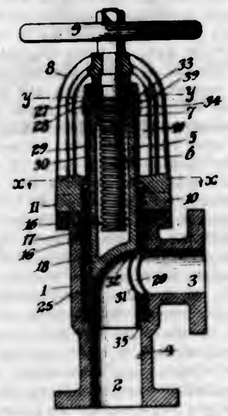
A collapsible goggle comprising lenses having eye-wire framings, and a flexible-band bridge connection, each of said eye-wires having an outwardly bent portion running parallel with the edge of the lens and forming a narrow passage-way for said flexible-band connection substantially as and for the purpose set forth.

1,103,119. RAIL CHAIR AND BRACE. JOHN WOLF, Carlisle, Pa. Filed Apr. 28, 1914. Serial No. 834,979. (Cl. 238—5.)



In an improvement relating to railway tracks, a chair consisting of base plates and extensions adapted to overlie the base flanges of rails and terminating in flanges adapted to clamp the webs of rails, said flanges having apertures therein for the reception of bolts, rails having their ends abutting each other intermediate the length of the rail chair, a brace having its ends projecting through the flanges of the chairs for the opposite rails and through said rails, means for securing the brace intermediate its length to the cross tie, the ends of the said brace being threaded, and nuts threaded on each end of the brace, one of said nuts engaging the inner side of the chair, and the other of said nuts engaging the outer side of the chair for clamping it into engagement with the web of the rail.

1,103,120. VALVE. DAVID ROBERT YARNALL, Philadelphia, Pa., assignor to Yarnall-Waring Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 27, 1912. Serial No. 680,348. (Cl. 137—4.)



1. In a device of the character stated, a valve body, a plug valve, composition packing for the valve, yielding metallic packing making contact with the composition packing and grooved about the face toward it and means for compressing the metallic and composition packings in the direction of the length of the plug valve.

2. In a device of the character stated, a valve body, a plug valve movable therein, spaced yielding metallic packings for the valve, having faces of wedged section toward each other, a spreader for the metallic packing between the packings adapted to press into the spaces at the side of the wedged surfaces and press the metal of the metallic packings against the valve, and means for pressing the packings and the spreader together in the direction of movement of the valve.

3. In a device of the character stated, a valve body, a valve movable therein, yielding metallic packing for the valve, having a face of wedged section, composition packing forming a spreader for the metallic packing adapted to press into the space at the side of the wedged surface and press the metal of the metallic packing against the valve, and means for pressing the packing and the spreader together in the direction of movement of the valve.

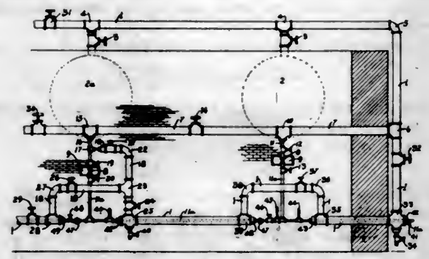
4. In a device of the character stated, a valve body, a valve movable longitudinally therein, spaced yielding metallic packing for the valve having faces each sloping with respect to the path of movement of the valve, the faces sloping on the side of each packing toward the other, and a spreader for the metallic packing adapted to wedge against the sloping faces and press the packing against the valve, in combination with means for pressing the packings and spreader together.

5. In a device of the character stated, a valve body, a valve movable longitudinally therein, spaced yielding metallic packing for the valve having faces each sloping with respect to the path of movement of the valve, the faces being sloped on the side of each packing toward the other, composition packing adapted to engage the sloping surfaces and means for pressing the metallic packings and the composition packing together.

[Claims 6 to 16 not printed in the Gazette.]

1,103,121. OIL-HEATING DEVICE. CHARLES J. ALLEN, San Jose, Cal. Filed Mar. 10, 1914. Serial No. 823,708. (Cl. 158—36.)

1. In an oil heating device of the character described, the combination with a plurality of steam boilers and oil burners heating said steam boilers of a main steam pipe communicating with said boilers, valves controlling the supply of steam from said boilers to said main steam supply pipe, said steam pipe extending downwardly from the points of communication with said boilers and thence across in front of said boilers, valves by which the direct steam is controlled to the oil burners, oil pipes for carrying the oil through said direct steam pipe to said burners, valves by which the oil is controlled to said oil burners, valves for shutting off the oil and steam from any one of the oil burners when not in use and still continue the use of the other burner and heating device, as and for the purpose described.



2. In an oil heating device, the combination with a plurality of steam boilers and oil burners heating said steam boilers, of a main steam pipe communicating with said steam boilers, valves controlling the supply of steam from said boilers to said main steam supply pipe, said steam pipe extending downwardly from the points of communication with said boilers and thence across in front of said boilers, oil burners connected with said steam pipe, valves by which said steam is controlled to said burners, an oil pipe passing through said main steam pipe adapted to heat the oil in said oil pipe, valves by which the flow of oil is controlled to said burners, means for connecting two or more oil burners to the same device without changing the construction thereof, valves for drawing off the condensed water in the lower portion of said main steam pipe, as shown and described.

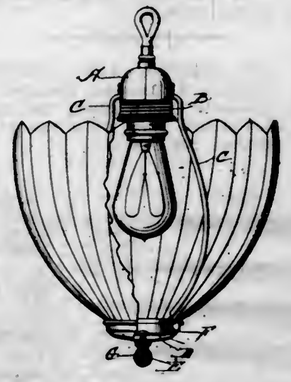
3. In an oil heating device, the combination with a plurality of steam boilers and oil burners heating said steam boilers, of a main steam pipe communicating with said steam boilers, valves controlling the supply of steam from said boilers to said main steam supply pipe, said steam pipe extending downwardly from the points of communication with said boilers and thence across in front of said boilers, an oil pipe entering the lower portion of said main steam pipe, packing boxes connected to said main steam pipe for the purpose of preventing any leakage of steam or water around said oil pipe where the same passes in and out of said main steam pipe, thermometers connected to said oil pipe by which the degrees of heat of the oil passing therethrough may be designated, a pressure gage by which the pressure on said oil passing through said oil pipe is designated, valves controlling the oil supply to said oil burners, as and for the purpose described.

1,103,122. ELECTRIC HOLDER. LAURITZ W. ANDERSEN, Waterbury, Conn., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Feb. 17, 1914. Serial No. 819,225. (Cl. 240—111.)

1. A separable shell forming a socket holder, arms extending from sections of the holder, and shade holding means attached to the opposite ends of said arms.

2. A separable shell forming a socket holder, arms extending from sections of the holder, shade holding means attached to the opposite ends of said arms and a ring for clamping the sections of shell holder together.

3. A longitudinally divided holder adapted to receive a socket shell therebetween, a clamping ring adapted to fit about said holder and clamp the sections together, arms extending from said sections, and shade holding means attached to the opposite ends of said arms.

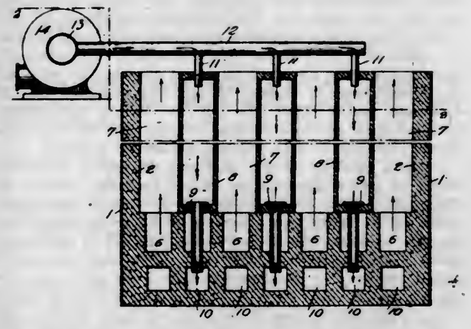


4. A socket or shell holder formed of longitudinally separable sections, a ring for clamping said parts together, arms extending from said separable sections, an inner disk connected to said arms, and an outer cup or disk and means for connecting said disks together and holding a shade therebetween.

5. A socket or shell holder formed of longitudinally separable sections, threaded at one end, a threaded ring for binding said sections together, arms connected to said sections, an inner disk connected to the opposite ends of said arms, an outer cup or disk and means for uniting said disk and cup and securing a shade therebetween.

[Claim 6 not printed in the Gazette.]

1,103,123. CONDENSER FOR ZINC VAPORS. MOSES APPEL, Johnstown, Pa. Filed Sept. 25, 1913. Serial No. 791,878. (Cl. 75—28.)

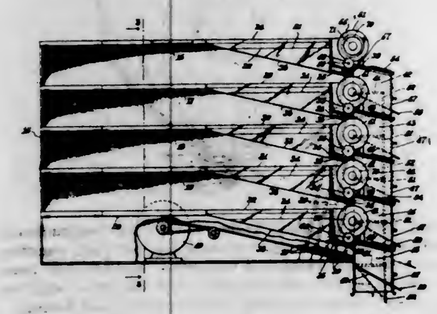


1. In a condenser for zinc vapors, an outer metallic casing, an inner refractory lining for said casing, a plurality of rows of cooling tubes disposed within said casing, the tubes of each row being spaced apart and the tubes of adjacent rows being in staggered relation, the corners of the tubes of one row abutting the corners of the tubes of the adjacent row, and the space between the tubes constituting passages for zinc vapor, and means for forcing a gaseous cooling medium through the cooling tubes, in an opposite direction to that of the zinc vapor.

2. In a condenser for zinc vapors, an outer metallic casing, an inner refractory lining for said casing, a plurality of vertical rows of cooling tubes disposed within said casing, the tubes of each row being spaced apart and the tubes of adjacent rows being in staggered relation, the corners of the tubes in one row abutting the corners

of the tubes in the adjacent row, the space between the tubes constituting passages for zinc vapor, means for introducing zinc vapor at the bottom of the casing, and means for forcing a gaseous cooling medium downwardly through the cooling tubes.

1,103,124. COIN-SORTING AND COMPUTING MACHINE. CHARLES S. BATDORF, Brooklyn, N. Y., assignor to Automatic Coin-Wrapping Machine Company, a Corporation of New York. Filed Feb. 11, 1913. Serial No. 747,598. (Cl. 133—3.)



1. In a machine of the character described, a vertical series of coin-sorting plates having openings therein for the escape of the coins not to be held thereon, said plates being partly below and extending horizontally beyond one another in series and the horizontal portions of said plates being freely separated from each other and exposed to admit the hand of the operator thereto for manually moving the coins about thereon and causing the coins not to be held thereon to pass through the openings therein.

2. In a machine of the character described, a vertical series of coin-sorting plates having openings therein for the escape of the coins not to be held thereon, said plates being partly below and extending horizontally beyond one another in series and the horizontal portions of said plates being freely separated from each other and exposed to admit the hand of the operator thereto for manually moving the coins about thereon and causing the coins not to be held thereon to pass through the openings therein, and said plates below the top one having downwardly inclined inner portions leading and for directing the coins falling thereon to said exposed horizontal portions.

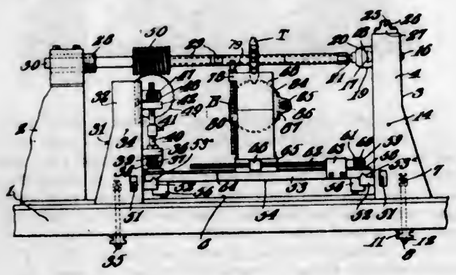
3. In a machine of the character described, a vertical series of coin-sorting plates having openings therein for the escape of the coins not to be held thereon, said plates being partly below and extending horizontally beyond one another in series and the horizontal portions of said plates being freely separated from each other and exposed to admit the hand of the operator thereto for manually moving the coins about thereon and causing the coins not to be held thereon to pass through the openings therein, and exposed hoppers at the outer edges of said plates into which the coins detained thereon may be manually moved for their automatic discharge.

4. In a machine of the character described, a vertical series of coin-sorting plates having openings therein for the escape of the coins not to be held thereon, said plates being partly below and extending horizontally beyond one another in series and the horizontal portions of said plates being freely separated from each other and exposed to admit the hand of the operator thereto for manually moving the coins about thereon and causing the coins not to be held thereon to pass through the openings therein, exposed hoppers at the outer edges of said plates into which the coins detained thereon may be manually moved for their automatic discharge, guideways or chutes leading from said hoppers, means for forcing the coins one after another along said guideways, and means at each guideway for permitting the lateral discharge therefrom of a coin of the wrong denomination therefor.

5. In a machine of the character described, a vertical series of coin-sorting plates having openings therein for the escape of coins not to be held thereon, said plates being partly below and extending horizontally beyond one another in series and the horizontal portions of said plates being freely separated from each other and exposed to admit the hand of the operator thereto for manually moving the coins about thereon and causing the coins not to be held thereon to pass through the openings therein, exposed hoppers at the outer edges of said plates into which the coins detained thereon may be manually moved, guideways or chutes leading from said hoppers, and means for forcing the coins one after another on edge along said guideways.

[Claims 6 to 9 not printed in the Gazette.]

1,103,125. GEAR-CUTTER ATTACHMENT FOR LATHES. ARTHUR BERGERON, Ironwood, Mich. Filed Dec. 18, 1912. Serial No. 737,542. (Cl. 90—11.)



1. In a device of the class described, spaced stocks; a carriage mounted to slide upon the stocks; supplemental work holding stocks located upon the carriage; a shaft supported for rotation independently of the carriage; and a gear train operatively connecting the shaft with the carriage to secure a sliding movement of the carriage.

2. In a device of the class described, spaced stocks; a carriage mounted to slide on the stocks; supplemental work holding stocks mounted to slide on the carriage at an angle to the line of movement of the carriage; means for sliding the supplemental stocks upon the carriage; a shaft journaled for rotation independently of the carriage; and a gear train connecting the shaft with the carriage to impart sliding movement to the carriage.

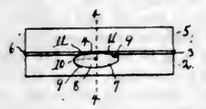
3. In a device of the class described, spaced stocks; a carriage mounted to slide upon the stocks; supplemental stocks mounted to slide upon the carriage at an angle to the line of movement of the carriage; means for sliding the supplemental stocks upon the carriage; means for imparting sliding movement to the carriage; centers mounted upon the stocks for movement at an angle to the direction of movement of the carriage; and means for moving the centers.

4. The combination with the head and tail stocks of the lathe, of a shaft journaled therein; an auxiliary stock located between said lathe stocks; a carriage mounted to slide upon the auxiliary stock and upon one lathe stock; a work holder on the carriage; and a gear train supported by the auxiliary stock and operatively connecting the carriage with the shaft.

5. The combination with the head and tail stocks of a lathe, of a shaft journaled therein; an auxiliary stock located between the lathe stocks; a carriage mounted to slide upon the auxiliary stock and upon one lathe stock; a gear train supported by the auxiliary stock and operatively connecting the carriage with the shaft; a work holder mounted to slide upon the carriage, longitudinally of the shaft; and means for sliding the work holder longitudinally of the shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,103,126. BOX-OPENER. FRIEDRICH C. BOYSEN, Darby, Pa. Filed Jan. 30, 1913. Serial No. 745,209. (Cl. 220—6.)



A box, a cover therefor, a lever pivoted to the box and provided with inwardly projecting flat faced lugs coacting with the edge of the cover and outwardly projecting finger holds formed from the edges of the lever adjacent its ends.

1,103,127. ASPHALTIC PAVEMENT. EDWARD M. CHADBOURNE, Tacoma, Wash. Filed Jan. 7, 1914. Serial No. 810,866. (Cl. 94—1.)



1. The method of constructing pavements composed of aggregate bonded together by an asphaltic binder which is non fluid at ordinary temperatures but capable of being rendered limpid by the application of heat, which consists in distributing the asphaltic binder and aggregate separately on a prepared foundation in layers of the proper depth to give the desired proportions when the layers are commingled, and in reducing the binder to a limpid condition by heating the same, then stirring the aggregate and binder *in situ* on the prepared foundation, and finally condensing the commingled aggregate and binder by surface pressure.

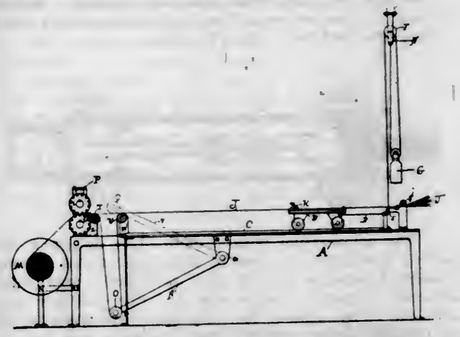
2. The method of constructing pavements composed of aggregate having its voids filled and the particles bonded together by asphaltic binder, which consists in spreading a layer of asphaltic binder on a suitable base, then spreading a loose layer of heated aggregate over the same, the thickness of the two layers being such as to give the proper proportions for the pavement when mixed, then mixing the layers of binder and heated aggregate by stirring the same on the base, then compacting the mixed aggregate and binder by surface pressure.

3. The method of constructing pavements, having a layer of mingled aggregate with its voids filled and the particles bonded together by asphaltic binder non-fluid at ordinary temperatures but capable of being rendered limpid by heat, which consists in spreading separately a layer of asphaltic binder and a layer of heated aggregate having between twenty-five and forty per cent. of voids therein, one over the other on a suitable roadway foundation, and in stirring the two layers together, whereby capillary action is hastened by the mechanical distribution of the binder through the layer of aggregate and uniform distribution of the binder is insured, and finally compacting the same by surface pressure.

1,103,128. TAPESTRY-CARPET-SETTING FRAME. CHARLES H. COLLARS, Albany, N. Y. Filed May 4, 1912. Serial No. 695,071. (Cl. 28—14.)

1. In a device for taking up the slack threads, the combination of a table; a carriage adapted to reciprocate thereon; an adjusting device for regulating the pull on the carriage; clamp rollers mounted on the table between which rollers the threads pass; a beam upon which the threads are wound; a means for extending the length of travel of the threads between the carriage and the clamp rollers, substantially as described.

2. The combination of a table; a carriage adapted to reciprocate thereon; a means for regulating the pull on the carriage; an arm pivoted to the table; a roller carried by said arm and resting upon the threads carrying the design in a tapestry carpet setting frame; a beam upon which the threads are wound; a means for taking up the loose threads at a uniform ratio, comprising a wheel; spurs on the periphery thereof; a series of resilient strips between the spurs; substantially as described.



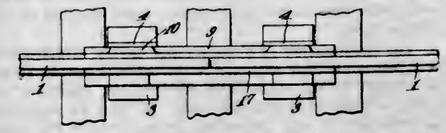
3. The combination of a table; a carriage adapted to reciprocate thereon; a means for regulating the pull on the carriage; a clamp carried by said carriage adapted to engage the threads; a means for increasing the length of travel of the threads between the carriage and the beam; a beam for winding the threads upon; clamp rollers between which said threads pass, each of said clamp rollers fluted on its periphery, substantially as described.

4. In a tapestry carpet setting frame, a beam upon which the design or pattern is wound; a carriage; means on said carriage for setting and clamping the pattern of the tapestry; a revoluble means provided with a roughened surface for grasping and at all times holding each individual thread comprising a tapestry, preventing the slack threads from coming through on to the beam except at a certain ratio, holding them back when they come on too fast, and progressing them when they come on too slow.

5. In a tapestry carpet setting machine, a table; a carriage adapted to reciprocate thereon; a means on said carriage for setting and clamping the pattern or design of the tapestry; a revoluble means for grasping and taking up the loose threads and retaining them in the position in which they are set by the operator.

[Claims 6 to 8 not printed in the Gazette.]

1,103,129. RAIL-FASTENER. SIMON C. COLLINS, Falmouth, Pa. Filed Oct. 7, 1913. Serial No. 793,918. (Cl. 239—9.)
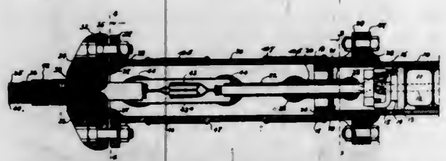


1. In a device of the class described, a base plate; a rail resting thereon and having a notch; a rail retainer interlocked with the plate and having a notch; and a stud supported by the plate and engaged in the notches to hold the rail against longitudinal creeping.

2. In a device of the class described, a base plate having a slot; a rail resting on the plate; a securing element mounted in the rail and engaged in the slot; and a rail retainer extended across the upper end of the securing element and interlocked with the plate.

3. In a device of the class described, a rail; an upright projection at one side thereof; a rail retainer having a groove in which the projection is received; and a base plate with which the retainer is interlocked.

4. In a device of the class described, a rail; a base plate upon which the rail rests; a pin extended through the rail and abutting against the base plate; and a rail retainer overhanging the pin and provided in its side face with a groove receiving the pin.

1,103,130. CONNECTION FOR COIL-CASES AND CABLES. JAMES CUNNINGHAM, Riverton, N. J., and WILLIAM H. HORNER, New York, N. Y., assignors to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed Feb. 7, 1911. Serial No. 607,106. (Cl. 173—268.)



1. The combination with a main cable having a protective covering, of a casing structure carried by and connected between ends of said main cable, said casing structure including a main case and two auxiliary cases attached to the ends of the main case respectively, terminal or stub cables extending from the main case into the auxiliary cases, and splices located in the auxiliary cases, respectively, and connecting said terminal cables with the ends of the main cable.

2. The combination with a main cable and a coil adapted to be connected therewith, of a casing structure carried by the main cable, said casing structure including a main case inclosing said coil and an auxiliary case attached to and extending outward from the main case, a terminal cable extending from the coil in the main case into the auxiliary case, and a splice between the main cable and terminal cable situated in the auxiliary case and connecting the coil to the main cable.

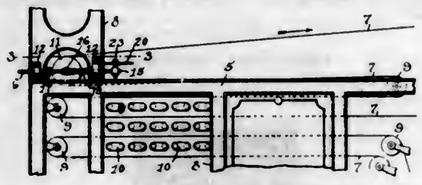
3. The combination with a main cable and a coil adapted to be connected therewith, of a casing structure carried by the main cable, said casing structure including a main case inclosing said coil and an auxiliary case attached to and extending outward from the main case and adapted to be opened to give access to a splice located therein, a terminal cable extending from the coil in the main case into the auxiliary case, and a splice between the main cable and terminal cable situated in the auxiliary case and connecting the coil to the main cable.

4. The combination with a main cable and a coil adapted to be connected therewith, of a casing structure carried by the main cable, said casing structure including a main case inclosing said coil and an auxiliary case attached to and extending outward from the main case and longitudinally divided into separable sections one of which is removable to give access to a splice located in the auxiliary case, a terminal cable extending from the coil in the main case into the auxiliary case, and a splice between the main cable and terminal cable situated in the auxiliary case.

5. The combination of a main cable having armor-wires, and a coil connected with the main cable, a casing structure carried by the main cable, said casing structure including a main case inclosing said coil and an auxiliary case attached to and extending outward from the main case and made in separable sections one of which is adapted to be removed to give access to a splice located in the auxiliary case; a terminal cable extending from the coil in the main case into the auxiliary case, a splice between the main cable and terminal cable situated in the auxiliary case and connecting the coil to the main cable; and means securing the armor-wires of the main cable to the outer end of the auxiliary case.

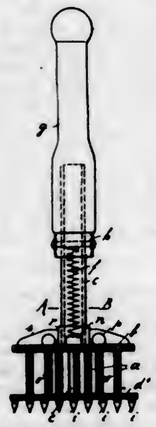
1,103,131. WARP-THREAD-TENSION INDICATOR FOR DRESSERS. GEORGE D. DE GRANDPRE, Providence, R. I. Filed July 29, 1913. Serial No. 781,792. (Cl. 28—14.)

1. In a warp dressing machine having a frame and a roll around which a plurality of warp threads are carried under tension, a warp thread tension indicator comprising bearings secured to the frame, a rod slidably supported in the bearings, a fixed bearing on the rod rotatably supporting the roll, a stop collar adjustably secured to the rod intermediate the forward rod bearing and the fixed bearing on the rod, a coiled spring on the rod engaging with the fixed bearing on the rod and with the rear rod bearing, a flat elongated indicator arm, means for securing one end of the indicator arm to the rear rod bearing, a collar adjustably secured to the rear end of the rod, outside of the rod bearing and under the indicator arm, an indicator finger on the collar shaped to extend upward and over the indicator arm, said indicator arm having a flat upper surface adapted for marking on with a piece of chalk or similar marking substance.



2. In a warp dressing machine, a warp thread tension indicator comprising bearings 12. 12., a rod 15, slidably supported in the bearings 12. 12., a fixed bearing 16 on the rod 15, for rotatably supporting a roll in the dressing machine, a stop collar 17 adjustably secured to the rod 15 intermediate the forward bearing 12 and the fixed bearing 16 on the rod, a coiled spring 19 on the rod engaging with the fixed bearing 16 on the rod and with the rear rod bearing 12, a flat elongated indicator arm 20 secured at one end to the rear rod bearing 12, a collar 21 adjustably secured to the rear end of the rod 15 outside of the rod bearing 12 and under the indicator arm 20, an indicator finger 23 on the collar 21 and shaped to extend upward and over the indicator arm 20, said indicator arm 20 having a flat blank upper face, whereby the position of the indicator finger 23 relative to the indicator arm 20 may be indicated by placing an erasable mark on the blank face of the indicator arm 20.

1,103,132. ICE-CRUSHER. JOHN DEININGER, Ulm, Germany. Filed Dec. 16, 1912. Serial No. 737,016. (Cl. 83—62.)

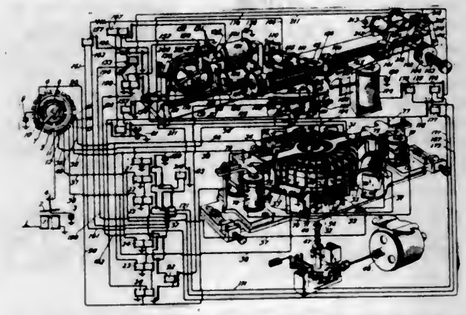


1. In an ice crusher comprising a main plate, a spring plate, pointed pins secured to the main plate and passing through holes in the spring plate and guiding said spring plate, a spring adapted to separate the plates, means for counter-guiding the spring plate and means for limiting its outward movement, the combination of short pointed pins on the lower surface of the spring plate.

2. In an ice crusher, comprising a main plate, a spring plate, pointed pins secured to the main plate and passing through holes in the spring plate and guiding said spring plate, a spring adapted to separate the plates, means for counter-guiding the spring plate and means for limiting its outward movement, the combination of a downwardly extending serrated flange upon the spring plate.

3. In an ice crusher, comprising a main plate, a spring plate, pointed pins secured to the main plate and passing through holes in the spring plate and guiding said spring plate, a spring adapted to separate the plates, means for counter-guiding the spring plate and means for limiting its outward movement the combination of short pointed pins on the lower surface of the spring plate and a downwardly extending serrated flange thereon.

1,103,133. PRINTING-TELEGRAPH RECEIVER. AMOS F. DIXON, Newark, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 9, 1913. Serial No. 741,119. (Cl. 178—34.)



1. A printing telegraph receiver comprising a rotating type wheel shaft, a plurality of pivoted notched disks surrounding said shaft, a plurality of pivoted spring-tensioned levers grouped about said shaft and coöperating therewith and with said disks to selectively arrest said shaft, a release magnet, a lever actuated by said magnet normally acting on said pivoted levers against their spring tension to prevent coöperation with said shaft and said disks but arranged to become inactive to allow cooperation between said shaft, pivoted levers and disks.

2. A printing telegraph receiver comprising a rotatable type wheel shaft, an arm thereon, a plurality of movable notched disks encircling said shaft, a plurality of pivoted levers having two extensions one coöperating with said disks and the other projecting centrally to coöperate with said arm whereby said disks may selectively present a continuous line of notches before one of said levers to arrest said shaft, a pair of release magnets, and a lever actuated by each of said magnets having centrally projecting portions normally acting upon the centrally extending portions of said pivoted levers to prevent the cooperation of said disks, pivoted levers and arm, but arranged to be actuated upon the energization of said magnets to allow coöperation of said disks, pivoted levers and arm whereby said shaft may be selectively arrested.

3. In a printing telegraph receiver, the combination of a current distributer, a plurality of circuits connected thereto, magnets in said circuits, a plurality of pivoted disks, one for each magnet and controlled thereby, a rotatable type shaft carrying the characters, a plurality of levers selectively controlled by the relative position of said disks, and a release magnet for allowing the selected lever to become operative to arrest the shaft in a position to print any character.

4. In a printing telegraph receiver, the combination of a current distributer, a plurality of circuits connected thereto, magnets in said circuits, a plurality of pivoted disks, one for each magnet and controlled thereby, a rotatable type shaft carrying the characters, a plurality of spring tensioned levers selectively controlled by the relative position of said disks, and a release magnet in one of said circuits operable to allow a selected one of said spring tensioned levers to coöperate with said shaft to present any character for printing.

5. In a printing telegraph receiver, a current distributer, a plurality of branch circuits connected thereto, type selecting magnets and operation controlling relays in said branch circuits, a rotatable type shaft carrying characters to be selected, means for starting the rotation of said shaft, and a start control relay actuated to prevent the operation of said starting means upon the operation of predetermined operation controlling relays.

1,103,134. TOBACCO-PIPE CLEANER. WILLIAM E. ELAM, Washington, D. C. Filed Mar. 2, 1914. Serial No. 821,996. (Cl. 131—12.)



1. The combination with a pipe having a readily detachable mouthpiece, of a transverse member of a plurality of sections normally lying within the stem near the bowl cavity, connected to the mouthpiece and having its margin circumferentially fitting and yieldingly pressed outward against the interior surface of the stem, to scrape the same longitudinally when moved from the vicinity of the bowl cavity.

2. The combination with a pipe having a detachable mouthpiece, of a stem cleaner fixed to the mouthpiece, extending therefrom in the smoke duct nearly to the bowl cavity and provided with a yieldingly expanding transverse scraper of a plurality of sections approximately fitting peripherally, the interior of the smoke duct in the stem and adapted, when moved longitudinally to the free end of the stem, to scrape the interior thereof and carry out before it any material therein.

3. The combination with a pipe having a detachable mouthpiece, of a stem cleaner fixed to the mouthpiece and comprising normally divergent spring arms extending within the stem toward the bowl cavity and terminating in oppositely turned scraper members resiliently pressed against the opposite walls of the smoke duct.

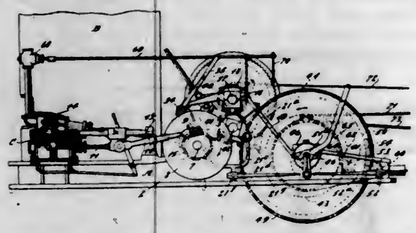
4. The combination with a mouthpiece adapted to be detachably connected with a pipe stem, of a scraping stem cleaner comprising a flat spring metal strip doubled near its middle, to U-shape, to form two divergent spring arms each terminating at its free end in an approximately semicircular disk adapted to fit half the interior surface of the stem, and a tubular screw passing through the bend in the strip in alinement with the smoke duct in the mouthpiece and fixing the cleaner to the latter.

5. The combination with a pipe having a detachable mouthpiece of normally divergent resilient arms secured to the inner end of the latter, extending within the stem toward the bowl cavity, and provided with terminal transverse scrapers respectively together fitting approximately the entire periphery of the smoke passage in the stem.

1,103,135. LOGGING-ENGINE. CYRUS EVERS, New York, N. Y., and JOSEPH H. DICKINSON, Montclair, N. J. Filed June 29, 1910. Serial No. 569,431. (Cl. 57—86.)

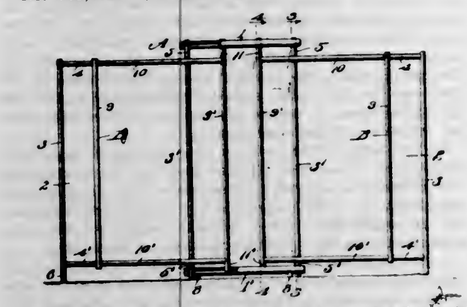
1. In a logging engine, in combination, a frame comprising side members and an intermediate member, a driving shaft and a drum shaft geared thereto journaled in the said side members and intermediate member, a drum on the drum shaft between one side member and the intermediate member, a counter shaft geared to said drum shaft and located on the opposite side of the intermediate member from the said drum, a second drum shaft geared to the counter shaft, and a drum on the second drum shaft on the opposite side of the intermediate member from the first named drum.

2. A logging engine comprising side and intermediate frame members, a power shaft journaled in said members and carrying a pinion, a drum shaft in advance of the power shaft and journaled in the side frame members, and having a gear fixed thereto meshing with said pinion, a rope drum on said shaft, said gear and drum having co-



operable clutch members, a pinion fixed to said drum shaft, a counter shaft arranged beneath the said drum shaft and having a pinion meshing with the second-named pinion, a drum shaft in advance of said first drum shaft and having a driving gear fixed thereto, a drum loosely mounted on said second drum shaft, said last-named driving gear and drum having coöperable clutch members.

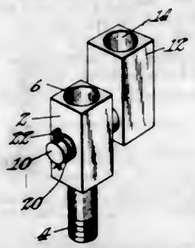
1,103,136. DISPLAY-RACK. LOUIS FELDMANN, Jr., and THEODORE E. CRECELIUS, St. Louis, Mo., assignors to Multiplex Display Fixture Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 30, 1913. Serial No. 745,179. (Cl. 211—22.)



In a knock-down display rack, the combination with upper and lower main metallic cross-bars, each of said cross-bars being transversely provided adjacent its opposite ends with through-openings, the openings of said upper cross-bar alining with the openings of said lower cross bar, of end members, each of said end members comprising inner and outer upright metallic bars and metallic cross-bars rigidly fixed together, the outer upright bar of each of said members having at its lower end an integral longitudinal extension forming an outer supporting foot for the rack and the inner upright bar of each of said members being provided at its opposite ends with integral longitudinal extensions loosely and removably fitting in the alining openings of said main cross bars, the lower extensions of said inner upright bars having a length to extend through, and below the plane of, said lower main cross bar and forming inner supporting feet for the rack, and laterally-disposed set-screws seated in said main cross bars for bindingly engaging with said inner upright bar extensions and thereby detachably securing said end members and main cross bars operatively together and in relatively fixed positions, substantially as and for the purposes described.

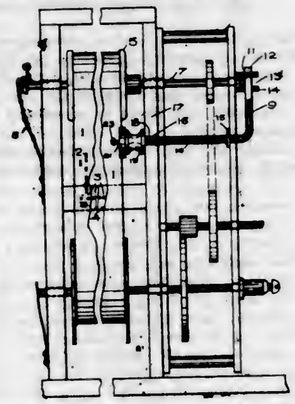
1,103,137. PRIMING-CUP. FREDERICK M. FURBER, Beachmont, Mass. Filed Feb. 21, 1912. Serial No. 679,120. (Cl. 123—187.5.)

1. A device of the character described, comprising a body constructed to be attached to an engine cylinder and having a passage formed therethrough to communicate with the interior of the cylinder, a valve positioned in said body, a bull's-eye carried by said valve and arranged to be moved into and out of alinement with said passage, and a handle for said valve recessed to form a priming cup, said valve being constructed to control the communication between said passage and said cup.



2. A device of the character described comprising a body constructed to be attached to an engine cylinder and having a passage formed therethrough to communicate with the interior of the cylinder, a priming cup, a valve arranged to control communication between said priming cup and said passage, and a bull's-eye carried by said valve and arranged to prevent the escape of gases through said passage while affording a view therethrough.

1,103,138. MUSICAL-INSTRUMENT ROLL-ADJUSTER. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Sept. 9, 1912. Serial No. 719,310. (Cl. 84—161.)



1. A music-roll adjuster comprising a spindle, a regulator having a shaft, and an arm rigid with said shaft and at a right angle thereto, the part of said arm away from the shaft bearing against the outer end of said spindle, screw-threads on a part of said shaft away from said angle arm, and screw-means mounted on said threaded part of said shaft and adapted to adjust said regulator in the axial direction of its shaft, and a bearing against which said screw means bears at the face of said bearing away from said arm, and through which bearing said shaft extends.

2. A music-roll adjuster comprising a spindle, a regulator having a shaft, and an arm rigid with said shaft and at an angle thereto, the part of said arm away from the shaft bearing against the outer end of said spindle, screw-threads on a part of said shaft away from said angle arm, and screw-means mounted on said threaded part of said shaft and adapted to adjust said regulator in the axial direction of its shaft, a casing, and a bearing in said casing against which said screw-means bears at the face of said casing away from said arm, and through which bearing said shaft extends.

3. A music-roll adjuster comprising a spindle, a regulator having a shaft, and an arm rigid with said shaft and at a right angle thereto, the part of said arm away from the shaft bearing against the outer end of said spindle, and screw-means mounted on said shaft at its end away from its right angle arm and adapted to adjust said regulator in the axial direction of its shaft, said screw means consisting of a threaded end of the shaft, a thumb-screw internally threaded and mounted on said threaded end of the shaft, and a stop attached into that same end of said shaft and extended through a free hole in said thumb-screw, and having a head exterior to and larger than said hole, and positioned at the limit of the normal longitudinal travel of said shaft.

4. A music-roll adjuster comprising a shaft having a threaded end, a thumb-screw internally threaded and mounted on said threaded end of the shaft, said shaft having longitudinal adjustment relatively to said thumb-screw and a stop attached into that same end of said shaft and extended through a free hole in said thumb-screw and having a head exterior to and larger than said hole, said stop fixed at a position having its head at a distance from said thumb-screw when said shaft is at its extreme outward position longitudinally of said thumb-screw.

5. A music-roll adjuster comprising a shaft having a threaded end, a thumb-screw internally threaded and mounted on said threaded end of the shaft, said shaft having longitudinal adjustment relatively to said thumb-screw and a screw-stop attached into that same end of said shaft and extended through a free hole in said thumb-screw and having a head larger than said hole, said stop fixed at a position having its head at a distance from said thumb-screw when said shaft is at its extreme outward position longitudinally of said thumb-screw.

1,103,139. BATH. EDWIN GEUSSENHAINER, Neumünster, Germany. Filed Jan. 11, 1912. Serial No. 670,700. (Cl. 4—27.)

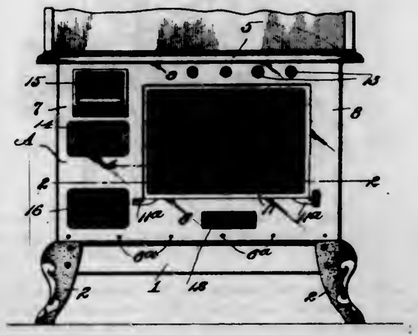


1. A bath for universal installation having its rim periphery substantially rectangular in shape and with its edges curved outwardly and downwardly and with the intermediate portion of the rim flat, the meeting points of adjacent rim edges being curved, the length of the curves in cross section being within the planes provided by the thickness of normal wall tiling, whereby the bath may be installed with its rim totally or partially exposed at will with the curved portion overlapped by the tiling when the bath is installed with its rim partially exposed.

2. A bath for universal installation having its rim periphery substantially rectangular in shape and with its edges curved outwardly and downwardly and with the intermediate portion of the rim flat, the meeting points of adjacent rim edges being curved, the length of the curves in cross section being within the planes provided by the thickness of normal wall tiling, whereby the bath may be installed with its rim totally or partially exposed at will with the curved portion overlapped by the tiling when the bath is installed with its rim partially exposed, the cross sectional configuration of the curved and flat portions of the rim being similar on each of the rectangular edges of the bath.

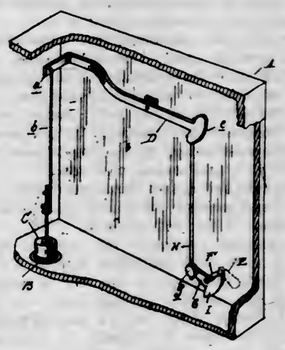
1,103,140. COOKING STOVE AND RANGE. WILLIAM N. GOLDHAMER, St. Louis, Mo. Original application filed Aug. 5, 1912, Serial No. 713,351. Divided and this application filed Jan. 13, 1913. Serial No. 741,842. (Cl. 126—1.)

In a stove or range, the combination with a front wall comprising a flat plate provided within its area with a transverse oven-door opening and having an integral relatively broad rectangular flange projecting rearwardly at and around the edges of said opening and a second rectangular or oven-abutting integral flange projecting from the face of said first flange and lying with its outer and inner faces to the rear of the plane of the outer face of said plate and forwardly of the rear edge of said first



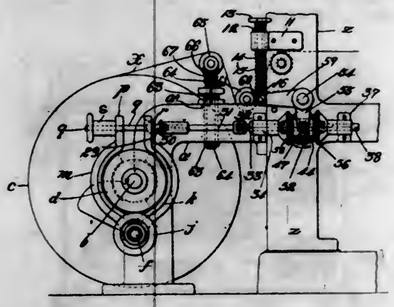
flange, said second flange with the portion of said first flange to the rear thereof forming a right-angular oven-seat, of a substantially rectangular oven-shell having its front end seated in and supported by said seat, and fastening devices engaging said oven-shell and said first flange for permanently fastening said oven-shell at its front end to said plate; substantially as described.

1,103,141. CLOSET-FLUSHING APPARATUS. WILLIAM HEAP, Grand Haven, Mich., assignor to William Heap & Sons, Grand Haven, Mich., a Firm consisting of William Heap, William Lionel Heap, and Cecil R. Heap. Filed Feb. 11, 1910. Serial No. 543,326. (Cl. 4—5.)



In a closet flushing mechanism, the combination with the tank, of a valve operating lever arranged therewithin and fulcrumed intermediate its end upon one side of the tank interior adjacent the top thereof, a valve, a connection between one end of said lever and said valve, a rock shaft journaled in said side wall of the tank adjacent the bottom of the tank and arranged upon the opposite side of the fulcrum of the lever from the connection of the latter with the valve, said rock-shaft having portions extending within and without the tank, an arm secured to the portion of the rock shaft within the tank, a handle arranged without the tank and connected to the rock shaft, a rod connecting said arm and the other end of said lever having a lost motion connection with the one and adjustable connection with the other, and a counter weight carried by said arm for returning the handle to its desired position.

1,103,142. WEB-CONTROLLING MECHANISM. IRVING A. HUNTING, Plainfield, N. J., assignor to Willis S. Morse, Philadelphia, Pa. Filed Oct. 28, 1909. Serial No. 525,130. (Cl. 42—75.)



1. In a device for regulating the tension on a web of paper in a printing press, the combination of a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; means mounted free to move in response to variations of the tension of the web; a driving mechanism; and a clutch mechanism connected with said devices and means and adapted to be thrown by the latter into and out of engagement with said driving mechanism; said clutch mechanism controlling said devices to maintain the tension of the web uniform.

2. In a device for regulating the tension on a web of paper in a printing press, the combination of devices for placing the web under tension; means mounted free to move in response to variations in the tension of the web; a driving mechanism having oppositely rotating members; and a clutch member connected with said devices and means and adapted to be thrown by the latter alternately into and out of engagement with said driving mechanism; said clutch member controlling said devices to maintain the tension of the web uniform.

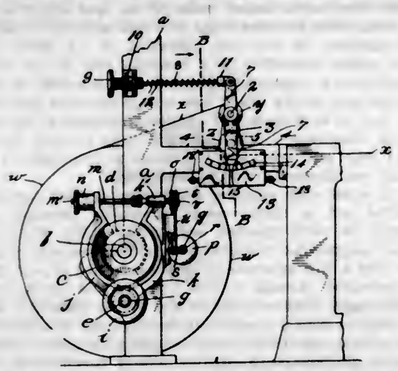
3. In a device for regulating the tension on a web of paper in a printing press, the combination of a rotary roll-supporting shaft from which the web is pulled; brake devices for retarding the rotation of said shaft and thereby increasing the tension of the web; means mounted free to move in response to variations in the tension of the web; a driving mechanism; and a clutch member connected with said devices and means and adapted to be thrown by the latter into and out of engagement with said driving mechanism; said member controlling said devices to maintain the tension of the web uniform.

4. A web-tension controller for keeping constant the tension of a web, said controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; a web-supporting mechanism mounted to move in response to variations in the tension of the web; a driving mechanism; and a clutch member connected with said devices and web-supporting mechanism and adapted to be thrown by the latter into and out of engagement with said driving mechanism; said clutch member controlling said devices to maintain the tension of the web uniform.

5. In a device for regulating the tension on a web of paper in a printing press, the combination of a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; a web supporting bar mounted free to move in response to variations in the tension of the web; a driving mechanism; and a clutch member connected with said devices and web-supporting bar and adapted to be thrown by the latter into and out of engagement with said driving mechanism; said clutch member controlling said devices to maintain the tension of the web uniform.

[Claims 6 to 42 not printed in the Gazette.]

1,103,143. WEB-TENSION-CONTROLLING MECHANISM. IRVING A. HUNTING, Plainfield, N. J., assignor to Willis S. Morse, Philadelphia, Pa. Filed Sept. 1, 1910. Serial No. 580,104. (Cl. 242—75.)



1. A web-tension controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft; and thereby increasing the tension of the web; electrically operated mechanism arranged to operate said devices; and means for varying the current which drives said mechanism, said means being mounted free to move in response to variations in the tension of the web.

2. A web-tension controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; electrically operated mechanism arranged to operate said devices; and means for reversing the direction of the current which drives said mechanism and thereby the direction of movement of the latter, said means being mounted free to move in response to variations in the tension of the web and being automatically operated by the tension of the web to control the supply of current to said mechanism.

3. A web-tension controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; electrically operated mechanism arranged to operate said devices; a shaft arranged to rock in response to variations in the tension of the web and automatically operated by the tension of the web; and an electrical make-and-break device connected with said mechanism and controlled by the rocking of said shaft to control the supply of current to said mechanism.

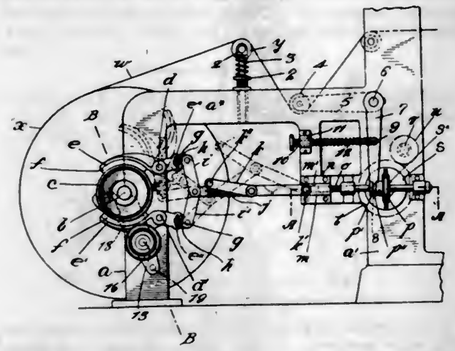
4. A web-tension controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; electrically operated mechanism arranged to operate said devices; an electrical make-and-break device electrically connected with said mechanism for controlling the supply of current thereto; and means automatically operated by the tension of the web and mounted free to move in response to variations therein for actuating said make-and-break device.

5. A web-tension controller having a rotary roll-supporting shaft from which the web is pulled; devices for retarding the rotation of said shaft and thereby increasing the tension of the web; electrically operated mechanism arranged to operate said devices and carried by one of the latter; and means for varying the current which drives said mechanism, said means being automatically operated by the tension of the web and being mounted free to move in response to variations therein.

[Claims 6 to 25 not printed in the Gazette.]

1,103,144. WEB-TENSION-CONTROLLING MECHANISM. IRVING A. HUNTING, Plainfield, N. J., assignor to Willis S. Morse, Philadelphia, Pa. Filed Dec. 7, 1910. Serial No. 595,997. (Cl. 242—75.)

1. In web-tension controlling mechanism, the combination of devices for placing the web under tension; means mounted free to move in response to variations in the tension of the web; a driving mechanism provided with a friction-disk; and a second friction-disk which contacts therewith and is driven thereby and which is operatively connected with said devices and means and arranged thereby to control said devices to maintain the tension of the web uniform; said means moving the last-named friction disk across the face of the other friction disk.



2. In web-tension controlling mechanism, the combination of devices for placing the web under tension; means mounted free to move in response to variations in the tension of the web; a driving mechanism provided with a friction-disk having a depression in its face; and a second friction-disk which contacts therewith and is driven thereby and which is operatively connected with said devices and means and is arranged thereby to control said devices to maintain the tension of the web uniform; said means moving the last-named friction-disk over said face.

3. In web-tension controlling mechanism, the combination of devices for placing the web under tension; means mounted free to move in response to variations in the tension of the web; a driving mechanism; link mechanism connected with said devices; and devices connected with said link mechanism and controlled by said means and moved by the latter into and out of operative relation to said driving mechanism.

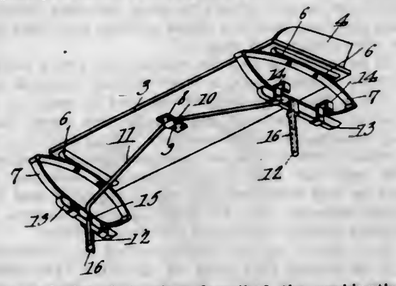
4. In web-tension controlling mechanism, the combination of devices for placing the web under tension; means mounted free to move in response to variations in the tension of the web; a driving mechanism; link mechanism connected with said devices; a slide-block for actuating said link-mechanism; a threaded shaft which engages and moves said slide-block; and a device which turns said shaft and is controlled by said means and moved by the latter into and out of operative relation to said driving mechanism.

5. A web-tension controller having a roll-carrying shaft from which a web is led; a pair of brake-arms which vary the frictional resistance of said shaft to rotation and thereby the tension of the web; link mechanism connected with said brake-arms; mechanically-driven devices for actuating said link mechanism and brake-arms; means for controlling said mechanically-driven devices and making the same responsive to variations in the tension on the web; and a manually-operated arm for actuating said link mechanism independently of said mechanically-driven devices and thereby throwing one of said brake-arms away from the other.

[Claims 6 to 10 not printed in the Gazette.]

1,103,145. ATTACHMENT FOR VEHICLE-SEATS. GEORGE JACKSON, Pottsboro, Tex., assignor of one-fourth to John Jackson, Pottsboro, Tex. Filed Nov. 3, 1913. Serial No. 798,981. (Cl. 21—44.)

1. An attachment for a wagon seat comprising a rod bent at its central portion to define downwardly diverging arms, the said arms bent abruptly downward at their outer extremities to form guide rods, guide sleeves carried by the wagon engaging portion of the wagon seat and means rotatably engaging the central portion of the said rod adapted to engage the seat to thereby prevent the shifting of the seat transversely with respect to the wagon engaging portion of the wagon seat.

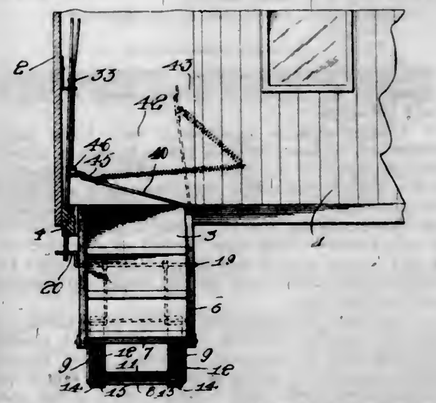


2. In a device of the class described, the combination of a bearing member attachable to the under surface of a wagon seat, a brace member including a central portion and diverging arms, said central portion rotatably held by said bearing member, the said arms diverging from a substantially central point, guide rods carried by the extremities of the said arms, and a pair of guide sleeves adapted to receive the said guide rods therein to limit the said guide rods to rectilinear motion, the said guide sleeves supported by the wagon engaging portion of the wagon seat.

3. An attachment for wagon seats comprising a rod bent at its central portion to define downwardly diverging arms, a bearing member rigidly secured to the wagon seat and rotatably engaging said rod, guide sleeves carried by the wagon engaging portion of the wagon seat and held stationary with respect thereto, the said rod and guide sleeves limiting the movement of the wagon seat to a vertical plane through said bearing, said rotatable engagement of the rod providing for the tilting of said seat about the bearing as an axis.

4. The combination with a wagon seat with springs secured thereto, of means carried by said springs for engaging a wagon body, a bearing member secured to the wagon seat, a rod rotatably carried by said bearing member and provided with downwardly extending outstanding arms, guide sleeves secured to the wagon engaging portion of the said springs, said guide sleeves slidably engaging the said outstanding arms and limiting the movement of the wagon seat to a vertical plane through said bearing, said rotatable engagement of the rod providing for the tilting of the seat about the bearing as an axis.

1,103,146. EXTENSION CAR-STEP. JOHN EMERY JONES, Glenfield, N. Y. Filed Apr. 4, 1914. Serial No. 829,529. (Cl. 105—86.)



1. In a device of the class described the combination with a support, an operating lever slidably mounted upon

said support, a step secured to said support and adapted to swing thereon, means connecting said step to said lever whereby said lever will swing said step to an open or closed position, and a trap door hingedly secured to said support, and means carried by said operating lever for holding said trap door in a closed position when said operating lever swings said step.

2. In an extension step the combination with a car having fixedly secured steps, a lever slidably mounted upon said car, a trap door hingedly secured to said car and adapted to be positioned above said fixed steps, means formed upon said lever for normally locking said trap door in a closed position, said last-mentioned means adapted to release said trap door when desired, an extension step carried by said fixed step, and means engaging said lever and said extension step for swinging said extension step to a closed position when said trap door is closed.

3. In a device of the class described the combination with a car having fixed steps, an operating lever slidably mounted upon said car, a trap door hingedly secured to said car and adapted to fit above said fixed steps, means for normally urging said trap door to a closed position, a pivotally mounted operating handle secured to said lever, said operating handle adapted to hold said trap door in a closed position or releasing the same when desired, and extension step carried by the lower portion of said fixed step, and means engaging said extension step and said lever whereby said step may be swung to an operable position when said lever is moved and said handle allows said trap door to swing to an open position.

4. In a device of the class described the combination with a car having fixed steps, an L-shaped bracket having a longitudinal slot fixedly secured to said car, an operating lever slidably mounted within said slot, an operating handle pivotally secured to said lever, said operating handle passing through the slot formed in said bracket, said operating handle provided at its lower portion with a laterally extending lip, said lever provided with a laterally extending lug formed at a spaced distance from said lip, a trap door hingedly secured to said car, a plate fixedly secured to said trap door adapted to fit between said lip and said lug, whereby said trap door may be held in a closed position, an extension step carried by said fixed step, and means engaging the lower end of said lever and engaging said extension step for throwing the same to an operable position when desired.

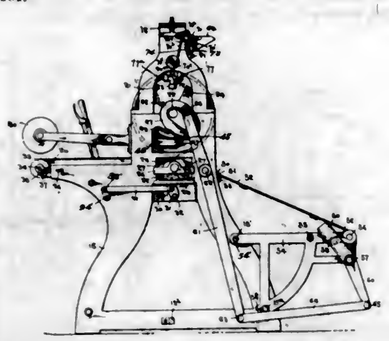
5. In a device of the class described the combination with a car having fixed steps, a supporting bar carried by the lower portion of said steps, a plurality of side bars secured to said supporting bar and adapted to swing freely, a step fixed upon the forward ends of said side bars, an operating lever slidably mounted within said car, means connecting said side bars to said operating lever whereby said step may be swung to an open or closed position by said lever, means engaging said lever for holding said step in a closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,103,147. PRINTING-PRESS. HENRY L. KOEHLER, Louisville, Ky. Filed July 2, 1912. Serial No. 707,235. (Cl. 101—126.)

1. A printing press providing a main frame having vertical side members, vertical guides thereon, a printing roller journaled in the frame, a pressure roller, bearings for the same having sliding engagement with said guides, resilient blocks under said bearings, lifter plates under said resilient blocks, a shaft journaled in the frame under said pressure roller, cams secured on said shaft and adapted to bear against said lifter plates for lifting said pressure roller against said printing roller, and actuating means for said cams.

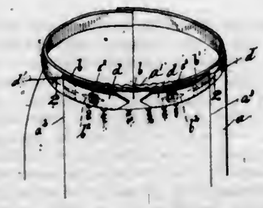
2. A printing press providing a main frame having vertical side members, vertical guides thereon, a printing roller journaled in the frame, a pressure roller, bearings for the same having sliding engagement with said guides, resilient blocks under said bearings, lifter plates under said resilient blocks, a shaft journaled in the frame under said pressure roller, cams secured on said shaft and adapted to bear against said lifter plates for lifting said pressure roller against said printing roller, and actuating means for said cams, said means comprising a link pivoted at one end to one of said cams above the shaft, and a lever pivoted to the frame to one side of the cam, said link being connected to said lever near the pivot point thereof.



3. A printing press providing a main frame having vertical slide members, vertical guides thereon, a printing roller journaled in the frame, a pressure roller, bearings for the same having sliding engagement with said guides, resilient blocks under said bearings, lifter plates under said resilient blocks, a shaft journaled in the frame under said pressure roller, a feed belt surrounding said pressure roller, cams secured on said shaft and adapted to bear against said lifter plates for lifting said pressure roller and said feed belt against said printing roller, and actuating means for said cams.

4. A printing press providing a main frame having vertical side members, vertical guide members thereon, a printing roller journaled in the frame, a pressure roller, a resilient feed belt embracing said pressure roller and operated thereby for feeding articles to said printing roller, bearings for the pressure roller having sliding engagements with said guides, resilient blocks under said bearings, lifter plates under said resilient blocks, a shaft journaled in the frame under said pressure roller, cams secured on said shaft and adapted to bear against said lifter plates, and means for actuating said cams for simultaneously lifting said pressure roller and said feed belt against said printing roller.

1,103,148. LADY'S SKIRT. ALBERT MALSIN, New York, N. Y. Filed Sept. 15, 1913. Serial No. 789,732. (Cl. 2—42.)



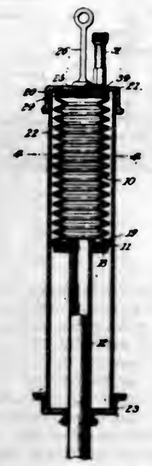
1. In a skirt having an elastic plaited part to be adjustable in width, non-elastic straps attached to the exterior of the skirt and adapted to cover up the plaited part and adjustable means for connecting the said straps to one another.

2. In a skirt having an elastic plaited part to be adjustable in width, non-elastic straps or flaps attached to the exterior of the skirt and overlapping one another, said straps being adapted to cover the plaited part of the skirt and adjustable means for connecting said straps to one another.

3. In a skirt having an elastic plaited part to be adjustable in width, a band of cloth covering the said plaited part and being elastically connected to the skirt, non-elastic straps extending toward one another and adapted to partly cover said band and means fixed to the skirt and adapted to hold said non-elastic straps flatly against the said band.

4. In a skirt having an elastic plaited part to be adjustable in width, a recessed band of cloth covering said plaited part and being elastically connected to the skirt, non-elastic straps extending toward one another and adapted to partly cover said band and means attached to the skirt by threads passed through the recessed portions of said band for holding the said straps flatly against said band.

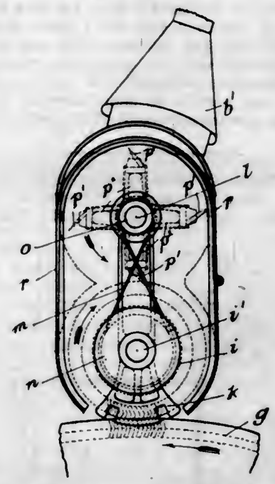
1,103,149. DRAFT-REGULATOR. AUGUST H. MARHENKE, New York, N. Y. Filed Mar. 8, 1913. Serial No. 752,834. (Cl. 236—6.)



1. In a draft regulator for low pressure steam boilers, the combination with a boiler and a draft flue associated therewith, of a damper in the flue, a vertical stand pipe extending above the normal water level in the boiler, water connections between the boiler and said stand pipe providing free communication between them, a collapsible member secured to the upper open end of said stand pipe, a tubular housing connected to another portion of said collapsible member and inclosing said member, said housing being movable downwardly during the collapsing of said members, the lower end of the housing having loose slidable engagement with the stand pipe, connections between the housing and said damper whereby the changes of position of the housing control the operation of the damper, and double-acting vent means carried by the housing and communicating with the interior of the collapsible member serving to allow free egress of air but preventing egress of water therefrom or ingress of air to the interior thereof, whereby the collapsible member is maintained full of water through the stand pipe irrespective of all changes of position of said member and housing.

2. In a draft regulator of the character set forth, the combination with a stationary vertical stand pipe, of a tubular housing surrounding the upper end of the stand pipe and slidable vertically thereabout, a collapsible and expansible member within the housing hermetically connected to the upper end of the stand pipe and adapted to be maintained full of water through the stand pipe, the upper end of the collapsible member acting to lift the housing, and an automatic double-acting vent valve carried by the upper portion of the housing and communicating with the interior of the collapsible member, said vent valve serving to allow the egress of air from the interior of the member and also preventing outflow of water therefrom or the inflow of air thereto.

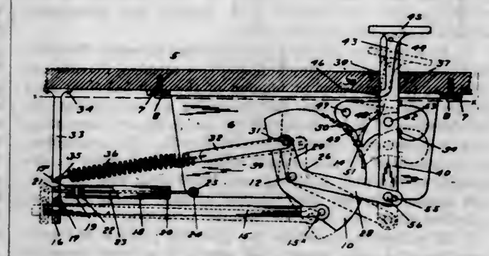
1,103,150. STRIPPING MECHANISM FOR CARDING-ENGINES. JOHN MIDGLEY and THOMAS G. MILLS, Todmorden, England. Filed June 3, 1912. Serial No. 701,135. (Cl. 19—15.)



1. In combination, a rotary stripping brush, adapted to strip the main cylinders and doffers of carding engines, a rotary stripper operatively associated with said brush for removing the waste and dust therefrom, a casing within which said brush and stripper are mounted, a dust cage, an exhaust pipe leading to said dust cage and a conduit extending between said casing and said exhaust pipe, said conduit communicating with said casing at a point midway between the end walls thereof.

2. In combination, a rotary stripping brush, adapted to strip the main cylinders and doffers of carding engines, a rotary stripper operatively associated with said brush for removing waste and dust therefrom, means for rotating said brush and said stripper in opposite directions and at different surface speeds, a casing within which said brush and stripper are mounted, a dust cage, an exhaust pipe leading to said dust cage and a conduit extending between said casing and said exhaust pipe, said conduit communicating with said casing at a point midway between the end walls thereof.

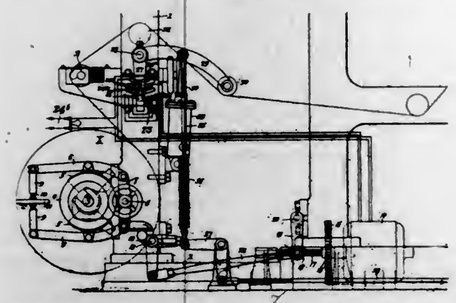
1,103,151. THROTTLE-LEVER-OPERATED CONTROLLER AND ACCELERATOR. CHARLES E. MORRIS, Lane, Kans. Filed June 28, 1912. Serial No. 706,534. (Cl. 74—81.)



In valve controlling mechanism the combination with a stationary support having an opening therein of a vertically positioned supporting plate secured to the lower surface thereof, a pivot post on said plate and a ratchet disk mounted rotatably on said post, a valve operating rod pivotally connected at one end with the said ratchet disk, a bell crank lever mounted on said post having arms of diverse lengths, a coiled spring connected with the

short arm of the lever at one end and with a suitable support on the lower surface of the said stationary support at the other end, a pedal bar movable vertically in the opening in said stationary support and tangentially to the periphery of the ratchet disk, the long arm of the bell crank lever having a slot and a pivot on the lower portion of the pedal bar engaging with said slot, a dog pivotally connected with the supporting plate for said ratchet disk engaging with said disk and a gravity pawl on the pedal bar adapted to simultaneously remove the said dog in the upward movement of the pedal bar.

1,103,152. TENSION-REGULATOR FOR PRINTING-PRESSES. WILLIS S. MORSE, Philadelphia, Pa. Filed Apr. 18, 1911. Serial No. 621,740. (Cl. 242—75.)



1. In a tension regulator for a printing press, the combination of a web roll shaft, a braking mechanism operative on said shaft, means including a member movable in response to variations in the tension of the web to cause the operation of the braking mechanism, a device controllable from the delivery end of the press for changing the adjustment of said movable member, and readily disengageable means for locking said device in any one of a plurality of adjusted positions.

2. In a tension regulator for a printing press, the combination of a web roll shaft, braking mechanism operative on said shaft, means including a member movable in response to variations in the tension of the web to cause the operation of the braking mechanism, and means for retarding the operation of said member and preventing sudden movements of the same.

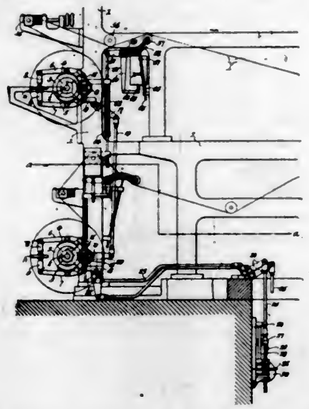
3. In a tension regulator for a printing press, the combination of a web supply roll shaft, braking mechanism operative on said shaft, means including a member movable in response to variations in the tension of the web to cause the operation of the braking mechanism as the tension of the web varies, manually operable means for adjusting said movable member at will, and means for retarding the operation of said member and preventing sudden movements of the same.

4. In a tension regulator for printing presses, the combination of a web supply roll shaft, a member movable in response to variations in tension of the web fed from said supply roll, mechanism for retarding or permitting the acceleration of the web supply roll shaft, means connecting said member and mechanism and causing the mechanism to be operated in accordance with the variations in the tension of the web, a spring associated with said member, and means whereby the tension of said spring may be adjusted while the movable member is active.

5. In a tension regulator for printing presses, the combination of a web supply roll shaft, a member movable in response to variations in tension of the web fed from said supply roll, mechanism for retarding or permitting the acceleration of the web supply roll shaft, means connecting said member and mechanism and causing the mechanism to be operated in accordance with the variations in the tension of the web, a lever having one end extended to a point near the delivery end of the press, a spring connected at one end to said movable member and at its opposite end to said lever, and means for adjusting said lever and spring and holding the latter at any one of a plurality of predetermined tensions.

[Claims 6 and 7 not printed in the Gazette.]

1,103,153. TENSION-REGULATING MEANS FOR PRINTING-PRESSES. WILLIS S. MORSE, Philadelphia, Pa. Filed Mar. 5, 1912. Serial No. 681,781. (Cl. 242—75.)



1. In a tension regulating device for printing presses, the combination of a pivotally mounted member operative on the paper web; braking mechanism operative on the paper supply roll; a normally idle motor connected to said mechanism for varying the retarding force exerted thereby; controlling mechanism for the motor governed by said pivotally mounted member, said mechanism comprising a reversing switch automatically controlled by said pivotally mounted member and a retarding device for the motor and its associated mechanism including means whereby said device is prevented from being operative until after the motor has moved to a predetermined extent.

2. In a tension regulating device for printing presses, the combination of a pivotally mounted member operative on the paper web; braking mechanism operative on the paper supply roll; a normally idle motor connected to said mechanism for varying the retarding force exerted thereby; controlling mechanism for the motor governed by said pivotally mounted member, said mechanism comprising a reversing switch automatically controlled by said pivotally mounted member and retarding apparatus for the motor and its associated mechanism; said apparatus including a device for exerting a greater retarding force when the motor moves in one direction than when it moves in the opposite direction.

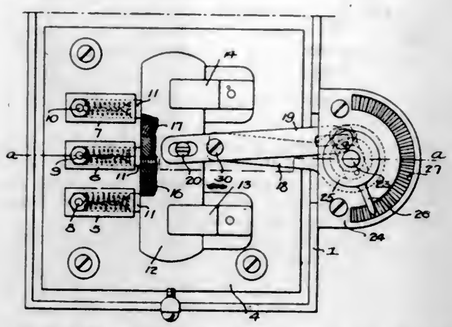
3. In a tension regulating device for printing presses, the combination of a movable member operative on the paper web; braking mechanism operative on the paper supply roll; a motor connected to said mechanism for varying the retarding force exerted thereby; controlling mechanism for the motor governed by said movable member; with retarding apparatus for the motor and its associated mechanism; the same including a device for exerting a greater retarding force when the motor moves in one direction than when it moves in the opposite direction; said means being arranged to be inoperative until the motor has moved to a predetermined extent.

4. In a tension regulating device for printing presses, the combination of braking mechanism operative on the paper supply roll; a motor connected to said mechanism for varying the retarding force exerted thereby; controlling means for the motor governed by the paper web; means for connecting the motor with said braking mechanism including a rotary disk; and a device for retarding the rotation of the disk including a movable supporting structure; a brake shoe carried thereby in engagement with the disk and free to move with the supporting structure toward and from the center of the disk.

5. In a tension regulating device for printing presses, the combination of braking mechanism operative on the paper supply roll; a motor connected to said mechanism for varying the retarding force exerted thereby; means governed by the paper web for controlling the motor; means including a gear for connecting the motor with the braking mechanism; and a device for braking the motor, the same including a brake shoe frictionally engaging said gear.

[Claims 6 to 15 not printed in the Gazette.]

1,103,154. REVERSING-SWITCH. WILLIS S. MORSE, Philadelphia, Pa. Filed Nov. 1, 1912. Serial No. 729,111. (Cl. 172—179.)



1. In a switch, the combination with three contacts, of a movable switch member adapted to connect one of said contacts with either of the other contacts, said switch member having a neutral position at which it is in contact with neither of said other contacts, a member for actuating said switch member, and means for adjusting the position of the switch member relatively to said actuating member.

2. The combination in a reversing switch of a movable member; an oscillatory actuating member; an arm connected to said actuating member; a lever fulcrumed on the arm and connected to the movable switch member; with means independent of said actuating member for turning the lever on its fulcrum.

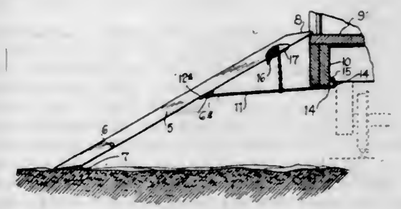
3. The combination in a reversing switch of a plurality of fixed contacts; a reciprocable member also having a contact; a rotary actuating member; an arm connected to said actuating member; a lever fulcrumed on said arm and pivoted to the reciprocable member; and an adjusting arm also connected to the lever for turning the same relatively to the arm on the rotary actuating member.

4. The combination in a reversing switch of a supporting structure; a plurality of contacts having engaging faces in substantially the same plane; a guiding means on the supporting structure; a body of insulating material directed by said guiding means; a contact carried by said body in position to simultaneously engage two of the fixed contacts; a rotary actuating member; an arm thereon; a member pivoted to said arm and also pivoted to said body of insulating material: with means for adjusting said member to vary the relative positions of the contact carried by the body of insulating material and the actuating member.

5. The combination in a reversing switch of fixed and movable contacts; a rotary actuating member; means for adjustably connecting said actuating member and the movable contact of the reversing switch; the same consisting of an adjustable arm supported to rotate on an axis substantially in line with said rotary member; an arm fixed to the rotary member; with a lever fulcrumed on said arm and connected to the adjustable arm and to the movable switch contact.

[Claims 6 to 8 not printed in the Gazette.]

1,103,155. SKID. ERIC W. NISWANGER, Hewins, Kans. Filed Feb. 14, 1914. Serial No. 818,780. (Cl. 57—18.)



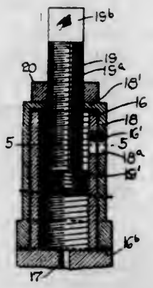
1. The combination with a skid, of a rod pivoted thereto and terminating in a toothed portion adapted to engage the under surface of an object to which the skid is attached, and adjustable means for holding said toothed portion in engagement to prevent sliding of the skid.

2. The combination with a skid including transverse rungs, of a rod rigid with one of said rungs and adapted to extend under the object to which the skid is adapted to be attached to prevent sliding movement of the skid, a flexible connection secured to said rod, and means engaging said flexible connection to hold the rod in engaging relation.

3. The combination with a skid including transverse rungs, of a rod rigid with one of the rungs and adapted to extend under the object to which the skid may be attached to engage said object to prevent sliding movement of the skid, a plate secured transversely of the skid and provided with an open-ended slot, and a chain having one end secured to the rod and adapted to selectively have one of its links engaged in the slot to thus hold the rod in position.

4. The combination with a skid, of a rod disposed longitudinally underneath of the same, a rung to which one end of the rod is connected, said rung being pivotally mounted at its ends to the rails of the skid, said rod being adapted to extend underneath the object to which the skid may be attached and formed with teeth for engaging said object, a plate secured transversely of the skid and provided with an open-ended slot, and a chain having one end secured to the rod and adapted to have one of its links engaged in said slot to thus hold the rod in position.

1,103,156. GREASE-CUP. JOHN O'CONNOR, Atchison, Kans. Filed Sept. 17, 1913. Serial No. 790,288. (Cl. 184—48.)



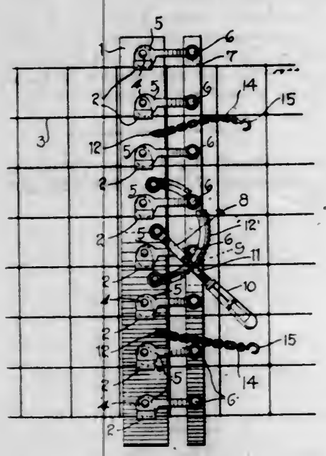
1. A grease-cup consisting of a cylinder having its inner wall screw threaded from top to bottom and having a lubricating duct communicating with the bottom thereof and being provided with a lateral opening adjacent to its top, a plunger having a screw threaded head and a screw threaded shank, said screw threaded head being engaged with the internal threads of the cylinder, a screw threaded member engaged with the upper end of the cylinder, said

threaded shank extending through said member, a lock nut in screw threaded engagement with said shank and normally resting on said member and co-acting therewith and with the shank for securely closing the upper end of the cylinder.

2. A grease-cup comprising an internally and externally screw threaded inner cylinder, an internally threaded outer cylinder provided with an inwardly extending flange which is normally seated on the top of the first said cylinder, said inner and outer cylinders being each provided with an opening near its upper end, said openings being normally out of registry and adapted to be moved into registry by rotating the outer cylinder on the threads of the inner cylinder, a plunger comprising a screw threaded head and a screw threaded shank, said head being adapted to be disposed on a plane above the openings of the cylinders and to be screwed down throughout the length of the inner cylinder, and a lock nut engaged with the threads of the shank and being normally seated on the flange of the outer cylinder and co-acting therewith and with said plunger for closing the end of the inner cylinder and securing the several elements of the grease cup in fixed position, substantially as specified.

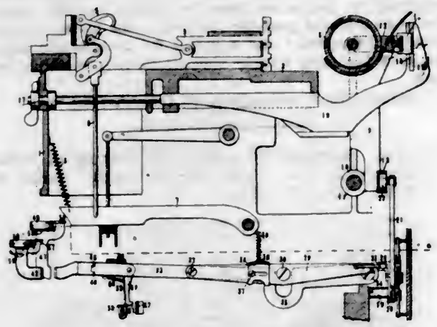
3. A grease-cup comprising an inner cylinder provided with screw threads on its interior surface and being provided with a lateral opening near its top, an outer cylinder rotatably mounted on the inner cylinder and provided with a lateral opening adapted to be moved alternatively in and out of registry with the opening of the inner cylinder, a plunger having screw threaded engagement with the threads of the inner cylinder and adapted to be moved alternatively up and down therein, and a lock nut on the plunger and adapted to bear against the outer cylinder for binding the several elements of the grease cup in fixed relation with one another, substantially as specified.

1,103,157. WIRE-CLAMP. JOHN ERVIN PECKENPAUGH, Franklin, Tex. Filed Oct. 6, 1913. Serial No. 703,714. (Cl. 39—53.)



A device of the character described comprising an elongated member, a plurality of spaced plates secured thereto, said plates being substantially L-shape in cross section, cam members pivotally mounted with relation to said plates, each of said cam members being provided with an extension, a bar pivotally engaged with the extensions of the cams whereby said cams may be caused to move in unison, a lever member pivotally engaged with the elongated member and the bar, a segmental rack carried by the elongated member overlying the bar, and a latch carried by the lever engageable with the rack for locking the bar in its different positions.

1,103,158. PLATEN-SHIFTING MECHANISM FOR TYPE-WRITERS. JOSEPH ALBERT RONCHETTI, Woonsocket, R. I., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed June 24, 1907. Serial No. 380,601. (Cl. 197—72.)



1. In a typewriting machine, in combination, a shiftable platen, a shift lever connected therewith, means for locking said lever in normal position, and means associated with said shift lever for releasing said locking means when it is attempted to depress the lever.

2. In a typewriting machine, the combination with a shiftable platen, of a pair of shift levers, and a lever pivotally connected at different points in its length with each of said shift levers and also connected with the platen, said lever being adapted to swing upon either of said points of connection with the shift levers as a fulcrum when the other of said levers is depressed.

3. In a typewriting machine, in combination, a shiftable platen, a shift lever connected therewith, a locking member positioned beneath said shift lever to automatically lock the same in raised position, and means connected with said shift lever adapted to unlock said locking member when said shift lever is depressed.

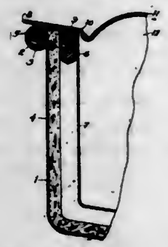
4. In a typewriting machine, the combination with the platen carriage normally held in an intermediate position and adapted to shift to either side of said intermediate position for different case printing, of a pivotally mounted lever, a rod connected with said lever and with the carriage which furnishes an actuating connection between those parts, a pair of shift levers, and a second lever connecting said first lever with each of said shift levers, said shift levers when depressed being adapted to shift the platen to either side of its normal printing position for different case printing.

5. In a typewriting machine, the combination with a shiftable carriage, of means for shifting the carriage from a normal intermediate position to a position at either side thereof for different case printing, comprising a pair of shift levers, a lever connected to each of said shift levers, a second lever pivotally mounted in the rear portion of the machine and having a connection with said first lever, and a rod connected with said second lever and said carriage which furnishes an actuating connection between those parts.

[Claims 6 to 55 not printed in the Gazette.]

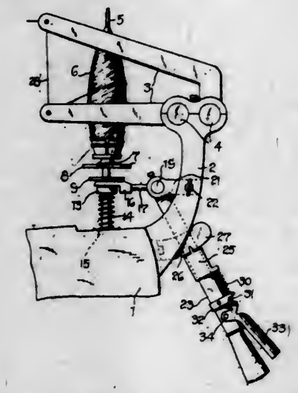
1,103,159. THERMAL PAN. BURTON E. ROSCOE, Springhill, Nova Scotia, Canada. Filed Jan. 22, 1913. Serial No. 743,577. (Cl. 62—23.)

A thermal pan comprising an outer pan having a lining of insulating material and a reinforcing ring about the outer peripheral edge thereof, a rim strip extending from said reinforcing ring toward the interior of said pan over said insulating lining and having a reinforcing ring circular in cross section secured about the inner edge thereof, an inner pan suspended within said outer pan and having a flange extending outwardly from the edge thereof over the edge of said outer pan and a retaining strip extending downwardly therefrom and a filler strip secured on the under side of said flange between said inner pan



and said retaining strip and resting upon said inner reinforcing ring and a cover fitting said inner pan and having a lining of insulating material.

1,103,160. SPINNING-MACHINE. ARTHUR L. SCHOELLES, Newfane, N. Y. Filed Nov. 21, 1913. Serial No. 802,232. (Cl. 118—13.)

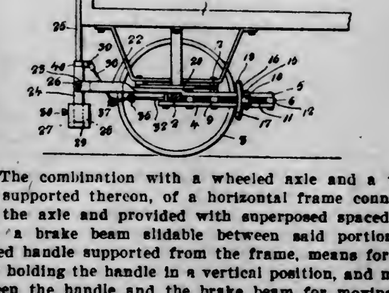


In a machine of the character set forth, the combination with a rail and a spindle carried thereby, of a thread holding jaw fixed thereto, a second jaw freely carried thereby and capable of movement endwise thereof relatively to the fixed jaw, a member loosely surrounding the spindle and coacting with the movable jaw for maintaining the jaws normally closed, a spring interposed between the member and rail and having its extremities secured thereto, means operatively engaged with the movable jaw for separating the same from the fixed jaw against the tension of the spring-controlled member without stopping the spindle, and anti-friction means interposed between the movable jaw and the spring-controlled member.

1,103,161. CHILD'S CARRIAGE. CHRISTOPHER S. SPOFFORD, Sturgis, Mich., assignor to Sturgis Steel Go-Cart Co., Sturgis, Mich. Filed Jan. 28, 1914. Serial No. 814,993. (Cl. 21—83.)

1. In a structure of the class described, the combination of the running gear frame comprising side members and a cross member; a seat; a foot rest comprising a U-shaped frame, pivoted by its arms on the side members of said running gear frame, its cross piece being disposed forwardly, and a body of flexible material secured to the cross piece of said foot rest frame, the rear end of said body being secured to the seat; and a U-shaped support of spring material having forwardly facing cross member engaging offsets in its arms, said support being secured to the cross piece of said foot rest frame to project downwardly therefrom and being disposed on the inner side of said cross member of said running gear frame to engage the same under tension.

2. In a structure of the class described, the combination of the running gear frame comprising side members and a cross member; a seat; a foot rest comprising a U-shaped frame, pivoted by its arms on the side members of said running gear frame, its cross piece being disposed forwardly; and a U-shaped support of spring material having forwardly facing cross member engaging offsets in its arms, said support being secured to the cross piece of said foot rest frame to project downwardly therefrom and being disposed on the inner side of said cross member of said running gear frame to engage the same under tension.



3. In a structure of the class described, the combination of the running gear frame comprising side members and a cross member; a seat; a foot rest comprising a U-shaped frame, pivoted by its arms on the side members of said running gear frame, its cross piece being disposed forwardly; and a U-shaped support of spring material having a plurality of forwardly facing cross member engaging offsets in its arms, said support being secured to the cross piece of said foot rest frame to project downwardly therefrom and being disposed on the inner side of said cross member of said running gear frame to engage the same under tension.

4. In a structure of the class described, the combination of the running gear frame comprising a cross member; a seat; a pivoted foot rest; and a U-shaped support of spring material having a plurality of cross member engaging offsets in its arms secured to said foot rest to project downwardly therefrom and engaging said running gear frame cross member under tension.

5. In a structure of the class described, the combination of the running gear frame comprising a cross member; a seat; a pivoted foot rest; and a U-shaped support of spring material having cross member engaging offsets in its arms secured to said foot rest to project downwardly therefrom and engaging said running gear frame cross member under tension.

[Claims 6 to 9 not printed in the Gazette.]

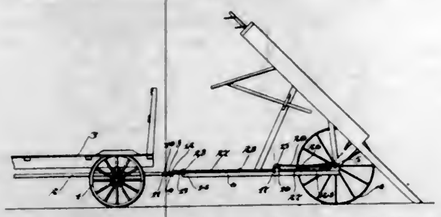
1,103,162. HAND-TRUCK. WILLIAM E. TAYMAN, Washington, D, C. Filed Jan. 27, 1913. Serial No. 744,466. (Cl. 21—65.)

1. The combination with a wheeled axle and a truck body supported thereon, of a horizontal frame connected with the axle and provided with superposed spaced portions, a brake beam slidable between said portions, a pivoted handle supported from the frame, means for normally holding the handle in a vertical position, and means between the handle and the brake beam for moving the latter in the direction of the wheels of the axle when the

handle is adjusted to a point below the pulling position, and means for holding the brake beam in an inactive position when the handle is in an active pulling position.

2. The combination with a wheeled axle and a truck body supported thereon, of a frame secured to the axle and comprising superposed pairs of bars, spacing blocks between the bars, a brake beam slidable between the bars, the upper bars of the frame being extended to points beyond the forward ends of the lower bars, a pivoted handle mounted between the extended ends of the upper bars, means between the handle and the brake beam for moving the latter in one direction, and means for holding the brake beam in an inactive position on prescribed movements of the handle.

1,103,163. VEHICLE-COUPLING. AARON L. THOMPSON, Lansing, Minn. Filed Mar. 12, 1913. Serial No. 753,755. (Cl. 21—75.)



1. The combination with front and rear vehicles to be coupled, of a cable arranged to connect said two vehicles when at a distant point one from the other, means operated by one of the traction wheels of one of said vehicles to wind up said cable and thereby draw said rear vehicle into close arrangement with said front vehicle during the initial forward movement thereof, and means preventing the unwinding of said cable to thereby hold said vehicles coupled, substantially as described.

2. The combination with front and rear vehicles to be coupled, of a cable arranged to connect said two vehicles when at a distant point one from the other, means operated by one of the traction wheels of one of said vehicles to wind up said cable and thereby draw said rear vehicle into close arrangement with said front vehicle during the initial forward movement thereof, means preventing the unwinding of said cable to thereby hold said vehicles coupled, and automatic means for tripping said traction wheel operated means out of action when said rear vehicle has reached a predetermined position with respect to said front vehicle, substantially as described.

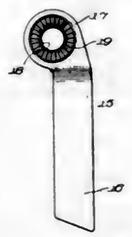
3. The combination with front and rear vehicles to be coupled, of a sheave secured to the front vehicle, a cable passed over said sheave, anchored at one end to the rear vehicle and having its other end wound on a windlass drum on said rear vehicle, means for rotating said windlass drum from the traction wheels of said rear vehicle, means preventing the unwinding of said cable from said drum to thereby hold said vehicles coupled, and means for tripping said windlass drum operating means out of action at a predetermined time, substantially as described.

4. The combination with front and rear vehicles to be coupled, of a sheave secured to the front vehicle, a cable passed over said sheave, anchored at one end to the rear vehicle and having its other end wound on a windlass drum on said rear vehicle, means for rotating said windlass drum from the traction wheels of said rear vehicle, means preventing the unwinding of said cable from said drum to thereby hold said vehicles coupled, and a trip rod mounted on said rear vehicle and arranged to be operated when engaged by a part on said vehicle for throwing said drum operating means out of action, substantially as described.

5. The combination with front and rear vehicles to be coupled, of a sheave secured to the front vehicle, a cable passed over said sheave, anchored at one end to the rear vehicle and having its other end wound on a windlass drum of said rear vehicle, means including coöperating half clutches for rotating said windlass drum from the traction wheels of said rear vehicle, means preventing the unwinding of the cable from said drum to thereby hold said vehicles coupled, and a trip rod mounted on the pole of said rear vehicle and arranged to be operated when engaged by a part on said front vehicle, for throwing said half clutches out of engagement one with the other, substantially as described.

[Claim 6 not printed in the Gazette.]

1,103,164. TOOL-HOLDER. HARRY TURNER, Chicago, Ill., assignor to Armstrong Bros. Tool Company, Chicago, Ill., a Corporation of Illinois. Filed June 20, 1912. Serial No. 704,742. (Cl. 29—98.)



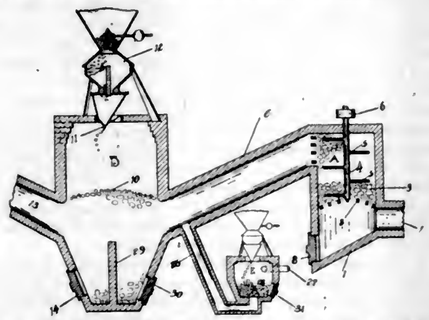
1. In a tool holder, the combination of an attaching shank having a head thereon, the latter having an opening extending therethrough from side to side and having countersunk recesses in its opposite sides immediately surrounding said opening, the bottoms of said recesses being serrated, a bolt passing through said opening and provided with an enlarged head having a transverse opening therethrough, a collar fitting on said bolt between the head thereof and the head of the attaching shank, the collar having a relatively deep recess in its outer face in which the head of said bolt fits snugly, and the said collar having a plurality of pairs of diametrically opposed notches of different shapes in its outer face, to coöperate with the opening through the bolt head in holding differently shaped tools, the inner end of said collar being adapted to fit snugly in the recess in the shank head, and being serrated to coöperate with the serrations in that recess, a washer surrounding the opposite end of said bolt and adapted to fit snugly in the shank head recess and having serrations to coöperate therewith, and a nut threaded on the last mentioned end of the bolt and turned tightly against said washer.

2. In a tool holder, in combination, an attaching shank provided with a head having an opening therethrough, a bolt passing through said opening, a collar fitting on said bolt, and held between the head of the bolt and said shank head, said collar being of smaller exterior diameter than the shank head, and being provided with an outstanding flange adjacent to its outer face, said shank head and said flange providing an annular groove adapted to receive an annular thread-cutting tool, and a nut threaded on the opposite end of said bolt for clamping the parts together.

1,103,165. PROCESS OF RENDERING SMELTER-FUMES USEFUL AND RECOVERY OF THEIR VALUES. CHARLES S. VADNER, Salt Lake City, Utah. Filed Mar. 8, 1913. Serial No. 752,997. (Cl. 48—85.)

1. The herein described process of purifying smelter fumes of their deleterious contents and rendering them useful and innocuous which consists in mixing the mechanically purified fumes with hydrocarbon gases and heating the said mixture to a high temperature in a gas converting chamber.

2. The herein described process of purifying smelter fumes of their deleterious contents and rendering them useful and innocuous which consists in mixing the mechanically purified fumes with hydro-carbon gases and heating said mixture to a high temperature in a gas converting chamber, thereby rearranging them in their combination, recovering the remaining combustible gases therein by cooling the said gases in any suitable manner, whereby part of the impurities and moisture are eliminated.



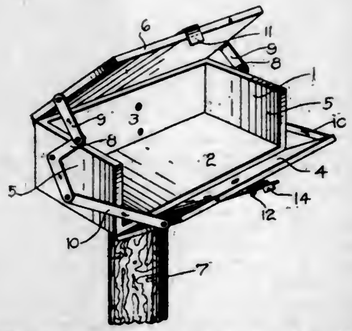
3. The herein described process of purifying smelter fumes of their deleterious contents and rendering them useful and innocuous which consists in mixing the mechanically purified fumes with hydrocarbon gases and heating said mixture to a high temperature in a gas converting chamber, thereby rearranging them in their combination, recovering the remaining combustible gases therein by cooling said gases in any suitable manner, whereby part of the impurities and moisture are eliminated, scrubbing the partially purified gases in any suitable scrubbing tower, containing lime rock and ferric oxid, whereby the remaining moisture assists in eliminating the remaining impurities and then passing the resultant combustible gases into receptacles for use for power and fuel purposes, whereby the said fumes are rendered useful and innocuous.

4. The herein described process of purifying smelter fumes of their deleterious contents and rendering them useful and innocuous which consists in mixing the mechanically purified fumes with hydrocarbon gases that have been previously passed through a column of red hot coke and heating said mixture to a high temperature in a gas converting chamber, thereby rearranging said fumes in their combination.

5. The herein described process of purifying smelter fumes of their deleterious contents and rendering same useful and innocuous which consists in mixing the mechanically purified fumes with hydrocarbon gases that have been previously passed through a column of red hot coke, heating said mixture to a high temperature in a gas converting chamber, thereby rearranging the fumes in their combination and recovering any remaining combustible gases therein by cooling said gases in any suitable manner, whereby part of the impurities and moisture are eliminated.

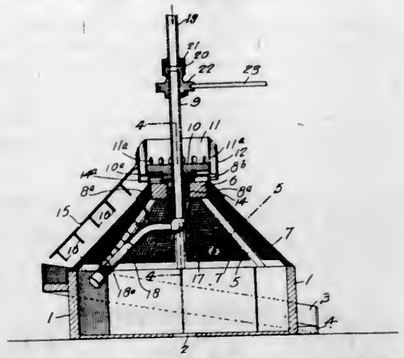
[Claims 6 to 12 not printed in the Gazette.]

1,103,166. MAIL-BOX. NATHANIEL WILLIAMS, Owosso, Mich. Filed Apr. 14, 1913. Serial No. 761,078. (Cl. 232—45.)



A mail box including a bottom, end and rear walls rigidly secured thereto, a top hingedly connected to the upper edge of the rear wall, a front wall similarly connected to the forward edge of said bottom, means connecting said top and front walls whereby the same may be operated simultaneously, an angular keeper carried on the front longitudinal edge of the top and projecting over the edge thereof, a pivoted member carried on the outer face of said front wall and having one end adapted to be disposed into engagement with the keeper to lock said top and front walls in their closed position against casual opening thereof, an offset portion formed at the other end of the pivoted member and adapted to engage said keeper and a signal carried by said offset end and held in position by engagement of the offset end of the keeper.

1,103,167. SCREEN. EARL ADAM WOOD, Gem, Idaho. Filed Aug. 4, 1913. Serial No. 782,827. (Cl. 83—56.)



1. The combination with a tank, of a series of inclined screen members disposed above said tank, means for feeding ore at the tops of said inclined screen members, means for projecting water upon the screens from the under side, and a shield disposed outside of the screen and above the latter for returning the water upon the screen.

2. The combination with a tank, of a series of inclined screen members disposed above said tank, means for feeding ore at the tops of said inclined screen members, means for projecting water upon the screens from the under side, and a shield disposed outside of the screen and above the latter, said screen being provided with downwardly inclined transverse flanges for returning the water upon the screen.

3. The combination with a tank, of a series of inclined screen members disposed above said tank, means for feeding ore at the tops of said inclined screen members, means for projecting water upon the screens from the under side, a shield disposed outside of the screen and above the latter, said screen being provided with downwardly inclined transverse flanges for returning the water upon the screen, and means for simultaneously shifting said water projecting means and said shield from one portion of the screen to another.

4. The combination with a tank having an inclined chute on the outside thereof, of a substantially conical inclined screen disposed above the tank, a receptacle disposed above the screen, a water pipe arranged to extend through said receptacle, said water pipe being curved to extend in close proximity to said screen and being perforated on the side next to the screen, a shield carried by said receptacle above said screen and provided with a series of downwardly inclined flanges, the end of said shield projecting over said chute, and means for rotating said receptacle, said pipe and said shield simultaneously.

5. The combination with a tank, of an inclined chute secured to said tank on the outside thereof, a substantially conical-shaped screen disposed above said tank, a stationary block or plate carried by said screen, a receptacle mounted for revolution on said stationary block, a pipe arranged to pass through the bottom of said receptacle, means for securing the receptacle to the pipe, said receptacle having perforations in its sides near the bottom of the

receptacle for discharging material upon said screen, a shield having downwardly inclined flanges on its under surfaces, said shield being arranged to extend over part of said screen, and means connected with said pipe for projecting water on the bottoms of said screen.

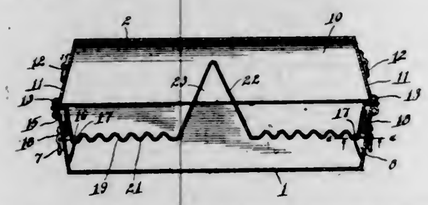
[Claims 6 to 8 not printed in the Gazette.]

1,103,168. TOBACCO-PIPE PROTECTOR. FRANK E. BARNICKLE, Tierra Buena, Cal. Filed July 3, 1913. Serial No. 777,221. (Cl. 131—12.)



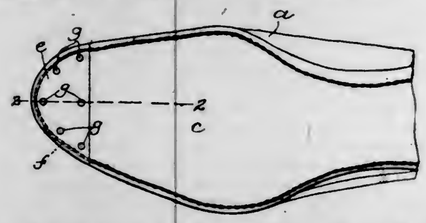
A device of the character described comprising a wire formed into a flat coil, the outer convolution thereof being formed into projecting rests adapted to engage the upper ends of a tobacco pipe bowl, said wire projecting upwardly from the end of the innermost convolution and being formed into a spiral spring, the uppermost convolution of said spiral spring being of a lesser diameter than said flat coil, as described.

1,103,169. COMBINED DISH-DRAINER, STEAMER, ROASTER, OR BAKING-PAN. FRANK B. BEAM, Anamosa, Iowa. Filed Apr. 8, 1913. Serial No. 759,732. (Cl. 53—6.)



In combination with a pan having inwardly projecting supporting elements at its corners, arranged at a point below its upper edge, a drainer arranged to fit in the upper portion of the pan and having supporting means to bear on said supporting devices of the pan, and a cover arranged to fit on the upper side of the drainer when latter is in use in the pan and fit directly on the upper side of the pan when the drainer has been removed.

1,103,170. METHOD OF APPLYING PROTECTORS TO SHOES. WILLIAM F. BOSTOCK, Providence, R. I. Filed Aug. 9, 1913. Serial No. 784,005. (Cl. 36—75.)



1. The method of producing a shoe having a sole protected at the toe, which consists in laying and rounding the sole, cutting away the tread face of the sole at and near the toe, stitching the sole, and placing a protector plate in the cut away part of the sole and over the stitches, the plate having a thickness substantially equal to the depth of the cut, so that its outer face is approximately flush with the tread face of the sole.

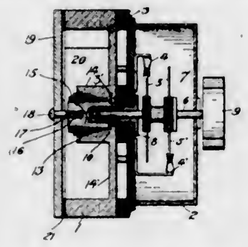
2. The method of producing a shoe having a sole protected at the toe, which consists in laying and rounding the sole, cutting away the tread face of the sole at and near the toe, stitching the sole, placing a protector plate in the cut away part of the sole and over the stitches, the plate having a thickness substantially equal to the depth of the cut, so that its outer face is approximately flush with the tread face of the sole and finishing the edges of said plate to register with the edges of the sole.

3. The method of producing a shoe having a sole protected at the toe, which consists in laying and rounding the sole, cutting away the tread face of the sole at and near the toe, stitching the sole, placing a protector plate in the cut away part of the sole and over the stitches, the plate having a thickness substantially equal to the depth of the cut, so that its outer face is approximately flush with the tread face of the sole and securing said plate to the sole by nails passing through the sole.

4. The method of producing a stitched shoe having a sole protected at the toe which consists in laying an outer sole upon the bottom of the shoe, cutting away the sole at and near the toe to a depth less than the thickness of the sole, stitching the sole to the shoe, placing a protector plate in the recess formed by cutting away the sole, such plate having a thickness substantially equal to the depth of the cut away recess, securing the plate to the sole, and finishing the edges of the plate and sole.

5. The method of producing a stitched shoe having a sole protected at the edge which consists in cutting away the tread face of the sole at the point where a protector is to be applied, to a depth substantially equal to that of the protector and less than the thickness of a single piece of sole leather, providing a stitch-receiving groove in the bottom of the cut away part, stitching the sole to the shoe, and laying the stitches which traverse the cut away part of the sole in such groove, whereby such stitches are caused not to project from the bounding surface of the cut away part, and finally mounting a protector plate in said cut away part and over the stitches in said groove.

1,103,171. SEALING-PLUG FOR ELECTRICAL WATER-HEATERS. ROBERT A. BOWER, San Francisco, Cal., assignor to Sales Company, Incorporated, San Francisco, Cal., a Corporation of California. Filed Feb. 9, 1914. Serial No. 817,492. (Cl. 219—39.)



1. In an electrical water heater provided with a water box and a switch box, the combination with a bearing thimble, of a sealing plug held within a seat in the wall of the water box and provided with separated threaded seats in the ends thereof with one of which engages the threaded end of the bearing thimble, a cover for the water box, and an attaching post threaded to engage the opposing threaded seat of the mentioned sealing plug for uniting the cover to the water box, said sealing plug forming a water seal union between the water chamber and the switch chamber of the electrical heater.

2. In an electrical water heater, the combination with a water box, of a stud projecting within the water chamber thereof and provided with a counter-sunk outwardly flaring seat, a switch box, an exteriorly threaded bearing thimble, a sealing plug held provided with separated interiorly threaded seats in the respective ends thereof with one of which the bearing thimble engages for holding the same in the seat of the stud projecting into the water chamber of the water box, a tapered packing gland surrounding the sealing plug and fitted within the flaring seat of the mentioned stud, screw means engaging the sealing plug for compressing the packing gland for the making of a water tight joint, a cover for the water box, and an attaching post threaded to engage the sealing plug for uniting the cover to the water box.

1,103,172. MARKING-GAGE. JOHN BRUK, Boston, Mass. Filed Feb. 2, 1914. Serial No. 815,972. (Cl. 33—173.)



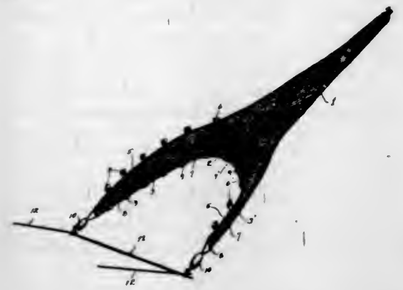
1. The jointed sectional rule herein described having one or more of its sections formed with rabbets at each side, a gage consisting of a base with a pair of side-portions having inwardly extended projections at their ends, the space between the side-portions corresponding to the transverse sectional shape of the section of the rule, whereby the gage may engage the section and slide along thereon, the top of the base of the gage having an inclined face, and a locking-plate pivoted to the top of the base having a wedge-shaped portion which coöperates with the inclined face thereof and the adjoining face of the rule to lock the gage in adjusted position, and also having a finger-engaging portion for operating the locking-plate.

2. The jointed sectional rule herein described having two of its sections formed with rabbets at each side and its hinge formed with grooves at its ends arranged to be brought into alinement with said rabbets thereby to form continuous runways, and a gage arranged to slide along on said sections having means to engage the runways and to pass through the grooves in the hinge, and a locking-device associated with said gage for locking it in any position it may be set on both sections.

3. The jointed sectional rule herein described having a gage slidably arranged on the sections thereof, the end of one of the sections having a recess, and a pivoted double-ended marking-plate arranged in said recess, said recess corresponding in shape to the shape of the marking-plate, thereby to house the same when not in use yet admit of both ends of the marking-plate projecting in opposite ways when said plate is turned on its pivot.

1,103,173. SHRIMP-NET. CHUNG CHETING, San Francisco, Cal. Filed Aug. 13, 1913. Serial No. 784,575. (Cl. 43—9.)

1. A trolling net for shrimp comprising an inclosing tapering relatively shallow body portion of meshed material, the mesh being of a size to prevent the passage therethrough of shrimp or the like, a wide mouth portion extended therefrom, a plurality of floats for supporting the upper edge of the mouth section, and means for maintaining the lower edge thereof adjacent to the ground to be worked, a spreader rod in advance of the mouth of the net for holding the mouth section extended, said spreader rod being normally in contact with the ground whereby to agitate the same and stir up the shrimp, which are thereby guided into the mouth of the net, and means projected from said rod for uniting the net to a floating structure.



2. A trolling net of meshed material, the same comprising an inclosing body portion, a wide open mouth section extended therefrom, the body portion being formed of a material to prevent the passage therethrough of shrimp, a reinforcing cord secured to the upper and lower edges of the mouth section, a plurality of floats united to the upper reinforcing cord and a plurality of weights united to the lower reinforcing cord, relatively large holding weights for the outer ends of the mouth section, a spreader projecting between said outer ends of the mouth section in advance of said relatively large weights for maintaining separated the walls of the mouth section and agitating the surface, and means projected from the spreader for uniting the net to a floating structure.

3. A trolling net of meshed material, the same comprising an inclosing tapering body portion, a wide substantially U-shaped mouth section extended therefrom, free of floor and roof walls, means for holding the upper edge thereof separated from the lower edge when in the water, devices for holding the lower edge of the mouth section to the ground surface, a spreader forwardly of the mouth for holding separated the ends of the mouth section, holding weights secured to said ends adapted with the weight of the spreader to hold the latter in contact with the ground to agitate the latter at a point in advance of the net, and means projected from the spreader for uniting the net to a propelling structure.

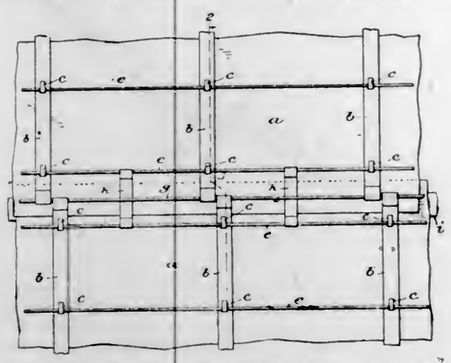
4. A trolling net of meshed material, the same comprising an inclosing tapering body provided with a shrimp inlet throat portion, the body being constructed of a mesh to prevent the passage of shrimp therethrough, a wide mouth section extended therefrom, a plurality of floats for holding the upper edge thereof a distance above the ground line when the net is in the water, a plurality of weights secured to the lower edge of the mouth section to hold the same to the bed of the water, a spreader rod arranged in advance of the mouth section and maintaining separated the outer ends of the mouth section, holding weights interposed between the spreader rod and the ends of said section for holding the spreader and outer ends of the mouth in contact with the ground, and means for uniting the net to a propelling structure.

5. In a trolling net for shrimp and the like, the combination of a tapering relatively shallow body of meshed material having an enlarged open forward mouth, a reinforcing cord secured to the upper edge of the mouth, a reinforcing cord secured to the lower edge of said mouth, a series of floats secured to the upper cord, a series of weights secured to the lower edge cord and sufficiently heavy to maintain the lower edge of said mouth adjacent the ground, the ends of the upper and lower cords terminating at the sides of the mouth and projecting forwardly relative to the mouth, a spreader rod projecting from side to side of the net arranged in advance of the mouth portion thereof and secured to said cord projections, means

whereby said spreader rod engages the ground and forms an agitating means forwardly of the net, and propelling means secured to said rod.

[Claim 6 not printed in the Gazette.]

1,103,174. BACKING FOR CEMENT-COATED WALLS. EDWIN D. CODDINGTON, North Milwaukee, Wis. Filed Jan. 18, 1913. Serial No. 742,756. (Cl. 72—66.)



1. A backing for cement coated walls comprising a flexible sheet of fibrous material reinforced by a number of independent approximately flat flexible metal bands spaced apart and adapted to engage with and reinforce a cement coating, and metal prongs projecting from the metal strips and passed through the sheet of flexible material to form shear resisting fastenings attaching the bands directly to the sheet material, said bands and sheet forming a substantially integral structure.

2. A backing for cement coated walls comprising a flexible sheet of fibrous material reinforced by approximately flat flexible metal bands, said bands having portions thereof struck-up and passed through the sheet of flexible material and bent laterally to form shear resisting fastenings attaching the bands directly to the sheet material.

3. A backing for cement coated walls comprising a flexible sheet of fibrous material, approximately flat flexible metal reinforcing bands spaced apart and having prongs projecting therefrom and passed through the sheet material to form shear resisting fastenings attaching the metal bands to the sheet, said bands being formed at intervals with clips to receive and hold reinforcing rods transversely to said bands.

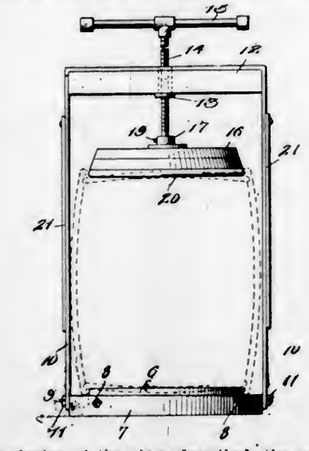
4. A backing for cement coated walls comprising a flexible sheet of fibrous material, metal reinforcing bands arranged at intervals in pairs on opposite faces of said sheet, one band of each pair having clips inserted through the intervening sheet and apertures in the opposite band and securing the parts together.

5. A backing for cement coated walls comprising a flexible sheet of fibrous material, metal reinforcing bands secured in pairs to opposite faces of the sheet at intervals by clips formed integrally with and passing from one band of each pair through the intervening sheet and apertures in the opposite band, said clips being bent and adapted to receive and hold reinforcing rods transversely to the bands.

[Claims 6 to 8 not printed in the Gazette.]

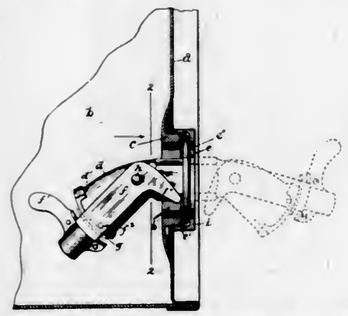
1,103,175. BARREL-HEADING PRESS. JOHN C. DARNALL, Staunton, Va. Filed Dec. 8, 1913. Serial No. 805,409. (Cl. 100—57.)

1. In a device of the class described, the combination of a base to support a receptacle, said base including an annular body, a metal tire secured to the outer edge of said body and projecting below the same to support the body in spaced relation to a floor or platform, means secured to the inner edge of said body for engagement with a receptacle head, a movable presser block to engage a head arranged in the other end of the receptacle mounted upon said base, and means for mounting the presser block upon the base whereby the same may be swung to an operative or inoperative position with relation to the receptacle.



2. In a device of the class described, the combination of a base to support a receptacle, said base including an annular body and metal tires secured to the inner and outer edges of said body and respectively projecting above and below the same, said inner tire being adapted to engage upon the edge of a closure head for one end of the receptacle, a movable presser block to engage the edge of a closure head for the other end of the receptacle, and means for mounting the presser block upon the base whereby the same may be swung to an operative or inoperative position with reltaion to the receptacle.

1,103,176. REVERSIBLE GATE FOR STEEL BARRELS. CHARLES T. DRAPER, Cleveland, Ohio, assignor to The Draper Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 6, 1914. Serial No. 817,029. (Cl. 137—27.)

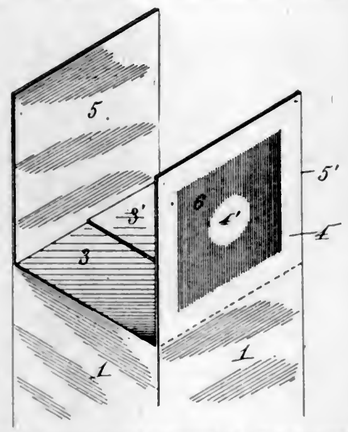


1. The combination with a fluid-receptacle, of a sleeve-like member forming the bung-hole thereof, a flanged faucet insertible through said bung-hole, an exterior closure-part before the mouth thereof, an exterior member pivotally mounting said closure-part forwardly of the faucet, and a lug thereon, extending within said bung-hole and positioned closely adjacent to its wall when the faucet is interiorly disposed within the receptacle, substantially as set forth.

2. The combination with a sheet metal receptacle, of a sleeve-like bushing at the bung-hole thereof, a reversible gate adapted to pass through said bushing, comprising a rearwardly flanged faucet, a closure part mounted before the mouth thereof, a frame pivotally mounting said part rearwardly of the faucet; said frame terminating in lugs lying closely adjacent to the wall of the bushing when the faucet is reversed within the said receptacle, and means for removably securing the flange at the mouth of the bushing either in reversed or extended position of the faucet, substantially as set forth.

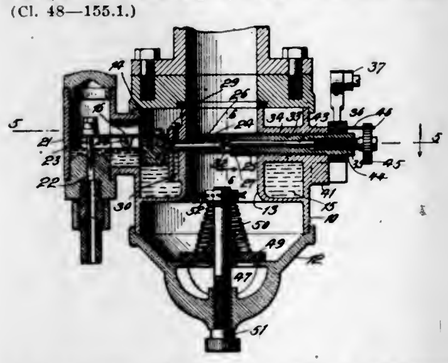
3. The combination with a fluid receptacle, of an extended bushing forming the bung-hole opening thereof, a faucet provided with a rearward flange and an unobstructed bore adapted to be passed through said bushing and extend interiorly of the receptacle, a frame exteriorly pivoted upon the faucet, a gate carried by said frame before the mouth of the faucet, angularly extended parts upon said frame adapted to lie closely adjacent to the inner wall of the bushing when the faucet is in reversed position, and means for securing the flange over the bushing either in the reversed or extended position of said faucet, substantially as set forth.

1,103,177. CARTON. FREDERIC W. DYE, Dayton, Ohio. Filed Apr. 7, 1914. Serial No. 830,186. (Cl. 229—43.)



As a new article of manufacture, a carton constructed from a single blank and having a series of overlapping end closure folds, an adhesive covering the entire surface of one of said folds adjacent to a surface of the other fold, and means to prevent the action of said adhesive on a substantial portion of said other surface, substantially as specified.

1,103,178. CARBURETER. THADDEUS B. EIKER, Allenhurst, N. J. Filed Aug. 3, 1912. Serial No. 713,137. (Cl. 48—155.1.)



1. A carbureter comprising a casing, a carbureting-chamber therein for the air and gasolene or the like, a valve controlling the passage of air and gas through said chamber, a gasolene supply pipe leading transversely into said chamber from one side thereof, a rotary gasolene discharge member leading into said chamber from the other side thereof and coacting with said supply pipe, a needle valve in said discharge member with its point set in proper initial relation to the outlet from said supply-pipe, and means for moving said discharge member and its needle-valve longitudinally to vary the discharge of gasolene and coöperatively moving said controlling valve.

2. A carbureter comprising a casing, a carbureting-chamber therein for the air and gasolene or the like, a valve controlling the passage of air and gas through said chamber, a gasolene supply pipe leading transversely into said chamber from one side thereof, a rotary gasolene discharge member leading into said chamber from the other side thereof and coacting with said supply pipe, means connecting said controlling valve with said rotary discharge member for coöperative action therewith, means for imparting rotary movement to said discharge member, and means for moving said discharge member longitudinally during its rotation to vary the discharge of gasolene and comprising interengaging screw threads on said member and the part of said casing receiving it.

3. A carbureter comprising a casing, a carbureting-chamber therein for the air and gasolene or the like, a valve controlling the passage of air and gas through said chamber, a gasolene supply pipe leading transversely into said chamber from one side thereof, a rotary gasolene discharge member leading into said chamber from the other side thereof and coacting with said supply pipe, means connecting said controlling valve with said rotary discharge member for coöperative action therewith, means for imparting rotary movement to said discharge member, and means for moving said discharge member longitudinally during its rotation to vary the discharge of gasolene and comprising interengaging screw threads on said member and the part of said casing receiving it, combined with a needle-valve in said discharge member with its point set in proper initial relation to the outlet from said supply-pipe, said needle-valve being connected with said discharge-member to move longitudinally therewith toward and from said supply-pipe.

4. A carbureter comprising a casing, a carbuleting chamber therein for air and gasolene or the like, a valve controlling the passage through said chamber, a gasolene supply and valve mechanism within said chamber at the lower side of said valve comprising a supply pipe member having an outlet at its inner end for gasolene and a coöperative movable member connected with said controlling valve, and means for rotating said movable member and imparting longitudinal movement thereto for varying the discharge of gasolene coöperatively with the movement of said controlling valve, the discharge for gasolene being at the lower side of said controlling valve.

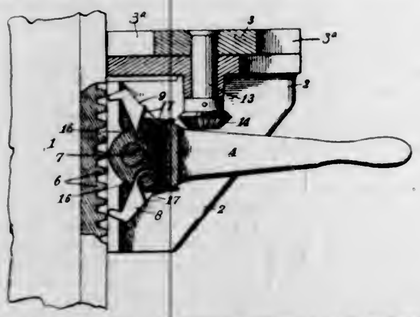
5. A carbureter comprising a casing, a carbureting chamber therein for air and gasolene or the like, a valve controlling the passage through said chamber, a receptacle for gasolene or the like exterior to said chamber, a supply pipe leading from said receptacle into said chamber and having an opening at the inner end thereof for the escape of the gasolene below said valve, a rotary discharge valve member connected with said controlling valve for operating the same and coöperating with the inner end of said supply pipe, and means for rotating said discharge member and moving the same longitudinally toward and from the inner end of said supply pipe for varying the discharge of gasolene coöperatively with the position of said controlling valve, combined with a needle valve in said discharge member with its point set in proper initial relation to the outlet from said supply pipe, said needle valve being connected with said discharge member to move longitudinally therewith toward and from said supply pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,103,179. ARBOR-PRESS. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Filed July 15, 1912. Serial No. 709,419. (Cl. 29—85.)

1. An arbor press, comprising a frame, a rack in the frame, a bracket slidable on the frame, a lever pivoted in the bracket, oppositely projecting pawls pivoted on the lever and alternately engaging the rack to oppositely

move the bracket and means for frictionally engaging the bracket with the frame to yieldably hold the bracket in place on the frame.

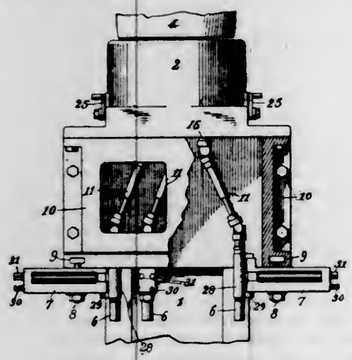


2. An arbor press, comprising a frame, a rack and ways on the frame, a bracket slidable on the ways, a clamping bolt in the bracket to frictionally engage the bracket with the ways, a lever pivoted on the bolt, and oppositely projecting pawls pivoted on the lever to oppositely and alternately engage the rack to move the bracket on the ways.

3. An arbor press, comprising a frame, a bracket slidable on the frame, a lever pivoted in the bracket, oppositely projecting pawls on the lever alternately engaging the rack, shoulders on the lever to limit the movement of the pawls toward the rack, whereby when the lever is in mid-position both pawls are out of such engagement, springs to move the pawls toward the shoulders and rack and means for holding the bracket from moving when the pawls are both out of engagement with the rack.

4. An arbor press, comprising a frame, a bracket slidable on the frame, means for frictionally holding the bracket from sliding, a rack in the frame opposite the bracket, a lever pivoted in the bracket, and a pawl pivoted on the lever and engaging the rack, the lever and pawl operating as a toggle lever to move the bracket, and also arranged to carry the pivot of the pawl beyond a point in line between the pivot of the lever and the end of the pawl, whereby the bracket is locked in position.

1,103,180. MULTIPLE-SPINDLE DRILL. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Filed July 15, 1912. Serial No. 709,420. (Cl. 77—24.)

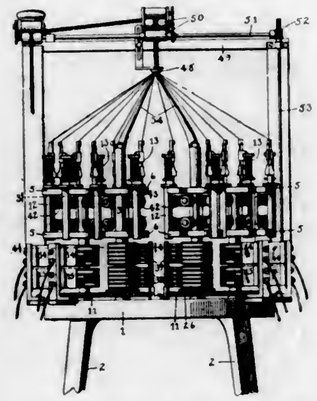


1. A multiple spindle drill, comprising a frame having a T-slot to receive a bolt, a spindle support having a longitudinal slot to receive the bolt whereby the support is longitudinally and rotatably adjustable on the frame, a bearing vertically adjustable on one end of the support, a block horizontally adjustable in the support and engaging the bearing to hold the same adjusted, a drill spindle journaled in the bearing, and means for rotating the spindle.

2. A multiple spindle drill, comprising a frame, a spindle support adjustably attached to the frame, a block adjustable in the end of the support, screws to adjust the block, a bearing arranged transversely of the end of the support and engaging the same, and a dove-tail rib on the bearing slidably engaging dove-tail grooves in the block and support.

3. A multiple spindle drill, comprising a spindle support consisting of an elongated body having a longitudinal slot to adjustably receive a holding bolt, screws extending longitudinally of the support and engaging a block movable in the end of the support, a bearing having inclined shoulders engaging oppositely inclined surfaces on the end of the support and a dove-tail rib on the bearing slidably engaging a dove-tail groove in the block and support.

1,103,181. BRAIDING-MACHINE. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Filed May 9, 1913. Serial No. 766,658. (Cl. 28—4.)



1. In a braiding machine, a series of rotating electro-magnets arranged to attract and hold bobbin carriers when excited, means for exciting the end magnets of the series comprising a commutator rotating once to two revolutions of the said magnets, and operating to excite each magnet during each alternate entire revolution of the said magnet, and commutators for the intermediate magnets rotating once at each revolution of the same, and operating to excite each magnet during only one half of each revolution.

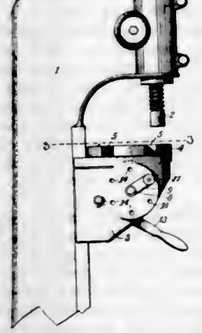
2. In a braiding machine, a series of rotating disks, electro-magnets rotating with the disks, means for exciting the magnets rotating with the intermediate disks during one half of the revolution of the same, and means for exciting the magnets rotating with the disks at each end of the series comprising contact rings electrically connected to the respective magnet coils and rotating therewith, a corresponding series of half time contact rings rotating at one half the number of revolutions of the first named rings, brushes electrically connecting the opposite rings of the respective series, a corresponding series of segments rotating with the half time rings and respectively connected to the same, and a series of brushes engaging the segments

3. In a braiding machine, a series of rotating sleeves carrying rotating disks, electro-magnets mounted on the sleeves to attract and hold bobbin carriers, means for exciting the magnets of the intermediate sleeves during one half of the revolution of the same comprising segments on the sleeves, and brushes contacting the segments, contact rings mounted on the end sleeves of the series, a half time sleeve arranged to rotate one revolution to two revolutions of the respective end sleeve, a corresponding series of contact rings on said half time sleeve, brushes connecting opposite rings on the two sleeves, a series of segments on the half time sleeve connected to the respective rings on the same, a series of brushes engaging the segments, and conductors connected to the said brushes.

4. The combination with a braiding machine having a series of adjacent rotating disks in which the end disks of the series are larger in diameter than the other disks in the series and all of the disks provided with recesses, metallic bobbin carriers adapted to be carried by the disks and transferred from one to the other and carried completely around the end disks, of transferring mechanism, comprising electromagnets opposite the notches to attract the bobbin carriers into the same, a rotatable sleeve for each set of end disks and rotating at half the speed thereof, means for transferring the electrical current from each magnet to the said sleeve, and means mounted upon the sleeve for intermittently making and breaking the electric circuit, to energize and deënergize the magnets to alternately attract and release the bobbins.

5. The combination with a braiding machine having a series of adjacent rotating disks, the end disk of the series being larger in diameter than the other disks of the series and all of said disks provided with notches, metallic bobbin carriers carried by the disks transferred from one of said disks to the other and carried completely around the end disks, transferring mechanism for the end disks comprising, electro magnets opposite the notches to attract the bobbin carriers into the same, a half time sleeve adjacent each end disk adapted to rotate at half the speed thereof, contact rings for each magnet electrically connected thereto, also connected to the disks and rotating therewith, corresponding contact rings on the half time sleeve, transfer brushes engaging the contact rings on the disk and those on the sleeve, contact segments fixed on the half time sleeve and rotating therewith, corresponding in number with the contact rings and electrically connected therewith, and fixed brushes carrying an electrical current and adapted to engage the contact segments.

1,103,182. ARBOR-PRESS. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Original application filed July 15, 1912, Serial No. 709,419. Divided and this application filed Oct. 23, 1913. Serial No. 796,802. (Cl. 29—85.)

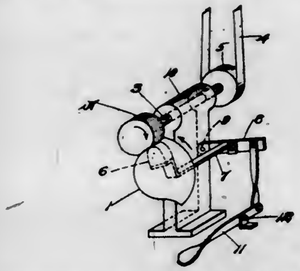


1. An arbor press, comprising a frame having an overhanging head carrying a ram, a knee on the frame, a rotary disk supported by the knee and having marginal recesses adapted to be brought successively beneath the ram, gearing to rotate the disk, a crank to operate the gearing, and means for holding the crank at intervals corresponding to the intervals between the centers of the recesses in the disk.

2. An arbor press, comprising a frame having an overhanging head carrying a ram, a knee adjustable on the frame, a rotary disk mounted on the knee, a vertical shaft in the axis of the disk and journaled in the knee, a horizontal shaft journaled in the knee, miter gears connecting said shafts, a crank fixed on the horizontal shaft, a handle movably connected to the crank and a stop pin slidable in the crank and connected to the handle, the knee having indentations successively engaged by the pin to hold the several recesses in the disk beneath the ram.

3. An arbor press, comprising a frame having an overhanging head carrying a vertically movable ram, a knee on said frame, a rotary disk carried by the knee and having a series of recesses in its margin spaced apart at intervals, gearing to rotate the disk, a crank connected to the gearing, a hollow telescopic handle on the crank, the outer portion thereof being rotative and slidable on the inner portion, a pin slidable in the handle and projecting from the crank, a spring surrounding the pin to move the same inward to engage indentations at intervals in the knee corresponding to the intervals of the recesses in the disk, said pin also being connected to the outer member of the crank to manually withdraw the pin from the indentations.

1,103,183. PROCESS OF FINISHING HAT-BODIES. HENRY T. EMMONS, Brookline, Mass. Filed Apr. 2, 1914. Serial No. 829,142. (Cl. 223—30.)



1. The method of producing a lustrous pile on a hat body consisting of first going over the hat body with a fine abrading surface, second, going over the hat body with a coarser abrading surface than said first abrading surface, and third going over the surface with a bristle brush.

2. The method of producing a lustrous pile finish on a hat body consisting of causing a fine abrading surface to move continuously in one direction over the hat body, then causing a second abrading surface coarser than said first abrading surface to go over the hat body continuously in one direction for a period of time, then to cause an abrading surface coarser than said first abrading surface to move over said hat body in the reverse direction by a continuous movement in said reverse direction for a period of time, then causing a bristle brush to move over the surface of said hat body continuously in one direction for a period of time.

3. The method of producing a lustrous pile finish on a hat body consisting of causing a fine abrading surface to move continuously in one direction over the hat body, then causing a second abrading surface coarser than said first abrading surface to go over the hat body continuously in one direction for a period of time, then to cause an abrading surface coarser than said first abrading surface to move over said hat body in the reverse direction by a continuous movement in said reverse direction for a period of time, then causing a bristle brush to move over the surface of said hat body continuously in one direction for a period of time, and then causing a bristle brush to move over said surface in the reverse direction to the action of said first bristle brush for a period of time.

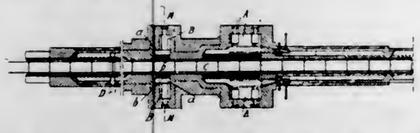
4. The method of producing a lustrous pile finish on a hat body, consisting of applying a rotary abrading surface to the hat body and causing the hat body to move in the same direction with the travel of said abrading surface but at a different rate of speed, then applying to said hat body another rotating abrading surface coarser than said first abrading surface and causing the hat to move in the same direction as the travel of the said abrading surface

but at a different rate of speed, then applying to said hat body a rotating bristle brush and causing the said hat body to move in the same direction but at a different rate of speed from the speed of travel of the said brush.

5. The method of producing a lustrous pile finish on a hat body, consisting of subjecting the hat body to the action of a rotating abrading surface moving continuously in the same direction over the hat body for a period of time, then subjecting the hat body to the action of a rotating abrading surface coarser than said first mentioned abrading surface continuously in the same direction for a period of time, then subjecting the said hat body to the action of a rotating abrading surface of said second degree of coarseness moving continuously for a period of time in a direction opposite to the direction of movement of said first application of said coarser abrading surface, then subjecting said hat body to the action of a rotary bristle brush moving continuously in one direction for a period of time over the surface of the hat body, then subjecting the hat body to the action of a rotary bristle brush moving over the surface of said hat body continuously in one direction but in the reverse direction from said first application of a bristle brush.

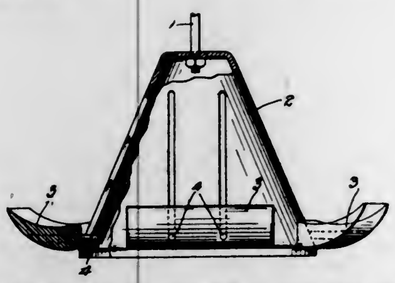
[Claims 6 to 8 not printed in the Gazette.]

1,103,184. APPARATUS FOR BAKING PORCELAIN AND SIMILAR SUBSTANCES IN CONTINUOUS FURNACES WITH MOVABLE HEARTHS. ERNEST GABRIEL FAUGERON, Montereau, France, assignor of one-half to Societe Anonyme des Faienceries de Creil et Montereau, Montereau, France. Filed Oct. 11, 1911. Serial No. 654,018. (Cl. 25—142.)



In a furnace of the continuous type with movable hearth for baking porcelain and similar materials, normal fire-grates, supplemental fire-grates located in advance of the normal fire-grate and constructed and arranged to produce a reducing atmosphere, and means for conducting the gases from the supplemental fire-grates into the furnace at a point where the porcelain begins to fuse.

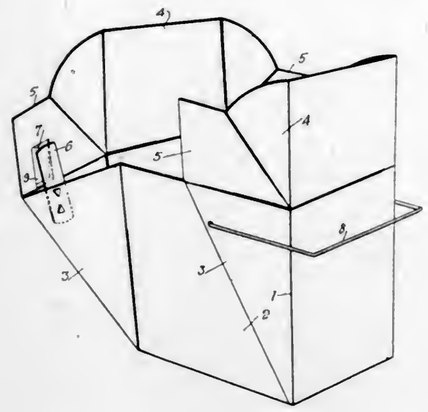
1,103,185. GROUND-ANCHOR. JOHN L. FAY, St. Louis, Mo. Filed Feb. 24, 1913. Serial No. 750,231. (Cl. 189—92.)



1. A ground anchor comprising a conical base having pairs of vertically disposed slots, and a plurality of flukes provided with bail wires passing through said slots whereby said flukes are capable of movement upon said base.

2. In a ground anchor the combination with a base, the lower end of which is substantially larger in diameter than the upper end, said base being provided with vertically disposed slots, and a plurality of flukes radially disposed around the base, parts of which flukes are loosely mounted in the slots whereby said flukes are pivotally and slidably connected to said base.

1,103,186. PAPER PAIL. WILLIAM F. FELDMEYER, Dayton, Ohio, assignor to The Aull Brothers Paper and Box Company, Dayton, Ohio, a Corporation of Ohio. Filed Sept. 25, 1912. Serial No. 722,177. (Cl. 229—26.)



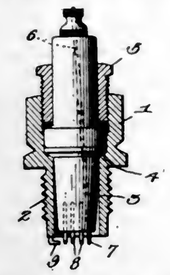
1. A paper pail having side and end walls, corner pieces connecting the adjacent edges of said walls, each corner piece being folded upon itself along a diagonal line and also being folded against the adjacent side wall, the outer portion of each corner piece having an upwardly extending flap adapted to be folded inward in closing said pail, and a clip secured to the inner portion of one of said corner pieces on each side of said pail and extending above the edge of said corner piece on the inner side of the flap of said corner piece, the upwardly extending flaps of the outer portions of those corner pieces to which the clips are secured having openings of a size to permit said flaps to be folded past the respective clips.

2. A paper pail having side and end walls, corner pieces connecting the adjacent edges of said walls, each corner piece being folded upon itself along a diagonal line and also being folded against the adjacent side wall, the outer portion of each corner piece having an upwardly extending flap adapted to be folded inward in closing said pail, and a clip secured to the inner portion of one of said corner pieces on each side of said pail and extending above the edge of said corner piece on the inner side of the flap of said corner piece, the upwardly extending flaps of the outer portions of those corner pieces to which the clips are secured having openings of a size to permit said flaps to be folded past the respective clips, and closures for said openings arranged to be engaged by the respective clips and moved outward when said flaps are folded inward.

3. A paper pail having side and end walls, flaps extending above the respective side walls, one flap on each side of said pail having an opening therein and being adapted to be folded inward when the pail is closed, clips secured to said pail and extending above the side walls thereof on the inner sides of the respective flaps, the upper portions of said clips being in alinement with the openings in the respective flaps, whereby said flaps can be folded past said clips with the clips in upright positions.

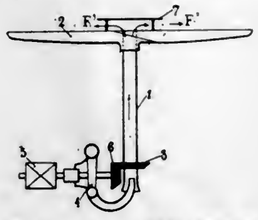
4. A paper pail having side and end walls, flaps extending above the respective side walls, one flap on each side of said pail having an opening therein and being adapted to be folded inward when the pail is closed, clips secured to said pail and extending above the side walls thereof on the inner sides of the respective flaps, the upper portions of said clips being in alinement with the openings in the respective flaps, whereby said flaps can be folded past said clips with the clips in upright positions, and closures for said openings adapted to be displaced by the clips as the flaps are folded.

1,103,187. SPARKING PLUG. BENJAMIN T. FERGUSON and RICHARD F. FENTON, Standard, La. Filed July 10, 1912. Serial No. 708,717. (Cl. 123—169.)



A spark plug comprising a casing, a core of insulation therein, a ground electrode fixed to the lower end of the casing and having its terminal disposed at one side of the core and contiguous thereto, a plurality of electrodes mounted in staggered relation in the lower end of the core and projecting from the bottom face thereof, said electrodes being equally spaced from each other and having oppositely disposed hooked ends terminating upon a line extending diametrically across the bottom face of the core and in alinement with the terminal of the ground electrode, whereby a line of sparks extending substantially entirely across the bottom face of the core is produced.

1,103,188. DRIVING AND SUSTAINING SURFACES APPLICABLE TO NAVIGATION IN AIR AND WATER. ANTOINE PADOUE FILIPPI, Paris, France. Filed June 24, 1912. Serial No. 705,560. (Cl. 244—19.)



1. The combination of a rotatable surface or plane of a form such that on its rotation a reduction of pressure of the medium in which the surface or plane rotates results at one of the faces of the surface or plane, with means for directing gas or fluid under pressure radially outward for the purpose of increasing the said reduction of pressure.

2. The combination of a rotatable surface or plane of a form such that on its rotation a reduction of pressure of the medium in which the surface or plane rotates results at one of the faces of the surface or plane, with means for directing gas or fluid under pressure radially outward for the purpose of increasing the said reduction of pressure and means for supplying gas or fluid under pressure to the other face of the surface or plane for the purpose of reducing or destroying the partial vacuum created at the center by the rotation of the surface or plane.

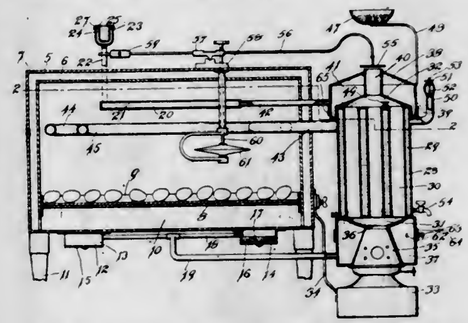
3. The combination of a rotatable surface or plane of a form such that on its rotation a reduction of pressure of the medium in which the surface or plane rotates results at one of the faces of the surface or plane, with a disk or plate coaxially disposed adjacent the said face and means for directing gas or fluid under pressure to the center of the space between the disk or plate and the surface or plane and radially outward over the face thereof.

4. The combination of a rotatable surface or plane of a form such that on its rotation a reduction of pressure of the medium in which the surface or plane rotates results at one of the faces of the surface or plane, with a hollow shaft on which the surface or plane is mounted, means for supplying gas or fluid to the hollow shaft, and a deflector plate coaxially disposed adjacent the said face of the surface or plane and adapted to deflect the gas or fluid radially outward over the surface or plane.

5. The combination of a rotatable surface or plane of a form such that on its rotation a reduction of pressure of the medium in which the surface or plane rotates results at one of the faces of the surface or plane, with a hollow shaft on which the said surface or plane is mounted, a fan forcing gas or fluid under pressure into the hollow shaft, means for driving the fan, and a deflector plate coaxial with the hollow shaft and adjacent the outer end thereof and the said face of the surface or plane, the said deflector plate being adapted to deflect the gas or fluid radially outward over the said face of the surface or plane to increase the speed of the said medium passing toward the periphery of the surface or plane.

[Claims 6 to 9 not printed in the Gazette.]

1,103,189. INCUBATOR AND BROODER. WILLIAM C. FISCHER, Phoenixville, Conn. Filed May 3, 1912. Serial No. 694,851. (Cl. 237—23.)



1. In an incubator, a case, a heating device, a hot air chamber surrounding said heating device and completely shut off from the latter, means for supplying air to said chamber, means for conducting air from said chamber to the interior of the case, a boiler separately formed from said hot air chamber and removably resting thereon and having flues to conduct the heat from said heating device, and a coil extending from said boiler to the interior of the case.

2. In an incubator, a case, a heating device, a hot air chamber surrounding said heating device and completely shut off therefrom, means for supplying air to said chamber, means for conducting said air to the interior of the case at the bottom thereof, a second heating chamber removably located above the first and having a flue to conduct the heat from said heating device, means for supplying air to said second heating chamber independently of the heating device or first heating chamber, and means for conducting said air to the interior of the case at the upper part thereof.

3. In an incubator, a case, a heating device having a heating chamber, a boiler separately formed from the heating device and removably located thereon and having flues to receive the heat from said heating chamber, a coil extending from said boiler within the case, a hot air chamber separately former from the boiler and removably located thereon and having a flue to conduct air from said boiler flues, said hot air chamber being completely shut off from said heating device, means for supplying air to said hot air chamber, and means for conducting the air from said hot air chamber to the upper part of said case.

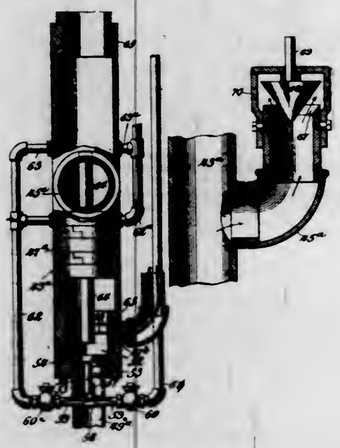
4. In an incubator, a case, a heating device, a hot air chamber surrounding said heating device and completely shut off therefrom, means for conducting the air into said chamber and to the bottom of the case, a boiler overlying said hot air chamber and having flues to conduct the air from said heating device, a coil extending

from said boiler within the case, a second hot air chamber overlying the boiler and having a flue to conduct the hot air from the boiler flues, said hot air chamber being completely cut off from the heating device, and means for supplying the second hot air chamber with air and for conducting it to said case.

5. In an incubator, a case, a heating device, a hot air chamber surrounding said heating device and completely shut off therefrom, said chamber comprising a unitary structure separate and distinct from the heater, means for conducting air to the hot air chamber and from thence to the case, a boiler forming a unitary structure removably located upon said hot air chamber and having flues communicating with the heating device, a coil extending from the boiler into the case, a second hot air chamber constituting a unitary structure removably seated upon the boiler and completely shut off from the heating device, and means for supplying air to the second heating chamber and for conducting it therefrom to the top of the case.

[Claims 6 and 7 not printed in the Gazette.]

1,103,190. PUMP. CHARLES HENRY FOX, Bakersfield, Cal. Continuation of application Serial No. 386,309, filed July 30, 1907. This application filed Aug. 14, 1912. Serial No. 715,110. (Cl. 103—84.)



1. An apparatus for raising water from wells, comprising a water pipe of a length to extend from near the bottom of the well below the surface of water therein to near the top of the well, a cylinder immersed in the water in the well and provided with means of communication with the water pipe, a reciprocatory piston within the cylinder movable into covering and uncovering relation to said means of communication, a valve for said means of communication closing toward the cylinder, and means for causing ignition of an explosive mixture in the cylinder to actuate the piston and to be projected into the water pipe for the elevation of the water by the combined effect of the buoyancy of the gas so formed and the force of the explosion.

2. In an apparatus for elevating water, a water pipe, an explosion chamber provided with means for causing the explosion of explosive mixtures in the chamber, means for directing the gases so formed from the explosion chamber into the water pipe at a low point in the latter, a reciprocatory member in the explosion chamber and related to the means for directing the gases to the water pipe to control the flow of such gases, and means for preventing the flow of water into the explosion chamber when the force of the explosion is exhausted.

3. In an apparatus for raising water, a water pipe, power means including an explosion chamber, a reciprocatory member movable therein, and connections controlled by the reciprocatory member between the explosion chamber and the water pipe for directing gases of explosion into the latter, and means for preventing the return flow of water toward the explosion chamber.

4. A means for the elevation of water from wells, comprising a water pipe, a cylinder supported at the lower end thereof, a piston within the cylinder movable lengthwise thereof, an exhaust duct leading from an intermediate point of the cylinder and opening into the pipe in an upward direction, means for filling the opposite ends of the cylinder with an explosive mixture, and means for igniting the explosive mixture at opposite ends of the cylinder.

5. A means for the elevation of water from wells comprising a pipe adapted to be lowered into the well to a point below the water level of the well, a group of cylinders associated with the lower end of the pipe, a reciprocatory piston in each cylinder, an exhaust duct communicating with each cylinder at a mid point thereof and united into a common exhaust duct directed upwardly lengthwise of the pipe and opening thereinto, a common supply for the cylinders for directing explosive mixtures to opposite ends thereof, spark plugs at opposite ends of the cylinders, means for energizing the spark plugs, valves at opposite ends of the cylinders, and means operable from the top of the well for opening and closing the valve at will.

[Claims 6 to 12 not printed in the Gazette.]

1,103,191. ATTACHMENT FOR SLIPPERS. RICHARD H. FULLERTON, Beverly, Mass. Filed Dec. 3, 1913. Serial No. 804,502. (Cl. 36—51.)



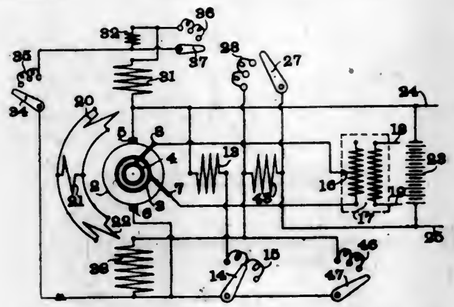
The combination with a slipper; of a tubular covering extending and secured to said slipper about the foot receiving opening thereof, and a coil spring within said covering, said spring having its ends connected.

1,103,192. ROTARY CONVERTER. VALÈRE ALFRED FYNN, London, England. Filed June 12, 1911. Serial No. 632,583. (Cl. 171—123.)

1. In a rotary converter, the combination with an armature having slip-rings, a commutator and brushes on said commutator, of a field structure having a normal exciting winding displaced from the axis of the brushes and connected in parallel thereto, an auxiliary field winding co-axial with the brushes, and also connected in parallel thereto, means for varying the axis of the resultant magnetization due to the exciting and auxiliary windings, a neutralizing winding co-axial with and connected in series relation with the brushes, and means for varying the ampere turns of said neutralizing winding.

2. In a rotary converter, the combination with an armature having slip-rings, a commutator and brushes on said commutator, of a field structure having a normal exciting winding displaced from the axis of the brushes and connected in parallel thereto, an auxiliary field winding co-axial with the brushes, and also connected in parallel

thereto, means for varying the axis of the resultant magnetization due to the exciting and auxiliary windings, two neutralizing windings connected in series relation with said brushes, one of said windings being co-axial with the brushes and the other being displaced therefrom, and means for varying the ampere turns of said neutralizing windings.



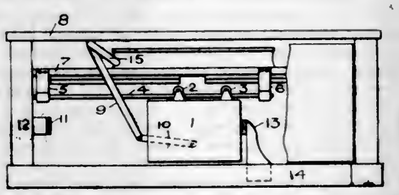
3. In a rotary converter, the combination with an armature having slip-rings, a commutator and brushes on said commutator, of a field structure having a normal exciting winding displaced from the axis of the brushes, an auxiliary field winding co-axial with the brushes, means for varying the axis of the resultant magnetization due to the exciting and auxiliary windings, a commutating winding co-axial with the auxiliary field winding, and connected in series therewith, a neutralizing winding co-axial with the brushes and connected in series relation thereto for producing a magnetization proportional to the current flowing through said brushes, and means for varying the ampere turns of said neutralizing winding.

4. In a rotary converter, the combination with an armature having slip-rings, a commutator and brushes on said commutator, of a field structure without defined polar projections and having a normal exciting winding displaced from the axis of the brushes and connected in parallel thereto, an auxiliary field winding co-axial with the brushes, and also connected in parallel thereto, means for varying the axis of the resultant magnetization due to the exciting and auxiliary windings, a neutralizing winding co-axial with and connected in series relation with the brushes, means for varying the ampere turns of said neutralizing winding, and a winding short-circuited along more than one axis per pole pair.

5. The method of adjusting the relation between the magnitudes of the alternating current and direct current voltages of a rotary converter having a commutator and brushes, which consists in producing a uni-directional exciting field and a neutralizing field displaced therefrom, varying the axis of the exciting field relatively to the brush axis, and simultaneously varying the magnitude of the neutralizing field.

[Claims 6 and 7 not printed in the Gazette.]

1,103,193. PIANO-CASE SLIDE-DOOR DEVICE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed June 6, 1912. Serial No. 702,008. (Cl. 84—159.)



1. In a player-piano: a slide-door, pulleys attached at the top thereof, a rod or shaft on which said pulleys are carried, and hangers fixed to said rod, a key-bed, a bellows chest underneath and adjacent to said key-bed and above said door, pulleys and rod, and the said hangers attached to said bellows chest.

2. In a player-piano: a slide-door, pulleys attached at the top thereof, a rod or shaft on which said pulleys are carried, and hangers fixed to said rod and attached to a part of the instrument, one of said pulleys attached to said door at approximately one-third the length of the door from one end, and the other said pulley attached to said door intermediate the other end of said door and the half of its length.

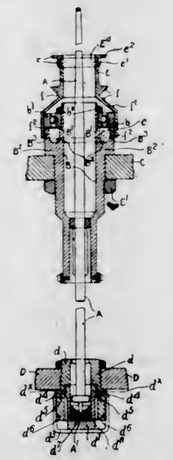
3. In a player-piano: a slide-door, pulleys attached at the top thereof, a rod or shaft on which said pulleys are carried, and hangers fixed to said rod and attached to a part of the instrument, one of said pulleys attached to said door at approximately one-third the length of the door from one end, and the other said pulley attached to said door adjacent the other end of said door.

4. In a player-piano: a slide-door, pulleys attached at the top thereof, a rod or shaft on which said pulleys are carried, and hangers fixed to said rod and attached to a part of the instrument, one of said pulleys attached to said door nearer to the middle of the top of the door than to that end of the door, and the other pulley attached to said door intermediate the other end of said door and the half of its length.

5. In a player-piano: a slide-door, pulleys attached at the top thereof, a rod or shaft on which said pulleys are carried, and hangers fixed to said rod and attached to a part of the instrument, one of said pulleys attached to said door nearer to the middle of the top of the door than to that end of the door and the other pulley attached to said door adjacent the other end of said door.

[Claims 6 to 8 not printed in the Gazette.]

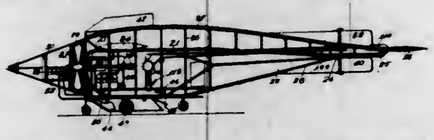
1,103,194. FLIER-FRAME FOR SPINNING, DOUBLING, AND THE LIKE. JOSEPH SHAW GAUNT, Manchester, and HARRY DYSON, Huddersfield, England. Filed July 10, 1911. Serial No. 637,603. (Cl. 118—29.)



1. The combination with a spindle of a bolster provided with a tubular extension and an annular lateral extension provided with an upwardly extended flange, said flange being in spaced relation to the tubular extension, said flange and tubular extension coöperating to form a lubricating channel, a flier provided with a depending sleeve inclosing said flange to shield the channel, said tubular extension being provided with an annular shoulder that is in the same plane as the upper edge of the flange, a bearing member resting on said shoulder, and a complemental bearing member carried by said sleeve.

2. The combination with a spindle, of a bolster provided with an integral tubular and an integral annular lateral extension, the lateral extension being provided with an upstanding flange that surrounds the tubular extension in spaced relation, the tubular extension and the flange forming between them a lubricant channel, the tubular extension being provided with an intermediate bearing seat in the same plane as the upper edge of the flange, a filer frame provided with means for inclosing said flange to seal the channel and complemental bearing rings carried by said tubular extension and said filer frame in a plane above said flange.

1,103,195. AIR-CRAFT. WILLIAM R. GORDON, Kinloch, Mo. Filed May 7, 1912. Serial No. 695,742. (Cl. 244—14.)



1. An air craft comprising a floating body mounted in a suitable frame, the operating and steering mechanism located within the floating body and divided to distribute the weight at a given center, a plane of hinged sections located above the body, and extending from the front of the body to the tail end of the frame, a steering rudder carried thereby, an elevator located to the rear of the rudder, a fin located on the top of the plane and at its forward end, a hollow fin located beneath the body and propellers located at the front and sides of the craft.

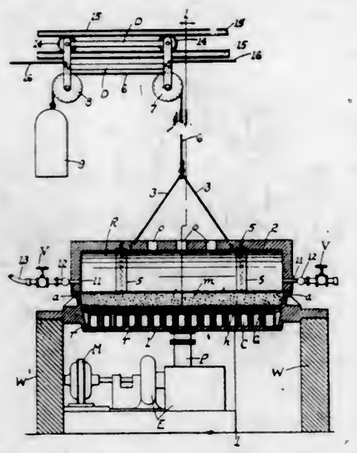
2. An air craft comprising a boat body, a plane located above the same and suitably bent and spaced away from the boat body, a fin located on the top of the frame, a hollow fin located on the bottom of the boat member, wings extending from both sides of the boat body, the said wings being suitably curved to assist in supporting the craft in floating position in the air, and propellers supported on projecting braces between the wings.

3. An air craft comprising a body suitably incased to stand the pressure of the air and to float upon the water, a single sectional plane forming the extreme top of the craft and attached to the body, the said plane suitably bent to retain the air, a plurality of bent wings extending or projecting from the sides of the craft, a pair of propellers projecting from the side of the craft and located between the wings, adjustable braces supporting the propellers upon the body of the craft, a double-tree extending the width of the craft for directing the thrust of the propellers to the center of the body portion, a motor for operating the propellers and a steering mechanism all operating from and mounted within the body of the craft.

4. An air craft comprising a body portion incased by a suitable covering, a motor and a steering mechanism located in the body portion and its weight arranged at the center of gravity, a propeller located in the front of the body, a top plane, side wings projecting from the body, propellers located between the side wings and means for directing their pressure to the center of gravity in the body and a hollow fin located beneath the body acting as an aileron for the craft when in the air and as a keel for the craft when in the water.

5. An air craft having an upper plane, a plurality of side projecting wings, propellers located in the front of the craft, a gauze shield for protecting the propellers, side propellers located between the side planes, gauze shields for protecting the side propellers, motors for operating the propellers simultaneously or independently, means for controlling the motors to operate simultaneously or independently, a rudder located on the plane, a rudder located beneath the body, an elevator located at the rear end, and means for operating the rudders and elevator for controlling the flight of the craft, and means for centralizing the exertion of the propellers along the central longitudinal line of the body for retaining the equilibrium of the craft, substantially as specified.

1,103,196. METALLURGICAL FURNACE. JOHN E. GREENAWALT, Denver, Colo. Filed Oct. 10, 1912. Serial No. 725,032. (Cl. 75—134.)



1. A metallurgical furnace comprising a bottom section provided with a perforated support for the charge, an upper removable section engaging the bottom section, and forming a sealed chamber therewith above the charge upon the assembling of the sections, means for introducing a supporter of combustion into said chamber through the walls of the upper section, and means on the walls of the upper section located at points contiguous to the seal between the sections and above the sealing plane for introducing inflammable material into said chamber.

2. A metallurgical furnace comprising a bottom section provided with a perforated support for the charge, an upper removable section engaging the bottom section and forming a sealed chamber therewith above the charge upon the assembling of the sections, means for introducing a supporter of combustion into said chamber through the walls of the upper section, and means on the walls of the furnace located at points contiguous to the seal between the sections and operating to introduce inflammable material into the chamber in paths substantially parallel to the surface of the charge.

3. A metallurgical furnace comprising a bottom section provided with a perforated support for the charge, an upper removable section engaging the bottom section and forming a sealed chamber therewith above the charge upon the assembling of the sections, means on the upper section for admitting air into said chamber, an exhauster coupled to the bottom section, and means disposed on the walls of the furnace at points contiguous to the seal between the sections, for introducing inflammable material into the furnace chamber above the surface of the charge.

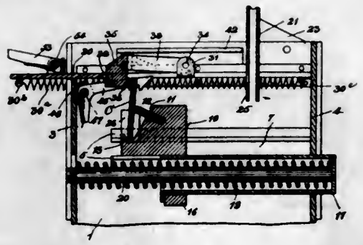
4. A metallurgical furnace comprising a bottom section provided with a perforated support for the charge, and an upper removable section engaging the bottom section and forming therewith a chamber above the charge sealed along the plane of separation between the sections, means on the upper section for permitting an influx of atmospheric air into said chamber, means on the upper section positioned above the surface of the charge for introducing inflammable material into said chamber in paths substantially parallel to said surface, and means coupled to the bottom section for drafting the air and gases through the charge and its support.

5. A metallurgical furnace comprising a bottom section provided with a perforated support for the charge, and an upper removable section engaging the bottom section and forming therewith a chamber above the charge sealed along the plane of separation between the sections, means on the upper section for permitting an influx of atmospheric air into said chamber, means for introducing in

paths substantially in parallel to the surface of the charge inflammable material into said chamber from points contiguous to the sealing plane between the sections, and means coupled to the bottom section for drafting the air and gases through the charge and its support.

[Claims 6 to 10 not printed in the Gazette.]

1,103,197. COIN-TESTING DEVICE FOR COIN-CONTROLLED MACHINES. ALBERT D. GROVER, Malden, and EARL E. BARBER, Boston, Mass., assignors to Autosales Gum & Chocolate Company, New York, N. Y., a Corporation of New York. Filed Oct. 7, 1912. Serial No. 724,256. (Cl. 194—97.)



1. In a coin-testing device, the combination with a movable coin-carrier adapted to hold the deposited coin in rigid operative position, manually operable means for actuating said coin-carrier of a movable testing member normally disconnected from said coin-carrier and adapted to operatively engage the raised edge of the deposited coin, whereby said coin-carrier and said testing member become rigidly locked together for simultaneous movement, and operating mechanism connected with said testing member.

2. In a coin-testing device, the combination with a movable coin-supporting member, manually operable means for actuating said member of a movable coin-testing member normally disconnected therefrom and adapted to operatively engage the raised edge of the supported coin, whereby said members become rigidly locked together for simultaneous movement.

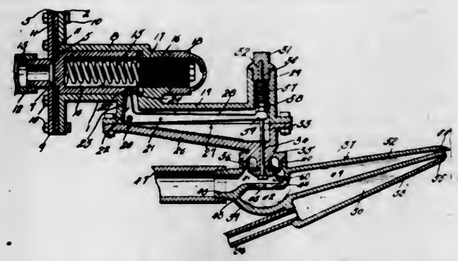
3. In a coin-testing device, a movable support, a coin-testing member pivoted thereto, hand-operated mechanism for carrying the deposited coin into engagement with said member, and means provided on said member for operatively engaging the raised edge of the coin to lock said support and said mechanism rigidly together for simultaneous operation, said coin-testing member being automatically rocked into inoperative position by a substantially smooth-edged check.

4. In a coin-testing device, the combination of a movable support, a coin-testing member pvivotally mounted thereon and adapted to operatively engage the raised edge of the deposited coin, said member being automatically rocked and held in a locking position by a substantially smooth-edged check, hand-operated mechanism for carrying the deposited coin into engagement with said coin-testing member to cause simultaneous operation of said support with said mechanism, a fixed stop arranged in the travel path of said member when in locking position, and stop means on said support for engaging the smooth-edged check after said member has been rocked thereby into locking position, whereby said smooth edged check locks said mechanism and said support against operation.

5. In a coin-testing device, the combination with a coin-carrier adapted to support a coin in rigid and substantially upright position, manually operable means for actuating said coin-carrier of a movable coin-testing member adapted to engage the raised edge of the coin on the carrier and thereby become operatively connected with said carrier, said member being automatically moved into inoperative position by a smooth-edged check.

[Claims 6 to 19 not printed in the Gazette.]

1,103,198. FUEL-REGULATOR. IRVIN U. HAGER, Alliance, Nebr. Filed Mar. 8, 1912. Serial No. 682,555. (Cl. 236—6.)



1. The combination with a casing, of a pressure controlled piston slidable therein, a longitudinal bore formed in the piston, a plug mounted in one end of the casing, a coil spring mounted in the bore and having one end bearing against the piston, and the other end against the plug, said plug being operable to adjust the tension of the spring, a bell crank lever pivoted to the casing and having one of its arms pivotally connected to the piston and its other arm being adapted to contact with a fuel controlling valve to hold the same open, whereby movement of the piston inwardly rocks the bell crank lever and causes the same to disengage said valve, and means for positively closing the said valve.

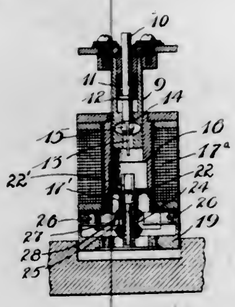
2. A pressure controlled fuel regulator, comprising a main casing, a piston slidable therein, a cap plate for one end of the casing having a central aperture, a diaphragm secured by said cap to the casing, said piston having its outer end passed through the aperture in the cap and bearing against the diaphragm, a plug mounted in the other end of the main casing, a coil spring interposed between said plug and said piston to hold the piston in engagement with the diaphragm, said plug being operable to adjust the tension of the spring, a supplemental casing supported by the main casing and having a valve mounted therein, a spring for the valve, nuts carried by the valve, a bell crank lever having one arm pivotally connected to the piston, and its other arm contacting with the nuts to hold the valve in its open position and against the tension of the valve spring, whereby the inward forcing of the piston by pressure against the diaphragm causes the piston to move inwardly to rock the bell crank lever, the free end of said lever moving downwardly thereby permitting the valve spring to positively seat and cut off the fuel supply to the nozzle of a steam generating burner.

3. The combination with a casing, of a pressure controlled piston slidable in the casing, a bell crank lever pivoted to the casing and having the end of one arm connected to said piston, a valve provided with a stem having an abutment thereon, the remaining arm of the lever bearing on one side of said abutment whereby movement of the piston in one direction opens said valve and movement of the piston in the other direction releases said valve for free closing movement, and means independent of said lever for positively closing said valve when the lever moves to release the valve.

1,103,199. SWITCH. GERALD W. HART, West Hartford, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed Nov. 26, 1913. Serial No. 803,144. (Cl. 175—281.)

1. In a remote-controlled switch, the combination of an opening solenoid, contacts in the circuit thereof, a switch arm adapted to connect and disconnect said contacts, means tending to move said switch arm out of engagement with said contacts, a stationary base carrying said contacts and switch arm, said base being stationary relatively to the movable member of the remote controlled switch, said switch arm tending to move toward said movable member under the action of said spring and being movable relatively to said member and controlled thereby.

2. In a remote-controlled switch, the combination of an opening solenoid, contacts in the circuit thereof, a switch arm adapted to connect and disconnect said contacts and movable out of engagement therewith, a stationary base carrying said contacts and switch arm, said base being stationary relative to the moving member of the remote-controlled switch, means whereby said switch arm is controlled by said moving member, a member carrying said switch arm, a spring permitting said switch arm and member to have independent movements but tending to move said switch arm toward said contacts, and a second spring tending to move both said member and said switch arm away from said contacts against the action of said first spring.

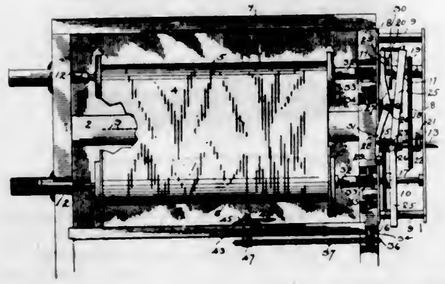


3. In a remote-controlled switch, the combination of an opening solenoid, contacts in the circuit thereof, a switch arm adapted to connect and disconnect said contacts and movable out of engagement therewith, a stationary base carrying said contacts and switch arm, said base being stationary relative to the moving member of the remote-controlled switch, means whereby said switch arm is controlled by said moving member, a member carrying said switch arm, a spring permitting said switch arm and member to have independent movements but tending to move said switch arm toward said contacts, a second spring tending to move both said member and said switch arm away from said contacts against the action of said first spring, and a locking device carried by said movable member adapted to compress said first spring when the movable member is in locked position.

4. In a remote-controlled switch, the combination of an opening solenoid, contacts in the circuit thereof, a switch arm adapted to connect and disconnect said contacts, a stationary base carrying said contacts and switch arm, said base being stationary relative to the moving member of the remote-controlled switch, means whereby said switch arm is controlled by said moving member, a member carrying said switch arm, a resilient means permitting said switch arm and member to have independent movements but tending to move said switch arm toward said contacts, a second resilient means tending to move said member and said switch arm away from said contacts against the action of said first resilient means, a second switch arm carried by said member and separated from said first switch arm by said first mentioned resilient means, switch closing contacts adapted to be engaged thereby, and switch locking means for said remote-controlled switch adapted to separate said last switch arm from its contacts when said remote-controlled switch is locked.

5. In a remote-controlled switch, the combination of an opening solenoid, contacts in the circuit thereof, a switch arm adapted to connect and disconnect said contacts, a stationary base carrying said contacts and switch arm, said base being stationary relative to the moving member of the remote-controlled switch, means whereby said switch arm is controlled by said moving member, a member carrying said switch arm; a resilient means permitting said switch arm and member to have independent movements but tending to move said switch arm toward said contacts, a second resilient means tending to move both said member and said switch arm away from said contacts against the action of said first resilient means, a second switch arm carried by said member and separated from said first switch arm by said first mentioned resilient means, switch closing contacts adapted to be engaged thereby, switch locking means for said remote-controlled switch adapted to separate said last switch arm from its contacts when said remote-controlled switch is locked, and an armature for releasing said lock, said armature having a portion interposed between said lock and said switch arm.

1,103,200. MUSIC-SHEET SHIFTER. FOREST H. HARTZELL, Dayton, Ohio, assignor to The Crown Hardware Manufacturing Company, Dayton, Ohio, a Corporation of Ohio. Filed June 17, 1912, Serial No. 704,011. Renewed Aug. 22, 1913. Serial No. 786,180. (Cl. 84—161.)



1. In a winding mechanism for music sheets, a receiving and a supply roll, winding and rewinding shafts by which the rolls are actuated, said shafts being incapable of longitudinal movement, and means to shift said receiving and supply rolls longitudinally independent of the winding and rewinding shafts while maintaining operative engagement therewith, substantially as specified.

2. In a winding mechanism for music sheets, a receiving and a supply roll, winding and rewinding shafts by which said rolls are alternately actuated, said shafts being incapable of longitudinal movement, reciprocating couplings between the rolls and shafts and means to reciprocate said couplings in relation to the shafts while maintaining a revoluble driving engagement therewith whereby said rolls may be adjusted longitudinally independent of said shafts, substantially as specified.

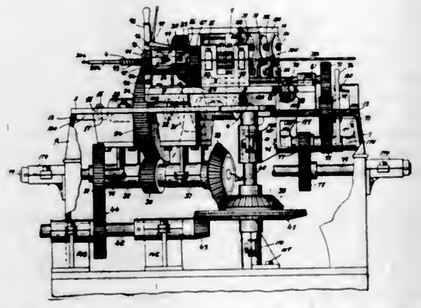
3. In a winding mechanism for music sheets, a receiving and a supply roll, winding and rewinding shafts by which said rolls are alternately actuated, said shafts being incapable of longitudinal movement, sleeves slidingly mounted upon said shafts but adapted to rotate in unison therewith and adapted to engage the rolls, and means for slidingly adjusting said sleeves upon the shafts independent of their revoluble movement whereby said rolls will be longitudinally adjusted, substantially as specified.

4. In a winding mechanism for music sheets, a receiving and a supply roll, winding and rewinding shafts by which said rolls are alternately actuated, sleeves splined upon said shafts whereby they may be longitudinally adjusted thereon but are rotated in unison therewith and adapted to engage the rolls, peripheral rack teeth formed in said sleeves, gear pinions engaging said peripheral rack teeth, and means to manually rotate said gear pinions to reciprocate the sleeves upon the shafts whereby the rolls will be longitudinally adjusted, substantially as specified.

5. In a winding mechanism, a receiving and a supply roll, winding and rewinding shafts actuating said rolls, sleeves carried by said shafts and longitudinally movable thereon but revoluble therewith, means for engaging the rolls with said sleeves, said sleeves having therein a plurality of parallel peripheral grooves, a control shaft, gear pinions carried by said shaft and engaging in the peripheral grooves of the sleeves whereby an oscillation of said shaft and the gears carried thereby will cause a corresponding reciprocatory movement of the sleeves to adjust the said rolls longitudinally independent of their actuating shafts, substantially as specified.

[Claims 6 to 14 not printed in the Gazette.]

1,103,201. COILING APPARATUS. WALLACE B. HEWITT, Upper Troy, N. Y., assignor to Henry G. Sanford, New York, N. Y. Filed Oct. 29, 1910. Serial No. 589,745. (Cl. 113—35.)



1. Coiling apparatus; comprising a coiling-head having coiling-rolls; a grooving head; means to vary the angular position of said grooving-head relatively to said coiling-head, means to vary the position of said coiling-head along the axis of the coil; said angular and co-axial adjustments serving to determine the angle at which a strip under treatment shall be delivered from said grooving-head to said coiling-head; and means to actuate said coiling-rolls in the various positions of said coiling head.

2. Coiling apparatus; comprising a support to receive a grooving-head and a coiling head; a turntable movable upon said support about an upright axis to receive one of said heads and permit movement thereof bodily to vary the angular relation between said heads; an upright, independently rotatable, shaft, co-axial with said turntable; a driving-shaft geared to said upright shaft; and mechanism carried by, and movable with, said turntable, to permit actuation, by said upright shaft, of the head movable bodily with said turntable, regardless of the angular relation of said heads.

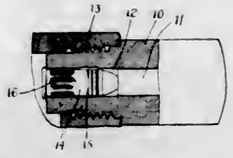
3. Coiling apparatus; comprising a support to receive a grooving head and a coiling head provided with rolls; a turntable movable upon said support about an upright axis intermediate said heads and situated substantially in the line of delivery therebetween, to receive one of said heads and permit movement thereof bodily to vary the angular relation between said heads; an upright, independently rotatable, shaft, co-axial with said turntable, and provided with a bevel gear; a counter-shaft supported radially in bearings carried by, and beneath, said turntable, said counter-shaft having a bevel gear meshing with said bevel gear on said upright shaft in the different positions of said turntable, and having a pinion; and a secondary counter-shaft supported in bearings carried by said turntable, above said lower counter-shaft, and provided with gears to be engaged respectively with said pinion and with said head movable with said turntable.

4. Coiling apparatus; comprising a strip-grooving head; a coiling-head; a turntable supported pivotally to turn about a vertical axis adjacent to said coiling-head, to vary the angle at which said strip is delivered to said coiling-head; said grooving-head comprising a series of rolls and actuating gears on said rolls; an operating gear mounted to turn about the axis of said pivot; means to actuate said operating gears; and means to connect said operating gear actuatively with said grooved-roll gears.

5. Coiling apparatus; comprising a strip-grooving head movable bodily about a predetermined axis for adjustment of the angle at which said strip is treated, and having rolls constructed and arranged to deliver said strip toward said axis, said rolls being provided with gears; an operating member rotatable upon said axis; and means to connect said member actuatively with said rolls.

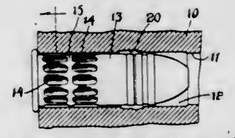
[Claims 6 to 13 not printed in the Gazette.]

1,103,202. CARTRIDGE-SHELL. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 19, 1913. Serial No. 801,834. (Cl. 102—16.)



A rim fire cartridge shell having the metal of its rear portion forward of the head stretched and made thinner by forming depressions therein, whereby the resistance of the shell to radial expansion is made less at the stretched portion than at the mouth of the shell, the stretched portion remaining permanently expanded to provide a gas check.

1,103,203. CARTRIDGE-SHELL. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 24, 1914. Serial No. 820,620. (Cl. 102—16.)



1. A cartridge shell having its rear portion forward of the head weakened by means of series of depressions therein, leaving an expanding ring between the series of depressions, substantially as described, for the purpose specified.

2. A cartridge shell having the metal of the rear portion thereof forward of the head stretched by forming series of depressions therein, leaving an expanding ring between the stretched portions.

3. A cartridge shell having the metal thereof stretched by forming series of grooves therein in the direction of its length, leaving an expanding ring between the series of grooves.

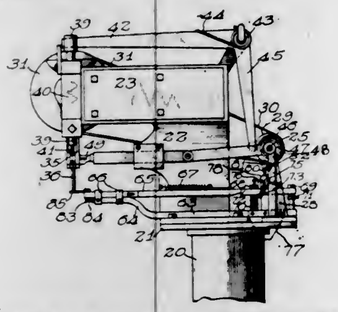
4. A cartridge shell having the metal thereof stretched by forming a plurality of series of grooves therein in the direction of its length, said series of grooves being placed in staggered relation with their contiguous ends overlapping, leaving sinuous expanding rings between the series of depressions.

1,103,204. CONTROLLER FOR SHOE MACHINERY. VALENTINE HOFFMAN, Chicago, Ill., assignor of one-fourth to Selz, Schwab & Company, Chicago, Ill., a Corporation of Illinois. Filed July 31, 1911. Serial No. 641,447. (Cl. 1—18.)

1. In a machine of the class described, tack-driving mechanism, a power shaft therefor, a clutch to couple and uncouple the same, clutch-operating mechanism comprising a pair of movable elements having a slip-joint and adapted to be moved to couple the clutch by the movement of the shoe-material into the line of the tack-nozzle, cam-actuated means to move one of the elements to break the joint with the other, and a spring to retract said cam-actuated element to uncouple the clutch.

2. In a shoe-tacking machine, tack-driving mechanism, a power shaft therefor, a clutch to couple and uncouple the same, clutch-operating mechanism comprising a movable slide and a pivoted sliding block having a slip-joint

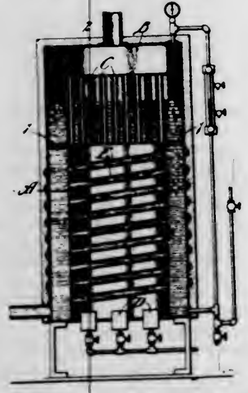
and adapted to be moved together in one direction to couple the clutch by the pressure of the shoe-material thereon when the latter is moved into the line of the tack-nozzle, a spring for the block, cam-actuated means to move the block to break the joint between the slide and block, and a spring to reversely move the block to uncouple the clutch.



3. A shoe-tacking machine, tack-driving mechanism, a power shaft having an actuating cam therefor, a clutch to couple and uncouple the same, a clutch-controlling element, a rock-shaft carrying said element, a slide normally in the line of the tack-nozzle and adapted to be moved by the movement of the shoe-material into position to receive the tacks, a pair of posts in rear of the slide, a block-slidably and pivotally supported on the posts normally in the path of the slide, a pin on the block, an arm on the rock-shaft having a slot for the pin, a post in the path of the cam having a pin to move the block on its pivot, and means to return the block to normal position.

4. In a shoe-tacking machine, tack-driving mechanism, a power shaft having an actuating cam therefor, a clutch to couple and uncouple the same, a detent to control the clutch, a rock-shaft carrying the detent, a slide and block having a slip-joint and adapted to be moved together in one direction by the movement of the shoe-material into position to be tacked, posts on which the block is slidably and pivotally mounted, an arm on the rock-shaft having a pin and slot connection with the block, a post in the path of the cam to move the block on its pivot, and springs to return the slide and block to normal position when pressure is removed from the slide.

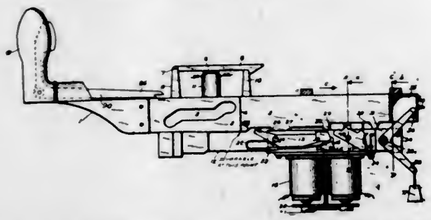
1,103,205. STEAM-GENERATING APPARATUS. DANIEL HOGAN, St. Louis, Mo. Filed Mar. 19, 1912. Serial No. 684,686. (Cl. 60—31.)



1. A steam generator consisting of a boiler having a water space surrounding the combustion chamber, a steam dome, a plurality of vertically disposed fire flues leading from the combustion chamber to the steam dome and partly surrounded by the water in the boiler, means for creating a flame in the combustion chamber, and water tubes extending transversely of the combustion chamber in the path of the flame and communicating with the water space that surrounds the combustion chamber so that the water of the boiler can circulate through said tubes.

2. A steam generator consisting of a boiler having a water space surrounding the combustion chamber, a steam dome, a plurality of vertically disposed fire flues leading from the combustion chamber to the steam dome and partly surrounded by the water in the boiler, means for creating a flame in the combustion chamber, and water tubes extending transversely of the combustion chamber in the path of the flame and communicating with the water space that surrounds the combustion chamber so that the water of the boiler can circulate through said tubes, said water tubes being inclined slightly from a horizontal plane.

1,103,206. DIVIDED SEMI-AUTOMATIC SIGNAL-LEVER. WINTHROP KEITH HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Jan. 19, 1912. Serial No. 672,070. (Cl. 246—53.)



1. In an interlocking system, a lever adapted for movement between a normal and a reverse position and formed in two parts, mechanical locking, coöperating means attached to each part part including an electromagnet for holding the parts together, one of said parts having means for operating said mechanical locking indication mechanism associated with the other part and means constantly tending to move the said other part to normal position.

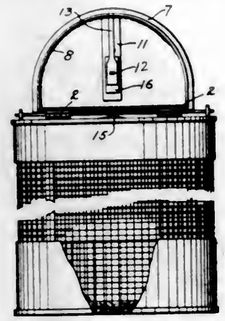
2. In an electric interlocking system, a source of current, a signal having an operated and a biased aspect, means including a manually operated device to complete a circuit from said source through said signal to cause said signal to assume an operated aspect, means connected with said manually operated device to break said circuit, a track circuit section including a translating device for causing said means to automatically act, and means connected with the manually controlled device to automatically indicate a return of the signal to biased position on account of the breaking of the circuit.

1,103,207. METHOD OF PRODUCING A COFFEE SUBSTITUTE. BENNO HUBER, Seattle, Wash. Filed Oct. 25, 1913. Serial No. 797,324. (Cl. 99—11.)

A method of producing a coffee substitute which consists in roasting peanuts until the shells may be easily removed therefrom, then grinding the kernels for producing small particles, then thoroughly mixing said small particles with granulated sugar about one per cent. with 99 per cent. peanuts, then thoroughly baking the composition until the same has become a dark brown or the color of coffee.

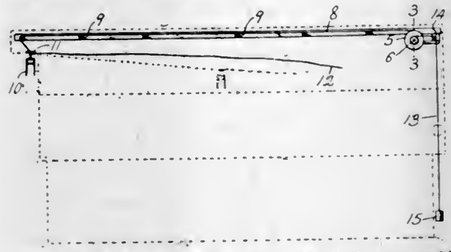
1,103,208. FASTENER FOR COVERS OF PAILS. JULIUS INGALSBE, Basom, N. Y. Filed Apr. 7, 1913. Serial No. 759,510. (Cl. 70—81.)

A device of the character described comprising a pail having an opening in its top, a hinged cover for said opening, said cover being provided with a slot, a keeper carried by the pail, a finger piece directed through the slot, a locking bar secured to the finger piece and adapted to be engaged with the keeper, and a flat spring interposed



between the hinged cover and the locking bar, said spring having one extremity anchored to and movable with the finger piece, the opposite extremity of the spring being in frictional contact with the under surface of the hinged cover.

1,103,209. LOADING AND UNLOADING DEVICE. JOHN JOHNSON, Stiles, Wis. Filed Oct. 22, 1913. Serial No. 796,695. (Cl. 212—77.)

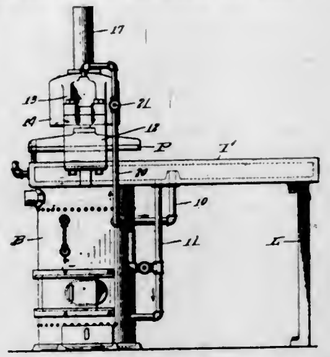


In an apparatus of the character described, a rotatably mounted pulley, a second pulley of relatively smaller diameter fixed upon one side of said first pulley, a cable secured at one end to the periphery of the first pulley, a carrier attached to the other end of said cable, supporting rollers for said cable, a second cable secured at one of its ends to the periphery of the smaller pulley, a guide roller for said latter cable, a weight secured to the other end of said cable, said cable extending to the smaller pulley from an opposite direction with relation to the connection of the carrier cable to the first named pulley, and a pull cord attached to the carrier whereby the carrier may be moved to position to be loaded and the pulleys rotated to wind the latter cable upon the smaller pulley and elevate the weight attached thereto, the descent of said weight reversing the rotation of the pulleys and winding the first cable upon the larger pulley when the pull cord is released to return the carrier to its normal position.

1,103,210. STEREOTYPE-MATRIX-MAKING PRESS. ROBERT T. JOHNSTON, Taunton, Mass., assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 10, 1905, Serial No. 254,658. Renewed Nov. 28, 1913. Serial No. 803,603. (Cl. 34—16.)

1. The combination of a boiler, a matrix drying table mounted thereon, a platen having an area so that the same can be applied over the entire surface of the flong, and a steam cylinder and piston connected to operate the platen so that the flong will be held to the type with steam pressure, whereby the platen will follow the flong as it shrinks and dries.

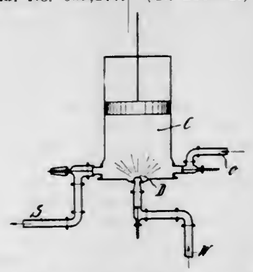
2. The combination of a boiler, a matrix-drying table mounted thereon, a platen coöperating therewith to form a press, a steam cylinder and piston connected to operate the platen, and a spring for raising the platen.



3. The combination of a boiler, a matrix-drying table mounted thereon, a platen coöperating therewith to form a press, an arch connected to said table, a cylinder formed in said arch, a piston working in said cylinder, a connection from said boiler to said cylinder, a small projecting cylinder arranged on top of the steam cylinder, a piston-rod extending between the platen and piston and also up into the small cylinder, a projection on said piston rod, and a spring engaging said projection and acting to raise the platen.

4. The combination of a boiler, a matrix drying table mounted thereon, connections for admitting steam from the boiler into the matrix drying table, a platen coöperating with said table to form a press, and a steam cylinder and piston connected to said boiler for operating the platen.

1,103,211. PROCESS OF PROTECTING PUMPS FROM OZONE. CHRISTOPH KNIPS, Charlottenburg, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed July 18, 1911. Serial No. 639,177. (Cl. 210—1.)



1. The method of protecting the interior of a pump from the corrosive action of ozone, consisting in supplying a small quantity of water to the pump or the like, while the pump is sucking in the ozonized air, the said quantity of water being sufficient for avoiding both oxidation of the inner metal parts of the pump or the like, owing to the influence of the ozone, and the employment of special greasing agents.

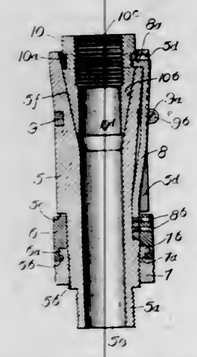
2. The method of protecting the interior of a pump from the corrosive action of ozone, consisting in supplying a small quantity of water to the pump or the like approximately simultaneously as it is sucking in the ozonized air, the said quantity of water being sufficient for avoiding both oxidation of the inner metal parts of the pump or the like owing to the influence of the ozone, and the employment of special greasing agents.

3. The method of protecting the interior of a pump from the corrosive action of ozone, which comprises suck-

ing in ozonized air from the ozone generator, supplying a small quantity of water to the pump or the like while it is sucking in the ozonized air, the said quantity of water being sufficient for avoiding oxidation of the inner metal parts of the pump or the like, owing to the influence of the ozone, and forcing the ozonized air and this small quantity of water into the water to be sterilized.

4. The method of protecting the interior of a pump from the corrosive action of ozone, which comprises sucking in ozonized air from the ozone generator, supplying a small quantity of water to the pump or the like, simultaneously while it is sucking in the ozonized air, the said quantity of water being sufficient for avoiding oxidation of the inner metal parts of the pump or the like, owing to the influence of the ozone, and forcing the ozonized air and this small quantity of water into the water to be sterilized.

1,103,212. PIPE-COUPLING. AUGUSTUS KRAEMER, Tres Pinos, Cal. Filed Oct. 11, 1913. Serial No. 794,540. (Cl. 137—28.)

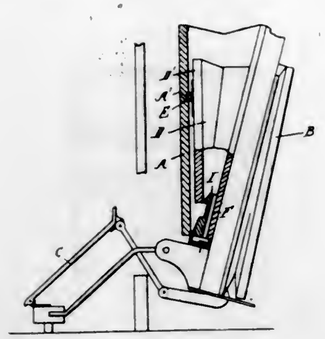


1. A coupling, consisting of a cylindric body member having a portion of its internal bore tapering outwardly, a sleeve slidably and non-rotatably mounted on said body portion, a nut having a threaded engagement with said body portion and engaging said sleeve to move same longitudinally upon the rotation of said nut, yielding hook shaped arms secured at one end to said sleeve and movable longitudinally in ways formed therefor in said body portion, a nipple having a tapering face adapted to fit the tapering face of the body member of the coupling, means on said nipple adapted to be engaged by said hook shaped arms, and means for disengaging said arms from said means.

2. A coupling, consisting of a cylindric body member having a portion of its internal bore tapering outwardly, a sleeve slidably and non-rotatably mounted on said body portion, a nut having a threaded engagement with said body portion and engaging said sleeve to move same longitudinally upon the rotation of said nut, yielding hook shaped arms secured at one end to said sleeve and movable longitudinally in ways formed therefor in said body portion, a nipple having a tapering face adapted to fit the tapering face of the body member of the coupling, said nipple having recesses adapted to be engaged by said hook-shaped arms, and a collar adapted to disengage said arms from said recesses.

1,103,213. EXPRESSION DEVICE FOR PNEUMATICALLY-OPERATED MUSICAL INSTRUMENTS. RICHARD A. LEADBETER, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed July 16, 1912. Serial No. 709,687. (Cl. 84—168.)

1. An expression device for pneumatically operated self playing musical instruments including a storage-bellows, a bellows within said storage-bellows collapsible therewith, means for actuating the bellows, the chambers within and without said inner bellows being normally in communication, and means controlled by the bellows actuating means for cutting off communication between said chambers.



2. An expression device for pneumatically operated musical instruments, comprising a storage-bellows, a bellows within said storage-bellows collapsible and expansible therewith and having an air passage normally establishing free communication between the spaces within the outer and inner bellows, bellows actuating means which when operated force air through said air passage, and means controlling the passage of air through said passage and acting to close the passage when air under excessive pressure is introduced in the passage.

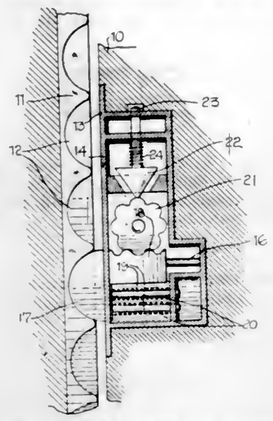
3. An expression device for pneumatically operated musical instruments, comprising a storage-bellows, an inner bellows collapsible and expansible with said storage-bellows, a bar forming a common portion of the inner and outer bellows, said bar being provided with a port to establish communication between the chambers therein, said portion having a laterally extending housing, a valve arranged in the laterally extending housing and normally open, and means for forcing air through the port to actuate the bellows, said valve being actuated when the pressure of air is suddenly increased to close said port whereby communication between the chambers is checked.

4. An expression device for pneumatically operated musical instruments, comprising a storage-bellows, a bellows within said storage-bellows, collapsible and expansible therewith, a bar forming a common member of the outer and inner bellows ported for communicating respectively therewith, a recessed casing communicating with both of said ports, and a valve within said casing adapted to seat to close the port communicating with the outer bellows, but normally separated from its seat.

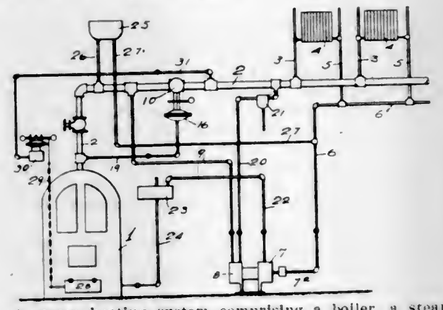
5. An expression device for pneumatically operated musical instruments, comprising a storage-bellows, a pneumatic resistor for increasing the tension of said storage-bellows, provided with a normally open port for throwing it out of action, a pump for exhausting said storage-bellows, and a valve responding to a sudden impulse of said pump for closing said port, and throwing said pneumatic resistor into action.

1,103,214. SASH-FASTENER. WILLIAM C. MATTERN and WILLIAM KOCH, Brooklyn, N. Y. Filed Jan. 29, 1913. Serial No. 744,961. (Cl. 16—19.)

In a window construction, the combination with a frame, and a sliding sash suitably mounted therein; of a notched bar counter-sunk in a stile of said frame, a frame counter-sunk in a stile of said sash, a spring forced locking bolt carried in said frame and adapted to project therebeyond for engagement with said notched bar, the upper edge of said bolt being provided with teeth, a pinion rotatably mounted in said last mentioned frame and meshing with the teeth on said bolt, and a spring forced locking pawl mounted in said frame and normally engaged with the teeth of said pinion.



1,103,215. HEATING SYSTEM. FRANCIS H. MONTREUIL, Chicago, Ill., assignor to Warren Webster & Company, Camden, N. J., a Corporation of New Jersey. Filed Oct. 29, 1913. Serial No. 798,019. (Cl. 237—9.)



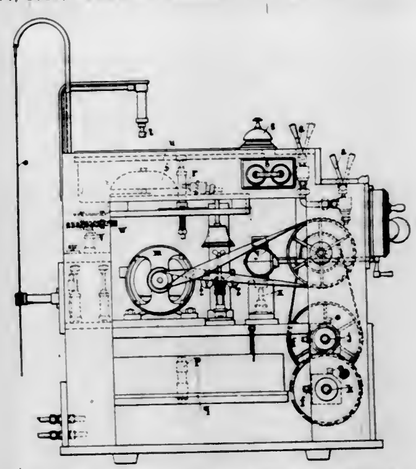
A steam heating system comprising a boiler, a steam main leading therefrom, a heater connected with said main so as to be supplied with steam, a return pipe connected with said heater, a pump connected with said return pipe, a steam pipe connecting the boiler with the pump to supply steam for operating the pump, an automatic valve in the steam heating main having means acted upon by the steam pressure from the boiler to hold the valve open and means for closing the valve when the steam pressure of the boiler falls below a predetermined amount.

1,103,216. RECLAIMING WASTE PRODUCTS IN THE MANUFACTURE OF SULFITE FIBER. HUGH K. MOORE and ROBERT B. WOLF, Berlin, N. H. Filed Nov. 1, 1910. Serial No. 590,158. (Cl. 92—2.)

1. The combination with a digester, a blow pit, and a stack communicating with the blow pit to receive the vapors and gases therefrom, of a surface condenser communicating with said stack for condensing the watery vapors, whereby the absorption of the free gases is limited to that by the products of condensation, means for receiving the uncondensed gases, and means for collecting the products of condensation.

2. The herein described process of recovering sulfur dioxid, which consists in discharging the contents of a digester into a blow pit which is maintained at not more than substantially atmospheric pressure, separating and recovering the pulp, condensing the vapors without the addition of water thereto, whereby the absorption of the sulfur dioxid is limited to that by the liquid products of condensation, conducting away separately the liquid product of condensation, and recovering the remaining sulfur dioxid.

1,103,217. NOISE-MAKING APPARATUS. ALBERT HARRISON MOORHOUSE, Staleybridge, England. Filed Jan. 14, 1913. Serial No. 742,036. (Cl. 46—70.)



1. In sound producing apparatus for theatrical and like purposes, the combination with compressed air supplying means and a sound producing device, of a hand actuated valve and also a continuously operated power actuated valve for controlling and regulating the flow of compressed air between said means and device, as set forth.

2. In sound producing apparatus for theatrical and like purposes, the combination with compressed air supplying means, of hand actuated valves arranged in close proximity to one another, continuously rotating disk valves each having at least one slot therein, a casing around said disk valves, inlet, outlet and exhaust connections to said casing, and piston like elements in communication with said outlet connections, the compressed air passing in series through said hand actuated valves and continuously rotating disk valves on its way to said piston-like elements, as set forth.

3. In sound producing apparatus for theatrical and like purposes, the combination with compressed air supplying means, of a hand actuated valve controlling the compressed air supply, a plurality of continuously operated disk valves receiving compressed air from said hand actuated valves, and a series of piston like elements each controlled by one of the disk valves, the said continuously operated valves supplying compressed air to said piston like elements in series, the compressed air passing in series through said hand actuated valves and continuously operated valves to the piston like elements, as set forth.

4. In sound producing apparatus for theatrical and like purposes, the combination with compressed air supplying means, of hand actuated valves receiving compressed air from said means, a plurality of continuously operated disk valves receiving compressed air from said hand actuated valves, a series of piston like elements each receiving compressed air from one of the disk valves, and sound producing devices actuated by said piston like elements, as set forth.

1,103,218. CASEMENT-WINDOW-OPERATING DEVICE. WINFIELD S. ODLE, Los Angeles, Cal. Filed Sept. 23, 1912. Serial No. 721,968. (Cl. 16—22.)

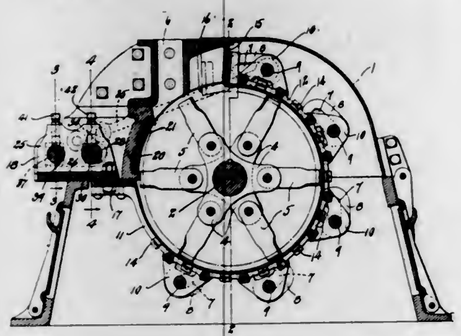
1. A casement window holder comprising a hinged sash having a fixed handle bracket whereby the sash is operated

and clamping means for the handle bracket consisting of a pivoted cam rod adapted to bind on the handle bracket.



2. A casement window holder comprising a hinged sash having a fixed handle bracket whereby the sash is operated and clamping means for the handle bracket consisting of a pivoted cam rod adapted to bind on the handle bracket and a handle on the cam rod for operating it.

1,103,219. ADJUSTABLE GRINDER. FERRIS OGDEN, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 5, 1913. Serial No. 799,329. (Cl. 83—11.)



1. In a reducing machine the combination of a shaft, beaters mounted thereon, an integral grinding cage cooperating with said beaters, and means for contracting and expanding said cage concentrically relative to said shaft.

2. In a reducing machine the combination of a revoluble shaft, beaters carried thereon, a unitary grinding cage coöperating with said beaters, and means for flexing said cage to vary its radial distance from said shaft equally on all sides.

3. In a reducing machine the combination of a rotary shaft, beaters carried thereby, a substantially cylindrical cage coöperating with said beaters, and means for varying the diameter of said cage equally at all points.

4. In a reducing machine the combination of a shaft, beaters carried thereby, a grinding cage coöperating with said beaters, means for varying the diameter of said cage, and means for guiding said cage to maintain all points thereon concentric of said shaft during such adjustment.

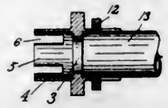
5. In a reducing mill the combination of a shaft, beaters carried thereon, an integral concave member coöperating with said beaters, and means for moving the extremities of said member toward said shaft and toward each other.

[Claims 6 to 23 not printed in the Gazette.]

1,103,220. COUPLING FOR ELECTRICAL CONDUITS. ALEXANDER C. PROUDFIT, Princeton, N. J. Filed Nov. 24, 1902. Serial No. 132,507. (Cl. 247—1.)

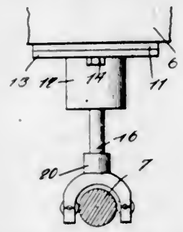
1. A coupling for electrical conduit, said coupling comprising a member having split fingers to receive and clasp the conduit end; and in combination therewith a cam-nut constructed and arranged to surround said member, said nut having cam portions to enter between said split fingers and to be engaged compressively therewith, upon rotation of said nut thereabout.

2. A coupling device for electrical conduit; comprising a member having a shank divided into a plurality of separated compressible fingers to receive a pipe, and a cam-nut rotatable in its own plane upon and in engagement



with said fingers, said nut having cam projections to enter between said fingers and serving upon rotation of said cam-nut to cause compression of said fingers to clamp said pipe; substantially as described.

1,103,221. SAFETY DEVICE. CHARLES W. QUIN, Centralia, Wash. Filed Jan. 14, 1914. Serial No. 812,114. (Cl. 188—2.)



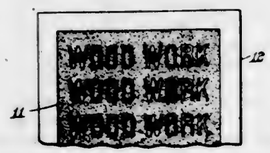
1. A safety appliance comprising the combination with a car body and axle, of a member slidably suspended from the car body at a point spaced above the axle, means resiliently urging said member to said point of suspension, an electrical circuit carried by the car body and including means for stopping the car and a normally open switch and means carried by said member for closing the switch.

2. A device for preventing derailment comprising the combination with a car body and an axle, of a member slidably suspended at a point spaced above the axle and resilient means for urging the said member downwardly to said point of suspension.

3. A device for preventing derailment comprising the combination with a car body and axle, of a member slidably suspended from the car body at a point spaced above and adjacent the axle and means resiliently urging the said member downwardly to said point of suspension.

4. A device for preventing derailment comprising the combination with a car body and an axle, of a cylindrical member suspended from the car body, a bar slidable through the end of the member and provided inwardly thereof with a head, a spring disposed in the cylindrical member and bearing against the head and a yoke carried by the lower end of the bar and having its arms embracing the axle.

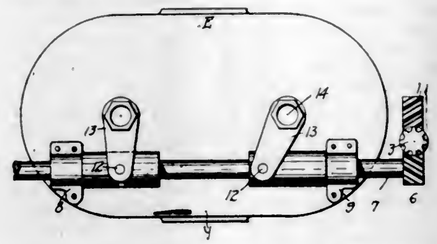
1,103,222. MOUNTING FOR GOLD-LEAF. FRED W. RAUSKOLB, Medford, Mass. Filed Apr. 17, 1913. Serial No. 761,857. (Cl. 154—47.)



1. As a new article of manufacture, a sheet of gold leaf having a backing of paper on one face and a coating of adhesive sizing applied directly to its other face.

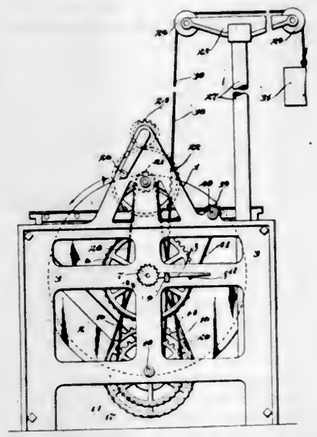
2. As a new article of manufacture, a sheet of gold leaf having a backing of transparent paper on one face and a coating of adhesive sizing applied directly to its other face.

1,103,223. INTERNAL-COMBUSTION ENGINE. ROBERT A. REYNOLDS, Detroit, Mich. Filed Jan. 15, 1912. Serial No. 671,183. (Cl. 123—81.)



In an internal combustion engine, the combination of an engine cylinder having a plurality of ports for exhausting the burnt gases and taking in the fuel, the said ports being multiplied to get port area with small width and an oscillatory valve having similarly diminished and arranged ports, one less in number than the ports of the cylinder, one of the ports of the valve being assigned for alternate registration with one of the inlet and one of the exhaust ports of the cylinder, substantially as described.

1,103,224. PUMP-ACTUATING MECHANISM FOR CARBURETERS. NELSON J. RUSSELL, Minneapolis, Minn. Filed Nov. 29, 1912. Serial No. 734,057. (Cl. 185—32.)

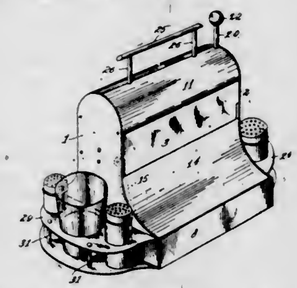


1. The combination with a rotary body, of a power device for rotating said body in an operative direction, means for rewinding or setting said power device without imparting backward rotation to said body, and an auxiliary power device operative, when moved in one direction to rotate said body while said power device is being reset, operative when held still to prevent rotation of said body, and operative when moved in the opposite direction to impart backward rotation to said body.

2. The combination with a rotary body, of a power device for rotating said body in an operative direction, means for rewinding or setting said power device without imparting backward rotation to said body, and an auxiliary power device operative, when moved in one direction to rotate said body while said power device is being reset, operative when held still to prevent rotation of said body, and operative when moved in the opposite direction to impart backward rotation to said body, said auxiliary power device including an operating pawl and ratchet.

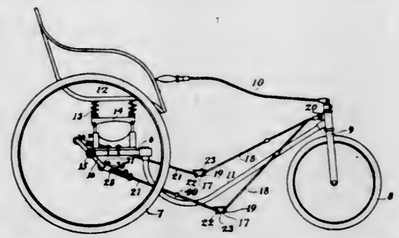
3. The combination with a rotary body, of a power device rotating said body in an operative direction, means for rewinding or setting said power device without imparting backward rotation to said body, an auxiliary power device operative, when moved in one direction to rotate said body while said power device is being reset, operative when held still to prevent rotation of said body, and operative when moved in the opposite direction to impart backward rotation to said body, said auxiliary power device including an operating pawl and ratchet, the said pawl being rendered operative when said lever is moved to a predetermined position, and a stop for supporting said lever in said predetermined position.

1,103,225. SERVING DEVICE. FRANZ T. M. SCHINDELER, Cleveland, Ohio. Filed Mar. 5, 1913. Serial No. 752,145. (Cl. 211—9.)



In a device of the character set forth, the combination of a receptacle having an inverted V-shaped bottom the sides whereof are downwardly, outwardly and upwardly inclined to provide laterally projecting pockets, side, end and cover plates forming with the central portion of the bottom a storage receptacle or hopper, the lower ends of the sides projecting above and spaced a relatively short distance from the downwardly inclined sides of the bottom to provide restricted passageways therewith, a cover plate for each pocket pivoted at its inner end adjacent to a side plate, arms projecting inwardly from each cover plate, a plunger having a cross head, and links connecting said cross head with said arms.

1,103,226. VEHICLE. JAMES C. SMITH, Elyria, Ohio, assignor to The Machine Parts Company, Elyria, Ohio, a Corporation of Ohio. Filed Sept. 14, 1912. Serial No. 720,308. (Cl. 208—30.)



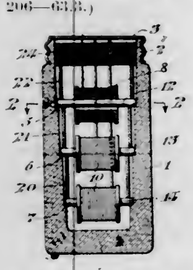
1. In a device of the class described, the combination with the running gear of a vehicle including front and rear wheels, means for operating said running gear including a crank shaft, a perforated member pivoted thereto, said member having a plurality of perforations therein, a pedal, a plurality of rods connecting said pedal and said member, each rod having a hook at one of its ends to hook in the perforations in said member, and means to clamp said rods together.

2. In a vehicle, the combination with a front wheel, rear wheels, a frame on said wheels, a crank shaft for rotating said rear wheels, a seat in said frame, a pedal operable from said seat, a frame head on said front wheel, a rod connecting said pedal to said frame head, a pair of

rods connected at one end to said pedal and provided with hooks on the other end one of said rods being longer than the other, a connecting link provided with a hook upon one end which hooks over said crank shaft, means to fasten said crank shaft in said hook upon said link, permitting the crank shaft to turn in the hook, a bearing member upon the other end of the link and substantially perpendicular thereto provided with bearing surfaces for said rods and means to clamp said rods to said bearing surfaces, said connecting link being provided with perforations into which the hooks upon the rods enter when the rods are clamped thereto.

3. In a vehicle, the combination of a front wheel and a pair of rear wheels, a frame on said wheels, a crank shaft for rotating said rear wheels, a seat in said frame, a pair of pedals operable from said seat, a frame head on said front wheel, a rod connecting each pedal to said frame head and pivoted thereto, a pair of rods connected at one end to each of said pedals and provided with hooks on the other end, one of said rods being longer than the other, a pair of connecting links, one associated with each of said pairs of rods and provided with a hook upon one end which hooks over said crank shaft, means to fasten said crank shaft in said hook upon said link, permitting the crank shaft to turn in the hook, a bearing member upon the other end of each of the links and substantially perpendicular thereto, provided with bearing surfaces for said rods and means to clamp said rods to said bearing surfaces, said connecting links being provided with perforations into which the hooks upon the rods enter when the rods are clamped thereto, said rods and connecting links being adjustable with respect to each other to adjust the pedals upwardly and rearwardly simultaneously.

1,103,227. LIGATURE-HOLDER. GEORGE M. STRATTON, New Brunswick, N. J. Filed Aug. 30, 1913. Serial No. 787,451. (Cl. 206—63.3.)



1. A holder for ligatures, or the like, comprising a bottle having its interior elliptical in cross section, a plurality of spools maintained in spaced relation within said bottle and a plurality of separate, relatively short tubes between said spools.

2. A holder for ligatures, or the like, comprising a bottle having an interior of elliptical cross section, and formed with a plurality of horizontal shoulders, straight pivot rods of graduated length resting upon said shoulders, and spools rotatable upon said rods.

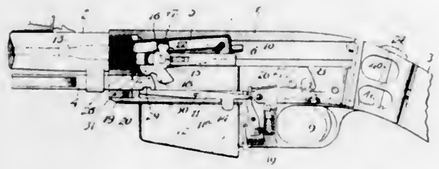
3. A holder for ligatures, or the like, comprising a bottle having its interior of elliptical cross section and formed with a plurality of shoulders upon its interior face, a plurality of straight pivot rods of uniform diameter and of different lengths adapted to fit snugly within said bottle upon said shoulders, spools rotatable upon said pivot rods, and separate spacing means comprising a plurality of rings of varying diameter between said rods operative to hold said rods in spaced vertical relation.

4. A holder for ligatures, or the like, comprising a bottle having its interior of elliptical cross section, and formed with a plurality of horizontal shoulders, straight pivot rods graduated in length adapted to rest upon said shoulders and to fit snugly within said bottle, and spacing means comprising a plurality of unconnected cylindrical rings between said rods operative to maintain said rods in spaced vertical relation.

5. In a holder for ligatures or the like, the combination of a bottle having a plurality of different internal diameters, the cross section of the interior of said bottle being in the form of an ellipse, and a plurality of straight pivot rods of uniform diameter and of graduated lengths maintained in vertically spaced relation within said bottle, the length of any given pivot rod being approximately equal to the greatest diameter of the cross section of the bottle adjacent such rod.

[Claims 6 to 9 not printed in the Gazette.]

1,103,228. REPEATING FIREARM. CARL GUSTAF SWEBILIUS and HANS T. R. HANITZ, New Haven, Conn., assignors to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 25, 1913. Serial No. 797,201. (Cl. 42—17.)



1. In a repeating firearm, a receiver, a vertically and longitudinally movable breech-block, a longitudinally movable lock-up slide guided on both sides of the receiver and adapted to force said breech-block either into or out of engagement with the lock-up shoulder of the receiver, a reciprocating action rod, and a breech-block operating cam adapted to convey the movement of the action rod to the breech-block and the lock-up slide.

2. In a repeating firearm, a receiver, a vertically and longitudinally movable breech-block, a longitudinally movable lock-up slide guided on both sides of the receiver and adapted to force said breech-block either into or out of engagement with the lock-up shoulder of the receiver, a reciprocating action rod, and a breech-block operating cam adapted to convey the movement of the action rod to the breech-block and lock-up slide, carried by said lock-up slide.

3. In a repeating firearm, a receiver, a vertically and longitudinally movable breech-block, a longitudinally movable lock-up slide, a breech-block operating cam, and a locking means carried by the breech-block adapted to rigidly lock breech-block and lock-up slide together when the breech-block is out of engagement with the lock-up shoulder in the receiver and starts on its rearward travel.

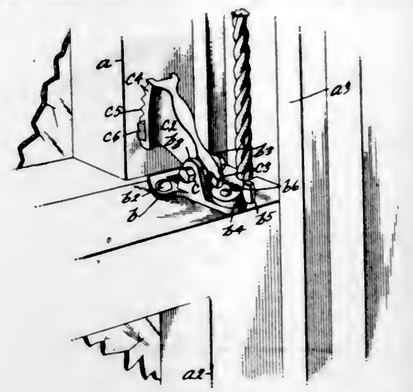
4. In a repeating firearm, a receiver, a longitudinally movable tilting breech-block, a longitudinally movable lock-up slide, a breech-block operating cam, and a reciprocating action-rod adapted to engage with the cam for either opening or closing the gun and having a limited free movement independently of said cam to securely lock the latter against movement while the breech is locked.

5. In a repeating firearm, a receiver, action mechanism therein including a breech-block arranged for both longitudinal and tilting movement, a lock-up slide associated therewith and arranged for longitudinal movement only relatively to the receiver and relatively to the breech-block, a reciprocating action rod, with operative means of connection between the same and said slide and breech-block, a spring-pressed hammer, a spring-pressed trigger, a spring-pressed sear, and a spring-pressed safety latch coöperating with said sear and also with said action rod.

[Claims 6 to 9 not printed in the Gazette.]

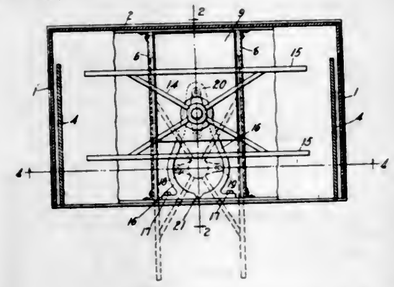
1,103,229. SASH-LOCK. WILLIAM HENRY VANCE, Berkeley, Cal. Filed Apr. 29, 1913. Serial No. 764,298. (Cl. 16—19.)

A sash lock, comprising a base adapted to be secured to the top of the lower sash, uprights thereon, a dog pivoted to said uprights and having a cam face impinging on the upper sash and provided with a tail piece, and a cam arranged beneath said tail piece to prevent the operation



of said dog in one position but being cut away at one point to permit moving said dog into inoperative position.

1,103,230. SHOW-CASE. ANTHONY VANDERVELD, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Sept. 2, 1911. Serial No. 647,340. (Cl. 211—16.)



1. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of being rotated when in outer position, and a controller and a member co-acting therewith, one secured to the case and the other to the rotatable rack to permit rotative movement of the rack and prevent contact with the case as the rack is moved to and from its position in the case or compartment.

2. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of rotative movement when in outer position, a controller connected to the case and having a curved side portion, and a member secured to the rotatable rack and riding said curved portion of the guide controller to permit limited rotative movement of the rack as it is moved to and from position within the case or compartment.

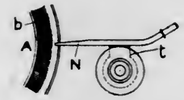
3. In a display device, the combination of a case or compartment, a rotatable rack movable to and from a position within the case or compartment and capable of rotative movement when in outer position, a controller secured to the case and having a curved side portion, and a member secured to the rotatable rack and riding along said curved portion of the controller to permit limited rotative movement of the rack as it is moved to and from position within the case or compartment, said controller and member having engaging portions to prevent rotative movement of the rack when in inner position.

4. In a display device, the combination of a case or compartment, a carriage movable to and from a position within the case or compartment, a rack free for rotative movement and mounted for movement with the carriage, a controller secured to the case, and a member rotatable with the rotatable rack and engaging said controller to permit rotative movement of the rack and prevent contact with the case as the rack is moved in and out of the case.

5. In a display device, the combination of a case or compartment, a rack free for rotative movement and movable to and from a position within the case or compartment, a controller secured to the case or compartment and having a curved side portion, and a member secured to the rotatable rack and movable with relation to the controller as the rack is moved to and from position within the case or compartment, said controller and member acting to permit rotative movement of the rack as it is moved to and from position within the case and permitting the rack to be rotated when in front position.

[Claims 6 to 10 not printed in the Gazette.]

1,103,231. CARDING-ENGINE. FRITZ VÖSTER and MAX JUNGBAUER, Augsburg, Germany, assignors to Cook and Co., Manchester, England, a Firm. Original application filed Dec. 27, 1909, Serial No. 535,093. Divided and this application filed Mar. 20, 1911. Serial No. 615,463. (Cl. 19—15.)



1. In a carding machine, the combination of a screw extending entirely across and parallel with the carding surface, a suction nozzle of small volume mounted on the screw, means for rotating the screw to move the nozzle longitudinally therein, and means for creating a suction in said nozzle.

2. In a carding machine, the combination with the carding surface thereof, of a suction nozzle of small volume, means for moving the nozzle entirely across said surface in a plane parallel therewith, and means for creating a suction in said nozzle.

3. In a carding machine, the combination with the carding surface, of a fixed sleeve extending entirely across said surface and provided with a longitudinal slot extending along the whole working breadth of the carding surface, a screw rotatable in the sleeve, a nozzle of small volume slidable on the sleeve and having a pin projecting through the slot and engaging the screw, and means for creating a suction in the nozzle.

4. In a carding engine the combination with the carding surface thereof, of suction means provided with a suction opening of small volume opposite said surface, and means for causing said suction opening to traverse said carding surface irrespective of the speed of movement of the latter.

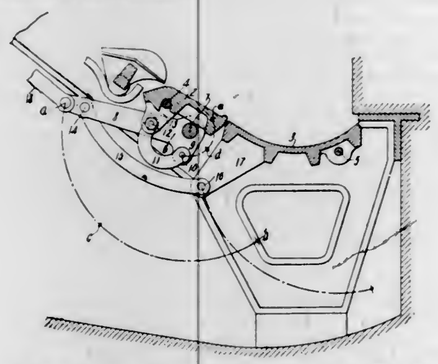
5. The combination, with the main cylinder of a carding machine of an air nozzle of small volume directed against the idle side of said cylinder, means to produce a suction current through said nozzle, and means to traverse said nozzle progressively to all parts of said cylinder as the latter rotates.

1,103,232. FURNACE-GRATE. FRANK L. O. WADSWORTH, Sewickley, Pa. Filed Sept. 30, 1912. Serial No. 723,075. (Cl. 110—39.)

1. In a furnace, the combination of an upwardly moving holdback and a downwardly moving dumping grate, of interconnected means for conjointly elevating said holdback and partially lowering said grate and then oscillating said grate without appreciably moving said holdback.

2. In a furnace, the combination of a movable holdback, a movable dumping grate in rear of said holdback,

an operating member, and connections from said operating member to said holdback and to said dumping grate and arranged when operated to raise the holdback and lower the grate, and adapted when said holdback is fully elevated to move said grate without sensibly affecting the position of said holdback.



3. In a furnace, the combination of an upwardly swinging holdback, a downwardly swinging dumping grate, operating means, and link connections from said means to said holdback and grate, and arranged when said means is operated to first raise said holdback and partially lower said grate and then oscillate said grate without appreciably moving said holdback.

4. In a furnace, the combination of an upwardly swinging holdback, a downwardly swinging dumping grate, a swinging operating member, and connections between said member and said holdback and between said member and said grate, and so arranged that during the first portion of the movement of said member said holdback is fully elevated and the grate partially lowered, and during the remaining movement of said member said holdback is maintained elevated and said dumping grate is swung or oscillated about its pivot.

5. In a furnace, the combination of an upwardly swinging holdback, a downwardly swinging dumping grate, a swinging operating member, a link connecting said operating member and said dumping grate, and operating connections between said member and said holdback, said connections being so arranged that during the first portion of the movement of said member said holdback is fully elevated and said dumping grate is partially lowered, and during the remainder of the movement of said member said dumping grate is oscillated without appreciably moving said holdback.

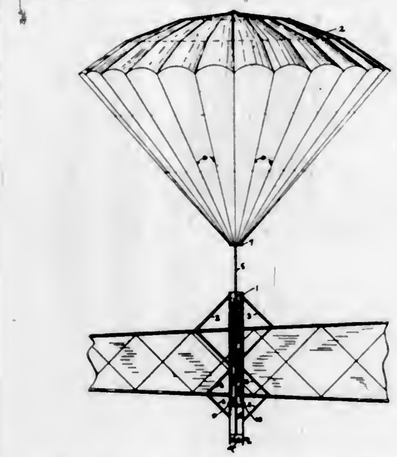
[Claims 6 and 7 not printed in the Gazette.]

1,103,233. SAFETY APPLIANCE FOR AIR-CRAFT. EDWARD L. WAIGHT, San Francisco, Cal. Filed Apr. 17, 1911. Serial No. 621,727. (Cl. 244—21.)

1. In a safety device for airships, a parachute case having an explosion chamber, explosive cartridges in said chamber, electric exploders in said cartridges, a ring adjacent to said cartridges and an electric circuit connected to said ring and said exploders.

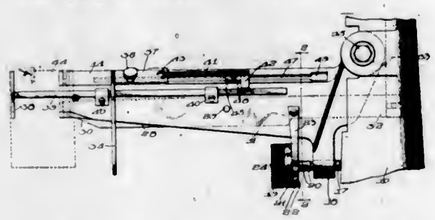
2. In a safety device for airships, a parachute case having an explosion chamber, explosive cartridges in said chamber, electric exploders in said cartridges, an electrical contact pendulum, fixed electrical contact ring, a circuit between said electric exploders, said pendulum and said ring, closable by contact between said pendulum and said ring, and a battery in said circuit.

3. In a safety device for airships, a parachute case having an explosion chamber, explosive cartridges in said chamber, electric exploders in said cartridges, electrical contact pendulum, an electrical contact ring fixed to said airship and tiltable therewith, a circuit including a battery connecting said exploders, said pendulum and said ring, closable by contact between said pendulum and said ring, and means for adjusting the instant of contact to correspond with any selected degree of tilting.



4. In a safety device for airships, means for automatically closing an electrical parachute discharging explosion circuit, comprising an electrical contact ring connected in said circuit, fixed to said airship and tiltable therewith, and an electrical contact pendulum connected in said circuit and suspended inside said ring.

1,103,234. WORK-SUPPORT FOR STAPLING-MACHINES. HENRY WEBER and WILLIAM OSTERHOLM, Chicago, Ill., assignors to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1908. Serial No. 442,276. (Cl. 1—15.)



1. In a machine of the character described, the combination of a main support, a laterally projecting work supporting arm adjustably supported at one extremity by the main support, means for adjusting the arm and for holding the arm in any of its adjusted positions, and against movement, a clencher member supported by the arm and movable independently with respect to the arm, positive means also supported by the arm for operating the clencher member, and means for operating the last said means.

2. In a machine of the character described, the combination of an adjustably supported arm, said arm being provided with work supporting faces arranged at an angle to each other, means for adjusting the arm and holding it in any of its adjusted positions and against movement, said arm being provided with a slot opening through one face and extending longitudinally of the arm, a clencher member supported by the free end of the arm, an operating lever supported and housed within the slot and having engagement with the clencher member, and means independent of the adjusting means for operating said lever.

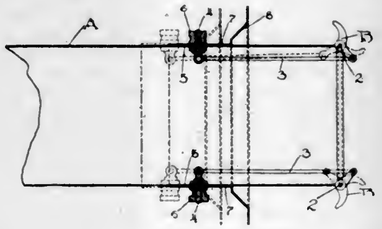
3. In a machine of the class described, the combination of an arm provided with a work supporting face, a work gage adjustably supported by the arm and projecting laterally beyond the face thereof, means for securing the gage against adjustment, a supplemental gage coöperating with and freely adjustable with respect to the first said gage and longitudinally with respect to the arm, and means tending normally to separate the gages.

4. In a machine of the character described, the combination of a work support, a gage adjustably supported thereby, means for holding the gage against adjustment, a supplemental gage coöperating with and freely adjustable with respect to the first said gage, elastic means for normally separating the gages, said supplemental gage being arranged to be adjusted by the work against the tension of the said elastic means, and an adjustable stop for limiting the movement of the supplemental gage in one direction.

5. In a machine of the character described, the combination of a work support, a gage, means for adjustably securing the gage to the support, a supplemental gage supported by the work support and freely adjustable with respect to the first said gage, an elastic member disposed between and connecting the said gages for normally holding the supplemental gage spaced from the first said gage, and a stop for limiting the adjustment of the supplemental gage in one direction, said stop being also arranged to vary the tension of the said elastic means.

[Claims 6 and 7 not printed in the Gazette.]

1,103,235. STOVEPIPE-FASTENER. THOMAS F. WHITE, St. Paul, Minn. Filed Aug. 11, 1913. Serial No. 784,110. (Cl. 126—318.)



1. In combination with a stove pipe section, dogs fulcrumed upon one end of said section, a collar slidable upon said section, locking members carried by said collar and slidably supported upon said stove pipe section, and connections between said locking members and the inner ends of said dogs, whereby said locking members may be adjusted to lock said collar in adjusted positions as well as to hold said dogs in adjusted positions upon their fulcrums.

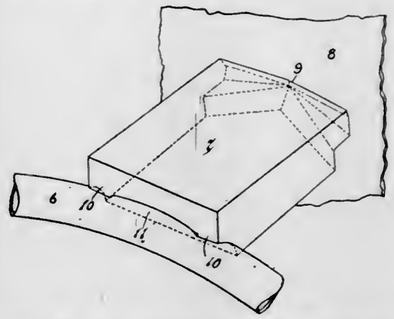
2. In combination with a stove pipe section, dogs fulcrumed upon one end of said section, a collar slidable upon said section, locking members connected with said collar comprising screws extending through longitudinal slots in said stove pipe section, thumb nuts carried by said screws, and connections between said screws and the inner ends of said dogs.

1,103,236. ARCH-BRICK. ALFRED H. WILLETT, New York, N. Y., assignor to American Arch Company, New York, N. Y., a Corporation of New York. Filed Sept. 14, 1911. Serial No. 649,245. (Cl. 110—87.)

1. An arch brick having at one end adjacent the center of the brick a projecting one point bearing for engaging a side sheet, and having at the other end a corner bearing at each side of the brick for engaging a tube with the portion intermediate the corner bearings cut away to clear the tube between such bearings.

2. An arch brick having on one side a one-point support adapted to rest against the side sheet and having its opposite side recessed to provide two spaced points of support adapted to rest upon an arch tube, so that the tube supported side is adapted to fit tubes of varying curvature, substantially as described.

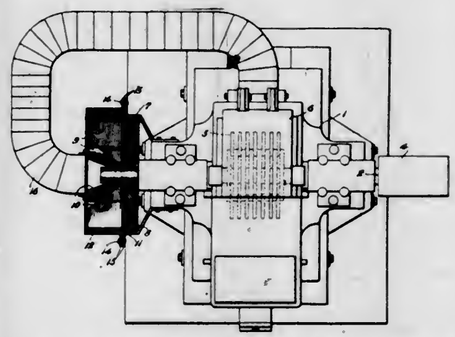
3. An arch brick constructed to be supported between a tube and side sheet and having at one end two points of support adjacent the side edges of the brick with a clearance space between whereby the brick is out of contact with the tube between the side edges of the brick and having at the other end a single point of support intermediate the side edges for engaging the side sheet.



4. An arch brick constructed to be supported between a tube and side sheet and having the lower corner of the brick at one end cut away intermediate the side edges to clear the tube and permit the brick to engage the tube adjacent the corner of the brick, and having at the other end a single point of support intermediate its sides edges for engaging the side sheet.

5. A locomotive furnace arch brick having a single-bearing side-sheet-engaging side and a two-bearing arch-tube-engaging side opposite said single-bearing side, said two bearings being located adjacent the ends of the brick, substantially as described.

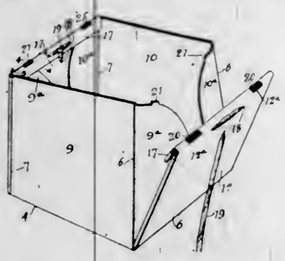
1,103,237. BLOWER FOR ROTARY MILLS. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 5, 1914. Serial No. 816,774. (Cl. 230—11.)



1. In a device having an operating device operated by a shaft, the combination of a fly wheel carried by the shaft, fan blades mounted on the fly wheel, and a blower casing encompassing the fly wheel and the fan blades; said blower casing including a fly wheel casing encompassing the fly wheel and a fan casing secured to the fly wheel casing and coöperating with the fan blades, said fan casing being provided with an axial inlet opening and a tangential discharge opening.

2. In a device of the class described, the combination of a fly wheel, fan blades disposed radially on one face of said fly wheel, and a casing encompassing the fly wheel and the blades; said casing having a circular portion adapted to coöperate with the fly wheel, and a non-circular portion adapted to coöperate with the fan blades for the purpose described.

1,103,238. FOLDING BOX. JAMES H. ZELL, Dayton, Ohio, assignor to The Aull Brothers Paper and Box Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 21, 1913. Serial No. 755,917. (Cl. 229—41.)



1. A box comprising a bottom, side walls and end walls secured to the respective edges of said bottom and movable into planes substantially parallel with said bottom or into positions at substantially right angles to said bottom, corner pieces secured to the respective edges of the adjacent side walls and end walls and adapted to fold along diagonal lines to enable them to be moved into positions parallel with said end walls when the latter are at right angles to said bottom, said end walls and those portions of said corner adjacent to said end walls having their edges turned inward and downward and arranged to extend over the upper edges of those portions of the respective corner pieces adjacent to the side walls, said corner pieces having slots along the lines on which they are turned inward.

2. A box comprising a bottom, side walls and end walls secured to the respective edges of said bottom and movable into planes substantially parallel with said bottom or into positions at substantially right angles to said bottom, corner pieces secured to the respective edges of said side walls and said end walls and adapted to fold along diagonal lines to enable them to be moved into positions parallel with said end walls when the latter are at right angles to said bottom, those portions of said corner pieces adjacent to the end walls being secured to said end walls at points between the sides of said end walls and the upper edges of said corner pieces and said end walls being turned inwardly and downwardly and permanently secured to the respective end walls between the opposite sides thereof, the end portions of said inturned edges being adapted to be sprung over the upper edges of those portions of the respective corner pieces which are secured to the side walls.

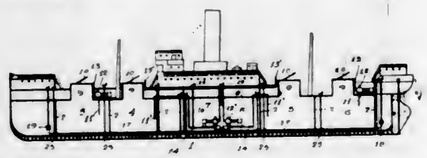
3. A box comprising a bottom, side walls and end walls secured to the respective edges of said bottom and movable into planes substantially parallel with said bottom or into positions at substantially right angles to said bottom, corner pieces secured to the respective edges of said side walls and said end walls and adapted to fold along diagonal lines to enable them to be moved into positions parallel with said end walls when the latter are at right angles to said bottom, those portions of said corner pieces adjacent to the end walls being secured to the respective end walls at points between the sides of said end walls and the upper edges of said corner pieces and said end walls being turned inwardly and downwardly and secured to the body portion of the respective end walls between the opposite sides thereof, the end portions of said inturned edges being adapted to extend over the upper edges of those portions of the respective corner pieces which are secured to the side walls, and means for locking said inturned edges in engagement with said corner pieces.

4. A box comprising a bottom, side walls and end walls secured to the respective edges of said bottom, and movable into planes substantially parallel with said bottom or into positions at substantially right angles to said bottom, corner pieces secured to the respective edges of said side walls and said end walls and adapted to fold along diagonal lines to enable them to be moved into positions parallel with said end walls when the latter are at right angles to said bottom, those portions of said corner pieces adjacent to the end walls being secured to the respective end walls at points between the sides thereof and the upper edges of said corner pieces and said end walls being turned inwardly and downwardly and secured to the body portions of the respective end walls between the opposite sides thereof, said inturned edges being arranged to extend over the upper edges of those portions of the respective corner pieces which are secured to the side walls, the inturned portions of said corner pieces having slots along the lines on which they are folded and the inturned portions of said end walls having openings therein along the lines upon which they are folded, said openings registering with the slots in the respective corner pieces and those portions of said corner pieces which are secured to said side walls having tongues on their upper edges to enter the openings in said end walls.

5. A box comprising a bottom, side walls and end walls secured to the respective edges of said bottom and movable into planes substantially parallel with said bottom or into positions at substantially right angles to said bottom, corner pieces secured to the respective edges of said side walls and said end walls and adapted to fold along diagonal lines to enable them to be moved into positions parallel with said end walls when the latter are at right angles to said bottom, the inner portions of said corner pieces being secured to the body portions of the respective end walls at points between the sides thereof and the upper edges of said corner pieces and said end walls being turned inwardly and downwardly and secured to said end walls between the opposite sides thereof, the end portions of said inturned edges being adapted to be sprung over the upper edges of those portions of the respective corner pieces which are secured to the side walls, those portions of said corner pieces which have their upper edges turned inward having slots along the line upon which their edges are folded adapted to receive the upper edges of those portions of said side pieces which are secured to the side walls.

[Claims 6 and 7 not printed in the Gazette.]

1,103,239. TANK-SHIP. RICHARD ZOLLING, Oakland, Cal. Filed June 1, 1912. Serial No. 700,956. (Cl. 114—74.)



1. In combination with a tank ship for transporting oil, the same being divided into suitable oil receiving compartments, of a suction pipe projecting downwardly into each compartment, a discharge pipe associated with said suction pipe, a pump interposed between said suction and discharge pipes for drawing the oil from the compartments, valve controlled means communicating with the exterior of the ship for admitting water into each compartment to replace the oil as it is drawn therefrom and maintain the oil level in contact with the suction pipe, and valve controlled means for connection with certain of said pumps for discharging the water from said compartments.

2. In combination with a tank ship for transporting oil, the same being divided into suitable receiving compartments, of a suction pipe projecting downwardly into each compartment, a discharge pipe associated with said suction pipe, a pump interposed between said suction and discharge pipes for removing the oil from the compartments, means within each compartment for heating the oil as it is contained therein and maintaining it in a fluid condition, means for admitting water into each compartment to replace the oil as it is drawn therefrom and maintain the oil level in contact with the suction pipe, and valve controlled means associated with certain of said pumps for withdrawing the water from each compartment after the oil has been drawn therefrom.

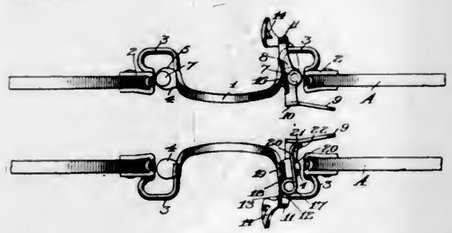
3. In combination with a tank ship for transporting oil, the same being divided into suitable receiving compartments, of a suction pipe projecting downwardly into each compartment, a discharge pipe associated with said suction pipe, a pump interposed between said suction and discharge pipes for drawing the oil from the compartments, means for admitting water into each compartment to replace the oil as it is being drawn therefrom and maintain the oil level in contact with the suction pipe, and means associated with each suction pipe for closing the same after the oil has been drawn from the compartment to prevent the entering of the water into said suction pipe.

4. In combination with a tank ship for transporting oil, the same being divided into suitable receiving compartments, of a suction pipe projecting downwardly into each compartment, a discharge pipe associated with said suction pipe, a pump interposed between said suction and discharge pipes for drawing the oil from the compartments, means for admitting water into each compartment to replace the oil as it is being drawn therefrom and maintain the oil level in contact with the suction pipe, and a valve carried at the lower end of each suction pipe and acted upon by the advancing water to close the lower end of the pipe and close the same after the oil has been drawn from the compartment, to prevent the entering of the water into said suction pipe.

5. In combination with a tank ship for transporting oil, the same being divided into suitable receiving compartments, of a suction pipe projecting downwardly into each compartment, a pump interposed between said suction and discharge pipes for drawing the oil from the compartments, valve controlled means for admitting water into the bottom of each compartment to replace the oil as it is being drawn therefrom and maintain the oil level in contact with the suction pipe, and valved connections between said water inlet means and certain of said oil drawing pumps and thrown into communication after the oil has been drawn from the compartments, for connecting said pumps with said water inlet means for pumping the water from the compartments.

[Claims 6 and 7 not printed in the Gazette.]

1,103,240. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Dec. 30, 1909. Serial No. 535,543. (Cl. 88—50.)



1. In an eyeglass mounting, the combination with a support, a pivot and a finger piece guard lever mounted to swing thereon and to extend from front to rear of the support, of a spring for positioning the guard embodying two arms extending in substantially parallel relation transversely of the plane of the lenses and connected together by a portion located on one side only of the pivotal axis, permitting the removal of the spring in a direction transverse to the said axis and to the pivot, said spring arms having their free ends detachably connected to the guard and support respectively, the connection with the guard being at a point on the opposite side of the pivotal axes thereof.

2. An eyeglass mounting comprising a support for the lenses, a guard mounted to swing on one side of the support, a spring securing device arranged on the other side of the support in the plane of the lenses, and a spring for the guard comprising an end secured by said device, a coil arranged to one side of the turning axis of the guard and an arm extending to the other side of the turning axis of the guard and coöperating with the latter.

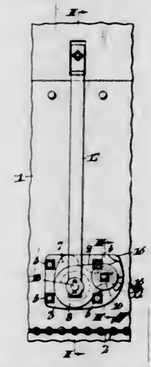
3. An eyeglass mounting comprising a support for the lenses, a socket horizontally arranged on one side of the support with its axis transverse to the plane of the lenses, a guard mounted to swing on the opposite side of the support, and a spring for the guard comprising an end secured in the socket, and an arm extending to one side of the socket and connected to the guard.

4. An eyeglass mounting comprising a support for the lenses, a guard mounted to swing on the upper side of the support, a socket arranged horizontally on the under side of the support, and a spring comprising an end fitted in the socket, a coil on one side of the turning axis of the guard, and an arm extending to the other side of the turning axis and secured to the guard.

5. An eyeglass mounting comprising a support for the lenses, a nose guard arranged above the support, coöperative bearing members on the guard and the support, separable by an inward movement of the guard, a socket arranged horizontally on the under side of the support, with its axis transverse to the plane of the lenses, and a spring for the guard comprising an end secured in the socket, a coiled portion in the rear, and a spring arm coöperating with the guard forwardly of the turning axis of the latter, and acting in a direction to hold the bearing members in engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,103,241. VALVE. ALLAN J. AITKEN, Buffalo, N. Y., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Apr. 14, 1913. Serial No. 760,863. (Cl. 137—21.)

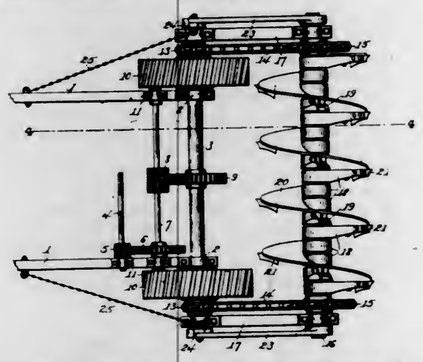


1. The combination of a valve seat having an opening therethrough, a pivot stem at one side of said opening, a valve pivoted on said stem, a spring surrounding said stem and pressing the valve against its seat, a supporting projection engaging the valve in the inner face thereof and forming a fulcrum support to assist the spring in seating said valve, said stem and spring being located between said projection and the opening in the valve seat.

2. The combination with a valve-seat plate having an opening therein, of a pivot stem secured to said plate at one side of the opening thereof, a valve pivoted on said stem, a spring surrounding said stem and pressing the valve against the plate, a projection on the plate forming a fulcrum support for the valve to assist the spring in pressing the valve against said plate when said valve is moved to close said opening, and a stop carried by the plate to limit the closing movement of said valve.

3. The combination with a valve seat plate having an opening therein, of a pivot stem secured to said plate at one side of said opening, a valve pivoted on said stem, a spring surrounding the stem, a projection on the plate forming a fulcrum support for the valve, said pivot stem being located between the said fulcrum support and the opening in the valve seat plate, said valve on its inner face being free from contact with said plate between said fulcrum support and the seat around the opening in the plate for the valve, whereby said spring bearing against the valve will force said valve against the valve seat plate at the opening therein, and a stop carried by the plate for limiting the closing movement of the valve.

1,103,242. ROAD-GRADING MACHINE. EDWIN J. AKINS, Moundsville, W. Va. Filed Oct. 10, 1911. Serial No. 653,896. (Cl. 37—26.)

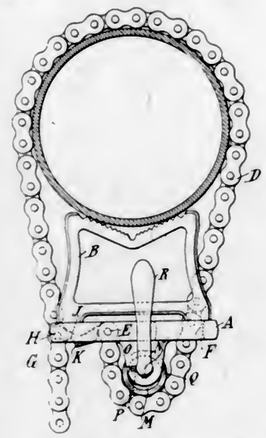


1. In a road building machine, the combination with a movable carriage, of a shaft journaled on the carriage frame and lying transversely of the direction of movement of the carriage, gearing for said shaft, a second shaft located in front of and parallel to the first-named shaft, substantially horizontal brace-arms having their opposite ends loosely connected to said shafts whereby the second shaft is maintained at a fixed distance in front of the first shaft, gearing interposed between said shafts, radially extending arms having a spiral disposition on said second shaft, earth-loosening shovels carried by said radial arms, and a helical blade mounted in fixed relation to said second shaft and of which said shaft forms the axis whereby loosened earth is moved laterally from the path of the advancing carriage to afford a solid and smooth roadway over which the wheels of the latter advance.

2. In a road grader, a traction vehicle, a shaft journaled in front of said vehicle, gearing interposed between the vehicle and said shaft whereby traction movement of the former effects rotation of the latter, means for bracing said shaft with respect to said vehicle, radial spirally disposed arms mounted on said shaft, digging instruments mounted upon the outer ends of said arms, and a continuous blade disposed spirally about said shaft and rigidly supported by said arms whereby earth loosened by said instruments is shifted laterally in a horizontal direction out of the path of the advancing vehicle to form a smooth and solid roadway for the wheels of the latter.

3. In a road grader, a traction vehicle, a shaft journaled in front of said vehicle, gearing interposed between the vehicle and said shaft whereby traction movement of the former effects rotation of the latter, means for bracing said shaft with respect to said vehicle, radial spirally disposed arms mounted on said shaft, digging instruments mounted upon the outer ends of said arms, a blade disposed spirally about said shaft and rigidly sustained by said arms, whereby earth loosened by said instruments is shifted horizontally in a direction transverse to the line of travel of the vehicle to form a solid and smooth roadway for the wheels of the latter, and means for elevating and lowering said shaft.

1,103,243. CHAIN PIPE-VISE. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Aug. 12, 1913. Serial No. 784,400. (Cl. 81—19.)

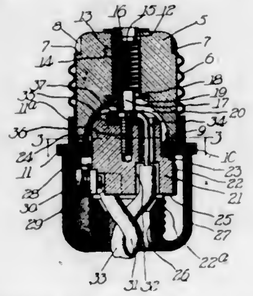


1. A chain pipe vise having a chain adapted to be fastened around the pipe, and means engaging the bight of the chain for tightening the latter on the pipe, said means including a cam member and an antifriction member between the cam member and the chain.

2. A chain pipe vise having a chain adapted to be fastened around the pipe, and means engaging the bight of the chain for tightening the latter on the pipe, said means including an eccentric and a ring loose on said eccentric and located between the chain and the eccentric.

3. A chain pipe vise having a chain adapted to be fastened around the pipe and means engaging the bight of the chain for tightening the latter on the pipe, said means including an antifriction member.

1,103,244. SEPARABLE ATTACHMENT-PLUG. ERNST G. K. ANDERSON, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Filed Aug. 10, 1909. Serial No. 512,178. (Cl. 173—343.)



1. The combination of a cap having an end contact and a side contact, a plunger electrically connected with said end contact, a member adapted to be inserted into said cap, an end contact on said insertible member for engagement with said plunger, a ring carried by said insertible member and having a portion thereof made yielding, and means carried by said cap and electrically connected with the side contact of said cap and disposed for yielding locking engagement with the resilient portion of said ring.

2. The combination of a cap, an end contact, a plunger electrically connected with said end contact, a side contact carried by said cap, a member insertible into said cap, binding terminals carried by said insertible member, an end contact on said insertible member electrically connected with one of said binding terminals and disposed for engagement with said plunger, a resilient side contact on said insertible member electrically connected with another binding terminal, and means carried by said cap and arranged for yielding locking engagement with the side contact of the insertible member, said means being electrically connected with the side contact of the cap.

3. The combination of a cap having an end contact and a side contact, a plunger electrically connected with one of said contacts, an insertible member having an end contact disposed for engagement with said plunger, a resilient side contact on said insertible member, and means carried by said cap and adapted for yielding holding engagement with said resilient side contact.

4. The combination with a cap having an end contact and a side contact, of an insertible member having an end contact and a side contact, longitudinally yielding means for making electrical connection between the end contact of the cap and the end contact of the insertible member when the latter is inserted into said cap, and means for locking said member in said cap, said locking means being releasable upon a predetermined force being applied to said member in a direct pull, said locking means also making electrical connection between the side contact of the plug and the side contact of the cap.

5. The combination of a cap having an end contact, an insertible member having an end contact, longitudinally yielding means for electrically connecting said end contacts with each other, a side contact on said cap, and a side contact on said member, said side contacts being arranged to electrically engage each other and lock the cap and insertible member together, so as to be capable of separation upon a predetermined force being applied to said insertible member in a direct pull.

[Claims 6 to 10 not printed in the Gazette.]

1,103,245. STOCKING DRYING AND SHAPING FORM. EBY R. APPLIN, Waupun, Wis. Filed Feb. 9, 1914. Serial No. 817,661. (Cl. 223—17.)



1. A stocking drying and shaping form consisting of a sheet-metal lining shell inwardly braced at intervals of its length against collapse, a wire-wrapping on the shell constituting an outer reinforce for the same against internal pressure, and a coating of suitable material solidified on the wire-wrapped shell.

2. A stocking drying and shaping form consisting of a sheet-metal lining shell, bracing sleeves therein at intervals of its length on rivets upset at their ends outside of the shell, a wire-wrapping on the shell constituting an outer reinforce for the same against internal pressure, and a coating of suitable material solidified on the wire-wrapped shell.

3. A stocking drying and shaping form consisting of a sheet-metal lining shell inwardly braced at intervals of its length against collapse, a wire-wrapping on the shell constituting an outer reinforce for the same against internal pressure, and a coating of block-tin molded on the wire-wrapped shell.

4. A stocking drying and shaping form consisting of a sheet-metal lining shell having an outer wrapping of wire constituting a reinforce against internal pressure, and a coating of suitable material solidified on the wire-wrapped shell.

1,103,246. TELESCOPIC POST FOR STANDS AND SIMILAR ARTICLES. JOHN H. ASTRUCK, New York, N. Y. Filed Oct. 4, 1913. Serial No. 793,292. (Cl. 248—7.)



1. A telescoping post comprising an outer tubular member, a collar mounted thereon, an inner tubular member, coupling means on said inner tubular member adapted to engage the collar, the inner tubular member being provided at its telescoped end with a plurality of spring jaws, and also with a plurality of protuberances that are adapted to jointly engage the outer member, said protuberances likewise constituting abutments coacting with the collar, to prevent a complete withdrawal of the inner member from the outer member.

2. A telescoping post comprising an outer tubular member, a threaded collar mounted thereon, an inner tubular member of substantially less outer diameter than the inner diameter of the outer member, a tubular coupling having a reduced upper bore that snugly encompasses the inner member, and a lower threaded chamber that engages the threaded collar, the inner member being provided at its lower end with a plurality of spring jaws that frictionally contact with the outer member, and with a plurality of additional outwardly projecting guides that slidably engage the outer member, said guides being adapted to enter the collar-chamber and abut against the roof thereof, whereby a complete withdrawal of the inner member from the outer member is prevented.

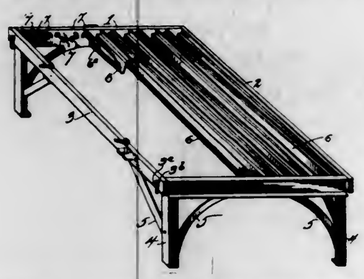
1,103,247. FENCE-POST MOLD. BERT C. BAKER, Fostoria, Ohio, assignor, by direct and mesne assignments, of one-half to Asa M. Smith, Prairie Depot, Ohio, and one-half to Earl Scott Smith, Toledo, Ohio. Filed Dec. 4, 1909. Serial No. 531,311. (Cl. 25—118.)

1. In a device of the described character, a trough-like mold having resilient sides, a support for the mold, and means for compressing the sides of the mold uniformly throughout their entire length.

2. In a device of the described character, a frame, a series of trough-like sheet metal molds having resilient sides, end supports which sustain the molds side by side within the frame, and means for simultaneously and uniformly compressing the sides of the molds throughout their length.

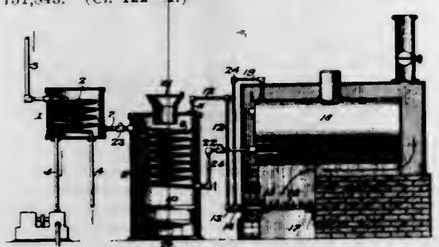
3. In a device of the described character, a frame having a removable side, a series of trough-like sheet metal

molds tapered from end to end, means for supporting the ends of the molds within the frame with their larger and smaller ends in alternation, and means for the adjust-



ment of said removable side, whereby the sides of the series of molds may be simultaneously and uniformly compressed throughout their length.

1,103,248. STEAM-GENERATOR. JOSEPH E. BARBANGER, Philadelphia, Pa. Filed Mar. 3, 1913. Serial No. 751,843. (Cl. 122—1.)

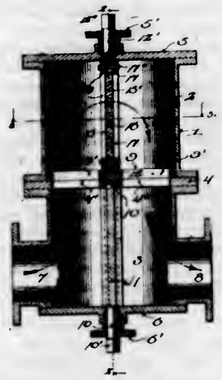


A gas generating retort, a generator for saturated steam therein, means for connecting said generator with a feed water supply, a gas outlet and conveying pipe connected with said retort, a steam outlet and conveying pipe connected with said generator, a boiler for generating live steam, a burner in the fire place of said boiler, and an atomizer connected with said burner, said gas outlet and conveying pipe having a connection with said atomizer, and said steam outlet and conveying pipe having a connection with the water space of said boiler.

1,103,249. GAS-FILTER. ALVIN J. BASSETT, Milwaukee, Wis., assignor to Sharp-Bassett Gas Producer Company, Milwaukee, Wis. Filed Feb. 20, 1914. Serial No. 819,896. (Cl. 48—137.)

1. A gas filter comprising a housing having a ported partition disk therein dividing the housing into compartments one of which has a gas intake and a gas discharge port, a stem projecting from the partition disk through the ported compartment of the housing, a gate carried by the stem for regulating communication between the intake and discharge ports, an oscillatory frame mounted within the other housing compartment, a flat filter carried by the frame, and means for reversing the position of said filter frame.

2. A gas filter comprising a drum-like housing having a gas intake and a gas discharge port adjacent to one end and arranged opposite each other, a centrally apertured and ported partition-disk carried by the housing whereby the same is divided into a gas receiving and discharge compartment and a filter compartment, a ported disk-valve revolubly mounted upon the partition within the filter compartment, a stem carried by the valve-disk extending through the partition and receiving and discharge compartment, a gate carried thereby, a trunnioned frame mounted in the filter compartment arranged to form close contact with the walls of said compartment and valve-disk, and a flat filter carried by the frame.



3. A gas filter comprising a drum-like housing having a gas intake and a gas discharge port adjacent to one end and arranged opposite each other, a centrally apertured and ported partition-disk carried by the housing whereby the same is divided into a gas receiving and discharge compartment and a filter compartment, a ported disk-valve revolubly mounted upon the partition within the filter compartment, a stem carried by the valve-disk extending through the partition and receiving and discharge compartment, a gate carried thereby, a trunnioned frame mounted in the filter compartment arranged to form close contact with the walls of said compartment and valve-disk, screen sheets fitted into the frame having filter material therebetween, and securing means for the filter sheets.

1,103,250. SEPARABLE ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1909. Serial No. 512,147. (Cl. 173—343.)



1. An attachment plug comprising two separable members, one of said members having contacts for coöperation with the contacts of a socket, and the other member having binding terminals associated therewith; means for locking said members together with said contacts in electrical communication with said binding terminals, said locking means being releasable upon the application of a predetermined force to said binding-terminal-carrying-member in a direct pull, and manually operable means for releasing said locking means and at the same time forcing said members apart.

2. An attachment plug comprising two separable members, one of said members having contacts for coöperation with the contacts of a socket, and the other member having binding terminals associated therewith; means for locking said members together with said contacts in electrical communication with said binding terminals, said locking means being releasable upon the application of a predetermined force to said binding-terminal-carrying-member in a direct pull; and means for releasing said locking means and at the same time forcing said members apart, upon rotation of one of said members with respect to the other.

3. In an attachment plug, the combination of a pair of separable members, one of said members having contacts for coöperation with the contacts of a socket, binding terminals carried by the other of said members, means for locking said members together with said contacts and binding terminals in electrical communication with each other upon a direct thrust of one of said members toward the other, said locking means being releasable upon the application of a predetermined force to said binding-terminal-carrying-member in a direct pull, and means for releasing said locking means upon rotation of one of said members with respect to the other.

4. An attachment plug comprising two separable members, one of said members being provided with a center contact and an outer contact for engaging the center contact and the threaded contact respectively of a socket, and the other of said members having binding terminals associated therewith, a spring clip carried by one of said members, a clip-engaging member carried by the other member, and means upon said last-named member for releasing said spring clip upon said last-named member being rotated.

5. An attachment plug comprising two separable members, one of said members being provided with a center contact and an outer contact for engaging the center contact and the threaded contact respectively of a socket, and the other of said members having binding terminals associated therewith, said second-named member being formed with a cam surface; a contact head carried by said second-named member and electrically connected with one of the binding terminals thereof; and a spring clip carried by said first-named member and adapted to receive said head when said members are thrust together, said clip being electrically connected with one of the contacts of said first-named member, and said clip being arranged to be engaged by the cam surface of said second-named member and opened thereby upon said second-named member being rotated.

[Claims 6 to 8 not printed in the Gazette.]

1,103,251. SEPARABLE ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1909. Serial No. 531,432. (Cl. 173—343.)



1. In a separable attachment plug, a pair of body members, one of which is adapted to be inserted into a socket, gripping means carried by one of said members, and a contact head carried by the other of said members and arranged to be grasped by said gripping means when said members are put together, said contact head being provided with a cam projection arranged to release said gripping means when said members are rotated relatively to each other.

2. In a separable attachment plug, a pair of body members, one of which is adapted to be inserted into a socket, spring contact fingers carried by one of said members, and a contact head carried by the other of said members and arranged to be inserted between said spring contact fingers and grasped thereby when said members are put together, said contact head being provided with a cam projection arranged to force said contact fingers apart when the members are rotated relatively to each other.

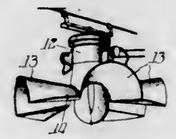
3. A separable attachment plug comprising two separable members, one of which is adapted for insertion into a wall socket and the other of which carries binding terminals for receiving leading in wires, interlocking contacts carried by said members, said contacts being arranged to lock together when the members are connected, means for releasing said contacts, and means for forcing said members apart when said contacts have been released.

4. A separable attachment plug comprising two separable members, one of which is adapted for insertion into a wall socket and the other of which carries binding terminals for receiving leading in wires, interlocking contacts carried by said members, said contacts being arranged to lock together when the members are connected, means whereby said contacts are released upon one of said members being rotated with respect to the other, and means for forcing said members apart when said contacts have been released.

5. In a separable attachment plug, a member adapted to be inserted into a socket, a second member adapted to be connected with said first member, gripping means on one of said members, contact head carried by the other member and arranged to be grasped by the gripping means when said members are connected with each other, said contact head being provided with a cam projection arranged to release said gripping means when the members are rotated, and auxiliary means tending to force said members apart.

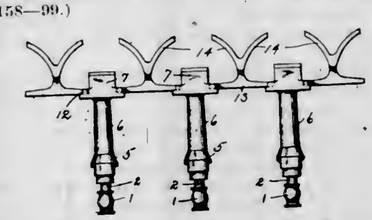
[Claims 6 to 12 not printed in the Gazette.]

1,103,252. REFLECTOR-SHADE. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 23, 1910. Serial No. 578,499. (Cl. 240—103.)



A reflector shade comprising a plurality of radially extending portions curved substantially into the form of partial paraboloids, the axes of which are inclined slightly downward, walls extending downwardly from said portions and curved into the form of parabolas, and a plurality of port ons disposed between said curved portions, and forming parts of a flat conical reflector.

1,103,253. BURNER. HORATIO S. BENNETT, Cleveland, Ohio. Filed Oct. 24, 1910. Serial No. 588,724. (Cl. 158—99.)



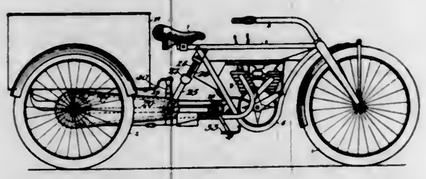
1. In a burner structure, a plurality of burner members arranged in rows and having lateral discharge orifices, and baffle members supported on the burner structure and restricting the discharge of the burning mixture and air for combustion to slots directly above the burner sections, said burner structure being open at the bottom to allow free unrestricted passage for air to the burner orifices.

2. A burner structure comprising a plurality of rows of burner sections having lateral discharge orifices, and suitable baffles supported between the rows and having curved plate portions extending from a point between the burner sections toward the top of the adjacent burner section and adapted to baffle the flames produced by the

burner sections and to restrict the passage of burning mixture through the burner, said burner structure being open at the bottom for free access of air.

3. In a burner, a plurality of groups of burner sections, each section comprising a mixing device, a burner head having lateral mixture discharge orifices, and supporting lugs below the discharge orifices on each side, and suitable baffle members having legs adapated to rest upon the supporting lugs of the adjacent burner sections, and baffle plates each extending upward above the adjacent burner section and toward the center thereof, thereby converging the flames from both sides of the burner section toward the center forming substantially one long flame above each group of burner sections.

1,103,254. MOTOR-TRICYCLE. WALTER L. BENTON, Houston, Tex. Filed July 12, 1913. Serial No. 778,631. (Cl. 208—45.)



1. A device of the character described, including a front or steering wheel and two rear, or carrying wheels, a two part framework supported by said wheels, said parts being hinged together, an arch pivoted to the rear part, a bearing carried by and integral with the arch, a rod hinged to the front part, said rod being slidable in said bearing and a resilient member surrounding said rod and resisting against the bearing and forming a cushion between said parts of said framework.

2. A device of the character described including a front steering wheel and two rear carrying wheels, a two part frame work supported by said wheels, the front part of the frame work consisting of two inverted arches arranged side by side and a lengthwise member connecting the ends of said arches, a casting carried by the arches and arranged at the rear side and near the bottom thereof, a member hinged to said casting, two sections of tubing whose forward ends are secured to the hinge member and which extend rearwardly, forming the rear part of said frame work, an arch pivoted to the rear part of said frame work, a bearing carried by and integral with the arch, a rod hinged to the front part of said frame work and slidable in said bearing and a resilient member surrounding said rod and resting against the bearing and forming a cushion between the parts of said framework.

3. A device of the character described including a front steering wheel and two rear carrying wheels, a two part frame work supported by said wheels, the front part of the frame work consisting of a double inverted arch and a lengthwise member connecting the ends of said arch, a casting secured to the rear side of said arch, near the bottom thereof, a member hinged to said casting to which the rear part of the frame work is secured, an arch pivoted on each side to the rear part of said frame work, a bearing carried by and integral with said last mentioned arch, a rod hinged to the front part of said framework and slidable in said bearing and a coil spring surrounding said rod and resting against said bearing and forming a cushion between the parts of said framework.

4. A device of the character described including a front steering wheel and two rear carrying wheels, a two part framework supported by said wheels, the front part of the framework consisting of a double inverted arch and a lengthwise member connecting the ends of said arch, a casting secured to the rear side of said arch near the bottom thereof, a member hinged to said casting to which the rear part of the framework is secured, an arch pivoted on each side of the rear part of the said framework, a bearing carried by and integral with said last mentioned arch, a bearing member carried by the front part of said framework and a resilient member interposed between said bearing and forming a cushion between the parts of said framework.

1,103,255. UNION SUIT. WILLIAM H. BILBROUGH, Elmira Heights, N. Y. Filed Nov. 18, 1909. Serial No. 528,651. (Cl. 2—144.)



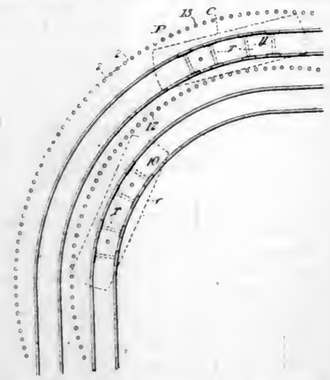
1. A garment having a central longitudinal slit in the back thereof, said slit extending a short distance down the inner side of one of the leg portions, an elongated four-sided flap having one of its longitudinal edges secured along one edge of said slit, and its other longitudinal edge free, and having its upper edge secured across the back of the garment, and its lower edge convexly curved and secured along the front edge of the slit in the leg portion of the garment, whereby the free edge of said flap extends from the point of attachment of the upper edge to the front edge of the slit in the leg portion.

2. A union suit comprising united leg and body portions formed from a tubular knitted fabric, the body portion being slit at the back from the waist line to the crotch, in combination with two oppositely disposed rear flaps, cut broader at the bottom than at the top, the upper ends of said flaps being united to the body portion along the waist line in overlapping arrangement, the remote longitudinal edges of the flaps being free, the adjacent edges being united to the correspondingly opposite edges of the slit in the body portion, and the lower ends of the flaps being cut convexly and united to the leg portions along the front gusset seams, whereby a fullness is produced in both leg portions at the crotch, as and for the purpose described.

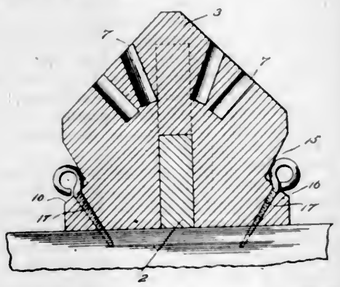
1,103,256. SAFETY DEVICE FOR STREET-RAILWAY CURVES. SAMUEL BLUEFIELDER, New York, N. Y. Filed Jan. 26, 1914. Serial No. 814,460. (Cl. 116—31.)

1. A safety device for a street railway curve comprising a line on the outside of the curve indicating the path of the extreme projecting or overhanging portions of the ends of a car passing around the curve, said line being formed by material permanently incorporated in and flush with the roadway or pavement adjacent the curve and having the color of its upper surface contrasting with that of the roadway or pavement, substantially as and for the purpose set forth.

2. A safety device for a street railway curve comprising a line on the outside of the curve indicating the path of the extreme projecting or overhanging portions of the ends of a car passing around the curve, said line being formed by spaced markers permanently incorporated in and flush with the roadway or pavement adjacent the curve and having the color of their upper surfaces contrasting with that of the roadway or pavement, substantially as and for the purposes set forth.



1,103,257. DECORATIVE DEVICE. GEORGE BOLLINGER, Jr., Cincinnati, Ohio. Filed Aug. 10, 1912. Serial No. 714,479. (Cl. 248—37.)



A device of the character described comprising two members, each of said members being composed of a relatively narrow block having a bottom flat surface, each of said blocks consisting of an upper reduced flat extremity arranged parallel to said flat bottom surface, of oppositely and downwardly inclined edges leading from said reduced edge, said blocks being each formed between said inclined edges and said flat bottoms with transverse alining V-shaped notches, one of said members being formed with an undercut rectangular recess disposed at a median line at its bottom, the other of said members being formed with a rectangular recess at a median line at its upper end whereby the first member may set flush upon said second member at right angles thereto, each of said members being formed with oppositely-inclined pole sockets opening out of its inclined edges.

1,103,258. PROCESS OF MANUFACTURING PURE IRON OR MANGANESE METAL FROM PURE OR IMPURE IRON OR MANGANESE-METAL OXIDS. CARL ADOLF BRACKELSBERG, Stockum, Dusseldorf, Germany. Filed Dec. 11, 1911. Serial No. 665,139. (Cl. 75—77.)

The herein described method of purifying and agglomerating ores of iron in one single operation, which consists in powdering the material, agglomerating the powder by moistening it with a binding means, agitating and drying the mass, heating the material to red heat and exposing it first to the action of air or steam and then under red heat up to white heat to the action of hydrochloric acid, so as to decompose the sulfids of arsenic, antimony, copper, lead, zinc, iron, etc. and to form chlorids of metals protoxids of iron, steam and sulfurous acid, all of which evaporate, and leading off the vapors, so that the residue concreted by means of protoxid of iron resulting from the reaction is practically free from arsenic, antimony, copper, lead, zinc, sulfur, etc.

1,103,259. FLY-PAPER HOLDER. JOHN J. BUCKLEY, Boston, Mass. Filed Apr. 23, 1913. Serial No. 763,131. (Cl. 43—22.)

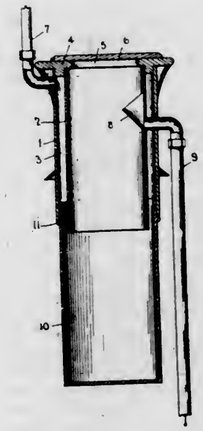


1. A device of the class described, comprising a plurality of sections, each including a bottom, side walls, and a receptacle at one end closed except on one side, the opposite end of each section being open, the sections being connected at their open ends and the side walls overlapping adjacent said open ends.

2. A device of the class described, comprising a plurality of sections, each including a bottom, side walls, and a receptacle at one end closed except on one side, the opposite end of each section being open, the sections being connected at their open ends and the side walls overlapping adjacent said open ends, and a member having a plastic surface disposed in said sections and having its ends curved away from the bottom and toward the top of each receptacle.

3. In a fly paper holder, a hinged frame, a trough at each end of the frame, cleats carried by the trough, supporting members secured to the frame adjacent the hinging portion of the frame, flexible cords secured to the supporting members, and adjustably engaging the ends of the frame, and means for holding the paper in the frame, said cords supporting the hinged frame and preventing the sprending thereof when in V form.

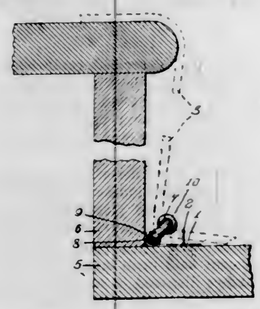
1,103,260. DRY CLOSET. WILFORD J. W. BYERS, Atoka, Okla. Filed July 29, 1912. Serial No. 712,196. (Cl. 4—20.)



A dry closet comprising outer and inner tubular members arranged one within the other and spaced apart, a seat mounted on the upper end of said members and closing the space between them at the top thereof, a ventilating pipe connected with the upper end of said outer member and communicating with the space between said members, said inner member being longer than the outer member and having its lower end extending below the lower end of said outer member, and a tubular receptacle closed

at one end and having its other end extending into close engagement with the inner face of the lower end of said outer member, a stop on the outer face of said receptacle, spaced from its upper end and against which the lower edge of said outer member is adapted to abut, the lower end of said inner member projecting into said receptacle below the upper edge thereof, and means for detachably connecting said receptacle with said outer member.

1,103,261. STAIR-CARPET HOLDER. HERMAN CASLER, Canastota, N. Y. Filed Oct. 28, 1911. Serial No. 657,369. (Cl. 16—26.)



1. A stair carpet holder comprising a base plate and a member carried by the base plate and designed to extend around the edge of the carpet, said member including a leg extending parallel to the base plate and having an enlargement at its free end forming a contracted inlet to the space between said leg and the base, substantially as and for the purpose described.

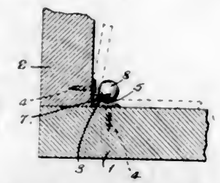
2. A stair carpet holder comprising a sheet metal base plate having one edge overturned to form a tubular guide and its remaining portion flat and provided with means for the attachment thereof to a step or riser, and a U-shaped member having one leg retained in said tubular portion and its other leg extending in a direction parallel to the first-named leg, and located, when in operative position, in a plane perpendicular to the face of the plate and intersecting the same between the side edges thereof, substantially as and for the purpose specified.

3. A stair carpet holder comprising attaching means adapted to be secured to a step in the angle formed by the tread of one step and the riser of the next step, and a substantially U-shape member having one arm hinged to the attaching means and the other arm extending part way over the carpet and engaging the angle of the carpet in the first-mentioned angle, substantially as and for the purpose described.

4. A stair carpet holder comprising attaching means adapted to be secured to a step in the angle formed by the tread of one step and the riser of the next step, and a substantially U-shape member having one arm hinged to the attaching means and movable about an axis substantially parallel to the meeting line of the riser and tread and its other arm rigidly connected to the first-mentioned arm and extending part way over the carpet and engaging the angle of the carpet in the first-mentioned angle, substantially as and for the purpose specified.

5. A stair carpet holder comprising a base plate adapted to be secured under the carpet to a step, in the angle formed by the tread of one step and the riser of the next step, the base plate being formed with a bearing having its axis extending substantially parallel to the line of meeting of the tread and riser, and a substantially U-shape member having arms of unequal length, the longer arm being journaled in the bearing and also slidable laterally therein, the shorter arm extending part way over the carpet and engaging the angle of the carpet in the first-mentioned angle and the bail portion of the member extending around the edge of the carpet, substantially as and for the purpose set forth.

1,103,262. STAIR-CARPET HOLDER. HERMAN CASLER, Canastota, N. Y. Filed Oct. 28, 1911. Serial No. 657,370. (Cl. 16—26.)



1. A stair carpet holder comprising means secured to the stairs beneath the carpet and formed with an elongated passage and a pin for extending through the carpet and through the elongated passage, substantially as and for the purpose described.

2. A stair carpet holder comprising a base secured to the stairs beneath the carpet and formed with a passage and a pin for extending through the carpet and through the passage, the base being formed with a guide for directing the point of the pin into the passage, substantially as and for the purpose specified.

3. A stair carpet holder comprising a base formed with an angle and a passage offset from the apex line of the angle, and a pin for piercing the carpet and extending into said passage, the passage being of less length than the length of the base whereby the angle of the base forms a guide for directing the pin into the passage, substantially as and for the purpose set forth.

4. A stair carpet holder comprising an angular plate adapted to be secured in the angle formed by the tread of one step and the riser of the next step, the plate being formed with an offset portion spaced apart from its angle and thereby forming a horizontally extending passage, and a member having means for extending into the passage and engaging the outer face of the carpet, substantially as and for the purpose specified.

5. A stair carpet holder comprising an angular plate adapted to be secured in the angle formed by the tread of one step and the riser of the next step, the plate being formed with an offset portion opposed to its angle forming a transverse horizontal passage, and a pin for piercing the carpet and extending into the passage, the pin having a laterally deflected portion extending through the carpet, and a head overlying the outer face of the carpet, substantially as and for the purpose described.

1,103,263. FUSEE-CAP. ROBERT M. CLARK, Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 5, 1914. Serial No. 836,544. (Cl. 102—24.)



1. An improved fusee cap composed of a fiber tube having at one end a double wall, the outer end of the double wall crimped and compressed inward into the closure at a point above or outside of the inner double wall to constitute a combined closure and depending protecting flange.

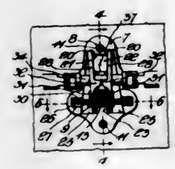
2. An improved fusee cap comprising a paper or fiber tube having a double wall at one end, the double wall crimped and compressed inward together and caused to interlock one with the other at a point above the inner end of the double wall.

3. An improved cap comprising a paper or fiber tube, a relatively short section of fiber or paper tube fitting within one end of the first said tube, both tubes crimped and compressed inward and caused to form a crimped and compressed inward closure at a point above the inner end of the short tubular section, thus forming a combined closure and protecting flange, the two tubes caused to interlock by the crimping and compressing action.

4. The method of closing the end of a fiber fusee cap tube with a depending annular flange, which consists in providing a fiber tube having at one end a double wall, simultaneously crimping inwardly the double wall of the tube at a point outside of the inner end of the double wall of the tube, and finally compressing the inwardly crimped portion of the double wall.

5. The method of closing the end of a fiber fusee cap tube with a depending annular flange, which consists in providing a fiber tube, fitting within one end thereof a relatively short fiber tube, simultaneously crimping inward the two tubes at a point outside of the inner end of the short tubular section, and finally simultaneously compressing the inwardly crimped portions of the two tubes, thus forming a combined closure and a depending protecting flange.

1,103,264. BAG-FASTENER. FISHER R. CLARKE, Stockton, Cal. Filed Nov. 18, 1913. Serial No. 801,638. (Cl. 70—2.)

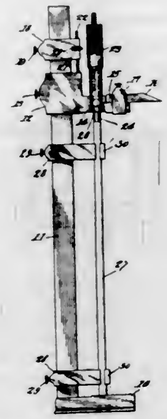


1. The combination with a keeper having an arrow head; of a casing having an opening adapted for the reception of said head and a recess extending to either side of the opening, a pair of catches movably mounted within said recess in a plane at right angles to the length of said opening and having triangular lugs at their inner sides, a spring outside each catch moving its lower end normally inward into engagement with the keeper-head, a manually rotatable shaft mounted in said casing and extending behind both said catches, and a triangular cam on the shaft adapted to be forced between said triangular lugs when the shaft is rotated.

2. The combination with a keeper having at its front end an arrow head of substantially rectangular cross section; of a casing having a rectangular opening for the reception of said head, the opening being reduced and made cylindrical at its rear end, said casing also having a recess in a plane at right angles to the length of the opening and extending to either side thereof, an upstanding lip at the bottom of this recess and rising to the bottom of said rectangular opening, a coiled ejector spring disposed within the cylindrical portion of said opening and normally resting against the rear side of said lip, a pair of catches disposed within said recess, yielding means for pressing them normally toward each other and into contact with the opposite sides of said lip forward of the ejector spring, and manually controlled means for overcoming said yielding means and spreading the catches apart, for the purpose set forth.

1,103,265. GAGE. EDWARD CORFF, Chicago, Ill. Filed Nov. 7, 1913. Serial No. 799,720. (Cl. 33—165.)

1. A gage comprising a base, a bar rising from the base, a carriage slidably mounted on the bar, said carriage having an outstanding arm, means for adjusting the carriage, a micrometer carried by the aforesaid arm, a pointer mounted on the arm and projecting therefrom, means for adjustably clamping the pointer on the arm, and a gage stem adapted to be mounted on the base in alinement with the stem of the micrometer to limit the travel of the carriage in the direction of the base.



2. A gage comprising a base, a bar rising from the base, a carriage slidably mounted on the bar, a micrometer and a pointer on the carriage, a gage stem mounted on the base parallel to the bar in alinement with the stem of the micrometer, means for adjusting the carriage in the direction of the base, and supporting members for the gage stem mounted on the bar, said members having jaws at their outer ends to engage said stem.

1,103,266. VARNISH AND PROCESS OF MAKING SAME. MICHAEL F. COUGHLIN, Stoughton, Mass., assignor to Frederic H. Kennard, Newton Center, Mass. Filed Feb. 2, 1914. Serial No. 816,043. (Cl. 134—26.)

1. A composition adapted for use as a varnish, containing kino resin, the solid constituents of waste sulfite liquor, and a common solvent for said resin and sulfite liquor constituents.

2. A composition adapted for use as a varnish, containing kino resin, the solid constituents of waste sulfite liquor, and a common solvent for said resin and sulfite liquor constituents, said solvent comprising a mixture of alcohol and water.

3. A composition adapted for use as a varnish, containing kino resin and sulfite pitch, in solution in alcohol of approximately 70 per cent. concentration.

4. A process of preparing a varnish, which consists in dissolving kino resin in alcohol of more than 70 per cent. concentration, dissolving sulfite pitch in a solvent containing less than 70 per cent. of alcohol, and combining the solutions in proportion to form a homogeneous varnish composition.

5. A process of preparing a varnish, which consists in dissolving kino resin in alcohol of more than 70 per cent. concentration, dissolving sulfite pitch in a solvent containing less than 70 per cent. of alcohol, and combining the solutions in such proportion that the resulting solvent contains approximately 70 per cent. of alcohol.

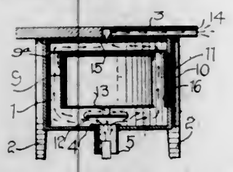
1,103,267. COMPOSITION CONTAINING SULFITE-WASTE AND SHELLAC. MICHAEL F. COUGHLIN, Stoughton, Mass., assignor to Frederic H. Kennard, Newton Center, Mass. Filed Feb. 2, 1914. Serial No. 816,044. (Cl. 134—26.)

1. The herein-described composition of matter containing shellac and the solid constituents of waste sulfite liquor.

2. The herein-described composition of matter containing shellac and the solid constituents of waste sulfite liquor, in solution in a suitable alkaline medium.

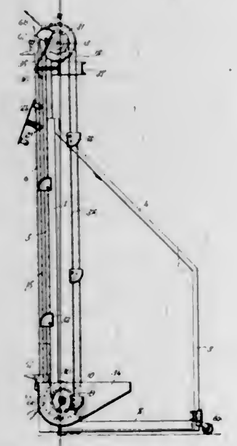
3. The herein-described composition of matter containing shellac and the solid constituents of waste sulfite liquor, in solution in a suitable medium containing ammonia.

1,103,268. DOUGH-RAISER. ELPHEGE J. B. COUPEL, Morgan City, La. Filed Jan. 17, 1914. Serial No. 812,766. (Cl. 126—282.)



A dough raiser comprising a casing, an oven arranged therein and spaced therefrom on all sides, a deflector supported from the central portion of the bottom of the oven, a draft flue depending from the bottom of the casing, a lamp supported from the casing and having its chimney disposed within the flue, a draft flue formed in the top of the casing, and an elbow communicating from the interior of the casing with the flue.

1,103,269. PLASTERING-MACHINE. JOSEPH H. COVERDILL, Indianapolis, Ind. Filed Mar. 19, 1913. Serial No. 755,481. (Cl. 72—130.)



1. A plastering machine including a frame, reciprocable trowel mechanism carried by said frame adapted to travel throughout the length thereof, means for reversing the direction of travel of the said trowel mechanism as it reaches the extremities of the said frame, conveyer mechanism carried by said frame adapted to feed the plaster on to the said trowel, and means for operating the trowel mechanism independent of the said conveyer mechanism.

2. A plastering machine including a trowel, means for moving said trowel, and means independent of the said first mentioned means for automatically shifting the position of said trowel at predetermined points during its movement.

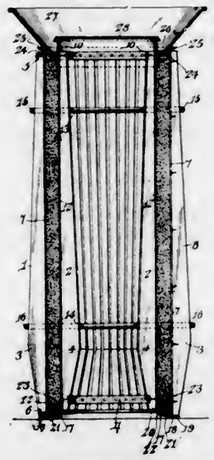
3. A plastering machine including a trowel, means for reciprocating said trowel, and means independent of said first mentioned means for automatically shifting the position of said trowel at each end of its reciprocating stroke.

4. A plastering machine including a trowel, means for reciprocating said trowel, means normally maintaining said trowel at an angle to the surface acted upon, and means automatically shifting the position of said trowel at each end of its reciprocating stroke.

5. A plastering machine including a trowel, means for reciprocating said trowel, a guide therefor, trip mechanism arranged at each end of the said guide, said mechanism being engageable with the said trowel to automatically shift the position thereof, as and for the purpose set forth.

[Claims 6 to 50 not printed in the Gazette.]

1,103,270. MOLD FOR CONCRETE PIPE. FREDERICK N. CRONHOLM, Sunnyside, Wash. Filed June 7, 1911. Serial No. 631,738. (Cl. 25—126.)



1. A mold for the manufacture of concrete pipe, comprising expansible and collapsible inner and outer members, each composed of a series of slats each tapering along the edge remote from the mold chamber, with flexible bands joining the ends of the slats of each member together, hoops adapted to the taper edges to expand the inner member and contract the outer member, and limiting means for the respective ends of the mold members, constructed to operate in opposition to the hoops.

2. A mold for manufacturing concrete pipe, comprising expansible and collapsible inner and outer members each composed of a series of slats tapering along the edges remote from the mold chamber, with flexible bands at the ends joining the slats of each member together and having their continuity broken to permit the laying out flat of the mold members, hoops adapted to the tapered edges to expand the inner member and contract the outer member, and limiting means for respective ends of the mold members constructed to operate in opposition to the hoops.

3. A mold for the manufacture of concrete pipe comprising expansible and collapsible inner and outer members, each composed of a series of slats each tapering along the edge remote from the mold chamber, with flexible bands joining the ends of the slats of each member together, hoops adapted to the taper edges to expand the inner member and contract the outer member, and limiting means for the respective ends of the mold members constructed to operate in opposition to the hoops, said limiting means comprising a basic member with shoulders for the lower ends of the respective mold members, and rings for the upper ends of the respective mold members.

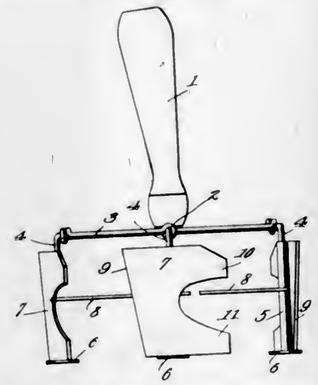
4. A mold for the manufacture of concrete pipe comprising expansible and collapsible inner and outer members, each composed of a series of slats each tapering along the edge remote from the mold chamber, with flexible bands joining the ends of the slats of each member together, hoops adapted to the taper edges to expand

the inner member and contract the outer member, and limiting means for the respective ends of the mold members constructed to operate in opposition to the hoops, said limiting means comprising a basic member with shoulders for the lower ends of the respective mold members, and rings for the upper ends of the respective mold members, the limiting ring for the upper end of the inner mold member being elongated axially to project thereabeyond and to be retained by and extend beyond the corresponding end of the molded pipe section and constitute an entering member for the bell end of a matching pipe section.

5. A mold for the manufacture of concrete pipe comprising expansible and collapsible inner and outer members each composed of a series of slats tapering along the edge remote from the mold chamber, retaining means for the respective ends of the mold members for determining the extent of expansion and contraction, hoops adapted to the tapering edges to expand the inner member and contract the outer member, a sleeve of fabric nonadherent to concrete and constructed to envelop the inner member, and another sleeve of fabric nonadherent to concrete and constructed to line the inner wall of the outer member.

[Claims 6 to 10 not printed in the Gazette.]

1,103,271. CAKE-MIXER. MINNIE CRUMP, Pineville, Ky. Filed Aug. 28, 1913. Serial No. 787,184. (Cl. 107—53.)



1. A device of this character, including a supporting frame having a plurality of depending rods, a plurality of spacing and mixing members, one carried by each rod, each of said members including a blade carried by the rod and provided with an outwardly extending scraping edge and an inwardly extending guiding portion, said inwardly extending guiding portion having two spaced terminals, and a scraping disk mounted upon the lower end of the rod.

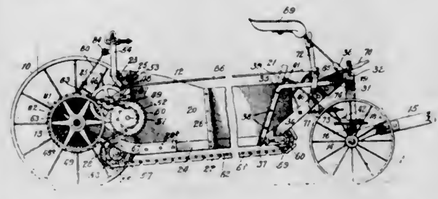
2. A device of this character, including a supporting frame having a plurality of depending rods, a plurality of scraping and mixing members, one carried by each rod, each of said members including a blade disposed exteriorly of the rod and provided with an outwardly extending scraping edge and inwardly extending guiding portion, said inwardly extending guiding portion having two spaced terminals, and a scraping disk mounted upon the lower end of the rod.

3. A device of this character, including a supporting frame having a plurality of depending rods, a plurality of scraping and mixing members, one carried by each rod, each of said members including a blade disposed exteriorly of the rod and provided with an outwardly extending scraping edge and an inwardly extending guiding portion, said inwardly extending guiding portion having two spaced terminals, a scraping disk mounted upon the lower end of the rod, and an agitating member disposed intermediate of the ends of the rod and extending inwardly out of radial alinement with the frame.

4. A device of this character, including a supporting frame having a plurality of depending rods, a plurality of scraping and mixing members, one carried by each rod, each of said members including a blade disposed exteriorly of the rod and provided with an outwardly extending scraping edge and an inwardly extending guiding portion, said inwardly extending guiding portion having two spaced terminals, a scraping disk mounted upon the lower end of the rod, an agitating member disposed intermediate of the ends of the rods and extending inwardly out of radial alinement with the frame, the latter member consisting of an ovate shaped plate with the apex disposed inwardly of the frame.

5. A device of this character, including an annulus, a plurality of radiating arms connected thereto and having each a depending rod, a handle connected centrally of the arms to rotate the device, and a plurality of scraping and mixing members, one mounted upon each depending rod, each one of said members consisting of three plates, one mounted upon the lower end of each rod, another disposed intermediate the ends of the rods and projecting toward the center of the annular member, and a vertical plate mounted upon the outer face of the rod.

1,103,272. FERTILIZER-DISTRIBUTER. CALVIN R. DAVIS, Chicago Heights, Ill., assignor, by mesne assignments, to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Oct. 2, 1911. Serial No. 652,371. (Cl. 111—40.)



1. In a fertilizer distributer, the combination of front and rear carrying-wheels, an axle for the rear wheels, a receptacle having its rear end disposed forwardly of said axle, and a rotary beater having its axis disposed forwardly of said axle, mounted to rotate about the fixed axis and disposed to discharge the material over said axle.

2. In a fertilizer distributer, the combination of the front and rear carrying-wheels, a rotary axle for the rear wheels, a receptacle having its rear end disposed forwardly of said axle, a conveyer disposed below said axle, and a rotary beater for discharging material rearwardly from the receptacle, and having its axis eccentrically disposed with respect to said axle.

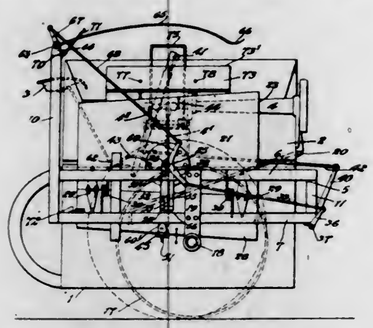
3. In a fertilizer distributer, the combination of front and rear carrying-wheels, an axle for the rear wheels, a receptacle having its rear end disposed forwardly of said axle, a beater for discharging material rearwardly from the receptacle mounted to discharge material over said axle, and having its axis disposed forwardly of said axle, and mechanism for driving the beater from one of the rear wheels.

4. In a fertilizer distributer, the combination of front and rear carrying-wheels, an axle for the rear wheels, a receptacle having its rear end disposed forwardly of said axle, the conveyer forming the bottom of the receptacle, disposed below the axle, a rotary beater for discharging material from the receptacle, having its axis eccentrically disposed with respect to said axle, and mechanism for driving the beater from one of the rear wheels.

5. In a fertilizer distributer, the combination of front and rear carrying-wheels, an axle for the rear wheels, a receptacle disposed forwardly of the axle having a bottom below said axle, and a rotary beater disposed to discharge the material over said axle and having its axis disposed forwardly of said axle.

[Claims 6 to 19 not printed in the Gazette.]

1,103,273. SHOCKING-MACHINE. CHARLES WILLIAM DAVISON, WILLIAM HERRIOT, EDGAR THOMAS SPIDY, and FRANK ADDLER MATTSON, Winnipeg, Manitoba, Canada. Filed May 9, 1913. Serial No. 766,582. (Cl. 56—121.)



1. The combination with a suitably supported substantially rectangular open ended frame, of a pair of alined stub shafts rotatably mounted in opposite sides of the frame, independent similar opposing basket forming sections permanently secured to the inner ends of the stub shafts and having their upper and lower edges spaced apart, similar gates hinged to the lower edges of the sections, springs holding the gates normally closed, a spring pressed dog carried by one of the gates and having one end extending and forming a trip rod, an eye secured to the other of the gates and normally receiving the dog thereby locking the gates closed, means for simultaneously rotating the stub shafts and upsetting the sections with attached gates and a trip carried by the frame and extending into the path of the trip rod.

2. The combination with a suitably supported substantially rectangular open ended frame of a pair of alined stub shafts rotatably mounted in opposite sides of the frame, independent similar opposing basket forming sections permanently secured to the inner ends of the stub shafts and having their upper and lower edges spaced apart, similar gates hinged to the lower edges of the sections, springs holding the gates normally closed, a spring pressed dog carried by one of the gates and having one end extending and forming a trip rod, an eye secured to the other of the gates and normally receiving the dog thereby locking the gates closed, a pair of cranks secured to the outer ends of the stub shafts, a cross shaft rotatably mounted in the front of the frame, arms extending from the cross shaft, side links connecting the arms with the cranks, means for rotating the cross shaft and thereby upsetting the sections and attaching gates and a trip carried by the frame and extending into the path of the trip rod.

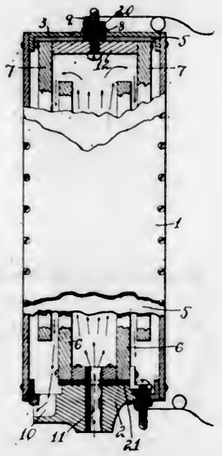
3. The combination with a suitably supported substantially rectangular open ended frame, a yoke bar carried by the frame and spanning the open end thereof, a normally horizontally disposed sheaf receiving and shock forming basket rotatably mounted in the frame and having an open top and means for dumping the basket and returning the same to the original position, of a counter shaft rotatably mounted on the yoke-bar, a pressure arm carried by the counter shaft and normally overhanging the basket and directly above the opening therein and means actuated by the dumping means for operating the counter shaft and passing the pressure arm into the basket through the opening during the dumping operation, as and for the purpose specified.

4. The combination with a suitably supported substantially rectangular open ended frame, a yoke bar secured to the frame and spanning the open end thereof, stub shafts rotatably mounted in the sides of the frame, a normally horizontally disposed sheaf receiving and shock forming basket carried by the stub shafts and having an open top and means for rotating the stub shafts to dump and return the basket to the original position, of a counter shaft rotatably mounted on the yoke-bar, a crank extending from one of the stub shafts, a crank secured to one end of the counter shaft, a link connecting the cranks, a pressure arm secured to the counter shaft and normally overhanging the basket directly above the opening and adjustable lugs carried by the yoke bar and engageable with the pressure arm, as and for the purpose specified.

5. The combination with a suitably supported rotatably mounted sheaf receiving and shock forming basket having an open top and provided on the under side with a pair of normally locked gates, of a pair of vertically disposed downwardly converging pressure rods passing through the sides of the basket and through the gates and located more or less centrally of the length of said basket, said rods having their ends enlarged to prevent their escape from the basket, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,103,274. ELECTRIC HEATER. HARRY W. DENHARD, San Francisco, Cal., assignor, by mesne assignments, to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 15, 1908, Serial No. 443,682. Renewed Nov. 9, 1912. Serial No. 730,536. (Cl. 219—39.)



1. An electric fluid heater comprising a casing having an opening at the lower end thereof, a tubular electrode open at one end, and communicating at its other end with said opening, a terminal member carried by said casing and connected with said electrode, a second tubular electrode surrounding said first electrode and spaced therefrom to provide for the flow of fluid therebetween to close the circuit across said electrodes, said second electrode being closed at the end adjacent the open end of said first electrode and a second terminal member carried by said casing and supporting said second electrode by its closed end.

2. An electric fluid heater comprising a casing, a pair of tubular electrodes therein, each open at one end and secured to opposite walls of said casing at the other end, one of said electrodes being larger than the other and partially inclosing the latter, a fluid inlet communicating with the supported end of the inner electrode and an outlet connecting with the open end of the outer electrode, whereby all the fluid to be heated is compelled to flow between said electrodes, both said inlet and said outlet being at the lower end of said casing to permit the latter to be drained of fluid, and thus open the circuit between said electrodes.

3. In an electric heater, a casing provided with an inlet and outlet at the same end thereof, an electrode forming an open-ended chamber communicating with said inlet, and a second electrode forming an open-ended chamber inclosing the open end of said first mentioned electrode and having its open end adjacent the outlet in the casing.

4. In an electric heater, a casing provided with an inlet and outlet at one end thereof, an electrode fixed to one end of said casing and forming an open ended chamber communicating with said inlet, and a second electrode fixed to the opposite end of said casing forming an open-ended chamber inclosing the open end of said first mentioned electrode and having its open end adjacent the outlet in the casing.

5. An electric fluid heater comprising a casing having an inlet and an outlet at one end of the same, an electrode demountably attached to one end of said casing and directing the fluid toward the opposite end of said casing, and a second electrode demountably attached to the opposite end of said casing and inclosing said first mentioned electrode, said second mentioned electrode directing the fluid directly to the outlet.

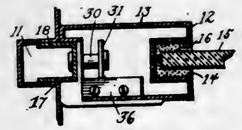
[Claims 6 to 8 not printed in the Gazette.]

1,103,275. BUCKLE. JOHN F. DUNN, New York, N. Y. Filed Nov. 11, 1910. Serial No. 591,818. (Cl. 24—194.)



In a buckle such as described, the combination with a movable clamp plate having laterally-disposed upturned cam-shaped runners; of a face plate constructed from sheet metal, having laterally-disposed upturned side flanges, said flanges being overturned to form hook-shaped loops to receive and form a bearing for said runners, and said face plate having a cross bar for fastening a belt thereto, said cross bar being spaced apart from and constructed integral with the body of the face plate and composed of two half sections extended from the raised edge of said flange toward the longitudinal median line of said face plate, to mutually receive the strain of said belt, and said face plate having on the end thereof opposite the said cross bar a curled portion to form a nosing, approximating in projection from the body of said face plate one half the space between the said cross bar and body of the face plate.

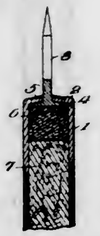
1,103,276. PIVOTED AND SLIDING WINDOW. ARVID W. ECKBERG and CARL STOHLBERG, Jamestown, N. Y. Filed Sept. 19, 1911. Serial No. 650,209. (Cl. 189—67.)



1. In a window sash construction, a jamb having a lengthwise groove therein, a sash having a lengthwise groove located opposite to the jamb groove, a strip transversely movable in said grooves, and means to actuate the strip including a pivot bolt secured to the strip, an angle piece having the pivot bolt passing through its outstanding member, guides for the base member of the angle piece to permit the latter to slide back and forth, said base member of the angle piece having a slot therein, and a cam having a wrist pin which projects into the slot of said base member.

2. In a window sash construction, a jamb having a lengthwise groove therein, a sash having a lengthwise groove therein located opposite to the jamb groove, a strip movable in said grooves, and means to actuate the strip including an angle piece which is slidable transversely with respect to said grooves, a pivot bolt connected to the outstanding member of the angle piece and to the strip, means carried by the sash to slidingly mount the base of said angle piece, and means connected to the said base of the angle piece for sliding the latter.

1,103,277. RAILWAY SIGNAL-FUSEE. JOHN W. EDMANDS, Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 5, 1914. Serial No. 836,581. (Cl. 102—24.)



1. A device of the character described, comprising a tube, the tube having an end closure, and a spike carrying clamping members engaging the inner and outer sides of the closure to clamp the spike thereto.

2. A device of the character described, comprising a fiber tube having an inwardly crimped end closure, a spike having laterally extending members engaging the inner and outer sides of the closure and clamping the spike thereto.

3. A device of the character described, comprising a tube having an end closure, a spike having a head at the inner side of the closure, the stem of the spike passing through the closure, and a washer applied to the stem of the spike and engaging the outer side of the closure to clamp the spike thereto.

4. A device of the character described, comprising a tube having an end closure, a spike having an integral laterally extending head or flange, and a washer, the two laterally named elements respectively engaging the inner and outer sides of the closure and clamping the spike thereto.

5. A device of the character described, comprising a fiber tube having an end closure, a spike having a cup-shaped head engaging one side of the closure, and a washer applied to the spike and engaging the other side of the closure, the washer held in position by engagement with the stem of the spike.

[Claims 6 and 7 not printed in the Gazette.]

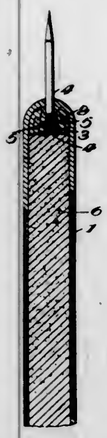
1,103,278. RAILWAY SIGNAL-FUSEE. JOHN W. EDMANDS, Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 5, 1914. Serial No. 836,582. (Cl. 102—24.)

1. A device of the character described, comprising a fiber tube having one of its end walls crimped, folded and compressed inward around and embracing the inner end of a spike.

2. A device of the character described, comprising a fiber tube having one end wall crimped and folded inward and compressed, and a spike having its inner end embedded within the crimped, folded and compressed head.

3. A device of the character described, comprising a fiber tube and a spike for one end thereof, the end wall of the tube crimped and folded inward and compressed around the inner end of the spike, the inner end of said spike provided with lateral portions also embedded in the crimped, folded and compressed head for uniting the spike thereto.

4. A device of the character described, comprising a fiber tube, a spike having a head, one end wall of the tube



crimped and folded inward and compressed around the head of the spike in uniting the latter to the tube.

1,103,279. FUSEE-CAP. JOHN W. EDMANDS, Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 5, 1914. Serial No. 836,583. (Cl. 102—24.)



1. A fusee cap comprising a fiber tube having its wall turned inward and formed into a closure for the tube, and a depending annular flange.

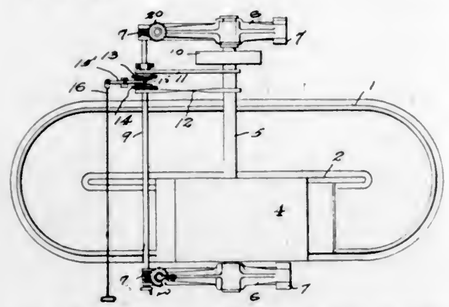
2. A fusee cap consisting of a fiber tube having an integral closure and a depending protecting flange integral with the closure.

3. A fusee cap comprising a tube having its wall crimped and folded and compressed inward to form a closure, and a portion of the closed-in wall depending from the closure into an annular protecting flange.

4. The method of closing the end of a fiber fusee cap 2 with a depending annular flange, which consists in first crimping inwardly a portion of the wall of the tube from one end thereof causing it to extend downward within the said tube, folding inward the turned-in portion at a point above the downwardly extending portion, and finally compressing the folded-in portion at a point above the end of the turned-in portion to form a closure and a depending flange.

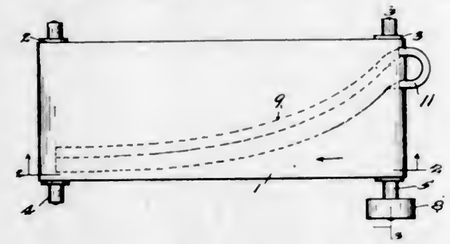
5. The method of closing the end of a fiber fusee cap with an annular flange depending from the said closure, which consists in crimping inwardly an extending end of the tube and causing it to project downwardly in the form of an annular flange, folding inward the end of the tube and the inward downwardly extending flange to form a closure, and finally subjecting the folded-in portion to pressure between inner and outer relatively rotatable and stationary members at a point above the downwardly extending inner flange.

1,103,280. BEATING-ENGINE. ROBERT S. FRAM, Vandalia, Ill. Filed Feb. 6, 1913. Serial No. 746,533. (Cl. 92—22.)



In a beating engine, the combination with its frame, drum, main shaft and pivoted shaft supporting arms, suspension means for the free ends of said arms, a countershaft and two pulleys thereon driven from the main shaft, a clutch on the countershaft, for engaging either pulley, and means actuated from the countershaft for elevating or depressing said arms.

1,103,281. MOLDING-MACHINE. THOMAS FRISCHMANN, Cleveland, Ohio. Filed Mar. 5, 1913. Serial No. 752,065. (Cl. 107—9.)

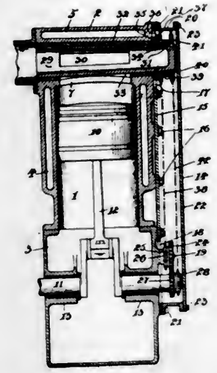


The combination with a vertically arranged endless moving belt, of a downwardly inclined open bottom trough parallel with the belt and forming a channel having a longitudinal curvature of gradually increasing radii, and a transverse concavity of gradually decreasing radii.

1,103,282. INTERNAL-COMBUSTION ENGINE. WARREN DONSON GALE, Waterville, Quebec, Canada. Filed Aug. 5, 1912. Serial No. 713,401. (Cl. 123—190.)

In an internal combustion engine, in combination, a plurality of cylinders having across the heads thereof a pair of circular valve casings extending continuously from one end cylinder to the other end cylinder and gradually diminishing in diameter from one end to the other end, said casings having inlet and exhaust ports respectively to and from the cylinders, the said heads being recessed between said chambers and having a spark plug opening at the bottom of said recesses leading into each cylinder between said ports, one of said casings at its larger end being connected to the inlet pipe and the other of said casings at its larger end being connected to the exhaust pipe, a set of tapered sleeves telescopically arranged in each of their casings and rotating in opposite directions respectively, the outer of said valves being open at both ends, and the inner of said valves being closed at the smaller end, each of said valves having external threads at the smaller ends, said smaller ends projecting beyond the cylinder, said valves having inlet and exhaust ports adapted to meet in rotation and register, a nut and lock nut on each of said outer sleeves at the smaller ends forming retaining members abutting the end

walls of said casings, a nut and lock nut on each of said inner sleeves at the smaller ends thereof abutting the smaller ends of said outer sleeves, sprocket wheels fixedly mounted on the four sleeves, a sprocket wheel fixedly mounted on the crank shaft, a chain connecting said sprocket on the crank shaft with two of the aforesaid



sprockets and auxiliary shaft gears connecting said auxiliary shaft and said crank shaft, a sprocket on said auxiliary shaft, a chain connecting said sprocket on the auxiliary shaft with the other two of the sleeve sprockets, a crank shaft, pistons operating in said cylinders and piston rods connecting said pistons to said crank shaft.

1,103,283. PROCESS FOR THE TREATMENT OF SEA-WEEDS FOR THE EXTRACTION OF THEIR ELEMENTS. MARIE PIERRE PAUL GLOESS, LÉON PIERRE JACQUES DARRASSE, and ETIENNE RAYMOND DARRASSE, Paris, France. Filed July 1, 1913. Serial No. 776,827. (Cl. 252.)

1. A process for the treatment of seaweeds for extracting the iodin, the mineral salts, the mucilaginous material and the cellulose therefrom, consisting in treating the seaweeds with non-alkaline oxidizing agent, for extracting the iodin therefrom, and then with an alkaline oxidizing agent for simultaneously extracting and transforming the mucilaginous material.

2. A process for the treatment of sea-weeds for extracting the iodin, the mineral salts, the mucilaginous material and the cellulose therefrom, consisting in treating the seaweed with a non-alkaline oxidizing agent thereby removing the iodin and the mineral salts of the sea-weeds, then treating the sea-weed with an alkaline oxidizing agent thereby dissolving the mucilaginous material and transforming it into a more viscous and detersive material, and finally obtaining the cellulose as a residual element.

1,103,284. HARROW. ALFRED A. GUERNE, Kalamazoo, Mich. Filed Feb. 7, 1914. Serial No. 817,100. (Cl. 55—3.)



1. In a harrow, the combination of three L-shaped angle bars united to form an equilateral triangle, draft eyes provided at each angle thereof, a plurality of harrow teeth secured to said angle bars and downwardly and outwardly inclined relative thereto, each tooth engaging the top edge of the angle bar and passing through an opening in the bottom thereof, eye bolts extending through openings in the upright member of the angle bar and embracing each tooth between its points of engagement with the angle bar, all coacting substantially as described for the purpose specified.

2. In a harrow, the combination of three L-shaped angle bars in the form of an equilateral triangle, draft eyes provided at each angle thereof, and a plurality of harrow teeth releasably secured to said angle bars and downwardly and outwardly inclined relative thereto, all coacting substantially as described for the purpose specified.

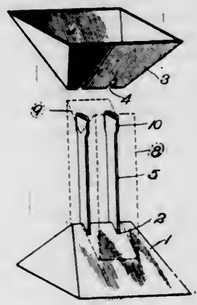
3. In a harrow, the combination of three bars united to form an equilateral triangle, draft eyes provided at each angle thereof and a plurality of harrow teeth releasably secured to said bars and downwardly and outwardly inclined relative thereto, all coacting substantially as described for the purpose specified.

1,103,285. ELECTRICAL INSULATING COMPOUND. THOMAS JEFFERSON HADLEY, Winnipeg, Manitoba, Canada. Filed Sept. 29, 1913. Serial No. 792,497. (Cl. 106—15.)

1. An electrical insulating compound consisting of coal tar eight gallons, kerosene oil two gallons, Portland cement two gallons and Japan drier one gallon.

2. An electrical insulating compound comprising coal tar 8 gallons, kerosene oil two gallons, Portland cement two gallons and Japan drier.

1,103,286. DISPLAY-PEDESTAL. HERBERT I. HALLETT, Kansas City, Mo. Filed Oct. 17, 1913. Serial No. 795,658. (Cl. 211—24.)



1. A display pedestal comprising slotted base and top members, a hollow standard mounted on the base and supporting the top member, a tie member extending through said standard and through the slots in the base and top, and foldable wings integral with the tie member and adapted for expansion to engage the base and top and lock the parts together.

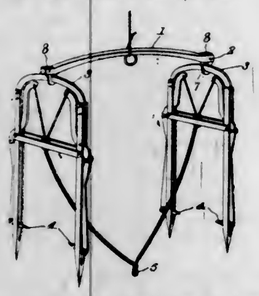
2. A display pedestal comprising hollow base and top members, having slots in their facing sides, a hollow standard mounted on the base and supporting the top, a tie member extending through the standard and having headed ends comprising wings adapted to fold to pass through the base and top slots and for expansion to lock the parts together.

3. The combination with pyramidal base and cap members, each having a transverse slot in its apex, of a standard having a V-shaped recess at each end for receiving the apex of the base or cap, and tie members having transverse wings at its ends adapted to fold upon the body of the member or to project laterally into contact with the inner surface of the base or cap, substantially as set forth.

4. The combination with pyramidal base and cap members, each having a transverse slot in its apex, of a standard having a V-shaped recess at each end for receiving the apex of the base or cap, tie members having transverse wings at its ends adapted to fold upon the body of the member or to project laterally into contact with the inner

surface of the base or cap, and diagonal brace members attached to said paired head portions, substantially as set forth.

1,103,287. HAY-FORK. JULIUS HEUSSER, Monroe, Wis. Filed Apr. 13, 1914. Serial No. 831,548. (Cl. 57—41.)

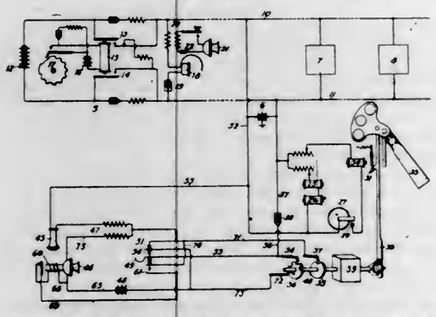


1. In a hay fork, the combination of a head piece or bar provided at its ends with hooks, and a fork suspended from each hook, and adapted to contact with one of the members of the hook so that movement of the one fork toward the other is positively prevented.

2. In a hay fork, the combination of a head piece or bar provided at its ends with hooks, and a fork suspended from each hook, the members of each hook being separated to a greater extent at the open end than at the opposite, closed, end, and one of said members acting as a positive stop to movement of the engaged fork in a direction toward the other fork.

3. In a hay fork, the combination of a head piece or bar provided at its ends with hooks, and a fork suspended from each hook, the latter each having one member extending substantially at right angles to the cross head, the hooks and head piece being so related that movement of either fork toward the other is prevented by contact of the fork with the substantially vertical member of its supporting hook.

1,103,288. SELECTIVE SIGNALING SYSTEM. RALPH N. HILL, Montclair, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 21, 1912. Serial No. 685,244. (Cl. 179—89.)

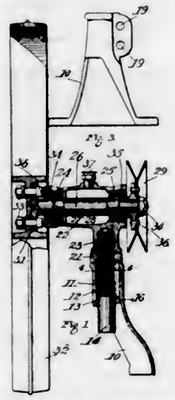


1. In a signaling system the combination with a pair of line wires, of a signal-transmitting station connected therewith, a signal-receiving station connected with said line wires, a telephone transmitter at said signal receiving station adapted to be operatively associated with said line wires, vibrating means mechanically connected with said transmitter, and means at said transmitting station for receiving a signal resulting from the operation of said vibrating means.

2. In a signaling system the combination with a pair of line wires, of a signal-transmitting station connected therewith, a signal-receiving station connected therewith, a telephone transmitter at said signal-receiving station adapted to be operatively associated with said line wires, an electromagnetic vibrator mechanically connected with said transmitter, and signal-receiving means at said transmitting station operatively connected with said line wires.

3. In a selective signaling system the combination with a pair of line wires having a transmitting station and a way station connected therewith, a selective signaling device at said waystation, a telephone set at said way station including a transmitter and a local battery adapted to be operatively associated with said line wires, an electromagnetic vibrator having a resonant connection with said transmitter, a circuit for said electromagnetic vibrator including said local battery, circuit-closing means therefor controlled by said selector, and signal-receiving means at said transmitting station in circuit to receive a signal resulting from the operation of said electromagnetic vibrator.

1,103,289. ADJUSTABLE BEARING-BOX FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 5, 1912. Serial No. 713,328. (Cl. 64—52.)

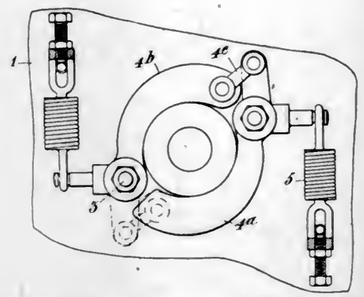


1. In a motor vehicle, the combination of a bracket, a bearing member carried by said bracket, means for adjusting said bearing member on said bracket and comprising a spindle secured to said bearing member and arranged in an opening in said bracket, means for moving said spindle in the direction of its axis, a split sleeve surrounding said spindle and supported directly by said bracket, and a key supported by said sleeve and adapted to prevent said spindle from turning in said bracket.

2. In a motor vehicle, the combination of a support having a hollow cylindrical portion, a bearing member supported by said bracket, and means for adjusting said bearing member relative to the bracket and comprising a threaded spindle secured to the bearing member and extending through the opening in the cylindrical portion of said bracket, a nut on said spindle and engaging one end of the cylindrical portion of the bracket, a split sleeve arranged on the interior of the cylindrical portion of the bracket and supported directly by the bracket, and a key engaging said spindle and said bracket and adapted to hold the spindle against rotation, said sleeve having means adapted to engage one end of the key and support the latter.

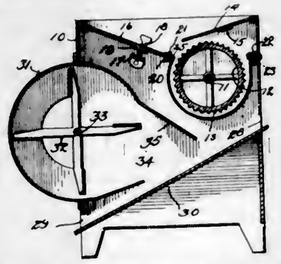
1,103,290. GOVERNING DEVICE FOR EXPLOSION OR COMBUSTION MOTORS. CARL ALRIK HULT and OSCAR WALFRID HULT, Stockholm, Sweden. Filed Nov. 23, 1912. Serial No. 733,068. (Cl. 123—140.)

1. A governing device for combustion motors, embodying therein a motor and a pump for supplying motive fluid thereto, a plurality of spring controlled weights carried by a rapidly moving part of the motor, means for operating said pump connected with said weights, and means for interconnecting said weights whereby the outward tendency of one weight occasioned by operation of the pump is transmitted in a substantially straight line to the other weight.



2. A governing device for combustion motors, embodying therein a motor and a pump for supplying motive fluid thereto, a pair of weights each pivotally mounted on the fly wheel of the motor, springs for limiting the centrifugal movement of said weights, means for actuating said pump connected with said weights, and a connection between said weights whereby the tendency of one weight to move as the result of actuation of said pump is transmitted in a substantially straight line to the pivot of the other weight and such tendency is thus counteracted.

1,103,291. PEANUT-SHELLING MACHINE. JOHN T. HUSTON, Henderson, Tex. Filed Dec. 1, 1913. Serial No. 804,005. (Cl. 130—30.)

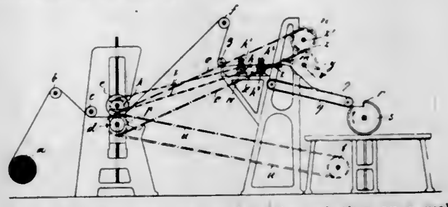


1. In a nut shelling machine, a corrugated cylinder, pivotally mounted and oppositely extending feed boards, means for adjusting one of the feed boards, and a concave having one end removably secured to the adjustable feed board, and the other end removably supported on the housing.

2. In a nut shelling machine, a housing, a longitudinally corrugated cylinder mounted in the housing, a swinging adjustable feed board mounted in the housing and having one of its ends arranged adjacent the cylinder, headed fastening devices carried by the end of said feed board, headed devices mounted on the housing at the opposite side of the cylinder, and a foraminous concave disposed under and spaced from the lower portion of the cylinder, one end of the concave having a lateral flange provided with openings for the reception of the fastening devices of the feed board, the opposite end of the concave having openings for receiving the heads of the other fastening devices.

1,103,292. CUTTING DEVICE FOR PRINTING-MACHINES. JOSEF JACOBS, Buisdorf, and AUGUST NEFGEN, Siegburg, near Cologne, Germany; said Jacobs assignor to said Nefgen. Filed Nov. 9, 1911. Serial No. 659,318. (Cl. 101—117.)

1. In a rotary printing machine for printing on a web of paper supplied from a supply roll, the combination with an exchangeable printing cylinder and an impression cylinder frictionally driven the one from the other; of a rotary cutter for cutting the printing web into sheets of a length corresponding to the size of printing cylinder and means for driving the rotatable cutter from said printing cylinder at the same angular velocity as the printing cylinder, whereby, when the printing cylinder is exchanged and without necessitating any change in gearing, the length of sheet cut by said cutter will be automatically and correspondingly varied.



2. In a rotary printing machine for printing on a web of paper supplied from a supply roll, the combination with an exchangeable printing cylinder and an impression cylinder frictionally driven the one from the other; of a rotary cutter for cutting the printed web into sheets of a length corresponding to the size of printing cylinder, means for driving the rotatable cutter from said printing cylinder at the same angular velocity as the printing cylinder, whereby, when the printing cylinder is exchanged and without necessitating any change in gearing, the length of sheet cut by said cutter will be automatically and correspondingly varied, tension rollers intermediate said cylinders and cutter and driving mechanism for rotating said tension rollers from said impression cylinder at a somewhat greater surface speed than the printing cylinder.

3. In a printing machine for printing on a web of paper supplied from a supply roll, the combination with a guide roller and a printing roller for printing one side of the paper, of tension rollers, a table over which the paper passes from the tension rollers, an endless conveyer, means coacting with the table for cutting the paper into sheets and delivering said sheets directly onto the conveyer, and a second printing roller onto which the sheet of paper is delivered from said conveyer for printing its other side.

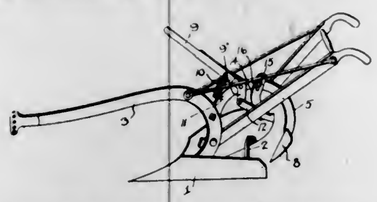
4. In a rotary printing machine for printing on one side of a web of paper supplied from a supply roll, the combination with an exchangeable printing cylinder and an impression cylinder frictionally driven the one from the other; of a rotary cutter for cutting the printed web into sheets of a length corresponding to the size of printing cylinder, means for driving the rotatable cutter from said cylinders at the same angular velocity as the printing cylinder, whereby, when the printing cylinder is exchanged, the length of sheet cut by said cutter will be automatically and correspondingly varied, a conveyer to which the sheets are supplied, a second printing cylinder to which the sheets are delivered from said conveyer for printing the other side thereof, and mechanism for rotating said second printing cylinder from the first mentioned printing cylinder.

1,103,293. SUBSOILER PLOW ATTACHMENT. CHRISTIAN J. JENSEN, Preston, Idaho. Filed June 7, 1912. Serial No. 702,368. (Cl. 97—32.)

1. A subsoiler attachment for plows comprising a curved beam having a shovel at one end and attaching means at the other, a hook for engaging a portion of a plow for locking the attachment in operative position, and means for releasing said hook.

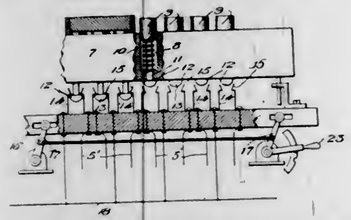
2. A subsoiler attachment for plows comprising a beam having a shovel mounted thereon, a hook pivotally mounted on said beam for engaging a portion of a plow to hold the attachment in operative position, a hook operating lever fulcrumed on said beam and links connecting said lever and hook.

3. A subsoiler attachment for plows comprising a beam having a shovel thereon, a hook pivotally mounted on said beam for engaging a portion of a plow to hold the attachment in operative position, a lever fulcrumed on said beam, links connecting said lever and hook and resilient means for connecting said lever to said beam.



4. A subsoiler attachment for plows comprising a semicircular beam having a shovel at one end and a clevis at the other, a bell crank lever fulcrumed on said beam near its clevis end, resilient means in advance of the lever and connected with the beam and lever, a hook pivotally and adjustably mounted on said beam at the rear of said lever for engaging a portion of a plow for holding said attachment in operative position, and links adjustably connecting said hook and lever.

1,103,294. ELECTRIC SIGN. LENORA H. JONES and LEROY MICHENER JONES, Wichita, Kans. Filed Jan. 29, 1912. Serial No. 674,174. (Cl. 177—350.)



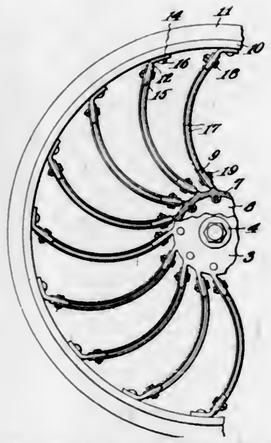
1. An electric sign comprising a plurality of electric lamps grouped closely together, a keyboard having a plurality of switches similarly grouped and each connected with its corresponding lamp, a removable form for depressing the necessary switches to cause the lamps to display a predetermined character, and a flange along one edge of said form to accurately aline the same.

2. An electric sign comprising rows of electric lamps grouped closely together, a keyboard having rows of push buttons grouped closely together and projecting above said keyboard, contacts controlled by each push button in each row, said contacts being electrically connected with the corresponding lamp in the corresponding row, removable forms of flat material to depress the necessary push buttons to cause the lamps to reproduce a predetermined character, and a flange along one edge of each form to enter between two rows of push buttons and accurately aline said form.

3. An electric sign comprising a plurality of electric lamps grouped closely together, a keyboard having a plurality of switches similarly grouped and each connected with its corresponding lamp, a removable form for depressing the necessary switches to cause the lamps to display a predetermined character, a plurality of studs on said form grouped similarly to said switches, and pegs adapted to be detachably secured to said studs in any desired arrangement, and each adapted to close a given switch when said form is applied to said keyboard.

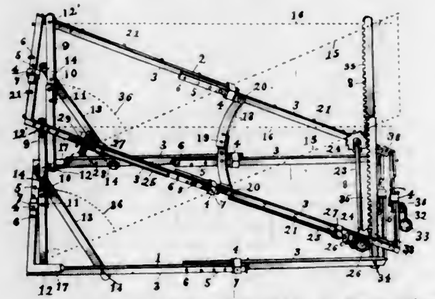
4. The combination with a keyboard having a bank of push buttons, of a sub-base, contacts on said sub-base coöperating with said push buttons, a bank of electric lamps arranged in a manner similar to the push buttons, each lamp being electrically connected with the contacts which coöperate with a predetermined push button, means for raising and lowering said sub-base, and means whereby, when said sub-base is in its raised position, said contacts can engage with and lock any push button which is depressed, all of the so-locked buttons being released when said sub-base is lowered.

1,103,295. SPRING-WHEEL. THOMAS N. JORDAN, Long Beach, Miss. Filed Dec. 2, 1913. Serial No. 804,230. (Cl. 152—50.)



In a spring wheel, a rim provided with a lug; a hub provided with a lug, the lug of the hub and the lug of the rim extending in a common direction, circumferentially of the wheel, and defining an angle with respect to each other; and parallel spokes secured to the opposite faces of the lugs, the spokes being alined, circumferentially of the wheel, and being arched, circumferentially of the wheel.

1,103,296. COT FOR INVALIDS. JESSE H. KINDRICK, Valley Center, Kans., assignor of one-half to C. B. Siler, Valley Center, Kans. Filed Aug. 28, 1913. Serial No. 787,113. (Cl. 5—12.)

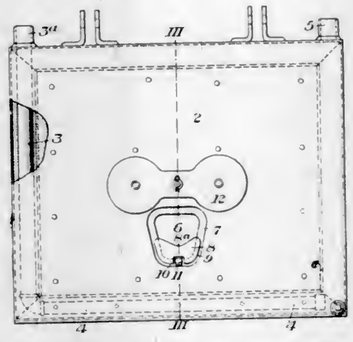


1. In a cot for invalids substantially in two sections, each section being composed of a plurality of sub-sections, means for adjusting said sections whereby the cot may be expanded or contracted, arms in two sections pivotally connecting the first named sections together, means to make said arms rigid, and a brace to make said arms rigid with the lower section, arms having cogs thereon pivotally connected to the lower section, an arbor journaled transversely in the upper section, spur-wheels mounted upon said arbor to engage the cogs on the aforesaid arms, and means for rotating said spur-wheels to position the free end of the upper section in any desired position and means to hold the cogs on the said arm in contact with the spur-wheels.

2. In a cot for invalids substantially in two sections, each section being composed of a plurality of sub sections, means for adjusting said sections whereby the cot may be expanded or contracted, arms in two sections pivotally connecting the first named sections together, means to make said arms rigid, and a brace to make said arms rigid with the lower section, arms having cogs thereon pivotally connected to the lower section, an arbor journaled transversely in the upper section, spur-wheels mounted upon said arbor to engage the cogs on the aforesaid arms, and means for rotating said spur-wheels to position the free end of the upper section in any desired position and means to hold the cogs on the said arm in contact with the spur-wheels, a sheave affixed to the free end of the upper section and a rope to play over said sheave, a weight affixed to said rope.

3. In a cot for invalids substantially in two sections, each section being composed of a plurality of sub sections, means for adjusting said sections whereby the cot may be expanded or contracted, arms in two sections pivotally connecting the first named sections together, means to make said arms rigid, and a brace to make said arms rigid with the lower section, arms having cogs thereon pivotally connected to the lower section, an arbor journaled transversely in the upper section, spur-wheels mounted upon said arbor to engage the cogs on the aforesaid arms, and means for rotating said spur-wheels to position the free end of the upper section in any desired position and means to hold the cogs on the said arm in contact with the spur-wheels, a sheave affixed to the free end of the upper section and a rope to play over said sheave, a weight affixed to said rope, a reticulated fabric stretched over the top section, and means for adjustably affixing it to said section, and means for preventing said section from contracting when weight is applied to the fabric.

1,103,297. FURNACE-DOOR. LUTHER L. KNOX, Niles, Ohio, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 19, 1912. Serial No. 715,726. (Cl. 75—132.)



1. A furnace door having a poke opening therethrough and a protecting member removably seated in said opening, said member comprising a metal body which extends across and fills the lower portion of said opening, the side portions of said body also extending upwardly above its central portion and along the side walls of said opening, substantially as described.

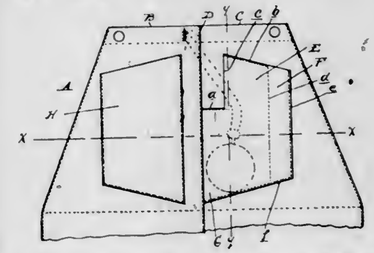
2. A hollow water-cooled furnace door having a poke opening therethrough, and a protecting member removably seated in the lower portion of said opening, said member forming a rest for a poker or the like, and also having side portions which extend upwardly above said recess and protect the lower portion of the side walls of said opening, substantially as described.

3. The combination with a furnace door having a poke opening therethrough, of a removable member seated in the lower portion of said opening, said member having a flange at its outer end which abuts the outer surface of the door adjacent to the opening, substantially as described.

4. A sheet metal water-cooled furnace door having a poke opening therethrough, said opening having its walls formed with a double bevel, and a protecting member seated on the lower wall of said opening and having a V-shaped groove therein to fit the double bevel of said wall; substantially as described.

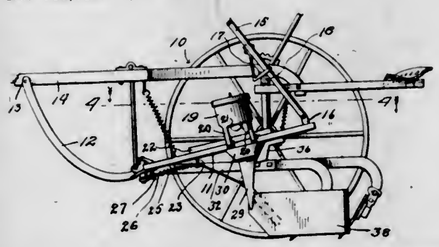
5. The combination with a furnace door having a poke opening therethrough, said opening being of less transverse width at its lower portion than at its upper portion, of a protecting member of wedge shape seated in the lower portion of said opening and forming a rest for a poker or the like, said member and the lower portion of the opening having interfitting portions which prevent endwise movement of the member in the opening, and said member being insertible into and removable from the upper portion of said opening when turned into an endwise position, substantially as described.

1,103,298. SAFETY-POCKET. OSCAR E. KRATZ, Detroit, Mich., assignor to Hamilton Carhartt, manufacturer, Detroit, Mich., a Corporation of Michigan. Filed Mar. 11, 1911. Serial No. 613,782. (Cl. 2—154.)



A safety pocket for garments comprising a patch of trapezoidal form secured to the garment with its long side extending vertically of the garment, the longer of said sides having a portion cut away where it joins the upper end whereby the upper portion of the pocket is offset inwardly from the lower portion thereof, stitching connecting the top and back edges of the patch to the garment, stitching connecting the lower portion of the front edge of the patch to the garment, a horizontal row of stitching connecting the patch to the garment and extending inwardly from the top of the lower portion of the longer edge of the patch to the bottom of the inwardly offset portion of said longer edge, said inwardly offset portion being disconnected from the garment to provide an opening directly into the pocket, and a row of stitching connecting the bottom edge of the patch.

1,103,299. CORN-PLANTER. PETER H. KROGER, Jr., Wessington Springs, S. D. Filed Apr. 25, 1913. Serial No. 763,635. (Cl. 111—6.)

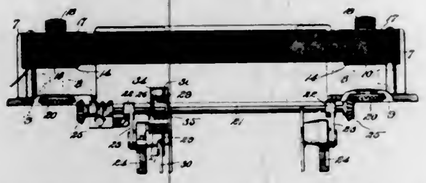


1. A planter including a hopper, sliding bars formed with respective ports disposed in operative relation with said hopper and forming a valve, a conical ground engaging seed delivery spout pivoted on said valve, a piv-

oted door forming the rear wall of said spout and weighted at the upper end whereby the door is normally rocked inwardly at the lower end to seal the delivery opening of said spout, a stop carried by said valve adapted to impinge against the upper end of said door at each rearward swinging movement of said spout and open the door with a resultant discharge of seed from said spout, and means operatively connecting said spout to said valve whereby swinging movement of said spout serves to operate said valve.

2. A planter including an upper and a lower straight bar slidably bearing one upon the other and provided with respective ports normally in registration with each other, a pin carried by the upper bar slidably projecting through a slot in the lower bar, a conical ground engaging seed delivery spout pivoted on the lower bar below its port and operatively connected to said pin whereby rearward swinging movement of said spout serves to move said upper bar and dispose its port out of registration with the port of the lower bar, a hopper adapted to register with the port in the upper bar when the latter is actuated to its limit of movement by said spout, a spring connected to said pin and to said lower bar for returning said spout and said upper bar to normal position after each operation, a pivoted door forming the rear wall of said spout and weighted at the upper end whereby the door is normally rocked inwardly at the lower end to seal the delivery opening of said spout, and a stop carried by said lower bar adapted to impinge against the upper end of said door at each rearward swinging movement of said spout with a resultant discharge of seed from the spout.

1,103,300. ADDING AND RECORDING MACHINE. HARRY LANDSIEDEL, Poplar Bluff, Mo., assignor to Dalton Adding Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 1, 1912. Serial No. 674,758. (Cl. 197—162.)



1. The combination with two spool shafts, of a drive shaft, a ratchet wheel on said drive shaft, means for actuating said ratchet wheel effectively to rotate said drive shaft, means preventing said ratchet wheel from moving laterally with said drive shaft, means on one side of said ratchet wheel whereby said wheel will actuate said drive shaft laterally in one direction under predetermined conditions, and means on the other side of said ratchet wheel whereby said wheel will actuate said drive shaft laterally in the opposite direction under predetermined conditions.

2. The combination with two spool shafts, and a pinion on each of said shafts, of a drive shaft, pinions on said drive shaft adapted to mesh with the pinions of said spool shaft alternately, a ratchet wheel mounted on said drive shaft, means for actuating said ratchet wheel effectively to rotate said drive shaft, cams attached to and controlled by said ratchet wheel, projections on said shaft arranged to be engaged by said cams to move said shaft laterally as required to mesh the pinions thereon alternately with the pinions on said spool shafts, and means preventing said ratchet wheel from moving laterally with said drive shaft.

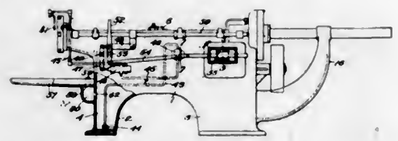
3. The combination with two spool shafts, and a pinion on each of said shafts, of a drive shaft, pinions on said drive shaft adapted to mesh with the pinions on said spool shafts alternately, a ratchet wheel mounted on said drive shaft, means for actuating said ratchet wheel effectively to rotate said drive shaft, projections on said drive shaft, cams on said ratchet wheel arranged to engage said projections effectively to shift said drive shaft laterally thereby meshing the pinions on said drive shaft alternately with the pinions on said spool shafts, and means preventing said ratchet wheel from moving laterally when said shaft is shifted as aforesaid, substantially as specified.

4. The combination with two spool shafts, and a pinion on each of said shafts, of a drive shaft, pinions on said drive shaft adapted to mesh with the pinions on said spool shafts alternately, a ratchet wheel mounted on said drive shaft, means for actuating said ratchet wheel effectively to rotate said drive shaft, a projection on said shaft at each side of said wheel and means actuated by said ratchet wheel to engage said projections to shift said drive shaft laterally to mesh the pinions thereon alternately with the pinions on said spool shaft, substantially as specified.

5. The combination with two spool shafts, and a beveled pinion on each of said shafts, of a drive shaft, beveled pinions on said drive shaft adapted to mesh with the pinions on said spool shafts alternately and thereby positively rotate said spool shafts, a ratchet wheel mounted on said drive shaft, means for actuating said ratchet wheel effectively to rotate said drive shaft, a device preventing said drive shaft from being moved laterally by the resistance of the spool shafts, and cams on opposite sides of said ratchet wheel actuated by said ratchet wheel for moving said drive shaft laterally against the resistance of said device effectively to mesh the pinions on said drive shaft alternately with the pinions on said spool shafts.

[Claims 6 to 11 not printed in the Gazette.]

1,103,301. LUBRICATING MECHANISM. RALPH R. Lapointe, Hudson, Mass., assignor to Lapointe Machine Tool Co., Hudson, Mass., a Corporation of Maine. Original application filed Nov. 14, 1911, Serial No. 660,235. Divided and this application filed Feb. 28, 1912. Serial No. 680,429. (Cl. 184—6.)



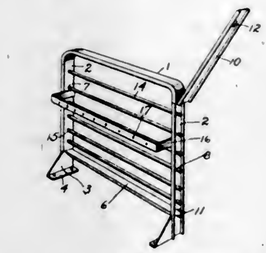
1. An apparatus of the kind described, comprising a support, an operating part carried thereon for movement in an operative direction and for return movement, reversible driving gearing connected to operate said part, lubricating mechanism connected with said gearing, and controlling means therefor arranged to deliver lubricant upon said operating parts on the operative movement thereof and to shut off the same on the return movement.

2. An apparatus of the kind described, comprising a support, driving means for imparting forward operative movements and return movements to a tool guided on said support, lubricating means and controlling means therefor connected for timed operation relative to said driving means to deliver lubricant on the forward operative movements of the tool and to shut off the supply thereof on the return movements.

3. Apparatus of the kind described, comprising a support, an operating part carried thereon for movement in an operative direction and for return movement, reversible driving gearing connected to operate said part including a shiftable clutch, a part of said gearing being formed and arranged to act as a pump with oil delivery connections to an operative point, and interconnected means for operating said clutch and for controlling said oil delivery connections whereby lubricant is delivered upon the operating parts on the operative movement thereof and shut off on the return movement.

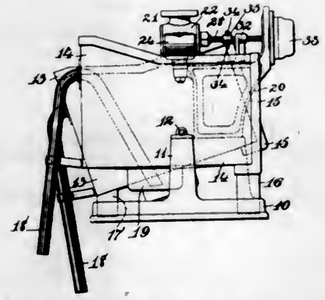
4. Apparatus of the kind described, comprising a support, an operating part carried thereon for movement in an operative direction and for return movement, mechanism for moving said operating part consisting in two trains of gearing adapted to drive the operating part in opposite directions with a slidable clutch arranged to selectively engage said trains to render them operative, one of said trains being formed and arranged with oil delivery connections to serve as a pump, and common controlling means for said clutch and for said connections whereby upon movement in one direction the operating part is moved in an operative direction and supplied with oil, and upon movement in another direction the operating part is returned and the supply of oil shut off.

1,103,302. SPOOL-RACK. WILLIAM J. LARIMER, Kansas City, Kans., assignor of one-half to Joseph C. Cutler, Kansas City, Kans. Filed Mar. 8, 1913. Serial No. 752,808. (Cl. 242—139.)



In a spool rack, a frame comprising a base and integral supporting racks, one having spaced key sockets and the other comprising an inner wall having apertures in alinement with the key sockets in the opposite rack, and having an outer wall section hingedly mounted on the frame and adapted for covering the outer face of the apertured wall, and rods adapted for projection through the apertures in said inner wall and having key ends for fitting within said key sockets.

1,103,303. LIQUID-WEIGHING DEVICE. WENZEL LEINERT, New York, N. Y. Filed Apr. 26, 1913. Serial No. 763,697. (Cl. 73—169.)



1. A liquid weigher consisting of a pair of tilting tanks, the tanks being unbalanced and having means for emptying them when they are tilted, a valve casing having spouts extending to both tanks, a rocking rod extending from the valve casing, arms on the rod and in the path of the tanks when they tilt, and a valve mechanism in the casing and acting to alternately close the spouts as the rod is rocked.

2. A liquid weigher consisting of a pair of tilting tanks, the tanks being unbalanced and having means for emptying them when they are tilted, a valve casing mounted above the space between the tanks, a pair of spouts projecting from the sides of the casing, means in the casing for alternately shutting off the spout, the casing having an inlet, a rocking rod connected to the last-mentioned means, and arms projecting from the rod and in the path of the tilting tanks.

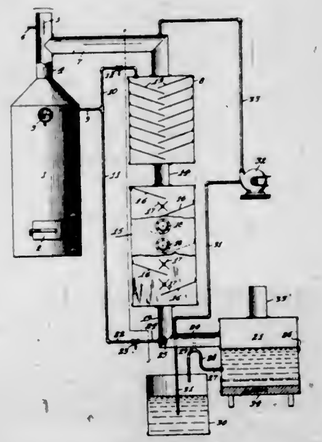
3. A liquid weigher consisting of a pair of tilting tanks, the tanks being unbalanced and having means for emptying them when they are tilted, a valve casing having oppositely projecting spouts, means in the casing for shutting off each spout alternately, said means consisting of a shut-off for the major portion and a shut-off for the less portion of the spout, floats suspended in each tank, means connecting each float with the shut-off for the major portion, and means for shutting off the less portion by each tank when it tilts.

4. A liquid weigher consisting of a pair of tilting tanks, the tanks being unbalanced and having means for emptying them when they are tilted, a valve casing having a pair of spouts, each to feed a tank, a ring in the casing to shut off part of each spout, a second ring to shut off the remainder of each spout, a weight to hold the first ring in its shut-off positions, floats in the tanks, means for actuating the first ring and its weight alternately by the floats, a rocking rod actuating the second ring, and arms on the rod and in the path of the tilting tanks.

5. A liquid weigher consisting of a pair of tilting tanks, the tanks being unbalanced and having means for emptying them when they are tilted, a valve casing having a pair of spouts, each to feed a tank, a ring in the casing to shut off part of each spout, a second ring to shut off the remainder of each spout, a weight to hold the first ring in its shut-off positions, floats in the tanks, a rod on the ring, arms on the rod, means for suspending the floats, arms on the suspending means and adapted to lift the arms on the rod, a rocking rod on the second ring, arms on the rocking rod, the last-mentioned arms extending in the paths of the tanks when they tilt.

[Claims 6 to 9 not printed in the Gazette.]

1,103,304. SMOKE-PRECIPITATOR. CYRENUS W. LENT, Byron, Cal. Filed May 26, 1913. Serial No. 769,836. (Cl. 110—142.)



1. An apparatus for the precipitation of smoke comprising in combination a steam generator, a furnace therefor, a flue extending away from said furnace, a smoke precipitating chamber having a plurality of baffle plates therein, means to deliver a stream of water upon said baffle plates, pipe connections to deliver steam into said chamber and to induce a gas current therethrough, a sludge tank into which the water, steam and smoke are discharged, and a pipe to discharge the water from said

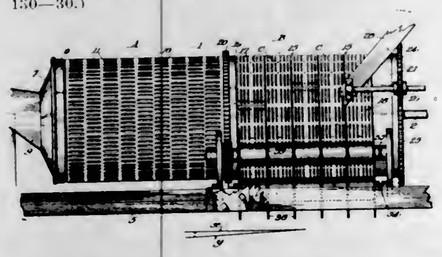
sludge tank to a tank from which the water is pumped to the smoke precipitation chamber, substantially as described.

2. In a smoke precipitation apparatus, the combination of a steam generator, a furnace, a flue leading from the furnace to a smoke precipitation chamber, a plurality of overlapping inclined baffle plates in said chamber, means to deliver a stream of water upon said baffle plates, a second smoke precipitation chamber with which the first chamber communicates, inclined baffle plates and revoluble wheels in said second chamber to mix the smoke and water passing therethrough, a sludge tank, pipe connections from the steam generator for supplying the first smoke precipitation chamber with steam and for inducing the movement of smoke through both of said precipitation chambers and into the sludge tank, and means to return the water from the sludge tank to the smoke precipitation chambers for reuse, substantially as described.

3. A smoke precipitation apparatus comprising the combination of a steam generator, a furnace, a flue leading from the furnace and connected with a smoke precipitation chamber, a plurality of overlapping baffle plates therein, a chamber adapted to deliver a stream of water into the top of said smoke precipitation chamber, and upon said baffle plates, a second precipitation chamber having a plurality of inclined baffle plates therein, revoluble paddle wheels under the lower edges of the baffle plates and in the second precipitation chamber and capable of being rotated by the water passing over the edges of said baffle plates, steam connections for supplying the smoke precipitation chambers with steam for inducing the movement of smoke and gas therethrough, and a sludge tank into which the water and smoke are discharged, substantially as described.

4. In an apparatus for the precipitation of smoke, the combination of a steam generator, a furnace, a flue leading from said furnace, a smoke precipitation chamber with which said flue is connected, a plurality of oppositely disposed, overlapping inclined baffle plates in said chamber, a pump for discharging water into the top of said chamber and upon said baffle plates, a steam pipe for delivering steam into the top of said precipitation chamber, a second chamber connected with the first one and having a series of oppositely inclined baffle plates therein, a plurality of paddle wheels in said second chamber, each adapted to be rotated by the water passing off the several baffle plates, a sludge tank, a pipe connecting the second smoke precipitation chamber with the sludge tank, and a steam spray nozzle in said pipe to induce the travel of smoke and gases through said chambers, substantially as described.

1,103,305. ROTARY PEANUT-STEMMER. THOMAS M. LILLISTON, Suffolk, Va., assignor to National Machine Corporation, Nansemond, Va., a Corporation of Virginia. Filed Jan. 9, 1914. Serial No. 811,214. (Cl. 130—30.)



1. In a peanut stemmer in combination, a rotary drum including a portion provided with elongated openings substantially parallel to the axis of the drum adapted to arrange the nuts longitudinally in the drum when said drum is rotated, and a stemming portion comprising short cylinders spaced apart to form circumferential slots, stemming saws extending through said circumferential slots into the interior of said drum, means to rotate the drum, means to rotate said saws, and means for supplying peanuts to said drum, said parts being adapted and arranged to cause said peanuts within the drum to be discharged therefrom.

2. In a peanut stemmer in combination, a rotary drum including a portion adapted to arrange the peanuts lengthwise in the drum prior to their arriving at the stemming mechanism, and a stemming portion comprising short cylinders spaced apart to form circumferential slots, stemming saws extending through the slots into the interior of the drum, and an inlet chute for supplying peanuts to the drum, said parts being adapted and arranged to cause the peanuts within the drum to be discharged therefrom.

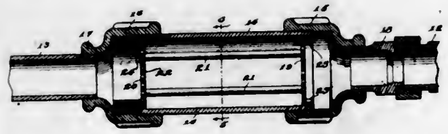
3. In a peanut stemmer in combination, a rotary stemming drum comprising a plurality of short cylinders spaced apart to form circumferential slots, the periphery of each cylinder being provided with a plurality of elongated openings having their major dimension parallel to said circumferential slots, stemming saws extending through said slots into the interior of said drum, means to rotate said stemming saws when said drum is rotated, and means for introducing peanuts into said drum, said parts being constructed and arranged for causing peanuts to be discharged from said drum.

4. In a peanut stemmer in combination, a rotary drum including a sieve portion provided with elongated openings substantially parallel to the axis of the drum adapted to arrange the nuts longitudinally in the drum, and a stemming portion comprising short cylinders spaced apart to form circumferential slots, a plurality of stemming saws extending through each slot into the interior of the stemming portion, and means to supply peanuts to the drum, said parts being adapted and arranged to cause peanuts to be discharged from the drum.

5. In a peanut stemmer in combination, a rotary drum including short cylinders spaced apart to form circumferential slots, means to rotate said drum, stemming saws extending through said slots into said drum, a shaft upon which said stemming saws are mounted, a large annular gear carried by said drum and rotatable therewith, a small pinion of less diameter than said stemming saws and mounted on said saw shaft in engagement with said annular gear to drive said saw shaft when said annular gear is rotated, and means to supply peanuts to said drum, said parts being adapted and arranged to cause said peanuts to be discharged from the drum.

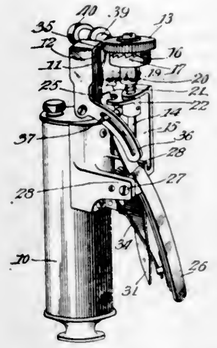
[Claims 6 to 9 not printed in the Gazette.]

1,103,306. STRAINER FOR MINING-MACHINES. ARTHUR E. MAHER, Greensburg, Pa. Filed Nov. 7, 1912. Serial No. 730,011. (Cl. 83—47.)



The combination with a pair of alined pipes, of a cylindrical casing exteriorly threaded at opposite ends, caps having enlarged inner end portions receiving the threaded ends of the casing and also having reduced portions receiving the ends adjacent thereto of the pipes, the said reduced portions forming internal shoulders at their point of juncture with said enlarged portions, diametrically opposed lugs projecting inwardly adjacent one end of the casing, spaced perforated disks snugly fitted in the ends of the casing, rods connecting the disks, one of said disks bearing against said lugs, a resilient cushioning element abutting against the other of said disks and said internal shoulders of one of the caps to retain the disks operatively associated within the cylinder, and a wire mesh fabric on the inner side of the disk next to the cushioning element.

1,103,307. CIGAR-LIGHTER. MICHAEL MCANENY, St. Louis, Mo., assignor to Handilite Manufacturing Company, a Corporation of Missouri. Filed Oct. 11, 1913. Serial No. 794,641. (Cl. 67—4.1.)



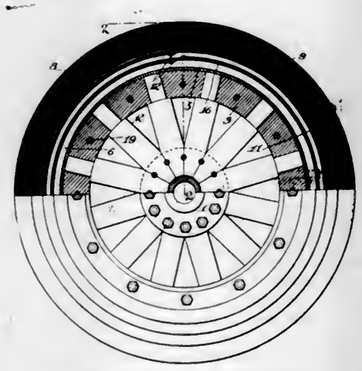
1. A lighter comprising a spark-producing mechanism consisting of relatively stationary and movable members and a rotatable shaft for moving the movable member, a spring connected with the movable member, an operating handle for placing the spring under tension, and releasable means having an operating handle acting to prevent movement of the movable member until the spring has been placed under the desired tension.

2. A lighter comprising spark-producing mechanism including a rotatable disk, an operating shaft for the disk, a spring blade connected with the shaft, a lever carrying said blade, and a releasable latch device to prevent the shaft from turning.

3. A lighter comprising spark-producing mechanism including a disk, an operating shaft for the disk having a radial arm, a spring blade engaging said arm to rotate the shaft in either direction, a lever carrying said blade, and a releasable latch device to prevent rotation of the shaft.

4. A lighter comprising spark-producing mechanism including a disk, an operating shaft for the disk having a radial arm, a spring blade engaging said arm to rotate the shaft in either direction, a lever carrying said blade, a releasable latch device to prevent rotation of the shaft, a snuffer, and connections between the snuffer and the spring blade.

1,103,308. VEHICLE-WHEEL. FREDERICK H. MESSINGER, New York, N. Y. Filed Dec. 27, 1910. Serial No. 599,367. (Cl. 152—8.)



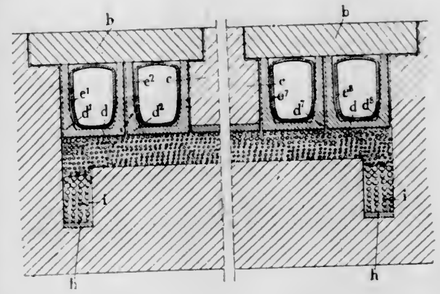
1. A vehicle wheel having a felly, a tread, a flat coiled spring between said felly and said tread, and a pivoted connection between the ends of said spring, said connection permitting relative movement of the convolutions of the spring.

2. A vehicle wheel having a felly, an annular frame carried by said felly and having a chamber therein, a tread mounted in said chamber and projecting therefrom, a flat coiled spring located within said chamber and engaging said tread, and a link connecting the ends of said spring, said link permitting relative movement of the convolutions of the spring.

3. A vehicle wheel having a felly, an annular frame carried by said felly and having a chamber therein, the walls of which have annular flanges, a tread having flanges which engage the outer flanges of said chamber, a flat coiled spring located within said chamber and engaging said tread, a pivoted connection between the ends of said spring, and a second coiled flat spring located within said chamber and coöperating with the inner flanges in the walls of said chamber, a pivoted connection between the ends of the second spring, the pivoted connection of each spring permitting relative movement of the convolutions of its spring.

4. A vehicle wheel having a felly, an annular frame carried by said felly and having a chamber therein the walls of which have inner and outer annular flanges, a tread having flanges which engage the outer flanges of said chamber, a flat coiled spring located within said chamber and engaging said tread, a second flat coiled spring located within said chamber and coöperating with the inner flanges in the walls of said chamber, and links connecting the ends of each spring.

1,103,309. ELECTRIC FURNACE. ADOLPHE MINET and HENRI LOUIS LEONCE LUCAS, Paris, France. Filed Dec. 30, 1913. Serial No. 809,487. (Cl. 204—64.)



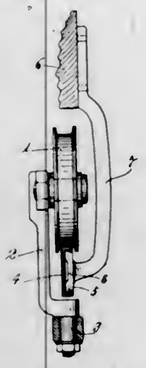
1. In an electric furnace, a principal resistance constituted by a mass of granulated carbon, and a secondary resistance constituted by blocks less conductive than the carbon, exerting a pressure on the principal resistance.

2. In an electric furnace, a principal resistance constituted by a mass of granulated carbon, a secondary resistance constituted by hollow blocks less conductive than the carbon, exerting a pressure on the principal resistance, and retorts arranged in the hollow blocks.

3. In an electric furnace, a principal resistance constituted by a mass of granulated carbon, a secondary resistance constituted by blocks less conductive than the carbon, exerting a pressure on the principal resistance and electrodes constituted by large granules of carbon and metal plates.

4. In an electric furnace, a principal resistance constituted by a mass of granulated carbon, a secondary resistance constituted by hollow blocks less conductive than the carbon, exerting a pressure on the principal resistance, retorts arranged in the hollow blocks, and electrodes constituted by large granules of carbon and metal plates.

1,103,310. OVERHEAD TRACK. GUSTAV A. OLSON, Albert Lea, Minn. Filed Aug. 8, 1913. Serial No. 783,831. (Cl. 104—181.)

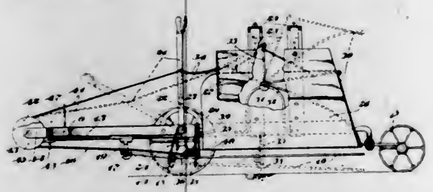


1. A track having a dove-tail channel, and a hanger bracket having a dove-tail head mounted within the channel of said track for sliding engagement therewith.

2. A sectional track having a dove-tail channel, a hanger bracket having a dove-tail head mounted within the channel of said track, for sliding engagement therewith, a dove-tail joint plate telescoped into the abutting ends of two sections of said track, and nut equipped bolts passed through said joint plate and said track sections.

3. A track having a dove-tail channel and a flat upper surface, and a hanger bracket having a dove-tail head mounted within the channel of said track for sliding engagement therewith.

1,103,311. SHOCK-CARRIER. ERLAND PAULSON, Knife River, N. D. Filed June 24, 1913. Serial No. 775,528. (Cl. 56—123.)



1. In a bundle carrier, a drop deck having bars movable into contact with the ground, and a shock ejector permanently and movably mounted on the bars of said drop deck and provided with an anchor for temporarily anchoring the same to the ground.

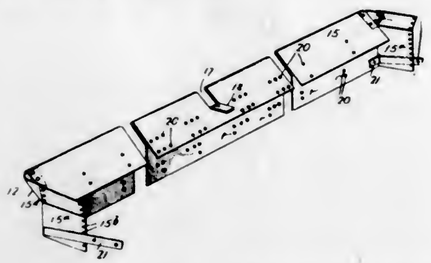
2. In a bundle carrier, the combination with a drop deck having bars adapted to be dropped into contact with the ground, of a shock ejector mounted to slide on the bars of said deck, an anchor on said ejector for anchoring the same to the ground, and a lever on said carrier connected to said ejector and anchor and controlling the operations thereof.

3. In a bundle carrier, the combination with a drop deck having bars adapted to be dropped into contact with the ground, of a shock ejector mounted to slide on the bars of said deck, an anchor on said ejector for anchoring the same to the ground, a lever on said carrier connected to said ejector and anchor and controlling the operations thereof, a tail-gate at the rear of said drop deck, and a connection to said lever for operating said tail gate.

4. In a bundle carrier, the combination with a drop deck having bars adapted to be dropped into contact with the ground, of a shock ejector mounted to slide on the bars of said deck, an anchor on said ejector for anchoring the same to the ground, a lever on said carrier connected to said ejector and anchor and controlling the operations thereof, a tail gate at the rear of said drop deck, a connection to said lever for operating said tail deck, the connection between said lever and tail gate having such normal play that under movement of said lever, said drop deck will first be lowered and said anchor engaged with the ground, and said gate will subsequently be raised.

5. In a bundle carrier, the combination with a drop deck having bars adapted to be dropped into contact with the ground, of a shock ejector mounted to slide on the bars of said deck, a ground engaging anchor on said ejector, a lever, and lever actuated connections operative to control the vertical movements of said deck and of said anchoring device, and limiting the movements of said ejector, in respect to said deck.

1,103,312. BUNDLE-SUPPORTER FOR THRESHERS. PETER POWERS, Carlisle, Nebr. Filed Oct. 28, 1913. Serial No. 797,815. (Cl. 130—1.)



1. A bundle supporter adapted for attachment to the self feeders of threshing machines, comprising a transverse body adapted to range across the front of the self feeder in front of the usual conveyer of the thresher, said bundle supporter having an upwardly flaring top, the body and top being returned in a forward direction at the sides, and provided with means for securing the attachment to the self feeder.

2. A bundle supporter adapted for attachment to the self feeders of threshing machine, comprising a transverse body adapted to range across the front of the self feeder in front of the usual conveyer of the thresher, said bundle-supporter inclining outwardly and upwardly at the top and having an opening extending through the front and through the said inclined top for receiving a divide board, there being a rest extending forwardly at the inner side of the bundle supporter at the lower end of the opening for supporting the divide board.

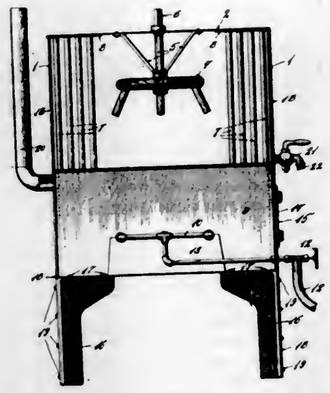
3. A bundle supporter adapted for attachment to the self feeders of threshing machines, comprising a transverse body adapted to range across the front of the self feeder in front of the usual conveyer of the thresher, said bundle supporter being formed at the top to afford support for the bundles, and means associated with the bundle-supporter to afford support for the front end of a divide board, the inner side of the supporter being downwardly and forwardly inclined at the sides of and below the said means.

4. The herein described attachment adapted to be secured to the self feeders of threshing machine, comprising a body adapted to range across the self feeder in front of the usual conveyer of the thresher, the body being formed of sections and laterally adjustable, the top of the attachment inclining upwardly and outwardly and the body of the attachment, as well as the said inclined top, being returned at the sides in a forward direction, means to secure the attachment at the front, there being an opening in the front and inclined top at the approximate center for the reception of the end of a divide board, and a forwardly extending rest for the divide board at the said opening.

5. A bundle supporter, adapted for attachment to the self-feeder of a threshing machine, said supporter being formed of slidably connected sections, the supporter furthermore having rearwardly returned end portions provided with attaching members adapted to be secured to the self-feeder of the thresher.

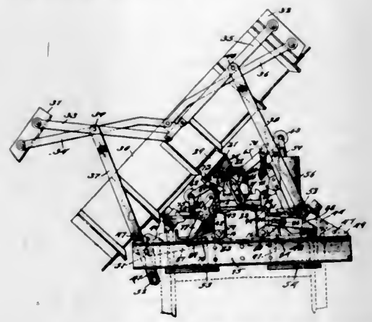
[Claims 6 and 7 not printed in the Gazette.]

1,103,313. COMBINED LAUNDRY GAS-STOVE AND WASHING-MACHINE BOILER. RUDOLPH RAMSEK, St. Louis, Mo., assignor to Anna Ramsek, St. Louis, Mo. Filed Dec. 20, 1912. Serial No. 737,834. (Cl. 126—350.)



The improved combined laundry gas-stove and washing machine boiler, comprising a sheet-metal wash boiler proper, a separate sheet-metal burner-containing-casing beneath said boiler, a series of separate supporting legs each having a horizontal flanged bottom-supporting arm extending a distance beneath and in contact with the bottom of said casing, and each leg also having vertical flanges, a series of binding and bracing strips extending continuously alongside of a considerable portion of the vertical flanges of the said legs upwardly completely across said burner-casing to and across the said boiler and overlapping the said casing and the said boiler, and suitable means for fixing said series of strips to said vertical leg-flanges, casing and boiler.

1,103,314. DUMP-CAR. JAY B. RHODES, Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Filed Dec. 28, 1911. Serial No. 668,342. (Cl. 105—191.)



1. A dump-car, comprising a truck, a bed mounted on said truck and adapted to tilt to discharge its load, a bar pivotally connected with the bed at one side of the center thereof and depending therefrom, a swinging member connecting the lower end portion of said bar with the truck, compressed air operated mechanism for tilting the bed, and means actuated by said compressed air operated mechanism for swinging said swinging member to permit longitudinal movement of said depending bar.

2. A dump-car, comprising a truck, a bed mounted on said truck and adapted to tilt to discharge its load, a bar pivotally connected with the bed at one side of the center thereof and depending therefrom, a bracket suspended from the truck and having its free end pivotally connected with the lower end portion of said bar, compressed air operated mechanism for tilting the bed to discharge its load, and means actuated by said compressed air operated mechanism for swinging said bracket to permit longitudinal movement of said bar when the bed is being tilted.

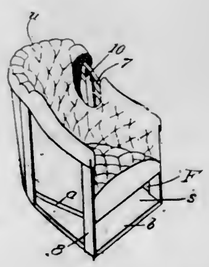
3. A dump-car, comprising a truck, a bed mounted on said truck and adapted to tilt to discharge its load, a bar pivotally connected with the bed at one side of the center thereof and depending therefrom, a stirrup pivotally supported at its upper end by the truck and pivotally connected at its lower end with said bar, compressed air operated mechanism for tilting the bed to discharge its load, and means connected with said stirrup and actuated by said compressed air operated mechanism to swing the same laterally when the compressed air operated mechanism is operated to tilt the bed.

4. A dump-car, comprising a truck, a bed mounted on said truck and adapted to tilt to discharge its load, a bar pivotally connected with the bed at one side of the center thereof and depending therefrom, a stirrup pivotally supported at its upper end by the truck and pivotally connected at its lower end with said bar, compressed air operated mechanism for tilting the bed to discharge its load, a bar connected with said stirrup for normally holding the same against lateral movement and means actuated by said compressed air operated mechanism for moving the latter bar to swing said stirrup laterally and permit endwise movement of said depending bar when the bed is to be tilted.

5. A dump-car, comprising a truck, a bed mounted on said truck and adapted to tilt to discharge its load, a bar pivotally connected with the bed at one side of the center thereof and depending therefrom, a laterally swinging bracket pivotally mounted at its upper end upon the truck, its free end being connected with said depending bar, a locking bar connected at one end with said bracket and adapted to engage a suitable stop to prevent lateral movement of said bracket, compressed air operated mechanism for tilting the bed, and means actuated by said compressed air operated mechanism for moving said locking bar to swing said bracket laterally when the bed is to be tilted.

[Claims 6 to 12 not printed in the Gazette.]

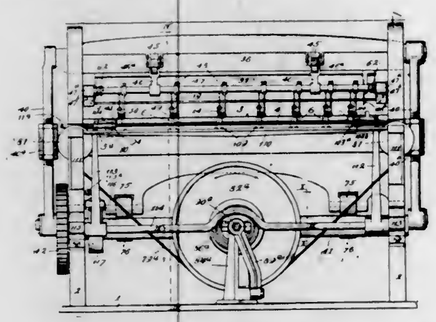
1,103,315. REMOVABLE SEAT STRUCTURE. RALPH F. ROGERS, Chicago, Ill. Filed Jan. 13, 1913. Serial No. 741,802. (Cl. 21—42.)



In a removable seat structure for vehicle bodies, a supporting frame comprising a base and a top rail and connecting side bars, said top rail being spaced from the side bars to leave grooves for receiving the top edge of a vehicle body, a seat floor raised from the base to leave a

compartment between the base and floor, and upholstering applied to the seat floor and to said side bars and top rail.

1,103,316. WIRE-FABRIC MACHINE. WILLIAM M. ROOP, Kansas City, Mo., assignor, by direct and mesne assignments, to Wire Fabric Machinery Company, a Corporation of Missouri. Filed Nov. 29, 1909. Serial No. 530,417. (Cl. 140—11.)



1. In a wire fence machine, a rock-shaft, an arm fixed thereto, a bell-crank lever also fixed to said rock-shaft, a rotary cam for actuating said bell-crank lever, and a carrier consisting of a reciprocably-mounted bar actuated by the arm and the bell-crank lever, and means pivotally-connected to said bar adapted to engage and carry the fence wires forward.

2. In a wire fence machine, a rock-shaft, an arm fixed thereto, a bell-crank lever also fixed to said rock-shaft, a rotary cam for moving said lever in one direction, resilient means for moving the lever in the opposite direction, brackets secured to the rear side of the machine frame, and a carrier consisting of a bar reciprocably-mounted in said carrier and actuated by the bell-crank lever, and means carried by said bar to engage and carry the fence wires forward.

3. In a wire fence machine, stapling devices for connecting the fence wires at their intersecting points, and a carrier for moving the fence wires forward between the stapling operations consisting of a reciprocating bar, and fingers pivotally-connected to said bar to engage and carry the fence wires forward.

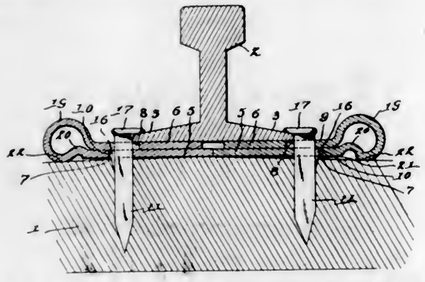
4. A machine for producing wire fabric of strand and stay wires, consisting of means for carrying the stay wires in position upon the strand wires, means for stapling the strand and the stay wires together at their intersecting points, and a carrier for moving the fabric forward between the stapling operations consisting of a reciprocating bar, and means carried by said bar to engage and carry the fence wires forward.

5. In a machine for producing wire fabric of strand and stay wires, a gripper for seizing and carrying each stay wire into position upon the strand wires and consisting of a frame, a pair of jaws movably-mounted in said frame to grip the stay wire, and yielding means carried by the frame to hold said jaws in engagement with the stay wire.

[Claims 6 to 18 not printed in the Gazette]

1,103,317. SPIKE-RETAINER. JAMES E. RORKE, Bay City, Mich. Filed Jan. 27, 1914. Serial No. 814,718. (Cl. 238—4.)

1. A railway spike retainer comprising a plate strip bent upon itself to dispose its free ends between the tie and rail and having spike holes adjacent the rail flange, the spike hole of the upper strip portion being offset with respect to the spike hole in the lower strip portion in a direction toward the rail to dispose the outer margin of the upper hole in overhanging relation with the outer margin of the lower hole, and a spike adapted to be driven through said holes into the tie and having a lug below its head for displacing the upper strip portion in passing therethrough and engaging the lower face of the overhanging margin of the upper strip to retain the spike in its driven position in the tie, the bent portion being resilient to permit of displacement of the strip ends and return the strip ends to initial positions, substantially as described.



2. A railway spike retainer comprising a plate strip bent upon itself to dispose its free ends between the tie and rail and having spike holes adjacent the rail flange, the spike hole of the upper end portion being offset with respect to the spike hole in the lower end portion in a direction toward the rail to dispose the outer margin of the upper hole in overhanging relation with the outer margin of the lower hole, a spike adapted to be driven through said holes into the tie and having a lug below its head for displacing the upper end portion in passing therethrough and engaging the lower face of the overhanging margin of the upper strip to retain the spike in its driven position in the tie, the bend of the plate strip being resilient to permit of displacement of the strip ends and return the strip ends to their initial position, and said strip being bent reversely to the first-named bend to provide a supporting portion on the first-named bend for normally holding the lower end of the strip out of engagement with the tie to thereby engage the upper strip end against the back of the spike and force the same against the rail flange upon depression of the rail, substantially as described.

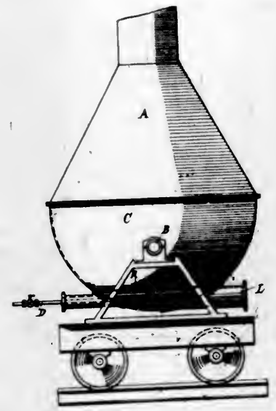
3. A railway spike retainer comprising a plate strip bent upon itself and having its free ends interposed between said rail and tie in superposed relation, said free ends having elongated spike holes disposed in offset relation with respect to each other in the direction of their elongation, and a spike shaped to snugly fit said holes laterally of their elongated ends and be driven through said holes into the tie and having a retaining shoulder for displacing the upper strip end with respect to the lower strip end and adapted to engage the lower face of the upper strip end to retain the spike in its driven position, said spike having a head in such vertical spaced relation with respect to said shoulder as to engage the rail flange when said shoulder is in engagement with the lower face of said upper strip end, substantially as described.

4. A railway spike retainer structure including superposed plates interposed between the rail and tie and including spring means for yieldingly holding said plates in predetermined relation with respect to each other, said plates having spike holes disposed in offset relation with respect to each other, and a spike adapted to be driven through said holes into said tie and having a retaining shoulder for displacing one of said plates with respect to the other and engaging one of said plates to retain the spike in its driven position, substantially as described.

5. A railway spike retainer structure including superposed plates interposed between the rail and tie and provided with spike openings or holes, and a spike adapted to be driven through said openings into the tie and having a retaining portion for engaging one of said plates when in a driven position, substantially as described.

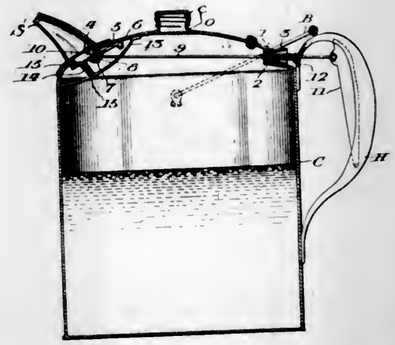
[Claims 6 and 7 not printed in the Gazette.]

1,103,318. PROCESS FOR SINTERING SMELTING PRODUCTS AND THE LIKE. JOSEF SAVELSBERG, Papenburg-on-the-Ems, Germany. Filed Oct. 21, 1912. Serial No. 726,943. (Cl. 75—17.)



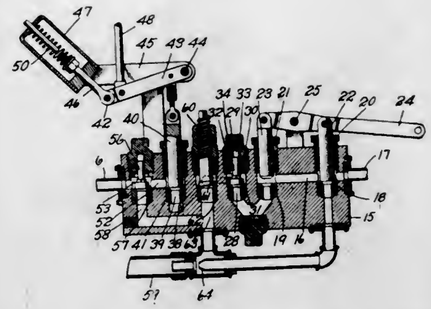
The process of sintering non-sulfurous ore fines and flue dust, which comprises mixing the material with carbonaceous material and blowing the same with air and excess of steam sufficient to form water gas by combining with the carbonaceous material and to condense in the upper portion of the charge and wet the same to prevent it from being blown away by the force of the blast.

1,103,319. NON-EXPLOSIVE OIL-CAN. FRANK JOSEPH SCHISLER, Winthrop, Minn. Filed July 28, 1913. Serial No. 781,617. (Cl. 221—15.)



A non-explosive oil can having a spout and a vent arranged in the opposite side walls thereof, a safety valve to close said vent, a main valve adapted to fit into and close the inner end of the spout and having a hinged connection to the inner side of the can to permit the valve to swing into engagement with the inner end of the spout, said main valve having an apertured offset therein, a spring arranged to close said main valve and hold it yieldingly in closed position, a valve operating rod fixed to said safety valve and having one end projecting through and beyond the apertured offset in the main valve, means for preventing the withdrawal of said rod from said valve, a spring to close said safety valve, and an operating mechanism connected with said rod whereby the latter is retracted to successively open the valves.

1,103,320. HYDRAULIC VALVE. JOHN J. SIMMONDS, Iola, Kans. Filed Jan. 13, 1913. Serial No. 741,804. (Cl. 138—16.)



1. The combination with a valve casing, of conduits leading from the casing, means for supplying fluid under pressure to the casing, means for draining the casing and conduits and valve mechanism for diverting the fluid supply from the conduits to the drain and whereby fluid is drawn back from the conduits, substantially as set forth.

2. The combination with a valve casing, of means for conducting fluid under pressure to the casing, conduits for conducting said fluid from the casing, a drain communicating with said conduits and with the supply means and comprising an ejector, and valve mechanism whereby said fluid is diverted from the conduits to the drain through said ejector, for the purpose set forth.

3. The combination with a valve casing having a channel extending therethrough, of means for delivering fluid under pressure to said channel, means for conducting fluid from the casing, a drain, a valve controlling communication between the casing channel and drain, and an ejector having valve communication with the fluid delivery means and adapted for drawing fluid from the casing channel and delivering same to the drain.

4. The combination with a valve casing having a channel extending therethrough, of means for delivering fluid under pressure to said channel, primary and secondary conduits opening independently from said channel and adapted for different duty, means for priming the secondary conduit during the action of the primary conduit, a valve operable from the pressure of the primary conduit for establishing a flow of fluid through the secondary conduit, a manually operable drain valve for draining the primary and secondary conduits and an ejector operable from said casing channel for accelerating the flow of liquid through said drain valve.

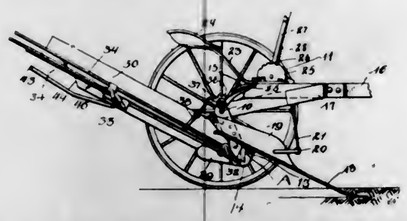
5. The combination with a valve casing having a channel extending therethrough, of means for delivering fluid under pressure to said channel, primary and secondary conduits opening independently from said channel and adapted for different duty, a valve operable from the pressure of the primary conduit for equalizing the pressure between the primary and secondary conduits, a manually operable drain valve for draining said conduits and an ejector operating from said casing channel for accelerating the flow of liquid through said drain valve.

[Claim 6 not printed in the Gazette.]

1,103,321. POTATO-DIGGER. CHRISTIAN S. SKEEM, Inkom, Idaho. Filed Aug. 12, 1913. Serial No. 784,416. (Cl. 55—111.)

1. In a potato digger, the combination with a wheeled axle of a frame pivotally suspended from said axle, rearwardly extending beams having their inner ends pivotally connected to said frame, a plural crank shaft journaled on said frame, connections between said shaft and the axle for rotating the former, a plural crank shaft journaled between said beams, said crank shafts each having a corresponding crank portion disposed in advance of

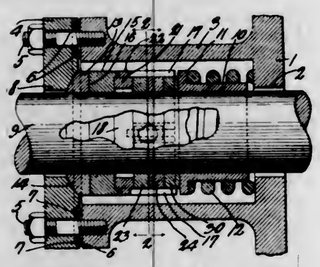
the remaining crank portions, shaker bars connecting the corresponding crank portions of said shafts respectively, and a digger element carried by said frame.



2. In a potato digger the combination with a wheeled axle, of a frame pivotally suspended from said axle, rearwardly extending beams having their inner ends pivotally connected to said frame, means for supporting the free ends of said beams at different elevations from the ground, a plural crank shaft journaled on said frame, connections between said crank shaft and the axle for rotating the former, a plural crank shaft journaled between said beams, shaker bars connecting the corresponding crank portions of said shaft respectively, and a digger element carried by said frame.

3. In a potato digger, the combination with a wheeled axle, of a frame pivotally suspended from said axle, rearwardly extending beams having their inner ends pivotally connected to said frame, a plural crank shaft journaled in said frame, connections between said shaft and the axle for rotating the former, a plural crank shaft journaled between said beams, shaker bars connecting the corresponding crank portions of said shafts respectively, and a digger element carried by said frame.

1,103,322. PACKING. THOMAS SMITH, San Luis Potosi, Mexico. Filed Nov. 18, 1913. Serial No. 801,686. (Cl. 137—116.)



1. In a packing of the class described, a reciprocating element; a segmental ring surrounding the reciprocating element and having a curved external seat; a cup surrounding the ring and having a curved internal seat; a cylindrical key lodged in the seats; means for limiting the movement of the cup longitudinally of the reciprocating element; and means for moving the ring longitudinally of the reciprocating element.

2. In a packing of the class described, a reciprocating element; a segmental ring surrounding the reciprocating element and having a curved external seat; a cup surrounding the ring and having a curved internal seat, the seats being of different radii; a cylindrical key loosely mounted in one seat and conforming to the curvature of the other seat; means for limiting the movement of the cup longitudinally of the reciprocating element; and means for moving the ring longitudinally of the reciprocating element.

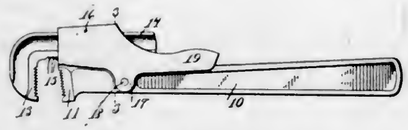
3. In a packing of the class described, an inclosing structure; a ring abutting against the inclosed structure; a cup abutting against the ring; segmental rings within the cup: means for preventing the segmental rings from rotating in the cup; and a rod mounted to slide in the segmental rings; the abutting faces of the first specified ring and the inclosing structure being curved upon an arc, the center of which is located within the inclosing structure, thereby to permit the cup and the first specified ring to rock as one piece with respect to the inclosing structure, upon a rocking movement of the rod.

4. In a packing of the class described, a reciprocating element; a cup surrounding the reciprocating element and provided with a seat and with a slot; a primary segmental ring located within the cup; a bridge assembled with the primary segmental ring and engaged in the slot; secondary segmental rings located within the cup; a key engaged with the peripheries of both of the secondary segmental rings and engaged in the seat; means for limiting the movement of the cup longitudinally of the reciprocating element and means for moving the rings longitudinally of the reciprocating element.

5. In a packing of the class described, a reciprocating element; a cup surrounding the reciprocating element, the cup being provided with a longitudinal slot and having a curved internal seat; a primary segmental ring located within the cup; a bridge engaged with the segmental ring and including a rib engaged in the slot; a secondary segmental ring located within the cup and provided with an external, curved seat; a cylindrical key engaged in the seats; means for limiting the movement of the cup longitudinally of the reciprocating element; and means for moving the rings longitudinally of the reciprocating element.

[Claims 6 and 7 not printed in the Gazette.]

1,103,323. PIPE-WRENCH. THOMAS B. SOMERS, Independence, Kans. Filed Sept. 10, 1912. Serial No. 719,617. (Cl. 81—103.)



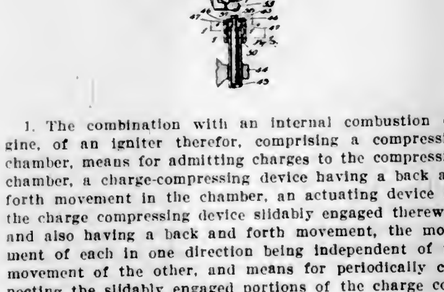
A wrench comprising a handle having one end terminating in a fixed jaw and its inner edge provided with teeth adjacent said fixed jaw, a locking sleeve pivoted on the handle and having its side walls extending rearwardly and connected by a bridge, a spring interposed between the bridge and the adjacent edge of the handle, a shank slidable in the sleeve and provided with teeth on its inner edge adapted for coöperation with the teeth on the handle, a jaw on one end of the shank adapted for coöperation with the fixed jaw, and spaced projections on the inner side of the wall of the sleeve adjacent the outer edge of the shank for decreasing the frictional engagement between the shank and sleeve.

1,103,324. THRESHING-MACHINE FOR STANDING GRAIN. EPHRAIM C. SOOY and NORMAN H. SOOY, Kansas City, Mo. Filed Feb. 18, 1913. Serial No. 749,195. (Cl. 56—29.)

1. In a grain thresher for standing grain, a case having an opening in its side to receive the heads of standing grain, and discharge openings in the ends of said casing, and combined rotary grain-threshing and air suction and blasting devices co-acting to draw the heads of grain within the side of the casing and blast the chaff through the openings in the ends of the casing.

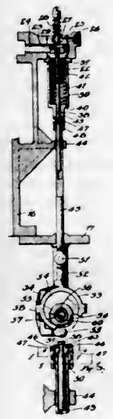
2. In a grain thresher, the combination with a rotary shaft and the grain threshers, of radial air suction and blast fan blades on said shaft supporting said threshers and arranged at an angle to the longitudinal axis of the shaft.

3. In a grain thresher, the combination with a rotary shaft, of outwardly-curved grain threshing plates, and radial air-blasting blades upon said shaft supporting said plates and inclined at an angle to the longitudinal axis of the shaft.



4. In a grain thresher, the combination with a casing having an opening in its side to receive the heads of the grain, and openings in the end or ends for the discharge of the chaff, of a rotary shaft within said case, radial fan blades on said shaft inclined at an angle to the longitudinal axis thereof, and beater bars on said blades movable past the lower edge of said opening in the side of the case and at an angle thereto.

1,103,325. INTERNAL-COMBUSTION ENGINE. WILLIAM S. SUTTON, Rockford, Ill. Filed Jan. 6, 1913. Serial No. 740,571. (Cl. 123—143.)



1. The combination with an internal combustion engine, of an igniter therefor, comprising a compression chamber, means for admitting charges to the compression chamber, a charge-compressing device having a back and forth movement in the chamber, an actuating device for the charge compressing device slidably engaged therewith and also having a back and forth movement, the movement of each in one direction being independent of the movement of the other, and means for periodically connecting the slidably engaged portions of the charge compressing device and the actuating device to secure their simultaneous movement and disconnecting the same to permit their indipendent movement.

2. The combination with an internal combustion engine, of an igniter therefor, comprising a compression chamber, means for admitting charges thereto, a reciprocatory charge-compressing device movable in the chamber, a reciprocatory actuating device therefor slidably telescoping therewith, said devices being capable of independent movement, and means mounted on the telescoping portion for periodically connecting the charge-compressing device and actuating device to effect the movement of the one from the other and disconnecting the same to permit one to operate independently of the other.

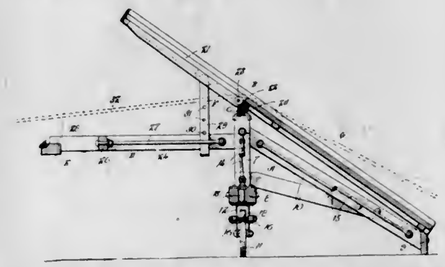
3. The combination with an internal combustion engine, of an igniter therefor, comprising a compression chamber, means for admitting charges thereto, a reciprocatory charge-compressing device movable in the chamber, a reciprocatory actuating device therefor, said devices being capable of independent movement, a clutch surrounding both members for periodically connecting and disconnecting the charge-compressing device and actuating device, and means for automatically actuating the clutch.

4. The combination with an internal combustion engine, of an igniter therefor, comprising a compression chamber, means for admitting charges thereto, and exhausting the ignited material therefrom into the engine, a plunger operating in the chamber, a reciprocatory actuating rod for the plunger slidably engaged therewith, a clutch element for connecting and disconnecting the rod and plunger, a controlling device movable with the rod and slidable longitudinally thereon for effecting the operation of the clutch element, and means in the path of the controlling device for shifting the same with respect to the rod.

5. The combination with an internal combustion engine, of an igniter therefor, comprising a compression chamber having communication with the engine, means for admitting a charge to the compression chamber, means for compressing the charge in the chamber, an actuating device for the compressing means slidably telescoping therewith and movable independently thereof, a device that detachably connects the actuating device and compressing means to effect their simultaneous movement, and means that periodically operates the connecting device to cause it to disconnect the actuating device and compressing means.

[Claims 6 to 11 not printed in the Gazette.]

1,103,326. FODDER-LOADING APPARATUS. WILLIAM F. LAWLER, Anderson, Ind. Filed Apr. 19, 1913. Serial No. 762,366. (Cl. 214—2.)



1. A fodder loading apparatus comprising in combination, a chassis, a slide-way carried thereby and having a horizontal axis of oscillation, and a spacing frame for rigidly positioning said chassis relative to a stationary object, said frame being movable with respect to said chassis to permit of adjustment to the height of the abutting element of the said stationary object from the ground.

2. A fodder loading apparatus comprising in combination, a chassis including a pair of wheels, a slide-way carried thereby and having a horizontal axis of oscillation in substantially the same common plane of said wheels, said slide-way being normally inclined, and a spacing frame movable about a horizontal axis in substantially the same common plane of said wheels, for rigidly positioning said chassis relative to a stationary object with the upper end of said slide-way closest to the said object.

3. A fodder loading apparatus comprising in combination, a chassis, a slide-way carried by said chassis with

a horizontal axis of oscillation intermediate its ends, the slide-way at one side of the said axis being heavier than that at the other side thereof to normally dispose the slide-way in an inclined position, by gravity, and a spacing frame extending from said chassis and to the same side of the said axis as the lighter portion of said slide-way for rigidly positioning said chassis relative to a stationary object and limiting the amplitude of oscillation of said slide-way in one direction.

4. In a fodder loading apparatus, the combination of a support frame, a slide-way carried thereby and oscillatable about a horizontal axis, said slide-way being normally inclined and having a longitudinally extending slot open at its upper edge and extending downwardly toward said axis, and tackle including a flexible member adapted to extend through the said slot, substantially as and for the purpose set forth.

5. In a fodder loading apparatus, the combination of a support frame, a slide-way carried thereby and oscillatable about a horizontal axis, said slide-way being heavier at one side of the said axis than at the other side thereof to normally dispose the slide-way in an inclined position, by gravity, and having a longitudinally extending slot open at its upper edge and extending downwardly toward the said axis, and tackle including a flexible member adapted to extend through the said slot, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

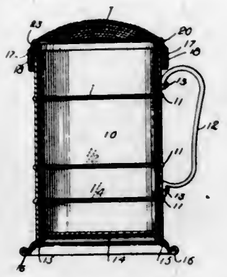
1,103,327. DISPLAY DEVICE. DAVID F. THOMSON, Cambridge, Mass., assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed July 17, 1912. Serial No. 709,874. (Cl. 211—24.)



1. A device for displaying an article of merchandise comprising upright members, one offset from and in advance of the other, said members presenting figures in postures for supporting a carton between them and having portions formed to conform to the postures of the figures and provide seats for receiving and engaging the sides of the carton; and means connecting and supporting said members in said relation and having provision permitting the folding of said members into collapsed or extended positions.

2. A device for displaying an article of merchandise comprising a card scored on lines *e* and *f* to present tandem members *a* and *b* and an intermediate connecting member *c* permitting said members *a* and *b* to be folded into the same plane or into positions in which one of said members is offset from said plane; and a carton supported by said members *a* and *b*, the latter having figures thereon in postures for supporting the carton and having portions formed to conform to and support the carton.

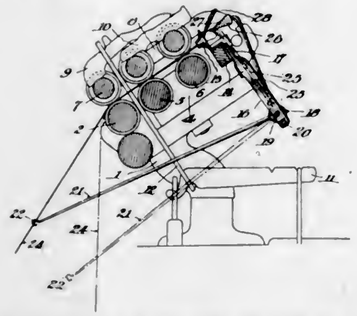
1,103,328. FLOUR-SIFTER. MARIE SCHLESINGER-THURY, Berkeley, Cal. Filed Feb. 13, 1913. Serial No. 748,218. (Cl. 83—60.)



1. A device of the character described comprising a body portion open at one end, and a closure for said body portion comprising a collar fitting about the open end of said body portion and formed from a single strip of material bent longitudinally to form inner and outer clamping members, a mesh covering having its edge portion positioned between the clamping members of said collar, and the outer edge portion of said collar being bent inwardly to form a flange securely holding said mesh between the clamping members of said collar and limiting the longitudinal movement of said collar upon said body portion in one direction.

2. A device of the character described comprising a body portion open at one end, a collar surrounding the open end of said body portion and provided with clamping members, a mesh having its edge portions positioned between the clamping members of said collar and extending across the open end of said body portion, and common means for securely holding said mesh between the clamping members of said collar and limiting longitudinal movement of said collar upon said body portion in one direction.

1,103,329. ROVING-STOP FOR SPINNING-FRAMES. EDWARD J. VALES, Augusta, Ga. Filed Dec. 4, 1913. Serial No. 804,633. (Cl. 118—17.)



1. A roving stop for spinning machines and the like, comprising in combination, a roll stand, feed rolls mounted on said roll stand and adapted to feed a string of roving, a roving bar, a trumpet guide for guiding the roving before it enters the feed rolls, said trumpet guide being mounted on the roving bar, a hub, a support wherein said hub is pivotally mounted, said support being attached to the roving bar, a feeler finger carried by said hub, a hook on said feeler finger adapted to engage the thread and support the feeler finger thereon, an upwardly extending rod also carried by said hub, and a plunger stop carried by said rod, said plunger stop being cone-shaped, the axis of said cone being substantially tangential to a circle passing through said trumpet guide and whose

center is a pivotal point for said hub, the conical portion of said plunger stop being roughened to provide a frictional surface adapted to engage and stop the roving when the feeler finger is dropped by the breaking of the thread.

2. A roving stop for spinning machines and the like, comprising in combination, a roll stand, feed rolls carried by said roll stand and adapted to feed a strand of roving, a roving bar, a trumpet guide mounted on said roving bar, a feeler finger, a hook on the end of said feeler finger in engagement with the thread as it leaves the feed rolls, a conically shaped plunger head provided with a roughened surface and operatively connected with said feeler finger, the parts being constructed and arranged to drop the conical plunger into the trumpet guide when the thread is broken.

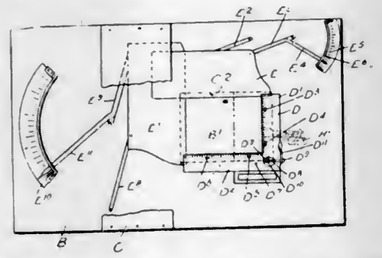
3. A roving stop for spinning machines and the like, comprising in combination, feed rolls adapted to draw roving from a suitable supply and feed the roving forward as required, a funnel shaped guide through which the strand of roving passes prior to reaching the feed rolls, a feeler finger in engagement with the strand after it leaves the feed rolls, and a conical shaped plunger operatively connected with the feeler finger to drop the point of said conical shaped plunger into the funnel shaped guide when the strand in engagement with the feeler finger is broken, said conical shaped plunger being provided with a roughened surface to engage the roving when dropped as aforesaid.

4. A roving stop for spinning machines and the like, comprising in combination, a funnel shaped roving guide for guiding a strand of roving, a feeler finger adapted to engage said strand, and a conical shaped plunger operatively connected with said feeler finger and adapted to be dropped into said funnel shaped guide when the strand is broken, said plunger being provided with a roughened surface to engage said roving and clamp the same within said guide.

5. A roving stop for spinning machines and the like, comprising in combination, a roving guide having an opening, a feeler finger adapted to engage the strand of roving, a conical shaped plunger having a roughened surface, and means for drawing the roving through said guide, the said parts being constructed and arranged to drop the point of the conical plunger into the opening in the roving guide when the strand is broken and to draw the plunger tightly against the guide to stop the roving by the tension on the roving.

[Claim 6 not printed in the Gazette.]

1,103,330. PHOTOGRAPHIC-PRINTING MACHINE. ANDREW HARMON WALLACE, St. Catharines, Ontario, Canada. Filed July 8, 1912. Serial No. 708,286. (Cl. 95—73.)



1. In a photographic printing apparatus, the combination with a casing, a table cover for the casing having a suitable window therein and designed to support a negative and printing paper, of an adjustable frame designed to extend around the window to protect the marginal edges of the paper, a covering shutter extending over the printing paper, negative and the inner edges of the adjustable frame, a cross dividing partition located in the casing, a printing light located in the casing beneath the window in the table or cover, a suitably colored window located in the partition, a light located to the opposite side of the partition to the aforesaid light, and means for alternately turning on and turning off the aforesaid light operated by the opening and closing of the shutter as and for the purpose specified.

2. In a photographic printing apparatus, the combination with a suitable table having a window therein, a stationary member extending around two sides of the window, of members movable parallel to the sides of the window opposite to the sides against which the stationary members are located, parallel swinging links pivotally connected at one end to the movable members, and means for adjusting the position of the movable members to regulate the size of the opening, as and for the purpose specified.

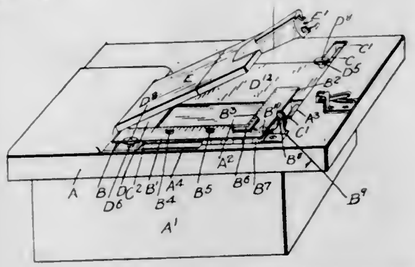
3. In a photographic printing apparatus, the combination with a suitable table having a window therein, a stationary member extending around two sides of the window, movable members parallel to the sides of the window opposite the sides against which the stationary members are located, parallel swinging links pivotally connected at one end to the movable members, a graduated quadrant for each movable member, and a pointer extending from one of the links of each movable member to coact with the graduated quadrant, as and for the purpose specified.

4. In a photographic apparatus, the combination with a suitable table having a window opening and window, of a spring plate extending along two sides of the window, means located beneath the plate for springing the plate upwardly to insert a negative, adjustable members extending along the remaining sides of the window and a covering shutter extending over the window and edges of the stationary plate and movable members, as and for the purpose specified.

5. In a photographic apparatus, the combination with a suitable table having a window opening and window, of a spring plate extending along two sides of the window, a rock shaft extending beneath the stationary plate, and an operating lever secured to the opposite end of the rock shaft, as and for the purpose specified.

[Claims 6 to 25 not printed in the Gazette.]

1,103,331. PHOTOGRAPHIC-PRINTING DEVICE. ANDREW HARMON WALLACE, St. Catharines, Ontario, Canada. Filed Dec. 13, 1912. Serial No. 736,512. (Cl. 95—79.)



1. The combination with the frame having a window opening therein and window, of a right angular frame member extending along two sides of the window, and adjustable members extending along the two remaining sides of the window, and a slidable connection between the adjustable members and the frame extending parallel with the sides of the window, as and for the purpose specified.

2. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel to the sides of the window, guides secured to the frame and extending parallel with the corresponding sides of the window, and frame members slidably connected thereto

and extending parallel with the opposite sides of the window, and a covering shutter extending over the window, as and for the purpose specified.

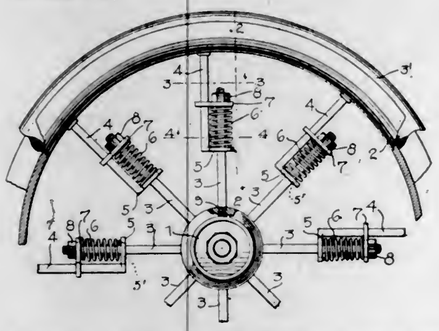
3. In a photographic printing device, the combination with the main frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, adjustable frame members extending parallel with the opposite side of the window, and means for securing the adjustable members in the position to which they are adjusted, as and for the purpose specified.

4. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, and rod members supported by the window frame and extending parallel with the sides of the right angular frame, and an adjustable spring member secured to each of the shutter members and designed to engage with the rods to hold the shutter members in the position to which they are adjusted, as and for the purpose specified.

5. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, rod members extending parallel with the corresponding sides of the window and supported by the frame, movable frame members slidably held upon the rods, knobs secured by the movable members having vertical orifices extending therethrough, stems extending through the orifices and spring connecting means carried by the stems designed to grip the rods to hold the adjustable members in the position to which they are adjusted, as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

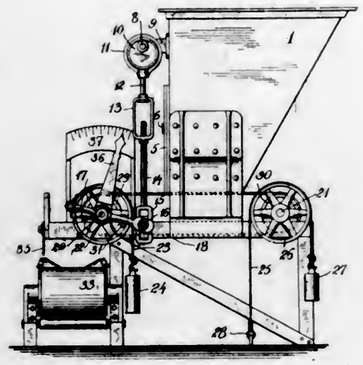
1,103,332. SPRING-WHEEL. FRANK A. WECKERT, Solon Springs, Wis. Filed Aug. 23, 1913. Serial No. 786,302. (Cl. 152—28.)



A spring wheel, comprising a hub, a rim, inner spoke sections secured to the hub and extending outwardly in a radial direction therefrom and washers secured to the outer ends of the inner spoke sections, outer spoke sections secured to the rim and extending inwardly therefrom in a radial direction, said outer spoke sections being formed at their inner ends with laterally disposed extremities formed with laterally elongated slots, the inner spoke sections being received in said slots and said slots being of a greater length than the diameter of the inner spoke sections, the outer spoke sections being mounted to slide through the washers, and coiled springs encircling the outer spoke sections and interposed between the washers and the angularly disposed inner ends of the outer spoke sections, for the purpose specified.

1,103,333. MEASURED-DELIVERY APPARATUS. FRANCIS D. WEEKS, Salida, Colo. Filed Mar. 2, 1911. Serial No. 611,794. (Cl. 193—24.)

1. In an automatic measured-delivery apparatus, a receptacle, a feed belt upon which the receptacle discharges, and mechanism for intermittently moving said belt including co-acting driving and driven friction members, mechanism for oscillating the driving friction member, means independent of the primary driving mechanism for imparting to the driving friction member a limited pressure of engagement during the advance movement and mechanism for preventing the reverse movement of the driven friction member by the driving friction member.



2. In an automatic measured-delivery apparatus, a receptacle, a feed belt upon which the receptacle discharges, and mechanism for intermittently moving said belt including co-acting driving and driven friction members, adjustable mechanism for oscillating the driving friction member through an angle variable at will, means independent of the primary driving mechanism for imparting to the driving friction member a limited pressure of engagement during the davance movement and mechanism for preventing the reverse movement of the driven friction member by the driving friction member.

3. In an automatic measured-delivery apparatus, a plurality of bins, an individual carrying belt for each bin and upon which it discharges, and mechanism comprising a friction drive for intermittently advancing said belts and including means for independently adjusting the extent and timing of the advance movement of each belt, and means for collectively adjusting the frequency of the advance movements.

4. In an automatic measured-delivery apparatus, a plurality of bins, an individual feed belt for each bin and upon which it discharges, each bin having an adjustable feed orifice, and mechanism for intermittently advancing said belts including means for independently adjusting the extent and timing of the advance movement of each belt and means for collectively adjusting the frequency of the advance movements.

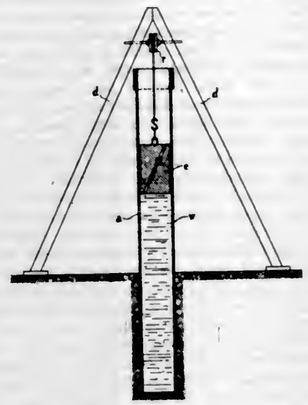
5. In an automatic measured-delivery apparatus, a plurality of bins, an individual feed belt for each bin and upon which it discharges, mechanism for intermittently advancing said belts including means for independently adjusting the extent of the advance movement of each belt, and an indicator associated with each belt for showing the extent of the advance movement thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,103,334. METHOD OF PRODUCING WELL-HOLES, POLE-HOLES, AND THE LIKE. OTTO WILHELMI, Lucerne, Switzerland, assignor of one-half to The Firm of Internationale Siegwartbalken-Gesellschaft, Lucerne, Switzerland. Filed Jan. 2, 1914. Serial No. 810,019. (Cl. 166—21.)

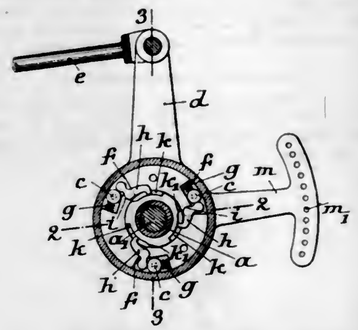
1. The method of producing holes for wells, piles, posts, and the like, consisting in introducing a liquid or plastic substance into a driving tube and pressing upon said substance, substantially as described.

2. The method of producing holes for wells, piles, posts, and the like, consisting in introducing a liquid or plastic



substance into a driving tube, and letting a monkey act upon said substance, as set forth.

1,103,335. SPEED-CHANGING DEVICE. EUGEN WOERNER, Cannstatt, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed May 20, 1910. Serial No. 562,366. (Cl. 74—53.)



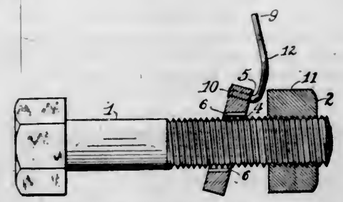
1. A device for changing a constant oscillating movement to a variable rotary motion, comprising a driving element connected to the oscillating member and a driven element connected to a rotary shaft, a roller clutch interposed between said elements and effective to connect them in a single direction of oscillation, pawls pivoted on the roller-carrying member and having tails projecting into contact with the rollers, and adjustable abutments in the path of movement of the noses of the pawls, whereby after a predetermined length of stroke in the clutching direction the pawls are turned on their pivots to force the rollers out of clutching position.

2. A device for changing a constant oscillating movement to a variable rotary motion, comprising a driving element connected to the oscillating member and a driven element connected to a rotary shaft, a roller clutch interposed between said members and effective to connect them in a single direction of oscillation, pawls pivoted on the roller-carrying member and having tails projecting into contact with the rollers, and an adjustable lever arm carrying abutments in the path of movement of the noses of the pawls, whereby after a predetermined length of stroke in the clutching direction the pawls are turned on their pivots to force the rollers out of clutching position.

1,103,336. METHOD FOR MANUFACTURING RESIN-SOAP AND RESIN. JACOUB AKTSCHOURIN, Aktschourin-Tupik, Russia. Filed Jan. 8, 1913. Serial No. 740,855. (Cl. 203—6.)

Process of recovering resin soap or resin from resinous or coniferous trees, which process consists in first treating the shavings from such trees with an alkaline solution, in the presence of a reducing agent, and then separating the resinous substances from the solution.

1,103,337. LOCK-WASHER. JEREMIAH W. ALBIN, Babylon, N. Y. Filed Dec. 3, 1913. Serial No. 804,398. (Cl. 151—14.)



1. A lock washer having an inclined bore, adapted to receive a bolt, and to be thrown into locking engagement therewith as a nut is screwed into working position against the washer.

2. A lock washer having an inclined central bore, a swinging latch secured to said washer, and means for holding said latch when it is in a closed position.

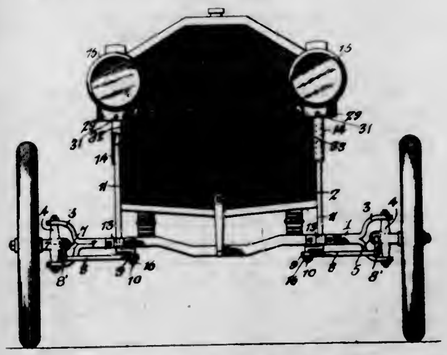
3. A lock washer having an inclined bore, a swinging latch, and a groove adapted to receive said latch, and to hold the same in a closed position.

4. A lock washer having an inclined bore, a pivoted spring latch, and a groove adapted to receive said latch and to hold the same in a closed position.

5. A lock washer comprising a flat plate having a central inclined bore, a spring latch pivotally secured to said plate at one side of said bore, and means for holding said latch in a closed position across said washer in front of said bore.

[Claims 6 and 7 not printed in the Gazette.]

1,103,338. HEADLIGHT-TURNING MECHANISM. CLAIRE P. ANDERSON, Lawson, Mo. Filed Jan. 27, 1914. Serial No. 814,741. (Cl. 240—62.)

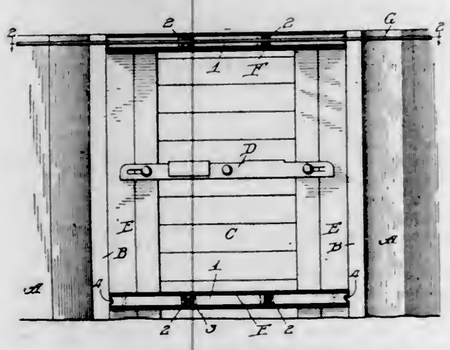


1. A lamp turning device comprising a supporting bracket provided with an integral ring portion having a race formed upon the upper face thereof, a lamp mounted upon said ring portion and provided with an annular flange upon its lower end provided with a race upon the under face thereof, said annular flange provided with a projecting rib upon the side thereof, and a detachable sectional band carried by said ring and engaging said rib

for allowing the rotation of said lamp upon said bracket and preventing the accidental displacement of said lamp from said bracket.

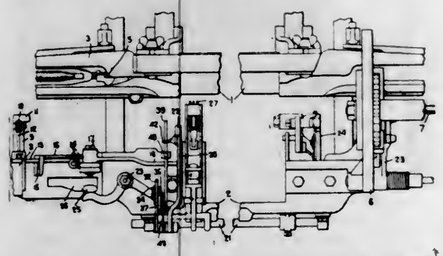
2. A device of the class described comprising a supporting bracket provided with an integral ring portion, a lamp mounted upon said ring portion and provided with an annular flange upon its lower end, said annular flange provided with a projecting rib portion upon the side thereof, a detachable band carried by said ring and engaging said rib for allowing the rotation of said lamp upon said bracket and preventing the accidental displacement of said lamp from said bracket, and means secured to the lower end of said lamp and projecting through said bracket for facilitating the rotation of said lamp upon said bracket.

1,103,339. TRUSS OR BRIDGE FOR HOOPS OF SILOS. SIGURD E. ANDERSON, Des Moines, Iowa. Filed Oct. 13, 1913. Serial No. 795,008. (Cl. 20—1.4.)



The combination of a silo of circular configuration, having a flattened door frame embodying a channel shaped member secured to extend across the door opening and having open extremities, the open side of the member being outward, a truss bar constructed of a single sheet of material bent intermediate its ends to form laterally projecting V-shaped portions, spaced from each other longitudinally of the member and spaced from the respective ends of the member, the apex of the projections being outward and each projection having an open recess in the apex thereof, the extremities of the bar terminating adjacent the ends of the channel member, and having inclined recesses in its extremities in alinement with the recesses in the projections, to receive the encircling hoop.

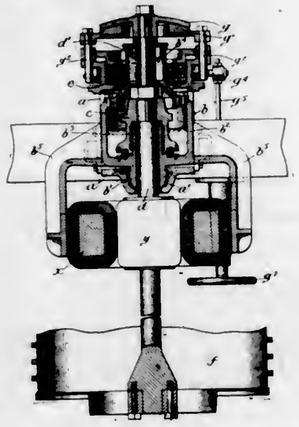
1,103,340. FEELER STOP-MOTION. CHARLES W. ASMAN, Knoxville, Tenn., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 16, 1914. Serial No. 812,565. (Cl. 139—54.)



1. In an automatic filling replenishing loom, loom stopping mechanism, a controller rock shaft, a vibrating actuator, a latch mounted on the controller rock shaft and normally out of the path of said actuator, a filling feeler and connections to said latch to place the latch in the path of said actuator upon the detection by the feeler of the required exhaustion of the filling, an arm mounted on the controller rock shaft, a hook member pivoted on said arm, a spiral cam journaled on said hook, a lever connected to the loom stopping mechanism and extended beneath said cam whereby the cam normally holds the said hook out of engagement with said lever, a mutilated ratchet connected to said spiral cam, a pawl coöperating with said ratchet mounted on said hook member, operative connections between said pawl and said vibrating actuator whereby upon the detection of the required filling exhaustion the spiral cam will be dropped into engagement with the knock-off lever, the pawl will be caused to engage the ratchet and the hook member will be dropped into engagement with the knock-off lever to cause the stopping of the loom upon a successive detection of filling exhaustion.

2. In an automatic filling replenishing loom, loom stopping mechanism, a vibrating actuator, a latch normally out of the path of said actuator but which when brought into the path thereof acts to control the filling replenishment, a filling feeler and connections to said latch to place the latch in the path of said actuator upon the detection by the feeler of the required exhaustion of the filling, a hook member mounted to move with the latch and pivoted to move with respect to the latch, a spiral cam journaled on said hook member above a part of the loom stopping mechanism whereby the cam normally holds the said hook member out of engagement with said part, a multilated ratchet connected to said spiral cam, a pawl coöperating with said ratchet mounted on said hook member, operative connections between said pawl and said vibrating actuator, whereby upon the detection of the required filling exhaustion the spiral cam will be dropped into engagement with the part of the loom stopping mechanism, the pawl will be cause to engage the ratchet, and the hook member will be dropped into engagement with the part of the loom stopping mechanism to cause the stopping of the loom upon a successive detection of filling exhaustion.

1,103,341. SUPPORTING AND DRIVING MEANS FOR CENTRIFUGAL MACHINES. MELVILLE H. BARKER, Boston, Mass. Filed Feb. 23, 1904. Serial No. 194,653. (Cl. 64—48.)



1. A mount for centrifugal machines embracing in combination a solid rotary basket-carrying shaft, an oscillatory sleeve member forming a means for suspending said shaft and having a thrust bearing and a lateral bearing for operatively sustaining said shaft in its rotation, a driving motor operatively connected to said shaft below its center of oscillation the stator element of said motor being rigidly secured to and supported by the oscillatory sleeve, substantially as described.

2. A mount for centrifugal machines embracing in combination a supporting hanger, a sleeve member having an oscillatory bearing in said hanger, a rotatable basket-carrying shaft extending through said sleeve member and having rotary bearing support on said sleeve member, a downwardly projecting yoke for rigidly securing a motor element to said sleeve member, and means for preventing the rotation of the sleeve member, substantially as described.

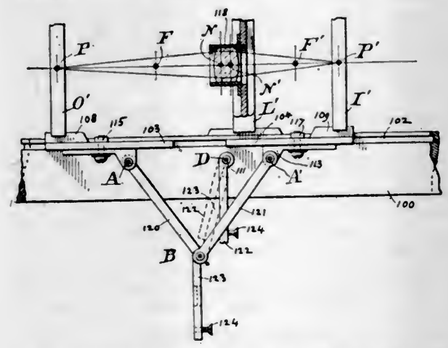
3. A mount for centrifugal machines embracing in combination a fixed socketed hanger, an oscillatory sleeve member seated therein, an elastic buffer interposed between said sleeve member and the hanger for yieldingly centralizing said sleeve member, a rotary basket-carrying shaft suspended through the sleeve member upon a thrust bearing located on said sleeve member, a driving motor located below the center of oscillation the elements of which are rigidly connected to the basket shaft and to the sleeve member respectively, substantially as described.

4. The combination of the suspended oscillatory rotary solid basket shaft, the basket secured to the lower end thereof, an oscillatory non-rotating sleeve member through which said basket shaft passes, said sleeve member being formed with both lateral and thrust bearing surfaces for the suspension of the rotary shaft and for maintaining axial alinement between the shaft and the sleeve member, a motor whose rotor is secured to the basket shaft below the sleeve and whose stator is rigidly suspended from the sleeve itself, substantially as described.

5. A mount for a centrifugal machine embracing in combination a fixed hanger, an oscillatory sleeve member seated therein, a rotary basket shaft suspended from a thrust bearing on the sleeve member said member being upwardly extended to form an oil reservoir inclosing the thrust bearing to keep said bearing immersed in oil, an encircling buffer interposed between the upward extension of the sleeve member and the surrounding portion of the hanger and a motor whose rotor element is connected with the shaft to drive the same, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,103,342. PHOTOGRAPHIC CAMERA. JOSEPH BECKER, Washington, D. C. Filed July 10, 1905. Serial No. 269,048. (Cl. 88—24.)



1. The combination with a photographic camera, comprising a lens support, an image support and an object support, and ways adapted to guide two of said supports with relation to the third; of mechanism for connecting the said three supports to compel two of them to move simultaneously with relation to the third, said mechanism consisting in an assemblage of pivoted rods.

2. The combination with a photographic comera, comprising a lens support, an image support and an object support, and ways adapted to guide two of said supports with relation to the third; of mechanism for connecting the said three supports to compel two of them to move simultaneously with relation to the third; said mechanism consisting in a crank and pitman connection between the lens support and either image support to form two variable triangular connections between such supports; and means for causing the angles of such triangles that are opposed to the pitmen or longer members to be and remain supplementary throughout all variations of the said triangles.

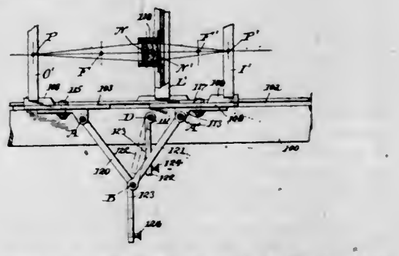
3. The combination with a photographic camera, comprising a lens support, an image support and an object support, and ways adapted to guide two of said supports with relation to the third; of mechanism for connecting the said three supports to compel two of them to move simultaneously with relation to the third, said mechanism consisting in a linkage comprising three rods, one pivoted to the lens support, the second to the image support and the third to the object support and a pivot connecting the three rods.

4. The combination with a photographic camera, comprising a lens support, an image support and an object support and slideways adapted to guide two of said supports with relation to the third, of a pintle or pintle bearings mounted in fixed relation on each one of the said three supports in a direction perpendicular to the direction of motion in the said slideways, and means for freely adjusting two of said pintles or pintle bearings on their respective supports in the direction parallel to the said slideways; also focusing mechanism for connecting said pintles or pintle bearings.

5. The combination with a photographic camera, comprising a lens support, an image support and an object support, and ways adapted to guide two of said supports with relation to the third; of mechanism for connecting the said three supports to compel two of them to move simultaneously with relation to the third, said mechanism consisting in a linkage comprising three rods, one pivoted to the lens support, one pivoted to the image support and the third to the object support; a pivot connecting the three rods, and means for adjusting the length of the lens link.

[Claims 6 to 16 not printed in the Gazette.]

1,103,343. METHOD OF ADJUSTING AND REGULATING AUTOMATICALLY-FOCUSED ENLARGING OR COPYING CAMERAS. JOSEPH BECKER, Washington, D. C. Original application filed July 10, 1905, Serial No. 269,048. Divided and this application filed Feb. 9, 1910, Serial No. 542,842. Renewed Oct. 3, 1913. Serial No. 793,262. (Cl. 88—24.)



1. The method of positioning on their respective frames the three connecting points that connect the mechanical focusing gear with the lens frame and the two end frames of a mechanically or automatically focused copying or enlarging camera, which consists in: first taking the lens frame and one of the end frames and positioning the connecting point of one of these first two frames at will; second, setting these first two frames at the proper distance apart to place them in focal relation on infinity, and using the first positioned connecting point as a fiducial point for positioning the connecting point of the second one of these first two frames; third, taking the said lens frame and the third frame and setting them at the proper distance apart to place them in focal relation on infinity, and using the positioned connecting point of the lens

frame as a fiducial point for positioning the connecting point of the said third frame.

2. The method of positioning on their respective frames the three connecting points that connect the mechanical focusing gear with the lens frame and the two end frames of a mechanically and automatically focused copying or enlarging camera, which consists in: first positioning the connecting point of the lens frame at will; second, taking the said lens frame and one of the end frames and setting them at the proper distance apart to place them in focal relation on infinity, and using the connecting point of the said lens frame as a fiducial point for positioning the connecting point of the said end frame; third, taking the same said lens frame and the remaining end frame and setting them at the proper distance apart to place them in focal relation on infinity, and using the connecting point of the said lens frame as a fiducial point for positioning the connecting point of the said remaining end frame.

3. The method of positioning on their respective frames the three pivotal axes connecting the mechanical focusing gear with the lens frame and the two end frames of a mechanically and automatically focused copying and enlarging camera, which consists in: first, taking the lens frame and one of the end frames and positioning the pivotal axis of one of these first two frames, as the axis of the first frame, at will; second, bringing the pivotal axis of the second frame into coincidence with the positioned axis of the said first frame and setting these first two frames at the proper distance apart to place them in focal relation on infinity, also fixing the pivotal axis of the said second frame to the second frame in the relative position so determined; third, taking the lens frame and the remaining end frame and bringing their pivotal axes into coincidence and setting the said lens frame and the said remaining end frame at the proper distance apart to place them in focal relation on infinity, also fixing the pivotal axis of the said remaining end frame to the said remaining frame in the relative position so determined.

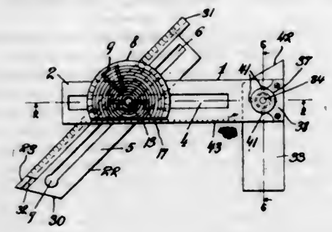
4. The method of positioning on their respective frames the three pivotal axes connecting the mechanical focusing gear with the lens frame and the two end frames of a mechanically and automatically focused copying or enlarging camera, which consists in: first, positioning the pivotal axis of the said lens frame; second, taking the said lens frame and one of the end frames and bringing the pivotal axis of the said end frame into coincidence with the pivotal axis of the said lens frame, also fixing said second pivotal axis to its said end frame in the relative position so determined; third, taking the said lens frame and the remaining end frame and bringing the pivotal axis of the said remaining end frame into coincidence with the axis of the said lens frame, also fixing said third pivotal axis to its said remaining end frame in the relative position so determined.

5. The method of positioning on their respective frames the three connecting points, that connect the mechanical focusing gear with the lens frame and the two end frames of a mechanically or automatically focused copying or enlarging camera, which consists in positioning one of the said three connecting points on its frame at will and using such positioned connecting point as a fiducial point for determining the positions of the other two connecting points by focusing on infinity.

[Claims 6 to 9 not printed in the Gazette.]

1,103,344. COMBINATION TOOL AND BEVEL-GAGE. ARTHUR E. BLOFIELD, New York, N. Y. Filed May 25, 1911. Serial No. 629,384. (Cl. 33—75.)

1. In a device of the character described, the combination with a dial member, of a pointer mounted concentrically with said dial member, to rotate with respect thereto, said dial member being divided into tens of degrees along each of ten concentric arcs struck from the axis of said pointer as a center by short lines intersecting said arcs, each of said lines being at an angular advance of one degree beyond the adjacent degree line of the nearest smaller arc, said dial member also carrying indicia adjacent the degree lines of the outer arc, and said pointer carrying indicia at radial distances from its axis corresponding to the radial position of said degree lines of the arcs of said dial member other than said outer arc, said indicia being adapted to indicate the angular position of said pointer when the same is rotated.



2. In a device of the character described, the combination with a dial member of a pointer mounted concentrically with said dial member to rotate with respect thereto, said dial member being divided into units of circular measure spaced along concentric arcs struck from the axis of said pointer as a center, said dial member carrying indicia adjacent the marks spaced along the outermost arc, and said pointer carrying indicia at the same radial distances from its axis as the marks of the other arcs, said indicia being adapted to indicate the angular position of said pointer when the later is brought into alinement with any of said marks.

3. In a device of the character described, the combination with a dial member of a pointer mounted to move over said member, said member being divided into units of circular measure by marks placed at different radial distances from the axis of said pointer, and said pointer being triangular in shape, with radial side edges adapted to be brought into alinement with said division marks.

4. In a device of the character described, the combination with a dial member of a pointer mounted to move over said member, said member being divided into duplicate series of units of circular measure, and said pointer having two edges so located with respect to said dial division marks that one edge is adapted to be brought into alinement with the marks of one series, and the other edge into alinement with the marks of the other series for indicating the angular position of the pointer when rotated in either one or the other direction from a neutral position.

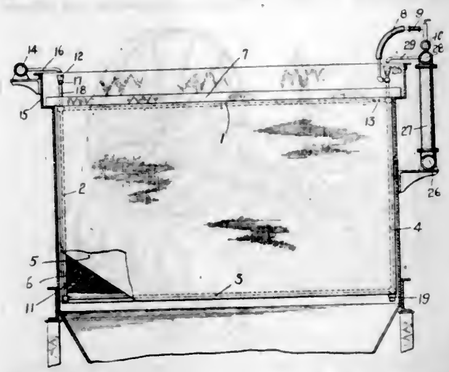
5. In a device of the character described, the combination with a dial member of a pointer mounted concentrically therewith to move over said member, said member being divided by concentric arcs and having radial division marks between said arcs, each of said division marks being at the same angular advance beyond the adjacent division mark between the nearest smaller arcs, and said pointer having a radial edge, and being provided with indicia at different radial distances from its axis corresponding to the radial position of said dial division marks, said indicia being adapted to indicate the angular position of said pointer when the same is rotated.

1,103,345. APPARATUS FOR FILTERING VALUABLE COMPOUNDS. NEWTON A. BURGESS, New York, N. Y., assignor to Butters Patent Vacuum Filter Company, Inc., a Corporation of Nevada. Filed Sept. 3, 1913. Serial No. 787,847. (Cl. 75—86.)

1. A filter leaf having automatic valve means with a housing for allowing discharge of clean water from said leaf into slimes when equal internal and external pressures obtain, but preventing entrance of slimes into said leaf when internal pressure is less than external pressure.

2. A filter leaf having a valve for discharging clean water into dirty water, said valve having a projection into said dirty water, the contents of which projection

are equal to or greater than the amount which would pass in the reverse direction through said valve before it closes.



3. A filter apparatus having a valve for discharging clean into dirty water, said valve having a projecting housing of notable content on the discharge side thereof.

4. A filter apparatus having a valve for discharging one liquid into another, the latter of which is detrimental to said valve, said valve having an extended housing the contents of which are sufficient to close said valve when passing in reverse direction so as to prevent the entrance of the detrimental liquid to said valve.

5. A filter leaf having submerged pressure equalizing means connected therewith and having a housing of notable content and length.

[Claims 6 to 9 not printed in the Gazette.]

1,103,346. RECOVERY OF GOLD AND SILVER FROM REFRACTORY ORES. CHARLES BUTTERS, London, England. Filed Aug. 28, 1912. Serial No. 717,499. (Cl. 75—18.)

1. The process of treating refractory gold and silver ores which consists in subjecting said ores in a finely divided condition to the action of nascent hydrogen produced in solution during the reaction.

2. The process of treating refractory gold and silver ores which consists in agitating the said ore whereby it is subjected to the action of nascent hydrogen produced in the solution of which the ore forms a part during the reaction.

3. The process of treating refractory gold and silver ores consisting in subjecting the gold to the action of a metal in the presence of caustic alkali.

4. The process of treating refractory gold and silver ores consisting in subjecting the ore in the presence of a metal having the property for the required reaction of aluminium to the action of caustic alkali.

5. The process of treating refractory gold and silver ores consisting in subjecting the ore to the action of metallic aluminium in the presence of caustic alkali.

[Claims 6 to 10 not printed in the Gazette.]

1,103,347. SHOE-REPAIRING MACHINE. ROBERT S. CADE, Canton, Ohio, assignor of one-half to Alonzo E. Jackson, Canton, Ohio. Filed Oct. 18, 1913. Serial No. 795,839. (Cl. 12—42.)

1. In a device of the character described, the combination of a base, an upright support secured thereto, an anvil located upon the top or upper end of said support, a reciprocating bar adapted to be guided by the anvil support, said bar being provided with a neck portion at its top or upper end, L-shaped plates pivotally connected to said neck, a heel lift removing blade connected to said L-shaped plates, and means for reciprocating said bar.

2. In a device of the character described, the combination of a base, an upright support secured thereto, an anvil fixed to said support, and located at the top or upper end thereof, a reciprocating bar guided by said support and provided with a neck portion at its top or upper end, L-shaped plates pivotally connected to said neck portion, a heel lift removing blade connected to said L-shaped plates, means for reciprocating said bar, and nail cutting blades, one of said blades being fixed and the other one being movable with the reciprocating bar.



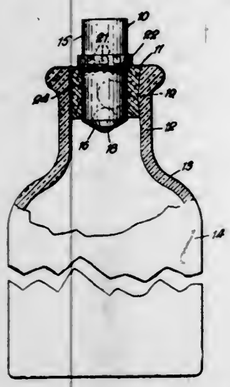
3. In a device of the character described, the combination of a base, a support secured to said base, a heel rest located at the top of said support, a reciprocating bar, said reciprocating bar being arranged to be guided by the heel rest support, means for actuating said reciprocating bar, and a heel lift removing blade fixed to and carried by the reciprocating bar, one edge of said blade being formed substantially straight and the other edge being beveled.

4. In a device of the character described, the combination of a base provided with a bracket, a support connected to said base, said support consisting of angle bars spaced from each other, an anvil located at the top or upper ends of said spaced angled bars, a reciprocating bar located between said spaced angle bars, a lever pivotally connected at one end to said bracket secured to the base, links connected to said lever intermediate its ends and to the reciprocating bar respectively, a heel lift removing blade located at the top or upper end of the reciprocating bar, and nail cutting blades, one being connected to said reciprocating bar and the other being connected to the top or upper end of the support.

1,103,348. NON-REFILLABLE BOTTLE. VINCENT CAPOBIANCO, New York, N. Y. Filed Mar. 7, 1912. Serial No. 682,323. (Cl. 215—62.)

In a non-refillable bottle, the combination with a bottle of a cylindrical casing having a tapered lower end said end being partially closed whereby a seat is formed for a valve, and said casing being secured in the neck of the bottle a valve comprising a small ball of light substance adapted to rest within the cylinder whereby the said opening in the tapered end part is closed, a larger heavy ball surmounting the small ball adapted to serve as a weight and a driver, whereby a close contact is maintained between the small ball and the opening in the end part, said balls being of such a size that they cannot exchange relative positions within the cylindrical casing, a cap adapted for closing the top of the cylindrical casing, and centrally in the walls of the casing a plurality of alined apertures peripherally disposed, and a flange extending from the exterior surface of the casing and having integrally formed

therewith a concentric band whereby a channel is provided extending peripherally around the cylindrical casing, having its base immediately below the said openings, and



the upper edge of said band extending above the openings, substantially as shown and described.

1,103,349. FOUNTAIN-PEN. WILLIAM L. CHAPMAN, New York, N. Y. Filed Feb. 4, 1913. Serial No. 746,219. (Cl. 120—47.)



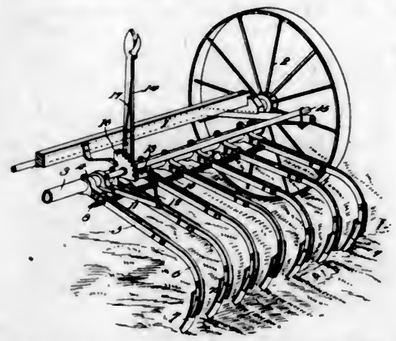
1. A fountain pen having a barrel provided with an ink reservoir, a filling piston, and a piston rod detachable from the piston for storage, said barrel having a rear end wall provided with an opening for admitting the piston rod in operative position, and means for receiving the piston rod in storage position separated from the piston, and a rear-end cap which closes the said piston rod opening and also engages and secures the rear end of the piston rod when in its storage position.

2. A fountain pen having a barrel provided with an ink reservoir, a filling piston therein, a piston rod detachable from the piston for storage and having a handle at its rear end, said pen having means for receiving and holding the piston rod when detached and separated from the piston, and a cap which closes the rear end of the barrel and engages and confines the said handle in its storage position.

1,103,350. CULTIVATOR. CHARLES S. CORKHILL, Ontario, Cal. Filed Aug. 20, 1913. Serial No. 785,751. (Cl. 97—34.)

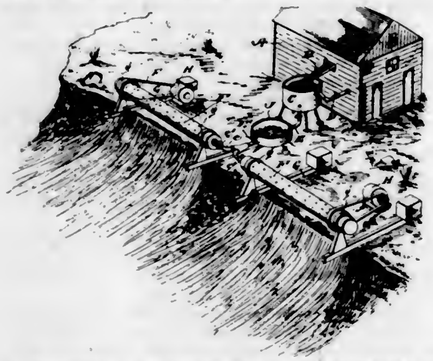
1. The combination of a head, a plurality of cultivators extending rearwardly from the said head normally in parallel relation and independently attached to said head by vertical pivots, a retaining rod loosely mounted in and extending transversely through the several cultivators in rear of said head, and springs coiled around said rod between and bearing against adjacent cultivators.

2. A cultivator comprising a rock shaft, a plurality of couplings independently connected to the said rock shaft by vertical pivots and extending rearwardly therefrom, cultivator beams secured rigidly to the respective couplings and normally in parallel relation, a retaining rod extend-



ing transversely through the beams in rear of the couplings, springs coiled around the retaining rod between and bearing against adjacent beams, and means for oscillating the rock shaft.

1,103,351. METHOD OF THE DISPOSAL OF TAILINGS. JOHN VAN NOSTRAND DORR, Denver, Colo. Filed Sept. 9, 1912. Serial No. 719,464. (Cl. 61—24.)



1. The method of disposing of finely divided waste material suspended in liquid, which consists in thickening the material by separating it from part of the liquid in which it is suspended, conveying the thus thickened finely divided material to a dump, carrying the liquid to another receptacle, distributing the thickened material approximately horizontally along the edges of the dump to form an extended layer of uniform consistency on the slope thereof, and then forming repeatedly successive layers in like manner.

2. The method of disposing of finely divided waste material suspended in liquid, which consists in thickening the material by separating it from part of the liquid in which it is suspended, regulating the amount of liquid thus separated to thus regulate the consistency of the thickened material, conveying the thus thickened finely divided material to a dump, distributing such material approximately horizontally along the edge of the dump to form an extended layer of uniform consistency on the slope thereof and then forming repeatedly successive layers in like manner.

1,103,352. APPARATUS FOR THE DISPOSAL OF TAILINGS. JOHN VAN NOSTRAND DORR, Denver, Colo. Filed June 21, 1913. Serial No. 775,135. (Cl. 214—1.)

1. The combination of a thickener to which the wet tailings pass from a mill and which partially dewaters the tailings, means for conducting back to the mill the extracted water for re-use, and a distributer which receives the thickened tailings from the thickener and delivers them to a dump.



2. The combination of a thickener to which the wet tailings pass from a mill and which partially dewaters the tailings, means for conducting back to the mill the extracted water for re-use, and a distributer which receives the thickened tailings from the thickener, consisting of a perforated pipe arranged approximately horizontally and connected with the thickener, and means for rotating said perforated pipe.

3. The combination of a thickener receiving wet tailings from a mill and which partially dewaters said tailings, means for saving the water extracted from the tailings, a perforated pipe arranged approximately horizontally and which receives tailings from the thickener, means for rotating the pipe, and counterbalanced supports for the pipe adapted to hold the latter at the edge of a dump.

4. An apparatus for the disposal of tailings, comprising a thickener for partially dewatering them, a vessel adapted to store the thickened tailings and to discharge the same at suitable intervals, and means for distributing the thickened tailings along the edge of a dump.

5. An apparatus for the disposal of tailings, comprising a thickener for partially dewatering the tailings, a vessel for storing the thickened tailings and for discharging them at suitable intervals, perforated pipes and mean for rotating said pipes to distribute the thickened tailings along the edge of a dump.

1,103,353. ELECTRIC HEATER. GEORG EGLY, Treptow, Germany, assignor to Gebrueder Siemens & Co., Berlin, Germany, a Corporation of Germany. Filed Apr. 8, 1913. Serial No. 759,803. (Cl. 219—76.)

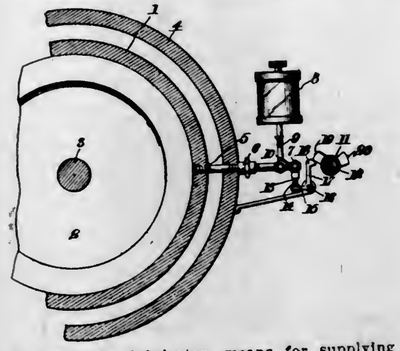
1. An electric heater composed of a non-metallic, highly refractory resistance material provided in the vicinity of the places at which current is supplied with a metallic coating and with a glaze on the metallic coating, for the purpose specified.

2. An electric heater composed of a non-metallic, highly refractory resistance material provided in the vicinity of the places at which current is supplied with a metallic coating glazed with a compound of boron, for the purpose specified.

1,103,354. MEANS FOR LUBRICATING ENGINE-CYLINDERS. FRANCIS ELLICOTT, Ruxton, Md. Filed July 30, 1913. Serial No. 782,007. (Cl. 184—56.)

1. Means for lubricating the cylinder, piston and piston rod of an engine consisting in tubes opening into the cylinder in the path of the piston adjacent each end of its stroke, means for supplying gas under pressure to the tubes, means for feeding oil thereto, a valve controlling the supply of gas and a cam for opening the valve at intervals, the cam being timed to open the valve when the pressure in the cylinder is reduced and the piston is covering one oil inlet opening.

2. Means for lubricating the cylinder, piston and piston rod of an engine consisting of passages one opening into the cylinder in the path of the piston adjacent each end of its stroke, means for supplying gas under pressure to the passages, means for feeding oil thereto, means for controlling the supply of gas, and means for operating the same to release the gas at intervals when the pressure in the cylinder is reduced and the piston covers one inlet, said means having a positive relation to a moving member of the engine so that the relative timing of the operations of the engine and lubricator will not vary.



3. In an engine lubricator, means for supplying gas under pressure, a pipe leading therefrom to the cylinder at a point covered by the piston at the rear end of the stroke, means for introducing lubricant into the pipe, a valve in the pipe, and positive means connecting the valve to the engine to open the valve at predetermined periods during low pressure in the cylinder, one period including the time when the piston covers the oil pipe, the other being when the piston is near the opposite end of the stroke providing for the lubrication of the piston rod.

4. Means for lubricating engine cylinders which consists of means for supplying gas under pressure, a pipe leading therefrom to the cylinder, means for introducing lubricant into the pipe in the path of the gas, a valve in the pipe and means for opening the valve and closing it at intervals, said means being positively driven by the engine, the opening occurring when the pressure in the cylinder is reduced, when the piston covers the end of the pipe, and when the piston is at the opposite end of the stroke.

1,103,355. COMPOSITION FOR PIE-CRUST OR THE LIKE. CHRISTINE M. FABEL, Oceanpark Heights, Cal. Filed May 31, 1913. Serial No. 771,090. (Cl. 99—10.)

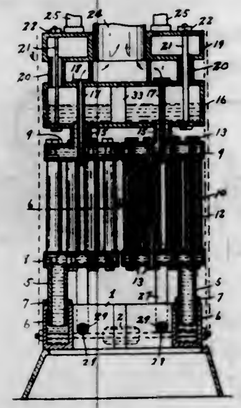
A composition of matter consisting of flour forty-eight parts, salt one and one-half parts, cornstarch one-fourth part, cream of tartar one and one-half parts, and lard twenty parts, these portions being determined by weight.

1,103,356. HEATER. ALEXANDER W. FINLAYSON, Detroit, Mich., assignor to F. S. Stoepel and Claud D. Doyle, trustees. Filed Aug. 12, 1912. Serial No. 714,534. (Cl. 122—271.)

1. In a heater, the combination with a hollow base and a hollow member disposed above the base, of a series of independent heating units, comprising hollow heads, pipes connecting said heads having tapered ends drawn into beveled apertures in said heads, hollow connecting rods passing through the heads and through said pipes and engaging said heads, a threaded pipe connecting the lower head of each heating unit with the base, a pipe connecting the upper head of each heating unit with said hollow member, a hollow connecting rod passing through said pipe, the upper head and said hollow member and engaging said members to detachably connect said parts and afford interior communication and an exterior passage through said connecting parts.

2. In a heater, the combination of a hollow base, a receptacle above the base, heating units interposed be-

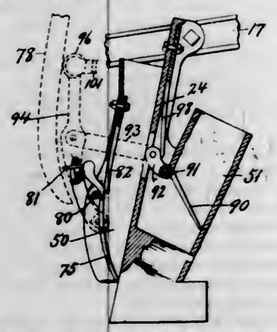
tween the base and receptacle, each unit comprising upper and lower heads, pipe sections having tapered ends seated in beveled apertures in said heads to connect them, and hollow tie bolts passing through said heads and through said connecting pipes, a pipe detachably connecting the upper head of each unit with the upper receptacle, and a pipe detachably connecting the lower head of each unit with the hollow base.



3. In a heater, the combination of a hollow base, heating units comprising upper and lower heads connected by pipes, the lower heads of said units being connected with said base, a hollow member above said heating units, a pipe connecting the upper head of each heating unit with said hollow member, and hollow rods engaging with the upper heads of the heating units and said hollow member passing therethrough and through said connecting pipes to tie said parts together and afford a passage for the caloric current therethrough.

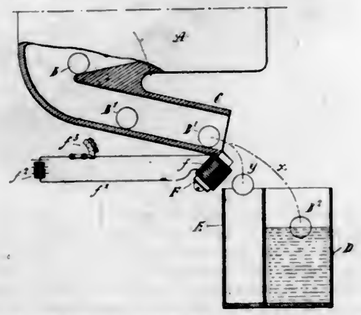
4. A heater unit comprising upper and lower hollow heads, a plurality of apertures extending through the walls of said heads, the walls of the apertures of the opposed heads having beveled edges, pipes having tapered ends seated in said beveled edge apertures, hollow tie rods passing through said pipes and heads and having exterior threaded ends, threaded nuts on the ends of said tie rods engaging the outer walls of said heads for drawing said parts together to effect an interior communication between said pipes and heads, and an exterior communication with said heads through said tie rods.

1,103,357. CHECK-ROW CORN-PLANTER. WILLIAM E. GILROY, Utica, N. Y., assignor to Eureka Mower Company, Utica, N. Y., a Corporation of New York. Original application filed Oct. 16, 1908, Serial No. 458,088. Divided and this application filed May 6, 1911. Serial No. 625,477. (Cl. 111—5.)



In a check-row planter, a corn chute, a fertilizer chute, separate valves in said chutes, and an operating member connected to the fertilizer controlling valve and also connected to the corn controlling valve with a lost motion whereby the fertilizer valve is opened slightly in advance of the corn controlling valve.

1,103,358. METHOD OF AND APPARATUS FOR TEMPERING IRON AND STEEL ARTICLES. HENRY HESS, Philadelphia, Pa. Filed May 1, 1911. Serial No. 624,446. (Cl. 148—10.)



1. The method of tempering iron and steel articles consisting in heating the articles and causing each of them to normally travel one of two routes and employing magnetic force to selectively divert to the other route the improperly heated articles, quenching the articles taking the first route, and treating the articles taking the latter route by further heating, travel selection and quenching.

2. The method of tempering iron and steel articles consisting in heating the articles while giving them mechanical support in heating location, and causing each article to normally travel from heating to quenching location, and employing magnetic force to selectively prevent each improperly heated article from traveling to quenching location.

3. The method of tempering iron and steel spheres consisting in heating the spheres while giving them mechanical support in heating location, and causing each sphere to normally roll along a runway from heating to quenching location, and employing magnetic force to selectively prevent each improperly heated sphere from traveling to quenching location.

4. The method of tempering iron and steel spheres consisting in heating the spheres while giving them mechanical support in heating location, and causing each sphere to normally roll along a runway from heating to quenching location, and employing magnetic force to selectively prevent each improperly heated sphere from traveling to quenching location by diverting it during its travel from heating to quenching location.

5. An apparatus for tempering iron and steel articles comprising in combination, a means for raising the articles to a high temperature, means for mechanically supporting the articles during heating and permitting them to travel normally to a quenching means after heating, a quenching means, and a magnet arranged and located to act selectively upon the articles to prevent improperly heated articles from traveling to said quenching means.

[Claims 6 to 12 not printed in the Gazette.]

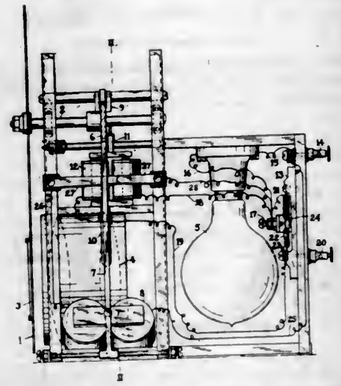
1,103,359. METHOD OF MAKING SPONGE-RUBBER. JOSEF HUEBNER, Chicago, Ill. Filed Jan. 25, 1913. Serial No. 744,171. (Cl. 18—53.)

1. The process for producing sponge rubber which consists in intimately admixing with a vulcanizable rubber compound a plurality of volatile ingredients adapted to be transformed into gaseous fluids at various temperatures none greater than that required for vulcanization of said compound; placing said compound in a mold and subjecting it successively to increasing degrees of heat each adapted to transform at least one of said volatile ingredients and maintaining each succeeding degree of heat for a period requisite to penetrate the whole mass, and finally increasing said temperature to the point and for the period requisite to vulcanize said compound.

2. The process for producing sponge rubber of substantially uniform porosity and permanent elasticity which consists in mixing a vulcanizable rubber compound with a non-drying liquid adapted to preserve the compound after vulcanization thereof, and with a plurality of ingredients adapted upon heating to be vaporized at different temperatures to form cells in the compound; placing the resulting mixture in a mold and subjecting the mold for appreciable intervals of time, respectively, to a series of temporarily maintained successively higher temperatures corresponding to those required for vaporizing the said ingredients respectively; and thereafter subjecting the said mold to a temperature sufficient to vulcanize the contents thereof.

3. The hereindescribed process for producing sponge rubber which consists in admixing with rubber successively at different intervals, resin oil, zinc oxid, turpentine, flour of sulfur and ammonium carbonate in the proportions, more or less, named, and thereupon vulcanizing the mass by placing the same in a mold, placing the latter in a vulcanizer and admitting steam to the latter at intervals at successively higher temperature to gradually increase the temperature of the compound until a maximum of substantially thirty-five pounds pressure is attained and maintaining the said pressure for a period of one and five-sixths hours more or less.

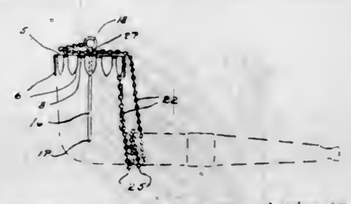
1,103,360. PICTURE-EXHIBITING DEVICE. ALFRED A. JACKSON, Norwalk, Conn. Filed Aug. 20, 1913. Serial No. 787,280. (Cl. 40—55.)



1. In a picture exhibiting device, the combination of a picture carrier, an actuating magnet and armature therefor, means for returning the armature for step-by-step movement of the carrier, a latch for holding the armature, an operating magnet for controlling the latch, an electric lamp, a thermostatic flasher, a circuit in two series sections, one section being through the lamp and actuating magnet and the other section being through the operating magnet, a shunt for the operating magnet, and means operated by the flasher for opening and closing the shunt, substantially as described.

2. In a picture exhibiting device, the combination of a picture carrier, an actuating magnet and armature therefor, means for returning the armature for step-by-step movement of the carrier, a latch for holding the armature, an operating magnet for controlling the latch, an electric lamp, a thermostatic flasher and winding therefor, a circuit in two series sections, one section being through the lamp and actuating magnet and the other section being through the flasher winding and operating magnet a shunt for the flasher winding and operating magnet, and means operated by the flasher for opening and closing the shunt, substantially as described.

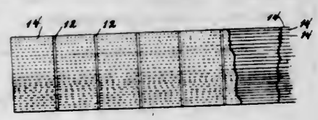
1,103,361. COVER FOR TOBACCO-PIPES. MAX JAGEMANN, New York, N. Y. Filed Feb. 26, 1913. Serial No. 750,835. (Cl. 131—12.)



1. The combination of a pipe cover having an opening, tongues radiating from said cover adapted to be bent over the outside of pipe bowls of various sizes, a pin insertible through said opening to penetrate the charge in the bowl and hold the cover from lifting, and a chain attached at one end to the cover and at the other to the upper end of the pin, adapted to have its intermediate portion wrapped detachably around the pipe stem, said chain being of sufficient length to admit of passing the pin through a link thereof prior to entering it into the charge, whereby the cover is closely anchored in position to the pipe.

2. A tobacco pipe cover adapted to overlie the charge in the bowl, in combination with a pin arranged to be thrust through said cover to penetrate the body of the charge, thereby aiding to hold said cover in position and conduct the heat from the burning charge to the cover.

1,103,362. PLASTER-SUPPORT FOR WALL-COVERING. FREDERICK L. KANE, Huntington, N. Y. Filed Feb. 28, 1911. Serial No. 611,491. (Cl. 20—13.)



A plaster support comprising a plurality of flexible sheets of paper united so as to form a single flexible sheet, longitudinal strands embedded between the paper layers, and thin, flat, transverse strengthening strips spaced apart and firmly secured to the surface of the paper.

1,103,363. TYPOGRAPHICAL MACHINE. GEORGE P. KINGSBURY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 31, 1913. Serial No. 798,419. (Cl. 199—7.)

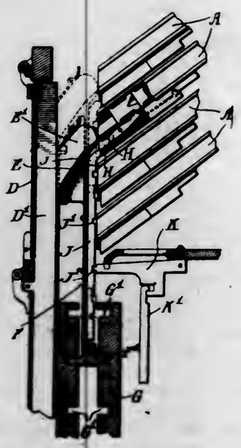
1. In a typographical machine, the combination of a plurality of magazines, a raceway common to all the magazines, an intermediate bridge, and a plurality of supports upon one or another of which said bridge may be mounted so as to be set in operative relation to one or another of the magazines, said bridge being removable at will from said supports so as to be mounted upon any selected one thereof.

2. In a typographical machine, the combination of a plurality of inclined magazines, an upright raceway common to all of the magazines, and an intermediate bridge in operative relation to one of the magazines, said bridge being removable from the machine at will and replaceable in operative relation to a different magazine.

3. In a typographical machine, the combination of a magazine, a racewny to receive the matrices therefrom, and an intermediate bridge to carry the matrices from the magazine to the raceway, said bridge being detachably mounted in the machine in such manner as to be removed laterally therefrom freely and at will.

4. In a typographical machine, the combination of a magazine, a raceway to receive the matrices therefrom, an intermediate bridge to carry the matrices from the maga-

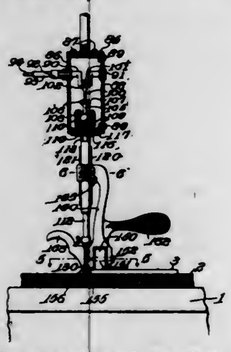
zine to the raceway, and a fixed support for the bridge, said bridge being detachably connected to the support so as to be removable therefrom independently of the other parts.



5. In a typographical machine, the combination of a plurality of stationary magazines, each provided with a series of escapements, a series of actuating devices, and a plurality of supports upon one or another of which the actuating devices may be mounted so as to be set in operative relation to the escapements of one or another of the magazines, the said actuating devices being removable at will from the supports so as to be shifted from one to another thereof when desired.

[Claims 6 to 8 not printed in the Gazette.]

1,103,364. GARMENT-CUTTING APPARATUS. GEORGE M. LAUB, Newark, N. J. Filed Dec. 1, 1911. Serial No. 663,339. (Cl. 164—75.)



1. In a cutting apparatus of the class described, the combination wth a knife, of a support having an arm whose free end is movable in a substantially horizontal plane, knife actuating mechanism carried by said arm, connected in slidable relation therewith, and freely movable vertically with respect thereto, a hand-piece nonrotatable with respect to said knife and carrying a presser, and means operative to vary the pressure of said presser in the direction of the goods to be operated upon.

2. In a cutting apparatus of the class described, the combination with cutting means comprising a vertically reciprocatory double edge cutting knife operative to cut either forward or backward from any point on the surface of the material to be operated upon, of a presser roller, means operative to vary the pressure of the roller on said material, guiding means carrying said presser roller and embracing said knife operative to engage a substantially rigid templet on the surface of the said material, supporting means comprising stationary track rails, flexible means operative to connect said cutting means and said supporting means, and a slidable connection between said supporting means and guiding means for permitting the latter to be uplifted from the material being cut.

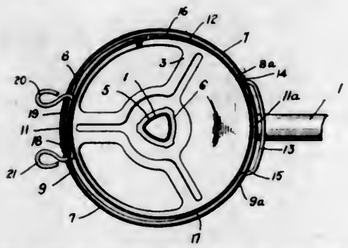
3. In a cutting apparatus, the combination with means arranged to move in a predetermined plane, of an element arranged to move freely in a predetermined straight path with respect to said means, and means for holding and actuating a cutter, said last mentioned means being movable in unison with said element with respect to said first-mentioned means, and movable freely independently of said element and said first-mentioned means.

4. In a cutting apparatus, the combination with means arranged to move in a predetermined horizontal plane, of an element arranged to reciprocate vertically in a predetermined path with respect to said means, and means for holding and actuating a cutter, said last mentioned means being movable in unison with said element with respect to said first mentioned means, and being movable freely independently of said element and said first mentioned means.

5. In a cutting apparatus, the combination with a carriage arranged to move in a predetermined horizontal path, a motor supported by said carriage, an arm pivotally connected to said carriage and arranged to swing with respect thereto about a vertical axis, a plunger arranged to reciprocate freely vertically in a predetermined path with respect to said arm, means arranged to reciprocate vertically in unison with said plunger for holding and actuating a knife, and for reciprocating said knife vertically with respect to said plunger, and power transmission means connecting said motor and said means for actuating a knife.

[Claims 6 to 17 not printed in the Gazette.]

1,103,365. INVERTED-BURNER GAS-LAMP. LOUIS B. LONDON, New York, N. Y. Filed Jan. 17, 1914. Serial No. 812,748. (Cl. 240—115.)

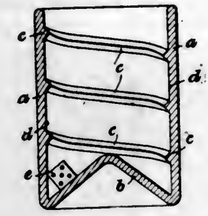


1. In an inverted burner gas lamp, the combination of a gas pipe, a globe-holder provided with a central opening having a marginal projection and through which opening said pipe passes, a metal clamp surrounding the said projection of the holder and compressed from a plurality of points toward the axis of the pipe, the said clamp, projection and pipe being permanently distorted and bent inwardly out of form and thereby clamping the said parts securely together, substantially as described.

2. In an inverted burner gas lamp, the combination of a gas pipe, a globe-holder provided with a central flanged opening through which said pipe passes, an endless metal clamp surrounding the flange of the holder and compressed from a series of equidistant points toward the axis of the pipe, the said clamp, flange and pipe being permanently distorted and bent inwardly out of form and thereby clamping the said parts securely together, substantially as described.

1,103,366. DICE-CUP. GEORGE W. MARKENS, Brooklyn, N. Y. Filed Apr. 2, 1914. Serial No. 829,030. (Cl. 46—56.)

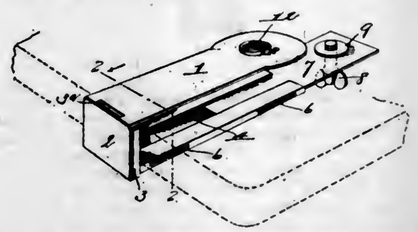
1. A dice box having its interior surface so formed as to present a plurality of projections in the path of a die being discharged therefrom, and having an inwardly extending conical bottom.



2. A dice box having an inwardly extending conical bottom.

3. In a dice box, means on the interior surface of the box to cause a die to turn over and over when being discharged, and an inwardly extending conical bottom.

1,103,367. HOLDER. JOSEPH MOLTAR, Fort Riley, Kans. Filed Aug. 18, 1913. Serial No. 785,394. (Cl. 24—259.)



1. A holder for flexible sheets comprising upper and lower members adapted to lie parallel to each other when in normal position, means for connecting said members, one of said members having a longitudinally extending guide-way, said guide-way being provided with longitudinal slots, and a slidable locking member adapted to slide longitudinally in said guide-way or to pass transversely across said guide-way through said slots.

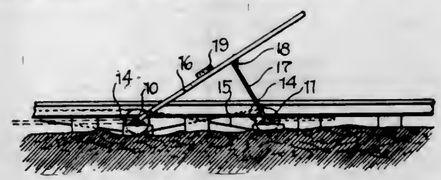
2. A holder of the kind described comprising a top member having an angled guide-way at one end, and slotted in alinement with said guide-way, a lower member having tongues at right angles to said member, said tongues being adapted to enter said guide-way and means adapted to enter the slot and engage said tongues for the purpose of locking said lower member and said top member together.

3. A holder of the kind described comprising a top member having an angled guide-way at one end and slotted adjacent said guide-way, a lower member having tongues at right-angles thereto, said tongues entering said guide-way, one of the tongues being toothed upon its inner side, a toothed locking member adapted to enter the slot and engage the toothed tongue and the second locking member adapted to fit between the toothed locking member and the remaining tongue.

1,103,368. AUTOMATIC STOP FOR RAILWAY-TRAINS. BUANAFEDE MONTERASTELLI, Passaic, N. J., assignor of one-fourth to Edward Murray, Passaic, N. J. Filed Dec. 6, 1913. Serial No. 805,089. (Cl. 246—59.)

1. In an automatic stop for railways, the combination with a track-way; of a pair of shafts extending transversely thereacross below the rails and mounted for oscillation with respect thereto, an arm carried on one end of each of said shafts, the one arm being of less length than the other and adapted to support the latter in an inclined position, and means for oscillating said shafts simultaneously in opposite directions.

2. In an automatic stop mechanism for railways, the combination with a track-way; of a pair of shafts mounted for oscillation below the rails of said track-way and projecting beyond the sides thereof, a drum mounted on one end of each shaft, a cable arranged in connection with said drums to oscillate the shafts in opposite directions as said cable is drawn, and an arm mounted on the opposite end of each of said shafts, and the arm of one shaft being of less length than the arm of the other shaft and adapted to support the latter in an inclined position.



1,103,369. EDUCATIONAL DEVICE. MARIA MONTESSORI, Rome, Italy. Filed June 22, 1909. Serial No. 504,012. (Cl. 35—9.)



1. Didactic material for the instruction of children comprising a multiplicity of units each containing as an essential feature a design of relatively large dimensions, the component parts of the design being wider than the ball of a child's finger tip, said design being flat, pronouncedly visible, and having a roughened surface continuously responsive to the touch of a finger moving over the surface of the components of the design.

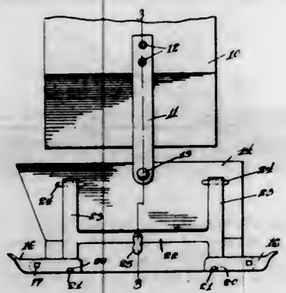
2. Didactic material for the instruction of children comprising a multiplicity of units each containing as an essential feature a letter of the alphabet in flowing script each of said letters being flat, of relatively large area, the structures of the letters being wider than the ball of a child's finger tip, pronouncedly visible, and provided with a continuously roughened surface responsive to the touch of a finger moving over the surface of the letters.

3. Didactic material for the instruction of children comprising a multiplicity of units each containing as an essential feature a design of relatively large dimensions, the component parts of the design being wider than the ball of a child's finger tip, said design being flat, pronounced visible and having a roughened surface continuously responsive to the touch of a finger moving over the surface of the components of the design, each of said units being provided with a guiding member to indicate the direction of the character.

4. In an educational device a plurality of individual characters each carried by a backing material and comprising as its essential feature an irregular design of relatively large dimensions, the component parts of the design being wider than the ball of a child's finger tip and being pronouncedly visible, said units having a surface formation such as to produce a marked sensible effect upon a finger moving over the said units, supporting members for the said characters, the latter being grouped or arranged in a definite predetermined sequence.

5. Didactic material for the instruction of children, comprising a multiplicity of units each carried by a backing material and comprising as their essential feature an irregular design of relatively large dimensions, the component parts of the design being approximately as wide as a child's finger tip and being pronouncedly visible, said units having a surface configuration such as to produce a marked sensible effect upon a finger moving laterally from the backing on to the said units or from the units on to the backing and to establish a sensible impression of at least two contacts upon a finger moving along the said units.

1,103,370. SACK-HOLDER. HARRISON I. MOORE, Windsor, Nova Scotia, Canada. Filed Nov. 29, 1913. Serial No. 803,840. (Cl. 83—26.)



1. A sack holder comprising a frame, plates pivotally connected with said frame and having their outer-end portions tapered to form upwardly-extending hooks, brackets carried by said frame, and a latch comprising side bars pivotally connected with said brackets and engaging the inner-end portions of said plates, and a cross bar connecting said side bars for permitting said side bars to be moved together to simultaneously release said plates.

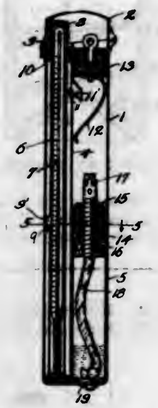
2. A sack holder comprising a frame, shafts rotatably connected with said frame, sack engaging means rigidly connected with said shaft and having their inner ends outweighing their outer ends to normally hold said sack engaging means in a normal position, and a latch pivotally connected with said frame, said latch comprising side bars having their upper end portions pivotally connected with said frame, a cross bar connecting the free end portions of said side bars, and an operating handle carried by said cross bar and constituting a weight for normally swinging said latch to a normal position to bring said side bars in engagement with the inner end portions of said sack engaging means and releasably hold the sack engaging means in a set position.

3. A sack holder comprising a frame having converging side walls terminating in parallel lower end portions, shafts rotatably carried by the lower end portions of said side walls, sack engaging means rigidly carried by said shafts and having their inner end portions extended to form weights normally holding said sack engaging means in a set position, a latch pivotally connected with the upper end portions of said side walls and including side bars for engaging the inner end portions of said sack engaging means, and a cross bar connecting the free end portions of said side bars, and a handle carried by said cross bar intermediate its length and extended to form a weight normally holding the side bars substantially parallel to the converging portions of the side walls of said frame and in a position to engage the inner portions of said sack engaging means to releasably hold the sack engaging means in a set position.

1,103,371. ASEPTIC THERMOMETER-HOLDER. CHARLES F. MYRE and JOSEPH P. HEBERT, Chippewa Falls, Wis. Filed Apr. 14, 1913. Serial No. 761,044. (Cl. 73—52.)

1. In an aseptic thermometer holder, the combination of a case having a partition dividing the case into compartments, an antiseptic supply container within one compartment, means for capillary distribution of the antiseptic in said compartment, the partition being formed with a vent affording communication between the compartments, and a thermometer casing within the second compartment having a vent communicating between the thermometer casing and the last mentioned compartment.

2. In an aseptic thermometer holder, the combination of a case having a partition dividing the case into laterally adjacent compartments, the partition being formed with a vent for intercommunication between the compartments, means for supplying antiseptic fumes to one of the compartments, the other compartment being adapted to contain a thermometer, and successive baffles between the supply compartment and the contained thermometer.



3. In an aseptic thermometer holder, the combination of a case having compartments, a thermometer receiving casing disposed in one of the compartments, a vent being provided between the last named compartment and a second compartment of the case, and a second vent being provided affording communication between the thermometer casing and its respective compartment, the two vents being out of alinement, and means for supplying antiseptic fumes to the second compartment.

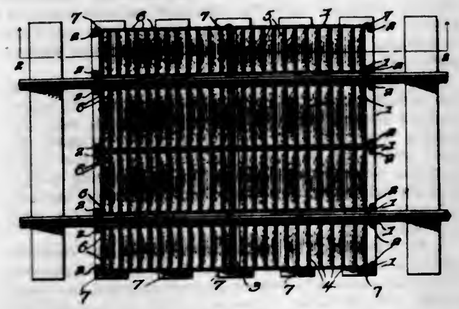
4. In an aseptic thermometer holder, the combination of a case having compartments, a thermometer receiving casing disposed in one of the compartments, a vent being provided between the last named compartment and a second compartment of the case, and a second vent being provided affording communication between the thermometer casing and its respective compartment, the vents being spaced apart longitudinally of the case, and means for supplying antiseptic fumes to the second compartment.

5. In an aseptic thermometer holder, the combination of a case having compartments, a thermometer casing arranged in one of the compartments, means for sustaining the thermometer in said casing spaced from the walls of the casing for providing a space surrounding the thermometer, means in the respective compartment engaging the thermometer casing for sustaining the same surrounded by the space within the respective compartment, the thermometer casing being formed with a vent communicating from its interior with its respective compartment, and vents for supplying antiseptic fumes to the other compartment of the case, a vent being provided for affording communication between the last named compartment and the thermometer receiving compartment.

[Claim 6 not printed in the Gazette.]

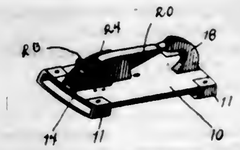
1,103,372. CATTLE-GUARD. WILLIAM E. NELSON, De Soto, Miss. Filed Dec. 12, 1913. Serial No. 806,285. (Cl. 256—17.)

A cattle guard for railroads comprising four interchangeable sections arranged two between the rails and one on the outer side of each rail, each section comprising vertical side plates having a lug on each end for attachment to the cross ties, the top of each side plate being beveled and having a vertical saw-toothed edge and the body of each side bar having a vertical slot at the center and a plurality of corresponding angular slots oppositely disposed on each side of the central slot, a plurality of interchangeable transverse plates supported in the corresponding slots, and a plurality of transverse bolts passing through the bodies of the bars on each section and secured thereto, the adjacent side plates of the sections between



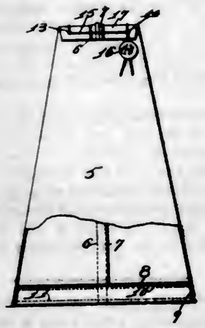
the rails held in contact with the teeth of their edges in register.

1,103,373. TRACE-CARRIER. SWAN OLSON, Marion, N. D. Filed Mar. 14, 1912. Serial No. 683,903. (Cl. 54—56.)



A trace carrier comprising a body having means for connection to a harness part and having a longitudinal slot in one end, a supporting arm on the other end of the body and directed inwardly thereof, spaced ears on said body on opposite sides of the slots respectively, a locking arm pivoted at one end between said ears, spaced cam extensions on the pivoted end of said locking arm, a leaf spring bridging said slot and coöperating with said cam extension to normally hold the free end of the locking arm in alinement with the free end of the supporting arm and permitting pivotal movement of the locking arm in either direction, a shoulder formed on the outer edge of the locking arm, and a bridge connecting said ears and adapted to be engaged by said shoulder to limit the movement of the locking arm in one direction.

1,103,374. PAPER CONTAINER. WILLIAM L. POFFENBARGER, St. Louis, Mo., assignor to Pyraform Bottle Manufacturing Company, a Corporation of Missouri. Filed Oct. 5, 1908. Serial No. 456,209. (Cl. 229—3.)



1. As a new article of manufacture, a paper bottle whose side walls are formed of a single blank cut to form a truncated cone, the meeting edges of said blank being overlapped and stitched together, said bottle having a circular bottom member fitted in the larger end of the bottle and provided with a downturned annular marginal flange which is secured to said side walls by stitching, the bottle so constructed being treated to make the paper impervious to moisture and the seams watertight.

2. As a new article of manufacture, a paper bottle whose side walls are formed of a single blank cut to form a truncated cone, the meeting edges of said blank being stitched together, said bottle having a circular bottom provided with a downturned circumferential flange which is secured by stitching to the side walls of the bottle, the bottle so constructed being treated to make the paper impervious to moisture and the seams watertight, the open end portion of the bottle being adapted to be folded to seal the bottle.

3. In a paper container, the combination of a conoidal body formed from a single sheet of paper whose meeting edges are secured by two or more parallel and vertical lines of stitching; a bottom member secured in place at the lower end of the body member by means of one or more lines of stitching; the mouth of the body member being folded over upon itself to form a flat closure and sealing devices extending through said closure, substantially as described.

4. In a paper container, the combination of a conoidal body formed from a single sheet of paper whose meeting edges are secured in place by two or more parallel and vertical lines of stitching; a flanged bottom member secured in place at the lower mouth of the body member by means of one or more lines of stitching passing through the flange and the body member; a metallic stiffening member mounted between the meeting edges of the body member and between two of said parallel and vertical lines of stitching, and adapted to be bent over upon itself when the mouth of the body member is flattened, to form a closure, substantially as described.

5. As a new article of manufacture, a truncated conical bottle constructed of water-proofed paper, whose side walls are formed of a single blank cut to form a truncated cone, the meeting edges of said blank being secured water tight together by non-adhesive means, said bottle having a closed bottom in its flaring end, and the open end portion of the bottle being adapted to be collapsed and folded to form a closure.

1,103,375. PROCESS OF MAKING SINTERED MAGNESITE AND DOLOMITE. EDUARD POHL, Rhöndorf-on-the-Rhine, Germany. Filed Apr. 8, 1913. Serial No. 759,794. (Cl. 106—42.)

1. The method of producing sinter burnt magnesite consisting in transforming the raw magnesite into a mealy mass of uniform composition throughout by working pure raw materials with less pure materials, and finally burning the mass to sinter.

2. The method of producing sinter burnt magnesite and dolimite consisting in transforming the raw magnesite and dolomite into a slimy and mealy mass of uniform composition throughout by working pure raw materials with less pure materials, and finally burning the mass to sinter.

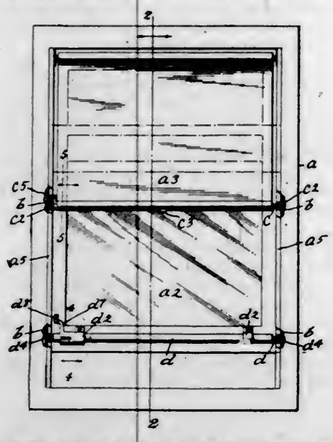
3. The method of producing sinter burnt magnesite and dolomite, consisting in transforming the raw magnesite and dolomite into a slimy and mealy mass of uniform composition throughout by working pure raw materials with sintering producing elements, and finally burning the mass to sinter.

4. The method of producing sinter burnt magnesite and dolomite, consisting in transforming the raw magnesite and dolomite into a slimy and mealy mass of uniform composition throughout by working pure raw materials with iron, clay, bauxite and similar sintering elements, and finally burning the mass to sinter.

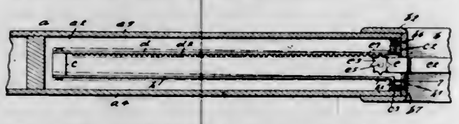
1,103,376. WINDOW ATTACHMENT. WILLIAM POTTER, New York, N. Y. Filed Dec. 13, 1912. Serial No. 736,457. (Cl. 20—40.)

In a window provided with the usual sliding sash and shade, a rack secured to each side of said window, adja-

cent said sash, a rod rotatable on said sash, a rod rotatable in said shade, and pinions on said rods in engagement with said racks to maintain said sash and shade in parallelism.

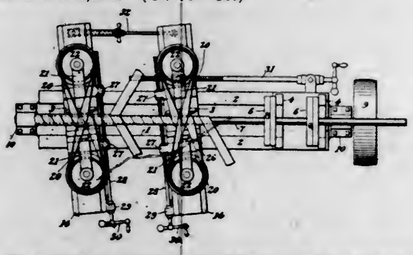


1,103,377. DOOR. WILLIAM POTTER, New York, N. Y. Filed Jan. 14, 1913. Serial No. 741,902. (Cl. 20—16.)



In a wall provided with a door opening, a removable frame, a door carrying strip movable horizontally therein, a door pivoted to said strip, means for maintaining said strip in vertical position, a bar secured to the rear of said frame and extending to a point adjacent said door opening, a plate in the frame of said door opening, a screw therein for drawing said bar toward said opening, and a screw therein for limiting the extent of such bar movement, said screws serving to adjust said door carrying frame to compensate for door warping.

1,103,378. TUBE-MACHINE. TOBIAS E. RAFFEL, New York, N. Y., assignor to Paper Working Machines Co., a Corporation of New York. Filed May 4, 1912. Serial No. 695,279. (Cl. 93—80.)



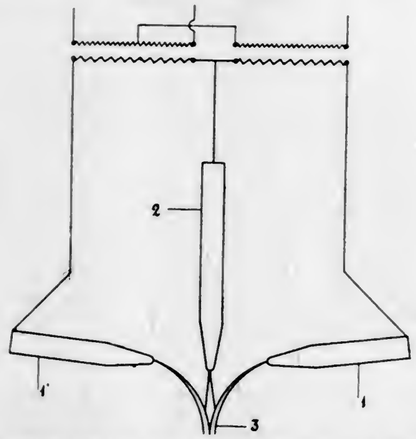
1. In a tube machine, in combination with a mandrel; a bed; a mandrel support carried on said bed, adapted for adjustment to mandrels of different diameters; two presser belts; two separate base members, each mounted on the bed for independent movement lengthwise thereof; a pair of pulleys for each belt carried on each base member, and arranged for adjustment equally toward and away from each other thereon, and means for transmitting motion to both belts.

2. In a machine for making spiral tubes, the combination of a mandrel, a bed, a carriage movable thereon, a base piece centrally pivoted on the carriage, a belt, pulleys therefor, supports for the pulleys slidably mounted on the base piece, means for simultaneously adjusting both supports to vary the distance between them, a driving shaft extending through the bed, and operative connections for transmitting motion from the driving shaft to the pulleys.

3. In a machine for making spiral tubes, the combination with a mandrel of a swingable base piece, two pulley supports slidably mounted thereon, pulleys in said supports, a belt carried on the pulleys, a driving shaft disposed under the base piece midway between the pulley supports, operative connections for transmitting motion from the driving shaft to the pulleys, and means for moving both pulley supports equally toward or away from each other.

4. In a machine for making spiral tubes, the combination of a mandrel, a bed, two carriages movable thereon, a base piece centrally pivoted on each carriage, two belts, pulleys for said belts, supports for the pulleys slidably mounted on each of the base pieces, a driving shaft extending centrally through the bed, operative connections for transmitting motion from the driving shaft to the pulleys, and means for swinging the base pieces to adjust the angle of the belts in respect to the mandrel.

1,103,379. METHOD OF GENERATING HEAT BY MEANS OF ELECTRIC ARCS. IVAR RENNERFELT, Stockholm, Sweden. Filed Mar. 18, 1913. Serial No. 755,194. (Cl. 204—64.)

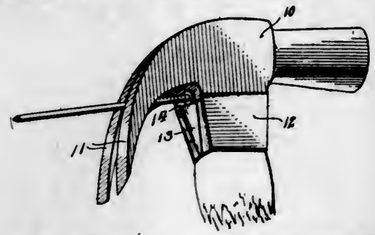


1. The method of generating heat by means of electric arcs consisting in passing electric currents along and between a plurality of at least three electrodes so as to produce an electric arc, strongly deviating away from all the electrodes toward one side, one of the electrodes being located at right angle to a plane containing the other electrodes.

2. The method of generating heat by means of electric arcs consisting in passing two phase currents along and between two opposing electrodes to the end of a third electrode at right angle to and symmetrically located between the first named electrodes so as to cause an electric arc to burn between the ends of all the electrodes, strongly deviating away from the ends of the electrodes in the direction indicated by the symmetrically located electrode.

1,103,380. CLAW-HAMMER. GEORGE W. RENTON, Brooklyn, N. Y., assignor to Hind Steel & Wire Works Inc., New York, N. Y., a Corporation of New York. Filed Sept. 14, 1912. Serial No. 720,432. (Cl. 145—30.)

A hammer embodying a socket portion having externally tapered sides and having a bifurcation forming claws, said bifurcation stopping short of the socket portion; and a nail-head support formed upon the side of the socket portion next the claws, said support presenting a head-engaging upper surface substantially perpendicular to the tapered side of the socket portion and providing such structure that a nail head will engage directly against the outer wall of the socket portion.



1,103,381. ROTARY KILN. HENRIK EMIL RIISAGER, Frederiksberg, Denmark. Filed Apr. 18, 1912. Serial No. 691,620. (Cl. 34—6.)



1. The combination with a rotary kiln, of a transversely corrugated longitudinal partition and means to secure the same in the kiln.

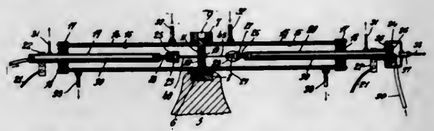
2. The combination with a rotary kiln, of chambered blocks secured to the interior of the kiln, a longitudinal partition plate, an angle iron to which the plate is secured and hooked bolts passing through the angle iron and engaging the chambered blocks interiorly.

3. The combination with a rotary kiln, of chambered blocks secured to the interior of the kiln, a longitudinal partition plate, an angle iron to which the plate is secured, two hooked bolts and spacing blocks positioned between the bolts to hold them in engagement with the first named block.

4. The combination with a rotary kiln comprising a shell and a lining, of chambered blocks secured to the shell and replacing portions of the lining, a longitudinal partition formed of independent sections and means to secure the sections separately in the kiln.

5. The combination with a rotary kiln of partition plates longitudinally and radially disposed, means to secure the partition plates to the kiln at their outer edges, opposite longitudinal members embracing between them adjacent edges of opposite partition plates and bolts to secure the longitudinal members and partition plates, together with spacing members interposed between the opposing longitudinal members.

1,103,382. COMBINED SINTERING AND STRETCHING PROCESS. KARL R. R. SEIFERT, Charlottenburg, Germany. Filed Apr. 21, 1913. Serial No. 762,484. (Cl. 205—16.)



1. The method of sintering and stretching wolfram or other metals and their alloys which consists in sintering the metal by means of an electric current, stretching the metal by passing it through a suitable die and subjecting the metal during the sintering and stretching process to the influence of reducing gases.

2. The method of sintering and stretching wolfram or other metals and their alloys which consists in sintering the metal by means of an electric current and simultaneously therewith stretching the metal by passing it through a suitable water cooled die.

3. The method of sintering and stretching wolfram or other metals and their alloys which consists in sintering the metal by means of an electric current and simultaneously therewith stretching the metal by passing it through a suitable water cooled die, and subjecting the metal during the sintering and stretching process to the influence of reducing gases.

4. The method of sintering and stretching wolfram or other metals and their alloys which consists in subjecting the metal to the action of an electric current to sinter it and simultaneously therewith treating the metal mechanically to stretch it.

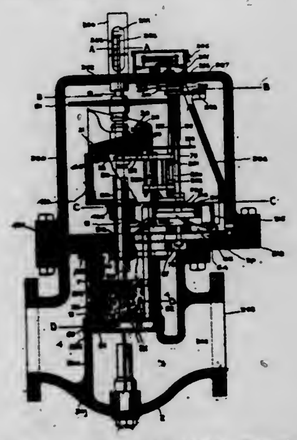
5. The method of sintering and stretching wolfram or other metals and their alloys which consists in passing an electric current through the metal to sinter it and stretching the metal by passing it through a suitable die while the current is on.

[Claims 6 to 14 not printed in the Gazette.]

1,103,383. PROCESS OF MAKING ANTHRAQUINONE. FRITZ SINGER and ERNST MILARCH, Offenbach-on-the-Main, Germany, assignors to Corporation of Chemische Fabrik Griesheim Elektron, Frankfort-on-the-Main, Germany. Filed Jan. 8, 1914. Serial No. 810,959. (Cl. 23—24.)

The process of making anthraquinone consisting in first treating anthracene with nitric acid at a temperature under 60° C. in presence of an indifferent liquid and in then transforming the intermediate product thus obtained into anthraquinone in presence of nitric acid at higher temperatures than 60° C.

1,103,384. METER. CHARLES HAVELOCK TAYLOR, Montreal, Quebec, Canada. Filed Apr. 5, 1911. Serial No. 619,121. (Cl. 73—167.)



1. In a fluid meter having a passage therethrough the combination with a cylindrical port-wall dividing the passage, a piston within the said wall and controlling the ports therein, an indicating device, and means operatively connecting the piston to the indicating device, of means for rotating the piston.

2. In a fluid meter having a passage therethrough the combination with a cylindrical port-wall dividing the passage, a piston within the said wall and controlling the ports therein, an indicating device, and means operatively connecting the piston to the indicating device, of means for rotating the piston and a governor controlling the said last mentioned means.

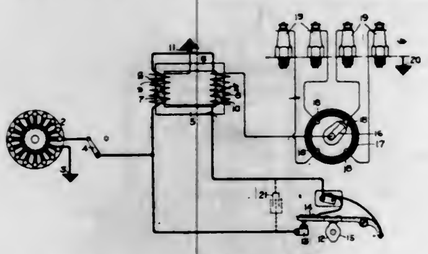
3. In a fluid meter the combination with registering devices, of fluctuating means operatively connected to the registering devices, a piston operated by the fluctuations of fluid passing through the meter, means operatively connecting the piston to the fluctuating means, means for rotating the piston, and a governor controlling the said piston rotating means.

4. In a fluid meter having a passage therethrough the combination with registering devices, a cylindrical port-wall dividing the passage, a piston within the said wall and controlling the ports therein, and a piston-rod carried by the piston, of a cylindro-helical member mounted upon the piston-rod, rotary mechanism stationary relatively to its axial direction and effecting a rotative connection between the said cylindro-helical member and registering devices, and means for rotating the said member.

5. In a fluid meter having a passage therethrough the combination with the frame of the meter and registering devices, of a cylindrical port-wall dividing the passage through the meter and having an annular chamber near the lower end thereof, a fluid impact motor, a nozzle arranged to project a jet of motive fluid against the said motor, the frame of the meter having a duct and an exhaust port, the duct leading from the said annular chamber to the nozzle, and the exhaust port leading from the motor to the portion of the passage outside of the port-wall, a shaft carrying the said motor, a piston within the port-wall and controlling the ports therein; a piston rod carried by the piston, means rotatively connecting the said shaft to the piston rod, a governor operatively connected to the said shaft, and variable operative means in rotative relation with and controlled by the said piston-rod and rotatively connected to the said registering devices.

[Claims 6 to 12 not printed in the Gazette.]

1,103,385. ELECTRICAL SYSTEM. RICHARD VARLEY, Englewood, N. J. Original application filed June 16, 1913, Serial No. 773,807. Divided and this application filed Mar. 21, 1914. Serial No. 826,235. (Cl. 123—148.)



1. A source of energy and a circuit therefor, a plurality of coils inductively related thereto, a current using instrumentality in circuit with one of said coils, and means for bringing another of said coils into circuit with said source.

2. A source of energy and a circuit therefor, a primary coil inductively related to said circuit, and a plurality of secondary coils inductively related to said primary coil.

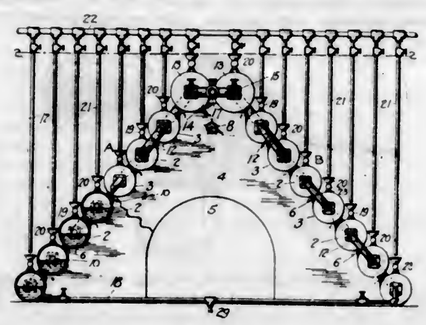
3. A source of energy and a circuit therefor, a primary coil inductively related to said circuit, and a plurality of secondary coils inductively related to said circuit and the primary coil.

4. A source of energy and a circuit therefor, a primary coil inductively related to said circuit and having in circuit controlling means, and a plurality of secondary coils inductively related to said primary coil.

5. A source of energy and a circuit therefor, a primary coil inductively related to said circuit and having in circuit controlling means, and a plurality of secondary coils inductively related to said first named circuit and the primary coil.

[Claims 6 to 35 not printed in the Gazette.]

1,103,386. CONDENSER. GEORGE L. VAIL, Denver, Colo. Filed Dec. 12, 1912. Serial No. 736,282. (Cl. 62—6.)



1. In a condenser, a series of containers having openings which by their position relative to the bottom surfaces thereof adapt them to retain in their lower portions, a quantity of liquid to a determined level, connections between said openings to provide a continuous passage for fluid from the container at one end of said series to that at the other end of the same, one of said end-containers being of greater capacity than the others and having an inlet for fluid, and means for subjecting the contents of the containers, to the influence of a cooling fluid.

2. In a condenser, an obliquely disposed series of successively arranged containers having openings which by their position relative to the bottom surfaces thereof adapt them to retain in their lower portions, a quantity of liquid to a determinate level, connections between said openings to provide a continuous passage for the flow of fluid from the upper container of the series to the lower one, and means for applying a cooling liquid separately to each of said containers.

3. In a condenser, two divergently disposed series of successively arranged containers, having openings which by their position relative to the bottom surfaces thereof adapt them to retain in their lower portions, a quantity of liquid to a determinate level, connections between said openings to provide a continuous passage for the flow of fluid from the uppermost container of each series, to the lowermost one of the same, the uppermost containers of the two series having a connection with a common source of fluid-supply, and means for applying a cooling liquid separately to each of said containers.

4. In a condenser, an obliquely disposed series of cylindrical containers arranged successively one above another, and connected for the flow of fluid from the container at the upper end of the series to that at the lower end of the same, and slotted pipes disposed above said containers, to apply a cooling fluid separately to the exterior surfaces of the same.

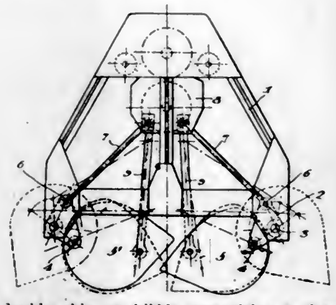
5. In a condenser, two divergently disposed series of cylindrical containers arranged successively one above another, and connected for the flow of fluid from the uppermost container of each series, to the lowermost one of the same, means for connecting the said uppermost containers with a common source of fluid-supply, and pipes disposed above said containers to apply a cooling fluid separately to the exterior surfaces thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,103,387. DOUBLE SKIP OR KIBBLE FOR AUTOMATICALLY RECEIVING LOOSE MATERIAL. PAUL VOLKENBORN, Cologne-Ehrenfeld, Germany. Filed July 24, 1913. Serial No. 780,870. (Cl. 37—30.)

1. A double skip or kibble comprising a frame, two skips rotatably mounted thereon, and means for moving said skips to a closed position in which the cutting edges of the skips are arranged out of contact with each other and in substantially vertical alinement.

2. A double skip or kibble comprising a frame, two skips rotatably mounted thereon, and means for moving said skips, one in advance of the other, to a closed position in which the cutting edge of one skip is above and out of contact with the other.

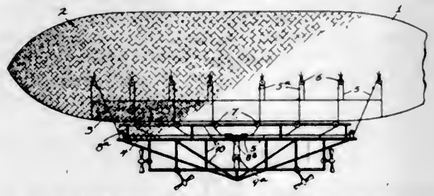


3. A double skip or kibble comprising a frame, two movable supports thereon, skips pivotally mounted on each of said supports, and means connected to said skips and supports for moving said skips, one in advance of the other, to their closed position in which the cutting edge of one skip is above and out of contact with the other.

4. A double skip or kibble comprising a frame, oscillatory supports thereon, skips pivotally mounted on said supports, a member movable with respect to said frame and links connecting said member to each of said skips and supports respectively, said links being arranged to move one of said skips in advance of the other to their closed position in which the cutting edge of one skip is above and out of contact with the other.

5. A double skip or kibble comprising a frame, oscillatory supports thereon, skips pivotally mounted on said supports, a member movable with respect to said frame and links connecting said member to each of said skips and supports respectively, the links which connect the skips to said member being arranged to move one of said skips in advance of the other to their closed position, in which the cutting edge of one skip is above and out of contact with the other.

1,103,388. ATTACHMENT FOR DIRIGIBLE BALLOONS OR GAS-BAGS. RUSSELL R. WATERMAN, San Diego, Cal., assignor to San Diego Aerial Navigation Co., San Diego, Cal., a Corporation of California. Filed Jan. 29, 1913, Serial No. 744,865. Renewed May 28, 1914. Serial No. 841,667. (Cl. 244—3.)



1. In an attachment for gas bags of the class described, the combination of a netting adapted to fit over the lower surface of said gas bag, a plurality of pulleys mounted on the side of said gas bag, cables attached to the sides of said netting mounted over said pulleys and the ends extending downwardly, a drum on which the ends of said cables are wound, and spring means in connection with said drum for keeping said cables in a certain tension.

2. In an attachment for dirigible balloons, the combination of a netting stretched over the lower surface of said dirigible balloon, a plurality of pulleys mounted along the opposite sides of said balloon, a plurality of cables attached to the sides of said netting extending over said pulleys provided with stops whereby said cables are prevented from traveling too far on said pulleys in either direction, a drum mounted in the car upon which said cables are wound, another cable wound on said drum, and a spring attached to said latter mentioned cable for holding said net at a certain tension against the lower surface of said dirigible balloon.

3. In an attachment for dirigible balloons, the combination of a netting adapted for the lower surface of a dirigible balloon, a plurality of cables attached to each side thereof, a plurality of pulleys mounted on opposite sides of said balloon some distance from the edges of said netting, a plurality of cables attached to the sides of said netting passing over said pulleys and a spring regulated drum upon which the other ends of said cables are wound.

4. A device of the class described comprising a netting adapted to fit over the lower surface of a gas bag, a plurality of pulleys attached to the netting on each side of said gas bag, a plurality of cables attached to the sides of said netting and passing over said pulleys provided with stops in said cables for preventing said cables from passing through said pulleys after they have reached a certain position, a plurality of idler pulleys for said cables and adapted for guiding them to the positions desired, a drum mounted in the car of the dirigible balloon upon which the ends of said cables are wound, and a spring means in connection with said drum for holding said cables in a certain tension at all times.

1,103,389. OPHTHALMIC MOUNTING. JOEL C. WELLS, Southbridge, Mass. Filed Apr. 3, 1914. Serial No. 829,242. (Cl. 88—50.)



1. An actuating spring for eyeglasses comprising a central helically wound portion and a wide inclosing band.

2. An actuating spring for eyeglasses comprising a central portion of substantially circular shape in cross section and an inclosing spring wall substantially rectangular in cross section.

3. In an eyeglass mounting the combination with a support, a pivot rising therefrom, of a guard lever swinging on the pivot and an actuating spring for the lever comprising a coil wound on the pivot, said spring terminating in a wide portion bent to inclose the coil.
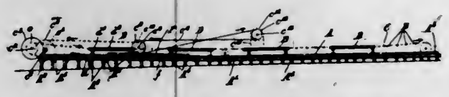
4. An eyeglass mounting including a support for the lenses, a lever mounted upon the support, a pivot for the lever carried by the support, a spring coiled axially with the pivot and terminating in a widened portion inclosing the pivot and portion of the spring coiled directly thereon, said widened portion having its free terminus connected to one of the two first named parts.

5. In an eyeglass mounting the combination with a support and a headed pivot carried thereby, of a lever mounted on the pivot, a helical spring coiled on the pivot between the lever and head, said helical spring terminating in a wide portion inclosing the helical portion thereof and in engagement with the head and lever, whereby said widened portion forms a protecting wall for preventing access of dirt to the coils of the helix.

1,103,390. WASHING AND COLLECTING APPARATUS. ROBERT HAZLEHURST WRIGHT, Nashville, Tenn., assignor to Charleston S. C. Mining & Manufacturing Company, Mount Pleasant, Tenn., a Corporation of South Carolina. Filed July 7, 1911. Serial No. 637,371. (Cl. 83—81.)

1. In an apparatus of the kind described, the combination of a longitudinally arranged trough, and traveling members shallower than the trough for causing travel and discharge of heavy or coarse material at the head end,

said trough being arranged with an upward incline at the head end and without such incline at the other end, means to feed to an intermediate portion of the trough the material to be separated, and means for supplying a separating current of water through the trough.

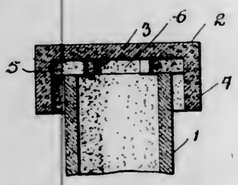


2. In an apparatus of the kind described, the combination of a longitudinally arranged trough and traveling members shallower than the trough for causing travel and discharge of heavy or coarse material at the head end, said trough being arranged with an incline to cause liquid and materials carried by it to discharge at the other or tail end, such incline being upward from the trough middle toward its head end and said trough being substantially level elsewhere, means to feed to an intermediate portion of the trough the material to be separated, and means for supplying a separating current of water through the trough.

3. In an apparatus of the kind described, the combination of a long shallow trough with a series of movable flights therein, means for causing the flights to move in one direction, and means for causing a portion of the material to travel in an opposite direction, each flight comprising a rigid cross-bar adapted to rest upon the trough bottom while traveling, a piece of packing material shaped to conform to the trough's bottom in size, and means to secure said packing material to said cross-bar.

4. In an apparatus of the kind described, the combination of a long shallow trough with a series of movable flights therein, a draft connection for causing the flights to travel in one direction, means for causing a portion of the material to travel in an opposite direction, each flight comprising a rigid cross-bar, a piece of packing material in front of said cross-bar, and a clamp plate in front of said packing material, said clamp plate adapted to be rigidly clamped to the cross-bar, and said clamp plate shaped and arranged to extend substantially above said cross-bar and at least as high as said draft connection, and recessed to accommodate the latter.

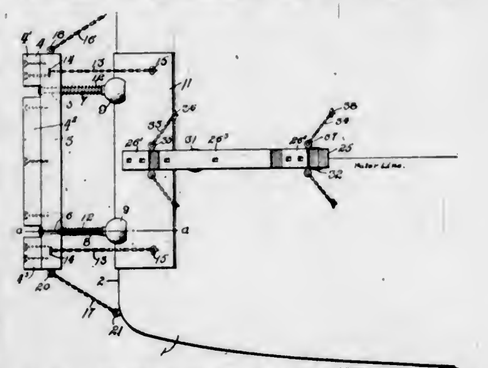
1,103,391. CAP FOR DRAIN-TILES. WILLIS ARMSWORTH, Cerro Gordo, Ill. Filed Feb. 6, 1913. Serial No. 746,651. (Cl. 61—9.)



1. A cap for drain tiles comprising a plate having depending therefrom a vertical marginal flange, a plurality of radially arranged elongated lugs formed integral with the under surface of the plate so as to provide passages, said lugs being adapted to rest upon the upper end of the drain tile, so that the lower edge of the flange will be below the upper edge of the drain tile, the diameter of said plate being such that said flange will be spaced from the side of the tile, as and for the purpose set forth.

2. A cap for drain tiles comprising a plate having depending therefrom a vertical annular flange, a plurality of radially arranged elongated lugs formed integral with the under surface of the plate so as to provide passages, said lugs being adapted to rest upon the upper end of the drain tile, so that the lower edge of the flange will be below the upper edge of the drain tile, the diameter of the plate being such that said flange will be spaced from the side of the tile.

1,103,392. FENDER. JULIUS E. BIAO, Fairchance, Pa. Filed Mar. 3, 1914. Serial No. 822,204. (Cl. 114—219.)



1. In a detachable fender for vessels, the combination with a bar having openings therein, rods extending through the openings having their outer ends headed and having their inner ends arranged to have a bearing against a portion of the vessel and each provided with a spring between the bar and the vessel, detachable flexible connections between the bar and the vessel and flexible connections between the bar and a portion of the fender.

2. In a fender for vessels, the combination with a bar having openings therein, rods extending through the openings, said rods having their outer ends headed and having their inner ends arranged to have a bearing against a portion of the vessel and each provided with a spring between the bar and the vessel, flexible connections between the bar and the vessel, and a buffer face detachably secured to the front of the buffer bar made up of portions spaced apart to permit the ends of the rods to move between the portions.

3. In a detachable fender for vessels, the combination with a bar having openings therein and arranged vertically in front of the cutwater of the vessel, a plate detachably fitting over the cutwater, rods carried by the plate arranged to extend through the openings in the bar, springs carried by the rods between the plate and the bar and flexible connections between the plate and the bar.

4. In a detachable fender for vessels, the combination with a bar having openings therein and arranged vertically in front of the cutwater of the vessel, a plate slidably mounted over the cutwater, rods carried by the plate arranged to extend through the openings in the bar, springs carried by the rods between the plate and the bar and flexible connections between the plate and the bar and flexible connections between the bar and the vessel.

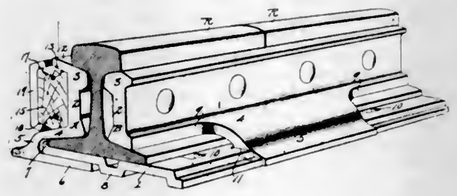
1,103,393. HAIR-PIN. JOSEPH FRANCIS BODY, Philadelphia, Pa. Filed June 29, 1910. Serial No. 569,597. (Cl. 132—22.)



1. A hair pin formed from a single length of material bent upon itself to produce spaced hair-engaging members having their intermediate portions crimped to form corrugations of uniform length and width, two of said corrugations near the free ends of the hair-engaging members being bent inwardly at substantially right angles to the other corrugations to produce oppositely disposed gripping jaws having convex faces, the hair-engaging members for the entire distance between the said gripping jaws and the free ends of the members being parallel and devoid of corrugations.

2. A hair pin formed from a single length of material bent upon itself to produce spaced legs of equal length having portions thereof near the closed end of the hair pin bent inwardly to produce upper co-acting gripping jaws, the material forming the legs of the hair pin beneath said jaws being crimped to form corrugations extending laterally from the front and rear of the pin, the convex portions of the corrugations of one leg being disposed opposite to and overlapping the concave portions of the corrugations of the mating leg, the terminal corrugations being spaced from the free ends of the legs of the pin and bent inwardly at substantially right angles to the other corrugations to form oppositely disposed lower co-acting gripping jaws having arcuate faces, the legs of the pin for the entire distance between the lower gripping jaws and the free ends of the legs being devoid of corrugations.

1,103,394. RAIL-JOINT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1913. Serial No. 757,948. (Cl. 239—6.)



1. A rail joint, comprising in combination with the rails, a base plate, opposite joint bars having a clamping engagement with the base plate, and one of which is provided with a channeled outer side, a compressible filler member seated in said channeled outer side of one of the joint bars, and a channeled bolt strap receiving the outer side and top and bottom of the filler.

2. A rail joint, comprising in combination with the rails, a base plate, opposite joint bars having a clamping engagement with the base plate, and one of which bars is provided with a channeled outer side, a reversible compressible filler member registering within the channeled bar, and a channeled bolt strap also receiving the filler and having its flanges disposed at corresponding angles to the angular faces of the filler.

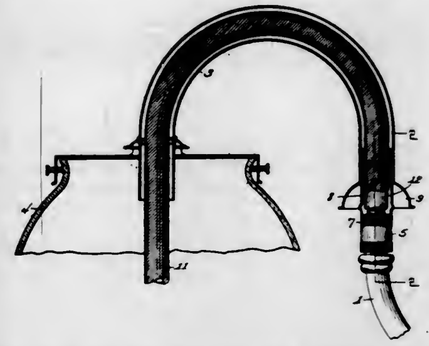
3. A rail joint including in combination with the rails, a joint bar having a channeled outer side, a reversible filler registering with the channel of said bar, and a channeled bolt strap receiving the filler and having its flanges disposed at a corresponding angle to the angular faces of the filler.

1,103,395. DROP-LIGHT ATTACHMENT. CARL F. W. BUSCH, Bellaire, Ohio. Filed Mar. 13, 1914. Serial No. 824,370. (Cl. 240—79.)

1. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, a sleeve mounted on said nipple, a curved tubular shade-supporting member mounted on said sleeve, and a drop-light tube directed through said tube and connected to said nipple.

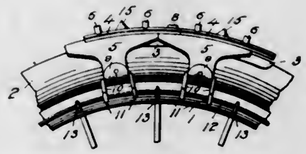
2. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, a sleeve mounted on said nipple, a curved tubular shade-supporting member mounted on said sleeve, and a drop-light tube directed through said tube and connected to said nipple, said nipple having a stem over which the end of said tube is fitted.

3. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, and having exterior screw threads thereon, an integral upright stem provided on said nipple, a sleeve having its lower end mounted on said threads, a curved tubular shade-supporting member disposed upon the upper end of said sleeve, and a drop-light tube having its end



fitted upon said stem, said tube being projected through said tubular member.

1,103,396. TIRE-ARMOR. JOHN COAN, Kansas City, Mo. Filed Jan. 3, 1910, Serial No. 535,977. Renewed Aug. 29, 1910. Serial No. 579,563. (Cl. 152—16.)
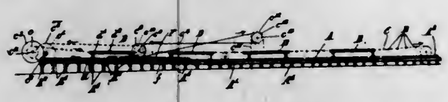


1. A tire armor comprising a series of sections, each of which consists of an inner tire engaging plate, an outer tread plate, an intermediate connecting plate arranged between said inner and outer plates and projecting beyond one end of the same, said end being adapted to be engaged between the ends of the inner and outer plates of the adjoining section and having formed therein slots, connecting rivets arranged through the ends of said inner and outer plates and the slots in the ends of said connecting plates whereby the sections of the armor are flexibly connected together, and means to secure said armor to the tire and rim of a wheel.

2. A tire armor comprising a series of sections, means whereby said sections are flexibly connected together, each of which consists of an inner tire engaging plate, an outer tread plate, an intermediate connecting plate secured between said inner and outer plates, armor attaching hooks formed on the opposite side edges of said connecting plates, attaching loops adapted to be engaged with said hooks, eyes formed on the inner ends of said loops, a series of fastening devices arranged in the rim of the wheel, a fastening ring adapted to be engaged with the eyes in said loops and the fastening devices in said rim, whereby the armor is securely held in position on a wheel.

3. A tire armor comprising a series of inter-engaging sections, each section comprising three layers of material secured together, the central layer being displaced longitudinally relative to the other layers whereby there is formed at one end of the section a projecting tongue and at the other a corresponding pocket adapted to receive the tongue of the succeeding section, a pin passed through the projecting upper and lower layers which form said pocket, said tongue having an oblong slot therein in which the pin of an adjacent section is adapted to play.

said trough being arranged with an upward incline at the head end and without such incline at the other end, means to feed to an intermediate portion of the trough the material to be separated, and means for supplying a separating current of water through the trough.

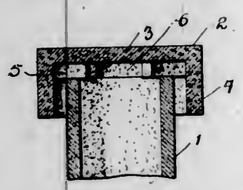


2. In an apparatus of the kind described, the combination of a longitudinally arranged trough and traveling members shallower than the trough for causing travel and discharge of heavy or coarse material at the head end, said trough being arranged with an incline to cause liquid and materials carried by it to discharge at the other or tail end, such incline being upward from the trough middle toward its head end and said trough being substantially level elsewhere, means to feed to an intermediate portion of the trough the material to be separated, and means for supplying a separating current of water through the trough.

3. In an apparatus of the kind described, the combination of a long shallow trough with a series of movable flights therein, means for causing the flights to move in one direction, and means for causing a portion of the material to travel in an opposite direction, each flight comprising a rigid cross-bar adapted to rest upon the trough bottom while traveling, a piece of packing material shaped to conform to the trough's bottom in size, and means to secure said packing material to said cross-bar.

4. In an apparatus of the kind described, the combination of a long shallow trough with a series of movable flights therein, a draft connection for causing the flights to travel in one direction, means for causing a portion of the material to travel in an opposite direction, each flight comprising a rigid cross-bar, a piece of packing material in front of said cross-bar, and a clamp plate in front of said packing material, said clamp plate adapted to be rigidly clamped to the cross-bar, and said clamp plate shaped and arranged to extend substantially above said cross-bar and at least as high as said draft connection, and recessed to accommodate the latter.

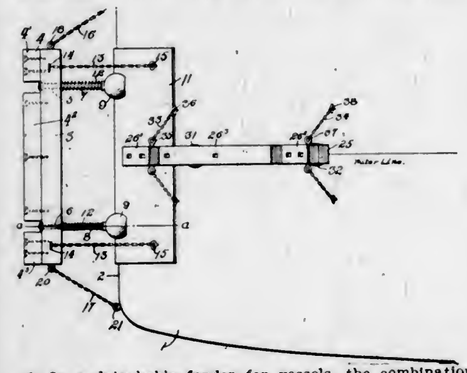
1,103,391. CAP FOR DRAIN-TILES. WILLIS ARMSWORTH, Cerro Gordo, Ill. Filed Feb. 6, 1913. Serial No. 746,651. (Cl. 61—9.)



1. A cap for drain tiles comprising a plate having depending therefrom a vertical marginal flange, a plurality of radially arranged elongated lugs formed integral with the under surface of the plate so as to provide passages, said lugs being adapted to rest upon the upper end of the drain tile, so that the lower edge of the flange will be below the upper edge of the drain tile, the diameter of said plate being such that said flange will be spaced from the side of the tile, as and for the purpose set forth.

2. A cap for drain tiles comprising a plate having depending therefrom a vertical annular flange, a plurality of radially arranged elongated lugs formed integral with the under surface of the plate so as to provide passages, said lugs being adapted to rest upon the upper end of the drain tile, so that the lower edge of the flange will be below the upper edge of the drain tile, the diameter of the plate being such that said flange will be spaced from the side of the tile.

1,103,392. FENDER. JULIUS E. BIRO, Fairchance, Pa. Filed Mar. 3, 1914. Serial No. 822,204. (Cl. 114—219.)



1. In a detachable fender for vessels, the combination with a bar having openings therein, rods extending through the openings having their outer ends headed and having their inner ends arranged to have a bearing against a portion of the vessel and each provided with a spring between the bar and the vessel, detachable flexible connections between the bar and the vessel and flexible connections between the bar and a portion of the fender.

2. In a fender for vessels, the combination with a bar having openings therein, rods extending through the openings, said rods having their outer ends headed and having their inner ends arranged to have a bearing against a portion of the vessel and each provided with a spring between the bar and the vessel, flexible connections between the bar and the vessel, and a buffer face detachably secured to the front of the buffer bar made up of portions spaced apart to permit the ends of the rods to move between the portions.

3. In a detachable fender for vessels, the combination with a bar having openings therein and arranged vertically in front of the cutwater of the vessel, a plate detachably fitting over the cutwater, rods carried by the plate arranged to extend through the openings in the bar, springs carried by the rods between the plate and the bar and flexible connections between the plate and the bar.

4. In a detachable fender for vessels, the combination with a bar having openings therein and arranged vertically in front of the cutwater of the vessel, a plate slidably mounted over the cutwater, rods carried by the plate arranged to extend through the openings in the bar, springs carried by the rods between the plate and the bar and flexible connections between the plate and the bar and flexible connections between the bar and the vessel.

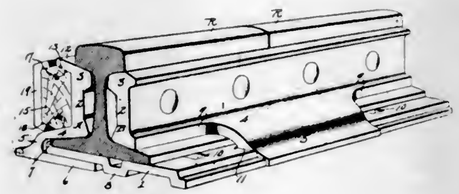
1,103,393. HAIR-PIN. JOSEPH FRANCIS BODY, Philadelphia, Pa. Filed June 29, 1910. Serial No. 569,597. (Cl. 132—22.)



1. A hair pin formed from a single length of material bent upon itself to produce spaced hair-engaging members having their intermediate portions crimped to form corrugations of uniform length and width, two of said corrugations near the free ends of the hair-engaging members being bent inwardly at substantially right angles to the other corrugations to produce oppositely disposed gripping jaws having convex faces, the hair-engaging members for the entire distance between the said gripping jaws and the free ends of the members being parallel and devoid of corrugations.

2. A hair pin formed from a single length of material bent upon itself to produce spaced legs of equal length having portions thereof near the closed end of the hair pin bent inwardly to produce upper co-acting gripping jaws, the material forming the legs of the hair pin beneath said jaws being crimped to form corrugations extending laterally from the front and rear of the pin, the convex portions of the corrugations of one leg being disposed opposite to and overlapping the concave portions of the corrugations of the mating leg, the terminal corrugations being spaced from the free ends of the legs of the pin and bent inwardly at substantially right angles to the other corrugations to form oppositely disposed lower co-acting gripping jaws having arcuate faces, the legs of the pin for the entire distance between the lower gripping jaws and the free ends of the legs being devoid of corrugations.

1,103,394. RAIL-JOINT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1913. Serial No. 757,948. (Cl. 239—6.)



1. A rail joint, comprising in combination with the rails, a base plate, opposite joint bars having a clamping engagement with the base plate, and one of which is provided with a channeled outer side, a compressible filler member seated in said channeled outer side of one of the joint bars, and a channeled bolt strap receiving the outer side and top and bottom of the filler.

2. A rail joint, comprising in combination with the rails, a base plate, opposite joint bars having a clamping engagement with the base plate, and one of which bars is provided with a channeled outer side, a reversible compressible filler member registering within the channeled bar, and a channeled bolt strap also receiving the filler and having its flanges disposed at corresponding angles to the angular faces of the filler.

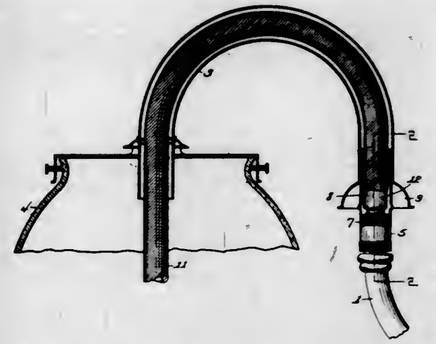
3. A rail joint including in combination with the rails, a joint bar having a channeled outer side, a reversible filler registering with the channel of said bar, and a channeled bolt strap receiving the filler and having its flanges disposed at a corresponding angle to the angular faces of the filler.

1,103,395. DROP-LIGHT ATTACHMENT. CARL F. W. BUSCH, Bellaire, Ohio. Filed Mar. 13, 1914. Serial No. 824,370. (Cl. 240—79.)

1. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, a sleeve mounted on said nipple, a curved tubular shade-supporting member mounted on said sleeve, and a drop-light tube directed through said tube and connected to said nipple.

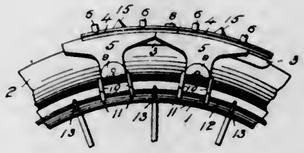
2. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, a sleeve mounted on said nipple, a curved tubular shade-supporting member mounted on said sleeve, and a drop-light tube directed through said tube and connected to said nipple, said nipple having a stem over which the end of said tube is fitted.

3. A drop-light attachment comprising, in combination, the arm of a gas fixture, a nipple mounted vertically on said arm, and having exterior screw threads thereon, an integral upright stem provided on said nipple, a sleeve having its lower end mounted on said threads, a curved tubular shade-supporting member disposed upon the upper end of said sleeve, and a drop-light tube having its end



fitted upon said stem, said tube being projected through said tubular member.

1,103,396. TIRE-ARMOR. JOHN COAN, Kansas City, Mo. Filed Jan. 3, 1910, Serial No. 535,977. Renewed Aug. 29, 1910. Serial No. 579,563. (Cl. 152—16.)

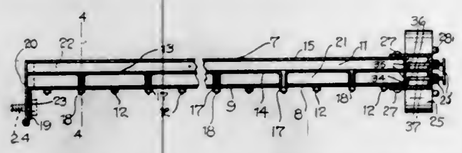


1. A tire armor comprising a series of sections, each of which consists of an inner tire engaging plate, an outer tread plate, an intermediate connecting plate arranged between said inner and outer plates and projecting beyond one end of the same, said end being adapted to be engaged between the ends of the inner and outer plates of the adjoining section and having formed therein slots, connecting rivets arranged through the ends of said inner and outer plates and the slots in the ends of said connecting plates whereby the sections of the armor are flexibly connected together, and means to secure said armor to the tire and rim of a wheel.

2. A tire armor comprising a series of sections, means whereby said sections are flexibly connected together, each of which consists of an inner tire engaging plate, an outer tread plate, an intermediate connecting plate secured between said inner and outer plates, armor attaching hooks formed on the opposite side edges of said connecting plates, attaching loops adapted to be engaged with said hooks, eyes formed on the inner ends of said loops, a series of fastening devices arranged in the rim of the wheel, a fastening ring adapted to be engaged with the eyes in said loops and the fastening devices in said rim, whereby the armor is securely held in position on a wheel.

3. A tire armor comprising a series of inter-engaging sections, each section comprising three layers of material secured together, the central layer being displaced longitudinally relative to the other layers whereby there is formed at one end of the section a projecting tongue and at the other a corresponding pocket adapted to receive the tongue of the succeeding section, a pin passed through the projecting upper and lower layers which form said pocket, said tongue having an oblong slot therein in which the pin of an adjacent section is adapted to play.

1,103,397. GAS-BURNER. CHARLES F. COLE and QUINCY CAAA, Huntington, W. Va. Filed Apr. 16, 1913. Serial No. 761,583. (Cl. 158—105.)



1. A burner of the character described comprising a body having a central longitudinal wall dividing said body into separate gas receiving flues or passages, a plurality of jet tips on one of the body walls communicating with one of said flues, a plurality of jet tips extending from said partition wall through said body wall and communicating with the other flue, a common supply means for said flues, and means for independently regulating the supply of gas to the flues.

2. A burner of the character described comprising a body, a central longitudinally extending partition wall in said body dividing the same into separate flues or passages, a plurality of jet tips on one of the body walls communicating with one of said flues, spaced jet tips on said partition wall extending through said body wall and alternately located with relation to the tips on said body wall, said latter tips communicating with the other flue, a gas supply head on one end of said body, and adjustable valves mounted in the supply head to independently regulate the supply of gas to said flues.

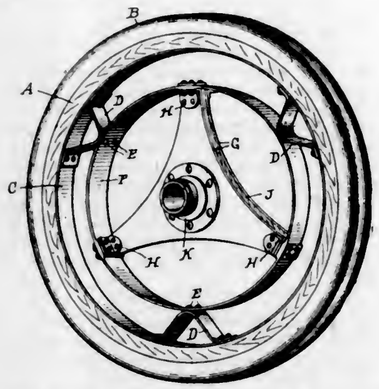
3. A burner of the character described comprising a body member of channel form in cross section, said member constituting the front, top and bottom walls of the burner, a partition wall arranged within said body member between said top and bottom walls, a back wall secured upon said body member, said partition wall and back wall forming separate flues in the burner, said back wall being provided with means on one end to close said flue, jet tips on the front wall of the burner, jet tips on said partition wall extending through said front wall, and gas supply means on the other end of the burner to supply gas to said passages.

4. A burner of the character described comprising a body having separate flues or passages, two series of jet tips communicating with the respective flues, a burner head mounted upon one end of the body and provided with an interior partition wall to divide the same into separate flues, a valve plate mounted in said head having spaced openings affording communication between the respective flues of the burner body and head, and valves mounted in the burner head and adjustable in said openings to independently control the supply of gas to the flues of the burner body.

1,103,398. WHEEL. BENSON P. COOPER, Ithaca, N. Y. Filed Nov. 5, 1910. Serial No. 590,865. (Cl. 152—28.)

1. In a vehicle wheel, the combination of a non-resilient felly, an inner concentric spring band, equi-distant intermediate supporting devices connected to the band and felly and formed as braces to meet stresses exerted circumferentially, an axle-bearing at the center of the spring band, and a hub member connected to the axle-bearing and to the spring band at points intermediate the supporting devices and constituting a bracing between its points of connection with the band to withstand stresses in directions substantially at right angles to the axis of the wheel.

2. In a vehicle wheel, the combination of a non-resilient felly, an inner concentric spring band, an odd number of equidistant intermediate supporting devices connected to the spring band and the felly and formed as braces to meet stresses exerted circumferentially, an axle bearing at the center of the spring band, and a hub member connecting the axle bearing and the spring band at points intermediate of the supporting devices and constituting a bracing between its points of connection with the band to withstand stresses in directions substantially at right angles to the axis of the wheel.



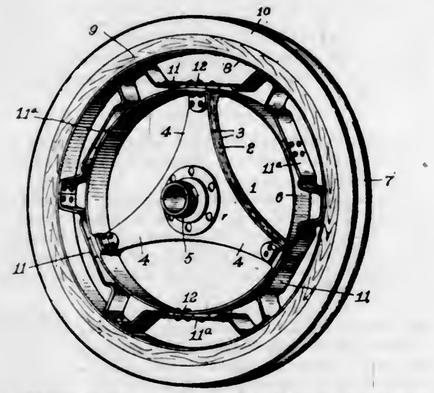
3. In a vehicle wheel, the combination of a non-resilient felly, a concentric spring band, intermediate diagonally braced members connected to the felly and the band whereby to meet circumferential stresses, a hub member having triangular extensions connected to the spring band at points intermediate the braced members, and an axle bearing carried at the center of the spring band by the hub member.

4. In a vehicle wheel, the combination with a rigid felly and a hub element, of a concentric spring band intermediate the felly and hub element, and secured to the latter and supporting members for the band between the same and the felly consisting of metal plates bent to V-shape with rounded apices, fastened at their bases to the felly and at their apexes to the spring band, as set forth.

5. In a vehicle wheel the combination of a rigid felly, a hub member, and a resilient band connected at alternate intervals to the felly and hub member and forming a resilient suspension member for supporting the hub within the felly, the points of connection of the band to the felly and hub member being rigid as against strains within the resilient limit of the band.

[Claim 6 not printed in the Gazette.]

1,103,399. WHEEL. BENSON P. COOPER, Ithaca, N. Y. Filed Nov. 5, 1910, Serial No. 590,866. Renewed Feb. 3, 1913. Serial No. 746,034. (Cl. 152—28.)



1. A vehicle wheel having in combination a hub-member having radial arms or extensions, a resilient band secured to said arms, a rigid felly, tangentially arranged springs for transmitting power from the hub-member to the felly and springs interposed between the felly and band for transmitting stresses from the felly to the band.

2. A resilient wheel for vehicles, comprising, in combination, a hub-member having a plurality of spaced extensions or arms and formed between such extensions to withstand torsional stress, a resilient band secured to said extensions, an outer rigid felly concentric with the band and spaced therefrom, and a series of springs between the band and felly, tangentially to the former, said springs being secured by their middle points alternately to the hub-member extensions or arms and to the band between such extensions and having their ends secured to the rigid felly.

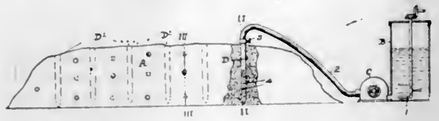
3. A resilient wheel for vehicles comprising, in combination, a hub-member having a plurality of spaced radial arms, a resilient band secured to said arms, an outer rigid felly concentric with said band and spaced therefrom, and a series of springs constructed to yield radially and circumferentially interposed between the band and the felly and arranged tangentially to the former.

4. A resilient wheel for vehicles, comprising in combination, a rigid hub-member having a plurality of spaced radial arms, a resilient band mounted on the radial arms, a rigid felly concentric with the band and spaced therefrom, a plurality of springs arranged tangentially to the band and connected at their middle points to the respective arms of the hub-member and at their ends to the rigid felly and a plurality of similar springs connected at their ends to the said felly and at their middle points to the band between the arms of the hub-member.

5. A resilient wheel for vehicles, comprising in combination, a rigid hub-member having a plurality of spaced radial arms, a resilient band mounted on the arms, a rigid felly concentric with the band and spaced therefrom, yielding devices connecting the felly to the band at points midway between the hub-member arms, and yielding devices for transmitting forces from the hub-member arms to the rigid felly arranged tangentially of the former.

[Claims 6 and 7 not printed in the Gazette.]

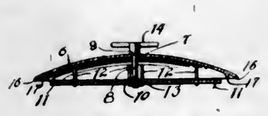
1,103,400. PROCESS FOR PREPARING ORE-DUST FOR SMELTING. WILLIAM COOPER, Denver, Colo. Filed Apr. 20, 1914. Serial No. 833,153. (Cl. 75—73.)



1. The process of preparing ore-dust for smelting, which consists in solidifying a mass of the same by saturating it with a solution of calcareous binder, permitting the mass to harden, and then breaking the mass into chunks.

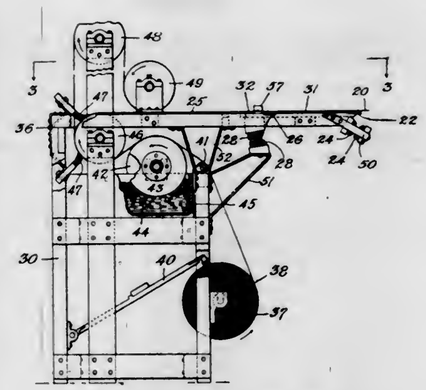
2. The process of preparing ore-dust for smelting, which consists in solidifying a mass of the same by saturating it with a solution of calcareous binder, permitting the mass to harden, and then introducing explosives into said mass and blasting the latter into chunks.

1,103,401. FASTENER FOR BARREL-HEADS. CHARLES A. COX, McLeansboro, Ill. Filed May 23, 1913. Serial No. 769,523. (Cl. 70—3.)



In a barrel, the combination with a flange secured to its upper edge and having grooves formed therein, of a closure head having loops carried by its under surface, a bolt passable through said head, a hub engaged by the lower end of the bolt, rigid arms radiating from said hub and engaging said loops, stops carried by the flange and having top plates adapted to be engaged by the outer ends of said arms, said bolt being operable to draw the hub toward the head, an annular flange formed near the rim of said head, whereby the ends of said arms tightly engage the top plates to hold the rim and flange of the head in tight engagement with said grooves.

1,103,402. METHOD OF APPLYING COVERING TO BOARDS AND OTHER ARTICLES. GEORGE W. DINSMOOR, Lawrence, Mass. Filed Nov. 24, 1913. Serial No. 802,650. (Cl. 216—62.)



1. The method of attaching paper, coated on one side with sticky material, to an article, which consists in laying an article against the sticky side of an elongated strip of said paper, moving the article to feed the paper to a severing device, moving the article to cause severing movement of the paper against said severing device, and moving said article against a wiper to wipe the severed portion of the paper against the article.

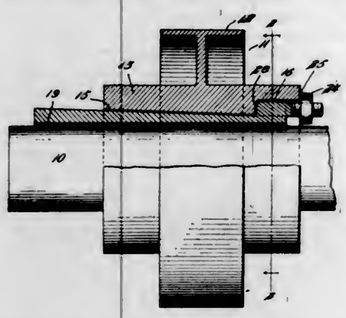
2. The method of attaching translucent paper, coated on one side with sticky material and having marks upon the other side, to an article, which consists in laying an article against the sticky side of an elongated strip of said paper, moving said article to feed said paper to a severing device, locally illuminating said other side of said paper to reveal said marks through the paper, severing the paper, and moving the article against a wiper to wipe the severed portion against the article.

3. The herein described method of covering an edge of a board with paper coated on one side with sticky material, which consists in laying a broad side of the board upon the sticky side of the paper so that the paper extends beyond the edge of the board, moving the board to feed the paper to a paper-severing device, moving the board to cause said severing device to sever the paper at a distance from the board, and moving the board against a wiper to wipe the free flap of paper over said edge and upon the opposite broad side of the board.

1,103,403. KEY FOR ROTARY ELEMENTS. JOSEPH C. DUCKWORTH, Williamston, S. C. Filed Feb. 11, 1913. Serial No. 747,700. (Cl. 74—8.)

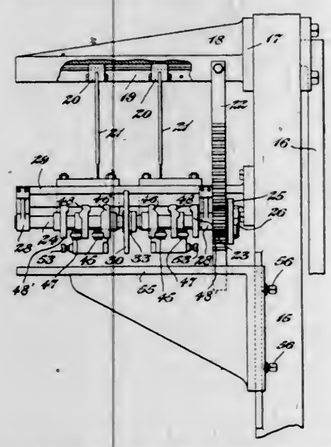
The combination of a shaft, an element having a bore adapted to receive said shaft, and means for securing the element to said shaft comprising a tapering key having an offset part at its narrow end, said bore having a

longitudinal tapering keyseat and a recess at the shallow end of said keyseat adapted to receive said key and the



offset portion thereof respectively to limit the movement of said key longitudinally of said shaft in either direction.

1,103,404. FASTENER FORMING AND DRIVING MACHINE. SAMUEL B. DUNHAM, New York, N. Y. Filed Jan. 8, 1908. Serial No. 409,812. (Cl. 1—9.)



1. In a machine for corrugating, cutting up and driving strips of metal into wood, the combination of means acting to feed a metallic ribbon, opposing dies capable of acting on said metallic ribbon to corrugate the same, means for severing the metallic ribbon into lengths, means for driving the fastener thus formed edgewise into wood and opposing flat faced jaws, of which one is yielding, said jaws being located below the dies and arranged to hold the fastener during the driving operation.

2. In a machine for making and driving corrugated sheet metal fasteners, the combination of corrugating dies for forming a fastener, a yielding means arranged to receive the fastener from the dies during the driving operation and a plunger operating between the dies and said yielding means to drive the fastener edgewise into wood.

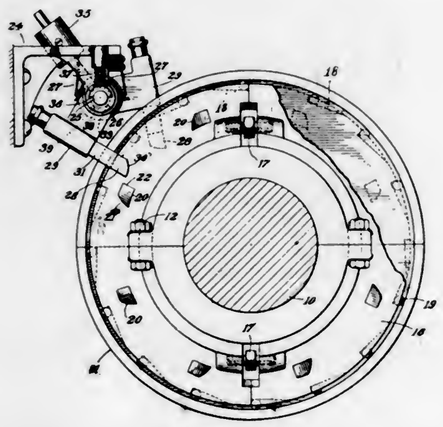
3. A fastener forming and driving mechanism, comprising dies for corrugating the fastener stock, of which dies one is movable, means for operating the movable die, shear and ledger blades juxtaposed to the dies, means for operating the shear blade for the purpose specified, a plunger acting between the dies and arranged to drive the fastener edgewise into wood, and yielding devices below the dies to receive and hold the fastener during the driving operation.

4. A fastener forming and driving mechanism, comprising dies for corrugating the fastener stock, of which dies one is movable, means for operating the movable die, shear and ledger blades juxtaposed to the dies, means for operating the shear blade for the purpose specified, a plunger acting between the dies and arranged to drive the fastener edgewise into wood, and yielding devices below the dies to receive and hold the fastener during the driving operation, such devices consisting in a stationary and a spring pressed jaw.

5. A fastener forming and driving mechanism, comprising a plunger head, a plunger carried thereby and arranged to drive the fastener edgewise into wood, and devices for corrugating the fastener stock and cutting the same into suitable lengths to form a fastener, such corrugating and cutting devices being actuated by the return motion of the plunger head.

[Claims 6 to 20 not printed in the Gazette.]

1,103,405. AUTOMATIC REVERSING-SWITCH. AUSTEN H. FOX, New York, and ARNOLD W. LENDEROTH, Stapleton, N. Y. Filed June 11, 1913. Serial No. 773,024. (Cl. 246—25.)



1. The combination of an electrical switch having a shiftable member, a reversible shaft, and connections between said shaft and switch-member including one-way clutches which automatically engage in opposite directions.

2. The combination of an electrical switch having a shiftable element, a reversible shaft, a pair of disks on said shaft for shifting said element in opposite ways, and one-way automatic clutches for connecting the one or the other of said disks to the shaft according to the latter's direction of rotation.

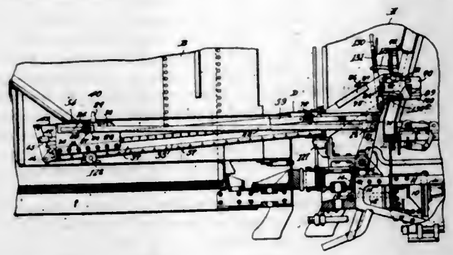
3. The combination of a reversible shaft, a pair of disks thereon connectible with the shaft by oppositely-acting one-way clutches and having oppositely-acting teeth, a parallel switch shaft, and a pair of fingers on said switch-shaft adapted to be engaged and displaced by the teeth of the respective disks.

4. The combination of a switch-shaft substantially balanced against rotation by gravity and having a pair of fingers, a reversible driving-shaft, members on said shaft adapted to engage and displace said fingers so as to turn said switch-shaft to one or the other of two positions, and automatic connecting and disconnecting means between said members and the reversible shaft.

5. The combination of a reversible axle, a split drum clamped thereon, a pair of separate disks loose on said drum and reversely-connectible therewith by one-way automatic clutches, said disks having teeth, and a switch having a shiftable element adapted to be operated by said teeth.

[Claims 6 to 8 not printed in the Gazette.]

1,103,406. LOCOMOTIVE-STOKER. NORMAN E. GEE, Altoona, Pa. Filed Oct. 15, 1912. Serial No. 725,960. (Cl. 110—104.)



1. A stoker including a fuel receiver, means for supplying fuel thereto, a plurality of steam jetting nozzles arranged to discharge the fuel from the receiver and arranged at different angles, a source of fluid pressure supply, a single valve in communication with the several nozzles and having means for simultaneously opening one or more nozzles and closing the remaining nozzle or nozzles, and means interposed between said valve and source of fluid pressure supply for producing an intermittent flow of the fluid to and through said valve.

2. A stoker including a fuel receiver, means for feeding fuel thereto, steam jetting nozzles opening into opposite sides of said receiver at an angle for discharging the fuel therefrom, fuel guiding means located beyond the said nozzles and having an adjustment conforming to the angularity of said nozzles, a source of fluid pressure supply for the nozzles, and a variable controlling device having means for selectively controlling said nozzles.

3. A stoking mechanism including a delivery mouth, means for feeding fuel thereto, fuel guiding means including side members, and a bottom plate extending from the discharge end of the mouth, a plurality of sweeping jet openings arranged to produce jets which sweep the top of said bottom plate, a nozzle adapted to produce a fuel ejecting jet discharging into the mouth in rear of said fuel guiding means, a source of fluid pressure supply, and a single controlling valve for selectively controlling the said nozzle and the said sweeping jet openings.

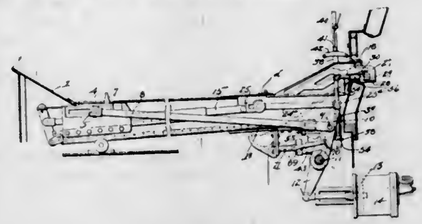
4. A stoker including a delivery mouth, mechanical conveying means for carrying fuel toward the fire box, an engine for operating the conveying means, a nozzle adapted to produce a jet for discharging the fuel from the delivery mouth into the fire box, means for conveying the exhaust from the engine to the said nozzle, and an intercepting valve operated automatically by the exhaust and serving to produce an intermittent feed of the exhaust to the nozzle.

5. A stoker including a delivery mouth, mechanical conveying means for carrying fuel toward the fire box, an engine for operating the conveying means, a nozzle adapted to produce a jet for discharging the fuel from the delivery mouth into the fire box, means for conveying the exhaust from the engine to the said nozzle, and an intercepting valve interposed in the path of the exhaust and the nozzle, said intercepting valve including a reciprocating valve member actuated automatically by the pressure of the exhaust and serving to produce an intermittent feed of the exhaust to the nozzle.

[Claims 6 to 11 not printed in the Gazette.]

1,103,407. MECHANICAL STOKER FOR FIRING LOCOMOTIVE-FURNACES. NORMAN E. GEE, Altoona, Pa. Filed Feb. 26, 1913. Serial No. 750,927. (Cl. 110—104.)

1. A stoking apparatus including a receiver adapted to communicate with the fire box, means for supplying fuel to said receiver, fuel discharging means consisting of a plurality of steam jetting nozzles communicating with said receiver, variable fuel guiding means extending beyond the nozzles, and means for changing the directive movement of said discharging means in correspondence with the position of said guiding means.



2. A stoking apparatus including a receiver adapted to communicate with the fire box, means for supplying charges of fuel to the receiver, a plurality of steam jetting nozzles communicating with the receiver and arranged respectively at different angles, variable fuel guiding means extending beyond the nozzles, and means for changing the direction of the steam jet or jets in correspondence with the position of the said guiding means.

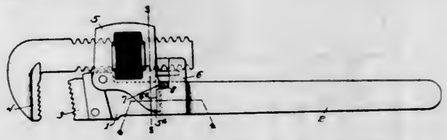
3. A stoking apparatus including a stoking chamber, means for supplying charges of fuel to said chamber, means for discharging fuel from the chamber, variable guiding means for the discharged fuel charges, controlling means for changing the directive movement of said discharging means in correspondence with the position of the guiding means, and a single operator's device for simultaneously adjusting said controlling means and said guiding means to select the part to be fed.

4. A stoking apparatus including a stoking chamber, means for supplying charges of fuel to the chamber, fuel discharging means consisting of a plurality of steam jetting nozzles opening into the chamber at different angles, variable fuel guiding means extending beyond the nozzles, means for selectively controlling the steam supply to said nozzles, and a device for simultaneously adjusting the said controlling means and the said guiding means to cause the directive movement of the steam jet or jets to correspond to the position of said guiding means.

5. In a stoking apparatus of the class described, a stoking chamber, means for feeding fuel to the chamber, steam-jetting nozzles opening into opposite sides of the chamber at an angle for discharging the fuel, adjustable guiding means for directing the path of the discharged fuel, means for variably controlling a supply of steam to either or both of the nozzles, and a device having operative connection with said controlling means and with said guiding means for simultaneously adjusting the same to select the part to be fed.

[Claims 6 to 12 not printed in the Gazette.]

1,103,408. WRENCH. ALBERT L. GREEN, Mingo Junction, Ohio. Filed May 8, 1914. Serial No. 837,171. (Cl. 81—105.)



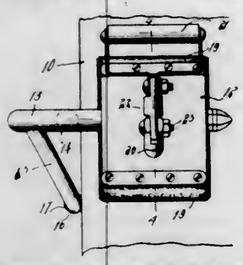
1. In a wrench, the combination with a wrench body and a pivoted guide having separated heel portions, of outstanding members formed integral with the sides of said body, the front faces of said members being recessed to form inclosed shoulders against which said heel portions abut.

2. In a wrench, the combination with a wrench body and a pivoted guide having separated heel portions, of outstanding members formed integral with the sides of

said body, the front faces of said members being provided with vertical grooves in which said heel portions are confined.

3. In a wrench, the combination with a wrench body and a pivoted guide having separated heel portions, of outstanding members formed integral with the sides of said body, the front faces of said members being provided with vertical grooves in which said heel portions are received behind forwardly extending embracing flanges.

1,103,409. DEVICE FOR HANDLING MARBLE SLABS. CHARLES H. GRIFFIN, Cleburne, Tex. Filed Nov. 20, 1913. Serial No. 802,140. (Cl. 57—9.)



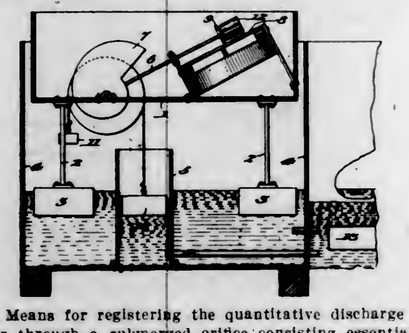
1. A slab gripping tool including a frame having the sides forming pivot shafts, a pair of opposed jaws eccentrically mounted on said pivot shafts, a stop frame carried by the first named frame and projecting across a prolongation of the space between said jaws, and grips mounted on said jaws.

2. A slab gripping tool including a frame having the sides forming pivot shafts, a pair of opposed jaws eccentrically mounted on said shafts and each having an arcuate yielding working face, a stop frame carried by the first named frame and projecting across a prolongation of the space between said jaws, and grips carried by said jaws.

3. A slab gripping tool including a frame having the sides forming pivot shafts, a pair of opposed jaws eccentrically mounted on said shafts, a stop frame carried by the first named frame and projecting at a slight angle thereto and extending across a prolongation of the space between said jaws, and grips carried by said jaws.

4. A slab gripping tool including a frame having the sides forming pivot shafts, a pair of opposed jaws eccentrically mounted on said shafts, a stop frame carried by the first named frame and projecting across a prolongation of the space between said jaws, and a grip on each jaw including a stem projecting from the jaw on one side of said pivot shaft, and a hand hold pivotally secured to said stem.

1,103,410. SELF-REGISTERING WATER-METER. FRANK W. HANNA, Defiance, Iowa. Filed Aug. 22, 1912. Serial No. 716,485. (Cl. 73—167.)



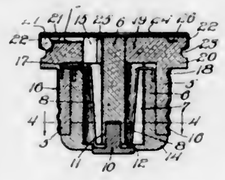
1. Means for registering the quantitative discharge of water through a submerged orifice consisting essentially of a registering means; means whereby the same is floated and controlled by the level of the water on one side of the orifice; and means for operating the registering means and including a float controlled by the level of the water on the other side of the orifice.

2. Means for registering the quantitive discharge of water through a submerged orifice in a partition wall in a channel or reservoir consisting essentially of a registering means; means whereby the same is floated and controlled by the level of the water on one side of the partition wall; and means for operating the registering means and including a float controlled by the level of the water on the other side of the partition wall.

3. Means for registering the quantitative discharge of water through a submerged orifice consisting essentially of a mechanical integrator with a motor driven surface, a registering wheel, a register and an arm; means whereby the same is floated and controlled by the level of the water on one side of the orifice; and means including a cam wheel and a float for operating the cam wheel and controlled by the level of the water on the other side of the orifice.

4. Means for registering the quantitative discharge of water through a submerged orifice consisting essentially of a mechanical integrator with a clock-driven plane surface, an arm movable in a straight line, a registering wheel mounted on the said arm and driven by the said surface, a register mounted on the said arm and driven by the said wheel; means whereby the same is floated and controlled by the level of the water on one side of the orifice; means, including a cam wheel for moving the said arm and a float for operating the said cam wheel and controlled by the level of the water on the other side of the orifice.

1,103,411. FUSE-PLUG. JOHN H. HANSON and JOHN W. STEELE, Chicago, Ill. Filed Apr. 12, 1913. Serial No. 760,650. (Cl. 175—278.)



1. A fuse plug comprising an outer member of insulating material, a threaded metallic shell secured thereto and adapted to be screwed into a socket, an inner member, a plurality of fuses carried by one of said members, and a contact piece carried by the other member and adapted to contact with one of said fuses, said members having portions engaging each other and preventing relative rotation thereof when in their operative relation, and said members being relatively movable in a direction to disassociate said engaging portions.

2. A fuse plug comprising an outer member of insulating material, a metallic threaded shell secured thereto and adapted to be screwed into a socket, a contact terminal carried by said shell, an inner member, a plurality of fuses carried by said inner member and arranged to be successively brought into operative relation to said terminal by relative rotation of said members, said members being shaped to engage each other to prevent relative rotation when in their normal position, and said members being longitudinally movable with respect to each other into position to separate the engaging portions of said members.

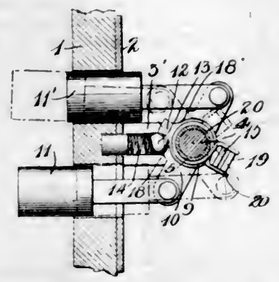
3. In a fuse plug, a body comprising a sleeve-like portion closed at one end, said body having a non-circular opening therein, a central insulating core wholly inclosed except at one end by said body, said core having a portion fitting in said opening to prevent rotation of the core when in its operative position, and a plurality of fuses carried by said core, the core being longitudinally movable to withdraw said portion from said opening, whereby the core is free to be rotated to carry a new fuse into operative position.

4. A fuse plug comprising an outer body portion of insulating material, having secured thereto a threaded metallic shell adapted to be screwed into a socket, said shell having a contact portion, a central insulating core in said body portion, said core and body portion having engaging parts to prevent relative rotation when in their operative relation, and a plurality of fuses carried by said core, said core being arranged to have a movement longitudinally of its axis and also a rotation about its axis to successively position said fuses in operative relation to said contact portion.

5. In a fuse plug, a body comprising a sleeve-like portion closed at one end, said body having a non-circular central opening, a withdrawal core wholly inclosed except at one end by said body, said core having a non-circular portion, said opening and said core-portion being shaped to permit insertion of said portion in said opening in any one of several positions, said core having a plurality of longitudinal openings therein, a fuse in each of said openings, and a conductor carried by said body portion with which conductor one of said fuses is arranged to contact.

[Claims 6 to 13 not printed in the Gazette.]

1,103,412. SNAP-SWITCH. GERALD W. HART, West Hartford, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed July 29, 1912. Serial No. 711,964. (Cl. 175—293.)



1. In a switch mechanism, the combination of a support, a shaft carried thereby, a detent plate and actuating means mounted on said shaft so as to be revoluble about the axis thereof, a switch-throwing spring connecting said plate and said member, a detent tending to move toward holding position, said detent plate having a projection normally engaging said detent, and said actuating means having a projection adapted to engage said detent and force it away from holding position but not entirely out of the path of the projection of said detent plate, said detent having a sloping surface engaged by said last named projection when said detent has been moved by said actuating means, so as to force said detent entirely out of the path of said last named projection and a switch arm connected to the detent plate so as to follow its movements.

2. The combination of a detent-plate having a to and fro movement and provided with a projection forming two locking recesses on opposite sides thereof, a detent having a surface facing said detent-plate and sloping in opposite directions, a spring forcing said detent into locking engagement with said detent-plate, said detent entering said recesses alternately as said detent-plate is moved to and fro, means having a to and fro movement and having two surfaces adapted to engage said detent, one at a time, and force it partially but not entirely out of said locking recesses when said means is in either of its two extreme positions, a driving spring connecting said detent-plate and said means so as to be put under tension when said means is moved in either direction and acting when under driving tension to move said detent fully out of said holding recesses.

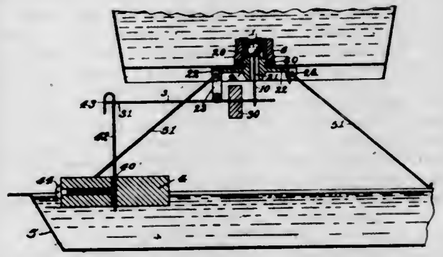
3. The combination of a detent-plate having a to and fro movement and provided with a projection forming two locking recesses on opposite sides thereof, a detent having a surface of revolution about an axis at right angles to the plane in which said detent-plate moves and revoluble about said axis, a spring forcing said detent toward locking engagement with said detent-plate so that it enters said recesses alternately as said detent-plate moves to and fro, means having a to and fro movement and having two surfaces adapted to respectively engage said detent and force it partially but not entirely out of said locking recesses when said means is in either of its two extreme positions, a driving spring connecting said detent-plate and means so as to be put under tension when said means is moved in either direction and acting when under tension to cause said detent-plate to complete the moving of said detent out of its respective recesses.

4. The combination of a detent-plate having a to and fro movement and provided with a projection forming two locking recesses on opposite sides thereof, a detent having a surface of revolution about an axis at right angles to the plane in which said detent-plate moves, the axis of said detent normally lying in the path of a portion of said projection, a spring forcing said detent toward locking engagement with said detent-plate so that it enters said recesses alternately as said detent-plate is moved in either direction, means having a to and fro movement and having two surfaces adapted to respectively engage said detent and force it partially but not entirely out of said locking recesses when said means is in either of its two extreme positions, a driving spring connecting said detent-plate and means so as to be put under tension when said means is moved in either direction and acting when under tension to cause said detent-plate to complete the moving of said detent out of its respective recesses.

5. The combination of a detent-plate having a to and fro movement, a detent having a surface of revolution about an axis at right angles to the plane of movement of said detent-plate, means having a to and fro movement in a plane parallel to said detent-plate and acting at the end of each of its movements to engage said detent and force it away from normal holding position, and a spring connecting said detent-plate and means.

[Claims 6 and 7 not printed in the Gazette.]

1,103,413. POULTRY DRINKING-FOUNTAIN. JESSE J. HASTY, Seattle, Wash. Filed Nov. 22, 1913. Serial No. 802,571. (Cl. 119—80.)

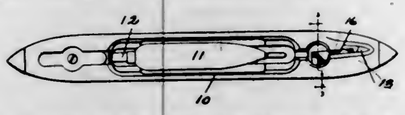


1. In a poultry drinking fountain attachment, a frame adapted to be secured to a source of water supply and having a water delivery channel, a valve controlling said channel and having an exteriorly projecting operative member, a lever pivoted on the frame and having actuative connection with the valve operative member, the opposite end of said lever having an eye therein, a weight mounted on that end of the lever which is connected with the valve, a combined weight and float having a stem extending through the eye in the other end of the lever and having its upper end hooked, whereby it may be readily disconnected from the lever when desired.

2. In a poultry drinking fountain attachment, a frame adapted to be secured to a source of water supply and

having a water delivery channel therein, a fulcrum arm extending therefrom and fount sustaining arms, a valve in the water delivery channel closing outwardly and having a stem projecting from said channel, a lever pivoted upon the fulcrum arm and operatively connected by one end with the valve stem, a weight adjustably mounted on this end of the lever, the other end of the lever having a vertical hole therethrough, a combined weight and float having a stem sliding through said hole in the lever and having its upper end bent into a hook, and means for adjusting the position of said combined weight and float upon its stem.

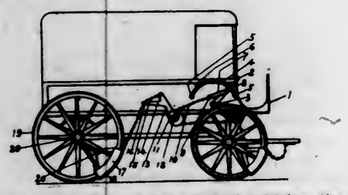
1,103,414. MEANS FOR THREADING SHUTTLES. GEORGE B. HAYES, Eagleville, Conn. Filed Aug. 26, 1913. Serial No. 786,708. (Cl. 139—46.)



1. A shuttle of the class described comprising a body portion slotted longitudinally and vertically adjacent the delivery end of the cop and having a slot connected with the guide eye at the side of the shuttle by a diagonal slit, a threading plate of thin stiff material located in said slot and extending downwardly and diagonally with its upper edge approximately flush with the upper face of the shuttle body and its lower edge approximately flush with the side wall of said body, the rear end of said threading plate being supported rigidly with the major part of said plate out of contact with the adjacent walls of said slot and slit and its free front end beveled rearwardly, the securing pins of said plate serving as means about which the thread will render, and one of said pins serving to keep the thread from contact with the shuttle body when the shuttle is traveling in one direction, and a pin fixedly located at the front end of the guide eye independent of said plate and serving to keep the thread from engagement with the shuttle body when the shuttle is moving in the other direction.

2. In a shuttle of the class described, a body portion slotted longitudinally and vertically and provided with a diagonal slit connecting said slot with the guide eye, a thin flat threading plate located in said slot and extending downwardly in said diagonal slit with its upper edge approximately flush with the upper face of the shuttle body and its lower edge substantially flush with the side wall of said body, means supporting the rear portion of said plate rigidly, with the major portion out of contact with the adjacent walls of said slot and slit, said means serving also to keep the thread from contact with the shuttle body when the shuttle is traveling in one direction, the free front end of said plate being beveled rearwardly, and a pin fixedly disposed at the front end of the guide eye for keeping the thread from engagement with the shuttle body when the shuttle is moving in the other direction, said pin being disposed adjacent the lower portion of the said beveled edge of said plate.

1,103,415. SLEIGH ATTACHMENT FOR VEHICLES. ANTON HOFACKER, Newark, N. J. Filed Nov. 10, 1913. Serial No. 800,170. (Cl. 21—96.)



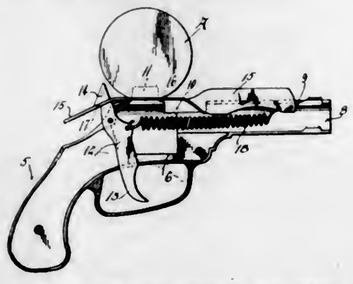
1. In a sleigh attachment for wheeled vehicles, the combination with the body and wheels of the vehicle, of a cross shaft under the body of the vehicle, having attached thereto levers and forked arms, said levers and arms flexibly connected with pivoted segmental runners, a handle mounted on the side of the vehicle, flexibly connected with the said cross shaft, substantially as and for the purpose set forth.

2. In a sleigh attachment for wheeled vehicles, the combination with the body and wheels of the vehicle, of a cross shaft under the body, bearings for said shaft fixed to the body, levers and forked guide arms attached to the cross shaft and flexibly connected to pivoted segmental runners, a handle mounted on the side of the vehicle, a handle guiding and locking device secured upon the side of the vehicle, substantially as and for the purpose set forth.

3. In a sleigh attachment for wheeled vehicles, the combination with the body and wheels of the vehicle, of a cross shaft under the body, bearings for said shaft fixed to the body, levers and forked guide arms attached to the cross shaft and flexibly connected to pivoted radially sliding, spring controlled segmental runners with guide flanges, a handle mounted on the side of the vehicle, a guiding and locking device secured to the side of the vehicle, substantially as and for the purpose set forth.

4. In a sleigh attachment for wheeled vehicles, the combination with the body and wheels of the vehicle of a cross shaft under the body, bearings for said shaft fixed to the body, levers and forked guide arms attached to the cross shaft and flexibly connected to pivoted radially sliding, spring controlled segmental runners with guide flanges and detachable shoes, said pivoted runners attached to the axle of the vehicle, a handle mounted on the side of the vehicle, a guiding and locking device secured to the side of the vehicle, substantially as and for the purpose set forth.

1,103,416. TOY PISTOL. FREDERICK P. HOFFMAN, Uniontown, Pa. Filed Jan. 29, 1914. Serial No. 815,275. (Cl. 124—1.)



1. A device of the class described comprising a body, means carried by the body for holding an article to be projected, an arm pivotally connected with the body and having an opening for the reception of the article-holding means therethrough, a spring connected with the arm for movement thereof to project an article from the holding means, and yieldable means for holding the arm against movement by the spring, said arm being arranged to lie with the article holding means in its opening when the arm is held against the action of the spring.

2. A device of the class described comprising a body having a longitudinal slot in its upper portion, a pair of lips carried by the body at opposite sides of the slot, a projecting arm pivoted in the slot forwardly of the lips, a trigger pivoted rearwardly of the lips and projecting above the slot, said arm having an opening therein and being arranged for movement on its pivot to engage its opening over the lips, said trigger being arranged for engagement with the arm to hold it in its last mentioned position, and a single spring engaged with the trigger and with the arm for exertion of its energy to hold the trigger yieldable in engagement with the arm and to move the arm forwardly when it is released.

3. A device of the class described comprising a body, means carried by the body for holding an article to be projected, an arm pivotally connected adjacent to one end with the body and having an opening adjacent to its free end for the reception of the article holding means therethrough, a spring connected with the arm for movement thereof to project an article from the holding means, and yieldable means for holding the arm against movement by the spring, said arm being arranged to lie with the article holding means in its opening when the arm is held against the action of the spring.

4. A device of the class described comprising a body, means carried adjacent to the rear portion of the body for holding an article to be projected, an arm pivotally connected adjacent one end to the body forwardly of the holding means, said arm having an opening for the receipt of the article holding means therethrough, a spring connected with the arm for movement thereof to project an article from the holding means, and yieldable means for holding the arm against movement by the spring, said arm being arranged to lie with the article holding means in its opening when the arm is held against the action of the spring.

5. A device of the class described comprising a body, article holding means carried by the body, an arm pivotally connected with the body forwardly of the article holding means, a trigger carried by the body rearwardly of the article holding means, means for moving the arm to project a body from the holding means, said trigger being adapted for removable engagement with the arm to hold it against the action of the arm moving means, and in position for engagement of a body in the holding means when the trigger is released.

1,103,417. PHOTOGRAPHIC-FILM PACK. CHARLES L. HOPKINS, Binghamton, N. Y. Filed Mar. 17, 1913. Serial No. 754,867. (Cl. 95—22.)



1. A tab strip for a photographic film pack, having within its borders a pair of slits forming the side margins of a tab narrower than the strip, converging toward each other at their upper ends and inclined with relation to the side margins of the strips at the points where the slits intersect the line upon which the strip is to be torn, whereby the tab is protected against severance during the tearing of the strip, an uncut portion of the strip being left at the nearer ends of the slits, whereby the tab is prevented from folding back.

2. In a photographic film pack, the combination with a casing having an exposing aperture, of a series of films in the casing lying in contact with each other over substantially their whole areas, film manipulating means, film leaders connecting each film to the manipulating means, and means within the casing for separating the films from the manipulating means and leaders.

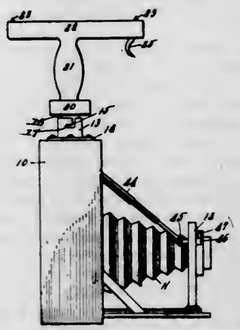
3. In a photographic film pack, the combination with a casing having an exposing aperture, of a series of films in the casing lying in contact with each other, folded film manipulating means, film leaders connecting each film to the manipulating means, means within the casing for separating the films from the manipulating means and leaders, and means to control the unfolding of the manipulating means.

4. In a photographic film pack, the combination with a casing having an exposing aperture, of a series of films in the casing, folded film manipulating means, film leaders connecting each film to the manipulating means, means within the casing for separating the films from the manipulating means and leaders, and resilient means to control the unfolding of the manipulating means and leaders, whereby rupture of them is avoided.

5. In a photographic film pack, the combination with a casing having an exposing aperture, of a septum in the casing covering the aperture, a series of films arranged in contact with each other behind the septum, film manipulating means extending over one end of the septum, thence across its outer face, thence under its other end and thence to the exterior of the casing, and film leaders connecting the films to the manipulating means.

[Claims 6 to 21 not printed in the Gazette.]

1,103,418. SELF-LEVELING REPEATING CAMERA. JOHN N. JOHNSON, Albuquerque, N. Mex. Filed Dec. 3, 1912. Serial No. 734,657. (Cl. 95—31.)



1. The combination of a film camera having a shutter snapping mechanism and a film actuating mechanism, with a spindle journaled in the camera and associated with said mechanisms, a detachable handle for supporting said camera, and actuating means mounted upon the handle whereby to set said spindle in motion.

2. In a camera, and in combination, a camera box, a socket sleeve upon the top of the box, a neck detachably fitting in said socket sleeve, a handle hinged upon the upper end of said neck, operating mechanism within the box including a spindle projecting up through said socket sleeve, and operating means arranged in the handle and having detachable connection with said spindle.

3. In a camera, and in combination, a camera box, operating mechanism in said box, a socket on the top of the box, a spindle associated with said mechanism and extending up into said socket, a detachable neck fitting in the socket, a hand grasp hinged upon the neck, operating means carried by the hand grasp, and a detachable connection between said spindle and said operating means.

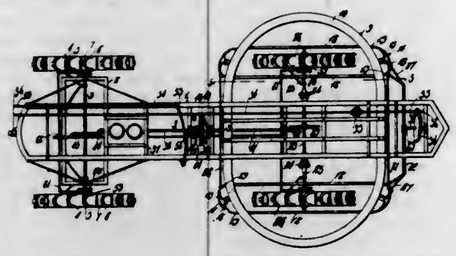
4. In a camera, and in combination, a camera box, operating mechanism in said box, a spindle in said box projecting up through the same, a detachable handle horizontally mounted upon the top of said box, and operating means for said mechanism carried by said handle and having detachable connection with said spindle.

5. A camera comprising a box, shutter snapping mechanism carried by the box, shifting mechanism for a sensitized medium within the box, a spindle in said box, and intermittent and independent connecting means between

said spindle and said shutter snapping and said sensitized medium operating mechanisms.

[Claims 6 to 14 not printed in the Gazette.]
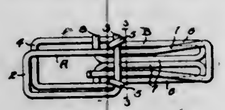
1,103,419. MOTOR-VEHICLE. OLE K. KAASA, Greenbush, Minn. Filed Oct. 4, 1913. Serial No. 793,420. (Cl. 21—114.)



1. A motor vehicle comprising a frame, a frame disposed transversely of the rear end of said frame, an axle supported by the second named frame, wheels carried by the axle, an oval frame carried by the forward end of the first named frame, said frame comprising track sections, parallel bars arranged in pairs, each pair supporting a stub axle, a wheel revolubly mounted on each stub axle, wheels carried by the bars for engaging the track sections, and means for shifting the parallel bars simultaneously to guide the vehicle.

2. A motor vehicle comprising a longitudinal frame, a transverse frame mounted upon the rear end thereof, a wheeled axle supported by the transverse frame, an oval frame mounted upon the forward part of the longitudinal frame and comprising upper and lower tracks, spaced parallel bars arranged in pairs and upon opposite sides of the longitudinal frame, yokes connecting the ends of the parallel bars, brackets carried by the yokes, rollers carried by the brackets for engaging the outer surface of the tracks, said tracks having horizontal webs, wheels carried by the ends of the parallel bars for engaging the tracks for travel in contacting relation with the horizontal webs, an axle supported transversely of the longitudinal frame, stub axles connected to the ends of said axle by universal joints, said stub axles being supported by the parallel bars, means for rotating the first and second named axles, and means for simultaneously shifting the parallel bars and thus the stub axles to guide the vehicle.

1,103,420. WIRE CLOTHES-PIN. ROBERT KEHN, Fairfax, S. D. Filed Mar. 9, 1914. Serial No. 823,479. (Cl. 24—252.)

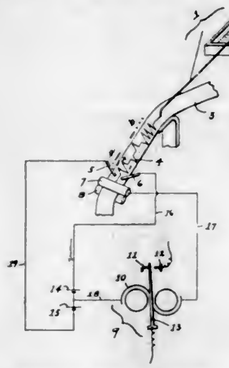


1. A wire clasp including a pair of complemental lever members pivotally connected at an intermediate point to provide coöperating handles and jaws, one of the jaws being formed with spaced side pieces which are returned inwardly to provide a pair of rearwardly extending spring arms terminating in heads which engage the handle of the other lever member to hold the jaws yieldingly in a closed position.

2. A wire clasp including a pair of complemental lever members pivotally connected at an intermediate point and each formed of a single length of wire which is bent to provide a looped handle at one end thereof and a looped jaw at the opposite end thereof, one of the jaws being formed with a rearwardly extending spring arm which has the end thereof deflected so as to pass freely through the looped finger piece of the lever member, the extremity of the spring arm terminating in a foot which engages the handle of the opposite lever member to hold the jaws yieldably in a closed position.

3. A wire clasp including a pair of complemental lever members each of which is formed from a single piece of wire, one of the lever members having opposite ends of the wire returned to provide a looped handle and looped jaw and one extremity of the wire being extended transversely across the lever member at the junction of the handle and jaw to provide a pivot pin, while the opposite lever member is constructed by bending the middle portion of the wire to provide a U-shaped handle, the arms of the U-shaped handle being coiled to provide pivot eyes adapted to engage the before mentioned pivot pin of the opposite lever member, and being then extended to provide the sides of the jaw, said sides being returned inwardly to form a pair of rearwardly extending spring arms which have the ends thereof deflected through the U-shaped handle and which terminate in feet engaging the looped handle of the opposite lever member to hold the jaws yieldably in a closed position.

1,103,421. CABLE TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by direct and mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Dec. 5, 1907. Serial No. 405,250. (Cl. 178—88.)



1. In a telegraph system transmitting signals in accordance with a particular system, a receiving apparatus comprising means for producing a record-line representing the transmitted signals, and means contacting with said record-line for translating the transmitted signals into those of another system.

2. In a telegraph system transmitting current-reversal signals, a receiving apparatus comprising means for producing a conducting line in accordance with the transmitted signals, and means coöperating with said conducting line for translating the current-reversal signals into direct current time-interval signals.

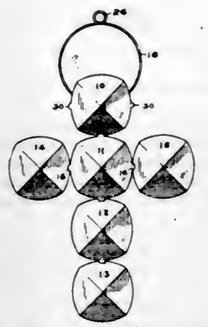
3. In a telegraph system transmitting current-reversal signals, a receiving apparatus comprising means for producing a conducting line in accordance with the transmitted signals, and means including an electro-magnetic device and contact members coöperating with said conducting line for translating the current-reversal signals into audible time-interval signals.

4. The combination with a movable record member having a conducting line, of contact members coöperating with the line along different paths, electromagnetic translating means, and a circuit connecting the contact members with the translating means, the circuit through each contact member differently actuating said electromagnetic translating means.

5. The combination with a movable record member having a conducting line, of two contact members coöperating with the line along different paths, polarized electromagnetic translating means, a source of electrical energy, and a circuit connecting opposite poles of said source with the translating means through the contact members.

[Claims 6 to 11 not printed in the Gazette.]

1,103,422. EMBLEM. WILLIAM H. KLUGE, Indianapolis, Ind. Filed Jan. 31, 1914. Serial No. 815,715. (Cl. 63—19.)



1. An emblem comprising a plurality of hinged sections forming a sphere when folded, and a single resilient annular locking means circumferentially embracing said sections when closed to form a sphere.

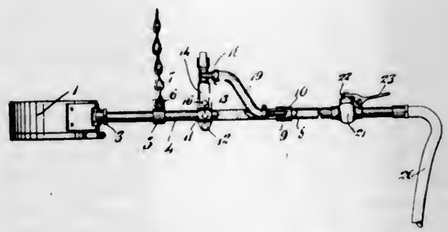
2. An emblem comprising a plurality of hinged sections forming a sphere when folded, each section having one side formed pyramidally, and a single resilient annular locking means for embracing said sections when closed to form a sphere.

3. An emblem comprising a plurality of hinged sections forming a sphere when closed, a single resilient annular means for locking all of said sections when closed to form a sphere, said locking means being under strain when locking the folded hinged sections.

4. An emblem comprising a plurality of hinged sections, one of said sections being provided with a recess, a plug for said recess, a swivel rotatively secured to said plug, and a resilient hoop passing through the swivel and embracing the folded sections together into a sphere.

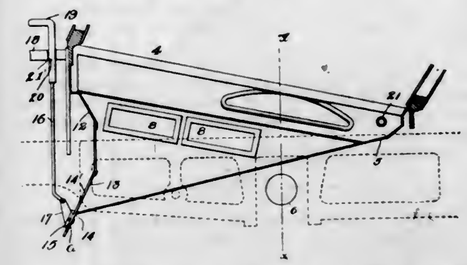
5. An emblem comprising a plurality of hinged sections, one of said sections being provided with a recess, a plug for said recess, a swivel rotatively secured to said plug, a resilient hoop passing through the swivel and embracing the folded sections together into a sphere, and an elastic loop formed in said hoop to increase its impingent action against the folded sections.

1,103,423. ENAMELING-DREDGER. LOUIS LIPP, St. Bernard, Ohio. Filed Mar. 13, 1914. Serial No. 824,378. (Cl. 83—60.)



A dredger comprising a sieve, a pneumatic hammer to agitate the same, a valve for admitting compressed air to the hammer, a handle for the sieve comprising a solid portion and a hollow portion, means for adjustably mounting the hammer on the solid portion, means for mounting the sieve on the solid portion, with the hollow portion provided with connections to the hammer and to a pressure line and means for mounting the valve in said hollow portion.

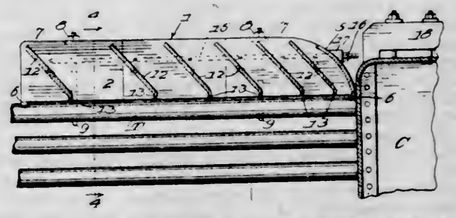
1,103,424. LOCOMOTIVE ASH-PAN. FRANK ANTHONY MAYER, Washington, D. C. Filed Sept. 26, 1912. Serial No. 722,446. (Cl. 110—171.)



1. The combination with an ash-pan having vertical walls terminating in outwardly inclined ash-pan supporting sheets and an inclined bottom having a pronounced inclination, a discharge opening at the lower rear end, a door for closing and opening said discharge end opening, that is adapted when open to form a continuation of said inclined bottom, of a fluid discharge pipe located in the forward end of said ash-pan that extends laterally thereof, said pipe having apertures arranged in parallel rows, one row being adapted to permit the discharge and projection of fluid toward the inclined bottom and the discharge opening at a different angle from the jets issuing from the apertures in the other row.

2. The combination of a body of an ash-pan which is open at its top and is provided with a bottom that inclines rearwardly with a pronounced inclination, and vertical side walls, terminating in outwardly inclined ash-pan supporting sheets having draft openings, said body being adapted to be connected to the fire-box by said angularly arranged ash-pan sheets and hangers as described, and in a manner to clear the rear driving axle, a discharge opening in the lower rear end, a door closing said opening and disposed at an angle to the inclined bottom when closed, means for controlling said door, a laterally extending discharge pipe located at the forward end of the ash-pan, that is provided with rearwardly directed apertures arranged to discharge the fluid contained in the pipe in the direction of the inclined bottom and the discharge opening.

1,103,425. AUTOMATIC CIRCULATOR FOR STEAM-BOILERS. ALEXANDER MCNAB, Bridgeport, Conn., assignor to The McNab Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 18, 1913. Serial No. 779,744. (Cl. 122—410.)



1. In a boiler circulator, a series of spaced water deflecting blades, and means to enable adjustment of the blades to vary the angular relations between the blades and the boiler.

2. In a boiler circulator, a series of spaced water deflecting blades, and means to enable simultaneous adjustment of the blades to vary the angular relations between the blades and the boiler.

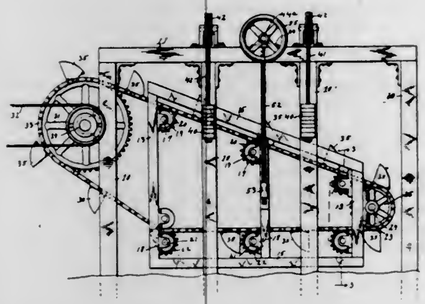
3. In a boiler circulator, water deflecting means, and means rigidly connected to the boiler tubes for movably supporting said deflecting means to permit adjustment of the latter.

4. In a boiler circulator, a pair of spaced side plates, means to rigidly connect said plates to the boiler tubes, a series of blades extending transversely of the plates and connected at their ends to the latter, and means connected to each of the plates for moving all of same in unison to vary the angular relationship between the plates and blades.

5. In a boiler circulator, water deflecting means arranged above and below the boiler tubes, and extending transversely of the tubes, and means to adjust said means to vary the angular relationship between same and the boiler tubes.

[Claims 6 to 11 not printed in the Gazette.]

1,103,426. CURRENT-MOTOR. PRESSLEY A. C. MOORE, Los Angeles, Cal. Filed Apr. 3, 1913. Serial No. 758,740. (Cl. 170—93.)



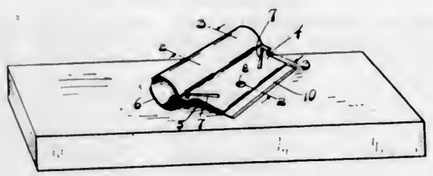
1. A current motor comprising a stationary frame; a chain frame vertically movable within said stationary frame; a power shaft revolubly mounted in one end of the chain frame; another shaft revolubly mounted on one end of the stationary frame; sprocket wheels on each of said shafts; sprocket chains mounted on said sprocket wheels; power buckets on said chains; means to raise and lower said chain frame and means to utilize the power from the shafts.

2. A current motor comprising an outer supporting frame; a chain frame within said supporting frame; a shaft on the chain frame; another shaft mounted on the supporting frame; sprocket wheels on said shafts; chains on said sprockets; power buckets on said chains; and means to utilize the power from the shafts.

3. A current motor comprising a stationary frame; a chain frame vertically movable within said stationary frame; a shaft mounted on the stationary frame; another shaft mounted on the chain frame; sprocket wheels mounted on said shafts; sprocket chains passing over and connecting said sprocket wheels; power buckets on said chains; means to raise and lower the chain frame within the stationary frame; and means to utilize the power of the shafts.

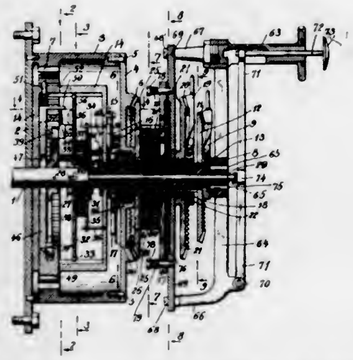
4. A current motor comprising a stationary frame; a chain frame mounted vertically movable within said stationary frame; a shaft revolubly mounted on one end of the stationary frame, said shaft having a clutch mechanism mounted upon one end thereof, and a pair of sprocket wheels; a shaft on the opposite end of the chain frame; a pair of sprocket wheels on said shaft; a pair of sprocket chains passing over and connecting said shafts and sprockets; power buckets mounted between said chains and pivotally secured thereto; idler sprockets mounted to support said chains intermediate the main sprockets; means to raise and lower said chain frame to suit the varying height of the water.

1,103,427. HONING-SUPPORT FOR SAFETY-RAZOR BLADES. FRED A. NEIDER, Augusta, Ky. Filed May 8, 1913. Serial No. 766,264. (Cl. 30—25.)



A honing support for two edged blades, comprising two wings and an intermediate cylinder formed integral with the wings, the wings having a central pivot between them and so located relatively to the cylinder as to permit rotation of the blade through one hundred and eighty degrees of a circle thereon, and clamps mounted on the wings upon opposite sides of the pivot, and adapted to be moved to positions which permit the rotation of the blade, or to positions which clamp the blade between the wings.

1,103,428. COUNTING-HEAD. HERBERT M. PILKINGTON, Arverne, N. Y., assignor, by mesne assignments, to Title Guarantee & Trust Company, trustee, New York, N. Y. Filed July 28, 1911. Serial No. 641,052. (Cl. 235—132.)



1. In a counting head, the combination of a shaft the revolutions of which are to be counted, means for indicating the desired numbers of revolutions of the shaft, a counting device for counting revolutions of the shaft normally disconnected from the shaft, means for moving said device a given distance for each revolution of the shaft, means connecting the counting device and the shaft at the completion of a predetermined number of revolutions of the shaft, means movable into position at the completion of a predetermined number of revolutions of the shaft to effect said connection, and means for disconnecting the counting device from the shaft.

2. In a counting head, the combination of a shaft the revolutions of which are to be counted, means for indicating the desired numbers of revolutions of the shaft, a counting device for counting revolutions of the shaft normally disconnected from the shaft, means for moving said device a given distance for each revolution of the shaft, means connecting the counting device and the shaft at the completion of a predetermined number of revolutions of the shaft, means movable into position at the completion of a predetermined number of revolutions of the shaft to effect said connection, means for disconnecting the counting device from the shaft, and means for restoring the counting device to its normal position.

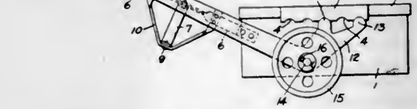
3. In a counting head, the combination of a shaft the revolutions of which are to be counted, means for indicating desired numbers of revolutions of the shaft, an adjustable stop movable to different positions corresponding to the desired number of revolutions, means for holding the stop at said position, a rotatable member movable with respect to the stop, means operated by the shaft for moving said rotating member equal distances for equal numbers of revolutions of the shaft, and means for resetting the rotatable member to its normal position with respect to the stop.

4. In a counting head, the combination of a shaft the revolutions of which are to be counted, means for indicating desired numbers of revolutions of the shaft, an adjustable stop movable to different positions corresponding to the desired number of revolutions, a rotatable member movable with respect to the stop, means acting to move said rotatable member into engagement with the stop, means operated by the shaft for moving said rotatable member away from the stop equal distances for equal numbers of revolutions of the shaft, and means for arresting the shaft at the completion of the desired number of revolutions.

5. In a counting head, the combination of a shaft the revolutions of which are to be counted, means for indicating desired numbers of revolutions of the shaft, an adjustable stop movable to different positions corresponding to the desired number of revolutions, means for holding the stop at its different positions, a movable member having a part operatively related to the stop to engage therewith, means operated from the shaft for moving said movable member distances proportional to the number of revolutions of the shaft, means for disengaging said movble member from its said operating means, and means for restoring said movable member when so disengaged, to its former position relative to the stop.

[Claims 6 to 31 not printed in the Gazette.]

1,103,429. HAND-TRUCK. ARTHUR F. PITKIN, Schenectady, N. Y. Filed Feb. 10, 1913. Serial No. 747,417. (Cl. 21—119.)



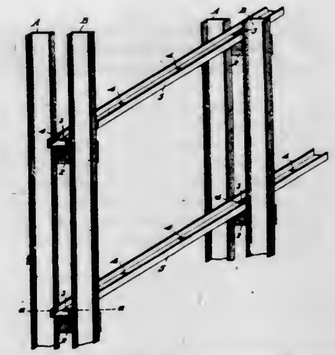
1. The combination of a receptacle provided with grip-members having series of notches therein, and a truck having bifurcated arms coöperating with a pair of notches in each of said grip-members to elevate and positively position said receptacle.

2. The combination of a receptacle provided on opposite sides near its upper edge with grip-members having series of notches in the lower surface thereof, and a hand-truck comprising two angular levers having splayed out ends cooperating with pairs of notches in said grip-members to elevate and positively position said receptacle upon forcing the free ends of said levers downwardly.

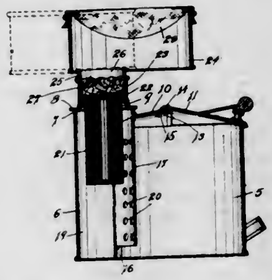
3. The combination of a receptacle provided on opposite sides near its upper edge with notched surfaces, and a hand-truck comprising two angular side levers each having a bifurcated lower end forming two arms of unequal length to coöperate with said notched surfaces to elevate and steady said receptacle upon lowering the long arms of said levers.

1,103,430. METALLIC STUDDING. PETER RANDOLPH and HERBERT C. MATTHEWS, San Francisco, Cal. Filed July 7, 1913. Serial No. 777,684. (Cl. 72—117.)

In metal partition structure, the combination of stud members arranged at intervals, each stud member comprising a pair of upright spaced channels, a connecting plate secured to the back of the channels and uniting them together into a rigid stud, said connecting plates each having on one of their edges and between the upright channels, a tang or bendable projection, and tie members extending between the studs and passed between the channels comprising the studs, said tie members having perforations fitting the said tangs, said tangs being bent over after the tie members are placed in position, to secure the tie members and stud members rigidly together.



1,103,431. MILK-PAIL. IRVING W. PULLMAN, Bristol, Vt. Filed Dec. 23, 1912. Serial No. 738,121. (Cl. 31—14.)



1. A milk pail having a swell reduced in size as compared with the body of the pail and of semi-circular form extending lengthwise along the front thereof, and a wall of semicircular form extending across the mouth of said swell, forming therewith a straining chamber, said straining chamber having an opening through the top of the pail.

2. A milk pail including a top having an opening therethrough, and a receiver having a projection extending downwardly from the bottom and eccentrically located thereon, said projection containing a chamber opening upwardly into the receiver.

3. A milk pail having a swell at its front portion, a strainer plate extending across said swelled part within the pail, forming a straining chamber that has a round opening through the top of the pail and a receiver having a projection eccentrically located thereon and removably fitting said opening, said projection forming a filtering chamber.

4. A milk pail including a top having an opening therein, a mouth piece having a strainer tube projecting through said opening, and a receiver having a projection fitting said mouth piece.

5. A milk pail including a top having an opening therein, a mouth piece having a strainer tube projecting through said opening, said mouth piece having vent openings therein, and a receiver having a projection fitting said mouth piece.

[Claim 6 not printed in the Gazette.]

1,103,432. LUBRICATOR-BEARING. ALBERT D. RAY, Cleveland, Ohio, assignor of one-half to Clyde H. Pratt, Cleveland, Ohio. Filed May 3, 1913. Serial No. 765,231. (Cl. 64—27.)



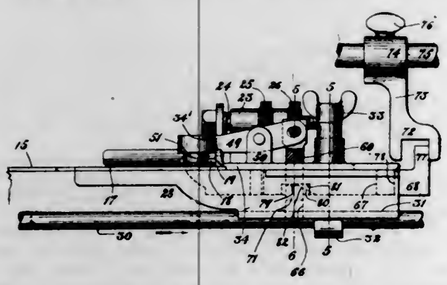
1. A lubricator bearing, comprising a chambered bearing member having an exterior communicating lubricator distributing groove, a threaded plunger provided with circumferentially extending split wings adapted to prevent rotation, a rotatable head-cap carrying a threaded stem adapted to rotate therewith and extending through said threaded plunger, and means for detachably securing said head-cap and normally preventing the circumferential movement of the same.

2. In a lubricator bearing, a headed bearing bolt provided with a cylindrical bore extending from said headed end and terminating in a bearing opening and a lubricant outlet port, said headed end being provided with a circumferential groove at the mouth of said bore, a threaded plunger member, a rotatable head-cap provided with a threaded stem extending through said threaded plunger and having its inner end split and removably mounted in said bearing opening, and a spring loop member having its free ends normally traversing said groove for detachably connecting said rotatable head-cap to said bearing bolt and resiliently preventing the rotation of said head cap in the latter.

3. A lubricator, comprising a bearing member having a cylindrical bore extending from one end and terminating in a lubricant outlet opening, said cylindrical bore being provided at its mouth with a circumferentially extending groove having recesses, a threaded non-rotatable plunger member provided with split wings, a rotatable head-cap provided with a fixed threaded stem extending through said threaded plunger member, and spring members carried by said head-cap and adapted to interlock with and traverse said groove and recesses.

4. In a lubricator bearing, a bearing bolt provided with a cylindrical bore terminating at its mouth in a circumferentially extending groove, the latter being provided at intervals with radially extending recesses, said bore terminating at its opposite or inner end in a bearing opening and a lubricant outlet port, a threaded plunger member, a rotatable head-cap carrying a threaded stem extending through said threaded plunger and having its inner end seated in said bearing opening, a pair of spring members carried by said head-cap and adapted to traverse said groove and radially extending recesses.

1,103,433. SIDE-REGISTER DEVICE. EDWARD J. F. REA, Hartford, Conn., assignor to American Automatic Press Company, San Francisco, Cal., a Corporation of California. Filed Mar. 18, 1912. Serial No. 684,491. (Cl. 101—36.)



1. The combination of a reciprocatory carriage, a gripper member on said carriage, a pair of plates on the carriage, having releasing notches for the gripper member, means for causing the movement of said plates with said carriage, means for arresting the movement of one of the plates with the carriage whereby the other can be moved with the carriage to effect registration of the notches to thereby release the gripper member, and means for shifting the gripper member when thus released.

2. The combination of a reciprocatory carriage, a gripper member on said carriage, a pair of plates on the carriage, having releasing notches for the gripper member, means for causing the movement of said plates with said carriage, means for arresting the movement of one of the plates with the carriage whereby the other can be moved with the carriage to effect registration of the notches to thereby release the gripper member, and means for shifting the gripper member when thus released, one of the plates having means for positively operating the gripper member.

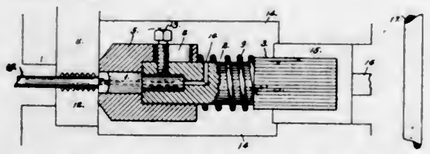
3. The combination of a reciprocatory carriage, a gripper member on said carriage, a pair of cam members supported by the carriage for movement therewith, said cam members being adapted to govern the gripper member, means supported independently of the carriage for effecting relatively the movement of one of the cam members to releasing position, the carriage on its movement conducting the other cam member to a position where it can cooperate with the companion cam member to effect the release of the gripper member, and means for causing the gripper member to move toward the carriage when the two cam members release the gripper member.

4. The combination of a reciprocatory carriage, a gripper member on said carriage, a pair of slidable cams supported by the carriage for movement therewith and adapted to normally hold the gripper member against movement, each cam having a releasing notch, means independent of the carriage for arresting the movement of one of the cams with the carriage whereby the notch of the other cam can be carried into register by the carriage with the notch of the arrested cam to release the gripper member, and means for operating the gripper member when the notches are in register.

5. The combination of a reciprocatory carriage, a gripper member on said carriage, a main cam having a releasing notch, an auxiliary cam also having a releasing notch, means on the carriage for effecting the movement of the cams therewith, a stationary part supported independently of the carriage for arresting the momement of the main cam with the carriage, the auxiliary cam being carried with the carriage on the arrest of movement of the main cam to bring the notches into register and thereby release the gripper member, and means for imparting an operative movement to the gripper member when it is thus released.

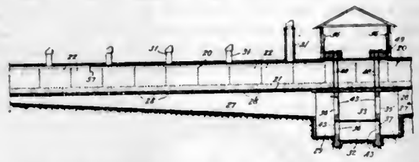
[Claims 6 and 7 not printed in the Gazette.]

1,103,434. HEADING-TOOL. ALEXANDER E. RICHEY, Joliet, Ill. Filed Apr. 2, 1912. Serial No. 688,085. (Cl. 10—11.)



A heading tool, having a two-part bore, one part square and the other circular, and varying in dimensions so as to form a shoulder around the end of the square part; a plunger operated in the circular part of said bore with a retracting spring coiled thereon; a forming piece secured to the end of said plunger and adapted to fit snugly and operate in the square part of said bore; means for firmly closing the square end of said bore and holding a rod with its heated end held projected therein; means for actuating said plunger by impact, by means of all of which a finished square bolt-head can be formed by one stroke of said plunger, all substantially as illustrated and described.

1,103,435. APPARATUS FOR DRYING PRODUCTS OF CLAY OR THE LIKE. LOUIS E. RODGERS, Chicago, Ill. Filed Nov. 18, 1913. Serial No. 801,681. (Cl. 34—46.)



1. A drier-apparatus comprising a chamber for receiving the articles to be dried, hot and cold air conduits, means for forcing hot and cold air through said conduits, respectively, a feeder-duct communicating with said chamber and with said conduits and extending lengthwise of said chamber, and valves controlling communication between said conduits and said feeder-duct.

2. A drier-apparatus comprising a chamber for receiving articles to be dried, hot and cold air conduits, means for forcing hot and cold air through said conduits, respectively, a feeder-duct below said chamber and extending lengthwise thereof and containing openings at intervals in its top and communicating with said feeder-duct and chamber, and valves for controlling communication between said conduits and said feeder-duct.

3. A drier-apparatus comprising a chamber for receiving the articles to be dried, hot and cold air conduits, means for forcing hot and cold air through said conduits, respectively, a feeder-duct extending lengthwise of said chamber and communicating with the latter, a mixing chamber interposed between, and in communication with, said feeder-duct and conduits, and valves controlling the introduction of air from said conduits into said mixing chamber.

4. A drier-apparatus comprising a plurality of non-communicating chambers arranged side-by-side for receiving the articles to be dried, feeder-ducts extending lengthwise of said chambers and communicating therewith, conduits for hot and cold air, respectively, extending transversely of said chambers and in communication with said feeder-ducts, and valves separately controlling the admission of air from said conduits into said chambers.

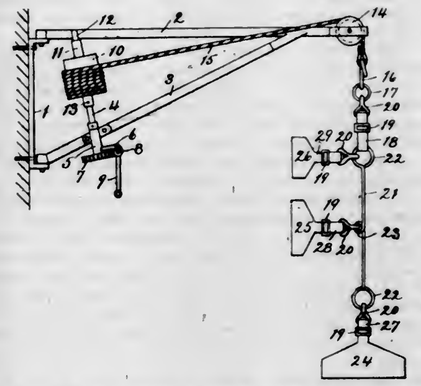
5. A drier-apparatus comprising a plurality of non-communicating chambers arranged side-by-side for receiving the articles to be dried, feeder-ducts extending longitudinally of said chambers and beneath them with openings at intervals in their top-walls affording connection between each chamber and the feeder-duct below it, a mixing chamber for each feeder-duct at one end of the latter, hot and cold-air conduits extending transversely of said chambers and having openings at which they communicate with said mixing-chambers, and valves for said last-referred to openings, whereby the introduction of hot and cold air into said mixing-chambers may be controlled.

[Claims 6 to 9 not printed in the Gazette.]

1,103,436. INVALID-LIFTING DEVICE. FRANCIS S. ROOT, Springfield, Mass. Original application filed Apr. 13, 1912, Serial No. 690,470. Divided and this application filed Apr. 14, 1913, Serial No. 760,868. Renewed Dec. 26, 1913. Serial No. 808,884. (Cl. 5—44.)

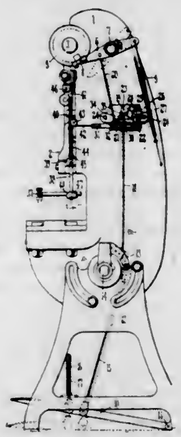
1. The combination, in an invalid-lifting device, of a cross-bar adapted to be attached to a hoisting member, connectors having top, intermediate and bottom eyes, said connectors being supported from said cross-bar, a seat supported from the bottom eyes of said connectors, a back support connected with the intermediate eyes of said connectors, and a head support connected with the top eyes of said connectors.

2. The combination, in an invalid-lifting device, of a cross-bar adapted to be attached to a hoisting member, adjustable side straps supported from said cross-bar, connectors depending from said straps, a seat provided with adjustable and detachable means for attaching the same to said connectors at the bottom, a back support provided with adjustable and detachable means for attaching the same to said connectors at points intermediate of their



ends, and a head support provided with adjustable and detachable means for attaching the same to said connectors at the top.

1,103,437. SAFETY DEVICE. JOHN SCHADE, Jr., New York, N. Y., assignor of one-half to Alfred C. Wessmann, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,640. (Cl. 164—107.)



1. The combination with the clutch of a power press and an operating treadle therefor, and a clutch releasing lever, of a reciprocating guard adapted to be moved by the treadle into position to protect the operating field of the press, and means interposed between said treadle and lever, comprising a slide bar flexibly connected to said guard, a lever engaging said bar, a rocking toe engaging said lever, a treadle actuated lever having a yielding connection with said toe, a locking lever connected to said releasing lever coacting with the treadle actuated lever, whereby the complete downward movement of the guard will permit the treadle to actuate the clutch.

2. The combination with the clutch of a power press and an operating treadle therefor, and a clutch releasing lever, of a reciprocating guard adapted to be moved by the treadle into position to protect the operating field of the press, and means interposed between said treadle and lever, comprising a slide bar having a recess therein and flexibly connected to said guard, a lever engaging said bar, a rocking toe engaging said lever, a treadle ac-

tuated lever having a yielding connection with said toe, a locking lever provided with a lug arranged to enter said recess in the slide bar for locking the same, said locking lever being connected to said releasing lever and coacting with the treadle actuated lever, whereby the complete downward movement of the guard will permit the treadle to actuate the clutch.

3. The combination with the clutch of a power press, and an operating treadle therefor, and a clutch releasing lever, of a vertically reciprocating bar mounted on the press, a guard adjustably secured thereto, and means interposed between the treadle and lever under the control of the treadle for moving the reciprocating bar with its guard into position to protect the operating field of the press, said means comprising a slide bar having a recess therein and flexibly connected to said reciprocating bar, a lever engaging said slide bar, a rocking toe engaging said lever, a treadle actuated lever having a yielding connection with said toe, a locking lever provided with a lug arranged to enter said recess in the slide bar for locking the same, said locking lever being connected to said releasing lever and coacting with the treadle actuated lever, whereby the complete downward movement of the guard and bar will permit the treadle to actuate the clutch.

4. The combination with the clutch of a power press, and an operating treadle therefor, and a clutch releasing lever, of a vertically reciprocating bar mounted on the press, a guard adjustably secured thereto, and means interposed between the treadle and lever under the control of the treadle for moving the reciprocating bar with its guard into position to protect the operating field of the press, said means comprising a slide bar having a recess therein and flexibly connected to said reciprocating bar, a lever engaging said slide bar, a spring for returning the guard, reciprocating bar, the slide bar and the lever to their normal positions, a rocking toe engaging said lever, a treadle actuated lever having a yielding connection with said toe, a locking lever provided with a lug arranged to enter said recess in the slide bar for locking the same, said locking lever being connected to said releasing lever, and coacting with the treadle actuated lever, whereby the complete downward movement of the guard and bar will permit the treadle to actuate the clutch.

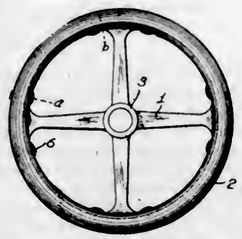
5. The combination with the clutch of a power press, and an operating treadle therefor, and a clutch releasing lever, of a vertically reciprocating bar mounted on the press, a guard adjustably secured thereto, and means interposed between the treadle and lever under the control of the treadle for moving the reciprocating bar with its guard into position to protect the operating field of the press, said means comprising a slide bar having a recess therein and flexibly connected to said reciprocating bar, a lever engaging said slide bar, a spring for returning the guard, reciprocating bar, the slide bar and the lever to their normal positions, a rocking toe engaging said lever, a treadle actuated lever having a yielding connection with said toe, a locking lever provided with a lug arranged to enter said recess in the slide bar for locking the same, a stop for limiting the upward movement of the locking lever, a spring for drawing said lever to said stop, said locking lever being connected to said releasing lever, and coacting with the treadle actuated lever, whereby the complete downward movement of the guard and bar will permit the treadle to actuate the clutch.

[Claim 6 not printed in the Gazette.]

1,103,438. STEERING-WHEEL. RUDOLPH H. SCHEIBERT, Cincinnati, Ohio. Filed Oct. 18, 1913. Serial No. 795,838. (Cl. 177—10.)

1. A steering-wheel comprising, a rim, arms supporting said rim, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circumferential series of push-buttons carried by the rim and adapted individually to place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.

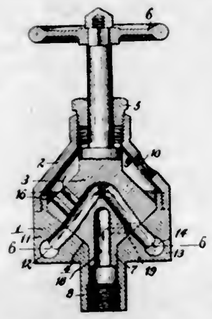
2. A steering-wheel comprising, a rim, arms supporting said rim, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circumferential series of push-buttons disposed upon the interior surface of the rim and adapted individually to place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.



3. A steering-wheel comprising a rim, arms supporting said rim, a pair of metallic rings embedded within the rim but separated from each other and forming portions of a single electric circuit, electrical conductors connected with said rings, and a circumferential series of push-buttons carried by the rim and adapted individually to place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of rings, combined substantially as set forth.

4. A steering-wheel comprising a rim, arms, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circumferential series of push-buttons carried by the rim and disposed one at each side of each of the arms, and adapted individually to place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.

1,103,439. MIXING-VALVE. JOHN SCHULTZ, Buffalo, N. Y. Filed June 6, 1913. Serial No. 772,124. (Cl. 137—26.)



1. A mixing valve, comprising a case having a valve-seat, an outlet, a plurality of inlets for different fluids and a double-ended port beginning and terminating at said valve seat, and a valve-head arranged in said seat and having a port arranged to connect one of said inlets with one end of said double-ended port and an outlet-port arranged to connect with the other end of said double-ended port, said double-ended port being closed except at its ends.

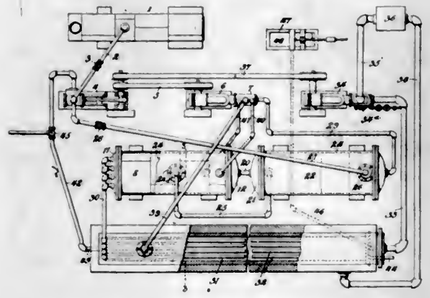
2. A mixing valve, comprising a case having a valve-seat, an outlet, a plurality of inlets for different fluids and a double-ended port beginning and terminating at said valve seat, and a valve-head arranged in said seat and having an injecting port arranged to connect one of said inlets with one end of said double-ended port, a passage connecting the other inlet of the valve case with said injecting port, and an outlet port arranged to connect with the other end of said double-ended port, said double-ended port being closed except at its ends.

3. A mixing valve comprising a case having a valve seat, an outlet, a cold water inlet, a steam inlet, and a double-ended port beginning and ending at said valve seat, and a valve head arranged in said seat and having an injecting port arranged to connect said steam inlet with one end of said double-ended port, a passage connecting the cold water inlet with said injecting port, an outlet port arranged to register with either end of said double-ended port, and a cold water port extending from the back to the face of the valve-head and arranged to register with one end of said double-ended port, said double-ended port being closed except at its ends.

4. A mixing valve, comprising a case having a valve-seat, an outlet, a cold water inlet, a steam inlet and a double-ended port beginning and ending at said valve-seat, and a valve head arranged in said seat and having an axial outlet port extending inwardly from the front side of the valve head and arranged to register with said steam inlet or said double-ended port, an injecting port of inverted V-form extending around the inner end of said outlet port and arranged to connect said steam inlet with one end of said double-ended port, a passage connecting said cold water inlet with said injecting port, and a cold water port arranged to connect said cold water inlet with one end of said double-ended port.

5. A mixing valve, comprising a valve-case having a valve-seat, an outlet, a water-inlet chamber and a steam inlet terminating at said valve-seat, and a valve-head arranged in said seat and having an injecting port arranged to connect said steam inlet with the outlet of the valve case and a plurality of passages connecting the water inlet chamber with said injecting port, said water inlet chamber being located at the back of the valve-head and said stem inlet being of small area relative to the back of the valve-head.

1,103,440. PROCESS AND SYSTEM FOR PRODUCING POWER. CHARLES A. SELLON, Alliance, Ohio. Filed Nov. 7, 1913. Serial No. 799,788. (Cl. 60—24.)



1. The process of producing and utilizing power which consists in raising the temperature of air by compressing it, then passing the hot compressed air through water to raise the temperature of the latter, then causing the air to expand and utilizing the lowered temperature thereby produced for refrigerating purposes, and returning the expanded air to the point of compression and at the same time preheating the expanded air by heat transference from the compressed air.

2. The process of producing and utilizing power, which consists in raising the temperature of air by compressing it, converting a portion of the heat so obtained into power by passing the hot air into heating relation to water, then causing the air to expand and utilizing the lowered temperature for refrigerating purposes and returning the expanded air to the point of compression in heat transferring relation to the heated air before expansion.

3. The process of producing and utilizing power, which consists in raising the temperature of air by compressing it, converting a portion of the heat so obtained into power by passing the hot air into heating relation to water, then causing the air to expand and utilizing the lowered temperature for refrigerating purposes, returning the expanded air to the point of compression in heat transferring relation to the heated air before expansion, and utilizing the expansion of the air for the generation of power other than refrigeration.

4. The process of producing and conserving power, which consists in raising the temperature of air by compressing it, then passing the hot compressed air through water to raise the temperature of the latter, then carrying the compressed air through an air motor to utilize mechanical energy represented by the expansion, then passing the expanded air through refrigerating apparatus, and finally returning the expanded air to the point of compression in heat transferring relation to the hot air before expansion to preheat the expanded air.

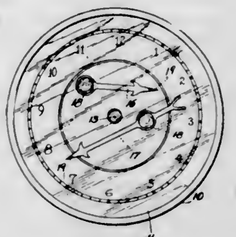
5. The process of producing and conserving power, which consists in raising the temperature of air by compressing it, then passing the hot compressed air through water to raise the temperature of the latter, then carrying the compressed air through an air motor to utilize mechanical energy represented by the expansion, then passing the expanded air through refrigerating apparatus, and finally returning the expanded air to the point of compression in heat transferring relation to the hot air before expansion to preheat the expanded air, the energy represented by the raising of the temperature of the water and by the mechanical action of the expanding air being utilized to assist in the initial compression of the air.

[Claims 6 to 17 not printed in the Gazette.]

1,103,441. PACKING COMPOSITION. JONATHAN SEWELL, Anaconda, Mont. Filed Mar. 3, 1913. Serial No. 751,764. (Cl. 106—8.)

The herein described composition of matter for use as a packing, consisting by weight of substantially fifty-four parts of pulverized anti-friction metal, eighteen parts of flake graphite, eighteen parts of cylinder oil, six parts of asbestos cement, and four parts of asbestos fiber, and forming a plastic mass.

1,103,442. PUZZLE. ELIAS FREDERIC SLEAR, Collingswood, N. J. Filed Jan. 3, 1914. Serial No. 810,228. (Cl. 46—41.)



1. A puzzle comprising a casing the bottom of which has delineated thereon a dial depicting suitable characters and the top of which casing is provided with a transparent cover, said casing bottom being provided with a pointer receiving medium and a pair of freely movable independent pointers, shaped and proportioned for coöperative engagement with one another and with said medium upon proper manipulation of the casing.

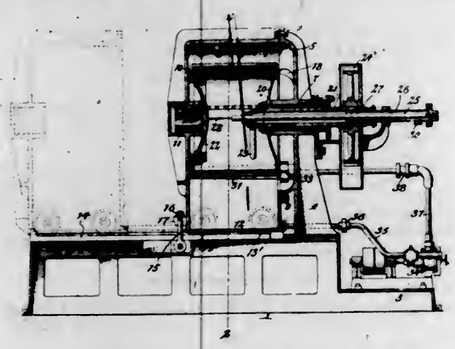
2. A puzzle comprising a casing the bottom of which has delineated thereon a dial depicting suitable characters and the top of which casing is provided with a transparent cover, said casing bottom being provided with a central pointer receiving medium, and a pair of freely movable, independent pointers each of which is provided

with a bent over point and a recessed protuberance of which the protuberance of one pointer is adapted to be seated with respect to the said medium and of which the protuberance of the other pointer is adapted to be seated with respect to the protuberance of the first mentioned pointer upon proper manipulation of the casing.

3. A puzzle comprising a casing having a transparent cover, said casing being provided at its bottom with a central band receiving medium, the casing bottom having delineated thereon a clock dial and a pair of hands shaped and proportioned for coöperatively engaging one another for accommodation by said medium under the influence of gravity upon manipulation of the casing.

4. A puzzle comprising a casing having a transparent cover, said casing being provided at its bottom with a central depression, the casing bottom having delineated thereon a clock dial and a pair of clock hands loosely accommodated between said cover and clock dial, each hand being provided with a turned over point and a recessed protuberance, of which the protuberance of one hand is adapted to be seated in said recess and of which the other protuberance is adapted to be seated in the protuberance of the first mentioned hand through the influence of gravity upon the proper manipulation of the casing.

1,103,443. DRYING-MACHINE. OLIVER S. SLEEPER, Buffalo, N. Y., assignor to Buffalo Foundry & Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 2, 1912. Serial No. 723,498. (Cl. 127—9.)



1. A drying machine comprising a drying drum adapted to receive the material to be dried on its outer surface, and a casing inclosing said drum, said drum and casing being separable axially to afford access to the interior of the machine.

2. A drying machine comprising a drying drum adapted to receive the material to be dried on its outer surface, and a casing inclosing said drum, said casing having a part which is removable axially from said drum for rendering the interior of the machine accessible.

3. A drying machine comprising a drying drum adapted to receive the material to be dried on its outer surface, and a casing inclosing said drum, said casing having a body which is movable lengthwise of the drum for rendering the interior of the machine accessible.

4. A drying machine comprising a drying drum adapted to receive the material to be dried on its outer surface, and a casing inclosing said drum and comprising a fixed head, a movable body detachably connected at one end with said fixed head and provided at its opposite end with a head which is movable with the body.

5. A drying machine comprising a base, a standard rising from the base and provided with a fixed bearing and with a fixed head, a longitudinally movable tubular body detachably secured at one end to said fixed head and provided at its other end with a movable head, said body and heads forming an inclosing casing, and a drum rotatable in said casing and adapted to receive the material to be dried on its periphery.

[Claims 6 to 13 not printed in the Gazette.]

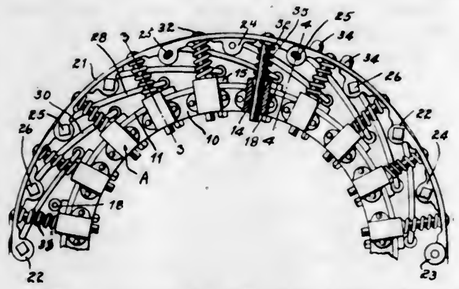
1,103,444. RAILROAD-SPIKE. GEORGE STANDFEST, Rochester, N. Y. Filed May 12, 1913. Serial No. 767,148. (Cl. 85—21.)



1. A spike comprising a head having a non-circular part by which it may be turned; a round shank which is substantially smooth in its upper part, and for at least one-half of its length, and sharp at its lower end; and two lugs with abrupt upper surfaces, the lugs being rounded in horizontal section, projecting on opposite sides of the lower portion of the shank, and tapering smoothly to the lower end thereof.

2. A spike having, in combination, a substantially round shank adapted to be turned when the spike is in use; lugs with abrupt upper surfaces and tapering lower surfaces, projecting from opposite sides of the shank; and a head comprising a substantially horizontal flange projecting at the front and one side of the shank, the other side of the head being substantially continuous with the side of the shank, and an upward non-circular projection by which the head may be turned.

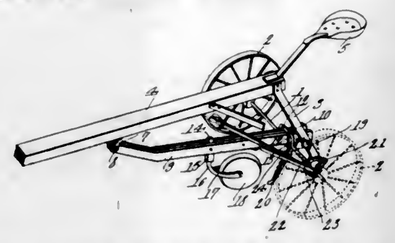
1,103,445. SPRING-TIRE. GEORGE W. VAN STEENBURGH, Manorkill, N. Y. Filed Mar. 6, 1913. Serial No. 752,483. (Cl. 152—8.)



1. The combination of a felly provided with radial passages, a plurality of U-shaped securing blocks embracing the felly and provided respectively with openings in their bight portions registering with the passages in the felly and further provided with radial passages in respective arms, a rim encircling the felly and formed of a plurality of annular members each of which comprises a plurality of hingedly connected sections, means for securing said annular members against lateral movement with respect to each other, bolts carried by the sections of said annular members and slidably engaged through the passages in said securing blocks and through the registering openings and passages of the securing block and felly respectively, and springs encircling each of said bolts having their terminals in engagement respectively with the securing blocks and the sections of the annular members.

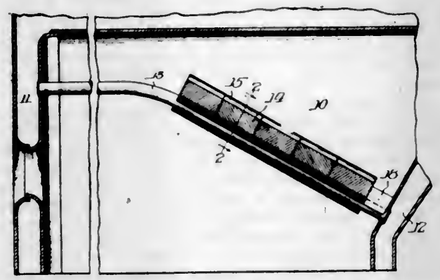
2. The combination of a felly provided with radial passages, a plurality of U-shaped securing blocks embracing the felly and provided respectively with openings in their bight portion registering with the passages in the felly and further provided with radial passages in respective arms, a rim encircling the felly and formed of a plurality of annular members each of which comprises a plurality of hingedly connected sections, means for securing said annular members against lateral movement with respect to each other, bolts carried by the sections of said annular members and slidably engaged through the passages in said securing blocks and through the registering openings and passages of the securing block and felly respectively, and tie rods having one end pivotally connected to the rim and their other ends pivotally connected to the securing blocks.

1,103,446. SUBSOIL-PLOW. ERNEST F. STEPHENS, Hawesville, Ky. Filed Feb. 15, 1912. Serial No. 677,671. (Cl. 97—32.)



The combination with supporting wheels, and an axle mounted for rotation therein and having a central crank normally extending upwardly from the axle, of a draft beam, means for connecting the draft beam to the axle and supporting said beam, a plow beam connected to the draft beam and constantly extending under the crank portion of the axle, the sides of said crank portion constituting means for holding the plow beam against lateral movement relative to the axle, said plow beam being pivotally connected to the crank, a lever secured to the axle for rotating it, and a toothed segment fixedly mounted adjacent and concentric with the axle and constituting means for holding the axle and lever against rotation, said axle being revoluble to raise and lower the plow beam, independently of the draft beam.

1,103,447. BOILER-ARCH CONSTRUCTION. ENOCH P. STEVENS, Chicago, Ill., assignor to Locomotive Arch Brick Company, Chicago, Ill., a Corporation of Illinois. Filed June 28, 1913. Serial No. 776,234. (Cl. 110—87.)



1. A boiler arch construction, comprising, in combination with a fire box having a plurality of arch tubes extending longitudinally therethrough, an arch having its main portion supported by said tubes, and a side brick supported by one of the outer arch tubes and having a rounded outer side resting against the side sheet of the fire box, said side brick being inclined upwardly and outwardly from the adjacent arch tube, whereby said side brick adjusts itself to variations in the distance between said outer tube and said side sheet, substantially as described.

2. A boiler arch construction, comprising, in combination with a fire box having a plurality of arch tubes extending longitudinally therethrough, an arch having its main portion supported by said tubes, said main portion comprising a plurality of upwardly-arched bricks, and a side brick supported by one of the outer arch tubes and having a rounded outer surface resting against the side sheet of the fire box, said side brick being inclined upwardly and outwardly from the adjacent arch tube, whereby said side brick adjusts itself to variations in the distance between said outer tube and said side sheet, substantially as described.

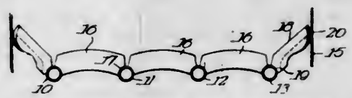
3. A side brick for boiler arches, having a curved surface at one side for engaging a fire box side sheet and formed at its opposite side to be supported on an arch tube, whereby when the brick is supported in inclined position with one side resting against an arch tube and its curved surface resting against said side sheet said brick will adjust itself to variations in the distance between said side sheet and said arch tube, substantially as described.

4. A side brick for boiler arches, having a curved side for engaging a fire box side sheet, and a grooved side for engaging an arch tube, said brick being inclined to the vertical when supported by an arch tube and a side wall of a firebox, whereby when the brick is supported by said arch tube and side sheet the brick will adjust itself to variations in the distance between the side sheet and arch tube by changing its angle of inclination, substantially as described.

5. A side brick for boiler arches, comprising a curved surface for engaging a fire box side sheet, and a grooved side for engaging an arch tube, said brick being inclined to the vertical when supported by an arch tube and a side wall of a firebox, whereby when the brick is supported by said arch tube and side sheet the brick will adjust itself to variations in the distance between the side sheet and arch tube by changing its angle of inclination, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,103,448. BOILER-ARCH CONSTRUCTION. ENOCH P. STEVENS, Chicago, Ill., assignor to Locomotive Arch Brick Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1913. Serial No. 804,625. (Cl. 110—87.)



1. In a boiler arch construction, a side brick, comprising a body portion and a rib projecting from one side and a portion of the bottom of said body portion, said rib having a curved contour, said side brick adapted to be supported in an upwardly and outwardly inclined position with one side engaging an arch tube and with said curved rib engaging a boiler side sheet, whereby said brick adapts itself to variations in the distance between said arch tube and said side sheet.

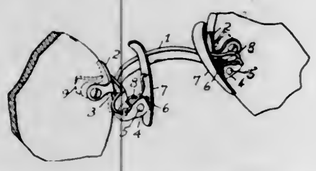
2. In a boiler arch construction, a side brick comprising a body portion and a rib projecting from one side and a portion of the bottom of said body portion, said rib having a curved contour, said brick being provided with recesses in its body portion and adapted to be supported in an upwardly and outwardly inclined position with one side engaging an arch tube and with said curved rib engaging a boiler side sheet, whereby said brick adapts itself to variations in the distance between said arch tube and said side sheet.

3. In a boiler arch construction, a side brick comprising a body portion, a rib projecting in a median line from one side and a portion of the bottom of said body portion, said rib having a curved contour, said brick having recesses in its under surface on opposite sides of said rib, and end walls having their outer and bottom portions with a curved contour, said brick adapted to be supported in an upwardly and outwardly inclined position with one side engaging an arch tube and with said rib en-

gaging a boiler side sheet, whereby said brick adapts itself to variations in the distance between said arch tube and said side sheet, and on wearing away of said rib the side sheet is engaged by the curved surface of one of said end walls.

4. In a boiler arch construction, a side brick comprising a body portion having a groove at one side, and a rib projecting from the opposite side and a portion of the bottom of said body portion, said rib having a curved contour, said side brick being adapted to be supported in an upwardly and outwardly inclined position, with said groove engaging a boiler side sheet, whereby said brick adapts itself to variations in the distance between said arch tube and said side sheet.

1,103,449. OPHTHALMIC MOUNTING. HARRY H. STYLL, Southbridge, Mass. Filed Apr. 22, 1914. Serial No. 833,765. (Cl. 88—50.)



1. A mounting of the character described, embodying a rigid bridge, adjustable supports carried thereby, guards fulcrumed adjacent the lower portions thereof, and yielding means for swinging the upper ends of said guards inward into gripping engagement with the nose.

2. In an ophthalmic mounting, the combination with the lenses, of a bridge rigidly connecting the same, rigid but adjustable arms extending rearwardly from the bridge and terminating in pivot heads, pivots carried by said heads, guards having pivot lugs disposed near the lower end thereof and mounted upon the pivots and a spring carried by each pivot having one end held against movement and the other end engaging the guard above the point of pivotance thereof for swinging the upper end of the guard inwardly into engagement with the nose.

3. In an ophthalmic mounting, the combination with the lenses, of a bridge rigidly connecting the same, rigid but adjustable looped arms extending rearwardly from the bridge, a guard pivotally secured adjacent the terminus of each of the arms, an actuating spring carried by the arm for swinging the upper end of the guard inward toward the nose and a supplemental adjustable gripping member carried by the upper end of the guard for grippingly engaging the nose.

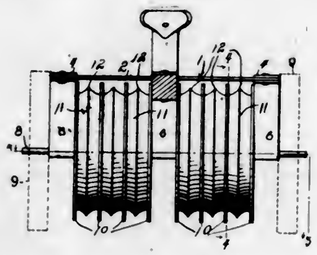
4. In an ophthalmic mounting, the combination with lenses, of a bridge rigidly securing the same in alinement, adjustable supports secured to the mounting, pivots adjacent the ends of the supports, guards pivoted on the pivots, springs on the pivots adapted to yieldingly operate the guards toward the nose and interacting stops between the supports and guards adapted to limit the movement of the guards on the pivots.

5. In an ophthalmic mounting, lenses, a rigid bridge connecting the lenses, rearwardly extending supports, guards, fulcrum connections between the supports and the guards and adjustable bends in the supports intermediate the lenses and the guards.

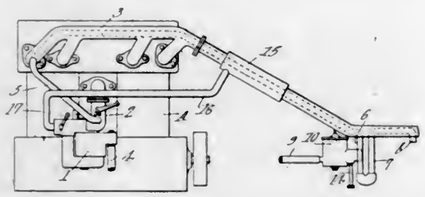
[Claims 6 and 7 not printed in the Gazette.]

1,103,450. COMBINED CLOD CUTTER AND CRUSHER. DAVID G. TETER, Nokomis, Ill. Filed Nov. 26, 1913. Serial No. 803,231. (Cl. 55—77.)

In a device of the class described, in combination with a frame, of hangers supported by the frame, a shaft supported by the hangers, a plurality of cutting disks rotatably mounted upon the shaft, a plurality of crushing disks rotatably mounted upon the shaft and between the cutting disks, said crushing disks having circumferential ribs formed thereon, the cutting edges of said disks extending beyond the periphery of said ribs, as and for the purpose set forth.



1,103,451. COMBUSTION-ENGINE. WILLIAM THORNEY and EMIL THORNEY, Denver, Colo. Filed May 14, 1913. Serial No. 767,728. (Cl. 123—122.)



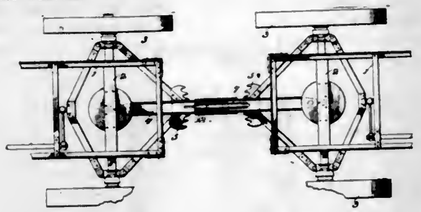
1. In combination with a combustion engine having a carbureter, an intake manifold and an exhaust manifold, a pipe connected to the intake manifold and passing through the exhaust, said pipe being open at the end outside of the exhaust, an extension on said pipe intermediate the ends extending outside of the exhaust, a supply of non-volatile fuel connected to said extension, and a supply of volatile fuel connected to the carbureter.

2. In combination with a combustion engine having a carbureter, an intake manifold, and an exhaust manifold, a pipe connected to the intake manifold and passing through the exhaust, an extension on said pipe intermediate the ends extending outside of the exhaust, a supply of non-volatile fuel connected to said extension, a pipe connected to the extension and passing through the exhaust, said pipe being open at the end outside of the exhaust, and a supply of volatile fuel connected to the carbureter.

3. In combination with a combustion engine, having a carbureter, an intake manifold and exhaust manifold, a pipe connected to the intake manifold and passing through the exhaust, an extension on the pipe intermediate the ends extending outside of the exhaust, a supply of non-volatile fuel connected to said extension, a pipe connected to the extension and passing through the exhaust, the end of said pipe being open outside the exhaust, a supply of volatile fuel connected to the carbureter, a jacket surrounding the exhaust, and a pipe leading from the jacket to the intake manifold.

1,103,452. COUPLING-LOCK FOR WHEELED VEHICLES. MARQUIS J. TODD, Buffalo, N. Y., assignor to Buffalo Pitts Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 23, 1913. Serial No. 763,138. (Cl. 21—137.)

1. In combination with a pair of wheeled vehicles, a coupling member between such vehicles, locking means carried by said coupling member for locking the latter to one or the other of said vehicles, and means for automatically shifting said locking means, coincident with the reversal of direction of travel of the vehicles, to unlock the coupling member from one vehicle as it is locked to the other vehicle.



2. In combination with a pair of wheeled vehicles, a coupling member between such vehicles, locking means carried by said coupling member for locking the latter to one or the other of said vehicles, and means carried by said coupling member for automatically actuating said locking means, coincident with the reversal of direction of travel of the vehicles, to unlock the coupling member from one vehicle as it is locked to the other vehicle.

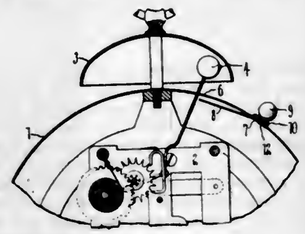
3. In combination with a pair of wheeled vehicles, a coupling member between such vehicles, locking means carried by said coupling member for locking the latter to one or the other of said vehicles, and a shifting member carried by said coupling member for automatically actuating said locking means when the direction of travel of the vehicles is reversed.

4. In combination with a pair of wheeled vehicles, a coupling member between such vehicles, locking means carried by said coupling member for locking the latter to one or the other of said vehicles, an arm pivoted to and depending from said coupling member and designed to engage the road, said arm normally lying at an oblique angle to the coupling member, and means actuated by the shifting of said arm, consequent upon the reversal of direction of travel of the vehicles, for unlocking said coupling member from one vehicle and locking it to the other vehicle.

5. In combination with a pair of wheeled vehicles, a coupling member between such vehicles, locking means carried by said coupling member for locking the latter to one or the other of said vehicles, and comprising a lever capable of occupying two positions, a second lever carried by said coupling bar and engaging the first mentioned lever, said second lever normally occupying an oblique position relatively to the coupling member and designed to be turned on its fulcrum by engaging with the road consequent upon the reversal of direction of travel of the vehicles, and thereby, through the first mentioned lever, effect the shifting of said locking means.

[Claims 6 to 8 not printed in the Gazette.]

1,103,453. CLOCK. HOWARD J. TREGANZA, New York, N. Y., assignor to The Ansonia Clock Company, New York, N. Y., a Corporation of Connecticut. Filed Mar. 14, 1913. Serial No. 754,294. (Cl. 58—16.)



1. In a clock, a bell hammer and a switch slidably mounted on the case and movable in a straight path at right angles to the clock face and across the path of and directly engaging the hammer.

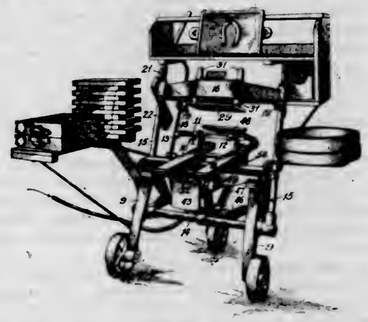
2. In a clock, a bell hammer and a switch slidably mounted on the case, comprising interior stop and slide members and an exterior handle movable in a straight path at right angles to the clock face to bring the stop member across the path of the hammer to directly engage it.

3. In a clock, a case having an elongated recess and a slot through the wall of the recess, a bell hammer and a switch comprising a member slidable in said recess, a stop member inside the case and a handle member outside the case, operable to move the slide member into position to bring the stop member across the path of and directly engaging the hammer.

4. In a clock, a case having an elongated recess and a slot through the wall of the recess, a bell hammer and a switch comprising a member slidable in said recess, a stop member inside the case and a handle member outside the case, operable to move the slide member into position to bring the stop member across the path of and directly engaging the hammer, the slide member being bowed to increase the frictional engagement of the slide and handle members with the case.

5. In a clock, a case having portions struck up from the inside to form an elongated recess and a slot cut through the wall of the recess, a bell hammer and a switch comprising a member slidable in said recess, a stop member inside the case and a handle member outside the case operable to move the slide member into position to bring the stop member across the path of and directly engaging the hammer.

1,103,454. MOLDING-MACHINE. HENRY TSCHERNING, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Nov. 8, 1911. Serial No. 659,077. (Cl. 22—43.)



1. In a molding-machine, a base, pivoted arms extending upward therefrom, a head carried thereby, an operating lever carried by the head, a squeezer-plate, a rock-shaft connected to the operating lever, a pinion thereon, a countershaft revoluble about the first-mentioned shaft, an arm with an integral pinion on said countershaft, said pinion meshing with said first-named pinion, and connections between said arm and the squeezer-plate.

2. In a molding-machine, a base, a head, a shaft in the head, an operating lever secured to the shaft, a countershaft revoluble about said shaft and connected therewith by links, meshing pinions on the shaft and countershaft, an arm connected to the countershaft pinion, and a squeezer-plate connected to the arm.

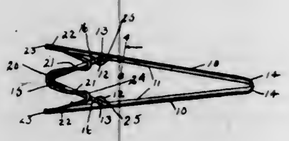
3. In a molding-machine, a base, a head, a shaft in the head, an operating lever secured to the shaft, a countershaft revoluble about said shaft and connected therewith by links, meshing pinions on the shaft and countershaft, an arm connected to the countershaft pinion, a squeezer-plate connected to the arm, and guides on the head for the squeezer-plate.

4. In combination, a flask-supporting base and a movable squeezer-plate to oppose the same, a cope-support movable forward to receive the cope, and backward out of the path of the squeezer-plate.

5. In a molding-machine, a platform for receiving a flask, a rapping device for agitating the same, a movably mounted cope-support independent of the platform and adapted to receive the cope while the platform is being agitated for work on the drag, means for operating the rapping device, and means operating simultaneously with the rapping device for advancing the cope-support into operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,103,455. TIE-CLASP. HARRY W. TUFTS, North Attleboro, Mass., assignor to Hallam-Rice Company, Providence, R. I., a Firm comprising Walter E. Hallam and Henry W. Rice. Filed Dec. 9, 1913. Serial No. 805,629. (Cl. 24—252.)



1. A clasp comprising a rigid substantially V-shaped hinge member having spaced apart arms each having a pintle, a pair of jaw members pivotally mounted on said pintles, and a substantially W-shaped spring having its middle fold extending around that of said hinge member with its ends engaging the operating ends of said jaws to hold their biting ends normally closed, and means for retaining said spring in position.

2. A clasp comprising a pair of jaws each having its operating end turned inward forming an end flange and also provided with inwardly projecting pierced pivoting ears, a V-shaped hinge member having a rigid middle portion and having spaced apart arms each provided with a laterally extending pivoting projection each entering the opening in a corresponding ear on said jaw members, and a substantially W-shaped spring having its middle portion folded around the middle of said hinge member with its intermediate portions extending into the space between said arms, and the ends of said spring engaging and being retained by the flanged operating ends of said jaw members to hold their biting ends normally in closed position.

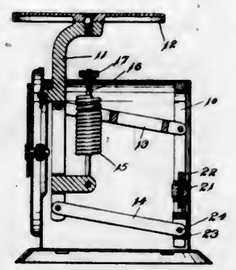
3. A clasp comprising a V-shaped hinge member having laterally extending pivoting projections, a pair of jaw members pivoted on said projection, the ends of said members being arranged to engage and rigidly support said jaws when their biting ends are in contact, and a spring having a portion folded over the apex of said V-shaped member and its ends engaging the operating ends of said jaws to hold their biting ends normally closed.

4. A clasp comprising a rigid substantially V-shaped hinge member having pintles extending laterally therefrom, a pair of jaw members pivotally mounted on said pintles, the apex of said hinge member being disposed away from the gripping ends of said jaws whereby said jaws may engage the goods throughout their length and the ends of said hinge member extending beyond the pintles and engaging the underside of said jaw members for rigidly supporting said jaws when their biting ends are in contact, a spring for normally holding the biting ends of said jaws normally closed, and means on said jaw members for retaining the ends of said casing.

5. A clasp comprising a rigid substantially V-shaped hinge member having spaced apart arms each having a pintle, a pair of jaw members pivotally mounted on said pintles, and a substantially W-shaped spring having its middle fold extending around that of said hinge member with its ends engaging the operating ends of said jaws.

[Claim 6 not printed in the Gazette.]

1,103,456. WEIGHING-MACHINE. GEORGE WALKER, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 13, 1911. Serial No. 620,884. (Cl. 73—46.)

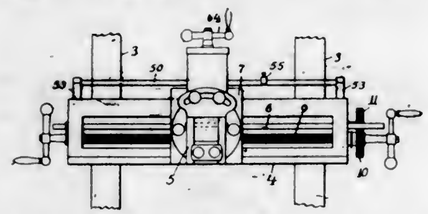


1. The combination with a weighing mechanism including two pairs of parallelly disposed members, and pivotal connections between the members of one pair and those of the other, of means mounted on one member of one pair for adjusting the pivotal connection with it of one member of the other pair and a casing for said mechanism with respect to which said adjustment is wholly independent.

2. In a weighing scale a fixed saddle, a movable platform frame, a lever frame extending between the saddle and the platform frame and pivotally connected therewith, a stud adjustably supported in said saddle and having a bifurcated head, a connecting rod extending between and pivotally connected with said platform frame and stud head, and a balance spring operatively connected with said platform frame.

3. In a weighing scale a combination with a saddle, a platform frame, a balance spring having a fixed support for one end and connected at its opposite end with said platform frame, a lever frame extending between said saddle and said platform frame and pivotally connected with both, a transverse bar fixed in said saddle near the lower end thereof, an adjusting device carried by said bar, a vertically movable member connected with and operated by said adjusting device and a connecting rod extending between said platform frame and said vertically movable member and pivotally connected with both.

1,103,457. METAL-PLANER. ALONZO W. WHITCOMB, Worcester, Mass. Filed Feb. 27, 1913. Serial No. 751,031. (Cl. 90—51.)



1. A metal planer comprising a cross rail, a head movable thereon, and electrically controlled means for terminating said movements at predetermined periods, said means embracing a stop adjustably connected with said cross rail but insulated therefrom, a contact moving with said head and in circuit therewith, a source of current, connection between said stop and one pole of said source, a clutch, an electromagnet controlling said clutch, connection between said electromagnet and the other pole of said source, and connection between said electromagnet and said head.

2. A metal planer comprising a cross rail, a head movable thereon, and electrically controlled means for terminating said movements at predetermined periods, said means embracing a stop adjustably connected with said cross rail, a contact moving with said head, a clutch, an electromagnet controlling said clutch, a source of current, and connections between said stop, contact, electromagnet and curent-source, whereby engagement of said stop and contact causes the delivery of current to said electromagnet.

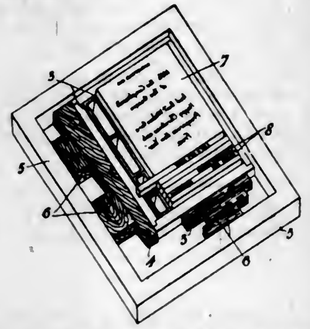
3. A metal planer comprising a cross rail, a head movable thereon, and electrically controlled means for terminating said movements at predetermined periods, said means embracing a rod terminally supported by said rail parallel therewith and near said head but insulated from said parts, a stop adjustably held by said rod, a contact moving with said head and in circuit therewith, a source of current, connection between said rod and one pole of said source, a contact connected with the other pole of said source, a contact normally out of touch with the last-named contact, means for automatically putting the last-named contacts into touch with each other, and an electromagnet having one terminal grounded with the planer and the other terminal connected with the last-named terminal.

4. A metal planer comprising a cross rail, a shoe longitudinally movable on the same, a head on said shoe, and electrically controlled means for terminating such movements at predetermined periods, said means embracing a tubular rod, a bracket supporting each end of the latter and held by said cross rail, a stop adjustably held by said rod, a contact moving with said head, a source of current and circuit wires, one of which wires passes through said rod but is insulated therefrom.

5. A metal planer comprising a cross rail, a shoe longitudinally movable on said rail, a head on said shoe, and electrically controlled means for terminating such movements at predetermined periods, said means embracing a tubular rod, a hollow bracket supporting each end of the latter and held by the cross rail, a stop adjustably held by said rod, a contact pin yieldably carried by said shoe to meet said stop, a source of current, and circuit wires, one of which passes through said rod and brackets.

[Claims 6 to 9 not printed in the Gazette.]

1,103,458. TYPE BARS OR SLUGS. MATTHEW HENRY WHITTAKER, Manchester, and CHARLES HOLLIWELL, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Sept. 27, 1913. Serial No. 792,078. (Cl. 101—175.)

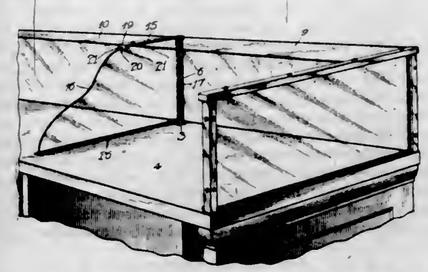


1. A printing form comprising printing slugs, one of said slugs being at least of the same measure as that of the others and recessed at its end below its printing surface, and the said recess being of such form and size as to permit the longitudinal adjustment of the printing slug in the form.

2. A printing form comprising printing slugs, one of said slugs being at least of the same measure as that of the others and recessed at both ends below its printing surface, and the said recesses being of such form and size as to permit the longitudinal adjustment of the printing slug in opposite directions in the form.

3. In a printing form, the combination of the side member 3, with printing slugs one of said slugs being recessed at its end below its printing surface so as to overhang the side member, and the said recess being of such form and size as to permit the longitudinal adjustment of the printing slug with reference to the side member.

1,103,459. COUNTER-PARTITION BRACKET. OSCAR M. WOLFF, Chicago, Ill. Filed Dec. 19, 1913. Serial No. 807,627. (Cl. 211—25.)



1. The combination of a bracket of T-shaped cross-section, means for securing said bracket to a counter, said bracket having threaded apertures extending through the web part thereof, a member mounted on the outer face of the transverse part of said bracket, fastening means engaging the outer ends of said apertures and adapted to secure said clamping member in position to engage the edges of adjacent glass panels between said member and the face of said transverse part, a channel member secured to the inner face of the web part of said bracket and adapted to embrace the edge of a transverse panel, and other fastening means engaging the inner ends of said apertures and adapted to secure said channel member to said bracket.

2. The combination of a bracket having a horizontally disposed part at the upper end thereof, a foot on the upright part of said bracket adapted to be used for securing said bracket to a counter, a clamping member mounted on the outer face of the upright part of said bracket and adapted to engage the edges of adjacent vertically disposed glass panels between said member and the face of said bracket, a second clamping member mounted on the upper face of said horizontal part and adapted to engage the edges of adjacent horizontally disposed glass panels between said member and the upper face of said horizontal part, said foot having a recess formed therein adapted to receive the lower corner of a transverse panel, and depending shoulders on said second clamping member adapted to embrace the adjacent edge of said transverse panel.

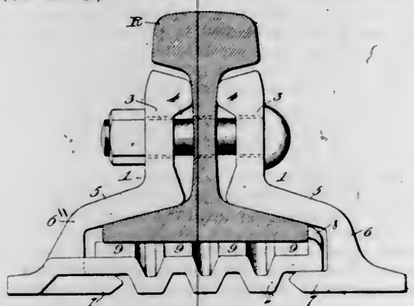
3. The combination of a bracket having a horizontally disposed part at the upper end thereof, a foot on the upright part of said bracket adapted to be used for securing said bracket to a counter, a clamping member mounted on the outer face of the upright part of said bracket and adapted to engage the edges of adjacent vertically disposed glass panels between said member and the face of said bracket, a second clamping member mounted on the upper face of said horizontal part and adapted to engage the edges of adjacent horizontally disposed glass panels between said member and the upper face of said horizontal part, said foot having a recess formed therein adapted to receive the lower corner of a transverse panel, and shoulders depending from the outer end of said horizontal part of said bracket and adapted to embrace the adjacent edge of said transverse panel.

4. The combination of a bracket having a horizontally disposed part at the upper end thereof, means for securing said bracket to a counter, a clamping member mounted on the outer face of the upright part of said bracket and adapted to engage the edges of adjacent vertically dis-

posed glass panels between said member and the face of said bracket, a second clamping member mounted on the upper face of said horizontal part and adapted to engage the edges of adjacent horizontally disposed glass panels between said member and the upper face of said horizontal part, a channel member secured to the inner face of the upright part of said bracket and adapted to embrace the edge of a transverse vertical panel, and shoulders depending from said second clamping member and embracing the adjacent edge of said transverse panel.

5. The combination of a bracket having a horizontally disposed part at the upper end thereof, means for securing said bracket to a counter, a clamping member mounted on the outer face of the upright part of said bracket and adapted to engage the edges of adjacent vertically disposed glass panels between said member and the face of said bracket, a second clamping member mounted on the upper face of said horizontal part and adapted to engage the edges of adjacent horizontally disposed glass panels between said member and the upper face of said horizontal part, and a channel member secured to the inner face of the upright part of said bracket and adapted to embrace the edge of a transverse vertical panel the outer end of said second clamping member being bent downwardly and having a notch formed therein adapted to provide a pair of shoulders embracing the adjacent edge of said transverse panel.

1,103,460. CROWNED-BASE RAIL-JOINT. BENJAMIN WOLHAUPTER, New Rochelle, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Feb. 11, 1913. Serial No. 747,824. (Cl. 239—6.)



1. A rail joint including joint bars having base flanges, and a separate base plate clamped between said base flanges and the rail bottoms and having a crowned rail seating portion.

2. A rail joint including joint bars having inwardly projecting horizontal base flanges, and a separate base plate engaged with the edges of the base flanges at one side of the joint and clamped between the bottoms of the rails and the base flanges of the joint bars, said separate base plate having a crowned rail seating portion.

3. A rail joint including side joint bars, and a separate corrugated rail supporting base plate engaged by said bars and having a crowned rail seating portion.

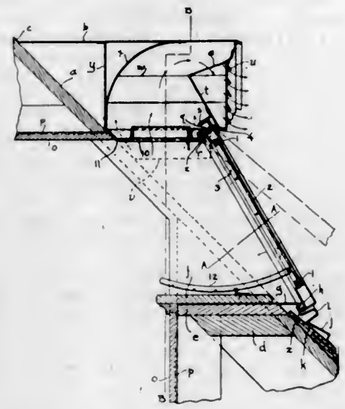
4. A rail joint including joint bars arranged below and out of contact with the under sides of the rail heads and having an engagement with the rail webs, and a separate base plate provided with a crowned rail seating portion.

5. A rail joint including joint bars arranged below and out of contact with the under sides of the rail heads and having an engagement with the rail webs, and a separate base plate engaged by said joint bars and having a crowned rail seating portion.

[Claims 6 and 7 not printed in the Gazette.]

1,103,461. DORMER. CHRISTIAN YAUCH, Detroit, Mich. Filed Feb. 5, 1914. Serial No. 816,696. (Cl. 189—64.)

1. A dormer, comprising a dome having a louver at the front, an inclined weather shield inclining upwardly and away from the louver, a dormer-window frame below the dome, side walls reaching backward from the dormer window frame, and a ventilator passage opening at the side of the dormer and below the dome, said ventilator passage leading up into the dome and discharging into the dome where the air currents pass over the weather shield and through the louver to the outside.



2. A dormer, comprising a dome provided with a louver at its front end, a sweep-plate consisting of an arched sheet of metal at the rear of the dome and interiorly thereof, a ventilator box opening below the dome and at the side of the dormer, the said ventilator box having a continuation leading up into the interior of the dome, a weather shield inclined upwardly and away from the louver, a dormer-window frame below the dome, and side walls leading from the dormer window frame backward.

3. A dormer-window, comprising a dome of arched sheet metal having louver boards at the forward end, a sheet metal ventilator passage located below and at one side of the dome, strips of sheet metal bent to form a dormer-window frame, further strips of sheet metal bent and fastened together to form a window sash, hinges for hinging the window sash to the window frame, glass carried in the window sash, and sheet-metal side walls leading back from the window frame.

4. A dormer, having in combination a dome, side walls continuing down therefrom, a window frame held by the side walls, and an adjustably opening window in the window frame, said dome being provided with openings to allow the discharge of the air.

5. A dormer-window, having in combination, a dome provided with louver boards, side walls continuing down from said dome, a window frame held by the side walls, and an adjustably opening window in said window frame.

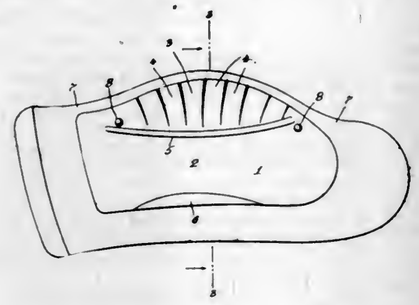
[Claim 6 not printed in the Gazette.]

1,103,462. WOOD WIND INSTRUMENT. NICHOLAS ALBERTI, Chicago, Ill. Filed Aug. 5, 1911. Serial No. 642,447. (Cl. 84—7.)



In a wood wind instrument, a sounding pipe provided with a single set of helical openings, a sleeve mounted on said sounding pipe and provided with a single series of valve openings arranged to register with the openings in the sounding pipe, said sleeve having a helical movement with respect to said sounding pipe, and means for maintaining the openings in the sleeve and pipe in registration.

1,103,463. INSTEP-SUPPORT. JAMES W. ARROWSMITH, Morristown, N. J. Continuation of application Serial No. 268,469, filed July 6, 1905. This application filed Mar. 29, 1910. Serial No. 552,238. (Cl. 36—71.)



1. An instep support comprising in its construction a plate curved and arched to fit the arch of the instep and having one side turned up to fit the side of the instep and provided with a curved outer edge and having an upwardly curved and laterally bowed strengthening rib located at the base of the upturned portion and extending longitudinally thereof the curve of the rib corresponding vertically with the upward curvature of the plate and its lateral bow being the reverse of the curve of the outer edge of the said upturned portion, the said upturned portion being divided into strips or fingers by slits terminating near the said rib.

2. An instep support comprising in its construction a plate curved and arched to fit the arch of the instep and having one side turned up to fit the side of the instep, said side portion having slits running from the line of its junction with the main portion to its outer edge, and said main portion being provided with a curved strengthening rib at its line of junction with said side portion and between the inner ends of said slits and the body of the main portion and a portion of the edge of said main portion opposite said rib being folded over against the said main portion.

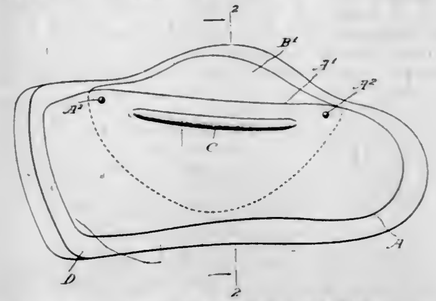
3. In a device of the character described the combination of a plate arched to fit the arch of the instep and having an upturned side portion to fit the side curve of the instep and also having said upturned side portion provided with cuts through the metal thereof whereby said side portion is rendered relatively more flexible than the main portion of the plate, and a rib provided in said plate extending between the main portion and the side portion and tending to partly isolate the said main portion of the plate from the side portion so that the flexure of the said side portion will be partly checked.

4. An instep support comprising in its construction a main plate curved and arched to fit the arch of the human instep and having a side portion turned up to fit the side of the instep provided with a curved outer edge, the construction and arrangement being such that the plate is depressed and the side portion flexed outwardly under the weight of the wearer, and an integral curved strengthening rib located at the line of junction of the said main plate and its side portion and extending along the same.

5. An instep support comprising in its construction a main plate curved and arched to fit the arch of the human instep and having a side portion turned up to fit the side of the instep provided with a curved outer edge, the construction and arrangement being such that the plate is depressed and the side portion flexed outwardly under the weight of the wearer, and an integral curved strengthening rib located substantially at the line of junction of the said main plate and its side portion and extending along the same on a line parallel with said junction, but terminating within the edges of the support.

[Claims 6 to 8 not printed in the Gazette.]

1,103,464. INSTEP-SUPPORT. JAMES W. ARROWSMITH, Morristown, N. J. Filed May 3, 1910. Serial No. 559,112. (Cl. 36—71.)



1. The combination of a metallic plate adapted to extend from the base of the calcaneum or os-calcis to the anterior part of the metatarsus, said plate approximating the width of the bony structure of the instep arch, and a cushion of non-metallic resilient material superimposed upon said metallic plate, said cushion having a side portion of the same material extending upwardly therefrom and above the highest point of the plate, said plate being provided with a depression near its middle and with a turned up inner edge, said cushion having a portion located in said depression and having a portion of its under surface in contact with the turned up inner edge of the plate.

2. In a device of the character described the combination of a metal plate and a piece of elastic, non-metallic substance superimposed on the said plate and covering its medial portion, the said plate having a groove extending longitudinally thereof and the piece of elastic substance having a portion in said groove.

3. In a device of the character described the combination of a metal plate and a piece of elastic, non-metallic substance superimposed on the said plate and covering its medial portion, the said plate having a groove extending longitudinally thereof and the piece of elastic substance having a portion in said groove, and the plate also having an upturned edge extending over a portion of the side of said piece of elastic substance.

1,103,465. BUNION SHIELD AND CORRECTOR. JAMES W. ARROWSMITH, Morristown, N. J. Filed Nov. 1, 1911. Serial No. 657,955. (Cl. 128—28.)

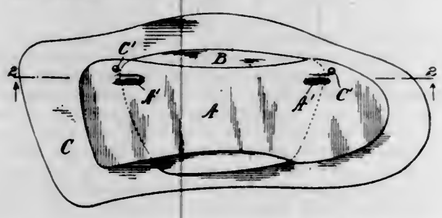


1. In a device of the character described the combination of a sole piece extending from the metatarsals to the forward phalanx of the great toe, an upright piece mounted thereon at its forward part, and an extension at the side thereof extending upward and over the joint of the great toe phalanx and the first metatarsal, and an expansible band secured to the said sole piece and adapted to extend around the side piece and the foot of the

wearer, whereby inward pressure is exerted on said joint, and means for causing the said upright piece to exert outward pressure on the inner side of the great toe.

2. In a device of the character described, the combination of a sole piece having an upward extension at the metatarso-phalangeal joint adapted to be maintained in contact with the outside of the foot at said joint and an upward extension at the inside of the great toe, the said extension outside the foot at the said joint terminating back of the phalangeal great toe joint so as to permit the toe to move freely outward independently thereof, and the said upward extension inside the great toe consisting of an expansible tube having an opening therein, whereby it may receive an expansive filling and be caused to exert an increasing outward pressure on the great toe.

1,103,466. INSTEP-ARCH SUPPORT. JAMES W. ARROWSMITH, Morristown, N. J. Filed Jan. 30, 1912. Serial No. 674,397. (Cl. 36—71.)



1. In an instep support, the combination of two plates one superposed upon the other, and a separable connection between the two plates comprising a projection on one plate occupying a small portion of the area thereof and a depression in the other plate also occupying a small portion of the area thereof and receiving said projection, the construction and arrangement being such that tension on the plates tending to move the same laterally will be resisted by contact between the walls of the depression and the projection, and one of said connection members must move vertically to permit lateral relative movement of the plates.

2. In an instep support, the combination of two plates one superposed upon the other, and a separable connection between the two plates comprising a projection on one plate occupying a small portion of the area thereof and a depression in the other plate also occupying a small portion of the area thereof and receiving said projection, the construction and arrangement being such that tension on the plates tending to move the same laterally will be resisted by contact between the walls of the depression and the projection, and one of said connection members must move in a non-lateral direction to permit lateral relative movement of the plates.

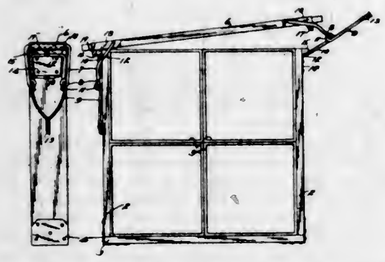
3. In a device of the character described, the combination of two plates superposed one upon another, a cover extending beyond the plates laterally and secured to the under plate so that the upper plate is held between the cover and the under plate, and a separable connection between the said upper and lower plates comprising a projection on one plate and a depression in the other receiving said projection and normally limiting its movement and the relative movement of the plates, said projection having an inclined side, so arranged that when pressure or tension in one plane is exerted the projection will act on the principle of the wedge or inclined plane to pass out of the depression and thus permit the movement of the plates with respect to each other.

4. In a device of the character described, the combination of two plates superposed one upon another, a cover extending beyond the plates laterally and secured to the under plate so that the upper plate is held between the cover and the under plate, and a separable connection between the said upper and lower plates comprising a projection on one plate and a depression in the other receiving said projection and normally limiting its movement and the relative movement of the plates, said depression having an inclined side, so arranged that when pressure or tension in one plane is exerted the projection will act on the principle of the wedge or inclined plane to pass out of the depression and thus permit the movement of the plates with respect to each other.

5. In a device of the character described, the combination of two plates superposed one upon another, a cover extending beyond the plates laterally and secured to the under plate so that the upper plate is held between the cover and the under plate, and a separable connection between the said upper and lower plates comprising a projection on one plate and a depression in the other receiving said projection and normally limiting its movement and the relative movement of the plates, said projection and said depression having coöperating upwardly and outwardly inclined sides, whereby when pressure or tension in one plane is exerted the projection will act on the principle of the wedge or inclined plane to pass out of the depression and thus permit the movement of the plates with respect to each other.

[Claims 6 to 11 not printed in the Gazette.]

1,103,467. SECTION-HOLDER FOR HIVES. CHRISTOF BACHMANN, Bagby, Cal. Filed Mar. 23, 1914. Serial No. 826,519. (Cl. 6—2.)



1. The combination with a honey-comb frame holder having a movable side, of a fastener for temporarily locking the movable side to the holder, said fastener comprising a spring member connected to one of said parts, and a lever member fulcrumed to the spring member and coöperable with the other of said parts for locking the parts in relatively closed position.

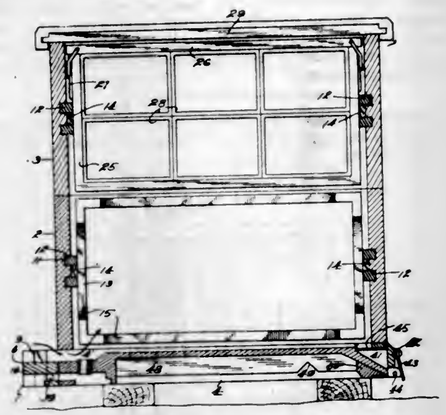
2. The combination in a honey-comb frame holder, of a main holder body open at one side, a movable side operable to close the open side of the holder, a swinging spring member connected to the movable side and carrying a locking member, and a shoulder on the holder body coöperating with said locking member and said spring member to hold the movable side in closed locked position upon the holder.

3. The combination in a honey-comb frame holder, of a main body part open at one side, a movable closure, abutments mounted upon the body part adjacent to the ends forming the opening, a locking device carried by said movable closure comprising a link with parallel, substantially bowed arms and pivoted in said movable member, and a lever fulcrumed in the outer swinging ends of the bowed link, one end of said lever being adjustable against its respective abutment and operative thereupon, when swung downwardly thereabout, to tension the bowed link as said lever is swung about the abutment.

1,103,468. BEEHIVE. CHRISTOF BACHMANN, Bagby, Cal. Filed Mar. 23, 1914. Serial No. 826,520. (Cl. 6—1.)

1. In a beehive, hive chambers open at the top and bottom, a cover, a bottom, said chambers being reversible end for end and side for side, removable, independent hive frames, and removable supports in said chambers for supporting and locking said frames in the hive chambers.

2. In a beehive, hive chambers open at the top and bottom, a cover, a bottom, said chambers being reversible end for end and side for side, removable, independent hive frames, and removable supports in said chambers for supporting and locking said frames in the hive chambers, said supports providing for the removal of any of the frames in their respective chambers.



3. In a beehive, hive chambers open at the top and bottom, a cover, a bottom, said chambers being reversible end for end and side for side, removable, independent hive frames, removable supports in said chambers for supporting and locking said frames in the hive chambers, said supports providing for the removal of any of the frames in their respective chambers, and a device for holding the inserted frames in compact position upon the supports.

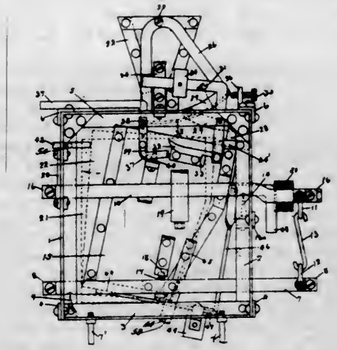
4. In a beehive, hive chambers open at the top and bottom, a cover, a bottom, said chambers being reversible end for end and side for side, removable, independent hive frames, removable supports in said chambers for supporting and locking said frames in the hive chambers, said supports providing for the removal of any of the frames in their respective chambers, a device for holding the inserted frames in compact position upon the supports, and a spring latch operating to hold the removable supports in position in the hive frames.

5. In a beehive, hive chambers open at the top and bottom, a cover, a bottom, said chambers being reversible end for end and side for side, removable, independent hive frames, removable supports in said chambers for supporting and locking said frames in the hive chambers, said supports providing for the removal of any of the frames in their respective chambers, a device for holding the inserted frames in compact position upon the supports, and a spring latch operating to hold the removable supports in position in the hive frames, said spring latch having a resilient arm engaging a complementary part on the hive frames so that the latch will remain steady in an open or a closed position.

[Claims 6 to 19 not printed in the Gazette.]

1,103,469. AUTOMATIC WEIGHING-MACHINE. ANDREW J. BALL, Fort Worth, Tex. Filed Aug. 30, 1913. Serial No. 787,489. (Cl. 73—175.)

1. A weighing machine having a main frame, a rigid quadrilateral supporting frame within said main frame and projecting from the rear side thereof, knife bearings rigid with said main frame at the front end thereof for said supporting frame, a discharge hopper pivotally supported on said supporting frame, a quadrilateral scale frame within said main frame and projecting from the rear side thereof and pivotally mounted on the rear side of said main frame, flexible connections suspending the rear corners of said supporting frame from the rear corners of said scale frame, a feed hopper above said discharge hopper and rigid with said main frame, a dribble cut-off operatively connected to said feed hopper and to said discharge hopper whereby said dribble cut-off is operated by the movements of said discharge hopper, and peas adjustably mounted on the side beams of said scale frame for determining the amount of goods to be delivered.



2. A weighing machine having a main frame, a rigid quadrilateral supporting frame within said main frame and projecting from the rear side thereof, knife bearings for said supporting frame rigid with the front end of said main frame, a loading and discharge hopper pivotally mounted on the side beams of said supporting frame, a quadrilateral scale frame within said main frame and projecting from the rear side thereof, knife bearings rigid with the rear side of said main frame constituting pivotal supports for said scale frame, flexible connections suspending the rear corners of said supporting frame from the rear corners of said scale frame, peas suspended on the side beams of said scale frame for determining the amount of goods to be delivered, means for feeding goods to said discharge and loading hopper, and means controlled by the movement of said discharge and loading hopper for regulating the feeding of goods to said discharge and loading hopper.

3. A weighing machine having a main frame, a rigid quadrilateral supporting frame within said main frame and projecting from the rear end of the main frame, knife bearings rigid with the front end of the main frame constituting pivotal supports for the front end of the supporting frame, a loading and discharge hopper pivotally mounted on the side beams of said supporting frame, a rigid quadrilateral scale frame mounted within said main frame and projecting from the rear end thereof, a cross bar rigid with the rear end of said main frame, knife bearings attached to said cross bar and constituting pivotal supports for the side beams of said scale frame, flexible connections suspending the rear end of said supporting frame from the rear corners of said scale frame, peas adjustably mounted on the side beams of said scale frame for determining the amount of goods to be delivered, means for feeding goods to said hopper, and means controlled by said hopper for regulating the feeding of goods to said hopper.

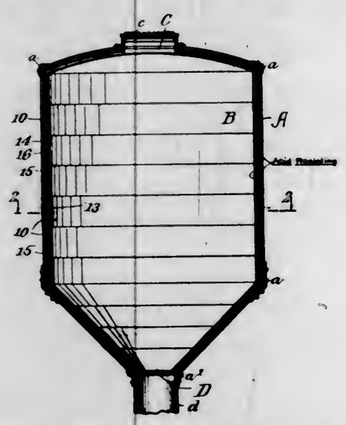
4. A weighing machine having a main frame, a rigid quadrilateral supporting frame within the main frame and projecting from the rear end thereof, pivotal supports rigid with the front end of said main frame for the front end of said supporting frame, a discharge and loading hopper and pivotal adjustable supports therefor mounted on the side beams of said supporting frame, a rigid quadrilateral scale beam mounted within said main frame and projecting from the rear end thereof, pivotal supporting bearings rigid with the rear end of said main frame for said scale frame, links pivotally connecting the rear corners of said supporting frame to said scale frame, peas adjust-

ably mounted on the side beams of the supporting frame for determining the amount of goods to be delivered, a regulating weight adjustably attached to the rear end of said scale frame, a feed hopper rigid with said main frame, a dribble pan and valve swingingly mounted on said feed hopper for controlling the feeding of material from the feed hopper to said discharge hopper, and link bars pivotally connected to said feed hopper and to said discharge hopper whereby said discharge hopper normally holds said valve open and by which the discharge hopper causes said valve to cut off the feed when the predetermined amount of goods has been delivered to the discharge hopper.

5. A weighing machine having a main frame, a rigid quadrilateral supporting frame within the main frame and projecting from the rear end thereof, pivotal supports rigid with the front end of the main frame for said supporting frame, a loading and discharge hopper and pivotal adjustable supports therefor mounted on the side beams of said supporting frame, a rigid quadrilateral scale frame mounted within said main frame and projecting from the rear end thereof, pivotal supports in the rear end of said main frame for said scale frame, links pivotally connected at their lower ends to the corners of said supporting frame and pivotally connected at their upper ends to the corners of said scale frame at the rear projecting ends of said frames, peas adjustably mounted on the side beams of said scale frame for determining the amount of goods to be delivered, a feed hopper rigid with said main frame, a dribble pan and valve swingingly mounted on said feed hopper, links pivotally connected to said dribble pan and valve and to said discharge hopper whereby said discharge hopper controls the feeding of material thereto, stops limiting the movement of said discharge hopper to a partial cutting off of the feed, and means automatically operated by the discharge hopper for releasing the discharge hopper when the complete load has been fed to the discharge hopper.

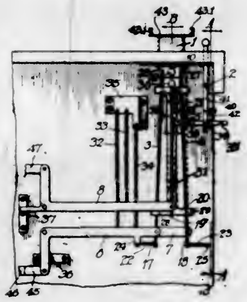
[Claim 6 not printed in the Gazette.]

1,103,470. TANK. GEORGE F. BASON, New York, N. Y. Filed July 14, 1913. Serial No. 778,848. (Cl. 72—14.)



A tank or the like provided with bottom and top closures, said closures having respectively supply and discharge openings therein, the sides, top and bottom of the tank consisting of an outer lining or casing and an inner lining, the said inner lining being composed of a series of acid resisting bricks or blocks which are set in rows, those of one row breaking joints with those of the adjacent row, the said bricks or blocks which form the inner linings of the side and bottom closure having their longitudinal and transverse edges formed with grooves or depressions which mate with the corresponding ones in the adjacent bricks or blocks, the bricks or blocks forming the inner lining for the top closure being similarly constructed and arranged, and the bricks forming the lower row thereof having a groove or depression in the under side thereof which mate with the grooves or depressions formed in the upper edges of the bricks or blocks of the upper row of the side lining, all of said grooves or depressions being constructed to receive an acid resisting binding material, arranged in continuous horizontal lines and in staggered longitudinal lines, the ends of each longitudinal section of binding material securing themselves to the adjacent continuous line of binding material thereby forming a net work of binding material securely holding the bricks or blocks together.

1,103,471. TREADLE MECHANISM. JOHAN GUSTAV LUDWIG BAUER, Chicago, Ill. Filed Apr. 3, 1913. Serial No. 758,581. (Cl. 74—81.)



1. The combination of a treadle, mechanism adapted to be actuated by said treadle, and means normally providing operative connection between said mechanism and treadle and adapted to be actuated by a sidewise shifting of said treadle for releasing said mechanism, from said operative connection.

2. The combination of a treadle, a plurality of mechanisms adapted to be actuated by said treadle, and means normally providing operative connection between all of said mechanisms and said treadle and adapted to be actuated by a sidewise shifting of said treadle for individually releasing said mechanisms, from said operative connection.

3. The combination of a treadle, a plurality of mechanisms adapted to be actuated by said treadle, means normally providing operative connection between all of said mechanisms and treadle actuated by a sidewise shifting of said treadle for individually releasing said mechanisms from said operative connection, and means for locking said treadle in its depressed position.

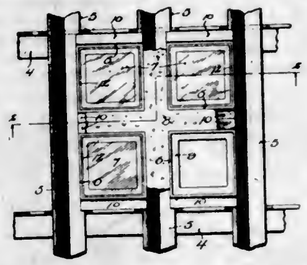
4. The combination of a depressible treadle, a resilient arm located at one side of said treadle and engaging the same, and normally urging it into its elevated position, mechanism adapted to be actuated by said treadle, and means normally providing operative connection between said mechanism and treadle and actuated by a sidewise shifting of said treadle for releasing said mechanism from said operative connection.

5. The combination of a depressible treadle, a coiled spring located at one side of said treadle and having an arm engaging said treadle, and normally urging it into its elevated position, mechanism adapted to be actuated by said treadle, and means normally providing operative connection between said mechanism and treadle and adapted to be actuated by a sidewise shifting of said treadle for releasing said mechanism from said operative connection.

[Claims 6 to 20 not printed in the Gazette.]

1,103,472. METAL-FRAME AND CONCRETE SIDEWALK, &c. HARRY F. BAYLEY, Milwaukee, Wis. Filed May 8, 1913. Serial No. 766,424. (Cl. 94—7.)

1. A sidewalk, vault-cover or the like comprising a metal frame, independent holders supported on the frame and each consisting of a casting in the form of a shell inwardly flanged at the bottom to form a horizontal seat and having outer bottom flanges extending in opposite directions to abut elements of said frame and like flanges of other holders, concrete in which the holders are embedded, glass-lights of less area throughout than the interiors of said holders in which they are seated, and elastic composition filling other than the concrete aforesaid surrounding each light in its holder.



2. A sidewalk, vault-cover or the like comprising a metal frame, holders supported on the frame and each consisting of a casting in the form of a shell provided with depending lugs that abut members of said frame, each holder being inwardly flanged at the bottom to form a seat and having outer bottom flanges extending in opposite directions, concrete in which the holders are embedded, glass-lights of less area than the interiors of said holders in which they are seated, and elastic composition filling surrounding each light in its holder.

3. As an article of manufacture, a glass-light holder for metal frame and concrete sidewalks, vault-covers and the like, the same consisting of a casting in the form of a shell inwardly flanged at the bottom to form a horizontal seat and having outer horizontal bottom flanges extending in opposite directions, the interior of the holder being of greater area throughout than the light to be secured therein, whereby an elastic composition filling may be utilized on said seat to fill the space above the same between said light and holder.

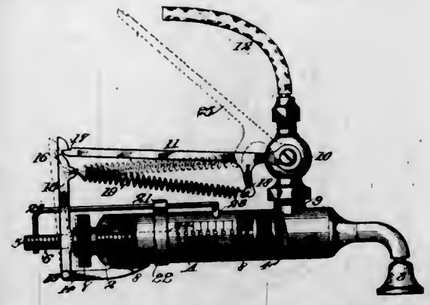
4. As an article of manufacture, a glass-light holder for metal frame and concrete sidewalks, vault-covers and the like, the same consisting of a casting in the form of a shell provided with depending lugs, and which is inwardly flanged at the bottom to form a seat as well as formed with outer bottom flanges extending in opposite directions, the interior of the holder being of greater area than the light to be secured therein.

1,103,473. PROCESS OF PRESERVING WOOD-OIL FROM CONGEALING ON BEING SUBJECTED TO HEAT. EMIL BERINGER and WILHELM ZIMMER, Charlottenburg, Germany, assignors to The Firm of Reichhold, Flügger & Boecking, lac-varnish manufacturers, Hamburg, Germany. Filed Sept. 23, 1913. Serial No. 791,317. (Cl. 134—56.)

The process of converting wood oil into an oil not congealing on being subjected to heat, which consists in adding to the wood oil a very small quantity of sulfur, substantially as herein described.

1,103,474. PRESSURE-REGULATING DEVICE. HENRY R. BICKFORD, Monterey, Cal. Filed July 23, 1913. Serial No. 780,668. (Cl. 137—4.)

1. The combination in a pressure regulating device, of a cylinder, a valve controlled inlet and outlet on said cylinder, a slidably mounted piston within said cylinder adapted to be actuated by air pressure admitted through the inlet, a rod secured to the piston extending through one end of the cylinder, a trigger arm pivotally secured to the cylinder adapted to be actuated by said rod and piston, an operating lever secured to the valve adapted to be normally secured by the trigger arm to hold the valve in an open position, and a spring connecting the valve lever and trigger for throwing this valve into a closed position when released by the trigger arm.



2. The combination in a pressure regulating device, of a cylinder, a valve controlled inlet and outlet on said cylinder, a slidably mounted piston within said cylinder adapted to be actuated by air pressure admitted through the inlet, a rod secured to he piston extending through one end of the cylinder, a coil spring interposed between one end of the cylinder and the piston, a pressure regulating nut on the rod for regulating the tension of said spring, a trigger arm pivotally secured to the cylinder adapted to be lifted by said nut, an operating lever secured to the valve, the outer end of which is adapted to be normally thrown into engagement with the trigger arm to hold the valve in an open position, a spring connecting the valve lever and trigger arm adapted to throw the valve into closed position when the valve lever is released by the trigger arm, and means for indicating the pressure within the cylinder the moment the valve is closed.

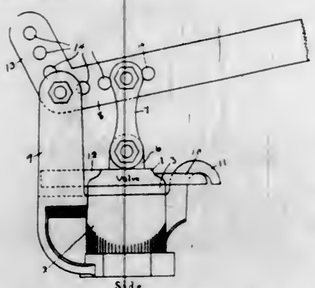
3. The combination in a pressure regulating device, of a cylinder, a valve controlled inlet and outlet on said cylinder, a slidably mounted piston within said cylinder adapted to be actuated by air pressure admitted through the inlet, a rod secured to the piston extending through one end of the cylinder, a coil spring interposed between one end of the cylinder and the piston, a pressure regulating nut on the rod for regulating the tension of said spring, a trigger arm pivotally secured to the cylinder adapted to be lifted by said nut, an operating lever secured to the valve, the outer end of which is adapted to be normally thrown into engagement with the trigger arm to hold the valve in an open position, a spring connecting the valve lever and trigger arm adapted to throw the valve into closed position when the valve lever is released by the trigger arm, a pressure indicating scale formed on the outer cylinder surface, and means connected with the piston and rod and adapted to move in unison with same for indicating the pressure within the cylinder.

4. The combination in a pressure regulating device, of a cylinder, a valve controlled inlet and outlet on said cylinder, a slidably mounted piston within said cylinder adapted to be actuated by air pressure admitted through the inlet, a piston rod secured to said piston, a spring interposed between one end of the cylinder and the piston to prevent air under pressure admitted through the inlet from moving the piston until a predetermined pressure has been obtained, a spring-pressed, valve-controlling lever, a latch arm engaging therewith and disengageable by the outward movement of the piston, and a nut adjustable on the piston rod, and engaging the latch arm to release the valve-controlling lever, so that the valve may be closed when a definite pressure in the cylinder is reached.

1,103,475. VALVE. JOHN M. BIRD, Fort Worth, Tex. Filed Mar. 29, 1913. Serial No. 757,599. (Cl. 137—104.)

1. A valve having a barrel provided with a vent in the side thereof, a hook formed on the side thereof and a slotted standard formed on the opposite side from said

hook, a cap having a slotted shank engaging said hook loosely and having a tongue projecting in said standard loosely for centering the valve on its seat, and a lever pivotally connected to said standard and operatively connected to said cap.



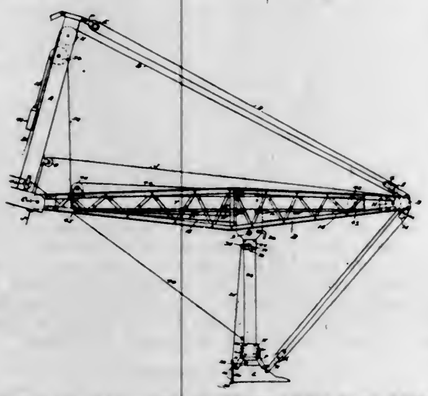
Side

2. A valve having a barrel provided with a hook formed on one side and a slotted standard formed on the other side diametrically opposite said hook, a cap for said barrel having a shank engaging said hook loosely and a tongue projecting loosely through said standard and constituting a guide for centering said cap on said barrel, and a lever pivotally connected to said standard for operating said cap.

3. A valve having a barrel provided with a hook formed on one side and a slotted standard formed on the other side diametrically opposite said hook, a cap having a perforated shank caught on said hook loosely and a tongue projecting loosely through said standard for centering said cap on said barrel, a lever having a plurality of perforations pivotally connected to said standard, and a link pivotally connected to said lever and to said cap.

4. A valve having a barrel provided with a hook formed on one side and a slotted standard formed on the other side diametrically opposite said hook, a cap having a perforated shank engaging said hook loosely and a tongue projecting loosely through said standard for centering the cap on said barrel, a lever having a bent arm and a plurality of perforations, and a link bar pivotally connected to said cap, said perforations and arm adapting said lever to be pivotally connected to said link bar and to said standard in different positions.

1,103,476. POWER-SHOVEL. STORRS M. BISHOP, Schenectady, N. Y. Filed May 19, 1911. Serial No. 628,160. (Cl. 37—16.)

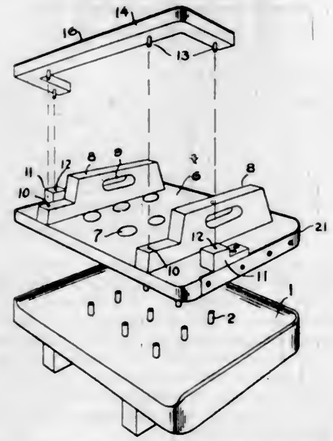


1. In an excavator, the combination of a boom, a carriage mounted to travel thereon, a dipper arm hung on the carriage, a bucket carried by said arm, means for actuating said arm, and means on the carriage controlled by the movement of said arm to automatically discharge the contents of the bucket.

2. In an excavator, the combination of a boom, a carriage mounted to travel thereon, a dipper arm hung on the carriage, a bucket carried by said arm, means for actuating said arm, means controlled by said arm to automatically lock the carriage to the boom, and means controlled by the movement of said arm to automatically discharge the contents of the bucket.

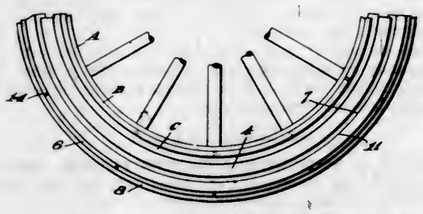
3. In an excavator, the combination of a boom, a carriage mounted to travel thereon, a dipper arm hung on the carriage, a bucket carried by said arm, means for actuating said arm, a closure for the bucket, a trip, a connection between said trip and said closure, and a stop on the carriage in the path of the trip whereby the trip will be actuated to release the closure as the dipper arm is raised.

1,103,477. CUSHION-MOLD. GEORGE B. BRINK, Detroit, Mich., assignor to Tufting Machine Supply Company, Detroit, Mich., a Corporation of Illinois. Filed Feb. 13, 1913. Serial No. 748,077. (Cl. 155—43.)



In a cushion-mold, the combination of a follow-board, a plurality of legs on one edge of the follow board, a leg on each side of the follow-board, the said legs being provided with dowel pin holes, a clencher strip, pins on the under side of the clencher strip fitting into the dowel pin holes to hold the clencher strip in spaced relation with the follow-board, and a metal strip on the upper face of the clencher strip, the said clencher strip being arranged to rest on all the legs.

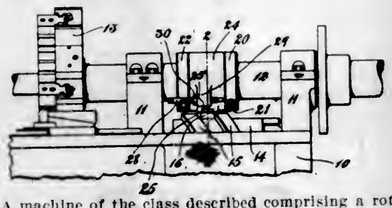
1,103,478. VEHICLE-TIRE. OLIVER W. BRITT, San Francisco, Cal. Filed Apr. 21, 1913. Serial No. 762,524. (Cl. 152—33.)



In a resilient tire for vehicle wheels, a pair of annular metallic members connected to the wheel rim, said members conjointly forming a substantially U-shaped seat in cross-section, an inflatable tube in said seat, a casing which is of U-shape in cross-section surrounding the outer portion of the tube, the free side portions of the casing having offset flanged portions which flanges provide shoulders that are for engagement with the free side edges of said members, said shoulders being normally

spaced from the free side edges of said members and said flanged portions extending across and covering said space and being slidably engaged with the respective inner faces of the free side portions of said members, the free edge portions of the flange portions on the inner faces of the latter being outwardly tapered, a lining in the seat and casing surrounding the tube, and a pair of thin flexible metal plates affixed to diametrically opposed points on the lining periphery and being arranged to extend over and beyond the extremities of said tapered edges of the flanged parts and to engage the respective inner faces of said members.

1,103,479. SPINDLE-ADJUSTING MECHANISM. ROBERT S. BROWN, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 24, 1912. Serial No. 692,821. (Cl. 74—1.)



1. A machine of the class described comprising a rotary endwise-movable spindle, a sleeve longitudinally adjustable on the spindle, provided with collars both connected directly with said sleeve and also with means for clamping the sleeve to the spindle, a band encircling the sleeve between the collars, mechanism acting against said band to reciprocate the spindle, and means for preventing the rotation of said band with said sleeve during the longitudinal movement of the spindle and sleeve.

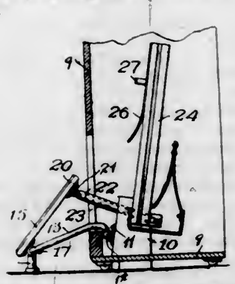
2. A machine of the class described, comprising a rotary endwise-movable spindle, a split sleeve provided with a rigid collar, a divided collar threaded onto the split portion of the sleeve, for constricting said sleeve into clamping engagement with the spindle, a band between the two collars, means acting against the band and the band acting against the collars, for reciprocating said spindle, and means for preventing the rotation of said band with said sleeve as the spindle is reciprocated.

3. A machine of the class described, comprising a rotary endwise movable spindle, a sleeve longitudinally adjustable on the spindle, provided with collars, one of which is integral therewith and the other of which is threaded thereonto, said sleeve being also provided with means for clamping the same to the spindle, a band encircling the sleeve between the collars, mechanism acting against the band to reciprocate the spindle, and means for preventing the rotation of said band with said sleeve during the longitudinal movement of the spindle and sleeve.

4. A machine of the class described, comprising a rotary endwise movable spindle, a split sleeve provided with an integral collar, and a divided collar threaded onto the split portion of the sleeve, the split portion of the sleeve extending through said integral collar, means for drawing the two collars into clamping engagement with the spindle, a band between the collars, means acting against the band and the band acting against the collars, for reciprocating the spindle, and means for preventing the rotation of said band with said sleeve as the spindle is reciprocated.

1,103,480. FOLDING PEDALS FOR PNEUMATIC MUSICAL INSTRUMENTS. THEODORE P. BROWN, Worcester, Mass., assignor to Simplex Player Action Company, a Corporation of Massachusetts. Filed Mar. 22, 1913. Serial No. 756,077. (Cl. 84—169.)

1. In a musical instrument, the combination of a pedal, a swinging support for the bottom thereof, a bellows, and two rods connected with the movable leaf of the bellows and with the pedal respectively, one rod being hollow and the other extending freely into the hollow rod and to the end thereof when the pedal is in operative position, whereby the pedal can be swung up without exerting any force on the bellows.

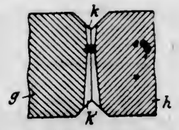


2. In a musical instrument, the combination of a pedal, a swinging support for the bottom thereof, a hollow rod pivoted to the upper end of said pedal, a bellows, and a rod pivoted to the movable leaf of the bellows and extending freely and loosely into said hollow rod for transmitting motion from the pedal to the bellows.

3. In a musical instrument, the combination of a pedal, a swinging support for the bottom thereof, a bellows behind the pedal connected with the upper end thereof, and a resilient yielding guide on the front of said bellows for receiving the top of the pedal when swung rearwardly on said support.

4. In a musical instrument, the combination of a pedal, a swinging support for the bottom thereof, a bellows behind the pedal connected with the upper end thereof, a guide on the front of said bellows for receiving the top of the pedal when swung rearwardly on said support, and guiding the end of the pedal upwardly along the front bellows, and a cleat on the bellows for holding the end of the pedal.

1,103,481. METHOD OF PRODUCING THE EARS IN NEEDLES HAVING BULGES AT BOTH SIDES OF A GROOVE PREVIOUSLY PRODUCED BY STAMPING. WALTHER BÜHREN, Iserlohn, Germany, assignor to Wilhelm Post, Iserlohn, Germany. Filed Apr. 21, 1914. Serial No. 833,366. (Cl. 163—5.)



The herein described method of producing the ears in needles having bulges at both sides of a groove previously produced by stamping, which method consists in placing the bulged portion of the needle shaft between compressing means, comprising two opposed parts with horizontal recesses which, if both parts are moved far enough toward each other, form a cylindrical opening of the size of the needle shaft, and subjecting the bulged portion of the needle shaft to compressing force by applying said compressing means, and thereupon passing a punch of known construction through vertical recesses provided in said parts of the compressing means and crossing the recesses first-named, for the purpose of producing the ear within the groove, and applying, during the punching operation, pressure to the parts forming the compressing means, substantially as set forth.

1,103,482. ALLOY FOR WELDING COPPER AND NICKEL. CARL CANZLER and RICHARD SAMESREUTHER, Düren, Germany, assignors to Autogenwerk Sirius, Gesellschaft mit beschränkter Haftung, Dusseldorf, Germany, a Firm. Filed Sept. 24, 1913. Serial No. 791,490. (Cl. 75—1.)

1. An alloy for welding copper which consists of the same metal as a base, phosphorus and a small percentage of silver.

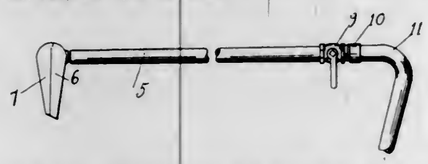
2. An alloy for welding copper, which consists of an alloy made in the form of a wire and consisting of the same metal as a base, phosphorus and a small percentage of silver.

1,103,483. ARTIFICIAL-STONE CEMENT. GIOVANNI CAPECE, Providence, R. I. Filed Dec. 15, 1913. Serial No. 806,906. (Cl. 106—31.)

1. The herein described artificial stone cement, consisting of beeswax, rosin, lead powdered, brick powdered, and Portland cement, substantially as described and in approximately the proportions specified.

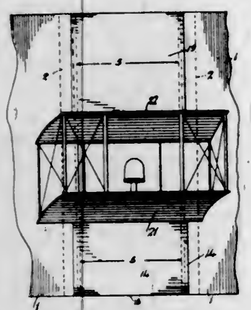
2. The herein described artificial stone cement, consisting of beeswax 1.80 grams, rosin 4.30 grams, lead powdered 3.15 grams, brick powdered 2.90 grams, Portland cement 15.10 grams, substantially as described.

1,103,484. HAND CONCRETE-MIXER. HARRY O. CLARKE, Pasadena, Cal. Filed Sept. 17, 1912. Serial No. 720,756. (Cl. 137—60.)



In a rake, the combination of a hollow handle; a head attached to said hollow handle and composed of two separable members having teeth formed thereon and having grooves in their adjacent sides which, when the members are fastened together, form passageways from the end of each tooth to and communicating with said hollow handle; means for fastening the members of said head together; and means for regulating the supply of fluid entering said handle.

1,103,485. ILLUSION APPARATUS. NELSON H. CLARKE, Cincinnati, Ohio. Filed Apr. 21, 1913. Serial No. 762,493. (Cl. 88—16.)



1. An illusion apparatus comprising a screen, means for projecting a scene upon said screen, an object adapted to harmonize with said scene, means to support said object movably in said scene, and means for changing the location of said object in said scene.

2. An illusion apparatus comprising a screen, means for projecting a scene upon said screen, an object adapted to harmonize with said scene, an opening in said screen whereby said object may be introduced into, and is permitted to move in, said scene, means for moving said object, and means whereby portions of said opening in said screen uncovered by said object may be covered during the movements of said object.

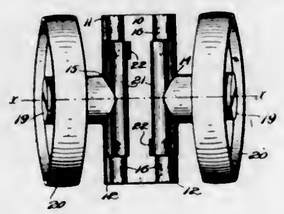
3. In an illusion apparatus of the character specified, the combination with a screen, of a tower, said tower being located in back of said screen, and a frame movably mounted on said tower, said frame being adapted to carry an object visible in front of said screen.

4. In an illusion apparatus of the character specified, the combination with the screen, of a tower, said tower being located in back of said screen, a frame movably mounted in said tower, said frame being adapted to carry an object visible in front of said screen, and means for moving said frame, whereby said object is caused to change location within the area of said screen.

5. In an illusion apparatus of the character specified, the combination with the screen, of a tower, said tower being located in back of said screen, a frame movably mounted in said tower, said frame being adapted to support, through an opening in said screen, an object in front of said screen, means for moving said frame, whereby said object is caused to move in front and within the area of said screen, and means whereby portions of the opening in said screen uncovered by said object may be covered during the movements of said object.

[Claim 6 not printed in the Gazette.]

1,103,486. AUTOGRIP FORM-TRUCK. ELMER M. COBB, South Portland, Me., assignor to Southworth Machine Company, Portland, Me., a Corporation of Maine. Filed Jan. 16, 1914. Serial No. 812,568. (Cl. 21—65.)



1. A device of the kind described, comprising a truck body having pairs of fixed upstanding lugs at its ends spaced apart to receive a form between them, and blocks pivoted for action between said lugs, equipped with axles having wheels fitted thereto and also with clamping jaws extending up from the pivot points in position to press upon the sides of a form as it is positioned on the body between said lugs, said jaws having one at one end and the other at its other end projecting portions adapted to co-act with an opposite end lug constituting a fixed jaw to grip the form at definite and localized separated points.

2. A truck of the kind described, comprising a body having a wheel base and provided with a central seat to receive a form, upstanding lugs constituting fixed jaws carried by said body at opposite sides of said form seat and spaced apart along the length thereof, and movable clamping jaws having form engaging portions adapted to co-act with said fixed jaws respectively to grip a form at localized and definite spaced apart points as it rests on said seat for the purpose stated.

3. A device of the kind described, comprising a truck body carried on wheels, said wheels having pivotal mountings permitting united swinging movement transversely of the truck, said mountings being also formed with clamping jaws to engage a form on the truck arranged to be actuated by the weight of the form, and spring means for acting on said mountings to cause said jaws to grip a form therebetween independently of the gravity action of the form.

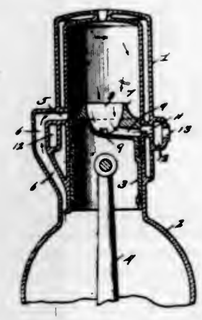
4. A device of the kind described, comprising a truck body carried on wheels, said wheels having mountings pivoted to permit limited swinging movement transversely of the truck, said mountings being formed with jaws for clamping a form resting on the truck by the weight thereof, and also having depending spaced apart extensions, and a spring mounted between said extensions for acting on said mountings to cause said jaws to press against a form

held therebetween independently of the gravity action of the form.

5. A truck comprising a body, and spaced apart clamping means consisting in a jaw fixed to the body and a relatively movable jaw and carried thereby, each of said clamping means being automatically operative to clamp at separated points irregular or tapering surfaces resting on the truck and hold the same automatically gripped rigid with the truck.

[Claim 6 not printed in the Gazette.]

1,103,487. INTERNAL-COMBUSTION ENGINE. JOSEPH E. COCHRAN, Elkhart, Ind., assignor to Stuart W. Cochran and Joseph T. Cochran, Elkhart, Ind. Filed June 6, 1910. Serial No. 565,176. (Cl. 123—73.)



1. In an internal combustion engine, the combination of a cylinder having inlet ports disposed at intervals around its circumference, an exhaust port, a piston reciprocating in the cylinder and adapted to cover said ports and having a central cavity presented upwardly to the explosion space of the engine and through which the exhaust gases are discharged, an annular shield upstanding beyond the end of the piston and forming with the wall of the cylinder an annularly continuous gradual upwardly enlarging space for directing the incoming gas from the inlet ports inwardly toward the head of the cylinder, said piston having a lateral passage leading through the side of the piston and adapted to register with said exhaust port.

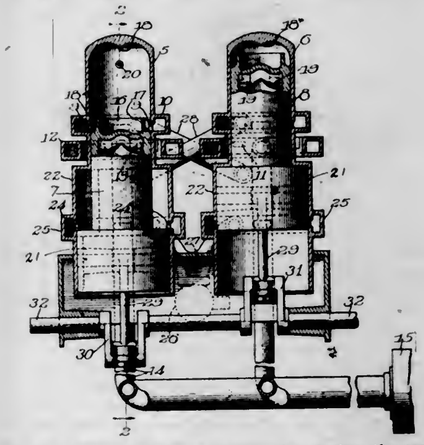
2. In an internal combustion engine, the combination of a cylinder having intake ports disposed at intervals around its circumference, and an exhaust port, and a piston reciprocating in the cylinder to cover and uncover said ports, the piston having a cup or cavity in its upper end, an annular upstanding deflector surrounding said cavity and generally tapered upward to space it concentrically from the wall of the cylinder, and a lateral passage leading outwardly from said cup or cavity and adapted to register with said exhaust port, said exhaust port and intake ports being at different points in the line of travel of the piston.

3. In an internal combustion engine, the combination of a cylinder having a plurality of intake ports disposed at intervals around its circumference and a plurality of exhaust ports disposed at intervals around its circumference, and a piston reciprocating in the cylinder to cover and uncover said ports, said piston having an annular shield on its upper end spaced from the wall of the cylinder and provided with a curved face to form an upwardly enlarging passage for communication with said intake ports, the piston also having a cavity or depression within said shield, and a plurality of lateral exhaust passages leading outwardly therefrom through the periphery of the piston for communication with said exhaust ports.

4. In an internal combustion engine, the combination of a cylinder having an intake port and also having exhaust ports, which latter are disposed equal distances apart around the circumference thereof, and a piston reciprocating in the cylinder to cover and uncover said ports, said piston having a plurality of exhaust passages radiating through the periphery thereof for communicating with said exhaust ports, the inner ends of said passages having communication with the explosion space through the upper end of the piston and a shield carried by the end of the piston and surrounding the inner ends of said passages and curved to form a gradual upward enlarging space between the shield and the cylinder wall.

5. In an internal combustion engine, the combination of a cylinder, a working piston adapted to reciprocate therein and provided with an opening extending through its inner end for establishing a fluid passage between the interior of the cylinder and exhaust, and a shield or ridge on the inner end of the piston surrounding said opening and being removed from the wall of the cylinder and forming a gradual upwardly enlarging space between such wall and said opening.

1,103,488. INTERNAL-COMBUSTION ENGINE. JOSEPH E. COCHRAN, Elkhart, Ind., assignor to Stuart W. Cochran and Joseph T. Cochran, Elkhart, Ind. Filed May 18, 1911. Serial No. 627,968. (Cl. 123—59.)



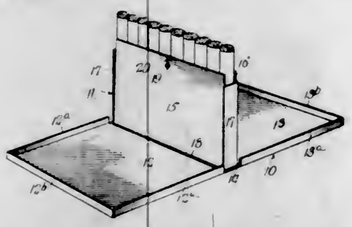
1. In a two-cycle internal combustion engine, the combination of a pair of working cylinders, each having fuel intake and exhaust ports and independent manifold chambers common to said intake and exhaust ports, a compressor chamber associated with each of said working cylinders, having fuel inlet and discharge ports arranged in different planes, said discharge port in each compressor chamber being connected with the intake manifold of the working cylinder associated with the other compressor chamber, a manifold common to the inlet ports of each compressor chamber, a carbureter common to the manifolds of the compressor chamber inlet ports, a working piston in each working cylinder, and a compressor piston connected therewith in each compressor chamber for covering and uncovering the fuel inlet ports thereof, and drawing a charge of fuel thereinto through such inlet ports, and expelling the charge through the discharge port of such chamber, two connected cranks, one connected with one working piston and its associated compressor piston, and the other with the other working piston and its associated compressor piston, whereby the piston connected with one crank will maintain a definite relation to those connected with the other, the compressor piston of one crank being so disposed with relation to the working piston of the other crank that it will intercept communication between the inlet and discharge ports of its chamber when the inlet port of the other compressor chamber is uncovered by its compressor piston.

2. In a two-cycle internal combustion engine, the combination of a working cylinder, having a plurality of intake ports situated at intervals around its periphery, and a plurality of exhaust ports situated at intervals around its periphery in a plane removed from the plane in which

said intake ports are situated, and arranged respectively in lines parallel with the axis of the cylinder and extending between said intake ports, a working piston in said cylinder having a recessed end and reduced in external diameter, a plurality of lateral ports connected with such recess and adapted to register with said exhaust ports and to be covered by the spaces between said intake ports during a portion of the stroke of the piston.

3. In an internal combustion engine, the combination of a working cylinder, having a plurality of intake ports, a manifold forming a common chamber connected with said ports, a plurality of carbureters of equal capacity having communication with said manifold chamber, a working piston in said cylinder, and means for exhausting the burned gases from said cylinder.

1,103,489. BOX. HARVEY CONOVER, Evanston, Ill., assignor to Thos. Cusack Company, a Corporation of New Jersey. Filed June 7, 1913. Serial No. 772,278. (Cl. 206—41.)



1. A box of the character described, comprising a body section, a lid section, an intermediate side wall section common to both body and lid sections, said body and lid sections being hinged to the opposite edges of said intermediate side wall section and a holder comprising side walls, end walls and a bottom wall, said holder being fixed to said intermediate section, and the side walls of said holder being of less width than the width of the box.

2. A box of the character described, comprising a body section, a lid section, an intermediate side wall section common to both said body and lid sections, said body and lid sections being hinged to the opposite lateral edges of said side wall section, and a container or holder fixed to said intermediate side wall section and adapted to lie within the box when closed, said container having oppositely disposed side walls, which are of substantially less width than the width of the box, and yielding means connecting the side walls of said container.

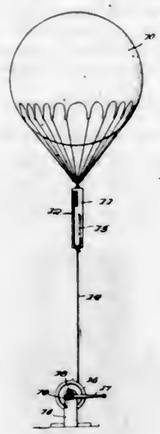
3. A box of the character described, comprising a body section, a lid section, an intermediate side wall section common to both the body and lid sections, said body and lid sections being hinged to the opposite lateral edges of said intermediate side wall section, and a container fixed to said intermediate side wall section of the box, said container comprising oppositely placed side walls and oppositely placed end walls, one of the side walls of the container being fixed to the end walls thereof, and the other side wall comprising a loose flap hinged to swing with respect to the intermediate side wall section of the box, and yielding means connecting said loose flap with the opposite side wall of the container.

1,103,490. RAIN-MAKER. JAMES M. CORDRAY, Los Angeles, Cal. Filed Aug. 6, 1913. Serial No. 783,373. (Cl. 102—1.)

1. A method of producing rain which consists in violently disturbing the air above the earth, in then heating the air and in supplying moisture and nitrogen to the air.

2. A method of producing rain which consists in testing the air, in then violently disturbing the air above the earth, in then heating the air, in then supplying it with moisture and nitrogen and then treating the air electrically.

3. A method of producing rain which consists in successively sending up a plurality of gangs of aerial containers and in discharging their contents at predetermined elevations.

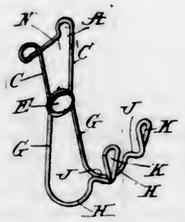


4. A method of producing rain which consists in testing the atmospheric conditions and in successively sending up a plurality of gangs of aerial containers and in successively discharging the contents of said containers at predetermined elevations.

5. A method of producing rain which consists in testing the atmospheric conditions and in successively sending up a plurality of gangs of aerial containers and in successively discharging the contents of said containers at predetermined elevations, the containers of each gang being simultaneously discharged.

[Claims 6 to 10 not printed in the Gazette.]

1,103,491. PICTURE-HANGER. REUBEN S. CORMIER, New Bedford, Mass. Filed Aug. 20, 1913. Serial No. 785,703. (Cl. 248—48.)

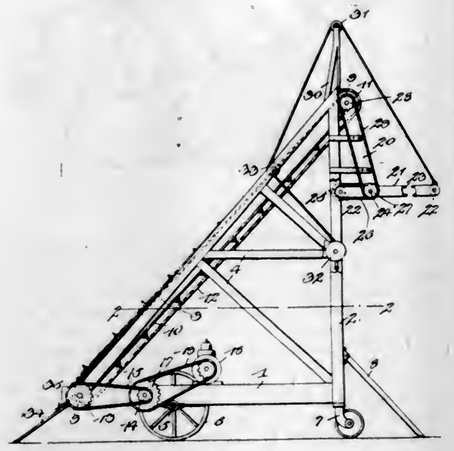


A picture hanger consisting of the upper suspension portion, the depending arms formed with outward extending bends and terminating in a pair of eyes in substantially vertical relation and adapted to be secured to the picture frame, and a retaining slide having a pair of engaging eyes fitting upon and securing said arms to prevent spreading and adjusting said arms.

1,103,492. HAY-STACKER. ANDREW J. DAVIDSON, Baggs, Wyo., assignor of one-fourth to George W. Davidson and one-fourth to Carl Davidson, Baggs, Wyo. Filed Oct. 2, 1912. Serial No. 723,602. (Cl. 193—14.)

A device of the character described including a frame, spaced supporting bars positioned to the rear of the frame and adjacent the upper extremity thereof, braces connecting such bars and the frame whereby such bars are maintained in fixed position, a shaft mounted in the upper end portion of such bars, a second shaft mounted on the frame adjacent the forward end thereof, a conveyer operatively

engaged with such shaft, driving means operatively connected with one of such shafts, a shaft mounted in the lower ends of the supporting bars, an operative connection between such shaft and the conveyer whereby the same may be caused to rotate in unison therewith, side bars pivotally supported intermediate their length by the lowermost shaft of the supporting bars, the portions of such side bars to the rear of the shaft being disposed be-



neath the upper extremity of the conveyer, shafts interposed between and mounted in the opposite end portions of the side bars, a conveyer passing around such shafts, an operative connection between the lowermost shaft of the supporting bars and one of the shafts of the side bars whereby the same may be caused to rotate in unison, and means whereby the side bars may be adjusted about the lowermost shaft of the supporting bars.

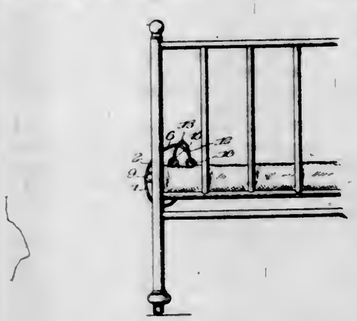
1,103,493. METHOD OF REPAIRING DAMAGED TOE-BOXES. TONY CASTIGLIONE DE CARMELO, Painesville, Ohio. Filed Jan. 8, 1914. Serial No. 810,934. (Cl 12—142.)



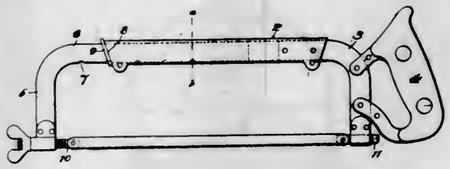
The method of repairing broken down toe-boxes in boots or shoes, consisting of first providing an auxiliary toe-box which is made independent of the integral toe-box, secondly coating the auxiliary toe-box with suitable adhesive, thirdly inserting said auxiliary toe-box in the toe of the boot or shoe, and finally driving a last into the toe-box and allowing the article to dry before removing the last.

1,103,494. BED-COVER HOLDER. HENRY C. EWALD, Louisville, Ky. Filed Mar. 28, 1913. Serial No. 757,443. (Cl. 24—261.)

A bed cover holder formed wholly of spring wire, embodying a lower bed clamping arm comprising members lying in substantially parallel planes, an upper cover engaging arm also comprising members lying in substantially parallel planes, said upper and lower arms being connected for relative yielding movement, a presser bar at the extremity of the upper arm, a cover gripping arm extending outwardly from the upper arm and also comprising members lying in substantially parallel planes, each of said arms being substantially semi-circular, and a cover gripping jaw at the extremity of the gripping arm, said jaw embodying a plurality of gripping points.



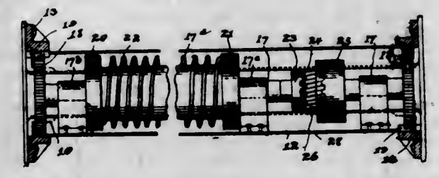
1,103,495. HACKSAW-FRAME. LEONARD M. FAIRBANKS, New Haven, Conn., assignor to The H. G. Thompson & Son Co., New Haven, Conn., a Corporation. Filed Feb. 18, 1914. Serial No. 819,460. (Cl. 145—34.)



1. A hack saw frame comprising a socket member, a slide, and a stop-loop, the outer end of the socket member beveled and adapted when forced against the stop-loop to cause it to engage with the slide whereby it is held against further movement into the socket.

2. In a back saw frame comprising a socket member, a slide and a clamping-loop the outer end of the socket member beveled, one edge of the slide formed with notches with which one edge of the loop may engage, whereby a stop is formed to limit the movement of the socket onto the slide.

1,103,496. SASH-BALANCE. GEORGE H. FORSYTH, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 19, 1906. Serial No. 344,033. (Cl. 16—150.)



1. In a sash balance, the combination of a sash, a torsion spring, reversely rotatable power-transmitting members connected to and independently actuated by the opposite ends of said spring respectively, and connections between said power-transmitting members and the sash whereby an equalization of the action of said spring on said sash is secured, substantially as described.

2. In a sash balance, the combination of a movable sash and its frame, a torsion spring, and reversely rota-

table members fastened to opposite ends of said spring and operating along the vertical walls of said frame for actuating the sash, substantially as described.

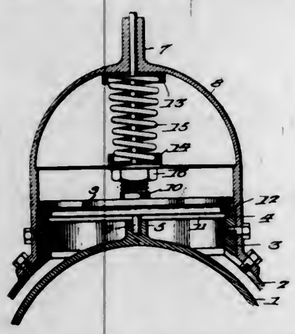
3. In a sash balance, the combination of a movable sash and its guides, a torsion spring, and means for equally balancing said sash including oppositely rotatable members acted upon by the opposite ends of said spring and oppositely rotatable in planes transverse the axis of the spring, substantially as described.

4. In a construction of the character described, the combination of a sash frame, a sash movable in said frame, a torsion spring, independently operable power-transmitting members secured to opposite ends of said spring in engagement with the frame and adapted to cause an equal balancing of said sash, substantially as described.

5. In a sash balance, the combination with a sectional spindle having an interposed torsion spring and a coupling member, the latter constituting also tensioning members for said spring, of gears on the ends of said spindle, and diagonally disposed racks engaged by said gears, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,103,497. INTERNAL-COMBUSTION ENGINE. JULIUS D. FRANK and ADALOR D. HUARD, Alpena, Mich. Filed May 15, 1913. Serial No. 767,915. (Cl. 123—173.)

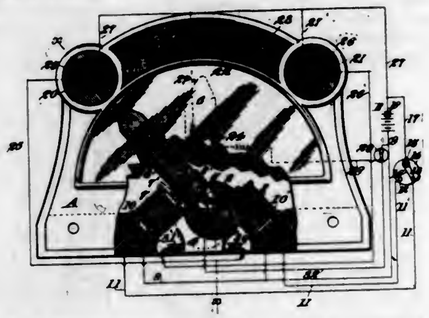


The combination of an engine cylinder, a water-jacket surrounding the same and having an outlet and also having a flange and a valve seat on said flange, a yoke fixed with respect to the jacket and having an apertured upper portion, a stem disposed in said apertured portion of the yoke and connected with the cylinder, a relief valve loosely surrounding said stem and having a threaded sleeve, an inverted cup surrounding the stem and disposed under the upper portion of the yoke, a nut threaded on the sleeve of the valve, a cup superposed on said nut, and a spring surrounding the stem and interposed between the two cups.

1,103,498. DIRECTION-INDICATOR. ARNOLD FRAUCHIGER, San Francisco, Cal. Filed Jan. 13, 1913. Serial No. 741,665. (Cl. 177—337.)

1. In a direction indicator, a curved indicator face having differently colored extensions at the opposite ends, a weighted pointer having curved connected slots above the center of gravity, pivot pins forming bearings about which the pointer is rockable to one side or the other, armatures fixed to the pointer and inclined co-acting magnets, and means to alternately energize said magnets and rock the pointer to one end or the other of the indicator.

2. A direction indicator comprising in combination a casing, an indicator arm mounted on a double pivot within the casing, slots formed in the arm to allow the arm a free rocking movement upon either pivot, a counterweight on the lower end of the arm, a pair of armature members secured on the arm, a pair of magnets mounted in the path of travel of the armature members, a face on the casing over which the arm is adapted to swing, colored extension faces formed on the first named face with which the indicator arm is adapted to be brought into register, and means for energizing one or the other of the magnets to rock the indicator arm into register with one of the colored extensions.



3. A direction indicator for automobiles comprising in combination a casing, an indicator arm mounted on a double pivot within the casing, curved slots formed in the arm to allow the arm a free rocking movement upon either pivot, a counterweight on the lower end of the arm, a pair of armature members secured on the arm, a pair of magnets mounted in the path of travel of the armature members, a face on the casing over which the arm is adapted to swing, colored extension faces formed on the first-named face with which the indicator arm is adapted to be brought into register, means for energizing one or the other of the magnets to rock the indicator arm into register with one of the colored extension faces, means for illuminating the whole face of the indicator, the end portions of the indicator face being capable of illumination in unison with the change of position of the indicator arm.

1,103,499. PROCESS OF REGENERATING OIL USED FOR ELECTRICAL PURPOSES. ROBERT FRIESE, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Apr. 1, 1913. Serial No. 758,246. (Cl. 196—26.)

A process of regenerating oil used as transformer oil or the like for electrical purposes, consisting in mixing the used oil with acetone, in leaving the mixture thereby obtained at rest whereupon its constituents of different specific gravity separate in two superposed layers, in removing the upper layer containing acetone and noxious constituents of the used oil, and in distilling off from the lower layer the residue of acetone remaining therein.

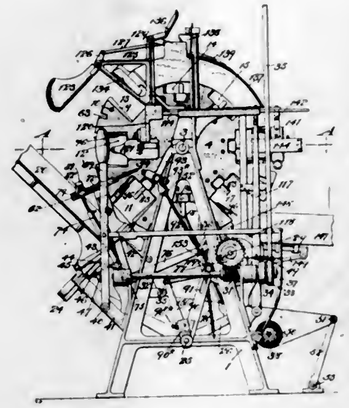
1,103,500. WRAPPING-MACHINE. RAYMOND EVERETT FUDGE, West Haven, Conn., assignor to The Rowland Machine Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 2, 1912. Serial No. 674,904. (Cl. 93—7.)

1. In a wrapping machine in which a strip of wrapping paper is fed by its engagement with a commodity and stretched between two successive commodities during the operation of wrapping, intercoacting chopping and shearing blades for chopping and shearing the paper to sever it between the commodities.

2. In a wrapping machine in which a strip of wrapping paper is stretched between two successive commodities during the operation of wrapping, a shearing blade set oblique to the plane of the paper, chopping blades and means for moving the chopping blades past the edge of the shearing blade to sever the paper.

3. In a wrapping machine in which a strip of wrapping paper is stretched between two successive commodities during the operation of wrapping, a shearing blade, means for adjusting it, double edged chopping blades and means for moving the chopping blades into position astride the shearing blade to sever the paper.

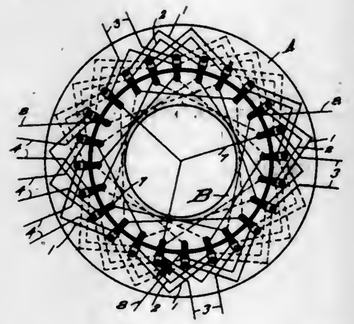
4. In a wrapping machine in which a strip of wrapping paper is stretched between two successive commodities during the operation of wrapping, a shearing blade, means for moving the shearing blade across the path of the strip and chopping blades under the control of the shearing blade to sever the opposite edges of the paper.



5. In a wrapping machine in which a rotary wheel is provided with pockets for receiving commodities to be wrapped, a movable stop at the bottom of a pocket in position to be engaged and moved by the commodity to bring the outer face of the commodity into a predetermined plane, means for locking the stop in the position in which it may have been moved by the commodity and means for forcing the commodity into the pocket.

[Claims 6 to 21 not printed in the Gazette.]

1,103,501. MULTIPHASE ELECTRIC MOTOR. HARRY GEARING, Los Angeles, Cal., assignor of one-fourth to Charles J. O'Neill and one-fourth to Gilbert P. Ritter, District of Columbia. Filed Aug. 10, 1912. Serial No. 714,363. (Cl. 172—274.)



1. The combination with a multiphase electric motor having a rotor winding and separate stator windings, of adjustable means for connecting the individual stator windings in Y or in delta arrangement with the power circuit and for connecting said winding to said power circuit in various combinations of Y, Y-delta, or delta-delta, whereby the power developed by the motor may be selectively varied.

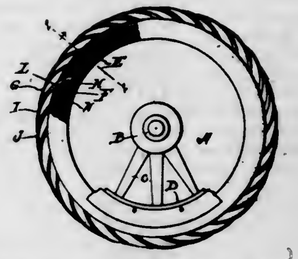
2. The combination with a multiphase electric motor having a rotor winding and separate unequal stator windings, of adjustable means for connecting the individual stator windings in Y or in delta arrangement with the power circuit and for connecting said windings to said power circuit in various combinations of Y, Y-delta, or delta-delta, whereby the power developed by the motor may be selectively varied.

3. The combination with a multiphase electric motor having a rotor winding and separate stator windings, of a controller having fixed and movable contacts to connect the stator windings with the power circuit individually in Y or in delta relation and jointly in various combinations of Y, Y-delta, or delta-delta, whereby the power of the motor is selectively varied.

4. The combination with a multiphase electric motor having a rotor winding and separate stator windings, of adjustable means for connecting the individual stator windings in Y or in delta arrangement with the power circuit and for connecting said windings to said power circuit in various combinations of Y, Y-delta, or delta-delta, whereby the power developed by the motor may be selectively varied, and a reversing switch in the stator circuit.

5. The combination with a multiphase electric motor having a rotor winding and separate stator windings, of adjustable means for connecting the individual stator windings in Y or in delta arrangement with the power circuit and for connecting said windings to said power circuit in various combinations of Y, Y-delta, or delta-delta, whereby the power developed by the motor may be selectively varied, a regulable external resistance in the rotor circuit, and a reversing switch in the stator circuit adapted to cut the resistance into the rotor circuit with each reversal of the stator circuit.

1,103,502. RESILIENT WHEEL. EMANUEL GEISEL, Philadelphia, Pa. Filed Nov. 19, 1910. Serial No. 593,199. (Cl. 152—8.)



In combination with a vehicle wheel, a supplemental rim having in its periphery spaced transverse dovetail grooves, double leaved resilient members comprising complementary bases adapted to fit snugly in said grooves, said leaves being of arcuate form and extending in one direction and tapering toward their extremities, and complemental wedges fitting in said grooves over the bases of said members whereby to lock said members to the supplemental rim.

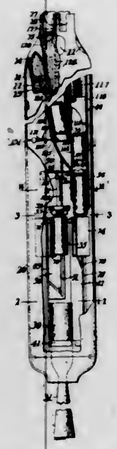
1,103,503. ROCKET APPARATUS. ROBERT H. GODDARD, Worcester, Mass. Filed May 15, 1914. Serial No. 838,707. (Cl. 102—23.)

1. A rocket apparatus having, in combination, a combustion chamber, a casing containing a supply of combustible material, and means for successively feeding portions of said material to said combustion chamber.

2. A rocket apparatus having, in combination, a combustion chamber, a rearwardly extending tapered tube of substantial length connected with said chamber, a casing surrounding said chamber, a receptacle in said casing containing a supply of combustible material, and means for feeding said material to said chamber, said material being ignited within said chamber and the products of combustion being discharged through the tapered tube.

3. A rocket apparatus having, in combination, a combustion chamber, means for supplying a charge of com-

bustible material thereto, and means for renewing the charge of combustible material within the combustion chamber.



4. A rocket apparatus having, in combination, a casing containing a plurality of cartridges, a combustion chamber, means for introducing said cartridges successively into said chamber, and means for firing each cartridge after it is placed in the combustion chamber.

5. A rocket apparatus having, in combination, a casing, a plurality of cartridges contained therein, a combustion chamber having a breech block, means for removing the breech block from said chamber, and means operable while said block is removed for introducing a fresh cartridge into said chamber.

[Claims 6 to 20 not printed in the Gazette.]

1,103,504. SOCKET-CAP. JOHN H. GOSS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 29, 1913. Serial No. 770,733. (Cl. 173—362.)

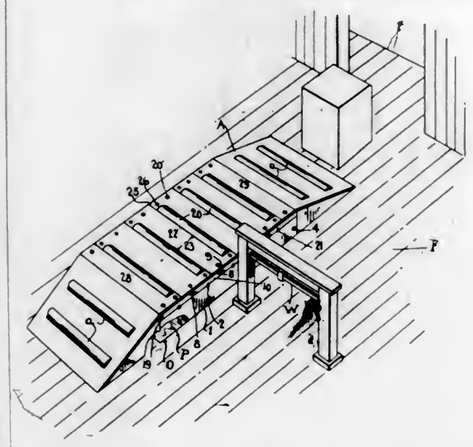


1. A socket cap, comprising a shell having a hub-hole, an inwardly projecting flange encircling such hole, and a recess surrounding the flange, a washer arranged in said recess and embracing the flange, and a hub having a flange fitted in said hub-hole, the hub flange and the shell flange conjointly rolled over against the washer in a smooth, rounded and whole condition, thereby uniting the shell and hub so as to effectively resist longitudinal and torsional strains.

2. A socket cap, comprising a shell having a hub-hole, an inwardly projecting flange encircling such hole, and a recess surrounding the flange, a washer located in said recess and in close contact with the flange, and a hub having a knurled flange closely fitting the hub-hole and in intimate contact with the shell-flange, the flanges of the shell and the hub being turned over together and over upon the washer thereby avoiding breaking or staking the metal of the flanges.

1,103,505. ROLLER-PLATFORM FOR SCALES. HERBERT M. GRANT, Visalia, Cal. Filed Dec. 23, 1912. Serial No. 738,296. (Cl. 193—1.)

1. A platform having parallel metallic wear plates constituting its surface and spaced from each other, blocks on the side sills of said platform supporting said plates and having bearings, fastening devices through said plates and blocks, and rollers whose bodies rise through the spaces between said plates and whose trunnions are journaled in said bearings.



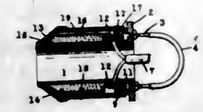
2. The herein described platform comprising a base consisting of end members and side sills having notches in their upper edges; combined with a series of units whereof each consists of a pair of blocks having notches in their lower edges adapted to coact with the notches in said side sills to produce bearings and also having tongues projecting from the upper portion of one end and the lower portion of the other end, a roller whose trunnions are journaled in the bearings thus produced, and a fastening device passing downward through the interengaging tongues of two of said blocks, the endmost units having blocks whose outer extremities are cut off square to overlie the end members of the base.

3. The herein described platform comprising side sills having opposite bearings, rollers whose bodies project slightly above said sills and whose trunnions are journaled in said bearings, and a flooring consisting of metallic strips whose bodies stand between the rollers and whose ends have laterally projecting tongues extending past the ends of the rollers and secured upon the sills over the bearings in the latter.

4. The herein described platform comprising side sills having opposite bearings, rollers whose bodies project slightly above said sills and whose trunnions are journaled in said bearings, and a flooring made up of a number of metallic plates whereof each is of a length to reach from one sill to the other and of a width to fill the space between the projecting portions of two rollers, and each plate has at its ends oppositely projecting lateral tongues overlying the sills and secured thereto and reaching to the plates next adjacent.

5. The herein described platform comprising a base; combined with a series of units whereof each consists of a pair of blocks having bearings and also having tongues projecting from the upper portion of one end and the lower portion of the other end, a roller whose trunnions are journaled in the bearings, a wear plate of a length to reach from one block to the opposite block and of a width to stand between two contiguous rollers, a laterally projecting tongue at each end of each plate overlying the block beneath it and extending past the end of the roller, and a fastening device passing downward through each end of each plate and through the inter-engaging tongues of two of said blocks, the endmost units having blocks whose outer extremities are cut off square to overlie the ends of the base.

1,103,506. HAIR-STEAMING DEVICE. THOMAS GROSERT and ERNEST UNGER, New York, N. Y.; said Grosert assignor to said Unger. Filed Jan. 3, 1914. Serial No. 810,136. (Cl. 219—21.)



1. A device of the class described, comprising an open ended tubular member of relatively high heat conductivity having a cylindrical bore adapted to contain a portion of a coil of hair intermediate its end and permit other portions to extend beyond opposite ends thereof, an outer tubular member having a conical nose affixed thereto at one end and a heating means disposed between said members and filling the space adjacent the connection between the inner and outer tubular members whereby a high degree of heat may be concentrated at one end of the device to heat the portion of the coiled hair adjacent the head.

2. A device of the class described compising an open ended inner tube of substantially uniform bore, an outwardly extending rear plate affixed thereto whereby said device may be supported in substantially horizontal position, an insulating ring surrounding said tube and disposed adjacent said plate, an outer tube having a rear end telescoping said ring abutting said plate and having a relatively blunt frusto-conical front end engaging said inner tube, heating means disposed between said tubes and within the frusto-conical end and an electric conductor leading through said rear plate to said heating means.

3. A hair waving device adapted to be placed on a person's head comprising a member including two telescoped metallic tubes fastened together at one end to form a closed space adapted to contain a coil of the person's hair, an electric heating coil carried by said member between the metal tubes and adjacent the closed end, an outwardly extending plate affixed to said member at the opposite end, a handle carried by said plate, means carried by the plate for directing an electric conductor to said heating coil, said plate including a projecting lug having a holding aperture therein whereby said device may be supported in position adjacent a person's head.

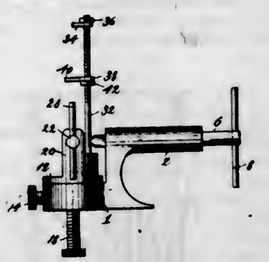
4. A device of the class described, comprising an open ended tubular member of relatively high heat conductivity and adapted to surround a portion of a coil of hair adjacent the person's head and permit other portions to extend beyond opposite ends thereof, a heating means surrounding said tubular member, a sheet of insulating material disposed between the heating means and said tubular member, and means for supporting said device in position.

5. In a device of the class described, a heating means adapted to surround a strand of hair adjacent the person's head, the end adapted to be disposed adjacent the head including a metallic heating ring, an inclosed heating device disposed on the side of the ring opposite the side adapted to be positioned adjacent the person's head, the portion of said heating device adjacent the ring being of frusto-conical form with the smaller end disposed close to the ring to maintain the same in heated condition.

[Claims 6 to 8 not printed in the Gazette.]

1,103,507. TOOL FOR BORING PIANO-ACTION PARTS. FRANK W. HALE, Somerville, Mass., assignor to Tuners Supply Company, Somerville, Mass., a Corporation of Massachusetts. Filed May 10, 1910. Serial No. 560,416. (Cl. 144—93.)

1. In a device of the class described, the combination of a base, a work holder mounted to rotate centrally of said base about a vertical axis, a drill holder on said base having a drill movable horizontally and radially with respect to the axis of rotation of said work holder, and a pair of standards on said work holder on opposite sides of said vertical axis, each carrying a clamping screw provided with a swiveled head.



2. In a device of the class described, the combination of a base, a work-holder mounted to rotate on said base, a face plate on the work-holder parallel to the axis of the latter, a drill-holder on said base having a drill movable radially with respect to the axis of rotation of the work-holder, said drill being rotatable relatively to said work-holder in a plane perpendicular to the plane of said face plate, and a pair of clamping screws on said work-holder on opposite sides of the axis.

3. In a device of the class described, the combination of a base, a flanged work holder rotatably mounted in said base and having a cavity formed therein for receiving the heel of a piano hammer, an adjusting screw projecting through the bottom of said cavity, standards on said base, a pair of clamping screws carried by said standards and provided with swiveled jaws, and a drill holder integral with said base and having a bore extending radially and perpendicularly with respect to the axis of rotation of said work holder.

4. In a device of the class described, the combination of a base, a carriage mounted to swivel thereon, a drill-holder on the base provided with a longitudinal groove on its exterior, a gage having a body portion shaped to fit said groove and a positively fed drill in said drill holder.

5. In a device of the class described, the combination of a base, a carriage mounted to swivel thereon, a drill-holder on the base provided with a longitudinal groove on its exterior, a gage having a body portion shaped to fit said groove, a drill mounted to rotate in said drill-holder, a rod, and an adjustable arm on the rod for determining the distance of the striking face of a hammer head from the center of the drill.

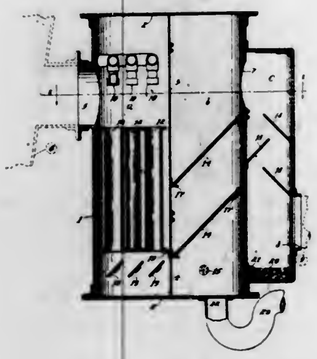
[Claims 6 to 11 not printed in the Gazette.]

1,103,508. SCARF-HOLDING COLLAR ATTACHMENT. THOMAS SCOT HAMILTON, King City, Cal.; W. J. Hamilton and Geo. W. Hamilton executors of said Thomas S. Hamilton, deceased. Filed May 31, 1912. Serial No. 700,608. (Cl. 2—71.)



The combination of a collar attachment and scarf holder comprising a plate of semi-rigid material bent upon itself at a point substantially adjacent one end to form two upstanding flaps of different lengths, the longer of said flaps adapted to fit within the collar extending upwardly a short distance, and then outwardly and upwardly away from the other flap to form a tie receiving portion, and the shorter of said flaps being curved outwardly to receive the band of the shirt, said plate being provided on either side of said first mentioned bend with a series of openings for the reception of fastening material.

1,103,509. APPARATUS FOR SCRUBBING AND COOLING GASES FOR USE IN FUMIGATING AND FIRE-EXTINGUISHING AND LIKE PURPOSES. GEORGE HARKER, Petersham, near Sydney, New South Wales, Australia, assignor to The Harker Fire Extinguisher & Fumigator Company Limited, Sydney, Australia. Filed Mar. 28, 1913. Serial No. 757,288. (Cl. 110—183.)



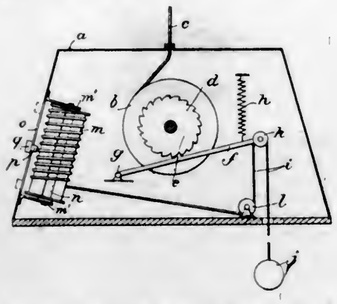
1. In an apparatus of the type described, the combination, with a source of waste combustion gases, of a group of tubes through which said gases pass, spray jet disposed opposite each of said tubes whereby an inspirating effect upon said gases is produced and said gases are thoroughly cooled and washed by water spray, a second chamber, gauze screening devices in said second chamber, and means for finally cooling the gases and extracting entrained water therefrom.

2. In apparatus of the type set forth, the combination, with a vertically elongated chamber, of a group of elongated vertical tubes supported in said chamber, and spaced from both ends thereof, a plurality of downwardly directed water spray nozzles mounted above said tubes and in substantial alinement therewith, a plurality of baffle plates supported opposite the ends of the tubes farthest from said nozzle, means for connecting the end of said chamber nearest to said spray nozzles to a source of waste combustion gases, and means for condensing and separating entrained water and other materials from the gases after their passage by said baffle plates.

3. In apparatus of the type set forth, the combination, with a chamber, of a group of elongated tubes supported in said chamber and spaced from both ends thereof, a plurality of water spray nozzles mounted in alinement with said tubes, a plurality of baffle plates supported opposite the ends of the tubes farthest from said nozzles, means for connecting the end of said chamber nearest to said spray nozzles to a source of waste combustion gases, a chamber communicating with said first chamber and adapted to receive the gases after their passage by said baffle plates, and inclined overlapping metallic baffle plates in said last mentioned chamber and defining a tortuous passageway whereby the gases will be brought closely in contact with cool metal surfaces, portions of said plates adjacent to their free edges being upwardly turned to form troughs and the ends of said plates being formed to discharge liquid collected thereby.

4. Mechanism for purifying waste combustion gases for use in disinfecting ships, buildings, or other inclosed spaces, or in extinguishing fires, comprising, in combination, a group of tubes communicating with a source of waste combustion gases, a plurality of spray nozzles adapted and arranged to discharge into said tubes whereby said gases may be cooled and washed, a chamber with which said tubes communicate, gauze screens within said chamber, a second chamber communicating with said first chamber, and inclined baffle plates in said last mentioned chamber whereby entrained water is removed.

1,103,510. MOORING APPARATUS FOR SUBMARINE MINES. FRÉDÉRIC AUGUSTE HENRI HARLÉ, Paris, France, assignor to Harlé & Co., Paris, France, a Corporation of France. Filed Sept. 5, 1913. Serial No. 788,314. (Cl. 102—3.)



1. In mooring apparatus for submarine mines, a support for the anchoring mechanism, a mooring drum for winding or unwinding the mooring rope arranged on the support and means for locking said drum, in combination with a second drum arranged on said support, a lead and a lead-line arranged to release the said locking means, the lead-line being wound on said drum, stopping means for said second drum arranged to be held out of operative position by said lead-line and means for urging it into stopping position when not bearing on the lead-line.

2. In mooring apparatus for submarine mines, a support for the anchoring mechanism, a mooring drum for winding and unwinding the mooring rope arranged on the support and a locking lever for said drum fulcrumed on the support, and provided with a lead-line guide at its free portion, in combination with a second drum mounted on the same support, a lead and a lead-line wound on said second drum and passing over the guide on the locking lever and means for stopping said second drum when a predetermined length of lead-line has been unwound therefrom.

3. In mooring apparatus for submarine mines, a support for the anchoring mechanism, a mooring drum for winding and unwinding the mooring rope arranged on the support and a locking lever for said drum fulcrumed on the support, and provided with a lead-line guide at its free portion, in combination with a second drum mounted on the same support, a lead and a lead-line wound on said second drum and passing over the guide on the locking lever, stopping means for said second drum arranged to be held out of operative position by said lead-line and means for urging it into stopping position when not bearing on the lead-line.

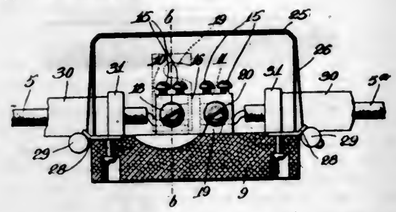
4. In mooring apparatus for submarine mines of the class described, the combination of a drum provided with a longitudinal groove, a lead-line wound on said drum, and stop mechanism adapted to be adjusted and to engage with said groove when the line has run out to the predetermined extent.

5. In mooring apparatus for submarine mines, a drum provided with a longitudinal stop and a lead-line wound on said drum, in combination with a locking pin yieldingly urged against the drum and arranged to bear on the lead-line and to engage the longitudinal stop when clear of the lead-line.

[Claim 6 not printed in the Gazette.]

1,103,511. SWITCH. WILLIAM S. HARLOW, Swampscott, Mass. Filed Apr. 29, 1909. Serial No. 492,959. (Cl. 247—12.)

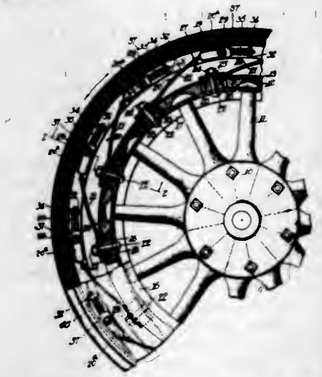
1. In an entering switch, the combination with a base of insulating material provided with two recesses in its upper face, of two terminals sustained by the base, means to electrically connect said terminals, a cover inclosing said terminals and provided with openings opposite the terminals, sealed means connecting the cover to the base, and insulating tubes for the line wire extending through the openings in the cover and provided with flanges which occupy the recesses in the base.



2. In an entering switch, the combination with a base of insulating material provided with two recesses in its upper face, of two terminals sustained by the base, means to connect said terminals electrically, a cover inclosing said terminals and provided on opposite sides with extensions to embrace the base, ears extending from the opposite ends of the base and projecting beyond the casing, a sealing wire extending through said ears and inclosing the cover, and insulating tubes for the line wires extending through openings in the ends of the cover and provided with flanges which occupy the recesses in the base.

3. In an entering switch, the combination with a base, of two terminals sustained thereby, a cover inclosing said terminals and provided with extensions on opposite sides which embrace the sides of the base, ears extending from the ends of the base, and a sealing wire extending through said ears and inclosing the cover.

1,103,512. ELASTIC WHEEL. LESLIE HARRINGTON, Chicago, Ill., assignor, by mesne assignments, to Edward G. Hoffman, Lulu H. Moore, and Homer P. Moses, Fort Wayne, Ind. Filed Apr. 28, 1911. Serial No. 623,883. (Cl. 152—37.)



1. In a wheel, the combination with a rim, of a tire movably mounted in relation to the rim, a plurality of flat springs interposed tangentially between said tire and rim, said flat springs being fixed at one end to the rim and movably secured to the tire at the other end and being provided at their ends adjacent the tire with loops, anti-friction rollers within said loops and fixed in relation to the tire, a fixed stop on the tire, coiled springs engaging said fixed stops at one end, and a block of fibrous material interposed between the forward extremities of the loops on said flat springs and the said coiled springs, there being lugs formed integrally on said fibrous block for engaging the hollow ends of said coiled springs.

2. In a wheel, the combination with a rim, of a tire movably mounted in relation to the rim, said tire comprising a metallic member channeled on its inner circumferential portion and being provided with a suitable tread on its outer circumference, a plurality of flat springs each secured at one end to the rim of the wheel, each spring being of uniform width throughout and of approximately the width of the rim, there being loops formed on the ends of the springs adjacent the tire, anti-friction rollers of fiber journaled within the said spring loops within the channeled inner circumferential portion of the tire and a lining of fibrous material within the channeled portion of the tire at the sides thereof.

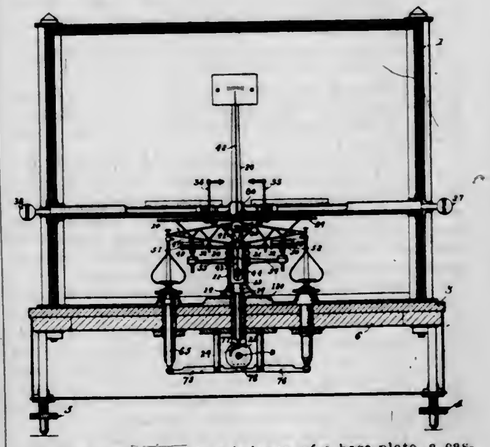
3. In a wheel, the combination with a rim, comprising a circumferential body portion on its inner periphery and a contracted portion including the outer peripheral portion of the rim, a tire movably mounted in relation to the rim, a plurality of flat springs of uniform width throughout and being of the same width as the contracted portion of the rim, and extending tangentially into movable engagement with the tire, and means for securing the said springs to the contracted portion of the rim comprising a U-shaped clamp, the branches of which are separated a distance equal to the width of the contracted portion of the rim and the width of the said flat springs and extend beyond said springs and rim.

4. In a wheel, the combination with a rim provided on its outer periphery with a contracted portion, a tire movably mounted in relation to the rim, a plurality of flat springs secured to the rim and extending tangentially to have movable engagement with the tire, and clamps for securing the said flat springs to the wheel rim, each of said clamps comprising a U-shaped member having parallel extensions adapted to register with a contracted portion of the wheel rim, both said clamps and said rim being provided with registering openings for radial and horizontal securing bolts.

5. A combination with a hub, spokes and felly, said felly provided with a reduced portion, of resilient members extending tangentially from the reduced portion of said felly, U-shaped clamps extending over said resilient members and the reduced portion of the felly aforesaid, means for securing said resilient members and clamps to said felly, a rim encircling said felly, movable connections between the outer terminals of said resilient members and said rim, and springs exerting a pressure directly upon the ends of said movable connections.

[Claims 6 to 9 not printed in the Gazette.]

1,103,513. BALANCE. WILFRID HEUSSER, Salt Lake City, Utah. Filed Oct. 26, 1908. Serial No. 459,499. (Cl. 73—99.)



1. The combination in a balance, of a base plate, a casing and a sub-base, a column provided with a bore and a shoulder adapted to project through said base plate into said sub-base with its shoulder resting against the base plate, said column being provided at its upper end with

bearings, a balance beam provided with an axis, knife edges carried by said axis, a shell concentrically located within the bore of said column and provided with notches adapted to engage with the axis of said beam, and an eccentric for reciprocating said shell within the bore of said column.

2. A hanger lifter comprising in combination, a hollow block provided with a head, said head having a radial slot therein, a shaft provided with a head, and a bent arm secured to said shaft and extending outwardly through said radial slot and provided at its upper end with two pins, said hollow block being provided with a screw to prevent said shaft from falling out during transportation.

3. The combination with the balance beam and its bearings, said balance beam being provided at each end with two knife-shaped agates, of hanger lifters provided with two pins and hanger plates with pans suspended therefrom, each of said hanger plates being provided with two agates adapted to rest upon the two knife-shaped agates at an end of the beam, each of said hanger plates also being provided with two depressions adapted to receive the two pins of one of said hanger lifters.

1,103,514. DEVICE FOR MAKING SMOKE RINGS. ROBERT F. R. HUNTSMAN, Plainfield, N. J. Filed Jan. 10, 1913. Serial No. 741,364. (Cl. 46—40.)



1. A device of the class described, comprising an open end cover, having an opening in the front thereof and a container slidable in said cover, the front of the container also having an opening normally out of register with the opening in the front of the cover.

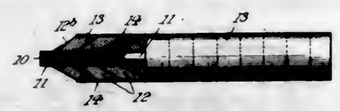
2. A device of the class described, comprising an open-end cover, having an opening in the front thereof, a container slidable in said cover, the front of said container provided with an opening to register with the opening in the cover, and removable means for closing one of said openings.

3. A device of the class described comprising an open end cover having a representation of a face on the front thereof, the mouth of said face being represented as open, an opening in the front of the cover registering with the mouth of the face, and a container slidably mounted in said cover, the front of said container provided with an opening to register with the opening in the cover.

4. A device of the class described comprising an open end cover having a representation of a face on the front thereof, the mouth of said face being represented as open, an opening in the front of the cover registering with the mouth of the face, a container slidably mounted in said cover, the front of said container provided with an opening to register with the opening in the cover, and removable means for covering one of said openings.

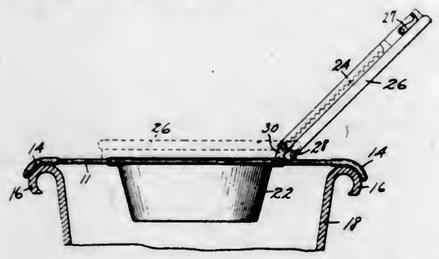
5. A device of the class described comprising a closed box having a representation of a face on the front thereof, the mouth of the face being represented as open, an opening in the front of the cover of the box registering with the mouth of the face, and removable means for covering said opening.

1,103,515. TOOTH-BRUSH. SYLVESTER B. HUSCH and GEORGE S. HUSCH, New York, N. Y. Filed Apr. 5, 1913. Serial No. 759,014. (Cl. 15—39.)



A tooth brush comprising a bundle of bristles, a breakable tubular wrapper inclosing the bundle of a plurality of caps mounted thereon, each cap being composed of a coniform front section and of a cylindrical rear section, the coniform front section of any one cap being encompassed by the cylindrical rear section of the adjoining cap, and breakable means for connecting the caps.

1,103,516. COMBINATION WASHING APPLIANCE AND BATH-SEAT. HARRY O. JOY and ARTHUR R. MONTFERRAND, Boston, Mass. Filed Nov. 21, 1913. Serial No. 802,293. (Cl. 4—2.)



1. A combination washing appliance and bath seat, comprising a frame adapted to be supported upon a bath tub, a pan supported by said frame, a cover hinged to said frame, and a wash-board on said cover.

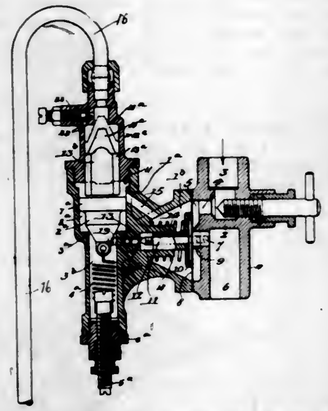
2. A combination washing appliance and bath seat, comprising a pair of rods having their ends bent and arranged to engage the roll at the upper edge of a bath tub, a pair of short rods connecting said first-mentioned rods, a receptacle removably supported by said rods, a cover hinged to one of said short rods, and a wash board mounted on the under side of said cover.

3. A combination washing appliance and bath seat, comprising a frame having a pair of elongated members arranged to engage the upper edge of a bath tub, a pan removably supported by said frame, a cover, a pair of plates pivotally connected to said cover and to said frame and adapted to be engaged by said cover intermediate their length to support said cover in an inclined position, and a wash-board on said cover.

4. A combination washing appliance and bath seat, comprising a frame arranged to engage the upper edge of a bath tub, a receptacle removably supported by said frame, a cover hinged to said frame, and a wash-board carried on the under side of said frame, said cover forming a seat when folded down on said frame but arranged to be supported in an inclined position to enable said wash-board to be used with said receptacle.

1,103,517. DEVICE FOR LIGHTING AND EXTINGUISHING GAS-LAMPS. JAMES KEITH and GEORGE KEITH, London, England. Filed Feb. 16, 1914. Serial No. 818,955. (Cl. 67—18.)

1. Means for automatically lighting and extinguishing gas lights, said means comprising a valve body through which the supply of gas passes, said valve body provided with a seat, a diaphragm adapted to engage said seat and to cut off passage of gas through said valve body, means tending to press said diaphragm against said seat, a chamber at the side of said diaphragm remote from said seat, said chamber formed with a by-pass conduit connecting the inlet end of said valve body with said chamber, a pilot tube communicating with said chamber, a second chamber communicating with said pilot tube, a loaded piston movable in said second mentioned chamber, the part of said second mentioned chamber beneath said piston being in communication with the inlet end of said supply valve body, and a valve float adapted to be actuated by said piston to obstruct communication between said first mentioned chamber and said pilot tube.

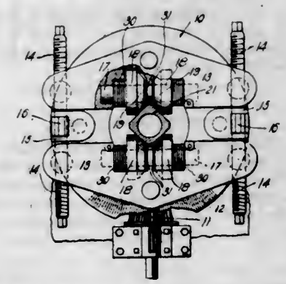


2. Means for automatically lighting and extinguishing gas lights, said means comprising a valve body through which the supply of gas passes, said valve body provided with a seat, a diaphragm adapted to engage said seat and to cut off passage of gas through said valve body, means tending to press said diaphragm against said seat, a chamber at the side of said diaphragm remote from said seat, said chamber formed with a by-pass conduit connecting the inlet end of said valve body with said chamber, a pilot tube communicating with said chamber, a second chamber communicating with said pilot tube, a loaded piston movable in said second mentioned chamber, a valve element connected with said piston, the part of said second mentioned chamber beneath said valve element being in communication with the inlet end of said supply valve body, and a valve float adapted to be actuated by said piston to obstruct communication between said first mentioned chamber and said pilot tube.

3. Means for automatically lighting and extinguishing gas lights, said means comprising a valve body through which the supply of gas passes, said valve body provided with a seat, a diaphragm adapted to engage said seat and to cut off passage of gas through said valve body, means tending to press said diaphragm against said seat, a chamber at the side of said diaphragm remote from said seat, said chamber formed with a by-pass conduit connecting the inlet end of said valve body with said chamber, a valve member adapted to obstruct communication between said conduit and said chamber, a pilot tube communicating with said chamber, a second chamber communicating with said pilot tube, a loaded piston movable in said second mentioned chamber, a valve element connected with said piston, the part of said second mentioned chamber beneath said valve element being in communication with the inlet end of said supply valve body, and a valve float adapted to be actuated by said piston to obstruct communication between said first mentioned chamber and said pilot tube.

4. Means for automatically extinguishing gas lights, said means comprising a pilot tube, a casing having a chamber communicating with said pilot tube, said casing being provided with upper and lower valve seats and with a port of admission of gas to said chamber, a loaded piston movable in said chamber and adapted to cover and uncover said port, a valve element connected with and below said piston and adapted to engage said lower valve seat, the part of said chamber beneath said seat having an opening for admission of gas under pressure in excess of the working pressure, and a valve float or float-valve adapted to be lifted by said piston against said upper valve seat to obstruct passage of gas to said pilot tube.

1,103,518. ROTARY DRILLING-RIG. RICHARD E. KLINE, Los Angeles, Cal., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation. Filed Nov. 26, 1912. Serial No. 733,631. (Cl. 255—23.)

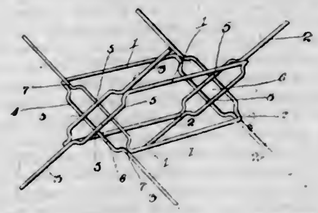


1. In a rotary drilling machine, the combination of a plurality of gripping devices each having a drill-stem engaging surface the elements whereof are adapted to coincide with a portion of a polygonal drill-stem, said gripping devices being adjustable singly and in groups, the elements of the gripping surfaces being at an oblique angle to the directions of adjustment.

2. In a rotary drilling machine, the combination of a plurality of revoluble gripping devices each having a drill-stem engaging surface the elements whereof are adapted to coincide with a portion of a polygonal drill-stem, said revoluble gripping devices being adjustable singly and in groups, the elements of the gripping surfaces being at an oblique angle to the directions of adjustment.

3. In a rotary drilling machine, the combination of a rotary table, a plurality of revoluble gripping devices each having a drill-stem engaging surface the elements whereof are adapted to coincide with a portion of a polygonal drill stem, said revoluble gripping devices arranged in groups which are adjustable to and from each other, the revoluble gripping devices of each group being adjustable to and from each other, and the elements of the gripping surfaces in each group being at an oblique angle to the direction of adjustment of the revoluble gripping devices which constitute said group.

1,103,519. REEL. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, Long Island City, N. Y., a Corporation of New York. Filed Apr. 11, 1911. Serial No. 620,296. (Cl. 242—77.)



1. A metal reel comprising a pair of U-shaped metallic members, the base of each member overlapping the other member whereby their bases form the body of the reel, the arms being in side contact and welded to each other at such points.

2. A metal reel comprising U or trough-shaped members arranged in pairs crossing each other and welded together at the crossing, the bases of said members overlap-

ping each other and in contact with the arms of the other member to form the body of the reel.

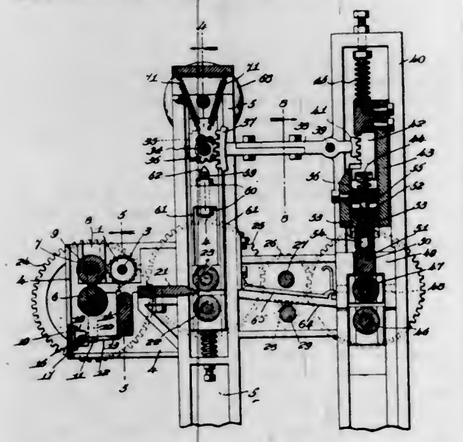
3. A metal reel consisting of pairs of U-shaped pieces of metal crossing each other and welded together at the crossing, the base of each piece of a pair overlapping the other piece whereby their bases form the body of the reel and each piece being side-welded to the other.

4. A metal reel comprising four U or trough-shaped members arranged in pairs, each pair crossing the other and welded together at the crossing, the bases of said members forming the reel body and each member of a pair side-welded to the other.

5. A metal reel comprising four U-shaped members, the bases of said members forming the body of the reel and the legs of one member overlapping those of another member and side-welded to each other.

[Claims 6 to 9 not printed in the Gazette.]

1,103,520. LEATHER-MARKING MACHINE. PAUL J. LAPHAM, Genoa, Ill., assignor to Lacene Manufacturing Company, Manchester, N. H., a Corporation of Maine. Original application filed Oct. 27, 1906, Serial No. 340,889. Divided and this application filed June 12, 1912. Serial No. 703,204. (Cl. 101—186.)



1. In a machine for grading leather shoe-parts, a movable marker having a tendency to oscillate, means for automatically adjusting said marker to the grade of the leather piece, means to hold said marker stationary at the moment of marking, and means for forcibly pressing the leather against the marker while thus held stationary.

2. In a machine of the class described, means for positively holding a leather piece at its opposite ends, a marker for marking the leather piece between said ends, and means coöperating with the holding means for one of the ends for exerting pressure between the leather piece and marker, combined with means for automatically adjusting said marker to the grade of the leather piece.

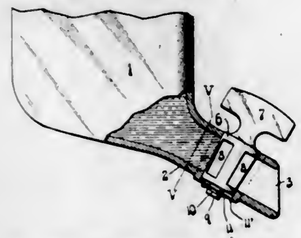
3. In a machine of the class described, means for engaging the opposite sides of a leather piece whose thinnest portion is to be ascertained, coöperating mechanism for cooperating with said engaging means for automatically obtaining the thickness-measurement of said thinnest portion of the leather piece, means for marking said piece in accordance with said measurement, including a marker normally movable but which is stationary at the moment of marking, for engaging the leather piece on one side, means for adjusting said marker to designate the said thickness-measurement, and a pressure-applying device for positively engaging the leather piece on the side opposite to said marker and pressing said piece against the marker.

4. In a machine of the class described, the combination with means controlled by the leather pieces for regulating the thickness-mark with which said pieces are to be marked, and normally movable means for marking in accordance therewith a series of leather pieces at the same unvarying distance from one end, including means for maintaining said marker stationary at the moment of marking.

5. In a machine of the class described, marking mechanism, including a marker which is stationary at the moment of marking, and coöperating mechanism automatically actuated to effect the marking at a predetermined distance from one end thereof, combined with means for obtaining the grade of the leather piece, and means for adjusting said marking mechanism to mark the leather piece in accordance with the grade thus obtained.

[Claims 6 to 19 not printed in the Gazette.]

1,103,521. LIQUID-SOAP DISPENSER. ALBERT W. LAWNIN, St. Louis, Mo., assignor of one-half to Louis W. Lawnin, Edwardsville, Ill. Filed Oct. 3, 1913. Serial No. 793,141. (Cl. 221—106.)



1. A liquid dispenser comprising a reservoir provided with a discharge nozzle at its lower end arranged at an angle to the vertical axis of the reservoir; the said nozzle including a neck adjacent the reservoir having a duct therein elongated vertically throughout the length of the neck, a valve housing adjoining said neck, and a spout adjoining said valve housing having a duct therein elongated vertically throughout the length of the spout; and a pocket valve in said valve housing.

2. A liquid dispenser comprising a reservoir provided with a discharge nozzle at its lower end arranged at an angle to the vertical axis of the reservoir; the said nozzle including a neck adjacent the reservoir having a duct therein elongated vertically throughout the length of the neck, a valve housing adjoining said neck, a spout adjoining said valve housing having a duct therein elongated vertically throughout the length of the spout; and a dispensing valve in said valve housing having a vertically elongated pocket for registration with the vertically elongated duct in said neck and spout.

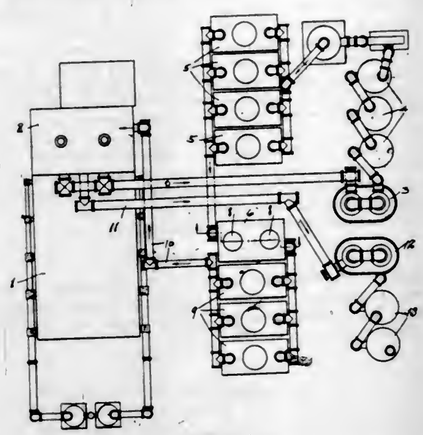
1,103,522. METHOD OF MANUFACTURING SULFURIC ACID. IENS PAULI LIHME, Lakewood, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 12, 1913. Serial No. 773,233. (Cl. 23—1.)

1. In a method of manufacturing sulfuric anhydrid and acid, the step which consists in passing the burner gases, at a temperature not to exceed 100° centigrade, in contact with a metallic oxid capable of absorbing hydrogen compounds of arsenic and the like, substantially as described.

2. In a method of manufacturing sulfuric anhydrid and acid, the step which consists in passing the burner gases, at a temperature between 70° and 90° centigrade, in contact with a metallic oxid capable of absorbing arseniureted hydrogen, substantially as described.

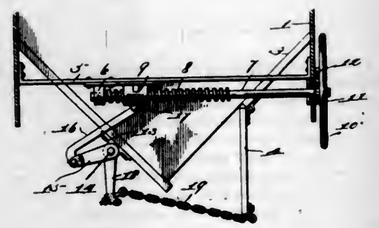
3. In a method of manufacturing sulfuric anhydrid and acid, the step which consists in passing the burner gases, at a temperature between 70° and 90° centigrade, in contact with iron oxid.

4. In a method of manufacturing sulfuric anhydrid and acid, the steps which consist in filtering the sulfurous burner gases at a temperature not exceeding 100° centigrade; passing such gases in contact with a metallic oxid capable of absorbing hydrogen compounds of arsenic and the like; further filtering such gases; and then subjecting the same to the catalytic action of platinum.



3. In a method of manufacturing sulfuric anhydrid and acid, the steps which consist in filtering the sulfurous burner gases; passing such gases, at a temperature between 70° and 90° centigrade, in contact with a metallic oxid capable of absorbing arseniureted hydrogen; further filtering such gases; and then subjecting the same to the catalytic action of platinum.

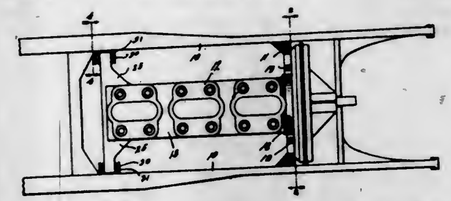
1,103,523. HOPPER-DOOR-OPERATING DEVICE. ALTON L. LOGAN, Edwardsville, Ill. Filed Oct. 16, 1913. Serial No. 795,404. (Cl. 105—185.)



1. The combination with a hopper having a swinging side section, of a transversely arranged operating shaft having a screw portion, a thread block working upon said screw portion, a second shaft at right angles to the first mentioned shaft, an arm fixed upon the second mentioned shaft, a link pivotally connecting said arm with said block, and chains operatively connected respectively to the swinging hopper section and to said second mentioned shaft.

2. A device of the kind described comprising a swinging door section, a shaft parallel thereto, arms fixed upon said shaft, chains connecting said arms to said door, a second shaft arranged at right angles to the first mentioned shaft, said second shaft having a screw portion, a threaded block adapted to travel along said portion, means for operating the shaft, an arm fixed upon the first mentioned shaft at an angle to the first mentioned arms, and means pivotally connecting said arm with said block, as and for the purpose set forth.

1,103,524. POWER-TRAIN MOUNTING FOR AUTOMOBILES. HOWARD C. MARMON, Indianapolis, Ind., assignor to Nordyke & Marmon Company, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 7, 1913. Serial No. 752,602. (Cl. 21—90.)



1. In combination, an automobile chassis, an engine, said engine having at one end an annular member offset vertically upward from the axis of the engine crank shaft, and said chassis having a cross bar having in its upper surface a bed in which said annular member fits, a clamp for holding said annular member in said bed, and a ring of resilient material interposed between said annular member and said bed and clamp.

2. In combination, an automobile chassis, an engine, said engine having at one end an annular member, and said chassis having a cross bar having in its upper surface a bed in which said annular member fits, a clamp for holding said annular member in said bed and also fitting said annular member, and a ring of resilient material interposed between said annular member and said bed and clamp.

3. In combination, an automobile chassis, an engine, said engine having at one end an annular member offset vertically from the axis of the engine crank shaft, and said chassis having a cross bar having in its upper surface a bed in which said annular member fits, a clamp for holding said annular member in said bed, and a ring of resilient material interposed between said annular member and said bed and clamp.

4. In combination, an automobile chassis, an engine having at one end a pair of oppositely laterally projecting arms, stirrups supported by the chassis and extending inwardly and downwardly therefrom, said arms resting in said stirrups, and being provided with horizontal holes extending through them, pins supported by said stirrups and extending through said holes, and bushings of resilient material spacing said pins from said arms.

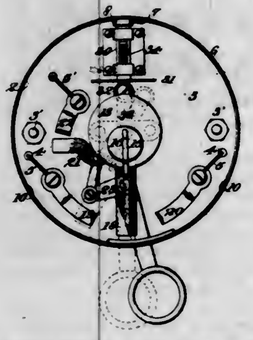
5. In combination, an automobile chassis having a cross bar provided in its upper surface with a bed, an engine provided at one end with a member which fits in said bed, a clamping member also fitting said member and holding it in place in said bed, a ring of resilient material spacing said member from said bed and said clamping member, said engine being provided at the other end with a pair of arms projecting laterally and oppositely therefrom, stirrups supported by said chassis and forming rests for said arms, and resilient material between said stirrups and said arms.

[Claim 6 not printed in the Gazette.]

1,103,525. ELECTRIC SWITCH AND LOCK-BOX THEREFOR. DANIEL S. MCKENNA, San Francisco, Cal. Filed Sept. 8, 1913. Serial No. 788,600. (Cl. 175—282.)

1. In an electric switch, a box having a channel, and a lateral aperture communicating therewith, a removable cap having a stop shoulder receivable in the channel and movable into said lateral aperture upon turning of the cap, a spring pressed bolt borne by the box to extend over said aperture to prevent movement of the stop shoulder out of said aperture, a shoe on the bolt, a pivoted switch arm, a roller on the switch arm to engage beneath the shoe to move the bolt to locking position, and key operated means for moving said switch arm to throw said bolt to locking position.

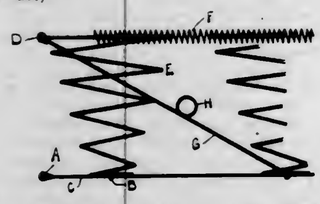
2. In an electric switch, a box having a socket, a removable cap having a part receivable in said socket, a spring pressed bolt borne by the box adapted to engage said part to hold same against movement out of the socket, a shoe on the bolt, a pivoted switch arm engaged with the shoe to move the bolt into and out of locking position, and key operated means to move said switch arm to throw the bolt to locking position.



3. In an electric switch, a box, a removable cap on the box, a slidable bolt for locking said cap on the box, a switch arm, means in connection with said arm to engage the bolt for moving the bolt to locking position during the movement of the switch arm to neutral position, and key operated means to actuate the arm.

4. In an electric switch, a box, a removable cap on the box, means to lock the cap on the cover, a switch arm which actuates said locking means, key operated means for operating the switch arm, and means whereby the key of the key operated means is withdrawable only when the switch arm is in neutral position, and the locking means has been moved to locked position by the switch arm.

1,103,526. SPRING BED-BOTTOM. GEORGE A. MELLON, St. Louis, Mo. Filed Dec. 29, 1913. Serial No. 809,217. (Cl. 5—29.)



1. A spring structure of the character described comprising a base framework, coil springs supported by said framework, a top border wire to which the marginal springs are connected, and braces between said top border wire and said base framework; said braces and the members of the base framework engaged thereby being crimped for interlocking engagement with each other, and being held by said springs.

2. A spring structure of the character described comprising a base framework, coil springs supported by said base framework, a top border wire to which the marginal springs are connected, and braces between said top border wire and said base framework, each of said braces being provided with a crimped portion which interlocks with said base framework.

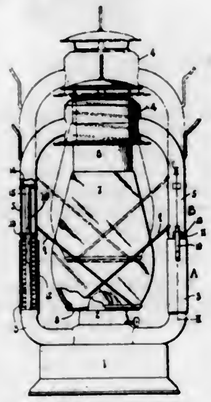
3. A spring structure of the character described comprising a base framework, coil springs supported by said base framework, a top border wire to which the marginal springs are connected, and braces between said top border wire and said base framework, each of said braces being provided with a crimped portion which interlocks with the lower portion of one of said coil springs.

4. A spring structure of the character described comprising straight rows of main springs, the springs in each row being separated from and located directly opposite to the springs in the adjacent rows, and helical springs arranged parallel with said rows of main springs and interposed directly between said separated springs, each of said main springs being provided with a hinge member whereby it is hinged to one of said helical springs.

5. A spring structure of the character described comprising straight rows of main springs, the springs in each row being separated from and located directly opposite to the springs in the adjacent rows, and helical springs arranged parallel with said rows of main springs and interposed directly between said separated springs, each of said main springs being crimped to provide a straight wire member which is surrounded by one of the helical springs so as to produce hinge-like connections between said main springs and said helical springs.

[Claim 6 not printed in the Gazette.]

1,103,527. LANTERN. CHARLES E. MOCKBEE, Rolla, Mo., assignor of one-half to Robert P. Shipley, University, Mo. Filed Feb. 28, 1914. Serial No. 821,636. (Cl. 240—32.)

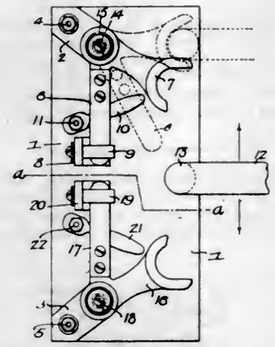


1. A lantern comprising a lower section including a burner and upstanding tubes, an upper section including a globe holder and depending tubes telescoped with said upstanding tubes, a latch for holding said parts in their normal positions, posts arranged within said tubes and secured to one of said sections, the other section being provided with an abutment extending inwardly from one of its tubes and adapted to engage one of said posts to limit the relative movement of said sections, and springs surrounding said posts tending to move said sections away from each other.

2. A lantern comprising a lower section including a burner and upstanding tubes, an upper section including a globe holder and depending tubes telescoped with said upstanding tubes, a latch for holding said parts in their normal positions, posts arranged within said telescoping tubes and secured to one of said sections, one of said posts being provided with an abutment extending from one of its ends to serve as a stop for limiting the relative movement of said sections, and springs surrounding said posts tending to move said sections away from each other.

3. A lantern comprising a lower section including a burner and upstanding tubes, an upper section including a globe holder and depending tubes telescoped with said upstanding tubes, posts arranged within said tubes and secured to the lower section, each of said posts being provided with an abutment flange at its upper end located above the plane of the upstanding tubes and constituting a guide for the telescoping tubes, abutments secured to and extending inwardly from the depending tubes adapted to engage the abutment flanges on said posts, and springs surrounding the lower portions of said posts, seated on the lower section and engaging the abutments on said depending tubes.

1,103,528. CURRENT-CONTROLLING APPARATUS. WILLIS S. MORSE, Philadelphia, Pa. Filed Oct. 26, 1912. Serial No. 727,955. (Cl. 172—179.)



1. The combination with an electric motor of a governing device therefor consisting of a member movable by said motor; with two reversing switches electrically connected in circuit with the motor and mounted to be respectively actuated at irregular intervals by said movable member adjacent the two ends of its path of movement.

2. The combination with an electric motor of a governing device therefor consisting of a member movable by said motor; two reversing switches connected to the motor and mounted to be respectively actuated by said movable member adjacent the two ends of its path of movement; with a third reversing switch for the motor operatively independent of said first two switches.

3. The combination with an electric motor of a governing device therefor consisting of a member movable by said motor in a substantially predetermined path; with two switches in circuit with said motor and respectively placed to be acted on by said movable member adjacent the ends of its path of movement, to first break the motor actuating circuit and thereafter cause the reversal of the direction of rotation of said motor.

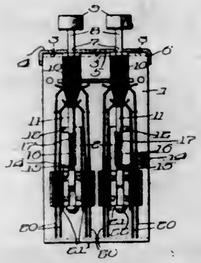
4. The combination with an electric motor of a governing device therefor consisting of a member movable by said motor in a substantially predetermined path; with two switches in circuit with said motor respectively placed to be acted on by said movable member adjacent the ends of its path of movement to break the motor actuating circuit, each of said switches including means for completing the motor circuit by continued movement of its movable element after said circuit has been opened.

5. The combination of a supporting structure; a switch blade pivotally mounted thereon; a forked arm connected to said blade; two contacts mounted to be engaged by said blade; an electric motor connected to the switch formed by said blade and contacts; with a member actuated by the motor and mounted to engage the forked arm to move the blade from engagement with one contact into engagement with the other contact and finally out of engagement with the latter.

[Claims 6 to 11 not printed in the Gazette.]

1,103,529. ELECTRIC SWITCH. CHARLES CLIFFORD NEWBURN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1911. Serial No. 652,370. (Cl. 179—177.)

1. A switch key including a plunger having a shank provided with a reduced end portion which is chamfered or cone shaped at its free extremity and a plunger restoring coiled spring surrounding the reduced end portion throughout the length of such reduced end portion and engaging the shoulder afforded by the contiguous portion of the plunger shank, the chamfered end of the plunger being initially received within the coiled spring and facilitating the insertion of the plunger within the spring bore.



2. A switch key including a plunger; a restoring coiled spring against the force of which the plunger is to be operated, said plunger having a shoulder for engaging the spring; and two ledges having open space between and between which ledges the spring is interposed and may there readily be accessible and which serve to hold the spring in position when the plunger is removed so that the plunger may readily be reëngaged with the spring, one of these ledges being recessed to receive the adjacent end of the coiled spring to position it when the plunger is removed.

3. A switch structure including a mounting block for a circuit controlling element and a mounting plate for the mounting block, said mounting plate having a slot while said mounting block has an extension entering said slot for the purpose of holding the mounting plate and blocks together; and a block complemental to the aforesaid mounting block, said extension uniting said blocks, the mounting plate being received between the blocks.

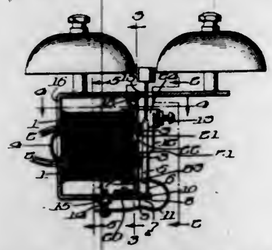
4. A switch structure including a mounting block for a circuit controlling element and a mounting plate for the mounting block, said mounting plate having a slot while said mounting block has an extension entering said slot for the purpose of holding the mounting plate and block together; and a block complemental to the aforesaid mounting block, said extension uniting said blocks, the mounting plate being received between the blocks, the aforesaid extension substantially conforming in dimensions to the dimensions of the slot in said mounting plate.

5. A switch structure including a mounting block for a circuit controlling element and a mounting plate for the mounting block, said mounting plate having a slot while said mounting block has an extension entering said slot for the purpose of holding the mounting plate and block together; a block complemental to the aforesaid mounting block, said extension uniting said blocks, the mounting plate being received between the blocks, the aforesaid extension substantially conforming in dimensions to the dimensions of the slot in said mounting plate; and a holding device secured to the mounting plate and engaging the mounting block structure to hold it in fixed relation to the mounting plate.

1,103,530. ELECTROMAGNET. CHARLES C. NEWBURN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 27, 1911. Serial No. 662,648. (Cl. 175—21.)

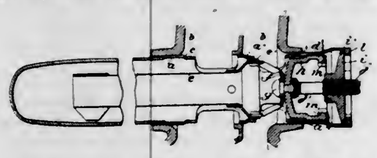
1. An electro-magnetic device including a spool structure whose ends are provided with projections; a frame work portion having three sides, the intermediate one of which is recessed to receive and have sliding relation with the projecting formation at one end of the spool structure; a framework portion constituting a fourth side of the frame work and recessed to receive and have sliding relation with the projecting formation at the other end of the spool structure, there being hook connection between one end of this fourth side and an outer one of the

three sides of the first aforesaid framework portion; and a screw joining the remaining outer side of the three sided framework portion with the remaining end of the fourth side of the framework.



2. An electro-magnetic device including a spool structure whose ends are provided with projections; a framework portion having three sides, the intermediate one of which is recessed to receive and have sliding relation with the projecting formation at one end of the spool structure; a framework portion constituting a fourth side of the framework and recessed to receive and have sliding relation with the projecting formation at the other end of the spool structure, there being hook connection between one end of this fourth side and an outer one of the free sides of the first aforesaid framework portion; and a fastening device joining the remaining outer side of the three sided framework portion with the remaining end of the fourth side of the framework.

1,103,531. TUBE FOR MULTITUBULAR STEAM-GENERATORS. ALBERT NICLAUSSE, Paris, France. Filed Mar. 17, 1913. Serial No. 754,728. (Cl. 122—362.)



1. In a multitubular boiler, a boiler tube, and an inner circulating tube having its outer end fitting against and directly in contact with the inner wall of the boiler tube to form a coned joint.

2. In a multitubular boiler, a boiler tube having an internal coning and an inner circulating tube having its outer end fitting against and directly in contact with said coning to form a coned joint.

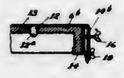
3. In a multitubular boiler, a boiler tube, and an inner circulating tube having its outer end fitting against and directly in contact with the inner wall of the boiler tube to form a coned joint, and a rod supported retaining member fitting against the inner wall of the inner tube opposite the coned joint.

4. In a multitubular boiler, a boiler shell, a boiler tube, and an inner circulating tube having its outer end fitting against and directly in contact with the inner wall of the boiler tube to form a coned joint, a rod supported retaining member fitting against the inner wall of the inner tube opposite the coned joint, a yoke supported on the boiler shell and means for holding said rod supported member thereby.

5. In a multitubular boiler, a boiler shell, a boiler tube extending therethrough and supported thereagainst by a coned joint, an inner circulating tube having its outer end fitting against and directly in contact with the inner wall of the boiler tube to form a coned joint, a rod-supported retaining member fitting against the inner wall of the inner tube opposite the coned joint, and a plug member closing the outer end of the boiler tube by a coned joint and serving to support said retaining member.

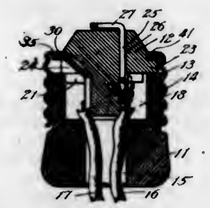
[Claims 6 to 8 not printed in the Gazette.]

1,103,532. FOLDING TABLE. NIELS C. NIELSEN, Cleveland, Ohio. Filed Dec. 19, 1913. Serial No. 807,682. (Cl. 164—78.)



The combination with a table top, of a flexible cutting strip adapted to be placed thereon, means to attach one end of the strip to the table, and a straining and holding device for the strip at the other end thereof, said device having a spring part to which the end of the strip may be attached, and a screw operating on said part to draw the strip taut.

1,103,533. ELECTRIC-SOCKET PLUG. EMIL B. NILSSON, Chicago, Ill., assignor to Chi-Ill-Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 25, 1911. Serial No. 645,939. (Cl. 173—359.)



1. An electric-plug comprising a bushing, a member of insulating material provided with contacts for connection with the terminals of an electric circuit, and a metal shell surrounding said member and in electrical connection with one of said contacts and secured to said bushing and operating to hold said bushing and member in assembled condition.

2. An electric-plug comprising a bushing, a member of insulating material provided with contacts for connection with the terminals of an electric circuit, and a metal shell, in electrical connection with one of said contacts, surrounding said member and screwing upon said bushing and operating to hold said bushing and member in assembled condition.

3. An electric-plug comprising a bushing, a member of insulating material provided with contacts for connection with the terminals of an electric circuit, and a metal shell screwing upon said bushing and against one of said contacts and provided with means for holding said member and bushing in assembled condition.

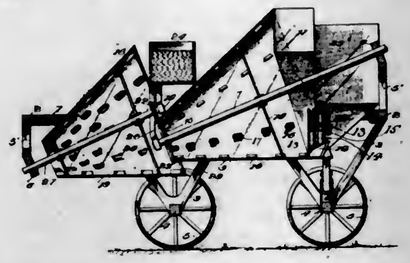
4. An electric-plug comprising a bushing, a member of insulating material provided with contacts for connection with the terminals of an electric circuit interlocking with said bushing, and a metal shell in electrical connection with one of said contacts, surrounding said member and provided with means for holding said member and bushing in assembled condition.

5. An electric-plug comprising a bushing, a member of insulating material interlocking with said bushing and provided with contacts for connection with the terminals of an electric circuit, and a metal shell screwing upon said bushing and against one of said contacts and provided with means for holding said member and bushing in assembled condition.

[Claims 6 to 30 not printed in the Gazette.]

1,103,534. CONCRETE-MIXER. GEORGE F. NYE, Kearney, Nebr. Filed Mar. 17, 1913. Serial No. 754,904. (Cl. 83—73.)

1. A concrete mixer comprising a drum having its lower side substantially horizontal and having an open inclined end, a substantially vertical hopper extending through said end of the drum and having an open bottom in juxtaposition to the lowest point of the inner surface of the drum and having an opening in one side communicating with the open bottom and discharging in the direction of rotation of the drum, and means for rotating the drum.



2. A concrete mixer comprising a drum, a hopper extending into the drum and having an open lower end in juxtaposition to the inner surface of the drum, a deflector extending inwardly over the surface of the drum adjacent the mouth of the hopper and in the path of the material issuing therefrom, and means for rotating the drum.

3. A concrete mixer comprising a drum, a hopper extending through the end of the drum and having its lower end in juxtaposition to the inner surface of the drum at the lowest point of the same and having an outlet discharging in the direction of rotation of the drum, a deflector carried by the lower end of the hopper and extending therefrom laterally and inwardly over the surface of the drum in the path of the material issuing from the hopper, and means for rotating the drum.

4. A concrete mixer comprising a conical mixing drum having its axis inclined and its lower side approximately horizontal, means for rotating the drum, means for depositing material upon the bottom of the drum, baffles on the inner surface of the drum extending longitudinally of the same, and lateral extensions at the rear ends of the baffles projected forwardly from the baffles in the direction of rotation of the drum.

5. A concrete mixer comprising a conical drum having its lower side substantially horizontal, means for rotating the drum, a hopper having an open bottom in juxtaposition to the inner surface of the drum at the larger end thereof, and baffles on the inner surface of the drum extending longitudinally thereof, the rearmost baffles being arranged to move past the innermost wall of the hopper in close relation thereto.

[Claim 6 not printed in the Gazette.]

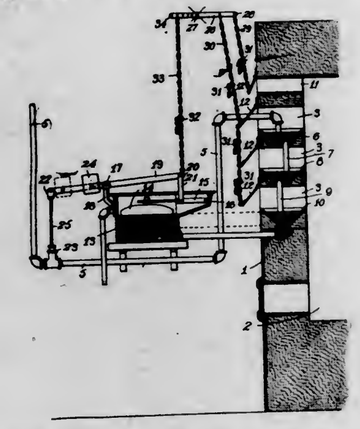
1,103,535. APPARATUS FOR BURNING LIQUID FUEL. WILLIAM E. OAKLEY, Astoria, N. Y., assignor to Oakley Foundry and Engineering Company, Astoria, N. Y., a Corporation of New York. Filed Apr. 5, 1911. Serial No. 619,074. (Cl. 158—4.)

1. In an apparatus of the class described, the combination with a liquid fuel pan, and a passage for air above said fuel pan, of means responsive to changes in the level of fuel in said pan for controlling the supply of fuel to said pan and for controlling the flow of air through said passage.

2. In an apparatus of the class described, the combination with a liquid fuel pan and a passage for air above said fuel pan, of adjustable means for controlling the supply of fuel to said pan, said means being responsive to changes in the level of fuel in said pan, and means actuated by the fuel supply controlling means for opening and closing said passage.

3. In an apparatus of the class described, the combination with a liquid fuel pan and a passage for air above said fuel pan, of adjustable means for controlling the supply of fuel to said pan, said means being responsive to changes in the level of fuel in said pan, and manually adjustable means actuated by the fuel supply controlling means for opening and closing said passage.

4. In an apparatus of the class described, the combination with a liquid fuel pan and a passage for air above said fuel pan, of a tank for liquid fuel in communication with said pan so that the level of fuel in both tank and pan will be the same, a float in said tank, means for controlling the supply of fuel to said pan, means for controlling the flow of air through said passage, and means actuated by the float for operating the fuel and air controlling means.



5. In an apparatus of the class described, a combustion chamber, an air passage leading thereto, means for opening and closing said air passage, a liquid fuel pan below said passage, means for controlling the level of the fuel in said pan, and means actuated by said controlling means for operating said opening and closing means.

[Claims 6 to 8 not printed in the Gazette.]

1,103,536. FENCE-POST. JAMES H. PEARSON, Bloomfield, Ind., assignor of one-half to Thomas A. Henderson, Bloomfield, Ind. Filed Sept. 6, 1912. Serial No. 719,021. (Cl. 189—25.)

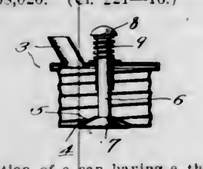


1. A post comprising a body formed of channel bar bent to form spaced sides, each of said sides having inwardly directed flanges on its margin, and a brace comprising a flat bar bent into a plurality of reversely directed, angularly related portions bearing at the bends in the channels formed by the channels of the bar and having a width equal to the width between said flanges, the lateral flanges of the said sides at opposed portions being inwardly forced at a plurality of separated points to form lips engaging over the inner faces of the angular portions of the brace.

2. A post comprising a body including sides spaced apart, each of said sides being formed with inwardly directed lateral flanges, a brace disposed between said sides and comprising a bar having a width equal to the width between said flanges, the body of the bar being formed with a plurality of reversely directed, angularly related portions which bear at their bends in the channels formed by said inwardly turned flanges, the terminal ends of said brace being inserted between the flanges and being angularly bent, and lips formed upon the sides by bending in opposite portions of the flanges at spaced points, said lips engaging over the inner faces of the angular portions of said brace.

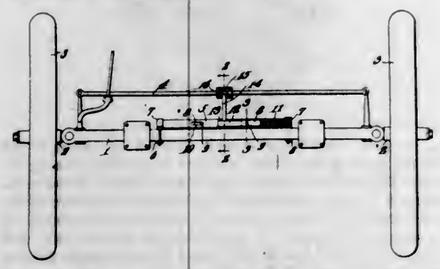
3. A post including a body formed from a single length of channel bar bent to form spaced sides, each of said sides having inwardly directed flanges on its margin, the lower ends of the legs or sides being outwardly bent, and a brace comprising a flat bar bent into a plurality of reversely directed, angularly related portions bearing at the bends in the channels formed by the flanges of the bar and having a width equal to the width between said flanges, the lateral flanges of the said sides at opposite portions being inwardly forced at a plurality of separated points to form lips engaging over the inner faces of the angular portions of the members, the upper terminal end of said brace being inserted between the flanges of one side or leg and being angularly bent, the lower end of the brace being extended transversely from one leg or side to the opposed leg or side and being then angularly bent and engaged by inwardly bent portions of said flanges.

1,103,537. OIL-CAN. RALPH L. PENN, Glencoe, Ohio, assignor of one-half to Joseph S. Randolph, Glencoe, Ohio, and one-fourth to P. B. Carr and one-fourth to J. B. Giffee, Barnesville, Ohio. Filed July 6, 1912. Serial No. 708,020. (Cl. 221—16.)



The combination of a can having a threaded neck, of a cylindrical threaded cap adapted to fit within said neck and to close the same, a discharge spout carried by the top of the cap, an inwardly depending sleeve carried centrally by the top of the cap, said cap having a bottom spaced from the top and provided with a valve seat, a valve stem extending upwardly through the cap and through said sleeve, and a coil spring arranged upon the upper portion of said stem and upon the exterior of the cap, said spring normally holding said valve in engagement with its seat.

1,103,538. STEERING ATTACHMENT. ALMERON H. PERRY, Genesee, Pa. Filed Apr. 23, 1914. Serial No. 833,962. (Cl. 21—200.)



1. In a steering gear stabilizer, an elongated casing having a slot therein, a slide within the casing, an arm attached to the said slide and working within the said slot, and springs disposed within the casing at the opposite ends of the slide for holding the slide at neutral position.

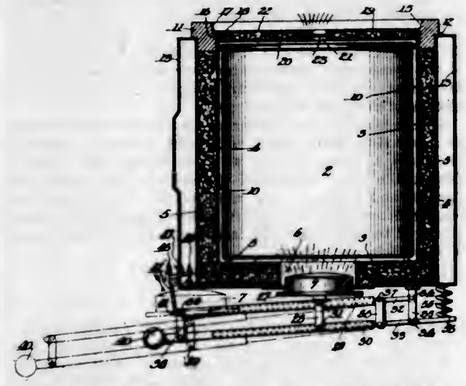
2. In a steering gear stabilizer, an elongated casing having a slot therein, spring pressed blocks having limited sliding movements within the casing, a slide mounted within the casing between the blocks, and an arm carried by the slide and working through the said slot.

3. In a steering gear stabilizer, an elongated casing, having a longitudinal slot, caps engaged to the ends of the casing, spaced blocks having limited sliding movements within the casing, expansion springs disposed within the casing between the blocks and caps, a slide mounted within the casing between said blocks, and an arm carried by the slide and working through the said slot.

4. The combination with an axle and a steering rod, of a casing attached to the axle, a spring held slide mounted within the casing and having an arm, and a clamp engaged to the steering rod and having an apertured portion receiving the free end of the said arm.

5. The combination with an axle and steering rod, of an elongated casing, clamps engaged to the axle and having caps engaging the ends of the casing, a slide mounted within the casing and having an arm working through the casing, springs disposed between the said caps and slide to hold the slide yieldably at neutral position, and a clamp engaged to the steering rod and having an apertured portion loosely receiving the free end of the said arm.

1,103,539. FIRELESS COOKER. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn., a Corporation. Original application filed Feb. 12, 1914, Serial No. 818,279. Divided and this application filed Mar. 21, 1914. Serial No. 826,417. (Cl. 126—39.)



1. In a cook-stove, the combination with a stationary food-container, of a preheater adapted to be moved into heating and heat-conserving positions with respect to the said container and into a lighting position.

2. In a cook-stove, the combination with a casing, of an insulated food-container formed with an ingress draft-passage, a preheater located below the said container in line with the said draft-passage therein, and a preheater-carrier by means of which the preheater is moved into its heating and heat-conserving positions with respect to the said passage and into a lighting position with respect to the said casing.

3. In a cook-stove, the combination with a food-container having an ingress draft-passage in its lower end, of a preheater located below the said food-container in line with the said draft-passage, and a telescopic preheater-carrier mounting the preheater and providing for moving it into its lighting, heating and heat-conserving positions.

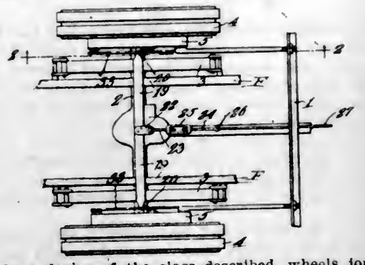
4. In a cook-stove, the combination with a food-container having an ingress draft-passage, of a preheater

movable toward and away from the said draft-passage and provided with an annular flange for the closure of the same, and means for automatically moving the said preheater into position for closing the said passage.

5. In a cook-stove, the combination with a food-container having an ingress draft-passage, of a preheater movable in line with the said container into heating and heat-conserving positions, and laterally with respect to the said line into a lighting position.

[Claim 6 not printed in the Gazette.]

1,103,540. BRAKE FOR AUTOMOBILE-TRUCKS. EDWIN ROBLIN, Toledo, Ohio. Filed Nov. 19, 1913. Serial No. 801,906. (Cl. 21—8.)



1. In a device of the class described, wheels journaled for rotation upon the ends of the axle and provided with drums; supports located within the drums and mounted on the axle; a shoe pivoted to each support and adapted to coöperate with the corresponding drum; an eccentric pivoted to each support and coöperating with the corresponding shoe to force the same outwardly against the drum; a connection uniting the eccentrics and disposed longitudinally of the axle; means for actuating the connection; and means for securing the supports against rotation with the wheels.

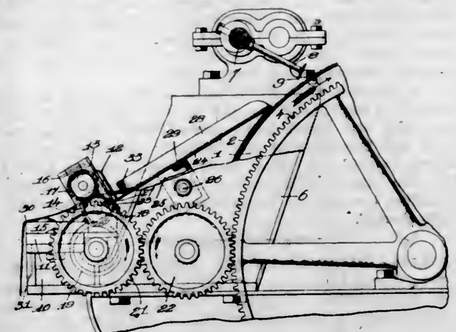
2. In a device of the class described, an axle; a wheel journaled on the axle; a drum carried by the wheel; a support carried by the axle and located within the contour of the drum; shoes coöperating with the drum and pivoted to the ends of the support; an eccentric pivoted to the support and engaging the inner faces of the shoes, the shoes being located above the support whereby the adjacent, inner edges of the shoes will rest gravitationally in engagement with the eccentric; means for operating the eccentric; and means for anchoring the support.

3. In a device of the class described, a frame; an axle carried thereby; a wheel journaled for rotation on the axle; a drum carried by the wheel; a support having an opening receiving the axle, the support including an arm extended beyond the periphery of the drum and connected with the frame; a shoe pivoted to the support and coöperating with the drum; an eccentric pivoted to the support coöperating with the shoe to force the same outwardly against the drum; and means for operating the eccentric.

4. In a device of the class described, a frame; an axle carried thereby; a wheel journaled on the axle; a drum carried by the wheel; a support located within the contour of the drum and having an opening receiving the axle; means for securing the support to the frame against rotation on the axle; shoes pivoted to the ends of the support and overhanging the support; springs connected with the shoes and with the support; an eccentric pivoted on the support and coöperating with the shoes; and means for operating the eccentric; the springs constituting yieldable means for maintaining the ends of the shoes in engagement with the eccentric, thereby to avoid rattling.

1,103,541. CONDENSING APPARATUS FOR CARDING-MACHINES. WILLIAM D. RUNDLETT, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Nov. 20, 1912. Serial No. 732,456. (Cl. 19—13.)

1. The combination, in a carding machine having means to doff and deliver a sheet of sliver, of sliver condensing means comprising a trumpet and positively driven rolls, located below and at a distance from the doffing point to enable the sliver to maintain a flat ribbon form for a considerable extent to permit ready piecing up and starting of the sliver, and means extending substantially tangentially from the doffing point to support the sliver in a straight, direct and inclined path of movement between the said doffing point and the trumpet while permitting a uniform and uninterrupted flow of the sliver upon said support.



2. The combination, in a carding machine adapted to doff and deliver side by side a plurality of sheets of sliver, of a trumpet and coöperating condensing rolls for each sliver, located below and at a distance from the doffing point to enable each sheet of sliver to maintain its flat ribbon form for a considerable extent to permit ready piecing up, an inclined, flat support arranged with its upper end substantially tangential to the doffing point to sustain the several sheets of sliver in direct and parallel paths of movement between the said doffing point and the several trumpets while permitting unimpeded flow of the sheets of sliver over the support, and upright partitions on the support between and to maintain separated adjacent sheets of sliver, said partitions being parallel to each other and to the direction of travel of the sheets of sliver.

1,103,542. SPIKE. CHARLES DANIEL RUSSELL, St. Paul, Minn. Filed Dec. 30, 1913. Serial No. 809,506. (Cl. 85—19.)



1. A railway spike including a shank formed at one end with a head and at its opposite extremity with a driving point, said shank being formed with angularly disposed faces, each of said faces having longitudinally extending grooves formed therein, said grooves tapering in depth at their lower extremities and being intersected by cup-shaped sockets formed in the side faces which extend laterally of the side walls of said grooves.

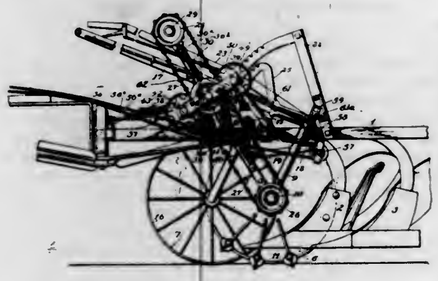
2. A railway spike including a shank formed at one end with a head and at its opposite extremity with a driving point, said shank being formed with angularly disposed faces, the said faces having longitudinally extending grooves formed therein and provided with sockets extend-

ing laterally of the adjacent side walls of said grooves and inwardly of the bottom walls thereof, inwardly extending shoulders being formed intermediate the inner extremities of said sockets and the bottom walls of the grooves.

3. A railway spike including a shank formed at one end with a head and at its opposite extremity with a driving point, said shank being formed with angularly disposed faces having longitudinally extending grooves formed therein, said grooves tapering in depth at their lower extremities and having adjacent laterally extending sockets formed in the side walls thereof, there being terminal sockets formed in the side faces of the spike at the upper extremities of said grooves.

4. A railway spike including a shank formed at one end with a head and at its opposite extremity with a driving point, said shank being formed with angularly disposed flat faces having longitudinally extending grooves formed therein and being provided with sockets formed from the adjacent side walls of said grooves, said sockets extending laterally of the grooves and below the bottom walls thereof.

1,103,543. PLOW-ADJUSTING MECHANISM. ORBIN F. SMITH and ALEXUS C. LINDGREN, Moline, Ill., assignors to Moline Plow Company, a Corporation of Illinois. Filed Nov. 14, 1912. Serial No. 731,356. (Cl. 97—70.)



1. In combination with a plow frame, a plowing device carried thereby and movable up and down, a means operated by the travel of the plow and comprising oppositely-moving portions, and means for effecting operative connection between the plowing device and either of said moving portions.

2. In a plow and in combination with a plow frame, a plowing device carried thereby and movable up and down, a member moving in opposite directions on opposite sides and operated by the travel of the plow, and means for effecting operative connection between the plowing device and either side of said member at will.

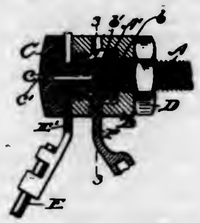
3. In a plow and in combination with the plow frame, a plowing device carried thereby and movable up and down, an endless sprocket chain operated by the travel of the plow and traveling in opposite directions on opposite sides, and means for effecting operative connection between the plowing device and either side of the chain at will.

4. In a plow and in combination with the frame, a plowing device carried thereby and movable up and down, an endless sprocket chain driven by power derived from the travel of the plow, and means for effecting operative connection at will between the opposite leads of the chain and the plowing device; whereby the plowing device will be moved by the chain to raise and lower the same.

5. In a wheeled plow and in combination with supporting wheels, a plowing device movable up and down relatively to the wheels, an upright endless sprocket chain driven by one of the supporting wheels and in relation to which chain the plowing device is movable in the direction of travel of the chain, and means for effecting operative connection at will between the plowing device and the stretch of the sprocket chain.

[Claims 6 to 18 not printed in the Gazette.]

1,103,544. ELECTRICAL BINDING-SCREW OR TERMINAL. SIDNEY SMITH, Detroit, Mich. Filed Feb. 16, 1914. Serial No. 818,924. (Cl. 173—259.)



1. An electrical terminal comprising a post having an enlarged head at one end, an annular cap mounted thereon provided with transverse openings and recessed to receive the head of the post whereby the cap may be rotated upon the post to change the radial direction of the transverse openings in the cap with respect to the post, and a cap nut provided with a projecting stem having a screw threaded engagement with the annular cap whereby it may be brought into impinging relation with the ends of the electrical conductors lodged in the transverse openings of the cap.

2. An electrical terminal comprising a screw-threaded post having an enlarged screw threaded head at one end, an annular cap with transverse openings to receive electrical conductors and tapped at one end to receive the enlarged screw-threaded head of the post, the opposite end of the cap provided with a smooth bore through which the post projects, said cap having also an intermediate recessed portion between the tapped portion and its smooth bore to receive the head of the post in which it is free to turn, whereby the cap may be rotated upon the post without changing its longitudinal adjustment, a cap nut provided with a projecting stem engaging the tapped portion of the annular cap, and a lock nut engaging the post to secure the post in position.

3. An electrical terminal comprising a screw-threaded post carrying an annular cap at one end, said cap provided with a plurality of transverse openings to receive the ends of electrical conductors and also tapped to receive the stem of a cap nut, the cap nut provided with a head overlapping the end wall of the annular cap and having a screw-threaded stem adapted to engage the ends of the electrical conductors lodged in the transverse openings of the annular cap, the overlapping head of the nut being adapted to engage a conductor lodged between the head of the nut and the wall of the annular cap, and a lock nut tapped to receive the post.

4. An electrical terminal comprising a post carrying an annular cap at one end, said cap provided with a plurality of transverse openings to receive the ends of electrical conductors engaged therewith and also tapped to receive the stem of a cap nut, and the cap nut having a screw threaded projecting stem designed to engage the electrical conductors lodged in the transverse openings of the cap,—said cap nut also provided with a central longitudinal bore to receive an electrical conductor inserted through the axis of said cap nut.

1,103,545. FISHING-TOOL. ALBERT J. SNOW, ARCHIE M. KIDD, and JOHN H. WHALEY, Taft, Cal. Filed Apr. 2, 1913. Serial No. 758,367. (Cl. 57—9.)

1. In a fishing tool for well boring apparatus, a sleeve having an interior seat adjacent its lower end and having a uniform internal diameter from said seat through the upper end of the sleeve, a pair of substantially semi-circular conically shaped jaws within said sleeve having their bases resting on said seat and having the outer faces of said bases loosely resting against the inner circumference of the sleeve, said jaws being capable of having movement in the sleeve both longitudinally and circumferentially thereof and to gravitate inwardly, and means to support the sleeve and to provide a closure for the upper end of the sleeve to thereby restrict outward movement of the jaws by engagement with the top ends of the latter consisting of a pipe threaded into the upper end of the sleeve.



2. In a fishing tool for well boring apparatus, a sleeve having an interior seat, a plurality of substantially semi-circular conically shaped jaws within said sleeve having their bases resting on said seat, and having the outer faces of said bases loosely resting against the inner circumference of the sleeve, said jaws being capable of having movement in the sleeve both longitudinally and circumferentially thereof and to gravitate inwardly, and means to close the upper end of the sleeve to restrict outward movement of the jaws by engagement with the top ends of the latter.

1,103,546. SIGNAL-LAMP. FURMAN D. SPEAR, New York, N. Y., assignor to Armspear Manufacturing Company, New York, N. Y. Filed July 15, 1913. Serial No. 779,124. (Cl. 240—22.)

1. A signal lamp comprising a lens having the form of a spheroidal section with its sides arranged in radial planes, the section being constructed above and below its equatorial zone with refracting rings arranged circumferentially and adapted to project the rays of light in a fan-like area.

2. In a signal lamp, the combination with a lamp frame, of a spheroidal flame chamber removably secured therein and composed of interchangeable transparent and opaque spheroidal sections arranged circumferentially side by side and having their continuous sides arranged in radial planes, each transparent section being constructed above and below its equatorial zone with refracting rings arranged circumferentially and adapted to project the rays of light in a fan-like area.

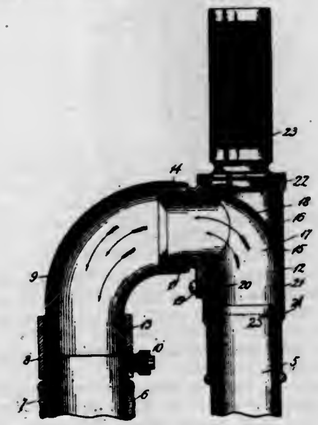
3. The combination with a lamp frame, of a flame chamber having a removable opaque section which is clamped between the base and breast of the frame and provided with a lens.

4. The combination with a lamp frame, of a flame chamber composed of interchangeable sections arranged circumferentially side by side, one of which sections is opaque and provided with a circular lens.

5. The combination with a lamp frame, of a flame chamber comprising interchangeable transparent and opaque sections arranged circumferentially side by side, one of which opaque sections is provided with a circular lens.

[Claim 6 not printed in the Gazette.]

1,103,547. VALVE FOR CLEANING-TOOLS. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 8, 1908. Serial No. 425,964. (Cl. 137—7.)



1. A tool handle formed for passage of a fluid therethrough, a valve casing located at the outer free end of the handle, means for connection of a tube to said casing, a valve located within said casing, and valve controlling means projecting at the end of said casing with its axis in line with the axis of the handle.

2. A tool handle arranged for a flow of fluid therethrough, a valve casing secured to and forming the outer free end of the handle and having a cylindrical valve chamber, means for attachment of a hose to said casing, a cylindrical valve located within said casing and having a fluid passage, and a handle secured to the valve and with its axis in line with the axis of the tool handle.

3. A tool handle arranged for flow of fluid therethrough and having a valve casing terminating the outer free end of the handle, a lateral projection for the attachment of a hose or like part to the side of said casing, a valve located within the casing and having a fluid passage, and operating means connected with the valve and projecting at the end of said casing.

4. A handle arranged for flow of fluid therethrough and having a valve casing terminating the outer free end of the handle with a cylindrical chamber in said casing, a cylindrical valve located within said chamber, a lateral extension for attachment of a hose or like part, and a handle secured to said valve and with its axis coincident with the axis of said handle.

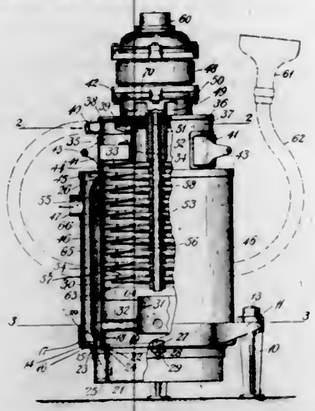
5. A handle having a valve casing at its end, an extension from said casing, a discharge elbow pivoted to the extension, a valve located within the valve casing and having a fluid passage, and means secured to the valve and located at the end of the casing for operating the valve.

[Claims 6 to 10 not printed in the Gazette.]

1,103,548. CLEANING APPARATUS. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 8, 1908. Serial No. 425,966. (Cl. 83—48.)

1. A shell having an inlet thereto, means within the shell for creating a flow of air thereinto, a separating

chamber located outside the shell, said shell having communicating passages opening from below said flow creating means into said chamber and a separating means located within said chamber.



2. A shell, means within the shell for creating a flow of air thereinto, an inclosing casing forming a separating chamber surrounding said shell, the latter having a communicating passage opening from below said flow creating means into said chamber, and a separating medium located within said chamber.

3. A separating chamber having outer and inner walls, the outer walls having an outlet therefrom and the inner wall forming a shell, means located within the shell for creating flow of air thereinto, said shell having communicating passages opening from below said flow creating means into said chamber, and a separating medium within said chamber.

4. A separating chamber having outer and inner walls concentrically arranged, the outer wall having an outlet therefrom and the inner wall inclosing a central chamber, means within the central chamber for creating flow of air thereinto, said separating chamber and central chamber having communicating passages located below the flow creating means and extending between the separating and central chambers, and a separating medium located within the separating chamber.

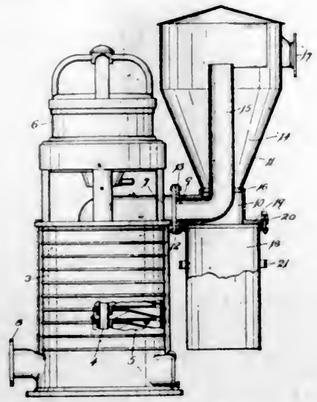
5. A shell, means within the shell for creating a flow of air therethrough, a separating chamber surrounding said shell, said shell and chamber having openings communicating therebetween, a separating medium located within said chamber, and an inlet to said shell at the top and an outlet from said chamber near the top.

[Claims 6 to 24 not printed in the Gazette.]

1,103,549. DUST-SEPARATOR. IRA H. SPENCER, West Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 17, 1912. Serial No. 671,633. (Cl. 83—48.)

1. A casing having mechanism for producing a current of air and with an opening laterally therefrom, a separator base including a supporting neck secured to said casing and with a lateral opening therefrom registering with the lateral opening in said casing, a separator casing supported by and projecting upwardly from said separator base, said casing having an opening, and a receptable supported by and removably secured to said separator base and depending therefrom.

2. A casing having mechanism for producing a current of air, a separator base including a supporting neck having a lateral opening and secured with said opening registering with an inlet opening to said casing, a conducting pipe projecting upward and having its opening registering with the outlet from said neck, a separator casing supported on said separator base and projecting upwardly from said neck and surrounding said conducting pipe, and a receptacle supported by said separator base and removably secured to and depending from said neck.



3. A separator base including a supporting neck having an outlet laterally from one side thereof, a conducting pipe projecting upwardly from the neck and with its central passage registering with said outlet opening and located at an angle thereto, a jacket supported by the separator base and having its small lower end extending into said neck, said jacket tapering gradually upward from the neck and having an inlet located opposite the mouth to said conducting pipe, and a receptacle supported by the separator base and removably secured to said neck.

4. A separator base including a supporting neck with a flange extending about its lower edge and projecting radially therefrom and with an outlet extending laterally from the neck and located on said flange, a receptacle supported by and removably secured to the under part of said flange, a conducting pipe extending upwardly from said neck and with its passage registering with said outlet, and a jacket supported by said separator base and secured to said neck and surrounding said conducting pipe, said jacket having an inlet at its top opposite said pipe.

5. A separator base including a supporting neck having an opening at one side with a conducting pipe registering with said opening and bent at an angle within said neck and extending upwardly therefrom, a receptacle supported by said separator base and removably secured to and depending from said neck, and a jacket supported by the separator base and secured to said neck and surrounding said conducting pipe, said jacket having an inlet opening thereto opposite said pipe.

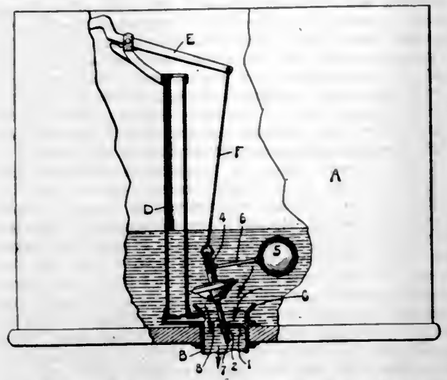
[Claims 6 to 9 not printed in the Gazette.]

1,103,550. WATER-CLOSET-FLUSHING MECHANISM. SAMUEL J. STEVENS, St. Louis, Mo., assignor to Allen R. Gilmore, St. Louis, Mo. Filed Nov. 19, 1913. Serial No. 801,810. (Cl. 4—5.)

1. The combination with the valve seat of a flush tank outlet, of a support below said valve seat, a tiltable valve movable to and from said valve seat, a stem carried by said valve adapted to engage said support to hold the valve away from said seat when the valve is tilted, and a float by which said valve is tilted to place said stem in engagement with said support.

2. The combination with the valve seat of a flush tank outlet, of a support below said valve seat, a tiltable valve movable to and from said valve seat, a stem carried by said valve slidably fitted to said support and having a detent for engagement with said support, and a float for tilting said valve to cause the detent of said stem to engage said support when the valve is elevated from said seat.

3. The combination with the valve seat of a flush tank outlet, of a support adjacent said valve seat, a tiltable valve movable to and from said valve seat, a detent stem carried by said valve, and a float rigidly secured to said valve adapted to tilt it to place said detent in engagement with said support when the valve is elevated from said valve seat, said float being located at one side of the axis of the valve for the purpose set forth.

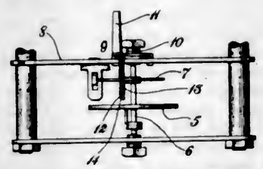


4. The combination with the valve seat of a flush tank outlet, of a support adjacent to said valve seat, a bushing removably mounted in said support, a tiltable valve having a detent stem operable in said bushing adapted to engage the bushing to hold the valve away from its seat when elevated and tilted, and a float carried by said valve by which the valve is tilted when elevated from said seat.

5. The combination with the valve seat of a flush tank outlet, of a support adjacent to said valve seat, a bushing adjustable in said support, a tiltable valve having a detent stem operable in said bushing adapted to engage the bushing to hold the valve away from its seat when elevated and tilted, and a float carried by said valve by which the valve is tilted when elevated from its seat.

[Claims 6 to 8 not printed in the Gazette.]

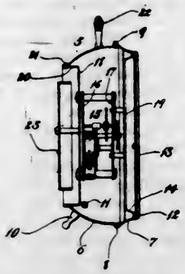
1,103,551. HAIR-SPRING REGULATOR. HENRY WACHTELHAUSEN, Meriden, Conn., assignor to The Parker Clock Company, Meriden, Conn., a Corporation of Connecticut. Filed June 19, 1912. Serial No. 704,572. (Cl. 58—113.)



In a clock movement having a hair spring, a manually operable lever formed by a single piece of sheet metal and provided with an outwardly extending finger piece, and an inwardly extending flat arm having a closed elongated slot therein, the outer coil of the spring extending through said slot, said arm having an inclined anti-fouling portion on the upper edge thereof, said lever being mounted for swinging movement and said arm being situated between said finger piece and the axis of motion of the lever.

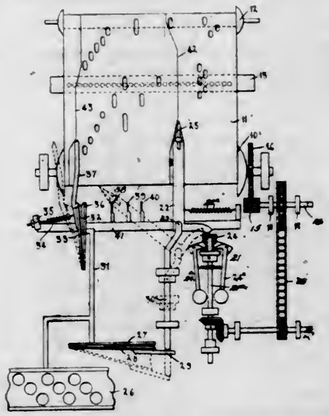
1,103,552. CLOCK. ELI M. WALKER, Meriden, Conn., assignor to The Parker Clock Company, a Corporation of Connecticut. Filed June 19, 1912. Serial No. 704,564. (Cl. 58—54.)

1. In a clock, the combination of a shell of greater diameter at its forward portion than at its rear portion, a plate, a clock movement fastened to the plate, the front of the shell being of greater diameter than the plate, and the latter being fastened in place to the rear of the shell, a dial connected with the clock movement, and a front section receiving said dial and connected with said shell.



2. In a clock, the combination of a shell in the form approximately of the segment of a sphere, a clock movement mounted in the shell, a disk to which the clock movement is connected, said disk having an outwardly extending flange and the shell having an opening to receive said flange, means for securing said shell and flange together, a dial connected with said clock movement, and an annular member which receives the dial, said annular member overlying the shell and being secured thereto.

1,103,553. RECORDING AND INDICATING DEVICE FOR MUSICAL INSTRUMENTS. SAMUEL S. WATERS, Washington, D. C. Filed Apr. 30, 1910. Serial No. 558,604. (Cl. 84—168.)



1. The combination in a self-playing musical instrument, of a movable record sheet, mechanism for feeding said record sheet, manually actuated means for varying the feed of said feeding mechanism, and a speed indicator driven by said feed mechanism and variably movable therewith, said speed indicator being provided with a member movable over the record sheet as the speed of said feeding mechanism varies.

2. The combination in a self-playing musical instrument, of a movable record sheet, mechanism for feeding said record sheet, manually actuated means for varying the speed of said feeding mechanism, a speed indicator driven by said feeding mechanism and variably movable therewith, said speed indicator being provided with a swinging member movable over the record sheet as the speed of said feeding means varies, a shifting support for said pointer, and means actuated by the same power that actuates the playing mechanism for moving said support to withdraw the pointer from the record sheet when said power ceases to be operative.

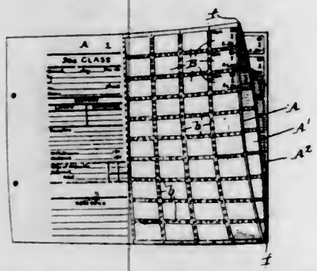
3. The combination in a self-playing musical instrument, of a movable record sheet, mechanism for feeding said record sheet, manually actuated means for varying the speed of said feeding mechanism, a speed indicator driven by said feeding mechanism and variably movable therewith, said speed indicator comprising a rectilinearly movable member and a vibrating member in the form of an angular lever one arm of which is in operative engagement with said rectilinearly movable member and the other arm movable over the record sheet as the speed of the feeding mechanism varies.

4. The combination in a self-playing musical instrument, of a movable record sheet, mechanism for feeding said record sheet, manually actuated means for varying the speed of said feeding mechanism, a speed indicator driven by said feeding mechanism and variable therewith, said speed indicator including a rectilinearly movable member and a swinging member in the form of an angular lever one arm of which is in operative engagement with said rectilinearly movable member and the other arm movable over said record sheet as the speed of the feeding mechanism varies, a shifting support on which said pointer is pivoted, and means actuated by the same power that actuates the playing mechanism for moving said support to withdraw the pointer from the record sheet when said power ceases to b operative.

5. In a self-playing musical instrument, the combination of a music record sheet provided with a marking representing a standard speed at which said record sheet is to be fed, mechanism for feeding said record sheet, means for changing the speed of said mechanism and a speed indicator driven by said record sheet feeding mechanism and provided with means for indicating, relatively to the speed marking on said record sheet, the speed at which said record sheet is being fed.

[Claims 6 to 11 not printed in the Gazette.]

1,103,554. TRIPLE-LEAF LEDGER. THOMAS N. WINSLOW, Greensboro, N. C. Filed Apr. 30, 1913. Serial No. 764,639. (Cl. 11—19.)

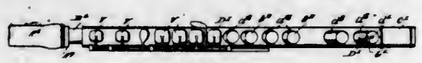


1. A ledger for recording transactions in deposit accounts, formed of account sections, each section embodying three superposed leaves, the triple leaves of each section all having corresponding successively arranged multiple coupon designations thereon, with corresponding coupon designations of all three leaves superposed one over the other and printed to indicate the same amount involved in a single transaction, the coupons of the two uppermost leaves only being separated from adjacent coupons by lines of weakness between them adapting them for removal to disclose the corresponding coupon of the lower leaf for a permanent ledger record of the transaction of which the removed coupons form the depositors' and auditors' records said leaves having on a non-removable portion appropriately designated spaces for data relating to the complete transaction of which the triple leaves form the current record, *i. e.*, the depositor's name, and identification the depositor's coupons and permanent record leaf having printed thereon like account identifying data.

2. An account ledger for the purpose described formed of account sections each composed of triplicate leaves superposed one upon the other, all of said leaves having stub sections with account identifying data thereon, the stub section of the uppermost sheet having appropriately designated spaces for the data relating to the depositor and special features of the account, the stub sections of the remaining sheets having printed forms thereon for certificates of deposit, and a series of coupons forming the outer portion of each sheet, the coupons on the triplicate leaves overlying and registering one with the other, there being lines of perforations between the coupons of the two uppermost leaves only, whereby said coupons may be detached to disclose the coupons on the lower unperforated leaf of the account section, each coupon of the upper and lower leaves having printed thereon designations of its value and the value of the total deposits including its value there being similar account identifying data on both removable and permanent portions of the leaves.

3. An account ledger for the purpose described, embodying a series of individual account sections bound together at one side edge, each individual account section being composed of triplicate leaves connected at the top and bottom edges by folding the paper of which the leaves are formed, whereby the leaves of each section are connected for being turned as a unit and their outer edges are left separate and said leaves having upon them corresponding successively arranged coupon designations with the corresponding coupon designations of all three leaves superposed in registry with each other, there being lines of weakness between the coupon designations of the two uppermost leaves only, whereby they may be removed for the depositors' and auditors' records and when removed disclose the third sheet coupon designation to form a permanent ledger record there being similar account identifying data on the depositor's coupons and bottom leaf.

1,103,555. WOOD WIND INSTRUMENT. NICHOLAS ALBERTI, Chicago, Ill. Original application filed Aug. 5, 1911, Serial No. 642,447. Divided and this application filed Mar. 1, 1913. Serial No. 751,444. (Cl. 84—7.)



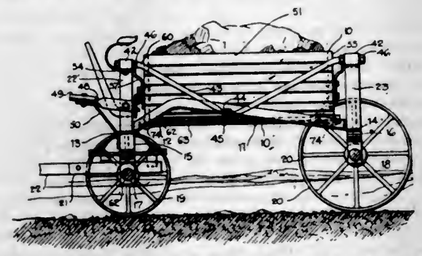
1. In a wood wind instrument, a sounding pipe provided with a single set of openings, the distance between the openings corresponding to a semitone, a sleeve mounted on said sounding pipe and having a single set of valve openings arranged to register with some of the openings in said pipe, a single set of valves arranged to close the valve openings in said sleeve, said sleeve being movable longitudinally of said pipe, the movement of said sleeve serving to bring each valve into registration with the opening in the pipe adjacent to that with which it first registered.

2. In a wood wind instrument, a sounding pipe provided with a single set of openings, the distance between the openings corresponding to a semitone, a sleeve mounted on said sounding pipe and having a single set of valve openings arranged to register with some of the openings in said pipe, a single set of valves arranged to close the valve openings in said sleeve, said sleeve being movable longitudinally of said pipe, the movement of said sleeve serving to bring each valve into registration with the opening in the pipe adjacent to that with which it first registered, and means for guiding the sleeve in its movement, said means comprising a pin carried by the sleeve and arranged to extend in a slot in the pipe.

3. In a wood wind instrument, a sounding pipe provided with a single set of openings, the distance between the openings corresponding to a semitone, a sleeve mounted on said pipe and having a single set of valve openings arranged to register with some of the openings in said pipe, a single set of valves or keys arranged to close the valve openings in said sleeve, said sleeve being movable on said pipe in a longitudinal direction, the movement of said sleeve serving to vary the registration of all the openings in the sleeve with the openings in the said pipe so that when the sleeve is moved toward the mouth piece its valve openings will register with openings of the said pipe that will be a half tone higher than when the said sleeve is moved and set in its position away from the mouth piece.

4. In a wood wind instrument, a sounding pipe provided with a single set of openings, the distance between said openings being progressively greater from one end of the pipe to the other, said distance between the openings corresponding to a semitone, a sleeve mounted on said sounding pipe and having a single set of openings of progressively greater length and arranged to register with some of the openings in said pipe, a single set of valves to close the openings in said sleeve, said sleeve being movable longitudinally of said pipe, to bring each valve into registration with the opening adja ent to that with which it is registered.

1,103,556. WAGON. BERT BAILEY, Regan, N. D. Filed Mar. 17, 1913. Serial No. 754,993. (Cl. 21—20.)



1. In a dump wagon the combination of a pair of side members, said side members being offset to produce supporting arms, end frames secured to said supporting arms, supporting means for the side members secured to the supporting arms, braces secured to the supporting means and to the end frames, bars secured to the end frames, trunnions disposed between the end frames and bars, a body supported by the trunnions, and stay rods connecting the bars and the side members.

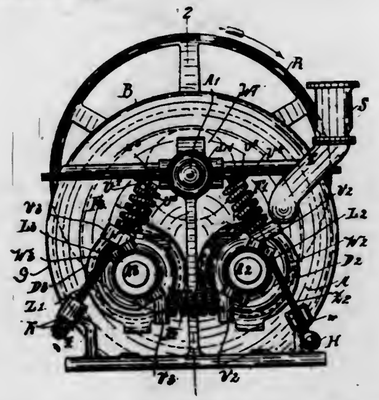
2. In a dump wagon such as described, the combination of a pair of side members, offset arms formed at the terminals of said side members, U-shaped end frames secured to the supporting arms, bolsters attached to the supporting arms, wheeled axles secured to the bolsters, U-shaped braces attached to the bolsters and the end frames, bars attached to the U-shaped end frames, trunnions disposed between the end frames and bars, the ends of said bars being bent to produce sleeves, a body supported by the trunnions, and stay rods disposed within the sleeves of the bars and connected to the side members.

1,103,557. PULVERIZING-MILL. EMIL BARTHELMESS, Neuss, Germany. Filed May 22, 1912. Serial No. 699,086. (Cl. 83—9.)

1. In a pulverizing machine, the combinatidon with a crushing ring, and means to rotate the same, of at least one crushing roller, means provided at each side of said roller to hold the same in engagement with the ring, said means comprising at each side of the roller a plurality of yielding members arranged at an angle to each other and lying in the same vertical plane, and means connecting said yielding members and arranged to equalize the force exerted thereby.

2. In a pulverizing machine, the combination with a crushing ring, and means to rotate the same, of at least one crushing roller, means provided at each side of said roller to hold the same in engagement with the ring, said means comprising at each side of the roller a plurality of springs arranged at an angle to each other, and means connecting said springs and arranged to equalize the tension thereof.

3. In a pulverizing machine, the combination with a crushing ring, and means to rotate the same, of two crushing rollers, means provided at each side of the rollers to hold the same in contact with the crushing ring, said means comprising an equalizing gear, at each side of the rollers a spring connecting said rollers with each other, and two springs one for each of the rollers and arranged at an angle to said connecting spring and respectively connected with one end to said roller and with the opposite end respectively to a relatively fixed part and to said equalizing gear.



4. In a pulverizing machine, the combination with a crushing ring, and means to rotate the same, of two crushing rollers, means provided at each side of the rollers to hold the same in contact with the crushing ring, said means comprising an equalizing gear, at each side of the rollers a spring connecting said rollers with each other, two springs one for each of the rollers and arranged at an angle to said connecting spring and respectively connected with one end to said rollers and with the opposite end respectively to a relatively fixed part and to said equalizing gear, and means to adjust said equalizing gear.

5. In a pulverizing machine, the combination with a crushing ring, means to rotate the same, of two crushing rollers, means provided at each side of the rollers to hold the same in contact with the crushing ring, said means comprising an equalizing rod, a pair of bell crank levers carrying said rod, at each side of the rollers a spring connecting said rollers with each other, and two springs one for each of the rollers and arranged at an angle to said connecting spring and respectively connected with one end to said rollers and with the opposite end respectively to a relatively fixed part and to said bell crank levers.

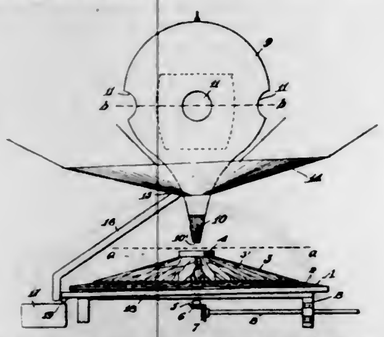
[Claims 6 to 12 not printed in the Gazette.]

1,103,558. AMUSEMENT DEVICE. MAX BERGER and RUDOLPH WEISBACH, San Francisco, Cal.; said Berger assignor to said Weisbach. Filed Sept. 3, 1913. Serial No. 787,918. (Cl. 46—57.)

1. In an amusement device the combination with a frusto-conoidal table having a series of irregular channels in its central portion and a series of depressions in its outer portion, a revoluble disk disposed centrally of the table and a hollow structure superposed above said disk having an open underside and a series of openings around its horizontal periphery.

2. An amusement device comprising a hollow structure having inlet openings on the side and a discharge opening on its underside, a depending neck surrounding said outlet opening formed of a plaited fabric, a rotary disk immediately below said neck, a downwardly sloping table surrounding said disk, a series of irregular grooves on said table leading to its outer periphery, and a platform

contiguous with the periphery of said table formed with a series of depressions.



3. A game apparatus comprising a hollow globular structure, vertical partitions in said structure dividing its interior into a plurality of compartments, said structure formed with inlet openings leading into said compartments and having an outlet on its underside communicating with said compartments, a rotary disk beneath the discharge opening, a frusto-conoidal table beneath said disk concentric therewith, a series of irregular interconnecting channels on said table leading from the disk to its outer periphery, and a stationary platform attached to the rim of said table having a series of depressions formed in its upper face.

4. A game apparatus comprising a hollow globular structure, vertical partitions in said structure dividing its interior into a plurality of compartments, said structure formed with inlet openings leading into said compartments and having an outlet on its underside communicating with said compartments, a throat surrounding said opening formed of plaited fabric, a rotary disk beneath the discharge opening, a frusto-conoidal table beneath said disk concentric therewith, a series of irregular interconnecting channels on said table leading from the disk to its outer periphery and a stationary platform attached to the rim of said table having a series of depressions formed in its upper face.

5. A game apparatus comprising a hollow globular structure, vertical partitions in said structure dividing its interior into a plurality of compartments, said structure formed with inlet openings leading into said compartments and having an outlet on its underside communicating with said compartments, a throat surrounding said opening formed of plaited fabric, a rotary disk beneath the discharge opening, a frusto-conoidal table beneath said disk concentric therewith, a series of irregular interconnecting channels on said table leading from the disk to its outer periphery, a stationary platform attached to the rim of said table having a series of depressions formed in its upper face, and a saucer shaped net surrounding said structure connected therewith at a point mediate the inlet and outlet openings.

1,103,559. REINFORCING-STRIP FOR BUTTON-FLIES. FRANK BLATCHFORD, Brookline, Mass., assignor to Wright Manufacturing Company, Lawrence, Mass., a Corporation of Massachusetts. Filed Feb. 19, 1914. Serial No. 819,704. (Cl. 36—52.)



1. As an article of manufacture, a thin, flexible elongated reinforcing strip, comprising a reinforcing portion adapted to conform to a button hole fly between the outer margin thereof and the outer ends of the button holes, and composed of one or more longitudinal strands, and a textile attaching portion composed of threads interengaged with each other and with the strand or strands of the reinforcing portion and adapted to receive attaching stitches, the longitudinal strand or strands having greater tensile strength than the threads of the attaching portion.

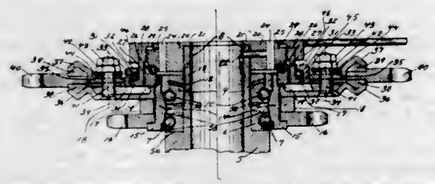
2. As an article of manufacture, a thin, flexible elongated reinforcing strip, comprising a reinforcing portion adapted to conform to a button hole fly between the outer margin thereof and the outer ends of the button holes, and composed of one or more longitudinal strands, and a textile attaching portion composed of threads interengaged with each other and with the strand or strands of the reinforcing portion and adapted to receive attaching stitches, the longitudinal strand or strands having greater tensile strength than the threads of the attaching portion, said reinforcing portion being located at one edge of the strip, while the attaching portion constitutes the greater part of the width of the strip and forms a lip adapted to overlap the outer ends of the button holes and to be attached at intervals to the fly by the stitches which reinforce the outer ends of the button holes.

3. As an article of manufacture, a thin, flexible elongated reinforcing strip, comprising a reinforcing portion adapted to conform to a button hole fly between the outer margin thereof and the outer ends of the button holes, and composed of one or more strands extending without lateral deviation lengthwise of the strip, and a textile attaching portion composed of braided threads extending in a zig-zag direction, and engaging the longitudinal strand or strands, the latter being of greater tensile strength than the threads and located at one edge of the strip.

4. A button hole fly having a series of button holes and a thin, flexible elongated strip attached to the fly by stitches extending between the edge of the fly and the outer ends of the button holes, said strip including a reinforcing portion composed of one or more elongated, flexible, attenuated strands extending parallel with the edge of the fly outside the outer ends of the button holes, and a textile attaching portion engaging the attaching stitches and composed of threads inter-engaged with each other and with the strand or strands of the reinforcing portion.

5. A button hole fly having a series of button holes reinforced by the usual stitches, and a thin, flexible elongated strip attached to the fly by stitches extending between the edge of the fly and the outer ends of the button holes, said strip including a reinforcing portion composed of one or more elongated, flexible, attenuated strands extending parallel with the edge of the fly outside the outer ends of the button holes, and a textile portion engaging the attaching stitches and composed of threads interengaged with each other and with the strand or strands of the reinforcing portion and forming a lip the continuity of the inner edge of which is interrupted by notches coinciding with the outer ends of the button holes, the margins of said notches being secured to the fly by the usual reinforcing stitches at the outer ends of the button holes.

1,103,560. CLUTCH DEVICE. JOHN C. CALVIN, Buffalo, N. Y.; Janet S. Calvin administratrix of said John C. Calvin, deceased. Filed Aug. 5, 1909. Serial No. 511,397. (Cl. 192—7.)



1. A yieldable clutch comprising a driving sprocket wheel, a driven sprocket wheel, friction members normally engaging said driving sprocket wheel, means uniting one of said friction members with said driven sprocket wheel, adjustable spring-tension means for yieldably holding said friction members in engagement with said driving sprocket wheel and manually movable separating means interposed between said friction members for holding said members out of engagement.

2. A yieldable clutch comprising a driving sprocket wheel, a driven sprocket wheel, a bearing hub, friction members engaging said driving sprocket wheel, means uniting one of said friction members with said driven sprocket wheel, means for placing said friction members under any desired predetermined tension, a slidable thrust ring mediately connected with said bearing hub and capable of lateral movement, a cup ring between one of said friction members and said slidable thrust ring for taking the thrust of said thrust ring, screw-threaded connecting means between said slidable thrust ring and one of said friction members and manually operative means for moving said connecting means laterally, whereby the tension on said friction members may be increased or decreased as desired.

3. A yieldable clutch comprising a driving sprocket wheel, a driven sprocket wheel, friction members engaging said driving sprocket wheel, means uniting one of said friction members with said driven sprocket wheel, means for placing said friction members under any desired predetermined tension, a slidable thrust ring capable of lateral movement, a cup ring between one of said friction members and said slidable thrust ring for taking the thrust of said thrust ring, an annular ring screw-threaded to said slidable thrust ring, means engaging said annular ring and one of said friction members and manually operative means for moving said annular ring laterally, whereby the tension on said friction members may be increased or decreased as desired.

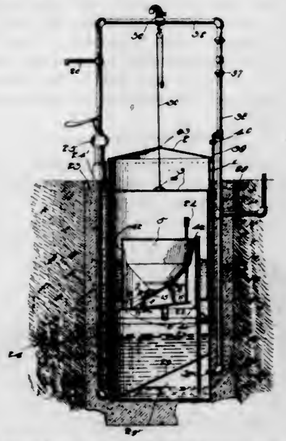
4. A yieldable clutch comprising a driving sprocket wheel, a driven sprocket wheel, a bearing hub, friction members engaging said driving sprocket wheel, means uniting one of said friction members with said driven sprocket wheel, means for placing said friction members under any desired predetermined tension, a slidable thrust ring capable of lateral movement and mediately united with said bearing hub, a cup ring between one of said friction members and said slidable thrust ring for taking the thrust of said thrust ring, an annular ring screw-threaded to said slidable thrust ring, a series of balls engaged by said annular ring, an annular cone ring engaging said series of balls and also engaging one of said friction members and manually operative means for moving said annular ring laterally, whereby the tension on said friction members may be increased or decreased as desired.

5. A yieldable clutch comprising a driving sprocket wheel, a driven sprocket wheel, a bearing hub, friction members engaging said driving sprocket wheel, means uniting one of said friction members with said driven sprocket wheel, means for placing said friction members under any desired predetermined tension, a slidable thrust ring mediately connected with said bearing hub and capable of lateral movement, a cup ring between one of said friction members and said slidable thrust ring for taking the thrust of said thrust ring, screw-threaded means connecting said slidable thrust ring and one of said friction members, an operating lever connected with said screw-threaded connecting means, whereby the tension on said friction members may be increased or decreased as desired.

[Claims 6 to 14 not printed in the Gazette.]

1,103,561. ACETYLENE-GAS GENERATOR. UEL M. CAUDELL, Evansville, Ind. Filed Mar. 1, 1913. Serial No. 751,605. (Cl. 48—55.)

1. In a generator of the class described the combination with a well and an expansion bell slidably mounted therein, a cylindrical casing positioned within said well and constituting a water seal, a carbid container carried by said cylindrical casing, said carbid container provided with an inclined chute at its lower portion, said cylindrical casing provided with a plurality of apertures, depending arms carried by said carbid container, operating arms carried by said depending arms, a door carried at the forward portion of said operating arms, for closing the lower end of said chute, a U-shaped bracket carried by said operating arm adjacent the forward portion thereof, upwardly extending fingers carried by said bracket and extending into said chute, means for operating said arms whereby when said door is raised the fingers carried by said bracket will pass upwardly into said chute for allowing only a predetermined quantity of carbid to be discharged from said chute.



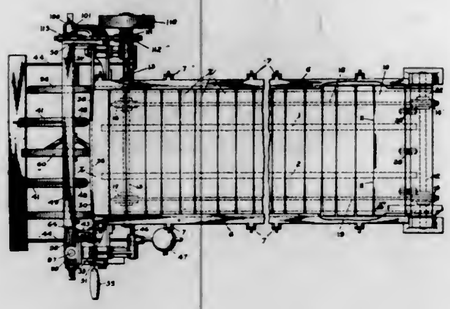
2. In a generator of the class described the combination with a well, and a bell positioned within said well, a carbid container positioned within said well and provided with an inclined chute, depending arms carried by said container, operating arms pivotally carried by said depending arms, a link pivotally secured to the rear portion of said arms and an operating member connected to said link, a weight carried by the forward portion of said operating arms for counter-balancing the weight of said operating member, a door carried at the forward portion of said arms for closing the lower portion of said chute, a U-shaped bracket carried by said operating arms adjacent the forward portion thereof and provided with a plurality of upwardly extending fingers, said fingers extending into said chute whereby when the forward portions of said arms are raised, the fingers will pass upwardly into said chute for preventing the carbid within the container from passing therefrom whereby only a predetermined amount will be discharged, and a U-shaped guide positioned about the outer portions of said bracket and fingers for holding the same in their correct position.

3. In a generator of the class described the combination with a well, a cylindrical casing positioned within said well, a carbid container carried by the upper portion of said cylindrical casing, an expansion bell positioned within said well, said cylindrical casing constituting a water seal for said bell, said cylindrical casing provided with a plurality of apertures, said carbid container provided with an inclined chute, a plurality of arms pivotally connected to said chute, a door carried by the forward end of said arms and constituting a closure for said chute, a bracket member provided with a plurality of fingers carried by said arms, a partition positioned within said chute thereby forming a pocket, said fingers adapted to pass up to the end portion of said partition and in front of said pocket for limiting the flow of carbid, said arms adapted to raise said door for allowing a predetermined amount of carbid to pass into said well, said pocket adapted to prevent the jamming of the carbid against the top of the chute by said fingers.

4. In a generator of the class described the combination with a well provided with a cylindrical casing, a bell positioned within said well, said cylindrical casing constituting a water seal for said bell, a carbid container carried by said cylindrical casing and provided with an inclined chute, a partition positioned in said chute thereby

forming a pocket, a plurality of arms pivotally secured to said carbid container, means for operating said arms, a U-shaped bracket provided with a plurality of upwardly extending fingers provided with said arms, a plurality of supporting members carried by said arms, said supporting members provided with bolts, a door, bolt members attached to said door and passing through said slots of said supporting members for supporting said door, said fingers adapted to pass adjacent the end of said partition before said door begins to raise, said fingers adapted to continue to pass upwardly in front of said pocket at which time the door will rise for allowing a predetermined amount of carbid to pass into said well, said pocket adapted to shield the ends of said fingers for preventing the ends of said fingers from jamming the carbid against the top of the chute.

1,103,562. BARREL-MAKING MACHINE. CLAUDE D. CLARK, New York, N. Y. Filed Aug. 9, 1911. Serial No. 643,189. (Cl. 147—1.)



1. A barrel making machine including in combination a support upon which the staves are laid edge to edge, a follower traveling along said support to progress the laid out staves, means for positioning the follower at the rear end of its travel, and means located the length of a barrel circumference forward from said position of the follower for cutting a stave lengthwise.

2. A barrel making machine including in combination a support upon which the staves are laid edge to edge, a member movable into position to overlap the ends of the laid out staves upon the support, a follower moving along said support to progress the series of laid out staves therealong, and a groove in the end of the follower into which said movable member extends during the movement of said follower.

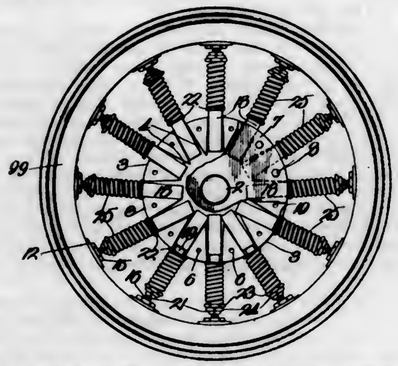
3. A barrel making machine including in combination a barrel forming device including interior and exterior members, a cutter on an interior former member and means for rotating said interior former member relatively to the formed barrel.

4. A barrel making machine including in combination a barrel forming device including interior and exterior members, a cutter on an interior former member and means for rotating said interior former member relatively to the other former members and to the barrel held thereby.

5. A barrel making machine including in combination a barrel forming device including interior and exterior members, a cutter on an interior former member, and means for rotating said interior former member relatively to the other former members and to the barrel held thereby, means for holding the said cutter in the non-cutting position when the said end interior former is moved in one direction, and means responsive to a reverse movement of the said end interior cutter when the barrel is held by the said other former members to move the said cutter to the cutting position.

[Claim 6 not printed in the Gazette.]

1,103,563. SPRING-WHEEL. ROSWELL M. CLARK, Kansas City, Mo. Filed Nov. 20, 1912. Serial No. 732,455. (Cl. 152—48.)



1. A spring wheel, comprising an inner member, an outer member, spokes pivotally attached at their outer ends to the outer member and fitting in the inner member for endwise slidable movement therein and oscillatory movement in the vertical plane of the circumference of the wheel, and provided with oppositely facing shoulders, and springs mounted on the spokes and engaging said shoulders and adapted at times to be compressed outwardly under endwise pressure imposed by the inner member of the wheel; said inner member having an interior recess in the radial plane of each spoke and each spoke having a spring pressed ball to ride into and out of the companion recess to prevent noise-producing contact between the inner member and spoke.

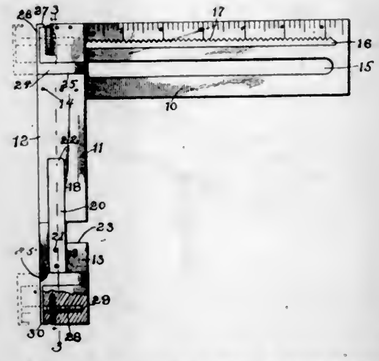
2. A spring wheel, comprising an inner member, an outer member, spokes pivotally attached at their outer ends to the outer member and fitting in the inner member for endwise slidable movement therein and oscillatory movement in the vertical plane of the circumference of the wheel, and provided with oppositely facing shoulders, and springs mounted on the spokes and engaging said shoulders and adapted at times to be compressed outwardly under endwise pressure imposed by the inner member of the wheel, said inner member having an interior recess in the radial plane of each spoke and each spoke having a transverse pocket, a spring therein, and a ball fitting in said pocket and engaging said spring and adapted to be projected into said recess when the latter and the pocket are alined.

3. A spring wheel, comprising an inner member having radial openings, which communicate at their inner ends or sides, the sides of the openings occupying the circumferential plane of the wheel converging outwardly, an outer member or rim surrounding the inner member, spokes pivoted at their outer ends to the outer member and provided at their inner ends with squared portions fitting in said openings of the inner member and capable of endwise and oscillatory movements therein, two or more adjacent spokes being adapted under extreme vertical movements of the inner member to engage at their inner ends, and coiled springs mounted on the spokes and exerting endwise pressure in opposite directions thereon, and adapted under sufficient movement of the inner member to be compressed in an outward direction by said inner member.

4. A spoke for a spring wheel having hub and tire members, said spoke comprising a member having two fixed and oppositely facing shoulders, a washer mounted slidingly on said spoke member and in engagement with one of said shoulders, and a spring mounted on said spoke member between said washer and the other of said shoulders, said spoke member having means for detachably securing one end thereof to the tire member, the other end of said spoke member being adapted to slidingly and detachably engage the hub member, said washer being adapted for engagement by the hub member to compress said spring.

5. A spring wheel comprising a hub member, a tire member provided with a series of sockets, a series of internally threaded socket pieces mounted in said sockets, a series of spokes each mounted slidingly at one end within the hub member and provided at its other end with a spherical head seated in one of said socket pieces, a tubular screw fitting around the outer end of each spoke and engaging the corresponding socket piece to secure the head of said spoke therein, and a jam nut for locking each of said tubular screws in position.

1,103,564. SQUARE. MATTHEW CLARKE, Wilkes-Barre, Pa. Filed May 13, 1913. Serial No. 767,386. (Cl. 33—112.)



1. A tri-square including a blade, a stock provided at its free end with longitudinally extending channels in its upper and lower faces, a supplemental stock adapted to engage end to end with the main stock and provided in its upper and lower faces with channels in alinement with the channels of the main stock, and spring arms secured in the channels of the supplemental stock and seating by their free ends in the channels of the main stock.

2. A tri-square including a blade, a stock, and a supplemental stock removable from the main stock, the main stock having channels formed in opposite faces and the supplemental stock having spring arms extending from its end for frictional engagement in the channel.

3. A tri-square including a stock, and a blade extending at right angles to the stock, said blade being provided with a plurality of spaced apart longitudinally extending slots to provide spaced blade portions, one of said blade portions being marked off with scale divisions along its outer edge and having its inner edge notched with the points of the notches in alinement with the divisions of the scale.

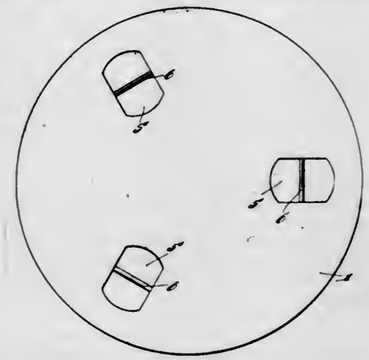
4. A tri-square including a blade, a stock, and adjustable gage arms carried by the stock and means for moving said gage arms toward and away from the outer edge of the stock.

5. A tri-square including a blade, an extensible stock having a main stock portion and a supplemental stock portion slidably connected from movement toward and away from each other, and gage arms slidably carried one by the main stock portion and one by the supplemental stock portion for movement toward and away from the outer edges of their respective stock portions.

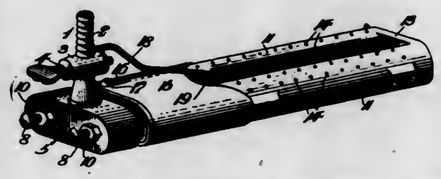
[Claims 6 and 7 not printed in the Gazette.]

1,103,565. STOVE-LID. WILLIAM H. CLOUD, Twin Falls, Idaho. Filed Feb. 28, 1913. Serial No. 751,245. (Cl. 126—220.)

A hollow stove lid comprising a flat upper plate having an inwardly tapering peripheral flange depending therefrom and an annular edge portion at the lower edge of said flange, said edge portion being disposed parallel to said upper plate; a lower plate disposed on said annular edge portion and having depressions extending below the lowest part of said tapering flanges providing legs for the stove lid when not in use; hollow depressed portions depended from said upper plate, extending through the hollow of said lid and engaging the depressions in said lower plate spacing said plates apart and preventing relative rotary movement thereof; and a lid lifter engaging pin across the hollow portion of each of the depressions in said upper plate, substantially as described.



1,103,566. GAS-BURNER. GEORGE B. CORB, JR., Philadelphia, Pa., assignor to Vesta Manufacturing Co., Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 13, 1913. Serial No. 789,593. (Cl. 158—117.)



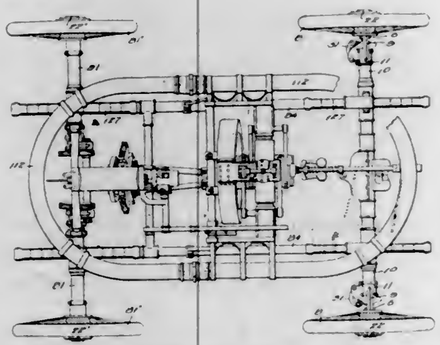
1. A gas-burner, comprising a chamber having a gas inlet and a jet nipple in one wall of the same, a burner tube arranged to register with said nipple and at a distance from said wall and formed with jet-openings in its outer portion, and an air-controlling sleeve longitudinally slidable upon the imperforate inner portion of said tube to more or less cover the space between the inner end of the tube and the chamber and to be covered by the latter when in its extreme closing position.

2. A gas-burner, comprising a chamber formed with a gas inlet and a flat inner wall having a plurality of gas-jet nipples in said wall, a plurality of burner-tubes supported to have their inner ends register with said nipples and at a distance from said wall and having the upper sides of their outer portions formed with jet-openings, and an air-controlling sleeve longitudinally slidable upon the imperforate inner portions of said burner-tubes to more or less cover the space between the inner ends of the latter and the inner wall of the chamber.

3. A gas-burner, comprising a chamber having a flat inner wall formed with a pair of jet-nipples and a screw-threaded stud between said nipples, a pair of burner tubes connected by webs at their ends and having the inner web formed with a threaded opening screwed upon said stud and said tubes formed with jet-openings in the upper sides of their outer portions, and a sleeve slidable upon the inner imperforate portions of said tubes to more or less cover the space between the inner ends of the latter and the wall of the chamber.

4. A gas-burner, comprising a chamber having a flat inner wall formed with a pair of jet-nipples and a screw-threaded stud between said nipples, a connection into said chamber, a pair of burner-tubes connected by webs at their ends and having the inner web formed with a threaded opening screwed upon said stud and said tubes formed with jet-openings in the upper sides of their outer portions, a sleeve slidable upon the inner imperforate portions of said tubes to more or less cover the space between the inner ends of the latter and the wall of the chamber, a pilot-jet-tube extending from said connection to a point beyond said sleeve, and a plate secured between the burner-tubes at a point beneath the jet-opening of said pilot tube.

1,103,567. MOTOR-VEHICLE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and this application filed Aug. 6, 1912. Serial No. 713,650. (Cl. 21—90.)



1. In a motor vehicle, the combination with the front axle and the spindle pivoted thereto, of a wheel on said spindle, two independent bearings interposed between said spindle and the hub of said wheel adjacent the ends of the spindle, said bearings being of different sizes, the larger being mounted at the base end of the spindle, and one of said bearings being located approximately in vertical alinement with the point of contact of the tread of said wheel with the ground while the other of said bearings is located out of line therewith, and a single adjusting means for retaining both bearings in position.

2. In a motor vehicle, the combination with the front axle, the spindle pivoted thereto to swing in a plane at a slight angle to the horizontal, a large bearing mounted at the base end of said spindle, and a smaller bearing mounted at the outer end of said spindle, of a wheel having a hub mounted on said bearings, the rim of the wheel being so constructed and located relative to the hub, and the spindle being so inclined, that the tread of the wheel at the point of contact with the ground is approximately vertically in line with one, and out of line with the other, of said bearings.

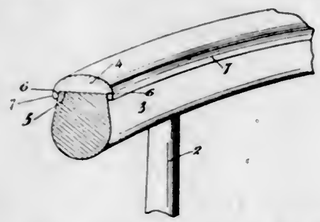
3. In a motor vehicle, the combination with the front axle, the spindle pivoted thereto to swing in a plane at a slight angle to the horizontal, a large bearing mounted at the base end of said spindle, and a smaller bearing mounted at the outer end of said spindle, of a wheel having a hub mounted on said bearings, the rim of the wheel being so constructed and located relative to the hub, and the spindle being so inclined, that the tread of the wheel at the point of contact with the ground is approximately vertically in line with the larger of said bearings.

4. In a motor vehicle, the combination with the front axle, the stepped spindle pivoted thereto, a large bearing mounted at the base end of said spindle, and a smaller bearing mounted at the outer end of said spindle, of a wheel having a hub mounted on said bearings and inclined so that the point of contact of the tread thereof with the ground is approximately vertically in line with the inner and larger of said bearings.

5. In a motor vehicle, the combination with a stationary axle, of a wheel having a hub formed of two concentric tubular members detachably connected together, the spokes of the wheel being attached directly only to the outer of said members and the inner hub member engaging suitable bearings, whereby the wheel and outer hub member may be removed without moving or affecting the said bearings, vertical trunnions supported from the axle and arranged between said concentric members of the hub, and means for adjusting the wheel about the axis of said trunnions.

[Claims 6 to 18 not printed in the Gazette.]

1,103,568. VEHICLE-TIRE. JOHN D. CRAFT, Evansville, Ind. Filed Aug. 23, 1912. Serial No. 716,640. (Cl. 21—155.)



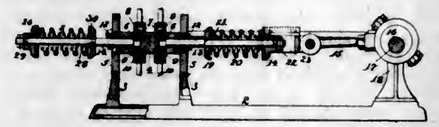
1. In a vehicle wheel, the combination with the felly, of a metallic tire thicker in cross section at the middle than at the sides and of oval contour for a wearing surface to bring the wear upon the thickest portion of the tire, and provided with a channel forming side flanges to fit over the side edges of the felly, with the metal adapted to spread on the surface when in use to cause the flanges to more firmly grip the side edges of the felly and prevent the entrance of dirt and moisture between the tire and the rim.

2. In a vehicle wheel, the combination with the felly, of a metallic tire thicker in cross section at the middle than at the sides and of oval contour for a wearing surface to bring the wear upon the thickest portion of the tire, and provided with a channel forming side flanges, with inside flaring walls, to fit over the side edges of the felly, with the metal adapted to spread on the surface when in use to cause the flanges to more firmly grip the side edges of the felly and prevent the entrance of dirt and moisture between the tire and the rim.

3. In a vehicle wheel, the combination with the felly, of a metallic tire thicker in cross section at the middle than at the sides and of oval contour for a wearing surface to bring the wear upon the thickest portion of the tire, and provided with a channel, the channel having a flat base and slightly flaring side walls, the base to make close contact with the periphery of the felly and the side walls to engage over the side edges thereof, with the metal adapted to stretch on the surface when in use to cause the flanges to more firmly grip the edges of the felly and prevent the entrance of dirt and moisture between the tire and the rim.

1,103,569. HYDRAULIC PUMP. JOSEPH DAVIDSON, East Point, Ga., assignor of one-half to American Machine & Manufacturing Company, a Corporation of North Carolina. Filed June 28, 1912. Serial No. 706,388. (Cl. 103—85.)

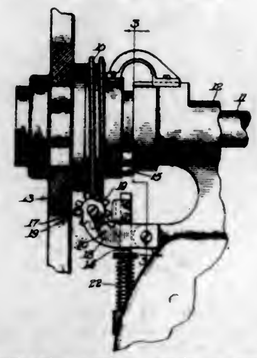
1. In a hydraulic pump, the combination of a base, a pair of frames supported by said base and suitably spaced apart, a cylinder fixed between said frames having a valved inlet and a valved outlet, a plunger mounted for sliding movement in said cylinder, a cross head connected to said plunger to positively actuate said plunger in one direction of movement and yieldingly connected to said plunger to actuate said plunger in the opposite direction, stationary guide rods fixed to said frames upon which said cross head is adapted to reciprocate to guide it in relation to the cylinder, and means to reciprocate said cross head having a connection therewith and supported by the stationary rods.



2. In a hydraulic pump, the combination of a base, a pair of frames supported by said base and suitably spaced apart, a cylinder fixed between said frames having a plurality of valved inlets and a plurality of valved outlets, a pair of plungers mounted for sliding movement in said cylinder and extending in opposite directions, cross heads respectively connected to said plungers to positively actuate said plungers in their suction movements and yieldingly connected to said plungers in the opposite direction, springs between the cross heads and the plungers to cause them to yieldingly move on the compression strokes, rods secured to and connecting said cross heads and slidingly mounted in said frames whereby the cross heads are simultaneously moved in the same directions, guide rods fixed to said frames upon which one of said cross heads is adapted to reciprocate and be guided, and means to reciprocate said cross head.

3. In a hydraulic pump, the combination of a cylinder having plunger chambers extending and opening in opposite directions, plungers for said chambers respectively extending beyond the cylinder at each end thereof, stuffing-boxes around the plungers, a reciprocating frame through each end of which the free ends of the plungers extend with a sliding fit, springs arranged between the frame and each of the plungers for subjecting said plungers to elastic pressure in a direction to move them into the respective chambers, lock nuts screwed upon the ends of the plungers to provide adjustable adjustments whereby the plungers may be adjusted in the frame and the cylinders and the frames operate the plungers in withdrawing them outwardly in respect to the chambers and also for adjusting the tensions of the springs to vary the maximum compression, and power devices for reciprocating the frame.

1,103,570. CLUTCH-TRIP-ACTUATING DEVICE. ALFRED L. DAY, Chicago, Ill., assignor to American Perforator Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 26, 1912. Serial No. 727,991. (Cl. 192—1.)



1. The combination with a driving member, a driven member, and a clutch between said members, of a tripper for said clutch, and a worm rotating with said driving member and meshing with an intermittently tripper operating pinion.

2. The combination with a driving member, a driven member, a clutch between said members and means for tripping said clutch, of a cam pinion having a projection thereon adapted to actuate said tripping means, and a worm carried by said driving member and meshing with said pinion to rotate the same.

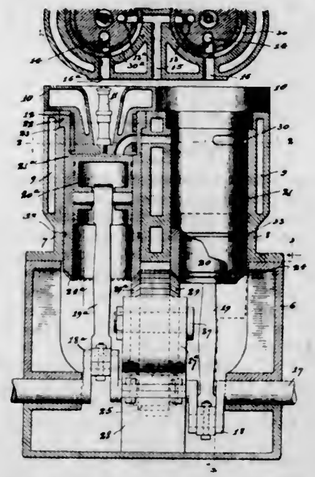
3. The combination with a driving member, a driven member and a clutch between said members, of a plunger adapted, when operated, to trip said clutch, a cam having a projection adapted to engage and operate said plunger, and gearing between said cam and said driving member.

4. The combination with a driving member, a driven member, and a clutch between said members, of a plunger adapted when operated to trip said clutch, a cam pinion having a projection thereon adapted to engage said plunger and operate the same, and a worm operated by said driving means and meshing with said pinion to rotate the same.

5. The combination with a driving member, a driven member, and a clutch between said members, of a plunger adapted when operated to trip said clutch, a projection on said plunger lying in the path of a projection carried by a pinion, and a worm carried and operated by said driving member meshing with said pinion.

[Claim 6 not printed in the Gazette.]

1,103,571. INTERNAL-COMBUSTION ENGINE. THEODORE DIXON and PETE GRIGSBY, West Baden, Ind. Filed Nov. 4, 1911. Serial No. 658,496. (Cl. 123—80.)

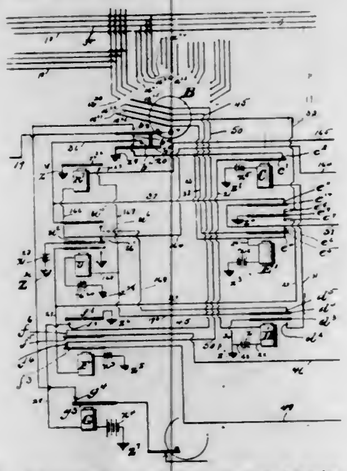


1. An internal combustion engine having in combination a fixed cylinder provided with intake and exhaust ports and having an annular shoulder near its upper end, a second cylinder rotatably mounted in said fixed cylinder and provided with an exterior annular shoulder adapted to rest on the shoulder of said fixed cylinder and with an interior annular shoulder, a port in said second cylinder in registering alinement with the ports of said fixed cylinder, a head for said cylinders extending over the ends thereof and having an extension entering said second cylinder and bearing against the interior shoulder thereon, ports in said head in registering alinement with the ports in the fixed cylinder, a piston in said second cylinder and means for rotating said second cylinder.

2. In an engine, the combination with a plurality of cylinders each provided with inlet and exhaust ports and each having the upper end thereof enlarged circumferentially to form a shoulder, a piston adapted for reciprocation within each cylinder, and a crank shaft common to all of said pistons, of a valve within each cylinder and rotatable therein between the cylinder wall and the piston and having the upper end thereof enlarged circumferen-

tially to fit the similarly formed portion of the inner wall of the cylinder and forming a shoulder resting upon the first mentioned shoulder, each valve being provided with a plurality of ports adapted to register with the ports in the respective cylinder, driving connections between all of said valves whereby the same will operate simultaneously, and driving connections between said crank shaft and valves.

1,103,572. AUTOMATIC TELEPHONE SYSTEM. BERT G. DUNHAM, Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed July 12, 1909. Serial No. 507,195. (Cl. 179—18.)



1. In an automatic telephone exchange, a series of finder switches, and means for operating said switches to find a subscriber's line by closing the subscriber's circuit, selector switches connected to said finder switches, means for operating said selector switches in response to interruptions in the current passing over the subscriber's line to cause said selector switch to step any desired distance, trunks having terminal contacts in said selector switches arranged in groups, said trunks being connected in multiple to other selector switches and means for continuing the operation of a switch after the impulses from the subscriber's station have ceased to cause it to automatically find an idle trunk in the group selected.

2. The combination with a selector switch having bank terminal contacts arranged in groups in the same horizontal plane, wipers for traversing said contacts, and an operating relay connected with said switch adapted to be connected to a subscriber's line and respond to impulses from a subscriber's station, a motor magnet controlled by said operating relay to cause said switch to advance one step for each impulse in said operating relay, and a second operating relay adapted to receive operative energy through a circuit in which a wiper on said switch constitutes a part, said second operating relay being adapted to control said motor magnet and operate the same when the wiper on said switch completes the circuit to said second operative relay, and means for completing the circuit through said wiper when a trunk associated with the terminal with which said wiper is engaged is in use in another switch, as and for the purpose set forth.

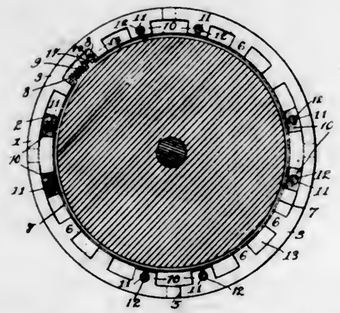
3. In an automatic telephone system, selector switches, terminal contacts arranged in horizontal rows, means for operating said switches by impulses from the subscriber's station to cause the wipers of a switch to traverse said terminal contacts, and means for supplying current to the operating mechanism of a switch through one of said contacts to cause it to continue its operation to find an idle trunk or connection, and means for holding the operating mechanism of said switch from being released by the opening of the subscriber's line during the automatic stepping of said switch, as and for the purpose set forth.

4. In an automatic telephone system, a series of subscribers' lines, finder switches less than the number of lines arranged in groups and connected in multiple to said lines, a plurality of selector switches less than the number of lines and connected to said finder switches, connector switches arranged in groups connected in multiple to trunks terminating in contacts arranged in groups in the selector switches, said contacts in different switches being arranged in single banks but the groups separated by abnormal contacts, means in said selector switches for responding to impulses from the subscriber's station when connected thereto by the finder switches, said impulses thereby being adapted to cause said selector switches to move one step for each impulse to select the terminals of trunks in different groups, and means for automatically continuing the operation of said switch after said impulses cease to cause it to find an idle trunk in the said group and to connect the subscribers' wires to the said idle trunk and thus to a connector switch, said abnormal contacts being arranged to automatically stop said switch and prevent its further movement in case all the trunks of the group are busy, as and for the purpose set forth.

5. In an automatic telephone exchange, a selector switch and other switches with which the subscribers' lines are to be connected, a line relay, means for connecting said line relay into subscribers' lines when the said subscribers' lines are extended to said selector switch, a motor magnet adapted to produce a step-by-step movement of said switch, and mechanism for operating said motor magnet in response to impulses in said line relay, trunk connections arranged in groups to said other switches, said trunk connections ending in terminals arranged in groups in banks of said selector switch, an operating relay independent of said line relay adapted to be operated by current supply through a circuit of which one of the terminals of said trunk is a part, means connected with said operating relay for causing the motor magnet to respond to impulses in said operating relay independent of said line relay, means for deënergizing said operating relay and thus stopping said switch when the wiper reaches an idle trunk, and electrical means also operated through said wiper to disconnect the line relay and to switch the subscribers' lines onto the wipers of the switch for connection to the idle trunk thus found.

[Claims 6 and 7 not printed in the Gazette.]

1,103,573. PISTON PACKING-RING. GEORGE H. ESTABROOKS, Brooklyn, N. Y. Filed Apr. 13, 1914. Serial No. 831,365. (Cl. 121—108.)



1. A piston provided with a packing ring comprising a plurality of transversely divided sections, means at each end thereof for preventing the rotation of the section while permitting the expansion thereof equally from end to end and a band spring located between said sections and the piston for expanding said sections.

2. A piston provided with a packing ring comprising a plurality of transversely divided sections and means at each end thereof for preventing the rotation of the section while permitting the expansion thereof equally from end to end, said means comprising fastening means and slots of larger diameter than said fastening means.

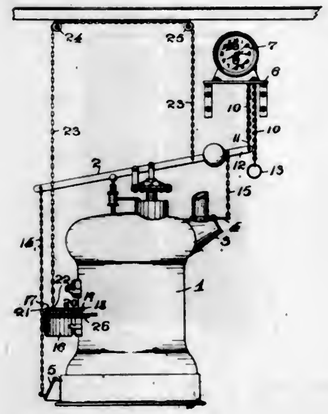
3. A piston provided with a packing ring comprising a plurality of transversely divided sections, means at each end of each of said sections for preventing the rotation of the section while permitting the expansion thereof equally from end to end, and a single spring located between said sections and the piston for expanding said sections.

4. A piston provided with a packing ring comprising a pair of superimposed layers each divided transversely into a pair of sections, each of said sections having at its opposite ends means for preventing the rotation of the section while permitting the movement thereof equally from end to end thereof, and a spring for expanding all of said sections simultaneously.

5. A piston provided with a packing ring comprising a pair of superimposed layers each divided transversely into a pair of sections, each of said sections having at its opposite ends means for preventing the rotation of the section while permitting the movement thereof equally from end to end of said section, and a spring for expanding all of said sections simultaneously, each of said sections having inwardly extending lugs in engagement with said spring.

[Claims 6 to 27 not printed in the Gazette.]

1,103,574. HEAT-REGULATING DEVICE. ARTHUR P. FELSBERG, Newark, N. J. Filed Nov. 1, 1912. Serial No. 729,014. (Cl. 161—8.)



1. The combination with means for operating the draft-regulating devices of a furnace, of a clock comprising a casing formed with an opening, and an arbor-speed-controlling mechanism, an arbor normally held against rotation by said mechanism, a sprocket-wheel mounted upon said arbor, and a link-chain extending into and through the opening in said casing and arranged to run upon said sprocket-wheel and in engagement with the sprocket-teeth thereof, said chain being fastened at one end to the means for operating said draft-regulating devices, all arranged that the free end-portion of the said chain when pulled rotates said sprocket-wheel in one direction for setting said draft-regulating devices, and the other portion of the chain when the speed-controlling mechanism acts being actuated by the weight of the means for operating the draft-regulating devices while its movement is also controlled and regulated by said speed-controlling mechanism.

2. The combination with a damper-rod of a furnace for operating the draft-regulating devices of the furnace, of a clock comprising a casing formed with an opening, and an arbor speed-controlling mechanism, an arbor normally held against rotation by said mechanism, a sprocket-wheel mounted upon said arbor, and a link-chain extending into and through the opening in said casing and arranged to run upon said sprocket-wheel and in engagement with the sprocket-teeth thereof, said chain being fastened at one end to said damper-rod, all arranged that the free end-portion of the said chain when pulled rotates said sprocket-wheel in one direction for setting said draft-regulating devices, and the other portion of the chain when the speed-controlling mechanism acts being actuated by the weight of the damper-rod while its movement is also controlled and regulated by said releasing and speed-controlling mechanism.

3. In a gate-opening means, in combination with a gate, a clock comprising a casing formed with an opening, and an arbor-speed-controlling mechanism, an arbor normally held against rotation by said mechanism, a sprocket-wheel mounted upon said arbor, and a link-chain extending within and through the opening in said casing and arranged to run upon said sprocket-wheel and in engagement with the sprocket-teeth thereof, said chain being connected at one end with said gate, and all arranged that one portion of the chain when pulled rotates said sprocket-wheel in one direction for setting said gate, and the other portion of the chain when the speed-controlling mechanism acts being actuated by said gate while its movement is also controlled and regulated by said speed-controlling mechanism.

1,103,575. TIME-CARD. NICHOLAS T. FICKER, New York, N. Y. Filed July 25, 1912. Serial No. 711,463. (Cl. 11—3.)



1. A card having printed on its obverse face in a vertical line a series of numerals indicating successive hours and, opposite each numeral of the vertical row a horizontal row of numerals differing successively by a constant difference and in regular sequential order as read across the card beginning at the vertical row, all the horizontal rows consisting of the same numerals in the same order and having on its reverse face numerals printed behind the numerals on the obverse face, said reverse numerals, forming a continuous series as read in horizontal rows in the direction opposite to the direction of progress of the corresponding obverse rows, and the numerals of said reverse series differing successively by unity, the lowest numeral of the reverse series being in horizontal alinement with the numeral indicating the latest hour in the obverse vertical line, substantially as described.

2. A card having printed on its obverse face in a vertical line a series of numerals indicating successive hours and opposite each numeral of the vertical row a horizontal row of nine numerals in regular sequential order as read across the card beginning at the vertical row, said numerals indicating by their difference equal fractions of an hour; and having on its reverse face numerals printed behind the numerals on the obverse face, said reverse numerals forming a series continuously increasing by unity as read in horizontal rows in the direction opposite to the direction of progress of the corresponding

obverse rows, the lowest numeral of the reverse series being in horizontal alinement with the numeral indicating the latest hour in the obverse vertical line, whereby, on punching numerals on the obverse face corresponding to the beginning and end of a given time period, the difference between the reverse members punched will indicate the elapsed time in tenths of an hour, substantially as described.

3. A card having printed on its obverse face in a vertical line a series of numerals indicating successive times, and opposite each numeral of the vertical row a horizontal row of numerals differing successively by a constant difference and in regular sequential order as read across the card beginning at the vertical row, all the horizontal rows consisting of the same numerals in the same order and having on its reverse face numerals printed behind those on the obverse face and constituting a group formed of horizontal rows so placed that there is a constant difference between successive numerals as read in successive horizontals always read in the same direction, said reverse numerals having such values with respect to their corresponding obverse numerals that the difference between any two of them will indicate the elapsed period between the times indicated by the corresponding obverse numerals, substantially as described.

1,103,576. ROSETTE FOR BRIDLES. THOMAS A. FOX, Newark, N. J., assignor to The Steffens-Amberg Co., a Corporation of New Jersey. Filed Feb. 2, 1912. Serial No. 675,079. (Cl. 54—76.)



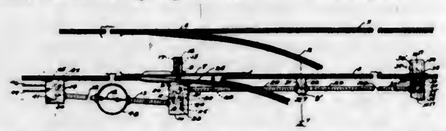
1. A rosette for the bridles of harness, comprising a main central and outwardly convexed body of circular marginal configuration, an outer ring-shaped element concentric with said central body, and radiating arms extending at intervals from the marginal edge-portion of said body and connected with said ring-shaped element, said ring-shaped element and said radiating arms being of greater thickness than the main central body, all arranged to provide a series of four arc-shaped openings for securing in the respective openings, the front, crown, cheek and throat-straps of the bridle, substantially as and for the purposes set forth.

2. A rosette for the bridles of harness, comprising a main central body of circular marginal configuration, an outer ring-shaped element concentric with said central body, said body having an outer convex face and recessed back, and radiating arms extending at intervals from the marginal edge-portion of said body, said arms being of greater thickness than that of the body, and said arms being connected with said ring-shaped element, all arranged to provide a dish-shaped rosette having a series of four arc-shaped openings for securing in the respective openings, the front, crown, cheek and throat-straps of the bridle, substantially as and for the purposes set forth.

1,103,577. SAFETY AUTOMATIC RAILWAY-SWITCH. ROBERT H. FRENCH, Sherman, Cal., assignor of one-half to Sidney C. Rowe, Beverly, Cal. Filed Oct. 3, 1911. Serial No. 652,636. (Cl. 104—24.)

1. An automatic release switch comprising a switch tongue, a spring to move the switch tongue, a second spring to resiliently hold the switch tongue against movement caused by the first spring, and means to throw the second spring into and out of commission.

2. An automatic release switch comprising a switch tongue, a spring to move the switch tongue to open the switch, a second spring to hold the switch tongue immovable against the pressure of the first spring, and means to throw the second spring into and out of commission.



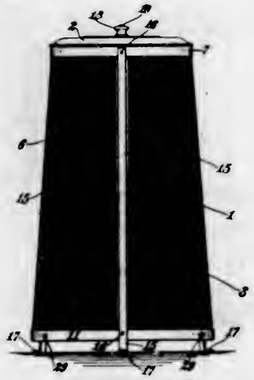
3. An automatic release switch comprising a switch tongue, a spring to move the switch tongue, resilient means to hold the switch tongue against such movement, and means operatable by a car wheel after passing over the switch to throw said resilient means out of commission.

4. An automatic release switch comprising a switch tongue, a spring to move the switch tongue, a second spring to resiliently hold the switch tongue against movement, and means operatable by the car after passing the switch to throw the second spring out of commission.

5. An automatic release switch comprising a switch tongue, a spring to move the switch tongue in one direction, resilient means to lock the switch tongue against such movement, means to release the resilient locking means, and means to move the switch tongue in the other direction when the locking means have been released.

[Claims 6 to 9 not printed in the Gazette.]

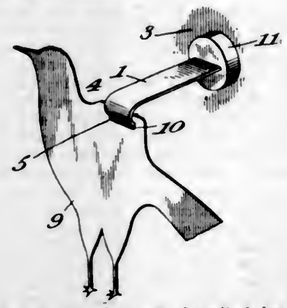
1,103,578. FLY-TRAP. EDWIN J. GOULD, St. Louis, Mo., assignor to The Ludlow-Saylor Wire Company, St. Louis, Mo., a Corporation of Missouri. Filed June 16, 1913. Serial No. 773,824. (Cl. 43—22.)



An insect trap comprising a body formed of a section of wire-netting bent in the shape of a truncated cone, a metal strip covering and connecting the side edges of the wire-netting, annular metal strips covering the upper and lower edges of the body, a cover for the upper end of the body, an open apex wire-netting cone fitting within the lower end of the body, an annular metal strip covering the lower edge of said cone and being detachably secured to the lower strip of the body, and means connecting the upper and lower strips of the body and extending beyond the lower strip to form feet, one of said means being arranged to overlie the said metal strip that connects the wire-netting of which the body is formed.

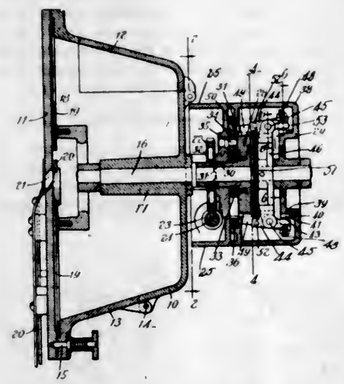
1,103,579. GAME APPLIANCE. FRANK H. HALL, Yonkers, N. Y. Filed June 6, 1913. Serial No. 772,024. (Cl. 124—15.)

1. A device of the character described having a supporting member provided with an elongated horizontally extended shank portion one end of which is adapted for attachment to a supporting surface, and the opposite forward end portion of which is provided with a downwardly directed hook like portion having at its lower part a wide flattened surface whereon an object to be supported is adapted to be detachably engaged and prevented from accidental movement, the extremity of said hook like portion being directed rearwardly behind said flattened supporting surface to facilitate slipping of the supported object rearwardly out of engagement therewith when struck by a missile.



2. A device of the character described having a supporting member provided with an elongated horizontally extended shank portion, one end of which is adapted for attachment to a supporting surface, and the opposite forward end portion of which is provided with a downwardly directed hook like portion having at its lower part a wide flattened surface whereon an object to be supported is adapted to be detachably engaged and prevented from accidental movement, the extremity of said hook like portion being provided with opposite converging edges affording a tapering point extended at an inclination upward and rearwardly behind said flattened supporting surface to facilitate slipping of the supported object rearwardly out of engagement therewith when struck by a missile.

1,103,580. HOPPER. ARTHUR R. HAVENER, Waltham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Feb. 7, 1914. Serial No. 817,272. (Cl. 218—17.1.)



1. A hopper for feeding articles having, in combination, a casing constructed and arranged to hold said articles, a raceway leading out of said casing, a picker plate constructed and arranged to feed said articles from said casing to said raceway, mechanism constructed and arranged to rotate said picker plate and mechanism constructed and arranged to reverse the direction of rotation of said picker plate when abnormal resistance to said rotation is encountered.

2. A hopper for feeding articles having, in combination, a casing constructed and arranged to hold articles, a raceway leading out of said casing, a picker plate constructed and arranged to feed said articles from said casing to said raceway, a shaft to which said picker plate is fastened, a clutch member fast to said shaft, two drivers, mechanism constructed and arranged to rotate said drivers in opposite directions, respectively, and means constructed and arranged to unlock said clutch member from one of said drivers and to lock it to the other of said drivers when abnormal resistance to the rotation of said picker plate is encountered thereby.

3. A hopper for feeding articles having, in combination, a casing constructed and arranged to hold articles, a raceway leading out of said casing, a picker plate constructed and arranged to feed said articles from said casing to said raceway, a shaft to which said picker plate is fastened, a clutch member fast to said shaft, two drivers, mechanism constructed and arranged to rotate said drivers in opposite directions, respectively, and means constructed and arranged to alternately unlock said clutch member from one of said drivers and to lock it to the other of said drivers when abnormal resistance to the rotation of said picker plate is encountered thereby, said last-named means constructed and arranged to unlock said clutch member from said last-named driver and to lock said clutch member to said first-named driver when said resistance has been overcome.

4. A hopper for feeding articles having, in combination, a casing constructed and arranged to hold articles, a raceway leading out of said casing, a picker plate constructed and arranged to feed said articles from said casing to said raceway, a shaft to which said picker plate is fastened, a clutch member fast to said shaft, two drivers, mechanism constructed and arranged to rotate said drivers in opposite directions, respectively, and means constructed and arranged to normally lock one of said drivers to said clutch member, said means constructed and arranged to yield when abnormal resistance to the rotation of said picker plate is encountered thereby and allow said clutch member to be unlocked from said last-named driver and to be locked to the other of said drivers.

5. A hopper for feeding articles having, in combination, a casing constructed and arranged to hold articles, a raceway leading out of said casing, a picker plate constructed and arranged to feed said articles from said casing to said raceway, a shaft to which said picker plate is fastened, an arm, constituting a clutch member, fastened to said shaft, a driver rotatably mounted on said shaft and having a recess in its periphery, a second driver rotatably mounted on said shaft, a friction ring engaging said second driver, mechanism constructed and arranged to rotate said drivers in opposite directions, respectively, a rocker arm pivoted to said clutch member, and a spring acting to hold one end of said rocker arm in engagement with said recess, the opposite end of said rocker arm arranged in locking engagement with said friction ring, whereby, when abnormal resistance to the rotation of said picker plate is encountered thereby, said rocker arm will be forced out of said recess and against said friction ring to lock said clutch member to said second driver whereby the direction of rotation of said shaft will be reversed.

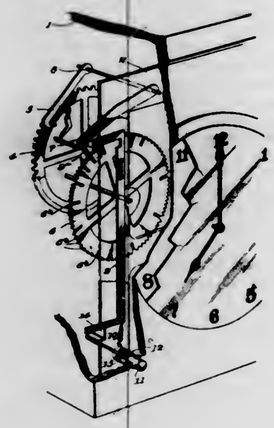
[Claims 6 to 11 not printed in the Gazette.]

1,103,581. CLOCK-SYNCHRONIZER. MAX HENDLER, Staunton, Ill. Filed Oct. 23, 1913. Serial No. 796,864. (Cl. 58—8.)

1. In a clock including a striking mechanism and controlling detents therefor, a means for operating the detents comprising in combination a vertically movable lifting link coöperating at its upper end with said detents, a cam member coöperating with said lifting link at its lower end, and a push button disposed in the lower portion of the clock casing and adapted to operate said cam member for the purpose described.

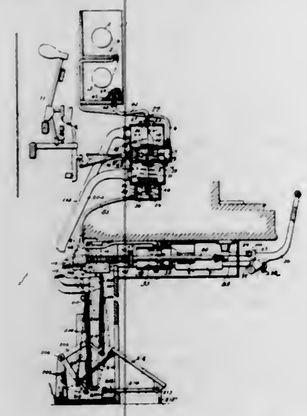
2. In a clock having a striking mechanism including controlling detents, a means for operating said detents comprising a lifting link slidably mounted upon a portion of the clock frame, said lifting link being provided at its upper end with an extension adapted to coöperate with said detents, said lifting link being provided at its lower extremity with a lateral extension, a cam member adapted

to coöperate with said lateral extension to slide the link upwardly, and means mounted in the lower portion of the



clock casing and operable from the exterior thereof for operating said cam member to lift said link.

1,103,582. EXPRESSION DEVICE FOR PLAYER-PIANOS AND THE LIKE. CHARLES P. HIDDEN, New York, N. Y. Filed Mar. 8, 1910. Serial No. 548,039. (Cl. 84—160.)



1. In an automatic musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of the force which said elements are capable of exerting being variable, devices for varying said intensity of force, to permit solo or thematic effects to be produced, and automatically operating means for controlling said devices, said means comprising a ported member and a port controlling member, one of said members being movable in one direction and one of said members being movable in a direction diverse to that just referred to, and means for effecting said movements.

2. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, devices for varying said intensity of force, to permit solo and thematic effects to be produced, automatically operating means for controlling said devices, automatic indicating means for indicating the notes selected for accentuation by said operating means, and connections between said two means for actuating said indicating means in correspondence with said means for controlling said devices.

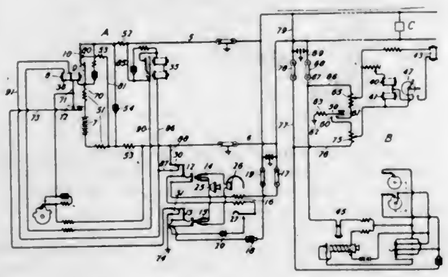
3. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, devices for varying said intensity of force, to permit solo and thematic effects to be produced, automatically operating means for controlling said devices, automatic indicating means for indicating the notes selected for accentuation, connections between said two means for actuating said indicating means in correspondence with said means for controlling said devices, a manually controlled part adapted to co-act with portions of said automatically operating means for manually controlling accentuation when desired, said connections between said means being operative for both the automatic and manual control of accentuation.

4. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, devices for varying said intensity of force, to permit solo and thematic effects to be produced, and means for controlling said devices, said means comprising a member the disposition of which determines the notes selected for accentuation, means co-acting with said member for selecting said notes, a group of co-acting, independently controlled instrumentalities for positioning said member in any one of a plurality of positions, and a second group of co-acting, independently controlled instrumentalities for positioning said member in any one of a plurality of positions substantially different from the positions above referred to.

5. In a musical instrument, a plurality of note sounding parts, force applying elements coöperating with said parts, the intensity of force which said elements are capable of exerting being variable, pneumatic devices for varying said intensity of force, to permit solo and thematic effects to be produced, and selective mechanism for controlling said devices comprising a ported member adapted for coöperaton with a perforated roll, said ported member having a group of ports corresponding to the number of force applying elements used and having also auxiliary ports the number of which is relatively small as compared to said group of ports, a member, a plurality of co-acting pneumatics controlled by the auxiliary ports aforesaid, said pneumatics being in two groups and each group adapted to act independently of the other, said governing member being in turn controlled by said pneumatics.

[Claims 6 to 47 not printed in the Gazette.]

1,103,583. SELECTIVE SIGNALING SYSTEM. RALPH N. HILL, Montclair, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 21, 1912. Serial No. 685,243. (Cl. 179—85.)



1. In a selective signaling system the combination with line wires having a sending station and a plurality of waystations connected therewith, of impulse transmitting means at said sending station including an impulse relay

for transmitting signaling impulses over said line wires, apparatus connecting devices at said sending station, a circuit-closing device at each of said way-stations, an operating circuit for said impulse relay including said circuit-closing devices and contacts on said apparatus connecting devices, a local signal and a circuit therefor closed by said impulse relay and including contacts on said apparatus connecting devices.

2. In a selective signaling system the combination with line wires having a sending station and a plurality of waystations connected therewith, of impulse-transmitting means at said sending station including an impulse relay, circuit-closing means and connections for operating said relay from any one of said waystations, a signal at the sending station adapted to be controlled by the operation of said impulse relay, and means for maintaining said relay operated after the release of the circuit-closing means at the waystation.

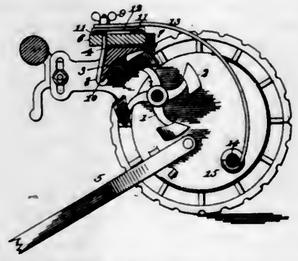
3. In a selective signaling system the combination with line wires having a sending station and a plurality of waystations connected therewith, of impulse-transmitting means at said sending station including an impulse relay, circuit-closing means and connections for operating said relay from any one of said waystations, a signal at the sending station adapted to be controlled by said impulse relay, and a locking circuit for said impulse relay adapted to be closed thereby.

4. In a selective signaling system the combination with line wires having a sending station and a plurality of waystations connected therewith, of impulse-transmitting means at said sending station including an impulse relay, circuit-closing means and connections for operating said relay from any one of said waystations, a signal at the sending station adapted to be controlled by said impulse relay, a holding circuit for maintaining said relay energized after the release of the circuit-closing means at the waystation, and means at the sending station for interrupting said holding circuit.

5. In a selective signaling system the combination with line wires having a sending station and a plurality of waystations connected therewith, of impulse-transmitting means at said sending station including an impulse relay, circuit-closing means and connections for operating said relay from any one of said waystations, a signal at said sending station adapted to be controlled by said impulse relay, a holding circuit for maintaining said relay energized after the release of the circuit-closing means at the waystation, a telephone set adapted to be connected with the line wires at the sending station, and means operated in the connection of said telephone set to the line wires for releasing said impulse relay.

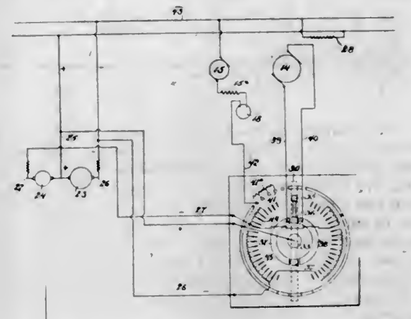
[Claims 6 and 7 not printed in the Gazette.]

1,103,584. LAWN-MOWER SHARPENER. JOHN HINEMAN, Cedar Rapids, Iowa. Filed Feb. 12, 1914. Serial No. 818,268. (Cl. 51—8.)



A grinder for lawn-mowers, comprising a straight-edged abrasive slab, a holder therefor adapted to rest on the ledger-blade of the mower, hook-bolts adapted to clamp said holder in position at one side, and curved, slightly elastic hooks engaging said holder at one end, and at the other end engaging the mower cross-rod.

1,103,585. GLASS-DRAWING APPARATUS. HARRY F. HITNER, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1909. Serial No. 481,048. (Cl. 172—239.)



1. A glass-drawing apparatus comprising in combination a driven member and power mechanism for actuating said driven means comprising a pair of electric generators of different voltage, a pair of electric motors of different power, and a single controlling means whereby the motors are successively connected to drive the driven means and whereby the generators are successively brought into connection with one of the motors.

2. In a glass drawing apparatus, a driven member and a driving means therefor comprising two electric motors of different power operated by a high voltage circuit, a low voltage circuit for starting the stronger motor, a circuit controller whereby the motors may be successively brought into operative connection with the driven member and the circuits changed, and a resistance means for the circuit co-acting with the circuit controller, arranged so as to graduate the change between the two motor drives.

3. In glass drawing apparatus, a driven member, and driving means therefor comprising, a main motor, a smaller motor, two generators of different voltage, and a controller and connections whereby the driven member is first brought into operative connection with the smaller motor supplied with current from the generator of higher voltage, then into operative connection with the larger motor supplied with current from the generator of lower voltage, and finally into operative connection with the larger motor supplied with current from the generator of higher voltage.

4. A glass drawing apparatus, a driven member, and driving means therefor comprising, a main motor, a smaller motor, two generators of different voltage, a controller and connections whereby the driven member is first brought into operative connection with the smaller motor supplied with current from the generator of higher voltage, then into operative connection with the larger motor supplied with current from the generator of lower voltage, and finally into operative connection with the larger motor supplied with current from the generator of higher voltage, and resistance means arranged so as to graduate the change from one operative connection to the next.

1,103,586. SHUTTLE MECHANISM. AZEL C. HOUGH, Janesville, Wis. Filed Nov. 26, 1913. Serial No. 803,309. (Cl. 139—27.)

1. The combination, with a shuttle, of the class described, provided with holding means for weft-units, and further provided with means for positively ejecting such units from such holding means, of means capable of causing such detaching means to be actuated when said shuttle arrives at a predetermined place in its course.

2. The combination, with the raceway of a loom, of a shuttle for such raceway, such shuttle being provided with

holding means for weft-units, and further provided with means for positively ejecting such units from such holding means, and an actuating dog, for said detaching means, located in the path of the latter.



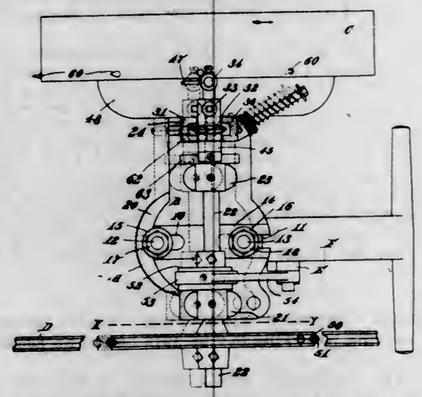
3. The combination, with the raceway of a loom, of a shuttle adapted to travel in such raceway, such shuttle being provided with separable holding means for weft-units, and further provided with a spring-pressed member which has a part that projects into operative position relative to said holding means and a weft-unit in the grasp thereof, and a dog in the path of said spring-pressed member, the arrangement of parts being such that, when said spring-pressed member encounters said dog, a weft-unit in the grasp of said holding means is positively ejected therefrom.

4. The combination, with the raceway of a loom, of a shuttle for such raceway, such shuttle being provided with holding means for weft-units, and further provided with means for positively ejecting such units from such holding means, and an actuating dog, for said detaching means, located in the path of the latter, and adapted to act upon the latter only when the shuttle is moving in one direction.

5. The combination, with the raceway of a loom, a shuttle adapted to travel in such raceway, such shuttle being provided with separable holding means for weft-units, and further provided with a spring-pressed member which has a part that projects into operative position relative to said holding means and a weft-unit in the grasp thereof, of a swinging dog in the path of said spring-pressed member, and means to prevent such dog from moving in one direction out of an approximately perpendicular position, the arrangement of parts being such that, when said spring-pressed member encounters said dog, a weft-unit in the grasp of said holding means is positively ejected therefrom.

[Claims 6 to 9 not printed in the Gazette.]

1,103,587. SEWING-MACHINE. HUGH HOUSTON, Lawrence, Mass. Filed June 2, 1911. Serial No. 630,801. (Cl. 112—8.)



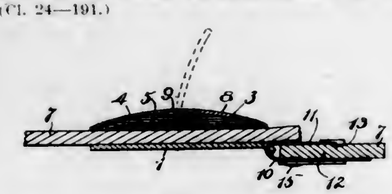
1. In a sewing machine having a post and a bracket attached thereto, the combination with continuous feed devices supported by the post, of a head slidable on said post in a direction parallel with the feed and having a looper and a needle in operative relation with each other and proximate the feed devices and having a needle driving shaft and an eccentric carried by the needle driving shaft and an eccentric strap carried by said eccentric and pivotally connected by an eccentric rod to said bracket as described.

2. In a sewing machine, the combination with continuous feed devices, of a head having a reciprocating needle and a thread catching device both in operative relation with each other and proximate the feed devices, said head being provided with means whereby it is positively caused to move in one direction parallel with the feed and back to its original position, together with driving means for the head mechanism movable with the head.

3. In a sewing machine, the combination with a feed pulley provided with pins which are projected through the rim and retracted therefrom as the pulley rotates, of a head having a reciprocating needle and a looper in operative relation with each other and proximate the feed pulley, said head being slidable back and forth in a direction parallel with the movement of the feed pulley, and means whereby the head is positively caused to move in one direction with a portion of the feed pulley and back to its original position, together with driving means for the head mechanism movable with the head.

4. In a sewing machine, the combination with a feed pulley provided with pins which are projected through the rim and are retracted therefrom at certain portions of the rotation as the pulley rotates, of a head slidable back and forth in a direction parallel with the movement of the feed pulley, means whereby the head is positively caused to slide back and forth in a direction parallel with the movement of a portion of the feed pulley, and driving means for the head mechanism movable with the head, together with a reciprocating needle and a looper in operative relation with each other and proximate the feed pulley, said needle being supported by the needle bar and a long boss whereby it is in elastic relation with the feed mechanism.

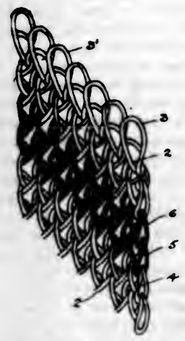
1,103,588. BUCKLE. ERNEST N. HUMPHREY, New Britain, Conn., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 20, 1913. Serial No. 790,829 (Cl. 24—191.)



A buckle comprising a box-like structure including a bottom having upturned flanges at the upper and lower edge, with a fixed top extending from the front end back to approximately the middle and supported on said flanges and spaced from said bottom plate to afford a belt passage, a lever hinged adjacent one end to said flanges adjacent the middle of the box structure and closely adjacent to the fixed top, said lever comprising a hinged part forming a continuation of the top of the buckle and providing at its hinged end a cam member, a clamping plate arranged within the box for movement relative thereto and lying substantially in the line of the belt passage, said clamping plate having a substantially uniform flat under face of substantial area for engagement with a strap and said lever cam being arranged to engage the upper face of said plate to move the latter down toward the strap.

1,103,589. KNITTED FABRIC. JOSEF KELLNER, Brooklyn, and SIDNEY WORMS, New Rochelle, N. Y., assignors to Franklin Knitting Mills, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1913. Serial No. 752,902. (Cl. 66—4.)

1. As an article of manufacture, a bias flat knitted complete fabric of sufficient length to enable it to serve a useful purpose in the manufacture of an article of commerce having lengthwise extending selvage side edges and having the stitches all running in the same direction and made with one side under greater tension than the other.



2. As an article of manufacture, a bias flat knitted fabric having lengthwise extending selvage edges having knitted therein a bias stripe of a contrasting color or colors.

3. As an article of manufacture, a flat knitted complete fabric having lengthwise extending selvage edges having knitted therein one or more substantially true bias stripes each of a contrasting color or colors from the body of the fabric.

4. As an article of manufacture, a bias flat knitted fabric having straight or unscalloped lengthwise extending selvage side edges from end to end thereof and having knitted therein one or more substantially true bias stripes each of a contrasting color or colors from the body of the knitted fabric, the stitches of said body and stripe or stripes all running in the same direction.

5. As an article of manufacture, a knitted fabric having lengthwise extending selvage edges and having all of the thread loops thereof running on a bias and having a stripe or stripes knitted therein of a contrasting color or colors, all of the thread loops of said stripe or stripes also running on a bias and in the same direction as the stitches of the other portion of the fabric.

[Claim 6 not printed in the Gazette.]

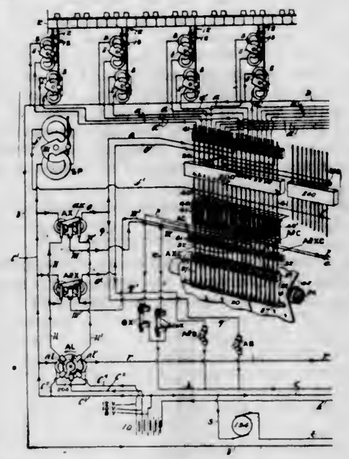
1,103,590. EXPRESSION-CONTROLLING MEANS FOR MUSICAL INSTRUMENTS. JOHN F. KELLY, Pittsfield, Mass. Filed Apr. 22, 1907. Serial No. 369,520. (Cl. 84—174.)

1. A musical instrument, comprising, in combination, actuating devices, means to group the actuating devices of the instrument into groups of the same note-name, and means to automatically simultaneously increase the strength of action of all of the groups of actuating devices.

2. An electrically-operated automatic playing musical instrument, comprising, in combination, means to group the tone-producing devices of the instrument into groups, each group of which contains tone-producing devices of the same note name, an operating magnet for each tone-producing device, controlling means for each group to vary the strength of current in the operating magnets, a source of electrical energy, and connections therefrom to the operating magnets and the controlling means.

3. An electrically-operated musical instrument, comprising, in combination, connections to group the tone-producing devices of the instrument into groups of the same note-name, a source of electrical energy, connections therefrom to the groups, independent automatically-operated expression-controlling means in the connections to each group to vary the voltage of the current delivered to each group.

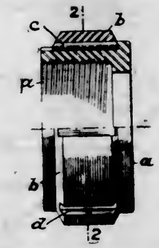
4. An electrically-operated playing apparatus for musical instruments, comprising, in combination, a plurality of magnets, each of which is connected to operate a tone producing device of the instrument, connections to group the magnets which operate the tone-producing devices of the same note name, a plurality of switch devices each of which controls the strength of operation of one of said groups of said magnets by varying the voltage of the current delivered to the groups, a source of electrical energy, and connections therefrom to the magnets of said groups and said controlling devices.



5. An electrically-operated musical instrument, comprising the combination of tone-actuating devices, connections to group the tone-actuating devices of the instrument into groups of the same note-name, a source of electrical energy, connections therefrom to the group connections, independent automatically-operated expression-controlling means in the connections to each of the group connections to vary the voltage of the current delivered to each of the tone actuating devices of each group whereby the expression of the tone in the groups may be varied.

[Claims 6 to 26 not printed in the Gazette.]

1,103,591. COUPLING-NUT. STRICKLAND L. KNEASS, Philadelphia, Pa., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 28, 1913. Serial No. 803,632. (Cl. 85—32.)



1. A coupling connection comprising a ring having a screw thread permanently formed thereon, said ring of a non-rusting material sufficiently strong and durable to maintain its own thread diameter and pitch without distortion, and an unremovable encircling band of relatively hard material held from lateral and circumferential movement relatively to the ring.

2. A coupling connection comprising a ring of non-rusting material having a thread permanently formed thereon, and an encircling band of relatively hard material and of less width than the inner ring and held from lateral and circumferential movement relatively to the ring.

3. A coupling connection comprising a ring of non-rusting material having an interior screw thread permanently formed thereon and forming the nut proper, and an encircling band of relatively hard material and of less width than the inner ring, said band being held from lateral and circumferential movement relatively to the ring and provided with spanner grooves.

4. A coupling connection comprising a threaded ring of non-rusting material and an unremovable encircling band of relatively hard material provided with an internal flange whose outer wall is flush with the corresponding wall of the threaded ring, whereby the nut has a thrust collar largely composed of the hard material.

5. A coupling connection comprising a threaded ring of non-rusting material having a part thereof of greater thickness than another part, and an unremovable band of relatively hard material encircling the thinner part of the nut and abutting against the surface connecting the thicker and thinner parts.

[Claims 6 and 7 not printed in the Gazette.]

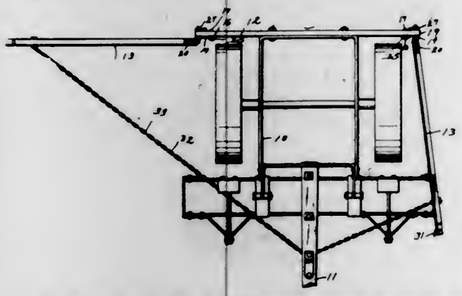
1,103,592. STYLUS FOR SOUND-REPRODUCING MACHINES. GUSTAVE LEHR, New York, N. Y. Filed Mar. 8, 1913. Serial No. 752,840. (Cl. 181—11.)



1. A stylus for sound-reproducing machines, comprising a shank, and a point therein of triangular pyramidal shape, with one side laterally and longitudinally convexly curved and the edge opposite said curved side also convexly curved.

2. A stylus for sound-reproducing machines, comprising a shank, and a point therein of triangular pyramidal shape with two adjacent plane sides, and with the intermediate side laterally and longitudinally convexly curved, and the edge opposite said curved side convexly curved near the tip of the device.

1,103,593. MARKER FOR CORN-PLANTERS. LEROY J. LINDSAY, Seymour, Iowa. Filed Dec. 8, 1913. Serial No. 805,458. (Cl. 111—24.)



1. In a corn planter, a transverse frame member, a horizontal rod rotatably and slidably mounted in the frame member near its end, at right angles to the longitudinal axis thereof, a right angled extension on the forward end thereof, a marker arm pivotally mounted on said extension, a bracket mounted on said extension, arranged to engage the frame member in one position of said extension for holding the latter spaced from said frame member, and to clear the frame member in another position of the extension.

2. In a corn planter, a transverse frame member, a horizontal rod rotatably and slidably mounted in the frame member near its end, at right angles to the longitudinal axis thereof, a right angled extension on the forward end thereof, a marker arm pivotally mounted on said extension, at two points at different distances from the end of the marker arm, a bracket mounted on said extension, arranged to engage the frame member in one position of said extension for holding the latter spaced from said frame member, and to clear the frame member in another position of the extension.

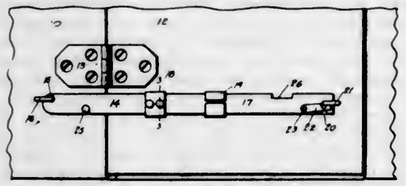
3. In a corn planter, a transverse frame member having an end beveled from its rear side forwardly and inwardly, a horizontal rod rotatably and slidably mounted in the frame member near its end, at right angles to the longitudinal axis thereof, a right angled extension on the forward end thereof, a marker arm pivotally mounted on said extension, at two points at different distances from the end of the marker arm, a bracket mounted on said extension, arranged to engage the frame member in one position of said extension for holding the latter spaced from said frame member, and to clear the frame member in another position of the extension.

4. In a corn planter, a transverse frame member having an end beveled from its rear side forwardly and inwardly, a horizontal rod rotatably and slidably mounted in the frame member near its end, at right angles to the longitudinal axis thereof, a right angled extension on the forward end thereof, a marker arm pivotally mounted on said extension, at two points at different distances from the end of the marker arm, a bracket mounted on said extension, arranged to engage the frame member in one position of said extension for holding the latter spaced from said frame member and to clear the frame member in another position of the extension, and a stop on said frame member for engaging said bracket and limiting the rotary movement of the marker arm.

5. In a device of the class described, a transverse frame member having at each end a horizontal rod rotatably and slidably mounted in the frame member near its end, at right angles to the longitudinal axis thereof, a right angled extension on the forward end thereof, a marker arm pivotally mounted on said extension, at two points at different distances from the end of the marker arm, a bracket mounted on said extension, arranged to engage the frame member in one position of said extension for holding the latter spaced from said frame member, and to clear the frame member in another position of the extension, and a flexible member secured to each of the marker arms near the free end thereof and designed to be slidably mounted on the frame of the machine.

[Claims 6 and 7 not printed in the Gazette.]

1,103,594. AUTOMATIC DOOR-LATCH. LEROY J. LINDSAY, Seymour, Iowa. Filed Feb. 9, 1914. Serial No. 817,715. (Cl. 16—6.)

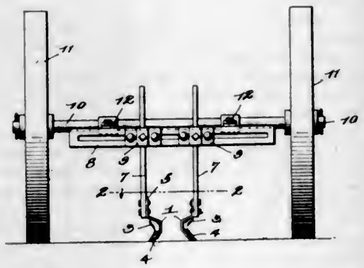


1. A door latch comprising a bar pivotally mounted at one end at a point on one side of its longitudinal center to swing in horizontal and vertical planes, a stop on said bar arranged on the other side of its longitudinal center, a second bar slidably mounted on said first bar and provided with a notch in its upper surface, the bars being capable of sliding vertical movement with relation to each other, said first bar being provided with means designed to be received in said notch in one of the relative positions of the bars, said second bar being pivotally mounted to swing in vertical and horizontal planes and being provided with means for engaging said stop when said first means is above said notch, said bars being pivoted respectively to a support and to a door.

2. In a device of the class described, the combination of a wall having a door opening and a door hinged therein, arranged to swing horizontally, with a bar pivoted at one end with the point on one side of its longitudinal center to said wall and provided with a stop on the other side of its longitudinal center, a second bar slidably mounted on said first bar and provided with means for engaging said stop, said second bar being provided with a notch in its upper surface and being pivoted at one end to said door to swing in horizontal and vertical planes, said first bar being provided with means designed to be received in said notch when said first means engages said stop.

3. In a device of the class described, the combination of a wall and a door hinged thereto to swing horizontally, with a latch device comprising a bar pivotally mounted at one end at a point above its longitudinal center on said wall, and provided with a stop on the other side of its longitudinal center, a second bar having in its lower edge at one end a notch, a staple mounted in said bar and having one prong received in said notch, a swing latch device mounted on said second bar and provided with a notch designed to receive the above mentioned prong of said staple, said latch device being frictionally held in any position of its movement with relation to the second bar, each of said bars being provided with a loop fixed on and receiving the other bar, the loop on the second bar being designed to engage said stop device in one of the positions of the bars, said second bar being provided with a notch designed to be below the loop on the first bar when the loop on the second bar engages said notch.

1,103,595. CULTIVATOR-BLADE. FRANKLIN LOTTER, Elkton, Mich. Filed Sept. 11, 1913. Serial No. 789,253. (Cl. 97—35.)

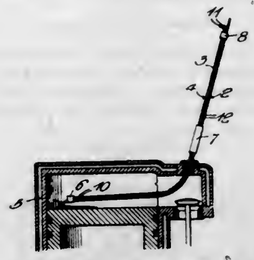


1. A cultivator blade having an outwardly turned gathering member at its front end and an outwardly diverging cutting member at its rear end, said cutting member having its lower edge sharpened and being formed at an angle to bring said sharpened lower cutting edge into engagement with weeds growing close to and at a distance from the rows of plants.

2. A cultivator blade comprising an upwardly curved outwardly flared gathering member having its upper and lower edges turned outwardly, an angularly disposed cutting member extending longitudinally from the rear end of said gathering member and having a lower outwardly projecting cutting edge, and an attaching shank formed on said blade.

3. A cultivator blade comprising an upwardly curved outwardly flared gathering member having its upper and lower edges turned outwardly, an angularly disposed rearwardly projecting diverging cutting member having a lower outwardly projecting cutting edge, and a standard secured to said shank.

1,103,596. DECARBONIZING-TOOL FOR PISTONS OF GAS-ENGINES. FRANKLIN LOTTER, Elkton, Mich. Filed Nov. 18, 1913. Serial No. 801,649. (Cl. 83—64.)

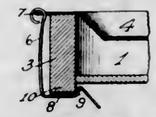


1. A longitudinally extensible decarbonizing tool comprising a plurality of superimposed flexible strips mounted to slide longitudinally on each other, a scraping element on one of said strips, and coöperating elements on said strips to limit their movement in opposite directions whereby when said strips are extended the tool is rendered flexible and when contracted it is rigid.

2. A scraping tool comprising a plurality of superimposed flexible metal strips, one of said strips having a scraping element at one end and a plurality of longitudinally disposed keepers, the other strips having one end pointed and their other end bent laterally to form finger grips, and stops on said sliding strips spaced from the pointed ends thereof.

3. A cleaning tool comprising a plurality of superimposed flexible metal strips, one of said strips being provided with a scraping element extending laterally therefrom in one direction, a keeper extending in an opposite direction adjacent said element, an elongated keeper arranged on said strip intermediately of its ends and another keeper at the other end of said strip, the other strips being slidably mounted in said keepers and having one end pointed and equipped with lateral shoulders and the other end bent laterally, said sliding strips being also provided with stops arranged intermediately of their ends for limiting their outward movement.

1,103,597. ATTACHMENT FOR HIGH CHAIRS. GEORGE C. LYNCH, New York, N. Y. Filed Dec. 21, 1909. Serial No. 534,299. (Cl. 65—53.)



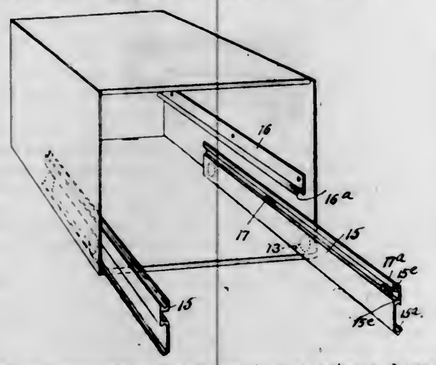
1. The combination with a tray frame adapted to be secured to a child's high chair and to be shifted into and out of position between the arms thereof, of a metal tray fitted within said frame and having an upstanding edge portion provided with flanges extending over and protecting said frame, and means for detachably securing said tray in position in said frame.

2. The combination with a tray frame or apron adapted to be secured to a child's high chair and to be shifted into and out of position between the arms thereof, of a metal tray fitted within said frame and having an upstanding edge portion provided with flanges extending over and protecting said frame, and means for detachably securing said tray in position in said frame, said means comprising clamps carried by said metal tray and adapted to be secured at the lower edge of said frame.

3. The combination with a tray frame or apron adapted to be secured to a child's high chair and to be shifted into and out of position between the arms thereof, said frame having a rim as 10 at its lower edge, of a metal tray fitted within said frame and having an upstanding edge portion provided with flanges extending over and pro-

tecting said frame, and means for detachably securing said tray in position in said frame, said means comprising clamps carried by said metal tray and adapted to engage the said rim of said frame.

1,103,598. FILING-CABINET. ARTHUR MARTIN, Cleveland, Ohio, assignor to The Van Dorn Iron Works Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 14, 1911. Serial No. 620,974. (Cl. 45—77.)



1. The combination in a file cabinet, a casing, a drawer adapted to be moved into and out of the same, supports for the drawer arranged between each side of the drawer and the casing and comprising rollers carried by the casing, rollers carried by the drawer, a slide having an outwardly facing channel forming a runway for the rollers, carried by the casing, a rail secured to the casing and coöperating with the slide to form a runway for the rollers carried by the drawer.

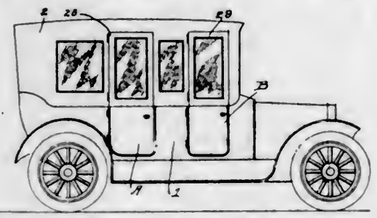
2. The combination in a file cabinet, a casing, a drawer adapted to be moved into and out of the same, a drawer suspension including supporting devices arranged between each side of the drawer and the corresponding side of the casing and comprising rollers carried by the casing, rollers carried by the drawer, a slide supported by the rollers of the casing, and a strip fixed to the casing and extending over the rollers carried by the drawer, said slide having an outwardly facing channel forming a runway for the rollers carried by the casing, and the top of the slide and said strip forming a runway for the rollers carried by the drawer.

3. In combination in a file cabinet, a casing, a drawer adapted to be moved into and out of the same, a suspension arranged between the drawer and the sides of the casing and comprising rollers carried by the casing, rollers carried by the drawer, a slide supported by the rollers of the casing, and a fixed rail secured to the casing and having an inwardly extending flange above the rollers of the drawer, said slide having a lower flange and an intermediate flange forming a runway for the rollers of the casing, and said slide having at the top a flange which cooperates with the flange of the rail to form a runway for the rollers of the drawer.

4. In combination in a file cabinet, a casing, a drawer adapted to be moved into and out of the same, and a suspension including supports at each side of the drawer comprising rollers carried by the casing, rollers carried by the drawer, a slide supported by the rollers of the casing, a strip secured to the casing above the rollers of the drawer and provided with an inwardly projecting flange, said slide being in the form of a Z-bar having an outwardly facing channel including a lower flange and an intermediate flange grooved to form a runway for the rollers of the casing and having an upper channel formed by the intermediate flange and an upper flange, said upper flange and the flange of said strip being grooved to form a runway for the rollers of the drawer, and stop devices for limiting the movement of the drawer relative to the slide, said stop devices being carried by the slide and drawer respectively and arranged in said upper channel.

5. In combination in a file cabinet, a casing, a drawer adapted to be moved into and out of the same, and a drawer suspension comprising rollers carried by the casing, rollers carried by the drawer, a slide supported by the rollers of the casing, and a strip secured to the casing above the rollers of the drawer, said slide having an outwardly facing channel forming a runway for the rollers of the casing and having above said channel an inwardly facing channel, the top of the slide and said strip forming a runway for the rollers of the drawer, and stop devices for limiting the movement of the drawer relative to the slide, said stop devices being carried by the slide and drawer respectively, and arranged in said inwardly facing channel.

1,103,599. DETACHABLE LIMOUSINE-BODY. FRANK J. MCAVOY, Chicago, Ill., assignor to London Auto Supply Co., Chicago, Ill., a Corporation of Illinois. Filed July 19, 1912. Serial No. 710,469. (Cl. 21—62.)



1. A removable limousine top for automobiles comprising sill members shaped to the outline of the top of an automobile body, a shoe member rabbeted in each of said sill members flush therewith, and turned upwardly at the ends of said sill members, attaching sockets afforded by said shoe members, upright supporting posts secured to said sill members, means rigidly securing the upturned end of said shoe members to the upright post occuring at the extremities of said sill members, and a roof structure supported on said upright posts.

2. In a device of the class described the touring body, top brackets, a detachable limousine top removably engaged thereon and embracing rabbeted sill members and upright posts connected therewith, a metallic sill plate or shoe recessed into the sills on the under side thereof and extending from the rear door post at one side of the tonneau, around the tonneau, and to the other rear door post for the tonneau, the ends of said sill plate bent vertically upward above the sill and rigidly bolted to said door post, a corresponding sill plate or shoe recessed into the under side of the sill between the rear and fore doors, the ends thereof bent upwardly and engaging the door posts for said doors rigidly to said sill sections, bends in said sill plates affording socket members adapted to receive the top brackets of the touring body thereinto, bolts engaging said brackets in said sockets, a socket in said plate or shoe near the rear bend or turn of the tonneau at each side thereof, a brace bar rigidly engaged therein at its lower end, a T shaped head at the upper end of each rigidly bolted to the top of the frame, a rod or bar rigidly engaged to the front post for the fore door and extending downwardly and engaged in position, a fabric exterior and interior covering for the frame so formed, windows therein, door sections hinged in said top to fit upon the door of the touring body, and connections between the door sections for each door whereby the opening or closing of the door of the touring body actuates the door as a whole.

3. In a device of the class described a frame shaped at its bottom to fit to the top of a touring body and having window and door openings therein, sill members forming the body of said frame, sill plates secured in said members, and at the door openings affording a rigid connection between the sill members and door post, integral socket members formed in said sill members corresponding with attaching brackets on the touring body and affording means for engaging said frame rigidly thereto, a T-headed brace bar extending from the bottom to the top of said frame at each side the same, and rigidly engaging the same together, the lower end of said brace bar rigidly engaging said sill plate or shoe, and means at the front end of the frame for rigidly engaging the same in position at each side of the car.

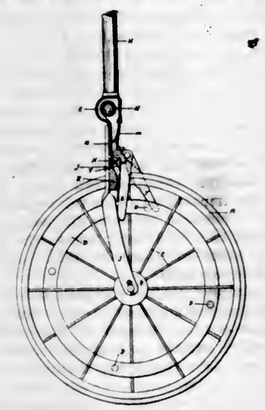
1,103,600. METHOD OF TREATING RADIO-ACTIVE BARIUM COMPOUNDS. HERBERT N. MCCOY, Chicago, Ill. Filed Mar. 27, 1914. Serial No. 827,667. (Cl. 23—13.)

1. The method of separating and concentrating radio-active substances, such as radium, mesothorium-one and thorium-X, from barium compounds, which comprises converting the barium compounds and radio-active substances into hydroxids, and fractionally separating the barium hydroxid from the solution.

2. In a method of separating and concentrating radio-active substances, such as radium, mesothorium-one and thorium-X, from barium compounds, the step which consists in partially precipitating the hydroxids of barium and the radio-active substances from solution.

3. In a method of separating and concentrating radio-active substances, such as radium, mesothorium-one and thorium-X, from barium compounds, the step which consists in partially precipitating the hydroxids of barium and the radio-active substances from solution by the addition of alkali-metal hydroxids.

1,103,601. TOY. DAVID H. MCFALLS, White Plains, N. Y. Filed Nov. 26, 1913. Serial No. 803,308. (Cl. 46—47.)

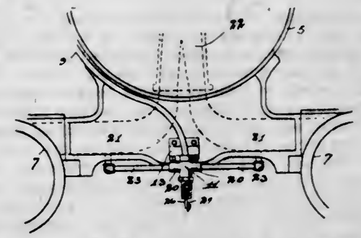


1. The combination of a wheel; a bifurcated bracket in which the wheel revolves; a hammer pivoted in said bracket; means for causing said hammer to be raised during a partial revolution of the wheel; a spring for causing said hammer to return with force after being raised away from the bracket; a roll of paper containing caps placed in a receptacle in said bracket; a dog mounted in connection with said hammer adapted to engage the loose end of the paper containing the caps and by the raising of the hammer draw the paper of caps forward; and a cog mounted in the bracket resting upon the paper of caps just back of the dog for holding the paper of caps during the reverse movement of the dog upon the depression of the hammer, preventing the paper from retreating or folding.

2. In a detonating toy, a wheel mounted in a bracket; a hammer mounted in the bracket; means on the wheel for raising the hammer; means on the bracket for causing the hammer, after being raised by the rotation of the wheel, to be returned with force against the bracket; a paper containing a series of caps placed in a receptacle in the bracket; means for feeding the paper of caps from said bracket in position to be exploded by the hammer, comprising a dog mounted near the end of the hammer, the dog resting upon the paper of caps and when the hammer is raised, moved forward, forcing the paper of caps forward and in place to be exploded when the hammer falls; and a cog mounted in the bracket adapted to engage the paper and hold it against displacement by the dog returning after the hammer has been raised.

3. The combination of a wheel; a bracket in which the wheel is mounted; a hammer mounted in the bracket; a series of projections on said wheel; said hammer adapted to be brought in contact with said projections during the rotation of the wheel, whereby the hammer will be raised; means for causing the hammer to return with force after being raised; a paper containing a series of caps; means on the bracket for retaining a roll of said paper of caps; with a means for feeding the paper from said roll, comprising a dog mounted on said hammer resting against the loose end of the paper forming the roll; with a stop cog on said bracket adapted to engage the paper and retain it from displacement during the operation of the mechanism, substantially as described.

1,103,602. AUTOMATIC EXHAUST DRAIN-COCK FOR STEAM-ENGINES. JOHN THOMAS MCGRATH, Bloomington, Ill. Filed Dec. 28, 1912. Serial No. 739,026. (Cl. 121—117.)



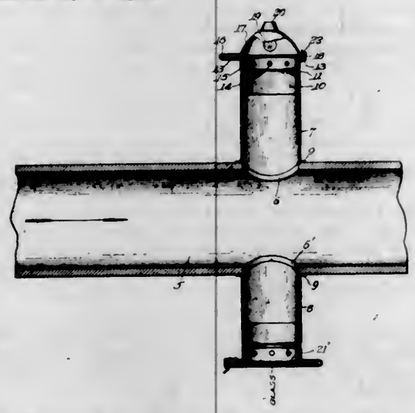
An automatic exhaust drain cock for steam engines comprising an exhaust valve provided with three intake openings, a valve chamber in communication with said intake openings, a valve seat in said valve chamber, a ball valve within said valve chamber, a downwardly projecting spout secured to said exhaust valve, a pivoted finger extending through an opening in said spout and the end of which is adapted to project into the opening formed by the valve seat for unseating the ball valve, means for moving said finger upon its pivot and a screw-threaded plug having a threaded engagement with said valve and forming one wall of the valve chamber.

1,103,603. SMOKE-INDICATOR. THOMAS W. MCNEILL and IRA J. BABCOCK, Chicago, Ill. Filed Mar. 17, 1913. Serial No. 754,937. (Cl. 88—14.)

1. In an apparatus of the character described, the combination, with a smoke flue, of two relatively short, diametrically opposite, alining tubes associated with the flue, one of said tubes having associated therewith a source of light and the other having its end closed by a glass plate, and a light-deflecting structure comprising a casing, a mirror in said casing, short free-ended tubes extending from said casing at such an angle that a ray of light passing through one said tube and deflected by the mirror will pass through the other tube, and a translucent plate carried by one of said tubes, whereby said mirror-carrying casing may be placed with one of its tubes in alinement with the plate-carrying tube of the flue, but spaced therefrom any desired distance, for purposes described.

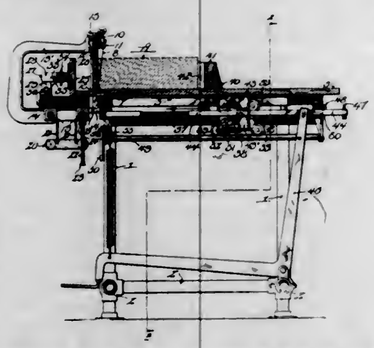
2. An apparatus of the character described, for use with a smoke flue, comprising a plurality of separated devices, each whereof provides a short free ended tube for disposition in alinement with a like tube of another of said devices, a source of light associated with the smoke flue for projecting a ray of light across the flue through one of said tubes, across the intervening unoccupied space between said tube and the alining tube of another of said

devices, into said alining tube; a deflecting mirror associated with that device which carries said alining tube; and a second short free-ended tube associated with said last mentioned device for passage therethrough of said deflected ray of light.



3. An apparatus of the character described, for use with a smoke flue, comprising a plurality of separated devices, each whereof provides a short free-ended tube for disposition in alinement with a like tube of another of said devices, a source of light associated with the smoke flue for projecting a ray of light across the flue through one of said tubes, across the intervening unoccupied space between said tubes and the alining tube of the other said device, and into said alining tube; a deflecting mirror associated with that device which carries said alining tube; and a second short free-ended tube associated with said last-mentioned device, for passage therethrough of said deflected ray of light, and a plate in one of the tubes of said mirror-carrying device to prevent currents of air therethrough for purposes described.

1,103,604. CUBE-CUTTING MACHINE. FREDERICK H. MERRELL, Milwaukee, Wis., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1913. Serial No. 764,410. (Cl. 31—65.)



1. A cube-cutting machine comprising a table, a series of alined fixed cutters adjacent to one edge thereof, a reciprocative head disposed beyond the fixed line of cutters, a cutting member carried thereby, an endless belt actuating means for the cutter head, a portable tray disposed beyond the reciprocative cutter, means for adjusting the tray relative to said reciprocative cutter, a follower strip mounted upon the table, a feed mechanism for the follower strip, and a fixed gage-strip carried by the table in juxtaposition to one end of the follower strip.

2. A cube-cutting machine comprising a skeleton frame having a series of vertically alined stationary cutting members disposed across the face of the table at its feed edge, a guide-rail arranged parallel with the feed edge of said table and under the same, a cutter-head reciprocatively mounted upon the guide-rail having a neck projecting above the face of said table, a single vertically disposed cutting member connecting the shank and neck of the cutter-head, the cutter member being extended across the plane of the face of said table beyond the fixed cutting members, a longitudinally disposed L-shaped receiving tray mounted upon the skeleton frame beyond the sets of cutting members, a follower strip mounted upon the table, and means for feeding the follower strip.

3. A cube-cutting machine comprising a skeleton frame having a transverse slot therein, a table mounted upon the frame having a feed edge juxtaposing the frame slot, a series of vertically alined fixed cutting members extending through the frame slot adjacent to the feed edge of the table, a guide-rail carried by the frame paralleling the slot therein and under the same, a receiving tray supported by the frame beyond the slot, the bottom of which tray is upon the same plane as the table, a cutter-head mounted upon the guide-rail having a neck projecting upwardly and over the tray, a single vertical cutting member extending through the frame slot connecting the neck and shank of the cutter-head, means for imparting horizontal reciprocative movement to the cutter-head whereby its cutting member is caused to travel back and forth within the frame slot, a follower strip mounted upon the table, and means for feeding the follower strip.

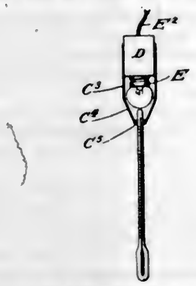
4. A cube-cutting machine comprising a skeleton frame having a transverse slot therein, a table mounted upon the frame having a feed edge juxtaposing the frame slot, a series of vertically alined fixed cutting members extending through the frame slot adjacent to the feed edge of the table, a guide-rail carried by the frame paralleling the slot therein and under the same, a receiving tray supported by the frame beyond the slot, an adjustable backing-plate for the tray, the bottom of which tray is upon the same plane as the table, a cutter-head mounted upon the guide-rail having a neck projecting upwardly and over the tray, a single vertical cutting member extending through the frame slot connecting the neck and shank of the cutter-head, means for imparting horizontal reciprocative movement to the cutter-head whereby its cutting member is caused to travel back and forth within the frame slot, a follower strip mounted upon the table, and means for feeding the follower strip.

5. A cube-cutting machine comprising a table, a series of alined fixed cutters adjacent to one edge thereof, a reciprocative head disposed beyond the fixed line of cutters, a cutting member carried thereby, an endless belt actuating means for the cutter head, a tray disposed beyond the reciprocating cutter, means for adjusting the tray relative to said reciprocative cutter, a follower strip mounted upon the table, a feed mechanism for the follower strip, and a gage-strip carried by the table in juxtaposition to one end of the follower strip.

1,103,605. DEVICE FOR ILLUMINATING THERMOMETERS AND SIMILAR INSTRUMENTS. MAX E. MOELLER, New York, N. Y. Filed Jan. 30, 1912. Serial No. 674,306. (Cl. 73—151.)

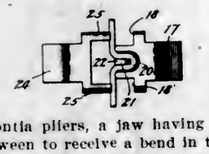
1. In a device of the character described, the combination of a casing, an illuminating device therein, said casing being provided with an opening, a tube of light-transmitting material fitting the said opening adapted to project therethrough into the said casing and into proximity to the said illuminating device, and being partially filled with an opaque liquid the said casing tapering toward the said tube and having a reflective interior, the construction and arrangement being such that the light of the illuminating device is projected longitudinally of the tube so as to be intercepted by the opaque substance in the bore of the tube and to pass beyond the same to illuminate the material of the tube below the upper surface of the opaque substance.

2. In a device of the character described, the combination of a casing, an illuminating device therein, said casing being provided with an opening, a tube of light-transmitting material fitting the said opening adapted to project therethrough into the said casing and into the field of direct radiation of said illuminating device, and being partially filled with an opaque liquid, the construction and



arrangement being such that the light of the illuminating device is projected longitudinally of the tube so as to be intercepted by the opaque substance in the bore of the tube and to pass beyond the same to illuminate the material of the tube below the upper surface of the opaque substance.

1,103,606. ORTHODONTIA-PLIERS. CHRISTOPH F. MONTAG, Blue Island, Ill. Filed Oct. 23, 1913. Serial No. 796,950. (Cl. 81—15.)



1. In orthodontia pliers, a jaw having two ribs with a groove therebetween to receive a bend in the wire, a finger in said groove, and a second jaw having two ribs to pass outside the ribs on the first jaw, for the purpose set forth.

2. In orthodontia pliers, a jaw having two ribs with a groove therebetween to receive a bend in the wire, a finger in said groove and out of contact with the walls to lie in said bend, and a second jaw having two ribs to straddle the ribs of the first jaw, for the purpose set forth.

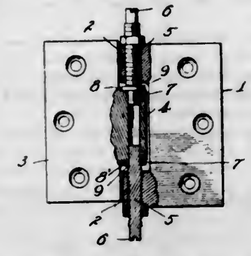
3. In orthodontia pliers, a jaw having two ribs with a groove therebetween to receive a bend in the wire, and a second jaw having two ribs to pass outside the ribs on the first jaw, each of said jaws having lateral engaging parts to turn the ends of the wire into line, for the purpose set forth.

4. In orthodontia pliers, a jaw having two ribs with a groove therebetween to receive a bend in the wire, a finger in said groove and out of contact with the walls which lie in said bend, and a second jaw having two ribs to straddle the ribs of the first jaw, each of said jaws having lateral engaging parts to turn the ends of the wire into line, for the purpose set forth.

1,103,607. VERTICALLY-ADJUSTABLE HINGE. JACOB HYSON MOORE, Delavan, Kans. Filed Aug. 14, 1913. Serial No. 784,725. (Cl. 16—113.)

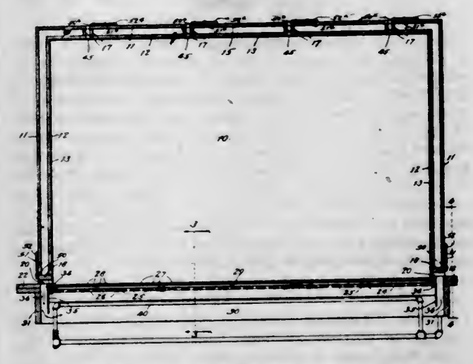
1. A hinge comprising two leaves each having knuckles, the knuckles upon one leaf being spaced apart for a distance greater than the length of the knuckle on the other leaf, pins screw-threaded in the knuckles of the first mentioned leaf and having diametrically reduced cylindrical end portions the knuckle of the second mentioned leaf having a longitudinal bore which extends from end to end thereof and which receives the reduced cylindrical ends of the pins.

2. A hinge comprising two leaves having knuckles, the distance between the knuckles upon one leaf being greater than the length of the knuckle upon the other leaf, pins screw threaded in the knuckles of the first mentioned leaf and having diametrically reduced cylindrical end portions and provided at the ends of said reduced portions with shoulders, washers located on the said shoulders and bearing against the ends of the knuckle of the second mentioned leaf, the knuckle of the second mentioned leaf having a longitudinal bore which extends from end to end thereof and which receives the reduced cylindrical ends of the pins.



3. A hinge comprising two leaves each having knuckles, the distance between the knuckles upon one leaf being greater than the length of the knuckle upon the other leaf, pins screw threaded in the knuckles of the first mentioned leaf and having diametrically reduced cylindrical end portions, the knuckle of the second mentioned leaf having a bore which receives the reduced cylindrical ends of the said pins and a third pin carried in said bore and interposed between the reduced ends of the first mentioned pins and adapted to prevent the first mentioned pin from binding against the knuckle of the second mentioned leaf.

1,103,608. DRY-KILN. GUSTAVE F. MORANZ, Chicago, Ill., assignor to Chicago Varnish Company, Chicago, Ill., a Corporation. Filed Apr. 16, 1913. Serial No. 761,544. (Cl. 34—19.)



1. A dry kiln comprising a drying chamber having air inlets and outlets at its bottom and top, heating pipes adjacent the bottom of said chamber and a floor in the lower part of said chamber and above said heating pipes, said floor forming a support for the objects to be dried and having upper and lower layers each formed of strips spaced apart, the spaces between the strips of the upper layer being arranged out of line with the spaces between the strips of the lower layer.

2. A dry kiln comprising a drying chamber having air inlets and outlets at its bottom and top, heating pipes adjacent the bottom of said chamber and a floor in the lower part of said chamber and above said heating pipes, said floor being formed of removable sections having upper and lower layers separated from each other and each formed of strips spaced apart, the spaces between the strips of the upper layer being arranged out of line with the spaces between the strips of the lower layer.

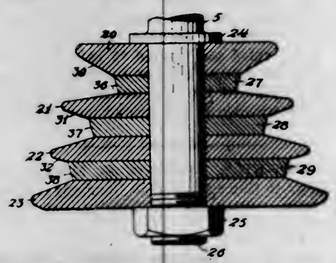
3. A dry kiln comprising a drying chamber having air inlets and outlets at its bottom and top, heating pipes adjacent the bottom of said chamber and a floor in the lower part of said chamber and above said heating pipes, said floor being formed of upper and lower layers separated from each other and each formed of strips spaced apart, the strips of the upper layer being materially narrower and closer together than the strips of the lower layer and the spaces between the strips of the upper layer being arranged out of line with the spaces between the strips of the lower layer.

4. A dry kiln comprising a drying chamber having air inlet and outlet passages at its bottom and top and a valve for the air-inlet passage consisting of a vertically movable plate and links for suspending said plate adjacent the air-inlet passage.

5. A dry kiln comprising a drying chamber having air inlet and outlet passages at its bottom and top, a valve for the air-inlet passage consisting of a vertically movable plate, links for suspending said plate adjacent the air-inlet passage and a dog or pawl for adjustably holding said plate in different positions.

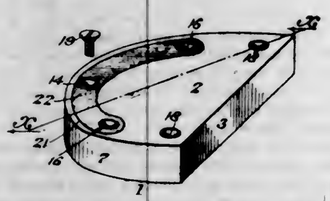
[Claims 6 to 8 not printed in the Gazette.]

1,103,609. WIRE-DRAWING MACHINE. RALPH L. MORGAN, Worcester, Mass. Filed Jan. 4, 1909. Serial No. 470,648. (Cl. 205—20.)



In a wire drawing capstan, a spindle having a collar, a plurality of spaced disks of different diameters, arranged on said spindle in order of size, a plurality of spaced wire seats of different diameters, interposed in alternating relation to said disks, and arranged in order of size, each of said disks being beveled on each surface from the edge of the adjacent wire seat to its periphery, to form casting off flanges, and each of said wire seats having its peripheral surface at an oblique angle to the axis of said spindle, and forming an obtuse angle with the adjacent beveled surface of one of the adjacent disks; and means carried on said spindle for holding said disks and said wire seats against said collar.

1,103,610. METALLIC HEEL FOR BOOTS OR SHOES. JAMES J. MULCONROY, Philadelphia, and EDWIN S. MORRIS, Oak Lane, Pa. Filed Sept. 26, 1913. Serial No. 791,937. (Cl. 36—40.)



1. As an improved article of manufacture, a hollow metallic heel having a closed bottom extending across the same and forming a flush tread, and means, sunk into the metal forming the bottom and forming together a level surface, for preventing slipping when in use.

2. In an improved article of manufacture, a hollow metallic heel having a closed bottom extending across the same and forming a flush tread and with a recess formed in the rear portion thereof, and a filling of suitable material in said recess and interlocked with the metal forming the bottom, in such manner that the larger portion of the metal wearing surface and the said material contact with the ground.

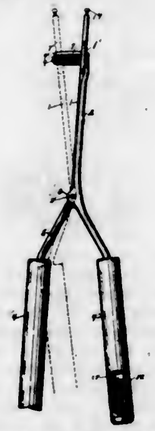
3. As an improved article of manufacture, a hollow metallic heel having a closed wearing surface and formed with a recess in the rear portion thereof, and a filling of metal of a different characteristic from that forming the heel held in said recess.

4. As an improved article of manufacture, a hollow, metallic heel, a crescent-shaped depression in the back thereof and a filling of soft metal in said depression and interlocked with said heel.

5. As an improved article of manufacture, a hollow, metallic heel having a recess therein, and a filling of soft metal in said recess and interlocked with said heel.

[Claim 6 not printed in the Gazette.]

1,103,611. LIGHTING DEVICE. EDWARD J. MURPHY, Barberton, Ohio. Filed Sept. 24, 1912. Serial No. 722,020. (Cl. 67—6.1.)



1. An igniting device comprising a pair of pivoted members, one of the members being turned laterally and inwardly to provide an abrader supporting arm with an ear at its outer end, said arm being longitudinally slotted, the other member being offset to embrace said arm; a pin removably arranged through said arm member and said ear; an abrader mounted on said pin; a pyrophoric holder having a longitudinal bore-like socket therethrough mounted on the outer end of said offset to overhang said abrader supporting arm; a pyrophoric arranged in said holder to project into the slot in said abrader supporting arm to engage said abrader; a supporting spring for said pyrophoric; and a follower for said spring threaded into the outer end of said holder.

2. A spark producing device comprising a pair of pivoted members, one of said members being provided with a laterally projecting longitudinally slotted abrader supporting arm at its outer end, the other member being offset to embrace said arm and having a holder at its outer end overhanging said arm; an abrader rotatably mounted on said arm; a block of spark producing material arranged in said holder to project through said slot in said arm; and a supporting spring for said block.

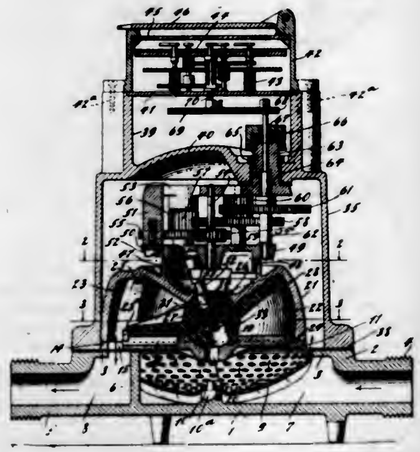
3. A spark producing device comprising a pair of pivoted members, one of said members being provided with a laterally projecting longitudinally slotted abrader supporting arm at its outer end, the other member being provided with a holder; an abrader mounted on said arm; a block of spark producing material arranged in said holder and extending through said slot to co-act with said abrader; and handles for said members adapted as stops to limit the opening of the members, one of the handles being removable to permit the holder being swung clear of the abrader supporting arm for the removal or insertion of the block.

4. A spark producing device comprising a pair of pivoted members, one of said members being provided with a laterally projecting longitudinally slotted abrader supporting arm at its outer end, the other member being offset to embrace said arm and provided with a holder at its outer end; an abrader mounted on said arm; and a block of spark producing material arranged in said holder to project through said slot in said arm.

5. A spark producing device comprising a pair of pivoted members, one of said members being provided with a laterally projecting longitudinally slotted abrader supporting arm at its outer end, the other member being provided with a holder; a cylindrical abrader rotatably mounted on said arm; a block of spark producing material arranged in said holder to project through said slot in said arm into engagement with said abrader, the edges of the slot constituting supports for the block; and a supporting spring for said block.

[Claims 6 and 7 not printed in the Gazette.]

1,103,612. WATER-METER. LEWIS HALLOCK NASH, South Norwalk, Conn. Filed Sept. 3, 1912. Serial No. 718,204. (Cl. 73—98.)

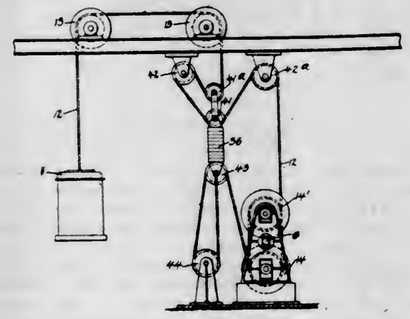


1. In a water meter, in combination, a base having an inlet, an outlet, and an annular internal flange, a piston chamber comprising a base plate spaced from said base and having ears overlying said flange, a dome supported on said plate and having ears overlying the ears on said plate, fastening devices connecting said ears to said flange, a piston in said chamber, a casing secured to said base and inclosing said chamber, and having a compartment separated from the piston chamber by a partition, indicator mechanism in said compartment, and gearing below said partition connecting the piston with the indicator mechanism.

2. In a water meter, in combination, a base having an inlet, an outlet and an annular internal flange, a piston chamber comprising a flat base plate, having an opening communicating with said outlet, and having a circumferential rabbet, said plate being circumferentially spaced from said flange and having ears overlying said flange, a dome supported on said plate and the lower edge of which engages said rabbet, said dome having an opening communicating with said inlet and ears overlying said first-named ears, fastening devices connecting said ears to said flange, a piston in said chamber, indicator mechanism driven by said piston, and a casing supported on said base and inclosing said chamber and mechanism.

3. In a water meter, in combination, a base having an inlet and an outlet, a partition separating said inlet and outlet, an internal annular flange on the base, a piston chamber comprising a flat base plate having an opening communicating with said outlet and resting on said partition, said plate being spaced from said flange and having ears overlying said flange, a dome supported on said plate and completing said chamber, and having an opening communicating with the said opening in the plate, and a second opening communicating with the said inlet, said dome having ears overlying said first-named ears, fastening devices connecting said ears to said flange, a piston in said chamber, indicator mechanism, and a casing supported on said base and inclosing said chamber and mechanism.

1,103,613. ELEVATOR. MICHAEL E. NEENAN, New York, N. Y., assignor to Neenan Elevator Company, New York, N. Y., a Corporation of New York. Original application filed Nov. 22, 1905, Serial No. 288,560½. Divided and this application filed Apr. 1, 1907, Serial No. 365,705. Renewed May 29, 1913. Serial No. 770,790. (Cl. 187—22.)



1. The combination with frictional driving apparatus, of flexible power-transmitting means driven thereby, a load-carrying device connected to said means, and a counterweight and sheave connection between the opposite leads of said means winding respectively on and off the driving apparatus, to effect tension on all the leads changing with the load.

2. The combination of frictional driving apparatus, flexible power-transmitting means driven thereby, a load-carrying device, and a counterweight for said load-carrying device, said counterweight being connected between the load-carrying device and all the leads of said flexible means winding respectively on and off the driving apparatus to effect tension on all the leads changing with the load.

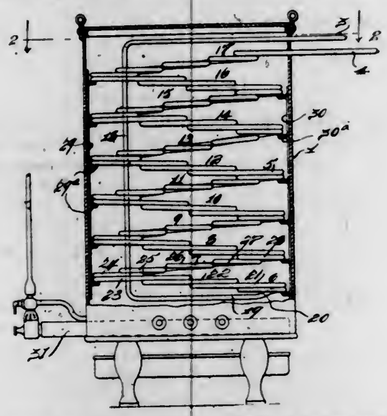
3. The combination with frictional driving apparatus, of a load-carrying device, flexible power-transmitting means, a counterweight for said load-carrying device, said power-transmitting means being connected to the car at one end and to the counterweight at the other end, and in frictional contact with said driving apparatus at intermediate portions, and a connection between said counterweight and other intermediate portions of said power-transmitting means to effect a variation in the tension of all the leads of said power-transmitting means in a predetermined ratio to the weight of the load.

4. The combination with frictional driving apparatus, of flexible power-transmitting means driven thereby, a load-carrying device connected to said flexible means, and a counterbalance connected between the load-carrying device and the opposite leads of said flexible means, to effect the application of tension changing with the load and in a predetermined ratio to the weight of the load to all the said leads winding respectively on and off the driving apparatus.

5. In an elevator, the combination with a car, of frictional driving means, power-transmitting means, and means separate from the car and connected between the car and the opposite leads of said power-transmitting means to vary the tension in the said leads when the load varies.

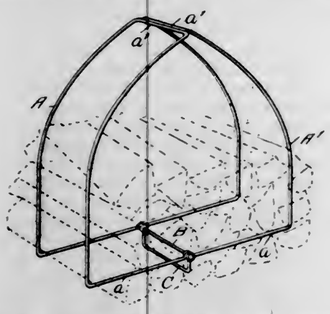
[Claims 6 to 18 not printed in the Gazette.]

1,103,614. WATER-HEATER. GEORGE T. NEWELL, Jr., Passaic, N. J., assignor to Vesta Manufacturing Company, Passaic, N. J., a Corporation of New Jersey. Filed Aug. 9, 1913. Serial No. 783,885. (Cl. 122—249.)



A water heater comprising a casing, a burner arranged therein, and a water pipe leading into the casing near the upper end, projected laterally, then downwardly and laterally adjacent the burner, and projected upwardly therefrom in a series of superimposed layers extending across the casing, each layer inclining upwardly from the inlet end thereof to the outlet end thereof, each layer including a series of successive coils, the lowermost section of each coil being on an upward inclination with respect to the uppermost section of the adjacent coil toward the inlet of the particular layer, whereby the flow of water throughout the layers is continuously against the action of gravity.

1,103,615. CARRIER. JACOB NILSON, Clearbrook, Minn. Filed Mar. 21, 1914. Serial No. 826,222. (Cl. 224—49.)

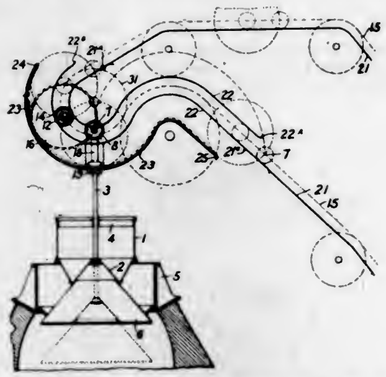


1. A carrier comprising a pair of side frames, the lower portions of which extend in substantially straight lines to form the base of the carrier, and the upper portions of the sides of which are curved inwardly and contact at their extremities to form a handle, a transverse pivot bar having headed ends and around which the inner extremities of the lower straight frame portions are loosely bent to form a fulcrum upon which the frames are movable toward and away from one another, and a discharge handle, the extensions of which are bent around the pivot bar at the inner sides of the bent extremities of the frames in order to confine the latter against lateral displacement, each of the said frames consisting of a single piece of wire of U-form with its cross bar at the upper end of the carrier.

2. A carrier comprising a pair of side frames, each consisting of a single piece of wire of substantially U-form, a transverse pivot bar around which the lower extensions of the frames are bent, and a U-shaped handle the extensions of which are also bent around the pivot bar, whereby the carrier may be supported in inverted position to discharge its load.

3. A carrier comprising a pair of side frames, the upper ends of which are movable toward and away from one another, a pivot bar connecting the lower ends of the side frames, and a handle engaging the pivot bar whereby the carrier may be held in inverted position to discharge the contents of the carrier, all for the purpose described.

1,103,616. ELEVATING AND DISCHARGING APPARATUS. MAX NOELLE, Westminster, London, England. Filed Aug. 19, 1913. Serial No. 785,510. (Cl. 214—8.)



1. In an apparatus of the kind specified; an endless track, a series of trolleys, each carrying a suspended bucket and adapted to be traversed simultaneously on the said track, and a mechanism for lowering each bucket to effect a discharge of its contents as it arrives at a predetermined part of the said track.

2. In apparatus of the kind specified; an endless inclined track, a series of trolleys adapted to be traversed simultaneously on said track, means on each trolley to removably support a bucket, mechanism at the upper part of said inclined track to effect the discharge of each bucket as it arrives at that part of the track, and means at the lower part of said track to effect the automatic removal of each empty bucket as it arrives at the said lower part.

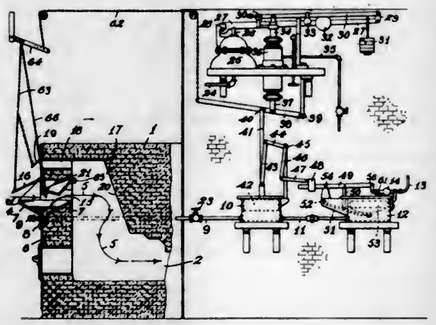
3. In apparatus of the kind specified; an endless inclined track, a series of trolleys adapted to be simultaneously traversed on said track, means on each trolley to removably support a bucket, mechanism at the upper part of said inclined track to effect the discharge of each bucket as it arrives at that part of the track, means to effect the automatic removal of each empty bucket as it arrives at the lower part of the track, and means to cause the automatic engagement of a trolley, which has already deposited an empty bucket, with a filled bucket during the traverse of said trolley.

4. In apparatus of the kind specified; a track comprising an upper and a lower pair of inclined superposed rails of narrow gage distanced apart, a horizontal extension at the upper end of said upper pair of rails, a pair of rails of broader gage to form a continuation of said upper rails, said broader gage rails being downwardly and then upwardly and again downwardly curved the lower ends of said downwardly curved rails extending above and adjacent to the upper ends of the lower pair of narrow gage rails and at a distance therefrom, a pair of broader gage rails forming an upper continuation of said lower narrow gage rails of approximately the same length and parallel to and at a distance from the aforesaid broad gage rails of the upper rails, a bucket-carrying trolley traversable on said track and adapted to travel during its upward movement upon said upper narrow gage rails and to travel upon the broader gage rails during the discharge of the bucket carried by said trolley, and means adjacent to said broad gage rails operative upon said trolley to effect the lowering of said bucket to discharge its contents, and to raise said bucket after said discharge has been effected.

5. In apparatus of the kind specified; a track comprising an upper and a lower pair of superposed rails of narrow gage distanced apart, a horizontal lower extension to each pair of rails the end of the extension of the lower rails curving upwardly and extending past and adjacent to downwardly curved ends of the upper rails said lower rails having a depressed portion, a pair of rails of broader gage bridging over said rails at the said depressed portion, a trolley comprising an axle to which a bucket is detachably connected, wheels on said axle to run on said narrow gage rails of said lower extension, a rearwardly extending frame on each end of said axle, an outwardly projecting stud axle on each frame, a wheel on each stud axle adapted to run upon the narrow gage rails, a second wheel on each axle adapted to run upon said broader gage bridging rails, means for traversing said trolley over said rails, and means to enable the disengagement of an empty bucket from said trolley and the later engagement of said trolley with a filled bucket to be effected.

[Claims 6 and 7 not printed in the Gazette.]

1,103,617. APPARATUS FOR BURNING LIQUID FUEL. WILLIAM E. OAKLEY, Millbury, and WILLIAM A. PENTECOST, Worcester, Mass., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee, a Corporation of New York. Filed Dec. 20, 1909. Serial No. 534,205. (Cl. 158—4.)



1. An apparatus for burning liquid fuel comprising a masonry structure having a front wall in which are located an open fuel pan and a supplementary air passage having a damper for opening and closing the latter, and having formed back of said pan and supplementary air passage a combustion chamber, the inner wall of which opposite said pan and air passage is oblique, serving as a baffle and leading downwardly to a passage for the admission of heated air and flame from the fuel pan.

2. In apparatus of the class described, a fuel pan for liquid fuel, an air passage over said pan, means for controlling the quantity of air admitted through said passage, and means for automatically varying the exposed surface of the liquid fuel in said pan in proportion to the quantity of air admitted through said passage.

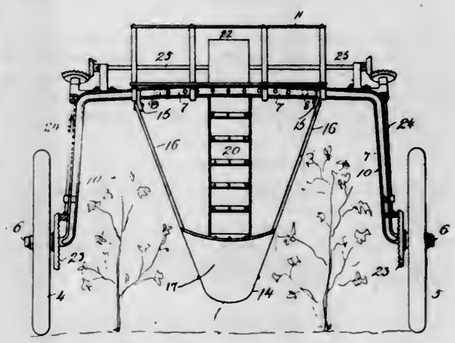
3. In an apparatus of the class described, an open fuel pan triangular in cross section, a combustion chamber, an air passage over the top into said combustion chamber, means for controlling the supply of air to said passage, and means for simultaneously varying the supply of hydrocarbon to the air current, comprising means for automatically raising the fuel level in the fuel pan.

4. In an apparatus of the class described, an open fuel pan triangular in cross section, a fuel tank arranged on a level with the fuel pan, a pipe connecting said tank and fuel pan, a plunger inclosed in said tank, and means for raising and lowering said plunger to vary the fuel level in said fuel pan.

5. In an apparatus of the class described, an open fuel pan, means for automatically varying the level of the fuel in said pan, a passage for an air current across the top of said pan, an adjustable baffle plate above said pan, and means for automatically varying the position of said baffle plate, corresponding with the variation in the level of the fuel in said fuel pan.

[Claim 6 not printed in the Gazette.]

1,103,618. MACHINE FOR USE IN GATHERING COTTON. JAMES F. O'SHAUGHNESSY, New York, N. Y., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y., a Corporation of Delaware. Filed June 2, 1913. Serial No. 771,371. (Cl. 214—1.)



1. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by said wheels and arched or elevated between them, a receptacle supported at its forward end by said axle and inclined rearwardly from said axle toward the ground, said receptacle being open at its top throughout the greater part of its length, a conveyer in the bottom of said receptacle, and means for operating the conveyer.

2. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by said wheels and arched between the wheels, a receptacle supported at its forward end by said axle and inclined rearwardly from said axle toward the ground, said receptacle being open at its top throughout the greater part of its length, a conveyer in the bottom of said receptacle, and means actuated by said wheels for operating the conveyer.

3. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by said wheels, and arched between the wheels, a receptacle supported at its forward end by said axle, and inclined rearwardly from said axle toward the ground, and provided with a hopper-like lower portion, said receptacle being open from the hopper-like portion forwardly along its top, a conveyer in the bottom of said receptacle, and means for operating the conveyer.

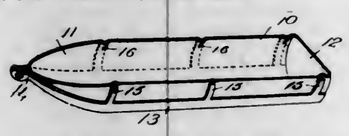
4. In a machine for use in gathering cotton, the combination of an axle arched between its ends, a wheel journaled upon each end of the arched axle, a receptacle supported at its forward end upon the arched portion of

said axle and inclined rearwardly and downwardly therefrom, said receptacle being open at its top and having outwardly flaring sides, a conveyer operating in said receptacle, and means for operating said conveyer.

5. In a machine for use in gathering cotton, a pair of wheels, an axle supported by said wheels and arched between them, a receptacle supported at its forward end and inclined downwardly and rearwardly therefrom, said receptacle being open at its top and provided with a down turned delivery mouth at its upper forward end, a conveyer operating in the bottom of said receptacle, means for suspending a bag below the delivery mouth, and means for operating said conveyer.

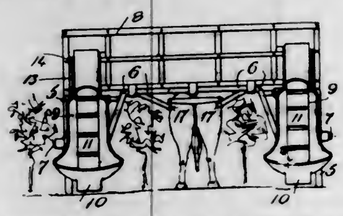
[Claim 6 not printed in the Gazette.]

1,103,619. MACHINE FOR GATHERING COTTON. JAMES F. O'SHAUGHNESSY, New York, N. Y., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y., a Corporation of Delaware. Substitute for application Serial No. 422,771, filed Mar. 23, 1908. This application filed Aug. 9, 1913. Serial No. 783,948. (Cl. 21—48.)



A device for use in gathering cotton, comprising a bottom or wearing plate adapted to be dragged along the ground, said plate having integral arms extending upwardly from the edges thereof, and a trough-shaped receptacle fitted to said plate and having its upper edges secured to said arms.

1,103,620. APPARATUS FOR USE IN GATHERING COTTON. JAMES F. O'SHAUGHNESSY, New York, N. Y., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y., a Corporation of Delaware. Filed Aug. 9, 1913. Serial No. 783,949. (Cl. 214—1.)



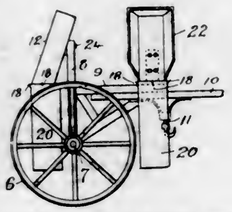
1. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by said wheels and arched between the wheels, a plurality of receptacles supported at their forward ends by said axle and each inclined rearwardly therefrom toward the ground, each of said receptacles open at the top throughout the greater part of its length, a conveyer in the bottom of each receptacle, and means for operating said conveyers.

2. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by said wheels and arched between the wheels, a plurality of receptacles supported at their forward ends by said axle and each inclined rearwardly therefrom toward the ground, each of said receptacles being open at the top throughout the greater part of its length, a conveyer in the bottom of each of said receptacles, and means actuated by said wheels for operating said conveyers.

3. In a machine for use in gathering cotton, the combination of a pair of wheels, an axle supported by and arched between said wheels, a plurality of receptacles supported at their forward ends by the elevated portion of said axle and inclined rearwardly therefrom toward the ground, each of said receptacles formed into a hopper at its lower end and open at the top, a conveyer operating in the bottom of each of said receptacles, and means for actuating said conveyers.

4. In a machine for use in gathering cotton, the combination with a pair of wheels, an axle supported thereby and arched or elevated between said wheels, a receptacle supported at its forward end upon the elevated portion of the axle and inclined rearwardly therefrom toward the ground, the upper forward end of said receptacle being turned downwardly to form a delivery mouth, said receptacle being open at its top, a conveyer operating in said receptacle and delivering to said mouth, means for suspending a bag beneath the delivery mouth of said receptacle, means for operating said conveyer, and a frame work supported by said axle.

1,103,621. MACHINE FOR USE IN GATHERING COTTON. JAMES F. O'SHAUGHNESSY, New York, N. Y., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y., a Corporation of Delaware. Filed Aug. 9, 1913. Serial No. 783,950. (Cl. 21—65.)



1. In a machine for use in gathering cotton, a frame, supporting wheels therefor, a directing chute mounted on said frame in vertically inclined position said chute having closed sides and bottom and an open front, and means for suspending a receiving bag over the delivery mouth of said chute.

2. In a machine for use in gathering cotton, a frame, supporting wheels therefor, a chute mounted on said frame and having closed sides and bottom and open front, the open front being presented outwardly from the frame, the sides of said chute being flared and means for suspending a receiving bag over the mouth of said chute.

3. In a machine for use in gathering cotton, a frame, supporting wheels therefor, a chute mounted on said frame in vertically inclined position, and having closed sides and bottom and open front, the open front being presented outwardly from the machine, and means for suspending a receiving bag over the lower delivery mouth of the chute.

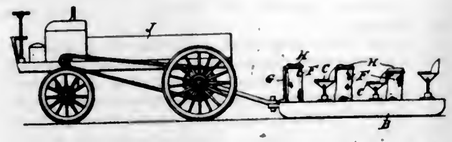
4. In a machine for use in gathering cotton, a frame, supporting wheels therefor, a chute mounted on said frame in vertical position, and having closed sides and bottom, and an open front presented away from the machine, the sides of the chute converging toward each other at their lower ends to form a delivery mouth and means for suspending a bag beneath said month.

5. In a machine for use in gathering cotton, a frame, supporting wheels therefor, a chute mounted on said frame in vertically inclined position, and having a bottom and sides, and closed at its upper end, the front of said chute being open, and means for suspending a bag beneath the lower delivery mouth of said chute.

[Claims 6 to 9 not printed in the Gazette.]

1,103,622. APPARATUS FOR USE IN GATHERING COTTON. JAMES F. O'SHAUGHNESSY, New York, N. Y., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y., a Corporation of Delaware. Filed Aug. 20, 1913. Serial No. 785,606. (Cl. 21—65.)

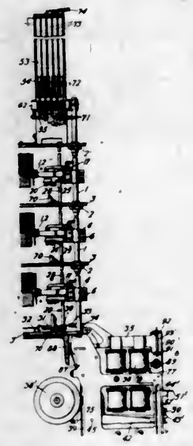
1. In an apparatus for use in gathering cotton, a platform, a plurality of seats carried thereby, said seats being independently movable, a bag support also mounted on said platform adjacent to each sent, and means for moving said platform along and between adjacent rows of cotton stalks.



2. In an apparatus for use in gathering cotton, a platform having runners resting upon and adapted to be dragged along the ground, a bag support mounted on said platform, a seat also mounted on the platform adjacent the bag support, said seat being mounted for free rotative movement, and means for dragging the platform along the ground.

3. In an apparatus for use in gathering cotton, a platform having runners to rest upon and adapted to be dragged along the ground, means for detachably securing a bag in upright position on said platform, a seat adjustably mounted upon said platform adjacent the bag securing means, said seat being mounted for rotative movement, and means for dragging the platform along the ground.

1,103,623. MULTIPLE-BRUSH SELECTOR. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 21, 1913. Serial No. 802,280. (Cl. 179—27.)



1 In an automatic switch, a plurality of rotatable power members located in the same plane, a bar adjacent to said power members, idler pulleys for causing engagement of said bar with said power members respectively, and electromagnets for operating said idler pulleys, said pulleys and magnets being mounted in a readily removable unitary structure.

2. In a switch, a bar, means for moving said bar in one direction, means for holding said bar against reverse movement, a rotatable power member for moving said bar in a reverse direction, an electromagnet, and means whereby the actuation of said magnet will cause engagement of said bar with said power member and will simultaneously cause said holding means to release said bar.

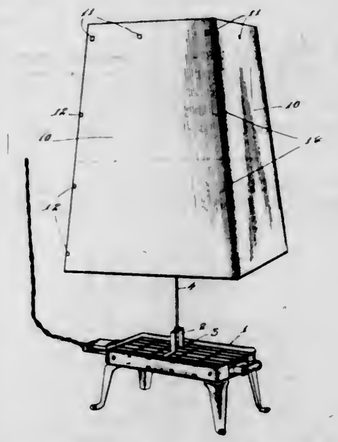
3. In a switch, a bar, means for moving said bar longitudinally in one direction, a pawl for preventing reverse movement of said bar, a rotatable pulley for moving said bar in the reverse direction, an electromagnet, and means whereby the actuation of said magnet will cause engagement of said bar with said pulley and will cause said pawl to be retracted.

4. In a switch, a brush shaft, an elevating bar therefor, a catch for fixing said bar to said shaft, a plurality of power members for moving said bar on one side thereof, a corresponding plurality of coöperating idler pulleys on the other side of said bar, operating magnets for said idler pulleys, a frame for supporting said pulleys and magnets, and means whereby said frame and elevating bar may be readily removed from said switch in a unitary structure.

5. In an automatic switch, a brush shaft, opposed pairs of brushes upon said shaft, a controlling device between the innermost brushes of said pairs, said device being rotatable in a plane at right angles to said shaft, and means for engaging said controlling device to release said brushes during the initial movement of said shaft.

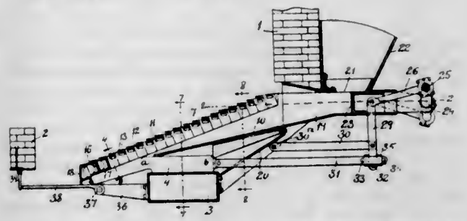
[Claims 6 to 13 not printed in the Gazette.]

1,103,624. MOVING DISPLAY DEVICE. EARL HOLMES RICHARDSON, Ontario, Cal., assignor to Hotpoint Electric Heating Company, Ontario, Cal., a Corporation of California. Filed Mar. 8, 1913. Serial No. 753,128. (Cl. 40—40.)



In a moving display device, a box comprising flat detachable sides and a flat top, means for detachably fastening the edges of the sides together and fastening the edges of the top to the sides, a fan formed in said top, and means upon the upper end of which the top freely rests for rotatably supporting the fan over a heater.

1,103,625. UNDERFEED FURNACE. ROBERT SANFORD RILEY, Providence, R. I. Filed Oct. 20, 1911. Serial No. 655,821. (Cl. 110—44.)



1. A furnace including a fuel-burning retort, having air conducting and discharging means at the sides and above the bottom thereof, to which air under pressure is supplied, and means for producing movements of the entire side walls and the air-conducting means longitudinally whereby to produce a feed of fuel and ash.

2. In a furnace, a series of substantially parallel upright walls and intermediate fuel-supporting members, forming fuel-burning retorts, said walls having air emission means within their upper limits, means located near the forward ends of said retorts for propelling the fuel thereinto, and means for moving said walls, and thereby the air emission means, to effect a further feed of the fuel in process of combustion, and of refuse.

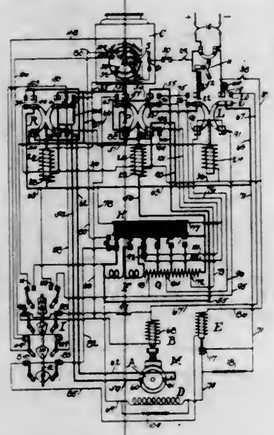
3. In a furnace having a fuel-burning retort with flanking side walls and air-supplying means, in combination with fuel-pushing means arranged to propel fuel into such retort so as to effect an underfeed of fuel into the retort, said side walls and air-supplying means being reciprocatively movable for producing a progressive feed of fuel from the retort, and mechanism connected to said air-supplying means and operative to reciprocate the same.

4. In a furnace, a fuel-burning retort including upwardly extending sides which are formed and arranged to support fuel at each side of the retort, means for feeding fuel into said retort beneath the bed of fuel, and means for producing a movement of the sides of the retort in their entirety, including the parts of such sides which form the mouth of the retort, in such manner as to advance the fuel and ash longitudinally of the furnace.

5. In a furnace, a retort having side walls, means for introducing fuel into said retort below the upper limits of said walls, and means for moving the entire retort walls, including both the portions thereof which define the retort mouth and the portions which support fuel at each side of such mouth in a manner such as to effect a longitudinal feed of all the fuel in the furnace.

[Claims 6 to 53 not printed in the Gazette.]

1,103,626. ELECTRIC ELEVATOR. ROBERT G. SANFORD, Yonkers, N. Y. Filed Feb. 20, 1912. Serial No. 678,819. (Cl. 172—152.)



1. In an electric elevator, the combination of a car, a motor operatively connected to said car, a source of electrical supply, a normally closed reversing switch arranged to reverse the motor connections so as to cause the motor to run in either direction, a potential switch adapted when in one position to close a circuit from the source of electrical supply to the motor, and when in another position to close a local or dynamic brake circuit on the motor, and means for holding said reversing switch against movement in either direction for both positions of said potential switch during the time the motor is in motion.

2. In an electric elevator, the combination of a motor, a resistance, means for connecting said resistance in series with said motor across the line in starting in both directions and for connecting said resistance in parallel with said motor in stopping, and means for controlling said resistance both in starting and stopping.

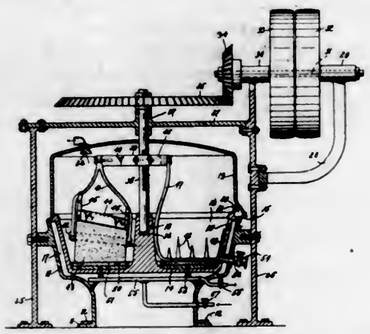
3. In an electric elevator, the combination of a motor, a resistance, means for connecting said resistance in series with said motor across the line in starting in both directions and for connecting said resistance in parallel with said motor in stopping, and means controlled by the load on the motor for varying said resistance both in starting and stopping.

4. In an electric elevator, the combination of a motor, a resistance, means for connecting said resistance in series with said motor across the line in starting in both directions and for connecting said resistance in parallel with said motor in stopping, and means controlled by the motor for varying said resistances both in starting and stopping.

5. In a electric elevator, the combination of a motor, a resistance, means for connecting said resistance in series with said motor across the line in starting in both directions and for connecting said resistance in parallel with said motor in stopping, and means automatically controlled for varying said resistance both in starting and stopping.

[Claims 6 to 23 not printed in the Gazette.]

1,103,627. MACHINE FOR TREATING CHOCOLATE MASSES. JOHN SHEFFMAN, New York, N. Y. Filed Jan. 13, 1914. Serial No. 811,872. (Cl. 83—45.)



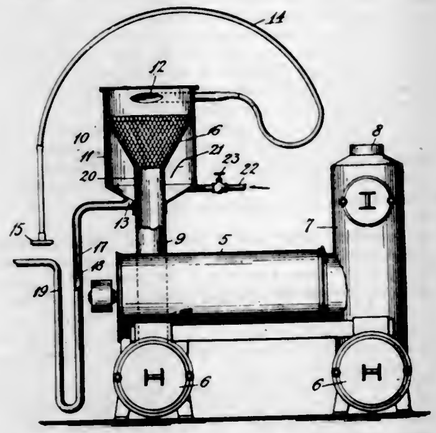
1. In a machine of the character described, the combination with a cup-shaped vessel provided upon its bottom with a bed stone, of a vertical rotary shaft centrally disposed in said vessel, a supporting member keyed to said shaft, a bracket pivotally attached to said supporting member, a conical roller carried by said bracket and cooperating with said bed stone, the axis of said conical roller being disposed at an angle to the axis of said shaft and the base of the roller forming the outer end thereof, a downwardly extending member fixedly attached to said supporting member, stirring arms upon said downwardly extending member, and a scraper also upon said downwardly extending member, said scraper bearing against the side wall of said vessel.

2. In a machine of the character described, the combination with a cup-shaped vessel provided upon its bottom with a bed stone, of a vertical rotary shaft centrally disposed in said vessel, a supporting member keyed to said shaft, a bracket pivotally attached to said supporting member, a conical roller carried by said bracket and cooperating with said bed stone, the axis of said conical roller being disposed at an angle to the axis of said shaft and the base of the roller forming the outer end thereof, a hood covering said vessel, means for heating said vessel, a downwardly extending member fixedly attached to said supporting member, stirring arms upon said downwardly extending member, and a scraper also upon said downwardly extending member, said scraper bearing against the side wall of said vessel.

3. In a machine of the character described, the combination with a cup-shaped vessel provided upon its bottom with a bed stone, of a vertical rotary shaft centrally

disposed in said vessel, a supporting member keyed to said shaft, a bracket pivotally attached to said supporting member, a conical roller carried by said bracket and cooperating with said bed stone, the axis of said conical roller being disposed at an angle to the axis of said shaft and the base of the roller forming the outer end thereof, a hood covering said vessel, heating means arranged below the bottom of said vessel, a downwardly extending member fixedly attached to said supporting member, stirring arms upon said downwardly extending member, and a scraper also upon said downwardly extending mémber, said scraper bearing against the side wall of said vessel.

1,103,628. CLEANING APPARATUS. IRA H. SPENCER, West Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed June 9, 1908. Serial No. 437,528. (Cl. 83—47.)



1. A cleaning apparatus including means for creating flow of a current of fluid, a receptacle, a flange projecting from the bottom of the receptacle providing a space between said flange and the wall of the receptacle, an outlet from said receptacle, said outlet being connected with the device for creating a flow of fluid, a screen of conical shape open at its upper end located within said receptacle and with its smaller end opening into said outlet within said flange, and means for delivering matter to be separated into said receptacle.

2. A device for creating flow of a current of air, a receptacle, a flange projecting upward from the bottom of the receptacle and providing a space between said flange and the wall of the receptacle, a connection communicating between the space within the flange and said device for creating flow of a current of air, a screen of frusto-conical form open at its upper end and with its lower end resting upon said flange, said receptacle having an inlet thereto above the screen, and means connected with the inlet for delivering the mixture to be separated into said receptacle.

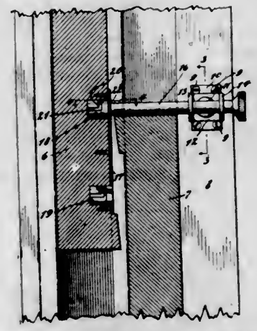
3. A device for creating flow of a current of air, a receptacle, a flange projecting upward from the bottom of the receptacle providing a space between the wall of the latter and said flange, a connection opening from the space within the flange and connected to the device for creating flow of a current of air, an outlet from the space outside of the flange, and on one side thereof the said outlet including a trap having a longer and shorter arm, whereby removal of fluid from said trap by the operation of the device for creating flow of a current of air is prevented, and an inlet for delivering a mixture to be separated into said receptacle.

4. A device for creating flow of a current of fluid, a receptacle having a communicating passage with said flow creating device and also having an outlet including a trap having a longer and a shorter arm whereby the removal of fluid from said trap by the action of the device for creating flow of air is prevented, means connected with the receptacle for delivering matter to be separated thereinto, and means for separating the water and the dirt carried by it from the air entering the casing of the device for creating said flow.

5. A device for creating flow of a current of fluid, a receptacle having a communicating passage with said flow creating device and also having an outlet including a trap having a longer and a shorter arm whereby removal of fluid from said trap by the action of the devices for creating a flow of air is prevented, means connected with the receptacle for delivering thereto matter to be separated therein, and means within the receptacle for separating the water and coarser material carried thereby.

[Claims 6 to 13 not printed in the Gazette.]

1,103,629. WINDOW-LOCK. MOSES J. STERNBERG, New York, N. Y. Filed May 29, 1914. Serial No. 841,746. (Cl. 16—119.)



1. A window fastener comprising a socket in a sash, a bolt adapted to engage therewith, and a pivoted bracket in which said bolt is carried and adapted to slide, for the purpose set forth.

2. A window fastener comprising a bolt, a bracket pivoted to a window frame and in which said bolt slides, and a plurality of sockets in the upper sash, the bolt passing freely over the top of the lower sash and engaging the sockets in the upper sash.

3. A window fastener comprising a bolt and a bracket in which the bolt is adapted to slide, said bracket being pivotally mounted and the bolt provided with a stop adapted to prevent the escape of the bolt from the bracket.

4. A window fastener comprising a bolt, a cylindrical metallic socket adapted to be fixed in the sash and having a longitudinal notch in its wall, said bolt provided with a cam lug adapted to frictionally engage said notch for the purpose set forth.

5. A window fastener comprising a bolt and a metallic socket, one adapted to be fixed to the frame and the other to the sash, said socket having a bayonet slot and the bolt having two lugs adapted to occupy different parts of said slot one of said lugs adapted to make frictional engagement with the slot as set forth.

1,103,630. WELDED JOINT FOR STEEL AND IRON PIPES AND TUBES. JOHN GRAHAM STEWART, Coatbridge, Scotland, assignor to Stewarts & Lloyds, Limited, Coatbridge, Scotland. Filed Nov. 22, 1912. Serial No. 732,951. (Cl. 137—29.)

1. A pipe joint comprising, in combination, a metal tube, a second metal tube having an enlarged faucet part surrounding the end of the said first tube and a metal of the same nature as the tubing packed tightly into the annular space between the two tubes and welded at the end of the faucet to the adjacent surfaces of the tubes.

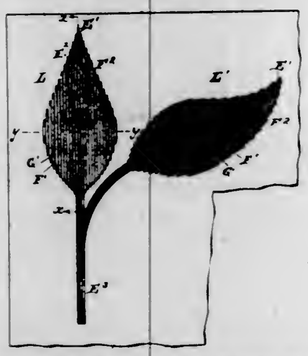
2. A pipe joint comprising, in combination, a metal tube, a second metal tube having an enlarged faucet part embracing the end of the said first tube and metal turnings of the same nature as the tubing packed into the space between the tubes and welded to the adjacent surfaces thereof.



3. A pipe joint comprising, in combination, a metal spigot tube, a second metal tube having a faucet part tightly embracing the end of the said spigot tube said faucet being enlarged at its end and metal packing inserted tightly into the enlargement, the end of the faucet part being weld-connected to the spigot by the aid of a portion of the metallic packing.

4. A pipe joint comprising, in combination, a metal spigot tube, a second metal tube having a faucet part tightly embracing the end of the said spigot tube said faucet being enlarged at its end, packing of the same material as the tubes inserted in the enlargement, and a weld connection made between the spigot and faucet with the aid of said packing.

1,103,631. METHOD OF CUTTING ORNAMENTATION ON GLASS ARTICLES. JAMES STOTT, Manayunk, Pa. Filed Jan. 30, 1914. Serial No. 815,367. (Cl. 51—11.)



1. The herein described method in the art of producing a serrated ornamental effect in the surface of a glass article, which consists in simultaneously cutting a plurality of parallel grooves of relatively small size to constitute together a large groove of gradually decreasing depth from its middle transversely and longitudinally and thereby causing the parallel grooves to terminate in the surface of the glass article in relatively different positions longitudinally to the cutting, whereby the surfaces of each of said grooves provides in their meeting lines with the surface of the glass article a zig-zag or serrated effect.

2. The herein described method in the art of producing a serrated ornamental effect in the surface of a glass article, which consists in producing a leaf effect by simultaneously cutting a plurality of parallel grooves of relatively small size to constitute together a large groove of gradually decreasing depth from its middle transversely and longitudinally and thereby causing the parallel grooves to terminate in the surface of the glass article in relatively different positions longitudinally to the cutting, whereby the surfaces of each of said grooves provides in their meeting lines with the surface of the glass article a zigzag or serrated effect, and connecting one terminal point of leaf effect with a stem effect formed by simultaneously cutting into the surface of the glass a plurality of parallel very shallow grooves of substantially constant depth the middle groove cut to a greater depth than the adjacent grooves on each side thereof.

1,103,632. SPRING-BOX. THOMAS H. SYMINGTON, Baltimore, Md. Filed Jan. 2, 1913. Serial No. 739,781. (Cl. 213—64.)



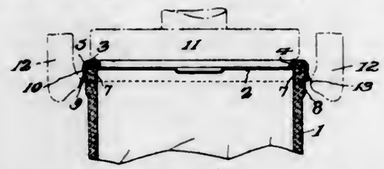
1. In a draft gear, in combination, a horizontal yoke, a draw-bar, means connecting the draw-bar and yoke, spring plates extending through the yoke, spacing members between the springs to flex the same, and a box inclosing the springs and spacing members, followers within the yoke bearing on the front and rear springs, the box having end members and openings at its front and rear ends by way of which the buffing and drawing stresses are transmitted from the yoke and draw-bar to the springs, the box being divided on a lateral plane into two sections and having means for connecting the sections.

2. In a draft gear, in combination, a horizontal yoke, a draw-bar, means connecting the draw-bar and yoke, spring plates extending through the yoke, spacing members between the springs to flex the same, a box inclosing the springs and spacing members, and followers within the yoke.

3. In a draft gear having followers, a shock-absorbing member consisting of a plurality of laterally disposed plate springs, means for spacing the same and a box inclosing the springs, the box being open at each end to permit each follower to bear on the plates, and means at each end for holding the springs in place, the box being divided intermediately in a plane at right angles to the length of the draft gear.

4. A spring box for draft gear, the box being divided in a plane transverse to its length, to provide for the insertion of the springs and being open at each end and having means adjacent each opening for supporting the springs.

1,103,633. SHEET-METAL COVER FOR RECEPTACLES. THOMAS LUCIEN TALIAFERRO and JOHN BENTON BELLAMY, Wheeling, W. Va., assignors, by mesne assignments, to Phoenix-Hermetic Company, New York, N. Y., a Corporation of New York. Filed Aug. 29, 1913. Serial No. 787,339. (Cl. 215—82.)

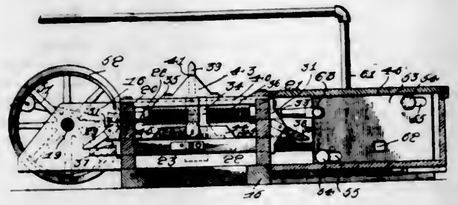


1. A receptacle having an outer vertical wall at its upper edge and a sheet metal cover therefor comprising a circular portion having the periphery thereof bent to form a downwardly projecting wall, the lower portion of said wall of the cover being bent outwardly relative to the upper portion of said wall and having an inwardly and upwardly projecting portion and a sealing gasket seated in the pocket formed by said upwardly projecting portion and extending upwardly therefrom whereby the bending of the lower portion of the cover inwardly toward the receptacle will force said sealing gasket upwardly along said vertical wall of the receptacle in firm sealing contact therewith.

2. A receptacle having an outer vertical wall at its upper edge and a sheet metal cover therefor comprising a circular portion having its periphery bent to form a downwardly projecting wall engaging the vertical wall of the receptacle, the lower portion of said wall of the cover being bent outwardly relative to the upper portion of said wall and forming with said upper portion an inwardly projecting shoulder, the lower edge of said wall having an inwardly and upwardly projecting portion and a sealing gasket seated in the pocket formed by said upwardly projecting portion and extending upwardly along the inner face of said wall to a line adjacent said shoulder, whereby the inward bending of the lower portion of said wall forces said sealing gasket upwardly along the face of said outer vertical wall of the receptacle and also forces said gripping shoulder into sealing contact with said rubber gasket.

3. A receptacle having an outer vertical wall at its upper edge and a sheet metal cover therefor comprising a circular portion having the periphery thereof bent to form a downwardly projecting wall, the lower portion of said wall of the cover being bent outwardly relative to the upper portion of said wall whereby when said cover is closed on the receptacle an inwardly projecting shoulder is formed, a sealing gasket, means for securing and supporting said sealing gasket on the inner face of the outwardly projecting portion of said downwardly projecting wall, said sealing gasket terminating upwardly adjacent said shoulder whereby when said lower portion of said outer vertical wall is bent inwardly to secure said cover to the receptacle said gasket will be forced upwardly along the wall of the receptacle and into firm sealing contact therewith at the region of said inwardly projecting shoulder.

1,103,634. ENGINE. JOHN H. TOWERY, Cushing, Okla. Filed Sept. 9, 1913. Serial No. 788,885. (Cl. 121—97.)

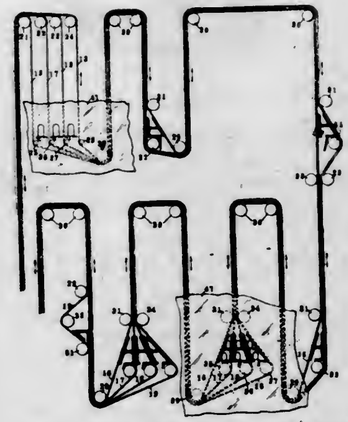


1. A steam engine comprising a frame, said frame comprising a pair of vertical heads positioned at a spaced distance apart, a bar slidably mounted through said heads, a rod slidably mounted within said head and positioned above said bar, said rod provided with a shoulder adjacent each end portion, adjustable collars positioned upon said rod adjacent said shoulders, a standard fixedly secured to said bar and slidably mounted upon said rod, springs positioned upon said rod so as to bear at one end upon said standard and at the opposite end upon one of said adjustable collars, said collars adapted to adjust the tension of said springs, means for reciprocating said bar, means for releasably holding said rod in a set position, said standard adapted to compress one of said springs when said bar is moved in one direction, said bar adapted to operate said last mentioned means for automatically releasing said rod whereby said rod will be moved by one of said springs for shifting a valve plate.

2. A steam engine comprising a frame, said frame comprising a plurality of heads positioned at a spaced distance apart, a bar carried by said heads and slidably mounted therethrough, a vertical standard fixedly secured to said bar, a rod slidably mounted upon said heads, bearing blocks fixedly secured upon each of said heads at a spaced distance apart, a plurality of triggers carried by said blocks, each trigger being pivotally secured adjacent one end portion so as to allow the larger portion thereof to extend downwardly, the short ends of said triggers adapted to alternately engage said rod for holding the same in a set position, springs carried by said rod and actuated by said standard whereby said rod may be moved for operating a valve plate, means for operating said bar, said bar adapted to alternately lift the lower ends of said triggers whereby the upper ends of said triggers will be released from said rod for allowing said rod to operate.

3. A steam engine comprising a frame, a bar slidably carried by said frame, means for operating said bar, a rod slidably mounted upon said frame, a standard fixedly secured to said bar and slidably mounted upon said rod, a spring carried by said rod and adapted to be actuated by said standard whereby said rod may be moved by said spring for sliding a valve plate, triggers carried by said frame for engaging said rod for holding the same in a set position, said bar adapted to operate said triggers for releasing said rod, and a lever pivotally secured to said standard and pivotally secured to said frame, whereby said bar may be manually shifted for moving said rod whereby the valve plate will be shifted for starting the engine.

1,103,635. ENDLESS-BELT CONVEYER. ROBERT W. VAIL, New York, N. Y. Filed Aug. 20, 1912. Serial No. 716,109. (Cl. 193—4.)



1. A conveyer system comprising a plurality of traveling endless belts having contact with each other for the greater part of their lengths, and a plurality of receiving and transmitting stations, said belts being spread apart at said stations for transmitting and receiving articles thereat.

2. A conveyer system comprising a plurality of traveling endless belts having contact with each other for the greater part of their lengths, and a plurality of receiving and transmitting stations, located between said belts, said belts being spread apart at said stations for transmitting and receiving articles thereat.

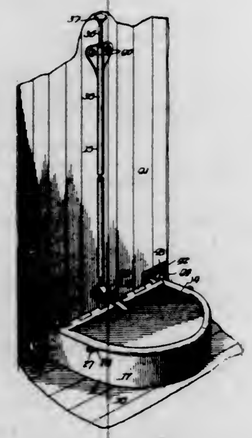
3. A conveyer system comprising a plurality of traveling endless belts having contact with each other for the greater part of their lengths, a plurality of receiving and transmitting stations, said belts being spread apart at said stations for transmitting and receiving articles thereat, and means for driving said belts.

4. A conveyer system comprising a plurality of traveling endless belts having contact with each other for the greater part of their lengths, and a plurality of receiving and transmitting stations, said belts being spread apart at said stations for transmitting and receiving articles thereat, means for driving said belts, and means for adjusting the tension thereof.

5. A conveyer system comprising a plurality of traveling endless belts having contact with each other for the greater part of their lengths, a plurality of receiving stations located between said belts, and a plurality of transmitting stations also located between said belts, means for separating and spreading the belts at one end of said stations, and means for again bringing the belts into contact with each other at the other end of said stations.

[Claims 6 and 7 not printed in the Gazette.]

1,103,636. SANITARY CUSPIDOR. RAOUL L. VIORAN, Chicago, Ill. Filed Oct. 27, 1913. Serial No. 797,371. (Cl. 4—39.)



1. A sanitary cuspidor comprising a receptacle holder, a paper receptacle disposed therein, and a rigid wire frame disposed between said receptacle and said holder, said frame comprising a plurality of wire members connected at their bottoms beneath the receptacle and rigidly connected together at their tops.

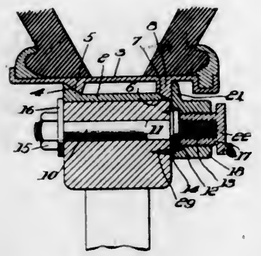
2. A sanitary cuspidor comprising a receptacle holder, a paper receptacle disposed therein, and a rigid wire frame disposed between said paper receptacle and said holder, said frame comprising a plurality of vertically disposed wires rigidly connected at their bottoms beneath said receptacle, and means for lifting said frame and receptacle out of the holder comprising members rigidly securing the top of said vertically disposed wires together.

3. A sanitary cuspidor comprising a holder, a receptacle disposed in said holder, a cover pivoted across the rear edge of said holder, means spacing said holder outwardly from the wall of a room, an arm extending rearwardly from the pivotal axis of said cover into the space provided between the wall and said holder, and a rod arranged adjacent said wall connected to said arm and adapted to be pressed downwardly against the force of the weight of said cover to open the cuspidor.

4. A sanitary cuspidor comprising a holder having recesses in its top edge on opposite sides, a paper receptacle disposed in said holder, and a frame comprising a top wire bent to conform to the shape of the holder and provided with outwardly extending loops resting in the recesses of the holder, and cross wires connected at their ends to the top wire and extending downwardly between said holder and said receptacle and across beneath said receptacle.

1,103,637. VEHICLE WHEEL-RIM. JAMES H. WAGENHORST, Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York, one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio, and one-fifth to The United States Tire Company, New York, N. Y., a Corporation of New York. Filed Oct. 29, 1910. Serial No. 589,680. (Cl. 152—21.)

1. In a vehicle wheel, in combination, a felly, a tire-carrying rim, means for preventing lateral movement of the rim with reference to the felly in one direction, and means for preventing the lateral removal of said tire-carrying rim from said felly in the opposite direction comprising a member rotatably supported from the felly, and a latch rotatably mounted on said member, the rotation of said member in one direction acting first to rotate said latch through a part of a revolution and then to move said latch laterally with reference to said felly without further rotating the latch.



2. In a vehicle wheel, in combination, a felly, a tire-carrying rim, means for preventing lateral movement of the rim with reference to the felly in one direction, and means for preventing the lateral removal of said tire-carrying rim from said felly in the opposite direction comprising a member rotatably supported from the felly, said member being externally threaded, and a latch screwing on the externally threaded portion of said member, the rotation of said member in one direction acting first to rotate said latch through a part of a revolution and then to move said latch laterally with reference to said felly without further rotating the latch.

3. In a vehicle wheel, in combination, a felly, a tire-carrying rim, means for preventing lateral movement of the rim with reference to the felly in one direction, and means for preventing the lateral removal of said tire-carrying rim from said felly in the opposite direction comprising a rotatable member having a screw-threaded engagement with means carried by the felly, and a latch rotatably mounted on said member, the rotation of said member in one direction acting first to rotate said latch through a part of a revolution and then to move said latch laterally with reference to said felly without further rotating the latch.

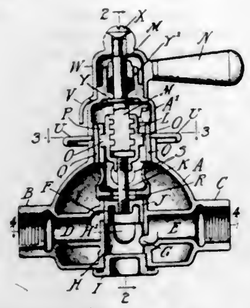
4. In a vehicle wheel in combination, a felly, a tire-carrying rim, means for preventing lateral movement of the rim with reference to the felly in one direction, and means for preventing the lateral removal of said tire-carrying rim from said felly in the opposite direction comprising a screw-threaded member projecting laterally from said felly, a sleeve screwing on said threaded member, an eccentric latch rotatably mounted on said sleeve, the rotation of said sleeve acting to rotate said latch into operative position, and a stop for preventing the further rotation of said latch when moved to operative position by the rotation of said sleeve.

5. In a vehicle wheel, in combination, a felly, a tire-carrying rim, means for preventing the removal of said rim including a rotatable member having a screw-threaded engagement with means carried by the rim, an eccentric latch rotatably mounted on said member and means for limiting the rotary movement of said latch comprising a stop projecting from the side of said felly, one part of said latch engaging said stop when the latch is rotated to operative position, and another part of said latch engaging said stop when the latch is rotated to inoperative position.

[Claims 6 to 30 not printed in the Gazette.]

1,103,638. VALVE. EARL G. WATROUS, Chicago, Ill. Filed Aug. 17, 1910. Serial No. 577,659. (Cl. 137—26.)

1. A valve casing, including a cylindrical valve chamber, having an opening and a valve seat surrounding the same at one end, there being a pair of ports in the cylindrical wall of the valve chamber near opposite ends respectively thereof, conduits communicating with said ports and with the exterior of the casing, a cylindrical valve in the chamber of less length than the same, adapted to close at will either of the ports while the other is open and in communication with the valve seat or to seat upon said valve seat, and a by-pass extending longitudinally of the valve chamber.



2. A valve casing, comprising a shell A having a central cylindrical valve chamber H therein, the bore of which in uncontracted at either end and opens at one end through the shell and at the other end to the interior of the shell, the chamber being also provided with ports in its cylindrical wall, a plug for closing that opening of the valve chamber which extends through the shell, passages extending through the wall of the shell and opening into said ports, a further opening in the shell opposite the interior end of the valve chamber, a member secured within the last said opening and provided with a valve seat resting on the interior end of the valve cylinder, a valve reciprocable within the cylinder and adapted to close at will either of the above mentioned ports while the other is open and in communication with the interior of the shell through the valve seat, and to seat upon the valve seat, valve operating means extending through the last named opening in the casing, and a closure for the last said opening surrounding the valve operating means.

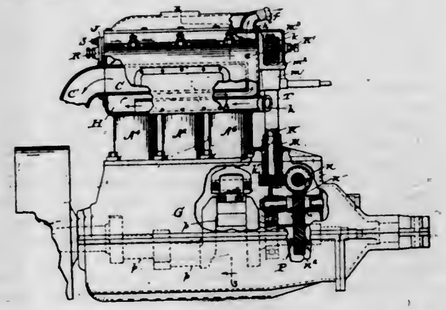
3. A valve casing comprising a valve chamber having an open end, ports out of register with each other intermediate the ends of the valve chamber, a cage Q and washer R, the cage adapted to clamp the washer between its lower end and the open end of the valve chamber the lower end of the casing having an opening therethrough, a by-pass extending longitudinally of the chamber and a valve adapted to close either of the ports while the other is open and in communication with the interior of the cage or to coöperate with the washer to close the opening through the lower end of the cage; substantially as described.

4. In a device of the class described, the combination of a casing A, a valve chamber H within the same having an open end and provided with ports out of register with each other, passages D E extending through the casing and connected with the ports, a cage Q connected to the casing and clamping a washer R between its lower end and the open end of the valve chamber, an opening in the end of said cage in register with the open end of the valve chamber and side openings in said cage communicating with the interior of the casing, and a valve reciprocating in said casing to close either port while the other is open and in communication with the interior of the cage or to close the opening through the end of the chamber at will, the chamber being further provided with a by-pass H'.

5. In a valve, the combination of a hollow casing A having the pipe connections B and C and the central valve chamber H open at its upper end and communicating with said connections by the passages D and E and ports F and G, the cage Q screwed into the upper part of the casing A and provided at its lower end with the annular valve-seat R resting upon the upper end of the valve chamber H, the valve J located in the chamber H and coöperating with said valve seat and with the ports F and G, a stem K on the valve the sleeve-nut L longitudinally guided but held from turning in the cage Q, and connected with the valve J by the stem K, the threaded spindle M journaled in the upper part of the casing and engaging the nut L, and the handle N applied to the spindle M for turning it; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,103,639. PLURAL-CYLINDER ENGINE. ROLLIN H. WHITE, Cleveland Heights Village, Ohio, assignor to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 6, 1912. Serial No. 681,955. (Cl. 123—190.)



1. In a plural cylinder engine, the combination with a single casting in which are formed two rows of cylinders disposed V-wise, an exhaust manifold which is in the V space between the two rows of cylinders, valve casings which are also located in the V space between the two rows of cylinders, and water circulating spaces which surround the cylinders, the exhaust manifold and the valve casings,—there being a port leading from each cylinder to its associated valve casing, an inlet port associated with each cylinder leading from the associated valve casing through the top of the casting, and a port associated with each cylinder leading from the associated valve casing to the exhaust manifold, of a removable cap secured to the top of the casting thereby inclosing an inlet manifold.

2. In a plural cylinder engine, the combination of a single casting in which is formed two rows of cylinders disposed V-wise, an exhaust manifold which is in the V space between the two rows of cylinders, valve casings which are also located in the V space between the two rows of cylinders, a water inlet tube which is formed in the V space between said cylinders and has an open front end, and is extended nearly to the rear end of the casting and is open at its rear end, and cored out water circulating spaces with which the rear end of said water inlet tube discharges, which water spaces surround the cylinders, the exhaust manifold and the valve casings and has a water discharging hole at the top of the casting near its front end, of a removable cap secured to the top of the casting thereby inclosing an inlet manifold, said cap being formed with a water discharge tube which registers with said water discharge hole in the casting when the cap is in place.

3. In a plural cylinder engine, the combination of a single casting in which is formed two rows of cylinders disposed V-wise, an exhaust manifold which is in the V space between the two cylinders, two longitudinally extended cylindrical valve casings which are located in the V space between the cylinders and above the exhaust manifold,—there being a port leading from each cylinder to the adjacent valve casing, and an inlet port associated with each cylinder leading from the associated valve casing through the top of the casting to the inlet manifold, and an exhaust port associating with each cylinder leading from the associated valve casing to the exhaust manifold, and there being also within the casting water circulating spaces which surround the cylinders the exhaust manifold and the valve casings, of two valves rotatably mounted in said two valve casings, each valve having in its surface grooves located at places such that each groove

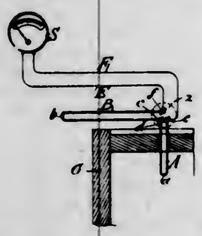
coöperates with a group of three ports associated with a cylinder, means for rotating said valves, and a removable cap secured to the top of the casting, thereby inclosing an inlet manifold.

4. In a plural cylinder engine, the combination of a single casting in which is formed two rows of cylinders disposed V-wise, an exhaust manifold which is in the V-space between the two cylinders, two longitudinally extended cylindrical valve casings which are located in the V space between the cylinders and above the exhaust manifold,—there being a port leading from each cylinder to the adjacent valve casing, and an inlet port associated with each cylinder leading from the associated valve casing through the top of the casting to the inlet manifold, and an exhaust port associating with each cylinder leading from the associated valve casing to the exhaust manifold, and there being also within the casting water circulating spaces which surround the cylinders, the exhaust manifold and the valve casings, of two valves rotatably mounted in said two valve casings, each valve having its surface grooves located at places such that each groove coöperates with a group of three ports associated with a cylinder, means for rotating said valves, each of said valves having a hole extended through it from end to end and having lateral ducts leading from said hole outward, means for discharging oil into the rear ends of said valve casings, and means for conducting the oil from the front ends of said valve casings to a suitable reservoir therefor.

5. In a plural cylinder engine, the combination of two rows of cylinders disposed V-wise, two cylindrical valve casings arranged in the V-shaped space between the two rows of cylinders, there being ports connecting the cylinders of one row with one of said valve casings, and there being also ports connecting the cylinders of the other row with the other valve casing, an inlet manifold common to all of the cylinders disposed within the V-shaped space between the two rows of cylinders, said inlet manifold being connected with each of the valve casings by as many ports as there are cylinders connected with said valve casing, an exhaust manifold common to all of the cylinders, which exhaust manifold is connected with the two valve casings by as many ports as there are cylinders connected with each valve casing, a rotary valve in each valve casing having surface grooves through which communication will be made from each cylinder to the inlet manifold and from each cylinder to the exhaust manifold.

[Claims 6 and 7 not printed in the Gazette.]

1,103,640. THERMO-ELECTRIC PYROMETER. CHARLES H. WILSON, Mount Vernon, N. Y. Filed Sept. 11, 1912. Serial No. 719,799. (Cl. 73—32.)



1. In a thermo-electric pyrometer, a primary thermo-couple, ordinary conducting low resistance leads coöperating therewith, a current measuring device connected therewith, a compensator couple connected in opposition to the primary couple, the elements of said compensator couple being dissimilar in composition to the elements of the primary couple, and having an electromotive force approximately the same as the electromotive force of the primary couple within the limits of temperatures occurring at the point of connection between the primary and compensator couples and means for maintaining the junctions of the couples with each other and with their leads at substantially equal and uniform temperature, said compensator couple having its active end located beyond the influence of said means.

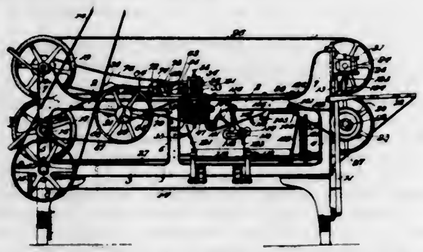
2. In a thermo-electric pyrometer, a primary thermo-couple, ordinary conducting low resistance leads coöperating therewith, a current measuring device connected therewith, a compensator couple connected in opposition to the primary couple, the elements of said compensator couple being dissimilar in composition to the elements of the primary couple, and having an electromotive force approximately the same as the electromotive force of the primary couple within the limits of temperatures occurring at the point of connection between the primary and secondary or compensator couples; said compensator couple and the primary couple being each of compound form composed of a plurality of couples connected in series and means for maintaining the junctions of the couples with each other and with their leads at substantially equal and uniform temperature, each of said compensator couples having its active end located beyond the influence of said means.

3. A thermo-electric pyrometer, comprising a primary couple, a secondary couple connected in opposition thereto, and means for maintaining the junctions of the couples with each other and with their leads at substantially equal and uniform temperature, said secondary couple having its active end located beyond the influence of said means.

4. A thermo-electric pyrometer, comprising a primary couple, a secondary couple connected in opposition thereto, means for maintaining the junctions of the couples with each other and with their leads at substantially equal and uniform temperature, the secondary couple having its active end located beyond the influence of said means, and means for maintaining the active junction of the secondary couple at a constant temperature.

5. A thermo-electric pyrometer, compriaing a primary couple, a secondary couple connected in opposition thereto, and a junction-box assembling the junctions of the couples and the leads connected therewith for maintaining the junctions at substantially equal and uniform temperature, the active end of said secondary couple being located outside said junction-box.

1,103,641. TOBACCO-STEMMING MACHINE. WILLIAM GEORGE WOODCOCK, Jr., Newark, N. J., assignor to Canadian Tobacco Utilities Limited, Toronto, Canada, a Corporation of Ontario. Filed Sept. 19, 1913. Serial No. 790,680. (Cl. 131—57.)



1. In a tobacco stemmer, a pair of stemming rolls arranged one above the other, a carrier having means to engage the stems and carry them through the rolls, means acting immediately after the passage of the leaf through the rolls to clear the face of the upper roll, and a wiper arranged to move in a path to engage the tobacco removed from said upper roll and to clear the face of the lower roll.

2. In a tobacco stemmer, stemming rolls, a carrier to carry the leaves through the same, a rejector roll placed to receive broken and unstripped leaves that may fall from said carrier, and a wiper arranged to travel in a path to clear the tobacco from said rolls and to coöperate with said rejector roll to wipe therefrom broken and unstripped leaves.

3. In a tobacco stemmer, stemming rolls, means for engaging and carrying the stem through said rolls, means for giving the rolls a relatively slow rotation during the passage of the stem, and means for thereafter greatly accelerating the movement of the rolls to clear the same by centrifugal action, a wiper arranged to wipe the tobacco from the rolls and a rejector roll with which such wiper coacts.

4. In a tobacco stemming machine, a pair of stemming rolls, a conveyer arranged to receive the stemmed leaves and to deliver them outside the machine, a second conveyer arranged to receive unstemmed and broken leaves, a rejector roll arranged above and on a line substantially between said conveyers, a wiper arranged to move in a path to throw the stemmed leaves on said first conveyer and to wipe the upper face of said rejector roll to move unstemmed and broken leaves onto said second conveyer.

5. In a tobacco stemming machine, the combination with a pair of stemming rolls, of stem gripping jaws arranged to carry the leaf through said rolls, auxiliary stem gripping jaws arranged to move in a path to engage any stem broken or slipped from said first jaws after passing through said rolls, a shutter moving in a path to wipe tobacco from the upper roll, a rejector roll positioned to receive any broken or unstemmed leaves falling from the stem gripping jaws, and a wiper moving in a path to wipe the stemmed leaves from the roll and to wipe over the rejector roll.

[Claims 6 to 10 not printed in the Gazette.]

1,103,642. WHEEL-TIRE. ABRAHAM M. ZIMMERS, Baltimore, Md. Filed Sept. 5, 1911. Serial No. 647,505. (Cl. 152—8.)

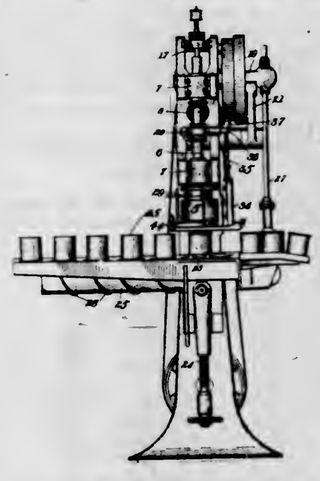


In combination, a wheel rim, an outer casing secured thereto, a continuous core circular in cross section extending around and within said casing and adapted to contact with the inner surface of the tread portion of said casing under normal loads and be seated in the opposite side of said casing under abnormal loads, and tapering coiled springs within the casing for supporting said core, the convolutions of said springs being curved to nest around the adjacent contour of said core and between said core and the walls of the casing when the core is depressed against the inner portion of the casing.

1,103,643. CAN-CLOSING MACHINE. JESSE EDWARD ABRAMS, Canonsburg, Pa., and IVAR FREDOLF WARME, Syracuse, N. Y., assignors, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed Apr. 26, 1911. Serial No. 623,513. (Cl. 113—14.)

1. The combination of a can support, a seaming head, seaming rolls carried thereby, means for rotating said seaming head, means for moving said seaming head up and down relative to said support, a can end feeding device movable with said seaming head and including a support for the can end, and a movable member for positively engaging and moving the can end on the support to a position underneath the seaming head.

2. The combination of a supporting frame, a support for can bodies carried thereby, a seaming head mounted on said supporting frame, means for rotating said seaming head, seaming rolls carried by said seaming head, a can end support extending underneath said seaming head and held in fixed relation thereto, said support having a circular opening in line with the axis of the rotating seaming head, said support having at its upper face a seat for the can end which is concentric with said opening, means for moving a can end on said can end support underneath said seaming head on to said can end seat, said opening being tapered downwardly and outwardly toward its lower face below said seat, so as to form a cone-shaped wall for rounding up and centering the open end of the can body relative to the seaming head and can end, and means for moving said seaming head and can end support relative to said can body support for presenting the can body to the seaming head.



3. The combination of a supporting frame, a support for can bodies carried thereby, a seaming head mounted on said supporting frame, means for rotating said seaming head, seaming rolls carried by said seaming head, a can end snpport extending underneath said seaming head and held in fixed relation thereto, said support having a circular opening in line with the axis of the rotating seaming head, said support having at its upper face a seat for the can end which is concentric with said opening, means for moving a can end on said can end support underneath said seaming head on to said can end seat, said opening being tapered downwardly and outwardly toward its lower face below said seat, so as to form a cone-shaped wall for rounding up and centering the open end of the can body relative to the seaming head and can end, means for moving said seaming head and can end support relative to said can body support for presenting the can body to the seaming head, a seating pad, and means for moving said seating pad into contact with the can end on said support for holding said can end on its seat until said can end is seated in the can body.

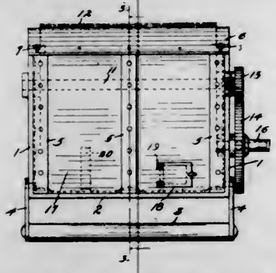
4. The combination of a supporting frame, a support for can bodies carried thereby, a seaming head mounted on said supporting frame, means for rotating said seaming head, seaming rolls carried thereby, a can end support extending underneath said seaming head and held in fixed relation thereto, said support having a circular opening therethrough in line with the axis of the rotating seaming head, said support at the upper face thereof having a recess forming a seat for a can end with its center substantially in alinement with the center of said opening and the axis of the rotating seaming head, means for moving a can end along said can end support on to said seat, said opening being tapered downwardly and outwardly toward its lower face so as to form a cone-shaped wall for rounding up and centering the can body, and

means for moving said seaming head and can end support relative to said can body support for presenting a can body to the seaming head.

5. The combination of a supporting frame, a support for can bodies carried thereby, a seaming head mounted on said supporting frame, means for rotating said seaming head, seaming rolls carried thereby, a can end support extending underneath said seaming head and held in fixed relation thereto, said support having a circular opening therethrough in line with the axis of the rotating seaming head, the diameter of said opening being slightly less than the diameter of a can end and slightly greater than the extreme diameter of the flange at the upper end of the can body, said support at the upper face thereof having a recess forming a seat for a can end with its center substantially in alinement with the center of said opening and the axis of the rotating seaming head, means for moving a can end along said can end support on to said seat, said opening being tapered downwardly and outwardly toward its lower face so as to form a cone-shaped wall for rounding up and centering the can body, and means for moving said seaming head and can end support relative to said can body support for presenting a can body to the seaming head.

[Claims 6 to 13 not printed in the Gazette.]

1,103,644. CURRY-BRUSH. JOHN P. ADOLFSON, Chokio, Minn. Filed Mar. 14, 1913. Serial No. 754,295. (Cl. 15—37.)



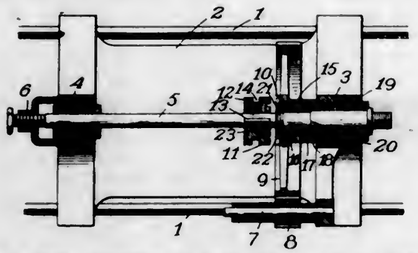
1. In a curry brush, a frame provided with a handle, a rotary brush provided with actuating means mounted in said frame, a canvas covering for said frame forming a dust receptacle, a vent formed in said canvas covering and flexible means secured to said canvas covering for normally holding it extended whereby compression of the flexible means forcibly ejects the dust through said vent.

2. In a curry brush, a frame provided with a handle, a rotary brush provided with actuating means mounted in said frame, a canvas covering for said frame forming a dust receptacle, a vent formed in said canvas covering and a spring disposed in said canvas covering for normally holding it extended whereby compression of the spring forcibly ejects the dust through said vent.

1,103,645. SPINDLE AND GEAR BEARING FOR LATHES. JOHN R. BACK, Worcester, Mass. Filed Feb. 10, 1913. Serial No. 747,303. (Cl. 74—59.)

1. A fixed framework, a shaft journaled in said framework slightly reduced in diameter next one of its bearings forming a shoulder, a gear wheel bushing on said reduced section adapted to bear against said bearing, said shaft being provided with a screw-thread and a nut by which said bushing is held against said shoulder, a gear wheel rotatable on said bushing, a driving pinion engaging said gear wheel, and a clutching mechanism between said shaft and said gear wheel.

2. A fixed framework, a shaft journaled in said framework, said shaft having a slightly reduced section next one of its bearings, a gear wheel bushing held on said reduced section, and provided at its end next said bearing with a radial flange, a gear wheel turning loosely on said bushing, a nut held on said shaft and bearing against said bushing to hold it against said shoulder, said nut overlapping said gear wheel, means for rotating said gear wheel, and a clutching mechanism for connecting said gear wheel and said shaft.



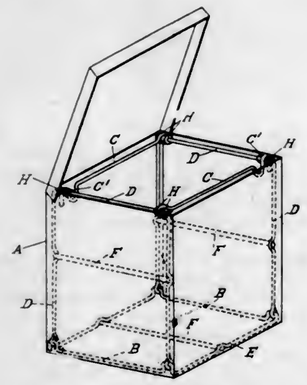
3. A fixed framework, a shaft journaled in said framework, a gear wheel carried on said shaft adjacent to one of its bearings, means for rotating said gear wheel, a clutching mechanism between said gear wheel and said shaft, a bushing between said gear wheel and said shaft provided at one end with a radial flange between said gear wheel and the journal bearing of said shaft, a shoulder on said shaft, a nut engaging a screwthreaded section of said shaft, and overlapping said bushing, and said gear wheel, and means at the end of said shaft for receiving the end thrust upon the shaft.

4. The combination, with a rotatably journaled shaft having means for preventing endwise movement in one direction, of a bushing held on said shaft against one of its bearings to prevent endwise movement of said shaft in the other direction, a rotating wheel journaled on said bushing, and means for rotatably connecting said wheel to said shaft.

5. The combination with a rotatably journaled shaft having a shoulder formed adjacent one of its bearings, a bushing carried by said shaft, a rotating wheel journaled on said bushing, means for holding said bushing in abutting engagement with said shoulder and said bearing, whereby to prevent endwise movement of the shaft in one direction, said means also adapted to retain said wheel on said bushing, means for preventing endwise movement of said shaft in the other direction, and means for rotatably connecting said wheel to said shaft.

[Claims 6 to 8 not printed in the Gazette.]

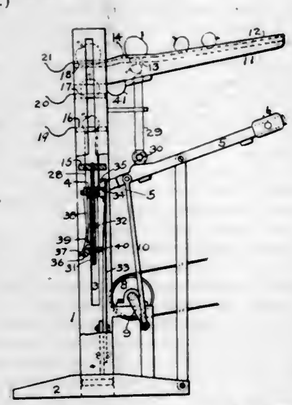
1,103,646. SKELETON FRAME AND RECEPTACLE. ROSE MARY BADDELEY, Onehunga, New Zealand. Filed Nov. 22, 1912. Serial No. 732,886. (Cl. 229—4.)



1. A collapsible frame of the kind described comprising a base constituted by a member bent to form a rectangular figure, two substantially ⊓-shaped members having their free ends pivoted at the respective corners of said base portion; two cross members pivoted to diagonally opposite corners of said ⊓-shaped members and formed at their free ends with a hooked portion adapted to engage with the corresponding corner of the opposite ⊓-shaped member and to be disengaged therefrom to enable the frame to be collapsed, and means to limit lateral movement of the pivoted ends and the hooked portions of said cross members.

2. A device of the kind described comprising an outer casing and a collapsible frame adapted to be arranged snugly within said casing, said frame comprising a base portion constituted by a wire bent to form a plane four-cornered figure, two substantially ⊓-shaped pieces of wire having their free ends pivoted at two corners of said base portion, two cross wires pivoted at one end to diagonally opposite corners of said ⊓-shaped pieces of wire and formed at their other ends with a hooked portion adapted to engage with the corresponding upper corner of the opposite ⊓-shaped piece of wire and means to limit lateral movement of the pivoted ends and the hooked portions of said cross wires.

1,103,647. APPLE-SIZER. FLOYD M. BAIR, Grand Ledge, Mich. Filed Nov. 24, 1913. Serial No. 802,793. (Cl. 130—32.)



1. The combination in a fruit sizer of a stationary shelf and a plurality of movable shelves, each of said shelves being provided with concentric openings increasing in size from the lowest to the highest shelf; a series of push pins having their axes concentric with the holes in said shelves, and means for alternately raising and lowering said push pins.

2. The combination in a fruit sizer of a stationary shelf and a plurality of movable shelves, each of said shelves being provided with concentric openings increasing in size from the lowest to the highest shelf; a series of push pins having their axes concentric with the holes in said shelves; and means for alternately raising and lowering said push pins, said means also being adapted to raise said movable shelves.

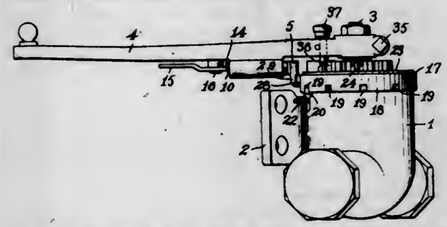
3. The combination in a fruit sizer of a stationary shelf and a plurality of movable shelves, each of said shelves being provided with concentric openings increasing in size from the lowest to the highest shelf; a series of push pins having their axes concentric with the holes in said shelves; and means for alternately raising and lowering said push pins, said means also being adapted to raise said movable shelves, and releasable stops for retaining said movable shelves in an elevated position.

4. The combination in a fruit sizer of a stationary shelf and a plurality of movable shelves, each of said shelves being provided with concentric openings increasing in size from the lowest to the highest shelf; a series of push pins having their axes concentric with the holes in said shelves; means of alternately raising and lowering said push pins, said means also being adapted to raise said movable shelves; releasable stops for retaining said movable shelves in an elevated position, and means for releasing said stops at any desired point during the descent of said pins.

5. The combination in a fruit sizer of a frame provided with slides at its opposite extremities; a stationary shelf near the top of said frame; a plurality of vertically movable shelves below said stationary shelf, said shelves being provided with concentric graduated openings adapted to receive fruit; a cross bar slidably mounted in said frame beneath said shelves; pins mounted in said cross bar and concentric with the openings in said shelves, and means for raising and lowering said cross bar.

[Claims 6 to 9 not printed in the Gazette.]

1,103,648. DOOR-CHECK. HARRY BALL, Worcester, Mass., assignor to Worcester Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 25, 1910. Serial No. 573,672. (Cl. 16—88.)



1. In a door check, a casing, a cover adjustably attached to said casing and provided with a stop on its periphery, a radial arm adapted to be connected with a door casing, a bolt sliding in ways on the under side of and parallel with said radial arm, a spring applied to force said bolt against the periphery of said cover, and means for releasing said bolt from the tension of said spring.

2. In a door check of the class described, a casing, a cover adjustably attached to said casing and having a shoulder on its periphery, a radial arm adapted to be connected with a door casing, a radially sliding bolt held on the under side of said arm, a slidable block, a spring interposed between said bolt and said block, and a cam bearing against said block to force it against said spring.

3. In a door check of the class described, a spring actuated swinging arm adapted to be connected with a door casing, a stop adjustably held by the casing of the door check, a bolt slidable in ways on the under side of said swinging arm, a spring bearing against said bolt to force it endwise, and a rotatable cam arranged to compress said spring.

4. In a door check of the class described, a casing, a flanged cover for said casing provided with a series of notches on the lower edge of its flange, a vertically slidable bolt held by said casing, a spiral spring applied to said bolt to force it into one of said notches, a stud projecting from the side of said bolt, a swinging radial spring actuated arm, and a locking mechanism between said arm and said cover.

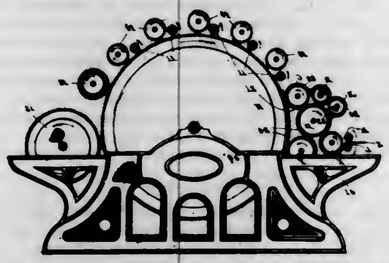
5. In a door check of the class described, a casing, a radial spring actuated swinging arm, a pair of stops independently adjustable on said casing in different horizontal planes, a slidable bolt held on the under side of said arm in the plane of one of said stops, and a spring for forcing said bolt toward the casing, said bolt having a lip extending into the plane of the other of said stops.

[Claim 6 not printed in the Gazette.]

1,103,649. BREAST FOR CARDING-MACHINES. EDDO V. BATES, Lowell, Mass., assignor of one-half to Robert B. Robinson, Dracut, Mass. Filed Sept. 24, 1913. Serial No. 791,643. (Cl. 19—3.)

1. In a carding machine, a main cylinder, a first worker, a tumbler, a licker-in adjoining but separated from the

tumbler, and feeding-in rolls in engagement with the licker-in, combined with a breast cylinder which engages the first worker, the licker-in and the tumbler, an additional worker in carding proximity with the breast cylinder, and a stripper in operative relation with the first worker, the breast and the additional worker.



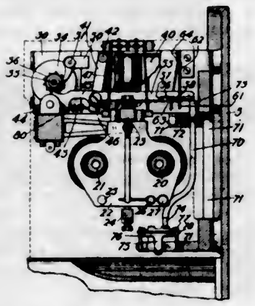
2. In a carding machine, a main cylinder, a first worker, a tumbler, a licker-in adjoining but separated from the tumbler, and feeding-in rolls in engagement with the licker-in, combined with a breast cylinder which engages the first worker, the licker-in and the tumbler, an additional worker in carding proximity with the breast cylinder, and a stripper in operative relation with the first worker, the breast and the additional worker, all so arranged that the teeth of the main cylinder, of the breast, and of both workers pitch in the same direction while the teeth of the licker-in, of the tumbler and of the stripper pitch in the opposite direction.

3. In a carding machine, a main cylinder, a first worker, a tumbler, a licker-in adjoining but separated from the tumbler, and feeding-in rolls in engagement with the licker-in, combined with a breast cylinder which engages the first worker the licker-in and the tumbler, an additional worker in carding proximity with the breast cylinder, and a stripper in operative relation with the first worker, the breast and the additional worker, all so arranged that the teeth of the main cylinder, of the breast, and of both workers pitch in the same direction while the teeth of the licker-in, of the tumbler and of the stripper pitch in the opposite direction, and so arranged that the main cylinder, the breast, and the additional worker rotate in one direction while the licker-in, the tumbler, the first worker and the stripper rotate in the opposite direction.

4. In a carding machine, a main cylinder, a first worker, a tumbler, a licker-in adjoining but separated from the tumbler, and feeding-in rolls in engagement with the licker-in, combined with a breast cylinder which engages the first worker the licker-in and the tumbler, an additional worker in carding proximity with the breast cylinder, and a stripper in operative relation with the first worker, the breast and the additional worker all so arranged that the teeth of the main cylinder, of the breast, and of both workers pitch in the same direction while the teeth of the licker-in, of the tumbler and of the stripper pitch in the opposite direction, and so arranged that the main cylinder, the breast, and the additional worker rotate in one direction while the licker-in, the tumbler, the first worker and the stripper rotate in the opposite direction and so arranged that the surface speed of the breast cylinder is faster than that of the licker-in, of the first worker, of the additional worker and of the stripper, while the surface speed of the stripper is greater than that of the first worker and of the additional worker, the surface speed of the tumbler is greater than that of the breast cylinder and less than that of the main cylinder.

1,103,650. TELEPHONE COIN-REGISTER. WILLIAM O. BECK, Ridgefield, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed July 20, 1912. Serial No. 710,692. (Cl. 232—57.5.)

1. In combination, a coin collector comprising a coin chute having deposit and refund channels, and electromagnetically controlled means for directing a coin into either of said channels; and a register comprising a register train, remotely controlled self-restoring means for actuating said train, and means operable by a coin in said deposit channel and coöperating with said self-restoring means for controlling the actuation of said train.



2. In a coin register, the combination with a coin collector comprising a coin chute having deposit and refund channels, and an electromagnetically controlled system for directing a coin into either of said channels, of a registering train, an actuator therefor, electromagnetic means for moving said actuator into operative position to said train, and means operable by a coin in said deposit channel for allowing said actuator to operate said register train.

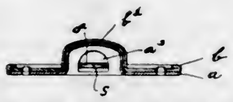
3. In a coin register, the combination with a coin collector comprising a coin chute having deposit and refund channels, and an electromagnetic device for directing a coin into either of said channels, of a registering train, an electromagnetically set self-restoring actuator therefor, and means controlled by a coin in said deposit channel and coöperating with said actuator for allowing said actuator to operate said register train.

4. In a coin register, the combination with a coin collector comprising a coin chute having deposit and refund channels, and an electromagnetic system for controlling the disposition of a coin into either of said channels, of a registering train, an electromagnetically set actuator therefor, means for operatively restoring said actuator, and means operable by a coin in said deposit channel and coöperating with said actuator for controlling said actuator to allow it to be operatively restored by said first mentioned means.

5. In a coin register, the combination with a coin collector comprising a coin chute having deposit and refund channels, and electromagnetic means for directing the coin into either of said channels, of a register train, an actuator therefor, electromagnetic means for placing said actuator in operative position relative to said train, a lever projecting into said deposit channel and in operative connection with said actuator for controlling the same, and means for restoring said actuator after the operation of said electromagnetic means to operate said register train.

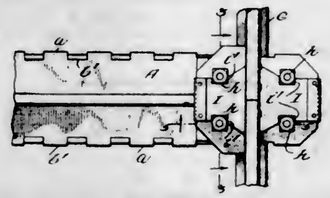
[Claims 6 to 9 not printed in the Gazette.]

1,103,651. GARMENT-FASTENER. JULIUS BRELL, New York, N. Y. Filed June 14, 1913. Serial No. 773,616. (Cl. 24—218.)



A separable fastener comprising a stud member including an attaching plate and a hollow stud thereon provided with arched slots in its opposite sides, a socket member including an attaching plate having a socket adapted to be engaged by said stud, and springs on said socket member having arc-shaped inner ends adapted to project through said slots and hold said members firmly against separation by lateral strain, the arched tops of said slots serving to compress said springs and facilitate the separation of said members by direct outward pull.

1,103,652. CROSS-TIE. GEORGE F. BROCKWAY, Eden, Iowa. Filed Mar. 13, 1914. Serial No. 824,413. (Cl. 238—5.)



1. A metallic tie of the character described, comprising a body or shell substantially rectangular in cross section and the top and bottom of which are bent along central, longitudinal lines to form inner facing grooves, and a truss bar extending longitudinally of the body or shell and having its upper and lower longitudinal edges disposed in said grooves.

2. A metallic tie of the character described, comprising a body or shell provided with central, longitudinal grooves in its top and bottom plates, and a truss bar extending centrally and longitudinally within the body or shell, said truss bar having its upper and lower edges engaged within the said grooves and being provided with lugs extending laterally from the sides thereof to the sides of the body or shell, all for the purpose described.

3. A metallic tie of the character described, comprising a body or shell consisting of top and bottom plates, the latter of which is provided with upstanding longitudinal flanges forming the sides of the body or shell, the adjacent edges of the said top and side plates being provided with series of spaced interlocked projections, all for the purpose described.

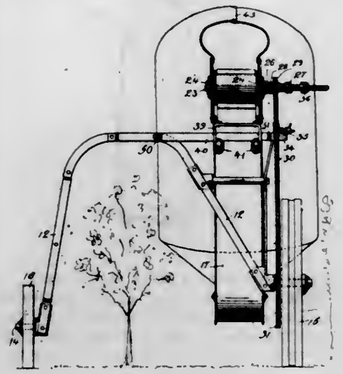
4. A metallic tie of the character described, comprising a body or shell, consisting of top and base plates, the latter of which is provided with upstanding flanges forming the sides of the body or shell, the upper edges of which sides are provided with spaced, upstanding projections, the side edges of the top plate being provided with spaced projections adapted to interlock with the said projections, of the sides, cushion blocks disposed upon the top plate at the opposite ends of the tie, and confined between the upstanding projections of the body or shell sides, rail supporting and holding plates disposed on the cushion blocks, and transverse U-bolts extending through the said holding and supporting plates and through the blocks and body or shell, upon the sides of the rail supported thereon.

5. A metallic tie of the character described, comprising a trussed body or shell, the sides of which are provided with upstanding projections, cushion blocks disposed on the body or shell adjacent its ends, rail supporting and holding plates disposed on the said cushion blocks, and U-bolts connecting the plates and cushion blocks and extending vertically and transversely through the body or shell upon the opposite sides of the rail seats.

[Claim 6 not printed in the Gazette.]

1,103,653. MACHINE FOR USE IN GATHERING COTTON. THOMAS E. BROWN, New York, N. Y., and CARL T. WESTLIN, Arlington, N. J., assignors to Cotton Machinery Company, New York, N. Y., a Corporation of New York. Filed Mar. 12, 1914. Serial No. 824,331. (Cl. 214—1.)

1. In a machine for use in gathering cotton, a frame raised or arched intermediate its ends, a supporting wheel at each end of said frame, said wheels being spaced apart from each other a distance sufficient to straddle a single row of cotton stalks, and a receptacle open at its top and supported upon the raised or arched portion of said frame and extending downwardly and rearwardly therefrom, and positioned at one side of the machine in approximately the plane of one of the supporting wheels to operate at the side of the straddled row of cotton stalks, and a carrier operating in said receptacle.



2. In a machine for use in gathering cotton, a frame raised or arched intermediate its ends and supported upon side wheels at its ends, one of said wheels being of smaller diameter than the other, a receptacle open at its top supported at its forward end upon the raised or arched portion of the frame and inclined downwardly and rearwardly therefrom, and positioned adjacent the plane of operation of the wheel of larger diameter.

3. In a machine for use in gathering cotton, a frame raised or arched intermediate its ends and supported at its ends upon wheels, and including a transversely extending member, a receptacle having a seat bracket upon its bottom side, said bracket engaged loosely over said transversely extending member, said receptacle extending rearwardly and downwardly from said frame, means for detachably engaging said receptacle and frame near the forward end of the former, and a carrier operating in said receptacle.

4. In a machine for use in gathering cotton, a frame raised or arched intermediate its ends upon wheels, said frame having transversely extending members, a receptacle having a forked seat bracket and a locking bracket secured to the under side of the same, said locking bracket being located near the forward end of said receptacle, and detachably secured to one of said frame members, said seat bracket being loosely seated on the other of said frame members to carry the weight of said receptacle, said receptacle being open at its top and inclined rearwardly and downwardly from the raised or arched portion of the frame, and a carrier operating in said receptacle.

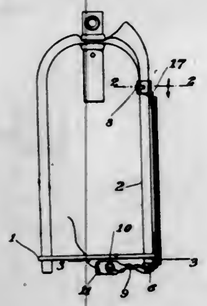
5. In a machine for use in gathering cotton, a frame raised or arched intermediate its ends, supporting wheels for the ends of said frame, a receptacle supported upon the raised part of said frame and inclined downwardly and rearwardly therefrom, said receptacle open at its top, a carrier operating in said receptacle, a drive gearing for said carrier including a double clutch mechanism, power operated mechanism for operating one member of the double clutch, manually operated mechanism for operating another member of the double clutch, and an adjustable idler for the power operated mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,103,654. PRESSER FOR FLIERS. CHARLES T. BURLIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Apr. 7, 1914. Serial No. 830,101. (Cl. 118—29.)

1. A sheet-metal presser for fliers, consisting of a body folded in two or more layers, with integral end portions

bent to form upper and lower presser bearings and an extension of the lower bent portion forming a tang and having a pad thereon.



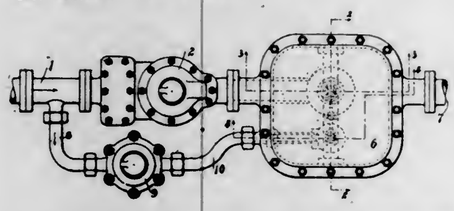
2. A presser formed of a sheet metal blank, with the lower end bent over transversely to the presser body and punched with a bossed aperture forming a bearing for the presser upon the flier, a tang extending integrally from such bent over portion and an integral pad on the end of the tang.

3. A presser having a body part formed of a sheet metal blank folded on itself, with the upper and lower parts of such blank bent to form upper and lower presser bearings, the lower part having an integral extension forming a pad and tang, and said extension being twisted one or more quarter turns with reference to the said lower bearing.

4. A presser formed of a sheet metal blank, having a body composed of folded layers of the sheet metal blank, an upper bearing formed in an integral curled portion extending from the top of the blank, and a tang and pad formed in an integral bent over and twisted portion extending from the lower end of the blank, said latter portion having an aperture with a bossed margin forming a lower presser bearing in alinement with the said upper bearing.

5. A presser formed of a sheet metal blank folded in two or more layers to form the body and provided with upper and lower bearings and a bent over tang portion at the lower bearing, the latter portion being angular in cross section and twisted with reference to the bearing, and a pad at the end of said portion.

1,103,655. WATER-METER SYSTEM. JOHN W. CALHOUN, Connellsville, Pa. Filed Aug. 15, 1911. Serial No. 644,221. (Cl. 73—167.)

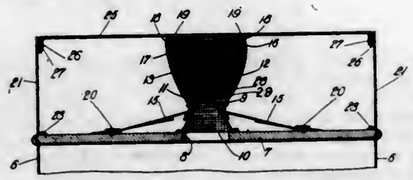


1. The combination with a supply main, of two meters of different capacity communicating therewith, a casing containing a delivery chamber communicating with the delivery side of said meters by separate ports, valves within said chamber controlling said ports, and closer means of different strengths operating to close said valves, respectively, the openings of said valves being controlled by the combined action of the varying fluid pressures within said chamber, and said closer means.

2. The combination with a supply main of two meters of different capacity communicating therewith, a casing containing a delivery chamber communicating with the delivery side of said meters, respectively, by different ports, valves within said chamber adapted to close said ports, respectively, closer means of strengths proportionate to the capacity of the two meters acting upon the valves communicating with the corresponding meters, and operative connections between said valves whereby the opening and closing of said valves is controlled by the combined action of the fluid pressure within said chamber, said closer means and said connection, on said valve.

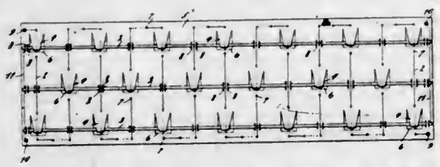
3. The combination with two meters of different capacity, of the casing 6 containing a delivery chamber, the meters having outlets 5, 11 respectively, communicating therewith, the valves 12, 13, having controlling springs 16, 17, and the lever 20 connecting said valves.

1,103,656. FLY-TRAP. MATTHEW D. CAMPBELL, Boston, Mass. Filed Mar. 26, 1913. Serial No. 756,847. (Cl. 43—22.)



In a fly trap an attractive plate, a fly retainer detachably secured to said plate, said fly retainer having an opening in one end thereof, means adapted to conduct flies to said retainer, said means including a cone shaped screen, the smaller end thereof adapted to project into and be enveloped by said retainer and provided with an opening, and a powder pad secured to the interior of said cone shaped screen adjacent to and surrounding the opening in the small end of said conductor, the outer surface of said pad being perforated.

1,103,657. ELECTRICAL-CIRCUIT CONTROLLER. VERNON CANO, ARTHUR A. CANO, and LEWIS CANO, New York, N. Y. Filed Nov. 28, 1913. Serial No. 803,578. (Cl. 177—10.)



1. An electrical circuit-controller, comprising a strip of insulating material having a relatively large opening, a pair of normally-separated conductors secured to said strip and crossing each other at said opening and one being movable to and from a position for contact with the other, and means at one side of said conductors for pressing them together.

2. An electrical circuit-controller, comprising a strip of insulating material having a relatively large opening, a pair of normally-separated conductors secured to said strip and crossing each other at opposite sides of said opening and one being movable to and from a position for contact with the other, and means at one side of said conductors for pressing them together.

3. An electrical circuit-controller, comprising a strip of insulating material having a relatively large opening, a pair of normally-separated conductors secured to said strip and crossing each at opposite sides of said opening, and a tongue on said strip at one side of said conductors for pressing them together.

4. An electrical circuit-controller, comprising a strip of insulating material having a tongue outlined by a cut portion of the strip, and a pair of normally-separated conductors secured to said strip and crossing each other at one side of said tongue and at opposite sides of the opening formed by the tongue and adapted to be brought into contact by pressure on the opposite side of said tongue.

5. An electric circuit-controller, comprising a strip of insulating material having a tongue outlined by a cut portion of the strip, a pair of normally-separated conductors secured to said strip and crossing each other at one side of said tongue and at opposite sides of the opening formed by the tongue and adapted to be brought into contact by pressure on the opposite side of said tongue, and circuit terminals on said strip to which said conductors are connected.

[Claims 6 to 15 not printed in the Gazette.]

1,103,658. MANUFACTURE OF CREAM OF TARTAR. HUMBERT CANTONI, Voghera, Italy, and JEAN CHAUTEMS and EMILE DEGRANGE, Geneva, Switzerland, assignors to The Firm of Cantoni Chautems et Compagnie and Emile Degrange, Geneva, Switzerland. Filed Feb. 8, 1912. Serial No. 676,449. (Cl. 23—24.)

1. The herein described process for extracting and recovering in the form of potassium bitartrate all the tartaric acid contained in tartaric materials, consisting in treating raw tartaric materials by means of alkaline and acid agents to obtain a solution of a normal tartrate, and a solution of free tartaric acid, and then mixing the said solutions together to precipitate as cream of tartar all the tartaric acid contained therein.

2. The herein described process for extracting and recovering in the form of cream of tartar all of the tartaric acid contained in tartaric materials, consisting in treating a portion of the crude materials with alkaline reagents to obtain a solution of a normal tartrate, treating another portion of the crude materials with acid reagents to obtain a solution of free tartaric acid, and then mixing the two solutions together to precipitate as cream of tartar the whole tartaric acid contained therein.

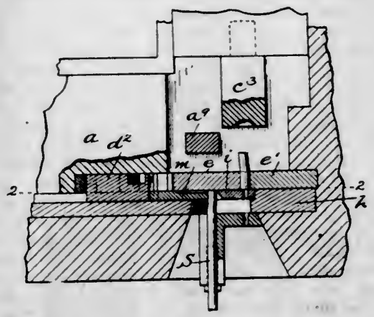
3. The herein described process for extracting and recovering in the form of cream of tartar all of the tartaric acid contained in tartaric materials, consisting in treating a portion of the crude material in the presence of heat with an alkaline reagent to obtain a solution of a normal tartrate, treating another portion of the crude material with acid reagents to obtain a solution of free tartaric acid, and then mixing the two solutions together to precipitate as cream of tartar all the tartaric acid contained therein.

4. The herein described process of extracting and recovering in the form of potassium bitartrate all the tartaric acid contained in tartaric materials consisting in treating raw tartaric materials by means of alkaline and acid agents to obtain a solution of normal tartrate and a solution of free tartaric acid, adding a potassium salt to the alkaline solution, adding oxalic acid to the acid solution, and then mixing the said solutions together to precipitate as cream of tartar all the tartaric acid contained therein.

5. The herein described process of extracting and recovering in the form of potassium bitartrate all of the tartaric acid contained in tartaric materials, consisting in first treating a portion of the crude materials with alkaline reagents to obtain the solution of normal tartrate, adding a potassium salt to this alkaline solution, then treating another portion of the crude materials with acid reagents to obtain a solution of free tartaric acid, adding a predetermined quantity of oxalic acid to this acid solution, and then mixing the two solutions together to precipitate as cream of tartar all the tartaric acid contained therein.

1,103,659. MACHINE FOR HEADING BOLTS AND RIVETS. MATTHEW CHAMPION, Cleveland, Ohio, assignor to The Champion Rivet Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 23, 1913. Serial No. 780,663. (Cl. 10—15.)

In a machine of the character described, the combination of a breast plate having through it a hole for the passage of the stock rod and having in its rear face a horizontal guide groove which intersects said hole, a bender plunger movable in said guide groove, and two stripper shoulders located adjacent to said hole, one above

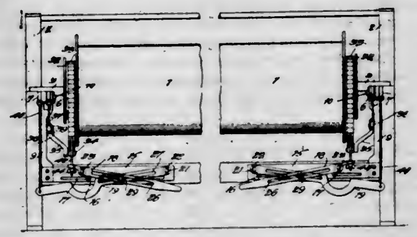


and one below the bender plunger,—the distance between said stripper shoulders being less than the diameter of the said hole in the breast plate.

1,103,660. PROCESS OF TREATING CEREALS. WILLIS E. COLLINS, Asheville, N. C. Filed Nov. 14, 1913. Serial No. 800,933. (Cl. 99—10.)

The improved process of treating wheat consisting in first passing the grain between rolls to scalp the bran therefrom, sifting the product to eliminate some of the fine particles; then roasting the remainder until starch granules are ruptured, and constantly stirring until the grits are partially dextrinized.

1,103,661. LOOM ATTACHMENT. IGNACE COULOMBE, Fall River, Mass. Filed Oct. 8, 1913. Serial No. 794,102. (Cl. 139—58.)



1. The combination with the loom and the warp beam having brake disks at its ends, of a support at each end of the beam, a pair of bearing levers arranged alongside each other and pivoted intermediate their ends to the support, said levers having registering notches on the rear side of the pivotal connection for receiving the adjacent end of the warp beam, an elbow lever pivoted to the support below the bearing levers, a brake band on the adjacent disk and having its inner end secured to the adjacent arm of the elbow lever, a flexible connection between the other arm and the front end of the inner lever of the pair of bearing levers, a pair of levers pivoted to the support and extending longitudinally of the beam, one of the said levers being pivoted to the support at the end remote from the bearing levers, a flexible connection between the other end of the said lever and the front end of the other bearing lever, the other lever of the last named pair being pivoted at the opposite end from the pivotal connection of the first-named lever of the pair and being extended beyond the said pivotal connection, an adjustable connection between the extended end of the said lever and the front

end of the brake band, said last-named pair of levers being longitudinally slotted, a bolt engaging the slots of both levers, and means for rigidly connecting the bolt to one of the levers.

2. The combination with the loom and the warp beam having brake disks at its ends, of a support at each end of the beam, a pair of bearing levers arranged alongside each other and pivoted intermediate their ends to the support, said levers having registering notches on the rear side of the pivotal connection for receiving the adjacent end of the warp beam, an elbow lever pivoted to the support below the bearing levers, a brake band on the adjacent disk and having its inner end secured to the adjacent arm of the elbow lever, a flexible connection between the other arm and the front end of the inner lever of the pair of bearing levers, a pair of levers pivoted to the support and extending longitudinally of the beam, one of the said levers being pivoted to the support at the end remote from the bearing levers, a flexible connection between the other end of the said lever and the front end of the other bearing lever, the other lever of the last-named pair being pivoted at the opposite end from the pivotal connection of the first-named lever of the pair and being extended beyond the said pivotal connection, an adjustable connection between the extended end of the said lever and the front end of the brake band, and an adjustable connection between the said levers intermediate their pivotal connection.

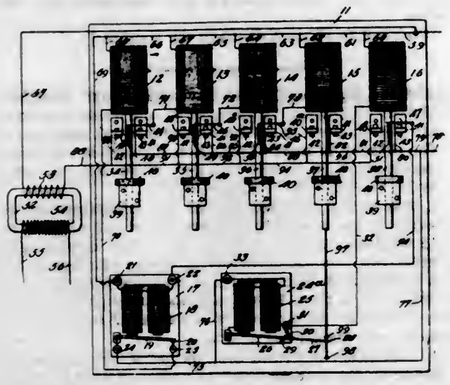
3. The combination with the loom and the warp beam, of a pair of bearing levers for each end of the beam, said levers being pivoted to a common support intermediate their ends and having registering notches in rear of the pivotal connection for receiving the adjacent end of the warp beam, a brake band at each end of the beam, an elbow lever pivoted below the inner bearing lever, the inner end of the brake band being connected to the adjacent end of the elbow lever, a connection between the other end of the elbow lever and the front end of the inner bearing lever, a pair of levers arranged alongside each other below the beam at each end thereof, said levers being pivoted at opposite ends, a connection between the front end of the outer bearing lever and the adjacent end of the lever whose pivotal connection is remote from the said end, an adjustable connection between the levers intermediate their pivotal connection, the other lever being extended beyond its pivotal connection and having an adjustable connection between the extended end and the front end of the inner bearing lever.

4. In a loom the combination with the warp beam, of a pair of levers pivoted at each end thereof and supporting the beam in rear of their pivotal connection, a brake band encircling each end of the beam, a connection between the rear end of the brake band and the front end of one of the said levers for making traction on the said end of the band when the front end of the bearing lever moves upward, a pair of levers pivoted below the beam at each end thereof, and extending longitudinally of the beam, the members of each pair being pivoted to the loom at their opposite ends and lying alongside each other, an adjustable connection between the said levers intermediate their pivotal connection, a connection between the free end of the lever whose pivotal connection is remote from the adjacent end of the beam and the front end of the other bearing lever, the other lever of the pair being extended beyond its pivotal connection toward the adjacent end of the warp beam, and an adjustable connection between the said extended end and the front end of the brake band.

5. In a loom, the combination with the warp beam, of a pair of levers pivoted at each end thereof and supporting the beam in rear of their pivotal connection, a brake band encircling each end of the beam, a connection between the rear end of the brake band and the front end of one of the said levers for making a traction on the said end of the band when the front end of the bearing lever moves upward, and a connection between the front end of the brake band and the front end of the other bearing lever for making traction on the said end of the brake band when the front end of the said bearing lever is moved upward.

[Claim 6 not printed in the Gazette.]

1,103,662. AUTOMATIC STARTING-BOX. MERLIN E. CUSTER, Carbonado, Wash. Filed Feb. 26, 1913. Serial No. 750,766. (Cl. 172—288.)

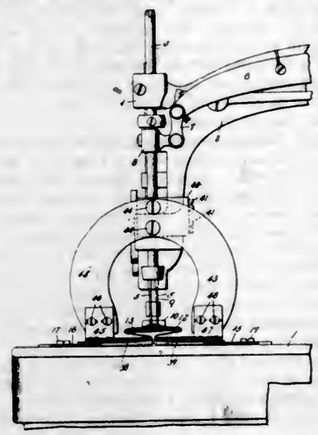


1. In an automatic starting box, the combination of a plurality of solenoids, a movable core for each solenoid, a resistance unit connected with each core and adapted to be thrown into and out of circuit by movements thereof, said resistance units being in parallel with each other with reference to the current supplied to the work, a circuit for energizing one of said solenoids, a contact for opening and closing said circuit, a magnet provided with an armature lever for actuating said contact, a connection from said armature lever to the core of one of the solenoids so that the movement of said last-mentioned core of one solenoid closes a circuit through said magnet and through another of said solenoids, and a contact controllable by said magnet and included in said last mentioned circuit.

2. In an automatic starting box, the combination of a plurality of solenoids, a movable core for each solenoid, a resistance unit connected with each core and adapted to be thrown into and out of circuit by movements thereof, said resistance units being in parallel with each other with reference to the current supplied to the work, a circuit for energizing one of said solenoids, a magnet provided with an armature lever for actuating said contact, a connection from said armature lever to the core of one of the solenoids so that the movement of said last-mentioned core of one solenoid closes a circuit through said magnet and through another one of said solenoids, a contact controllable by said magnet and included in said last mentioned circuit, a second magnet, a circuit connected with said second magnet for energizing the same, contact mechanism controllable by the last of said solenoids to be energized for operating said circuit through said second magnet, and a contact controllable by said second magnet and included in the circuit of the first solenoid to be energized.

1,103,663. PLAIT-FOLDER FOR SEWING-MACHINES. JOSEPH H. DE NIKE, Albany, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 21, 1907. Serial No. 353,285. (Cl. 112—12.)

1. A box plait folder for sewing machines, including in combination plait forming members, means for simultaneously adjusting said plait-forming members for different sized plaits, means for supporting said plait forming members from the work support of the machine, and folding members coöperating with the plait forming members, and means for supporting the folding members from the head of the machine; substantially as described.



2. A box plait folder for sewing machines, including in combination plait forming members, means for supporting said plait forming members from the work support of the machine, means for simultaneously adjusting said plait forming members and means coöperating with said plait forming members to form a box plait; substantially as described.

3. A box plait folder for sewing machines, including in combination plait forming members, means for adjustably supporting said plait forming members, whereby said plait forming members may be adjusted transversely of the machine, independent means for adjusting the plait forming members for different sized plaits, and means coöperating with said plait forming members to form a box plait; substantially as described.

4. A box plait folder for sewing machines, including in combination plait forming members, means for adjusting the plait forming members for different sized plaits, a bracket secured to the work support, and extending outwardly therefrom, for supporting said plait forming members, and means coöperating with said plait forming members to form a box plait; substantially as described.

5. A box plait folder for sewing machines, including in combination coöperating plait forming members, means for adjusting the plait forming members for different sized plaits, a bracket secured to the work support and extending outwardly therefrom, for supporting said plait forming members, and a folding plate located on each side of said plait forming members and coöperating therewith and means carried by the head of the machine for supporting said folding plates; substantially as described.

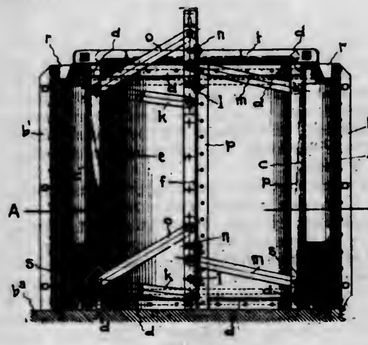
[Claims 6 to 33 not printed in the Gazette.]

1,103,664. COLLAPSIBLE CORE. CHARLES F. DRAPER, Montreal, Quebec, Canada. Filed June 25, 1913. Serial No. 775,726. (Cl. 25—128.)

1. The combination with a form whereby hollow members are cast such form having abutting straight edge portions and such form presenting when in use an unbroken molding surface, of means for releasing the same from the cast member comprising devices for relatively displacing the said edges in both radial and tangential directions, and for converting the shell into substantially spiral form.

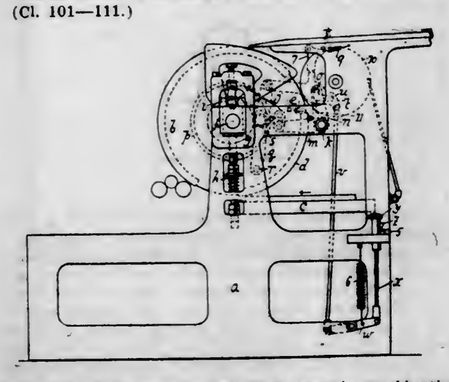
2. In combination with a form whereby the hollow members are cast such form having abutting straight edges and adapted for relative lateral displacement and means for effecting the said displacement comprising a member movable in the approximate axial line of the form and devices having different scope of movement operatively connecting the said member to the respective edges and other portions of the form for the purpose set forth.

3. In combination with a form whereby hollow members are cast such form consisting of sheet metal having abutting straight edges and adapted for relative lateral displacement and means for effecting such displacement comprising a bar disposed in the approximate axial line of the form, levers pivotally connected to the interior of the form adjacent to one of such edges and pivotally connected at their opposite ends to the bar at a point inclined from the pivotal connection to the form and other levers pivotally connected contiguously to the other edge of the form and at their opposite ends to the bar such last mentioned levers being inclined relatively to the first mentioned levers.



4. In combination with a form whereby hollow members are cast such form consisting of sheet metal having abutting straight edges and adapted for relative lateral displacement and means for effecting such displacement comprising a rod disposed in the approximate axial line of the form, levers pivotally connected to the interior of the form adjacent to one of such edges and pivotally connected at their opposite ends to the bar at a point inclined from the pivotal connection to the form, and other levers pivotally connected contiguously to the other edge of the form and at their opposite ends to the bar such last mentioned levers being inclined relatively to the first mentioned levers, and additional levers pivotally connected to the interior of the form in different positions and pivotally connected at their opposite ends to the bar, these last mentioned levers having regularly approximately increasing inclination for the purpose set forth.

1,103,665. PRINTING-PRESS. GEORGE P. FENNER, New London, Conn. Filed Aug. 16, 1913. Serial No. 785,071. (Cl. 101—111.)



1. In a single revolution printing press the combination with an impression cylinder and a bed, means operated by the impression cylinder for elevating and lowering the cylinder, means including a reciprocating member normally in action with the cylinder elevating and lowering

means for controlling the cylinder to rise and fall at each impression, and means for preventing accidental throw of the elevating and lowering devices when the cylinder is lowered.

2. In a single revolution printing press the combination with an impression cylinder and a bed, means operated by the impression cylinder for elevating and lowering the cylinder, means including a reciprocating member normally in action with the cylinder elevating and lowering means for controlling the cylinder to take the impression when lowered at each revolution, and means for preventing accidental throw of the elevating and lowering devices when the cylinder is lowered.

3. In a single revolution printing press the combination with an impression cylinder and a bed, means operated by the impression cylinder for elevating and lowering the cylinder, and means including a reciprocating member normally actuated by the cylinder elevating and lowering means for controlling the cylinder to take the impression when lowered and to grip the sheet when elevated at each revolution, and means for preventing accidental throw of the elevating and lowering devices when the cylinder is lowered.

4. In a single revolution printing press the combination with an impression cylinder and a bed, means operated by the impression cylinder for elevating and lowering the cylinder, and means including a reciprocating member normally actuated by the cylinder elevating and lowering means for controlling the cylinder to take the impression when lowered and to grip the sheet when elevated in approximately one half of a revolution of the cylinder, and means for preventing accidental throw of the elevating and lowering devices when the cylinder is lowered.

5. In a single revolution printing press the combination with an impression cylinder and a bed, a cam carried by the impression cylinder, means connected to the cam for elevating and lowering the cylinder, means including a reciprocating hook member normally in action with the cylinder elevating and lowering means for controlling the cylinder to elevate it during one half its revolution and to lower the cylinder during the other half to take the impression, and means for preventing accidental throw of the elevating and lowering devices when the cylinder is lowered.

[Claims 6 and 7 not printed in the Gazette.]

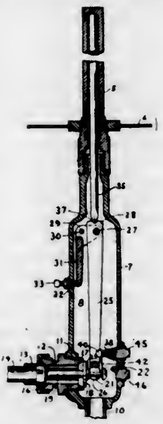
1,103,666. STACK-FLASHING. ROBERT FRANKLIN FIFE, Canton, Ohio. Filed Oct. 14, 1913. Serial No. 795,036. (Cl. 108—26.)



1. In combination with an inclined roof and a stack extending therethrough, a stack flashing comprising a roof plate provided with an elongated stack opening adapted to accommodate said stack and to permit said roof plate to assume the necessary degree of inclination to conform to the pitch of said roof, the integral edge of said plate around said stack opening turned upwardly from the plane of said plate, that portion of said edge at the lower side of said opening extending upwardly farther than the remaining portion of said up-turned edge, a collar connected to said roof plate and surrounding and inclosing said stack opening and upturned edge, the said collar at its upper end adapted to closely encircle and engage said stack and the lower end of said collar being outwardly spaced from said up-turned edge, producing a drainage channel between said up-turned edge and collar and said collar provided with a drainage and ventilation opening leading from the lowest part of the said drainage channel in the interior of said collar onto the roof plate below said collar, whereby leakage into the interior of said collar will be conducted by said drainage channel and discharged onto said roof plate, and air will be permitted to enter the interior of said collar to produce evaporation of dampness.

2. A stack flashing comprising upper and lower members, each member provided with a base plate and a segmental collar portion connected thereto, said plates provided with complemental marginal openings having upturned inner edges spaced from the inner sides of said collar portions and producing drainage channels, the collar portion of the lower member provided with a drainage opening leading from the lowest part of the drainage channel in the interior of said collar portion onto the roof plate of said lower member below said collar portion, and said upper member and lower member adapted to be connected together with the roof plate of the upper member overlapping the roof plate of the lower member, the drainage channel of said upper member arranged to discharge into the drainage channel of the lower member, and the collar portions of said members forming a complete collar.

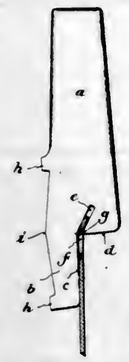
1,103,667. THERMOSTATIC CONTROLLING-VALVE. JOHN EDWIN FULWEILER, Philadelphia, Pa. Filed Nov. 28, 1913. Serial No. 803,415. (Cl. 236—5.)



1. In a heating system, the combination with means for controlling the heating agent, of a pivoted lever arranged to actuate said controlling means, means adjustable to vary the position of the pivotal axis of said actuating lever, means thermostatically operated to effect the movement of said actuating lever, and a leaf spring secured at one end to said actuating lever and having the other end engaged with the means for controlling said heating agent with tensional energy sufficient to quickly move said controlling means after having been started in motion.

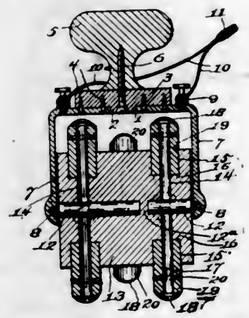
2. In a heating system, the combination with a valve having a guide, of a valve disk having a stem frictionally movable in said guide, and having a shouldered extension, a thermostatically actuated lever having means adjustable to vary the position of its pivotal axis and having its free end arranged to move between the said valve disk and the shoulder of the said extension, a leaf spring secured at one end to said lever and having the other end engaged with said shoulder, and a spring tending to shift said lever to close said valve, said leaf spring being of such a tension as to be incapable of overcoming the friction of the said valve disk stem until said valve disk is started in motion by said lever, but operative to shift said valve disk at a speed greatly in excess of the actuating lever when so started in motion, said leaf spring being of such length that its increase in tension due to flexing within the limits allowed by the movement of the end of the said lever between the valve disk and the shoulder, will be less than the force of the momentum gained by the valve disk when moved by the pressure of the fuel, and will when thus started effect the closing of said valve disk with a quick snap action.

1,103,668. SAW-SET. OLE N. GARNESS, Bellingham, Wash. Filed Dec. 15, 1913. Serial No. 806,775. (Cl. 76—72.)



A saw tooth setting tool, comprising a body having a depending finger provided with a vertical wall, an offset portion located to one side of said vertical wall, an inclined slot formed in said offset portion, the same being inclined upwardly into said offset portion and having its open end located at the juncture of said vertical wall and the lower face of said offset portion, the upper side of said slot being a continuation of said vertical wall, and the portion between the lower face of said offset portion and the lower side of said slot forming a tongue having an acute nose located substantially opposite and near the juncture of the upper side of the slot and vertical wall of the finger.

1,103,669. ELECTRIC MASSAGE INSTRUMENT. JAMES EDWIN GIBBS, Cincinnati, Ohio, assignor of one-half to Wm. A. Byerly, Bridgewater, Va. Filed Mar. 13, 1914. Serial No. 824,530. (Cl. 174—89.)

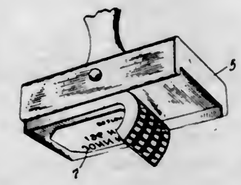


1. A body massage instrument comprising a one piece roller having end sockets separated by an interior portion of the roller body, shafts fitting the end sockets and abutting against said portion, sockets extending from the periphery of the roller and terminating in shoulders, sleeves supported by the shoulders and projecting from the roller, rods secured in the sleeves and having body contact heads projecting from the sleeves, and a frame in which the shafts are mounted.

2. In an electric massaging instrument, the combination with a frame divided centrally and having depending end sockets, a block connecting the divided portions of the frame, a hand knob secured to the block, and a revoluble two-part shaft held by the sockets, of a roller fixed on the shaft, a plurality of sleeves secured in and projecting from the roller, and rods secured in the sleeves and engaging the shaft and having body contact heads projecting from the outer end of the sleeves.

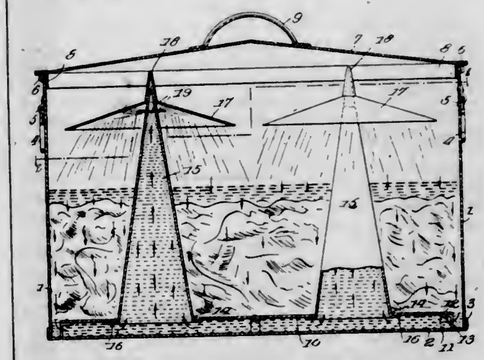
3. In an electric massaging instrument, the combination of a supporting frame having the top thereof divided crosswise, each portion of the frame having a depending shaft socket, an insulating block connecting the divided portion of the frame, a roller, a two part shaft driven into the roller and journaled in the sockets, sleeves extending into and projecting from the roller, body contact fingers extending from the shaft through the sleeves, and electric connections secured to the frame portions adjacent to the said block.

1,103,670. AIR-CUSHION FOR RUBBER STAMPS. CALDER C. GIBSON, Buffalo, N. Y. Filed Jan. 23, 1914. Serial No. 813,942. (Cl. 101—58.)



In a stamping device, a cushion comprising an outer wall, pairs of longitudinally disposed ribs carried by the wall, the ribs of two adjacent pairs being spaced apart slightly to permit severance of the outer wall between the last mentioned ribs for producing a cushion of the required size, transversely disposed partitions between the longitudinally disposed ribs of each pair, the alternate transversely disposed ribs being of less height than the companion transversely disposed ribs.

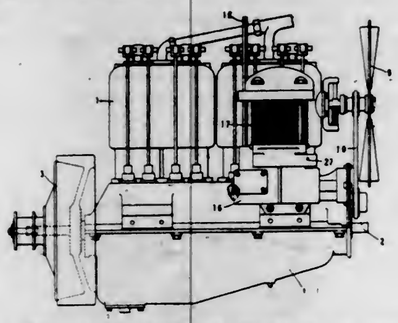
1,103,671. WASHBOILER. ALBERT GRUENSTERN, Everett, Wash. Filed June 4, 1913. Serial No. 771,673. (Cl. 68—30.)



The combination with the wash boiler, of an imperforate plate of lesser area than the bottom of the boiler and having means for engaging the boiler to support the plate in spaced relation above the bottom of the boiler, a hollow conical member extending upwardly from the plate near each end thereof, each of the said members having a closed top and having openings near its apex, the plate having an opening registering with the base

of each of the conical members, and a conical deflector for each conical member, each of the said deflectors having a conical socket at its center for engaging the top of the conical member, said socket being arranged to support the deflector with its concave face downwardly and in position for engagement by the material discharged through the opening of the conical member.

1,103,672. ELECTRIC STARTING AND GENERATING MECHANISM FOR VEHICLES. JOHN ALLEN HEANY, Flint, Mich., assignor, by mesne assignments, to A. E. L. Leckie, Washington, D. C. Filed June 7, 1910. Serial No. 565,478. Renewed Dec. 4, 1913. Serial No. 804,764. (Cl. 123—179.)



1. A starting and generating mechanism for vehicles embodying a dynamo electric machine adapted for gear connection with an engine shaft and having a casing, a main shaft mounted in said casing, a driving shaft intermediate the armature of the dynamo electric machine and the main shaft and having worm gear connections therewith for driving the latter, and a shaft having spiral gear connections with the main shaft and operatively arranged to drive the armature.

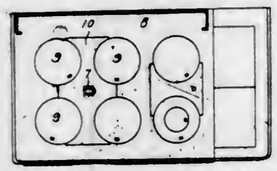
2. In a device of the character described, a dynamo electric machine having a casing, a main shaft extending therethrough, an armature shaft operatively supported transversely to said main shaft, a worm and worm-gear connecting said shafts, a countershaft intermediate the main shaft and armature, spiral and spur gears connecting said shafts, and clutch devices intermediate the armature shaft, main shaft and countershaft.

3. In a device of the character specified, a dynamo electric machine having its armature arranged on a vertical axis, a main shaft operatively supported with reference thereto, and having gear connections with an engine shaft, worm and worm-gear connections between the armature shaft and main shaft for driving the latter, and connections intermediate the main shaft and armature shaft including spiral and spur-gears for driving the armature from the main shaft and clutch devices operatively arranged with reference to the several gears whereby one set of gears will be operative for driving the main shaft and the other set of gears will be operative for driving the armature.

4. In a device of the character described, a dynamo electric machine, a main shaft operatively arranged to be gear-connected with an engine shaft, said main shaft being geared to a timing shaft of the engine, worm-gear connections between the armature shaft and main shaft, a counter-shaft, spiral gear connections between the counter-shaft and main shaft, spur-gears connecting said counter-shaft and the armature shaft and automatic means appurtenant to the gear trains whereby the main shaft will be driven by the armature and the armature will be driven by the main shaft.

5. In a device of the character described, a dynamo electric machine adapted to drive and be driven from a main shaft, a main shaft operatively arranged with reference thereto, and adapted for gear connection with an engine shaft, concentric members operatively connected with the armature and main shaft, gearing interposed between the concentric members, main shaft and armature whereby said armature will drive the main shaft or be driven thereby, and clutch devices interposed in the gearing connections.

1,103,673. STOVE-TOP SUPPORT. GEORGE E. HEIDBREDER and ANTON OHNEMUS, Quincy, Ill., assignors to Excelsior Stove and Manufacturing Company, Quincy, Ill., a Corporation of Illinois. Filed Oct. 31, 1913. Serial No. 798,469. (Cl. 126—211.)

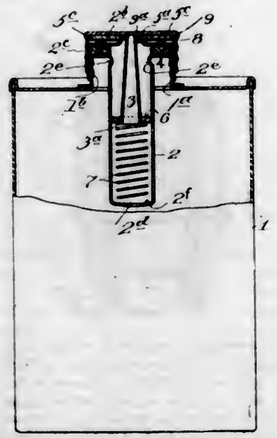


1. In a stove top support, a base having a vertically disposed socket, a post having a bottom portion formed to enter a socket in the base, said post being shiftable to a position at right angles to its normal position and being formed to enter farther into the socket and to be positively locked against rotation in its shifted position, thereby decreasing the height of the support.

2. The combination with a base, of a pair of opposed side flanges carried thereby, a second pair of opposed side flanges disposed at right angles to the first mentioned flanges, said second pair of opposed side flanges being of a less height than the first mentioned side flanges, a post having a bottom arranged to enter between both pairs of opposed side flanges and being provided with a pair of outwardly extending flanges on opposite sides of the post adapted to rest on either pair of opposed side flanges.

3. In a device for supporting stove tops, a base provided with a socket, a post formed to enter said socket in one position and to enter farther into the socket in a position at right angles to its first position, said post being positively locked against rotation by its engagement with the base in either of its operative positions.

1,103,674. CONTAINER. MORRIS KARP, Passaic, N. J., assignor to Passaic Metal Ware Company, Passaic, N. J., a Corporation of New Jersey. Filed Nov. 14, 1913. Serial No. 800,910. (Cl. 221—27.)



1. The combination of a container, a cap, means to support the cap upon the container, a guide suspended from the cap and depending within the container, a spout movable within the guide and through openings in the container and cap, and a spring within the guide to retain said spout projected from the guide through said openings.

2. The combination of a container having an opening, an aperture cap fitted over said opening, a guide suspended from the cap and depending within the container through said opening, a spout movable in said guide and through the opening in said cap, the guide having an abutment, and a spring within the guide acting against the spout and abutment for normally retaining the spout projected through the guide and cap.

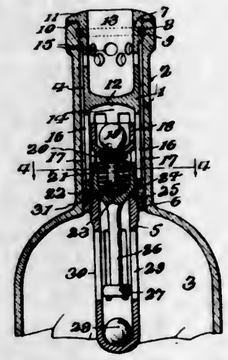
3. The combination of a guide, and means to attach the guide to a container comprising a cap fitted to and supporting the guide, a spout, the guide having an abutment at its inner portion, a spring within the guide bearing against the spout and abutment to retain the spout projected through the cap and guide, and means to prevent leakage between the spout and cap.

4. The combination of a guide, and means to attach the guide to a container comprising a cap fitted over and supporting the guide, a spout, means to retain the spout projected through the cap and guide, and a washer encircling the spout to engage the cap to prevent leakage between the cap and spout, said washer being fitted to slide with the spout within said guide.

5. The combination of a guide, and means to attach the guide to a container comprising a cap fitted over the guide, a spout, means to retain the spout projected through the guide, said spout having a flange at its inner end, and a washer upon the spout co-acting with said flange.

[Claims 6 to 14 not printed in the Gazette.]

1,103,675. NON-REFILLABLE BOTTLE. JEREMIAH C. LAUTENBACHER and ALBERT GEARY, Schuylkill Haven, Pa. Filed July 31, 1913. Serial No. 782,276. (Cl. 215—61.)

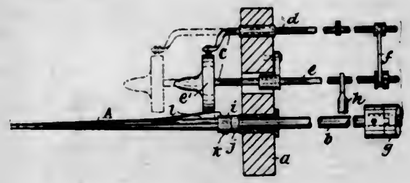


1. In combination with the bottle, an emptying stopper inserted therein and comprising an upper tubular section having a partition and openings at either side thereof, and a lower tubular section having openings therein, a valve located within said stopper, a valve seat formed on the lower section, weighted members arranged within said upper and lower sections and on either side of said valve, and a spring interposed between the upper weighted member and the valve and seated within a recess in the valve and engaging the weighted member for operating upon the valve.

2. In combination with the bottle, an emptying stopper inserted therein and comprising an upper tubular section having a partition and openings at either side thereof, and a lower tubular section having openings therein, a valve located within said stopper, a valve seat formed on the lower section, a weighted member arranged within the said upper section, comprising a ball and a receptacle therefor, a spring interposed between said valve and said weighted member, a second weighted member consisting of a ball arranged in the said lower section, said weighted members being arranged to operate upon the valve alternately when the bottle is held upright or inverted.

3. In combination with the bottle, an emptying stopper inserted therein, and comprising an upper tubular section having a partition and openings at either side thereof, and a lower tubular section having openings therein, a valve located within said stopper, a stem formed on said valve and having a bead thereon, a valve seat formed in the upper edge of said lower section, said valve having a recess and a spring seated therein, a cupped member engaging one end of said spring, and a weight carried by said cup.

1,103,676. WINDING MECHANISM. EMORY J. LIPPS, Fountain Hill borough, Pa. Filed Feb. 16, 1914. Serial No. 818,841. (Cl. 242—31.)



1. Means for forming a wound package including, with the frame, an axial supporting member for the package and a package-engaging thread-guide member, one of said members being rotary around the axis of the supporting member and one reciprocatory longitudinally of said axis to bring the thread-guide member against the wound portion of the package and one of said members being also shiftable relatively to the other longitudinally of said axis to shift the point of winding along said axis, said supporting member having in the portion thereof around which the package-butt-windings are coiled a lateral offset coöperative with the thread-guide member.

2. Means for forming a wound package including, with the frame, an axial supporting member for the package and a package-engaging thread-guide member, one of said members being rotary around the axis of the supporting member and one reciprocatory longitudinally of said axis to bring the thread-guide member against the wound portion of the package and one of said members being also shiftable relatively to the other longitudinally of said axis to shift the point of winding along said axis, said supporting member having in the portion thereof around which the package-butt-windings are coiled a lateral offset coöperative with the thread-guide member and converging forwardly toward said axis.

3. Means for forming a wound package on a cop-tube including, with the frame, a cop-tube-receiving spindle member and a package-engaging thread-guide member, one of said members being rotary around the axis of the spindle member and one reciprocatory longitudinally of said axis to bring the thread-guide member against the wound portion of the package and one of said members being also shiftable relatively to the other longitudinally of said axis to shift the point of winding along said axis, said spindle member having in the portion thereof receiving the tube-butt means for maintaining a part of the tube-butt laterally offset and in coöperative relation to the thread-guide member.

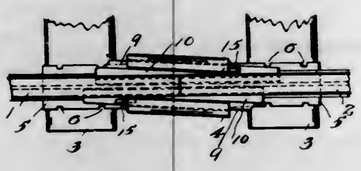
4. Means for forming a wound package on a cop-tube including, with the frame, a cop-tube-receiving spindle member and a package engaging thread-guide member, one of said members being rotary around the axis of the spindle member and one reciprocatory longitudinally of said axis to bring the thread-guide member against the wound portion of the package and one of said members

being also shiftable relatively to the other longitudinally of said axis to shift the point of winding along said axis, said spindle member having in the portion thereof receiving the tube-butt means for displacing a part of the tube-butt into laterally offset relation to the tube, and cooperative relation to the thread-guide member.

5. Means for forming a wound package including, with the frame, an axial supporting member for the package and a package-engaging thread-guide member, one of said members being rotary around the axis of the supporting member and one reciprocatory longitudinally of said axis to bring the thread-guide member against the wound portion of the package and one of said members being also shiftable relatively to the other longitudinally of said axis to shift the point of winding along said axis, said supporting member having in the portion thereof around which the package-butt-windings are coiled a longitudinal rib coöperative with the thread-guide member.

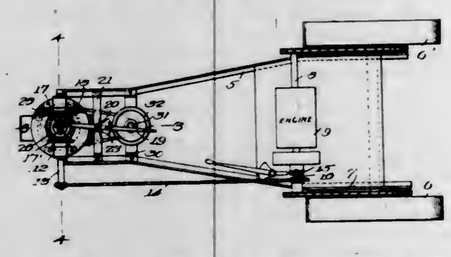
[Claim 6 not printed in the Gazette.]

1,103,677. RAIL-JOINT. JAMES A. MALOY, Columbus, Ohio. Filed Sept. 8, 1913. Serial No. 788,621. (Cl. 239—6.)



The combination with perforated rail ends, of an integral chair having oblique, parallel, grooved side walls, a pair of wedge members each having an outer obliquely extending tongue fitted in a grooved wall and having a flat grooved inner face bearing against the rail ends, and a splice bar located in each grooved face having a boss in each perforated rail end.

1,103,678. TRACTOR. ROBERT MARSH, Weldon, Ill. Filed Nov. 1, 1913. Serial No. 798,675. (Cl. 21—114.)



1. In a tractor, a frame, a cross bar connected thereto, a vertical shaft rotatable in said cross bar, a counter shaft journaled above said cross bar, pinions loosely mounted on said counter shaft, means for driving said counter shaft, a pinion wheel keyed on said vertical shaft above said cross bar and in mesh with first said pinions, an inverted U-shaped frame rotatably mounted on said vertical pin below said cross bar, a sprocket wheel on said pin between said frame and bar and connected to said frame, means for turning said sprocket wheel whereby said frame is turned, an axle journaled in the lower end of said frame, a pilot wheel on said axle, a second sprocket wheel on said axle secured to said pilot wheel, a horizontal shaft journaled in said frame below said vertical shaft, a smaller sprocket wheel on said horizontal shaft connected to second said sprocket wheel, a bevel gear keyed on the lower end of said vertical shaft, a bevel gear on said horizontal shaft in mesh with last said gear, and a clutch on said counter shaft adapted to be thrown in engagement with one of first said bevel gears for driving said pilot wheel in one direction or the other.

2. In a tractor, a frame, a cross bar secured to said frame, a counter shaft journaled above said cross bar, means for driving said counter shaft, pinions loosely mounted in spaced relation on said counter shaft, a vertical shaft rotatably mounted in said cross bar, a pinion wheel keyed on the upper end of said vertical shaft in mesh with said first pinions, a frame rotatably mounted on said vertical shaft, means for rotating said frame on said shaft, said means including a sprocket wheel secured to the rotatable frame and bearing against said cross bar and journaled on said vertical shaft, a pilot wheel carried by said frame, connecting means between said vertical shaft and pilot wheel for driving the latter, a yoke secured to first said frame, a lever pivoted on said yoke, and a clutch slidably keyed on said counter shaft between first said pinions and connected with said lever for engaging one or the other of first said pinions to drive said pilot wheel in one direction or the other.

3. In a tractor, a frame, a counter shaft journaled above said frame, means for driving said counter shaft, a vertical shaft rotatably mounted in said frame, a second frame rotatably mounted on said vertical shaft, means for rotating said second frame on said shaft, a sprocket wheel journaled on said vertical shaft, first said frame bearing upon said sprocket wheel, said second frame being secured to said sprocket wheel, said sprocket wheel adapted to be rotated for rotating the second frame, an axle journaled in said second frame, a pilot wheel carried by said axle, a sprocket wheel on said axle connected with said pilot wheel, a horizontal shaft journaled in said second frame, a second sprocket wheel secured to said horizontal shaft and connected with first said sprocket wheel, a pinion keyed on said horizontal shaft, a pinion keyed on said vertical shaft in mesh with said horizontal shaft pinion, and reversible connecting means between said counter shaft and vertical shaft for driving said pilot wheel in one direction or the other.

4. In a tractor, a frame, a cross bar, connected to one end thereof and having a horizontal plate formed thereon, a vertical shaft rotatably mounted on said cross bar, a second frame rotatably mounted on said vertical shaft, a pilot wheel carried by said second frame, means for driving said vertical shaft, connecting means between said vertical shaft and pilot wheel for driving the latter, a sprocket wheel secured to said second frame and bearing against said plate, a third frame secured to first said frame, a shaft rotatable in said third frame, a steering wheel secured on last said shaft, a sprocket wheel on last said shaft, and connecting means between said sprocket wheels whereby said pilot wheel may be turned as said steering wheel is turned.

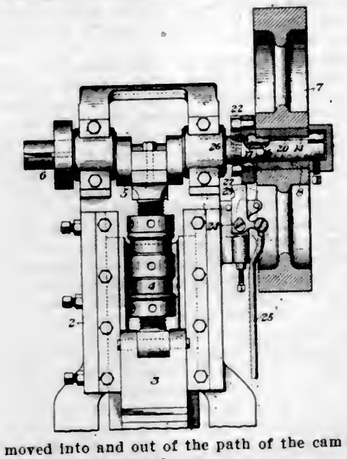
5. In a tractor, a fixed frame, a movable frame, a sprocket wheel secured to the movable frame, upon which the fixed frame bears, and a shaft extending through said fixed frame, sprocket wheel and movable frame, said shaft being rotatable therein.

[Claim 6 not printed in the Gazette.]

1,103,679. CLUTCH MECHANISM. JOHN A. MCGINNIS, Bridgeport, Ohio, assignor to Wheeling Stamping Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Nov. 15, 1913. Serial No. 801,114. (Cl. 192—6.)

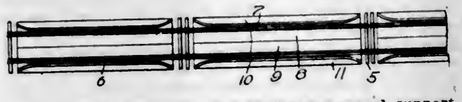
1. Clutch mechanism, comprising a pair of clutch keys rotatably seated between the driving and driven members of a machine and rotatable into and out of clutching position, said members at one end portion having teeth which engage each other, and actuating means arranged to act upon one of said clutch members, substantially as described.

2. Clutch mechanism comprising a pair of intergeared clutch keys seated between the driving and driven members of a machine, a cam member fixed to one of said keys, a spring acting upon the cam member, and means arranged



to be moved into and out of the path of the cam member; substantially as described.

1,103,680. RAIL-GUARD. JOHN MIHALYAK, Bitumen, Pa. Filed July 24, 1913. Serial No. 780,878. (Cl. 239—17.)

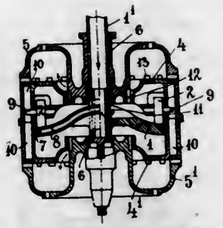


1. A rail guard comprising stationary spaced supporting plates adapted to be fixed to the ties of a track and abutting against the bases of the track rails, being of the same height thereof, supporting members adapted to be secured to the ties exteriorly of said rails and being of the same height thereof and abutting against the bases of the said rails, guard rails positioned upon said members and having curved ends, and countersunk members fixedly securing said guard rails to said members, said guard rails being positioned above the heads of the track rails, the intermediate portions of said guard rails being spaced from the inner longitudinal edges of said members.

2. A rail guard comprising a pair of stationary spaced supporting plates adapted to be fixed to the ties between the track rails and abutting against the bases of said rails, being of the same height thereof, supporting members secured to the ties exteriorly of the track rails and being of the same height as the said track rails and abutting against the bases thereof, guard rails positioned upon said members and having curved ends, and bolts countersunk in said guard rails for securing same to said members, said guard rails to be positioned above the heads of the track rails, the intermediate portions of said guard rails being spaced from the inner longitudinal edges of said members.

1,103,681. MOTOR. FRANZ MILLER, Milan, Italy. Filed July 29, 1913. Serial No. 781,720. (Cl. 121—63.)

1. In a motor, the combination of a pair of opposed cylinders connected together to form the casing of the motor and provided with inlet and outlet ports; a hollow shaft, whereon said cylinders are mounted concentric with each other and with the shaft, adapted for connection to a source of motive-fluid supply, said cylinders and shaft constituting companion parts, one of which is fixed and the other revoluble, and said shaft having ports for communication with the inlet ports of said cylinders during the movement of the revoluble part; a piston reciprocating in each cylinder; a member located between said pistons and provided with a plurality of undulating cam surfaces; and rollers connected with said pistons arranged to bear against said cam surfaces to convert the reciprocating movement of the pistons into rotary movement of said revoluble part and to cause said pistons to approach toward and recede from each other simultaneously.



2. In a motor, the combination of a pair of opposed cylinders connected together to form the casing of the motor and provided with inlet and outlet ports; a hollow shaft, whereon said cylinders are mounted concentric with each other and with the shaft, adapted for connection to a source of motive-fluid supply, said cylinders and shaft constituting companion parts, one of which is fixed and the other revoluble, and said shaft having ports for communication with the inlet ports in said cylinders during the movement of the revoluble part; a piston reciprocating in each cylinder; a member located between said pistons and provided with a plurality of undulating cam surfaces; and rollers connected with said pistons arranged to bear against said cam surfaces to convert the reciprocating movement of the pistons into rotary movement of said revoluble part and to cause said pistons to approach toward and recede from each other simultaneously.

3. In a motor, the combination of a pair of opposed cylinders connected together to form the casing of the motor and provided with inlet and outlet ports; a hollow shaft, whereon said cylinders are mounted concentric with each other and with the shaft, adapted for connection to a source of motive-fluid supply, said cylinders and shaft constituting companion parts, one of which is fixed and the other revoluble, and said shaft having ports for communication with the inlet ports in the cylinders during the movement of the revoluble part; a member fixed to said shaft for controlling the opening and closing of said inlet ports; a piston reciprocating in each cylinder; means for preventing rotation of said pistons relative to said cylinders; and means coöperating with said pistons to convert their reciprocation into rotary movement of said revoluble part and to cause said pistons to approach toward and recede from each other simultaneously.

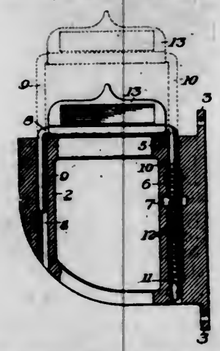
4. In a motor, the combination of opposed cylinders provided with inlet and outlet ports; a shaft around which the cylinders are mounted, said cylinders and shaft constituting companion parts one of which is fixed and the other revoluble; a piston reciprocating in each cylinder; and means to convert the reciprocatory movement of said pistons into rotary movement of said revoluble part and to cause said pistons to approach toward and recede from each other simultaneously, said pistons coöperating independently with such means at opposite sides thereof.

5. In a motor, the combination of a pair of opposed cylinders; a shaft around which said cylinders are mounted concentrically with each other and with the shaft, said cylinders and shaft constituting companion parts, one of which is fixed and the other revoluble; a piston reciprocating in each cylinder; and a cam rail interposed between said pistons and with which the latter coöperate independently, to convert the reciprocatory movement of the pistons into rotary movement of said revoluble part and to cause said pistons to approach toward and recede from each other simultaneously.

1,103,682. ARTICLE-HOLDER. JOHN B. MUELLER, Pittsburgh, Pa. Filed Aug. 28, 1913. Serial No. 787,056. (Cl. 24—263.)

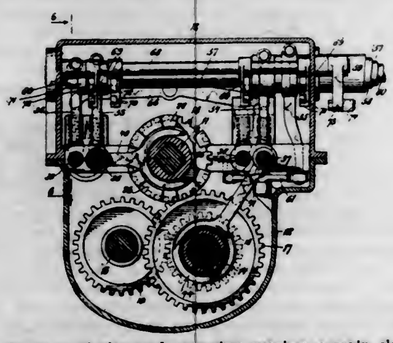
1. An article holder comprising a body portion, a yoke having a horizontal cross bar and two arms of different

lengths, the body portion having openings for receiving said arms, a horizontal portion between said openings adapted to coöperate with the cross bar to form a clamp and closure for the article or articles to be held thereby, said yoke being adapted to rotate about the axis of the longer arm to permit articles to be placed on the body portion between the openings, and a spring surrounding the longer arm and adapted to move the cross bar toward the body portion; substantially as described.



2. An article holder comprising a body portion, a yoke having a cross bar and two arms of different lengths, there being an opening in the body portion in which the longer arm is arranged to reciprocate and rotate, a pin extending through the longer arm, a spring surrounding said arms and engaging the pin for moving the yoke toward the body portion, there being a recess in the body portion for the reception of the pin to retain the yoke in an elevated position when it is raised and rotated; substantially as described.

1,103,683. TRANSMISSION-GEARING. CLARK W. PARKER, Springfield, Mass., assignor to Louis W. Emerick, Fulton, N. Y., receiver of Parker Transmission and Appliance Company, bankrupt. Filed Oct. 8, 1910, Serial No. 585,916. Renewed Sept. 20, 1912. Serial No. 721,514. (Cl. 74—59.)



1. In transmission and reversing gearing, a main clutch including a shiftable element, additional clutches including shiftable elements, means for operating the main clutch element alone or in conjunction with any one of the additional clutch elements, and means for locking all the shiftable elements of the additional clutches when the main clutch element is shifted alone, and for locking the remaining shiftable elements when one of the additional clutch elements is shifted to act in conjunction with the main clutch element, substantially as and for the purpose described.

2. In transmission and reversing gearing, a main clutch including a shiftable element, additional clutches including shiftable elements, means for operating the main clutch element alone or in conjunction with any one of the additional clutch elements, and means for locking all the shiftable elements of the additional clutches when the main clutch element is shifted alone, and for locking the remaining shiftable elements when one of the additional clutch elements is acting in conjunction with the main clutch element, the locking means including impositive locking parts paired respectively with the shiftable elements of the additional clutches and operable by the shifting movement of such elements, and a member common to all of said parts and arranged to be operated by any one of said parts when moving out of operative position to positively hold the other locking parts from operation, substantially as and for the purpose specified.

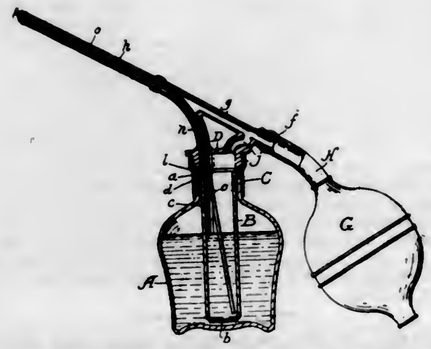
3. In transmission gearing, shiftable elements, impositive locking means for normally holding said elements from shifting, and means arranged to be operated by the impositive locking means of one shiftable element to positively hold the normally impositive means of the other elements from operation when said one shiftable element is shifted, substantially as and for the purpose set forth.

4. In transmission gearing, two shiftable members, impositive means for normally locking said members from movement, said means including parts movable out of operative position by the shifting of said members, and a rocking member pivoted between its ends and coacting on opposite sides of its pivot with said parts whereby when either part is operated out of operative position, the other part is positively held in operative position; substantially as and for the purpose described.

5. In transmission gearing, driving and driven shafts, an intermediate shaft, a reverse shaft, a train of gearing between the driving, the intermediate and the reverse shafts, the gearing being arranged to drive the reverse shaft through the intermediate shaft, gears loosely mounted on the driven, intermediate and the reverse shafts, the loose gears being arranged to transmit motion to the driven shaft directly from the intermediate shaft and directly from the reverse shaft, and means for connecting the loose gears to their respective shafts, substantially as and for the purpose specified.

[Claims 6 to 22 not printed in the Gazette.]

1,103,684. ATOMIZER. ELIHU R. PETTIT, Philadelphia, Pa. Filed Dec. 1, 1911. Serial No. 663,275. (Cl. 128—2.)

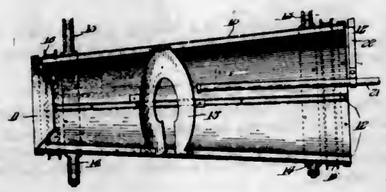


1. In an atomizer, the combination of a wide mouthed bottle for the liquid with an inner wide mouthed bottle supported by an air-tight joint and of such capacity as to contain a considerable body of liquid, the two bottles affording air chambers at their upper ends, said inner bottle having a small opening at its lower end through which there is free communication and circulation of the liquid from either bottle to the other, a bulb for forcing air into the air chamber of the inner bottle, and a discharge nozzle in communication with the liquid contents of the inner bottle, said inner bottle having a small opening in its side near the top through which there is communication between the air chambers of the two bottles to permit the rapid escape of the air from the outer bottle when the bulb is not being compressed, said liquid acting as a piston to compress the air in the outer bottle when the air in the inner bottle is being compressed by compression of the bulb.

2. In an atomizer, the combination of the inner and outer bottles whose lower portions are in communication with each other, with a cap having air tubes, one extending in a straight line between the air inlet and the nozzle, and two others diverted downwardly from said straight tube to the inner bottle, one from a point adjacent to the air inlet opening and the other from a point farther along in the straight tube.

3. In an atomizer, the combination of the nozzle having a tapered bore, an air supplying tube communicating therewith, and a liquid-supplying tube having a forward portion of polygonal cross section which tube, at its forward end, contacts with the tapered bore of the nozzle.

1,103,685. CONCRETE-MIXER. WILLIAM PFILE, Freeport, Ill. Filed Mar. 18, 1913. Serial No. 755,152. (Cl. 83—73.)

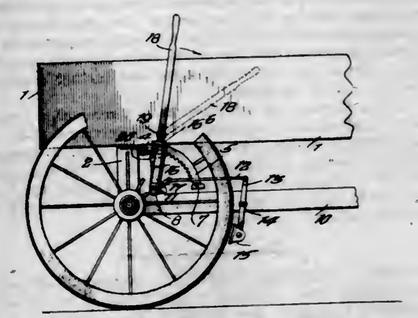


1. A concrete mixer comprising a rotatable conical cylinder having the opening of its smaller end reduced by a flange extending inwardly from the cylinder casing, a spiral plate located in the cylinder dividing same into an intake and discharge compartment, said plate adapted to retain the bulk of ingredients in the entrance compartment during certain part of operation, baffle plates extending inwardly from the cylinder casing in both compartments, the cylinder being mounted with its axis horizontal so that said ingredients will be thoroughly dry mixed before passing said spiral plate, and means for supplying water in the discharge compartment from central and spaced points therein.

2. A concrete mixer comprising a rotatable cylinder having an entrance and discharge end, the opening of the entrance end being reduced by a flange extending inwardly from the cylinder casing, a spiral plate located in the cylinder dividing same into an intake and discharge compartment, said plate adapted to retain the bulk of ingredients in the entrance compartment during a certain portion of operation, baffle plates extending inwardly from the cylinder casing in both compartments, the cylinder being mounted with its lower cylinder wall inclined with its entrance end the highest to allow said retained ingredients to be thoroughly dry mixed before passing said spiral plate, and means for supplying water in the discharge compartment from a central point therein.

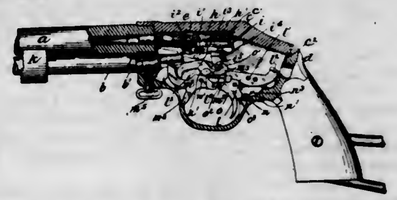
1,103,686. BRAKE-OPERATING DEVICE. MICHAEL E. PUE, Marlinton, W. Va. Filed Oct. 20, 1913. Serial No. 796,295. (Cl. 21—10.)

1. The combination with a rock shaft, an arm secured to one end of said rock shaft and being provided with upper and lower sockets, said upper socket being elongated, a brake lever arranged to pass through said upper socket and having a reduced portion arranged to enter the lower socket and to be pivotally supported therein, a spring-pressed locking dog carried by said arm, a locking segment pivoted at one end only and having teeth arranged to be engaged by said spring-pressed dog, and a lug carried by said dog and arranged to be engaged by the lever in its pivotal movement in the lower socket for withdrawing the dog from its locking engagement with the locking segment.



2. The combination with a rock shaft, an arm secured to one end of said rock shaft and being provided with upper and lower sockets, said upper socket being elongated, a brake lever arranged to pass through said upper socket and having a reduced portion arranged to enter the lower socket and to be pivotally supported therein, a spring-pressed locking dog carried by said arm, a locking segment pivoted at one end only and having teeth on its lower side arranged to be held by the weight of the segment in normal engagement with said spring-pressed dog, a lug carried by said dog and adapted to be engaged by the pivotal movement of the lever in its lower socket for withdrawing the dog from its locking engagement with the locking segment, a portion of said dog being shifted by the engagement of the lever with the lug into position to sustain the locking segment out of engagement with the dog while the lug on the dog is engaged by the lever.

1,103,687. FIREARM. EDWARD E. REDFIELD, Glendale, Oreg. Filed Jan. 28, 1913. Serial No. 744,627. (Cl. 42—17.)



1. In a firearm, the combination of a receiver, a breech-block movable longitudinally therein, a slide bar operatively connected with the breech-block, a spring pressed pivoted latch adapted to engage the slide bar and having a cut-off finger to stand in the path of the cartridges, and a trigger directly engaging the latch.

2. In a firearm, the combination of a receiver, a longitudinally movable breech-block, a slide bar operatively connected with the breech-block, a slide latch adapted to engage the slide bar, a trigger engaging the slide latch, a hammer and means whereby the hammer may act upon the slide latch to hold it in unlocked position after movement by the trigger.

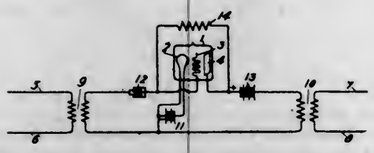
3. In a firearm, the combination of a receiver, a breech-block longitudinally movable therein, a slide bar operatively connected with the breech block, a spring pressed slide locking lever having in its rear end a shoulder to engage the slide bar, said slide bar being adapted to move over said shoulder and hold it in unlocked position when released, and means to actuate said latch.

4. In a firearm, the combination of a receiver, a breech-block movable longitudinally therein, a pivoted lifter having at its rear end a rearwardly tapered lug, a slide bar

operatively connected with the breech-block and having at its rear end a forwardly tapered lug to coöperate with the lug of the lifter, the lug of the slide bar passing under the lug of the lifter in its rearward movement, and means to depress slightly the rear end of the lifter before the forward movement of the slide bar begins whereby in its forward movement the lug of the slide bar acts upon the upper side of the lug of the lifter and further depresses the rear end of the lifter.

5. In a firearm, the combination of a receiver, a breech-block longitudinally movable in the receiver, a slide bar operatively connected with the breech-block, a hammer mounted movably on the breech-block, a pivoted slide latch adapted to engage the slide and a pivoted lifter, the hammer acting upon the latch through the lifter to hold the latch in unlocked position.

1,103,688. ELECTRIC RELAY. WILTON LANCASTER RICHARDS, East Orange, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 8, 1913. Serial No. 747,057. (Cl. 179—171.)



1. An electric relay comprising an incoming circuit, an outgoing circuit including a gaseous conductor forming a part of each of said circuits, and a conductive leakage path connected to two points in said gaseous conductor.

2. An electric relay comprising an incoming circuit, an outgoing circuit including a gaseous conductor forming a part of each of said circuits, and a high resistance conductive leakage path connected to two points in said gaseous conductor.

3. An electric relay comprising an evacuated vessel, a heated member, a conducting member and a conducting plate sealed therein, an incoming circuit connected across said heated member and said conducting member, an outgoing circuit connected across said heated member and said conducting plate, and an additional metallic circuit connecting said conducting member and said plate.

4. An electric relay comprising an evacuated vessel, an incoming circuit, an outgoing circuit, a cathode common to said circuits and anodes individual to said circuits sealed in said vessel, and a shunt circuit including a high resistance connecting said anodes.

5. An electric relay comprising an evacuated vessel, a heated electrode, a grid shaped member and a plate sealed therein, an incoming circuit including said heated electrode, a condenser and said grid member; an outgoing circuit including said heated electrode, a source of potential and said plate; and a shunt circuit including said grid member and said plate.

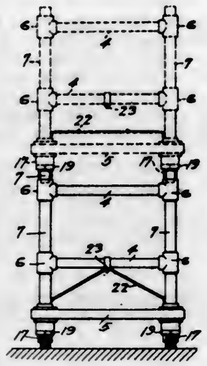
[Claims 6 to 9 not printed in the Gazette.]

1,103,689. TRUCK FOR MILK-CANS. ANDREW LYLE RUSSELL, Midway, Pa. Filed Mar. 17, 1913. Serial No. 754,924. (Cl. 21—65.)

1. In trucks for milk-cans adapted for stacking, the combination of a frame, wheels supporting same, seats formed at the upper corners of said frame, and engaging members at the lower corners adapted to enter corresponding seats of a similar truck, whereby a plurality of trucks may be stacked one upon the other.

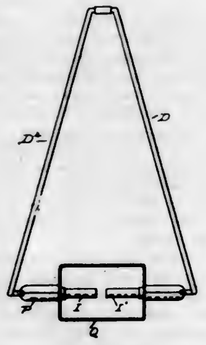
2. In trucks for milk-cans adapted for stacking, the combination of a frame, wheels supporting same, seats formed at the upper corners of said frame, and gravity operated bolts at the lower corners adapted to enter corresponding seats of a similar truck, whereby a plurality of trucks may be stacked one upon the other.

3. In trucks for milk-cans adapted for stacking, the combination of a frame, wheels supporting same, seats formed at the upper corners of said frame, gravity operated bolts at the lower corners of said frame adapted to



enter corresponding seats of a similar truck, a chain connecting pairs of said bolts, and a support on said frame for said chain.

1,103,690. ELECTRICALLY-HEATED INSTRUMENT. GEORGE J. SCHNEIDER, Detroit, Mich., assignor to Acme Electric Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 11, 1909. Serial No. 532,646. (Cl. 219—25.)



1. In an electrically-heated instrument, a member having a heating element secured thereto, a hood member surrounding said element, a handle, and means for locking said hood and element section by movement of the handle.

2. In an electrically-heated instrument, the combination with a section having a heating element secured thereto, of a hood section surrounding said element, a handle, and means for locking said sections to each other by rotation of said handle.

3. In an electrically-heated instrument, the combination with a section having a heating element secured thereto, a hood section, a handle, a shank on said handle insertible through an aperture in said hood, and a keeper on said element section with which said shank may be engaged.

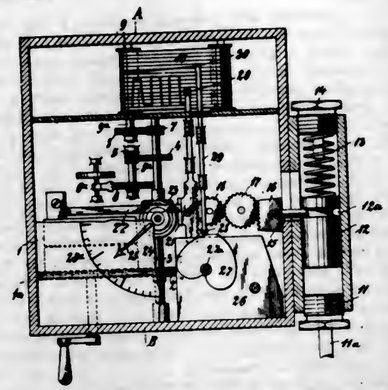
4. In an electrically-heated instrument, a member having a heating element, a hood for covering said member detachable therefrom, a handle detachable from the hood, and a key for attaching the handle, hood and said member together.

5. In an electrical heater, the combination with a heat distributing body, of a resistor, terminal contacts for said resistor fixedly positioned in relation to said heat distributing body, a hood for covering said heat distributing

body apertured in registration with said terminal contacts, and a connector insertible through said aperture into engagement with said contacts.

[Claims 6 to 22 not printed in the Gazette.]

1,103,691. RECORDER. EMIL SCHUCH, Munich, Germany. Filed July 15, 1913. Serial No. 779,108. (Cl. 234—16.)



1. In an indicating and recording apparatus for hydraulic or pneumatic presses and the like, the combination with mechanism adapted to indicate and record on a traveling chart the pressure exerted during each pressing operation and the duration of such pressure, of clockwork mechanism adapted to simultaneously record the time on the said chart, the said time recording mechanism continuing to make a record when the chart is stationary substantially as described for the purpose specified.

2. In a recorder for power-actuated machines, the combination with an actuating device connected with and controlled by the power medium of the machine, a driven indicator card, a stylus controlled by the said actuating device and marking on the said indicator card, a second time-controlled stylus in contact with the said indicator card for recording time thereon, a timepiece, means for driving the indicator card from the time piece, said time piece having a second hand, and a locking and releasing device for the said second hand and controlled by the said actuating device.

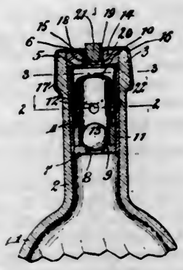
3. In a recorder for power-actuated machines, the combination with a spring motor, an indicator card, means for driving the said indicator card from the said spring motor, a pressure cylinder connected with the actuating power of the machine, a spring-pressed piston slidable in the said cylinder, a stylus for indicating the work of the machine on the said indicator card, a gearing for actuating the said stylus from the said piston, a time stylus, a clockwork for actuating the said time stylus, a second hand adapted to be driven by the said motor, and a locking and releasing device for the said second hand and controlled by the said gearing for moving the said second hand in or out of driving connection with the said motor.

4. In a recorder for power-actuated machines, an actuating device connected with the actuating power of the machine, an indicator card, a time clock mechanism for driving said indicator card, a second hand, means for driving the said second hand from said clock mechanism, a locking and releasing device controlled by the said actuating device and connected with the said second hand to lock or release the latter, a time stylus indicating on the said indicator card, and a clock mechanism for actuating the said time stylus.

5. In a recorder for power actuated machines, an actuating device connected with and controlled by the power medium of the machine, a vertical movable rack controlled by said actuating device, a stylus carried by the said rack, a clock mechanism, an indicator strip, means for driving the indicator strip from the clock mechanism, a second hand adapted to indicate on a second dial, a gear wheel movable on the shaft of said second hand, and adapted to be driven by said clock mechanism, a spring for holding said gear wheel in driving engagement with said clock mechanism, and means on the said rack for engaging the spring to move the said gear wheel out of driving connection with the said clock mechanism.

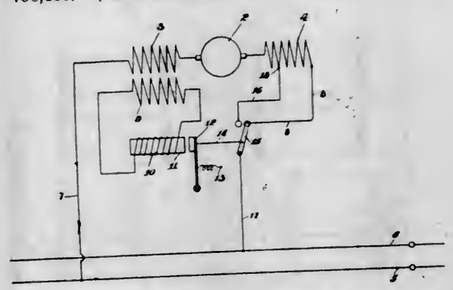
[Claim 6 not printed in the Gazette.]

1,103,692. BOTTLE-STOPPER. LOUIS F. SEAMES, Buffalo, N. Y. Filed May 6, 1913. Serial No. 765,757. (Cl. 215—65.)



The combination of a bottle having a neck and an external collar at its upper end, a stopper body arranged within the neck and having a central passage, a cap having a body surrounding said collar and a top extending across the mouth of the neck and provided with a central opening, and a tubular filling arranged in the neck and engaging its upper end with the underside of the top and its lower end with the upper end of said stopper body and provided with an axial opening in line with the openings of said top and stopper body.

1,103,693. ELECTRIC CIRCUIT AND MOTOR. HARRY M. SHEDD, Roselle, N. J., assignor to David A. Marks, New York, N. Y. Filed Dec. 24, 1912. Serial No. 738,460. (Cl. 172—276.)



1. In a system of the class described, a series electric motor with a primary winding connected to a source of electrical energy, a secondary winding operatively connected with said motor, a magnet connected with said secondary winding and adapted to be energized thereby when a current is induced in said secondary winding, an armature for the magnet, and means connected with the armature for varying the electrical resistance of said motor.

2. In a system of the class described, a motor connected to a source of electrical energy, a secondary winding on the field magnet of said motor, a magnet connected to said secondary winding and adapted to be energized thereby when an alternating current passes through the motor, an armature for the magnet, and means connected with the armature for varying the resistance of the motor.

3. In a system of the class described, a pair of bus-bars, a series motor, conductors connecting said series motor and bus-bars so that said motor may be run when a direct current is applied, a secondary winding on a field magnet of said motor, a magnet connected in series with said secondary winding, an armature for said magnet, a switch connected to said armature, and a circuit adapted to be closed by said switch for shunting out a section of the motor winding.

4. The combination with an electric motor with a field magnet winding of a secondary winding in inductive relation to this field magnet winding of said motor and means operated by current flow in said secondary winding for varying the effective resistance of the field magnet windings of the motor.

5. The combination with an electric motor having a field magnet winding, a secondary winding in inductive relation to this winding of said motor and means operated through said secondary winding when an alternating current flows through said motor to automatically shunt out a portion of the motor winding.

[Claims 6 to 9 not printed in the Gazette.]

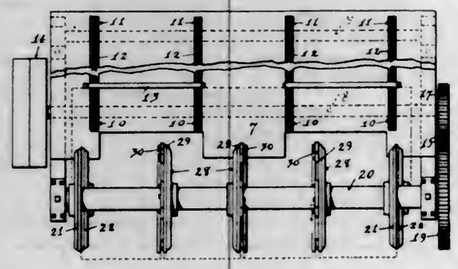
1,103,694. PROCESS FOR TREATING FELT CLOTH. GEORGE R. SHEVILL, Brooklyn, N. Y.; Mary E. Shevill executrix of said George R. Shevill, deceased. Filed Aug. 22, 1912. Serial No. 716,361. (Cl. 38—7.)

1. The process of sizing felt cloth with gum tragscanth dissolved in water so that the gum tragacanth becomes incorporated in and a part of the felt cloth and made a part of the felt.

2. The process of sizing felt cloth with gum tragacanth and gum dammar dissolved in water so that the gum tragacanth and gum dammar become incorporated in and form a part of the felt cloth.

3. The process of sizing felt cloth, hoods, bodies and cones with gum tragacanth and gum dammar dissolved in water so that the gum tragacanth and gum dammar become incorporated in and form part of the cloth, and adding thereto bleach for white felts and acids and mordant for colors.

1,103,695. SLOTTING, CREASING, AND SLITTING MACHINE. HARLEY N. SICKLER, Buffalo, N. Y. Filed Apr. 25, 1914. Serial No. 834,334. (Cl. 93—58.)



1. In a slotting and grooving machine, in combination with means for feeding board, a driven wheel and two peripheral flanges thereon forming a peripheral groove, and a driven wheel, segmental shears mounted thereon for engaging in said groove to slot the board, and a peripheral tread for engaging with one flange of said first-mentioned wheel to groove said board.

2. In a slotting and grooving machine, a bed, driven sprocket-chains and feeding strips secured to said chains for feeding board, a driven wheel having two peripheral flanges forming a peripheral groove, and a driven wheel and segmental shears thereon for engaging in said groove to slot the board, and a peripheral tread for engaging with one flange of said first-mentioned wheel to groove the board.

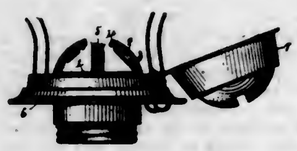
3. In a slotting and grooving machine, in combination with means for feeding paper board and the like, a plurality of driven wheels having peripheral flanges forming a peripheral groove on each wheel, a corresponding plurality of driven wheels coacting with said first-mentioned wheels, shear segments mounted on each for engaging in the grooves of said first-mentioned wheels to slot the board, and a peripheral tread on each wheel for engaging with one flange of said first-mentioned wheels to groove said board.

4. In a slotting and grooving machine, a bed, driven sprocket-chains and feeding strips secured to said chains to feed board, a plurality of driven wheels each having two peripheral flanges forming peripheral grooves, and a corresponding plurality of driven wheels coacting with said first-mentioned wheels, shear segments mounted thereon for engaging in said grooves to cut slots in said board, and peripheral treads for engaging with one flange each of said first-mentioned wheels to groove the board.

5. In a slotting and grooving machine, a bed, sprocket chains and strips secured to said chains for feeding board, driven wheels each having two peripheral flanges forming peripheral grooves, wheels coacting with said first-mentioned wheels, shear segments mounted thereon for engaging in said grooves to cut slots in said board, peripheral treads for engaging with one flange each of said first mentioned wheels to groove the board, and gearing for driving said wheels and said sprocket chains so proportioned as to time the delivery of boards to said wheels for the proper positioning of said slots.

[Claims 6 to 8 not printed in the Gazette.]

1,103,696. ATTACHMENT FOR LAMP-BURNERS. CHARLES P. SMITH, Marine City, Mich. Filed Sept. 29, 1911. Serial No. 651,939. (Cl. 67—72.)

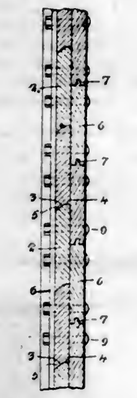


1. In combination with a burner body, a burner member and an adjustable cap, an attachment for the purpose specified separate from said body and member and having a base portion resting on said burner body provided with an opening through which said burner member extends, said opening being enlarged with respect to the burner member to provide for the admission of air through the opening, said opening also having an extension in which the burner member is positioned, riser portions extending upwardly from said base portion on opposite sides of the burner member and each terminating short of and adjacent said burner member, and said riser portions being shaped to permit said cap to close thereover.

2. In combination with a burner member, an attachment for the purpose specified formed as an integral metallic article, said attachment provided intermediate its end edges with an opening through which said burner member extends, said opening being enlarged with respect to the burner member to provide for the admission of air through the opening, and said attachment having a plurality of notches along opposite sides for the purpose specified.

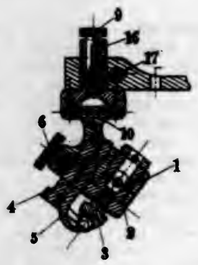
3. In combination with a burner member, an attachment for the purpose specified formed of a blank of metal, said blank provided intermediate its end edges with an opening through which said burner member extends, said opening being enlarged with respect to said burner to provide for the admission of air through the opening, said opening having a plurality of extensions in which said burner member is located and positioned, said blank having a plurality of notches along opposite sides for the purpose specified.

1,103,697. BOX-CAR. WILLIAM C. SMITH, Kansas City, Mo., and GEORGE H. BARBER, Osawatomie, Kans. Filed June 13, 1913. Serial No. 773,507. (Cl. 105—192.)



A car wall including a siding and a lining therefor, said siding and lining being each constructed of sections of approximately uniform width, joints of the siding sections being offset with respect to the joints of the lining sections, the lining and siding being in contact throughout their lengths and breadths, the joints between the siding sections presenting an inner portion at right angles to the surface of the siding and an outer portion inclined with respect to said surface, the joints between the lining sections being of the tongue and groove type.

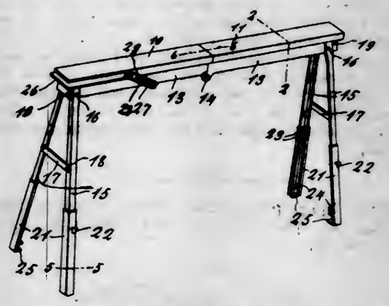
1,103,698. MECHANICAL DOP FOR POLISHING (CUTTING) DIAMONDS. EDGARD SOETENS, Borgerhout-Antwerp, Belgium. Filed June 12, 1913. Serial No. 773,340. (Cl. 51—11.)



An adjustable dop comprising a cylindrical carrier, a support therefor in which said carrier is rotatable about its axis of symmetry, tongs and adjusting member carried by said tongs, a ball and socket joint between said support and said member, the ball of said joint forming a part of said support, and having in the apex thereof a guiding slit in the main plane of oscillation thereof a set screw carried by said member, the pointed end of which cooperates with said slit to guide the movement of said support and means for adjustably securing said member in said tongs.

1,103,699. CARPENTER'S TRESTLE. WILLIAM H. SOUTH, Bozeman, Mont. Filed May 31, 1913. Serial No. 771,028. (Cl. 20—83.)

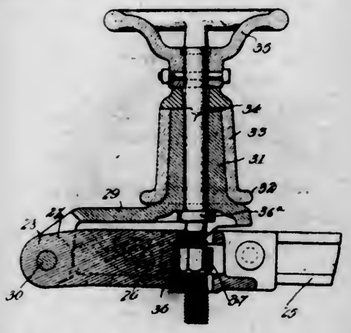
1. A trestle comprising a top beam having a bottom rib, strips secured to the sides of the ribs and depending therefrom, and legs pivoted to the depending portions of the strips to fold beneath the top beam, said legs being angular in cross-section and having a bottom portion extending into the angle, said bottom portion being spaced from one of the flanges of the legs to permit folding of the legs over the aforesaid strips.



2. A trestle comprising a top beam which is in sections, each of which has a bottom rib, strips secured to the sides of the ribs of each section, the strips of the respective sections being hinged together to permit folding of the sections, and legs pivoted to the strips to fold beneath the top beam, said legs being angular in cross-section and having a bottom portion extending into the angle, said bottom portion being spaced from one of the flanges of the legs to permit folding of the legs over the aforesaid strips.

3. A trestle comprising a top beam having a bottom rib, strips secured to the sides of the ribs and depending therefrom, legs pivoted to the depending portions of the strips, studs carried by the strips and projecting therefrom to engage the edges of the legs to limit their outward swing, said strips having apertures through which the studs extend, and springs secured to the inner faces of the strips and carrying the studs at their free ends.

1,103,700. GANG-PLOW. WILLIAM N. SPRINGER, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Sept. 17, 1913. Serial No. 790,343. (Cl. 97—68.)



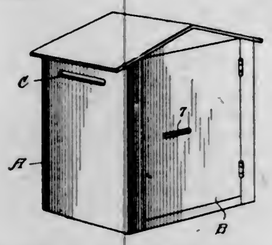
1. In a gang plow structure, the combination with a truck frame, and brackets thereon, of pairs of bars, a wheel mounted between the rear ends of the bars of each pair, a spacer between the forward ends of the bars of each pair and projecting forwardly therefrom, means pivotally connecting said bars and spacers with said brackets, a vertical rod connected with each spacer, bearings for said rods, and a hand wheel on each of said rods.

2. In a gang plow structure, the combination with a truck frame, and a bracket thereon, of a spacer pivoted at one end to said bracket, said spacer provided with an opening having flat walls, bars secured to said spacer, a wheel mounted between said bars, a vertical rod mounted on the truck frame and having a threaded portion passing through said spacer, a nut on said rod in the opening in

the spacer, and a hand-operated device on said rod for turning the latter.

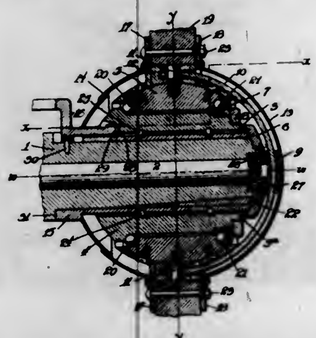
3. In a gang plow structure, the combination with a truck frame, of a fixed bracket secured to the truck frame, a bracket mounted on the fixed bracket to swing horizontally, wheel bars, a spreader between said wheel bars and pivotally connected with said swinging bracket, a wheel mounted between the rear ends of said wheel bars, a nut carried by said spreader, a rod passing through the brackets on the truck frame and having a threaded portion passing through said nut, and means for turning said rod.

1,103,701. MAIL-BOX LOCK. SAMUEL SQUILLER, McKees Rocks, Pa. Filed Mar. 17, 1914. Serial No. 825,327. (Cl. 70—75.)



In a lock, a sliding bolt having a key-receiving slot and holes at opposite sides thereof, resilient members arranged in the path of the holes and engageable with the bolt to hold the same in a locked position, and a key insertible through the slot and having means insertible in the hole to displace the resilient means for freeing the bolt.

1,103,702. HUB FOR POSITIVELY-DRIVEN STEERING-WHEELS. FRANK H. STANARD, Denver, Colo., assignor to The Stanard Automobile Manufacturing Company, Denver, Colo., a Corporation of Colorado. Filed Mar. 7, 1913. Serial No. 752,727. (Cl. 21—90.)

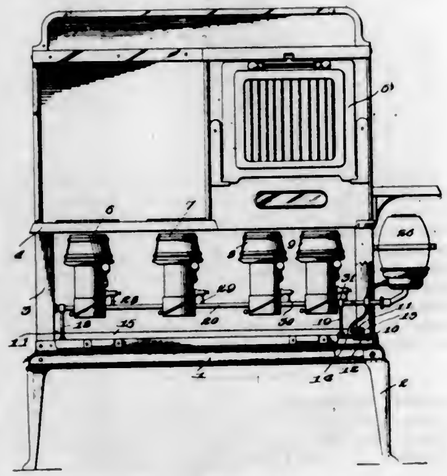


1. In combination a rigid axle, a driving shaft mounted in the axle, a hub mounted upon the axle to rotate about the same and having a limited angular adjustment about a substantially vertical axis, a yoke pivotally connected with the hub and struck from a center coinciding with the axis about which the hub is adapted to be turned for angular adjustment, and a head having sliding connection with such yoke and adapted to be coupled to the driving shaft for rotation therewith.

2. In combination a rigid axle, a driving shaft mounted therein, a hub mounted upon the axle to rotate thereon and adapted to have a limited angular adjustment about a vertical axis, a yoke of approximately semi-circular form pivotally connected at its ends with the hub at opposite points, and a head having sliding connection with such yoke and adapted to make detachable connection with the driving shaft.

3. In combination an axle, a driving shaft mounted therein, a hub mounted upon the axle to rotate thereon and adapted to have a limited angular adjustment about a vertical axis, a band connected centrally with the hub, a semicircular yoke having its end portions connected with such band, and a head slidable upon the yoke and making detachable connection with the driving shaft.

1,103,703. OIL-STOVE. LOUIS STOCKSTROM, St. Louis, Mo., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 27, 1913. Serial No. 797,663. (Cl. 126—50.)



1. The combination with a stove, of a movable member supported thereby, burners supported by said movable member, an oil supply pipe for supplying oil to the burners having a rearwardly extending portion above the movable member, and having its outer end turned outwardly beyond the end of the stove and an oil tank supported by the outer end of said pipe whereby the movable member may be drawn outwardly to bring the burners from beneath the top of the stove.

2. The combination with a stove, of a movable member supported thereby, an oil supply pipe extending across the member, burners supported by said pipe, one end of the said pipe having a rearwardly extending portion above the movable member having its outer end turned outwardly, an oil tank supported by the outer end of the said pipe beyond the end of the stove, whereby the movable member may be drawn outwardly to bring the burners from beneath the top of the stove.

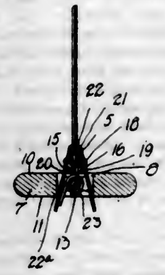
3. The combination with a stove, of a lighting member carried thereby, burners supported by the said member beneath the top of the stove, an oil supply pipe for the said burners having one end extending rearwardly above the member and having its extreme outer end turned outwardly, and a tank supported by the outer end of the said pipe beyond the end of the stove, whereby the removable member may be drawn outwardly to bring the burners out from beneath the top of the stove.

4. The combination with a stove, of a sliding member supported by the stove, brackets supported by the member, an oil supply pipe supported by the brackets, burners supported by the oil supply pipe and receiving oil therefrom, a crank-shaped pipe connected to one end of the oil supply pipe and extending rearwardly and outwardly beyond the end of the stove, means carried by the member for supporting an oil-supply tank beyond the end of the stove, a connection between said tank and the crank-shaped pipe whereby the member may be drawn outwardly to bring the burners out beyond the top of the stove, said member being supported at all times in a horizontal position.

5. The combination with a stove, of channel-shaped guideways at each end thereof, a member having upwardly turned flanges fitting within said guideways, brackets carried by the member, an oil supply pipe carried by the brackets above the member, burners supported by the oil supply pipe and receiving oil therefrom, a crank-shaped pipe connected to the oil-supply pipe and extending rearwardly and outwardly beyond the end of the stove, a bracket carried by the member and extending outwardly, a tank supported by the bracket and connected to the crank-shaped pipe whereby the member may be drawn outwardly to bring the burners out beyond the top of the stove, substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

1,103,704. HAT-PIN-POINT PROTECTOR. ANDREW STRZENCIWILK, Buffalo, N. Y. Filed Apr. 18, 1914. Serial No. 832,828. (Cl. 24—155.)



1. A hat pin point protecting device comprising a disk provided with an opening, a shaft arranged in said disk and extending across said opening, a retaining member extending across the opening and secured to the disk, a pair of spring controlled jaw operating members pivotally mounted upon said shaft, said members being oppositely disposed and extending through said opening one at each side of the shaft, and a pair of gripping jaws fixedly secured to said members.

2. A hat pin point protecting device comprising a disk provided with an opening, a shaft arranged in said disk and extending across said opening, a retaining member extending across the opening and secured to the disk, a pair of spring controlled jaw operating members pivotally mounted upon said shaft, said members being oppositely disposed and extending through said opening one at each side of the shaft, a pair of gripping jaws fixedly secured to said members, said members having their inner ends inturned and against which abuts the said gripping jaws, and the said inturned end and gripping jaws provided with grooves, the grooves of said ends forming a continuation of the grooves of the jaw.

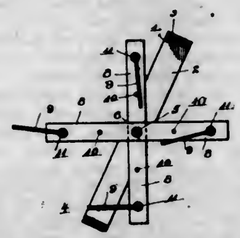
1,103,705. AUTOMATIC MULTIPLE-NOTE HORN. ETIENNE TESTE, Paris, France. Filed Apr. 3, 1911. Serial No. 618,551. (Cl. 116—19.)

1. An automatic multiple-note horn, comprising a plurality of trumpets, an air distributer provided with a series of openings capable of coming successively in front of the trumpets and arranged in such manner that the sounds successively emitted produce one or several predetermined musical phrases, said air distributer being tubular and furnished with an internal concentric sleeve which forms between it and the internal periphery of the distributer an annular chamber which directs the air directly into the reeds of the trumpets.

2. In an automatic multiple note horn, an air distributer provided with a ratchet wheel, a collar movable on the distributer, a pawl carried by the collar and engaging the ratchet wheel, a piston having connection with the collar, an air bulb for forcing air against the piston and moving the latter in a direction adapted to slide the pawl along the ratchet wheel, and a spring for moving the parts in the opposite direction and actuating the distributer.



1,103,706. WATER-POWER WHEEL. ADOLPH H. THOREN, Leahy, Wash. Filed Mar. 7, 1913. Serial No. 752,784. (Cl. 170—119.)



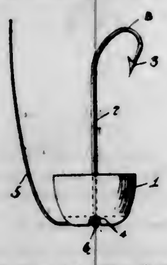
1. A device of the class described comprising a frame including a lowermost cross portion, side portions, and an uppermost cross portion, a horizontal shaft journaled in the said side portions of the frame, a water wheel fixedly mounted upon said shaft within the frame, and including end portions having radial arms, vanes pivoted between corresponding pairs of arms and limiting pins provided on said arms inwardly with respect to the vane pivots for engagement by said vanes upon moving into the power sweep of the wheel, said vanes being adapted to engage the lower cross member of the frame after passing out of the power sweep so as to be aided in feathering thereby.

2. A device of the class described comprising a frame including a lowermost cross portion, side portions connected therewith, and an uppermost cross portion, a horizontal shaft journaled in the said side portions of the frame, a water wheel fixedly mounted upon the said shaft within the frame and including end portions having radial arms, vanes pivoted between corresponding pairs of arms for movement upon horizontal axes, and limiting pins provided on said arms inwardly with respect to the vane pivots for engagement by said vanes upon movement into the power sweep of the wheel, the lowermost cross portion of the frame being disposed at a slightly greater distance from the axis of the wheel than the vane pivots and being adapted for engagement by the vanes when moving out of the power sweep.

3. A device of the class described comprising a frame including a lowermost cross portion, side portions connected therewith, and an uppermost cross portion, a horizontal shaft journaled in the said side portions of the frame, a water wheel fixedly mounted upon the said shaft within the frame and including end portions having radial arms, vanes pivoted between corresponding pairs of

arms for movement upon horizontal axes, and limiting pins provided on said arms inwardly with respect to the vane pivots for engagement by said vanes upon movement into the power sweep of the wheel, the lowermost cross portion of the frame being disposed at a slightly greater distance from the axis of the wheel than the vane pivots and being arranged beneath the wheel and in advance of the vertical plane of its axis for engagement by the said vanes when gravitating into their inactive sweep.

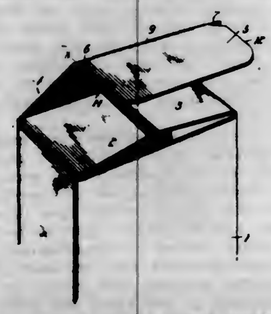
1,103,707. COMBINED FISH-HOOK AND SINKER. WILLIAM E. THERM, Cincinnati, Ohio. Filed Mar. 16, 1914. Serial No. 825,079. (Cl. 43—7.)



1. A device of the character described comprising a sinker, a shank extending through said sinker and having an eye formed on one end, said sinker being provided with a recess to accommodate the eye and radially directed recesses extending from the first mentioned recess to accommodate a line threaded in said eye, and a hook formed on the opposite end of said shank.

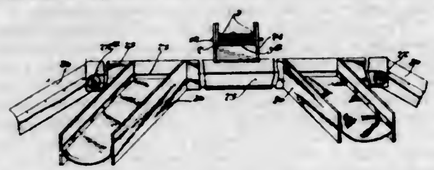
2. A device of the class described comprising a sinker, a shank having one end secured in said sinker, an eye formed on said end of the shank, the opposite end of said shank being curved, a hook formed on the free extremity of said shank, said sinker having an eye accommodating recess in one end, said eye being positioned in said recess and flush with said end of the sinker, line accommodating recesses projecting radially from the eye accommodating recess, and a line positioned in one of said radially directed recesses and having its end threaded in the eye.

1,103,708. CARTON. EUGENE W. THUMB, Chicago, Ill. Filed Oct. 1, 1913. Serial No. 792,772. (Cl. 229—39.)



In a carton of the class described, a pair of side flaps at the end, and an end member provided with a front flap, said end member being adapted to extend entirely across the carton so as to cover the end of the same, and said front flap carried by the end member being adapted to be inserted into the carton at the edges of the side flaps, said front flap being notched at each end adjacent the juncture between the front flap and the end member, whereby when said last mentioned flap is forced into the carton the ends thereof will engage the side flaps and lock the entire end of the box against self opening.

1,103,709. CONVEYING SYSTEM. GILBERT TOLLEFSON, Bagley, Minn. Filed June 26, 1913. Serial No. 775,886. (Cl. 214—1.)



1. In a device of the kind described, the combination with a conveyer arranged to receive commodities, of a distributing belt and a sack filling spout at the delivery end of said conveyer, and means for causing said conveyer to deliver to either said distributing belt or said sack filling spout, substantially as described.

2. In a device of the kind described, the combination with a conveyer arranged to receive commodities, of a distributing belt extending transversely of the delivery end of said conveyer, means for driving said distributing belt in either direction, at will, a sack filling spout at the delivery end of said conveyer, and means for causing said conveyer to deliver to either said distributing belt or said sack filling spout, substantially as described.

3. In a device of the kind described, the combination with a conveyer arranged to receive commodities, of a distributing belt extending transversely of said conveyer, means for driving said distributing belt in either direction, at will, reversely extended sack filling spouts at the delivery end of said conveyer, and independent means for causing said conveyer to deliver, at will, to either of said sack filling spouts or to said distributing belt, substantially as described.

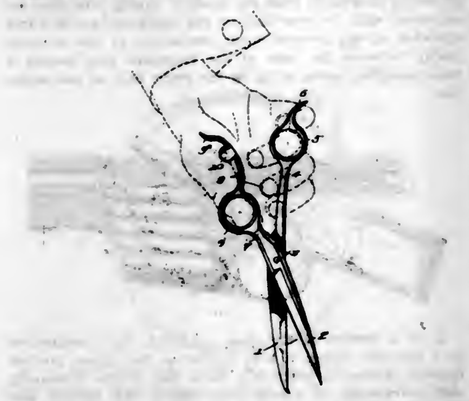
4. In a device of the kind described, the combination with a trough, of a slat and belt conveyer mounted in said trough with its lower portion arranged to travel over the bottom thereof and to scrape materials from the said trough which have been screened through the upper portion of said conveyer, a distributing belt extending transversely of the delivery end of said conveyer, reversely extended sack filling spouts at the delivery end of said conveyer, a gate for closing either of said sack filling spouts, and means for causing said conveyer to deliver into either of said sack filling spouts or to said distributing belt, substantially as described.

5. In a device of the kind described, the combination with a trough, of a distributing belt mounted in said trough, a gate opening in one side of said trough, and a pair of gates hinged to the sides of said trough and connected, for simultaneous movement, said gates being arranged, one to open and close said gate opening, and the other to open and close the passageway through said trough, the gate closing said passageway arranged to deflect material carried by said belt through said gate opening, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,103,710. BARBER'S SHEARS. WALTER HENRY TOURJÉE, Factoryville, Pa. Filed Aug. 27, 1913. Serial No. 786,887. (Cl. 30—13.)

1. In a barber's shears, a pair of blades pivotally connected together, one of said blades having an elongated shank, a loop carried at the end of said elongated shank, an outwardly curved extension integral with said loop, the other blade having a relatively short shank, a loop at the end of said short shank, an elongated extension integral with said last named loop, said last named extension being outwardly curved in the opposite direction from said first named outwardly curved extension on the first named loop, a ball carried by and integral with said second named extension, and said ball being disposed between the end of said second named extension and the loop to which the latter is attached, the centers of said ball and of the loop on the elongated shank being equidistant from the pivot.



2. In a barber's shears, a pair of blades pivotally connected together, one of said blades having an elongated shank, a loop carried at the end of said elongated shank, an outwardly curved extension integral with said loop, the other blade having a relatively short shank, a loop at the end of said short shank, a second elongated extension integral with said last named loop and curved outwardly in the opposite direction from the first named outwardly curved extension, a raised portion carried by said second extension on the concave side thereof, the first named loop and the raised portion of the second extension being equidistant from the pivot.

3. In a barber's shears, a pair of blades pivotally connected together, one of said blades having an elongated shank, a loop carried at the end of said elongated shank, an outwardly curved extension integral with said loop, the other blade having a relatively short shank, a loop at the end of said short shank, a second elongated extension integral with said last named loop and curved outwardly in the opposite direction from the first named outwardly curved extension.

1,103,711. WIRE-CLAMP. RICHARD H. UHRBROCK, Towson, Md. Filed Apr. 6, 1914. Serial No. 829,984. (Cl. 140—123.)



1. A wire clamp comprising opposed jaw members, each having a radial handle member, and a connecting bolt, said bolt having a head inset in one jaw member and a nut inset in the other jaw member.

2. A wire clamp comprising opposed jaw members, each having a radial handle member, and a connecting bolt, said bolt having a head inset in one jaw member and a nut inset in the other jaw member; the bolt head being of non-circular shape and the jaw member in which it is inset being constructed to retain the bolt head securely at various predetermined axial adjustments.

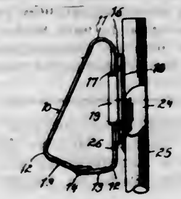
3. A wire clamping device comprising jaw members each having a radial handle, a bolt extending through the jaw members and having a non-circular head inset in one jaw member and capable of predetermined axial adjustments, a nut inset in the other jaw member, and indicia on the bolt head and on the face of the jaw member in which it is inset to indicate predetermined adjustments.

4. A wire clamp comprising clamping jaws each having a radial handle and a threaded connecting member axially adjustable with respect to one jaw member, the other jaw member being provided with an inset nut engaging the threaded connecting member.

5. A wire clamp comprising jaw members each having a radial handle, and a threaded connecting member axially adjustable with respect to one jaw member and in threaded engagement with respect to the other jaw member.
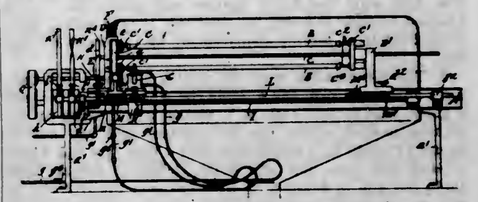
[Claims 6 and 7 not printed in the Gazette.]

1,103,712. PENCIL ATTACHMENT. FRANK UNRUH, New Orleans, La. Filed Jan. 23, 1913. Serial No. 743,824. (Cl. 24—11.)



An attachment for pencils consisting of a single piece of rectangular spring metal, said metal piece being bent approximately centrally of its ends to form a pair of parallel spaced plates, a pair of elongated wings formed on one of said plates by slitting the plate at sharp angles to the longitudinal edges thereof, said wings being disposed in a plane at approximately right angles to the plane of the plate and adapted to clamp a pencil, a pair of bendable extension tongues formed on the other plate intermediate the ends thereof and adapted to secure a pencil sharpener and integral locking spurs on said first named plate adapted to engage the wall of a pocket when the pocket wall is inserted between the two plates.

1,103,713. MACHINE FOR COATING TUBES AND THE LIKE. CHARLES VALLONE and JOHN H. ILLIG, Buffalo, N. Y., assignors to Barcalo Manufacturing Co., Buffalo, N. Y. Filed Oct. 24, 1912. Serial No. 727,585. (Cl. 91—45.)



1. In a machine for coating articles, the combination of a holder for the article to be coated, said holder having a part which is moved in positioning the article for coating, a coating device, feed mechanism for moving said coating device lengthwise relative to said holder, and means actuated by the movement of said movable part of said holder for controlling the operation of said feed mechanism.

2. In a machine for coating articles, the combination of means for holding and rotating the article to be coated, said means having a part which is moved in positioning the article for coating, a coating device, feed mechanism for moving said coating device lengthwise relative to said holder, and means actuated by the movement of said movable part of said holder for controlling the operation of said feed mechanism.

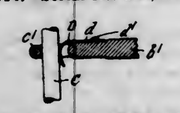
3. In a machine for coating articles, the combination of a coating device, means for holding a plurality of said articles, said means being movable for placing one article in operative relation to said coating device and removing another article from said operative relation, feed mechanism for moving said coating device lengthwise relative to said holding means, and means actuated by the movement of said holding means for controlling the operation of said feed mechanism.

4. The combination of a coating device, a holder for the articles to be coated which is movable to place the article in operative relation to said coating device, feed mechanism for moving said coating device lengthwise relative to said holder, and means controlled by the operation of said holder for setting said feed mechanism in motion, substantially as set forth.

5. The combination of a coating device, a holder for the articles to be coated which is movable to place the article in operative relation to said coating device, feed mechanism for moving said coating device lengthwise relative to said holder, and a controlling device for said feed mechanism which is actuated by said holder for setting said feed mechanism in operation, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,103,714. ANTIRATTLING DEVICE FOR SLIDING-SIDE CRIBS. CHARLES VALLONE, Buffalo, N. Y., assignor to Barcalo Manufacturing Co., Buffalo, N. Y. Filed Feb. 24, 1914. Serial No. 820,460. (Cl. 5—58.)



1. The combination with the sliding side of a crib having a horizontal rail, and a guide rod on which said rail is arranged to slide, of a spring strip which is secured to and extends lengthwise of said rail and has a bent free end which bears yieldingly against said guide rod and is adapted to slide thereon.

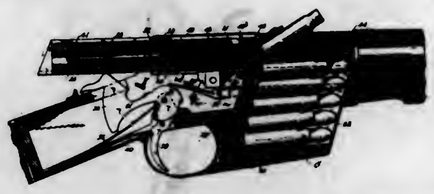
2. The combination with the sliding side of a crib, and a guide rod which passes through a guide hole in said side, of a spring strip secured to said side and having a free end which extends into said hole and bears yieldingly against said guide rod and is adapted to slide thereon.

3. The combination with the sliding side of a crib having a horizontal rail, and a guide rod which passes through a guide hole in said rail, of a spring strip having an attaching portion which extends along said rail and is secured thereto and a free end which extends into said hole and bears yieldingly against said guide rod and is adapted to slide thereon, the free end of said spring strip being held from lateral displacement by the walls of said hole.

4. The combination with the sliding side of a crib having a horizontal rail, and a guide rod which passes through a guide hole in said rail, of a spring strip having an attaching portion which lies flat against said rail and is secured thereto by a single rivet and a bent free end which extends into said hole and bears yieldingly against said guide rod and is adapted to slide thereon, the free end of said spring strip being held from lateral displacement by the walls of said hole.

1,103,715. REPEATING RIFLE. ORVILLE A. VOGEL, Gallup, N. Mex. Filed Oct. 28, 1913. Serial No. 797,758. (Cl. 42—18.)

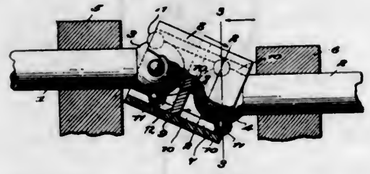
1. In a repeating rifle, the combination with a receiver, of a magazine coöperating therewith and detachably connected thereto, and means to secure the magazine in position, said means comprising a spring pressed plunger bolt 29 acting forwardly from the receiver casing into snap engagement with the rear face of the magazine and a finger operated spring pressed lever connected to the receiver casing between the ends of the magazine and having a nose engaging under a lug on the front face of the magazine.



2. In a firearm of the class set forth, the combination of a receiver casing, a bolt carrier at the upper portion thereof, means to positively move the carrier forwardly and rearwardly, a breech bolt within the carrier and moved thereby first to rotate the bolt to unlock the same and secondly to move the bolt rearwardly to open the receiver, the operating means between the carrier and bolt comprising a pin extending transversely through the bolt and coöperating with cam slots in the carrier, and a firing pin extending through said operating pin.

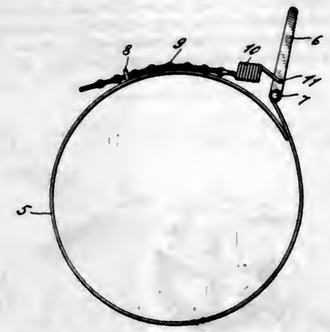
3. In a firearm of the class described, the combination with a receiver casing, of means to deliver cartridges thereto automatically, a breech bolt movable longitudinally and rotarily in the casing, the rotation of the bolt serving to lock or unlock the bolt with respect to the breech block of the casing, a carrier inclosing the bolt, means extending through the carrier and bolt causing the movements of the bolt with or with respect to the carrier, the initial movement of the carrier causing the unlocking rotation of the bolt and subsequent movement of the carrier causing movement of the bolt simultaneous therewith rearwardly, an extractor connected to the carrier by pin and slot connection and having downwardly projecting members coöperating with the front end of the bolt whereby the longitudinal movements of the extractor conform to the slidable movements of the bolt, one of said projecting members constituting a hook, and an ejector carried by the front end of the bolt and coöperating with said hook to deliver an empty shell from the receiver.

1,103,716. SHAFT-COUPLING. JOHN J. WALLBILLICH, Detroit, Mich. Filed Feb. 19, 1913. Serial No. 749,492. (Cl. 74—19.)



In a shaft coupling, the combination with the adjacent ends of a pair of coacting shaft sections, of a hollow cylindrical body having relatively spaced longitudinal grooves in its inner periphery, heads provided upon the said shaft ends for engagement within the ends of the said body, means carried by each head for sliding engagement within the body grooves to prevent relative rotation of the body and head, a circular limiting member adapted to be positioned medially within the said body between the shaft heads, radial projections provided upon the outer periphery of the said limiting member for sliding engagement within the body grooves, and removable means for securing the limiting member to the body in its operative position.

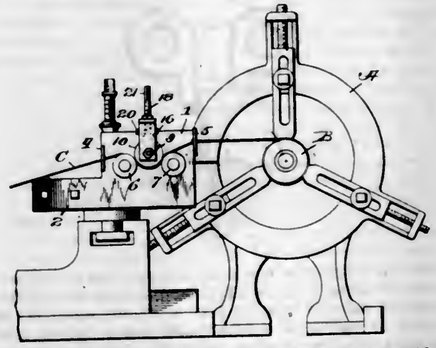
1,103,717. DEVICE FOR CONTRACTING PISTON-RINGS. HOWARD J. WALTON and CECIL M. NERBER, Titusville, Pa. Filed Apr. 17, 1914. Serial No. 832,521. (Cl. 81—3.)



1. A device of the character described comprising a split flexible band, a lever pivoted to one end of the band, a chain anchored to the other end of the band, and a resilient connection between the chain and the lever.

2. A device of the character described comprising a split flexible band the ends of which overlap a lever pivoted to one end of the band, a chain anchored to the other end of the band, and a resilient connection between the chain and the lever.

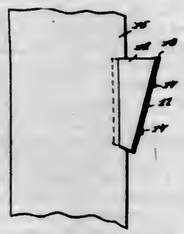
1,103,718. TENSION DEVICE FOR ARMATURE-WINDING MECHANISM. CHARLES C. WEST, Cairo, Ill. Filed Sept. 14, 1912. Serial No. 720,436. (Cl. 140—138.)



A wire tensioning device, comprising a plate provided with a vertical slot, plates secured to the first-mentioned plate and having openings therein through which said wire is adapted to be threaded, rollers journaled on said plate on opposite sides of the slot aforesaid, a shaft slidably mounted in said slot, a roller rotatably mounted on said shaft, the peripheries of said rollers being adapted to engage the wire, an inverted U-shaped member slidably mounted on the plate and having notches in its arms to receive the shaft aforesaid, a threaded shaft rotatably mounted on the first-mentioned plate, said U-shaped member being provided with a threaded opening to engage said threaded shaft, and means to rotate said shaft.

1,103,719. STEP. PERRY O. WHEELER, Youngstown, Ohio. Filed Feb. 12, 1914. Serial No. 818,401. (Cl. 228—22.)

1. A step formed from a sheet metal blank provided with fastener-receiving openings and provided with an extension leading from its upper edge, said blank being bent longitudinally to form the outer wall and side walls of the step, the extension forming an abutment lip at the upper end of the outer wall of the step, the side edges of said blank being cut at an incline whereby when said blank is bent to form the complete step, the edges of the side walls will fit tightly against a pole and the outer wall will extend from the pole at an incline thereto.

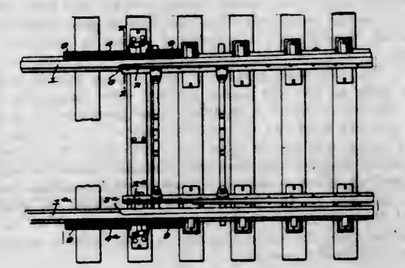


2. A step formed from a sheet metal blank bent longitudinally to form the outer wall and side walls, said outer wall being of greater height than said side walls to form an abutment lip, and means for connecting said step with a pole whereby the side walls may be caused to dig into a pole to assist in holding the step firmly upon the pole.

3. A step provided with an outer wall and side walls leading from said outer wall to form a hollow step and prevent water from gathering upon the upper end of the step and said step being provided with fastener receiving openings.

4. A step of the character described comprising an outer wall, side walls extending from said outer wall, said outer wall extending at an incline to the engaging edges of said side walls, said outer wall having its upper end extending above the edges of said side walls to form an abutment lip and said outer wall being provided with openings for receiving the fastening means.

1,103,720. RAILROAD-SWITCH. GEORGE W. WHITEMAN, Philadelphia, Pa. Filed May 19, 1914. Serial No. 839,522. (Cl. 104—12.)



1. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof.

2. In railroad construction, the combination of a main rail, a tapering switch rail having a thickened point adjacent the main rail and movable toward and from the same, said main rail being deeply recessed to accommodate the thickened point of said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof.

3. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, reinforcing means outside

the main rail and extending longitudinally of the same adjacent the recessed portion thereof, and means for securing said reinforcing means to said main rail.

4. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and reinforcing means outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof, said reinforcing means being raised above the main rail to form therewith a contacting surface conforming to the coning of a car wheel.

5. In railroad construction, the combination of a main rail, a tapering switch rail adjacent the main rail and movable toward and from the same, said main rail being recessed to accommodate said switch rail when the latter is in engagement therewith, and a short rail section forming reinforcing means secured outside the main rail and extending longitudinally of the same adjacent the recessed portion thereof, said reinforcing rail section being raised above the main rail to form therewith a contacting surface conforming to the coning of a car wheel.

[Claim 6 not printed in the Gazette.]

1,103,721. PICTURE-HOOK. ALLEN T. WILLIAMS, Boston, Mass. Filed Aug. 21, 1913. Serial No. 786,017. (Cl. 248—48.)



1. The combination with a picture hook of resilient wire secured at one end to one end of said hook and curved to lie flat upon the outer face of said hook, an angularly and inwardly extending pointed portion extending through an aperture in the hook to engage the picture molding and being formed integral with the wire, and a knob loosely connected with the wire at the point of formation thereof with the pointed angularly extended portion.

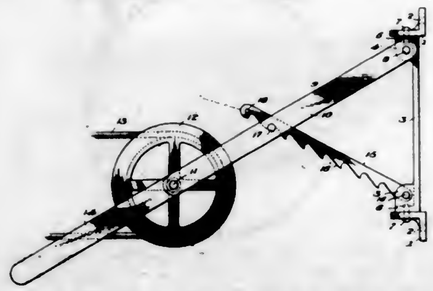
2. The combination with a picture hook having a molding hook at one end and a picture wire supporting hook at the other end of a resilient wire permanently secured at one end adjacent to the free end of the molding hook and being bent to lie upon the outer face of the picture hook, an angular and inwardly extended pointed extension formed on the free end of the wire and extending through an aperture in the picture hook to engage the molding, said wire being bowed outwardly at the point of its formation with the extension and a knob loosely connected with the bowed portion.

1,103,722. CLOTHES-LINE TIGHTENER. DANIEL M. WINANS, Binghamton, N. Y., assignor to Winans Machine Co., Binghamton, N. Y., a Corporation of New York. Filed Mar. 27, 1914. Serial No. 827,668. (Cl. 68—12.)

1. In a clothes line tightener, the combination with a swiveled or pivoted brace, of an arm or lever pivoted to said brace and adapted for up and down movement and for bodily movement laterally with said brace, and a rack pivoted to the brace and having teeth adapted to engage the arm or lever to hold it in different positions of its up and down adjustment.

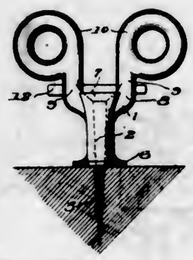
2. In a clothes line tightener, the combination with attaching brackets, of a brace swiveled thereto, a lever pivoted to one part of the brace, a pulley or sheave carried by the lever, a rack pivoted to another part of the brace and having teeth adapted to adjustably engage the lever, said brace, lever and rack constituting a triangle or truss, and being adapted for bodily swinging as a unit.

3. In a clothes line tightener, the combination with attaching brackets, of a brace swiveled thereto and provided with ears at its upper and lower parts, a lever composed of parallel bars pivoted to one set of ears of said brace, a sheave or pulley carried by and located between said bars of the lever, one of said bars extending freely beyond the sheave or pulley and serving as an operating handle, a pawl or stud connecting the bars of the lever,



and a toothed rack pivoted to the other set of ears of the brace, said rack having its free part lying between the bars and its teeth adapted to engage the stud or pawl and being provided on its free end with a stop, the lever, brace and rack constituting a triangle or truss and being laterally movable as a unit with the handle and sheave or pulley.

1,103,723. STAGE-SCREW. PAUL WITTE, Decatur, Ill. Filed Feb. 7, 1914. Serial No. 817,308. (Cl. 85—41.)

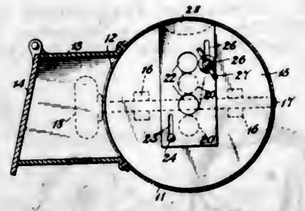


1. In a device of the class described, the combination with an ordinary wood screw, of a winged manipulating member having a bore adapted to receive removably the shank of the screw, the threaded portion of the screw being adapted to protrude therefrom, means for securing the screw within the said bore, the said means being adapted to prevent rotation of the screw therein, and a limiting flange formed upon the lower end of the manipulating member adjacent to the threaded portion of the screw.

2. In a device of the class described, the combination with an ordinary wood screw, of a winged manipulating member having a bore adapted to receive removably the shank of the screw, the threaded portion of the screw being adapted to protrude therefrom, the upper end of the said bore being provided with a flared portion for the reception of the screw head, the said member being provided further with transversely alining slots in communication with the said flared portion of the bore, and a securing wedge adapted to be mounted within the said slots with its inner edge engaged in the head kerf of the screw.

3. In a device of the class described, the combination with an ordinary wood screw, of a winged manipulating member having a bore adapted to receive removably the shank of the screw, the threaded portion of the screw being adapted to protrude therefrom, the upper end of the said bore being provided with a flared portion for the reception of the screw head, the said member being provided further with transversely alining slots in communication with the said flared portion of the bore, and a securing wedge adapted to be mounted within the said slots with its inner edge engaged in the head kerf of the screw, the ends of the wedge being adapted to protrude from the slots of the manipulating member and the wings of the said member being arranged so as to overlie the said wedge ends.

1,103,724. DAMPER. GUSTAV WOLF, New York, N. Y. Filed Mar. 25, 1914. Serial No. 827,140. (Cl. 126—292.)

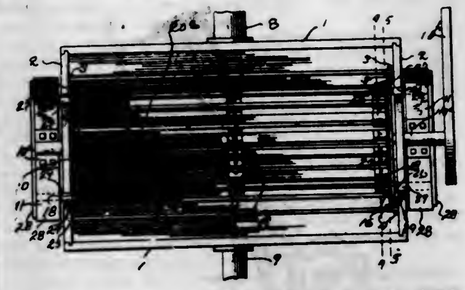


1. The combination with a circular damper having a notch in its edge portion and a plurality of openings therethrough; of a plate slidable on the damper and held from rotation and having a corresponding number of openings to aline at times with the first mentioned openings, one end of the plate being rounded to coöperate with the edge notch for varying the size thereof or close the same, adjustment of the plate serving to simultaneously cover or uncover the openings and notch, and means for holding the plate in an adjusted position on the damper.

2. The combination with a smoke pipe leading from the combustion chamber of a furnace or the like and means for obtaining access thereto; of a damper pivoted in the pipe and adapted to be turned from the exterior thereof, said damper having openings therethrough near its center and a notch in its upper edge substantially in alinement therewith, an auxiliary damper slidably connected to the first mentioned damper in contact with one face of the same and having openings of corresponding number and size coöperating with the first mentioned openings and a convexly arcuate upper edge coöperating with the notch, and an adjusting member for frictionally holding the auxiliary damper at various positions of adjustment on the first mentioned damper to regulate the sizes of the openings and notch or close the same, said damper when vertically disposed in a horizontal pipe with the openings and notch uncovered permitting the lighter gases to escape through the notch while air is supplied through the openings, whereas when the damper is horizontal in a vertical pipe the light gases will escape through the openings while the fresh air is supplied through the notch in each case to combine with the heavier and combustible gases to be consumed.

3. The combination with a smoke pipe leading from the combustion chamber of a heater and a damper mounted in the pipe and having a notch in its upper edge, said damper being adapted to be set at different angular positions in the smoke pipe and having openings therethrough near its central portion; of a plate having openings corresponding with the openings in the damper and having vertical slots therein, means carried by the damper and engaged through the slots for slidably retaining the plate thereagainst, the upper edge of the plate coöperating with the notch, and a binding nut for holding the plate in an adjusted position whereby when the damper is closed and the plate adjusted the light and non-combustible gases will escape therethrough while the heavier and combustible gases will return to the combustion chamber, whereas when the damper is set at an angle the lighter gases will escape around the same while atmospheric air will, through a whirling motion with the heavier and combustible gases, cause the latter to return to the combustion chamber.

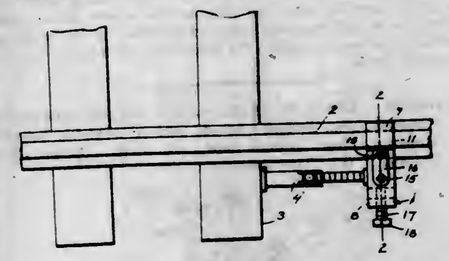
1,103,725. WOOD-PULP THICKENER AND SAVE-ALL. ALBERT D. WOOD, Canton, N. C. Filed Nov. 14, 1912. Serial No. 731,450. (Cl. 92—36.)



1. In a strainer of the class described, a vat, intake and outlet ducts connected to said vat, a cylinder rotatably mounted in said vat, a removable partition at each side of said cylinder in the said vat, a packing strip extending partially around said cylinder, and having ends extending above the horizontal axis thereof, one of the ends of said strip being connected to said vat and the other end at the opposite side of the cylinder being adjustably connected to said vat, whereby said strip may be adjusted to contact closely with the end of said cylinder.

2. In a strainer of the class described, a vat, intake and outlet ducts connected to the sides of the vat, a cylinder rotatably mounted in the vat and provided with inclined vanes thereon, said vanes being inclined tangentially from said cylinder in a direction opposite to the rotation of said cylinder, a removable partition in the vat, one on each side of the cylinder, a packing strip connected at one end to the wall of the vat, said strip extending underneath the cylinder at one end, and means for adjusting said packing strip to contact firmly with the end of said cylinder.

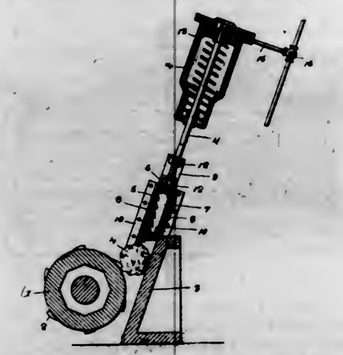
1,103,726. RAIL-TIE-SPACING DEVICE. SAMUEL H. YOUNG, Durden, Ga. Filed May 1, 1914. Serial No. 835,697. (Cl. 104—16.)



1. A tie spacing device in combination with a jack, having its face disposed in engagement with one side of a tie of means to clamp the rail to extend outwardly at right angles thereto and form an abutment for the head of the jack comprising a base plate, a jaw at one end of the base plate and relatively stationary, a jaw slidable on the base plate, means to slidably support the jaw, and means to slide the jaw into clamping position, said jaws arranged to clamp opposite sides of the rail.

2. A device of the character described comprising a base plate, a right angularly extending jaw formed integral with one end of the base plate, a right angularly extending flange formed at the other end of the base plate, said base plate being provided with longitudinal slots, a slidable jaw, bolts slidable in the slots and adjustably connected with said slidable jaw to support said slidable jaw with relation to the base plate, in different adjusted positions, and an adjusting screw mounted in said flange and at one end engaging the slidable jaw.

1,103,727. CRUSHING-MILL. GEORGE L. ABBOTT, Morriston, Fla. Filed Feb. 11, 1914. Serial No. 818,081. (Cl. 83—14.)

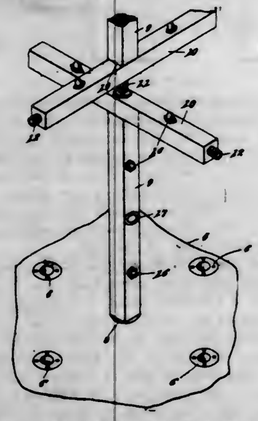


1. In combination, a crushing roll provided with peripheral teeth and rotatable upon a horizontal axis, a breast plate arranged at an angle to the working face of the roll, and a hammer movable into the flaring space between the roll and breast plate and in a plane parallel with said breast plate.

2. In combination, a crushing roll provided with peripheral teeth and rotatable upon a horizontal axis, a breast plate opposite the working portion of the face of the roll and having a downward and inward inclination with relation to the vertical plane of the axis of the roll, to provide a tapering passage between the same and said working face of the roll, and a reciprocating hammer movable into said passage in a plane parallel with the breast plate.

3. In combination, a crushing roll provided with peripheral teeth and rotatable upon a horizontal axis, a breast plate opposite the working portion of the face of the roll, said plate having a downward and inward inclination with relation to the vertical planes of the axis of the roll, whereby a tapered feed passage is provided between the plate and roll, guides on opposite sides of and extending above the breast plate, a reciprocating hammer movable in said guides and downwardly into said flaring space in a plane parallel with the face of the breast plate, fluid pressure means for impelling the hammer on its working stroke, and spring means for impelling the hammer on its return stroke.

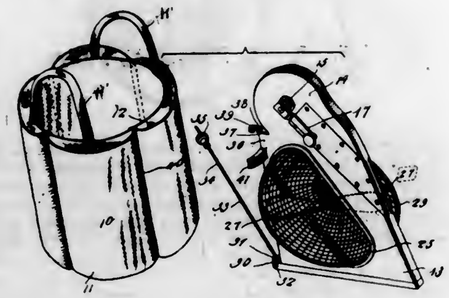
1,103,728. DISPLAY-RACK. JOHN SELDON ADAMSON, Houston, Tex., assignor of one-half to Denis J. Lynch, Houston, Tex. Filed Sept. 23, 1913. Serial No. 791,442. (Cl. 211—14.)



1. A display rack unit, comprising a bar, a screw threaded rod projecting longitudinally from each end of the bar, and a plurality of sockets extending transversely through the bar, each of said sockets comprising a tubular body internally threaded having a flange on one end, and a nut rigidly secured to the other end, whereby the body may be rotated.

2. In a display rack, a pair of units, each comprising a bar formed with a transverse opening circular in cross section, and a socket rotatably secured within said opening, each socket comprising a tubular body internally threaded having a flange on one end, and a nut rigidly secured to the other end; and a screw threaded connecting rod projecting into said socket.

1,103,729. PROPELLING ATTACHMENT FOR LIFE-PRESERVERS. JOHN G. L. ANDERSON, Providence, R. I. Filed Jan. 7, 1913. Serial No. 740,671. (Cl. 9—18.)



1. A propelling mechanism for life belts comprising a supporting member, means for attaching the supporting member to the belt, a housing arranged on the supporting member, a gear arranged in said housing, shafts disposed at right angles to each other, meshing gears carried by said shafts, the first-mentioned gear imparting motion to said shafts, said supporting member being formed with an obliquely disposed opening, a propeller mounted on one of said shafts and disposed in said opening, and means for rotating the first mentioned gear.

2. A propelling attachment for life belt comprising a supporting member, a manually operated propelling mechanism carried by said member, a rod hingedly supported by the member and disposed to clamp the member to the belt, a keeper arranged on the supporting member and disposed to engage the free end of said rod.

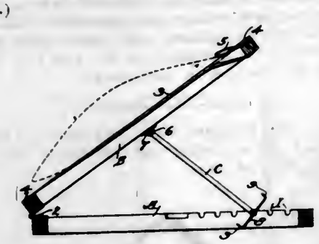
3. A propelling attachment for life belts comprising a frame, a housing supported by said frame, a gear arranged in said housing, a shaft supported by the frame, a gear carried by said shaft and meshing with the first-mentioned gear, a second shaft supported by said housing at right angles to the first-mentioned shaft, meshing gears carried by said shafts, an obliquely disposed opening formed in said frame, a propeller mounted on the second-mentioned shaft and disposed in said opening, panels formed of cork and secured to said frame, metallic plates secured to the cork panels and inclosing said shafts, and means for operating the first-mentioned gear to drive said propeller.

4. A propelling mechanism for life belts comprising a supporting member, pivoted means carried by the supporting member and disposed to embrace the belt, said supporting member consisting of a vertically disposed casing formed with an opening arranged obliquely with respect to the belt, a propeller mounted for rotation within said opening, and means for rotating said propeller.

5. A propelling mechanism for life belts comprising a supporting member including spaced plates constituting a housing, a gear wheel arranged within said housing, means for operating said gear wheel, a shaft supported within the housing and driven by said gear wheel, a second shaft disposed at right angles to the first mentioned shaft and driven by the same, said housing being provided with an opening which slopes from the upper edge of the housing which is secured to the belt downwardly to the lower unattached edge of the housing, and a propeller carried on the last mentioned shaft and disposed within said opening.

[Claims 6 to 12 not printed in the Gazette.]

1,103,730. INVALID-REST. THYRA ANDERSON, Salina, Kans. Filed Apr. 27, 1914. Serial No. 834,807. (Cl. 5—43.)



1. In an invalid rest, the combination of a base frame, a rest frame, a pivotal connection intermediate said frames, brace means between the frames for holding the rest frame at different adjustments, and a support on the rest frame comprising a web secured to one end of the frame and passing longitudinally of the latter beneath the other end of the same, then being extended over the last named end and folded upon itself to provide a suspension fold, said support being slightly bellied intermediate the ends of the frame, and means for attaching the support to the frame.

2. In an invalid rest, the combination of a base frame, a rest frame, a hinged connection between corresponding ends of said frames permitting the same to be collapsed one upon the other, a brace intermediate said frames for holding the rest frame in an adjusted position, said brace comprising a cross bar and a locking member carried by said cross bar and engageable with the free ends of the frames to hold the latter in collapsed condition.

3. In an invalid rest, the combination of a base frame, a rest frame, a hinged connection between corresponding ends of said frames permitting the same to be collapsed one upon the other, a brace member pivoted to the rest frame and of U-form comprising a cross bar, the base frame being provided with notches to be engaged by said cross bar of the brace, and a locking member intermediate the ends of said cross bar and comprising yielding catches capable of engaging over the free ends of the frames when the latter are collapsed one upon the other to lock the frames together and prevent movement of the brace.

1,103,731. BOTTLE-OPENER. OWEN GRANVILLE ASHLEY, Tolchester Beach, Md. Filed Oct. 28, 1913. Serial No. 797,865. (Cl. 65—46.)



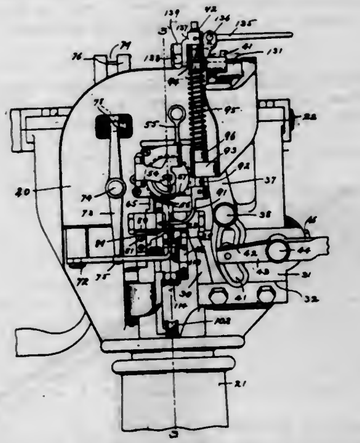
1. In a device for removing caps from bottles, the combination with a receptacle adapted to receive the caps, of a spout on the receptacle and communicating therewith, said spout extending at an angle to the receptacle, and a cap removing member encircling the spout at its juncture with the receptacle, said cap removing member having a cap removing portion lying adjacent to and exteriorly of the entrance to the said spout.

2. In a device for removing caps from bottles, the combination with a receptacle adapted to receive the caps, of a spout on the receptacle and communicating therewith, said spout extending at an angle to the receptacle, a cap removing member encircling the spout at its juncture with the receptacle, said cap removing member having a cap removing portion lying adjacent to and exteriorly of the entrance to the said spout, a closure normally closing the lower end of the receptacle to retain the caps removed by the cap removing member within the receptacle, and a spring carried by the receptacle and engaging the closure to normally hold the same in position to close the lower part of the receptacle.

3. In a device for removing caps from bottles, the combination with a cap receiving receptacle, of means encircling the receptacle and supported thereon, said means comprising a cap removing member and a holder, with the said cap removing member adapted to remove the caps from the bottles in order that they can be received in the receptacle and the said holder adapted to support the said receptacle.

4. In combination with a receptacle, a cap removing member on the receptacle and consisting of a single piece of material encircling the receptacle, said piece of material being formed to provide an upwardly extending holder portion, uprights formed by the said piece of material by bending the same in a substantially U-shaped form, and a second piece of material carried by the uprights and curved for gripping engagement with the caps to be received in the receptacle.

1,103,732. SHOE-SEWING MACHINE. HARRIE A. BALLARD, Ashland, Mass., assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Aug. 30, 1904. Serial No. 222,691. (Cl. 112—20.)



1. A sewing machine of the character described, comprising an oscillatory curved awl, an oscillatory curved needle, carriers for said awl and said needle connected to move in synchronism, independent pivots for said carriers arranged in axial alinement, means for oscillating said carriers, independent supports for said pivots, a power shaft for actuating said means, and means actuated by said shaft for moving one of said pivots axially relatively to the other independently of the oscillatory movement of said carriers.

2. A sewing machine of the character described, comprising an oscillatory curved awl, an oscillatory curved needle, independent oscillatory carriers for said awl and needle, a pivot for the needle carrier, a stationary support for said pivot, a laterally movable slide, a pivot supported thereon in axial alinement with the first-mentioned pivot, an awl carrier journaled on said second-mentioned pivot, one of said carriers having a slot, and the other having a projection slidingly entering said slot, means for reciprocating said slide, and means for oscillating said needle carrier, substantially as set forth.

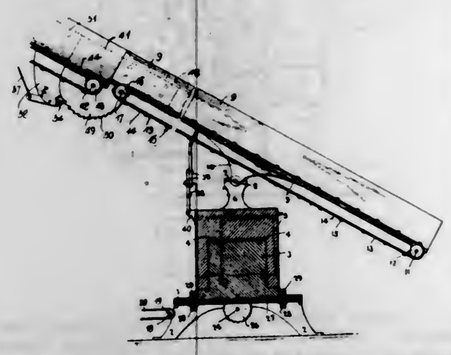
3. A sewing machine of the character described, comprising a curved needle, an oscillatory carrier therefor, a curved awl, an oscillatory carrier therefor, a sliding connection between said carriers whereby they are caused to oscillate synchronously, means for effecting the oscillation of said carriers, independent studs on which said carriers are pivoted, said studs being arranged in axial alinement, a stationary member supporting one of said studs, a movable member supporting the other of said studs, and means for actuating the last-mentioned member to move the stud supported thereby axially with relation to the other stud.

4. In a sewing machine, a frame, a rectilinearly movable slide on said frame, independent alined studs on said frame and said slide, a power shaft, power-transmitting means actuated by said shaft by which said slide is reciprocated to move one of said studs toward and from the other, an awl, a needle, an awl carrier pivoted on the movable stud, a needle carrier pivoted on the other stud, a pin on one carrier in sliding engagement with the other carrier, an eccentric rod connected with one of said carriers, and an eccentric on said power shaft operatively engaged with said eccentric rod.

5. A sewing machine of the character described, comprising two supports one of which is movable relatively to the other, a needle carrier arranged to oscillate on one of said supports, an awl carrier arranged to oscillate on the other one of said supports, the axes of said carriers being parallel, means for reciprocating one of said supports to impart lateral feeding movement to the carrier thereon, means arranged to impart oscillatory movement to one of said carriers, and means connecting said carriers for transmitting oscillatory movement from one to the other.

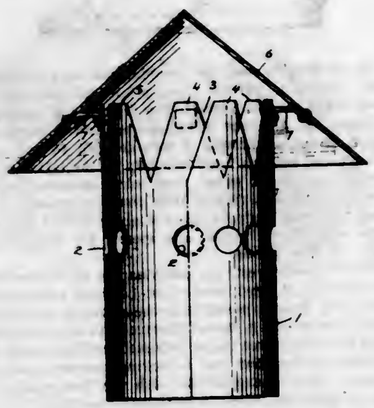
[Claims 6 to 14 not printed in the Gazette.]

1,103,733. STACKER. EDMUND BEHRNS, Buffalo Lake, Minn. Filed Oct. 12, 1913. Serial No. 794,943. (Cl. 193—16.)



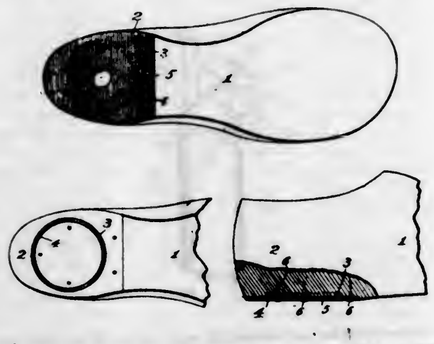
In a stacker, the combination with a base having thereon a bearing post, of an elevator supporting cylinder telescopically engaged with and revolubly mounted on and having a ball bearing engagement with said post, bearing lugs formed on said cylinder and projecting above the same, an elevator supporting shaft engaged with said bearing lugs, an elevator trough pivotally mounted on said shaft, means to support the trough at different inclinations, an endless conveyer arranged in said trough, a main drive shaft mounted in said base, a counter shaft geared to said main drive shaft, a spur gear fixed on said counter shaft and projecting up through said base, a similar gear loosely mounted on the counter shaft also projecting through the base, idle gears mounted beneath and projecting upwardly through the base at right angles to the gears on said counter shaft, a double face gear ring arranged around said cylinder and supported on and driven by the gears on said counter shaft and in said base, and means whereby the movement of the gear ring is transmitted to the conveyer in said trough.

1,103,734. DRAFT-PIPE CAP. HERBERT F. BELKNAP, Marshfield, Mass. Filed Oct. 20, 1913. Serial No. 796,302. (Cl. 98—4.)



The herein described draft pipe comprising a short length of pipe having a series of perforations spaced apart and extending around the pipe, a series of projections at the upper end of the pipe in vertical alinement with said perforations, said pipe being provided with a series of V-shaped recesses extending entirely around the pipe intermediate the perforations and projections, a conical cap connected to the upper end of the pipe, and supporting brackets for said cap connected to said projections and to said cap.

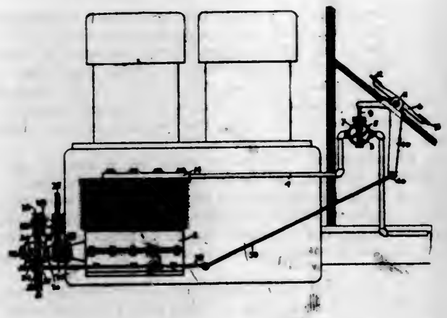
1,103,735. SHOE-LAST. FRANCIS E. BENTON, Stoughton, Mass. Filed Aug. 20, 1913. Serial No. 785,748. (Cl. 12—139.)



A wooden shoe last provided in the bottom face of its heel portion with a shallow annular groove having

straight parallel walls, a metal ring disposed within said groove and having parallel inner and outer faces lying parallel with the parallel walls of the groove, a heel plate covering the bottom face of the heel and the bottom edge of said metal ring, and fastening devices passing through the heel plate and entering the heel.

1,103,736. STARTER FOR INTERNAL-COMBUSTION ENGINES. THEODORE A. BOOR, Ashville, Ohio. Filed Nov. 8, 1912. Serial No. 730,171. (Cl. 123—179.)



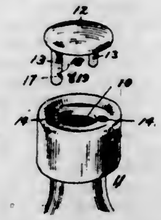
1. In a starter for internal combustion engines, an intermediately pivoted foot treadle, a spindle on which the foot treadle is secured, a bell-crank secured upon said spindle, a valve operated by one arm of said bell-crank to supply motive fluid to a motor, and gearing operated by the other arm of said bell-crank to connect said motor to the power shaft of the engine to start the same, or to connect the power shaft of the engine to the motor to run the motor as a compressor after the engine has been started.

2. A motor having a power shaft, a pinion carried thereby, a gear operated by said pinion, a clutch member carried by said gear, a pinion having a clutch member adapted to mesh with the first named clutch member, a gear meshing with said second named pinion, an engine-driven power shaft, a clutch for connecting the last named gear to the said power shaft, and means for moving said second named pinion and gear to throw said clutch and clutch members into and out of operation.

3. A starter for internal combustion engines, comprising a motor, a pinion and a gear mounted upon the shaft thereof, a gear meshing with the pinion and having a clutch member, a second pinion having a clutch member to engage the first clutch member, an engine-driven power shaft, a pair of clutch members carried by the said power shaft, a gear mounted on the power shaft between said clutch members and having clutch members to engage each of the members on the power shaft, said last named gear meshing with the second named pinion, and means for moving said second named pinion and the engine shaft gear to enable the motor to drive the engine to start the same, and the engine to drive the motor as a compressor after starting.

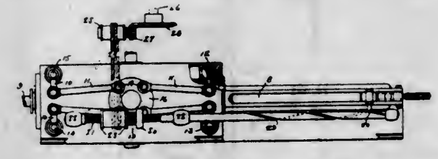
4. A starter for internal combustion engines, comprising a motor, a pinion mounted on the shaft thereof, an intermediate gear and pinion, the former of which meshes with the shaft pinion, a clutch adapted to connect said intermediate gear and pinion, an engine-driven power shaft, a gear mounted on the said power shaft and in engagement and movable with the intermediate pinion, a gear mounted on the motor shaft and with which the engine shaft gear is adapted to mesh when the intermediate gear and pinion are disengaged, and clutches for connecting the engine shaft gear with the engine shaft in relatively opposite directions, all for the purpose described.

1,103,737. CLOSURE FOR BOTTLES, JARS, &c. FRANK M. BUDLONG, San Jose, Cal., assignor of one-third to John M. Curragh, San Jose, Cal. Filed Aug. 10, 1909. Serial No. 512,183. (Cl. 215—12.)



In a bottle, the combination of a closure comprising a member extending across the bottle opening and having a stem projecting into and permanently locked within a chamber in the bottle wall, the locked portion of the stem being wholly within the chamber, the bottle having around its mouth an upward projection reaching to a plane not lower than the top of the stem when the member that extends across the mouth of the bottle is broken from the stem, said member and said stem being integral and of frangible material, whereby the said member may readily be broken from the stem leaving the stem attached to the bottle.

1,103,738. MARINE STEERING-GEAR. LESLIE CAULDWELL BURNS, Union Hill, N. J. Filed Mar. 11, 1914. Serial No. 823,919. (Cl. 121—13.)



1. In a motor of the character described, a pressure cylinder, a piston working therein, a piston rod extending beyond the end of the cylinder, valves controlling the admission of pressure to opposite faces of the piston, a screw rod, a sleeve threaded thereon, means operated on the longitudinal movement of said sleeve on the screw rod to actuate said valves and means operated by the travel of the piston in the cylinder to rotate said rod and thus longitudinally displace the said sleeve.

2. In a motor of the character described, a pressure cylinder, a piston working therein, a piston rod extending beyond the end of the cylinder, valves for admitting fluid pressure to opposite faces of the piston, a screw rod, a sleeve threaded thereon, means controlled by said sleeve for operating said valves on the longitudinal displacement of the sleeve on said screw rod, manually operated means for rotating said sleeve on said rod to effect longitudinal displacement of the sleeve, and means operated by the travel of the piston for rotating said screw rod in a direction to effect longitudinal displacement of the sleeve in a direction opposite to that in which it has been traveled by the manually operated means.

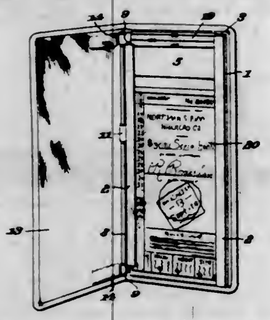
3. In a motor of the character described, a pressure cylinder, a piston working therein, a piston rod extending beyond the end of the cylinder, valves for admitting fluid pressure to opposite faces of the piston, a screw rod, a sleeve threaded thereon, means controlled by said sleeve for operating said valves on the longitudinal displacement of the sleeve on said screw rod, manually operated means for rotating said sleeve on said rod to effect longitudinal displacement of the sleeve, and means operated by the travel of the piston for rotating said screw rod in a direction to effect longitudinal displacement of the sleeve in a

direction opposite to that in which it has been traveled by the manually operated means, said manually controlled and piston controlled means being capable of simultaneous operation.

4. In a motor of the character described, a pressure cylinder, a piston working therein, a piston rod extending beyond the end of the cylinder, valves for admitting fluid pressure to opposite faces of the piston, a screw rod parallel to the piston a sleeve threaded thereon and operatively connected to the valves to actuate the latter, a manually operated belt for rotating said sleeve on the screw rod, an extension of the screw rod having a spiral groove cut therein, and a pin on the piston rod engaged in said groove to effect the rotation of said screw rod on the travel of the piston, substantially as described.

5. In a motor of the character described, a pressure cylinder, a piston working therein, a piston rod extending beyond the end of the cylinder, valves for admitting fluid pressure to the opposite faces of the piston, a rotatable screw rod arranged parallel to the piston, a sleeve threaded on said rod and operatively connected to the valves to actuate the latter, manually operated means for rotating said sleeve on the screw rod, an extension of the latter having a high pitch spiral groove therein and a pin on the piston rod engaging said groove to effect the rotation of said screw rod on the travel of the piston, substantially as described.

1,103,739. SCRIP-HOLDER. GEORGE H. CLEVELAND, Waco, Tex. Filed July 18, 1913. Serial No. 779,841. (Cl. 211—37.)



1. A scrip holder comprising a main plate formed with guide flanges on its edges, an abutment transverse the plate near one end thereof, said guide flanges and abutment serving to retain the scrip in folded form within the holder, and strip friction means carried by the plate beyond the abutment.

2. A scrip holder comprising a main plate formed with guide flanges on its edges, an abutment transverse the plate near one end thereof, strip friction means carried by the plate beyond the abutment, and a book cover in which the holder is movably connected.

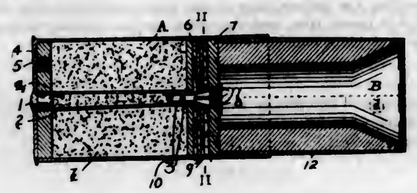
3. A scrip holder comprising a main plate formed with guide flanges on its edges, an abutment transverse the plate near one end thereof, strip friction means carried by the plate beyond the abutment, a book cover in which the holder is movably connected, and spaced receiving pockets formed on the rear section of the book cover.

4. A scrip holder comprising a main plate formed with guide flanges on its edges, an abutment transverse the plate near one end thereof, strip friction means carried by the plate beyond the abutment, a rod secured to the plate, and a cutter slidably mounted on the rod.

5. A scrip holder comprising a main plate formed with guide flanges on its edges, an abutment transverse the plate near one end thereof, strip friction means carried by the plate beyond the abutment, a rod secured to the plate within the plane of the opposing surface of the plate, and guide flanges, and a cutter slidably mounted on the rod.

[Claims 6 to 8 not printed in the Gazette.]

1,103,740. AMMUNITION. WILLIAM COOPER, Denver, Colo. Filed Jan. 15, 1914. Serial No. 812,223. (Cl. 102—12.)



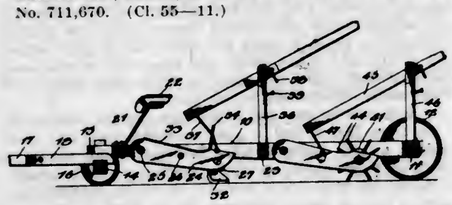
1. In ammunition, a projectile of hollow cylindrical form having a constant external diameter and having the forward end of its internal bore beveled outward to meet the external perimeter and form a cutting edge, and a circumferential, soft covering for said projectile, formed in two, readily-separable and removable sections, whereby, as the projectile leaves a gun, the covering separates and drops off.

2. An assembled ammunition unit for submarine use comprising a casing having an inclosed end, a hollow cylindrical projectile inserted in the open end of said casing, an explosive charge in said casing adapted to propel said projectile, and a second explosive charge adapted to expel the water from the bore of said projectile and from the gun.

3. An assembled ammunition unit for submarine use comprising a casing having a closed end, a hollow cylindrical projectile inserted in the open end of said casing, means for expelling the water from the bore of said projectile and from the gun, and means for expelling the projectile from the gun.

4. An assembled ammunition unit for submarine use comprising a casing having a closed end and containing an expelling explosive charge, a hollow cylindrical projectile inserted in said casing, a water tight packing between said projectile and said explosive charge, and a tube in said casing having a packed end adjacent to the bore of said projectile and containing an explosive charge adapted to expel the water from said bore and from the gun.

1,103,741. GROUND CUTTER AND PULVERIZER. ALBERT M. COX, Mattie, S. C. Filed July 26, 1912. Serial No. 711,670. (Cl. 55—11.)

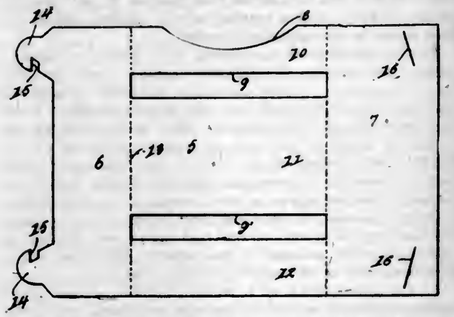


1. In a pulverizing machine, the combination of implement holding members having recesses provided with interior circular enlargements and cutting implements having similarly shaped necks and head portions removably engaged in said recesses.

2. In a ground cutter and pulverizer, an implement holding member having recesses cut in its face adjacent the ground, each of said recesses also opening upon an adjacent side of the member, each of said recesses being provided with interior circular enlargements and cutting implements having similarly shaped neck and head portions removably engaged in said recesses, and said recesses being so disposed that when the machine is assembled and in operation, the heads of the cutting implements are securely held in said enlargements.

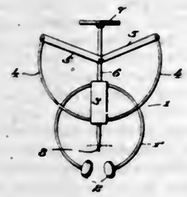
1,103,742. SHIRT-HOLDER. CHARLES H. DAMMAN, Chicago, Ill. Filed Mar. 18, 1913. Serial No. 755,232. (Cl. 229—87.)

The herein described shirt holder comprising a rectangular body portion formed of paper and provided with a pair of transverse slots adjacent the ends thereof, whereby said body portion is divided into three sections, one of said sections being cut away on a curved line adjacent its outer end to receive the neck band of a shirt, a pair of rear sections hinged to the side edges of the body portion,



and locking tongues on one of said sections having angular notches therein and slits in the other section for securing said rear sections to each other in engagement with the body, the end sections of the body being adapted to engage the front of a shirt to hold said shirt against the rear section.

1,103,743. CALF-WEANER. LEE R. DEHLER, Gary, Ind. Filed Apr. 18, 1913. Serial No. 762,052. (Cl. 119—132.)



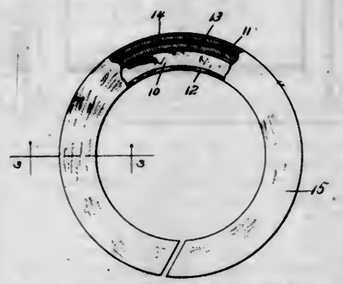
1. A calf weaner, having an attaching element comprising a split ring, the ends of which being provided with knobs, a rectangular housing, said housing being extended to within the ring and having the said ring centrally connected with one of the edges of the housing, the housing being formed with a longitudinally extending passage, the end of the housing within the split ring having a bowed spring secured to one of the corners thereof, a pin arranged within the passage of the housing and having one of its ends provided with a head, and link connections between the ends of the bow-shaped spring and the pin.

2. A device of the character described comprising a bow spring, a rectangular member provided with a longitudinal bore connected to the center of said spring at one of its ends, the bore of said member being disposed at right angles to the bow spring at the connection of the spring with the said rectangular member, a pin guided by the bore of said rectangular member and being provided with an enlarged head, toggle members connected to the free ends of said bow spring and to said pin adjacent its ends, said device adapted to be held upon the head of the calf so that the pin may prick the same when said enlarged head is pressed.

3. A device of the character described comprising a rectangular member having a longitudinal bore therein, a bow spring secured at the middle thereof to one end of said rectangular member and having the free ends thereof extended toward the opposite end of said member, a split ring having its ends enlarged and being secured to said opposite end of the rectangular member at the middle thereof, the ends of said split ring disposed directly toward the first mentioned end of said member, a pin adapted to be guided by the bore in said member, and the point thereof directed toward the ends of said split ring, an enlarged flat head provided on the opposite end of said pin, and toggle members connected to the free ends of said bow spring and connected to a portion of said pin between said rectangular member and the head of said pin.

4. In a calf weaner, a split resilient ring having its ends provided with knobs, a housing, said ring being centrally secured to one of the ends of the housing, a bow shaped spring secured to the opposite end of the housing, said spring having its ends provided with pivoted links, a longitudinally disposed pin having one of its ends passing through a passage in the housing, and its opposite end provided with a head, and said pin being pivotally connected with links.

1,103,744. STEAM-PACKING. GEORGE STEWART ROWLAND DICKSON, New York, N. Y. Filed Feb. 18, 1914. Serial No. 819,519. (Cl. 137—115.)



1. In a packing strip, a wear metal of substantial I formation, having its flanges cut at intervals; a fibrous material packed about one flange and the web of said wear material with the other flange exposed and an envelop inclosing the fibrous material and the wear metal, except the exposed portions.

2. In a packing strip, a wear metal of substantial I formation, having its flanges cut from opposite sides in staggered relation; a fibrous material packed about one flange and the web of said wear strip; a fabric envelop inclosing the fibrous material and the wear metal with one flange exposed, said completed article being curved presenting the exposed flange upon the wearing surface of the strip.

3. In a packing strip, a wear metal of substantial I formation; a fibrous material packed about said wear strip, a reinforcing fabric embedded in the fibrous material adjoining one of the flanges of the wear metal; and a fabric envelop inclosing the fibrous material with one of the flanges of the wear metal exposed, the structure being curved to bring the exposed flange of wear metal on the contacting side of the packing strip.

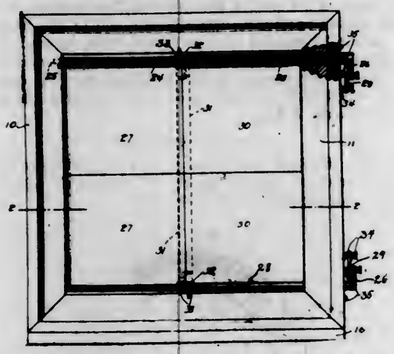
1,103,745. MULTIPLYING ATTACHMENT FOR CAMERAS. HARRY D. FARQUHAR, New York, N. Y. Filed Mar. 29, 1913. Serial No. 757,541. (Cl. 95—36.)

1. A multiplying attachment for cameras embodying a plurality of plate sections mounted in the frame of the camera remote from the lens, means for shifting certain of said plate sections from one side of the exterior of the frame, said means telescoping one with the relation to the other, and sleeves through which said shifting means operate.

2. A multiplying attachment for cameras embodying plate sections mounted in the frame of the camera remote from the lens, and hand-operated means at one side of the frame for shifting certain of said sections independently of the other sections to uncover independent quarter portions of the opening through the frame, said means extending through said side of the frame in interfitting engagement.

3. The combination with a camera including a base, a front section carrying a single lens, a back section movable

on the base and a bellows connecting said sections; of an internal bead at the back of the frame producing an opening, a plurality of hinged plates coöperating to close the opening formed in the back portion of the frame by said bead, and interfitting means connected to the pivots of the plates and located at one side of the back section of the camera for shifting the plates.

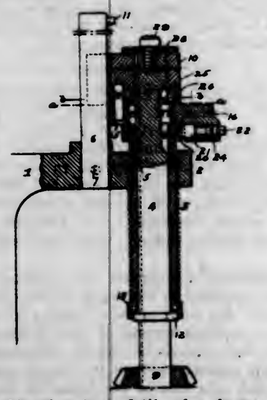


4. The combination with a camera including a base, a front section carrying a single lens, a back section movable on the base and a bellows connecting said sections; of a plurality of hinged plates coöperating to close the back portion of the frame, pivots for the plates fitting on each other, means connected to the pivots of the plates and located at one side of the back section of the camera for independently shifting the plates, handles for turning the pivots, and means carried by the back section and cooperating with the handles for holding said plates in adjusted positions.

5. The combination with a camera including a base, a front section carrying a single lens, a back section movable on the base and a bellows connecting said sections; of a plurality of slidable plates coöperating to partially close the back section of the frame and allow openings in the remaining portions, and a grasping member operating through the frame and connected to certain of said plates for shifting the same, certain plates being removable and reversible to vary the sizes and shapes of the openings.

[Claims 6 to 8 not printed in the Gazette.]

1,103,746. DRILL. THOMAS J. FEGLEY and GEORGE O. LEOPOLD, Philadelphia, Pa., assignors to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 12, 1913. Serial No. 806,266. (Cl. 77—45.)



1. The combination in a drill, of a frame; a spindle; the frame having a threaded opening; a feed screw mounted on the spindle and adapted to the threaded opeaing; a ratchet wheel on the feed screw; a vibrating carrier having a pawl arranged to engage the ratchet wheel, the spindle having a longitudinal slot therein; a roller mounted in the slot and arranged to actuate the carrier; a segment carried by the spindle and extending over the roller holding the feed screw from moving in one direction on the spindle; and a bearing on the spindle holding the feed screw in the opposite direction.

2. The combination in a drill, of a frame; a spindle; means for turning the spindle; a feed screw mounted on the spindle; a frame having a threaded opening for the feed screw; a collar on the spindle against which the lower end of the feed screw rests, said spindle having a slot; a roller in the slot; a segment mounted on the spindle and resting on the roller; the feed screw being held between the segment and the collar, said feed screw having a ratchet wheel; a block mounted on the spindle; a carrier pivoted to the block and having a pawl engaging the ratchet teeth of the feed screw and having an opening for the passage of the spindle, the roller acting to vibrate the carrier as the spindle rotates.

3. The combination of a slotted spindle; a feed screw having a ratchet wheel; a block on the spindle; a carrier pivoted to the block and having a pawl engaging the ratchet wheel and having an opening through which the spindle extends; a roller located in the slot of the spindle and extending through the opening in the carrier, said roller being of a greater length than the height of the carrier; and an abutment carried by the spindle against which the end of the roller rests so as to allow the carrier to move freely between the block and the feed screw.

1,103,747. EXTRACTION OF NICKEL FROM MIXTURES OF NICKEL AND OTHER METALS. HANS EDWARD FIERZ, Basel, Switzerland. Filed Mar. 26, 1914. Serial No. 827,404. (Cl. 75—66.)

1. A process for the extraction of nickel consisting in reducing metal oxids containing nickel by means of reducing agents containing carbon monoxid, removing the carbon monoxid from contact with the metals while the temperature is maintained substantially at that point at which the reduction has taken place, then lowering the temperature to that required for the extraction of the nickel by carbon monoxid, and extracting the nickel by means of carbon monoxid.

2. A process for the extraction of nickel consisting in reducing metal oxids containing nickel by means of reducing agents containing carbon monoxid, removing the carbon monoxid from contact with the metals by displacing it by means of another gas while the temperature is maintained substantially at that point at which the reduction has taken place, then lowering the temperature to that required for the extraction of the nickel by carbon monoxid, and extracting the nickel by means of carbon monoxid.

3. A process for the extraction of nickel consisting in reducing metal oxids containing nickel by means of reducing agents containing carbon monoxid, removing the carbon monoxid from contact with the metals by displacing it by means of hydrogen while the temperature is maintained substantially at that point at which the reduction has taken place, then lowering the temperature to that required for the extraction of the nickel by carbon monoxid, and extracting the nickel by means of carbon monoxid.

1,103,748. ELECTRIC FITTING FOR CIRCUIT-WIRING. MORRIS F. FINKELSTEIN, New York, N. Y. Filed Nov. 17, 1911. Serial No. 660,868. (Cl. 173—263.)



1. A connector for electric conductors, comprising an insulating casing, a clamp within said casing adapted to engage and grip a wire, a clamp-operating member, said casing having an opening adapted to receive said operating member loosely, and means for retaining the operating member loosely in the opening.

2. A connector for electric conductors, comprising an insulating casing, a clamp within said casing adapted to engage and grip a wire, a clamp-operating member, said casing having an opening adapted to receive and hold said member loosely when the said member is inoperative with respect to said clamp, and a movable cover adapted to close said opening.

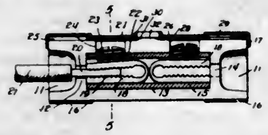
3. A connector for electric conductors, comprising an insulating casing, a pair of oppositely disposed clamps within said casing, said casing having openings for permitting the introduction of the ends of conductors into said clamps, clamp-operating members, said casing having further openings adapted to receive and hold said members loosely when the same are inoperative with respect to said clamps, and a cover for said last-mentioned openings, said cover having limited movement relative to said casing to permit said last-mentioned openings to be covered and uncovered.

4. A connector for electric conductors, comprising an insulating casing, a conducting sleeve therein having a threaded opening, said casing having an opening registering with said threaded opening and of greater dimension than the same, a clamping screw adapted to be received in said threaded opening and to be received loosely in said other opening, a clamping member in said sleeve adapted to be controlled by said screw and means on said casing for retaining said screw in the opening of the casing.

5. A connector for electric conductors, comprising an insulating casing, a conducting sleeve therein having a threaded opening, said casing having an opening registering with said threaded opening and of greater dimension than the same, a clamping screw adapted to be received in said threaded opening and to be received loosely in said other opening, a clamping member in said sleeve adapted to be controlled by said screw, and a cover upon said casing and movable relative thereto and adapted to extend over said opening of said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,103,749. ELECTRICAL FITTING. MORRIS F. FINKELSTEIN, New York, N. Y. Filed Apr. 4, 1913. Serial No. 758,790. (Cl. 173—324.)



1. A device of the class described comprising an insulating body, a conducting sleeve therein, conductor-receiving and holding clips within said sleeve, screws for controlling said clips, said body having a guideway extending longitudinally thereof, and a guard movably mounted in said guideway and having openings therethrough, said guard in normal position covering said screws, said body having end rings partly covering said guideway, said rings having means for limiting the movements of said guard.

2. A device of the class described comprising an insulating body, a conducting sleeve therein, conductor-receiving and holding means within said sleeve, members for controlling said last-mentioned means, and a guard slidable longitudinally of said body and normally covering said members, said guard having openings affording access to said members in a predetermined position of said guard, said guard having about one of said openings an annular projection affording means for manipulating said guard.

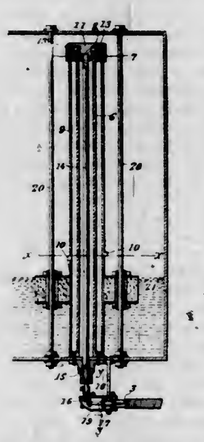
3. A device of the class described comprising, an insulating body having a groove thereon; conductor-receiving and -holding means in said body; means for electrically connecting the conductors; a guard for said last mentioned means, movable in said groove, whereby said last mentioned means may be exposed or covered by said guard.

4. A device of the class described comprising, an insulating body having a groove on the periphery thereof; conductor-receiving and -holding means in said body; means for electrically connecting the conductor; a guard for said last mentioned means mounted to move in said groove, whereby said last mentioned means may be uncovered or covered by said guard; and means for holding said guard in either of the positions when uncovering or covering said means for electrically connecting the conductors.

5. A device of the class described comprising an insulating body having a longitudinal groove on the periphery thereof; conductor-receiving and -holding means on said body; means for electrically connecting the conductors; a guard mounted to slide in said groove; and means on the body at the groove for limiting the movement of said guard said guard having openings therethrough whereby said means for connecting the conductors may be operated.

[Claims 6 to 9 not printed in the Gazette.]

1,103,750. FLUID-GAGE. LELAND A. FRAME, Coalinga, Cal. Filed Sept. 24, 1913. Serial No. 791,628. (Cl. 73—82.)

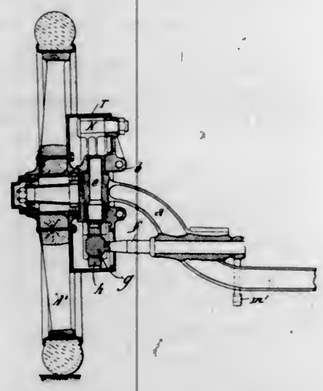


In means of the character specified the combination of a tank, a tube arranged vertically in the tank and secured at its lower end to the bottom thereof, a rod extending through the tube and bottom of the tank, a second tube slipped over the first mentioned tube, a cap closing the upper ends of both tubes and secured to the said second tube and having a boss which is secured to the upper end of the rod and constitutes one member of a ball bearing, a ring supported upon the upper end of the first mentioned tube and grooved in its upper side, balls arranged between such ring and the said boss, a float arranged within the tank and having spiral connection with the second tube, and guide rods connected with the tank and directing the float in its vertical movements and serving to prevent turning thereof.

1,103,751. VEHICLE-BRAKE. ORESTE FRASCHINI, Milan, Italy. Filed Feb. 13, 1911. Serial No. 608,279. (Cl. 21—8.)

1. A device for controlling brakes fitted to the steering wheels of vehicles comprising, in combination with an axle, and a revoluble and oscillatory wheel connected thereto; a drum connected to said wheel; a member carried by said axle; a pair of brake shoes pivoted to said member; an apertured, rotatable cam having curved and flat faces thereon; and a second cam oscillating within the

aperture in the first cam and adapted to operate the same in such a manner as to produce the braking of the wheels at any angle.



2. A device for controlling brakes fitted to the steering wheels of vehicles comprising, in combination with an axle, and a revoluble and oscillatory wheel connected thereto; a drum connected to said wheel; a member carried by said axle; a pair of brake shoes pivoted to said member; a cam situated between the ends of said shoes; and a member movably connected to said cam and adapted to move in relation thereto for operating the cam.

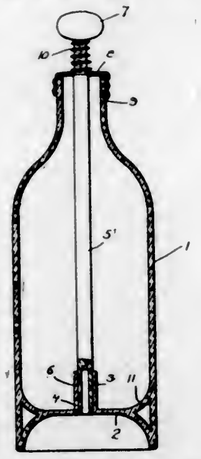
3. A device for controlling brakes fitted to the steering wheels of vehicles comprising, in combination with an axle, and a revoluble and oscillatory wheel connected thereto; a drum connected to said wheel; a member carried by said axle; a pair of brake shoes pivoted to said member and having flanged ends; a cam situated between the flanged ends of said brake shoes; and an internal member oscillating within said cam and adapted to operate the same when rotated.

4. A device for controlling brakes fitted to the steering wheels of vehicles comprising, in combination with an axle, and a revoluble and oscillatory wheel connected thereto; a drum connected to said wheel; a member carried by said axle; a pair of brake shoes pivoted to said member; an apertured, rotatable cam having curved and flat faces thereon; an oscillatory member mounted in the aperture in said cam; and a shaft having a fixed axis of rotation connected to the oscillatory member for rotating the same and said cam.

1,103,752. SANITARY BOTTLE. PAUL G. FUEGMANN and FRIEDRICH HERMAN HUMMEL, West New York, N. J. Filed Dec. 23, 1913. Serial No. 808,349. (Cl. 215—102.)

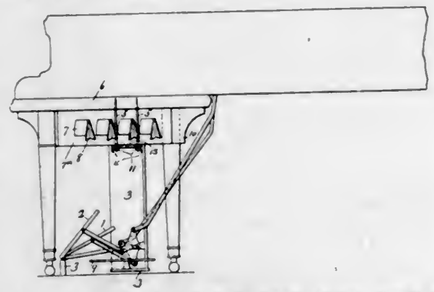
1. A bottle of the character described having a concaved bottom whereby the bottom is spaced from a support for the bottle, a cylindrical tube formed integral with the bottom wall and extending into the bottle and opening through the bottom wall, said tube having an opening adjacent its lower edge, a cylindrical tube having an opening adjacent its lower end slidably mounted within the first tube, a closure cap for said bottle, said second tube adapted to extend upwardly through the closure cap, a knob on the upper end of said second tube, and a helical spring mounted upon the tube and interposed between the knob and cap and normally holding the opening in the second tube out of registration with the opening in the first tube.

2. A bottle of the character described having a concaved bottom, a cylindrical tube formed integral with the bottom, extending into the bottle and opening through the bottom thereof, said tube having an opening in one side adjacent its lower end, a second tube mounted within the first tube and having an opening adjacent its end adapted to communicate with the opening in the first tube, a closure cap for said bottle, said second tube extending upwardly through the closure cap and means for normally



holding the openings in the tubes out of registration with each other.

1,103,753. PIANO-PEDAL SUPPORT. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Jan. 10, 1913. Serial No. 741,182. (Cl. 84—233.)



1. A piano having a keybed, player action chests and striker pneumatics under said keybed, a frame or support and pedals thereon below said player action parts, and suspension means attached to said keybed and extended down between said player action parts and connected to said supporting frame.

2. A piano having a keybed, player action chests and striker pneumatics under said keybed, a frame or support and pedals thereon below said player action parts, one or more rails across the top of said frame or support and lengthwise of the keybed, and suspension means attached to said keybed and extended down between said player action parts and connected to said rail or rails.

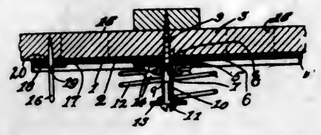
3. A piano having a keybed, player action chests and striker pneumatics under said keybed, a frame or support and pedals thereon below said player action parts, and suspension means attached to said keybed and extended down between said player action parts at the wider spaces between said parts at the breaks of the scale and connected to said supporting frame.

4. A piano having a keybed, player action chests and striker pneumatics under said keybed, a frame or support and pedals thereon below said player action parts, one or more rails across the top of said frame or support and lengthwise of the keybed, and suspension means attached to said keybed and extended down between said player action parts at the wider spaces between said parts at the breaks of the scale and connected to said rail or rails.

5. A piano having a keybed, player action chests and striker pneumatics under said keybed, a frame or support and pedals thereon below said player action parts, one or more rails across the top of said frame or support and lengthwise of the keybed, and suspension means attached to said keybed and extended down between said player action parts and connected to said rail or rails, and blocks at the ends of the scale, said rails being attached to said blocks.

[Claims 6 to 18 not printed in the Gazette.]

1,103,754. AIR-VALVE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Feb. 8, 1913. Serial No. 747,131. (Cl. 103—66.)



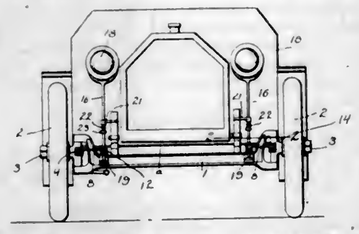
1. A valve device comprising a flexible valve having a hole therein, and a stiff guard on the outer face of said valve, and having a hole therein opposite to and larger than said hole in the valve, a washer having a hole therein smaller than the hole in the guard and attached to the outer face of said guard with its hole over the hole in the guard, and opposite to the hole in the valve, said valve and said washer being attached together through the hole in the guard.

2. A valve device comprising a flexible valve having a hole therein, and a stiff guard on the outer face of said valve, and having a hole therein opposite to and larger than said hole in the valve, a washer having a hole therein smaller than the hole in the guard and attached to the outer face of said guard with its hole over the hole in the guard, and opposite to the hole in the valve.

3. A valve-seat and a valve-means, said valve means provided with a guide hole, a guide screw entered into said seat and extended through the guide hole, a spring having several coils surrounding said guide, a loop on said spring slidably engaged on said guide, and a soft bushing in said loop and extended outwardly between the said coils of the spring.

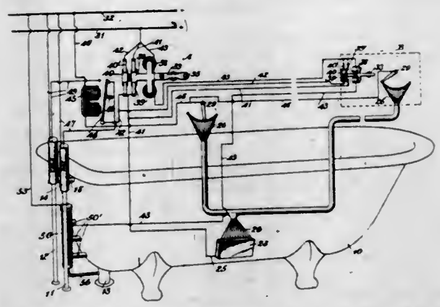
4. A valve-seat and a valve-means, said valve means provided with a guide hole, a guide or screw entered into said seat and extended through the guide hole, a spring having several coils surrounding said guide, a loop on said spring slidably engaged on said guide, and a soft bushing in said loop and extended outwardly between the valve-means and the part of the spring adjacent thereto.

1,103,755. AUTOMATIC HEADLIGHT-TURNING DEVICE. JAMES WM. S. GARDNER, Saylesville, R. I. Filed Jan. 12, 1914. Serial No. 811,659. (Cl. 240—62.)



In a device of the character described, a member having a U-shaped integral clip, means for connecting the said clip to a steering knuckle, said member having a series of perforations at its outer end, a cross bar provided with perforations at its opposite ends, means for connecting one end of said cross bar adjustably to the first named member, a member adjustably connected to the opposite end of said cross bar, means for supporting the headlight standard in said member, a bracket having a socket for supporting the lower end of the headlight standard, and a spring for holding said standard in the socket.

1,103,756. AUTOMATIC WATER-TEMPERATURE-CONTROL SYSTEM. FRANK R. GEBHARDT, Monsey, N. Y. Filed Feb. 12, 1914. Serial No. 818,377. (Cl. 236—4.)



1. In a water control system, the combination of independent hot and cold water valve mechanisms, main circuit wires, connections between the valve mechanisms and the main wires, a make and break device including a movable armature adapted in alternation to complete the circuit through the hot and the cold water mechanisms, means to initiate the flow of water, and temperature control means adjustable in accordance with the temperature desired to determine the action of the make and break device, said temperature control means including a series of thermometers associated with the bottom of the tub, said thermometers having their bulbs on the same level and communicating with one common connecting wire and the several thermometers having individual auxiliary contacts on graduated levels.

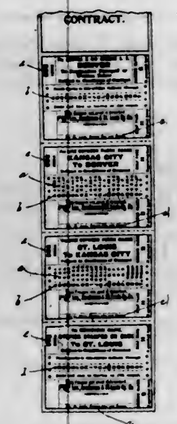
2. In a system of the character set forth, the combination with a tub and hot and cold water supply means delivering thereinto, of electrically operated means for controlling the flow of water, said means including a series of thermometers associated with the bottom of the tub, said thermometers having one common connecting wire and each thermometer having its own individual auxiliary contact leading into its stem, the auxiliary contacts of the thermometers being at different levels as to temperature, a make and break device, means to connect the individual wire of the selected thermometer with the make and break device, connections between the make and break device and the water valve mechanisms, and means to initiate the flow of water through the valve mechanisms.

3. The herein described control system for hot and cold water comprising the combination with a tub and means to deliver hot and cold water thereinto according to any desired temperature, of means to automatically stop the flow of water when the desired depth of water is delivered into the tub, said flow stopping means including a vertical casing adjacent the tub, said casing having a plurality of ports leading into the tub at different levels, means to confine the flow of water from the tub to a selected one of said ports when the desired level of water is reached, a drain pipe leading from the bottom of the casing to the drain pipe of the tub independent of the inlet ports, and means within the casing acted upon by the admission of water thereinto serving to complete a circuit and stop the flow of water.

1,103,757. RAILWAY INTERLINE TICKET. JAMES D. GIBBS, Louisville, Ky. Filed Nov. 27, 1911. Serial No. 662,752. (Cl. 11—15.)

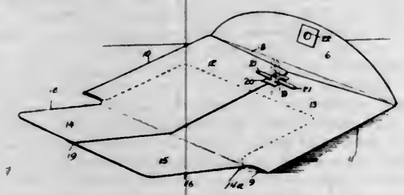
1. A railway interline ticket having printed on a succession of coupons a plurality of railway names representing

the routes of the ticket, each transverse line of routings being designated by a distinctive letter or character and having the junctions or common way-points printed in geographical rotation on each coupon as described.



2. A railway interline ticket having a multiplicity of routes printed in alinement across a series of coupons, each line of routing being designated by a distinctive letter or character, the said routes being arranged in a plurality of groups on each coupon, and having all of the common junction points via which the routes apply printed in geographical rotation on each coupon substantially as and for the purpose specified.

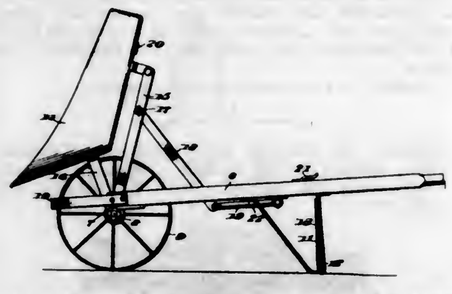
1,103,758. ENVELOP. CHARLES G. GLOVER, Thetford, Vt., assignor to himself and Otis D. Bond, Thetford, Vt. Filed Apr. 28, 1913. Serial No. 764,013. (Cl. 229—74.)



In an envelop, a member having two parallel creases spaced apart and two additional creases disposed substantially at right angles to the first mentioned creases, flaps beyond the second mentioned creases, one of the flaps being turned up adjacent one of the second mentioned creases, the member beyond one of the first mentioned creases having an extension disposed below the plane in which is disposed the second mentioned crease adjacent the turned up flap, the member being bent at the first mentioned creases with the portions of the member beyond the first mentioned creases secured to each other and to the last mentioned flap.

1,103,759. WHEELBARROW. PAUL GNATZIG, Madison, Wis. Filed May 7, 1913. Serial No. 766,197. (Cl. 21—68.)

1. In a wheel barrow, the combination with a supporting frame having a wheel carrying axle, of a body having a downwardly and forwardly extending bracket member pivotally engaging the axle, and tilting means including a yoke pivoted on the frame and having a bridge portion forming a treadle, and a bifurcated link connecting said yoke with the bracket member, the side members of the link being terminally pivoted on the bridge portion of the yoke adjacent to the ends of said bridge portion.



2. In a wheel barrow, the combination with a frame having a wheel carrying axle, of a body having a bracket member pivoted on the axle, a yoke pivoted on the axle and having a bridge portion constituting a treadle, a link connecting said yoke with the bracket member, and stop members connected with the sides of the frame and lying in the path of the yoke.

3. In a wheel barrow, the combination with a frame having handles and a wheel carrying axle, of a pivotally supported body, and tilting means for said body including a yoke having a treadle portion and a link connecting said yoke with the pivotally supported body whereby the latter may be tilted and its contents discharged without letting go of the handles.

1,103,760. CHAIN ATTACHMENT. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 20, 1913. Serial No. 774,929. (Cl. 24—116.)

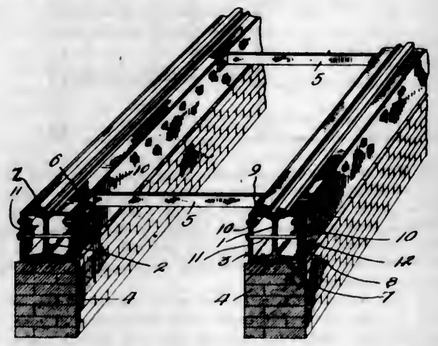


A chain connector of the type described, comprising a blank formed of spring sheet metal of substantially rectangular shape with rounding ends, the opposite ends of the blank having bays cut out on the axial line and the opposite sides of said blank being recessed on the transverse axis whereby when the said sides and ends are rolled to form the completed article, the end bays form end apertures and the side recesses form a central opening and the transverse sides of the blank coöperate to form a restricted passageway from said end openings to said central opening.

1,103,761. STREET-RAIL SLEEPER. HARRY S. GOVER, Bel Air, Md. Filed Apr. 7, 1914. Serial No. 830,182. (Cl. 238—5.)

1. In a sleeper for street railways comprising a channel shaped metallic casing designed to receive a rail so that the head of the rail is disposed above the sides of said casing, angular clamping members mounted within said sleeper arranged to engage opposite sides of the top of a rail and means extending transversely through the sides of the sleeper to adjust the clamping action of said clamping members.

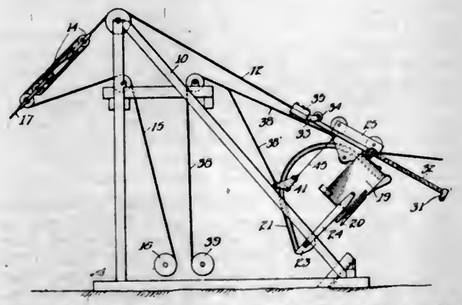
2. In a device of the character described, the combination with a support of rails, elongated casings having open upper edges and comprising bottom and side walls, said rails to be mounted within the casings, transverse connecting bars connecting the casings with each other, means mounted within the casings to clamp opposite sides of the tops of the rails, said means closing said casings, bolts inserted transversely through the sides of the casings and central portions of the rails and nuts turned upon the ends of said bolts.



3. In a device of the character described, the combination with a foundation of elongated casings, rails to be mounted in spaced parallel relation to each other and within said casings and having their tops disposed slightly above the level of the edges of the sides of said casings, angle bars mounted within said casings and secured interiorly of the side walls thereof adjacent the upper edges thereof to clamp the opposite sides of the tops of the rails, said angle bars having body portions thereof that clamp the rails disposed in a horizontal plane and flush with the upper edges of the side walls of the casings, means connecting the casings with each other and means extending through the rails and casings transversely to adjust the clamping action of said angle bars.

4. A sleeper for street railways comprising a channel-shaped casing designed to receive a rail so that the head of the rail is disposed above the side of the casing, rail clamping members mounted within the casing and arranged to engage opposite sides of the top of a rail, and means to secure the casing to the rail.

1,103,762. CABLE-EXCAVATOR. ALVAH D. HADSEL, Philadelphia, Pa., assignor to The Cable Excavator Company, Philadelphia, Pa., a Corporation. Filed Oct. 14, 1913. Serial No. 795,058. (Cl. 37—19.)



1. In a cable excavator, the combination with a main supporting cable and a carriage movable thereon, of an excavator bucket including a bail secured at one end to one end of the bucket and extending thence upwardly and over a portion of said carriage, and draft means connected to said carriage and coöperating with the end of the bail opposite the bucket.
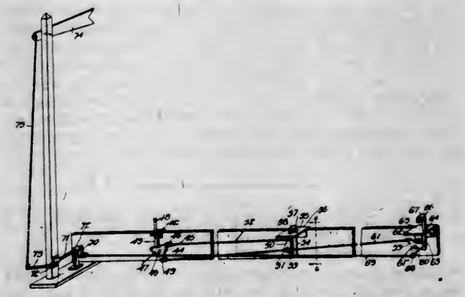
2. In a cable excavator, the combination with a main cable, a bumper secured thereto and means to control the elevation of said cable, of a bucket, a carriage on the cable to support the bucket therefrom, draft means to cause the carriage and bucket to be traversed along the main cable, and dumping devices including a stiff member movable along and parallel to the main cable into contact with said bumper, said member being supported for longitudinal slidable movement on and independently of the carriage and a flexible connection between the stiff member and one part of the bucket made effective by the continued movement of the draft means after the bumper is engaged, said flexible connection being guided over the carriage between the stiff member and the bucket.

3. In a cable excavator, the combination with a main supporting cable and a bumper secured thereto, of a carriage movable along the cable, a bucket supported upon and suspended below said carriage, said bucket including a bail connected at one end to the bucket body and having its intermediate portion arched and extending through a part of the carriage, draft means connected to the carriage and to the part of the bail remote from the bucket body, and means connected to the bucket body and operating through the carriage against said bumper to tilt and empty the bucket, while the draft means continues in operation.

4. In a cable excavator, the combination with a main cable and a bumper secured thereto, of a carriage movable along said cable, said carriage including a pair of side plates and an antifriction roller journaled between their lower ends, a bucket including an arch-shaped bail movable between the carriage side plates and over said roller whereby the main weight of the bucket is supported upon the carriage, draft means serving to cause the carriage and bucket to be traversed along the main cable, and dumping mechanism associated with the carriage and the bucket, said dumping mechanism including a stiff member supported upon the carriage for independent movement and adapted to strike against said bumper, and a flexible connection between the stiff member and the bucket serving to tilt the bucket after the bumper is struck and the draft means continues in operation.

5. In a cable excavator, the combination with a main cable, of a carriage movable thereaiong, an excavator bucket supported by said carriage and including an upwardly arched bail adapted to move longitudinally of the carriage, connections between both ends of the bail and the opposite ends of the bucket, a runner coöperating with said bail and a portion of said connections, said runner including a pair of spaced side plates on opposite sides of the bail, and draft means connected partly to said carriage and partly to said bucket through said runner, substantially as set forth.

1,103,763. AUTOMATIC TRAIN-STOP. RICHARD HAMMERLY, New York, N. Y., assignor of one-half to Frank E. Tilly, Woodhaven, N. Y. Filed Sept. 13, 1913. Serial No. 789,631. (Cl. 246—59.)



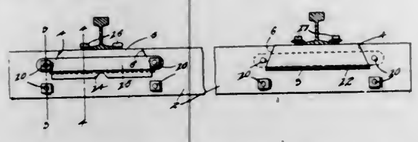
1. In an automatic train stop, two trips spaced apart and each provided with a rack, a pinion with which one

of the racks meshes, a pinion with which the other rack meshes, two arms secured to the first pinion, a signal, means connecting one of the arms with the signal for operating the latter, a signal member having a rack, a pinion meshing with the last mentioned rack, two arms secured for moving with the last mentioned pinion, means connecting the other of the first mentioned arms with one of the second mentioned arms, an arm secured to the second mentioned pinion and means connecting the other of the second mentioned arms with the arm on the second mentioned pinion.

2. In an automatic train stop, two trips, a signal, a signal member, means connecting one of the trips with the signal and the signal member and independent means connecting the signal member with the other trip for the purpose specified.

3. In an automatic train stop, two trips having racks, a signal member having a rack, a signal, pinions meshing with the racks and provided with arms, means connecting an arm on a pinion at one of the trips with the signal and with an arm on the pinion at the signal member and means connecting an arm on the pinion at the signal member with an arm on a pinion at the other trip.

1,103,764. RAILROAD-TIE. HOWARD HARING, Suffern, N. Y. Filed Feb. 24, 1914. Serial No. 820,628. (Cl. 238—5.)



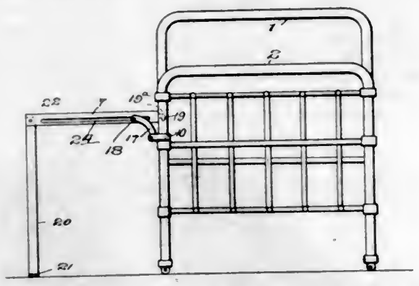
1. A railroad tie comprising a pair of channel bars, the edges of said channel bars being adapted to abut each other, a spacing block between the channel bars, bolts adapted to extend through the channel bars and the spacing blocks, said channel bars being provided with recesses in their edges, cushioning blocks secured in the recesses, a plate extending transversely of each of the recesses and forming a rest for the cushioning blocks, means to hold a railroad rail to the cushioning blocks, and means to hold the cushioning blocks in place in the tie.

2. A device of the character described comprising a pair of channel bars, each of said channel bars being provided with a recess near each end, the walls of each of the recesses being beveled, a plate adapted to seat in the bottom of each of the recesses, each plate being provided with a plurality of apertures, strips secured to each of the channel bars and adapted to overlie the recesses to form closures therefor, and means within the recesses and seated against the plates to form a cushion for railway rails when the device is in use.

3. A device of the character described comprising a pair of channel bars, each of said channel bars being provided with a recess near each end, spacing blocks within the channel bars and immediately adjacent the recesses, bolts extending through the channel bars and through the spacing blocks to hold the whole together, cushioning members secured in the recesses, plates extending transversely of the recesses and forming supporting members for the cushioning elements, means to hold the cushioning elements in place and prevent the same from becoming laterally displaced, and means coöperating with the cushioning elements to hold railroad rails in place thereon.

1,103,765. BED. FLORENCE M. HARRIS, Brooklyn, N. Y. Filed May 2, 1914. Serial No. 835,855. (Cl. 5—8.)

1. The combination with a bed frame embodying a mattress proper of a supplemental mattress frame occupying a position normally beneath the mattress proper, and pivoted members connected with the bed frame and having a sliding engagement with the supplemental mattress frame whereby the latter may be swung upward to occupy a plane parallel with the mattress proper.

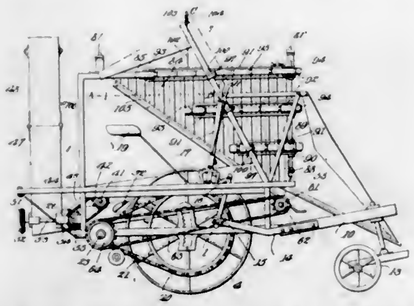


2. The combination with the head and foot piece of a bed, of clips secured thereto each embodying a yoke, a second yoke carried by each of the first named yokes, a supplemental mattress frame having a sliding connection with the two second yokes, and pivoted legs carried by the front rail of the supplemental frame and foldable upwardly therengainst.

3. The combination with the head and foot piece of a bed, of clips secured thereto each embodying a yoke, a second yoke carried by each of the first named yokes, a supplemental mattress frame having a sliding connection with the two second yokes, pivoted legs carried by the front rail of the supplemental frame and foldable upwardly thereagainst, and means for holding the legs secured to the side rail.

4. The combination with the head and foot piece of a bed, of a clip secured to vertical posts of each of the pieces and embodying a yoke, a second yoke having a pivotal connection with each of the first named yokes, a supplemental mattress frame having a sliding connection with the two second yokes, whereby to permit of the supplemental mattress frame being swung upward to bring it to load receiving position, and downward to pass under the mattress proper of the bed, and hinged legs carried by the front side rail of the supplemental mattress frame.

1,103,766. CORN-HARVESTING MACHINE. GEORGE W. HENDERSON and OLEN HENDERSON, Ridge Farm, Ill. Filed July 11, 1913. Serial No. 778,623. (Cl. 56—112.)



1. A corn harvesting machine including gathering devices forming a stalk receiving space therebetween, an endless apron arranged vertically and extending rearwardly at one side of said space, the active flight of the apron being movable rearwardly, and a snapping blade extending upwardly adjacent and coöperating with the active face of the apron, said blade being fixed, and means for actuating the apron.

2. A corn harvesting machine including gathering devices forming a stalk receiving space therebetween, an endless apron arranged vertically back of said space, the active flight of the apron being movable rearwardly, an upwardly and rearwardly inclined snapping blade extending close to and coacting with the active face of the apron, and means for deflecting ears laterally from the blade.

3. A corn harvester including gathering devices, a snapping apron having its active flight normally vertical and movable rearwardly from the gathering devices, an upwardly and rearwardly inclined snapping blade adjacent to and coöperating with the active face of the apron, and yielding means for pressing stalks against the apron in advance of the blade.

4. A corn harvester including gathering devices, a snapping apron having its active flight normally vertical and movable rearwardly from the gathering devices, an upwardly and rearwardly inclined snapping blade adjacent to and coöperating with the active face of the apron, and endless means for holding stalks against the apron in advance of the blade.

5. A corn harvester including gathering devices, a snapping apron having its active flight normally vertical and movable rearwardly from the gathering devices, an upwardly and rearwardly inclined snapping blade adjacent to and coöperating with the active face of the apron, endless means for engaging stalks and holding them against the apron in advance of the blade, and means for simultaneously moving rearwardly the adjacent flights of the apron and said endless stalk engaging means.

[Claims 6 to 17 not printed in the Gazette.]

1,103,767. PIPE AND BOLT PULLER. OSCAR HENRICKSON, Pinewood, Fla. Filed Dec. 4, 1913. Serial No. 804,598. (Cl. 145—38.)

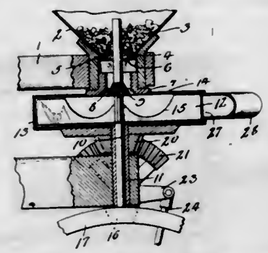
1. A tool of the character described, comprising a handle member, and a foot at an angle thereto, the tool being adapted to be rocked on the heel of the foot, the said foot having a vertical through opening for the passage of the article to be pulled, a rearwardly extending recess complementary with said opening, together with a gripping dog accommodated in said opening and recess, the dog being vertically rockable and being also slidable to take a thrust bearing against the rear wall of the recess, there being a co-acting gripping member opposed to the dog for the engagement of the article to be pulled.

2. A tool of the character described, comprising a foot and a handle member, the foot having a vertical opening extending therethrough to accommodate the article to be pulled, together with a gripping dog carried by the foot, at the opening thereof, there being a forwardly disposed bearing surface presented by the tool at the rear of the said dog, and said dog being slidable bodily transversely to the vertical opening to bear by its rear end against the said forwardly disposed bearing surface, and there being a co-acting gripping member opposed to and spaced from the front end of the dog, for the engagement of the article to be pulled.

3. A tool of the character described, comprising a foot and a handle member, the foot being formed with an opening to accommodate the article to be pulled, a sliding dog disposed transversely to the opening and formed with an oblong slot, a retaining pin extending transversely through the foot and through the slot of the dog, said dog being rockable on the pin and slidable relatively thereto, the rear end of the dog beyond the pin being adapted to come to a bearing against the solid portion of the tool in the rear of the pin, and there being an opposing gripping member co-acting with the dog.

4. A tool of the character described, comprising a foot and a handle member, the foot having an opening to receive the article to be pulled, a rockable dog on the foot at the opening, and an opposing gripping member co-acting with the dog, said opposing member consisting of an adjustable jaw sliding to and from the front end of the dog, together with a follower screw taking into the front end of the foot and bearing by its end against the back of the said jaw.

1,103,768. MACHINE FOR SOWING LAND-PLASTER. WILLIAM A. HERMENS, Forest Grove, Oreg. Filed Feb. 17, 1914. Serial No. 819,269. (Cl. 111—38.)



1. A land plaster sowing machine comprising a hopper, a pair of concentric shafts, means for continuously rotating one of said shafts in one direction, means for oscillating the other shaft, a casing mounted upon the oscillatory shaft and provided with an inlet disposed in a line with the outlet of the hopper, and with an outlet for the discharge of the material supplied thereto, a fan disposed within said casing and operated by the continuously rotating shaft.

2. A machine for sowing land plaster comprising a pair of concentric shafts, a hopper, a casing mounted upon one of the shafts and provided with an outlet and with an inlet to receive the material from the hopper, cooperating grinding devices, one mounted upon the other shaft to act upon the material feeding from the casing, means for oscillating the first-named shaft, means for rotating the second-named shaft constantly in one direction, and a fan carried by the second-named shaft and arranged to rotate within the casing.

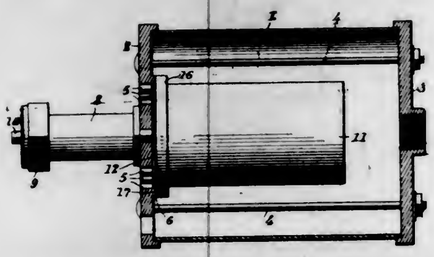
3. A machine for sowing land plaster comprising a hopper having a discharge outlet, a casing disposed below said outlet and provided with an outlet and with an inlet to receive the material from the hopper, a discharge pipe communicating with the outlet of the casing and extending partially around the casing and tangentially thereto, a shaft carrying the casing, a second shaft concentric with the aforesaid shaft and extending through the casing, a fan mounted upon the second-named shaft operating in the casing, means for oscillating the first-named shaft, and means for continuously rotating the second-named shaft.

4. A machine for sowing land plaster comprising a hopper having a discharge outlet, a casing disposed below the outlet, said casing being provided with an outlet and with an inlet to receive the material from the hopper, a discharge pipe connected with the outlet of the casing and extending partially around the casing and tangentially with relation thereto, a shaft carrying the casing, a second shaft concentric with the first-named shaft and extending through the casing into the outlet of the hopper, a grinding element within the hopper outlet, a co-acting grinding element upon the second-named shaft, means for oscillating the first-named shaft, means for continuously rotating the second-named shaft, and a fan carried by the second-named shaft working within the casing.

5. A machine for sowing land plaster comprising a hopper having a discharge outlet, a hollow shaft, a casing

carried by said shaft, said casing being provided with an inlet disposed to receive the material from the hopper and an outlet for the discharge of the material therefrom, a discharge pipe communicating with the outlet of the casing and extending partially around the casing and tangentially with relation thereto, and a second shaft journaled within the first-named shaft, a fan carried by the second-named shaft and operating in the casing, a gear upon the hollow shaft, a gear segment meshing therewith, a gear upon the second-named shaft, a drive shaft, a drive gear upon the drive shaft meshing with the gear upon the second-named shaft, an eccentric upon the drive shaft, and a connection between said eccentric and the gear segment for oscillating the latter.

1,103,769. MUFFLER. JOHN F. HINTZ, Brillion, Wis. Filed July 23, 1913. Serial No. 780,747. (Cl. 121—116.)



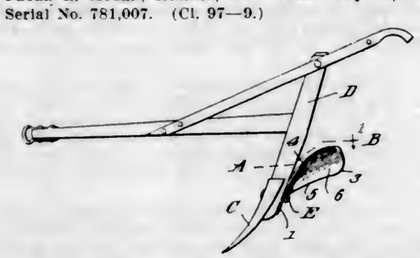
1. In a muffler of the character specified the combination of a cylinder having opposite ends closed and having one of such ends provided with a plurality of openings, a drum arranged within the cylinder and having one end open and the opposite end closed, the closed end being arranged adjacent the end of the cylinder provided with the plurality of discharge openings, said drum being moved upon the entrance of the exhaust gases into the cylinder to close the openings of the cylinder end, and a spring normally exerting a pressure to move the drum to uncover the openings in the end of the cylinder to provide an escape for the burnt gases.

2. In a muffler of the character specified the combination of a drum having opposite ends closed by means of heads, one of such heads having an inlet to receive the burnt gases and the other one of the heads being provided with a plurality of openings, a drum arranged within the cylinder and having one end closed and its opposite end open, the open end of the drum facing the inlet of the cylinder, and the closed end of the drum being adapted to close the outlets in the head of the cylinder, and a spring arranged to exert a pressure upon the drum to move the same away from the head of the cylinder provided with the discharge openings.

3. A muffler of the character specified comprising a cylinder, heads closing the ends of the cylinder, one of such heads having an inlet to receive the burnt gases and the other head being provided with a plurality of outlets, a drum arranged within the cylinder and having one end open and facing the inlet of the cylinder, a plate closing the opposite end of the drum and adapted to come in contact with the head of the cylinder provided with the outlets to close the latter, and a spring arranged between the head of the drum and the head of the cylinder having the outlets formed therein.

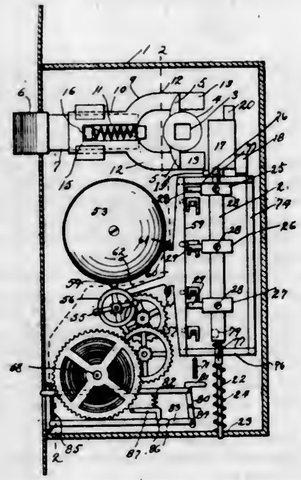
4. A muffler of the character specified comprising a cylinder, heads closing the ends of the cylinder, one of such heads having an inlet for the burnt gases and the other head being provided with a plurality of outlets, a rod slidably mounted in the head of the cylinder having the outlets, means for limiting the longitudinal movement of the rod, a drum secured to the inner end of the rod and having one end open and facing the inlet of the cylinder and having its opposite end closed and adapted to abut against the head of the cylinder having the outlets to close the latter, and a spring normally exerting a pressure to hold the head of the drum spaced from the head of the cylinder having the outlets formed therein.

1,103,770. LISTING ATTACHMENT FOR PLOWS. PETER E. HOGAN, Atlanta, Tex. Filed July 24, 1913. Serial No. 781,007. (Cl. 97—9.)



The combination with a standard, a shovel bearing against the front face thereof, and an attaching bolt extending through the shovel and standard, of a listing attachment including a blade having a flat end adapted to bear against the back face of the standard, said end being formed with a longitudinal slot extending thereinto from its free end, said slot being adapted to receive the back end portion of the bolt, said blade extending upwardly above the shovel and substantially throughout the width thereof, that portion of the blade above the shovel being twisted obliquely to form a rear curved wing constituting means for deflecting laterally the soil loosened by the shovel, said blade being supported out of contact with the surface of the ground, and means engaging the rear end portion of the bolt and binding against the attachment for clamping said attachment and the shovel against opposite sides of the standard.

1,103,771. PERMUTATION-LOCK. SELDEN P. HOVEY, Los Angeles, Cal. Filed July 3, 1912. Serial No. 707,519. (Cl. 70—54.)



1. In a lock, a sliding lock bolt, sliding members engaging said lock bolt and adapted to be operated by knobs on the two sides of said lock, a sliding block normally engaging one of the sliding members and holding the same against movement, a plunger secured to said block, sleeves adjustably secured to said plunger, a projection on each of said sleeves, and means successively engaging said projections to depress said plunger and block.

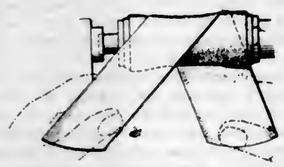
2. In a lock, a sliding lock bolt, sliding members engaging said lock bolt and adapted to be operated by knobs on the two sides of said lock, a slidable block normally held in position to engage one of the sliding members and prevent said member from being operated by one of the said knobs, a plunger mounted on said block, sleeves adjustably mounted on said plunger, a lateral projection mounted on each of said sleeves, and plungers adapted to engage said projections to depress said plunger.

3. In a lock, a sliding lock bolt, sliding members engaging said lock bolt and adapted to be operated by knobs on the two sides of said lock, a slidable block normally in position to engage one of the sliding members and prevent the sliding bolt from being operated by one of said knobs, a plunger mounted on said block, sleeves adjustably mounted on said plunger, each of said sleeves having a lateral projection, plungers slidably mounted and having beveled extremities adapted to engage said projections when successively operated to move said plunger downwardly, and means to retain said plunger in its operated position until another plunger has been moved into an operative position.

4. In a lock, a sliding bolt, a sliding member operatively engaging said sliding bolt, a block slidably mounted and normally engaging said sliding member to hold it from operation, a plunger mounted on said block, sleeves secured to said plunger, plungers slidably mounted and adapted to engage said sleeves, each of said plungers having a rod slidably mounted thereon, a pin pivotally mounted on each plunger, and a projection on said pin and normally engaging the rod aforesaid, said pin being adapted to be actuated out of engagement with said rod.

5. In a lock, a sliding bolt, a sliding member operatively engaging said sliding bolt, a block normally positioned to prevent the movement of said sliding member, a plunger mounted on said block, said plunger having a socket therein, a lever pivotally secured and having a lateral projection adapted to engage said socket, and rods pivotally secured to said lever to move said projection into and out of engagement with said socket.

1,103,772. METHOD OF RE-COVERING COTTON-MILL ROLLS. JAMES B. HUDSON, Charlotte, N. C. Filed Mar. 4, 1914. Serial No. 822,461. (Cl. 118—23.)



1. A method of re-covering worn rolls which comprise a metal core having a covering of felt and of leather superimposed on the felt consisting in removing the leather so as to leave the felt intact, in immersing the exposed felt in a readily volatile felt cleansing agent neutral to the glue or cement by which the felt is caused to adhere to the core, in abrading the felt immediately following the immersion of the roll, and in finally applying a new leather cover to the abraded felt.

2. A method of re-covering worn rolls which comprise a metal core having a covering of felt and of leather superimposed on the felt consisting in removing the leather so as to leave the felt intact, in immersing the exposed felt in gasolene, in abrading the felt immediately following the immersion of the roll, and in finally applying a new leather cover to the abraded felt.

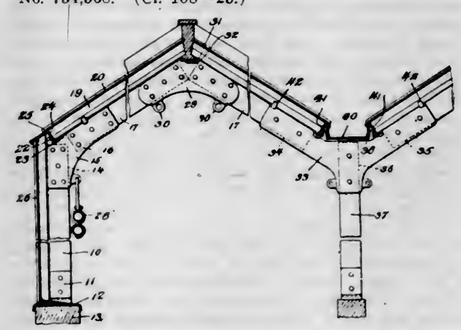
3. A method of re-covering worn rolls which comprise a metal core having a covering of felt and of leather superimposed on the felt consisting in slitting the leather cover from end to end and peeling it from the roll, leaving the felt intact, in immersing the exposed felt in a readily volatile felt cleansing agent neutral to the glue or cement by which the felt is caused to adhere to the core, in abrading the felt immediately following the immersion of the roll, and in finally applying a new leather cover to the abraded felt.

4. A method of re-covering worn rolls which comprise a metal core having a covering of felt and of leather superimposed on the felt consisting in slitting the leather cover from end to end and peeling it from the roll, leaving the felt intact, in immersing the exposed felt in gasolene, in abrading the felt immediately following the immersion of the roll, and in finally applying a new leather cover to the abraded felt.

5. A method of re-covering worn rolls which comprise a covering of felt and of leather superimposed on the felt consisting in removing the leather so as to leave the felt intact, in immersing the exposed felt in a readily volatile felt cleansing agent neutral to the glue or cement by which the felt is caused to adhere to the core, in rapidly revolving the roll and simultaneously abrading the felt immediately following the immersion of the roll, and in finally applying a new leather cover to the abraded felt.

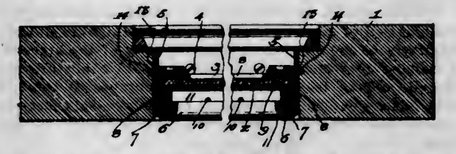
[Claims 6 to 8 not printed in the Gazette.]

1,103,773. GREENHOUSE CONSTRUCTION. MAURICE I. JACOBS, Brooklyn, N. Y. Filed Mar. 15, 1913. Serial No. 754,568. (Cl. 108—25.)



In a valley structure for greenhouses and the like, a post, converging rafters, and a Y-shaped fitting having sockets for the adjacent ends of said members, such fitting having across its top a plate provided with upright spaced ribs and flanges outside the ribs; combined with a channel member, a pair of Z-shaped bars, the lower arm of each of which rests on one of said flanges and is adapted to underlie the lower edge of the glazed roof to collect condensation therefrom and its upper arm being hooked over the adjacent flange of said channel member, the roof bars whose lower ends engage said Z-bars, and the glazing mounted thereon.

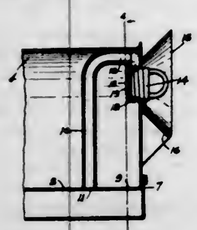
1,103,774. WINDOW-SASH. AUGUST O. JOHNSON, Chicago, Ill. Filed Nov. 20, 1913. Serial No. 802,095. (Cl. 20—56.4.)



A window sash comprising: a frame, an inwardly extending channeled flange secured within the opening thereof, packing in the channel of said flange, an angle iron frame, a window pane seated within the angle thereof, a second angle iron frame resting within said first mentioned angle iron frame and in contact with said pane, a reinforcing strip seated within the angle of said second mentioned angle iron frame, screws passing through said angle iron frames and into said reinforcing strip, and

means for retaining the outwardly projecting flanges of said angle iron frames and said reinforcing strip seated within said channel and in contact with said packing.

1,103,775. SANITARY DRINKING-FOUNTAIN. FRITZ JOHNSON, Englewood, Colo., assignor of one-half to Cornelius Ortgysen, Englewood, Colo. Filed Apr. 21, 1913. Serial No. 762,635. (Cl. 119—77.)



1. The combination of an elongated open drinking trough; a feeding reservoir mounted above said trough and extending substantially the length thereof; said reservoir having a restricted neck portion at its lower end disposed centrally along said trough, and said restricted neck portion being provided with a closed bottom, spaced and supported above the bottom of said trough but below the top edges of the walls thereof; a discharge outlet located in the forward end of said closed bottom; a vent pipe opening at its lower end into said trough and at its upper end terminating in a plane passing vertically and transversely through said outlet; a filling opening in the forward end of said reservoir; and means for stoppering said filling opening.

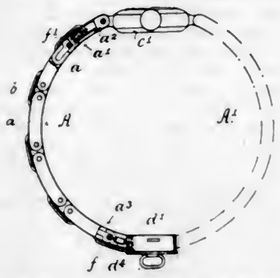
2. The combination of an elongated open drinking trough; a feeding reservoir mounted above and extending longitudinally of said trough, said reservoir being of enlarged volume at its top end tapering toward its lower portion, providing a restricted neck disposed centrally along said trough, and said restricted neck portion being provided with a closed bottom spaced and supported above the bottom of said trough, but below the top edges of the walls thereof; a filling opening provided in the forward end wall of said reservoir; stoppering means therefor; a discharge outlet formed through said closed bottom at the forward end of said reservoir, and disposed at right angles to said filling opening; a vent opening formed through said closed bottom slightly to the rear; and a vent pipe communicating at its lower end with said vent opening, and extending upwardly within said reservoir to the top of said enlarged portion, thence extending forwardly, and terminating in a plane substantially passing vertically and transversely through said discharge outlet.

1,103,776. BRACELET AND SIMILAR ARTICLE. ERNEST JONES, Birmingham, England. Filed Nov. 15, 1912. Serial No. 731,598. (Cl. 63—5.)

1. In a flexible and adjustable bracelet or the like, the combination of a chain composed of links which are slidable relatively to one another circumferentially of the bracelet, a member to which the end links of said chain are anchored, and an inelastic, flexible element passed through said links, whereby movement of the ends of said element toward each other will effect the sliding movement of said links.

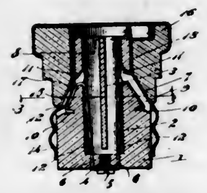
2. In a flexible and adjustable bracelet or the like, the combination of a chain composed of links which are slidable relatively to one another circumferentially of the bracelet, certain of which links are provided with central guides, a member to which the end links of said chain are anchored, and an inelastic, flexible element passed through said links and guides, whereby movement of the ends of said element toward each other will effect the sliding movement of said links.

3. In a flexible and adjustable bracelet or the like, the combination of a chain, the adjacent, component links of which have pin-and-slot connections, to permit relative sliding movement thereof circumferentially of the bracelet,



a member to which the end links of said chain are anchored, and an inelastic, flexible element passed through said links, whereby movement of the ends of said element toward each other will effect the sliding movement of said links.

1,103,777. MULTIPLE-FUSE PLUG. ALEXANDER J. KALINOWSKI, Lyons, Colo. Filed July 18, 1913. Serial No. 779,836. (Cl. 175—278.)

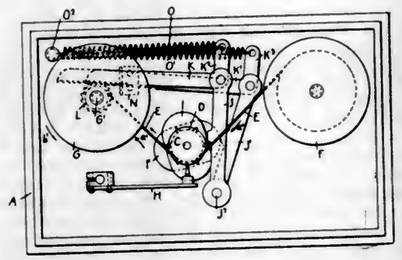


1. A fuse plug comprising a body, a contact carried by said body, fusible elements each having one end secured to said contact and the opposite end in engagement with the outer surface of the body, a shell surrounding said body, a strip stamped from said shell and in engagement with the outer end of one of said elements and capable of engaging the outer end of the remaining element, and a cap for said body.

2. A fuse plug comprising a body, a contact carried by said body, fusible elements each having one end secured to said contact and the opposite end in engagement with the outer surface of the body, a shell surrounding said body, a strip stamped from said shell and in engagement with the outer end of one of said elements and capable of engaging the outer end of the remaining element, a cap for said body, and a connection between said cap and shell.

3. A fuse plug comprising a body having the outer wall thereof circumferentially reduced and the reduced part tapered for a portion of its length and of a uniform diameter for the remaining portion of its length, the tapered portion being formed with grooves, said body being further formed with a longitudinal bore having a closed end formed with a center opening and passages at opposite sides of such opening, a partition within the bore and dividing the same into chambers or compartments, fusible elements each disposed within one of said chambers and having one end thereof passed through one of said passages and the opposite end passed through the wall of the bore and lying within one of said grooves in the tapered portion of the outer wall of the body, a contact screw disposed within the central opening and connected to the adjacent ends of said fusible elements, a shell surrounding said body and having a finger stamped therefrom and adapted to engage one or the other of the grooves in the tapered portion of the outer wall of the body to place the respective fusible element in the circuit, and a cap for said body.

1,103,778. COMPENSATING DRIVING MECHANISM. WILLIAM FLOYD KENDALL, Valley Cottage, N. Y., assignor to Sears Cross & Co., New York, N. Y. Filed Feb. 20, 1913. Serial No. 749,623. (Cl. 242—70.)



1. In a compensating driving mechanism, the combination of a tape-feeding means for feeding a tape, driving means for driving the said tape-feeding means at a predetermined rate of speed, a winding-up drum for winding up the tape, ratchet wheels on the said winding-up drum, ratchet pawls engaging the said ratchet wheels, spring-pressed mechanisms connected with the said ratchet pawls for alternately imparting a forward movement to the said ratchet pawls to turn the said ratchet wheels and the winding-up drum for the latter to wind up the tape, and cam devices moving in unison with the said tape-feeding means and connected with the said spring-pressed mechanisms for imparting return movement to the said pawls.

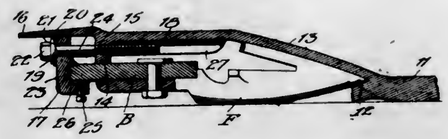
2. In a compensating driving mechanism, the combination of a tape-feeding means for feeding a tape, driving means for driving the said tape-feeding means at a uniform rate of speed, a winding-up drum for winding up the tape, a cam device moving in unison with the said tape-feeding means, a pair of levers adapted to be swung alternately outward by the said cam device, ratchet pawls fulcrumed on the said levers, ratchet wheels on the said winding-up drum, and springs pressing the said ratchet pawls to alternately impart a forward movement to the said pawls, to turn the ratchet wheels forwardly whereby the drum is turned and the tape is wound up, the said springs alternately imparting a return movement to the said levers.

3. In a compensating driving mechanism, the combination of a tape-feeding means for feeding a tape, driving means for driving said tape-feeding means at a predetermined rate of speed, a winding-up drum for winding up the tape, ratchet and pawl mechanisms connected with the said winding-up drum, springs for alternately imparting a forward movement to the said pawl and lever mechanisms to rotate the winding-up drum for the latter to wind up the tape and to impart a return movement to the said levers, and cam devices moving in unison with the said tape-feeding means and connected with the said levers for alternately imparting an outward movement to the levers to alternately return the pawl and ratchet mechanisms.

4. In a compensating driving mechanism, the combination of a clock-driven shaft, a tape-feeding wheel on the said shaft for feeding a tape at a uniform rate of speed, a winding-up drum on which winds up the said tape, a cam device on the said shaft, levers in engagement with the said cam device to alternately swing the levers outward, ratchet pawls fulcrumed on the said levers and each provided with a series of teeth, ratchet wheels on the winding-up drum and engaged by the said teeth of the ratchet pawls, and springs for alternately imparting a forward movement to the said pawls to turn the ratchet wheels and the winding-up drum and to alternately impart a return movement to the said levers.

5. In a compensating driving mechanism, the combination of a clock-driven shaft, a tape-feeding wheel on the said shaft for feeding a tape at a uniform rate of speed, a winding-up drum on which winds up the said tape, a cam device on the said shaft, a pair of levers in engagement with and alternately swing outward the said cam device, ratchet pawls each having a series of teeth and an angular arm, ratchet wheels on the said winding-up drum and engaged by the said ratchet teeth, and springs connected with the angular arms of the said ratchet pawls for imparting a forward movement to the said ratchet pawls to turn the ratchet wheels and the winding-up drum to wind up the tape and to alternately impart a return movement to the said levers.

1,103,779. ATTACHMENT FOR MOWING-MACHINES. PETER H. KLIEWER, Woodburn, Oreg. Filed Mar. 26, 1914. Serial No. 827,417. (Cl. 56—30.)

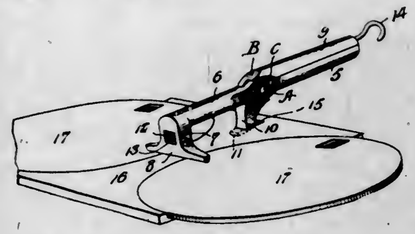


1. A device of the character described comprising a pointed finger having a socket in its rear end, a rod extending rearwardly from said finger and having a depending lug provided with a threaded bore, a substantially L-shaped clamping member in rear of said lug and having an opening through its upright portion and a screw passing loosely through said opening and engaged with the threads in the bore of said lug.

2. A device of the character described comprising a pointed finger having a socket in its rear end, a rod extending rearwardly from said finger and having a depending lug provided with a threaded bore, a substantially L-shaped clamping member in rear of said lug and having openings through its upright and horizontal portions, the opening through said horizontal portion being threaded, a clamping screw passing through said threaded opening, an inwardly extending shoulder on said upright portion and below the opening therein and a clamping screw passing loosely through said last mentioned opening and engaged with the threads in the bore of said lug.

3. A device of the character described comprising a pointed finger having a socket in its rear end, an attaching rod inclining upwardly and rearwardly from said rear end and above said socket, a lug depending from said rod near its rear end and having a threaded bore, a substantially L-shaped clamping member in rear of said lug and beneath the rearmost portion of said rod, said member having an opening in its upright portion, a clamping screw passing loosely through said opening and engaged with the threads in the bore of said lug, an inwardly extending shoulder between said opening and the horizontal portion of said member, the latter having a threaded bore, and a clamping screw engaged therewith and adapted for coaction with said shoulder.

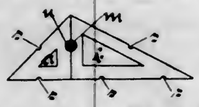
1,103,780. STOVE-LID LIFTER. HARRY LAWRENCE, Callaway, Minn. Filed Apr. 23, 1913. Serial No. 763,103. (Cl. 126—323.)



An implement of the class described comprising pivotally connected members, one of which has a jaw portion

provided with a terminal lug, the other member having a jaw portion provided with a terminal head having a cross bar, said head being also provided with an angular aperture having flanges at diagonally opposite corners.

1,103,781. TOY-BUILDING FOR THE REPRODUCTION OF IRON TECHNICAL CONSTRUCTIONS. ALFRED LEHNER, Kelsterbach-on-the-Main, Germany. Filed Mar. 17, 1913. Serial No. 754,978. (Cl. 46—35.)



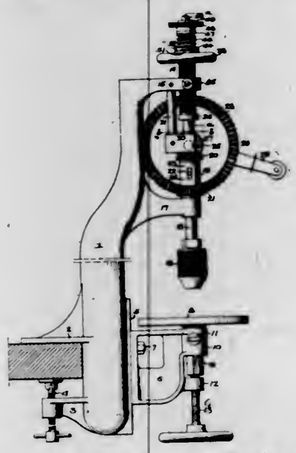
1. A unit for toy building, consisting of a triangular body having incisions in its sides, substantially as and for the purpose described.

2. A unit for toy building, consisting of a triangular frame, having a plurality of semicircular incisions in its sides, substantially as and for the purpose described.

3. A device of the character described, consisting of a triangular body having a plurality of semicircular incisions in its sides, together with means for uniting said triangle to a second triangle having similar incisions, substantially as described.

4. A device of the character described, consisting of a triangular body, having a symmetrical triangular opening therein, a plurality of semicircular incisions in its outer sides, together with means for uniting said triangle to a second triangle having similar incisions, substantially as described.

1,103,782. BENCH-DRILL. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1913. Serial No. 748,975. (Cl. 77—34.)

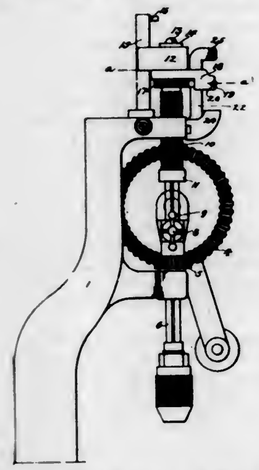


1. The combination in a drill, of a spindle; means for turning the spindle; a feed screw through which the spindle extends; a threaded bearing for the feed screw, the spindle having an annular groove and the feed screw being slotted opposite to the groove; a key mounted in the slot and extending into the groove; and a hand wheel having a threaded portion adapted to the threads of the feed screw and locking the key in position.

2. The combination of a spindle; means for turning the spindle; a feed screw through which the spindle extends; a bearing for the feed screw, said feed screw having a head at its upper end; a hand wheel adapted to the threaded portion of the feed screw and arranged to rest directly under the head of the said feed screw; a set screw confining the hand wheel to the feed screw, the spindle having an annular groove; the feed screw having a slot opposite the annular groove; a key mounted in the slot and extending into the groove, the hand wheel retaining the key in position; and friction mechanism mounted on the spindle and resting against the end of the feed screw, said friction mechanism being carried by the spindle.

3. The combination of a spindle having a thread at one end; a collar carried by the threaded end of the spindle; bearings for the spindle; means for driving the spindle; a feed screw mounted on the spindle; means for locking the spindle to the feed screw so that it will move longitudinally with it but will allow the spindle to turn in the feed screw; a bearing for the feed screw, said feed screw having a head at the upper end; said head having a series of sockets; a ball mounted in each socket; a flanged sleeve mounted on the projecting end of the spindle above the head of the feed screw, the underside of the flange being grooved so as to provide two surfaces on different planes; an adjusting nut on the threaded end of the spindle; a spring mounted between the adjusting nut and the sleeve so that the sleeve will yieldingly bear upon the balls in the sockets of the feed screw.

1,103,783. DRILL. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 11, 1913. Serial No. 789,313. (Cl. 77—33.)

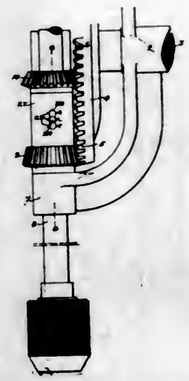


1. The combination in a drill, of a frame; a spindle; a feed screw on the spindle; a ratchet wheel on the feed screw; a carrier; a spring pawl on the carrier for operating the ratchet wheel; an arm on the pawl for shifting it so that it will feed either to the right or to the left; a cam on the spindle for actuating the carrier; a shifter on the frame having upper and lower projections, one at one side and the other on the opposite side of the carrier and in the path of the arm of the pawl, so that, when the feed screw reaches the limit of its downward movement, the pawl will be automatically moved out of engagement with the ratchet wheel and, when the screw reaches the limit of its upward movement, the pawl will be automatically thrown out of engagement with the ratchet wheel.

2. The combination in a drill, of a frame; a spindle; means for turning the spindle; a feed screw on the spindle; a ratchet wheel secured to the feed screw; a carrier; a cam on the spindle for vibrating the carrier; a spring pawl on the carrier for operating the ratchet wheel; an arm on the pawl; said carrier having a notch therein arranged to receive the arm when the pawl is in engagement with the ratchet wheel; and a shifter having an upper and a lower projection, one on one side of the

pawl and the other on the opposite side thereof and in the path of the arm when it is in either of its two extreme positions, so that, when the arm comes in contact with one of the projections, the pawl will be thrown out of engagement with the ratchet wheel.

1,103,784. (CHANGE-SPEED MECHANISM. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 20, 1913. Serial No. 790,901. (Cl. 74—59.)



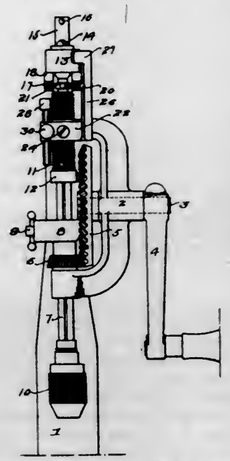
1. The combination in change speed mechanism, of a spindle; a sleeve secured thereto; two wheels mounted loosely on the spindle; ratchet teeth on the wheels; a carrier; two pawls pivotally mounted on the carrier, each pawl having two fingers; and means for shifting the pawls so that either one, or both of them, can be moved into engagement with their respective ratchet wheel.

2. The combination in change speed mechanism, of a spindle; a sleeve secured to the spindle; said sleeve being recessed; a carrier; a wheel loosely mounted on the spindle on each side of the carrier; said wheel having ratchet teeth; two pawls pivotally mounted on the carrier, one pawl engaging the ratchet teeth of one wheel and the other pawl engaging the ratchet teeth of the other wheel, each pawl having two fingers so as to positively lock its wheel to the carrier; a shifter for holding one or the other, or both, of the pawls in engagement with the wheels; and means for driving the wheels at different speeds.

1,103,785. AUTOMATIC STOP FOR DRILLS. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1914. Serial No. 817,644. (Cl. 77—33.)

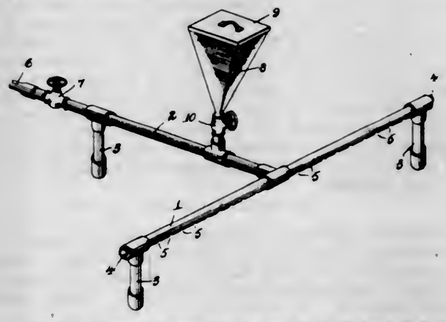
1. The combination in a drill, of a frame; a spindle; a feed screw on the spindle; a ratchet wheel on the feed screw; a carrier; a spring pawl on the carrier; an arm on the pawl for shifting it so that it will feed either to the right or to the left; a cam on the spindle for actuating the carrier; a shifter on the frame having upper and lower stops, one on one side and the other on the opposite side of the carrier and in the path of the arm on the pawl, one of said stops being adjustable so that the pawl will be automatically thrown out of engagement with the ratchet wheel at any point desired.

2. The combination in a drill, of a frame; a spindle; a feed screw on the spindle; a ratchet wheel on the feed screw; a carrier; a spring pawl on the carrier; an arm on the pawl for shifting it so that it will feed either to the right or to the left; means on the spindle for actuating the carrier; a shifter on the frame having upper and lower stops, one on one side and the other on the opposite side of the carrier and in the path of the arm of the pawl, the lower stop being vertically adjustable; and means for fastening the lower stop in the position in which it is adjusted.



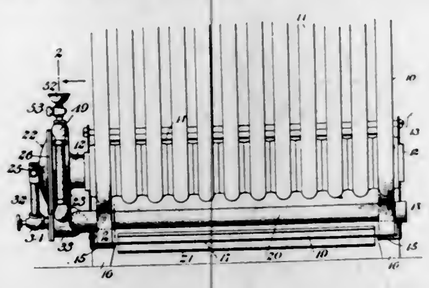
3. The combination in a drill, of a frame; a spindle; a feed screw on the spindle; a ratchet wheel on the feed screw; a carrier; a spring pawl on the carrier; an arm on the pawl for shifting it so that it will feed either to the right or to the left; means on the spindle for actuating the carrier; a shifter on the frame having upper and lower stops, one on one side and the other on the opposite side of the carrier and in the path of the arm of the pawl, the lower stop being vertically adjustable and consisting of a shank having a head thereon, said shank being flattened on one side, the shifter having an opening through which the shank extends; and a set screw in the shifter bearing against the flattened portion of the shank.

1,103,786. FLOOR-WASHING DEVICE. GEORGE T. LEWIS, Chicago, Ill., assignor of one-half to George C. Poundstone, Chicago, Ill. Filed Mar. 28, 1913. Serial No. 757,317. (Cl. 137—14.)



A floor washing device comprising a T-shaped body formed of pipe and consisting of a transverse head portion closed at the ends and a longitudinal stem portion, legs fixed to the outer ends of the head portion and a third leg adjacent the free end of the stem portion, said legs being adapted to slidably rest upon the floor, said head portion being provided with a plurality of perforations adapted to project jets of water downwardly and away from the stem portion, means for attaching a flexible hose to said stem portion and means for supplying a cleansing composition in regulable quantities to the water passing through said stem portion, substantially as described.

1,103,787. THERMOSTATIC PRESSURE-VALVE. MILDRED LEWLESS, New York, N. Y. Filed Jan. 28, 1914. Serial No. 814,926. (Cl. 236—6.)



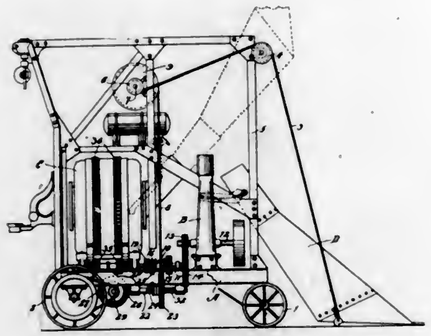
1. In a pressure valve, the combination with a reservoir adapted to contain water under pressure and having a water supply connection and a threaded opening near its lower portion; of a diaphragm casing comprising two sections secured together, a diaphragm held between said sections and disposed normally rectilinear, one section having a reduced threaded extension for engagement with the threaded portion of the reservoir, the other section of the diaphragm casing having an angular fitting integral therewith and provided with a valve seat, a valve connected to the diaphragm at the central portion thereof and operating through said diaphragm section to coöperate with the valve seat and regulate the size of the passage therethrough, a supply pipe connected with one end of said angular fitting, and a burner communicating with the other connection and receiving a supply of fuel therethrough for the heating of the water in the reservoir, variation in the internal pressure in the reservoir due to the heating of the water at various temperatures serving to close or open the valve by varying pressures on the diaphragm.

2. A thermostatic valve comprising a casing, a diaphragm in the casing, said casing having an opening with an extension adapted for attachment to a radiator, an auxiliary valve integral with the casing and having a seat, a cylindrical valve connected to the diaphragm and operating through the casing to separate the interior of the diaphragm from the auxiliary valve, a spring normally maintaining the diaphragm rectilinear and the valve unseated, said valve carried by the diaphragm loosely cooperating with said seat to partly cut off the supply when seated, a supply pipe for fuel communicating with the auxiliary valve, a burner to heat the water in the radiator, an outlet pipe also communicating with said auxiliary valve and with the burner, said valve being shifted by the flexing of the diaphragm under excessive pressure to restrict the flow of fuel to the supply pipe, and a gage glass having a filling member for supplying water to the radiator.

1,103,788. CONTROL MECHANISM FOR CONCRETE-MIXERS. ERICH H. LICHTENBERG, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis. Filed Oct. 25, 1913. Serial No. 797,256. (Cl. 57—83.)

1. In a machine of the class described, the combination of a driven shaft, a clutch sleeve on said shaft, means for clutching said sleeve to the shaft, a winding drum loosely mounted on said clutch sleeve, a plurality of gears connected with the clutch sleeve for rotation therewith, a hoisting cable adapted to wind about said drum, a shiftable gear, means for shifting said shiftable gear into operative connection with the first mentioned gears, and means for connecting one of the first mentioned gears with the winding drum whereby to transmit motion from the said driven shaft to the winding drum.

2. In a machine of the class described, the combination of a driven shaft, a clutch sleeve on said shaft, means for clutching said sleeve to the shaft, a winding drum loosely mounted on said clutch sleeve, a plurality of gears connected with the clutch sleeve for rotation therewith, a hoisting cable adapted to wind about said drum, a shiftable gear, means for shifting said shiftable gear into operative connection with the first mentioned gears, means for connecting one of the first mentioned gears with the winding drum whereby to transmit motion from the said driven shaft to the winding drum, a reversing gear intermediate the shiftable gear and one of the first mentioned gears whereby to obtain reverse action, and means for retarding the movement of the winding drum.



3. Control mechanism for mixing machines comprising, in combination, a motor driven shaft, clutch mechanism including a clutch member having a clutch sleeve mounted on said shaft, means for clutching said clutch member to the shaft for rotation therewith, a winding drum loose on the said clutch sleeve, gears fixed to said sleeve, means for connecting one of the gears with the winding drum, a drive shaft, a shiftable gear connected with said shaft, and means for moving said shiftable gear to engage the same with either one of the first mentioned gears to transmit motion to the drive shaft.

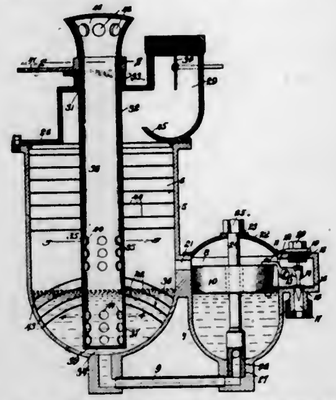
4. Control mechanism for mixing machines comprising, in combination, a motor driven shaft, clutch mechanism including a clutch member having a clutch sleeve mounted on said shaft, means for clutching said clutch member to the shaft for rotation therewith, a winding drum loose on the said clutch sleeve, gears fixed to said sleeve, means for interlocking one of said gears with the winding drum at will whereby the drum will rotate with the clutch sleeve, a drive shaft, and means intermediate said gears and the drive shaft for transmitting forward and reverse motion to the latter.

5. Control mechanism for mixing machines comprising, in combination, a motor driven shaft, clutch mechanism including a clutch member having a clutch sleeve mounted on said shaft, means for clutching said clutch member to the shaft for rotation therewith, a winding drum loose on the said clutch sleeve, gears fixed to said sleeve, means for interlocking one of said gears with the winding drum at will whereby the drum will rotate with the clutch sleeve, a drive shaft, means intermediate said gears and the drive shaft for transmitting forward and reverse motion to the latter, and a brake band coöperating with the clutch member to retard the movement of the drum in one direction after release of the clutch member from the driven shaft.

[Claims 6 to 11 not printed in the Gazette.]

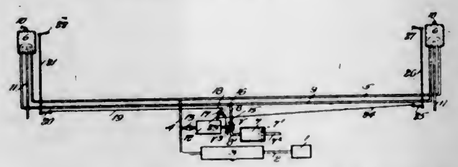
1,103,789. CARBURETER. FRED J. MACEY, San Diego, Cal. Filed Oct. 30, 1912. Serial No. 728,569. (Cl. 48—166.)

1. In a carbureter, a body having a chamber adapted to contain a hydrocarbon, an air inlet at one end of the chamber, an outlet for the chamber, a tube disposed vertically in the chamber connected at one end with the inlet and closed at its other end, there being a valve opening in the tube above the normal level of the hydrocarbon, and another valve opening in the tube below the normal level of the hydrocarbon in the chamber, a rotatable tube disposed within the first tube and having an opening for registering with the first opening in the first tube and a second opening for registering with the second opening in the first tube for uncovering one of the openings in the first tube when the other opening in the first tube is closed by the rotation of the second tube, means for rotating one of the tubes relatively to the other, and means for maintaining hydrocarbon in the chamber at the normal level.



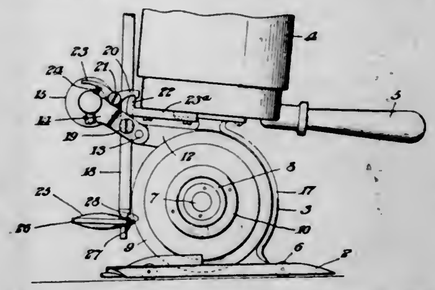
2. In a carbureter, a body having a chamber adapted to contain a hydrocarbon, an air inlet at the top of the chamber, an outlet for the chamber, a tube disposed vertically in the chamber connected at the top with the inlet and closed at its lower end adjacent the bottom of the chamber, there being a valve opening in the tube above the normal level of the hydrocarbon and another valve opening in the tube below the normal level of the hydrocarbon in the chamber, a tube disposed within the first tube and having an opening above the normal level of the hydrocarbon for registering with the first opening in the first tube and a second opening below the normal level of the hydrocarbon for registering with the second opening in the first tube for uncovering one of the openings in the first tube when the other opening in the first tube is closed by the rotation of the second tube, means for rotating one of the tubes relatively to the other, means for maintaining the hydrocarbon in the chamber at the normal level, and horizontally perforated plates spaced apart and disposed in the chamber and provided with openings, through which the tubes extend.

1,103,790. EMERGENCY AIR-BRAKE DEVICE. JOSEPH H. MACLEARY, Wilmington, Del. Filed Feb. 20, 1914. Serial No. 819,953. (Cl. 188—3.)



In an air brake mechanism for street cars, a main air reservoir, a reservoir pipe line connected therewith, a brake cylinder, a brake cylinder pipe, connections between said brake cylinder and said brake cylinder pipe, said connections including a three way valve, a pair of exhaust pipes, means for connecting said brake cylinder pipe with said reservoir pipe line or with either of said exhaust pipes, an auxiliary pressure reservoir, connections between said auxiliary pressure reservoir and said main air reservoir on one side, said last named connections including a check valve, connections between said auxiliary reservoir and said three-way valve on the other side, and means including separate operating handles at each end of the car for turning the three-way valve so as to establish communication between said auxiliary pressure reservoir and said brake cylinder or said brake cylinder and said brake cylinder pipe.

1,103,791. CLOTH-CUTTING MACHINE. MAYER R. MAIMIN, New York, N. Y., assignor to H. Maimin Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 31, 1913. Serial No. 809,644. (Cl. 164—76.)



1. In a cloth cutting machine the combination with a carriage, a circular blade rotatably mounted thereon, a bracket pivotally mounted on the carriage to have a swinging movement in a vertical arc; a grinding device and a guard device, for the blade, both mounted on said pivoted bracket, and a lever including a latch device adapted to actuate said pivoted bracket on its downward movement, and automatically lock it at the terminus of its upward movement.

2. In a cloth cutting machine comprising a movable carriage, a rotatable circular blade, a bracket pivoted on the carriage to have a swinging movement in a vertical arc, a grinding device, and a guard device, both mounted on said bracket in such relation to each other that the grinding device will be out of operative position when the guard is in operative position, and a latch adapted to automatically lock said elements in said positions.

3. In a cloth cutting machine comprising a movable carriage, a circular blade mounted rotatably thereon, a bracket pivotally mounted on the carriage to have a vertical swinging movement in an arc in front of the blade, means operating as a lever to depress said bracket and as a latch to automatically lock it in raised position, resilient means operating to raise said bracket into position to be locked, a grinding device and a guard bar, both directly mounted on said swinging bracket, whereby the guard bar is brought into and held in operative perpendicular position when the grinding device is raised into inoperative position.

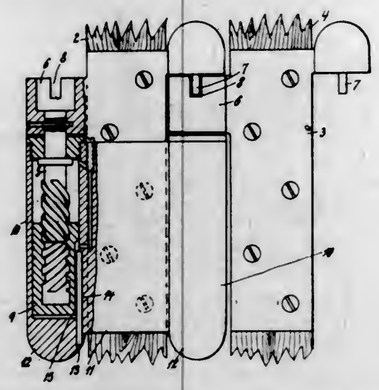
4. In a cloth cutting machine comprising a movable carriage and a circular blade mounted thereon to be revoluble in a vertical plane, the combination therewith of a single movable bracket pivotally mounted on the carriage in such manner as to permit its arc-like reciprocation in front of and in alinement with the plane of rotation of the revoluble cutting blade; a guard device, and a grinding device, both directly mounted on said bracket and actuated thereby in such relation to each other that the guard device will be in operative position when the grinding device is out of operative position and vice versa, with devices adapted to impart the specified operative movement to said bracket, substantially as set forth.

5. In a cloth cutting machine the combination with a carriage, a circular blade mounted rotatably thereon, a bracket pivotally mounted on the carriage and adapted to have a swinging movement in a vertical arc, the axis of the pivot being disposed at an angle to the axis of rota-

tion of the blade, a straight guard bar mounted directly on said bracket in such manner as to assume a perpendicular position in front of the blade when the pivoted bracket is depressed, and to assume a position across the face of the blade when the pivoted bracket is raised; resilient means to automatically retract the bracket when manually released from its lowered position, and means to automatically engage and lock it when it reaches the terminus of its upward position.

[Claims 6 and 7 not printed in the Gazette.]

1,103,792. DOOR CHECK AND HINGE. PAUL MÄRKSCH, Berlin, Germany. Filed Jan. 29, 1913. Serial No. 744,918. (Cl. 16—88.)



1. In a hinge, the combination with the door and door frame, of two plates, one of the said plates secured to the rear edge of the door, the other of the plates secured to the door frame, each plate having a lug secured to one side of the same, a sleeve secured to the other side of the respective plate and bearing a slot in its head to receive the corresponding lug, two shafts secured to the said sleeves respectively, and a coupling member rotatably and undisplaceably mounted on and adapted to swing around each of the said shafts.

2. In a combined hinge and door check, the combination with the door and door frame, of two plates, one of the said plates secured to the rear edge of the door, the other of the plates secured to the door frame, each plate having a lug secured to one side of the same, a sleeve secured to the other side of the respective plate and bearing a slot in its head to receive the corresponding lug, two screw threaded shafts respectively secured to the said sleeves, a coupling member, two checking cylinders connected to each other by means of the said coupling member and respectively rotatably mounted on the respective shafts and adapted to engage the threads on the said shafts, a groove arranged in the cylinder wall, a groove arranged in the said piston, a channel arranged in the bottom of the said cylinder and terminating in the said groove, and a pin screwed in the said bottom projecting into the said groove and adapted to prevent the rotation of the said piston.

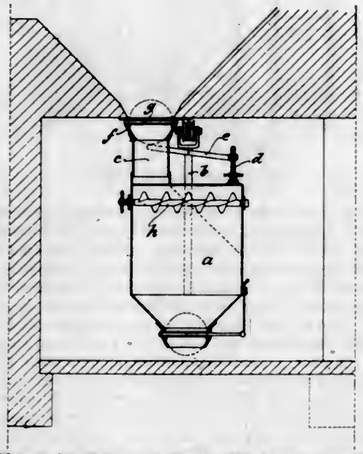
1,103,793. SECTIONAL METAL STACK-COVER. FREDERICK W. MARTIN, Wichita, Kans. Filed July 31, 1913. Serial No. 782,335. (Cl. 108—3.)

A portable metal stack cover comprising a series of independent corrugated arcuate roofing sheets overlapped along their side marginal edges, the ridge sheets overlapping the eaves sheets at their ends, each sheet having openings through each corner, bosses extending from each side of the sheet around the said corner opening and serving as a spacing member to space the sheets apart at their overlapped portions to provide vent spaces therebetween; and a pin passing through said openings respectively, and securing the sheets together, an elongated head extending



from said pin and serving as a detent to assist in holding the cover against motion.

1,103,794. RECEPTACLE FOR LIGHT ASHES. JOSEF MARTIN, Munich, Germany. Filed Jan. 26, 1914. Serial No. 814,604. (Cl. 110—165.)



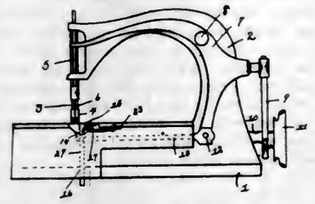
1. Means for the removal of light ashes, comprising a receptacle a suspending rod connecting said receptacle to a track rail, a hopper above said receptacle a tube connecting said hopper to said receptacle, means to reciprocate said tube vertically and a conveyer in the upper part of said receptacle.

2. A device for the dustless removal of light ashes comprising a receptacle suspended by a vertical hanger to a mono-rail, a hopper above said receptacle a main tube connecting said hopper with said receptacle, a frusto-conical inlet to said tube contacting closely with a frusto-conical outlet on said hopper, a short tube on the opening into said receptacle into which the main tube telescopes, a two-armed lever fulcrumed on said hanger and adapted to vertically reciprocate said main tube, a conveyer screw disposed transversely in the upper part of said receptacle, and means to actuate said lever and said conveyer screw.

3. In a device for the removal of light ashes having a receptacle, a hopper above said receptacle and a main tube connecting said hopper to said receptacle, a short tube making a telescoping joint with said main tube and means to vertically reciprocate said main tube, as specified.

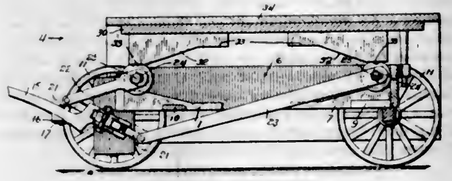
1,103,795. SEWING-MACHINE GUIDE. WILLIAM J. MARTUS, Whitesboro, N. Y., assignor to Charles A. Powell, Whitesboro, N. Y. Filed Mar. 8, 1911. Serial No. 613,041. (Cl. 112—9.)

1. A guide for a sewing machine consisting of a spindle mounted in the work-plate of the machine to be raised and lowered, the spindle having at its upper end a guide member, the face of the work-plate being cut out to receive said guide member when lowered, a bell-crank lever pivotally mounted at the rear part of the work-plate and having an arm extending to and projecting from the front of the machine and a second arm projecting from the point of mounting of the lever partway forward across the work-plate and thence laterally and having a cam-shaped end, the said end lying beneath the under surface of the guide member whereby the swinging of the lever operates to press the cam-end under the said guide member at the top of the spindle and hold the same in raised position.



2. A work-guide consisting of a spindle mounted in the work-plate to be raised and lowered therein, its upper end being shaped in the form of a work-guide and the work-plate being formed to pocket said guide when the spindle is lowered, a lever mounted underneath the surface of the work-plate and pivotally mounted at one end with its opposite end projecting from the machine toward the operator, a cam-arm mounted on said lever, the cam acting on the under-surface of the guide to raise the same, the cam being also provided with a level surface at its higher end for the fixed support of the guide, and a stop at the end of said level part, substantially as described.

1,103,796. TRUCK. IRA MCCOON, Windsor Locks, Conn. Filed Apr. 16, 1913. Serial No. 761,502. (Cl. 21—118.)



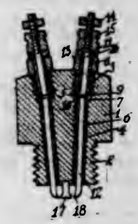
1. In a truck,—a frame having cam surfaces; a pair of rear wheels and a pair of front wheels for said frame, said front pair of wheels being pivotally attached to said frame; a tongue adapted to oscillate vertically and transversely; a beam pivotally mounted on said tongue; arms pivotally connected to said beam and said pivotally mounted pair of wheels; a platform for loads having cam surfaces associated with said frame; rollers engaging the cam surfaces of the platform and frame; means connecting the rollers to said tongue whereby when said tongue is oscillated vertically the platform is made to reciprocate to and from said frame by the rollers moving on said cam surfaces.

2. In a truck,—a frame comprising two oppositely disposed longitudinal members; cams adjacent the ends of said members and integral therewith; pairs of front and rear wheels associated with said frame, said front pair of wheels being pivotally attached to said frame; a tongue adapted to oscillate vertically and transversely of said frame; a beam pivotally mounted on said tongue; arms pivotally connected to said beam and said pivotally mounted pair of wheels; transverse shafts in the frame between said longitudinal members; a pair of independent rollers on each end of said shaft, one of each of said pair of rollers engaging one of said cams; levers, connecting the tongue to the shafts; a platform for loads associated with the frame; cams carried by said platform and integral therewith, each of said cams on said platform engaging the second of each of said pairs of rollers; and means on said platform and frame for guiding said platform vertically.

3. In a truck,—a frame having cam surfaces; a pair of rear wheels and a pair of front wheels for said frame, said front wheels being pivotally attached to said frame; a tongue adapted to oscillate vertically and transversely of said frame; a beam pivotally mounted on said tongue; arms pivotally connected to said beam and said pivotally mounted front wheels; a platform for loads, having cam surfaces; rollers engaging the cam surfaces of the platform and frame; means connecting the rollers to said tongue whereby when said tongue is oscillated vertically the platform is made to reciprocate to and from said frame by the rolling action of the rollers on the cam surfaces, said tongue when oscillated transversely of the frame causing the movement of the front wheels on their pivots whereby the truck is directed.

4. In a truck,—a frame having cam surfaces; a pair of rear wheels and a pair of front wheels for said fame; means securing each front wheel pivotally to the frame; a transverse, rotatably mounted member at the front of the frame; a tongue pivotally mounted on said member whereby said tongue is adapted to oscillate transversely of said frame on said member and vertically to the frame with said member; a beam pivotally mounted on said tongue; arms pivotally connected to said beam and said pivotally mounted wheels; a platform for loads, having cam surfaces; rollers engaging the cam surfaces of the platform and frame, said transverse, rotatably mounted member having arms; levers connecting the rollers to the arms of said transverse member whereby when said tongue is oscillated vertically the platform is made to reciprocate to and from said frame by the rolling action of the rollers on the cam surfaces of the frame and the platform, said tongue when oscillating transversely on said transverse, rotatably mounted member causing the movement of the front wheels on their pivotal means substantially as and for the purpose set forth.

1,103,797. SPARK-PLUG. EARL MCFARLAND and EDWARD C. CHURNING, Sausalito, Cal. Filed May 8, 1913. Serial No. 766,377. (Cl. 123—169.)



1. A spark plug including a cored body member, a ground point threaded in said body member, said body member being provided with a pair of downwardly convergent electrode bores, each of said bores being enlarged and internally screw threaded at its upper terminal, an annular recess formed at the junction of the enlarged portion of the bore and the lower reduced portion, an insulating tube for said lower portions of each bore, an annular flange formed on said tube and arranged in said annular recess, an insulating tube for said upper enlarged portion of each of said bores, an annular flange carried by said second tube and arranged in said annular recess, a pair of electrodes arranged in said bores, a collar carried by each of said electrodes and mounted between the said tube flanges, and a clamping bushing for each of said electrodes, said bushing being threaded in said enlarged upper terminal of said passages.

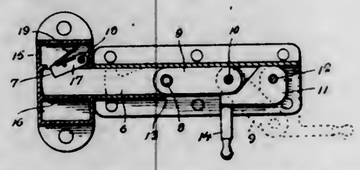
2. A spark plug including a body member, a pair of electrodes arranged in said body member, insulating tubes for each of said electrodes, laterally extending platinum points for each of said electrodes, a ground point threaded in said body portion and arranged between the said electrodes, said electrodes being adapted to rotation for varying the

distance of the points from the ground point, and means for clamping the electrodes in adjusted position.

3. A spark plug comprising a body portion having a pair of downwardly converging electrode bores formed therein, a pair of electrodes mounted within said bores, insulating tubes for each of said electrodes mounted within the bores, lateral points for each of said electrodes disposed in spaced relation to each other, a ground point removably secured to said body portion between the electrode points, means for preventing longitudinal movement of said electrodes relative to the body portion and permiting rotary movement and means for clamping the electrodes in adjusted position.

4. A spark plug comprising a body portion having a pair of downwardly converging electrode bores formed therein, an electrode mounted within each of said bores, an insulating tube for each of said electrodes, a laterally extending point formed integral with each of said electrodes, a ground point secured to said body portion adjacent the electrode points, means for preventing longitudinal movement of the electrode relatively to the body portion and for permitting rotary adjustment of the electrodes and means for clamping the electrodes in adjusted position.

1,103,798. LOCK. ROBERT GEORGE MCMAHON, St. Joseph, Ill. Filed Jan. 14, 1914. Serial No. 812,108. (Cl. 70—102.)



A lock of the class described comprising a lock casing adapted to be secured to the casement of a door, a bolt casing adapted to be secured to the door and having aligning slots in opposite sides thereof, the said last-named casing being provided with a slot at right angles to the first named slot, a sliding bolt in said bolt casing and movable into the lock casing, a bell crank shaped lever pivoted within the bolt casing and movable through the last-named slot, a link connecting the said lever with the said bolt, one of the connections of the link being slidable in the first-named slot in the bolt casing, a pawl pivotally mounted within the lock casing and engageable with the bolt to lock the same, a spring acting upon the pawl to hold the same in the path of movement of the bolt, and key-operated means within the lock casing for moving the pawl to released position.

1,103,799. HINGE FOR UMBRELLA-RIBS. MOSES C. MCMILLAN, Wilmington, Ohio. Filed Nov. 14, 1913. Serial No. 801,055. (Cl. 135—25.)



1. A hinge of the character described comprising two members, one of said members having a substantially U-shaped portion of resilient material and the other of said members being pivotally connected at its end between the walls of said U-shaped portion of the first-mentioned hinge member at a point remote from the end of said U-shaped portion, the edge of one of the side walls of said U-shaped portion of said first-mentioned hinge member being bent toward the other wall of said hinge member to form a lip, said lip having its edge extending obliquely to the length of said hinge member and arranged to be engaged by the last-mentioned hinge member to cause said lip to move laterally to permit said last-mentioned hinge member to enter the space between the side walls of the U-shaped hinge member and to lie beneath said lip when the latter has returned to its normal position.

2. A hinge of the character described comprising two members, one of said members having a U-shaped portion and the second member being pivotally connected between the walls of said U-shaped member at a point remote from the end thereof, one of the walls of said U-shaped portion having one edge bent inward to cause it to extend obliquely to the length of said hinge member, said second hinge member having its side walls converging downwardly and having its upper edge of a width greater than its lower edge, whereby as said second hinge member is moved into alinement with said U-shaped hinge member its side wall will engage said obliquely extending lip and move the same laterally to permit said second hinge member to pass between the walls of said U-shaped hinge member and to permit said lip to engage the wide upper edge of said second hinge member.

3. A hinge of the character described comprising two members, one having a U-shaped portion and the other being pivotally connected between the walls of said U-shaped portion at a point remote from the end thereof, one of the walls of said U-shaped portion having its upper edge bent inward to cause it to extend obliquely to the length of the hinge member, whereby as the last-mentioned hinge member is moved into alinement with the first-mentioned hinge member it will engage said obliquely extending lip and move the same laterally to permit said hinge member to pass beneath said lip, that side of said U-shaped hinge member opposite the side having the lip being provided with a portion to bear against said last-mentioned hinge member and retain the same in engagement with said lip.

4. A hinge of the character described comprising two members, one having a U-shaped portion and the other being pivotally connected to said U-shaped portion and adapted to be moved into a position between the side walls thereof, one of the side walls of said U-shaped portion having a lip arranged to extend above the last-mentioned hinge member when said last-mentioned hinge member lies between the side walls of said U-shaped hinge member and the other side wall of said U-shaped hinge member having a resilient portion extending inwardly and downwardly therefrom in a position to be engaged by said last-mentioned hinge member and serving to move the same toward that side wall which has the lip.

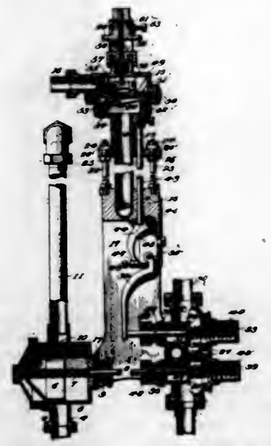
1,103,800. AUTOMATIC WATER-HEATER. BENJAMIN E. MEACHAM, Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 4, 1912. Serial No. 688,501. (Cl. 126—351.)

1. The combination with a water heater, a burner, a gas supply for the burner, a water discharge for the heater, thermostatic means for controlling the gas supply and water discharge, and automatic means for causing a circulation of the water in the heater after the water discharge is closed.

2. The combination with a water heater, a burner, a gas supply for the burner, a water discharge for the heater, thermostatic means for controlling the gas supply, a water discharge controlled by the thermostatic means, and automatic means for causing a circulation of the water in the heater after the water discharge is closed.

3. The combination with a water heater, a water supply for the heater, a water discharge pipe for the heater, a valve in said pipe for checking the flow of water therethrough, and means operated by the expansion of said pipe for opening the valve therein and allowing a full flow of water therethrough, and means operated by the expansion of said pipe for allowing the gas valve to close when the water in the heater has reached a predetermined temperature.

4. The combination with an automatic water heater, a water supply therefor, a water discharge pipe for said heater, a valve in said pipe and normally checking the flow of water from the heater, a stem carried by a stationary part of the heater and adapted to open the valve when the pipe moves outwardly by the expansion thereof and means operated by the continued expansion of the pipe to allow the gas valve to close when the water in the heater has reached a predetermined temperature.



5. The combination with an automatic water heater, a water supply therefor, a water discharge pipe for said heater, a receptacle, carried by the discharge pipe, a transverse partition carried by the receptacle and having an opening therein, a valve closing the opening but allowing a slight leakage therearound, a yoke carried by a stationary part of the heater and surrounding the receptacle, but the receptacle being free to move therein, a lever pivoted to the lower face of the partition and engaging the valve and normally holding it closed, and having a pin extending through the partition, a second lever pivoted to the upper face of the partition and engaging the pin, a vertically adjustable stem supported by the yoke and extending into the receptacle and straddling the second lever whereby the expansion of the discharge pipe moves the receptacle and the stem operates the levers for unseating the valve and allowing a full flow of water through the receptacle when the water has exceeded its predetermined temperature.

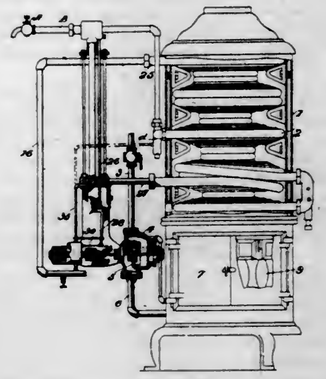
[Claims 6 to 8 not printed in the Gazette.]

1,103,801. INSTANTANEOUS WATER-HEATER. BENJAMIN E. MEACHAM, Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 10, 1914. Serial No. 817,849. (Cl. 126—351.)

1. A controlling device for water heaters, comprising in combination, a water supply, two syphons in communication with the water-supply, a fuel controlling valve operatively connected with the syphons, whereby one syphon acts under the water pressure to close the fuel valve and the other by the reduction of water pressure to open the fuel valve.

2. A controlling device for water heaters, comprising a water supply, two oppositely acting syphons in communication with the water supply, one syphon acting against the other, a fuel valve operatively connected with the syphons whereby the water pressure acting on one syphon compresses one syphon and closes the fuel valve, and a reduction in the water pressure permits the other syphon to open the fuel valve.

3. A controlling device for water heaters, comprising a water-supply, two syphons in communication therewith, a fuel supply valve operatively connected with the syphon and automatic means for shifting the variation in water pressure from one syphon to the other, whereby the fuel valve is normally held closed by the water-pressure and is opened by a reduction in the water pressure.

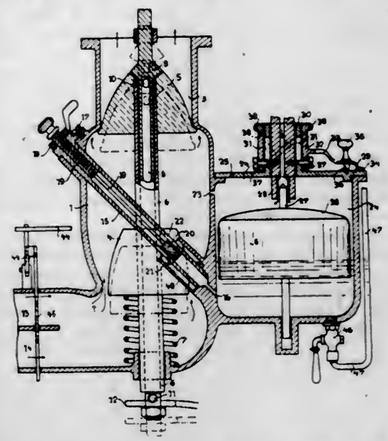


4. A controlling device for water heaters, comprising in combination a water-supply, two syphons in communication therewith, one syphon being larger than the other, a fuel valve operatively connected with the syphon, and means for equalizing the water pressure in the syphons when water is not flowing and for reducing the pressure in the large syphon when the water is flowing, whereby the fuel valve is closed when the water is not flowing and is opened when the water is flowing.

5. A controlling device for water heaters, comprising a water supply, two syphons in communication therewith, means for normally holding the fuel valve closed and automatic means for unbalancing the water-pressure between the syphons when the water is flowing, for the purpose described.

[Claims 6 to 12 not printed in the Gazette.]

1,103,802. CARBURETER. OTTO MEISSNER, Coswig, Germany. Filed Oct. 18, 1912. Serial No. 726,566. (Cl. 48—155.1.)



1. A carbureter comprising a float chamber, a carbureting chamber communicating with said float chamber below and above the liquid surface, an inclined slotted tube arranged in said carbureting chamber to receive the liquid from the float chamber, a grooved plug arranged in the slotted part of said tube so as to atomize the liquid, means for introducing hot and cold air into the carbureting chamber, means for adjusting the proportions of hot and

cold air automatically, a float in the float chamber, a valve cone carried by the same, an adjustable valve seat for said cone, means for adjusting the position of said valve seat according to the nature of the fuel used, and connections between the adjusting device for the valve seat and the regulating device for the air supply causing the proportions of hot and cold air to be varied when the seat is adjusted.

2. In a float-feed carbureter, a carbureting chamber, means for feeding liquid into said chamber, means for atomizing said liquid, an air inlet at the bottom of the chamber, an outlet for the explosive mixture at the top of the chamber, a valve cone for regulating and closing said outlet, a valve cone for regulating said inlet, a hollow vertical stem holding said cones at a constant distance from one another, means for operating said stem so as to adjust the cones, a tube arranged in said stem and having its lower end in communication with the atmosphere, a small valve cone connected to the upper end of the tube and seated in the outlet cone so as to be raised by the suction of the motor when said latter cone is moved into closing position, the tube having air vents adapted to admit atmospheric air to the motor when its cone is thus raised, substantially as and for the purpose set forth.

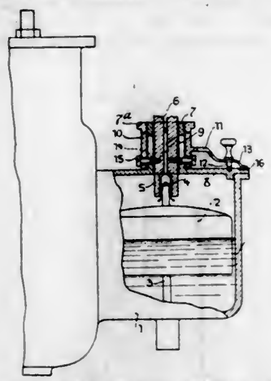
3. In a float-feed carbureter, a vaporizing and mixing chamber, a tube arranged in an inclined position in said chamber so as to receive the liquid from the float chamber, a plug having longitudinal downwardly widening grooves arranged opposite slots within said tube so as to atomize the liquid and discharge the vapor through its grooves and the slots of the tube, the upper end of the tube being closed and secured to the chamber wall so as to allow the tube to be removed from the outside, and a rod in said tube holding the plug and fitted by means of a screw-thread in the closed end of the tube so as to allow of being turned from the outside for adjusting the position of said plug relative to the slots in the tube, substantially as and for the purpose set forth.

4. In a float-feed carbureter, the combination with a carbureting chamber connected by means of a duct with the lower part of the float-chamber and having a socket projecting obliquely from said duct into said carbureting chamber, of a tube arranged in an inclined position in said chamber and having its lower end disposed in said socket so as to receive the liquid from the float-chamber, the socket being wider than the tube so that an annular space is formed between them, the tube having slots disposed opposite the orifice of the socket, a plug, having longitudinal downwardly widening grooves, arranged within the tube opposite said slots so as to atomize the liquid and discharge the vapor through its grooves and through the slots in the tube, the upper end of the tube being closed and secured to the chamber wall so as to allow the tube to be removed from the outside, and a rod in said tube holding the plug and fitted by means of a screw-thread in the closed end of the tube so as to allow of being turned from the outside for adjusting the position of said plug relative to the slots in the tube, substantially as and for the purpose set forth.

5. In a float-feed carbureter, a carbureting chamber, a channel admitting air to said chamber, said channel being divided longitudinally into two parts one supplying hot and the other cold air, a damper arranged in a transverse position in said channel so as to be capable of shutting off either the hot or the cold air stream or admitting both in various proportions, an expansible liquid-receptacle built into the wall of the carbureting chamber so as to assume its temperature, a system of levers controlling the position of the damper and adapted to be acted upon by the receptacle for varying the proportions of hot and cold air as the receptacle expands and contracts, a wedge arranged between the receptacle and the lever system so as to allow of being adjusted for varying the initial position of the damper, an adjustable valve for regulating the admission of liquid to the float chamber to suit the nature of the fuel used, and connections between said valve and the wedge for varying the position of the damper simultaneously with the valve.

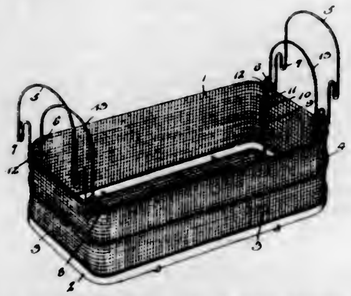
[Claim 6 not printed in the Gazette.]

1,103,803. FLOAT-CHAMBER FOR CARBURETERS. OTTO MEISSNER, Coswig, Germany. Filed Jan. 2, 1914. Serial No. 809,998. (Cl. 137—104.)



In a carbureter, a float chamber, a float in said chamber, a valve cone carried by said float, a cover for said chamber, a socket formed on said cover, a valve seat held in said socket, so as to coöperate with said cone and so as to allow of vertical adjustment, studs connected to said valve seat and guided in vertical slots in the socket, a rotatable sleeve arranged about said socket and having oblique slots in which said studs are guided so that the valve seat is moved vertically when the sleeve is rotated, an arm connected to the sleeve for facilitating its adjustment, and a pointer on said arm for indicating on a scale the position of the valve seat.

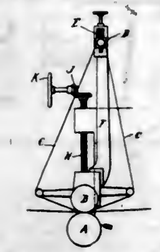
1,103,804. CLOTHES-DRAINER. JAMES E. MERRITT, Fargo, N. D. Filed June 10, 1913. Serial No. 772,836. (Cl. 68—30.)



A clothes drainer comprising a body, bottom sections hinged to the lower edges of the sides of the body, bail handles attached to the body and provided at their opposite sides with hooks some of which are inwardly disposed and others outwardly disposed with relation to the body, members pivotally connected with the ends of the hinged bottom sections at points between the hinged and free edges thereof and disposed within the body, eyes connected with said members and adapted to engage the inwardly disposed hooks of the bail handles and bails pivotally connecting the eyes at the same end of the body together.

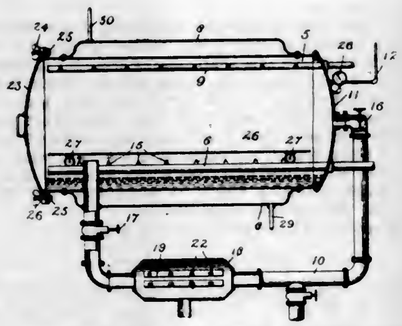
1,103,805. ROTARY INTAGLIO-PRINTING MACHINE. EDUARD MERTENS, Freiburg, Breisgau, Germany, assignor of one-half to Elsässiche Maschinenbau Gesellschaft, Mulhausen, Germany. Filed Mar. 8, 1912. Serial No. 682,547. (Cl. 101—104.)

1. In a rotary intaglio printing machine with elastic backing cloth adapted to operate continuously, comprising a machine frame, a printing cylinder, a pressure cylinder, a tension roller, mechanism for tensioning and positioning the said cloth with regard to the printing cylinder, comprising bars rigidly connected to the journal supports of the pressure cylinder at one end, and to the journal supports of the tension roller at their other end, a screw adjustment adapted to raise or lower the tension roller journals in their supports, and screw mechanism adapted to move the pressure cylinder in the machine frame positively with regard to the printing cylinder, said motion being compulsorily participated in by the tension roller.



2. In a rotary intaglio printing machine with elastic impression band, in combination in a printing press frame, the printing cylinder A, the pressure cylinder B, the endless elastic band C adapted to travel between the said cylinders and soften the impact, hand wheel K, cone-gearing J, journal for the cylinder B, journal for the roller D, the threaded shaft H connected to the journal of the cylinder B for the purpose of raising or lowering it, tension roller D having the band C passing over it, mechanism E for independent regulation of the tension roller and bars F rigidly connecting the journal of the cylinder B with the journal of the roller D so that the motions of the one are compulsorily shared by the other.

1,103,806. APPARATUS FOR MOISTENING YARNS. VICTOR E. MERTZ, New York, N. Y. Filed Feb. 7, 1913. Serial No. 746,903. (Cl. 28—7.)

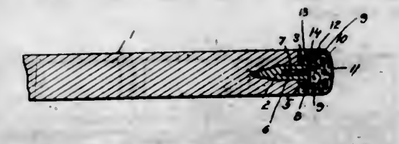


1. Apparatus for moistening fibrous material, comprising a vacuum chamber having a door at one end thereof, a fluid conveying pipe directed into the said chamber and adapted to discharge therein, and means for circulating a cooling agent around the surface of the chamber for the purpose described.

2. Apparatus for moistening fibrous material, comprising a vacuum chamber having a door at one end thereof, a steam pipe directed into the said chamber and adapted to discharge therein, and means for circulating a cooling agent around the surface of the chamber for the purpose described.

3. Apparatus for moistening fibrous material, comprising a vacuum chamber, a plurality of steam and water pipes directed into the said chamber and adapted to discharge therein, a circulating pipe having its opposite ends directed into the chamber and having one of its ends arranged higher in the chamber than the other end, a series of nozzles connected to fluid supply pipes and located in the circulating pipe and adapted for directing liquid to move in one direction through the said circulating pipe, and a second series of nozzles connected with fluid supply pipes and arranged in the circulating pipe and adapted for directing liquid to move through the supply pipe in a direction opposite from that had with the first series, and a water jacket connected with the vacuum chamber.

1,103,807. BILLIARD-CUE-TIP FASTENER. GEORGE MILLER, Baltimore, Md. Filed Aug. 8, 1913. Serial No. 783,753. (Cl. 46—9.)



1. A fastener for billiard cue tips comprising a screw adapted to be turned into the striking end of said cue, a tip securing plate removably fitted within said screw, teeth provided by said plate adapted to engage said tip, and means for locking said tip securing plate secured to the peripheral edge of said plate and coöperating with a recess formed in said screw.

2. A fastener for billiard cue tips comprising a screw having a central screw threaded opening formed longitudinally therein, a tip receiving plate, a screw threaded member formed centrally upon said plate and adapted to be threaded within the opening in said screw, a plurality of angularly disposed teeth formed on said tip securing plate, a washer loosely mounted upon said screw, and a packing member interposed between the tip and said washer.

1,103,808. ADJUSTABLE TOOL. MELCHIOR MILLER, Le Mars, Iowa. Filed May 19, 1913. Serial No. 768,682. (Cl. 51—4.)

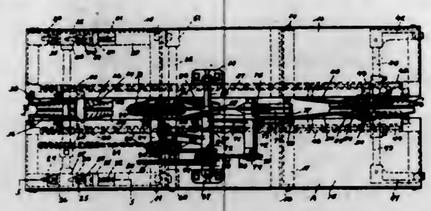


A tool of the character described comprising a tang having a flat enlarged head from one end of which extends a key boss and which has a laterally extending pivot lug intermediate of its ends a threaded opening being located within the head, in combination with a stub tang at one end having an eye arranged to engage said lug and at the other end a flat enlarged slotted head arranged to slide over said first mentioned head with a key lug extending from the end thereof said lugs extending in parallel spaced relation and a set screw passing through said slot and threading into said threaded opening, all arranged as and in the manner set forth.

1,103,809. FISH-CLEANING MACHINE. CHARLES F. MISCHLER, Sandusky, Ohio. Filed May 2, 1913. Serial No. 765,141. (Cl. 17—10.)

1. In a fish cleaning machine, the combination of a supporting frame and a fish conveyer mounted on said

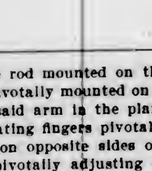
frame, a transverse rod mounted on the frame above the conveyer, an arm pivotally mounted on said rod, a circular knife mounted on said arm in the plane of the conveyer, a pair of cut regulating fingers pivotally mounted on said arm and disposed on opposite sides of the knife respectively, means for pivotally adjusting said cut regulating fingers to vary the depth of cut, adjustable means for limiting the downward movement of said arm under the influence of gravity, a cleaning wheel rotatably mounted on said frame in the plane of said circular knife, and a spreader mounted on the frame between the cleaning wheel and knife.



2. In a fish cleaning machine, the combination of a supporting frame, and a fish conveyer on said frame, a swinging arm mounted on the frame above the conveyer, a circular knife rotatably mounted on said arm intermediate the ends of the latter and in the plane of the conveyer, a pair of cut regulating fingers pivotally supported upon the outer end of said arm at a point forward of the advance edge of the knife and disposed on opposite sides of the knife respectively said fingers having their free ends directed toward the inner end of the arm, and means for pivotally adjusting said cut regulating fingers to vary the depth of the cut.

3. A cleaning wheel for fish cleaning machines comprising a disk having a plurality of radial slots adjacent its peripheral edge and an endless coil having its ribbon laced through said slots and surrounding the periphery of the disk and slots being of a depth to permit movement of the coil radially of the disk.

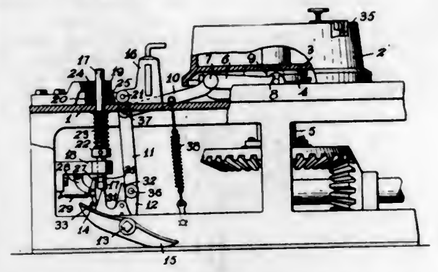
1,103,810. BOX FOR BADGES. HENRY O. MIX, Nassau, Minn. Filed May 26, 1913. Serial No. 769,997. (Cl. 211—16.)



The hereindescribed supporting plate for badges comprising a metal plate having a nested series of V-shaped slits formed therein to provide a series of hooks, said hooks being bent outwardly from the plate and the apex portions of the V-shape members being bent at an inclination to the body of the hook to support the badges, and the apices of the hook members before bending being disposed toward the bottom of the plate.

1,103,811. WIRE-DRAWING MACHINE. WILLIAM H. MORSE, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 15, 1910. Serial No. 538,226. (Cl. 205—16.)

1. The combination in a wire drawing machine, of a wire drawing block, means for rotating said block, a die holder, a rod capable of longitudinal movement and held from longitudinal movement by its frictional engagement with the die holder due to the strain exerted by the wire in the operation of wire drawing, and means for stopping the rotation of the wire drawing block by the longitudinal movement of said rod.



2. The combination in a wire drawing machine, of a wire drawing block, means for rotating said block, a rod capable of being moved longitudinally by gravity, but held from longitudinal movement during the operation of wire drawing by the tensile strain upon the wire, and means for stopping the rotation of the wire drawing block operated by the longitudinal movement of said rod.

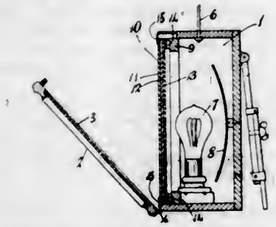
3. A wire drawing machine comprising a wire drawing block, a die holder and die through which the wire is drawn, a pivot for said die holder movable transversely to the line of movement of said wire whenever the strain upon the die holder is relieved, means for rotating said block, and means for disconnecting said block from said means of rotation, said disconnecting means arranged to be operated by the movement of said pivot transversely to the line of movement of said wire.

4. A wire drawing machine, comprising a wire drawing block, means for rotating said block including a clutching mechanism, a die holder, a rod on which said die holder is held, means for holding said rod from longitudinal movement by its frictional engagement with said die holder due to the tensile strain upon the wire, and means for disengaging said clutching mechanism by the longitudinal movement of said rod.

5. A wire drawing machine, comprising a wire drawing block, a rotating shaft, a clutch member arranged to connect said block and said shaft, means arranged to operate said clutch connection, a die holder and die through which the wire is drawn by the rotation of said block, a movable pivot for said die holder held from longitudinal movement by frictional contact with said die holder while the wire is being drawn, and connecting means between said pivot and said clutch operating means arranged to cause said clutch operating means to disconnect said clutch when the pivot moves longitudinally.

[Claims 6 and 7 not printed in the Gazette.]

1,103,812. CHANGEABLE ILLUMINATED SIGN. CARRUTH P. MURDOCK, Cincinnati, Ohio. Filed Apr. 20, 1912. Serial No. 692,205. (Cl. 40—132.)



In a changeable illuminated sign, a casing to inclose a light source and having an open front, a ledge adjacent to the open front and extending on opposite sides thereof, a plurality of superposed and contacting light-pervious plates extending across said open front, a plurality of flat springs secured to said ledge at opposite sides of the open front, engaging with the rearmost plate and yieldably supporting the plurality of plates, a plurality of flat clips mounted on the front of said casing on opposite sides of the opening to engage with and hold said plates back against said springs, and a door hinged to said casing at one side of said open front to close over said plates and over their clips, said door having a light-pervious part to stand in front of the superposed plates when the door is closed, and means for fastening said door in its closed position.

1,103,813. VEHICLE-WHEEL. THOMAS BLACKWOOD MURRAY, Scotstoun, Scotland. Filed June 4, 1912. Serial No. 701,620. (Cl. 152—21.)



1. In a vehicle wheel, a detachable rim wedge-shaped in transverse cross section, but inclined only on its inner periphery, a fixed wheel periphery beveled on its outer periphery to the incline of the inner periphery of the detachable rim and of substantially the same width as the latter, a radially inward extending flange on the side of least diameter of said wheel periphery, a retaining ring bearing against the edge of the detachable rim to hold the latter in position on the wheel, said retaining ring extending from the wheel periphery radially outward to a point within the outer periphery of the detachable rim on its side of least internal diameter, and bolts passing through said retaining ring and said flange on the wheel periphery to secure said retaining ring in position, said retaining ring having an inwardly extending flange offset to engage the inner periphery of said flange on the wheel periphery, substantially as described.

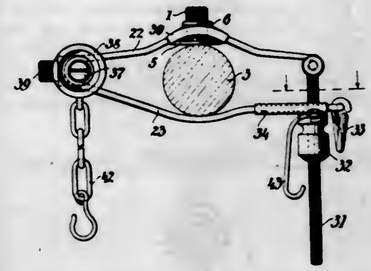
2. In a vehicle wheel, a detachable rim wedge-shaped in transverse cross section, but inclined only on its inner periphery, a fixed wheel periphery beveled on its outer periphery to the incline of the inner periphery of the detachable rim and of substantially the same width as the latter, a radially inward extending flange on the side of least diameter of said wheel periphery, a retaining ring bearing against the edge of the detachable rim to hold the latter in position on the wheel, said retaining ring extending from the wheel periphery radially outward to a point within the outer periphery of the detachable rim on its side of least internal diameter, and bolts passing through said retaining ring and said flange on the wheel periphery to secure said retaining ring in position, said retaining ring having at its outer edge a laterally extending flange or bead overlying and protecting the bolt heads, substantially as described.

3. In a vehicle wheel, a detachable rim tapered on its inner periphery, a wheel having a fixed periphery tapered to the incline of the inner periphery of said detachable rim, retaining means bearing against the edge of the detachable rim at its side of least internal diameter, and means for securing said retaining means to the fixed periphery of the wheel, said fixed periphery being transversely channeled to receive a withdrawal bolt, substantially as described.

1,103,814. CAMERA-HOLDER. ROBERT NAGLO, Wiesbaden, Germany. Filed May 20, 1912. Serial No. 698,580. (Cl. 248—30.)

1. A camera-holder comprising in combination a camera-supporting screw, a bow connected therewith, and means for clamping the bow against an object to be used as a camera-stand, said clamping means embodying another camera-supporting screw standing at right angles to the aforesaid screw.

2. A camera-holder comprising in combination a camera-supporting screw, a bow connected therewith, and means for clamping the bow against an object to be used as a camera-stand, said clamping means embodying two additional camera-supporting screws standing at right angles to the aforesaid screw and also to each other.



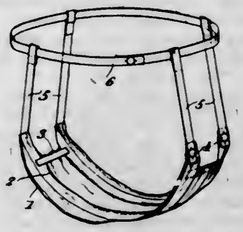
3. A camera-holder, comprising in combination, a camera-supporting screw having a base-plate having holes at its edge, a bow and attachment means for firmly holding the base-plate against a support, and a pin carried by said bow for entering a hole in the base-plate.

4. A camera-holder, comprising in combination, a camera-supporting screw having a base-plate rigidly connected therewith, and a bow placed about the screw, a flexible limb pivotally attached to one end of the bow, and fastening means for the limb pivotally attached to the other end of the bow.

5. A camera-holder, comprising in combination, a camera-supporting screw having a base-plate rigidly connected therewith, a bow placed about the screw, a flexible limb pivotally attached to one end of the bow, and fastening means for the limb pivotally and adjustably attached to the other end of the bow.

[Claims 6 and 7 not printed in the Gazette.]

1,103,815. SANITARY SUPPORT FOR NAPKINS. DELIA NESGOOD, West Brighton, N. Y. Filed Sept. 24, 1913. Serial No. 791,611. (Cl. 128—5.)

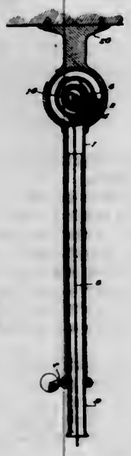


A napkin support comprising a sling of flexible material folded in the vicinity of both of its longitudinal edges along two parallel lines whereby three plies of material are provided adjacent each longitudinal edge of the sling, the edges of both folds lying within the longitudinal edges of the sling whereby single plies only are provided at the edge portions of the sling, and elastic members connected at their ends with the said folded portions at points where the said material is arranged in three plies and at the outermost folds of the plies.

1,103,816. BARBER'S FAN-SUPPORT AND THE LIKE. JOHN LEON NEWHOUSE and EMIL RUNKEL, Pine Island, Minn. Filed Apr. 4, 1913. Serial No. 758,991. (Cl. 9—8.)

1. In combination, in a fan support, a supporting bracket provided with an annular housing and with a

rigid tubular member opening into and projecting from the housing, a removable head closing one end of the housing and provided with and carrying a fixed drum shaft longitudinally slotted, a removable head closing the opposite end of the housing, a winding drum confined on said shaft by said heads, a drum actuating spring having one end removably engaging said slot of the shaft, said drum having a flexible connection wound thereon with a free end extending through said tubular member and adapted to be attached to a fan, said tubular member provided with a stop to limit the movement of the fan toward the drum, and means whereby said stop is adjustable longitudinally with respect to said member, substantially as described.



2. In combination, in a fan support, a bracket provided with a winding drum housing having a removable head normally closing one end of the housing, a drum shaft arranged within the housing and fixed to the opposite end head thereof, said shaft having a longitudinal slot opening through its free end, a removable winding drum mounted on said shaft, and provided with an actuating spring having a portion removably entering said slot of the shaft, said drum having a flexible connection wound thereon with a free end adapted to have a fan secured thereto, and a flexible connection guide and fan stop projecting from and carried by said housing.

3. A fan support comprising a bracket adapted to be secured to a ceiling, or other support, and comprising a winding drum housing, a winding drum mounted in said housing, means supporting the same therein, a tubular member projecting from and carried by said housing, a longitudinally-adjustable fan-stop tube arranged longitudinally of said tubular member, and means for securing said tube in the desired longitudinal adjustment with respect to said member, said drum adapted to carry a flexible connection extending therefrom freely through said member and tube and at its free end beyond said tube adapted to be secured to a fan.

4. In combination, in a fan support, a supporting bracket provided with an annular housing and with a rigid tubular member opening into and projecting from the housing, having a head closing one end of the housing and provided with and carrying a fixed drum shaft, a removable head closing the opposite end of the housing, a winding drum confined on said shaft by said heads, a drum-actuating spring having one end removably coupled to the shaft, said drum having a flexible connection wound thereon with a free end extending through said tubular member and adapted to be attached to a fan, said tubular member provided with a stop to limit the movement of the fan toward the drum, and means whereby said stop is adjustable toward and from the drum, substantially as described.

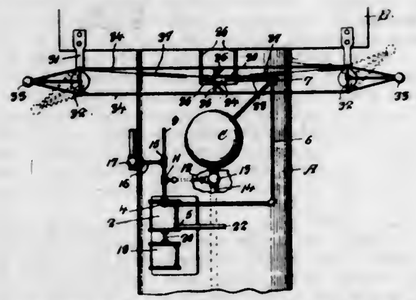
1,103,817. KITE. ERNEST NIEHOFF, Roanoke, Va. Filed Jan. 20, 1914. Serial No. 813,228. (Cl. 244—22.)



1. In a kite, a frame, a weight carried by one side of the frame, and a second weight of different size carried by the opposite side of the frame.

2. In a kite, a frame comprising an upright member and a cross bar, a sheet of material mounted on said frame, and weights carried by the ends of the cross bar, said weights being of unequal size.

1,103,818. TRAIN-STOPPING APPARATUS. FRANK NORTHUP, Ludlow, Vt., assignor of one-eighth to Joseph Northup, one-eighth to William W. Avery, one-eighth to Joseph B. Reid, and one-eighth to Ralph L. Reid, Alexandria Bay, N. Y. Filed Mar. 7, 1913. Serial No. 752,694. (Cl. 246—59.)

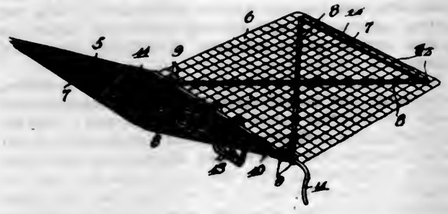


1. In train stopping apparatus, the combination with the propelling mechanism of a car, of a controlling device for said mechanism, a cylinder, a piston within said cylinder and adapted for rectilinear movement therein, a connection between said piston and controlling device, a source of fluid supply for said cylinder, a controlling valve interposed between said source and cylinder, a lever connected to said valve and having a socket formed therein, a block adapted for sliding movement, guide rods for said block, a latching pin carried by said block, means acting upon the block and holding said latching pin normally seated in the socket in said lever, a flange formed on said block, a trip mechanism comprising rods spaced apart in parallelism and disposed at the opposite sides of the path of movement of said block, lugs carried by said rods and engaging said flange, means for sliding said rods whereby said lugs will slide the block to move the latching pin out of the socket, and means for swinging said valve to open position upon the release of said lever.

2. In train stopping apparatus, the combination with the propelling mechanism of a car, of a controlling device for said mechanism, a cylinder, a piston within said cylinder and adapted for rectilinear movement therein, a connection between said piston and controlling device, a source of fluid supply for said cylinder, a controlling valve interposed between said source and cylinder, a lever connected to said valve and having a socket formed therein, a block capable of sliding movement, guide rods for said block, a latching pin carried by said block, a spring acting upon said block and holding the latching pin normally seated within the socket in said lever, a trip mechanism adapted to slide said block against the action of said spring to release said lever, and means for swinging said valve to open position upon the release of said lever.

3. In train stopping apparatus, the combination with the propelling mechanism of a car, of a controlling device for said mechanism, a cylinder, a piston within said cylinder and adapted for rectilinear movement therein, a connection between said piston and controlling device, a source of fluid supply for said cylinder, a controlling valve interposed between said source and cylinder, a lever connected to said valve and having a socket formed therein, a block capable of sliding movement, guide rods for said block, a latching pin carried by said block, a spring acting upon said block and holding the latching pin normally seated within the socket in said lever, a flange formed on said block, a trip mechanism comprising rods spaced apart in parallelism and disposed at the opposite sides of the path of movement of said block, lugs carried by said rods and engaging said flange, a T-shaped lever having the extremities of the head thereof pivotally connected with said rods, means for actuating said lever to slide said rods whereby said lugs will slide the block to move the latching pin out of the socket, and means for swinging said valve to open position upon the release of said lever.

1,103,819. EGG-CRATE GUARD. GUSTAV E. NYSTROM, Brooklyn, N. Y. Filed Jan. 7, 1914. Serial No. 810,885. (Cl. 217—57.)



A guard for egg crates comprising reticulated sections, frames connected thereto and having eye terminals, a rod passed through the eye terminals for pivotally connecting the frames, resilient fingers at the ends of the rod for engagement with the sides of the crate, and clamps supported medially on the rod for engagement with a partition within the crate.

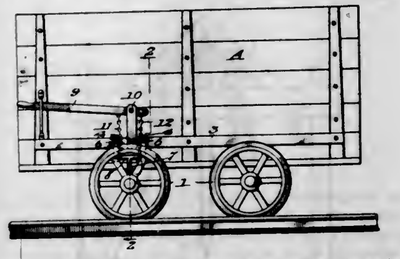
1,103,820. AEROPLANE. HAROLD MANSON-OLIN, New York, N. Y. Filed July 19, 1911. Serial No. 639,323. Renewed Jan. 14, 1914. Serial No. 812,158. (Cl. 244—12.)



In an aeroplane frame, comprising a series of triangular-shaped frame members decreasing in size from one end of the frame to the other and disposed transversely of the same, a series of transversely disposed planes, one superposed above the other and rigidly extending outward from each transverse side of the supporting members, each of said planes extending outwardly a greater distance than the plane next below, the lowest of said planes being continuous both outside and within the supporting members.

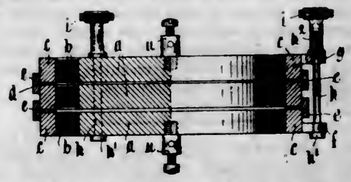
1,103,821. SPRAG-BRAKE. ELLIS F. ORNER, Gowen City, Pa. Filed Apr. 23, 1914. Serial No. 833,884. (Cl. 188—46.)

In a brake, the combination with a car body having wheels thereon, of hangers mounted on the car body, a brake bar journaled in the hangers and maintained normally in a vertical position, a lever pivotally mounted on the car body, and flexible means connected to the lever and brake bar for causing the bar to be actuated upon the



movement of the lever to throw the bar either to a horizontal position to engage a wheel of the car or cause the bar to be swung from the horizontal position to a vertical position.

1,103,822. HIGH-TENSION OSCILLATOR. WERNER OTTO, Berlin, Germany. Filed June 29, 1912. Serial No. 706,723. (Cl. 250—38.)



1. An inclosed high-tension oscillator having electrode plates standing freely opposite each other with substantially parallel opposing surfaces, a casing formed of section corresponding to the single electrode plates, and insulating parts arranged between said electrode plates and casing sections and directly supporting said electrode-plates.

2. An inclosed high-tension oscillator having electrode plates standing freely opposite each other, a casing formed of sections corresponding to the single electrode plates, and insulating rings arranged directly between said electrode plates and casing sections and supporting said electrode plates.

3. An inclosed high-tension oscillator having electrodes standing freely opposite each other, a casing formed of corresponding sections, insulating parts arranged between said electrodes and casing sections and supporting said electrodes, the electrodes and casing sections having the same axial dimension, and distance rings interposed between the neighboring casing sections.

4. An inclosed high-tension oscillator having electrodes standing freely opposite each other, a casing formed of corresponding sections, insulating rings arranged between said electrodes and casing sections and supporting said electrodes and casing sections having the same axial dimension, and distance rings interposed between the neighboring casing sections.

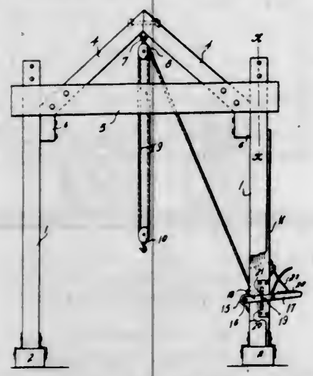
5. An inclosed high-tension oscillator having electrodes standing freely opposite each other, a casing formed of corresponding sections, insulating parts arranged between said electrodes and casing sections and supporting said electrodes, and centering rings engaging the adjacent ends of neighboring casing sections.

[Claims 6 to 11 not printed in the Gazette.]

1,103,823. KNOCKDOWN FRAME. HUGH H. PADGETT and LOUIS L. BOOKOUT, Lindale, Tex. Filed Apr. 21, 1913. Serial No. 762,587. (Cl. 57—129.)

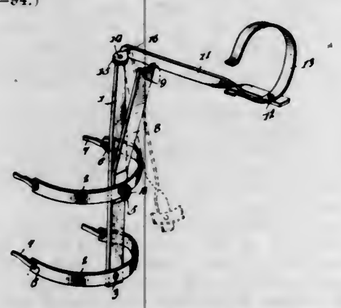
1. A knockdown frame comprising two triangular upright side members, and a third member rigidly connecting the upper extremities of the side members, said third mem-

ber comprising two parallel timbers, secured at each side of two members inclining upwardly toward each other, the last named members being rigidly connected at their upper ends.



2. A knock-down frame, comprising two triangular upright side members, and a third member comprising two parallel timbers secured at each side of two timbers inclining upwardly toward each other, and rigidly connected at their upper ends, the opposite faces of said parallel timbers being grooved at their extremities to receive the pointed upper ends of the side members.

1,103,824. ARM REST OR SUPPORT. FRANK W. PAGE, Wisdom, Mont., assignor of one-half to Bruce A. Risley, Wisdom, Mont. Filed Apr. 26, 1913. Serial No. 763,837. (Cl. 42—94.)



1. In a device of the class described, a supporting body, an arm rest member pivoted thereto, a support member engaged by said arm rest member, and means to adjust said support member relatively to said rest member.

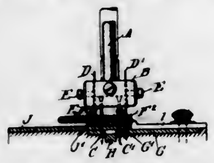
2. In a device of the class described, a supporting body member, a support member, one of said members provided with an elongated slot, a fastening member projecting from the other member and passing through said slot adjustably securing said support, and an arm rest member pivotally mounted on said supporting body engaging said support member.

3. In a device of the class described, a supporting body having an arm, a horizontally and vertically movable arm rest member mounted on said arm, an upwardly extending support member adjustably mounted on said arm engaged by said rest member, said supporting member provided with a recess at its top end for the purpose specified.

4. In a device of the character described, a supporting body having an arm, a pivot pin formed upon the upper end of said arm, a plate pivotally mounted on said pin, a pin extending from the outer edge of said plate, an arm-rest member pivoted to said last-mentioned pin, and a supporting arm for said arm-rest member carried by said arm.

5. In a device of the class described, a bar element, bands fastened to said bar, flexible attaching members fastened to said bands, a support element, each of said elements provided with a slot, one of said slots being elongated, a bolt passing through said slots, a nut on said bolt, abutment means on said support member, an arm rest member engaging said support member adjacent said abutment means pivoted to said bar to swing vertically and horizontally, and arm clasp means on said arm rest member.

1,103,825. CUTTING ATTACHMENT FOR SEWING-MACHINES. GEORGE WASHINGTON PARKINSON and RALPH SOLOMON TOMPKINS, Beacon City, N. Y. Filed Aug. 9, 1913. Serial No. 783,937. (Cl. 112—6.)



1. The combination of a sewing machine and a cutting attachment, the sewing machine having a reciprocating needle bar carrying spaced sewing needles and a feed bar for feeding the doubled-up brim of a felt hat in a transverse direction, the said cutting attachment having two cutters reciprocating with the said needle bar, the cutters having cutting edges arranged in different horizontal planes.

2. The combination of a sewing machine and a cutting attachment, the sewing machine having a reciprocating needle bar carrying spaced sewing needles, and a feed bar for feeding the doubled-up brim of a felt hat in a transverse direction, the said cutting attachment having two cutters reciprocating with the said needle bar and arranged on opposite sides of the said needles, the cutters having cutting edges extending approximately parallel to the line of movement of the said feed bar, the said cutting edges being arranged in different horizontal planes, and the cutting edge of one of the cutters cutting through the thickness of the upper doubled-up portion of the brim at the time the needle bar is in its lowermost position.

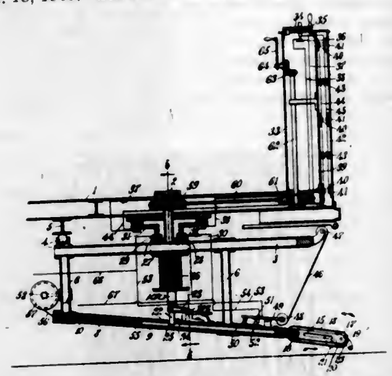
3. The combination of a sewing machine and a cutting attachment, the sewing machine having a reciprocating needle bar carrying spaced needles, and a feed bar for feeding the doubled-up brim of a felt hat in a transverse direction, the said cutting attachment having two cutters reciprocating with the said needle bar and arranged on opposite sides of the said needles, the cutters having cutting edges extending approximately parallel to the line of movement of the said feed bar, the said cutting edges being arranged in different horizontal planes and the cutting edge of one of the cutters cutting through the thickness of the upper doubled-up portion of the brim at the time the needle bar is in its lowermost position, and the cutting edge of the other cutter cutting through the doubled-up brim at the outer edge thereof and at a time the needle bar is in lowermost position.

4. In a sewing machine, the combination of a reciprocating needle bar, a reciprocating cutter carried by the needle bar and arranged to one side of the sewing needle and spaced therefrom, a presser foot having a slot for the passage of the said cutter, a needle plate, and a feed bar for feeding the doubled up brim of a felt hat, transversely of the needle plate, the length of the cutting edge of said cutter being in excess of the throw of the feed bar, the said cutting edge being spaced from the needle plate a distance equal to the thickness of the brim, at the time the needle bar reaches its lowermost position.

5. A cutting attachment for sewing machines, comprising a carrier attached to the needle bar of the sewing machine, and spaced cutters adjustably secured to the said carrier and having their cutting edges in different horizontal planes.

[Claims 6 and 7 not printed in the Gazette.]

1,103,826. AUTOMATIC CAR-FENDER AND SAFETY-BRAKE. BERNARD PÉDUCASSE, Lyon, France. Filed Dec. 13, 1909. Serial No. 532,793. (Cl. 105—250.)



1. In a device of the class described, and in combination with a suitable vehicle, a fender comprising a plurality of parts in telescoping relation, the said parts having openings adapted to register, locking means adapted to engage said openings to retain one of said parts in retracted position, means for projecting the said part relatively to the other when the locking means is released, a brake on the vehicle, and a plurality of independently operable means for simultaneously releasing the said locking means and actuating the said brake, whereby the speed of the car is lessened when the said part is brought to projected position.

2. In a device of the class described, the combination with a suitable vehicle of a fender rotatably mounted thereon, the fender comprising parts telescopically related, means for holding one of the parts in a retracted position, other means for projecting the said part, a brake on the vehicle, and a plurality of independently operable means for moving the said holding means in order to permit the said part of the fender to be projected and for actuating the brake in any position the said part may occupy.

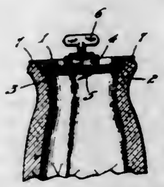
3. In a device of the class described, in combination with a suitable vehicle, of a rotatable fender, the fender comprising two parts in movable relation, means for maintaining the parts in such relation, the said means comprising locks movably mounted in position, parts of the fender being provided with registering openings into which the said locks extend, a solenoid associated with the locks, a plurality of independently op able means for closing the circuit through the solenoid, and means for projecting one of the said parts of the fender relatively to the other when the locks are actuated by the solenoid.

4. In a device of the class described, in combination with a suitable vehicle, a fender rotatably mounted thereon, the fender comprising parts in movable relation, means for holding the parts in one relation, the said means including locks, a solenoid carried by the fender for actuating the locks, means between the fender and the vehicle for maintaining electrical connection with the solenoid in any position of the fender, means for moving one of the said parts relatively to the other, and a plurality of independently operable means for closing a circuit through the said solenoid.

5. In a device of the class described, in combination with a suitable vehicle, a fender rotatably mounted on the vehicle, the fender comprising a plurality of parts in extensible relation, means for holding the said parts in non-extended position, the said means comprising an electro-magnetic device carried by the fender, means for extending the said parts relatively to each other, and coöperating means on the vehicle and fender whereby the circuit through the said electro-magnetic device may be closed in any position of the fender.

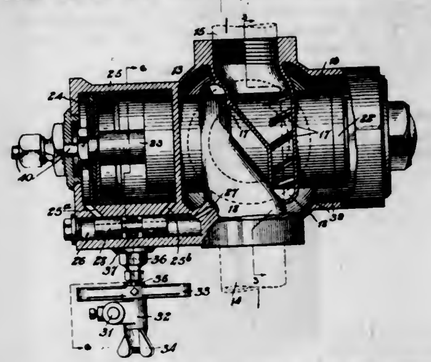
[Claims 6 to 13 not printed in the Gazette.]

1,103,827. BOTTLE-COVER. FREDERICK W. PEISCH, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 813,052. (Cl. 215—53.)



A bottle cover comprising a cover member adapted to fit within the mouth of a bottle to rest upon the ordinary closing disk therein and provided with a central recess and a raised edge flange adapted to contact with the edges of the bottle mouth; and a spring wire cork screw member mounted for limited longitudinal movement in said recess and projecting therefrom, substantially as described.

1,103,828. AUTOMATIC LAUNDRY-VALVE. WILLIAM H. PERKINS and CARL A. LINDGREN, Hathorne, Mass. Filed Jan. 26, 1914. Serial No. 814,389. (Cl. 137—68.)



1. In a device of the character set forth, the combination of a main casing having means to supply thereto different characters of fluid, a cylindrical shell within the casing, said shell having two series of circumferentially arranged inlet ports communicating with the several supply means, said supply means including circumferential chambers extending around and in communication with the respective ports, a cylindrical valve slidable within the shell and having two sets of ports adapted to register with the aforesaid ports, a cut-off slidable within the valve and adapted to close either series of ports aforesaid, and means to reciprocate said valve independently of the operation of the cut-off.

2. The herein described valve mechanism comprising a casing, a fixed shell within the casing, said shell being provided with spaced series of ports, a valve movable within the shell and having ports adapted to register with the aforesaid ports, means to deliver different characters of fluid to said shell and into communication with the several series of ports, a hand-controlled slidable cut-off 39' to close one or the other of said series of ports while the others are left open, and means coöperating with said shell to deliver from the interior thereof the fluid received through said shell, substantially as set forth.

3. The herein described valve mechanism including a main casing having means to supply thereto different characters of fluids, a cylindrical shell within the casing, said shell having two series of circumferentially arranged inlet ports communicating with the several supply means, said supply means including circumferential chambers extending around and in communication with the respective ports, a cylindrical valve slidable within the shell and

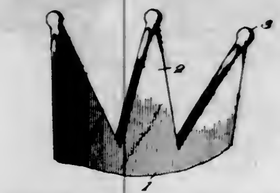
having two sets of ports adapted to register with the aforesaid ports, and means to reciprocate said valve so as to either open or close all of said ports.

4. The herein described valve mechanism including a main casing having means to supply thereto different characters of fluids, a cylindrical shell within the casing, said shell having two series of circumferentially arranged inlet ports communicating with the several supply means, said supply means including circumferential chambers extending around and in communication with the respective ports, a cylindrical valve slidable within the shell and having two sets of ports adapted to register with the aforesaid ports, a hand-controlled cut-off slidable within the valve and adapted to close either of said registering series of ports, and automatic means to reciprocate the valve independently of the movement of the cut-off, substantially as set forth.

5. The herein described valve mechanism for washing machines comprising a main casing having supply means for hot and cold water and an outlet for mixed hot and cold water, each of said supply means including an annular chamber, a stationary cylindrical shell within said annular chambers, said shell having a series of ports communicating with each of said annular chambers and arranged throughout the extent of the annular chamber pertaining thereto whereby the water is delivered within the shell, a valve movable with respect to the shell on the inside thereof, and means controlled by the amount of water delivered for automatically moving said valve, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,103,829. GRAMOPHONE NEEDLE OR STYLUS. MINARD A. POSSONS, Cleveland, Ohio. Filed Dec. 16, 1913. Serial No. 807,074. (Cl. 181—11.)



1. A gramophone needle, comprising a sheet of thin metal having an enlarged rounded member on its outer end.

2. A gramophone needle, comprising a sheet of thin metal tapering and having an enlarged rounded member on its outer end.

3. A gramophone needle, comprising a sheet of thin metal having an enlarged rounded member formed integral therewith on its outer end.

4. A gramophone needle comprising a sheet of thin metal having an elliptical member on its outer end.

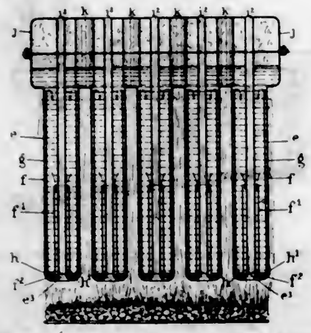
5. A gramophone needle comprising a sheet of thin metal having an elliptical member formed integral therewith on its outer end.

[Claims 6 to 8 not printed in the Gazette.]

1,103,830. DEVICE FOR HEATING AND VAPORIZING LIQUIDS. CHARLES LUCIEN PREINSLER, Rheims, France. Filed Dec. 12, 1913. Serial No. 806,309. (Cl. 122—406.)

1. A tubular container for heating liquids having a bottom centrally recessed substantially as described, in combination with partitioning arranged therein and comprising a tubular member inwardly recurved at its lower end to form an inner tubular passageway spaced from the outer walls thereof, the latter being arranged within the tubular container and spaced therefrom to afford a circulatory passage between the same, said passageway corresponding substantially in cross sectional area to that of the inner tubular passageway.

2. A tubular container for heating liquids having a bottom centrally recessed substantially as described, in combination with partitioning arranged therein and comprising a tubular member inwardly recurved at its lower end to form a relative short inner tubular passageway spaced from the outer walls thereof, the latter being arranged within the tubular container and spaced therefrom to afford a circulatory passage between the same, said passageway corresponing substantially in cross sectional area to that of the inner tubular passageway.

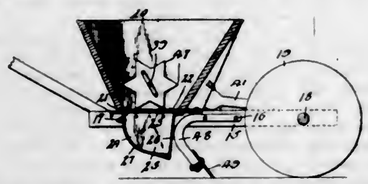


3. In a container for heating liquids, a convex bottom centrally recurved substantially as described, in combination with a cover for said container and a stay bolt extending between said cover and the central recurved portion of the bottom, for the purpose described.

4. In a container for heating liquids, a convex bottom centrally recurved substantially as described, in combination with a cover for said container and a hollow stay bolt extending between said cover and the central recurved portion of the bottom to permit the combustion gases to pass therethrough and thus increase the heating surface of the container.

5. A multi-unit boiler for liquids, comprising a plurality of heating units each comprising a liquid container having internal partitioning which forms inner and outer communicating circulatory channels of substantially equal cross sectional area, said units being spaced apart together with flues arranged in extension of said spaces between the heating units to permit the flow of the gases of combustion therethrough, substantially as described.

1,103,831. SEED-PLANTER. ROBERT H. PRIOR, Cedartown, Ga., assignor of one-half to Augustin E. Young, Cedartown, Ga. Filed Mar. 10, 1914. Serial No. 823,762. (Cl. 111—32.)



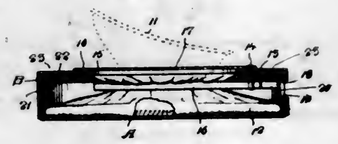
1. In a planter, a discharge spout having an opening, a pivoted member carrying a tongue to obstruct said opening, said pivoted member having a crank at one end, an axle, a tappet member on the axle, and a spring retracted rod connected pivotally at one end with the crank on the pivoted member and having at the other end a lug positioned in the path of the tappet member.

2. In a seed planter, a discharge spout, a pivoted member having a crank at one end, a tongue secured on the pivoted member and constituting a closure for the spout, a spring retracted rod connected pivotally at one end with the crank on the pivoted member, and means for actuating the rod at predetermined intervals.

3. In a planter, a discharge spout, a pivoted member having a closure for said spout, and a crank at one end, a spring retracted rod connected pivotally with the crank, a tappet member supported for rotation and including a plurality of cam series having various numbers of cams arranged side by side, a plate fixed on the frame of the planter and having an upstanding flange with a plurality of notches arranged in alinement with the cam series, a lug depending from the spring and adapted to lie in the path of one of the cam series, the spring retracted rod being guided through one of the notches in the flanges, said flange and rod being also provided with interengaging notches whereby the rod may be supported with the lug out of the path of any of the cam series.

4. In a planter, a hopper having a shaft supported for rotation and provided with a crank at one end, an axle carrying a ground wheel and having a crank at one end, a pitman connecting the two cranks and having an intermediate bulged portion, and a keeper through which the pitman is guided, the end portions of said keeper being provided with anti-friction members.

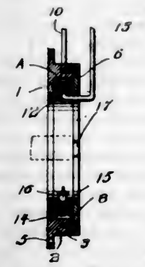
1,103,832. CUSPIDOR. ADOLPH A. RACKOFF, New York, N. Y. Filed Nov. 5, 1913. Serial No. 799,347. (Cl. 4—39.)



1. A cuspidor comprising a two-part box-like casing having an opening, shutter-like sections normally closing the opening and pivoted to one part of the casing, a collapsible box held within the casing and having an expansible mouth portion to be projected through the opening in the casing, levers connected to the pivots of the shutters and working interiorly of the casing to act upon the mouth of the bag for closing the same, and finger extensions on the said levers and projected through one side of the casing.

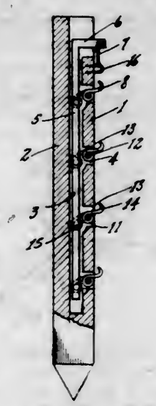
2. A cuspidor comprising a two-part box-like casing having an opening, shutter-like sections normally closing the opening and pivoted to one part of the casing, a collapsible box held within the casing and having an expansible mouth portion to be projected through the opening in the casing, levers connected to the pivots of the shutters and working interiorly of the casing to act upon the mouth of the bag for closing the same, finger extensions on the said levers and projected through one side of the casing, and resilient means mounted between the finger extensions for acting thereon to bring the shutters and levers together.

1,103,833. TIRE-INFLATOR. CHARLES RAGAN, Buffalo, N. Y. Filed July 23, 1913. Serial No. 780,842. (Cl. 152—11.)



In a device of the character described a ring, an annular extension formed on said ring, said annular extension being of less thickness than the width of the ring and having screw receiving apertures in the periphery thereof, said annular extension also having an outlet aperture in the periphery thereof, ears formed integral with the ring and extending outwardly therefrom to provide means to connect the ring to the spokes of a vehicle wheel, an inner rotatable ring mounted within the annular extension and spaced therefrom to form a chamber, said inner rotatable ring having an air inlet aperture therein, arms at diametrically opposed points extending into the ring and forming a means to secure said ring to the axle of a vehicle, a cover plate having screw receiving apertures therein, adapted to register with the internally screw threaded apertures in the annular extension, and a packing ring secured to the rotatable ring and adapted to frictionally engage the side walls of the chamber to prevent air leakage when the device is in use.

1,103,834. FENCE-POST AND WIRE-HOLDER. JOHN D. RALEY, New Castle, Colo. Filed Jan. 26, 1914. Serial No. 814,439. (Cl. 256—48.)



1. A device of the character described comprising a body portion, said body portion being provided with a longitudinal recess, said body portion also being provided with a plurality of apertures communicating with the recess, a wire engaging element in each of the apertures, a bar slidable through the longitudinal recess, pivotal connections holding the wire-engaging elements to the bar, and means at the opposite ends of the pivotal connections to engage fence wires and hold the same in place against the post.

2. In a device of the character described, the combination with a fence post having a longitudinally extending recess formed therein and a plurality of apertures communicating with the recess, of a plurality of wire-engaging elements pivoted in the recesses, a bar slidable through the longitudinal recess, means to pivotally secure the inner ends of the wire-engaging elements to the bar, means at the opposite ends of the wire-engaging elements to engage fence wires, and means carried by the longitudinal bar to lock the whole in place.

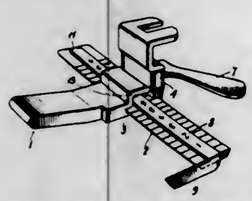
3. In a device of the character described, the combination with a fence post having a longitudinal recess and a plurality of transverse apertures communicating with the recess, of a bar slidable longitudinally through the recess, wire-engaging elements pivotally secured in each of the apertures, the inner ends of said wire-engaging elements being pivotally secured to the bar, wire-holding hooks formed at the outer ends of the wire-engaging elements, the free ends of the wire-engaging hooks being adapted to frictionally engage the outer face of the fence post and hold fence wires in place thereon, an angular extension formed at the upper end of the longitudinal bar, a hasp pivoted to the free end of the angular extension, said hasp being provided with a slot, a staple secured to the fence post and adapted to extend through the slot in the hasp to hold the bar in its locked position.

1,103,835. HIGH-TENSION-CURRENT SYSTEM. RICHARD RAINES, New York, N. Y. Filed Mar. 9, 1912. Serial No. 682,723. (Cl. 123—166.)



A circuit interrupting device comprising a cylindrical casing capable of rotary movement, contacts on the inner surface of said casing and normally spaced apart, a cam within said casing and composed of a laminated structure and adapted to actuate said contacts to circuit closing position, a shaft carrying said cam, and a rigid connection between said cam and shaft, said connection comprising spring fingers fastened to the opposite faces of said cam at diametrically opposite points and engageable in grooves formed in the adjacent part of the shaft of said armature.

1,103,836. ATTACHMENT FOR SEWING-MACHINES. WILLIAM HENRY RAPLEE, Los Angeles, Cal., assignor to The Raplee Squier Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 15, 1913. Serial No. 754,660. (Cl. 112—9.)



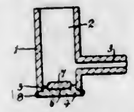
1. A presser foot having its under face formed to provide a presser surface and having a transverse shoulder in said under face, a presser part fitted against said shoulder for adjustment transversely of said presser foot, the presser part having its underface flush with the underface of said foot to form a substantially uninterrupted inward continuation of said presser surface in any position of said presser part, a leaf spring arranged against the rear face of the presser foot and having its lower edge portion formed as an engaging lip which coacts with the shoulder to define a groove or channel in which the presser part is fitted, the leaf spring having a slot, a lug projecting rearwardly from the presser foot through said slot, and a cam lever pivoted at its engaging end to said lug and arranged to act on said leaf spring to cause the latter to engage the presser part with clamping pressure.

2. A presser foot having its under face formed to provide a presser surface and having a transverse shoulder in said under face, a presser part fitted against said shoulder for adjustment transversely of said presser foot, the presser part having its under face flush with the under face of said foot to form a substantially uninterrupted inward continuation of said presser surface in any position of said presser part, means in co-action with the shoulder to clamp the presser part to the presser foot and a spring pressed edge guide mounted directly on the presser part and including a yieldable finger arranged closely adjacent an end of said presser part.

3. A presser foot having its underface formed to provide a presser surface and having a transverse shoulder in said under face, a presser part fitted against the shoulder for adjustment transversely of the presser foot, the presser part having its under face flush with the under face of said foot to form a substantially uninterrupted inward continuation of said presser surface in any position of said presser part, means in co-action with the shoulder to clamp the presser part to the presser foot, the latter having a recess opening to its under face inwardly of the shoulder and above said presser part, and an edge guide comprising a leaf spring fixed on the upper face of the presser part and disposed longitudinally thereof in line with the recess in the presser foot and a guide finger arranged at the free end of said spring beyond and adjacent said end of said presser part.

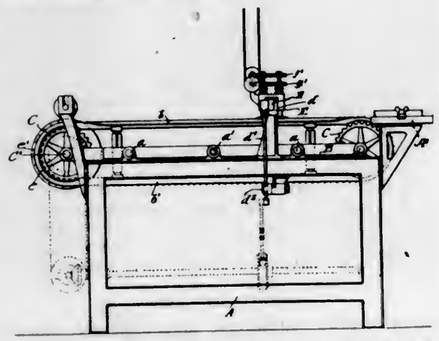
4. A presser foot having its underface formed to provide a presser surface and having a transverse shoulder in said under face, a presser part fitted against the shoulder for adjustment transversely of the presser foot, the presser part having its under face flush with the underface of said foot to form a substantially uninterrupted inward continuation of said presser surface in any position of said presser part, means in co-action with the shoulder to clamp the presser part to the presser foot, a leaf spring fixed on the upper face of the presser part and disposed longitudinally thereof, and a guide finger arranged at the free end of the leaf spring beyond and adjacent an end of said presser part.

1,103,837. TOBACCO-PIPE. EDWARD REDFERN, Auckland, New Zealand. Filed Oct. 8, 1913. Serial No. 794,112. (Cl. 131—12.)



A tobacco pipe comprising a bowl, a cylindrical bore therethrough, a stem, a recessed cap adapted to fit both ends of the bore and a removable wad of absorbent material fitting said recess, substantially as herein set forth and illustrated.

1,103,838. MECHANISM FOR CUTTING THE FLOATING THREADS OF LACE AND OTHER FABRICS. MARTIN O. REHFUSS, ARTHUR BURGESS, and JOHN G. REHFUSS, Philadelphia, Pa. Filed Feb. 12, 1912. Serial No. 676,994. (Cl. 26—9.)



1. The combination, in mechanism for removing floating threads from fabrics, of a cutter; means for stretching the fabric; and means for rotating the cutter in a plane substantially parallel to the plane of the stretched fabric to cut the floating threads.

2. The combination, in mechanism for removing floating threads from fabrics, of a cutter; fabric supports spaced apart; means for stretching a fabric between the supports; and means for moving the cutter in a plane substantially parallel to the plane of the stretched fabric to sever the floating threads therefrom.

3. The combination, in mechanism for removing the floating threads from fabric, of a cutter; fabric supports spaced apart; means for stretching a fabric between the supports; means for conveying the fabric; means for moving the cutter in contact with the fabric between the supports to sever the floating threads projecting therefrom, said cutter being rotatable in a plane substantially parallel with the plane of the fabric.

4. The combination, in mechanism for removing floating threads from a fabric, of means for stretching the fabric to raise the floating threads; a cutter consisting of two blades rotatable in a plane substantially parallel with the plane of the stretched fabric; means for independently rotating the blades; and means for causing a relative movement between the cutter and the fabric.

5. The combination, in mechanism for removing floating threads from fabrics, of means for conveying a fabric; means for stretching the fabric transversely to the direction of and during said conveying movement; a cutter; and means for rotating said cutter in a plane substantially parallel with the plane of the stretched fabric to cut and remove the floating threads of the fabric.

[Claims 6 to 12 not printed in the Gazette.]

1,103,839. RAISING AND LOWERING MECHANISM. GEORGE E. RELLAY, Guilford, Conn. Filed Nov. 18, 1913. Serial No. 801,684. (Cl. 248—3.)



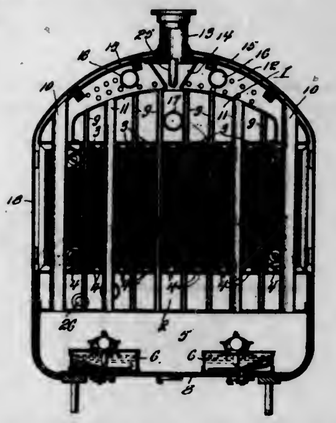
1. A raising and lowering mechanism comprising a tubular standard, a tubular support within the standard, clamping jaws in the tubular support and projecting through the wall thereof, means for manipulating them, and a guide fixed to the upper end of the tubular support and adapted to close the interior of the tubular standard, forming an air cushion.

2. A raising and lowering mechanism comprising a tubular standard, a tubular support within the standard, clamping jaws in the tubular support and projecting through the wall thereof, means for manipulating the jaws, a guide fixed to the upper end of the tubular support and adapted to close the interior of the standard, and a guide fixed to the lower end of the standard adapted to engage the exterior of the tubular support.

3. A raising and lowering mechanism comprising a tubular standard, a tubular support within the standard, clamping jaws in the tubular support and projecting through its wall, means for manipulating the jaws, a guide fixed to the lower end of the standard and adapted to engage and slide along the exterior of the tubular standard and a stop projecting through the wall of the tubular standard in position to engage the said guide and limit the upward movement of the standard.

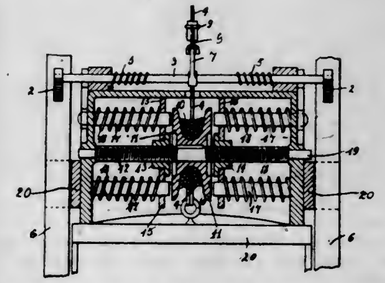
4. A raising and lowering mechanism comprising a tubular standard, a tubular support for the standard, means within the tubular support and projecting through its wall for locking the standard in different vertical adjustments and a U-shaped stop within the tubular support having its opposite ends projecting through the wall of the support in position to engage the standard and limit its movement.

1,103,840. AUTOMOBILE-RADIATOR. EDGAR J. RICHARDSON, Sioux City, Iowa. Filed May 14, 1913. Serial No. 767,635. (Cl. 62—28.)



A radiator comprising upper and lower water compartments, intermediate water tubes connecting such compartments, a heating chamber beneath the lower compartment having door covered openings in its front and bottom, an air space above the upper compartment, air tubes connecting the heating chamber and air space, a casing inclosing the compartments and intermediate connecting tubes, and a door in the lower portion of the front of the casing opposite the door opening in the front of the heating chamber.

1,103,841. SAFETY APPARATUS FOR MINING-CAGES. SIDNEY WILLIAM RICHARDSON and WILLIAM STAVELEY, Hokitika, New Zealand. Filed May 7, 1913. Serial No. 766,180. (Cl. 187—87.)

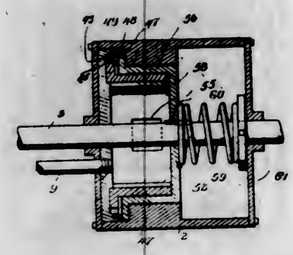


1. Apparatus of the nature described comprising a mining cage connected directly to the main supporting rope, an independent carriage located above the cage, means carried by said carriage for automatically arresting the fall of the carriage upon breakage of said rope, a screw-threaded spindle rotatably mounted on said carriage, a drum fixed thereto, a rope coiled around said drum and fixedly connected at one end to the drum and at the other end to the cage, screw threaded nuts mounted on said spindle and carrying crossheads, and springs adapted to be compressed by said crossheads on rotation of the drum, substantially as described.

2. Apparatus of the nature described comprising a mining cage connected directly to the main supporting rope, cage guides, an independent carriage located above the cage, eccentric grip dogs mounted on said carriage, springs tending to throw said grip dogs into engagement with said cage guides, arms on said dogs, means for connecting said arms to a ring encircling the rope, a collar on the rope for engaging said ring, a screw-threaded spindle rotatably mounted on said carriage, a drum fixed

thereto, a rope coiled around said drum and fixedly connected at one end to the drum and at the other end to the cage, screw threaded nuts mounted on said spindle and carrying crossheads, and springs adapted to be compressed by said crossheads on rotation of the drum, substantially as described.

1,103,842. INTERNAL-COMBUSTION ENGINE. JOSEPH P. ROBERTS, Bell, Fla. Filed Dec. 18, 1912. Serial No. 737,475. (Cl. 136—7.)



1. Valve mechanism for internal combustion engines embodying a rotary valve shaft, a stationary ported valve seat base, a ported cylindrical valve seat thereon, and a ported cylindrical valve fast on the rotary valve shaft and working in contact with the valve seat.

2. Valve mechanism for internal combustion engines embodying a rotary valve shaft, a stationary ported valve seat base, a ported cylindrical expansion valve seat thereon, and a ported cylindrical valve fast on the rotary valve shaft and working in contact with the valve seat.

3. Valve mechanism for internal combustion engines embodying a rotary valve shaft, a stationary ported valve seat base, a ported cylindrical valve seat thereon, and a ported cylindrical valve fast on the rotary valve shaft and encircling and working in contact with the valve seat.

4. Valve mechanism for internal combustion engines embodying a rotary valve shaft, a stationary ported valve seat base, a ported cylindrical valve seat thereon, a ported cylindrical valve fast on the rotary valve shaft and working in contact with the valve seat, and a spring holding the valve against the valve seat.

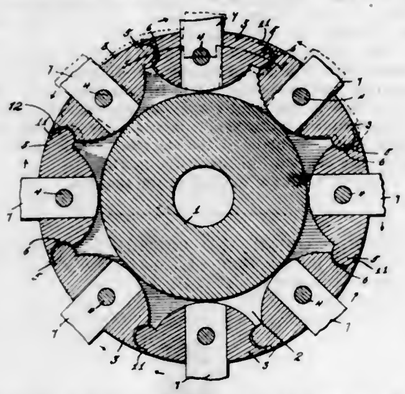
5. Valve mechanism for internal combustion engines embodying a rotary valve shaft, a stationary ported valve seat base, a divided and ported cylindrical valve seat thereon, and a ported cylindrical valve fast on the rotary valve shaft and working in contact with the valve seat.

[Claims 6 to 9 not printed in the Gazette.]

1,103,843. FLY-WHEEL. NELS J. ROTHSTEN, Beloit, Wis. Filed May 19, 1913. Serial No. 768,598. (Cl. 74—6.)

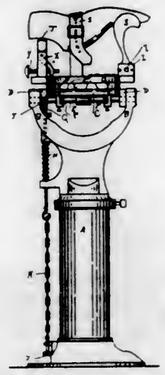
1. A fly wheel of the class described comprising a hub, a plurality of blocks pivotally mounted upon said hub, each block provided with a spoke receiving socket, a spoke carried by each block, a section of a rim carried by each spoke and constituting a balancing weight therefor, each block provided with a projecting knob at one end and a receiving socket at the other end, the socket of each block being slightly deeper than the knob of the adjacent block adapted to fit therein for allowing the free swinging movement of said blocks and reducing the friction or engagement between said blocks, said blocks adapted to simultaneously swing under a sudden impulse or rotation for equalizing the rotation of said hub.

2. A device of the class described comprising a hub, blocks pivotally carried thereby, each block provided with a socket at one end, a rounded knob carried by each block, the knob of one block adapted to fit in the socket of the adjacent block, a spoke carried by each block, and a weight carried by each spoke adjacent the outer end thereof, said blocks provided with stop shoulders formed adjacent said sockets and knobs for limiting the swing of said blocks upon said hub, the swing of one block adapted to control the swing of the adjacent blocks for causing



the center of gravity of the weight of said spoke to be shifted under a sudden swing of said wheel.

1,103,844. REPAIR-JACK. DANIEL ROUNDS, Portland, Me. Filed Sept. 12, 1912. Serial No. 719,903. (Cl. 12—123.)



1. In a repair jack, a pedestal, a work support mounted on said pedestal and arranged to have rotary motion about both horizontal and vertical axes, and means for automatically causing the work support to rise or fall in response to the turning movement of the work support about its horizontal axis.

2. In a repair jack, a pedestal, a work support mounted in said pedestal and arranged to have rotary motion about both horizontal and vertical axes, and means for automatically causing said work support to rise or fall with a graduated regular motion in response to the turning movement of the work support on its horizontal axis.

3. In a repair jack, a pedestal, a table mounted on said pedestal adapted to have vertical rotation, a plate mounted on said table and adapted to have sliding movement relative thereto, and a work supporting ring mounted on said plate and adapted to be rotated relative to said plate.

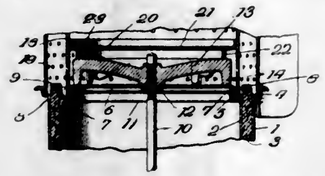
4. In a repair jack, a pedestal, a table pivotally supported on said pedestal, a plate mounted on said table and adapted to have sliding movement relative thereto, means for causing said plate to slide on said table when the table is rotated, and a work support mounted on said plate.

5. In a repair jack, a pedestal, a shaft fixedly mounted in said pedestal, a table rotatably secured to said shaft and provided with a slot, a plate adapted to have sliding

movement relative to said table, a gear rigidly secured on the shaft, a rack on the under side of the plate, the gear on the shaft being adapted to project through the slot in the table into engagement with the rack on the under side of the plate, and a work support mounted on said plate.

[Claims 6 to 8 not printed in the Gazette.]

1,103,845. MEANS FOR RAISING COMBUSTION-TUBES ON BLUE-FLAME WICK-STOVES. HENRY RUPPEL, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 27, 1913. Serial No. 786,942. (Cl. 158—90.)



1. The combination with a burner having a central diaphragm, upwardly extending members carried by the diaphragm, of combustion tubes having means within the central tube for engaging the upwardly extending members and raising the combustion tube above the burner.

2. The combination with a burner having a central perforated diaphragm, radially extending arms carried by the diaphragm and strengthening the same, of a combustion tube having in the center thereof a downwardly extending member having inclined edges adapted to engage the radially extending arms for raising the combustion tube above the burner.

3. The combination with a burner having a central perforated diaphragm, radially extending arms carried by the diaphragm, of a combustion tube having a horizontally arranged plate within the central tube, a vertically disposed ring carried by the plate and having inclined lower edges adapted to engage the radially extending arms of the diaphragm, whereby the rotation of the combustion tube raises the same from the burner trough.

4. The combination with a burner having a central diaphragm, radially extending arms carried by the diaphragm, a ring connecting the outer ends of the arms, of a perforated combustion tube having a downwardly extending member having inclined edges adapted to engage the radially extending arms at a point between the said ring and the inner ends of the arms, whereby the combustion tube is raised by the rotation thereof.

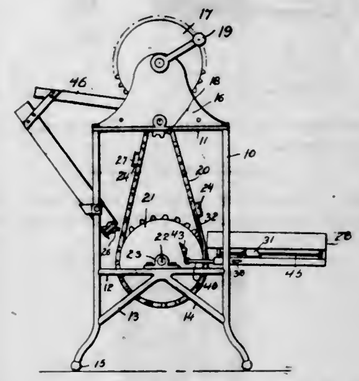
5. The combination with a burner having a central perforated diaphragm, radially extending arms carried by the diaphragm, a ring connected to the arms within their outer ends, a perforated combustion tube, the inner tube having a horizontal plate attached thereto, a vertically disposed ring carried by the plate and spaced from the inner combustion tube and having portions of its edges downwardly inclined and terminating in upwardly extending portions and adapted to rest upon the outer ends of the radially extending arms beyond the ring.

[Claims 6 to 9 not printed in the Gazette.]

1,103,846. ADDRESSING AND INSERTING MACHINE. THOMAS F. RUSSELL, Spokane, Wash. Filed Aug. 11, 1913. Serial No. 784,283. (Cl. 101—1.)

1. In a machine of the character described, a name plate grabbing frame, said frame comprising a pair of angular spaced vertically disposed arms, a rack bar formed integrally with said frame, a pair of laterally extending spaced arms formed integral with said frame, and rollers mounted upon said last mentioned arms.

2. In a machine of the character described, a plurality of name plates, a name plate receiving magazine, said magazine comprising a casing divided into two compartments, one of said compartments adapted to receive said name plates, means for increasing the receiving capacity of said plate receiving compartment, said means comprising a stop plate slidably mounted within said receiving compartment, and means for operating said stop plate comprising a rack bar slidably mounted within the other of said compartments, means for operatively connecting the rack bar with the stop plate, a spring interposing one terminal of the rack bar and the end of the casing in which it is mounted and means for operating said rack bar.



3. In a machine of the character described, a pair of chains adapted to be rotated, a drum adapted for rotary engagement with said chains, a plurality of name plates, means for individually supporting each of said name plates mounted upon said chains, means for removing said name plates from said supporting means including a pair of angular arms normally disposed for engagement with said name plates, a pair of arms formed integral with said first mentioned arms, and a cam member mounted upon said drum and adapted for engagement with said last mentioned arms.

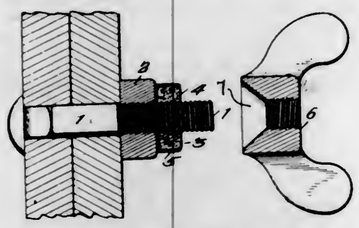
4. In an addressing machine, a filling magazine, name plates arranged within said filling magazine, a receiving magazine, means for removing the name plates from the filling magazine, means for automatically removing the name plates from said first named removing means, and means for automatically adjusting the capacity of the receiving magazine comprising a rack bar slidably mounted within said receiving magazine, a stop block slidably mounted within said receiving magazine and operatively connected with the rack bar, a spring engaging one terminal of the rack bar and the receiving magazine, cams operatively connected with the first named removing means and a pair of spaced arms carried by said rack bar and adapted for engagement with the cams.

5. In a machine of the character described, a name plate grabbing frame, said frame comprising a pair of spaced arms, a rack bar formed integral with said frame, a name plate receiving compartment, said rack bar disposed within the compartment, a pair of spaced arms formed integral with said first named arms and extending at right angles thereto, rollers mounted upon the free terminals of said last named arms, a spring mounted within the compartment between one terminal of the rack bar and one end of the compartment, and means for increasing the receiving capacity of the receiving compartment operatively connected with and actuated by said rack bar and means for operating the rack bar to increase the receiving capacity of said receiving compartment.

1,103,847. NUT-LOCK. JOHN GEORGE SCHNEIDER, York, Pa., assignor of one-third to Charles A. Hawkins, York, Pa. Filed Jan. 27, 1914. Serial No. 814,652. (Cl. 151—7.)

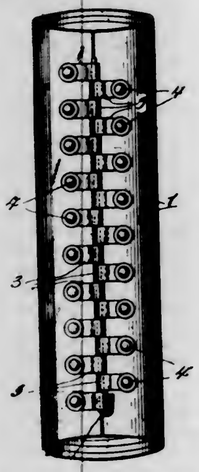
The combination with a threaded bolt and an ordinary nut applied thereto, of a locking nut applied against the outer face of the ordinary nut and composed of a circular body of elastic material, and a compressible casing of

thin metal which incloses the cork body, the face portion of the latter being compressed into the thread of the bolt,



and the sheet metal retaining the cork in such engagement, as described.

1,103,848. BLOW-OUT PATCH. CHARLES L. SMITH, Brooklet, Ga. Filed May 16, 1913. Serial No. 768,098. (Cl. 152—24.)



A blow out patch for the inner tube of a pneumatic tire, said patch consisting of a tubular body flexible throughout and divided longitudinally of its inner wall, rows of metal loops attached to said body and arranged to alternate with and overlap each other at their closed ends, all of said loops being positioned wholly on the outside face of the body and each loop being independently fastened to the body by a rivet located at such distance from the marginal edge as to leave the latter free and flexible, a coupling wire inserted through said overlapping loops, and a flap fastened to the inside face of one of said marginal edges and overlapping the other marginal edge of the inside face of the latter, the disposition of said loops and their fastening rivets being such that when said coupling wire is inserted through said loops, the marginal edges of the flexible body lie in close proximity to each other throughout their length.

1,103,849. FIRE-ESCAPE. ANDREW F. V. STENBORG, Hibbing, Minn. Filed Sept. 25, 1912. Serial No. 722,338. (Cl. 227—28.)

1. A device of the character described including a body member provided with an encircling helical rope or cable receiving groove, the ends of which are extended longitudinally through the ends of the body, and a lock plate pivoted intermediate its length to the body member and adapted in one position to extend by its ends over the end portions of the groove to close the same.

2. A device of the character described including a tortuously grooved body member, a rope or cable adapted to engage in the groove of the body member, a locking member carried by the body member and movable into position to lock the rope or cable in the groove, a life belt, and means for attaching the life belt to the body member, said means also locking the locking member against movement out of active position.



3. A device of the character described including a body member, the central portion of which is provided with a helical rope or cable receiving groove and the end portions of which are flattened at one side, the flattened faces of said body member being grooved longitudinally to form continuations of the first mentioned groove, and a locking plate movable to snugly engage over the flattened portions of the body member to bear over the grooves thereof and prevent displacement of a cable therefrom.

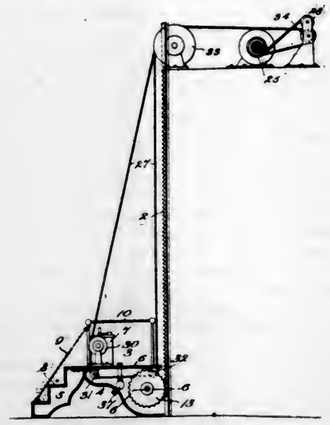
4. A device of the character described including a body member, the end portions at one side of which are flattened, said body member being provided centrally with a helical rope or cable receiving groove, said flattened portions being provided with longitudinally extending rope or cable receiving grooves forming continuations of the helical groove, the central portion of the body member being provided with a longitudinal slot lying in the plane of the flattened end portions, a locking plate passed through said slot and pivoted therein, and supporting means detachably connected to said body member, the connection being such as to prevent movement of the locking plate to inactive position.

5. A device of the character described including a body member, the end portions at one side of which are flattened, said body member being provided centrally with a helical rope or cable receiving groove, said flattened portion being provided with longitudinally extending rope or cable receiving grooves forming continuations of the helical groove, the central portion of the body member being provided with a longitudinal slot lying in the plane of the flattened end portions, and a locking plate passed through said slot and pivoted therein.

[Claim 6 not printed in the Gazette.]

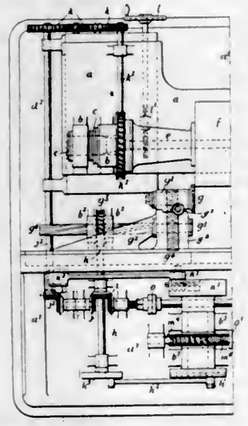
1,103,850. FIRE-ESCAPE. BERNHARD SÜSSIS, New York, N. Y., assignor of one-half to Louis Chrystal, Newark, N. J. Filed Mar. 26, 1913. Serial No. 757,010. (Cl. 227—5.)

A fire escape adapted to be used in combination with a building comprising bars arranged vertically along the building each having angularly disposed sides, two of the adjacent said sides being provided with longitudinally disposed grooves and two of the adjacent sides being provided with teeth, a car mounted for movement along the bars and having hook portions which are slidably received in the grooves, gear wheels journaled upon the car and operatively connected together and meshing



with the teeth upon the bars, and means mounted upon the building for rotating the gear wheels.

1,103,851. MACHINE FOR CUTTING HELICAL TEETH OF GEAR-WHEELS. WILLIAM EDWIN SYKES, Uxbridge, England. Filed Jan. 6, 1912. Serial No. 669,857. (Cl. 90—8.)



1. In a machine for generating and cutting helical toothed gear wheels, the combination of a bed, means carried thereon for axially mounting and turning the wheel blank to be operated on, a second bed, a carriage mounted thereon and adapted to slide in a plane parallel with the face of the wheel blank, a cutter carried by said carriage, means for sliding said carriage, means for imparting a rocking motion to said cutter, and means for driving said wheel blank and said cutter simultaneously, substantially as described.

2. In a machine for generating and cutting helical toothed gear wheels, the combination of a slidable carriage, two sets of bearings thereon, a revoluble shaft mounted in one set of said bearings, a pinion carried by said shaft, a helical pinion shaped cutter mounted on one end of said shaft, a screw spindle adapted to revolve in the other set of said bearings, a gear wheel mounted on said spindle and engaging with said pinion, a nut engaging with said spindle, and means for sliding said spindle in said nut, substantially as described.

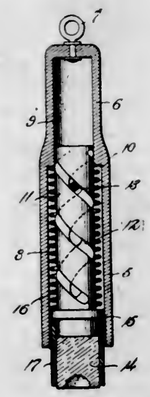
3. In a machine for generating and cutting helical toothed gear wheels, the combination of a slidable carriage, two sets of bearings thereon, a shaft revolubly mounted in one set of bearings and carrying a helical pinion shaped cutter, a screw spindle revolubly mounted in the other set of bearings, two engaging gear wheels mounted, respectively, on said shaft and said spindle, a nut engaging with and turning the said spindle, gear wheels and cutter during the endwise movement of said spindle with said carriage, and a revoluble crank and crank pin connected with the said slidable carriage, for operating the same, substantially as described.

4. In a machine for generating and cutting helical toothed gear wheels, the combination of a slidable carriage, bearings carried thereby, a rotatable shaft and a screw spindle adapted to turn in said bearings, gear connections between said shaft and spindle for imparting rotary motion from the latter to the former, a disk cutter in the form of a single helical pinion mounted on said shaft, a feeding mechanism adapted to actuate said cutter, and a revoluble crank operatively connected with said carriage to impart a reciprocatory movement thereto, substantially as described.

5. In a machine for generating and cutting helical toothed gear wheels, the combination of means for rotatably mounting a wheel blank on its axis, means for moving said wheel blank at right angles to its axis, a carriage, a rotatable helical pinion shaped cutter mounted on said carriage, means for sliding said carriage to and fro and simultaneously rocking said cutter on its axis, and a feeding mechanism adapted to act upon said cutter, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,103,852. AUTOMATIC POOL AND BILLIARD CUE CHALKER. FRANK MACOMB TILLOU, Bayonne, N. J. Filed May 3, 1913. Serial No. 765,302. (Cl. 46—8.)



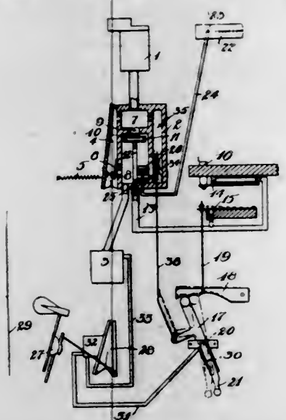
An automatic chalker comprising a cylindrical body having inner and outer bores therein, the outer bore being of greater size than the inner bore, a plunger slidably fitted within the inner bore and of less length than the body, an annular shoulder formed on the plunger spaced from the outer end thereof, the said plunger being formed with a spiral groove, a cross pin mounted in the body and engaged in the spiral groove so that on the inward and outward movements of the plunger the same will be rotated, a coiled expansion spring arranged within the outer bore of the body and surrounding the plunger and having its outer end working against the shoulder, a chalk cube arranged in alinement with the outer end of the plunger, and a resilient sleeve telescoped over the outer end of the plunger and also over the cube for connecting the same to the plunger, the said sleeve being of a length to extend over a major portion of the cube.

1,103,853. TAG-FASTENER. DENNY EDMUND WALSHE, Grand Saline, Tex. Filed Dec. 12, 1913. Serial No. 806,254. (Cl. 40—26.)



A tag fastener composed of wire in one piece and comprising a shank forming one side of the fastener, a spring tongue forming the opposite side thereof, a tag loop forming a continuation of said shank and tongue and a looped hook adjacent to and extending laterally beyond said tongue and composed of a primary return bend integral with the opposite end of said shank and a secondary return bend in continuation of said primary return bend and disposed on an incline and forming a looped bill disposed at an acute angle to said shank and adapted to pass in quick application under a package binding cord, the free end of said tongue normally resting on said secondary return bend adjacent to the tip thereof, said inclined secondary bend forming in conjunction with said tongue a tapering mouth which insures the entrance of said cord into said looped hook.

1,103,854. MECHANICAL MUSIC-PLAYING INSTRUMENT. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Nov. 22, 1912. Serial No. 732,802. (Cl. 84—160.)



1. In a pneumatic music playing instrument, a pneumatic action mechanism, exhaust mechanism for creating a vacuum therein, a wind-way connecting said parts, including three parallel passages, a pneumatically controlled regulator valve for one of said passages, a manually controlled valve for another of said passages, and a valve for the third passage, with means for either manually or automatically operating said last mentioned valve, said means including a pneumatic for moving said valve to its closed or opened position, a duct leading from said pneumatic to the atmosphere and opening to the atmosphere at two points, a valve for each of said openings to the atmosphere, each of said valves being normally closed, a small bleed hole connecting said last mentioned pneumatic with said exhaust mechanism to exhaust the same and cause said valve to normally remain open when both of said valves to the atmosphere are closed, a larger bleed hole also connecting said last mentioned pneumatic with said exhaust mechanism, a valve for the large bleed hole, a pneumatic for controlling said valve, a tracker board having an expression perforation therein arranged to be opened and closed by a note sheet, and a duct leading from said last mentioned pneumatic to said tracker perforation, the operation of said valve for the large bleed hole being effective only when one of the manually controllable valves for the atmospheric openings in the duct for the high tension valve is opened.

2. In a piano player, a sounding device, a hammer therefor, expression controlling means including a movable hammer support for holding the hammer at different striking distances relatively to said sounding device, pneumatic mechanism including a high tension exhauster, a pneumatic for mechanically moving said hammer support, an action chest for controlling the mechanical operation of the hammer, a pneumatic regulator for automatically regulating the air tension between said action chest at a lower tension than in said exhauster, means for abruptly putting said action chest in direct communication with said exhauster to increase the tension in said chest, means for manually varying the degree of the automatically regulated tension in said chest, and a single manually controllable device coöperating with all of said expression controlling means.

3. In a player piano, a sounding device, a hammer therefor, a pneumatic mechanism including an exhauster, a pneumatic action, a wind-way leading from said action to said exhauster and including a plurality of passages arranged in parallel, a valve for one of said passages, with a pneumatic regulator coöperating therewith for automatically controlling the passage of air through said passage to provide a regulated tension in said pneumatic action, a valve for another of said passages with means for fully opening or fully closing said passage by means of said valve, a manually controllable valve for the third passage for varying the degree of opening therewith, with a single manually operable controlling device coöperating with the second and third of said valves for causing the second valve to stand normally closed while the third valve is being opened, and with automatic means for opening the second valve even though the third valve is open.

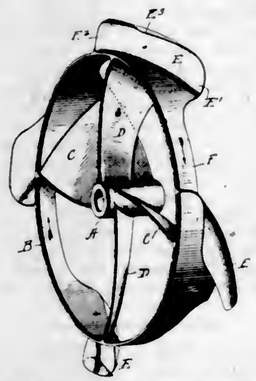
4. In a player piano, a sounding device, a hammer therefor, a pneumatic mechanism including an exhauster, a pneumatic mechanism including an exhauster, a pneumatic action, a wind-way leading from said action to said exhauster and including a plurality of passages arranged in parallel, a valve for one of said passages, with a pneumatic regulator coöperating therewith for automatically controlling the passage of air through said passage to provide a regulated tension in said pneumatic action, a valve for another of said passages with means for fully opening or fully closing said passage by means of said valve, a manually controllable valve for the third passage for varying the degree of opening therewith, with a single manually operable controlling device coöperating with the second and third of said valves for causing the second valve to stand normally closed while the third valve is being opened, and with automatic means for opening the second valve even though the third valve is open, said automatic means including a tracker-board and a perforated note sheet.

5. In a player piano, a sounding device, a hammer, pneumatic action mechanism, an exhauster, a tracker-board, a pneumatic regulator for automatically controlling the tension of air within the pneumatic action mechanism, a manually operable valve for permitting the degree of tension within the action mechanism to be gradually varied, with independent means for abruptly increasing the air tension within said pneumatic action mechanism whenever the same is less than the tension which obtains in the exhauster, with a single manually controllable device cooperating with said manually operable valve and said means for abruptly increasing said air tension within the pneumatic hammer action mechanism.

[Claim 6 not printed in the Gazette.]

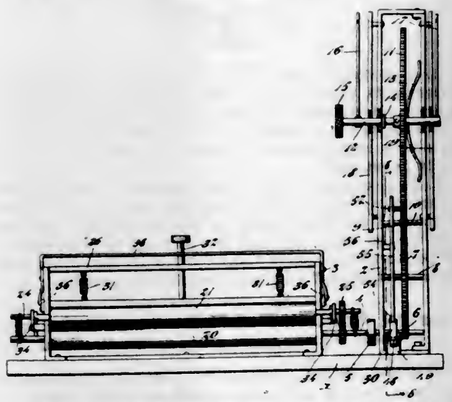
1,103,855. PROPELLER. JACOB F. WOODYARD, Parkersburg, W. Va. Filed Feb. 20, 1912, Serial No. 678,761. Renewed May 4, 1914. Serial No. 836,355. (Cl. 170—166.)

1. A wheel, substantially as herein described, comprising a hub, a band concentric with and spaced from the hub, a series of main blades between the hub and band and a series of supplemental blades between the hub and band and alternating with the main blades, the supplemental blades being of less width than the main blades and terminating at their rear edges in approximately the same plane with the corresponding edges of the rear half of main blades, the front edges of the supplemental blades being set back relatively corresponding to the rear half of the main blades, a series of buckets outside of the band and inclining from their front to their rear ends, the outer edges of the said buckets being widened midway between their ends and the band being narrowed or cut away at its front edge between the adjacent buckets with the front edge of the main blades at the outer ends thereof projecting in advance of their respective buckets, all substantially as and for the purposes set forth.



2. A wheel substantially as described, comprising a hub, a band, blades between the hub and band and buckets on the outer side of the band, the blades at the outer ends of their front edges projecting in advance of their respective buckets, substantially as set forth.

1,103,856. MEASURING-MACHINE. JACOB ALANKO and THOMAS TOIVONEN, Astoria, Oreg. Filed July 1, 1913 Serial No. 776,857. (Cl. 33—131.)



1. A ribbon measuring machine comprising a pair of positively driven feed rolls, mechanism for determining the amount of ribbon to be measured, means for automatically stopping the rotation of the rolls when the quantity has been measured, means for severing the ribbon and means actuated in the movement of the severing mechanism for relatively separating the rolls.

2. A ribbon measuring machine comprising a pair of positively driven feed rolls, one of which is movable toward and away from the other, mechanism for determining the amount of ribbon to be fed through the rolls, mechanism for severing the ribbon, means actuated by the severing mechanism for elevating said movable roll and means for holding the movable roll in elevated position.

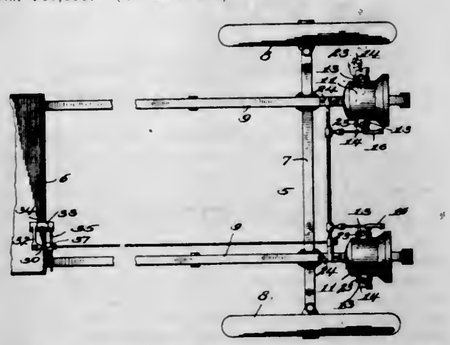
3. A ribbon measuring machine comprising a pair of positively driven feed rolls, one of which is movable toward and away from the other, mechanism for determining the amount of ribbon to be fed through the rolls, mechanism for severing the ribbon, means actuated by the severing mechanism for elevating said movable roll and means for holding the movable roll in elevated position and means for releasing the holding means.

4. A ribbon measuring machine comprising a positively driven feed roll, a separate feed roll intergeared with the first roll, means for normally holding the rolls in intergeared relation, mechanism for determining the amount of ribbon to be fed through the rolls, means for automatically stopping the rotation of the positively driven roll, ribbon severing mechanism, and means actuated by the ribbon severing mechanism for elevating the movable roll.

5. In a ribbon measuring machine, the combination with a driven shaft having a feed roll thereon, a frame, a shaft slidably mounted in the frame and having an intergeared connection with the driven shaft, means for holding the positively driven shaft against rotation, means for releasing said holding means, and means actuated in the rotation of the slidably mounted shaft for throwing said holding means to operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,103,857. AUTOMOBILE-HEADLIGHT. WILLIAM N. ALLAN, San Antonio, Tex. Filed Sept. 11, 1913. Serial No. 789,299. (Cl. 240—61.)



1. The combination with an automobile, of the usual fixed headlight yokes, headlights hinged to said yokes and having means connected thereto for simultaneously and equally tilting the headlights downwardly and causing them to maintain a reflected light at downward angles of inclination immediately in advance of the steering wheels of the automobile.

2. The combination with an automobile, of the usual fixed headlight yokes, headlights hinged to said yokes, means for downwardly tilting said headlights and maintaining an illumination at a downward angle of inclination slightly in advance of the front wheels of the automobile, and means for automatically restoring the headlights to normal position when released.

3. The combination with headlights and supports for the latter, of sockets for attachment to the headlights, additional sockets hinged to the sockets on the headlight sockets and removably mounted on the supports, and means for operating said headlights.

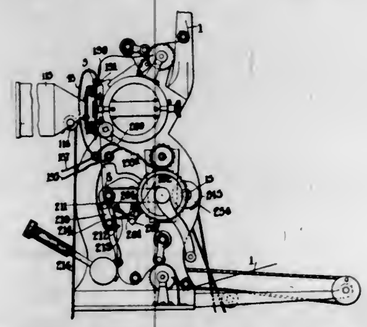
4. The combination with an automobile, of headlights provided with means for supporting and tilting the headlights and independent of and removably applied to the usual headlight supporting means for shifting the reflected light of said headlights from a straightaway pro-

jected plane to a downward angle of inclination slightly in advance of the front wheels of the automobile without modifying the illuminating capacity of the headlights, and means for maintaining the headlights in either position of reflection and controllable from the interior of the automobile.

5. The combination with an automobile, of the usual headlight supporting yokes, headlights provided with intermediately jointed sockets mounted on the yokes and permitting the headlights to be swung at downward angles of inclination, and mechanism connected to said sockets and operable from the interior of the automobile for swinging the headlights at downward angles of inclination.

[Claims 6 to 19 not printed in the Gazette.]

1,103,858. ELECTRIC CONTROL FOR KINEMATOGRAPH APPARATUS. WALTER HILLIER ANDERSON, Wellington, New Zealand, assignor to Kino Limited, Wellington, New Zealand. Original application filed Dec. 4, 1912, Serial No. 734,805. Divided and this application filed Nov. 24, 1913. Serial No. 802,714. (Cl. 88—17.)

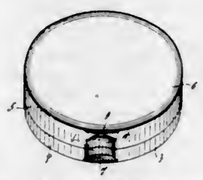


1. In kinematograph apparatus, a film, terminals of an electric circuit through which the film passes, an electric conductor attached along each face of the film where desired, and adapted to connect the terminals, a motor circuit, an electric motor for driving the apparatus, two shunt circuits, a motor control solenoid in one shunt circuit, a switch in the motor circuit operable by the said solenoid, a dash pot controlling the core of the solenoid, a safety shutter control solenoid in the second shunt circuit, a lamp house tunnel, a fall down safety shutter in the tunnel, a spindle to which the shutter is attached, a pulley upon the spindle, a cord wrapped upon the pulley and connected to the core of the safety shutter control solenoid, whereby when the conductor on the film connects with the terminals the motor circuit is opened energizing the safety shutter control solenoid and closing the safety shutter.

2. In kinematograph apparatus a film, terminals of an electric circuit through which the film passes, an electric conductor attached along each face of the film where desired and adapted to connect the terminals, a motor circuit, an electric motor for driving the apparatus, two shunt circuits, a motor control solenoid in one shunt circuit, a switch in the motor circuit operable by the said solenoid, a dashpot controlling the core of the solenoid, a safety shutter control solenoid in the second shunt circuit, a branch circuit from the film conductor terminals in the first shunt circuit, a notch having a roller which rests upon the film, a terminal on the roller switch adapted to contact with a terminal on the apparatus, a lamp house tunnel, a fall down safety shutter in the tunnel, a spindle to which the shutter is attached, a pulley upon the spindle, a cord wrapped upon the pulley and connected to the core of the safety shutter control solenoid whereby when the conductor on the film connects with the terminals, first mentioned, or when a breakage or slackening of the film occurs and the first shunt circuit is closed, the motor circuit is opened, which thus energizes the second solenoid and closes the safety shutter.

3. In a kinematograph apparatus a film, terminals of an electric circuit through which the film passes, an electric conductor attached along each face of the film where desired and adapted to connect the terminals, a motor circuit, an electric motor for driving the apparatus, two shunt circuits, a motor control solenoid on one shunt circuit, a switch in the motor circuit operable by the said solenoid, a safety shutter control solenoid in the second shunt circuit, a branch circuit from the film conductor terminals in the first shunt circuit, a switch having a roller which rests upon the film, a terminal on the roller switch adapted to contact with a terminal on the apparatus, a lamp house tunnel, a fall down safety shutter in the tunnel, a spindle to which the shutter is attached, a pulley upon the spindle, a cord wrapped upon the pulley and connected to the core of the safety shutter control solenoid, a switch contact in the second shunt circuit adapted to contact with the motor switch for immediately closing the shutter, a centrifugal device for opening the second shunt circuit comprising a disk, a shaft upon which the disk is fixed, arms upon the disk, a cylinder mounted freely upon the shaft and into which the arms enter, a boss of insulating material, a stop and an electric terminal thereon, a metal sleeve surrounding the shaft and upon which the boss is fixed, a boss secured to the cylinder and adapted to contact with the terminal on the boss, and between which the second shunt circuit passes, whereby when the speed of the motor is sufficient to properly display the pictures, the current through the second shunt circuit is broken and the safety shutter opened.

1,103,859. MEANS FOR FACILITATING THE OPENING OF CONTAINERS. ERNEST CHARLES AUSTIN, Wellington, New Zealand, assignor to E. C. Austin Limited, Wellington, New Zealand, a Corporation of New Zealand. Filed Aug. 27, 1912. Serial No. 717,285. (Cl. 220—6.)



1. A container body, having an indentation extending through its upper edge, a cover, having an indentation therein corresponding to and adapted to receive said indentation in the container body, the indentations together forming a recess adapted to receive the thumbs, substantially as set forth.

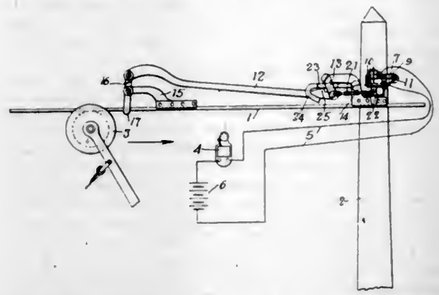
2. In a container body having adjacent its upper end an indentation closed at the bottom and open at the top and one side, a cover having an indentation closed at the top and open at the bottom and one side, the indentations together forming a recess and having roughened lower and upper portions and adapted to receive the thumbs.

1,103,860. SIGNALING DEVICE. GEORGE L. BARRETT, Springfield, Ohio. Filed Sept. 6, 1913. Serial No. 788,426. (Cl. 246—54.)

1. The combination, with a trolley wire, a signal circuit, a circuit breaker and closer supported independently of and at a point remote from said trolley wire, an actuating member supported adjacent to said trolley wire and operatively connected with said circuit breaker and closer, and devices arranged to be successively engaged and actuated by a trolley wheel to positively control the movements of said actuating member, which movements control the opening and closing of the circuit breaker and closer.

2. The combination, with a trolley wire, a signal circuit, and a circuit breaker and closer supported independently

of and at a point remote from said trolley wire, of brackets mounted on said trolley wire and spaced apart, an actuating member carried by said brackets and capable of longitudinal movement relative to said trolley wire, an operative connection between said actuating member and said circuit breaker and closer, a device connected with said actuating member and arranged to be engaged by a trolley wheel to impart movement to said actuating member and close said circuit, a detent to hold said actuating member in a position to retain said circuit closed, and means actuated by the further movement of said trolley wheel to release said actuating member from said detent.



3. The combination, with a signal circuit comprising a signal and a circuit breaker and closer, of a trolley wire, brackets carried by said trolley wire and spaced apart, a rod mounted on said brackets for longitudinal movement, an operative connection between said rod and said circuit breaker and closer, trip arms connected with said rod and arranged to be actuated by a trolley wheel moving along said trolley wire, a latch carried by one of said brackets and adapted to engage a part carried by said rod, said latch being arranged to be engaged by the trolley wheel to move the same out of engagement with said part of said rod.

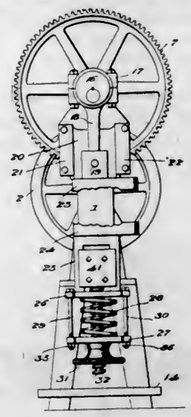
4. The combination, with a signal circuit comprising a signal and a circuit breaker and closer, of a trolley wire, brackets mounted thereon and spaced apart, a rod, a link connecting one end of said rod to one of said brackets, another link connecting the other end of said rod to the other of said brackets and extending beyond said bracket to form a trip arm, and means controlled by a trolley wheel for retaining said rod in a position to retain said circuit breaker and closer in a closed position.

5. In a device of the character described, the combination, with a trolley wire, a signal circuit, and a circuit breaker and closer for the signal circuit comprising a movable member to open and close said circuit, of an actuating rod mounted adjacent to said trolley wire, operatively connected with said movable member and capable of longitudinal movement relatively to said wire, a trip arm connected with said actuating rod and extending into a position to be engaged by a trolley wheel moving along said trolley wire and thereby cause said movable member to be actuated, and a latch arranged to engage said actuating rod and hold the same in a position to retain said movable member in its open position and to be released from said rod by the further movement of said trolley wheel.

[Claims 6 and 7 not printed in the Gazette.]

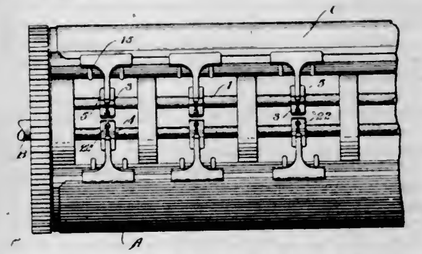
1,103,861. BROOM-BANDING MACHINE. NORMAN H. BEEBE, Wichita, Kans., and GEORGE WILLIAM DUVALL, Davenport, Iowa, assignors to Lee Broom & Duster Co., Davenport, Iowa, a Corporation of Iowa. Filed Jan. 22, 1912. Serial No. 672,692. (Cl. 15—4.)

In a broom banding machine, the combination of a main frame, two forms between which the broom is banded, means for reciprocating one of said forms, a yoke movably supported and guided on an arm of the main frame, a screw depending from the said arm of the frame, two plates through which the screw extends, one of which plates is secured to the yoke, a spring surrounding the screw and interposed between the plates, a nut on the screw for raising and lowering the form carried by the yoke to adjust it



with respect to the other form and the size of the broom to be made, and means independent of the nut and screw for varying the tension of the spring.

1,103,862. CLAMP FOR PRINTING-PRESSES. GEORGE W. BENNETT, Massillon, Ohio, assignor, by direct and mesne assignments, to Samuel Mollet. Filed Oct. 7, 1913. Serial No. 793,954. (Cl. 101—168.)



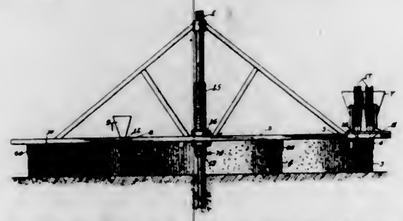
1. A clamping device for printing sheets comprising a base, a fixed jaw on one end of said base, bearings carried by said base below said jaw, a shaft journaled in said bearings, a movable jaw mounted eccentrically upon said shaft and movable about the axis thereof toward and away from said first jaw, tension means carried by said base and acting upon said movable jaw to hold the latter in clamping position, an arm on said base, a pivot support for said arm, and means for swinging said arm about said support whereby the jaws will be moved simultaneously to place the printing sheet under tension.

2. A clamping device for printing sheets comprising a base, a fixed jaw on one end of said base, bearings carried by said base below said jaw, a shaft journaled in said bearings, a movable jaw mounted eccentrically on said shaft, and movable toward and away from said first jaw, tension means carried by said base and acting upon said movable jaw to hold the latter in normal position, an arm on said base, a second arm pivotally connected with said first arm and supporting the same, and means carried by said second arm for swinging said first arm about the support whereby the jaws will be moved simultaneously to place the printing sheet under tension.

3. A clamping device for printing sheets comprising a base, a fixed jaw on one end of said base, bearings carried by said base below said jaw, a shaft journaled in said bearings, a movable jaw mounted eccentrically on said shaft and movable toward and away from said first jaw, tension means carried by said base and acting upon said

movable jaw to hold the latter in normal position, an arm on said base, a second arm pivotally connected with said first arm and supporting the same, a block pivoted upon said second arm, and a set screw carried by said block and movable therethrough and engaging the adjacent edge of the printing sheet supporting surface whereby the jaws may be moved simultaneously to place the printing sheet under tension.

1,103,863. METHOD AND APPARATUS FOR FORMING CURVED WALLS. ERNEST S. BOWKER, Chicago, Ill., assignor of one-half to Albert H. Eminger, Gibson City, Ill. Filed July 25, 1912. Serial No. 711,413. (Cl. 25—155.)

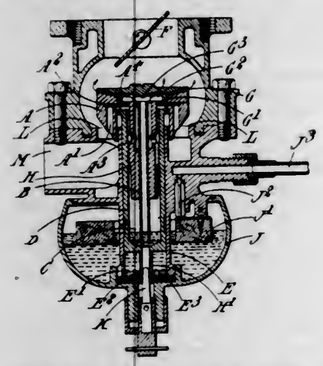


1. The method of forming a concrete wall without the use of a supporting mold, which consists in pouring liquid or semi-liquid concrete upon a suitable base and shaping it into an approximately uniform layer thin enough to become self-sustaining immediately after being formed, and then adding, in the same way, successive layers until a wall of the desired height is reached.

2. The method of forming a concrete wall without the use of a supporting mold which consists in pouring liquid or semi-liquid concrete upon a suitable base so as progressively to form a thin layer or ribbon, confining the concrete as it is poured only momentarily, and then, in the same way, adding successive layers until a wall of the desired height is reached.

3. The method of forming a concrete wall which consists in pouring liquid or semi-liquid concrete upon a suitable base so as progressively to form a uniform layer thin enough to become self-sustaining immediately after being formed, adding, in the same way, successive layers until a wall of the desired height is reached, and smoothing and working the sides of the wall for a considerable distance below the top thereof as each layer is being formed.

1,103,864. CARBURETER. GEORGE WILLIAM ALSTON BROWN, London, England, assignor of two-thirds to George Pilkington Mills and Clement Talbot Limited, London, England. Filed Feb. 10, 1913. Serial No. 747,432. (Cl. 48—154.1.)



1. In a carbureter the combination of, an air valve, a mixing or combining chamber therein for fuel and air, conduits between said chamber and supplies of fuel and air respectively, an outlet from said chamber, a flattened or extended end portion on the valve into which said outlet opens, a disk arranged substantially parallel to and close to the flattened or extended portion of the valve and means to adjust the disk relatively to the flattened or extended portion of the valve.

2. In a carbureter the combination of, an air valve, a mixing or combining chamber therein for fuel and air, conduits between said chamber and supplies of fuel and air respectively, an outlet from said chamber, a flattened or extended end portion on the valve into which said outlet opens, a disk arranged substantially parallel to and close to the flattened or extended portion of the valve, and a spreading means arranged on the disk on that side adjacent the outlet.

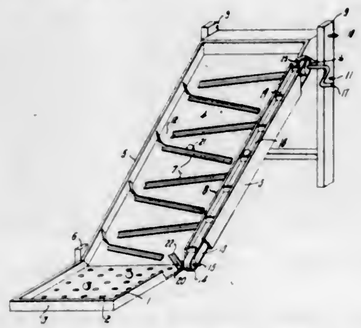
3. In a carbureter the combination of, an air valve, a mixing or combining chamber therein for fuel and air, conduits between said chamber and supplies of fuel and air respectively, an outlet from said chamber, a flattened or extended end portion on the valve into which said outlet opens, a disk arranged substantially parallel to and close to the flattened or extended portion of the valve, means to adjust the disk relatively to the flattened or extended portion of the valve, and a spreading means arranged on the disk on that side adjacent the outlet.

4. In a carbureter the combination of, an air valve, a mixing or combining chamber therein for fuel and air, conduits between said chamber and supplies of fuel and air respectively, an outlet from said chamber, a flattened or extended portion on the valve and to which said outlet opens, a disk adjustably mounted substantially parallel to the flattened portion of the valve and providing a narrow peripheral slit at the edge of the flattened portion.

5. In a carbureter the combination of, an air valve having a flattened or extended head in connection with a hollow cylindrical portion, a disk adjacent the flattened end, spacing members between the disk and said valve-head with means to secure said disk to the flattened or extended head, a fuel conduit disposed in the cylindrical portion of the valve, means to introduce air to the cylindrical portion and fuel to the fuel conduit respectively and to permit axial movement of the two parts together and a sprender on the disk close to and above the fuel conduit.

[Claim 6 not printed in the Gazette.]

1,103,865. GAME APPARATUS. FRANCIS M. CALER, Inglewood, Cal. Filed May 15, 1913. Serial No. 768,193. (Cl. 46—61.)



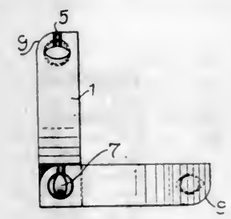
1. In a game apparatus the combination of a base having a plurality of pockets, a frame on said base, an inclined sectional track secured to said frame having openings in the lower ends of the sections thereof for making said track continuous, a plurality of balls adapted to roll on said track, a conveyer means for returning said balls from the bottom to the top of said track, and a spring secured to the side of said frame at the top of said track for throwing said balls from the belt to the track.

2. In a game apparatus the combination of a base having a plurality of pockets, a frame on said base, an inclined sectional track secured to said frame having openings in the lower ends of the sections thereof for making said track continuous, a plurality of balls adapted to roll on said track, a conveyer means for returning said balls from the bottom to the top of said track, a spring secured to the side of said frame at the top of said track for throwing said balls from the belt to the track, and a gate pivotally secured at the bottom of said track for simultaneously opening the passage to the pockets or closing the passage to the conveyer means or vice versa.

3. In a game apparatus, the combination with a base having a plurality of pockets in its top side and an inclined frame secured thereto having a plurality of laterally and oppositely inclined sections of track having openings at their lower ends for affording communication between adjacent sections, of a plurality of balls or marbles adapted to roll down said track when placed at the top of the incline and lodge in or about the pockets in said base, conveyer means on one side of said frame adapted to convey said balls or marbles from the bottom to the top of said frame, and means secured to the lower section of said track whereby the balls or marbles may be caused to either drop from the track upon the base or upon said conveyer means, at the will of the player, as described.

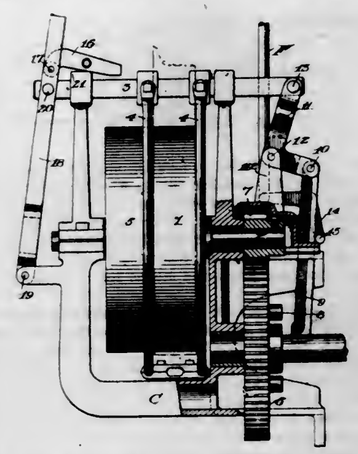
4. In a game apparatus, the combination with a base having a plurality of pockets in its top, side and an inclined frame secured thereto having a plurality of laterally and oppositely inclined sections of track having openings at their lower ends for affording communication between adjacent sections, of a plurality of balls or marbles adapted to roll down said track when placed at the top of the incline and lodge in or about the pockets in said base, conveyer means on one side of said frame adapted to convey said balls or marbles from the bottom to the top of said frame, means secured to the lower section of said track whereby the balls or marbles may be caused to either drop from the track upon the base or upon said conveyer means at the will of the player, and means at the top of said conveyer means adapted to throw said balls or marbles off of the conveyer and on to said track when the top of the incline has been reached, as described.

1,103,866. SASH-WEIGHT. DAVID GEORGE CARROLL, Atlanta, Ga., assignor of one-half to J. Earl Lane, Atlanta, Ga. Filed Nov. 22, 1913. Serial No. 802,547. (Cl. 16—20.)



A sash weight including a plurality of sections, each section comprising a body portion, longitudinally alined ears formed upon the ends thereof, one of said ears being provided with an opening having an elongated portion tapering to a point at each end, said ear being provided with longitudinal grooves communicating with said opening, the elongated portion of said opening extending transversely with respect to the body portion, a lug extending outwardly from the other of said ears, an alongated head formed integral with the lug, said head tapering to a point at each end and adapted to be disposed longitudinally with respect to the body portion, whereby when said sections are connected, they are disposed at right angles whereby to insert said head within the opening and said head being adapted to be arranged transversely across the longitudinal portion of the opening when the two sections are arranged in alinement as and for the purpose set forth.

1,103,867. STOP MECHANISM FOR MACHINERY. DANIEL M. COOPER, Rochester, N. Y., assignor, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 30, 1909. Serial No. 535,564. (Cl. 74—46.)



1. A stop mechanism comprising a rotatable member having a projection thereon, driven and driving members, a shifter for breaking connection between the driven and driving member, an oscillatory lever pivotally connected to the shifter for operating it, a dog pivotally mounted on the oscillatory lever, and means for moving the dog into the path of the projection on the rotatable member to cause the latter to effect the operation of the shifter.

2. A stop mechanism comprising a rotatable member having a projection thereon, driving and driven members, a shifter for breaking connection between the driven member and driving member, a bell crank lever having one arm connected to the shifter, a dog carried by the other arm of the bell crank lever, and means for moving said dog into the path of the projection on the rotatable member.

3. A stop mechanism comprising a pulley, a slidable belt shifter operating to move the belt from the pulley, a member rotatable with the pulley and provided with a projection, a bell-crank lever having one arm pivotally connected to the belt shifter, a dog carried by the other arm of the bell-crank lever, and means for adjusting said dog into the path of the projection on the rotary member.

4. A stop mechanism comprising a shaft having fast and loose pulleys and provided with a pinion, a gear wheel meshing with the pinion having a projection at one side thereof, a driving belt, a belt shifter mechanism embodying a transversely movable arm, a lever for operating it and a dog for actuating the arm depending at the side of the gear wheel, said lever being normally out of the path of the projection, and means for adjusting said dog into the path of said projection.

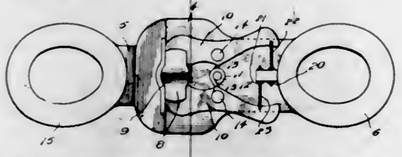
5. The combination with a driving shaft having fast and loose pulleys thereon and provided with a pinion and a gear wheel meshing therewith having a laterally extending projection, of a driving belt, a belt shifter movable transversely above the pulleys, and a member for operating it, an actuating arm depending from said member at the side of the gear wheel and means for swinging it laterally into the path of said projection.

[Claims 6 and 7 not printed in the Gazette.]

1,103,868. COUPLING FOR TRACTION-ENGINES. MARCUS RAY COWELL, Minneapolis, Minn. Filed Mar. 21, 1913. Serial No. 756,058. (Cl. 21—114.)

1. In a coupler and in combination, a pair of co-acting members, eyes formed in said members, an opening in one of said members adapted to co-act with a lug on the

other, a shoulder on said lug and spring jaws carried by said member having an opening, extending thereover and adapted to engage the under side of said shoulder and lock said lug against return through said opening.

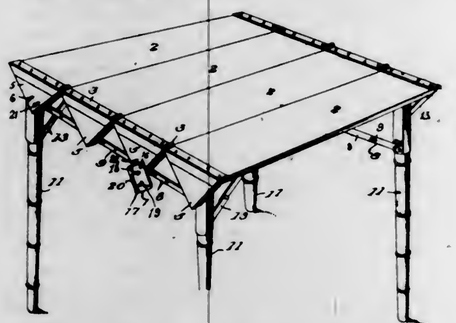


2. In a coupling device, a locking member, a coöperative member, the locking member having a rectangular opening, a T-shaped lug on said coöperative member having a rectangular head, said head being beveled, a pair of jaws extending over the opening, said lug being adapted to engage in the opening and said beveled head on the lug engage and open said jaws, and means for holding said jaws normally closed.

3. In a coupling device, a locking member, a coöperative member, the locking member having a rectangular opening, a T-shaped lug on said coöperative member having a rectangular head said head being beveled, a pair of jaws extending over the opening, said lug being adapted to engage in the opening, said beveled head on the lug engage and open said jaws, means for holding said jaws normally closed and a pin formed on the extreme lower part of said locking member adapted to coöperate with an opening in said coöperative member.

4. In a coupling device, a locking member, a coöperative member, the locking member having a rectangular opening, a T-shaped lug on said coöperative member having a rectangular head, said head being beveled, a pair of jaws pivoted to said locking member and extending over the opening, said lug being adapted to engage in the opening, and said beveled head on the lug engage and open said jaws, and means for holding said jaws normally closed comprising a spring adapted to engage said jaws beyond the pivots from said opening and means for opening said jaws.

1,103,869. CONVERTIBLE TABLE. JEROME M. DUCHEZ, Sacramento, Cal. Filed Aug. 5, 1913. Serial No. 783,175. (Cl. 190—11.)



1. A convertible box or table comprising four leaves hinged to each other for movement into a common plane or into rectangular relation, end pieces divided into four triangular sections, each section being attached to and depending from a corresponding leaf, said sections when the leaves are folded into rectangular relation abutting against each other and forming end pieces for the box, and means for locking the leaves either in a common plane or in angular relation.

2. A convertible box or table comprising four members hinged to each other for movement into a common plane or into rectangular relation, end pieces divided into four triangular sections, each section being attached to and depending from a corresponding leaf, said sections when the leaves are folded into rectangular relation, abutting against each other and forming end pieces for the box, legs hinged to the inner faces of the leaves and movable either into a position perpendicular to the leaves or into a position parallel thereto, and means for holding the legs in a perpendicular position.

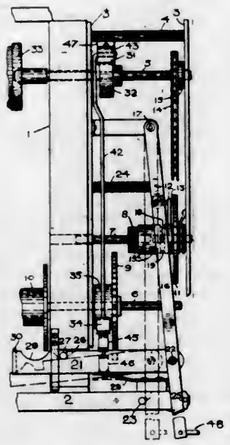
3. A convertible box or table comprising a plurality of leaves hinged to each other for movement into a common plane or into angular relation, end pieces each formed in sections, the sections corresponding in number to the number of leaves, each section being attached to and depending from a corresponding leaf, said sections when the leaves are folded into angular relation abutting against each other, jointed braces attached to and disposed between said sections and movable into position to hold the sections in alinement with each other and the leaves in a common plane, and legs hinged to the inner faces of the leaves.

4. A convertible box or table comprising a plurality of leaves hinged to each other for movement into a common plane or into angular relation, end pieces each formed in sections, said sections corresponding in number to the number of leaves, each section being attached to and depending from a corresponding leaf, said sections when the leaves are folded into angular relation abutting against each other, jointed braces attached to and disposed between said sections and movable into position to hold the sections in alinement with each other and the leaves in a common plane, and legs hinged to the inner faces of the leaves, said legs being of such length that the free end of the leg abuts against the adjacent end section when the leg is folded into a position parallel to the leaves.

5. A convertible box or table comprising a plurality of leaves hinged to each other for movement into a common plane or into angular relation, end pieces each formed in sections, each section being attached to a corresponding leaf, legs hinged to the inner faces of the leaves and movable into a position parallel or perpendicular thereto, and yielding latches mounted upon the end pieces and engageable with the lower ends of the legs when the legs are folded to hold the legs in folded position.

1,103,870. [WITHDRAWN.]

1,103,871. MUSICAL-INSTRUMENT-ROLL-GEARING SHIFT AND BRAKES. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed June 14, 1912. Serial No. 703,651. (Cl. 84—166.)



1. In a music-roll gearing: a music spool gearing, a take-up roller gearing, a driving means, and operative connections to both said gearings adapted to clutch in either gearing at will, a spindle adapted to engage and reroll a music-spool, a second spindle adapted to drive a music-sheet take-up spool, the two spindles having parallel axes, a brake-wheel on each said spindle, a brake to each said wheel, and a vertically operating reciprocating actuating-means adapted to bodily reciprocate longitudinally of itself and throw each said brake against its wheel and the other brake away from its wheel at that same time.

2. In a music-roll gearing: a music spool gearing, a take-up roller gearing, a driving means, and operative connections to both said gearings adapted to clutch in either gearing at will, a spindle adapted to engage and reroll a music-spool, a second spindle adapted to drive a music-sheet take-up spool, the two spindles having parallel and horizontal axes, a brake-wheel on each said spindle, a brake above the brake-wheel of the upper spindle, a brake below the brake-wheel of the lower spindle, and a vertically operating actuating-means adapted to bodily reciprocate longitudinally of itself and throw each said brake against its wheel and the other brake away from its wheel at that same time.

3. In a music-roll gearing: a music spool gearing, a take-up roller gearing, a driving means, and operative connections to both said gearings adapted to clutch in either gearing at will, a spindle adapted to engage and reroll a music-spool, a second spindle adapted to drive a music-sheet take-up spool, the two spindles having parallel and horizontal axes, a brake-wheel on each said spindle, a brake above the brake-wheel of the upper spindle, a brake below the brake-wheel of the lower spindle, and vertically operating actuating-means adapted to bodily reciprocate longitudinally of itself and throw each said brake against its wheel and the other brake away from its wheel at that same time.

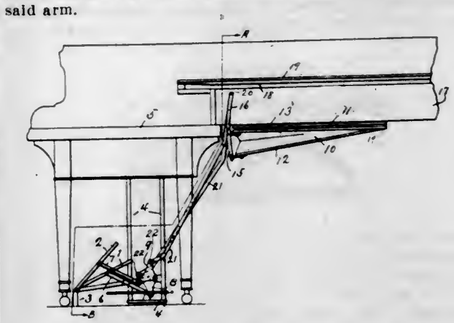
4. In a music-roll gearing: a music spool gearing, a take-up roller gearing, a driving means, and operative connections to both said gearings adapted to clutch in either gearing at will, a spindle adapted to engage and reroll a music spool, a second spindle adapted to drive a music-sheet take-up spool, the two spindles having parallel and horizontal axes, a brake-wheel on each said spindle, a brake above the brake-wheel of the upper spindle, a brake below the brake-wheel of the lower spindle, and vertically operating actuating-means adapted to bodily reciprocate longitudinally of itself and throw each said brake against its wheel and the other brake away from its wheel at that same time, a spring above and bearing down on said upper brake, and a second spring below and upwardly bearing against said actuating-means and said lower brake.

5. In a music-roll gearing: a music spool gearing, a take-up roller gearing, a driving means, and operative connections to both said gearings adapted to clutch in either gearing at will, a spindle adapted to engage and reroll a music-spool, a second spindle adapted to drive a music-sheet take-up spool, the two spindles having parallel and horizontal axes, a brake-wheel on each said spindle, a brake above the brake-wheel of the upper spindle, a brake below the brake-wheel of the lower spindle, and a vertical connecting rod reciprocating longitudinally of itself and engaging both said brakes and adapted to bodily reciprocate longitudinally of itself.

[Claims 6 to 15 not printed in the Gazette.]

1,103,872. MUSICAL-INSTRUMENT PUMPER CONNECTION. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Jan. 10, 1913. Serial No. 741,181. (Cl. 84—233.)

1. A pumper bellows in substantially horizontal position and having a moving board on its under side, and an arm having two vertical parts with a space between them and joined at their upper ends, and having the lower ends of said two parts rigidly attached to said moving board, said two part arm extended above said pumper, and moving with said moving board; and a pumper pedal action lower than said pumper bellows, with a longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm between its two vertical parts and there attached to said arm at the upper part of said arm.



2. A musical instrument having a keybed, a pumper bellows in substantially horizontal position rearward of said keybed and approximately in the same plane and having a moving board on its under side and an arm rigidly attached to said moving board, extended above said pumper and keybed, and moving with said moving board; and a pumper pedal action beneath said keybed and forward of said pumper bellows, with an inclined position longitudinally reciprocating unitary pitman connected from said pedal action to the extended part of said arm.

3. A pumper bellows in substantially horizontal position and having a moving board on its under side, and an arm rigidly attached to said moving board, extended above said pumper, and moving with said moving board; and a pumper pedal action lower than said pumper bellows, with a longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm, said pedal action including a bellcrank and pedal, and a link from the pedal to the bellcrank, the bellcrank and pitman being connected together, said bell-crank being entirely below the uppermost part of said pedal.

4. A musical instrument having a keybed, a pumper bellows in substantially horizontal position rearward of said keybed and approximately in the same plane and having a moving board on its under side and an arm rigidly attached to said moving board, extended above said pumper and keybed, and moving with said moving board; and a pumper pedal action beneath said keybed and forward of said pumper bellows, with an inclined position longitudinally reciprocating pitman connected from said pedal action to the extended part of said arm; said pedal action including a bellcrank and pedal, and a link from the pedal to the bellcrank, the bellcrank and pitman being connected together, said bell-crank being entirely below the uppermost part of said pedal.

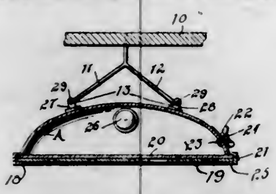
5. A musical instrument having a keybed, a pumper bellows rearward of said keybed and having a moving member of said pumper to the rear of said keybed, and a pumper pedal action beneath said keybed and forward of said pumper bellows, and an inclined position longitudinally reciprocating inflexible and unitary pitman connected from said pedal action to said moving member of said pumper.

[Claims 6 and 7 not printed in the Gazette.]

1,103,873. LICENSE-NUMBER ILLUMINATOR. DOMENICK GENTILE, Jersey City Heights, N. J. Filed Apr. 2, 1913. Serial No. 758,352. (Cl. 40—133.)

A license number illuminator and holder comprising a casing having an open side, the horizontal edge portions and one vertical edge portion of the casing having a U-shaped cross section to form grooves, a light-pervious numbered plate and a color plate disposed at the rear of the number plate both removably received in said grooves, the ends of the horizontal edge portions adjacent the other vertical edge of the casing being beveled, a locking member comprising a plate detachably fitted against the end of the casing adjacent said beveled ends of the horizontal

edge portions, a screw mounted in said end of the casing and extending through an opening in the plate, a nut on said screw for binding the plate to the casing, the end of said plate adjacent the open end of said casing having a



U-shaped cross section to form a groove for receiving corresponding ends of the number plate and color plate, the terminals of said end of the locking member being beveled to mate with the beveled ends of the horizontal edge portions of the casing, and a lamp in said casing.

1,103,874. VENTILATING AND DISINFECTING MEANS FOR SHOES. HENRY W. HALLEY, Hutchinson, Kans. Filed June 21, 1913. Serial No. 775,004. (Cl. 36—3.)



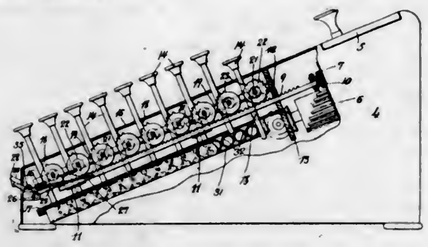
1. A ventilated shoe comprising a body, a heel having a chamber communicating with the interior of the body, an imperforate cup fitted within the chamber and adapted to hold disinfectant material, and a perforated elastic pad arranged over said chamber to support the foot of the wearer, and arranged further to make an approximately tight joint with the upper edges of said cup and to constitute a piston working up and down therein, whereby circulation of air between the said cup and the interior of the body is forced as said pad moves up and down under the varying pressure of the foot thereon as the wearer walks.

2. A ventilated shoe comprising a body, a heel having a chamber communicating with the interior of the body, a cup in said chamber constituting a cylinder and containing absorbent material adapted to hold disinfectant material, and an elastic perforated pad covering said chamber and adapted to support the foot of the wearer but having a limited degree of movement up and down under variations in pressure of the foot as the wearer walks, and said pad being arranged further to make a substantially tight joint with the upper edges of said cup and provided with a portion working up and down in said cup cylinder and constituting a piston therefor setting up forced circulation of air between said cylinder and the interior of said shoe.

3. A ventilated shoe comprising a body, a heel having a chamber communicating with the interior of the body, and a perforated pad or cover for the chamber, adapted to be compressed therein by pressure of the foot in walking, together with a metal cup in said chamber, and an absorbent disk or pad in said cup adapted to hold disinfectant material, the edges of the cup being so disposed with reference to the pad that the central portion thereof will act as a plunger in the cup.

4. A ventilated shoe comprising a body, a heel having a chamber communicating with the interior of the body, an imperforate cup forming a lining for the chamber and containing absorbent material adapted to hold disinfectant material, and a perforated pad covering said chamber and arranged to support directly the foot of the wearer, a depending portion from said pad closely fitting the inner walls of said cup and constituting a piston adapted when worked up and down to force a circulation of air between said cup and the interior of said shoe, one of said heel and pad parts being elastic whereby relative motion of said cup and said piston takes place as the pressure on the heel varies when the wearer walks, and said circulation is set up as aforesaid.

1,103,875. CALCULATING-MACHINE. ARTHUR HANTSCH, Linden, N. J. Filed Nov. 6, 1913. Serial No. 799,446. (Cl. 235—82.)



1. In a calculating machine the combination with a feed drum and a tens wheel, a slidable rack in operative engagement with the said tens wheel, a depressible key, a mutilated gear adapted to engage the said rack and means for operating the said mutilated gear to move the said rack a predetermined distance upon depression of the said key.

2. In a calculating machine the combination with a feed drum and a tens wheel, a slidable rack in operative engagement with the said tens wheel, a depressible key, a mutilated gear adapted to engage the said rack means for operating the said mutilated gear to move the said rack a predetermined distance upon depression of the said key, and means for automatically locking the said rack in position after it has been moved.

3. In a calculating machine the combination with a feed drum and a tens wheel, a slidable rack in operative engagement with the said tens wheel, a depressible key, a mutilated gear adapted to engage the said rack, means for operating the said mutilated gear to move the said rack a predetermined distance upon depression of the said key, means for automatically locking the said rack in position after it has been moved, and means for unlocking the said rack to restore the parts to their normal position.

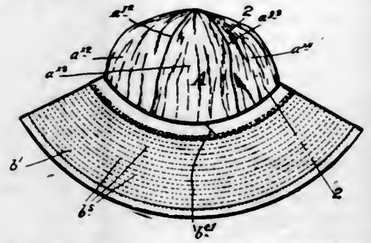
4. In a calculating machine the combination with a feed drum and a tens wheel, a slidable rack in operative engagement with the said tens wheel, a row of numbered depressible keys, a mutilated gear adjacent each key and adapted to engage the said rack to move the same a distance indicated by the numbers on the keys and means for operating one of the said mutilated gears upon depression of the key adjacent the same.

5. In a calculating machine the combination with a feed drum and a tens wheel, a slidable rack in operative engagement with the said tens wheel, a row of numbered depressible keys, a mutilated gear adjacent each key and adapted to engage the said rack to move the same a distance indicated by the numbers on the keys, means for operating one of the said mutilated gears upon depression of the key adjacent the same, and means for preventing operation of any other key in the row of keys when the said one key has been depressed.

[Claim 6 not printed in the Gazette.]

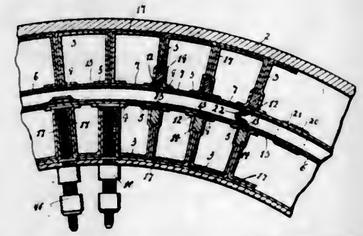
1,103,876. TOURIST FOLDING HAT. ROBERT HERRMANN, New York, N. Y. Filed Mar. 27, 1913. Serial No. 757,664. (Cl. 2—108.)

1. A hat having a brim, a crown secured thereto and an elastic band located at the juncture of the brim and crown to cause the hat to adjust itself to the head of the wearer, the brim and crown both being freely flexible and not having any stiffening member therein, the brim comprising an upper and lower member, the outer edge portion of the lower member being turned back over and upon the outer edge portion of the upper or exposed member, said turned back edge portion being stitched to both the outer member and another portion of the inner member, the inner edge portion of the upper member being stitched to the inner brim member, a portion of the inner brim member being turned back over the upper member and secured to both the upper member and another portion of the lower or inner brim member by stitching, thus providing an outer band for the hat, the outer band and the upper member together providing a receiving space therebetween for the elastic band.



2. A hat having a brim, a crown secured thereto and an elastic band located at the juncture of the brim and crown to cause the hat to adjust itself to the head of the wearer, the brim and crown both being freely flexible and not having any stiffening member therein, the brim comprising an upper and lower member, the outer edge portion of the lower member being turned back over and upon the outer edge portion of the upper exposed member, said turned back edge portion being stitched to both the outer member and another portion of the inner member, the inner edge portion of the upper member being stitched to the inner brim member, a portion of the inner brim member being turned back over the upper member and secured to both the upper member and another portion of the lower or inner brim member by stitching, thus providing an outer band for the hat, the outer band and the upper member together providing a receiving space therebetween for the elastic band, the inner and outer brim members being connected together at frequent intervals and the outer band being provided with an opening to permit the insertion and removal of said elastic band as and when desired.

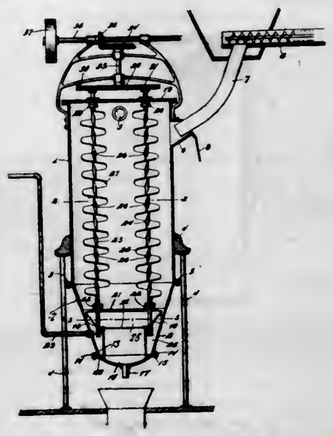
1,103,877. PNEUMATIC TIRE. HAROLD FREDERICK HEYCOCK, Dunedin, New Zealand. Filed May 7, 1913. Serial No. 766,234. (Cl. 152—22.)



1. A tire comprising an outer casing, a plurality of inflatable cells arranged within said casing, said cells having inwardly turned sleeves, a metal tube passing centrally through said cells concentric with said casing and embraced by said sleeves, said tube having apertures opening into said cells, cell-positioning means surrounding said tube, a rubber tube within said metal tube, and independent means for separately inflating said cells and said rubber tube.

2. A tire comprising an outer casing, a plurality of inflatable cells arranged within said casing, a metal tube passing centrally through said cells and concentric with said casing, said tube having apertures opening into said cells, cell positioning means detachably carried by and surrounding said metal tube, a rubber tube within said metal tube, and means for independently inflating said cells and said rubber tube, said cells being provided with sleeves embracing said metal tube and coacting with said positioning means to form an air tight joint when said cells are inflated.

1,103,878. TURPENTINE-EXTRACTOR. JAMES M. HILLARD, Gulfport, Miss., assignor of one-half to M. W. Connor, Columbia, Miss. Filed Jan. 11, 1913. Serial No. 741,491. (Cl. 203—6.)



1. An extractor of the character described comprising a retort having a vapor outlet at its upper end and a refuse outlet at its lower end, means at the latter named end for the discharge of the heavier products, vertically disposed hollow shafts within the retort provided with steam discharge ports and spiral agitators, and means for simultaneously rotating said shafts in opposite directions.

2. An extractor of the character described comprising a retort having a vapor outlet at its upper end and a refuse outlet at its lower end, an annular screen in said retort above said refuse outlet, a door for closing the refuse outlet provided with an outlet for the by-products and having a screen to project into the opening of the first named screen when the door is closed, said screens forming a steam chest, a steam supply pipe opening into said chest, a pair of vertically disposed hollow shafts communicating at their lower ends with the steam chest and provided at intervals with steam discharge ports, spiral agitator blades mounted upon the shafts, and means for reversely rotating said shafts so that one agitator blade will impart an upward motion to the material and the other agitator blade, a downward motion to the material.

1,103,879. TOOTH-BRUSH. EDWARD F. HOFFMAN, Glandorf, Ohio. Filed Aug. 5, 1913. Serial No. 783,110. (Cl. 15—59.)



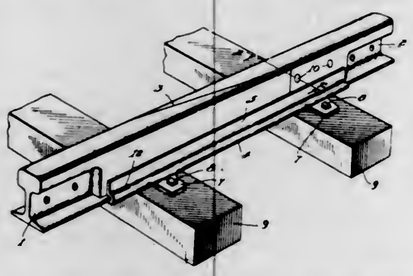
As a new article of manufacture, a tooth brush comprising a casing having one end open and partially cut away, a brush body, a shank carrying the brush body, a locking head slidable within the casing and having the shank connected thereto, a notch formed in one end of the shank and adapted to project through the cut away portion of the casing when the brush body is within the casing, and a spring member including a plurality of arms and carried by the locking head, with the said spring member movable therewith to slide along one of the walls of the casing, one of the arms of the spring member being adapted to have an end project into a depression in the casing to lock the brush body in extended position and the other arm being adapted to abut against the wall of the casing to hold the locking head against sidewise movement within the casing.

1,103,880. CARTON OR CONTAINER. DE WITT C. JOHNSON, Brooklyn, N. Y., assignor to The G. B. Farrington Company, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1911. Serial No. 665,044. (Cl. 211—40.)



A carton having one of its walls formed with an aperture, a display holder formed from a sheet of transparent material, the central portion of which is concavo-convex in cross section, a marginal flange for the holder for engaging the inner face of the carton wall adjacent the aperture so as to hold the central portion with its convexed face projected beyond the outer surface of the carton wall, a closing strip for the back of the holder, the same being secured to the marginal flange, and a strip secured to the inner wall of the carton and over the closing strip to prevent disengagement of holder from the aperture.

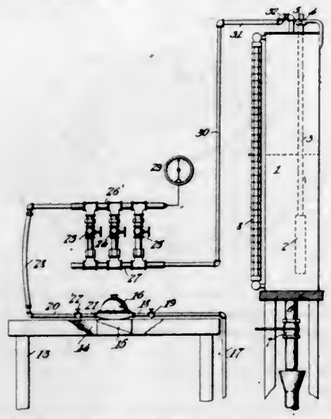
1,103,881. RAIL-JOINT. OLOF JOHNSON, Hudson, Wis. Filed Jan. 5, 1914. Serial No. 810,465. (Cl. 239—6.)



1. In a rail joint, the combination of a pair of abutting rails; a chair in which said rail ends are mounted; a rigid connection between one of said rails and one end of said chair; a connection between the other of said rails and the other end of said chair permitting of limited relative longitudinal movement of said parts, said last mentioned connection comprising a vertically extending key removably inserted in the base portion of said chair engaging a slot provided in one edge of the base of said rail end, said slot being of a length greater than the corresponding dimension of said key; and a cotter pin through said key locking the latter in said chair, substantially as described.

2. In a rail joint, the combination of a pair of abutting rails having base flanges thereon, there being a slot in one of the flanges of one of said rails; a chair disposed under the ends of said rail and having its longitudinal edge portions extending around said flanges and upwardly on the sides of said rails, one of said edge portions reaching higher than said other edge portion; bolts passing through the higher of said edge portions and one of said rails rigidly securing the latter to said chair; a key passing vertically through said chair adjacent its lower edge portion and said slot adjustably securing the rail provided with said slot to said chair; and a cotter pin locking said key in position, substantially as described.

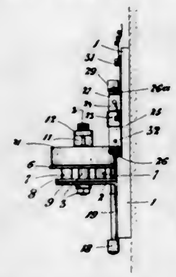
1,103,882. VOLUMETRIC METER-TESTER. JOHN F. KIDDER, Burlington, Vt. Filed Jan. 3, 1914. Serial No. 810,135. (Cl. 73—51.)



1. In an apparatus for testing meters, the combination with a meter having means for controlling a supply and discharge of liquid thereto and therefrom, of a measuring tank of determined capacity having a water gage, a scale arranged to the rear of said water gage, a series of valves having different-sized orifices, a connection from said valves to said tank, and a flexible connection from said valves to said meter discharge.

2. In an apparatus for volumetrically testing meters, the combination with a meter, of parallel pipes, valves connecting said pipes provided with different-sized orifices, a flexible connection from one of said pipes to said meter, a tank and a delivery pipe connected to the other pipe for discharging liquid into the tank.

1,103,883. DOOR CONTACT-SWITCH. ALBERT KIELBLOCK and HERMANN DITTMANN, Arnstadt, Germany. Filed June 3, 1913. Serial No. 771,552. (Cl. 161—25.)



1. In a switch, the combination, with a vertically-movable switch member; of a rotatable element upon which the switch member rests having a cam arranged to engage and raise said switch member; an operating member connected to said element for rotating the same in one direction; a spring connected to said element for rotating the same in the other direction; and a brake device for retarding the second-named rotary movement of said element.

2. In a switch, the combination with an endwise-movable vertical switch member; of a rotatable element arranged beneath the switch member and provided with a cam adapted to engage said switch member and having oppositely-beveled ends and an intermediate straight portion; means for rotating said element in one direction; a spring connected to said element for rotating the same in the other direction; and a brake device for retarding the second-named rotary movement of said element.

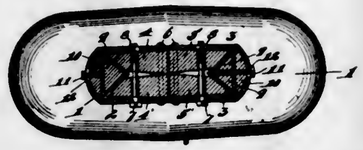
3. In a switch, the combination, with a vertically-movable switch member; of a rotatable element upon which the switch member rests having a cam arranged to operatively engage said switch member; means for rotating said element in one direction; a spring connected to said element for rotating the same in the other direction; and a brake device for retarding the second-named rotary movement of said element embodying a plurality of yielding elements connected to said element for rotation therewith, and a stationary member frictionally engaged by said yielding elements.

4. In a switch, the combination, with a vertically-movable switch member; of a rotatable element upon which the switch member rests having a cam arranged to operatively engage said switch member; means for rotating said element in one direction; a spring connected to said element for rotating the same in the other direction; and a brake device for retarding the second-named rotary movement of said element embodying a plurality of vertically-disposed rubber studs carried by said element for rotation therewith, and a stationary plate frictionally engaged by said studs.

5. In a switch, the combination, with an endwise-movable vertical switch member; of a rotatable element arranged beneath the switch member and provided with a cam adapted to engage said switch member and having oppositely-beveled ends and an intermediate straight portion; means for rotating said element in one direction; a spring connected to said element for rotating the same in the other direction; and a brake device for retarding the second-named rotary movement of said element embodying a plurality of yielding elements connected to said element for rotation therewith, and a stationary member frictionally engaged by said yielding elements.

[Claim 6 not printed in the Gazette.]

1,103,884. COMBINATION DESK AND SEAT FOR SCHOOL-ROOMS. CHARLES H. W. KNICKREHM, Forest Park, Ill. Filed Oct. 20, 1913. Serial No. 796,235. (Cl. 155—34.)

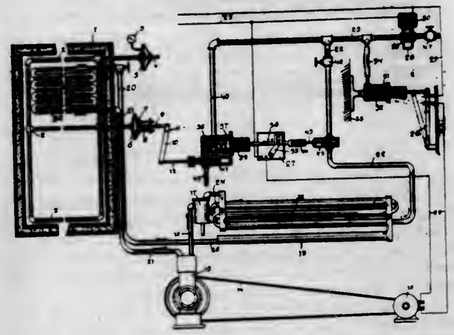


1. A device of the kind described comprising a hollow base; a post extending into said base; a pair of clamping jaws in said base engaging said post; a rivet passing through said base and said jaws; and a bolt passing through said jaws and adapted to adjust the latter, the head of said bolt being extended from said base for manual operation thereof and the nut of said bolt being held by said base to prevent rotation thereof, substantially as described.

2. A device of the kind described comprising a hollow base; a post triangular in cross section extending into said base; a block in said base against one side of said post; a pair of clamping jaws in said base with one end of each jaw engaging one side of said post; a rivet passing through the other end of each of said jaws and said base; and a bolt passing through said jaws and adapted to maintain the latter in operative condition, substantially as described.

3. A device of the kind described comprising a hollow base having perforations therein, one of said perforations being square; a post extending into said base; a block between the inner wall of said base and said post; two clamping jaws in said base, each having one end thereof engaging one side of said post, said block and jaws cooperating to hold said post in position; a rivet extending through the other ends of said jaws and said base; a threaded bolt passing through said jaws and having its threaded end in said square perforation and its head disposed in one of the other of said perforations; and a nut threaded on said bolt, disposed in and fitting said square perforation, said bolt and nut coöperating to operate said jaws, substantially as described.

1,103,885. CONTROLLING DEVICE FOR REFRIGERATING SYSTEMS. GEORGE KNOX, Omaha, Nebr., assignor of one-half to J. L. Baker, Omaha, Nebr. Filed July 26, 1910. Serial No. 574,010. (Cl. 62—6.)



1. In a refrigerating system, the combination with a storage chamber, an elastic-fluid compressor, a motor for actuating the same, a condenser, means for supplying water to the condenser, and means for utilizing the compressed elastic fluid to cool the storage chamber, of means controlling the stopping and starting of the motor, means controlling the supply of water to the condenser, a fluid-pressure-actuated piston for actuating the motor-controlling and water controlling means, a valve controlling the fluid-pressure on said piston, and a thermostatic device arranged in the storage chamber and operatively connected with said valve.

2. In a refrigerating system, the combination with a storage chamber, an elastic-fluid compressor, an electrical motor for actuating the compressor, and means for utilizing the compressed elastic fluid to cool the storage chamber, of a rheostat for controlling the electrical motor, a fluid-pressure-actuated piston connected with said rheostat, a valve controlling the fluid-pressure on said piston, and a thermostatic device connected with said valve and caused to actuate the same by changes of temperature in the storage chamber.

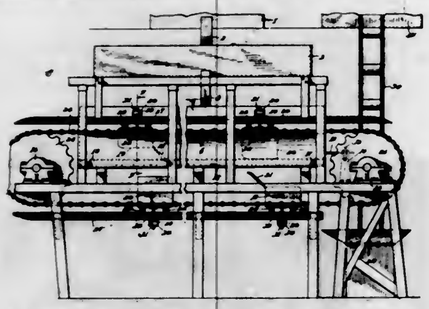
3. In a refrigerating system, the combination with an elastic-fluid compressor, a water-cooled condenser therefor, and an electrical motor for actuating the same, of a rheostat controlling the starting of the motor, a water supply pipe connected with the condenser, a piston connected with the starting rheostat, means tending to actuate the piston to turn off the rheostat, a cylinder inclosing the piston and connected with the water supply pipe for the condenser so that while pressure is maintained in said pipe the piston may be actuated thereby to turn on the rheostat, a valve adapted and normally tending to shut off the water supply, and electrically controlled means for holding said valve open.

1,103,886. SLAG-DISINTEGRATING APPARATUS. LARS LARSON, Chicago, Ill. Filed Dec. 12, 1913. Serial No. 806,204. (Cl. 75—146.)

1. Apparatus of the class described comprising a trough; means for admitting the material to be treated to said trough; means arranged in the bottom of said trough for cooling the material admitted to said trough, said trough being longitudinally corrugated; and means for removing the contents of said trough, substantially as described.

2. Apparatus of the class described comprising a trough; means for admitting the material to be treated to said trough; means arranged in the bottom of said

trough for cooling the material admitted to said trough, said trough being longitudinally corrugated; and means movable longitudinally of said trough for removing the contents thereof, substantially as described.



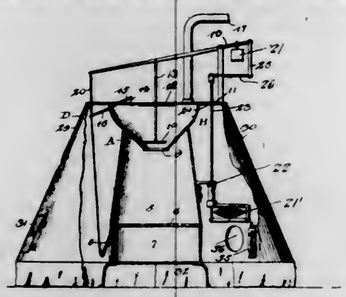
3. Apparatus of the class described comprising a trough; means for admitting the material to be treated to said trough; means for cooling the material admitted to said trough; and means mounted in said trough for longitudinal movement in one direction for removing the contents of said trough, substantially as described.

4. Apparatus of the class described comprising an elongated trough; means for admitting the material to be treated to said trough at various points along its length; means for cooling the material admitted to said trough; and means for removing the contents of said trough, substantially as described.

5. Apparatus of the class described comprising an elongated trough; means for admitting material to be treated to said trough at various points along its length and adjacent the bottom of said trough; means for cooling the material admitted to said trough; and means for removing the contents of said trough, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

1,103,887. BROODER. JOHN F. MACKAY, Trenton, N. J. Filed June 17, 1913. Serial No. 774,149. (Cl. 237—21.)



1. A heater for brooders having a fire box, a hopper disposed above and communicating with the fire box, a top plate covering the hopper and extending beyond the perimeter thereof entirely around the heater, dampers for controlling the draft of the heater, and means for controlling the dampers supported by the top plate of the hopper.

2. A heater for brooders having a fire box, a hopper disposed above and communicating with the fire box, a top plate covering the hopper and extending laterally beyond the perimeter thereof entirely around the heater, a closure controlling communication between the hopper and fire box, dampers for controlling the draft of the heater, and means for controlling the movements of the closure and the dampers supported by the top plate of the hopper.

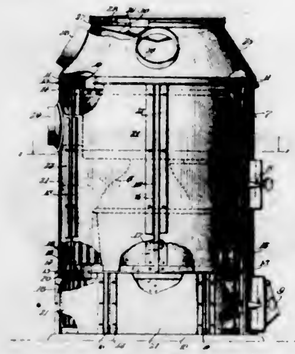
3. A heater for brooders having a fire box, a hopper disposed above and communicating with the fire box, a top plate covering the hopper and extending beyond the perimeter thereof entirely around the heater, there being a check draft opening through the top plate into the hopper, a damper for controlling the draft through said opening, a damper controlling the draft to the fire box, a closure controlling the communication between the hopper and fire box, and a single means supported on the said top plate and connecting respectively with the said dampers and closure, by which their movements are controlled.

4. The combination of a heater for burning solid fuel, provided with a top perforated to permit fuel to be fed through it to the fire chamber of the heater, means carried by the heater for supporting a brooder hood, and a suspended hood supported by the said means so as to be free from the surface on which the heater rests and forming a brooder chamber surrounding the heater.

5. The combination of a heater for burning solid fuel, having a chamber in its upper portion covered by a top through which is a fuel feed opening, a flue through which the products of combustion pass off communicating with the said chamber, a valve controlling the communication between the said chamber and the fire box of the heater, means for operating said valve supported by the heater, means carried by the heater for supporting a brooder hood, and a suspended hood supported by the said means so as to be free from the surface on which the heater rests and forming a brooder chamber surrounding the same.

[Claims 6 to 8 not printed in the Gazette.]

1,103,888. FURNACE. ALFRED MARTIN, Rockford, Ill. Filed Oct. 20, 1913. Serial No. 796,294. (Cl. 126—114.)



1. In a furnace, an outer casing including spaced upper and lower casing-members, a plurality of spaced vertical supports, each having a socket therein at its opposite ends, said supports being in supporting engagement with said casing-members by the latter being received in said sockets, whereby the supports may be moved sidewise upon the casing-members and be retained from lateral displacement, and casing-sections detachably mounted and interposed between adjacent supports.

2. In a furnace of the character set forth, the combination of spaced upper and lower horizontal peripherally extending casing members, vertical spaced supporting members interposed between said casing members for supporting the upper member, said supporting members having their ends connected with said casing members in such a manner that the vertical members are adjustable sidewise and are held during their sidewise movement from breaking their supporting connections between the upper and lower members, and casing sections interposed between adjacent supporting members and being detachably connected thereto.

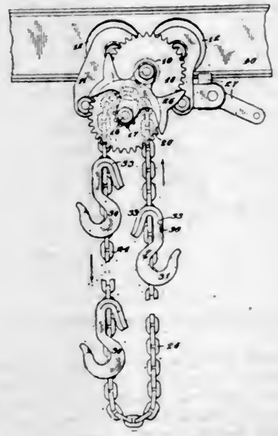
3. In a furnace of the hot air type, having a distributing-pipe hood, a supporting connection upon which the hood rests, devices for supporting said supporting connection, including a plurality of spaced vertically disposed supporting members each connected to said supporting connection, and mounted in such manner that they may be moved sidewise to different positions without breaking their supporting connection with the hood, and casing sections interposed between adjacent supporting members and detachably connected thereto.

4. In a furnace, a heater, and a casing about the heater comprising a top portion having a plurality of conduit outlets, a horizontally disposed casing-frame portion, a plurality of vertical members mounted upon said casing-frame portion and being in connection with said top portion for supporting same in position, the connection between said vertical members and the top portion and casing frame being such that the vertical members may be moved sidewise to different positions to effect different spacing therebetween without destroying their supporting connection between the top portion and casing frame, and detachably mounted casing-sections interposed between adjacent vertical members whereby any one of the casing-sections may be detached to permit access to the casing interior.

5. In a furnace of the character set forth, the combination of a heater, and a casing thereabout including an upper and lower track-way extending about a portion of the casing, a plurality of vertical members mounted movable along said track-ways to permit different spacing between said vertical members, said vertical members serving as a means for supporting the upper track-way in position, and the mounting of said members in connection with the track-ways being such that the members are held at all times from lateral displacement relative to the track-ways.

[Claim 6 not printed in the Gazette.]

1,103,889. HOISTING MECHANISM. EDWARD Y. MOORE, Cleveland, Ohio. Filed Dec. 24, 1910. Serial No. 599,140. (Cl. 193—9.)

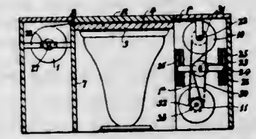


1. In a hoisting mechanism, the combination, with a pocket wheel and means for rotating it in one continuous direction, of an endless chain depending over said pocket wheel in a single continuous loop the lower end of which hangs free, said chain having its successive links at right angles to each other, and a removable hook forked at its upper end and adapted to straddle a link of the chain and rest on the upper shoulder of the next lower link.

2. In a hoisting mechanism, the combination, with a trolley frame and supporting wheels, of a pocket wheel carried by the frame, and means carried by the frame for rotating said wheel, and an endless chain depending over the pocket wheel and having its uppermost links occupying the pockets, said chain hanging in one free continuous loop and having its successive links at right angles to each other, and a removable hook having a forked upper end adapted to straddle a link and rest on the shoulder of the next lower link.

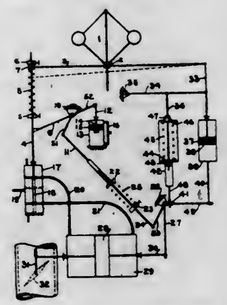
3. In a device of the character described, the combination, with a trolley frame and supporting wheels, of a pocket wheel rotatably carried by the trolley frame, means for rotating such wheel, an endless single loop chain overhanging the pocket wheel and resting in pockets thereof, the lower end of said chain being free whereby the chain may be moved laterally with the trolley, the successive links of said chain standing at right angles to each other, and a load supporting S-hook having its upper loop bifurcated to straddle one link of the chain resting on the shoulders of the next lower link, the tines provided by such bifurcation being formed with inward projections adapted to occupy the space between alternate links of the chain and substantially embrace the intermediate link, such tines resting on the shoulder of the link next below such intermediate link.

1,103,890. SANITARY APPARATUS. MARY MOUAT, Mount Roskill, Auckland, New Zealand. Filed Feb. 27, 1913. Serial No. 751,091. (Cl. 4—18.)



The combination with a closet seat and lid therefor, of a paper bearing roll removably mounted to one side thereof, a drum rotatably mounted on the opposite side of said seat over which the paper is adapted to pass, a bobbin upon which the paper is adapted to be wound, two pairs of parallel rods, a member having a bearing therein carried by each pair of rods, a roller carried by said bearings, spring means for holding said bearing containing members normally at one end of said parallel rods, said roller being adapted to bear against the paper intermediate said drum and bobbin and means for rotating said bobbin.

1,103,891. TIME-ELEMENT POWER-LIMITING DEVICE. ARNOLD PFAU, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Apr. 14, 1913. Serial No. 761,628. (Cl. 121—112.)



1. In an indirect governor for prime movers, a speed responsive means, a motor for actuating the main valve of the prime mover, a means governed by said speed responsive means for controlling said motor, and means independent of said speed responsive means and coöperable directly with said controlling means for finally returning said valve to a predetermined limiting position from a temporary position beyond.

2. In an indirect governor for a prime mover, a speed responsive means, a motor for actuating the main valve of the prime mover, a means governed by said speed re-

sponsive means for controlling said motor, and means adapted to communicate the motion of said motor directly to said controlling means for finally returning said valve to a predetermined limiting position from a temporary position beyond.

3. In an indirect governor for a prime mover, a speed responsive means, a motor for actuating the main valve of the prime mover, a means governed by said speed responsive means for controlling said motor, compensating means between said motor and said speed responsive means, and means independent of said compensating means for finally returning said valve to a predetermined limiting position from a temporary position beyond.

4. In an indirect governor for a prime mover, a speed governor, a servo-motor for actuating the main valve of the prime mover, a valve governed by said speed governor for controlling said servo-motor, and means coöperable directly with said servo-motor controlling valve for finally returning the main valve to a predetermined limiting position from a temporary position beyond.

5. In an indirect governor for a prime mover, a speed responsive means, a motor for actuating the main valve of the prime mover, a controlling valve for said motor governed by said speed responsive means, and an elastic connection directly between said motor and said controlling valve for finally returning said main valve to a predetermined limiting position from a temporary position beyond.

[Claims 6 and 7 not printed in the Gazette.]

1,103,892. RUBBER SOLE FOR BOOTS AND SHOES. CLIFFORD S. REDFIELD, Brookline, Mass., assignor to Essex Rubber Company, Inc., Trenton, N. J., a Corporation of New Jersey. Filed Apr. 24, 1914. Serial No. 834,241. (Cl. 36—32.)

1. An unattached, vulcanized, rubber sole for boots and shoes comprising rubber-containing material having a natural, "calendered" surface.

2. An unattached, vulcanized rubber sole for boots and shoes consisting of rubber-containing material having a wholly transverse, "fibrous" structure rendering said sole of greater transverse than longitudinal strength.

3. An unattached, vulcanized rubber sole for boots and shoes comprising rubber-containing material having greater transverse than longitudinal strength and greater longitudinal than transverse flexibility, and having a natural, "calendered" surface.

4. An unattached, vulcanized rubber sole for boots and shoes comprising rubber-containing material having a natural, "calendered," pitted surface and being of substantially homogeneous structure throughout.

5. An unattached, vulcanized rubber sole for boots and shoes comprising rubber-containing material having its constituent surface and internal particles self-distributed.

[Claims 6 to 8 not printed in the Gazette.]

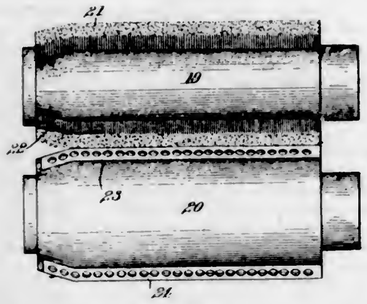
1,103,893. TOBACCO-STEMMING MACHINE. JAMES P. SCOVILL, Troy, N. Y., assignor to Trojan Machine Company, Troy, N. Y., a Corporation of New York. Filed Sept. 23, 1913. Serial No. 791,269. (Cl. 131—57.)

1. In a tobacco leaf stemming machine, a pair of oppositely rotating rolls and means for drawing a leaf between them, one of said rolls having flexible members providing a yieldable leaf engaging surface and the other roll being formed with recessed areas coacting with the flexible yieldable surface.

2. In a tobacco leaf stemming machine, a pair of oppositely rotating rolls and means for drawing a leaf between them, one of said rolls having a brush segment and the coacting roll being formed with recessed areas operating in relation to the brush segment.

3. In a tobacco leaf stemming machine, a pair of oppositely rotating rolls and means for drawing a leaf between them, one of said rolls being formed with a brush segment, the other roll having a segmental portion of its peripheral surface formed with recessed areas coöperating with the brush segment when the rolls are rotated.

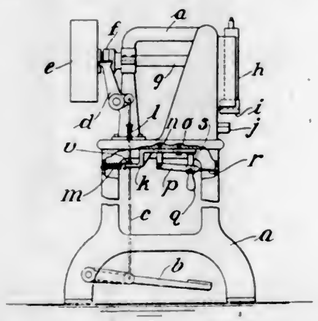
4. In a tobacco leaf stemming machine, a pair of oppositely rotating rolls and means for drawing a leaf between them, one of said rolls having a brush segment, the other roll having a metal piece upon its periphery perforated to form recessed areas and disposed to coact with the brush segment of the companion roll.



5. In a tobacco leaf stemming machine, a pair of oppositely rotating rolls and means for drawing a leaf between them, one of said rolls having members providing a yieldable leaf engaging surface, the companion roll being formed with a peripheral countersunk surface, and a perforated plate covering said cut out portion and completing the peripheral surface of the roll and disposed to coact with the yieldable surface.

[Claims 6 and 7 not printed in the Gazette.]

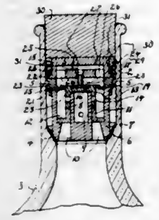
1,103,894. SAFETY APPLIANCE. JOHN SEVERANCE, Springfield, Mass., assignor to Milton Bradley Company, Springfield, Mass., a Corporation of Massachusetts. Filed Mar. 24, 1913. Serial No. 756,454. (Cl. 192—1.)



1. In a safety device, a clutch, a rod for operating said clutch, normally inoperative means for locking said rod in inoperative position, means for shifting said first named means to locking position, means for locking said means in said locking position, and means for moving said rod locking means back to inoperative position upon release of said last named locking means.

2. An apparatus of the class described, comprising, in combination, an operable machine, a clutch therein arranged to start a cycle of operations when moved in one direction, a rod having an abutting part movable to shift said clutch, a locking-device having an abutting part movable into position to prevent the shifting movement of the rod by contact with its abutting part, means to normally hold the locking-device in inoperative position, and an automatic device to hold the locking-device in operative position when moved to that position, said automatic device being arranged to be released at will and permit the locking-device to assume a normal position, all for the purpose described.

1,103,895. NON-REFILLABLE BOTTLE. ELISHA S. STAPLES, New Haven, Conn., assignor of one-half to Charles E. Graham, West Haven, Conn. Filed Apr. 5, 1913. Serial No. 759,152. (Cl. 215—69.)



1. A non-refillable bottle having its neck formed near its lower end with a seat, the side walls of the neck formed with inclined ribs, a plug resting on said seat, said plug formed with a centrally arranged post, passages in the bottom of the plug around said post, said post formed with a centrally arranged chamber, openings near the bottom of the chamber, a closure surrounding said post and adapted to close the said openings, a cap set over the top of said post and formed in the side walls with ports, a head formed with a transverse chamber, openings from the top of the head into said chamber and from the bottom of the head into said chamber, said openings being out of alinement, a weight between the head and post, a coupling collar connecting the head and post and formed with pairs of inclined lugs adapted to engage with the ribs on the inner walls of the neck.

2. A non-refillable bottle having its neck formed near its lower end with a seat, the inner walls of the neck formed with a series of inclined ribs, a plug resting on said seat, said plug formed with a centrally arranged upwardly exending hollow post, said post formed near its lower end with openings, the bottom of the plug around the post formed with openings to provide passages, a closure around said post and adapted to close said openings and passages, a cap set over the upper end of the post and formed in its side walls with ports, a head formed with a transverse chamber, openings from the bottom of the head into said chamber, and openings from the upper end of the head into said chamber, said openings out of alinement with each other, a weight located between the head and post and resting on said cap the upper end of the plug and the lower end of the head formed with lugs, a coupling ring formed with bayonet slots adapted to engage with the lugs on the head and plug whereby the head and plug are connected together, said collar formed with externally arranged lugs adapted to engage with the ribs in the neck of the bottle whereby the head and plug are locked in the neck.

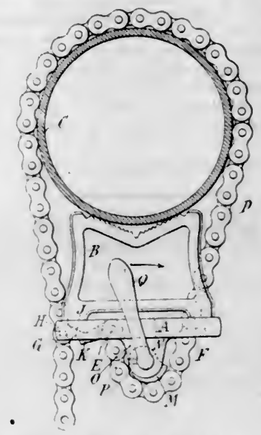
1,103,896. CHAIN PIPE-VISE. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Aug. 12, 1913. Serial No. 784,399. (Cl. 81—19.)

1. A chain pipe vise having a chain adapted to be passed around the pipe and fastened at two points, and means engaging the bight of the chain and adjustable relatively to the points at which the chain is fastened so as to tighten the chain on the pipe.

2. A chain pipe vise having a chain adapted to be passed around the pipe and fastened at two points, and a cam engaging the bight of the chain and adjustable relatively to the points at which the chain is fastened so as to tighten the chain on the pipe.

3. A chain pipe vise having a chain adapted to be fastened around the pipe and a cam engaging the bight of the chain and lying within the loop thereof which passes around the pipe and adjustable to force the engaged portion of the chain outward to tighten the chain on the pipe.

4. A chain pipe vise having a base and a chain fixed at one end and adapted to pass thence below and around the pipe and to be fastened in such position, and means engaging the bight of the chain below the base for tightening the chain on the pipe.



5. A chain pipe vise having a base and a chain fastened at one end and adapted to pass thence below and around the pipe and to be fastened in such position, a cam below the base engaging the bight of the chain for tightening the same on the pipe, and an operating handle for said cam extending upward above the base.

[Claims 6 to 8 not printed in the Gazette.]

1,103,897. LOCK. WALDON S. BALL, San Francisco, Cal. Filed Apr. 29, 1913. Serial No. 764,355. (Cl. 70—70.)



1. In a lock, a pivoted tumbler, a dead bolt normally engaged thereby, a series of permutation selector-bars, means controlled by the selector bars controlling the operation of the tumbler, by which any one of a number of keys will be effective in locking the lock and only a corresponding key effective in unlocking the lock, and manually operable means coöperating with a key for actuating the selector-bars operating the tumbler and shifting the bolt.

2. In a lock, a manually operable rock-shaft, a carriage, means for reciprocating the carriage from the rock-shaft, a dead-bolt, a tumbler normally engaging the bolt when the bolt is in an advanced or retracted position, means for normally preventing movement of the tumbler, and means on the carriage adapted to be positioned by a key on the reciprocation of the carriage for permitting the operation of the tumbler to release the bolt.

3. In a lock, a manually operable rock-shaft, a carriage, means for reciprocating the carriage from the rock-shaft, a dead-bolt, a tumbler normally engaging the bolt when the bolt is in an advanced or retracted position, means for normally preventing movement of the tumbler, means on the carriage adapted to be positioned by a key on the reciprocation of the carriage for permitting the operation of the tumbler to release the bolt, and means for actuating the tumbler when the latter is released by the rock-shaft.

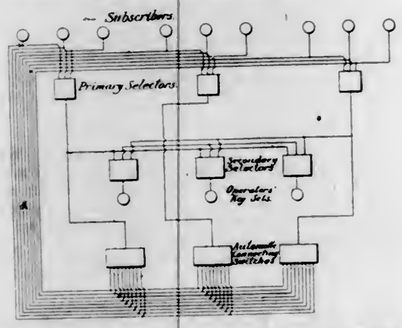
4. In a lock, a manually operable rock-shaft, a carriage, means for reciprocating the carriage from the rock-shaft, a dead-bolt, a tumbler normally engaging the bolt when the bolt is in an advanced or retracted position, means for normally preventing movement of the tumbler, means on the carriage adapted to be positioned by a key on the reciprocation of the carriage for permitting the operation of the tumbler to release the bolt, means for actuating the

tumbler when the latter is released by the rock-shaft, and means controlled by the rock-shaft for shifting the bolt when the tumbler is released therefrom.

5. In a lock, a dead-bolt, manually operable means for shifting the bolt, a pivoted tumbler for normally holding the bolt against movement, and means coöperating with any one of a variety of keys for permitting the operation of the tumbler and the advancement of the bolt and operable only by the insertion of the key in the lock employed in the advancing of the bolt to permit the retraction thereof.

[Claims 6 to 21 not printed in the Gazette.]

1,103,898. METHOD OF ESTABLISHING VARIABLE CONDUCTIVE PATHS FOR ELECTRICAL COMMUNICATION. EDWARD E. CLEMENT, Washington, D. C. Filed Mar. 14, 1912. Serial No. 683,799. (Cl. 179—27.)

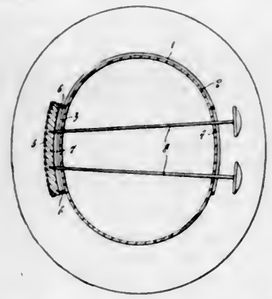


1. The method of establishing variable conductive paths and directing telephone traffic therethrough which comprises the following steps: (*a*) selectively converging incoming call units when initiated, upon and distributing the converged call units among, correlated interchangeable connective mechanisms; (*b*) selectively converging, distributing, and referring said call units at this stage through correlated interchangeable normally free secondary mechanisms upon, among and to operators' positions; (*c*) translating and setting up the whole expression of the designation of the destination of each call unit in a code form; and (*d*) causing operation of said connective mechanisms in accordance with said code designation, independently of further volition or attention on the part of an operator.

2. The method of establishing variable conductive paths and directing telephone traffic therethrough which comprises the following steps: (*a*) selectively converging incoming call units when initiated, upon and distributing the converged call units among, correlated interchangeable connective mechanisms; (*b*) selectively converging, distributing, and referring said call units at this stage through correlated interchangeable normally free secondary mechanisms upon, among and to operators; (*c*) translating and setting up the whole expression of the designation of the destination of each call unit in a code form; (*d*) causing operation of said connective mechanisms in accordance with said code designation, independently of further volition or attention on the part of an operator; and (*e*) finally placing the completed path for the call unit under control through the connective mechanisms alone, and entirely detaching the operator from any further connection with said call unit or its path of travel thus established.

3. The method of establishing variable conductive paths and directing telephone traffic therethrough which comprises the following steps: (*a*) selectively converging incoming call units when initiated, upon and distributing the converged call units among, correlated interchangeable connective mechanisms; (*b*) selectively converging, distributing, and referring said call units at this stage through correlated interchangeable normally free secondary mechanisms upon, among and to operators; (*c*) translating and setting up the whole expression of the designation of the destination of each call unit in a code form; (*d*) causing said connective mechanisms to operate in accordance with the code designation thus determined; and (*e*) finally placing the selected and completed path of travel for the call unit under control through the connective mechanisms alone, from the communicating stations, and detaching and locking out the operator from any further association or connection with said call unit or its path of travel thus established.

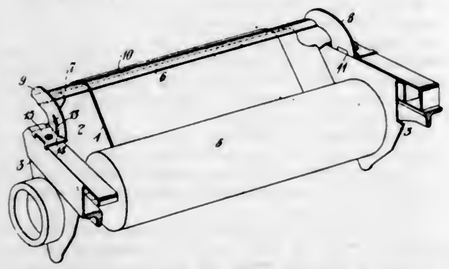
1,103,899. HAT-PIN GUARD. ALICE COATES, Hamilton, New Zealand. Filed Jan. 6, 1914. Serial No. 810,593. (Cl. 132—25.)



1. A guard of the kind described comprising a wire bent into loops at its ends so that the central part of said wire forms a connection for said loops, one of said loops being adapted to lie against one side of the crown of the hat and the other against the opposing side, a shield corresponding in size to one of the loops, arms connecting said shield to said loop, and a layer of cork inserted between said shield and the adjacent loop.

2. A guard of the kind described comprising a wire bent into substantially semicircular shape so as to fit around the crown of the hat, an elongated loop formed at one end of said wire so as to lie against one side of the crown of the hat, an elongated loop formed at the other end of said wire so as to lie against the opposing side of the crown of the hat, a shield corresponding in size to one of the loops, arms connecting said shield to said loop, and a layer of cork inserted between said shield and the adjacent loop.

1,103,900. TYPE-WRITING MACHINE. CORNELIUS B. CORCORAN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 20, 1913. Serial No. 768,713. (Cl. 197—180.)



1. In combination with the paper table of a typewriting machine, a bead along the upper edge of said paper table, and a guard plate extending parallel to and above said bead, said guard being curved to conform with the curvature of said bead.

2. In combination with the paper table of a typewriting machine, a guard plate extending parallel to and above the edge of said paper table, said plate being concavo-convex in cross section, and means for moving said guard plate away from said paper table.

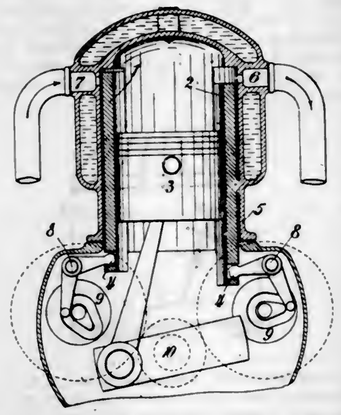
3. In combination with the paper table of a typewriting machine, a guard plate extending parallel to and above the edge of said paper table, said guard plate having hinge connection at one end whereby it may be moved away from said paper table, and means to lock said guard plate at the opposite end thereof in its effective position.

4. In combination with a platen frame, a paper table connected therewith, and means on said platen frame for supporting a guard plate parallel to and above the edge of said paper table.

5. In combination with a platen frame, a paper table connected therewith to guide work sheets to the platen, and a guard plate supported on the platen frame parallel to the edge of said paper table over said work sheets.

[Claim 6 not printed in the Gazette.]

1,103,901. COMBUSTION-ENGINE. MARTIN FISCHER, Zurich, Switzerland, assignor to Fischer Motor Corporation, a Corporation of New York. Filed Jan. 12, 1912. Serial No. 670,904. (Cl. 123—188.)



1. In an internal combustion engine, in combination, a cylinder provided with inlet and outlet ports, a piston therein, slide valves crescent-shaped in cross-section coöperating with said ports and means to actuate said valves.

2. In an internal combustion engine, in combination, a cylinder provided with inlet and outlet ports, recesses formed in the cylinder constituting expanded portions of the inner wall with inwardly diverging sides beyond the normal cylindrical form of the lining of said cylinder, said recesses being open to the combustion chamber and connecting with said ports, a piston in said cylinder, valves mounted to slide longitudinally within said recesses and coöperating with said ports, and means to actuate said valves.

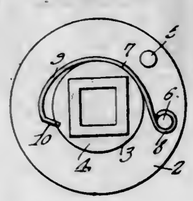
3. In an internal combustion engine, in combination, a cylinder provided with inlet and outlet ports, recesses formed in the walls thereof open to the combustion chamber and connecting with said ports, a piston in said cylinder, valves mounted to slide longitudinally in said recesses and coöperate with said ports, the inner face of said valves corresponding to the curvature of the cylinder, and means to actuate said valves.

4. In an internal combustion engine, in combination, a cylinder provided with a port near its head, a piston in said cylinder, a recess in the wall of the cylinder open to the combustion chamber, a valve adapted to move longitudinally of said piston in said recess and laterally removable therefrom into the cylinder when not held operatively in the recess by the piston, and means to actuate said valve.

5. In an internal combustion engine, in combination, a cylinder having a port near its head end, a piston in said cylinder supported by the walls of said cylinder, a recess in the wall of the cylinder crescent-shaped in cross-section transverse to the longitudinal axis of the cylinder, a valve in said recess adapted to be held in place by the piston, and means for actuating said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,103,902. BOLT-LOCK. MICHAEL FRANCIS GOSSWILLER, Troy, Mont., assignor of one-half to Walter Bissell, Troy, Mont. Filed May 27, 1913. Serial No. 770,232. (Cl. 151—25.)



The combination of a bolt, a nut, and a resilient spiral spring member, the said nut provided with an upright post, a second post spaced a distance away from the first mentioned post and supported by the said nut, the said spiral resilient spring member carried by the first mentioned post, the opposite end of said spiral spring member bent sharply inward and normally resiliently engaging the bolt, the extreme free end of said spiral spring member sharpened and adapted to bite into the bolt threads, the relative rotation of the bolt and nut in one direction forcing the spring member away from the bolt threads, the said resilient spiral member held against disengagement therefrom by means of the second post, the opposite relative rotation of the bolt and nut tending to draw the spring member into forced and frictional contact with the bolt for the prevention of such rotation.

1,103,903. COMPOSITION OF MATTER. EDWARD D. KENDALL, Elizabeth, N. J., assignor of twenty-two one-hundredths to Dickson Q. Brown, New York, N. Y., and one-third to Albert R. Ledoux, Cornwall, N. Y. Filed Nov. 3, 1911. Serial No. 658,371. (Cl. 106—23.)

The herein described composition of matter, for use as a substitute for caoutchouc, consisting of guayule, twenty-two parts; balata, twenty parts; asphaltum, twelve to twenty-four parts; wax-tailings, eight to twenty parts; sulfur, two to eight parts, substantially as described.

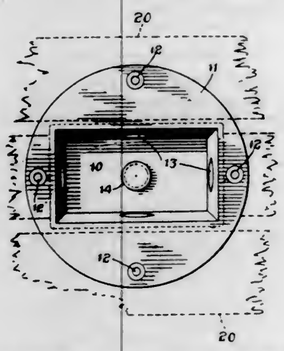
1,103,904. SAFETY-RAZOR. ELLSWORTH L. MCCAIN, Detroit, Mich. Filed Apr. 28, 1913. Serial No. 764,054. (Cl. 30—12.)



A safety razor comprising a flat guard plate, a supporting stem, tapering guide pins carried by said plate adjacent to the longitudinal edges thereof, said guard plate having the longitudinal edges beveled and toothed, blades having the inner edges thereof cut away to provide clearance for said stem and provided with apertures to receive said tapering pins, but of smaller diameter than that of the base of the pins, whereby said blades can be supported by the sides of said pins at an inclination relative to said guard plate and with the beveled edges thereof in a plane with the beveled edges of said guard plate, and a clamping plate in screw threaded engagement with the stem

and recessed to receive the tapering guide pins and adapted to bear along the longitudinal margins of said blades and maintain the beveled edges thereof in a plane with the beveled edges of said guard plate and said clamping plate.

1,103,905. OUTLET-BOX. HARRY C. MILLS, Unionville, Conn. Filed Apr. 18, 1913. Serial No. 761,909. (Cl. 247—5.)



A device of the character described, comprising an outlet box for old lath and plaster work in which one lath is cut away for substantially the length of the box, said box being relatively narrow and adapted to be passed between adjacent laths on each side of the cut lath, and a face plate extending from the outer edge of the box about its perimeter and having holes in the longitudinal and vertical center lines of the box for screws adapted to engage the ends of the cut lath and the adjacent laths each side of the cut lath.

1,103,906. COUCH-HAMMOCK AND BACK-SUPPORT THEREFOR. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Original application filed Sept. 12, 1910, Serial No. 581,623. Divided and this application filed Apr. 11, 1914. Serial No. 831,317. (Cl. 5—61.)



1. A couch hammock comprising a seat, upstanding hammock suspension means, a back support, means for connecting the upper portions of said support to said hammock suspension means above the seat and serving as a pivotal support for the effective portion of said back, and adjustable basal, seat-engaging means coöperating with the lower part of the effective portion of said back support to vary the angularity of the latter.

2. A couch hammock comprising a seat, upstanding hammock suspension means, a back support, means for connecting the upper portions of said support to said hammock suspension means above the seat and serving as a pivotal support for the effective portion of said back, and adjustable basal, seat-engaging means independent of said upstanding hammock suspension means and directly coöperating with the seat portion of the hammock and with the lower part of said back support, to vary the angularity of the latter.

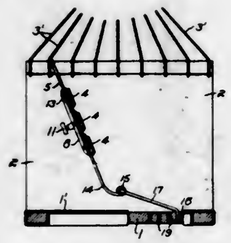
3. A couch hammock comprising a seat, upstanding hammock suspension means, a back support, means for connecting the upper portions of said support to said upstanding hammock suspension means above the said seat, and other and adjustable basal, seat-engaging means independent of said upstanding hammock suspension means and coöperating with the lower part of said back support to vary the angularity of the lower end thereof.

4. A couch hammock comprising a seat, upstanding hammock suspension means, a back support having a spreader-bar along its upper edge, means for connecting said spreader-bar to said hammock suspension means above the said seat, and other and adjustable basal, seat-engaging means independent of said upstanding hammock suspension means and coöperating with the lower part of said back support to vary the angularity of the lower end thereof.

5. A couch hammock comprising a seat, upstanding, flexible hammock suspension means, a back support, means for adjustably connecting the upper portions of said support to said upstanding hammock suspension means above the said seat and other and adjustable basal, seat-engaging means independent of said upstanding hammock suspension means and coöperating directly with the seat portion of the hammock and with the lower part of said back support to vary the angularity of said back support at the lower portion thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,103,907. COUCH-HAMMOCK AND BACK-REST THEREFOR. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Continuation in part of application Serial No. 721,765, filed Sept. 23, 1912. This application filed Dec. 30, 1912. Serial No. 739,234. (Cl. 5—61.)



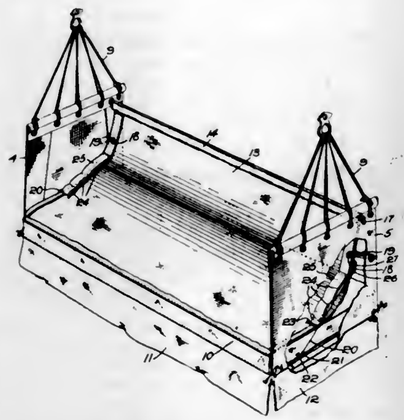
1. A couch hammock comprising a seat and two suspension ends, a back rest extending longitudinally of the hammock and provided with terminal connecting means adapted to engage said suspension ends and to hold the upper edge of said back rest in substantially fixed relation with said ends, and other means independent of said suspension ends and engaging the seat and back rest below said terminal connecting means to vary the angularity of said back rest.

2. A couch hammock comprising a seat, two upturned ends, hammock suspension means connected therewith, a back rest bar, a flexible back rest depending therefrom, end brackets having fixed fulcruming points at their upper ends, coöperating with the upturned ends, hooks pivotally connected to the lower ends of said brackets, and means independent of said upturned ends and coöperating with said hooks, for supporting the lower end of said back rest either in a vertical or in an inclined plane.

3. A couch hammock comprising a seat provided with a frame, two upturned ends, hammock suspension means connected therewith, a back rest bar, a flexible back rest depending therefrom, end brackets having fixed fulcruming points at their upper ends, coöperating with the upturned ends, hooks pivotally connected to the lower ends of said brackets, the end portions of said frame each having a plurality of hook receiving sockets, whereby the lower end of said back rest may be supported in different planes.

4. A couch hammock comprising a seat, two upturned ends, hammock suspension means connected therewith, a back, means for connecting the back to both of said ends at a fixed height above the seat and serving as a pivotal support for the effective portion of said back and other adjustable means independent of said upturned ends and coöperating with the lower part of the effective portion of said back to vary the angularity thereof.

1,103,908. COMBINED BACK-REST AND WIND-SHIELD FOR COUCH-HAMMOCKS. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Filed Mar. 10, 1914. Serial No. 823,818. (Cl. 5—61.)



1. A back rest or wind shield for couch hammocks and like structures, consisting of a member having means for attaching its upper portion to the end-suspension means of the hammock, said member having its upstanding edges provided with strap-pieces, and means adapted to be secured to the seat portion of the hammock and detachably to engage said strap pieces, for securing the back rest or wind shield in position.

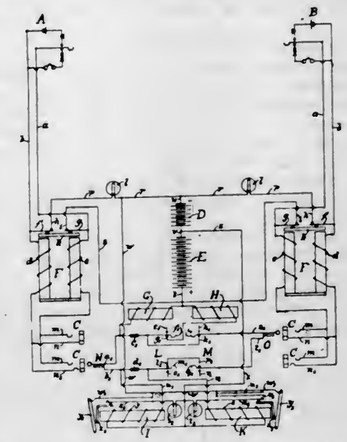
2. A back rest or wind shield for couch hammocks and like structures, consisting of a member having means for attaching its upper portion to the end-suspension means of the hammock, said member having its upstanding edges provided with strap pieces, and hooks adapted to be secured to the seat portion of the hammock and detachably to engage said strap pieces.

3. A back rest or wind shield for couch hammocks and like structures, consisting of a member having means for attaching its upper portion to the end-suspension means of the hammock, said member having its upstanding edges provided with strap pieces having a plurality of hook receiving portions, and hooks adapted to be secured to the seat portion of the hammock and interchangeably to engage said hook receiving portions.

4. A back rest or wind shield for couch hammocks and like structures, consisting of a member having means for attaching its upper portion to the end-suspension means of the hammock, said member having its upstanding edges provided with strap pieces each having a plurality of pockets, and hooks adapted to be pivotally secured to the seat portion of the hammock and detachably to engage said pockets.

5. A combined back rest and wind shield for couch hammocks and like structures, consisting of a sheet-like member of substantially the full length of the hammock and having means for pivotally attaching the upper portion to the suspension ends of the hammock, said sheet like member having its upright edges provided with strap pieces, each provided with a plurality of pockets, and hooks adapted to be attached to the seat portion of the hammock and detachably to engage said pockets.

1,103,909. TELEPHONE SIGNALING SYSTEM. FREDERICK R. PARKER, Chicago, Ill. Filed Aug. 24, 1904. Serial No. 221,994. (Cl. 179—58.)



1. A telephone line-signaling system comprising a telephone line having a signal lamp connected in series therewith, the said lamp having a filament with a current-carrying capacity not exceeding approximately five-one-hundredths of an ampere, and means for lighting the lamp over the line to give a signal.

2. A telephone line-signaling system comprising a telephone line having a signal lamp connected in series therewith, the said lamp having a filament with a current-carrying capacity not exceeding approximately five-one-hundredths of an ampere whereby it may be lighted in series with a high-resistance line to give a signal and also through a short-circuit of the line resistance without burning out, and means for lighting the lamp over the line to give a signal.

3. A telephone line-signaling system comprising a telephone line having a signal lamp connected in series therewith, the said lamp having a filament with a current-carrying capacity not exceeding approximately five-onehundredths of an ampere whereby it may be lighted in series with a line having a resistance of at least five-hundred ohms to give a signal and also through a short-circuit of the line resistance without burning out, and means for lighting the lamp over the line to give a signal.

4. An electric lamp having a high-resistance filament constructed to carry a maximum current not greater than approximately five-onehundredths of an ampere, a telephone line, and means for lighting the lamp in a series circuit with the line to display a signal.

5. In a telephone system, the combination with a telephone line and connection terminals connected thereto, of a line-signal lamp connected to the said line, a cut-off relay associated with the said line and adapted to disconnect the said line-signal lamp from the telephone line when in an operated condition, a plug-cord circuit adapted to be conductively connected with the said line, a supervisory signal-controlling relay connected to a talking strand of the said plug-cord circuit, the said supervisory relay being equipped with two armatures, one armature being adapted to close a contact in the supervisory signal circuit and the other armature being adapted to open a contact in the same circuit, a source of electricity associated with the said supervisory relay and with the said line-signal lamp, means for closing a circuit of the said source through the said supervisory relay and thereby actuating one of its armatures, when connection is made with the line, thus closing a contact in the said supervisory signal circuit, the said supervisory relay circuit including a talking strand of the plug-cord circuit, a terminal of the connecting plug, a main line

terminal, and the said line-signal lamp and means on the line for operating the other armature of the supervisory relay and thereby extinguishing the supervisory signal, substantially as described.

[Claims 6 to 138 not printed in the Gazette.]

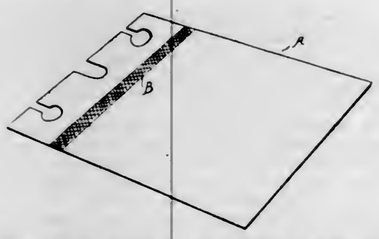
1,103,910. FERTILIZING COMPOUND. THOMAS L. WILLSON and MAXIMILIAN MATTHEUS HAFF, Ottawa, Ontario, Canada, assignors, by direct and mesne assignments, to Southern Investment Co. of Canada Ltd., Montreal, Canada, a Corporation of Canada. Filed Dec. 18, 1911. Serial No. 666,398. (Cl. 71—7.)

1. A fertilizer comprising a powder formed from a fused mass containing an alkali metal and a phosphate enriched with potash vapor.

2. A fertilizer comprising a powder formed from a fused mass containing an alkali and a phosphate enriched with vapor of potash and phosphoric acid.

3. A fertilizer comprising a powder formed from a fused mass containing an alkali and a phosphate enriched with vapors of potash, phosphoric acid and ammonia.

1,103,911. FLEXIBLE-HINGE LEAF. JAMES BARKER, Detroit, Mich. Filed July 15, 1911. Serial No. 638,741. (Cl. 11—19.)
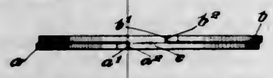


1. A book leaf formed of paper having a hinge portion, comprising a narrow section integral with the body of the leaf impregnated with a softening material, increasing the flexibility of the hinge portion over that of the body of the leaf.

2. A book leaf formed of paper having a hinge portion, comprising a narrow section integral with the body of the leaf of uniform thickness with the body, said section being impregnated with a softening material, increasing the flexibility thereof over that of the body of the leaf.

3. A book leaf formed of paper of uniform stock throughout and having a narrow section integral with the body of the leaf, treated with a softening material increasing the flexibility of said section over that of the body of the leaf.

1,103,912. PISTON-RING. MILLARD L. DUNHAM, New York, N. Y. Filed Nov. 3, 1913. Serial No. 798,837. (Cl. 121—108.)



1. A piston packing comprising a pair of separate, split rings, arranged side by side, said rings being connected with each other at a point near and intermediate their respective joints.

2. A piston packing comprising a pair of separate, cast, split rings, arranged side by side, said rings being connected with each other at a point near and intermediate their respective joints.

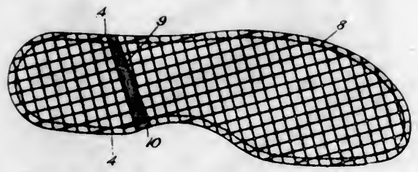
3. A piston packing comprising a pair of separate, split rings, arranged side by side, the abutting ends of said rings being recessed for lap joints, and said rings being connected with each other at a point near and intermediate their respective lap joints.

4. A piston packing comprising a pair of separate, cast split rings, arranged side by side, the abutting ends of said rings being recessed for lap joints, and said rings being connected with each other at a point near and intermediate their respective lap joints.

5. A duplex packing ring comprising a pair of separate, cast, concentric split rings, arranged side by side, the abutting ends of said rings being recessed for lap joints, and said rings being connected with each other at a point near and intermediate their respective lap joints, the relative arrangement of said rings being such that their respective free ends, when unconfined, lie normally outside the concentric plane of the combined rings as contracted.

[Claims 6 to 8 not printed in the Gazette.]

1,103,913. PROCESS OF MAKING SHOES. CHARLES CHESTER EATON, Brockton, Mass., assignor to C. A. Eaton Company, Brockton, Mass., a Corporation of Massachusetts. Filed June 11, 1913. Serial No. 772,984. (Cl. 12—142.)



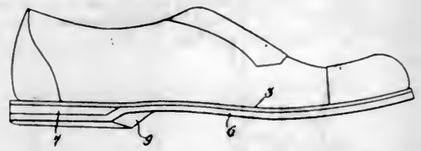
1. The process of making an orthopedic, spring heel shoe, which comprises molding the outsole with the heel portion thereof offset below the level of the adjacent end of the shank portion to form a recess for a heel lift, and with the portion of the sole connecting said shank portion with said heel portion extending from the outside of the shank forwardly across the sole to the inside of the shank to form an inclined heel breast of gradually increasing depth from said outer side of the shank to said inner side thereof, securing a heel lift in said recess of such dimensions that the upper surface of said lift is substantially flush with the upper surface of said shank along their contacting edges, and finally securing the sole and heel lift to a shoe.

2. The improved process of making a shoe having a leather outsole, comprising molding the tread surface of the outsole in substantially its final form, simultaneously condensing portions of the outsole by a plurality of intersecting indentations, thereby forming spaced flat tread surfaces between said indentations to constitute antislipping devices, then applying the sole so prepared to the bottom of a shoe having an upper, insole and welt extending entirely around the shoe bottom, and stitching the marginal portion of the sole and welt together.

3. The improved process of making a shoe having a leather outsole, comprising molding the tread surface of the outsole in substantially its final form with the heel portion of the sole offset to constitute the tread face of the heel, simultaneously condensing both forepart and heel portions of the outsole by a plurality of intersecting indentations thereby forming spaced flat tread surfaces between said indentations to constitute antislipping devices, then applying the sole so prepared to the bottom of a shoe having an upper, insole and welt extending entirely around the shoe bottom, interposing an orthopedic cushion heel lift between the heel and said offset portion of the outsole, and stitching the marginal portion of the sole, cushion heel lift, and welt together.

1,103,914. SHOE. CHARLES CHESTER EATON, Brockton, Mass., assignor to C. A. Eaton Company, Brockton, Mass., a Corporation of Massachusetts. Filed June 20, 1913. Serial No. 774,826. (Cl. 36—27.)

1. A spring heel shoe, having, in combination, an upper, an insole, a welt secured to said upper and insole, and extending around the entire periphery of the shoe bottom, a molded outsole secured to said welt, said outsole having its heel portion offset below the level of the adjacent end of the shank portion to form a recess for a heel lift, the portion of the sole connecting said shank portion with said heel portion gradually increasing in depth from the outer side of the shank to the inner side thereof, and a heel lift secured in said recess of such dimensions that the upper surface of said lift is substantially flush with the upper surface of said shank along their contacting edges.



2. A spring heel shoe having, in combination, an upper, an insole, a welt secured to the upper and insole and extending around the entire periphery of the shoe bottom, a molded outsole having anti-slipping corrugations molded therein, having its heel portion offset below the level of the adjacent end of the shank portion to form a recess of greater depth at one side of the sole than at the other, and having its heel breast inclined forwardly from the side of the recess of lesser depth to the side thereof of greater depth, and a cushion heel lift secured in said recess of such dimensions as to fill said recess, said outsole and heel lift being secured to said welt by outsole stitching.

3. A shoe having an upper, an insole, a welt secured to said upper and insole and extending entirely around the periphery of the shoe bottom, an outsole having its heel portion inclined transversely of the shoe to form a recess between said heel portion and the level of the adjacent end of the shank portion of the sole of greater depth at one side of the sole than at the other, and a cushion heel lift in the form of a wedge secured in said recess, the thick end of said wedge lying in the deep portion of said recess at one side of the sole and the thin end lying in the shallow portion of said recess at the other side of the sole.

4. A shoe having an upper, an insole, a welt secured to said upper and insole and extending entirely around the periphery of the shoe bottom, a molded leather outsole having its heel portion inclined transversely to the heel of the shoe to form a recess of greater depth on one side than the other, a cushion wedge heel lift of correspondingly increased thickness on one side interposed between the sole and heel, and stitching uniting the welt, wedge heel lift, and outsole together.

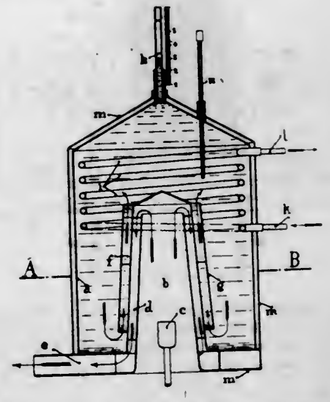
5. A shoe having a leather outer sole molded along the tread surface thereof, and condensed by intersecting depressions indented in the tread face during the molding operation and forming a plurality of flat tread spaces between said depressions.

[Claim 6 not printed in the Gazette.]

1,103,915. METHOD AND DEVICE FOR MEASURING THE HEATING VALUE OF FUELS. HUGO JUNKERS, Aix-la-Chapelle, Germany. Filed Oct. 15, 1913. Serial No. 795,240. (Cl. 73—184.)

1. A calorimeter for determining the heating value of fuels, consisting of a vessel whose lower portion is shaped as a hollow casing forming a combustion chamber which is open on its under side and heat transferring devices fitted in the combustion chamber for the purpose of taking up the heat liberated by the combustion of fuels and transmitting it to a liquid, for example petroleum, which fills the said vessel and whose coefficient of expansion is as nearly as possible constant within the range of temperatures used and a measuring device for determining the expansion of the said liquid.

2. A calorimeter for determining the heating value of fuels, consisting of a vessel whose lower portion is shaped as a hollow casing forming a combustion chamber which is open on its under side and heat transferring devices fitted in the combustion chamber for the purpose of taking up the heat liberated by the combustion of fuels and transmitting it to a liquid, for example petroleum, which fills the said vessel and whose coefficient of expansion is as nearly as possible constant within the range of temperatures used and a measuring device for determining the expansion of the said liquid and having a circulation jacket for facilitating the circulation and mixture of the measuring liquid.



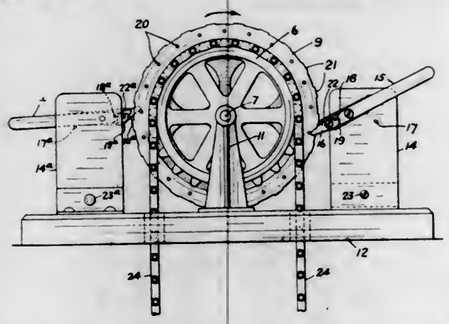
3. A calorimeter for determining the heating value of fuels, consisting of a vessel whose lower portion is shaped as a hollow casing forming a combustion chamber which is open on its under side and heat-transferring devices fitted in the combustion chamber for the purpose of taking up the heat liberated by the combustion of fuels and transmitting it to a liquid, for example petroleum, which fills the said vessel and whose coefficient of expansion is as nearly as possible constant within the range of temperatures used and a measuring device for determining the expansion of the said liquid and having a heat-transferring device, for example a coiled tube, suitable for passing a liquid through, for the purpose of adjusting the initial temperature of the measuring liquid.

4. A calorimeter for determining the heating value of fuels, consisting of a vessel whose lower portion is shaped as a hollow casing forming a combustion chamber which is open on its under side and heat-transferring devices fitted in the combustion chamber for the purpose of taking up the heat liberated by the combustion of fuels and transmitting it to a liquid, for example petroleum, which fills the said vessel and whose coefficient of expansion is as nearly as possible constant within the range of temperatures used and a measuring device for determining the expansion of the said liquid in which all the parts which come in contact with the measuring liquid are shaped in such a way as to prevent the adhesion of air.

1,103,916. ELECTRIC MAKE-AND-BREAK DEVICE. GEORGE E. LAWRENCE, Philadelphia, Pa., assignor to Hydro Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 25, 1912. Serial No. 722,228. (Cl. 177—351.)

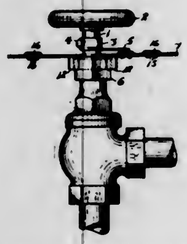
1. An electric make-and-break device comprising the combination of a wheel revoluble in two directions and having on its rim contact teeth spaced apart, a pair of pivotal levers having contacts clearing said teeth when the levers are in normal position, and complemental projections on the wheel and movable dogs on the levers whereby upon rotation of the wheel one of said levers is turned and released to make momentary wiping contact and the other lever remains at rest in its normal position, substantially as described.

2. An electric make-and-break device comprising the combination of a revoluble wheel having on its rim contact teeth spaced apart, a pivotal lever tending to return to normal position and provided with a contact clearing said teeth when the lever is in normal position, and means operated by the revolution of the wheel and adapted to turn said lever with its contact between and clear of said teeth, and then to release said lever and permit it in returning to normal position to wipe its contact over and past a tooth.



3. An electric make-and-break device comprising a toothed contact wheel rotatable in two directions, a vibratory contact normally out of range of the wheel and provided with means for causing it to wipe a tooth of the wheel, and means inoperative when the wheel turns in one direction and operative when the wheel turns in the other direction to shift the contact and release it and permit it to automatically wipe a tooth, substantially as described.

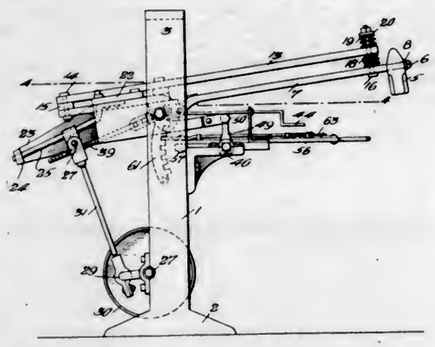
1,103,917. VALVE-INDICATOR. JASPER C. LAWSON, San Francisco, Cal. Filed Nov. 19, 1913. Serial No. 802,006. (Cl. 137—4.)



In combination with a valve stem and stuffing box therefor, a pointer adjustably secured on said stem, a disk having a radially extending slot, by which it can be passed around the stem, a spring secured to the back of the disk and partially surrounding said stuffing box and conforming in shape thereto and having diverging ends, said disk having thereon a circumferential series of indicating marks, and having also a concentric series of elongated holes, fasteners through said holes, and buttons secured by said fasteners in said holes adjustably on the disk and having indicating characters thereon.

1,103,918. HAMMER. JOHN F. OVERCASH, Primghar, Iowa. Filed July 31, 1913. Serial No. 782,254. (Cl. 78—32.)

1. A power hammer comprising a supporting frame, a swinging frame arranged transversely of the supporting frame near the top thereof, and mounted to swing on an axis transverse to the supporting frame, a beam mounted to swing with the swinging frame and movable laterally of the swinging frame and movably longitudinally on the swinging frame, means for swinging the frame, and a common means for moving the beam longitudinally and laterally of the swinging frame.



2. A power hammer comprising a supporting frame, a swinging frame arranged transversely of the supporting frame near the top thereof, and mounted to swing on an axis transverse to the supporting frame, a beam extending laterally from the frame on both sides thereof and having a slidable connection with the swinging frame for permitting the beam to be moved longitudinally and to be moved laterally with respect to the swinging frame, and from side to side of the supporting frame, a common means for moving the beam longitudinally and for moving the beam laterally, said means comprising a slide bar arranged approximately parallel with the axis upon which the frame swings, a sleeve slidable on the slide bar, a bracket pivoted at one end to the sleeve and at the other to the swinging frame, said slide bar being mounted to oscillate, and a common means for oscillating the bar and for moving the sleeve longitudinally thereof.

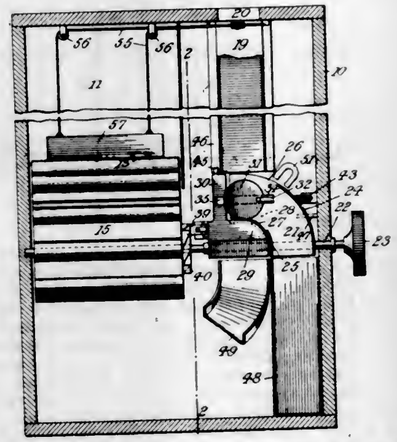
3. A power hammer comprising a supporting frame, a swinging frame pivoted to the supporting frame to swing on an axis transverse to the said supporting frame, a beam supported by the swinging frame and movable therewith, a hammer handle pivoted to the beam adjacent to the supporting frame, a bolt passing through the handle and the end of the beam remote from the swinging frame, springs arranged on the bolt on opposite sides of the beam, and a nut threaded on to the bolt for varying the tension of the springs.

4. A power hammer comprising a supporting frame, a swinging frame arranged transversely thereof and mounted to swing on an axis transverse to the supporting frame, a beam mounted to swing with the swinging frame, a slide rod connected with the swinging frame and extending perpendicularly to the axis upon which the frame swings, a power shaft journaled parallel with the axis of the swinging frame and provided with a crank, a pitman journaled at one end of the crank and slidable at the other end of the rod, said pitman having a threaded opening and a threaded rod engaging the opening, said rod being journaled on the swinging frame, and means for rotating the rod.

1,103,919. VENDING-MACHINE. LOUIS C. TARASCH, Brooklyn, N. Y., assignor to Theodore Jelenk, Brooklyn, N. Y. Filed Apr. 1, 1913, Serial No. 758,092. Renewed June 1, 1914. Serial No. 842,308. (Cl. 194—85.)

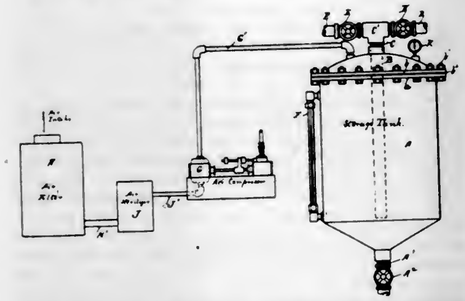
1. A vending machine comprising a shaft, a recessed delivery drum loosely mounted thereon, a curved oscillable member fast on the shaft and provided with a coin slot, a driver loosely mounted on the shaft and extending partly beneath the oscillable member, a coin rest on the driver beneath the coin slot, an arm extending upwardly from the driver sidewise of the coin slot and adapted to be engaged facewise by a coin held within the slot, and means for operatively connecting the driver to the delivery drum.

2. A vending machine comprising a shaft, a recessed delivery drum loosely mounted thereon, a curved oscillable member fast on the shaft, said member being provided with a coin slot and with a check-rod slot extending across the coin slot, a driver loosely mounted on the shaft and extending partly beneath the oscillable member, a coin rest on the driver beneath the coin slot, an arm extending upwardly from the driver sidewise of the coin slot and adapted to be engaged facewise by a coin held within the coin slot, said arm being likewise provided with a check-rod slot, a spring-controlled check rod movable within the check rod slots of the oscillable member and arm, and means for operably connecting the driver to the delivery drum.



3. A vending machine comprising a shaft, a recessed delivery drum loosely mounted thereon, an oscillable member fast on the shaft and provided with a coin slot, a driver loosely mounted on the shaft and normally adjacent to and disengaged from said drum, a coin rest on the driver beneath the coin slot, an arm extending from the driver sidewise of the coin slot and adapted to be engaged facewise by a coin held within the slot, and means for operatively connecting the driver to the delivery drum.

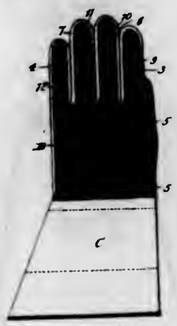
1,103,920. METHOD OF STORING UNFERMENTED FRUIT-JUICE. FRANCIS J. WALKER, Jr., Erie, Pa. Filed Jan. 11, 1913. Serial No. 741,500. (Cl. 99—8.)



1. The method of storing unfermented fruit juice, consisting in placing sterilized juice in an inclosed tank, and connecting said tank with a source of sterile air, under uniform pressure adapted to supply leakage of air therefrom, substantially as set forth.

2. The method of storing unfermented fruit juice, consisting in placing sterilized juice in an inclosed tank and connecting said tank with suitable apparatus adapted to supply sterile air to said tank under uniform pressure adapted to supply leakage therefrom, substantially as set forth.

1,103,921. GLOVE. PETER A. WALLER, Kewanee, Ill., assignor to Boss Manufacturing Company, Kewanee, Ill., a Corporation of Illinois. Filed Nov. 9, 1910. Serial No. 591,507. (Cl. 2—9.)



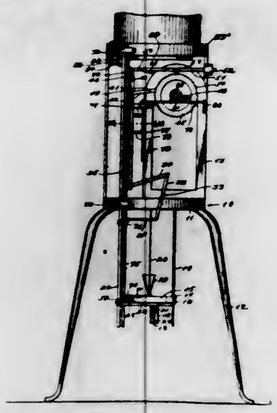
A glove consisting of a blank of inelastic material constituting a palm portion the wrist edge and the sides of the blank being substantially straight, a front thumb section at one side of the blank adjacent its wrist edge, said thumb section extending downwardly toward the wrist edge and outwardly beyond the adjacent side edge of the blank whereby the same may be folded to an upright position, the blank having formed at its edge remote from its wrist edge separate spaced finger portions adapted to form the front and sides of the first and fourth fingers of the glove; said finger portions being of a width to extend between the fingers of the wearer and lie upon the backs thereof, a pair of separate inelastic finger pieces secured at their lower edges to the portion of the blank intermediate the integral finger pieces thereof and to the adjacent lower edges of said finger pieces, a separate thumb section formed of a single piece of material and arranged to extend at the front of the glove to completely cover the back of the thumb and the fleshy part of the hand of the wearer adjacent the base of the thumb, the section being secured at its upper edges to the front thumb piece and having its lower part secured to the inelastic palm piece, and a one piece back for the glove of elastic material comprising a back proper and finger backs, the back proper having a straight wrist edge and straight side edges, the side edge which is disposed adjacent the thumb being recessed adjacent the wrist edge, said back piece being secured at its edges to the various other members which constitute the glove.

1,103,922. CUTTING MECHANISM FOR KNITTING-MACHINES. JACOB H. ADAMEE, Durham, N. C., assignor of one-third to J. H. Stone, Durham, N. C. Filed June 5, 1913. Serial No. 771,859. (Cl. 164—45.)

1. Apparatus of the character described, comprising a support, a stationary cutter-blade attached thereto, a clamping element arranged upon one side of the cutter-blade and adapted to reciprocate transversely toward and away from the cutter-blade, automatic means adapted upon the release of the clamping element to move the same toward the stationary cutter-blade, means to normally retain the clamping element set, means to move said means whereby the clamping element is released, and a movable cutter-blade arranged to coöperate with the stationary cutter-blade.

2. Apparatus of the character described, comprising a relatively stationary cutter-blade, a clamping element extending longitudinally of the cutter-blade upon one side thereof and movable transversely toward and away from the same, locking means adapted to normally hold the

clamping element away from the stationary cutter-blade, means to automatically move the clamping element toward the stationary cutter-blade upon the release of the clamping element, and a movable cutter-blade arranged to coöperate with the stationary cutter-blade.



3. Apparatus of the character described, comprising a substantially horizontal support having an opening formed therethrough to receive stocking tops passing downwardly, a substantially horizontal stationary cutter blade mounted within the opening of the support and attached to the same, a reciprocatory clamping element substantially horizontally arranged within the opening and in substantially the same horizontal plane with the stationary cutter-blade for movement toward and away from the cutter-blade, and a movable cutter-blade pivoted to the support below and adjacent the clamping element to coöperate with the stationary cutter-blade.

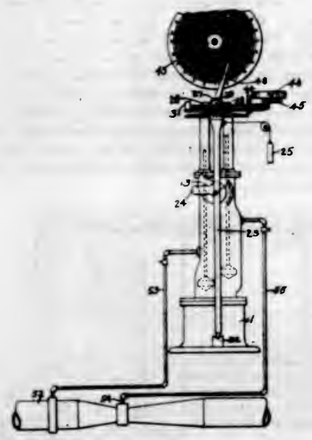
4. Apparatus of the character described, comprising a substantially horizontal stationary cutter-blade, a substantially horizontal reciprocatory clamping element mounted upon one side of the stationary cutter-blade in substantially the same horizontal plane therewith and provided upon its side adjacent the cutter-blade with a laterally extending bead engaging flange, a pivoted cutter-blade arranged below and near the reciprocatory clamping element and adapted for movement toward and away from the stationary cutter-blade, and automatic means to move the pivoted cutter-blade and clamping element.

5. In apparatus of the character described, the combination with a support provided with an opening, of a stationary cutter-blade mounted within the opening and attached to the support, a reciprocatory clamping element mounted within the opening and movable toward and away from the stationary cutter-blade, a transversely reciprocatory locking plate connected with the clamping element and provided with tapered recesses, a longitudinally reciprocatory coacting locking plate provided with laterally extending tapered teeth to enter the tapered recesses of the first named locking plate, a spring attached to the first named locking plate to move the same in one direction when released, a spring attached to the longitudinally reciprocatory locking plate to move the same in one direction when released, and a pivoted cutter-blade mounted to coöperate with the stationary cutter-blade.

[Claims 6 to 15 not printed in the Gazette.]

1,103,923. SPEED-CHANGING DEVICE. FREDERICK N. CONNET, Providence, R. I. Filed Mar. 25, 1911. Serial No. 616,918. (Cl. 73—167.)

1. In a measuring device an exhibitor and mechanism for actuating the latter, said mechanism including a driving disk disposed substantially in a horizontal plane, a driven member, an intermediate gravity retained ball for transmitting motion from said disk to said driven member, and means for shifting the ball bodily relatively to the axis of the disk, whereby the reading of the exhibitor is controlled.



2. In a measuring device of the character described, an exhibitor, a driving disk disposed substantially in a horizontal plane, a driven member, an intermediate gravity retained ball for transmitting motion from the disk to said exhibitor through said driven member, and means for shifting the ball bodily relatively to the axis of the disk.

3. A measuring device comprising an inverted pendulum, an exhibitor carried thereby, a Venturi tube and means actuated by differences of pressure in said tube for actuating said pendulum and exhibitor said means including a driving disk and a driven member, an intermediate ball for transmitting motion from said disk to said exhibitor, and means for shifting the ball relatively to the axis of said disk.

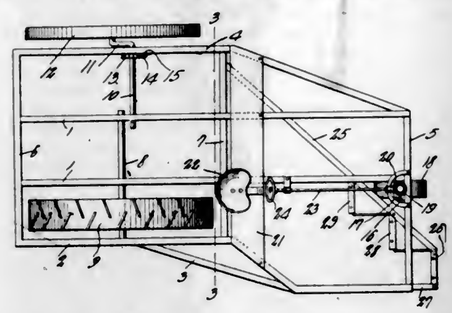
4. In a measuring device an inverted pendulum an exhibitor carried thereby, a driving disk, a driven member through which said exhibitor is operated said member being supported by said inverted pendulum, and a ball for transmitting motion from the disk to the driven member for controlling the action of said exhibitor.

5. In a measuring device, an exhibitor, an oscillating arm carrying said exhibitor, a pair of shafts having antifriction rolls, a ball between and in contact with said rolls, a spring for holding the shaft rolls in contact with the ball, and a rotatable ball driving disk on which the ball rests and through the movement of which disk the exhibitor is operated through the ball and one of said shafts.

1,103,924. FRAME FOR AGRICULTURAL IMPLEMENTS. ARTHUR O. GAHR, Milbank, S. D. Filed May 19, 1913, Serial No. 768,686. Renewed May 16, 1914. Serial No. 839,055. (Cl. 21—114.)

1. A frame comprising parallel intermediate beams and side beams, one of the side beams having offset end portions, a brace extending between the said offset end portions, the other side beam having angularly disposed end portions, the forward end of the last-mentioned side beam being connected to one of the intermediate beams, a front cross beam connecting the intermediate beams and the first-mentioned side beam together, a rear cross beam connecting the ends of the intermediate beams and side beams together, an intermediate cross beam connecting all of the first-mentioned beams together, a propelling wheel journaled behind the intermediate cross beam, a ground wheel journaled behind the intermediate cross beam, a dirigible wheel journaled below the front cross beam and an obliquely disposed beam carried in front of the propelling wheel and extending across the path thereof and parallel sections attached to the said obliquely disposed beam.

2. A frame comprising parallel intermediate beams, a side beam having offset end portions, a brace connected with the offset end portions of said side beam, a second side beam having angularly disposed end portions, one end of the last-mentioned side beam being connected with one of the intermediate beams, a rear cross beam connecting all of the beams together, an intermediate cross beam connecting all of the beams together, a front beam connecting the first-mentioned intermediate beams and the side beam having offset ends, together, a propelling wheel journaled between the first-mentioned intermediate beams and the side beam having offset ends, said propelling wheel being located between the rear cross beam and the



intermediate cross beam, a ground wheel journaled between the rear beam and the intermediate cross beam, means for raising and lowering the ground wheel, a dirigible wheel journaled below the front cross beam, an obliquely disposed beam connected at its rear end with the intermediate cross beam and lying under the front beam and the first-mentioned intermediate beams, and connected to the same, said obliquely disposed beam extending across the path of the propelling wheel and having its forward end projecting in front of the front beam, a strut interposed between the forward end of the obliquely disposed beam and the front beam, and parallel sections carried by the obliquely disposed beam.

1,103,925. BESSEMERIZING COPPER MATTE. JAMES B. HERRESHOFF, Jr., New York, N. Y., assignor to Nichols Copper Co., New York, N. Y., a Corporation of New York. Filed Aug. 12, 1912. Serial No. 714,564. (Cl. 75—62.)

1. The improvement in the art of bessemerizing matte which consists in introducing silicious material into a converter upon the molten charge therein, which material thus becomes heated but chemically remains unchanged, removing the charge from said material and utilizing said heated material as a fluxing medium for a subsequent charge of matte.

2. The improvement in the art of bessemerizing copper matte which consists in introducing silicious material into a converter upon the molten charge therein, in sufficient amount to form a thick, viscous mass upon said charge, removing the charge from the converter while allowing said mass to remain therein and introducing matte into the converter upon said mass.

3. The improvement in the art of bessemerizing copper matte which consists in reacting upon matte in the converter with a slag composed essentially of copper silicate.

REISSUES.

13,769. FASTENING DEVICE. JOSEPH BAYER, Jr., New York, N. Y., assignor, by mesne assignments, to Nocsting Pin-Ticket Company, Inc., a Corporation of New York. Filed May 25, 1912. Serial No. 699,825. Original No. 1,023,237, dated Apr. 16, 1912, Serial No. 618,887. (Cl. 40—25.)

1. A fastening device of the class described, comprising a wire bent centrally to form a doubled penetrating shank of predetermined length, the parts of which lie close together and from which said parts then diverge to a predetermined point from which point side portions extend parallel, said parallel side portions being folded and the ends thereof extended toward the shank and bent back upon themselves to form two parallel hooks opening toward the shank, the ends of the wire being finally arranged close to the parallel side portions and inside the same.



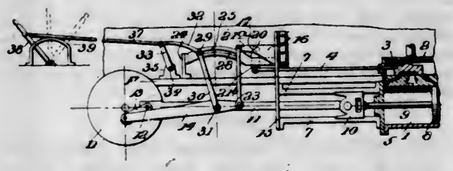
2. A tag holder comprising a piece of wire with a pin portion with a rounded end adapted to be inserted in the material to be tagged, and a hook portion formed of a free end of the wire extending substantially perpendicular to the pin portion said hook portion adapted to engage the edge of the tag to hold the tag substantially at right angles to the pin portion the free end of the wire forming the hook adapted to engage with the under surface of the tag.

3. A tag holder comprising a piece of wire with a pin portion with a rounded end adapted to be inserted in the material to be tagged, and an integral hook portion formed of the free ends of the wire comprising two spaced apart hooks lying substantially at right angles to the pin portion for engagement with the edge of the tag to hold the tag substantially at right angles to the pin portion the free ends of said wire adapted to engage with the under surface of the tag.

4. A tag holder comprising a piece of wire bent upon itself to form a pin composed of two members with a rounded end pin point at the bend, the free ends of said members being diverged and bent at substantially right angles to the pin, each member being formed into a hook, both hooks lying in a position to simultaneously engage the same edge of the tag to hold the same substantially at right angles to the pin the free ends of said wire adapted to engage with the under surface of the tag.

5. A tag-holder formed of a wire bent to form a pin, composed to two members, with a rounded-end-pin point at the bend, said members being diverged at substantially right angles to the pin, each member being formed into a hook arranged to engage with both faces of a tag, the free ends of the wire engaging with the underside of the ticket.

13,770. STEAM-ENGINE VALVE-GEAR. WILLIAM SHERMAN BROWN, Knoxville, Tenn., assignor to William S. Murrian, trustee, Knoxville, Tenn. Filed May 15, 1914. Serial No. 838,878. Original No. 1,033,532, dated July 23, 1912, Serial No. 638,001. (Cl. 121—98.)



1. In a locomotive valve gear, the combination of a reversing mechanism comprising a support movable in an arc, a drive-wheel, a crank on said wheel, an auxiliary crank, an auxiliary rod coupled to said auxiliary crank, two approximately upright links having their lower ends coupled to the auxiliary rod and one of said links having its upper end coupled to said support, and a distributing valve in operative relation with the other of said two links, substantially as described.

2. In a locomotive valve gear, the combination of a reversing mechanism comprising a support movable in an arc, a drive-wheel, a crank on said wheel, an auxiliary crank, an auxiliary rod coupled to said auxiliary crank,

two approximately upright links having their lower ends coupled to the auxiliary rod and the rear of said links having its upper end coupled to said support, and a diatributing valve in operative relation with the forward of said two links, substantially as described.

3. In a locomotive valve gear, the combination of a slide block, means for moving said block, an auxiliary crank, an auxiliary rod coupled to said crank, and two approximately upright links, each having its lower end coupled to the auxiliary rod and one having its upper end coupled to said slide block and the other having its upper end in operative relation with the distributing valve, substantially as described.

4. In a locomotive valve gear, the combination of a slide block, means for moving said block, a bell crank in operative relation with the distributing valve, an auxiliary crank, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to the auxiliary rod and one having its upper end coupled to said slide block and the other having its upper end coupled to said bell crank, substantially as described.

5. In a locomotive valve gear, the combination of an approximately horizontal bridge-piece forming a slideway, a slide block on said slideway, means for moving said slide block, an auxiliary crank, an auxiliary rod coupled to said crank, and two approximately upright links, each having its lower end coupled to the auxiliary rod and one having its upper end coupled to said slide block and the other having its upper end in operative relation with the distributing valve, substantially as described.

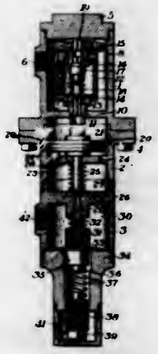
6. In a locomotive valve gear, the combination of an approximately horizontal bridge-piece forming a slideway, a slide block on said slideway, means for moving said slide block, a bell crank in operative relation with the distributing valve, an auxiliary crank, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to the auxiliary rod and one having its upper end coupled to the slide block and the other having its upper end coupled to the bell crank, substantially as described.

7. In a locomotive valve gear, the combination of a bracket, a bell crank hinged to said bracket and being in operative relation with the distributing valve, a slide block, means for supporting said slide block, means for moving said slide block, an auxiliary crank, an auxiliary rod, and two approximately upright links each having its lower end coupled to said auxiliary rod and one having its upper end coupled to said slide block and the other having its upper end coupled to said bell crank, substantially as described.

8. In a locomotive valve gear, the combination of a bracket, a bell crank supported by said bracket and being in operative relation with the distributing valve, a bridge-piece having its rear end secured to the engine framing and having its other end extended beneath said bell crank and secured to said bracket, the said bridge-piece having a slideway, a slide block on said slideway, means for moving said block, an auxiliary crank, an auxiliary rod coupled to said crank, and two approximately upright links each having its lower end coupled to the auxiliary rod and one having its upper end coupled to said slide block and the other having its upper end coupled to said bell crank, substantially as described.

13,771. AUTOMATIC RETAINER FOR AIR-BRAKES. JOHN M. CARTER, Memphis, Tenn., assignor of one-half to Asa C. Henry, Memphis, Tenn. Filed July 3, 1913. Serial No. 777,360. Original No. 996,748, dated July 4, 1911, Serial No. 577,579. (Cl. 188—12.)

1. In combination with the brake cylinder and triple valve of an air-brake system, an automatic retainer casing made up of communicating sections, a weighted valve controlling the communication between two of the sections, a spring-pressed graduating valve positioned within said weighted valve and regulating a passageway through the latter, a pipe communicating between one of said sections and the check valve casing of the triple valve, a pipe communicating between one of the other sections and exhaust port of the triple valve, said valves in the casing adapted to be actuated automatically by the engineer's brake valve, substantially as described.



2. In combination with the brake cylinder and triple valve of an air brake system, an automatic retainer casing made up of communicating sections, a hollow weighted valve regulating communication between two of the chambered sections, a spring-pressed valve within the chambered valve and regulating the passage therethrough, a second valve within the weighted valve and regulating a passageway between the interior of the hollow valve and the chamber in which the same is positioned, a piston mounted in one of said sections and having a stem movable through an aperture in a perforated partition in the section in which it is located, a spring adapted to hold said piston seated, the chambered portion in which said spring is positioned having a vent duct to the atmosphere, the casing in which the weighted valve is positioned having a port adapted to communicate with the exhaust port of the triple valve, and one of the sections having a port communicating with the triple valve casing, substantially as described.

3. In combination with the brake cylinder and triple valve of an air-brake system, an automatic retainer casing made up of communicating sections, a hollow weighted valve regulating communication between two of the chambered sections, a spring-pressed valve within the chambered valve and regulating the passage therethrough, a second valve within the weighted valve and regulating a passageway between the interior of the hollow valve and the chamber in which the same is positioned, a piston mounted in one of said sections and having a stem movable through an aperture in a perforated partition in the section in which it is located, a cap nut upon said stem, a spring interposed between the same and said perforated partition, the chamber in which said spring is mounted having a vent forming an exit to the atmosphere for an excess of compressed air, thereby allowing said spring to hold the piston seated, substantially as described.

4. In combination with the brake cylinder and triple valve of an air-brake system, an automatic retainer casing made up of communicating sections, a hollow weighted valve regulating communication between two of the chambered sections, a spring-pressed valve within the chambered valve and regulating the passage therethrough, a second valve within the weighted valve and regulating a passageway between the interior of the hollow valve and the chamber in which the same is positioned, a piston mounted in one of said sections and having a stem movable through an aperture in a perforated partition of the section in which it is located, a cap nut upon said stem, a spring interposed between the same and said perforated partition, the chamber in which said spring is mounted having a vent forming an exit to the atmosphere for an excess of compressed air, thereby allowing said spring to hold the piston seated, a hollow valve stem mounted in and communicating with a chambered section of the casing and connected to the cylinder containing said piston, a valve cap fixed to said hollow stem, a spring bearing against said cap, a diaphragm, a cap fitted to the section containing said hollow piston stem, a spring-pressed plunger bearing against said diaphragm, the casing containing the weighted valve having a port adapted to communicate with the exhaust port of the triple valve, and the section containing said diaphragm provided with a port designed to communicate with the triple valve casing, substantially as described.

5. In combination with the brake cylinder and triple valve of an air brake system, an automatic retainer casing made up of communicating sections, a hollow weighted valve regulating communication between two of the chambered sections, a spring-pressed valve within the chambered valve and regulating the passage therethrough, a second valve within the weighted valve and regulating a passageway between the interior of the hollow valve and the chamber in which the same is positioned, a piston mounted in one of said sections and having a stem movable through an aperture in a perforated partition of the section in which it is located, a cap nut upon said stem, a spring interposed between the same and said perforated partition, the chamber in which said spring is mounted having a vent forming an exit to the atmosphere for an excess of compressed air, thereby allowing said spring to hold the piston seated, a hollow valve stem mounted on and communicating with the chambered section of the casing and connected to the cylinder containing said piston, a valve cap fixed to said hollow stem, a spring bearing against said cap, a diaphragm, a cap fitted to the section containing said hollow piston stem, a spring-pressed plunger bearing against said diaphragm, a threaded plug fitted within the cap carrying said plunger, the casing containing the weighted valve having a port adapted to communicate with the exhaust port of the triple valve, and the section containing said diaphragm provided with a port designed to communicate with the triple valve casing; substantially as described.

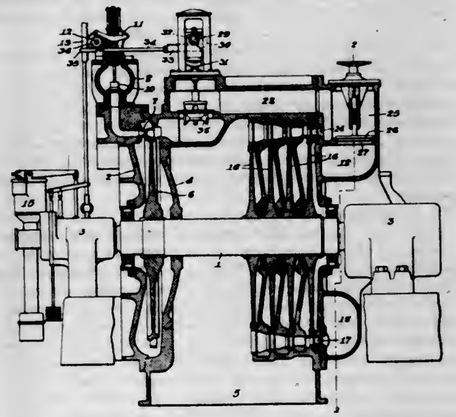
6. In combination with the brake cylinder and triple valve of an air brake system, a valve retaining casing made up of three chambered sections, one of said sections having a perforated partition, a hollow weighted valve regulating the aperture in the partition communicating with the chamber divided by said perforated partition, a piston mounted in one of the chambers of the section having the perforated partition, a stem of said piston passing through the latter, a spring holding said piston seated, the chamber in which said spring is positioned having a vent to the atmosphere, a hollow valve stem, a valve cap fitted to said hollow stem, a diaphragm against which said cap stem is adapted to bear, a cap having threaded connection with the section in which said diaphragm is mounted, an adjustable spring-pressed plunger mounted within said cap and bearing against said diaphragm, the casing containing the weighted valve having a port adapted to communicate with the exhaust port of the triple valve, and the section containing said diaphragm provided with a port designed to communicate with the triple valve casing; substantially as described.

7. The combination with a brake cylinder, triple valve and auxiliary air reservoir of an air-brake system, of a retainer connected to the brake cylinder to receive the exhaust therefrom, a valve for controlling the escape of air from said retainer, means under the control of the engineer for controlling the opening of said valve, and automatic means for limiting overcharging of the auxiliary reservoir; substantially as described.

8. The combination with a brake cylinder, triple valve, and auxiliary air reservoir of an air-brake system of a retainer connected to the brake cylinder to receive the exhaust therefrom, a valve for controlling the escape of air from said retainer, and means under the control of the engineer for controlling the opening of said valve, said retainer having an escape opening in communication with the atmosphere which is automatically opened when the pressure in the train pipe becomes excessive on re-charging; substantially as described.

9. The combination with a brake cylinder, triple valve and auxiliary air reservoir of an air-brake system, of a retainer connected to the brake cylinder to receive the exhaust therefrom, a valve for controlling the escape of air from said retainer, means under the control of the engineer for controlling the opening of said valve, and an escape port connected to the train pipe and which is automatically opened to the atmosphere when the pressure in the train pipe becomes excessive in re-charging; substantially as described.

13,772. MIXED-PRESSURE TURBINE. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 5, 1914. Serial No. 843,270. Original No. 1,091,345, dated Mar. 24, 1914, Serial No. 783,977. (Cl. 121—118.)



1. A mixed pressure turbine having a high pressure end and a low pressure end, and provided with a restricted constantly-open passage between the condenser and the high pressure stage for establishing a vacuum in the high pressure end when the machine is running on low pressure steam.

2. A mixed pressure turbine having a high pressure end and a low pressure end, a passage for conveying the exhaust steam from the former to the latter, a check valve in said passage, and a restricted constantly-open passage connecting the high pressure end with the condenser.

3. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, and means for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel.

4. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, a passage for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel, and one or more check valves in said passage opening toward said low pressure nozzles.

5. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, a passage for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel, one or more check valves in said passage opening toward said low pressure nozzles, and means for positively operating said valves when said high pressure valve gear goes into operation.

6. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure

wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, a passage for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel, one or more check valves in said passage opening toward said low pressure nozzles, and operative connections between said valves and the high pressure valve gear.

7. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, a passage for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel, one or more check valves in said passage opening toward said low pressure nozzles, and a pilot valve seated in an opening in one of said check valves.

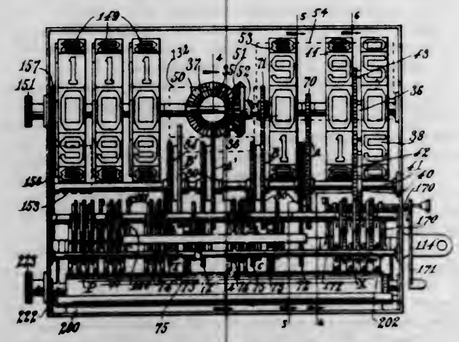
8. A mixed pressure turbine having a high pressure wheel and nozzles, valve gear controlling the admission of high pressure steam to said nozzles, low pressure wheels and nozzles therefor, means for supplying low pressure steam to a portion of said nozzles, a wide passage for conveying to the remainder of said nozzles the exhaust steam from the high pressure wheel, and two or more check valves operating in parallel to control said passage.

9. A mixed pressure turbine having a high pressure wheel and nozzles, low pressure wheels and nozzles, means for supplying low pressure steam to a portion of said low pressure nozzles, and means for admitting low pressure steam to the remainder of said nozzles at will.

10. A mixed pressure turbine having a high pressure end and a low pressure end, means for supplying low pressure steam to a portion of the low pressure nozzles, a passage conveying the exhaust from the high pressure end to the remainder of said low pressure nozzles, one or more check valves in said passage, and a hand valve for admitting the low pressure steam to said passage.

11. A mixed pressure turbine having a horizontal casing comprising a condenser exhaust conduit, a high pressure stage chamber at one side of said conduit, low pressure stages at the other side of said conduit and discharging thereinto, a shaft extending through said conduit and stages, and a restricted constantly-open annular passage around said shaft between said conduit and said high pressure stage.

13,773. FARE-REGISTER. OTTO N. MOORE, Indianapolis, Ind., assignor, by mesne assignments, to Ohmer Fare Register Company, Rochester, N. Y. Filed July 5, 1913. Serial No. 777,442. Original No. 845,882, dated Mar. 5, 1907, Serial No. 262,008. (Cl. 234—4.)



1. In a fare-register, a registering mechanism for registering amounts less than one dollar, a registering mechanism for registering amounts of one dollar and over, a pair of independent actuators one for each of said registering mechanisms, a single means for setting each of said actuators independently, and means for driving the actuators to actuate the registering mechanisms.

2. In a fare-register, a totalizer, a pair of independent setting means, one for predetermining amounts to be registered which are subdivisions of a unit and the other for predetermining amounts to be registered which are multiples of the unit, and intermediate connecting mechanism between said setting means and the totalizer for actuating the totalizer in accordance with the positions of the two setting means.

3. In a fare-register, the combination, with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, and another independent actuator for the multi-units portion, and a single means for independently predetermining the actuating effect of each of said actuator upon its respective portion of the totalizer.

4. In a fare-register, the combination, with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, and another independent actuator for the multi-units portion, and means for independently predetermining the actuating effect of each of said actuators upon its respective portion of the totalizer.

5. In a fare-register, a cash-fare totalizer, a ticket-fare totalizer, means for predetermining the amount of a fare to be registered, and means for selecting either of said totalizers and actuating the same in accordance with the setting of the predetermining means.

6. In a fare-register, the combination with a pair of totalizers each consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of a pair of actuntors for the units portions of the two totalizers, another independent pair of actuators for the multi-units portions of the pair of totalizers, a single means for independently setting each pair of actuators, and means for connecting one totalizer or the other with its actuators and advancing the selected totalizer in accordance with its actuator setting.

7. In a fare-register, the combination with a pair of totalizers each consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of a pair of actuators for the units portion of the two totalizers, another independent pair of actuators for the multi-units portions of the pair of totalizers, means for independently setting each pair of actuators, and means for connecting one totalizer or the other with its actuators and advancing the selected totalizer in accordance with its actuator setting.

8. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, another actuator for the multi-units portion, a single means for independently predetermining the actuating effect of each of said actuators upon its respective portion of the totalizer, a pair of fare-indicators corresponding to the portions of the totalizer, and intermediate connections between said single predetermining means and said fare-indicators for producing an indication of a fare to be registered.

9. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, another actuator for the multi-units portion, means for independently predetermining the actuating effect of each of said actuators upon its respective portion of the totalizer, a pair of fare-indicators corresponding to the portions of the totalizer, and intermediate connections between said predetermining means and said fare-indicators for producing an indication of a fare to be registered.

10. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, another actuator for the multi-units portion, a single means for independently predetermining the actuating effect of each of said actuators upon its respective portion of the totalizer, a pair of fare-indicators corresponding to the portions of the totalizer, intermediate connections between said single predetermining means and said face-indicators for producing an indication of a fare to be registered, and means for exposing the fare indication subsequent to the actuation of the totalizer.

11. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion with transferring mechanism therebetween, of an actuator for the units portion, another actuator for the multi-units portion, means for independently predetermining the actuating effect of each of said actuators upon its respective portion of the totalizer, a pair of fare-indicators corresponding to the portions of the totalizer, intermediate connections between said predetermining means and said fare-indicators for producing an indication of a fare to be registered, and means for exposing the fare indication subsequent to the actuation of the totalizer.

12. In a fare-register, the combination with a totalizer, of means for indicating any desired fare within predetermined limits, said indicating means consisting of two portions, one for indicating dollars and the other for indicating fractions of dollars, means for actuating said indicator, and means for advancing the totalizer in accordance with the indication of the indicator.

13. In a fare-register, the combination with two independent totalizers, of an indicator capable of indicating any desired fares within predetermined limits, said indicator consisting of two portions one for indicating dollars and the other for indicating fractions of dollars, means for actuating said indicator, and a selecting means for actuating one or the other of said totalizers in accordance with the indicator actuation.

14. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion, of an actuator for the units portion, another actuator for the multi-units portion, an indicator having two portions corresponding with the portions of the totalizer, means for exposing said indicator only upon the actuntion of the totalizer, a setting-indicator for indicating the position of the units-actuator, a second setting-indicator for indicating the position of the multi-units actuator, means for setting said several indicators and actuators, and means for actuating the actuntors to advance the totalizer in accordance with the setting of the indicators.

15. In a fare-register, the combination with a totalizer consisting of a units portion and a multi-units portion, of an actuator for the units portion, another actuator for the multi-units portion, an indicator having two portions corresponding with the portions of the totalizer, means for exposing said indicator only upon the actuation of the totalizer, a setting-indicator for indicating the positions of the units-actuator and the multi-units actuator, means for setting said indicator and actuators, and a single means for actuating the actuators to advance the totalizer in accordance with the setting of the indicator.

16. A register-actuator comprising a pivoted disk carrying a concentric flange terminating at one end in a pawl-receiving pocket and a pawl-engaging shoulder, a second pivoted element having a concentric pawl-engaging portion terminating at one end in a pawl-receiving pocket and a pawl-engaging shoulder, and a pivoted pawl-carrying element carrying a pawl arranged between the first two elements with a free end adapted to be forced into either pocket by the pawl-engaging surface of the opposing element.

17. A register-actuator comprising a pivoted disk carrying a concentric flange terminating at one end in a pawl-receiving pocket, a second pivoted element having a concentric pawl-engaging portion terminating at one end in a pawl-receiving pocket and a pawl-engaging shoulder, and a pivoted pawl-carrying element carrying a pawl arranged between the first two elements with a free end adapted to be forced into either pocket.

18. A register-actuator comprising two movable elements having parallel detent-engaging portions each terminating in a detent-receiving pocket, and a detent-carrying element carrying a detent arranged between said two elements and having a portion adapted to be engaged by the detent-engaging surfaces and forced by either into the pocket of the other.

19. A register-actuator comprising two movable elements having parallel detent-engaging portions each terminating in a detent-receiving pocket, and a detent-carrying element carrying a detent arranged between said two elements and having a portion held by either into the pocket of the other.

20. A register-actuator comprising a shaft, a setting element mounted on said shaft and carrying a flange which is concentric with the shaft and terminate in a pawl-receiving pocket, a second element mounted on the shaft and having a periphery which is parallel with the flange of the other element and terminate in a pawl-receiving pocket, a register-actuating element also mounted on the shaft and carrying a pawl adapted to be engaged by the concentric portions of either of the first-mentioned elements and forced thereby into the pocket of the other element, and means for swinging the second element.

21. A register-actuator comprising a shaft, a setting element mounted on said shaft and carrying a flange which is concentric with the shaft and terminate in a pawl-receiving pocket, a second element mounted on the shaft and having a periphery which is parallel with the flange of the other element and terminate in a pawl-receiving pocket, a register-actuating element also mounted on the shaft and carrying a pawl adapted to be engaged by the concentric portions of either of the first-mentioned elements and held thereby into the pocket of the other element, and means for swinging the second element.

22. In a fare-register, the combination with two totalizers, of an actuntor for each of said totalizers, a selector member capable of engaging either of said actuators, a reciprocating plate, intermediate connections between said plate and the selector for shifting the selector into engagement with either of said actuators by opposite movement of the plate from medial position, and means for driving the selector through the same actuating movement for either movement of the plate, said means consisting of a shaft connected to the selector, a two-armed lever carried by said shaft and having its ends extended in opposite directions from the shaft, and means carried by the plate for engaging one arm of the lever in one direction and the other arm of the lever in the opposite direction.

23. In a fare-register, the combination with two totalizers of an actuator for each of said totalizers, a selector member capable of engaging either of said actuators, means for shifting said selector into engagement with either of the totalizers, means for driving said selector through its actuating movement in either of its positions, an operating element operable in opposite directions from a medial position, and intermediate connections between said operating element and the selector-driving means for moving said driving means in the same direction upon movement of the operating member in either direction from its medial position.

24. In a fare-register, the combination with fare-registering mechanism, of a passenger-counter, and intermediate separable connections between said fare-register and the passenger-counter whereby the passenger-counter may either be automatically operated or remain inoperative during operation of the register dependent upon the condition of said separable connection.

25. In a fare-register, the combination with fare-registering mechanism, of a passenger-counter, an actuator therefor, means for independently actuating the passenger-counter and operating means dependent in its operation upon the operation of the registering mechanism, and means for connecting or disconnecting said operating means with the passenger-counter actuator.

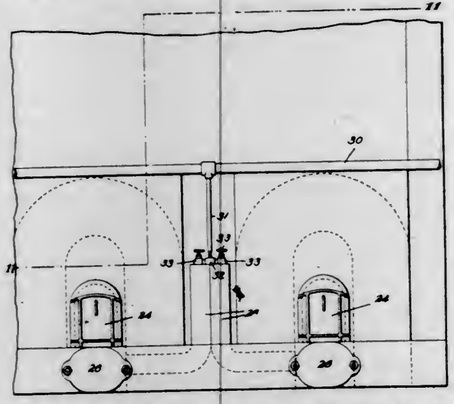
26. In combination in a fare register, a totalizer, setting means for controlling the amount of movement of said totalizer comprising a plurality of rotatable setting members adapted to be controlled from a plurality of different stations located differentially relative to said totalizer and means for actuating said totalizer an amount dependent upon the setting of said setting members.

27. In combination in a fare register, a totalizer for registering the total value of fares collected, and a plurality of setting means for setting the parts of said totalizer,

said setting means being adapted to be controlled from a plurality of different stations located differentially relative to said totalizer.

28. In combination in a fare register, a totalizer for registering the total value of fares collected, means for setting the totalizer to register a fare comprising a plurality of parallel members extending longitudinally of the car, each controlling a different digit member of said totalizer and means to actuate the totalizer according to the setting of said setting members.

13,774. KILN, FURNACE, &c. HENRY O. ROBINSON, Brookline, Mass., and CHRISTOPHER STEADMAN, Huguenot Park, N. Y. Filed Apr. 1, 1911. Serial No. 618,488. Original No. 971,642, dated Oct. 4, 1910, Serial No. 512,338. (Cl. 25—151.)



1. A kiln containing, in combination, a furnace, means to supply a forced-draft thereto, said means having a steam-inlet opening into which air may be drawn by the steam and sufficient in extent to permit the air and steam to form therein a homogeneous mixture, means to inject steam into said opening, and means to distribute said draft through the fuel body, the said furnace, except for the opening aforesaid, being tight so that the kiln cannot normally draw any gases from the furnace except the hot gases of combustion.

2. The combination, in a kiln, of a furnace, a draft conduit having an inlet-end and multiple delivery to deliver air within a mass of fuel supported at said multiple delivery, and a steam-jet device arranged to deliver into said inlet-end, said conduit being sufficient in extent to permit the steam and air to be thoroughly mixed therein and also being air tight, except for the inlet and multiple delivery, to prevent any steam or air from passing into the kiln save through the fuel bed.

3. A kiln containing in combination a furnace, means to provide a forced-draft therefor, a steam supply device for said forced-draft means and sufficiently removed from the point of combustion to insure for said draft a homogeneous mixture of steam and air, means to regulate said steam supply and thereby the resultant draft, and means to distribute said resultant homogeneous draft through the fuel-body.

4. The combination, in a kiln, of a furnace, a draft-intake therefor extending from the fuel-bed to a point outside the furnace and having its outer end of substantially uniform cross-section, and means terminating in a jet-forming valve to deliver a draft-regulating fluid-jet to said outer end of the draft intake and thereby induce in said intake a controllable entrained draft for said furnace.

5. The combination, in a kiln, of a furnace, a draft-intake therefor extending from a multiple delivery end at the fuel-bed to an open receiving end located above the furnace door, a steam delivery pipe, and a jet-forming and controlling valve in which said pipe terminates located at the open end of the draft-intake, said pipe and valve being thereby adapted to deliver into said intake a varying amount of steam without destroying the jet.

6. A kiln containing, in combination, a furnace; an air trunk having an intake for conveying forced-draft to said furnace and a multiple delivery end provided with a plurality of relatively small openings for delivering said forced-draft to said furnace; means to induce said draft in said air trunk and through said multiple delivery into said furnace to regulate said draft; said intake being sufficiently removed from said multiple delivery to secure uniformity in both the composition of the regulated draft and its delivery to the furnace through said openings.

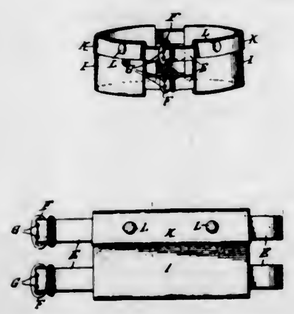
7. In a brick-kiln formed with separate and substantially independent arches providing individual fire spaces extending at intervals transversely across the kiln and having means to open and close at will the ends of the arches along the sides of the kiln, the combination of means for delivering steam to each arch and means to control the delivery of said steam to each arch independently of the delivery of the steam to every other arch, whereby by opening and closing the ends of the arches and at the same time varying the amount of steam admitted thereto, the burning of each part of the kiln is under control independently of the other parts.

8. A kiln having a floor formed of a series of arches, a grate beneath each end of each arch, a dead wall located in front of each grate and approximately in line therewith, a fuel door for each grate having its lower end resting squarely upon said dead wall, whereby an air tight closure is formed, an ash-pit for each grate also provided with an air tight closure, an air-trunk located in each front wall of the kiln and having outlets in the ash-pits below the dead walls, and means for variably forcing air through said air trunks.

9. A kiln having a floor formed of a series of arches, a grate beneath each end of each arch, a dead wall located in front of each grate and approximately in line therewith, a fuel door for each grate having its lower end resting squarely upon said dead wall, whereby an air tight closure is formed, an ash-pit for each grate also provided with an air tight closure, air trunks arranged in pairs and located in each front wall of the kiln between each pair of arches, said air trunks diverging at their lower ends and each discharging in an ash-pit below the grate, and means for variably forcing air through said trunks.

DESIGNS.

46,081. CARRIER FOR VALUABLES. LOUISE H. BOCH, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,812. Term of patent 14 years.



The ornamental design for a carrier for valuables, as shown and described.

46,082. LEATHER. CARL BRANDT, Boston, Mass., assignor to Brandt Leather Company, Boston, Mass., a Corporation of Massachusetts. Filed May 20, 1914. Serial No. 839,893. Term of patent 7 years.



The ornamental design for leather as shown.

46,083. SECTIONAL BORDER. LESLIE A. BROWN, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed May 11, 1914. Serial No. 837,946. Term of patent 7 years.



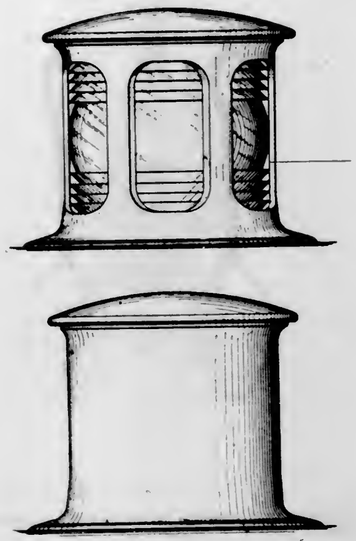
The ornamental design for a sectional border, as shown.

46,084. BUTTON. JOHN F. BYRNE, New York, N. Y., assignor to City Button Works, New York, N. Y. Filed May 21, 1914. Serial No. 840,130. Term of patent 3½ years.



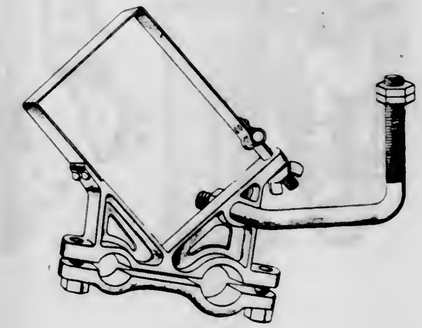
The ornamental design for a button, as shown.

46,085. BOAT-BOLLARD. IRWIN CHASE, Bayonne, N. J., assignor to The Elco Company, Bayonne, N. J., a Corporation of New Jersey. Filed Mar. 11, 1914. Serial No. 824,069. Term of patent 7 years.



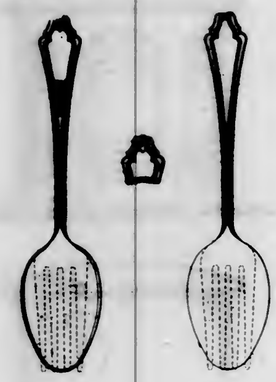
The ornamental design for a boat bollard, as shown.

46,086. BRACKET. WILLARD F. CLARK, Chicago, Ill., assignor to Pierre H. Gilleland, Chicago, Ill. Filed Nov. 17, 1913. Serial No. 801,548. Term of patent 3½ years.



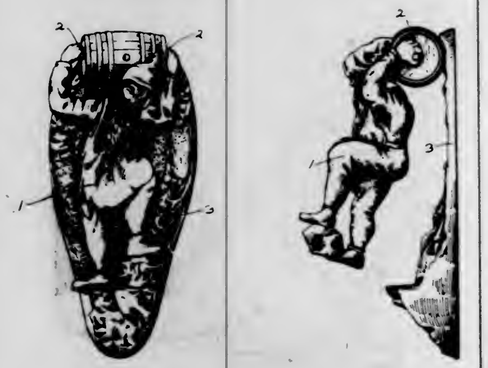
The ornamental design for a bracket, as shown.

46,087. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed May 18, 1914. Serial No. 839,449. Term of patent 14 years.



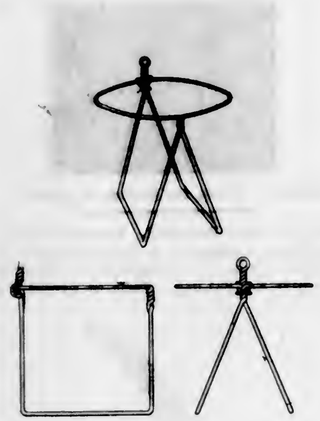
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,088. DOOR-KNOCKER. GEORGE C. GEBELEIN, Wellesley, Mass. Filed May 12, 1914. Serial No. 838,154. Term of patent 14 years.



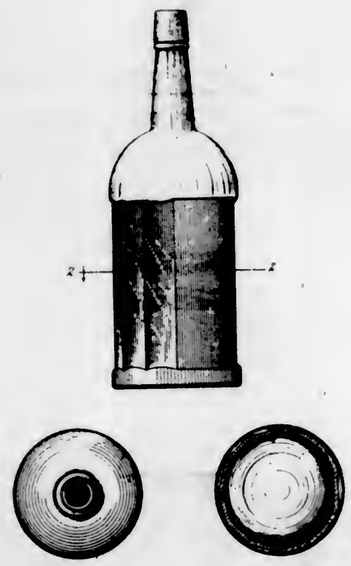
The ornamental design for a door-knocker, substantially as shown.

46,089. MILK-BOTTLE HOLDER. FRED C. GIBBS, South Portland, Me. Filed Apr. 16, 1914. Serial No. 832,399. Term of patent 14 years.



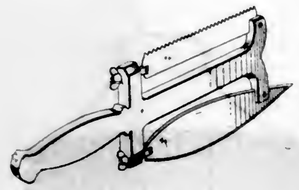
The ornamental design for a milk bottle holder, as shown.

46,090. BOTTLE. SHEPARD J. GOLDBERG, New York, N. Y. Filed May 23, 1914. Serial No. 840,630. Term of patent 14 years.



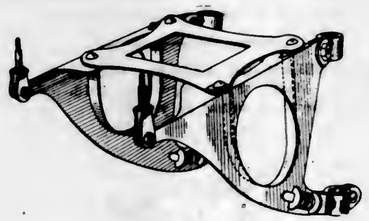
The ornamental design for a bottle as shown.

46,091. COMBINED KNIFE AND SAW. ALPHEUS M. GREER, Runnels county, near Goldsboro, Tex. Filed Apr. 18, 1914. Serial No. 832,977. Term of patent 7 years.



The ornamental design for a combined knife and saw, as shown.

46,092. MOUNTING FOR LAMPS AND LAMP-SUPPLY CONTAINERS. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed May 19, 1914. Serial No. 839,657. Term of patent 14 years.



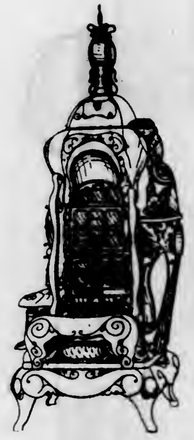
The ornamental design for mounting for lamps and lamp supply containers, as shown.

46,093. CARRIAGE-LAMP. JAMES H. HILL, Rochester, N. Y., assignor to Embury Manufacturing Co., Warsaw, N. Y., a Corporation. Filed May 9, 1914. Serial No. 837,592. Term of patent 14 years.



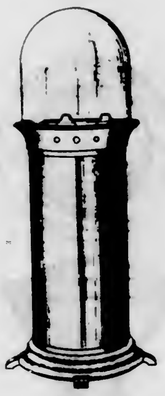
The ornamental design for a carriage lamp, as shown.

46,094. HEATING-STOVE. GEORGE W. HOWES, Dowagiac, Mich., assignor to Estate of P. D. Beckwith, Inc., Dowagiac, Mich. Filed Feb. 26, 1914. Serial No. 821,306. Term of patent 14 years.



The ornamental design for a heating stove as shown.

46,095. AIR-PUMP SUPPORT AND CASING. JOHN T. JANETTE, Chicago, Ill. Filed Apr. 23, 1914. Serial No. 833,994. Term of patent 7 years.



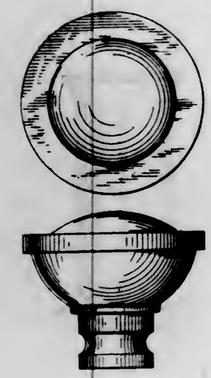
The ornamental design for an air pump support and casing as shown.

46,096. TOWEL-HOLDER. MARTIN KIEF, Hondale, N. Mex. Filed May 14, 1914. Serial No. 838,582. Term of patent 14 years.



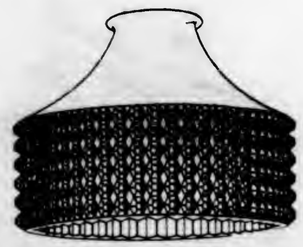
The ornamental design for a towel holder, as shown.

46,097. AUTOMOBILE LAMP-GLOBE. ARTHUR K. MILLER, Peekskill, N. Y. Filed May 6, 1913. Serial No. 765,930. Term of patent 7 years.



The ornamental design for an automobile lamp globe, as shown.

46,098. GLASS SHADE OR REFLECTOR. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,002. Term of patent 14 years.



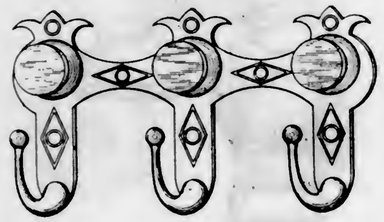
The ornamental design for a glass shade or reflector comprising a skirt portion having upon the outer surface thereof angular jewel-like protuberances and upon the inner surface thereof substantially radially disposed prisms backing up the aforesaid protuberances.

46,099. EMBLEM OR BADGE. GEORGE E. NERNEY, Attleboro, Mass. Filed Apr. 19, 1913. Serial No. 762,410. Term of patent 14 years.



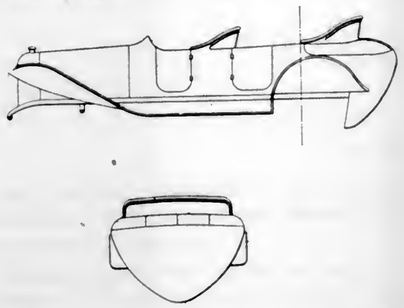
The ornamental design for an emblem or badge as shown.

46,100. GARMENT-HANGER. GEORG POHL, Melvin, Iowa. Filed May 15, 1914. Serial No. 838,879. Term of patent 7 years.



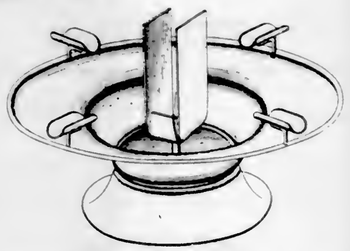
The ornamental design for a garment hanger, as shown.

46,101. AUTOMOBILE-BODY. RICHARD H. RICE, Lynn, Mass. Filed Mar. 2, 1914. Serial No. 822,069. Term of patent 7 years.



The ornamental design for an automobile body as shown and described.

46,102. ASH-TRAY. PASQUALE ROSSOTTO, New York, N. Y. Filed May 9, 1914. Serial No. 837,591. Term of patent 7 years.



The ornamental design for an ash tray as shown.

46,103. PADLOCK. FRANK SOLEY, Philadelphia, Pa., assignor to Miller Lock Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 13, 1914. Serial No. 838,396. Term of patent 14 years.



The ornamental design for a padlock substantially as shown in the accompanying drawing.

TRADE-MARKS

PUBLISHED JULY 14, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 54,818. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FULLER & JOHNSON MANUFACTURING COMPANY, Madison, Wis. Filed Mar. 2, 1911.

MULTIMOTOR

Particular description of goods.—Gasolene-Pumping Engines.
Claims use since Jan. 20, 1911.

Ser. No. 55,239. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed Mar. 22, 1911.

PAN

Particular description of goods.—Candies.
Claims use since about the year 1898.

Ser. No. 55,588. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE SOLDERALL COMPANY, New York, N. Y. Filed Apr. 7, 1911.

SOLDERALL

Particular description of goods.—Soldering Material Composed of Pulverized Solder, a Flux, and a Carrier.
Claims use since about Jan. 15, 1911.

Ser. No. 57,263. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KNELL & PRENGEL CO., Milwaukee, Wis. Filed June 23, 1911.

Luxus

Particular description of goods.—Coffees, Teas, and Spices.
Claims use since June 8, 1911.

Ser. No. 61,005. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH CLOUTIER, Worcester, Mass. Filed Jan. 24, 1912.

Dyspeptic's Friend

Particular description of goods.—A Remedy for Dyspepsia.
Claims use since Nov. 1, 1910, or thereabout.

Ser. No. 62,952. (CLASS 2. RECEPTACLES.) MODEL KITCHEN EQUIPMENT COMPANY, Chicago, Ill. Filed Apr. 17, 1912.

MODEL

Particular description of goods.—Match-Receptacles of Metal.
Claims use since on or about the 22d day of January, 1912.

Ser. No. 63,245. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LOZIER MOTOR COMPANY, Detroit, Mich. Filed May 1, 1912.

LOZIER

Particular description of goods.—Automobiles.
Claims use since 1900.

Ser. No. 63,491. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ALEX D. SHAW & Co., New York, N. Y. Filed May 11, 1912.

BISQUIT'S OWN

The trade-mark consists of the arbitrary words "Bisquit's Own."
Particular description of goods.—Brandy.
Claims use since Jan. 1, 1904.

Ser. No. 64,286. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MELLIER COMPANY—PERFUMER, St. Louis, Mo. Filed June 20, 1912.

FLORESSENCE

Particular description of goods.—Perfumery.
Claims use since Feb. 21, 1902.

Ser. No. 65,896. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHAS. MORRILL, New York, N. Y. Filed Sept. 20, 1912.



Particular description of goods.—Saw-Sets, Nail-Pullers, Spike-Pullers, Box-Openers, Bench-Strops, Seal-Presses, Hand-Punches, and Liquid-Soap-Dispensing Machines.
Claims use since Feb. 1, 1912.

Ser. No. 66,028. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH FINELLI, Hoboken, N. J. Filed Sept. 28, 1912.



Particular description of goods.—Olive-Oil.
Claims use since Mar. 1, 1912.

Ser. No. 67,457. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANKLIN CARO CO., Richmond, Va. Filed Dec. 17, 1912.

CARO

Particular description of goods.—Chewing-Gum.
Claims use since May 31, 1912.

Ser. No. 68,335. (CLASS 12. CONSTRUCTION MATERIALS.) UNION FIBRE COMPANY, Winona, Minn. Filed Feb. 5, 1913.

FIBROFELT

Particular description of goods.—A Vegetable Self-Sustaining Heat-Insulating Material in Sheet Form.
Claims use since Jan. 1, 1913.

Ser. No. 69,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. LONERGAN'S, Pittsburgh, Pa. Filed Mar. 22, 1913. Under ten-year proviso.



Particular description of goods.—Medical Compounds for the Digestive Organs.
Claims use since 1875.

Ser. No. 69,435. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SOCIÉTÉ ANONYME DES SAVONS DE MARSEILLE, Marseille, France. Filed Mar. 29, 1913.



Particular description of goods.—Soap.
Claims use since Apr. 27, 1895.

Ser. No. 69,849. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RAMON P. FRANQUI, New York, N. Y. Filed Apr. 17, 1913.



The picture shown being fanciful.
Particular description of goods.—Toilet Soap.
Claims use since Feb. 1, 1913.

Ser. No. 70,054. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FESLER SALES COMPANY, New York, N. Y. Filed Apr. 25, 1913.



Particular description of goods.—Shaving-Soap.
Claims use since January, 1913.

Ser. No. 70,685. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) E. C. ATKINS & COMPANY, Indianapolis, Ind. Filed May 27, 1913. Under ten-year proviso.

COLUMBIAN

"Columbian."
Particular description of goods.—Saws.
Claims use since about July, 1894.

Ser. No. 70,704. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS C. WEDGEFUTH, New York, N. Y. Filed May 27, 1913.

Sulfosol

Particular description of goods.—A Preparation of Sulfur in Soluble Form and Preparations and Medical Compounds Containing Sulfur in Soluble Form.
Claims use individually since about June 1, 1912, and by two different corporations with my consent since the latter part of 1906 to about June 1, 1912.

Ser. No. 70,886. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) EDWARD H. WAGNER, New York, N. Y. Filed June 5, 1913.

ROAR

Particular description of goods.—Fireworks.
Claims use since June 2, 1913.

Ser. No. 70,940. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Blackberry Cordial.
Claims use since Apr. 26, 1901.

Ser. No. 70,977. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. LEWIS & SON, Westboro, Mass. Filed June 9, 1913.



The portrait and signature being those of George W. Lewis, a member of the firm. No claim is made to the exclusive use of the words "Trade Mark."
Particular description of goods.—Lice and Fly Destroyer.
Claims use since Jan. 1, 1903.

Ser. No. 71,206. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COCHRANE MANUFACTURING CO., Dedham, Mass. Filed June 20, 1913. Under ten-year proviso.

ROYAL WILTON VELVET.

Particular description of goods.—Carpets.
Claims use since on or about July 1, 1894.

Ser. No. 71,210. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COCHRANE MANUFACTURING CO., Dedham, Mass. Filed June 20, 1913.

SULTANA
COTTAGE CARPET

The word "Carpet" shown on the drawing being disclaimed.
Particular description of goods.—Carpets.
Claims use since on or about Nov. 18, 1901.

Ser. No. 71,557. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed July 7, 1913.



Particular description of goods.—Metal-Polish, Glove-Cleaners in Powdered or Liquid Form, Clothes-Cleaners in Powdered or Liquid Form, and Soaps.
Claims use since Apr. 26, 1901.

Ser. No. 71,559. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed July 7, 1913.



The cross being red.
Particular description of goods.—Glove-Cleaners, Clothes-Cleaners in Liquid Form.
Claims use since Apr. 26, 1901.

Ser. No. 71,829. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LOUIS MANDEL, Chicago, Ill. Filed July 18, 1913.

VES-POCK

Particular description of goods.—Cameras.
Claims use since June, 1911.

Ser. No. 71,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed July 18, 1913.

DIGITOLINE

Particular description of goods.—Pharmaceutical Product Obtained from Digitalis-Leaves, and Particularly Applicable in Every Case of Heart Disease Where Digitalis-Leaves are Indicated.
Claims use since Mar. 13, 1911.

Ser. No. 72,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. S. LOVE MANUFACTURING CO., Johnstown, Pa. Filed Aug. 28, 1913.



Particular description of goods.—Candies, Bonbons, Fruit Tablets, and Sugar-Coated Popcorn.
Claims use since March, 1890.

Ser. No. 72,646. (CLASS 15. OILS AND GREASES.) TILLMANN & BENDEL, San Francisco, Cal. Filed Sept. 2, 1913.

GOLDEN STAR



No claim being made to the exclusive use of the symbol of the star.
Particular description of goods.—Petroleum or Kerosene Oil.
Claims use since September, 1876.

Ser. No. 72,664. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) H. MUNDLOS & Co., Magdeburg, Germany. Filed Sept. 3, 1913.

Original Mundlos

Particular description of goods.—Sewing-Machines and Parts Thereof.
Claims use since Sept. 8, 1911.

Ser. No. 73,237. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) ALBERT PICK & COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Oct. 6, 1913.



The trade-mark consists of the words "Golden Gate" printed in a scroll design, as shown in the accompanying drawing, no claim being made to any of the other words appearing thereon, nor to the seal of the Panama Pacific International Exposition.
Particular description of goods.—Impregnated Safety-Matches.
Claims use since Sept. 25, 1913.

Ser. No. 73,274. (CLASS 17. TOBACCO PRODUCTS.) GANS BROTHERS, New York, N. Y. Filed Oct. 8, 1913.



Particular description of goods.—Cigars.
Claims use since June 26, 1911.

Ser. No. 73,748. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CARL ESSBACH, Brunndöbra, Germany. Filed Nov. 3, 1913. Under ten-year proviso.



Particular description of goods.—Accordions, Mouth-Organs, Concertinas, Flutinas, Bandonions, Blow-Accordions, Mandolins, Banjos, Citherns, Guitars, Tuning-Forks, Jews'-Harps, Metronomes, Music-Boxes, Ocarinas, Castanets, Drums, Triangles, Tambourines, Cymbals, Chimes, Xylophones, Pianos, Harpsichords, Orchestrions, Musical Automatons, Street-Organs, and Strings, Bows, String-Holders, Pegs, Bridges, Dampers, Chin-Stays, and Hair-Bows.
Claims use since Jan. 15, 1886.

Ser. No. 74,176. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VEREINIGTE CHININFABRIKEN ZIMMER & CO. GES. MIT BESCHRÄNKTER HAFTUNG, Franfort-on-the-Main, Germany. Filed Nov. 24, 1913.

Optochin

Particular description of goods.—A Preparation for Treating Malaria and Similar Diseases and Pneumococcus Infection.
Claims use since Oct. 31, 1913.

Ser. No. 74,243. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DR. THEINHARDT'S NÄHRMITTEL-GESELLSCHAFT M. B. H., Stuttgart-Cannstatt, Germany. Filed Nov. 28, 1913.

INFANTINA

Particular description of goods.—Prepared Food for Infants.
Claims use since the 15th of October, 1898.

Ser. No. 74,348. (CLASS 30. CLOTHING.) TURNER FLEXIBLE INNERSOLE CO., Portland, Me. Filed Dec. 3, 1913.

TURN or WELT

Particular description of goods.—Leather Shoes.
Claims use since Apr. 1, 1911.

Ser. No. 74,355. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DWIGGINS WIRE FENCE COMPANY, Anderson, Ind. Filed Dec. 4, 1913.

STAR

Particular description of goods.—Metal Fencing-Gates and Fence-Posts.
Claims use since April, 1907.

Ser. No. 74,415. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MCNEELY & PRICE, Philadelphia, Pa. Filed Dec. 6, 1913.



No claim is made herein to the words "McNeely & Price" and "Phila., U. S. A.," nor to the exclusive right to use the word "Kid."
Particular description of goods.—Glazed Kid.
Claims use since Feb. 28, 1896.

Ser. No. 74,854½. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROMEO RINALDI, Jersey City, N. J. Filed Dec. 27, 1913.



Particular description of goods.—Ointments and Salves.
Claims use since Nov. 15, 1913.

Ser. No. 75,012. (CLASS 12. CONSTRUCTION MATERIALS.) THE PHILIP CAREY MANUFACTURING CO., Lockland, Ohio. Filed Jan. 7, 1914.



Particular description of goods.—Imitation Plaster, Solid Wood and Commercial Veneer.
Claims use since Jan. 18, 1912.

Ser. No. 75,636. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION MILLING CO., Union, Iowa. Filed Feb. 2, 1914.



OLD SOL

Particular description of goods.—Wheat and Buckwheat Flour.
Claims use since June 1, 1913.

Ser. No. 75,681. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) MATHIS AND FERGUSSON, Salt Lake City, Utah. Filed Feb. 4, 1914.

RIRCo

Particular description of goods.—Flexible Surgical Pads; Surgical Bandages, and Surgical Belts.
Claims use since Jan. 15, 1914.

Ser. No. 75,831. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C. Filed Feb. 10, 1914.



The right to the exclusive use of all the words except the words "Now Ready" being disclaimed.

Particular description of goods.—Wheat-Flour.

Claims use since about Dec. 1, 1913.

Ser. No. 75,941. (CLASS 17. TOBACCO PRODUCTS.) JOHN F. MILLER, Wheeling, W. Va. Filed Feb. 16, 1914.

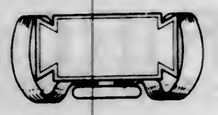


The words "Big Wheeling" are specifically disclaimed. In the drawing the lining is intended to indicate shading, and not any particular color.

Particular description of goods.—Stogies.

Claims use since July 1, 1911.

Ser. No. 76,053. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE HORN & BRANNEN MFG. CO., Philadelphia, Pa. Filed Feb. 20, 1914.



Particular description of goods.—Electric-Lighting Fixtures.

Claims use since Jan. 10, 1914.

Ser. No. 76,250. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MONTGOMERY WARD & CO. INC., New York and Brooklyn, N. Y.; Chicago, Ill.; Fort Worth, Tex.; Kansas City, Mo., and Portland, Oreg. Filed Feb. 28, 1914.



Particular description of goods.—Leather Belting, Rubber Belting, Stitched Canvas Belting, Woven Cotton Belting, Rubber Garden-Hose, Rubber Steam-Hose, Rubber Suction-Hose, Rubber Tubing, Cotton Garden-Hose, Cotton Fire-Hose, Linen Fire-Hose, Cotton Mill-Hose; Lace-Leather, Cut; Cotton Suction-Hose, Flax Machinery Packing, (in Various Forms;) Rubber Machinery Packing, (in Various Forms;) Graphite Machinery Packing, (in Various Forms;) Asbestos Machinery Packing, (in Various Forms;) Hemp Machinery Packing, (in Various Forms;) Rubber Sheet-Packing, Rubber Bicycle-Tires, Rubber Automobile-Tires, Rubber Motor-Cycle Tires, Rubber Inner Tubes for Bicycle-Tires, Rubber Inner Tubes for Automobile-Tires, Rubber Inner Tubes for Motor-Cycle Tires, Rubber Buggy-Tires, Rubber Baby-Buggy Tires, Rubber Tires for Toy Vehicles, and Rubber Velocipede-Tires.

Claims use since the 31st day of January, 1914.

Ser. No. 76,326. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) F. ROSENSTERN & CO., New York, N. Y. Filed Mar. 4, 1914.



Particular description of goods.—Terry-Cloth, Cotton Cloth, Cotton Blanketing and Blankets, Woolen Piece Goods, Woolen Blanketing and Blankets, and Mixed Cotton and Woolen Piece Goods, Blanketing, and Blankets.

Claims use since about Jan. 1, 1914.

Ser. No. 76,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN M. CAMERON, Fort Myers, Fla. Filed Mar. 5, 1914.

ORANGEL

Particular description of goods.—Citrus Fruits, Jellies, and Preserves.

Claims use since Dec. 24, 1913.

Ser. No. 76,362. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JELLICO GROCERY COMPANY, Jellico, Tenn. Filed Mar. 5, 1914.

CYCLONE

Particular description of goods.—Coffee.

Claims use since about May, 1913.

Ser. No. 76,446. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Mar. 7, 1914.

PARASILK

Consisting of the fanciful word "Parasilk."

Particular description of goods.—Hosiery.

Claims use since July 15, 1913.

Ser. No. 76,498. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCESCO IZZO & FIGLIO, Torre Annunziata, near Naples, Italy. Filed Mar. 10, 1914.



No claim is made to the use of the words "Italy," "Torre Annunziata," "Gran Pastificio," or to words "Italian Product Best Neapolitan Macaroni."

Particular description of goods.—Macaroni.

Claims use since 1913.

Ser. No. 76,727. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLYDE MILLING AND ELEVATOR COMPANY, Clyde, Kans. Filed Mar. 18, 1914.

PAWNEE CHIEF

Particular description of goods.—Wheat-Flour.

Claims use since July, 1899.

Ser. No. 76,815. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JOHN P. GALLAGHER, Philadelphia, Pa. Filed Mar. 21, 1914.

Galwin

Particular description of goods.—Flax, Jute, Asbestos, Hemp, Cotton, Rubber, and Rubber Compound for Steam, Air, Ammonia, Hydraulic, and Metallic Packings.

Claims use since Jan. 1, 1914.

Ser. No. 76,823. (CLASS 37. PAPER AND STATIONERY.) PARSONS PAPER CO., Holyoke, Mass. Filed Mar. 21, 1914.



Particular description of goods.—Printing and Writing Papers.

Claims use since October, 1913.

Ser. No. 76,835. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) AMERICAN CLEANSER COMPANY, Haoke Ranch, near Boerne, Tex. Filed Mar. 23, 1914.

SILKALITE

Particular description of goods.—A Substance for Cleaning and Polishing Kitchen Utensils, Glassware, Chinaware, Granite-Ware, Crockery, Mirrors, Jewelry, Windows, Nickel, Brass, Gold, Terra-Cotta, Porcelain, Dental and Surgical Instruments, Precious Stones, Tile, and Marble; and for Cleaning the Skin, Oil-Paintings, Kid Gloves, Cement, Stone, Rubber Goods, Buck, Canvas, Silk, Woolens, Flannels, Panama Hats, Linoleum, Oil-Cloth, Gilding, Furniture, and Woodwork.

Claims use since about Oct. 15, 1913.

Ser. No. 76,841. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GEORGE CLOSE COMPANY, Cambridge, Mass. Filed Mar. 23, 1914.

Alpha

Particular description of goods.—Chocolate Candy.

Claims use since Jan. 7, 1914.

Ser. No. 76,877. (CLASS 12. CONSTRUCTION MATERIALS.) RAWLINGS BROS., LTD., London, England. Filed Mar. 23, 1914.

RAWLPLUG

Particular description of goods.—Plugs for Fixing Screws in Plaster, Brick, Marble, Slate, &c.

Claims use since Sept. 4, 1912.

Ser. No. 76,897. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALEXANDER E. DESSERT, New York, N. Y. Filed Mar. 24, 1914.



Particular description of goods.—A Remedy for Piles.

Claims use since Feb. 19, 1914.

Ser. No. 76,933. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY CO., San Francisco, Cal. Filed Mar. 25, 1914.

TIOGA

Particular description of goods.—Fresh and Canned Pineapples.

Claims use since January, 1904.

Ser. No. 76,938. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GUY K. MITCHELL, Baltimore, Md. Filed Mar. 25, 1914.



Particular description of goods.—Electrically-Operated Elevators and Dumb-Waiters, Electric Motors, Dynamos, Electric Switches.
Claims use since Dec. 16, 1913.

Ser. No. 76,972. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RHEINSTROM BROS., Cincinnati, Ohio. Filed Mar. 26, 1914.

Rosebud

Consisting of the word "Rosebud."
Particular description of goods.—Cherries.
Claims use since Jan. 1, 1900.

Ser. No. 76,985. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WEIDEMAN CO., Cleveland, Ohio. Filed Mar. 26, 1914. Under ten-year proviso.

BEST VALUE

Particular description of goods.—Canned Fruits, Canned Vegetables, Spices, Rice, Tapioca, Molasses, Hominy, Sardines, Flavoring Extracts for Foods, Macaroni, Noodles, Spaghetti, Coffee, Pancake-Flour, and Rolled Oats.
Claims use since October, 1894.

Ser. No. 76,999. (CLASS 38. PRINTS AND PUBLICATIONS.) THE MCCASKEY REGISTER COMPANY, Alliance, Ohio. Filed Mar. 27, 1914.

McCaskey Bulletin

Particular description of goods.—A Monthly Publication.
Claims use since 1907.

Ser. No. 77,109. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PANAMA MACARONI COMPANY, Los Angeles and Culver City, Cal. Filed Mar. 31, 1914.

RED-MARK

Particular description of goods.—Macaroni, Noodles, Spaghetti, Soup-Marks.
Claims use since Mar. 23, 1913.

Ser. No. 77,114. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo. Filed Mar. 30, 1914.



Particular description of goods.—Cornmeal.
Claims use since Feb. 1, 1902.

Ser. No. 77,115. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BEE BEE CONFECTION COMPANY, Dayton, Ohio. Filed Apr. 1, 1914.



Particular description of goods.—Chewing-Gum.
Claims use since about the 15th day of February, 1913.

Ser. No. 77,137. (CLASS 17. TOBACCO PRODUCTS.) NICHOLAS VARDA, New York, N. Y. Filed Mar. 31, 1914.



Particular description of goods.—Cigarettes.
Claims use since Mar. 25, 1914.

Ser. No. 77,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN P. DOUSMAN MILLING COMPANY, De Pere, Wis. Filed Apr. 2, 1914.

PURO

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 10, 1914.

Ser. No. 77,176. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GROCERS COFFEE CO., Indianapolis, Ind. Filed Apr. 3, 1914.



Particular description of goods.—Teas and Coffees.
Claims use since Feb. 1, 1913.

Ser. No. 77,183. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN H. LAWRENCE, Washington, D. C. Filed Apr. 3, 1914.

PLURO

Particular description of goods.—A Metal-Polish.
Claims use since Feb. 15, 1914.

Ser. No. 77,228. (CLASS 39. CLOTHING.) BEST & COMPANY, New York, N. Y. Filed Apr. 6, 1914.

LILIPUTIAN BAZAAR

Particular description of goods.—Infants' Bands, Shirts, Diaper-Drawers, Coats, Bibs, Skirts, Slips, Dresses, Nightgowns, Bloomers, Sweaters, Wrappers, Sacks, Kimonos, Bath-Robes, Negligées, Cloaks, Rain-Capes, Ladies' Tailored Suits, Caps, Bonnets, Hats, Blouse-Suits, Reefers, Pajamas, Underwaists, Bathing-Suits, Sweater-Coats, Rompers, Overalls, Guimpes, Aprons, Drawers, Night-Drawers, Petticoats, Corsets, Brassières, Pantalets, Union Suits, Hosiery, Gloves, Boots and Shoes Made of Leather, Canvas, and Combinations Thereof.
Claims use since at least as early as 1879.

Ser. No. 77,328. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Apr. 8, 1914.

CHATEAU

Particular description of goods.—Coffee, Teas, and Spices.
Claims use since Mar. 28, 1914.

Ser. No. 77,384. (CLASS 7. CORDAGE.) A. LESCHEN & SONS ROPE COMPANY, St. Louis, Mo. Filed Apr. 10, 1914.

MARATHON

Particular description of goods.—Wire Rope.
Claims use since Feb. 23, 1914.

Ser. No. 77,401. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROBERT ZINN & CO., GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Barmen-Rittershausen, Germany. Filed Apr. 10, 1914.

Cache-Cache

The trade-mark consists of the word-mark "Cache-Cache."
Particular description of goods.—Shoe-Eyelets, Shoe-Hooks, Shoe-Buttons, Shoe-Buckles, Shoe-Lace Loops, Snap-Fasteners of Every Kind, as well as Buttons Made of Base Metal or Composition.
Claims use since about August, 1913.

Ser. No. 77,423. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed Apr. 11, 1914.

RED-TOP

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 16, 1914.

Ser. No. 77,445. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCFADDEN COFFEE & SPICE CO., Dubuque, Iowa. Filed Apr. 13, 1914.

ELECTRIC

Particular description of goods.—Coffee.
Claims use since July 1, 1912.

Ser. No. 77,526. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMPIRE COTTON OIL COMPANY, Atlanta, Ga. Filed Apr. 17, 1914.

MILCO

Particular description of goods.—Feed-Meal for Horses, Mules, and Cows.
Claims use since July, 1912.

Ser. No. 77,530. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES M. GEORGE, Amarillo, Tex. Filed Apr. 16, 1914.



The mark being a portrait of myself.
Particular description of goods.—Catarrh Medicine.
Claims use since Oct. 15, 1913.

Ser. No. 77,549. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SANTA ROSA CURED FRUIT ASSOCIATION, Santa Rosa, Cal. Filed Apr. 17, 1914.

SONOMA BEAR

Particular description of goods.—Prunes.
Claims use since Oct. 1, 1913.

Ser. No. 77,641. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) M. WELTE & SONS, INC., New York, N. Y. Filed Apr. 21, 1914. Under ten-year proviso.

M. Welte & Sons, Inc.

Particular description of goods.—Self-Playing Pianos, Organs, and Orchestrions.
Claims use since July 1, 1865.

Ser. No. 77,651. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HUTCHINSON OIL COMPANY, Hutchinson, Kans. Filed Apr. 22, 1914.

Neatsfoot

Particular description of goods.—Harness-Oil Dressing.
Claims use since September, 1911.

Ser. No. 77,717. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Apr. 24, 1914.

ORINOCO

Particular description of goods.—Prepared Roofings.
Claims use since on or about the 21st day of April, 1914.

Ser. No. 77,738. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) GEO. S. WHITE, Nashville, Tenn. Filed Apr. 24, 1914.



Geo. S. White

The name "Geo. S. White" is the facsimile of applicant's signature.
Particular description of goods.—Rat-Traps.
Claims use since January, 1914.

Ser. No. 77,775. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFITH-DURNEY CO., San Francisco, Cal. Filed Apr. 27, 1914.

Golden Elk

Particular description of goods.—Canned and Fresh Pineapples.
Claims use since January, 1904.

Ser. No. 77,811. (CLASS 2. RECEPTACLES.) THE SPRINGFIELD METALLIC CASKET COMPANY, Springfield, Ohio. Filed Apr. 27, 1914.

BRITENA

Particular description of goods.—Name-Plates for Burial-Caskets.
Claims use since on or about the 20th day of February, 1913.

Ser. No. 77,815. (CLASS 17. TOBACCO PRODUCTS.) ISIDOR TEITELBAUM, Cleveland, Ohio. Filed Apr. 27, 1914.



Particular description of goods.—Cigars.
Claims use since Jan. 5, 1914.

Ser. No. 77,875. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) YOUNG & PARSONS, Abernant, Ala. Filed Apr. 29, 1914.



Particular description of goods.—Remedy for Hemorrhoids.
Claims use since Apr. 2, 1914.

Ser. No. 77,894. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio. Filed Apr. 30, 1914.



No claim being made herein to the words "White Bar Soap."
Particular description of goods.—Soap.
Claims use since August, 1880.

Ser. No. 77,922. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWAIIAN PINEAPPLE CO., LTD., Honolulu, Territory of Hawaii. Filed May 1, 1914.

MAUNA LOA

Particular description of goods.—Canned Pineapple.
Claims use since October, 1910.

Ser. No. 77,927. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FR. KAISER, Waiblingen, Germany. Filed May 1, 1914.

Aeroxon

Particular description of goods.—Fly-Catchers.
Claims use since December, 1911.

Ser. No. 77,941. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. W. VANCE, Pierce City, Mo. Filed May 1, 1914.

WINNER

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since August, 1913.

Ser. No. 77,949. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONVERSE RUBBER SHOE CO., Malden, Mass. Filed May 2, 1914.

TUFF-E-NUFF

Particular description of goods.—Rubber Tires, Casings, and Inner Tubes.
Claims use since Mar. 24, 1914.

Ser. No. 77,969. (CLASS 38. PRINTS AND PUBLICATIONS.) CLOUD PUBLISHING COMPANY, Chicago, Ill. Filed May 4, 1914.

MOVIL PICTORIAL

Particular description of goods.—Weekly Publications.
Claims use since May 2, 1914.

Ser. No. 78,080. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KENZO IKEDA, New York, N. Y. Filed May 7, 1914.

B - U

Particular description of goods.—Tea.
Claims use since Mar. 1, 1914.

Ser. No. 78,095. (CLASS 17. TOBACCO PRODUCTS.) C. C. PORTER, Holdrege, Nebr. Filed May 7, 1914.

KRAVEMOR

Particular description of goods.—Cigars.
Claims use since January, 1914.

Ser. No. 78,104. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) STANDARD VARNISH WORKS, New York, N. Y. Filed May 7, 1914.

KOIL-LAC

Particular description of goods.—Varnishes, Enamels, Japans, Driers, Ready-Mixed Paints, and Varnish-Remover.
Claims use since Mar. 25, 1914.

Ser. No. 78,127. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOME REMEDY COMPANY, Fredonia, N. Y. Filed May 8, 1914.

Acher Pain

Particular description of goods.—Liniment.
Claims use since about Apr. 15, 1914.

Ser. No. 78,132. (CLASS 17. TOBACCO PRODUCTS.) THE MILLER CIGAR CO., Wheeling, W. Va. Filed May 8, 1914.

Stogaroma

Particular description of goods.—Stogies.
Claims use since Mar. 23, 1914.

Ser. No. 78,143. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WAITE GRASS CARPET CO., Oshkosh, Wis. Filed May 8, 1914.

WAITE

Particular description of goods.—Grass Rugs.
Claims use since about Aug. 1, 1909.

Ser. No. 78,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBERT P. CARSON, Manitou, Colo. Filed May 9, 1914.

CAC

Particular description of goods.—A Medicine for Asthma, Bronchitis, and Hay-Fever.
Claims use since Jan. 1, 1914.

Ser. No. 78,166. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSIAH HEAVENRIDGE, Cannon City, Colo. Filed May 9, 1914.

"On the Hog."



Particular description of goods.—Preparation for the Treatment of Hog-Cholera.
Claims use since Apr. 15, 1914.

Ser. No. 78,179. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAMS BAKING COMPANY, Newark, N. J. Filed May 9, 1914.



Particular description of goods.—Bread.
Claims use since Apr. 1, 1914.

Ser. No. 78,183. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARROW BOTTLERS COMPANY, Chicago, Ill. Filed May 11, 1914.

ABC

Particular description of goods.—Bottle-Making Machinery and Appliances Therefor.
Claims use since Mar. 21, 1912.

Ser. No. 78,185. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR & COMPANY, Chicago, Ill. Filed May 11, 1914.

TOURAINE

Particular description of goods.—Sardines.
Claims use since Jan. 1, 1914.

Ser. No. 78,195. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM H. DAMON, Los Angeles, Cal. Filed May 11, 1914. Under ten-year proviso.

NONOLIO

Particular description of goods.—Polish for Varnish.
Claims use since Dec. 1, 1894.

Ser. No. 78,202. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE NORMAN COMPANY, Philadelphia, Pa. Filed May 11, 1914.

"Helping Hans"



Particular description of goods.—Cleanser.
Claims use since Apr. 28, 1914.

Ser. No. 78,207. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SLATER MILL & ELEVATOR COMPANY, Slater, Mo. Filed May 11, 1914.



Particular description of goods.—Wheat-Flour. More Specifically Self-Rising Flour.
Claims use since Dec. 4, 1913.

Ser. No. 78,208. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SLATER MILL AND ELEVATOR COMPANY, Slater, Mo. Filed May 11, 1914.

Manu

Particular description of goods.—Wheat-Flour.
Claims use since May 24, 1907.

Ser. No. 78,211. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY TATRO, Burlington, Vt. Filed May 11, 1914.

TAKE-ALL



Particular description of goods.—Soap.
Claims use since Mar. 20, 1914.

Ser. No. 78,218. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DETROIT WHITE LEAD WORKS, Detroit, Mich. Filed May 12, 1914.

LUX-CPAR

Particular description of goods.—A Clear Varnish for Use in Finishing Woods and other Materials.
Claims use since Apr. 17, 1914.

Ser. No. 78,232. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA ASSOCIATED RAISIN CO., Fresno, Cal. Filed May 13, 1914.



The cap and shirt of the figure being red.
Particular description of goods.—Raisins.
Claims use since Jan. 1, 1914.

Ser. No. 78,252. (CLASS 37. PAPER AND STATIONERY.) PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y. Filed May 13, 1914.

Phoenix

No claim being made herein to the sole use of the words "Trade Mark" appearing upon the drawing.
Particular description of goods.—Toilet-Papers.
Claims use since about Nov. 17, 1897.

Ser. No. 78,266. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPENCER & WASHINGTON, Atlantic City, N. J. Filed May 12, 1914.

APEX

Particular description of goods.—A Remedy for the Hair and Scalp.
Claims use since July, 1913.

Ser. No. 78,275. (CLASS 15. OILS AND GREASES.) W. R. GRACE & Co., New York, N. Y. Filed May 14, 1914.



VENCEDOB

Particular description of goods.—Kerosene.
Claims use since Apr. 26, 1914.

Ser. No. 78,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KADIAK FISHERIES CO., Seattle, Wash. Filed May 14, 1914.

CRITERION

Particular description of goods.—Canned Salmon.
Claims use since July, 1912.

Ser. No. 78,286. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RODMAN CHEMICAL COMPANY, East Pittsburgh, Pa. Filed May 14, 1914.

CARBO

The trade-mark consists of the word "Carbo."
Particular description of goods.—Case-Hardening Materials.
Claims use since Oct. 1, 1910.

Ser. No. 78,304. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEIT-MILLER-LAU CO., Fort Wayne, Ind. Filed May 15, 1914.

"KATREENAS"

Particular description of goods.—Chocolate Candy.
Claims use since Apr. 20, 1914.

Ser. No. 78,332. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JOHN W. MEAKER, Detroit, Mich. Filed May 16, 1914.



In which the letter "L" appears in the middle panel of a quadrangular figure having an upper red panel and a lower blue panel.
Particular description of goods.—Spark-Plugs.
Claims use since May 5, 1914.

Ser. No. 78,349. (CLASS 37. PAPER AND STATIONERY.) THE CHATFIELD & WOODS COMPANY, Cincinnati, Ohio. Filed May 18, 1914.



No claim is made for the word "Bond."
Particular description of goods.—Bond Writing-Paper.
Claims use since the 12th day of May, 1914.

Ser. No. 78,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ALBERT DICKINSON COMPANY, Chicago, Ill. Filed May 18, 1914.

LITTLE BUSTER

Particular description of goods.—Popping-Corn.
Claims use since about Apr. 1, 1914.

Ser. No. 78,351. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ALBERT DICKINSON COMPANY, Chicago, Ill. Filed May 18, 1914.



Particular description of goods.—Popping-Corn.
Claims use since about Apr. 1, 1914.

Ser. No. 78,353. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) E. H. & A. C. FRIEDRICHS CO., New York, N. Y. Filed May 18, 1914.



Particular description of goods.—Artists' Oils and Varnishes.
Claims use since March, 1914.

Ser. No. 78,369. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHOEMAKER & BUSCH, Philadelphia, Pa. Filed May 18, 1914.

AIRSWEET

Particular description of goods.—Disinfectants, Deodorants, Perfumes, and Porous Holders Therefor.
Claims use since about Jan. 20, 1914.

Ser. No. 78,395. (CLASS 39. CLOTHING.) QUALITY TAILORING CO. OF N. Y., INC., New York, N. Y. Filed May 19, 1914.



Particular description of goods.—Men's and Young Men's Outer Clothing.
Claims use since May 4, 1914.

Ser. No. 78,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION FISHERMEN'S CO-OPERATIVE PKG. CO., Astoria, Oreg. Filed May 19, 1914.

MERITO

Particular description of goods.—Canned Salmon.
Claims use since October, 1909.

Ser. No. 78,487. (CLASS 39. CLOTHING.) E. W. BURT & COMPANY INCORPORATED, Boston, Mass. Filed May 23, 1914.

Grippertown

Particular description of goods.—Leather Boots and Shoes.
Claims use since on or about the 1st day of May, 1914.

Ser. No. 78,496. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOSEPH GERTS, Chicago, Ill. Filed May 23, 1914.

X-ALL

Particular description of goods.—Furniture-Polish.
Claims use since May 16, 1914.

Ser. No. 78,506. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN W. ROBB, Philadelphia, Pa. Filed May 23, 1914.

EDUCATOR

Particular description of goods.—Tooth-Powder, Tooth-Paste, Tooth-Wash, and Face-Cream.
Claims use since about May 1, 1914.

Ser. No. 78,526. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa. Filed May 25, 1914.

GOTHAM

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since about May 1, 1913.

Ser. No. 78,537. (CLASS 39. CLOTHING.) SEGAL & PRANSKY, Philadelphia, Pa. Filed May 25, 1914.

Paystowear

Particular description of goods.—Gloves, Overalls, and Hosiery.
Claims use since Apr. 1, 1910.

Ser. No. 78,540. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) M. G. STONEMAN & SON, Albany, N. Y. Filed May 25, 1914.

"STONESPAR"

Particular description of goods.—Varnish.
Claims use since Jan. 1, 1914.

Ser. No. 78,586. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed May 27, 1914.

SPOTLIGHT

Particular description of goods.—Electrical Batteries.
Claims use since Apr. 13, 1914.

Ser. No. 78,604. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FRANK CHAPMAN, Providence, R. I. Filed May 28, 1914.

VERIFAX

Particular description of goods.—Friction-Tape.
Claims use since at least Nov. 10, 1913.

Ser. No. 78,635. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) APREA BROS., New York, N. Y. Filed May 29, 1914.



Particular description of goods.—Olive-Oil.
Claims use since about Mar. 7, 1914.

Ser. No. 78,645. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed May 29, 1914.



Particular description of goods.—Weighing Machines and Scales.
Claims use since July, 1895.

Ser. No. 78,669. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SAXON MOTOR COMPANY, Detroit, Mich. Filed May 29, 1914.

SAXON

Particular description of goods.—Automobiles.
Claims use since Mar. 1, 1914.

Ser. No. 78,681. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NINIAN E. BYERS, New York, N. Y. Filed June 1, 1914.



The words "Home Made Bread" not being herein claimed.
Particular description of goods.—Bread.
Claims use since May 15, 1914.

Ser. No. 78,698. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. F. HEUBLEIN & BRO., Hartford Conn. Filed June 1, 1914.

THE CLUB

Particular description of goods.—Olive-Oil.
Claims use since the year 1897.

Ser. No. 78,708. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed June 1, 1914.

MULTEX

Particular description of goods.—Electric Batteries.
Claims use since Apr. 13, 1914.

Ser. No. 78,709. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed June 1, 1914.

BRITELITE

Particular description of goods.—Electric Batteries.
Claims use since Apr. 13, 1914.

Ser. No. 78,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POWELL-SANDERS CO., Spokane, Wash. Filed June 1, 1914.

STARLIGHT

Particular description of goods.—Coffee.
Claims use since May 26, 1914.

Ser. No. 78,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOUTH HOLLAND MILK CORPORATION, New York, N. Y. Filed June 1, 1914.

POSY

Particular description of goods.—Condensed Milk.
Claims use since the 15th day of May, 1914.

Ser. No. 78,756. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed June 2, 1914.

Oretana

Particular description of goods.—Bicycles.
Claims use since Mar. 31, 1913.

Ser. No. 78,777. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PURITY YEAST COMPANY, Beresford, S. D. Filed June 3, 1914.



Particular description of goods.—Yeast.
Claims use since Apr. 20, 1914.

Ser. No. 78,793. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

GARLAND

Particular description of goods.—Ready Mixed Paint.
Claims use since February, 1911.

Ser. No. 78,799. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

NAPOLEON

Particular description of goods.—Candy.
Claims use since September, 1913.

Ser. No. 78,801. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

MARIE ANTOINETTE

Particular description of goods.—Candy.
Claims use since September, 1913.

Ser. No. 78,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

Empress Eugenie

Particular description of goods.—Candy.
Claims use since September, 1913.

Ser. No. 78,851. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. ALTEN CO., INC., New York, N. Y. Filed June 6, 1914.

LA MINESOTERA

Particular description of goods.—Wheat-Flour.
Claims use since December, 1909.

Ser. No. 78,856. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BAY STATE MILLING CO., Winona, Minn. Filed June 6, 1914.

NORMANO

Particular description of goods.—Wheat-Flour.
Claims use since Feb. 21, 1914.

Ser. No. 78,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSOLIDATED GROCERY COMPANY, Pensacola, Jacksonville, and Tampa, Fla. Filed June 6, 1914.

SEE-GEE

Particular description of goods.—Self-Rising Flour.
Claims use since September, 1913.

Ser. No. 78,860. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DUNLOP MILLING CO., Clarksville, Tenn. Filed June 6, 1914.

JAY-PEE-DEE

Particular description of goods.—Self-Rising Flour.
Claims use since Feb. 10, 1914.

Ser. No. 78,862. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GRAIN JUICE COMPANY, LTD., Chicago, Ill. Filed June 6, 1914.

GRAINO

Particular description of goods.—An Unfermented Hop Extract of Cereals.
Claims use since May 13, 1914.

Ser. No. 78,870. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWLEY & HOOPS, New York, N. Y. Filed June 6, 1914.

KOMICALKIDS

Particular description of goods.—Candy.
Claims use since Feb. 20, 1914.

Ser. No. 78,884. (CLASS 39. CLOTHING.) THE ROYAL TAILORS, Chicago, Ill. Filed June 6, 1914.

"Get that Million Dollar Look"
-in the Royal Tailored Coat-

Particular description of goods.—Men's Coats, Vests, and Trousers.
Claims use since the month of May, 1914.

Ser. No. 78,885. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. ALLEN SMITH & COMPANY, Knoxville, Tenn. Filed June 6, 1914.

FLOROSA

Particular description of goods.—Wheat-Flour.
Claims use since Feb. 20, 1914.

Ser. No. 78,887. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHULTZ, BAUJAN & Co., Beardstown, Ill. Filed June 6, 1914.

NELL ROSE

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Sept. 1, 1913.

Ser. No. 78,889. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHULZE BAKING COMPANY, Chicago, Ill. Filed June 6, 1914.



Particular description of goods.—Bread.
Claims use since May 18, 1914.

Ser. No. 78,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN G. WOODWARD & Co. (INC.), Council Bluffs, Iowa. Filed June 6, 1914.

Tuck End

Particular description of goods.—Candy.
Claims use since January, 1914.

Ser. No. 78,917. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARSON, PIRIE, SCOTT & Co., Chicago, Ill. Filed June 9, 1914.

MARVEL

Particular description of goods.—Ginghams.
Claims use since about 1904.

Ser. No. 79,030. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE EBLING BREWING COMPANY, New York, N. Y. Filed June 12, 1914.

Particular description of goods.—Extract of Malt and Hops.
Claims use since June 1, 1914.

Ser. No. 79,128. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE TURNER-LOOKER Co., Cincinnati, Ohio. Filed June 15, 1914.

BEECHMONT

Particular description of goods.—Straight Whisky.
Claims use since the 15th day of May, 1893.

Ser. No. 79,153. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) IMPERIAL RUBBER Co., New York, N. Y. Filed June 16, 1914.

INNOVATION

Particular description of goods.—Electrical Tapes, Paints and Varnishes for Electrical Insulating Purposes, Electrical Insulating Compounds, Switchboard-Mats, Insulating-Mats, Electrical Bushings, Electrical Fiber for Insulating Purposes, and Incandescent Lamps.
Claims use since the year 1913.

Ser. No. 79,180. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE PEERLESS MACHINERY COMPANY, Boston, Mass. Filed June 17, 1914.



Particular description of goods.—Celluloid-Covered Eyelets and Lacing-Hooks for Shoes.
Claims use since June 1, 1914.

TRADE-MARK REGISTRATIONS GRANTED

JULY 14, 1914.

98,349. WINDOW-SHADE CARRIERS, METAL CURTAIN-FIXTURES, SHADE-ADJUSTERS, AND THE LIKE. THE AGUS SHADE CARRIER COMPANY, Baltimore, Md.
Filed March 31, 1914. Serial No. 77,089. PUBLISHED MAY 12, 1914.

98,350. ELECTRIC LAMPS. ALADDIN ELECTRIC LAMP COMPANY, Wilmington, Del.
Filed March 28, 1914. Serial No. 77,015. PUBLISHED MAY 12, 1914.

98,351. FURNITURE-POLISH. AMSTERDAM POLISH COMPANY, Amsterdam, N. Y.
Filed March 30, 1914. Serial No. 77,042. PUBLISHED MAY 12, 1914.

98,352. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 2, 1914. Serial No. 77,139. PUBLISHED MAY 12, 1914.

98,353. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 2, 1914. Serial No. 77,142. PUBLISHED MAY 12, 1914.

98,354. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 2, 1914. Serial No. 77,143. PUBLISHED MAY 12, 1914.

98,355. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 4, 1914. Serial No. 77,194. PUBLISHED MAY 12, 1914.

98,356. HOSIERY. BAKER, MOISE & Co., Dallas, Tex.
Filed July 18, 1913. Serial No. 71,820. PUBLISHED MAY 12, 1914.

98,357. LEATHER BOOTS AND SHOES. I. BLYN & SONS, New York, N. Y.
Filed December 13, 1913. Serial No. 74,552. PUBLISHED MAY 12, 1914.

98,358. OIL FILTRATION AND CIRCULATION APPARATUS. S. F. BOWSER & COMPANY, INC., Fort Wayne, Ind.
Filed October 20, 1913. Serial No. 73,498. PUBLISHED APRIL 28, 1914.

98,359. PLANT FOOD. WILLIAM BRUESER, Kansas City, Mo.
Filed August 26, 1912. Serial No. 65,420. PUBLISHED DECEMBER 9, 1913.

98,360. BEER. CAPITAL CITY BREWING COMPANY, Helena, Mont.
Filed April 10, 1914. Serial No. 77,371. PUBLISHED MAY 12, 1914.

98,361. SPLICE-BARS FOR RAILWAY-RAILS. CARNEGIE STEEL COMPANY, Pittsburgh, Pa.
Filed September 2, 1910. Serial No. 51,656. PUBLISHED MAY 12, 1914.

98,362. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. ANGELO CIPOLLA, Providence, R. I.
Filed March 31, 1914. Serial No. 77,093. PUBLISHED MAY 12, 1914.

98,363. WOVEN TEXTILE USED IN MANUFACTURING BAGS, CERTAIN COVERINGS, AND MATERIALS. THE CLEVELAND-AKRON BAG Co., Cleveland, Ohio.
Filed October 27, 1913. Serial No. 73,617. PUBLISHED MAY 12, 1914.

98,364. ROPE. COLUMBIAN ROPE COMPANY, Auburn, N. Y.
Filed March 10, 1914. Serial No. 76,489. PUBLISHED APRIL 28, 1914.

98,365. ARTIFICIAL TEETH, TOOTH-FACINGS, AND TOOTH-BACKINGS. THE COLUMBUS DENTAL MANUFACTURING COMPANY, Columbus, Ohio.
Filed February 28, 1914. Serial No. 76,232. PUBLISHED MAY 12, 1914.

98,366. ARTIFICIAL TEETH, TOOTH-FACINGS, AND TOOTH-BACKINGS. THE COLUMBUS DENTAL MFG. COMPANY, Columbus, Ohio.
Filed March 16, 1914. Serial No. 76,670. PUBLISHED MAY 12, 1914.

98,367. METALLIC VALVES AND PARTS THEREOF. THE CONSOLIDATED SAFETY VALVE COMPANY, Bridgeport, Conn.
Filed February 25, 1914. Serial No. 76,127. PUBLISHED MAY 5, 1914.

98,368. METALLIC VALVES AND PARTS THEREOF. THE CONSOLIDATED SAFETY VALVE COMPANY, Bridgeport, Conn.
Filed February 25, 1914. Serial No. 76,128. PUBLISHED MAY 5, 1914.

98,369. LADIES' GUIMPES OR SEMIWAISTS OF CERTAIN MATERIALS AND LIGHT-WEIGHT DRESS GOODS. TIMOTHY F. CROWLEY, INC., New York, N. Y.
Filed February 9, 1914. Serial No. 75,781. PUBLISHED MAY 12, 1914.

98,370. COFFEE. DENISON & COMPANY, Chicago, Ill.
Filed February 16, 1914. Serial No. 75,930. PUBLISHED MAY 12, 1914.

98,371. COFFEE AND TEA. DENISON & COMPANY, Chicago, Ill.
Filed February 16, 1914. Serial No. 75,932. PUBLISHED MAY 12, 1914.

98,372. ATHLETIC UNION SUITS OF TEXTILE FABRIC. DIAMOND MFG. CO. OF DEL., Wilmington, Del.
Filed July 9, 1913. Serial No. 71,614. PUBLISHED MAY 12, 1914.

98,373. TILE AND TILE PIPE. WALTER S. DICKEY, Kansas City, Mo.
Filed March 18, 1914. Serial No. 76,730. PUBLISHED MAY 12, 1914.

98,374. PREPARED SHEET-ROOFING. DRISCOLL BRO'S & Co., Ithaca, N. Y.
Filed March 31, 1914. Serial No. 77,095. PUBLISHED MAY 12, 1914.

98,375. ELECTRIC MOTORS. THOMAS A. EDISON, INCORPORATED, West Orange, N. J.
Filed April 4, 1914. Serial No. 77,199. PUBLISHED MAY 12, 1914.

98,376. EDIBLE FATS AND OILS. THE N. K. FAIRBANK COMPANY, Chicago, Ill.
Filed February 26, 1914. Serial No. 76,177. PUBLISHED MAY 12, 1914.

98,377. CORDS AND ROPES COMPOSED OF CERTAIN NAMED MATERIALS. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany.
Filed November 1, 1913. Serial No. 73,731. PUBLISHED MAY 12, 1914.

98,378. NON-ALCOHOLIC MALT BEVERAGES. FREDERICK W. FINGER, Louisville, Ky.
Filed March 10, 1914. Serial No. 76,497. PUBLISHED MAY 12, 1914.

98,379. FIREPROOF SAFES. FIRE PROOF BOOK AND STATIONERY CO., Oakland, Cal.
Filed November 24, 1913. Serial No. 74,164. PUBLISHED MAY 12, 1914.

98,380. RUBBER SPECIALTY FOR THE USE OF WOMEN AS A VAGINAL DOUCHE. GEORGE W. FRAZIER, New York, N. Y.
Filed February 3, 1914. Serial No. 75,648. PUBLISHED MAY 12, 1914.

98,381. LUBRICATING-OILS, MINERAL OILS USED FOR ALL KINDS OF LUBRICATING PURPOSES. GIBBS-BROWN OIL AND GASOLINE COMPANY, St. Louis, Mo.
Filed February 4, 1914. Serial No. 75,672. PUBLISHED MAY 12, 1914.

98,382. WORK AND NEGLIGÉE SHIRTS. GOODMAN, COHEN & CO., New York, N. Y.
Filed April 8, 1914. Serial No. 77,306. PUBLISHED MAY 12, 1914.

98,383. BLEND OF STRAIGHT WHISKIES AND GINS. GORDON DISTILLING AND DISTRIBUTING COMPANY, Union, N. J.
Filed September 17, 1913. Serial No. 72,916. PUBLISHED MAY 12, 1914.

98,384. LEATHER BOOTS AND SHOES. GREENBERG MILLER CO., INC., New York, N. Y.
Filed March 30, 1914. Serial No. 77,059. PUBLISHED MAY 12, 1914.

98,385. MOUNTINGS FOR SPECTACLES AND EYE-GLASSES. F. A. HARDY & CO., Chicago, Ill.
Filed February 12, 1914. Serial No. 75,870. PUBLISHED MAY 12, 1914.

98,386. SPARK-PLUGS. THE HARTFORD MACHINE SCREW COMPANY, Hartford, Conn.
Filed March 26, 1914. Serial No. 76,961. PUBLISHED MAY 12, 1914.

98,387. POLISH FOR CLEANING AND POLISHING ENAMELED, PAINTED, VARNISHED, AND POLISHED SURFACES. CHARLES M. HAY PAINT CO., Portland, Me.
Filed March 31, 1914. Serial No. 77,104. PUBLISHED MAY 12, 1914.

98,388. SECONDARY BATTERIES. HELIOS MANUFACTURING COMPANY, Philadelphia, Pa.
Filed April 17, 1914. Serial No. 77,531. PUBLISHED MAY 12, 1914.

98,389. BRICKS. THE HOCKING VALLEY FIRE CLAY CO., Nelsonville, Ohio.
Filed April 11, 1914. Serial No. 77,418. PUBLISHED MAY 12, 1914.

98,390. ARTIFICIAL BAIT. IMMELL BAIT CO., Blair, Wis.
Filed February 19, 1914. Serial No. 76,054. PUBLISHED MAY 12, 1914.

98,391. SCOTCH BLEND WHISKY. IMPERIAL LIQUOR COMPANY, Seattle, Wash.
Filed April 9, 1913. Serial No. 69,678. PUBLISHED MAY 12, 1914.

98,392. CANNED VEGETABLES. INDERRIEDEN CANNING CO., Chicago, Ill.
Filed January 21, 1914. Serial No. 75,330. PUBLISHED MAY 12, 1914.

98,393. CANNED VEGETABLES. INDERRIEDEN CANNING CO., Chicago, Ill.
Filed January 21, 1914. Serial No. 75,332. PUBLISHED MAY 12, 1914.

98,394. CANNED VEGETABLES. INDERRIEDEN CANNING CO., Chicago, Ill.
Filed January 21, 1914. Serial No. 75,333. PUBLISHED MAY 12, 1914.

98,395. CANNED VEGETABLES. INDERRIEDEN CANNING CO., Chicago, Ill.
Filed January 21, 1914. Serial No. 75,335. PUBLISHED MAY 12, 1914.

98,396. CORDAGE, ROPE, TWINE, AND STRING. THE INDIA RUBBER, GUTTA PERCHA AND TELEGRAPH WORKS CO., LTD., Silvertown, London, England.
Filed February 7, 1914. Serial No. 75,764. PUBLISHED APRIL 28, 1914.

98,397. BISCUITS AND PASTRY. ROBERT A. JOHNSTON CO., Milwaukee, Wis.
Filed January 12, 1914. Serial No. 75,122. PUBLISHED MAY 12, 1914.

98,398. COTTON PIECE GOODS. KING PHILIP MILLS, Fall River, Mass.
Filed March 25, 1914. Serial No. 76,939. PUBLISHED MAY 12, 1914.

98,399. CONCRETE CONSTRUCTION MATERIAL FOR FLOORS HAVING THE PROPERTIES OF PORTLAND CEMENT AND SAND. V. H. KRIEGSHABER, Atlanta, Ga.
Filed March 11, 1914. Serial No. 76,552. PUBLISHED MAY 12, 1914.

98,400. GLOVES. LA CROSSE KNITTING WORKS, La Crosse, Wis.
Filed April 6, 1914. Serial No. 77,242. PUBLISHED MAY 12, 1914.

98,401. STOCKINGS AND UNDERWEAR. J. W. LANDENBERGER & CO., Philadelphia, Pa.
Filed March 18, 1914. Serial No. 76,746. PUBLISHED MAY 12, 1914.

98,402. STOCKINGS. J. W. LANDENBERGER & CO., Philadelphia, Pa.
Filed March 18, 1914. Serial No. 76,747. PUBLISHED MAY 12, 1914.

98,403. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed March 27, 1914. Serial No. 76,996. PUBLISHED MAY 12, 1914.

98,404. BOTTLE-BRUSHES. GEORGE S. LEINER & CO., New York, N. Y.
Filed March 27, 1914. Serial No. 76,994. PUBLISHED MAY 12, 1914.

98,405. BATH, BOTTLE, GLASS, HOUSE-CLEANING, AND DAIRY BRUSHES. GEORGE S. LEINER & CO., New York, N. Y.
Filed March 27, 1914. Serial No. 76,995. PUBLISHED MAY 12, 1914.

98,406. BONDING CEMENT OR CONCRETE. THE LIVINGSTONE COMPANY, Baltimore, Md.
Filed March 10, 1914. Serial No. 76,510. PUBLISHED MAY 12, 1914.

98,407. BEER. LONE STAR BREWING CO., San Antonio, Tex.
Filed March 5, 1914. Serial No. 76,365. PUBLISHED MAY 12, 1914.

98,408. LIQUEUR. LUYTIES BROTHERS, New York, N. Y.
Filed March 25, 1914. Serial No. 76,940. PUBLISHED MAY 12, 1914.

98,409. OUTER COATS AND SUITS. LEON MANN CO., New York, N. Y.
Filed March 18, 1914. Serial No. 76,749. PUBLISHED MAY 12, 1914.

98,410. WHISKY. MAX MAYER, New York, N. Y.
Filed April 3, 1914. Serial No. 77,313. PUBLISHED MAY 12, 1914.

98,411. TANK FLOAT BULBS OR BALLS. THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio.
Filed April 15, 1914. Serial No. 77,490. PUBLISHED MAY 12, 1914.

98,412. METAL PIPES, TUBES, AND CASINGS. NATIONAL TUBE COMPANY, Pittsburgh, Pa.
Filed March 28, 1914. Serial No. 77,026. PUBLISHED MAY 12, 1914.

98,413. BOOTS AND SHOES MADE OF RUBBER AND LEATHER. NORTHERN SHOE CO., Duluth, Minn.
Filed June 9, 1913. Serial No. 70,980. PUBLISHED MAY 12, 1914.

98,414. CANDY. NOVELTY CANDY COMPANY, New York, N. Y.
Filed January 19, 1914. Serial No. 75,296. PUBLISHED MAY 12, 1914.

98,415. CERTAIN NAMED MACHINES AND TOOLS. SAMUEL OSBORN & CO. LIMITED, Sheffield, England.
Filed February 26, 1914. Serial No. 76,190. PUBLISHED MAY 12, 1914.

98,416. LEATHER GLOVES. V. PERRIN & CIE., Grenoble, France; London, England, and Gloversville and New York, N. Y.
Filed July 16, 1913. Serial No. 71,772. PUBLISHED MAY 12, 1914.

98,417. PORCELAINS. PORZELLANFABRIK SCHÖNWALD A. G., Schönwald, Germany.
Filed June 21, 1912. Serial No. 64,320. PUBLISHED MAY 12, 1914.

98,418. HOSIERY. G. V. S. QUACKENBUSH & CO., Troy, N. Y.
Filed November 12, 1913. Serial No. 73,933. PUBLISHED MAY 12, 1914.

98,419. CLEANER AND POLISHER FOR WOODWORK. QUAKER CLEANSER CO., Plainfield, N. J.
Filed September 11, 1913. Serial No. 72,790. PUBLISHED MAY 12, 1914.

98,420. WHEAT-FLOUR. RANDOLPH MILLING COMPANY, Baldwin, Ill.
Filed February 16, 1914. Serial No. 75,945. PUBLISHED MAY 12, 1914.

98,421. FLAVORING FOR ICE-CREAM AND OTHER CONFECTIONS AND FOOD PRODUCTS. REX EXTRACT COMPANY, Esopus and New York, N. Y.
Filed January 16, 1914. Serial No. 75,234. PUBLISHED MAY 12, 1914.

98,422. METALLIC VALVES. RICH TOOL COMPANY, Chicago, Ill.
Filed February 9, 1914. Serial No. 75,788. PUBLISHED MAY 12, 1914.

98,423. MANICURE AND TOILET TOOLS. JOSEPH ROSS & COMPANY, Irvington, N. J.
Filed March 14, 1914. Serial No. 76,655. PUBLISHED MAY 12, 1914.

98,424. CERTAIN ARTICLES OF CLOTHING FOR INFANTS, CHILDREN, MISSES, AND WOMEN. CHARLES BROADWAY ROUSS, New York, N. Y.
Filed April 23, 1913. Serial No. 70,019. PUBLISHED MAY 12, 1914.

98,425. WORK AND NEGLIGÉE SHIRTS. SALANT & SALANT, New York, N. Y.
Filed March 30, 1914. Serial No. 77,077. PUBLISHED MAY 12, 1914.

98,426. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed January 10, 1914. Serial No. 75,103. PUBLISHED MAY 12, 1914.

98,427. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed January 10, 1914. Serial No. 75,104. PUBLISHED MAY 12, 1914.

98,428. IRON AND STEEL BLOOMS, BILLETS, BARS, AND SHEETS. JOSEPH SANKEY AND SONS, LIMITED, Bilston, England.
Filed March 26, 1914. Serial No. 76,975. PUBLISHED MAY 12, 1914.

98,429. CORSETS AND GLOVES. CHARLES SCHNABEL, New York, N. Y.
Filed February 3, 1914. Serial No. 75,660. PUBLISHED MAY 12, 1914.

98,430. BLOUSES AND WAISTS. SHOTWELL & HARRIS, Houston, Tex.
Filed March 17, 1914. Serial No. 76,721. PUBLISHED MAY 12, 1914.

98,431. CERTAIN NAMED OILS, CANDLES, GREASES, AND THE LIKE. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed March 7, 1914. Serial No. 76,449. PUBLISHED MAY 12, 1914.

98,432. WROUGHT-STEEL SHELF-BRACKETS. THE STANLEY WORKS, New Britain, Conn.
Filed March 21, 1914. Serial No. 76,825. PUBLISHED MAY 12, 1914.

98,433. MEN'S, WOMEN'S, AND CHILDREN'S KNIT OR WOVEN UNDERWEAR AND HOSIERY. WALLACE G. STARRY, ROY A. BURD, & MONTE W. BURD, Harrisburg, Pa.
Filed January 29, 1914. Serial No. 75,543. PUBLISHED MAY 12, 1914.

98,434. CERTAIN NAMED FOODS. STONE-ORDEAN-WELLS COMPANY, Duluth, Minn.
Filed September 13, 1913. Serial No. 72,848. PUBLISHED MAY 5, 1914.

98,435. APPLE-BUTTER, FRUIT JELLIES, FRUIT JAMS, AND PRESERVES. SULZBERGER & SONS COMPANY, New York, N. Y.
Filed January 12, 1914. Serial No. 75,136. PUBLISHED MAY 12, 1914.

98,436. FRUIT JELLIES AND FRUIT JAMS. SULZBERGER & SONS COMPANY, New York, N. Y.
Filed January 12, 1914. Serial No. 75,137. PUBLISHED MAY 12, 1914.

98,437. WHEAT-FLOUR, RYE, GRAHAM FLOUR, AND CORNMEAL. W. L. SWEET & CO., New York, N. Y.
Filed December 11, 1909. Serial No. 46,461. PUBLISHED MAY 12, 1914.

98,438. STEEL AND IRON CASTINGS AND FORGINGS. TAYLOR-WHARTON IRON & STEEL CO., High Bridge, N. J.
Filed April 1, 1914. Serial No. 77,136. PUBLISHED MAY 12, 1914.

98,439. CANOPIES FOR BEDS. JAMES THOMPSON AND COMPANY, New York, N. Y.
Filed February 20, 1914. Serial No. 76,065. PUBLISHED MAY 12, 1914.

98,440. HOSIERY. E. M. TOWNSEND & CO., New York, N. Y.
Filed April 9, 1914. Serial No. 77,360. PUBLISHED MAY 12, 1914.

98,441. BEDSTEADS. JOHN W. VAIL, Chicago, Ill.
Filed December 16, 1913. Serial No. 74,647. PUBLISHED APRIL 28, 1914.

98,442. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,802. PUBLISHED MAY 12, 1914.

98,443. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,803. PUBLISHED MAY 12, 1914.

98,444. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,804. PUBLISHED MAY 12, 1914.

98,445. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,806. PUBLISHED MAY 12, 1914.

98,446. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,807. PUBLISHED MAY 12, 1914.

98,447. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,808. PUBLISHED MAY 12, 1914.

98,448. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,809. PUBLISHED MAY 12, 1914.

98,449. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,810. PUBLISHED MAY 12, 1914.

98,450. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & Co., Prague-Wrschowitz, Austria-Hungary.
Filed November 4, 1913. Serial No. 73,811. PUBLISHED MAY 12, 1914.

98,451. SHIRTS, UNDERSHIRTS AND DRAWERS, OVERALLS, JUMPERS, AND TROUSERS. WISE BROTHERS, New York, N. Y.
Filed March 16, 1914. Serial No. 76,711. PUBLISHED MAY 12, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

8,674. ILLUMINATING-OILS. SONE & FLEMING MANUFACTURING CO. LIMITED, New York, N. Y., Standard Oil Co. of New York, successor.
Registered September 27, 1881. Renewed September 27, 1911.

LABELS

REGISTERED JULY 14, 1914.

17,838.—*Title:* "AMALGAMATED MIXED PAINT." (For Mixed Paint.) AMALGAMATED PAINT COMPANY, Jersey City, N. J., and New York, N. Y. Filed May 29, 1914.

17,839.—*Title:* "AUNT JEMIMA'S PANCAKE FLOUR." (For Flour.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed June 26, 1914.

17,840.—*Title:* "REAL RESTFUL REST." (For Bed-Springs.) THE CLEVELAND WIRE SPRING CO., Cleveland, Ohio. Filed May 23, 1914.

17,841.—*Title:* "CREME DE MENTHE." (For Pepsin Gum.) CREME DE MENTHE GUM CO., Manitowoc, Wis. Filed June 12, 1914.

17,842.—*Title:* "DE MARTINI BRAND GENOVA STYLE." (For Macaroni.) DE MARTINI MACARONI CO., INC., Brooklyn, N. Y. Filed June 25, 1914.

17,843.—*Title:* "MACARONI GRAGNANO STYLE." (For Macaroni.) DE MARTINI MACARONI CO., INC., Brooklyn, N. Y. Filed June 25, 1914.

17,844.—*Title:* "KRAFT CLEANSER." (For a Cleaning-Powder.) CHRISTIAN HEINRICH FOLKERS, Chicago, Ill. Filed June 20, 1914.

17,845.—*Title:* "Q AND Q." (For Mararoni.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

17,846.—*Title:* "MADAME GOLAIS SANITARY ADJUSTABLE PETTICOAT." (For Petticoats.) CATHERINE GOLAIS, New York, N. Y. Filed January 6, 1914.

17,847.—*Title:* "GOOD SAMARITAN." (For Foot-Balm.) EDWARD A. HOWLAND, Springfield, Mass. Filed June 27, 1914.

17,848.—*Title:* "LAS DALAGAS." (For Cigars.) LAKS CIGAR CO., New York, N. Y. Filed June 13, 1914.

17,849.—*Title:* "THE WANDERING DEW VINE HAIR GROWER." (For a Hair-Tonic.) MINERVA LEWIS, Birmingham, Ala. Filed January 16, 1914.

17,850.—*Title:* "CANAL CIGARETTES." (For Cigarettes.) SHULEM J. MARCHOSKY, New York, N. Y. Filed June 30, 1914.

17,851.—*Title:* "McMURRAY'S CHOCOLATE ICING." (For Chocolate Icing.) WILLIAM McMURRAY & COMPANY, St. Paul, Minn. Filed June 29, 1914.

17,852.—*Title:* "OLYMPIA PALE EXPORT." (For Light Beer.) OLYMPIA BREWING CO., Olympia, Wash. Filed April 23, 1914.

17,853.—*Title:* "PILLSBURY'S HEALTH BRAN." (For Bran.) PILLSBURY FLOUR MILLS COMPANY, Minneapolis, Minn. Filed June 10, 1914.

17,854.—*Title:* "PURITY YEAST." (For Yeast.) PURITY YEAST CO., Beresford, S. D. Filed June 3, 1914.

17,855.—*Title:* "ASCHE KAYTON." (For Cigars.) ANTHONY STEFANOWSKI, Detroit, Mich. Filed April 2, 1914.

17,856.—*Title:* "WICOMICO CLUB." (For Rye Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,857.—*Title:* "GOLDEN SPRAY." (For Rye Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,858.—*Title:* "OLD DAVY." (For 100-Proof Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,859.—*Title:* "ULMAN'S COON-CLUB." (For Rye Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,860.—*Title:* "M. D. & V. CLUB." (For Straight Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,861.—*Title:* "CANNON ROACH AND BED BUG POWDER." (For an Insecticide.) MOSES WAGNER, New York, N. Y. Filed June 23, 1914.

17,862.—*Title:* "ALL 'ROUND THE WORLD." (For Cigars.) J. FRED. WILCOX, Chicago, Ill. Filed May 29, 1914.

17,863.—*Title:* "BUTTER CUSTARD." (For Butter Custard.) YORK-BRADFORD CO., San Francisco, Cal. Filed June 1, 1914.

PRINTS

REGISTERED JULY 14, 1914.

3,672.—*Title:* "LOOK PLEASANT, PLEASE." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed June 27, 1914.

3,673.—*Title:* "GERMAN STYLE SMOKED SAUSAGE." (For Sausage.) MAX MATTHES, Wilmington, Del. Filed June 3, 1914.

3,674.—*Title:* "THE TEST OF FIRE." (For Brass Beds.) PITTSBURGH-HICKSON COMPANY, East Butler, Pa. Filed June 25, 1914.

3,675.—*Title:* "EVERY TIME YOU'LL TAKE." (For Chewing-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 17, 1914.

3,676.—*Title:* "ONE MAN PLAYS THEM ALL." (For a Combination Automatical Musical Instrument.) THE RUDOLPH WURLITZER CO., Cincinnati, Ohio. Filed June 25, 1914.

3,677.—*Title:* "STANDCO." (For Hollow Set-Screws.) STANDARD PRESSED STEEL CO., Philadelphia, Pa. Filed June 2, 1914.

3,678.—*Title:* "STYLE SHOES OF QUALITY." (For Boots and Shoes.) UTZ & DUNN CO., Rochester, N. Y. Filed June 29, 1914.

3,679.—*Title:* "WAYNE KNIT HOSIERY." (For Hosiery.) WAYNE KNITTING MILLS, Fort Wayne, Ind. Filed June 22, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

CINCINNATI TRACTION CO. *v.* POPE.

Decided October 17, 1913.

No. 2,306.

1. PATENTS—SUBJECTS OF PATENTS—"MANUFACTURE"—STREET-RAILROAD TRANSFER-TICKET.

A street-railroad transfer-ticket devised to keep a check on passengers and conductors with respect to the time when used, in part by means of a coupon, the body portion when the coupon is detached being receivable only during the forenoon hours, may properly be classed as an article to be used in a method of doing business and as such is a "manufacture" within the meaning of Revised Statutes section 4886, (U. S. Comp. St., 1901, p. 3382,) and a proper subject of a patent.

2. SAME—SAME—SAME.

The term "manufacture" as used in the patent law has a very comprehensive sense, embracing whatever is made by the art or industry of man, not being a machine, a composition of matter, or a design.

3. SAME—VALIDITY AND INFRINGEMENT—TRANSFER-TICKET.

The Pope patent, No. 805,153, for a time-limit transfer-ticket for use by street-railroads, etc., was not anticipated and discloses patentable invention; also *Held* infringed.

APPEAL from the District Court of the United States for the Southern District of Ohio; Howard C. Hollister, Judge.

Suit in equity by William C. Pope against the Cincinnati Traction Company. Decree for complainant, and defendant appeals. Affirmed.

Messrs. Wood, Wood & Nathan (*Mr. William R. Wood* and *Mr. Charles C. Linthicum* of counsel) for the appellant.

Messrs. Hosea & Knight (*Mr. Marcellus Bailey* and *Mr. James L. Norris of counsel*) for the appellee.

Before KNAPPEN and DENISON, Circuit Judges, and SATER, District Judge.

KNAPPEN, *Cir. J.:*

This is a suit for the infringement of claims 1, 3, 4, 7, and 8 of United States patent to Pope, No. 805,153, November 21, 1905. The defenses are: (*a*) non-patentable subject-matter; (*b*) anticipation; (*c*) lack of invention; and (*d*) non-infringement. The district court held the patent valid and infringed, and made the usual decree for injunction and accounting, from which this appeal is taken.

1. Is the subject-matter patentable? The invention relates particularly to "time-limit" transfer-tickets for use by street-railways, traction companies, etc. The stated objects of the invention are, in substance, to enable the railroad company to make the transfer as quickly as possible, and to keep check on conductors and passengers; and thereby be able to determine whether a given transfer has been correctly issued and whether lawfully presented by the passenger; as well as to provide a transfer-ticket which when used can prove with certainty the correctness of the passenger's claim, thereby preventing litigation in case a transfer issued for forenoon use is presented for afternoon-fare, and for this reason refused by the conductor.

The specifications disclose a ticket consisting of a strip of suitable material (presumably paper) divided into a body portion and a single afternoon-coupon, the latter being separated, on the one side from the body portion and on the other from the stub, by lines of perforations or indentations, enabling the ready separation of the body from the coupon, as well as of the latter from the stub. In the "preferred embodiment" of the invention (Figure 1) the body portion is provided with a column of abbreviations indicating the months of the year and with columns of numerals for the days of the month; also with an inscription containing the name of the issuing railroad and suitable instructions to the passengers, as to the limitations under which the transfer is usable. It bears also inscriptions indicating the transfer points, the conductor's number, and "conventional indications" showing the hour and fractions thereof. The body portions are consecutively numbered, correspondingly with the coupons, and contain the legend, "If no coupon attached hour punched is a. m. hour." The coupon contains the abbreviated name of the railroad and notice "Not good if detached." This coupon denotes that the hour punched on body of (number) transfer is p. m. hour. In a modified form suggested the ticket and legends are somewhat different in details of inscription, but the net result of the information given is the same. In this modified form (Fig. 2) the coupon and body each contain a table of hours, the former on a dark ground, the latter on a light field. The drawings of the "pre-

ferred" and "modified" forms (Figs. 1 and 2, respectively) follow:

Fig. 1.

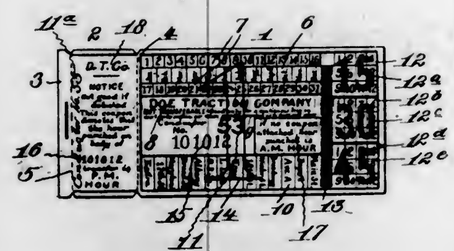
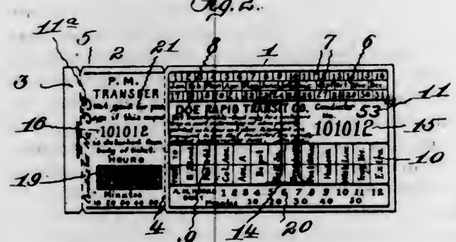


Fig. 2.



It results that when the time limit on the body is punched and issued unaccompanied by the coupon, the transfer is for forenoon use only, but when issued with the coupon it shows on its face that it is only for afternoon use; and, as suggested in the specifications, in case of dispute reference to the conductor's number and to the pad containing the stubs and unissued coupons will readily disclose for what portion of the day the transfer was in fact issued.

Claim 1 reads:

1. A transfer ticket comprising a body portion and a coupon, said body portion and coupon bearing conventional indications to constitute an antemeridian transfer ticket when said body portion is used separately and a postmeridian transfer ticket when used together.

Claims 3, 4, and 7 do not differ from claim 1 in respects material here.

Claim 8 reads:

8. A transfer ticket comprising a body portion and a coupon and further provided with conventional indications to constitute a complete transfer ticket for one part of the day when said body portion is used separately and a complete transfer ticket for another part of the day when said body portion and coupon are used together.

(1) The patent is assailed as relating merely to—

a method of transacting business, a form of contract, a mode of procedure, a rule of conduct, a principle or idea, or a permissive function, predicated upon a thing involving no structural law;

and counsel say that the ticket in question—

has no physical characteristics which enable it to be distinguished from any other transfer ticket or from any other printed slip of paper.

If this criticism is well taken, the subject-matter is not within the patent statute.[1]

(2) But while the case is perhaps near the border line, we think the device should be classed as an article to be used in a method of doing business, and thus a "manufacture" within the statute. (Rev. St., sec. 4886; U. S. Comp. St., 1901, p. 3382.) Broadly stated—

the term "manufacture," as used in the patent law, has a very comprehensive sense, embracing whatever is made by the art or industry of man, not being a machine, a composition of matter, or a design.[2]

The device of the patent clearly involves physical structure. The claims themselves are, in a proper sense, limited to such structure.

The specifications describe a distinctive physical structure, viz., a given combination and general arrangement of body and coupon (with the suggestion that the two parts may be printed in different colors), accompanied by "conventional indications" and instructions for the use and interpretation of the ticket. But the alleged patentable novelty does not reside in the arrangement of the printed text, nor does such text constitute merely a printed agreement. The argument to that effect overlooks the important consideration that the body alone is good at one time, and that the body and coupon are required for the other portion of the day; and that the ticket bears on its face, whether the body is used alone or with the coupon, the distinguishing indications. Nor is there merely an attempt to patent a form of a contract. The specifications do not confine the construction to either the style, or printed arrangement or language of the legends. The essential thing is that the required information be conveyed on the face of the ticket. The authorities cited in the margin sustain, to a greater or less degree, the patentability of this device.[3]

Rand, McNally & Co. v. *Exchange Scrip-Book Co.* involved the patentability of an exchange scrip-book containing the essential feature that the units are expressed in money instead of miles as in ordinary mileage-tickets, and avoided the necessity for calculation—

by adopting a standard, expressed on the face of the ticket, that indicates to both carrier and traveler, without calculation, just what each one is entitled to.

The language of Judge Grosscup seems peculiarly applicable here:

Nor do we think that this patented concept is nothing more than a business method. Its use is a part of a business method. The ticket patented is not a method at all, but a physical tangible facility, without which the method would have been impracticable, and with which it is practicable.

The *Benjamin Menu Card Case* involved a combination of menu-card with meal-check. To the objection that it was—

only for a piece of cardboard paper, with printed matter or composition on both sides thereof, and divided on one side by perforated lines employed in the system of doing business,

Judge Seaman said:

The fact that the structure may be of cardboard with printed matter upon it does not exclude the device from patentability, according to the Patent Office. * * *

[1] *In re Moeser*, (Ct. of App. D. C.; 123 O. G., 655;) *Hotel, etc., Co.* v. *Lorraine*, (C. C. A. 2; 160 Fed., 467; 87 C. C. A., 451;) *United States Credit System Co.* v. *American Credit Indemnity Co.*, (D. C.; 53 Fed., 818; s. c., 59 Fed.; C. C. A. 2, 139; 8 C. C. A., 49.)

[2] Language of Judge Acheson in *Johnson* v. *Johnston*, (C. C.; 60 Fed., 618, 620;) see also *Riter-Conley Mfg. Co.* v. *Aiken*, (C. C. A. 3; 203 Fed., 699, 703; 121 C. C. A., 655, and cases there cited.)

[3] *Johnson* v. *Johnston, supra; Rand, McNally & Co.* v. *Exchange Scrip-Book Co.*, (C. C. A. 7; 187 Fed., 984, 986; 110 C. C. A., 322;) *Thomson* v. *Citizens' National Bank*, (C. C. A. 8; 53 Fed., 250, 255; 3 C. C. A., 518;) *Benjamin Menu Card Co.* v. *Rand, McNally & Co.*, (210 Fed., 285, opinion by Judge Seaman;) *ex parte Wm. E. Watkins*, decision of Duell, Commissioner of Patents.

The presence of conventional indications and legends does not rob the structure of patentability. In more than one of the cases cited, the structures sustained as patentable bore conventional indications and information.

The cases relied upon by defendant are, we think, readily distinguishable from the instant case. In *re Moeser* the device of the patent was characterized as "a form of proposed contract." The device involved in *Hotel Co.* v. *Lorraine*, was declared to be "simply a system of bookkeeping." In *United States Credit Co.* v. *American Credit Co.*, the subject-matter was considered by the district court as a method of transacting business. In the latter case (as considered by the court of appeals), as in most, if not all, of the other authorities relied upon, the patentability under the statute of the subject-matter involved does not seem to have been passed upon.

(3) 2. *Anticipation.* The strongest references presented to prove anticipation are the "Ham ticket" (covered by patent), "Exhibit 709," and the "Valley-Junction" ticket. The Ham and No. 709 consist each of a ticket bearing two separate and independent tables of time-figures, the one printed light on a dark ground and the other dark on a light ground, and apparently intended for forenoon and afternoon use respectively. The claims of the Pope patent read upon neither of these devices, in letter or in spirit. Assuming that the different method of printing the two tables of time-figures is, without other designation, a sufficient indication of intended forenoon and afternoon use respectively, neither of these references has the fundamental structure of Pope's device, which is a ticket comprising a body portion (always one and the same) plus a single coupon; the ticket being so constructed as that independently of any rule of conduct, as to punching or otherwise, the ticket when bearing the coupon is by that fact alone, and necessarily, good only for a given part of the day, and when without the coupon good only for another part of the day; for, if the tables of time-figures found in "Exhibit 709" and the "Valley-Junction" ticket are to be considered as coupons (as was apparently the intention of the Ham ticket, at least), we have a body portion plus two coupons, neither one nor both performing the office of Pope's coupon. If these tables are not to be treated as coupons, the departure from the Pope device is equally clear. It follows that in case of neither of these references can there be a complete transfer-ticket for one part of the day when a "body portion" is used separately and a complete transfer-ticket for another part of the day when the "body portion" and coupon are used together. This conclusion can be avoided only by treating one of the coupons, when used in connection with the body portion, as a part of that body portion. Such construction is strained and unnatural. Nor is the result affected by the argument that the Ham ticket and No. 709 could be issued without detaching either the a. m. or p. m. end, the appropriate time-table being punched; nor by the suggestion that Pope's ticket Fig. 2 could be so used, and still respond to the patent claims. These arguments ignore the actual physical structure of Pope's device as before set out. Conceding that there—

could be no patentable novelty in a coupon-ticket *per se*, nor in the mode of use involved in issuing a whole or a part only of a ticket,

it is not the mode of use which is the subject of the patent, and the structural differences between the Pope device and the prior art are, in our opinion, matters of substance and not merely form.

The Valley-Junction ticket is even more plainly non-anticipatory. It was never intended for use as a transfer, but merely as a receipt or check for fare paid. It has in no sense a body portion and a coupon. It has, it is true, two narrow lines of figures (1 to 12 inclusive) running transversely across the end of the ticket, the one indicated as a. m., the other as p. m., and evidently intended to be appropriately punched. The only way in which the ticket could be considered as in any sense comprising a body portion and a coupon is by treating the line of p. m. figures as a coupon and the remainder (including the a. m. figures) as a body portion. This would be a forced and unreasonable construction.

In our opinion, the broad structural conception of the Pope transfer has not been anticipated.

3. Invention. Does the Pope device involve invention, or merely the expected skill of the printer or street-car man? It need not be said that this is a question of fact. The question is less difficult when considered in connection with the utility of Pope's device and the public favor it has met. In 1896 defendant began using the "709" transfers. So far as shown, no other company used that precise form. Until 1903 it used various unpatented forms, printed by the Webb Printing Company. In the latter year the Ham patent issued, the Pope patent issuing more than two years later. The Globe Printing Company had the sole right of manufacture under both patents. The defendant used the Ham ticket apparently until about the time the Pope patent issued, when it applied to the Globe Company for figures on a form covered by the claims of that patent; the Globe Company having manufactured according to those claims for some months before the patent issued. It did not, however, buy of the Globe Company but of the Webb Company, against whom and another of its customers infringement suits are pending; the testimony herein being, by stipulation, applicable thereto. It has ever since used this form of transfer, which is clearly an infringement of the Pope patent. The "tribute of its imitation"[4] is cogent evidence of the utility of the Pope transfer. Indeed, this utility is readily apparent as respects both facility and rapidity of use and effectiveness in preventing misunderstandings and misuse. It is novel and distinctive in form. It has been favorably received. Although its average price was slightly higher than that of the Ham, it has largely superseded that device, which was never used by more than twelve railway companies. The Pope transfer is used by forty-four railway companies, included within nineteen States, ranging from coast to coast and from Maine to Louisiana. Its annual sales are more than three times the sales of the Ham transfers during the entire period of two and one-half years between the issues of the Ham and Pope patents,

[4] Mr. Justice McKenna's expression in *Diamond Rubber Co.* v. *Consolidated Tire Co.*, (220 U. S., 441; 31 Sup. Ct., 444; 55 L. Ed., 527.)

and bear the same ratio to the period of two and one-half years following. From March 23, 1909, to February 1, 1910, the sales of the Pope transfers were twenty-one times greater than those of the Ham, which were then used by but three roads. Although the fact that an improvement has superior utility, and immediately supersedes other devices, is not material where the question of invention is not in doubt;[5] yet in case of doubt these considerations may determine the question of invention.[6] It may well be that, given the idea of the Pope patent, the expected skill of the printer or street-car man would have been sufficient to determine the arrangement of printed text, and even the form of legends; yet, in view of the history of the art, taking into account the apparent desire for a more effective transfer (as evidenced by the frequent changes in the use of unpatented devices), the superior utility of the device in suit, its novel and distinctive character, and the extent to which it has been accepted by the public, we think the device of the structure of the Pope transfer must be held to involve invention.

4. Infringement. As appears from what we have already said, we have no difficulty in holding that the transfer in use by the defendant at the time of and since the commencement of suit is an infringement of the Pope patent.

The decree of the district court is affirmed, with costs.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 9, 1914.

Joseph G. Hibbs, Jr., his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Isaac A. Sheppard & Co., of Fourth street and Montgomery avenue, Philadelphia, Pa., the application of Josephine L. Hibbs, (trading as E. A. Hibbs,) William L. Levis, Charles U. Levis, and Thomas J. Close, executors of said Josephine L. Hibbs, deceased, of northeast corner of Bread and Quarry streets, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered August 30, 1881, No. 8,613, to Joseph G. Hibbs, Jr., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Joseph G. Hibbs, Jr., at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph G. Hibbs, Jr., his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 2, 1914.

The Leib Lubricating Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William E. Benson, 353 Minnesota street, St. Paul, Minn., for registration of a trade-mark and trade-mark registered March 13, 1883, No. 10,114, to The Leib Lubricating Company, 196–198 Chicago street, Buffalo, N. Y., and a notice of such declaration sent by registered mail to said The Leib Lubricating Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Leib Lubricating Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 26, 1914.

Carlton's Blended Tea Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The G. B. Farrington Company, New York, N. Y., for registration of a trade-mark and trade-mark registered April 15, 1890, No. 17,770, to Carlton's Blended Tea Company, Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Carlton's Blended Tea Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Carlton's Blended Tea Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Citation of Decisions.

Citation of decisions of the Court of Appeals of the District of Columbia rendered between October 13, 1913, and March 2, 1914, published in the OFFICIAL GAZETTE and in volume 41, *Appeal Cases of the District of Columbia.*

	O. G.		App. D. C.	
	Vol.	Page.	Vol.	Page.
Asbestone Co. *v.* Philip Carey Mfg. Co.	200	857	41	507
Atkins & Co., *re*	198	240	41	238
Barber *v.* Spalckhaver	201	268	41	576
Barclay *v.* Carter Medicine Company	198	238	41	240
Barcley *v.* Schuler	199	309	41	250
Barrett *v.* Irish Industrial Development Association	197	1294	41	244
Barrett Manufacturing Company, *re*	202	631	41	513
Bettendorf *v.* McKeen	202	315	41	580
Brantingham *v.* Combs	203	929	41	568
Brenizer *v.* Robinson	201	1221	41	590
Brown *v.* Campbell	201	905	41	499
Capron, *re*	200	855	41	299
Chapman, *re*	198	240	41	258
Comptograph Co. *v.* Adder Machine Co	200	1391	41	427
Cooper, *re*	200	583	41	511
Emerson and Yoerg *v.* Riley	200	280	41	480
Fleuss and Davis, *re*	200	1115	41	520
Gorham Mfg. Co., *re*	198	703	41	263
Groves, *re*	200	856	41	316
H. Wolf & Sons *v.* Lord & Taylor	202	632	41	514
Hopkins *v.* Peters and Dement	199	1243	41	302
Johnson *v.* Martin	201	267	41	502
Keith *v.* Lorimer	203	1555	41	562
Keith *v.* Lundquist	203	1555	41	562
Lorimer *v.* Keith	203	1555	41	562
McNeil, *re*	200	583	41	516
Merrill, *re*	199	618	41	294
Moody *v.* Colby	198	899	41	248
Ochs, *re*	200	1116	41	519
Oneida Community, *re*	198	899	41	260
Pein, *re*	201	570	41	586
Peter Schoenhofen Brewing Co. *v.* John Sexton & Co	200	1117	41	510
Peters *v.* Hopkins	199	1243	41	302
Peters *v.* Hopkins and Dement	199	1243	41	302
Quaker Oats Co. *v.* Mothers Macaroni Co	198	899	41	254
Radcliffe *v.* Fottinger	197	1293	41	233
Riley *v.* Emerson and Yoerg	200	279	41	497
Shields *v.* Lees	199	618	41	236
Stamatopoulos *v.* Stephano Brothers	200	1394	41	590
Sutton *v.* Wentworth	204	320	41	582
Universal Motor Truck Company *v.* Universal Motor Company	197	535	41	261
Warrington *v.* Combs	203	929	41	568
Waterbury Chemical Co. *v.* Reed & Carnrick	200	279	41	256
Woven Steel Hose & Rubber Co. *v.* Keasbey & Mattison Company	198	495	41	247

[5] *Olin* v. *Timken,* (155 U. S., 141, 155; 15 Sup. Ct., 49; 39 L. Ed., 100;) *Adams* v. *Bellaire Stamping Co.,* (141 U. S., 539, 542; 12 Sup. Ct., 66; 35 L. Ed., 849;) *Hollister* v. *Benedict, etc., Co.,* (113 U. S., 59, 72; 5 Sup. Ct., 717; 28 L. Ed., 901;) *Gould & Eberhardt Co.* v. *Cincinnati Shaper Co.,* (194 Fed., 680, 685; 115 C. C. A., 74, and cases cited;) *McClain* v. *Ortmayer,* (141 U. S., 419, 429; 12 Sup. Ct., 76; 35 L. Ed., 800.)

[6] *Hollister* v. *Benedict, etc., Co., supra; Keystone Mfg. Co.* v. *Adams,* (151 U. S., 139, 143; 14 Sup. Ct., 295; 38 L. Ed., 103;) *Potts* v. *Creager,* (155 U. S., 597, 608; 15 Sup. Ct., 194; 39 L. Ed., 275;) *Hobbs* v. *Beach,* (180 U. S., 383, 392; 21 Sup. Ct., 409; 45 L. Ed., 586;) *Star Brass Works* v. *General Elec. Co.,* (111 Fed.; C. C. A. 6, 398; 49 C. C. A., 409;) *Kalamazoo Ry. Supply Co.* v. *Duff Mfg. Co.,* (C. C. A. 6; 113 Fed., 294; 51 C. C. A., 221;) *Dowagiac Mfg. Co.* v. *Superior Drill Co.,* (C. C. A. 6; 115 Fed., 886, 895; 53 C. C. A., 36;) *Electric Controller Co.* v. *Westinghouse Co.,* (C. C. A. 6; 171 Fed., 83, 87; 96 C. C. A., 187.)

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 204—No. 3. TUESDAY, JULY 21, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 21, 1914	679
PANAMA-PACIFIC EXPOSITION	679
ADVERSE DECISIONS IN INTERFERENCE	679
APPLICATIONS UNDER EXAMINATION	680
PATENTS GRANTED	681
REISSUES	968
DESIGNS	974
TRADE-MARKS—REGISTRATION APPLIED FOR	985
TRADE-MARK REGISTRATIONS GRANTED	1005
LABELS AND PRINTS	None.
INTERNATIONAL UNION FOR THE PROTECTION OF INDUSTRIAL PROPERTY	1011
ADJUDICATED PATENTS	1014
DISCLAIMERS	1014
INTERFERENCE NOTICES	1014

ISSUE OF JULY 21, 1914.

Patents	834—No.	1,103,926 to No.	1,104,759, inclusive.
Designs	53—No.	46,104 to No.	46,156, inclusive.
Trade-Marks	158—No.	98,452 to No.	98,609, inclusive.
Labels	None.		
Prints	None.		
Reissues	5—No.	13,775 to No.	13,779, inclusive.
Total	1050		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	North Carolina	7	2
Arizona	5	.....	North Dakota	5	.....
Arkansas	2	.....	Ohio	62	4
California	36	.....	Oklahoma	10	.....
Colorado	6	.....	Oregon	13	2
Connecticut	24	2	Pennsylvania	62	10
Delaware	2	.....	Rhode Island	17	1
Florida	.....	1	South Carolina	4	.....
Georgia	3	.....	South Dakota	5	1
Idaho	2	.....	Tennessee	10	.....
Illinois	80	22	Texas	13	3
Indiana	9	4	Utah	1	.....
Iowa	9	.....	Vermont	.....	.....
Kansas	11	.....	Virginia	4	.....
Kentucky	6	1	Washington	12	5
Louisiana	1	1	West Virginia	5	.....
Maine	4	2	Wisconsin	20	3
Maryland	12	1	Wyoming	.....	.....
Massachusetts	52	14			
Michigan	36	1	Alaska, District of	.....	.....
Minnesota	12	1	Canal Zone	.....	.....
Mississippi	1	.....	District of Columbia	6	1
Missouri	16	7	Hawaii Territory	.....	.....
Montana	6	.....	Philippine Islands	.....	.....
Nebraska	9	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	5	.....	U. S. Navy	.....	.....
New Jersey	38	12			
New Mexico	.....	.....	Total to residents of the United States	790	141
New York	141	40			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	1	.....	Mexico	1	.....
Austria-Hungary	4	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	2	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Portuguese East Africa	.....	.....
Canada	11	.....	Queensland	.....	.....
Chile	.....	.....	Russia	2	.....
China	.....	.....	Scotland	4	.....
Costa Rica	.....	.....	Spain	.....	1
Cuba	.....	.....	Sweden	2	.....
Denmark	2	.....	Switzerland	7	.....
Dominican Republic	.....	.....	Transvaal, South Africa	1	.....
England	24	4	Uruguay	1	.....
France	7	.....	Victoria	1	.....
Germany	24	12	Western Australia	2	.....
Guatemala	.....	.....			
Ireland	.....	.....	Total to residents of foreign countries	97	17
Italy	.....	.....			
Java	1	.....			
Luxemburg	1	.....			

Panama-Pacific Exposition.

In compliance with the provisions of the act approved September 18, 1913, (H. R. 7595, Public No. 14,) a branch office of the United States Patent Office has been opened at San Francisco, Cal., for the purpose of issuing certificates of proprietorship, as provided in said act.

THOMAS EWING,
Commissioner.

Adverse Decisions in Interference.

PATENT No. 1,050,828.

On June 16, 1914, a decision was rendered that Fred K. Hendrickson was not the first inventor of the subject-matter covered by claims 1 and 2 of his Patent No. 1,050,828, "Machine for turning multiple-diameter shafts," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,074,943.

On June 11, 1914, a decision was rendered that Léon Gaumont was not the first inventor of the subject-matter covered by claims 1 and 2 of his Patent No. 1,074,943, "Automatic clutch running kinematographs and phonographs synchronously," and no appeal having been taken within the time allowed such decision has become final.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 18, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	May 28	574
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 2	June 10	535
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 7	July 13	107
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Feb. 6	June 22	673
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 18	June 8	395
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 24	June 10	545
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 13	June 3	562
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 14	June 18	1127
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 5	May 29	571
235	10. Carriages and Wagons	Mar. 3	June 12	915
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 7	May 29	288
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 7	May 25	967
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 4	June 16	467
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar 13	June 19	531
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 13	June 19	965
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Feb. 27	May 15	728
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 18	May 28	219
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	May 26	June 10	290
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 29	June 2	358

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 15	June 6	377
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 7	June 1	422
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 9	243
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 19	May 9	491
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 9	June 9	555
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 1	June 8	303
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 21	833
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 2	June 9	462
65	28. Internal-Combustion Engines	Mar. 20	June 17	618
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 1	June 15	458
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 27	June 23	287
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 11	May 28	341
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 6	665
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 6	June 10	340
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 1	372
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 4	June 18	600
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 6	June 3	630
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 5	June 10	722
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 18	June 15	666
321	39. Water Distribution	Mar. 16	June 8	520
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	June 4	1082
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 4	June 18	461
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 3	June 10	388
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 3	376

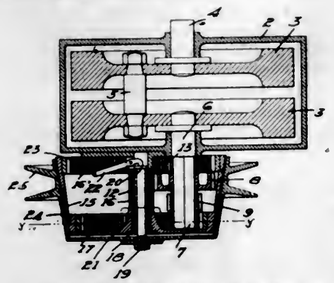
Oldest new case, Feb. 2; oldest amended, May 9.
Total number of applications awaiting action..... 23,029

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 19	June 17	934
	Designs	June 8	May 6	246
	Labels and Prints	June 29	June 30	88

PATENTS

GRANTED JULY 21, 1914.

1,103,926. VARIABLE-SPEED GEARING. EMIL A. ANDERSON, Swea City, Iowa. Filed Aug. 7, 1913. Serial No. 783,575. (Cl. 74—58.)



1. The combination, with a driving shaft, of two concentric cones having opposing friction surfaces normally held in yielding engagement with one another and eccentrically mounted with respect to said driving shaft, the inner cone having internal gear rings of different sizes, and said driving shaft having gears thereon of different sizes adapted to mesh respectively with said gear rings, said outer cone having means for connection with a driven member.

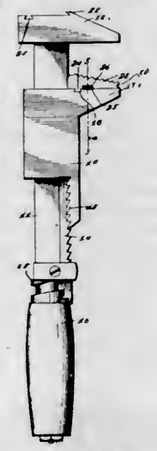
2. A variable speed gearing comprising a driving shaft, concentric cones having opposing friction surfaces eccentrically mounted with respect to said driving shaft, the inner cone having internal gear rings of different sizes, gears of different sizes mounted on said driving shaft to mesh respectively with the gear rings, means for yieldingly holding said outer cone in frictional engagement with said inner cone, and means for shifting said gears to vary the speed of said cones.

3. The combination, with a driving shaft, of two concentric members having opposing friction surfaces normally held in yielding engagement with one another and eccentrically mounted with respect to said driving shaft, the inner member having internal gear rings of different sizes, said driving shaft having gears thereon of different sizes adapted to mesh respectively with said gear rings, said outer member having means for connection with a driven member.

1,103,927. TOOTHED JAW FOR WRENCHES. STEPHEN R. AUDIBERT, Fort Kent, Me. Filed Sept. 27, 1913. Serial No. 792,172. (Cl. 81—180.)

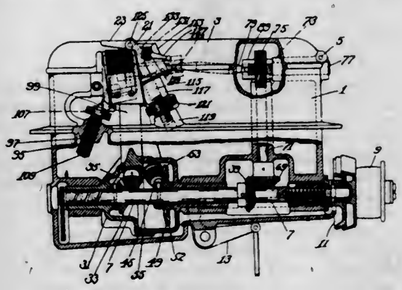
1. A wrench comprising a stationary jaw, a shank extending from said stationary jaw, a movable jaw adjustably mounted upon said shank, said movable jaw being provided with a lip having a transversely extending under-cut wedge shaped groove formed in said outer face and being also provided with a notch adjacent said groove, the outer end face of said stationary jaw being provided with a transversely extending under-cut wedge-shaped groove and with a notch adjacent its grooves, a transversely extending strip carried by said stationary jaw and overhanging the outer face thereof, a jaw plate, a dove-tailed wedge carried by said jaw plate and fitting into the under-cut grooves of said movable and stationary jaws, said plate having one end provided with a groove in which the strip of said stationary jaw fits to assist in holding said plate in position, and a resilient strip carried by said plate and having a tongue struck therefrom, the tongue fitting into the notches of said stationary and movable jaws to removably hold said plate in position.

2. A wrench comprising a stationary jaw, a shank extending from said stationary jaw, a movable jaw slidably mounted upon said stationary jaw, one of said jaws being provided with a transversely extending under-cut tapered groove and with a notch positioned adjacent the groove, a strip carried by said last mentioned jaw and overhanging the face of the jaw, a plate provided with a transversely extending groove in its inner face, and with a



groove in one end face, a dove-tailed wedge carried by said plate and fitting into the under-cut groove of said jaw to hold said plate connected with said jaw in a position to permit the overhanging strip of said jaw to fit into the end groove of said plate, and a resilient strip secured to the first mentioned groove of said plate and having a tongue struck therefrom to fit into the notch of said jaw whereby said plate may be removably held in place.

1,103,928. SKIVING-MACHINE. ARTHUR BATES, ARTHUR ERNEST JERRAM, and JOSEPH GOULDBOURN, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 19, 1908. Serial No. 453,813. (Cl. 69—16.)



1. In a skiving machine, the combination with a work supporting table having an aperture therein, of a rotary dished knife, the axis of rotation of which is oblique to the plane of the table and the edge of which is adapted to

make a cut extending at an angle to said axis, said knife being located below said table with a portion of its edge in said aperture.

2. In a skiving machine, the combination with a work supporting table having an aperture therein, of a rotary dished knife the edge of which is arranged to make a cut extending at an angle to the axis of rotation arranged below said table with a portion of its cutting edge in said aperture and its remaining portion inclined downwardly therefrom.

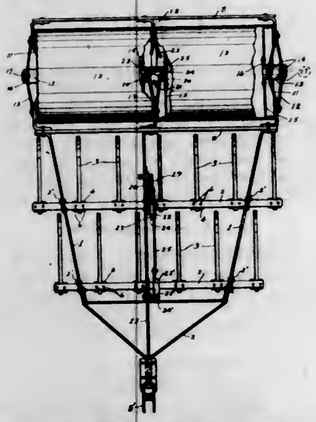
3. In a skiving machine, the combination with a work supporting table having an aperture therein, of a rotary dished knife, the axis of rotation of which is oblique to the plane of the table and the edge of which is adapted to make a cut extending at an angle to said axis, said knife being located below said table with a portion of its edge in said aperture, and driving mechanism for said knife also located below said table.

4. In a skiving machine, the combination with a work supporting table having an aperture therein, of a rotary dished knife the edge of which is arranged to make a cut extending at an angle to the axis of rotation having a portion of its edge extending in said aperture, grinding devices for the knife, and operating mechanism for said parts, the remaining portion of said knife, and said grinding devices and operating mechanism being located below the level of the table.

5. In a skiving machine, the combination with a work supporting table having an aperture therein, of a rotary dished knife the edge of which is arranged to make a cut extending at an angle to the axis of rotation having a portion of its edge extending in said aperture, a feed roll and operating mechanism for the knife and roll, all of said parts being located below the level of the table.

[Claims 6 to 57 not printed in the Gazette.]

1,103,929. LAND-ROLLER. LEVI W. BEER, East Mansfield, Ohio. Filed Sept. 11, 1913. Serial No. 789,276. (Cl. 55—6.)



1. In combination with a support, a substantially U-shaped frame having the free ends of the legs thereof secured to the rear end of the support, a central member connected to the rear side of the U-frame and to the rear end of the support and a pair of rollers journaled in the legs of the U-frame and having telescopic portions projecting through said central member.

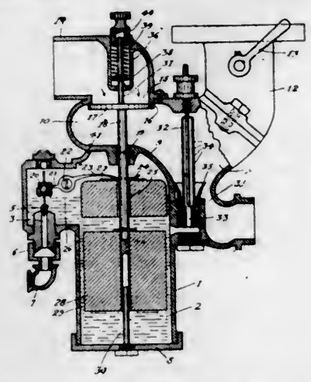
2. In a land roller, a frame having end members and a central member each of which are formed of a pair of connected members spread apart at their centers, a journal box for each end and said central member, a pair of ears carried by each journal box and being connected to the respective members of the frame ends and central member, a pair of rollers having journals on their outer ends which are received in the boxes of the frame ends, and a pair of telescoping tubular parts on the confronting inner ends of the rollers, the outer of which tubular part is received in the journal box of the central member.

3. In a land roller, a roller frame, a pair of outer and a central journal box secured to the frame, a pair of rollers having outer journals received in said outer boxes, and telescopic journals carried by the inner ends of the rollers and engaged in said central box.

4. In a land roller, a roller frame, a pair of rollers journaled at their outer ends to the frame, telescopic journals on the inner ends of the rollers, and means to support said telescopic journals common to both of the latter and surrounding same.

5. In combination with a frame, a pair of rollers journaled at their outer ends to the frame, telescopic journals on the inner ends of the rollers, and means to support said telescopic journals common to both of the latter and engaged with the exterior of the outermost journal.

1,103,930. CARBURETER. ASHLEY C. BENNETT, Minneapolis, Minn. Filed July 1, 1912. Serial No. 706,908. (Cl. 48—155.2.)



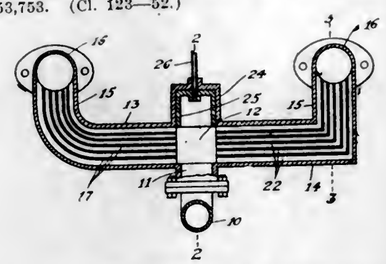
1. A carbureter comprising a casing having an air inlet port and a valve member for closing the same, said valve member including a stem, a receptacle for the liquid fuel formed in the casing and separated from the air chamber of the carbureter into which receptacle said stem projects, means for maintaining the liquid fuel at a constant level within the receptacle including a float sustained upon the surface of said liquid, said valve stem extending centrally through said float, a second float beneath the first named float and submerged in the liquid to which the valve stem is connected for positioning the valve member.

2. A carbureter comprising a casing having an air inlet port with a valve seat surrounding the same and a valve member engaging said valve seat for closing the port, means for yieldingly holding the valve member in engagement with the valve seat, a sliding member engaging the valve member, a spring for actuating the sliding member to move the valve member against the force of its positioning means, and means to adjust the force exerted by said spring.

3. A carbureter comprising a casing having an air inlet port with a valve seat surrounding the same and a valve member engaging said valve seat for closing the port, means for yieldingly holding the valve member in engagement with the valve seat, said casing being provided with a socket extending over the port into proximity with the valve member, a pin slidable in said socket and engaging the valve member, a spring in said socket tending to force the pin outwardly, and means to vary the tension of the spring.

4. A carbureter comprising a casing having an air inlet port surrounded by a valve seat and a valve member for engaging said seat to close the port, a receptacle partially filled with liquid, a float submerged in said liquid for connection with the valve member for holding the same in contact with the valve seat at a predetermined pressure, and yielding means engaging the valve member and tending to move the same out of engagement with the seat against the force exerted by the float.

1,103,931. INTAKE-MANIFOLD. ASHLEY C. BENNETT, Minneapolis, Minn. Filed Mar. 12, 1913. Serial No. 753,753. (Cl. 123—52.)



1. An intake manifold comprising a casing formed with a central chamber, means for introducing explosive mixture into said chamber, a plurality of manifold pipes leading from said central chamber, and means dividing the space within said pipes throughout their lengths into a multiplicity of ducts or passageways.

2. An intake manifold comprising a casing formed with a central chamber, means for introducing explosive mixture into said chamber, a plurality of manifold pipes leading from said central chamber, and means dividing the space within said pipes throughout their lengths into a multiplicity of flat-bottomed ducts or passage-ways.

3. An intake manifold comprising a casing formed with a central chamber, means for introducing explosive mixture into said chamber, a plurality of manifold pipes leading from said central chamber, and two sets of angularly disposed partitions dividing the space within the said manifold pipes into a multiplicity of flat-bottomed passage-ways.

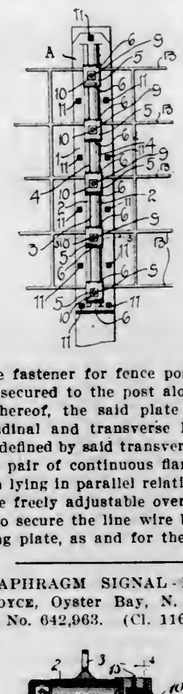
4. An intake manifold comprising a casing formed with a central chamber, means for introducing explosive mixture into said chamber, a plurality of manifold pipes leading from said central chamber, and two sets of partitions disposed at right angles to one another within the manifold pipes dividing the space within said pipes throughout the length of the same into a multiplicity of rectangular ducts or passage-ways.

5. An intake manifold comprising a casing formed with a central chamber, means for introducing explosive mixture into said chamber, a plurality of manifold pipes leading from said central chamber, two sets of partitions disposed at right angles to one another within the manifold pipes dividing the space within said pipes throughout the length of the same into a multiplicity of rectangular ducts or passage-ways said ducts or passage-ways for each manifold pipe having the mouths opening into the central chamber in common planes, and a valve operative in said chamber for closing said mouths as desired.

[Claims 6 to 8 not printed in the Gazette.]

1,103,932. WIRE-FASTENER. AMBROSE BERRY, Guntersville, Ala. Filed May 11, 1914. Serial No. 837,915. (Cl. 256—55.)

1. A wire fastener for fence posts, comprising, an attaching plate secured to the post and provided with longitudinally extending flanges upstruck from the plate and disposed relative to each other so as to define between the flanges an intervening continuous slot, the ends of the slot being open, the said flanges having portions lying parallel to the adjacent surface of the post, and line wire clamping elements freely adjustable in the slot defined by the upstruck flanges of the plate and adjustable with relation to the flanges and serving to permit the line wire to be interposed between the flanges and the plate, the said plate having a serrated surface extending at right angles to the length of the slot between the flanges of the attaching plate and engaging the flanges of the attaching plate, as and for the purpose specified.



2. A line wire fastener for fence posts, comprising, an attaching plate secured to the post along one of the vertical surfaces thereof, the said plate being respectively split on longitudinal and transverse lines and upstruck within the area defined by said transverse and longitudinal splits to form a pair of continuous flanges each having a terminal portion lying in parallel relation to the post, and a clamping plate freely adjustable over the flanges in the length thereof to secure the line wire between the flanges and the clamping plate, as and for the purpose set forth.

1,103,933. DIAPHRAGM SIGNAL-HORN. HARRISON HURLBERT BOYCE, Oyster Bay, N. Y. Filed Aug. 8, 1911. Serial No. 642,963. (Cl. 116—1.)

1. In an alarm of the character described, a diaphragm, a holder therefor, a hammer arranged to vibrate said diaphragm, and means for actuating said hammer comprising a rotating element and a pitched blade.

2. In an alarm of the character described, a diaphragm, a holder therefor, a hammer adjacent to said diaphragm but normally free therefrom, and means for vibrating said hammer comprising a rotating element and a pitched blade carried thereby arranged to engage the hammer.

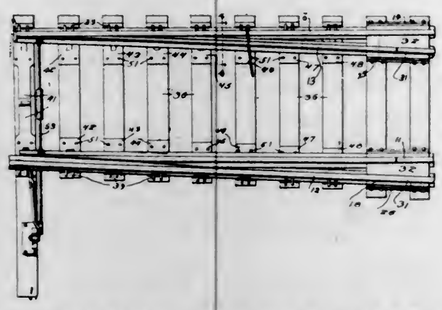
3. In an alarm of the character described, a diaphragm, a hammer adjacent thereto, a spring arm carrying said hammer, and means for vibrating said hammer comprising a rotating element and a pitched blade carried thereby arranged to engage said arm.

4. In an alarm of the character described, a diaphragm, a hammer adjacent thereto, a spring arm carrying said hammer, and means for vibrating said hammer comprising a rotating element and a pitched blade carried thereby arranged to engage said arm close to the hammer.

1,103,934. SWITCH CONSTRUCTION. RICHMOND E. BRANNEN and LEM WALLACE, Willcox, Ariz. Filed Mar. 13, 1914. Serial No. 824,465. (Cl. 104—12.)

1. In a railway switch, a track including main outer rails and switch points, the rails having foot portions extending inwardly therefrom, having inclined upper sides, the points being shaped to set upon the foot portions and

against the heads of the rails, and longitudinally spaced friction plates supporting the switch points, having a taper successively diminished toward the heel.



2. In a railway switch of the type described, a full rail and a split switch rail, and a plurality of friction plates supporting the split rail, the outermost having a raised portion of maximum height and approximately horizontal, immediately adjacent the full rail, and the succeeding inner plates having raised horizontal portions of successively diminished area and height, and tapered portions extending inwardly from the horizontal and switch rail supporting portions, the taper diminishing sucessively from the toe to the heel of the switch rail.

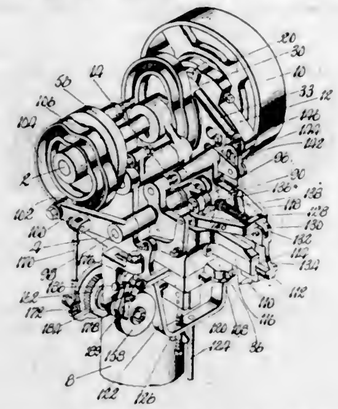
3. In a railway switch of the class described, a full rail and a split switch rail, a plurality of friction plates supporting the switch rail, and having raised and tapered supporting portions diminished in height, area and taper successively from the toe to the heel of the switch rail, a brace plate engaged on the outer part of each friction plate beneath the full rail and having head engaging braces thereon, and means to secure the said brace plate to the friction plate and to secure said plates to ties.

4. In a switch of the class described, a full rail and a split switch rail, a plurality of friction plates spaced longitudinally of the switch rail, rises on the plates greater than the height of the inner edge of the full rail base, and diminishing in height sucessively toward the heel of the switch rail, brace plates engaged on the friction plates outwardly of the rises and beneath the full rail and having braces thereon engaging beneath the head of the full rail, and means to secure the brace plates to the friction plates to bear the full rail against the rises.

5. A heel joint comprising a base having an upper side inclined downwardly toward the inner side, a foot-piece carried thereby having an inclination inwardly corresponding to the upper side of a rail foot, and being provided with an upstanding plate, an upper member slidable on the base and having a corresponding foot-piece and upstanding plate, said upstanding plates having alined apertures, said base and upper member being of a width to receive two rails side by side thereover between the upstanding plates, rails adjacent respective upstanding plates, a filler block between the rails, the rails and block having openings therethrough alined with said apertures in the upstanding plates, bolts extended through the plates rails and block and nuts engaged therewith to clamp the elements together.

1,103,935. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. MICHAEL F. BROGAN, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 11, 1911. Serial No. 665,035. (Cl. 1—20.)

1. A machine for attaching an upper to the channel lip or to the shoulder of a sole comprising, in combination, fastening inserting mechanism, manually operated means for pressing together the parts to be united before the fastening inserting operation begins, automatic means arranged to operate upon said parts, while held in the aforementioned means, for pressing the said parts tightly together along a line at one side of but closely adjacent to the line of insertion just before the fastening is inserted, and means for actuating said last mentioned pressing means constructed to insure the previous operation of the first mentioned pressing means.



2. A machine for attaching an upper to the channel lip or to the shoulder of a sole comprising, in combination, fastening inserting mechanism, means for pressing together the parts to be united before the fastening inserting operation begins, other means operating automatically to press said parts together along a line at one side of but closely adjacent to the line of insertion just before the fastening is inserted, a single manually operated means and connections from said means for actuating said last mentioned pressing means and for operating said first mentioned pressing means, said actuating connections providing lost motion whereby said first mentioned pressing means is operated before said last mentioned pressing means is actuated.

3. A machine for attaching an upper to the channel lip or to the shoulder of a sole having, in combination, fastening inserting mechanism comprising a stationary nose or throat, a clenching tool constructed and arranged to enter behind the channel lip or in the channel of the sole and movabe toward the nose or throat to clamp together the parts to be united, means for actuating said inserting mechanism constructed to move said clenching tool yieldingly into work clamping position, and means independent of the means for moving said clenching tool into work clamping position for automatically stopping said inserting mechanism after a single fastening has been inserted.

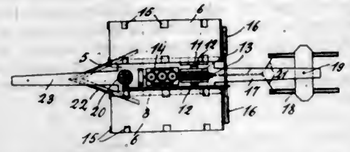
4. In a machine of the class described, staple forming and inserting means constructed to form and insert a blunt-ended staple and staple clenching means shaped to turn the projecting ends of both legs of the staple to one side of the plane of the body of the staple and to curve said legs back into a plane substantially parallel to the plane of the body of the staple.

5. A machine for attaching an upper to the channel lip or to the shoulder of a sole having, in combination, staple forming and inserting mechanism constructed and arranged to form and insert a blunt-ended staple through the parts to be united with the body of the staple substantially parallel to the bottom face of the sole, and means for clenching the projecting ends of said staple shaped to turn both legs of the staple to one side of the plane of the body of the staple.

[Claims 6 to 11 not printed in the Gazette.]

1,103,936. ROAD-MACHINE. JOSEPH BROPHY, Bergland, Mich. Filed Apr. 21, 1913. Serial No. 762,662. (Cl. 37—7.)

A road machine comprising a pair of laterally spaced packer wheels, a platform suspended between said wheels below the axles thereof, and having extensions in front and to the rear of the packer wheels, and ground-engaging supports carried by the front and rear platform extensions, one of said supports being dirigible and the other support being a scraper.



1,103,937. METHOD OF MAKING SHOES. ELI BROTHERS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 23, 1908. Serial No. 454,441. (Cl. 12—142.)



1. That improvement in the art of making stitch down shoes which consists in placing the upper right side out upon a last shaped to fill and to support the upper upon the inside down to, and vertically within the bounds of, the desired flange line and to provide an abrupt edge at said flange line extending throughout the shank and the forepart regions, locating upon the bottom of the last a sole so proportioned that a marginal portion thereof will project beyond said edge, turning out the marginal portion of the upper that extends beyond the flange gaging edge of the last and stitching it down upon the sole close to said edge, removing said last, and inserting a second last adapted to fill the same pattern but having the desired shape of the finished shoe.

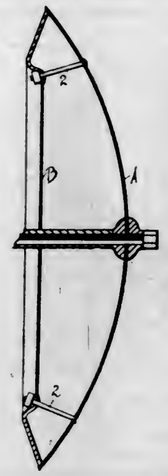
2. That improvement in the art of making stitch down shoes which consists in placing the upper right side out upon a last shaped to fill and to support the upper upon the inside down to the desired flange line and to provide an abrupt edge at said line extending throughout the shank and the forepart regions, locating upon the bottom of said last a sole so proportioned that a marginal portion thereof will project beyond said edge, pressing the upper back from the edge adjacent to the toe end of the last, and then turning the upper out at said edge and stitching it down upon the sole close to said edge along the shank and about the forepart, removing said last and inserting a second last adapted to fill the same pattern but having the desired shape of the finished shoe.

1,103,938. DISK SUBSURFACE-PACKER. HARDY W. CAMPBELL, Bethany, Nebr. Filed May 7, 1908. Serial No. 431,384. (Cl. 97—64.)

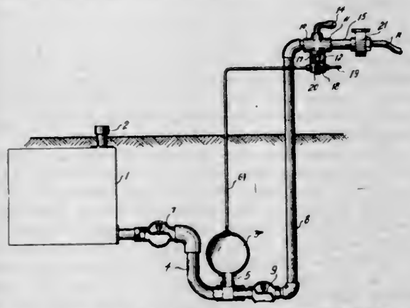
1. The combination, with a concavo-convex disk provided with a peripheral cutting edge and bolt holes near said edge, of a packing ring of less diameter than said disk and having its outer edge adapted to fit snugly against the inner surface of said disk near the cutting edge thereof, said ring forming with said disk a V-shaped cutting surface, the inner edge of said ring being inwardly turned and having bolt holes therein and bolts passing through said holes and through the holes in said disk.

2. The combination, with a concavo-convex disk, a ring having its outer edge seated against the concave surface of said disk near the periphery thereof, said ring having an inwardly turned portion and bolts passing through said disk and having threaded ends and lock nuts in said inwardly turned portion, for the purpose specified.

3. The combination, with a concavo-convex harrow disk having smooth inner and outer surfaces, without shoulders or projections, of a sheet metal frusto-conical packing ring of less diameter than said disk, and having its outer edge adapted to fit snugly against the inner surface of said disk near the cutting edge thereof, said ring forming with said disk a V-shaped cutting surface, and means rigidly securing the edge of said ring to the outer portion of said disk.



1,103,939. FLUID-DISPENSING APPARATUS. JOHN JAMES CATRON, Bonham, Tex. Filed Apr. 8, 1913. Serial No. 759,721. (Cl. 220—120.)

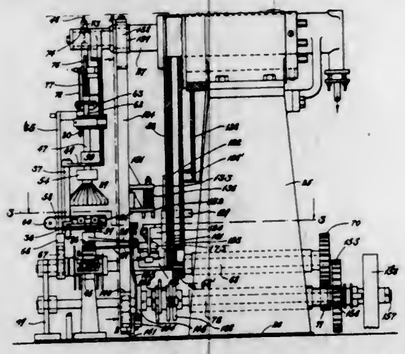


A fluid dispensing apparatus, comprising a fluid storage tank, a supplementary tank disposed at a level lower than that of the storage tank, a fluid conducting connection between the two tanks, a check-valve interposed in said connection, permitting a flow of fluid only from the storage tank to the supplementary tank, a discharge pipe, having communication with the supplementary tank and extending to an elevation above the storage tank, a check-valve interposed in the discharge pipe, adjacent to the supplementary tank, permitting fluid to flow through said pipe from but not to the supplementary tank, an air pipe communicating with the supplementary tank, and a valve normally closing the discharge pipe and opening the air pipe to the atmosphere, the discharge pipe being open and the air pipe connected with a source of compressed air in the other limiting position of the valve.

1,103,940. MACHINE FOR MAKING RECEPTACLES. WALTER E. CLAUSSEN, New York, N. Y. Filed Aug. 19, 1912. Serial No. 715,790. (Cl. 93—60.)

1. The combination of means for supporting a cup-blank, an annular member, a plaiting-head, said plaiting-head and annular member being relatively movable to

cause the forcing of the blank into said annular member and said head being provided with means for forming external plaits on the blank, and means for sweeping across said plaits as the blank is being relatively forced into said annular member, for flattening down said plaits.



2. The combination of means for supporting a cup-blank, an annular member, a plaiting-head, said plaiting head and annular member being relatively movable to cause the forcing of the blank into said annular member, one of said parts having means for forming external plaits on the blank, and a plurality of spring fingers for sweeping across said plaits as the blank is being relatively forced into said annular member, for flattening down said plaits.

3. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, yieldable means for supporting a blank above said fingers, and a plaiting-head movable relatively into said annular member and provided with plaiting members movable into the spaces between said fingers.

4. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, spring devices for supporting a blank at one side of said annular member, and a plaiting head movable relatively into said annular member and provided with plaiting members movable into the spaces between said fingers and also adapted to move said spring-devices into said spaces.

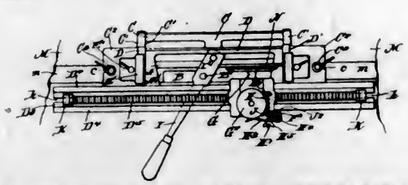
5. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, a substantially frusto-conical plaiting head movable relatively into said annular member and provided with links hinged to the small end thereof, said head being longitudinally externally grooved and said links being movable into the spaces between said fingers and into the grooves of the head on the relative movement of said head an annular member, and springs arranged in annular order, for supporting the blank relatively to said fingers, said springs being movable into the spaces between the fingers on the relative movement of the head and annular member.

[Claims 6 to 25 not printed in the Gazette.]

1,103,941. KNIFE-GRINDER. ROBERT B. COCHRAN, Washington, N. J., assignor, by direct and mesne assignments, to Morgans & Wilcox Mfg. Company, Middletown, N. Y., a Corporation of New York. Refiling of application Serial No. 491,571, filed Apr. 22, 1909. This application filed Apr. 28, 1914. Serial No. 834,894. (Cl. 51—7.)

1. In a grinding machine of the character set forth adapted to operate upon a knife of a paper-cutting machine, a supporting frame detachably mounted over said machine, grinding mechanism mounted thereon, a bar pendent from such supporting frame and receivable within a groove on the cutting machine frame, and a coöperating member carried by the grinding machine frame and also receivable within said groove, said members having a wedging action and engageable with the walls of said groove for holding the grinding machine in operative relation to the knife.

2. In a grinding machine, a frame, curved ways thereon, a carrier mounted in said ways and movable thereon to vary its vertical angular position relatively thereto, a carriage mounted on said carrier and movable longitudinally thereof, a shaft journaled in said carriage, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, and means for holding such machine in operative relation to a knife to be ground.



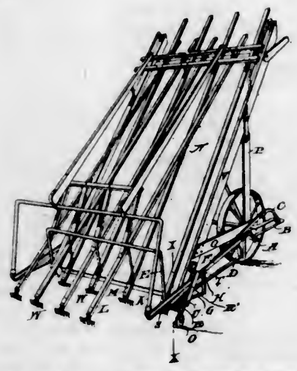
3. In a grinding machine, a frame, curved ways thereon, a carrier mounted on said ways and movable thereon to vary its vertical angular position relatively thereto, means for holding said carrier in such angular position, a carriage mounted on said carrier to reciprocate thereon, a shaft journaled in said carriage with freedom to move axially, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, means for holding such machine in operative relation to a knife to be ground, and means for presenting said disk in yielding contact with such knife.

4. In a grinding machine, a frame, curved ways thereon, a carrier mounted on said ways and movable thereon to vary its vertical angular position relatively thereto, means for holding said carrier in such angular position, a carriage mounted on said carrier to reciprocate thereon, a shaft journaled in said carriage with freedom to move axially, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, means for holding such machine in operative relation to a knife to be ground, means for presenting said disk in yielding contact with such knife, and adjustable means for varying the force of such yielding contact.

5. In a portable grinding machine adapted to operate upon the knife of a paper-cutting machine, a bar having an inclined face, a block having an oppositely inclined face, said bar and block adapted to be received in the groove of said paper-cutting machine, means for moving said bar and block relatively to each other to engage or disengage said groove, and grinding mechanism carried by said bar.

[Claims 6 to 9 not printed in the Gazette.]

1,103,942. HAY-LOADER. THOMAS P. CORWIN, Kenton, Ohio. Filed Aug. 7, 1911. Serial No. 642,814. (Cl. 56—64.)

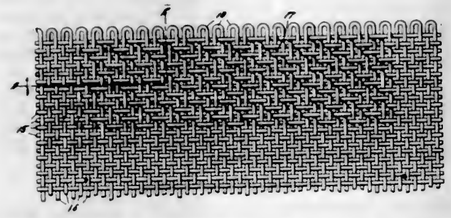


1. A hay loader comprising a platform provided with rakes, pitmen for actuating the rakes, means for operating the pitmen, brackets carried by the platform, rollers adjustably mounted in the brackets, and supports carried by the pitmen and movable over the rollers said supports having one end pivotally connected to the pitmen and the front end slidably connected to said pitmen, and means for securing the supports in various adjustments to the pitmen.

2. A hay loader comprising a platform provided with rakes, pitmen for operating the rakes, supports adjustably connected to the pitmen for adjusting the pitmen vertically, and rollers, over which the supports reciprocate, adjustably connected to the platform.

3. A hay loader comprising a platform provided with rakes, pitmen for operating the rakes, adjustable supports carried by the pitmen for adjusting the pitmen and rakes, vertically, and means carried by the platform and engaged by the supports for adjusting the positions of the pitmen and rakes at their initial rearward movement.

1,103,943. WIRE-CLOTH FOR USE ON PAPER-MAKING MACHINES. CHARLES A. COUPS, Belleville, N. J. Filed Feb. 29, 1912. Serial No. 680,770. (Cl. 139—9.)



1. A length of wire cloth for paper-making machines having throughout its main body portion and entirely across a limited extent of its end portions a plain weave and along its longitudinal side portions between said plain-weave end-portions, bands of twill, weaving merging into said plain weaving.

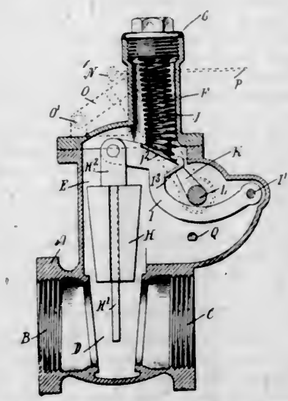
2. A length of wire cloth for paper-making machines having throughout its main body portion and entirely across a limited extent of its end portions a plain weave and along its longitudinal side portions between said plain-weave end-portions, bands of twill weaving merging into said plain weaving, the warp and weft wires throughout the cloth being of the same diameter and character, and said twill weaving being of the two-up and two-down character.

1,103,944. VALVE. NELSON B. CREIGHTON, New York, N. Y. Filed Apr. 16, 1912. Serial No. 691,114. (Cl. 137—92.)

1. A device of the class described, comprising a valve, a spring-pressed lever for actuating the valve, supporting means for normally holding the lever raised, and an automatic locking device for locking the lever in place after being released from the said supporting means and after the valve has moved into closed position, consisting of a bolt arranged in the path of movement of the lever.

2. A device of the class described, comprising a valve body having a valve seat, a valve, a lever pivotally connected with the said valve, a spring pressing the said lever and tending to seat the valve on said seat, means for normally holding the lever in raised position and the valve open, and an automatic locking device for locking the lever in place after being released from the holding means and the valve moved to closed position, consisting of a spring controlled bolt movable laterally in the path of movement of the lever.

3. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected with the said valve, a spring pressing the said lever and tending to seat the valve on said seat, a rock shaft extending through the said chamber and having a lug within the chamber engaging the said lever to hold the latter normally in raised position against the tension of the said spring whereby the valve is held open, means connected to the rock shaft for holding said lug in operative engagement with the lever, and a releasing device connected with said means.

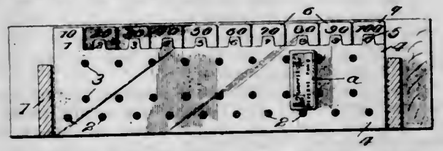


4. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected with the said valve, a spring pressing the said lever, and tending to seat the valve on said seat, a rock shaft extending through the said chamber and having a lug within the chamber engaging the said lever to hold the latter normally in raised position against the tension of the said spring, whereby the valve is held open, means connected to the rock shaft for holding said lug in operative engagement with the lever, a releasing device connected with the said means, and a locking device having a spring-pressed bolt adapted to lock the lever when the valve is in closed position.

5. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected to the valve and provided with a spring seat and an abutment, a spring seated on the said spring seat and under tension while the valve is open, a device for normally holding the valve open comprising a rock shaft extending through the said chamber and having a lug normally engaging the said abutment to hold the lever in raised position, an arm on one outer end of the said rock shaft, fusible solder connecting the said arm with the said rock shaft, and an abutment for the said arm to rest on, whereby the lever may be released from the lug when the solder is fused.

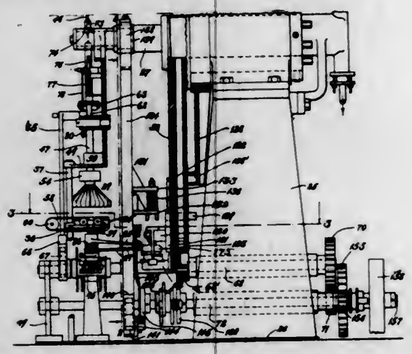
[Claims 6 to 8 not printed in the Gazette.]

1,103,945. FILING-CASE OR THE LIKE. HARRY E. DAVIS, Chicago, Ill. Filed Nov. 1, 1912. Serial No. 729,173. (Cl. 129—16.)



1. A filing device including a case having longitudinal compartments and a plurality of partitions traversing said compartments to form pockets arranged in transverse rows, each of said partitions bearing "unit" designations for the individual pockets and "tens" designations for the rows.

cause the forcing of the blank into said annular member and said head being provided with means for forming external plaits on the blank, and means for sweeping across said plaits as the blank is being relatively forced into said annular member, for flattening down said plaits.



2. The combination of means for supporting a cup-blank, an annular member, a plaiting-head, said plaiting head and annular member being relatively movable to cause the forcing of the blank into said annular member, one of said parts having means for forming external plaits on the blank, and a plurality of spring fingers for sweeping across said plaits as the blank is being relatively forced into said annular member, for flattening down said plaits.

3. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, yieldable means for supporting a blank above said fingers, and a plaiting-head movable relatively into said annular member and provided with plaiting members movable into the spaces between said fingers.

4. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, spring devices for supporting a blank at one side of said annular member, and a plaiting head movable relatively into said annular member and provided with plaiting members movable into the spaces between said fingers and also adapted to move said spring-devices into said spaces.

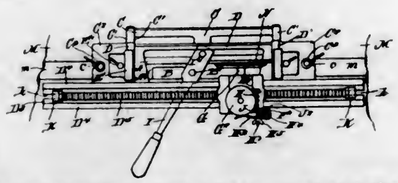
5. The combination of an annular member provided with inwardly-extending, laterally-spaced fingers, a substantially frusto-conical plaiting head movable relatively into said annular member and provided with links hinged to the small end thereof, said head being longitudinally externally grooved and said links being movable into the spaces between said fingers and into the grooves of the head on the relative movement of said head an annular member, and springs arranged in annular order, for supporting the blank relatively to said fingers, said springs being movable into the spaces between the fingers on the relative movement of the head and annular member.

[Claims 6 to 25 not printed in the Gazette.]

1,103,941. KNIFE-GRINDER. ROBERT B. COCHRAN, Washington, N. J., assignor, by direct and mesne assignments, to Morgans & Wilcox Mfg. Company, Middletown, N. Y., a Corporation of New York. Refiling of application Serial No. 491,571, filed Apr. 22, 1909. This application filed Apr. 28, 1914. Serial No. 834,894. (Cl. 51—7.)

1. In a grinding machine of the character set forth adapted to operate upon a knife of a paper-cutting machine, a supporting frame detachably mounted over said machine, grinding mechanism mounted thereon, a bar pendent from such supporting frame and receivable within a groove on the cutting machine frame, and a coöperating member carried by the grinding machine frame and also receivable within said groove, said members having a wedging action and engageable with the walls of said groove for holding the grinding machine in operative relation to the knife.

2. In a grinding machine, a frame, curved ways thereon, a carrier mounted in said ways and movable thereon to vary its vertical angular position relatively thereto, a carriage mounted on said carrier and movable longitudinally thereof, a shaft journaled in said carriage, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, and means for holding such machine in operative relation to a knife to be ground.



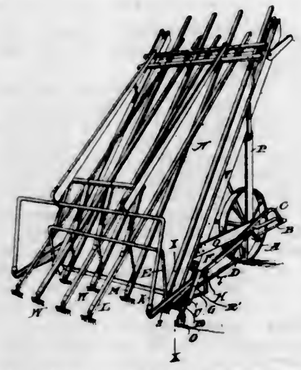
3. In a grinding machine, a frame, curved ways thereon, a carrier mounted on said ways and movable thereon to vary its vertical angular position relatively thereto, means for holding said carrier in such angular position, a carriage mounted on said carrier to reciprocate thereon, a shaft journaled in said carriage with freedom to move axially, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, means for holding such machine in operative relation to a knife to be ground, and means for presenting said disk in yielding contact with such knife.

4. In a grinding machine, a frame, curved ways thereon, a carrier mounted on said ways and movable thereon to vary its vertical angular position relatively thereto, means for holding said carrier in such angular position, a carriage mounted on said carrier to reciprocate thereon, a shaft journaled in said carriage with freedom to move axially, a grinding disk on said shaft, a rack on said carrier, a pinion on said shaft in mesh with said rack, means for holding such machine in operative relation to a knife to be ground, means for presenting said disk in yielding contact with such knife, and adjustable means for varying the force of such yielding contact.

5. In a portable grinding machine adapted to operate upon the knife of a paper-cutting machine, a bar having an inclined face, a block having an oppositely inclined face, said bar and block adapted to be received in the groove of said paper-cutting machine, means for moving said bar and block relatively to each other to engage or disengage said groove, and grinding mechanism carried by said bar.

[Claims 6 to 9 not printed in the Gazette.]

1,103,942. HAY-LOADER. THOMAS P. CORWIN, Kenton, Ohio. Filed Aug. 7, 1911. Serial No. 642,814. (Cl. 56—64.)

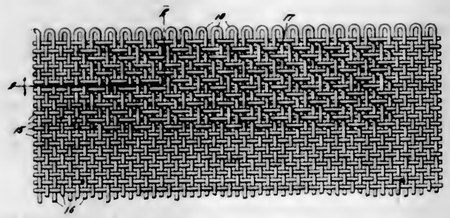


1. A hay loader comprising a platform provided with rakes, pitmen for actuating the rakes, means for operating the pitmen, brackets carried by the platform, rollers adjustably mounted in the brackets, and supports carried by the pitmen and movable over the rollers said supports having one end pivotally connected to the pitmen and the front end slidably connected to said pitmen, and means for securing the supports in various adjustments to the pitmen.

2. A hay loader comprising a platform provided with rakes, pitmen for operating the rakes, supports adjustably connected to the pitmen for adjusting the pitmen vertically, and rollers, over which the supports reciprocate, adjustably connected to the platform.

3. A hay loader comprising a platform provided with rakes, pitmen for operating the rakes, adjustable supports carried by the pitmen for adjusting the pitmen and rakes, vertically, and means carried by the platform and engaged by the supports for adjusting the positions of the pitmen and rakes at their initial rearward movement.

1,103,943. WIRE-CLOTH FOR USE ON PAPER-MAKING MACHINES. CHARLES A. COUPS, Belleville, N. J. Filed Feb. 29, 1912. Serial No. 680,770. (Cl. 139—9.)



1. A length of wire cloth for paper-making machines having throughout its main body portion and entirely across a limited extent of its end portions a plain weave and along its longitudinal side portions between said plain-weave end-portions, bands of twill, weaving merging into said plain weaving.

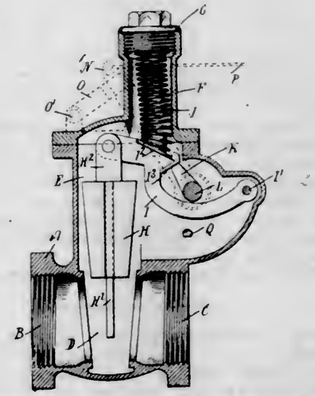
2. A length of wire cloth for paper-making machines having throughout its main body portion and entirely across a limited extent of its end portions a plain weave and along its longitudinal side portions between said plain-weave end-portions, bands of twill weaving merging into said plain weaving, the warp and weft wires throughout the cloth being of the same diameter and character, and said twill weaving being of the two-up and two-down character.

1,103,944. VALVE. NELSON B. CREIGHTON, New York, N. Y. Filed Apr. 16, 1912. Serial No. 691,114. (Cl. 137—92.)

1. A device of the class described, comprising a valve, a spring-pressed lever for actuating the valve, supporting means for normally holding the lever raised, and an automatic locking device for locking the lever in place after being released from the said supporting means and after the valve has moved into closed position, consisting of a bolt arranged in the path of movement of the lever.

2. A device of the class described, comprising a valve body having a valve seat, a valve, a lever pivotally connected with the said valve, a spring pressing the said lever and tending to seat the valve on said seat, means for normally holding the lever in raised position and the valve open, and an automatic locking device for locking the lever in place after being released from the holding means and the valve moved to closed position, consisting of a spring controlled bolt movable laterally in the path of movement of the lever.

3. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected with the said valve, a spring pressing the said lever and tending to seat the valve on said seat, a rock shaft extending through the said chamber and having a lug within the chamber engaging the said lever to hold the latter normally in raised position against the tension of the said spring whereby the valve is held open, means connected to the rock shaft for holding said lug in operative engagement with the lever, and a releasing device connected with said means.

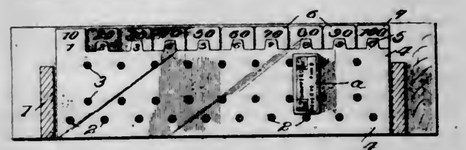


4. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected with the said valve, a spring pressing the said lever, and tending to seat the valve on said seat, a rock shaft extending through the said chamber and having a lug within the chamber engaging the said lever to hold the latter normally in raised position against the tension of the said spring, whereby the valve is held open, means connected to the rock shaft for holding said lug in operative engagement with the lever, a releasing device connected with the said means, and a locking device having a spring-pressed bolt adapted to lock the lever when the valve is in closed position.

5. A device of the class described, comprising a valve body having an inlet, an outlet, a separate chamber and a valve seat intermediate the said inlet and outlet, a valve, a lever in the said chamber connected to the valve and provided with a spring seat and an abutment, a spring seated on the said spring seat and under tension while the valve is open, a device for normally holding the valve open comprising a rock shaft extending through the said chamber and having a lug normally engaging the said abutment to hold the lever in raised position, an arm on one outer end of the said rock shaft, fusible solder connecting the said arm with the said rock shaft, and an abutment for the said arm to rest on whereby the lever may be released from the lug when the solder is fused.

[Claims 6 to 8 not printed in the Gazette.]

1,103,945. FILING-CASE OR THE LIKE. HARRY E. DAVIS, Chicago, Ill. Filed Nov. 1, 1912. Serial No. 729,173. (Cl. 129—16.)



1. A filing device including a case having longitudinal compartments and a plurality of partitions traversing said compartments to form pockets arranged in transverse rows, each of said partitions bearing "unit" designations for the individual pockets and "tens" designations for the rows.

2. A filing device comprising a case having longitudinal parallel compartments and series of parallel partitions traversing said compartments to form pockets arranged in transverse rows and longitudinal series, each of said partitions bearing "unit" designations for the individual pockets and "tens" designations for the rows.

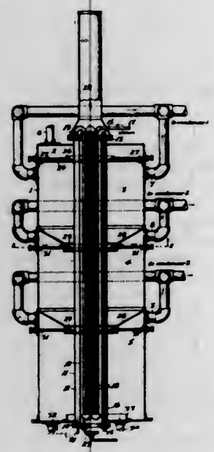
3. A filing device comprising a case having transverse rows of pockets, and partitions intervening between said rows of pockets and bearing unit designations for the pockets and "tens" designations for the rows.

4. A filing device comprising a case having transverse rows of pockets, and partitions intervening between said rows of pockets and bearing unit designations for the pockets.

5. A filing device comprising a case having longitudinal parallel compartments and series of parallel partitions traversing said compartments to form pockets arranged in transverse rows and longitudinal series, said partitions being movable longitudinally so as to vary the capacity of said pockets, each of said partitions bearing "unit" designations for the individual pockets and "tens" designations for the rows.

[Claims 6 to 15 not printed in the Gazette.]

1,103,946. EVAPORATING AND DISTILLING APPARATUS. JOHN T. DAVIS, Alameda, Cal., assignor to Davis Topping Company, San Francisco, Cal., a Corporation of Arizona. Filed Apr. 21, 1913, Serial No. 762,663. Renewed June 13, 1914. Serial No. 845,009. (Cl. 196—8.)



1. In an apparatus for distilling petroleum or the like, the combination with a chamber, of means for supplying steam to the interior of the chamber, means for feeding the petroleum or the like in a thin film over one surface of the chamber, means for applying heat to the opposed surface of the chamber, whereby the steam is interposed between the film of oil and the applied heat, a casing inclosing the oil carrying surface of the chamber, partitions carried by the casing and extending closely adjacent to the oil carrying surface to divide the casing into compartments, and means for separately removing the distillates from each compartment.

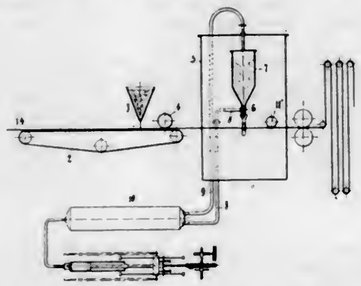
2. In an apparatus for distilling petroleum and the like the combination with two vertical substantially concentric cylinders having an annular steam space between them, of means for feeding steam into said space, means for applying fire heat to one surface of the annulus, means for supplying oil in a thin vertically flowing film on the other surface of the annulus, vertically superposed compartments whose floors are slightly spaced from the film-carrying surface, and means for separately removing the distillates from each compartment.

3. In an apparatus for distilling petroleum or the like, the combination with a casing, of a vertically arranged cylinder located within the casing, means for feeding the petroleum or the like in a thin film over the outer surface of the cylinder, partitions carried by the casing and extending closely adjacent to and surrounding the outer surface of the cylinder to divide the casing into compartments, a second cylinder located within the first mentioned cylinder and spaced therefrom, means for supplying steam to the space between the cylinders, means for supplying heat to the interior of the second mentioned cylinder, and means for separately removing the distillates from each compartment.

4. In an apparatus for distilling petroleum or the like, the combination with a casing, of a vertically arranged cylinder located within the casing, means for supplying heat to the interior of the casing, a partition carried by the casing and extending closely adjacent to and surrounding the cylinder to divide the casing into compartments, adjustable means carried by the partition to vary the space between the inner edge of the partition and the cylinder, and means for separately removing the distillates from each compartment.

5. In an apparatus for distilling petroleum or the like, the combination with a casing, of a vertically arranged cylinder located within the casing, means for supplying heat to the interior of the casing, a partition carried by the casing and extending closely adjacent to and surrounding the cylinder to divide the casing into compartments, a split ring supported on the partition and surrounding the cylinder, means for varying the diameter of the ring, and means for separately removing the distillates from each compartment.

1,103,947. MACHINE FOR COVERING FABRICS AND OTHER OBJECTS WITH MATERIAL IN THE FORM OF POWDER. LEON ALBERT DESTREZ, Paris, France. Filed Mar. 2, 1912. Serial No. 681,229. (Cl. 91—45.)

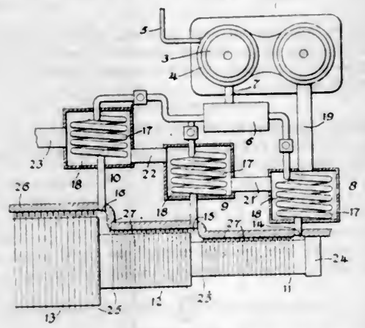


1. In a machine for coating round-surfaced material with powder, the combination of a conveyer for feeding the material, means for applying adhesive material to the surface to be coated, a powder container provided at its bottom with an annular blower nozzle through which said material is fed concentrically, said nozzle having an internal peripheral delivery slit which faces said surface, a source of compressed air supply, and separate pipes leading from said air supply source and in continuous communication with the top of said container and said nozzle, whereby the powder is entrained with the air entering the nozzle, sprayed under pressure against the said adhesive-coated surface and forced by such pressure to enter the interstices of said material.

2. In a machine for coating round-surfaced material with powder, the combination of a powder container provided at its bottom with an annular blower nozzle having a continuous internal peripheral delivery slit, means for feeding the material concentrically through said nozzle, a source of compressed air supply, and a pipe leading from said air-supply source into said container for spraying the powder under pressure through said slit against said material.

3. In a machine for coating round-surfaced material with powder, the combination of means for feeding the material, means for applying adhesive material to the surface to be coated, a powder container provided at its bottom with an annular blower nozzle through which said material is fed concentrically, said nozzle having an internal peripheral delivery slit which faces said surface, a source of compressed air supply, and a pipe leading from said air-supply source into said container for spraying the powder under pressure against the said adhesive-coated surface.

1,103,948. METHOD OF CONSERVING HEAT. HERBERT H. DOW, Midland, Mich., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 23, 1906. Serial No. 323,106. (Cl. 123—6.)



1. The method of converting the heat in the exhaust gas of an internal combustion engine into useful work, which consists in abstracting the thermal energy of said gas in a series of successive steps of progressively decreasing temperature, then in converting the abstracted thermal energy into pressure energy, then in converting the pressure energy into kinetic energy in the form of fluid velocity and finally in abstracting the velocity energy by means of a moving mass.

2. The method of converting the heat in any waste gas from any source of combustion into useful work which consists in abstracting the thermal energy of said gas in a series of successive steps of progressively decreasing temperatures, then in converting the abstracted thermal energy into pressure energy, then in converting the pressure energy into kinetic energy in the form of fluid velocity and finally in abstracting the velocity energy by means of a moving mass.

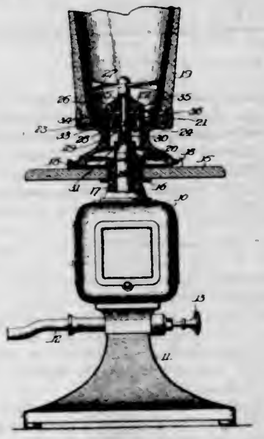
3. The method of converting the heat in the exhaust gases of an internal combustion engine into useful work, which consists in abstracting the thermal energy of said gases into two or more steps of different temperatures, then in converting the abstracted thermal energy into pressure energy, then in converting the pressure energy into kinetic energy in the form of fluid velocity and finally in abstracting the velocity energy by means of a moving mass.

4. The method of conserving the waste heat of an internal combustion engine provided with a water jacket, which consists in utilizing the exhaust gas from said engine for raising the temperature of all or a portion of the water discharged from said water jacket to successively decreasing temperatures, whereby the thermal energy of said gas is abstracted, then in converting the abstracted thermal energy into pressure energy, then in converting said pressure energy into kinetic energy in the form of fluid velocity and finally absorbing the velocity energy by means of a moving mass.

5. The method of conserving the waste heat of an internal combustion engine provided with a water jacket, which consists in segregating portions of the water discharged from said jacket, then in raising the temperature of the segregated portions of said water to successively decreasing temperatures by means of the exhaust gas from said engine, whereby the thermal energy of said gas is abstracted in as many steps of progressively decreasing temperature as there are segregations, then in converting the abstracted thermal energy into pressure energy, then in converting the pressure energy into kinetic energy in the form of fluid velocity and finally in absorbing the velocity energy by means of a moving mass.

[Claims 6 and 7 not printed in the Gazette.]

1,103,949. AGITATOR. CHARLES N. ECKLYN, Racine, Wis., assignor to Standard Electric Works, Racine, Wis., a Corporation of Wisconsin. Filed Nov. 20, 1912. Serial No. 732,430. (Cl. 31—63.)



1. In a device of the class described, the combination of a liquid container having a removable bottom wall, an agitator carried by said removable wall, the shaft controlling said agitator projecting beneath said wall, a driving element having an upwardly projecting shaft, and means for disengagedly uniting said shafts, substantially as described.

2. In a device of the class described, the combination of a liquid container having a removable bottom wall, a propeller rotatably mounted in said bottom wall, a shaft connected to said propeller and projecting below said wall, a driving motor having an upwardly projecting shaft, and means for flexibly interengaging said shafts, substantially as described.

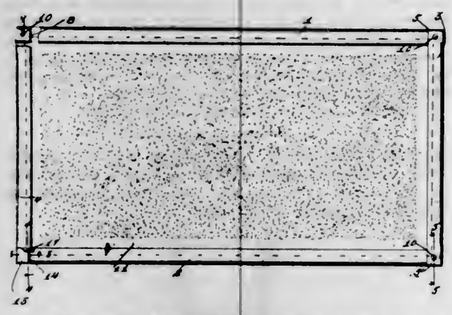
3. A device of the class described, comprising in combination, a driving element having an upwardly projected driving shaft, a container, a propeller mounted within said container, driving means for said propeller, said driving means being projected through the bottom wall of said container, means for disengagedly connecting said propeller shaft with the shaft of said driving element, and a universal joint interposed between said shafts, substantially as described.

4. A device of the class described, comprising in combination, a driving element having an upwardly projecting shaft, a container provided with a base, means for centering said base with relation to said driving element, a propeller within said container, a driving shaft for said propeller, said shaft being projected through the bottom of said container, and means for disengageably uniting the shaft of said driving element and said propeller shaft, substantially as described.

5. A device of the class described, comprising in combination, a container having an opening in its lower end, a base, means for detachably uniting said container and base, an agitator carried by said base, a shaft for said propeller, said shaft being projected through the open lower end of said container, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,103,950. FLY-PAPER HOLDER. GENNARO ESRICO, Waterbury, Conn. Filed Sept. 20, 1913. Serial No. 790,896. (Cl. 43—22.)



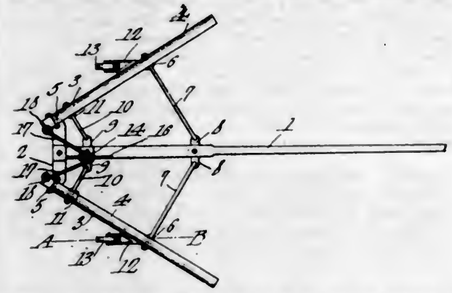
1. A fly paper holder comprising a plurality of pivotally secured strips, each strip formed to constitute a U-shape body in cross section, said body adapted to fit upon the edges of a sheet of fly paper for holding the same in position, one of said strips provided at one end with a pair of spring jaws, one of said jaws being positioned above the other, the upper jaw terminating in a rolled sleeve, another of said strips provided with a tongue bent backwardly upon itself and terminating in a rolled portion, the end portion of said last mentioned strip adapted to be positioned between the spring jaws of said first mentioned strip, said rolled portion and said tongue of said last mentioned strip adapted to be positioned within said spring jaws of said first mentioned strip, and said rolled portion of said last mentioned strip adapted to rest behind the rolled sleeve of said spring jaw for holding said strips in engagement with each other.

2. A fly paper holder comprising a plurality of strips adapted to fit upon the edges of a sheet of fly paper, one of said strips provided at one end with a plurality of spring jaws, one of said spring jaws terminating in a rolled sleeve, another of said strips provided with a tongue bent backwardly upon itself and terminating in a rolled portion, a side sleeve formed integral upon one side of said last-mentioned strip at right angles to the rolled portion of said tongue, said tongue and rolled portion of said last-mentioned strip fitting between said spring jaws, said side sleeve of said last-mentioned strip resting against the inner edge of one of said spring jaws for holding the straight ends of said strips in engagement with each other.

3. A fly paper holder comprising a plurality of U-shape strips, said strips provided at their end portions with a plurality of overhanging lips, said lips adapted to be pivotally secured to each other for holding the strips in pivotal engagement, a U-shape spacing member positioned between said overhanging lips for holding the same in spaced relation, a pivot member passing through a plurality of said lips and one of said spacing members for holding the strips in pivotal engagement, and means carried by one of the corners formed by a plurality of said strips for holding the free ends in detachable locked engagement.

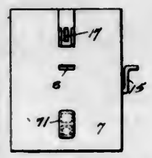
1,103,951. ROAD-SCRAPER. GEORGE EYERS, Marshfield, Wis. Filed July 19, 1912. Serial No. 710,504. (Cl. 37—5.)

The combination with a draft beam and a cross strip at one end thereof, of forwardly diverging scraping blades, eye bolts connected to each blade, one eye bolt on each blade movably engaging one end of the cross strip, front and rear pairs of links connected to the remaining eye bolts, the links of each pair converging forwardly and being pivotally connected to the sides of the beam, rearwardly extending brackets secured to the blades adjacent the centers thereof, wheels journaled within the brackets, upwardly extending arms fixedly connected to the rear end portions of the blades, a lever fulcrumed on the beam, and link connections between said lever and the respective arms, said lever and connections constituting means for simultaneously rotating the blades about their



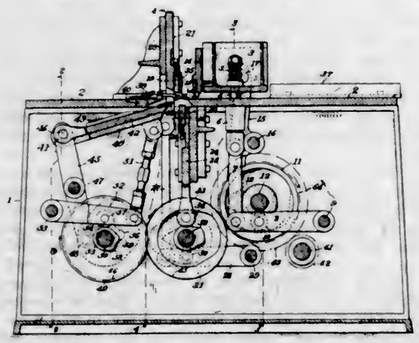
respective longitudinal axes to bring either the wheels or the lower edges of the blades into contact with the ground, and means for holding the lever in any position to which it may be shifted.

1,103,952. CHECK-CONTROLLED APPARATUS. WILLIAM JACKSON FISHER, Memphis, Tenn. Filed Mar. 19, 1913. Serial No. 755,525. (Cl. 211—8.)



In a vending apparatus including a casing, the combination with an open-mouth receptacle for spheres, a chute communicating with the mouth and having a transparent pocket outside the casing, a box within the casing below the pocket, a rocker shaft and actuating means therefor, a rocker arm and a release gate and retention gate pivoted to said arm to control the exit of a sphere from the mouth of the receptacle, a pivoted retention gate below the receptacle, and means for actuating said gate to permit a sphere to fall into said box.

1,103,953. SHEET-METAL-JOINTING MACHINE. PHILLIPP F. FLAGGE, Milwaukee, Wis., assignor, by mesne assignments, to Albert Lynn Lawrence, Cleveland, Ohio. Filed Sept. 3, 1912. Serial No. 718,215. (Cl. 113—1.)



1. In a sheet metal jointing machine the combination of a bed, a clamp for holding a sheet in place thereon, a form movable into different positions upon the sheet for forming successive folds, and a reciprocating fold turner for bending successive folds over said form.

2. In a sheet metal jointing machine the combination of a bed, a clamp movable transversely to the bed for holding a sheet in place thereon, a form carried by the clamp and movable transversely thereto into different positions on the sheet for forming successive folds, and a reciprocating fold turner adapted to bend successive folds in the sheet, one within another, over said form.

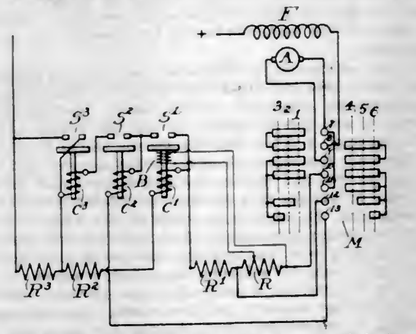
3. In a sheet metal jointing machine the combination of a work supporting bed, guides having bearings in the bed perpendicular thereto, a clamp yieldingly mounted on said guides and movable toward and from the bed, cams adapted to actuate said guides and to move said clamp into position to hold the work in place on the bed, a folding form movable transversely to the movement of said clamp into different positions on the work for successively forming folds therein, and means for bending the work over said form into successive folds one within another.

4. In a sheet metal jointing machine the combination of a bed, means for determining the position of a sheet on the bed, means for holding the sheet in place on the bed, means for trimming one edge of the sheet, a folding form movable lengthwise of the bed into different positions on the sheet parallel with its trimmed edge for making successive folds therein, and means for bending the sheet over said form in its different positions.

5. In a sheet metal jointing machine the combination of a bed, means for holding a sheet in place on the bed, a folding form movable laterally into different positions on the sheet parallel with one of its edges for making successive folds therein, a reciprocating fold turner movable obliquely to the plane of the bed and adapted to engage the sheet on the opposite side from and adjacent to the folding form in its different positions, and means for deflecting the fold turner to bend the sheet over the folding form.

[Claims 6 to 11 not printed in the Gazette.]

1,103,954. ELECTRIC-MOTOR CONTROLLER. HOMER E. FROST, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 13, 1913. Serial No. 789,654. (Cl. 172—179.)



1. In a current-varying controller, a controlled circuit, resistance therefor, a series of switches for controlling the resistances, operating windings therefor energized by current in the controlled circuit, an operator's switch comprising contacts for connecting the resistances and the winding of the first switch in the controlled circuit, and means for preventing the operation of the said switch when all the resistances are in circuit.

2. In a current-varying controller, a controlled circuit, resistances for the circuit, a series of switches for controlling the resistances, operating windings therefor energized by current in the controlled circuit, means connected to the resistance for preventing the operation of the first switch of the series and an operator's switch comprising contacts for connecting the resistances and the operating winding of the first switch in the controlled circuit, and for cutting out a portion of the resistance, thereby deënergizing the said preventing means.

3. In a current-varying controller, a controlled circuit, resistances therefor, a series of switches for controlling the resistances, operating windings therefor energized by current in the controlled circuit, a preventive winding for the first switch of the series, and an operator's switch comprising contacts for connecting the resistance and the operating winding of the first switch of the series in the controlled circuit, and for connecting the winding of the second switch in the controlled circuit.

4. In a motor-control system, an electric motor, a circuit therefor, resistance in the circuit, a series of switches therefor, operating windings for the switches energized by current through the motor, means for connecting the resistance and the winding of the first switch in the motor circuit, means for preventing the closure of the first switch when all the resistance is in circuit, and means for cutting out at will a portion of the resistance, thereby permitting the said first switch to close.

5. In a motor-control system, an electric motor, a circuit therefor, resistance in the circuit, operating windings therefor energized by current through the motor, means for connecting the resistance and the winding of the first switch of the series in the motor circuit, means for preventing the closure of the first switch when all of the resistance is in the circuit, means for cutting out at will a portion of the resistance thereby permitting the said first switch to close, and means for connecting the operating winding of the second switch in the motor circuit at the will of the operator.

[Claims 6 and 7 not printed in the Gazette.]

1,103,955. CHALK-HOLDING MEANS. GEORGE E. GARON, Manchester, N. H. Filed Mar. 17, 1913. Serial No. 754,794. (Cl. 242—98.)

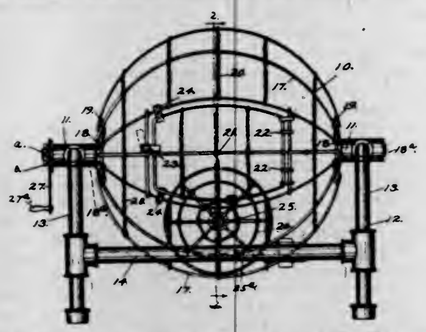


In means for the purpose described, a spool-carrying frame formed of a single piece of sheet-metal and comprising side plates having apertured ears arranged adjacent each other and also having a transverse portion connecting the said plates, at an opposite point to the ears, and having an aperture for the passage of a cord; a spindle secured in said side plates; a spool loosely mounted on the spindle between the side plates and comprising spaced sheet-metal plates, transverse portions extending between and connecting said plates at points adjacent the peripheries thereof, and brace portions struck from one of the plates and bent inwardly at right angles thereto and extending edgewise between two opposite transverse portions; and a convolute spring confined between the brace portions of the spool and the opposite plate and coiled about the spindle and connected at its inner end with the spindle and at its outer end with the spool.

1,103,956. INCINERATOR. PETER GORDEN, Chicago, Ill. Filed Dec. 6, 1913. Serial No. 805,116. (Cl. 110—18.)

1. An incinerator for paper refuse and the like, comprising a supporting frame, a reticulated container revo-

lubly mounted on said frame, and a separating and agitating element adapted to lie free in said container.



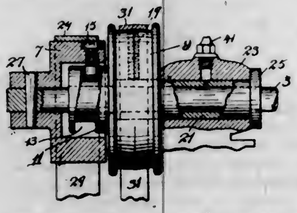
2. An incinerator for paper refuse and the like, comprising a supporting frame, a reticulated container revolubly mounted on said frame, and a reticulated separating and agitating element in said container.

3. An incinerator for paper refuse and the like, comprising a supporting frame, a spherical, reticulated container revolubly mounted on said frame, and a spherical reticulated separating and agitating element in said container.

4. An incinerator for paper refuse and the like, comprising a spherical, reticulated container formed of interwoven wires and provided with oppositely arranged journals and with a crank on one of said journals, a supporting frame with bearings for said journals, and a spherical, reticulated separating and agitating element formed of interwoven wires in said container.

5. An incinerator for paper refuse and the like, comprising a spherical, reticulated container formed of a plurality of arched wires and provided with oppositely arranged journals to which the ends of said wires are secured, wires extending around said container and secured to each of said arched wires, a supporting frame on which said container is rotatably mounted, and a spherical reticulated separating and agitating element formed of interwoven wires in said container.

1,103,957. BUFFING-MACHINE. WILLIAM GORDON, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 21, 1909. Serial No. 491,297. (Cl. 51—17.)



1. In a grinding or polishing machine having, in combination, a rotary and reciprocatory shaft, an abrading member connected therewith, a plurality of rotary actuating members for said shaft, said members having overlapping parts, and connecting means between said actuating members for causing relative angular movement of said members to reciprocate said shaft.

2. A grinding or polishing machine having, in combination, a shaft, an abrading member connected therewith, a plurality of actuating members also connected therewith and with each other independently of the shaft and means for rotating said actuating members at different velocities.

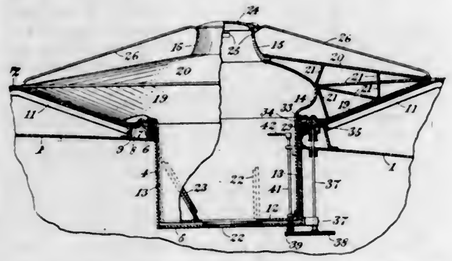
3. A grinding or polishing machine having, in combination, a shaft, an abrading member connected therewith, a plurality of actuating members mounted thereon, said members being connected with each other independently of the shaft, and means for rotating said members in the same direction at different velocities.

4. A grinding or polishing machine having, in combination, a rotary shaft, an abrading member connected therewith, and means for reciprocating said shaft, said means including means for rotating said shaft.

5. A grinding or polishing machine having, in combination, a shaft, an abrading member connected therewith, and actuating mechanism for rotating and reciprocating said shaft, said mechanism being carried wholly by said shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,103,958. SUBMARINE BOAT. ANTHONY J. GRIFFIN, New York, N. Y. Filed July 20, 1910. Serial No. 572,836. (Cl. 114—16.7.)



1. In combination, a submarine boat having an outer shell and a deck above the outer shell, the deck having a opening therein, and the shell having a well therein located within the margin of the deck opening; a safety chamber for containing occupants of the boat, the safety chamber having a lower portion entering the well and having an enlarged upper part flaring outward within the deck opening with the outer upper margin of the chamber substantially flush with the adjacent portions of the deck of the boat; means for releasably securing the safety chamber in place on the boat, and means for releasing the securing means.

2. In combination, a submarine boat having an outer shell and a deck above the outer shell, the deck having a longitudinally elongated opening therein and the shell having a well therein located within the margin of the deck opening; a safety chamber for containing occupants of the boat, the safety chamber having a lower part entering the well and having an enlarged upper part flaring outward within the deck opening and substantially fitting therein with the upper outer edges of the walls of such enlarged portion substantially flush with the deck; means for releasably securing the safety chamber in place on the boat, and means for releasing the securing means.

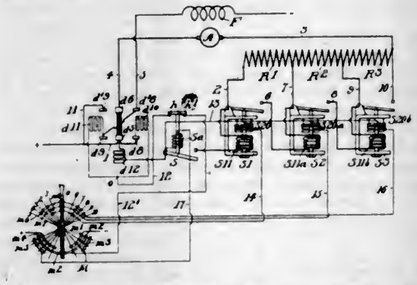
3. In combination, a submarine boat provided with a well extending inwardly and downwardly from its upper surface, a detachable safety chamber for occupants of the boat, such chamber comprising an occupants-containing compartment adapted to enter the well and to project therefrom in its upper portion, and a buoyancy compartment projecting outwardly from the upper portion of the occupants-containing compartment at the outside of the well, the largest horizontal dimension of the safety chamber through the occupants-containing compartment and the buoyancy compartment being at least twice as great as any horizontal dimension of the portion of the occupants-containing compartment in the well and the greatest vertical dimension of the buoyancy compartment being no greater than the greatest vertical dimension of the portion of the occupants-containing compartment in the well, whereby the lower portion of the occupants-containing compartment has unobstructed access to the well and a substantial amount of buoyant stability is imparted to the safety chamber when detached.

4. In combination, a submarine boat having an outer shell and a deck above the other shell, the deck having an opening therein and the shell having a well therein located within the margin of the deck opening; a detachable safety chamber for occupants of the boat, such chamber comprising an occupants-containing compartment adapted to enter the well and having an unobstructed circumferentially enlarged upper portion projectig from the wall to provide free head space for occupants, and a deck-providing buoyancy compartment at the sides of the enlarged upper portion of the occupants-containing compartment within the deck opening largely below the deck of the boat and entirely at the outside of the well.

5. In combination, a submarine boat provided with a well extending inwardly from the outer surface, a safety chamber adapted to enter the well, sealing means at the mouth of the well coöperative with the outer walls of the chamber, means for releasably securing the safety chamber in place on the boat, means for releasing the securing means, and means for admitting water to the well to equalize the pressure therein upon the safety chamber with the external water pressure, such water admitting means being connected for actuation concurrently with the release of the securing means.

[Claims 6 to 12 not printed in the Gazette.]

1,103,959. ELECTRIC CONTROL SYSTEM. JAY H. HALL, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Sept. 26, 1910, Serial No. 583,747. Divided and application filed Nov. 3, 1910, Serial No. 590,460. Divided and this application filed Jan. 7, 1911. Serial No. 601,335. (Cl. 172—179.)



1. A reverser, operating windings therefor, in combination with means energizing one of said windings for operating the reverser in one direction and means energizing both of said windings each at substantially half voltage for holding said reverser in its operated position.

2. In a reverser, a branched magnetic circuit, an energizing winding for each branch, a current reversing member controlled by the magnetic circuit and means for causing substantially no flux to flow in one part of the said circuit when the winding for operating the current-reversing member is energized.

3. In a reverser, two magnetic circuits having a common path, a winding for each circuit, a current reversing member controlled by the windings, and means for causing substantially no flux to flow in the said path when the winding for operating the current-reversing member is energized.

4. In a magnetically-operated reverser, a reversing member, windings for operating the reversing member in one direction or the other, and a winding adapted to hold the reversing member in its operated position which when energized affects the holding power of both of the said operating windings.

5. In a reverser, a set of stationary reverser contacts, a set of movable reverser contacts mounted on a movable member of magnetic material, operating windings for moving said member in opposite directions to engage said stationary contacts, said member containing a portion of the magnetic circuit which is common to both operating windings.

[Claims 6 to 10 not printed in the Gazette.]

1,103,960. ARTIFICIAL LIMB. JAMES E. HANGER, JR., St. Louis, Mo. Filed July 2, 1913. Serial No. 776,988. (Cl. 3—3.)



1. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of an elastic strip attached at its lower end to said thigh section on both sides thereof, a strap attached at its opposite ends at approximately the upper ends of said elastic strip and attached intermediate its ends to the fore part of the lower-leg section, and shoulder straps slidably connected with said elastic strips above said looped strap, all adapted to swing the lower-leg section forward on the joint.

2. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of an elastic strip attached at its lower end to said thigh section on both sides thereof, a strap attached at its opposite ends at approximately the upper ends of said elastic strip and loosely attached intermediate its ends of the fore part of the lower leg section, sheaves carried on the free ends of said elastic strip, and shoulder straps passing through said sheaves, all adapted to swing the lower leg section forward on the joint, substantially as described.

3. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of an elastic strip attached at its lower end to said thigh section on both sides thereof, a strap attached at its opposite ends at approximately the upper ends of said elastic strip and loosely attached intermediate its ends to the fore part of the lower leg section, and shoulder straps slidably connected with said elastic strips above said looped strap, all adapted to swing the lower-leg section forward on the joint, substantially as described.

1,103,961. MANUFACTURE OF GLASS ARTICLES. BENJAMIN M. HANNA, Pittsburgh, Pa. Filed Dec. 23, 1913. Serial No. 808,497. (Cl. 88—54.)



1. The method herein described of uniting two bodies of glass in solid state which consists in forming in one body a recess to receive the other, bringing the two bodies to different degrees of temperature, applying the second

body to the recess formed in the first when the two bodies are at such different temperatures, and then allowing them to come to uniform temperature.

2. The method of making bi-focal lenses which consists in grinding the lens parts and forming in one lens part an orifice for receiving the other lens part, bringing the two parts to different degrees of temperature and then inserting one part in the orifice formed for it in the other lens part, and allowing the parts so brought together to come to uniform temperature.

3. The method of making a bi-focal lens which consists in forming in one lens part a recess extending part way through the depth of the lens and shaped to receive the other lens part, bringing the two parts to different degrees of temperature, applying a sealing substance to the edge of the part second named and inserting it in the recess formed for it in the lens part first named, and then allowing the united lens to come to uniform temperature.

1,103,962. SPECTACLE-GLASS. BENJAMIN M. HANNA, Pittsburgh, Pa. Filed Jan. 29, 1914. Serial No. 815,125. (Cl. 88—54.)



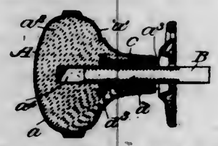
1. In a bi-focal eyeglass, the combination of a primary lens having a marginal recess and a secondary lens inserted in such recess, the edges of such recess being in the main divergent toward the margin but their divergence being interrupted and the interruption affording surfaces opposed to oblique strains tending to separation of the secondary lens when in place in the said recess of the primary lens.

2. A bi-focal eyeglass in which the normal curve of the edge of union of containing body and insert is broken by an irregularity affording surfaces opposed to oblique strains tending to separation.

3. In a bi-focal eyeglass, the combination of a primary lens, and a secondary lens carried in a recess in the primary lens, the edge of the recess in the primary lens being formed with an overhanging rim.

4. In a bi-focal eyeglass, the combination of a primary lens having a marginal recess and a secondary lens inserted in such recess, the edges of such recess being interrupted by overhanging points.

1,103,963. DOOR-KNOB. WALTER C. HARLOW, Brooklyn, N. Y., and HERBERT L. TOWLE, Glenside, Pa. Filed May 26, 1913. Serial No. 770,020. (Cl. 70—85.)



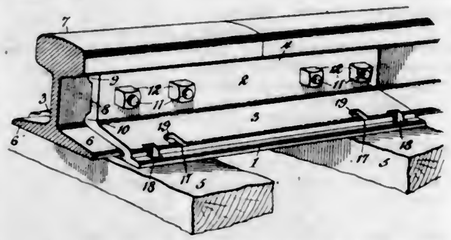
1. A door-knob composed of a shell of thin material, a plastic filling therefor, a stiffening frame in the neck of the door knob and embedded in said filling, an internally threaded member inclosed by said knob and rotatable in said frame but held against longitudinal movement, a threaded spindle in said threaded member, and means independent of said frame for preventing relative rotation of the spindle and knob.

2. A door-knob composed of a shell of thin material, a plastic filling therefor, a tubular casing placed in the neck of the door knob and embedded in said filling, an interiorly threaded sleeve inclosed by said knob and rotatably fitted within said casing, and a spindle having screw threads upon its edges and engaged thereby within said sleeve.

3. In a door-knob, in combination, a shell comprising a coöperating crown shell and neck shell, a plastic filling therefor supporting and securing said shells rigidly together, said filling being axially recessed, a spindle having screw threads upon its edges and entered within said recess, an interiorly threaded sleeve about said spindle, a casing for said sleeve permitting rotary movement but preventing longitudinal movement of the latter, said casing being embedded in and secured by said filling and means for turning said sleeve to advance or return the spindle.

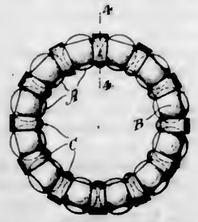
4. A door-knob composed of a shell of thin material, a plastic filling therefor, a stiffening frame in the neck of the knob, said filling securely uniting the shell and the frame, a spindle passing through said frame, and a screw-threaded element coöperating with the frame and spindle for securing said spindle against longitudinal movement in said frame.

1,103,964. RAIL-JOINT. CALAWAY HERNDON, Wagoner, Okla. Filed Apr. 22, 1913. Serial No. 762,878. (Cl. 239—6.)



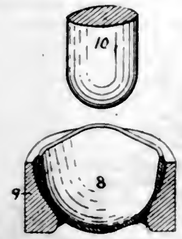
In a rail joint, the combination with rails, of a chair consisting of a single piece and comprising a bottom plate and integral sides composed of inclined lower portions, the bottom plate being extended laterally beyond the sides to form projecting flanges, and the said chair being provided with inner and outer spike receiving openings, the inner openings extending through the inclined portions of the sides and the bottom plate at the side edges of the rails and having transversely enlarged upper portions forming recesses in the inclined portions of the sides, so as to expose the side flanges of the rails to permit the heads of the spikes to directly engage the rails, thereby enabling the spikes to sink deeper into the cross ties and presenting side and outer end walls to the spikes, the outer end walls extending from the upper faces of the said inclined portions to the lower face of the bottom plate, and the said outer openings being formed in the laterally projecting side flanges of the bottom plate and presenting side and outer end walls to the spikes.

1,103,965. CAGE FOR BALL-BEARINGS. ERNST GUSTAV HOFFMANN, deceased, New Rochelle, N. Y., by Alfred W. Kiddle, New York, N. Y., and Amalie Mathilde Becker, Frankfort-on-the-Main, Germany, executors. Filed Feb. 10, 1911. Serial No. 607,730. (Cl. 64—59.)



In a device of the class described, a series of balls, pressed sheet metal annular rings on opposite sides of the balls and bent C-shaped ring holding clips, the balls being held in place between and by the two annular rings, each ring having a series of cup-shaped ball-receiving portions whose inner surfaces conform to the surface of a sphere having a greater radius than the radius of the balls which engage or are engaged by said surfaces, and also having neck portions that are curved in cross section between the cup-shaped ball-receiving portions, the C-shaped clips engaging the curved neck portion to hold the rings in place on opposite sides of the balls.

1,103,966. MANUFACTURING SEAMLESS TUBES. EMIL F. HOLINGER, McKeesport, Pa. Filed June 11, 1913. Serial No. 773,014. (Cl. 113—51.)



1. The process of drawing tubes by cupping operations, which consists in subjecting them to successive operations in successively smaller ring dies and simultaneously with some of the operations producing longitudinal corrugations in the walls of the tubes and then smoothing out the corrugations.

2. The process of drawing tubes by cupping operations, which consists in subjecting them to successive operations in successively smaller ring dies and simultaneously with alternate operations producing longitudinal corrugations in the walls of the tubes and then smoothing out the corrugations.

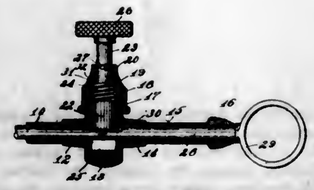
3. The process of manufacturing tubes which consists in forming a square blank with rounded corners, forming the blank into a cup having a square section with rounded corners, and subjecting the cup to successive operations to reduce its cross-section and increase its length and simultaneously causing the said cross-section to become gradually circular.

4. The process of manufacturing tubes which consists in forming a square blank with rounded corners, forming the blank into a cup having a square section with rounded corners, subjecting the cup to successive operations to reduce its cross-section and increase its length and simultaneously causing the said cross-section to become gradually circular, and during the said operations subjecting the cup to corrugating operations.

5. The process of manufacturing tubes which consists in forming a square blank with rounded corners, forming the blank into a cup having a square section with rounded corners, subjecting the cup to successive operations to reduce its cross-section and increase its length and simultaneously causing the said cross section to become gradually circular, and corrugating the cup longitudinally during some of the operations.

[Claim 6 not printed in the Gazette.]

1,103,967. DRAINAGE-TUBE. HARRY ELVERTON HUGHES, Baltimore, Md. Filed Apr. 2, 1914. Serial No. 828,942. (Cl. 27—18.)



1. In a catheter for draining and embalming purposes, the combination with a drainage tube, of a plunger movable in said tube, and means for closing the passage through said tube prior to the complete withdrawal of the plunger therefrom.

2. In a catheter for draining and embalming purposes, the combination with a drainage tube, of a plunger movable in said tube, and means for locking said plunger in operative position within said tube, said means being adapted for closing the passage through said tube when said plunger has been partially withdrawn therefrom.

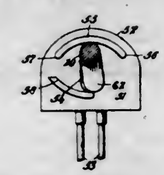
3. In a catheter for draining and embalming purposes, the combintaion with a drainage tube open at both ends, of a plunger movable in said tube and having a cam-like recess, and means coöperative with said recess to retain said plunger in operative position within said tube, said means being adapted for closing the passage through said tube when said plunger has been partially withdrawn therefrom.

4. In a catheter for draining and embalming purposes, the combination with a drainage tube, of a plunger movable in said tube, and locking means normally holding said plunger in operative position, said means automatically closing the passage through said tube simultaneously with the withdrawal of said plunger from the latter.

5. In a catheter for draining and embalming purposes, the combination with a tube open at both ends, of a plunger movable in said tube adapted to be withdrawn entirely from the tube to permit unrestricted passage therethrough, and locking means normally holding said plunger in operative position, said means automatically closing the passage through the tube simultaneously with the withdrawal of said plunger from the latter.

[Claims 6 to 13 not printed in the Gazette.]

1,103,968. EARTHENWARE-PRESS. EUGENE L. JESTER, East Liverpool, Ohio. Filed Apr. 17, 1911. Serial No. 621,542. (Cl. 25—27.)



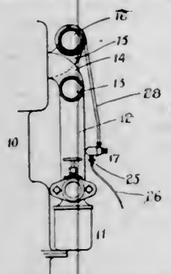
In a press of the character described a die-operating head provided with a slot, an outstanding supporting ledge and an outstanding, eccentric, pressing ledge on one side of said head and an outstanding lifting ledge on the opposite side of said head, a shaft provided with a sustaining and pressing arm and with a spaced, offset, lifting arm, said head mounted upon said shaft between said arms, said sustaining and pressing arm adapted for engagement with said supporting ledge and said pressing ledge and said lifting arm adapted for engagement with said lifting ledge, said head adapted for reciprocating movement transverse to the axis of said shaft.

1,103,969. AUXILIARY AIR-INLET DEVICE FOR INTERNAL-COMBUSTION ENGINES. CHARLES H. JOCKMUS, Ansonia, Conn. Filed Nov. 17, 1913. Serial No. 801,353. (Cl. 126—189.)

1. Apparatus for supplying preheated air to the cylinder of an internal combustion engine, embodying a pipe having one end adapted to be placed in communication with the cylinder and its opposite end bent to form a coil including a plurality of turns to surround the exhaust pipe of the engine, one turn being provided upon its inner side with a longitudinal slot and the opposite end of the pipe being closed, substantially as described.

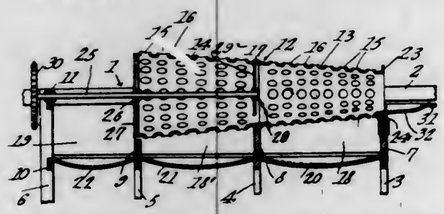
2. Apparatus for supplying preheated air to the cylinder of an internal combustion engine, embodying a pipe having one end thereof adapted to be placed in communication with the cylinder and its opposite end bent to form a coil including a plurality of turns to receive the exhaust

pipe of the engine therein, the end turn being provided upon its inner side with a longitudinal slot and having its end closed, substantially as described.



3. Apparatus for supplying preheated air to the cylinder of an internal combustion engine, comprising a coil including a plurality of turns to receive therethrough the exhaust pipe of the engine, the end turn being provided upon its inner side with a longitudinal slot and having its outer end closed, and means to place the opposite end of the coil in communication with the interior of the cylinder, substantially as described.

1,103,970. FRUIT-GRADER. JOHN H. O. KEMP, Charles Town, W. Va. Filed July 5, 1913. Serial No. 777,571. (Cl. 130—32.)

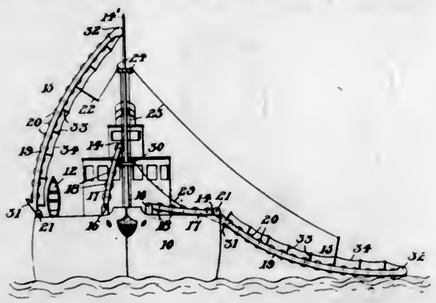


In a grader, a frame, a shell comprising forward and rear sections having relatively small and large perforations, respectively, and having their adjacent ends telescoped together, bearings carried by the frame, the forward section having an exterior flange flush with the front end thereof and seated in the said bearings, a table carried by the frame in advance of the shell and having a rear depression coöperating with the lower portion of the front end of the forward section and said flange, the flange serving to direct articles from the said depression into the forward section, a shaft disposed axially within the rear section, and spiders secured upon the shaft and to the front and rear ends of the rear section, the forward spider tending to retain the articles in the forward section, and the rear spider tending to retain the articles in the rear section, the rear end of the shaft projecting from the rear section and being journaled to the frame, and the forward end of the shaft terminating short of the front end of the forward section to permit an uninterrupted passage of articles into the forward section.

1,103,971. LIFE-BOAT-LAUNCHING MECHANISM. FRANK KRATKY, New York, N. Y. Filed May 6, 1914. Serial No. 836,717. (Cl. 9—22.)

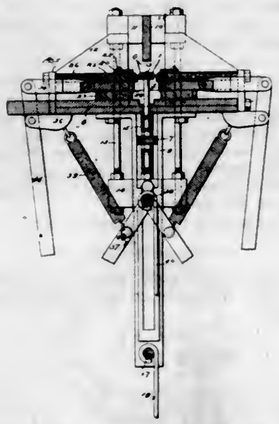
1. In combination with a ship having a mast centrally-mounted on the deck thereof, of pivoted way sections positioned upon the deck and at opposite sides of the mast, floats upon the outer free ends of the outer ones of said way sections and adapted for positioning upon the water, a winding drum upon said deck, hoisting cords secured to said way sections and having portions thereof wound upon said drum, and operative winding means for said drum whereby said way sections are adapted for assuming arched positions above the deck contacting said mast.

2. A device of the class described, comprising a ship having a deck and a mast centrally-mounted thereon, inner way sections hingedly-mounted upon the deck at opposite sides of the mast and adapted for contacting the mast when in their inoperative positions, outer way sections hinged to the opposite gunwales of the ship and also adapted to contact the mast with their free ends when inoperatively positioned in arched formation above the deck, and operating means for said way sections.



3. A device of the class described, comprising in combination with a ship having a mast centrally-positioned upon the deck thereof, of inward way sections oppositely-hinged to the deck adjacent the foot of the mast and terminating short of the adjacent gunwale of the ship when operatively-positioned, outer way sections hinged to the opposite gunwales of the ship and adapted for positioning the free ends thereof in floating contact with the water, said way sections comprising side rails and rollers mounted therebetween, pulleys upon opposite sides of said mast, winding drums at the foot of said mast, cords secured to the sections of each way and passing over said mast pulleys and around the said drums, and operating means for said drums.

1,103,972. MACHINE FOR FOLDING LEATHER. ALFRED L. LILLEY, Hartford, Conn., assignor to The Smith-Worthington Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 10, 1914. Serial No. 811,372. (Cl. 69—5.)



1. A machine for folding leather having a yielding bed for supporting the leather, stationary folders, a platen for forcing the leather and the bed down between the stationary folders, clamps for holding the leather on the bed after it has been forced down between the stationary folders, and movable folders for folding the edges of the leather toward each other.

2. A machine for folding leather having a yielding bed, a scoring and locating rib extending upwardly along the bed, stationary folders, a platen for forcing the leather and the bed downward between the stationary folders, clamps for holding the leather on the bed, and movable folders for folding the edges of the clamped leather toward each other.

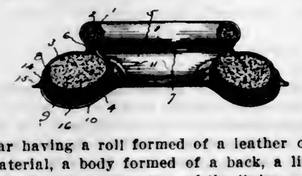
3. A machine for folding leather having a yielding bed, stationary folders, gage plates adjustably mounted on the stationary folders, a platen for forcing the leather from between the gage plates down between the stationary folders, clamps for holding the leather on the bed after it has been forced down, and movable folders for folding the edges of the clamped leather toward each other.

4. A machine for folding leather having a yielding bed, stationary folders, means for adjusting the space between the stationary folders, gage plates adjustably mounted on and movable with the stationary folders, a platen for forcing the leather from between the gage plates down between the stationary folders, clamp plates for holding the leather and the bed downward, and movable folders for folding the edges of the clamped leather toward each other.

5. A machine for folding leather having a yielding bed, adjustably mounted stationary folders, movable clamp plates, movable folders between the stationary folders and the clamp plates, and a platen adapted to force the leather and the bed down between the stationary folders, movable folders and clamp plates.

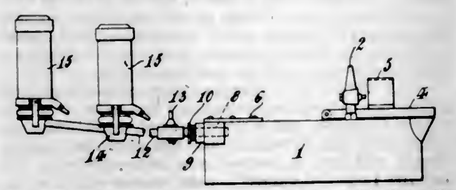
[Claims 6 and 7 not printed in the Gazette.]

1,103,973. HORSE-COLLAR. ROBERT G. LILLEY, Hartford, Conn., assignor to The Smith-Worthington Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 1, 1913. Serial No. 758,150. (Cl. 54—19.)



A collar having a roll formed of a leather cover and a filling material, a body formed of a back, a lining and a filling material, the front edges of the lining and the back being inserted and stitched between the edges of the roll cover, and the outer edge of the lining being stitched to the inner surface at a distance in from the outer edge of the back so as to leave a protecting skirt, a facing comprising a fabric and filling material, said facing fabric at its inner edge being stitched directly to the lining and having its outer edge extending inwardly and lying naturally against the inner surface of said skirt, and a lacing passing through and through the facing and back a distance in from the outer edge of the skirt, whereby the outer edge of the facing will be concealed beneath the skirt and yet be attached independently of the lining so as to allow the facing to be unlaced from the back without disturbing the stitches which secure the lining to the back.

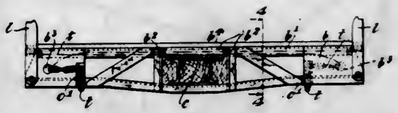
1,103,974. MILKING-MACHINE. KNUT IVAR LINDSTRÖM, Vibynäs, Nykvarn, Sweden, assignor to Aktiebolaget Mjölkningsmaskin Omega, Flen, Sweden. Filed Jan. 28, 1914. Serial No. 815,095. (Cl. 31—70.)



1. In a milking machine the combination with the milk receiver and the teat cups, of connecting tubes arranged between said cups and said receiver and made entirely of a transparent elastic material.

2. In a milking machine the combination with the milk receiver and the teat cups, of connecting tubes arranged between said cups and said receiver and made of celluloid.

1,103,975. LOGGING-CAR. BASIL MAGOR, New York, N. Y., assignor to Magor Car Company, New York, N. Y., a Corporation of New Jersey. Filed May 3, 1911, Serial No. 624,839. Renewed Mar. 25, 1914. Serial No. 827,248. (Cl. 105—173.)



1. In a logging car or truck, the combination with the stakes to retain the logs, and the stake-controlling chains, of a center sill, and a bunk consisting of a hollow top member adapted to form a support for the logs and laid transversely above the center sill, a bottom member extending transversely below the center sill, means to unite said top and bottom members, the said chains extending from side to side within the hollow of the top member, and means to keep the bunk from twisting upon the center sill.

2. In a logging car or truck, the combination with the stakes to retain the logs, and the stake-controlling chains, of a center sill, and a bunk consisting of a straight inverted channel plate laid transversely above the upper surface of the center sill, a channel plate extending transversely below and bent around the under surface of the center sill, the said chains extending from side to side within the channel of the said inverted plate, and angle plates located at the junction of the bunk and center sill to prevent the bunk from twisting upon the center sill.

3. In a logging car or truck, the combination with the stakes to retain the logs, and the stake-controlling chains, of a center sill, and a bunk consisting of a hollow top member adapted to form a support for the logs and laid transversely above the center sill, a bottom member extending transversely below the center sill, plates at each end of the bunk to unite the top and bottom members, the said chains extending from side to side within the hollow of the top member, means upon the plates at the ends of the bunk to secure the ends of the chains, and means located at the junction of the bunk and the center sill to keep the bunk from twisting upon the center sill.

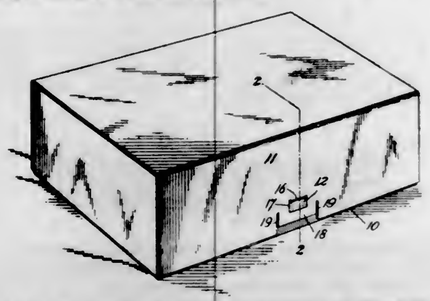
4. The combination to form a logging car, of a frame including a center sill, a pair of bunks each having a top member and a bottom member laid respectively across the top and bottom of the center sill, the top members being of substantial depth to form a support for the logs substantially above the plane of the frame, means to unite the top and bottom members of the bunk on each side of the center sill, means at each end of each bunk to retain the logs, and means to keep the bunks from twisting upon the center sill; thus providing upon and uniting to the frame two transverse members adapted to support logs without unduly exposing the frame to the latter and at the same time firmly securing the transverse members to the frame.

1,103,976. BOX-COVER FASTENING. GUSTAV MAIER, Schramberg, Germany. Filed Aug. 26, 1913. Serial No. 786,688. (Cl. 229—45.)

1. A fastening device for locking covers on boxes comprising a keeper on the side of the box and coöperative securing means on the cover comprising an extension lying wholly in the plane of the wall of said cover, to engage the interior of said keeper, and an opening in which said extension lies having an edge adapted to engage the underside of said keeper.

2. A fastening device for locking covers on boxes comprising a keeper on the side of the box and coöperative

securing means on the cover comprising an extension lying wholly in the plane of the wall of said cover, to engage the interior of said keeper, and an opening in which said extension lies having an edge adapted to engage the underside of said keeper, said extension consisting of a tongue integral with the said cover.
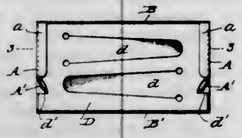


3. A fastening device for locking covers on boxes comprising a keeper on the side of the box and coöperative securing means on the cover comprising an opening, and a tongue lying wholly in the plane of the wall of said cover, projecting into said opening from the upper edge of said opening, said opening receiving said keeper and having an edge engaging the underside of said keeper, said tongue passing into said keeper.

4. In combination a box having a body with a loop on the side thereof, a cover having a substantially U-shaped slot formed therein, thereby forming an integral tongue on said cover, said U-shaped slot receiving the sides of said loop and said tongue extending through said loop, so that said loop extends across the axis of said tongue.

5. In a fastening device for box covers, a box having an outwardly projecting loop on each of two sides, combined with a cover having downwardly projecting integral tongues on similar sides, said cover having adjacent each tongue a bifurcated slot, each of said tongues adapted to engage a loop while the cover is being placed on the box, and said loops to enter the said slots after the cover is in place, thus locking the cover on the box, said fastening devices lying substantially flush with the outer surfaces of the cover.

[Claims 6 and 7 not printed in the Gazette.]

1,103,977. HOLDER FOR SAFETY-RAZOR BLADES. RICHARD MARX, Philadelphia, Pa. Filed Apr. 26, 1912. Serial No. 693,443. (Cl. 206—39.)

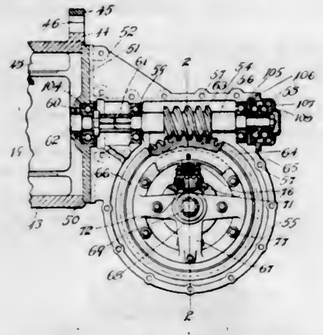


1. A razor blade holder embodying a receptacle having end and side walls and overlying flanges on the end walls having their inner faces above the level of the edge of a side wall and rigid inwardly extending projections on the end walls extending from the bottom of the receptacle upwardly for coöperation with end recesses in the blades there being a space above said projections for the escape of the uppermost blade in a horizontal plane above the projection, and a yielding follower for holding the blades up against the flanges on the end walls.

2. A razor blade holder embodying a receptacle formed of sheet metal with bottom, end and side walls, the end walls having overlying flanges with their inner faces above the level of the edge of a side wall and projections in the ends of the receptacle for coöperation with end recesses in the blades, said projections being of the same height as the side wall of least height, whereby the blades may be withdrawn from the holder edgewise in a plane above the projections and a yielding follower for holding the blades against the said flanges.

3. A razor blade holder embodying a receptacle formed of sheet metal with bottom, end and side walls, the end walls having overlying flanges with their inner faces above the level of the edge of one side wall and the end walls being bent inwardly to form blade engaging projections of substantially the same height as the last mentioned side wall whereby the blades may be withdrawn from the holder edgewise in a plane above the projections, and a yielding follower plate having recesses for coöperation with said projections.

1,103,978. DRIVING-GEARING FOR MOTOR-VEHICLES. HIRAM P. MAXIM, Hartford, Conn., assignor to The Waverley Company, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 15, 1912. Serial No. 684,000. (Cl. 74—34.)



1. A rotating member, driven members, operative connections between the rotating member and driven member, said connections including a pinion supported by the rotating member and connected with the driven members, a threaded stud bearing said pinion, a nut on the threaded stud and supporting the thrust of said pinion, said rotating member having means for preventing rotation of the nut, and means for driving the rotating member.

2. A rotating member having ears projecting therefrom, a threaded stud borne by the rotating member, a pinion mounted on said stud, a nut located on the stud and supporting the thrust of said pinion, said ears on the rotating member acting to hold the nut against rotation, means for driving the rotating member, and driven members operatively connected with said pinion.

3. A rotating member, a threaded stud borne by the rotating member, a pinion mounted on said stud, a nut threaded on the stud and having a flange supporting the thrust of said pinion and a non-circular shaped portion, said rotating member having ears engaging said non-circular shaped portion of the nut to hold it against rotation, means for driving the rotating member, and driven members operatively connected with said pinion.

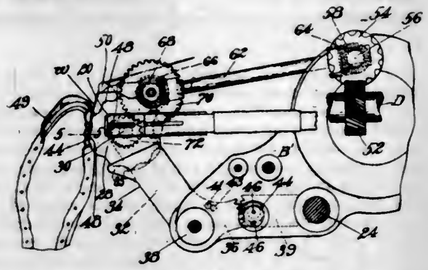
4. A rotating member including separable side parts, a threaded stud borne by the rotating member, a pinion mounted on the stud, a nut threaded on the stud and supporting the thrust of said pinion, the separable parts of the rotating member having means located in coacting engagement with the nut to hold it against rotation, means for driving the rotating member, and driven members operatively connected with the rotating member.

5. In a driving mechanism for motor vehicles, a gear including two sections each including a hub, arms projecting radially therefrom, and a rim supported at the outer end of said arms thus forming a cage, a toothed ring clamped between said rims, a threaded stud secured between said rims and projecting inwardly, a nut located on the threaded portion of the stud, a pinion supported on the stud and backed by said nut, said rims having oppositely disposed

ears projecting to hold said nut from rotation, and driven mechanism located within said cage and connected with said pinion.

[Claim 6 not printed in the Gazette.]

1,103,979. LASTING-MACHINE. THOMAS H. McAULIFFE, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 23, 1912. Serial No. 699,189. (Cl. 12—2.)



1. A lasting machine having, in combination, upper stretching means, a member for forcing the upper into the angle between the feather-edge and lip of the sole and mechanism for imparting continuous uninterrupted operative movement to said member.

2. A lasting machine having, in combination, means for stretching the upper, a member constantly in engagement with the edge of the upper to crease the upper into the angle of union between the feather-edge and lip of the sole and mechanism for imparting continuous uninterrupted operative movement to said member.

3. A lasting machine having, in combination, upper stretching means, a member for crowding the stretched upper into the angle of union between the feather-edge and lip of the inner sole, means for adjusting said member to and from operative position and means for imparting continuous uninterrupted operative movement to said member when it is in operative position.

4. In a lasting machine, the combination of a rotatable wiper for forcing the upper into the angle of union between the feather-edge and lip of the sole and mechanism for effecting continuous uninterrupted rotation of said wiper, substantially as described.

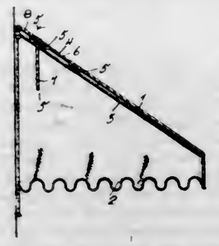
5. In a lasting machine, the combination with upper stretching instrumentalities, of a wiper substantially as described and movable into and from operative position, operating mechanism for imparting continuous uninterrupted rotary movement to the wiper when operatively connected with the wiper, and connections from the wiper to said operating mechanism arranged to effect operative connection between the wiper and said operating mechanism when the wiper is moved into operative position.

[Claims 6 to 23 not printed in the Gazette.]

1,103,980. AWNING-VENTILATOR. DAVID R. McGINNIS, Fresno, Cal. Filed May 23, 1914. Serial No. 840,511. (Cl. 156—15.)

1. In a device of the class described the combination with an awning having a rectangular transverse extending opening formed adjacent its upper portion, means for reinforcing said opening and a flap carried by said awning, opening upon said awning whereby heated air within said awning may strike upon said flap and then be directed to and expelled through said opening.

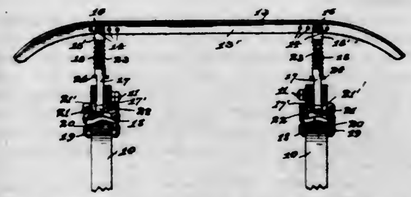
2. In a device of the class described the combination with an awning, said awning provided adjacent its upper portion with a transverse extending rectangular opening, said awning provided with transverse extending integral strips fixedly secured thereto, reinforcing cords passing through one of said strips and having their ends extending transversely across said opening and secured to the remaining strip whereby said opening will be firmly reinforced, and a flap secured to said awning above said opening and depending for a spaced distance below the under surface of the upper portion of said awning whereby the heated air within said awning will pass upwardly and will strike said flap whereby the air will be directed through said opening and expelled from the awning.



3. In a device of the class described the combination with an awning, said awning provided adjacent its upper portion with a transversely extending opening, a flap positioned within said awning, said flap provided with an integral strip fixedly secured to the upper portion of said awning, said flap depending in a vertical position into the body of the awning, said flap being free to move at its ends and lower portion, said flap being adapted to direct the heated air within the awning through said opening.

4. A device of the class described the combination with an awning, said awning provided with a transverse opening formed adjacent its upper portion, means for reinforcing said opening, the upper portion of said awning being bent backwardly upon itself and terminating in an integral depending flap, said flap being formed adjacent said opening whereby said flap will conduct the heated air within said awning through said opening and will constitute a shield for the rays of the sun passing through said opening.

1,103,981. AUTOMOBILE-BUFFER. ALLAN L. McGREGOR, Chicago, Ill. Filed May 5, 1911. Serial No. 625,342. (Cl. 213—39.)



An automobile buffer comprising, in combination, a buffer-bar, clamps adapted to be secured to the side bars of the vehicle frame, rearwardly extending buffer-bar carrying arms, hollow bars in which said carrying arms are slidably mounted, coöperating ratchet plates on said clamps and the inner ends of said hollow bars, respectively, a tightening bolt extending through said ratchet plates, and cushioning springs surrounding said arms and abutting against the forward ends of said hollow bars, substantially as described.

1,103,982. WINDOW SHADE AND CURTAIN FIXTURE. CYRUS MOORE, Cambridge, Ohio. Filed Nov. 13, 1913. Serial No. 800,841. (Cl. 156—28.)

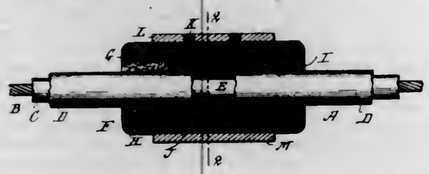
1. In combination with an adjustable shade and curtain holder transversely telescoping sections each of said sections having their outer ends bent at right-angles and abutting the sides of the window frame, a second bent portion continuing from the first portion and parallel thereto, said second bent portion serving to hold the said

telescoping sections in spaced relation from the face of the window frame and securing means adapted to fasten said sections to the sides of the window frame through the first mentioned bent portion.



2. A curtain holder comprising telescopic sections adapted to extend transversely across the window frame, said sections having their outer extremities bent rearwardly for engagement with the opposite edges of said frame the terminals of said bent portions being rebent upon themselves and engaging the inner face of the first bent portion, said second bent portion being rebent at right-angles to form a third bent portion to engage the face of said window frame and to space said telescopic sections therefrom, means for fastening said first and second bent portion to the side of the window frame and slidably adjustable supports adapted for movement on said telescoping sections.

1,103,983. PROTECTIVE DEVICE FOR SHEATHED CONDUCTORS. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 15, 1912. Serial No. 690,973. (Cl. 173—365.)



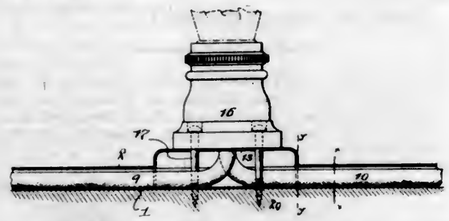
1. In combination, a line conductor covered with an insulation, a metal sheath covering said insulation, a portion of said metal sheath being removed, and a sleeve of insulating material inclosing said insulation where the sheath has been removed and extending inward to said insulation.

2. In combination with a metal sheathed continuous line conductor whereof a certain length is denuded of its sheath, a sleeve of refractory insulating material inclosing said denuded portion and said conductor for a distance on each side thereof, a filling of insulating material between said denuded portion of said conductor and said sleeve, the said sleeve having an opening in its wall for introducing said filling in a fluid state, and means for closing said opening.

3. In combination with a metal sheathed continuous line conductor whereof a certain length is denuded of its sheath, a sleeve of insulating material inclosing said denuded portion and said conductor for a distance on each side thereof, the said sleeve being divided longitudinally into sections, a clamping band for securing said sections together, and a filling of insulating material between said denuded portion of said conductor and said sleeve: the said sleeve and said band having registering openings for introducing said filling in a fluid state, and means for closing said openings.

1,103,984. PROTECTIVE CASING FOR LINE CONDUCTORS. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 8, 1912. Serial No. 730,131. (Cl. 247—5.)

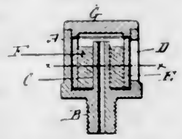
1. A casing for line conductors, comprising a support, a trough-shaped sheet metal base section on said support, an inverted box-shaped sheet metal cover for said section having a top wall and side walls, the said cover having in the edges of its opposite transverse side walls recesses fitting upon said base section and in its top wall an opening, a plate covering said opening, and means extending through said plate for securing said cover and said plate to said support.



2. A casing for line conductors, comprising a support, a trough-shaped sheet metal base section on said support, an inverted box-shaped sheet metal cover for said section, the said cover having a top wall and side walls and having in the edges of its opposite transverse side walls recesses extending transversely across and fitting upon said base section and having the edges of its longitudinal side walls and the unrecessed portions of the edges of its transverse side walls in contact with said support and in said top wall an opening, a plate covering said opening, and means extending through said plate for securing said cover and said plate to said support.

3. A casing for line conductors, comprising a support, a trough-shaped sheet metal base section on said support, an inverted box-shaped sheet metal cover for said section, the said cover having a top wall and side walls and an opening in its top wall and oppositely disposed recesses in the edges of its side walls, the said recesses extending transversely across and fitting upon said base section, a socket covering said opening, and means extending through said opening for clamping together said socket, said cover and said base section and securing the same to said support.

1,103,985. DEVICE FOR INDICATING CONDITION OF GAS IN REFRIGERATING APPARATUS. THOMAS E. MURRAY and AUGUST W. H. GRIEPE, New York, N. Y.; said Griepe assignor to said Murray. Filed Nov. 8, 1912. Serial No. 730,138. (Cl. 73—51.)

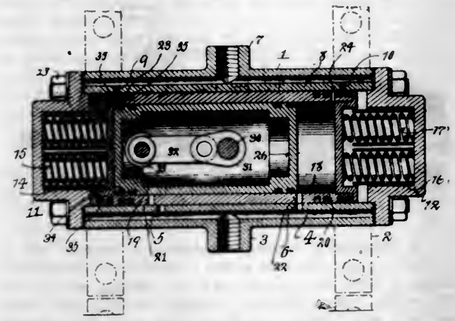


A cylindrical receptacle constructed to trap moisture, having a sight-opening in its wall, a cylindrical lining of transparent material forming a closure for said opening, means for conveying a gas charged with moisture into said receptacle, and a body of material adapted to change color when subjected to the action of moisture disposed in said receptacle.

1,103,986. COMPRESSOR-PUMP. THOMAS E. MURRAY and AUGUST W. H. GRIEPE, New York, N. Y.; said Griepe assignor to said Murray. Filed Nov. 8, 1912. Serial No. 730,139. (Cl. 230—27.)

1. A compressor pump, comprising a cylinder, a sleeve valve therein having inlet and outlet ports coöperating with inlet and outlet ports in said cylinder, a piston in said valve, means for reciprocating said piston, and means for opposing a predetermined resilient resistance to the movement of said sleeve valve by the fluid compressed therein by said piston.

2. A compressor pump, comprising a cylinder, a piston therein, a sleeve valve inclosing said piston, having inlet and outlet ports coöperating with inlet and outlet ports in said cylinder, means for reciprocating said piston, and means in said cylinder and interposed between the same and the ends of said sleeve valve for opposing a predetermined resilient resistance to the movement of said sleeve valve by the fluid compressed therein by said piston.



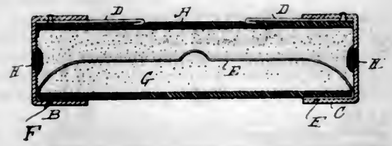
3. A compressor pump, comprising a cylinder, a piston therein, a sleeve valve inclosing said piston, having closed ends and, in its wall, outlet and inlet ports coöperating with outlet and inlet ports in the wall of said cylinder, means for reciprocating said piston, and a plurality of springs interposed between each end of said sleeve valve and said cylinder.

4. A compressor pump, comprising a cylinder, a sleeve valve therein, having a longitudinal slot and outlet and inlet ports coöperating with outlet and inlet ports in the wall of said cylinder, a hollow piston closed at both ends disposed within said valve and having a slot registering with said valve slot, mechanism within said piston for reciprocating the same, and a driving shaft for said mechanism entering said piston through said slots.

5. A compressor pump, comprising a cylinder, a sleeve valve therein, having a longitudinal slot and outlet and inlet ports coöperating with outlet and inlet ports in the wall of said cylinder, a hollow piston closed at both ends disposed within said valve and having a slot registering with said valve slot, mechanism within said pistom for reciprocating the same, a stuffing-box seated in a wall of said cylinder and entering said piston through said slots, and a driving shaft for said reciprocating mechanism received in said stuffing-box.

[Claim 6 not printed in the Gazette.]

1,103,987. ELECTRIC FUSE. THOMAS E. MURRAY, New York, N. Y. Filed Mar. 10, 1913. Serial No. 753,358. (Cl. 175—273.)

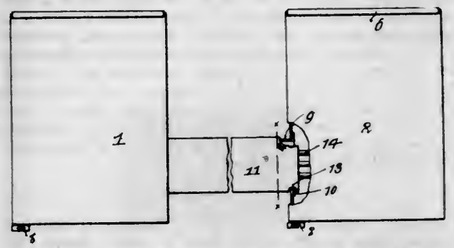


1. An electric fuse, comprising a tubular case, a fuse strip secured at its ends to said case, end caps on said case, one of said caps being provided with an opening smaller in area than said case, a filling of comminuted refractory material inclosing said strip, and a plug of fibrous refractory material compressed in said opening and locked therein by expansion within said case.

2. An electric fuse, comprising a tubular case having external undercut recesses, end caps on said case, leaf springs secured on the inner sides of said caps and provided with hooked extremities engaging in said recesses, and a fuse strip in said case and connected to said caps.

1,103,988. TUBULAR CONNECTION-DUCT. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 16, 1913. Serial No. 761,423. (Cl. 247—4.)

1. A box having a supporting wall, the said wall having a recess in its edge, a tubular duct, comprising a body portion having an end flange and seated in said recess, and a cover having longitudinal flanges receiving said body portion: the said cover having notches receiving the upper edges of said body flange and the edges of said wall bounding said recess.

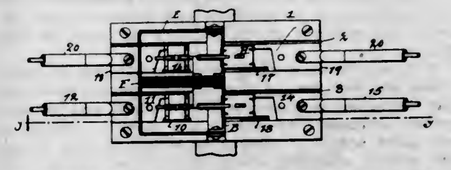


2. A box having a supporting wall, the said wall having a recess in its edge, a tubular duct, comprising a body portion having an end flange and seated in said recess, a cover having longitudinal flanges receiving said body portion and notches receiving the upper edges of said body flange and the edges of said wall bounding said recess, and means for locking said cover in place.

3. A box, having a recess in the edge of one of its walls, a cover for said box, means for locking said cover in place, a tubular duct, comprising a body portion having an end flange and seated in said recess, and a cover for said duct having longitudinal flanges receiving said body portion: the said duct cover having notches receiving the upper edges of said body flange and the edges of the box wall bounding said recess.

4. A box, having a recess in the edge of one of its walls, a cover for said box having a downwardly turned flange extending over a portion of said recess, means for locking said cover in place, a tubular duct, comprising a body portion having an end flange and seated in said recess below said cover flange, and a cover for said duct having longitudinal flanges receiving said body portion: the said duct cover having notches receiving the upper edges of said body flange and the edges of the box wall bounding said recess.

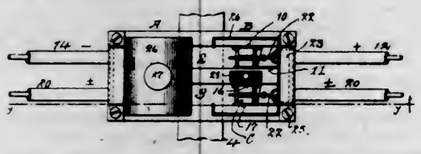
1,103,989. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed June 9, 1913. Serial No. 772,528. (Cl. 175—292.)



1. A base, a group of two pairs of contacts on said base, the pairs of said group being interposed respectively in the positive and neutral conductors of a three-wire system, a second group of two pairs of contacts on said base, the pairs of said second group being interposed respectively in the negative and neutral conductors of said system, a switch lever pivoted to said base between said groups and having two parallel arms on each side of its pivot, and fuse plugs carried on said arms and adapted to enter and close circuit between the members of said pairs of contacts, the arms on one side of said lever being set at an angle to the arms on the other side; whereby when said lever is swung in one direction, the fuses on two of said arms shall enter between and close circuit in the pairs of contacts interposed in said positive and neutral conductors, and when said lever is swung in the opposite direction, the fuses on the other two of said arms shall enter between and close circuit in the pairs of contacts interposed in said negative and neutral conductors.

2. A base, three mutually insulated bus-bars extending across said base, two pairs of contacts on said base, each pair having one member connected to one of said bus-bars, circuit terminals connected to the opposite members of said pairs, a pair of contacts on said base, each having one member connected to one of the other bus-bars, two circuit terminals connected to the opposite members of said pairs, the said four pairs of contacts being arranged in two groups of two pairs each, each group including one of the two pairs of contacts connected to the same bus-bar, a shaft journaled on said base and extending across the same between said groups, two pairs of arms on said shaft, one pair of arms being placed at an angle to the other pair, and fuse plugs carried by said arms and coöperating with said pairs of contacts.

1,103,990. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed June 9, 1913. Serial No. 772,529. (Cl. 175—292.)



1. A base, having a plurality of channels, a plurality of mutually insulated bus-bars extending transversely across said base, connections extending from said bars through said base and into said channels and each connection communicating with one member of a pair of contacts therein, plates in said channels forming the opposite members of said pairs, circuit leads connected to said plates, and means for closing circuit between the members of each pair.

2. A base, a group of two pairs of contacts on said base, the pairs of said group being interposed respectively in the positive and neutral conductors of a three-wire system, a second group of two pairs of contacts on said base, the pairs of said second group being interposed respectively in the negative and neutral conductors of said system, a bell-crank switch lever pivoted to said base, fuse plugs on said lever and adapted to enter between the members of the pairs of one of said groups, a second bell-crank switch lever pivoted to said base, and fuse plugs carried on said lever and adapted to enter between the members of the pairs of the other of said groups.

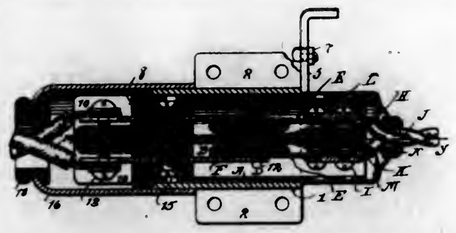
3. A base, three mutually insulated bus-bars extending across said base, two pairs of contacts on said base, each pair having one member connected to one of said bus-bars, circuit terminals connected to the opposite members of said pairs, a pair of contacts on said base, each having one member connected to one of the other bus-bars, circuit terminals connected to the opposite members of said pairs, the said four pairs of contacts being arranged in two groups of two pairs each, each group including one of the two pairs of contacts connected to the same bus-bar, two bell-crank switch levers pivoted to said base, and fuse plugs on said lever; the fuse plugs on one of said levers coöperating with one of said groups of contacts, and the fuse plugs on the other of said levers coöperating with the other of said groups of contacts.

4. A base, a pair of contacts thereon, a fuse plug entering and closing circuit between said contacts, and a bell-crank lever pivoted to said base; one arm of said lever carrying said fuse plug, and the other arm being a hollow shield covering said plug.

5. A base, a pair of contacts thereon, a fuse plug entering and closing circuit between said contacts, a shaft journaled on said base, an arm on said shaft supporting said fuse plug, and a hollow shield on said shaft extending over said plug.

[Claim 6 not printed in the Gazette.]

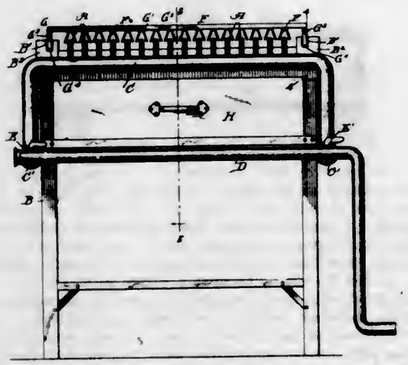
1,103,991. CONNECTING DEVICE. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 16, 1913. Serial No. 795,406. (Cl. 173—332.)



1. A connecting device, comprising a socket, and a removable plug; the said socket comprising a cylindrical casing, a block of insulating material closing one end of said casing, contact plates extending through said block and into said casing, and means for connecting circuit terminals to said plates, and said plug comprising a tubular shell fitting in said socket casing, a longitudinal partition in and extending diametrically across said shell, projections on opposite sides of said partition having undercut transverse opposite ends, contact plates covering the faces of said projections and bent at their edges to engage said undercut ends, and means for connecting circuit terminals to said plates; the contact plates in said plug coöperating with the contact plates in said socket.

2. A connecting device, comprising a socket, and a removable plug: the said socket comprising a cylindrical casing, a block of insulating material closing one end of said casing, contact plates extending through said block and into said casing, and means for connecting circuit terminals to said plates, and said plug comprising a tubular shell fitting in said socket casing, a longitudinal partition in and extending diametrically across said shell, projections on opposite sides of said partition having undercut transverse opposite ends, springs seated in recesses in the faces of said projections, contact plates covering said faces and compressing said springs and bent at their edges to engage said undercut ends, and means for connecting circuit terminals to said plates; the contact plates in said plug coöperating with the contact plates in said socket.

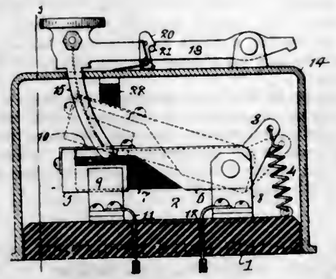
1,103,992. GAS-BROILER. GEORGE WESLEY MURRAY, Atlantic City, N. J. Filed May 21, 1913. Serial No. 768,995. (Cl. 126—41.)



1. A gas broiler comprising a frame, a series of horizontal parallel gas pipes spaced apart and provided with perforations on their upper sides, a griddle arranged above the gas pipes and formed of a series of inverted V-shaped hoods, each arranged over and parallel to a gas pipe, the sides of the hoods extending below the perforated top of the pipes, as described.

2. A gas broiler comprising a main frame having grooved side bars, and a series of horizontal parallel gas pipes having perforations on their upper side, a griddle formed of a series of inverted V-shaped hoods each arranged over and parallel to one of said gas pipes and extending down below the top of the perforated portion of the same, a frame in which the said hoods are rigidly secured, the sides thereof projecting downward and adapted to slide in the guideways formed by the grooves of the main frame, as described.

1,103,993. PROTECTIVE DEVICE FOR ELECTRIC CIRCUITS. THOMAS E. MURRAY and ARTHUR V. A. McHARG, New York, N. Y.; said McHarg assignor to said Murray. Filed Dec. 26, 1913. Serial No. 808,775. (Cl. 175—275.)



1. A movable switch member adapted to be heated by an overload current in the circuit including said member, means destructible by said heated member for retaining said member in circuit closing position, and means for supporting said retaining means and moving the same into and out of coöperation with said switch member.

2. A movable switch member adapted to be heated by an overload current in the circuit including said member, means destructible by said heated member for retaining said member in circuit closing position, an inclosing case for said parts, and means entering said case through an opening in a wall thereof for supporting said retaining means and moving the same into and out of coöperation with said switch member.

3. A movable switch member adapted to be heated by an overload current in the circuit including said member, a movable support having a recess, and a filament destructible by said heated member bearing thereon and bridging said recess.

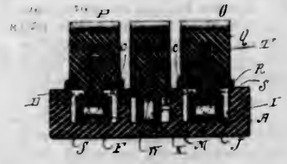
4. A movable switch member adapted to be heated by an overload current in the circuit including said member, a movable support having a recess, a rotatable reel on said support, and a filament destructible by said heated member bearing thereon, wound on said reel and bridging said recess.

5. A pivoted switch member adapted to be heated by an overload current in the circuit including said member, resilient means for retracting said member, a pivoted lever disposed above said switch member, parallel arms depending from said lever and receiving said switch member between them, a body of material destructible by said heated member extending between said arms and across said member, and means for preventing the retraction of said switch member by said resilient means when said destructible body is in contact with said member and when said member is in circuit closing position.

[Claims 6 to 10 not printed in the Gazette.]

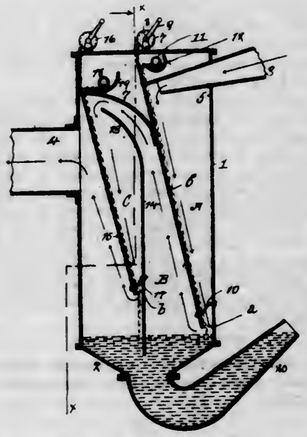
1,103,994. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 26, 1913. Serial No. 808,776. (Cl. 175—277.)

1. An electric cut-out, comprising a base having sockets and circuit terminals of the positive and negative leads of a three-wire system therein, fuse plugs entering said sockets and coöperating with said terminals to close circuit in each lead, neutral terminals disposed in a channel in said base, a plug entering said channel, a bridge bar on said plug coöperating with sad terminals to close circuit in said neutral lead, and means on said positive and negative fuse plugs for engaging said neutral plug after the same has been seated in said base and preventing the removal of said neutral plug until said positive and negative plugs shall first have been removed.



2. An electric cut-out, comprising a base having sockets and circuit terminals of the positive and negative leads of a three-wire system therein, fuse plugs entering said sockets and coöperating with said terminals to close circuit in each lead, neutral terminals disposed in a channel in said base, a plug entering said channel, a bridge bar on said plug coöperating with said terminals to close circuit in said neutral lead, lateral projections on said plug adapted to enter recesses in the upper surface of said base, and lateral projections on said positive and negative fuse plugs extending over said neutral plug projections when said plugs are seated in said base.

1,103,995. APPARATUS FOR TRAPPING PARTICLES IN SUSPENSION IN GAS-CURRENTS. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 13, 1914. Serial No. 811,822. (Cl. 110—183.)



1. An apparatus for trapping particles in suspension in a gas current, comprising a water receptacle, means for delivering said current a plurality of times successively upon the water surface, and means for independently varying the velocities of the successive current deliveries.

2. An apparatus for trapping particles in suspension in a gas current, comprising a water receptacle, means for projecting said particles downwardly upon the surface of said water to remove a portion of said particles, means for varying the velocity of said projected particles, means for projecting the remaining particles upon said water surface, and means for varying the velocity of said remaining particles.

3. An apparatus for trapping particles in suspension in a gas current, comprising a water receptacle, means for projecting said particles downwardly upon the surface

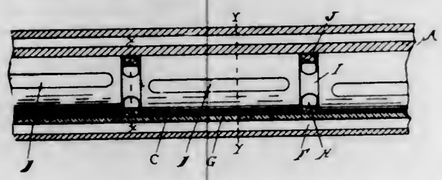
of said water to remove a portion of said particles, means for varying the distance of projection of said particles, means for projecting the remaining particles upon said water surface, and means for varying the distance of projection of said remaining particles.

4. An apparatus for trapping particles in suspension in a gas current, comprising a shell, two substantially vertical ducts therein, each having a discharge outlet at its lower end, a water receptacle in said shell below said outlets and receiving the particles projected therefrom, and a conduit for conveying the gas current escaping from the outlet of the first duct to the inlet of the second duct.

5. An apparatus for trapping particles in suspension in a gas current, comprising a shell, two substantially vertical ducts therein, each having a discharge outlet at its lower end, and a wall movable to vary the cross sectional area of said outlet, a water receptacle in said shell below said outlets and receiving the particles projected therefrom, and a conduit for conveying the gas current escaping from the outlet of the first duct to the inlet of the second duct.

[Claims 6 to 8 not printed in the Gazette.]

1,103,996. ROTARY VALVE. EMIL A. NELSON, Detroit, Mich., assignor to Rotary Valve Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 13, 1910. Serial No. 586,850. (Cl. 136—7.)

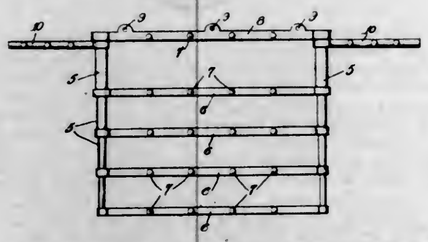


1. The combination with a cylindrical valve case, of a rotary valve therein having a plurality of ported sections, grooves intermediate adjacent sections reducing the area of the cross section to increase the flexibility thereof, and a packing ring engaging said groove.

2. The combination with a cylindrical valve case, of a rotary valve therein having alined ports in different longitudinal portions thereof registering with coöperating ports in the case, a groove between adjacent ports in said valve reducing the area of cross section to increase the flexibility thereof, and a packing ring engaging said groove.

3. The combination with the valve case of an explosion engine, of a rotary valve therein having ports in different longitudinal portions thereof, a packing ring positioned intermediate adjacent ports, and a groove in said valve for increasing the flexibility thereof intermediate the adjacent ports and forming a recess for receiving said packing ring.

1,103,997. CLOTHES-RACK. SAMUEL M. NELSON, Hovland, Minn. Filed Apr. 11, 1913. Serial No. 760,439. (Cl. 45—13.)



A rack comprising a frame having side bars, suspending means for said frame to support the same in a vertical plane, and secondary frames having side bars telescoping into each other and into the side bars of said first frame, said secondary frames being adapted to drop into extended position upon suspension of said first frame, and clothes supporting pins carried by each frame.

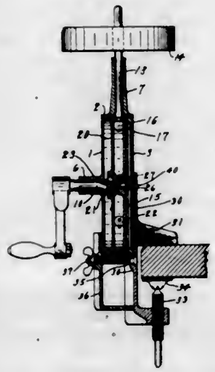
1,103,998. HAME. EDWIN F. OLIVE, Iron City, Tenn. Filed Dec. 4, 1913. Serial No. 804,688. (Cl. 54—30.)



1. A device of the type described including a hame-member having an outstanding arm, itself having a branch, said arm having suspended therefrom a loop adapted to receive a shaft or thill, said branch being adapted to provide for the attachment thereto of a trace or tug.

2. A device of the type described including a hame-member having an outstanding arm and a shaft receiving loop suspending therefrom, said arm having a trace receiving branch off-set therefrom, the outer terminals of said arm and branch being opposed to each other and extending in the same general direction.

1,103,999. FRICTION DRIVE MECHANISM. THOMAS A. PANYARD, Milwaukee, Wis., assignor to Luther Grinder Manufacturing Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 25, 1912. Serial No. 722,208. (Cl. 74—26.)



1. The combination of a driving shaft, a set of friction disks, one loose on the shaft and the other secured to rotate with the shaft and free to move axially thereon, a driven shaft extending between the disks and a wheel thereon in bearing contact with their inner faces, and means adapted to coöperate with the driving shaft, to draw the disks into forcible contact with said wheel.

2. The combination with a driving shaft, a set of friction disks, one loose, and the other secured to rotate with the shaft, a radially disposed driven shaft extending outwardly from between said disks, a globular friction wheel on said radially disposed shaft, and means connected with the driving shaft for pressing the disks together.

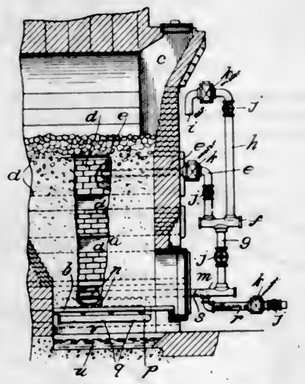
3. The combination with a driving shaft, a set of friction disks, one loose, and the other secured to rotate with the shaft, a radially disposed driven shaft extending outwardly from between said disks, a friction wheel on said radially disposed shaft, and means connected with the driving shaft for pressing the disks together, the disk secured to rotate with the shaft being grooved to receive the friction wheel on the driven shaft.

4. The combination with a driving shaft, a set of friction disks, one loose, and the other secured to rotate with the shaft, a radially disposed driven shaft extending outwardly from between said disks, a friction wheel on said radially disposed shaft, and means connected with the driving shaft for pressing the disks together, the disk secured to rotate with the shaft being grooved to receive the friction wheel on the driven shaft, and said friction wheel being provided with a spherically rounded periphery.

5. The combination with a driving shaft, a set of friction disks, one loose, and the other secured to rotate with the shaft, a radially disposed driven shaft extending outwardly from between said disks, a friction wheel on said radially disposed shaft, and means connected with the driving shaft for pressing the disks together, together with a set of rollers interposed between said disks.

[Claims 6 to 10 not printed in the Gazette.]

1,104,000. PROCESS OF REGULATING COMBUSTION. GEORGE W. PARKER, New York, N. Y., assignor to The Parker-Russell Mining & Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Mar. 10, 1909, Serial No. 482,551. Divided and this application filed Dec. 9, 1909. Serial No. 532,168. (Cl. 48—203.)

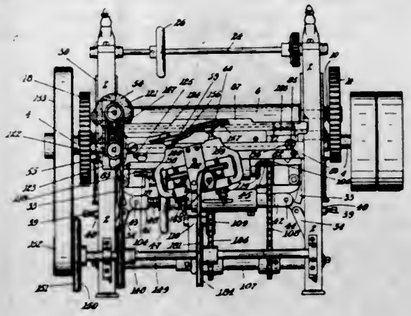


1. A process for regulating the combustion of fuel consisting in collecting products of combustion arising from a deep bed of fuel; dividing said products into a plurality of streams; mixing air and steam with one of said streams; leading the mixture thus formed in a winding path through the other of said streams and thereby heating the mixture; and discharging the heated mixture into said deep bed of fuel.

2. A process for regulating the combustion of fuel consisting in collecting products of combustion arising from a deep bed of fuel; dividing said products into a plurality of streams; mixing air and steam with one of said streams; controlling the proportions in which the constituents of said mixture enter therein; leading the mixture thus formed in a winding path through the other of said streams and thereby heating the mixture; and discharging the heated mixture into said deep bed of fuel.

3. A process for regulating the combustion of fuel consisting in collecting products of combustion arising from a deep bed of fuel; dividing said products into a plurality of streams; mixing air with one of said streams; transferring to the mixture thus formed heat from the other of said streams by passing one of said streams over the other and thereby heating the mixture; introducing steam into said mixture; and discharging the latter into said deep bed of fuel.

1,104,001. SPLITTING OR SKIVING MACHINE. CHARLES PEASE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 2, 1908 Serial No. 436,215. (Cl. 69—10.)



1. In a machine of the class described provided with a chain-knife comprising a series of blades each having a transverse cutting edge and rounded cutting corners, and means for actuating said knife, means acting upon said knife while in motion for dressing said straight edges, and separate means acting similarly for dressing said rounded corners.

2. In a machine of the class described; provided with a chain-knife comprising a plurality of blades, each provided with a transverse cutting edge and rounded cutting corners, means operating during the movement of the knife to dress said rounded corners.

3. Dressing mechanism for apparatus of the class described, said apparatus having an articulated knife comprising a plurality of separately formed cutting members with transverse cutting edges having rounded cutting corners, and said dressing mechanism comprising a disk held in position to engage and adapted to dress said rounded corners respectively, substantially as described.

4. The combination with an endless chain-knife and its table, said knife comprising a plurality of link members each including a knife and its mount; of a plurality of abutment tracks traversed by said link members respectively and each adjustable to vary the line of travel of a plurality of said links at the same time; abutment screws and clamping screws to hold said abutments in adjusted position; and means to permit adjustment of said knives independently upon their mounts without varying the position of said abutment.

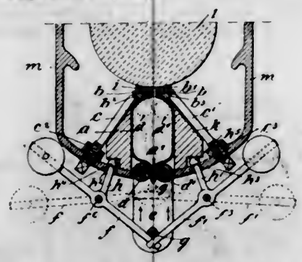
5. In a machine for treating material of the class described; a chain knife; a plurality of actuating sprocket wheels therefor; said knife and wheels lying respectively in the plane of feed of said material; said sprocket wheels being mounted on shafts provided with gears; and a countershaft geared to said wheel shaft gears to actuate the same; and means to take up the slack in said chain, said means permitting said gears to remain in mesh.

[Claims 6 to 8 not printed in the Gazette.]

1,104,002. LUBRICATING DEVICE FOR AXLE-BEARINGS. HEINRICH POETTER, Dusseldorf, Germany. Filed Nov. 28, 1913. Serial No. 803,374. (Cl. 64—35.)

1. In a lubricating device for axle bearings, a collapsible receptacle adapted to contain lubricant, furnished with an outlet orifice for said lubricant and adapted to be inserted in an axle box, screw devices mounted in said axle box, adapted to maintain said lubricant outlet orifice in contact with an axle journaled in said axle box, and to exert pressure on the upper portion of said collapsible receptacle, rollers mounted in upwardly movable supports and adapted to bear against the lower portion of said collapsible receptacle, and means for applying upwardly directed pressure to said upwardly movable supports and thereby actuating said rollers therein mounted

to exert upwardly directed pressure on the lower portion of said collapsible receptacle.



2. In a lubricating device for axle bearings, a collapsible receptacle adapted to contain lubricant, said receptacle being provided with an upward extension having a lubricant delivery orifice formed therein, the upper portion of said extension being composed of leather and adapted to bear against the axle journaled in said axle box; the lower portion of said extension being provided with recesses or notches, screw devices adjustably mounted in said axle box and having their upper ends in engagement with said recesses or notches, a casing inclosing said collapsible receptacle, and adapted to be inserted together therewith into said axle box; vertically movable supports, rollers carried thereon and adapted to bear against the lower portion of said receptacle, loaded lever devices adapted to exert upward pressure upon said vertically movable supports and said rollers carried thereon, and means for loading said lever devices.

3. In a lubricating device for axle bearings, a collapsible receptacle adapted to contain lubricant, said receptacle being provided with an upward extension having a lubricant delivery orifice formed therein, the upper portion of said extension being composed of leather and adapted to bear against the axle journaled in said axle box, the lower portion of said extension being provided with recesses or notches, screw devices adjustably mounted in said axle box and having their upper ends in engagement with said recesses or notches, a casing inclosing said collapsible receptacle and adapted to be inserted together therewith into said axle box, vertically movable supports, rollers carried thereon and adapted to bear against the lower portion of said receptacle, loaded lever devices adapted to exert upward pressure upon said vertically movable supports and said rollers carried thereon and weights carried by said lever devices for loading the same.

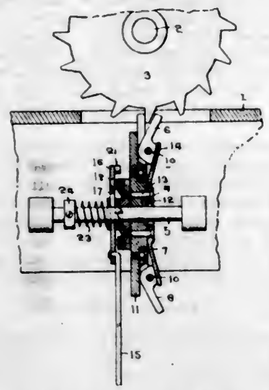
1,104,003. TYPE-WRITER ESCAPEMENT MECHANISM. CLIFTON K. RAINEY, Birmingham, Ala. Filed Oct. 19, 1912. Serial No. 726,838. (Cl. 197—82.)

1. In combination, a shaft, a spacing wheel thereon, an annular rack secured to one side of said wheel, a longitudinally slidable member mounted on said shaft, a laterally projecting tooth carried by said member engaging said rack, and a wedge shape lug carried by said member adapted to engage between the teeth of said rack during the operation of said member.

2. In combination, a shaft, a wheel on said shaft, an annular rack projecting laterally from said wheel, a member mounted on said shaft and having longitudinal and transverse movement thereon, a tooth carried by said member engaging said rack, and means tending to move said tooth transversely against said rack.

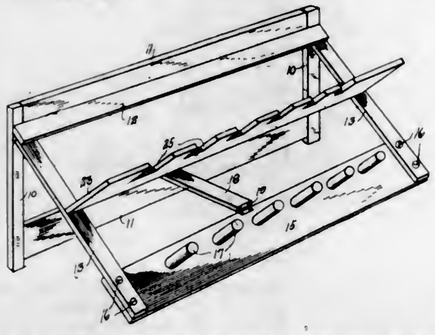
3. In combination, a shaft, a spacing wheel thereon, an annular rack projecting laterally from said wheel, a member mounted on said shaft and movable longitudinally and transversely thereon, and means on said member adapted to engage said rack to rotate said wheel.

4. In combination, a shaft, a wheel on said shaft, an annular rack projecting laterally from said wheel, a member mounted on said shaft having longitudinal and transverse movement thereon and adapted to coöperate with said rack to intermittently rotate said wheel, and means on said member adapted to lock said rack against rotation subsequently to an operation of said member.



5. In combination, a shaft, a wheel on said shaft, an annular rack projecting laterally from said wheel, a member mounted on said shaft having longitudinal and transverse movement thereon and adapted to coöperate with said rack to intermittently rotate said wheel, means tending to move said member transversely against said rack, and means on said member adapted to lock said rack against rotation subsequently to an operation of said member.

1,104,004. FOLDING PIPE-RACK. JOHN S. RATHBONE, Mystic, Conn. Filed Apr. 30, 1913. Serial No. 764,608. (Cl. 131—51.)



1. A foldable pipe rack including a relatively movable section, a plurality of spaced apart prongs carried by the lower end of one of said sections for receiving the bowls of pipes, a cross element pivotally connected to said last mentioned section, said cross element being arranged in spaced parallel relation with the lower end of said last mentioned section and provided with a plurality of cut out portions for receiving the stems of pipes supported by the adjacent prongs, substantially as described.

2. A foldable pipe rack comprising a supporting frame, standards pivotally secured to the upper outer sides of said frame, a transverse supporting element secured to the outer ends of said standards, a plurality of spaced apart alined prongs secured to said supporting element, a transverse cross piece pivotally secured to said standard, said cross piece provided with a plurality of spaced apart cut out portions, said cross piece being arranged parallel to said supporting element, an inclined element secured to the upper end of said frame, said inclined element forming a stop for said standard, and a bracing bar pivotally secured to said supporting element, the free ends of said bar bearing against the lower end of said frame.

1,104,005. DIFFERENTIAL GEARING. WILHELM ROMEISER, Waidmannslust, near Berlin, Germany. Filed May 13, 1914. Serial No. 838,245. (Cl. 74—34.)



1. In a motor-car, the combination with a two-part driving axle and a differential gearing connecting the two parts of the axle, of means constantly and yieldingly connecting the two parts of the axle and tending to cause the two parts of the driving axle to rotate synchronously.

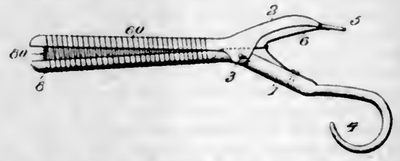
2. The combination with a two-part driving axle and a differential gearing connecting the same, of frictional means constantly connecting the two parts of the axle and tending to retard the speed of the one part when the speed of the other part is retarded.

3. The combination with a two-part driving axle and a differential gearing connecting two adjacent ends of the two parts of the axle, of a friction clutch likewise constantly connecting the said ends of the two parts of the driving axle.

4. The combination with a two-part driving axle and a differential gearing connecting two adjacent ends of the two parts of the axle, of a casing adapted to be driven by one end of the one part of the axle, a plurality of plates adapted to be driven by said casing, a plurality of plates arranged alternately with the former plates and adapted to be driven by the end of the other part of the axle, and a spring tending to press said plates one against another, substantially as shown.

5. The combination with a two-part driving axle and a differential gearing connecting two adjacent ends of the two parts of the axle, of an internally ribbed casing adapted to be driven by one of said ends, a plurality of plates surrounding the other of said ends and engaging the ribs in said casing, a plurality of plates non-rotatably mounted on the latter end and arranged alternately with the former plates, and a spring tending to press said plates one against another, substantially as shown.

1,104,006. GLOVE-FINGER-TURNING DEVICE. EMMA A. RUNNER, Ithaca, N. Y. Filed Feb. 26, 1914. Serial No. 821,157. (Cl. 223—20.)



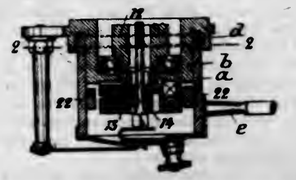
1. A glove finger turning device comprising two members pivoted together and having suitable grasping ends, in combination with an obstructing coil around said members back of the grasping end to prevent the finger or glove being grasped back of the tip of a finger.

2. In a glove turning device comprising semicylindrical grasping members having rounded hollow grasping ends, a wire interior obstruction just back of the grasping ends, said wire extending to the outside and coiled around said grasping members back of the grasping ends.

1,104,007. INTERRUPTER FOR ELECTRIC IGNITION-MACHINES. MAX SCHÄFER, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Feb. 8, 1912. Serial No. 676,473. (Cl. 123—166.)

1. In combination with an interrupter for an electric ignition machine, a casing for the interrupter comprising a stationary part, an adjustable part, and a deformable spring frictionally engaging both of said parts to hold them together in any position to which the adjustable part may be turned.

2. In combination with an interrupter for electric ignition machines, a quickly detachable casing for the interrupter comprising a stationary part, an adjustable part, and locking mechanism frictionally engaging both of said parts at any position to which the adjustable part may be positioned, said locking mechanism being disengageable by pulling the adjustable part axially.



3. In combination with an interrupter for an electric ignition machine, a casing for the interrupter comprising a stationary part provided with a peripheral offset, an adjustable part provided with a peripheral offset and carrying an actuating cam for the interrupter contacts, and a spring fitting said peripheral offsets to hold the two parts together at any position to which the adjustable part may be turned.

4. In combination with an interrupter for an electric ignition machine, a casing for the interrupter comprising a stationary part provided with a peripheral offset, an adjustable part provided with a peripheral offset and carrying an actuating cam for the interrupter contacts, and a deformable spring fitting said peripheral offsets to disengageably hold the two parts together at any position to which the adjustable part may be turned.

5. In combination with an interrupter for an electric ignition machine, a casing for the interrupter comprising a stationary part provided with a peripheral offset, an adjustable part provided with a peripheral offset and carrying an actuating cam for the interrupter contacts, a lug extending within the peripheral offsets of one of said parts, and a split spring fitting said peripheral offsets and abutting against said lug to hold the two parts together at any position to which the adjustable part may be turned.

[Claim 6 not printed in the Gazette.]

1,104,008. ILLUMINATED-LENS SIGN. WALTER M. SCARBOROUGH, Lancaster, Pa. Filed Oct. 2, 1913. Serial No. 792,955. (Cl. 240—111.)



1. A sign comprising a face plate of sheet metal containing a substantially circular orifice having a notch in the margin therof, a lens having a head and a shank of smaller diameter than the part of the head adjacent thereto, thus forming an annular shoulder surrounding the shank on the under face of the head, a lug formed on the side of the shank and spaced from the shoulder, and a cam on the inner or under face of the plate adapted to frictionally engage the lug, whereby the shank may be inserted in the orifice by registering the lug with the notch and the lens secured in frictional engagement with the face plate by turning the lens to bring the lug into frictional contact with the cam.

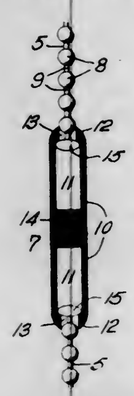
2. A sign comprising a face plate of sheet metal containing a substantially circular opening having a notch in the margin thereof, a lens having a head and a shank of smaller diameter than the part of the head adjacent thereto, thus forming an annular shoulder surrounding the shank on the under face of the head, and a lug formed

on the side of the shank and spaced from the shoulder, the face plate being upset to form a ridge on its inner or under face adapted, after the lens has been inserted in the orifice and turned on its axis, to frictionally engage the lug.

3. A sign comprising a face plate of sheet metal containing a substantially circular opening having a notch in the margin thereof, a lens having a head and a shank of smaller diameter than the part of the head adjacent thereto, thus forming an annular shoulder surrounding the shank on the under face of the head, and a lug formed on the side of the shank and spaced from the shoulder, the face plate being upset to form, on its inner or under face, a pair of radially extending ridges separated by a depression, said depression coöperating with the lug to prevent or limit the turning of the lens after the same has been secured in position.

4. A sign comprising a face plate of sheet metal containing a substantially circular opening having a notch in the margin thereof, a lens having a head and a shank of smaller diameter than the part of the head adjacent thereto, thus forming an annular shoulder surrounding the shank on the under face of the head, a lug formed on the side of the shank and spaced from said shoulder, and a cam on the inner or under face of the face plate comprising a pair of ridges separated by a depression, said cam coöperating with said lug to secure the lens in position on the face plate.

1,104,009. INSULATOR. EMILIEN SEGUIN, Montreal, Quebec, Canada, assignor of one-half to Frederick J. Parsons, Montreal, Quebec, Canada. Filed Oct. 14, 1912. Serial No. 725,767. (Cl. 173—28.)

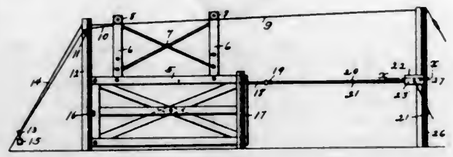


1. In a device of the type described, the combination with two similar tubular members having screw threads at one end and at the other an opening of less size than the internal bore thereof, and an insulating member adapted to connect said members, of a pair of chains having enlargements at the ends thereof, said enlargements being of sufficient size to prevent their passage through the reduced openings in said tubular members.

2. In a device of the class described, the combination with a chain of an insulator formed in two similar tubular sections each screw threaded at one end and provided with an opening of reduced size at the opposite end adapted for the passage of the chain, upset portions on adjacent ends of the chain too large for passage through said end openings, and a threaded plug connecting the two parts of the insulator.

1,104,010. FARM-GATE. OLE SEVERSON, Randall, Kans. Filed Jan. 26, 1914. Serial No. 814,474. (Cl. 39—30.)

1. The combination with a sliding gate, of means normally tending to close said gate, a latch casing, a pair of cables extending in opposite direction from said latch casing, an enlarged member to which both of said cables are attached, a connection from said enlarged member to the gate, and a pair of swingingly mounted latch elements mounted in said casing and behind which said enlarged member engages to hold the gate in its open position.



2. The combination with a sliding gate, of means normally tending to close said gate, a latch casing, a pair of cables extending in opposite directions from said latch casing, an enlarged member to which both of said cables are attached, a connection from said enlarged member to the gate, a pair of swingingly mounted latch elements mounted in said casing and behind which said enlarged member engages to hold the gate in its open position, and guide members arranged within said casing and over which said cables pass, said guide members being arranged in such manner that a pull upon one of said cables engages said enlarged member with one of said latches and a pull upon the other of said cables releases said enlarged member from said latch.

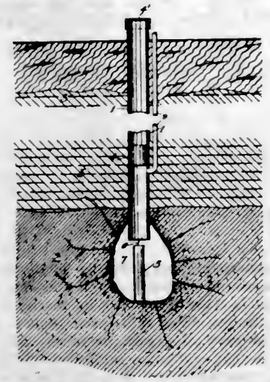
3. The combination with a sliding gate, of means normally tending to close said gate, a latch casing, a pair of cables extending in opposite direction from said latch casing, an enlarged member to which both of said cables are attached, a connection from said enlarged member to the gate, a pair of swingingly mounted latch elements mounted in said casing and behind which said enlarged member engages to hold the gate in ita open position, guide members arranged within said casing and over which said cables pass, said guide members being arranged in such manner that a pull upon one of said cables engages said enlarged member with one of said latches and a pull upon the other of said cables releases said enlarged member from said latch, and vice versa.

4. The combination with a sliding gate, of means normally tending to close said gate, a latch casing, a pair of cables extending in opposite direction from said latch casing, an enlarged member to which both of said cables are attached, a connection from said enlarged member to the gate, a pair of swingingly mounted latch elements mounted in said casing and behind which said enlarged member engages to hold the gate in its open position, guide members arranged within said casing and over which said cables pass, said guide members being arranged in such manner that a pull upon one of said cables engages said enlarged member with one of said latches and a pull upon the other of said cables releases said enlarged member from said latch, and a guide member through which the last named cable passes, said guide member being arranged to prevent the movement of said enlarged member across said casing.

5. The combination with a sliding gate, of means normally tending to close said gate, a latch casing, a pair or cables extending in opposite direction from said latch casing, an enlarged member to which both of said cables are attached, a connection from said enlarged member to the gate, a pair of swingingly mounted latch elements mounted in said casing and behind which said enlarged member engages to hold the gate in its open position, guide members arranged within said casing and over which said cables pass, said guide members being arranged in such manner that a pull upon one of said cables engages said enlarged member with one of said latches and a pull upon the other of said cables releases said enlarged member from said latch, and a vertically arranged rib disposed longitudinally within said casing and having a longitudinally extending slot formed therein which opens at the front end of said rib, said slot being of such width as to permit the passage of one of said cables but prevent the passage of said enlarged member.

[Claims 6 to 8 not printed in the Gazette.]

1,104,011. METHOD OF TREATING OLD WELLS. WALTER O. SNELLING, Pittsburgh, Pa. Filed Aug. 2, 1913. Serial No. 782,695. (Cl. 166—21.)



1. The method of treating old wells, which consists in closing the well and producing therein, in a slow and regular manner, a large volume of highly heated gas under considerable pressure, in such a manner that the gas so produced will, in passing outward from the well, tend to melt, dissolve, thermolize, decompose or otherwise remove paraffin and other bodies obstructing the pores or passages of the formation adjacent to the well.

2. The method of treating old wells, which consists in closing the well and burning therein without detonation a pyrotechnic mass or mixture to produce a considerable volume of highly heated gas under pressure, and keeping the well closed for a sufficient time to enable the gas so produced to largely pass out through the pores or passages of the surrounding formation, and exercise a volatilizing melting or removing action on paraffin or other obstructions in such pores or passages.

3. The method of treating old wells, which consists in closing the well, producing therein a considerable volume of highly heated gas under pressure, the production of such gas within the well and the temperature of the same, being so regulated that the pressure thereof is increased gradually and without violent acceleration, until the maximum is reached, and keeping the well closed for a sufficient time to enable the hot gas to penetrate the walls of the closed space and melt, dissolve or push aside bodies in its path.

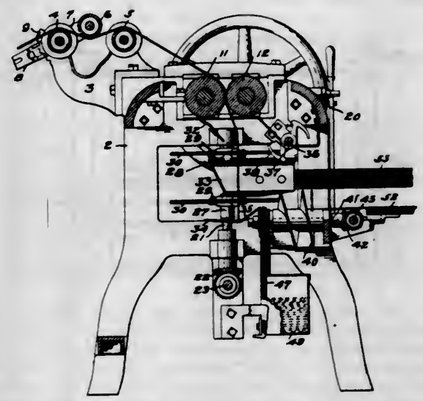
4. The method of treating oil wells, which consists in causing the production of a large body of highly heated gas under pressure, within a closed well, by chemical reaction, without detonation, within a pyrotechnic mass comprising combustible compounds and the oxygen required for their combustion, such gas exercising a melting or removing action on paraffin or other obstructions in the porous formations adjacent to the well.

5. The method of treating old wells, which consists in causing the production of a large body of highly heated gas under pressure, within the well, by the combustion of a considerable quantity of a non-detonating explosive mixture comprising nitrated organic bodies, which gas is capable of penetrating the porous formations adjoining the well and melting or removing paraffin and other obstructions therein.

[Claims 6 and 7 not printed in the Gazette.]

1,104,012. MACHINE FOR MAKING FLEXIBLE BOXES. EDWIN G. STAUDE, Minneapolis, Minn. Filed Dec. 15, 1905. Serial No. 291,878. (Cl. 93—45.)

1. In a machine of the class described, means for feeding a blank in a vertical plane in combination with folders revolving in a plane substantially at right angles to said feeding plane and adapted to engage and move the blank bodily in a horizontal plane with the plane of the blank facing toward its line of travel while standing in a vertical position and the preliminary fold is being made, substantially as described.



2. In a machine of the class described, means for feeding a blank in a substantially vertical plane, and means for moving the blank bodily in a plane substantially at right angles to its first feeding plane with the blank standing in an upright position and its plane facing toward its line of travel, a part of said means engaging the upper and lower ends of the blank to fold the same toward the central portion of the blank while moving the blank in a plane substantially at right angles to its first feeding plane, substantially as described.

3. In a machine of the class described, the combination with means for delivering blanks on end in a vertical plane, of folders comprising radiating arms arranged to operate in a plane substantially at right angles to said feeding plane and engage said blanks to move them horizontally while they stand in an upright position with the plane of the blanks facing toward their line of travel, substantially as described.

4. In a machine of the class described, folders comprising radiating arms operating in substantially horizontal planes and having hooked ends to engage and bear on the middle portion of the blank, for the purpose specified.

5. In a machine of the class described, folders adapted to revolve in a horizontal plane and to engage and move a blank in a horizontal plane, while standing vertical, during the operation of making preliminary folds in the blank, in combination with folders revolving in a vertical plane and adapted to engage and move the blank horizontally during the operation of making the final folds therein, substantially as described.

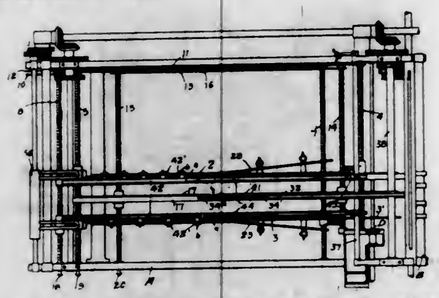
[Claims 6 to 31 not printed in the Gazette.]

1,104,013. FOLDING AND GLUING MACHINE. EDWIN GUSTAVE STAUDE, Minneapolis, Minn. Filed Mar. 21, 1911. Serial No. 615,999. (Cl. 93—52.)

1. The combination, with the side folder frames and carrier belts therefor, of presser belts carried by the folder frames and arranged above said carrier belts, the folder frame carrier belt and presser belt on one side of the machine being adjustable toward or from the corresponding parts on the other side of the machine, rolls for said presser belts, the rolls of one of said presser belts being adjustable longitudinally of their axes of rotation and in parallelism with the carrier belt.

2. The combination with the laterally adjustable side folder frames and carrier belts therefor, of presser belts and rolls therefor carried by the folder frames and transversely adjustable with said folder frames, and means for moving one of said presser belts laterally relatively to the carrier belt of the adjacent folder frame.

3. The combination, with the side folder frames and carrier belts therefor, of an intermediate carrier frame and carrier belt and an upper carrier belt coöperating with said intermediate carrier belt, one of said side frames being shorter than said intermediate frame, and a gluing device operating transversely of said frames past the end of said shorter frame.

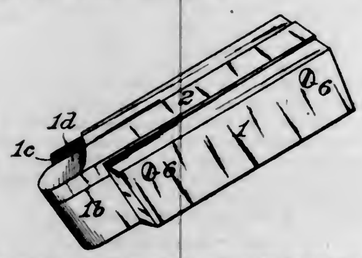


4. The combination, with the side carrier frames and carrier belts therefor and means for adjusting said frames and belts laterally to bring them into close coöperating relation with one another, one of said frames being shorter than the other frame, and a gluing device also transversely adjustable and capable of movement past the end of said shorter frame to permit the application of glue to comparatively small blanks.

5. The combination, with the side folder frames and carrier belts therefor, of an intermediate carrier frame and carrier belt and an upper carrier belt coöperating with said intermediate carrier belt, said intermediate frame having depending standards having forked lower ends, transverse screw shafts having a driving connection between them, nuts mounted on said shafts and engaging the forked lower ends of said standards, whereby the revolution of said shafts will move said intermediate frame laterally between said side frames.

[Claims 6 to 18 not printed in the Gazette.]

1,104,014. TOOL-HOLDER. WILLIAM C. STEPHENSON, Rocky Mount, N. C., assignor of one-half to John M. Daughtry, Rocky Mount, N. C. Filed Jan. 29, 1914. Serial No. 815,142. (Cl. 29—96.)

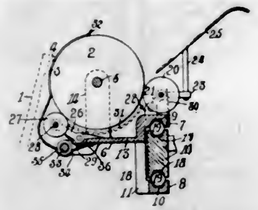


1. A tool holder having a longitudinal recess in its top face of less depth than the thickness of the tool to be held, a projection, conforming in shape to the contour of the cutting end of the tool, on the front end of the holder, the top face of said projection forming a continuation of the bottom of said recess, and means to clamp the tool in the holder.

2. A tool holder having a longitudinal recess in its top face of less depth than the tool to be held, an integral projection on the front end of said holder, the top of which forms a continuation of the bottom of said recess and the front end of said projection conforming in shape to the contour of the nose of the tool, and a back support for the tool projecting from the front end of the holder to one side of said recess, the top face of said back support sloping downwardly toward the side of the holder.

3. A tool holder having a longitudinal recess in its body adapted to receive a metal cutting tool, a bottom support for the tool extending outwardly from the body, at one end of said recess, and a back support extending upwardly from the top of the bottom support.

1,104,015. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Original application filed June 30, 1903, Serial No. 163,704. Divided and this application filed Mar. 18, 1913. Serial No. 755,109. (Cl. 197—127.)



1. In a typewriting machine, the combination with a rotatable platen and a paper apron therefor, of a paper table on which a work-sheet may be placed to be fed to said apron, arms on which said paper table is mounted, a pressure roll on said arms, and pivots on which said arms are mounted so that said paper table and said pressure roll may be swung together away from the platen.

2. In a front-strike typewriting machine, the combination with a rotatable platen, of a paper table, a rear pressure roll over which a work sheet is passed from said paper table, means normally holding said pressure roll against the platen, a paper apron arranged to receive a work sheet from said pressure roll, arms carrying said rear pressure roll on which it may be swung clear of the platen, and a gage extending substantially the entire length of the platen in front of the paper apron against which a work sheet may be centered while said rear pressure roll is free from the platen that said rear pressure roll may grip the paper to the platen.

3. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage upon which said platen is mounted, of a rod beneath said platen toward its front surface on said carriage, paper-guiding fingers slidable upon said rod, and integral extensions of said fingers bearing against said carriage beneath said platen to cause said fingers to hug said platen.

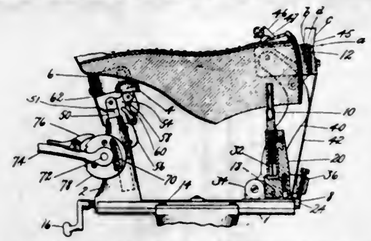
4. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage in which said platen is mounted, of a front pressure roll, a rod beneath said front pressure roll, paper fingers slidable on said rod lying outside said pressure roll and hugging said platen above said pressure roll, and rearward extensions of said fingers bearing against said carriage beneath the platen to cause said fingers to hug said platen.

5. In a front-strike typewriting machine, the combination with a rotatable platen and a carriage in which said platen is mounted, of a front pressure roll below the printing line bearing against said platen, supports for said pressure roll below it, paper fingers extending above the printing line, supports and springs for said paper fingers below said pressure roll, and rearward extensions of said fingers bearing against said carriage beneath the platen, to cause said fingers to hug said platen.

[Claims 6 to 23 not printed in the Gazette.]

1,104,016. JACK FOR SHOE-MACHINES. EDWARD A. STIGGINS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 13, 1902, Serial No. 127,116. Divided and this application filed Nov. 16, 1904, Serial No. 232,953. Renewed Feb. 20, 1914. Serial No. 820,047. (Cl. 12—127.)

1. In a lasting machine, a jack having means movably mounted and adapted when not in use to occupy a position in the rear of and below the last bottom and to be positioned over the shoe for holding a shoe against rearward and vertical movement, a toe-band, and means for moving the toe-band to cause it to wipe the upper of the shoe along the toe portion and around the toe end of the last.



2. In a lasting machine, a jack comprising a toe-band, supports for said toe-band including yielding elements normally holding said band open for the insertion of the last, and means for moving the band toward the last, said yielding elements operating, when the band is brought into engagement with the last, to close said band around the toe portion of the last.

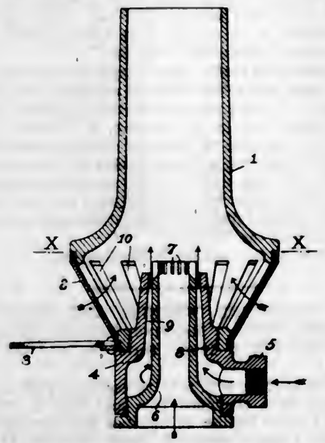
3. In a lasting machine, a jack having a swinging-down-hold, and means for actuating it into position for holding a shoe against rearward and vertical movement, combined with a toe-band having a resilient support, and means for raising the toe-band and its support to cause the band to wipe the upper yieldingly along the toe portion and over the toe end of the last.

4. In a lasting machine, a jack comprising a last pin for supporting a last, a toe-band, and a resilient support to which the ends of the toe-band are secured, said support holding the toe-band normally open for the convenient insertion of a last, in combination with means for moving the toe-band to cause it to wipe the upper of the shoe being lasted along the toe portion and around the toe end of the last, said resilient support being thereby put under tension to cause the toe-band to clamp the sides of the toe portion of the last.

5. In a machine of the class described, a jack comprising means for supporting a last, and a toe-band for embracing the toe end of the last, in combination with a single means for moving one side of the toe-band in the direction of the height of the last to adjust it independently of the other side and for holding it in adjusted position.

[Claims 6 to 47 not printed in the Gazette.]

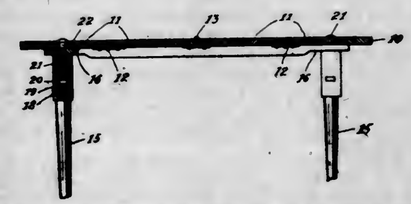
1,104,017. BURNER FOR CLAY-KILNS. EUGEN SZÖCS, Budapest, Austria-Hungary. Filed Aug. 28, 1913. Serial No. 787,198. (Cl. 158—118.)



1. In a gas-burner, the combination of two open-ended, concentrically arranged pipes, the edge of the inner pipe being slit with a plurality of slits extending through the pipe-wall in planes oblique to a radius extending to each slit, and the outer pipe arranged with its edge opposite the slits in the end of said inner pipe.

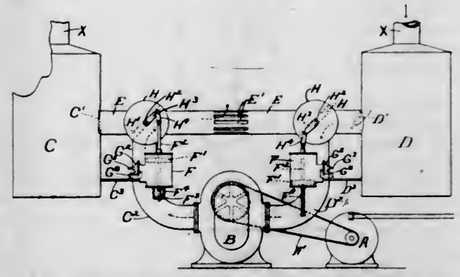
2. In a gas-burner the combination of a casing of substantially the shape of two cones arranged base to base, a nozzle extending into said casing through one apex and substantially to the widest part of the chamber within said casing, a burner passageway in the opposite apex of the chamber, air ports in the conical wall adjacent the entering nozzle and a central air duct and a peripheral gas duct in said nozzle.

1,104,018. KNOCKDOWN TABLE FOR AUTOMOBILES. GEORGE R. THISS, Minneapolis, Minn., assignor to Barnum Trunk Company, Minneapolis, Minn., a Corporation. Filed Sept. 27, 1913. Serial No. 792,091. (Cl. 45—116.)



A table comprising a plurality of leaves hinged together so as to fold one upon another into a compact bundle, crossbar supports independent of said table leaves, a plurality of legs for each support, each of said legs being provided with a longitudinal bore and a nut fixed in said bore, and bolts extending through the table top and support and into said bore and having threaded ends for receiving said nuts whereby the table top, crossbar and legs may be rigidly clamped together.

1,104,019. POWER CONTROL. EDWARD G. THOMAS, Boston, Mass., assignor to Lamson Company, Newark, N. J., a Corporation of New Jersey. Filed June 1, 1906. Serial No. 319,731. (Cl. 230—24.)



1. In an apparatus of the character described, a constantly operating blower, a pressure storage drum communicating with the pressure side of the blower, a vacuum storage drum communicating with the exhaust side of the blower, a pipe forming a communication between said drums and open to the external air at a point intermediate of its connections with the drums, and a valve mechanism controlling the communications of the pressure drum with the blower and pipe actuated by fluctuations of pressure in the pressure drum to direct the pressure from the blower to either the pressure drum or the pipe.

2. In an apparatus of the character described, a constantly operating blower, a pressure storage drum communicating with the pressure side of the blower, a vacuum storage drum communicating with the exhaust side of the blower, a pipe forming a communication between said

drums and open to the external air at a point intermediate of its connections with the drums, and a valve mechanism controlling the communications of the vacuum drum with the blower and pipe actuated by fluctuations of the vacuum in the vacuum drum to direct the exhaust to the blower from either the vacuum drum or from the pipe.

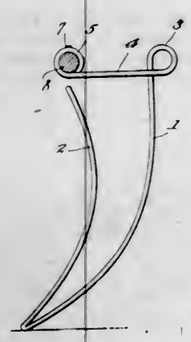
3. In an apparatus of the character described, a constantly operating blower, a pressure storage drum communicating with the pressure side of the blower, a vacuum storage drum communicating with the exhaust side of the blower, a pipe forming a communication between said drums and open to the external air at a point intermediate of its connections with the drums, a valve mechanism controlling the communications of the pressure drum with the blower and pipe actuated by fluctuations of pressure in the pressure drum to direct the pressure from the blower to either the pressure drum or the pipe, and a second valve mechanism controlling the communications of the vacuum drum with the blower and pipe actuated by fluctuations of the vacuum in the vacuum drum to direct the exhaust to the blower from either the vacuum drum or from the pipe.

4. A fluid pressure system, comprising a pump, a plurality of reservoirs, and means for automatically connecting and disconnecting each reservoir to and from the pump in response to the pressure of the fluid in that reservoir alone.

5. A fluid pressure system, comprising a pump, a plurality of reservoirs, and automatic means for independently connecting the pump to each reservoir when the fluid pressure in said reservoir departs from its normal value and disconnecting the pump from said reservoir when said pressure attains said normal value.

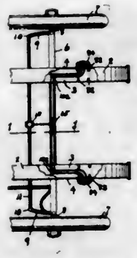
[Claims 6 to 10 not printed in the Gazette.]

1,104,020. TOOTH FOR HAY-RAKES. HJALMAR TORGERSEN, Ashby, Minn. Filed Jan. 11, 1913. Serial No. 741,552. (Cl. 56—69.)



The combination with a supporting structure, of a tooth formed in a single length of spring wire and including an arm extending rearwardly from said structure said arm having a coil at its forward end, said coil extending loosely around the supporting element and terminating in an eye, means extending through the eye and from said supporting element for holding the coil against rotation upon said element, a single loop at the other end of the arm, a downwardly and forwardly curved projecting yielding portion extending from the loop, and a bowed finger extending upwardly from the lower end of said downwardly extending portion and terminating close to and below said supporting structure and below the coil, the downwardly curved extending portion of the tooth passing adjacent the side of the arm and all parts of the tooth from the eye to the free terminal of the finger being free to yield in any direction when subjected to pressure.

1,104,021. DIRIGIBLE LAMP. JACQUES ADOLPHE TREFZER, Detroit, and CHARLES S. OWEN, Highland Park, Mich. Filed Nov. 5, 1913. Serial No. 799,262. (Cl. 240—62.)



1. In a vehicle, a steering bar and a rotatable shaft, a lamp supported upon the shaft, a connecting wire secured to the shaft and actuated by the bar and having a normally slack portion, and means whereby a movement impressed upon the wire for the purpose of causing tension therein is caused to be transmitted to the shaft to cause a rotation thereof.

2. In a vehicle, a steering bar and a rotatable shaft, a lamp supported upon the shaft, a connecting wire secured to the shaft and actuated by the bar, a flexible casing loosely surrounding the wire, said wire and casing having normally slack portions, and means whereby a movement impressed upon the wire, for the purpose of causing tension therein, is transmitted to the shaft to cause a corresponding rotation thereof.

3. In a vehicle, a rotatable shaft, a lamp supported on the shaft, a second rotatable shaft, wires connecting the shafts and having normally slack portions, means whereby a movement impressed upon the wires by a rotation of the second shaft in either direction is transmitted to the shaft upon which the lamp is supported to cause a corresponding rotation thereof, a steering bar, and means connecting the steering bar and second shaft to cause a rotation of the second shaft corresponding to the effective steering movement of the bar.

4. In a vehicle, a rotatable shaft, a lamp supported on the shaft, a second rotatable shaft, wires connecting the shafts, flexible casings through which the wires are respectively slidable, both wires and casings having slack portions to permit movement between said shafts, means whereby a movement impressed upon the wires by a rotation of the second shaft in either direction is transmitted to the shaft upon which the lamp is supported to cause a corresponding rotation thereof, a steering bar, and means connecting the steering bar and second shaft to cause a rotation of the second shaft corresponding to the effective steering movement of the bar.

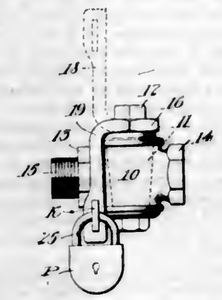
5. In a vehicle, a shaft, a lamp supported on the shaft, a bracket upon which the shaft is rotatably mounted, a second shaft, a bracket upon which it is rotatably mounted, each bracket having an opening, a shoulder in the opening, a wire passing through the openings and secured to the respective shafts, a flexible casing for the wire passing into the openings and bearing against the respective shoulders, and means whereby angular motion may be given to the second rotatable shaft corresponding to steering movements of the vehicle.

[Claims 6 to 11 not printed in the Gazette.]

1,104,022. COMBINED WRENCH AND LOCK FOR SHUT-OFF COCKS. MANNING TUTTLE, Springfield, Mass. Filed Feb. 4, 1914. Serial No. 816,596. (Cl. 137—7.)

1. The combination with a valve casing having a cutoff plug therein, of a combined lock and wrench therefor comprising a plate having an opening therethrough, parallel members integral with said plate, extending at right angles thereto and spaced apart so as to fit on opposite sides of a part leading from the valve casing, and means

for locking the outer ends of said members together, said plate and members integral therewith being reversible on the valve stem to serve as a wrench, the said parallel members forming the grip of the wrench.



2. A combined locking device and wrench of the class described, comprising a substantially U-shaped member and an apertured plate integrally joined to said member at the bend in the U and extending laterally therefrom, said plate being reversible and the limbs of said member serving as a handle when the device is used as a wrench.

3. A device of the class described, comprising a substantially U-shaped member having holes at the ends of the limbs thereof, a headed fastening bar extending between said limbs and having a shank adapted to pass through the holes at the ends of said limbs, means engaging the end of the shank of said bar and coöperating with one of said limbs to lock the bar in place, and a plate integral with said member at the bend therein and extending laterally therefrom and having a part adapted to fit a portion of a valve.

4. A combined locking device and wrench for a valve, comprising a substantially U-shaped member having holes extending through the ends of the limbs thereof, a T-headed fastening bar having a shank adapted to extend through the holes in said limbs to connect the latter, the head of said bar engaging the outer side of one limb to limit its movement in one direction, and said shank having a hole in the end thereof projecting beyond the outer side of the other limb, means fitting said hole in the shank and adapted to lock said bar in place, and a plate integrally joined to said member at the bend therein, and extending laterally therefrom, said plate having an opening extending therethrough adapted to fit a part of a valve, the integrally connected member and plate being reversible, the opening in the plate fitting the valve stem and the limbs of the U-shaped member serving as a grip for the wrench.

1,104,023. THROAT FOR BOTTLING-MACHINES. HARRY L. VAUGHAN, Chicago, Ill. Filed Jan. 15, 1910. Serial No. 538,184. (Cl. 113—2.)



1. As a new article of manufacture, a throat piece adapted to be removably secured within the head of a capping machine comprising a tubular cylindrical casing provided with an integral inwardly extending flange at the upper end thereof, an annular throat piece provided with a tapered bore fitting within the interior of said casing and abutting the inwardly extending flange thereof, said inwardly extending flange completely overlying the upper portion of the throat piece and being provided with an opening extending therethrough affording access to the top of the throat piece, and means removably secured upon the lower end of the casing and underlying the lower end of said throat piece for holding the same within the said casing.

2. A throat for bottling machines, comprising a tubular casing, an inwardly extending flange thereon, a removable lining fitting within the casing and seated against the flange and comprising a throat piece with a tapering bore through its main portion and a bore of larger diameter therebeneath, a flanged sleeve fitting on the casing and engaging the lower end of the throat piece to hold it in place, there being recesses in the lower edge of the casing with openings leading therefrom through the lower edge of the throat piece, spring pressed dogs contained within the recesses of the casing and projecting through said openings to engage a crown cap between them and the shoulder formed between the tapering bore and the bore of larger diameter of the throat piece, the flange of the sleeve serving to prevent the removal of the dogs from the recesses.

3. A throat for bottling machines, comprising a tubular casing, an inwardly extending flange thereon, a removable lining fitting within the casing and seated against the flange and comprising a throat piece with a tapering bore through its main portion and a bore of larger diameter therebeneath, a flanged sleeve fitting on the casing and engaging the lower end of the throat piece to hold it in place, there being recesses in the casing with openings leading therefrom through the throat piece, dogs contained within the recesses of the casing and projecting through said openings to engage a crown cap between them and the shoulder formed between the tapering bore and the bore of larger diameter of the throat piece, and springs mounted in the lower end of the casing each bearing at its opposite ends against two of the dogs to hold them with pressure in their inner positions and permit them to recede to allow the crown cap to pass thereby.

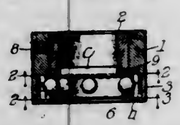
4. A throat for bottling machines, comprising a tubular casing, an inwardly extending flange thereon, a removable lining fitting within the casing and seated against the flange and comprising a throat piece with a tapering bore through its main portion and a bore of larger diameter therebeneath, a flanged sleeve fitting on the casing and engaging the lower end of the throat piece to hold it in place, there being recesses in the casing with openings leading therefrom through the throat piece, dogs contained within the recesses of the casing and projecting through said openings to engage a crown cap between them and the shoulder formed between the tapering bore and the bore of larger diameter of the throat piece, the lower edge of the casing having slits cut therein from one recess to another, and springs fitted in the slits and bearing at the opposite ends against two of the dogs to hold said dogs normally in their inner position.

5. A throat for bottling machines, comprising a tubular casing, an inwardly extending flange thereon, a removable lining fitting within the casing and seated against the flange and comprising a throat piece with a tapering bore through its main portion and a bore of larger diameter therebeneath, a flanged sleeve fitting on the casing and engaging the lower end of the throat piece to hold it in place, there being recesses in the casing with openings leading therefrom through the throat piece. dogs contained within the recesses of the casing and projecting through said openings to engage a crown cap between them and the shoulder formed between the tapering bore and the bore of larger diameter of the throat piece, there being grooves formed in the outer surface of the casing near its lower end from one recess to another, and springs contained within the grooves and secured at their middle portions to the casing and bearing at their opposite ends against two of the dogs to hold said dogs in their inner position.

1,104,024. THROAT FOR BOTTLING-MACHINES. HARRY L. VAUGHAN, Chicago, Ill. Filed Dec. 19, 1910. Serial No. 598,002. (Cl. 113—2.)

1. A throat attachment for bottling machines comprising a tubular casing, provided with an inwardly extending flange at one end thereof, a removable lining fitting

within the casing comprising a plurality of annular abutting rings fitting within said casing and seated against said flange, the uppermost ring being provided with a tapered bore, and the lowermost ring being provided with a bore of greater diameter than the bore of said tapered ring and with an opening extending therethrough, a movable detent carried by the casing, and projecting through the opening in said lowermost ring, and means carried by the casing and underlying said lowermost ring to normally hold the lining within the casing.



2. A device of the kind described, comprising a tubular throat piece provided with a plurality of openings therethrough, a ball of greater diameter than said openings positioned on the exterior of the throat at each opening and extending partially therethrough, and resilient means for maintaining said balls in operative position, comprising a spring for each pair of balls.

3. A device of the kind described, comprising a tubular throat piece provided with a plurality of openings therethrough, a ball of greater diameter than said openings positioned on the exterior of the throat at each opening and extending partially therethrough, and resilient means for maintaining said balls in operative position, comprising a plurality of springs having holes provided therein and in engagement with said balls at said holes.

4. In a device of the kind described and in combination, a tubular casing having a flange at one end and a plurality of recesses at the opposite end, a removable tapering lining fitting in said casing and seated against said flange, said lining having an opening therethrough at each of said recesses, a ball of greater diameter than the openings in said lining, positioned in each recess and extending into the bore of the lining, and means for maintaining such balls in position, comprising a spring for each pair of balls, said springs provided with holes therein of less diameter than the diameter of the balls, and arranged to contact with the balls with the same extending through said holes.

5. In a device of the kind described and in combination, a tubular casing having a flange at one end and a plurality of recesses at the opposite end, a removable tapering lining fitting in said casing and seated against said flange, comprising a pair of annular rings, one of said rings having an opening therethrough at each of said recesses, a ball of greater diameter than the openings in said lining positioned in each recess and extending into the bore of the lining, and means for maintaining such balls in position, comprising a spring for each pair of balls, said springs provided with holes therein of less diameter than the diameter of the balls, and arranged to contact with the balls with the same extending through said holes.

1,104,025. BOTTLE-OPENER. HARRY LOCKWOOD VAUGHAN, Chicago, Ill. Filed Jan. 13, 1913. Serial No. 741,708. (Cl. 65—46.)



1. In a bottle seal removing device, the combination with a body part adapted to be secured to a support and having a supporting extension, of an arm slidable along said extension and having a pointed and barbed end.

2. In a bottle seal removing device, the combination with a body part adapted to be secured to a support and having a semi-circular ledge extending therefrom, of an attachment comprising a semi-circular body part for fitting into said ledge and having an arm for engaging and extracting seals or stoppers.

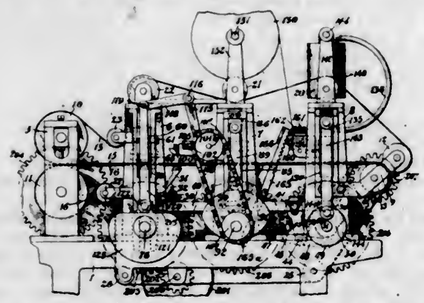
3. In a bottle seal removing device, the combination with a body part adapted to be secured to a support and having a semi-circular ledge, of a seal removing attachment comprising a semi-circular body of springy sheet metal adapted for frictional adjustable engagement with said semi-circular ledge, and an arm extending from said attachment body and having a barbed end.

4. In combination, a bottle cap removing device comprising a body part having a forwardly extending ledge with its end bent semi-circular to form an abutment for bottle caps, and a bottle seal removing attachment comprising a sheet metal semi-circular body part for frictionally fitting in said semi-circular ledge end to be adjustable lengthwise therein, and a barbed arm extending from said sheet metal body part.

5. A seal removing attachment for bottle openers comprising a semi-circular body of springy sheet metal adapted for frictional clamping engagement with the opener, and an arm extending from said body and having a barbed end.

[Claims 6 to 8 not printed in the Gazette.]

1,104,026. MACHINE FOR MAKING WINDOW-ENVELOP BLANKS. MATTHEW VIERENGEL, Brooklyn, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 1, 1911. Serial No. 658,009. (Cl. 93—61.)



1. In a machine of the character described, the combination of a continuously operating sheet or blank conveyer, a window cutting device, a paste applying device, a patch applying device and means for simultaneously operating said cutting, pasting and patch applying devices, with a plurality of sheet arresting fingers arranged in the path of sheets and adapted to arrest sheets or blanks in operative relation to said devices without interfering with the continuous motion of the conveyer and means for simultaneously operating said fingers.

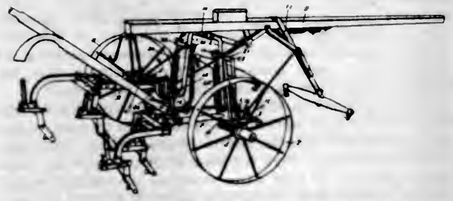
2. In a machine of the character described, the combination of the continuously operating endless conveying tapes, a window cutting device, a paste applying device, a patch applying device, means for simultaneously operating said cutting, pasting and patch applying devices, with a plurality of sheet arresting fingers arranged in the path of sheets and adapted to arrest sheets or blanks in operative relation to said devices without interfering with the continuous motion of the tapes, and means for simultaneously operating said fingers.

3. In a machine of the character described, the combination of a sheet or blank conveyer, means for applying paste to said sheets or blanks, and mechanism for applying patches to said blanks, said patch applying mechanism comprising an intermittently operated strip feeding device, a stationary knife mounted adjacent to said feeding device, a patch applying plunger having means for holding a patch and a movable knife mounted upon said plunger and coöperative with said stationary knife for severing a patch from the strip.

4. In a machine of the character described, the combination of a sheet or blank conveyer, means for applying paste to said sheets or blanks, and mechanism for applying patches to said blanks, said patch applying mechanism comprising an intermittently operated strip feeding device, a patch applying plunger having suction openings in its patch engaging face, a suction pump communicating with said suction openings, means supporting said suction pump above said plunger, a piston rod extending from the pump piston and connected with said plunger, and a strip severing device.

5. In a machine of the character described, the combination with a continuously operating sheet or blank conveyer, a window cutting device, a paste applying device, a patch applying device and means for arresting the sheets or blanks in three successive positions of dwell in operative relation to the window cutting, paste applying and patch applying devices, respectively, without interfering with the continuous motion of the conveyer.

1,104,027. CULTIVATOR. FREDERICK C. WARNE, Mansfield, Ohio, assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Oct. 1, 1912. Serial No. 723,411. (Cl. 97—35.)



1. In a balancing mechanism for cultivators, a yoke, provided with a journal, a beam connected to said yoke for horizontal and vertical movement, a bar pivotally mounted for vertical movement on said yoke, a sleeve mounted on said yoke journal carrying a sector crank which depends below and operates forward and rearward of the axis of said yoke journal, a lifting and adjustable connection between said bar and sector, and connecting means to connect the sector crank and pivot bar secured to the sector so as to have its lower end move below and to the rear of the journal.

2. In a balancing mechanism for cultivators, a yoke, a beam connected to said yoke for horizontal and vertical movement, a bar pivotally mounted for vertical movement on said yoke, a sleeve carrying a sector crank which depends below the axis of said yoke and journaled thereon, lifting and connecting means to connect the crank and pivot bar, means to connect the sector crank and pivot bar below the axis of the sleeve whereby more or less leverage is obtained.

3. In a balancing mechanism for cultivators, a yoke, a beam connected to said yoke for horizontal and vertical movement, a bar pivotally mounted for vertical movement on said yoke, a sleeve carrying a sector crank which depends below the axis of said yoke and is journaled thereon, lifting and connecting means to connect the crank and pivot bar, means to connect the sector crank and pivot bar below the axis of the sleeve whereby more or less leverage is obtained, and means to vary the lifting power of said balancing mechanism as described.

4. A balancing mechanism for cultivators comprising a yoke, a sleeve mounted on said yoke carrying a depending sector crank which is adapted to partially rotate below the horizontal axis of the yoke, a bar centrally pivoted on said yoke and combined lifting and balancing mechanism connected to said sector crank and pivoted bar, said connections with the crank being each located below the axis of the sleeve as described and set forth.

5. A balancing mechanism for cultivators comprising a yoke, a sleeve mounted on said yoke carrying a depending sector crank which is adapted to partially rotate below the horizontal axis of the yoke and on each side of the vertical axis of said yoke, a bar centrally pivoted on said yoke, and combined lifting and balancing mechanism connected to said sector crank and pivot bar, said connections with the crank being each located below said sleeve as described and set forth.

[Claim 6 not printed in the Gazette.]

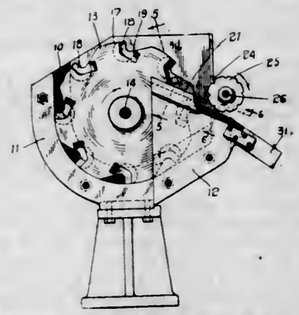
1,104,028. DEFLATING-TOOL. WILLIAM L. WATSON, McKenzie, N. D. Filed Jan. 23, 1914. Serial No. 813,886. (Cl. 152—12.)



1. A deflating tool having arms adapted to straddle a tire valve stem and slide on the flattened surfaces thereof, said arms having means to engage the threads of said stem when the tool is rotated, said tool having means between said arms to engage the valve within said stem and hold it in an open position while said arms are in engagement with said threads.

2. A deflating tool comprising a head having a lug formed thereon and spring arms in substantially parallel relation adapted to straddle the tire valve and slide on the flattened surfaces of said stem, said arms engaging the threads of said stem when the tool is rotated and capable of springing apart to adapt the tool for stems of different size, said lug entering the opening in said stem and engaging the valve therein to hold it in an open position.

1,104,029. MACHINE FOR FEEDING HEADED BLANKS. KARL WEISS, Waterbury, Conn., assignor to The Blake and Johnson Company, Waterbury, Conn., a Corporation of Connecticut. Filed Oct. 23, 1913. Serial No. 796,880. (Cl. 10—169.)

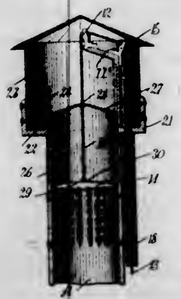


In a machine of the character described, a hopper, a feed wheel mounted to rotate vertically within the hopper and having in its periphery pockets provided with laterally inclined discharge end walls to deflect the blanks to one side of the feed wheel, and a vertical longitudinally inclined chute projecting into the hopper and arranged upon and contiguous to one side of the feed wheel, said chute having the lower portions of its walls arranged to form a vertical groove and the upper portions of such walls diverging upwardly for providing a substantially V-shaped catching recess, to arrange the blanks to deliver them in proper order into the vertical groove.

1,104,030. SMOKE-STACK CLEANER. FELICIANO C. WILLAT, Montevideo, Uruguay. Filed Mar. 25, 1912. Serial No. 686,107. (Cl. 15—41.)

1. A smoke stack attachment including a housing positioned above the upper end of the stack, a closing cap

slidably mounted within said housing and adapted to fall by gravity to close the upper end of said stack, and a brush disposed above said stack and adapted to fall into the same to clean the sides thereof, said brush when in raised position disposed within said cap to support the same in position to uncover the top of said stack.



2. A smoke stack attachment including a housing positioned above the upper end of the stack, an apertured closing cap slidably mounted within said housing and adapted to fall by gravity to close the upper end of said stack, a brush disposed above said stack and adapted to fall into the same to clean the sides thereof, said brush when in raised position disposed within said cap to support the same in position to uncover the top of said stack, and a flexible member attached to the brush and passing out through the aperture of the cap, said member being operable from the bottom of the stack and by means of which said brush is actuated and said brush and cap supported in their raised position.

3. A brush for cleaning smoke stacks of irregular configuration, comprising a supporting member, a series of arms pivotally supported from said member, a brush carried by each of said arms, the brushes of alternate arms being slidably mounted thereon, a stretcher pivotally attached to each of said arms, said stretchers extending inwardly toward each other, a freely sliding runner on the supporting member, said stretchers pivotally connected with said runner, and a bonding wire connecting the several brushes.

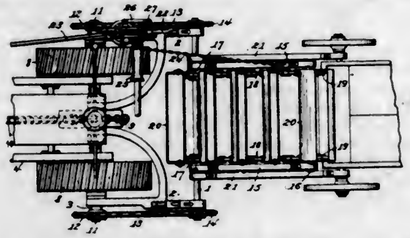
4. A smoke stack attachment including a slidingly mounted cap for closing the upper end of the stack, a brush disposed above the stack and adapted to fall into the same to clean the sides thereof, said brush when raised being disposed within the cap, and means connected with the brush for raising it and the cap and supporting them raised.

5. In combination with a smoke stack having a pair of transversely disposed brackets projecting above the upper edge thereof and supported therefrom, each of said brackets having an inwardly facing groove, a closing cap slidably mounted in said grooves, a brush disposed within said closing cap, and means for raising said brush and cap.

[Claim 6 not printed in the Gazette.]

1,104,031. EARTH SCOOP AND ELEVATOR. EDWIN J. AKINS, Moundsville, W. Va. Filed July 1, 1912. Serial No. 706,942. (Cl. 37—24.)

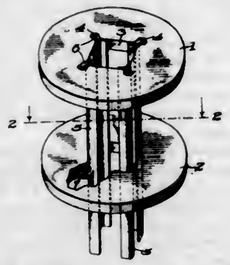
1. In combination, the hollow axle of a traction vehicle, said axle having traction wheels rotatable thereon, means for driving said wheels, shafts floating within said axle, means for driving said shafts, supporting members connected to said axle, an elevator-drive shaft journaled in said members, means connecting said shaft to the floating shafts whereby motion imparted to the latter is communicated to the former, an inclined elevator frame supported at its lower end by said shaft, a companion shaft journaled in the upper end of said frame, a plurality of elevating buckets actuated by rotation of said drive-shaft, means for raising and lowering said supporting members for adjusting the level of said drive-shaft, and means for adjusting the inclination of said frame, said elevator mechanism being adapted to trail behind the traction vehicle and to have its buckets travel in the same direction as the vehicle.



2. In combination, the hollow axle of a traction vehicle, said axle having traction wheels rotatable thereon, means for driving said wheels, shafts floating within said axle, means for driving said shafts, supporting members connected to said axle, elevating mechanism mounted on said supporting members, said mechanism comprising a drive-shaft journaled in said members, parallel frame members having their lower ends mounted on said shaft, a shaft journaled in the upper ends of said frame members, sprocket wheels mounted on the last mentioned shaft, sprocket wheels mounted on said drive-shaft, sprocket chains connecting said wheels, a plurality of elevating buckets mounted on said chains, and means connecting the drive-shaft to said floating shafts whereby motion imparted to the latter is communicated to the former.

3. In combination, the hollow axle of a traction vehicle, said axle having traction wheels rotatable thereon, means for driving said wheels, shafts floating within said axle, a differential-gear drive for said shafts, supporting members connected to said axle, elevating mechanism including an endless chain of buckets mounted on said supporting members, and means operatively connecting said elevating mechanism to said floating shafts whereby motion imparted to the latter is communicated to the former for actuating said buckets to travel in a forward scooping direction and in trailing relation to the vehicle.

1,104,032. SPOOL FOR ELECTROMAGNETS. CARL J. ANDERSON, Chicago, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 10, 1909. Serial No. 517,051. (Cl. 175—21.)



1. In a spool for electromagnets, in combination, a pair of disks adapted to form the ends of the spool, each of said disks having an angular aperture therein and angle strips adapted to be disposed in the angles of said apertures and secured to said disks.

2. In a spool for electromagnets, in combination, disks adapted to form the ends of said spool, said disks having similar angular apertures therein, and angle strips adapted to form the barrel of said spool disposed in the angles of said apertures and secured to said disks.

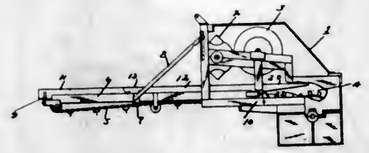
3. In a spool for electromagnets, in combination, angle strips adapted to form the barrel of the spool, disks forming the ends of said spool, said disks having angular apertures therein, the strips fitting in the angles of said apertures, and means for securing the disks and strips together.

4. A spool for electromagnets comprising a plurality of parallel strips arranged in spaced relation to form a hollow frame and a plurality of disks rigidly secured to said strips in a parallel relation, one of said disks being secured to said strip at a distance from the nearest extremities thereof.

5. A spool for electromagnets comprising end disks each having a polygonal central opening therein and sheet metal angle strips connecting said disks, each of said strips extending through the central opening of each disk and having tongues projecting into each disk to secure the same thereto and to clamp the same in one of the angles of the central opening therein.

[Claim 6 not printed in the Gazette.]

1,104,033. ATTACHMENT FOR THRESHING-MACHINE FEEDERS. IRA D. BATE, West Jefferson, Ohio. Filed Nov. 1, 1911. Serial No. 657,914. (Cl. 130—1.)



1. In combination with a threshing machine having a feeder, cylinder and concave, an attachment for said feeder comprising a low central bar mounted on the body of said feeder and adjustable to bring its inner end past the inner edge of said feeder and into proximity to said cylinder and concave.

2. In combination with a threshing machine having a feeder and cylinder, an attachment for said feeder comprising a low central bar and an adjustable finger secured to the inner end of said bar extending into juxtaposition to said cylinder.

3. In combination with a threshing machine having a feeder and cylinder, an attachment for said feeder comprising a low central bar extending into juxtaposition to said cylinder, a bowed supporting element for said bar embracing the inner end of said feeder, and a supporting member for said element.

4. In combination with a threshing machine having a feeder and cylinder, at attachment comprising, in combination with a sectional framework foldable downwardly and inwardly, a low central bar extending into juxtaposition to said cylinder, and a hinge structure forming a connection between the sections of said bar and facilitating its folding under with the outer section of said feeder.

5. In combination with a threshing machine having a feeder, cylinder and concave, an attachment comprising a low central bar, and adapted to extend into juxtaposition to said cylinder and concave, whereby bundles of grain are directed endwise into the space between said cylinder and concave.

1,104,034. EYEGLASSES. GEORGE H. CHAPEL, Howell, Mich. Filed Jan. 12, 1914. Serial No. 811,692. (Cl. 88—50.)



1. As a new article of manufacture, a contractible lens rim having parallel clips formed integral with the ends of said rim and adapted to coöperate with said rim in holding a lens.

2. As a new article of manufacture, an eye glass rim having integral parallel clips and an integral bridge.

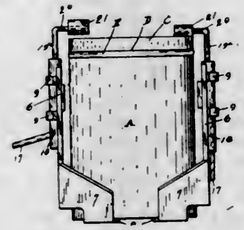
3. As a new article of manufacture, an eye glass bridge having the ends thereof integral with the ends of contractible rims.

4. In eye glasses, contractible rims, parallel clips formed integral therewith and connecting the ends of said rims, and means for contracting said rims.

5. In eye glasses, a bridge, contractible rims having ends formed integral with said bridge, and means at the ends of said bridge for contacting said rims.

[Claims 6 to 20 not printed in the Gazette.]

1,104,035. FASTENER FOR RECEPTACLE-COVERS. CLARENCE R. CHELLEW, Peoria, Ill. Filed Feb. 6, 1911. Serial No. 606,813. (Cl. 70—3.)



1. A fastener for the cover of a receptacle, comprising a plate having feet to extend beneath and engage the bottom of the receptacle, a member movable longitudinally on said plate and adapted to engage the top of the cover, a lever for locking the movable member against the cover, and means for releasing the movable member when the lever is released.

2. A fastener for the cover of a receptacle, comprising a plate having feet to extend beneath and engage the bottom of the receptacle, a member adjustably connected with said plate and movable longitudinally on said plate for engaging the top of the cover, means for causing an impinging relation between said adjustable member and cover, and means for releasing said adjustable member from said cover, when said last mentioned means is released.

3. A fastener for the cover of a receptacle, comprising a plate having feet to extend beneath and engage the bottom of the receptacle, a member movable longitudinally on said plate, cover engaging means having an adjustable connection with said movable member, and means for operating said movable member.

4. A fastener for the cover of a receptacle, comprising a member having means to engage the bottom of the receptacle, a stem movably carried on said member, a cover engaging member having an adjustable connection with said stem, a lever for moving the stem to lock the member against the cover, and a spring operating to reelase the cover engaging member when the lever is released.

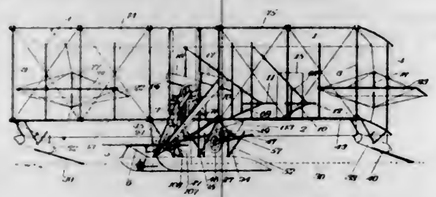
5. A fastener of the character described, comprising a plate, a stem movably attached to said plate, a lug attached to the plate and extending into the stem, a lever fulcrumed on the stem, and adapted to engage the lug for moving the stem, a spring in the stem bearing against the lug, and a cover engaging member adjustably connected with said stem.

[Claims 6 to 12 not printed in the Gazette.]

1,104,036. FLYING-MACHINE. GLENN H. CURTISS, Hammondsport, N. Y. Original application filed Aug. 22, 1911, Serial No. 645,340. Divided and this application filed Sept. 14, 1912. Serial No. 720,355. (Cl. 244—29.)

1. A heavier-than-air flying machine, a movable equilibrium-restoring device at each side of the machine, a movable frame extending close to and adapted to be moved by the swinging of the operator's body, connections there-

from to said equilibrium restoring devices to operate the same by movement of said body frame, a second laterally movable frame for another operator, and means for placing said second frame in or out of operative relation to said equilibrium-restoring devices at any time.



2. A heavier-than-air flying machine, a movable equilibrium-restoring device at each side of the machine, a laterally movable frame extending close to each side of the operator's body, connections therefrom to said equilibrium restoring devices to operate the same by movement of said frame in either direction, a second laterally movable frame for another operator normally unconnected with said equilibrium restoring devices, and means for operatively connecting said latter frame to said equilibrium restoring devices during flight.

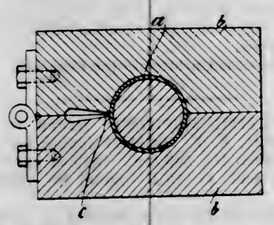
3. A heavier-than-air flying machine, a movable equilibrium-restoring device at each side of the machine, a pair of seats, a pivoted shoulder frame partially embracing the operator's body and mounted adjacent said seat to swing laterally, connections from said shoulder frame to said equilibrium-restoring devices, a second swinging shoulder frame mounted adjacent the second seat for the second operator, and detachable means for connecting said frames together.

4. In a heavier-than-air flying machine in combination, a pair of seats, a horizontal elevating rudder, a lever and connections to said rudder for opearting the same, a vertical steering rudder, a wheel or lever for operating the same mounted on said first lever and having connections to said steering rudder, and means permitting said wheel (while operatively connected) to be moved from one seat to the other during flight, and locking means for locking said wheel in either position.

5. In a heavier-than-air flying machine in combination, a pair of seats, a horizontal elevating rudder, a lever and connections to said rudder for operating the same, a vertical steering rudder, a wheel or lever for operating the same, and having a supporting arm pivoted to said first lever to swing at right angles to the movement of said first lever, whereby said wheel while operatively connected may be moved from one seat to the other during flight and means for locking said wheel supporting arm in either position.

[Claims 6 to 10 not printed in the Gazette.]

1,104,037. PROCESS OF CASTING IRON IN PERMANENT MOLDS. EDGAR A. CUSTER, Philadelphia, Pa., assignor to The Custer Sandless Casting Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 22, 1910. Serial No. 588,494. (Cl. 22—200.)

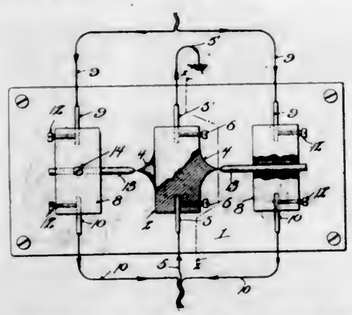


1. The process of casting iron in permanent molds which consists in causing the line of setting to progress in proportion to the rate of pouring by providing a mold of relatively large mass and superficial area and then removing the casting from the mold prior to chilling.

2. The process of producing a homogeneous iron casting of uniformly fine texture which consists in causing the metal in the gate and in the matrix to set simultaneously and in proportion to the rate of pouring.

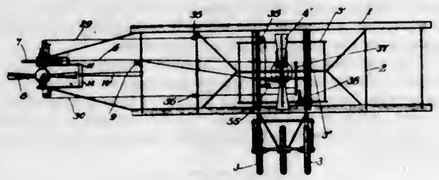
3. The process of casting iron in permanent molds, which consists in filling the mold gradually from the bottom toward the top, preventing the temperature of the mold from rising above 600° F. and causing the metal to set as poured, and then removing the casting from the mold.

1,104,038. LIGHTNING-ARRESTER. GERHARD P. A. DAMSCHEN, Oconomowoc, Wis. Filed Feb. 6, 1912. Serial No. 675,817. (Cl. 175—30.)



In an electric circuit having a pair of alined wires for supplying current to an instrument, and a single ground wire; the combination of a metallic block interrupting each line wire, an adjustable pointed electrode extending from each block, a second metallic block interrupting the ground wire and interposed between the line wire blocks, and integral conical electrodes extending therefrom in axial alinement with the line wire electrodes, the same being spaced from said line wire electrodes at predetermined distances.

1,104,039. FLYING-MACHINE. CARL DIENSTBACH, New York, N. Y., assignor of one-third to Walter L. Fairchild, New York, N. Y., and one-third to Walter L. Fairchild, trustee, New York, N. Y. Filed Apr. 13, 1910. Serial No. 555,240. (Cl. 244—14.)



1. In a device of the character described, an aeroplane, a propeller for changing the equilibrium thereof, and means for changing the angle of the propeller blades, the blades of the propeller being pivoted on an axis at one side of the center.

2. In a device of the character described, an aeroplane, a horizontal propeller for changing the equilibrium thereof, and means for changing the angle of the propeller blades, the blades of the propeller being pivoted on an axis at one side of the center.

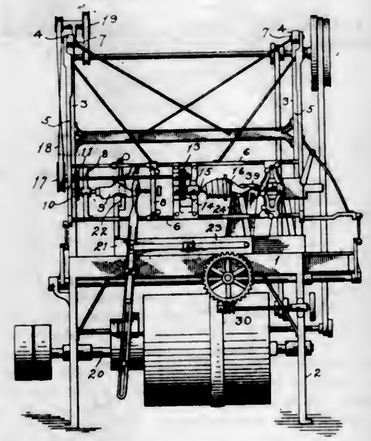
3. In a device of the character described, an aeroplane, a propeller located at one side of the machine for changing the equilibrium thereof, and means for changing the angle of the propeller blades, the blades of the propeller being pivoted on an axis at one side of the center.

4. In a device of the character described, an aeroplane, a horizontal propeller located at one side of the machine for changing the equilibrium thereof, and means for changing the angle of the propeller blades, the blades of the propeller being pivoted on an axis at one side of the center.

5. In a device of the character described, an aeroplane, a lifting and depressing propeller for changing the equilibrium thereof, and means for changing the angle of the propeller blades, the blades of the propeller being pivoted on an axis at one side of the center.

[Claim 6 not printed in the Gazette.]

1,104,040. LAST-TURNING MACHINE. EARNEST A. EASTMAN, Dayton, Ohio, assignor of one-half to The Crawford McGregor and Canby Co., Dayton, Ohio, a Corporation of Ohio. Filed Mar. 20, 1913. Serial No. 755,667. (Cl. 142—15.)



1. In a wood working machine, a support for the work to be operated upon, a traveling head, two parallel shafts carried by the head and arranged at an inclination to the direction of travel of the head, cutter heads of different diameters carried by said shafts and rotating in parallel adjacent planes, the larger of the heads being located slightly in advance of the smaller head, and means to rotate the heads.

2. In a wood working machine, a support for the work, a traveling head, two revoluble cutter heads carried by the traveling head and rotating in parallel adjacent planes inclined in relation with the path of travel of the head, the relative positions of the cutter heads being such that the inoperative side of the rearmost cutter head or the side opposite the cutting point will extend beyond the cutting point of the advance head, and means to rotate the cutter heads.

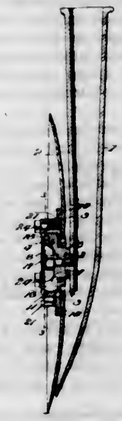
3. In a wood working machine, a support for the work, a traveling head, two revoluble cutter heads carried by said traveling head and rotating in parallel planes, the advance head being of greater diameter than the follower head, the relative location of the heads being such that the path of operation of the larger head will merge into the path of operation of the smaller head formed simultaneously therewith.

4. In a wood working machine, a support for the work, a traveling head, two eccentrically mounted revoluble cutter heads carried by the traveling head and rotating in parallel planes the heads being so located in relation one with the other, that the simultaneous paths of operation of the two cutters will merge one into the other.

5. In a wood working machine, a support for the work, a traveling head, two cutter heads carried thereby rotating at different rates of speed in parallel planes inclined to the path of travel of the traveling head, the planes of rotation of the heads being so relatively located that the path of operation of one head will merge into the simultaneous path of operation of the other head.

[Claims 6 to 9 not printed in the Gazette.]

1,104,041. BEARING. WILLIAM ELLIOTT, Beatrice, Nebr., assignor to Dempster Mill Manufacturing Company, Beatrice, Nebr., a Corporation of Nebraska. Filed Nov. 18, 1912. Serial No. 732,088. (Cl. 64—26.)



1. In combination, a bearing block having circumferential and end bearing surfaces, means for supporting said block against rotation, and a rotary element provided with a central journal box inclosing and rotating on said block, said box consisting of a cup-like member fixed to the rotary element and providing an end wall having a bearing surface at the inner end face of the block and an annular wall having a bearing surface circumferentially encircling the block, and a removable cup-like member providing an end wall having a bearing surface to engage the outer end face of the block and an annular wall of greater diameter than the annular wall of said fixed member and in conjunction with adjacent walls forming an oil chamber exteriorly of and in communication with said bearing surfaces, and means for removably securing said removable member.

2. In bearings for rotary elements, a non-rotary cylindrical bearing block, and a journal box inclosing and rotating thereon and consisting of a cup-like member fixed to the rotary element and forming an end wall and the circumferential bearing surface of the box, and a removable cup-like member forming the opposite end wall of the box, and bolts for tightly clamping the removable member to the fixed member, an enlarged oil chamber being formed around the annular portion of the fixed member and within the annular portion of the removable member, said box providing oil passages through and past the edge of the annular portion of the fixed member to supply oil to the end and circumferential bearing surfaces.

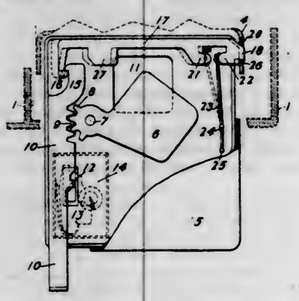
3. In bearings for rotary elements, a journal box carried by the rotary element and consisting of a cup like member fixed to said element and having a laterally projecting annular portion of an external diameter less than the external diameter of said member, and a removable cup-like member having a laterally projecting annular wall of greater internal diameter and also of greater length than the external diameter and length, respectively, of said annular portion of said fixed member, said removable member surrounding and forming an oil chamber around said annular portion of the fixed member and having the edge of its annular portion clamped to said fixed member and forming an oil tight joint, and accessible clamping screws passing removably through said removable member and into the annular portion of said fixed member.

4. In combination, a bearing block, and a rotary element provided with a journal box inclosing and rotatable on said block and having an outer surrounding wall and an internal annular wall forming a bearing surface surrounding said block and an oil chamber between said outer surrounding wall and said internal annular wall, said box having opposite exterior end walls forming bearing surfaces engaging the opposite sides of said block, respectively, and limiting the relative longitudinal play of the box and block, said box consisting of two cup-like opposite-side members one formed with said outer surrounding wall, and the other formed with said internal annular wall, one of said exterior end walls forming a side wall of said oil chamber and being spaced from the adjacent end edge of said internal annular wall to afford an annular radial oil space communicating with said chamber and with the adjacent bearing surfaces of the block and box.

5. In combination, a bearing block, and an element having a journal box inclosing and rotatable on said block, said box having opposite side exterior walls forming bearing surfaces at the opposite sides of said block and limiting the relative longitudinal movements of the block and box, said box consisting of two opposite-side members, one formed with an internal annular wall forming a bearing surface circumferentially surrounding said block and the other formed with a circumferential exterior wall providing an oil chamber between said internal and external walls, the outer side of said block and the adjacent side wall of said box being relatively formed to provide a central intervening oil cavity, said last mentioned side wall of the box forming a side wall of said oil chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,104,042. CASH-RECEPTACLE FOR COIN-COLLECTORS. OSCAR F. FORSBERG, Yonkers, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed June 1, 1912. Serial No. 700,965. (Cl. 232—15.)



1. The combination with a receptacle and a door therefor, of a cash box adapted to be inserted therein having a coin receiving opening, a closure therefor, means self-acting upon the insertion of said box for locking said box within said receptacle, and means for moving said closure to open and closed position and through the instrumentality of said closure unlocking said box from said receptacle.

2. In combination with a receptacle, a cash box adapted to be inserted therein having an opening for receiving coins, a closure therefor, means for actuating said closure, locking means for arresting said actuating means in an intermediate position, and means operable by said receptacle for unlocking said locking means.

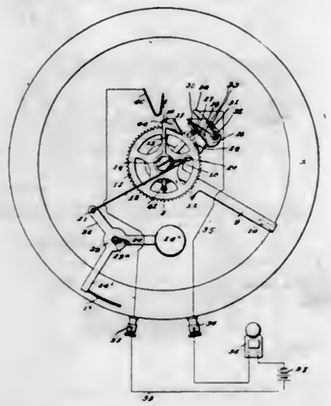
3. In combination with a receptacle, a frame, a cash box attachable to said frame and having a coin receiving opening therein, a closure therefor, means for actuating said closure, means for arresting said actuating means in an intermediate position, a lock for retaining said closure in closed position, and means operable by said frame for actuating said arresting means.

4. In combination with a receptacle and a door therefor, of a frame, a cash box attachable to said frame and having a coin-receiving opening therein, means for locking said cash box to said frame, a closure for said opening, a lock for retaining said closure in closed position, means operable by said door for actuating said closure, and means operable by said closure for unlocking said cash box from said frame.

5. In combination with a receptacle and a door therefor, of a frame, a cash box attachable to said frame and having a coin-receiving opening therein, a closure for said coin-receiving opening, means for locking said cash box to said frame, means by which said cash box may be removed from said frame and operating said closure, a lock for retaining said closure in closed position, and means operated by said closure for unlocking said cash box from said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,104,043. CLOCK. LEWIS D. GIDDENS, Wilson, N. C. Filed Sept. 8, 1913. Serial No. 788,664. (Cl. 58—19.)

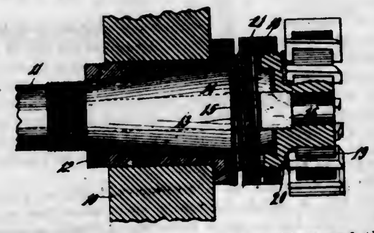


1. The combination with the minute hand arbor of a clock, of a ratchet wheel mounted thereon to move therewith, a pawl bearing plate pivotally mounted on the arbor and carrying a pawl adapted to engage the ratchet, a trip lever mounted on the arbor and formed with an abutment adapted to engage and release the pawl, and an extension formed on said trip lever, a trip rod connected at one end with said extension, and means consisting of a three-arm lever having a weight on one of its arms connected with said trip rod and operated exteriorly of the clock for causing the trip lever to prevent the movement of the pivotal plate when desired.

2. The combination with the minute hand arbor of a clock, of a ratchet wheel mounted thereon to move therewith, a pawl bearing plate pivotally mounted on the arbor and carrying a pawl adapted to engage the ratchet, a trip lever mounted on the arbor and formed with an abutment adapted to engage and release the pawl, an electric current associated with the clock mechanism, one leg of the circuit terminating at a contact point carried by the clock and the other leg terminating at the pivotal plate, an alarm mechanism arranged on said circuit and actuated by the engagement of the plate with the contact point, a trip rod connected at one end of the trip lever and a three-arm lever carrying a weight to return the trip rod and mechanism to normal position.

3. The combination with the minute hand arbor of a clock, of a ratchet wheel mounted thereon, a setting mechanism, a plate adapted to engage and be limited in its movement in one direction by the setting mechanism, a pivoted pawl carried by said plate, a weighted arm, engaging said pawl, a trip mechanism adapted to be engaged by said pawl, an electric circuit associated with the clock mechanism and closed by contact of said pawl with a stationary contact, a stationary contact, an alarm in said circuit, and means consisting of a three-arm lever carrying a weight and having one arm connected with the trip mechanism for returning the parts to normal position.

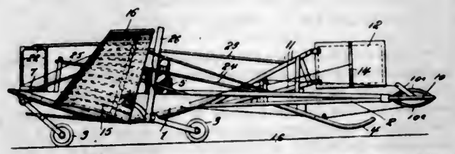
1,104,044. CUTTER-COUPLING FOR MILLING-MACHINES. JOHN GOETZ, West Allis, Wis., assignor to The Kempsmith Manufacturing Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 13, 1914. Serial No. 824,368. (Cl. 29—105.)



1. A cutter coupling for milling machines and the like, comprising the combination with a spindle having a threaded end with a slotted end face and a cutter head having a threaded boss with a slotted end face of a key fitting within the slots in the end of the spindle and the boss, and a nut threaded on the spindle and the boss to draw them together.

2. A cutter coupling for milling machines and the like, comprising a spindle having a threaded head and a conical projection at the end face thereof with a slot therethrough, a cutter head having a threaded connecting boss with a conical recess therein to receive and fit upon the conical projection of the spindle and having a slot in its end, a key fitting within the slots of the spindle and the connecting boss, and a nut having right and left hand threads fitting on the head of the spindle and on the connecting boss of the cutter head respectively to draw the parts together or force them apart.

1,104,045. FLYING-MACHINE. ABRAHAM LINCOLN HENSON, Fort Collins, Colo. Filed Jan. 15, 1913. Serial No. 742,255. (Cl. 244—14.)



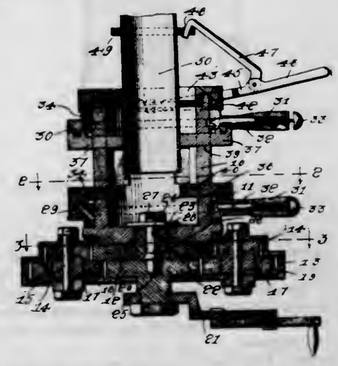
1. In a flying machine, a supporting surface comprising a lower plane having wings angled upwardly and outwardly and rearwardly, an upper plane extending between and secured to the wings of the lower plane and arranged in rear of the foremost portions of the latter, and an intermediate plane arranged between the upper and lower planes and secured to the wings of the latter and having its forward portion disposed in rear of the forward portion of the lower plane and in advance of the upper plane.

2. In a flying machine a supporting surface comprising a lower plane having dihedrally angled wings, an upper plane extending between and secured to the wings of the lower plane, and a relatively shorter intermediate plane extending between and secured to the wings of the lower plane, said planes being arranged in stepped as well as superposed relation.

3. In a flying machine a supporting surface comprising a lower plane having wings inclined upwardly and outwardly and upwardly and rearwardly, an upper plane extending between and secured to the wings of the lower plane near their extremities, said upper plane having its leading edge terminating in rear of the leading edges of the wings of the lower plane between the inner ends of the latter and such points of attachment of the upper plane thereto, and an intermediate plane extending between and secured to the wings of the lower plane and having its leading edge arranged at a point in advance of the leading edge of the upper plane and on a line between the same and the foremost portions of the leading edges of the wings of the lower plane.

4. In a flying machine, a frame including a car inclining upwardly and forwardly in advance of its transverse center and inclined upwardly and rearwardly in rear of its transverse center, a lower plane having wings secured to the forward portion of the car and inclined outwardly and upwardly and upwardly and rearwardly, a motor upon the forward portion of the car between the wings of the lower plane and inclined to correspond to the inclination of such portion of the car, an upper plane extending between and secured to the wings of the lower plane, an intermediate plane extending between and secured to the wings of the lower plane, the said several planes being arranged in stepped relationship, an aviator's seat mounted upon the rear inclined portion of the car, longitudinally extending shafts upon the wings of the intermediate supporting surface and having a degree of inclination corresponding to that of the motor, gearing between said shafts and the motor, and propellers upon said shafts operating in rear of the wings of the supporting planes.

1,104,046. PIPE-THREADING MACHINE. JOSEPH H. HINES, Prescott, Ariz. Filed May 7, 1913. Serial No. 766,233. (Cl. 10—89.)



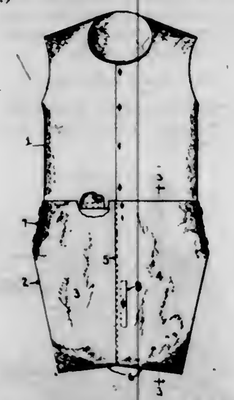
1. A pipe threading machine comprising a hub, a housing carried by said hub and rotatably mounted thereon, gear wheels in said housing, one of said gear wheels being provided with a rectangular extension passing through an opening formed in said hub whereby said hub will rotate with said gears, collars rotatably mounted upon said hub, means for releasably holding said collars in an adjusted position upon said hub, arcuate cam groves carried by said collars, dies and guides slidably mounted in openings formed in said hub and having their outer ends provided with arcuate grooves through which said cam ribs pass whereby said dies and guides may be moved inwardly and outwardly by turning said collars, pipe engaging means rotatably connected with said hub, and means for rotating said gear wheels.

2. A pipe threading machine comprising a hub, a housing rotatably mounted upon said hub, a gear wheel rotatably mounted in said housing and provided with a spindle extending through said housing, means engaging said spindle for rotating said gear wheel, gear wheels positioned upon opposite sides of said first mentioned gear wheel and meshing with the same, small gear wheels mounted in said housing and provided with rectangular shanks extending through said last mentioned gear wheels whereby the small gear wheels will rotate with the last mentioned gear

wheels, a large gear wheel rotatably mounted in said housing and meshing with the smaller gear wheels, a rectangular shank extending from said last mentioned gear wheel and passing through a rectangular opening formed in the head of said hub whereby said hub will rotate with said gear wheels, an axle for said last mentioned gear wheel provided with means at its inner end for engaging the inner face of the head of said hub whereby said housing may be prevented from becoming separated from said hub, pipe guiding means carried by said hub, and thread cutting dies carried by said hub.

3. A pipe threading machine comprising a rotatable hub, thread dies adjustably connected with said rotatable hub, pipe guides adjustably connected with said rotatable hub, a ring rotatably mounted upon said hub, a lever provided with forks pivotally connected with said ring, a hook carried by said lever, and pipe engaging means carried by said hook whereby a pipe may be moved into said hub through said guides and into engagement with said dies by moving said lever upon its pivots.

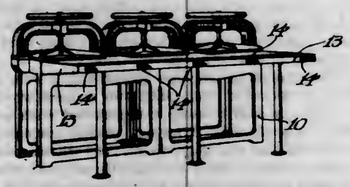
1,104,047. UNDERGARMENT. SAMUEL HOLSTEIN, New York, N. Y. Filed Aug. 5, 1913. Serial No. 783,222. (Cl. 2—144.)



1. A drawer attachment for shirts composed of two strips of material having their inner edges curved inwardly from their opposite ends toward the centers of the strips, said curved edges being secured together, and means at the opposite ends of said strips for securing the attachment in operative position.

2. A drawer attachment for shirts composed of two strips of material having their inner edges curved inwardly from their opposite ends toward the centers of the strips, said curved edges being secured together, said strips having their corners beveled and provided with fastening elements.

1,104,048. FORM-TABLE. ROBERT T. JOHNSTON, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 30, 1912. Serial No. 723,232. (Cl. 101—52.)



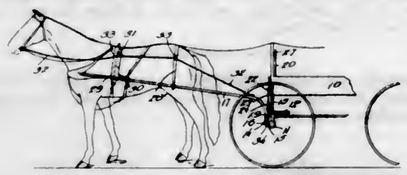
1. The combination of a table, a second table the top of which is slightly lower than the top of said first-mentioned table, and a member having an inclined face carried by one of said tables, with the inclined face of which member the other table has sliding contact when one of said tables is moved toward the other whereby the adjacent edges of the tops of said tables are brought to the same level.

2. The combination of a table, a second table the top of which is slightly lower than the top of said first-mentioned table, and a member carried by said first-mentioned table having an inclined outer and upper face, with the inclined face of which member the other table has sliding contact when one of said tables is moved toward the other whereby the upper edge of the top of said second table is brought even with the adjacent upper edge of the top of the other table.

3. The combination of a stationary table, a wheeled table the top of which is slightly lower than the top of said stationary table, and a member carried by said stationary table having an inclined outer and upper face, with the inclined face of which member the wheeled table has sliding contact when it is moved toward said stationary table whereby the upper edge of the top of said wheeled table is brought even with the adjacent upper edge of the top of the stationary table.

4. The combination of a stationary table, a wheeled table the top of which is slightly lower than the top of said stationary table, and a plurality of brackets carried by said stationary table spaced apart along one side thereof, each of the brackets having an inclined outer and upper face and an adjoining horizontal upper face, with the inclined face of one or more of which brackets the wheeled table has sliding contact when it is moved toward said stationary table whereby the upper edge of the top of said wheeled table is brought even with the adjacent upper edge of the top of the stationary table with the abutting end of the wheeled table supported on the horizontal faces of said brackets.

1,104,049. HORSE DETACHER AND CONTROLLER. EDWARD S. JONES, Mobile, Ala., assignor of one-half to Gerson Cohn. Filed July 11, 1913. Serial No. 778,512. (Cl. 21—75.)

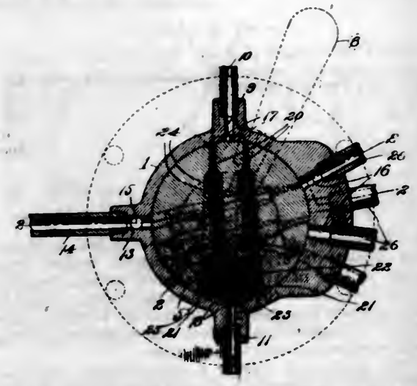


1. The combination of a vehicle and detachable shafts, means to hold the shaft normally engaged with the vehicle, means to release the shafts, a harness including a support for the forward parts of the shafts and a bridle element, an emergency rein connected to the bridle element and engaged slidably with a part of the harness at a point above the shafts and intermediately thereof, and connected to the rear part of the shafts.

2. The combination of a vehicle, a rigid shaft element detachably engaged with the vehicle, means for holding the shaft element normally engaged with the vehicle, means for detaching the shaft element, a harness including a bridle element and a support for the forward part of the shaft element, an emergency rein connected to the bridle element and engaged slidably with the harness and connected with the rear part of the shaft for the purposes described.

3. In a releasing and control mechanism, a vehicle, laterally spaced apertured carrying members, a shaft element having tenons adapted to be slidably engaged in the apertures of the carrying members, a transverse bar carried by the shaft element, a vertically slidable member carried by the vehicle having parallel members engaged above and below the bar from the rear, a revoluble member, a crank element thereon, connections between the crank element and the vertically slidable member, and means to rotate the revoluble member.

1,104,050. GAS-ENGINE STARTER. STEPHEN S. KRAYER, St. Louis, Mo. Filed Aug. 30, 1912. Serial No. 717,981. (Cl. 123—180.)



1. A device of the character described comprising a valve case oil inlet and outlet passages entering said case, an air inlet passage, a plurality of gas outlet passages, a valve plug, oil chambers formed in said valve plug, and means for manipulating said valve plug to bring said chambers into communication with said oil inlet and outlet passages, and then to bring said chambers into registration with said air inlet and gas outlet passages, in succession, substantially as specified.

2. A device of the character described, comprising a valve case, an oil inlet passage, an oil outlet passage arranged opposite to said oil inlet passage, an air inlet passage comprising two branches arranged in vertical alinement, a plurality of gas outlet passages arranged in parallel series, certain of said passages being in the same plane as the upper branch of said air inlet and certain thereof in the same plane as the lower branch of said air inlet, a valve plug, and a plurality of oil chambers in said valve plug arranged in two parallel planes and entering said plug in a rectangular series and opening out of said plug in a staggered series, and means for manipulating said valve plug to communicate said oil inlet and outlet passages, and to communicate said air inlet passage and selected ones of said gas outlet passages, substantially as specified.

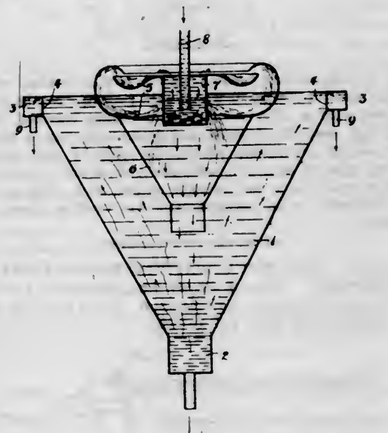
3. A device of the character described, comprising a valve case, an oil inlet passage, an oil outlet passage arranged opposite to said oil inlet passage, an air inlet passage comprising two branches arranged in vertical alinement, a plurality of gas outlet passages arranged in parallel series, certain of said passages being in the same plane as the upper branch of said air inlet and certain thereof in the same plane as the lower branch of said air inlet, a valve plug, a plurality of oil chambers in said valve plug arranged in two parallel planes and entering said plug in a rectangular series and opening out of said plug in a staggered series, and means for manipulating said valve plug to communicate said oil inlet and outlet passages, and to communicate said air inlet passage and selected ones of said gas outlet passages, and a packing of wire gauze in each oil chamber, substantially as specified.

4. A device of the character described, comprising a valve case, an oil inlet passage, an oil outlet passage arranged opposite to said oil inlet passage, an air inlet passage comprising two branches arranged in vertical alinement, a plurality of gas outlet passages arranged in parallel series, certain of said passages being in the same plane as the upper branch of said air inlet and certain thereof in the same plane as the lower branch of said air inlet, a valve plug, a plurality of oil chambers in said valve plug arranged in two parallel planes and entering said plug in a rectangular series and opening out of said plug in a staggered series, and means for manipulating said valve plug to communicate said oil inlet and outlet passages, and to communicate said air inlet passage and selected ones of said gas outlet passages, a packing of wire gauze in each oil chamber, and an adjustable cap for each chamber, substantially as specified.

5. A device of the character described comprising a case, oil inlet and outlet passages, a valve plug, an air supply, gas outlet passages, an oil chamber carried by said valve plug, and means for manipulating said valve effectively to selectively communicate said oil chamber with said oil inlet and outlet passages, and with said air inlet and gas outlet passages, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

1,104,051. SEPARATOR. PAUL KROPP, Dresden, Germany. Filed Feb. 27, 1914. Serial No. 821,606. (Cl. 210—5.)



1. In combination with a collecting chamber for solid matter and a receiving chamber for liquid arranged above the same and open at the top means for directing the overflow liquid of the latter chamber to the former chamber and baffles interposed in its passage, the said liquid receiving chamber being extended downward below the lower baffle and arranged to be struck by the water directed inward thereby so as to change again suddenly the direction of the flow.

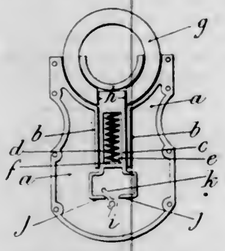
2. In combination with a collecting chamber for solid matter and a receiving chamber for liquid arranged above the same means for directing overflow liquid from the latter chamber to the former chamber and baffles interposed in the path of flow of the liquid to change its direction the lower edge of the lower baffle being inclined upward and inward to direct the liquid against said receiving chamber which is extended down far enough to receive such impact.

3. In combination with a collecting chamber for solid matter and a receiving chamber for liquid arranged above the same, means for directing overflow liquid from the latter chamber to the former chamber and a pair of annular baffles arranged around said receiving chamber the inner and upper baffle forming a shallow trough and the outer and lower baffle being of scroll form and presenting its upper edge downward toward said trough, which it overhangs, and its lower edge obliquely upward and inward.

4. In combination with a funnel form part having at its upper end an annular liquid channel and outlet and at its lower end a collecting chamber for solid matter, an inner funnel form part discharging into the one first mentioned, a receiving chamber overflowing into said inner funnel-form part and a pair of annular curved baffles surrounding said receiving chamber, one of said baffles

at its upper edge over hanging the other baffle and also presenting its inner and lower edge obliquely upward toward said receiving chamber substantially as set forth.

1,104,052. LOCK. GEORGE HUNT LAMB, London, England. Filed Nov. 22, 1913. Serial No. 802,490. (Cl. 70—107.)



In a lock, a ring formed with a gap, a casing, curved guides in said casing in which said ring can rotate, a bolt formed with a slot, webs in said casing between which said bolt can slide toward and from said ring, a stop in said casing projecting within the slot of said bolt, a spring between said stop and one end of the slot of said bolt, a pivot for a key in said casing, and arms on said bolt adapted to be engaged by a key turning about said pivot.

1,104,053. TOOL FOR UNCAPPING HONEY AND LIKE PURPOSES. DONALD HENRY LEA, Westmere Post Office, near Wanganui, New Zealand. Filed Sept. 28, 1912. Serial No. 722,923. (Cl. 6—12.)



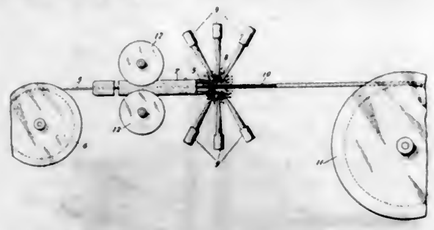
1. A tool for uncapping honey or for like purposes, comprising a thin flat hard metal knife blade having a cutting edge; a sheet metal jacket secured at its edges to said blade thereby forming a chamber upon said blade but leaving said cutting edge projecting, and means for conducting a heating medium into and out of said chamber.

2. A tool for uncapping honey or for like purposes, comprising a flat hard steel blade having cutting edges and an intra-marginal portion all of constant thickness, the marginal portions being of less thickness than and lying in the same plane with the intra-marginal portion; a separate curved sheet metal jacket secured at its edges to said blade but leaving said marginal portion projecting and forming a chamber; and means for conducting a heating medium through the chamber.

3. A tool for uncapping honey or for like purposes, comprising a thin flat blade having cutting edges; a handle rigidly secured to said blade; a sheet metal jacket secured at its edges to the upper side of said blade, forming thereby a chamber; an inlet tube adjacent to said handle and communicating with the chamber; outlet tube leading from said chamber near the point of the blade and disposed away from and in spaced relation to said jacket and extending to near the handle; and flexible connections secured to the tubes respectively.

1,104,054. MANUFACTURE OF NON-OXIDIZING CONDUCTORS. OSCAR LINDER, Chicago, Ill., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 3, 1914. Serial No. 810,197. (Cl. 49—78.)

1. The method of making a non-oxidizable conductor which consists in drawing an oxidizable metallic wire through a tube of vitreous material, maintaining the forward end of said tube in a plastic state, and causing it to adhere to said wire in the form of a thin, uniform and continuous coating.



2. The method of making a non-oxidizing conductor which consists in drawing an oxidizable metallic strip through a tube of vitreous material, maintaining said vitreous material at the end where said strip emerges in a plastic state, and feeding said tube forward at a rate sufficient to apply a thin, uniform and continuous coating of said vitreous material on said strip.

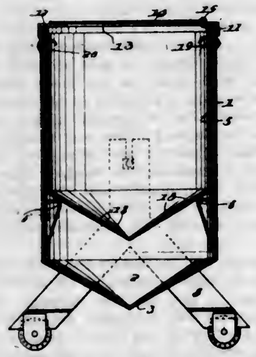
3. The method of making a non-oxidizable conductor which consists in drawing a suitable metallic wire through a tube of vitreous material, maintaining the forward end of said tube in a plastic state, feeding said tube forward at a speed sufficient to cover said wire with a thin, uniform and continuous coating of said vitreous material, and winding said covered wire upon a reel.

4. The method of making a non-oxidizing conductor which consists in drawing the oxidizable metallic wire through a tube of vitreous material, maintaining the forward end of said tube in a plastic state without oxidizing said inclosed wire, feeding said tube forward at a speed sufficient to enable said wire to be covered with a thin, uniform and continuous coating of said material in intimate contact therewith.

5. The method of making a non-oxidizing conductor which consists in drawing the oxidizable metallic wire through a tube of vitreous material having a point of plasticity lower than the melting point of said wire, maintaining the forward end of said tube in a plastic state without oxidizing said wire, and causing said vitreous material to adhere to said wire in the form of a thin, uniform and continuous coat.

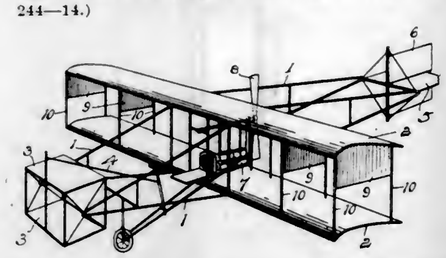
[Claims 6 to 8 not printed in the Gazette.]

1,104,055. GARBAGE-CAN. NELLIE W. LOWE, Erie, Pa. Filed Sept. 18, 1911. Serial No. 649,937. (Cl. 220—115.)



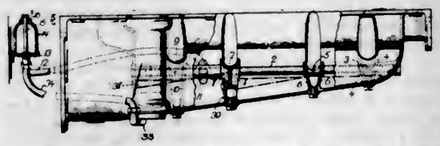
A garbage can comprising an outer receptacle having a conical bottom portion, and an opening substantially centrally of the conical bottom, an angular member providing shoulders, secured to the inner wall of the outer receptacle, said shoulders having a supporting member integral therewith and extending downwardly and into engagement with the inner wall of the outer receptacle, an inner receptacle having a conical perforated bottom positioned between the shoulders, whereby the bottom is wedged between the shoulders.

1,104,056. MEANS FOR INCREASING THE STABILITY OF AEROPLANES. WALTER L. MARR, Flint, Mich. Filed July 2, 1910. Serial No. 570,136. (Cl. 244—14.)



In an aeroplane, a pair of main planes disposed one above the other in spaced relation and connected at the front and rear edges thereof by vertically disposed uprights spaced apart throughout the length of said plane, a set of depending stability planes at the ends of said main planes perpendicular to the upper main plane from which they depend and having the forward and rear ends thereof connected to said uprights and maintained in parallelism to the line of flight, the stability planes of each set being spaced apart approximately the distance of their length and having the lower edges thereof above the lower main plane and providing air passages below and transversely of the upper main plane, and a motor disposed on the frame in such relation to said stability planes that the greater effective area of the stability planes is above the center of gravity of the aeroplane.

1,104,057. LUBRICATING SYSTEM FOR MOTORS. WALTER L. MARR, Flint, Mich. Filed Apr. 21, 1913. Serial No. 762,527. (Cl. 184—13.)



1. A lubricating system for a motor comprising a base provided with a longitudinally disposed feed duct and divided by cross walls between which the feed duct discharges, the walls having openings whereby lubricant trapped in the base drains into the lowest compartment, an automatic check valve controlling the opening into the lowest compartment for retaining the contents thereof when the base is tilted from normal position, a pump having an inlet supplied by gravity from the lowest compartment, and a reservoir into which the pump discharges and from which the lubricant flows into the base feed duct.

2. In a lubricating system for a motor, an engine base having a longitudinally inclined bottom and cross walls dividing the base into compartments with drainage openings therethrough, a feed duct extending along the wall of the base having outlets between the cross walls, an automatic check valve controlling the opening through a cross wall into the lowest compartment of the base for retaining the contents of said compartment when the base is tilted from normal position, a pump having an inlet supplied from the lowest compartment, and a reservoir supplied by the pump and connected to the feed duct for supplying the latter.

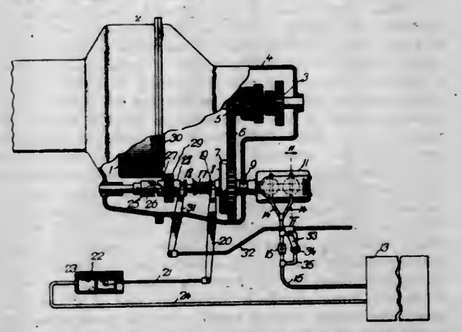
3. In a lubricating system for a motor, a cast metal base provided with an inclined bottom and divided by cross walls into compartments with drainage openings through the walls, a substantially horizontal feed duct, pipe cast into the wall of the casing and provided with outlets into the base between the cross walls, an automatic check valve controlling the opening through a cross wall into the lowest compartment, a pump having an inlet fed by gravity from the base compartment, and a reservoir supplied by the pump and connected to the feed duct pipe to discharge into the latter.

4. In a lubricating system for a motor, a base having a longitudinally inclined bottom, cross walls dividing the base into compartments and having drainage openings therethrough, an automatic check valve in the drainage opening into the lowest compartment for retaining the contents of the latter when the base is tilted from normal position, a pump having an inlet supplied by gravity from the lowest compartment of the base and means for directing discharge from the pump into the base compartments.

5. In a lubricating system for a motor comprising a base provided with a longitudinally inclined bottom and with cross walls dividing the base into compartments, the cross walls having drainage openings therethrough, means controlling the opening into the lowest compartment for retaining the contents thereof when the base is tilted from normal position, a pump casing secured in an opening in the base in the lowest compartment with an inlet opening from the compartment, a pair of intermeshing gears in the casing for forcing oil from the inlet to an outlet therefrom, means for returning and distributing the discharge from the outlet into the base compartments, a flexible driving connection for rotating one of the gears, and means for operating the connection from a motor.

[Claims 6 to 11 not printed in the Gazette.]

1,104,058. STARTING DEVICE FOR EXPLOSIVE-ENGINES. WALTER L. MARR, Flint, Mich. Filed June 21, 1913. Serial No. 775,035. (Cl. 123—179.)



1. The combination of an engine, a fly wheel therefor, and a change speed mechanism one of whose members always moves with the engine, with an air pressure tank, a combined compressor and motor whose cylinders are in communication with the tank, means controlled by the compressed air in the tank and adapted to operatively connect the compressor with the change speed mechanism for forcing air into the tank, manually operable means for connecting the compressor to rotate the fly wheel and to admit air to the compressor as a motor from the tank, adapted to automatically release the fly wheel from the compressor when the speed of the fly wheel exceeds the speed of the compressor.

2. The combination of an explosive engine, a fly wheel therefor, and change speed mechanism driven thereby, with a compressed air tank, a compressor motor whose cylinders are in communication with the tank, means automatically preventing return of air from the tank to the compressor, manually operable means adapted to operatively connect the fly wheel and the compressor and to simultaneously open communication from the tank to the compressor cylinders, adapted to automatically re-

lease the compressor and close such communication when the fly wheel speed exceeds the compressor speed, and means controlled by the pressure of air in the tank and adapted to automatically connect the compressor with the change speed mechanism when the pressure in the tank falls below a predetermined point.

3. The combination of an explosive engine, a fly wheel therefor and change speed mechanism operated thereby, with an air compressor and motor, a countershaft turning with the compressor, a pressure tank in communication with the compressor through a check valve, clutch mechanism adapted to positively connect the compressor and fly wheel and adapted to automatically release the compressor when the fly wheel exceeds the speed thereof, means for operating the clutch adapted to simultaneously open communication between the compressor and the air tank and a clutch for coupling the compressor to the change-speed mechanism adapted to automatically release the compressor when the pressure in the tank exceeds a predetermined point.

4. The combination of an explosive engine, fly wheel and change-speed mechanism driven therefrom, with a countershaft, a combined air compressor and motor coupled to the countershaft, a pressure tank in communication with the compressor through a check valve, a clutch adapted to throw the countershaft into operative connection with the fly wheel when shifted in one direction and to be thrown out in the opposite direction automatically when the speed of the fly wheel exceeds the speed of the clutch mechanism, means for throwing the clutch in, adapted to simultaneously open communication between the compressor and the air tank to operate the former as a motor, a friction clutch adapted to operatively connect the countershaft with the change-speed mechanism, a spring adapted to normally move the friction clutch into engagement and means controlled by the pressure of air in the tank and adapted to open the clutch against the action of the spring when the pressure in the tank reaches a predetermined point.

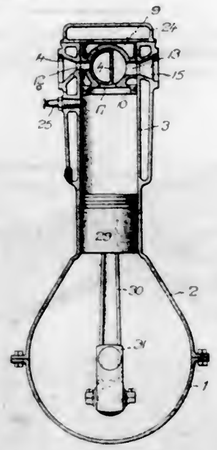
5. The combination of an engine fly-wheel having peripheral gear teeth, a change speed mechanism driven thereby, with a countershaft, a combined compressor and motor coupled to the countershaft, a compressed air tank, a pipe line connecting the compressor with the tank, a check valve in the pipe line preventing the return of air from the tank to the compressor, a by-pass around the check valve, a manually operable valve controlling the by-pass, a pinion rotatable and longitudinally movable on the countershaft adapted to mesh with the gear teeth on the fly wheel, clutch members adapted to couple the pinion with the countershaft when it is in mesh with the fly wheel and to throw the pinion out of mesh with the fly wheel when the speed of the latter exceeds the pinion speed, manually operable means adapted to simultaneously throw the pinion into gear and to open the by-pass valve, a friction clutch on the countershaft, one of whose members is connected through speed reduction mechanism with a change-speed train member, a spring adapted to normally throw the friction clutch into engagement to drive the countershaft from the change-speed mechanism, a pressure cylinder constantly in communication with the pressure tank and a piston in the cylinder operatively connected to the friction clutch and adapted to open the latter in opposition to the spring when the pressure in the tank reaches a predetermined point.

[Claim 6 not printed in the Gazette.]

1,104,059. EXPLOSIVE-ENGINE. WALTER L. MARR, Flint, Mich. Filed Oct. 10, 1913. Serial No. 794,394. (Cl. 123—190.)

1. In an explosive engine, the combination of a cylinder having an inlet and an exhaust port, a valve journaled transversely in the cylinder, and a floating head encircling the valve in the cylinder, the valve and head cooperating to control communication through the ports with the interior of the cylinder.

2. The combination in an explosive engine, of cylinders, a valve journaled transversely thereto in the upper portions of the cylinders, and floating heads each supported in a cylinder by the valve, the cylinders having inlet and exhaust ports that are controlled by the coöperative action of the heads and valve.



3. The combination in an explosive engine, of a cylinder having a lateral inlet and a lateral outlet, with a floating head reciprocable in the upper portion of the cylinder having a main port opening into the cylinder, and an inlet and an exhaust port registering respectively with the corresponding openings of the cylinder, and a valve journaled transversely through the upper portion of the cylinder and the head which it supports, the valve and head cooperating to control communication between the main port and the inlet and exhaust ports.

4. In an explosive engine, a cylinder having an inlet and an outlet, a floating head reciprocable in the cylinder having a main port opening into the cylinder interior and an inlet and an exhaust port in register respectively with the inlet and outlet of the cylinder, and a valve journaled transversely in the cylinder and in the head which it maintains in position, the head and valve coöperating to control communication between the main port and the inlet and exhaust ports.

5. In an explosive engine, cylinders having inlet and outlet openings, a rotatable valve common to all of the cylinders in which it is journaled transversely and a head for each cylinder supported therein by the valve on which it is journaled, the valve and head having by-passes and ports whereby the interior of the cylinder is thrown into communication with the inlet and outlet thereof in proper timed relation.

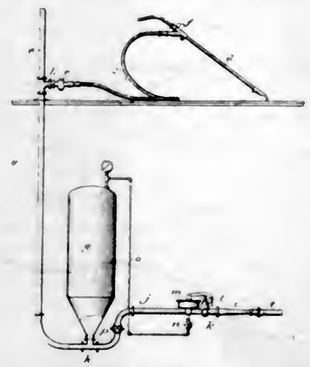
[Claims 6 to 12 not printed in the Gazette.]

1,104,060. VACUUM CLEANING APPARATUS. FRANK J. MATCHETTE, Milwaukee, Wis. Filed Sept. 16, 1911. Serial No. 649,691. (Cl. 230—13.)

1. In vacuum cleaning apparatus the combination of a suction service pipe, a vacuum storage reservoir with which said pipe connects, having a dust discharge opening in the lower part thereof, and air exhausting means connected with said opening below said reservoir.

2. In vacuum cleaning apparatus the combination with a vacuum and dust storage reservoir having a discharge opening in the lower part thereof, of a suction pipe and air exhausting means having a common connection with said discharge opening below said reservoir.

3. In vacuum cleaning apparatus the combination of a vacuum reservoir having a dust discharge opening in the lower part thereof, a suction service pipe or service main connected with said reservoir, intermittently operating air exhausting means connected with said discharge opening below said reservoir, and a check valve in the connection between the reservoir and air exhausting means arranged to close when the air exhausting means is rendered inoperative.



4. In vacuum cleaning apparatus the combination of a vacuum reservoir having a dust discharge opening in the lower part thereof, a suction pipe or service main connected with said reservoir, air exhausting means connected with said discharge opening below said reservoir, a check valve in the connection between the reservoir and the air exhausting means adapted to close when the air exhausting means is rendered inoperative, and means adapted to automatically render the air exhausting means operative and inoperative according to variations of vacuum in the apparatus.

5. In vacuum cleaning apparatus the combination of a vacuum reservoir having a dust discharge opening in the lower part thereof, a suction pipe or service main connected with said opening, air exhausting means connected with said suction pipe or service main in alinement therewith adjacent to its connection with and below the reservoir, a check valve in the connection between the air exhausting means and the suction pipe or service main adapted to close when the air exhausting means is inactive or inoperative, and automatic means actuated by variations of vacuum in the apparatus to render the air exhausting means operative and inoperative.

1,104,061. CABLE AND METHOD OF FORMING AND CONNECTING THE SAME. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1908. Serial No. 418,122. (Cl. 173—264.)



1. A multi-conductor cable comprising a ribbon of insulated wires, the insulation of the wires being made discontinuous along a line oblique to the length of the cable, and the two sections of the cable on opposite sides of the oblique uninsulated line being displaced laterally with respect to each other.

2. A multi-conductor cable consisting of a ribbon of insulated wires having the insulation removed therefrom along a line oblique to the length of the cable, the two sections of the cable on opposite sides of the oblique line being displaced to bend the uninsulated portions of the wires of the cable substantially at right angles to said oblique line, and the cable being folded on itself along the oblique line to produce terminal projections of the wires.

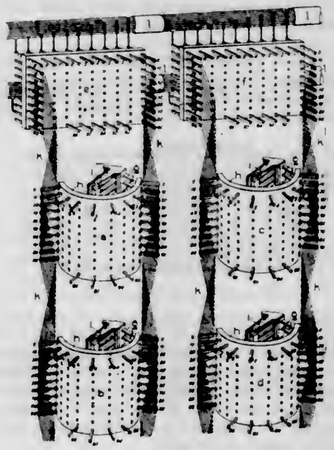
3. The method of bringing the wires of a flat cable out for connection without individually handling the same, which consists in making discontinuous the insulation of the wires along a line oblique to the length of the cable, displacing with respect to each other the sections of the cable on opposite sides of the oblique line to bend the bared portions of the wires substantially at right angles to said line, and folding the cable upon itself along the oblique uninsulated line.

4. A multi-conductor cable comprising a ribbon of wires, insulating fabric secured to the opposite sides of said ribbon, said fabric being made discontinuous along a line oblique to the length of the cable and the sections of the cable on opposite sides of the oblique uninsulated line being displaced laterally with respect to each other.

5. A multi-conductor cable consisting of a ribbon of wires inclosed by insulating fabric, said fabric being discontinuous along a line oblique to the length of the cable, the sections of the cable on the opposite sides of the oblique line being displaced to bend the uninsulated portion of the wires of the cable substantially at right angles to said oblique line, and the cable being folded on itself along the oblique line to produce terminal projections of the wires.

[Claim 6 not printed in the Gazette.]

1,104,062. WIRING SYSTEM FOR TELEPHONE-EXCHANGES. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1909, Serial No. 509,467. Renewed May 11, 1914. Serial No. 837,925. (Cl. 179—16.)



1. A row of selectors each having terminals arranged in curved rows and in intersecting straight rows, and brushes arranged to traverse said curved rows, in combination with a cable having conductors uniting terminals of successive rows on one selector with corresponding terminals on the other selectors, said cable running at a right angle to the planes of movement of the brushes and between the straight rows of terminals.

2. A selector having terminals in curved rows and brushes arranged to traverse said rows, in combination with a connecting rack having rows of terminals corresponding to said rows of the selector, a cable having conductors uniting terminals of the successive rows on the selector with corresponding terminals on the connecting rack, said cable running at a right angle to the planes of movement of said brushes, and a second cable having conductors connected to successive terminals of a row on the connecting rack.

3. A selector having terminals arranged in curved rows and straight rows at right angles to said curved rows and brushes adapted to traverse said curved rows, in combination with a connecting rack having terminals arranged in rows corresponding to those of the selector, a plurality of cables, the conductors of each of which unite successive termi-

nals in a straight row on the selector with the corresponding terminals on the connecting rack, said cables running in the direction of said straight rows of terminals, and a plurality of other cables, the conductors of each of which are connected to successive terminals of a row on the connecting rack corresponding to a curved row on the selector.

4. A row of selectors, each having terminals arranged to form curved rows and straight rows at right angles to said curved rows, and brushes adapted to traverse said curved rows, in combination with a connecting rack in line with the row of selectors having terminals arranged in rows corresponding to those of a selector, a plurality of cables, the conductors of each of which unite successive terminals in a straight row on one of the selectors with the corresponding terminals on the other selectors and connecting rack, said cables running in the direction of said straight rows of terminals, and a plurality of other cables, the conductors of each of which are connected to successive terminals in a row on the connecting rack corresponding to curved rows on the selectors.

5. A group of selectors, each having curved rows of terminals, and brushes arranged to traverse said rows, said selectors being arranged in rows extending at right angles to the planes of movement of the brushes, in combination with connecting racks, one in line with each row of selectors and having terminals corresponding to those of a selector, conductors running in the direction of said rows of selectors and uniting in multiple the corresponding terminals of the selectors in each row and connecting in line therewith, and other conductors arranged to unite corresponding terminals of the connecting racks.

[Claims 6 to 25 not printed in the Gazette.]

1,104,063. BOX. JEROME F. MCCALL, Philadelphia, Pa. Filed Feb. 5, 1914. Serial No. 816,657. (Cl. 229—34.)



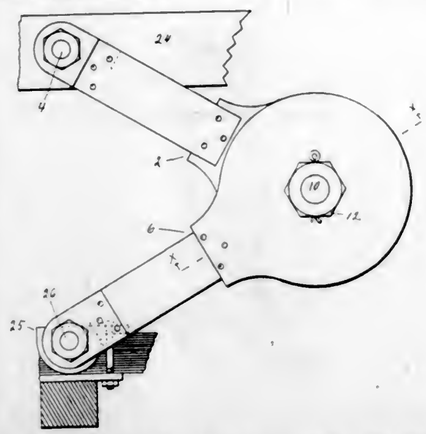
1. In a box member the combination of ends and sides in folded relation at the corners, an inturned fold on the end, and a flap integral with the side and passing back of the corner and end folds making five plies and projecting inward past said folds substantially parallel with and detached from the inner face of the body of the box member and engaging the inner part of the inturned end fold and constituting therewith a lock.

2. In a box member the combination of an end having an inturned fold, and a side passing back of said fold and having an integral flap extending inward past the fold and arranged substantially parallel with and free from the inner face of the body of the box member and engaging the inner part of the inturned fold to constitute a lock.

1,104,064. SHOCK-ABSORBER. JOHN A. MCKNIGHT, Louisville, Ky., assignor to The Millnite Mfg. Co., a Corporation of Kentucky. Filed Apr. 8, 1914. Serial No. 830,320. (Cl. 21—105.)

1. A shock absorber comprising a casing, a cover therefor, an intermediate member engaged by said cover, friction members between said intermediate member and said casing, said cover adapted to advance said intermediate member against the resistance of certain of said friction members and to engage and simultaneously advance certain other members against their friction with said casing.

2. In a shock absorber, a casing, a cover therefor, an intermediate member positioned in said casing, a lug on said cover adapted to engage said member, a brake shoe embracing a major portion of said member, a brake member in contact with a major portion of the wall of said casing, springs positioned between said shoes, a projection on said intermediate member adapted to engage the shoe in contact with casing wall.



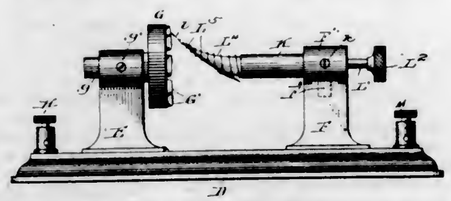
3. In a shock absorber, a casing, a cover for said casing, an intermediate member engageable by said cover, a plurality of friction couples disposed between said intermediate member and said casing, said couples comprising inner and outer members, springs between said members forcing same respectively against said casing and intermediate member, projections on said intermediate member adapted to engage said members and advance same simultaneously.

4. In a shock absorber, a casing, a cover rotatably seated on said casing, an intermediate member positioned in said casing, a lug on said cover entering said member, a bolt passing through said casing and engaged in said lug, a projection on said lug adapted to engage said member, a brake shoe in contact with said member, a brake shoe in contact with the wall of said casing and a projection on said member adapted to engage said second mentioned brake shoe and advance same.

5. In a shock absorber, a casing and a cover, said casing and cover relatively rotatable, a bolt connecting said casing and cover, an intermediate member within said casing, means associated with the cover for engaging said member, brake shoes in contact with said member, brake shoes contacting with the wall of said casing, means associated with said member for simultaneously engaging said second mentioned brake shoes.

[Claims 6 to 8 not printed in the Gazette.]

1,104,065. DETECTOR FOR WIRELESS APPARATUS. BENJAMIN J. MIESSNER, Washington, D. C. Filed Oct. 5, 1910. Serial No. 585,484. (Cl. 250—31.)



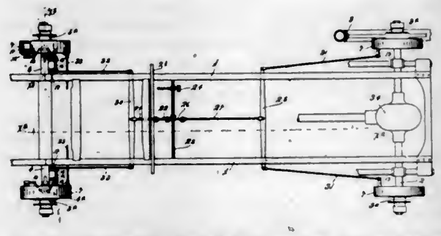
1. A detector for wireless apparatus comprising two contact devices, one consisting of a sensitive contact member, and the other of a metal point, and resilient means of relatively very small mass for lightly pressing the metal point against the sensitive contact member in a direction at an incline to the plane of the contact surface of such sensitive contact member.

2. A detector for wireless apparatus comprising two contact devices, one consisting of a sensitive contact member and the other of a metal point, and a light spring carrying said metal point and arranged to press it against said sensitive contact member in a direction inclined to the general plane of the sensitive contact member contact surface.

3. A detector for wireless apparatus, comprising two contact devices, one of which is a crystalline sensitive contact member and the other a light spring contact point having a resilient straight portion contacting with and extending at an incline to the crystal surface.

4. A detector for wireless apparatus comprising two contact devices, one consisting of a sensitive contact member, and the other of a metal point, and resilient means carrying such metal point contact and arranged to press the same lightly against such sensitive contact member in a direction at an incline to the contact surface of said sensitive contact member, said resilient means permitting a limited lateral sliding movement of the metal point over the contact surface of such sensitive contact member.

1,104,066. AUTOMOBILE BRAKE-ACTUATING MECHANISM. HAROLD S. MORTON, Minneapolis, Minn. Filed Dec. 9, 1912. Serial No. 735,633. (Cl. 21—8.)



1. The combination with a four-wheeled vehicle having steering knuckles with the front wheels journaled on said knuckles, of individual brakes applied to the hubs of all four wheels, and means for simultaneously setting all of the said brakes, comprising front and rear equalizing levers, the rods connecting the ends of said front and rear equalizing levers, respectively, to the front and rear brakes, the said front brake connections including swivel joints located approximately in line with the vertical axes of the knuckle pivots, a primary brake actuating lever, a secondary brake actuating lever pivotally connected at one end to one end of said primary lever, a rod connecting one end of said secondary lever to the intermediate portion of one of said equalizing levers, and a rod connecting the intermediate portion of said secondary lever to the intermediate portion of the other equalizing lever.

2. The combination with a four-wheeled vehicle and individual brake devices applied to the hubs thereof, of a primary brake actuating lever, a secondary brake actuating lever having one end pivoted to one end of said primary lever, front and rear equalizing levers having their ends connected to the respective front and rear brakes, a rod connecting the intermediate portion of one of said equalizing levers to the intermediate portion of said secondary brake actuating lever, and another rod connecting the free end of the latter to the intermediate portion of the other equalizing lever.

1,104,067. METHOD OF MAKING TRANSPARENT MODELS FOR ANATOMICAL STUDY. HASHIME MURAYAMA, New York, N. Y. Filed Oct. 17, 1913. Serial No. 795,811. (Cl. 35—16.)

1. The method of making transparent models for use in studying anatomical specimens which consists in tracing on paper the outlines of enlarged views of the specimen, then reproducing photographically the enlarged tracings on transparent plates, and finally assembling the transparent plates in successive serial order to form the completed model.



2. The method which consists in tracing the outlines of successive serial uniformly enlarged sectional views of an anatomical specimen, then photographically reproducing the enlarged tracings on transparent plates, and finally assembling the plates in the successive serial order of the original sectional views to form the completed model.

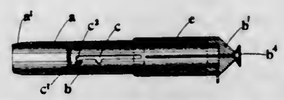
3. The method which consists in tracing the outlines of successive serial uniformly enlarged sectional views of an anatomical specimen, then supplying the respective enlarged tracings with details of the several specimen sections, then photographically reproducing the enlarged tracings on transparent plates, and finally assembling the plates in the successive serial order of the original sectional views to form the completed model.

4. The method which consists in tracing successive serial uniformly enlarged sectional views of an anatomical specimen, then producing photographic negatives from said tracings, then reproducing photographically the negative images upon transparent plates and finally assembling said plates in serial order to form the completed model.

5. The method which consists in tracing successive serial uniformly enlarged sectional views of an anatomical specimen, then producing photographic negatives from said tracings, then adjusting sensitized transparent plates upon said negatives to conform to the relation of said sectional views, and subjecting the same to the action of actinic light rays, and finally assembling the transparent plates in serial order.

[Claims 6 to 8 not printed in the Gazette.]

1,104,068. TOBACCO-PIPE FILLER AND POUCH FOR USE THEREWITH. DOWNES ELLAND NORTON, London, England. Filed Apr. 14, 1911. Serial No. 621,077. (Cl. 131—52.)



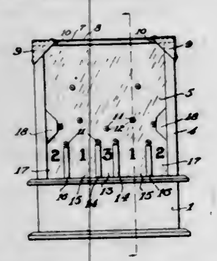
1. A pipe filler, consisting of an open-ended cylinder member of a diameter corresponding to that of the internal bore of a pipe, said cylinder member having a cutting edge at one end adapted to receive and cut a charge of tobacco, a second cylinder member disposed within the first cylinder member and adapted to act as a plunger, and means consisting of a bayonet slot and pin for connecting the said cylinder members together so that pressure may be applied through the second cylinder member for cutting the charge and filling it into the open end of the first cylinder member, said means permitting the disconnection of the respective cylinder members so that the charge of tobacco cut and received into the open end of the first cylinder member may be discharged, by the movement of the second cylinder member, into the bowl of the pipe, substantially as described.

2. A pipe filler, consisting of an open-ended cylinder member of a diameter corresponding to that of the internal bore of a pipe, said cylinder member having a cutting edge at one end adapted to receive and cut a charge

of tobacco, a second cylinder member disposed within the first cylinder member and adapted to act as a plunger, means consisting of a bayonet slot and pin for connecting the said cylinder members together so that pressure may be applied through the second cylinder member for cutting the charge and filling it into the open end of the first cylinder member, said means permitting the disconnection of the respective cylinder members so that the charge of tobacco cut and received into the open end of the first cylinder member may be discharged, by the movement of the second cylinder member, into the bowl of the pipe, and said means also permitting of cutting and producing charges of various size, substantially as described.

3. A pipe filler, consisting of an open-ended cylinder member of a diameter corresponding to that of the internal bore of a pipe, said cylinder member having a cutting edge at one end adapted to receive and cut a charge of tobacco, a second cylinder member disposed within the first cylinder member and adapted to act as a plunger, means consisting of a bayonet slot and pin for connecting the said cylinder members together so that pressure may be applied through the second cylinder member for cutting the charge and filling it into the open end of the first cylinder member, said means permitting the disconnection of the respective cylinder members so that the charge of tobacco cut and received into the open end of the first cylinder member may be discharged by the movement of the second cylinder member into the bowl of the pipe and a receptacle for the tobacco to be cut, substantially as described.

1,104,069. BONUS-DETERMINING DEVICE. HENRY E. OLIVER, Birmingham, Ala., assignor of one-half to John V. Morris, Birmingham, Ala. Filed June 2, 1913. Serial No. 771,344. (Cl. 46—56.)



1. In an apparatus of the character described, a cabinet comprising a wide coin passage way, a series of coin receiving pockets provided at the bottom of said passage way, a top cover for said passage way having therein an elongated coin slot which extends directly over a major portion of the bottom of the coin passage way above said pockets, a transparent front wall for said coin passage way, and pins which project into said coin passage way and are arranged to prevent a coin being dropped directly into any given pocket while permitting the coin to be dropped skilfully to directly strike any one of a number of pins and to rebound therefrom before entering a pocket, substantially as described.

2. In an apparatus of the character described, a cabinet provided with a wide vertical coin passage having its front wall transparent, resilient pins interposed in said passage way and having a predetermined relationship to each other and to coin pockets at the bottom of the passage, a cover over the passage having an elongated slot which extends directly over a number of said pins to permit a coin being skilfully dropped against any pin selected from among those disposed directly under said slot to obtain a predetermined rebound therefrom, and partitions forming pockets to receive coins at the bottom of the passage.

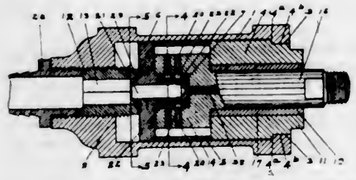
3. In an apparatus of the character described, a cabinet provided with a wide vertical coin passage having substantially parallel side walls and a transparent front wall, resilient pins interposed in said passage way and distributed crosswise thereof in a predetermined relationship to each other and to coin pockets at the bottom of the passage, a top cover over the passage having a slot extending substantially from side to side of the top and being sufficiently elongated to permit a coin being skilfully dropped from different selected points in the slot against the pin selected to obtain a predetermined rebound therefrom, partitions forming pockets to receive coins at the bottom of the passage, a movable bottom for the pockets, and a till into which the coins fall when said bottom is moved.

4. In a machine of the character described, a cabinet having a glass front, a back carrying pins set in predetermined relationship, said back and front forming between them a coin passage way, a plurality of separate coin receiving pockets disposed at the bottom of the passage way, and a top cover for said passage way having therein a slot which directly overhangs the major portion of the bottom of the passage way above said pockets and is made many times the width of the coin intended to be dropped therethrough to permit a coin to be dropped directly from different points in the slot toward the different pockets, said pins being arranged to prevent the coin being dropped directly into any given pocket, substantially as described.

5. In an apparatus of the character described, a cabinet comprising walls forming a wide vertical coin passage, one wall being transparent, coin deflecting means in said passage, and a cover over said passage provided with a slot extending substantially the width of the passage and having its marginal side edges formed of glass.

[Claims 6 to 8 not printed in the Gazette.]

1,104,070. ROTARY MOTOR. CHARLES F. OVERLY, Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 19, 1912. Serial No. 672,247. (Cl. 121—77.)



1. In a rotary motor, a casing having an open end with a projection extending inwardly from an arc of the circle of its bore forming a shoulder therein, a motor bearing member fitted to said bore and having a reduced portion throughout its length adapting it to entirely pass said projection and means including a screw-plug to clamp said member against said shoulder, substantially as described.

2. In a rotary motor, a casing having an open end with a projection extending inwardly from an arc of the circle of its bore forming a shoulder therein, a motor cylinder and a motor bearing member with means to fix same in their relation to each other, said cylinder and bearing member fitted to said bore and each having a reduced portion throughout its length adapting it to entirely pass said projection and means including a screw-plug to clamp said cylinder and bearing member in place with said bearing member against said shoulder, substantially as described.

3. In a rotary motor, a casing having an open end with a projection extending inwardly from an arc of the circle of its bore forming a shoulder therein, a rotary motor member, motor bearing members on opposite sides of said rotary motor member fitted to said bore and each having a reduced portion throughout its length adapting it to entirely pass said projection and means including a screw-plug to clamp said bearing members in place with one of them against said shoulder, substantially as described.

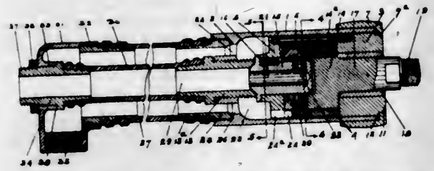
4. In a rotary motor, a casing having an open end with a projection extending inwardly from an arc of the circle of its bore forming a shoulder therein, a rotary motor

member, a motor cylinder and motor bearing members at the respective ends thereof with means to fix said cylinder and bearing members in their relation to each other, said cylinder and bearing members being fitted to said bore and each having a reduced portion throughout its length adapting it to entirely pass said projection and means including a screw-plug to clamp said cylinder and bearing members in place with one of said bearing members against said shoulder, substantially as described.

5. In a rotary motor, a casing having a bore with an integral head at one end and open at its opposite end with a projection extending inwardly from one or more arcs of the circle of its bore forming a shoulder or shoulders therein, a motor bearing member fitted to said bore and having a reduced portion throughout its length adapting it to entirely pass said projection or projections and means including a screw-plug to clamp said bearing member against said shoulder or shoulders, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,104,071. ROTARY MOTOR FOR DRIVING TOOLS. CHARLES F. OVERLY, Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 19, 1912. Serial No. 672,248. (Cl. 121—77.)



1. In a rotary motor, a casing having an open end, a motor bearing member adapted to be inserted through said open end, an abutment adapted to be inserted in an opening in the wall of said casing from the inner side thereof and form a stop to prevent the outward movement of said bearing member and means to secure said bearing member against said abutment.

2. In a rotary motor, a casing having an open end, a motor bearing member adapted to be inserted through said open end, an abutment adapted to be inserted in an opening in the wall of said casing from the inner side thereof and form a stop to prevent rotary and outward movement of said bearing member and means to clamp said bearing member against said abutment.

3. In a rotary motor, a casing having an open end, a motor bearing member adapted to be inserted through said open end, an abutment adapted to be inserted in an opening in the wall of said casing from the inner side thereof and form a stop to prevent rotary and outward movement of said bearing member, said bearing member being adapted to retain said abutment in place and means to secure said bearing member against said abutment.

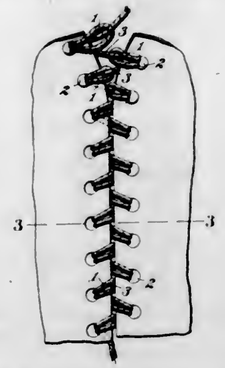
4. In a rotary motor, a casing having an open end, a motor bearing member adapted to be inserted through said open end, a wearing ring and means to fix said ring in its relation to said casing, said means also forming a stop to prevent rotary and outward movement of said bearing member.

5. In a rotary motor, a casing having an open end, a wearing ring and an abutment inserted from the inner side of said casing through an opening in the wall thereof into an opening in said ring to fix said ring in place.

[Claims 6 to 12 not printed in the Gazette.]

1,104,072. SEAM OF STITCHES FOR UNITING MATERIALS AT THEIR ABUTTING EDGES. EDNA A. PERRY, Beverly, Mass. Filed Apr. 14, 1909. Serial No. 489,856. (Cl. 112—34.)

1. In a seam of stitches for uniting materials at their abutting edges with a single thread the combination with the materials having abutting edges to be sewn, of loops of thread on one side of the materials arranged alternately first upon one material and then upon the other, and single threads connecting the loops on the opposite side of the materials, each single thread passing through the closed end of one of said loops, substantially as described.



2. In a seam of stitches for uniting materials at their abutting edges with a single thread the combination with the materials having abutting edges to be sewn, of loops of thread on one side of the materials extending to the abutting edges of the materials alternately first from one material and then from the other, and single threads on the opposite side of the materials extending across the abutting edges from one material to the other and connecting the alternate loops, each single thread passing through the closed end of one of said loops, substantially as described.

3. In a seam of stitches for uniting materials at their abutting edges the combination with the materials having abutting edges to be sewn, of a plurality of loops of thread, each loop of which is passed upwardly through a single one of a series of holes disposed in a single row in each of the respective materials adjacent to the abutting edges, extends along the surface of the material from said hole to the abutting edges and is held by thread passed through its closed end at the abutting edges, substantially as described.

4. In a seam of stitches for uniting materials at their abutting edges the combination with the materials having abutting edges to be sewn, of loops of thread passed upwardly through holes disposed in a single row in each of the respective materials adjacent to the abutting edges, extending along the upper surface of the materials from said holes to the abutting edges and secured by thread extending beneath the materials and passed through the closed ends of the loops at the abutting edges, substantially as described.

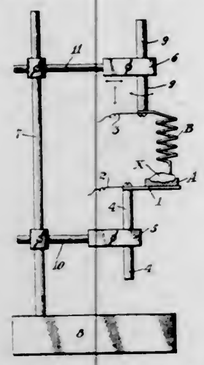
5. In a seam of stitches for uniting materials at their abutting edges the combination with the materials having abutting edges to be sewn, of loops of thread passed upwardly through holes in each of the materials adjacent to the abutting edges, extending along the surface of the materials from said holes to the abutting edges and held by a thread from the other side of the materials passed through the closed ends of the loops at the abutting edges of the materials, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,104,073. DETECTOR FOR WIRELESS TELEGRAPHY AND TELEPHONY. GREENLEAF WHITTIER PICKARD, Ameshury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y., a Corporation of New York. Filed June 21, 1911. Serial No. 634,521. (Cl. 250—31.)

1. A contact member for a detector rectifier, which consists of a wire of electrically conducting material formed

with a loop, in combination with a rotatable support to which one end of the wire is secured, the free end of the wire being offset from the center of the support.



2. The combination with a conducting solid possessing the property of rectification, of a contact member therefor which consists of a metallic terminal of low inertia, constructed with flexibility and freedom of movement in all lateral directions when in contact with said rectifying member, whereby the body of the contact member may be moved by shocks or jars without shifting its contact point on the rectifying member.

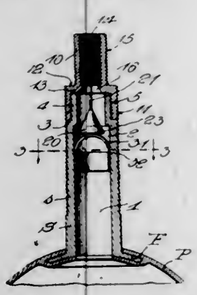
3. A contact member for a detector rectifier, which consists of an alloy of platinum and gold.

4. The combination with a conducting solid possessing the property of rectification, of a contact member therefor, which consists of a springy wire of electrically conducting material formed with a loop.

5. A contact member for a detector rectifier, which consists of a platinized gold wire formed with a loop.

[Claims 6 to 13 not printed in the Gazette.]

1,104,074. AIR-VALVE FOR PNEUMATIC TIRES. FRANK P. ROOT, Akron, Ohio. Filed Sept. 12, 1912. Serial No. 720,029. (Cl. 152—12.)



1. In an air valve for pneumatic tires, the combination with the tubular stem having a valve seat, and an outwardly closing valve therefor; of a stop consisting of a cylindrical body frictionally mounted within the interior of said stem, and a tongue projecting from one side of said body toward the valve and curved over toward the other side of said body.

2. In an air valve for pneumatic tires, the combination with a stem whose bore is shouldered near its outer end and reduced and cylindrical beyond said shoulder, and is provided beyond said reduced portion with a valve seat and beyond the seat in turn with an extension for the pump; of a valve movable within the reduced portion of said bore, a stem projecting from said valve through said extension, and a stop adjustably mounted within the larger portion of said bore.

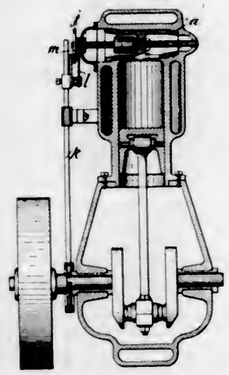
3. In an air valve for pneumatic tires, the combination with a stem whose bore is shouldered near its outer end and reduced and cylindrical beyond said shoulder, and is provided beyond said reduced portion with a valve seat; of a conical valve whose larger inner end is slidably mounted within the reduced portion of the bore, a stem projecting from its smaller end through said valve seat, and a stop within the larger portion of said bore at a point to prevent the withdrawal of the stem from said valve seat when the valve is pushed inward as described.

4. In an air valve for pneumatic tires, the combination with a stem made in inner and outer parts whereof the inner part is externally threaded at its outer end and the outer part is internally threaded to fit the threads of the inner part and shouldered beyond its threads to rest against the extremity of the inner part, the outer part having an internal valve seat opposite said shoulder; of an extension on the outer part rising from said shoulder, and a soft valve having a stem projecting into said extension and a conical head adapted to close against said seat.

5. In an air valve for pneumatic tires, the combination with a stem made in inner and outer parts thereof the inner is externally threaded at its outer end and the outer is internally threaded to fit the threads of the inner and shouldered beyond its threads to rest against the extremity of the inner part, the outer part having an internal valve seat opposite said shoulder; a conical valve of soft material whose body is adapted to close into said seat and whose inner end is slidably mounted within the bore of the inner part and of greater circumference than any portion of the seat.

[Claim 6 not printed in the Gazette.]

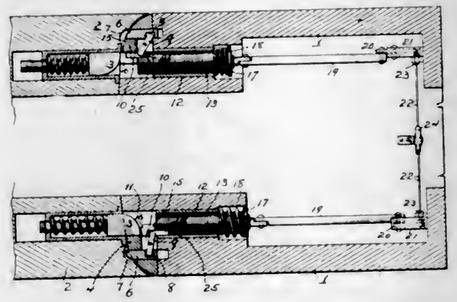
1,104,075. FOUR-STROKE CYCLE-ENGINE. JUAN DIEGO SHAW, Buenos Aires, Argentina. Filed Oct. 19, 1912. Serial No. 726,739. (Cl. 123—80.)



1. In an internal combustion engine, the combination of a cylinder having a transverse bore; a crank shaft, a piston rod and a piston for the engine; an eccentric on the shaft; a cylindrical distributing device in said bore and having a transverse partition providing a carbureter chamber and an exhaust chamber, each chamber being provided with an opening one opening being about 90° in advance of the other and both adapted to communicate with the cylinder; a toothed piece secured to said device and having four backwardly opening undercut teeth; an eccentric rod engaging the eccentric; and a pair of spring pressed fingers pivoted to said rod and engaging in said teeth.

2. In an internal combustion engine, the combination of a cylinder provided at its upper end with a transverse bore; a piston in the cylinder; a shaft operatively connected therewith; an eccentric on said shaft; a cylindrical distributing device snugly disposed in said bore and having a transverse partition providing a carbureter chamber communicating with the carbureter and with an exhaust chamber communicating with the exhaust, each of said chambers provided with an opening one opening being about 90° in advance of the other and each adapted to establish communication between its chamber and the cylinder; spring pressed packing strips in the outer face of said device; a shaft passing through said device and projecting at one end; a baffle piece on said shaft in said exhaust chamber to prevent the exhaust striking the opposite wall of the chamber; a toothed piece on said projecting end of the shaft and having four undercut teeth having their shoulders disposed to the rear of the direction of rotation of the teeth; an eccentric rod connected to said eccentric and disposed near said tooth piece; and a pair of spring pressed fingers pivoted to said rod and adapted to engage the said teeth.

1,104,076. DOOR-LATCH-RELEASING DEVICE. WILLIAM M. SIMMONS, Burlington, Iowa. Filed Aug. 16, 1913. Serial No. 785,185. (Cl. 70—42.)



1. The combination with a vehicle body provided at respective sides with doors and latches for said doors, of latch releasing means, a hand lever at the front of the vehicle, levers connected with said latch releasing means, cords connected respectively with said last mentioned levers, and both of said cords connected with said hand lever at the same side of the pivotal support of the latter, whereby one of said cords will be drawn taut to operate one of the door latches and the other cord will be slackened when the hand lever is moved in one direction or the other.

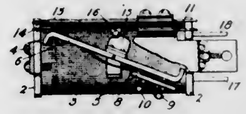
2. The combination with a vehicle body provided with doors at respective sides, and latches for said doors, of latch releasing plungers for said latches, pivoted levers, rods connecting said plungers with said levers, a hand lever at the front of the vehicle and in a plane between the planes of the first-mentioned levers and two cords secured to said hand lever at the same side of its pivotal support and attached respectively to the first-mentioned levers.

3. The combination with a vehicle body, a door therefor, a latch for the door, and a keeper for the latch, of an auxiliary movable stop for the latch mounted near the latch-engaging part of the keeper.

4. The combination with a vehicle body, a door therefor, a latch for the door, and a keeper for the latch, of a plunger, means for operating the plunger to move the latch from the keeper, a movable stop near the engaging face of the keeper, and connections between the plunger and said stop for moving the latter.

5. The combination with a vehicle, a door therefor, a latch for the door and a keeper for said latch, of an auxiliary movable stop near the engaging face of the keeper, a plunger to engage the latch for moving it away from the keeper, a shoulder on said plunger, a pivoted lever cooperating with the shoulder on the plunger and with the auxiliary stop for operating the latter, and means for operating the plunger.

1,104,077. ELECTROMAGNETIC CIRCUIT-CONTROLLING DEVICE. WILLIAM F. SMITH, Brooklyn, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 30, 1912. Serial No. 734,334. (Cl. 175—325.)



1. The combination with an electromagnet, of lateral extensions from the terminals of the core thereof, a yoke secured to the said extensions, a centrally pivoted armature supported by the yoke, a set of contacts supported by the yoke and contact operative means carried by and located near the center of the armatures.

2. In an electromagnetic device the combination with a core, of spool heads of magnetic material attached to the terminals thereof and adapted to serve as polar extensions for the said core, a centrally pivoted armature, a set of contacts and means near the center of the armature for operating the said contacts.

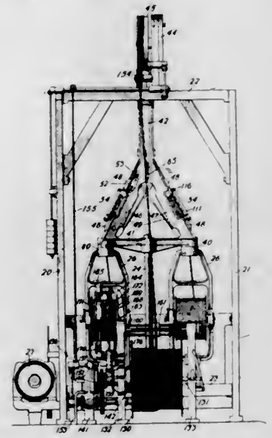
3. In a relay the combination with an electromagnet, of a centrally pivoted armature, a set of contacts, and actuating means carried by the armature and located near the center thereof adapted upon a slight movement of the armature to produce a wide range of movement of the said contacts.

4. In a relay, the combination with an electromagnet, of an armature, a set of contact devices, a roller carried by one of the said devices, a cam carried by and located near the center of the armature adapted to engage the roller to cause the operation of the contact devices.

5. In a relay, the combination with an electromagnet, of a centrally pivoted armature, a set of contact springs, a cam carried by said armature, and means carried by one of said springs near the center thereof engaged by said cam in the movement of said armature for closing said contact springs.

[Claims 6 and 7 not printed in the Gazette.]

1,104,078. TWISTING-MACHINE. WILLIAM F. SMITH, Chicago, Ill., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Oct. 3, 1913. Serial No. 793,128. (Cl. 28—21.)



1. In combination, mechanism for twisting a plurality of strands, means for drawing the strands through said twisting mechanism, and speed equalizing means for the

strands comprising two endless flexible members and means for causing said endless flexible members to engage the strands.

2. In combination, mechanism for twisting a plurality of strands, means for drawing the strands through said twisting mechanism, and means for equalizing the speed of the strands comprising two endless belts and pressure devices for causing said belts to grip the strands.

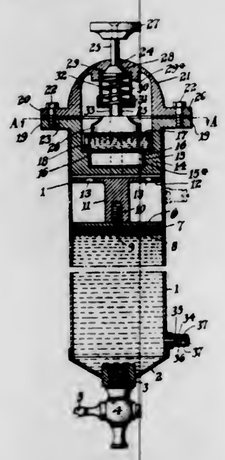
3. In combination, mechanism for twisting a plurality of strands, means for drawing the strands through said twisting mechanism, and means for equalizing the speed of the strands comprising two endless belts, pulleys over which said belts are passed and pressure devices for causing said belts to grip the strands.

4. In a machine for twisting strands, mechanism for equalizing the speed of the strands comprising two endless belts, a plurality of pulleys over which said belts are passed and pressure devices for causing said belts to grip the strands, each of said pressure devices comprising a bracket and a plurality of spring pressed rollers mounted on said bracket, said belts passing between said rollers and being forced together thereby.

5. In combination, mechanism for twisting a plurality of strands, means for drawing the strands through said twisting mechanism, speed equalizing means for the strands comprising two endless flexible members and means for causing said endless flexible members to engage said strands, and means for adjusting the tension on said endless flexible members.

[Claims 6 to 30 not printed in the Gazette.]

1,104,079. FIRE-EXTINGUISHER. CASSIN SNYDER, Philadelphia, Pa. Filed May 23, 1912. Serial No. 699,128. (Cl. 169—7.)



1. In a fire extinguisher, a chamber containing fire extinguishing material, a hollow member closing an end of said chamber, a dome member secured to said hollow member, a removable cup in said hollow member adapted to contain a chemical, an independent chemical container, a rod extending through said dome, a spring within said dome controlling said rod, a casing for said spring, and means controlled by said rod for bringing the chemicals into contact to produce gas pressure.

2. In a fire extinguisher, a chamber containing fire extinguishing material, a hollow member forming a closure for one end of said chamber, said hollow member having a pocket adapted to contain chemical material, ledges on said hollow member above said pocket, a fragile chemical container resting on said ledges and extending across said pocket, and means extending to the exterior of said chamber for delivering a blow to said fragile container.

3. In a fire extinguisher, a chamber having a compartment containing fire extinguishing material, an independent compartment containing chemicals for producing gas pressure, a plunger adapted to expel the fire extinguishing material and subjected to said gas pressure, and a safety valve normally separated by said plunger from the gas produced by said chemicals and adapted to be directly subjected to the gas pressure after predetermined movement of said plunger.

4. In a fire extinguisher, the combination with a casing, of a member filling one end thereof, a second member secured to said member, said members forming a chamber independent of said casing, normally isolated chemicals in said chamber, means extending to the exterior for bringing said chemicals together, fire extinguishing material in said casing, a plunger fitting within said casing and isolating said fire extinguishing material from said members, and means forming a gas passage from said chamber to the side of said plunger opposite to said fire extinguishing material.

5. In a fire extinguisher, the combination with a casing, of a member closing one end thereof, a second member forming with said first member an independent chamber, gas producing chemicals in said chamber, a fragile container normally isolating one of said chemicals, a rod extending to the exterior of said chamber for breaking said fragile container, a spring within said chamber, and a spring casing secured to said second member, said spring normally exerting pressure on said rod away from said fragile container.

[Claims 6 to 8 not printed in the Gazette.]

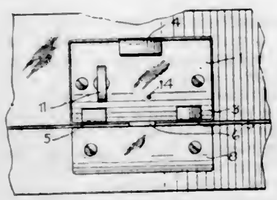
1,104,080. SAFETY-RAIL. JAMES A. SPECK, Salem, Oreg. Filed Jan. 15, 1914. Serial No. 812,212. (Cl. 239—6.)



1. In combination, rails having adjacent ends beveled to present a continuous tread surface, means for securing the ends of the rails in spaced relation, and parallel cuts in the base of said rails adjacent said last mentioned means, said cuts forming lugs of the material therebetween which are bent against the ends of said last mentioned means to form a lock thereagainst.

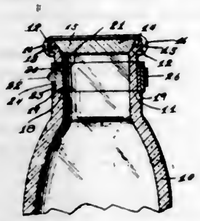
2. In combination, rails having parallel scarfed ends to form a continuous tread surface, a chair adapted to hold said rails in spaced relationship to each other, said chair having beveled ends, and means on the base of said rails running parallel with the beveled ends of said chair adapted to butt against said ends and lock said chair in operative position.

1,104,081. SASH-LOCK. HENRY J. STANG, Bison, Kans. Filed Jan. 10, 1913. Serial No. 741,304. (Cl. 16—143.)



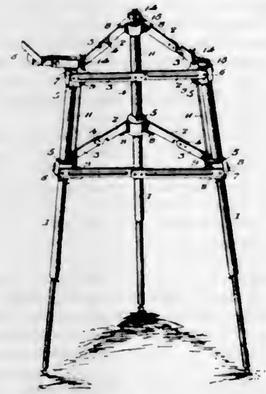
A sash lock including a casing provided with an opening, a bolt slidably supported within the casing and adapted to be directed through the opening thereof, a rod having one end pivotally connected to the bolt, a drum rotatably mounted within the casing and through which the free extremity of the rod is slidably directed, said drum being provided with means whereby it may be rotated.

1,104,082. MILK-BOTTLE. WILLIAM STOCK, Passaic, N. J. Filed Aug. 9, 1913. Serial No. 783,957. (Cl. 215—8.)



A bottle comprising a neck, said neck provided with an opening in one side thereof a plug carrying a knob on its outer face positioned in said opening, a band provided with an aperture passing around said neck and said knob fitting in said aperture in said band for securely holding said plug in said opening.

1,104,083. FOLDING TABLE. HARRY A. STONE, New York, N. Y., assignor to Folding-Stand Company, Inc., New York, N. Y., a Corporation of New York. Filed May 10, 1913. Serial No. 766,796. (Cl. 45—117.)



A folding table having, in combination, bodily movable foldable independent legs, upper and lower jointed braces pivoted to and connecting the legs whereby the legs may all fold together, abutments on the legs with which the braces engage when the table is in extended condition, latches for locking the braces against the abutments when the table is in extended condition, and operating means common to the latches for the lower braces and those for the upper braces for each leg.

1,104,084. BUTTON. CHARLES L. THATCHER, Providence, R. I., assignor to Irons and Russell Company, Providence, R. I., a Corporation of Maine. Filed Mar. 12, 1914. Serial No. 824,226. (Cl. 24—97.)



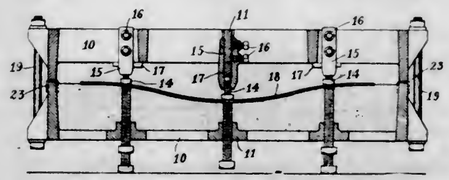
1. A button comprising a front plate having a buttonhole engaging post, a retaining member carried by said post having a pair of yieldable fabric engaging fingers the whole being adapted to be rotated a quarter turn after passing through the buttonhole and means whereby said fingers may be moved to yieldably grip the fabric and bind the same against the back of the front plate.

2. A button of the character described comprising a front portion having a buttonhole engaging post, a retaining member pivoted on said post and having portions extending on opposite sides of the pivoting point, said member being adapted to be turned up substantially in line with the post to facilitate passing through the buttonhole and subsequently to be turned down at substantially right angles thereto to engage the fabric and lock the button in position.

3. A button comprising a front plate having a buttonhole engaging post, a retaining member pivoted on said post and having one or more yieldable fabric engaging fingers extending to one side of the pivot, and a binding and manipulating portion on the other side of said pivot, said member being adapted to be turned up substantially in line with the post to facilitate positioning in the buttonhole of the wearer and to be turned down on its post at substantially right angles thereto to lock the button in position.

4. A button comprising a front plate having a buttonhole engaging post, a retaining member pivoted on said post and having a pair of yieldable fabric engaging fingers extending to one side of the post, and a binding and manipulating portion on the other side of said pivot, said member being adapted to be turned up substantially in line with the post to facilitate positioning in the buttonhole of the wearer, the whole being adapted to be rotated a quarter turn after passing through the buttonhole and the retaining member then turned down at substantially right angles to the post to cause said fingers to yieldably grip the fabric and bind the same against the back of the front plate.

1,104,085. MOLDING-FLASK. HENRY E. THOMPSON, Newark, N. J., assignor of three-fourths to Percy L. Gallagher, Verona, N. J., and one-fourth to Joseph D. Gallagher, Glen Ridge, N. J. Filed Nov. 16, 1911. Serial No. 660,569. (Cl. 22—96.)



1. A molding flask comprising a plurality of abutments adjustably and removably secured to said flask, said abutments being provided with independent adjustable contact points adapted to constrain the casting within said flask.

2. A molding flask provided with supporting bars, abutments adjustably secured to said bars and provided with adjustable contact points adapted to constrain the casting within said flask.

3. A molding flask provided with supporting bars, abutments having bifurcated outer ends for straddling said bars and adjustable contact points at the inner ends adapted to constrain the casting within said flask, and means for adjustably securing the bifurcated ends of the abutments to said bars.

4. In an improved molding flask, supporting bars and abutments comprising pins and divided bases straddling said bars, said pins being threaded into said bases, substantially as described.

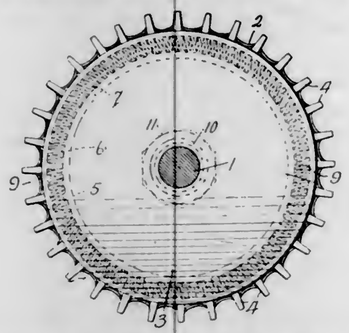
5. In an improved molding flask, supporting bars, abutments straddling said bars and wedges under said abutments, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,104,086. SPROCKET-WHEEL. HELMER ULLENSAKER, Hatton, N. D. Filed Oct. 27, 1913. Serial No. 797,553. (Cl. 74—29.)

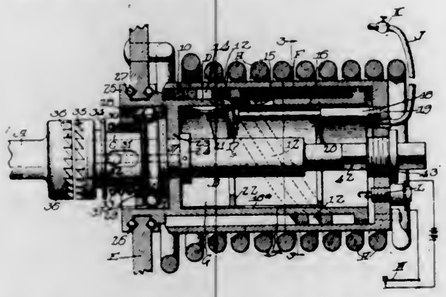
A device of the character described comprising three sections, the intermediate section being of greater diam-

eter than the outer sections and having its periphery provided with chain engaging teeth and provided with laterally projecting flanges, the outer sections being connected one to the other and the intermediate section being capable of rotation independently of the outer sections, the outer sections being provided with inwardly directed annular flanges having their inner faces grooved and adapt-



ed to contact with the adjacent face of the intermediate section, the intermediate section having a projection on each face thereof adapted to extend within the groove of the adjacent outer section, such projections being diametrically opposed, and an expansible member positioned within the groove of each of the outer sections, the extremities of such member being in contact with the projection of the intermediate section disposed in such groove.

1,104,087. STARTING DEVICE FOR EXPLOSIVE-ENGINES. LEWIS C. VAN RIPER, New York, N. Y. Filed May 28, 1912. Serial No. 700,283. (Cl. 123—179.)



1. The combination with an engine shaft, of starting mechanism for the same comprising a rotatable cylinder element, a longitudinally movable piston element, which elementa together provide an explosion chamber, means for introducing an explosive into said explosion chamber, means for igniting the same, one element being formed with a cam slot and the other being provided with a follower which moves in said cam slot whereby the longitudinal movement of the piston element imparts a rotating movement to the cylinder element, a spring against the tension of which the explosion takes place, and means operated by the longitudinal movement of the piston element for connecting and disconnecting the cylinder element to said engine shaft.

2. The combination with an engine shaft having a clutch member, of a starting shaft, a clutch member which is movable on said starting shaft, a rotatable cylinder element, a longitudinally movable piston element, which elements form together an explosion chamber, means for introducing an explosive into said chamber, means for igniting the same, a spring against the tension of which the explosion takes place, one of said elements being formed with a cam slot and the other with a follower which moves in said cam slot, and means actuated by the movement of one of said elements for causing said movable clutch member to be engaged with and disconnected from the clutch member on the engine shaft.

3. In starting mechanism the combination with a rotatable cylinder element, of a longitudinally movable piston element, which elements together provide an explosion chamber, means for introducing an explosive into said explosion chamber, means for igniting the same, one element being formed with communicating cam slots angularly arranged one to another and the other being provided with a follower which moves in said cam slots whereby the longitudinal movements of the piston element in opposite directions imparts a rotating movement in one direction to the cylinder element, a starting shaft, and means for coupling the cylinder element to said starting shaft, one end of said starting shaft having a suitable cross sectional configuration for a crank, substantially as described.

4. In starting mechanism the combination with a rotatable cylinder element, of a longitudinally movable piston element, which elements together provide an explosion chamber, and means for introducing an explosive into said explosion chamber and igniting the same, one element being formed with a cam slot and the other being provided with a follower which moves in said cam slot whereby the longitudinal movement of the piston element imparts a rotating movement to the cylinder element, a starting shaft arranged within said explosion chamber, the extremity of which is suitably formed to be engaged by a crank, the head of the piston being formed with a removable part by means of which access may be had to the starting shaft, and means for engaging the starting shaft with said cylinder element and for disengaging the same when power is applied to said shaft.

5. The combination with the shaft of an engine provided with a clutch member, of starting mechanism comprising a starting shaft, a clutch member longitudinally movable on said starting shaft, a rotatable cylinder, a cylindrical piston which telescopes over said cylinder, the piston and cylinder providing together an explosion chamber, means for introducing an explosive into said chamber, means for igniting the same, a spring secured to said piston element so as to be put under tension by the outward movement of the piston when the explosion takes place, a clutch between the cylinder and said starting shaft, intersecting spiral camways formed on said cylinder, a follower on the piston adapted to move in said camways, a spring which tends to force the movable clutch member on the starting shaft into engagement with the clutch on the engine shaft, a lever, one end of which bears against the movable clutch member and the other upon the piston so as to hold said clutch members separate when the piston is in its inner position but permit them to engage when the piston is moved outwardly, a removable plug in the head of the piston which bears against the starting shaft so as to hold the piston a trifle away from its inmost position, the outer end of said starting shaft being suitably formed for a crank, and the piston being formed with a slot adapted to receive the engaging end of said lever when the piston moves to its inmost position upon the removal of said plug, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,104,088. METHOD FOR MAKING HOLLOW AXLES. CHARLES M. WALES, New York, N. Y. Filed Nov. 10, 1911. Serial No. 659,510. (Cl. 29—165.)



1. The herein described method of forming the journal end of a tubular car axle which consists in first forming a central axial hole in the axle, and a journal portion having an external taper from a smaller diameter at the end to a larger diameter at the wheel seat and then forcing a ring formed of segments and having an internal diameter substantially equal to the diameter of the end of said taper journal portion longitudinally over said journal portion while the segments of said ring are rigidly held together.

2. The herein described method of forming the journal end of a tubular car axle which consists in first forming a central axial hole in the axle, and a journal portion having an external taper from a smaller diameter at the end to a larger diameter at the wheel seat and then forcing a ring formed of segments and having an internal diameter substantially equal to the diameter of the end of said taper journal portion longitudinally over said journal portion and then forming a collar at the end of said journal by forcing a shouldered mandrel against said end while said segments are rigidly held together.

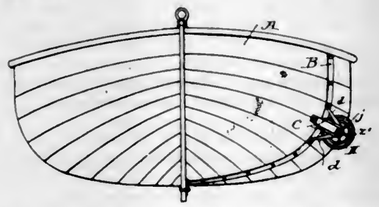
3. The herein described method of forming the journal end of a tubular car axle which consists in first forming a central axial hole in the axle, and a journal portion having an external taper from a smaller diameter at the end to a larger diameter at the wheel seat and then forcing a ring formed of segments and having an internal diameter substantially equal to the diameter of the end of said taper journal portion longitudinally over said journal portion and then forcing a tapered and shouldered mandrel into and against the end of said axle while said segments are rigidly held together.

4. The herein described method of forming the journal ends on tubular car axles which consists in forming a tubular forging and reducing the diameter of the ends by forcing longitudinally thereon a ring shaped forming die of smaller diameter and made up of segments while said segments are rigidly held together.

5. The herein described method of forming the journal end of tubular axles which consists in forming a tubular forging of the approximate length of the finished axle forging, reducing the diameter of the end by forcing a ring formed of segments, longitudinally thereon of less diameter, and forming a collar by forcing a shoulder against the end while said ring is held in place.

[Claim 6 not printed in the Gazette.]

1,104,089. AUTOMATIC SAFETY LAUNCHING DEVICE FOR LIFE-BOATS. CHARLES W. WEILAND, Brooklyn, N. Y. Filed Dec. 5, 1913. Serial No. 804,839. (Cl. 9—22.)



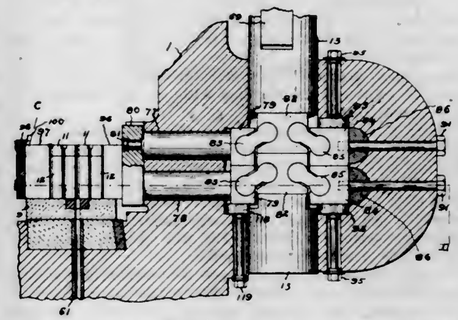
1. The combination with the hull of a lifeboat adapted to be launched from a ship, of a plurality of strengthening bands extending substantially from the gunwale to the keel of said life boat, brackets mounted on said bands approximately at the bilge of said life boat, and adapted together with said bands to distribute shocks over a large area of the said hull, and wheels mounted in said brackets and adapted to roll on the side of said ship as the said life boat is raised or lowered, substantially as described.

2. The combination with the hull of a life boat adapted to be launched from a ship, of a plurality of vertical bands, one of said bands being nearer to the bow and the other nearer to the stern of said life boat, wheels, and brackets therefor mounted on said bands adjacent to the curve of the bilge of the said hull, and so extended outwardly from said hull that the peripheries of said wheels are approximately in the same vertical plane as is the upper part of the said hull, substantially as described.

3. The combination with the hull of a life boat of vertical strengthening bands, and wheel brackets mounted thereon and comprising a yoke fastened to said band, a lateral stay brace *d* and a longitudinal stay brace *e*, and a wheel mounted in said bracket and adapted to roll on the side of a ship, substantially as described.

4. The combination with the hull of a life boat adapted to be launched from a ship of a plurality of bands, extending substantially from the gunwale to the keel, brackets mounted thereon and located below the gunwale and above the center of gravity of said lifeboat, and wheels carried by said brackets and adapted to roll down the side of the ship, substantially as described.

1,104,090. HEADER. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Nov. 29, 1913. Serial No. 803,670. (Cl. 10—50.)



1. The combination with dies; of means for imparting a lateral movement thereto; and means connected therewith, whereby the resistance pressure by the dies upon the wire will be variable at different points throughout the length of the dies.

2. The combination with dies; of means for imparting a lateral movement thereto, having independently operated members; and means for varying the relative positions of said members.

3. The combination with dies; of means for imparting a lateral movement thereto in one direction, said means having companion members connected therewith; and means for independently varying the relative positions of said companion members.

4. The combination with dies; of means for moving the same laterally, said means having a plurality of independent slides; a primary member; means for connecting said slides to said primary member; and means for independently adjusting the relative positions of said slides.

5. The combination with dies; of means for imparting a lateral movement thereto, comprising a plurality of reciprocating members; a plunger; an operative connection between each of said slides and said plunger; and means for independently varying the position of each of said slides toward and away from said plunger.

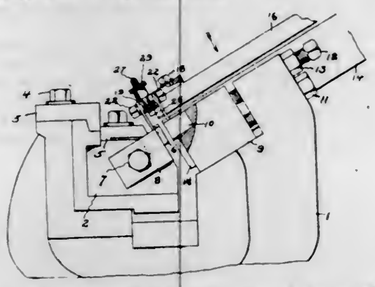
[Claims 6 to 13 not printed in the Gazette.]

1,104,091. THREAD-ROLLING MACHINE. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 29, 1913. Serial No. 809,379. (Cl. 80—8.)

1. In a thread rolling machine; a stationary die; and a movable die, each of said dies being mounted so that the thread rolling faces thereof lie at an angle between the horizontal and vertical.

2. In a thread rolling machine, the combination with a stationary die; of a movable die; and a feed chute for conducting blanks to said dies, the threading face of said dies lying at an angle between the horizontal and vertical and in such relation to said feed chute that said thread

rolling faces are substantially parallel with the axis of the blanks while in said feed chute.



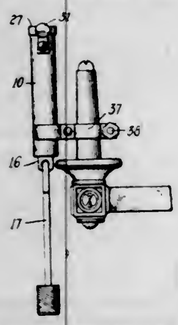
3. In a thread rolling machine, the combination with a stationary die; of a movable die, the threading faces of said dies being at an angle between the horizontal and vertical; a feed chute for conveying blanks to said dies, arranged so that the blanks are delivered therefrom to a position in line with the dies without the assistance of interposed mechanism.

4. In a thread rolling machine, the combination with a stationary die; of a fixed die, the threading faces of which are at an angle between the horizontal and vertical; means for delivering blanks to said dies, said means comprising a feed chute extending at substantially a right angle to the threading faces of said dies, and through which the blanks travel to said dies without change of their angle of inclination therein.

5. In a thread rolling machine, the combination with a stationary die; of a movable die; a feed chute for conducting blanks in line with said dies; means for advancing said blanks substantially parallel with the face of said dies, said means comprising a finger engaging said blank; and means for preventing the movement of said blanks away from said dies, said means comprising a spring finger having contact with the head of said blank.

[Claims 6 to 9 not printed in the Gazette.]

1,104,092. SPARKING IGNITER. MILTON E. WINANS, Newark, N. J., assignor to Oxweld Acetylene Company, Chicago, Ill., a Corporation of West Virginia. Filed Mar. 5, 1914. Serial No. 822,626. (Cl. 67—20.1.)



1. In an igniter of the class described, in combination, a fixed stop member, a rotatable but axially stationary abrading element, a rotatable driving member connected with the abrading element to rotate the same and movable axially relatively to the stop member, one of said members having a locking lug and the other a locking notch to receive the lug whereby rotation of the driving member and the abrading element is normally prevented, a spring normally holding the driving member in locking engagement with the stop member and tending to rotate the former, means for tensioning the spring, means coöperating with the driving member to shift the same axially out of engagement with the stop member, and means for holding a body of sparking material in operative relation to the abrading element.

2. In a igniter of the class described, in combination, a rotary abrading element, a rotary driving member connected therewith and movable axially relatively thereto, a stop coöperating with the member to hold the disk and member against rotation until the member is released by axial movement, a spring arranged to rotate the member and the abrading element and to hold the member yieldingly in engagement with the stop, an actuating member connected with the spring to tension the same and cooperating with the aforesaid member to move the same axially, means for holding a body of sparking material in operative relation to the abrading element.

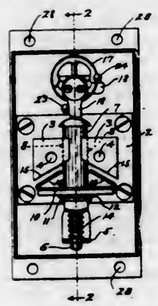
3. In an igniter of the class described, a cylindrical casing, a stop-bearing therein, a rotary abrading element journaled in the stop-bearing, a rotatable and axially movable driving member connected with the abrading element and in locking engagement with the stop-bearing, a spring connected at one end to said driving member, an actuating element rotatable relatively to the driving member and connected to the other end of the spring, a cam on the driving member, and a stud carried by the actuating element and arranged to engage the cam and shift the driving member axially when the actuating element is rotated.

4. In an igniter of the class described, in combination, a rotatable hollow cylindrical driving body, a stationary stop from which the driving body is releasable by axial movement, a helical spring arranged in said body and having one end connected thereto, an actuating plug rotatable in the driving body and connected to the other end of the spring, the driving body having adjacent to said plug a circumferentially extending opening formed at one end with a bayonet slot and at the other with an inclined edge, and a stud mounted on the actuating plug and extending into said opening.

5. In an igniter of the class described, in combination, a hollow cylindrical casing, a stop-bearing in the casing at one end thereof and provided with one or more notches on its inner face, a rotary abrading element having a shaft extending through the stop bearing, an auxiliary movable driving body connected at one end with said shaft to rotate the same and having one or more lugs to engage the notches in the stop-bearing, an actuating plug rotatably mounted in the other end of the driving body, a spring in the driving body and connected to the same and to the actuating plug, the end of the driving body adjacent to the plug being provided with a notch formed at one side with a bayonet slot and at the other with an inclined cam edge, and a stud on the plug extending into said noteh.

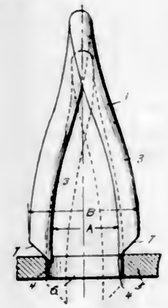
[Claims 6 to 9 not printed in the Gazette.]

1,104,093. AUTOMOBILE-SWITCH. HERBERT W. YOUNG, Chicago, and ALLEN S. PEARL, Maywood, Ill. Filed Dec. 8, 1911. Serial No. 664,567. (Cl. 175—282.)



In combination, a supporting plate, two separated stationary contact pieces mounted upon said plate and insulated from each other and from the plate, a bracket on said plate at one side of said contact pieces, a movable switch stem slidably mounted in said bracket and extending between said contact pieces to the opposite side thereof, an insulating sleeve on said stem, said contact piece being shaped to form a guide for said sleeve, a movable switch piece carried by said stem, a spring between the stem and the bracket tending to force the stem in the direction to carry said movable switch piece into engagement with the stationary contact pieces, and an actuating member for said stem mounted on said plate in proximity to the free end thereof.

1,104,094. STAPLE FOR FENCES AND OTHER PURPOSES. WALTER E. AMBERG, Chicago, Ill., assignor of one-half to Carlton M. Garrett, Chicago, Ill. Filed July 28, 1913. Serial No. 781,621. (Cl. 85—49.)



1. A metallic staple of a substantially U shape having the legs offset or bent sidewise and toward each other so the ends of the legs will lie in a plane at an angle to the plane of the base, a space being provided between the ends of the legs for the passage of a wire.

2. A metallic staple of a substantially U shape having the legs offset or bent sidewise in opposite directions and toward each other and the ends of said legs provided with beveled surfaces forming points.

3. A metallic staple of a substantially U shape and having its legs pointed and offset or bent sidewise and toward each other so the points of the legs will lie in a plane at an angle to the plane of the base.

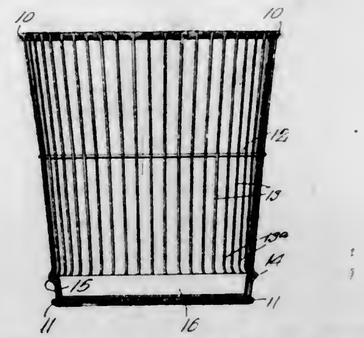
1,104,095. PROCESS OF MAKING SUPERIOR SUGAR. NIELS BREINHOLT BACH, Modjoherto, Java. Filed Aug. 4, 1913. Serial No. 782,903. (Cl. 127—7.)

1. In the method of making white cane sugar, the process which comprises liming and sulfiting the thin juice sufficiently to clarify it, filtering the juice, concentrating the filtrate to thick juice, liming and sulfiting the thick juice and filtering the same.

2. In the method of making white sugar, the process which comprises clarifying thin cane juice by the action of sulfurous acid on lime within the juice, the resulting juice being neutral after said action, and the quantity of lime less than that required for complete liming of the juice, filtering the juice, concentrating the thin juice to thick juice and forming sulfite of lime within the thick juice and filtering the juice, the total quantity of lime for both thin and thick juices being less than the normal quantity of lime required for liming.

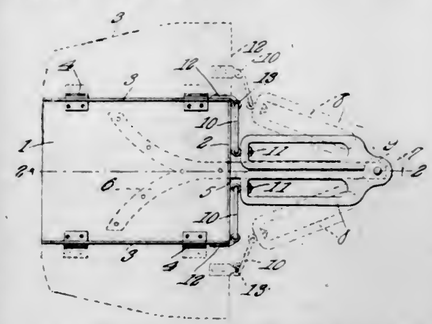
1,104,096. WIRE BASKET. HARRY T. BEATTY and ANDREW REESE, Massillon, Ohio, assignors to The Massillon Wire Basket Co., Massillon, Ohio. Filed Nov. 3, 1911. Serial No. 658,395. (Cl. 220—136.)

1. A receptacle having its sides composed of longitudinal filler strands having unconnected outwardly yieldable portions, the said yieldable portions having outwardly bulged kinks intermediate their ends forming seat elements, and that portion of the receptacle defined by the said yieldable portions tapering from one end to the said seat elements to receive a bottom and to spring the seat elements outwardly as the bottom is forced toward them, whereby the seat elements will spring over the periphery of the bottom.



2. A basket comprising an open ended body having upper and lower marginal strands connected by filler strands, the filler strands having unconnected outwardly yieldable portions intermediate the marginal strands, the said yieldable portions having outwardly bulged kinks intermediate their ends constituting seat elements arranged in a plane parallel with and between the marginal strands, that portion of the basket defined by the said yieldable portions tapering from one end to the said seat elements, and a bottom peripherally fitted in said seat elements.

1,104,097. LOAF-SUGAR SCOOP. ELPHEGE F. BENOIT, North Yakima, Wash. Filed Feb. 16, 1914. Serial No. 819,043. (Cl. 65—36.)



1. A scoop embodying a bottom, sides hinged thereto, and manually controllable means operatively connected to the sides for swinging the same to and from each other.

2. A scoop comprising a bottom, sides hinged thereto, a shank attached to the bottom, and manually controllable means carried by the shank and operatively connected to the sides for swinging the same to and from each other.

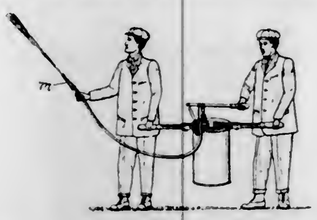
3. A scoop embodying a bottom, sides hinged thereto, a pair of complemental handles, movable to and from each other, and means operatively connecting the handles and sides for swinging the latter to and from each other.

4. A scoop comprising a bottom, sides hinged thereto, a shank attached to the bottom, handles carried by the shank and movable to and from each other, and means operatively connecting the handles, and sides for swinging the latter to and from each other.

5. A scoop comprising a bottom, sides hinged thereto, a pair of complementing pivoted handles, and links connecting the free ends of the handles and the sides, for swinging the sides to and from each other.

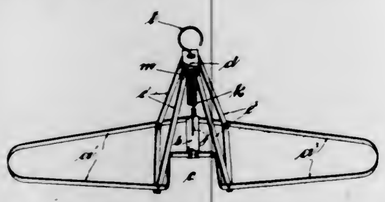
[Claims 6 and 7 not printed in the Gazette.]

1,104,098. HAND-PORTABLE PUMPING APPARATUS. HENRY P. BLISS, Middletown, Conn., assignor to W. & B. Douglas, Middletown, Conn., a Corporation. Filed Sept. 19, 1912. Serial No. 721,220. (Cl. 137—67.)



In a device of the character described, a tank, a pump mounted therein, a cupped-cover fitting into the top of the tank and apertured to receive said pump, a strainer arranged in said cover, a two part hoop surrounding said tank near its top, means for drawing the ends of the parts of said hoop together to clamp the cover in the tank, rigid carrying handles pivotally secured between the ends of the parts of said hoop, stops on said handles to engage said hoop to prevent said handles being raised above a horizontal position, a pump lever secured to the piston rod and extending across the top of the tank at an angle to the carrying handles with the pump handle arranged in operative relation to one of said carrying handles, a bracket secured to the wall of the tank, a link connecting said bracket with the end of said pump lever, an attachment nipple on said pump, and a hose secured thereto provided with a nozzle in operative relation to the other carrying handle.

1,104,099. GARMENT-HANGER. JOHN GEORGE BRENNER, Hulme, Manchester, England. Filed Apr. 25, 1913. Serial No. 763,649. (Cl. 211—13.)

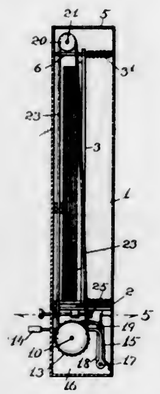


1. A coat or like hanger, comprising two half-frame parts, a plate to which the half-frame parts are pivotally connected, the said half frame parts and plate in plan corresponding to the length and width of the shoulders of a coat, a further and shorter plate directly over the first named plate, means for pivotally connecting the upper plate to the half-frame parts and holding the upper plate at the required distance from the lower plate, a spring connected at its ends to the two plates respectively and by its tension holding the plates at their shortest distance apart, a covering of cloth for the upper parts of the hanger, its surface contour, under the tension of the spring, being such as to correspond to the contour of the shoulders and neck part of the coat, substantially as herein set forth.

2. A coat or like hanger comprising two half-frame parts, a plate to which the half-frame parts are pivotally connected, the said plate being shorter than the full width of the half-frame parts and the half frame parts at one side being bent inward to suit the shortened plate, a further plate directly over the first named plate, means for pivotally connecting the upper plate to the half-frame parts and holding the upper plate at the required distance from the lower plate, a spring connected at its ends to the two plates respectively and by its tension holding the plates at their shortest distance apart, and a covering of cloth for the upper parts of the hanger secured by its edges to the half frame parts, to the upper plate and to the means on one side of the hanger for connecting the top plate to the half frame parts substantially as herein set forth.

3. A coat or like hanger comprising two half frame parts, a plate to which the half-frame parts are pivotally connected, a further and shorter plate directly over the first named plate, means pivotally connected for holding the upper plate at the required distance from the lower plate and allowing the half frame parts to fold over against the other, the distance of the pivots at each end of the half frame parts from each other being greater than the distance between the free ends of the half frame parts when folded, a spring connected at its ends to the two plates respectively and by its tension normally holding the plates at their shortest distance apart and when the half frame parts are folded to lie alongside each other holding the said parts together at their free ends until forcibly separated, a covering of cloth for the upper parts of the hanger, the cloth allowing of its being held taut and to the contour of the shoulders and neck of a coat under the tension of the spring, or allowing the hanger to be folded up substantially as herein set forth.

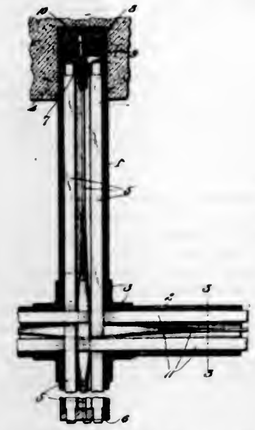
1,104,100. COPY-HOLDER. GEORGE F. BROWN, Galt, Ontario, Canada. Filed July 23, 1913. Serial No. 780,830. (Cl. 120—34.)



1. In a copy holder, an upright box-form open-front frame, including a spring pressed member at the rear of the frame and marginal inward extensions at the front, a horizontal shaft rotatably mounted at the lower part of said frame, a pulley at each side of said shaft, pulleys rotatably mounted at the upper portion of said frame and having belt connections with the lower pulleys, a guide bar carried by the belts and having sliding contact with said marginal inward extensions to limit the forward movement of said spring pressed member, a depressible lever mounted upon said frame and having a ratchet and pawl connection with said shaft, and means for returning said lever to normal position after operation.

2. In a copy holder, an upright box-form open-front frame, including a spring pressed member at the rear and marginal inward extensions at the front, a false bottom designed to serve as a support for the copy, a bottom separated from the false bottom by an interval, a horizontal shaft rotatably mounted in said interval, a pulley at each side of said shaft, pulleys rotatably mounted at the upper portion of said frame and having belt connections with the lower pulleys, a guide bar carried by the belts and having sliding contact with said marginal inward extensions to limit the forward movement of said spring pressed member, a depressible lever mounted upon said frame and having a ratchet and pawl connection with said shaft, and means for returning said lever to normal position after operation.

1,104,101. SAFETY-BAR. LEWIS A. BROWN, Horine, Mo. Filed July 21, 1913. Serial No. 780,156. (Cl. 116—1.)



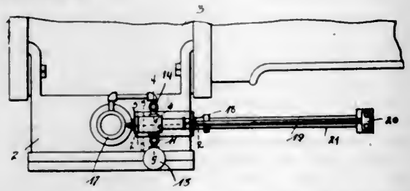
1. A safety bar comprising a tubular bar, a plurality of radial metallic plates within said bar, and means for stretching and holding said plates, substantially as specified.

2. The combination with a series of intersecting tubular bars, of a series of radial metallic plates mounted in said bars and also being in intersecting arrangement, and means for stretching and holding said plates, substantially as specified.

3. In combination with a tubular bar, a series of radial metallic plates mounted in said bar having their outer edges close to and out of contact with the wall of said bar, and means for stretching and holding said plates in the position and adjustment aforesaid, substantially as specified.

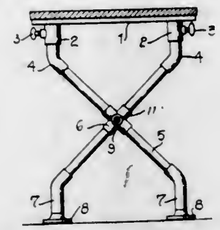
4. The combination with a tubular bar, a series of radial metallic plates mounted in said bar having their outer edges close to and out of contact with the wall of said bar, and manipulative means for stretching and holding said plates in the position and adjustment aforesaid, substantially as specified.

1,104,102. FORCE-FEED OILER. CHARLES L. BUNDY, Minor, Kans. Filed July 9, 1913. Serial No. 778,084. (Cl. 184—27.)



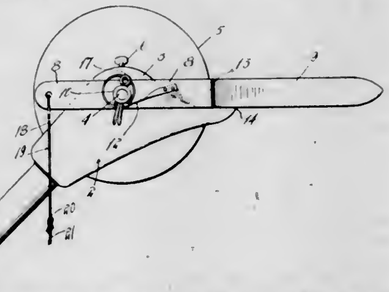
In an oil pump for engines, the combination of a casing, a cap connected to one end of the casing, a bore formed centrally through the cap, a stem operable in the cap, a check valve connected to the inner end of the stem, a coil spring surrounding the outer end of the stem, a nut for regulating the tension of said spring, a casing connected to one side of the main casing and having a check valve mounted therein, said casing having communication with a supply tank, a second casing having a check valve mounted therein, said casing having an outlet formed therein to afford communication with the main casing, said casing having communication with the steam supply pipe, a cylinder connected to the casing, and a plunger operable in the cylinder and casing, as and for the purpose set forth.

1,104,103. WORK-BENCH. PETER JAMES CARPENTER, Jr., Dobbs Ferry, N. Y. Filed June 18, 1913. Serial No. 774,465. (Cl. 45—48.)



A work bench of the class described comprising a top, plates secured to the under face thereof, adjacent the ends of the same, depending sockets formed on said plates, supporting legs comprising elbow pipe sections adjustably secured in said last mentioned sockets, angular base sections, a plurality of pipe sections removably engaged with said elbow and base sections, and cross T's removably engaged with the ends of said pipe sections, whereby to form substantially cross supporting members, and means engaged with the cross T's for bracing the supporting legs.

1,104,104. TROLLEY-GUIDE. EDWARD H. CAUVEL, Oil City, Pa. Filed May 20, 1913. Serial No. 768,850. (Cl. 191—84.)

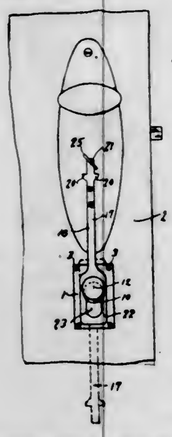


The combination with a trolley harp comprising spaced plates having an axle with its ends fixed in the plates and extending slightly beyond the same, said axle having its ends formed with perforations, of fingers pivotally connected to the extended ends of said axle, sleeves mounted upon the extended ends of the axle, said sleeves having slots formed therein, leaf springs each having one of its ends engaged in one of said slots of the sleeve and its other end fixed to one of the fingers, cotter pins passing through the perforations of the sleeves and axle to hold the springs in their wound position.

1,104,105. PROCESS OF MAKING SUBSTITUTES FOR ANIMAL WOOL. CANDIDO CHAVEZ, Mexico, Mexico. Filed May 20, 1913. Serial No. 768,755. (Cl. 13—5.)

The process of making substitutes for animal wool, which consists in soaking waste fiber in water to remove all foreign matter; successively submerging the fiber in baths of caustic soda at 4° B., chlorid of lime at 6° B., and sulfuric acid and bisulfite of soda at 5° B., the fiber remaining in each bath from three to four hours, submerging the fiber in a constantly boiling basic bath of sulfuric acid and bisulfite of sodium at 3° B., and then in an absolutely cold solution of caustic soda at 20° B., to obtain by such sudden change of temperature the mercerization of the fiber; submerging the fiber thus treated first in a bath of chlorid of lime at 6° B. then in a bath of sulfuric acid and bisulfite of sodium at 3° B.: and finally loosening and combing the fiber.

1,104,106. KEY-FASTENING DEVICE. WILLIAM RALPH CONCIE, Spokane, Wash. Filed July 15, 1913. Serial No. 779,134. (Cl. 70—7.)



1. A key fastening device comprising in combination, a plate adapted to be fastened to a door and provided with a countersunk bore therethrough, a spindle inserted in said bore and provided with a shoulder occupying said countersunk portion, said spindle projecting beyond the face of said plate opposite said countersunk portion, an apertured eccentric fastened to said spindle where it projects from the face of said plate, and a key fastening member rotatively engaging said eccentric.

2. A key fastening device comprising in combination, a plate adapted to be fastened to a door and having a bore therethrough countersunk at one side thereof, a spindle inserted in said bore having a flange or collar occupying said countersunk portion, said spindle projecting from the face of said plate opposite said countersunk portion, an integral structure rigidly attached to said spindle comprising an apertured eccentric and sleeve, said eccentric having a collar, and a key fastening member relatively engaging said eccentric intermediate said plate and said collar.

3. A key fastening device comprising in combination, a plate adapted to be fastened to a door and provided with a countersunk bore therethrough, a spindle inserted in said bore and provided with a shoulder occupying said countersunk portion, said spindle projecting beyond the face of said plate opposite said countersunk portion, an apertured eccentric fastened to said spindle where it projects from the face of said plate, a key fastening member rotatively engaging said eccentric, said eccentric being provided with a collar engaging the outer surface of said key fastening element and holding the same against the outer face of said plate.

4. A key fastening device comprising in combination, a plate adapted to be fastened to a door provided with a countersunk bore therethrough, a spindle inserted in said bore and having a collar occupying the countersunk bore, said spindle projecting beyond the face of said plate on the side opposite the countersunk bore, a key fastening element placed over said spindle and provided with an elongated slot therein, and an operating structure attached to the projecting portion of said spindle, said structure comprising an eccentric having a diameter equal to the width of said slot and inserted therein, a sleeve rigid with said eccentric, and a nut rigid with said sleeve, said eccentric and sleeve being perforated to receive the projecting portion of said spindle, said eccentric having a collar of greater diameter than the slot in said fastening element, said collar projecting over the face of said element and holding said element against the face of said plate.

5. A device of the class described comprising in combination, a member adapted to engage a key to prevent the same from turning, and a member adapted to throw said first mentioned member into locking position, said first mentioned member having pivotal engagement with said second mentioned member.

[Claim 6 not printed in the Gazette.]

1,104,107. METAL-PICKLING PROCESS. THOMAS REGINALD DAVIDSON, Westmount, Quebec, Canada. Filed July 11, 1913. Serial No. 778,575. (Cl. 148—42.)

1. The treatment of metal for cleansing the surface thereof preparatory to receiving a coating of enamel or the like, which consists in immersing same in concentrated sulfuric acid.

2. The treatment of metal for cleansing the surface thereof preparatory to receiving a coating of enamel or the like, which consists in first immersing same in concentrated sulfuric acid and then in a water bath.

3. The treatment of metal for cleansing the surface thereof preparatory to receiving a coating of enamel or the like, which consists in first immersing same in concentrated sulfuric acid, then in a water bath and subsequently washing the metal in a fresh bath of water.

4. The treatment of metal for cleansing the surface thereof preparatory to receiving a coating of enamel or the like, which consists in immersing such metal in heated concentrated sulfuric acid.

5. The treatment of metal for cleansing the surface thereof preparatory to receiving a coating of enamel or the like, which consists in first immersing such metal in heated concentrated sulfuric acid and then in a bath of heated water.

[Claim 6 not printed in the Gazette.]

1,104,108. GARMENT-STAY. JOHN R. DEAN, North Girard, Pa. Filed Nov. 16, 1912. Serial No. 731,739. Renewed Dec. 19, 1913. Serial No. 807,777. (Cl. 2—76.)



1. A garment stay formed of a flat strip of elastic material having slits extending inwardly alternately from opposite edges, the opposing faces of the slits at the edges of the stay forming plane surfaces in parallel and contact relation.

2. A garment stay formed of a flat strip of elastic material having slits extending inwardly alternately from opposite edges, the opposing faces of the slits at the edges of the stay forming plane surfaces in parallel and contact relation and the inner ends of the slits being out of contact relation.

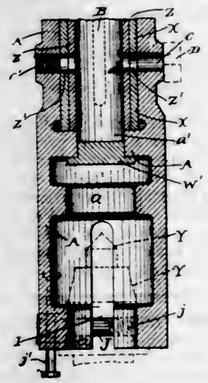
3. A garment stay formed of a flat strip of elastic material having slits arranged transversely of the material and so associated as to form transverse bars between the slits which bars are subjected to torsional strain as the stay is flexed some of said slits extending to the edge of the stay and having opposing faces, the said slits so extending to the edge of the stay forming plane surfaces in parallel and contact relation, the inner ends of the slits being out of contact relation.

4. A garment stay formed of a flat strip of elastic material having a securing device thereon and slits extending inwardly alternately from opposite edges, the crossings formed by the slits adjacent to the securing device having dimensions differing from the crossings of other portions of the stay to give greater rigidity to the stay at the securing device than at other points in the stay.

1,104,109. METHOD OF BLEACHING CELLULOSE WOOD-PULP. FREDERICK WILLIAM DOBSON, Tamworth, England. Filed Jan. 26, 1912. Serial No. 673,656. (Cl. 8—2.)

The herein described process of bleaching chemical wood cellulose which consists in placing a concentrated bleaching agent in a rotary vessel, adding water thereto to form a solution, placing within the vessel the cellulose to be bleached in sheet form and dry, and rotating the vessel, the amount of the bleaching solution being so proportioned with respect to the amount of cellulose to be bleached as to render subsequent draining of the bleached cellulose unnecessary.

1,104,110. DRILL-EXTENSION DEVICE. HARRY J. FORSTER, Chicago, Ill. Filed Sept. 8, 1913. Serial No. 788,666. (Cl. 77—55.)

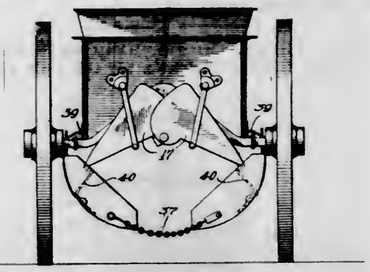


1. A shell provided with a cylindrical passage way of more than one diameter extending longitudinally therethrough the part of said passage way which is of smallest diameter obtained by means of an annular rib with tables on the faces thereof adapted to form abutments, and said shell also provided with longitudinally extending slots open at the ends of said shell, lugs on said shell, adjacent to said slots, said shell and lugs provided with laterally extending holes and laterally extending screw threaded holes, in combination with screw threaded bolts to fit said holes and the screw threads thereon to engage with the threads in the screw threaded holes, said holes and bolts therein arranged to contract the slotted portion of said shell on to a cylindrical article contained therein at each end thereof.

2. A shell provided with a cylindrical passage way of more than one diameter extending longitudinally therethrough the part of said passage way which is of smallest diameter being obtained by means of an annular rib with tables on the faces thereof adapted to form abutments, and said shell also provided with longitudinally extending slots open at the ends of said shell, adjacent to said slots, lugs on said shell, said shell and said lugs respectively provided with laterally extending holes, in combination with a bolt provided with an annular groove, said bolt adapted to extend through said laterally extending holes, means to contract the slotted portions of said shell on to the bodies contained in said cylindrical passage way, an abutment on said shell, a longitudinally movable pin in said abutment, and means to yieldingly hold said pin in an advanced position to engage with said groove in the bolt which is in the laterally extending holes and adjacent to said pin.

3. A device comprising a shell provided with means to contract said shell on to bodies contained therein and provided with holes extending through the wall of said shell, the combination of a pin or bolt adapted to extend through said holes in said wall, and said pin or bolt provided with an annular groove adjacent to one end thereof, with an abutment on said shell, a longitudinally movable body in said abutment, and means to yieldingly hold said last named body in an advanced position with the end thereof in said annular groove.

1,104,111. DUMP-WAGON. DWIGHT GERBER, Bellevue, Pa. Filed Mar. 6, 1912. Serial No. 681,867. (Cl. 21—20.)



1. In combination, a box, two doors forming the bottom of the box and hinged together along the longitudinal center of the box, each of said doors having at its ends an upwardly projecting flange lying in proximity to the outside of the box, and supports for said doors arranged to permit them to swing about axes parallel with the axis of the hinge, and the end walls of the box having their under portions cut away to permit the hinge to rise above the position which it occupies when the doors are horizontal.

2. In combination, a box, two doors forming the bottom of the box and hinged together along the longitudinal center of the box, and swinging supporting links pivotally connected to the box at their upper ends and at their lower ends to the doors at some distance from the hinge.

3. In combination, a box, two floating doors forming the bottom of the box and hinged together along the longitudinal center of the box independently of the box, two links hung upon each end of the box, and a connection between the lower end of each of the links and one of the doors at some distance from the hinge.

4. In a wagon, wheeled axles, a box supported on the axles, the rear axle being in the form of an inverted V, two doors forming the bottom of the box and hinged together along the longitudinal center of the box, and means for yieldingly supporting the doors so as to permit them to swing about axes parallel with and at some distance from the hinge from horizontal positions to positions in which the end of the hinge has risen into the space within the raised portion of the rear axle.

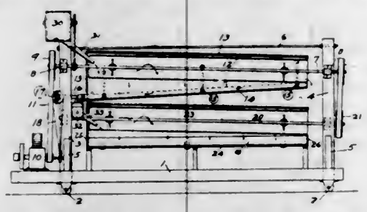
5. A dumping bed comprising two doors hinged together, co-axial trunnions arranged at the ends of each door parallel with and at some distance from the hinge, bearing and supporting members engaging with said trunnions and constructed and arranged to permit the doors to swing about axes of the trunnions, and means interposed between one of the trunnions and the hinge for swinging the doors in one direction.

[Claims 6 to 9 not printed in the Gazette.]

1,104,112. PROCESS FOR SAVING GOLD FROM SAND. GEROME H. HAMILTON, Oregon City, Oreg. Filed Oct. 18, 1912. Serial No. 726,508. (Cl. 83—56.)

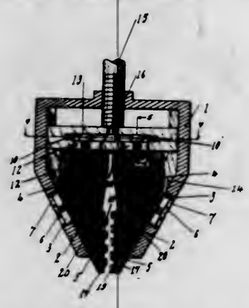
The herein described process of saving finely powdered gold from sands which consists in thoroughly drying the

sand, then passing it through a screening device of fine mesh, and afterward passing the finely screened matter through a bolting device which is being agitated so as to



cause the matter to be repeatedly dropped or thrown against fine bolting cloth, whereby to force the finest powdered gold therethrough.

1,104,113. CHUCK. MILO A. HAMILTON, Scotts, Mich. Filed Apr. 7, 1913. Serial No. 759,416. (Cl. 29—115.)



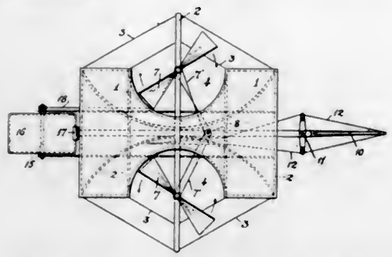
1. In a chuck, the combination of the body having opposed converging longitudinally slotted jaw seats, jaws having inclined bearing surfaces on their outer edges coacting with said seats, headed pins on said jaws engaging the slots of said jaw seats, a cross head having longitudinal slots therein, the sides of the body being provided with inwardly projecting flanges slidably supporting said jaws and cross head, headed pins on said jaws engaging said slots in said cross head, whereby, as the cross head is reciprocated, the jaws are moved to and from each other, and a driving shank having threaded engagement with the body and rotatably connected to said cross head.

2. In a chuck, the combination of the body having opposed converging longitudinally slotted jaw seats, jaws arranged in said seats, headed pins on said jaws engaging the slots of said jaw seats, a cross head having longitudinal slots therein, said body being provided with side parts engaging the sides of the jaws and cross head for laterally supporting the same for sliding movement in said body, headed pins on said jaws engaging said slots in said cross head whereby, as the cross head is reciprocated, the jaws are moved to and from each other, and a driving shank having threaded engagement with the body and rotatably connected to said cross head.

3. In a chuck, the combination of the body having opposed converging longitudinally slotted jaw seats, jaws arranged in said seats, a cross head having longitudinal slots therein, said body being provided with side parts engaging the sides of the jaws and cross head for laterally supporting the same for sliding movement in said body, headed pins on said jaws engaging said slots in said cross head whereby, as the cross head is reciprocated, the jaws are moved to and from each other, and a driving shank having threaded engagement with the body and rotatably connected to said cross head.

4. In a chuck, the combination of a body having opposed converging jaw seats, jaws arranged in said seats and provided with headed members on their ends, a driving shank having threaded engagement with said body and having a head on its inner end, and a cross head consisting of sections having opposed grooves coacting to provide longitudinal slots in which said headed members of said jaws and shank are engaged, the sides of the body being provided with side parts embracing the ends of said cross head whereby the same is supported for sliding movement.

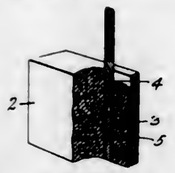
1,104,114. FLYING-MACHINE. CARL HARTMANN, Corona, N. Y. Filed Feb. 28, 1913. Serial No. 751,218. (Cl. 244—16.)



1. A flying machine comprising a plane lying above the center of gravity of the machine, propellers on opposite sides of said plane and having turning axes at right angles thereto, a vertical steering rudder at one end of the machine, and a horizontal steering rudder pivoted upon an axis passing through its center and lying in front of the before mentioned plane said rudder having one side heavier than the other.

2. A flying machine comprising a plane lying above the center of gravity of the machine, propellers on opposite sides of said plane and having turning axes at right angles thereto, a vertical steering rudder at one end of the machine, a horizontal steering rudder symmetrically disposed as to a central axis at the other end of the machine the rudder portion on one side of said axis being heavier than the portion on the other side, and means for changing the angle of said horizontal rudder.

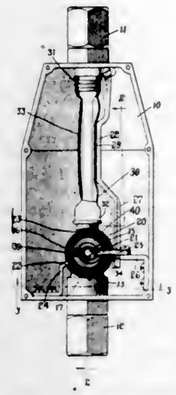
1,104,115. CARBON BRUSH. RAYMOND F. HAUSEN, Pittsburgh, Pa., assignor to Pittsburgh Carbon Brush Company, a Copartnership composed of George E. Stimple and Raymond F. Hausen, Pittsburgh, Pa. Filed Dec. 19, 1913. Serial No. 807,618. (Cl. 171—210.)



In a collecting brush for dynamos, motors, etc., the combination of the carbon-brush, having an opening therein, a conductor in said opening, and a screw in said opening engaging said conductor and forming threads in the metal of said conductor.

1,104,116. AUTOMATIC VALVE FOR GAS-FIXTURES. ARTHUR E. HIERTZ, Bridgeport, Conn. Filed Jan. 31, 1914. Serial No. 815,691. (Cl. 67—115.)

1. In an apparatus of the character described, the combination with a rotary valve, of a shaft connected with the valve to turn the same, a disk mounted upon the shaft to turn therewith and provided upon one face with a groove, a coil spring surrounding the shaft, disposed upon one side of the disk and secured to the shaft to turn the same to bring the valve to its closed position, manually operated means to turn the shaft to bring the valve to its open position, a pivoted lever arranged near the disk and having a portion adapted to enter the face groove of the disk, a gas conduit having a flexible portion, and a pivoted lever having a portion thereof engaging the flexible portion of the gas conduit and its lower end arranged to engage the free end of the first-named lever.



2. In apparatus of the character described, the combination with a rotary valve, of a shaft connected with the valve to turn the same, a spring to turn the shaft to bring the valve to the closed position, a disk mounted upon the shaft to turn therewith and provided upon its outer face with a groove V-shaped in cross section, a pivoted bell-crank lever arranged near the disk and having one arm provided with a portion V-shaped in cross-section to enter the V-shaped face groove of the disk, a gas conduit having a flexible portion, and a lever pivoted at one end with a portion engaging the flexible portion of the gas conduit and its free end engaging the free end of the bell-crank lever.

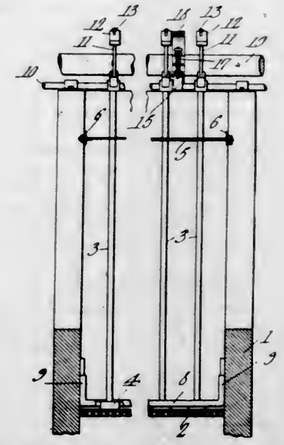
3. In apparatus of the character described, the combination with a horizontal rotary valve, of a shaft to turn the valve, a spring connected with the shaft to turn it to bring the valve to the closed position, a disk mounted upon the shaft to turn therewith and provided upon its face with a radial groove and upon its periphery with spaced stop-shoulders, an upstanding stop disposed near the disk to engage the shoulders to positively limit the movement of the disk in both directions, manually operated means to turn the shaft, a pivoted lever arranged near the disk and adapted to have a portion thereof moved into the face groove of the disk, an upstanding gas conduit having a flexible portion, and an upstanding lever pivoted at its upper end, with a portion thereof engaging the flexible portion of the gas-conduit, and its lower end engaging the bell-crank lever.

1,104,117. MEANS FOR SEPARATING ORES. CHARLES L. HOGE, Carterville, Mo. Filed Oct. 7, 1913. Serial No. 793,940. (Cl. 83—56.)

1. An ore separator comprising a grate, a plurality of rods extending substantially perpendicular thereto with heads at one extremity, the said head resting upon the said grate, spaced guides slidably engaging and holding in position the said rods, the lower guide substantially U-shaped in cross section and housing the upper portions of the rod heads therein, and means for pounding the rods to vibrate the said grate.

2. An ore separator comprising a horizontally extending grate, a plurality of vertically extending rods with enlarged heads at their lower extremities, the said heads resting upon the said grate, spaced guides slidably engaging and holding in a vertical position the said rods, the said lower guide U-shaped in cross section and housing the upper portions of the rod heads therein, and means for pounding the said rods to vibrate the said grate.

3. An ore separator comprising a horizontally extending grate, a plurality of vertically extending rods with enlarged heads at their lower extremities, the said heads resting upon the said grate, spaced guides slidably engaging and holding in a vertical position the said rods, the said lower guide U-shaped in cross section and housing the upper portions of said rod heads therein and holding the said heads with the longitudinal axes thereof extending at right angles to the longitudinal axes of the grate bars, and means for vibrating and agitating the said rods.



1,104,118. SHUTTER-OPERATING DEVICE. JOACHIM T. HOLTFOTH, Kalamazoo, Mich. Filed Oct. 1, 1912. Serial No. 723,328. (Cl. 161—26.)



1. In a shutter operating device, the combination of a cylinder having a pneumatic shutter engine connection at one end; independently adjustable rotary valves provided with peripheral tapered passages disposed at the ends of said cylinder, said cylinder being provided with a port between said valves; indexes for said valves; a piston reciprocating between said valves and across said port; and a spring arranged to actuate said piston toward the said engine connection of said cylinder.

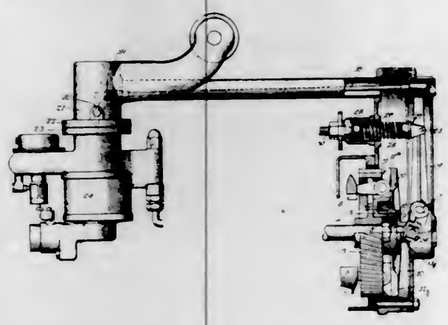
2. In a shutter operating device, the combination of a cylinder having a pneumatic shutter engine connection at one end; independently adjustable valves at the ends of said cylinder, said cylinder being provided with an opening between said valves; a piston reciprocating between

said valves and across said opening; and a spring arranged to actuate said piston toward the said engine connection of said cylinder.

3. The combination of a cylinder provided with an actuated member connection; valves for said cylinder, said cylinder being provided with a port between said valves; a piston reciprocating between said valves and across said port; and a spring for actuating said piston toward the actuated member connection of said cylinder.

4. The combination of a cylinder provided with an actuated member connection, there being an inlet at the outer end of the cylinder and an exhaust at its inner end and an opening between said inlet and exhaust; a piston reciprocating between said inlet and exhaust and across said opening; and a spring for actuating said piston toward the exhaust thereof, whereby the movement of the piston on one side of said opening is controlled by the admission of air to the cylinder and its movement on the other side of said opening is controlled by the escape of the air.

1,104,119. GOVERNOR FOR INTERNAL-COMBUSTION ENGINES. HARRY L. HORNING, Waukesha, Wis. Filed May 19, 1913. Serial No. 768,397. (Cl. 123—108.)



1. In combination, an internal combustion engine, a valve controlling the supply of combustible mixture thereto, a governor controlling the position of said valve, said governor comprising a timing gear, a yoke provided with a sleeve rigidly mounted upon the hub of said gear, a cup-shaped member disposed over said sleeve, said cup-shaped member being adapted to shift longitudinally of said sleeve but being held against rotation independently thereof, a pair of arms carried by said cup-shaped member, a pair of centrifugal weights pivoted to said yoke, said weights having feet bearing against said arms, a pivoted lever, one end of said lever having ball bearing connection with said cup-shaped member, the other end of said lever being connected to said valve, and a spring acting against said lever tending to move said cup-shaped member against the action of said centrifugal weights.

2. In combination, a valve controlling the supply of fuel to an internal combustion engine, a substantially cylindrical member adapted to be rotated at a speed proportional to engine speed, a substantially cup-shaped member fitted over said cylindrical member, a centrifugal device mounted upon said cylindrical member adapted to shift said cup-shaped member relative to said cylindrical member, means whereby motion imparted to said cup-shaped member by said centrifugal device is transmitted to said valve, a hole in said cup-shaped member adapted to admit air slowly to the space between said cylindrical member and said cup-shaped member as said cup-shaped member is shifted, and a spring tending to prevent said shifting of said cup-shaped member.

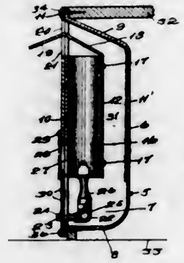
3. In combination with an internal combustion engine, a valve controlling the supply of combustible mixture to the engine, and mechanism controlling said valve, said mechanism comprising a substantially cup shaped member, a supporting member upon which said cup-shaped member is snugly and slidably fitted, a centrifugal device driven at a speed proportional to engine speed adapted to shift said cup-shaped member relative to its supporting member, a hole in said cup-shaped member adapted to admit air slowly between said cup-shaped member and the supporting member, and mechanism connecting said cup-shaped member with said valve.

4. In combination with an internal combustion engine, a valve controlling the supply of fuel to said engine, and mechanism controlling said valve, said mechanism comprising a hollow member, a second member collapsible with the hollow member, a centrifugal device driven at a speed proportional to engine speed adapted to shift one of said members relative to the other, mechanism connecting the shiftable member with said valve, a hole in one of said members adapted to slowly admit fluid to the space between said members when the shiftable member is moved by the centrifugal device, and a spring tending to prevent the shiftable member from moving under the action of the centrifugal device.

5. In combination with an internal combustion engine, a valve controlling the supply of fuel to the engine, and means for controlling said valve, said means comprising a hollow member, a second member collapsible with the hollow member, governor mechanism driven at a speed proportional to engine speed adapted to shift one of said members relative to the other, mechanism connecting the shiftable member with said valve, and a hole in one of said members adapted to slowly admit fluid to the space between the said members when the shiftable member is moved by the governor mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,104,120. HEATER FOR AUTOMOBILES. JOHN C. KANE and FRANCIS E. HUGG, Detroit, Mich. Filed Apr. 6, 1914. Serial No. 829,976. (Cl. 237—3.)



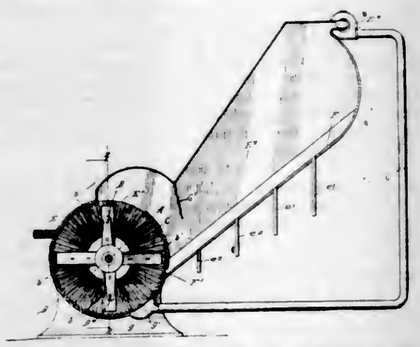
1. In a gas heater for automobiles or the like, a main upstanding heating shell having one side thereof formed open, a removable plate covering the open side of the heating shell and provided near its lower end with an air inlet opening and near its upper end with a gas discharge opening, a partition secured to the inner side of the removable plate and having the upper end thereof bent to form an inclined top portion arranged adjacent the gas discharge opening, and a burner arranged within the lower end of the main heating shell and adapted to discharge products of combustion into the chamber formed by the partition and plate.

2. In a gas heater for automobiles or the like, a main upstanding heating shell having one side thereof formed open, a removable plate to cover the open side of the heating shell and provided near its lower end with air inlet openings and near its upper end with a discharge opening, a partition secured to the inner side of the removable plate and extending longitudinally within the heating shell and having its upper end provided with a laterally extending top portion passing through the discharge opening to divide the same into hot air and gas discharge openings, a plurality of open ended tubes arranged between the plate and the partition and secured thereto, a gas supply pipe arranged within the lower portion of the heating shell, and burners secured to the gas supply pipe and extending into proximity to the lower ends of the tubes.

3. In a gas burner for automobiles or the like, a main upstanding heating shell having one side thereof formed open and provided with outwardly extending flanges to serve for securing the heating shell to a support, a removable plate covering the open side of the heating shell and provided near its lower end with air inlet openings and near its upper end with an outlet opening, upstanding tubes arranged within the heating shell and secured to the removable plate with their upper ends disposed in proximity to the outlet opening, and burners arranged within the lower portion of the heating shell with their upper ends extending into the lower ends of the tubes, substantially as described.

4. In a gas heater for automobiles or the like, a main heating shell having one side thereof formed open, a removable plate covering the open side of the heating shell and provided near its lower end with an air inlet opening and near its upper end with a gas discharge opening, a partition secured to the inner side of the removable plate to form therewith a gas passage leading into the gas discharge opening, and a burner arranged within the lower end of the main heating shell and adapted to discharge products of combustion into said gas passage, substantially as described.

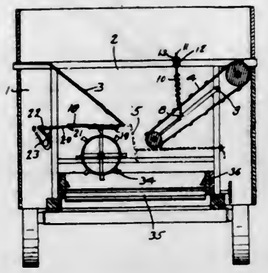
1,104,121. PULVERIZER. JAMES B. KNOBLOCK, Chicago, Ill. Filed June 3, 1913. Serial No. 771,457. (Cl. 83—11.)



1. In a pulverizer, the combination of a casing provided with a feed opening, the end walls of said casing being provided with corrugated grizzlies extending radially from the center thereof, and having grooves extending parallel with said corrugations, corrugated grizzlies in the peripheral wall of said casing, revoluble blocks mounted upon a shaft in said casing, each of said blocks arranged at an angle to the one next to it, means for creating an air current in said casing whereby the material being operated upon while in suspension is driven in different directions and thrown against the grizzlies to effect the pulverization, and means for withdrawing the finely pulverized material out of said casing, substantially as described.

2. A pulverizer comprising a casing forming a circular chamber having a feed opening and an exit opening, corrugated grizzlies forming a lining for the end heads of said casing, said grizzlies having slots or grooves extending radially from the center of each side of the periphery, a peripheral casing having corrugations extending angularly toward the center to form a central peripheral channel, a shaft extending transversely through said channel, blocks carried thereby, each of said blocks so arranged that its face is disposed at an angle following its path of travel and to the line of motion, and means for creating an air current in said pulverizing chamber wherein the material is thrown, and while in suspension is forcibly driven against the corrugated grizzlies and is disintegrated by force of the impact, and means for withdrawing the pulverized material from the chamber, substantially as described.

1,104,122. AUTOMATIC FEEDER FOR GRAIN-SEPARATORS. WILLIAM CLYDE LEONARD, Walla Walla, Wash., assignor of one-half to A. F. Brockman, Bickleton, Wash. Filed Oct. 2, 1913. Serial No. 792,998. (Cl. 130—1.)



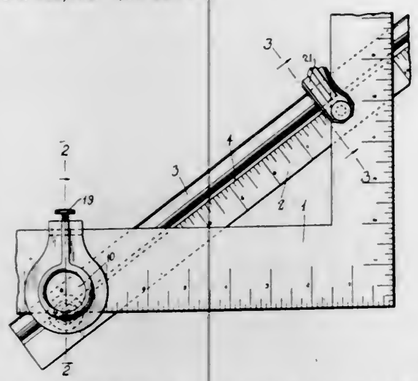
1. Automatic feeding apparatus for grain separators comprising in combination, an inclined hopper board, a draper belt inclined oppositely to said hopper board and forming a feeding space with said hopper board, said belt being mounted for bodily pivotal movement about its upper end, and spring means adapted to hold said belt in position to provide a minimum feeding space when the belt is unloaded.

2. Automatic feeding apparatus for grain separators comprising in combination, an inclined hopper board, a draper belt inclined oppositely to said hopper board and forming a feeding space with said hopper board, said belt being mounted for bodily pivotal movement about its upper end, and spring means adapted to hold said belt in position to provide a minimum feeding space when the belt is unloaded, a traveling grate adapted to project into said feeding space beneath the lower edge of said hopper board, and spring means adapted to project said grate relatively farther into said space when light grain is being fed.

3. Automatic feeding apparatus for grain separators comprising in combination, an inclined hopper board, a draper belt inclined oppositely to said hopper board, and forming a feeding space with said hopper board, said belt being mounted for bodily pivotal movement about its upper end, spring means adapted to hold said belt in position to provide a minimum feeding space when the belt is unloaded, a throttle grate mounted beneath the lower edge of said hopper board and adapted to project into said space, cleats on which said grate is mounted, a link hinged to said grate, an arm pivoted to said link, a shaft rigid with said arm, and spring actuated means attached to said link, a shaft rigid with said arm, and spring actuated means attached to said shaft adapted to project said grate into said feeding space.

4. Automatic feeding apparatus for grain separators comprising in combination, an inclined hopper board, a draper belt inclined oppositely to said hopper board and forming a feeding space with said hopper board, said belt being mounted for bodily pivotal movement about its upper end, spring means adapted to hold said belt in position to provide a minimum feeding space when the belt is unloaded, a throttle grate mounted beneath the lower edge of said hopper board and adapted to project into said space, a link hinged to said grate, an arm pivoted to said link, a shaft rigid with said arm, spring actuated means attached to said shaft adapted to project said grate into said feeding space, said means comprising a bell lever rigid with said shaft, a ring pivoted to said lever, a second lever pivoted to said link and provided with a plurality of apertures adapted to receive the same, a spring attached to said last mentioned lever, and means for adjusting the tension of said spring.

1,104,123. BEVEL-GAGE FOR SQUARES. THOMAS LEWIS, Smithfield, Pa. Filed Sept. 30, 1912. Serial No. 723,249. (Cl. 33—93.)



1. The combination with a graduated square of a bevel attachment comprising a rule having thereon a scale of measurement, a rule attaching member comprising a substantially circular plate having therein a circular opening and formed at one end with an extension provided with a set screw adapted to engage the inner edge of one arm of the square, a stud bolt formed on said plate and adapted to pivotally engage said rule, said bolt having its center in registry with the outer edge of said arm, said center of the bolt being indicated on the plate by a notch formed therein, said notch being adapted to register with the graduations along the outer edge of said arm, and a clamp adapted to be engaged with the free end of the rule and with the other arm of the square whereby the rule may be clamped in adjusted position on said other arm,.

2. The combination with a square of a bevel attachment comprising a rule having on its opposite sides longitudinal grooves and having along one of said grooves on one side of the rule a scale of measurement, a rule attaching member comprising a substantially circular plate having an extension, an offset shoulder formed opposite said extension and adapted to engage the outer edge of one arm of said square, an offset lug on the extension of said plate, a flange on said lug adapted to engage the inner edge of said arm, means whereby the rule attaching member is fastened in its adjusted position, a rule attaching bolt on said offset shoulders having its center in registry with the outer edge of the arm, a nut to hold the rule in pivotal engagement with said bolt, and a U-shaped clamp having its inner edge formed to correspond to the shape of the rule and provided with oppositely disposed shoulders adapted to engage the longitudinal grooves in said rule, said clamp being adapted to hold said rule in position on the other arm of said square.

3. The combination with a square and a bevel attachment comprising a graduated rule, of a rule attaching member comprising a substantially circular plate having an extension, a shoulder formed on said plate opposite said extension and adapted to engage the outer edge of one arm of said square, an offset lug on the extension of said plate, a flange formed on said lug and adapted to engage the inner edge of said square, a set screw extending through said lug and into engagement with said square, whereby the rule attaching member is held in its adjusted position, a bolt formed on said plate and adapted to engage one end of said rule, said bolt having its center in registry with the lower edge of the square, a nut to hold the rule in pivoted engagement with said bolt, and means to adjustably secure the free end of the rule to the other arm of the square.

4. The combination with a square of a bevel attachment comprising a rule having a bead formed on one edge and having on its opposite sides and adjacent said bead longitudinally extending grooves, said rule having on one side thereof along said grooves a graduated scale of measurement, means to connect one arm of said square with one end of the rule, and an attaching device to adjustably secure the free end of said rule to the other arm of the square, said device comprising a clamping member having upper and lower clamping jaws, said upper jaw having therein a right angular recess to slidably receive said last mentioned arm, a semicircular body connecting said jaws having its inner edge recessed to form an opening corresponding to the circular bead on said rule, oppositely disposed shoulders formed on said upper and lower jaws and adapted to slidably engage said longitudinal grooves in the rule whereby the latter is slidably retained within said clamp.

1,104,124. BRIQUETING IRON ORES. WALTHER MATHESIUS, Charlottenburg, Germany. Filed July 22, 1913. Serial No. 780,480. (Cl. 75—73.)

1. Method of briqueting finely-divided iron ores, blast-furnace flue dust and the like which consists in forming a binding medium containing a base, alumino-silicates and iron oxid by mixing pulverized highly basic alumino-silicates with ferric hydroxid and warm water, mixing the binding medium with the material to be briqueted and molding the whole.

2. Method of briqueting finely-divided iron ores, blast-furnace flue dust and the like which consists in forming a binding medium containing a base, alumino-silicates and iron oxid by mixing pulverized highly basic alumino-silicates with ferric hydroxid and warm water in the proportion of about one molecule of ferric-hydroxid to three molecules of the bases contained in the basic alumino-silicates, mixing the binding medium with the material to be briqueted and molding the whole.

3. Method of briqueting finely-divided iron ores, blast-furnace flue dust and the like which consists in forming a binding medium containing lime, alumino-silicates and iron oxid by mixing caustic lime containing alumino-silicates with ferric hydroxid by wet grinding, thereupon mixing the binding medium with the material to be briqueted and molding the whole.

4. Method of briqueting finely-divided iron ores, blast-furnace flue dust and the like which consists in forming a binding medium containing lime, alumino-silicates and iron oxid by mixing caustic lime containing alumino-silicates with ferric-hydroxid by wet grinding in the presence of heat, thereupon mixing the binding medium with the material to be briqueted and molding the whole.

5. Method of briqueting finely-divided iron ores, blast-furnace flue dust and the like which consists in forming a binding medium by mixing pulverized highly basic alumino-silicates with ferric-hydroxid and warm water, mixing the binding medium with the material to be briqueted and with small quantities of fusing-point lowering agents, and molding the whole.

[Claims 6 and 7 not printed in the Gazette.]

1,104,125. ATTACHMENT FOR REGULATING TIME-RECORDING REGISTERS. HORACE B. MCCABE, Chicago, Ill., assignor to Gisholt Machine Company, Madison, Wis., a Corporation of Wisconsin. Filed Mar. 6, 1913. Serial No. 752,266. (Cl. 234—43.)

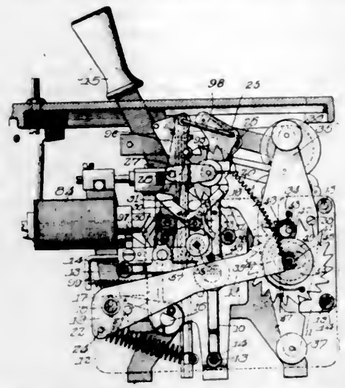
1. The combination with a time recording register, of apparatus for arresting the change of the recording mechanism during a time sufficient to take a plurality of records therefrom.

2. The combination with a time recording register having recording mechanism which is changed by power electrically stored and mechanically expended, of apparatus for arresting the expending of the stored power during a time sufficient to take a plurality of records therefrom.

3. The combination with a time recording register, of apparatus for arresting the change of the recording mechanism for a given time, and a device for rendering the arresting apparatus inoperative.

4. The combination with a time recording register, of apparatus for arresting the change of the recording mechanism for a given time, and a manually operable device for rendering the arresting apparatus inoperative.

5. The combination with a time recording register, of apparatus actuated by a moving part of the register for



arresting the change of the recording mechanism during a time sufficient to take a plurality of records therefrom.

[Claims 6 to 27 not printed in the Gazette.]

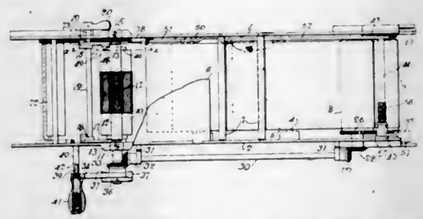
1,104,126. TRANSFER-PICTURE. GEORGE R. MEYERCORD, Chicago, Ill. Filed Apr. 12, 1912. Serial No. 690,380. (Cl. 41—33.)

1. A decalcomania transfer for imitating an oil painting comprising a print having a flat face on the side which is to be exposed after the transfer and on the other side a face in relief.

2. A decalcomania transfer for imitating an oil painting comprising a print having a flat face on the side which is to be exposed after the transfer and having on its opposite face high spots formed by successive printings upon the completed flat print.

3. The method of forming a relief decalcomania transfer in imitation of an oil painting, which consists in making the usual flat print and then forming the relief by building up high spots on the back face of the print by successive printings of the areas to be raised.

1,104,127. AUTOGRAPHIC REGISTER. FREDERICK C. NICKOL and MILTON C. STERN, Dayton, Ohio, assignors to The Egry Register Company, Dayton, Ohio, a Corporation of Ohio. Filed July 12, 1911. Serial No. 638,068. (Cl. 11—36.)



1. In an autographic register, the combination, with a support for a web of paper, a writing table, printing mechanism arranged to act on said web of paper between the support therefor and said writing table, an inking device for said printing mechanism, and feeding mechanism to move said paper over said writing table, of operating mechanism comprising a single actuating member, to impart movement to said inking mechanism, said feeding device and said printing mechanism.

2. In an autographic register, the combination, with a frame having means to support a web of paper, a writing table carried by said frame, feeding rollers mounted on said frame to move said paper over said writing table, a printing roller arranged to act upon said paper between said supporting means and said feeding rollers, and an inking device for said printing roller, of a single operating handle to actuate said feeding rollers, said printing roller and said inking device.

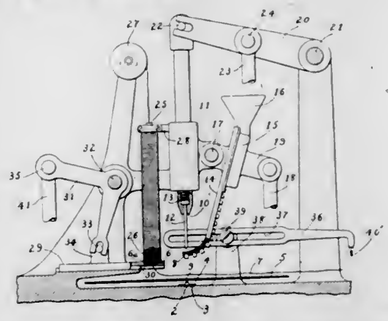
3. An autographic register comprising a frame, means to support a web of paper on said frame, a writing table carried by said frame, feeding mechanism to move the paper from said web over said writing table, printing mechanism mounted on said frame to print on said paper before the latter reaches said writing table, an inking device for said printing mechanism, and an actuating member operatively connected to said feeding mechanism, said printing mechanism and said inking device.

4. In an autographic register, the combination, with a frame, means for supporting a web of paper on said frame, a writing table carried by said frame, and feeding mechanism arranged beyond said writing table, of a printing roller carried by said frame and arranged to act on said web of paper between the support therefor and said writing table, a platen mounted in said frame, and means for simultaneously actuating said feeding mechanism and said printing roller.

5. In an autographic register, the combination, with a frame, means for supporting a web of paper on said frame, a writing table carried by said frame, and feeding mechanism arranged beyond said writing table, of a printing roller carried by said frame and arranged to act on said web of paper between the support therefor and said writing table, a platen mounted in said frame, means for simultaneously actuating said feeding mechanism and said printing roller, and means for imparting movement to said printing roller independently of said feeding mechanism.

[Claims 6 to 23 not printed in the Gazette.]

1,104,128. WASHER AND STRING ATTACHING MECHANISM. ABRAHAM NOVICK, Brooklyn, N. Y., assignor to F. L. Schmidt Company, New York, N. Y., a Corporation of New York. Filed May 15, 1914. Serial No. 838,676. (Cl. 93—61.)



1. In a mechanism of the character described, the combination of a washer reservoir having a string passage lengthwise therethrough, means for delivering a washer with a string therethrough from said reservoir into setting position, and means for securing said washer and string to a sheet of material.

2. In a mechanism of the character described, the combination of an eyelet setting anvil, a reciprocating punch for coaction with said anvil, means for delivering eyelets one at a time into the path of said punch, a washer reservoir having a string passage lengthwise therethrough, and means for delivering a washer with a string therethrough from said reservoir under said eyelet between said punch and anvil.

3. In a mechanism of the character described, the combination of an eyelet setting anvil, a reciprocating punch for coaction with said anvil, an eyelet engaging needle carried by said punch and yieldable in the direction of the

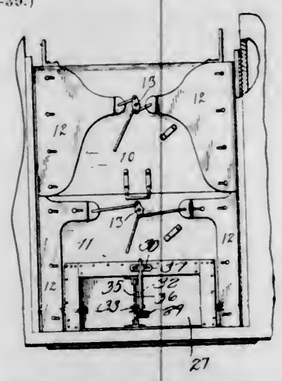
reciprocation of said punch, means for feeding eyelets one at a time into the path of said needle and punch, a washer reservoir having a string passage lengthwise therethrough, and means for delivering a washer with a string therethrough from said reservoir to a position under the eyelet between said punch and anvil.

4. In a mechanism of the character described, the combination of an eyelet setting anvil having means thereon for supporting and centering a bottom washer, a reciprocating punch for coaction with said anvil, an eyelet engaging needle carried by said punch and yieldable in the direction of the reciprocation of said punch, means for feeding eyelets one at a time into the path of said needle and punch, means for retracting the eyelet feeding means from the path of said punch, means for reciprocating said punch, a top washer reservoir having a string passage lengthwise therethrough, and means for delivering a top washer with a string therethrough from said reservoir to a position under the eyelet between said punch and anvil.

5. In a mechanism of the character described, the combination of an eyelet setting anvil, a reciprocating punch for coaction with said anvil, an eyelet engaging needle carried by said punch and yieldable in the direction of the reciprocation of said punch, an eyelet chute for feeding eyelets one at a time into the path of said needle and punch, means for retracting said eyelet chute from the path of said punch, a washer reservoir having a string passage lengthwise therethrough, means for delivering a washer with a string therethrough from said reservoir to a position under the eyelet between said punch and anvil, and means for retracting said washer delivery means.

[Claims 6 to 10 not printed in the Gazette.]

1,104,129. BOX-CAR DOOR. WIGO G. NYMON, Argusville, N. D. Filed May 28, 1913. Serial No. 770,457. (Cl. 20—39.)

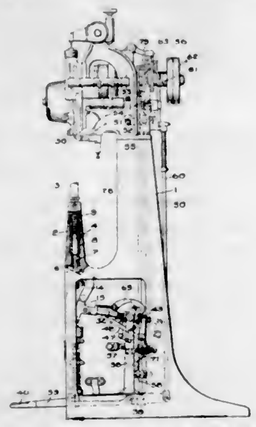


1. In a car door having a gateway therethrough, a gate slidably mounted over the gateway, a notched bar disposed vertically within the gateway, a bracket adjacent to the gateway, a bracket on the gate, and a lever movably connected with the last said bracket and removably connected to the first said bracket for holding the gate closed, said lever being provided with means for engaging with the notched bar for raising the gate after said lever has been released from the first said bracket.

2. The combination in a vertically slidable gate, of a combined locking and lifting mechanism consisting of a vertically mounted notched bar, a bracket adjacent to the gateway, a bracket secured on the gate, a lever connected to the last said bracket and adapted for longitudinal and pivotal movement relative thereto and adapted for engagement with the first said bracket for holding the gate closed, and means carried by the lever for engaging the notches of said vertical bar and adapted to coact therewith for raising the gate.

3. The combination with a vertically slidable gate and a gateway, of combined locking and lifting mechanism comprising a vertically disposed bar secured to the gateway and provided in its outer edge with horizontal notches having their inner ends enlarged, a bracket adjacent the upper portion of the gateway, a bracket on the gate, a lever slidably pivoted to the second bracket and adapted for engagement with the first bracket to hold the gate closed and a lateral extension on the pivoted end portion of the lever adapted to engage in the notches whereby rocking movement of the lever will lift the gate.

1,104,130. HORN-CONTROLLING MECHANISM FOR METALLIC FASTENING-MACHINES. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 21, 1907. Serial No. 353,211. (Cl. 1—41.)



1. In a machine for operating on boots and shoes, the combination of a work support for engaging and supporting the work, a power shaft, and power-operated means periodically to depress said work support to permit the work to be fed, said means including a slide bar connected with the work support, a pivotally mounted member having oppositely extending arms one of which has an opening through which said slide bar extends and the wall of said opening adapted on movement in one direction to engage and carry with it said slide bar and its connected work support and upon movement in an opposite direction to free said slide bar.

2. In a machine of the character described, the combination of a work support for sustaining a shoe against an opposed work contacting part, means for raising the work support to position the shoe, a slide bar connected to the work support, a pivotally mounted arm having jaw portions the walls of which are adapted to frictionally engage and move the slide bar upon movement of said arm in one direction to permit the shoe to be fed and then to free the slide bar to permit the shoe to be clamped between the work support and opposed contacting part, and means for operating said pivotally mounted arm.

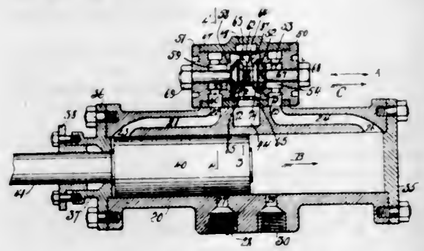
3. In a machine of the character described, the combination of a work support for sustaining a shoe against an opposed work contacting part, a work support sustaining spring, means for raising the work support to position the shoe, a bar or rod connected to the work support by which the work support may be periodically depressed for feeding the work, a movable arm having an opening through which said bar or rod extends, and means for causing opposite walls of said opening to directly and frictionally engage said bar or rod and then move it to separate the work support and opposed work contacting part to permit work feed and then release said bar or rod to the impulse of said work support sustaining spring.

4. Work support controlling means comprising in combination a work engaging member, means to raise the same, and screw and nut retarding means to control the lowering of said work engaging member.

5. In a machine of the character described, the combination of a work support, a spring for sustaining said work support, and raising means therefor comprising an endwise movable screw, a nut thereon, said screw and nut being capable of relative rotation, and means to move one of them endwise and simultaneously therewith as such movement is initiated to restrain relative rotation whereby to render said screw and nut effective for raising said work support and placing said sustaining spring under compression.

[Claims 6 to 36 not printed in the Gazette.]

1,104,131. FLUID-MOVED VALVE. GEORGE S. POWER, Nutley, N. J. Filed Oct. 8, 1913. Serial No. 794,010. (Cl. 121—11.)



1. In an apparatus of the character described the combination of a cylinder having inlet and exhaust ports, a valve chest for said cylinder, a valve in said chest, oppositely positioned faces for said valve and means to alternately impinge jets of fluid against the faces of said valve to give the initial impetus to said valve for each of its reciprocations.

2. In an apparatus of the character described the combination of a cylinder having inlet and exhaust ports, a valve chest for said cylinder, a valve in said valve chest having reversed tapering faces, a sleeve in said chest with ports to enable a fluid to alternately impinge against said tapering faces.

3. In an apparatus of the character described the combination of a cylinder having inlet and exhaust ports, a valve chest for said cylinder, a fluid moved valve in said valve chest, reversed tapering faces for the valve and a sleeve in said chest having two sets of ports, the fluid from one set of ports striking one of the tapering faces and the jets from the other set of ports simultaneously avoiding the other tapered face of the valve, the valve reciprocating with the alternate effects of the jets.

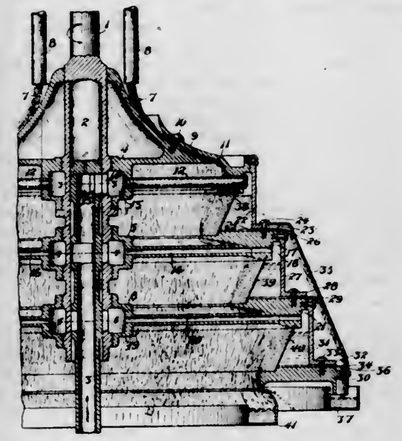
4. In an apparatus of the character described the combination of a cylinder, ports for the cylinder, a valve chest for the cylinder, a sleeve in the valve chest having two ports, a slidably movable valve in the valve chest and a pair of reversed frustums for the valve alternately in the paths of jets of fluid discharged from the ports in said sleeve.

5. In an apparatus of the character described the combination of a cylinder, ports for the cylinder, a valve chest for the cylinder having two inlet ports coacting therewith, a reciprocating valve in the valve chest, a guide for the valve and a pair of reversed tapering faces for the valves that are alternately actuated by fluid from one of the said inlet ports.

[Claims 6 to 12 not printed in the Gazette.]

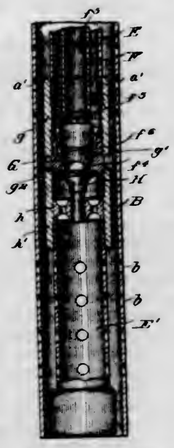
1,104,132. APPARATUS FOR RECOVERING VALUABLE CONSTITUENTS FROM ORES. FREDERICK H. PRENTISS, San Francisco, Cal., assignor of one-half to Leda B. Prentiss, San Francisco, Cal., and one-half to Robert C. Lane, Berkeley, Cal. Filed Jan. 17, 1910. Serial No. 538,409. (Cl. 83—87.)

A rotatable vessel having an inverted-cone-shaped screen concentric with the axis of rotation and permanently secured to, and within, the wall of the vessel to form with said screen a closed annular space said screen being of a mesh adapted to permit passage therethrough of the particles to be separated, a layer of material resting upon the screen and forming a jig bed, means for forcing a stream of water into said closed space between said wall and screen and through the material forming



the jig bed, whereby the worthless gangue is washed out from said jig bed, means adapted to discharge from the annular chamber between the screen and the vessel, and means for rendering the pressure of said stream through said screen pulsating, whereby the centrifugal force forces the fine particles of high specific gravity through the screen.

1,104,133. APPARATUS FOR FORCING FLUIDS FROM WELLS. WILLIAM P. RANDALL, Le Roy, N. Y., assignor to Joseph S. L. Purdy, Le Roy, N. Y. Filed Feb. 3, 1913. Serial No. 746,003. (Cl. 166—3.)



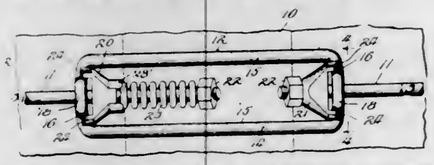
1. In an apparatus of the character described, the combination with a fluid pressure chamber and an ejection tube movable longitudinally therein, the lower portions of said chamber and tube being adapted to be submerged, of a valve normally closing the ejection tube against the entrance of fluid arranged to be opened by the movement of said tube and to admit fluid thereinto, said tube being provided with perforations for the inlet of gas from the sur-

rounding chamber and means for introducing fluid under pressure into said chamber.

2. In a well cleaning apparatus, the combination with a fluid pressure chamber and an ejection tube movable longitudinally therein provided with a plurality of perforations located at different positions in its length, the lower ends of said chamber and tube being both adapted to be submerged, of a valve normally closing the tube and chamber against the entrance of liquid arranged to be operated upon the relative movement of the tube in opposite directions in the chamber to control the flow of liquid into the tube and means for controlling the flow of fluid pressure in the chamber to eject the liquid from the tube.

3. In a well cleaning apparatus, the combination with a well casing, an inclosed gas chamber therein extending approximately to the bottom of the well and provided with a valve seat, and a valve head normally held in engagement with its seat by the fluid pressure in the well, of a perforated siphon tube arranged in the chamber having an open lower end arranged to coöperate with the valve head and means for moving said tube longitudinally and a restriction located above said seat and between the chamber and tube and means for controlling the flow of fluid pressure into the chamber above the restriction.

1,104,134. HOOP AND FASTENER FOR SILO AND LIKE TANKS. ANDREW RASMUSSEN, Racine Junction, Wis., assignor to Peerless Silo Supply Co., Racine, Wis., a Corporation of Wisconsin. Filed Nov. 4, 1912. Serial No. 729,305. (Cl. 217—95.)



1. The combination with a hoop adapted to surround a silo or like tank and having its ends arranged in line with each other, of a hoop fastener comprising an open coupling member, fittings within the member pivotally connected to the opposite ends thereof and provided with openings through which the hoop ends extend and means associated with the hoop ends and fittings to draw the hoop about the tank.

2. The combination with a hoop adapted to surround a silo or like tank and having its ends arranged in line with each other, of a hoop fastener comprising a coupling member, fittings pivotally connected to the opposite ends thereof and provided with openings through which the hoop ends extend, at least one of said ends being screw-threaded, with a nut thereon to act against the adjacent fitting to tighten the hoop, the opening in the said latter fitting being larger than the hoop end and means to centralize the hoop end therein, for the purpose set forth.

3. The combination with a hoop adapted to surround a silo or like tank and having its ends arranged in line with each other, of a hoop fastener comprising an open coupling member, fittings within said member pivotally connected to the opposite ends thereof and provided with openings through which the hoop ends extend, means to centralize the hoop ends in said fittings to avoid friction between the parts, one end of the hoop being screw-threaded to receive a nut, and a spring interposed between one of said fittings and said nut.

4. The combination with a hoop for a silo or like tank, of a hoop fastener comprising a coupling member, fittings pivotally connected thereto and provided with openings through which the hoop ends extend, one end of the hoop end being screw-threaded to receive a nut, and a spring interposed between one of said fittings and said nut, the opening in said latter fitting being made larger than the diameter of the hoop end, and said spring being constructed to serve as a guide for the hoop end to avoid binding engagement of the hoop end with the wall of said opening.

5. The combination with a hoop for a silo or like tank, of a hoop fastener comprising a coupling member, fittings pivotally connected thereto and provided with openings through which the hoop ends extend, nuts screw-threaded to the hoop ends and co-acting with the fittings, the opening in one of the fittings being of greater diameter than the hoop end which extends therethrough, and a spiral spring surrounding the latter hoop end between the associated fitting and nut, with one end thereof connected to said fitting said spring closely fitting the hoop end to serve as a guide for the latter end to hold the same out of contact with the wall of the opening in said fitting.

[Claims 6 to 8 not printed in the Gazette.]

1,104,135. MANUFACTURE OF SYRUP. MARK C. RICH, Hot Springs, S. D. Filed Nov. 28, 1911. Serial No. 662,918. (Cl. 99—11.)

1. A syrup containing an infusion of alfalfa, glucose and a saccharine syrup.

2. A syrup containing a strained infusion of alfalfa and a saccharine syrup.

3. That improvement which consists in cutting alfalfa before it becomes woody and fibrous, subjecting it to artificial heat and grinding it, boiling it with water and straining the infusion and then boiling said infusion with a saccharine syrup.

4. That improvement which consists in cutting alfalfa before it becomes woody and fibrous, subjecting it to artificial heat and grinding it, boiling it with water, straining the infusion, and then boiling said infusion with glucose and a saccharine syrup.

1,104,136. MANUFACTURE OF ALFALFA PRODUCTS. MARK C. RICH, Hot Springs, S. D. Filed Nov. 28, 1911. Serial No. 662,920. (Cl. 99—11.)

1. That improvement in the treatment of alfalfa which consists in cutting it before it has become woody and fibrous, and then partially curing it and then treating it to prevent bleaching.

2. That improvement in the treatment of alfalfa which consists in cutting it before it has become woody and fibrous, partially curing it in the field and subjecting it to artificial heat.

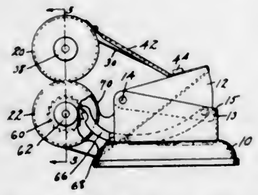
3. That improvement in the treatment of alfalfa which consists in cutting it before it has become woody and fibrous, partially curing it in the field and then treating it for a sufficient period to prevent bleaching.

4. That improvement in the treatment of alfalfa, which consists in cutting it before it has become woody and fibrous, then curing and heating it to prevent bleaching, and then grinding it.

5. That improvement in the treatment of alfalfa which consists in cutting it before it has become woody and fibrous, partially curing it in the field, then subjecting it to artificial heat, and then grinding it.

[Claims 6 to 10 not printed in the Gazette.]

1,104,137. SANITARY CIGAR-CUTTER. HENRY P. ROBERTS, Boston, Mass., assignor to Sanitary Cigar Cutter Co., a Corporation of Massachusetts. Filed Oct. 15, 1913. Serial No. 795,267. (Cl. 131—38.)

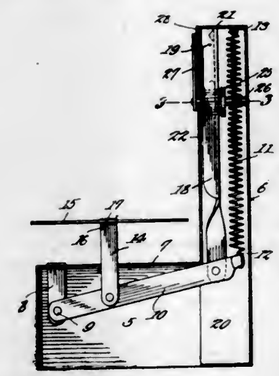


1. In a device of the character described, a pivotally mounted plate having an aperture adapted to receive the tip end of a cigar, a strip of paper extending over said aperture, means for severing the tip of the cigar, and means for feeding the paper forward to present a fresh portion over said aperture after each cigar tip is severed.

2. In a device of the character described, a member having an aperture adapted to receive the tip end of a cigar, a strip of paper over said aperture, a take-up roll adapted to take up the paper as it is used, means for severing the cigar tip, and means for operating the take-up roll to cause said strip to move over said aperture to present a fresh portion over said aperture after each cigar tip is severed.

3. A device of the character described, comprising a pivotally mounted member having an aperture adapted to receive the tip end of a cigar, a strip of paper fed from a supply and passing over said aperture, a take-up roll for taking up the web of paper, means for cutting off the cigar tip, and means operative during the cutting operation for actuating the take-up roll.

1,104,138. TOY WEIGHING-MACHINE. CHARLES B. ROBERTSON, Baltimore, Md. Filed Nov. 10, 1913. Serial No. 800,044. (Cl. 73—46.)

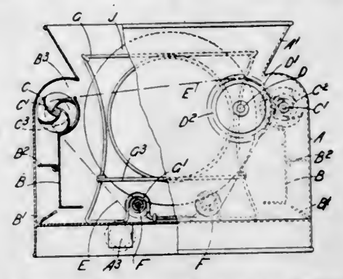


The combination in a scale of the character described, comprising a casing having a vertical column provided at its rear end, a dial provided on the front of the column, a bracket depending into the casing, having a lever pivoted thereto at its lower end, said lever being extended rearwardly through said casing and transversely into said column, vertical bars pivotally mounted upon said lever and extended through said casing and having a pan supported thereon above said casing, a spring depending from the top of said column, the free end of the spring being connected with the free end of said lever, a vertical bar having rack teeth provided in one of its edges pivotally mounted upon said lever, a horizontal shaft journaled in the front and rear walls of said column, and projecting through the front wall thereof, said projection having a hand affixed thereto and adapted to rotate on said dial, a lantern gear provided on said shaft in mesh with the rack teeth on said vertical bar, thereby rotating said hand on said dial when said bar is lowered upon said pan being depressed, substantially as described.

1,104,139. MACHINE FOR WASHING PLATES. HORACE WYNDHAM RODDA, London, England. Filed July 28, 1913. Serial No. 781,566. (Cl. 141—9.)

1. In a machine for washing plates and other circular articles of tableware, the combination of a tank, a stationary support for the plates within the tank, means for rotating the plates relatively to the stationary support and means for circulating water between the plates.

2. In a machine for washing plates and other circular articles of tableware, the combination of a tank, a removable rack adapted to support the plates, means for rotating the plates relatively to the rack and means for simultaneously circulating water between the plates.



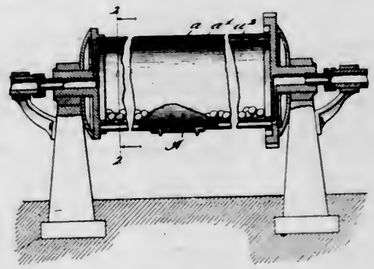
3. In a machine for washing plates and other circular articles of tableware the combination of a tank, a removable rack adapted to support the plates, means within the tank for rotating the plates in their own plane relatively to the rack which remains stationary and means for simultaneously circulating water between the plates.

4. In a machine for washing plates and other circular articles of tableware the combination of a tank, a removable rack adapted to support the plates, rotary members within the tank adapted to engage the edges of the plates and rotate them in a vertical plane relatively to their stationary supporting rack and means for circulating water between the plates.

5. In a machine for washing plates and other circular articles of tableware the combination of a tank, a removable rack adapted to support the plates, rotatable grooved rollers within the tank adapted to engage the edges of the plates and rotate them in a vertical plane relatively to their stationary supporting rack, means for rotating said rollers and means for simultaneously circulating water between the plates.

[Claims 6 to 10 not printed in the Gazette.]

1,104,140. METHOD OF TREATING BITUMINOUS MATERIAL. JAMES C. ROSS, Colorado Springs, Colo., assignor to The Hydrocarbon Company, a Corporation of Nevada. Filed Sept. 27, 1911. Serial No. 651,492. (Cl. 83—9.)



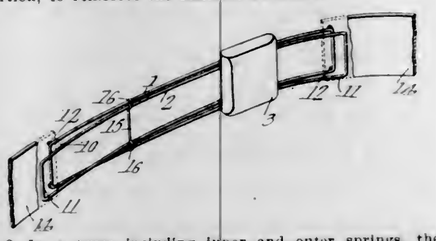
1. The method of treating bituminous materials which consists in first mixing the material with a suitable quantity of litharge and then grinding or pulverizing the same.

2. The method of treating bituminous materials which consists in first mixing the material with a suitable quantity of litharge, then lowering the temperature of the mixture and then grinding or pulverizing the same while said lowered temperature is maintained.

1,104,141. TRUSS. HIRAM C. RUDISILL, Greencastle, Ind. Filed June 23, 1913. Serial No. 775,444. (Cl. 128—26.)

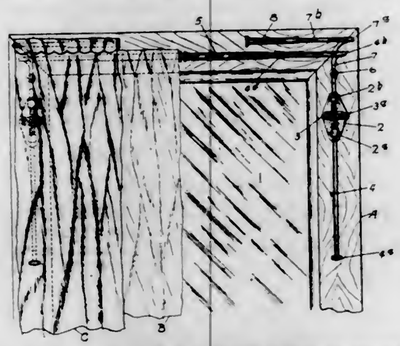
1. In a truss, a resilient structure comprising inner and outer curved springs; a pad assembled with the intermediate portion of the resilient structure; and a belt

connected with the ends of the outer spring; the inner spring being terminally free upon each side of the pad to form body engaging ends, the body engaging ends being normally spaced from the ends of the outer spring but being adapted to contact therewith under abdominal distortion, to reinforce the resilient structure.



2. In a truss including inner and outer springs, the springs being curved and having their ends spaced, the springs being of looped form, the inner spring being narrower than the outer spring and longer than the outer spring; the ends of the outer spring having belt engaging means; and a pad connected with one spring, the pad lying inside of the inner spring.

1,104,142. CURTAIN-FIXTURE. AUGUST SCHOENDELEN, Davenport, Iowa. Filed Mar. 19, 1914. Serial No. 825,801. (Cl. 156—22.)



1. In combination with a frame, a bracket secured to said frame, a vertically and horizontally disposed rod pivotally supported by said bracket, a vertically and horizontally disposed member detachably secured to said rod.

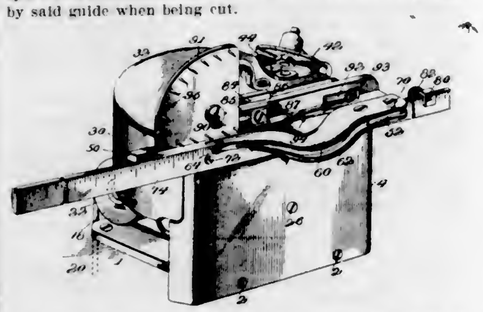
2. A curtain fixture comprising a bracket, a curtain support adjustably secured to said bracket, a drapery support detachably secured to said curtain support, automatic locking means within said bracket adapted to hold said supports in their variously adjusted positions.

3. A curtain fixture comprising a bracket, a curtain support adjustably secured to said bracket, a vertically and horizontally disposed drapery support detachably secured to said curtain support, said horizontally disposed portion extending beyond the vertical portion in opposite directions and forward of the vertical plane thereof, spring actuated means within said bracket adapted to hold said supports in their variously adjusted positions.

1,104,143. CLOTH-CUTTING MACHINE. GEORGE SCOTT, Amsterdam, N. Y. Filed Jan. 26, 1912. Serial No. 673,595. (Cl. 164—61.)

1. In a cutting machine and in combination with a plate and disk cutter, a support located adjacent to said plate and disk cutter and movable with respect thereto during the operation of cutting and a guide mounted upon said support and capable of movement thereon with respect to said cutter whereby material may be guided by said guide when being cut.

2. In a cutting machine and in combination with a plate and disk cutter, a support located adjacent to said plate and disk cutter and movable with respect thereto during the operation of cutting, said support having a slot therein, and a guide having a part located in said slot so that the guide is capable of movement therein, with respect to said cutter, whereby the material may be guided by said guide when being cut.



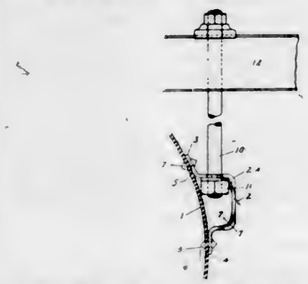
3. In a cutting machine and in combination with a plate and disk cutter, a support located adjacent to said plate and disk cutter and movable with respect thereto during the operation of cutting, said support having a slot therein, a member sliding within the slot of said support, and a guide mounted for rotary movement upon said member, whereby the guide may be given both a rotary and a sliding movement with respect to said support.

4. In a cutting machine and in combination with a plate and disk cutter, a support carried by said plate in proximity to said cutter and movable with respect to said plate during the operation of cutting, and a guide mounted for movement upon said support whereby the material may be guided by said guide when being cut.

5. In a cutting machine and in combination with a plate and disk cutter, a support located adjacent to said plate and disk cutter and having a slot permitting movement parallel with the face of said cutter, and a guide mounted for rotary movement upon said support, whereby the material to be cut may be given both a straight and curved cut as it is guided by said support.

[Claims 6 to 12 not printed in the Gazette.]

1,104,144. BOILER-BRACKET. EDWARD P. SELDEN, Erie, Pa., assignor to Erie City Iron Works, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1912. Serial No. 691,724. (Cl. 220—140.)



1. A boiler bracket comprising perforated ends adapted to engage the boiler shell; an outwardly extending intermediate loop having a horizontal opening through the loop; an extension having a bottom plate extending in a horizontal direction and secured to the bottom wall of said loop; and a top plate bent up from said bottom plate at the outer end of the bottom plate and extending on an upward slant to the top wall of the loop, said top plate being secured to the top of the loop and forming a compression member for the extension.

2. A boiler bracket comprising perforated ends adapted to engage the boiler shell; an outwardly extending intermediate loop having a horizontal opening through the loop; and an extension secured to the bottom wall of the loop, and having side webs forming compression members for the extension.

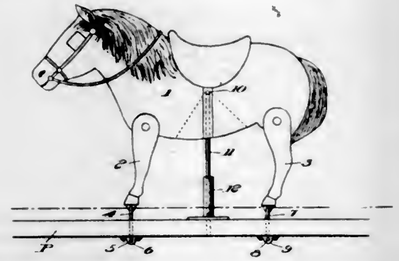
3. A boiler bracket comprising perforated ends adapted to engage the boiler shell; an outwardly extending intermediate loop having a horizontal opening through the loop; an extension having a bottom plate secured to the bottom wall of the loop, the top plate bent up from the bottom plate at the outer end of the bottom plate and secured to the top wall of the loop; and a vertical web extending from one of said plates.

4. A boiler bracket comprising perforated ends adapted to engage the boiler shell; an outwardly extending intermediate loop having a horizontal opening through the loop; an extension having a bottom plate secured to the bottom wall of the loop, the top plate bent up from the bottom plate at the outer end of the bottom plate and secured to the top wall of the loop; and a vertical web extending from one of said plates forming a closure and contact with the opposite plate.

5. A boiler bracket comprising perforated ends adapted to engage the boiler shell; an outwardly extending intermediate loop having a horizontal opening through the loop; an extension having a bottom plate secured to the bottom wall of the loop, the top plate bent up from the bottom plate at the outer end of the bottom plate and secured to the top wall of the loop; and a web bent up from the bottom plate and inclosing the loop and having an edge in alinement with the engaging ends of the loop, said web having an opening giving access to the interior of the loop.

[Claim 6 not printed in the Gazette.]

1,104,145. CAROUSEL. ALBERT G. SHARKEY, New York, N. Y. Filed Jan. 4, 1912, Serial No. 669,486. Renewed Nov. 14, 1913. Serial No. 801,054. (Cl. 46—27.)



1. An amusement device comprising a suitable support, a pair of crank shafts suitably journaled upon said support provided with a pair of cranks, a passenger carrier mounted upon said cranks, a pair of pinions of relatively different diameters on said crank shafts and means for rotating said crank shafts and cranks to oscillate the carrier irregularly.

2. An amusement device comprising a passenger carrier, a pair of cranks suitably journaled upon which the carrier is mounted and means for rotating said cranks at relatively different speeds to cause the carrier to irregularly oscillate.

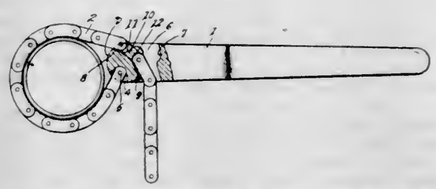
3. An amusement device comprising a passenger carrier in the form of the body of a simulated animal and links in the form of the legs of such an animal oscillatively connected to said carrier and means for irregularly oscillating said carrier and said links.

4. An amusement device comprising a suitable support; a reciprocal rod, mounted on said support; a passenger carrier in the form of a simulated animal or figured representative oscillatively mounted on said reciprocal rod; links oscillatively connected to the carrier forward and rearward of said reciprocal rod; means for irregularly oscillating and reciprocating the carrier and links.

5. An amusement device comprising a suitable support; a telescoping rod mounted on said support; a passenger carrier oscillatively mounted on said telescoping rod; and means for oscillating and reciprocating said passenger carrier irregularly.

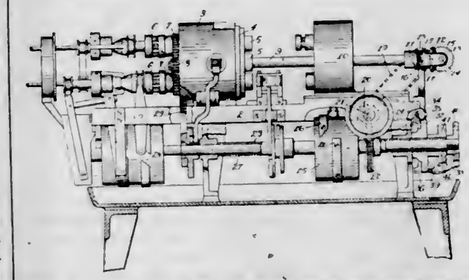
[Claims 6 to 8 not printed in the Gazette.]

1,104,146. CHAIN WRENCH. FRANK M. SIMPSON, Alameda, Cal. Filed July 2, 1913. Serial No. 777,118. (Cl. 81—66.)



A chain wrench comprising a handle having a rounded head formed at one terminal thereof, said rounded head having a recess therein, a chain pivotally mounted at one terminal within the recess, said head provided with a chain slot, the outermost wall of said slot being provided with angular shoulders, a pair of spaced integral chain hooks carried by one of the angular shoulders and adapted for engagement with the rounded terminals of one of the links of the chain upon opposite sides, one of the links of the chain adapted to lie against the upper angular shoulder and the other link adapted to lie in engagement with the lower angular shoulder, said slot being reduced at one terminal and said chain hook being turned toward the reduced terminal of the slot and disposed within the slot.

1,104,147. METAL-WORKING MACHINE. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 23, 1911. Serial No. 629,020. (Cl. 29—37.)



1. In a machine of the class described, the combination with a rotary turret and a reciprocatory tool slide, of means for indexing the turret at a rapid speed and accelerating the speed of the tool slide and comprising a pair of shafts one extending into the other, the latter continuously rotatable and carrying means for actuating the tool slide and the former intermittently rotatable but at an increased speed as compared with the speed of the continuously rotatable shaft and carrying means for rotating the turret, means for rotating said shafts and comprising two sets of worm and worm wheel gearing, and means intermittently connecting one of said sets of worm wheel gearing with the intermittently rotatable shaft.

2. In a machine of the class described, the combination with a rotary turret and a reciprocatory tool slide, of means for indexing the turret at a rapid speed and ac-

celerating the speed of the tool slide and comprising a pair of shafts one continuously rotatable and carrying means for actuating said tool slide and the other intermittently rotatable but at an increased speed as compared with the speed of the continuously rotatable shaft and carrying means for rotating the turret, means for rotating the continuously rotatable shaft and rotating the intermittently rotatable shaft from the continuously rotatable shaft and comprising two sets of work and worm wheel gearing, and means intermittently connecting one of said sets of worm wheel gearing with the intermittently rotatable shaft.

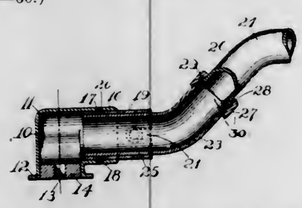
3. A machine of the class described having a pair of cam bearing shafts, and means for causing one of said shafts to be rotated intermittently by but at a higher speed than the other of said shafts and comprising two sets of worm and worm wheel gearing and means intermittently connecting one of said sets of worm wheel gearing with the intermittently rotatable shaft.

4. A machine of the class described having a pair of cam bearing shafts one extending into the other, and means connecting said shafts for causing the inner to be intermittently rotated by but at a higher speed than the outer shaft, the inner shaft carrying turret rotating means and the outer shaft tool slide actuating means.

5. In a machine of the class described, the combination with a rotary turret and a reciprocatory tool slide, of a pair of shafts one within the other, the outer shaft carrying means for actuating the tool slide and the inner shaft carrying means for rotating the turret, and means for connecting said shafts and causing one of said shafts to be rotated intermittently by but at a higher speed than the other and comprising a notched member fixed to one of said shafts, a pawl coöperating with said notched member, and a cam fixed to the other shaft for interrupting the connection between said pawl and notched member at predetermined times.

[Claims 6 to 28 not printed in the Gazette.]

1,104,148. CLEANING-TOOL. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporate Body of Connecticut. Filed Apr. 25, 1907. Serial No. 370,168. (Cl. 15—60.)



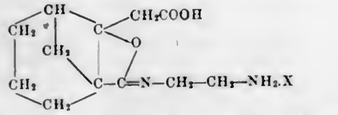
1. A cleaning implement including a handle having a main section and a tool supporting section attached thereto by a joint constructed to permit rotary adjustment of the sections one with respect to the other, means for securing the joint to prevent relative movement of the sections, the tool supporting end of the tool supporting section being bent at an angle to that part secured to the main section of the handle, and a long narrow cleaning tool swiveled to turn freely upon the outer end of said tool supporting section on an axis passing laterally and horizontally across the tool, said handle having an opening extending therethrough and said tool having a slot communicating with the opening in the handle.

2. A cleaning implement including a handle comprising a main section and a tool supporting section, said sections having a passage lengthwise therethrough, a joint securing said sections together to permit rotative adjustment, means for locking the sections against rotative movement, the tool supporting section having its lower end bent at an angle to that part secured to the main section of the handle, a sleeve removably secured to the tool supporting section, and a long narrow cleaning tool swivelly mounted on said sleeve and wholly supported thereby, the axis of rotation of said tool passing laterally across it in a horizontal direction.

1,104,149. AURIC COMPOUNDS FROM CANTHARIDYLETHYLENEDIAMIN AND PROCESS OF MAKING SAME. GUSTAV SPIESS, Frankfort-on-the-Main, and ADOLF FELDT, Oberursel, Germany. Filed July 28, 1913. Serial No. 781,642. (Cl. 23—24.)

1. The process of preparing derivatives from cantharidylethylenediamin, which consists in causing a complex auric acid to act upon the cantharidin ethylenediamin.

2. As new products, auric compounds from cantharidylethylenediamin which most probably correspond to the general formula:



wherein X stands for a complex auric acid, being colorless to golden-yellow crystals, soluble in water without decomposition, scarcely soluble in ether and benzene and decomposing when heated, leaving metallic gold.

3. As a new product, the cantharidylethylenediamin aurocyanid, having most probably the atomic group:

$$=N-CH_2-CH_2-NH_2.H-Au(CN)_2.$$

being colorless crystals, soluble in water without decomposition, scarcely soluble in ether and benzene and decomposing when heated, leaving metallic gold.

1,104,150. BODY-SUPPORTING APPLIANCE. WILHELM STAAB and HERMAN FÖCKERER, Munich, Germany. Filed Mar. 10, 1913. Serial No. 753,442. (Cl. 2—93.)

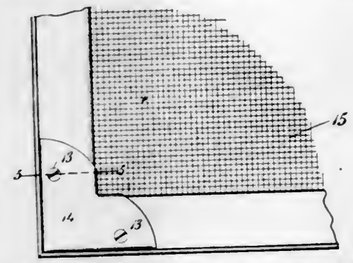


1. A device of the character specified, embodying therein a body brace including a rigid vertical back piece, means adjustable longitudinally of said back piece for supporting a pliant retaining strap, a pliant retaining strap loosely held by said means, a pin tapered toward its lower end and having a rounded top, and means carried by said retaining strap and adapted to easily engage and become disengaged from said pin.

2. A device of the character specified, embodying therein a rigid vertical back piece, a rigid horizontal shoulder piece secured to one end of said back piece, a pliant shoulder strap pivotally secured to each end of said shoulder piece, a pliant body belt pivotally secured to said back piece at the end opposite that to which said shoulder piece is secured, strap supporting members slidable toward and from each other on said rigid back piece, an endless strap engaging said supporting members, means for fixing said supporting members to said back piece in adjusted position whereby the length of strap projecting away from said back piece may be regulated, and means on said strap for removably engaging a seat back.

3. A device of the character specified, embodying therein a rigid vertical back piece, a rigid horizontal shoulder piece secured to one end of said back piece, a pliant shoulder strap pivotally secured to each end of said shoulder piece, a pliant body belt pivotally secured to said back piece at the end opposite that to which said shoulder piece is secured, strap supporting members slidable toward and from each other on said rigid back piece, an endless strap engaging said supporting members, means for fixing said supporting members to said back piece in adjusted position whereby the length of strap projecting away from said back piece may be regulated, and means on said strap for removably engaging a seat back, said last named means including a pin tapered toward its lower end and rounded at the top inserted in the seat back, and a slotted plate carried by said strap and adapted to easily engage and become disengaged from said pin.

1,104,151. WINDOW-SCREEN. EDWARD STEIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Apr. 7, 1913. Serial No. 759,317. (Cl. 156—14.)



1. In a window screen, a frame divided lengthwise into separable sections, means for locking together the outer edge of the two sections, the inner portions of the sections bent at right angles to form flat faces in opposition to each other between which the screening is grasped, a reentering lip on the inner edge of one section, and a hook lengthwise of the corresponding inner edge of the other section with the wire mesh locked between said hook and lip.

2. In a window screen, a frame divided lengthwise into separable sections, the one adapted to fit inside of the end walls to lock behind each other, the inner portions of the sections bent at right angles to form flat faces in opposition to each other between which the screening is grasped with a reëntering lip on the inner edge of one section and a hook lengthwise of the corresponding inner edge of the other section with the wire mesh locked between said hook and lip.

3. In a window screen, a frame divided lengthwise into a body section and a locking section, with angle irons located between the two sections at the corners to lock together the body section to form a frame, the two sections having corresponding beads in their outer edges to lock together with the inner edges of the two sections having a coöperating tongue and groove with the wire mesh locked between said tongue and groove, and with corner plates engaging over said beads and means for securing said corner plates to the angle irons to form a rigid and substantial frame.

1,104,152. EYEGLASSES. CLARENCE M. STEVENSON, Los Angeles, Cal., and NELSON M. BAKER, Southbridge, Mass. Filed Jan. 8, 1912. Serial No. 669,978. (Cl. 88—50.)



1. A nose guard including operatively inter-related main and supplemental bearing portions and automatic means whereby the variation of pressure on one causes a variation of pressure on the other bearing portion.

2. A nose guard including a main bearing portion, a supplemental free front edge bearing portion and means for automatically forcing the supplemental free front edge bearing portion into biting engagement with the nose.

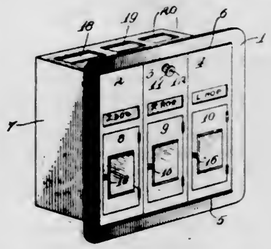
3. A nose guard including a main bearing portion, a resilient normally inoperative supplemental bearing portion, and means for forcing said resilient portion into operative position.

4. A nose guard including a main bearing portion, a supplemental bearing portion and a cam for forcing the supplemental bearing portion inward relative to the main bearing portion.

5. A nose guard including a main member having an ear, a lever having a cam head pivoted to the ear, and means carried by the main member and engaged by said cam head for biting into the nose as the main member is swung on its pivot.

[Claims 6 to 10 not printed in the Gazette.]

1,104,153. RECEIPTACLE FOR MAIL AND THE LIKE. LE ROY T. STEWARD, Chicago, Ill. Filed Aug. 31, 1912. Serial No. 718,007. (Cl. 232—24.)



1. A device for holding mail or the like comprising a plurality of connected receptacles open at the top, a closing device for said open tops, means for mounting said receptacle so as to permit it to be moved into and out of operative relation to said closing device, a lock for holding said receptacles in operative relation to said closing device, independent doors in said receptacles, and independent locks for said doors adapted to permit each of said doors to be opened independently of the others.

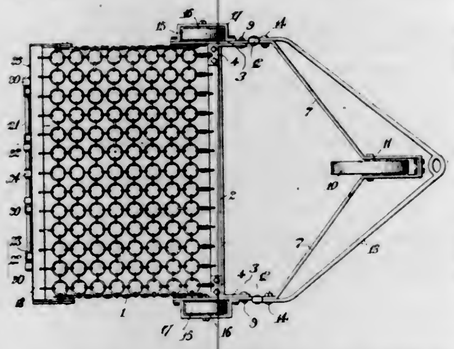
2. A device for holding mail or the like, comprising a casing open on the front side, a receptacle arranged in said casing and forming a closure for said open side, a hinge connecting the lower front corner of the receptacle to said casing, said receptacle being open at the top and having a series of vertical partitions extending from the top to the bottom thereof to divide it into a series of compartments, a lock arranged to lock the receptacle in position wherein the top thereof is closed by the casing, each of said compartments having an individual door in the front wall of the receptacle, and separate locks for said doors.

3. In a device for holding mail or the like, a casing open at the front, an open-top receptacle arranged in the casing and having a front wall of the size and shape to close the open side of the casing, said receptacle being open at the top, a series of vertical partitions arranged in the receptacle to divide it into a series of compartments, a hinge connecting the lower front corner of the receptacle to the casing, a spring acting on the receptacle to swing the upper end outwardly and expose the open upper ends of the compartments, a lock for holding the receptacle in its retracted position with the upper end closed by the casing, separate doors in the front wall of the receptacle for said compartments, and a lock for each door.

4. A device for holding mail or the like comprising a casing open on one side, a receptacle divided into a series of individual compartments, all of said compartments being open on one side of the receptacle, each compartment being provided with a door in a side of the receptacle adjacent to the open side, means for movably sup-

porting the receptacle in the casing, a lock for locking the receptacle in the casing and individual locks for said doors.

1,104,154. DRAG. FREDERICK V. STINSON, Rockport, Me. Filed Aug. 15, 1913. Serial No. 784,964. (Cl. 43—11.)

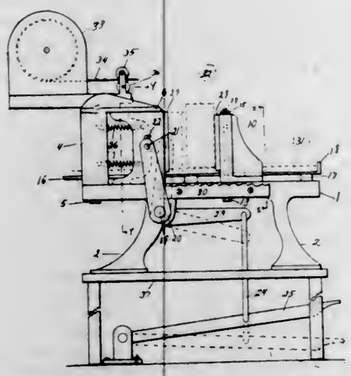


1. In a drag of the character described, the combination of a receptacle, mouth bars having connection with the receptacle, side plates having the ends of the mouth bars secured thereto and held spaced apart thereby, side bars adjustably connected with the side plates, runners adjustably connected with the side bars and adapted to trail upon the bottom and fix the position of the mouth of the receptacle, and a bail having pivotal connection with the side bars.

2. A drag comprising a receptacle, mouth bars connected with opposite portions of the receptacle, side plates having ends of the mouth bars connected thereto, side bars pivotally connected with the plates and relatively adjustable with reference thereto, means for securing the side bars to the plates in the adjusted position, and a bail having pivotal connection with the said side bars.

3. In combination with a drag, and side bars connected therewith, oppositely disposed runners pivotally connected at one end with the side bars and having adjustable connection at the opposite end with each other and with the side bars.

1,104,155. BUNCHER AND BANDER. WILLIAM WATTS, Louisville, Ky. Filed Mar. 23, 1914. Serial No. 826,638. (Cl. 100—57.)

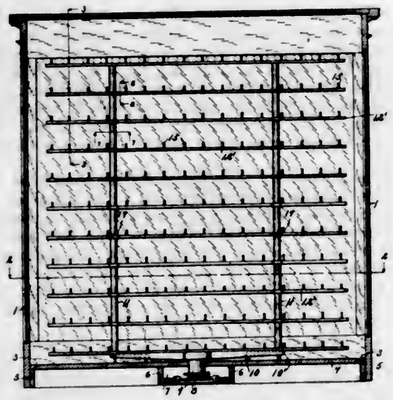


1. In a machine of the class described, a bed, guide rails on each side thereof, standards erected on the rear end of said bed, arms extending forward from said standards in a plane parallel with the bed, a movable head positioned between said arms and said guide rails, an adjustable head positioned on the bed forward of said movable head, means for advancing said movable head and means for retracting and normally holding said movable head retracted.

2. In a machine of the class described, a bed, guide rails thereon, standards erected at the rear end of the bed, arms extending forward from said standards in a plane parallel with said guide rails, a movable head positioned between said arms and said rails, a head adjustably secured on said rails by means of bolts passing through slots in said bed and up through said head, a shaft mounted transversely beneath the bed, arms on the ends of said shaft provided with pins adapted to engage with said movable head, a foot-lever, connections between said lever and said shaft, and means for normally holding said movable head in a retracted position.

3. In a machine of the class described, a bed, standards erected thereon, overhanging arms on said standards, a movable head between said arms and the bed, an adjustable head positioned on the bed, a transverse shaft, vertical arms on said shaft, pins in said arms engaged in said movable head, a foot lever, a connection between said lever and said shaft, and means for normally holding said parts in an inoperative position.

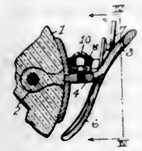
1,104,156. REVOLVING-RACK SHOW-CASE. LYMAN W. WELCH, Grand Rapids, Mich. Filed June 6, 1913. Serial No. 772,069. (Cl. 211—16.)



1. In a revolving rack show case for hats, the combination of a carriage and a base bar pivotally supported on said carriage, vertical columns at each end of said base bar, a rack consisting of a series of spaced channel bars perforated and disposed on said columns with their flanges downward, said columns passing through said perforations, clamping bolts extending through said flanges on both sides of said columns adjacent thereto, and doubled rod supports with portions upwardly offset to receive and retain the hats, the inner ends of the rods being downwardly offset and disposed in apertures in said bars, as specified.

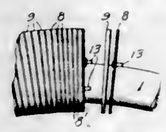
2. In a revolving show case for hats, the combination of a carriage, a base bar pivotally supported on said carriage a vertical column on said base bar, a rack consisting of a series of channel bars, said channel bars being provided with suitable openings for the passage of said column and disposed upon said column with their flanges extending downwardly, and clamping bolts extending through said flanges adjacent to the column whereby said flanges may be drawn together to clamp the channel bars upon said column, all coacting substantially as described for the purpose specified.

1,104,157. OPHTHALMIC MOUNTING. JOEL C. WELLS and NELSON M. BAKER, Southbridge, Mass. Filed Apr. 3, 1914. Serial No. 829,241. (Cl. 88—50.)



A mounting of the character described, comprising a bridge having its terminal portions looped to provide guards, lens attachments intermediately secured to the bridge, and automatic gripping means carried by one of the two first named parts and operating above the guard portions of the bridge.

1,104,158. TIRE. HERBERT A. WHEELING, Carthage, Mo. Original application filed June 14, 1912, Serial No. 703,641. Divided and this application filed Sept. 30, 1912. Serial No. 723,071. (Cl. 152—9.)

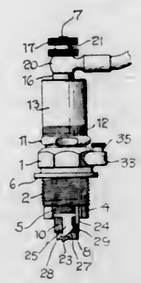


1. A tire of the character specified, comprising an inner annular tube of metal, an internally threaded bushing in each end of the tube, a coupling for the ends, the said coupling having each of its ends enlarged and externally threaded for engaging the bushings of the tube, the enlarged portions of the coupling being threaded in opposite directions, and the bushings at the ends of the tube being also threaded in opposite directions, said coupling having an annular series of openings between the threaded portions, and the ends of the tube being cut away at the inner side of the tube to form a recess for the insertion of a tool to engage the openings, a plurality of disks of metal and fibrous material each having an eccentric opening for receiving the tube, said disks being arranged with their widest portion outward, each disk having a plurality of openings, and rivets in the openings, said rivets connecting each disk to the two adjacent disks.

2. A tire of the character specified, comprising an inner tube of metal, a coupling for engaging the ends of the tube and drawing them tightly together, the said coupling being rotatable, and the tube having its ends cut away on the inner side to permit access to the coupling, said coupling having an annular series of openings for the engagement of the tool to rotate the same, and a plurality of disks of metal and fibrous material alternately arranged, and each having an eccentric opening for receiving the tube and with its widest dimension outward, each disk being connected to the adjacent disks at each side.

3. A tire for vehicles, comprising a non-resilient cylindrical core bent into circular form, a screw-threaded coupling uniting the ends of the core and arranged to be inclosed thereby when the ends are drawn together, a series of perforated disks strung upon the core and forming a solid sectional tread for the tire, and a second short series of perforated disks employed to complete the tire tread and to cover the connected end portions of the inner core, said disks being formed with slots leading to the interior perforations thereof, the width of said slots being such as to permit the disks to freely pass over the coupling when uniting the ends of the core and before they are fully drawn together, but not sufficient to permit them to pass over the core, whereby after the ends of the core have been drawn together by the coupling the core occupies the perforations of the slotted disks which are then thereby held in place.

1,104,159. SPARK-PLUG. WILLIAM S. WITTER, Toledo, Iowa. Filed May 26, 1913. Serial No. 769,991. (Cl. 123—169.)



1. A spark plug consisting of a shell, having the upper portion thereof internally threaded, a nut engaged with the threaded portion of said shell, a stem disposed through said shell and nut and having a head thereon at its lower end disposed below the lower end of said shell, an insulating means applied to said stem to rest on said head and having a portion thereof disposed through said nut, an insulating body applied to said stem to rest on the nut and having a portion of said insulating means disposed therethrough, means in connection with said body and the upper end of said nut to clamp the insulating parts of the plug together, an electrode carried on the head of said stem, an additional electrode carried on the lower end of said shell and depending therefrom, an intermediate electrode carried on said insulating means adjacent the lower end of said stem and provided with points disposed respectively adjacent the aforesaid electrodes, and an arcuate flame protecting flange formed on the lower edge of the shell, said flange being provided with a gap receiving the additional electrode therethrough.

2. A spark plug consisting of a shell, the inner wall of which is threaded at its upper end, a nut engaged with the threaded portion of said shell, a stem projecting through said shell and nut having a head on the lower end thereof disposed below the lower end of said shell, an insulating tube applied to said stem for the greater portion of its length and resting on the head thereof, said tube also extending through said nut, an insulating sleeve encircling the lower portion of said tube to also rest on the head of said stem, the upper portion of said insulating sleeve engaging the lower edge of said nut, an insulating body applied on said nut and receiving said stem and a portion of said insulating tube therethrough, means in connection with the upper end of said stem and said body to clamp the insulating parts of the plug together, an electrode carried on the head of said stem and extending laterally therefrom, an additional electrode carried on said shell and depending therefrom, an intermediate electrode carried on the insulating sleeve and having a pair of points thereon respectively disposed in close proximity to the aforesaid electrodes, and a depending annular flange formed on the lower edge of said shell, said flange being provided with a gap therein to receive the additional electrode therethrough.

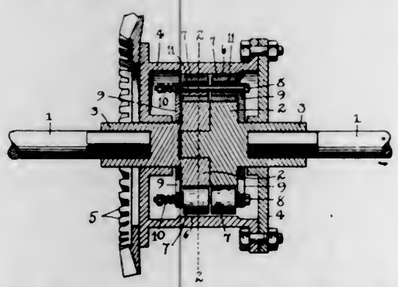
3. In a spark plug, a shell having an internally threaded portion at the upper end thereof, a tubular nut engaged with the threaded portion of said shell, said nut being provided with a bead on the upper end thereof to extend above the upper end of the shell, said bead being flattened at diametrically opposite points thereon, a stem extending through the shell and nut, said stem being provided with a head on the lower end disposed below the lower end of said shell, an insulating tube applied on the stem to rest on the head thereon and extending through said nut, an insulating sleeve surrounding the lower portion of said tube and contacting at its ends respectively with said head and the lower end of said nut, an insulating body applied on the upper portion of the same above the nut and receiving a portion of said tube therein, a cushion

washer encircling said tube between said body and said nut, means engaged with the upper end of said stem and the upper portion of said body to clamp the insulating parts of the plug together, said body being provided with a recess at the upper portion thereof to receive the last mentioned means therein, an electrode carried on the head of said stem, an additional electrode depending from the lower end of said shell, and an intermediate electrode carried on the insulating sleeve and having a pair of points thereon respectively disposed in close proximity to the aforesaid electrodes.

4. In a spark plug, a shell having an internally threaded portion at the upper end thereof, a tubular nut engaged therewith having a bead on the upper end to project above the top of said shell, a stem disposed through said shell and nut to project some distance above the latter, said stem being provided with a head on its lower end projecting below the lower end of said shell, an insulating tube applied on said stem to rest on the head thereof and extending through said nut, a plurality of insulating washer members encircling said tube between the head on said stem and the lower end of said nut, an insulating body applied on the upper end of said stem above the nut and receiving a portion of said tube therein, a cushion washer disposed between said body and nut, the upper end of said body being provided with a recess, a washer applied on the upper end of said stem and disposed within said recess, a lock nut applied on said stem above the washer to clamp the insulating parts of the plug together, said nut being partially received in the recess of said body, a reversible terminal nut applied to said stem above the lock nut, an electrode carried on the head of said stem, an additional electrode depending from the lower end of said shell, a ring member clamped between certain of the insulating washer members, and an intermediate electrode formed on and depending from said ring member, said intermediate electrode being provided with a pair of points disposed in close proximity respectively to the aforesaid electrodes.

5. A spark plug consisting of a shell, a nut removably engaged with the upper end thereof, a stem extending through said shell and nut, insulating means between the stem and nut, an insulating body applied to the upper end of said stem, means to clamp the insulating parts of the device together, an electrode carried on the lower end of said stem, an additional electrode carried on the lower end of said shell, an intermediate electrode carried on the aforesaid insulating means, and a flame protecting flange formed on the lower edge of the shell and provided with a gap to receive said additional electrode therethrough.

1,104,160. GEARING FOR AXLES OF AUTOMOBILES. WARREN W. ANNABLE, Grand Rapids, Mich., assignor of four-twentieths to Fred Z. Pantlind, one-twentieth to Palmer A. Jones, one-twentieth to Thomas Friant, and one-twentieth to T. Stewart White, Grand Rapids, Mich. Continuation of application Serial No. 609,637, filed Feb. 20, 1911. Renewed Dec. 12, 1911, Serial No. 665,376. This application filed Aug. 24, 1912. Serial No. 716,826. (Cl. 74—7.)



1. An axle gearing for automobiles, comprising two independently rotative driven members, a driving member common to both driven members, separate clutch members to connect each respective driven member with the driving member and separate and independently operative means for moving the respective clutch members into operative engagement actuated by the respective driven member.

2. An axle gearing for automobiles, comprising two independently rotative driven members, a driving member common to both driven members, separate clutch members for connecting the driving member with each driven member, means for moving the said clutch members into operative position, frictionally engaging the driven members and operated thereby and springs to maintain said frictional engagement.

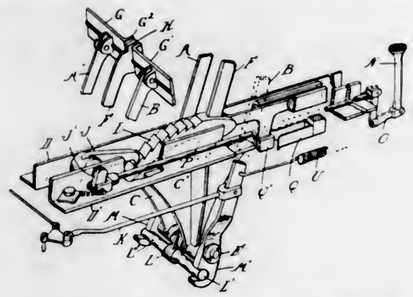
3. An axle gearing for automobiles, comprising two independently rotative driven members, a driving member common to both driven members, separate clutch members to connect each driven member with the driving member, and a plate frictionally engaging each driven member and carried forward thereby, and also connected to the respective clutch members to move the same into operative position, whereby the driven member will operate to drive the driving member.

4. An axle gearing for automobiles, comprising two shafts arranged end to end and independently rotative, a driven wheel fixed on each shaft, a driving member common to both wheels and surrounding the same, clutch rollers between the respective driven wheels and the driving member, a plate frictionally engaging each driven wheel and independently rotative about the same axis, each plate connected to the respective clutch rollers, and means for connecting said plates to limit the relative movement of the same.

5. The combination of two shafts arranged end to end, a wheel on each shaft, a case surrounding said wheels spaced apart therefrom and independently rotative, said case having internal opposing eccentric surfaces, and locking rollers between said surfaces and the wheels, said rollers being connected to each other and having a limited independent movement about the axis of the case and wheels.

[Claims 6 to 9 not printed in the Gazette.]

1,104,161. CONTROL MECHANISM FOR MOTOR-VEHICLES. GEORGE M. BACON, Detroit, Mich., assignor to Anderson Electric Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 19, 1912. Serial No. 672,173. (Cl. 21—90.)

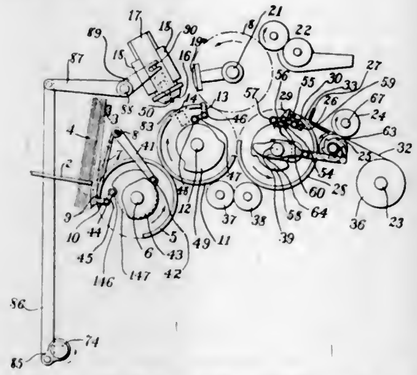


1. In a control mechanism for electric vehicles, the combination with a plurality of independently operable brake pedal levers, of an intermediate lever arranged for simultaneous operation with both of said pedal levers when actuated by a single foot, and a circuit opening switch actuated by said intermediate lever.

2. In a control mechanism for electric vehicles, the combination with a pair of independently operable brake pedal levers and means for automatically retracting the same, of an intermediate lever operable simultaneously with said pedal levers, locking means for said levers automatically operated by said intermediate lever, and a circuit opening electric switch also actuated by said intermediate lever.

3. In a control mechanism for electric vehicles, the combination with a pair of independently operable pedal levers, and means for automatically retracting the same, of an intermediate lever operable simultaneously with said pedal levers when both are engaged by a single foot, locking mechanism for preventing the return of said levers operated by the intermediate lever, an electric switch connected to be opened by said intermediate lever when actuated, and releasing means for said locking means permitting the return of said levers.

1,104,162. MACHINE FOR MAKING WINDOW-ENVELOP BLANKS. WILLIAM H. BANZETT, Bergenfield, N. J., assignor to Mercantile Corporation, New York, N. Y., a Corporation of New York. Filed Nov. 26, 1912. Serial No. 733,596. (Cl. 93—61.)



1. A machine of the class specified including in combination, a rotary blank-bed, means for intermittently rotating said blank-bed, rotary means for delivering blanks one at a time to said blank-bed, means on said blank-bed for gripping a blank, a cutter for coaction with said rotary bed between the intermittent rotations thereof for cutting a window opening in the blank on said bed, rotary means for delivering gum to the window margin of said blank, and rotary means for delivering a patch against said gummed margin.

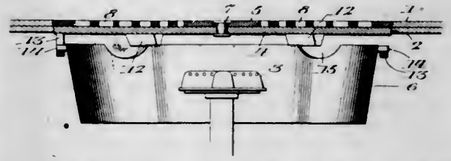
2. A machine of the class specified including in combination, a rotary blank-bed, means for intermittently rotating said blank-bed, rotary means for delivering blanks one at a time to said blank-bed, means on said blank-bed for gripping a blank, a reciprocating cutter for coaction with said rotary bed between the intermittent rotations thereof for cutting a window opening in the blank on said bed, means for removing the window blank from the first mentioned blank, rotary means for delivering gum to the window margin of the first mentioned blank, and rotary means for delivering a patch against said gummed margin.

3. A machine of the class specified including in combination, a rotary blank-bed, means for intermittently rotating said blank-bed, means for delivering blanks one at a time to said blank-bed, means on said blank-bed for gripping a blank, a cutter for coaction with said rotary bed between the intermittent rotations thereof for cutting a window opening in the blank on said bed, means carried by said rotary bed for delivering the window blank to said cutter, means carried by said cutter for successively retaining and discharging the window blank from said cutter, means for delivering gum to the window margin of the first mentioned blank, and means for delivering a patch against said gummed margin.

4. A machine of the class specified including in combination, a rotary blank-bed, means for intermittently rotating said blank-bed, means for delivering blanks one at a time to said blank-bed, means on said blank-bed for gripping a blank, a cutter for coaction with said rotary bed between the intermittent rotations thereof for cutting a window opening in the blank on said bed, means carried by said rotary bed for delivering the window blank to said cutter, means carried by said cutter for successively retaining and discharging the window blank therefrom, a rotary gummer for delivering gum to the window margin of the first mentioned blank, means for delivering gum to the rotary gummer, a rotary patch-bed for coaction with the rotary blank-bed, means for delivering patches one at a time to said rotary patch-bed, means on said patch-bed for gripping a patch, and means for rotating said blank-bed and said patch-bed in coaction for delivering said patch onto said gummed window margin of the blank.

5. In machine of the class specified including in combination, a rotary blank-bed, means for intermittently rotating said blank-bed, means for delivering blanks one at a time to said blank-bed, means on said blank-bed for gripping said blank, a cutter for coaction with said rotary bed between the intermittent rotations thereof for cutting a window opening in the blank on said bed, a rotary gummer for delivering gum to the window margin of the blank, means for delivering gum to the rotary gummer, a rotary patch-bed for coaction with the rotary blank-bed, means on said patch-bed for gripping a patch, means for advancing a continuous web of transparent paper, and for delivering the leading end of said web in position to be engaged by the rotary patch-bed gripping means, means for severing a patch portion from the leading end of said web, means for rotating said blank-bed and said patch-bed in coaction for delivering said patch onto said gummed window margin of the blank, and means for actuating and timing the several instrumentalities with each other.

1,104,163. STOVE LID OR COVER. PAUL BECKER, Cleveland, Ohio, assignor to Max M. Koch, Cleveland, Ohio. Filed May 8, 1913. Serial No. 766,337. (Cl. 126—214.)



1. A stove lid or cover comprising a lower foraminous disk-like member having recesses in its perimeter and an upstanding projection on its upper side and also having depending hooks at points adjacent its perimeter; an upper disk-like foraminous member superimposed on the lower disk-like member and having a slot receiving the projection on the lower member and also having at its perimeter lugs that depend through the recesses in the lower member and extend below said lower member; a central pivotal connection between the lower and upper disk-like members; and an annular skirt member having radial projections removably arranged in the hooks of the lower disk-like member and also having notches in its upper edge constituting eduction apertures.

2. A stove lid or cover comprising a lower foraminous disk-like member having recesses in its perimeter, and an upper disk-like foraminous member to which the lower member is pivotally connected; said upper member having at its perimeter depending lugs, disposed in said recesses of the lower member.

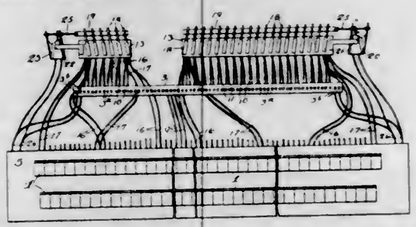
3. In a stove lid or cover, the combination with a disk-like member having hooks adjacent its perimeter, said hooks depending from said member and having openings in the upper portions of their sides; of a skirt-member having radial projections movable through openings of the depending hooks of the disk-like member and removably seated in said hooks.

4. A stove lid or cover, comprising a lower foraminous disk-like member having recesses in its perimeter, an upper disk-like foraminous member to which the lower disk-like member is pivotally connected; said upper member having at its perimeter lugs that depend through the recesses in the lower member and extend below said lower member, and a skirt member arranged within the group of depending lugs on the upper member and connected with the lower member.

5. A stove lid or cover, comprising a lower foraminous disk-like member having recesses in its perimeter, an upper disk-like foraminous member to which said lower member is pivotally connected; said upper member having at its perimeter lugs that depend through the recesses in the lower member and extend below said lower member, depending hooks on the lower disk-like member at points adjacent the perimeter thereof, and a skirt member arranged within the group of depending lugs on the upper disk-like member and having radial projections removably arranged in the said hooks.

[Claim 6 not printed in the Gazette.]

1,104,164. RANGE-EXTENDING DEVICE FOR PNEUMATIC PIANO-PLAYER ACTION. ERNEST G. CLARK, De Kalb, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed July 14, 1913. Serial No. 778,835. (Cl. 84—161.)



1. In an automatic piano-playing mechanism, in combination with a tracker and a pneumatic action; a duct bar containing ducts corresponding to a limited number of the tracker ducts and containing for each of said ducts a pair of ducts adapted to be alternately connected therewith; a valve device for effecting such alternative connections; tubes from the tracker ducts to the first-mentioned ducts of the duct bar; tubes from one of the ducts of each pair leading to the pneumatics corresponding directly to the limited number of tracker ducts, and tubes from the other ducts of the respective pairs leading to pneumatics chromatically distant a predetermined number of steps from the first-mentioned pneumatics, and means for moving said valve device to shift said connections.

2. In an automatic piano-playing mechanism, in combination with a tracker and a pneumatic action, a duct bar containing ducts corresponding to a limited number of tracker ducts and connected therewith respectively, and containing also for each of said ducts a pair of ducts adapted to be alternatively connected with said first-mentioned ducts; valves mounted on the duct bar for effecting such alternative connections; tubes from one of the ducts of each pair leading to the pneumatics corresponding directly to the limited number of tracker ducts and tubes from the other ducts of the respective pairs leading to the pneumatics chromatically distant a predetermined number of steps from the first-mentioned pneumatics; a motor pneumatic and mechanical connections by which it operates said valves to shift said connections.

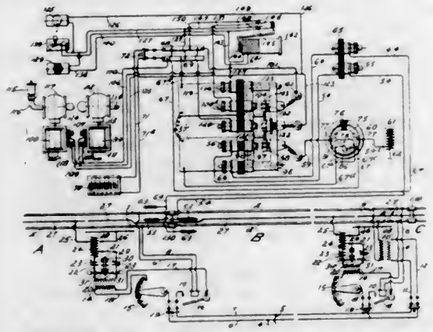
3. In an automatic piano-playing mechanism, in combination with a tracker and a pneumatic action, a duct bar containing ducts corresponding to a limited number of tracker ducts and connected therewith respectively, and containing also for each of said ducts a pair of ducts adapted to be alternatively connected with said first-mentioned ducts; valves mounted on the duct bar for effecting such alternative connections; tubes from one of the ducts of each pair leading to the pneumatics corresponding directly to the limited number of tracker ducts and tubes from the other ducts of the respective pairs leading to the pneumatics chromatically distant a predetermined number of steps from the first-mentioned pneumatics; motor pneumatics and connections therefrom to said valves for actuating them respectively in opposite directions to shift said connections, and primary pneumatics which control said motor pneumatics.

4. In an automatic piano-playing mechanism, in combination with a tracker, a note sheet and a pneumatic action, a duct bar containing ducts corresponding to a limited number of tracker ducts and connected therewith respectively, and containing also for each of said ducts a pair of ducts adapted to be alternatively connected with said first-mentioned ducts; valves mounted on the duct bar for effecting such alternative connections; tubes from one of the ducts of each pair leading to the pneumatics corresponding directly to the limited number of tracker ducts, and tubes from the other ducts of the respective pairs leading to the pneumatics chromatically distant a predetermined number of steps from the first-mentioned pneumatics; motor pneumatics and connections therefrom to said valves for actuating them respectively in opposite directions to shift said connections, and primary pneumatics which control said motor pneumatics, the tracker having ducts for controlling said primary pneumatics, and the note sheet having apertures for coöperating with said ducts.

5. In an automatic piano-playing mechanism, in combination with a tracker and a pneumatic action, a duct bar having ducts for connection with a limited number of tracker ducts, respectively, each opening at one surface of the duct bar in an elongated mouth, and a pair of ducts adjacent to each of the first-mentioned ducts opening at said surface in mouths positioned in a line along side said elongated mouth; a valve device for each of said first-mentioned ducts which covers all three of said mouths having a recess elongated transversely of said elongated mouth and lapping at one end thereon and at the other end on one of the other mouths and movable to shift the last-mentioned lap from one to the other of said other mouths, and means for moving said valve device.

[Claims 6 to 9 not printed in the Gazette.]

1,104,165. AUTOMATIC WIRELESS TRAIN-CONTROL APPARATUS. THOMAS E. CLARK, Detroit, Mich. Filed Feb. 26, 1912. Serial No. 679,803. (Cl. 256—58.)



1. In train control apparatus, a track, a vehicle on said track, a source of alternating electro-motive force, a wire near the ground extending from one side of said source parallel with the track, a wire near the ground extending parallel to the track connected to the other side of said source, a conductor carried by said vehicle comprising two branches, one near to each of said wires, an instrument in said conductor responsive to current flow therein, and a connection between said conductor and the ground.

2. In train control apparatus, a track, a source of high potential oscillating current, a fixed conductor connected therewith and extending parallel to the track, and means for completing a closed oscillating circuit from said conductor back to said source, said means including a conductor carried by a vehicle, said conductor traveling adjacent to but separated from the fixed conductor and including a suitable translating device.

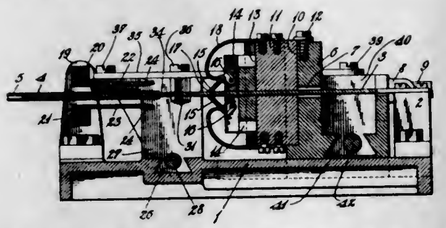
3. In train control apparatus, a track, a source of high potential oscillating current, a fixed conductor connected therewith and extending parallel to the track, and a grounded conductor on a vehicle having an element adjacent to but separated from the fixed conductor, for completing a closed oscillating circuit from said fixed conductor back to its source, said conductor on the vehicle including a suitable translating device.

4. In train control apparatus, a track, a source of high potential oscillating current, a fixed conductor connected therewith and extending along the track, a conductor on a vehicle having an element adjacent to but separated from the fixed conductor, means to ground the conductor on the vehicle and a translating device in said vehicle carried conductor depending for its action entirely upon current flowing in the train carried conductor.

5. In a railway system of train control, a track, a wayside circuit disposed in parallelism with the track comprising two limbs out of alinement with each other, a circuit for generating a high-frequency high-potential current, a variable inductance included in said generating circuit, the limbs of the wayside circuit being independently and adjustably connected to said inductance, a vehicle adapted to move along the track, a receiving circuit on said vehicle having a portion disposed adjacent one limb of said wayside circuit, a second receiving circuit on said vehicle having a portion adapted to become disposed adjacent the other limb of the wayside circuit, and an instrument in and common to both circuits on the vehicle adapted to be actuated by the flow of current through either of said circuits.

[Claims 6 to 14 not printed in the Gazette.]

1,104,166. TUBE-FLANGING MACHINE. THOMAS N. COFFELDER, Detroit, Mich. Filed Nov. 22, 1912. Serial No. 732,811. (Cl. 113—1.)



1. In a tube flanging machine, the combination of a member to be inserted in a tube to be flanged, tiltable members adapted to be brought into engagement with the top and bottom of said tube when in place upon said member to form abutments, and yieldable means adapted to engage within the end of the tube and bend the sides thereof outwardly against said abutments.

2. In a tube flanging machine, the combination of laterally movable members adapted to enter the end of a tube to be flanged, means for moving said members to cut portions from the tube, tiltable abutments to engage opposite sides of the tube, and means adapted to enter the end of the tube and fold the sides thereof outwardly against said abutments, said means being disposed in planes above and below the planes of said members.

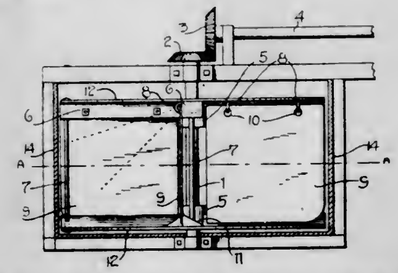
3. In a tube flanging machine, the combination of tiltable members between which the end of a tube to be flanged is adapted to be placed, adjustable fingers positioned to limit the movement of the tube in the machine, means for moving the fingers to sever portions from the end of the tube, and means for folding the portions of the tube between said cut away portions at right angles to the sides of the tube.

4. In a tube flanging machine, the combination of members adapted to receive the end of a tube to be flanged between them and having recesses, cutting fingers adapted to limit the movement of the tube between said members, means for moving the fingers laterally into the recesses to sever portions from the end of the tube, abutments adapted to engage the sides of the tube and having faces in alinement with the ends of the fingers, and means adapted to enter the end of the tube and fold the sides thereof outwardly against said faces of the abutments.

5. In a tube flanging machine, the combination of a member adapted to fit within a tube to be flanged, means for limiting the movement of the tube above said member and severing by an outward movement portions from said tube, tiltable clamping members movable into engagement with the sides of the tube on said member and adapted to form abutments, pivoted members adapted to enter the end of the tube beyond the ends of the clamping members and to turn upon their pivots and fold the sides of the tube outwardly against said abutments.

[Claims 6 to 20 not printed in the Gazette.]

1,104,167. WATER-WHEEL. THOMAS CRISP, Jayton, Tex. Filed Oct. 4, 1913. Serial No. 793,435. (Cl. 170—121.)



A device of the character described including an axle, arms radiating from such axle, blades pivotally supported by certain of such arms and adapted to abut the remainder of the arms to limit their movement in one direction, and imperforate disks secured to the arms above and below the wings, the forward faces of the lowermost arms being inclined upwardly and rearwardly to afford knife edges, the forward faces of the upper arms being vertically disposed.

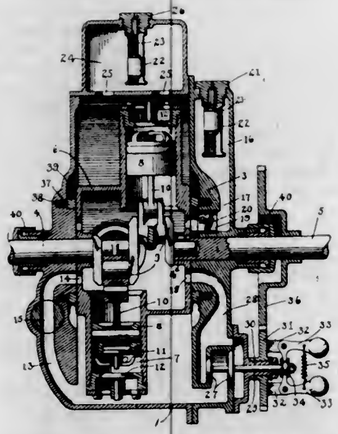
1,104,168. HYDRAULIC CLUTCH. CLARENCE E. CURTISS, Grand Rapids, Mich., assignor of two-thirds to Robert B. Kellogg, Grand Rapids, Mich. Filed Jan. 13, 1913. Serial No. 741,686. (Cl. 192—18.)

1. A hydraulic clutch, comprising a stationary case, a driving shaft and a driven shaft projecting within the same, a chamber on one shaft, radial cylinders communicating with the said chamber, pistons in said cylinders, cranks on the other shaft and connected to the pistons, and means for controlling the flow of fluid from the case to the chamber and through the cylinders.

2. A hydraulic clutch, comprising a stationary case, a driving shaft and a driven shaft projecting within the same, a chamber provided with radial cylinders communicating with the interior thereof, and fixed to the inner end of one shaft, a piston in each of the radial cylinders, cranks on the inner end of the other shaft connected to the pistons in the cylinders, outwardly opening check valves in the piston and cylinder heads, a by-pass from the interior of the case to the interior of the drum, and a valve in the by-pass whereby it may be restricted or closed.

3. A hydraulic clutch, comprising a fixed outer case, a driving shaft and a driven shaft, journaled in the respective ends of the case and projecting within the same, a chamber provided with radial cylinders communicating

with the interior thereof, and fixed to the inner end of the one shaft, a piston in each of the said cylinders, cranks on the inner end of the other shaft and connected to the said pistons, check valves in the pistons, and cylinder heads, a by-pass from the interior of the case to the interior of the said chamber, a manually operated valve in said by-pass, a spring actuated relief valve adapted to open under excessive pressure and a passage leading from the said relief valve to the interior of the chamber.

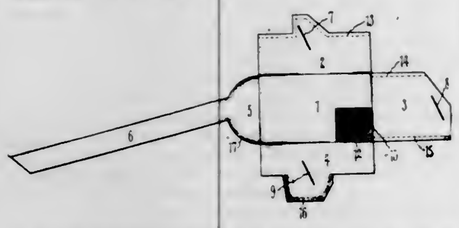


4. A hydraulic clutch, comprising a fixed outer case, a driving shaft and a driven shaft journaled in the respective ends of the case and projecting within the same, a chamber having radial cylinders communicating with the interior thereof fixed on the inner end of one shaft, a piston in each of the cylinders, cranks on the inner end of the other shaft connected to the said pistons, check valves in the pistons and cylinder heads, a by-pass from the interior of the case to the interior of the chamber, a manually operated valve in said by-pass, and means for automatically controlling the speed of the driven shaft, comprising a valve opening from the case, a passage from said valve to the interior of the chamber, and a centrifugal governor adapted to control the said valve.

5. The combination with a hydraulic clutch having a fixed outer case and a rotative chamber, of a fluid reservoir mounted on the said case, and communicating with the said chamber.

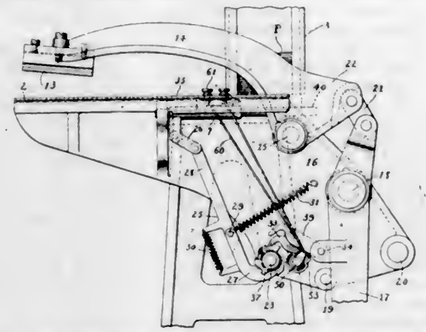
[Claims 6 to 8 not printed in the Gazette.]

1,104,169. SAFETY-ENVELOP. JOHN B. DE MATTEIS, New York, N. Y., assignor of one-half to Samuel Wira, New York, N. Y. Filed Oct. 1, 1912. Serial No. 723,354. (Cl. 229—82.)



A safety envelop comprising a main portion having an inclined slit in one of its corners, two side flaps and one end flap having inclined slits arranged to be brought into parallelism with one another when the flaps are folded and the other end flap having an inclined tongue arranged to be passed inwardly through the slits in the two side and other end flaps at right angles thereto for locking the flaps together and thence outwardly through the inclined slit in the corner of the main portion, the protruding end of the tongue being adapted to be secured by a stamp to prevent the withdrawal of the tongue.

1,104,170. ADDRESSING-MACHINE. FRANK DE MINICO, New York, N. Y., assignor to Pollard-Alling Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Sept. 14, 1912. Serial No. 720,359. (Cl. 101—1.)



1. An addressing machine including in combination, a printing bed, a reciprocating platen, a printing plate supply, means for successively advancing plates from the supply to the printing bed, a main lever, a pivoted plate lever operatively connected to said plate advancing means, means pivotally connected to said main lever for oscillating said plate lever and settable means interposed between said plate lever and plate lever oscillating means for governing the oscillations of said plate lever.

2. An addressing machine including in combination, a printing bed; a reciprocating platen, a printing plate supply, means for successively advancing plates from the supply to the printing bed, a main lever, a pivoted plate lever operatively connected to said plate advancing means, said plate lever having a pawl-engaging tooth and a plate lever pawl pivoted on said main lever for engagement with said plate lever tooth.

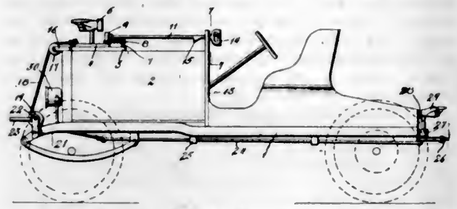
3. In an addressing machine, the following parts in combination: a printing plate supply, reciprocating means for successively advancing plates from said supply, a main lever, a pivoted plate lever operatively connected to said reciprocating plate advancing means, means for oscillating said plate lever from the main lever and settable means interposed between said plate lever and plate lever oscillating means for governing the oscillations of said plate lever.

4. In an addressing machine, the following parts in combination: a printing plate supply, reciprocating means for successively advancing plates from said supply, a main lever, a pivoted plate lever operatively connected to said reciprocating plate advancing means, said plate lever having a pawl-engaging tooth and a plate lever pawl pivoted on said main lever for engagement with said plate lever tooth.

5. In an addressing machine, the following parts in combination; a printing plate supply, means for successively advancing plates from said supply, a main lever, a pivoted plate lever operatively connected to said plate advancing means, means for oscillating the plate lever from the main lever including a plurality of pivotally mounted ratchets each effective, when selected, for at one time permitting the plate lever oscillating means to oscillate the plate lever and at another time for preventing said means from oscillating the plate lever, and other means for, at another time, continuously permitting said oscillation, and hand operated means for making said selection.

[Claims 6 to 9 not printed in the Gazette.]

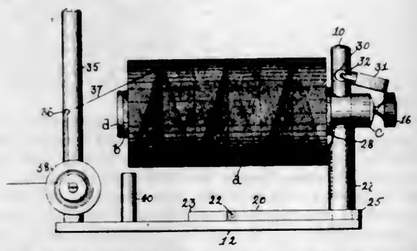
1,104,171. INDICATOR FOR AUTOMOBILES. ROBERT DICKINSON, Victoria, British Columbia, Canada. Filed Oct. 16, 1912. Serial No. 726,168. (Cl. 116—31.)



1. In combination with an automobile and its chassis, of a shaft rotatably mounted upon the forward end of the chassis, drums loosely carried by said shaft, a plate pivotally mounted upon the hood of the automobile, cords connected to the plate and wound upon said drums, indicators fixed to the drums, rods having their outer ends pivoted to the plate, whereby when one of said rods is reciprocated said plate will be partially rotated, to rotate the shaft and actuate one of the indicators, as and for the purpose set forth.

2. In combination with an automobile and its chassis, of a shaft journaled upon the forward end of the chassis, drums loosely mounted upon the shaft, extensions carried by the drums and having indicators connected thereto, a plate pivotally mounted upon the hood of the automobile, means for holding the plate in its neutral position, cords having their upper ends connected to the plate and wound upon the drums, rods slidably mounted upon the chassis, the forward ends of said rods being connected to the lower ends of the cords, a bow pivotally connected to the rear of the automobile, an indicator carried by the bow, said bow having its opposite ends connected to the rear ends of said rods, means carried by the plate for partially rotating the same to operate the drums through the cords to cause the indicators carried by the extensions on said drums to be actuated alternately to cover the lenses of the usual head lights, said cords also serving to operate the rods to direct the indicator carried by the bow in different directions.

1,104,172. LOCKED-COP-TUBE HOLDER. HARRY DILYOCK, Boston, Mass., assignor of one-half to Jacob Smith, Boston, Mass. Filed Nov. 28, 1913. Serial No. 803,510. (Cl. 242—130.)



1. In an apparatus of the character described, a base plate provided with holes for the reception of screws by which the base plate is fastened to a support, a post extended from said base plate and provided with a hole, a cap plate hinged to said base plate and provided with arms which straddle said post, said cap plate covering the screw holes in the base plate, a sleeve loose on said post and bearing on the arms of said cap plate, a spindle for the roll of thread mounted on said post, said spindle having at one end a head and near its other end a hole for the passage through it of said post, a locking device extended through the hole in the said post, and means for securing the said spindle in fixed relation to said post, substantially as described.

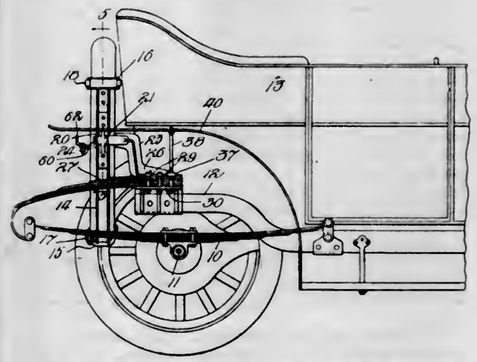
2. In an apparatus of the character described, a base plate, means for securing the base plate to a support, a cap plate to cover said means, a post extended from the base plate and provided with an opening through it, a spindle for a roll of thread mounted on said post, said spindle having at one end means for retaining the roll thereon and at its other end a hole for the passage through it of said post, a sleeve on the said post to support said spindle and to lock said cap plate, and a locking device for said spindle extended through the hole in the post, substantially as described.

3. In an apparatus of the character described, a base plate, means for securing the base plate to a support, a cap plate to cover said means, a post extended from said base plate, a sleeve on said post to lock said cap plate against removal, a spindle extended from said post and removable therefrom and coöperating with said sleeve to retain it on said post, and means to lock said spindle on said post, substantially as described.

4. In an apparatus of the character described, a base plate, means for fastening it to a support, a cap plate to cover said fastening means, a post extended from said base plate, a spindle mounted on said post and extended therefrom at an angle thereto, means interposed between said spindle and cap plate to lock the latter, and means to lock the spindle on said post against removal by unauthorized persons.

5. In an apparatus of the character described, a base plate, means for fastening it to a support, a cap plate to cover said fastening means, a post extended from said base plate, a sleeve mounted on said post to lock said cap plate, a spindle mounted on said post beyond said sleeve and extended from said post at an angle thereto, and means to lock said spindle on said post against removal by unauthorized persons, substantially as described.

1,104,173. TIRE-CARRIER AND LAMP-SUPPORTING BRACKET. THOMAS I. DUFFY, Chicago, Ill., assignor to E. C. Sales Co., Chicago, Ill., a Corporation of Illinois. Filed June 19, 1912. Serial No. 704,629. (Cl. 224—29.)



1. A tire carrier comprising a lower trough-shaped or part-circular tire seat, an upper cover portion fitted thereto to hold the tire in place in said seat, a hinge to hinge one end of the cover portion to the seat, to permit the cover to swing upwardly, a lock to lock the other end of the cover to said seat, and means associated with said hinge and lock to fasten the carrier to a support.

2. A tire carrier comprising lugged supporting members adapted to be attached to a vehicle, a lower tire seat, an upper cover member, a hinge to hinge the cover member at one end thereof to said tire seat to permit the same to swing upwardly, a lock at the other end of the cover member to lock it to said seat, said hinge and lock comprising overlapping lugs having registering openings to receive the lugs of the said supporting members.

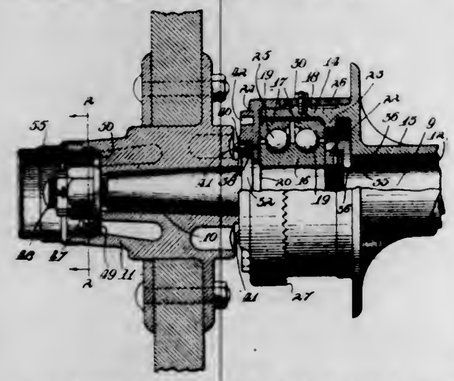
3. A tire carrier comprising a part-circular frame composed of a transversely slitted sheet-metal body of concave cross section.

4. A tire carrier comprising a part-circular frame composed of a transversely slitted sheet-metal body of concave cross section, and rods at the sides of the carrier about which the sheet-metal body is wrapped at its margins.

5. A tire carrier comprising a part-circuluar frame composed of a transversely slitted sheet-metal body of concave cross section, rods at the sides of the carrier about which the sheet-metal body is wrapped, and a cover member hinged at one end to said frame, with means at the other end thereof for locking the same to said frame.

[Claim 6 not printed in the Gazette.]

1,104,174. REAR AXLE FOR MOTOR-VEHICLES. THOMAS I. DUFFY, Chicago, Ill., assignor to E. C. Sales Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1912. Serial No. 728,215. (Cl. 21—90.)



1. In a semi-floating driving axle, a housing, a driving shaft rotatively mounted therein and axially removable therefrom, anti-friction bearings between the shaft and the housing embracing inner and outer raceway members and interposed anti-friction elements, with means for confining them on said shaft and for holding the bearing members assembled, whereby the bearings, as a unit, are removable with the axle and means screw-threaded to the housing and interlocked to the shaft to effect endwise removal thereof from the housing.

2. A driving axle and a wheel mounting for motor driven vehicles comprising, in combination with an axle body or housing, a rotative driving shaft mounted in and axially removable from said housing and provided with a spindle to receive a wheel hub, anti-friction bearings between said shaft and housing, means to confine the anti-friction bearings on the shaft and screw-threaded means engaging the housing and interlocked to the shaft to remove the shaft and the anti-friction bearings endwise away from said housing.

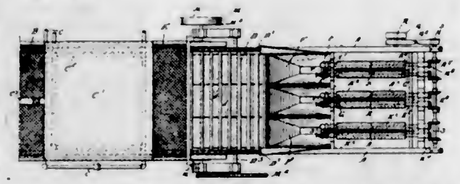
3. A driving axle and a wheel mounting for motor driven vehicles comprising, in combination with an axle body or housing, a rotative driving shaft mounted in and removable axially from the housing and provided beyond said housing with a spindle to receive a wheel hub, anti-friction bearings between said shaft and housing, inner and outer shoulders on the shaft between which the anti-friction bearings are confined; with means to hold the bearing members assembled on the shaft in all positions of said shaft, and a ring screw-threaded to the housing and provided with a flange to close the outer end thereof and to interlock with said shaft, whereby, when the ring is unscrewed from the housing, the shaft and the anti-friction bearings are removed from the housing and the anti-friction bearings are retained as a unit on said shaft.

4. A driving axle and a wheel mounting for motor driven vehicles comprising, in combination with an axle body or housing, a rotative driving shaft mounted in and removable from said housing and provided with a spindle to receive a wheel hub, anti-friction bearings between said housing and shaft, inner and outer shoulders on said shaft between which the anti-friction bearings are confined, a ring screw-threaded on the outer end of the housing and provided with a flange to close said outer end thereof and adapted to interlock with the shaft, whereby, when the ring is unscrewed from the housing, the shaft and the anti-friction bearings are removed from the housing, and means carried by the housing to engage said ring to removably lock the same in place.

5. A driving axle and a wheel mounting for motor driven vehicles comprising, in combination with an axle body or housing, a rotative driving shaft in said housing and removable endwise therefrom, anti-friction bearings between said housing and shaft and removable with said shaft, said shaft being provided with a flange, and a ring screw-threaded to the housing provided with a flange to close the outer end thereof and to fit behind said shaft flange.

[Claim 6 not printed in the Gazette.]

1,104,175. MACHINE FOR PEELING PEACHES AND OTHER FRUIT. SAMUEL J. DUNKLEY, Kalamazoo, Mich., assignor, by mesne assignments, to Dunkley Company, Kalamazoo, Mich., a Corporation of Michigan. Filed Nov. 20, 1904. Serial No. 234,715. (Cl. 146—14.)



1. In a peach peeling machine, the combination with a tank or chamber for containing a fluid for softening and loosening the skins, of means which extend through the tank for subjecting the same to the action of said fluid for a uniform period of time, and a washing, spraying and brushing mechanism at the exit end of the tank for removing the softened and loosened skins, coöperating substantially as described.

2. In a peach peeling machine, the combination with a skin-softening and loosening device, of a washing, spraying and brushing device, coöperating substantially as specified.

3. In a peach peeling machine, the combination with means for softening and loosening the skins, with means for washing, spraying and brushing the peaches, and thus removing the skins, and means for automatically delivering the same from said skin-softening and loosening means to said washing and brushing means, substantially as specified.

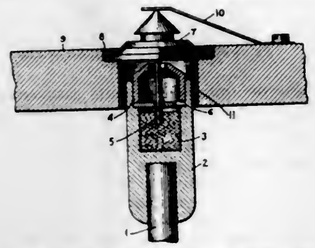
4. In a peach peeling machine, the combination with means for softening and loosening the skins of same, with means for washing, spraying and brushing same and thus removing the skins, means for automatically delivering them from said skin-softening and loosening means to said washing and brushing means, and a hopper or chute for automatically delivering the peaches to said skin-softening and loosening means, substantially as specified.

5. In a peach peeling machine, the combination with a tank for containing a skin-softening and loosening liquid, of a heater therefor, a conveyer passing through the tank for conveying the peaches into, through and out of said liquid, and a group of perforated water pipes for spraying the peaches with water as they pass lengthwise of and between said pipes, substantially as specified.

[Claims 6 to 26 not printed in the Gazette.]

1,104,176. BEARING FOR ELECTRIC METERS. PAUL EIBIG, Nieder-Schönhausen, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 1, 1910. Serial No. 569,871. (Cl. 64—10.)

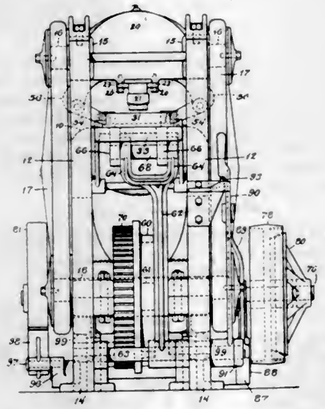
1. An upper bearing for an electric meter comprising in combination a rotatable member having a chamber in its upper end, a stationary member having a recess surrounding said chamber, a pivot pin extending into said chamber and normally holding the rotatable member out of engagement with the stationary member, and a spring support for the pivot pin arranged to permit a movement of the pivot pin, such movement being limited by the engagement of the rotatable member with the stationary member.



2. An upper bearing for an electric meter comprising in combination a rotatable shaft, an oil containing chamber at the upper end of said shaft, a stationary member having a recess surrounding the wall of said chamber, a pivot pin substantially co-axial with said shaft and extending into said chamber and normally holding the wall of the chamber out of engagement with the stationary member, and an elastic support for the pivot pin arranged to permit a movement of the pivot pin, such movement being limited by the engagement of the wall of the chamber with the stationary member.

3. An upper bearing for an electric meter comprising in combination a rotatable member, an oil containing chamber at the upper end of said member, a stationary support having a recess surrounding the wall of said chamber, a head resting on the stationary support, a pivot pin secured to said head and extending into said chamber and normally holding the chamber out of engagement with the support, and elastic means for maintaining the head on the support.

1,104,177. HEEL-COMPRESSING MACHINE. EDWARD ERICKSON, Boston, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed July 23, 1907. Serial No. 385,146. (Cl. 12—48.)



1. A heel-compressing machine comprising a stationary die, and a plurality of movable dies, all of which have work-engaging faces inclined to the directions of movement of the movable dies.

2. A heel-compressing machine comprising movable side dies, a movable heel seat die, a movable breast die, and a tread support for the heel inclined to the direction of pressure of the dies.

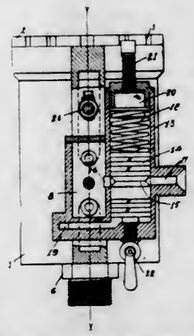
3. A heel-compressing machine comprising a tread support for a heel, a heel seat die and breast die movable toward and from the heel support in a line inclined to the tread-engaging face thereof and side dies adapted to compress between them an inclined heel.

4. A heel-compressing machine comprising a heel seat die movable in a given path, and having a work-engaging face whose median line is inclined to the path of movement, a coöperative die having a plane face parallel to said median line and adapted to engage the tread of the heel, coöperative side dies adapted to surround the sides of a heel, and a breast die movable with the top die and adapted to enter between the side dies and the heel breast, said breast die and side dies having coöperative faces inclined to the direction of movement of the former.

5. A heel-compressing machine comprising a relatively stationary element, a relatively movable element movable toward and from the stationary element, coöperative dies mounted respectively on the stationary and movable elements, and transversely movable coöperative dies mounted on the stationary element, all of said dies having work-engaging faces adapted to inclose and compress a heel with its median line inclined to the directions of movement.

[Claims 6 to 43 not printed in the Gazette.]

1,104,178. FLUID-PRESSURE-OPERATED LUBRICANT-CUP. FRANK FLEMING, Sacramento, Cal. Original application filed Jan. 13, 1912, Serial No. 671,054. Divided and this application filed May 21, 1912. Serial No. 698,809. (Cl. 184—39.)



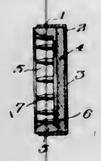
1. A device of the character described comprising a reservoir, a reciprocating member disposed in said reservoir, a valve controlled steam passage way mounted on the side of said reservoir, a plurality of pipes communicating with said steam passage way, and means for applying fluid pressure against said reciprocating member, as described.

2. A device of the character described comprising a reservoir a reciprocating piston disposed in said reservoir, said reservoir being provided with a passage way communicating with the top thereof above said piston a cylindrical member disposed on the side of said reservoir and provided with a spring pressed piston, said cylindrical member, said reservoir, and said piston each being provided with a passage way, all of which are normally in communication with each other and with the first named passage way in said reservoir, said reservoir being provided with a passage way below said piston communicating with said cylindrical member below the piston in said cylindrical member as described.

3. A device of the character described comprising a reservoir, a reciprocating member disposed in said reservoir, said reservoir being provided with a passage way communicating from the outside of said reservoir to the inside thereof above said reciprocating member, a cylindrical member disposed on the side of said reservoir and provided with a spring pressed piston, said cylindrical

member, said reservoir and said piston each being provided with a passage way all of which are normally in communication with each other and with said first named passage way, said reservoir being provided with a passage way below said reciprocating member and communicating with said cylindrical member below the piston in said cylindrical member as described.

1,104,179. PHOTOGRAPHIC RAY-FILTER. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 25, 1914. Serial No. 834,309. (Cl. 95—81.5.)



1. A photographic ray filter comprising a cap carrying a filter screen and having an open inner end provided with a compressible lining adapted to engage over and grip the outer end of a lens tube.

2. A photographic ray filter comprising a cap carrying a filter screen at its outer end and having an open inner end provided with a compressible lining arranged to secure the filter screen in place and adapted to also engage over and grip the outer end of a lens tube.

3. In a photographic ray filter, the combination with a tubular cap having a seat or shoulder at its outer end, of a filter screen disposed against said shoulder and a compressible lining ring arranged within the inner open end of the cap to secure the filter screen in place and adapted to also engage over and grip the outer end of a lens tube.

4. In a photographic ray filter, the combination with a tubular cap having a seat at its outer end and a filter screen disposed against said seat, of a detachable, compressible soft rubber lining ring arranged within the inner open end of the cap to secure the filter screen in place against its seat and also adapted to engage over and grip the end of a lens tube.

5. In a photographic ray filter, the combination with a tubular cap having a seat at its outer end and a filter screen disposed against said seat, of a detachable compressible lining ring arranged within the inner open end of the cap to secure the filter screen in place against its seat and also adapted to engage over and grip the end of a lens tube, said lining ring being composed of a strip of soft rubber slightly greater in length than the inside circumference of the cap and capable of being crowded into an annular position within the cap with its ends abutting whereby its expanding pressure holds it in place.

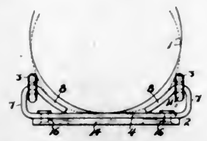
[Claim 6 not printed in the Gazette.]

1,104,180. PORTABLE GARMENT-HANGER. ELIZABETH H. M. J. F. FORLONG, New York, N. Y. Filed Nov. 25, 1912. Serial No. 733,443. (Cl. 45—37.)



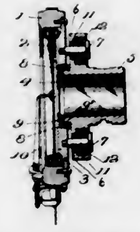
A portable garment hanger, consisting of two telescoping tube members, a loop pivotally connected to the free ends of each of said tube members, said loop members terminating in angularly disposed free ends of such shape as to conform to the shape of its attached tube member and being adapted to fold down and partially embrace said tube.

1,104,181. TIRE-PROTECTOR. LEE E. FRYE, San Francisco, Cal. Filed Jan. 13, 1913. Serial No. 741,744. (Cl. 152—16.)



A tire protector composed of units each comprising a sheet metal body extending across the tire and bent at its ends, first, inward, then again back toward the central portion to make an acute angle therewith, and having apertures near the ends of each inwardly projecting portion, and a shoe, rigid with the body and staggered relatively thereto in a circumferential direction, and links each having hook-shaped ends passing respectively through said apertures of adjacent bodies, said links extending inwardly wholly in planes between the bounding planes of the bodies.

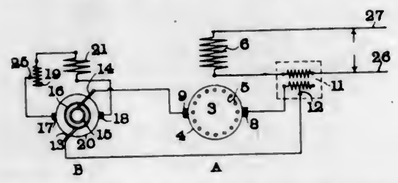
1,104,182. SOUND-BOX. GEORGE LANSING FUNNELL, London, England, assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed June 9, 1913. Serial No. 772,612. (Cl. 181—11.)



1. In a sound box, a diaphragm casing, a diaphragm mounted therein, a back for said casing having a central opening, a support extending inwardly from the walls of said opening, a ring of resilient material resting on said support and extending beyond the outer surface of said back, a hollow hub projecting into said ring, and means securing said hub to said back on a line passing diametrically through the hub.

2. In a sound box, a diaphragm and diaphragm casing, a back to said casing having a central opening, a narrow resilient ring projecting into said opening and forming a lining for the wall thereof, a hollow hub having a portion thereof extending into and snugly fitting said ring, a flange on said hub bearing on said ring, and screws extending through said flange for securing said hub to the back of said casing.

1,104,183. ALTERNATE-CURRENT GENERATOR. VALÈRE ALFRED FYNN, London, England. Filed May 23, 1911. Serial No. 628,902. (Cl. 171—241.)



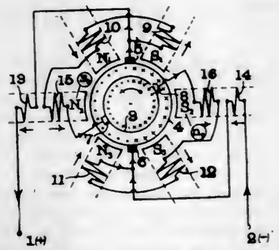
1. An apparatus for generating alternating current comprising a main generator having an induced member provided with a single induced winding, and an inducing member provided with a commuted winding and a short-circuited winding, an auxiliary generator, means for maintaining a constant ratio between the speeds of the two generators, and means for supplying single-phase current derived from the auxiliary generator to the commuted winding of the main generator along an axis displaced by ninety electrical degrees from that of the induced winding.

2. An apparatus for generating alternating current comprising a main generator having an induced member provided with a single induced winding, and an inducing member provided with a commuted winding and a short-circuited winding, an auxiliary generator, means for maintaining a constant ratio between the speeds of the two generators, means for supplying single-phase current derived from the auxiliary generator to the commuted winding of the main generator along an axis displaced by ninety electrical degrees from that of the induced winding, and means external to the main generator for electromagnetically coupling the commuted winding and the induced winding.

3. An apparatus for generating alternating current comprising a main generator having an induced member provided with a single induced winding, and an inducing member provided with a commuted winding and a short-circuited winding, an auxiliary generator, means for maintaining a constant ratio between the speeds of the two generators, means for supplying single-phase current derived from the auxiliary generator to the commuted winding of the main generator along an axis displaced by ninety electrical degrees from that of the induced winding, and a series transformer interposed between the commuted and the induced windings.

4. An apparatus for generating alternating current comprising a main generator having an induced member provided with a single induced winding, and an inducing member provided with a commuted winding and a short-circuited winding, a single-phase self-excited auxiliary generator having slip rings, means for maintaining a constant ratio between the speeds of the two generators, and brushes on the commuted winding of the main generator displaced by ninety electrical degrees from the induced winding, said brushes being connected to the slip rings of the auxiliary generator.

1,104,184. DYNAMO-ELECTRIC MACHINE. VALÈRE ALFRED FYNN, London, England, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 17, 1911. Serial No. 633,759. (Cl. 171—223.)



1. In a dynamo electric machine, the combination with a revolving member having an n-pole winding, main brushes and an auxiliary brush displaced by about $120/n$ degrees from a main brush, of a stationary member carrying coils adapted to produce a $3n$ pole field, certain of said coils being connected in series between a main and an auxiliary brush.

2. In a dynamo electric machine, the combination with a stationary member having $3n$ mechanical poles each provided with a coil, of a revolving member having an n-pole winding, main brushes and an auxiliary brush displaced by sixty electrical degrees from one of the main brushes, and means connecting certain of the coils on the stationary member in series with a main and an auxiliary brush.

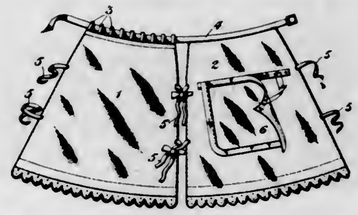
3. In a dynamo electric machine, the combination with a stationary member having $3n$ mechanical poles $2n$ of which are each provided with a coil, of a revolving member having an n-pole winding, main brushes and an auxiliary brush displaced by about $120/n$ degrees from one of the main brushes, and means connecting certain of the coils on the stationary member in series with a main and an auxiliary brush.

4. In a dynamo electric machine, the combination with a stationary member having $3n$ mechanical poles $2n$ of which are each provided with a coil, of a revolving member having an n-pole winding, main brushes and an auxiliary brush displaced by about $120/n$ degrees from one of the main brushes, means connecting certain of the field coils in series with a main and an auxiliary brush, and means for producing an auxiliary magneto motive force on certain of the mechanical poles.

5. In a dynamo electric machine, the combination with a stationary member having $3n$ mechanical poles, of a revolving member having an n-pole winding, main brushes and auxiliary brushes displaced sixty electrical degrees from the main brushes, each brush being located between adjacent mechanical poles, main exciting coils on the poles adjacent to the main brushes and connected in series between a main and an auxiliary brush.

[Claims 6 to 25 not printed in the Gazette.]

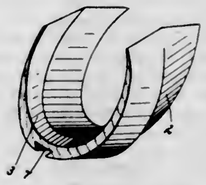
1,104,185. GARMENT. MAUD S. GEORGE, St. Louis, Mo. Filed Oct. 18, 1913. Serial No. 796,038. (Cl. 2—42.)



1. An underskirt comprising a belt and separate skirt sections 1 and 2 depending therefrom, one of said sections being permanently secured to said belt, the other thereof having a series of loops disposed along its upper margin through which said belt is projected, whereby one section may be instantly detached from the belt, and tapes secured upon and adapted to detachably connect said sections, substantially as and for the purposes described.

2. An underskirt comprising a belt and separate skirt sections 1 and 2 depending therefrom, a sheet of waterproof material detachably secured to one of said sections, said section being permanently secured to said belt, the other of said sections having a series of loops disposed along its upper margin through which said belt is projected, whereby one section may be instantly detached from the belt, and tapes secured upon and adapted to detachably connect said sections, substantially as and for the purposes described.

1,104,186. PNEUMATIC TIRE. HERBERT B. GILLETTE, Grand Rapids, Mich. Filed Oct. 8, 1912. Serial No. 724,499. (Cl. 152—18.)



1. In a tire, the combination with an outer casing and a pneumatic tube, of a protector element interposed between the casing and tube comprising a ring secured within the tread portion of said casing, said ring being flat

and dove-tailed in cross section, and crescent shaped members of resilient material having dove-tailed notches in their bases engaging said ring, said members being arranged on said ring with their ends abutting and being interiorly beveled at one end and provided with corresponding wedge-shaped joint tongues at the other end fitting the bevels of adjacent members, the said bevels and joint tongues being expanded upwardly from the bases of said members.

2. In a tire, the combination with an outer casing and a pneumatic tube, of a protector element interposed between the casing and tube comprising a ring secured within the tread portion of said casing, said ring being flat and dove-tailed in cross section, and crescent shaped members of resilient material having dove-tailed notches in their bases engaging said ring.

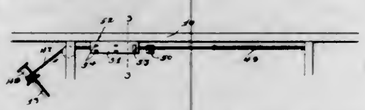
3. A tire comprising an outer casing provided with an internal annular dove-tailed rib; crescent shaped members of resilient material having dove-tailed notches in their bases engaging said rib said members being arranged with their ends abutting and being interiorly beveled at one end and provided with corresponding joint tongues at the other end, fitting the bevels of adjacent members, the said bevels and joint tongues being expanded upwardly from the bases of said members, and a pneumatic tube arranged within said members.

4. A tire comprising an outer casing provided with an internal annular dove-tailed rib; crescent shaped members of resilient material having dove-tailed notches in their bases engaging said rib, and a pneumatic tube arranged within said members.

5. An element for pneumatic tires comprising a ring, and crescent shaped members of rubber having notches in their bases engaging said ring, said members being arranged on said ring with their ends abutting and being interiorly beveled at one end and having corresponding joint tongues at the other fitting the bevels of the adjacent members, said bevels and joint members being expanded upwardly from the bases of said members.

[Claim 6 not printed in the Gazette.]

1,104,187. PLOW-LIFT FOR GANG-PLOWS. LESLIE S. HACKNEY, St. Paul, Minn. Original application filed Aug. 14, 1911, Serial No. 643,922. Divided and this application filed May 31, 1912. Serial No. 700,655. (Cl. 97—70.)



1. In a device of the class described, the combination of a frame carrying plows, a drum shaft on the frame, drums on said shaft, a cable for each plow attached at one end thereto and wound at its other end on one of said drums, means for turning said shaft to wind said cables on their respective drums to raise said plows, a cable attached at one end to one of said drums and connected at its other with said frame, said cable being arranged to be wound upon its drum as the plows are lowered and adapted to stop the rotation of said drum shaft, thus limiting the fall of said plows.

2. In a device of the class described, the combination of a frame carrying plows, a drum shaft on the frame, drums on said shaft, a cable for each plow, attached at one end thereto and wound at its other end on one of said drums, means for turning said shaft to wind said cables on their respective drums to raise said plows, a spring on the frame, a cable attached at one end to said spring and wound at its other end on one of said drums and means for stopping the movement of said cable whereby the rotation of said drum shaft is discontinued and the fall of the plows limited.

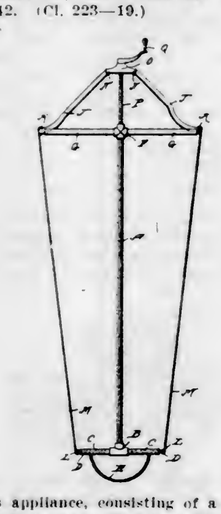
3. In a device of the class described, the combination of a frame carrying plows, a drum shaft on the frame, drums on said shaft, a cable for each plow attached at one end thereto and wound at its other end on one of said drums, means for turning said shaft to wind said cables on their respective drums to raise said plows, a spring on the frame, a cable attached at one end to said spring and wound at its other end on one of said drums, a clamp on the cable, a support on the frame, a stop adjustable in said support and adapted to engage said clamp and limit the movement of said cable in one direction.

4. In a device of the class described, the combination of a frame carrying plows, a spool revoluble on said frame, a drum shaft on the frame, drums on said shaft, a cable connecting said spool and one of said drums, a cable connecting each plow with one of said drums, means for rotating the spool to raise said plows, means for locking the spool to hold said plows in elevated position, and adjustable means for discontinuing the rotation of the drum shaft in lowering the plows to thereby limit their working depths.

5. In a device of the class described, the combination of a frame carrying plows, a spool revoluble on said frame, a drum shaft on the frame, drums on said shaft, a cable connecting said spool and one of said drums, a cable connecting each plow with one of said drums, means for rotating the spool to raise the plows, a spring on the frame, a cable attached at one end to said spring and wound at its other end on one of said drums, and means for stopping the movement of said cable whereby the rotation of said drum shaft is discontinued and the fall of the plows limited.

[Claim 6 not printed in the Gazette.]

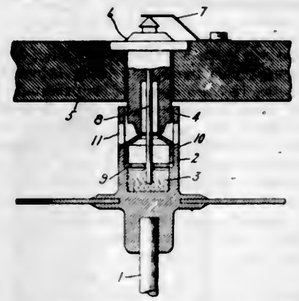
1,104,188. TROUSERS APPLIANCE. MARTIN V. HAMMACK, Kansas City, Mo. Filed Apr. 17, 1913. Serial No. 761,742. (Cl. 223—19.)



A trousers appliance, consisting of a supporting member, a pair of sleeves carried by said member and provided with a suspending loop, a pair of arms adjustably mounted in said sleeves, a pair of rigid arms secured to the supporting member and formed with guides, adjustable spreaders mounted in the member and adjustable in the guides of the rigid arms, and trousers-engaging members secured to the pair of adjustable arms and to the pair of spreaders said spreaders being adjusted by a hand-operated screw.

1,104,189. BEARING FOR MEASURING INSTRUMENTS. MAX HELM, Pankow, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 24, 1912. Serial No. 699,482. (Cl. 64—25.)

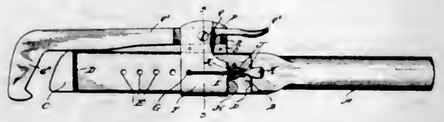
1. A meter bearing comprising a rotatable oil chamber having an extended upper wall, a guide pin extending into the upper part of the chamber and surrounded by the upper wall thereof and adapted to limit transverse movement of the chamber, means operatively supporting said guide pin and permitting a movement thereof, and a pintle secured to said pin and normally holding the chamber and the pin out of engagement.



2. A meter bearing comprising a rotatable shaft, an oil chamber at the upper end of said shaft, a stationary support having an opening, a top member resting on said support, a guide pin secured to said top member and extending through said opening and into the upper part of said chamber and limiting transverse movement of the latter, a pintle normally holding the chamber out of engagement with the pin, and means for flexibly holding the top upon said support.

3. A meter bearing comprising a rotatable shaft, an oil chamber at the upper end of said shaft, a stationary support having an opening, a top member resting on said support, a guide pin secured to said top member and extending through said opening and into the upper part of said chamber and limiting transverse movement of the latter, a pintle secured to said pin and normally holding the chamber out of engagement with the pin, and means for flexibly holding the top upon said support.

1,104,190. WRENCH. JOHN HOHN, Baldwin, Iowa. Filed Apr. 21, 1913. Serial No. 762,551. (Cl. 81—140.)

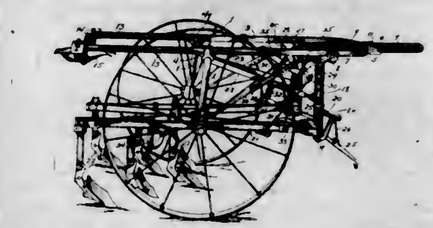


The wrench herein shown and described, consisting of the shank having a series of alining openings and formed with a jaw, a sleeve slidable on the shank and having an opening adapted to register with one of the series of openings in the shank, the arm formed at one end with a jaw and pivoted in said sleeve and formed at its other end with a finger piece, a spring bearing against said arm adjacent the finger piece, an arm on said sleeve extending from the inner edge thereof and formed with a pair of ears, a lever pivoted between said ears having a hook at one end adapted to pass through the opening of the sleeve into one of the openings of the shank, a finger piece on the other end of said lever, and a spring for retaining the lever in adjusted position.

1,104,191. CULTIVATOR. JOHN I. HOKE, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Sept. 26, 1913. Serial No. 791,977. (Cl. 97—35.)

1. The combination with a frame, an inverted U-shaped axle pivotally connected therewith, ground wheels, and a beam, of automatic beam-raising mechanism supported by the frame, and means connecting the axle with said raising mechanism to shift said axle when the raising mechanism operates.

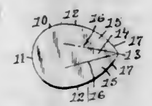
2. The combination with an inverted U-shaped axle, ground wheels, a frame and a beam connected with the frame, of a bell-crank supported by the frame, a rod connecting one arm of the bell-crank with the beam, a spring connecting the other arm of the bell-crank with the beam, an arm movable with said bell-crank and a pitman connecting said last-mentioned arm with the axle for swinging the latter when the bell-crank operates.



3. The combination with an inverted U-shaped axle, ground wheels, and a frame, of vertical sleeves supported by the frame, rods passing through said sleeves, cultivator gangs, mounting for said cultivator gangs on said rods, bell-cranks supported by said sleeves, a spring connecting one arm of each bell-crank with a cultivator gang, a rod connecting the other arm of each bell-crank with the same cultivator gang, and means connecting said bell-cranks with the axle.

4. The combination with an axle, ground wheels, a frame mounted on the axle, and a cross bar on the frame, of sleeves mounted on the cross bar and adjustable lengthwise thereon, vertical sleeves depending from the horizontal sleeves, rods passing through the vertical sleeves, cultivator gangs having mounting on said rods, raising mechanism mounted on said vertical sleeves and connected with the cultivator gangs, arms secured to the lower portions of said rods, arms secured to the upper ends of said rods, and a rod connecting the upper arms.

1,104,192. HEEL-PLATE BLANK. ERNEST HUNOLD, Providence, R. I. Original application filed Apr. 21, 1913, Serial No. 762,583. Divided and this application filed Sept. 30, 1913. Serial No. 792,630. (Cl. 36—74.)



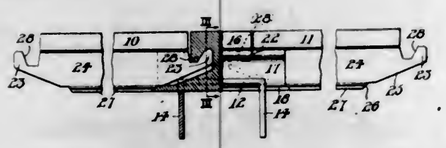
1. A heel plate blank stamped from sheet or bar metal and having a semi-circular end and rounded sides which converge to form a pointed opposite end from which pointed end the blank is split back toward the semi-circular end approximately two thirds the length of the blank, forming a pointed central and two pointed side arms, the pointed ends of which all meet at the pointed end of the blank.

2. A heel plate blank having a flat body portion, a rounded end, and two sides which converge to form a pointed opposite end and from which pointed end the blank is split back toward the rounded end of the blank, forming a pointed central and two side arms, the pointed ends of the central and side arms all meeting at the pointed end of the blank.

3. A heel plate blank having a flat body portion, a rounded end, and two sides which converge to form a pointed opposite end and from which pointed end the blank is split back forming a plurality of equally disposed pointed arms, the pointed ends of the arms all meeting at the pointed end of the blank.

4. A heel plate blank having a flat body portion, a pointed end, and a plurality of arms having pointed ends the pointed ends of the arms forming the pointed end of the blank.

1,104,193. RAIL JOINT AND CHAIR. LOUIS HUNYADI, Cleveland, Ohio. Filed Apr. 24, 1914. Serial No. 834,117. (Cl. 239—8.)



A device of the class described comprising a block having a flanged base, a tread portion and a web between said base and tread portion, portions of the said web extended from opposite ends of the tread portion and provided with slots open at their tops and ends, the upper faces of the web having inclined faces on opposite sides of said slots and adjacent the ends of said web portion, a rail having a hooked extension upon the web portion thereof and with the web of the rail cut away beneath the said hook forming an inclined face therebeneath, the said hook having an inclined inner face, the web of said block having recesses with outer inclined faces and positioned beneath each end of the tread portion and adapted for the reception of said hook with the inclined face of the hook in seating engagement with the said recess face and with the rail tread in alinement with the tread of the block.

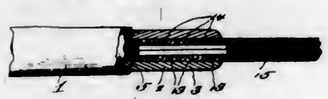
1,104,194. ELECTRIC SWITCH. RISAKU ISHIYAMA, Seattle, Wash. Filed Oct. 4, 1913. Serial No. 793,321. (Cl. 161—27.)



1. The combination with a suitable time-controlled mechanical motor, a notched cam driven thereby, a pin coacting with said notched cam limiting the movements of said cam longitudinally of its shaft, a spring-trigger urging said cam into engagement with said pin, and a wing hingedly connected to the free end of said trigger effected in reciprocative movements by the said longitudinal movements of the cam, of a switch closing element adapted to be supported in its open position by said wing in one of the extreme positions of the wing and tripped to close when said wing is withdrawn.

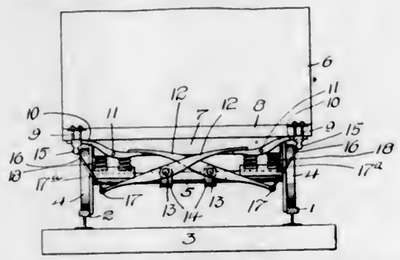
2. The combination with a suitable time-controlled mechanical motor, a notched cam driven thereby, a pin coacting with said notched cam limiting the movements of said cam longitudinally of its shaft, a spring-trigger urging said cam into engagement with said pin, and a wing yieldingly connected at right angles to the free end of said trigger and effected in reciprocative movements by the said longitudinal movements of the cam, of a switch closing element adapted to be supported in its open position by said wing in one of the extreme positions of the wing and tripped to close when said wing is withdrawn.

1,104,195. SWITCHBOARD-PLUG. MARTIN A. JANES, Northfield, Mass. Filed Nov. 13, 1913. Serial No. 800,730. (Cl. 173—322.)



In combination with a switchboard plug, a head comprising two separable parts, one being integral with the plug and having recesses upon its longitudinal edges, said longitudinal edges having tongues and shoulders adjoining said recesses, the other parts being detachably connected to said integrally connected parts and having ears to engage said recesses, said parts being semi-cylindrical, and the recesses and ears conforming to the cylindrical contour of said parts, means passing through the ears for detachably fastening said parts together, the detachable part having its longitudinal edges provided with longitudinal shoulders and tongues corresponding to and adapted to coöperate with the first shoulders and tongues so as to insure the detachable parts against slipping, said parts upon their inner cylindrical surfaces having a plurality of spurs to prevent the cord from slipping.

1,104,196. SHOCK-ABSORBER. EUGENE JENOI and STEVE KRUCHIO, Thorpe, W. Va.; said Jenoi assignor to said Kruchio, Rozalia Mary Szabo, and Sarah Kruchio, Uniontown, Pa. Filed Aug. 28, 1913. Serial No. 787,208. (Cl. 105—24.)



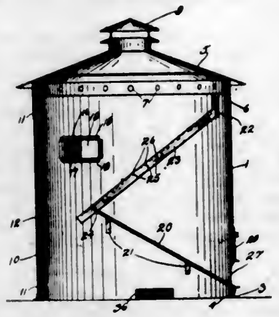
1. A shock absorber comprising buffers supported above the axle of railroad rolling stock, a pair of secondary levers centrally fulcrumed and having their inner ends crossed, a pair of primary levers fulcrumed above said buffers, and having their inner ends engaging the inner ends of said primary levers, and their outer ends having a link connection with supports depending from the car or other rolling stock.

2. The combination with a car truck and axle, of a shock-absorber, comprising buffer springs supported above the axle, a pair of secondary levers centrally fulcrumed, and crossing each other near their inner ends, depending pivotal supports at opposite sides of the truck, links pivotally-connected at their upper ends to said supports, and at their lower ends to the outer ends of said secondary levers, and a pair of primary levers supported at their outer ends by said yokes and having their inner ends overlapped by the inner ends of said secondary levers above said buffer springs.

1,104,197. POULTRY-HOUSE. ANDREW A. KRAMER, Kansas City, Kans. Filed Oct. 4, 1910. Serial No. 585,270. (Cl. 119—21.)

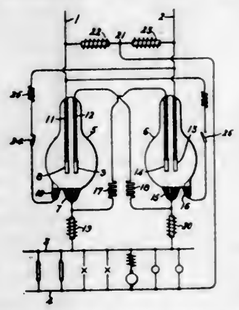
1. A poultry house comprising an inclosure, a droppings board located in an inclined position within the inclosure with its sides and lower edges contacting sides of the inclosure and its upper edge spaced from the inclosure to provide an opening to the upper portion thereof, and a roost inclined over the droppings board with its lower end supported on the upper end of said board.

2. In a poultry house, an inclosure having an entrance at one side and a clean out opening at the opposite side, a droppings board arranged in an inclined position within the inclosure with its sides and lower end adjacent the sides and rear of the inclosure, its rear edge located below the clean out opening and its upper edge spaced from the entrance to provide access to the upper portion of the inclosure, and a roost having its lower end supported on the upper end of the droppings board and inclined backwardly away from the entrance, substantially as set forth.



3. In a poultry house, an inclosure, circular in cross section and having an entrance at one side and a clean out opening at the opposite side, a droppings board arranged in an inclined position with its sides and lower edge adjacent the inner surfaces of the inclosure and its upper edge spaced therefrom to provide access to the upper portion of the inclosure at the front thereof, and a roost having its upper end supported by the inclosure and its lower end supported by the upper end of the droppings board, substantially as set forth.

1,104,198. VAPOR ELECTRIC APPARATUS. OSIAS O. KRUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1903. Serial No. 184,878. (Cl. 176—42.)



1. The combination of a source of alternating current, a plurality of evacuated receptacles each provided with a cathode and a plurality of anodes, connections between all of the electrodes and said source, and means in circuit with all but one of the working anodes of each receptacle for limiting the flow of current between anodes thereby preventing arcing between the anodes.

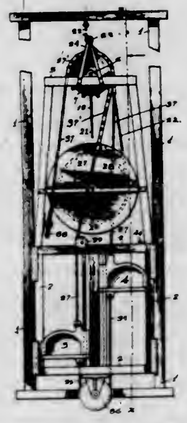
2. The method of operating a vapor electric apparatus having a plurality of anodes and a cathode traversed by current from an alternating current source, which consists in allowing the free passage of current from one of the anodes to the cathode and limiting to a relatively small amount the current passing from the other anode or anodes to the cathode.

3. The combination of a plurality of vapor electric devices each having a cathode and a plurality of anodes, a source of supply, connections joining an anode or anodes of one device to said source, connections joining an anode or anodes of the other device in a similar manner to said source, and means in series with an anode of each device for causing an unsymmetrical flow of current from the anodes of each rectifier to the cathode.

4. The combination of an exhausted envelop or receptacle, electrodes therein of opposite polarity, one at least of said electrodes being of vaporizable material, a source of alternating current, and means between said electrodes and said source such as to allow the free passage of current waves of one polarity between electrodes of opposite polarity but such as to oppose the passage of current between electrodes of the same polarity.

5. The combination in a vapor electric device for use with alternating current, said device having a cathode and a plurality of anodes whereby current waves of different polarities are transmitted, of means for opposing the flow of waves of one polarity without opposing waves of different polarity.

1,104,199. FOOT-OPERATED ELEVATOR. RICHARD LABORDA, San Francisco, Cal. Filed July 11, 1913. Serial No. 779,635. (Cl. 187—11.)



1. A foot operated elevator comprising a suitable car; a stationary suspension cable; a suitable sheave rotatably mounted on the top o fthe car and adapted to engage the stationary cable; a spring actuated drum rotatably mounted on the car and adapted to elevate the said car by winding the lower end of the stationary cable thereon; stirrups slidably mounted within the car; and means operatively connecting the stirrups with the sheave rotatably mounted upon the top of the car for the purpose of controlling the elevation of the said car by the spring actuated drum.

2. A foot operated elevator comprising a suitable car; a spring actuated drum rotatably mounted within the car; a sheave rotatably mounted within the car and above the spring actuated drum; stirrups slidably mounted within the car; a stationary suspension cable adapted to engage the periphery of the sheave and having its lower end wound around the spring actuated drum; sprockets rotatably mounted on either side of the sheave and adapted to rotate in opposite directions and to engage the said sheave when turning in one direction only; and suitable connections between the stirrups and the sprockets and adapted to rotate the said sprockets in opposite directions from each other so that one of the said sprockets will always be in engagement with the sheave when it is continuously rotating in one direction, for the purpose of controlling the elevation of the car by the spring actuated drum and suspension cable.

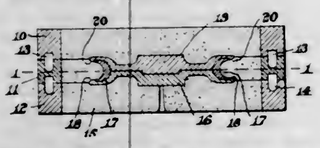
3. A foot operated elevator comprising a suitable car; a spring actuated drum rotatably mounted within the car; a shaft rotatably mounted on the top of the car and above the spring actuated drum; a sheave rigidly secured

to the approximate center of the shaft and having clutch members on either side thereof; sprockets rotatably mounted upon the shaft and on either side of the sheave and having clutches adapted to engage the clutches on the sheave when turning in one direction only; a stationary suspension cable adapted to engage the periphery of the sheave and having its lower end wound around the spring actuated drum; stirrups slidably mounted within the car; suitable connections between the tops of the stirrups and adapted to engage the sprockets and rotate the same in opposite directions by pulling downward on one stirrup; means adapted to cause the clutches of either sprocket to engage the clutch on that side of the sheave when turning in the same direction therewith; and means for releasing both sprockets from the sheave.

4. A foot operated elevator comprising a suitable car; a sheave rotatably mounted on the top of the car; a stationary suspension cable adapted to engage the periphery of the sheave and to rotate the same; a spring actuated drum rotatably mounted within the frame and adapted to engage the lower end of the cable below the sheave and to wind the said cable around the said drum for the purpose of elevating the car; stirrups slidably mounted within the car; sprockets rotatably mounted on the top of the car and coaxial with the sheave and adapted to engage the sheave when rotating in the same direction therewith; suitable springs adapted to retain the sprockets against the sheave; suitable connections between the tops of the stirrups and adapted to rotate the sprockets in opposite directions; means for releasing both sprockets from the sheave; and means for controlling the descent of the car when both sprockets are released from the sheave.

5. A foot operated elevator comprising a suitable car; a sheave rotatably mounted upon the top of the car; a stationary suspension cable adapted to engage the periphery of the sheave and rotate the same; a spring actuated drum rotatably mounted within the car below the sheave and adapted to engage the lower end of the suspension cable and to wind the said cable around the said drum for the purpose of elevating the car; stirrups slidably mounted within the car; sprockets rotably mounted on the car coaxial with the sheave and adapted to engage the sheave when rotating in the same direction therewith; suitable springs adapted to retain either sprocket in connection with the sheave when rotating therewith; suitable connections between the tops of the stirrups and having chain portions adapted to engage the sprockets and to rotate the said sprockets in opposite directions when one of the stirrups is pulled downward; levers adapted to disengage both sprockets from the sheave; and a suitable governor secured to the spring actuated drum and adapted to control the descent of the car when both sprockets are released from the sheave.

1,104,200. METHOD OF MAKING SHEAVES. CHARLES H. LANGILL, Boston, Mass. Filed Sept. 22, 1913. Serial No. 791,251. (Cl. 22—203.)

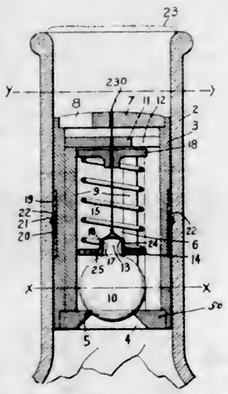


1. The method of casting sheaves consisting of positioning an annular steel tread portion in the central part of a flask by sand packed therein with patterns on either side thereof, said patterns having annular ribs adapted to fit over the edges of said tread portion and being surrounded by sand, removing said patterns, and pouring metal into the cavities formed by the removal of said patterns, thereby embedding the tread portion in the periphery of said pulley.

2. The method of casting sheaves consisting of positioning a pattern in an outer part of a flask by means of sand packed therein, positioning an annular metal tread portion on said pattern and in a central part of the flask by means of sand packed therein, positioning the other pattern in the other outer parts of said flask and partly upon said tread portion, packing sand around said last mentioned pattern, removing the upper part of the flask, removing the upper pattern, replacing said upper part of the flask, inverting the entire mold, removing the other pattern in the same manner and replacing the part of the flask from which the other pattern had been removed, and pouring metal into the cavities formed by the removal of said patterns.

3. The method of casting sheaves consisting of positioning an annular metal tread portion in a central part of a flask by means of sand packed therein with patterns positioned on either side thereof by sand in the outer parts of said flask, said patterns being provided with annular ribs fitting over the edges of said tread portion, removing the upper part of the flask, removing the upper pattern, replacing said upper part of the flask, inverting the entire mold, removing the other pattern in the same manner, and replacing the part of the flask from which it was removed, and pouring metal into the cavities formed by the removal of said patterns.

1,104,201. NON-REFILLABLE BOTTLE. FRANK LENZI, Boston, Mass. Filed Mar. 21, 1913. Serial No. 755,847. (Cl. 215—61.)

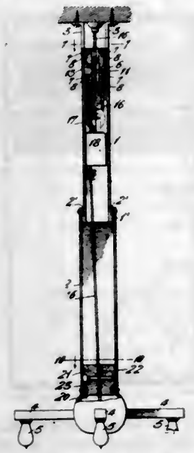


A non-refillable stopper for a bottle comprising a casing having a valve chamber and a valve seat and provided with a convex top having openings therethrough, of a ball valve in the valve chamber and provided with an extension, a disk resting on said valve and having a recess to receive said extension, a spring engaging said disk, a freely-movable follower sustained by the upper end of the spring within the valve chamber, and means for locking the casing within a bottle neck.

1,104,202. ADJUSTABLE ELECTRIC-LIGHT CHANDELIER. MARTINIS J. LINDAHL, Woodburn, Oreg. Filed Jan. 2, 1914. Serial No. 810,002. (Cl. 240—69.)

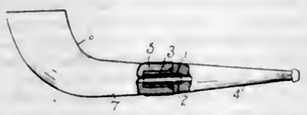
1. A chandelier comprising upper and lower telescopic sections the uppermost one of which is adapted to be secured to an overhead support, sectional clamps in the uppermost and lowermost of said sections, a guide on said uppermost clamp, electric lights carried by said lowermost section, a weight slidable within said telescopic sections, and twisted current conducting wires secured in said uppermost clamp, engaged with the guides on said weight and said uppermost section, secured in said lowermost clamp and connected to said electric lights.

2. In a device of the character described, the combination with upper and lower telescopic sections, of clamps secured in said upper and lower sections, each of said clamps comprising two members having registering grooves in their meeting faces and clamping bolts passing through said members and intersecting said grooves, current conducting wires secured in said clamps, a weight having a guide with which said wires are engaged and a guide on said upper clamp with which said wires are also engaged.



3. In a device of the character described, the combination with upper and lower telescopic sections, a weight slidable within said sections and a guide on said weight, of a clamping block secured in said uppermost section and having a notch in its upper face and a V-shaped groove in one of its vertical faces, a substantially V-shaped clamping member seated in said groove and having its inner edge grooved, twisted current conducting wires within said V-shaped groove and engaged by the groove of said clamping member, a bolt passing through said clamping block and said clamping member, said bolt intersecting said notch and said grooves and passed between the twists of said wires, and a pulley mounted within said notch on said bolt, said current conducting wires being engaged with the guide on said weight, passed over said pulley, and secured to said lowermost telescopic section.

1,104,203. SMOKING-PIPE. LOUIS B. LINKMAN, Chicago, Ill., assignor to M. Linkman & Company, a Corporation of Illinois. Filed Feb. 10, 1913. Serial No. 747,525. (Cl. 131—12.)

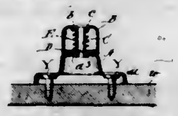


A pipe mouth piece comprising a longitudinally bored body part and a reduced slip-joint nipple, the bore of said nipple and an adjacent portion of said body part being of greater diameter than that of the remaining portion of said body part, and a metallic tube extending throughout said larger bore, the bore of the metallic tube being substantially the same as the bore of the body part.

1,104,204. FASTENER. GEORGE A. MACCORMACK, Boston, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed Nov. 5, 1913. Serial No. 799,388. (Cl. 24—221.)

1. In a fastener, the combination with a body of a turn button rotatably mounted thereon, comprising a hollow shell and a plate yieldingly mounted therein, and complementary locking members on said body and said plate adapted yieldingly to lock said button against rotation.

2. In a fastener, the combination with a body provided with a projection, of a turn button rotatably mounted thereon comprising a hollow shell and a plate yieldingly mounted therein provided with sockets at right angles to the center of rotation of said button, said sockets adapted to coöperate with said projection yieldingly to lock said button against rotation.

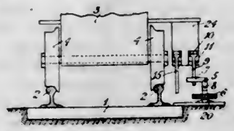


3. In a fastener, the combination with a body provided with a projection, of a turn button rotatably mounted thereon comprising a hollow shell and a plate yieldingly mounted therein provided with sockets at right angles to each other, said sockets adapted to coöperate with said projection yieldingly to lock said button against rotation.

4. In a fastener, the combination with a body having a substantially flat top provided with a projection, of a turn button rotatably mounted thereon and comprising a hollow shell, a pintle passing through said shell into said body, a plate within said button provided with sockets at right angles to each other, a spring between said plate and the top of said shell, said sockets adapted to coöperate with said projection yieldingly to lock said button against rotation.

5. In a fastener, the combination with a body having a substantially flat top provided with a projection, of a turn button rotatably mounted thereon and comprising a hollow shell, a hollow pintle open at both ends passing through said shell into said body, a plate within said button provided with sockets at right angles to each other, a spring between said plate and the top of said shell, said sockets adapted to coöperate with said projection yieldingly to lock said button against rotation.

1,104,205. APPARATUS FOR AUTOMATICALLY INDICATING THE POSITION OF SIGNALS ON LOCOMOTIVES. MARSTON MANTHORPE, Copenhagen, and ARTHUR INGEMANN HANSEN, Hellerup, Copenhagen, Denmark, assignors to Ferdinand Andersen, Copenhagen, Denmark. Filed Sept. 6, 1913. Serial No. 788,485. (Cl. 246—25.)



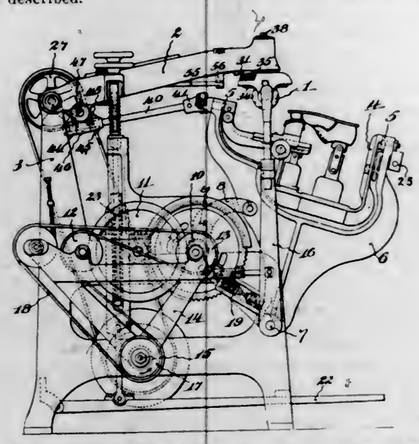
1. In a signal indicating means, the combination with two independent swinging contacts carried by a locomotive, of a trip device comprising a vertical shaft, means to rotate the latter, and means carried by the shaft to alternately project into the paths of said contacts.

2. In a signal indicating means, the combination with two independent contacts carried by a locomotive, of a trip device comprising a vertical shaft mounted between the paths of said contacts, and having a horizontal arm adapted to alternately project into the paths of said contacts, and means to rotate the shaft to swing the arm into said paths.

1,104,206. LEVELING-MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 15, 1911. Serial No. 633,221. (Cl. 12—34.)

1. A leveling machine having, in combination, a shoe supporting jack, a positively driven leveling roll arranged to assume any desired inclination with relation to the line of travel of the jack to rub the surface of the sole outwardly toward the margin, and means for varying the relative longitudinal position and lateral inclination of the leveling roll and jack, substantially as described.

2. A leveling machine having, in combination, a shoe supporting jack, a leveling device, means for varying the relative longitudinal position and lateral inclination of the leveling device and jack, and means operated in varying the relative lateral inclination of the leveling device and jack for varying the inclination of the leveling device to the line of travel of the jack as the lateral inclination of the leveling device and jack is varied, substantially as described.



3. A leveling machine having, in combination, a shoe supporting jack, a leveling device, means for varying the relative longitudinal position and lateral inclination of the leveling device and jack, and means operated in varying the relative lateral inclination of the leveling device and jack for positioning the leveling device to rub the central portion of the sole in a longitudinal direction and each margin of the sole in an outward direction, substantially as described.

4. A leveling machine having, in combination, a shoe supporting jack, a leveling roll swiveled about a vertical axis, means for rotating the roll, and means for varying the relative longitudinal position of the leveling roll and jack, substantially as described.

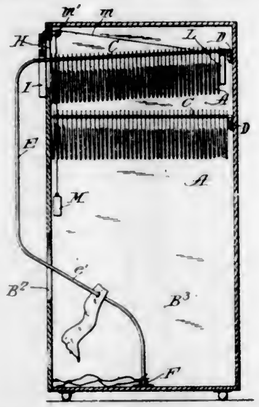
5. A leveling machine having, in combination, a shoe supporting jack, a leveling roll, means for rotating the roll, connections between the shoe supporting jack and leveling roll for inclining the roll relatively to the line of travel of the shoe as the jack is tipped laterally, and means for varying the relative longitudinal position and lateral inclination of the leveling roll and jack, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

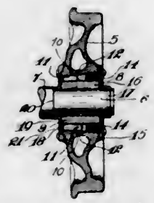
1,104,207. TOWEL-DISPENSING CABINET. EDWARD E. MCCRACKEN, Greenville, Pa. Filed May 8, 1913. Serial No. 766,404. (Cl. 45—32.)

1. A towel-dispensing cabinet, comprising a casing in the upper portion of which clean towels are stored and in the lower portion of which soiled towels are received, a door to the cabinet having an opening in its upper portion for the withdrawal of clean towels and an opening in its lower portion for permitting the passage of soiled towels to the lower portion of the cabinet, a horizontally arranged towel-supporting rod in the upper portion of the cabinet detachably connected with the cabinet at its rear end, and a vertically arranged rod locked to but detachably connected with said horizontally arranged rod inside the door of the cabinet and which extends through the upper opening in the cabinet door and projects downwardly therefrom to and through the opening for soiled towels and which guides soiled towels to the interior of the cabinet.

2. A towel dispensing cabinet, comprising a closed casing having a front door provided with an opening in its upper portion for the withdrawal of clean towels and an opening in its lower portion to receive soiled towels, a door for the opening in the upper portion of the cabinet, a towel-supporting rod in the upper portion of the cabinet which is detachably connected with the cabinet, a vertically arranged rod extending through the opening in the upper portion of the cabinet and extending downwardly and through the opening in the lower portion thereof and detachable locked connections within the cabinet between said rods.



1,104,208. CAR-WHEEL. GEORGE E. MCFADDEN, Pullman, Ill. Filed Oct. 27, 1913. Serial No. 797,539. (Cl. 105—67.)

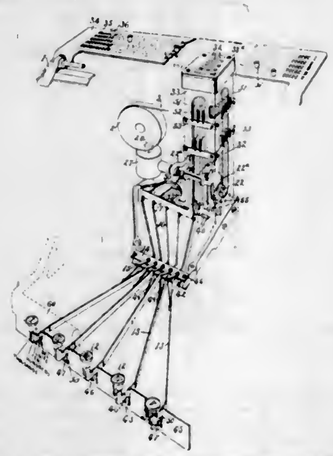


1. The combination of a rotating member and a support therefor; of a sectional bearing bushing encircling the support, wear-compensating members in contact with the outer surface of the bushing sections and movable in the direction of the length thereof, said members being tapered in the direction of their length, the rotating member having a bore to accommodate the bushing sections and the wear-compensating members, said bore being tapered to conform to the taper of said wear-compensating members, springs engageable with the wear-compensating members for forcing the same in a direction to compensate for wear of the bushing sections, and plates mounted over the ends of the hub bore, against one of which plates the aforesaid springs abut, said plates having hub portions through which the support passes, said support having shoulders between which the aforesaid hub portions are located.

2. The combination of a rotating member and a support therefor; of a section bearing bushing encircling the support, wear-compensating members in contact with the outer surface of the bushing sections and movable in the direction of the length thereof, said members being tapered in the direction of their length, the rotating member having a bore to accommodate the bushing sections and the wear-compensating members, said bore being tapered to conform to the taper of said wear-compensating members, springs engageable with the wear-compensating members for forcing the same in a direction to compensate for wear of the bushing sections, and plates mounted over the ends of the hub bore, against one of which plates the aforesaid springs abut, the other plate closing the corresponding end of the hub bore, which bore is longer than the wear-compensating members to provide a packing space in said bore at the smaller end of said members.

3. The combination of a rotating member and a support therefor; of a sectional bearing bushing encircling the support and having recesses in its outer surface, wear-compensating members seating in said recesses and movable in the direction of the length of the bushing sections, said members being tapered in the direction of their length, the rotating member having a bore to accommodate the bushing sections and the wear-compensating members, said bore being tapered to conform to the taper of said wear-compensating members, and springs engageable with the wear-compensating members for forcing the same in a direction to compensate for wear of the bushing sections.

1,104,209. TYPE-WRITING MACHINE. WILLIAM P. MCLAUGHLIN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 13, 1911. Serial No. 627,026. (Cl. 197—177.)



1. In a typewriting machine, the combination of a power driven carriage, an escapement mechanism for controlling the letter feed movement of the carriage, means for releasing the carriage from the escapement mechanism to permit the carriage to run from one column position to another, a plurality of groups of movable stops, one group for each column, and each stop in a group representing some one decimal stopping position in the column represented by the group, and a key controlling each group of stops.

2. In a typewriting machine, the combination of a power driven carriage, an escapement mechanism for controlling the letter feed movement of the carriage, means for releasing the carriage from the escapement mechanism to permit the carriage to run from one column position to another, a plurality of groups of movable stops, one group for each column, and each stop in a group representing some one decimal stopping position in the column represented by the group, the stops of each group being normally ineffective to arrest the carriage, so that columns may be skipped in which no one of the stops is operated.

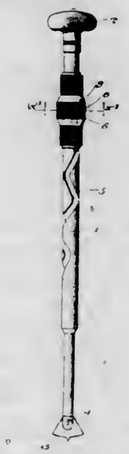
3. In a typewriting machine, the combination of a power driven carriage, an escapement mechanism for controlling the letter feed movement of the carriage, means for releasing the carriage from the escapement mechanism to permit the carriage to run from one column position to another, a plurality of groups of movable stops, one group for each column, and each stop in a group representing some one decimal stopping position in the column represented by the group, a number of racks, one for each group of stops carried by the carriage, stops adjustable to fixed positions on said racks, and a key controlling each of said groups of movable stops to project any selected stop in a group into the path of the fixed stop on the rack which coöperates with that group.

4. In a typewriting machine, the combination of a power driven carriage, an escapement mechanism for controlling the letter feed movement of the carriage, means for releasing the carriage from the escapement mechanism to permit the carriage to run from one column position to another, a plurality of groups of movable stops, one group for each column, and each stop in a group representing some one decimal stopping position in the column represented by the group, the stops of each group being arranged in the direction of movement of the carriage and each stop of a group being a letter space in advance of the preceding stop, a number of racks arranged parallel to the direction of movement of the carriage, stops adjustable to fixed positions on the racks, and a key controlling each group of movable stops to project any selected stop of a group into the path of the fixed stop on one of the racks.

5. In a typewriting machine, the combination of a power driven carriage, an escapement mechanism for controlling the letter feed movement of the carriage, means for releasing the carriage from the escapement mechanism to permit the carriage to run from one column position to another, a plurality of groups of movable stops, one group for each column, and each stop in a group representing some one decimal stopping position in the column represented by the group, keys corresponding in number to the number of groups of movable stops, means whereby each key may be moved to register with any stop in a group, and means whereby said key may then be moved to actuate the stop with which it registers.

[Claims 6 to 39 not printed in the Gazette.]

1,104,210. VALVE-GRINDER. NOAH E. MEREDITH, Los Angeles, Cal., assignor of forty-nine one-hundredths to John F. Walsh, Los Angeles, Cal. Filed Mar. 17, 1914. Serial No. 825,260. (Cl. 51—4.)



1. A valve grinder comprising a shank with a spiral groove therein said groove having a plurality of waves and a sleeve slidable along said shank with means engaging said groove to oscillate the shank as the sleeve is moved in one direction.

2. A valve grinder comprising a shank adapted to engage the valve, said shank having a longitudinal wavy groove, the said groove having a general spiral direction,

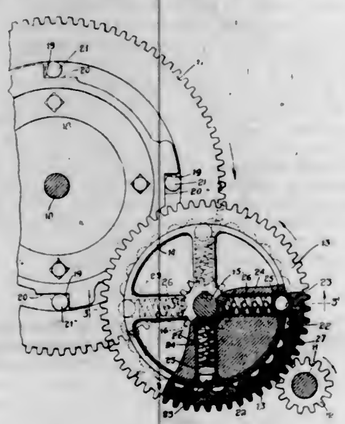
and a sleeve slidable on the shank with means engaging in said groove.

3. A valve grinder comprising a shank adapted to engage the valve, said shank having a spiral wavy groove, a sleeve sliding on the shank, and a ball retained in said sleeve engaging in said groove.

4. A valve grinder comprising a shank with a spiral wavy groove, a sleeve slidable on said shank, a ball within said sleeve engaging said groove, and a screw plug in the sleeve retaining said ball in engagement with the groove.

5. A valve grinder comprising a shank with a spiral groove therein said groove having a plurality of waves, a sleeve slidable along said shank with means engaging said groove to oscillate the shank as the sleeve is reciprocated, and a hand knob swiveled on the upper end of said shank.

1,104,211. STARTING MECHANISM FOR EXPLOSIVE-ENGINES. HUBERT MEREDITH-JONES, New York, N. Y., assignor to Columbia Nut and Bolt Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Apr. 22, 1913. Serial No. 762,807. (Cl. 74—29.)



1. Mechanism of the character described comprising a wheel having peripheral recesses with inclines, a toothed ring outside the wheel, rolls between the inclines and the ring, an intermediate shaft carrying a pinion engaging the toothed ring and a wheel, radially pressed balls carried by the second wheel and a second toothed ring outside the second wheel and having sockets in its inner wall engaged by the balls, whereby when the second toothed ring is driven the first wheel will be driven by the intermediate connections stated, when the first wheel is driven otherwise the first toothed ring is disconnected, and when a reverse movement of the second toothed ring takes place the second toothed ring is disconnected from the second wheel by the yielding of the balls.

2. Mechanism of the character described comprising a wheel having peripheral recesses with inclines, a toothed ring outside the wheel, rolls between the inclines and the ring, an intermediate shaft, means for driving the toothed ring from the intermediate shaft, a wheel carried by the said shaft and carrying radially acting spring-pressed balls, and a second toothed ring outside the second wheel, said second ring being provided in its inner wall with sockets adapted to be engaged by the balls.

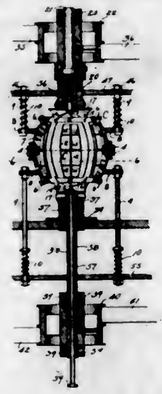
3. Mechanism of the character described comprising a wheel having peripheral recesses with inclines, a toothed ring outside the wheel, rolls between the inclines and the ring, an intermediate shaft, means for driving the toothed ring from the intermediate shaft, a wheel carried by said shaft and having radial sockets, balls in said sockets, springs for forcing said balls forward and a second toothed ring outside the second wheel and having sockets in its inner wall adapted to be engaged by the spring-pressed balls, for the purpose set forth.

4. In combination, an engine shaft, a wheel carried thereby and having peripheral recesses with inclines, a toothed ring outside the wheel, rolls between the inclines and the ring, an intermediate shaft, a pinion on said shaft engaging the toothed ring, a wheel on said shaft, radially acting spring-pressed balls carried by the second wheel, a second toothed ring outside the second wheel and having sockets in its inner wall engaged by the balls, a starting shaft and a pinion on said shaft engaging the second toothed ring.

5. In combination, an engine shaft, connecting means carried thereby and adapted to start said shaft forward and to release said shaft when said shaft drives forward, and yielding driving means for the connecting means mounted independently of the engine shaft and adapted to yield should the engine backfire.

[Claims 6 to 9 not printed in the Gazette.]

1,104,212. POTATO-PARER. TOBIAS MILLER, Youngstown, Ohio. Filed Sept. 10, 1913. Serial No. 789,108. (Cl. 146—14.)



1. A paring machine including a paring unit consisting of a pair of cup members each having holding and cutting means, means for rotating the cup members, means for separating the cup members, and means for discharging the pared object when the cup members are separated.

2. A paring machine including a paring unit consisting of a pair of cup members each having cutting means, means for rotating the cup members, means for separating the cup members, a manually operated ejector arranged in one of the cup members, and a discharging device operating between the cup members when separated.

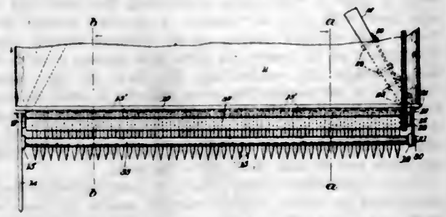
3. A paring machine including a paring unit consisting of a pair of cup members, each of which comprises a body frame and a plurality of yieldingly mounted knife-carrying members, and means for rotating said members.

4. A paring machine including a paring unit consisting of a pair of cup members, each of which comprises a body frame, a plurality of movable segments hung within said frame, and a plurality of knife-carrying blocks movably mounted in said segments, manually controlled clamping means coöperating with said movable segments, and means for rotating the cup members.

5. A paring machine including a paring unit consisting of a pair of cup members each of which comprises a body frame, a plurality of movable segments pivotally hung within the frame, and a plurality of knife-carrying blocks mounted in the segments and having spring hinge connections therewith, manually controlled clamping means coöperating with said movable segments and means for rotating the cup members.

[Claims 6 to 15 not printed in the Gazette.]

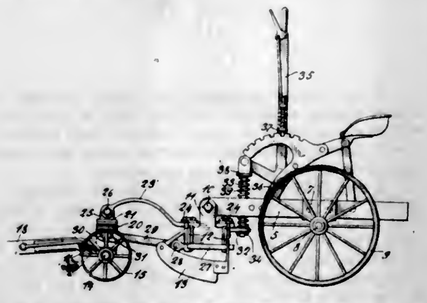
1,104,213. HEADER DEVICE. CARROLL HINCKLEY MONTGOMERY, White Deer, Tex. Filed May 18, 1911. Serial No. 628,074. (Cl. 56—100.)



1. In a header harvester, a platform, a comb secured to the platform and having the upper face of its rear portion raised slightly to a point higher than the platform with the remaining upper face portions of the comb arranged upon substantially the same horizontal plane as the platform, a breasting element positioned over the comb to deflect the material and thereby direct the tops thereof toward the comb, a cutting mechanism arranged in substantially the same horizontal plane with the platform and comb and positioned to operate through the rear of the comb directly adjacent to the platform so as to cut the deflected material near the tops thereof, and a sweeper operable over the comb at the rear thereof to sweep the topped material from the point of the cutting operation directly from the comb on to the platform.

2. In a header harvester, a platform, a comb in substantially the same plane and communicating directly with the platform, a breasting element positioned over the comb to deflect the material and thereby direct the tops thereof toward the comb, a cutting mechanism also in substantially the same plane with the platform and comb and working through the rear of the comb directly adjacent to the platform so as to cut the deflected material near the tops thereof, and a sweeper operable over the comb at the rear thereof to sweep the topped material off the comb and drop it directly on to the platform.

1,104,214. CORN-PLANTER. JELTE R. MULDER, Roselawn, Ind. Filed Mar. 12, 1914. Serial No. 824,159. (Cl. 111—6.)

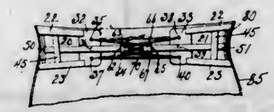


1. The combination of a wheeled frame having a pivoted part at its forward end, a truck in front of said pivoted part, draft links pivotally connecting the truck to the pivoted part, resilient arched beams connecting the truck and the aforesaid pivoted part, a hand lever carried by the wheeled frame, and an operative connection between said hand lever and the pivoted part.

2. The combination of a wheeled frame having a pivoted part at its forward end, a truck in front of said pivoted part, said truck comprising an axle, a bolster, a kingbolt connecting the axle and the bolster, and wheels on the axle, draft links connecting the bolster of the truck to the aforesaid pivoted part, a hand lever carried by the wheeled frame, and an operative connection between said hand lever and the pivoted part.

3. The combination of a wheeled frame having a pivoted part at its forward end, a truck in front of said pivoted part, said truck comprising an axle, a bolster, a kingbolt pivotally connecting the axle and the bolster, and wheels on the axle, draft links connecting the bolster of the truck to the aforesaid pivoted part, resilient arched beams connecting the bolster and the pivoted part, a hand lever carried by the wheeled frame, and an operative connection between said hand lever and the pivoted part.

1,104,215. SKELETON GIRDLE. JACOB A. ONDRAK, Brooklyn, N. Y. Filed July 23, 1912. Serial No. 711,081. (Cl. 241—8.)



1. In a girdle the combination of a pair of members, straps for each member, means to connect the accompanying ends of the members, an adjusting strap for each member of the girdle, means to connect the latter straps and a safety tape connecting one pair of accompanying ends of the members of the girdle.

2. In a girdle the combination of a pair of members, straps for each member, means to connect the ends of the straps of one member with the accompanying ends of the straps of the other member, an adjusting strap for each member, means to connect the end of one adjusting strap with the accompanying end of the other adjusting strap, and compound lacing connecting all the other ends of all the straps.

3. In a girdle the combination of a pair of members, straps for each member with the end of each strap for one member detachably connected to the accompanying end of the strap of the other member, guide braces connecting the straps of each member, an adjusting strap slidably supported on the guide braces of each member, with the end of one detachably connected to the accompanying end of the other, and compound lacing connecting the other ends of all the straps.

4. In a girdle the combination of a pair of members, straps for each member, tabs connecting the accompanying ends of each of said straps of each member, means to connect one pair of accompanying tabs of said straps, an adjusting strap for each member of the girdle, a tab at each end of each adjusting strap, a fastener connecting one end of one adjusting strap with the accompanying end of the other adjusting strap and a draw tape connecting both tabs at the other ends of the adjusting straps and also both tabs of the other straps of the members of the girdle adjacent to the tabs of the adjusting straps.

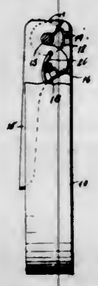
5. In a girdle the combination of a pair of members, straps for each member, tabs at the ends of each pair of the straps, means to connect each pair of accompanying tabs, guide braces connecting the straps of each member, a guide bearing formed with each guide brace, an adjusting strap slidably supported in the guide braces of each member, a tab at each end of each adjusting strap, means to connect the end of one adjusting strap with the accompanying end of the other adjusting strap and compound lacing connecting the tabs at the other ends of the adjusting straps with the tabs of the other straps adjacent thereto.

[Claim 6 not printed in the Gazette.]

1,104,216. SAFETY-STIRRUP. WALTER A. OSTWALD, Bayfield, Colo. Filed Aug. 28, 1912. Serial No. 717,569. (Cl. 54—49.)

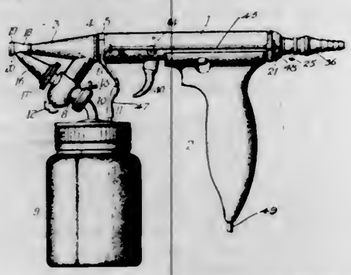
In a stirrup, a yoke having open ended slots formed centrally in the upper portions of the arms thereof, a roller for attachment of a stirrup strap disposed between the ends of the arms, trunnions on the ends of the roller loosely disposed in the said slots, strap protecting flanges

carried by the roller, a spring pressed releasing frame pivotally mounted in the arms of the yoke below the slot, vertical fingers on the upper end of the releasing frame,



said fingers each having a horizontal open ended slot in one side thereof for the reception of one of the trunnions, the outer end of the upper portion of each of the fingers above the slot being upwardly and outwardly inclined.

1,104,217. PNEUMATIC PAINT-BRUSH. JENS A. PAASCHE, Chicago, Ill. Filed Apr. 11, 1910. Serial No. 554,669. (Cl. 91—45.)



1. In a pneumatic paint brush, in combination, air-discharge means; and color-discharge means comprising a sleeve, a tube secured to said sleeve, the forward end of said tube being tapered and the opening therein terminating upon the surface of said tapered portion, and a nozzle fitting upon the forward end of said tube and being internally tapered to fit the forward tapered end of said tube, said nozzle having a connection with said sleeve, whereby the nozzle may be moved longitudinally of said tube to control the discharge of color.

2. In a pneumatic paint brush, in combination, a body; air-discharge means carried by said body; a lug on said body having an opening therein; a sleeve mounted in said opening; a tube fixed in the forward end of said sleeve, the forward end of said tube being tapered and the opening therein terminating upon the surface of said tapered portion, and a nozzle fitting upon said tube and being internally tapered to fit the forward tapered end of said tube, said nozzle having a screw-thread connection with said sleeve, whereby the nozzle may be moved longitudinally of said tube to control the discharge of color.

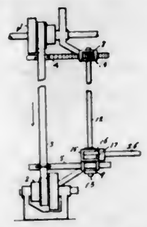
3. In a pneumatic paint brush, in combination, pressure-fluid-discharge means; and paint-discharge means comprising a tube adapted to convey the paint, the forward end of said tube being tapered bluntly, the opening in said tube being relatively large and terminating upon the face of said tapered portion, and a nozzle fitting tightly upon said tube and being interiorly tapered to fit the forward tapered end of said tube, said nozzle and said tube being slidable with relation to each other to control the discharge of paint.

4. In a pneumatic paint brush, in combination, a body comprising a barrel; color-discharge means at the forward end of the body; an air nozzle adjacent to said color discharge means; a head closing the rear end of said barrel, said head having a recess in its outer face and having a port connecting said recess with the inner face of said head; a pipe in said barrel connecting the inner end of said port with said air nozzle; a member closing said recess, said member having an air passage therein communicating at its inner end with said recess; a valve in said passage for controlling the flow of air therethrough; a valve-operating stem slidable in said member and extending into the rear end of said barrel; a finger lever extending into and pivoted in said barrel; and a link within said barrel connecting said finger lever with the inner end of said valve-operating stem.

5. In a pneumatic paint brush, in combination, a body comprising a barrel, color discharge means at the forward end of the body, an air nozzle adjacent to said color discharge means, a head closing the rear end of said barrel, said head having a recess in its outer face and having a central screw threaded opening extending from said recess to the inner side of said head, said head having a port connecting said recess with the inner face of said head, a pipe within said barrel connecting the inner end of said port with said air nozzle, a member closing the recess in said head and having a stem threaded in said central opening, said member having a passage therein communicating at its inner end with said recess, a valve in said passage for controlling the flow of air therethrough, a valve operating stem slidable in the first mentioned stem and extending into the rear end of said barrel, and a finger lever adapted to slide said stem to open said valve.

[Claims 6 to 11 not printed in the Gazette.]

1,104,218. BELT-SHIFTER. JAMES R. PEARSON, Cincinnati, Ohio, assignor to The Acme Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 26, 1914. Serial No. 821,159. (Cl. 64—4.)



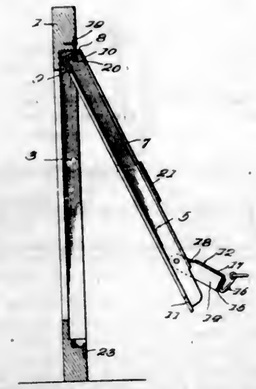
1. A belt shifter comprising two shafts provided with ratchet wheels, a housing swiveled thereon and provided with pawls arranged to engage with the said wheels, and a hand lever provided with selective means for disengaging certain of said pawls from the wheels.

2. A belt shifter comprising two shafts journaled in a housing and provided with adjacent ratchet wheels, a hand lever swiveled concentric with the wheels and provided with a plurality of pawls adapted to engage with the wheels, and selective means actuated by said lever for engaging or releasing the pawls in pairs and for turning the shafts alternately in either of opposite directions.

3. A belt shifter comprising a housing, two shafts in alinement with their adjacent ends journaled therein and each provided with a ratchet wheel, a member swiveled concentric with said wheels and provided with two pairs of pawls adapted to engage with opposite sides of the corresponding wheels, and a hand lever swiveled on the member and provided with selective means for alternately disengaging certain of said pawls.

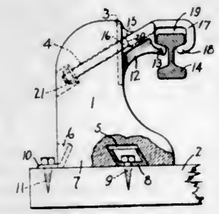
4. A belt shifter comprising oppositely disposed shafts, a ratchet wheel and a pinion secured on each shaft, shifter racks engaging with the pinions, pawls arranged to engage with the wheels, a hand lever and selective means controlled thereby for alternately disengaging certain pawls, whereby the shafts may be turned alternately in either of opposite directions and in predetermined order.

1,104,219. PICTURE-HOLDER. GIUSEPPE POLVERINO, New York, N. Y. Filed Oct. 9, 1913. Serial No. 794,303. (Cl. 40—152.)



A picture holder comprising side members having laterally spaced inturned flanges, a flanged end member connecting said side members at one end, a strip secured to one of the flanges on each side member at the other end of said side members, the other flanges on said side members being cut away at this strip connected end, and a closure for said end comprising side and end strips each having an inturned flange on its outer edge, the ends of said side strips being connected to the side strips of the holder proper and having their flanges cut away for a portion of their length.

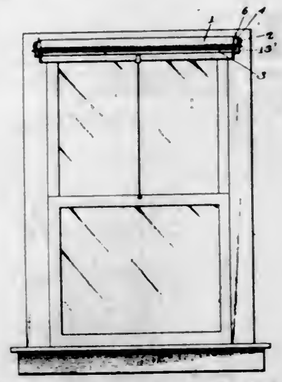
1,104,220. THIRD-RAIL SUPPORT. WILLIAM B. POTTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 1, 1908. Serial No. 441,327. (Cl. 191—32.)



The means for supporting a contact rail in inverted position with clearance above the railway, comprising an insulator having a recess formed in one side, a space block seated in said recess and provided with a shoulder for engaging a flange of the rail and with a shouldered aperture, a hook-shaped device engaging the opposite flange of the rail and having a shouldered shank passing through said shouldered aperture in the block and through the insulator, and means for tensioning said hook-shaped device.

1,104,221. SHADE-CONTROLLER. HERMAN F. RICHTER, Los Angeles, Cal., assignor to Hynes Shade Guide Company, Los Angeles, Cal., a Corporation of California. Filed July 14, 1913. Serial No. 778,856. (Cl. 156—36.)

1. In combination with the shade roller and shade secured thereto, a broad plate of sheet metal secured to the shade roller, said plate being slit to form a spring finger, the outer end of the plate being formed as a closed loop bent at right angles to the main portion of the plate and forming a guide for the spring fingers and limiting its outward movement, and a stationary stop lug in the path of movement of said spring finger when the finger is extended.



2. In combination with a shade roller and shade thereon, a pair of broad thin plates secured to the shade roller near one end thereof, on opposite sides of the shade roller, each broad plate being slit to form a spring tongue, the outer end of the plate being bent at right angles to form a closed loop through which the said tongue projects, and a stationary stop lug adapted to arrest either of said spring fingers and stop rotation of the spring roller.

3. In combination with a shade roller and shade thereon, a broad thin spring finger secured to the shade roller and adapted to be held against the shade roller when the shade is wound thereon, a stationary stop adjacent the end of the spring finger and in the path of movement thereof when the spring finger is allowed to spring away from the roller, said stationary stop comprising a slotted plate with a lug bent at right angles thereto, and a screw through the slotted plate.

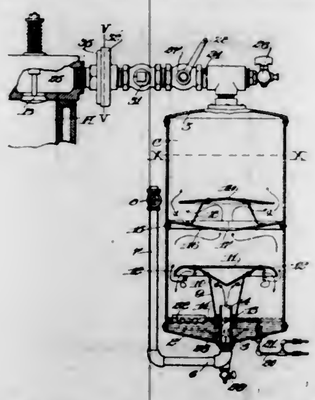
4. In combination with the shade roller and shade secured thereto, a plate of sheet metal secured to the shade roller, a spring finger formed on said plate, a member formed on said plate adapted to guide the projecting end of said finger and to limit the outward movement thereof, a stop adapted to be engaged by the projecting end of said finger when the shade is unwound and the projecting end of the finger is swung outwardly, to arrest the unwinding motion of the shade roller.

1,104,222. CARBURETER. CEDRIC E. RIMMER, FRED A. PLYMIRE, and WILLIAM WILLS, Luning, Nev.; said Wills assignor of three-tenths of the whole right to William L. Rohrer, Canton, Ohio. Filed Nov. 24, 1913. Serial No. 802,633. (Cl. 48—155.)

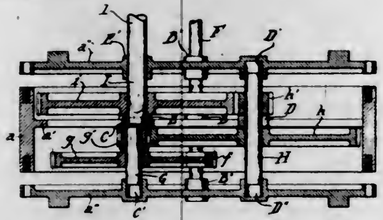
1. The combination in a carbureter, of a closed tank adapted to contain a hydrocarbon fuel, means for maintaining a predetermined fuel level within the tank, an air inlet pipe on the tank having its inlet end connected with the lower end of the tank, a tube extending above the fuel level connected to said inlet end and having a plurality of perforations formed in the tube near its lower end, a deflecting plate having an annular downwardly turned flange formed on its outer edge mounted above the tube, a conical-shaped deflector secured to said plate, means for raising or lowering the deflectors with relation to the top of the tube, a plurality of stationary deflecting plates secured in the tank above the adjustable deflectors, an outlet pipe connected to the top of the tank, means in said pipe to prevent back-firing into the tank, and an auxiliary air valve in the pipe.

2. In a carbureter, a liquid fuel containing tank, an air inlet tube extending up through the bottom of the tank having a plurality of perforations located below the level of the liquid fuel, a deflecting plate having a downturned flange at its outer edge, a cone-shaped deflector secured to the under face of said plate and at the center thereof and having its apex closed and alined with the upper

end of said tube, a baffle plate secured to the tank and located above said deflecting plate and having its bottom provided with a central opening, and an imperforate secondary baffle plate connected to the first named baffle plate and located thereabove and in spaced relation to the tank side walls.



1,104,223. SPEED-REDUCER. ARTHUR I. RISSER, Chicago, Ill. Filed Feb. 11, 1913. Serial No. 747,622. (Cl. 24—7.)

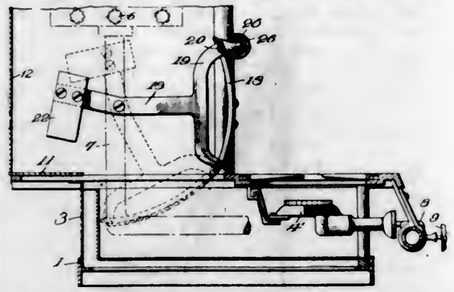


In a speed reducer, a gear casing comprising a circumferential wall, a partition wall midway the ends of said circumferential wall and integral therewith, and end walls removably attached to said ends of said circumferential wall, said end walls being respectively provided with journal bearings on the inner faces thereof and said partition wall being also provided with journal bearings, some of said journal bearings in said partition and end walls being in alinement, and one of said end walls being also provided with journal bearings extending therethrough.

1,104,224. GAS-RANGE. JOSEPH ROY, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 23, 1913. Serial No. 743,864. (Cl. 126—39.)

1. The combination with a range having a burner at the front thereof, of an oven in rear of and in a horizontal plane above the burner and having an opening in its front wall, a door for said opening and having a movement in an arc of a circle inside of a vertical plane with the burner and adapted to swing below the oven when in an open position.

2. The combination with a range having a burner at the front thereof, of an oven in rear of and in a horizontal plane above the burner and having an opening in its front wall, a door for said opening, arms having bifurcated forward ends secured to the inner face of the door and extending within the oven, said arms having the rear portions thereof turned at an angle and pivoted within the oven intermediate their ends, weights rigidly secured to the rear ends of the arms and having reduced forward ends, said door having a swinging movement in rear of a vertical plane with the burner whereby the door is overbalanced by the weights and held closed and the door when open overbalances the weights and is held open.



3. The combination with a range having a burner at the front thereof, of a grating above the burner, an oven in rear of the grating and having its lower-end in a horizontal plane with the grating, said oven having an opening in its front wall, a door for said opening and having a movement in rear of a vertical plane with the burner and adapted to swing below the bottom of the oven.

4. The combination with a range having a burner at the front thereof, of an oven in rear of and in a horizontal plane above the burner and having an opening in its front wall, a door for said opening, arms having bifurcated forward ends secured to the inner face of the door and extending within the oven, the said arms pivoted intermediate their ends, and having their rear portions turned upwardly at an angle beyond the pivot, weights rigidly secured to the extreme rear ends of the upwardly turned portion of the arms, and having reduced forward ends secured to the rear ends of the arms, whereby the said door has a swinging movement in rear of a vertical plane with the burners, and is over-balanced by the weights and held closed, and the door when open, overbalances the weights and is held open.

1,104,225. ELECTRIC CONDUCTOR FOR TROLLEY-CARS. JAMES SCOTT, Cleveland, Ohio. Filed Apr. 10, 1914. Serial No. 830,889. (Cl. 191—35.)



1. An electrical conductor for trolley lines having a comparatively thin laterally spread body provided with downwardly extending guards along its side edges and a central web of approximately the same depth as said guards and constructed to form a run for a trolley wheel.

2. A current conductor for trolley lines adapted to carry all the current on the line in the sense of a supply cable and provided with a runway at its middle for a trolley and guards along its sides to shield said runway.

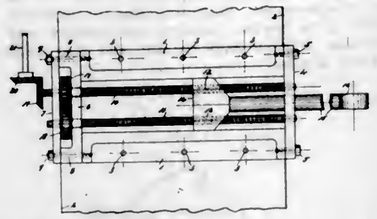
3. A conductor for an electric current in trolley car lines having a substantially plate-shaped body adapted to be supported in a horizontal position and provided with three several depending portions uniformly spaced apart, one of said portions being at the middle and one at each edge of said body.

4. A conductor for electric trolley lines adapted to convey all the current on the line and having a comparatively wide body provided with a downward projection at its middle adapted to make running contact for a trolley wheel and provided with depending guards at its sides, in combination with means to suspend said conductor in a horizontal position.

5. An electrical conductor for trolley lines consisting of a conducting member having a laterally spread body provided with a depending web at its center adapted to be contacted by a trolley wheel and having depending guards along its edges, in combination with carriers at intervals rigidly engaged with said conductor and means therewith to sustain the conductor in a horizontal position.

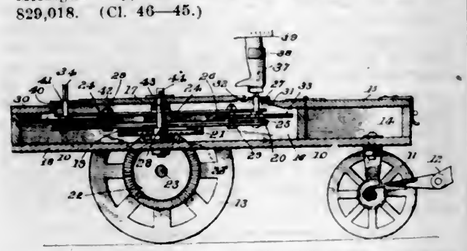
[Claim 6 not printed in the Gazette.]

1,104,226. BRAKE FOR CARS. PIOTR SHUMINSKI, Hamilton, Ontario, Canada, assignor of one-fourth to J. Louis Goldberg, Hamilton, Canada. Filed Apr. 4, 1913. Serial No. 758,820. (Cl. 188—58.)



In a device of the character described, the combination with a pair of spaced guide members, of a cross head slidably disposed and guided therebetween, a brake actuating rod rigidly secured to said cross head centrally thereof, a pair of reversely threaded rods having threaded engagement with said cross head and disposed upon opposite sides of said brake actuating rod, a spur gear wheel carried by each of said reversely threaded rods, said gear wheels meshing with each other, and means for imparting rotation to one of said rods.

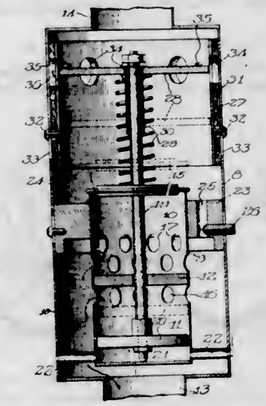
1,104,227. TRUNDLE WHIRLIGIG TOY. JOHN STEC, Michigan City, Ind. Filed Apr. 2, 1914. Serial No. 829,018. (Cl. 46—45.)



1. A device of the class described, comprising a wagon having revoluble ground wheels and a rear axle, a gear secured to said axle, a vertical stationary axle upon said wagon, a pinion revolubly-mounted upon said stationary axle and meshing with said gear and having outwardly-projecting spokes, rings rigidly secured to the ends of said spokes, upwardly-projecting shafts journaled in said rings, a circular rack fixed to said stationary axle, gears upon said shafts meshing with the teeth of said rack, doll figures rigidly secured to the tops of said shafts, and a central stationary platform secured to said stationary axle centrally of the path of travel of said shafts around said stationary axle upon a movement of said cart.

2. A device of the class described, comprising in combination with a cart having a chamber therein and a circular opening in the top of the cart, wheels upon said cart, an axle revoluble with said wheels and having the cart mounted thereon, a gear secured to said axle, a stationary axle mounted upon the bottom of said cart and vertically positioned centrally of the top opening of the cart, a pinion revolubly-mounted upon said stationary axle meshing with the gear on said wheel supporting axle, said pinion having outwardly projecting spokes, two rings in vertical alinement with each other and spaced apart and secured to the outer ends of said spokes and concentric with said stationary axle, vertical shafts journaled in said rings, a circular toothed rack secured to said stationary shaft, gears secured to said vertical shafts between said rings and in constant engagement with the teeth of said circular rack, doll figures removably mounted upon the upper ends of said vertical shafts and adapted for revolution therewith, a platform ring secured to said vertical shafts and positioned above the top of the cart, and a disk within said platform ring fixedly mounted upon said stationary shaft.

1,104,228. REGULATOR FOR PNEUMATIC SERVICE SYSTEMS. JOSEPH J. STOETZEL, Chicago, Ill., assignor to Pneumatic Tube Appliance Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 11, 1911. Serial No. 654,125. (Cl. 243—12.)



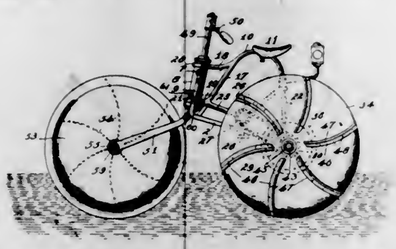
1. In a transmission system the combination of a transit tube, a pair of concentrically arranged casings, the outer of said casings being connected to said tube, means connected to said outer casing and adapted to cause a transmitting air current to flow through said tube and casings, a valve concentrically located with respect to said casings, and coacting with the inner of said casings, for controlling the volume of said air current through said casings, and a piston mounted in said inner casing and operatively connected to said valve, said piston being adapted to be actuated through variations in said air current for shifting said valves.

2. In a pneumatic transmission system the combination of a transit tube, a casing connected thereto, means connected to said casing and adapted to cause a transmitting air current to flow through said tube and casing, a partition located in said casing and subdividing it into two compartments, a valve adapted to be shifted for controlling communication between said compartments so as to vary the volume of said air current passing through said tube and casing, and a piston located in one of said compartments and operatively connected to said valve, said piston being adapted to be actuated by variations in said flow of air through said tube and casing, said partition having a passage leading therethrough for providing constant communication between said compartments.

3. In a pneumatic transmission system the combination of a transit tube, a casing connected thereto, means connected to said casing and adapted to cause a transmitting air current to flow through said tube and casing, a partition located in said casing and subdividing it into two compartments, a valve adapted to be shifted for controlling communication between said compartments so as to vary the volume of said air current passing through said tube and casing, a piston located in one of said compartments and operatively connected to said valve, said piston being adapted to be actuated by variations in said flow of air through said tube and casing, said partition having a passage leading therethrough for providing constant communication between said compartments, and means for adjusting the cross sectional area of said passage.

4. In a pneumatic transmission system, the combination of a cylinder having one end connected to the transit tube and having its other end connected with a source of power, a second cylinder located within the first, a partition subdividing said second cylinder into two compartments, the upper end of said cylinder being open and said cylinder having openings in its side walls connecting each of said compartments with the space around said inner cylinder, a piston mounted in the lower compartment of said cylinder, a valve controlling the open upper end of said cylinder and connected with said piston, the space in said inner cylinder below said piston being connected with the outer air, a second partition extending across the space between said cylinders and having a by-pass passage, and means above said valve and adapted through an increase in the volume of air entering said casing to close said valve.

1,104,229. WATER-CYCLE. MIKE SZEGEL, Newark, N. J. Filed Jan. 27, 1914. Serial No. 814,687. (Cl. 115—19.)



1. A water cycle embodying buoyant propellers provided with cudvilinear blades gradually increasing in width from the axis to the peripheries of the propellers.

2. A water cycle embodying buoyant propellers provided witr curvilinear blades gradually increasing in width from the axis to the peripheries of the propellers, and a buoyant steering wheel.

3. A water cycle embodying buoyant propellers provided with curvilinear blades gradually increasing in width from the axis to the perihperies of the propellers, and a non-rotatable buoyant steering wheel.

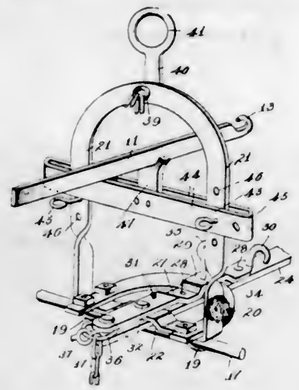
4. A water cycle embodying buoyant propellers provided with curvilinear blades gradually increasing in width from the axis to the peripheries of the propellers, a non-rotatable buoyant steering wheel, and means for limiting the arc of its rotation.

5. In a water cycle, a frame comprising side and front members, a steering head secured to the front members, an arched seat bar secured to the steering head, a rear axle, bearings therefor, branched members of the seat post secured to the bearings, buoyant bladed propellers carried by the shaft, and a non-rotatable buoyant steering wheel supported from the steering head.

1,104,230. WHEEL-PLOW. PAUL TURZIK, Endicott, N. Y., assignor of one-half to Steve T. Krna, Binghamton, N. Y. Filed Dec. 8, 1913. Serial No. 805,317. (Cl. 97—36.)

1. In a wheel-plow, the combination with the axle, of an inverted U-shaped frame provided with an integral strap connecting the lower ends of the sides of said frame, and having a central upward bend, a draft-bar between said bend and axle, a semi-circular track having its ends resting on said frame strap and secured to the axle, a transversely-disposed strap member having spaced walls between which said frame extends, means for securing said strap member to said frame at different adjustments, a plow beam, and a beam support projecting upward centrally between the walls of said strap member, and provided with a seat for said beam.

2. In a wheel-plow, the combination with the axle, of a frame of inverted U-shape formed with alined openings and having an integral strap connecting the lower ends of the sides of said frame, a draft-bar extending between said strap and the axle, a semi-circular track having its ends secured to said frame strap, eyebolts securing said track to the axle, a transversely-disposed strap member having spaced walls between which said frame extends, and having openings adapted to register with those of said frame, eye-bolts for securing the strap member to the frame at different adjustments, a central beam support projecting upward from said strap member, and recessed at its upper end to provide a seat for the plow beam, a rein-support projecting upward centrally from said frame, an eye-bolt securing said support, and chain connections between said eye-bolt and the eye-bolts of said strap member.



3. In a wheel-plow, the combination with the axle, of a frame of inverted U-shape, having its ends connected by a strap secured to the axle, and bent upward centrally of its length, a longitudinally-extending bar provided with a clevis at its forward end, and having its rear end extending between the axle and the bend in said strap, a strap member vertically-adjustable upon said frame, a support recessed at its uppper end and rigidly secured at its lower end between the parallel portions of said strap member, a beam resting on said support, and a chain connection between the front end of the beam and said longitudinal bar.

1,104,231. MINER'S AUGER. JOHN UNDERATION, Hocking, Iowa. Filed May 21, 1913. Serial No. 769,097. (Cl. 255—69.)

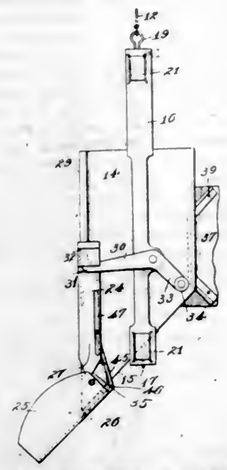


A device of the class described, comprising an auger, socket members formed at the head thereof, outwardly opening sockets in said socket members, blades mounted in said sockets, plates overlying said blades, and screws passing through said plates and blades and seated in said socket members.

1,104,232. AUTOMATIC-DUMPING CONVEYER. WILLIAM E. WALSH, Butte, Mont. Filed Sept. 17, 1913. Serial No. 790,239. (Cl. 214—12.)

1. A skip comprising a body portion, a slide door, a hinged extension apron, and said door adapted upon lowering to actuate said apron upon its hinge.

2. A skip comprising a container, a bail, a front slide door, and pivoted actuating arms adapted for elevating said door to an open position, an extension apron pivotally mounted beneath said door, extension feet upon said door adapted for engaging said apron upon a downward movement of the door and whereby said apron is moved upon its hinge to closed position.



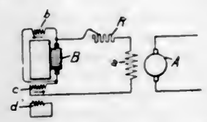
3. A skip comprising an open top receptacle having an exit in the front wall thereof, a door slidably mounted upon said front wall and adapted for partially closing said exit, actuating angular levers pivoted to the opposite sides of said receptacle and adapted upon actuation for elevating said door to its open position.

4. A skip comprising an open top receptacle having an exit in the front wall thereof, a door mounted upon said front wall and adapted for partially closing said exit, actuating angular levers pivoted to the opposite sides of said receptacle and adapted upon actuation for elevating said door to its open position, an extension apron pivoted to the bottom of said container, said apron adapted to be normally opened and engageable by said door for shifting to its closed position.

5. A skip comprising a container having an open top and a front exit, a slide door and a pivoted apron combinedly closing said exit, pivoted means upon said container engaging said door for sliding the same to open position and automatic means adapted to open said apron simultaneously with the opening of the door.

[Claim 6 not printed in the Gazette.]

1,104,233. DYNAMO-ELECTRIC MACHINE. WILHELM WEILER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 11, 1913. Serial No. 747,690. (Cl. 171—223.)



1. In combination, a generator provided with a separately excited field winding, an exciter supplying said field winding, means for causing the voltage of said exciter to decrease as the current thereby increases, and means for delaying the voltage reducing effect of said first mentioned means.

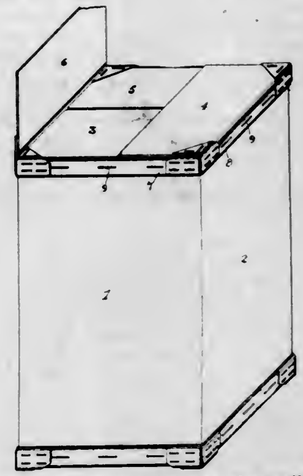
2. In combination, a generator provided with a separately excited field winding, an exciter supplying said field winding, means for causing the voltage of said exciter to decrease with increasing current, and further means for increasing the magnetic time lag of said exciter.

3. In combination, a generator provided with a separately excited field winding, an exciter supplying said field winding, said exciter having a field winding and a series field winding wound differentially with respect thereto, and further means for increasing the magnetic time lag of said exciter.

4. In combination, a generator provided with a separately excited field winding, and an exciter suppiying said field winding, said exciter having a field winding, a series field winding wound differentially with respect thereto, and a short circuited field winding.

5. In combination, a generator provided with a separately excited field winding, an exciter supplying said field winding, said exciter having a field winding and a series field winding wound differentially with respect thereto, and means for delaying the voltage reducing effect of said differential series field winding.

1,104,234. COLLAPSIBLE CARTON. JOSEPH W. WEISS, Baltimore, Md. Filed May 31, 1913. Serial No. 770,920. (Cl. 229—37.)



1. A collapsible carton comprising side walls and end flaps and corner pieces attached to said walls and flaps, each corner piece comprising two side walls secured to the meeting side walls of the carton and two top flaps secured respectively to the adjacent flaps of the carton, said top flaps adapted to overlap each other, the inner flap forming a strengthening brace resisting compression.

2. A collapsible carton comprising side walls and end flaps, reinforcing folds at the junction of said walls and flaps and corner pieces having side walls attached to the meeting folds, and top flaps secured to the adjacent flaps of the carton, said flaps of the corner piece being superimposed when the carton is assembled, the inner of the superimposed flaps contacting the junction of the side wall and flap of the carton and serving as a bracing member resisting compression.

3. A collapsible carton comprising side walls and end flaps, reinforcing ridges adjacent to the junction of the walls and flaps and reinforcing corner pieces for the carton, said corner pieces comprising side walls attached to the ridges and top flaps secured to the adjacent flaps of the carton, said top flaps of the corner pieces being disposed in superimposed relation when the carton is assembled, one of the flaps of the carton being between said flaps of the corner piece, the inner of the latter flaps contacting the edge of the carton at the interior thereof, and serving as a bracing member resisting compression.

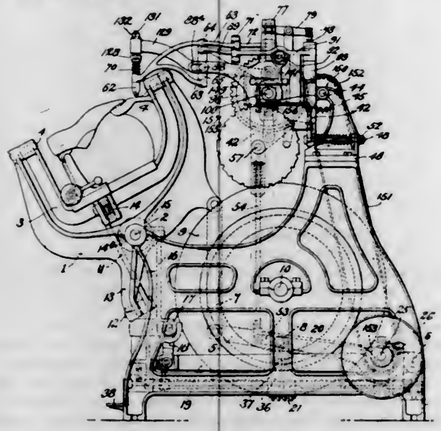
4. A collapsible carton comprising side walls and end flaps, reinforcing ridges adjacent to the junction of the walls and flaps and reinforcing corner pieces for the carton, said corner pieces comprising side walls attached to

the ridges and top flaps secured to the adjacent flaps of the carton, said top flaps of the corner pieces being disposed in superimposed relation when the carton is assembled, one of the flaps of the carton being between said flaps of the corner piece, the inner of the latter flaps contacting the edge of the carton at the interior thereof, and serving as a bracing member resisting compression, said corner pieces being weakened along the line corresponding to the edges of the carton so as to readily bend thereon.

5. A collapsible carton comprising side walls and end flaps, reinforcing ridges adjacent to the junction of the walls and flaps and reinforcing corner pieces for the carton, said corner pieces comprising side walls attached to the ridges and top flaps secured to the adjacent flaps of the carton, the lines of bending between the side walls and top flaps of the corner piece being above the vertical edges of the walls, said top flaps of the corner pieces being disposed in superimposed relation when the carton is assembled, one of the flaps of the carton being between said flaps of the corner piece, the inner of the latter flaps contacting the edge of the carton at the interior thereof, and serving as a bracing member resisting compression, said corner pieces having perfortions along the lines of bending.

[Claims 6 to 8 not printed in the Gazette.]

1,104,235. SOLE-LEVELING MACHINE. ERASTUS E. WINKLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 10, 1908. Serial No. 426,253. (Cl. 12—33.)



1. A sole leveling machine, having, in combination, a shoe supporting jack, a sole leveling device relatively movable to transfer the point of operation of the leveling device over the sole of a shoe supported on the jack, means for holding the leveling device oblique to the direction of its travel along the shoe, and means for actuating said device to rub the sole obliquely outward first on one margin and then on the other, substantially as described.

2. A sole leveling machine, having, in combination, a shoe supporting jack and a rub stick relatively movable to transfer the point of operation of the rub stick over the sole of a shoe supported on the jack, and means for holding the rub stick diagonally across the margin of the sole and for vibrating it transversely of the sole, substantially as described.

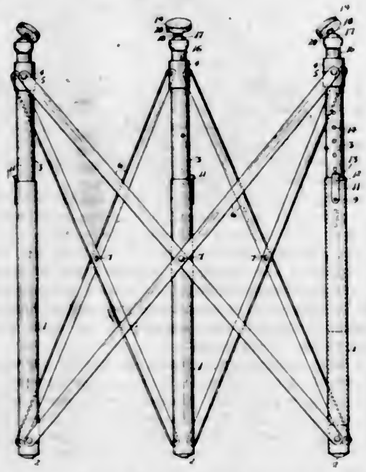
3. A sole leveling machine, having, in combination, a shoe supporting jack and a rub stick relatively movable to transfer the point of operation of the rub stick over the sole of a shoe supported on the jack, and means for varying the transverse angular relation of the rub stick and for vibrating it transversely of the sole, substantially as described.

4. A sole leveling machine, having, in combination, a shoe supporting jack and a leveling device relatively movable to transfer the point of operation of the leveling device over the sole and to vary the lateral inclination of the leveling device, and means for varying the transverse angular relation of the leveling device during the leveling operation and for actuating it to apply a rubbing pressure to the sole, substantially as described.

5. A sole leveling machine, having, in combination, a shoe supporting jack, a leveling device, means for holding the device oblique to first one edge of the sole and then the other, and connected mechanism acting automatically to impart relative movement to the leveling device and jack to apply an outward rubbing pressure obliquely to each margin of the sole of a shoe supported on the jack, substantially as described.

[Claims 6 to 33 not printed in the Gazette.]

1,104,236. TIMPANO-SUPPORT. DEXTER M. WRIGHT, San Francisco, Cal. Filed June 10, 1912. Serial No. 702,927. (Cl. 248—41.)



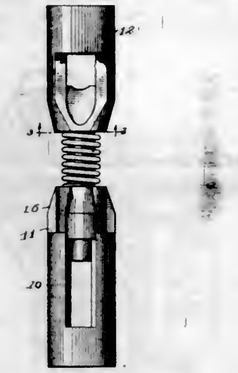
1. A timpano support comprising standards, each consisting of upper and lower relatively slidable members, shoes for directly supporting a timpano, universal-joint connections between said shoes and the upper ends of the upper members, and links pivoted to one another in pairs and pivotally connected at their ends respectively to the lower ends of said lower members and the upper ends of the upper members.

2. The combination of three pairs of upper and lower relatively slidable members, links pivotally connected in pairs to one another and at their ends respectively to the upper ends of the upper members and the lower ends of the lower members, shoes for directly supporting a timpano, and flexible connections between said shoes and the upper ends of the upper members.

3. The combination of three pairs of upper and lower relatively slidable members, links pivotally connected in pairs to one another and at their ends respectively to the upper ends of the upper members and the lower ends of the lower members, shoes for directly supporting a timpano, and ball and socket connections between said shoes and the upper ends of the upper members.

1,104,237. VALVE-EXTRACTOR FOR WELLS. ROBERT L. WYCKOFF and JOHN D. NANGLE, Independence, Kans. Filed Feb. 20, 1914. Serial No. 819,989. (Cl. 57—9.)

1. A device of the class described comprising a socket member having a threaded extension, and an angular groove partially surrounding said extension, a nut upon said extension, a helical spring surrounding said extension and secured to the upper face of said nut, the upper end of said spring seated within said circular groove and the end of said spring adapted to engage the end of said groove.



2. A device of the class described comprising a socket member having a partially threaded extension, a nut upon said extension, said socket member having a curved socket in the bottom thereof terminating in an abutment, a spring having one end secured to said nut and its other end normally mounted with said curved socket with the end threads of the extension covered by said nut, the upper end of said spring adapted for ratcheting over said abutment during a turning of the socket in one direction and for resiliently preventing rotation in the opposite direction.

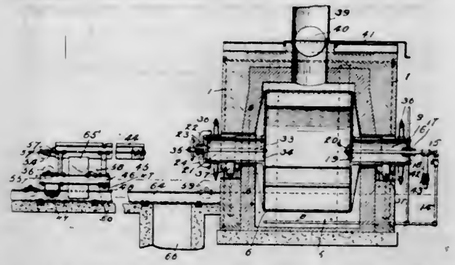
1,104,238. PIVOT. JOHN T. ALLMAND, Detroit, Mich., assignor to Fisher Closed Body Co., Detroit, Mich., a Corporation of Michigan. Filed Dec. 15, 1913. Serial No. 806,711. (Cl. 21—148.)



1. A pivot, having in combination, a plate or supporting member, a stud protruding from the face thereof, a rest protruding from the face of the plate or supporting member below the stud, an attaching plate for securing to a swinging member, a web connected with the attaching plate and provided at its upper end with a slot through which the stud protrudes and at its lower end with a heel that can be dropped over the rest, and means for tightening the web against the first-mentioned plate or supporting member.

2. A pivot, having in combination, a plate or supporting member, a stud protruding from the face of the plate or supporting member, a rest protruding from the face of the plate or supporting member below the stud, an attaching plate for securing to a swinging member, a web connected with the attaching member and provided at its upper end with a slot through which the stud protrudes and at its lower end with a heel that can be dropped over the rest, and a nut running on the threaded end of the stud for tightening the web against the first-mentioned plate or supporting member.

1,104,239. MEANS FOR TREATING ORES. FRANK P. ARNOLD, Carbondale, Pa., and GEORGE F. WEDEMAN, Washington, D. C. Filed May 23, 1914. Serial No. 840,535. (Cl. 75—138.)



1. Apparatus for treating ores comprising a receptacle revolubly supported on hollow trunnions, means for approximately closing the inner ends of said trunnions, and one of said trunnions having a pipe extending therethrough for supplying a highly heated gas to the receptacle, and a connection with said pipe for drawing off gases freighted with values from the receptacle.

2. Apparatus for treating ores comprising a receptacle revolubly supported on hollow trunnions, one of said trunnions being provided with a detachable cover, a yoke supporting said cover, and a pipe extending through the cover and provided with a disk at its inner end.

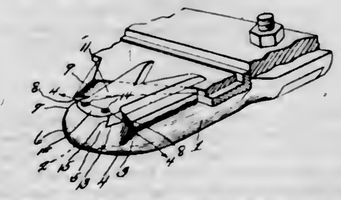
3. Apparatus for treating ores comprising a receptacle revolubly supported on trunnions, means for supplying and removing ore to and from said receptacle through one trunnion, and means for supplying neutralizing agents to the ores.

4. Apparatus for treating ores, comprising a receptacle revolubly supported on trunnions, one of said trunnions being provided with a detachable cover, in combination with means for supplying and removing ore to and from said receptacle through said trunnion.

5. Apparatus for treating ores comprising a receptacle revolubly supported on trunnions, one of said trunnions having a detachable cover on its outer end; in combination with a longitudinally movable hopper, and a carriage for projecting said hopper into and withdrawing the hopper from the trunnion.

[Claims 6 and 7 not printed in the Gazette.]

1,104,240. BINDER-SICKLE GUARD OR TOOTH. DAVID F. BARNES, Coleridge, Nebr. Filed Jan. 17, 1914. Serial No. 812,614. (Cl. 56—43.)



A sickle bar tooth guard comprising a body portion having a recess for the sickle bar to move therein, the body

portion of the guard having a rounded end and upon its upper surface adjacent said end a recess, a cover plate having one of its ends secured in the recess adjacent the rounded end, the end wall of the recess of the rounded end overhanging the end of the cover, the opposite sides of the rounded end being drawn inwardly to form shoulders with which a stalk contacts while being severed by the sickle bar, the guard adjacent the rounded end tapering downwardly and rearwardly.

1,104,241. RAIL-JOINT. ARTHUR M. BAUER, Akron, Ohio. Filed June 24, 1913. Serial No. 775,514. (Cl. 239—10.)



1. A rail joint chair comprising a pair of plates, upstanding portions formed integral with said plates, lugs formed on the upstanding portions, a bifurcated underlying portion formed on one of said plates, a tongue formed on the other of said plates and adapted to extend into the bifurcation in the first mentioned underlying portion, an ear formed on the tongue near the point where it joins the plate, a second ear formed integral with the bifurcated underlying portion immediately adjacent the point where it joins the plate, said second ear bridging the bifurcation and forming an aperture, each of said ears having an aperture therein adapted to aline with the apertured ear, and a bolt adapted to extend through the apertures in the ears to hold the whole together when the device is in use.

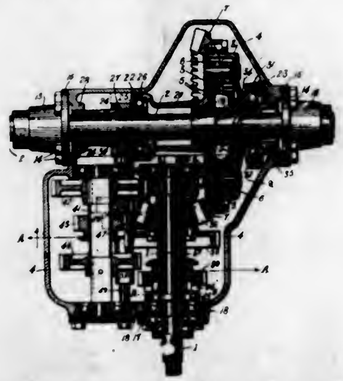
2. In a joint chair a pair of plates, upstanding members formed on the plates, said upstanding members being adapted to lie immediately adjacent the web of a railroad rail and abut the head of said rail, thereby bracing the same, an underlying portion formed on one of said plates, said underlying portion being provided with a centrally located tapered bifurcation extending transversely thereof, a second plate, a tongue formed integral with the second mentioned plate and adapted to extend into the bifurcation in the underlying portion of the first mentioned plate, an ear formed on the tongue near the point where the tongue joins the plate, a second ear formed integral with the underlying portion and bridging the bifurcation, each of said ears having an aperture therein, said apertures being adapted to aline when the device is in use, and a bolt adapted to extend through the apertures to firmly clamp the whole in position on the end of railroad rails.

1,104,242. AIRSHIP. JOSEPH BONNOT, ALFRED BELOT, JEAN VASSALLO, and ROSE EMERY, Marseille, France. Filed Sept. 10, 1913. Serial No. 789,045. (Cl. 244—12.)



An aeroplane having a semi-conical shaped body portion, the cross sectional area diminishing from the front of the body to the rear thereof, the upper surface being arched and the lower surface being horizontal, said upper surface comprising a series of longitudinally spaced laterally arched sections of a curvature corresponding to the curvature of the cone, said horizontal surface comprising longitudinally spaced sections positioned beneath said first mentioned sections, and a pair of flexible ailerons adjacent the rear end of the body portions.

1,104,243. GEARING. ALEXANDER T. BROWN, Syracuse, N. Y., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 30, 1908. Serial No. 430,098. (Cl. 74—58.)



1. In combination in a transmission and speed-changing gearing, a casing comprising two sections each being provided with a compartment, the casing also being provided with a passageway connecting compartments thereof, a driving member in one compartment, a driven member in another compartment, and transmission and speed-changing means for connecting the driving and driven members and rotating the driven member at different speeds, the same including a gear extending through the passageway, substantially as and for the purpose described.

2. In combination in a gearing, a casing provided with compartments, and a passageway connecting compartments thereof, a driving member in one compartment, a driven member in another compartment, and power-transmitting means connecting the driving and driven members, the same including an equalizing device extending through the passageway, substantially as and for the purpose specified.

3. In combination in a gearing, a casing provided with compartments, and a passageway connecting compartments thereof, a power-shaft in one compartment, axle-sections in another compartment, an equalizing device including a body rotatable about the axis of the axle-sections and extending through the passageway, and gears connecting said body to the axle-sections, and power-transmitting means connecting the power-shaft and said body, substantially as and for the purpose set forth.

4. In combination in a gearing, a casing provided with compartments, a partition interposed between compartments of the casing and united to opposite sides of the casing, and a passageway between the edge of the partition and the opposing surface of the casing, said passageway connecting compartments of the casing, a driving member in one compartment, a driven member in another compartment, and power-transmission means connecting the driving and driven members and including a gear extending through the passageway, substantially as and for the purpose described.

5. In combination in a transmission and speed-changing gearing, a casing provided with compartments, a partition between compartments of the casing, and a passageway connecting compartments of the casing, a driving member in one compartment, a driven member in another compartment, and transmission and speed-changing means for connecting the driving and driven members, the same including a countershaft having one end supported by the partition, and a gear extending through the passageway, substantially as and for the purpose specified.

[Claims 6 to 70 not printed in the Gazette.]

1,104,244. BUTTON-HOOK ATTACHMENT FOR PENCIL-FERRULES. ROBERT BROWN BRUNSWICK, Philadelphia, Pa. Filed Sept. 17, 1913. Serial No. 790,203. (Cl. 24—11.)

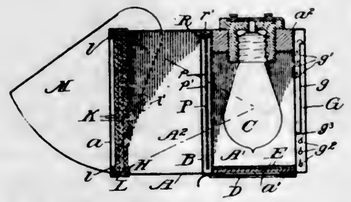


1. In combination, an extension forming an integral part of a pencil ferrule, said extension being bent upon itself to form a loop acting as a button hook, one side of the loop being yieldable and detached from the ferrule and having its extremity formed in an inturned hook, the outer hump of which being substantially flush with the periphery of the ferrule.

2. A pencil retaining device comprising an extension forming an integral part of the pencil ferrule, extending upwardly beyond the ferrule and alined therewith, and having a return bend forming a free yieldable portion extending toward the ferrule, the extremity of said portion terminating in an inturned hook, the hump of which being in substantial alinement with the periphery of the ferrule, said hook and the hump constituting means to cause a partial fold in the pocket of wearing apparel partially overlying the ferrule to assist in retaining the pencil in the pocket.

3. A pencil retaining device comprising an extension forming an integral part of the pencil ferrule, said extension extending beyond the ferrule alined therewith and having a portion bent back toward the ferrule, said portion terminating at its free end in an inturned hook, the outer hump of which being in substantial alinement with the periphery of the ferrule.

1,104,245. PHOTOGRAPHIC-DARK-ROOM LAMP. DEMETRIUS FREDERICK CHARLTON, Marquette, Mich. Filed Feb. 10, 1914. Serial No. 817,741. (Cl. 240—20.)



1. In a lamp of the character described, the combination with a casing, of a lamp therein, said casing having a light emitting opening, a two wing shutter arranged between the lamp and the opening for controlling the degree of light emitted from said opening, said wings overlapping one another and pivoted at points adjacent each other, each wing having an arcuate rack concentric with its pivot, and a shaft provided with oppositely inclined worms engaging the respective racks on the wings for simultaneously swinging said wings in opposite directions for the purpose specified.

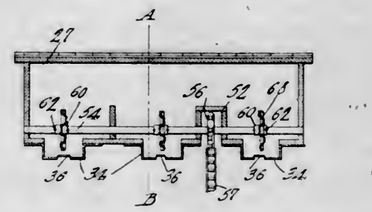
2. In a lamp of the character described, the combination with a casing, of a shutter case provided with a shutter dividing the casing into two compartments, a lamp in the inner compartment, the outer compartment having a light emitting opening opposite the shutter case, and the inner compartment having a direct light emitting opening through a wall of the casing.

3. In a lamp of the character described, the combination with a casing, of a shutter case dividing the lamp casing into two compartments, a lamp in the inner compartment, the outer compartment having a light emitting opening in its end and the inner compartment having a light emitting opening in its bottom, an adjustable closure for said bottom opening, and means for holding colored glasses over both openings.

4. In a lamp of the character described, the combination with a casing, of a lamp therein, said casing having a light emitting opening, a stop arranged inside said opening, a cover frame removably secured over said opening in fixed relation to said stop, and resilient means on said frame for engaging and holding various thicknesses of colored glasses over said opening and against said stop without changing said fixed relation of the cover frame to the stop.

5. In a lamp of the character described, the combination with a casing, of a lamp therein, and a ventilating chamber in one wall of said casing, there being inlet and outlet openings in walls of said chamber which are disposed at an angle to each other, all of the inlet openings being above the outlet openings, and an angular partition having a portion arranged parallel to the wall having the inlet openings, and another portion extending from said first portion to said wall with the inlet openings, said second portion of the partition being disposed above the outlet openings.

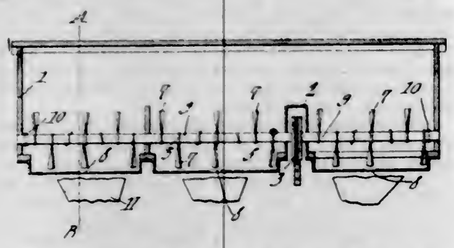
1,104,246. AGITATING-DISK FOR PLANTERS. EUGENE MACON COLE, Charlotte, N. C. Original application filed Dec. 7, 1912, Serial No. 735,519. Divided and this application filed Nov. 3, 1913. Serial No. 799,019. (Cl. 111—34.)



1. In a machine of the class described, the combination with a receptacle having an outlet, and a shaft mounted for rotation within the receptacle, of agitating means including a disk having its marginal portion offset beyond opposite portions of the disk alternately to form pockets at each side of the disk, each pocket having its end walls converging inwardly, a hub having diametrically opposed notches in the ends thereof, and a coupling pin extending through the shaft and seated in the notches to hold the hub against rotation upon the shaft and against longitudinal movement relative thereto.

2. The combination with a receptacle having an outlet in the bottom thereof, of agitating means mounted for rotation above the outlet opening and including a shaft, a disk secured to the shaft and having its marginal portion offset laterally in opposite directions successively to form an annular series of pockets at each side of the disk, the end walls of each pocket converging inwardly, each of said pockets being formed with a notch in its outer end and between said end walls.

1,104,247. AGITATOR AND FEEDER FOR FERTILIZER-DISTRIBUTERS. EUGENE MACON COLE, Charlotte, N. C. Filed Nov. 3, 1913. Serial No. 799,020. (Cl. 111—34.)

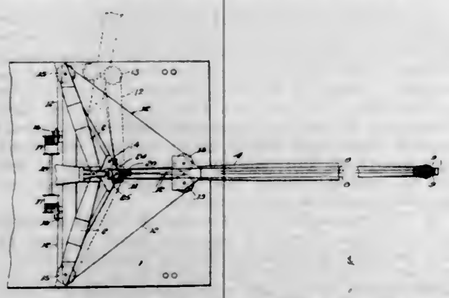


1. A combined agitator and feeder including a shaft, and a unit carried by the shaft and including a pair of contacting oppositely extending, oppositely pitched sheet metal blades revoluble with the shaft for deflecting material in opposite directions successively, blades revoluble with the shaft at opposite sides of the said central blades for directing material toward the center of the unit, the blades of the central pair being in contact, and spacing means on the shaft and between the remaining blades.

2. A combined agitator and feeder including a shaft, and a plurality of units on the shaft, each unit including a centrally disposed pair of oppositely extending oppositely pitched blades contacting with each other at their inner ends and formed of sheet metal, and additional blades at each side of said central blades and disposed at angles to each other, those blades at the sides of the central blades being pitched to direct material toward the central blades, and spacing sleeves interposed between said side blades, all of the blades being held against rotation relative to the shaft.

3. A combined agitator and feeder including an angular shaft, and a plurality of units arranged on the shaft, each unit including a central pair of contacting oppositely disposed oppositely pitched segmental blades of sheet metal for directing material in opposite directions successively during the rotation of the shaft and blades, and a set of blades on the shaft at each side of the central blades, said sets of blades operating to direct material toward the central blades during the rotation of the shaft, all of the blades having angular eyes for the reception of the shaft, spacing sleeves interposed between the blades of the sets, additional sleeves mounted on the shaft beyond the outer ends of the outer units, and means extending through said last named sleeves and the shaft for holding the blades and spacing sleeves clamped together.

1,104,248. DREDGE. JOHN F. CRAIG, Longbeach, Cal. Filed Dec. 26, 1913. Serial No. 808,652. (Cl. 212—66.)

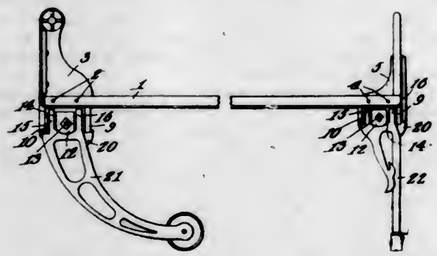


1. In a dredge, a pivotally mounted boom, cables connected with said boom to swing the same in opposite directions, winding drums connected with the said cables, said winding drums being connected to operate simultaneously to pay out one cable and draw in the other cable, and means for engaging with the paying out run of either cable, to take up slack therein.

2. In a dredge, a pivotally mounted boom, sheaves thereon, a properly located fixed support, cables connected to said fixed support and running over the respective sheaves on said boom, winding drums connected to the other ends of the respective cables, means for operating said winding drums simultaneously to pay out either cable and draw in the other cable to swing the boom in either direction, and means for engaging the paying out run of either cable to take up slack therein.

3. In a dredge, a pivotally mounted boom, sheaves thereon, a properly located fixed support, cables connected to said fixed support and running over the respective sheaves on said boom, winding drums connected to the other ends of the respective cables, means for operating said winding drums simultaneously to pay out either cable and draw in the other cable to swing the boom in either direction, and means for engaging the paying out run or bight of either cable to take up slack therein, and comprising a sheave mounted on said fixed support at a properly located point, and adapted to receive the said run or bight of the cable at a certain portion of its movement.

1,104,249. SWINGING LEG FOR BEDS. FRANK J. CROUCH and SAMUEL B. COOKE, Portland, Oreg. Filed Mar. 6, 1914. Serial No. 822,965. (Cl. 5—37.)



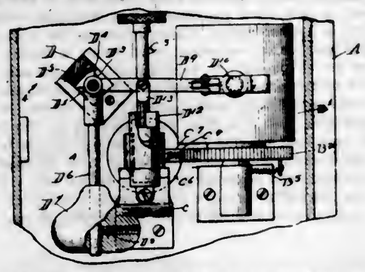
1. A bed, including a supporting member, a leg, a pin connected to the leg, a clamp carried by the supporting member for engaging the pin and whereby the pin forms a hinging element for the leg, a locking device having two members, one carried by the supporting member and the other carried by the leg for locking the leg at right angles to the supporting member and whereby when the supporting member is moved in a plane at right angles to such locked position permits the automatic release of the leg so that the leg will swing in a plane in parallel to the supporting member.

2. A bed, including a supporting member, a leg having two spaced lugs, one of said lugs being provided with an elongated slot and the other with a tapered slot, a pin projecting through said slot, a clamp carried by the supporting member for engaging the pin between the lugs to cause the pin to form a hinging element, a locking device carried by the supporting member and the leg for locking the leg at right angles to the supporting member, whereby when the supporting member is moved in a plane at right angles to such locked position, the leg is released and swings to a plane parallel to the supporting member.

1,104,250. RECORDER. CHARLES W. DAKE and CRAWFORD P. MCGINNIS, Chicago, Ill., assignors to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 25, 1913. Serial No. 763,497. (Cl. 234—1.)

1. In a recorder a record blank and means for recording thereon changes in velocity and means responsive to said changes in velocity for actuating the record blank.

2. In a recorder a record blank, means for recording thereon the occurrence of changes in velocity and their intensity and means responsive to said changes in velocity for actuating the record blank.



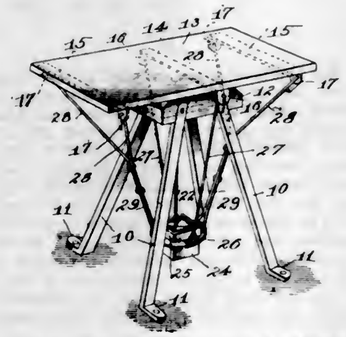
3. In a recorder a record blank and means for recording thereon changes in velocity and means responsive to said changes in velocity for actuating the record blank, said means operative in unison.

4. In a recorder a record blank, means for recording thereon the occurrence of changes in velocity and their intensity and means responsive to said changes in velocity for actuating the record blank, said means operative in unison.

5. In a recorder a pendulum free to swing, means for yieldingly resisting its oscillation, means for recording the oscillations of the pendulum, a record blank upon which the record is made and means for actuating said blank, said means comprising a freely swinging pendulum.

[Claims 6 to 18 not printed in the Gazette.]

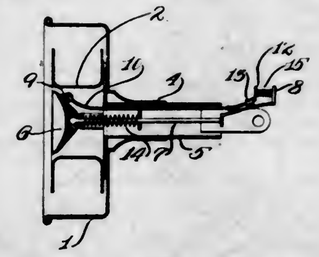
1,104,251. SHIP'S TABLE. THOMAS DEDIO, Dnipro, Alberta, Canada. Filed Mar. 16, 1914. Serial No. 825,027. (Cl. 114—195.)



1. A self-leveling table, comprising a table-top, transverse plates secured to the under side of the table-top and provided with depending ears at their ends, supporting legs secured at their upper ends to a head-block, an eye-bolt depending centrally from said top, a second eye-bolt extending centrally through the head block and connecting with the eye-bolt of the table, an eye-bolt depending centrally from the under side of said head block, a rod loosely connected to said last-named eye-bolt, a weight suspended upon the lower end of said rod, and link connections between said weight and said depending ears.

2. A self-leveling table, comprising a table-top, transverse plates having depending perforated ears at their ends secured to the under side of the table-top, table-supporting legs having their lower ends adapted to be secured to a floor, a head-block to which the upper ends of the legs are secured, eye-bolt connections between said head-block and the table-top, a rod loosely-suspended centrally from said head block, a weight secured to the lower end of said rod, a collar surrounding said weight and formed with an annular flange, and diverging links connected at their lower ends to said flange and hooked into the perforations of said ears at their upper ends.

1,104,252. VACUUM-CUP-RELEASING DEVICE FOR LAMPS. WILLIAM P. DUNHAM, Los Angeles, Cal. Filed Mar. 25, 1914. Serial No. 827,024. (Cl. 248—89.)



1. The herein described portable stand comprising a base, a column, a suction valve mounted so as to be reciprocated in the column, and a controlling device adapted to lift an edge of the suction valve to admit air thereunder.

2. The herein described portable stand comprising a base, a hollow column, a stem passing through the column, and having a projecting hand piece, a vacuum cup mounted at the end of the stem, the column and base supported by the stem, in combination with a second hand piece movable with relation to the first and connected to a portion of the vacuum cup, whereby the vacuum cup may be lifted at one point to admit air thereunder.

3. The herein described portable stand comprising a base, a hollow column, a stem passing through the column, and having a projecting hand piece, a vacuum cup mounted at the end of the stem, the column and base supported by the stem, in combination with a second hand piece movable with relation to the first and connected to a portion of the vacuum cup, whereby the vacuum cup may be lifted at one point to admit air thereunder, said second hand piece reciprocable with the first hand piece.

4. The herein described portable stand comprising a base, a hollow column, a stem passing through the column, and having a projecting hand piece, a vacuum cup mounted at the end of the stem, the column and base supported by the stem, in combination with a second hand piece movable with relation to the first and connected to a portion of the vacuum cup, whereby the vacuum cup may be lifted at one point to admit air thereunder, said second hand piece reciprocable with the first hand piece, a spring normally holding the two hand pieces together.

5. The herein described portable stand comprising a base, a hollow column, a stem passing through the column, and having a projecting hand piece, a vacuum cup mounted at the end of the stem, the column and base supported by the stem, in combination with a second hand piece movable with relation to the first and connected to a portion of the vacuum cup, whereby the vacuum cup may be lifted at one point to admit air thereunder, said second hand piece reciprocable with the first hand piece, a spring normally holding the two hand pieces together, a flexible connection between the second hand piece and the vacuum cup.

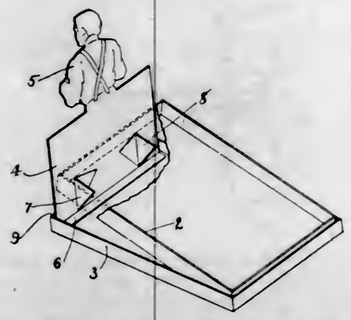
[Claim 6 not printed in the Gazette.]

1,104,253. DISPLAY-BOX. HENRY W. DUNPHEE, Leominster, Mass. Filed Jan. 6, 1913. Serial No. 740,287. (Cl. 211—28.)

1. A display box including in combination a box body, a cover, an advertising display member hinged within said cover and near one edge thereof, and a supporting member for one end of said box body hinged to said display member on an axis normal to the axis of the hinge joining said display member and box cover.

2. A display box including in combination a box body, a cover, an advertising display member hinged within said cover and near one edge thereof, and a supporting member for one end of said box body, formed integral with

said display member and foldable on an axis normal to the axis of the hinge joining said display member and box cover, into and out of conformity with said display member.

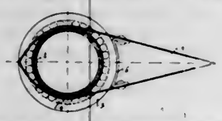


3. A display box including in combination a box body, a cover, an advertising display member hinged within said cover, near one edge thereof, said display member having a width substantially the same as the length of the edge of the box cover near which it is hinged, and a supporting member for one end of said box body hinged to said display member on an axis normal to the axis of the hinge joining said display member and box cover.

4. A display box including in combination a box body, a cover, an advertising display member hinged within said cover and near one edge thereof, and a supporting member for one end of said box body hinged to said display member on an axis normal to the axis of the hinge joining said display member and box cover, said display member extending upwardly beyond said box body when that body is in display position, supported on said display member supporting means.

5. A display box including in combination a box body, a cover, an advertising display member hinged within said cover, near one edge thereof, said display member having a width substantially the same as the length of the edge of the box cover near which it is hinged, and a supporting member for one end of said box body formed integral with said display member and foldable on an axis normal to the axis of the hinge joining said display member and box cover, into and out of conformity with said display member, said display member extending upwardly beyond said box body when that body is in display position, supported on said display member supporting means.

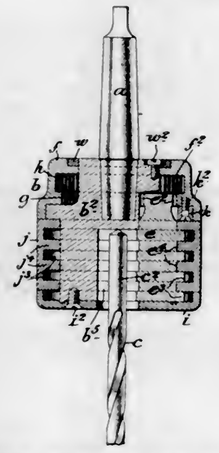
1,104,254. STRUT-COVER OF STREAM-LINE SURFACE. GUSTAV R. EDDELBUTTEL-REIMERS, Geneva, Wash. Original application filed June 28, 1912, Serial No. 706,481. Divided and this application filed Dec. 8, 1913. Serial No. 805,417. (Cl. 244—31.)



A revoluble strut-cover of streamline surface, said strut-cover to be connected to its strut in such a way as to allow said cover to swing freely around the strut, substantially as described and for the purpose specified.

1,104,255. DRILL-CHUCK. GEORGE W. EMRICK, Brooklyn, N. Y., assignor, by mesne assignments, to Automatic Drill Chuck Corporation, Detroit, Mich., a Corporation of Michigan. Filed May 24, 1912, Serial No. 699,484. Renewed Dec. 24, 1913. Serial No. 808,610. (Cl. 29—140.)

1. A drill chuck comprising a head portion in the central bottom part of which is an axial bore around which are mounted a plurality of detachable and rotary tumblers having spiral cam ribs on one side thereof, and which do not extend entirely around said tumblers, a rotary cap mounted on said head and geared in connection with said tumblers, a helical spring placed between the rotary cap and said head and connected with each, a rotary shell adapted to be passed on over the bottom of said head and said tumblers and provided with internal annular ribs which correspond with and operate in the spaces between said cam ribs, and a bottom plate secured to the bottom of said head and holding said shell and tumblers in position, the bearing surfaces of the cam ribs in said shell being divided into separate parts, of which the alternate parts are formed on an arc of the same circle, while the other parts are formed on the arcs of circles of less diameter.



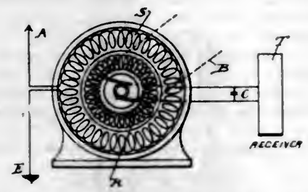
2. A drill chuck comprising a head portion in the central bottom part of which is an axial bore around which are mounted a plurality of detachable and rotary tumblers having spiral cam ribs on one side thereof, and which do not extend entirely around said tumblers, a rotary cap mounted on said head and geared in connection with said tumblers, a helical spring placed between the rotary cap and said head and connected with each, a rotary shell adapted to be passed on over the bottom of said head and said tumblers, and provided with internal annular ribs which correspond with and operate in the spaces between said cam ribs, and a bottom plate secured to the bottom of said head and holding said shell and tumblers in position, said cap and said shell being independently rotatable.

3. In a drill chuck of the class described, a head portion in the central bottom part of which is an axial bore around which are mounted a plurality of detachable and rotatable cylindrical tumblers having spiral cam ribs on one side thereof and which do not extend entirely around said tumblers, a rotary shell adapted to be passed on over the bottom of said head and said tumblers and provided with internal ribs which correspond with and operate in the spaces between said cam ribs and bear on the body of said tumblers, and the bearing surfaces of which are divided into separate parts of which the alternate parts are formed on an arc of the same circle while the other parts are formed on the arcs of circles of less diameter.

1,104,256. APPARATUS FOR AND METHOD OF RECEIVING ELECTRIC WAVES. RUDOLF GOLDSCHMIDT, Darmstadt, Germany. Filed Mar. 29, 1911. Serial No. 617,735. (Cl. 250—8.)

1. In wireless signaling, means for intercepting the energy of high frequency electromagnetic waves radiated through the atmosphere, a receiving instrument adapted

to be operated by low frequency alternating current having a constant amplitude, and means for transforming the intercepted high frequency current into such low frequency current of constant amplitude.

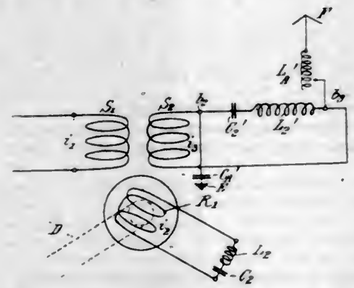


2. Apparatus of the character described, comprising an asynchronous transformer adapted to reduce the frequency of intercepted electric waves, and a receiver to which the waves of reduced frequency are conducted.

3. Apparatus of the character described comprising an antenna adapted to intercept electric waves of high frequency, an asynchronous transformer, means for conducting said waves from the antenna to said transformer, and means for receiving the transformed waves from the transformer to render them perceptive.

4. In wireless signaling, the method of receiving messages, which consists in intercepting the energy of high frequency electromagnetic waves radiated through the atmosphere, and transforming said intercepted current into low frequency alternating current, whereby the intercepted high frequency current is translated into a current that is readily perceptible.

1,104,257. HIGH-FREQUENCY GENERATOR. RUDOLF GOLDSCHMIDT, Darmstadt, Germany. Filed May 9, 1911. Serial No. 625,988. (Cl. 172—28.)



1. A high frequency generator comprising rotor and stator parts, each provided with single phase windings, a condenser, and connections between the condenser and the windings of the rotor adapted to establish a resonant rotor circuit.

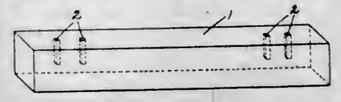
2. A high frequency generator comprising a stator having single phase windings adapted to receive alternating current, a rotor having single phase windings, a condenser, and connections between the condenser and the windings of the rotor constituting a resonant circuit for nullifying one of the frequencies generated in the rotor circuit.

3. A high frequency generator comprising a plurality of stators, each being provided with single phase windings, a rotor movable in the fields of said stator windings and also provided with single phase windings, and tuning agencies connected to one set of said single phase windings.

4. A high frequency transformer comprising a first stator having single phase windings and adapted to receive an exciting current, a second stator having single phase windings, a rotor arranged opposite both of said stators and having single phase windings, a condenser, and connections between the condenser and the windings of the second stator and adapted to establish a resonant second stator circuit.

5. A high frequency transformer comprising a first stator having single phase windings and adapted to receive an exciting current, a second stator having single phase windings, a rotor arranged opposite both of said stators and having single phase windings, a first condenser, connections between said first condenser and the windings of the rotor and adapted to establish a resonant rotor circuit, a second condenser, and connections between said second condenser and the windings of the second stator and adapted to establish a resonant second stator circuit.

1,104,258. COMPOSITION RAILWAY-TIE. ALFREDO GIULIANI, New York, N. Y., assignor of one-fourth to James J. Walker and one-fourth to Michael A. Scudi, New York, N. Y. Filed May 21, 1913. Serial No. 768,935. (Cl. 106—32.)



1. A composition railway tie, comprising macerated paper ¼ths, cement ¼th, sand ¼th and tar ¼th.

2. A composition for use in making artificial lumber, comprising macerated paper ¼ths, cement ¼th, sand ¼th and tar ¼th, substantially.

1,104,259. CLASP. JACOB L. GWIATZ, Philadelphia, Pa. Filed Feb. 16, 1914. Serial No. 818,879. (Cl. 24—120.)



1. A clasp, comprising two members, one member having side flanges, and beveled lugs at one end, the other member pivotally connected at one end to the side flanges and having two spring arms adapted to lock with the said lugs, substantially as described.

2. A clasp, comprising two members, one member having side flanges, and beveled lugs at one end, the other member pivotally connected at one end to the side flanges and having two spring arms adapted to lock with the said lugs, and said arms having their outer edges recessed, substantially as described.

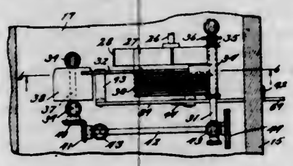
3. A clasp comprising two members, one member having a flange at one end, serrated flanges at its side edges, and beveled lugs at its other end, the other member pivotally connected at one end to the side flanges and having two spring arms adapted to lock with the said lugs by lateral spring pressure, substantially as described.

4. A clasp comprising two members, one member having a flange at one end, serrated flanges at its side edges, and beveled lugs at its other end, the other member pivotally connected at one end to the side flanges and having two spring arms adapted to lock with the said lugs by lateral spring pressure, said arms having beveled side edges to coöperate with the beveled lugs in forcing the arms into locked position, substantially as described.

5. A clasp comprising two members, one member having a flange at one end, serrated flanges at its side edges, and beveled lugs at its other end, the other member pivotally connected at one end to the side flanges and having two spring arms adapted to lock with the said lugs by lateral spring pressure, said arms recessed in their side edges adjacent the serrated edges of the side flanges of the first-mentioned member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,104,260. GRAPHOPHONE-CLOCK. HERMAN L. HARTENSTEIN, Chicago, Ill. Filed July 19, 1909. Serial No. 508,424. (Cl. 58—14.)



1. The combination of a clock striking train, a talking machine, mechanism operatively connecting the two, means controlled by the clock mechanism for controlling the operation of the talking machine and means to lock the talking machine out of connection with the striking train whereby it may be independently operated.

2. The combination with a clock striking train, a sound producing machine including a record, means for operating the record, means for controlling the operation of the record, including means for rendering the talking machine inoperative and for permitting a uniform and definite degree of movement of the record at each operation thereof, means operated at predetermined intervals by the clock movement for automatically operating the said controlling mechanism, and manual means independent of the clock striking train and the last said means for operating the said controlling means.

3. The combination with a clock striking train, a sound producing machine including a record, means for operating the record, means for controlling the operation of the record, including means for rendering the talking machine inoperative and for permitting a uniform and definite degree of movement of the record at each operation thereof, means operated at predetermined intervals by the clock movement for automatically operating the said controlling mechanism, and means independent of the said train for operating the said controlling means and for locking the same to permit the talking machine to operate independently of the clock.

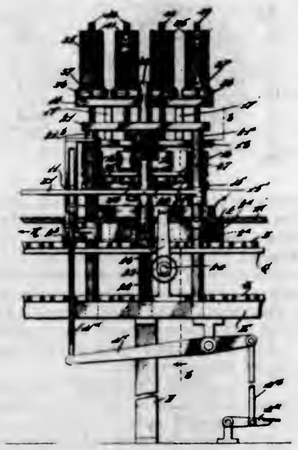
4. The combination with a sound producing machine including a record, means for imparting motion to the record, stop mechanism for the record, releasing mechanism for the stop mechanism, a clock striking train associated with said machine, means operated at predetermined intervals by the said train for tripping the said stop mechanism, and means other than the last said means for rendering the stop mechanism inactive to permit the sound producing machine to operate independently of the clock.

5. In combination with a clock striking train, a talking machine including a record, means for moving the record, controlling mechanism for the record including a rotatable member operatively related to the record, a pivotally supported member adapted to engage the said rotatable member to stop the record, means operated periodically by the said train for tripping said pivoted member to release the record, and means under the control of the operator for shifting and holding said pivoted member out of operative position whereby the talking machine may operate independently of the clock mechanism.

[Claims 6 to 23 not printed in the Gazette.]

1,104,261. SOLDER-PLACING MACHINE. BERNARD HAUSHEER, Norwich, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 17, 1913. Serial No. 742,579. (Cl. 113—94.)

1. In a solder-placing machine having a runway for the cans, disposed above said runway a transversely movable slide having a downwardly extending passage therethrough; disposed above and vertically-movable independently of said slide a magazine having a downwardly-delivering outlet normally registering with said passage; disposed beneath, and transversely-immovable relatively to said slide, a plate having a downwardly-delivering passage therethrough registrable with said passage in said slide; means to center a can in said runway with said passage in said plate; means to simultaneously lower said magazine, said slide, and said plate until stopped by said can; and means to move said slide transversely until its said passage registers with said passage in said plate.



2. In a solder-placing machine having a runway for the cans; disposed above said runway a plurality of transversely-movable slides each having a plurality of downwardly-extending passages therethrough; disposed above and vertically-movable independently of said slides magazines equal in number to said passages and each having a downwardly-delivering outlet normally registering with one of said passages; disposed beneath and transversely immovable relatively to said slides a plate having therethrough a plurality of downwardly delivering passages respectively registrable with one of said passages in said slides; means to center each of a plurality of cans in said runway with one of said passages in said plate; means to simultaneously lower said magazines, said slides and said plate until stopped by said cans and means to simultaneously move said slides transversely until each of their said passages registers with one of said passages in said plate.

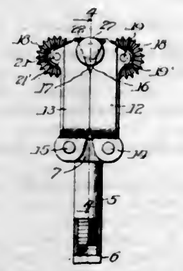
3. In a solder-placing machine having a runway for the cans, disposed above said runway a transversely-movable slide having a downwardly-extending passage therethrough; disposed above and vertically-movable independently of said slide a cylindrical magazine having a downwardly-delivering, bevel-edged, outlet normally registering with said passage; disposed beneath and transversely-immovable relatively to said slide a plate having a downwardly-delivering passage therethrough registrable with said passage in said slide; means to center a can in said runway with said passage in said plate; means to simultaneously lower said magazine, said slide, and said plate until stopped by said can; means to move said slide transversely until its said passage registers with said passage in said plate.

4. In a solder-placing machine having a runway for the cans, disposed above said runway a plurality of transversely-movable slides each having a plurality of downwardly-extending passages therethrough; disposed above and vertically-movable independently of said slides cylindrical magazines equal in number to said passages and each having a downwardly-delivering, bevel-edged, outlet normally registering with one of said passages; disposed beneath and transversely-immovable relatively to said slides a plate having therethrough a plurality of downwardly-delivering passages respectively registrable with one of said passages in said slides; means to center each of a plurality of cans in said runway with one of said passages in said plate; means to simultaneously lower said magazines, said slides and said plate until stopped by said cans; and means to simultaneously move said slides transversely until each of their said passages registers with one of said passages in said plate.

5. In a machine of the class described a magazine having therethrough a passage terminating in a downwardly presented opening; disposed within and above said passage a rod extending normally to said opening; means disposed above said passage to suspend said rod movably in every direction; beneath said opening a slide having therethrough a passage normally in alinement with said passage; and means to move said slide transversely of said passage.

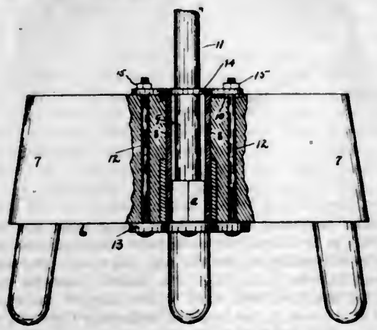
[Claims 6 to 12 not printed in the Gazette.]

1,104,262. BOILER-TUBE CLEANER. FRANK HERLE, Chicago, Ill. Filed Dec. 10, 1913. Serial No. 805,700. (Cl. 83—64.)



A boiler tube cleaner comprising a handle, a block carried thereby, a pair of oppositely disposed frames pivotally mounted on the block, a pair or rollers revolubly mounted in the frames, each of said rollers being of barrel-shaped form adapted to be arranged in a boiler tube transversely of the length of the tube and having curved teeth with continuous cutting edges on its surface, springs connecting the frames, an adjustable member, and stops on said member interposed between said frames to hold the rollers apart.

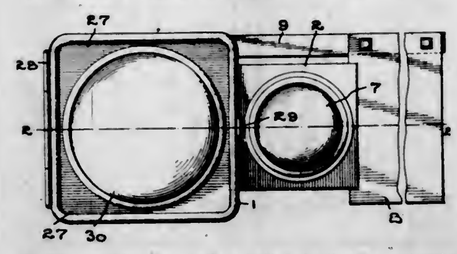
1,104,263. WASHING-MACHINE DOLLY. JOHN D. A. JOHNSON, Omaha, Nebr. Filed Jan. 7, 1913. Serial No. 740,597. (Cl. 68—15.)



1. In combination with the agitator shaft of a washing machine, a dolly comprising radially disposed wings, abutting at their inner ends, and a sleeve formed with a rectangular opening therein for receiving the agitator shaft, said sleeve being disposed at the juncture of the inner ends of said wings and provided at one of its ends with a detent plate and at the other of its ends with a buffer plate, bolts passing through said detent plate, thence transversely through said wings and thence through said buffer plate, thereby binding said detent plate, said wings and said buffer plate rigidly together, said wings carrying dependent fingers adjacent their outer ends.

2. In combination with the agitator shaft of a washing machine, a dolly comprising radially disposed wings abutting at their inner ends, and a sleeve formed with a rectangular opening therein for receiving said agitator shaft, said sleeve being disposed at the juncture of the inner ends of said wings and provided at one of its ends with a transverse plate adapted to lie on the upper edge of one of said wings, said plate having its outer end apertured to receive a bolt passing into one of said wings and thereby binding the sleeve and wing rigidly together.

1,104,264. LAMP. DWIGHT D. KING, Warren, Pa. Filed Mar. 13, 1914. Serial No. 824,431. (Cl. 240—46.)



1. The combination with a casing having an extension at one side, of a removable block secured to the casing at the inner end of the extension, dividing the casing into two chambers, one comprising the main portion of the casing and the other the extension, both of said chambers having lights therein, said extension having a lens at one end for throwing light upon a license tag and having a red lense in one side, and said main portion in the casing having a lense in its end, substantially as described.

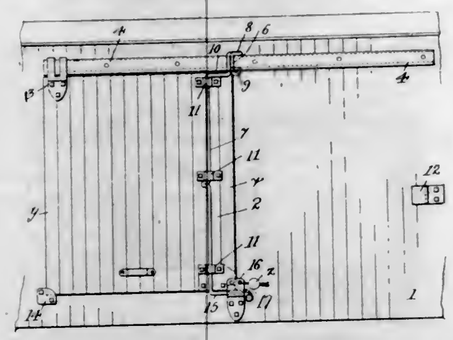
2. A lamp of the character described, comprising a casing having an extension at one side, a block removably secured in the casing at the inner end of the extension and dividing the casing into a relatively small chamber in the extension and a relatively large chamber in the main portion of the casing, a lamp socket on the block inside the chamber of the extension, said extension having two transparent portions, one adapted to permit the light to be thrown upon the license tag and the other red in color, a door closing the relatively large chamber and having a transparent portion, and a lamp located in the relatively large chamber, substantially as described.

3. A lamp of the character described, comprising a casing having an extension at one side, a block removably secured in the casing at the inner end of the extension and dividing the casing into a relatively small chamber in the extension and a relatively large chamber in the main portion of the casing, a lamp socket on the block inside the chamber of the extension, said extension having two transparent portions, one adapted to permit the light to be thrown upon the license tag and the other red in color, a door closing the relatively large chamber and having a transparent portion, a plate secured in the relatively large chamber and having a lamp socket therein, and a reflector secured around the socket, substantially as described.

1,104,265. CAR-DOOR AND MEANS FOR LOCKING SAME. CHARLES E. LANGELL, Belleville, Kans. Filed May 2, 1912. Serial No. 694,767. (Cl. 20—23.)

1. In a sliding door of the class described for cars or other compartments, having a plurality of hangers and a locking and sealing appliance and adapted to slide along the surface of the receptacle when open and to recede into and flush with its wall when closed, the combination of a bar track above the door and having an abrupt curve or angle part near its rear end, a hanger from the rear part of the top of the door loosely clasping the straight part of said bar track and adapted to clasp rigidly the angle or curved part of said track by torsion of the door in closing it, with a vertical operating rod pivoted to the face of the door near its front edge and extending above

the door and extending outwardly from the door and thence upwardly in front of and above said track and back horizontally over said track thence outwardly over the track then downwardly in front of the track thence backwardly under said track and upwardly back of said track forming a lug on the back of said bar track and pivoted to the face of the door, and adapted to support the front edge of said door from the top of said bar track, substantially as set forth and for the purposes specified.



2. In a sliding door of the class described, and adapted to slide outside the wall of a car, box or other compartment while open and to sink into the said wall and flush therewith while closed, the combination of a door suspended from the top of a bar track horizontally secured to the wall of the car and extending outward from it and horizontally thereto except at its rear end, a bar track having a curved or angle bend near its rear end and extending to the wall of the car, and from the direct line of said bar track, a flat sliding hanger rigidly secured to the top and near the rear edge of said door and adapted to hook over and slide loosely on said bar track while the door is open and to engage rigidly the angle or curved part of said bar track by the torsion when the front edge of the door is swung into the recess of the doorway, together with means for supporting the front edge of the said door, consisting of a vertical operating rod pivoted to the face of the door near its front edge and extending above the door and extending outwardly from the door and thence upwardly in front of and above said track and back horizontally over said track thence outwardly over the track thence downwardly in front of the track thence backwardly under said track and upwardly back of said track forming a lug on the back of said bar track and pivoted to the face of the door, and adapted to support the front edge of said door from the top of said bar track, with means for locking said door while closed and consisting of an open bracket secured to said wall under the front edge of the door and extending outwardly under said door and having an upwardly extending lip between which and the wall of the car the lower edge of the door is adapted to slide while open, and a broad flat latch member pivoted to the wall of the car and adapted to drop into and fill the recess between the said outward extending lip and the outer face of the door when the same is closed flush with the wall of the car and adapted to keep the door from being forced from its recess, and an upward struck lug on said latch, and being provided with holes in said lug and said upwardly extending lip which holes register and are adapted to receive a sealing wire or band, substantially as set forth and for the purposes specified.

1,104,266. ENAMELS AND PROCESS OF MAKING THEM. MAX MAYER, Tempelhof, and BELA HAVAS, Schöneberg, near Berlin, Germany, assignors to Chemisch-Metallurgische Industrie Gesellschaft mit beschränkter Haftung, Berlin, Germany, a Corporation of Germany. Filed Nov. 19, 1912. Serial No. 732,216. (Cl. 49—91.)

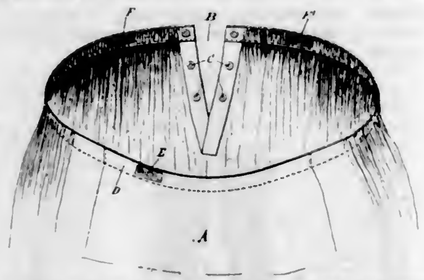
1. The process of producing white opaque enamels, which consists in adding to the enamel proper a white opaquing agent containing spinel.

2. The process of producing white opaque enamels, which consists in adding to the enamel proper a white opaquing agent containing spinel and a suitable white refractory material.

3. A white opaque enamel comprising a body of enamel comprising a body of enamel proper containing spinel as the whitely opaquing medium.

4. A white opaque enamel comprising in addition to the enamel proper, a suitable white refractory material and spinel as the whitely opaquing medium.

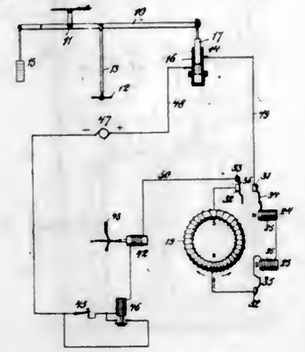
1,104,267. SKIRT. MEYER MAYERS, New York, N. Y. Filed Aug. 11, 1913. Serial No. 784,072. (Cl. 2—42.)



A skirt including a body and a waist band and having a placket in the back, the waist band comprising an inclosing hem extending around the top, and a separate webbing inclosed therein consisting of a middle inelastic portion of stiffer material than that of the body of the skirt secured at its ends to the hem and occupying the front of the inclosing hem, and two elastic portions extending from the respective ends of the inelastic portion substantially to the placket, the elastic portions being secured at their ends.

1,104,268. WEIGHING MECHANISM. EDWIN H. MESSITER, Brooklyn, N. Y., assignor to Weigher Patent Company, New York, N. Y., a Corporation of New York. Filed June 14, 1911. Serial No. 633,056. (Cl. 177—351.)

1. The combination with weighing means and an electric motor comprising two members movable with respect to each other, one constituting an armature and the other a field magnet, and means therein for advancing the lines of force in the motor, in the movement of one of the said members with respect to the other; of means controlled by the position of the weighing means under the influence of a load for determining the extent of said advance of the lines of force.



2. The combination with weighing means and an electric motor comprising two members movable with respect to each other, one constituting an armature and the other a field magnet, and means for exciting the motor through successive units of advance of one of the said members with respect to the other; of means controlled by the position of the weighing means under the influence of a load for determining the extent of movement through which such excitation shall occur.

3. The combination with weighing means and an electric motor containing two members relatively movable with respect to each other under the influence of a magnetic torque in the motor, of means controlled by the position of the weighing means under the influence of a load for predetermining the extent of movement through which such magnetic torque shall be produced, and causing the termination of the production of such magnetic torque at the end of such movement.

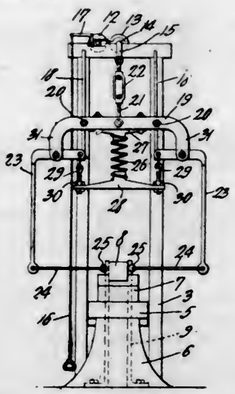
4. The combination with weighing means including a mercury vessel and a plunger for immersion therein, said mercury vessel being provided with a plurality of successively disposed contact terminals, of an electric motor containing a plurality of successively disposed elements each of which represents a unit of advance of the motor, said elements being individually in electric connection with said mercury vessel contact terminals, and an electric generator in circuit with the motor and the mercury vessel.

5. The combination with weighing means including a mercury vessel and a plunger for immersion therein, said mercury vessel being provided with a plurality of successively disposed contact terminals, of an electric motor comprising a relatively rotatable field magnet and armature, a succession of contact terminals therein, and a brush for engagement with said contact terminals successively whereby the lines of force in the motor are successively advanced for each unit of advance of the motor, and means connecting said motor terminals with said mercury contact terminals, whereby as the mercury rises in the vessel said elements will be brought successively into electric connection therewith.

[Claims 6 to 24 not printed in the Gazette.]

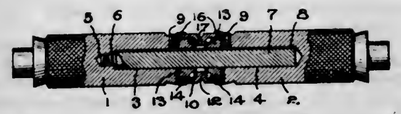
1,104,269. POWER-HAMMER. JOHN ELMER MORRISON, Arma, Kans. Filed Mar. 28, 1914. Serial No. 827,916. (Cl. 78—40.)

1. A power hammer comprising a carriage, means for imparting reciprocatory motion thereto, means for guiding said carriage during such motion, a pair of bell crank levers pivotally secured to the extremities of said carriage, links pivotally secured to the lower extremities of said bell crank levers, a hammer pivotally engaged by said links, a floating lever linkedly connected to the adjacent extremities of the bell crank levers, and a spring extending between the said carriage and lever and normally holding the same apart.



2. A mechanism of the class described, comprising a supporting frame, guides carried thereby, a U-shaped carriage slidably mounted on said guides for reciprocatory motion, a crank shaft rotatably carried by said frame, said crank shaft provided with an offset arm, extensible means connecting said crank shaft and the said reciprocatory carriage, said U-shaped carriage provided with downwardly extending spaced legs, bell crank levers pivotally secured to the said legs, a hammer pivotally mounted above the ground, substantially horizontally extending links pivotally engaging opposite sides of said hammer, and a spring carrying member secured to said carriage, a spring carried thereby, a floating lever engaging said spring, and extensible links engaging the extremities of said floating lever and the said bell crank levers.

1,104,270. ROLL. CARL OTTO CHRISTIAN PACK, Highland Park, N. J. Filed Mar. 13, 1914. Serial No. 824,362. (Cl. 118—23.)



1. A roll of the character described, comprising two sections having longitudinal cylindrical sockets in their adjacent ends, a cylindrical arbor snugly fitting the said recesses, jam screws in the sections engaging the arbor, a bearing located between the sections and around the arbor, said bearing comprising an outer casing having pockets in its opposite ends, cones fitting the arbor and located in the pockets, balls between the cones and the inner ends of the pockets, and cups located between the sections and the cones and having flanges at their outer edges overlapping the casing, substantially as described.

2. A roll of the character described, comprising two sections having longitudinal cylindrical sockets in their adjacent ends, one member at the inner end of its socket having a screw-threaded pocket, a cylindrical arbor snugly fitting the said recesses and having a screw-threaded lug at one end engaging the threads in the pocket, jam screws in the sections engaging the arbor, a bearing located between the sections and around the arbor, said bearing comprising an outer casing having pockets in its opposite ends, cones fitting the arbor and located in the pockets, balls between the cones and the inner ends of the pockets, said cones adjustable in the pockets by the turning of one roll section to adjust the same on the threaded lug, and cups located between the sections and the cones and having flanges at their outer edges overlapping the casing, substantially as described.

1,104,271. VENDING-MACHINE. ROBERT T. POLK, Smiths Turn Out, S. C. Filed May 20, 1913. Serial No. 768,892. (Cl. 211—8.)



1. The combination with a bulk holder, of a measuring receptacle consisting of telescopically connected upper and lower sections, said receptacle having an outlet, and a series of revoluble blades within the receptacle for directing material from the inlet to the outlet, said blades being extensible with the receptacle.

2. The combination with a bulk holder, of a measuring receptacle consisting of telescopically connected sections, said receptacle having an outlet, and a revoluble series of extensible blades within the receptacle for directing material from points below the inlet to points above the outlet.

3. The combination with a bulk holder, of a measuring receptacle consisting of telescopically connected sections, said receptacle having an outlet, a revoluble series of extensible blades within the receptacle for directing material from points below the inlet to points above the outlet, and means extending from the inlet of the receptacle for preventing lodgment of material upon the upper ends of the blades.

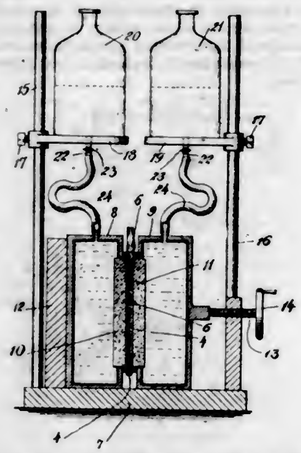
4. The combination with a bulk holder and a receptacle section depending therefrom, there being an opening between the bulk holder and said section and constituting an inlet to the said section, of a vertically adjustable shelf, a lower receptacle section movable with the shelf and having an outlet out of vertical alinement with the inlet, the two sections being telescopically connected, and means revoluble within the sections and adjustable longitudinally to a length equal to the length of the measuring receptacle, for directing material in the receptacle from points below the inlet to points above the outlet.

5. The combination with a bulk holder, of a measuring receptacle consisting of telescopically connected sections, said receptacle having an outlet, a revoluble series of extensible blades within the receptacle for directing material from points below the inlet to points above the outlet, means extending from the inlet of the receptacle for preventing lodgment of material upon the upper ends of the blades, a stationary chute for receiving material from the outlet, and a cut-off for the chute.

[Claims 6 to 8 not printed in the Gazette.]

1,104,272. APPARATUS FOR TREATING BATTERY-PLATES. GUSTAV H. RABENALT, Buffalo, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Feb. 6, 1913. Serial No. 746,483. (Cl. 204—29.)

1. The combination of two porous dies adapted to be applied to the opposite sides of a pasted battery plate respectively, and means for supplying a reagent to said dies and causing the reagent to pass through the pores of the dies to set or harden the paste.



2. In a device of the class described, a porous die adapted to be applied to the active surface of a pasted battery plate and means for supplying a reagent to said die and causing the reagent to pass through the pores of the die to set or harden the paste.

3. The combination of means for engaging a pasted battery plate on one side thereof, a container having a porous die in one face thereof adapted to be applied to the other side of the plate, and means for supplying to the container under pressure a reagent adapted to pass through the pores of the die and set the paste.

4. The combination of an acid proof porous die having a rough face adapted to be applied to the surface of a pasted battery plate to increase the active area thereof and means for supplying a reagent to said die and causing the reagent to pass through the pores of the die to set or harden the paste.

5. The combination of a die having a rough face adapted to be applied to the surface of a pasted battery plate to increase the active area thereof and means coöperating therewith for supplying a reagent to set or harden said surface while the die is engaged herewith.

[Claims 6 to 16 not printed in the Gazette.]

1,104,273. PROCESS OF TREATING BATTERY-PLATES. GUSTAV H. RABENALT, Buffalo, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Feb. 6, 1913. Serial No. 746,484. (Cl. 204—29.)

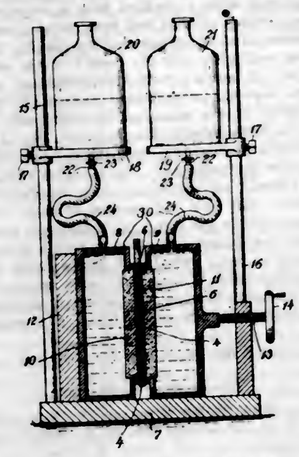
1. The improved process of increasing the active surface of pasted storage battery plates which consists in applying a die to the surface of the paste to increase the active area thereof and treating the surface with a reagent to set said surface before the plate is subjected to electrolysis.

2. The improved process of increasing the active surface of pasted battery plates which consists in applying an irregular faced die to the surface of the paste and treating the said surface with a reagent to set said surface while the die is applied thereto and before the die is removed.

3. The improved process of increasing the active surface of pasted battery plates which consists in applying an irregular faced die to the surface of the paste and treating the said surface with sulfuric acid to set said surface before the die is removed.

4. The improved process of increasing the active area of pasted battery plates which consists in applying a die to the surface of the paste to increase the active area thereof and treating the surface with a reagent to form a sulfate at said surface to cause said surface to set while the die is applied thereto and before the die is removed.

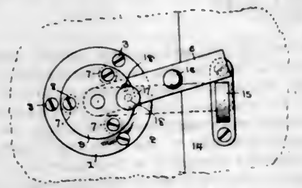
5. The improved process of increasing the active area of pasted battery plates which consists in applying a die



to the surface of the paste while soft and simultaneously treating the surface with a reagent to set the paste to make it firm.

[Claims 6 to 8 not printed in the Gazette.]

1,104,274. SAFETY-LOCK. ALFRED RE, New York, N. Y. Filed July 31, 1913. Serial No. 782,284. (Cl. 70—14.)



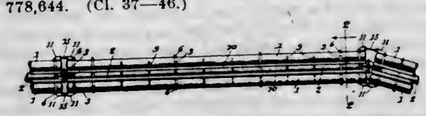
1. A safety lock comprising a plate secured to a door, a stub shaft extending therethrough, a lock bar secured at one end to said stub shaft and adapted to engage a keeper, said lock bar having a plurality of openings therein, a cover spaced from said plate, a thumb screw carried by said cover and adapted to engage in either of the openings in said lock bar for locking the latter in operative or inoperative position, and further adapted to be adjusted so as not to obstruct the path of said lock bar, a key adapted to engage said stub shaft for swinging said lock bar.

2. A safety lock comprising a base plate secured to a door, a stub shaft extending through said plate and into a recess in said door, a lock bar secured to said stub shaft adapted to engage a keeper, a cover spaced from said base plate and secured thereto, means carried by said base plate for adjustably holding said lock bar in locked or unlocked position, a key adapted to engage said stub shaft for raising or lowering said lock bar, and a disk adapted to be turned by said key for preventing the rotation of said stub shaft by an instrument.

3. A safety lock comprising a plate secured to a door, a stub shaft extending through said plate, a lock bar secured to said shaft and adapted to engage a keeper, means for holding said lock bar in locked or unlocked position or for permitting free movement thereof, a key to engage said stub shaft for swinging said lock bar, and means for preventing the operation of said stub shaft by an instrument.

4. A safety lock comprising a plate secured to a door, a shaft rotatable in said plate, a lock bar on said shaft and adapted to engage a keeper, a key for engaging said shaft for operating said bar from the outside of the door, and a knob on said lock bar for operating the same from the inside of the door.

1,104,275. FLOATING DISCHARGE-PIPE FOR HYDRAULIC DREDGES. ARTHUR WELLS ROBINSON, Montreal, Quebec, Canada. Filed July 12, 1913. Serial No. 778,644. (Cl. 37—46.)



1. In a floating discharge pipe for dredges spring cushion buffers located near the outside corners of the adjoining ends of the floats adapted to engage with each other should the floats get out of alinement and chains to limit the degree of such disalinement.

2. In a floating discharge pipe for dredges spring cushion buffers located near the outside corners of the adjoining ends of the floats adapted to engage with each other should the floats get out of alinement, chains to limit the degree of such disalinement and spring cushioning devices for the chains.

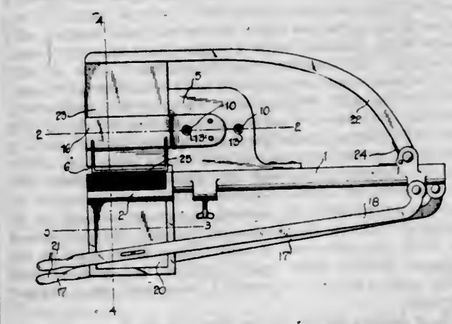
3. In a floating discharge pipe for dredges spring cushion buffers located near the outside corners of the adjoining ends of the floats adapted to engage with each other should the floats get out of alinement, chains to limit the degree of such disalinement, spring cushioning devices for the chains, and a pivotal connection between the floats comprising a link and pin connection superposed upon the upper surface of the adjoining ends of the discharge pipe sections carried by the floats.

4. A floating discharge pipe for dredges comprising a series of floats each supporting a section of discharge pipe, a pivotal connection between the floats comprising a link and pin connection superposed upon the upper surface of the adjoining ends of the discharge pipe sections, spring cushioning devices for the link, spring cushioned buffers at the lateral corners of the floats and chains to limit the disalinement of the floats.

5. A floating discharge pipe for dredges comprising a series of floats each supporting a section of discharge pipe, a pivotal connection between the floats comprising a link and pin connection imposed upon the upper surface of the adjoining ends of the sections of the discharge pipe, spring cushioning devices for the link, spring cushioned buffers at the lateral corners of the floats, chains to limit the disalinement of the floats and spring cushioning devices for the chains.

[Claims 6 to 9 not printed in the Gazette.]

1,104,276. SLIP-FOLDER. FRED P. ROCKWELL, Albert Lea, Minn. Filed Feb. 4, 1914. Serial No. 816,638. (Cl. 101—47.)



1. A folding device of the class described comprising a base member having longitudinal slots therein, a plate member secured vertically on the upper face of said base

portion and having a portion thereof offset whereby to provide a space between the lower edge of said plate and the upper face of said base member, said vertical plate being provided with a longitudinal slot alining with one of the longitudinal slots of said base member and also provided with a horizontal channel intersecting the aforesaid slot therein and bifurcating the outer portion of said plate, means movable vertically through the longitudinal slots of the base member and through the longitudinal slot of the plate member for applying certain folding operations to a slip, additional means movable laterally through the horizontal channel in the plate member to apply further folds to a slip, and additional means movable vertically with respect to the plate for the application of still further fold to said slip.

2. A folding device of the class described comprising a base member provided with a pair of longitudinal slots therein, a vertical plate applied thereto and having the lower edge thereof partially offset to provide a space between the portion of said plate and the upper face of said base member, said vertical plate being also slotted longitudinally for the length of the offset portion in alinement with one of the longitudinal slots of said base member, the vertical plate being also provided with a horizontal channel intersecting the slot therein and bifurcating said plate for the full length of the offset portion thereof, means movable vertically through the slots of said base member and the slot in said plate and operable from points below the plane of the base member to apply certain folds to a slip, means movable laterally through the horizontal channel in the plate to apply further folds to said slip, and additional means movable vertically with respect to said plate and operable from a point above the same for applying still further folds to said slip.

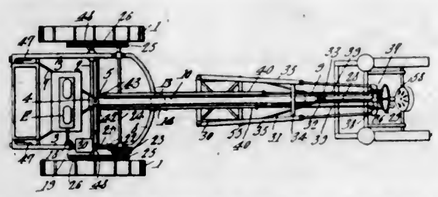
3. A folding device of the class described comprising a base member having a pair of vertical slots therein, a vertical plate secured to the upper face of said base member having the lower edge offset for a portion of its length to provide a space between a portion of the lower edge of said plate and said base member, said plate being also provided with a vertical slot extending for the full length of said offset portion and alining with one of the vertical slots of said base member, said plate also having a horizontal channel formed therein to intersect the aforesaid slot in the same and bifurcate said plate for the length of the offset portion thereof, blades guided through the vertical slots of the base member, operating levers connected to said blades, one of said blades being adapted to be guided through the vertical slot of the plate and the other of said blades being adapted to be guided to one side of said plate, means movable laterally through the horizontal channel in said plate to provide vertical folds in a member to be folded, an additional blade designed for vertical movement along one side of said vertical plate, and an additional operating lever in connection with said last mentioned blade.

4. A folding device of the class described comprising a base member having a pair of longitudinal slots therein, a vertical plate secured thereto and having a portion of the same spaced from the upper face of said base member, said plate being provided with a longitudinal slot in vertical alinement with one of the longitudinal slots of said base member and also provided with a horizontal channel intersecting said vertical slot, whereby to substantially bifurcate the forward portion of the plate, a pair of folding knife blades guided through the longitudinal slots of said base member, the one of said blades being also adapted for disposition through the alining longitudinal slot of the aforesaid plate, a movable folding strip carried on said plate adapted for lateral movement thereon to be disposed through the horizontal channel therein, means to limit the movement of said folding strip, and an additional folding blade guided against one face of said plate and adapted for vertical movement with respect thereto.

5. A folding device of the class described comprising a base member having a pair of longitudinally spaced apart slots therein, a vertical plate secured to the upper face of said base member and having the lower edge thereof offset for a portion of its length to provide a space between a portion of said plate and the base member, said plate being provided with a vertical slot in registration with one of the vertical slots of said base member and also having a horizontal channel intersecting the slot therein and bifurcating said plate for the length of the offset in the same, a pair of levers pivotally connected at one of their ends to the rear end of said base member and disposed below the latter, blades connected to said levers and guided through the slots in said base member, one of the blades being movable through the longitudinal slot of the plate and the other of the blades being movable vertically along one side thereof, an additional lever pivotally connected at its end to the rear end portion of said base member and disposed above the latter, an additional blade secured to the last mentioned lever and movable along one side face of said vertical plate, said blades being adapted to provide certain folds in a member to be folded, and means movable laterally through the horizontal channel in said plate to provide certain other folds in a member to be folded.

[Claims 6 to 8 not printed in the Gazette.]

1,104,277. TRACTOR. EDWARD J. SAMPSON, Grandmound, Iowa. Filed Feb. 20, 1913. Serial No. 749,699. (Cl. 21—114.)

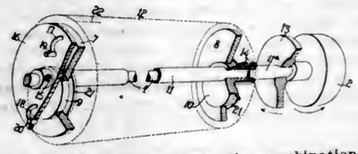


1. A two wheeled explosive engine tractor, including an axle, a frame carried by the axle, two tractor wheels rotatable upon the axle, a post forming a pivoting element for the axle and wheels carried by the frame, a longitudinal beam extending rearwardly from the frame, an inclined beam connected pivotally to the upper end of the post and having its rear end connected to the rear end of the longitudinal beam, a pair of arms swingingly connected below and at the free end of the longitudinal beam, and an adjusting screw mounted in the rear end of the longitudinal beam and the free ends of the pair of arms to regulate the position of the arms relatively to the beam.

2. A two wheeled explosive engine tractor, including an axle, a frame carried by the axle, two tractor wheels rotatable upon the axle, a post forming a pivoting element for the axle and wheels carried by the frame, a longitudinal beam extending rearwardly from the frame, an inclined beam connected pivotally to the upper end of the post and having its rear end connected to the rear end of the longitudinal beam, a pair of arms swingingly connected below and at the free end of the longitudinal beam, an adjusting screw mounted in the rear end of the longitudinal beam and the free ends of the pair of arms to regulate the position of the arms relatively to the beam, and a hook connected to the under side of the longitudinal beam adjacent the axle, whereby the forward end of the tongue of an implement may be connected thereto while the free ends of the pair of arms engage the upper portion of the tongue adjacent the frame of such implement.

1,104,278. TYPE-WRITING MACHINE. SIGMUND SCHIFF, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 4, 1910. Serial No. 590,635. (Cl. 197—127.)

1. In a typewriting machine, the combination of a paper guide, a platen frame, a platen shaft supported in the platen frame, a platen, means which connects the platen to the shaft to cause the two to rotate together under normal conditions, the platen being shiftable transversely of the shaft with respect to the paper guide while the platen and shaft are connected by said means, and means on the platen shaft and movable independently thereof for so shifting the platen.



2. In a typewriting machine, the combination of a paper guide, a platen frame, a platen shaft supported in the platen frame, a platen, means forming a positive driving connection between the platen and the shaft to rotate the platen when the shaft is rotated in either direction, the platen being shiftable transversely of the shaft with respect to the paper guide, while the platen and shaft remain connected by said means, and an eccentric rotatable independently of said shaft for shifting the platen.

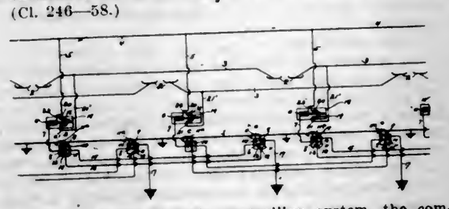
3. In a typewriting machine, the combination of a paper guide, a platen frame, a platen shaft supported in the platen frame, a platen, means which connects the platen to the shaft to cause the two to rotate together under normal conditions, the platen being shiftable transversely of the shaft with respect to the paper guide while the platen remains connected by said means to the shaft, an eccentric loose on the platen shaft for shifting the platen, and means for turning the eccentric relatively to the platen shaft.

4. In a typewriting machine, the combination of a paper guide, a platen frame, a platen shaft supported in the platen frame, a platen, means which connects the platen to the shaft to cause the two to rotate together under normal conditions, the platen being shiftable transversely of the shaft with respect to the paper guide while the platen remains connected by said means to the shaft, a sleeve on the shaft, an eccentric fast to the sleeve, and means for turning the sleeve relatively to the shaft to shift the platen.

5. In a typewriting machine, the combination of a paper guide, a platen frame, a platen shaft supported in the platen frame, a platen, means which connects the platen to the shaft to cause the two to rotate together under normal conditions, the platen being shiftable transversely of the shaft with respect to the paper guide while the platen remains connected by said means to the shaft, a sleeve on the shaft, an eccentric fast to the sleeve, and a hand wheel for turning the sleeve relatively to the shaft to shift the platen.

[Claims 6 to 39 not printed in the Gazette.]

1,104,279. ELECTRICAL TRAIN-CONTROLLING SYSTEM. JOHN H. SCHROEDER and CARSON D. BAUCOM, Savannah, Ga. Filed Nov. 5, 1913. Serial No. 799,334. (Cl. 246—58.)



1. In an electrical train controlling system, the combination with a block of railway, a source of electrical supply, rolling equipment, and electrically controlled train controlling means on the rolling equipment, of contact ramps at respective ends of said block, to supply current to the electrically controlled devices on the rolling equipment, a normally open partial circuit connecting said ramps with the source of electrical supply, an electromagnetically operated circuit closer in said partial circuit, circuit closing means arranged at respective ends of the block to be mechanically operated by a train, and normally open circuits including said circuit closing means, the magnet of said electro-magnetically operated circuit closer and the source of electrical supply.

2. In electrical train controlling system, the combination with a block of railroad, and a source of electrical supply, of contact ramps at respective ends of said block, a conductor connecting said ramps, a partial circuit connecting said conductor with the source of supply, a normally open circuit closer in said circuit, a solenoid for closing said circuit closer, a circuit from the source of supply and including said solenoid, and mechanically operable circuit closers at respective ends of the block for automatically closing the circuit of the solenoid when a train enters either end of the block.

3. In an electrical train controlling system, the combination with a block of railway and a source of electrical supply, of contact ramps at respective ends of the block for supplying current to electrically controlled train controlling means on rolling equipment, a conductor connecting said ramps, a partial circuit connecting said conductor with the source of supply, a normally open circuit-closer in said partial circuit, electro-magnetically operable means for closing said circuit closer, a normally open circuit connecting said electro-magnetically operable means with the source of supply, mechanically operable switches at respective ends of the block and both included in said normally open circuit, two conductors connecting said switches, and means operable by a train for operating said switches to close said normally open circuit through one or the other of the said two conductors.

4. In an electrical train controlling system, the combination with a block of railroad, and a supply conductor, of contact ramps at respective ends of the block, a conductor connecting said ramps, a partial circuit connecting said conductor with the source of supply, a normally open circuit closer in said partial circuit, electromagnetic controlling means for closing said circuit closer, a mechanical switch at each end of the block, each mechanical switch comprising four contacts and a switch arm to connect said contacts in pairs, a partial circuit including two contacts of one of said switches, the electro-magnetic controlling means of the circuit-closer and the source of supply, a partial grounded circuit including two contacts of the other mechanical switch, two conductors connecting the remaining contacts of the respective mechanical switches, and means operable by rolling equipment for operating said mechanical switches to close or open the circuit of the electro-magnetic controlling means for the circuit closer.

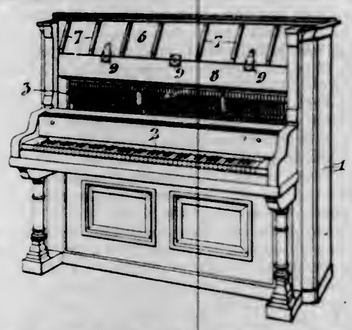
5. In an electrical train controlling system, the combination with a block of railway, a source of electrical supply, electrically connected contact ramps at respective ends of the block, and electro-magnetically controlled means for supplying current to said ramps from the source of supply, of mechanical switches at respective ends of the block, each switch comprising four stationary contacts and a revoluble arm for connecting said contacts in pairs, a clutch connected with said arm, means operable by a train for operating said clutch to turn the switch arm, a partial circuit including two contacts of one mechanical switch and the said electro-magnetically controlled means, two contacts of the other switch being grounded, conductors connecting the remaining contacts of the respective mechanical switches, rolling equipment, and electro-magnetically controlled means on the rolling equipment to receive current from said ramps.

1,104,280. ACTION-MUFFLING DEVICE FOR PIANOS. WILLIAM HARRIS SELTZER, Philadelphia, Pa. Filed Dec. 23, 1913. Serial No. 808,397. (Cl. 84—52.)

1. In a piano, the combination with the action thereof, of a muffling device extending above and in front of the said action, and a pivotal connection whereby a portion of the said device may be swung to afford access to the said action.

2. In a piano, the combination with the action thereof, of a muffling device comprising an inclined board extend-

ing above the said action, and a vertical extension located at the front of the said action and pivotally attached to the said board, substantially as shown and for the purpose set forth.



3. In a piano the combination with the action thereof, of a muffling device comprising an inclined board extending above the said action; a vertical extension located at the front of the said action and pivotally attached to the said board, and a lining of sound absorbing material for the said board and extension substantially as shown and for the purpose set forth.

1,104,281. SIGNAL APPARATUS FOR AUTOVEHICLES. EDWARD A. TAPPE, Los Angeles, Cal. Filed Aug. 20, 1913. Serial No. 785,788. (Cl. 116—31.)



1. Apparatus of the class specified, comprising a casing having windows in the sides thereof, illuminating means in the casing, hinged spring-pressed shutters on the exterior of the casing normally covering said windows, and a rotatable signal arm arranged exteriorly of the casing and adapted to move against the shutter of either of the windows at will to uncover such window and effect illumination of the signal arm.

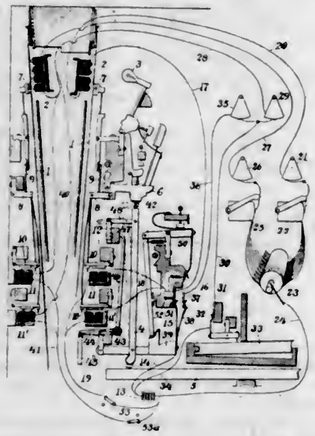
2. Apparatus of the class specified, comprising a casing having windows in the sides thereof, illuminating means in said casing, hinged spring-pressed shutters on the exterior of the casing normally covering said windows, a signal arm movably arranged exteriorly of and adjacent to the casing and adapted to move against the shutter of either of said windows to uncover such window and effect illumination of the signal arm and suitable means for moving the signal arm at the will of the operator.

3. Apparatus of the class specified, comprising a casing having windows in the sides thereof, illuminating means in said casing, hinged spring-pressed shutters on the exterior of the casing provided with extensions thereon and normally covering said windows, a signal arm movably arranged exteriorly of and adjacent to the casing and adapted to bear against the extension of the shutter of either of the windows to uncover such window and effect illumination of the signal arm, and suitable means for moving the signal arm at the will of the operator.

4. Apparatus of the class specified, comprising a casing having windows in the sides thereof, illuminating means in the casing, hinged spring-pressed shutters on the exterior of the casing provided with extensions thereon and normally covering said windows, a signal arm normally disposed between said extensions and movably arranged on the exterior of the casing and adapted to bear against the extensions of the shutters of either of the windows to uncover such window and effect illumination of the signal arm, substantially as described.

5. Apparatus of the class specified, comprising a casing having windows in the sides thereof, illuminating means in the casing, shutters to cover the windows, said shutters having one end thereof hingedly mounted on the exterior of the casing and provided with extensions on the other end thereof, springs arranged to press against the shutters to make the latter self closing, rollers on said extensions, a signal arm disposed between said extensions on the exterior of the casing, and means for moving the signal arm at will against the roller on the extension of either of the shutters to swing such shutter away from the window which it normally covers and effect illumination of the signal arm, substantially as described.

1,104,282. ELECTROMECHANICAL ACTION FOR MUSICAL INSTRUMENTS. MELVIN L. SEVERY, Arlington Heights, and GEORGE B. SINCLAIR, Medford, Mass. Filed Feb. 25, 1910. Serial No. 545,961. (Cl. 84—131.)



1. The combination of a sonorous body, percussive and electromagnetic means for its actuation, a damper therefor, electromagnetic and mechanical means for actuating said damper, and means operative at will to determine which of said vibrating and damping means shall be effective.

2. The combination of a sonorous body, an electromagnet for its actuation, a damper for said body, an electromagnet controlling said damper, means for producing current for both said electromagnets, circuit connections between said means and first-named electromagnet, circuit connections between said means and the second-named electromagnet, a section of which connections is common to both, resistance in said common section, and means adapted to open and close both connections through said resistance.

3. The combination of a sonorous body, a damper therefor, a hammer and actuating means for percussively vibrating said body, means for non-percussively actuating said sonorous body, an electromagnet and means for energizing it, an armature controlled by said electromagnet, means connected with said armature and also connected with said hammer actuating means for undamping said body, the means connected with said armature being operative independently of the hammer actuating undamping means.

4. The combination of a sonorous body, means for non-percussively actuating said sonorous body, a hammer for the actuation thereof, an action including a pivoted wippen for operating said hammer, a damper for said body, an arm pivoted to said wippen and adapted to be depressed by the elevation of said wippen, a spoon rigid with said arm engaging the tail of said damper, and electromagnetic means for depressing said arm.

5. The combination with a sonorous body, means for non-percussively actuating said body, and a key, of a sticker rising from said key, a pivoted member controlling the non-percussive means and pivotally connected with the lower part of said sticker, a link pivotally connected with the upper part of said sticker, a laterally movable bar pivotally carrying said link, a wippen having a boss projecting from beneath its free end into the path of the upper end of said sticker, and a hammer operated by said wippen for percussively actuating said body.

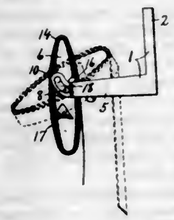
[Claim 6 not printed in the Gazette.]

1,104,283. SPRING-WHEEL. HARRY WEDEMAN, Manhattan, Mont. Filed June 5, 1913. Serial No. 771,966. (Cl. 152—38.)



A spring wheel comprising a hub, spokes radiating from said hub, an intermediate rim to which the outer ends of said spokes are connected, an inner rim having elongated slots therein through which the spokes respectively pass, tubular members engaged on said spokes and passing through said slots, a flange on each tubular member engaging the outer side of the inner rim and covering the adjacent slot, a plate slidable on each tubular member, a nut threaded on each tubular member for forcing said plate into engagement with the exposed side of the inner rim and also covering the adjacent slot, springs surrounding the spokes between the inner and intermediate rim, an outer rim, bolts engaged with the outer rim and slidably engaged through the intermediate and inner rim, springs surrounding said bolts between the inner and intermediate rims and between the intermediate and outer rims respectively, outwardly directed flanges at each side edge of the inner rim for embracing the intermediate and outer rim, and bolts connecting said flanges at spaced intervals.

1,104,284. TOILET-PAPER HOLDER. HERBERT D. WOOD, Phoenix, N. Y. Filed Mar. 2, 1914. Serial No. 821,946. (Cl. 211—31.)



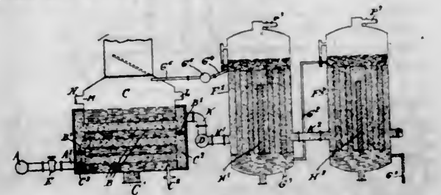
1. A toilet paper holder comprising a support having end bearings, one of which is elongated, a reel journaled in said bearings, and coöperative means on the support and reel for causing said reel to shift its position in the elongated bearing as the paper is unwound therefrom.

2. A toilet paper holder comprising a bracket having end bearings for a reel, one of the bearings being elongated and inclined, a reel journaled in said bearings, and cooperative means on the bracket and reel for causing one end of the reel to travel up the inclined bearing as the paper is unwound from the reel.

3. A toilet paper holder comprising a bracket having a pair of arms spaced apart and provided with journal bearings, one of which is inclined upwardly and forwardly, a reel journaled in said bearings and normally resting at one end against the lower end of the inclined bearing, and coöperative stops on the ends of the reel and bracket adjacent the inclined bearing for limiting the rocking movement of the reel and causing its adjacent end to ride up the inclined bearing as the paper is unwound.

4. A toilet paper holder comprising a support, a reel journaled on the support and normally resting in a horizontal position, and coöperative means on the support and reel for lifting one end of said reel from its normal position when the paper is unwound therefrom.

1,104,285. METHOD OF HEATING AND EVAPORATING LIQUIDS. OTTO K. ZWINGENBERGER, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Nov. 25, 1911. Serial No. 662,276. (Cl. 127—9.)



1. A method of heating and evaporating liquids which consists in passing hot gas through a system of primary evaporation vessels, distributing the gas over as many such evaporation vessels as is necessary to prevent the contained liquids from reaching the boiling point, substantially reducing the temperature of said gas and subsequently passing the same through a series of boilers, generating steam in said boilers and using said steam for evaporation purposes in any suitable way.

2. A method of heating and evaporating liquids which consists in passing hot gas through a system of primary evaporation vessels, regulating the quantity of gas admitted to said vessels, distributing the gas over as many such evaporation vessels as is necessary to prevent the contained liquids from reaching the boiling point, substantially reducing the temperature of said gas and subsequently passing the same through a series of boilers, generating steam in said boilers and using said steam for evaporation purposes in any suitable way.

3. A method of heating and evaporating liquids which consists in passing hot gas through a system of primary evaporation vessels, regulating the quantity of the gas admitted to said vessels, admitting the gas at the bottom of said evaporation vessels, distributing the gas over as many of the same as is necessary to prevent the contained liquids from reaching the boiling point, substantially reducing the temperature of said gas and subsequently passing the same through a series of boilers, generating steam in said boilers and using said steam for evaporation purposes in any suitable way.

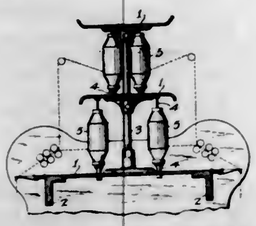
4. A method of heating and evaporating liquids which consists in passing hot gas through a series of primary evaporation vessels, regulating the quantity of the gas admitted to said vessels, circulating the gas in a zig-zag path through said vessels, distributing the gas over as many such evaporation vessels as is necessary to prevent the contained liquids from reaching the boiling point, substantially reducing the temperature of said gas and subsequently passing the same through a series of boilers, generating steam in said boilers and using said steam for evaporation purposes in any suitable way.

5. A method of heating and evaporating liquids which consists in passing hot gas through a series of primary evaporation vessels, causing a circulation of the liquid from the bottom to the top of the vessels, regulating the quantity of the gas admitted to said vessels, distributing the gas over as many such evaporation vessels as is necessary to prevent the contained liquids from reaching the temperature of said boiling point, substantially reducing the temperature of said

gas and subsequently passing the same through a series of boilers, generating steam in said boilers and using said steam for evaporation purposes in any suitable way.

[Claims 6 to 14 not printed in the Gazette.]

1,104,286. METALLIC CREEL. WILLIAM O. ALDRICH, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1912. Serial No. 719,071. (Cl. 242—131.)



1. In a creel, a perforated metallic creel-plate and tubular step-holders therein having rim flanges adapted to seat on the margins of the perforations of said plate and each having one or more fingers suitably disposed thereon to engage the under side of said margins.

2. The combination in a metallic creel, of means for mounting the skewer steps therein comprising a tubular skewer-step holder supported in a perforation in the creel-plate, a supporting ledge in the bottom of said holder forming a seat for the step and having an ejector hole, and one or more fingers or prongs adapted for interlocking said holder with and within the perforation.

3. The combination of the creel plate with recesses or perforations therein and means for holding a skewer step, comprising a tubular member, means on said member for positively and automatically interlocking with said recesses or perforations by the insertion of the member into said recess, and a skewer step seated in said member and independent of the said interlocking means.

4. In a creel, in combination, a metallic creel-plate having a perforation, a step-holder within the same and one or more spring fingers adapted for positively interlocking said holder with the said creel-plate by the insertion of the former in the perforation thereof, and a skewer-step supported in said holder.

5. In a creel, in combination, a metallic creel-plate having a perforation, a step-holder within said perforation and provided with means adapted for positively interlocking with said creel-plate by the insertion of the holder in the perforation thereof, and a skewer-step supported in said holder independent of said locking means.

[Claims 6 to 9 not printed in the Gazette.]

1,104,287. PROCESS OF TREATING ORES. FRANK P. ARNOLD, Carbondale, Pa., and GEORGE F. WEDEMAN, Washington, D. C. Filed Feb. 12, 1914. Serial No. 818,404. (Cl. 75—17.)

1. The process of treating ores which comprises expanding live steam, drawing off the water of condensation, superheating the dry steam and passing the gas thus formed through comminuted ore impregnated with neutralizing agents, substantially such as described.

2. The process of treating ores which comprises expanding live steam, drawing off the water of condensation, superheating the dry steam and passing the gas thus formed through comminuted ore impregnated with neutralizing agents, substantially such as described, and heating and agitating the ore.

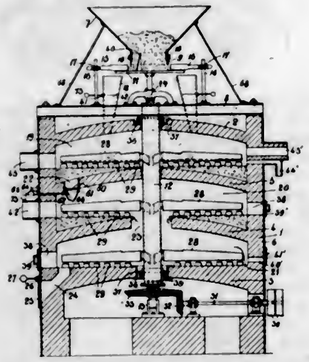
3. The process of treating ores which comprises expanding live steam, drawing off the water of condensation, superheating the dry steam and passing the gas thus formed through comminuted ore impregnated with neutralizing agents, substantially such as described, heating and agitating the ore and arresting and condensing the excess of gases.

4. The process of treating ores which comprises expanding live steam, drawing off the water of condensation, superheating the dry steam and passing the gas thus formed through ore impregnated with a neturalizing agent composed of bicarbonate of soda, caustic potash and sodium chlorid.

5. The process of treating ores which comprises expanding live steam, drawing off the water of condensation, superheating the dry steam, and passing the gas thus formed through ore impregnated with a neutralizing agent composed of bicarbonate of soda, caustic potash, and sodium chlorid, heating and agitating the ore and collecting and condensing the excess of gases.

[Claims 6 to 8 not printed in the Gazette.]

1,104,288. ROASTING-FURNACE. KNUT JAKOB BESKOW and ARTHUR RAMÉN, Helsingborg, Sweden. Filed Aug. 18, 1910. Serial No. 577,845. (Cl. 75—143.)



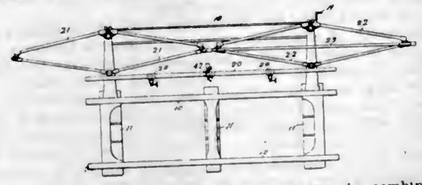
1. In an ore-roasting furnace, the combination of a support for the ore, a hopper provided with a discharge orifice spaced above said support, whereby ore may be discharged from said orifice to form a pile upon said support until the pile thus formed closes said orifice, means for adjustably varying the space between said support, and said orifice, and means for removing a portion of the ore from the pile to permit a further discharge of ore from said orifice, substantially as and for the purpose described.

2. In an ore roasting furnace the combination of a support for the ore consisting of a horizontal table fastened outside the furnace on the upper end of a rotatable vertical shaft centrally arranged in the furnace and projecting outside the furnace, a hopper provided with a discharge orifice centrally arranged above said table and spaced above said orifice to form a pile upon said support until the pile thus formed closes said orifice and one or more adjustable scrapers protruding over the circumference of the said table.

3. In an ore roasting furnace the combination of a support for the ore consisting of a horizontal table fastened outside the furnace on the upper end of a rotatable vertical shaft centrally arranged in the furnace and projecting outside the furnace, a hopper provided with a discharge orifice centrally arranged above said table and spaced above said orifice to form a pile upon said support until the pile thus formed closes said orifice and one or more adjustable scrapers protruding over the circumference of the said table, tubes leading the material scraped down from said table into the furnace.

4. In an ore roasting furnace the combination of a support for the ore consisting of a horizontal table fastened outside the furnace on the upper end of a rotatable vertical shaft centrally arranged in the furnace and projecting outside the furnace, a hopper provided with a discharge orifice centrally arranged above said table and spaced above said orifice to form a pile upon said support until the pile thus formed closes said orifice and one or more adjustable scrapers protruding over the circumference of the said table, tubes leading the material scraped down from said table into furnace, shutters arranged in said tubes, counterweights acting upon said shutters and tending to keep them closed.

1,104,289. PANTOGRAPH. WORTHY C. BUCKNAM, Jersey City, N. J., assignor to Davis-Bournonville Company, New York, N. Y., a Corporation of New York. Filed Sept. 29, 1913. Serial No. 792,323. (Cl. 33—25.)



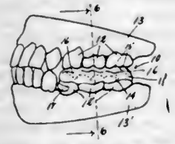
1. A pantographic apparatus, comprising, in combination, a table constituting a work-support, vertical posts mounted at the back of said table, mechanism for effecting simultaneous vertical adjustment of said posts, a transverse bar constituting an implement support, and linkage connecting said bar with said posts with capability of universal, parallel movement over said table.

2. A pantographic apparatus, comprising, in combination, a table supported on uprights and constituting a work-support, arms projecting rearward from said table, vertical members vertically adjustable in said arms, mechanism for effecting simultaneous vertical adjustment of said members, universal parallel movement linkage supported by said members, and a transverse bar carried by said linkage for movement over said table.

3. Pantographic apparatus, comprising a suitable primary support, pivotally-jointed parallelograms having corresponding joints fixed to the support, a bar connecting two corresponding freely-movable joints of the parallelograms, and another bar connecting two other freely-movable joints thereof and constituting an implement support

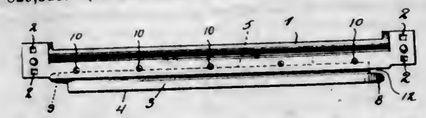
4. The combination with a pantographic structure, of a swiveled tracer support thereon carrying a tracer wheel and mechanism for driving the same, said tracer support also having a lateral socket, and a radius arm with center attachable to said socket, substantially as described.

1,104,290. REMOVABLE ATTACHMENT FOR COMPENSATING MALARTICULATION OF TEETH. MERRILL S. CHARLES, Los Angeles, Cal. Filed May 5, 1914. Serial No. 836,575. (Cl. 32—5.)



The herein-described removable attachment for compensating mal-articulation existing between the teeth in one jaw and the corresponding teeth in the other jaw, consisting of a body adapted to occupy the space between the teeth in the one jaw and the corresponding teeth in the other jaw, said body having its outer side provided with projections and depressions corresponding to the sulci and cusps on the ends of the teeth in one of the jaws, and having its inner sides provided with projections and depressions corresponding to the sulci and cusps on the ends of the teeth in the other of the jaws, and said body having at the edge thereof a flange which extends substantially at right angles thereto and is adapted to fit against the teeth, said flange having an extension adapted to fit around and clasp adjacent teeth.

1,104,291. LAWN-MOWER. JOSEPH CHESTER CLARK, San Angelo, Tex. Filed Apr. 4, 1914. Serial No. 829,519. (Cl. 56—19.)



1. A stationary blade, for the purpose described, made of flexible material and having a tongue extending lengthwise from each end and parallel with the longitudinal edges of the blade.

2. In a lawn mower having a plurality of rotating knives, a stationary blade comprising a flat body portion and a downwardly curved tongue extending lengthwise from one end and adapted to be contacted with by said rotating knives.

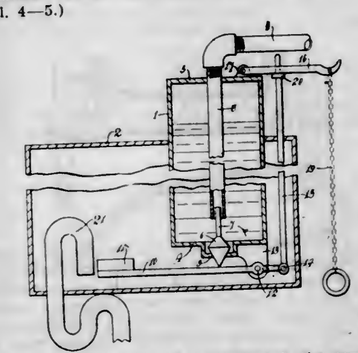
3. In a lawn mower having rotating knives, a stationary blade comprising a thin flat body portion rectangular in cross section, and a downwardly curved tongue extending lengthwise thereof and parallel with the axis of said blade.

4. In a lawn mower having rotating knives, a stationary blade comprising a thin flat body portion rectangular in cross section, and a tongue extending lengthwise from each end and parallel with the longitudinal edges thereof formed thereon.

5. In a lawn mower having rotating knives, a stationary blade comprising a thin flat body portion rectangular in cross section, and curved tongues extending lengthwise from its end and parallel with the axis of said blade, one of said tongues being curved downwardly and the other curved upwardly.

[Claims 6 to 9 not printed in the Gazette.]

1,104,292. SILENT FLUSHING APPARATUS. WILLIAM T. COWPERTHWAITE, Mount Eden, Auckland, New Zealand. Filed Nov. 28, 1913. Serial No. 803,504. (Cl. 4—5.)

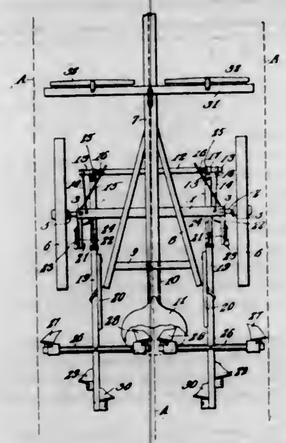


In apparatus of the nature indicated, the combination of an inner and outer chamber, means for supplying water to the inner chamber, an opening in the bottom of said inner chamber, a valve normally closing said opening and adapted to open upwardly, a pivoted lever located below the inner chamber and adapted to operate the valve, a float mounted on said lever on the same side of its pivot as said valve is located, a vertical rod connected at its lower end to said lever on the side of the pivot remote from said float, a lever adapted to operate the upper end of said vertical rod, and means for operating, by hand, the latter lever.

1,104,293. CULTIVATOR. MAL M. DECKER, Burr Oak, Kans. Filed Nov. 8, 1911. Serial No. 659,214. (Cl. 97—35.)

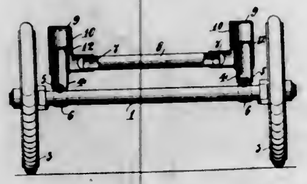
The combination with an arched member having a laterally extending trunnion, a beam pivoted on the trunnion

and having an angular cross beam, and shovels connected to the two beams, of a coiled spring secured at its upper end to the arched member and having a curved terminal portion extending back of and under the trunnion and con-



nected to the beam, said spring constituting means for shifting the shovels either downwardly or upwardly, the curved terminal coöperating with the trunnion to limit the downward movement of the shovels under the action of the spring.

1,104,294. PNEUMATIC SUSPENSION FOR VEHICLES. CHARLES A. ERICKSON, Plattsburg, N. Y. Filed Jan. 20, 1911. Serial No. 603,703. (Cl. 21—50.)



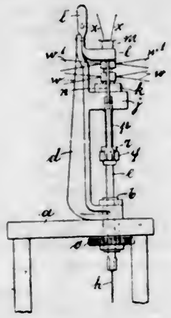
1. In a pneumatic suspension for vehicles the combination with a running gear, of a plurality of relatively stationary members pivoted to said running gear, a relatively movable member mounted upon said stationary members comprising a hollow frame containing a fluid under compression and a plurality of plungers engaging with said relatively stationary members to form compression chambers and a passage formed in the wall of each plunger for supplying fluid under pressure to said chambers from the frame and means for supplying fluid under pressure to said frame.

2. In a pneumatic suspension for vehicles the combination with the running gear, of a plurality of pistons having a long contacting surface secured to said running gear, a hollow frame movable on said pistons and forming a compression chamber between the same at the end of each piston, means for supplying fluid under pressure to said frame and chambers, and valves in said frame spaced apart to form a compartment to receive fluid having relatively higher pressure than the fluid in the other part of the frame.

3. In a vehicle, the combination with the running gear and body provided with a hollow frame affording an air chamber, of means for supporting the body upon the running gear comprising a pair of members pivotally secured in spaced relation upon the running gear to swing in the same plane, a pair of members secured to the frame and telescoping with the first pair to form air cushion supports having communication with the air chamber of the body, a pair of levers movable substantially in the swinging plane of the members and fulcrumed to the body and each lever having one arm pivotally connected to the running gear and a pair of crossed members formed in sections, each member connecting the other arm of one of the levers with the body at a point near the opposite lever and springs for connecting the sections to yieldingly oppose the lengthening of said members to thereby resist the swinging of the telescoping members and the recoil thereof when compressed.

4. In a vehicle the combination with the running gear and body, of a pair of pneumatic supports pivotally secured in spaced relation upon the running gear to adapt them to swing in the same plane and rigidly secured to the body to afford resilient supporting means therefor, a retarding means including a bracket rigidly secured to the body within the space between the supports, a lever fulcrumed to the bracket and pivotally accured by one of its arms to the running gear, a member formed in sections connecting the other arm of the lever with the body at a point spaced from said bracket, and a spring engaged by said sections to yieldingly oppose the lengthening of said members to thereby resist the swinging of said pneumatic supports and recoil thereof when compressed.

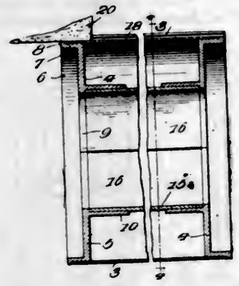
1,104,295. AUTOMATIC FUSION DEVICE FOR MAKING METALLIC-FILAMENT SUPPORTS. KARL FARKAS, Glen Ridge, N. J. Filed Dec. 19, 1910. Serial No. 598,101. (Cl. 49—2.)



1. In an automatic fusion device for making metallic filament supports, a chuck and magazine comprising a chuck body having two openings for the leads, a magazine of less height than the chuck with central channel therein having a reduced lower portion and a plurality of openings in its top portion for receiving bent wires, a coiled spring around the reduced portion of the magazine, a top plate on the chuck body having openings coinciding with the openings in the magazine, a hollowed out shaft adapted to receive the glass rod or arbor in line with the central channel of the magazine, and means for advancing the glass rod or arbor and pushing the magazine toward the top plate of the chuck body to bring forward the wires.

2. In an automatic fusion device for making metallic filament supports, a chuck and magazine comprising a chuck body with two openings for the leads, a magazine of less height than the chuck with central channel having a reduced lower portion and a plurality of openings in its top portion for receiving bent wires to form the filament end supports, a top plate on the chuck body with openings coinciding with the openings in the magazine, means for supporting the stem, means for supporting and advancing the arbor, means for pushing the magazine toward the top plate of the chuck body to bring forward the wires, and a coiled spring around the reduced portion of the magazine tending to force the chuck and magazine into its normal position.

1,104,296. STOCK-SHELL FOR WINDING FABRICS. WILLIAM F. GAMMETER, Cadiz, Ohio. Filed Oct. 30, 1913. Serial No. 798,375. (Cl. 242—77.)



1. A stock roll for winding sheets of hot material including a hollow cylindrical shell of relatively thin metal, end pieces or heads carried within the ends of the shell, each head comprising a body portion having a peripheral flange supporting the shell and having a central, many sided aperture, said aperture having inwardly extending walls and said walls being longitudinally slotted, and a central tube extending through the cylinder and attached to said end pieces and having flanges extending radially through the slots of the head.

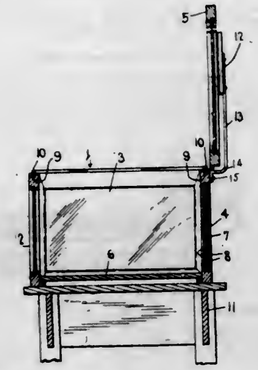
2. A stock roll for winding sheets of hot material including a hollow cylindrical shell of relatively thin metal, metallic end pieces or heads within the ends of the shell, each comprising a body portion having a peripheral flange engaging the shell, the center of each head being formed with a many sided aperture, the head being formed with walls extending inward and defining said aperture, said wall being formed with longitudinally extending slots, and a central tube extending through the cylinder from end to end, said tube being many sided and being formed in sections, the margins of the sections being outwardly flanged, said flanges extending through the slots of the wall of each head and the tube being disposed upon the inner face of said wall.

3. A stock roll for winding sheets of hot material including a hollow cylindrical shell of relatively thin sheet metal having a smooth exterior face from end to end, metallic end pieces or heads supporting the ends of the shell, each of said end pieces consisting of a disk-like body portion having a peripheral flange formed with a marginal shoulder, said shoulder engaging the corresponding end of the shell, the center of the body being formed with a many sided mandrel aperture, each head having an inwardly extending wall surrounding said aperture, the wall being longitudinally slotted at a plurality of points, and a central mandrel receiving tube extending through the cylinder from end to end and attached to said heads, said tube being formed of angular sections having marginal flanges whereby the sections may be attached to each other, the ends of said flanges extending through the slots in the wall of each head and the ends of said tube being disposed on the inner face of the wall.

4. A stock roll for winding sheets of hot material including a hollow cylindrical shell, end pieces or heads carried within the ends of the shell, each head being formed with a central opening having inwardly extending, longitudinally slotted walls, and a central tube extending through the cylinder and engaging the heads, said tube having radially disposed flanges engaging with the slots of said walls.

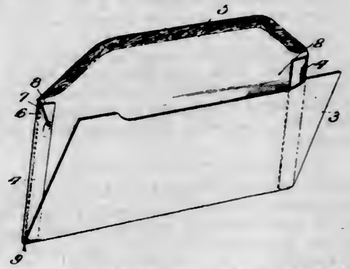
5. A stock roll for winding sheets of hot material including a hollow cylindrical shell, end-pieces or heads carried within the ends of the shell, each head being formed with a central opening having walls projecting from the head parallel to the shell, and a central tube extending through the cylinder and engaging the heads, said tube and wall having one, a radially disposed projecting portion, and the other a radially disposed slot within which the projecting portion is received to thereby connect the tube to the head for rotary movement therewith.

1,104,297. SHOW-CASE. FRANK GURLEY, High Point, N. C. Filed June 12, 1911. Serial No. 632,617. (Cl. 211—25.)



The combination with a show case having a glazed hinged cover, of a yielding standard projecting from the upper edge of the rear wall of said case, projecting substantially in a vertical position with the rear wall of the show case, a rectangular shaped frame secured to and forming a part of the upper end of the standard and adapted for contact with the glass of the hinged cover for supporting the sash in a vertical position and adapted to display through the glass of the cover, the sign or other advertising matter that may be secured to and carried by said transversely positioned upper end of the standard.

1,104,298. ENVELOP. PAUL HARI, Portland, Oreg., assignor, by direct and mesne assignments, to Oregon Envelope Company, a Corporation of Oregon. Filed Dec. 8, 1913. Serial No. 805,389. (Cl. 229—86.)

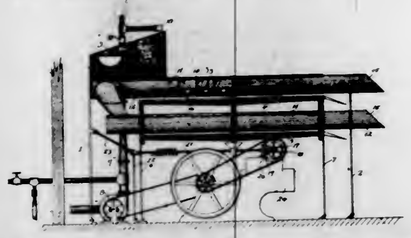


1. In an envelop having an end flap and a back flap adhering to the face of one extremity of the end flap, a cutting thread positioned within the fold of the end flap, one extremity of the thread being looped over one edge of the end flap and extending diagonally of the outer face thereof the portion looped over terminating adjacent the free side edge of the flap and being secured between the adhering gummed faces of the end and back flap the free end of the thread projecting beyond the opposite edge of the envelop and forming a free terminal.

2. In an envelop having an end flap and a back flap adhering thereto, a sinuously disposed cutting thread positioned within the end flap, one extremity of the thread being secured to the envelop and the opposite extremity thereof extending to form a free terminal.

3. In an envelop having an end flap and a back flap adhering to the face of one extremity of the end flap, a cutting thread positioned within the end flap and being sinuously disposed throughout a portion of its length, one extremity of the thread being looped over one end edge of the end flap to extend diagonally of the upper extremity thereof and being secured between the adhering gummed faces of the side and end flap, an inwardly directed obliquely disposed V-shaped slot formed in the free edge of the end flap, and arranged to engage the extremity of the looped over portion of the thread, the free end of the thread projecting beyond the opposite edge of the envelop and forming a free terminal.

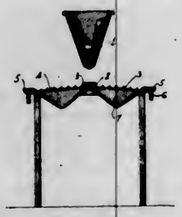
1,104,299. DISTRIBUTER FOR CONCENTRATORS. WILLIAM A. HUELSDONK, Le Grand, Cal. Filed Jan. 23, 1913. Serial No. 743,783. (Cl. 83—59.)



1. A distributing member for a concentrating apparatus, the same comprising a longitudinal trough adapted to receive material, another trough disposed immediately below said first named trough and receiving said first named trough between its sides, said first named trough being provided along its lower edge with a plurality of openings communicating with said second named trough, said first named trough being also provided with a plurality of openings in each of its sides above said first named openings, said openings in the said sides of said first named trough communicating with said second named trough, said second named trough being provided with a plurality of openings along its lower edge, as described.

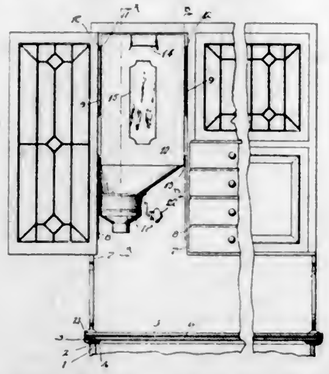
2. A distributing member for a concentrating apparatus, the same comprising a trough adapted to receive material, said trough being provided with a plurality of openings along its lower edge, said trough being also provided with a plurality of openings in each side above said first named openings, said last named openings each having a projecting lip on one edge, said lip being adapted to be bent to adjust the size of said opening, a receiving trough disposed below said first named trough, all the openings in said first named trough communicating with said second named trough, said second named trough being provided with a plurality of openings in its lower edge, as described.

1,104,300. CONCENTRATING-TABLE. WILLIAM A. HUELSDONK, Le Grand, Cal. Original application filed Jan. 23, 1913, Serial No. 743,783. Divided and this application filed June 23, 1913. Serial No. 775,190. (Cl. 83—88.)



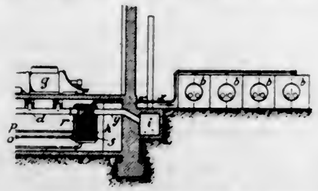
A concentrating table consisting of a central longitudinal member, a screen mesh disposed on said central member, a platform disposed in a sloping manner on each side of said central member, and in a lower plane than said central member, each of said platforms being provided with a plurality of riffles, as described.

1,104,301. KITCHEN-CABINET. OSCAR F. JOHNSON, Red Wing, Minn., assignor to The Red Wing Manufacturing Company, Red Wing, Minn., a Corporation of Minnesota. Filed Sept. 7, 1912. Serial No. 719,045. (Cl. 45—16.)



In a cabinet, the combination of laterally spaced supports provided adjacent their front edges with vertical guide-ways; a receptacle provided adjacent the front of its lower end with lateral projections slidably and pivotally engaging the respective guide-ways; and two links respectively pivoted at their lower ends to the supports rearwardly of and above, the guide-ways and removably pivoted at their upper ends to the receptacle adjacent the rear of its upper end.

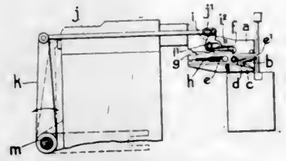
1,104,302. PRELIMINARY HEATER. NICOLAS KIHN, Düdelingen, Luxemburg, assignor to Eisenhütten-Aktien-Verein Düdelingen, Düdelingen, Luxemburg. Filed Feb. 28, 1910. Serial No. 546,577. (Cl. 122—24.)



In combination, a gas engine cylinder provided with a water jacket, a boiler provided also with a water jacket, means for passing relatively cold water into said engine jacket, means for leading water through said engine jacket into said boiler jacket, means for leading water through said boiler jacket into the interior of said boiler, and means for passing exhaust gases from said cylinder through said boiler.

1,104,303. THREAD-SEVERING MECHANISM FOR AUTOMATIC LOOMS. ALBERT GEORG KOECHLIN, Basel, Switzerland, assignor, by mesne assignments, to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 10, 1912. Serial No. 714,437. (Cl. 139—85.)

1. In a weft-thread severing mechanism for automatic looms, the combination of a shuttle bobbin exchange device, a movable carrying slide having a primary locking and a secondary tooth, a weft-thread cutter mounted on said slide, a locking lever to engage the primary locking tooth of said slide in an inoperative rear position thereof, said locking lever being rotatably and slidably mounted upon a pivot, means to move said cutter slide out of its rear position into a forward position when unlocked, returning means dependent on the batten for utilizing the beating movement of the latter to bring said cutter slide back to its rear position, operating means for said cutter to open it in its rear position and to close it when moved forward out of this position, and interconnecting means between said bobbin exchange device and said locking lever arranged to so control the latter when a bobbin exchange is set into operation that the locking lever may be disengaged from the cutter slide and simultaneously withdrawn out of its locking position, substantially as and for the purpose described.
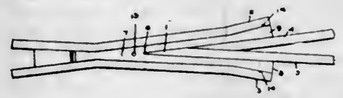


2. In a weft thread severing mechanism for automatic looms, the combination of a shuttle bobbin exchange device, a movable carrying slide having a primary locking and a secondary tooth, a weft-thread cutter mounted on said slide, a locking lever to engage the primary locking tooth of the said slide in an inoperative rear position thereof, said locking lever being rotatably and slidably mounted upon a pivot, means to move said cutter slide out of its rear position into a forward position when unlocked, returning means dependent on the batten for utilizing the beating movement of the latter to bring said cutter slide back to its rear position, operating means for said cutter to open it in its rear position and to close it when moved forward out of this position, and interconnecting means between said bobbin exchange device and said locking lever arranged to so control the latter when a bobbin exchange is set into operation that the locking lever may be disengaged from the cutter slide and simultaneously withdrawn out of its locking position, a shuttle feeler being provided and having means to cut the thread in the neighborhood of the shuttle and to clamp it on the side directed toward the aforesaid weft-thread cutter until the thread is severed by the latter, substantially as and for the purpose described.

1,104,304. SHOE-FORM. ALFRED G. LEGGE, Brockton, Mass. Filed June 28, 1911. Serial No. 635,853. (Cl. 12—128.)



The improved shoe form comprising a hollow toe part of sheet material, an ankle member of similar material having an upper surface filling the opening in the upper of the shoe, and having depending sides lying against the rear ends of the toe part and adapted to lie adjacent the lining of the shoe, said ankle member being pivoted to the sides of said toe part by two opposite pivots, each extending through the said contacting portions of said toe and heel parts.

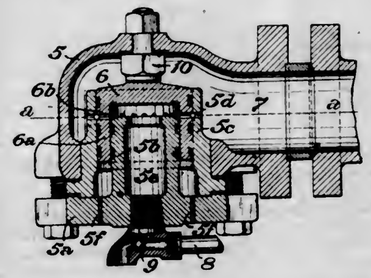
1,104,305. SAFETY DEVICE FOR RAILWAY FROGS AND GUARD-RAILS. EDWARD BOSWELL MALCOLM, Campbellton, New Brunswick, Canada. Filed July 15, 1913. Serial No. 779,181. (Cl. 104—50.)



1. In a safety device for frogs or guard rails, a plate of spring material suitably shaped and fitted between two railway rails, said plate having downwardly curved ends terminating in curled extremities engaging the bases of the rails, a bolt hole therethrough intermediate of the length thereof and a U-shaped recess extending thereinto from the top and completely across between said bolt hole and one end, and a lateral lug at the other end, a bolt extending through said bolt hole and engaging said plate, an anchor plate engaging the other end of said bolt, a spring encircling said bolt between said anchor plate and said spring plate, and a bolt engaging the webs of the rails and inserted through said U-shaped recess and engaging said spring plate in the bed of said recess.

2. In a safety device for frogs or guard rails, a plate of spring material covering the space between a plurality of rail heads and substantially flush with the tops of said rail heads, said plate having a bolt hole intermediate of the length thereof, lateral lugs at one end extending under the rail heads, downward bends toward the other end forming a U-shaped recess and downwardly curved ends terminating in curled extremities and engaging the bases of the rails, a bolt inserted through the webs of the rails and engaging said spring plate in the bed of said U-shaped recess, a bolt inserted through said bolt hole having its head countersunk in said plate, an anchor plate engaging the lower end of said bolt and held thereto by a suitable locked nut, and a spring inserted in said bolt between the anchor plate and the spring plate and maintaining said spring plate in its upper position flush with the top surfaces of the rails.

1,104,306. DRIFTING-VALVE FOR LOCOMOTIVE-ENGINES. HENRY C. MANCHESTER and SAMUEL S. RIEGEL, Scranton, Pa. Filed Aug. 21, 1913. Serial No. 785,888. (Cl. 121—14.)



1. In a drifting valve device for locomotive engines, the combination of a casing having connections adapted to communicate respectively with a distribution valve chest and a boiler steam supply, and a valve for controlling the flow of steam through the casing, said valve being subject in one direction to the pressure from the valve chest tending to close the same, and in the opposite direction to the live steam pressure from the boiler tending to open said valve.

2. In a drifting valve device for locomotive engines, the combination of a casing having connections adapted to communicate respectively with a distribution valve chest and a boiler steam supply, and a valve controlling the ad-

mission of a limited quantity of live steam, said valve having means subject to the opposing pressures of the valve chest and the boiler for operating the same.

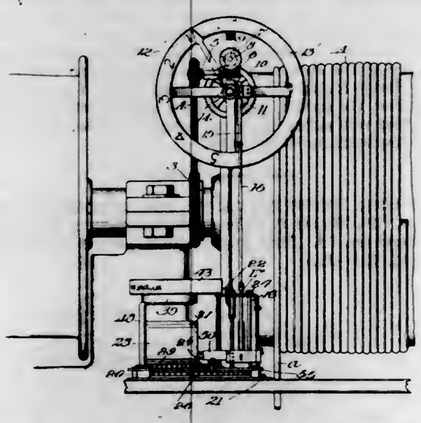
3. In a drifting valve device for locomotive engines, the combination of a casing having connections adapted to communicate respectively with a distribution valve chest and a boiler steam supply, and a valve for controlling the flow of steam from the latter to the former, said valve having a larger area subject to the valve chest pressure tending to close the same, and a smaller area subject to the boiler pressure in the opposite direction tending to open said valve, a portion of said valve being subject to atmospheric pressure.

4. In a drifting valve device for locomotive engines, the combination of a casing having connections adapted to communicate respectively with a distribution valve chest and a boiler steam supply, and a valve subject to the opposing pressures of the valve chest on one side, and to the boiler pressure and the atmosphere on the other side for controlling the flow of steam through the casing.

5. In a drifting valve device for locomotive engines, the combination of a casing having connections adapted to communicate respectively with a distribution valve chest and a boiler steam supply, a cylindrical flange within said casing, a cup shaped valve mounted in said cylindrical flange, and a cylindrical projection extending within the cup valve.

[Claims 6 to 10 not printed in the Gazette.]

1,104,307. AUTOMATIC COUNTING AND RECORDING MECHANISM. FRANK W. MCLEAN, Morenci, Ariz. Filed Mar. 18, 1913. Serial No. 755,265. (Cl. 234—1.)



1. A counting mechanism including a record sheet holder, a stylus coacting with the holder and means for reciprocating the stylus across the record sheet holder, and means actuated by the reciprocation of the stylus and engaging the record sheet holder for advancing the record sheet holder a predetermined distance only in a direction at right angles to the direction of movement of the stylus upon each complete reciprocation of the stylus.

2. A counting mechanism including a record sheet holder, a fixed stylus, a movable stylus disposed below the fixed stylus, means for reciprocating the stylus across the sheet holder, means actuated by the reciprocation of said means for advancing the record sheet holder one step for each reciprocation of the styli, and means shifting the second-named stylus into action with the record sheet holder at predetermined intervals.

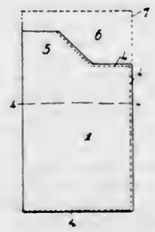
3. A counting mechanism including a rotatable, cylindrical sheet holder, a stylus carrier reciprocating parallel to the axis of the holder, an upper fixed stylus carried upon the carrier, a lower outwardly shiftable stylus carried thereby, means actuated by the reciprocation of the carrier for advancing the holder one step at each reciprocation of the carrier, and means for causing the projection of the shiftable stylus at predetermined intervals.

4. A counting mechanism including a cylindrical record holder, a ratchet wheel operatively connected with the record holder to rotate the same, a reciprocating stylus carrier movable parallel to the axis of the holder, a stylus thereon coacting with the holder, and means operatively connected with the carrier and operatively engaging the ratchet wheel for advancing the ratchet wheel and record holder one step only upon each complete reciprocation of the carrier.

5. A counting mechanism including a rotatable record holder, a ratchet wheel operatively connected with the record holder to rotate the same, a reciprocating stylus carrier movable parallel to the axis of the record holder, a fixed stylus carried thereon, a movable stylus carried thereon, means operatively engaging the reciprocating stylus carrier and the ratchet wheel whereby the latter may be advanced one step upon each reciprocation of the stylus carrier, and means operatively engaging the movable stylus and operatively engaged by said ratchet wheel for projecting the movable stylus at definite intervals into coaction with the record holder.

[Claims 6 to 27 not printed in the Gazette.]

1,104,308. BAG. WILLIAM J. MOELLER, Wyoming, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed Mar. 1, 1911. Serial No. 611,605. (Cl. 150—3.)



1. As an article of manufacture, a bag cut away to form an outwardly extending contracted neck and opening at the top on one side thereof, and suitable means for closing said opening, substantially as set forth and for the purposes specified.

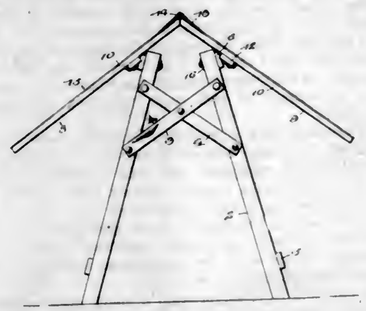
2. As an article of manufacture, a bag having a longitudinal seam, said bag being cut away at the top adjacent said longitudinal seam to form an outwardly extending contracted neck and opening, at one side of the top of the bag, and suitable means for tying said outwardly extending neck to close said opening, substantially as set forth and for the purposes specified.

3. A bag comprising a main body portion and provided with a tapered outwardly extending open neck at one side thereof, and means for closing said neck.

1,104,309. SWING-CANOPY. JOSEPH J. PARENT, Auburn, Me. Filed May 7, 1913. Serial No. 766,199. (Cl. 135—5.)

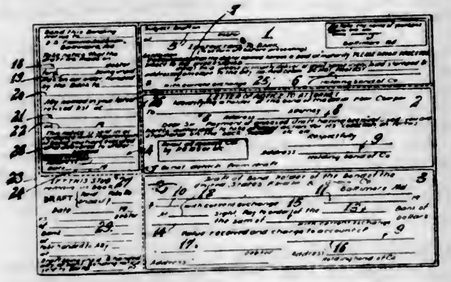
1. A folding canopy for lawn swings comprising a pair of frames hingedly connected to each other, a canopy covering extending over said frames, and brackets carried by said frames for fastening the same to the transverse braces of a swing, each of said brackets comprising a bracket member carried by the frame for engaging said transverse brace and means for clamping said bracket member to said brace.

2. A folding canopy for lawn swings comprising a pair of frames hingedly connected to each other, a canopy covering extending over said frames, said frames each comprising side bars, an end bar and a cross bar, brackets carried by said cross bars for supporting the same from the transverse braces of a swing, and removable hook members



carried by said bracket members for clamping the same to said braces.

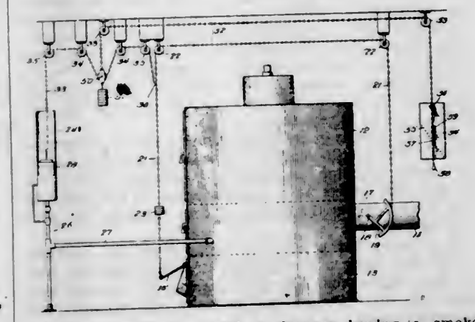
1,104,310. COLLECTION-DRAFT, &C., SHEET. HERBERT LEE PAICE, Baltimore, Md. Filed May 9, 1913. Serial No. 766,514. (Cl. 11—19.)



An original entry sheet having a main dividing portion at which the sheet may be separated into two sections, each of said sections having a plurality of printed forms, each section having a dividing portion at which one of the forms of a sheet section may be separated from the remainder, combined with a second or transfer entry sheet having a dividing portion corresponding in relation and location to that of the original sheet at which said second sheet may be divided into two sections that correspond in location to the sections of the original sheet, those of said second sheet having a plurality of forms like in number to those of the corresponding sections of the original sheet, certain of said forms of the second sheet being duplicates of those of corresponding location in the original sheet and at least one of said second sheet section forms being of a different nature than the one of corresponding location on the original sheet, said forms of the original and second sheets having correspondingly located "filling in" spaces whereby the entries on the original sheet may be transferred by manifolding to the second sheet to simultaneously fill in the spaces of the second sheet forms as the corresponding spaces of the original sheet forms are filled in.

1,104,311. FURNACE-REGULATOR. HENRY F. QUICKEL, Harrisburg, Pa. Filed Nov. 5, 1912. Serial No. 729,620. (Cl. 236—6.)

1. The combination with a furnace having a smoke pipe, a normally open cut-off damper in said smoke pipe, a normally closed air intake damper, and controlling mechanism for said dampers, of means connecting said dampers whereby both the opening and the closing movements thereof are in unison, said means being adapted to permit said cut-off damper to remain partly open when said air intake damper is brought to rest in closed position, and automatically acting means for thereafter fully closing said cut-off damper when permitted by said controlling mechanism.



2. The combination with a furnace having a smoke pipe, a cut-off damper in said smoke pipe opened by gravity, an air intake damper closed by gravity, and controlling mechanism for said dampers, of a flexible connector connecting said dampers, a pulley over which said connector passes, means connecting said controlling mechanism with said flexible connector, said connector being arranged to cause both the opening and the closing movements of said dampers to be in unison but being of a length to permit said cut-off damper to remain partly open when said air intake damper is brought to rest in closed position, and a counterweight carried by said connector at a point removed from said air intake damper and between the same and said pulley for closing said cut-off damper independently of said intake damper.

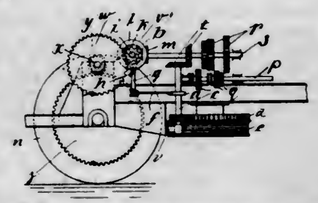
3. The combination with a furnace having one or more dampers, of mechanism for controlling said dampers, a flexible connector connecting said dampers and controlling mechanism, means for supporting said connector, and adjustable means for flexing said connector to vary the effective length thereof.

4. The combination with a furnace having a pair of dampers, of a flexible connector connecting said dampers, one or more pulleys over which said connector passes, mechanism for controlling said dampers, a second flexible connector connecting said first named connector and said controlling mechanism, and adjustable means for flexing said last named connector to vary the effective length thereof.

5. The combination with a furnace having one or more dampers, of mechanism for controlling said dampers, a flexible connector connecting said dampers and controlling mechanism, means for supporting said connector, and a separate adjustable pulley over which said connector passes for flexing the same to vary the effective length thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,104,312. HAULING DEVICE FOR AGRICULTURAL MACHINES. WLADIMIR VON RACZYNSKI, Posen, Germany. Filed Mar. 9, 1914. Serial No. 823,499. (Cl. 104—92.)



1. A power driven portable hauling device for operating agricultural machines such as plows comprising in com-

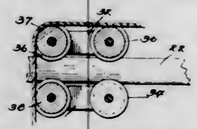
bination with the traction wheels of means including an internal combustion engine for driving said wheels at a uniform speed such that the hauling device will move slowly through a predetermined distance.

2. A power driven portable hauling device for operating agricultural machines moving over a plurality of courses in a field, comprising in combination with the traction wheels, of means including an internal combustion engine for driving said wheels at a uniform speed over a distance equal to one of the courses in the field during the time that the agricultural machine or machines completes a course in said field.

3. A power driven portable hauling device for operating plows comprising in combination with the traction wheels, of means including an internal combustion engine for driving said wheels at a uniform speed to the extent of one furrow during the period of time taken by the plow to plow a furrow.

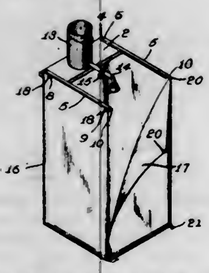
4. A power driven portable hauling device for operating plows comprising a continuously operating internal combustion engine and reduction gearing for causing said engine to drive the hauling device at an extremely low operating speed.

1,104,313. DERRICK APPARATUS. WELLINGTON RANDALL, Varner, Kans. Filed Nov. 12, 1912. Serial No. 730,946. (Cl. 212—56.)



A carrier comprising a plurality of parallel members, a carriage slidably mounted upon said carrier and provided with a plurality of spaced rollers working upon said parallel members and engaging the upper and lower faces thereof, said spaced rollers provided with flanges upon each side thereof for preventing the lateral displacement of said rollers relative to said parallel members, and cable guiding pulleys interposed between said rollers for allowing the cables passing thereover to pass between said spaced parallel members.

1,104,314. PORTABLE BATH. CHARLES A. RENCH, Hamilton, Ohio. Filed May 27, 1914. Serial No. 841,186. (Cl. 4—26.)



1. A portable bath comprising, a shelf adapted to support a pail provided with a shower-pipe, a box-shaped bag adapted to be supported from the shelf and to have its base rest upon a floor below the shelf and having its front wall openable at one of the front corners, a stoppered discharge opening in the back wall of the bag near its base, and loops upon the lower front corners of the bag adapted to engage supporting devices at the front of the top of the bag when the base of the front of the bag is elevated, combined substantially as set forth.

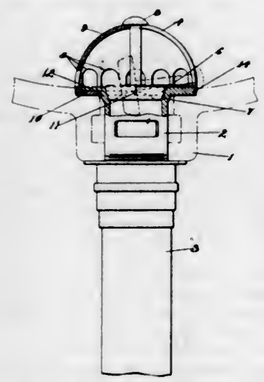
2. A portable bath comprising, a shelf adapted to support a pail provided with a shower-pipe, a box-shaped bag adapted to be supported from the shelf and to have its base rest upon a floor below the shelf and having its front wall openable at one of the front corners, a stoppered discharge opening in the back wall of the bag near its base, loops upon the lower front corners of the bag adapted to engage supporting devices at the front of the top of the bag when the base of the front of the bag is elevated, and hooks supported by the shelf and adapted to be engaged by the upper edges of the walls of the bag and to also be engaged by said loops, combined substantially as set forth.

3. A portable bath comprising, a shelf adapted to support a pail provided with a shower-pipe, bag-supporting arms detachably connected with and projecting forward from the shelf, hooks carried by said arms, and a box-shaped bag having a base adapted to rest upon a floor below the shelf and having its front wall openable at one of the front corners and having attaching devices at the upper edges of its walls for engagement with said hooks, combined substantially as set forth.

4. A portable bath comprising, a shelf, eyes carried by the shelf at the rear portion of its ends, bag-supporting arms provided at their rear ends with pins to engage said eyes and provided also with downwardly projecting dowel-pins to engage dowel-holes in the forward portion of the shelf, hooks carried by the arms, a box-shaped bag having its base adapted to rest upon a floor below the shelf and having its front wall openable at one of the front corners of the bag, and attaching devices carried by the bag and adapted to engage said hooks, combined substantially as set forth.

5. A portable bath comprising, an overhead support, a box-shaped bag having its base adapted to rest upon a floor below said support and having one of its corners openable from the top of the bag to a point near its base, attaching devices for securing the top of the bag to said support, attaching devices secured to the front lower corner of the bag and adapted to engage attaching devices on said support when the base of the bag is elevated, and a stoppered discharge opening in the back wall of the bag near its base, combined substantially as set forth.

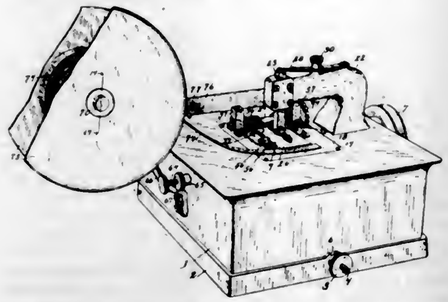
1,104,315. TRAP. HOMER G. RENNER, Portland, Oreg. Filed Aug. 19, 1913. Serial No. 785,485. (Cl. 4—35.)



1. A device of the kind described, comprising a trap plug, a guard detachably secured upon the plug, said guard consisting of a hemispherical casing having a series of peripheral openings and a vertical slot in one side rising to its center, a waste plug within the guard, a stem rising from the waste plug through said vertical slot, and a cap conforming to the surface of the guard fixed upon the stem across said slot, whereby the stem may be moved to vertical position to seat the plug, or to horizontal position to unseat it.

2. In a device of the kind described a trap plug having one portion of its flange formed in double thickness, a guard comprising a hemispherical casing having an inwardly extending flange about its edge to form a seat for the reduced portion of the plug flange and provided with a series of peripheral openings and a vertical slot, and a waste plug within said guard adapted to seat within the trap plug and having a shank extending through said slot, by means of which the waste plug may be seated and removed.

1,104,316. LABEL CUTTING AND FOLDING MACHINE. ARTHUR ROSENTHAL, Grand Rapids, Mich., assignor to Rose Label Machine Company, Grand Rapids, Mich. Filed Mar. 11, 1912. Serial No. 683,066. (Cl. 93—87.)



1. In a label cutting and folding machine, the combination of a suitable frame; a shaft with suitable driving means; an oscillating feed member; an actuating eccentric on said shaft for actuating the same to secure a step-by-step four-motion feed movement; a feed plate of parallel serrated bars adjustably supported on said feed member; a work plate with suitable central guide bars intermeshing with the toothed bars of said feed plate; a vertical pressure bar; a spring for urging the same downwardly; a pressure shoe pivoted to said pressure bar cooperating with the said feed member; a pair of spring pressed creaser rolls disposed at the end of said pressure plates for creasing said labels; means for actuating said creaser rolls; a cut-off shear consisting of stationary blade and a reciprocating blade coöperating therewith; suitable means coöperating with said feed for actuating said shears; and folder plates at each side of the pressure shoe to receive and fold the labels that are cut off and advanced by the said feed device onward to the creaser rolls for creasing the same, coacting for the purpose specified.

2. In a label cutting and folding machine, the combination of a suitable frame; a shaft with suitable driving means; an oscillating feed member; an actuating eccentric on said shaft for actuating the same to secure step-by-step four-motion feed movement; a feed plate of parallel serrated bars adjustably supported on said feed member; a work plate with suitable central guide bars intermeshing with the toothed bars of said feed plate; a vertical pressure bar; a spring for urging the same downwardly; a pressure shoe pivoted to said pressure bar coöperating with the said feed member; a pair of spring pressed creaser rolls disposed at the end of said pressure plates for creasing said labels; means for actuating said creaser rolls; a cut-off shear consisting of stationary blade and a reciprocating blade coöperating therewith; suitable means coöperating with said feed for actuating said shears; and folder plates at each side of the pressure shoe to receive and fold the labels that are cut off and advanced by the said feed device onward to the creaser rolls for creasing the same, coacting for the purpose specified.

3. In a label cutting and folding machine, the combination of a suitable frame; a shaft with suitable driving means; an oscillating feed member; an actuating eccentric on said shaft for actuating the same to secure a step-by-step four-motion feed movement; a feed plate of parallel serrated bars adjustably supported on said feed member; a work plate with suitable central guide bars intermeshing with the toothed bars of said feed plate; a vertical pressure bar; a spring for urging the same downwardly; a pressure shoe pivoted to said pressure bar cooperating with the said feed member; a pair of spring pressed creaser rolls disposed at the end of said pressure plates for creasing said labels; means for actuating said creaser rolls; a cut-off shear consisting of stationary blade and a reciprocating blade coöperating therewith; suitable means coöperating with said feed for actuating said shears; and folder plates at each side of the pressure shoe to receive and fold the labels that are cut off and advanced by the said feed device onward to the creaser rolls for creasing the same, coacting for the purpose specified.

4. In a label cutting and folding machine, the combination of a suitable frame; a shaft with suitable driving means; an oscillating feed member; an actuating eccentric on said shaft for actuating the same to secure step-by-step four-motion feed movement; a feed plate of parallel serrated bars adjustably supported on said feed member; a work plate with suitable central guide bars intermeshing with the toothed bars of said feed plate; a vertical pressure bar; a spring for urging the same downwardly; a pressure shoe pivoted to said pressure bar coöperating with the said feed member; a pair of spring pressed creaser rolls disposed at the end of said pressure plates for creasing said labels; a ratchet wheel for advancing said feed rolls; a ratchet pawl for acting on said ratchet wheel; an eccentric on said shaft for actuating said pawl; a cut-off shear consisting of stationary blade and a reciprocating blade coöperating therewith; suitable means coöperating with said feed for actuating said shears; and folder plates at each side of the pressure shoe to receive and fold the labels that are cut off and advanced by the said feed device onward to the creaser rolls for creasing the same, coacting for the purpose specified.

5. In a label cutting and folding machine, the combination of a suitable frame; a shaft with suitable driving means; an oscillating feed member; an actuating eccentric on said shaft for actuating the same to secure step-by-step four-motion feed movement; a feed plate of parallel serrated bars adjustably supported on said feed member; a work plate with suitable central guide bars intermeshing with the toothed bars of said feed plate; a vertical pressure bar; a spring for urging the same downwardly; a pressure shoe pivoted to said pressure bar cooperating with the said feed member; a pair of spring pressed creaser rolls disposed at the end of said pressure plates for creasing said labels; means for actuating said creaser rolls; a cut-off shear consisting of stationary blade and a reciprocating blade coöperating therewith; a suitable oscillating member for carrying said reciprocating blade; an eccentric on said shaft for actuating the said reciprocating blade; and folder plates at each side of the pressure shoe to receive and fold the labels that are cut off and advanced by the said feed device onward to the creaser rolls for creasing the same, coacting for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,104,317. METALLURGICAL METHOD. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Apr. 10, 1914. Serial No. 831,052. (Cl. 75—1.)

1. The metallurgical method which comprises bringing together carbon, titaniferous iron ore containing not less than 3% content of titanic oxid, and oxid of manganese in quantity not less than 10% of said titanic oxid, and melting them together at temperature below 1700° C.

2. The metallurgical method which comprises bringing together carbon, titaniferous iron ore containing not less than 3% content of titanic oxid, and manganiferous iron ore, and melting them together at temperature below 1700° C.

3. The metallurgical method which comprises bringing together carbon, titanic oxid, and oxid of manganese in

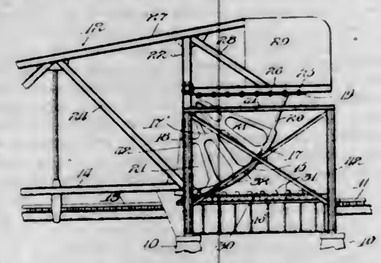
quantity not less than 10% of said titanic oxid, and melting them together at temperature below 1700° C.

4. The metallurgical method which comprises bringing together carbon, titaniferous iron ore, and manganiferous iron ore, and melting them together at temperature below 1700° C.

5. The metallurgical method which comprises bringing together carbon, titanic oxid, and manganiferous iron ore, and melting them together at temperature below 1700° C.

[Claims 6 to 18 not printed in the Gazette.]

1,104,318. BASCULE-BRIDGE. ALBERT H. SCHERZER, Chicago, Ill. Original application filed Jan. 23, 1911, Serial No. 604,015. Divided and this application filed Aug. 5, 1912. Serial No. 713,486. (Cl. 14—39.)



1. A bascule bridge provided with a one piece rolling and supporting segment which constitutes a component part of and is fixed rigidly to the bridge truss at the heel end of the truss to support the weight of the shore end of the truss in all positions of the latter, embracing a web thickened at its lower side to provide a curved bearing member, and flanged at one of its sides to constitute a strut or compression member and flanged also at another side to constitute an attaching member by which the segment is rigidly attached to the truss.

2. In a bascule bridge, the combination with a bridge leaf truss, of a one-piece rolling segment, embracing a web flanged at its lower side to constitute a curved bearing member and flanged at its inner side to constitute a strut or compression member, the truss having a strut member arranged end to end and in line with the strut member of said segment, with means for rigidly fastening the segment in the truss structure, whereby the segment constitutes a component part of the truss structure.

3. In a bascule bridge, the combination with bridge leaf trusses, of rolling segments at and constituting the heel ends of the trusses and adapted to support the weight of the shore end of the leaf in all positions of the latter, each of said segments embracing a web arranged in the plane of its truss and flanged at its lower edge to constitute a curved bearing member and flanged at its inner side to constitute a strut or compression member, the truss having a strut member arranged end to end and in line with the strut member of said segment, with means to fixedly fasten the segment in the truss structure.

4. In a bascule bridge, the combination with a leaf truss comprising upper and lower chords, with a strut member extending downwardly from the upper chord and terminating above the lower chord, and with a horizontal girder extending rearwardly from said strut member, of a one-piece rolling and supporting segment comprising a web thickened at its lower side to constitute a curved bearing member, and thickened at its inner side to constitute a strut member which is arranged end to end and in line with the shorter strut member of the truss, and being also flanged to provide a horizontal attaching member, with means to rigidly attach it to said girder.

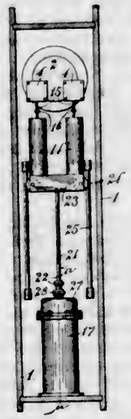
1,104,319. SKIRT. ALEXANDER M. SCHNEIDER, New York, N. Y. Filed Mar. 13, 1914. Serial No. 824,358. (Cl. 2—42.)

1. A skirt comprising an upper body having an extensible lower portion which is normally gathered into folds, an extensible flounce depending therefrom which flounce is normally gathered at its top, and an elastic at the junction between body and flounce, whereby the flounce and lower body portion are jointly held normally in their gathered position.



2. A skirt comprising an upper body that is adapted to hug the figure at the hips and extends to a point above the knees, the lower portion of said body being extensible, a pocket formed at the bottom of said lower portion, an accordion plaited flounce depending from the body and being extensible throughout its length, and an elastic within the pocket, whereby the flounce and lower body portion are jointly contracted.

1,104,320. THERMAL MOTOR. AUGUST G. SCHWIETERMAN, Dayton, Ohio. Filed Mar. 5, 1914. Serial No. 822,614. (Cl. 60—1.)



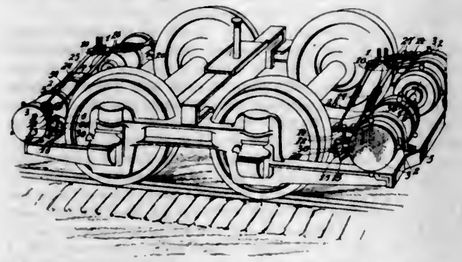
1. In a thermal motor, a cylinder containing a fluid susceptible of variations of expansion and contraction under varying atmospheric temperatures, a non-expansible fluid below said expansible fluid, and a tubular member projecting through said expansible fluid and into the non-expansible fluid, and a piston and rod within said tubular member and exposed to the action of the non-expansible fluid when the latter is affected by the expanding action effect of the expansible fluid.

2. In a thermal motor, the combination of an outer cylinder containing in its lower portion a non-expansible fluid such as a lubricating oil, and an expansible fluid thereabove, and a cap above said cylinder providing an upper chamber for a portion of said non-expansible fluid, a tubular member submerged in said non-expansible and expansible fluids and having a piston and piston rod affected by said expansible fluid through the action of the latter on the non-expansible fluid, said tubular member communicating with the upper non-expansible fluid chamber, and means affording a drainage of the non-expansible fluid from said upper chamber to the bottom of expansible fluid chamber, substantially as specified.

3. In a thermal motor, a cylinder having an upper and a lower chamber, a piston cylinder communicating with said upper and lower chambers, a piston in said last named cylinder adapted to be acted upon by liquid in the lower chamber, and a valve controlling the communication through said piston cylinder between said upper and lower chambers.

4. In a thermal motor, a main cylinder containing a fluid subject to expansion through changes in atmospheric temperature, and a non-expansible fluid below said expansible fluid, an overflow reservoir above said cylinder for said non-expansible fluid, a tubular member submerged in said expansible and non-expansible fluids, and having an overflow opening discharging into the reservoir for the non-expansible fluid, a piston and rod in said tubular member exposed to the action of the non-expansible fluid when acted upon by expansion of the expansible fluid, a tubular member providing a communication between the non-expansible fluid reservoir and the portion of the main cylinder below the expansible fluid contained therein, and a valve in said last named tubular member controlling said communication, substantially as specified.

1,104,321. WHEEL-FLANGE LUBRICATOR. ROBERT H. SCROGGINS, Vienna, Va., assignor of one-half to Joseph H. Bradley, Washington, D. C. Filed May 22, 1913. Serial No. 769,245. (Cl. 184—3.)



1. A lubricating means of the character described, the combination with the car truck, a lubricant holder mounted thereon and having a discharging nozzle arranged to eject the lubricant against the car wheel flange, means coöperating with the holder for normally forcing the lubricant through the nozzle, a closure member for the nozzle and a means for catching the lubricant as it escapes from the nozzle to cause it to smear over the wheel flange against which the lubricant is ejected, and other means actuated by the swinging of the car truck for controlling the movements of the closure member and the means for smearing the ejected lubricant onto the wheel flange.

2. In a wheel flange lubricator, the combination with the wheeled truck; of a lubricant holding cylinder mounted on the truck, said cylinder having an ejecting nozzle for delivering the lubricant against the wheel flange, a spring-pressed piston within the cylinder that forces the lubricant toward the nozzle, means operable externally of the cylinder for returning the spring-pressed piston to its back position, the said cylinder having a capped filling end, a closure member for the nozzle end, and means controlled by the lateral swing of the car truck that coöperates with the closure member to effect the opening and closing of the said closure member.

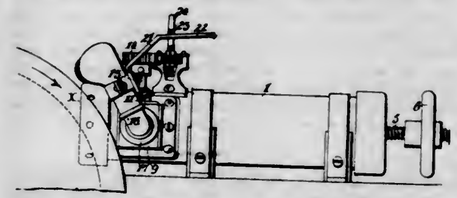
3. In a wheel flange lubricator, the combination with the wheeled truck; of a lubricant holding cylinder mounted on the truck, said cylinder having an ejecting nozzle for delivering the lubricant against the wheel flange, a spring-pressed piston within the cylinder that forces the lubricant toward the nozzle, means operable externally of the cylinder for returning the spring-pressed piston to its back position, the said cylinder having a capped filling end, a closure member for the nozzle end, means controlled by the lateral swing of the car truck that coöperates with the closure member to effect the opening and closing of the said closure member, and means including a rock shaft, a cam thereon, a slidable member whose movements are controlled by the movements of the cam and a connection that joins the closure member and slidable member.

4. In a car wheel flange lubricator, the combination with the car truck, of a cylinder located in front of each one of an opposite pair of car wheels, each cylinder including a laterally projected nozzle for ejecting the lubricant over its corresponding wheel flange, means contained within each cylinder for normally forcing the lubricant therein through the nozzle thereof, a closure member for each cylinder nozzle, and a means controlled by the lateral swing of the car truck for simultaneously opening the closure members for the opposite cylinders.

5. In a car wheel flange lubricator, the combination with the car truck, of a cylinder located in front of each one of an opposite pair of car wheels, each cylinder including a laterally projected nozzle for ejecting the lubricant over its corresponding wheel flange, means contained within each cylinder for normally forcing the lubricant therein through the nozzle thereof, a closure member for each cylinder nozzle, a means controlled by the lateral swing of the car truck for simultaneously opening the closure members for the opposite cylinders, said means including a pair of oppositely disposed rock shafts, each carrying a cross head, a longitudinally disposed bracket secured to the car body and having pendent front and rear bearings, a pair of connecting lever members for each rock shaft pivotally connected to the opposite ends of the front and rear pendent brackets, and to their respective rock shaft cross heads.

[Claim 6 not printed in the Gazette.]

1,104,322. WHEEL-FLANGE-LUBRICATING MECHANISM. ROBERT H. SCROGGINS, Vienna, Va., assignor of one-half to Joseph H. Bradley, Washington, D. C. Filed July 31, 1913. Serial No. 782,342. (Cl. 184—3.)



1. A wheel flange lubricating mechanism that comprises the following elements in combination; a lubricant holding cup having an inlet and an outlet, means for normally forcing a lubricant into the said inlet, a valve device that controls the flow of the lubricant through the cup from the inlet to the outlet thereof, a wheel flange smearing member in communication with the outlet from the cup, a power transmitting member connected with the valve, means that joins said member with the car body for moving the said member laterally in reverse directions as the car body swings laterally when passing over curves to thereby shift the controlling valve to open and close the fluid passages between the inlet and outlet of the grease cup.

2. A wheel-flange lubricating mechanism that comprises the following elements in combination; a lubricant holding cup having an inlet and an outlet, means for normally forcing a lubricant into the said inlet, a valve device that controls the flow of the lubricant through the cup from

the inlet to the outlet thereof, a wheel flange smearing member in communication with the outlet from the cup, a power transmitting member connected with the valve, means that joins the said member with the car body for moving the said member laterally in reverse directions as the car body swings laterally when passing over curves to thereby shift the controlling valve to open and close the fluid passages between the inlet and outlet of the grease cup, said transmitting member being formed of sections, and means for longitudinally adjusting the said sections with respect to each other.

3. A wheel flange lubricating mechanism that comprises the following elements in combination; a lubricant holding cup having an inlet and an outlet, means for normally forcing a lubricant into the said inlet, a valve device that controls the flow of the lubricant through the cup from the inlet to the outlet thereof, a wheel flange smearing member in communication with the outlet from the cup, a power transmitting member connected with the valve, means that join the said member with the car body for moving the said member laterally in reverse directions as the car body swings laterally when passing over curves to thereby shift the controlling valve to open and close the fluid passages between the inlet and outlet of the grease cup, and means carried by the transmitting member for setting the smearing member into and out of engagement with the wheel flange as the controlling valve is shifted.

4. In a wheel flange lubricating mechanism, a lubricant container having a discharge through which the lubricant is ejected, means for normally forcing the lubricant through the said discharge, a supplemental grease holding cylinder or cup in communication with the said discharge, the said cup having an outlet, a smearing member in communication with the said outlet, a tubular valve rotatably mounted within the grease cup, said valve having radial apertures adapted to be alternately brought into communication with the inlet and outlets of the grease cup, means connected with the said rotatable tubular valve and with the car body whereby to automatically shift the said valves as the car truck passes onto and from the curved trackway sections.

5. In combination a lubricant holding cylinder having a discharge means that coöperates with the cylinder for creating a continuous force feed of the lubricant through the said discharge, a pivotally supported smearing member adapted to swing in the vertical plane and to drop against the wheel flanges, a lubricant feedway in constant communication with the smearing member, a valve coöperatively connected with the said feedway for controlling the passage of the grease therethrough to the smearing member, and operative connections between the car body and the valve and the smearing member for shifting the said smearing member and the valve at times when the wheel truck enters and passes over curved track sections.

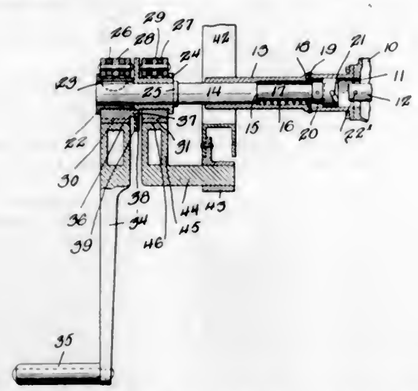
[Claims 6 to 9 not printed in the Gazette.]

1,104,323. SAFETY STARTING-CRANK. JOSIAH H. ROHRER, Philadelphia, Pa. Filed Aug. 7, 1912. Serial No. 713,862. (Cl. 123—185.)

1. The combination with a shaft, of sleeves carried by the said shaft, gripping jaws engaging said sleeves, a connection between one sleeve and the gripping jaws of the other sleeve, a supported bracket operatively connected to one set of gripping jaws, and a crank operatively connected to the other set of gripping jaws.

2. The combination with a shaft, a sleeve keyed therein, gripping-jaws engaging said sleeve, a second sleeve loose upon said shaft and connected to the gripping-jaws engaging the keyed sleeve, a second pair of gripping-jaws engaging the loose sleeve, a bracket engaging one set of gripping-jaws, and a crank operatively connected to the other set of gripping-jaws.

3. The combination with a shaft of a sleeve keyed thereon, a second sleeve loose upon the shaft, a pair of gripping jaws engaging each sleeve, a connection between the first sleeve and the gripping jaws of the second sleeve, a bracket, a crank arm, one jaw in one pair being fulcrumed to the bracket and the corresponding jaw in the other pair fulcrumed to the arm, cam extensions formed upon the other jaw in each pair, and said bracket and crank arm being formed with recesses to receive said cam extensions.



4. The combination with a shaft, of a sleeve keyed thereon, a second flanged sleeve rotatably mounted thereon, a pair of gripping jaws engaging said sleeves, cam extensions formed upon the like jaws of each pair, a pin formed upon the cam extension of one gripping jaw engaging the keyed sleeve, and entering an aperture formed in the flange of the second sleeve, fulcrums formed on the other jaws of each pair, a crank and a bracket, said fulcrums being connected to the crank arm and bracket, and said crank arm and bracket being both formed with recesses to receive the cam extensions.

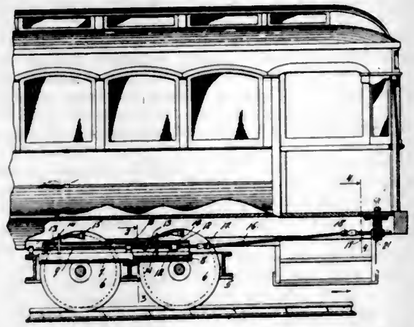
5. The combination with a shaft, of a sleeve keyed thereon, a second sleeve formed with a flange and loose upon said shaft, a pair of gripping jaws frictionally engaging each sleeve, said jaws of each pair being pivotally connected, cam extensions formed upon the like jaws of each pair, a pin formed upon the cam extension of the gripping jaw engaging the keyed sleeve and entering an aperture formed in the flange of the second sleeve, fulcrums formed on the other jaws of each pair, a crank arm and a bracket, one of said fulcrums being connected to the crank arm, and the other fulcrum to the bracket, said crank arm and bracket being formed with recesses to receive the cam extensions, a link pivoted to one jaw, a bell-crank lever pivoted to the link and crank arm, a finger extending from one jaw and a spring sleeved to the crank arm to engage the finger.

[Claims 6 and 7 not printed in the Gazette.]

1,104,324. CAR-WHEEL-FLANGE LUBRICATOR. SAMUEL W. SNYDER and PHILIP C. BOELZNER, Mount Morrison, Colo. Filed Jan. 22, 1913. Serial No. 743,490. (Cl. 184—3.)

1. In a car wheel-flange lubricator, the combination with the car body and truck, of a rock shaft mounted on a truck frame, a lubricant-applying device carried by the said shaft, means also mounted upon the truck frame for supplying lubricant to the said device, and means mounted on the body of the car, and connected in operative relation with said shaft for actuating the latter to bring the lubricant-applying device into engagement with a wheel of the truck for the purpose set forth.

2. In apparatus of the class described the combination with the car body and truck, of a rock shaft journaled on the truck frame, lubricant-applying devices carried by the said shaft, and a lubricant-containing receptacle also mounted on the truck and in which the lubricant-applying devices are normally located, rock-shaft-actuating means carried by the body of the car and connected in operative relation with the shaft for bringing the lubricant-applying devices into engagement with wheels of the truck, substantially as described.



3. The combination with a car body and truck, of a rock shaft journaled on the truck frame, brushes carried by the said shaft, guides for the brushes, means for supplying the brushes with lubricant, and rock-shaft-actuating means mounted on the body of the car and connected in operative relation with the shaft for bringing the brushes into engagement with the car wheels of the truck.

4. The combination with a car body and truck, of a rock shaft journaled on the truck frame, brushes carried by said shaft, stationary guides for the brushes, means for supplying the latter with lubricant, gearing mounted on the body of the car, a push stem for operating the gearing, and an operative connection between the gearing and the rock shaft, for actuating the latter to cause the brushes to travel in their guides into engagement with the car wheels for the purpose set forth.

5. The combination with a car body and truck, of a rock shaft journaled on the truck frame, curved arms rigidly secured to the rock shaft, stationary guides having slots through which the said arms pass, the said guides being curved in the direction of wheels of the truck, the said arms being equipped with brushes, a lubricant receptacle mounted on the truck frame and arranged to receive the brushes when the latter are in their normal position, means for normally retaining the rock shaft in position to hold the brushes in the lubricant of the said receptacle and means connected with the rock shaft and operable from the body of the car for causing the brush arms to travel in their guides to bring the brushes into engagement with wheels of the truck, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,104,325. BOBBIN FOR THREAD AND THE LIKE. JAMES STEWART, Catford, England. Filed Nov. 7, 1913. Serial No. 799,734. (Cl. 242—122.)



1. A bobbin comprising a tubular body portion made of fibrous material, metallic end disks having each a central boss portion which fits tightly within each end of said body portion, there being a central opening in said boss portion, flanges on said disks projecting over and turned onto the ends of said body portion, and serrated portions on said flanges where the latter are in contact with the body portion, substantially as described.

2. A bobbin comprising a cylindrical body portion made of fibrous material, conical flared out ends on said body portion, metallic end disks having each a conical boss portion and a central hole in each boss portion, and serrated edges on the peripheral portions of said disks, said peripheral portions projecting over the edges of the body portion and being turned over onto the ends of said body portion, substantially as described.

3. A bobbin comprising a cylindrical body portion made of fibrous material, conical flared out ends on said body portion, metallic end disks having each a conical boss portion, there being a central hole in each boss portion, grooves in the sides of said conical boss portion, an upturned edge bordering each central hole, and serrated edges on the peripheral portions of said disks, said peripheral portions projecting over the edges of the body portion and being turned over onto the ends of said body portion, substantially as described.

4. A bobbin comprising a tubular body portion made of fibrous material, metallic end disks, each having a central boss portion seated within and engaging the ends of said body portion, and flanges on said disks projecting over and turned against the body portion at the ends thereof to compress the body portion between the bosses and the turned portions of the flanges to hold the parts together; substantially as described.

5. A bobbin comprising a tubular body portion made of fibrous material, metallic end disks each having a central boss portion, an external friction surface on the sides of said boss portions in direct contact with the inner face of the body portion, and flanges on said end disks projecting over and turned against said body portion at the ends thereof to compress said body portion between the bosses and the turned portions of the flanges to hold the parts together; substantially as described.

1,104,326. NON-HYGROSCOPIC MANURE-STUFF AND PROCESS OF MAKING SAME. HUGO STOLTZENBERG, Breslau, Germany, assignor to The Firm of Melasse-Schlempe, G. M. B. H., Berlin, Germany. Filed July 7, 1913. Serial No. 777,769. (Cl. 71—7.)

1. The process of producing a non-hygroscopic fertilizer consisting in treating vinasse with phosphoric acid, substantially as described.

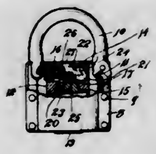
2. The process of producing a non-hygroscopic fertilizer consisting in mixing vinasse preferably after previous concentration with an acid phosphate, substantially as described.

3. The process of producing a non-hygroscopic fertilizer consisting in mixing vinasse preferably after previous concentration with superphosphates, substantially as described.

4. The process of producing a non-hygroscopic fertilizer consisting in mixing vinasse preferably after previous concentration with an acid phosphate heating the mass until a reaction sets in and condensing the acids set free, substantially as described.

5. A non-hygroscopic fertilizer consisting of a compound of vinasse and superphosphates, substantially as described.

1,104,327. PADLOCK. ELMER B. STONE, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 15, 1913. Serial No. 795,268. (Cl. 70—106.)



1. In a lock, a shackle, a bolt longitudinally movable to engage the shackle and to be released therefrom and also laterally movable to engage a stop, a bolt having a releasing recess formed therein, a stop to prevent longitudinal movement of the bolt, a cylinder, and a projection having a cam release extending into the releasing recess

in the bolt and arranged to move said bolt laterally to disengage it from said stop and to move it longitudinally to disengage it from the shackle.

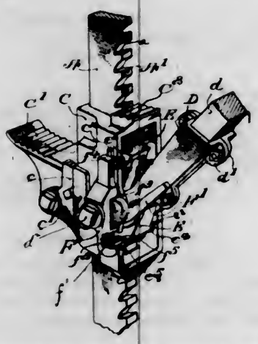
2. In a lock, a shackle, a container having a releasing recess, a stop formed at the entrance of said releasing recess, a bolt with its end located normally opposite said stop but adapted to pass into said recess, means for holding the end of the bolt opposite said stop, a cylinder located in the container, an actuator on the end of the cylinder arranged to move the bolt laterally to disengage it from its stop and longitudinally to disengage it from the shackle.

3. In a lock, a shackle, a bolt longitudinally movable to engage the shackle and to be released therefrom and also laterally movable to engage a stop, a stop to prevent longitudinal movement of the bolt, a cylinder, and a projection on said cylinder arranged to move the bolt laterally to disengage it from said stop and to move it longitudinally to disengage it from the shackle.

4. In a lock, a shackle, a container having a bolt recess, a part of which constitutes a releasing recess, a bolt located in the bolt recess but with its rear end outside of the releasing recess when the bolt engages the shackle, means for holding the end of the bolt against the stop formed by the edge of the releasing recess, a cylinder located in the container, and an actuator on the end of the cylinder arranged to move the bolt laterally to disengage it from its stop and longitudinally to disengage it from the shackle.

5. In a lock, a shackle, a container having a bolt recess and a cylinder recess, a part of the bolt recess also constituting a releasing recess, a stop formed at the edge of the releasing recess, a bolt located in the bolt recess and with its end without the releasing recess when the bolt engages the shackle, a spring seated in said releasing recess and thrusting the bolt outward and also in position to engage said stop, a cylinder located within the cylinder recess, and an actuator on the end of the cylinder arranged to engage the bolt to move it laterally to disengage it from said stop and longitudinally to disengage it from the shackle.

1,104,328. LIFTING-JACK. CHARLES H. SUTTON, Ohio City, Ohio. Filed Jan. 30, 1914. Serial No. 815,501. (Cl. 57—99.)



1. The combination with the toothed standard, of a slide mounted thereon and having its side next to the teeth open, a lever having a forked inner end passed through the slide opening and straddling the standard, a pivot mounted in the slide close to the toothed edge of the standard and upon which the forked end of the lever rocks, an upper yoke-like pawl pivoted between the inner end of the lever fork above its pivot or fulcrum and at its lower end straddling the toothed edge of the standard said pawl having an extension below its pivot, a lower pawl pivoted to the lever fork below its fulcrum or pivot, and a contractile spring connecting said lower pawl with the said extension of the upper pawl to draw the opposite free ends of the pawls into engagement with the standard teeth.

2. The combination with a standard having a toothed edge, a slide mounted on the standard, a lever pivoted in the slide, and upper and lower oppositely projecting spring pressed pawls mounted on the lever and having cam surfaces at one side near their opposite ends, of a spring pressed pawl controller mounted on the outer side of the slide and having lugs or fingers extending through slots therein into the path of the upper sides of both of said cam surfaces to alternately release the pawls when the lever is rocked to lower or retract the slide, and means for moving the controller to render it inoperative with respect to the pawls.

3. The combination with a toothed standard, a slide thereon, a lever pivoted at its inner end in the slide, upper and lower oppositely projecting spring pressed pawls pivoted to the lever and engaging the said toothed standard, a vertically sliding spring pressed controller having a slot through which the pivot of the lever passes, and provided with upper and lower lugs extending inwardly over the upper sides of portions of the pawls to alternately release them when the lever is rocked to lower the slide, and means for raising the controller to throw its lugs out of the path of the pawls.

4. The combination with a toothed standard, a slide thereon, a lever pivoted in the slide, and upper and lower oppositely projecting spring pressed pawls pivoted to the lever and engaging the standard teeth, and having cam surfaces at the same side of their opposite ends, of a spring pressed controller mounted to slide vertically on the slide and formed with a chamber and two lugs projecting laterally through the slide into the path of the upper sides of the cam surfaces on said two pawls to alternately retract them when the lever is rocked to lower or retract the slide, a spring in said chamber pressing the controller downwardly, a cam lever engaging a portion of the controller to raise it against the action of its spring and throw the lugs out of the path of the pawls to permit them to act normally when the lever is to raise the slide.

5. The combination with a toothed standard, a slide thereon, a lever pivoted in the slide, and upper and lower pawls pivoted on the inner end of the lever and engaging the toothed standard, of a slotted controller mounted at the outer side of the slide on the lever pivot and having a chamber therebelow, a spring mounted in the chamber with its upper end exposed, lugs extending inwardly from the controller over parts of the two pawls to alternately release them when the lever is rocked to lower the slide, and a cam lever also mounted on the lever pivot and engaging the controller to raise it and throw its lugs out of operative relation with the pawls; the upper end of the said spring bearing on said cam lever.

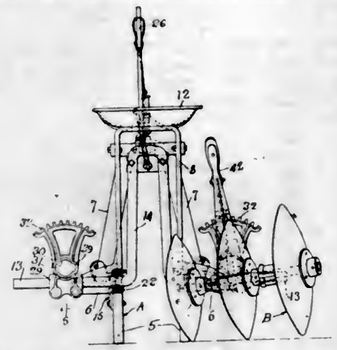
[Claim 6 not printed in the Gazette.]

1,104,329. CULTIVATOR. STARLEY S. SWANSON, Bellevue, Ohio, assignor to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed Dec. 20, 1912. Serial No. 737,796. (Cl. 97—31.)

1. In a cultivator, the combination, with a frame, and disk gangs arranged on opposite sides thereof, of interlocking connections between the gangs and the frame whereby said gangs may be readily interchanged, and a lever connected to and removable with each of said gangs to adjust the same relatively to said frame and prevent the separation of said interlocking connections.

2. In a cultivator, the combination, with a frame, and a bearing carried thereby, of a spindle journaled in said bearing, said bearing and said spindle having coöperating parts arranged to be moved into and out of interlocking engagement by the rotation of one of said members, an earth-engaging tool carrying said spindle, and means for locking the spindle against rotation to retain the same in adjusted positions and to retain said parts in interlocking engagement.

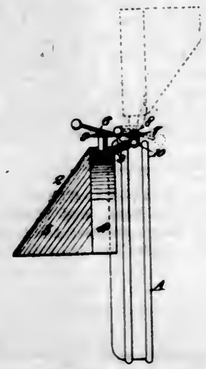
3. In a cultivator, the combination, with a frame, and a bearing carried thereby, of a spindle journaled in said bearing, said bearing and said spindle having coöperating parts arranged to be moved into and out of interlocking engagement by the rotation of one of said members, an earth-engaging tool carrying said spindle, and a lever mounted on and removable with said spindle, and a part carried by said bearing and coöperating with said lever to adjust said earth-engaging tool relatively to said frame and to retain said parts in interlocking engagement.



4. In a cultivator, the combination with a frame and a bearing carried thereby, of a spindle journaled in said frame thereby, of a spindle journaled in said frame and having interlocking connection therewith and adapted to have a limited rotatory movement in its locked position, an earth-engaging tool gang carried by said spindle, and means for simultaneously locking the gang at a predetermined angle within the limit of movement of the spindle in its locked position and locking the interlocking parts of said connection against separation.

5. In a listed corn cultivator, the combination with a pair of runners, of a transverse shaft, separable interlocking bearings respectively connected to the runners and shaft, and an earth engaging tool connected to said shaft.

1,104,330. CONCENTRATING LAMP-SHADE. CHARLES H. TOWNSEND, Berkeley, Cal. Filed Jan. 26, 1914. Serial No. 814,317. (Cl. 240—47.)



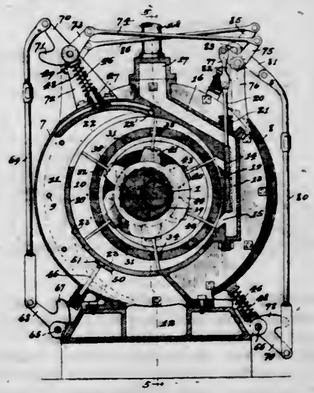
1. The combination with a reflecting and like lamp, of a segmental rim concentric with the axis of the lamp, a conical reflector converging forwardly therefrom, a hinge, one leaf of which is fixed to the top and front of the lamp frame, the other member turnable thereon and extending forwardly, sleeves extending between said member and the top of the reflector rim, and bolts extending through said sleeves to secure the reflector to the hinge.

2. A reflecting lamp of the character described, a semicircular rim concentric with the axis of the lamp, a convergent reflecting surface extending from said rim, a hinge, one member of which is secured to the top of the lamp and the other member to the rim of the reflector, an arm fixed to said latter member and capable of movement to raise or lower the reflector about the hinge, and a spring having one end fixed to the front of the reflector rim and the other at a point so related to the hinge axis that it will exert a pull to hold the reflector either open or closed.

3. The combination with a reflector of the character described, of a concentric semicircular rim having a semicircular, semi-conical reflecting segment extending forwardly therefrom, a horizontal hinge, one member of which is secured to the front of the lamp and the other to the reflector rim, an arm by which the reflector may be turnably moved about the hinge to open or close it, a crank arm extending out of line with the axis of the hinge, and a roller turnable upon the outer end of said arm, and a spring having one end connected with said turnable roller and the other to the front of the lamp rim and capable of exerting a pull to retain the reflector either open or closed.

4. In combination with a reflecting lamp, a supplemental reflector hinged thereto, an eccentric member connected to the hinge pintle, and a spring connected to said member and the supplemental reflector whereby the latter is positively held by the spring in either operative or inoperative position.

1,104,331. ROTARY ENGINE. EBER B. TREE, Chicago, Ill., assignor to Joseph H. Beach, Theodore R. Eggert, W. M. Spiegel, Clay W. Holmes, and George M. Diven, Elmira, N. Y. Filed Apr. 8, 1910. Serial No. 554,122. (Cl. 121—72.)



1. In a multiple-cylinder rotary engine of the eccentric-piston type, the combination with a pair of end cylinders of like eccentricity, and a pair of intermediate cylinders of opposite eccentricity to said end cylinders, of a driven shaft extending through and journaled outside of said cylinders, a series of endwise connected piston drums in said cylinders having a single central connection to said shaft, stationary bearing bosses of opposite eccentricity, respectively, in said end and intermediate cylinders, and piston vanes mounted on said bosses, and drivingly engaging said drums, substantially as described.

2. In a multiple-cylinder rotary engine of the eccentric piston type, the combination with a pair of end cylinders of like eccentricity, and a pair of intermediate cylinders of opposite eccentricity to said end cylinders, of stationary end walls secured to the outer sides of said end cylinders, stationary bearing bosses of opposite eccentricity, respectively, in said end and intermediate cylinders and rigidly secured to said end walls, a driven shaft extending through said series of bearing bosses with clearance between itself and the latter and journaled outside of said cylinders, a series of endwise connected piston-drums in said cylinders having a single central connection to said shaft, and piston vanes mounted on said bosses and drivingly engaging said drums, substantially as described.

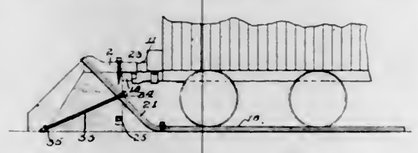
3. In a rotary engine of eccentric piston type, the combination with a cylinder, a driven shaft extending through the same, a piston drum concentric with and fast on said shaft, and a stationary bearing boss eccentric to and surrounding said shaft within said drum, of a series of piston vanes having stems or shanks provided with hubs rotatably mounted in close lateral juxtaposition on said bearing boss and blades swiveled in and drivingly engaging said drum, and segmental extensions on and wholly in the planes of said hubs, located diametrically opposite the respective blades thereof and constituting counterweights serving to neutralize the centrifugal force of said blades, substantially as described.

4. As a new article of manufacture, a piston vane for a rotary engine comprising an annular hub portion, a radially extending shank lying in the same plane with said hub portion, a blade extending transversely of said shank, and of a thickness less than the width of the latter, and a reinforcing fillet between the inner edge of said blade and the outer edge of said shank, substantially as described.

5. As a new article of manufacture, a piston vane for a rotary engine, comprising an annular hub portion, a radially extending shank lying in the same plane with said hub portion, a blade extending transversely of said shank, and of a thickness less than the width of the latter, and a reinforcing fillet between the inner edge of said blade and the outer edge of said shank, said fillet extending longitudinally the full width of said blade and transversely the full width of said shank, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,104,332. BUMPING BLOCK OR POST FOR RAILWAYS. JAMES MILTON WAUGH, Chicago, Ill. Filed Sept. 6, 1912. Serial No. 718,793. (Cl. 104—49.)



1. A bumping post and resilient buffing gears secured thereon and positioned to engage the extremity of the car in alinement with the center sills of the car.

2. A bumping post embracing a base or foundation and a plurality of spring bumping or buffing gears rigidly secured thereon side by side in position to engage the end sill of the car in alinement with the center sills thereof and to engage the drawhead of the car approximately simultaneously therewith.

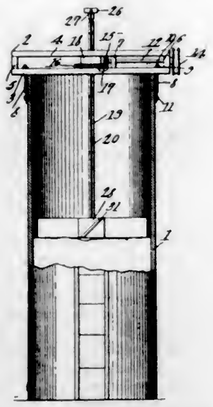
3. In a device of the class described a plurality of rigidly connected parallel casings arranged horizontally substantially at the level of the end sill of a car and in alinement with the draw head thereof respectively, resilient friction members arranged in groups in each casing, and buffing heads engaged in the respective casings and bearing against the outermost of said groups and adapted to be respectively engaged by the end sill of the car and in alinement with the center sills and by the drawhead of the car, thereby utilizing said bumping gears and the buffing gear simultaneously in absorbing impacts.

4. A bumping post of reinforced concrete, a central buffing gear rigidly secured thereon in position to be engaged by the drawhead of the car, laterally disposed bumping gears rigidly secured on said bumping post above the same, and a transverse beam carried on the outer ends thereof, and adapted to receive the impact of the end sill of the car substantially in alinement with the center sills whereby stresses of impact are absorbed in said bumping gears in the under frame of the car and in the buffing gear of the car, all acting simultaneously to receive the same.

5. In a bumping post a rigid post, and resilient bumping gears of high capacity rigidly secured thereon in position to impact the end sill of a car in alinement with the center sills thereof.

[Claims 6 to 25 not printed in the Gazette.]

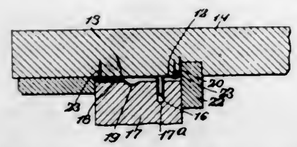
1,104,333. PACKER FOR SILOS. JOHN ALBERT WESTBROOK, Brady, Tex., assignor of one-half to Joe A. Adkins, Brady, Tex. Filed Oct. 7, 1913. Serial No. 793,974. (Cl. 100—56.)



1. In a silo packer, a frame comprising a base and a cap; a wheel disposed between the base and the cap; anti-friction elements located between the wheel and the base; a spacer interposed between the wheel and the cap and removable to permit the wheel and the anti-friction elements to be placed between the base and cap; a shaft mounted to slide in the wheel; a packing element carried by the shaft; and means for connecting the wheel and the shaft for simultaneous rotation.

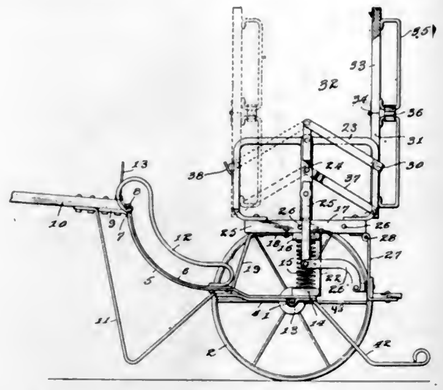
2. In a silo packer, a frame comprising a base and a cap; a wheel located between the base and the cap; a shaft mounted to slide in the wheel and provided with a key way; a key in the wheel and engaged in the key-way; a spacer surrounding the shaft and interposed between the wheel and the cap, the spacer constituting means for retaining the key in place and constituting also a slide-bearing for the shaft; and a packing element carried by the shaft.

1,104,334. METAL WEATHER-STRIP. CHESTER P. WHITCOMB, Somerville, Mass., and JOHN G. GODFREY, Steuben, Me.; said Whitcomb assignor to said Godfrey. Filed May 8, 1913. Serial No. 766,315. (Cl. 20—69.)



A one piece sheet metal weather strip comprising a flat base, a sealing rib integral with the base and adapted to enter a groove in the edge of the sash, and a resilient tongue bent backwardly from one edge of the base, adapted to spring outwardly from the outer side of the base, and provided at its free edge with a projection adapted to enter another groove in the sash, the inner portion of the tongue and the corresponding edge portion of the base being provided with coinciding orifices to receive attaching devices.

1,104,335. COMBINATION GO-CART AND SULKY. HENRY A. WILLIAMS, Murphysboro, Ill. Filed Aug. 16, 1913. Serial No. 785,049. (Cl. 21—83.)



1. A child's carriage, comprising a wheeled axle, a spring-supported seat mounted upon said axle, a pivoted foot rest at one end of said seat, a fixed foot rest at the other end of said seat, and a pivotally mounted back arranged upon said seat and capable of being shifted to either end thereof, having a pivotal connection with said pivoted foot rest.

2. A convertible carriage of the kind described, comprising a wheeled axle, straps carried by said axle, a bolster mounted upon said straps, springs mounted upon said bolster, a bolster mounted upon said springs, a seat carried by said last-mentioned bolster, a foot rest carried by said straps, and straps carried by said seat extending under said foot rest.

3. A convertible carriage, comprising a wheeled axle, straps mounted upon said axle having eyes at their end, a bolt passing through said eyes, a spring-supported seat mounted upon said straps, spaced straps connected to said seat having eyes at their ends pivotally mounted upon said bolt, a foot rest carried by the first-mentioned straps, side frames mounted upon said seat, and a sectional back having a pivotal connection with said side frames.

4. A convertible carriage of the kind described, comprising a wheeled axle having a spring-supported seat mounted thereon, side frames carried by said seat, links pivotally connected to said side frames, pivoted levers, links carried by said levers, a back carried by said links, a pivoted foot rest at one end of said seat, and links connecting the lower ends of said levers to said pivoted foot rest.

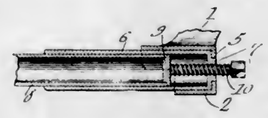
5. A convertible carriage of the kind described, comprising a wheeled axle, a bolster mounted upon said axle, coil springs arranged upon said bolster, a bolster mounted upon said springs, a seat fixed to the last-mentioned bolster, side frames carried by said seat, pivotally mounted links carried by said side frames, and a sectional back connected to said pivoted links, said back being formed of pivotally mounted sections, and means for connecting said sections together in folded or set-up position.

[Claims 6 to 16 not printed in the Gazette.]

1,104,336. CORNER-BRACKET FOR BED-SPRINGS. ERNEST H. WOELFFEL, Point Pleasant, W. Va., assignor to West Virginia Malleable Iron Co., Point Pleasant, W. Va. Filed Apr. 23, 1914. Serial No. 833,966. (Cl. 5—69.)

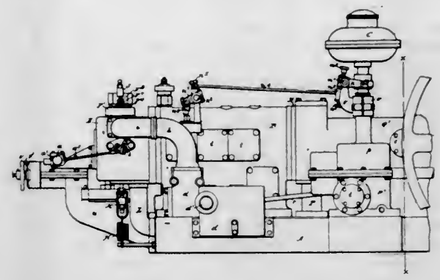
1. The combination with the side rail of a bed spring, of a bracket having an integral socket, a sleeve received in the socket and adapted to receive the end of the side rail, and an adjusting screw passing through the end of the sleeve and engaging the end of the side rail.

2. The combination with a hollow side rail of a bed spring, of a plug inserted in the end of the rail, a bracket having an integral socket, a sleeve received in the socket



and adapted to receive the end of the rail, and an adjusting screw passing through the socket and sleeve and engaging the plug in the side rail.

1,104,337. GAS-ENGINE. BAXTER M. ASLAKSON, Salem, Ohio. Filed Dec. 14, 1905. Serial No. 291,673. (Cl. 123—71.)



1. In a gas engine, two parallel combustion cylinders each provided with a piston, and means adapted to transmit the power generated in said cylinders to a main shaft, two gas compressors, two air compressor cylinders placed side by side and rigidly connected with said combustion cylinders, said air compressors, each being provided with a piston working in unison with one of the pistons in the combustion cylinders in alinement therewith and means for adjusting the distance between the piston in the combustion cylinder and the piston in the gas compressor, said air compressor piston serving as a cross-head, and means for admitting first air and then gas to said combustion cylinders, said combustion cylinder pistons being adapted to operate alternately in their power stroke, and valves governed by the governor of the engine and located one in each of the gas conduits and adapted to control the gas to the gas compressors and from the gas compressors to the said combustion cylinders, for the purpose set forth.

2. The combination in a gas engine, of a pair of parallel cylinders arranged side by side, air compressors and gas compressors formed adjacent to the ends of each of said cylinders, said air compressors comprising a piston which works in unison with one of the pistons in the combustion cylinders and in alinement therewith said air compressor pistons serving as cross heads for the engine, means for regulating the distance between the piston in the combustion chamber and the piston in the air compressor cylinder and independent conduits connecting the compression chamber of each cylinder with the inlet port of the combustion chamber of that cylinder, and connecting the compressor of each cylinder with the air inlet port of the combustion chamber of the other cylinder.

3. In an internal combustion engine, a working cylinder having its outer end adapted to serve as a combustion chamber, an air compressor formed at the end of the cylinder opposite to the combustion chamber, means for separating the working cylinder from the air compressor, a gas compression chamber, a piston provided with a cone shaped face corresponding with the gas compression chamber, said air compressor comprising a piston working in

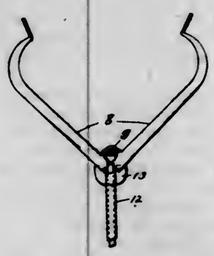
unison with the piston in the combustion chamber and in alinement therewith, said air compressor piston serving as a cross-head, and means for admitting first air and then gas to said cylinder, and means adapted to govern the amount of gas admitted to the gas compression chamber, and the amount of gas flowing from the gas compression chamber for the purpose set forth.

4. In combination, two parallel working cylinders each having a cone-shaped piston, operating therein, gas compression chambers in which gas is compressed during the working stroke of its piston formed in one end of each cylinder respectively, air compression chambers in which air is compressed during the return stroke of its piston formed at the opposite end of said cylinders respectively, means for separating said air compression chambers from said working cylinders, each compression chamber being provided with a piston rigidly connected to and working in unison with the pistons in said working cylinder, means for delivering said air and gas to the combustion chamber of its cylinder, the gas compressed in the gas compression chamber of that cylinder and the air compressed in the air compression chamber of the other cylinder, a valve for each of said engines, each valve permitting the admission of gas to the gas compression chamber of the one cylinder and the admission of air to the air compression chamber of the other cylinder and conduits located immediately beneath said cylinders between the compression chamber and combustion chamber of the opposite cylinder respectively.

5. In combination, two working cylinders, one end of each being adapted to serve as a combustion chamber and the opposite end thereof adapted to serve as a compression chamber, means for separating the combustion chambers and the compression chambers, each of said compression chambers being provired with an exhaust port and an independent air and gas inlet port, a piston operating in each working cylinder and a piston working in each compression chamber connected to the pistons in the working cylinder, means for regulating the distance between said pistons, and independent conduits located beneath the cylinders for connecting the compression chamber of each cylinder with the inlet port of the combustion chamber of that cylinder and connecting the compressor of each cylinder with the air inlet port of the combustion chamber of the other cylinder.

[Claims 6 to 13 not printed in the Gazette.]

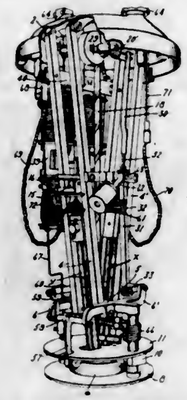
1,104,338. LIFTING DEVICE. JOSEF BABITZKY, Cleveland, Ohio. Filed Jan. 31, 1914. Serial No. 815,707. (Cl. 57—113.)



1. A lifter comprising a rod, a pair of jaws pivoted to one end thereof, a spring tending to open the jaws a tube slidable on the rod and having a fork at its front end the branches of which press against the jaws to close the same when the tube is advanced, and a lever operating between the tube and the rod, to advance the former.

2. A lifter comprising a rod, a pair of jaws pivoted to one end thereof, said jaws having notches in the rear side thereof, a spring tending to open the jaws, and a tube slidable on the rod and having a fork at its front end the branches of which fit in said notches and act to close the jaws when the tube is advanced.

1,104,339. FLAMING-ARC LAMP. SAMUEL H. BLAKE, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1909. Serial No. 507,369. (Cl. 176—69.)



1. An arc lamp having a frame comprising a top plate, two pairs of parallel bars secured thereto and converging downwardly, a yoke having arms to which the lower ends of said bars are secured, hangers depending from said yoke, an economizer supported by means of said hangers, and pole pieces on said hangers.

2. An arc lamp having a frame comprising a top plate, two pairs of parallel bars secured thereto and converging downwardly, an electrode holder sliding between the bars of each pair, a yoke having arms secured to the lower end of said bars, hangers depending from said yoke, coils on said hangers in series with said holders, and an economizer supported by means of said hangers.

3. An arc lamp having downwardly converging guideways, electrode holders sliding freely along said guideways, electrodes carried by said holders, a carrier having laterally extending rods engaging with said holders, a screw shaft of long pitch engaging with said carrier, a brake controlling said shaft, a pull rod having lost-motion connection with said brake, a rock shaft connected with said rod, a laterally movable plate through which one of said electrodes passes, and lamp magnet coils having an armature connected with said rock shaft, and with said movable plate.

4. An arc lamp having downwardly converging electrodes, feeding mechanism for such electrodes, a laterally movable sled engaging one electrode, a rock shaft connected with said sled, a brake lever for locking said feeding mechanism, a pull rod connected to said lever, a second rock shaft, connections between the second rock shaft and the rod for actuating the latter, lamp magnet coils provided with an armature, connections between said armature and the second rock shaft for operating the same and connections between the two rock shafts for operating the former from the latter.

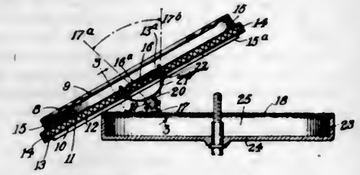
1,104,340. PHONOGRAPH SOUNDING-BOARD. DONALD M. BLISS, Orange, N. J., assignor to Bliss Talking Machine Co., a Corporation of Delaware. Filed Mar. 31, 1914. Serial No. 828,489. (Cl. 181—10.)

1. In a sound device, the combination of a face member, and a ridged and furrowed trussing member in intimate contact at the ridges with the face member.

2. In a sound device, the combination of a face member and a ridged and furrowed trussing member secured at the ridges to the face member.

3. In a sound device, the combination of a face member and a ridged and furrowed trussing member, having parallel ridges and furrows, secured at the ridges to the face member.

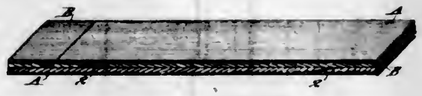
4. In a sound device, the combination of a face member and a ridged and furrowed trussing member having angular ridges and furrows, secured at the ridges to the face member.



5. In a sound device, the combination of a stretched face member and a ridged and furrowed trussing member in intimate contact at the ridges with the face member.

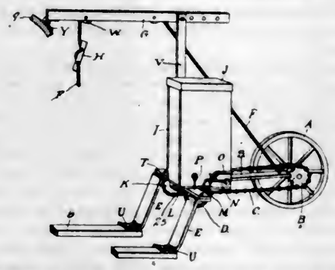
[Claims 6 to 35 not printed in the Gazette.]

1,104,341. LEATHER BELTING. EMIL BLOSSFELD, San Francisco, Cal. Filed July 3, 1912. Serial No. 707,454. (Cl. 74—63.)



A leather belt comprising superposed sheets of leather, the sheets being composed of strips cut parallel with the length of the hide, said strips being split and superposed in a reversed end to end relation with the grain of one sheet extending in the opposite direction from the grain of the other sheet, the joints of one sheet lying intermediate the joints of the other sheet, the forward ends of each of the outer sheets being tapered with the inner ends of the taper in advance of the outer end of the taper so as to lie under the next preceding sheet, and the forward ends of each of the inner sheets being tapered with the end of the taper adjoining the layer above in advance of the end of the taper on the traction surface of the belt.

1,104,342. DISTRIBUTER. WILLIAM R. BUCK, New Milford, Conn. Filed Mar. 22, 1913. Serial No. 756,128. (Cl. 43—14.)



1. A distributing apparatus including brackets, means for removably attaching the brackets to a planter, a cross piece, means for attaching the cross piece to the brackets to permit adjustment of the opposite ends of the brackets toward and from each other, a receptacle mounted on the cross piece, a reach arm, a drive wheel mounted on said arm, an agitator mounted in the receptacle, a driving connection between said drive wheel and agitator, and means for controlling the outflow of material from said receptacle.

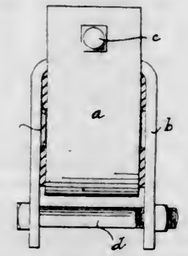
2. In a distributing apparatus, a bracket having a foot with a curved bearing surface, means for loosely attaching said foot to a planter, a receptacle mounted on the bracket, an agitator located in the receptacle, a reach arm pivotally attached to the receptacle, a drive wheel rotatably mounted in the reach arm, and a driving connection between said drive wheel and the agitator.

3. In a distributing apparatus, a receiver having its side parts recessed at the bottom ends thereof, a distributing plate secured to the bottom of the receiver against said ends to form one side of said recesses, said distributing plate having openings, a valve plate pivotally mounted on the upper surface of said distributing plate and having its edges located in said recesses, and means for operating the valve plate.

4. A distributing apparatus formed as a unit and including a bracket having means for movably and removably attaching it to a planter, and a structure carried by the bracket and including a receptacle mounted on the bracket, a reach arm pivotally supported by the bracket, a drive wheel rotatably mounted on the reach arm, a support rigidly secured to said structure, a supporting bar having means for pivotally attaching it to the planter, means for pivotally attaching said supporting bar and said support together, and a hoisting member secured to the reach arm and supported upon said bar upon which it is moved to hoist the reach arm.

5. In combination in a distributing apparatus, a receptacle, a bottom therefor constituting a sower plate having discharge openings on one side thereof and clearance openings on its other side, a valve plate mounted on the sower plate and having openings on one side to register with the discharge openings in the sower plate, said valve plate being unperforated on its opposite side, an agitator located in the bottom of the receptacle, and means for rotating the agitator.

1,104,343. CUSHION-SHACKLE. ANTHONY BUONICORE, New York, N. Y. Filed Dec. 7, 1912. Serial No. 735,515. (Cl. 21—104.)



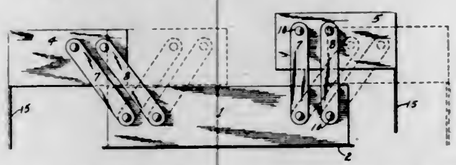
1. A cushion shackle embodying therein a plurality of similar metallic elements, each having flat parallel sides and a flat connecting bearing surface, said elements having a sliding fit one within the other with the sides of one element occupying parallel planes perpendicular to the sides of the other, the ends of the sides of each element projecting beyond the bearing surface of the other, and the edges of the sides of one of them projecting in juxtaposition to the surface of the other whereby a substantially inclosed chamber having top and bottom bearing surfaces is formed, and a resilient cushion, seated within said chamber between said bearing surfaces, said elements respectively being provided with means whereby one of them may be secured to one part, and the other may be secured to a relatively movable part.

2. A cushion shackle embodying therein a plurality of similar metallic elements, each having flat parallel sides and a flat connecting bearing surface, said elements having a sliding fit one within the other with the sides of one element occupying parallel planes perpendicular to the sides of the other, the ends of the sides of each element projecting beyond the bearing surface of the other, and the edges of the sides of one of them projecting in juxtaposition to the surface of the other whereby a substantially inclosed chamber having top and bottom bearing surfaces is formed, and a resilient cushion, seated within and conforming to, said chamber between said bearing

surfaces, said elements respectively being provided with means whereby one of them may be secured to one part, and the other may be secured to a relatively movable part, and said cushion being weakened adjacent the sides of said first named element, whereby oscillatory movement of said element is permitted, and movement or displacement of said cushion is prevented.

3. A cushion shackle embodying therein a substantially U-shaped element adapted to be connected to the running gear of a vehicle, a U-shaped load carrying element seated within said first named element, and adapted to sustain the load of the vehicle body, and a resilient cushion seated between said elements, said cushion comprising a plurality of rubber pads, one of said pads being of smaller dimensions than the pad engaged by either of said elements, whereby the vibrations of said running gear element are absorbed by said cushion.

1,104,344. CONFECTIONERY-BOX. WALTER C. CARLSON, Milwaukee, Wis. Filed Nov. 18, 1912. Serial No. 731,999. (Cl. 206—44.)

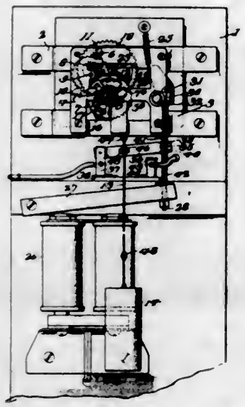


A confectionery box, comprising the combination of a base compartment having extended side and bottom walls, a pair of superposed compartments having a combined bottom area equal to that of the base and normally covering the base with their inner walls in approximate contact, a pair of links on two sides of each upper compartment, pivoted thereto and also pivoted to the base at points intermediate of the ends of the base and below the connections with the upper compartment, said links being of such length as to permit an extension of each of the upper compartments to a position with the inner marginal portion of its bottom supported upon the upper margin of the lower compartment, and lapping over and partially covering the lower compartment, flanges depending from the outer wall of each upper compartment normally received between the end margins of the side walls of the base and adapted to coöperate with the base in supporting the upper compartments in extended position, and a cover adapted to inclose all the compartments when the latter are in folded position and to rest upon the extended bottom wall of the base.

1,104,345. SELF-WINDING CLOCK. MAURICE CASTEL, Iron Mountain, Mich. Filed Jan. 30, 1914. Serial No. 815,495. (Cl. 58—41.)

1. A self-winding clock, comprising a weight driven power shaft, an electric switch and means to automatically close said switch when the clock has run down a given amount and to automatically open said switch when the weight has ascended to a given point in winding, an electric motor, a clutch forming a driving connection between the driving member of said motor and said shaft, an electro-magnet having a movable armature mechanically connected to operate said clutch in one direction, a spring operatively connected to said clutch to operate the same in another direction, and mechanical connection between said switch and said spring for retaining said switch normally open.

2. A self-winding clock, comprising a power shaft, means to normally drive said power shaft to operate the time keeping mechanism of the clock, an electric motor, a clutch adapted to form a driving connection between the driving element of said motor and said power shaft, a movable member adapted to operate said clutch, an electro-magnet having a movable armature, operative connection between said armature and said clutch operating member for operating said member in one direction, a spring connected to said member for operating the same in another direction, an electric switch having a movable contact mechanically connected to said armature and to said clutch operating member and adapted to be held open by said spring and held closed by said armature, a source of electric current connected in circuit with said motor, switch and the coils of sail electro-magnet, and means to automatically close said switch when the normal power drive of said clock has run down a predetermined amount and to open said switch when said drive has been wound up a predetermined amount.

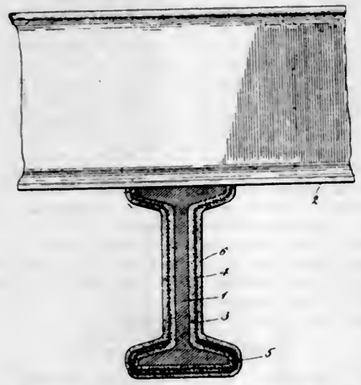


3. A self-winding clock, comprising a power shaft, a flexible member operatively connected to said shaft to drive the same, a weight suspended by said flexible member, an electric motor, gearing adapted to form a driving connection between the driving element of said motor and said power shaft, an electro-magnet having a movable armature, operative connection between said armature and said gear shifting member to move the latter by the movement of the armature to shift said gearing in one direction, a spring connected to said member for shifting said gearing in another direction, an electric switch having a movable contact mechanically connected to said armature and to said gear shifting member, and means carried by said flexible weight suspending member and adapted to automatically close said switch when said weight has descended to a predetermined point and to open said switch when said weight has ascended to a predetermined point.

4. A self-winding clock, comprising a power shaft, a flexible member operatively connected to said shaft to drive the same, a weight suspended by said flexible member, an electric motor, gearing adapted to form a driving connection between the driving element of said motor and said power shaft, a movable member adapted to shift said gearing into and out of connection with said power shaft and driving element of the motor, an electro-magnet having a movable armature, operative connection between said armature and said gear shifting member to move the latter by the movement of the armature to shift said gearing, a spring connected to said gear shifting member to also shift said gearing, but in a different direction from that of said armature, an electric switch having a movable contact yeldably connected to said armature and to said gear shifting member, a source of electric current connected in circuit with said motor, switch and the coils of said electro-magnet, and means carried by said flexible weight suspending member and adapted to automatically close said switch when said weight has descended to a predetermined point and to open said switch when said weight has ascended to a predetermined point, said switch controlling the power circuit of said motor and the energizing circuit of said magnet.

5. A self-winding clock, comprising a power shaft, a drum carried by said shaft and connected thereto, a flexible member attached to said drum and adapted to be wound thereon, a weight suspended by said flexible member, an electric motor, gearing adapted to form a driving connection between the driving element of said motor and said power shaft, a movable support carrying said gearing, an electro-magnet having a movable armature, a rod forming an operative connection between said armature and said gear support to move the latter by the movement of the armature to shift said gearing, a spring connected to said gear support to shift said gearing in a direction opposite from that of said armature and to also move said armature from its magnet, two coil springs on said rod, an electric switch having a movable contact member held between said springs, a source of electric current connected in circuit with said motor, switch and the coils of said electro-magnet, and means carried by said flexible weight suspending member and adapted to automatically close said switch when said weight has descended to a predetermined point and to open said switch when said weight has ascended to a predetermined point, the said switch controlling the power circuit of said motor and the energizing circuit of said magnet.

1,104,346. PROTECTIVE COATING FOR METALLIC MEMBERS. WILLIAM L. CHURCH, Newton Center, Mass., assignor to Ambursen Company, Boston, Mass., a Corporation of New Jersey. Filed Oct. 7, 1912. Serial No. 724,288. (Cl. 72—109.)



1. The combination of a metallic member, with a protective covering therefor, such covering comprising a sheet of semi-elastic acid proof material such as asbestos bent around the member, and a coating of concrete wholly enveloping said member and sheet.

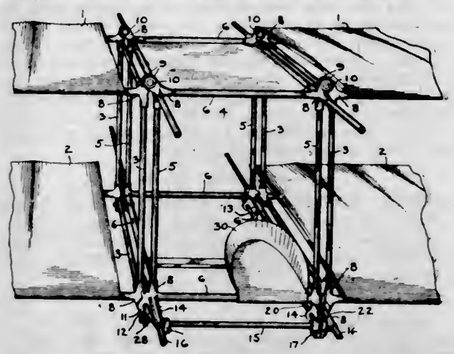
2. The combination of a metallic member, with a protective covering therefor, such covering comprising a sheet of semi-elastic acid proof material such as asbestos partially surrounding but spaced from said member, and a coating of concrete in which said member and sheet are wholly embedded.

3. The combination of a metallic member, with a protective covering therefor, such covering comprising a spaced reinforcing fabric and a sheet of semi-elastic acid proof material such as asbestos outwardly spaced from the reinforcing fabric, and a coating of concrete in which are wholly embedded the metallic member, the reinforcing fabric, and the sheet of asbestos.

1,104,347. AEROPLANE. HORACE CORBIN, Toledo, Ohio, assignor of one-half to Jacob C. Haim, Jr., Toledo, Ohio. Filed Dec. 18, 1913. Serial No. 807,427. (Cl. 244—12.)

1. In an aeroplane, the combination of a supporting frame, wings pivoted to the supporting frame, the said wings and frame having eyes, fingers adapted to be inserted in the eyes for locking the parts in position, and means for operating the fingers.

2. In an aeroplane, the combination of a supporting frame, wings pivoted to the supporting frame, the frame and wings having eyes, side members having fingers adapted to be inserted in the eyes to lock the wings in position, and means for operating the side members.



3. In an aeroplane, the combination of a supporting frame, wings pivoted to the supporting frame, the frame and wings having eyes, side members having fingers adapted to be inserted in the eyes to lock the wings in position, a rocking-bar connected to the side members, and a lever for operating the rocking-bar to release the said means.

4. In an aeroplane, the combination of a supporting frame, wings pivoted to the supporting frame, the frame and wings having eyes, side members having fingers adapted to be inserted in the eyes to lock the wings in position, a rocking-bar connected to the side members, a lever for operating the rocking-bar to release the said means, and a flexible means for limiting the movement of the wings with respect to the supporting frame.

5. In an aeroplane, the combination of a supporting frame, wings pivoted to the supporting frame, the frame and wings having eyes, side members having fingers adapted to be inserted in the eyes to lock the wings in position, a rocking-bar connected to release the said means, and webs for spreading the open space formed between the wings and the supporting frame.

[Claim 6 not printed in the Gazette.]

1,104,348. STOCKING-FORM. ALBERT B. EASTWOOD, Rochester, N. Y. Filed Dec. 24, 1913. Serial No. 808,601. (Cl. 223—19.)

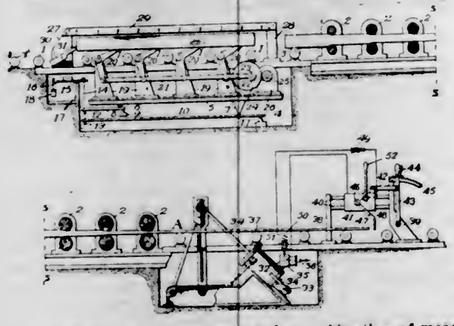


1. A stocking-form having a flat, and comparatively wide and thin body-member, adapted to stretch both the foot and the leg of a stocking and shaped at one end to approximately the outline or horizontal contour of the foot, and a heel-filler fixed to the lower surface of the

body-member and of greater depth at its rear extremity, where it terminates in a pronounced angle adapted to retain the heel of the stocking at a definite distance from the toe-extremity.

2. A stocking-form having a flat, and comparatively wide and thin body-member, adapted to stretch both the foot and the leg of a stocking and shaped at one end to approximately the outline or horizontal contour of the foot, and a heel-filler projecting from the lower surface of the body-member and of increasing depth toward its rear extremity, where it terminates in a pronounced angle, said heel-filler being adjustable toward and from the toe-extremity of the body-member to adjust the form for stockings having feet of different lengths.

1,104,349. ROLLING-MILL PLANT. VICTOR E. EDWARDS, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 15, 1914. Serial No. 832,111. (Cl. 80—3.)



1. In a rolling mill apparatus, the combination of means for ascertaining the amount of metal in a bloom to be rolled, means for rolling said bloom to a predetermined size, and means for cutting the rolled product into equal lengths without remainder, or short, as predetermined by the amount of metal in said bloom.

2. In a rolling mill apparatus, means for weighing a bloom, means for rolling said weighed bloom to a predetermined cross section, and means for cutting the rolled product into equal sections of a length proportionate with the weight of the bloom.

3. In a rolling mill apparatus, means for ascertaining the amount of metal in a bloom, means for continuously rolling said bloom into a product of predetermined cross section, and means for successively cutting said product as it emerges from said rolling means into a plurality of billets of equal length, the amount of metal in all of said billets being equal to the amount of metal in said bloom.

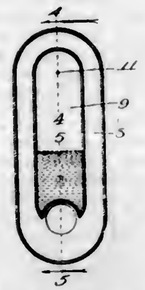
4. In a rolling mill apparatus, means for weighing a bloom, a series of reducing rolls into which the bloom is introduced after leaving said weighing means, a shearing mechanism for dividing the product emerging from said reducing rolls, and means for operating said shearing mechanism to divide the product into equal lengths without remainder or short.

5. In a rolling mill apparatus, means for ascertaining the amount of metal in a bloom, means for rolling said bloom to a predetermined cross section, a shearing mechanism adjusted in accordance with the amount of metal in said bloom to cut the rolled product into billets of equal length, and means, actuated by engagement therewith of the rolled product, for operating said sheat.

[Claims 6 to 8 not printed in the Gazette.]

1,104,350. STEAM-RADIATOR. LEWIS W. EGGLESTON, Wheaton, Ill., assignor to American Radiator Company, Chicago, Ill., a Corporation of New Jersey. Filed July 21, 1913. Serial No. 780,163. (Cl. 237—19.)

1. A steam radiator comprising, in combination, a steam sections, one of said sections being provided with a water receptacle in the interior thereof, the said water receptacle being provided adjacent its upper end with a vapor outlet adapted to discharge vapor through the interstices of the radiator.



2. A steam radiator comprising, in combination, steam sections, a vaporizing section in series therewith, a water receptacle within said vaporizing section and in the plane thereof and wholly surrounded thereby on its bottom, top and both edges to receive heat therefrom, the said water receptacle being provided adjacent its upper end with a vapor outlet opening adapted to discharge vapor through the interstices of the radiator.

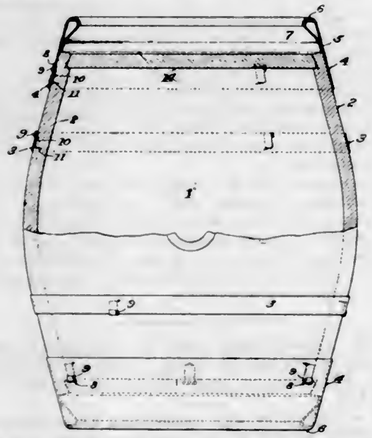
3. A steam radiator comprising, in combination, steam sections, a vaporizing section in series therewith and provided in its interior with a water receptacle in the plane thereof and surrounded thereby on its top, bottom and both edges, said vaporizing section partially overlapping the faces of said receptacle to heat the same.

4. A steam radiator comprising, in combination, with steam sections, a vaporizing section in series therewith, with a water receptacle in the interior thereof and in the same plane therewith to receive heat therefrom, and means to supply water to said receptacle.

5. A steam radiator comprising, in combination, steam sections, a vaporizing section in series therewith, a water receptacle wholly within said vaporizing section and in the plane thereof, to receive heat therefrom, and means controlled by the humidity of the apartment for supplying water to said receptacle.

[Claim 6 not printed in the Gazette.]

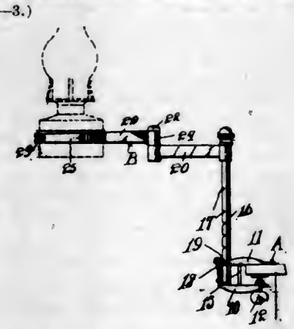
1,104,351. BARREL. OTTO R. EMMRICH, Menasha, Wis. Filed Oct. 29, 1913. Serial No. 797,924. (Cl. 217—91.)



1. In a device of the described class, the combination of an annular series of barrel staves provided at their respective ends with a chime groove, barrel heads extending across and secured within the chime grooves at the respective ends of the staves, the outer surface of said heads being flush with the ends of said staves, a pair of annular chime members, each chime member comprising two annular collars welded together at a distance from the outer ends of said chime members, the outer ends of one of said annular collars being adapted to overlap and reinforce the outer ends of the other annular collar, whereby said collars mutually support each other, stave retaining hoops located between the chime members and the center bilge of the barrel and means for securing said hoops and chime members in place.

2. In a device of the described class, the combination of an annular series of barrel staves provided at their respective ends with a chime groove, barrel heads extending across and secured within the chime grooves at the respective ends of the staves, the outer surface of said heads being flush with the ends of said staves, a pair of annular chime members, each chime member comprising two annular collars welded together at a distance from the outer ends of said chime members, each of said chime members being provided with a plurality of apertures for the reception of the ends of retaining brackets, the outer ends of one of said annular collars being adapted to overlap and reinforce the outer ends of the other annular collar, whereby said collars mutually support each other, stave retaining hoops located between the chime members and the center bilge of the barrel, a plurality of brackets, each of said brackets being provided at one end with an angular member adapted to be driven into the exterior surface of said stave while their opposite ends are adapted to be inserted through the apertures in said chime members and turned over and against the exterior surface of said chime members, whereby said chime members are securely retained in place upon the respective ends of the barrel, all substantially as and for the purpose specified.

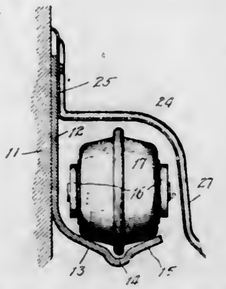
1,104,352. LAMP-BRACKETS. HEDVIG L. ERLANDSSON, Chicago, Ill. Filed Sept. 26, 1912. Serial No. 722,539. (Cl. 248—3.)



In a lamp bracket the combination of a clamp member, a rod mounted for vertical adjustment in said clamp member, an arm journaled on the upper end of said rod for movement in a plane at right angles to the latter, and a lamp holding element journaled on the free ends of said arm, said lamp holding element comprising a single strip of metal bent upon itself to form continuous arms, the free ends of said arms being bent outwardly and inwardly, and a latch member pivotally connected to the end of one of said arms, said latch member being provided with a series of reduced portions adapted to interchangeably engage in a recess in the end of the other arm whereby said arms may be locked against movement away from each other when disposed different distances apart.

1,104,353. BARN-DOOR TRACK. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed Mar. 21, 1914. Serial No. 826,349. (Cl. 16—7.)

1. In combination, a door hanger track having a flat web adapted for attachment to the wall of a building, an outwardly-extending part to receive and support a hanger, a hanger, a bracket overlying the vertical web of the track and extending through an opening therein, and having at its lower end an outwardly-turned part in contact with the outwardly-extending part of the track to support the same.



2. A door hanger track consisting of sections each notched at its end, each section having a vertical web adapted for attachment to the wall of a building and an outwardly-extending part to receive and support a hanger, and brackets overlying the junctions of adjacent sections extending out through the adjacent notches thereof and underlying the adjacent outwardly-extended parts of the sections to support the same.

3. In combination, a door hanger track having a flat web adapted for attachment to the wall of a building, an outwardly-extending part to receive and support a hanger, a hanger, a bracket overlying the vertical web of the track and extending through an opening therein, and having at its lower end an outwardly-turned part in contact with the outwardly-extending part of the track to support the same, the outwardly-extending parts of the track being centrally depressed, for the purpose set forth.

4. A door hanger track consisting of sections each notched at its end, each section having a vertical web adapted for attachment to the wall of a building and an outwardly-extending part to receive and support a hanger, and brackets overlying the junctions of the adjacent sections extending out through the adjacent notches thereof and underlying the adjacent outwardly-extended parts of the sections to support the same, the outwardly-extending parts of the track being centrally depressed, for the purpose set forth.

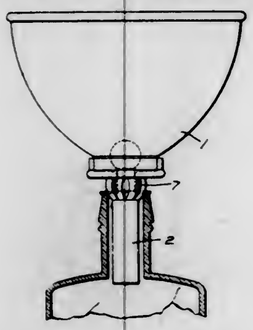
5. In combination, a door hanger track consisting of sections each having a vertical web to be attached to the wall of a barn and an outwardly-extending part to receive and support a hanger, brackets at the junctions of the track sections and adapted to be bolted to the wall of the barn, a cover overlying the track and leaving between itself and the outer edge of the same a space for a depending part of the hanger, the track and cover being made in sections of corresponding lengths, and cover-joints overlying the ends of adjacent cover-sections and provided with an outward projection adapted to cover the bracket securing bolts, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,104,354. FUNNEL. CUTHBERT GENTLE, Dorchester, Mass., assignor to Thomas H. Bowdidge, Boston, Mass. Filed Mar. 5, 1913. Serial No. 752,086. (Cl. 226—33.)

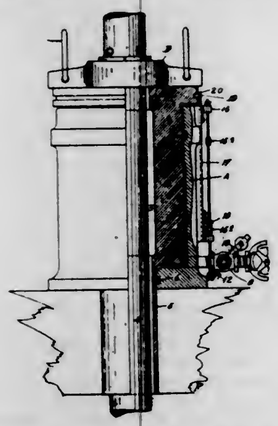
1. In a funnel, the combination with a fluid container, of a spout composed of a short inner tube section and a long outer tube section rigidly secured together, the upper end of the long tube section fitting around and spaced from the short tube section and having slots extending below the end of the inner tube section, and a valve normally closing said inner tube section, said valve having arms extending out through the slots in the outer tube section and normally spaced below the end of the inner tube section, the latter serving as a stop to limit the upward movement of said arms for opening the valve, substantially as described.

2. In a funnel, the combination with a fluid container, of a spout composed of two spaced tubes, the outer tube having longitudinal air vents, and a valve arranged in



the inner tube and adapted to close by gravity, said valve having arms projecting out through the air vents in the outer tube for engagement with the mouth of a vessel to be filled, said air vents serving as guides for said arms.

1,104,355. AUTOMATIC HYDRAULIC CASING-JACK. RICHARD W. GRAHAM, Berkeley, Cal. Filed July 19, 1913. Serial No. 779,963. (Cl. 138—9.)



1. A hydraulic casing jack comprising in combination, an open-ended cylinder, a plunger mounted in said cylinder having a central opening extending therethrough to permit it to slip over a casing, and means connected with the cylinder for admitting fluid under pressure to lift the plunger.

2. A hydraulic casing jack comprising in combination, an open-ended cylinder, a plunger mounted in said cylinder having a central opening extending therethrough to permit it to slip over a casing, exhaust and inlet pipes connected with the cylinder, valves on said pipes, and means for automatically opening and closing said valves to intermittently admit and release fluid to raise and lower the plunger.

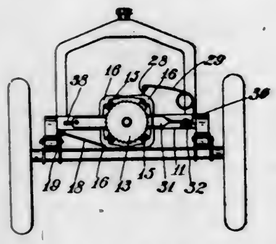
3. A hydraulic casing jack comprising in combination, an open-ended cylinder, a plunger mounted in said cylinder having a central opening extending therethrough to permit it to slip over a casing, exhaust and inlet pipes connected with the cylinder, valves on said pipes, and means connected with the plunger for opening and closing said valves to intermittently admit and release fluid to raise and lower the plunger.

4. A hydraulic casing jack comprising in combination, an open-ended cylinder, a plunger mounted in said cylinder having a central opening extending therethrough to permit it to slip over a casing, and means connected with the cylinder for intermittently admitting and releasing fluid to raise and lower the plunger.

5. A hydraulic casing jack comprising in combination, an open-ended cylinder, a plunger mounted in said cylinder having a central opening extending therethrough to permit it to slip over a casing, and means for reciprocating the plunger.

[Claims 6 to 8 not printed in the Gazette.]

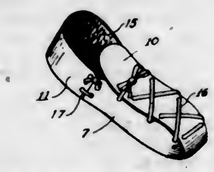
1,104,356. MEANS FOR STARTING INTERNAL-COMBUSTION ENGINES. WILLIAM F. GROLL and CHARLES P. GROLL, Waldo, Ohio. Filed Oct. 22, 1912. Serial No. 727,128. (Cl. 74—54.)



1. A driving device adapted for use in cranking means for automobiles consisting of a rotary spider wheel having radial arms provided with a plurality of angular rim pieces 16 forming a cornered driving member polygonal in side view, a pawl on said driving member and an actuating strap connected with said driving member and winding on the rim formed by said angular pieces 16, and means for rewinding the strap after it has been operated for turning the driving member, substantially as described.

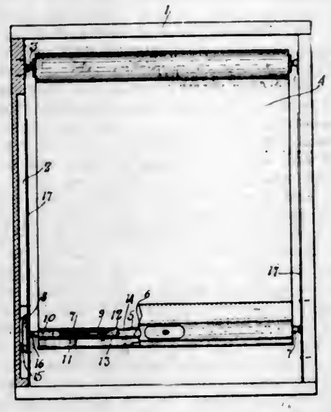
2. A driving device adapted for use in cranking means for automobiles consisting of a rotary spider wheel having radial arms provided with a plurality of radially adjustable angular rim pieces 16 forming a cornered driving member polygonal in side view, a pawl on said driving member and an actuating strap connected with said driving member and winding on the rim formed by said angular pieces 16, and means for rewinding the strap after it has been operated for turning the driving member, substantially as described.

1,104,357. FOLDABLE SLIPPER. NELS H. HASSEL, Chicago, Ill. Filed Oct. 30, 1913. Serial No. 798,191. (Cl. 36—11.)



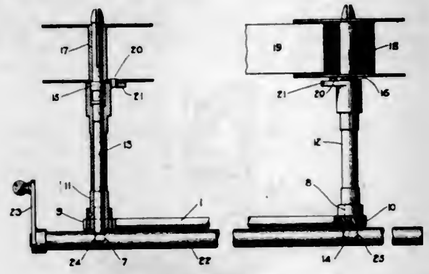
A slipper or foot-piece consisting of a sole portion having integral therewith at one of its ends a transverse portion and at its other end a longitudinally extended single piece tongue and on each of its sides a flap disconnected at its front portion from said tongue piece, said transverse portion adapted to be folded upwardly and bent forwardly, said flaps adapted to be folded upwardly and bent inwardly and said tongue adapted to be folded upwardly and extended rearwardly, and means to secure the tongue to the flaps and the transverse piece to the rear ends of the flaps.

1,104,358. CURTAIN-FIXTURE. JACOB D. HEATER, Dayton, Ohio, assignor to The Barney and Smith Car Company, Dayton, Ohio, a Corporation of West Virginia. Filed Sept. 11, 1913. Serial No. 789,297. (Cl. 156—26.)



In a curtain fixture, the combination with a frame having a guideway therein, a curtain rod, a friction shoe carried by said curtain rod and mounted to travel in said guideway, said shoe having a laterally projecting portion, a part secured to said frame member and projecting beyond the edge of said guideway to engage the projecting part of said shoe to retain said shoe within said guideway, said part terminating at a point removed from the upper end of said guideway a distance less than the length of said friction shoe but sufficient to permit said friction shoe to be tilted and removed from said guideway.

1,104,359. RIBBON-REVERSING MECHANISM FOR TYPE-WRITERS. WELLINGTON PARKER KIDDER, Boston, Mass., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed June 24, 1905, Serial No. 266,815. Renewed Dec. 18, 1913. Serial No. 807,564. (Cl. 197—151.)



1. In a typewriting machine, in combination, a ribbon, a spool upon which said ribbon is adapted to be wound, means adapted to carry said ribbon spool, means having its axis parallel with the axis of said carrying means adapted to rotate said spool, and cam means for causing a longitudinal movement of one of said means with respect to the other whereby said spool is disconnected from its rotating means.

2. In a typewriting machine, in combination, a ribbon, a spool on which said ribbon is wound, vertically disposed means for supporting said spool, means parallel to said supporting means for rotating said spool, and rotatably mounted cam means in engagement with and adapted to cause a relative movement of one of said means to disengage said spool from said rotating means.

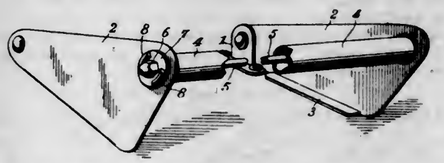
3. In a typewriting machine, in combination, a ribbon, a spool on which said ribbon is wound, means for supporting said spool, rotatable means engaging said spool and adapted to rotate the same to feed the ribbon, said supporting means adapted to be operated upon to shift said spool whereby said rotatable driving means is disengaged therefrom, and a cam for operating said supporting means.

4. In a typewriting machine, in combination with a ribbon-spool of a vertically disposed spindle adapted to support the same, means actuated by a constantly moving part of the machine adapted to drive said spool, and means adapted to lift said spindle and thereby cause a lateral movement of said spool to disengage said driving means therefrom.

5. In a typewriting machine, in combination, a ribbon, a spool upon which said ribbon is adapted to be wound, an upright spindle on which said spool is mounted, means surrounding said spool adapted to be actuated by the key levers of the machine to drive said spool, and means adapted to cause a movement of said spool with respect to said driving means to disengage said parts.

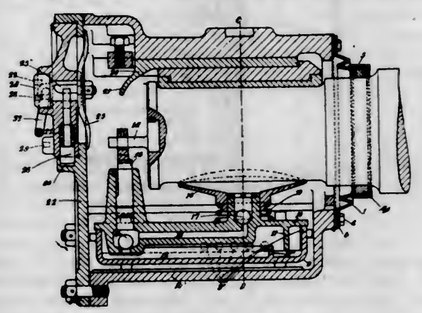
[Claims 6 to 26 not printed in the Gazette.]

1,104,360. FOOT-REST. CARL C. KUSTERER, Grand Rapids, Mich., assignor to Keeler Brass Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Oct. 4, 1912. Serial No. 723,850. (Cl. 21—15.)



A foot rest, comprising substantially triangular pivoted sheet metal arms having circular depressed portions near one angle to receive the end of a tube, and recesses in said portions, a tube inserted in said portions and having projections inserted in the recesses, and a tie-bolt extending through the arms and the axis of the tube.

1,104,361. LUBRICATING DEVICE FOR JOURNAL-BOXES. JOHANN MARTIN LASSMAN, Taganrog, Russia. Filed Mar. 8, 1912. Serial No. 682,560. (Cl. 64—24.)



1. In combination, an axle, an axle box, a lubricant receptacle contained in said axle box, a cover for said receptacle, a pump chamber in communication with said receptacle, means formed by said receptacle and said cover to prevent foreign matter from passing with the lubricant into said pump chamber, a pump in said pump chamber and means to operate positively the said pump from said axle to force the lubricant steadily from said receptacle onto said axle.

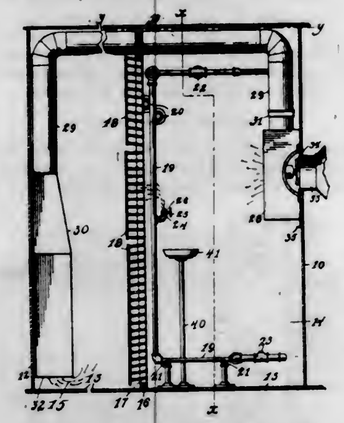
2. In combination, an axle, an axle box, a lubricant receptacle contained in said axle box and having an inlet for the lubricant, a cover for said receptacle, a pump

chamber in communication with said receptacle, means formed by said receptacle and said cover to prevent foreign admixtures from passing along with the lubricant into said pump chamber, a pump in said pump chamber, a delivery funnel, means to hold said funnel in resilient contact with said axle, and means to operate said pump positively from said axle to discharge the lubricant steadily from said receptacle through said funnel onto the axle.

3. In combination, an axle, an axle box, a reservoir for containing lubricant located in said axle box, a cover for said reservoir formed with a channel, a pump chamber communicating with said reservoir and with said channel at one end of the latter, a ball valve to interrupt the flow of lubricant from said reservoir into said channel, a delivery funnel located at the other end of said channel, a ball valve in the neck of said funnel, a pump in said pump chamber, and driving means connected with and eccentrically disposed relatively to said axle to operate said pump to force the lubricant from the reservoir past the first mentioned ball valve, along said channel, past the second mentioned ball valve into said funnel, thence onto the axle.

4. In combination, an axle, an axle box, a reservoir for containing lubricant disposed in said axle box, a readily removable reservoir cover comprising a pump chamber and a lubricant delivery funnel both in communication with said reservoir, the said pump chamber and the neck of said delivery funnel being both formed as one piece, a pump arranged in said pump chamber and means to operate said pump positively from said axle to force the lubricant steadily from said reservoir through said funnel onto said axle.

1,104,362. VARNISH-DRYING ROOM. CARL L. LIEDBLAD, Jamestown, N. Y. Filed Nov. 4, 1912. Serial No. 729,343. (Cl. 34—19.)



1. In a device of the class described, a drying room, a heating chamber connected to said drying room by shutter controlled openings, means for introducing heat into said heating chamber, a fan connected to said heating chamber to force the heated atmosphere into said drying room through said shutter controlled openings, and means for returning said heated atmosphere from said drying room to said fan and into said heating chamber to be recirculated thereby in said drying room.

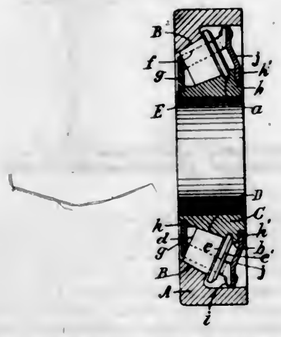
2. In a device of the class described, a drying room, a heating chamber having openings connecting to said drying room, shutters in said openings between said heating chamber and drying room to deflect the heated atmosphere to different portions of the drying room, means for introducing heat into said heating chamber, a fan in a fan box connected to said heating chamber to force the heated atmosphere through said shutters into said drying room, and means for returning the heated atmosphere to said fan box to be again forced out therefrom into said drying room.

3. In a device of the class described, a drying room, a heating chamber having shutter controlled openings connecting to said drying room to deflect the heated atmosphere to the different parts of said drying room, means for introducing heat into said heating chamber, a box in said heating chamber having an opening therein facing toward said drying room, a fan in said opening to force the heat from said heating chamber into said drying room, pipe connection between the farther end of said drying room from said heating chamber and said box containing said fan, said pipe having an open end to draw in the heated atmosphere by said fan and carry the same back to said box to be again driven into said drying room, substantially as and for the purpose specified.

4. In a device of the class described, a drying room, a heating chamber having openings connecting to said drying room, movable shutters in said openings between said heating chamber and drying room to deflect the heated atmosphere to different portions of said drying room, a series of heating pipes before said openings between said heating chamber and drying room, a fan box in said heating chamber having an opening therein facing toward said heating pipes and shutters, an air pipe having an open end at the farther end of said drying room and connected to said fan box, and a fan in said opening in said fan box to force the heated air from said pipes through said shutters and drying room and to draw said heated air back through said air pipe to re-circulate the same.

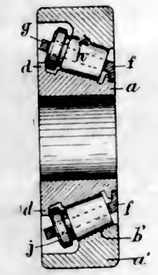
5. In a device of the class described, a drying room, a heating chamber having openings connecting to said drying room, heating pipes in said heating chamber, a large pipe having an open end at the farther end of said drying room from said heating chamber and extending into said heating chamber, a fan in the heating chamber end of said large pipe to drive the heated atmosphere through said drying room and draw it back through said large pipe to re-circulate the same, said heating chamber having a fan controlled opening to the outer atmosphere to introduce cool air or empty the air out of said heating chamber and drying room, substantially as and for the purpose specified.

1,104,363. ANTIFRICTION ROLLER-BEARING. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Oct. 4, 1912. Serial No. 723,846. (Cl. 64—62.)



In a roller bearing, the combination, with a hub having a conical roll-seat with an annular groove near the larger end and an annular flat flange next such groove projecting outward beyond the conical roll-seat, of a series of tapering rolls fitted to the roll-seat and having collars rotating in said groove and beveled upon their outer surface to contact with the flat surface of the said flange, the beveled surface being proportioned to bear equally upon the flange at the outside and inside of the line of the conical roll-seat, whereby the accelerating and retarding influence of the friction upon such collars are substantially equalized.

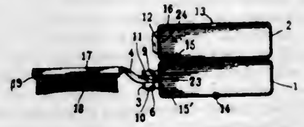
1,104,364. TWO-PART ROLL FOR ROLLER-BEARINGS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Jan. 29, 1913. Serial No. 744,879. (Cl. 64—62.)



1. In a roller bearing containing tapering rolls, the combination, with a hub having a conical seat with an annular groove near the larger end and a flat annular flange next such groove projected outward beyond the line of the conical seat, of a series of rolls having each a tapering body fitted to the conical seat and a journal projected from its larger end toward the flat annular flange with a collar larger than the roll fitted to turn upon each of the said journals and rotated in the said groove, and having its outer corner beveled to form a conical surface bearing upon the said flange partly inside and party outside the line of the roll-seat.

2. In a roller bearing containing tapering rolls, the combination, with a hub having a conical seat with an annular groove near the larger end and a flat annular flange next such groove projected outward beyond the line of the conical seat, of a series of rolls having each a tapering body fitted to the conical seat and a journal projected from its larger end toward the flat annular flange with a collar larger than the roll fitted to turn upon each of the said journals and rotated in the said groove, and having its outer corner beveled and proportioned to contact with the said flange on a line with the prolongation of the said conical seat, and bearing upon the said flange partly inside and partly outside the line of said seat.

1,104,365. TOILET-BRUSH. ALICE LOUISE T. LOUGHLIN, New York, N. Y. Filed Dec. 9, 1913. Serial No. 805,506. (Cl. 15—39.)



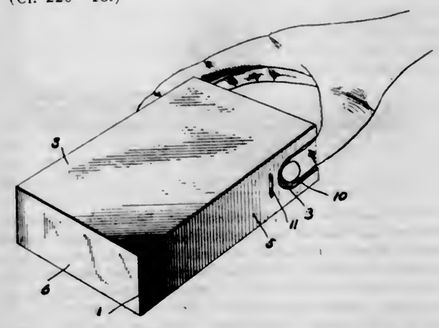
1. In a folding toilet brush a casing having a base section and a cover section hinged thereto, a boss extended from the base-section, a brush-handle pivoted thereto and provided with a locking shoulder and a lug on the cover section arranged to engage the locking shoulder of the handle section with the base and cover-section in closed position.

2. In a folding toilet brush, a casing comprising a base-section and a cover-section, a bifurcated boss extending from the base-section, a brush-handle pivoted thereto, a ledge on said boss to engage the handle section when in open position, shoulders on said bifurcated member arranged to be engaged by the cover section and a lug on the handle section adapted to register with said shoulders and abut against the cover section when the cover and base of the casing are in closed position.

3. In a folding toilet brush, a casing comprising a base section and a cover section, a bifurcated boss extending from one end of the base section, a brush-handle pivoted therein provided with a locking shoulder, shoulders upon the bifurcated boss registering with the locking shoulder of the handle member with the brush in extended position, a lug on the cover section forming a stop which abuts against the shoulders of the bifurcated boss and brush-handle and stop-lugs extending from the lower section of the casing into the upper section of the casing opposite the shoulders of the bifurcated boss.

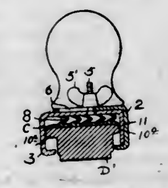
4. In a folding toilet brush, a casing having a base section and a cover section hinged thereto, a boss extending from the base section, a brush handle pivoted thereto and provided with a locking shoulder, a shoulder on the boss to limit the opening movement of the handle, and a lug on the cover section arranged to engage the locking shoulder of the handle section with the base and cover section in closed position.

1,104,366. CONTAINER. GODFREY S. MAHN, Philadelphia, Pa. Filed Sept. 26, 1913. Serial No. 791,913. (Cl. 220—13.)



A cigar box formed of sheet metal comprising a rectangular drawer having an open top and closed bottom, sides and ends, a casing conforming in shape and size to the drawer adapted to snugly receive the drawer and having one open end, said casing at its sides having recesses extending inwardly from its open end adapted to receive the thumb and finger of an operator to compress the sides of the drawer toward each other, said drawer and casing having interlocking means separated by the movement of the sides of the drawer toward each other, substantially as described.

1,104,367. STAMP. THOMAS O. MATTHEWS, Pittsburgh, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa. a Corporation of Pennsylvania. Filed Mar. 20, 1914. Serial No. 825,945. (Cl. 101—56.)

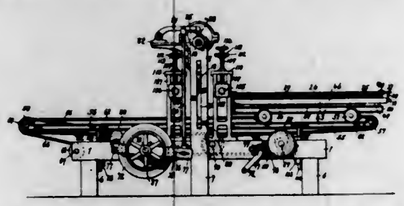


1. In a stamp, a holder having an impression face, an inturned detaining flange extending outwardly from said impression face, a type-carrying plate mounted on said impression face and slidable thereon at right angles to said retaining flange, a second inturned retaining flange extending outwardly from said type carrying plate, type

inserts set on said type-carrying plate having their ends inserted under said second retaining flange, the opposite ends of said type inserts being inserted under first retaining flange when said type-carrying plate is slid toward said first retaining flange, and means engaging said type-carrying plate for locking the latter stationary.

2. In a stamp, a holder having an impression face, an inturned retaining flange extending outwardly from said impression face, a type-carrying plate mounted on said impression face and slidable thereon at right angles to said retaining flange, a second inturned retaining flange extending outwardly from said type carrying plate, a cushion member mounted on said type carrying plate, type inserts set on said cushion member having their ends inserted under said second retaining flange, the opposite ends of said type inserts being inserted under said first retaining flange when said type carrying plate is slid toward said first retaining flange, and means engaging said type carrying-plate for locking the latter stationary.

1,104,368. MACHINE FOR INTERLACING CURLED HAIR. FREDERICK MAUSSNER, Philadelphia, Pa., assignor to Interlaced Curled Hair Company, a Corporation of Delaware. Filed Sept. 11, 1913. Serial No. 789,267. (Cl. 38—8.)



1. A machine of the character described, having reciprocating needles in combination with a frame consisting of upper and lower sections, each section formed of a series of parallel bars for confining the material to be treated and allowing the needles to pass through said sections, fastening devices at each end of the frame for holding the upper and lower sections of the frame together and means for moving the frame into the action of the needles.

2. A machine of the character described, having reciprocating needles in combination with a frame consisting of upper and lower sections, each section formed of a series of parallel bars for confining the material to be treated and allowing the needles to pass through said sections, end plates into which said parallel bars are loosely inserted, longitudinal bolts to hold the end plates upon the ends of the parallel bars and means for moving the frame into the action of the needles.

3. A machine of the character described, having reciprocating needles in combination with a frame consisting of parallel bars to compress the block of material to be treated, a roller for compressing the bars forming the frame, corrugations formed upon said roller to engage the bars of the frame and means for moving the frame within the action of the needles.

4. A machine of the character described, having reciprocating needles in combination with a frame for containing the material to be treated, a carriage, tracks, a sprocket chain having the ends attached to the carriage, sprocket wheel over which said sprocket chain passes located beyond the length of the travel of the carriage, means for imparting motion to the sprocket chain, a friction clutch, a connection between said clutch and one of said sprocket wheels and means for operating the clutch to impart an intermittent movement to the sprocket chain.

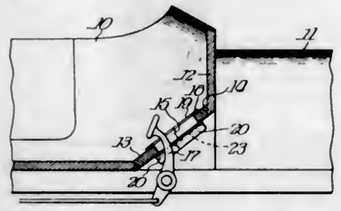
5. A machine of the character described, having reciprocating needles in combination with a shaft for operating the needles, a cam on said shaft, an arm operated by said cam, a rod attached to the arm, a shaft mounted in the side members of the machine, a friction clutch upon the last mentioned shaft, said rod connected with said friction clutch to intermittently rotate the same, a hand wheel on said last mentioned shaft, a sprocket chain operated by said last mentioned shaft, a carriage to which said sprocket chain is attached and tracks upon which said carriage is mounted.

[Claim 6 not printed in the Gazette.]

1,104,369. ALUMINUM ALLOY. WILLIAM A. MCADAMS, Bay Shore, N. Y. Filed Oct. 16, 1913. Serial No. 795,453. (Cl. 75—1.)

An aluminum alloy composed of tin, silver, cadmium and aluminum in the proportions substantially as set forth.

1,104,370. SLOT GUARD OR SHIELD. JOHN I. MCCORMICK, Chicago, Ill., assignor of one-half to Harry Lytton and William Lytton, Chicago, Ill. Filed Nov. 24, 1913. Serial No. 802,725. (Cl. 21—90.)



1. In a motor vehicle the combination of a controlling lever, a sectional foot board, the sections of said board having recesses opening through their adjacent edges and coöperating to form a slot in which the lever operates, and a sectional flexible shield, the sections of the shield connected with the respective sections of the foot board and forming a closure for the slot.

2. In a motor vehicle, the combination of a controlling lever, a sectional foot board, the sections of said board having recesses opening through their adjacent edges and coöperating to form a slot in which the lever operates, and a sectional flexible shield, the sections of the shield connected with the respective sections of the foot board and forming a closure for the slot, said shield sections being detached from the lever, successive portions of the shield being deflected by the lever as the latter is moved lengthwise of the slot.

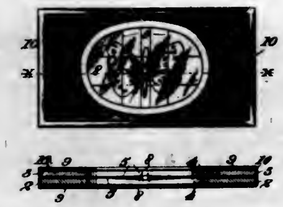
3. In a motor vehicle, the combination of a controlling lever, a sectional foot board, said sections having recesses coöperating to form a guide slot in which the lever operates, and a shield forming a closure for the slot, said shield embodying sections of flexible material detached from the lever and from each other, said sections arranged on the opposite sides of the slot, extending in directions across the slot and removable with the respective sections of the foot board.

4. In a motor vehicle, the combination of a controlling lever, a sectional foot board, said sections being freely removable and having coöperating recesses forming a guide slot through which the lever passes, and a guard for the slot, the said guard embodying separable flexible sections secured on opposite sides of the slot to the respective board sections, detached from each other and projecting in directions across the slot, the proximate edges of the sections abutting and being normally deflected away from the slot, said abutting portions being in alinement with the slot, and between which portions the lever operates.

5. In a motor vehicle, the combination of a controlling lever, a foot board comprising removable sections, the sections having recesses coöperating to form a guide slot through which the lever passes, a guard for the slot, said guard embodying flexible sections secured on opposite sides of the slot to the respective board sections and to project in directions across the slot, the proximate edges of the guard sections abutting and being normally deflected away from the slot, said abutting portions being in alinement with the slot, and between which portions the lever operates, and additional sections secured to the respective board sections to coöperate with the first recited guard sections and extending in directions across the slot, the lever also passing between the proximate edges of the second recited guard sections, said lever being detached from all of the sections.

[Claims 6 and 7 not printed in the Gazette.]

1,104,371. ENTOMOLOGICAL MOUNT. XIMENA MCGLASHAN, LEONORA G. MCGLASHAN, and CHARLES F. MCGLASHAN, Truckee, Cal. Filed Mar. 9, 1914. Serial No. 823,353. (Cl. 35—12.)



1. In a mount of the class described, the combination of a pair of cardboard sections, registering openings formed in said sections, a filamentous support extending across the opening on each card, a transparent closure on each card, and means for securing the card sections together.

2. In a mount of the class described, the combination of a pair of cardboard sections, registering openings formed in said sections, a filamentous support extending across the opening on each card, means for securing the filamentous support in position, a transparent closure on each card, and means for securing the card sections together.

3. In a mount of the class described, the combination of a pair of cardboard sections, registering openings formed in said sections, a plurality of slits formed in the outer edges of each card, a plurality of threads extending across the opening in each card and secured in the slits, a transparent closure on each card, and a binding strip to secure the cards together.

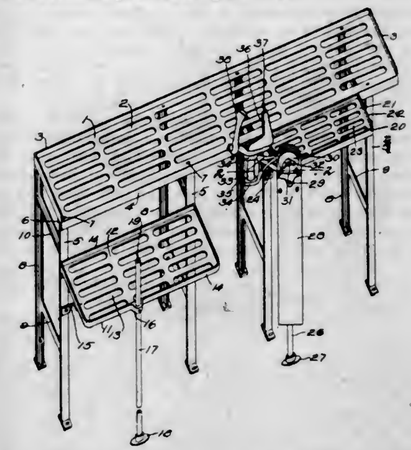
4. The combination in a mount of the class described, of a pair of cards 2 and 3, having openings 5 formed therein, the thread-like supports 4, and the binding strip 10, substantially as described.

5. In an entomological mount, the combination of a pair of card sections, registering openings formed in said cards, a sectional filamentous support extending across the openings in the cards, a specimen mounted between said sectional filamentous support, means for holding the filamentous support in a taut condition so as to exert sufficient pressure on both sides of the specimen to hold this in a fixed position, and means for securing the cards together.

1,104,372. SHOEMAKER'S WORK-BENCH. GEORGE T. MCLEOD, Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 27, 1909. Serial No. 524,952. (Cl. 12—122.)

1. A shoemaker's work bench comprising a main work bench, and an assembler's bench and a laster's bench secured to and projecting from the main work bench, each of said benches having a metal top plate provided with elongated openings of less length than the respective benches in the same direction and forming between the ends of such elongated openings web portions integral with the top plate of the respective benches.

2. A shoemaker's work bench comprising a main work bench, and an assembler's bench and a laster's bench secured to and projecting from the main work bench, each of said benches having a metal top plate provided with elongated openings of less length than the respective benches in the same direction and forming between the ends of such elongated openings web portions integral with the top plate of the respective benches, the main work bench being of a length greater than the combined lengths of the assembling and lasting benches.



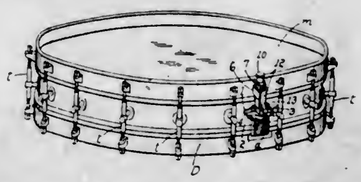
3. A shoemaker's work bench having a supporting surface comprising a rigid metallic plate, said plate being provided with a plurality of series of openings for the passage of tacks and having integral portions separating adjacent openings.

4. A shoemaker's work bench formed of metal and comprising a main work bench, an assembling work bench located at one end of the main work bench and projecting from the front of the main work bench at a lower level than the top thereof and having an assembling spindle, and a lasting bench at the other end of said main work bench and also projecting from the front of the main work bench at the level thereof and provided with a lasting jack, the main work bench having an unobstructed surface extending between the assembling and lasting benches, the tops of said benches being perforated for the passage of tacks.

5. A shoemaker's work bench comprising a main work bench, and an assembling work bench at one end thereof and a lasting bench at the other end thereof, said main work bench having a metal top plate provided with elongated openings for the passage of tacks, said elongated openings being of less length than the dimension of the top plate of the main work bench in the same direction and having their adjacent ends separated by web portions integral with the top plate of the main work bench.

[Claim 6 not printed in the Gazette.]

1,104,373. COMBINED SNARE STRAINER AND MUFFLER. JULIUS A. MEYER, St. Louis, Mo., assignor to Duplex Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 26, 1913. Serial No. 763,902. (Cl. 84—127.)



1. In combination with a snare-drum, a hollow bearing carried by the body of the drum, a drum-snare take-up having a member reciprocable in said bearing in a path substantially parallel to the axis of the drum, and an oscillating lever adjacent the hollow bearing operating in the plane of the axis of the member, for actuating the take-up in a given direction for imposing tension on the snares.

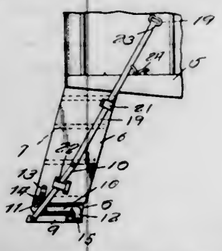
2. In combination with a snare-drum, a hollow bearing carried by the body of the drum, a non-rotatable stem rectilinearly reciprocable in said bearing, means for coupling the snares or strings to said stem, an adjusting screw operating in said stem and terminating in a head, a lift-piece engaging said head, and an oscillating lever engaging said lift-piece and operating in the plane of the axis of the screw.

3. In combination with a snare-drum, a hollow bearing carried by the body of the drum, a non-rotatable reciprocating stem coupled to the snares and traversing said bearing, a screw operating in said stem and provided with a terminal head, a lift-piece engaging said head and provided with an opening affording free passage of the screw therethrough, a lever pivoted opposite the hollow bearing and provided with a forked inner arm engaging the lift-piece, the fork-members being disposed symmetrically about the axis of the lever and free to embrace the screw-member for a muffled position of the lever.

4. In combination with a snare-drum, a hollow guide-bearing secured to the drum-body, a non-rotatable reciprocating stem coupled to the snares and traversing said bearing, an adjusting member comprising a screw operating in the bearing and having a terminal head and a narrow neck between the head and screw, said neck being offset from the screw, an angle lift-piece having a longitudinal leg operating freely between the guide-bearing and drum-body, and a perforated leg engaging the head of the screw and traversed by the screw and neck thereof, a bent lever pivoted contiguous the bearing and provided with a long outer arm and a short forked inner arm, the ends of the fork members being disposed symmetrically about the axis of the lever and engaging the transverse leg of the lift-piece, and spanning the neck and adapted to foul the offset with a tripping of the lever to muffled position.

5. In combination with a snare-drum, a hollow bearing on the drum, a drum-snare take-up having a member reciprocable in said bearing, an oscillating lever for engaging and actuating the take-up in one direction to impose tension on the snares, with a movement of the lever in one direction, and an offset on the take-up positioned to be impinged by the lever with a movement of the latter in the opposite direction for forcing the take-up in the opposite direction to relieve the tension on the snares should the take-up fail to respond when disengaged from the lever.

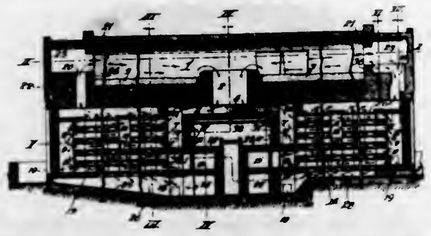
1,104,374. FOLDING CAR-STEP. DAVID L. MILLER, FRED T. LOBACH, and CHARLES F. PETERS, Egypt, Pa. Filed Aug. 25, 1913. Serial No. 786,544. (Cl. 105—86.)



1. An extension car step comprising the combination with stationary steps, of a riser pivoted thereto, a tread pivoted to the lower end of the riser, a link pivoted to the forward portion of the tread, a lever slidably mounted at the side of the stationary steps and having pivotal connection with the link and a bracket on the side of the steps adapted to embrace the link when the steps are in closed position and to guide the link during a portion of its movement.

2. An extension car step comprising the combination with stationary steps, of plates secured to the sides thereof and provided with outwardly extending pintles, a riser, a member secured to each end of the riser, a member secured to each end of the riser and having one end extending past the riser and directed laterally and having its other end terminating short of the riser and directed laterally, a tread portion provided with outwardly extending pintles passed through the last-named end of the member and the first-mentioned pintles being passed through the other end of the member.

1,104,375. GLASS-FURNACE. ROBERT H. MILLER, St. Louis, Mo., assignor to Laclede-Christy Clay Products Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 11, 1912. Serial No. 690,137. (Cl. 49—59.)



1. In a glass furnace, side, end, top and bottom walls inclosing a substantially rectangular hearth chamber, said end walls being provided with mixing chambers therein and burner openings leading from said mixing chambers to said hearth chamber, said furnace being provided with gas and air supply ducts leading to said mixing chambers, the bottom wall of said hearth chamber being provided with a substantially centrally located down-draft opening.

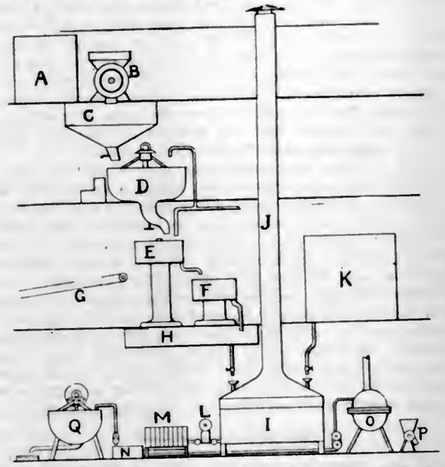
2. In a glass furnace, side, end, top and bottom walls inclosing a substantially rectangular hearth chamber, said end walls being provided with mixing chambers therein and burner openings leading therefrom, said furnace being further provided with gas and air supply ducts leading to said mixing chambers, said gas and air ducts being in communication adjacent their communication with said mixing chambers whereby air and gas delivered through said ducts will be commingled when entering said mixing chamber, said bottom wall of said hearth chamber being provided with a supstantially centrally located down-draft opening whereby the heating gas delivered by said burner openings may be discharged through said discharge opening.

3. In a glass furnace, side, end, top and bottom walls inclosing a substantially rectangular hearth chamber, each of said end walls being provided with a plurality of mixing chambers therein together with burner openings leading therefrom to said hearth chamber, said furnace being provided with gas and air ducts, said bottom wall of said hearth chamber being provided with a substantially centrally located down-draft opening coacting with said burner openings to establish heating currents from each end of said hearth chamber toward the center thereof.

4. In a glass furnace, side, end, top and bottom walls inclosing a substantially rectangular hearth chamber, said end walls being provided with mixing chambers therein and burner openings leading from said mixing chambers to said hearth chamber, said furnace being provided with gas and air supply ducts leading to said mixing chambers, the bottom wall of said hearth chamber being provided with a substantially centrally located down-draft opening, said furnace being provided with a deflecting wall located beneath said discharge opening and serving to divide the gas discharged through said opening.

5. In a glass furnace, side, end, top and bottom walls inclosing a substantially rectangular hearth chamber, said end walls being provided with mixing chambers therein and burner openings leading from said mixing chambers to said hearth chamber, said furnace being provided with gas and air supply ducts leading to said mixing chambers, the bottom wall of said hearth chamber being provided with a substantially centrally located down-draft opening, said furnace being provided with a deflecting wall located beneath said discharge opening, said furnace being provided with a deflecting wall located beneath said discharge opening and serving to divide the gas discharged through said opening, dividing walls extending from said deflecting wall and serving to further divide the discharged gas.

1,104,376. SOY-MILK PRODUCT AND PROCESS OF MAKING THE SAME. LOUIS J. MONAHAN and CHARLES J. POPE, Oshkosh, Wis. Filed July 28, 1913. Serial No. 781,585. (Cl. 99—11.)



1. The process of making malted soy milk which consists in emulsifying soy beans, filtering out the liquid, adding malt extract to the filtrate and evaporating off the water.

2. The process of making malted soy milk which consists in emulsifying soy beans separating the liquid from the residue, cooking the filtrate, refiltering the liquid, adding malt extract and evaporating to dryness.

3. The process of making malted soy milk which consists in extracting the soluble food products from soy beans in the form of an emulsion, cooking and filtering the extract, adding malt extract and recooking the mixture.

4. The process of making malted soy milk which consists in extracting the soluble food products from soy beans, adding a portion of cocoanut oil, cooking the extract, filtering off the insoluble content, adding malt extract and evaporating to dryness *in vacuo*.

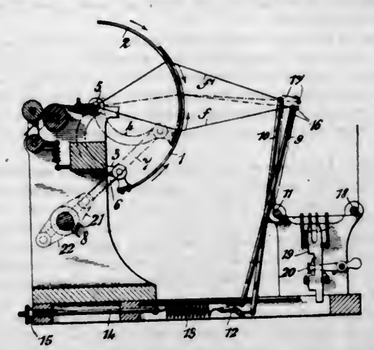
5. The process of making malted soy milk which consists in emulsifying soy beans previously mixed with a portion of sodium bicarbonate, separating the liquid emulsion from the bean residue, cooking the liquid, filtering off the insoluble matter, adding malt extract and evaporating to dryness *in vacuo*.

[Claims 6 to 10 not printed in the Gazette.]

1,104,377. WARP-TENSION-REGULATING MECHANISM. CARL MORIGGL, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Original application filed Nov. 14, 1910, Serial No. 592,307. Divided and this application filed Aug. 13, 1912. Serial No. 714,800. (Cl. 139—81.)

1. In a loom, the combination of a shedding mechanism for forming two sheds of warp threads, independently movable whips for said sheds, tension means and mechanism connecting said tension means and said whips and permitting opposite movement of said whips under constant tension.

2. In a loom, the combination of shedding mechanism for forming the sheds of warp threads, independently movable whips and unitary tension means tending to move both of said whips away from said shedding mechanism.



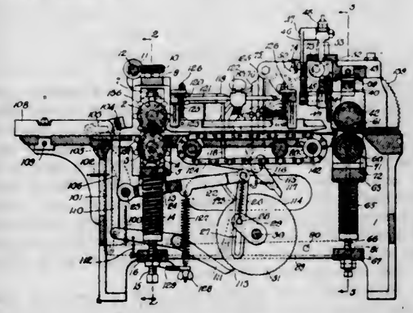
3. In a loom, the combination of shedding mechanism for forming the sheds of warp threads, independently movable whips, and a single tension means tending to move both of said whips away from said shedding mechanism, but permitting independent movement of one whip in respect to the other.

4. In a loom, the combination of shedding mechanism for forming the sheds of warp threads, independently movable whips, and tension means tending to move both of said whips away from said shedding mechanism, but permitting independent movement of one whip in respect to the other under the same tension.

5. In a loom, the combination of shedding mechanism for forming two sheds of warp threads, separate whips for the two sheds, a lever having one end connected to one whip and the opposite end connected to the other whip, and tension means secured to said lever intermediate of the ends of the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,104,378. MACHINE FOR GRADE-MARKING DIED-OUT LEATHER PIECES. ELMER P. NICHOLS, Manchester, N. H., assignor to Lacene Manufacturing Company, Manchester, N. H., a Corporation of Maine. Original application filed Feb. 27, 1908, Serial No. 418,008. Divided and this application filed Mar. 28, 1912. Serial No. 686,919. (Cl. 101—186.)



1. In a machine of the kind described, feeler mechanism located to operate on the under side of a piece of stock to determine thinnesses therein, and grade-marking mechanism arranged to operate on the upper side of said stock, connections between the aforesaid mechanisms including means rendering the marking mechanism responsive only to the final determination of said feeler mechanism in feeling of a number of different thinnesses.

2. In a machine of the kind described, the combination with detecting mechanism, of grading mechanism responsive thereto for indicating the grade of the leather

piece, starting means to set in motion said grading mechanism and mechanism for positively limiting the grading mechanism to one grading movement for one starting operation.

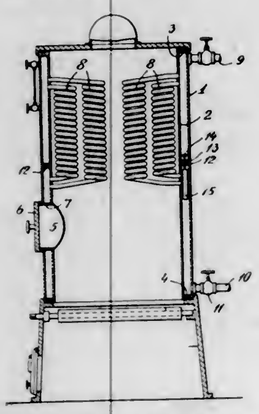
3. In a machine of the kind described, the combination with detecting mechanism, of grading mechanism responsive thereto and including a marker, operating means for said marker, including starting means to set in motion said operating means, and means for positively stopping the marker after it has performed a single marking movement.

4. In a machine of the kind described, the combination with detecting mechanism to operate on a piece of leather, of a grade-marker and connections responsive to said detecting mechanism, and means for starting the marking movement of said marker, including means adapted to be engaged by the piece of leather and movable thereby.

5. In a machine of the kind described, the combination with detecting mechanism to operate on a piece of leather, of a grade-marker and connections responsive thereto, and means for starting the marking movement of said marker, including means adapted to be engaged by the piece of leather and movable thereby, and connections operated by the movement of said movable means for timing said starting means.

[Claims 6 to 15 not printed in the Gazette.]

1,104,379. WATER-TUBE BOILER. AUGUST W. OFELDT, Jersey City, N. J. Filed Oct. 30, 1913. Serial No. 798,362. (Cl. 122—382.)



1. In a boiler, the combination with a structure comprising a steam and water space, having a valved blow off connection, a heating space, and generating tubes in that heating space each connected at both ends to said steam and water space, of a ported partition located in such steam and water space between the ends of such generating tubes, and dividing such steam and water space into separate chambers, and valve means controlling flow through the port or ports of such partition and normally open but adapted to close such port or ports when the blow off connection is opened.

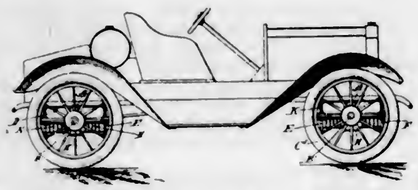
2. In a boiler, the combination with a structure comprising a steam and water space, having a valved blow off connection, a heating space, and generating tubes in that heating space each having its ends connected to said steam and water space at different levels, of a ported partition located in such steam and water space between the ends of such generating tubes, and dividing such steam and water space into separate chambers, and valve means controlling flow through the port or ports of such partition and normally open but adapted to close such port or ports when the blow off connection is opened.

3. In a boiler, the combination with a structure comprising a vertical annular steam and water space having a valved blow off connection, a heating pipe within such annular steam and water space, and generating tubes in that heating space each having its ends connected to said steam and water space at different levels, of a ported partition located in such steam and water space between the ends of such generating tubes, and dividing such steam and water space into separate chambers, and valve means controlling flow through the port or ports of such partition and normally open but adapted to close such port or ports when the blow off connection is opened.

4. In a boiler, the combination with a structure comprising a steam and water space, having a valved blow off connection, a heating space, and generating tubes in that heating space each connected at both ends to said steam and water space, of a ported partition located in such steam and water space between the ends of such generating tubes, and dividing such steam and water space into separate chambers, and one or more float-operated valves controlling flow through the port or ports of such partition and normally open but adapted to close such port or ports when the blow off connection is opened.

5. In a boiler, the combination with a structure comprising a steam and water space, having a valved blow off connection, a heating space, and generating tubes in that heating space each connected at both ends to said steam and water space, of a ported partition located in such steam and water space between the ends of such generating tubes, and dividing such steam and water space into separate chambers, and one or more float-valves controlling flow through the port or ports of such partition and normally open but adapted to close such port or ports when the blow off connection is opened, each such float valve comprising a valve plug above the partition, a stem passing through the corresponding port of that partition, and a float beneath such partition and connected to such stem.

1,104,380. SHOCK-ABSORBER FOR VEHICLES. PETER K. OLECHNA, Schenectady, N. Y. Filed Mar. 6, 1914. Serial No. 822,925. (Cl. 21—50.)

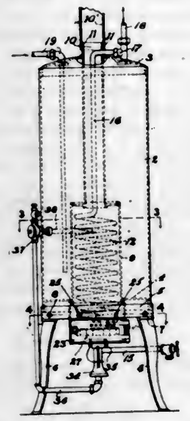


1. A shock absorber for vehicles, comprising a stationary frame, consisting of a top piece, a bottom comprising end pieces, an intermediate piece and rods connecting said end and intermediate pieces, posts connecting the top piece with said bottom pieces, a floating frame within said stationary frame and guided by said posts, compression springs interposed between the top piece of said stationary frame and said floating frame, and extension springs connected with the bottom of the stationary frame and with said floating frame.

2. A shock absorber for vehicles, comprising a stationary frame consisting of a top portion and a bottom portion, posts connecting the top and bottom portions of the frame, a floating frame within said stationary frame comprising end pieces, an intermediate piece and rods interposed between the end and intermediate pieces, compression springs interposed between the top of the frame and said floating frame, and extension springs connected with the bottom of the stationary frame and with the rods of the floating frame.

3. A shock absorber for vehicles, comprising a stationary frame, a floating frame arranged within the stationary frame and guided thereby, compression springs in said stationary frame above the floating frame, extension springs connecting the bottom of said stationary frame with said floating frame, extension springs of stronger tension than those first mentioned, connections between said springs of stronger tension and the floating frame, and chains connecting said last mentioned springs with the bottom of the stationary frame.

1,104,381. STAND-BOILER. ROBERT T. PARISEN, Knoxville, Pa., assignor to Lawson Manufacturing Company, Homestead, Pa., a Corporation of Pennsylvania. Filed May 28, 1913. Serial No. 770,318. (Cl. 122—16.)



1. The combination of a stand boiler, a chamber-forming shell within and closed to the boiler and open through the bottom thereof, a vent for the shell extending to the exterior of the boiler, a water heating coil within the shell with the upper extremity of the coil extending through the vent to the exterior of the boiler, coupling devices for connecting the upper and lower ends of the coil respectively to the upper and lower portions of the boiler, an open-top chamber beneath the boiler bottom and embracing the lower portion of the coil with the lower extremity of the latter extending through a wall of the chamber, and a gas burner within the chamber.

2. The combination of a stand boiler provided with a rim at its lower end offset downwardly from the boiler bottom, a chamber-forming shell within and closed to the boiler and open through the bottom thereof, a vent extending from the shell to the exterior of the boiler, an open-top burner-inclosing chamber forming a downward continuation of said shell, means securing the chamber to the bottom rim of the boiler, a water heating coil within the shell with its upper and lower ends connected respectively to the upper and lower portions of the boiler, and a gas burner within the burner-inclosing chamber.

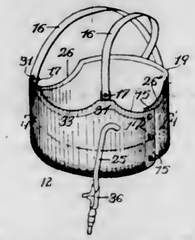
3. The combination of a stand boiler, a chamber-forming shell within and closed to the boiler and open through the bottom thereof, a vent extending from the shell to the exterior of the boiler, an open-top burner-inclosing chamber having a top portion of the same contour as the shell opening in the boiler bottom and uniting with and forming a downward continuation of the shell, the lower portion of the boiler formed with a downwardly extending rim, the burner-inclosing chamber shaped at one side to engage the rim with means for securing the chamber thereto, a water heating coil within the chamber-forming shell with its upper and lower ends connected respectively to the upper and lower portions of the boiler, and a gas burner within the burner-inclosing chamber.

4. The combination of a stand boiler, a chamber-forming shell within and closed to the boiler and open through the bottom thereof, a vent for the shell extending to the exterior of the boiler, a water heating coil within and depending from the shell with the upper end of the coil coupled to the upper portion of the boiler and with the lower extremity of the coil extended laterally and coupled to the lower portion of the boiler, an open-top burner-inclosing chamber secured to the boiler and forming a downward continuation of the shell, the chamber having an opening at one side to embrace the lateral extension of the coil, and a gas burner within the burner-inclosing chamber.

5. The combination of a stand boiler circular in cross-section, a chamber-forming shell circular in cross-section within and closed to the boiler and open through the bottom thereof, the location of the shell being eccentric to the boiler, a vent pipe extending from the shell to the exterior of the boiler, a water-heating coil within the shell with its upper and lower ends connected respectively to the upper and lower portions of the boiler, an open-top burner-inclosing chamber beneath the boiler and with its upper portion circular in cross-section and adapted to form a downward continuation of the shell, the boiler formed with a bottom depending rim, means securing the burner chamber to the depending rim, and a gas burner within the burner chamber.

[Claims 6 to 12 not printed in the Gazett.e]

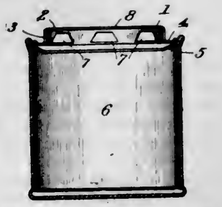
1,104,382. LIFE-PRESERVER. JEREMIAH M. PINEAU, Quincy, Mass. Filed Apr. 18, 1913. Serial No. 762,113. (Cl. 9—17.)



1. A double-walled body-encircling band, composed of two continuous side portions adapted to confine an interposed body of air, and united at their opposite ends to form thin end tabs, and between their ends to form a thin central non-inflatable portion which subdivides the band into front and rear inflatable portions, a narrow air passage being provided which extends across said non-inflatable portion and connects said inflatable portions, an inflating tube connected with one of the inflatable portions, fastening devices adapted to connect said end tabs, and straps adapted to support the band from the wearer's shoulders, said straps being arranged to hold the thin portion formed by the connected tabs under one arm, and to hold the said thin non-inflatable portion under the other arm, so that the said thin portions permit free play of the wearer's arms.

2. A life-preserver comprising a double-walled body-encircling band having inflatable front and back portions, and end portions adapted to meet under one arm of the wearer, and adapted to be detachably connected, the walls being connected partly across the band between the front and back portions to form a thin flexible portion under the other arm of the wearer, and means for contracting the band at said flexible portion.

1,104,383. BURNER FOR FUEL-RECEPTACLES. ELLIS M. POTTER, New York, N. Y. Filed Mar. 28, 1914. Serial No. 828,036. (Cl. 158—91.)



1. A burner member for fuel receptacles having an open top, comprising an inverted dish-shaped device having a

top portion provided with a central flame outlet and a vertical annular wall provided with a series of spaced air inlets, said wall terminating in a peripheral flange adapted to seat within the upper edge of said fuel receptacle.

2. The combination with a fuel receptacle having an open top and internal annular flange and a closure member normally closing said top, of a burner member comprising an inverted dish-shaped device having a top portion provided with a flame outlet and a vertical annular wall provided with a plurality of spaced air inlets, said wall terminating in a peripheral flange adapted to seat upon the internal flange of said fuel receptacle.

1,104,384. PROCESS OF PRODUCING SILICON MONOXID. HENRY NOEL POTTER, New York, N. Y., assignor to George Westinghouse, Pittsburgh, Pa.; Henry Herman Westinghouse, Charles A. Terry, and Walter D. Updegraff, executors of said George Westinghouse, deceased. Original application filed Dec. 30, 1904, Serial No. 238,925. Divided and this application filed July 29, 1907. Serial No. 386,153. (Cl. 204—63.)

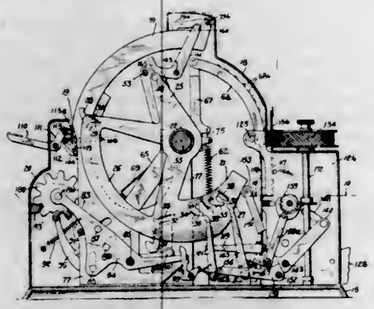
1. The method of making silicon monoxid which consists in so heating a surface consisting of a mixture of silica and carbon by an electrical source of heat in a partly filled inclosing chamber free from chemically active gases, that gaseous carbon monoxid and silicon monoxid upon liberation may expand quickly out of the reaction region and the active contact between silicon monoxid and carbon be thereby practically arrested.

2. The process of making a pulverulent material containing silicon monoxid, which consists in heating silicon dioxid in contact with carbon to a critical temperature in a partially filled inclosing chamber.

3. The process of making a pulverulent material containing silicon monoxid, which consists in heating silicon dioxid in contact with carbon to a critical temperature in a partially filled inclosing chamber, into the unfilled portion of which the reaction product can escape from the region of the reaction.

4. The process of making a pulverulent compound containing monoxid of silicon, which consists in heating to a critical temperature a mixture of silicon dioxid and carmon in approximately the proportion of twelve (12) parts carbon to sixty and four tenths (60.4) parts of silicon dioxid.

1,104,385. CALCULATING-MACHINE. WILLIAM P. QUENTELL, Montclair, N. J. Filed Feb. 24, 1914. Serial No. 820,615. (Cl. 235—58.)



1. In a calculating machine, the combination with an index member, an adding member adapted to add when moved in one direction, and means tending to move the adding member in the opposite direction, of normally retracted means for locking the members together in predetermined relations.

2. In a calculating machine, the combination with an index member, an adding member adapted to add when moved in one direction, and means tending to move the adding member in the opposite direction, of a locking pawl carried by the adding member and adapted when released to lock the said members together in one of a series of positions corresponding to numeral digits.

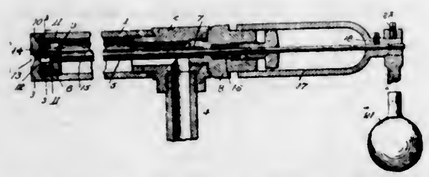
3. In a calculating machine, the combination with an index member, an adding member adapted to add when moved in one direction, and means tending to move the adding member in the opposite direction, of a locking pawl carried by the adding member and adapted when released to lock the said members together in one of a series of positions corresponding to numeral digits; and a latch for holding the locking pawl in a retracted position.

4. In a calculating machine, the combination with an index member having a series of numeral digits indicating stations thereon, an adding member adapted to add when moved in one direction but biased to move in the opposite direction, of normally retracted means for locking the members together, and means for holding the adding member in a zero position, said normally retracted means being adapted to be released by an object inserted in the machine at one of said stations of the index member to lock said members together.

5. In a calculating machine, the combination with an index member having a series of openings corresponding to numeral digits, an adding member adapted to add when moved in one direction, and means tending to move the adding member in the opposite direction, of normally retracted means for locking the members together.

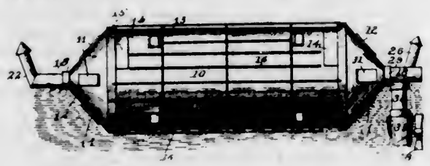
[Claims 6 to 26 not printed in the Gazette.]

1,104,386. OIL-BURNER. WIRT S. QUIGLEY, Rockaway Park, N. Y. Filed Oct. 31, 1912. Serial No. 728,910. (Cl. 137—86.)



An oil spraying device for use as an oil burner comprising in combination a tube for supplying the oil, a nozzle therefor consisting of a head having a central bore and a fine perforation axially thereof, serving as a discharge orifice, an outer annular cut-away portion and a series of perforations through the inner flange so formed and through the shell left surrounding the central bore, the perforations through said shell being approximately tangential to the circumference of the bore and considerably larger in area of cross section than the before described discharge orifice, together with a tube and stuffing box closing the inner end of the axial bore, a needle mounted in said tube in line with the discharge orifice and means for manually projecting and withdrawing said needle quickly through and from said discharge orifice.

1,104,387. LIFE-BOAT. MICHAL RAZNIAK, Strathcona, Alberta, Canada. Filed Apr. 11, 1914. Serial No. 831,223. (Cl. 9—4.)



1. A device of the class described comprising in combination with a tubular hull having a journaling perforation through the stern end thereof, a tubular casing journaled in said perforation, a downwardly-extending casing upon said tubular casing and having a closure bottom, a segment rack centrally pivoted upon said bottom within said downwardly-extending casing and having an upwardly-extending marginal toothed flange, an upright post upon said segment, a shaft journaled in said post and extending outwardly of said downwardly-extending casing, a propeller blade upon said shaft, and means within the hull operatively-connected with said rack for shifting said segment in the steering operation.

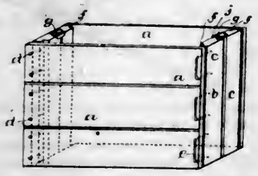
2. A device of the class described comprising a tubular hull having conical ends provided with journal perforations, a boat-shaped passenger compartment within said hull, oppositely-projecting tubes secured to said compartment and journaled in said perforations, air conduits extending through each of said tubes and communicating with the interior of the hull, an air expelling fan journaled positioned within one of said conduits, an extension upon one of said tubes, a laterally-shiftable propeller blade journaled in said extension, a crank means, operative means between said crank means and said propeller and fan, and steering means within said passenger compartment adapted for laterally shifting said propeller.

1,104,388. MACHINE FOR WASHING DISHES, CUPS, AND CUTLERY. GEORGE W. RUBUSH, Washington, D. C. Filed Sept. 3, 1913. Serial No. 788,020. (Cl. 141—9.)



The combination with a tank, of a supporting frame, a roller journaled upon said frame, a driving rod, a resilient belt over said roller and secured at its free ends to said rod, a cross arm secured at a point adjacent to the end of said rod, forked means carried by said arm and coöperating with the end of said rod for conveying dishes, sponges carried by the opposite ends of said arm, and a pan centrally fixed to said arm with its open side adjacent to one of said sponges.

1,104,389. COLLAPSIBLE TRANSPORT-BOX. HENRY THOMAS SHELTON, FREDERICK WALTER STEERE, and CHARLES POWER, Bunbury, Western Australia, Australia. Filed June 2, 1913. Serial No. 771,336. (Cl. 217—16.)

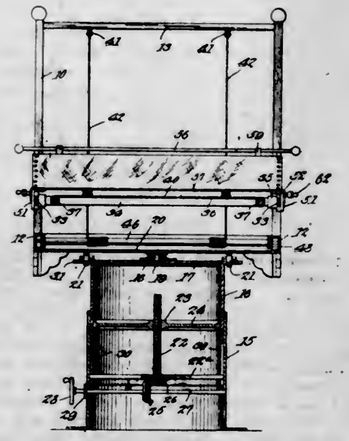


1. A collapsible transport box having ends, each composed of a plurality of sections; and flexible tongues hingedly connecting the sections of each end, said tongues having serrated and overlapping terminals operative to lock said end sections in open position.

2. A collapsible box of the character described having ends, each composed of a plurality of sections; and an inherently flexible metal strip, the intermediate portion of which forms a hinge between the adjacent edges of said end sections, and the terminal of which is adapted to be forcibly engaged with said sections to lock the same in alinement.

1,104,390. INVALID-BEDSTEAD. RALPH A. STANLEY, Gladstone, Ill. Filed Mar. 21, 1914. Serial No. 826,344. (Cl. 5—12.)

1. The combination of a cylindrical pedestal, a hollow plunger slidably mounted in the pedestal, a top plate carried by the plunger, a bedstead swiveled to the top plate to swing in a horizontal plane, a cross-bar in the plunger and having a nut at its center, a non-traveling screw mounted in the pedestal and threaded through the nut, and means for operating said screw.



2. The combination with a bedstead having side rails, corner-posts and top cross-rails connecting the corner-posts, of a lifting frame slidably mounted on the corner posts, sheaves carried by the cross-rails, hoisting lines passing over the sheaves and connected to the lifting frame, rollers extending transversely between the side rails, around which rollers the hoisting lines are wound, guide pulleys adjacent to the ends of the side rails over which guide pulleys the hoisting lines pass to the rollers, and means for operating the rollers.

3. The combination with a bedstead having side rails, corner posts and top cross rails connecting the corner posts, of a lifting frame slidably mounted on the corner posts, sheaves carried by the cross rails, hoisting lines passing over the sheaves, resilient connections between the hoisting lines and the lifting frame, rollers extending transversely between the side rails, around which rollers the hoisting lines are wound, guide pulleys adjacent to the ends of the side rails over which guide pulleys the hoisting lines pass to the rollers, and means for operating the rollers.

4. The combination with a bedstead having corner posts, of a lifting frame slidably mounted on said posts, raising and lowering means for the frame, rollers carried by the frame on opposite sides thereof, a sheet wound on the rollers, and means for operating said rollers.

5. In a bedstead, a head rest frame having side rails, supporting side rails on which the side rails of the head rest frame are slidably mounted, and a hauling device connected to the head rest.

[Claim 6 not printed in the Gazette.]

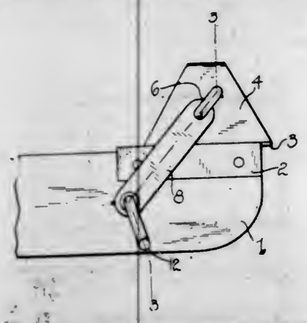
1,104,391. LOGGING-BUNK. JOHN R. STINSON, Malvern, Ark. Filed May 13, 1914. Serial No. 838,346. (Cl. 105—173.)

1. In combination with a bunk provided in a face with a run-way, a plate adapted to be received within said run-way, a block pivotally engaged with the plate, and means for maintaining the block in operative position.

2. In combination with a bunk, a block supported thereby, a link operatively connected at one extremity with the block and provided at its opposite extremity with locking means and with a laterally directed hook member.

3. In combination with a bunk provided in its upper face with a run-way, a plate adapted to be received within such run-way, a block pivotally engaged with the

plate, and means coacting with the block and bunk for maintaining the block in operative position.

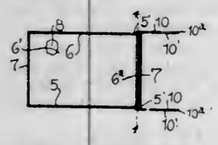


4. In combination with a bunk provided with an elongated longitudinally disposed opening therethrough, a block adapted to rest upon the bunk, links pivotally engaged with the block and provided with openings adapted to register with the elongated opening of the bunk, the opening in one of the arms being elongated and disposed longitudinally of the arm, and a key adapted to be disposed through such registering openings, said key being provided at one extremity with a laterally disposed finger.

5. In combination with a bunk provided with an elongated longitudinally disposed opening therethrough, a block adapted to rest upon the bunk, links pivotally engaged with the block and provided with openings adapted to register with the elongated opening of the bunk, the opening in one of the arms being elongated and disposed longitudinally of the arm, and a key adapted to be disposed through such registering openings, said key being provided at one extremity with a laterally disposed finger, the opposite extremity of the key being provided with means whereby axial rotation may be imparted thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,104,392. PAPER BOX. SOL STONE, San Diego, Cal. Filed Aug. 23, 1913. Serial No. 786,312. (Cl. 229—45.)

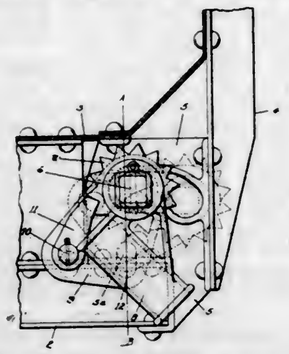


The combination with a box having a cover, said box and cover being provided with flanges at their marginal portions adapted to overlap when in closed relation, said box and cover being provided with slots therethrough immediately adjacent the flanges at their forward ends, such slots being adapted to aline when the cover is adjusted into closed position, of a wide strip of flexible material removably directed through such apertures when in alined position and adapted to bear against the inner surface of one of the flanges, such strip being of a length greater than the width of the box and having its extremities projecting beyond the opposite sides thereof, each of such extremities being provided with a transverse opening so that the fingers of a person may be engaged with said strip whereby such strip affords a locking means and a carrying means.

1,104,393. OPERATING MECHANISM FOR DUMP-DOOR WINDING-SHAFTS. RALPH G. TAYLOR, Davenport, Iowa, assignor, by mesne assignments, to The Bettendorf Company, Bettendorf, Iowa, a Corporation of Iowa. Filed Apr. 4, 1912. Serial No. 688,482. (Cl. 105—14.)

1. In combination a winding shaft bracket provided with a pintle extending laterally therefrom, a winding shaft and ratchet, a pawl plate journaled on said ratchet and slidingly engaging said pintle.

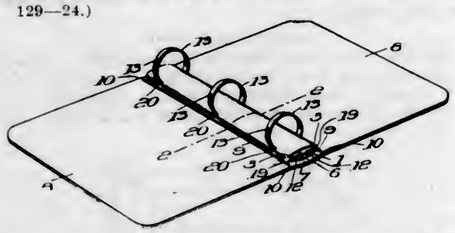
2. In combination a winding shaft bracket provided with a slotted opening, a winding shaft adapted to travel in said opening, a ratchet adapted to rotate said shaft, a pawl plate swingingly attached to said bracket and actuated by said shaft substantially as described.



3. A movably supported winding shaft, a ratchet secured to said shaft and provided with extending hub portions, a pawl plate swingingly mounted on said ratchet hub extension, a ratchet pawl and locking dog carried by said pawl plate.

4. A winding shaft operating mechanism comprising a ratchet secured to a movably supported shaft, means to rotate said ratchet, a swingingly mounted pawl plate journaled on said shaft, a pawl and locking dog pivotally secured to said pawl plate and means to maintain same in fixed relation to said movable shaft.

1,104,394. TEMPORARY BINDER. CLARENCE D. TRUSSELL, New York, N. Y., assignor to Trussell Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 26, 1908. Serial No. 469,226. (Cl. 129—24.)



1. A temporary binder including in combination a back and covers composed of a single-ply integral piece of flexible material, a loose-leaf binding mechanism, and means passing through said back and fastening said mechanism permanently upon the inner face thereof.

2. A temporary binder including in combination a back and covers composed of a single-ply integral piece of leather so that the cut edges of said piece of leather constitute the edges of the covers and back, a loose-leaf binding mechanism, and means passing through said back and fastening said mechanism permanently upon the inner face thereof.

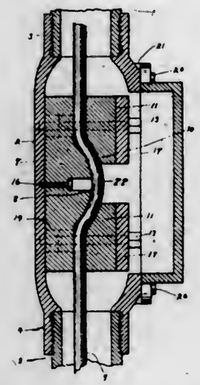
3. A temporary binder including in combination a back and covers composed of a single-ply integral piece of flexible material, a loose-leaf binding mechanism on the inner side of said back, a binding plate on the outer side of said back and means for clamping said back between said mechanism and said plate.

4. A temporary binder including in combination a back and covers composed of a single-ply integral piece of flexible material, a loose-leaf binding mechanism on the inner side of said back and a binding plate on the outer side of said back having ears passing through said back and engaging a part of said mechanism so as to fasten the latter to said back.

5. A temporary binder including in combination a back and covers composed of a single-ply integral piece of flexible material, and a loose-leaf binding mechanism permanently attached thereto, said integral piece of flexible material being of reduced strength along two lines substantially parallel with and at opposite sides of the back, so as to provide definite lines for the bending or hinging of the flexible covers relatively to the back.

[Claims 6 to 9 not printed in the Gazette.]

1,104,395. SUSPENSION-BOX FITTING FOR ELECTRIC INSTALLATION. WHEELER H. VIBBER, New London, Conn. Filed Apr. 15, 1911. Serial No. 621,357. (Cl. 247—10.)

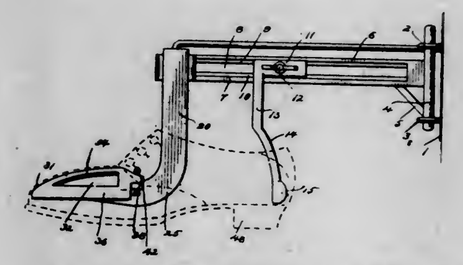


1. In a suspension-box fitting for electric installation, the combination with a box having a relatively large interior clamping chamber provided at its upper and lower ends with means for the attachment of sections of a conduit-pipe, and formed in its outer face with a large lateral opening giving access to the said chamber and normally closed by a cover; of an inner deflecting-member adapted in size to be introduced into the said chamber through the said lateral opening, fastened to the rear wall of the box and adapted in width to have one or more cables passed over its front face, one or more outer deflecting-members adapted to be introduced into the said chamber through the said opening, and means for drawing the said inner and outer deflecting-members together for their co-action, whereby a plurality of cables arranged side by side may be passed through the fitting and gripped therein for being vertically supported.

2. In a suspension-box fitting for electric installation, the combination with a box having a relatively large interior clamping-chamber, provided at its upper and lower ends with means for the attachment of sections of a conduit-pipe, and formed in its outer face with a large lateral opening giving access to the said chamber and normally closed by a cover; of an inner deflecting-member adapted in size to be introduced into and removed from the said chamber through the said lateral opening, and formed with a horizontal deflecting-rib in front of which one or more cables arranged side by side may be passed, two movable deflecting-blocks introduced into and removed from the said chamber through the said lateral opening and respectively located above and below the said horizontal-rib of the inner deflecting-member with which they co-act, and means for drawing the said blocks toward the said inner member, whereby one or more cables passing upward through the box may be gripped and held.

3. In a suspension-box fitting for electric installation, the combination with a box provided at its upper and lower ends with means for the attachment of sections of a conduit-pipe, formed with a relatively large interior clamping-chamber, having in its outer face a large lateral opening giving access to the said chamber and normally closed by a cover, and provided upon the inner face of its rear wall with bosses located at the sides of the said clamping-chamber; of an inner deflecting-member adapted in size to be introduced into the said chamber through the said opening and having a horizontal deflecting-rib, two deflecting-blocks introduced into and removed from the said chamber through the said lateral opening and respectively located above and below the said horizontal-rib and co-acting therewith for gripping a plurality of cables arranged side by side and passing between them, and clamping screws passing through the said blocks, and the inner deflecting-member into the said bosses, whereby a plurality of cables arranged side by side and passing between the said deflecting-member and blocks may be gripped and held.

1,104,396. SHOE-SUPPORT. JOHN C. WALSH, Philadelphia, Pa. Filed Sept. 8, 1911. Serial No. 648,322. (Cl. 12—128.)



1. A device of the kind described consisting of a bracket, an enlargement formed terminally of said bracket, and a shoe tree comprising an arm formed with an angularly disposed terminal having a lug downwardly turned, and parallel to said arm, said arm being supported on said bracket, said enlargement formed with opposed recesses arranged to receive said arm and its parallel offset.

2. A device of the kind described comprising a bracket, a bearing in which said bracket is pivoted, a member adjustable on said bracket and engaging the heel end of a shoe, an enlargement formed terminally of said bracket, a shoe tree comprising an arm formed with an angularly disposed terminal having an offset parallel to said arm, said arm being supported on said bracket, said enlargement being formed with opposed recesses arranged to receive said arm and its parallel offset, an integral lug formed on said arm extending laterally of said bracket, and a brace arranged to be pivotally connected to a wall and removably connected to said lug to hold said bracket in position.

3. In combination an arm, two sections arranged to support the toe end of a shoe, each of said sections having a rectilinear edge arranged normally to abut with that of its mate, the rectilinear edge of each section formed with an inwardly sloping surface at one end thereof whereby said sections may bodily rock on each other, a cross-piece formed integrally at one end of said arm, each section being pivotally connected at one end to one end of said cross-piece, lugs formed upon said arm upon one of which the opposite end of each section is slidable, and means engaging said lugs and said sections arranged to hold said sections in set position.

4. The described device consisting of a pivotally mounted bracket having an enlarged outer end and a longitudinal slideway, a shoe tree on the end of said bracket, a shoe heel engaging member slidable in said slideway, means for holding said member in fixed position, and means for holding said bracket rigidly projected, said tree consisting of an arm having its upper end returned whereby it may engage said bracket, said bracket having recesses for engagement with said arm and returned portion, said arm having a right angular portion, the outer end of which is T-shaped, toe engaging members pivoted to said outer end,

and opposing lugs inwardly of said end over which said members are movable and means whereby said members may be fixed to said lugs.

1,104,397. HARNESS-SADDLE. HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Mar. 29, 1909. Serial No. 486,581. (Cl. 54—38.)



1. A tree for a harness saddle, comprising a frame having a sheet metal wing slitted to form a pair of lips, a plurality of strengthening rods separated from each other and extending longitudinally of the frame, and means for holding the said rods and frame together arranged on opposite sides of a central line passing transversely through said frame and held in position against shifting longitudinally thereof by said lips.

2. A tree for a harness saddle, comprising a frame having a sheet metal wing formed with an opening to receive a terret shank and slitted to form a pair of lips, a plurality of strengthening rods separated from each other and extending longitudinally of the frame, and clamping devices including a terret extending through the opening in said wing and positioning and clamping means engaging said rods, the said lips engaging and holding said clamping means against shifting longitudinally of said frame.

3. A tree for a harness saddle, comprising a frame formed from sheet metal, a pair of strengthening rods extending subatantially from end to end of said frame, means for spacing the central portions of said rods from each other, means for securing the free ends of the rods to the frame, and separate means, each including a device engaging both rods and lips struck up from the metal of the frame, for binding the rods to the frame, the said binding means being arranged between the spacing means and the means which secure the free ends of the rods to the frame.

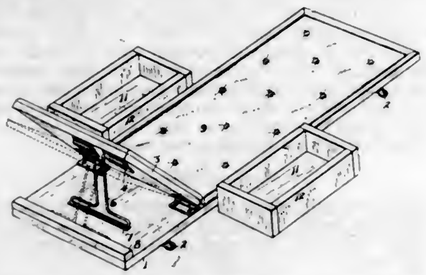
4. For a harness saddle, a tree comprising a frame formed from sheet metal, a pair of strengthening rods separated from each other and extending from the center of the frame longitudinally toward its opposite ends, means for spacing the central portions of the rods from each other, and means arranged on either side of the spacing means and between it and the free ends of the rods for binding them to the frame, the metal of the frame between the rods on opposite sides of the binding means being slitted and struck-up to form lips which are bent over into engagement with the binding means to hold the latter in place.

5. A tree for a harness saddle comprising a frame formed from sheet metal, a pair of rods separated from each other and extending longitudinally of the frame and having inturned portions on opposite sides of a central transverse line, binding means for securing the inturned portions to the frame including lips carried by the frame, the central portions of the rods being bent outwardly and extending parallel to each other in planes different from the remaining portions of the rods, and separate means for binding the free ends of each rod to the frame arranged between said first mentioned binding means and the free ends of the rods, the said binding means comprising a strap struck up from the metal of said frame.

[Claims 6 and 7 not printed in the Gazette.]

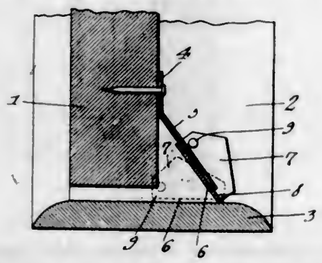
1,104,398. AUTOMOBILE REPAIRER'S SUPPORT. JAMES H. ZIMMERMAN, Placerville, Cal. Filed Feb. 21, 1914. Serial No. 820,349. (Cl. 5—43.)

A device of the character described comprising a long thin flat rectangular support, casters at the edges of said body upon which it is directly supported, a head rest, one end of which is pivotally attached to the body, and



a supporting brace for said head rest, and a box secured to the body at one side thereof.

1,104,399. WEATHER-STRIP. ERNEST G. ALLEN, Aberdeen, Wash., assignor of one-fourth to Phillip H. King and one-fourth to Edward Kohl, Aberdeen, Wash. Filed Mar. 26, 1914. Serial No. 827,453. (Cl. 20—66.)

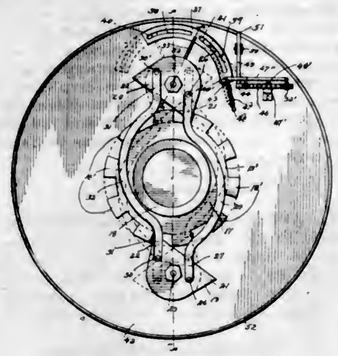


1. The combination with a door and its threshold, of a flexible angular apron strip carried by the lower portion of the door and projecting relatively close to the threshold, and a strip having one edge portion pivoted over the threshold and arranged to swing under the apron strip, the second mentioned strip having an overhanging pin at that end adjacent the free edge of the door and arranged to engage over the apron strip when the door is closed, whereby the apron strip will be sprung when it is being engaged under and withdrawn from under the said pin

2. The combination with a door and its threshold, of a flexible angular apron strip carried by the lower portion of the door and projecting relatively close to the threshold, a threshold strip disposed upon the threshold and having one edge pivotally mounted upon the threshold, that end of the threshold strip adjacent the free edge of the door being upturned, and a pin carried by the said upturned end adjacent the free edge of and overhanging the threshold strip and arranged to engage over the outer side of the apron strip when the door is closed, to swing the threshold strip under the apron strip, and whereby the apron strip will be sprung into and out of engagement with the threshold strip.

1,104,400. FRICTION-CLUTCH. DAVID REDMOND BARRY, Beaumont, Tex. Filed Dec. 6, 1911. Serial No. 664,156. (Cl. 192—6.)

1. A device of the kind described comprising a driving shaft, a driven shaft held in alinement with said shaft, a disk mounted upon said driving shaft, a ratchet wheel on said driven shaft, diametrically opposite pawls mounted upon said disk and engaging with said ratchet wheel, said disk when revolving causing said pawls to turn said ratchet wheel in one direction, means on said disk for shifting said pawls to cause them to turn said wheel in an opposite direction, a drum on said shaft slidable over said disk and actuating said last-named means, and means for moving said drum in and out of operative position.

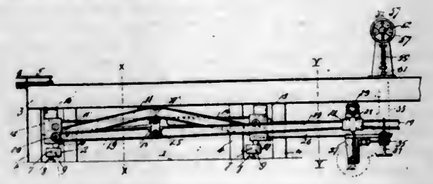


2. In combination a driving shaft, a driven shaft loosely socketed thereto, a disk fixed upon the driving shaft, a ratchet wheel fixed upon the driven shaft, pawls pivoted to said disk at diametrically-opposite points of and engaging with said ratchet wheel, means for causing said pawls to move in unison, said disk when revolving causing said pawls to turn said ratchet wheel in one direction, means for holding said pawls in position to turn said wheel, a slidable member projecting above the periphery of said disk arranged to shift said pawls to cause them to turn said wheel in an opposite direction.

3. In combination with a driving and a driven shaft, said driven shaft being independently rotatable, a disk fixed upon the driving shaft, a ratchet wheel fixed on the driven shaft, double toothed pawls pivoted upon said disk, means for moving said pawls in unison, a rocking bar arranged to hold one tooth of each pawl in operative position to rotate said ratchet wheel, means projecting above the periphery of said disk for actuating said rocking bar, a drum slidable over said disk engaging said projecting means to actuate it, and means for moving said drum into and out of engagement.

4. A device of the kind described comprising a driving and an independently rotatable shaft, a disk mounted on the driving shaft and a ratchet wheel on the driven shaft, a double-toothed pawl pivoted to said disk, each tooth adapted to engage with said ratchet wheel according to the direction of movement of said disk, a rockbar mounted on said disk, a resilient arm on said pawl actuated by said rock-bar to cause said pawl to be shifted to an opposite position, a drum slidable over said disk, means actuated by said drum arranged to operate said rock bar, and means for actuating said drum.

1,104,401. VERTICAL LOADER FOR WEIGHING-SCALES. HENRY M. B. BARY, Philadelphia, Pa. Filed Dec. 8, 1911. Serial No. 664,694. Renewed June 11, 1914. Serial No. 844,585. (Cl. 73—121.)



1. A vertical loader for platform weighing scales, comprising a frame adapted to be arranged between the platform and the weighing levers, and to be supported solely by the latter, vertically movable plungers mounted on said frame, over the knife edges of the weighing levers and below the platform, a system of levers and connections through which all said plungers are operated simultaneously and means whereby all the plungers may be operated from a single point.

2. A vertical loader for platform weighing scales, comprising a self-contained frame composed of side beams transverse connection, and platform elevating mechanism mounted on said frame, said loader adapted to be placed over and sustained solely by the weighing levers.

3. A vertical loader for platform scales, having platforms adapted, when not in use, to rest on supports independently of the weighing levers, said loader, comprising vertically adjustable jacks, and frames supporting the same, located between the platform and weighing levers and supported by the knife edges of the weighing levers, levers connected to the plungers of a plurality of jacks and coupled together between the jacks, levers connected to the frames adjacent the fulcrums of weighing levers, and linked to the levers of the jacks, a train of gearing and operating means having flexible connections and coupled to the last named levers and adapted to move the same, and to thereby operate the plungers of the jacks and raise the platform from its independent supports.

4. In a vertical loader for platform weighing scales, the combination of a platform, weighing levers located below the platform, supports adapted to sustain the platform independently of the weighing levers and with a self-contained, vertical loading mechanism comprising a frame sustained by said weighing levers, lifting levers carried by said frame, plungers actuated by said lifting levers and adapted to contact with the platform and mechanism for simultaneously operating all the lifting levers from a single point.

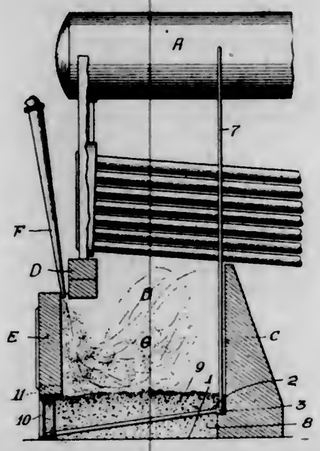
5. In a vertical loader for platform weighing scales, the combination of a platform, weighing levers located below the platform, supports adapted to sustain the platform independently of the weighing levers, with a self-contained, vertical loading mechanism comprising a frame sustained by said weighing levers, lifting levers carried by said frame, plungers actuated by said lifting levers and adapted to contact with the platform and mechanism for simultaneously operating all the lifting levers from a single point, said mechanism comprising a train of gearing including flexible connections, a divided shaft in one section of which is keyed a pinion and a non-sliding clutch member, and on the other section a sliding clutch member adapted to engage with the non-sliding member, clutch adjusting means, automatically operating means for locking the non-sliding clutch member, when the clutch members are disengaged, a winch, a flexible connection from the winch shaft to the shaft on which the sliding clutch member is mounted, and a dog adapted to lock the winch shaft at a point coinciding with a predetermined position of the non-sliding clutch member.

1,104,402. BOTTOM CONSTRUCTION FOR FURNACES. HENRY H. BLAKE, Pittsburgh, Pa., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 30, 1911. Serial No. 636,294. (Cl. 122—371.

1. Cooling means especially adapted for shallow combustion-chambers of furnaces, comprising, in combination with the combustion-chamber, a series of connected, substantially horizontally-arranged, imperforate pipes disposed near the bottom of said combustion-chamber, means for circulating water through said pipes, and a bed of material disposed between said pipes and the bottom of said combustion-chamber, and serving as a non-conductor of heat.

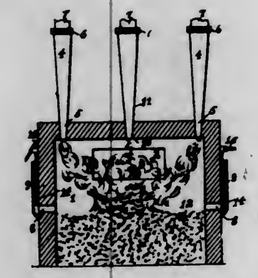
2. Cooling means especially adapted for shallow combustion-chambers of furnaces, comprising, in combination with the combustion-chamber, a series of connected pipes disposed near the bottom of said combustion-chamber and inclined from the rear to the front of said combustion-chamber, means for circulating water therethrough, and a bed of material disposed between said pipes and the bottom of said combustion-chamber, and serving as a non-conductor of heat.

3. In a furnace, a boiler, connected pipes disposed near the bottom of the combustion-chamber of the furnace, a connection between said pipes and said boiler, affording



communication therebetween, means for circulating water through said pipes and a bed of material disposed between said pipes and the bottom of said combustion-chamber, and serving as a non-conductor of heat.

1,104,403. APPARATUS FOR UTILIZING LOW-GRADE FUELS. HENRY H. BLAKE, Pittsburgh, Pa., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 3, 1911. Serial No. 642,052. (Cl. 110—28.)



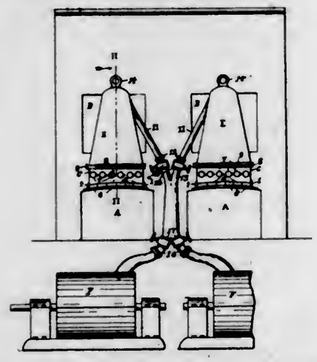
1. In a furnace for the combustion of low-grade fuel, means for admitting pulverized higher-grade fuel downwardly into the furnace wherein it forms a flame reverberating against the furnace bottom, means for admitting the low-grade fuel downwardly into the furnace, and means for introducing a current of air laterally into said flame to force the same into contact with said low-grade fuel.

2. In a furnace for the combustion of low-grade fuel, means for admitting pulverized higher-grade fuel downwardly into the furnace wherein it forms a frame reverberating against the furnace bottom, means for admitting the low-grade fuel downwardly into the furnace, means for introducing a current of air from without the furnace laterally into said flame to force the latter into contact with said low-grade fuel, and means for heating said air previous to its admission into the combustion chamber.

3. In a furnace for the combustion of low-grade fuel, means for admitting a plurality of flows of higher-grade fuel downwardly into the furnace wherein the same form flames reverberating against the furnace bottom, means for admitting the low-grade fuel downwardly into the furnace between said flames, and means for introducing currents of air laterally into said flames to force the latter into contact with said low-grade fuel.

4. In a furnace for the combustion of low-grade fuel, means for admitting a plurality of flows of higher-grade fuel downwardly into the furnace wherein the same form flames reverberating against the furnace bottom, means for admitting the low-grade fuel downwardly into the furnace between said flames, means for introducing currents of air from without the furnace laterally into said flames to force the latter into contact with said low-grade fuel, and means for heating said air previous to its admission into the combustion chamber.

1,104,404. APPARATUS FOR DISTRIBUTING PULVERIZED FUEL. HENRY H. BLAKE, Pittsburgh, Pa., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 21, 1911, Serial No. 639,756. Renewed Dec. 8, 1913. Serial No. 805,431. (Cl. 110—106.)



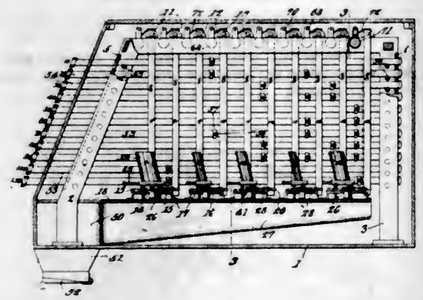
1. In apparatus for the purpose described, the combination of a furnace having a vertical opening in the top thereof, a distributer having a closed rounded top placed in a vertical position above the furnace and communicating at its bottom with said opening, and a fuel supply pipe leading upwardly into the side of the distributer which discharges the fuel against the rounded top of the distributer by which said fuel is reverberated downwardly into the furnace.

2. In apparatus for the purpose described, the combination of a furnace having a vertical opening in the top thereof, a distributer base mounted on said furnace and communicating with said opening, a distributer body having a closed rounded top mounted vertically on said base, a main fuel supply pipe adjacent to said furnace, and a second fuel supply pipe mounted on said main pipe and leading upwardly into said body which introduces the fuel upwardly against said rounded top by which said fuel is reverberated downwardly through said base into the furnace.

3. In apparatus for the purpose described, the combination of a plurality of furnaces provided with vertical openings in their tops, a distributer having a closed rounded top mounted vertically on each of said furnaces and communicating with said openings, a main fuel supply pipe communicating with the source of fuel supply adjacent to said furnaces, and branch pipes leading from said main pipe upwardly into said distributers by which said fuel is introduced against said rounded tops by which said fuel is reverberated downwardly through said distributers into the furnaces.

4. In apparatus for the purpose described, the combination of a plurality of furnaces provided with vertical openings in their tops, a distributer having a closed rounded top removably mounted in a vertical position on top of each furnace and communicating with the opening thereof, a main fuel supply pipe communicating with the source of fuel supply adjacent to said furnaces, and branch pipes removably mounted on said main pipe and leading upwardly into said distributers by which said fuel is introduced against the rounded tops by which said fuel is reverberated downwardly through said distributers into the furnaces.

1,104,405. COIN-DELIVERY MACHINE. ROBERT CAIRNS and JOSEPH W. CAIRNS, Watertown, Wis. Filed Oct. 27, 1913. Serial No. 797,510. (Cl. 133—4.)



1. A coin-delivery apparatus comprising a series of parallel swinging frames, each frame having spaced bars and said bars of the respective frames being in alinement, a coin ejector connected to each frame, longitudinal bars slidably mounted between the aforesnid spaced bars and having abutments engageable therewith, certain ones of the bars having more than one abutment to engage a corresponding number of bars of different swinging frames simultaneously.

2. A coin-delivery apparatus comprising a series of parallel swinging frames, each frame having spaced bars and said bars of the respective frames being in alinement, a coin ejector connected to each frame, said coin ejectors being located alternately on opposite sides of the series of frames, longitudinal bars slidably mounted between the aforesaid spaced bars and having abutments engageable therewith, certain ones of the bars having more than one abutment to engage a corresponding number of bars of different swinging frames simultaneously.

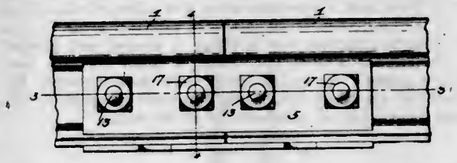
3. A coin-delivery apparatus comprising a supporting frame having front, rear and side members, a series of parallel swinging frames between the side members, each frame having spaced bars and the bars of the respective frames being in alinement, transverse supports between the front and rear supporting frame members, longitudinal bars slidably mounted on said supports and located between the aforesaid spaced bars, said longitudinal bars having abutments engageable with the spaced bars, certain ones of the longitudinal bars having more than one abutment to engage a corresponding number of bars of different swinging frames simultaneously, and a coin ejector connected to each swinging frame.

4. The combination with a coin receptacle, of a swinging coin ejector, a pivoted coin-supporting member swinging into the receptacle to engage the coin next to the one being ejected, a swinging member operatively connected to the coin ejector and having a projecting member extending beneath the receptacle when the ejector is retracted, and means on the swinging member to retract the supporting member when the ejector is retracted.

5. The combination with a coin receptacle, of a swinging coin ejector, a pivoted coin-supporting member normally tending to swing into the receptacle, a swinging member operatively connected to the coin ejector, and having a projecting member extending beneath the receptacle when the ejector is retracted, and means on the swinging member engageable with the coin-supporting member to swing the same out of the receptacle when the ejector is retracted.

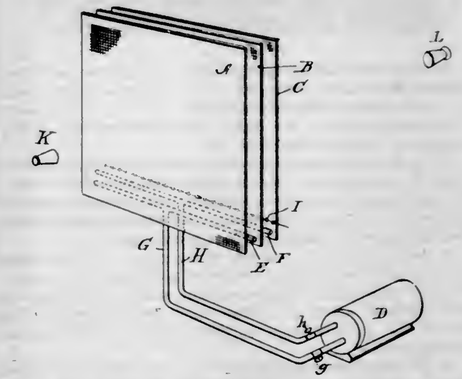
[Claims 6 and 7 not printed in the Gazette.]

1,104,406. RAIL-JOINT. ANDREW J. CALFEE, Leadvale, Tenn. Filed Nov. 24, 1913. Serial No. 802,739. (Cl. 239—6.)



In a device of the character described, the combination with the meeting ends of two rails, and a solid fish plate in contact with one side thereof, of a sectional fish plate contacting with the opposite sides of said rails, said sectional fish plate comprising an inner and an outer member channeled longitudinally on their inner faces, cushioning elements formed of a single piece of resilient wire bent to form a plurality of coiled springs disposed at intervals within the channels of said inner and outer members, bolts passing through said solid and sectional fish plates and the intervening rails and springs, and nuts for drawing said sectional fish plate into yielding contact with one side of the rails.

1,104,407. PROCESS FOR PRODUCING COLOR EFFECTS AND THE APPARATUS THEREFOR. JULIA M. CARY, Ridgefield, Conn. Filed May 26, 1913. Serial No. 769,789. (Cl. 88—24.)



1. The process of producing scenic effects, which consists in using a visible vapor body as the support for color effects, shaping and controlling the said vapor body by means of gauze screens, and projecting light upon the vapor body.

2. The apparatus for carrying out the said process, which consists in gauze screens adapted to locate and shape a visible body of vapor, means for producing a visible body of vapor within the space between said screens, and means for throwing light upon said body of vapor.

1,104,408. SWIVEL. ERNEST CHALMERS, Birmingham, England. Filed Jan. 31, 1913. Serial No. 745,482. (Cl. 24—240.)

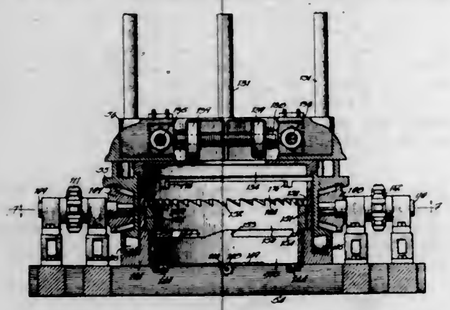


1. A swivel comprising a hook and a spring guard portion for said hook, an attachment portion and a shell in-

closing the shank of said hook, said attachment portion comprising a bow which is secured to said shell; a collar secured around the shank of said hook and said inclosing shell being bodily rotatable upon said collar.

2. As an article of manufacture a swivel made from a hook part provided with a shank, a shaped and pressed collar secured around said shank, a guard for said hook and a pressed-up hollow shell, said shell inclosing the shank of said hook and being rotatably mounted to the said pressed collar, substantially as described.

1,104,409. WELL-SINKING APPARATUS. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Apr. 14, 1913. Serial No. 761,006. (Cl. 255—19.)



1. In a well sinking apparatus, in combination, a boring pipe, a drill mounted on its lower end, means for rotating said pipe, means for supporting said pipe to regulate the pressure upon the drill, and independently-acting means for jumping said pipe.

2. In a well sinking apparatus, in combination, a boring pipe, a drill mounted on its lower end, means for rotating said pipe, means for supporting said pipe to regulate the pressure upon the drill, and independently-acting means for automatically jumping said pipe.

3. In a well sinking apparatus, in combination, a boring pipe, a drill mounted on its lower end, means for rotating said pipe, means for supporting said pipe to regulate the pressure upon the drill, and independently-acting means for automatically jumping said pipe at regular intervals.

4. In a well sinking apparatus, in combination, a boring pipe, a drill mounted on its lower end, means for rotating said pipe, means for supporting said pipe to regulate the pressure upon the drill, and independently-acting means for jumping said pipe during the continued rotation of said pipe.

5. In a well sinking apparatus, in combination, a boring pipe, a drill mounted on its lower end, means for rotating said pipe, means for supporting said pipe to regulate the pressure upon the drill, and independently-acting means for gradually raising said pipe and thereafter gradually lowering it.

[Claims 6 to 84 not printed in the Gazette.]

1,104,410. ART OF EXTRACTING COPPER. GEORGE B. CHITTENDEN, Chilito, Ariz. Filed May 21, 1914. Serial No. 840,100. (Cl. 75—18.)

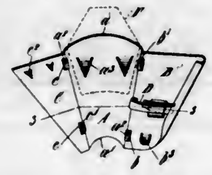
1. In the art of extracting copper from its ores, the hereindescribed process which consists in adding lime water to an acid solution containing copper whereby to effect the precipitation of the copper contained in said solution.

2. In the art of extracting copper from its ores, the hereindescribed process which consists in adding lime water in excess to an acid solution containing copper whereby to effect the precipitation of the copper contained in said solution.

3. In the art of extracting copper from its ores, the hereindescribed process which consists in leaching the ore with an acid solution, filtering the solution, adding lime water in excess until the mass shows an alkaline reaction, allowing the precipitate to settle, and then running off the liquid.

4. In the art of extracting copper from its ores, the hereindescribed process which consists in adding lime water in excess to an acid solution containing copper whereby to effect the precipitation of the copper contained in said solution, running off the liquid, and then subjecting the precipitate to moderate heat.

1,104,411. NECKTIE. MORRIS JELMAN COHEN, South Hampstead, London, England. Filed Oct. 21, 1913. Serial No. 796,483. (Cl. 2—11.)



1. A knot-forming device for use with ties, comprising three rigid members hinged together in such a way that when folded up they slidably embrace the tie proper, and means operable independently of the movements of the hinged members for clamping them as a whole to the tie after relative adjustment between the folded device, the slidably embraced tie, and the collar, has been effected.

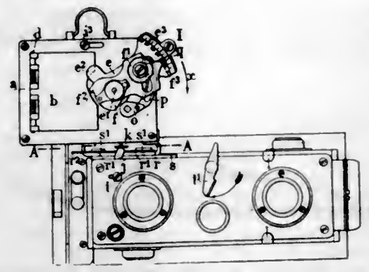
2. A knot-forming device for use with ties, comprising a rigid member shaped to serve as the cross-flap of the knot, a strip of tie-material attached to said member to serve as the inverted U-shaped portion of the knot, a second rigid member hinged to one side edge of the first member and serving as a rear support for the ends of the tie, a spring clip carried by the second member, and a third rigid member hinged to the other side edge of the first member, the spring clip when actuated serving to keep the second and third members, when folded upon the first member, in their folded position and to clamp the three members as a whole to the tie.

3. A knot-forming device for use with ties, comprising a rigid member shaped to serve as the cross-flap of the knot, a strip of the same material as the tie attached to said member to serve as the inverted U-shaped portion of the knot, a second rigid member hinged to one side edge of the first member and serving as a rear support for the ends of the tie, a third rigid member hinged to the other side of the first member, a resilient strip hinged near the junction of the first and second rigid members and extending across the second member, and a two-armed member hinged between its arms about midway in the breadth of the second rigid member with one arm on the exterior thereof to serve as a thumb piece and the other arm between the interior of the said second rigid member and the resilient strip to coöperate with the latter.

4. A knot-forming device for use with ties, comprising a fabric covered rigid member shaped to serve as the cross flap of the knot, a strip of tie-fabric, means securing said strip to the upper part of the rigid member to serve as the inverted U-shaped portion of the knot, a second fabric-covered rigid member hinged at one side edge to one side edge of the first member and turned back upon itself at its other side edge, a third fabric-covered rigid member hinged at one side to the other side edge of the first member, a resilient strip hinged near the junction of the first and second rigid members and extending across the second member, and a two-armed member hinged between its arms about midway in the breadth of the second rigid member with one arm on the exterior thereof to serve as a thumb piece and the other arm between the interior of the said second rigid member and the resilient strip to coöperate with the latter.

5. A tie-infolding device comprising a back leaf, a front leaf and a clamping leaf hinged together as hereinbefore described to slidably infold the portions of the tie brought together at the front of the collar and when folded present the appearance of a knot, a strip of tie-material attached to the internal surface of the front leaf, and means operable independently of the infolding movements of the infolding device for clamping the latter to the tie after relative adjustment between the folded device, the slidably infolded tie, and the collar.

1,104,412. AUTOMATIC DEVICE FOR CONTROLLING THE OPERATION OF PHOTOGRAPHIC APPARATUS. LOUIS JOSEPH EMMANUEL COLARDEAU and JULES RICHARD, Paris, France. Filed Feb. 10, 1913. Serial No. 747,513. (Cl. 161—26.)



1. In a device for automatically controlling the release of the shutters of photographic apparatus, annunciating vanes, a driving mechanism, levers actuated by said mechanism, means for adjusting the relative positions of the two levers and determining the duration of the exposure, means for allowing the levers to open the vanes, and means for allowing the levers to actuate the press-button of the shutter for opening and closing said shutter.

2. In a device for automatically controlling the release of the shutters of photographic apparatus, annunciating vanes, a driving mechanism, two levers actuated by said mechanism, projections on said levers, coöperating with the vanes, pins on said levers, a hook, a cam, and projections on said cam, adapted to act upon the press-button of the shutter.

3. In a device for automatically controlling the release of the shutters of photographic apparatus, annunciating vanes, a driving mechanism, levers actuated by said mechanism, means for winding up the driving mechanism by means of said levers, means for allowing the levers to open the vanes, and means for allowing the levers to actuate the press-button of the shutter for opening and closing said shutter.

4. In a device for automatically controlling the release of the shutters of photographic apparatus, annunciating vanes, a driving mechanism, two levers actuated by said mechanism, projections on said levers, coöperating with the vanes, pins on said levers, a hook, a cam, retaining notches in said cam, in which the hook engages, and two projections on the cam, for acting upon the press-button of the shutter.

5. In a device for automatically controlling the release of the shutters of photographic apparatus, annunciating vanes, a driving mechanism, two variably angularly spaced apart levers, a projection on each lever for retaining the vanes, and a pin on each lever for opening or closing the shutter.

[Claim 6 not printed in the Gazette.]

1,104,413. ARTIFICIAL LEG. LESLIE O. CONNER and GEORGE R. HALE, Narrows, Va. Filed Nov. 20, 1913. Serial No. 802,136. (Cl. 3—3.)

1. In an artificial leg, a thigh; a calf; a pivot element connecting the thigh with the calf; a spring comprising arms, the spring being engaged in its intermediate portion with the pivot element; means upon the thigh for engaging one end of the spring; braces connected with the arms of the spring and located within the calf; and means for connecting the braces with the calf.



2. In an artificial leg, a thigh; a calf; a pivot element connecting the thigh with the calf; a spring bearing in its intermediate portion upon the pivot element and comprising arms; means upon the thigh for engaging one end of the spring; forward and rear braces located within the calf and connected with the arms of the spring; means for securing the rear brace to the calf; the forward brace being longitudinally adjustable upon the calf; and the calf engaging means coöperating with the forward brace to hold the same fixed in adjusted positions.

3. In an artificial leg, a thigh; a calf pivotally connected therewith; forward and rear braces attached adjacent their lower ends to the calf; upwardly extending resilient elements connected at their lower ends with the braces; means upon the thigh for receiving the upper portions of the resilient elements; and means upon the thigh for supporting the resilient elements intermediate their ends.

4. In an artificial leg, a thigh; a calf; forward and rear braces secured to the calf; springs connected with the braces adjacent their upper ends; and means for connecting the springs with the thigh.

5. In an artificial leg, a thigh; a calf pivotally connected therewith; a brace connected with the forward portion of the calf; a spring connected with the upper end of the brace; means upon the thigh for engaging the upper portion of the spring.

[Claims 6 and 7 not printed in the Gazette.]

1,104,414. TOILET-PAPER PACKAGE. GULIELMO COTTINI, Springfield, and GIROLAMO COTTINI, Holyoke, Mass. Filed Jan. 22, 1914. Serial No. 813,697. (Cl. 206—57.)

1. As an improved article of manufacture, a toilet paper package comprising a plurality of sheets, each folded upon itself to form a long lap and a short lap, attaching means between the short lap of one sheet and the long lap of the next adjacent sheet, and attaching means for the long laps only of said sheets, such first-mentioned attaching means being weaker than the sheet at its place of attachment to said second-mentioned attaching means.

2. As an improved article of manufacture, a toilet paper package comprising a plurality of sheets, each folded upon itself to form a long lap and a short lap, and cut inwardly a short distance from its upper edge to form a partially detached member, attaching means between the short lap of one sheet and the long lap of the next adjacent sheet, and attaching means for the partially detached members of the long laps.

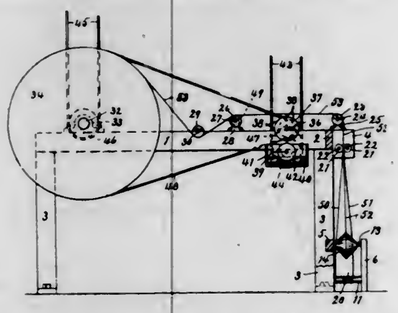
3. As an improved article of manufacture, a toilet paper package, comprising a plurality of sheets, each

folded upon itself to form a long lap and a short lap, and cut inwardly a short distance from its upper edge to form a partially detached member, attaching means between the short lap of one sheet and the long lap of the next



adjacent sheet, and attaching means for the partially detached members of the long laps, such first-mentioned attaching means being weaker than the paper at the junction between the long lap and its partially detached member, in any given case.

1,104,415. TOILET-PAPER MACHINE. GULIELMO COTTINI, Springfield, and GIROLAMO COTTINI, Holyoke, Mass. Filed Jan. 22, 1914. Serial No. 813,698. (Cl. 101—44.)



1. In a toilet paper machine, actuating means for a strip of paper, means to direct said strip in a generally horizontal direction, coöperating revoluble and stationary members to fold said strip lengthwise, said revoluble member changing the direction of said strip to an approximately vertical course, and means to change the direction of said strip to a generally horizontal course once more, but which latter course is approximately at right-angles to the original generally horizontal direction.

2. In a toilet paper machine, actuating means for a strip of paper, means to direct said strip in a generally horizontal direction, coöperating revoluble and stationary members to fold said strip lengthwise, said revoluble member changing the direction of said strip to an approximately vertical course, and means to crease and change the direction of said strip to a generally horizontal course once more, but which latter course is approximately at right angles to the original generally horizontal direction.

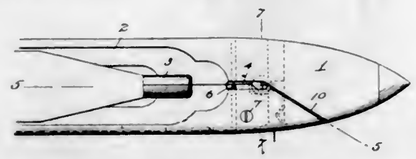
3. The combination, in a toilet paper machine, with actuating means for a strip of paper, of a supporting member, a folder plate hinged at one end to said supporting member and having a V-shaped notch in the opposite end, and a folding roll mounted to revolve through said notch when said plate is in operative position.

4. The combination, in a toilet paper machine, with actuating means for a strip of paper, of folding means for such strip, such last-mentioned means comprising a folding roll in the form of double cones having a common base, and a folder plate notched to receive such roll, and means to permit said plate to be swung out of and into operative position relative to said roll.

5. The combination, in a toilet paper machine, with actuating means for a strip of paper, of a pair of guide members for such strip, a pin wheel located between said guide members and adjacent to a plane common thereto and to the strip guided thereby, the latter between said guide members being without support other than that afforded by said pin wheel, and means to supply an adhesive to the pins carried by said wheel.

[Claim 6 not printed in the Gazette.]

1,104,416. HAND-THREADING SHUTTLE. NAZAIRE DEMERS, Manchester, N. H. Filed Apr. 12, 1913. Serial No. 760,763. (Cl. 139—46.)

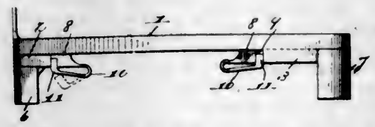


1. The combination of a shuttle body having a chamber and a channel extending longitudinally from said chamber toward its tip and also having a transverse aperture that intersects the inner portion of said channel and extends between opposite sides of the body, and further having a vertical bore that extends between its lower side and said channel, a bore extending between the forward and rear sides of the body, a slit extending forwardly and diagonally outward from said channel to the forward side of the body, and a slit in said forward side and leading backwardly from the first-named slit to the second-named bore; a pin disposed and adjustable endwise in the said transverse aperture and having its inner end arranged in the said channel; a tension device arranged in said vertical bore of the body and having a mouth disposed in alinement with the channel; and an eye arranged in the second-named bore of the body and communicating with the last-named slit of the body and also communicating with the channel and the tension device.

2. The combination of a shuttle body having a chamber and a longitudinal channel extending from the chamber toward a tip of the body and also having a vertical bore extending upwardly from its lower side and communicating with the channel; and a friction spring secured in the said vertical bore and comprising a loop having on its uppermost portion a bight that is flared toward one side of the body, and a loop having at its uppermost portion a bight that is disposed at a right angle to the first-named bight and has its inner leg inclined upwardly and outwardly.

3. The combination of a shuttle body having a chamber and a longitudinal channel extending from the chamber toward a tip of the body and also having a vertical bore extending upwardly from its lower side and communicating with the channel, a transverse bore, and diagonal and longitudinal slits connecting the channel and the transverse bore; a transverse eye arranged in said transverse bore and having a notch communicating with the channel in the body and also having a tortuous slit extending outwardly from the notch to its delivery end; and a friction spring secured in the said vertical bore and comprising a loop having on its uppermost portion a bight that is flared toward one side of the body, and a loop having on its uppermost portion a bight that is disposed at a right angle to the first-named bight and has its inner leg inclined upwardly and outwardly; said uppermost portions of the loops forming a mouth, for the purpose set forth.

1,104,417. DETACHABLE CALK. JOHN H. GERKEN and LOUIS HEBENSTREIT, Pittsburg, Kans. Filed Jan. 16, 1914. Serial No. 812,486. (Cl. 168—35.)

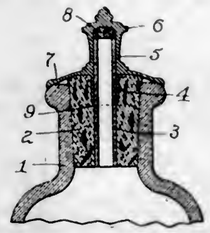


1. The combination with a horse-shoe having dovetail bosses, of calks having shanks adapted to fit said bosses, said shanks being transversely grooved, and integral metal strips carried by said shanks and bent back upon the shanks, the free ends of said strips coöperating with said grooves, the end portions of the strips having a width exceeding the length of the grooves.

2. The combination with a horse-shoe calk, of a shank having a transverse groove therein, a comparatively thin metal strip carried by the end of the shank and bent back over the shank, said strip having its free end bent inwardly and adapted to enter said groove, the said end portion having a width greater than the length of the groove.

3. The combination with a horse-shoe having a boss provided with a dovetail slot, of a calk having a shank adapted to enter said boss, said shank being transversely grooved, said groove resting immediately adjacent the inner face of the boss when the shank is in position, and means formed integral with said shank for entering said groove, said means having a greater width than the length of the groove.

1,104,418. BOTTLE-STOPPER. THEODORE A. GEY, Norristown, Pa. Filed Oct. 23, 1913. Serial No. 796,905. (Cl. 215—55.)

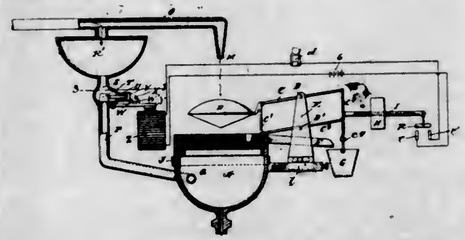


A stopper consisting of a cork of substantially cylindrical exterior with a glass spiller tube projecting above the cork and a closure having a portion to fit over the glass tube and a downward tubular extension to fit between the upper portion of the cork and the glass tube, said cork being adapted for insertion in a tapered mouth bottle to thereby compress the lower end of the cork and leave the upper end free for the insertion of the tubular extension of the closure, substantially as described.

1,104,419. LIQUID-CONTROLLED ALARM APPARATUS. STEPHEN A. GLYNN and BERT L. QUAYLE, East Ely, Nev. Filed Feb. 21, 1912. Serial No. 679,200. (Cl. 177—311.)

1. In an apparatus of the class described, means for supplying liquid, a receptacle for the liquid, a counterbalanced lever carrying a tongue having oppositely projecting surfaces shaped to retain a portion of the liquid flowing from the source of supply to said receptacle, said tongue being located between said liquid supply and receptacle, and means controlled by the lever to indicate a diminution of the flow of the liquid.

2. In an apparatus of the class described, a liquid supplying conduit provided with a discharge orifice, a counterbalanced lever carrying at one end a tongue comprising protuberant surfaces which project above and below a central horizontal plane and upon which a portion of the liquid is adapted to be retained by adhesion, said tongue being located below said orifice, and an alarm arranged for operation by said lever when the weight of liquid on the tongue falls below a predetermined limit.



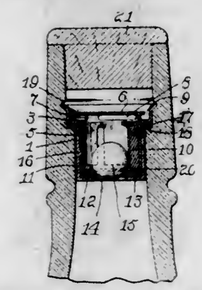
3. In an apparatus of the class described, the combination of a supply pipe, a counterbalanced lever carrying a tongue comprising protuberant surfaces projecting above and below a central horizontal plane and arranged in the path of the liquid flowing from said pipe, a circuit-closer carried by said lever, and a circuit having an alarm therein and also having terminals in position to be closed by the circuit-closer when said tongue is overbalanced.

4. In an apparatus of the class described, the combination of a supply pipe, a receptacle to contain liquid flowing from said pipe, a pivoted lever carrying at one end a tongue comprising surfaces which project above and below a central horizontal plane and are adapted to retain a portion of the liquid thereon, said tongue being arranged to receive the liquid discharged from said pipe, an adjustable weight supported from the other end of said lever, and an alarm arranged for actuation by said lever when the tongue becomes overbalanced by said weight.

5. In an apparatus of the class described, the combination of a supply pipe, a receptacle to receive liquid from said pipe, levers pivotally supported in parallel relation, rods pivoted to the ends of said levers to form a parallelogram, a tongue supported from one end of the levers in position to receive liquid flowing from said pipe, an adjustable weight supported from the other end of said levers, and an alarm arranged for actuation by said levers when the supply of liquid diminishes sufficiently to permit overbalancing of the tongue by the weight.

[Claims 6 to 24 not printed in the Gazette.]

1,104,420. NON-REFILLABLE BOTTLE. JOSEPH HARRY GRUVER, Baltimore, Md., assignor of one-half to Francis Norris, Jr., Raspeburg, Md. Filed Aug. 9, 1913. Serial No. 784,003. (Cl. 215—65.)



1. In combination in a non-refillable bottle, a bottle having a shoulder in its neck facing upwardly with a groove close above said shoulder and a stopper consisting of a shell having an exterior shoulder to fit upon the shoulder in the bottle neck with yielding packing interposed, the said shell having an upwardly extending rim above said shoulder, the extreme upper edge of which is bent outwardly into the groove in the bottle neck, the

main body of said shell extending below the said shoulder, and a valve carried by the shell, substantially as described.

2. A non-refillable bottle stopper comprising a sheet metal shell having an upper enlargement providing an exterior and an interior shoulder and an upstanding rim and having a perforated bottom, an inner shell of sheet metal secured in fixed relation to the outer shell and having a cover portion located in the upper enlargement with lateral discharge openings below the same to deliver into said upper enlargement, an inner pronged member fixed in the inner shell, a cork seat between the pronged member and the bottom of the outer shell and a ball to rest on said cork seat, the said pronged member having stops to limit the movement of the ball, substantially as described.

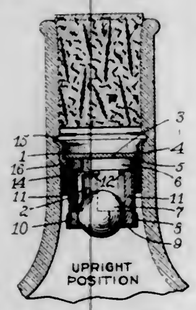
3. A non-refillable bottle stopper comprising a sheet metal shell having an upper enlargement providing an upstanding rim and an exterior and an interior shoulder and having an integral perforated bottom, an inner shell fixed to the outer shell and having a cover portion with lateral openings below the same to deliver into said upper enlargement, a ball valve, guide means on the inner side of the inner shell for the said ball valve and a cork washer, upon which the ball is seated, held between the bottom of the outer shell and the inner members, substantially as described.

4. In combination in a non-refillable bottle stopper, an outer shell having an enlarged upper portion providing an exterior shoulder and an upstanding rim, an inner member comprising a shell fixed to the outer shell and having a cover portion located within the upper enlargement and with lateral openings below it, and having interior guides, a washer forming a valve seat at the lower part of the exterior shell and held by said inner member and a ball valve fitted to said seat, substantially as described.

5. In combination in a non-refillable bottle stopper, an outer shell having an upper enlargement providing an exterior shoulder and an upstanding rim, an inner shell held in fixed relation to the outer shell and having a cover portion located above the plane of the inner bottom of said enlargement, with lateral openings beneath said cover and a ball valve closing an opening in the bottom of the outer shell.

[Claims 6 and 7 not printed in the Gazette.]

1,104,421. NON-REFILLABLE-BOTTLE STOPPER. JOSEPH HARRY GRUVER, Baltimore, Md., assignor of one-half to Francis Norris, Jr., Raspeburg, Md. Filed May 20, 1912, Serial No. 698,555. Renewed June 10, 1914. Serial No. 844,362. (Cl. 215—62.)

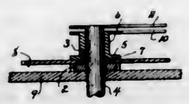


1. In combination with a bottle having a single groove in its neck, a fixed seat member consisting of a metallic shell, a sliding member movable in the fixed seat member and having a cover portion at one end with lateral openings below said cover portion and having also a central opening at its opposite end with a ball valve closing said opening, said fixed seat member having an interior shoulder furnishing a seat for the cover portion and having a rim of larger diameter than the diameter of the sliding member, which rim terminates in a flange extending laterally into the groove in the bottle neck, said cover portion and groove being in substantially the same plane when the stopper is open, substantially as described.

2. A non-refillable bottle stopper comprising a fixed seat member, a sliding valve member movable therein having a cover portion with lateral openings below the same and a central opening, a ball valve to engage the central opening, and a pronged member held in the sliding valve member, the prongs of which have stops to limit the movement of the ball to a point removed from the lateral openings, substantially as described.

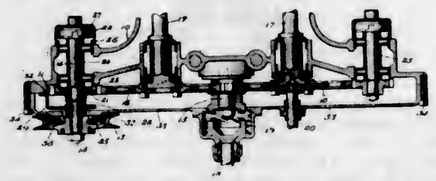
3. In combination, a fixed seat member, a sliding valve member therein having a cover portion and having lateral openings over which the said cover projects and with the edges of said openings turned inwardly and a ball valve closing the lower end of the sliding valve member, substantially as described.

1,104,422. CANNON-PINION FOR TIMEPIECES. ERNEST H. HORN, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed May 7, 1914. Serial No. 836,924. (Cl. 58—138.)



In a time-piece, the combination with the center-arbor thereof, of a cannon pinion fixed upon the center-arbor and provided upon its forward face with a concentric hub virtually increasing the length of its bore and hence its hold upon the said center-arbor, and an hour-socket bearing directly upon the said center-arbor and loosely thereupon and having its rear face formed with a concentric recess receiving the said hub and larger in diameter than the same.

1,104,423. HYDROCARBON-MOTOR. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 13, 1911. Serial No. 638,363. (Cl. 123—195.)



1. In a hydrocarbon engine, in combination, a casing, a crank shaft, an auxiliary shaft driven from the crank shaft and provided on one end with a coupling, a bearing for said auxiliary shaft provided at one end with means engaging said casing, and a cap for inclosing said coupling and secured to the other end of said bearing and engaging said casing, whereby said bearing is rigidly held in said casing.

2. In a hydrocarbon engine, in combination, a casing, a crank shaft, an auxiliary shaft driven from the crank shaft and provided on one end with a coupling, a bearing for said auxiliary shaft having a flange at one end engaging said casing, and a cap inclosing said coupling and having threaded engagement with the other end of said bearing and engaging said casing, whereby said bearing is rigidly held in said casing.

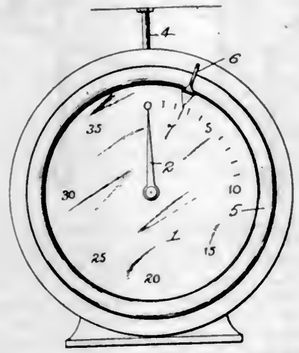
3. In a hydrocarbon motor, in combination, a casing, a crank shaft, an auxiliary shaft, a gear on said auxiliary shaft driven from said crank shaft, and bearings for said auxiliary shaft on opposite sides of said gear, one of said bearings being mounted in said casing and the other of said bearings being secured to the exterior of said casing.

4. In a hydrocarbon engine, a casing, a shaft supported by said casing and having one end projecting outwardly therefrom, a gear mounted on the projecting end of said shaft, a second gear meshing with said gear and a bearing for the projecting end of said shaft provided with a cup-shaped supporting flange secured to said casing and engaging a recess in said casing, said flange inclosing the gear on said shaft and having an opening at one side to permit the engagement of said gears.

5. In a hydrocarbon motor, a crank case, a crank shaft mounted in the crank case, an auxiliary shaft, gears for driving said auxiliary shaft from the crank shaft, a pulley on said auxiliary shaft provided with a flange adapted to intercept and remove oil from said shaft, and a ring surrounding said flange and adapted to receive the oil therefrom.

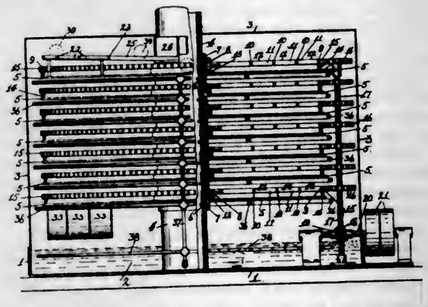
[Claims 6 and 7 not printed in the Gazette.]

1,104,424. MARKER FOR SCALES AND THE LIKE. ALFRED W. JANSEN, New York, N. Y. Filed Jan. 20, 1914. Serial No. 813,209. (Cl. 116—49.)



The combination with the bezel and glass of a dial, of a marker slidably mounted on said bezel, said marker having an intermediate portion substantially S-shaped, the lower and middle limbs of said S portion embracing the edge of the glass, the upper and middle limbs of said S portion embracing the bezel, an index portion extending from the lower extremity of said S toward the dial proper, and a finger-piece extending from the upper extremity of said S portion.

1,104,425. COOKER. ALFRED JOHN KEAST, Campbell, Cal., assignor to California Fruit Canners Association, San Francisco, Cal., a Corporation of California. Filed Dec. 1, 1913. Serial No. 803,910. (Cl. 126—272.)



1. In a cooker, the combination of a heating casing having within it a fixed column; a vertical series of successively communicating, spaced floors within the casing, fixed to its column; a vertical series of pushers, one above each floor and rotatable about the casing column as an axis to roll the cans on the floors to their successive communications; means for feeding the cans to the uppermost floor; and means for discharging the cans from the lowermost floor.

2. In a cooker, the combination of a heating casing having within it a fixed column; a vertical series of successively communicating, spaced floor-plates within the casing, fixed to its column; a vertical series of pusher-frames, one above each floor-plate and rotatable about the casing column as an axis, to roll the cans on the floor plates to their successive communications; means engaging the peripheries of the pusher-frames to rotate them; means for feeding the cans to the uppermost floor-plate; and means for discharging the cans from the lowermost floor-plate.

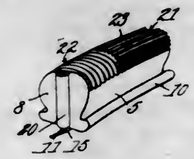
3. In a cooker, the combination of a heating casing having within it a fixed column; a vertical series of successively communicating, spaced floor-plates within the casing, fixed to its column; a vertical series of pusher-frames one above each floor-plate, said pusher-frames being supported by and adapted to roll upon the floor-plates, and having hubs rotatably fitted about the casing column; means engaging the peripheries of the pusher-frames to rotate them, to roll the cans on the floor plates to their successive communications; means for feeding the cans to the uppermost floor-plate; and means for discharging the cans from the lowermost floor-plate.

4. In a cooker, the combination of a heating casing having within it a fixed column; a vertical series of successively communicating, spaced floor-plates within the casing, fixed to its column; a vertical series of rotating skeleton pusher-frames formed with can-receiving open pockets, one pusher frame above each floor-plate and supported and adapted to roll thereon about the casing column as an axis; means engaging the peripheries of the pusher-frames to rotate them to roll the cans on the floor-plates to their successive communications; means for feeding the cans to the pockets of the uppermost pusher-frame and the uppermost floor plate; and means for discharging the cans from the lowermost pusher-frame and floor-plate.

5. In a cooker, the combination of a heating casing having within it a fixed column; a vertical series of spaced floor-plates within the casing fixed to its column, each of said plates having a can-discharge-opening relatively arranged out of line successively in receding progression from top to bottom of said floor-plate series; a vertical series of skeleton pusher-frames mounted one on each floor-plate and adapted to rotate about the fixed column as an axis, said frames having open can receiving pockets to roll the cans upon the plates to the successive discharge openings thereof; means for rotating said pusher-frames; means for feeding the cans to the pockets of the uppermost pusher frame and its floor-plate; and means for receiving and discharging the cans from the openings of the lowermost floor plate.

[Claim 6 not printed in the Gazette.]

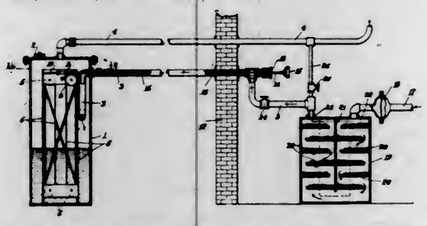
1,104,426. TIRE. FREDERICK KELLER and HENRY COGAN, Paterson, N. J. Filed Apr. 2, 1912. Serial No. 688,066. (Cl. 152—22.)



A tire comprising a plurality of individually removable sections, each section having a groove in one end wall and being provided upon its other end wall with a tongue adapted to register in the groove of an adjoining section; each section being provided in its tread with longitudinal ribs located adjacent the groove and adapted to stiffen the section longitudinally adjacent the groove, each sec-

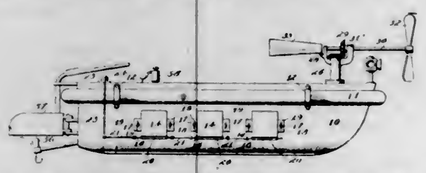
tion being provided in its tread with transverse ribs located adjacent the tongue, the transverse disposition of the last specified ribs permitting the section to yield longitudinally whereby the groove of one section may be engaged by the tongue of an adjoining section.

1,104,427. APPARATUS FOR CARBURETING AIR. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-half to Charles N. Lindley and one-fourth to James B. Haggin, New York, N. Y. Filed May 6, 1913. Serial No. 765,845. (Cl. 48—158.)



In an apparatus of the character described, a closed tank containing volatile combustible liquid and having an inlet pipe and an outlet pipe for a supplied current of atmospheric air and within the tank, suitably supported, a pair of rollers carrying an endless web of absorbent material, means including a ratchet-wheel attached to one roller for imparting motion to said web, and means for actuating said ratchet-wheel including a cord or wire passing through the said inlet pipe, substantially as set forth.

1,104,428. LIFE-BOAT. JOHN KERTÉSZ, Pottstown, Pa. Filed Jan. 15, 1914. Serial No. 812,360. (Cl. 9—3.)



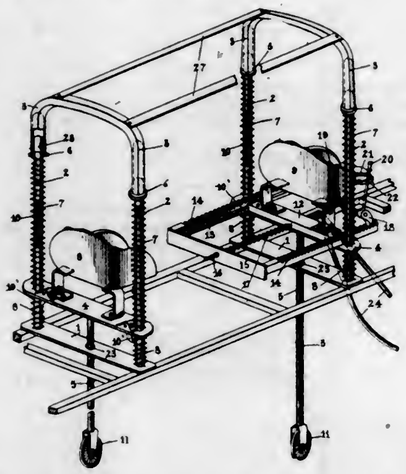
1. The combination with a life boat, of a pneumatic tube arranged around the exterior of the boat, an air storage tank, a wind-driven pump for supplying air to said tank, and a connection between said tank and tube.

2. The combination with a life boat, of a pneumatic tube arranged around the exterior of the boat, means for supplying air to said tube, a plurality of equilibrators at each side of the boat, each of said equilibrators being closed at its top and having a valve at its bottom, all of the valves at each side of the boat being connected together, for operation in unison.

3. The combination with a life boat, of a pneumatic tube arranged around the exterior of the boat, equilibrators at each side of the boat, said equilibrators having closed tops, and each being provided at its bottom with a slide-valve, said valve having link connections, and means for operating all of the slide valves at one side of the boat together.

1,104,429. SAFETY DEVICE FOR AEROPLANES. NAZAIRE LACROTTE, Paris, France. Filed Sept. 9, 1913. Serial No. 788,950. (Cl. 244—2.)

1. A shock absorber serving at the same time as a device for raising the seats of the pilot and of the passengers in an aeroplane, comprising in combination, two horizontal cross bars fixed to the frame of the aeroplane; four vertical cylindrical rods provided with head pieces; a frame in the shape of a dome supported on these head pieces; seat supporting means each guided on two vertical rods; a rod fixed to the lower part of the seat supporting means, provided at its other end with a shock absorbing means; shock absorbing means mounted above the seat supporter; balancing springs mounted underneath the seat supporter; racks cut into the vertical rods; pawls connected with the seat supporters and engaging with the teeth of the racks when the seats rise; and a seat for the pilot capable of vertical and horizontal displacement.



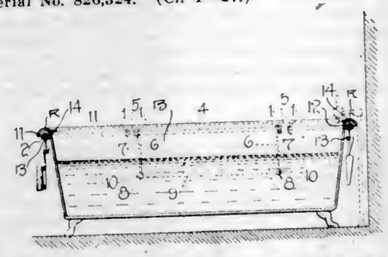
2. A shock absorber serving at the same time as a device for raising the seats of aeroplanes comprising in combination, two horizontal cross bars fixed to the frame of the aeroplane; four vertical rods; a frame in the shape of a dome; two seat supporters; compensating springs; racks carried by the vertical rods; a seat for the pilot displaceable horizontally and vertically; a horizontal toothed slide for the horizontal displacement; pawls carried by the seat and engaging with the racks; a forked piece fixed in front of the pilot seat; rings carried by the landing gear in which the arms of the forked piece can slide; and buffers provided at the ends of the arms of the fork which come in contact with the earth when the aeroplane falls down and cause the seat of the aviator to move backward and upward.

3. A shock absorber serving at the same time as a device for raising the seats of aeroplanes comprising, two horizontal cross bars fixed to the frame of the aeroplane; four vertical rods; a frame in the shape of a dome mounted upon the upper ends of the vertical rods and capable of sliding thereon without becoming separated therefrom by the compression of shock absorbing springs mounted upon the vertical rods, to protect the aviator in the case of capsizing and compensating springs placed underneath the seat at the lower end of the vertical rods.

4. A shock absorber serving at the same time as a device for raising aeroplane seats, comprising in combination, two horizontal cross bars fixed to the frame of the aeroplanes; a frame in the shape of a dome, a seat supporter allowing a horizontal and vertical displacement; rods connected with the seat supporter; a shock absorbing wheel carried by the rods back of the landing gear; and a buffer mounted back of that wheel and at a higher level causing the seat to hook with the teeth of the vertical bar in the case of abrupt landing.

5. A shock absorber serving at the same time as a device for raising seats of aeroplanes, said shock absorber comprising in combination with the frame of the aeroplane; front and rear horizontal cross-bars fixed to the frame of the aeroplane; a pair of front vertical rods mounted on said front bar; a pair of rear vertical rods mounted on said rear bar; a frame in the shape of a dome mounted on said rods; a seat supporter guided on the rear ends; shock absorbing springs on the rear rods and pressing on the seat supporter; a rod fixed to the lower part of the seat supporter; a sliding plate guided on the front vertical rods; and rods connecting the sliding plate with the landing gear of the aeroplane, in order to absorb the shocks of an ordinary landing.

1,104,430. BATH-TUB ATTACHMENT. GEORGE A. L'HOMMEDIEU, Atlantic City, N. J. Filed Mar. 21, 1914. Serial No. 826,324. (Cl. 4—27.)

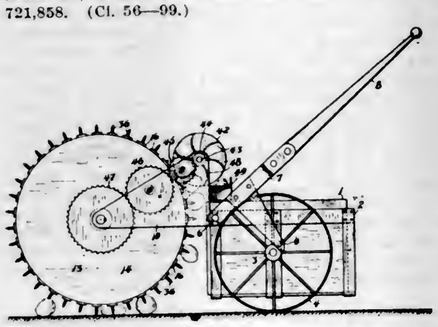


1. The combination with the roll rim of a bath tub, of brackets disposed within the rim, those at the sides of tub being of ring form and those at the ends of hook form.

2. The combination with the roll rim of a bath tub, of brackets disposed within the rim, and sectional rods engaging the brackets.

3. A lavoratorial appliance provided with a roll rim and with hook and eye brackets disposed within the rim, a rod arranged to engage the brackets, and nuts carried by the terminals of the rods to secure the latter in position.

1,104,431. FRUIT-GATHERER. PETER H. LINT, San Francisco, Cal. Filed Sept. 23, 1912. Serial No. 721,858. (Cl. 56—99.)

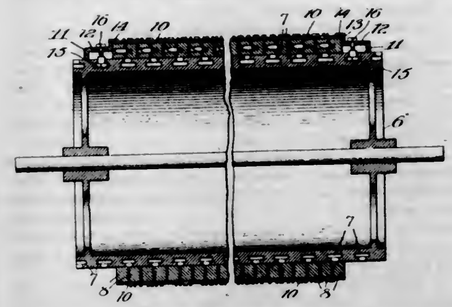


1. In a fruit gatherer, the combination of a drum comprising end pieces, and longitudinally extending slats adjustably secured to said end pieces, outwardly projecting pins movable radially through the slats, a receptacle, means whereby said drum and receptacle move over the ground in unison, means for withdrawing said pins, operated automatically upon the arrival of the pins at a predetermined point in their rotation with the drum, and means for transferring to the receptacle the fruit released from the pins so withdrawn.

2. In a fruit gatherer, the combination of a drum, a shaft on which said drum rotates, pins projecting, and movable, radially outward from the drum, springs arranged to press said pins outwardly therefrom, a receptacle, means on which said receptacle is removably supported, cams carried by said shaft and arranged to withdraw said pins against outward pressure of said springs, and means for transferring to the receptacle the fruit released from the pins so withdrawn.

3. In a fruit gatherer, the combination of a drum comprising end pieces and longitudinally extending apertured slats secured thereto, having guides, pinholders movable in said guides, springs pressing said pinholders outward, a shaft on which said drum rotates, radially projecting pins secured to said pinholders, a receptacle, wheels on which said receptacle is removably supported, cams carried by said shaft arranged to actuate said pinholders to withdraw said pins, and means for transferring to the receptacle the fruit released from the pins so withdrawn.

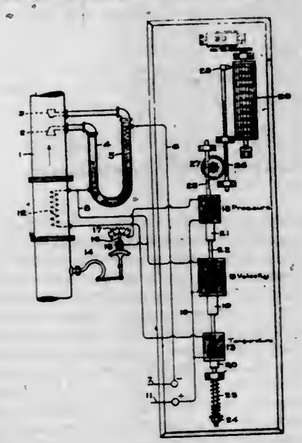
1,104,432. PRINTING-PRESS ROLL. WILLIAM MACGOWAN, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,894. (Cl. 101—169.)



1. A printing-roll having an enlarged part to receive an electrotype, and reduced parts at the ends thereof, slots with overhanging margins in the reduced parts of the roll, blocks therein, clamps overlying the reduced parts of the roll and overhanging the enlarged part to engage an electrotype thereon, and bolts engaging the clamps with the blocks in the slots.

2. A printing-roll having, in combination, a series of rings forming an enlarged part of adjustable size to receive and support an electrotype, and a reduced part on which said ring is fitted, the reduced part being provided with slots having overhanging margins, blocks in the slots, clamps whose tips overhang the enlarged part of the roll to engage an electrotype thereon, and bolts connecting the clamps and blocks, for the purpose set forth.

1,104,433. FLUID-FLOW METER. HAROLD H. MAPELSDEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 17, 1909. Serial No. 508,106. (Cl. 73—167.)



1. A meter for measuring the flow of elastic fluid through a main, said fluid being subject to changes in its condition, comprising a device responsive to the velocity of the flowing fluid, a device responsive to the static pressure in the main, a device responsive to the temperature

of the flowing fluid, an indicating mechanism, and means whereby said mechanism can be jointly controlled by said three devices to determine the weight of fluid flowing through the main.

2. A flow meter for elastic fluids, comprising three electro-motive devices, a velocity-responsive device, a device responsive to static pressures, a temperature-responsive device, suitable means whereby said velocity, pressure, and temperature-responsive devices respectively control said electromotive devices, an indicator, and means whereby said indicator is controlled by all of said electromotive devices.

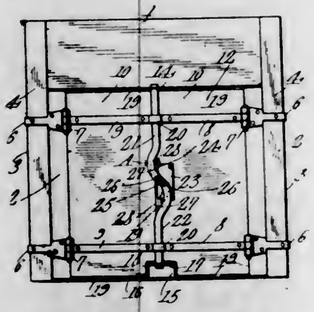
3. A flow meter, comprising three solenoids, a velocity-responsive device, a pressure-responsive device, a temperature-responsive device, suitable means whereby said velocity, pressure and temperature-responsive devices respectively control said solenoids, a movable rod common to all of said solenoids, an indicator, and means whereby the indicator is moved by the rod.

4. A flow meter, comprising three solenoids in axial alinement, a movable core for each, a common rod carrying all of said cores, an indicating and recording mechanism actuated in part by said rod, a velocity-responsive device in circuit with one solenoid, a pressure-responsive device in circuit with another, and a temperature-responsive device in circuit with the third.

5. A flow meter, comprising three electromotive devices, an indicator common to all, means connecting said indicator and electromotive devices, three resistance coils respectively in circuit with said devices, and devices respectively responsive to the velocity and pressure of the fluid, and each controlling one of said resistance coils, said third coil being directly influenced by the temperature of said fluid.

[Claims 6 to 13 not printed in the Gazette.]

1,104,434. BOLTING MECHANISM. CHARLES C. McCOLLY, deceased, Wayne, Colo., by Josiah McColly, administrator, Wayne, Colo., assignor of one-half to Carman E. Lookingbill, Maxwell, Iowa. Filed June 28, 1912. Serial No. 706,540. (Cl. 16—61.)

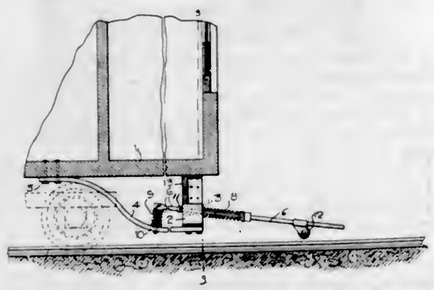


1. In a device of the class described, a pair of keepers; oppositely extended locking bolts slidable in the keepers and having rigid inner ends provided with concavities in their opposite edges; a lever; a primary pivot element engaging the intermediate portion of the lever; secondary pivot elements connecting the rigid ends of the bolts with the lever upon opposite sides of the primary pivot element and upon opposite sides of a line parallel to the bolts and passing through the primary pivot element; and studs upon the lever adjacent its ends and independent of the secondary pivot elements, the studs being engaged in the concavities of the rigid ends of the bolts upon opposite sides of said line when the bolts are moved to locked positions, the studs constituting means whereby the lever may be swung.

2. In a device of the class described, a pair of keepers; oppositely extended locking bolts slidable in the keepers and having rigid inner ends; a lever; a primary pivot element supporting the lever; secondary pivot elements uniting the rigid ends of the bolts and the lever upon opposite sides of the primary pivot element; and a stud upon one end of the lever and independent of the secondary pivot element, the stud engaging the rigid end of one bolt to one side of a line parallel to the bolts and passing through the primary pivot element when the bolts are advanced into locked positions.

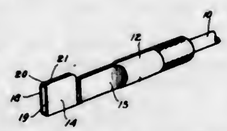
3. In a device of the class described, a keeper; a locking bolt slidable in the keeper and having a concavity in one edge; a lever; a fulcrum for the lever; a projection on the lever, engaged in the concavity of the locking bolt; and a pivot element connecting the locking bolt with the lever, intermediate the projection and the fulcrum of the lever.

1,104,435. CAR-FENDER. JOSEPH L. McDONNELL, Philadelphia, Pa. Filed Apr. 9, 1913. Serial No. 760,020. (Cl. 105—251.)



A car fender including vertically disposed spaced supports having elongated openings in the lower ends thereof, curved brace members having their outer ends arranged in a plane lower than the inner ends and secured to the lower ends of said supports, the inner ends of said brace members being rigidly secured to the car bottom at a point to the rear of the supports, a fender rod having its ends movably supported in said elongated openings, a fender apron supported by the intermediate portion of said rod, coil springs disposed between the inner ends of said rod and said brace members to normally hold the fender apron in spaced relation with the ground, a second set of coil springs mounted upon the ends of the fender rod and disposed between the fender apron and the supports, and transverse pins carried by said rod and adapted to engage the rear side of said supports to limit the outward sliding movement of the fender apron.

1,104,436. CONNECTOR. JOSEPH F. MENNINGEN, West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Jan. 30, 1909. Serial No. 475,267. (Cl. 173—363.)



1. A connector for electric circuits, comprising two interchangeable parts, each of said parts including male and female contacts in line with each other axially of the connector, the female contacts being formed of a single piece of material and being bent to close three sides for engagement with the male contact members.

2. An electric connector, comprising two duplicate parts, each part including a shell for the reception of a conductor, a female contact, and a male knife blade contact located between the female contact and the shell and complementary to the female contact on the other part, the female contacts being formed of a single piece of material and being bent to close three sides for engagement with the complementary male contacts.

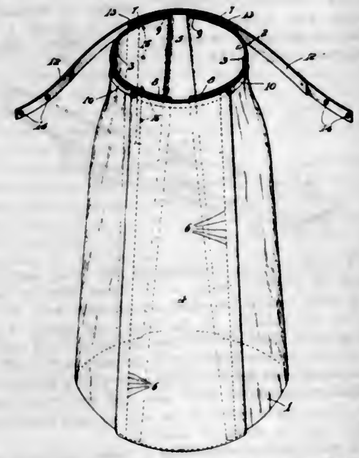
3. A connector for electric circuits, comprising two duplicate parts, each of said parts consisting of sheet metal shaped to form a shell for the reception of a conductor and complementary male and female contacts in line with each other, the female contacts being bent to close three sides for engagement with male contact members.

4. An article of manufacture, comprising a shell for the reception of a conductor, and male and female contacts, the male contact being between the female contact and the shell, and the female contact being bent to close three sides thereof for engagement with a coöperating male contact.

5. A connector for electric circuits, comprising two coöperating parts, each part including a contact wrist and contact fingers respectively complementary to the contact fingers and wrist on the other part and so located that when the two parts are together there can be no relative longitudinal movement between them, the contact fingers being integrally formed to close three sides to be engaged by complementary contact wrists.

[Claims 6 and 7 not printed in the Gazette.]

1,104,437. MATERNITY-GOWN. ELIZABETH MILES, Evanston, Ill. Filed Dec. 1, 1913. Serial No. 803,985. (Cl. 2—42.)



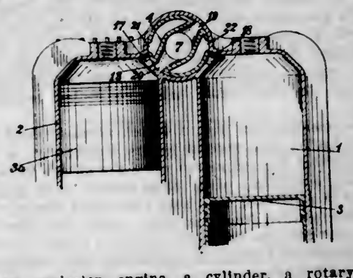
1. A skirt comprising a body having longitudinally extending panels provided at the front and rear sides thereof; inwardly turned adjustable plaits provided at the longitudinal edges of said panels whereby the circumference of the skirt may be varied by adjusting said plaits; and longitudinally adjustable straps extending between and connecting the upper end portions of the longitudinal edges of the front and rear panels at corresponding sides of the skirt for determining the circumference of the skirt and indirectly holding said plaits in positions of adjustment, substantially as described.

2. A skirt comprising a body having longitudinally extending panels provided at the front and rear sides thereof; inwardly turned adjustable plaits provided at the longitudinal edges of said panels whereby the circumference of the skirt may be varied by adjusting said plaits; longitudinally adjustable straps extending between and connecting the upper end portions of the longitudinal edges of the front and rear panels at corresponding sides of the skirt for determining the circumference of the skirt and indirectly holding said plaits in positions of adjustment; and an expansible belt provided at the waist of said skirt connected therewith intermediate its ends with one of said panels, substantially as described.

3. A skirt comprising a body formed of two similar pieces of fabric joined together so that the seams thereof are positioned at the sides of the skirt; a panel formed centrally in each of said pieces defined by longitudinally extending lines of stitching which form tucks at the longitudinal edges of said panels; loose inwardly turned adjustable plaits provided at and coextensive with said tucks; and longitudinally adjustable members extending between and connecting the upper end portions of the tucks of the front and rear panels at corresponding sides of the skirt, substantially as described.

4. A skirt comprising a body having longitudinally extending panels provided at the front and rear sides thereof; inwardly turned adjustable plaits provided at the longitudinal edges of said panels whereby the circumference of the skirt may be varied by adjusting said plaits; loops secured to the longitudinal edges of said front panels; straps, each having its rear end secured to a vertical edge of said rear panel, extending through one of said loops and its other end adjustably secured upon itself; and a belt secured to said rear panel and extending over said straps hiding the latter from view, substantially as described.

1,104,438. EXPLOSION-ENGINE. WILLIAM J. MILLER and DAVID W. JONES, Columbus, Ohio, assignors of one-third to Julius F. Stone, Columbus, Ohio. Filed Mar. 27, 1909, Serial No. 486,195. Renewed Apr. 6, 1912. Serial No. 689,043. (Cl. 123—190.)



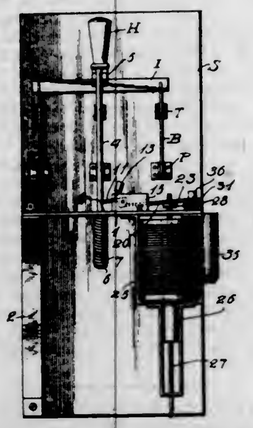
In an explosion engine, a cylinder, a rotary valve thereon having open ends and a longitudinal intake passage way communicating with one end, and a longitudinal exhaust passage way communicating with the other end, a partition comprising converging walls interposed transversely in said valve between the inner ends of said passage ways and projecting into said exhaust passage way, said valve having a plurality of openings affording communication between said cylinder and said intake passage way, and a plurality of openings affording communication between said cylinder and said exhaust passage way.

1,104,439. AUTOMATIC CIRCUIT-BREAKER. JAMES L. MITCHELL, Santa Paula, Cal. Filed Nov. 14, 1912. Serial No. 731,448. (Cl. 175—269.)

1. The combination with a frame having an opening, a notched rod projecting through the opening and headed, and a spring coiled thereon between said head and frame; of a trigger movably mounted on said frame with its nose adapted to engage said notch and its heel provided with a notch, a pivoted lever whose nose is adapted to engage the notch in said heel when the trigger is set, and a coil whose core is connected with the lever and moves the latter to disengage the trigger when the coil is energized.

2. The combination with a notched rod, and means tending to move it longitudinally; of a pivoted trigger having its nose adapted to engage said notch and its heel provided with a notch, and tripping mechanism including a lever whose nose is adapted to engage the notch in said heel when the trigger is set, a pivot for said lever, an upright coil, and a core therein carrying a collar contacting with the rear arm of said lever and adapted

to actuate the latter to disengage said trigger when the coil is energized.



3. The combination with a switching mechanism normally held under tension and including a rod; of a frame having a hole through which said rod moves when the switch is thrown, a trigger pivoted on the frame and having a nose adapted to engage said rod when the switch is closed, a handle on said trigger, a trip for holding said trigger with its nose in engaging position, and a coil for causing said trip to release said trigger when the conditions in the circuit being controlled become abnormal.

4. The combination with a switch normally held under tension, and a rod carried by its handle; of a frame through which the rod moves when the switch is thrown, a trigger consisting of a block-shaped body pivotally mounted in a bearing upon said frame and having a nose projecting forward from one upper corner and adapted to engage said rod, the body also having a notch in its rear lower corner, and tripping mechanism for holding said trigger with its nose in engaging position.

5. The combination with a switch, a frame having an opening, and a rod projecting from the switch through said opening and having a notch; of a movable trigger whose nose is adapted to engage said notch and whose heel is notched, a pivotal support for this trigger on said frame, a trip lever pivoted between its extremities on said frame with its nose adapted to engage the notch in the heel of the trigger when the latter is set, and electrically-actuated mechanism for moving the rear arm of said trip lever when the conditions in the circuit being controlled become abnormal.

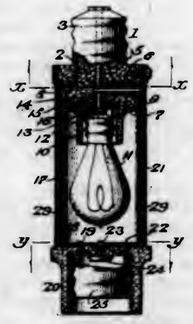
[Claims 6 to 9 not printed in the Gazette.]

1,104,440. ELECTRIC-CURRENT INDICATOR. OTTO MOESSNER, Philadelphia, Pa.; Oscar Moessner, New Haven, Conn., administrator of said Otto Moessner, deceased. Filed Oct. 22, 1913. Serial No. 796,575. (Cl. 177—324.)

1. In a device of the character stated, means for connection to contacts of an electric supply-circuit, conductors from said means, means for connecting the lines of an implement-actuating circuit to said conductors, and an electric lamp in constant shunt connection with said conductors.

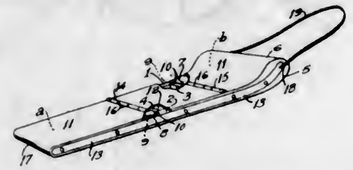
2. In a device of the character stated, a frame having means at one end for detachably connecting it to a coupling of an electric supply-circuit and having contacts and having at its other end means for connecting the lines of an implement-actuating circuit, conductors in said frame and connected to said contacts and connecting means, and an electric lamp in constant shunt-connection with said conductors.

3. In a device of the character stated, a plug having contacts adapted to contact with contacts of an electric supply-circuit, a transparent cylinder secured at one end to said plug, a body secured to the other end of said



cylinder and having a plug-socket, conductors connected to the contacts in the plug and the contacts in the plug-socket, and an electric lamp within said cylinder and in constant shunt-connection with said conductors.

1,104,441. SURF-COASTER. ALFRED N. NELSEN, Long-beach, Cal., assignor of one-half to Henry J. Woods, Hollywood, Cal. Filed Apr. 24, 1913. Serial No. 763,450. (Cl. 9—11.)



1. A surf coaster provided at its front end with a bulbous air chamber larger at the front than at the rear.

2. A surf coaster provided at its ends with air chambers, the air chamber at the front end being of greater buoyant value than the air chamber at the rear end.

3. A surf coaster provided at its ends with stiff walled air chambers, and between said ends with a flexible walled air chamber extending from one stiff walled air chamber to the other, there being at the side of said flexible walled chamber bars to serve as handles.

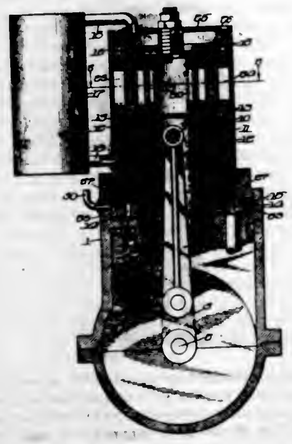
4. A surf coaster comprising a frame composed of side-bars, and cross-bars spaced apart from the ends of the side-bars and from each other, a flexible cover extending over the frame from one cross-bar to the other, and metal sheets fastened to the frame and bent around the ends thereof to form air chambers.

5. A surf coaster comprising a frame composed of two side bars and two cross bars uniting the frame and spaced apart from each other, metal sheets applied on and hermetically sealed and fastened to the side bars and cross bars and spaced apart from each other, and a flexible cover over the intermediate space to form an intermediate air chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,104,442. INTERNAL-COMBUSTION ENGINE. PERCY WARREN NOBLE, Pontiac, Mich. Filed Jan. 27, 1913. Serial No. 744,303. (Cl. 123—80.)

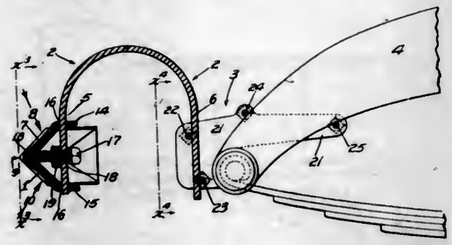
1. An internal combustion plural cycle engine including a working cylinder having intake and exhaust passages; a valving cylinder surrounding the working cylinder; an engine casing; an end wall carried by the engine casing and interposed between the valving cylinder and crank portion of the engine, this end wall engaging the working cylinder to maintain it in fixed alinement; a lubricant containing space partially formed by said end wall; and gearing for turning the valving cylinder, the working space of the gearing being in communication with the lubricant containing space whereby said gearing is lubricated.



2. An internal combustion plural cycle engine including a working cylinder having intake and exhaust passages; a valving cylinder surrounding the working cylinder; and gearing adjacent the crank end of the valving cylinder for turning the valving cylinder, there being a lubricant containing space in communication with the gearing space to enable the lubrication of the gearing.

3. An internal combustion plural cycle engine including a working cylinder having intake and exhaust passages; a valving cylinder surrounding the working cylinder; an engine casing; and an end wall carried by the engine casing and interposed between the valving cylinder and crank portion of the engine, this end wall engaging the working cylinder to maintain it in fixed alinement.

1,104,443. BUFFER FOR AUTOMOBILES. WILLARD N. PACKER, Los Angeles, Cal., assignor, by direct and mesne assignments, to Thomas Pelham Lide, Los Angeles, Cal. Filed Apr. 28, 1913. Serial No. 764,265. (Cl. 213—39.)



1. A buffer to be attached to an automobile frame, said buffer comprising a buffer bar; universally resilient means for supporting said bar, said means comprising resilient U-shaped metal bands, each of which bands has but two legs both projecting downwardly one behind the other; dogs for connecting the forward legs of said bands to said buffer bar; and clamps for attaching the rearward legs of said bands to the automobile frame.

2. A buffer to be attached to an automobile frame, said buffer comprising a buffer bar of angular section, the apex of said angular section being to the front; two dogs embracing said buffer bar, each of said dogs having two leaves extending backward from said bar, said leaves having elongated apertures therein; a U-shaped resilient metal band for each of said dogs, each of said bands having two legs, the forward of said legs passing through the two elongated apertures in the leaves of said dogs; a set-screw threaded through the forward leg of each of said bands between said apertures in the leaves of the dogs; said set-screw being adapted to abut the angular buffer bar from the rear and adjacent the apex thereof; a lock nut on each of said set-screws between the apex of said buffer bar and the forward leg of each band; and clamping means for each of said bands, said clamping means being adapted to attach the rearward legs of said bands to the automobile frame.

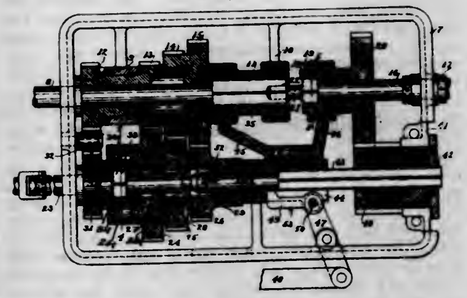
3. A buffer bar, dogs embracing the buffer bar and provided with apertures; U springs having forward and rear legs which are in the apertures, said forward legs being provided with threaded apertures; bolts screwed through the threaded apertures and engaging the buffer bar, and means to fasten the rear legs to an automobile frame.

4. A buffer bar, dogs embracing the buffer bar and provided with apertures, resilient members each having one of its ends located in the apertures of one of said dogs, said ends being provided with threaded apertures, bolts screwed through the threaded apertures and engaging the buffer bar, and means to fasten the other ends of said resilient means to an automobile frame.

5. A buffer to be attached to an automobile frame, said buffer comprising a buffer bar, resilient means for supporting said bar, said means comprising resilient metal bands, each of said bands having two legs, a dog of channel cross-section and adapted to clamp said bar against one of said legs, and means for attaching the other leg to the automobile frame.

[Claims 6 to 8 not printed in the Gazette.]

1,104,444. TRANSMISSION MECHANISM. CHARLES J. PAULSON, New York, N. Y., assignor to Albert J. Nothacker, New York, N. Y. Filed Nov. 25, 1912. Serial No. 733,243. (Cl. 74—59.)



1. A driving shaft, a driven shaft co-axial therewith, an axially movable countershaft, a gearing comprising primary members on the driven shaft, final members on the driven shaft and intermediate members enveloping the counter shaft, clutching means operable by the reciprocation of the countershaft adapted to connect it with one or another intermediate gear, clutching means adapted, at one time, to engage the driving and driven shafts and disengage them from the gear train, and at another time to disengage said shafts and engage the driving shaft with the primary gear and the driven shaft with the final gear, and engaging means adapted to engage and disengage the two clutching means with and from one another.

2. A driving shaft, a driven shaft co-axial therewith, an axially movable countershaft, a gearing comprising primary members on the driven shaft, final members on the driven shaft and intermediate members enveloping the counter shaft, clutching means operable by the reciprocation of the countershaft adapted to connect it with one

or another intermediate gear, a carriage adjacent to the countershaft, means to operate said carriage, a pawl adapted to engage and disengage said carriage and shaft, and clutch means connected with said carriage and adapted, at one time, to engage the driving and driven shafts and disengage them from the gear train, and at another time to disengage said shafts and engage the driving shaft with the primary gear and the driven shaft with the final gear, clutching means operable by movement of the countershaft, adapted to engage said shaft with and disengage it from an intermediate gear of said train, and means to move said countershaft.

3. A gear case, a driving shaft, a driven shaft co-axial therewith, an axially movable countershaft, a gearing comprising a primary member loose on the driving shaft provided with a reversing gear and a graduated series of gears, a final gear loose on the driven shaft and intermediate gears comprising a reversing pinion revolubly mounted on the case, a gear mounted in the case revoluble with the countershaft and engaging the final gear, and enveloping said shaft, a reversing gear and a graduatd series of gears severally engaging the corresponding primary gears, each of said intermediate reversing and reducing gears having a countershaft-engaging socket, an engaging member on the countershaft adapted to engage the aforesaid sockets severally, a carriage enveloping the countershaft, means to reciprocate said carriage, a pawl on said carriage adapted to engage it and disengage it from the countershaft, clutching means connected with said carriage and adapted, at one time, to engage the driving and driven shafts and disengage them from the gear train, and at another time to disengage said shafts and engage the driving shaft with the primary gear and the driven shaft with the final gear, and means to reciprocate said countershaft.

4. A gear case, a driving shaft, a driven shaft co-axial therewith, an axially movable countershaft, a gearing comprising a primary member loose on the driving shaft and provided with a reversing gear and a graduated series of reducing gears, a final gear loose on the driven shaft and intermediate gears comprising a reversing pinion revolubly mounted on the case, a gear mounted in the case revoluble with the countershaft and engaging the final gear, and, enveloping said shaft, a reversing gear and a graduated series of reducing gears severally engaging the corresponding primary gears, each of said intermediate reversing and reducing gears having a countershaft-engaging socket, an engaging member on the countershaft adapted to engage the aforesaid sockets severally, the sockets aforesaid, in adjacent intermediate gears, being separated by distances exceeding the axial dimension of said engaging member on the countershaft, a carriage enveloping the countershaft, means to reciprocate said carriage, a pawl on said carriage adapted to engage it and disengage it from the countershaft, clutching means connected with said carriage and adapted, at one time, to engage the driving and driven shafts and disengage them from the gear train, and at another time to disengage said shafts and engage the driving shaft with the primary gear and the driven shaft with the final gear, and means to reciprocate said countershaft.

5. A driving shaft, a driven shaft co-axial therewith, an axially movable countershaft, a gearing comprising primary gears loose on the driving shaft, a final gear loose on the driven shaft, a reversing pinion elsewhere mounted and intermediate gears enveloping the countershaft, clutching means adapted, at one time, to engage the driving and driven shafts and disengage them from the gear train, and at another time to disengage said shafts and engage the driving shaft with the primary gears and the driven shaft with the final gear, clutching means, operable independently of the first named clutching means, adapted to engage the countershaft with one intermediate gear and to release said gear without engaging another gear, and automatically engaging means adapted to automatically connect the two clutching means when the first named clutching means is operated to disconnect the driving and driven shafts.

[Claims 6 to 10 not printed in the Gazette.]

1,104,445. KIMONO. NELLIE M. PETERS, Chicago, Ill. Filed Aug. 4, 1913. Serial No. 782,847. (Cl. 2—145.)

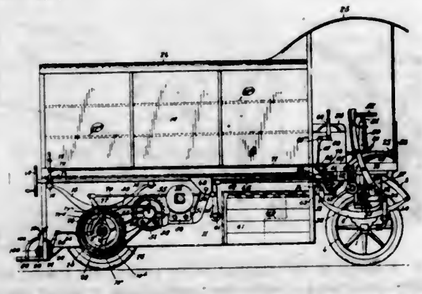


1. A one-piece garment provided with a perforation or aperture adapted to receive the head of the wearer, a hook upon one surface of the garment, and a pair of eyes upon the other surface of the garment, both of said eyes being adapted to be engaged by said hook.

2. A garment formed of a single piece of material and having a perforation adapted to receive the head of the wearer, an opening extending from said perforation, means to close said opening, a fastening device on one surface of the fabric and a pair of fastening devices on the opposite surface, both adapted to be engaged by said first-mentioned fastening device.

3. A garment formed of a single piece of material and having a perforation adapted to receive the head of the wearer, an opening extending from said perforation, means to close said opening, a fastening device on one surface of the fabric, and means upon the other surface of the fabric adapted to coöperate with said fastening device, there being a fullness or gathering of the material on said second-mentioned side of the fabric adjacent the point where same is secured to said fastening device.

1,104,446. MOTOR-VEHICLE. LEROY S. PROUTS, Canton, Ohio. Filed Dec. 5, 1913. Serial No. 804,801. (Cl. 21—90.)



1. A motor vehicle provided with a single driver's station at the forward end thereof and with a plurality of driver's stations at the rear end thereof, the said stations at the rear arranged at the two sides of the vehicle respectively, and each of the stations provided with guiding, controlling and braking means.

2. A motor vehicle provided at the forward end with an elevated driver's station equipped with a seat and guiding, controlling and braking means disposed for manipulation by the driver when seated in said seat, and a lower driver's station equipped with a transversely extending foot board at the rear of said vehicle and guiding, controlling and braking means at the two sides of the vehicle disposed for manipulation by the driver when standing on said foot board.

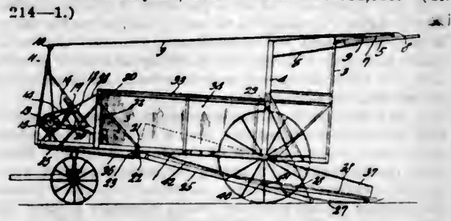
3. A motor vehicle provided with a load carrying portion having a low level floor extending longitudinally in the midst thereof, a forward, high level driver's station accessible from said floor and provided with a seat and guiding, controlling and braking means, and a rear low level driver's station accessible from said floor and provided with guiding, controlling and braking means, said means being independently operable at either station.

4. In a motor vehicle, in combination with the main frame, driving axle and driving wheels thereon, thrust frames on the two sides of said main frame and having their upper ends connected to said main frame and their lower ends connected to said axle, and an electric motor and transmission gearing mounted upon each of said thrust frames, said transmission gearing on each frame consisting of a counter-shaft journaled in a bearing connected to said thrust frame and provided with a first and a second sprocket, chain belt connection between said motor and said first sprocket, and chain belt connection between the second sprocket and the driving wheel on the same side of the vehicle.

5. In a motor vehicle, in combination with the main frame, driving axle and driving wheels thereon, two thrust frames arranged upon the two sides of said main frame, respectively, each thrust frame having one end connected to said main frame and its other end connected to said driving axle, and the intermediate portion of said thrust frame constituting a motor and transmission gearing mounting portion, an independent motor and transmission gearing mounted on each of said thrust frames, the motor, transmission gearing and driving wheel on each side of the vehicle operatively connected together.

[Claims 6 to 13 not printed in the Gazette.]

1,104,447. STACKER. EDSON A. ROACH, Bordulac, N. D., assignor of one-half to David M. Graham, Bordulac, N. D. Filed July 24, 1913. Serial No. 781,015. (Cl. 214—1.)



1. A machine of the class described including a movable main structure, a bottom slidably and pivotally connected thereto at its front end, means for supporting the rear end of the bottom, said means, when released, permitting the bottom to gravitate at its rear end into contact with the ground, prongs extending rearwardly from said bottom and adapted to contact with the ground, and a space-former extending longitudinally along the bottom and between the prongs.

2. The combination with a movable main structure, of a bottom, means connecting the front end of the bottom to said structure for rearward and upward and downward swinging movement, said bottom including an imperforate front portion and rearwardly extending prongs, flexible means for limiting the rearward movement of the bottom relative to the main structure, and means under the control of the operator for swinging the bottom upwardly and shifting it longitudinally to its initial position, said bottom being adapted to swing downwardly at its rear end out of normal position and into contact with the ground.

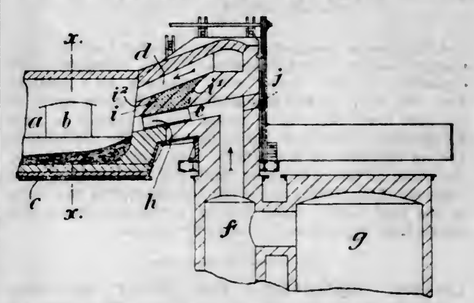
3. The combination with a movably supported main structure, of a bottom connected at its front end to said structure to slide forwardly and rearwardly and to swing upwardly and downwardly relative thereto, said bottom including an imperforate front portion and rearwardly extending prongs, flexible means for yieldingly limiting the rearward movement of said bottom relative to the main structure, and means for elevating the bottom and shifting it forwardly to its normal position after being swung downwardly into contact with the ground.

4. The combination with a movably supported main structure, of a bottom movable downwardly relative thereto into contact with the ground, means for producing a momentary pause in the forward movement of the bottom when dropped into contact with the ground and during the forward movement of the main structure, a table adapted to travel downwardly upon the bottom when dropped into contact with the ground, and means for limiting such movement of the table.

5. In a machine of the class described the combination with a movable main structure, of a bottom adapted to swing downwardly relative thereto into contact with the ground, said bottom including rearwardly extending prongs, a table normally supported upon the front portion of the bottom and adapted to gravitate rearwardly thereabong when the bottom is swung downwardly, and means for abruptly limiting such movement of the table.

[Claim 6 not printed in the Gazette.]

1,104,448. REGENERATIVE OPEN-HEARTH FURNACE. THOMAS BOND ROGERSON, Tollcross, Glasgow, Scotland. Filed Feb. 24, 1914. Serial No. 820,381. (Cl. 75—94.)



1. The method of repairing the burnt blocks of regenerative open hearth furnaces by first inserting, in the block, a center and placing same in position where the portion of the block has been destroyed, and then applying refractory material about the center to replace the portion destroyed.

2. The method of repairing the burnt blocks of regenerative open hearth furnaces by providing an opening in the furnace, inserting a center through said opening and into position at the place where the block has been destroyed, placing a refractory material about the center to replace the portion destroyed and thereafter closing the opening in the furnace.

3. Repairing the burnt blocks of regenerative open hearth furnaces by first inserting, in the block, a center and placing same in position where the portion of the block has been destroyed, and then applying a refractory mixture, composed of broken silica brick, silver sand and clay, about the center to replace the portion destroyed.

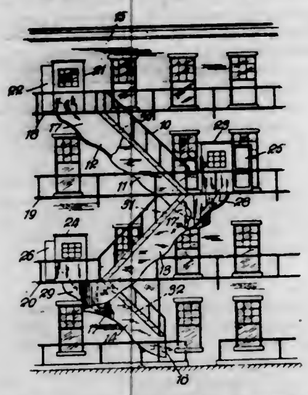
4. Repairing the burnt blocks of regenerative open hearth furnaces by first inserting, in the block, a center and placing same in position where the portion of the block has been destroyed, then applying a mixture of refractory material, composed of broken silica brick, silver sand and silica clay, about the center to replace the portion destroyed, and finishing off the rebuilt block with a mixture composed of silver sand and silica clay, brown sand being finally thrown on the rebuilt block for the purpose of glazing the same.

5. The mode of repairing the burnt blocks of regenerative open hearth furnaces by first inserting, in the block, a center, consisting of a curved plate of sheet metal, and

placing same in position where the portion of the block has been destroyed, and then applying a mixture of refractory material about the center to replace the portion destroyed.

[Claim 6 not printed in the Gazette.]

1,104,449. FIRE-ESCAPE. MAX ROSNER, New York, N. Y., assignor, by direct and mesne assignments, to Edwin D. Henderson, Jr., New York, N. Y. Filed Feb. 12, 1912. Serial No. 677,223. (Cl. 227—7.)



A fire escape comprising a series of covered chutes, said chutes being arranged in series to form alternately and oppositely inclined flights with reference to a vertical line; the chute of the higher flight joining the chute of the next lower flight by a curved bottom surface to form a continuous slide from top to bottom of the fire escape; and an entrance to each chute, said entrance leading to the chute of the next lower flight and the mouth of said entrance being wholly above the termination of the chute of the next higher flight thereby preventing flames and smoke from being drawn into the fire escape.

1,104,450. RECEPTACLE FOR BURNT MATCHES. SAMUEL SCHWARZKOPF, Toledo, Ohio. Filed Mar. 16, 1914. Serial No. 825,126. (Cl. 206—20.)



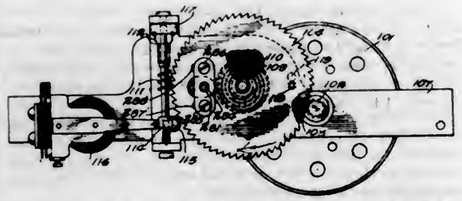
1. In a burnt match receptacle, means for temporarily supporting a match in one portion of the receptacle and operable by the striking of a match against a part of said means to permit a movement of the deposited match into another portion of the receptacle.

2. In combination, a member forming a burnt match receiving receptacle provided with a receiving opening in its upper portion, and means mounted in said receptacle intermediate its lower end and the receiving opening and serving as a temporary support for matches when deposited in the receptacle, said means being operable by the striking of a match against a portion thereof to release a supported match to permit it to move into the lower portion of the receptacle.

3. In combination, a burnt match holding member having a receiving receptacle which is open at its upper portion, a partition member pivotally mounted in said receptacle and dividing it into a receiving chamber and a storage chamber, means yieldingly holding said partition member in chamber separating position, and means operable by the striking of a match thereagainst to automatically move said partition member to open communication between said chambers.

4. In combination, a member forming a burnt match receiving receptacle provided with a receiving opening in its upper portion, and means comprising a match holding part and a match striking part each pivotally attached to the receptacle and coöperating one with the other whereby a movement of the striking part by the striking of a match thereagainst will impart a match releasing movement of the match holding part to permit a match held by said holding part to drop into the lower portion of the receptacle.

1,104,451. TELEPHONE AUTOMATIC TRUNK-SELECTING SYSTEM. MICHAEL SETTER, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 6, 1910. Serial No. 559,826. (Cl. 179—18.3.)



1. In a telephone system, a plurality of trunks having terminals arranged in a row, a movable element adapted to move back and forth along said row of terminals, means including a spring for actuating said element in such back and forth movement, and electrically-operated means for winding up said spring.

2. In a telephone system, a plurality of trunks provided with terminals arranged in a row, a metallic wiper adapted to traverse said row of terminals in contact therewith, means including a spring for operating said wiper in such back and forth movement, and electrically-operated means for winding up said spring.

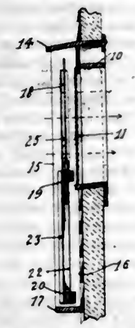
3. In a telephone system, a plurality of trunks provided with terminals arranged in a row, a metallic wiper adapted to travel along said row of terminals in contact therewith, means including a spring for propelling said wiper in its operative movement, electrically-operated means for winding up said spring, means normally locking the wiper against motion, electrically-operated means for unlocking the wiper, and means for causing the wiper to stop on the terminal of the first idle trunk.

4. In a telephone system, a plurality of trunks provided with terminals arranged in a row, mechanism for selecting idle trunk terminals, means including a spring for operating said mechanism, an electric motor for keeping said motor normally wound up, means for normally locking said mechanism against operation, and an electromagnet for unlocking the mechanism to permit operation thereof by the said spring.

5. In a telephone system, a plurality of trunks provided with terminals arranged in a row, means for traversing said row of terminals to select idle trunks, an operating mechanism for said means comprising a gear wheel and a governor wheel, a spring connecting said wheels, means for operating one wheel to wind up said spring, means on said wheels for stopping the motion of the one wheel when the spring is wound up, a governor controlling the motion of the governor wheel, a catch normally engaging said governor to prevent motion of said mechanism, and a magnet for operating said catch to permit selection of an idle trunk.

[Claims 6 to 18 not printed in the Gazette.]

1,104,452. AWNING FOR WINDOWS. ARTHUR F. SMITH, Ventura, Cal. Filed Sept. 2, 1913. Serial No. 787,601. (Cl. 98—31.)

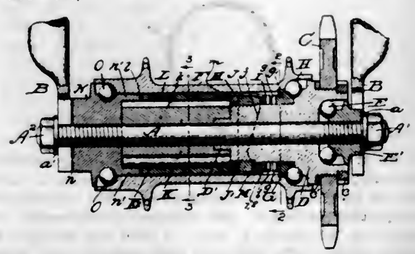


1. An awning for framed openings, comprising a frame, an auxiliary frame secured thereto having slotted side bars, said bars being spaced a distance from said frame, and a sliding frame adapted to be covered with a fabric and slidably mounted in said slots, whereby circulation of air is not destroyed.

2. An awning for framed openings, comprising a frame, slotted side bars secured in spaced relation to said frame and exteriorly thereof, a watershed connected to each of said side bars and said frame, a frame slidably mounted in said slotted bars, an opaque fabric secured to said frame, and means to raise and lower said sliding frame.

3. An awning for framed openings, comprising an apertured frame, a watershed secured thereto, slotted side bars secured externally of said frame and of said watershed, means to adjust said side bars in spaced relation to said window frame and its supports, cross bars slidably mounted in said slotted side bars, means to connect said sliding cross bars to form an awning frame, an opaque fabric secured to said frame, operating lines secured to said awning frame, and sheaves supported adjacent the upper portion of said apertures in said apertured frame, whereby said lines may be carried over said sheaves to the interior of the structure to which said window frame and its attachments are secured.

1,104,453. COASTER-BRAKE. SIDNEY SMITH, Detroit, Mich. Filed Oct. 10, 1913. Serial No. 794,377. (Cl. 208—57.)

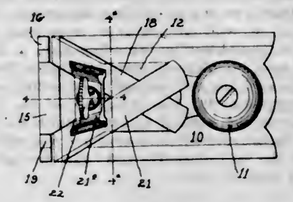


1. In a coaster brake, a stationary axle, a sprocket wheel, a hub for said sprocket wheel, a collar having a cam face carried by the sprocket wheel hub and rotatable therewith, an annular ring free to rotate on the hub provided with a cam face adapted to be actuated by the cam face of the collar and having on its opposite side a ratchet face, yieldable means to secure the annular ring against rotation with the hub when being actuated by the cam, a wheel hub sleeved over the sprocket wheel hub, and an annular ring free to turn upon the sprocket wheel hub and adapted to rotate with said wheel hub having a ratchet face to co-act with the ratchet face of the annular ring.

2. In a coaster brake, a stationary axle, a sprocket wheel, a hub for the sprocket wheel free to turn upon the axle, a detachable collar secured to the sprocket wheel hub having a cam face, an annular ring free to rotate on said hub provided with a cam face adapted to be actuated by the co-acting cam face of the collar, having on its opposite side a ratchet face, yieldable means to hold the annular ring against rotation with the hub when actuated by the cam, a wheel hub sleeved over the sprocket wheel hub, and an annular ring free to turn upon the sprocket wheel hub engaged to the wheel hub, and having a ratchet face to co-act with the ratchet face of the first named annular ring, whereby the wheel hub may turn with the sprocket wheel hub.

3. In a coaster brake, a stationary axle, a sprocket wheel, a hub carrying said sprocket wheel, a collar having a cam face carried by the sprocket wheel hub and rotatable therewith, an annular ring loosely sleeved on the hub provided with a cam face adapted to be actuated by the cam face of the collar, having on its opposite side a ratchet face, an annular ring free to turn upon the sprocket wheel hub and engaged to the wheel hub having a ratchet face to co-act with the ratchet face of the annular ring, a sleeve provided with a plurality of cams loosely mounted on the axle engaging the sprocket wheel hub that it may rotate thereby, an expansible spring sleeve inclosing said cam sleeve and housed within the wheel hub, means to secure said sleeve against rotation, a plurality of rolls co-acting with said cam to expand said sleeve into braking relation with the wheel hub, and a spring collar secured to said sleeve adapted to overlap the collar having a cam face carried by the sprocket wheel hub and to engage the annular ring, whereby said annular ring is held against rotation and in abutting relation with the cam face collar that it may be actuated thereby.

1,104,454. PLANE. WILLIAM E. SPARKS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 11, 1913. Serial No. 778,591. (Cl. 145—10.)



1. In a plane, a bed plate or stock having transversely arranged throats at the opposite forward corners thereof, there being grooves in said bed plate extending rearwardly from said throats and intersecting each other, cutters adapted to fit said grooves, clamping means for said cutters located in front of the intersection of said grooves; and a knob fixed on said bed plate at the rear of such intersection; substantially as described.

2. In a plane, a bed plate having intersecting grooves, one of said grooves being deeper than the other at the point where said grooves intersect, cutters located in said grooves and overlapping each other, and a single means for clamping both cutters in said grooves; substantially as described.

3. In a plane, a bed plate having cutter-receiving grooves extending to one edge thereof, and a detachable nose piece applied to said edge of the bed plate and forming in connection with the ends of said grooves, throats for the cutting ends of the cutters; substantially as described.

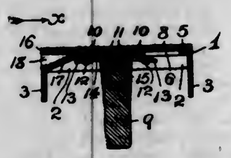
4. In a plane, the combination of a bed plate or stock having transversely arranged throats at the opposite forward corners thereof, there being grooves in said bed plate extending rearwardly from said throats, cutters fitting said grooves, a single clamp to secure both of said

cutters in the respective grooves at the same time, and a knob fixed to the bed plate at the rear of the cutters; substantially as described.

5. In a plane, the combination of a bed plate or stock, having intersecting cutter-receiving grooves terminating at the forward corners thereof, one of said grooves being deeper than the other at the point of intersection, cutters fitting the respective grooves, a single clamp for securing the cutters in the respective grooves, in overlapping relation, and a single detachable nose piece cooperating with the forward ends of both grooves to form throats for the cutters; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

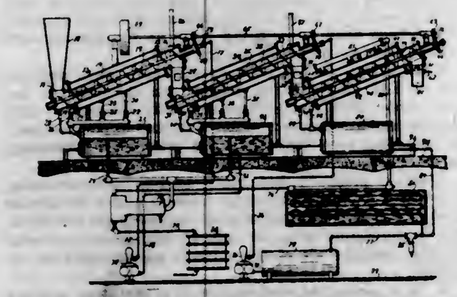
1,104,455. BAG-FRAME FASTENER. HUGO TUECKMANTEL, Irvington, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Nov. 25, 1913. Serial No. 802,873. (Cl. 70—116.)



1. A bag-frame fastener for bag frames and the like, comprising a main chambered body or base, said body being provided with an upper flat surface formed at one end with a thumb or finger-receiving depression, and a flat plate-like member movably disposed upon said upper flat surface of said body or base and normally extending over said receiving depression, for the insertion of the finger beneath said plate-like member, for the manipulation of the same and of the locking mechanism of the bag-frame fastener.

2. A bag-frame fastener for bag frames and the like, comprising a main chambered body or base, said body being provided with an upper flat surface formed at one end with a thumb or finger-receiving depression, the upper flat surface of the said main body or base being also provided with a longitudinally extending slot, a flat plate-like member movably disposed upon said upper flat surface of said body or base and normally extending over said receiving depression, for the extension of the finger beneath said plate-like member for the manipulation of the same, and a spring-controlled locking post extending downwardly from the said plate-like slide and through the slot in said main body or base.

1,104,456. PROCESS FOR EXTRACTING OILS FROM SOLIDS. CHARLES TURNER, Chicago, Ill. Filed June 26, 1911. Serial No. 635,503. (Cl. 87—6.)



1. The herein described process of extracting oils from solids, consisting in passing the solid material through an upwardly inclined chamber, washing the material with a volatile solvent within the chamber, maintaining the liquid drained from the material within the chamber at a suitable level to seal the receiving end of the chamber, draining the liquids laterally from the material within the chamber into a separating tank, and discharging the material from the chamber through a liquid seal.

2. The herein described process of extracting oils from solids consisting in passing the solid material through a chamber, washing the material with a volatile solvent within such chamber, discharging the material from the chamber through a liquid seal, then passing the material through a second chamber, washing it therein with a volatile solvent, discharging the material from such chamber into and passing it through a third chamber, applying heat to the material while in such third chamber for vaporizing the solvent remaining in the material, discharging the material from such chamber, and introducing into the material as it enters and leaves such chamber a vapor under pressure in the form of jets directed toward the chamber in both cases.

3. The herein described process of treating solid material for extracting oils therefrom consisting in first washing the material with a volatile solvent, then passing the material through a chamber and heating it therein for vaporizing the solvent remaining in the material, and sealing the receiving and discharge ports of such chamber against the escape of vapors therethrough by directing into such chamber through such ports a vapor under pressure.

4. The herein described process of treating solid material for extracting oils therefrom consisting in first washing the material with a volatile solvent, then passing the material through a chamber and heating it therein for vaporizing the solvent remaining in the material, and sealing the port of such chamber against the escape of vapors therethrough by directing into such chamber through such port a vapor under pressure.

5. The herein described process of extracting oils from solids, consisting in delivering the material to the lower end of an inclined chamber through a liquid seal, conveying the material through the chamber, delivering a volatile solvent to the center of the mass of material as it passes through the chamber, draining the liquid from the mass laterally and discharging it to a separating tank and discharging the material from the chamber through a liquid seal.

1,104,457. SIFTER-TOP POWDER-CAN. GEORGE W. WEBER, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 1, 1910. Serial No. 590,151. (Cl. 221—64.)

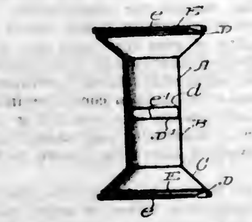


1. An article of manufacture of the character described comprising, in combination: a container having a perforated top head, the latter being formed with a cylindrical neck portion having a slot therein; a perforated cap mounted on the outside of said top head and having a depending flange encircling said neck portion, said flange being provided with an opening; a spring mounted within said top head and having one end thereof extending through said slot and said opening; and means for holding the cap in open position against the action of said spring, substantially as specified.

2. An article of manufacture of the character described comprising, in combination: a container having a perforated top head provided with a necked-in portion, the necked-in portion having a segmental slot therein; a perforated cap having a depending flange encircling said necked-in portion, the depending flange being provided with an opening; and a spring within said top head having one end thereof secured to one edge of the segmental slot and the other end thereof projected through said slot and the opening in said flange, the extended end of said spring forming a finger piece by means of which the cap may be rotated relatively to the top head of the container, substantially as specified.

3. An article of manufacture of the character described comprising, in combination: a container having a perforated top head, the top head being formed with a cylindrical neck portion having a segmental slot therein, said slot being provided with a notch at one end thereof; a perforated cap mounted on the outside of said top head and having a depending flange encircling said neck portion of the top head, said flange being provided with an opening; and a spring mounted within said top head having one end thereof extending through said segmental slot and the opening in said flange and adapted to engage in said notch to thereby hold the rotatable cap in its open position, substantially as specified.

1,104,458. SHEET-METAL SPOOL. GEORGE W. WEBER, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 25, 1911. Serial No. 645,905. (Cl. 242—118.)



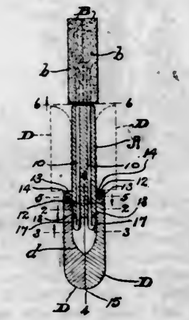
1. A spool of the character described comprising, in combination: two substantially cylindrical, drawn sheet metal members having tapered outer end portions and telescoped one within the other at their inner ends, one of said members having an integral, perforated diaphragm at its inner end adapted to strengthen the members and prevent crushing thereof, said members being rigidly and permanently secured to each other to thereby prevent separation of the parts when longitudinal outward pressure is exerted on the tapered end portions; and heads secured to each member at the outer ends thereof, substantially as specified.

2. A pool of the character described comprising, in combination: two substantially cylindrical, drawn sheet metal members each having a tapered outer end portion, one of said members being necked-in at its inner end and provided with an integral, perforated diaphragm, the latter being adapted to strengthen the member and prevent crushing thereof, said necked-in end being telescoped within the inner end of the other member, said members being soldered together to thereby prevent separation when longitudinal outward pressure is exerted on the tapered ends; and sheet metal heads secured to each of said members at the outer ends thereof, substantially as specified.

1,104,459. TOOTH-BRUSH. DAVID WEISS, Cleveland, Ohio. Filed Mar. 30, 1914. Serial No. 828,108. (Cl. 15—39.)

1. In a tooth-brush, a handle, and two brushing sections adapted to be swung laterally and arranged at the forward end of the handle, each brushing section comprising a shaft which has bearing in and extending longitudinally of the forward section of the handle, the rear portion of the handle being divided longitudinally and centrally between the shafts into two substantially corresponding but oppositely arranged sections which have their forward portions embracing the rear end-portion of the forward handle-section and are pivotally connected at their forward ends to the forward handle-section at opposite sides respectively of the handle and arranged to be swung laterally from each other and forwardly into a position alongside of the forward handle-section.

2. In a tooth-brush, a handle, and two brushing sections adapted to be swung laterally and arranged at the forward end of the handle, each brushing section comprising a shaft which has bearing in and extends longitudinally of the forward section of the handle, the rear portion of the handle being divided longitudinally and between the shafts into two sections which have their forward portions embracing the rear end-porton of the forward handle-section and are pivotally connected at their forward ends to the forward handle-section and have their axes substantially parallel with the tufts of bristles of the brushing sections.



3. In a tooth-brush, a handle, and two brushing sections adapted to be swung laterally and arranged at the forward end of the handle, each brushing section comprising a shaft which extends through and rearwardly of and has bearing in the forward section of the handle, the rear portion of the handle being divided longitudinally and between the shafts into two sections which have their forward portions embracing the rear end-portions of the forward handle-section and are pivotally connected at their forward ends to the forward handle-section and have their axes substantially parallel with the tufts of bristles of the brushing sections, the shafts being provided with shoulders at the rear end face of the forward handle-section.

4. In a tooth-brush, a handle, and two brushing sections adapted to be swung laterally and arranged at the forward end of the handle, each brushing section comprising a shaft which extends through and rearwardly of and has bearing in the forward section of the handle, the rear portion of the handle being divided longitudinally and between the shafts into two sections which embrace the rear end of the different shafts respectively and have their forward portions embracing the rear portion of the forward handle-section and are pivotally connected at their forward ends to said forward handle-section, each shaft being provided within the pivoted handle-section embracing said shaft with a lateral and outward enlargement closely embraced by said handle-section.

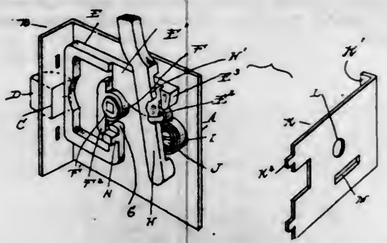
5. In a tooth-brush, a handle, and two brushing sections adapted to be swung laterally and arranged at the forward end of the handle, each brushing section comprising a shaft which extends through and rearwardly of and has bearing in the forward section of the handle, the rear portion of the handle being divided longitudinally and between the shafts into two sections which are pivotally connected at their forward ends to said forward handle-section, each pivoted handle-section being provided opposite the other pivoted handle-section with a recess extending rearwardly from the forward extremity of the respective handle section, and each shaft being provided within the recess in the pivoted handle section into which said shaft extends with a lateral and outward enlargement engaged by the side walls of said recess.

[Claim 6 not printed in the Gazette.]

1,104,460. LATCH. PETER J. WESOLOWSKI, Detroit, Mich. Filed Mar. 8, 1913. Serial No. 752,871. (Cl. 70—42.)

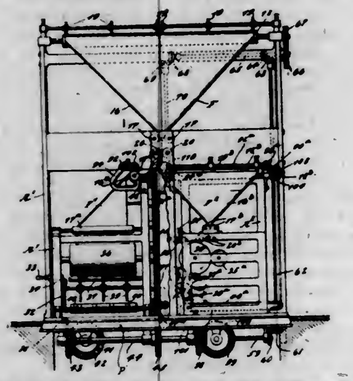
1. A latch, comprising an angle plate, a latch-bolt engaging an aperture in the flange of said plate and having

a bifurcated portion lying adjacent and parallel to the body portion of the plate, a rotary member having oppositely-projecting fingers for engaging bearings on said bifurcated portion, a lever pivoted to the body of said plate and extending transversely across one arm of said bifurcated portion, a lug on said arm in rear of said lever for engagement with the latter, and a coil spring located between said lever and plate and bearing against said bifurcated portion.



2. A latch, comprising an angle plate, a latch-bolt engaging an aperture in the flange of said plate and having a bifurcated portion parallel to the body of said plate, a rotative member having oppositely-projecting fingers for engagement with said bifurcated portion, a lever pivoted to said plate, an arm on said bifurcated portion extending transversely of said lever, said arm and lever being reversely mortised to lie within the thickness of the bifurcated portion.

1,104,461. PRINTING-PRESS. GLENN S. WILLIAMSON, New York, N. Y. Filed Nov. 3, 1911. Serial No. 658,302. (Cl. 101—124.)



1. In a rotary web printing press, the combination of a plurality of sets of printing couples, web slitting means for severing said webs longitudinally, first and second longitudinal folders adapted to operate in series with each other, the first folder of double width, each folder including a triangular former, a third longitudinal folder beyond the double width folder, means for associating and conducting a plurality of webs from said sets of printing couples double width directly to the first longitudinal folder without the use of angle bars and means for associating and conducting a longitudinal portion of one or more webs directly to said third folder.

2. In a rotary web printing press, the combination of a plurality of sets of printing couples, web slitting means for severing said webs longitudinally, first and second longitudinal folders adapted to operate in series with each other, the first folder of double width, each comprising a triangular former and rollers at the point thereof, forwarding means between the longitudinal formers, a third longitudinal folder beyond the double width folder, means for associating and conducting a plurality of webs from said sets of printing couples double width directly to the first longitudinal folder without the use of angle bars and means for associating and conducting a longitudinal portion of one or more webs directly to said third folder.

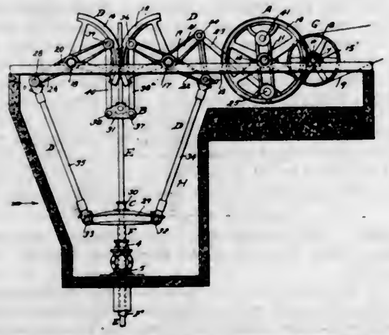
3. In a rotary web printing press, the combination of a plurality of sets of printing couples, web-slitting means, two longitudinal folders adapted to operate in series with each other, one of double width, each comprising an internal former and external turners, compensating means between the slitting means and the first longitudinal folder, a third longitudinal folder beyond the double width folder, means for associating and conducting a plurality of webs from said sets of printing couples double-width to the first longitudinal folder, including a registering roller for each web and a guide roller over which the associated webs pass on their way to the first longitudinal folder and means for associating and conducting a longitudinal portion of one or more webs directly to said third folder.

4. In a rotary web printing press, the combination of a plurality of sets of printing couples, a single slitting means for slitting all the double-width webs of said sets simultaneously, two longitudinal folders adapted to operate in series with each other, one of double width, each comprising an internal former and external turners, a third longitudinal folder beyond the double-width folder, a slitter in advance of said third folder, means for associating the plurality of webs from said sets of printing couples and conducting them by way of the single slitting means to the first longitudinal folder by which the plurality of slit double width webs is folded longitudinally to be again folded longitudinally into book-fold by the second folder and means for associating and conducting a longitudinal portion of one or more webs directly to said third folder.

5. Mechanism for folding the product of a printing press, comprising two longitudinal folders in series, one of them of double width, each comprising a triangular former and rollers at the point thereof, forwarding mechanism between said folders, a third longitudinal folder beyond the double width folder and means for leading webs either to said double width folder directly without the use of angle bars or a portion of the webs printed by the press directly to said third folder.

[Claims 6 to 27 not printed in the Gazette.]

1,104,462. MECHANICAL MOVEMENT. WILLIAM W. WILSON, Los Angeles, Cal. Filed Oct. 16, 1912. Serial No. 726,063. (Cl. 74—5.)



1. A mechanical movement, comprising two oscillatory members having fixed centers and operatively connected and executing movements in opposite directions, a reciprocatory member having rectilinear movement, means for imparting motion to said oscillatory members, and operative connections between each of said oscillatory members and said reciprocatory member.

2. A mechanical movement, comprising a rotary member, two oscillatory members having inter-meshing teeth, a reciprocatory member, operative connections between said rotary member and one of said oscillatory members, and operative connections between each of said oscillatory members and said reciprocatory member.

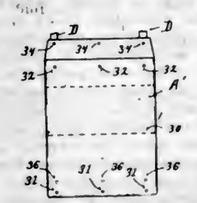
3. A mechanical movement, comprising a rotary member, two reciprocating members, two oscillatory members having intermeshing teeth, operative connections between said rotary member and one of said oscillatory members and separate operative connections between each of said oscillatory members and each of said reciprocatory members.

4. A mechanical movement, comprising a gear wheel, intermeshing toothed sectors, a pitman between the gear wheel and one of the sectors, arms projecting respectively from the sectors, two reciprocatory cross-heads, and separate pitmen extending from the sectors and the arms thereof to the cross-heads.

5. A mechanical movement, comprising a gear wheel, intermeshing toothed sectors, a pitman between the gear wheel and one of the sectors, arms projecting respectively from the sectors, two reciprocatory cross-heads, and separate pitmen extending from the sectors and the arms thereof to the cross-heads, one of said cross-heads having a projecting part passing slidably through the other cross-head.

[Claim 6 not printed in the Gazette.]

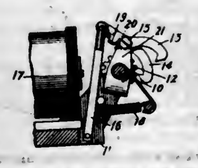
1,104,463. HAND-BAG. EDWARD H. WUEST, Cincinnati, Ohio. Filed Oct. 9, 1912. Serial No. 724,789. (Cl. 190—44.)



1. A hand-bag of flexible material open at the top and adapted to be folded transversely upon itself, a flap to fold over and cover the bag opening, a fastening member on the front of the bag near the top thereof, a fastening member on the back of the bag near the bottom thereof, and a fastening member on said flap to coöperate with the fastening member on the front of the bag when in unfolded position and with the fastening member on the back of the bag when in folded position.

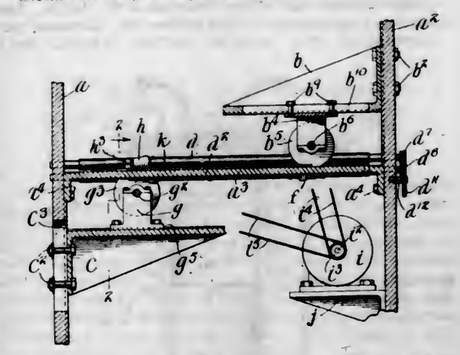
2. A hand bag of flexible material open at the top and adapted to be folded transversely upon itself, a flap to fold over and cover the bag opening, fastening members near the top and bottom of the front of the bag adapted to coöperate with each other to secure the bag in folded position, fastening members on the back of the bag near the bottom thereof, and fastening members on said flap adapted to coöperate with the fastening members on the front of the bag near the top when the bag is in unfolded position and with the fastening members on the back of the bag when in folded position.

1,104,464. RATCHET MECHANISM. ARTHUR H. ADAMS, Sparkill, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 12, 1912. Serial No. 677,023. (Cl. 74—16.)



A ratchet mechanism comprising a shaft, a ratchet wheel and a member independently and rotatably mounted thereon, an actuating pawl carried by said member and adapted to advance said wheel, a stopping pawl also carried by said member and adapted to control the advance of said wheel, and a spring coöperating with said actuating pawl, whereby said wheel may be advanced through equal spaces.

1,104,465. MACHINE FOR PREPARING FIBROUS CAN-BODIES. JAMES F. ADAMS, Phillipsburg, N. J., assignor to The Canister Company, Phillipsburg, N. J., a Corporation of New Jersey. Filed Oct. 29, 1913. Serial No. 797,950. (Cl. 93—58.)



1. In a machine for forming can bodies from a sheet of fibrous material, a frame provided with a table having a transverse slot, a wheel support mounted over one side portion of said table and provided with an emery wheel adapted to operate in said slot and vertically adjustable, said wheel being adjustable on its support transversely of the table, another support mounted under the opposite side portion of said table and vertically adjustable and provided with an emery wheel which operates in said slot and is adjustable transversely of said table, a roller mounted beneath the emery wheel supported above the table and below said slot, and in connection with which said wheel operates, another roller mounted above the table and in connection with which the emery wheel supported below the table operates, and separate pairs of feed rollers mounted in and above the table transversely thereof and on the opposite sides of said slot and said wheels.

2. In a machine for forming can bodies from a sheet of fibrous material, a frame provided with a table having a transverse slot, emery wheels mounted above and below the opposite side portions of said table and adapted to operate in said slot, rollers corresponding with said wheels and mounted above and below the table, and in connection with which said emery wheels operate, and feed rollers arranged in pairs mounted transversely of said table and on the opposite side of said wheels.

3. In a machine for forming can bodies from a sheet of fibrous material, a frame provided with a horizontal table having a transverse slot, emery wheels mounted above and below the opposite side portions of said table and adapted to operate in said slot, rollers mounted above and below the table and above and below said slot and operating in connection with said wheels, and guide rollers arranged in pairs transversely of the table and on the opposite sides of said slot and said wheels.

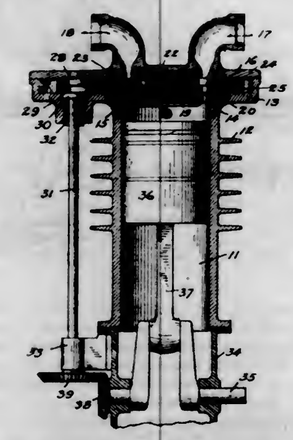
4. In a machine of the class described, a frame provided with a table having a transverse slot, wheels supported above and below the opposite side portions of the table and adapted to operate in said slot, rollers supported above and below the table and above and below said wheels and said slot, and in connection with which said wheels operate, and guide rollers arranged on the opposite sides of said slot and said wheel transversely of the table.

5. In a machine of the class described, a frame provided with a table having a transverse slot, emery wheels

mounted above and below the opposite side portions of said table and adapted to operate in said slot, said wheels being adjustable transversely of the table, rollers mounted above and below the table and said slot and said wheels, and adapted to operate in connection with said wheels, said rollers being adjustable transversely of the table, and guide rollers arranged in pairs on the opposite sides of said wheels and said slot.

[Claims 6 to 8 not printed in the Gazette.]

1,104,466. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. SHERMAN T. ALLEN, Los Angeles, and GEORGE A. CLEAVELAND, Jr., Glendale, Cal. Filed Apr. 22, 1913. Serial No. 762,768. (Cl. 123—188.)

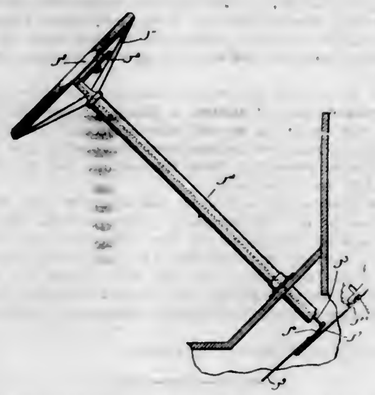


1. An internal combustion engine, comprising a cylinder having oppositely disposed ports formed in its head, a piston reciprocatingly mounted in said cylinder, a plurality of plates having ports disposed there-through adapted to slide on said head, said plates also having slots oppositely disposed from said ports, disks adapted to register in and slide in said slots, a valve shaft, said disks being eccentrically fixed in relation to said valve shaft, and means interposed between said piston and said valve shaft whereby said valve shaft is driven to reciprocate said plates to register the ports therein in fixed and definite relation.

2. An internal combustion engine, comprising a cylinder having a valve chest formed on one end thereof, and having a plurality of recesses adjacent the intersection of the cylindrical walls and floor of said valve chest, a slidably mounted member adapted to engage said recess and provided with a centrally disposed portion forming a closure for said cylinder, having a plurality of ports therein, a plurality of sliding plates mounted in said valve chest, means to reciprocate said valve plates, and resilient means to force said slidably mounted member in operative contact with the lower of said plates.

1,104,467. MEANS FOR STARTING AND CONTROLLING INTERNAL-COMBUSTION ENGINES. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed July 22, 1912. Serial No. 710,865. (Cl. 123—179.)

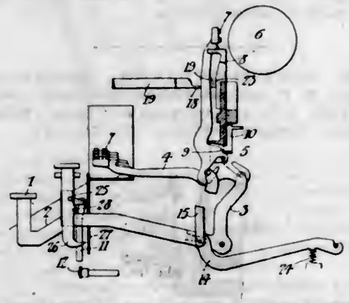
1. In an automobile, or similar vehicle, the combination with a spark-time-controlling device, a dynamo electric machine, a plurality of storage batteries, grouped for series and for parallel connection, a spark producing means, a circuit therefor adapted for connection with said batteries and with said dynamo, a switch for connecting said batteries in series and in parallel, alternatively, with said dynamo, and for closing said spark producing circuit when said batteries are in parallel relation and an auxiliary switch for closing said circuit when said batteries are connected in series relation, and a common means for controlling the latter switch and said spark-time device.



2. The combination with an internal combustion engine, of a spark-time-controlling device, a dynamo electric machine, a plurality of storage batteries, grouped for series and parallel connection, spark producing means, a circuit therefor, adapted for connection with said batteries and with said dynamo, a switch for connecting said batteries in series or in parallel alternatively with said dynamo, an auxiliary switch movable in one position for closing said spark circuit when batteries are in parallel relation and movable into a second position for closing said circuit when the batteries are connected in series relation, and a common means for controlling the latter switch and said spark-time device.

3. The combination with an internal combustion engine, of a dynamo-electric machine, a plurality of storage batteries, grouped for series and parallel connection, spark producing means, a circuit therefor, adapted for connection with said batteries and with said dynamo, a switch for connecting said batteries in series or in parallel alternatively with said dynamo, an auxiliary switch movable in one position for closing said spark circuit when batteries are in parallel relation and movable into a second position for closing said circuit when the batteries are connected in series relation, and common means for controlling the said switches.

1,104,468. COMBINED TYPE-WRITING AND COMPUTING MACHINE. RICHARD M. BECKER, New York, N. Y., assignor to John Thomas Underwood, Brooklyn, N. Y. Filed Apr. 9, 1913. Serial No. 759,830. (Cl. 235—58.)



1. A typewriting and computing machine comprising a key, a lever on which the key is pivoted, a comb guiding said lever, a latch forming an extension of said key

adapted to lock said key in said comb, and a stop limiting the throw of said key.

2. A front-strike typewriting and computing machine comprising a platen and keys, type-bars for writing on said platen and operated by said keys, a segment in which said type-bars are mounted, a stop pivoted on said segment, a key for swinging said stop in front of said type-bars so as to arrest them as they approach the platen, and a spring normally holding said stop ineffective.

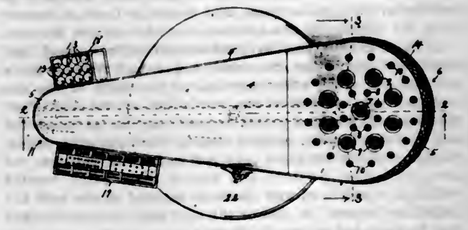
3. A front-strike typewriting and computing machine comprising a platen and keys, type-bars actuated by said keys for writing on said platen, a segment in which said type-bars are mounted, a type-guide for alining said type-bars as they approach the platen, a stop pivoted on said segment, a key for swinging said stop across said type-guide, and a spring normally holding said stop ineffective.

4. A front-strike typewriting and computing machine comprising a platen and keys, type-bars actuated by said keys for writing on said platen, a segment in which said type-bars are mounted, a type-guide for alining said type-bars as they approach the platen, a stop pivoted on said segment, a key for swinging said stop across said type-guide, and a spring normally holding said stop ineffective.

5. A typewriting and computing machine comprising a platen and keys forming a keyboard, type-bars actuated by said keys for writing on said platen, a stop interposable to arrest said type-bars before the type strike the platen, a key at the keyboard for moving said stop to its effective position, a spring normally holding said stop ineffective, and a latch operable by said key for holding said stop effective.

[Claims 6 to 9 not printed in the Gazette.]

1,104,469. AMUSEMENT APPARATUS. EDWARD J. BESEMAN, Los Angeles, Cal. Filed Dec. 30, 1913. Serial No. 809,580. (Cl. 46—62.)



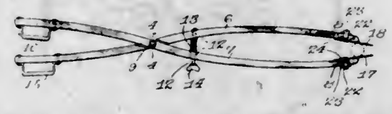
1. Amusement apparatus comprising a platform provided with openings in the rear end portion thereof and formed to provide circular depressions adjacent to the openings, an inclosing wall on the edge of the platform, and runways below the platform leading from the openings to the front end of the platform.

2. Amusement apparatus comprising a platform, the rear portion of the platform being provided with a substantially central opening and with openings spaced from the central opening and said platform having the front portion thereof sloping downwardly from the front end and the rear portion sloping upwardly toward the central opening, an inclosing wall on the edge of the platform, and runways below the platform leading from the opening to the front end of the platform.

3. Amusement apparatus comprising a platform, the rear portion of the platform being provided with a substantially central opening and with openings spaced from the central opening, some of the openings being larger than other of the openings, said platform having the front portion thereof sloping downwardly from the front end and the rear portion sloping upwardly toward the central opening, and provided with depressions adjacent to some of said openings, an inclosing wall on the edge of the platform, and runways below the platform leading from the larger of the openings to the front end of the platform.

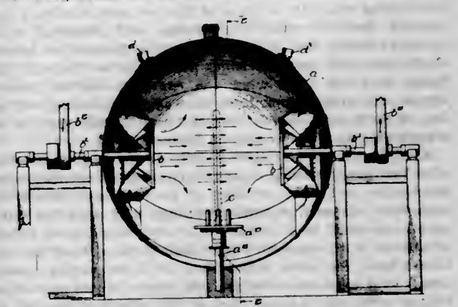
4. The herein described amusement apparatus, comprising a platform the rear end portion of which is provided with a substantially central opening and with openings spaced from the central opening, some of the openings being larger than other of the openings, said platform having its front portion sloping downwardly from the front end and its rear portion sloping upwardly toward the central opening, and provided with circular depressions adjacent to the larger of the openings, an inclosing wall on the edge of the platform, said wall provided with an opening at the front end of the platform, and runways leading from the larger of the openings and terminating adjacent to the opening at the front end of the platform.

1,104,470. HAND IMPLEMENT. CHRISTIAN P. BILSON, Chicago, Ill. Filed Nov. 28, 1913. Serial No. 803,594. (Cl. 57—9.)



In an implement of the class described, a pair of crossed levers pivoted together at the point of intersection, a pair of article-grasping plates at one end of the levers, these plates being arranged to face inwardly and converge toward their outer ends, a pair of handles at the opposite ends of the levers, these handles extending in the same direction from the sides of the levers, a spring for normally separating the article-engaging end of the levers, and means for regulating the distance the levers are normally spread, for the purpose set forth.

1,104,471. APPARATUS FOR COATING OBJECTS WITH SUBDIVIDED MATERIAL. FRANKLIN F. BRADLEY, Chicago, Ill., assignor to Bradley & Vrooman Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 14, 1911. Serial No. 654,679. (Cl. 91—59.)



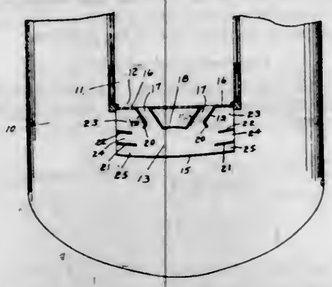
1. Apparatus for coating objects with subdivided material carried by air including a receptacle for the objects whose interior surface is substantially curved througout; and means for effecting the forced passage of air within the receptacle to enable the air to convey subdivided material to the object that is to be coated therewith.

2. Apparatus for coating objects with subdivided material carried by air including a receptacle for the objects whose interior surface is substantially spherical throughout and means for effecting the forced passage of air within the receptacle to enable the air to convey subdivided material to the object that is to be coated therewith.

1,104,472. VENTILATOR. GEORGE C. BREIDERT, Chicago, Ill., assignor to Auto Utilities Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 23, 1913. Serial No. 763,047. (Cl. 98—22.)

1. A ventilator for cars, and the like composed of a hollow structure having an air-ramming face disposed at substantially right angles to the line of travel of the car and provided with a wall arranged inwardly of said face and formed centrally with a discharge opening communi-

cating with the interior of the car, the air-ramming face and wall constituting a passageway through the ventilator from side to side through which air can pass unobstructedly, said inner wall being formed on opposite sides of the opening therethrough with converging, deflecting flanges projecting toward said air-ramming face and formed with angularly disposed lips.



2. A ventilator for cars, and the like composed of a hollow structure having an air-ramming face disposed at substantially right angles to the line of travel of the car and provided with a wall arranged inwardly of said face and formed centrally with a discharge opening communicating with the interior of the car, the air-ramming face and wall constituting a passageway through the ventilator from side to side through which air can pass unobstructedly, said inner wall being formed on opposite sides of the opening therethrough with converging, deflecting flanges projecting inwardly and toward said air-ramming face and formed with angularly disposed lips, and deflecting vanes arranged in opposite ends of said passageway.

3. A ventilator for railway cars, or the like, consisting of a box-like structure closed except for an opening communicating with the interior of the car, and relatively oppositely disposed exhaust openings, and provided with an air-ramming face transverse to the direction of travel of the car with opposite edges positioned so that the air forced over the same when the car is in motion passes across said exhaust openings, said edges extending out as far, in each case, as any part of the structure capable of obstructing air on that side of the ventilator.

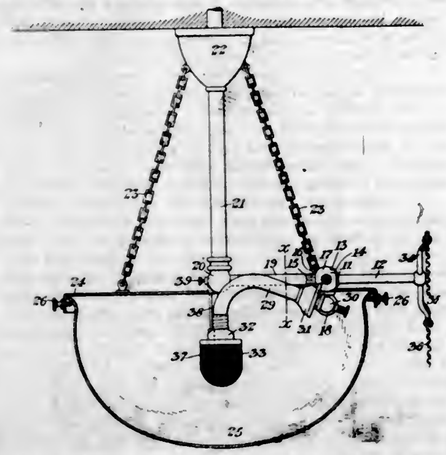
4. A ventilator for railway cars, or the like, consisting of a box-like structure closed except for an opening communicating with the interior of the car, and relatively oppositely disposed exhaust openings and provided with an air-ramming face transverse to the direction of travel of the car with opposite edges positioned so that the air forced over the same when the car is in motion passes across said exhaust openings, said edges extending out as far, in each case, as any part of the structure capable of obstructing air on that side of the ventilator, and deflecting elements in said exhaust openings which prevent wind from blowing into the car from said ventilator.

5. A ventilator for railway cars, or the like, consisting of a box-like structure closed except for an opening communicating with the interior of the car, and relatively oppositely disposed exhaust openings, and provided with an air-ramming face transverse to the direction of travel of the car with opposite edges positioned so that the air forced over the same when the car is in motion passes across said exhaust openings, said edges extending out as far, in each case, as any part of the structure capable of obstructing air on that side of the ventilator, and louvers spaced apart in said exhaust openings.

[Claims 6 to 15 not printed in the Gazette.]

1,104,473. GAS-BURNER. FRANK M. BROOKS, New York, N. Y. Filed Apr. 1, 1914. Serial No. 828,746. (Cl. 67—94.)

1. An inverted gas burner comprising a gas cock fitted with a key and stem, offset portions at the sides of the gas cock, a nipple secured at one end in one of the said offset portions, and adapted at its opposite end to be connected to a gas supply pipe, nozzles connected to and leading from the other offset portion of the gas cock, burner tubes attached to the said nozzles, and means at the ends of the said burner tubes for supporting the gas manties.



2. An inverted gas burner, comprising a gas cock fitted with a key, offset portions at the sides of the said gas cock, a socket, a nipple secured at one end to the said socket, and at the other end in one of the said offset portions, elbow nozzles leading from the other offset portion, burner tubes attached to the elbow nozzles, mouth pieces at the extremities of the said burner tubes, adapted to receive inverted gas mantles, and means in the said burner tubes for regulating the admission of air and gas thereto.

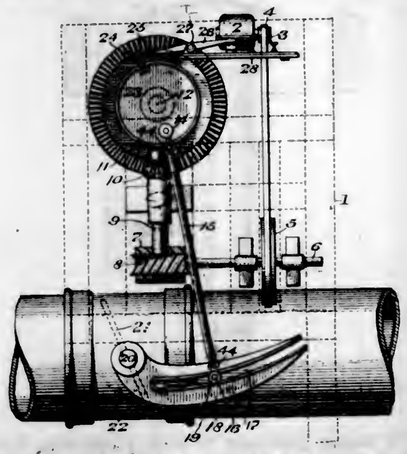
3. In a gas fixture, in combination with a bowl and means for supporting the same, a gas cock fitted with a key and key stem, offset portions at the sides of the gas cock, a nipple secured at one end in one of the said offset portions and adapted at its opposite end to be connected to a gas supply pipe, nozzles leading from the other offset portion, and burner tubes attached to the said nozzles, the gas cock, offset portions and burner tubes being located within the said bowl and the stem secured to the said key extending beyond the rim of the said bowl so that the key may be operated exteriorly thereof.

4. In a gas fixture, in combination with a bowl and means for supporting the same, a gas cock fitted with a key, offset portions connected to the body of the said gas cock, a socket, a nipple secured at one end in the said socket and at the other end in one of the offset portions of the said gas cock for supporting the same and the parts attached thereto, elbow nozzles leading from the other offset portion, burner tubes attached to the said elbow nozzles, mantle supports fitted at the extremities of the said burner tubes, the said gas cock, elbow nozzles and burner tubes being located within the said bowl, and a stem secured to and extending from the said key beyond the rim of the said bowl so that the key may be operated exteriorly thereof.

1,104,474. DOSING DEVICE FOR CONTROLLING THE FLOW OF SEWAGE TO SPRINKLING-FILTERS. CHARLES B. BUERGER, New York, N. Y., assignor of one-half to Morris L. Bayard, Woodbine, N. J. Filed July 29, 1913. Serial No. 781,717. (Cl. 137—68.)

1. In a device of the character stated, a supply tank, a conduit, a valve therefor, a motor operatively connected with said valve to open and close the same, and an electric circuit including a float switch controlled by the liquid in said supply tank, an automatically controlled contact switch, and means connected to said valve and contact switch and constructed to open the circuit only when said valve is in closed position.

2. In a device of the character stated, a valve, a rock arm connected therewith, a motor, speed changing mechanism connecting said rock arm and motor, an electric circuit including an automatic switch controlling said motor and a contact switch, and means driven by said speed changing mechanism to control said contact switch.



3. In a device of the character stated, a supply tank, a valve, a rock arm therefor, a longitudinally adjustable connection in sliding engagement with said rock arm, a crank connected with said connection, devices to rotate said crank, an electric circuit for said devices and including means to close the circuit when a predetermined level is reached in the supply tank, and means controlled by the crank during its rotation to open said circuit.

4. In a device of the character stated, a supply tank, a valve, an arm connected therewith, a connection from said arm, a crank secured to said connection, devices to rotate said crank, an electric circuit controlling said devices and including a float switch governed by the fluid level in the supply tank, and a contact switch, and a device actuated by said crank and controlling said contact switch.

5. In a device of the character stated, a supply tank, a valve, an arm connected therewith, a connection from said arm, a crank secured to said connection, devices to rotate said crank, an electric circuit controlling said devices and including a float switch governed by the fluid level in the supply tank, and a member rotated by said crank and having a recess coöperating with said contact switch to open the circuit.

[Claim 6 not printed in the Gazette.]

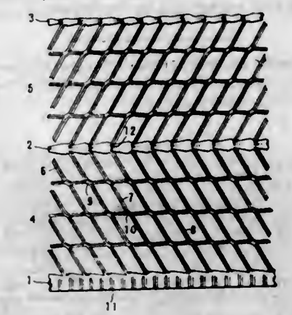
1,104,475. METAL FABRIC. NORRIS ELMORE CLARK, Plainville, Conn. Filed Oct. 15, 1909. Serial No. 522,734. (Cl. 72—117.)

1. The improved expanded metal having one or more sections thereof in the form of expanded meshes, and one or more non-expanded sections integral with the first and made with shortenings by which its length is equalized with that of the expanded section.

2. The improved expanded metal having one or more sections thereof in the form of expanded meshes, and one or more non-expanded sections integral with the expanded section and corrugated at an angle to the length thereof whereby such length is equalized with that of the expanded section.

3. The improved sheet metal formed into a series of sections, alternately expanded and non-expanded, the non-expanded sections ribbed and having shortenings by which their length is equalized with that of the expanded sections.

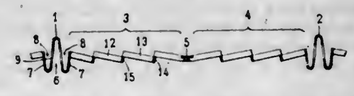
4. The improved sheet metal formed into a series of sections, alternately expanded and non-expanded, the non-expanded sections ribbed and being corrugated transversely of the length thereof whereby such length is reduced.



5. An expanded metal fabric comprising parallel rods of entire metal corrugated at intervals transversely throughout their lengths and expanded portions integrally connecting said rods.

[Claims 6 to 9 not printed in the Gazette.]

1,104,476. METAL FABRIC. NORRIS ELMORE CLARK, Plainville, Conn. Continuation of application Serial No. 480,976, filed Mar. 2, 1909. This application filed Apr. 1, 1912. Serial No. 687,597. (Cl. 72—117.)



1. As a new article of manufacture, a slitted and expanded sheet metal structure, consisting of slitted and unslitted portions, and having relatively deep ribs consisting of bent unslitted portions of the metal, an unslitted strip intermediate of the deep ribs, at least some of the deep ribs having their edges adjacent to the slitted portions reversely bent and facing the opposite side of the structure from the deep ribs themselves and oppositely directed slats connecting said strip and the edges of said deep ribs substantially as described.

2. As a new article of manufacture, a slitted and expanded sheet metal structure, consisting of slitted and unslitted portions, and having relatively deep spaced ribs consisting of bent unslitted portions of the metal, a central strip between each pair of deep ribs the inner edges of the deep ribs being reversely bent so as to face in the opposite direction from the deep ribs themselves and two series of slats connecting said strip with the reversely bent edges of said deep ribs, substantially as described.

3. As a new article of manufacture, a slitted and expanded sheet metal structure consisting of slitted and unslitted portions and having deep ribs consisting of bent unslitted portions of the metal, said ribs having relatively narrow reversely bent lips at their edges, a central unslitted strip and a series of oppositely directed slats connecting said strip with said reversely bent lips, the outer portions of the deep ribs having perforations therein substantially as described.

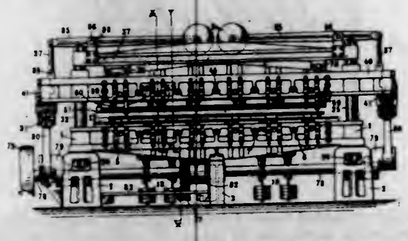
4. An expanded metal fabric consisting of longitudinally corrugated ribs having reversely bent edges forming channels facing in opposite directions and an expanded metal section connecting the reversely bent edges and consisting of two parts united midway between the corrugated ribs, the strands of the two parts being inclined in opposite directions.

5. An expanded metal fabric consisting of longitudinally corrugated ribs having reversely bent edges forming channels facing in opposite directions and an expanded metal section connecting the reversely bent edges and consisting

of two parts united midway between the corrugated ribs, the sides of the ribs having openings so constructed so as to prevent the formation of lines of cleavage.

[Claims 6 to 9 not printed in the Gazette.]

1,104,477. METAL-WORKING. NORRIS ELMORE CLARK, Plainville, Conn. Filed Nov. 29, 1912. Serial No. 734,104. (Cl. 164—6.5.)



1. In a metal working machine, two series of vertically and laterally movable punch bars, coöperating die bars and means for bringing one series of the punch bars into operation in advance of the other series upon slitted stock to corrugate the same and form corrugated mesh work and means for separating the bars laterally for spreading out the corrugated portions of the reticulated sheet and setting it without closing the mesh work.

2. In a metal working machine, a series of vertically and laterally movable punch bars, coöperating die bars and means for bringing the punch bars into operation upon slitted stock to corrugate the same and form mesh work, means for separating the bars laterally for spreading out the reticulated sheet and means for automatically locking one set of bars in their laterally separated position.

3. In a metal working machine, a series of vertically and laterally movable punch bars, coöperating die bars and means for bringing the punch bars into operation upon slitted stock to corrugate the same and form mesh work, means for separating the bars laterally for spreading out the reticulated sheet, means for automatically locking one set of bars in their laterally separated position and manually controlled means for releasing said locking means.

4. In a metal working machine, a series of vertically and laterally movable punch bars, coöperating die bars and means for bringing the punch bars into operation upon slitted stock to corrugate the same and form mesh work, means for separating the bars laterally for spreading out the reticulated sheet and means for moving alternate bars of one set of bars longitudinally.

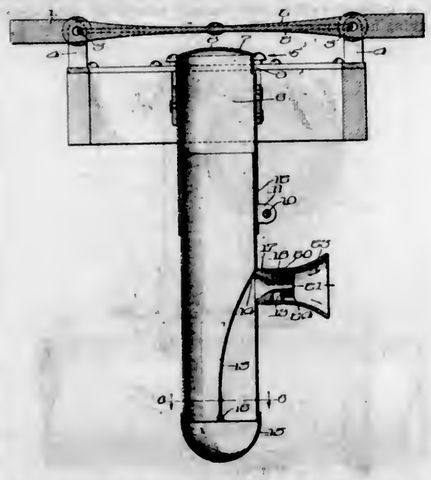
5. In a metal working machine, a series of punch bars and a series of die bars corresponding thereto, parallel motion links connecting the punch bars, parallel motion links connecting the die bars and means for bringing one set of bars into operation in conjunction with slitted stock to corrugate and spread the same.

[Claims 6 to 64 not printed in the Gazette.]

1,104,478. MUSICAL INSTRUMENT. JOHN C. DEAGAN, Chicago, Ill. Filed Sept. 4, 1913. Serial No. 788,095. (Cl. 84—31.)

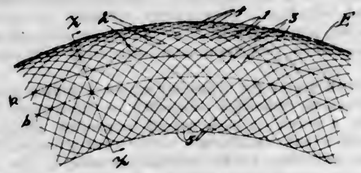
1. A musical instrument including a cylindrical resonating tube for receiving sound waves at one end and closed at its opposite end by a semi-globular closure, the tube being provided with a partition within the same extending longitudinally thereof, this partition terminating at the center of said closure at one end, said partition having a continuation at its other end extending transversely thereof whereby the interior of the tube is subdivided into a continuous air column of a length greater than the tube.

2. A musical instrument including a resonating tube; a smaller pipe connected with the resonating tube; a cap adjustable longitudinally of the pipe and a diaphragm carried by the cap and engaged with the outer end of the pipe and whose tension is adjusted by the adjustment of the cap upon said pipe.



3. A musical instrument including a resonating tube; a smaller pipe connected with the resonating tube; a cap in threaded connection with the pipe so as to be adjustable longitudinally of said pipe; and a diaphragm carried by the cap and engaged with the outer end of the pipe and whose tension is adjuated by the adjustment of the cap upon said pipe.

1,104,479. VEHICLE-WHEEL. ADOLPH L. DE LEEUW, Cincinnati, Ohio. Filed Oct. 19, 1910. Serial No. 587,859. (Cl. 152—8.)



1. A torus of strands normally interweaving at a pitch progressively increasing from its innermost to its outermost periphery.

2. A resilient self-sustaining tire of spring wire strands each helically interweaving normally at a pitch progressively increasing from its innermost to its outermost periphery.

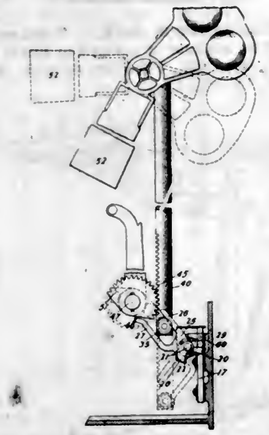
3. A wire fabric constituting a tire element and consisting of a plurality of wire strands normally interweaving right and left at a pitch progressively increasing from its lesser to its greater peripheral portions.

4. A torus of stiff resilient strands helically normally interweaving to form circumferentially elongated diamond-shaped meshes at its major periphery and transversely elongated diamond-shaped meshes at its minor periphery.

5. A woven wire fabric constituting a tire element and consisting of a plurality of spring wire strands interweaving right and left at a pitch progressively increasing from an inner peripheral line to its outermost peripheral portion, the meshes at the outermost peripheral portion being normally circumferentially elongated, those at an intermediate periphery being normally right-angled parallelograms, and those at an inner peripheral portion being normally transversely elongated.

[Claims 6 to 32 not printed in the Gazette.]

1,104,480. SEMAPHORE-SIGNALING SYSTEM. ROBERT MOTT DU VIGNIER, Hollis Terrace, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 23, 1912. Serial No. 685,899. (Cl. 246—21.)



1. In combination a semaphore signal, an operating member therefor having a reciprocal movement, current interrupting mechanism, and a rotating member operatively connected with said operating member and said current interrupting mechanism for both releasing and resetting said current interrupting mechanism in the reciprocal movement of said operating member.

2. In a semaphore signaling system the combination with a semaphore arm and a vertically movable rod connected therewith, of current interrupting mechanism embracing a shaft and driving means carried thereby, a disk carried by said shaft and having a notch therein, a pivotally mounted pawl normally engaging said notch, a projection on said pawl extending over the face of said disk, a rotating member located adjacent said disk and operatively connected with said vertically movable rod, and a lug on said rotating member brought into engagement with the projecting portion of said pawl when said rod is substantially at the limit of its downward movement.

3. The combination with a semaphore signal comprising a semaphore arm and a vertically movable rod connected therewith, of current interrupting mechanism embracing a shaft and driving means therefor, a disk secured to said shaft and having a notch therein, pins projecting from the face of said disk, a spring-pressed pawl engaging said notch, a projection on said pawl extending over the face of said disk, a rotating member operatively connected with said vertically movable rod, and a pair of lugs on said rotating member, one of said lugs being adapted when the said rod is substantially at the limit of its downward movement to lift said pawl from engagement with the notch, and both said lugs being adapted to engage the pins in said disk in the upward movement of said rod to reset said interrupting mechanism.

4. The combination with a semaphore signal comprising a semaphore arm and a vertically movable rod connected therewith, of current interrupting mechanism embracing a clock-train, a support for said interrupting mechanism, a forked arm mounted upon said support and operatively connected with said vertically movable rod for both releasing and resetting said current interrupting mechanism, and means for limiting the downward movement of said forked member.

5. The combination with a semaphore signal comprising a semaphore arm and a vertically movable rod connected therewith, of current interrupting mechanism embracing a clock-train, a support for said interrupting mechanism, a forked arm mounted upon said support and operatively connected with said vertically movable rod for both releasing and resetting said current interrupting mechanism, a shoulder on said member and a stop on said support adapted to be engaged by said shoulder.

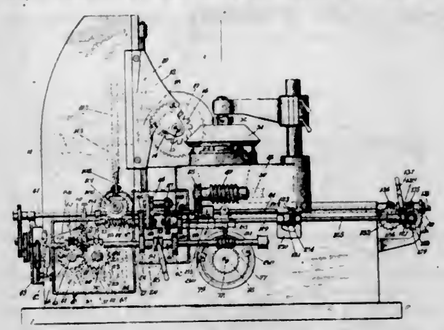
1,104,481. COAL-CONVEYER. JOSEPH DODDS, Fauldhouse, and WILLIAM BROWN, Cambuslang, Scotland. Filed May 31, 1910. Serial No. 564,191. (Cl. 193—1.)



1. A track for a portable conveyer having flat conveyer plates coupled together, comprising, in combination, track rails, blocks secured in pairs at intervals to the track rails, an axle removably secured to each pair of blocks, rollers loosely mounted upon each axle, a tubular distance piece on each axle and which retains the rollers in position thereon, and side plates on the blocks adapted to constitute sides to the conveyer.

2. A track for a portable conveyer having flat conveyer plates coupled together, comprising, in combination, pairs of plates, blocks secured to and between the said plates and arranged in pairs, angled side plates secured to the blocks for preventing material, during conveyance, moving off the conveyer plates, an axle secured to each pair of blocks, a pair of rollers loosely mounted upon each axle and a tubular distance piece on each axle and which retains each pair of rollers in position thereon.

1,104,482. GEAR-CUTTING MACHINE. HENRY J. EBERHARDT, Newark, N. J., assignor to Newark Gear Cutting Machine Co., Newark, N. J., a Corporation of New Jersey. Filed Oct. 6, 1911. Serial No. 653,172. (Cl. 90—6.)



1. In a bevel gear cutting machine: a cutting element and a work element; means to impart feeding motion to one element; means to simultaneously therewith impart a further feeding motion to one element at an angle to said former feeding motion; means to vary the velocity ratio between said feeding motions; and additional means to effect a change of velocity ratio between said feeding motions.

2. In a gear cutting machine: a cutter carriage, and a suitable cutter carried thereby; a workhead adapted to retain the blank to be cut; a feed train to impart a feeding motion to said cutter carriage; a feed train to impart a feeding motion to said workhead simultaneously with the feed of said cutter carriage; a ratio change train intermediate of said two feed trains to vary the velocity ratio between the feeds imparted to said cutter carriage and workhead; and additional means to effect a change of velocity ratio between said feeding motions.

3. In a gear cutting machine: a cutter carriage, and a suitable cutter carried thereby; a workhead adapted to retain the blank to be cut; a feed train to impart a feeding motion to said cutter carriage; a feed train to impart a feeding motion to said workhead simultaneously with the feed of said cutter carriage; a ratio change train intermediate of said two feed trains to vary the velocity ratio between the feeds imparted to said cutter carriage and workhead; and additional means to effect a change of velocity ratio between said feeds, including two free running wheels on the feed shaft, a clutch intermediate of said wheels and slidably mounted upon said shaft, and means to cause said clutch to engage either of said wheels.

4. In a gear cutting machine: a cutting element and a work element; means to impart feeding motion to one element; means to simultaneously therewith impart a further feeding motion to one element at an angle to said former feeding motion; means to vary the velocity ratio between said feeding motions; and means to provide lost motion in one of said feeding motions.

5. In a gear cutting machine: a cutting element and a work element; means to impart feeding motion to one element; means to simultaneously therewith impart a further feeding motion to one element at an angle to said former feeding motion; means to vary to velocity ratio between said feeding motions; additional means to effect a change of velocity ratio between said feeding motions; and means to provide lost motion in one of said feeding motions.

[Claims 6 to 18 not printed in the Gazette.]

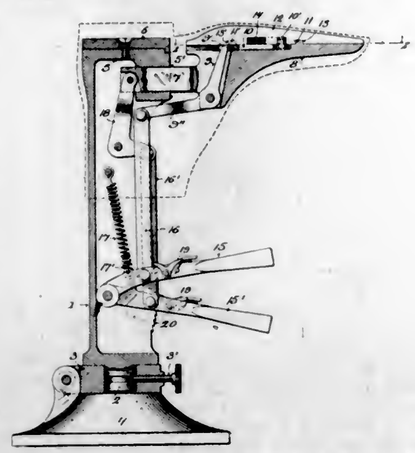
1,104,483. MEANS AND DEVICE TO CONTROL AND REGULATE THE FLOW OF SURFACE WATER. KOSSUTH J. ENSMINGER, Hamersville, Ohio. Filed Nov. 28, 1913. Serial No. 803,466. (Cl. 61—24.)



1. Means for controlling and for regulating the flow of surface water resulting within the water-shed of a river, stream, etc., these means consisting of checks formed of living plants arranged in the feeders and surface depressions adapted to collect and to carry off surface water, said plants being set so close that resulting undergrowth will eventually meet and arranged in rows disposed across the course of these feeders so as to retard the flow of surface water collecting therein, but without positively stopping such flow.

2. Means for controlling and for regulating the flow of surface water resulting within the water-shed of a river, stream, etc., these means consisting of checks formed by rows of living plants arranged in the feeders and surface depressions adapted to collect and to carry off the surface water, said plants being set in rows so as to be transversely disposed across the course of collecting surface water and the checks so formed being spaced from each other and placed at intervals throughout the water courses so as to retard the flow of surface water from one check to the other but without positively stopping such flow.

1,104,484. SHOEMAKER'S JACK. WILLIAM ESCHE, Milwaukee, Wis., assignor of one-half to Erwin B. Loewenbach, Milwaukee, Wis. Filed Oct. 9, 1913. Serial No. 794,286. (Cl. 12—123.)



1. A jack comprising a standard having a head, a heel-plate carried by the head, an instep-block carried by the standard and adjustable longitudinally relative to the heel-plate, a longitudinally divided sole-plate fitted upon the instep-block, and means for spreading and contracting the sole-plate transversely.

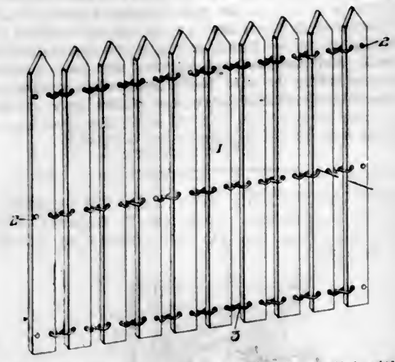
2. A jack comprising a standard having a head, a heel-plate carried by the head, an instep-block in slidable union with the standard head, a longitudinally divided sole-plate mounted upon the base of the instep-block, means for transversely adjusting the sole-plate members, and actuating mechanism for adjusting the sole-plate and instep-block.

3. A jack comprising a standard having a head, a heel-plate carried thereby, an instep-block having a shank in slidable union with the head, a longitudinally divided sole-plate having obliquely disposed cam surfaces therein, a slide carried by the instep-block provided with lugs for engagement with the sole-plate cam-slots, transversely disposed guides connecting the sole-plate and instep-block, an actuating lever for the slide, and an actuating lever for the instep-shank.

4. A jack comprising a hollow standard having a head provided with a horizontally disposed aperture, a heel-plate carried by the head, an instep-block provided with a shank in slidable union with the head aperture, a longitudinally divided sole-plate fitted to the base of the instep-block, transverse guides connecting the sole-plate and instep-block, obliquely disposed cam surfaces carried by the sole-plate members, a longitudinally slidable stem having lugs for engagement with the cam surfaces of the sole-plate, a bell-crank lever in pivotal union with said instep-block having one arm engageable with the slidable stem, a bell-crank lever in pivotal union with the standard having one arm engageable with the shank of the aforesaid instep-block, levers carried by the standard in connection with the bell-crank levers, and means for locking said levers.

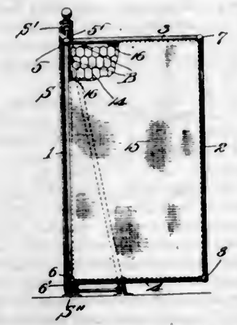
5. A jack comprising a standard provided with a head, a heel-plate carried thereby, an instep-block in slidable union with the head, a longitudinally divided sole-plate mounted upon the base of the instep-block, means for spreading and contracting the sole-plate members transversely, and means for adjusting the instep-block, together with the sole-plate, longitudinally relative to the heel-plate.

1,104,485. FENCE CONSTRUCTION. ELSWORTH E. EVERSON, Brilliant, Ohio. Filed Oct. 19, 1912. Serial No. 726,752. (Cl. 256—34.)



In fence construction, slats arranged parallel with each other and spaced so that the same may be folded one upon the other, each of said slats being provided with an upper, lower and intermediate pair of openings, the openings of each pair arranged in close proximity to the longitudinal edges of their respective slats, the lower pair of openings positioned in proximity to the lower end of the slats, the intermediate pair centrally of the slats and the upper pair adjacent to the top of the slats, a set of connecting members engaged in said openings and disposed between each pair of slats, each of the members of the set being in the form of a double hook, the bills of the hook extending in opposite directions with respect to each other, said bills extending through said opening and the bills of each hook being bent toward each other and thereby providing a double link, said connecting members when coupling slats together have their body portions inclined and at an opposite inclination with respect to the inclination of the bills of the hooks when bent to extend toward each other.

1,104,486. WING OR LEAF FOR DISPLAY-RACKS. LOUIS FELDMANN, Jr., and THEODORE E. CRECELIUS, St. Louis, Mo., assignors to Multiplex Display Fixture Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 6, 1912. Serial No. 689,027. (Cl. 40—102.)



1. A wing or leaf for display racks comprising a frame, a series of hook-shaped engaging members arranged and disposed inwardly on said frame, and a wall section covering the area of said frame, said wall section having its edges reinforced and engaged by said members; substantially as described.

2. A wing or leaf for display-racks comprising a frame, a series of hook-shaped engaging members arranged and disposed inwardly on said frame, a section of reticulated metallic material engaged at its edges by said members and covering the area of said frame, and a section of fabric overlying and covering said section of reticulated material and having its edges reinforced and also engaged by said members; substantially as described.

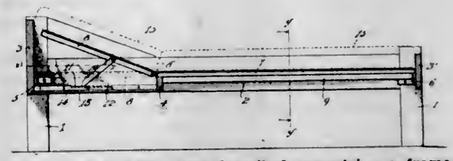
3. A wing or leaf for display-racks comprising a frame, a series of hook-shaped engaging members arranged and disposed inwardly on said frame, a section of reticulated metallic material engaged at its edges by said members and covering the area of said frame, and a section of fabric provided at its edges with a reinforcing strip overlying and covering said section of reticulated material, said fabric together with its said strip being also engaged by said members; substantially as described.

4. A wing or leaf for display-racks comprising a frame, a series of hook-shaped engaging members arranged and disposed inwardly on said frame, a section of reticulated metallic material engaged at its edges by said members and covering the area of said frame, and a section of fabric provided at its edges with a reinforcing metallic strip overlying and covering said section of reticulated material and said members, said fabric together with its said strip being also engaged by said members; substantially as described.

5. A wing or leaf for display-racks comprising a frame, a plurality of series of engaging hooks arranged thereon, said series being disposed on opposite sides of the central plane of said frame, a plurality of parallel sections of reticulated metallic material covering the area of said frame, each of said sections being engaged at its edges by a series of said hooks, and a plurality of cover sections of fabric provided at their edges with reinforcing strips, each of said fabric sections with its said reinforcing strip being engaged by a series of said hooks and overlying said series of hooks and the metallic section engaged thereby; substantially as described.

[Claim 6 not printed in the Gazette.]

1,104,487. COUCH. FREDERICK P. FISCHER, Chicago, Ill. Filed Feb. 7, 1914. Serial No. 817,144. (Cl. 5—43.)



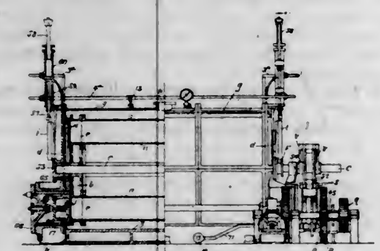
1. A device of the class described comprising a frame; a bottom member supported by said frame, said bottom member consisting of a plurality of movably connected sections, the terminal section at one end of said frame being adapted to assume either a horizontal or upwardly inclined position; means for supporting said terminal section in either of said positions; and an upwardly opening compartment in said frame, said terminal section serving as a closure for said compartment, substantially as described.

2. A device of the class described comprising a frame; a bottom member supported by said frame, said bottom member consisting of a main section; a supplemental section hingedly connected with said main section at one end thereof, said supplemental section being adapted to assume either a horizontal position coplanar with said main section or an upwardly inclined position; pivotally mounted arms for releasably supporting said supplemental section in an upwardly inclined position; stops in said frame for supporting said supplemental section in lowered horizontal position; and an upwardly opening compartment in said frame, said supplemental section serving as a closure for said compartment, substantially as described.

3. A device of the class described comprising a frame; a bottom member supported by said frame, said bottom

member consisting of a main section; a supplemental section hingedly connected with said main section at one end thereof, said supplemental section being adapted to assume either a horizontal position coplanar with said main section or an upwardly inclined position; pivotally mounted arms for releasably supporting said supplemental section in an upwardly inclined position; a plurality of notches coöperating with said arms whereby said supplemental section may be supported in various inclined positions; means for supporting said supplemental section in lowered horizontal position; and an upwardly opening compartment in said frame, said supplemental section serving as a closure for said compartment, substantially as described.

1,104,488. APPARATUS FOR IMPREGNATING POROUS MATERIAL. WILLIAM JOHNSTON FRAME, Carmunnock, and HOPE LYLE GALLOWAY, Kilmacolm, Scotland, assignors to Saveoil Creosoting Machine Company, Limited, Glasgow, Scotland. Filed Sept. 16, 1913. Serial No. 790,134. (Cl. 99—12.)



1. An apparatus adapted for use in impregnating porous material, and comprising a plurality of containers, means for moving said containers bodily into a plurality of operative positions, the said containers being adapted to be charged with the material to be treated, when in one of the said operative positions, means for subjecting the said material to a pressure of impregnating fluid in said containers, when the latter are in a later operative position, and means for placing the said containers under vacuum when in a still later operative position.

2. An apparatus adapted for use in impregnating porous material and comprising a plurality of containers, arranged parallel to each other, and in a circle, means for rotating said containers about the axis of said circle into a plurality of operative positions, the said containers being adapted to be charged with the material to be treated, when in one of the said operative positions, and means for subjecting the said material to a pressure of impregnating fluid in said containers, when the latter are in another of said operative positions.

3. An apparatus adapted for use in impregnating porous material and comprising a plurality of containers arranged parallel to each other, and in a circle, means for rotating said containers about the axis of said circle into a plurality of operative positions, the said containers being adapted to be charged with the material to be treated when in one of the said operative positions, means for subjecting the said material to a pressure of impregnating fluid in said containers when the latter are in a later operative position, and means for placing the said containers under vacuum when in a still later operative position.

4. An apparatus adapted for use in impregnating porous material and comprising a plurality of containers, means for moving said containers bodily into a plurality of operative positions, and holding them stationary in said operative positions, the said containers being adapted to be charged with the material to be treated when in one of the said operative positions, means for subjecting the said material to a pressure of impregnating fluid in said containers when the latter are in a later operative position, and means for placing the said containers under vacuum when in a still later operative position.

5. An apparatus adapted for use in impregnating porous material and comprising a tank adapted to contain impregnating liquid, a plurality of containers arranged parallel to each other, and in a circle, means for rotating said containers about the axis of said circle into a plurality of operative positions, some above and some below the liquid level in said tank, the said containers being adapted to be charged with the material to be treated when in one of the said operative positions above the liquid level in said tank, and means for subjecting the said material to pressure when the said containers are in another of said operative positions below the liquid level in said tank.

[Claims 6 to 12 not printed in the Gazette.]

1,104,489. AUTOMATIC STOP FOR SOUND-REPRODUCING MACHINES. WILLIAM V. GERSTER, Pittsburgh, Pa. Filed Oct. 11, 1912. Serial No. 725,204. (Cl. 74—46.)



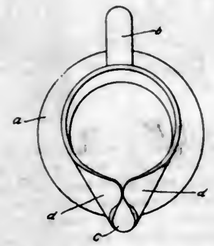
1. The combination with a rotating element, a traveling member, and a controlling lever, of a holding member positioned in the path of the controlling lever and operated to and from a holding position by said lever when the latter is moved to and from the starting position, a spring tensionally disposed to retract the controlling lever from the starting position, a pawl for engaging said holding member and holding the same inoperative against the tension of said spring to thereby maintain the controlling lever at the starting position, a swivelly mounted projecting rod, and a swivelly mounted member operated by a movement of said rod to actuate the pawl to disengage said holding member.

2. The combination with a rotating element, a traveling member, and a controlling lever, of a horizontally projecting rod swivelly mounted, a swivelly mounted bearing carrying said rod, a holding member operated by said controlling lever to and from a holding position by the movement of the latter to and from the starting position, a spring tensionally disposed to retract said controlling lever from the starting position, a pawl arranged to engage the holding member when said controlling lever is at the starting position to hold said holding member inoperative against the tension of said spring, and means for effecting a movement of said swivel bearing simultaneously with a movement of said swivel rod.

3. The combination with a rotating element, a traveling member and a controlling lever, of a swivelly mounted horizontally projecting rod, a swivelly mounted bearing carrying said rod, means for effecting a movement of said bearing simultaneously with a movement of said rod, a holding member operating to and from a holding position by the movement of said lever, a pawl having one end positioned to engage said holding member, the other end of said pawl being engaged by said swivel bearing, and means carried by said traveling member for actuating said rod during the operation of the traveling member and thereby to effect a combined movement of the rod and said bearing to disengage the pawl from said holding member.

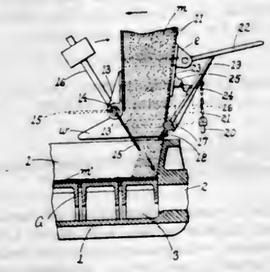
4. The combination with a rotating element, a traveling member, and a controlling lever, of a swivelly mounted horizontally projecting rod, a swivelly mounted bearing carrying said rod, means for effecting a movement of said bearing simultaneously with a movement of the rod, a holding member operatively positioned in the path of the controlling lever to be operated to and from a holding position by said lever during a movement of the latter to and from the starting position, a spring tensionally disposed to effect a return movement of the said holding member from the starting position, a spring actuated pawl having one end engaging said holding member after the latter has been operated by the controlling lever, the other end of said pawl being engaged by said swivel bearing, and means carried by said traveling member for engaging said rod during the operating of the machine to effect a combined movement of said rod and swivel bearing and thereby operate said pawl to release the holding member and permit said tensionally disposed spring to return said controlling lever to the stopping point.

1,104,490. JUG. CHARLES H. GLAZIER, Hubbardston, Mass. Filed Feb. 26, 1909. Serial No. 480,204. (Cl. 65—31.)



As an article of manufacture, a one-piece glass blank for cutting, comprising a blown, manipulated, body portion in the form of a jug and having upright, encircling side walls terminating at the top in a pouring mouth, and having two lateral lips integral with the said blown body portion and forming unbroken continuations of the upper edges of said encircling side walls, sheared and bent over inwardly toward each other so as substantially to touch and thereby substantially completely to obstruct, to the issuance of solids, the top of the jug directly in the rear of the pouring mouth, while leaving said mouth wholly unobstructed in advance of said lips, to the flow of liquid, the entire receptacle being blown from glass in a single integral piece.

1,104,491. CHARGE-CAR. JOHN E. GREENAWALT, Denver, Colo. Filed Oct. 16, 1912. Serial No. 726,188. (Cl. 214—1.)



1. In a traveling charge-car, a holder having inclosing walls and open at the bottom, a movable gate disposed across said open bottom for supporting the charge in the holder, a movable member on the holder adapted to release the gate from its charge-supporting position, and operating to be depressed below the bottom edge of the holder when moved to effect the release of the gate aforesaid, whereby the member may serve as a leveler.

2. In a charge-car, a holder having inclosing walls and open at the bottom, a gate hinged on one side of the holder and operating to be swung across the open bottom for supporting the charge, a locking-gate hinged opposite the first gate and holding the latter in its charge-supporting position, the edge of the locking-gate being adapted to be depressed below the bottom edge of the holder when swung in proper direction to release the first gate.

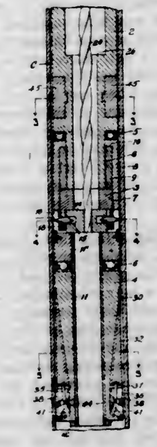
3. In combination with a receptacle having a depositing surface for the support of a charge, a charge-car movable across the receptacle, a gate for supporting the charge in the car for a closed position of the gate, a movable member on the car coöperating with the gate and permitting a release thereof for purposes of discharging the contents of the car, said member serving as a leveler for the material deposited in the receptacle upon its discharge from the car.

4. In a charge-car, a holder for the charge, a pair of doors coöperatively supporting the charge in the holder for a closed position of the doors, and releasing the charge with an opening of the doors, and means on one of the doors for leveling the discharged contents by a movement of the car in a given direction.

5. In a charge-car, a holder for the charge, a pair of doors coöperatively supporting the charge in the holder for a closed position of the doors and releasing the charge with an opening of the doors, means on one of the doors serving as a leveler for the discharged contents during the movement of the car thereover, and balancing members on the opposite door for actuating said door and regulating the flow of the discharging contents.

[Claims 6 to 14 not printed in the Gazette.]

1,104,492. CASING-CUTTER. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 14, 1914. Serial No. 824,642. (Cl. 81—195.)



1. In a casing cutter, the combination of a rotatable carrier, cutters movable laterally in the carrier, a downwardly tapered spirally twisted mandrel movable vertically between the cutters and operating to rotate and laterally move the same, and mandrel operating means.

2. In a casing cutter, the combination of a rotatable carrier, cutters, cutter supports slidable laterally in the carrier, a downwardly tapered spirally twisted mandrel movable vertically between and engaging the inner ends of the cutter supports for moving them laterally and for rotating the carrier, and mandrel operating means.

3. In a casing cutter, the combination of casing cutting means rotatable about a vertical axis and also movable laterally, and means made operative by vertical blows for rotating and moving laterally the cutting means.

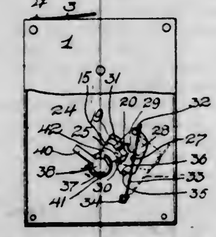
4. In a casing cutter, the combination of cutting means rotatable about a vertical axis, a support for the rotatable

cutting means, and a device movable vertically relatively to the cutting means and operatively engaging the latter for rotating the same.

5. In a casing cutter, the combination of cutting means rotatable about a vertical axis, a support for the rotatable cutting means, and a vertically movable non-rotatable spiral device operatively engaging the cutting means with its spiral formation operating to rotate the latter.

[Claims 6 to 20 not printed in the Gazette.]

1,104,493. LOCK. WILLIAM HENRY HALE, Pittsburgh, Pa., assignor of one-third to Harry L. Felser and one-third to Rocco G. Femia, Pittsburgh, Pa. Filed Aug. 5, 1913. Serial No. 783,152. (Cl. 70—53.)



1. A lock comprising a locking bolt, a pair of latch members engaging with the bolt for locking it, a releasable member for and interposed between said latch members, a normally stationary barrel provided with a lug for actuating said releasing member when the barrel is rotated, a rotatable barrel, and a longitudinally shiftable and rotatable key provided with means for rotating said barrels simultaneously to operate the releasing member.

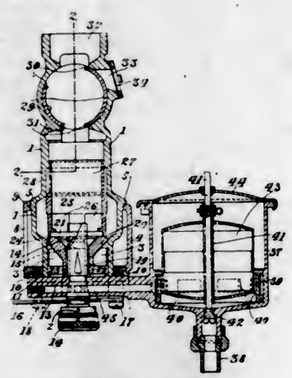
2. A lock comprising a lock bolt, a pair of spring controlled pivoted latch members engaging with the bolt for locking it, a releasable means for and interposed between said latch members, a pair of rotatable barrels each provided with a seat, said seats normally out of alinement and adapted to aline when one of the barrels is rotated relatively to the other, one of said barrels provided with means for operating the releasing member, and a longitudinally shiftable and rotatable key provided with means adapted to engage in the registering seats for rotating said barrels simultaneously thereby causing the operation of the releasing member to free the bolt of the latch members.

3. A lock comprising a lock bolt, a pair of spring controlled pivoted latch members engaging with the bolt for locking it, a releasable means for and interposed between said latch members, a pair of rotatable barrels each provided with a seat, said seats normally out of alinement and adapted to aline when one of the barrels is rotated relatively to the other, one of said barrels provided with means for operating the releasing member, a longitudinally shiftable and rotatable key provided with means adapted to engage in the registering seats for rotating said barrels simultaneously thereby causing the operation of the releasing member to free the bolt of the latch members, and a spring controlled stop member constituting a positioning device for the means carried by said element.

1,104,494. CARBURETER. WILLIAM WILSON HAMILL, Glasgow, Scotland. Filed Sept. 7, 1911. Serial No. 648,190. (Cl. 48—154.1.)

1. A carbureter having, in combination, a fuel spraying device, having an outer part with a circular and tapered outlet and an inner part which is adjustable, means for adjusting the inner part, a sleeve concentric with the said device for controlling the air supply, an inner concentric sleeve slidably mounted on the said device for controlling the feul supply and means whereby the inner sleeve is operated from the outer sleeve.

2. A carbureter having, in combination, a fuel spraying device, having an outer part and an inner part with circular head thereon which is adjustable, means for adjusting the inner part, a sleeve concentric with the said device for controlling the air supply, an inner concentric sleeve slidably mounted on the said device for controlling the fuel supply and means whereby the inner sleeve is operated from the outer sleeve.



3. A carbureter having, in combination, a fuel spraying device, having an outer part with a circular knife edge outlet, and an inner part with head having a depending knife edge thereon and which is adjustable, means for adjusting the inner part, a sleeve concentric with the said device for controlling the air supply, an inner concentric sleeve slidably mounted on the said device for controlling the fuel supply and means whereby the inner sleeve is operated from the outer sleeve.

4. A carbureter having, in combination, a casing with a tapered opening therein, a fuel spraying device, having an outer part which externally is partly cylindrical and partly conical, said conical part engaging the aforesaid tapered opening in the casing and an inner part which is adjustable, means for adjusting the inner part, a sleeve concentric with the said device for controlling the air supply, an inner concentric sleeve slidably mounted on the said device for controlling the fuel supply and means whereby the inner sleeve is operated from the outer sleeve.

5. A carbureter having, in combination, a fuel spraying device pushed into the carbureter, means for removably holding the device in position in the carbureter in such manner that no tool is required to remove the same, a sleeve concentric with the said device for controlling the air supply, an inner concentric sleeve slidably mounted on the said device for controlling the fuel supply and means whereby the inner sleeve is operated from the outer sleeve.

[Claims 6 to 9 not printed in the Gazette.]

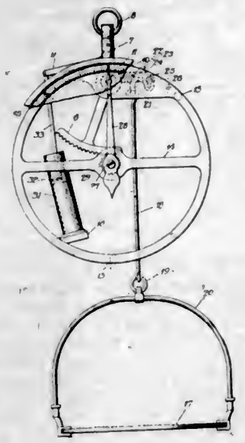
1,104,495. SHEARS. AXEL HANSEN, Cottage Grove, Oreg. Filed Feb. 11, 1914. Serial No. 817,999. (Cl. 30—13.)



1. In shears, a stock formed hollow at one end, cutting blades pivoted together within said stock, a sliding cam capable of mutual engagement with the inner ends of said blades, a spring secured to the inner wall of said stock, a link connecting said spring cam, a lever pivoted in said stock and projected therebeyond and secured at its inner termination to said link and oppositely disposed springs carried by said stock and projected thereinto for engagement with said cutting blades, whereby their cutting edges are normally forced away from each other.

2. In shears, a stock, cutting blades pivoted together carried by said stock, means carried by said stock for normally forcing the cutting edges of said blades away from each other, a manually operable lever pivoted to said stock, a link pivoted to said lever, a cam carried by said link capable of engagement with the non-cutting ends of said blades whereby the cutting edges of the same may be forced together and return means connecting said link and stock whereby the said lever is moved to normal position when pressure is removed therefrom.

1,104,496. WEIGHING-SCALE. CLARENCE H. HAPGOOD, Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 23, 1913. Serial No. 796,791. (Cl. 73—29.)



1. In a weighing scale, an indicator casing, a member from which said casing is pivotally suspended, indicator mechanism within said casing, connections between said indicator mechanism and said member whereby movement of the casing about its pivot operates the indicator mechanism, a load receiver, and connections therefrom whereby the addition of a load to the receiver causes the casing to revolve upon its pivot.

2. In a weighing scale, a casing, a member from which said casing is pivotally suspended, indicator mechanism in said casing, rack and pinion connection between said indicator mechanism and the suspension member whereby the movement of the casing about its pivot operates the indicator mechanism, a load receiver, and connections therefrom whereby the addition of load to the receiver rotates the casing with reference to the suspension member.

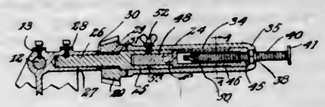
3. In a weighing scale, a casing, a suspension member, a pivotal connection between said casing and suspension member, a rack on the suspension member eccentric to said pivotal connection, indicator mechanism carried by the casing, a pinion for operating said mechanism engaging said rack, a load receiver, and connections therefrom whereby the addition of load to the receiver causes the casing to be revolved upon its pivotal connection.

4. In a weighing scale, a casing, a suspension member to which said casing is pivoted, a load receiver connected to said casing eccentric to its pivotal suspension, indicator mechanism within the casing and connections from the indicator mechanism to said suspension member whereby the swinging of the casing causes the rotation of the indicator mechanism.

5. In a weighing scale, a casing, a supporting member to which the casing is eccentrically pivoted, a load receiver connected to the casing eccentric to its axis of support, indicator mechanism contained in the casing, and connections from the indicator mechanism to the support whereby the swinging of the casing upon its pivot operates the indicator mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,104,497. DEVICE FOR REMOVING THREADED NUTS. HOLLIS H. HARRIS, Lorain, Ohio, assignor of one-half to Walter L. Hiller, Lorain, Ohio. Filed Jan. 31, 1914. Serial No. 815,597. (Cl. 81—56.)



1. In a device of the character described, the combination of a member having a socket engaging a nut, a rigid second member in fixed axial alinement with said socket adapted to slidably engage the member on which said nut is threaded, gearing attached to said members, and means attached to said gearing whereby one of the members is rotated with relation to the other.

2. In a device of the character described, the combination of a tubular member having a socket engaging a nut, a member in fixed axial alinement with the tubular member adapted to slidably engage the member on which the nut is threaded, each of said members being adapted to prevent the article engaged thereby from rotating in relation thereto, and means for rotating one of these engaging members with relation to the other whereby the nut is removed from its threaded member.

3. In a device of the character described, the combination of a tubular member having a non-circular socket adapted to engage a nut, a tubular member in fixed axial alinement with said socket having means for slidably engaging the member on which the nut is threaded preventing its rotation with relation with said last named member, allowing it to slide out from the same, gearing attached to one of said tubular members, and means for rotating said gearing whereby one of the tubular members is rotated with relation to the other.

4. In a device of the character described, the combination of a tubular member having a non-circular socket adapted to engage a nut, a tubular member within said tubular member having a flattened portion adapted to engage a flattened portion on the member on which said nut is threaded and prevent its rotation with relation to such member, but allowing a sliding movement therein, means on which one of said tubular members is rotatably mounted, and means for causing it to rotate with relation to the other.

5. In a device of the character described, the combination of a tubular member having a non-circular socket adapted to engage a nut, a tubular member within said tubular member having an opening with a flattened side adapted to engage a flattened side on the member on which said nut is threaded, means for holding said tubular member against rotation, a gear in axial alinement with said tubular members, means connecting said gear with the first mentioned tubular member, a gear meshing therewith, and means for rotating said last named gear.

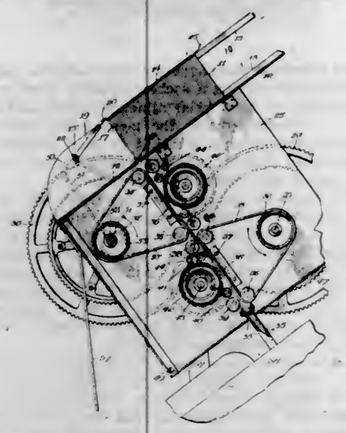
[Claims 6 to 9 not printed in the Gazette.]

1,104,498. GLASS-WASHING MACHINE. JOHN W. HASBURG, Chicago, Ill. Filed Oct. 12, 1911. Serial No. 654,342. (Cl. 141—7.)

1. In a machine of the character described, the combination, of a washing chamber, having an inlet for a plate of glass to be washed and an outlet opposite to said inlet; two duplicate, oppositely-facing non-alining plate engaging and feeding means, each comprising a conveyer belt, having a straight plate guiding run, a belt driving roller at the rear thereof and a stationary table underlying the plate guiding run; a rotary plate scouring brush, in front of the straight plate guiding run of each of the feeding means; intermeshing gears, carried by the belt driving rollers, whereby they are rotated at the same speed; a gear, carried by each of the scouring brushes; and a gear, associated with each roller driving gear and meshing with its opposite brush driving gear.

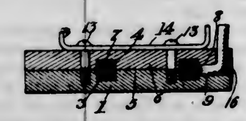
2. In a machine of the character described, the combination, of a washing chamber, having an inlet for a

plate of glass to be washed and an outlet opposite to said inlet; two duplicate, oppositely-facing, non-alining plate engaging and feeding means, each comprising a conveyer belt, having a straight plate guiding run, a driving roller at the rear thereof and a stationary table underlying the plate guiding run; a rotary plate scouring brush, in front of the straight plate guiding run of each



of the feeding means; intermeshing gears carried by the belt driving rollers, whereby they are rotated at the same speed; a second gear, carried by each of the first mentioned gears; and a gear, smaller than the second afore mentioned gear, carried by each of the scouring brushes and each meshing with its opposite second mentioned gear, whereby the peripheral velocity of the scouring brush is greater than that of the belt driving roller.

1,104,499. ELECTRIC HEATING DEVICE. JOHN ALLEN HEANY, Washington, D. C. Filed Oct. 18, 1913. Serial No. 795,908. (Cl. 219—47.)

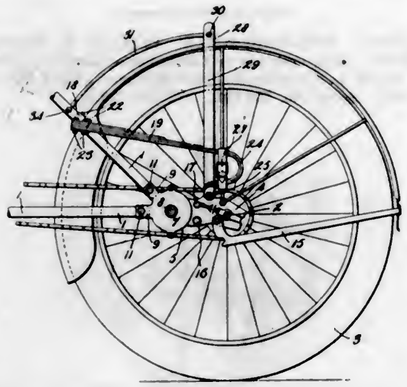


1. An electric heating unit employing alternating or pulsating currents comprising two solid plate-like sections of metal having high hysteretic properties, one of said plates being provided on its inner face with an annular recess, and an electric ring-like coil positioned in said recess composed of a plurality of superposed helical turns, said sections being united to completely embed and inclose the coil in the metal thereof, a portion of which forms a solid core for the coil.

2. An electric heating unit employing alternating or pulsating currents comprising two solid plate-like sections of metal having high hysteretic properties, said sections being provided on their meeting faces with registering annular grooves, and an electric ring-like coil positioned in the opening formed by said grooves, said coil comprising a plurality of superposed helical turns and said section being united to completely embed and inclose the coil in the metal thereof, a portion of which forms a solid core for said coil.

1,104,500. SHOCK-ABSORBER FOR MOTOR-CYCLES. CHARLES W. HEATH, Sioux Falls, S. D. Filed June 2, 1913. Serial No. 771,274. (Cl. 208—97.)

1. The combination with rear wheel forks, of links pivotally connected to the ends of the fork members, leaf springs secured at one end to the fork members, the opposite ends thereof being curved inwardly and secured to said links, an auxiliary frame pivotally connected to said links and means for pivotally connecting said auxiliary frame to the fork members.



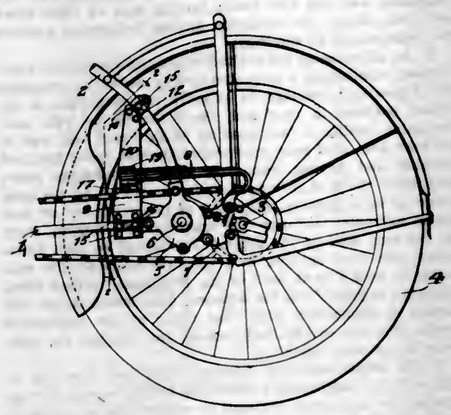
2. The combination with the wheel forks of a vehicle, of links, an axle carried by said links, a circular plate carried by each of said links, a pair of plates detachably secured to each of the fork members, means for pivotally connecting one of the circular plates between each of the pairs of plates carried by the fork members and means for yieldingly connecting the said links to the fork members.

3. The combination with the wheel forks of a vehicle, having their rear apexes cut away, of a pair of circular plates adapted to be connected to each fork member, means for connecting each pair of plates and holding the same in spaced relation, angular extensions formed integrally with each of said plates, means for connecting the said extensions to the fork members, a circular plate pivotally secured between each pair of the first mentioned plates, a link carried by each of the last mentioned circular plates, the rear axle of the vehicle adapted to be secured to the said links, and means for yieldingly connecting the said links to the fork members substantially as described.

4. The combination with the rear forks of a motorcycle, of links pivotally connected thereto, an axle carried by the said links, means for yieldingly connecting the links to the fork members, an auxiliary frame, comprising a yoke member, means for pivotally connecting the extremities of the yoke member to said links, a bar pivotally connected to the fork members at one end and means for pivotally connecting the opposite end of said bar to the intermediate portion of the yoke member for the purpose specified.

5. The combination with the rear forks of a vehicle having the rear apexes of the forks cut away, of a pair of circular plates, angular extensions carried by said plates each having a recess formed in the inner face thereof, the truncated ends of the forks adapted to rest within said recesses and means for connecting the extensions to the forks, apertured lugs arranged on the diametrically opposite sides of the said plates, bolts extending through said apertured lugs for connecting each pair of plates, means for holding the plates in spaced relation, a circular plate pivotally secured between each pair of first mentioned plates, offset links carried by the last mentioned circular plates, the axle of the vehicle adapted to be secured to said links, leaf springs permanently secured at one end to the forks, and diverging toward the said links, the opposite ends of the springs being curved inwardly and connected to the said links, an auxiliary frame connected to said links and means for pivotally connecting said auxiliary frame to the said fork substantially as and for the purpose specified.

1,104,501. SHOCK-ABSORBER FOR MOTOR-CYCLES. CHARLES W. HEATH, Sioux Falls, S. D. Filed Oct. 6, 1913. Serial No. 793,553. (Cl. 208—94.)

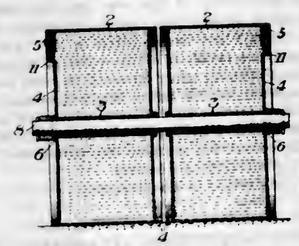


1. The combination with a forked vehicle frame having the rear axle pivotally connected thereto, and a spring connected at one end to the axle, of a support connecting the forks, the vehicle frame and the opposite end of the spring being connected to said support.

2. The combination with a forked vehicle frame having the rear axle pivotally connected thereto, of a vertical support detachably secured to the forks of the frame, a leaf spring connected at one end to the axle and the opposite end of said spring being detachably secured to said support.

3. A shock absorber for vehicles, the combination with a forked frame, having an axle pivotally connected thereto, of a support, means of detachably connecting the extremities of the support to the forks of the frame, a bracket detachably connected to the support, a leaf spring connected at one end to the axle and the opposite end thereof being detachably connected to the said bracket.

1,104,502. WATER-BALLAST LAND-ROLLER. JOHN HIST, Berea, Ohio. Filed Dec. 5, 1911. Serial No. 664,110. (Cl. 55—48.)

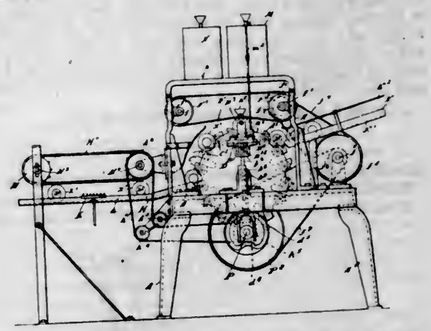


1. A land roller having a water tight drum comprising a cylinder with insert heads formed with central openings, said heads having an outwardly extending flange at the periphery, and an outwardly extending flange surrounding the central opening, an axle tube or sleeve connecting the heads and having its ends extending outwardly through said openings and flush with the outer edges of the annular flanges surrounding the openings, the ends of the cylinder being flush with the outer edges of the annular flanges at the periphery of the heads, the ends of the cylinder extending beyond the annular flanges surrounding the openings and the tube extending therethrough, a shaft extending through said tube, and a handle having bearing members mounted on the ends of the shaft; substantially as described.

2. A land roller having a water tight drum comprising a cylinder and insert heads, each head being formed with an outwardly extending annular flange at its periphery and with an opening surrounded by an outwardly extending annular flange at its center, said peripheral flange being united with the cylinder with its edge flush with the edge of the cylinder, a tube extending through the openings in the heads and united with the flanges surrounding same with its ends flush with the edges of said flanges, a shaft disposed in said tube with its ends extending beyond the same, and bearings mounted on said ends of the shaft in contact with the edges of the united tube and flanges.

3. A land roller having a water tight drum comprising a cylinder with inset heads formed with central openings, each of said heads having an outwardly extending flange at the periphery, and an outwardly extending flange surrounding the central opening, an axial tube or sleeve connecting the heads and having its ends extending outwardly into said openings and welded to the annular flanges surrounding the openings, the ends of the cylinder being welded to the annular flanges at the peripheries of the heads, said ends extending beyond the annular flanges surrounding the openings and the ends of the tube, a shaft extending through said tube, and a handle having bearing members mounted on the ends of the shaft; substantially as described.

1,104,503. CAN LACQUERING OR COATING MACHINE. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed July 26, 1907. Serial No. 385,627. (Cl. 91—37.)



1. In an automatic machine for coating the inside of cans with lacquer or protective material, the combination with a plurality of rotatable can holders, an intermittently movable carrier upon which said holders are mounted, a runway for delivering the cans to the holders, means for successively rotating the cans in the holders, a longitudinally reciprocating and transversely movable swab adapted to enter the can mouth or opening, a feed trough for the lacquer or coating material, a holder for said swab, a hollow perforated stem for said swab-noider, a feed plunger communicating with said hollow stem, a longitudinally reciprocating slide for operating said swab, a transversely movable support for said slide, a discharge runway, and a flame jet for flashing or igniting and sterilizing the freshly coated cans as they pass on the discharge runway, substantially as specified.

2. The combination with a can holder of a swab having transverse and longitudinal faces for engagement with the end and peripheral surfaces of a can and adapted to enter the mouth or opening of the can and apply a thin continuous coating or film of liquid lacquer or coating material to the interior surface of the can, means for bringing the swab and the can in said can holder into coöperative relation with each other with the swab inside the can, and in rubbing contact with its interior surface, and means for

rotating said can and swab, relatively to each other, substantially as specified.

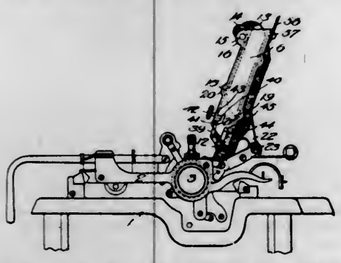
3. The combination with a can holder, of a swab having transverse and longitudinal faces for engagement with the end and peripheral surfaces of a can and adapted to enter the mouth or opening of the can and apply a thin continuous coating or film of liquid lacquer or coating material to the interior surface of the can, means for bringing the swab and the can in said can holder into cooperative relation with each other with the swab inside the can, and in rubbing contact with its interior surface, means for rotating said can and swab relatively to each other, and means for reciprocating one of said parts, the swab or can, in respect to the other while the swab is inside the can, substantially as specified.

4. The combination with a can holder, of a swab having transverse and longitudinal faces for engagement with the end and peripheral surfaces of a can and adapted to enter the mouth or opening of the can, and apply a thin continuous coating or film of liquid lacquer or coating material to the interior surface of the can, means for bringing the swab and the can in said can holder into coöperative relation with each other with the swab inside the can, and in rubbing contact with its interior surface, means for rotating said can and swab, relatively to each other, and means for automatically feeding or supplying liquid lacquer or coating material to the swab, substantially as specified.

5. The combination with a can holder, of a swab having transverse and longitudinal faces for engagement with the end and peripheral surfaces of a can and adapted to enter the mouth or opening of the can and apply a thin continuous coating or film of liquid lacquer or coating material to the interior surface of the can, means for bringing the swab and the can in said can holder into coöperative relation with each other with the swab inside the can, and in rubbing contact with its interior surface, means for rotating said can and swab, relatively to each other, and means for automatically feeding or supplying liquid lacquer or coating material to the longitudinal outer edge of said swab, substantially as specified.

[Claims 6 to 87 not printed in the Gazette.]

1,104,504. ATTACHMENT FOR FEEDING CARDS TO TYPE-WRITERS. IVAR G. HOLLIDAY, Boise, Idaho. Filed Aug. 20, 1913. Serial No. 785,682. (Cl. 197—130.)



1. An attachment for feeding cards and the like to typewriters, comprising in combination with the carriage of the typewriter and the platen roll, of a magazine having means for engaging the carriage to hold the magazine in approximately vertical position and inclining rearwardly toward its upper end, a rod supported transversely of the magazine at the upper side of the front thereof, sleeves on the rod near each end of the magazine, a set screw for holding each sleeve in adjusted position, guide plates within the magazine at each end thereof, and adjustable toward and from each other, said magazine having a feed opening at its lower end and at its rear wall, and means for feeding cards in succession from the magazine through the feed opening.

2. An attachment for feeding cards and the like to typewriters, comprising a magazine having means for engaging the carriage of the typewriter for supporting the magazine in inclined position above and in rear of the platen roll, and guide plates within the magazine at the ends thereof, each plate having a slidable connection with the magazine, and the said plates having lugs at their front and rear edges, the magazine having transverse grooves for engagement by the lugs.

3. An attachment for feeding cards and the like to typewriters, comprising a magazine having means for engaging the typewriter carriage to support the magazine in inclined position in rear and above the platen roll, said magazine having a feed opening at its lower end and at its rear wall, said rear wall being extended below the feed opening and having transverse slots or openings above and below the feed opening, a roller supported by the magazine at each opening, a portion of the periphery of each roller extending through the opening, a roller in front of the rear wall of the magazine adjacent to each roller below the feed opening and coöperating with the said roller to feed a card, each of the last-named rollers being mounted to yield from the adjacent first-named roller, and means in connection with that roller of the last-named series adjacent to the feed opening for varying the pressure of the said roller.

4. An attachment for feeding cards and the like to typewriters, comprising a magazine having means for engaging the typewriter carriage to support the magazine in inclined position in rear and above the platen roll, said magazine having a feed opening at its lower ends and at its rear wall, said rear wall being extended below the feed opening and having transverse slots or openings above and below the feed opening, a roller supported by the magazine at each opening, the periphery of each roller extending through the opening, a roller in front of the rear wall adjacent to each of the first-named rollers below the feed opening, and coöperating with the adjacent first-named roller to feed a card and coöperating with the rollers below the feed opening, said last-named rollers being mounted to yield away from the first-named rollers.

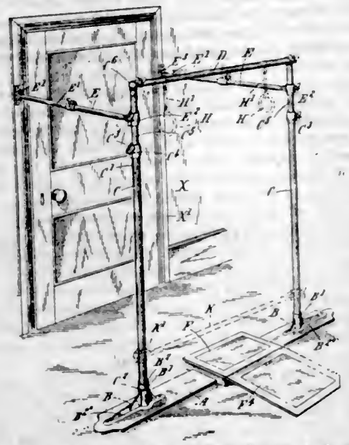
5. In an attachment for feeding cards and the like to typewriters, the combination with the magazine having means for engaging the carriage of a typewriter to support the magazine above and in rear of the platen roll, said magazine having a feed opening at its lower end, a feed roller journaled in rear of the magazine above the feed opening, the magazine having an opening through which the roller extends into engagement with the rearmost cards in the magazine, a plurality of pairs of rollers journaled below the feed opening, one member of each pair being at the front of the feed opening and the other member of each pair being at the rear thereof, said rollers being adapted to engage the card as it moves from the mechanism through the opening and to feed the card to the platen roll, the members of the pairs of rollers at one side of the feed opening being mounted to yield away from the other members of the pairs, resilient means pressing the said rollers toward the other members of the pairs, means for varying the tension of the said resilient means, and a driving connection between the platen roll and the said rollers for rotating said rollers.

[Claim 6 not printed in the Gazette.]

1,104,505. EXERCISING APPARATUS. HERBERT FLEETWOOD HOLWORTHY, Church Stretton, England. Filed Dec. 21, 1912. Serial No. 737,980. (Cl. 46—69.)

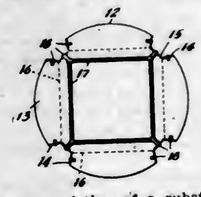
1. A portable exerciser comprising a base plate, a plurality of standards mounted thereon, a telescopic extension in each of said standards, a resilient mounting for each of said extensions, a horizontal bar connected to said extensions and means for securing said extensions to the standards to render the resilient mountings inoperative; substantially as described.

2. A portable exerciser comprising a base plate, a plurality of standards thereon, a telescopic extension in each of said standards, a resilient mounting for each of said extensions, within the standards, frictional means for clamping the extensions to the standards, a horizontal bar connected to the upper ends of said extensions, and a horizontal brace rod extending from each extension, said



brace rods being arranged to resist tension and compression stresses; substantially as described.

1,104,506. BUNG-SEAL. JOHN M. HOTHERSALL, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 5, 1912. Serial No. 688,595. (Cl. 217—114.)

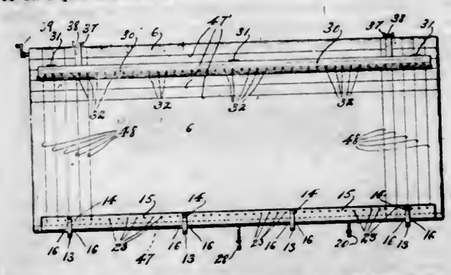


1. A bung seal consisting of a substantially flat piece of sheet metal having a plurality of prongs extending from one side thereof, the prongs being adapted to be driven into a barrel to secure the seal in place, there being spaces between some of the prongs to permit a tool to be inserted under the seal between the prongs when the seal is in place and said sheet metal piece being weakened between the prongs, whereby the seal will tear when a tool is inserted thereunder and leave visual evidence thereof, substantially as specified.

2. A bung seal comprised of a disk of sheet metal, and having a plurality of sets of prongs adapted to be driven into a barrel to secure the seal thereto and located around the periphery thereof, each of said sets comprising three members adjacent each other and disposed in intersecting planes substantially at right angles to the main portion of the disk, said disk having weakened lines extending between each set of prongs, said lines terminating at the points of intersection of the planes in which the prongs are disposed, the central prong of each set being located intermediate the ends of the scored lines and each adapted to prevent the insertion of a tool between the other two prongs of the set when the seal is in place, substantially as specified.

1,104,507. STRETCHING AND IRONING TABLE FOR LAUNDRIES. RALPH D. HOWELL, Newark, N. J. Filed Dec. 15, 1913. Serial No. 806,688. (Cl. 68—10.)

1. In a device of the kind described, a padded table-body provided with a longitudinal opening, a carrier-bar vertically movable in said opening, holding-points carried by said carrier-bar and adapted to be projected above the surface of said table-body, means for producing vertical movements of said carrier-bar, a pivoted clamp-member at one edge of said table-body, and a transversely movable clamp-member mounted upon said table-body parallel to said pivoted clamp-member.



2. In a device of the kind described, a padded table-body provided with a longitudinal opening, a carrier-bar vertically movable in said opening, holding-points carried by said carrier-bar and adapted to be projected above the surface of said table-body, means for producing vertical movements of said carrier-bar, a pivoted clamp-member at one edge of said table-body, means for producing vertical movements of said pivoted clamp-member, and a transversely movable clamp-member upon said table-body lying parallel to said pivoted clamp-member.

3. In a device of the kind described, a padded table-body provided with a longitudinal opening, a carrier-bar vertically movable in said opening, holding-points carried by said carrier-bar and adapted to be projected above the surface of said table-body, means for producing vertical movements of said carrier-bar, a pivoted clamp-member at one edge of said table-body, means for producing vertical movements of said pivoted clamp-member, a transversely movable clamp-member upon said table-body lying parallel to said pivoted clamp-member, and means for producing a transverse movement of said movable clamp-member.

4. In a device of the kind described a table-body, bearing-brackets adjacent to one longitudinal edge of said table-body, a shaft journaled in said bearing-brackets, eccentrics fixed on said shaft, carrier-arms journaled on said eccentrics, a longitudinally extending clamp-member carried by said carrier-arms adapted to be projected over the marginal edge of said table-body, means for oscillating said shaft and eccentrics to produce vertical movements of said carrier-arms and said clamp-member, and a transversely movable clamp-member upon said table-body lying parallel to said first mentioned clamp-member.

5. In a device of the kind described a table-body, bearing-brackets adjacent to one longitudinal edge of said table-body, a shaft journaled in said bearing-brackets, eccentrics fixed on said shaft, carrier-arms journaled on said eccentrics, a longitudinally extending clamp-member carried by said carrier-arms adapted to be projected over the marginal edge of said table-body, means for oscillating said shaft and eccentrics to produce vertical movements of said carrier-arms and said clamp-member, a transversely movable clamp-member upon said table-body lying parallel to said first mentioned clamp-member, and means for producing a transverse movement of said movable clamp-member.

[Claims 6 to 9 not printed in the Gazette.]

1,104,508. HOSE CONSTRUCTION. CHARLES K. HUTHSING, St. Louis, Mo. Filed Mar. 5, 1913. Serial No. 751,992. (Cl. 137—90.)

1. In a hose, a removable lining adapted to be inserted into a casing, said lining having a pair of filling strips formed on the outside thereof, said filling strips adapted to be spaced apart, the spacing apart of said filling strips forming a pair of diametrically opposed longitudinal recesses between said lining and said casing, said filling strips being of such width as to almost surround said lining.

2. A hose comprising an inner lining and an outer casing, said inner lining adapted to be removable, a pair of filling strips mounted on the outside of said inner lining, said strips being apart from each other forming a pair of longitudinal spaces said strips being of such width as to almost surround said inner lining, said spaces providing means for allowing said inner lining to be expanded.

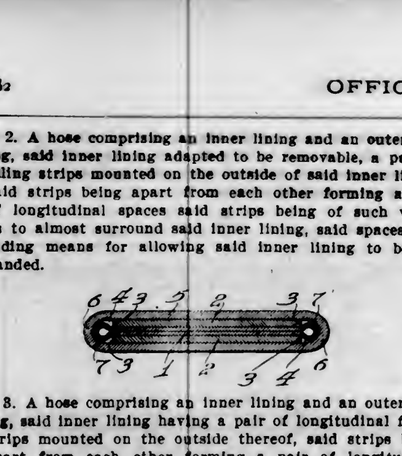
3. A hose comprising an inner lining and an outer casing, said inner lining having a pair of longitudinal filling strips mounted on the outside thereof, said strips being apart from each other forming a pair of longitudinal spaces, said spaces allowing said inner lining to expand and tightly fit said outer casing when said inner lining is under pressure said strips being of such width as to almost surround said inner lining.

4. In a hose, an inner lining adapted to be inserted into an outer casing, said inner lining having a pair of filling strips formed on the outside thereof, said filling strips adapted to be spaced apart, the spacing apart of said filling strips forming a pair of diametrically opposed longitudinal recesses, said filling strips adapted to adjoin at a point adjacent the ends of said inner lining.

5. A hose having a lining and a casing, a pair of filling strips located between said lining and said casing, said strips forming longitudinal spaces between said lining and said casing, said strips being of such width as to almost surround said lining.

[Claims 6 to 12 not printed in the Gazette.]

1,104,509. FURNACE-DAMPER REGULATOR. RALPH M. HYDE, Westfield, N. Y. Filed Mar. 26, 1913. Serial No. 756,951. (Cl. 236—6.)



1. In a draft regulator for steam boilers, an outer casing, a top therefor provided with a central boss having an opening therethrough, said boss extending above the outer surface of the top and below the inner surface of the top, the upper and lower faces of the boss being surfaced or ground, a bell-shaped member disposed within said outer casing and being provided with a central boss at its top having an upper face ground to form a tight fit with the lower face of the first named boss, a rod carried by the boss on said bell-shaped member and arranged to extend through the opening in the first named boss, a cap carried at the upper end of said rod having a lower surface ground to permit a tight fit against the upper surface of said first named boss, a lever, flexible connections between said lever and the dampers of the furnace, and connections between said cap and said lever for operating the lever through the movement of the cap.

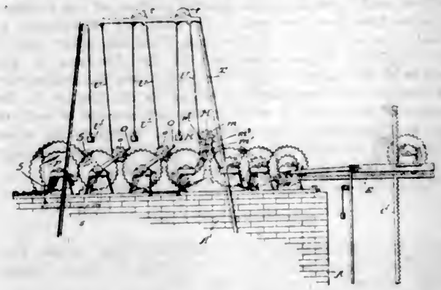
2. In a draft regulator for steam boilers, an outer casing, a top therefor provided with a central boss having an opening therethrough, said boss extending above the outer surface of the top and below the inner surface of the top, the upper and lower faces of the boss being ground, a bell-shaped member disposed within said outer casing and being provided with a central boss at its top having an upper face ground to form a tight fit with the lower face of the first named boss, a rod carried by the boss on said bell-shaped member and arranged to extend through the opening in the first named boss, a cap carried at the upper end of said rod having a lower surface ground to permit a tight fit against the upper surface of said first named boss, a lever, flexible connections between said lever and the dampers of the furnace, connections between said cap and said lever for operating the lever through the movement of the cap, said last named connections comprising integral arms secured to said cap, an integral yoke connected with one end of said lever, links connecting the ends of said arms with said yoke, and a support carried by the outer casing, said lever being pivotally connected to said support.

4. In a draft regulator for steam boilers, an outer casing, a top therefor provided with a central boss having an opening therethrough, said boss extending above the outer surface of the top and below the inner surface of the top, the upper and lower faces of the boss being surfaced or ground, a bell-shaped member being disposed within said outer casing and being provided with a central boss at its top having an upper ground face to form a tight fit with the upper face of the first named boss, a rod carried by the boss on said bell-shaped member and arranged to extend through the opening in the first named boss, said rod being smaller than the opening to provide clearance between the rod and the walls of the opening, and a cap carried at the upper end of said rod having a lower surface ground to permit a tight fit against the upper surface of said first named boss.

1,104,510. TIDE-MOTOR. JUNPACHIRO ISHII, Boston, Mass. Filed Oct. 25, 1913. Serial No. 797,195. (Cl. 253—10.)

1. In a tide motor, the combination of a vertically reciprocatory float, a transmission mechanism including a series of gears whereby to convert the reciprocatory movements of the float into rotary motion, a storing mechanism including series of gears carrying winding drums, vertically movable weights for connection with and disconnection from the winding drums, means for throwing each series of gears into and out of operation, and means for throwing certain of the gears of each series into and out of operation in accord with the connection and disconnection of their respective weights.

2. In a tide motor, the combination of a vertically movable float, a transmission mechanism including a series of gears whereby to convert the reciprocatory movements of the float into rotary motion, a power storing mechanism including winding drums and vertically movable weights, a gear frame between the transmission and storing mechanisms, and a pair of intermeshing gears journaled in said gear frame and movable therewith so that either one or both of the gears form a connection between the transmission mechanism and the storing mechanism.



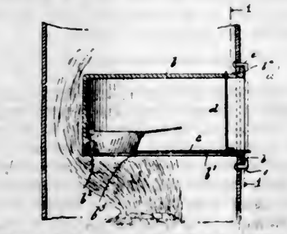
3. In a tide motor, the combination of a vertically reciprocatory float having a pair of compartments one of which is permanently closed, a transmission mechanism including a series of gears whereby to convert the reciprocatory movements of the float into rotary motion, and means whereby to permit the other float compartment to alternately flood and free itself of water, and including a latch engaging one of the transmission gears whereby to lock the transmission mechanism and the float against movement.

4. In a tide motor, a vertically reciprocatory float having two compartments of which the lower compartment is permanently closed and the upper compartment is provided with an opening in one side wall thereof, a valve disk hinged at its lower edge to the said wall of the float and movable to cover and uncover the opening, a valve controlling member for movement against the valve disk, weight controlled connections for moving the controlling member to hold the valve closed, and springs for moving said controlling member to permit the valve to open when the weight controlled connections are released.

5. In a tide motor, the combination of a vertically reciprocatory float, a transmission mechanism including a series of gears whereby to convert the reciprocatory movements of the float into rotary motion, a power storing mechanism including series of gears carrying winding drums, and vertically movable weights engageable with and disengageable from said winding drums, a pair of intermeshing gears movably mounted so that either one or both of the gears form a connection between the transmission and storing mechanisms, the said storing mechanism including means for throwing each series of gears into and out of operation and means for throwing certain of the gears of each series into and out of operation in accord with the connection and disconnection of their respective weights.

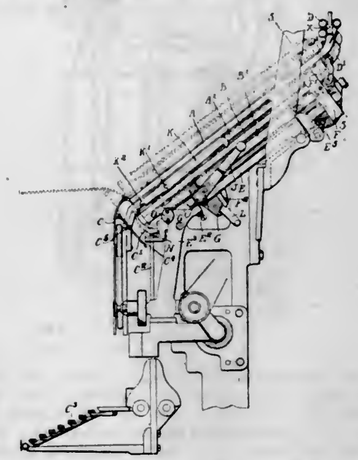
[Claim 6 not printed in the Gazette.]

1,104,511. WATER-BOILER APPLIANCE. VICTOR KALFUS, New York, N. Y. Filed Apr. 6, 1914. Serial No. 829,799. (Cl. 126—100.)



An appliance for water boiler furnaces, consisting of a hollow body having an open end and an open bottom, a semi-circular flange at the inner end of said bottom, and a slide for said open bottom, said slide having a semi-circular recess which with the said flange forms a circular opening for a lid, said hollow body being adapted to be removably secured in a furnace to act as a flame deflector and to serve at the same time as an oven.

1,104,512. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, New York, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 1, 1913. Serial No. 745,609. (Cl. 199—7.)



1. In a typographical machine, the combination of a plurality of magazines, with a supporting frame therefor sustained by the machine frame, the magazines being movable toward and from the supporting frame to bring a selected one into operative relation to the other parts.

2. In a typographical machine, the combination of a plurality of magazines, with a supporting frame therefor resting upon and supported by the machine frame, the magazines being movable toward and from the supporting frame to bring a selected one into operative relation to the other parts.

3. In a typographical machine, the combination of a plurality of magazines, means to connect the magazines and hold them in relation to each other, and a frame to support the magazines and their connecting means, the said magazines and connecting means being movable toward and from the supporting frame to bring a selected magazine into operative relation to the other parts, and the said supporting frame being in turn sustained by the machine frame.

4. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of base frames therefor, and connections between said base frames, and a supporting frame for the magazines and their base frames, the said magazines and their base frames being movable toward and from the supporting frame to bring a selected magazine into operative relation to the other parts, and the said supporting frame being in turn sustained by the machine frame.

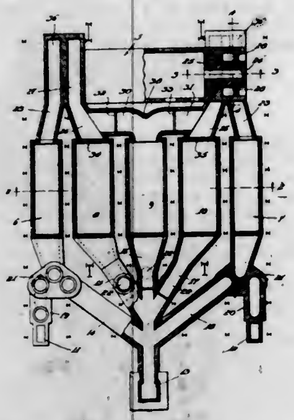
5. In a typographical machine, the combination of a plurality of magazines connected in series and a supporting frame for said magazines, the said connected magazines being movable toward and from the supporting frame to bring a selected one into operative relation to the other parts, and the supporting frame resting upon and being in turn sustained by the machine frame.

[Claims 6 to 55 not printed in the Gazette.]

1,104,513. REGENERATOR CONSTRUCTION. THOMAS H. KENYON, Gary, Ind. Filed Jan. 7, 1914. Serial No. 810,802. (Cl. 75—94.)

1. The combination with a furnace of a regenerator opposite to each end of the same, and an auxiliary regen-

erator between both of said regenerators and opposite to the body of the furnace, of a connection from each of the first mentioned regenerators to the corresponding end of the furnace, connections from the auxiliary regenerator to each end of the furnace, and valves for substituting the auxiliary regenerator for either of the first mentioned regenerators.



2. The combination with a furnace, a flue, and a source of air supply, of a regenerator opposite to each end of the furnace, a connection from one end of each regenerator to the corresponding end of the furnace, a connection from the other end of each regenerator to the flue and to the source of air supply, an auxiliary regenerator between both of said regenerators and opposite to the body of the furnace, connections from one end of said auxiliary regenerator to both ends of the furnace, a connection from the other end of the auxiliary regenerator to the flue and to the source of air supply, valves for controlling the connections of all of said regenerators either to the flue or to the source of air supply, and valves for controlling the connections from all of said regenerators to the furnace.

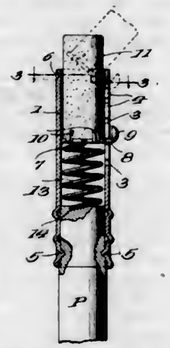
3. The combination with an open hearth furnace, a flue, and a source of air supply, of a regenerator opposite to each end of the furnace, a connection from one end of each regenerator to the corresponding end of the furnace, connections from the other end of each regenerator to the flue and to the source of air supply, an auxiliary regenerator mounted between said regenerators and opposite to the body of the furnace, connections from one end of said auxiliary regenerator to both ends of the furnace, connections from the other end of the auxiliary regenerator to the flue and to the source of air supply, valves for controlling the connections of all of said regenerators either to the flue or to the source of air supply, and valves for controlling the connection of each of said regenerators to the furnace.

4. The combination with an open hearth furnace, a flue opposite to the central portion of the same, and a source of air supply, of a regenerator opposite to each end of the furnace, a connection from each of said regenerators to the corresponding end of the furnace, a connection from the other end of each of said regenerators to the flue and to the source of air supply, an auxiliary regenerator between both of said regenerators and opposite to the central portion of the furnace and opposite to the flue, connections from one end of the auxiliary regenerator to both ends of the furnace, connections from the other end of the auxiliary regenerator either to the flue or to the source of air supply, valves for controlling the connection of each of said regenerators either to the flue or to the source of air supply, and valves for controlling the connection of each of said regenerators to the furnace.

5. The combination with an open hearth furnace, a flue, and a source of air supply, of a regenerator opposite to each end of the furnace, a connection from one end of each regenerator to the corresponding end of the furnace, a cross connection joining both of said connections together, connections from the other end of each of said regenerators both to the flue and to the source of air supply, an auxiliary regenerator between both of said regenerators and opposite to the central portion of the furnace, a connection from one end of the auxiliary regenerator to said cross connection, connections from the other end of the auxiliary regenerator both to the flue and to the source of air supply, valves for controlling the connection of each of said regenerators either to the flue or to the source of air supply, a valve in the furnace end of each of the first mentioned regenerators, and valves in the cross connection at both sides of the connection from the auxiliary regenerator to the cross connection.

[Claims 6 to 8 not printed in the Gazette.]

1,104,514. ERASER FOR LEAD-PENCILS. AXEL KILSTROM, Providence, R. I. Filed Jan. 5, 1914. Serial No. 810,442. (Cl. 120—38.)

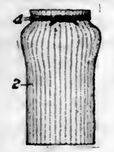


1. A device of the character described comprising a tubular guide formed with a longitudinal slot and a plurality of transverse notches opening into said slot, a substantially polygonal plate slidable within said guide, an integral neck on one corner of said plate, said neck passing through said slot, an operating head formed on the outer end of said neck, a cylindrical eraser resting on said plate, integral tongs formed on the edges of said plate and bent into the sides of said eraser, a coil spring for forcing said plate normally outward and a plurality of projections struck inwardly from the free end of said guide for limiting the outward movement of said plate.

2. The combination with a pencil, of a tubular guide secured to and incasing one end thereof, said guide being formed with a longitudinal slot and a plurality of notches opening into said slot, a slide within said guide, a shoulder on the inner side of said slide, an operating knob on said slide and passing through said slot, a cylindrical eraser carried by said slide, a shoulder on the incased end of said pencil, and a coil spring disposed between said slide and said pencil and in contact with said shoulders, said spring being under longitudinal and torsional tension whereby said knob is retained yieldingly within one of said notches for the purpose set forth.

1,104,515. MANTLE FOR INVERTED INCANDESCENT GAS-LAMPS AND METHOD OF TYING THE SAME. ELMER L. KNOEDLER, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Original application filed Feb. 17, 1911, Serial No. 609,194. Divided and this application filed Feb. 24, 1913. Serial No. 750,053. (Cl. 67—98.)

1. An inverted incandescent mantle structure, comprising a mantle body and a supporting ring, said body having a circumferential fold at the ring secured by a plurality of cord loops having a knot, said loops and knot being hidden in the fold of the mantle body between the two plies thereof; substantially as described.



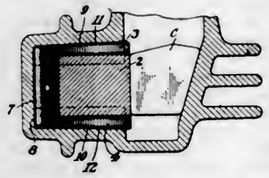
2. An inverted incandescent mantle structure, comprising a mantle body and a supporting ring, having a circumferential fold around the ring secured by a single knot, the cord and knot being hidden in the fold between the two plies of the mantle body; substantially as described.

3. An inverted incandescent mantle structure, comprising a mantle body and a supporting ring, the mantle body having a circumferential fold at the ring secured by a plurality of cord loops having a single knot, the loops and knot being hidden within the fabric and lying between the two plies thereof around the ring; substantially as described.

4. The method of tying an incandescent mantle structure, consisting in assembling a mantle body open at both ends and a supporting ring within one end of the body, throwing a plurality of cord loops around the body and ring; knotting the same, and then turning the mantle inside out and closing the open end thereof opposite the ring end; substantially as described.

5. The method of tying an incandescent mantle structure, consisting in assembling a mantle body open at both ends and a supporting ring within one end of the body, throwing a plurality of cord loops around the body and ring, securing the ends of one of the loops by a single knot, turning the mantle inside out, and closing the open end opposite the ring end; substantially as described.

1,104,516. CAR-COUPLING. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Feb. 18, 1913. Serial No. 749,113. (Cl. 203—65.)

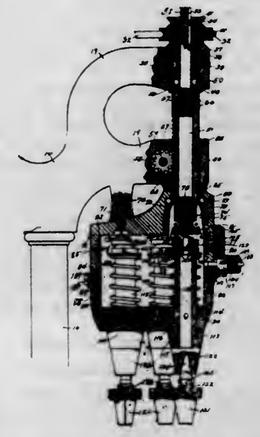


1. In a car coupler, a coupler head, a knuckle, a wedge lock, said knuckle having the upper and lower surface of its tail inclined in a transverse direction, said inclines converging toward the rear side of said tail, corresponding inclines on the coupler head, and means on the coupler head co-acting with the knuckle tail to prevent excessive wedging of said inclines but permitting their contact to prevent vertical movement of said knuckle relative to the head, the said lock being adapted to hold the inclines on the knuckle tail in wedging engagement with the inclines on the coupler head.

2. In a car coupler, a coupler head, a knuckle, a wedge lock, said knuckle having on its upper and lower surfaces inclines convergent toward the rear side of its tail co-acting with corresponding inclines on the coupler head, and a vertical bearing surface on the rear side of said knuckle tail in contact with a corresponding bearing on the coupler head to prevent excessive wedging of said inclines, the said lock being adapted to hold the inclines on the knuckle tail in wedging engagement with the inclines on the coupler head.

3. In a car coupler, a coupler head, a knuckle having a tail with a vertical rear side, inclines upon the upper and lower surfaces of said tail, said inclines extending transversely across the width of said tail and being convergent toward its rear side, and a wedge lock, the said lock being adapted to keep the inclines upon the tail in engagement with corresponding inclines upon the head.

1,104,517. AUTOMATIC MULTIPLE-CHUCK DRILL-PRESS. JOSEPH N. LANDAU, New York, N. Y. Filed May 21, 1913. Serial No. 768,901. (Cl. 77—25.)



1. An automatic drill press embodying the combination with a supporting standard and a work support; of a head carried by the standard and having a pair of vertically spaced horizontal bearing arms projecting therefrom, sleeves carried by the arms, a spindle rotatably journaled in said sleeves, means for rotating the spindle, a chuck spindle supported beneath the aforesaid spindle and adapted to receive a working tool, means associated with one of the sleeves for normally shifting the first-named spindle upwardly, means operable against the action of said last-mentioned means to shift the spindle downwardly, and coupling means for said spindles, said coupling means being normally inoperative when the first-named spindle is raised and operative when the spindle is lowered.

2. In a multiple chuck drill press, the combination with a supporting standard and a work support carried thereby; of a head carried by the standard and having bearing arms projecting therefrom, a spindle rotatably journaled in said arms, means for rotating the spindle, a closed magazine supported beneath said spindle and comprising a casing disposed horizontally at right angles to the spindle, a plurality of chuck-carrying devices carried by said magazine and shiftable with a portion of the latter to present either one of said devices in alinement with said spindle, and means for coupling said spindle with either one of said devices.

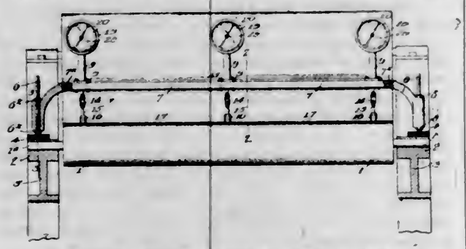
3. In a multiple chuck drill press, the combination with a supporting standard; of a head carried by the standard and having bearing arms, a spindle rotatably journaled in said arms and adapted for reciprocation, means for rotating the spindle, a magazine supported beneath said spindle, a plurality of chuck-carrying devices carried by said magazine and shiftable to present either one of said devices in alinement with said spindle, each device having a spindle adapted for reciprocation and provided with a clutch head at its upper end and each head having a peripheral groove, the aforesaid spindle having a co-acting clutch head, and spring pawls carried by said latter head and actuated by reciprocation of its spindle for engagement with said grooves to hold the spindles against separation longitudinally when the heads are coupled.

4. In a multiple chuck drill press, the combination with a supporting standard and a work support carried thereby; of a head carried by the standard and having bearing arms projected therefrom, a movable spindle rotatably journaled in said arms, means for rotating the spindle, a magazine supported beneath said spindle, a plurality of chuck-carrying devices carried by said magazine and shiftable to present either one of said devices in alinement with said spindle, each device embodying a spindle movable in the magazine, means to connect each latter spindle with said first-named spindle, means for preventing independent rotation or longitudinal separation of the spindles when connected, and means for supporting the spindles of said devices, whereby said spindles and the chucks carried thereby may be depressed with the first-named spindle.

5. In a multiple chuck drill press, the combination with a supporting standard and a work support carried thereby; of a head carried by the standard and having bearing arms projected therefrom, a longitudinally shiftable spindle rotatably journaled in said arms, means for rotating the spindle, a magazine supported beneath said spindle, a plurality of chuck-carrying devices carried by said magazine and shiftable to present either one of said devices in alinement with said spindle, each device embodying a spindle movable in the magazine, means for connecting the spindles when the same are in contact, means for preventing independent rotation or longitudinal separation of the spindles when connected, and means for supporting the spindles of said devices, whereby said spindles and the chucks carried thereby may be depressed with the first-named spindle, said last named means normally holding said chuck spindles elevated.

[Claims 6 to 22 not printed in the Gazette.]

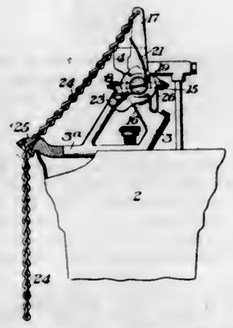
1,104,518. PAPER-MAKING MACHINE. DUNCAN L. LESLIE and JOHN L. HARRIS, Roanoke Rapids, N. C. Filed Apr. 24, 1913. Serial No. 763,334. (Cl. 33—172.)



1. In a paper making device, a frame, a base roll rotatably carried by said frame and arranged to receive a sheet of paper, a gage frame carried by said main frame and arranged to extend above said base roll longitudinally thereof, said gage frame being provided with a longitudinal slot, a plurality of gages carried by said gage frame, each of said gages comprising a hollow standard slidably disposed in the longitudinal slot in said gage frame, a movable rod arranged to extend through said hollow standard, a contact wheel secured to said rod and arranged to engage the paper on the base roll, the axis of the wheel being parallel with the axis of the base roll, means carried by said hollow standard for permitting the rotation of the standard with respect to the gage frame, and means for locking the gage in its rotated position.

2. In a paper making device, a frame, a base roll rotatably carried by said frame and arranged to receive a sheet of paper, a gage frame carried by said main frame and arranged to extend above said base roll longitudinally thereof, said gage frame being provided with a longitudinal slot, a plurality of gages carried by said gage frame, each of said gages comprising a hollow standard slidably disposed in the longitudinal slot in said gage frame, a movable rod arranged to extend through said hollow standard, a contact wheel, a bearing therefor, means connecting said contact wheel bearing with said movable rod, said means permitting the rotation of the bearing about the axis of the rod as a center, means for locking the bearing in its rotated position, and means carried by the hollow standard for permitting the rotation of the standard with respect to the gage frame and for locking it in its rotated position.

1,104,519. GAS VALVE OR COCK. THOMAS JAMES LITLE, Jr., Woodbury, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Mar. 24, 1913. Serial No. 756,414. (Cl. 116—1.)



1. A gas cock having an audible signal, means for actuating the cock to open and close it, an audible signal, and means operated by the movement of said cock to closed position for sounding said signal, said means being inoperative when the cock is moved to opened position; substantially as described.

2. In a gas cock, the combination of a rotary valve, an actuating device therefor, a combined pawl and signal member, and means whereby said member locks the valve in both its open and closed positions and gives a signal only when the valve is closed, substantially as described.

3. A gas cock having a rotary valve, a combined clutch and ratchet member on the stem of the valve, an actuating lever having a clutch portion to coöperate with said member, and a combined pawl and signal member arranged to snap into engagement with the ratchet teeth of said member, said teeth being of different depths, and the deeper teeth being arranged to actuate said member to produce a signal substantially as described.

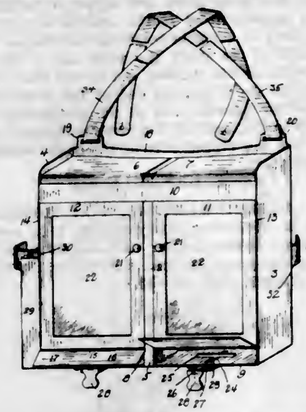
4. A gas cock comprising a rotary valve, a combined clutch and ratchet member attached to said valve, an actuating lever having a clutch portion to coöperate with the clutch member, a spring for returning the lever to normal position and also acting to force its clutch portion into engagement with the clutch member, a combined pawl and signal, the clutch member having teeth, and some of said teeth being of a depth to cause the pawl and signal member to vibrate and thereby emit an audible signal; substantially as described.

5. A gas cock comprising a rotary valve having a projecting stem, a member secured to said stem and having peripheral ratchet teeth of different depths, means for rotating the valve, and a spring pawl adapted to engage one of the deeper teeth when the valve is being turned to closed position and thereby vibrate said pawl to cause it to emit an audible signal, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

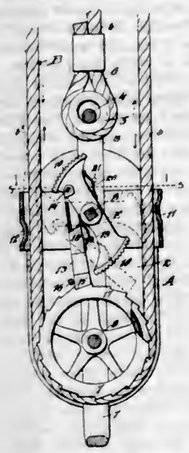
1,104,520. DELIVERY-RECEPTACLE FOR LETTER-CARRIERS. JOHN LOVAS and SAM SERA, Erie, Pa. Filed Mar. 28, 1914. Serial No. 827,992. (Cl. 150—14.)

1. A delivery receptacle for letter carriers comprising a body portion provided with a pair of compartments, shiftable followers mounted upon the bottoms of said compartments, doors for closing said compartments, a flap hinged to the lower end of each of said doors and providing outlets for said compartments when said flaps are elevated whereby when the followers are shifted mail matter will be projected through said openings, and means for connecting said body portion to the carrier.



2. A device for the purpose set forth comprising a compartment receptacle having a curved rear wall and a pair of doors at the front, flaps secured to the lower ends of said doors and adapted when elevated to provide outlets for mail matter within said compartments, shiftable followers carried by the bottom of said receptacle and adapted when shifted outwardly to project mail matter through said compartments, and means for supporting said receptacle from the shoulders of the carrier.

1,104,521. HOISTING-BLOCK. SAMSON LOWENSTEIN, New York, N. Y. Filed Apr. 14, 1914. Serial No. 831,747. (Cl. 57—34.)



1. A tackle block comprising a body, a pulley therein, a rope passing around the pulley, a clutch device having a plurality of gripping portions for automatically gripping the rope when the latter moves in one direction, manually-actuated means for throwing the device out of clutching relation to the rope, and a device for maintaining the clutching device in unclutching position.

2. A tackle block comprising a body, a pulley mounted therein, a rope passing around the pulley, a double end clutch dog arranged to grip the rope at a plurality of points when the rope moves in one direction, and a prop device disposed between the pulley and dog for holding the latter in inoperative position and adapted to be tripped by movement of the pulley in one direction.

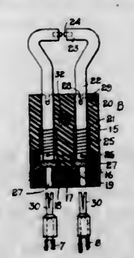
3. A tackle block comprising a body, a pulley therein, a rope passing around the pulley, an abutment along which the rope travels, a dog for gripping the rope against the abutment, means connected with the dog for throwing the same to inoperative position, and a prop connected with and carried by the dog and arranged to engage the pulley to support the dog in inoperative position, and adapted to be automatically tripped as the pulley moves during the hoisting of a load.

4. A tackle block comprising a body, a pulley therein, a rope passing around the pulley, abutments along which the rope passes, a double-ended dog arranged to grip the rope against the abutments, a prop pivotally connected to the dog near one end to serve as a weight for causing the dog to automatically engage the rope, and manually actuated means connected with the dog for throwing the same to inoperative position and support the prop of the pulley, whereby the prop maintains the inoperative position of the dog.

5. A tackle block comprising a body, a pulley therein, a rope passing around the pulley, abutments along which the rope passes, a double-ended dog arranged to grip the rope against the abutments, a prop pivotally connected to the dog near one end to serve as a weight for causing the dog to automatically engage the rope, manually actuated means connected with the dog for throwing the same to inoperative position and support the prop of the pulley, whereby the prop maintains the inoperative position of the dog, and teeth on the pulley with which the prop engages for tripping the prop when the pulley moves in one direction.

[Claims 6 to 9 not printed in the Gazette.]

1,104,522. AUTOMATIC IGNITION SYSTEM FOR GAS-LIGHTS. JOSEPH W. LUNDAHL, Thomaston, and OSCAR ARVID EKSTROM, Litchfield, Conn., assignors of one-half to said Lundahl, one-fourth to said Ekstrom, and one-fourth to Carl A. Larson, Thomaston, Conn. Filed Sept. 6, 1913. Serial No. 788,405. (Cl. 175—115.)



1. In a system of the class described, the combination of a burner, a valve for controlling the supply of gas thereto, an igniter for the burner, an induction coil having its secondary winding connected therewith, and a primary circuit including a make-and-break device having a movable element movable with the valve for producing in the primary circuit a succession of current impulses.

2. In a system of the class described, the combination of a burner, a valve controlling the supply of fuel thereto, an igniter for the burner, an electric circuit for the igniter, and a make-and-break device for the said circuit, said device including an element movable with the valve and having a plurality of contact points, and a contact disposed in a path of and engageable by the contact points for producing a succession of current impulses during the opening movement of the valve.

3. In a system of the class described, the combination of a burner, a valve controlling the supply of fuel thereto, an igniter for the burner, an electric circuit for the igniter, and a make-and-break device for the said circuit, said device including an element movable with the valve and having a plurality of contact points, a contact disposed in the path of and engageable by the contact points for producing a succession of current impulses during the

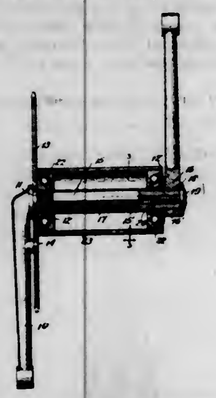
opening movement of the valve, and means for arresting the movable element during the closing movement of the valve.

4. In a system of the class described, the combination of a burner, a valve controlling the supply of fuel thereto, a pawl movable with the valve, and an ignition means for the burner including a make-and-break device, said device comprising a toothed element with which the pawl engages for movement with the valve in one direction, and a contact disposed in wiping relation with the toothed element.

5. In a system of the class described, the combination of a burner, a valve controlling the supply of fuel thereto, a pawl movable with the valve, and an ignition means for the burner including a make-and-break device, said device comprising a toothed element with which the pawl engages for movement with the valve in one direction, a contact disposed in wiping relation with the toothed element, and a device for preventing movement of the toothed element as the valve is moved closed.

[Claims 6 to 13 not printed in the Gazette.]

1,104,523. BICYCLE CRANK-HANGER. GEORGE W. MCILWAINE, Rutherford, N. J. Filed Feb. 2, 1914. Serial No. 816,056. (Cl. 208—68.)

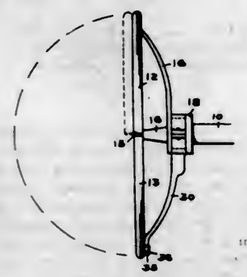


1. The herein described crank hanger comprising, in combination, a crank having a threaded shoulder and a polygonal shaft extending laterally therefrom, a sleeve having a polygonal bore fitted to said shaft and abutting against said shoulder, the end of the sleeve opposite the shoulder being screw threaded and spaced inwardly from the extreme end of the shaft, a second crank having a polygonal socket fitted to the end of the shaft and abutting against the threaded end of the sleeve, means to prevent separation of the last mentioned crank from the shaft, and bearing members fitted to the threaded portions of the crank and sleeve.

2. In a device of the character set forth, the combination with a bicycle bracket including bearing members secured to its ends, of a crank hanger comprising a crank having a threaded shoulder and a polygonal shaft extending laterally therefrom through the bracket, a bearing member secured on said threaded shoulder and coöperating with one of the bracket bearing members, a sleeve fitted to the shaft within the bracket, said sleeve abutting at one end against said threaded shoulder and having its opposite end provided with a screw thread of opposite character from that of the shoulder, a bearing member secured to the threaded end of the sleeve and coöperating with the remaining bearing member of the bracket, a crank fitted to the laterally projecting end of the shaft and abutting against the threaded end of the sleeve, and means extending into the shaft serving to prevent outward displacement of the last mentioned crank therefrom.

3. In a bicycle hanger, the combination of a crank having an integral polygonal shaft extending therefrom, the outer end of the shaft being adapted to be cut off to provide any desired length for the shaft, the free end of the shaft being internally bored and tapped, a stiffening and reinforcing member fitted to the exterior surface of said shaft and being of variable length in accordance with the desired length of the shaft, the outer end of the member being spaced from the extreme end of the shaft, a second crank fitted to the projecting end of the shaft and abutting against the adjacent end of the reinforcing member, and a screw acting against the last mentioned crank and extending into the tapped bore of the shaft to secure the crank to the shaft.

1,104,524. STEERING-WHEEL FOR MOTOR-CARS. THOMAS W. MCKENZIE, Indianapolis, Ind., assignor of one-third to Joseph Lauler and one-third to Charles Oeftering, Indianapolis, Ind. Filed July 18, 1913. Serial No. 779,809. (Cl. 74—33.)



1. A steering wheel of the above specified class, comprising a fixed and a hinged section, means for hingedly securing the hinged section to the fixed section, a hub for the fixed section for securing the latter to the steering shaft, said hub being provided with a circumferentially disposed groove, a movable spoke adapted to ride in said groove and susceptible to oscillatory travel about said hub and wheel, to bring said spoke beneath and to support the hinged section in operative position.

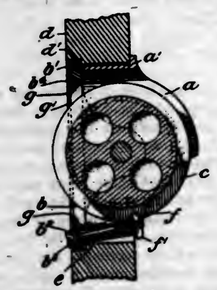
2. A steering wheel of the above specified class, comprising a fixed and a hinged section, means for hingedly securing the hinged section to the fixed section, a hub for the fixed section for securing the latter to the steering shaft, said hub being provided with a circumferentially disposed groove, a movable spoke adapted to ride in said groove and susceptible to oscillatory travel about said hub and wheel, to bring said spoke beneath and to support the hinged section in operative position, a hook formed on the free end of said movable spoke, and means on the hinged section of the wheel to take over said hook.

3. A steering wheel of the above specified class, comprising a fixed and a hinged section, means for hingedly securing the hinged section to the fixed section, a hub for the fixed section for securing the latter to the steering shaft, said hub being provided with a circumferentially disposed groove, a movable spoke adapted to ride in said groove and susceptible to oscillatory travel about said hub and wheel, to bring said spoke beneath and to support the hinged section in operative position, a hook formed on the free end of said movable spoke, means on the hinged section of the wheel to take over said hook, and means for preventing accidental displacement of said hook from said preceding means.

1,104,525. SASH-PULLEY. ULYSSES G. MCQUEEN, New Rochelle, N. Y. Filed Oct. 15, 1913. Serial No. 795,250. (Cl. 16—17.)

1. In combination, a sash pulley adapted to interlock with the stile, a headed screw mounted to swivel in the frame of the pulley, and a nut carried on the threaded end of the screw and adapted to engage the stile, the headed screw and the nut serving to hold the pulley removably in the stile.

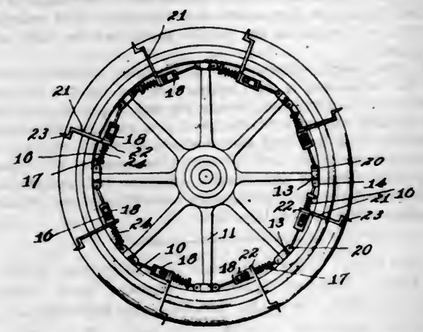
2. In combination, a sash pulley adapted to interlock with the stile and comprising a frame and a housing, a headed screw mounted to swivel in said frame, depending flanges formed integral with the housing and terminating in juxtaposition to the nut to guide the same positively in its movement in substantially a vertical plane as the pulley is passed in or withdrawn from the stile, and a nut carried on the threaded end of the screw and adapted to engage the stile, the headed screw and the nut serving to hold the pulley removably in the stile.



3. In combination with the frame of a sash pulley, a detachable face plate therefor composed of a single piece of stamped metal and provided with ears struck up from the metal and adapted to engage snugly the frame to hold the face plate in position thereon and means engaging directly with the frame to secure the pulley to the sash.

4. In combination with the frame of a sash pulley, a detachable face plate therefor composed of a single piece of stamped metal and provided with ears struck up from the metal and adapted to engage snugly the frame to hold the face plate in position thereon, the inner edge of the frame being beveled and the ears being inclined correspondingly to interlock with the beveled edges of the frame and means engaging directly with the frame to secure the pulley to the sash.

1,104,526. ANTISKID ATTACHMENT. ALEXANDER MEDVE, Mohawk, Mich. Filed Feb. 24, 1914. Serial No. 820,566. (Cl. 152—14.)



1. The combination with a vehicle wheel, of an antiskid device comprising a U-shaped resilient member having arms embracing the outer sides of the wheel tire and so constructed at their outer ends as to adapt said ends to engage a road surface, means for supporting said resilient member at a point midway of its length on the inner side of the tire, comprising an eye on the U-shaped member, a bolt extending through said eye, and means for securing the ends of said bolt.

2. The combination with a vehicle wheel, of an antiskid device comprising a U-shaped resilient member having arms embracing the outer sides of the wheel tire and so constructed at their outer ends as to adapt said ends to engage a road surface, means for supporting said resilient member at a point midway of its length on the inner side of the tire, comprising an eye on the U-shaped member, a bolt extending through said eye, means for securing the ends of said bolt consisting of a clamp on the wheel spoke pivotally connected to one end of the bolt, and an adjusting device at the opposite end of said bolt.

3. The combination with a vehicle wheel, of anti-skid means, comprising a plurality of U-shaped resilient members each formed with a central eye and sharpened outer ends, clamps on the wheel spokes adjacent to their outer ends, bolts extending through said eyes and pivotally secured at one end to said clamps, coil springs encircling said bolts, and turn-buckles on the free ends of said bolts connecting the latter to the clamp on the adjacent spoke.

1,104,527. CAMERA-BACK. JOHN D. MEGOWN, Youngstown, Ohio. Filed Apr. 25, 1913. Serial No. 763,669. (Cl. 95—49.)



1. An adaptable camera back including a series of nested frames adapted to be employed in connection with different sizes of plate holders, and a laterally adjustable clamping frame.

2. An adaptable camera back including a main frame, a series of removable flushly nested frames fitted within the main frame, each of the nested frames being provided at one side thereof with positioning means and at the opposite side thereof with a latch member, the various nested frames being adapted to be employed with different sizes of plate holders, and a slidably mounted clamping frame adapted to coöperate with the main frame and any selected one of the nested frames.

3. An adaptable camera back including a main frame provided with a rabbeted opening, a series of flanged frames nested within each other and the main frame, the flange of the largest nested frame engaging the rabbeted portion of the main frame while each of the other nested frames is rabbeted to receive the flange of the next smaller frame, the various frames being provided with positioning means for engaging different sizes of plate holders, latch means for retaining the nested frames in position, and a slidably mounted clamping frame adapted to be employed in connection with the main frame and a selected one of the nested frames.

4. An adaptable camera back including a main frame, a series of nested frames applied to the main frame and adapted to be employed in connection with different sizes of plate holders, channel bars having a yielding connection with the main frame, and a clamping frame slidably mounted between the channel bars.

5. An adaptable camera back including a main frame, a series of nested frames applied to the main frame and adapted to be employed in connection with different sizes of plate holders, channel bars having a yieldable connection with the main frame, a clamping frame slidably mounted between the channel bars, and means for locking the clamping frame in adjusted positions according to the size of plate holder which is being used.

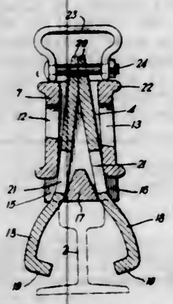
[Claims 6 and 7 not printed in the Gazette.]

1,104,528. RAIL-STOP. HERBERT J. MELVILLE, Pittsburgh, Pa., assignor of one-half to Richard A. McDonald, Chicago, Ill. Filed Mar. 30, 1914. Serial No. 828,266. (Cl. 104—49.)

1. A rail stop comprising a body portion to engage the rail head, a pair of rail engaging clamps at the rear of the same, a pair of lugs at the front of the same extending below the top of the rail and a wedge extending through the body portion and the clamps to tighten the latter.

2. A rail stop, comprising a body portion to engage the rail head, a rectangular chamber at the rear thereof,

a curved rib extending forwardly from said chamber, to engage the wheel tread, a pair of lugs to straddle the rail head at the front end of said rib, a pair of clamps within said chamber, a pair of slots in the side walls of said chamber, a slot in each of the clamps in line therewith, and a wedge extending transversely of the rail and above the same, and passing through all of said slots to tighten the clamp.

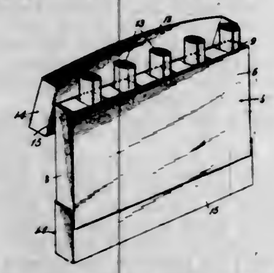


3. A rail stop comprising a body portion to engage the rail head, a rectangular chamber at the rear end thereof, a rib extending across the lower end of said chamber parallel to the rail, a pair of clamps within said chamber one on each side of said rib and projecting above and below the walls of said chamber, and a wedge passing through the side walls of said chamber and through said clamps to bind the latter to the rail.

4. A rail stop, comprising a body portion to engage the rail head, a rectangular chamber at the rear end thereof, a pair of clamps within said chamber which engage the head of the rail when they are raised, means for raising and positively locking the clamp, and a rib extending across the lower end of said chamber between the clamps for automatically separating the lower ends of the clamps when they are lowered so their lower ends will clear the rail and the device may be lifted bodily off the rail.

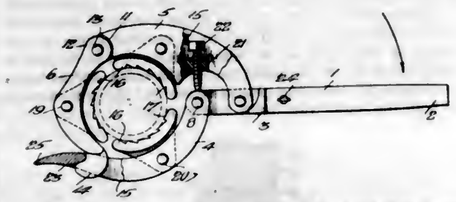
5. A rail clamp, comprising a box shaped guide, a pair of hooked clamps passing through said guide and adapted to engage the head of a rail, and a wedge passing through the guide and the clamps to tighten the latter.

1,104,529. CIGARETTE-BOX. AARON MENDELSON and SHEPARD J. GOLDBERG, New York, N. Y. Filed Oct. 4, 1913. Serial No. 793,417. (Cl. 229—15.)



A cigarette box consisting of an elongated flat body, partitions in said body providing compartments having alternatively closed ends and similarly arranged open ends terminating at the top and bottom edges of the body, whereby the compartments opening in the same direction are spaced apart, whereby when cigarettes are disposed in said compartments they will project therefrom, and closures at the edge portions of the body adjacent to the ends of the compartments, each closure embodying a back portion, an edge portion, end portions and a front portion, said end portions and front portion being designed to overlie the ends and a wall of the box body and to receive the projecting portions of the cigarettes.

1,104,530. PIPE-TONGS. JOHN DE WITT MEREDITH, Burkburnett, Tex. Filed July 12, 1913. Serial No. 778,707. (Cl. 81—66.)



1. Pipe tongs comprising a handle, an arc-shaped link pivoted to one end of the handle, a second arc-shaped link pivoted to the handle on the inner side of the first-named link and adjacent to the connection of the said link, a third arc-shaped link pivoted to the outer end of the last-named link, said links being arranged with their concave sides inwardly, each of the said links having a longitudinal slot or recess extending through the link, the last-named link having a hook at its free end for engaging the outer end of the recess of the first-named link to lock the links in position around a pipe, and a gripping jaw in connection with each link, each jaw being arc-shaped to fit the concave face of the link and each of the said jaws having a longitudinally extending lug on its concave face engaging the recess of the adjacent link, a pivot pin passing through the link and the lug for pivotally connecting the jaw to the link, and means for tightening the links on the pipe.

2. Pipe tongs, comprising a handle, a link pivoted to the handle at one end, a series of links pivoted to the handle near the said end and extending in the opposite direction from the first-named link, means in connection with the free ends of the links for connecting the said free ends, and a set screw threaded through the link of the series adjacent to the handle and engaging the said handle adjacent to the connection of the first-named link for adjusting the links on the pipe.

3. Pipe tongs, comprising a handle, a link pivoted to the handle at one end, a series of links pivoted to the handle near the said end and extending in the opposite direction from the first-named link, means in connection with the free ends of the links for connecting the said free ends, and means in connection with the link of the series adjacent to the handle and adjustable with respect thereto, and engaging the handle to tighten the links on the pipe.

4. Pipe tongs, comprising a rigid handle, a flexible member for embracing a pipe having one end pivoted to one end of the handle, and having the other end pivoted to the handle adjacent to the said end and spaced apart therefrom and provided intermediate its ends with a releasable connection, and means in connection with the last-named end of the flexible member and adjustable with respect thereto for engaging the adjacent end of the handle for the purpose specified.

1,104,531. DETACHABLE HANDLE FOR HAND-CARDS. HERBERT MIDGLEY, Worcester, Mass. Filed Oct. 12, 1912. Serial No. 725,375. (Cl. 119—94.)



1. In combination with a hand-card comprising a face-clothing, a backing base and narrow rim reinforce binding the edges thereof and having card-teeth adapted for stripping flats and cylinders of textile-carding machines; a separably attached handle of the character described, having a body member extending across and seating against the back of the card and means for clamping and retaining it upon the base of the card, said retaining means comprising under-locking bevel-faced lugs upon the handle members, and engaging under-beveled recesses cut in the narrow rim of the card base, said parts adapted for gripping the opposite edges laterally across the card and simultaneously forcing the attached portion of the handle to hug down against the back surface of the card, by the co-action of the engaged beveled surfaces, when the clamping means is tightened.

2. In combination as described, with a hand-card comprising a face clothing with card teeth, a thin slightly curved stiff back-board and a metal binding frame uniting the edges of said face clothing and back-board, the front and rear edges of said card being provided with under beveled recesses cut through said binding frame, as shown; and the detachable metal handle consisting of a bifurcated brace having an extended shank, the under surface of the brace arms being adapted to seat against and support said back-board, and having lugs that engage in said under-beveled recesses, a sleeve mounted upon said shank and having projections that coact with counter-matching projections upon said brace for maintaining the alinement relation, and provided with an under beveled lip that engages the opposite recess in said frame, means for adjusting and holding said sleeve for clamping the parts, and a hand-grip member arranged upon said shank.

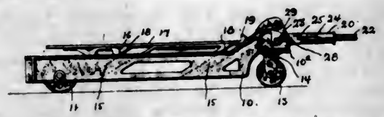
3. The combination, of a hand-card including a face clothing having card-teeth therein, a thin curved back member, and a metallic building strip overlocking and uniting the edges thereof, said card having at its front and rear edges, engaging recesses formed through the metal binding frame and under-beveled in the back-member adjacently above the face clothing, said metallic strip being notched, but extending continuously across the tops of said recesses; a separably attached handle comprising a back-supporting brace, a sleeve slidably mounted thereon and having intermatching members that maintain relative alinement with said brace, the brace and sleeve being provided with lugs that fit in the notched frame and engage in the under-cut recesses at front and rear of the card, a nut acting against said sleeve for tightening the brace upon the card, and a hand-grip member mounted upon the extended rear part of said brace.

4. A handle for hand-cards, comprising a body member having an engaging lug at one end and a screw-threaded shank at its other end; a sleeve slidable upon said shank, and having a projecting under lip, said sleeve provided with inclined members that match upon upwardly inclined surfaces on the body, and an internally threaded member fitted upon said screw-threaded shank and abutting against said sleeve.

5. A detachable handle for hand-cards, comprising a furcated brace or body having an extended shank, and provided with under-engaging lugs at the ends of its fork members, and upwardly inclined surfaces on its body, said brace adapted to seat against the back of the card, a member slidable upon said shank and provided with means for engagement with the rear edge of the card, and inclines for engaging said inclined surfaces upon the brace body, a nut threaded upon the shank and abutting against said sliding member, and a hand-grip member mounted upon said shank and abutting against said nut.

[Claims 6 and 7 not printed in the Gazette.]

1,104,532. LIFTING-TRUCK. CARL E. M. MILLER, New York, N. Y. Filed June 6, 1913. Serial No. 772,072. (Cl. 21—118.)



1. A lifting truck comprising a wheeled main frame, a top frame mounted on the main frame and arranged to rise and fall when moved longitudinally on the main frame, swinging slotted arms pivoted on the main frame, a link connection between the arms and the top frame, a lever handle mounted on the main frame near the aforesaid arms, said handle having a cross-bar and a locking bar slidable on the handle, said locking bar being adapted to enter the slotted arms and having an abutment thereon to engage the cross-bar of the lever handle.

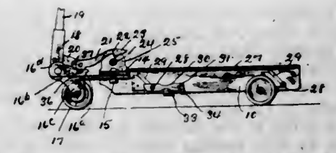
2. A lifting truck comprising a main wheeled frame, a top frame movable up and down on the main frame, said top frame being provided with a plurality of abutments or shoulders, a swinging pawl pivoted on the main frame and adapted to engage the aforesaid shoulders or abutments, means for releasing the pawl from the shoulders or abutments by a movement of the top frame, and automatic means for holding the pawl out of the path of one of said abutments.

3. A lifting truck comprising a main wheeled frame, a top frame arranged to slide longitudinally and vertically on the main frame, said top frame being provided with a plurality of shoulders spaced apart, means for moving the top frame longitudinally, a pawl pivoted on the main frame and adapted to engage the aforesaid shoulders, and a link connection connected to the pawl and to the top frame, whereby excessive movement of the top frame will tilt the pawl and release the top frame.

4. In a lifting truck the combination with the main wheeled frame and the top frame arranged to slide longitudinally and vertically thereon, said top frame being provided with shoulders arranged one behind the other, of a tilting pawl pivoted on the main frame and adapted to drop into engagement with said shoulders, said pawl having a lower extension behind its pivot, a link connection between said extension and the top frame, and a dog pivoted behind the pawl and adapted to swing into engagement with the pawl when the latter is raised.

5. A lifting truck comprising a main wheeled frame, a top frame movable up and down on the main frame, said top frame being provided with a plurality of abutments or shoulders, a swinging pawl pivoted on the main frame and adapted to engage the aforesaid shoulders or abutments, and means for releasing the pawl from the shoulders or abutments by the movement of the top frame.

1,104,533. LIFTING-TRUCK. CARL E. M. MILLER, New York, N. Y. Filed Oct. 17, 1913. Serial No. 795,640. (Cl. 21—118.)



1. A lifting truck comprising a lower frame mounted on wheels, a pivoted extension projecting forward from the lower frame and also mounted on wheels, a vertically swinging handle on the extension, a second frame connected with the lower frame so that when pulled forward it will rise on the lower frame, a hook and link connection between the second or movable frame and the handle, and means for releasing the hook by a movement of the handle.

2. A lifting truck comprising a lower frame mounted on wheels and provided with a pivoted forward extension also mounted on wheels, a second frame riding on the lower frame and adapted when pulled forward to rise on the lower frame, a pivoted handle on the forward extension, a pivoted hook carried by the handle, a cross-rod on the upper frame adapted to engage the hook, and means actuated by the movement of the handle for releasing the hook from the cross-bar.

3. A lifting truck comprising a frame mounted on wheels and provided with a pivoted forward extension also mounted on wheels, a second frame riding on the lower frame and adapted when pulled forward to rise on the lower frame, a cross bar on the forward part of the upper frame, a swinging handle pivoted in the forward extension, a hook pivotally connected with the handle and adapted to

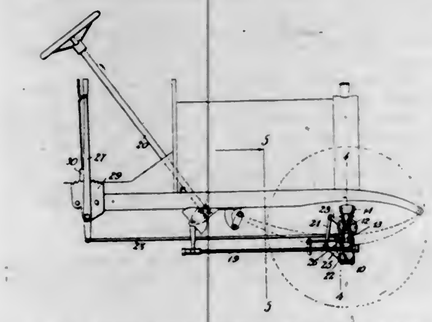
engage the aforesaid cross-rod, and means as a barb on the hook and a pin on the forward extension for releasing the hook by the swinging of the handle.

4. A lifting truck comprising a lower frame mounted on wheels and provided with a pivoted forward extension also mounted on wheels, an upper frame connected with the lower frame so that when pulled forward it will rise on the lower frame, a swinging handle on the pivoted extension, a connection between the handle and the upper frame by which the upper frame can be pulled forward by the swinging of the handle and means for releasing the connection between the upper frame and handle by a movement of the handle.

5. The combination of the lower and upper frames, the latter riding on the former, of means for raising the upper frame by pulling it forward on the lower frame, a pivoted arm carried by the upper frame and adapted to engage an abutment carried by the lower frame, and a pawl at the free end of the arm adapted to ride on the aforesaid abutment and release the arm from said abutment when the upper frame is pulled to a certain position.

[Claim 6 not printed in the Gazette.]

1,104,534. AUTOMOBILE WHEEL-CONTROLLING MEANS. WALTER F. MITCHELL and EUGENE E. HENRY, Astoria, Oreg. Filed Dec. 24, 1913. Serial No. 808,588. (Cl. 21—192.)



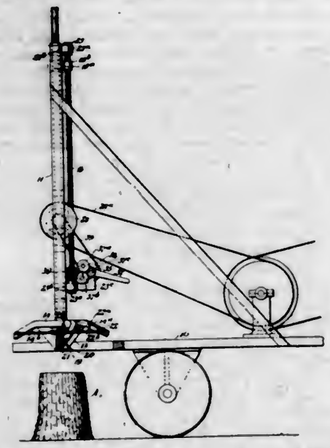
1. In a device of the character set forth, the combination with a vehicle axle, steering heads connected thereto, steering knuckles journaled in said heads, and wheels connected to said steering knuckles, of means associated with said steering heads to cause rotation thereof around an axis parallel to the axle.

2. In a device of the character set forth, the combination with an axle, steering heads connected to the axle, knuckles journaled in said heads on normally vertical axes, said knuckles having normally horizontal spindles, and wheels journaled on said spindles, of means journaled on the axle and having connections with said heads to cause the same to rotate to a certain extent in either direction around an axis parallel to the axle, and means to control the steering of the wheels through said steering knuckles.

3. In a device of the character set forth, the combination with an axle having bearings at its ends arranged in longitudinal alinement, a pair of steering heads journaled coaxially in said bearings, steering knuckles mounted on normally vertical axes in said heads, wheels connected to said steering knuckles, means to turn the knuckles in parallelism around their axes, and means connected to said steering heads to cause rotation thereof around their common axis independently of the operation of the steering mechanism.

4. In a device of the character set forth, the combination of a drop axle having coaxially arranged bearings at its ends, a rock shaft journaled along and parallel to the main portion of the axle, a pair of steering heads having coaxially arranged shanks journaled in said bearings, arms and links connecting said shanks and said rock shaft, means to control the rotation and position of the rock shaft, and said steering heads, steering knuckles journaled in said heads, wheels mounted upon the steering knuckles, and steering mechanism acting upon said steering knuckles and wheels independently of the head controlling means.

1,104,535. STUMP-CUTTING MACHINE. AMBROSE LARKIN MOORE and GEORGE DANIEL MOORE, New Orleans, La. Filed Nov. 24, 1913. Serial No. 802,666. (Cl. 144—2.)



1. In a stump-cutting machine, a driven upright shaft mounted to be raised and lowered, an advance cutter head carried by said shaft at the lower end, said head having knives diverging in an upward direction, and a second cutter head on said head above and co-axial with the advance cutter head, said second cutter head having arms extending outwardly beyond the first cutter head, the outer ends of the arms being downwardly and forwardly inclined and provided with forward faces, the latter having knives thereon, the knives having an inclination rearwardly and upwardly and having forwardly disposed cutting edges at the outside and at the bottom ends thereof.

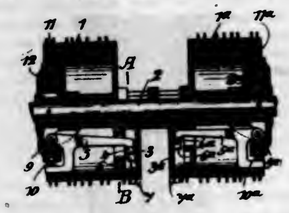
2. In a stump-cutting machine, an upright shaft mounted to be raised and lowered, means for driving said shaft, and stump-cutting means comprising a central advance cutter head having knives that diverge in an upward direction, said knives having transverse cutting edges at their lower ends, and the outer edges thereof being also cutting edges, and members above the advance cutter head and extending outwardly beyond the latter, and forwardly and downwardly inclined, the said members having cutter knives thereon presenting forward cutting edges.

3. In a stump-cutting machine, a driven shaft mounted to be raised and lowered, a downwardly tapered advance cutter head on the lower end of the shaft, said head having cutter knives diverging in an upward direction, and upper cutter members on the shaft overhanging above and outside of the tapered cutter head, the said overhanging portions of said members having a downward inclination and provided with cutter knives.

1,104,536. MACHINE FOR PUNCHING JACQUARD-CARDS FOR EMBROIDERY-MACHINES AND THE LIKE. CARL MORIGGL, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Mar. 27, 1913. Serial No. 757,063. (Cl. 164—114.)

1. In a machine for punching jacquard cards for embroidery machines and the like, in combination, a punch controlling means, a separate punch controlling means, the two said means being movable independently of each other, and means for effecting temporary movement of the second punch controlling means with the first.

2. In a machine for punching jacquard cards for embroidery machines and the like, in combination, a punch controlling drum, a second punch controlling member, said drum and member being rotatable independently of each other, and means for effecting temporary rotation of said second member with said drum.



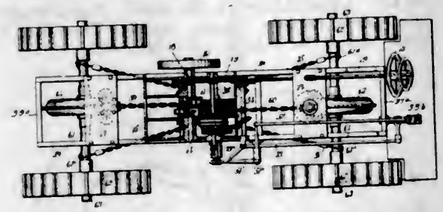
3. In a machine for punching jacquard cards for embroidery machines and the like, in combination, a shaft, a punch controlling drum and a second punch controlling member, both rotatably and independently mounted on the shaft, and means for effecting temporary rotation of said second member with said drum.

4. In a machine for punching jacquard cards for embroidery machines and the like, in combination, a punch controlling means, a separate punch controlling means, a latch carried by one of said means and adapted to engage the other to effect movement together, and means for controlling said latch.

5. In a machine for punching jacquard cards for embroidery machines and the like, in combination, a punch controlling drum, a second punch controlling member mounted coaxially with the drum, a latch carried by said drum and adapted to engage said second member, and means for controlling said latch.

[Claims 6 and 7 not printed in the Gazette.]

1,104,537. TRACTION-ENGINE. SAMUEL S. MORTON, Upper Sandusky, Ohio, assignor, by mesne assignments, to The Herr Engine Company, Portsmouth, Ohio. Filed Aug. 2, 1910, Serial No. 575,075. Renewed June 19, 1914. Serial No. 846,216. (Cl. 21—114.)

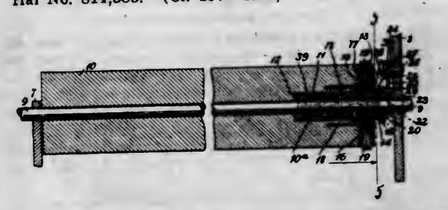


1. A motor vehicle, comprising a rigid frame, front and rear axles each formed of two sections, ground wheels on the axles, gear casings in which the inner ends of the sections of the axles are mounted, means for pivoting each gear casing to the frame substantially at the longitudinal center thereof, said pivoting means being offset toward the center of the frame, differential gearing in each gear casing and connecting the sections of the axle, each differential gearing including a chain wheel, a transmission shaft mounted in the frame between the axles, high and low speed gearing for operating the transmission shaft, differential gearing on the transmission shaft and including two chain wheels, chains passing around the chain wheels of the transmission shaft and the axles, and a reversing mechanism for said transmission shaft.

2. A motor vehicle, comprising a rigid frame, front and rear axles each formed of two sections, ground wheels on the axles, gear casings in which the inner ends of the sections of the axles are mounted, means for pivoting each gear casing to the frame out of line with the axle and substantially at the longitudinal center of the frame, differential gearing in each gear casing and connecting the sections of the axle, each differential gearing including a chain wheel, a transmission shaft mounted in the frame between the axles, differential gearing on the transmission shaft and including two chain wheels, and chains passing around the chain wheels of the transmission shaft and axles.

3. In a motor vehicle, a rigid frame having a depending member intermediate of its ends, front and rear axles, ground wheels on the axles, centrally arranged gear casings in which the axles are mounted, gearing in the casings for operating the axles, a ball and socket joint between the frame and the gear casing of the front axle, said ball and socket joint being in rear of said axle, a king bolt connection between the frame and the gear casing of the rear axle, said king bolt being in front of said axle, rods having one end pivoted to the lower portions of the gear casings and their other ends pivoted to the center of the depending member of the frame, a transmission shaft, and means for operating the gearings of the gear casings from the transmission shaft.

1,104,538. PLATEN-ROLLER RELEASE. ROBERT MARCIUS MOSHER, Dillon, Mont. Filed Jan. 26, 1914. Serial No. 814,383. (Cl. 197—123.)



1. In a platen roller release, the combination of a platen roller, an annular ratchet for turning the same, said ratchet being normally loose relatively to said platen roller, a barrel carried by said platen roller and provided with a clamping flange for engaging said annular ratchet, and forcing the latter into operative engagement with said platen roller, a rocking lever engaging said barrel, and an actuating lever provided with a lug for engaging said rocking lever in order to shift the position of said rocking lever.

2. In a platen roller release, the combination of a platen roller provided adjacent to one of its ends with a compartment, a barrel extending into said compartment and loose relatively to said platen roller, a spring located within said barrel, for the purpose of moving said barrel relatively to said roller, a clamping flange carried by said barrel and having a general annular form, an annular ratchet loosely encircling said barrel and located between said annular flange and said platen roller, for the purpose of turning said platen roller, an annular bead carried by said barrel, a rocking lever engaging said annular bead, and an actuating lever movable by hand and provided with a lug for engaging said rocking lever.

3. In a platen roller release, the combination of a platen roller, a rack for turning the same, a barrel carried by said platen roller and movable relatively thereto, a spring for shifting said platen roller relatively to said barrel, a clamping flange carried by said barrel and adapted, upon movements of said barrel, to press said ratchet against said platen roller, a rocking lever in operative engagement with said barrel for the purpose of shifting said barrel relatively to said roller in order to disconnect said rack from said platen roller, and means controllable at the will of the operator for locking said rocking lever in a number of predetermined relative positions.

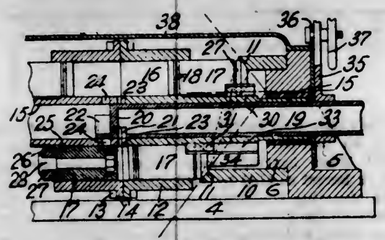
4. A device of the character described, comprising carriage members, a shaft mounted thereupon, a platen roller mounted upon said shaft and provided with a substantially cylindrical compartment, an end plate mounted upon said platen roller and disposed adjacent said compartment, said end plate being provided with a journal neck, an annular rack engaging said end plate and encircling said journal neck for the purpose of turning said roller when clamped

against said end plate, a barrel extending into said compartment and provided with a clamping flange for engaging said annular rack, a rocking lever for engaging said barrel and drawing the same slightly out of said compartment, means for normally holding said barrel at the limit of its travel within said compartment, a rocking lever engaging said barrel for the purpose of drawing it slightly outward from said barrel and thereby compressing said spring, and mechanism controllable at the will of the operator for locking said rocking lever in a number of predetermined positions.

5. A device of the character described, comprising a platen roller, an annular ratchet disposed adjacent one end of said roller and adapted to turn said roller by frictional engagement therewith, a clamping flange for pressing said annular ratchet toward said roller and thereby enabling said ratchet to turn said roller, means including a rocking lever for shifting said flange relatively to said annular rack, and an actuating lever disposed adjacent said rocking lever and provided with a lug for engaging said rocking lever, said lug having a slanting face, said actuating lever being under control at the will of the operator.

[Claims 6 to 8 not printed in the Gazette.]

1,104,539. ROTARY ENGINE. CRAVEN ROBERT ORD, McAdam Junction, New Brunswick, Canada. Filed Feb. 17, 1912. Serial No. 678,180. (Cl. 121—63.)



1. A device of the character described comprising a rotor, containing a plurality of bores forming cylinders and a plurality of counter bores of larger diameter than said cylinders, pistons adapted to reciprocate in said cylinders, cross heads on the ends of said pistons, ribs between said counter bores having guide bars thereon engaging said cross head, and thrust members engaging said pistons.

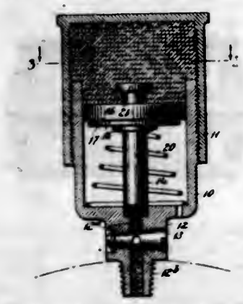
2. In a device of the character described, a rotor, a thrust block having the thrust surface thereof in the form of a truncated cone, the axis of which is parallel and eccentric to the axis of the rotor, and pistons in said rotor engaging said conical thrust surface.

3. A device of the character described comprising a rotor, containing a plurality of cylinders located axially parallel therewith, pistons reciprocating in said cylinders, thrust members adjacent the ends of the rotor, a conical roller mounted on each piston engaging said thrust members, a ball bearing between said roller and piston, guides extending from the ends of the rotor, and cross heads on the pistons engaging said guides and arranged to receive the resultant force from the piston and conical thrust surface, and to impart turning motion to the rotor.

1,104,540. GREASE-CUP. THOMAS OPIE ORGAN, Germantown, Pa. Filed Oct. 11, 1913. Serial No. 794,613. (Cl. 184—43.)

1. A grease cup, comprising a hollow body open at the upper end and having a stem depending from the bottom thereof, the said stem having an outlet bore, a discharge tube fixedly secured to the bottom of the cup in communication with the outlet bore, said tube rising in the interior of the cup, a ring follower surrounding the discharge tube and movable up and down thereon, means to cause the follower to be raised, and a cup-shaped cover forming a closure for the upper end of the cup.

2. A grease cup having a hollow body open at the top, and a securing stem depending from the bottom thereof and formed with an outlet port, a fixed discharge tube in axial alinement with the outlet port and rising in the interior of the cup, a stop nut on the upper end of the discharge tube, and a ring follower in the cup and surround



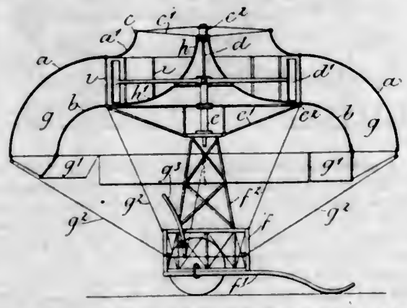
ing the discharge tube to have sliding up and down movement thereon, means for causing an upward pressure on the under side of the ring follower to cause the same to rise, and a cup-shaped cover interiorly threaded, the cup body having an external thread to receive the thread of the cover.

1,104,541. CHASER FOR CUTTING SCREW-THREADS. RICHARD M. PHELAN, Chicago, Ill., assignor of one-half to Alexander Davidson, Chicago, Ill. Filed Oct. 6, 1913. Serial No. 793,637. (Cl. 29—99.)



A chaser consisting of a body part provided with an offset at the end thereof, the face of said offset end provided with a recess and with screw threads, and the end of said offset recessed.

1,104,542. AERONAUTICAL MACHINE. JAMES ROBERTSON PORTER, Holborn, London, England. Filed Jan. 27, 1913. Serial No. 744,458. (Cl. 244—18.)



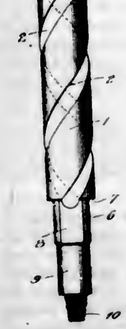
1. An aeronautical machine consisting of a framework; an outer and an inner lower wall constructed and spaced apart to form a downwardly flaring annular passageway, the lower edge of said inner wall terminating in the plane of the lower edge of said outer wall; an upper intake annular passageway formed by a continuation of said outer wall and an internal conical member having an unimpeded concave outer surface, forming a continuation of said inner wall, and providing a deflecting surface for directing the incoming air to said flaring passageway; and means for drawing in and propelling said incoming air through said passageway, substantially as described.

2. In an aeronautical machine, the combination of an outer and an inner wall constructed and spaced to provide upper and lower reversely curved annular passageways forming a continuous downwardly flaring passageway of ogee contour, having unimpeded interior deflecting surfaces, and provided with open ends terminating in planes at right angles to the major axis of said machine; means for drawing air inwardly through said upper passageway and discharging same outwardly through said lower passageway; and means controlling the discharge of air from said lower passageway at varying positions of its circumference, substantially as described.

3. In an aeronautical machine, the combination of a suitably supported outer and an inner wall constructed and spaced to provide an upper and a lower reversely curved annular chamber, forming a continuous open ended annular passageway, the upper portion of said inner wall comprising a hollow two-part conical member having an outer concave deflecting surface, a transverse space being provided between the upper and lower portions of said two-part member; a rotary driven shaft extending longitudinally within said hollow conical member; and radial arms on said shaft, provided with propeller blades operating in said upper annular chamber, substantially as described.

4. In an aeronautical machine, the combination of a suitably supported outer and an inner wall, constructed and spaced to provide an upper and a lower annular chamber, forming a continuous downwardly flaring passageway of ogee contour, said passageway having open ends disposed in planes at right angles to the major axis of the machine; rotary driven propeller blades mounted and operating in said upper annular chamber; movable closures coöperating with the lower open end of said lower annular chamber for controlling the discharge of air therethrough; and means for operating said closures at varying positions around said lower open end, substantially as described.

1,104,543. DRILLING-BIT. JOHN EDWIN PROSSER, Tulsa, Okla. Filed Oct. 7, 1913. Serial No. 793,857. (Cl. 255—64.)

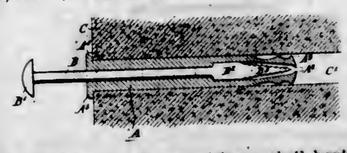


1. A drill comprising a body of approximately cylindrical form having one end reduced on opposite faces to form oppositely arranged approximately parallel surfaces, said body having a cutting edge beyond the said surfaces, and the body having spiral grooves, extending to the said surfaces, and the said surfaces being grooved longitudinally to form continuations of the spiral grooves, said body being annularly reduced at the opposite end and the grooves opening at the reduced portion, said body having a threaded shank at the end remote from the cutting edge.

2. A drill comprising a body of approximately cylindrical form having one end reduced on opposite faces to form oppositely arranged transversely parallel surfaces, and having a cutting edge beyond the said surfaces, the opposite end of the body being annularly reduced, and the body having spiral grooves extending from the annularly reduced portion to the said surfaces, the said surfaces being grooved longitudinally to form continuations of the spiral grooves.

3. A drill comprising a body of approximately cylindrical form having one end reduced on opposite faces to form oppositely arranged transversely parallel surfaces, and having a cutting edge beyond the said surfaces, the opposite end of the body being annularly reduced, and the body having spiral grooves extending from the annularly reduced portion to the said surfaces.

1,104,544. EXPANSION-NAIL. GEORGE C. RAEGER, Waterloo, N. Y. Filed Jan. 17, 1914. Serial No. 812,743. (Cl. 85—2.4.)



1. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the outer end of the shell having a head and the inner ends of the said members terminating in jaws, and a nail adapted to be placed into the said recess and having a head at its outer end and a conical inner end adapted to spread the jaws apart on driving the nail inward, the conical end of the nail being of such a length that a portion thereof remains between the jaws and holds them apart.

2. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally close together, and a nail adapted to be placed into the said recess and having a head at its outer end, the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw terminals engaging the teeth of the point to prevent return movement of the nail.

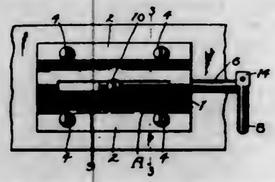
3. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally close together, and a nail adapted to be placed into the said recess and having a head at its outer end, the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw terminals engaging the teeth of the point to prevent return movement of the nail and the outer faces of the jaws being provided with sharp edges adapted to embed in the wall of the hole in which the expansion nail is used.

4. An expansion nail, comprising a shell having spaced members rigidly connected with each other intermediate the ends to form a longitudinal recess, the said recess being widened at the inner end of the shell, the outer ends of the shell members having head flanges and the inner ends of the shell members forming gripping jaws, the terminals of which are normally closed together, and a nail adapted to be placed into the said recess and having a head at its outer end, the nail head having a slot for the reception of a fence wire, the inner end of the nail being enlarged to fit into the said widened inner portion of the recess, the enlarged inner end of the nail terminating in a toothed point adapted to pass between the terminals of the jaws to spread the same apart, the jaw

terminals engaging the teeth of the point to prevent return movement of the nail.

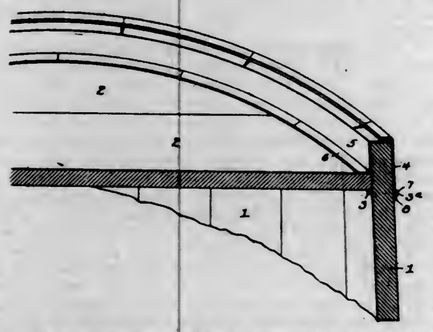
5. An expansion nail, comprising a shell having jaws at its inner end, and a nail having at its inner end an elongated enlargement terminating in a toothed point, said enlargement, when the nail is driven into the shell lying between the jaws with its point projecting beyond the said jaws.

1,104,545. SHADE AND CURTAIN-POLE BRACKET. WILLIAM J. REITZ, Southwest, Pa. Filed July 25, 1913. Serial No. 781,172. (Cl. 156—22.)



An adjustable curtain pole bracket including a guide casing formed of a single sheet of material and having an intermediate portion thereof crimped to provide a longitudinal guideway extending from end to end thereof, the said crimped portion being formed at the front thereof with a longitudinal slot and upon opposite sides thereof with rearwardly opening longitudinal grooves extending along the base thereof, a stock including arms disposed at angles to each other, one of the arms being slidable within the crimped portion of the guide casing while the other arm projects through the longitudinal slot thereof, a clamping screw passing through the slot of the guide casing and the arm of the stock, and a polygonal nut engaging the inner end of the clamping screw and having opposite sides thereof received within the before mentioned longitudinal grooves at the base of the crimped portion of the casing to lock the nut against rotation.

1,104,546. BARREL-HEAD RETAINER. EDWARD W. ROBINSON, Savannah, Ga., assignor to International Barrel Company, Savannah, Ga., a Corporation of Georgia. Filed Dec. 10, 1912. Serial No. 735,984. (Cl. 217—89.)



1. The combination of a barrel composed of staves interwoven with pairs of wires, a head resting upon the inner wire of the end pair, and a retainer of inverted U-shape in cross section, said retainer being passed over the ends of the staves and the inner member of the retainer having an inwardly projecting flange overlapping the peripheral portion of the barrel head so as to maintain said head upon its seat on the inner wire, the outer member of the retainer having thereon a hollow bead for engaging the outer wire of the end pair, and said outer member of the retainer having beyond said hollow bead a flaring flange for facilitating the engagement of said outer member of the retainer with said outer wire.

2. A barrel head retainer consisting of inner and outer members one lying against the inner faces of the staves and the other against the outer faces of the same, the inner member having an inwardly projecting flange for engaging the barrel head and said members being united by interlocked flanges at the outer corner of the retainer and being retained in rigid relation to one another by reason of said interlocked flanges.

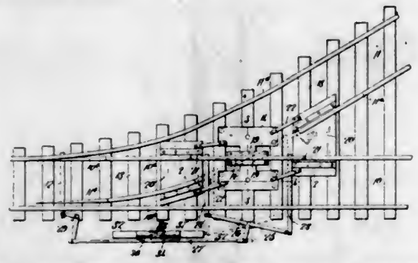
3. A barrel head retainer consisting of inner and outer members one lying against the inner faces of the staves and the other against the outer faces of the same, the inner member having an inwardly projecting flange for engaging the barrel head and said members being united by interlocked flanges located at the outer corner of the retainer and bent down upon the top of the same and being retained in rigid relation to one another by reason of said interlocked flanges.

4. A barrel head retainer consisting of inner and outer members one lying against the inner faces of the staves and the other against the outer faces of the same, the inner member having an inwardly projecting flange for engaging the barrel head, said members being united by interlocked flanges at the outer corner of the retainer, and being retained in rigid relation to one another by reason of said interlocked flanges, and the outer member of the retainer having a hollow head formed thereon for engaging a wire which constitutes part of the barrel structure.

5. A barrel head retainer consisting of inner and outer members one lying against the inner faces of the staves and the other against the outer faces of the same, the inner member having an inwardly projecting flange for engaging the barrel head, said members being united by interlocked flanges located at the outer corner of the retainer and bent down upon the top of the same, and being retained in rigid relation to one another by reason of said interlocked flanges, and the outer member of the retainer having a hollow bead formed thereon for engaging a wire which constitutes part of the barrel structure.

[Claim 6 not printed in the Gazette.]

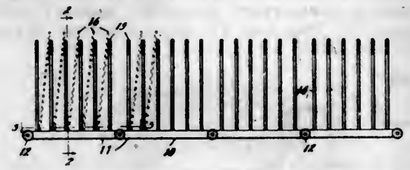
1,104,547. SWITCH. WILLIAM R. ROSS, Morrisdale, Pa. Filed Aug. 21, 1912. Serial No. 716,252. (Cl. 104—119.)



1. A railway switch comprising a plate supported by the ties at the intersection of the inner rail of the main track and the inner rail of the branch track, a second plate superposed upon and pivotally connected with the middle portion of the first mentioned plate and to one of the ties to which the first named plate is secured, a switch rail section mounted upon the second plate and adapted to turn with the latter and movable to aline with the inner rail of the main track or the inner rail of the branch track, plates disposed in rear and in advance of said first mentioned plates and secured to the rigid portions of the inner rail of the main track and the inner rail of the branch track and having their opposed edges formed with projecting ends adapted to be engaged by the said switch rail section to limit the throw of the switch rail section and retain the same in alinement with either the inner rail of the main track or the inner rail of the branch track, a pair of bars having pivotal connection with the underface of the base of said switch rail section at points adjacent the terminal portions thereof and means connected with said bars for causing the operation of said switch rail section.

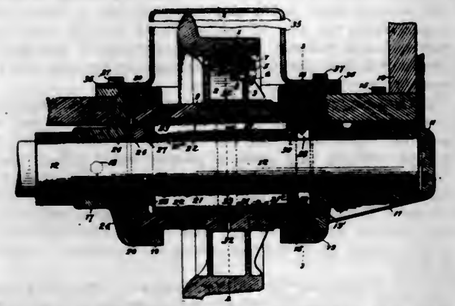
2. A railway switch comprising a plate supported by the ties at the intersection of the inner rail of the main track and the inner rail of the branch track, a second plate pivotally supported by the first named plate and one of the ties to which the said first named plate is secured, a switch rail section mounted to turn with the second plate and movable to aline with the inner rail of the main track or inner rail of the branch track, a plate secured in rear and in advance of the first mentioned plate and secured to the rigid portions of the inner rail of the main track and the inner rail of the branch track and having projecting ends adapted to be engaged by the said switch rail section to limit the throw of the switch rail section and retain the same in alinement with either the inner rail of the main track or the inner rail of the branch track, means interconnecting the first mentioned plate with the plates disposed in rear and in advance thereof, a pair of bars having pivotal connection with the said switch rail section at points adjacent the terminal portions thereof, said bars being extended beneath the latter mentioned means and terminating beyond one of the main rail sections, and means connected with the terminal portions of said bars for causing the operation of said switch rail section.

1,104,548. CONVEYER FOR SHEETS OF MATERIALS. FRANK RUDOLPHI, Montclair, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 9, 1912. Serial No. 682,589. (Cl. 193—2.)



A conveyer adapted to carry sheets of material comprising, in combination, a chain having spaced, parallelly arranged links arranged in pairs, supporting means for said chain, and a plurality of members extending between each pair of links, each of said members comprising an inverted, substantially U shaped member whereby a plurality of sheets are adapted to be supported by each pair of links of the chain and retained by said members separated from each other, the horizontal portion of the U shaped members serving to form a support for the middle portions of the sheets.

1,104,549. MINING-CAR WHEEL. HUGH W. SANFORD, Knoxville, Tenn. Filed Apr. 28, 1914. Serial No. 834,973. (Cl. 105—67.)



1. In a car construction, the combination of a rotatable axle having an abutment thereon, a wheel sleeved upon the axle having an inner hub portion to contact with said abutment, and the outer end of the axle projecting through the hub, and means for retaining the wheel in place on the axle comprising a pedestal member adapted to be detachably secured to the frame of the car, said pedestal member being sleeved upon the end of the axle and having an enlarged inner end sleeved upon the outer end of the hub of the wheel.

2. In a car construction, the combination of a rotatable axle having an abutment thereon, a wheel sleeved upon the axle having an inner hub portion to contact with said abutment, and the outer end of the axle projecting through the hub, and means for retaining the wheel in place on the axle comprising a pedestal member adapted to be detachably secured to the frame of the car, said pedestal member being sleeved upon the end of the axle and having an enlarged inner end sleeved upon the outer end of the hub of the wheel, and a metallic washer interposed between the outer end of the axle and the reduced portion of the pedestal member.

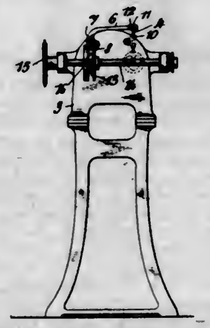
3. In a car wheel, the combination of a rotatable axle, a wheel having a hub fixed thereto sleeved upon the axle, the body portion of the hub being spaced from the periphery of the axle whereby to form a chamber, means for substantially closing the ends of said chamber, an oil duct leading into said chamber through the hub substantially midway of the ends of the latter, and means for supporting the wheel in place comprising a pedestal member sleeved upon the outer end of the axle and having a portion loosely engaging the outer end of the wheel hub.

4. In a mining car wheel, an axle, a wheel having a hub loosely positioned on the axle, a bearing for the axle outside of the wheel, an oil reservoir in the wheel, the hub of the wheel having an opening therethrough communicating with the oil reservoir and with said axle, longitudinally extending bearing rollers interposed between the hub of the wheel and the axle, the wheel hub having at one end an annular flange forming a housing for one end of the rollers, and a cup washer at the outside end of the hub forming a housing for the opposite end of the rollers.

5. In a car wheel, the combination of a rotatable axle, a wheel having a hub fixed thereto sleeved upon the axle, the body portion of the hub being spaced from the periphery of the axle whereby to form a chamber, elongated roller bearings in said chamber, means for substantially closing the ends of said chamber, an oil duct leading into said chamber through the hub, substantially midway of the ends of the latter, and means for supporting the wheel in place comprising a pedestal member sleeved upon the outer end of the axle and having a portion loosely engaging the outer end of the wheel hub.

[Claims 6 to 15 not printed in the Gazette.]

1,104,550. JACQUARD-CARD-PUNCHING MACHINE. HIPPOLYT SAURER, Arbon, Switzerland. Filed Feb. 27, 1913. Serial No. 750,952. (Cl. 164—114.)



1. In a jacquard card punching machine, a drum, means for rotatively setting the drum according to the manner in which the card is to be punched, a cam rigidly connected with the drum, and means for exerting pressure in a radial direction upon the track of the cam for the purpose of returning the drum to the zero position.

2. In a jacquard card punching machine, a plurality of drums, means for rotatively setting the drums according to the manner in which the card is to be punched, a cam rigidly connected with each drum, and means for exerting pressure in a radial direction upon the tracks of the cams for the purpose of returning the drums to the sero position.

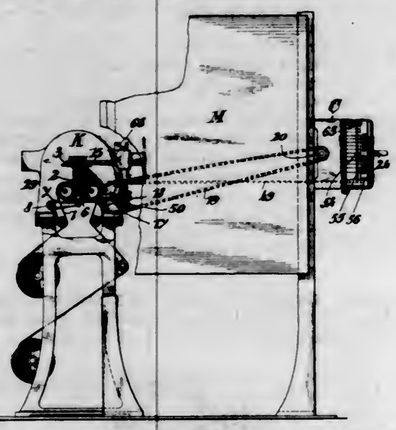
3. In a jacquard card punching machine, a plurality of drums, means for rotatively setting the drums according to the manner in which the card is to be punched, a heart-cam rigidly connected with each drum, and means for exerting pressure in a radial direction upon the track of the cams, for the purpose of returning the drums to the zero position.

4. In a jacquard card punching machine, a plurality of drums, means for rotatively setting the drums according to the manner in which the card is to be punched, a heart-cam rigidly connected with each drum, lever mechanism adapted to exert pressure in a radial direction upon the tracks of the cams, and means for actuating the said mechanism, for the purpose of returning the drums to the zero position.

5. In a jacquard card punching machine, a plurality of drums, means for rotatively setting the drums according to the manner in which the card is to be punched, a heart-cam rigidly connected with each drum, a lever carrying two rollers, one located above the track of each cam, and means for actuating the said lever, whereby the rollers are pressed upon the cam tracks in a radial direction, for the purpose of returning the drums to the zero position.

[Claim 6 not printed in the Gazette.]

1,104,551. MACHINE FOR PUNCHING JACQUARD-CARDS. HIPPOLYT SAURER, Arbon, Switzerland. Filed July 29, 1913. Serial No. 781,712. (Cl. 164—111.)



1. In a machine for punching jacquard cards, the combination of a punch-selecting device, means for operating said device, an indicating device and transmitting mechanism whereby the indicating device is moved to a position of rest with the movement of the selecting device.

2. In a machine for punching jacquard cards, the combination of a punch-selecting device, selective means for shifting said device to different positions, a series of indicating devices corresponding to the several positions of the punch-selecting device, a driver adapted to be moved with the movement of said shifting means into operative relation with the corresponding indicating device, and transmitting mechanism whereby the driver is actuated with the movement of the selecting device.

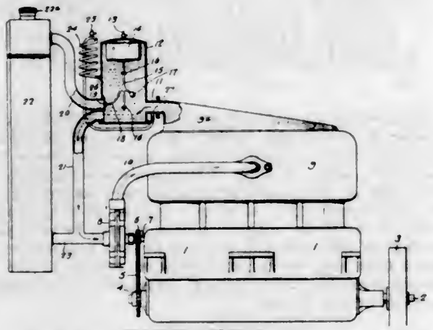
3. In a machine for punching jacquard cards, the combination of a punch-selecting device, selective means for shifting said device to different positions, a series of indicating disks, a shaft parallel with the series of disks and adjacent thereto, a driver mounted to slide on said shaft and to rotate therewith and adapted to engage operatively one or another of said disks, connections whereby the driver is shifted by the operation of the selective means into operative relation with one or another of said disks, and transmitting mechanism whereby the shaft is actuated with the movement of the punch-selecting device.

4. In a machine for punching jacquard cards, the combination of a punch-selecting device, selective means for shifting said device to different positions, an indicating disk, a transmitting disk reversely geared to the first disk, a driver adapted to be moved with the movement of said shifting means into operative relation with the first named disk or with the transmitting disk, and transmitting mechanism whereby the driver is actuated in one direction with the movement of the selecting device.

5. In a machine for punching jacquard cards, the combination of a punch-selecting device, selective means for shifting said device to different positions, an indicating disk, a transmitting disk reversely geared to the first disk, a shaft parallel with the axes of said disks and adjacent thereto, a driver mounted to slide on said shaft and to rotate therewith and adapted to engage operatively either the indicating disk or the transmitting disk, connections whereby the driver is shifted on the shaft by the operation of the selecting means into operative relation with one or the other of said disks, and transmitting mechanism whereby the shaft is actuated with the movement of the punch-selecting device.

[Claims 6 to 9 not printed in the Gazette.]

1,104,552. AUTOMATIC RADIATING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. EUGENE A. SAYRE, Elgin, Ill. Filed Jan. 31, 1912. Serial No. 674,431. (Cl. 123—174.)



1. In a radiating system for internal combustion engines, the combination of an engine having a jacket, a radiator, pipes connecting the radiator and the jacket, a by-pass between said pipes, a cooling liquid for circulation through said jacket and said radiator, a valve for proportioning the flow of cooling liquid through said by-pass and said radiator, and means operated by the vapor pressure of the cooling liquid for controlling the movement of the valve.

2. In a radiating system for internal combustion engines, the combination of an engine having a jacket, a radiator, pipes connecting the radiator and the jacket, a by-pass between said pipes, a cooling liquid for circulation through said jacket and said radiator, a pressure chamber for receiving the vapors of the cooling liquid, a closure for said by-pass and one of the pipes leading to the radiator, and means operated by the vapor pressure of the cooling liquid for controlling the movement of said closures.

3. In a radiating system for internal combustion engines, the combination of an engine having a jacket, a radiator, pipes connecting the radiator and the jacket, a by-pass between said pipes, a cooling liquid for circulation through said jacket and said radiator, a pressure chamber for receiving the vapors of the cooling liquid, a closure for said by-pass and for one of the pipes leading to the radiator, both of said closures being on a common movable operating rod, the movement of said rod serving to open one of said closures and to close the other, and means operated by the vapor pressure of the cooling liquid for controlling the movement of the rod.

4. In a radiating system for internal combustion engines, the combination of an engine having a jacket, a radiator, pipes connecting the radiator and the jacket, a by-pass between said pipes, a cooling liquid for circulation through said jacket and said radiator, and means operated by the vapor pressure of the cooling liquid for proportioning the flow of cooling liquid through said by-pass and said radiator.

5. In a radiating system for internal combustion engines, a radiator adapted to receive a cooling liquid, a jacket inclosing the cylinder of the engine, connections establishing communication between the top of the jacket and the top of the radiator, connections establishing communication between the bottom of the radiator and the jacket, a by-pass between the connections at the top and bottom of the radiator, a pump for causing a circulation of the cooling medium through the jacket, the radiator and the by-pass and thermostatic means dependent on the vapor pressure of the cooling medium for automatically controlling the flow of the cooling medium through the radiator and the by-pass.

[Claims 6 to 8 not printed in the Gazette.]

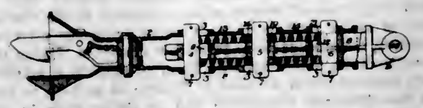
1,104,553. SAFETY BABY-HAT. ANTONINO SCATURRO, New York, N. Y. Filed June 30, 1913. Serial No. 776,725. (Cl. 2—106.)



1. In a device of the class described, a crown, a band secured to the lower edge of the crown, a screen wire shield depending from the band and shaped to produce an annular ellipsoidal protuberance, a reinforcing band at the lower end of the shield, and means connected to the lower end of the band for securing the hat to the head of the wearer.

2. A device of the class described comprising a crown, a band secured to the lower portion of the crown, an annular ellipsoidal elastic screen connected to the band, a second band secured to the lower edge of said screen and a chin elastic connected to the lower band.

1,104,554. DRAFT-RIGGING. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 29, 1910. Serial No. 594,690. (Cl. 213—42.)

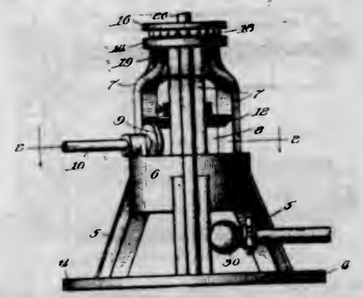


1. In a draft rigging, a plunger member adapted to be connected to a car frame, a draft member having coupling means at its forward end and provided with a casing portion at its rear end portion which telescopes over the plunger member, a plurality of keys connecting said members, the members being slotted to permit endwise movement of the draft member, and a plurality of springs arranged in tandem and within said casing portion and provided with bearings whereby they sustain both buffing and pulling stresses, one bearing of each spring being carried by the plunger and the other bearing of each spring being carried by the draft member substantially as described.

2. In a draft rigging, a plunger member adapted to be pivotally connected to a car frame, a draft member having a casing portion telescoping over the plunger member and arranged to swing therewith, three keys extending through the casing portion of the draft member and the plunger member, the casing portion and plunger member having elongated slots to receive the front and rear keys, and the casing portion only having an elongated slot to receive the intermediate key, two springs seated within the casing portion between the keys, the forward spring having a rigid bearing on the plunger member at its forward end and the rear spring having a rigid bearing on the plunger member at its rear end, and bearings for the inner ends of the springs seated against the intermediate key, substantially as described.

3. In a draft rigging, a plunger member adapted to be connected to a car frame, a draft member provided with coupling means and having a casing portion fitting telescopically over the plunger member, a forward key extending through the draft and plunger members and normally fixed against forward movement, but capable of rearward movement, a rear key also extending through the draft and plunger members and normally held against rearward movement but capable of forward movement, an intermediate key member connecting the plunger and draft members and held against both forward and rearward movement, springs arranged in tandem within the casing portion of the draft member, the rear spring having at all times a bearing against the rear key at its rear end and the forward spring having at all times a bearing upon the forward key at its forward end, and followers forming abutments for the adjacent ends of said springs, said followers seating against the intermediate key and having a movable engagement with the draft member, substantially as described.

1,104,555. BASE FOR BOTTLE-FILLING MACHINES. ADOLPH SCHNEIDER, Chicago, Ill., assignor to Banning & Banning, Chicago, Ill., a Firm composed of Thomas A. Banning, Samuel W. Banning, and Walker Banning. Filed May 16, 1911, Serial No. 627,421. Renewed Sept. 5, 1913. Serial No. 788,324. (Cl. 226—15.)



1. A base for filling machines comprising an open work supporting standard, a chambered web formed integral with said standard and extending transversely across said standard, a sleeve for the conduction of air mounted in said web, a packed joint at the juncture of said web and sleeve, a tube for conducting liquid, said tube being of smaller diameter than the interior of said sleeve and lying within said sleeve and extending through said web, substantially as described.

2. A base for filling machines comprising an open work supporting standard, a chambered web formed integral with said standard and extending transversely across said standard, a sleeve for the conduction of air mounted in said web, a packing for the upper face of said web to prevent leakage at the juncture of the sleeve and web, a tube for conducting liquid, said tube being of smaller diameter

than the interior of said sleeve and lying within said sleeve, and a packing on the under face of said web to prevent leakage at the juncture of the web and pipe, substantially as described.

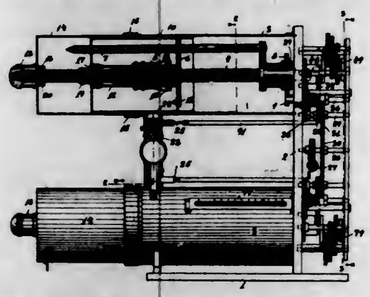
3. A base for filling machines comprising open work supporting members, a web fixedly secured to said supporting members and extending transversely between the supporting members, a chamber centrally located within said web, a sleeve mounted in said web and terminating above said chamber, a connection between said chamber and the source of air supply, a tube within said sleeve of smaller diameter than the interior of said sleeve, said tube being mounted in that portion of the web below said chamber, substantially as described.

4. A base for filling machines, comprising an openwork supporting standard, a chambered web fixedly secured to said standard and extending transversely across said standard, a sleeve for the conduction of air mounted in said web, a packed joint at the juncture of said web and sleeve, a chamber within said web communicating with the interior of said sleeve, a connection from a source of pressure supply entering said chamber, a tube for conducting liquid, said tube being located within said sleeve and of smaller diameter than the interior of said sleeve, means for locking said tube in said web, and a connection between said tube and a source of liquid supply, substantially as described.

5. A base for filling machines comprising a web extending transversely across said base, a series of separated supporting standards extending downwardly from said web to which said web is fixedly secured, a series of separated supporting standards extending upwardly from said web, a sleeve mounted in said web, a tube within said web, a chamber centrally located in said web and lying intermediate the lower termini of the sleeve and pipe, a gear secured to said sleeve, a driving gear meshing with the first mentioned gear, said latter gear lying within the spaces between the upwardly extending standards and having a bearing in said web, substantially as described.

[Claim 6 not printed in the Gazette.]

1,104,556. PHOTOGRAPHIC RECORDING APPARATUS. CARL SCHOU, Holte, Denmark. Filed Jan. 6, 1913. Serial No. 740,356. (Cl. 234—1.)



1. An automatic recording apparatus for the photographic recording of signals comprising two drums each adapted to receive a sensitive film, means for rotating each of said drums on its axis and simultaneously displacing it longitudinally forwardly and backwardly therealong, means for dividing and reflecting part of a light-beam against each of said drums, and means for cutting off the light to each of them during their respective backward movements.

2. An automatic recording apparatus for the photographic recording of signals comprising two drums each adapted to receive a sensitive film, means for rotating each of said drums on its axis and simultaneously displacing it longitudinally forwardly and backwardly therealong, means for dividing and reflecting part of a light-beam against each of said drums, a focusing screen placed a determined distance from the object whose movements are to be recorded which distance is such that images will be produced on the said drum and the said screen simultaneously, and means for cutting off the light to each of said drums during its backward movement.

3. An automatic recording apparatus for the photographic recording of signals comprising two drums, each adapted to receive a sensitive film, means for rotating each of said drums and for simultaneously displacing it longitudinally forwardly and backwardly therealong, means for controlling the rotation of each of said drums each of said last-named means comprising a spring actuated part having two spring members adapted to exert their tensions in opposite directions, connections operatively associated with said drum for placing one of said members under tension during the forward travel of said drum and the other of said members under tension during the backward travel of said drum, mechanism actuated by said actuated part for reversing and stopping said drum, said spring-actuated part acting under its own tension for controlling the reversing of the rotation of the drum at the end of the forward travel of the same, a stop co-acting with said spring-actuated part for controlling the stopping of said drum at the end of the backward travel of the same, and means actuated by the other of said drums for releasing said spring actuated part from said stop to permit said part to again act under its own tension to control the starting of the drum on its forward travel.

1,104,557. MANUFACTURE OF METALLIC FILAMENTS FOR ELECTRIC INCANDESCENT LAMPS. JAMES ALEXANDER SCOULAR, Hammersmith, London, England, assignor to Dick, Kerr & Company, Limited, London, England. Filed Mar. 14, 1913. Serial No. 754,346. (Cl. 176—132.)

1. The herein described process for the manufacture of tungsten filaments for incandescent electric lamps which consists in intimately mixing tungsten powder with a small proportion of sodium silicate solution in the viscous form so as to produce a paste, squirting the said paste to form raw filaments and subjecting the raw filaments to heat so as to render them conductive and to cause them to sinter into finished metallic tungsten filaments.

2. The herein described process for the manufacture of tungsten filaments for incandescent electric lamps which consists in intimately mixing tungsten powder with a small proportion of sodium silicate solution in the viscous form so as to produce a paste, calendering the mixture, squirting the said paste to form raw filaments, and subjecting the raw filaments to heat so as to render them conductive and to cause them to sinter into finished metallic tungsten filaments.

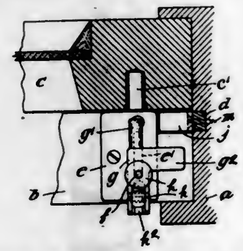
3. The herein described process for the manufacture of tungsten filaments for incandescent electric lamps which consists in intimately mixing tungsten powder with a small proportion of sodium silicate solution in the viscous form so as to produce a paste, calendering the mixture, squirting the said paste to form raw filaments, drying the raw filaments and rendering the same conductive by baking, and thereafter subjecting the baked filaments to a high temperature in an inert atmosphere so as to sinter them into finished metallic tungsten filaments.

4. The herein described process for the manufacture of tungsten filaments for incandescent electric lamps, which consists in intimately mixing tungsten powder with a small proportion of sodium silicate solution in the viscous form so as to produce a paste, calendering the mixture, squirting the said paste to form raw filaments, drying the raw filaments, and subjecting them to heat in a suitable inert atmosphere in an electric furnace so as both to render the filaments conductive and to sinter them in one operation.

5. The herein described step in the process for the manufacture of tungsten filaments for incandescent electric lamps by the squirting process which consists in producing a squirtable paste by intimately mixing tungsten powder with a small proportion of a viscous solution of sodium silicate.

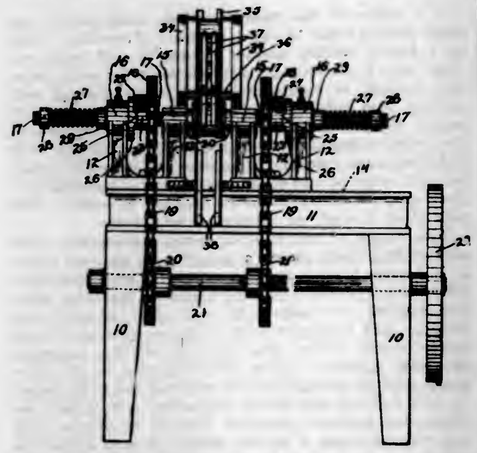
[Claim 6 not printed in the Gazette.]

1,104,558. WINDOW-LOCK. GERARD T. SEGER, Revere, Mass. Filed Dec. 31, 1913. Serial No. 809,773. (Cl. 16—52.)



In combination with a window casing having a parting bead and upper and lower window sashes movable at opposite sides of said parting bead, a base plate mounted on the upper end of said lower sash, and having a slot extending perpendicularly with relation to said upper sash, a screw movably mounted in said slot, a locking bolt adapted to be held either side up on said plate and through which said screw is passed, a nut on said screw for clamping said bolt to said plate, said bolt having an end portion, extending longitudinally with relation to said slot, and a transversely extending side portion, said end and side portions being respectively arranged to engage the upper sash and the parting bead when the bolt is moved toward said upper sash, and said bolt having oppositely disposed projections arranged to engage said plate and lock said bolt against longitudinal movement in either of its positions of use, substantially as described.

1,104,559. MACHINE FOR PERFORMING OPERATIONS ON THE ENDS OF CAN-BODIES. LEE C. SHARP, Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed June 18, 1900, Serial No. 502,861. Renewed Dec. 7, 1912. Serial No. 735,541. (Cl. 153—21.)



1. In a machine for forming flanges on can bodies, the combination of an inclined chute, a yielding guide finger over the chute, said chute and guide finger adapted to carry a row of cans, a reciprocating die and means for allowing the can bodies successively to engage the die, said die fitting within the end of the can body and simultaneously engaging its entire circumference and acting to form a continuous flange around the whole circumference of the can body at the same time by the movement of the die in the direction of the axis of the can.

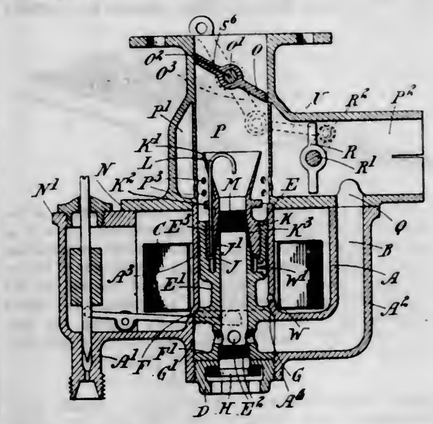
2. In a machine for making cans, the combination of a frame having a table and supports therefor with a reciprocating flanging die having a surrounding limiting wall for the flange to abut against, a rotating shaft carrying it, a sprocket wheel attached to said shaft, a drive shaft in the frame below the table, a sprocket wheel attached thereto and a chain run over said sprockets and having its runs at opposite sides of the table, said die fitting within the end of the can body and simultaneously engaging its entire circumference and acting to form a continuous flange around the whole circumference of the can body at the same time by the movement of the die in the direction of the axis of the can.

3. In a can-body flanging machine, the combination of a pair of opposing flanging heads, each head having a portion of its inner side extended a substantial distance to form a segmental rest to receive and support the can-body, and each head having also in its inner face an annular groove with a tapering portion rigid with the head and projecting from the inner wall of said groove, said tapering portion being adapted to enter the open end of the can-body and the groove being adapted to form the flange on said end, and means for moving the heads toward and from each other.

4. In a can-body flanging machine, the combination of a pair of opposing flanging heads, each head having a portion of its inner side extended a substantial distance to form a segmental rest to receive and support the can-body, and each head having also in its inner face an annular groove with a tapering portion rigid with the head and projecting from the inner wall of said groove, said tapering portion being adapted to enter the open end of the can-body, and the groove being adapted to form the flange on said end, means for delivering the can to the heads, means for revolving said heads, and means called into action by the revolution of the heads for forcing them toward and from each other.

5. In a can-body flanging machine, means for extracting the flanged body from the groove in which the flange is formed, including reciprocating flanging heads carrying semi-circular rests, a shoulder formed in the semicircular rests adapted to engage a flange on the can-body and hold said body from further movement relative to the flange engaging rest until the other end is drawn out of its head.

1,104,560. CARBURETER. REGINALD HOFFGAARD SHOOBRIDGE and ARTHUR FREDERICK GUNSTONE, Bath, England. Filed Jan. 11, 1913. Serial No. 741,518. (Cl. 48—156.)



1. In a carbureter, a feeding chamber in communication with a source of liquid hydrocarbon, a carbureting chamber in communication with an air supply, capillary means comprising ribs arranged side by side to form unbroken capillary passages therein-between to constitute a member in which such passages run longitudinally of the same for transferring hydrogen from said feeding to said carbureting chamber, and means for equalizing the pressure between the two chambers.

2. In a carbureter, a feeding chamber in communication with a source of liquid hydrocarbon, a carbureting chamber, an air duct leading to said mixing chamber, a conical capillary member adjustably secured in said feeding chamber and projecting into said duct to provide a constricted passage for the air, said member being provided with ribs arranged side by side to form the capillary passages therein longitudinally of the same, and equalizing means arranged between said feeding and carbureting chambers to neutralize the effect produced by the suction of the engine.

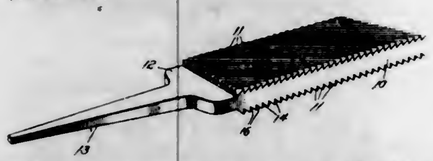
3. In a carbureter, a hydrocarbon reservoir, a feeding chamber supplied from said reservoir, a carbureting chamber, an air duct leading to said carbureting chamber, capillary means comprising ribs arranged side by side to form unbroken capillary passages therein-between to constitute a member in which such passages run longitudinally of the same for transferring hydrocarbon from said feeding to said carbureting chamber, an auxiliary duct traversing the body of the throttle valve and communicating with said reservoir and adapted to deliver hydrocarbon through the body of the throttle valve to the engine on throttling of the throttle valve, and an air supply in said duct for vaporizing the hydrocarbon before delivery to the cylinders.

4. In a carbureter, a hydrocarbon reservoir provided with an opening therethrough, a hollow core fitted in the opening, an air duct communicating with the interior of said core, a cup carried by said core constituting an annular feeding chamber in communication with said reservoir, and a capillary member supported in said cup and projecting beyond the end of said core, said member being provided with ribs arranged side by side to form the capillary passages therein longitudinally of the same.

5. In a carbureter, a hydrocarbon reservoir provided with an opening therethrough, a hollow core removably fitted in the opening and provided with a conical upper end, a cup formed on said core and providing with the conical upper end an annular feeding chamber in communication with said reservoir, a conical capillary member mounted over the upper end of said core and projecting therebeyond, said member being provided with ribs arranged side by side to form the capillary passages therein longitudinally of the same, and an air supply in communication with the interior of said core.

[Claims 6 to 8 not printed in the Gazette.]

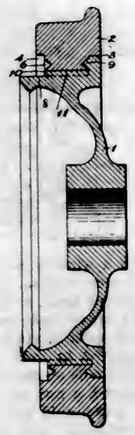
1,104,561. FILE. OLIVER GEORGE SIMMONS, Philadelphia, Pa. Filed July 1, 1913. Serial No. 776,781. (Cl. 29—78.)



In a file of the class set forth, a body having a series of parallel teeth arranged along one surface thereof at an angle of approximately 30 degrees to the longitudinal axis of the body, each tooth having a smooth sharp milled cutting edge unbroken from one edge of the file to the other and having its cutting face consisting of a plane substantially perpendicular to said body surface, the rear face of each tooth constituting a plane meeting said cutting face in an angle of substantially 30 degrees.

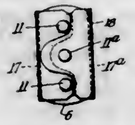
1,104,562. CAR-WHEEL. JOHN SLATTERY, Chrome, N. J. Filed Feb. 10, 1914. Serial No. 817,829. (Cl. 105—159.)

In a wheel of the character described, a shoe provided with an internal annular flange, the sides of said flange being offset inwardly from the sides of the shoe and formed on the sides with V-shaped grooves, a body arranged in said shoe provided with a peripheral bearing surface fitting against the inner surface of said flange, a radial flange having a V-shaped bead extending normal thereto for fitting into one of the grooves in said annular flange, and a horizontally extending bendable flange, said bendable flange being adapted to be forced over against the flange on said shoe and into the V-shaped groove therein, whereby the shoe and the body are clenched to-



gether, and key members connecting said body and said shoe for preventing a rotation of the shoe independent of the body.

1,104,568. SAFETY RIPPER AND CASE. HENRY ADALBERT SMITH, Elgin, Ill. Filed Feb. 18, 1914. Serial No. 818,530. (Cl. 30—14.)



1. A device of the class described, comprising a two edged cutting blade having a plurality of openings therein, a flexible holding member secured to said blade provided with a plurality of complementary fastening members adapted to engage with each other through said opening, said holding member being so positioned with respect to the cutting edge as to be out of engagement therewith, a flexible folded shield adapted to slip over and protect the exposed cutting edge and means for securing said shield to said device, said means comprising complementary fastening members adapted to engage with each other through an opening in said blade.

2. A device of the class described, comprising a two edge cutting blade having a plurality of openings therein, a flexible holding member secured to said blade provided with a plurality of complementary fastening members adapted to engage with each other through said opening, said holding member being so positioned with respect to the cutting edge as to be out of engagement therewith, a flexible folded shield adapted to slip over and protect the exposed cutting edge and means for securing said shield to said device, said means comprising complementary fastening members adapted to engage with each other through a central opening in said blade, the means for securing said blade being so positioned as to bring the edge of the shield out of engagement with the cutting edge it protects.

1,104,564. HAND-STAMP. CURTISS EUGENE SNYDER, South Valley, N. Y. Filed Feb. 7, 1914. Serial No. 817,285. (Cl. 101—58.)

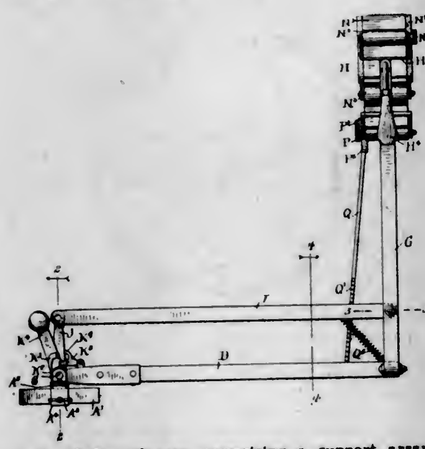
A hand-stamp comprising a die having mounted thereon a projecting lug having a central passage, a block mounted in the passage and having a curved upper surface, the walls of the passage being extended above the curved surface of said block and curved therefrom and

defining therewith a socket, a stock having a spherical head mounted in the socket so that the die is adapted for



rocking movements on the stock, and a spring between the stock and the die.

1,104,565. WINDOW-CLEANER. LEO SONDEREGGER, New York, N. Y., assignor of one-half to William Meyer, New York, N. Y. Filed May 2, 1913. Serial No. 765,061. (Cl. 15—59.)



1. A window cleaner, comprising a support arranged for attachment to a window sill, a spring-pressed shaft arranged to extend transversely of the window sill and journaled on the said support, inner and outer bars attached to the said shaft, inner and outer wiper arms pivotally connected with the outer ends of the said bars, a sleeve mounted concentrically relative to the said shaft and provided with integral arms, inner and outer links connecting the said wiper arms with the said sleeve arms, and wipers held on the free ends of the said wiper arms.

2. A window cleaner, comprising a support arranged for attachment to a window sill, a spring-pressed shaft arranged to extend transversely of the window sill and journaled on the said support, inner and outer bars attached to the said shaft, inner and outer wiper arms pivotally connected with the outer ends of the said bars, a sleeve mounted concentrically relative to the said shaft and provided with integral arms, inner and outer links connecting the said wiper arms with the said sleeve arms, wipers held on the free ends of the said wiper arms, a handle on the said inner wiper arm, and manually-controlled mechanism connected with the said outer wiper arm for imparting a transverse swinging movement to the said outer wiper arm.

3. A window cleaner, comprising a support arranged for attachment to a window sill, a spring-pressed shaft arranged to extend transversely of the window sill and journaled on the said support, inner and outer bars attached to the said shaft, inner and outer wiper arms pivotally connected with the outer ends of the said bars, a sleeve mounted concentrically relative to the said shaft and provided with integral arms, inner and outer links connecting the said wiper arms with the said sleeve arms, wipers held on the free ends of the said wiper arms, a handle on the said inner wiper arm, a flexible connection connected with the said outer wiper arm, guides on the said outer bar for guiding the said flexible connection, a cam to which the said flexible connection is attached, a cam sleeve mounted to turn on the said shaft and carrying the said cam, and a handle for operating the said cam sleeve.

4. A window cleaner, comprising a support arranged for attachment to a window sill, a spring-pressed shaft arranged to extend transversely of the window sill and journaled on the said support, inner and outer bars attached to the said shaft, inner and outer wiper arms pivotally connected with the outer ends of the said bars, a sleeve mounted concentrically relative to the said shaft and provided with integral arms, inner and outer links connecting the said wiper arms with the said sleeve arms, wipers held on the free ends of the said wiper arms, a handle on the said inner wiper arm, a flexible connection connected with the said outer wiper arm, guides on the outer bar for guiding the said flexible connection, a cam to which the said flexible connection is attached, a cam sleeve mounted to turn on the said shaft and carrying the said cam, a handle loose on the said cam sleeve, a pawl on the said handle, and a ratchet wheel secured on the said cam sleeve and engaged by the said pawl.

5. A window cleaner, comprising a support arranged for attachment to a window sill, a spring-pressed shaft arranged to extend transversely of the window sill and journaled on the said support, inner and outer bars attached to the said shaft, inner and outer wiper arms pivotally connected with the outer ends of the said bars, a sleeve mounted concentrically relative to the said shaft and provided with integral arms, inner and outer links connecting the said wiper arms with the said sleeve arms, and wipers held on the free ends of the said wiper arms, each wiper having a rubbing plate, an endless wiping web passing over the said plate and winding up and unwinding rollers on which winds and unwinds the said web.

[Claims 6 to 9 not printed in the Gazette.]

1,104,566. FOUNTAIN-PEN. RUTER W. SPRINGER, Springfield, Ill. Filed Jan. 17, 1906. Serial No. 296,500. (Cl. 120—48.)



1. A three pointed writing pen, having two ordinary flexible nibs, whose writing points are in the same hori-

zontal plane, and adapted to spread apart when pressed on a writing surface, and having a third nib with its point in the same vertical plane with the junction of the first two nibs.

2. A three-pointed pen, having two ordinary flexible nibs, with their writing points in the same horizontal plane, and adapted to spread apart when pressed on a writing surface, and having the third nib above them.

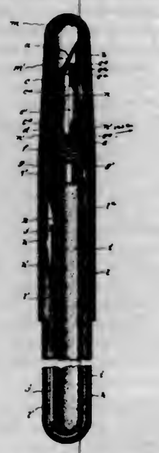
3. A three-pointed pen, having three nibs so arranged with reference to one another that the planes separating adjacent nibs intersect each other adjacent to the point of the pen whereby when pressed upon a writing surface their points will spread in different directions upon the writing surface.

4. A three-pointed writing pen, having two ordinary flexible nibs with their writing points in the same plane below, and the third nib approaching them at an angle from above.

5. A three-pointed pen, having two ordinary flexible nibs with their writing points in the same horizontal plane, and having the third nib above the other two, combined with an open tubular body.

[Claims 6 to 13 not printed in the Gazette.]

1,104,567. FOUNTAIN-PEN. RUTER W. SPRINGER, Springfield, Ill. Original application filed Jan. 18, 1906, Serial No. 296,500. Divided and this application filed Aug. 16, 1906. Serial No. 330,843. (Cl. 120—46.)

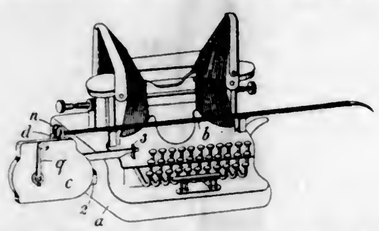


1. A self-filling fountain pen having a handle containing an ink-retaining collapsible tube from which ink is supplied to the writing point, a door capable of yielding to pressure, in the outer portion of the handle, and bearing upon the said ink-retaining tube so that when pressed inwardly it collapses the tube, in combination with a self-closing air-tight valve adapted to cut off communication between the ink-retaining tube and the writing point when after the pen has been filled the said door is pressed inward to collapse the tube, and means under the control of the user for positively holding the valve open when desired.

2. A self-filling fountain pen, having a handle containing an inner ink-retaining tube, and provided with an inwardly-opening door in the handle, said door being under an original strain of outward pressure, so that it will not yield until a certain specified pressure is applied.

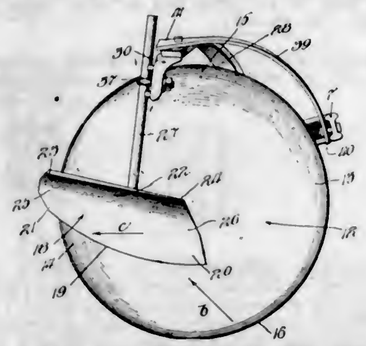
1,104,568. TAPE-COPY-HOLDER ATTACHMENT FOR TYPE-WRITERS. WILLRED STAFFORD, London, England, assignor to The Oliver Typewriter Co. Ltd., London, England, a Corporation of Great Britain. Filed Oct. 4, 1913. Serial No. 793,425. (Cl. 120—32.)

A tape copy holder attachment for type-writing machines, said attachment comprising a copy holder, a spring motor, a driving roller actuated by said spring motor for driving the tape along said copy holder, a key, a drum fixed to one of the wheels of the spring motor, projections on the periphery of said drum, a rock-shaft arranged adja-



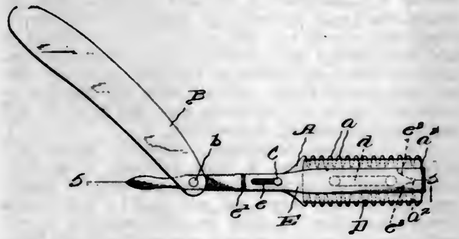
cent to said drum, oppositely arranged detent arms mounted on said rock-shaft and adapted to move into and out of engagement with the periphery of said drum and with said projections, and means for operatively connecting said rock-shaft and said key.

1,104,569. PLOW. CHARLES R. STEPHENS, Moline, Ill., assignor to The Moline Plow Company, Moline, Ill., a Corporation of Illinois. Filed Apr. 20, 1912. Serial No. 691,984. (Cl. 97—79.)



In an implement of the class described the combination with a concavo-convex disk having its concave face set toward the direction of movement, said disk being set at an angle to the line of draft and having its upper edge tilted backwardly, of a mold-board scraper set in engagement with the concave face of said disk, the lower engaging edge of said scraper being of arcuate formation, a stem rigidly connected to the scraper and extended upwardly therefrom in a direction substantially at right angles to the arcuate contact edge, a mounting for said stem to permit the stem and scraper to be set into different vertical adjustments with respect to the disk, said stem and mounting being relatively so positioned that the stem always lies at an angle with respect to the vertical and whereby the adjustments of the stem and scraper are in the direction of the length of the stem, and means permitting the lower end of the stem which carries the scraper to swing forwardly and backwardly, whereby as the stem and scraper are adjusted up and down the arcuate edge of the scraper may be maintained in contact with the concave face of the disk, the upper edge of the scraper extending forwardly away from the disk to limit the upward travel of the furrow slice along the face of the disk, said forwardly projecting portion lying substantially at right angles to the stem, whereby as the scraper is set into different up and down adjustments the arcuate edge of the scraper remains in contact with the disk, and whereby as said adjustments are secured the forwardly projecting portion of the scraper always remains tilted at an angle to the horizontal to permit the furrow slice to rise as it travels toward the edge of the disk.

1,104,570. SAFETY-RAZOR. JOSIAH PERCIVAL STEVENS, Atlanta, Ga. Filed Feb. 21, 1914. Serial No. 820,242. (Cl. 30—12.)

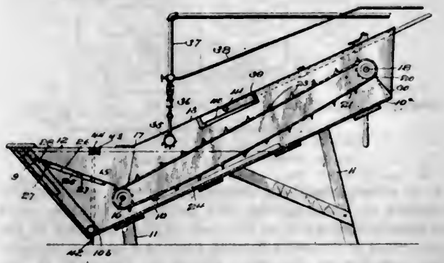


1. In a safety razor, the combination with a support for the razor blade provided with a rearwardly-projecting arm, and a handle attached to said arm, a pin attached to said rearwardly-projecting arm, means for detachably connecting said blade to the support, and a resilient clamp engaging the outer end of said arm and having a slot engaging said pin, said clamp being adapted to swing laterally about said pin and to slide longitudinally thereon, thus to release the razor blade when desired and to lock the said razor blade on said holder, substantially as described.

2. In a safety razor, the combination with a razor support provided with means for attaching the razor blade to one side thereof, a headed stud connected to said support on the same side with said razor-holding means, a lug provided on the opposite side near the outer end thereof, and a resilient clamp slotted longitudinally to engage said stud and bent over at its outer end, and provided with jaws to engage said lug, the said resilient clamp being adapted to lock said razor blade in place and to release same when desired, substantially as described.

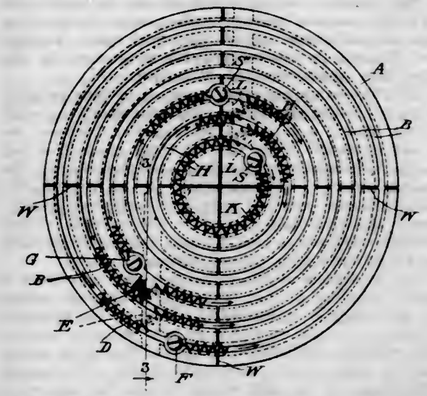
3. In a safety razor, the combination with a razor support provided with means for attaching the razor blade to one side thereof, a headed stud connected to said support on the same side with said razor-holding means, a lug provided on the opposite side near the outer end thereof, a resilient clamp slotted longitudinally to engage said stud and bent over at its outer end, and provided with jaws to engage said lug, and a thumb lug provided on the inner end of said clamp in rear of said slot, the said resilient clamp being adapted to lock said razor blade in place and to release same when desired, substantially as described.

1,104,571. SCALDING-MACHINE. WILLIAM B. STEVENS, Trappe, Md. Filed Feb. 29, 1912. Serial No. 680,647. (Cl. 146—14.)



A machine for scalding vegetables and fruit comprising a tank, a cover for said tank, an inclined conveyer within the tank under the cover, means for moving said conveyer longitudinally of said tank, a steam box supported underneath the cover and over the conveyer in said tank, said box extending across approximately the entire width of the conveyer and extending a substantial distance lengthwise of said conveyer, said box having a perforated bottom, and a pipe leading into said steam box, whereby the vegetables or fruit conveyed beneath the steam box will be exposed to an even flow of steam from the steam box through a considerable portion of the travel thereof.

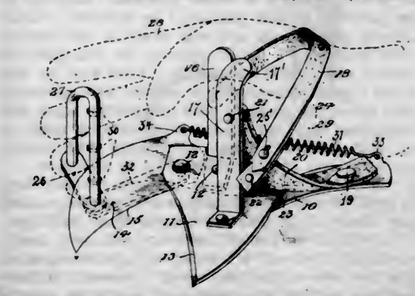
1,104,572. ELECTRIC HEATER. CLARENCE S. STEWARD, Chattanooga, Tenn. Filed Apr. 3, 1914. Serial No. 829,265. (Cl. 219—37.)



1. An electric heater comprising a single piece of steatite or other suitable material having a series of concentrically formed slots in the upper surface thereof and which slots are widened to form chambers, said chambers communicating with each other through ducts formed in the walls thereof, terminals passing through apertures in the bottoms of the ducts, the other portions of the bottoms being imperforate, coiled wires mounted in said chambers and passing through said ducts in the walls, said coils connected to the terminals and designed to receive separate circuits to regulate the degree of heat.

2. An electric heater comprising a single piece of steatite or other suitable material having a series of concentrically formed slots in the upper surface thereof and which slots are widened to form chambers, said chambers communicating with each other through ducts formed in the walls thereof, terminals passing through apertures in the bottoms of the ducts, the other portions of the bottoms being imperforate, coiled wires mounted in said chambers and passing through said ducts in the walls, said coils connected to the terminals and designed to receive separate circuits to regulate the degree of heat, the top of the plate having intersecting grooves formed at right angles to each other in the tops of the walls intermediate the slots.

1,104,573. HAND-OPERATED STALK-CUTTER. JAMES A. STOCKTON and MARVIN N. WILLIMON, Tipton, Okla. Filed Nov. 3, 1913. Serial No. 799,009. (Cl. 30—24.)



1. An implement of the class described comprising a support carrying a cutter, rigid standards spaced apart and rising from said support and adapted to bear respec-

tively against the palm and the back of the hand, a cutter swinging from the support and coacting with the cutter of the same, and means adapted to be actuated by the hand which engages between the standards to operate the movable cutter.

2. An implement of the class described comprising a base member, a cutter connected to said base member, rigid standards spaced apart and rising respectively from said base member and cutter and adapted to receive the hand of the operator, another cutter pivoted between the first-mentioned cutter and the base, and means adapted to be actuated by the hand which is engaged by the standards to operate the movable cutter.

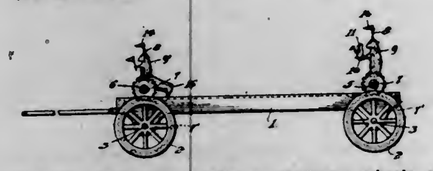
3. In a device of the class described, a base member, a stationary cutter spaced from the base member, a rigid standard having a lateral offset engaging between the base and stationary cutter, another rigid standard spaced from the first-mentioned standard and connected to the stationary cutter, a movable cutter pivoted between the stationary cutter and the base and supported thereby, a finger receiving loop carried by the movable cutter, and straps arranged to hold the base and standards upon a hand with the fingers thereof engaging the loop.

4. An implement of the class described comprising a support including a body and rigid standards spaced apart and adapted to receive the hand of the operator, a stationary cutter connected to said support, another cutter movably coupled to said support, operating means carried by said movable cutter and adapted to be engaged by the fingers of the hand which engages the support, a stay member connected to said supporting body and to one of the standards, and straps including coacting fastening means and connected respectively to one of said standards and to said stay and adapted to engage the hand of the operator.

5. An implement of the class described comprising a support adapted to be attached to a hand and carrying a stationary cutter, another cutter pivoted to said support, a finger receiving loop including members spaced apart, one of the loop members being secured to the movable cutter, a link connecting the members of the finger receiving loop, and another link connecting the finger receiving loop to the pivot of the movable cutter.

[Claim 6 not printed in the Gazette.]

1,104,574. TOY WAGON. JOHN A. SUNDQUIST, Georgetown, Conn. Filed Dec. 12, 1913. Serial No. 806,227. (Cl. 46—45.)



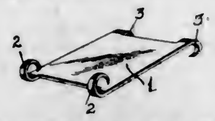
1. A toy wagon comprising a platform; wheels supporting said platform; a shaft rotatably mounted in bearings provided on said platform; an operative connection between said wheels and said shaft; a post arising from said platform; a figure mounted on said post for free vertical and rotary movement; a bevel gear on said shaft; and a bevel gear having a vertical axis connected with said figure and meshing with and resting upon said first mentioned gear, said gears being held in mesh by gravity, said first mentioned gear being eccentrically mounted upon said shaft, substantially as described.

2. A toy wagon comprising a platform; wheels supporting said platform; gears fixed to said wheels; a shaft rotatably mounted in bearings arising from said platform; pinions on said shaft meshing with said gears; a post arising from said platform; a figure mounted on said post for free vertical and rotary movement; a bevel gear having a vertical axis, said bevel gear being secured centrally to the lower end of said figure; and a bevel gear fixed to said shaft meshing with and resting upon said first mentioned gear, said gears being held in mesh by gravity, said second mentioned gear being eccentrically mounted upon said shaft, substantially as described.

3. A toy wagon comprising a platform; wheels supporting said platform; a rotatably mounted shaft arranged above said platform; an operative connection between said wheels and said shaft; a crank formed in said shaft; and a figure having one end loosely mounted upon said crank and having its opposite end loosely resting upon said platform, whereby, when said shaft is rotated, said figure will be moved back and forth on said platform, substantially as described.

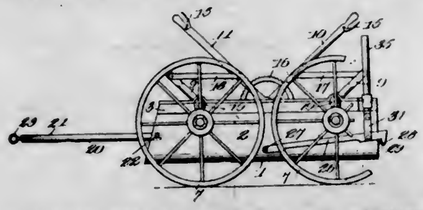
4. A toy wagon comprising a platform; wheels supporting said platform; a shaft rotatably mounted in bearings provided on said platform; an operative connection between said wheels and said shaft; a post arising from said platform; a figure rotatably mounted on said post; a gear connection between said shaft and said figure whereby, when said shaft is rotated, said figure will be simultaneously rotated; a crank formed in said shaft; and a figure having one end loosely mounted upon said crank and having its opposite end loosely resting upon said platform, substantially as described.

1,104,575. BANDAGE-FASTENER. SYLVANUS HOWARD SWOPE, Greenville, Ohio. Filed Apr. 24, 1914. Serial No. 834,138. (Cl. 24—87.)



A fastener for connecting two parts of a bandage comprising a body portion, a pair of combined gripping and hinging claws and a pair of gripping claws located on the respective ends of said body portion and extending longitudinally therefrom and lying beyond the ends of the body portion, each pair of said claws being oppositely deflected away from the general plane of the body portion and then by a return bend, extended substantially in the direction of and inclined toward the body portion; the combined gripping and hinging claws forming approximately closed rings, and the gripping claws having rearwardly presented openings between their points and the body portion to facilitate gripping the bandage.

1,104,576. GRAVEL-MACHINE. HENRY T. SYKES, New London, Mo., assignor of one-half to A. Victor Ely, New London, Mo. Filed Oct. 24, 1912. Serial No. 727,562. (Cl. 37—19.)



1. A gravel machine, comprising a body substantially U-shaped in cross section and having open ends, axles journaled transversely of the ends of the body and at the upper edges of the sides thereof, each axle having laterally offset spindles at its ends, wheels on the ends of the axles, the body of each axle having a radial arm, a plate arranged transversely of the body at the center thereof and between the upper edges of the sides, levers pivoted to the plate, a link connecting each lever with the arm of the adjacent axle, and means for holding each lever in adjusted position.

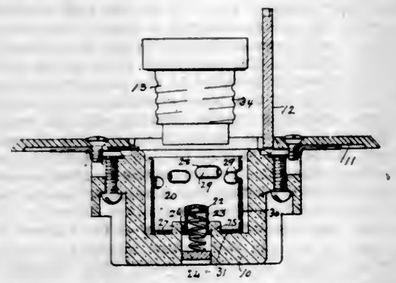
2. A gravel machine, comprising a body substantially U-shaped in cross section and having open ends, axles journaled transversely of the ends of the body and at the upper edges of the sides thereof, each axle having laterally offset spindles at its ends, wheels on the ends of the axles, and an independent means connected with the body of each axle for oscillating the same to raise and lower the adjacent end of the body with respect to the wheels.

3. A gravel machine comprising a scraper of approximately U-shape in cross section and having open ends, a gate arranged transversely of the rear end of the scraper for closing said end, the gate being hinged at its upper edge to the scraper, a rod arranged transversely of the gate and extending beyond each end thereof, a resilient latch lever secured to the scraper at each side, each latch lever having a lug for engaging the adjacent end of the rod and standing normally out of engagement with the said end, and a common moving means for operating the latch levers to engage the lugs with the rod ends, said means comprising a shaft journaled transversely of the scraper and having a lateral arm at each end, a link connecting each arm with the adjacent latch lever, and a lever rigid with the shaft for oscillating the said shaft.

4. A gravel machine, comprising a scraper body, a gate hinged at its top to the body at the rear thereof, resilient latch levers secured to the scraper at each side thereof, each lever having a catch for engaging the gate to hold the same closed, said levers standing normally with the catches out of engagement with the gate, a shaft journaled on the scraper and having a lateral arm at each end, a link connecting each arm with the adjacent latch lever, and means for oscillating the lever, the latch levers being engaged with the gate when the links are in alinement with the arms of the shaft.

5. A gravel machine comprising a wheeled scraper, a gate for closing the rear end of the scraper, latching means normally out of engagement with the gate for holding the said gate closed, a shaft journaled on the scraper and having radial arms at its ends, links connecting the arms with the gate latching means, and a lever on the shaft and extending in the opposite direction from the arms, said latching means being held in closed position when the links are in alinement with the arms.

1,104,577. ELECTRICAL RECEPTACLE. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 14, 1913. Serial No. 773,693. (Cl. 173—358.)



1. An electrical receptacle having a rigid shell contact open at its outer end, a base flange at its inner end and securing means engaging only said base flange to hold the same upon its support, in combination with inwardly-projecting spring-pressed studs spaced around said shell and adapted to engage the thread of an inserted screw plug, substantially as described.

2. An electrical receptacle having a rigid shell contact open at its outer end, a base flange at its inner end and securing means engaging only said base flange to hold the same upon its support, in combination with inwardly-projecting spring-pressed studs spaced around said shell below its upper edge and adapted to engage the thread of an inserted screw plug, substantially as described.

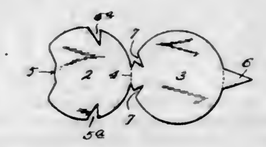
3. An electrical receptacle having a rigid shell contact and inwardly-projecting spring-pressed studs independent of said shell but spaced around the exterior of the latter and passing through said shell and adapted to engage the thread of an inserted screw plug, substantially as described.

4. An electrical receptacle having a rigid cylindrical shell contact with staggered perforations spaced around the same, in combination with a series of springs arranged outside said shell and studs pressed through said perforations by said springs, substantially as described.

5. An electrical receptacle having a rigid cylindrical shell contact with staggered perforations spaced around the same, in combination with a ring underlying the base of the shell and provided with a series of upwardly-extending spring arms lying outside said shell and provided with studs passing through the perforations in the latter.

[Claim 6 not printed in the Gazette.]

1,104,578. BOTTLE-CLOSURE. NELS F. THOMPSON, Kansas City, Mo. Filed Jan. 13, 1914. Serial No. 811,793. (Cl. 215—14.)

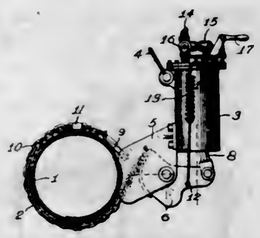


1. A closure for bottles, consisting of a supplemental lid having a marginal port, a main lid hinged to said supplemental lid and having incisions, and a marginal tab on said main lid.

2. A closure for bottles, consisting of two lids hinged together, one of said lids having a shoulder diametrically opposite its hinged portion, and both lids having marginal incisions to render them resilient, for the purpose set forth and described.

3. In combination with a bottle having an annular internal recess terminating at its lower side in a shoulder, and a cap consisting of a supplemental lid and a main lid hinged together and adapted to fit snugly upon said shoulder, the supplemental lid having an outlet port diametrically opposite its hinged portion and two marginal inlet ports, the main lid having two marginal incisions to render it resilient and a marginal tab, which latter bears against and is held in an upright position by the adjacent side of the bottle when the main lid is in closed position, for the purpose set forth and described.

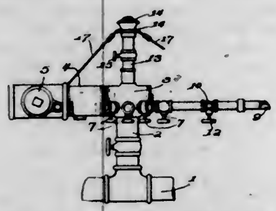
1,104,579. CINCH FOR SHEET-METAL PIPE. KARL JOHAN THORSBY, Oakland, Cal., assignor to California Corrugated Culvert Company, West Berkeley, Cal. Filed Oct. 25, 1913. Serial No. 797,190. (Cl. 81—19.)



A cinch for pressing together the overlapping layers of metal at the joint of sheet metal pipe comprising, a fluid-pressure cylinder, valve mechanism carried by the cylinder for controlling the flow of fluid to and from the cylinder, a saddle carried by the cylinder and adapted to engage the outer one of the overlapping layers of the pipe to be joined, a wrapping connector adapted to encircle the pipe where the layers thereof overlap each other and having one end

fixed with relation to said cylinder, a piston in said cylinder, and operative connections between said piston and the second end of said wrapping connector, combined substantially as set forth.

1,104,580. IRRIGATING SYSTEM. ALFRED TREGONING, Los Angeles, Cal. Filed July 31, 1911. Serial No. 641,686. (Cl. 137—66.)

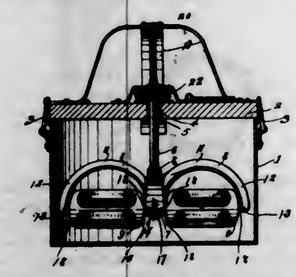


1. In an irrigating system of the kind described, a water main, an aerially extending inlet pipe projecting upwardly from said main, a distributing head on its upper end, a plurality of sprinkling pipes connected to said head, a controlling valve in each of said sprinkling pipes, a valve controlling the flow of water through said aerially extending pipe from said main, a distributing nozzle communicating with said head and supported thereby at an elevated point, a valve outlet pipe radially connected with said head and a second set of sprinkling pipes connected to said outlet pipe.

2. In an irrigating system of the kind described, a water main, an aerially extending inlet pipe connected with said water main, a distributing head at the upper end thereof, a valve controlling the flow of water from said main to said head, a distributing nozzle communicating with said head and supported thereby at an elevated point, a horizontal outlet pipe projecting from said distributing head and adapted at its free end to receive a pipe fitting, a plurality of radially extending sprinkling pipes connected with said distributing head, and fittings alternatively adapted to be applied to the free end of said outlet pipe, one of said fittings being provided with a valve and an oppositely disposed outlet in advance thereof, the other fitting being valveless and having a plurality of outlet nipples adapted for connection with sprinkling pipes.

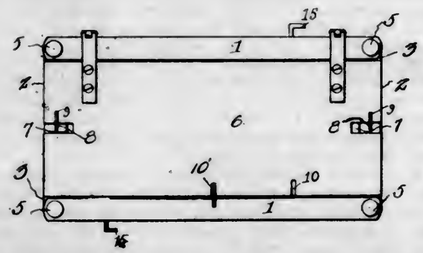
3. In an irrigating system, the combination with a water main, of a plurality of vertically disposed inlet pipes connected with said main, distributing heads respectively mounted on the upper terminals of said vertical pipes, a vertically disposed pipe mounted on the upper terminal of each of said distributing heads, nozzles respectively mounted on the upper terminals of said last mentioned vertically disposed pipes, and horizontally disposed sets of sprinkling pipes connecting adjacent distributing heads.

1,104,581. WASHING-MACHINE. JACOB M. TWEIT and JEREMIAH O. WISE, Ericson, Mont. Filed May 5, 1911. Serial No. 625,230. (Cl. 68—23.)



In a washing machine the combination with a tub of a rotatable shaft having an angular lower end disposed in spaced relation to the bottom wall of the tub and centrally of the side walls of the tub, the lower end of said shaft having its faces provided with longitudinal recesses open at their lower ends, a plurality of arms extending laterally from the respective faces of the angular end of said shaft and formed integral therewith, the extremities of the arms and the lower end of the shaft being disposed in a common plane, said extremities each formed with a bearing, cylindrical rollers provided with suction cups longitudinally thereof, trunnions projecting from the ends of said rollers and respectively disposed in the bearings and recesses, said cylindrical rollers being normally disposed in a horizontal plane with relation to the shaft, and a rectangular plate removably secured to the lower end of the shaft for closing all of the recesses forming a bearing for the trunnions of the rollers.

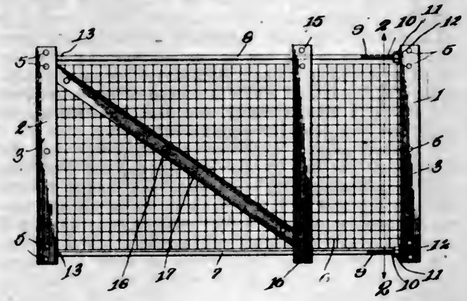
1,104,582. CRATE. ARTHUR J. VAN DOLAH, Linnton, Oreg. Filed May 16, 1911. Serial No. 627,492. (Cl. 217—48.)



A folding crate comprising pivotally connected side and end members, top and bottom members oppositely hinged to the side members and foldable against the latter respectively when the crate is knocked down, said top and bottom members being provided with recesses in each end and in their free edges, pins rotatably mounted in the end members at the top and bottom of same, said pins having laterally directed outer ends and the shanks of said pins being movable freely through the recesses in the top and bottom members respectively as said crate is knocked down and set up and the ends of said pins being further adapted to overlie the top and bottom members when the pins are rotated to dispose the ends transversely of said recesses whereby the top and bottom members are locked against movement from set up position, and pins rotatably mounted in the side members respectively and disposed in a plane at right angles to said side members, said pins having laterally directed ends and the shanks of said pins being freely movable through the recesses in the free ends of the top and bottom members respectively when the top and bottom members are moved to knocked down position and adapted to overlie the top and bottom members when the pins are rotated to dispose the outer ends thereof transversely of the recesses in the free ends of the top and bottom members whereby the latter are locked against movement from knocked down position.

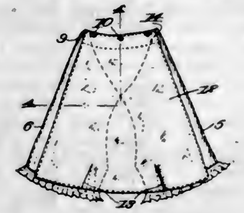
1,104,583. GATE. JOHN G. VAUGHN, Guthrie, Mo. Filed July 30, 1913. Serial No. 782,060. (Cl. 256—73.)

A gate comprising end pieces constructed of a plurality of strips, a piece of meshed wire clamped between said end pieces, rods, each of said rods having their corresponding ends rigidly connected to the upper and lower ends of one of said end pieces, the opposite ends of said rods being screw-threaded and loosely connected to the other of said end pieces, washers on said rods adjacent said last-mentioned end pieces, nuts in engagement with the screw threaded ends of said rods for adjusting the relative relation of said end pieces, a bar constructed of two strips disposed upon the opposite sides of said piece of wire approximately midway said end pieces, and bracing strips disposed diagonally upon the opposite sides of said piece of wire and rigidly connected to the upper end of said



first-mentioned end-piece and to the bottom of said bar, substantially as described and for the purpose set forth.

1,104,584. UNDERGARMENT. AUSTIN VICKERS, Asbury Park, N. J. Filed Mar. 19, 1913. Serial No. 755,465. (Cl. 2—122.)



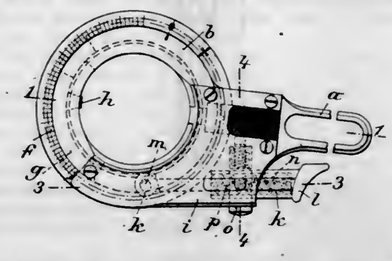
In combination with an undergarment, comprising a limb receiving portion having a slit on its inner side, flaps formed on the side of the limb receiving portion at the upper extremity of the slit, a second limb receiving portion having a slit adjacent its upper end, flaps extending laterally from the upper extremities of the slits, buttons attached to the waist band of the garment, one of said buttons being positioned adjacent the end of the second mentioned flap, a button placed substantially in the center of the garment and a third button attached to the waist band of the garment substantially the same distance from the center button as the first mentioned button, the first mentioned flap having button-holes adapted to engage the button; a shield having button-holes at the upper extremity to engage the aforesaid button, and darts in the lower edge of said shield and adapted to cause said shield to more closely engage the person of the wearer.

1,104,585. SETTING-KEY FOR FUSES. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Oct. 14, 1913. Serial No. 795,128. (Cl. 86—23.)

1. In a setting key having a hand grip, a corrective element for engaging with the setting ring of a fuse, and a longitudinally movable member mounted adjacent to the hand grip and connected to said corrective element for setting the latter.

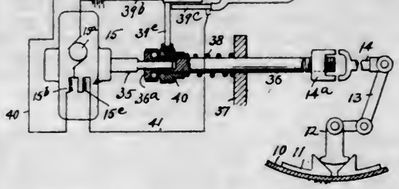
2. In a setting key having a hand grip, a corrective element for engaging with the setting ring of a fuse, a spring-pressed longitudinally movable member mounted adjacent to the hand grip and connected to said corrective element, and means for holding said longitudinally movable member in different positions, the spring of said member returning it to its normal position when released from said holding means.

3. In a setting key having a hand grip, a corrective element for engaging with the setting ring of a fuse, a longitudinally movable member mounted adjacent to the hand grip and connected to said corrective element, said member having teeth in one side, a spring placed under tension



as said member is moved to actuate said element, and a spring-pressed lock for engaging said teeth for holding said member in its different positions, said member being returned to its normal position by said spring when released from said lock.

1,104,586. ELECTRICALLY-OPERATED BRAKE. GEORGE R. WADSWORTH, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 2, 1913. Serial No. 765,034. (Cl. 188—36.)



1. In combination with a movable brake member, a reversing electric motor for operating the brake member, said motor having two field circuits, and switching mechanism for controlling the direction and extent of motor movement, said switching mechanism including a hand-operated member for controlling either of said field circuits of the motor, and a motor actuated member for controlling the extent of motor movement.

2. In combination with a movable brake member, a motor connected to said brake member for operating the same, said motor having two oppositely wound field windings, switching mechanism for controlling the starting, stopping and the direction of movement of the motor, comprising a manually operable member for completing the circuit through one or the other of said field windings, and a motor actuated member for controlling the extent of movement of the motor in either direction.

3. In combination with a movable brake member, a motor for actuating the same, switching mechanism for controlling the starting and stopping of the motor, said mechanism comprising a manually operable element and a traveling motor actuated member, and means by which said member is caused to stop the motor when a predetermined brake pressure is reached.

1,104,587. ATTACHMENT FOR RADIATORS. ISADORE WAGNER, Chicago, Ill. Filed July 13, 1911. Serial No. 638,391. (Cl. 237—19.)

1. A radiator hood comprising a piece of resilient metal, the respective longitudinal edges of which are bent to

yieldably and frictionally engage the respective radiator sides.



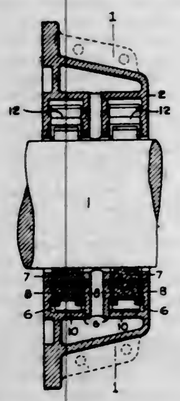
2. A radiator hood comprising a piece of resilient metal, the respective longitudinal edges of which are bent downwardly and inwardly to yieldably and frictionally engage the radiator sides.

3. A radiator hood comprising a piece of resilient metal, the respective longitudinal edges of which are bent downwardly and inwardly to yieldably and frictionally engage the respective radiator sides, and a trough formed upon each side of the radiator by a continued bend of the said longitudinal edges, as and for the purpose set forth.

4. As an article of manufacture, a radiator hood constructed of a single piece of resilient material, the sides of said hood being curved inwardly, outwardly, and upwardly, said curved sides adapted to yieldably and frictionally engage the top of a radiator for holding said hood thereupon, and means for closing the ends of said curved sides whereby a trough is formed.

5. As an article of manufacture, a radiator hood constructed of a single piece of resilient material, the sides of said hood being curved inwardly, outwardly, and upwardly, said curved sides adapted to yieldably and frictionally engage the top of a radiator for holding said hood thereupon, and means for closing the ends of said curved sides whereby a trough is formed, the portion of said hood intermediate said curved sides being flat.

1,104,588. SHAFT-PACKING. PAUL WAGNER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 3, 1912. Serial No. 694,852. (Cl. 137—116.)



1. A shaft packing comprising a segmental ring, the segments of which have radially disposed ends arranged in engagement with each other, holders for the segments, articulated joints between the adjacent ends of the holders, and spring means for pressing the segments toward the shaft.

2. A shaft packing comprising a segmental ring, the segments of which have radially disposed ends arranged in engagement with each other, holders for the segments, articulated joints between the adjacent ends of the holders, the members of said joints being slightly spaced apart, and means for pressing the segments toward the shaft.

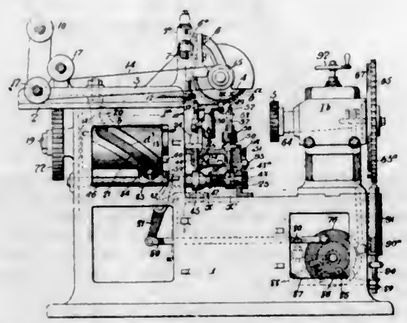
3. A shaft packing composed of a segmental ring provided with articulated joints between the adjacent ends of the segments, said joints comprising a substantially semi-circular groove in the end of one segment and a rib on the adjacent end of the next segment having parallel sides terminating in an end which is shaped to coöperate with said groove, a divided casing, and fingers carried by the casing and engaging with segments of the ring.

4. A shaft packing composed of a segmental ring, the segments of the ring having radially disposed ends that are in engagement with each other, and holders for the segments provided with a transverse rib at one end having a substantially semi-circular cross-section and with a transverse groove of similar cross-section at the other end, said ribs and grooves interlocking to form articulated joints having clearance spaces between the ribs and the bottoms of the grooves.

5. A shaft packing composed of a segmental ring, a divided casing therefor, and means for retaining in each portion of said casing the segments contained therein when said portion is removed from the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,104,589. GEAR-GRINDING MACHINE. FREDERICK ALEXANDER WARD and WILLIAM NEWTON TAYLOR, Toledo, Ohio. Filed Oct. 15, 1909. Serial No. 522,802. (Cl. 51—4.)



1. In a machine for grinding gears or doing similar work, the combination of a grinding medium, for imparting a given contour to the work, means for supporting the gear to be operated upon, mechanism for imparting relative movement to the grinding medium and gear support to cause the grinding medium to engage the work, and means coöperating with the grinding medium to trim the operating surfaces thereof and maintain at said surfaces the contour to be applied to the gear.

2. In a machine for grinding gears or doing similar work, the combination of a grinding medium, means for supporting the gear to be operated upon, mechanism for imparting relative movement to the grinding medium and gear support to bring the grinding medium and the gear teeth into coöperative engagement to effect a grinding of the teeth by and in accordance with the working face of said medium, and means coöperating with the grinding medium to trim the operating surfaces thereof and maintain at said surfaces the contour to be applied to the gear.

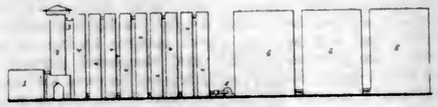
3. In a machine for grinding gears or doing similar work, the combination of a grinding medium, supporting and indexing mechanism for the gear to be operated upon, mechanism for imparting relative movement to the grinding medium and gear support, and means coöperating with the grinding medium to trim the operating surface thereof to the contour to be imparted to the gear.

4. In a machine for grinding gears or doing similar work, the combination of a grinding wheel having its peripheral portion shaped to conform to the surface to be ground, supporting and indexing mechanism for the gear, means for imparting relative movement to the grinding wheel and the gear support to cause the wheel to engage successive teeth of the gear, and mechanism coöperating with the grinding wheel to trim the peripheral portion thereof and maintain the same of the exact contour to be imparted to the gear.

5. In a machine for grinding gears or doing similar work, the combination of a rotatable grinding medium, the operating surface of which conforms to the working face of the gear tooth, means for supporting the gear, mechanism for imparting relative movement to the grinding medium and gear support and for intermittently indexing the gear supporting means, and mechanism for trimming the grinding medium to maintain the same in exact conformity with the surface to be ground.

[Claims 6 to 8 not printed in the Gazette.]

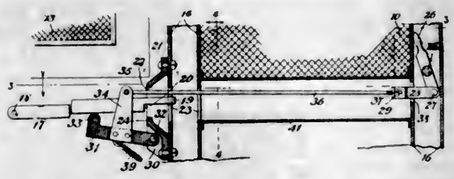
1,104,590. MANUFACTURE OF SULFURIC ACID. UTLEY WEDGE, Ardmore, Pa. Filed Sept. 18, 1909. Serial No. 518,395. (Cl. 23—1.)



1. In sulfuric acid apparatus, the combination of a sulfurous gas generator, a Glover tower which receives said gas, and a plurality of lead chambers receiving the discharge from said Glover tower, said lead chambers being disposed as vertical towers and connected in series alternately at top and bottom and presenting a surface area equaling or exceeding three-tenths of a square foot for each cubic foot of chamber space.

2. In sulfuric acid apparatus, the combination of a sulfurous gas generator, a Glover tower receiving the gas therefrom, a plurality of lead chambers disposed as vertical towers and receiving the discharge from said Glover tower, said lead chambers being connected in series alternately at top and bottom and presenting a surface area equaling or exceeding three-tenths of a square foot for each cubic foot of chamber space, and lead chambers into which the last of said vertical towers discharges, said latter lead chambers each presenting a much less area of surface for each cubic foot of capacity than said towers.

1,104,591. ELEVATOR-WELL-DOOR OPERATOR AND LOCK. PETER G. WESTERBERG, New York, N. Y. Filed Apr. 18, 1914. Serial No. 832,778. (Cl. 70—102.)



1. The combination with a door supported for horizontal sliding movement and a bolt pivotally supported for vertical swinging movement and projecting toward the inner edge of the door; of a slotted support carried by the door frame, said bolt having a shoulder to engage the support with the reduced portion passing through the slot, said frame having slots in alinement with the slot of the support, a lever pivoted in the opposite side of the frame, a trigger pivoted in the support beneath the bolt and having an upwardly extending engaging portion to contact with the bolt, an upright fixed to the trigger, a frame adjacent to the lever having a slot therein, an adjustable connection between the upright and the lower end of the lever whereby when the lever is moved in the opening direction of the door the trigger will release the bolt and open the door whereby the door will slide over the bolt with the adjustable connection passing through the slots, movement of the lever in the opposite direction lowering the trigger to permit closing of the door, a spring normally lowering the trigger to permit the bolt to drop to engaged position for locking the door in closed position, and a casing across the door over the adjustable connection between the upright and lever to prevent operation thereof from the exterior.

2. The combination with an elevator well having a doorway and a gate slidable over the same; of locking means coöperating with the inner vertical edge of the door, an operating device carried by the door near its opposite vertical edge, means at the inner edge of the door independent of the locking means and connected to the operating member for releasing the locking device upon pressure being exerted there-against in the act of opening the door, said operating device when moved in the opposite direction also releasing the locking mechanism and permitting the door to be closed, and means normally holding said releasing mechanism inoperative to permit the locking mechanism to operate.

3. The combination with a door slidably supported having a slotted portion; of a pivoted bolt coöperating with said slotted portion to hold the door in a closed position, a trigger beneath said bolt, and a lever carried by the opposite portion of the door with respect to the slotted portion and operatively connected to the trigger for raising the latter to release the bolt and permit the door to be opened.

4. The combination with a door slidably supported having a slotted portion; of a pivoted bolt coöperating with said slotted portion to hold the door in a closed position, a trigger beneath said bolt, a lever carried by the opposite portion of the door with respect to the slotted portion and operatively connected to the trigger for shifting the latter to release the bolt and permit the door to be opened, said connection between the lever and the trigger being adjustable to vary the movement of the trigger, and means normally holding the lever in a neutral position and permitting the bolt to engage the door.

5. The combination with a door having a frame of channel metal, said door being supported for horizontal sliding movement, and a bolt pivotally supported for vertical swinging movement and projecting toward the inner edge of the door; of a slotted casting carried by the door frame, said bolt having a reduced portion forming a shoulder to engage the casting with the reduced portion passing through the slot, said frame having slots in alinement with the slot of the casting, a lever pivoted in the opposite side of the frame, a trigger pivoted in the casting beneath the bolt and having an upwardly extending engaging portion to contact with the bolt, and connections between the lever and trigger operating through the slots for swinging the trigger vertically to disengage the shoulder from the casting to permit the door to be opened.

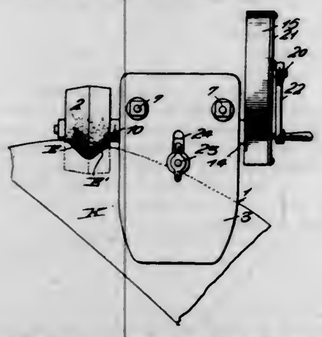
[Claim 6 not printed in the Gazette.]

1,104,592. DEVICE FOR SHARPENING BAND CUTTING-KNIVES. JOHN M. WHITCOMB, Redwood Falls, Minn. Filed Apr. 2, 1914. Serial No. 829,051. (Cl. 51—7.)

1. A grinding machine comprising an upright clamp, a bearing supported by said clamp, a shaft revolubly mounted in said bearing, a grinding wheel operatively connected to one end of said shaft, means for rotating the shaft and means for permitting said bearing to be adjusted toward or away from said clamp and for varying the axial relation of said bearing in respect to said clamp.

2. A grinding machine comprising a clamp composed of a pair of upright clamping plates, means for moving said plates toward each other, a bearing support projecting laterally from one of said plates, a bearing carried by said support, a shaft revoluble in said bearing, means carried by said bearing for rotating said shaft, means for permitting the axial relation of said shaft in respect to said clamp to be varied, and a grinding wheel driven by said shaft and movable with said bearing.

3. A grinding machine comprising a clamp composed of a pair of upright clamping plates, means for moving said plates toward each other, a bearing support projecting laterally from one of said plates and having a pair of laterally extending slots, a bearing in contact with one side of said support, adjusting bolts projecting from said bearing through said slots, nuts on said bolts, a shaft revoluble within said bearing, means for rotating said shaft and a grinding wheel driven by said shaft.

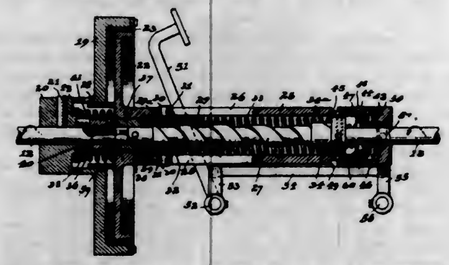


4. A grinding machine comprising a clamp composed of a pair of upright clamping plates having alined slots, a clamping bolt passing through said slots, a nut on said bolt, a bearing supporting plate extending laterally from one of said plates and having a pair of parallel laterally extending slots, a bearing sleeve in contact with one side of said bearing supporting plate, adjusting bolts carried by said sleeve and projecting through said slots, nuts on said adjusting bolts, an upright support on one end of said sleeve, a shaft revoluble within said sleeve, a grinding wheel driven by one end of said shaft, a pinion on the opposite end of said shaft, a gear revolubly mounted on said upright support and in mesh with said pinion, and means for rotating said gear.

5. A grinding machine comprising a pair of spaced upright clamps each comprising outer and inner clamping plates connected at their upper ends, a bearing supporting plate connecting the upper ends of said clamps and having a pair of parallel laterally extending slots, a bearing sleeve in contact with one side of said bearing supporting plate, adjusting bolts carried by said sleeve and projecting through said slots, nuts on said adjusting bolts, an upright support on one end of said sleeve, a shaft revoluble within said sleeve, a grinding wheel driven by one end of said shaft, a pinion on the opposite end of said shaft, a gear revolubly mounted on said upright support and in mesh with said pinion, and means for rotating said gear.

[Claim 6 not printed in the Gazette.]

1,104,593. FLEXIBLE TRANSMISSION AND STARTING DEVICE FOR EXPLOSIVE-ENGINES. JOHN F. WHITE, Bloomington, Ill. Filed Feb. 13, 1909. Serial No. 477,579. (Cl. 123—187.)



1. The combination of an engine shaft, a transmission shaft, and flexible transmission and starting mechanism interposed between said shafts, including a clutch member having a hub sleeved upon and secured to the engine shaft, a coöperating movable clutch member, the hub of the first mentioned clutch member having a chambered portion and said movable clutch member having an annular boss positioned within said chambered portion of the hub, and a spring connection interposed between said movable clutch member and transmission shaft.

2. The combination of an engine shaft, a transmission shaft, and flexible transmission and starting mechanism interposed between said shafts, including a friction clutch member having a hub sleeved upon and secured to the engine shaft, a coöperating movable clutch member, the hub of the first mentioned clutch member having a chambered portion and said movable clutch member having an annular boss positioned within said chambered portion of the hub, and a spring connection interposed between said movable clutch member and transmission shaft, the said mechanism being constructed and arranged whereby to form an evenly balanced fly wheel.

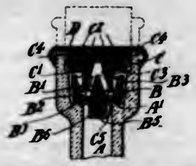
3. The combination of an engine shaft, a transmission shaft, and flexible transmission and starting mechanism interposed between said shafts, including a friction clutch member having a hub sleeved upon and secured to the engine shaft, a coöperating movable clutch member, the hub of the first mentioned clutch member having a chambered portion and said movable clutch member having an annular boss positioned within said chambered portion of the hub, a spring connection interposed between said movable clutch member and transmission shaft, and an interlocking connection between the two shafts operable to impart movement from the transmission shaft to the engine shaft.

4. The combination with an engine shaft and a transmission shaft, of a clutch one member whereof is rigid with said engine shaft, a flexible member between the other member of said clutch and said transmission shaft and engaging directly a fixed part of the latter, the flexible member being adapted to be placed under tension from the engine shaft during the initial part of its turning movement, and means whereby when said clutch is uncoupled the energy thus stored is subsequently released and exerted upon said engine shaft.

5. The combination with an engine shaft and a transmission shaft, of a clutch one member whereof is rigid with said engine shaft, a spring cushion connection between the other member of said clutch and said transmission shaft, means whereby said other member of the clutch is held against rotation when said clutch-members are uncoupled, and means whereby the stored energy of said spring cushion is exerted upon said engine shaft to turn the latter in a forward direction, while said other member of the clutch is held against rotation.

[Claims 6 to 33 not printed in the Gazette.]

1,104,594. NON-REFILLABLE BOTTLE. ROBERT WOLTON WIGG, Middle Brighton, Victoria, Australia. Filed May 21, 1914. Serial No. 840,017. (Cl. 215—69.)



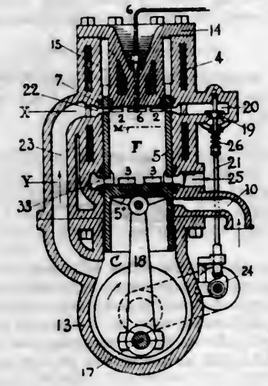
1. An improved valve device for a non-refillable bottle comprising a cup shaped valve seated upon a shoulder in the neck of the bottle having a central cone and a stem projecting into the neck of the bottle and a stopper fitted or cemented into the orifice of the bottle neck having an annular guide piece with a central conical recess and perforations for the outflow of liquid the inner face of the said cup shaped valve the central cone and the said conical recess being of approximately the same angle substantially as described.

2. In a non-refillable bottle a shoulder in the neck of the bottle, a valve seated upon said shoulder, an upstanding circumferential wall on said valve inclined on its interior side, a projection located on said valve within said wall and having its sides oppositely inclined to the interior of said wall, a stopper secured to the bottle neck above said valve and having a downwardly projecting guide piece, a recess in said guide piece corresponding in shape to the projection on the valve, and perforations through said stopper some of which are disposed around the outside of said guide piece and some of which lead into the recess therein.

1,104,595. PROCESS FOR PRODUCING MOLDS FOR CASTING STEREOTYPE-PLATES. CARL WINKLER, Berne, Switzerland. Filed Dec. 26, 1913. Serial No. 808,761. (Cl. 29—148.)

The process for producing molds for casting stereotype plates, which consists in finishing said molds at about a temperature to which said molds are raised when the plates are cast in said molds.

1,104,596. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. FRANK O. WOODLAND, Worcester, Mass. Filed Jan. 29, 1912. Serial No. 674,176. (Cl. 123—73.)



1. In an internal combustion engine of the two-cycle type, the cylindrical tubular piston having a partition-disk or head approximately mid-way thereof, and provided with inlet and outlet ports, one set circumferentially disposed near the upper end of the tubular extension, the other set near the piston disk; in combination with a crank-shaft, a connection thereto from the piston, a compression-chamber, a cylinder within which said piston reciprocates, the cylinder head having an inward extension forming an annular recess to receive the tubular top-end of the piston, said cylinder having upper and lower circumferential, inwardly open grooves, one positioned adjacent to the inner end of the cylinder head, the other positioned below, to register with the respective sets of piston-ports when the piston is at the outward end of its stroke, a fuel-supply inlet into said compression chamber controlled by the lower extended part of the tubular piston, and a feed connecting passage from said compression chamber into the upper circumferential groove of said cylinder, said piston acting as a valve for the circumferential ports of the cylinder and for controlling the fuel inlet.

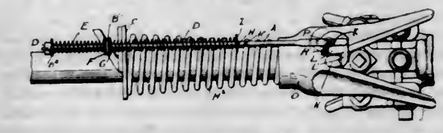
2. In an internal-combustion engine in which the spent charge is expelled by the incoming charge, the combination, with the engine-cylinder having an annular piston-receiving space at its upper end, and an internal circumferential channel in its wall adjacent to the mouth of said annular space, a reciprocating piston having a tubular extension that enters said annular space and is also adapted to serve as a valve for said circumferential internal channel, a charge-mixing chamber and passage for conducting explosive-mixture therefrom into said circumferential channel, an auxiliary air-inlet way leading into said channel for admitting air thereinto, and a mechanically actuated means for controlling said air-inlet way for positively regulating the supply of air entering therethrough.

3. In an internal combustion engine of the two-cycle type, the combination with the reciprocating tubular piston having a circumferential row of ports therein, and suitable ignition appliances for firing the charge; of a piston-inclosing cylinder provided with a circumferential interior groove or ring of induction-ports with a chamber-space surrounding the same; a charge-supply passage and an air-supply passage, each connecting with said chamber-space and oppositely arranged for alternately filling the chamber-space and port, means in connection with said charge-supply passage for accumulating, compressing and delivering the fuel element, and means coöperating with said air-supply passage for inducting air into said surrounding chamber-space at a predetermined instant, and for limiting the amount of the air inflow.

4. In an internal combustion engine of the two-cycle type, the combination with the cylinder provided with inlet and exit ports, a reciprocating tubular piston having its piston-head or disk at intermediate position therein, and provided with ports adjacent to said disk, the combustion chamber being within said piston tube, of a cylinder-head provided with a cylindrical body portion of less diameter than the cylinder bore, and extending within the cylinder for a distance approximately equal to the extent of the piston stroke, with an annular recess between the cylinder surfaces approximately fitting the tubular end of the piston; means for compressing and conducting the fuel elements into the combustion chamber through said inlet ports near said cylinder-head-extension, suitable ignition appliances for centrally firing the charge, and means for circumferentially introducing a layer of air into the combustion-chamber at a plane adjacent to the inner face of said cylinder head, and preceding the inflow of the fuel element charge into said combustion chamber.

5. A two cycle internal combustion engine, comprising, in combination, a tubular piston including the combustion-chamber, and provided with an upper and lower circular row of ports thereinto, a cylinder in which said piston reciprocates, a cylinder head having an inward extension affording an annular recess for receiving the end of the piston, a closed crank-casing, the inlet from the carbureter leading into said casing and controlled by said piston, circular chambers within the cylinder having ports that coact with the piston ports at the respective planes for intake and exhaust, a passage from the crank-case chamber into the circular intake chamber, an exhaust exit from the other circular chamber, an air inlet way communicating with the circular intake chamber, a controlling means for intermittently operating the air inlet, in unison with the action of the piston, and for a limited time in the cycle of action.

1,104,597. SAFETY-LOCK FOR COUPLING-HEADS. LEONIDAS D. WOODRUFF, Hattiesburg, Miss. Filed July 2, 1913. Serial No. 777,082. (Cl. 188—13.)



1. An automatic safety lock for fluid pressure coupling comprising, in combination with a coupler head, a latch pivotally mounted thereon and having a lateral projection for engagement over a portion of an adjacent coupled head, a longitudinally movable rod having sliding pivotal connection with said latch adjacent to one end, means for supporting its opposite end, and means upon said rod for holding the latch in a locked position.

2. An automatic safety lock for fluid pressure coupling comprising, in combination with a coupler head, a latch pivotally mounted thereon and having a lateral projection

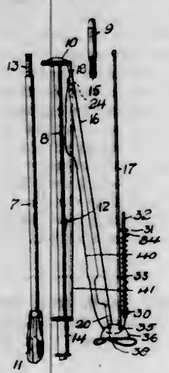
for engagement over a portion of an adjacent coupled head, a longitudinally movable rod having sliding pivotal connection with said latch adjacent to one end, means for supporting its opposite end, said latch having a notch in its edge adapted to be engaged by a projection upon said rod to hold the latch in a locked position.

3. An automatic safety lock for fluid pressure coupling comprising, in combination with a coupler head, a latch pivotally mounted thereon and having a lateral projection for engagement over a portion of an adjacent coupled head, a spring-pressed rod having a longitudinal slot formed near one end thereof, a bolt secured to the latch and having sliding pivotal connection with the sliding portion of the rod, and means carried by the latch for engaging said slot for holding the latch in a locked position.

4. An automatic safety lock for fluid pressure coupling comprising, in combination with a coupler head, a notched latch pivotally mounted thereon and having a lateral projection for engagement over a portion of an adjacent coupled head, a spring-pressed rod having a longitudinal slot formed near one end thereof, a bolt secured to the latch and having sliding pivotal connection with the sliding portion of the rod, said rod having a lateral projection with a shouldered end adapted to engage said notch of the latch to hold the latter in a locked position.

5. An automatic safety lock for fluid pressure coupling comprising, in combination with a coupler head, a latch pivotally mounted thereon and having a lateral projection for engagement over a portion of an adjacent coupled head, a rod having a longitudinal slot formed near one end thereof, a bolt projecting from the latch and engaging said slot, said latch having a recess in its edge adapted to receive a projection upon said rod to hold the latch in a locked position, an eye bolt and means for supporting the same, said eye bolt adapted to receive said rod, keys fastened in the rod, and springs bearing intermediate the eye bolt and said keys.

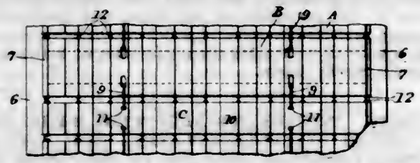
1,104,598. UMBRELLA. EDWARD WYSKOSKY, Wilmington, Del. Filed Sept. 30, 1913. Serial No. 792,678. (Cl. 135—25.)



An umbrella comprising a stick, a runner slidably mounted thereon, a stretcher pivotally connected to the said runner, a rib formed of an upper and lower section, said stretcher slidably mounted on the upper rib section, resilient members carried by said upper section and engaging said stretcher for maintaining the latter extended when the umbrella is open, a spring actuated rod carried by said lower section, and means connected to the upper section and to said rod and engaged by the stretcher for pulling the rod to maintain the lower section extended.

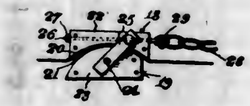
1,104,599. TIRE. GUY YANTIS, Yantis, Tex. Filed Sept. 12, 1913. Serial No. 789,534. (Cl. 152—18.)

1. A protector for tires embodying in combination with a pair of stringers, transverse rows or series of plates having a pivotal connection with each other and pivotally attached at opposite ends to said stringers, the series of plates overlapping each other and being formed with slots extending longitudinally of the tire, and links connecting one series of plates with the adjoining series at opposite sides thereof and arranged to slide in said slots.
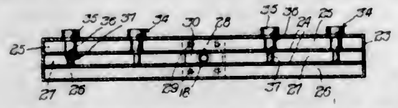


2. A protector for tires embodying a pair of annular stringers arranged in spaced relation to each other, and transverse rows or series of puncture-proof plates having a jointed connection at their meeting edges and also having a jointed connection with said stringers, the plates of one series being bent upon themselves to form outer and inner walls, and the plates of the adjoining series at opposite sides thereof being cut away to leave portions of a single thickness which bear an overlapping relation to the series at opposite sides thereof, each series being connected with the adjoining series by links which permit a relative sliding movement of the series longitudinally of the tire.

1,104,600. WIRE-STRETCHER. JOSEPH F. YOUNG and OURY J. TEBOW, Tipton, Okla. Filed Oct. 31, 1911. Serial No. 657,712. (Cl. 39—53.)



A clamping device consisting of a pair of bars, one of said bars having a longitudinally extending concave bearing face, the other of said bars having a longitudinally extending convex bearing face, wire engaging means carried by said bearing faces, links connecting the ends of said bars, and means for attaching one of said bars to a wire stretcher.

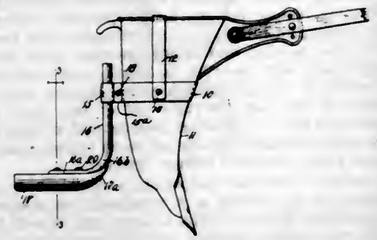
1,104,601. BURNER. JOHN ZANDER, Chicago, Ill. Filed May 5, 1913. Serial No. 765,663. (Cl. 158—99.)



1. A burner comprising a casing, a plurality of division walls in said casing extending longitudinally thereof and dividing the interior of the casing into separate gas and air passages, plates secured to the upper and lower faces of said casing, an air supply pipe entered into one of said plates, a gas supply pipe entered into the other of said plates, said casing being cut away at the point of attachment of one of said plates and in alinement with the air passage to provide communications between the air pipe and the air passage, and said casing also being cut away at the point of attachment of the other of said plates and in alinement with the gas passage to provide communication between the gas pipe and gas passage, and conductors mounted in the walls of said casing, said conductors establishing a series of passages at right angles to said casing passages, each conductor passage communicating with a casing passage, substantially as described.

2. A burner comprising a casing, a plurality of division walls in said casing extending longitudinally thereof, and dividing the interior of the casing into a separate air passage and a separate gas passage, means on said casing providing a supplemental chamber, means establishing communication between the supplemental chamber and air passage, a main air supply pipe communicating with the supplemental chamber, a second supplemental chamber on said casing, means establishing communication between the second supplemental chamber and gas passage, a main gas supply pipe communicating with the second supplemental chamber and conductors mounted in the walls of said casing, said conductors establishing a series of passages at right angles to said casing passages, and each conductor passage communicating with a casing passage, substantially as described.

1,104,602. ATTACHMENT FOR GRAIN-DRILLS. MAURICE LEONARD AKERS, Pendleton, Oreg., assignor to Pendleton Iron Works, Pendleton, Oreg. Filed Aug. 30, 1912, Serial No. 717,890. Renewed June 12, 1914. Serial No. 844,811. (Cl. 111—11.)



1. An attachment for grain drills, comprising a shoe having a shank, a collar adapted to embrace the boot or hoe of a grain drill, means for clamping the collar to said shank, and hanger straps extending upwardly from the collar and having means to engage the upper edge of a grain drill boot.

2. An attachment for grain drill boots, comprising a shoe, a shank extending upwardly from the shoe, a collar adapted to embrace the hoe or boot of a grain drill, the side arms of the collar at their rear ends constituting clamp jaws embracing the shank of the shoe, a bolt on said clamp jaws, and hanger straps secured to the collar and extending upwardly therefrom, the upper ends of the hangers having inturned ends adapted to hook over the upper edge of the hoe or boot.

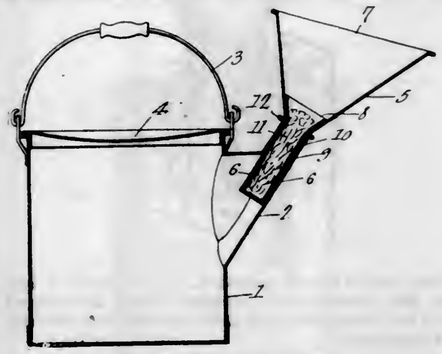
3. An attachment for grain drill boots, consisting of a split band including a collar to slidably embrace the boot, parallel arms extending rearwardly from the terminal ends of the collar, and jaws at the ends of the parallel arms to embrace a shoe shank.

4. An attachment for grain drill boots, consisting of a split band, and hangers rising from the band at the sides and formed with return-bends at the upper ends thereof to hook over the top edge of the boot, said split band including a collar to slidably embrace the boot, parallel arms extending rearwardly from the terminal ends of the collar, a clamp bolt extending through the said parallel arms, and jaws at the ends of the parallel arms to embrace a shoe shank.

5. An attachment for grain drill boots, comprising a collar adapted to embrace the boot, a clamp on the rear end of the collar, and a shoe having a shank adjustably held by said clamp, the shoe being substantially horizontal for its major portion, and the shoe and shank curving upwardly in close relation at the front end of the shoe, said shoe furthermore being concavo-convex in cross section throughout its length including the horizontal portion and upwardly curved front end.

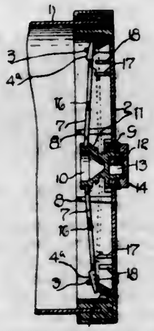
1,104,603. STRAINING DEVICE FOR FUNNELS. ROBERT FRED ALEXANDER, Kramer, Ind. Filed Mar. 28, 1914. Serial No. 827,935. (Cl. 210—16.)

In combination, a funnel including a cylindrical imperforate spout and a flared body, a straining screen including a cylindrical spout portion fitting in the funnel spout and a flared body fitting in the funnel body, and a straining sack slipped over the spout portion of the



straining screen and fitting snugly in the funnel spout, the mouth portion of the sack being expanded and clamped between the bodies of the funnel and straining screen.

1,104,604. BURIAL-VAULT. FRANKLIN E. ARNDT, Galion, Ohio. Filed Apr. 4, 1914. Serial No. 829,644. (Cl. 27—7.)



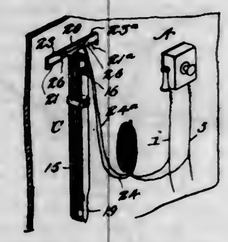
1. A vault door, a plurality of locking members movably mounted on the inner face of the door, means for guiding the locking members in their movements, and an actuating device revolubly mounted upon the door and operable from the outer face thereof, said actuating device being formed with a spiral groove having its convolutions increasing in a rearward direction and engaged by the locking members.

2. A vault door, a plurality of locking members movably mounted on the inner face thereof, and means operatively connected to said locking members and operable from the outer face of the door for imparting a compound movement to said locking members, to wit, a movement in a plane parallel to the plane of the door, and simultaneously therewith, a rocking movement in a plane transverse to the plane of the door.

1,104,605. TELEPHONE SYSTEM FOR TRAINS. HOWARD E. BARBER and JAMES W. MCFARLAND, Cherry Tree, Pa. Filed Jan. 30, 1911. Serial No. 605,560. (Cl. 173—273.)

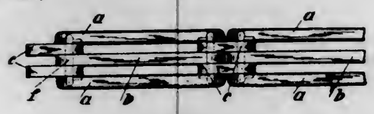
In combination with a telephone system for railway trains, a pole for establishing communication between aerial wires and said system, said pole comprising a plurality of flat sections pivotally connected together whereby said sections may be folded in superimposed relation and

supported within the caboose of the train, a clamp embracing said sections to hold the latter in folded position, the uppermost section being of T-form to provide a cross arm constituting the head of the pole, substantially L-



shaped contact plates secured to the underside of said cross arm, binding posts extended through said contact plates and cross head and flexible wire connected with said post and system.

1,104,606. CHAIN. ERNST GIDEON BEK, Pforzheim, Germany. Filed Apr. 25, 1913. Serial No. 763,661. (Cl. 59—80.)



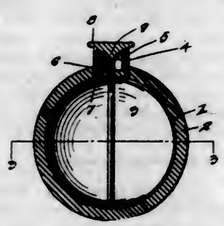
1. In a chain, a link, consisting of two chambered elements which latter are provided with a perforation at each end, resilient prehensile means located inside each element at the perforations and double-headed pins respectively connecting the corresponding ends of said elements, the heads of the pins being received by the perforations in the elements and held therein by said resilient means.

2. In a chain, a link, consisting of two chambered elements which latter are provided with a perforation at each end, resilient prehensile means located inside each element at the perforations, two double-headed pins each connecting one end of one element with the corresponding end of the other element, the heads of the said pins being received by the perforations in the elements and held therein by said resilient means, and other elements located intermediately of the first said elements and having terminal holes through which said pins pass.

3. In a chain, a link consisting of two chambered elements each of whose ends is provided with a perforation, resilient prehensile means located inside each element at said perforations, pins connecting the respective ends of said elements, the heads of the pins being received by the perforations in the links and gripped by said resilient means, and other elements located intermediately of the said two link elements and surrounding the connecting pins, and means for detachably interconnecting the facing intermediate elements of two successive links.

4. In a chain, a link, consisting of two chambered elements each of whose ends is provided with a perforation, resilient prehensile means located inside each element at said perforations, pins connecting the respective ends of said elements, the heads of the pins being received by the perforation in the links and gripped by said resilient means, and two-part elements located intermediately of said two link-elements, surrounding the connecting pins, and interconnecting the individual links, the one half of each of said itermediate connecting elements comprising a chambered, perforated member, and resilient prehensile means therein, and the other half comprising an outwardly similarly shaped member and a headed stud thereon adapted to enter the perforation of the first said half and to be gripped by said resilient prehensile means located therein.

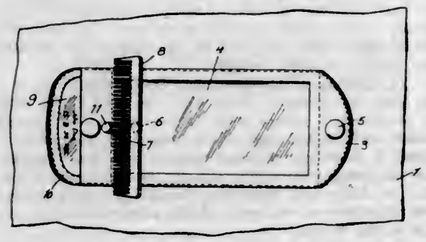
1,104,607. PERFUME-ATOMIZER. FRANK BERGER, Baltimore, Md. Filed Feb. 7, 1914. Serial No. 817,294. (Cl. 128—2.)



1. A perfume atomizer comprising a flexible body portion formed in the nature of a receptacle, an externally screw threaded tubular member, a spray pipe formed integral with the tubular member, said receptacle having an opening therein, an internally screw threaded ring mounted within the opening, said tubular member being turned into engagement with the ring, said spray pipe being positioned within the receptacle and communicating with the atmosphere at one end, the outer end of said spray pipe being provided with a restricted opening, and a flanged internally screw threaded closure cap to be turned upon the externally screw threaded tubular member.

2. A perfume atomizer comprising a flexible body portion formed in the nature of a receptacle, an externally screw threaded tubular member, a spray pipe formed integral with the tubular member, said receptacle having an opening therein, an internally screw threaded ring mounted within the opening, said tubular member being turned into engagement with the ring, said spray pipe being positioned within the receptacle and communicating with the atmosphere at one end, the outer end of said spray pipe being provided with a restricted opening, a flanged internally screw threaded closure cap to be turned upon the externally screw threaded tubular member, a frusto conical valve carried by said cap and adapted to seal the opening in the outer end of said spray pipe.

1,104,608. HAT-MIRROR. JAMES R. BETT, Lord, Md., assignor to Robert B. Bett, Chehalis, Wash. Filed Feb. 19, 1913. Serial No. 749,457. (Cl. 2—113.)



The hereindescribed hat mirror comprising a frame, a mirror secured within the frame, a pocket at one end of said frame provided with a transparent plate, said pocket adapted to receive an identification card, a clamp connected to the frame for holding a comb and means for securing the frame within the crown of a hat.

1,104,609. BABY-JUMPER. FLOYD M. BLAIN, Central Point, Oreg. Filed Jan. 24, 1914. Serial No. 814,059. (Cl. 155—44.)

1. In a baby jumper, a baby holder consisting of a saddle portion, side and end sections hingedly connected to the saddle portion, said side sections including supplemental members or extensions, having interlocking means

whereby when said sections are joined they form a transverse guard, an overhead support, means for sustaining the baby holder, on the overhead support, and other means for holding the side and end sections to their relatively adjusted positions.



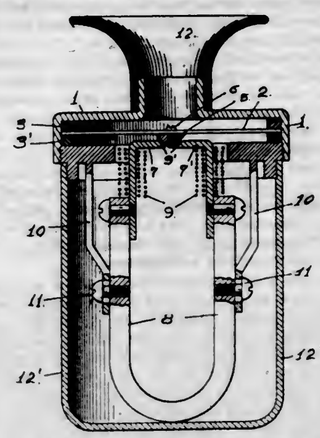
2. In a baby jumper, a baby holder comprising a central frame, formed of a wire strand bent to produce side and end portions; U-shaped frame sections hingedly connected to the side and end portions of the central frame, a flexible covering that incases all of the mentioned frames and is connected therewith, that portion of the flexible covering over the central frame having leg openings, means on the side and end sections for holding the said side and end sections locked to their adjusted positions, and a hanger connected to the opposite side frame sections for suspending the said holder from an overhead support.

3. An appliance of the character described, in which is included a baby holder consisting of a central rigid frame composed of opposite side and opposite end portions, side and end sections hingedly joined to the side and end portions of the central frame, a flexible body that covers all of the said frames, said body including triangular extensions adapted to overlap to form a transverse guard when the side members are adjusted to their swinging up position, means for holding the side and end frames to their adjusted positions, and means connected to the side frames for suspending the said holder from an overhead support.

4. In a baby jumper, a seat or saddle portion, two side frames hingedly secured to said seat portion, over-head suspension means connected to said side frames, a covering over said side frames which includes flap members that are adapted to over-lap and form a front transverse guard, a front frame hinged to said seat portion, a back frame hinged to said seat portion, strap and buckle connections between said side frames and said front and back frames respectively, and a cover over said front and back frames, substantially as shown and described.

1,104,610. RECEIVER FOR TELEPHONES. GEORGE N. BLANCHARD and OTTO G. MINZENMAYER, San Francisco, Cal. Filed July 10, 1912. Serial No. 708,569. (Cl. 179—119.)

In a receiver for the described purpose, the combination with a housing open at one end, a disk-shaped hanger threaded into the open end of said housing and formed centrally with an opening, a bell mouth cover secured to said disk-shaped hanger, arms extending into said housing from said disk-shaped hanger, a double pole magnet adjustably mounted on said arms, a non-magnetic diaphragm retained in position by the cover and extending over the opening in said hanger, a wedge shaped armature detachably carried by the under surface of said diaphragm, and cores carried by said magnet and extending through the

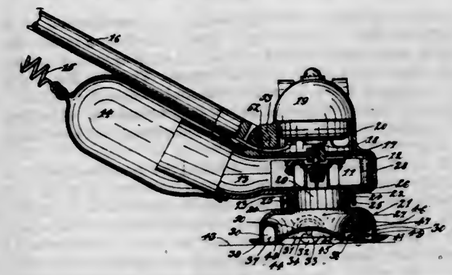


opening in sand hanger, the polar faces of which are shaped to conform to the side of the armature.

1,104,611. DINITRO-DIAMINO-BENZOPHENONE. LOUIS BLANGEY, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Filed Feb. 26, 1914. Serial No. 821,206. (Cl. 23—24.)

The new dinitro-diamino-benzophenone which possesses an orange to yellow color, melts in the pure state at about 292° C. is insoluble in dilute hydrochloric acid, very difficultly soluble in alcohol, ether and benzene, easily soluble in boiling cresol and on reduction with stannous chlorid gives rise to a product which melts at from 213–214° C. and yields a colorless solution in concentrated sulfuric acid.

1,104,612. SUCTION-CLEANER. EDWARD J. BODEY, Cincinnati, Ohio, assignor to The Eclipse Folding Machine Company, Sidney, Ohio, a Corporation of Ohio. Filed Nov. 11, 1912. Serial No. 730,663. (Cl. 15—60.)



1. A portable suction cleaner comprising a suction-head having a plurality of suction-slots of relatively different widths, a longitudinally extending brush in the wider of said slots, and supporting rollers between said slots and extending below the face of said suction-head whereby said suction-head is rockingly supported.

2. A portable suction cleaner comprising a suction-head having a plurality of suction-slots spaced apart, a brush mounted in and projecting from one of said slots and supporting rollers located between said slots and projecting below the lower face of said suction-head.

3. A portable suction cleaner comprising a suction-head having a plurality of suction-slots provided with walls extending longitudinally at the sides of said respective slots,

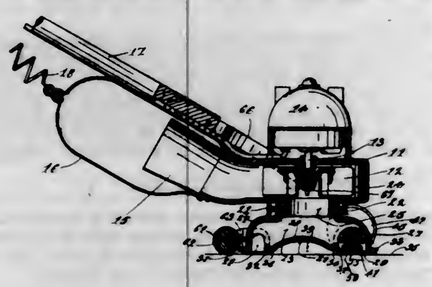
one of the walls of each of said slots being higher than the other of said walls thereof when said suction cleaner is supported upon the surface being cleaned, and rollers at the ends of said slots rockingly supporting the suction cleaner upon the surface being cleaned.

4. A portable suction cleaner comprising a suction-head having a pair of suction-slots at its bottom spaced apart and located side by side, each of said slots provided with walls extending longitudinally at the sides of said respective slots, the lower edges of the adjacent ones of said walls being higher than the lower edges of the farthest distanced ones of said walls when said suction-head is supported on the surface being cleaned, forming inlet-spaces for said slots presented toward each other, and an arched connection between said adjacent walls forming an arched draft-space between and communicating with said inlet-spaces, substantially as described.

5. A portable suction cleaner comprising a suction-head having a narrow suction slot and a wide suction slot, said suction-slots extending crosswise of the suction cleaner and located side by side and spaced apart, a suction-creating device communicating with said suction-slots, and a brush extending lengthwise in said wide suction-slot, whereby the particles to be sucked are agitated, said narrow suction-slot having unobstructed connection with said suction-creating device, for the purpose described.

[Claim 6 not printed in the Gazette.]

1,104,613. SUCTION-CLEANER. EDWARD J. BODEY, Cincinnati, Ohio, assignor to The Eclipse Folding Machine Company, Sidney, Ohio, a Corporation of Ohio. Filed Sept. 24, 1913. Serial No. 791,549. (Cl. 15—60.)



1. In a portable suction cleaner, the combination of a suction-nozzle, a supporting wheel therefor, a plate on which said wheel rotates pivoted to said nozzle, a brush, said nozzle and plate having crossing slots by the walls whereof said brush is positioned, and means for positioning said plate with relation to said nozzle for adjusting the height of said nozzle and of said brush with relation to said wheel.

2. In a portable suction cleaner, the combination of a suction-nozzle, a supporting wheel therefor, a plate on which said wheel rotates pivoted to said nozzle, a brush, said nozzle and plate having crossing slots by the walls whereof said brush is positioned, the axes of said wheel, brush and pivot being triangularly arranged, the vertical plane in which the axis of said pivot is located being spaced from the vertical planes in which the axes of said wheel and brush are located, and means for positioning said plate with relation to said nozzle.

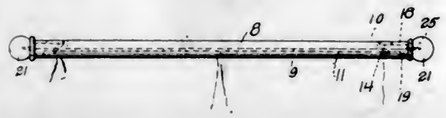
3. In a portable suction cleaner, the combination of a suction-nozzle, a supporting wheel therefor, a plate on which said wheel rotates pivoted to said nozzle, a brush, said nozzle and plate having crossing slots by the walls whereof said brush is positioned, the axes of said wheel, brush and pivot being triangularly arranged, the distance between said axes of said wheel and pivot being greater than the distance between the axes of said brush and pivot, the axes of said wheel and pivot being in different vertical planes and means for positioning said plate with relation to said nozzle.

4. In a portable suction cleaner, the combination of a nozzle, a supporting wheel therefor, a plate on which said wheel rotates, said plate pivoted to said nozzle, a gear rigid with said wheel, a brush, a pinion on said brush meshing with said gear, said nozzle and plate having crossing slots in which said brush is mounted,

5. In a portable suction cleaner, the combination of a nozzle, a plate, a brush, a wheel journaled to said plate said plate pivoted to said nozzle, said nozzle and plate provided with coacting crossing slots the walls whereof position said brush, driving means between said wheel and brush for rotating said brush, the relation of the walls of said slots and of the axes of said wheel, brush and pivot being such that when said plate is swung downwardly said brush is moved downwardly to less extent than the downward movement of said wheel.

[Claim 6 not printed in the Gazette.]

1,104,614. CURTAIN-POLE. CHARLES W. BONDASCHA, Hazzard, Pa., assignor of one-third to Arthur Chattaway and one-third to C. Leonard Chattaway, Hazzard, Pa. Filed Mar. 14, 1914. Serial No. 824,729. (Cl. 156—19.)



1. A curtain pole comprising a body provided with a longitudinal groove and a pair of slots opening into the ends of said grooves, a shiftable curtain clamping bar capable of being moved into and out of said groove for clamping and releasing a curtain, shifting means for said bar pivotally connected to said body and the bar, knobs connected to said shiftable means for actuating the same, said knobs capable of overlapping the said body and engaging said means to prevent operation of the latter whereby the bar is maintained in the position moved to by said shifting means.

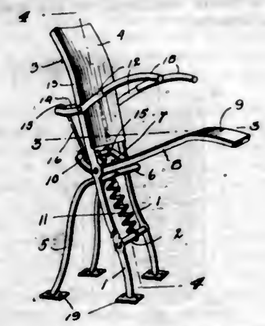
2. A curtain pole comprising a body portion, a curtain clamping bar adapted to be shifted into and out of said body, shifting means for said bar pivotally connected thereto and to said body portion, knobs connected with said shifting means and constituting handles therefor, said knobs capable of being shifted to engage said pole body in said means for locking said bar in said body portion.

3. A curtain pole comprising a pole body, a curtain clamping bar capable of being shifted to clamp a curtain to said body, means connected to said bar and to said body and capable when shifted to move said bar to and from clamping position, and elements carried by said shifting means and capable of being adjusted to engage said body and said shifting means for maintaining said bar in clamping position.

4. A curtain pole comprising a pole body, a bar capable of being adjusted to clamp a curtain to said body, link and lever mechanisms connected to said bar and pivotally connected to said body for shifting said bar to and from clamping position, and knobs carried by said mechanisms and capable of being adjusted to overlap said body and engage said mechanisms for maintaining said bars in clamping position.

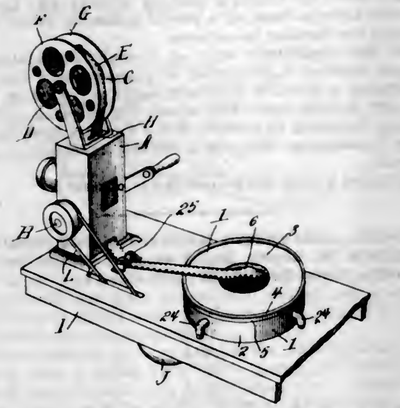
1,104,615. FOLDING CHAIR. CHARLES C. BRADEN, Winslow, Ariz. Filed Sept. 29, 1913. Serial No. 792,440. (Cl. 155—13.)

A chair of the class described comprising front and rear legs, the upper end of the rear legs terminating in a yoke, and the upper ends of the front legs terminating in a back supporting frame, a bar connecting the front legs, a seat frame comprising arms having their rear ends connected by a bar, and said arms being pivotally connected to the back fraine, arms pivotally connected to the back frame and having their rear ends connected by a bar, links pivotally connecting said bars, a coil spring having its upper end connected to the second named bar, and its lower end



connected to the first named bar, as and for the purpose set forth.

1,104,616. FILM-WINDING MECHANISM. PAUL C. BRENNER, Chicago, Ill. Filed Aug. 5, 1913. Serial No. 783,103. (Cl. 88—18.7.)



1. The combination with a moving picture apparatus, of a revolving film receiver, means operated by the exhibiting apparatus for revolving the receiver, and means operated by the apparatus for inducing suction in the receiver radially of the axis thereof.

2. A revolving tray, means for conducting a film thereto and means for inducing movement of an air current within the tray to move the film to a predetermined position in the tray.

3. A revolving tray, means for conducting a film thereto, and means for inducing movement of an air current outward of the axis of the tray to effect a predetermined position of the film in the tray.

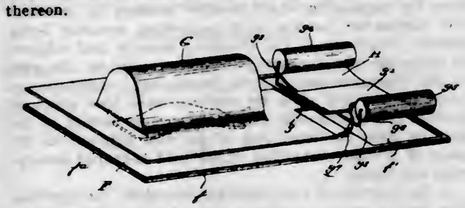
4. Film winding mechanism having a rotary tray, means for conducting the film to the tray, and means for inducing movement of an air current to draw the film laterally of the axis of the tray.

5. A revolving tape receiving tray, means for revolving the tray, means for feeding the tape to the tray, and means for creating an air current within the tray and against the tape so as to move the latter to a predetermined position within the tray.

[Claims 6 to 9 not printed in the Gazette.]

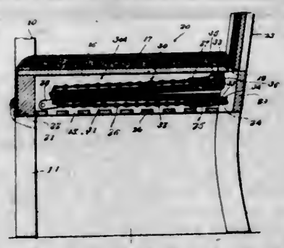
1,104,617. IMPRESSION OR TRANSFER DEVICE. CLAUDE H. BRIGHT, Jr., Memphis, Tenn. Filed Dec. 14, 1912. Serial No. 736,780. (Cl. 100—67.)

1. An impression or transfer device comprising a supporting plate having an offset at one end depressed below the plane thereof, means for yieldingly supporting said supporting plate, means for depressing the same, web carrying rolls mounted upon and arranged at opposite sides of said offset, said rolls being adapted for the transfer of an impression web from one roll to the other, and means actuated by the depression of the supporting plate for intermittently turning one of said rolls to wind up the web thereon.



2. An impression or transfer device comprising a plate having an extension at one end offset below the plane thereof, a spring for yieldingly supporting said plate, a handle for depressing the same against the resistance of said spring, brackets carried by and arranged on opposite sides of said extension, rolls journaled on said brackets, said rolls being adapted for the transfer of a web of impression material from one roll to the other, and pawl and ratchet mechanism adapted to be actuated by the depression of the plate for intermittently turning one of said rolls to wind up the web thereon.

1,104,618. CONVERTIBLE ARM-CHAIR AND FOLDING BED. HARRY BROOKS, Uniontown, Pa., assignor of one-fourth to Alexander W. Craig and one-fourth to Dominick S. Leppe, Uniontown, Pa. Filed Apr. 3, 1914. Serial No. 829,361. (Cl. 5—48.)



1. In a device of the character described, the combination with a frame having a bottom and sides forming a box, of a horizontal bar on the frame, a U-shaped member mounted to swing on the frame and normally lying within the box, a bed spring connected to the horizontal bar and the U-shaped member and normally lying in the box, with the bed spring adapted to be unfolded when the U-shaped member is extended relatively to the frame, a foldable tick normally lying within the box and adapted to be unfolded with the bed spring, means connecting the tick with the said horizontal bar and the U-shaped member for holding the tick in position relatively to the bed spring, and a seat for the frame and constituting a covering for the box for closing the same when the contents of the box have been arranged therein.

2. In a device of the character described, the combination with a frame including a bottom and sides forming a box, of a horizontal bar on the frame, a U-shaped member mounted to swing on the frame and normally lying within the box, a bed spring carried by the horizontal bar and the U-shaped member and adapted to be unfolded when the U-shaped member is extended, supporting members for supporting the U-shaped member in extended and horizontal position, said supporting members being foldable relatively to the U-shaped member and adapted to lie in the box therewith, shoulders formed on the sides of the frame, and a seat for the frame and constituting a cover for the box when its contents have been arranged therein.

3. In a device of the character described, the combination with a frame including a bottom and sides forming a box, of a horizontal bar on the frame, a U-shaped member mounted to swing on the frame and normally lying within the box, a bed spring carried by the horizontal bar and the U-shaped member and adapted to be unfolded when the U-shaped member is extended, supporting members for supporting the U-shaped member in extended and horizontal position, said supporting members being foldable relatively to the U-shaped member and adapted to lie in the box therewith, shoulders formed on the sides of the frame, a seat for the frame and constituting a cover for the box when its contents have been arranged therein, and a forwardly depending member carried by the seat to close the front end of the box adjacent to the point of pivotal connection of the said U-shaped member with the frame.

4. In a device of the character described, the combination with a frame forming a box, of a bar supported on the frame, a U-shaped member mounted to swing on the frame and movable into an extended position thereon, a bed spring supported on the said bar and the U-shaped member and foldable within the box when the U-shaped member lies therein, supporting members for supporting the U-shaped member in a horizontal and extended position, means carried by the U-shaped member and engaging the frame for holding the bed spring and U-shaped member and constituting a cover for the box to inclose the said bed spring and U-shaped member therein when the same are not in use.

1,104,619. BED. ANNA BROWN, Vancouver, Wash. Filed May 1, 1914. Serial No. 835,705. (Cl. 5—16.)



1. In a bed, an extension pivoted thereto, supporting legs for holding the extension in horizontal position, means for throwing the legs to operative or inoperative positions, and means for securing the operating means against operation when the legs are in either position.

2. In a bed, an extension pivoted thereto, legs pivoted to the extension and adapted to fold thereon or support the extension in horizontal position, means for throwing the legs to extension supporting position or folding them upon the extension, said means comprising in part a double lever, and means for locking the double lever against movement when the legs are in either position.

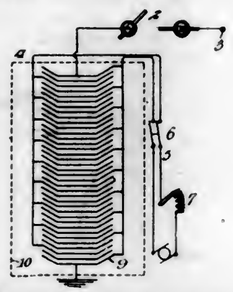
3. In a bed, an extension pivoted to the bed, supporting legs pivoted to the extension and adapted to fold thereon, a double lever pivoted to the extension and connected to the legs, means for operating the lever to throw the legs to operative or inoperative position, and means for locking the lever against movement.

4. In a bed, an extension pivoted to the bed, supporting legs pivoted to the extension and adapted to fold thereon, a double lever pivoted to the extension and connected to the legs, means for operating the lever to throw the legs to operative or inoperative position, and a locking plate pivoted to the extension adapted to be arranged in the path of movement of the lever whereby the legs will be locked in operative or inoperative position.

1,104,620. RE-FORMING OF FILMS OF ELECTROLYTIC LIGHTNING-ARRESTERS. JAMES WESTHALL BROWN, Brooklyn, N. Y. Filed Jan. 7, 1914. Serial No. 810,895. (Cl. 175—315.)

1. The combination with an electrolytic lighting arrester adapted to be applied to a transmission line and including a plurality of aluminum trays having an electrolyte between them and means, for charging said arrester, including an electric circuit separate from that of the transmission line.

2. The combination with an electrolytic lightning arrester adapted to be applied to a transmission line or main circuit, of a circuit additional to the main circuit for charging the arrester.



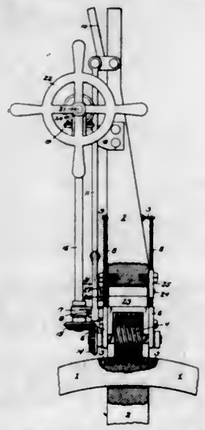
3. The combination with an electrolytic lightning arrester of cell formation and adapted to be applied to a transmission line or main circuit, of a circuit additional to the main circuit for charging said cells.

4. The combination with an electrolytic lighting arrester adapted to be applied to a transmission line or main circuit and having a plurality of trays with an electrolyte between them, of a circuit additional to the main circuit for charging the arrester.

5. The combination with an electrolytic lightning arrester adapted to be applied to a transmission line and including a plurality of aluminum trays having an electrolyte between them and means, for charging said arrester, including an electric circuit separate from that of the transmission line and a variable resistance in said circuit.

[Claims 6 to 15 not printed in the Gazette.]

1,104,621. REVERSING MECHANISM FOR ENGINES. MARTIN W. BROWN, New York, N. Y. Filed Jan. 17, 1913. Serial No. 742,635. (Cl. 74—5.)



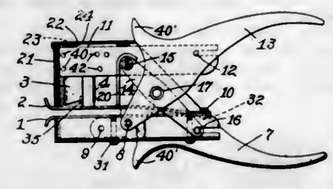
1. The combination, in a reversing device for engines, of a toothed quadrant, a reverse lever, a worm for engaging the toothed quadrant, a worm carrier movable on the reverse lever so as to carry the worm into or out of engagement with said toothed quadrant, a raising and lowering device for the worm carrier, a locking cam bearing upon the top of the worm carrier and serving, as it swings into locking position, to depress said carrier and thus insure engagement of the worm with the toothed quadrant, and means for operating said locking cam.

2. The combination, in a reversing device for engines, of a toothed quadrant, a reverse lever, a worm carrier

movable on the reverse lever for engaging and disengaging the worm, means for lifting said worm carrier on the reverse lever, and a pair of springs for depressing the worm carrier, said springs being disposed diagonally opposite one another, whereby one acts adjacent to the edge of the worm carrier at one side thereof and the other adjacent to the edge of the worm carrier at the opposite side thereof.

3. The combination, in a reversing device for engines, of a toothed quadrant, a reverse lever, a worm for engaging said toothed quadrant, a worm carrier movable on said reverse lever so as to engage or disengage said worm, means for imparting such movement to the worm carrier, a shaft geared to the worm and extending in line with the reverse lever but movable with the worm carrier, a shaft mounted in a fixed bearing on the reverse lever, and gear members connecting said shafts, that member which is carried by the worm-operating shaft being splined thereto so as to permit movement of said shaft with the worm carrier without deranging the gearing.

1,104,622. MACHINE FOR FASTENING PAPER OR LIKE SHEETS TOGETHER. GEORGE P. BUMP, La Crosse, Wis., assignor to Bump's Perfected Paper Fastener Co., a Corporation of Wisconsin. Filed May 5, 1913, Serial No. 765,626. Renewed June 10, 1914. Serial No. 844,364. (Cl. 93—1.)



1. In combination in a machine of the class described, a pair of jaws, a needle with tongue cutting and folding means on one jaw, a shear edge on the other jaw, handles connected with the jaws one of said handles and jaws being connected rigidly and a link connection between the jaws, substantially as described.

2. In combination in a machine of the class described, a pair of jaws, a needle with tongue cutting and folding means on one jaw, and a die on the second jaw, a handle carrying said second jaw rigidly, a handle having sliding connection with the first jaw and pivotal connection at its front end with the second jaw, and a link connection between the jaws having a sliding connection with the second jaw and pivoted to the first jaw, said link connection being journaled on the handle last mentioned, substantially as described.

3. In combination in a machine of the class described, a pair of jaws, a needle with tongue cutting and folding means on one jaw, a shear edge on the second jaw, a handle and housing connected to and in fixed relation to said second jaw, a handle slidably connected to the one jaw and pivotally connected to the second jaw, and a link connection between the jaws journaled on the pivoted handle member, said housing inclosing the working parts, substantially as described.

4. In combination in a machine of the class described, a pair of jaws the upper one carrying a needle with tongue cutting and folding means and the lower one carrying a shear edge, a handle and housing connected to and in fixed relation to the lower jaw, a handle having pivotal connection with the lower jaw, and sliding connection with the upper jaw, a link connection journaled on the pivoted handle and connecting the jaws, said housing and pivoted handle inclosing the upper jaw and the housing also inclosing a portion of said pivoted handle, the parts carried by the upper jaw and the link connection, substantially as described.

5. In combination in a machine of the class described, a pair of jaws movable toward and from each other while maintaining their parallelism, handles connected therewith, a needle with tongue cutting and folding means on one jaw, a shear edge on the other jaw and a housing inclosing the working parts and connected in fixed relation to one of the jaws and its handle and a link pivoted to the jaws and to the other handle, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,104,623. HAME. RALPH R. BURKHART, Spokane, Wash. Filed Aug. 20, 1913. Serial No. 785,714. (Cl. 54—25.)



1. In a hame, assembled sections, one of said sections having a socket and the other section having a stock slidably and adjustably fitted within the socket, the second-mentioned section having a flat side and the first-mentioned section having a flat-sided extension projecting beyond the receiving end of the socket and contacting the said side of the second-mentioned section, and means for holding the sections at adjustment.

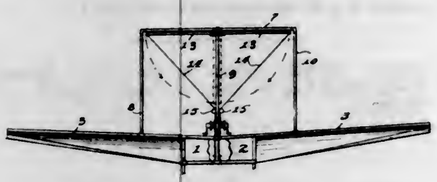
2. In a hame, assembled sections, one of said sections having a socket and the other section having a stock slidably and adjustably fitted within the socket, the second-mentioned section having a flat side and the first-mentioned section having a flat-sided extension projecting beyond the receiving end of the socket and contacting the said side of the second-mentioned section, and means for holding the sections at adjustment, the surface of the extension merging with the said side of the second-mentioned section.

3. In a hame, assembled sections, one of said sections having a socket and the other section having a stock slidably and adjustably fitted within the socket, the second mentioned section having a flat side and the first-mentioned section having a flat-sided extension projecting beyond the receiving end of the socket and contacting the said side of the second-mentioned section, one side of the second-mentioned section being beveled and the said extension being provided along one edge with a flange fitting said beveled edge, and means for holding the sections at adjustment.

1,104,624. AEROPLANE. JOSEPH BUTTNER, Baltimore, Md. Filed Sept. 3, 1913. Serial No. 787,973. (Cl. 244—29.)

1. The combination in an aeroplane, of the main lifting and supporting planes all fixed against relative movement and all having their transverse lines substantially horizontal, and the two supplemental planes mounted above the main planes symmetrically with respect to the central

longitudinal axis of the aeroplane, the two supplemental planes having substantially the same area as the main planes and being movable simultaneously about longitudinal axes to vertical positions in which they serve as guiding planes to prevent lateral movement or to horizontal positions in which they serve as supporting planes.



2. The combination in an aeroplane, of the main lifting and supporting planes all fixed against relative movement and all having their transverse lines substantially horizontal, and the two supplemental planes mounted above the main planes symmetrically with respect to the central longitudinal axis of the aeroplane, the two supplemental planes having substantially the same area as the main planes and being movable simultaneously about longitudinal axes at the edges thereof respectively to vertical positions below the said axes in which they serve as guiding planes to prevent lateral movement or to horizontal positions in which they serve as supporting planes.

3. The combination in an aeroplane, of the main lifting and supporting planes all fixed against relative movement and all having their transverse lines substantially horizontal, and two supplemental planes mounted above the main planes symmetrically with respect to the central longitudinal axis of the aeroplane, the two supplemental planes having substantially the same area as the main planes and each being pivoted at one edge about a longitudinal axis near the center of the aeroplane, and means for simultaneously moving the two supplemental planes to vertical positions in which they serve as guiding planes to prevent lateral movement or to horizontal positions in which they serve as supporting planes.

4. The combination in an aeroplane, of the main lifting and supporting planes all fixed against relative movement and all having their transverse lines substantially horizontal, the two supplemental planes mounted above the main planes symmetrically with respect to the central longitudinal axis of the aeroplane, the two supplemental planes having substantially the same area as the main planes and being movable simultaneously about longitudinal axes at the edges thereof respectively to vertical positions below the said axes in which they serve as guiding planes to prevent lateral movement or to horizontal positions in which they serve as supporting planes, and means above the supplemental planes for engaging them to prevent their movement above their horizontal positions.

1,104,625. GARMENT. EVA CAPLAN, Philadelphia, Pa. Filed Apr. 8, 1912. Serial No. 689,149. (Cl. 2—143.)

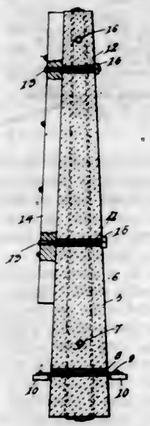
1. A skirt provided with a gore at each side, and in the rear half of the waist line a hem coincident with the region of the gores and slotted forward thereof, a non-adjustable elastic band freely and removably contained within said hem, a fastening device carried by each end of the band, a complementary fastening device attached to the waist line of the skirt forward of each of the gores and beyond the corresponding slot in the hem, whereby said band may be normally inserted within the hem coincident with the region of the gore with its ends projecting through said slots and anchored to produce the desired tension by means of the complementary fastening devices but with capacity for ready detachment and withdrawal for the purpose of permitting the laundrying of the skirt.

2. In a garment formed of substantially non-elastic material, gore pieces inserted in said garment at the waist line, said gore pieces being bifurcated at their lower extremity, a circumferential pocket extending across the region of the gores and the rear portion of the waist line,



a non-adjustable elastic band passed through the pocket, and means for detachably securing the ends of the elastic band to the skirt forward of the gore pieces.

1,104,626. CONCRETE FENCE-POST. ROBERT A. CHAMBERS, St. Elmo, Tenn. Filed June 18, 1913. Serial No. 774,462. (Cl. 72—82.)

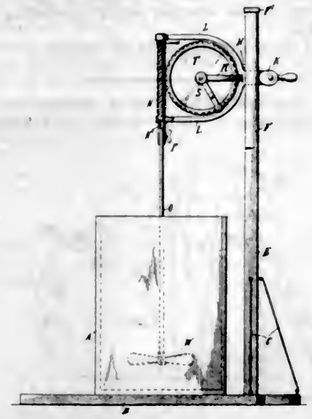


In a concrete fence post, a pair of tubular members embedded one above the other in the lower end of said post, disposed at right angles to each other and terminating flush at their ends with the face of the post, rods mounted within the tubular members and having their terminals extending outwardly from the post and a rectangular anchoring plate secured intermediate its ends to each end of each rod, said anchoring plates being disposed with their greatest area in a horizontal plane relative to the vertical axis of the post.

1,104,627. CHURN. EUNICE E. CHAPMAN, Petersburg, Tenn. Filed Mar. 19, 1914. Serial No. 825,903. (Cl. 31—42.)

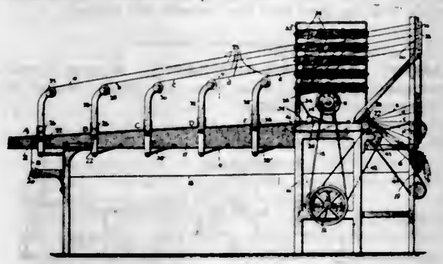
A churn comprising a support having a vertical slot therein, a hanger with a shank portion extending through and movable within said slot, a forked cam member pivoted to the end of said shank portion and straddling the projecting end thereof and adapted to engage said standard on either side of the slot, said hanger having curved arms extending in pairs at right angles to each other and having apertures in the ends forming bearings, a dasher

driving shaft journaled in the bearings in the ends of one set of arms and a driving shaft journaled in the other



arms, a wheel upon the driving shaft and having gear connection with the dasher driving shaft, as set forth.

1,104,628. FEATHER-FABRIC MACHINE. JOHN AUGUSTINE COLEY, Somerville, N. J., assignor to Mabel E. Coley, Somerville, N. J. Filed Dec. 26, 1912, Serial No. 738,601. Renewed June 16, 1914. Serial No. 845,488. (Cl. 112—24.)



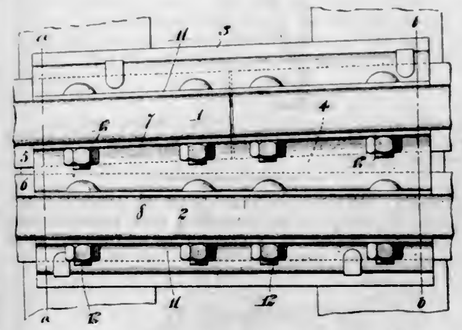
1. In a machine of the class specified, the combination of assembling mechanism comprising a master belt, a series of auxiliary belts, guiding means for the auxiliary belts whereby the first of them coöperates directly with the master belt and each succeeding auxiliary belt cooperates with all belts leading thereto, and means to drive said belts, and stitching mechanism for the work assembled by the foregong mechanism.

2. In a machine of the class specified, the combination of a pair of spaced parallel master belts, pairs of auxiliary belts coöperating with said master belts at spaced stations, the auxiliary belts at the first station coöperating directly with the master belts and at each succeeding station with the master belts through the preceding auxiliary belts, stitching mechanism for the work assembled and conveyed to the stitching mechanism by the assembling mechanism, and means to operate the stitching mechanism and assembling mechanism simultaneously.

3. In a feather fabric machine, the combination of stitching mechanism, a plurality of sets of endless belts, each set comprising a master belt and a series of auxiliary belts successively coöperating therewith, said sets being spaced on opposite sides of the stitching mechanism, and a guard comprising a substantially flat plate having upturned lateral edges coöperating with the outer edges of both of said sets of belts maintaining them at a proper distance apart.

4. In a feather fabric machine, the combination of a plurality of spaced series of endless belts, each series comprising a master belt and a plurality of auxiliary belts cooperating therewith, stitching mechanism, a guard to maintain the belts in proper spaced relation as they approach the stitching mechanism, means for guiding a reinforcing device between the series of belts and between said guard and the stitching mechanism, and means to operate all of said devices simultaneously.

1,104,629. SWITCH-CHAIR. MICHAEL J. CONNERTON, Danville, Ky. Filed Nov. 4, 1913. Serial No. 799,172. (Cl. 104—95.)



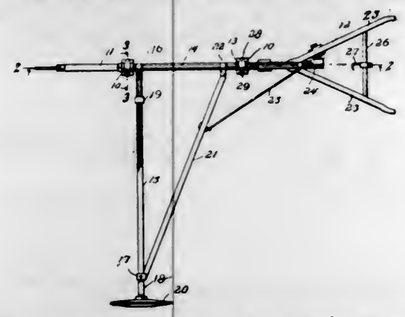
1. As an article of manufacture a joint and filler block comprising a supporting plate for arrangement under the rails of a railway switch at the joint and provided on its upper side at its center with an integral longitudinal wedge shaped wall to separate and abut against the opposing base flanges of the rails and also provided with integral web walls converging in the same direction as the sides of the first-named wall, said web walls serving to bear against the opposing webs of the rails and having base portions to overhang the inner base flanges of the rails, the side portions of said plate being unobstructed and extending outwardly in opposite directions from said wedge shaped wall.

2. In combination with the lead and stock rails of a railway switch, a joint and filler block comprising a supporting plate arranged under said rails at the joint and provided with an integral longitudinal wedge shaped wall on its upper side separating and abutting against the opposing base flanges of the rails and also provided with integral web walls converging in one direction, bearing against the opposing webs of said rails and having base portions overhanging the inner base flanges of the rails and connecting the said web walls to the first-named walls, the side portions of said plate being unobstructed and extending outwardly beyond the outer sides of the said rails, fish plates on the outer sides of said rails and bolts connecting the web walls of the joint and filler blocks, the rails and fish plates together.

1,104,630. LAND-MARKER. ELISHA S. COPELAND, Bethune, S. C. Filed May 17, 1911. Serial No. 627,694. (Cl. 111—24.)

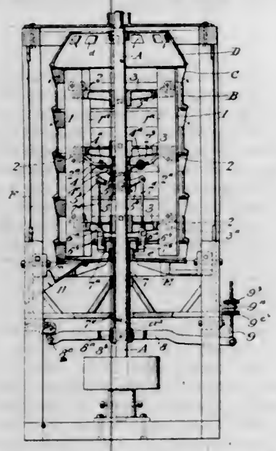
In a land marker, the combination with an agricultural implement, of a plurality of clamps connected with the beam of said implement, a pivoted rod mounted between the said clamps and connecting the same, the said clamps being adapted to constitute the pivot members of the said rod, a supporting bar mounted to swing on the said rod, an adjustable wheel bar mounted to slide on the said supporting bar, a wheel on the said wheel bar, means for adjusting the wheel bar relatively to the supporting bar, a lifting bar mounted to swing on the said rod and secured to the said supporting bar, a rod having pivotal connection with the said lifting bar, a lever pivoted on the said implement and connected to the said lifting bar for swing-

ing the same from one side of the implement to the other, and a locking lug on the cross bar of the said implement



and adapted to receive and secure the said lever in locked position thereon.

1,104,631. GRAIN-SCOURER. JOHN B. CORNWALL, Moline, Ill., assignor to Barnard & Leas Manufacturing Company, Moline, Ill., a Corporation of Illinois. Filed Apr. 19, 1913. Serial No. 762,428. (Cl. 83—29.)



1. In a grain scourer, the combination of a scouring chamber, a scouring cylinder therein having longitudinally disposed pivotally mounted counter-balanced blades, and means whereby the angles of the blades to the axis of the scouring chamber may be adjusted from the outside of the chamber.

2. In a grain scourer, the combination of a scouring casing, a scouring cylinder therein having pairs of relatively fixed blades pivotally mounted upon the periphery of said scouring cylinder, and means for adjusting said pairs of blades to vary the angle at which they stand to the axis of the cylinder.

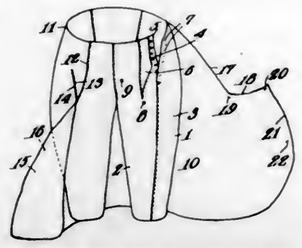
3. In a grain scourer, the combination of a scouring case, a scouring cylinder therein having a series of pairs of longitudinally disposed beater blades pivotally mounted adjacent its periphery; with means for rocking said pairs of blades on their pivots.

4. A scouring cylinder comprising a shaft, spiders thereon, arms pivotally mounted on said spiders, blades attached to the outer ends of said arms, inwardly projecting arms connected with the blades, a disk engaging said arms, means for adjusting said disk, and means outside of the scouring casing controlling the adjusting means.

5. A scouring cylinder comprising a shaft, spiders thereon, arms pivotally mounted on said spiders, blades attached to said arms at opposite sides of the pivots; inwardly projecting arms connected with the blades; a disk engaging said arms, means for adjusting said disk, and means outside of the scouring casing controlling the adjusting means.

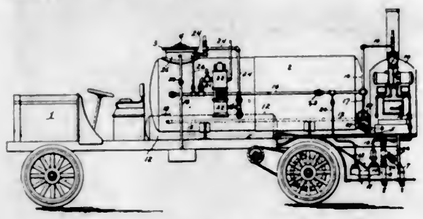
[Claims 6 to 22 not printed in the Gazette.]

1,104,632. RIDING-HABIT. MAX COWEN, New York, N. Y. Filed Aug. 7, 1912. Serial No. 713,831. (Cl. 2—139.)



In a riding habit, a pair of trousers; and a skirt secured to the trousers adjacent the waist band of the trousers, the skirt being split at the back to define two flaps, one flap only being cut away at its rear and top edges and being openable to the waist-line of the trousers to permit an expansion of the buttock of the wearer and to avoid a pull at the waist-line of the trousers when one leg of the wearer is in pommel-engaging position, and means for securing the flaps together and the cut-away flap to the seat and one leg of the trousers, whereby the skirt is formed into a walking skirt and the trousers are incased.

1,104,633. SPRAYING APPARATUS. WALTER CRESSY, Gloucester, Mass. Filed Oct. 13, 1913. Serial No. 794,937. (Cl. 137—63.)

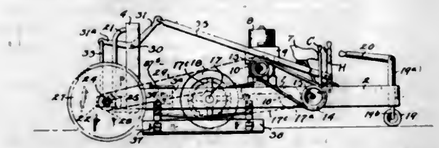


1. An apparatus for spraying asphalt consisting of a self propelled truck, a steam generator and a tank on said truck, the said tank having a discharge pipe with a valve therein, an air pump having a pipe leading into the tank for forcing air into the same or for exhausting it from the tank, a steam pipe from the generator leading into the tank for heating the contents of the latter, a steam pipe leading to the pump, a steam pipe leading to the discharge pipe, valves in said steam pipes and an operator's platform, the valve in the steam and discharge pipes being within reach of the operator whereby they may be actuated while the truck is moving.

2. An apparatus for spraying asphalt consisting of a self propelled truck, a tank thereon having a filling opening and a discharge pipe, a valve in said discharge pipe, an air pump connected with the tank for exhausting the air therefrom whereby when the filling pipe from the asphalt heater or still is connected with the tank, the asphalt will be drawn into the tank by the partial vacuum in the latter, and also for creating a pressure within the tank for forcing the asphalt therefrom, heating pipes within the tank, a steam generator carried by the truck, and pipes leading from the steam generator to the air pump, heating pipes within the tank, and to the tank discharge pipe for cleaning the latter preparatory to spraying.

3. An apparatus for spraying asphalt, consisting of a self propelled truck, a tank thereon having a filling opening and a discharge pipe, a valve in said discharge pipe, an air pump connected with the tank for exhausting the air therefrom while filling the tank and also for creating a pressure within the tank for forcing the asphalt therefrom, a heating pipe within the tank, a steam generator carried by the truck, steam pipes leading from the generator to the pump, a heating pipe within the tank, and a discharge pipe, valves in the pipes leading to the pump and discharge pipe and an operator's platform located with relation to said valves and also the valve in the discharge pipe whereby they may be actuated by the operator when the truck is in motion.

1,104,634. ICE-CUTTING MACHINE. ALFRED CURRIE, Delhi, N. Y. Filed June 11, 1913. Serial No. 773,034. (Cl. 62—8.)



1. An ice cutting machine including a carriage, standards on said carriage, a motor mounted upon the carriage, traction wheels driven by said motor, guide rods applied to the before mentioned standards, journal boxes slidably mounted upon the said guide rods, a shaft journaled in the said boxes, rotary cutters upon the shaft, a driving connection between the shaft and the motor, and means for sliding the journal boxes upon the guide rods to adjust the cutters.

2. An ice cutting machine including a carriage, means for propelling the carriage, standards projecting from the carriage upon opposite sides thereof, a guide rod secured to each standard, journal boxes slidably mounted upon the guide rods, a cutter shaft journaled in the journal boxes, cutters applied to the cutter shaft, a rock shaft journaled between the standards, an operative connection between the rock shaft and the journal boxes, and means for operating the rock shaft to slide the journal boxes upon the guide rods and adjust the rotary cutters.

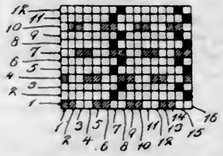
3. An ice cutting machine including a carriage, standards projecting from the carriage, guide rods secured to the standards, journal boxes slidably mounted upon the guide rods, a cutter shaft mounted within the journal boxes and having opposite ends thereof threaded, rotary cutters adjustably fitted upon the threaded ends of the cutter shaft, clamping nuts threaded upon the ends of the shaft and engaging the rotary cutters to hold the said cutters securely in adjusted positions, and means for moving the journal boxes upon the guide rods to raise and lower the cutters.

4. An ice cutting machine including a carriage, means for propelling the carriage, a pair of standards projecting from the carriage at the rear end thereof, a guide rod secured to each of the standards, journal boxes slidable upon the guide rods, a cutter shaft mounted in the journal boxes, cutters upon the cutter shaft, a rock shaft journaled between the standards, an operative connection between the rock shaft and the journal boxes, a hand lever at the forward end of the carriage, and an operative connection between the said hand lever and the rock shaft.

1,104,635. VELVET-WEAVING. ROBERT DANTZER and JAMES DANTZER, Lille, France. Filed Sept. 27, 1911. Serial No. 651,646. (Cl. 139—71.)

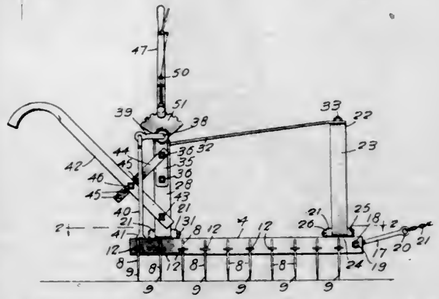
1. A process for weaving weft pile velvet consisting in dividing a single warp into an upper and a lower shed, shooting a weft thread through the upper shed to form the pile, and shooting simultaneously therewith and in the same direction a weft thread through the lower shed to form the ground.

2. A process for weaving weft pile velvet consisting in dividing a single warp into two groups, the threads of one group forming the shed for the ground, and the threads of the other group forming the binding shed; shooting a



weft thread between the threads of the raised ground warps and the raised threads of the binding warps, and shooting simultaneously therewith and in the same direction a weft thread through the shed formed by the ground warps.

1,104,636. CULTIVATOR. CHARLIE F. DAVIS, Shawnee, Okla. Filed July 5, 1913. Serial No. 777,521. (Cl. 97—31.)



1. A cultivator comprising a plurality of triangular frames, each comprising a base and sides, a series of teeth detachably connected with each frame, front and rear arch bars for connecting the frames, each arch bar comprising a body extending transversely between the frames, and arms pivoted to the adjacent sides of the frames, the body of the front arch being of greater length than the body of the rear arch to space the frames a greater distance at their apices than at their bases, a shaft journaled on the body of the rear arch bar and having rearwardly extending crank arms at its ends, a link connecting each arm with the base of the adjacent frame, a lever secured to the shaft for oscillating the same, means for holding the lever in adjusted position, and a plate connecting the bodies of the arch bars.

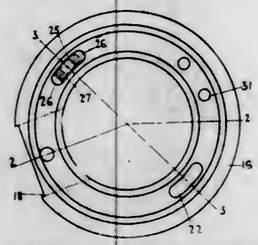
2. A cultivator comprising a plurality of substantially triangular frames, front and rear arch bars for connecting the frames, each arch bar comprising a body extending transverse to the frames, and arms extending approximately perpendicular to the plane of the frames, a hinge connection between each arm of each arch bar and the adjacent frame at the inner side of the frame for permitting the outer side of the frame to be raised and lowered, a rigid connection between the bodies of the arch bars, a shaft journaled on the rear arch bar longitudinally of the body thereof and extending beyond the arms, said shaft having at each end a lateral arm, a link connecting each arm to the adjacent frame and means for oscillating the shaft and for holding it in adjusted position, a handle connected to each arm of the rear arch bar near its connection with the adjacent frame, a bar connected at one end to each arm of the rear arch bar, and an adjustable connection between each handle and the adjacent bar.

3. A cultivator comprising a plurality of substantially triangular frames, front and rear arch bars for connecting the frames, each arch bar comprising a body extending transverse to the frames and arms extending approximately perpendicular to the plane of the frames, a hinge connection between each arm of each arch bar and the

adjacent frame at the inner side of the frame for permitting the outer side of the frame to be raised and lowered, a rigid connection between the bodies of the arch bars, a shaft journaled on the rear arch bar longitudinally of the body thereof and extending beyond the arms, said shaft having at each end a lateral arm, a link connecting each arm to the adjacent frame, means for oscillating the shaft and for holding it in adjusted position, and means supported by the rear arch bar for raising and lowering the outer edges of the frame.

4. A cultivator comprising a plurality of substantially triangular frames, front and rear arch bars for connecting the frames, each arch bar comprising a body extending transverse to the frames and arms extending approximately perpendicular to the plane of the frames, a hinge connection between each arm of each arch bar and the adjacent frame at the inner side of the frame for permitting the outer side of the frame to be raised and lowered, and a rigid connection between the bodies of the arch bars.

1,104,637. CAM AND ADJUSTING DEVICE THEREFOR. CHARLES DAY and GEORGE E. WINDELER, Stockport, England, assignors to General Electric Company, a Corporation of New York. Filed June 13, 1912. Serial No. 703,393. (Cl. 74—1.)



1. Means for adjusting a cam, consisting of a shaft, a hub fixed thereto, a ring carried by the hub and concentric with the shaft, said ring having slots therein, studs fixed in the hub and passing through the slots, metal fillers between the studs and the ends of the slots, means for holding the fillers in place, and a cam block carried by the ring.

2. Means for adjusting a cam, consisting of a shaft, a hub fixed to the shaft, a ring carried by the hub and concentric with the shaft, said ring having slots therein, studs fixed in the hub and passing through the slots, metal fillers between the ends of the slots and the studs with means for holding them in place, a cam block, shoulders on the ring between which the cam-block is radially adjustable, a radial slot in the block, a bolt passing through the slot and seated in the ring, metal fillers in the slot and means for holding them in place; whereby the circumferential and radial adjustment of position of the cam may be effected in such manner that when fixed in position shocks upon the cam are not transmitted to its securing means, as described.

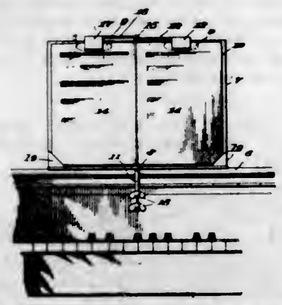
3. In combination, a support, a cam mounted thereon which is provided with a segmental slot, a means that passes through the slot into the support for holding the cam, flat shims between the means and the ends of the slot, and a swivel block between the shims and one end of said slot.

4. In combination, a support, a cam mounted for angular adjustment thereon which is provided with a segmental round ended slot, a clamping bolt that has flat surfaces where it passes through the slot, swivel blocks located in the ends of the slot, and removable shims located between the blocks and the flat surfaces of the bolt.

5. In combination, a support, a cam mounted for angular adjustment thereon which is provided with a segmental round ended slot, a clamping bolt that passes through the slot, swivel blocks located in the ends of the slot, a plurality of thin shims having parallel front and rear surfaces located between the bolt and blocks, and a retaining device for preventing the block and shims from getting out of place.

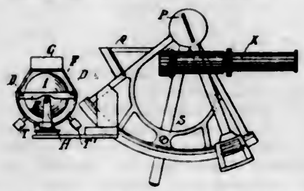
[Claims 6 and 7 not printed in the Gazette.]

1,104,638. MUSIC-LEAF TURNER. WILLIAM DEFFENBAUGH, Wichita, Kans. Filed Apr. 19, 1913. Serial No. 762,268. (Cl. 84—17.)



A music leaf turner comprising two board-like sections, pintle eyes formed on the sections at the top and bottom edges contiguous to the inner edges thereof, a hollow shaft passed through the eyes to form a pintle for swingingly connecting the sections, the said shaft being rotatable in the eyes, a second shaft rotatably mounted within the hollow shaft, the last-named shaft being longer than the hollow shaft, arms formed at the upper ends of the shafts, winged nuts on the other ends of the said shafts, inverted U-shaped clips integral with the free ends of the said arms, and means on the outer lower corners of said sections for engaging the cover sheets of music.

1,104,639. ARTIFICIAL HORIZON FOR SEXTANTS. ALPHONSE DÉMICHEL, Paris, France. Filed Oct. 29, 1909. Serial No. 525,401. (Cl. 33—73.)



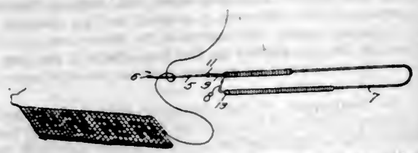
1. In combination, a sextant, a frame and means for pivotally supporting said frame on the sextant, a collimator attached to said frame, and a gyroscope with means for pivotally supporting it within the frame.

2. In combination, a sextant, a bracket attached thereto, a frame and knife edge supports adapted to carry said frame on the bracket, said knife edge supports having their axis in a plane at right angles to the plane of the sextant, a collimator attached to the frame, and a gyroscope with knife edge supports for bearing it within the frame, the latter knife edge supports having their axis parallel to the plane of the sextant.

3. In combination, a sextant, a gyroscope, a collimator, a Cardan suspension comprising members by which the collimator and gyroscope are respectively supported, means for counterweighting the member of the Cardan suspension on which the collimator is carried, and means for attaching the Cardan suspension to the sextant.

4. In combination, a sextant, a gyroscope, a collimator, a Cardan suspension comprising members by which the collimator and gyroscope are respectively supported, means for counterweighting the member of the Cardan suspension on which the collimator is carried, means for attaching the Cardan suspension to the sextant and means for actuating said gyroscope by an electric current.

1,104,640. BEAD-CROCHETING NEEDLE. CHARLOTTE ISABELL DENNER, Santa Rosa, Cal. Filed Feb. 17, 1914. Serial No. 819,192. (Cl. 66—17.)



1. A crocheting needle having a hook at one end and having its opposite end bent upon itself to form a loop, a saddle formed at the free end of the loop, said saddle having its sides curved to conform to the shape of the needle, and a lip formed at one end of the saddle for engaging the needle, and a bend stop formed on the loop.

2. A crocheting needle having a hook at one end and having its opposite end formed into a loop, and a saddle formed at the free end of the loop, said saddle adapted to normally receive the needle.

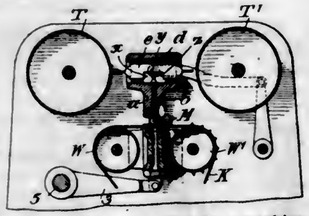
3. A crocheting needle having a hook at one end and having its opposite end bent upon itself to form a loop for receiving beads, and means carried by the free end of the loop adapted to normally engage the needle to prevent loss of beads from the loop.

4. A crocheting needle having a hook at one end, a loop formed at the opposite end of the needle, said loop adapted to receive beads, the plane of said loop being at right angles to the plane of said hook.

5. The combination with a crocheting needle, of a loop for receiving beads, said loop forming a continuation of the needle, and means forming a continuation of the loop adapted to prevent passage of beads from the loop to the needle, said means being movable at will to allow passage of beads.

[Claim 6 not printed in the Gazette.]

1,104,641. JACQUARD-CARD-PERFORATING MACHINE. KARL EGGART, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Mar. 14, 1913. Serial No. 754,195. (Cl. 164—114.)



1. In a jacquard card perforating machine, selecting means, a support or carrier, means to move the same toward and from the card to be perforated, a frame movable in the support or carrier at right angles to the direction of movement thereof and needles movable by the selecting means in the frame.

2. In a jacquard card perforating machine, a frame, needles slidable therein, a support in which the frame is slidably mounted, punches slidable in the frame, and means for moving the support to and from the work.

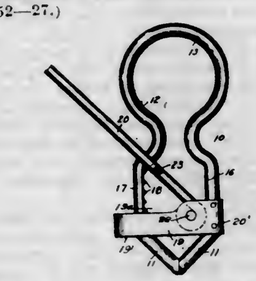
3. In a jacquard card perforating machine, a frame, needles slidable therein, a support in which the frame is slidably mounted, punches slidable in the frame, means for setting the needles in the frame, and means for moving the support to and from the work.

4. In a jacquard card perforating machine, a rotatable drum, a frame, horizontal needles slidable in axial direction therein, a support in which the frame is mounted with capability of sliding in horizontal direction, vertical punches axially slidable in the frame below the needles, means for moving the frame to and from the drum, and means for moving the support to and from the work.

5. In a jacquard card perforating machine, a rotatable drum, a frame, horizontal, recessed needles slidable in axial direction therein, a support in which the frame is mounted with capability of sliding in horizontal direction, a vertical punch, axially slidable in the frame, located below each needle and adapted to enter the recessed part of the latter, means for moving the frame to and from the drum, and means for moving the support to and from the work.

[Claim 6 not printed in the Gazette.]

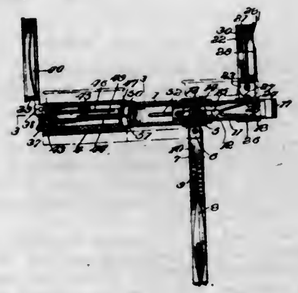
1,104,642. TOOL FOR REPAIRING TIRES. PETER E. ERICKSON, Port Chester, N. Y., assignor to P. E. Erickson & Son, Inc., Port Chester, N. Y., a Corporation of New York. Filed Apr. 24, 1913. Serial No. 763,329. (Cl. 152—27.)



1. In a tool for repairing tires, the combination of a main frame terminating in angularly disposed prongs movable bodily toward and from each other, the intermediate portion of the frame constituting an integral spring loop serving to normally hold said prongs against each other, means to positively force the prongs apart, and a brace carried by the frame and serving to prevent sliding movement of one of the prongs with respect to the other prong in a direction perpendicular to the plane of said bodily movement.

2. In a tool for repairing tires, the combination of a frame including a pair of straight normally parallel shanks, a pair of jaws extending from said shanks to normal engagement with each other, and means normally maintaining said parts in the positions indicated, a brace connected to one of said shanks and extending around the opposite shank, said brace serving to prevent one of said jaws from sliding with relation to the other, and a lever pivoted to said brace adjacent one of the shanks and having interlocking progressive coöperation with the opposite shank, substantially as set forth.

1,104,643. TOURIST'S GLASS. JOHN M. FAEHRMANN, Houston, Tex. Filed Feb. 5, 1913. Serial No. 746,391. (Cl. 88—1.)



1. An instrument of the character described, comprising a body-portion, a compass case carried by one end of the body-portion, a lens pivoted to the outer edge of the compass case, a telescoping member within the body-portion, a lens pivoted to the outer end of the telescoping member,

means for moving the telescoping member in and out of the body-portion, and means carried by the telescoping member for locking the needle of the compass against movement.

2. An instrument of the character described, comprising a body-portion, a compass case carried by one end of the body-portion, a lens pivoted to the outer edge of the compass case, a telescoping member within the body portion, a lens pivoted to the outer end of the telescoping member and adapted to coöperate with the first-mentioned lens, means for moving the telescoping member inwardly or outwardly, and a member carried by the telescoping member and extending within the compass case for locking the needle against movement.

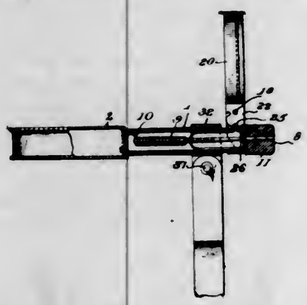
3. An instrument of the character described, comprising a body-portion, a compass case carried by one end of the body-portion, a lens pivoted to the outer ends of the compass case, a telescoping member extending from within the opposite end of the body-portion, a lens pivoted to the outer end of the telescoping member and coöperating with the first-mentioned lens, means for moving the telescoping member inwardly or outwardly, a compass within the compass case, an arm surrounding the pivot of the needle of the compass, and means carried by the telescoping member for moving the arm upwardly and locking the needle against movement when the telescoping member is in its inward position.

4. The combination with a telescope, of toggle levers pivotally connected to the telescope, and a plate pivotally connected to the outer end of the toggle levers and adapted to fold inwardly and outwardly for the purpose described.

5. The combination with a telescope, formed of two spaced lenses, a plate carried by the inner lens, toggle levers connected to said plate, and a large plate carried by the outer end of the toggle levers and adapted to serve to close the eye not being used in telescoping.

[Claim 6 not printed in the Gazette.]

1,104,644. TOURIST'S GLASS. JOHN M. FAEHRMANN, Houston, Tex. Filed Jan. 17, 1914. Serial No. 812,797. (Cl. 88—1.)



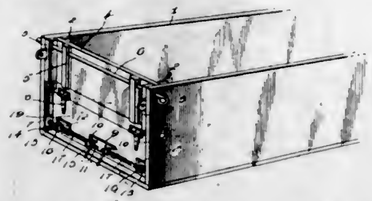
1. An instrument of the character described, comprising a body portion, a lens carried by one end of the body portion, a hollow telescoping member within the body portion, and having a block in its outer end, a rotatable rod swiveled within the block, means carried by the outer end of the rod for rotating the same, an elongated sleeve carried by the body portion and into which is screwed the rotatable rod whereby the telescoping member is adjusted in or out of the body portion.

2. An instrument of the character described, comprising a body portion, a lens pivoted to one end of the body portion, a telescoping member within the body portion means for adjusting the telescoping member in and out of the body portion, a band surrounding the outer end of the telescoping member and having its ends extending upwardly, a U-shaped plate between the upwardly turned ends of the band, clips securing the upwardly turned ends of the band and the U-shaped member together in their spaced relation, a lens having an ear pivoted between the upwardly turned ends of the band and having notches in two sides thereof, a spring within the hollow telescoping member and having a looped outer end passing through an opening in the telescoping member and an opening in the U-shaped plate and adapted to enter one of the notches in the ear carried by the lens whereby the lens is held in its downward or upward position substantially as shown and described.

3. An instrument of the character described, comprising a body portion, a lens carried by one end of the body portion, a telescoping hollow member within the body portion means for adjusting the telescoping member within the body portion, a band surrounding the outer end of the telescoping member and having its free ends turned upwardly, a U-shaped plate between the free ends of the band clips clamping the ends of the band and the plate together, a lens comprising a band having its ends turned downwardly, a clip clamping the ends of the band together and fitting between the clips of the U-shaped member and having notches in two sides thereof, a pivot securing the clip of the lens between the clips of the band, the clip of the lens having notches in two sides thereof, a spring within the outer end of the telescoping member and having a looped end passing through the telescoping member and through an opening in the U-shaped plate and adapted to enter one of the notches in the clip of the lens whereby the lens is held in its downward or upward position.

4. An instrument of the character described, comprising a body portion, a lens carried by one end of the body portion, a telescoping member within the body portion means for moving the telescoping member in and out of the body portion, a lens pivoted to the telescoping member, a band surrounding the outer end of the body portion and having its outwardly turned ends clamped together by a clip and the free ends turned outwardly, upwardly and inwardly forming a rectangular block, a magnifying glass having a hollow body portion, having ears passing on the outside of the rectangular portion of the clip and pivoted thereto and a spring pressed block within the hollow body portion of the magnifying glass and adapted to engage the rectangular shaped portion of the clip whereby the magnifying glass may be held in its downwardly or upwardly folded position.

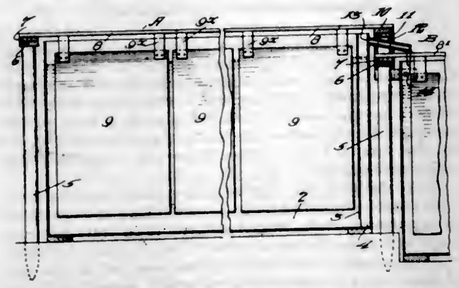
1,104,645. END-GATE FOR LUMBER-WAGONS. JOHN C. FEASTER, Skedee, Okla. Filed Nov. 15, 1912. Serial No. 731,574. (Cl. 21—21.)



1. An end gate including an upper and a lower member hingedly connected together, keeper members disposed adjacent to the upper and lower members, spring pressed locking rods carried by the lower member of the gate and adapted to engage with the keeper members to lock the gate in a closed or opened position, means provided upon the rods for adjusting the tension of the springs of the rods, means provided upon the lower member for sustaining the rods in locked position, and means for co-acting with the rod for retaining the rods out of engagement with the keepers.

2. An end gate including an upper and a lower member, means for securing the upper member to a wagon body, plates provided with guide ears disposed upon the lower member, the central plate having outatruck lugs, a pair of rods passing through the ears and having their inner ends provided with hand holds, the said hand holds being normally disposed between the opposed face of the ears and lugs of said central plate, an adjustable element for each of the rods, a spring arranged upon each of the rods and exerting a tension between its respective adjustable element and its respective ears of the central plate, and keepers adapted to be engaged by the rods to lock the lower member of the gate either in a closed or an open position.

1,104,646. ELECTROLYTIC APPARATUS. JOHN D. FIELDS, Butte, Mont. Filed Mar. 11, 1913. Serial No. 753,523. (Cl. 204—5.)



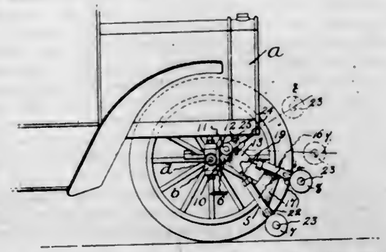
1. In an electrolytic apparatus, an elongated tank of conducting material, a series of metal strengthening ribs integral with said tank and extending longitudinally thereof, said metal ribs dividing the tank into separate cells and constituting anodes, a series of conducting bars suspended above said tank, a cathode carried by each of said conducting bars, said cathode being disposed between adjacent anodes, a common conducting bus bar at the end of the cell having electrical connection with said conducting bars, an electrolyte disposed in said cell, an over flow trough at one end of said cell, and a baffle plate extending across one end of said cell near said over flow trough, said baffle plate terminating short of the bottom of the cell to provide a passage for the electrolyte.

2. In an electrolytic apparatus, an elongated tank of conducting material, a series of metal strengthening ribs integral with said tank and extending longitudinally thereof, said metal ribs dividing the tank into separate cells and constituting anodes, a series of conducting bars suspended above said tank, a cathode carried by each of said conducting bars, said cathode being disposed between adjacent anodes, a common conducting bus bar at the end of the cell having electrical connection with said conducting bars, an electrolyte disposed in said cell, an over flow trough at one end of said cell, and a baffle plate extending across one end of said cell near said over flow trough, said baffle plate terminating short of the bottom of the cell to provide a passage for the electrolyte, said baffle plate being integral with said metal tank and said anodes.

3. In an electrolytic apparatus, the combination of a series of cells, each cell comprising a metal tank, a plurality of integral strengthening plates disposed within the tank and extending longitudinally thereof, said plates constituting anodes, a transverse baffle plate near one end of the tank, said baffle plate being integral with the tank and with said anodes, an over flow trough at the end of the tank near said baffle plate, a conducting bus bar disposed above said trough, a plurality of conducting ribs, one end of each of said ribs being connected to said conducting bus bar and the other end being insulated, and cathode plates suspended from each of said conducting bars between adjacent anodes, the cells of the series being progressively lower in elevation.

4. In an electrolytic apparatus, the combination of a series of cells, each cell comprising a metal tank, a plurality of integral strengthening plates disposed within the tank and extending longitudinally thereof, said plates constituting anodes, a transverse baffle plate being integral with the tank and with said anodes, an over flow trough at the end of the tank near said baffle plate, a conducting bus bar disposed above said trough, a plurality of conducting ribs, one end of each of said ribs being connected to said conducting bus bar and the other end being insulated, cathode plates suspended from each of said conducting bars between adjacent anodes, the cells of the series being progressively lower in elevation, down spouts connected with the over flow trough of one cell and extending downwardly past the conducting bars which suspend the cathodes of the adjacent cell, and an electrical connection between the conducting bus bar of one cell and the metal tank of the adjacent lower cell.

1,104,647. AUTOMOBILE-GUARD. ABRAHAM R. FINKELSTEIN, Brooklyn, N. Y. Filed Feb. 4, 1914. Serial No. 816,451. (Cl. 105—128.)



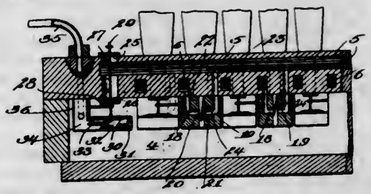
1. In an automobile fender, the combination with the steering knuckles of the vehicle; of a telescoping frame pivotally carried by the steering knuckles, and rollers transversely mounted on the frame for contacting with the vehicle wheels.

2. In an automobile fender, the combination with the steering knuckles of the vehicle; of a telescoping frame pivotally carried by the steering knuckles, and adapted to be swung to an operative and an inoperative position, and rollers transversely mounted on the frame for contacting with the vehicle wheels when the frame is swung to its operative position.

3. In an automobile fender, the combination with the steering knuckles of the vehicle; of brackets secured to the knuckles, a telescoping frame pivotally carried by the said brackets and rollers rotatably carried by the frame and adapted to be actuated by the vehicle wheels substantially as described.

4. In an automobile fender, the combination with the steering knuckles of the vehicle; of brackets carried by the said knuckles, a telescoping frame pivotally carried by the said brackets and adapted to be swung to an operative and an inoperative position, means for locking the frame in the inoperative position, shafts mounted transversely on the frame, and rollers carried by the shafts and adapted to be actuated by the wheels of the vehicle substantially as described.

1,104,648. ORGAN. FREDERICK J. FLAHERTY, Waltham, Mass. Filed May 18, 1912. Serial No. 698,259. (Cl. 84—20.)



1. In an organ, the combination with a wind-chest, of a pipe valve, an actuating motor therefor mounted as a unit on the under side of the top of the wind-chest and having a pair of fluid passages leading therefrom, and a valve mounted to coöperate with either of said passages to close the same.

2. In an organ, the combination with a wind-chest having key and stop channels formed in the top thereof, of a pipe valve, and actuating motor therefor, said key and stop channels communicating therewith, and a valve operative to close either of said channels.

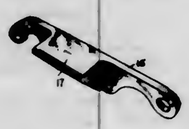
3. In an organ, the combination with a wind-chest having longitudinally and transversely extending key and stop channels formed in the top thereof, of a pipe valve, an actuating motor therefor having a valve-actuating diaphragm and a pair of passages leading therefrom to the respective key and stop channels and presenting a pair of opposed ports, and a valve interposed between said ports and capable of closing either of them.

4. In an organ, the combination with a wind-chest having key and stop channels formed in the top thereof and also having organ pipes mounted on the top thereof, a valve for each pipe, an actuating motor for each pipe valve having a valve-actuating diaphragm, and a pair of fluid passages for controlling the operation thereof, said passages communicating with said key and stop channels and provided with opposed ports, and a valve interposed between said ports and operative to close either of them.

5. In an organ, the combination with a wind-chest, of a pipe valve and an actuating motor therefor constructed as a unit mounted on the under side of the top of the wind-chest and comprising a body having a pressure chamber, a slot communicating therewith, and a pair of fluid passages leading from said slot, a diaphragm operative in said chamber and connected to said pipe valve, and a valve positioned in said slot and operative to close either of said passages.

[Claims 6 to 10 not printed in the Gazette.]

1,104,649. SLED-BRAKE. COLIN WALTER FOOTE, Rochester, Mich. Filed Jan. 24, 1913. Serial No. 743,952. (Cl. 21—46.)



1. A brake device for the running gear of a vehicle, resilient means for suspending said device, and means for moving the same into position to enable it to be forced against the action of said resilient means between the running gear and the surface over which the vehicle moves.

2. A braking device for the running gear of a vehicle, said device being adapted to receive part of the running gear, resilient means for suspending said device, and means for moving the device into position to engble it to be forced against the action of the resilient means between the running gear and the surface over which the vehicle moves.

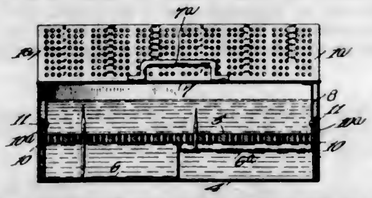
3. The combination of a pair of arms, means for pivotally connecting said arms together, a lever pivoted to one of said arms and having a wedge to pass between the same on one side of said pivot and spread the adjacent ends of said arms apart, resilient means for holding said lever in such spreading position, and projectings on the opposite ends of said arms extending toward each other.

4. In a brake device, the combination of a pair of arms pivoted together, a lever pivoted to one arm to swing between the said arms and having a wedge-shaped projection thereon, and a spring having one end secured to one end of the lever and its other end connected to the said arms.

5. In a brake device, the combination of a pair of arms pivoted together intermediate of their ends, said arms having openings in their upper ends and inwardly projecting members at their lower ends, a lever pivoted intermediate its ends to one of the arms to swing between the said arms and having a wedge-shaped projection thereon, and a spring having one end secured to one end of the lever and its other end to an eye on the pivot of the said arms.

[Claims 6 to 8 not printed in the Gazette.]

1,104,650. HOLDER AND STERILIZER FOR DENTAL BURS. HOWARD JOHNSON FRIES, Seattle, Wash. Filed June 5, 1913. Serial No. 771,944. (Cl. 106—3.)



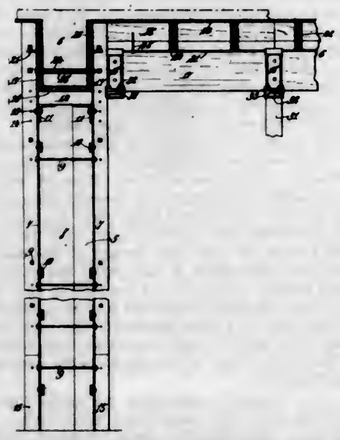
1. A holder for dental burs comprising a forwardly inclined plate and a rigid support therefor, such plate having numerous numbered perforations for receiving burs of different kinds and sizes, and a stepped or shouldered support for the burs, the same being made in sections and arranged directly under the inclined plate parallel thereto, one section being farther from said plate than the other, as described.

2. A sterilizer for dental implements, comprising a tank for the sterilizing liquid, a bur-holding plate provided with numerous holes duly numbered to indicate different kinds and sizes of burs, a support for the latter arranged under said plate, and spring catches attached to the ends of the plate and adapted for automatic engagement with the top edge of the tank when the aforesaid plate is raised out of the solution, as described.

3. In a sterilizer for dental implements, a tank for holding the sterilizing liquid, a plate provided with numerous numbered perforations for reception of burs, the plate being adapted to be raised and lowered in the tank, and spring catches applied to the ends of the plate, their upper free ends being provided with outwardly projecting shoulders adapted, when the plate is raised, for automatic engagement with and subsequent support of the plate in the position required for access to the burs, as described.

4. The combination with a sterilizing tank and a perforated plate adapted for holding burs and provided with spring catches, of a lid or cover for the tank provided with pendent portions adapted for detachable engagement with such spring catches, as described.

1,104,651. CONCRETE CONSTRUCTION. WILLIAM T. GAGNEBIN, Omaha, Nebr. Filed Nov. 5, 1910. Serial No. 590,896. (Cl. 25—131.)



1. In means for molding concrete structures, the combination of inclosing walls having exterior corner spaces, main angle irons having their angles set into said corner spaces of the walls and the angular members thereof projected outwardly beyond the outer surfaces of the walls, the side edges of the walls abutting against the angular members near the angles of the angle irons and having brace angles secured thereto at intervals to bear against the outer sides of the wall, and cross ties removably engaging the angular members of the main angle irons and directly bearing against and extending across the outer surfaces of the walls.

2. In means for molding concrete structures, the combination of inclosing walls having exterior corner spaces, main angle irons having their angles set into said corner spaces of the walls and the angular members thereof projected outwardly beyond the outer surfaces of the walls, the side edges of the walls abutting against the angular members near the angles of the angle irons, the intersecting angular members of the irons being materially greater in width than the thickness of the inclosing walls and having openings therein coincident with the outer surfaces of the walls, and cross ties removably engaging the said openings of the angular members of the main angle irons and directly bearing against and extending across the outer surfaces of the walls.

3. In means for molding concrete structures, the combination of inclosing walls having engaging side edges, angle irons having the angles thereof set in the outer corners of the walls, the edges of the walls bearing against the angle irons, cross ties removably extending through the angle iron flanges and held against the outer sides of the inclosing walls, angle knees adjustably secured to said angle irons, an open seat held in the upper portion of the walls on the knees and adjustable vertically with the knees in relation to the angle irons, and a girder mold intersecting the upper portions of the angle irons and walls and bearing upon the said seat.

4. In means for molding concrete structures, the combination with side and bottom walls, of standards secured to the outer sides of the side walls and having upper and lower angular extremities, auxiliary side walls disposed on the upper edges of the first named side walls, angle iron supports held in the upper angular extremities of the standards, fastening devices removably engaging the auxiliary side walls and the angle iron supports, locking means attached to the lower angular extremities of the standards, a channel iron support applied to and engaging the bottom wall and lower angular extremities of the standards and having locking means formed in the bottom thereof, the fastening means carried by the lower angular extremities of the standards extending over and engaging the locking means in the bottom of the channel iron, and a temporary supporting post applied to the under side of the channel iron.

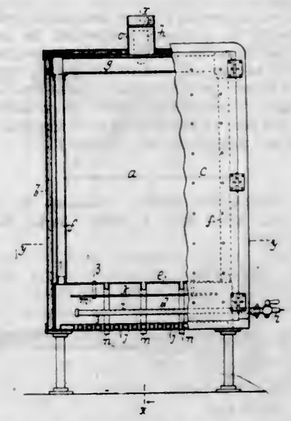
1,104,652. PORTABLE OVEN. HERMANN GEHNRICH, New York, N. Y. Filed July 13, 1911. Serial No. 638,306. (Cl. 25—144.)

1. In a portable oven, the combination with a casing adapted to constitute the upper, lower and side walls of a bake compartment; a heat compartment arranged within the upper part of the bake compartment; a fire compartment arranged within the lower part of the bake compartment; a series of flues situated in the bake compartment, separated from the walls and extending from the fire to the heat compartment; devices for heating the fire compartment; and a chimney leading from the upper compartment.

2. A device of the kind described, comprising a sectional casing with a swinging door, an oven located within the casing, means for heating the oven, a chimney connected to the oven, a damper arranged in the chimney, and means carried by the damper for locking the door while the damper is closed.

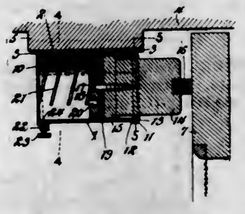
3. A device of the kind described, comprising a sectional casing with a swinging door, an oven located within the casing, means for heating the oven, a chimney connected to the oven, a swivel damper arranged in the chimney, and means coöperating with the damper and the door for locking the door while the damper is closed.

4. A device of the kind described, comprising a sectional casing with swinging door, an oven located within the casing, means for heating the oven, a chimney connected



to the oven, a swivel damper arranged in the chimney and means coöperating with the handle of the damper and the door for locking the door when the damper is closed.

1,104,653. DOOR-CHECK. JAMES EDWIN GIBBS, Cincinnati, Ohio, assignor of one-half to William A. Byerly, Bridgewater, Va. Filed Jan. 14, 1914. Serial No. 812,066. (Cl. 16—77.)



1. A pneumatic door check comprising a barrel of substantially the same internal diameter throughout, and having one end open and of the same diameter as the bore of the cylinder, a piston adapted to the bore of the cylinder, and readily removable means in the cylinder at the open end thereof and extending radially into the cylinder to reduce the effective bore thereof, the piston having an axially elongated portion of a diameter and length to move along the bore reducing means in guiding contact therewith throughout the stroke of the piston.

2. A pneumatic door check comprising a barrel, and a piston block adapted to the interior of the barrel and of a length approximating that of the barrel, said barrel having a groove at the end through which the piston block extends, and a retaining ring sprung into the groove to prevent escape of the piston block from the barrel.

3. A door check comprising a barrel closed at one end and at the other end open to the full diameter of the bore of the barrel, a cylindrical piston of a length substantially that of its stroke and having one end movable into and out of the barrel through the open end thereof, the diameter of the piston being substantially the same as the length of its stroke, and means at the open end of the barrel for preventing escape of the inner end of the piston therefrom.

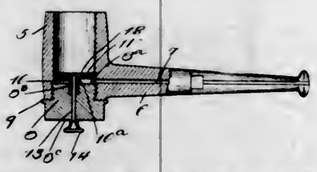
4. A door check comprising a barrel closed at one end and at the other end formed with a bead defining an internal groove, a split ring seated in the groove and encroaching on the bore of the barrel, and a piston block having a head at one end approximating in diameter that

of the internal diameter of the barrel, and the remainder of the block being reduced in diameter corresponding to the internal diameter of the split ring seated in the groove.

5. A door check having a barrel and piston lodged therein, with means for normally projecting the piston to a limited extent from the barrel, and a supporting bracket for the barrel having one end inclined with respect to the longitudinal center line of the barrel and bracket to indicate the angle of installation of the check structure with relation to the part to which it is to be applied.

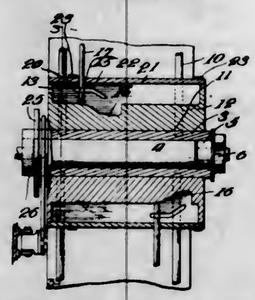
[Claim 6 not printed in the Gazette.]

1,104,654. TOBACCO-PIPE. CHARLES B. GILLILAND, Chicago, Ill. Filed Mar. 8, 1912. Serial No. 682,505. (Cl. 131—12.)



A tobacco pipe including a straight cylindrical tobacco chamber, a closure for the lower end of the chamber, said closure being provided centrally with a socket opening in the chamber, a circular perforated disk having a centrally projected stud seated in and held and guided by the socket, a pin passed centrally through the closure, a scraper bar secured to one end of the pin and slidable on the face of the disk and a finger piece secured to the other end of the pin outwardly of the closure whereby the device may be disassembled by removing the finger piece and drawing the pin, disk and bar through the mouth of the chamber.

1,104,655. WHEEL FOR TRACTION-ENGINES. BENJAMIN F. GILLIS, Watertown, Wis. Filed Dec. 4, 1913. Serial No. 804,706. (Cl. 21—209.)



1. In a traction wheel, a hub, a rim, rigid spokes connecting the hub and rim, a plurality of radially extending mud-lugs shiftable through slots formed in the rim, each mud-lug including an inwardly extending rod, a sliding sleeve surrounding the hub and through which the rigid spokes pass, said sleeve including a plurality of radially directed blades, each blade including spaced walls, said spaced walls being formed with angular cam-slots, the inner end of each rod extending into the space between a pair of walls, a pin extending through the cam slots of each pair and through the inner end of the corresponding rod, and manually actuatable means for shifting the sliding sleeve laterally to cause the projection or retraction of said mud-lugs.

2. In a wheel of the character described, a hub, a rim, rigid spokes connecting the hub and rim, a plurality of mud-lugs operating through slots in the rim, and each including an inwardly extending rod, a longitudinally sliding member mounted upon the hub and operatively connected to the rods to cause a projection of the lugs on a movement of the sliding member in one direction, and a retraction of the rods upon a movement of the sliding member in the other direction, a housing inclosing said sliding member and the inner ends of said rods and said housing being formed of removable sections, and means for holding the housing sections in engagement with each other.

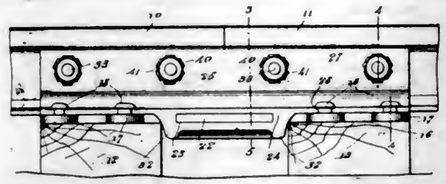
3. In a wheel of the character described, a hub, a rim, rigid spokes connecting the hub and rim, a plurality of mud-lugs disposed in slots in said rim and each mud-lug having an inwardly extending rod, a sliding member mounted upon the hub and comprising a plurality of radiating blades and annular end-pieces, each of said blades having a pair of spaced outwardly extending walls, each pair of walls being formed with alining cam-slots, the inner end of each spoke being disposed between the walls of a corresponding blade, a pin extending through the corresponding cam-slots and through each rod, manually actuatable means for laterally shifting the sliding member to cause the projection and retraction of the lugs, and a housing surrounding the sliding member and resting upon the edges of the laterally extending walls thereof, said housing comprising detachable sections.

4. In a wheel of the character described, a hub, a rim, fixed spokes connecting the hub and rim, a plurality of mud-lugs disposed in slots in said rim and having inwardly extending rods, a sliding sleeve mounted upon the hub and comprising annular end-members and longitudinally extending blades spaced from each other to receive the rigid spokes between them, each blade being outwardly extended to form spaced walls, said walls being provided with cam-slots, the inner end of each rod being received between a pair of said walls, the inner extremity of each rod bearing upon the edge face of the blade, said edge-face being recessed to correspond to the form of said cam-slot and thereby provide a bearing for the inner end of the corresponding rod, a pin passing through said cam slots and through each rod, and manually actuatable means for laterally shifting the sleeve to thereby project or retract the mud-lugs.

5. In a wheel of the character described, a hub, a rim, fixed spokes connecting the hub and rim, a plurality of mud-lugs disposed in slots in said rim and having inwardly extending rods, a sliding sleeve mounted upon the hub and comprising annular end-members and longitudinally extending blades spaced from each other to receive the rigid spokes between them, each blade being outwardly extended to form spaced walls, said walls being provided with cam-slots, the inner end of each rod being received between a pair of said walls, the inner extremity of each rod bearing upon the edge face of the blade, said edge face being recessed to correspond to the form of said cam slot and thereby provide a bearing for the inner end of the corresponding rod, a pin passing through said cam slots and through each rod, and a housing formed of a plurality of cover sections resting at their ends upon the annular members at the ends of the sleeve and notched to permit the passage of the rods, removable bands encircling said housing and holding the sections in place, and manually operatable means for laterally shifting the sleeve to thereby project or retract the spoke.

1,104,656. RAIL-JOINT. CHARLES P. GOETZINGER, Guthrie, Okla., assignor of one-third to Gustave A. Erixon and one-third to Joseph E. Paymal, Guthrie, Okla. Filed Sept. 24, 1913. Serial No. 791,552. (Cl. 239—6.)

1. A rail joint comprising a pair of opposed members, each embodying a vertical plate and a horizontal plate, the horizontal plate of one of said members having edge spike-receiving recesses and the horizontal plate of the other of said members having a central depending slotted portion and edge recesses on opposite sides thereof, a base plate integral with the recessed edge of the horizontal plate of the first named member, and coextensive in length therewith and extending laterally therefrom to and beneath the free edge of the horizontal plate of the second named member, said base plate being provided at its free edge with a central tongue engaging the slot in said slotted portion of the second named member, and having lugs on opposite sides of said tongue formed with openings registering with the said edge recesses in the second named member, the latter named recesses and openings being adapted for the passage of spikes to jointly fasten the horizontal plate of the first named member and the said base plate of the second named member to adjoining ties in longitudinal alinement with said slotted portion and tongue.



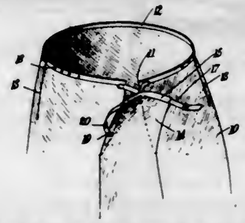
2. A rail joint comprising a pair of opposed members, each embodying a vertical plate and a horizontal plate, the horizontal plate of one of said members having edge spike-receiving recesses and the horizontal plate of the other of said members having a central depending slotted portion and edge recesses on opposite sides thereof, a base plate integral with the recessed edge of the horizontal plate of the first named member and provided with a central tongue engaging the slot in said slotted portion of the second named member, and having lugs on opposite sides of said tongue formed with openings registering with the said edge recesses in the second mentioned member, the latter named recesses and openings being adapted for the passage of spikes to jointly fasten the base plate and horizontal plate of the first named member to adjoining ties in longitudinal alinement with the said slotted portion and tongue, a longitudinally extending rib along the recessed edge of the base plate between the sets of recesses therein and terminating in abutment knobs, and a similar longitudinally extending rib upon the said central slotted portion, said rib extending along the inner margin of said slotted portion and terminating in abutment knobs arranged in transverse alinement with the first named knobs.

3. A rail joint comprising a pair of opposed members, each embodying a vertical plate and a horizontal plate, the horizontal plate of one of said members having edge spike-receiving recesses and the horizontal plate of the other of said members having a central depending slotted portion and edge recesses on opposite sides thereof, a base plate integral with the recessed edge of the horizontal plate of the first named member, said base plate being provided at its free edge with sets of apertured end lugs and a tongue disposed between said lugs, said tongue being spaced from the adjacent lugs to provide intervening recesses, the said apertured lugs being arranged to register with the edge recesses in the second named member for the passage of spikes to jointly fasten the same to a tie, a longitudinally extending rib upon the base plate along the recessed edge of said plate and between the recesses therein, said rib terminating in abutment knobs, and a longitudinally extending rib upon the central slotted portion of the second named member, said rib terminating in abutment lugs extending downward through said recesses between the tongue and apertured lugs.

1,104,657. GARMENT. ABRAHAM GOLDBERG, New York, N. Y. Filed Oct. 6, 1911. Serial No. 653,103. (Cl. 2—143.)

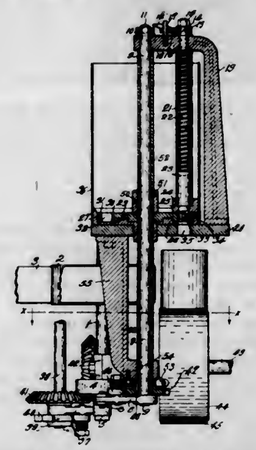
1. A skirt having a waistband and a placket opening, a closing flap for said opening and provided with an open-ended pocket having an opening intermediate its ends, crossed straps secured respectively to the opposite edges of said placket opening and passing in opposite directions into said intermediate opening of said pocket and through said pocket, each of said straps passing through an end opening of said pocket and being disposed along the waistband of the skirt, and means for adjustably securing said straps at said waistband of the skirt.

2. A skirt having a waistband, a placket opening, a closing flap extending over said opening and provided near the upper edge with an open-ended pocket having at the inner side an opening intermediate its ends, crossed and oppositely disposed straps secured respectively to the opposite edges of said pocket opening and extending in opposite directions into said intermediate opening of said



pocket, each of said straps passing through said pocket and out at the open end thereof and remote from the placket edge to which said strap is secured, and means for adjustably securing said straps at the waistband of the skirt.

1,104,658. CANNING MACHINERY. JOSEPH P. GOODFELLOW, Blaine, Wash. Filed Aug. 5, 1913. Serial No. 783,173. (Cl. 226—9.)



1. A measuring device, comprising a hopper, a shaft rotatably mounted with respect to the hopper, a plunger mounted eccentrically with respect to the shaft, a perforated disk rotatably mounted within the hopper, a trip cam secured to said plunger, and an arm carried by the said shaft adapted to engage said trip, said shaft adapted to receive a reciprocating rotary motion.

2. A measuring device, comprising a hopper, a perforated disk mounted within the hopper adapted to rotate intermittently, a plunger, the lower end of which is in line with the perforations, means for raising said plunger periodically, resilient means adapted to force the plunger downwardly, and a housing for said plunger and resilient means, said plunger being arranged eccentrically with respect to the axis of the rotation of the disk.

3. A measuring device comprising a hopper, a shaft rotatably mounted with respect to the hopper, a plunger mounted eccentrically with respect to the shaft, a perforated disk rotatably mounted within the hopper, means for rotating the shaft through a predetermined angle and means carried by the shaft engaging the plunger adapted to raise the plunger intermittently.

1,104,659. SYRINGE-NOZZLE. FREDERICK A. GORDON, Spokane, Wash. Filed July 16, 1913. Serial No. 779,348. (Cl. 128—25.)

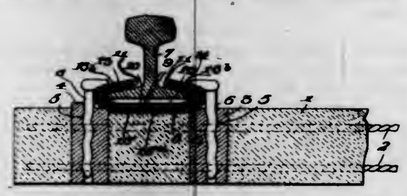
A syringe nozzle including a flexible tapered tubular body portion having one terminal sealed and the other

open and adapted to be placed upon the finger of an operator and completely cover the finger, a tube fixed along one side of said body portion and being tapered toward its



outer end and having its rear end extended for connection to a liquid supply source, and the forward end of said tube being provided with a plurality of apertures to permit issuance of the liquid.

1,104,660. COMBINED INSULATING AND FASTENING MEANS FOR RAILS. WILLIAM R. GORRELL, Alhambra, Cal., assignor to Gorrell Steel Spike Lock Railroad Tie Corporation, Havre de Grace, Md. Filed Apr. 20, 1914. Serial No. 833,267. (Cl. 238—2.)



1. In a rail fastening and insulating means, the combination with a track rail and tie therefor, of a metallic chair mounted on said tie and an insulating plate applied thereto, means forming interlocking engagement between said chair and insulating plate and additional means in connection with the tie and last mentioned means to aid in retaining the chair in place on said tie.

2. In a rail fastening and insulating means, the combination with a track rail and tie therefor; of a chair comprising an insulating plate receiving the base flanges of the rail thereon, a protecting plate designed coincident to the outline of said insulating plate and receiving the latter thereon, said insulating and protecting plates being provided with interlocking depressions and means in connection with the tie and the depressions of said plates to aid in the retention of the chair on said tie.

3. In a rail fastening and insulating means, the combination with a track rail and a tie therefor, the latter being provided with a depression in its upper face over which said track rail is adapted to be disposed; of a chair comprising an insulating plate for the reception of the base flanges of said rail thereon, a metallic protecting plate designed coincident to the outline of said insulating plate and receiving the latter thereon, said insulating and protecting plates being provided with interlocking depressions received in the depression in the upper face of the tie, whereby to retain said chair in position thereon.

4. In a rail fastening and insulating means, a chair comprising a pair of insulating plates, metallic spacing means therefor, a metallic protecting plate for the same, and means formed in connection with said plates for the interlocking of the same one to the other.

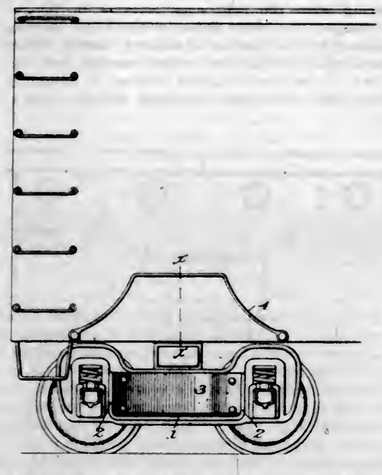
5. In a rail fastening and insulating means, a chair comprising a pair of insulating plates, a metallic spacing plate interposed therebetween, and a protecting plate receiving the aforesaid plates thereon, said insulating and metallic plates being provided with interlocking depressions to retain the same one to the other and also aid in the retention of the chair on a tie.

[Claims 6 to 9 not printed in the Gazette.]

1,104,661. FREIGHT-CAR STEP. MORGAN A. GREEN, Montpelier, Idaho. Filed Dec. 6, 1913. Serial No. 805,084. (Cl. 105—195.)

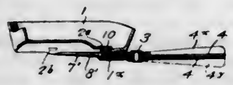
1. In a freight car, a truck provided with a step the same being arranged in the space formed between adjacent journal boxes.

2. In a freight car, a truck having a step between adjacent journal boxes, such step having a back and end pieces.



3. In a freight car, a step provided upon the truck and arranged opposite the space formed between opposite journal boxes and a grab-iron mounted upon the car body above the step.

1,104,662. SANITARY DENTAL IMPRESSION-TRAY. GARRETT LAYTON GRIER, Milford, Del. Filed Apr. 18, 1914. Serial No. 832,789. (Cl. 32—6.)



1. In a dental impression tray, a body portion having an opening in its bottom disposed on an axial line through the center and near the forward edge of said body portion, and other openings disposed on either side of said center line, and a handle comprising a pair of jaws provided with fixed teeth arranged to enter the side openings and having a movable hook adapted to enter said centrally disposed opening.

2. In a dental impression tray, a body portion having an opening in its bottom disposed on an axial line through the center and near the forward edge of said body portion, other openings disposed on either side of said center line, a handle comprising a pair of jaws pivotally connected together, each of said jaws being provided at its end with a fixed tooth arranged to enter one of the side openings, and a hook mounted to turn on the pivot which connects the jaws, said hook being arranged to enter the central opening.

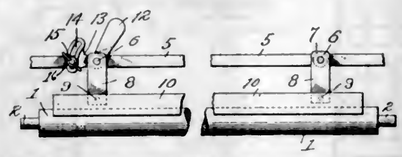
3. In a dental impression tray, a body portion having an opening in its bottom disposed on an axial line through the center and near the forward edge of said body portion, other openings disposed on either side of said center line, a handle comprising a pair of jaws pivotally connected together, each of said jaws being provided at its end with a fixed tooth arranged to enter one of the side openings, a hook mounted to turn on the pivot which connects the jaws, said hook being arranged to enter the central opening, and stop members carried by one of said jaws for limiting the movement of the hook.

4. A handle for dental impression trays comprising two crossed members pivoted at their intersection and having rearwardly projecting jaws equipped with teeth at their free extremities, a hook carried by the pivot and arranged to rotate on the same, and means for limiting the movement of the hook.

5. A handle for dental impression trays comprising two crossed members pivoted at their intersection and having rearwardly projecting jaws equipped with teeth at their free extremities, a hook carried by the pivot and arranged to rotate on the same, and means for limiting the movement of the hook, said last named means comprising a pair of stop members carried by one of said jaws and disposed on opposite sides of said hook.

[Claim 6 not printed in the Gazette.]

1,104,663. SHEET-DEFLECTING DEVICE. JACOB GROOM, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Aug. 21, 1913. Serial No. 785,922. (Cl. 101—43.)



1. The combination with suitable folding rollers, of suspension links movable about axes transverse to said rollers, and a deflector blade pivotally suspended from the depending ends of said links to adapt it to be swung in substantially the tangent plane of said rollers into and out of position to deflect sheets into the bight of said rollers.

2. In a machine of the character described, the combination with suitable folding rollers, of a support, pins or rods journaled in said support and extending transversely of said rollers, a deflector blade movable into and out of sheet-deflecting position adjacent said rollers, arms depending from said pins or rods in approximately the tangent plane of said rollers, said deflector blade being pivotally connected to said arms, and means for moving said deflector blade.

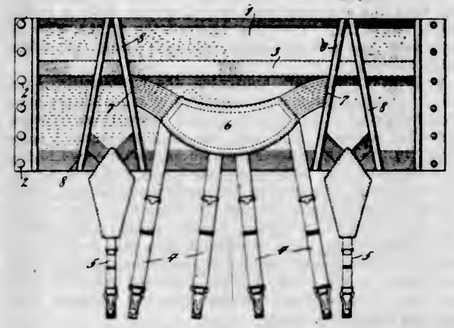
3. In a machine of the character described, the combination with suitable folding rollers, of a support, pins or rods journaled in said support and extending transversely of said rollers, a deflector blade movable into and out of sheet-deflecting position adjacent said rollers, arms depending from said pins or rods in approximately the tangent plane of said rollers, said deflector blade being pivotally connected to said arms, and means for moving said deflector blade, said means including a hand lever rigid with one of said pins or rods.

4. The combination with suitable folding rollers, of a fixed support arranged above said rollers, a deflector blade extending lengthwise of said rollers, said blade being movable in the tangent plane of said rollers into and out of sheet-deflecting position, and means for shifting the positions of said deflector blade, said shifting means including a hand lever movable in a plane parallel to said tangent plane.

5. The combination with a folding machine embodying suitable folding rollers, of a tipping-in attachment therefor comprising a fixed support, pins or rods projecting from said support, a deflector blade swingingly suspended from said pins or rods, and means for swinging said blade into and out of sheet deflecting position with respect to said rollers, said means including arms fixed to said pins or rods and pivotally connected to said deflector blade, and a hand-lever fixed to one of said pins or rods.

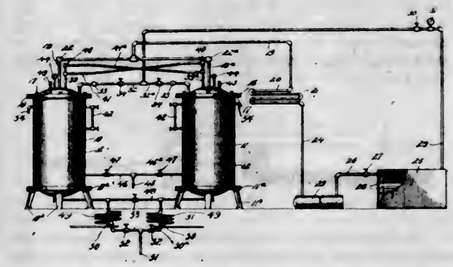
1,104,664. SUPPORTING-BELT. EDGAR GUGGENHEIM, New York, N. Y., assignor to M. W. Schloss Mfg. Co., New York, N. Y., a Firm composed of Meyer W. Schloss and Edgar Guggenheim. Filed Dec. 4, 1913. Serial No. 804,580. (Cl. 2—188.)

1. A low corset consisting of a flat body portion whose upper and lower edges are substantially parallel and unshaped to the figure of the wearer, said body portion being elastic in a longitudinal direction and provided in the upper portion and at substantially the waist line with a zone of elastic but less yielding nature than the remainder of the body portion for the purpose set forth.



2. A low corset consisting of a flat body portion whose upper and lower edges are substantially parallel and unshaped to the figure of the wearer, said body portion being elastic in a longitudinal direction and provided in the upper portion and at substantially the waist line with a zone of elastic but less yielding nature than the remainder of the body portion, and hose supporters attached to the body portion at points below the said less yielding zone.

1,104,665. REFRIGERATING APPARATUS. JOHN HAMERSLEY, New Comerstown, Ohio. Filed Oct. 7, 1911. Serial No. 653,393. (Cl. 62—6.)



1. In a refrigerating apparatus, a still-absorber, a refrigerating coil associated therewith, a condenser in the line of connection between the still-absorber and coil, a low pressure pipe for conveying the spent refrigerant from the coil and a circulator within the still-absorber and communicating with said pipe, said circulator comprising a cylindrical conductor extending partially around the still-absorber and provided with a series of spaced inclined discharge apertures, and a conical shield secured to the circulator body and arranged to surround the apertures.

2. In a refrigerating apparatus, a still-absorber, a jacket surrounding the same and forming a cooling chamber, means for supplying a cooling agent thereto, a refrigerating coil, high and low pressure pipes connected with the coil and condenser in the high pressure pipe, an expansion valve in said high pressure pipe between the condenser and coil, a circulator within the still-absorber and comprising a cylindrical body extending partially around the same, a pipe leading from the low pressure pipe through said cooling chamber to said cylindrical body, said cylindrical body being provided with inclined discharge apertures, and a rearwardly extending conical shield secured to the cylindrical body and surrounding said apertures.

3. In a refrigerating apparatus, the combination of a pair of still-absorbers, a refrigerating coil, a high pressure pipe, valved connections between said high pressure pipe and the respective still-absorbers, a condenser in said

pipe, an expansion valve in said pipe between the condenser and coil, a low pressure pipe connected with the coil, valved connections between said low pressure pipe and the respective still-absorbers, vent pipes communicating with the still-absorbers, each provided with a safety valve, and a pipe connection between the safety valve of each vent pipe and the other vent pipe below the safety valve therein.

4. In a refrigerating apparatus, the combination of a pair of still-absorbers, a refrigerating coil, a high pressure pipe connected with the coil, valved connections between the high pressure pipe and the still-absorbers, a condenser in the high pressure pipe, an expansion valve in the high pressure pipe between the condenser and coil, a connecting means between the still-absorbers affording relief valved intercommunication for the passage of excess pressure from one to the other, cooling jackets surrounding the still-absorbers, pipes disposed within said jackets, circulators within the still-absorbers and communicating with said pipes, a low pressure pipe connected with the coil, and valved connections between said low pressure pipe and the last-named pipes.

5. In a refrigerating apparatus, the combination of a pair of still-absorbers, a refrigerating coil, high and low pressure lines, valved connections between the respective still-absorbers and the high and low pressure lines, whereby the still-absorbers may be alternately employed as stills and absorbers, in connection with a common refrigerating system, a water supply pipe connecting the still and absorbers, a controlling valve in said pipe, a main water supply pipe, valved branches connecting the same with said water supply pipe on opposite sides of said controlling valve, said branches having heating coils therein, and burners for heating said coils.

1,104,666. RATCHET-WHEEL AND THE LIKE. EDWARD E. HARRIS, Valliant, Okla., assignor to Corona Manufacturing Co., Valliant, Okla., a Corporation of Oklahoma. Filed June 18, 1913. Serial No. 774,455. (Cl. 156—29.)



1. In combination a roll having radially disposed recesses in its end, a flat disk-like member attached to the recessed end thereof having a circular opening to receive the end of the roll and provided with arms projecting into said opening and seated in said recesses in the end of the roll.

2. In combination a roller having radially disposed recesses in its end, a flat disk-like member on the recessed end thereof having a circular opening to receive the end of the roller and provided with radially disposed arms projecting into said opening and seated in the corresponding recesses in the end of the roller; and an axially disposed device passing through such member and engaging the end of the roller.

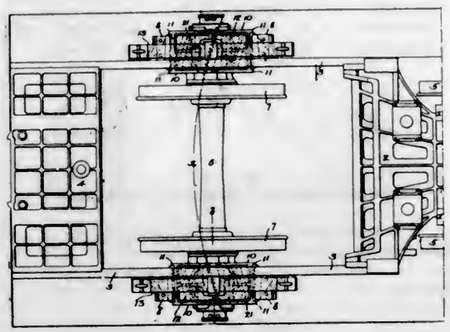
3. In combination a roller having radially disposed recesses in its end, a flat wheel having an opening fitted to the end of the roller, and radially disposed arms extending into said opening and seated in the corresponding recesses in the end of the roller; with a device extending axially through the wheel and engaging the roller.

4. In combination with a shade roller having shallow radial channels in its end, a flat ratchet wheel having an opening fitted to the end of the roller, and having radially disposed arms extending into said opening and seated in the corresponding channels in the end of the roller; with a gudgeon pin extending axially through the ratchet wheel and engaging the roller.

5. A reversible ratchet wheel for the purpose specified comprising a flat disk-like member having squared or double faced teeth on its periphery, a large axial opening, and a series of radial arms extending into said opening but connected at their inner ends to leave an axially disposed space for the passage of a retaining device.

[Claim 6 not printed in the Gazette.]

1,104,667. RADIAL TRUCK. GEORGE R. HENDERSON, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 17, 1913. Serial No. 774,141. (Cl. 105—17.)



1. The combination in a radial truck, of a frame having pedestals on each side; a carrier mounted in each pedestal so as to move vertically, each carrier having a cross member and two vertical members forming a recess; an independent box mounted in the recess of each carrier; an axle mounted in the boxes; and a bearing between each box and the cross member of its carrier.

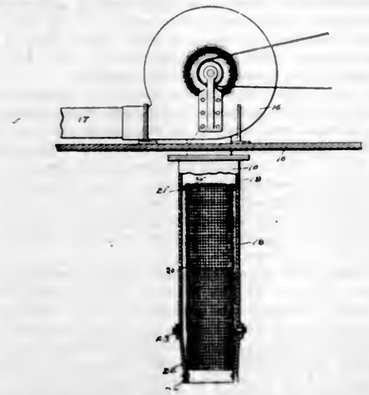
2. The combination of an axle; wheels thereon, said axle extending beyond the wheels; an independent box in which each extension of the axle is mounted; side frames located beyond the wheels; pedestals in each side frame; a carrier located between the pedestals of each side frame; means for preventing the carriers moving laterally, said carriers having curved recesses adapted to receive the boxes above mentioned; and an equalizing element resting on each carrier.

3. The combination of two side frames of a locomotive, pedestals projecting from each side frame; an independent carrier located between the pedestals of each side frame, each carrier having a recess therein; two independent boxes, one box mounted in the recess in one carrier and the other box mounted in the recess in the other carrier and having walls corresponding to the curves of the walls of the other carrier; a bearing in each box; an axle extending into each box; wheels on the axles located between the boxes and between the side frames of the locomotive; a spring located on the outside of each frame, each spring resting on a carrier; a link connecting each spring to the frame at one end; equalizing mechanism; and a link connecting each spring with said mechanism.

4. The combination of two side frames, having pedestals; a carrier mounted between the pedestals of each side frame; a box mounted in each carrier so as to move laterally; an axle adapted to the boxes; two disks located between the upper portion of each box and the carrier, each disk having ribs and grooves interlocking with those of the other disk.

5. The combination of two side frames, having pedestals; a carrier mounted between the pedestals of each frame; a box mounted in each carrier, the side walls of the boxes and the walls of the carriers being curved; a segmental flange on the upper surface of each box and on each carrier; two disks having interlocking inclined ribs and grooves, one disk being confined against movement, other than rotary, to the box, and the other disk confined to the carrier; an axle mounted in the boxes; and wheels on the axle.

1,104,668. MEANS FOR CLEANING AND TURNING BAGS. WILLIAM HENRY HERBST, Dedham, Mass. Filed Aug. 29, 1912. Serial No. 717,785. (Cl. 139—47.)



1. In a bag cleaning device, a tubular casing, means for producing suction therein, and tubular means for preventing a bag held in the casing by suction from passing through the casing and from contacting with the walls of the casing, an air chamber being formed by said means between the latter and the casing.

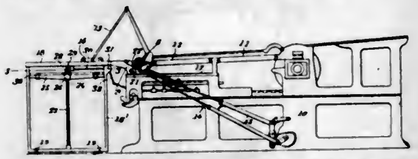
2. In a bag cleaning device, a duct, means for exhausting air therefrom, a tubular cage-like member within the duct and spaced from the walls thereof, to form an annular air chamber between the cage member and the walls of the duct, one end of said member being open.

3. In a bag cleaning device, a duct, means for partially exhausting air therefrom, a member for receiving a bag detachable from the end of the duct, and a screen constituting a receptacle connected with said member and projecting into the duct.

4. In a bag cleaning device, a duct, means for partially exhausting air therefrom, a tubular member within the duct and provided with openings for the passage of air, and means for spacing the said member and the sides of a bag received thereby from the walls of the duct, said means last mentioned being slidable with reference to the walls.

5. In a bag cleaning device, a duct, an exhaust fan connected therewith, a screen member extending transversely of the duct at a distance from the mouth, a detachable collar connected with the end of the duct, for receiving a bag, a tubular cage-like member connected with the collar and extending to the aforesaid screen, and means for spacing the member and the sides of a bag received thereby from the walls of the duct and having slidable connection with the latter.

1,104,669. PRINTING-PRESS ATTACHMENT. WILLIAM R. HILDEBRAND, New York, N. Y. Filed Dec. 30, 1913. Serial No. 809,565. (Cl. 101—31.)

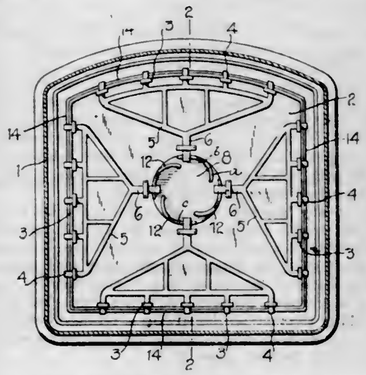


1. A press attachment comprising a head, a delivery mechanism mounted upon the head, said head being mounted for bodily movement toward and from the press whereby the delivery device may deliver sheets upon a table adjacent to or spaced from the press and an adjustable means for operating the said delivery mechanism from a movable part of the press at the position to which the head is adjusted.

2. A press attachment comprising a head, rack bars mounted upon the frame of the press, gear wheels carried by the head and meshing with the rack bars to move the head along the frame of the press, a delivery mechanism mounted upon the head, said head being mounted for bodily movement toward and from the press whereby the delivery device may deliver sheets upon a table adjacent to or spaced from the press and adjustable means for operating the delivery mechanism from a movable part of the press at the position to which the head is adjusted.

3. In combination with a press, rack bars positioned thereon, a head adapted to move along the frame of the press, a shaft journaled in the head, means mounted upon the shaft and meshing with the teeth of the rack bars to move the head along the frame of the press, tracks connected with the head, a delivery mechanism mounted on the head and adapted to move along the tracks, and longitudinally extensible means for operating the delivery mechanism from a moving part of the press.

1,104,670. BURIAL-VAULT. EARL D. HORN, Galion, Ohio. Filed Apr. 4, 1914. Serial No. 829,619. (Cl. 27—7.)



1. A vault door, a plurality of locking members movably mounted upon the inner face of the door, and a revoluble actuating device mounted on the door and provided with a cam embodying actuating surfaces parallel to the plane of the door but eccentric in formation and other surfaces inclined away from the face of the door but concentric, the sections engaging the locking members for the actuation thereof.

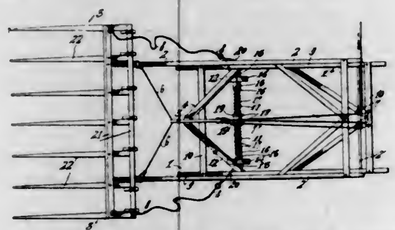
2. A vault door, a plurality of locking members movably mounted on the inner face of the door, and a revoluble actuating device mounted in the door and provided on its rear face with a cam upon which the inner ends of the locking members ride, said cam being formed with recesses at a high point into which the inner ends of the locking members are adapted to snap, whereby the locking members will be automatically held in projected positions.

1,104,671. HAY-STACKER. TOMAS FRED HOUSE, Hurst, Mo. Filed Dec. 29, 1913. Serial No. 809,414. (Cl. 57—53.)

1. In a hay stacker, the combination with a supporting frame having a transverse shaft, arms pivoted to said supporting frame, a fork carried by said arms, a hoisting frame, means for actuating the same, and a connecting element between said hoisting frame and said pivoted arms, of a coiled spring slidably mounted on said transverse shaft and having one end fixed, a guide carried by the supporting frame, and a flexible connection secured to said fork, passing through said guide, and secured to the free end of said coiled spring.

2. In a hay stacker, the combination with a supporting frame having a transverse shaft, arms pivoted to said

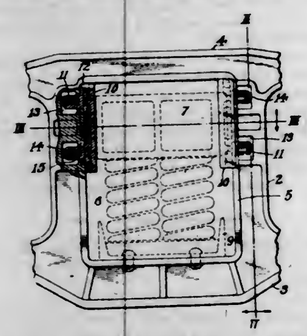
supporting frame, a fork carried by said arms, a hoisting frame, means for actuating the same, and a connecting element between said hoisting frame and said pivoted arms, of a fixed stop carried by said transverse shaft, a supporting wheel having its hub journaled on said shaft, and bearing against said stop, a sleeve slidably mounted on said shaft and bearing against the opposite end of the said hub, a guide on said sleeve, a spring slidably mounted on said shaft and bearing at one end against said sleeve, and a flexible connection secured to said fork and the free end of said spring and passing through the guide of said sleeve.



3. In a hay stacker, the combination with a supporting frame having a transverse shaft, a sleeve slidable on said shaft, a guide on said sleeve, arms pivoted to said supporting frame, a fork carried by said arms, a hoisting frame, means for actuating the same, and a connecting element between said hoisting frame and said pivoted arms, a spring loosely coiled around said shaft and bearing at one end against said sleeve, and a flexible connection secured to said fork and the free end of said spring and passing through the guide of said sleeve.

4. In a hay stacker, the combination with a wheel supporting frame and a movable lifting member carried thereby, of a movable braking element normally out of engagement with the supporting wheel of said frame, an operating element carried by said lifting member, and a yielding connection between said operating element and said braking element for imparting a return movement to said lifting member when raised and for simultaneously releasing said braking element.

1,104,672. TRUCK SIDE FRAME. PLINY J. HOWARD, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Apr. 29, 1913. Serial No. 764,299. (Cl. 105—243.)



1. In a truck side frame having an opening therein for a bolster, bearing blocks for the bolster in the upper part of said opening, means for attaching the bearing blocks to the side frame comprising a wedge coöperating with a pin carried on each block and with a portion of the side frame, the said wedge being adapted to be inserted into registering apertures in the side frame and pin and to draw the bearing block tightly against the face of the bolster opening.

2. In a truck side frame having an opening therein for the bolster, bearing blocks for the bolster in the upper part of said opening, each of said bearing blocks having a rearwardly extending dowel shaped projection, registering apertures in the frame and in the projection for the reception of a wedging key, the said wedge being adapted to draw the bearing block tightly against the face of the bolster opening and to hold it in such position.

3. In a truck side frame having therein an opening for the bolster, apertured columns at the side of the opening, a bearing block for the bolster in the upper part of said opening having a slotted rearward extension coöperating with an aperture in a column, a recess in the frame communicating with said aperture and a wedge shaped key for insertion through said recess into the slot in the extension, the said wedge shaped key being adapted to draw the block against said column and to hold it in such position.

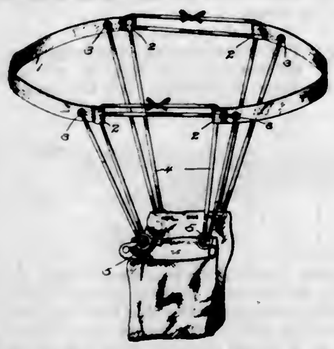
4. In a truck side frame having therein an opening for the bolster, columns at the sides of the opening, each column having an offset upper portion, bearing blocks for the bolster adapted to fit in each of said offset portions and to be held by the offset against vertical movement, each of said bearing blocks having a slotted rearward extension coöperating with an opening in a column, an aperture in the side frame, and a wedge shaped key adapted for insertion through said aperture and said slot in the extension for drawing a bearing block back against a column and for securing it to the side frame.

1,104,673. CROSS-REIN BUCKLE. EDWARD L. INGALSBE, Harrison, Nebr. Filed Jan. 25, 1913. Serial No. 744,215. (Cl. 24—177.)



A device of the class described comprising a frame including an intermediate transverse bar and loops extending beyond the frame at one end and of less width than the frame, whereby lateral stop shoulders are produced, a tongue swinging upon said bar, and another frame including a transverse bar and engaged by said loops in position to bear against said stop shoulders and limiting the movement of the last-mentioned frame in one direction and a tongue swinging upon the transverse bar of said last mentioned frame.

1,104,674. BELT FOR CATAMENIAL SACKS. CARRIE JOHNSON, Seattle, Wash. Filed Oct. 30, 1913. Serial No. 798,340. (Cl. 128—5.)

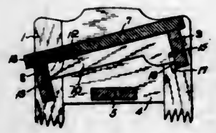


1. A catamenial sack comprising a plurality of strips, loops formed in both ends of each of the strips, an eye formed in each end of each of the strips spaced from the loops, elastics passing through the loops on adjacent ends of the strips, said elastics also passing through the eyes of adjacent ends of the strips, said elastics having depending loops for the reception of a sack.

2. A catamenial sack comprising a plurality of strips having loops formed in each end thereof, eyes provided in each end of the strips and spaced from the loops and an elastic passing from the eye in the end of one strip to the eye in the adjacent end of the adjacent strip, forming a loop and extending through the loop in the strip adjacent the last named eye, extending to the loop in the end of the strip provided with the first mentioned eye, forming a loop and returning to the first mentioned eye, said loops in the elastic adapted to receive a sack.

3. A catamenial sack comprising a plurality of strips, loops formed in adjacent ends of adjacent strips, eyes in the strips spaced from the loops, and an elastic threaded through the eyes and loops in the strips and having loops formed therein, each loop in the elastic depending from an eye and the adjacent loop in the strip, the loops adapted to support a sack.

1,104,675. COMBINED PIANO AND PLAYER BENCH. WILLIAM G. KILBERG, Cambridge, and ANDREW J. JOHNSON, Somerville, Mass., assignors to C. A. Cook Company, Cambridge, Mass., a Corporation of Massachusetts. Filed June 25, 1913. Serial No. 775,778. (Cl. 155—22.)



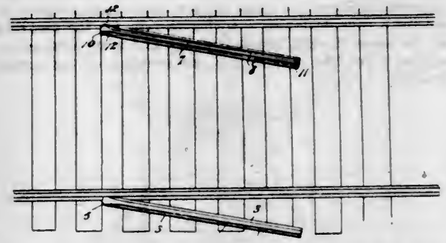
1. A combined piano and player bench comprising end members each having a substantially hook shaped slot formed therein near one edge thereof, a seat having a pin at each end adapted to travel in the coacting slot, and a crank shaped pivot member extending from one end member to the opposite end member adjacent the other edge thereof and operatively connected to said seat, said crank member having two short length crank portions to support the seat in both the upper and lower sections of said crank, said crank being movable through substantially 180°.

2. A combined piano and player bench comprising end members each having a substantially hook shaped slot formed therein near one edge thereof, a seat having a pin at each end adapted to travel in the coacting slot, and crank means adjacent the other edge of said end members and having two short length crank portions to support the seat in both the upper and lower positions of said crank portions.

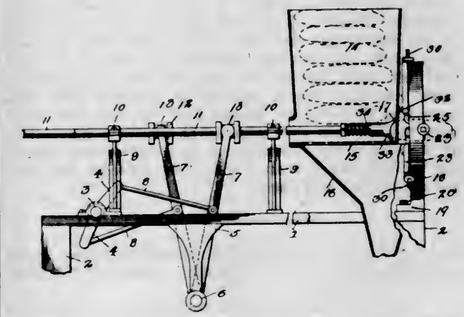
3. A combined piano and player bench comprising end members each having a curved slot formed therein near one edge thereof and provided with a plurality of sockets at different elevations, a seat having a pin at each end adapted to travel in the coacting slot, and crank means adjacent the other edge of said end members and having two short length crank portions to support the seat in both the upper and lower positions of said crank portions, whereby said seat may be supported in a horizontal and in oppositely inclined positions.

1,104,676. LOCOMOTIVE AND CAR WHEEL REPLACER. HOWARD K. KINNEY, Murray, Okla. Filed July 25, 1913. Serial No. 781,208. (Cl. 105—163.)

A wheel replacer having grooves extending longitudinally thereof and provided with a shoulder which separates the said grooves from each other, the bottoms of the said grooves being higher at points between the ends of the grooves than at the ends thereof, the replacer being provided at one end with chamfered corner portions and having at its opposite sides recesses located adjacent said chamfered corner portions and into which one end of the grooves lead, the said shoulder extending the full length of the replacer and having a broadened end portion lying between the recesses and which extends between the chamfered corner portions, the upper surface of the said broadened end portion of the shoulder being curved in a downward direction from a point adjacent the highest points of the bottoms of the grooves to that end of the replacer having the recesses and chamfered corners.



1,104,677. CORN-SHELLER. JOHN KIOVSKY, Astoria, N. Y., assignor of two-thirds to Richard Kiovsky, Springfield, Mass., and Frank Kiovsky, New York, N. Y. Filed Aug. 14, 1912. Serial No. 715,088. (Cl. 130—9.)



1. In a corn sheller, a hopper having an opening in its side, a shaft mounted for reciprocation in the hopper in alinement with the opening and a spring pressed head slidably mounted on the shaft, and having a bell mouthed end portion which normally lies in advance of the end of the shaft and which is adapted to resiliently present the ears of corn to the sheller.

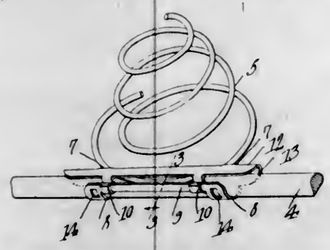
2. In a corn sheller, a hopper having an opening in its side, a shaft mounted for reciprocation in the hopper in alinement with the opening and a spring pressed head slidably mounted upon the shaft and having a bell mouthed end portion which normally lies in advance of the head of the shaft and which is adapted to resiliently present the ears of corn to the sheller, the upper part of the said bell mouthed portion extending beyond the lower part of the same.

1,104,678. SPRING-ATTACHING CLIP. PHILIP J. KNAUFF, New York, N. Y. Filed Jan. 16, 1914. Serial No. 812,566. (Cl. 5—29.)

1. A spring attaching clip comprising a body portion bent along a longitudinal line to form a ledge and outstanding flange, arms carried by the said flange and carrying a cross bar which extends therebetween, spaced fingers extending from the ledge adapted to engage the cross bar for securing the attaching clip to the rod-like member, and means for securing a spring to said clip.

2. A spring attaching clip comprising a body portion bent along a longitudinal line and defining a ledge and a flange extending therefrom, spaced arms extending from said flange and carrying a cross bar at their extremities, a plurality of spaced fingers projecting from the said ledge

spaced apart a distance relatively less than the spacing of the arms, said fingers adapted to engage the cross bar and interlock therewith, the said flange provided at its upper extremity with slots extending therethrough positioned adjacent the ends thereof, said slots adapted to receive a convolution of a spring therein for the securing of the same thereto, the said flange and arms adapted to engage a rod-like member for the securing of the spring thereto.



3. The combination with a rod-like member and a spring, of a clip comprising a body portion bent along a longitudinal line to define a ledge and perpendicular flange, the said flange provided along its lower edge with curved arms, a cross rod extending between the extremities thereof and carried thereby, a plurality of spaced fingers located a distance apart relatively less than the spacing of the said arms, said fingers projecting from the said ledge along the free edge thereof and adapted to interlock with and engage the cross bar which extends between the said fingers, said flange provided with slots extending therethrough located near the ends and upper edge thereof, said slots adapted to receive a convolution of the said spring therethrough, said convolution extending beneath and in contact with the said ledge and bearing against the said fingers.

1,104,679. ENAMELING COMPOSITION. IGNAZ KREIDL, Vienna, Austria-Hungary. Filed Apr. 25, 1914. Serial No. 834,387. (Cl. 49—91.)

1. An enameling composition containing as an opaquing agent a colloid of a metal compound suitable for opaquing purposes.

2. An enameling composition containing as opaquing agent a colloid of an oxygen-containing metal compound suitable as opaquing agent.

3. An enameling composition containing as opaquing agent a colloid of a metal oxid suitable for opaquing purposes.

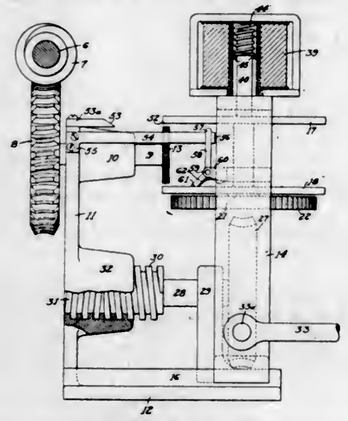
4. An enameling composition containing as an opaquing agent, colloidal zirconium oxid.

5. An enameling composition containing as opaquing agent a colloid of an oxygen-containing zirconium compound.

1,104,680. TEMPERATURE-REGULATOR. FRANK A. KUNTZ, New York, N. Y. Filed Jan. 27, 1913. Serial No. 744,375. (Cl. 236—4.)

1. The combination with a valve for admitting and shutting off fluid for maintaining uniform temperature, of a circuit having thermostatic means to make and break the circuit, and mechanism being operated by means in said circuit to set said valve in one position when said circuit is broken and to reverse itself when said circuit is closed to set said valve in its opposite position, said mechanism being adaptable to be driven at an accelerating rate when said valve is being set to one position and at a retarding rate when being set to its opposite position.

2. The combination with a valve for admitting and shutting off fluid for maintaining uniform temperature, of a circuit having thermostatic means to make and break the circuit, a continuously driven shaft in the same direction at a uniform speed, and mechanism driven thereby being operated by means in said circuit to set said valve in one position when said circuit is broken and to reverse itself when said circuit is closed to set said valve in its opposite position, said mechanism having means to set said valve at an accelerating rate to one position and at a retarding rate to its opposite position.



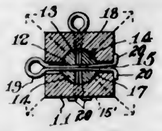
3. The combination with a valve for gradually admitting and shutting off hot and cold air, of a circuit having thermostatic means to make and break the circuit, and mechanism being operated by means in said circuit to set said valve in one position when the circuit is broken and to reverse itself when said circuit is closed to set said valve in its opposite position, said mechanism adaptable to set said valve at a retarding rate when admitting hot air and at an accelerating rate when admitting cold air.

4. The combination with a valve for admitting and shutting off fluid for maintaining uniform temperature, of a circuit having thermostatic means to make and break the circuit, a shaft driven continuously in the same direction, and mechanism driven thereby by means in said circuit to set said valve in one position when said circuit is broken and to reverse itself when said circuit is closed to set said valve in its opposite position; said mechanism including a continuously driven friction wheel, and a pair of friction-disks being actuated by said operating means to engage one or the other of said disks with said wheel to operate the mechanism in opposite directions.

5. The combination with a valve for admitting and shutting off fluid for maintaining uniform temperature, of a circuit having thermostatic means to make and break the circuit, a shaft driven continuously in the same direction, and mechanism driven thereby being operated by means in said circuit to set said valve in one position when the circuit is broken and to reverse itself when said circuit is closed to set said valve in its opposite position; said mechanism including a shiftable frame, said valve connected to said frame, and means actuated by said operating means to shift said frame in opposite directions to open and close said valve.

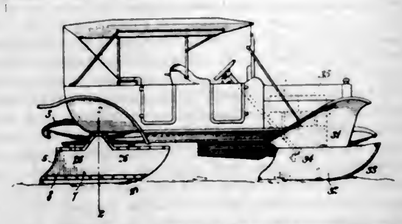
[Claims 6 to 24 not printed in the Gazette.]

1,104,681. NUT-LOCK. JOHN A. P. LEE, Tucker, Ark. Filed July 13, 1911. Serial No. 638,406. (Cl. 151—5.)



A nut and bolt lock comprising a bolt having longitudinal slots formed therethrough and arranged at an angle to each other, a nut having a central threaded opening and openings through the nut in different planes intersecting the central opening at right angles to each other and across the central opening, said openings being reduced in size to the width of the slots in expanded condition at the points of communication with the central opening, and cross keys driven through said openings and the slots of the bolt, said keys being of a width slightly in excess of the width of the slots in unexpanded condition whereby the portions of the bolt bounding the said slots will be forced outwardly against the nut.

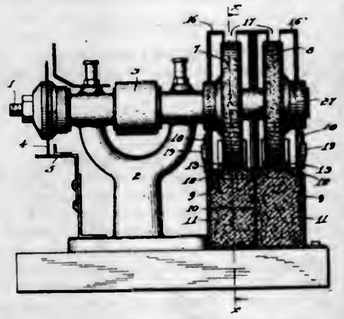
1,104,682. AUTOMOBILE SLED. FRANK JALMAR LEHTONEN, Negaunee, Mich. Filed Jan. 21, 1913. Serial No. 743,356. (Cl. 21—47.)



1. In combination, a vehicle having a rear driven axle, a sleeve embracing the axle, brackets secured on the sleeve and having forwardly and rearwardly extending arms, casings mounted for rocking movements on the sleeve and into which the ends of the axle extend, said casings having inner portions arranged below the brackets, cushioning springs between the upper sides of the upper portions of the casings and the ends of the said bracket arms, propelling mechanisms in the casings and driving connections between the ends of the axle and the propelling mechanisms.

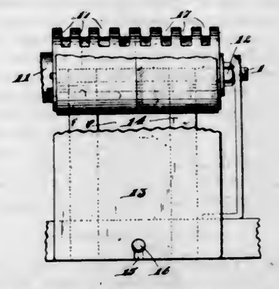
2. The combination with a vehicle having a driven axle, a sleeve embracing the axle, casings carried by the sleeve, the casings having relatively large slots in their bottom walls, traction chains mounted in the casings and having parallel spurs traveling through the slots and arranged diagonally therein, driving means for the chains and longitudinal spaced ribs formed on the bottoms of the casings beyond the ends of the said slots.

1,104,683. FINISHING-MACHINE. HARRY LEVINE, Chicago, Ill. Filed July 11, 1913. Serial No. 778,477. (Cl. 12—31.)



A machine of the class described comprising a spindle; an inking wheel on said spindle; a housing surrounding said wheel and having a slot giving access thereto; a pad of absorbent material in the bottom of said housing in contact with said wheel; a hinged and slotted plate holding said pad in position to permit said inking wheel to engage the latter; and a spring catch for said plate, substantially as described.

1,104,684. POLISHING-MACHINE. HARRY LEVINE, Chicago, Ill. Original application filed July 11, 1913, Serial No. 778,477. Divided and this application filed Oct. 4, 1913. Serial No. 793,357. (Cl. 51—1.)

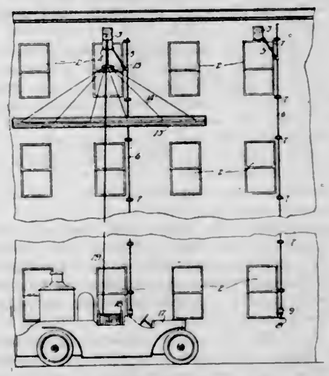


1. A machine of the class described comprising a rotatably mounted drum having spaced peripheral grooves therein; a covering carried by said drum covering said grooves; and a member spaced from said drum and having slots therein adapted to guide work against the portions of said covering over said grooves, substantially as described.

2. A machine of the class described comprising a spindle; a drum mounted on said spindle and having spaced peripheral grooves therein; a yieldable covering secured on said drum over said grooves; and a member spaced from said drum and having work guiding slots therein, each of said slots being in registration with one of the grooves of said drum, substantially as described.

3. A machine of the class described comprising a threaded spindle having an abutment at one end; a nut threaded on the other end of said spindle; perforated plates adjacent said nut and abutment; a drum on said spindle between said plates and formed of two semi-cylindrical parts hinged together at one pair of their adjacent edges; and a pin in each end of each part of said drum engaging corresponding perforations in said plates locking said parts in cylindrical form, substantially as described.

1,104,685. FIRE-ESCAPE APPARATUS. THOR OSCAR LOFGREN, Chicago, Ill. Filed Oct. 6, 1913. Serial No. 793,616. (Cl. 227—11.)

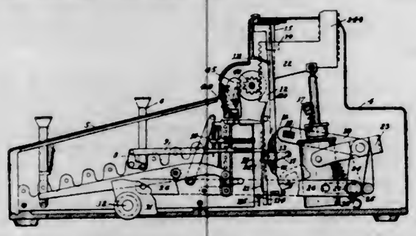


1. A fire escape apparatus comprising a box fixed to the surface of the wall of a building, said box having a hinged door, manually operable means secured to the surface of the said wall and connected to said hinged door for opening and closing the same, a pulley within said box, a flexible member associated with said pulley and coiled upon the said hinged door, a folding portable platform, and another flexible member, power controlled, adapted to be re

releasably secured to the first named flexible member and thereby drawn over said pulley to engage said portable platform and to raise and lower the same.

2. A fire escape apparatus comprising a box fixed to the surface of the wall of a building, said box having a hinged door, an operating rod secured to and movable over the surface of the said wall, connection between said operating rod and the said hinged door whereby the former member is caused to operate the latter, a pulley mounted in said box, a flexible member associated with said pulley and coiled from each end upon said hinged door, a folding portable platform, and a winding drum provided with a cable adapted to be releasably secured to one end of the aforesaid flexible member and thereby drawn over said pulley to engage said portable platform and to raise and lower the same through the medium of said winding drum.

1,104,686. CARRYING MEANS FOR ADDING-MACHINES. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed Mar. 5, 1914. Serial No. 822,584. (Cl. 235—133.)



1. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, means for causing the slides to advance the pinions a unit distance to carry and controlled from the rotation of the pinions by their respective actuators, and means for shifting the toothed slides over to engage their respective pinions when the pinions engage their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators.

2. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, means for causing the slides to advance the pinions a unit distance to carry and controlled from the rotation of the pinions by their respective actuators, and a restoring bar engaging all of the slides and arranged to regulate the movement of the slides to carry, and also arranged to shift the slides to engage the pinions when the pinions are in engagement with their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators.

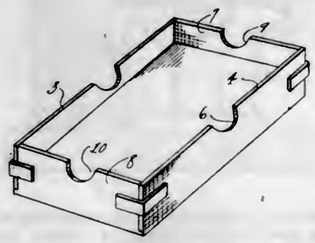
3. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, a spring connected with each slide arranged to advance the slide when in engagement with its pinion to move it a unit distance to carry, a restoring bar connected with all of the slides arranged to retract the slides when advanced by their springs, means connecting each slide with its pinion for controlling the said carrying movement of the slide as each pinion completes a revolution, said slide being also movable to engage the pinions when the pinions engage their actuators, and operating means for the restoring bar arranged to move it to shift the slides into engagement with the pinions when the pinions engage their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators.

4. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a rod on which the slides are supported at the slotted portions, a spring connected with each slide arranged to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, a restoring bar connected with all of the slides to retract them when moved by their springs, means connecting each slide with its pinion for controlling the said carrying movement of the slides as each pinion completes a revolution, said restoring bar being also operated to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions and slides in engagement during the retraction of the pinions from the actuators.

5. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a rod on which the slides are supported at their slotted portions, a spring connected with each slide arranged to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, said slides each having a second slotted portion, a restoring bar projecting through the latter slotted portion of the slides and arranged to retract the slides when moved by their springs and to permit relative movement of the slides and bar, means connecting each slide with its pinion for controlling the said carrying movement of the slide as each pinion completes a revolution, and means for causing the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions and slides in engagement during the retraction of the pinions from the actuators.

[Claims 6 to 32 not printed in the Gazette.]

1,104,687. HOLDER FOR PLAYING-CARDS. DONALD MACQUEEN, Port Huron, Mich. Filed Feb. 11, 1914. Serial No. 818,073. (Cl. 40—55.)

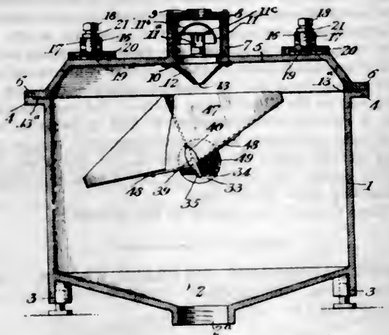


1. A device of the character described comprising a bottom, sides and ends hingedly secured to the bottom, a false bottom spaced from the bottom and forming a chamber, and a weight adapted to be placed in the false bottom to hold the device in the desired position.

2. A device of the character described comprising a bottom; a strip of felt secured to the bottom, ends and sides secured to the bottom, said ends and sides being provided with recesses in their free edges, means to normally hold the ends and sides in vertical position, and a weight adapted to be rested on the bottom of the box and adapted to hold the same from accidental displacement.

3. A device of the character described comprising a bottom, sides and ends hingedly secured to the bottom, a false bottom spaced from the bottom, walls holding the false bottom in spaced relation with the bottom, yieldable resilient means to normally hold the sides and ends in their vertical position, and a weight adapted to be inserted in the chamber formed between the bottom and the false bottom to prevent the box from becoming accidentally displaced.

1,104,688. METER. GILMORE MASON, New York, N. Y. Filed Jan. 31, 1914. Serial No. 815,670. (Cl. 73—178.)



1. A meter comprising a casing, a rocking bar mounted therein, an oscillatory bucket removably fastened on the bar, a stop fast on one end portion of the bar, said casing having an inlet discharging into the bucket and an outlet, and adjustable means carried by the casing and in the path of movement of the stop.

2. A meter comprising a casing provided with an inlet and an outlet, a rocking bar journaled in the casing and having a cut-out portion forming a bucket seat, a bucket rigidly but removably fastened to the seat and disposed beneath the inlet, a stop fast on the bar, and adjustable abutments carried by the casing and oppositely disposed and located in the path of movement of the stop.

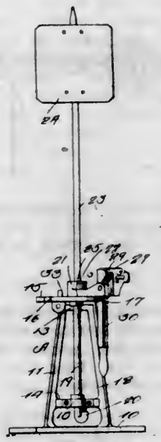
3. A meter comprising a casing provided with an inlet and an outlet, a bearing at each side of the interior of the casing, a flat rocking bar mounted in the bearing, a bucket carried by the bar, a stop having a bifurcated end straddling the bar, means for rigidly fastening the bifurcated end of the stop to the bar, and adjustable abutments carried by the casing and in the path of movement of the stop.

4. A meter comprising a casing having an inlet, a pressure reducer in the inlet, a rocking bar journaled in and extending across the casing, a bucket seated on the bar beneath the inlet, a stop at one end of the bar, and oppositely disposed adjustable abutments carried by the casing and in the path of movement of the stop.

5. A meter comprising a casing provided with a housing at one side and a neck opposite said housing, a removable cap for the neck, a removable cover for the housing, said casing being provided with an inlet and a discharge, adjustable abutments extending through opposite sides of the housing, caps inclosing the heads of the abutments, a rocker shaft journaled in the casing and having one end projecting into the housing and its other end disposed adjacent said neck, a bucket mounted on the bar, and a stop on the end of the bar within the housing and limited in its movements by contact with the abutments.

[Claims 6 to 15 not printed in the Gazette.]

1,104,689. SWITCH-STAND AND LOCK. JOHN D. MAUPIN, HARRY E. ALLEN, and SPRINGFIELD BALDWIN, Teague, Tex. Filed Oct. 7, 1913. Serial No. 793,903. (Cl. 104—25.)



A switch stand comprising a frame, a table mounted upon the frame and having a pair of notches in the edge thereof, a vertical switch stand journaled at its lower end on the frame and in its upper end in the table, a cap fixed on the upper end of said switch stand above the table, laterally extending spaced arms formed integral with the cap and extending beyond the edge of the table, the outer end of one of said arms being enlarged to form a casing, a hand lever pivoted between said arm and adapted to turn on its pivot from a horizontal unlocked position to a vertical locked position and to engage in the notches of the table when in locked position, an automatic lock mounted in said casing including a spring latch adapted to engage in a notch in the hand lever when the latter is in locked position, and a flange on said casing conforming with the shape of the inner end of the lever and adapted to be engaged by the latter for terminating the movement of the hand lever to locked position.

1,104,690. FASTENING DEVICE. CARROLL A. MILLER, Rowley, Mass. Filed June 20, 1911. Serial No. 634,202. (Cl. 74—8.)

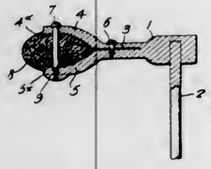


The combination with a shaft, of a handle on one end of the shaft, the end of the shaft having a longitudinally arranged groove and a circumferentially arranged segmental groove intersecting the first groove, a set screw in the handle, said set screw arranged to be guided into the segmental groove by means of the longitudinal groove, said segmental groove being of greater depth than the longitudinal groove, the grooved end of the shaft having a stop-lug, and the handle having a shoulder for engagement with said lug, whereby the handle is retained on the end of the shaft.

1,104,691. PIANO-HAMMER. JOSEPH C. MILLER, Lincoln, Nebr. Filed Oct. 30, 1913. Serial No. 798,220. (Cl. 84—103.)

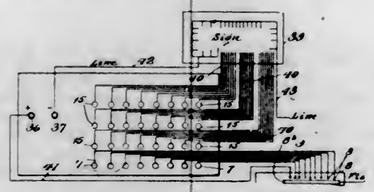
A piano hammer comprising a head having a pair of jaws and being provided with an inwardly extending slot

at the junction of the jaws, a striking member having symmetrical halves disposed between the jaws, means for clamping said striking member, said last named means comprising a screw carried by the jaws and arranged to



pass through an axis of said symmetrical striking member, and an auxiliary screw arranged to pass through the slot for drawing together the portions on opposite sides of the slot.

1,104,692. DISTRIBUTING SWITCH MECHANISM FOR ELECTRIC SIGNS AND SIMILAR DEVICES. LEONARD MILLER, Brownwood, Tex., assignor to Boy Stephanus Boysen, Brownwood, Tex. Filed Sept. 19, 1911. Serial No. 650,263. (Cl. 177—346.)



1. The combination of an electrical sign or exhibitor embodying a plurality of groups of illuminating units, a flasher for controlling the illumination of the units of said groups, and a distributing switch mechanism for establishing operative relation between said flasher and the different groups of illuminating units of the sign or exhibitor, embodying a plurality of groups of contacts corresponding to the groups of illuminating units, the contacts of each group being connected respectively to the units of the corresponding group of illuminating units, a switch blade for each group of contacts having separate contacts adapted to engage all of the contacts of the respective group simultaneously, a shaft common to and coöperative with all of the switch blades and embodying means for operating the switch blades successively when rotated, and electromagnetic means controlled by the flasher for rotating said shaft.

2. The combination of an electrical sign or exhibitor having a plurality of groups of illuminating units, means for controlling the illumination of the units of said groups, and distributing switch mechanism governed by said controlling means and operative automatically to successively set the different groups of units in operative condition, embodying a plurality of groups of contacts for the corresponding groups of illuminating units, the contacts of each group being connected respectively to the units of the corresponding group of illuminating units, a single switch member having separate contacts adapted to engage the contacts of the respective group, a shaft common to and coöperative with all the switch members, and electro-magnetic means controlled by the flasher for rotating said shaft and thereby operating the switch members.

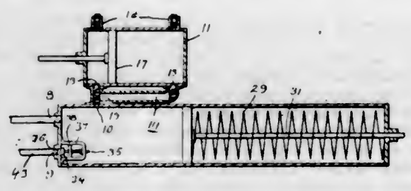
3. The combination of a plurality of switches, each switch embodying a set of contacts and a switch member each switch member having separate contacts and operative to simultaneously engage and disengage the contacts of the respective set, and a single rotary shaft common to and coöperative with said switch members for closing said switches successively, electro-magnetic operating means for rotating said shaft, and devices for retaining the different switch members in predetermined relations after each operation of said electro-magnetic means.

4. The combination of an electrical sign or exhibitor embodying a plurality of groups of illuminating units, a flasher capable of rendering said units operative successively, and a distributer interposed between and electrically connected to the units of the sign and the flasher embodying a plurality of switches, one for each group of illuminating units, each embodying a set of contacts connected individually to the units of the respective group of illuminating units and a switch member having a set of separate contacts to engage the contacts for the illuminating units, a shaft common to and coöperative with all the switch members to close the respective switches successively, and electro-magnetic means controlled automatically by the flasher and connected to operate said shaft to close said switches successively and thereby render different groups of the units of the sign operative successively.

5. The combination of an electrical sign embodying a plurality of groups of illuminating units, a flasher capable of rendering the units of the sign operative successively, and a distributer for controlling the operation of the different groups of units embodying a multiple contact switch for each group of units of the sign, the contacts of each switch being connected in separate circuits between the flasher and to the illuminating units of the corresponding group, a rotating shaft common to and coöperative with all of said switches, and electro-magnetic means controlled automatically by the flasher for operating said shaft to govern the operation of the different groups of illuminating units of the sign.

[Claims 6 and 7 not printed in the Gazette.]

1,104,693. AUTOMATIC AIR-BRAKE SYSTEM. WILLIAM MILLER, Gilman, Mont. Filed Nov. 7, 1913. Serial No. 799,773. (Cl. 188—5.)



1. In an airbrake system, the combination of a brake cylinder, a traction operated pump adapted to force air into said cylinder, the cylinder being formed with a discharge port, a valve automatically operated by the pressure within the brake cylinder to close said discharge port, a piston positioned within the brake cylinder, a brake shoe means operatively connecting the piston and brake shoe, whereby a movement of the piston in one direction will cause the brake shoe to become operative and valve mechanism operable independently of said valve to reduce the pressure within the cylinder.

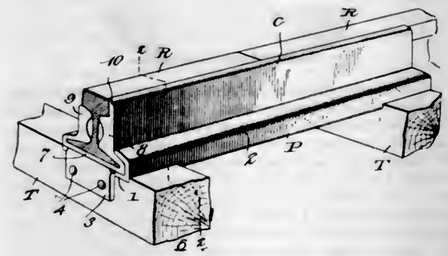
2. In an airbrake system of the character described, the combination with a car, of a brake cylinder, a traction operated pump adapted to force air into said cylinder, the cylinder being formed with a discharge port, an adjustable valve positioned within the cylinder to automatically close the discharge port when a fixed pressure is obtained within said cylinder, a piston operable within the brake cylinder, and brake mechanism operatively connected to said piston.

3. In an airbrake system of the character described, the combination with a vehicle, of a brake cylinder, a traction operated pump connected to said cylinder, the cylinder being formed with a pair of discharge ports, a manually operated valve normally closing one of said ports, a second valve adapted to automatically close the other discharge port when the pressure within the brake cylinder reaches a certain degree, a piston operable within the brake cylinder, and brake mechanism connected to said piston, the piston operating when the second mentioned valve is closed to apply the brakes.

4. In an airbrake system of the character described, a brake cylinder, means for forcing air into said cylinder, brake mechanism actuated by certain predetermined pressure within the brake cylinder, said cylinder being formed with a pair of discharge ports, a manually operated valve for closing one of said ports, a spring pressed valve adapted to close the other of said ports when a fixed pressure is created in the brake cylinder, and spring means connected to said second mentioned valve, whereby the pressure necessary to close said valve may be regulated.

5. In an airbrake system of the character described, a brake cylinder, a means for forcing air into said cylinder, the cylinder being formed with a pair of discharge ports, manually operated means for opening and closing one of said ports, a valve positioned within the cylinder to close the other of said ports when a certain pressure is created within said cylinder, a valve stem secured to said valve, a U-shaped frame through which the valve stem extends, spring means for holding the valve normally open, adjusting means whereby the tension of said spring means may be varied, brake mechanism operable when said second mentioned valve is closed, and means for manually closing the second mentioned ports.

1,104,694. BOLTLESS RAILWAY-RAIL JOINT AND TIE-PLATE COMBINED. JOHN L. MILTON and JOSEPH E. HOLLAND, Memphis, Tenn. Filed Sept. 23, 1913. Serial No. 791,356. (Cl. 239—3.)



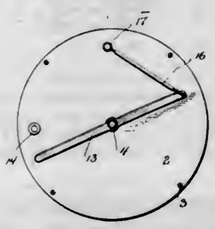
1. In combination with rail ties, a bed plate upon the ties and having its ends flanged and secured to the ties, said plate having its outer longitudinal edge provided with an angular flange which overlies its base and its inner edge centrally formed with a longitudinally extending resilient lip, a chair adapted to be received upon the base and to be engaged by the flange and lip of the said base, and independent means arranged between the chair and plate for sustaining the chair against longitudinal movement upon the plate.

2. In combination with rail ties having depressions adjacent their ends, of a bed plate arranged within the depressions, the ends of the bed plate being down-turned and secured to the outer faces of the ties, one of the longitudinal edges of the bed plate being formed with an inturned angular flange, the opposite longitudinal edge of the said plate being centrally formed with an upturned elongated resilient lip, the plate having depressions, a rail chair having its inner face formed to receive rails, said chair having its base upon its under face provided with lugs and its longitudinal edges flanged and adapted to be inserted upon the base of the bed plate and to have its opposite edges engaged by the flange and lip of the said bed plate and its lugs received within the depressions in the bed plate.

3. In a device of the class described, in combination with rail ties, a bed plate arranged within depressions provided in the tops of the ties, said plate having its outer edge formed with a flange which overlies its base, the inner longitudinal edge of the plate being formed with an upturned lip disposed between the ties, the ends of the plate being downturned to engage with the outer faces of the ties, and means co-acting with the ends for securing the said ends to the ties, a chair adapted to be received upon the base plate, means for securing the chair upon the base plate, and the flange and lip of the base plate adapted to engage with the opposite longitudinal edges of the said chair.

4. In a device for the purpose set forth, in combination, ties, a base plate having downturned ends arranged upon the ties and their ends secured to the tie, said base plate also connected with the ties, the outer longitudinal edge of the base plate having an angular inturned flange, a chair, two rails adapted to have their ends arranged within the chair, said chair including a base which is adapted to be secured to the bridge plate and to the ties, said chair having its opposite longitudinal edges flanged and adapted to be received between the flange of the bed plate and the lip thereof, the said chair being provided with sides which have their inner faces shaped to correspond with the fishing spaces of the rails and their outer faces vertically straight, and the straight faces of the outer side member being provided with a rail-engaging crest.

1,104,695. THERMOSTATIC CIRCUIT-CLOSER. JOHN C. MOESSNER, Mount Pleasant, S. C. Filed Apr. 19, 1913. Serial No. 762,263. (Cl. 177—303.)

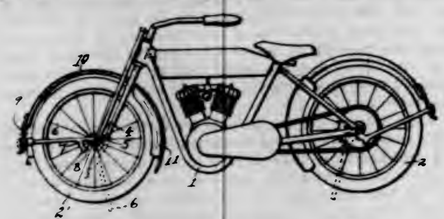


In combination a cylindrical case a shaft extending transversely and centrally therein, a cover engaging said case and forming a support for one end of said shaft, a pinion fixed upon said shaft, an arm through which said shaft passes, outwardly extending studs mounted upon said case and supporting said arm, said shaft projecting through said cover, an angular offset formed at one end of said arm, a geared sector engaging said pinion at one end, a stop shoulder formed upon said sector whereby to prevent movement of said gear in one direction, a deflected curvilinear arm formed upon said geared sector, a pivot mounted in said offset at its free end upon which is fulcrumed said deflected arm whereby said arm is disposed eccentric with respect to said pivot and said gear, a contractile spring secured to said case and secured to said deflected arm, a lever disposed outside said case fulcrumed intermediate its ends upon said shaft, a binding post secured to said case, a binding post secured upon said cover, and a fusible link secured to said cover on the outside thereof, and connected to said lever whereby to hold said lever in spaced relation from said second named binding post and whereby said contractile spring is placed under tension when said shoulder engages said pinion.

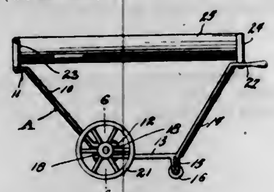
1,104,696. STAND FOR MOTOR-CYCLES AND THE LIKE. HERMAN MOLINE, Chicago, Ill. Filed Apr. 9, 1913. Serial No. 759,944. (Cl. 208—75.)

The combination with a cycle having a front fork, an auxiliary fork, forwardly extending rocker arms pivoted to said forks and an axle carried at the front ends of said rocker arms, of a U-shaped support pivoted at its ends to

said axle; and angularly disposed arms on said support having sockets engaging the lower ends of said fork causing an upward thrust on said auxiliary fork, substantially as described.

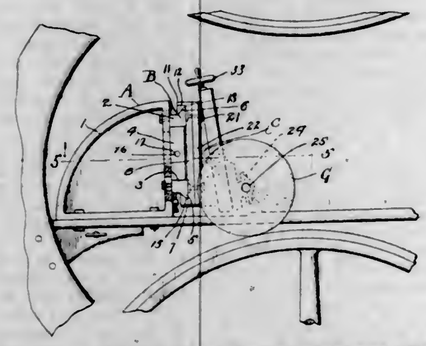


1,104,697. COTTON-LAP-ROLL TRUCK. JOHN A. MORRELL, Pickens, S. C. Filed Dec. 23, 1913. Serial No. 808,437. (Cl. 21—65.)



A cotton lap roll truck comprising a U-shaped member formed of a pair of sections having portions disposed in overlapping relation, a wheeled axle clamped between the overlapping portion of the member, and a tray supported upon the upper ends of the arms of the member.

1,104,698. GRINDING-MACHINE FOR BAND-SAWS. LESTER W. MYRICK, Gardiner, Oreg. Filed Oct. 1, 1913. Serial No. 792,827. (Cl. 51—4.)

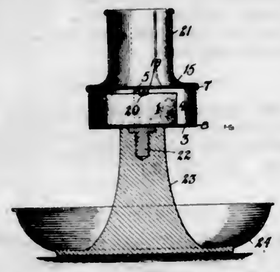


1. The combination with a support, of a frame slidable laterally upon the support and provided with a pivot shaft, a second vertically disposed frame pivotally mounted upon the pivot shaft, said second frame having an outer inclined face, a bed plate mounted to slide vertically on the outer inclined face of the second frame, means including an operating screw rotatably mounted in the upper portion of the bed plate and vertically movable in a threaded socket in the second frame for moving the bed plate vertically on the second frame, and a grinding wheel mounted in bearings upon the outer face of the bed plate.

2. The combination with a support, of a frame slidable laterally upon the support and carrying a pivot shaft, a wedge-shaped frame mounted upon the pivot shaft, a bed plate sliding at an angle on the wedge-shaped frame, a bearing screw rotatably mounted in the top portion of the bed plate and vertically movable in the wedge-shaped frame and adapted when actuated to shift the bed plate vertically on the wedge-shaped frame, and a grinding wheel carried in adjustable bearings on the bed plate.

3. The combination with a support, of a frame slidable laterally thereon and provided with a pivot shaft, a second frame mounted to turn on the pivot shaft and provided with an inclined guide face, a bed plate vertically slidable over in the inclined guide face of the second frame, a grinding wheel carried by the bed plate, means for shifting the first frame bodily on the support to move the grinding wheel laterally of the wheel being ground and means for sliding the vertical bed plate to shift said grinding wheel toward and from the center line of the wheel being ground.

1,104,699. MATCH-IGNITING DEVICE. JACOB E. NEAHR, New York, N. Y. Filed Sept. 30, 1913. Serial No. 792,564. (Cl. 206—20.)



1. A match igniter comprising an igniting strip, a strip-containing drum around whose exterior the igniting strip is wound, said drum provided with an eye through which the strip is drawn out to wind around said drum, a cover for said drum, said cover hinged to said drum to swing to one side, and a device for both fastening said cover in closed position and securing the tip of the wound strip, said cover having a notch, and said fastening device locking into said notch, and also having a clip to catch over the cover at said notch and hold the cover down.

2. In a match-igniter, the combination with a match-igniting strip, of a drum containing the same and comprising a body, said body having an eye through which the strip emerges, and mounted to afford a fixed support upon which to wind the strip as the latter pays out of said eye, and means mounted on said drum adjacent to said eye and movable relatively to said body to clamp upon the exterior of said drum both ends of the exposed portion of said strip.

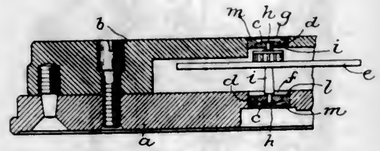
3. In a match-igniter, the combination of a drum, a match-igniting strip contained in the drum, said drum provided with an eye through which the strip emerges, said strip wound entirely around the circumference of the drum, and the tip of the strip overlapping the exposed or withdrawn portion thereof which is adjacent to said eye, and a clip to hold both the tip of the wound strip and also that portion of the strip which is overlapped by said tip.

4. A match-igniting device comprising a strip-containing drum, said drum including a complete single-piece hollow body completely surrounding said strip and provided with an opening through which the strip may be drawn out and wound around the exterior of said body while paying out of said opening, and means exterior to said body and mounted for movement relatively thereto, for securing the wound portion of the strip against endwise displacement.

5. A match-igniting device comprising a drum, said drum including a base and a body portion to inclose the match-igniting strip, said body portion having an opening through which the strip can be drawn out, and said body portion being mounted on said base to afford a fixed support upon which to wind the strip as it pays out through said opening, and releasable means mounted for movement independently of said body, for securing the wound portion of the strip against endwise displacement.

[Claims 6 to 17 not printed in the Gazette.]

1,104,700. METHOD OF MOUNTING PIVOT-BEARINGS FOR TIMEPIECES. OLOF OHLSON, Newton, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Original application filed July 12, 1911, Serial No. 638,119. Divided and this application filed Mar. 15, 1913. Serial No. 754,604. (Cl. 29—10.)



1. The method of setting a pivot bearing in the movement frame of a time piece, which consists in forming the bearing to fit loosely in a hole in the frame, placing the bearing in such hole, and expanding the peripheral portion of the bearing outwardly into contact with the walls of the hole.

2. The method of setting a pivot bearing in the movement frame of a time piece, which consists in forming the bearing to fit loosely in a hole in the frame, placing the bearing in such hole, and expanding the peripheral portion of the bearing outwardly into contact with the walls of the hole, leaving the central part of the bearing free from distortion.

3. The method of setting a pivot bearing in the movement frame of a time piece, which consists in forming the bearing to fit loosely in a hole in the frame, placing the bearing in such hole, and pressing simultaneously against opposite ends of the bearing at points between the axis and rim only of the bearing in directions outwardly from the points of application of such pressure, thereby expanding the rim into contact with the walls of the hole.

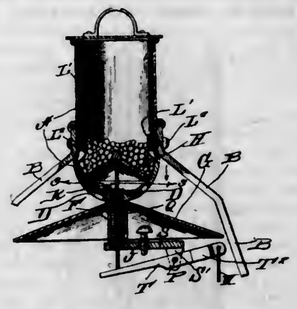
4. A method of mounting a jeweled bearing in a time piece, which consists in placing the bearing in a hole in the movement frame of the time piece and forcing the metal of the jewel setting between the jewel and the rim of the setting outwardly against the walls of the hole, leaving the metal of the setting adjacent to the jewel in substantially its original condition.

5. A method of mounting a jeweled bearing in a time piece, which consists in placing the bearing in a hole in the movement frame of the time piece, and indenting the opposite end faces of the jewel setting simultaneously at points near the periphery of such setting by means of indenting tools having indenting portions beveled on their outer faces and substantially parallel with the axis of the bearing on their inner faces, such indenting portions being located near the rim of the setting, whereby the material of the setting near the rim is forced outwardly and that adjacent to the jewel is left substantially undisturbed and undistorted.

[Claims 6 to 9 not printed in the Gazette.]

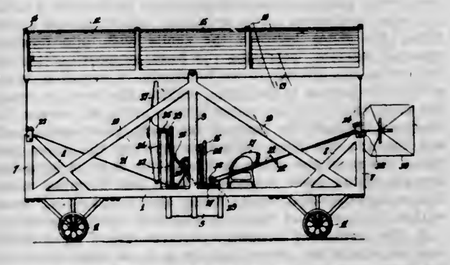
1,104,701. AUTOMATIC POULTRY-FEEDER. FREDERICK ROW PARKS, Oswego, N. Y., assignor to William P. King, Syracuse, N. Y. Filed Jan. 29, 1914. Serial No. 815,257. (Cl. 119—70.)

1. An automatic poultry feeding device comprising a receptacle having openings in the lower portion thereof, a conical-shaped valve within the receptacle, a tubular shell connected to and communicating with the lower portion of the receptacle, a stem movable through said tubular shell and engaging said valve, a bracket member secured to the tubular shell, a tilting lever mounted upon a projection of said bracket member, said stem adapted to rest upon one end of the lever, a bait-carrying wire connected to the other end of the lever, and means for limiting the throw of said lever.



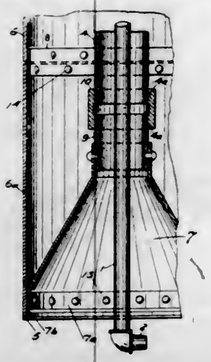
2. An automatic poultry feeding device comprising a receptacle having openings in the lower portion thereof, a conical-shaped valve within the receptacle, a tubular shell connected to and communicating with the lower portion of the receptacle, a stem movable through said tubular shell and engaging said valve, a bracket member secured to the tubular shell, a tilting lever mounted upon a projection of said bracket member, said stem adapted to rest upon one end of the lever, a bait-carrying wire connected to the other end of the lever, an adjusting screw mounted in said bracket member and adapted to limit the throw of the lever, and a conical-shaped deflector having a central cylindrical opening to receive said tubular shell.

1,104,702. AIRSHIP. EDWARD E. PAULEY, Marion, Ind. Filed Dec. 12, 1913. Serial No. 806,277. (Cl. 244—14.)



A flying machine comprising a frame work formed of a pair of longitudinally extending bars connected at the ends thereof by cross pieces and at the center thereof by spaced platform sections, an engine bed secured to the bars beneath said platform sections, short uprights at the front and rear ends of the bars, longer uprights at the centers of the bars, struts connecting said uprights with the bars, a longitudinally extending supporting surface pivotally mounted upon the central uprights to tilt vertically upon a horizontal transverse axis, said supporting surface being of major length in the direction of flight and substantially hood-shaped, a steering wheel mounted upon one of said platform sections, a winding shaft actuated thereby, guide pulleys upon the short, front and rear uprights, cables connected with the front and rear ends of the supporting surface and leading inwardly over said guide pulleys to said winding shaft, the front and rear cables being arranged to wind in opposite directions upon said shaft, locking means for holding the steering wheel in adjusted position, an arched frame rising from the other platform, a driving propeller journaled upon said arched frame, a motor supported upon the motor bed, and a driving connection between said motor and the shaft of the propeller.

1,104,703. METHOD OF FORMING CONCRETE PILES IN PLACE. WILLIAM R. PHILLIPS, Portland, Oreg. Original application filed Mar. 17, 1911, Serial No. 615,165. Divided and this application filed Apr. 7, 1913. Serial No. 759,561. (Cl. 61—41.)



1. The method of forming a concrete pile in place which consists in placing, where the pile is to be formed, a tubular form comprising outer and inner shells spaced apart, filling the space between the shells with pile forming material, thereby weighting the form, supporting the filling above the ground so as to provide a scouring space within the bottom of the form, sinking the form by scouring away the soil from under it by a hydraulic stream introduced through the bore of the form, discharging said soil through the bore, extending upward the outer and inner shells of the form as the latter is sunk into the ground, and filling such extensions with pile forming material as required.

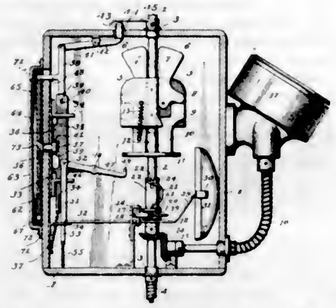
2. The method of forming a concrete pile in place which consists in placing, where the pile is to be formed, a tubular form comprising outer and inner shells spaced apart, filling the space between the shells with pile forming material, thereby weighting the form, supporting the filling above the ground so as to provide a scouring space within the bottom of the form, sinking the form by scouring away the soil from under it by a hydraulic stream introduced through the bore of the form, discharging said soil through the bore, extending upward the outer and inner shells of the form as the latter is sunk into the ground, filling such extensions with pile forming material as required, and finally filling also the scouring space within the bottom of the form with pile forming material.

3. The method of forming a concrete pile in place which consists in placing, where the pile is to be formed, a tubular form comprising outer and inner shells spaced apart, filling the space between the shells with pile forming material, thereby weighting the form, supporting the filling above the ground so as to provide a scouring space within the bottom of the form, sinking the form by scouring away the soil from under it by a hydraulic stream introduced through the bore of the form, discharging said soil through the bore, extending upward the outer and inner shells of the form as the latter is sunk into the ground, filling such extensions with pile forming material as required, and finally filling also the scouring space within the bottom of the form and the bore of the form with pile forming material.

1,104,704. SPEEDOMETER-ALARM. ARCHIBALD PICKEN, Norfolk, Va., assignor of one-half to Frederick William Curd, Norfolk, Va. Filed Apr. 10, 1913. Serial No. 760,303. (Cl. 73—123.)

1. In a device for the purpose described, a speed-responsive actuating member, an alarm mechanism in constant connection therewith, a lock for holding the alarm mechanism against participation in a movement of the actuating member, and means controlled by the actuating member for releasing the lock to permit the actuating member to drive the alarm mechanism.

2. In a device for the purpose described, a speed-responsive actuating member, an alarm mechanism in constant frictional engagement with the actuating member, a lock for holding the alarm mechanism against participation in the movement of the actuating member, and means controlled by the actuating member for releasing the alarm mechanism from the lock to permit its participation in the movement of the actuating member due to the frictional engagement therewith.



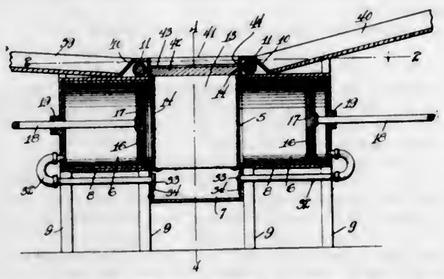
3. In a device for the purpose described, a rotatable shaft, a centrifugal governor carried thereby, an alarm mechanism having a member frictionally mounted on the shaft to be driven thereby, a lock for holding the alarm mechanism against participation in the movement of the shaft, and controlling means for the lock in the path of the centrifugal member for moving said lock to release the alarm mechanism to participation in the movement of the shaft for the actuation of the alarm.

4. In a device for the purpose described, a rotatable shaft, a ratchet wheel mounted thereon, means for holding the ratchet wheel in constant frictional engagement with the shaft, an anchor escapement in coactive relation to the ratchet wheel, means controlled by the anchor escapement for sounding an alarm, a centrifugal governor carried by the shaft, a lock related to the anchor escapement to hold the latter and through it the ratchet wheel against actuation by the shaft, and means controlling the lock and in the path of the centrifugal governor to move the lock to releasing relation to the anchor escapement.

5. In a device for the purpose described, a rotatable shaft, a centrifugal governor carried thereby, an alarm mechanism in constant frictional engagement with the shaft, a lock for holding the alarm mechanism against movement and responsive to movements of the governor, an adjustable visual indicator of speeds, and means controlled by the adjustable indicator for setting the lock with respect to the governor to be actuated thereby at speeds corresponding to the indicated speeds.

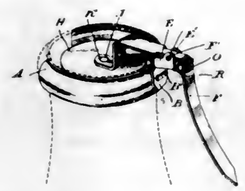
[Claims 6 to 16 not printed in the Gazette.]

1,104,705. WASHING-MACHINE. JOHN PITTINGS, Antler, N. D. Filed Mar. 21, 1914. Serial No. 826,307. (Cl. 68—37.)



In a washing machine, spaced cylinders having their opposed ends open, pistons to reciprocate in said cylinders, a chamber arranged between the open ends of said cylinders and extending below the same, drain pipes connecting the outer ends of the respective cylinders with the lower end of said chamber, a receptacle in said chamber having reticulated side walls, and means for synchronously moving said pistons in opposite directions to alternately force the water through the receptacle walls.

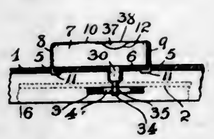
1,104,706. CLOSURE FOR MILK-BOTTLES. JOHN S. RAMSEY, Conshohocken, Pa. Filed Sept. 17, 1913. Serial No. 790,289. (Cl. 215—34.)



1. A closure for milk bottles comprising a split ring designed to engage about the beading of the neck of a bottle, a handle pivotally mounted upon said ring, a disk, a headed pin projecting therefrom, the end of said lever having a slot through which said pin passes, thus allowing the disk to center itself, as set forth.

2. A closure for milk bottles comprising a resilient split ring, a plate fastened thereto and having laterally and horizontally disposed wings, a lever having pintles engaging apertures in said wings, a spring bearing between said plate and handle, and designed to hold a portion of the under surface of the handle against the top of the plate to limit the movement of the handle in one direction, said handle having an angled slotted end, a disk, and a headed pin fastened thereto and passing through said slot, as set forth.

1,104,707. BAG-FRAME FASTENER. WILLIAM C. RATH, Brooklyn, N. Y., assignor to Deitsch Brothers, a Corporation of New York. Filed May 20, 1914. Serial No. 839,684. (Cl. 70—116.)



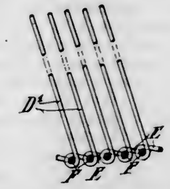
1. A bag-frame fastener comprising a casing provided in its top with a receiving depression and an opening in the wall-portion of said top which forms the said receiving depression, a vertically movable spring-actuated locking bolt in said casing, said bolt having a portion extending into and through the opening in the wall-portion of said depression, a push-piece mounted upon said projecting portion of the locking bolt, said push-piece being adapted to enter and register with said receiving depression, a horizontally movable push-plate within said casing, and means connected with said push-plate normally in holding engagement with said vertically movable locking bolt for retaining said bolt in its depressed relation.

2. A bag-frame fastener comprising a casing provided in its top with a receiving depression and an opening in the wall-portion of said top which forms said receiving depression, said casing being provided in one end with a fingerpiece-receiving opening, a vertically movable spring-actuated locking bolt in said casing, a yoke-shaped end-member connected with said bolt, said yoke-shaped end-member having portions extending into and through the opening in the wall-portion of said depression, a push-piece mounted upon the projecting portions of said yoke-shaped end-member, said push-piece being adapted to enter and register with said receiving depression, a horizontally movable push-plate within said casing, a fingerpiece connected with said push-plate and extending into and through the fingerpiece-receiving opening in the end of said casing, said push-plate being provided with an opening into and through which the yoke-shaped end-member of the locking bolt extends, a retaining tongue connected with said push-plate normally in holding engagement with the yoke-shaped end-member of said movable locking bolt for retaining said bolt in its depressed relation.

3. A bag-frame fastener comprising a casing provided in its top with a receiving depression and an opening in the wall-portion of said top which forms the said receiving depression, a back-plate within said casing, said back-plate being provided with a tubular receiving socket, said socket having a perforated bottom-end, a vertically movable locking bolt in said socket, said bolt having its lower end-portion extending into and through the said perforated bottom-end of the said socket, and the said bolt having its upper portion extending into and through the opening in the wall-portion of said depression, a push-piece mounted upon the upper projecting portion of the locking bolt, said push-piece being adapted to enter and register with said receiving depression, a horizontally movable push-plate within said casing, a spring within said tubular receiving socket, said spring encircling the shank of said vertically movable bolt, and means connected with said push-plate normally in holding engagement with said vertically movable locking bolt for retaining said bolt in its depressed relation.

4. A bag-frame fastener comprising a casing provided in its top with a receiving depression and an opening in the wall-portion of said top which forms said receiving depression, said casing being provided in one end with a fingerpiece-receiving opening, a back-plate within said casing, said back-plate being provided with a tubular receiving socket, said socket having a perforated bottom-end, a vertically movable locking bolt in said socket, said bolt having its lower end-portion extending into and through the said perforated bottom-end of the said socket, a yoke-shaped end-member connected with said bolt, said yoke-shaped end-member having portions extending into and through the opening in the wall-portion of said depression, a push-piece mounted upon the projecting portions of said yoke-shaped end-member, said push-piece being adapted to enter and register with said receiving depression, a horizontally movable push-plate within said casing, a fingerpiece connected with said push-plate and extending into and through the fingerpiece-receiving opening in the end of said casing, said push-plate being provided with an opening into and through which the yoke-shaped end-member of the locking bolt extends, a spring within said tubular receiving socket, said spring encircling the shank of said vertically movable bolt, and a retaining tongue connected with said push-plate normally in holding engagement with the yoke-shaped end-member of said movable locking bolt for retaining said bolt in its depressed relation.

1,104,708. CHAIN CONVEYER. OTTO SCHMIDT, Stuttgart, Germany, assignor to Cannstatter Misch- und Knetmaschinen-Fabrik Cannstatter-Dampf Backofenfabrik Werner & Pfleiderer, Cannstatt, Germany. Filed Nov. 13, 1913. Serial No. 800,829. (Cl. 193—2.)



1. A feeding chain comprising a plurality of links each of which consists of a pin one end of which is bent so as to be capable of engaging the next pin and the other end of which is bent so as to be capable of engaging the next pin

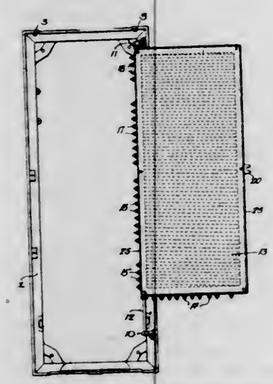
and continues at right angles to the chain in the form of a tine.

2. A feeding chain comprising a plurality of links, tines formed integral with said links and substantially at right angles thereto, and wire coils wound about the pins of said links so as to form a support for the material carried by said chain.

3. A feeding mechanism comprising a plurality of chains, tines on the links of said chains, and means to move said chains parallel to one another in such manner that the tines of one chain are displaced with respect to the next chain by a distance equal to a fraction of the lengths of the links of said chains.

4. A feeding mechanism comprising a plurality of chains, tines formed integral with links of said chains, and means to move said chains parallel to one another in such manner that the tines of one chain are displaced with respect to the next chain by a distance equal to a fraction of the lengths of the links on said chains.

1,104,709. SWITCHBOARD-MOUNTING. ADOLPH W. SCHRAMM, Riverton, N. J., assignor to Electro Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 20, 1912. Serial No. 737,874. (Cl. 175—298.)



1. The combination of a frame; a switch-board panel mounted thereon; with a resistance-containing structure pivotally mounted on said frame and free to swing toward and from said switchboard panel.

2. The combination of a hollow frame; a slab of insulating material mounted thereon; a back plate for the frame co-acting therewith and with the slab to form a container; and a resistance containing structure movably mounted on the frame within said container.

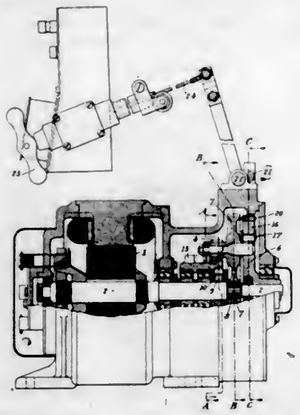
3. The combination of a hollow frame; a slab of insulating material mounted thereon; a removable back plate cooperating with said frame and with the slab to form a container; and a resistance containing structure movably mounted within said container and free to swing toward and from said insulating slab.

4. The combination of an open frame; a slab of insulating material on one face of the frame; a back plate removably mounted on the opposite face of said frame; and a resistance containing structure movably mounted on the frame between the back plate and the insulating slab.

5. The combination of an open frame; a slab of insulating material on one face of the frame; a back plate having pins fitting recesses in the frame and coöperating therewith to form a container; means in addition to said pins, for removably holding the back plate in position; and a resistance containing structure pivotally mounted between the back plate and said slab.

[Claims 6 to 11 not printed in the Gazette.]

1,104,710. ELECTRIC STARTER FOR INTERNAL-COMBUSTION ENGINES. WILLIAM HARDING SCOTT, Norwich, England. Filed May 9, 1913. Serial No. 766,602. (Cl. 74—34.)



1. The combination with an internal combustion engine a dynamo-electric machine driven by the said engine for generating electricity, and epicyclic gearing adapted to transmit motion from the dynamo-electric machine to the internal combustion engine to start the said engine and also adapted when the engine is running, to allow the engine to drive the electric motor at the proper speed for generating; of clutches one of which is arranged between the dynamo-electric machine shaft and the central, or sun, wheel of the epicyclic gearing adapted to free the said central, or sun, wheel from the dynamo-electric machine shaft when the said machine operates to rotate the engine shaft and to clutch the said central, or sun, wheel to the dynamo-electric machine shaft when the said machine is operating as a generator, a support carrying the planet wheels of the epicyclic gearing, a yielding braking device acting conjointly with the other of the said clutches to clutch said support thereto when the engine is being started and adapted to free the said planet wheel support from the braking device when the engine is properly running, substantially as hereinbefore explained.

2. The combination with an internal combustion engine a dynamo-electric machine driven by the said engine for generating electricity, and epicyclic gearing adapted to transmit motion from the dynamo-electric machine to the internal combustion engine to start the said engine and also adapted when the engine is running, to allow the engine to drive the electric motor at the proper speed for generating; of clutches one of which is arranged between the dynamo-electric machine shaft and the central, or sun, wheel of the epicyclic gearing adapted to free the said central, or sun, wheel from the dynamo-electric machine shaft when the said machine operates to rotate the engine shaft and to clutch the said central, or sun, wheel to the dynamo-electric machine shaft when the said machine is operating as a generator, a support carrying the planet wheels of the epicyclic gearing, a yielding braking lever acting conjointly with the other of said clutches to clutch said support thereto when the engine is being started and adapted to free the said planet wheel support, from the braking device when the engine is properly running, together with means in connection with the said braking device to control the speed at which rotary motion is transmitted from the dynamo-electric machine shaft to the engine shaft and on back fire to release said brake whereby the support for the planet wheels of the epicyclic gearing is freed and the said epicyclic gearing rendered inoperative; substantially as hereinbefore described.

3. The combination with an internal combustion engine a dynamo-electric machine driven by the said engine for generating electricity, and epicyclic gearing adapted to transmit motion from the dynamo-electric machine to the internal combustion engine to start the said engine and also adapted when the engine is running, to allow the engine to drive the electric motor at the proper speed for generating; of clutches one of which is arranged between the dynamo-electric machine shaft and the central, or sun, wheel of the epicyclic gearing adapted to free the said central, or sun, wheel from the dynamo-electric machine shaft when the said machine operates to rotate the engine shaft and to clutch the said central, or sun, wheel to the dynamo-electric machine shaft when the said machine is operating as a generator, a support having ratchet teeth and carrying the planet wheels of the epicyclic gearing, a yielding braking device acting conjointly with the other of the said clutches to clutch said support thereto when the engine is being started and adapted to free the said planet wheel support, from the braking device when the engine is properly running, together with a pawl adapted to engage the ratchet teeth on the said planet wheel support to prevent rotation thereof when starting, a pivoted lever carrying said pawl and held by yielding pressure which resists the force exerted for starting but which resistance, should back-fire occur, is overcome and the said lever is turned on its pivot and allows the said pawl to be disengaged from the ratchet teeth of the said planet wheel support, substantially as hereinbefore described.

1,104,711. DISPLAY-CABINET. WILLIAM E. SHEPARD, Lincoln, Nebr. Filed Dec. 19, 1913. Serial No. 807,753. (Cl. 211—16.)

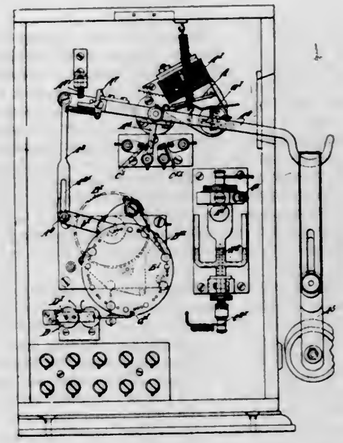
1. A display cabinet comprising a casing, a door hinged thereto forming a closure to one side of the casing, curved rods fastened to said door, a series of display frames having sliding pivotal connections with said rods, projections upon one of said frames, and means engaged by said projections as the door is closed and serving to hold the frames in locked positions within the casing, as set forth.

2. A display cabinet comprising a casing, a door hinged thereto, a series of curved rods fastened to the door, display frames, screw eyes fastened to the latter and through which said rods are moved as the door is closed and opened, thereby causing the frames to be raised and lowered, a lug projecting from one of said frames, slotted plates fastened to the casing and which slots are engaged by said lugs to lock the frame carrying the lugs within the casing as the door is closed and released as the door opens, as set forth.

3. A display cabinet comprising a casing, a door hinged thereto, a block for supporting the latter, curved rods fastened to the door, a series of display frames, screw eyes fastened to the lower edge thereof and through which said rods are adapted to move as the door is opened and closed, thereby causing the frames to be raised and lowered accordingly, blocks against which the lower ends of the frames are adapted to contact as they are moved back into the casing, and means for automatically locking and releasing the frames within the casing as the door is closed and opened, as set forth.

4. A display cabinet comprising a casing, a door hinged thereto, curved rods fastened to the door, a frame having screw eyes through which said rod is adapted to move, plates fastened to the opposite inner faces of the casing and having vertical slots, each plate being shouldered adjacent to its upper end, and lugs fastened to said frame and adapted to pass into and out of said slots automatically as the door is closed and opened, as set forth.

1,104,712. WIRELESS TELEGRAPH OR TELEPHONE SYSTEM. WILLIAM HENRY SHEPHARD and ARCHIBALD EDWARD MCKECHNIE, London, England. Filed Dec. 13, 1913. Serial No. 806,568. (Cl. 250—8.)



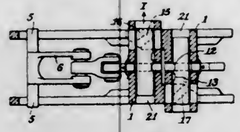
1. In a wireless telegraph system, the combination with an alarm device which gives an aural indication when the receiving apparatus is rendered operative, of an automatic transmitter, a pivotal arm, a telephone receiver normally carried by said arm, and means for breaking the circuit through the automatic transmitter when the said arm moves as a result of the removal of the telephone receiver.

2. In a wireless telegraph system, the combination with an alarm device which gives an aural indication when the receiving apparatus is rendered operative, a make and break disk, a stop pin on said disk, an electromagnet under the control of the circuit of said alarm device and an armature of said magnet normally engaging with said stop pin.

3. In a wireless telegraph system, the combination with an electromagnet arranged in the receiving circuit, of a switch arm controlled by said magnet, a movable mercury switch the actuating circuit of which is controlled by said switch arm, an electromagnet adapted to be energized and deënergized by the mercury switch, an inertia member controlled by the last mentioned electromagnet, an alarm bell, means whereby said member brings said alarm bell into operation, an automatic transmitter, and means whereby said member brings the transmitter into action.

4. In a wireless telegraph system, the combination with an electromagnet arranged in the receiving circuit, of a switch arm controlled by said magnet, a movable mercury switch the actuating circuit of which is controlled by said switch arm, an electromagnet adapted to be energized and deënergized by the mercury switch, an inertia member controlled by the last mentioned electromagnet, an alarm bell, means whereby said member brings said alarm bell into operation, an automatic transmitter, means whereby said member brings the transmitter into action, a pivoted arm, a telephone receiver normally carried by said arm, means whereby when said receiver is in position the transmitter and the alarm device can be operated, and means whereby when the telephone receiver is removed the transmitter and the alarm device are rendered inoperative and the receiving circuit short circuited.

1,104,713. AUTOMATIC COUPLING FOR RAILWAY-CARS. WITOLD V. SOKOLOWSKI, Warsaw, Russia, assignor of one-half to Witold Morzycki, St. Petersburg, Russia. Filed Jan. 6, 1913. Serial No. 740,436. (Cl. 213—36.)



1. In an automatic coupling device for railway cars, the combination of two coupling halves, each coupling half having a coupling head, a draw hook, a connection between the coupling head and the draw hook, a member adapted to slide in said head perpendicularly to the longitudinal axis of the coupling device, means for producing the sliding movement of the member by the engagement of the two heads one into the other, a link chain loosely attached to the draw hook, the inner link of the link chain passing centrally through the head and through said member, the inner link having a projection centrally locking the member, and means provided in each member for releasing automatically the said connection between the head and the draw hook.

2. In an automatic coupling device for railway cars, the combination of draw hooks, two coupling halves normally supported by the draw hooks in a downwardly inclined position, each coupling half having a coupling head, a connection between the coupling head and the draw hook, each head having a curved horn and a guide, the guide of one head coacting with the horn of the other head, a link chain loosely attached to the draw hook, the inner link of the link chain passing centrally through the head, a member adapted to slide in the head perpendicularly to the longitudinal axis of the coupling device and through which the inner link of said chain passes, means for producing the sliding movement of the member by the engagement of the two heads one into the other, the inner link having a projection centrally locking the member, and means provided in each member for releasing automatically the said connection between the head and the draw hook.

3. In an automatic coupling device for railway cars, the combination of draw hooks, two coupling halves normally supported by the draw hooks in a downwardly inclined position, each coupling half having a coupling head, a connection between the coupling head and the draw head, each head having a curved horn and a guide and a central opening, the guide of one head coacting with the horn of the other head, a link chain loosely attached to the draw hook, the inner link of the link chain forming a bolt passing centrally through the central opening of the head, a member having a recess and adapted to slide in the head arranged perpendicularly to the longitudinal axis of the device and through which the chain passes, each member being provided with a slot and with a slanting groove adapted to engage a slanting rib of the other head, the rib being provided on a lug adapted to take into a neck of the other head, the inner link having a projection adapted to engage said member and centrally locking this member, and means providing in each member for releasing automatically the said connection between the head and the draw hook.

4. In an automatic coupling device for railway cars, the combination of draw hooks, two coupling halves normally supported by the draw hooks in a downwardly inclined position, each coupling half having a coupling head with a curved horn and a guide, the guide of one head coacting with the horn of the other head, rods supporting said head against the draw hook and adapted to be automatically connected with the coupling head, a link chain loosely attached to the draw hook, the inner link of the link chain passing centrally through the head, a member adapted to slide in the head perpendicularly to the longitudinal axis of the coupling device, and through which said chain passes, means for producing the sliding movement of the member by the engagement of the two heads one into the other, the inner link having a projection centrally locking the member, and means provided in each member and each head for automatically releasing the connection by the rods between the head and the draw hook.

5. In an automatic coupling device for railway cars, the combination of draw hooks, two coupling halves normally supported by the draw hooks in a downwardly inclined position, each coupling half having a coupling head with a curved horn and a guide, rods having slots and adapted to support the head against the draw hook, a common tongue, a link chain loosely attached to the draw hook, the inner link of the chain passing centrally through the head, a member adapted to slide perpendicularly to the axis of the coupling device and on the head, and through which member the said link passes, means for producing a sliding movement of the member by the engagement of the two heads one into the other, the inner link having a projection centrally locking the member, a rocking plate pivotally mounted on the coupling head and engaging the tongue, and pins attached to the member coacting with the rocking plate.

[Claims 6 to 8 not printed in the Gazette.]

1,104,714. METHOD OF MANUFACTURING METALLIC TORSELS. JEAN ERNEST SONNIER, Paris, France. Filed Nov. 24, 1913. Serial No. 802,720. (Cl. 113—116.)



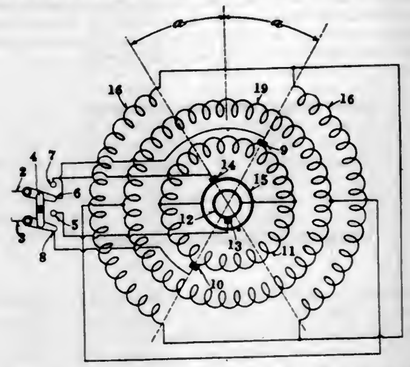
1. A method of constructing torsels from sheet metal, which comprises rolling the longitudinal edges of a sheet metal blank into marginal tubes spaced apart by an undeformed portion of the blank, and twisting the blank about its longitudinal axis, substantially as described.

2. A method of constructing torsels from sheet metal, which comprises rolling the longitudinal edges of a sheet metal blank into marginal tubes spaced apart by an undeformed portion of the blank, undulating the latter portion of the blank, pressing the tubular margins together to close in the base of the undulation and twisting the blank about its longitudinal axis, substantially as described.

3. A method of constructing torsels from sheet metal which comprises rolling the longitudinal edges of a sheet metal blank into marginal tubes spaced apart by an undeformed portion of the blank, imparting a plurality of undulations to the latter portion, pressing the tubular margins together to close in the bases of the undulations and twisting the blank about its longitudinal axis.

1,104,715. DYNAMO-ELECTRIC MACHINE. SIMON SPARROW, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 15, 1912. Serial No. 703,785. (Cl. 171—123.)

1. In a dynamo electric machine, the combination with a stator provided with at least two permanently closed circuits per pole pair disposed along different axes, of a rotor having a commuted winding and brushes displaced from the axis of each of the stator closed circuits, and means for supplying alternating current to the brushes.



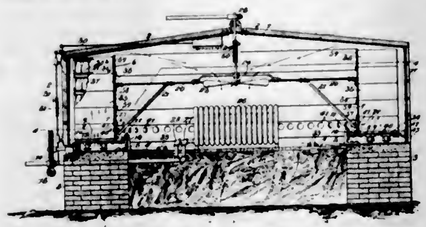
2. In a dynamo electric machine, the combination with a stator provided with at least two short-circuited distributed windings per pole pair having different axes, one of said windings being distributed over a smaller portion of the stator than the other, of a rotor having a commuted winding and brushes displaced from each axis along which the stator is short-circuited, and means for supplying alternating current to the brushes.

3. In a dynamo electric machine, the combination with a stator provided with at least two short-circuited windings per pole pair positioned along different axes of a rotor having a commuted winding and sliprings connected thereto, brushes on the commuted winding displaced from each axis along which the stator is short-circuited, and means for supplying alternating current to the brushes or to the sliprings at will.

4. In a dynamo electric machine, the combination with a stator provided with at least two short-circuited distributed windings per pole pair having different axes, one of said windings being distributed over a smaller portion of the stator than the other, of a rotor having a commuted winding and sliprings connected thereto, brushes on the commuted winding displaced from each axis along which the stator is short-circuited, and means for supplying alternating current to the brushes or to the sliprings at will.

5. In a dynamo electric machine, the combination with a source of alternating current, of a stator having one short-circuited winding distributed over 180–2^a electrical degrees and another short-circuited winding displaced from the first and having a different space distribution, a rotor having a commuted winding, and brushes connected to the supply and displaced by a degrees from the first stator winding.

1,104,716. PASTEURIZING APPARATUS. GODFREY M. S. TAIT, Washington, D. C. Filed Mar. 24, 1914. Serial No. 826,931. (Cl. 126—272.)



1. A hot air insulated pasteurizing apparatus comprising an outer casing of an insulating material, an annular carrier within said casing having thereon bottle receiving compartments with open outer ends and imperforate sides and inner ends forming a cellular structure upon said annular carrier and dividing the space above the same by imperforate vertical partitions into a plurality of vertical sections separate from each other but with the compartments of each vertical section in communication, means for rotating said annular carrier within said casing, means for circulating heated air through said vertical sections, and thermostatically controlled heating means for heating such air and maintaining the same and the contents of said apparatus at the pasteurization temperature, said casing having openings therein with which the outer ends of said compartments are arranged to be brought into alinement.

2. A hot air insulated pasteurizing apparatus comprising an outer casing of insulating material, an annular carrier within said casing having thereon a sectional cellular structure comprising a plurality of separate bottle receiving receptacles with open outer ends and imperforate side walls dividing the space above said carrier by imperforate vertical partitions into a plurality of vertical sections separate from each other, means for rotating said annular carrier within said casing, and thermostatically controlled heating means for heating the air in said apparatus and maintaining said air and the contents of said apparatus at the pasteurization temperature, said casing having openings therein with which the outer ends of said receptacles are arranged to be brought into alinement.

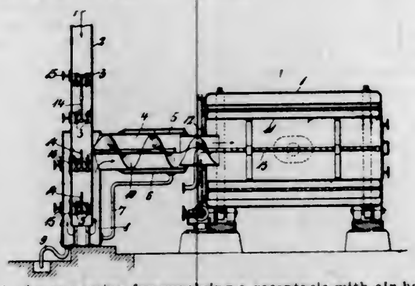
3. A hot air insulated pasteurizing apparatus comprising an outer casing of insulating material, an annular carrier within said casing having thereon bottle receiving compartments with open outer ends, imperforate sides and inner ends, and perforate tops and bottoms, forming a cellular structure upon said annular carrier and dividing the space above the same by imperforate vertical partitions into a plurality of vertical sections separate from each other but with the compartments of each vertical section in communication, means for rotating said annular carrier within said casing, means for circulating heated air through said vertical sections, and thermostatically controlled heating means for heating such air and maintaining the same and the contents of said apparatus at the pasteurization temperature, said casing having openings therein with which the outer ends of said compartments are arranged to be brought into alinement.

4. A hot air insulated pasteurizing apparatus comprising an outer casing of insulating material, an annular carrier within said casing having thereon a sectional cellular structure comprising a plurality of separate bottle receiving receptacles with open outer ends, imperforate sides and inner ends, and perforate tops and bottoms, forming a cellular structure upon said annular carrier and dividing the space above the same by imperforate vertical partitions into a plurality of vertical sections separate from each other but with the receptacles of each vertical section into communication, means for circulating heated air through said vertical sections, and thermostatically controlled heating means for heating such air and maintaining the same and the contents of said apparatus at the pasteurization temperature, said casing having openings therein with which the outer ends of said receptacles are arranged to be brought into alinement.

5. A hot air insulated pasteurizing apparatus comprising an outer casing of insulating material, an annular carrier within said casing having an inner cylindrical shell thereon and also having thereon around said shell bottle receiving compartments with open outer ends and imperforate sides and inner ends forming a cellular structure upon said annular carrier and dividing the space above the same by imperforate vertical partitions into a plurality of vertical sections separate from each other, but with the compartments of each section in communication, a horizontal partition within said cylindrical shell having a central opening therein, means for rotating said annular carrier and partition within said casing, means for circulating heated air through said vertical sections and the openings in said partition, and thermostatically controlled heating means for heating such air and maintaining the same and the contents of said apparatus at the pasteurization temperature, said casing having openings therein with which the outer ends of said compartments are arranged to be brought into alinement.

[Claims 6 to 14 not printed in the Gazette.]

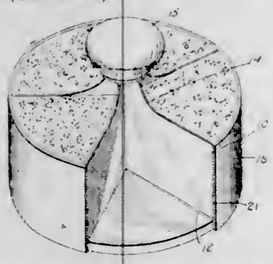
1,104,717. APPARATUS FOR PRODUCING AND CONTROLLING MOISTENED AIR IN MALTING-DRUMS. LUDWIG TOPF, Erfurt, Germany. Filed Jan. 12, 1912. Serial No. 670,895. (Cl. 98—43.)



1. An apparatus for supplying a receptacle with air having moisture therein and for regulating said moisture, consisting of a moistening and cooling chamber, a second horizontal chamber in communication with a moistening chamber, a spiral baffle located in the horizontal chamber, said horizontal chamber having perforations in its walls, a casing surrounding the horizontal chamber around the perforated portion, and a pipe leading from the casing to the moistening chamber.

2. An apparatus of the character described, comprising a vertically disposed chamber, an air feeding pipe extending into said chamber and terminating near the lower end thereof, means for feeding air to the upper end of the pipe, a series of nozzles for spraying water in said pipe, a horizontal chamber in communication with the vertically disposed chamber adjacent its upper end, a spiral baffle in said horizontal chamber, a casing surrounding the horizontal chamber, said chamber having perforations to allow the surplus moisture to pass therefrom to the casing.

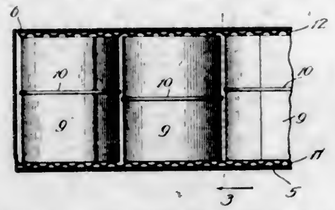
1,104,718. CHEESE-CUTTER. RICHARD TREVISAN, Worcester, Mass. Filed Dec. 15, 1913. Serial No. 806,907. (Cl. 31—68.)



A cutter for dividing Camembert and other circular cheeses which are packed in individual receptacles into equal sector portions and to deliver said portions successively to an open space cut in said receptacles, comprising a plurality of substantially rectangular blades radially arranged with their inner edges contacting throughout their entire length and all of their bottom edges lying in the same plane and with perpendicular outer edges, and upward extensions connected to said blades terminating in a common handle serving to retain said blades in their relative positions, said blades having unobstructed sides to contact throughout the entire area of the sides of the sectors of cheese to protect and serve as pushers for said sectors when the cutter is rotated.

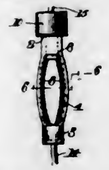
1,104,719. EGG-CARRIER. JUNIUS E. TUCKER, Memphis, Tenn., assignor of one-third to D. C. Herndon and one-third to A. G. Ballersby, New York, N. Y. Filed Jan. 17, 1914. Serial No. 812,625. (Cl. 229—15.)

1. An egg-carrier comprising, in combination, a box, cylindrical corrugated cushioning cells in the box, having separable meeting edges and provided with circumferential elastic bands, and strips of corrugated cushioning material in the box, between the corrugated faces of which the cells are confined endwise, and presenting the ends of their corrugations at substantially right angles to the corrugations of said strips, whereby said cells are individually held in place and reinforce the opposing walls of the box.



2. An egg-carrier comprising, in combination, a box having a body and a cover telescoping it, individual cylindrical cells of reinforced corrugated strawboard in the box having separable meeting edges and provided with circumferential elastic bands, and lower and upper strips of reinforced corrugated strawboard in the box, between the corrugated faces of which the cells are confined endwise, and presenting the ends of their corrugations at substantially right angles to the corrugations of said strips, whereby said cells are individually held in place and reinforce the opposing walls of the box.

1,104,720. ELECTRICAL CONNECTION. BENJAMIN B. TURNER, Baltimore, Md. Filed Mar. 6, 1913. Serial No. 752,296. (Cl. 173—328.)



1. In a plug and socket connection, a socket consisting of an elliptical collar and a circular collar, bowed spring arms connecting the collars and joined to the elliptical collar at the ends of the short axes, a plug consisting of two collars and bowed spring arms connecting the collars.

2. In a plug and socket connection, a socket consisting of an elliptical collar and a circular collar, bowed spring arms connecting the collars and joined to the elliptical collar at the ends of the short axes, a plug consisting of two circular collars and bowed spring arms connecting the collars, one collar of the plug fitting and taking a bearing in the circular collar of the socket.

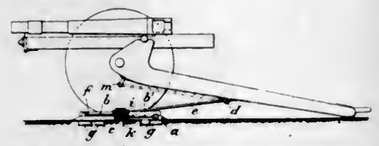
3. In a plug and socket connection, a socket consisting of an elliptical collar and a circular collar, bowed spring arms connecting the collars and joined to the elliptical collar at the ends of the short axes, a plug consisting of two circular collars and bowed spring arms connecting the collars, the bowed arms of both the socket and the plug being curved laterally so that in operative position the curves are concentric, the inner surfaces of the socket arms having a radius equal to that of the external surface of the plug arms.

4. In a plug and socket connection, a socket consisting of an elliptical collar and a circular collar, bowed spring arms connecting the collars and joined to the elliptical collar at the ends of the short axes, a plug consisting of two circular collars and bowed spring arms connecting the collars, the bowed arms of both the socket and the plug being curved laterally so that in operative position the curves are concentric, the inner surfaces of the socket arms having a radius equal to that of the external surface of the plug arms, the bowed arms in their operative position being so placed that the respective centers of curvature of the arms are spaced apart by a considerable distance, so that in rotating the plug about its axis, the arms are distorted as the plug arms enter their seats in the socket arms.

5. A socket composed of spring bands having an elongated mouth, the interior of the socket opening having a transverse dimension at right angles to the long diameter of the mouth, such dimension being of a length less than such diameter, and a plug having a portion of elongated cross-section, the greatest dimension of this portion being slightly less than the long diameter of the mouth of the socket, and a shank of lesser cross-sectional dimension so that the plug can be inserted in the socket, the long dimension of the plug being parallel to the long diameter of the mouth of the socket, the plug being then rotatable to bring the parts into close contact, one member being slightly resilient.

[Claims 6 to 8 not printed in the Gazette.]

1,104,721. SUPPORT FOR GUN-CARRIAGE WHEELS. KARL VÖLLER and EMIL MÜLLER, Dusseldorf, Germany. Filed Aug. 15, 1913. Serial No. 784,914. (Cl. 89—40.)

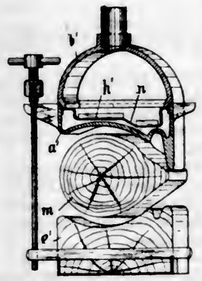


1. In combination with a gun carriage, a traverse platform having a plurality of wheel supports, a series of arms connecting said supports, pivoting means for said arms at the center of the platform, and arms connected to said pivoting means and also to said gun carriage.

2. In combination with a gun carriage, a traverse platform having a plurality of wheel supports, spikes depending from said supports, a series of arms connecting said supports, pivoting means for said arms at the center of the platform, and arms connected to said pivoting means and also to said gun carriage.

3. A traverse platform for gun carriages comprising a plurality of wheel supports, crossed arms detachably connecting said supports, a pivotal connection between said arms at the center of the platform, and rods carried by said gun carriage and designed to engage the pivot of said arms for centering said gun carriage on said platform, said pivotal connection permitting a relative rotary movement between the carriage and its supports.

1,104,722. VULCANIZER. OTTO WALTER, Hanover, Germany. Original application filed Mar. 14, 1911, Serial No. 614,328. Divided and this application filed Nov. 20, 1912. Serial No. 732,474. (Cl. 18—18.)



1. A vulcanizer apparatus comprising a heating chamber adapted to receive live coals, and means within the chamber for supporting said coals adjacent but out of contact with the bottom of the chamber, in combination with a base between which and the bottom of said heating chamber the article to be treated may be placed and means for firmly securing said parts together.

2. A vulcanizer apparatus comprising a heating chamber adapted to receive live coals, and a grate within the chamber for supporting said coals adjacent but out of contact with the bottom of the chamber, in combination with a base between which and the bottom of said heating chamber the article to be treated may be placed and means for firmly securing said parts together.

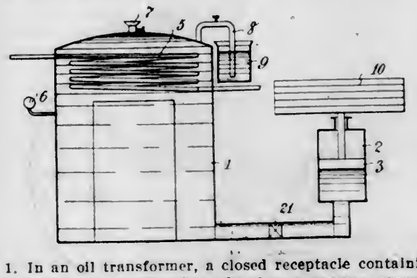
3. A vulcanizer apparatus comprising a heating chamber adapted to receive live coals and having a bottom transversely curved to the shape of a tire, a stepped grate for supporting said coals adjacent but out of contact with the bottom of the chamber, in combination with a base between which and the bottom of said heating chamber the article to be treated may be placed and means for firmly securing said parts together.

4. A vulcanizer apparatus comprising a heating chamber adapted to receive live coals and having a bottom transversely curved to the shape of a tire and means within the chamber for supporting said coals adjacent but out of contact with the bottom of the chamber, in combination with a base between which and the bottom of said heating chamber the tire may be placed, a mandrel conforming substantially to the inner cross section of the tire and adapted to be placed therein during the operation of the vulcanizer, and means for securing together the heating chamber and base with mandrel and tire interposed.

5. A vulcanizer apparatus comprising a heating chamber adapted to receive live coals, a readily opened cover therefor with vent for gases arising from the coals, means within the chamber for supporting said coals adjacent but out of contact with the bottom of the chamber, in combination with a base between which and the bottom of said heating chamber the article to be treated may be placed and means for firmly securing said parts together.

[Claims 6 to 8 not printed in the Gazette.]

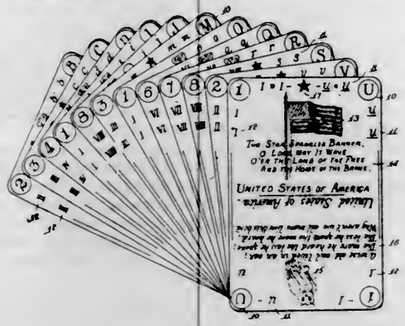
1,104,723. OIL-TRANSFORMER. HEINRICH WEISS, Vienna, Austria-Hungary. Filed Oct. 28, 1913. Serial No. 797,703. (Cl. 171—124.)



1. In an oil transformer, a closed receptacle containing a transformer, an expanding chamber, a passage connecting the bottom of said receptacle with the bottom of said expanding chamber establishing communication between the two, said receptacle adapted to be completely filled with oil, thereby excluding all air, said oil also filling said passage and said expanding chamber, a movable piston in said expanding chamber adapted to completely cut off the expanding oil from the outside air, substantially as described.

2. In an oil transformer a closed receptacle containing a transformer, an expanding chamber in communication with said receptacle, oil adapted to so completely fill said receptacle and said chamber as to exclude any air, means for cooling said oil in said receptacle and a movable piston in said expanding chamber adapted to cut off the expanding oil from the outside air and maintain oil at a higher pressure than the cooling means, substantially as described.

1,104,724. PLAYING-CARDS. URBAN S. ALSRUHE, Towson, Md. Filed Sept. 11, 1913. Serial No. 789,300. (Cl. 46—25.)

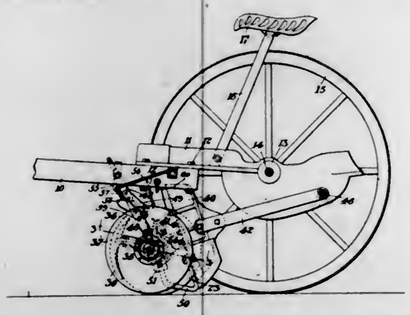


1. A pack of playing-cards each card of which bears at one end thereof a numeral in one corner and a letter of the alphabet in the other corner, as herein shown and for the purpose set forth.

2. A pack of playing-cards each card of which bears a numeral in a corner at one end thereof, a letter of the alphabet in the other corner of that end of the card, and corresponding numeral and letter in the corners at the other end of the card diagonally opposite the first mentioned numeral and letter, respectively.

3. A pack of playing-cards each card of which bears at one end thereof an Arabic numeral in one corner and a capital letter in the other corner, together with small letters associated with the capital letter and corresponding Roman characters associated with the Arabic numeral, subtantially as shown and for the purpose set forth.

1,104,725. POTATO-PLANTER. LEWIS AUGUSTUS ASPINWALL, Jackson, Mich., assignor to Aspinwall Manufacturing Company, Jackson, Mich., a Corporation of Michigan. Filed Aug. 12, 1913. Serial No. 784,304. (Cl. 111—11.)



1. In a potato planter, a double disk furrow opener, comprising a disk frame having overlapping juxtaposed bearings set at an inclination to each other, disks, spindles to which the said disks are secured and which fit and turn within the said bearings, which extend substantially from disk to disk, and means for securing each spindle in position within its bearing.

2. In a potato planter, a double disk furrow opener comprising a disk frame having overlapping juxtaposed bearings set at an inclination to each other, disks with spindles adapted to fit and turn within the said bearings, which extend substantially from disk to disk, hubs at the free ends of the said spindles, to which the said disks are connected, and means for securing each spindle in position within its bearing.

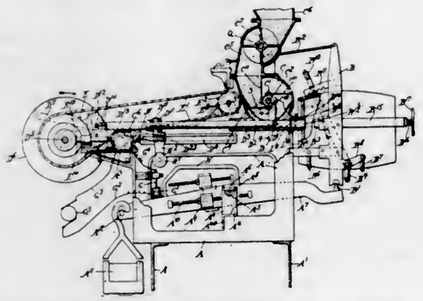
3. In a potato planter, a double disk furrow opener comprising a disk frame having overlapping juxtaposed bearings set at an inclination to each other, disks with spindles adapted to fit and turn within the said bearings, which extend substantially from disk to disk, hubs at the free ends of the said spindles to which the said disks are connected, a bolt extending longitudinally through each spindle, and a washer and nut associated with each bolt coacting therewith to maintain the spindle in position in its bearing.

4. In a potato planter, a double disk furrow opener comprising a disk frame having overlapping bearings set at an inclination to each other, disks located, one in advance of the other, spindles to which said disk furrow openers are secured and which fit and turn within the said bearings, an inclined nose piece fixed in position between the advanced edges of the said disks, and means for securing the said spindles and disks in position within the said bearings.

5. In a potato planter, a double disk furrow opener comprising a disk frame having overlapping bearings set at an inclination to each other, spindles revoluble within the said bearings, a hub at the free end of each spindle, a disk secured to each hub, means for maintaining the said spindles, hubs and disks in position within their bearings, and a nose piece fixed in position between the forward edges of the said disks.

[Claims 6 to 10 not printed in the Gazette.]

1,104,726. PROCESS OF FILLING PACKAGES. ADELMER MARCUS BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Continuation of application Serial No. 683,667, filed Mar. 14, 1912. This application filed Jan. 27, 1913. Serial No. 744,283. (Cl. 100—57.)



1. The process of filling packages with a compressed or compacted mass of powdery material which consists in inserting the major increment by a filling stream and then the minor increment by a compacting stream.

2. The process of filling packages with a compressed or compacted mass of powdery material which consists in inserting the major increment of such material by a small filling stream and then the minor increment by a compacting stream.

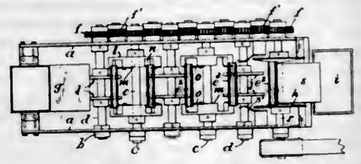
3. The process of filling packages with a compressed or compacted mass of powdery material which consists in inserting the major increment of such material by a small filling stream and then the minor increment by a small compacting stream.

4. The process of filling packages with a compressed or compacted mass of powdery material which consists in inserting the major increment of such material by a small swiftly moving stream and then the minor increment by a small compacting stream.

5. The process of filling packages with a compressed or compacted mass of powdery material which consists in inserting the major increment of such material by a small swiftly moving stream and then the minor increment by a small slowly moving compacting stream.

[Claims 6 to 21 not printed in the Gazette.]

1,104,727. ROLL-GRADING MACHINE. JOHN C. BELL, Harrison, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,107. (Cl. 83—92.)



1. In a roll-grading machine, a rotary roll-gage-carrier having two heads provided with roll-gages at different points upon their opposite faces, such gages being formed of jaws with spaces between the jaws permitting the passage of the standard rolls, in combination with a receptacle for the standard rolls, and with means for delivering rolls for gaging at the upper sides of the heads with the ends of the rolls over the said spaces, whereby the rolls of standard size fall through the spaces between the heads and are collected in the receptacle.

2. In a roll-grading machine, the combination, with a rotary roll-gage-carrier having two heads provided with roll-gages at different points upon their opposite faces, such gages having spaces permitting the passage of the standard rolls, of a receptacle for the standard rolls, and means for delivering rolls for gaging, transverse to such heads, with their ends over the said notches, whereby the rolls of standard size fall through the gaging-spaces into the space between the heads and thence through gaging-spaces at the bottom of the heads, and are collected in the receptacle.

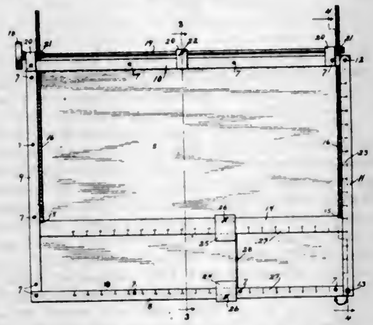
3. In a roll-grading machine, the combination, with rotary gage-carriers having gaging-jaws, of a rotary shifter rotated in unison with the carriers and adapted to transport rolls from one of the carriers to another.

4. In a roll-grading machine, the combination, with rotary gage-carriers having gaging-jaws, of a rotary shifter adapted to receive the rolls and deliver them to the jaws of the first carrier, and a rotary shifter for delivering certain of the rolls from the first carrier to the second.

5. In a roll-grading machine, the combination, with a series of rotary gage-carriers having gaging-jaws, of a rotary shifter adapted to receive and deliver rolls to the first carrier, a rotary shifter to deliver certain rolls from one carrier of the series to another, and a rotary shifter operating to take the discarded rolls from the last carrier and discharge them from the machine.

[Claims 6 to 8 not printed in the Gazette.]

1,104,728. CASTING-MACHINE. WILLIAM DIETRICH, Chicago, Ill. Filed Dec. 4, 1913. Serial No. 804,778. (Cl. 22—136.)



1. In a device of the class described, a suitable table, a suitable bar rigidly secured on the table at the front edge, a second bar rigidly secured on the table at the left hand edge extending from the first named bar to the rear of the table, a third bar secured on the table at the right hand edge extending from the first named bar to the rear of the table, a fourth bar slidably mounted on said table parallel to the first named bar and extending from said second named bar at the left to said third named bar at the right and means for moving said fourth named bar laterally toward and away from said first named bar comprising two rack bars connected to said fourth named bar and two gears meshing with said rack bars mounted rigidly on a common shaft.

2. In a device of the class described, a suitable table, a bar rigidly secured to the table at the front edge, a second bar rigidly secured to the table at the left hand edge extending from said first named bar to the rear of the table, a third bar secured to the table at the right hand edge extending from said first named bar to the rear of the table and mounted to swing on a pivot at one end, a fourth bar slidably mounted on said table parallel to said first named bar and extending from said second named bar to said third named bar, a rack bar connected at either end of said fourth named bar and extending laterally therefrom to the rear edge of the table, a shaft at the rear edge of the table, gears rigidly mounted on said shaft in constant mesh with said rack bars, means for rotating the said shaft and means for locking the shaft against rotation.

3. In a device of the class described, a suitable table, a bar rigidly mounted on said table at the front edge, a second bar rigidly mounted on said table at the left hand edge and extending from said first named bar to the rear edge of the table, a third bar pivotally mounted on said table with means for locking it at the right hand edge of said table extending from said first named bar to the rear edge of the table, a fourth bar movably mounted on said table parallel to said first named bar and extending from said second named bar to said third named bar, means for moving said fourth named bar laterally toward and away from said first named bar comprising two rack bars connected to said fourth named bar and a shaft carrying two gears in constant mesh with said two rack bars, a guide block slidably mounted on said first named bar and a guide block slidably mounted on said fourth named bar.

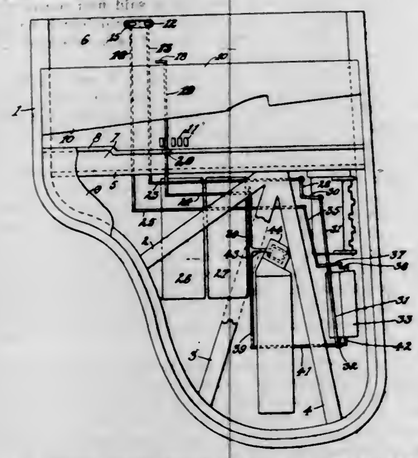
4. In a device of the class described, a suitable table, a bar rigidly mounted on said table at the front edge, a second bar rigidly mounted on said table at the left hand edge and extending from said first named bar to the rear edge of the table, a third bar mounted on the table at the right hand edge extending from said first named bar to the rear edge of the table, a fourth bar slidably mounted on said table parallel to the first named bar and extending from said second named bar at the left to said third named bar at the right, means for moving said fourth named bar laterally toward and away from said first named bar and a guide block slidably mounted on said first named bar.

1,104,729. PIANO-PLAYING-CONTROL SYSTEM. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Feb. 12, 1913. Serial No. 747,936. (Cl. 84—168.)

1. In a player piano: a keybed or table, control handles at the front of said keybed, shafts extended rearwardly from said handles beyond said keybed and having upwardly extended arms at their rear ends and rearward of said keybed, and connections extended from said rear arms transversely of the piano and lying rearwardly of said keybed; and horizontal braces to said piano rearward of said keybed, and horizontal bellows pumpers positioned below said braces, adjacent thereto, and having a space between said braces and pumpers, said connections lying transversely of the piano in horizontal plane in the said space between the said braces and pumpers.

2. In a player piano: a keybed or table, control handles at the front of said keybed, shafts extended rearwardly from said handles beyond said keybed and having upwardly extended arms at their rear ends and rearward

of said keybed, and connections extended from said rear arms transversely of the piano and lying rearwardly of said keybed; and horizontal braces to said piano rearward of said keybed, and horizontal bellows pumpers positioned below said braces, adjacent thereto, and having a space between said braces and pumpers, said connections lying in horizontal plane in the said space between the said braces and pumpers.



3. A player piano having horizontally disposed braces, horizontal bellows pumpers positioned below said braces, adjacent thereto, and having a space between said braces and pumpers, and control connections lying transversely of the piano in horizontal plane in the said space between the said braces and pumpers.

4. A player piano having horizontally disposed braces, horizontal bellows pumpers positioned below said braces, adjacent thereto, and having a space between said braces and pumpers, and control connections lying in horizontal plane in the said space between the said bracea and pumpers.

5. In a player piano: a keybed or table, control handles at the front of said keybed, shafts extended rearwardly from said handles to the rear of said keybed, and connections extended from the rear ends of said shafts transversely of the piano, and additional longitudinal connections extended rearwardly from the ends of said transverse connections that are distant from their attachment to said shafts, said connections being disposed in substantially horizontal positions.

[Claims 6 to 27 not printed in the Gazette.]

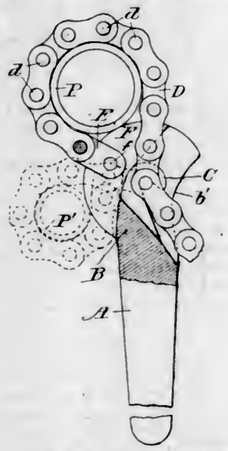
1,104,730. PIPE-WRENCH. WALTER JAMES HAMBLIN, Perth, Western Australia, Australia. Filed May 12, 1914. Serial No. 838,151. (Cl. 81—70.)

1. A pipe wrench having a rounded head with a catch arranged concentrically of its periphery, and a chain eccentrically pivoted at one end to the head and provided with means of adjustable connection with said catch.

2. A pipe wrench having a rounded head with a peripheral slot, catches arranged in said slot concentrically of the periphery of the head, and a chain eccentrically pivoted at one end in said slot and provided with means of adjustable connection with said catches.

3. A pipe wrench having a bifurcated head with a rounded periphery, catches projecting from the inner faces of the bifurcation and arranged centrally of the head and concentrically of the periphery of said head, and a chain eccentrically pivoted at one end in said bifurcation and provided with means of adjustable connection with said catches.

4. A pipe wrench having a bifurcated head with a rounded periphery, catches projecting from the inner faces of the bifurcation and arranged concentrically of the periphery of the head, the walls of said bifurcation having arcuate recesses, a link pivoted in said recesses with the inner faces of its arms spaced apart a distance equal to the distance between the walls of the bifurcation, for the purpose specified, and a chain pivoted at one end to said link and provided with means of adjustable connection with said catches.



5. A pipe wrench having a bifurcated head with a rounded periphery, catches arranged on the walls of the bifurcation concentrically of the periphery of the head, said walls of the bifurcation having arcuate recesses, a chain provided with means of adjustable connection with said catches, and a link connected to said chain and pivoted in said recesses with the inner faces of its arms spaced apart a distance exceeding the greatest width of the chain, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,104,731. NUT-LOCK. HAYNIE H. HEIMAR, Durham, N. C. Filed Dec. 13, 1913. Serial No. 806,498. (Cl. 151—11.)



1. A lock nut comprising a polygonal body portion, said body portion provided with a threaded bore extending the majority of the distance therethrough, said nut provided with a second bore communicating with the first mentioned bore and relatively larger than the same, a spiral locking spring positioned within the second mentioned bore, means for rigidly securing the same to the side walls thereof, a threaded pin extending through the side walls of said second mentioned bore and rotatably engaging said spiral spring adjacent the free end thereof, and a chisel blade provided at the extreme end of said spiral spring, said chisel blade adapted to engage the threads of a bolt.

2. A lock nut comprising a body portion provided with a threaded bore extending partially therethrough said nut provided with a second bore relatively larger than the first mentioned bore communicating and co-axial therewith, a spiral locking spring positioned within the said second mentioned bore, means rigidly securing the said spring to the side walls of said bore, a threaded pin extending through the side walls of the second mentioned bore and rotatably and nontranslatably engaging the said spiral spring adjacent the free end thereof, and enlarged and sharpened means at the extreme end of said spiral spring adapted to engage the threads of a bolt.

1,104,732. VAPOR-BURNING APPARATUS. GEORGE LEWIS HOGAN, New York, N. Y., assignor, by direct and mesne assignments, of one-fourth to William Ernest Holland, Chicago, Ill., and three-fourths to Aero Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 25, 1913. Serial No. 744,205. (Cl. 48—161.)



1. A liquid fuel burning apparatus including a burner and a carbureter having an air chamber, a vapor chamber, an absorbent medium between the two chambers, an unobstructed passage leading from one end of the absorbent medium to the other and a longitudinally movable tube within the said passage and in operative relation with the burner, said tube being of a size to form an uninterrupted space between its exterior surface and the interior surface of the passage and for the full length of said passage.

2. In a vapor burning lamp, the combination with a burner, of a carbureter including an absorbent block having a passage therethrough, an air chamber at the top of the block, a vapor chamber at the bottom of the block, a longitudinally movable tube in the passage, extending to the burner and having vents therein near the bottom, means for vertically adjusting the tube and a spring for retaining the tube in its adjusted position.

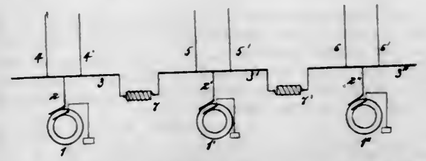
3. In a vapor burning lamp, the combination with a burner, of a carbureter including an absorbent block having a passage therethrough, an air chamber at the top of the block, a vapor chamber at the bottom of the block, a longitudinally movable tube within the passage, extending to the burner and having vents therein near the bottom and, a pipe extending from the exterior of the lamp through said passage to the interior of the tube.

4. In a vapor burning lamp, the combination with a burner, of a carbureter including an absorbent block, an air chamber at the top of the block, a vapor chamber at the bottom of the block, a fitting extending through the top chamber and presenting air vents therethrough, a washer located between the bottom of the said fitting and the top of the block, a longitudinally movable tube extending through the block and presenting a projection adapted, at a predetermined point in the movement of the tube, to engage with the washer and carry the same against the fitting to cover the vents in the latter.

5. A vapor burning apparatus including a carbureter having an absorbent block with a passage therethrough, an air chamber at the top of the block, a longitudinally movable tube located in said passage, a handle attached to the tube and extending therefrom to the exterior of the apparatus and a spring yieldingly holding the tube in position.

[Claims 6 to 9 not printed in the Gazette.]

1,104,733. DISTRIBUTION OF ELECTRICAL ENERGY. PHILIP VASSAR HUNTER, Heaton, Newcastle-upon-Tyne, England. Filed June 21, 1912. Serial No. 704,996. (Cl. 171—242.)

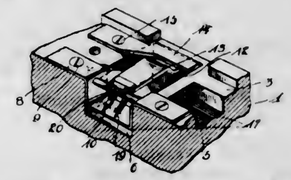


1. An electrical distribution system comprising generators, bus-bars in series connected thereto, and a reactance between adjacent bus bars having a high positive temperature coefficient substantially as described.

2. An electrical distribution system comprising generators, bus-bars in series connected therewith, a transformer having its primary in series between two bus-bars and a resistance with a high positive temperature coefficient in the secondary circuit substantially as described.

3. An electrical distribution system comprising generators, bus-bars in series connected therewith, a transformer having its primary in series between two bus-bars and a multiplicity of secondaries each with a resistance having a high positive temperature coefficient in its secondary substantially as described.

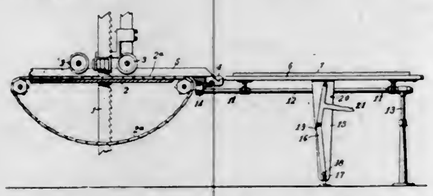
1,104,734. BURGLAR-ALARM. CHARLES FREMONT LEE, Chicago, Ill., assignor to William L. Rohrer, Chicago, Ill. Filed Mar. 26, 1913. Serial No. 756,950. (Cl. 177—202.)



1. In a burglar alarm, the combination with an electric circuit including a source of current and a ringer, of a keeper plate having a latching bolt opening, a contact spring secured beneath the plate and connected to one terminal of the electric circuit, a yoke member arranged beneath the keeper plate and connected to the other terminal of the electric circuit, a spring operated contact pivoted between the side of the yoke member and adapted to engage the first-named contact when released by the latching bolt and a bolt engaging insulating member carried by the spring operated contact.

2. In a burglar alarm, the combination with an electric circuit including a source of current and an audible alarm, of a keeper plate having a latching bolt opening, a contact spring secured beneath the plate and connected to one terminal of the electric circuit, means for insulating the spring from the keeper plate, a supporting member arranged beneath the plate and connected to the opposite terminal of the electric circuit, a spring actuated contact pivoted to said supporting member and adapted to engage the opposite contact and an insulating plate carried by said last-named contact and adapted to be engaged by a latching bolt.

1,104,735. LUMBER-GUIDE. EDMUND MORRIS, Grand Rapids, Mich. Filed Oct. 28, 1912. Serial No. 728,152. (Cl. 143—132.)



1. In combination with a rip-sawing machine having a table, a lumber guide, comprising a vertically adjustable table, an adjustable fence on the table, and means for adjusting the last named table in the plane of the saw table when in use and for swinging the same away from in front of the saw table when out of use.

2. In combination with a rip-sawing machine having a table, a lumber guide, comprising a narrow table in advance of the saw table, an adjustable fence on the narrow table, means for adjusting the narrow table in the plane of the saw table when edging lumber, and means for swinging the narrow table below the plane of the saw table and away from in front of the same when ripping lumber.

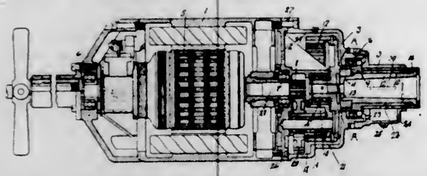
3. In combination with a rip sawing machine having a table, a second table arranged in line with the saw table, and in advance of the same, an adjustable fence on the last named table, and means for alternately adjusting the said table with its upper surface in the plane of the upper surface of the saw table and with the second table and fence below the said plane.

4. In combination with a rip-sawing machine, a lumber guide, comprising a rock shaft, arms projecting from the said shaft, a table carried by the arms, and a leg to support the table when in use, the table, arms and legs being adapted to swing upward above the rock shaft when out of use.

5. In combination with a rip sawing machine, a narrow table in advance of the machine, an adjustable fence on the table, pivoted arms attached to one edge of the table at one end, a rock-shaft supporting the arms and adapted to swing the table upward or downward out of operative position, and a leg hinged to the table adapted to support the same in operative position, and to fold against the under side of the same when the table is swung upward or downward.

[Claims 6 to 9 not printed in the Gazette.]

1,104,736. GEARING. FRANKLIN SCHNEIDER, Cleveland, Ohio, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 12, 1911. Serial No. 643,796. (Cl. 74—7.)



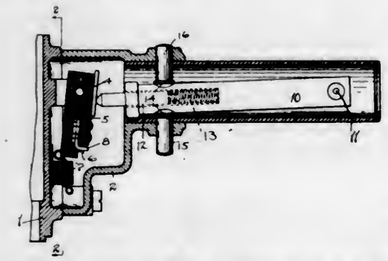
1. In mechanism of the character described, the combination of a casing; a motor mounted therein and provided with a spindle; a pinion secured on said spindle; a first gear meshing with said pinion; a second gear rotatable with said first gear; a tool-spindle alined with said motor-spindle; an anti-friction bearing for said tool-spindle adjacent its inner end; a thrust-bearing for said tool-spindle disposed between its ends; and an internal gear secured to said tool spindle between the anti-friction bearing and thrust bearing and in mesh with the second gear.

2. In mechanism of the character described, the combination of a casing; a motor mounted therein and provided with a spindle; a pinion secured on said spindle; a tool-spindle alined with said motor-spindle; an anti-friction bearing for said tool-spindle adjacent its inner end; a thrust-bearing for said tool-spindle disposed between its ends; an internal gear secured to said tool-spindle between the anti-friction bearing and the thrust bearing; a rotatable shaft parallel with said motor-spindle and tool-spindle; and two gears secured to said shaft, one of said gears meshing with said pinion and the other meshing with said internal gear.

3. In mechanism of the character described the combination of a casing; a motor mounted in said casing; a partition near one end of the latter, the motor-spindle projecting through said partition and the latter being provided on its outer face with an extension; a tool-spindle journaled in the end of said casing and in said extension; an internal gear attached to the inner end of said tool-spindle; a rotatable shaft parallel with said motor-spindle and journaled at one end in said partition and at the other in such extension; and pinions on said shaft connecting the same with said motor spindle and with said internal gear, respectively.

4. In mechanism of the character described, the combination of a casing; a partition near one end of the latter; a motor mounted in said casing, the motor spindle projecting through said partition; a tool spindle journaled in the end of said casing and in said partition; and gearing disposed between the outer face of the partition and the adjacent end of the casing, and connecting the motor spindle with the tool spindle.

1,104,737. ELECTRICAL SWITCH. FRANKLIN SCHNEIDER, Cleveland, Ohio, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 20, 1913. Serial No. 749,645. (Cl. 175—287.)

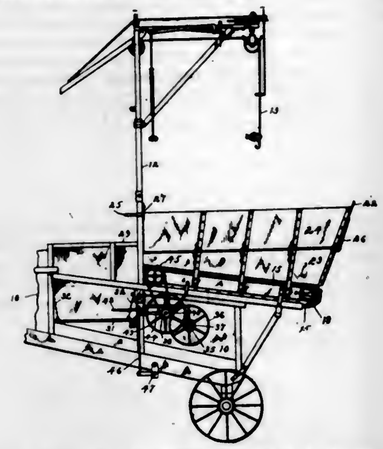


1. In an electrical switch, the combination of a casing; an oscillatory switch member therein; an extension attached to said casing and serving as a handle; an oscillatory member pivotally mounted at the outer end of said extension; a spring pressed plunger reciprocably mounted in said second member, said plunger being adapted upon oscillation of the latter to operate said switch member; and two buttons slidably mounted in opposite sides of said extension and adapted to actuate said oscillatory member.

2. In an electrical switch, the combination of an open casing; a plurality of aline lugs therein; a switch member; a pin connecting said member and said lugs, said pin being loosely received in the latter; and a cover for said casing, adapted when in position to maintain said pin in position and upon removal to permit said pin to be slidably withdrawn from said lugs.

1,104,738. FEEDER FOR CORN HUSKERS AND SHREDDERS. JAMES B. SCHUMAN, Indianapolis, Ind., assignor to The Schuman Company, Indianapolis, Ind., a Corporation of Maine. Filed May 6, 1912. Serial No. 695,394. (Cl. 193—14.)

1. A feeder for shredders comprising a carrier, yieldingly mounted shock retaining walls at the sides thereof capable of being lowered to permit a suspended corn shock to swing within said walls onto said carrier and to be raised to retain said shock thereon, safety walls extending forwardly of said retaining walls, and means under control of an operator for actuating said carrier to propel shocked material to within his reach.



2. A feeder for shredders comprising a carrier, yieldingly mounted shock retaining walls at the sides thereof capable of being lowered to permit a suspended shock to swing within said walls onto said carrier and to be raised to retain said shock thereon, safety walls extending forwardly and inwardly from said retaining walls, and means under control of an operator for actuating said carrier to propel shocked material toward the feeding rolls of a shredder.

3. A feeder for shredders comprising a carrier, inclosing side and end walls for said carrier said side walls being yieldingly mounted to permit the entrance of shocks therethrough to said carrier, means for controlling the movement of said side walls, and means for actuating said carrier to convey material to a shredder.

4. In a feeder for shredders, a shock-retaining receptacle comprising an end wall and yieldingly mounted side walls communicating therewith, said side walls being capable of adjustment to permit a suspended corn shock to swing within and be retained in standing position within said walls, a carrier positioned at the lower portion of said receptacle and constituting the floor thereof, and means for actuating said carrier to convey shocks from said receptacle to be shredded.

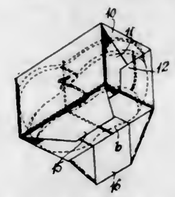
5. In a feeder for shredders, a shock retaining receptacle comprising an end wall, side walls communicating therewith and having their upper portions yieldingly mounted, to permit a suspended corn shock to swing within and be retained in standing position within said walls, a movable carrier forming a bottom for said receptacle and upon which shocks are positioned in standing position, and means for actuating said carrier to convey shocks from said receptacle.

[Claim 6 not printed in the Gazette.]

1,104,739. PACKAGE. HENRI A. SÉVIGNÉ, Winthrop, Mass. Filed Mar. 24, 1913. Serial No. 756,338. (Cl. 229—87.)

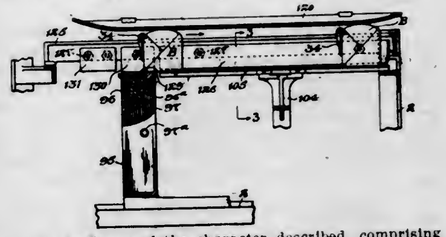
1. A package comprising a flat stiffener, a plurality of irregular-shaped articles in contact with one surface of said stiffener, and a flexible wrapper in contact with the articles and having its edge portions turned in and folded against the other surface of said stiffener, a single final edge portion overlying all the other edge portions.

2. A package comprising a flat stiffener, merchandise supported by said stiffener, and a flexible wrapper completely inclosing the stiffener and merchandise and holding them together, said wrapper having its edge portions turned in and overlapped and folded against the bottom



of the stiffener, a single final flap or edge portion overlying all other turned in edge portions.

1,104,740. APPLIANCE FOR SEALING WRAPPED PACKAGES. HENRI A. SÉVIGNÉ, Winthrop, Mass. Filed Nov. 24, 1913. Serial No. 802,823. (Cl. 93—2.)



1. An appliance of the character described, comprising a straight guideway having a flat stationary bottom and straight sides at a right angle to the bottom, the appliance having a top opening to permit articles to be pushed from one end to the other, and means for heating one end of the guide-way while permitting the other end to remain cool.

2. An appliance of the character described, comprising a straight guideway including a bottom and side members, the top being open to permit articles to be pushed from one end to the other, the ends of the side members for the entrance of the articles diverging, and means for heating one end of the guideway while permitting the other end to remain cool.

3. An appliance of the character described, comprising a straight guideway having bottom and sides and top, which is open to permit articles to be pushed from one end to the other, and means for heating one end of the guideway while permitting the other end to remain cool, means being provided for supplying wax at the point where the guideway is heated.

4. A sealing device for wrappers for loaves of bread comprising a table including a bottom and a pair of side walls, said table open at each end, a burner located beneath said table and adapted to heat the bottom and side walls thereof, and a cooling table arranged in longitudinal alinement with and spaced from said heating table, said cooling table including a bottom and a pair of side walls and open at each end.

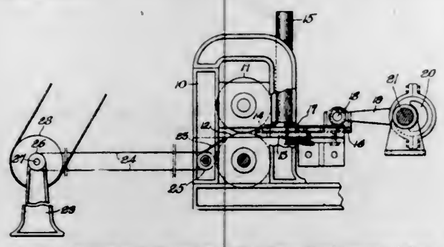
5. An appliance of the character described, comprising a straight guideway having a flat stationary bottom and straight sides at a right angle to the bottom, the appliance having a top opening to permit articles to be pushed from one end to the other, means for heating one end of the guideway while permitting the other end to remain cool, and pushers movable from end to end of the guideway.

[Claim 6 not printed in the Gazette.]

1,104,741. PAPER-FEEDER. FRANK K. ARNOLD, Nashua, N. H., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H., a Corporation of Massachusetts. Filed Aug. 16, 1913. Serial No. 785,112. (Cl. 101—39.)

1. A machine of the character described, comprising a pair of treating rolls, a series of magazines having outlets
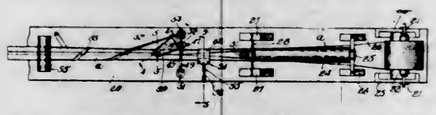
in proximity to the nip of said rolls, said outlets being proportioned to permit the passage of but one article at a time from each magazine, a series of pushers having recessed operative ends movable in said outlets for positively transferring articles to the nip of the rolls, and means for reciprocating the pushers a distance to transfer the articles the entire distance from the outlets of the magazines to the rolls.



2. A machine of the character described, comprising a pair of treating rolls, a row of tubular magazines mounted closely adjacent said rolls and having slotted outlets leading to the nip of said rolls, a slide having a series of pushers movable through the said outlets, said pushers having recessed operative ends to engage and guide articles from the bottoms of the magazines, and means for reciprocating the slide and pushers a distance to transfer the articles the entire distance from the magazines to the rolls.

3. A machine of the character described, comprising a pair of treating rolls, a row of tubular magazines mounted closely adjacent said rolls and having slotted outlets leading to the nip of said rolls, a slide having a series of pushers movable through the said outlets, said pushers having recessed operative ends to engage and guide articles from the bottoms of the magazines, a shaft having eccentrics, pitmen operatively connected with said eccentrics, and connections between said pitmen and the pushers whereby the latter are reciprocated to feed articles from the bottoms of the magazines to the nip of said rolls, the eccentrics being proportioned to cause one stroke of the slide and pushers to carry articles from the magazines to the nip of the rolls.

1,104,742. MACHINE FOR MAKING PAPER-TUBE SECTIONS. FRANK K. ARNOLD, Nashua, N. H., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H., a Corporation of Massachusetts. Filed Jan. 31, 1914. Serial No. 815,647. (Cl. 93—82.)



1. A machine of the character described, having a single stationary former, means for drawing a strip of paper lengthwise of the former and folding the strip around the former, said means including a flexible spiral strap for wrapping the strip closely to the former, and means for applying an adhesive material to the strip.

2. A machine of the character described, having a former, means for drawing a strip of paper lengthwise of the former and wrapping it around said former, a flexible spiral strap closely inclosing the strip and former, and means for adhesively connecting the edges of the strip.

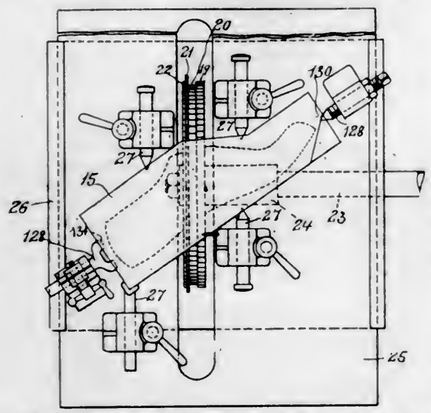
3. A machine of the character described, having a former, means for drawing a strip of paper lengthwise of the former and wrapping it around said former, a flexible tension or drag inclosing the strip and former, and means for adhesively connecting the edges of the strip, said tension or drag comprising a strip secured at one end to the former and having means for connecting its other end to a fixed point.

4. A machine of the character described, having a former, means for drawing a strip of paper lengthwise of the former and wrapping it around said former, a flexible tension or drag inclosing the strip and former, and means for adhesively connecting the edges of the strip, said tension or drag comprising a strip secured at one end to the former, the other end of the strip having a spring and means for adjustably connecting it with a fixed support.

5. A machine of the character described having a former, means for drawing a strip of paper lengthwise of the former and folding the strip around the former with the edges of the strip overlapping, two separated flexible smoothers between which and the former the strip is drawn, and a deflector and adhesive applier between said smoothers.

[Claim 6 not printed in the Gazette.]

1,104,743. METHOD OF MAKING LASTS. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Mfg. Company, South Boston, Mass., a Corporation of New Jersey. Filed Mar. 29, 1909, Serial No. 486,462. Renewed May 4, 1911. Serial No. 625,881. (Cl. 144—309.)



1. The herein described process of forming a two part last and consisting in severing a blank into a heel-part and forepart and forming an undercut tongue on one part during the severing operation, forming an undercut groove in the other part for said tongue, assembling the two parts with the tongue occupying said groove, and finally turning the blank while so assembled.

2. The herein described process of forming a two part last and consisting in severing a blank into a heel-part and forepart and, while severing, in forming a rib on one part and an undercut tongue on the other, forming an undercut groove in the ribbed part, using the rib as means for guiding said part to the grooving tool, assembling the forepart and heel-part with the tongue in the groove, and turning the blank while so assembled.

3. The herein described process of forming a two part last and consisting in severing a blank into a heel-part and forepart, forming one part with an undercut tongue extending from the sole part way toward the top, forming the other part with a complemental undercut groove extending from the sole part way toward the top to receive said tongue, assembling the two parts, and finally shaping the exterior of the blank while so assembled.

4. The herein described process of forming a two part last and consisting in severing a blank into a heel-part and forepart, forming one part with an undercut tongue and the other with an undercut groove to receive the tongue, assembling the two parts, boring through one part and into the other on a line substantially perpendicular to the plane of division, arranging a locking device in the bored chamber, and finally shaping the exterior of the blank while so assembled and locked.

5. The herein described process of forming a two part last and consisting in mounting a blank between end indenting tools, severing the blank, while held between said tools, into a forepart and heel-part, forming the two parts with an interlocking tongue and groove, assembling the forepart and heel-part and locking them together, and mounting the assembled parts in a last-turning lathe with the end indentations formed by said tools upon the coöperative work centers of the lathe.

[Claim 6 not printed in the Gazette.]

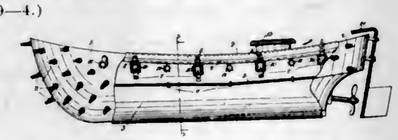
1,104,744. PROCESS OF TREATING PONTIANAK. ALBERT R. ELLISON, Brookline, Mass. Filed Oct. 13, 1909, Serial No. 522,467. Renewed Apr. 23, 1913. Serial No. 763,181. (Cl. 18—50.)

1. The process of obtaining india rubber from pontianak, which consists in subjecting the pontianak to the action of a mixture of naphtha, acetone oil and acetone for a time sufficient to isolate the rubber; said mixed acetone oil and acetone being present in a quantity sufficient to precipitate the said rubber, substantially as described.

2. The process of obtaining india rubber from pontianak, which consists in subjecting the pontianak to the action of a mixture of substantially one part of naphtha, one part acetone oil, and slightly more than one part acetone, and for a time sufficient to isolate the rubber, substantially as described.

3. The process of obtaining india rubber from pontianak, which consists in subjecting the pontianak to the action of a mixture of substantially equal parts of naphtha, and acetone oil, and slightly more than one part of acetone and for a time sufficient to isolate the rubber, agitating the pontianak while being acted upon by the mixture; and subjecting the recovered rubber to the action of boiling water, substantially as described.

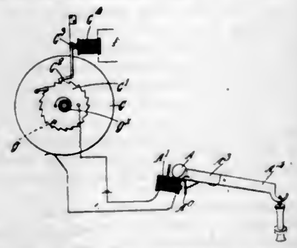
1,104,745. LIFE-BOAT. JOHN GUNNARSON, Bettendorf, Iowa. Filed Mar. 6, 1914. Serial No. 822,861. (Cl. 9—4.)



1. In a life boat the combination with the hull, of a plurality of springs, a cover connected to the gunwales of the boat and to said springs and angular air inlets passing through and connecting said cover and hull.

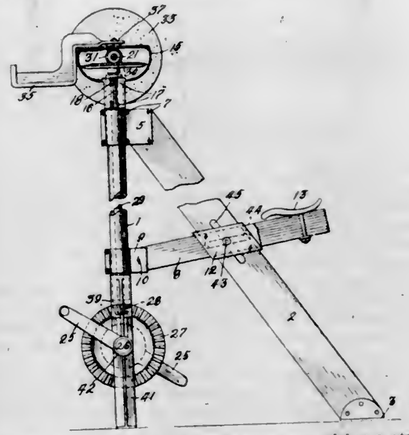
2. In a life boat the combination with the hull, of a plurality of springs, a cover connected to the gunwales of the boat and to said springs, angular air inlets passing through and connecting said cover and hull and a storm cover releasably secured to the first named cover and passing over the top of the boat.

1,104,746. WIRELESS TELEGRAPH OR TELEPHONE SYSTEM. WILLIAM HENRY SHEPHARD and ARCHIBALD EDWARD MCKECHNIE, London, England. Filed May 7, 1914. Serial No. 837,075. (Cl. 177—330.)



In a circuit closer, the combination of a rotary inertia member, a second rotary member movable therewith, electric magnetic releasing means for said members, means for rotating said members when released, circuit terminals carried by said members respectively and a pair of contacts carried one on each of said rotating members adapted to engage when the second rotary member is stopped and the inertia member moves to a predetermined position, substantially as described.

1,104,747. TOOL-DRIVING MECHANISM. JAMES M. THOMPSON, Milwaukee, Wis., assignor to Luther Bros. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 31, 1910. Serial No. 552,573. (Cl. 77—7.)



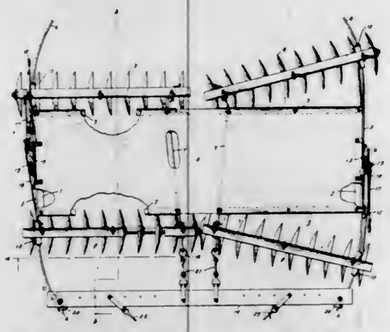
1. A foot power driving mechanism comprising a standard having a base portion adapted to rest upon the floor and provided with an upright tubular upper portion, a support having adjustable swivel connection with the upper portion of the standard, means for locking the same to the standard in any desired position of rotative adjustment, a crank shaft journaled in said base and provided with foot pedals, a vertical shaft journaled in the tubular standard and provided with gear wheels at its upper and lower ends, a gear wheel on the crank shaft in mesh with the gear wheel on the vertical shaft, and a driven shaft provided with a gear wheel in mesh with the upper gear wheel on the vertical shaft and journaled in said support, said driven shaft being adapted for direct connection of suitable tools therewith, and said tools being adapted to operate at any angle in a horizontal plane about said standard, by appropriate adjustment of said support.

2. A foot power driving mechanism comprising a standard having a base portion adapted to rest upon the floor and provided with an upright tubular upper portion, a support having adjustable swivel connection with the upper portion of the standard, means for locking the same to the standard in any desired position of rotative adjustment, pedal and crank mechanism journaled in said base, a vertical shaft journaled in the tubular standard and driven from the pedal and crank mechanism, and a driven shaft operatively connected with the vertical shaft and journaled in said support, said driven shaft being adapted for direct connection of suitable tools therewith, together with a brace bar extending angularly from the upper portion of the standard to the floor, a seat bar adjustably connected with the brace bar, and a seat mounted on said seat bar.

1,104,748. DISK HARROW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Oct. 6, 1911. Serial No. 653,242. (Cl. 55—83.)

1. A disk harrow comprising a platform, four disk gangs, two located at the front edge and two at the rear edge of the platform having their inner ends pivotally

connected to the platform, curved guide-ways extending from the platform, a guide supported by each guide-way, and a pivotal connection between a disk gang and a guide-way.



2. In apparatus of the character set forth, the combination with a frame, of front and rear sets of disk gangs pivoted at their inner ends to the central portion of the frame, and means mounted on the outer portions of the frame and connected to the corresponding front and rear gangs for simultaneously swinging the latter.

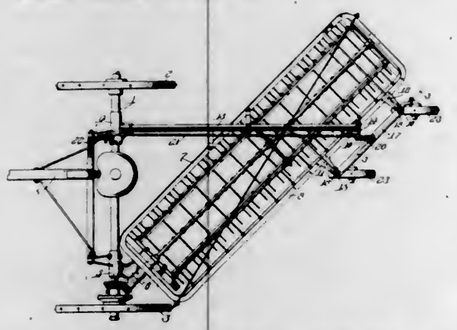
3. In apparatus of the character set forth, the combination with a platform, of a front set of gangs pivoted at their inner ends to the central portion of the platform and arranged in advance of the same, a rear set of gangs pivoted at their inner ends to the central portion of the platform and arranged in rear of the same, and means mounted on the outer portions of the platform and connected to the gangs for swinging the corresponding front and rear gangs.

4. In apparatus of the character set forth, the combination with a platform, of transverse bars located on intermediate portions of the same and extending in advance and in rear thereof, front and rear sets of gangs pivoted to the projecting portions of the bars, and means mounted on the platform and connected to the gangs for swinging the same.

5. In apparatus of the character set forth, the combination with a support, of curved guides at the opposite outer ends of the same, front and rear sets of gangs pivoted to an intermediate portion of the support, boxes connected to the gangs and movable on the guides, and means for moving the gangs.

[Claim 6 not printed in the Gazette.]

1,104,749. RAKE. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Aug. 6, 1912. Serial No. 713,582. (Cl. 56—31.)



1. The combination of a frame, two wheel supports, a wheel for each support, connections between said wheel supports and frame to allow said supports vertical movement relative to the frame, and an equalizing-bar pivoted intermediate its ends to a frame member and being pivotally connected on vertical axes at each end to one of said wheel supports, said wheel supports being movable rotatably to allow their wheels to caster horizontally.

2. The combination of supporting-wheels, an axle supported by the wheels, one end of a frame supported by the axle, the frame being located diagonally with respect to the said axle, supports for two wheels, said supports carried by the rear end of the frame and movable vertically thereon, an equalizing-bar connecting the two supports, a connection between the equalizing-bar and the frame, and wheels for said wheel supports.

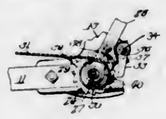
3. The combination of supporting wheels, an axle supported by the wheels, one end of a frame supported by the axle, two wheel supports carried by the opposite end of the frame and movable vertically thereon, wheels for the supports, an equalizing-bar connecting the two supports, a supporting connection between the frame and said equalizing-bar, and means for vertically varying the support of said equalizing-bar.

4. The combination of supporting wheels, an axle supported by the wheels, one end of a frame supported by the axle, two brackets supported by the other end of the frame, two wheels, supports for the wheels located in the brackets, the brackets slidable on the wheel supports, an equalizing bar connecting the supports, a bell-crank supported by the frame, a connection between one arm of the bell-crank and the equalizing bar, and means for rocking the bell-crank.

5. The combination of supporting wheels, an axle supported by the wheels, one end of a frame supported by the axle, two brackets supported by the other end of the frame, two wheels, supports for the wheels located in the brackets, the brackets slidable on the wheel supports, an equalizing bar connecting the supports, a bell-crank supported by the frame, a connection between one arm of the bell-crank and the equalizing bar, and a hand-lever for rocking the bell-crank.

[Claim 6 not printed in the Gazette.]

1,104,750. PLOW-LIFT. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed July 7, 1913. Serial No. 777,678. (Cl. 97—69.)



1. In a plow structure, the combination with a draft frame and a plow beam pivotally connected thereto, of lifting means coöperating with the plow beam, a drum, a cable connection between the drum and lifting means, a lever for rotating the drum, a catch adapted to engage the drum, means movable with the drum for limiting capability of operation of the lever upon the drum, and means operable through movement of said lever for actuating the catch.

2. In a plow structure, the combination with a draft frame and a plow beam pivotally connected thereto, of lifting means for the plow beam, and operating means having connection with the lifting means including a reciprocable lever in operable connection with said operating means, a catch adapted to lock the movement of said lifting means in one direction, means movable through movement of the drum for limiting capability of operation of the lever on the drum, and means operable through movement of said lever to release said catch from said locked position.

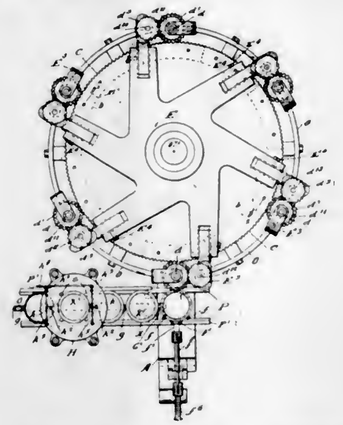
3. In a plow structure, the combination with a vertically movable plow beam, of a bell-crank member pivoted thereto, a land-wheel journaled on one arm of the bell-crank member, a pivoted lever having a stop contactable with the other arm of said bell-crank member, and a segment-engageable lever having a connection with said pivoted lever and adapted to maintain same in various set positions.

4. The combination with a plow beam and lifting device, of a drum having connection with said device, a lever having a ratchet connection with said drum and being reciprocable to rotate same, and a stop carried by the drum and against which said lever is adapted to contact at a predetermined point in the rotation of drum.

5. The combination with a plow beam and lifting device, of a drum having connection with said device, a ratchet wheel in connection with the drum, a lever, a dog operated by the lever to engage the ratchet wheel to rotate same, a catch held in engagement with a portion of the drum, and said dog being in such operable relation with said catch that the dog, through movement of the lever, may move the catch from its said engagement with the said portion of the drum, and means for limiting the capability of operation of the lever on the drum.

[Claim 6 not printed in the Gazette.]

1,104,751. DOUBLE-SEAMING MACHINE. FRED WEGNER, Fairport, N. Y., assignor to Sanitary Can Company, New York, N. Y., a Corporation. Filed Sept. 27, 1909. Serial No. 519,794. (Cl. 113—14.)



1. In a double seaming machine, the combination with a series of axially rotatable can holders, of a rotary carrier upon which they are mounted, and a stationary convexly curved seaming tool, said seaming tool being convexly curved in the direction of its length and being on the inner side of the path of the can holders, and having a plurality of separate and independently adjustable seam forming segments, substantially as specified.

2. In a double seaming machine, the combination with a series of axially rotatable can holders, of a rotary carrier upon which they are mounted, and a stationary convexly curved seaming tool, said seaming tool being convexly curved in the direction of its length and being on the inner side of the path of the can holders and having a plurality of separate and independently adjustable seam forming segments, and a plurality of separate and independently adjustable seam closing segments, substantially as specified.

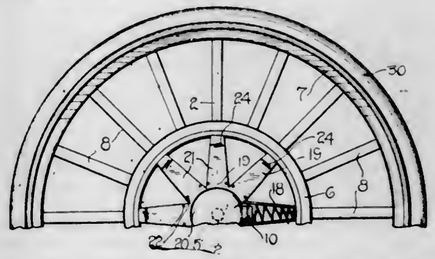
3. In a double seaming machine, the combination with a series of radially adjustable axially rotatable can holders, of a rotary carrier upon which they are mounted, a stationary convexly curved seaming tool, and a stationary cam for operating the can holders to clamp and unclamp the cans, a can conveyer, a can head holder and feeder above said conveyer for delivering the can heads to the cans and a feeder for delivering the cans to said can holders, substantially as specified.

4. In a double seaming machine, the combination with a series of axially rotatable can holders, of a rotary carrier upon which they are mounted, a stationary convexly curved seaming tool having separately adjustable seam forming and closing segments, a can feeder and can head centering pins, substantially as specified.

5. In a double seaming machine, the combination with a series of axially rotatable can holders, of a rotary carrier upon which they are mounted, a stationary convexly curved seaming tool, a can feeder having an outer pair of can head centering pins, and an inner movable pair of can head centering pins, substantially as specified.

[Claims 6 to 24 not printed in the Gazette.]

1,104,752. SPRING-WHEEL. WILLIAM H. ABBOTT, Gwinn, Mich. Filed Oct. 11, 1913. Serial No. 794,703. (Cl. 152—39.)



1. The combination with a spring wheel including a plurality of cushioning springs, of a casing for each of said springs, said casings being open upon one side, pins secured to the side walls of each casing, a cover plate embodying a plurality of arms adapted for engagement upon the open sides of the respective casings and provided with openings to receive said pins, and a pair of locking members movably mounted upon each of said arms for engagement with said pins to removably lock the cover plate to the spring casings.

2. The combination with a spring wheel including a plurality of cushioning springs, of a casing for each of said springs open upon one side, pins projecting from each of the side walls of the casing at its open side, a cover plate embodying a plurality of arms, said arms being adapted for engagement over the open sides of the respective spring casings, and provided with openings to receive the pins thereon, and locking devices mounted upon the outer ends of said arms, each including a pair of movable locking elements and a lever to actuate the same, said elements being adapted to engage the pins upon the casing walls and removably lock the cover plate in position thereon

---

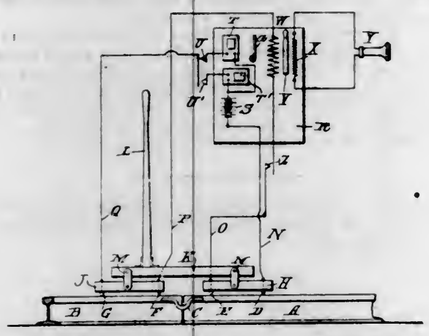
1,104,753. TESTING INSTRUMENT. HAMILTON BAUSS, Kennett Square, Pa., assignor to The American Steel & Wire Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 23, 1910. Serial No. 573,418. (Cl. 175—183.)

1. A testing instrument for rail bonds and the like comprising means for passing a main current through the bond, means for shunting a current around the bond, and a telephone receiver actuated differently by the two different currents.

2. A testing instrument for rail bonds and the like comprising means for passing a main current through the bond, means for shunting a part of the main current around the bond, an interrupter actuated by the main current for generating a magnetic field, a telephone receiver having a circuit passing through said magnetic field and an induction coil in the circuits of the shunt current and the receiver.

3. A testing instrument for rail bonds and the like comprising a circuit in which is an interrupter adapted to generate a magnetic field, rail contacts for said circuit,

another circuit passing through said magnetic field, rail contacts for said other circuit, an indicator in operative relation to the two circuits, and means for adjusting the effect of said interrupter upon said other circuit.

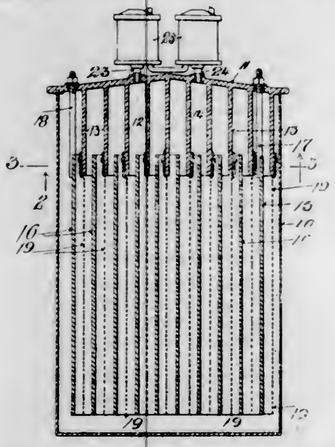


4. A testing instrument for rail bonds and the like comprising a circuit and an interrupter therein for generating a magnetic field, rail contacts for said circuit, another circuit passing through said magnetic field, rail contacts for said other circuit, a telephone receiver in operative relation to the two circuits, and means for adjusting the effect of the interrupter upon said other circuit.

5. A testing instrument for rail bonds and the like including four contact points in pairs, a separate holder for each pair and a bar to which an intermediate point of each holder is pivotally attached.

[Claims 6 to 10 not printed in the Gazette.]

1,104,754. ELECTROLYTIC CELL. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Nov. 6, 1912. Serial No. 729,753. (Cl. 204—5.)

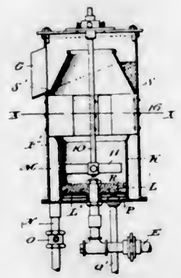


1. In an electrolytic cell, a receptacle, a cover or top therefor, said cover or top having spirally arranged walls upon its under surface to form a closed chamber, electrode plates correspondingly formed into spirals and respectively suspended within said chamber and the exterior space thereof, a porous curtain separating said plates and gas delivery connections communicating respectively with said chamber and said exterior space.

2. In an electrolytic cell, a receptacle, a top or cover therefor having integral spirally arranged walls on the under surface thereof forming a closed chamber and an open space between the spiral convolutions of said chamber, electrode plates respectively suspended in said chamber and open space and having spiral formations to conform to the spiral outline of said chamber and space respectively, a porous curtain interposed between said electrode plates and gas delivery connections communicating with said chamber and exterior space respectively.

3. In an electrolytic cell, a receptacle, a top or cover therefor having depending from the under surface thereof a specially arranged wall forming a closed chamber open at the bottom and an open space exterior of said chamber, electrode plates suspended respectively in said chamber and open space, a porous curtain applied against the spiral wall of said chamber and depending therefrom in spiral formation and interposed between said electrode plates and a clamping ring for securing said curtain against said spiral wall, said ring having an off-set lower edge to engage over the lower edge of said wall to bring the surface of the curtain toward alinement with the inner surface of said wall, and gas delivery connections respectively from said chamber and open space.

1,104,755. ORE-CONCENTRATING APPARATUS. JOHN M. CALLOW, Salt Lake City, Utah, assignor to Metals Recovery Company, Augusta, Me., a Corporation of Maine. Filed Dec. 13, 1913. Serial No. 806,361. (Cl. 83—85.)



1. In ore concentrating apparatus having a solution-containing tank and a porous body therein through which fine streams of air under pressure are admitted into the solution from below, a means operating in proximity to the upper surface of said body for maintaining the heavier constituents of the solution in suspension to thereby prevent the blanketing of the air outlets of said porous body.

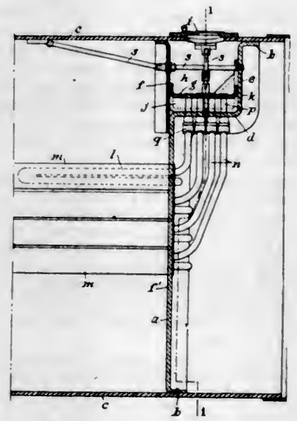
2. In ore concentrating apparatus having a solution-containing tank, and a porous body therein through which streams of air under pressure are delivered into the lower part of the solution, a sweep operating adjacent the upper face of said body for the purpose of maintaining the heavier constituents of the solution in suspension and thereby preventing the blanketing of the air outlets of said porous body.

3. In apparatus of the character described, the combination with a solution-containing tank, a porous body therein and spaced therefrom to form a chamber between itself and the bottom of the tank, and means for admitting an expansible fluid into said chamber, said porous body adapted to sub-divide the fluid and deliver the same in numerous fine streams into the solution contained in the tank, of means operating in proximity to the upper face of the porous body adapted to maintain the heavier constituents of the solution in a state of suspension to prevent the blanketing of the air outlets of said body.

4. In apparatus of the character described, the combination with a solution-containing tank, a porous body therein and spaced therefrom to form a chamber between itself and the bottom of the tank, and means for admitting an expansible fluid into said chamber, said porous body adapted to sub-divided the fluid and deliver the same in numerous fine streams into the solution contained in the tank, of a vertical shaft mounted within said tank, and sweep-arms on the shaft operating adjacent the upper surface of the porous body and adapted to prevent the blanketing of the air outlets thereof by maintaining the heavier constituents of the solution in a state of suspension.

5. In apparatus of the character described, the combination with a solution-containing tank, a porous body therein and spaced therefrom to form a chamber between itself and the bottom of the tank, and means for admitting an expansible fluid into said chamber, said porous body adapted to sub-divide the fluid and deliver the same in numerous fine streams into the solution contained in the tank, of means operating in proximity to the upper face of the porous body adapted to maintain the heavier constituents of the solution in a state of suspension to prevent the blanketing of the air outlets of said body, and vertical baffles projecting substantially radially within the tank above said last-named means.

1,104,756. BOILER WITH FIRE-TUBE SUPERHEATER. SIMON HOFFMANN, New York, N. Y., assignor, by mesne assignments, to Locomotive Superheater Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 12, 1912. Serial No. 670,734. (Cl. 122—462.)



1. In a steam boiler provided with fire tubes, a superheater comprising a pair of headers one of which employs a part of the front tube sheet as part of its wall, superheater elements held within some of the fire tubes each of said elements having a pair of ends one of which connects with a header while the other passes through said header into the remaining headers, and steam connections between the headers and the steam supply and engine cylinders respectively.

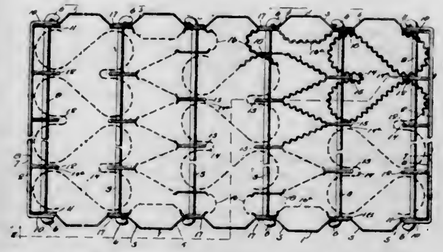
2. In a steam boiler provided with fire tubes, a superheater comprising a pair of headers part of the front tube sheet being employed as a wall common to the two headers, superheater elements held within some of the fire tubes and having their ends connected with the two headers, and steam connections between the headers and the steam supply and engine cylinders respectively.

3. In a steam boiler provided with fire tubes, a superheater comprising a pair of headers one on each side of the front tube sheet, part of which tube sheet constitutes a partition wall common to both headers, superheater elements held within some of the fire tubes and having their ends connected with the two headers, and steam connections between the headers and the steam supply and engine cylinders respectively.

4. In a steam boiler provided with fire tubes, a superheater comprising a pair of headers one on each side of the front tube sheet part of which tube sheet constitutes a partition wall common to both headers, superheater elements held within some of the fire tubes each of said elements having a pair of ends one of which connects with a header while the other has connecting means passing through said header into the remaining header, and steam connections between the headers and the steam supply and engine cylinders respectively.

5. In a steam boiler provided with fire tubes, in combination with the front tube sheet, segments joined to said tube sheet so as to constitute, with a portion of the same, wall surfaces of two header chambers, superheater elements held within some of the fire tubes and having their ends connected with the two headers, and steam connections between the headers and the steam supply and engine cylinders respectively.

1,104,757. METALLIC DOOR-MAT. LEON S. HOWE, New York, N. Y. Filed Feb. 19, 1912. Serial No. 678,630. (Cl. 15—63.)



1. A folding door-mat comprising a plurality of scraping members of crinkled strip-metal bent lengthwise into various convolutions and mounted so that the crinkles extend vertically and give an extensive scraping edge in all directions and an extensive supporting edge against the floor; frame-members for binding said convolutions together into relatively folding mat-sections, the overlapping portions of the relatively folding mat-sections being provided with a flat bearing part for preventing the interlocking against folding of the adjacent sections.

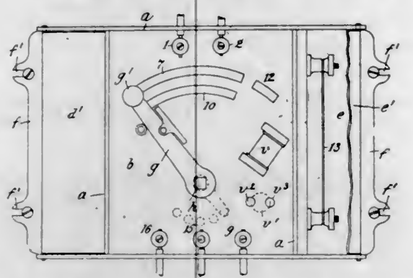
2. A folding reversible door-mat comprising a plurality of hinged sections, each section being made up of various convolutions of crinkled strap-metal with the crinkles extending vertically to give an extensive scraping edge in all directions and an opposite extensive supporting edge against the floor, the convolutions of one section meshing with the convolution of its neighbor; and cross-rods piercing the meshing portions of said sections and binding the same together into relatively folding mat-sections, the adjacent portions of the relatively folding mat-sections being provided with a flat bearing part for preventing the interlocking against folding of adjacent meshing mat-sections.

3. A folding reversible door-mat comprising a plurality of hinged sections, each section being made up of various convolutions of crinkled strap-metal with the crinkles extending vertically to give an extensive scraping edge in all directions and opposite extensive supporting edge against the floor, the convolutions of one section meshing with the convolution of its neighbor; and cross-rods piercing the meshing portions of said sections and binding the same together but permitting a relative turning of the sections upon each rod, one of said sections being provided with flat faces adapted to be engaged by the crinkles of its neighbor adjacent said cross-rods for facilitating the turning of the juxtaposed sections relative to each other.

4. A folding reversible door-mat comprising a plurality of hinged sections, each section being made up of various convolutions of crinkled strap-metal with the crinkles extending vertically to give an extensive scraping edge in all directions and an opposite extensive supporting edge against the floor, the convolutions of one section meshing with the convolution of its neighbor; cross-rods piercing the meshing portions of said sections and binding the same together; means permitting a relative turning of the sections upon each said rod; a frame comprising members

formed with parts extending between portions of adjacent mat sections; and cross-rods piercing the extended parts of said end members and fixing said end members to said mat sections.

1,104,758. ELECTRIC STARTER FOR MOTORS, ALTERNATING OR DIRECT CURRENT. CHARLES B. PINKERTON and ALFRED E. WASON, London, England. Filed Oct. 31, 1913. Serial No. 798,534. (Cl. 172—179.)



1. A starter for electric motors comprising, in combination, a starting switch having a movable contact member, a double-pole main switch having a movable contact member, and a spindle common to both switches, said spindle forming electrical connection between the movable contact member of the starting switch and the movable contact member for one pole of the main switch whereby electrical current is conducted to the starting switch.

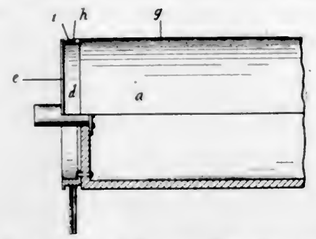
2. A starter for electric motors, comprising a casing divided into compartments by front and back insulating panels, a starting switch arranged on the front panel, a rheosat located behind said front panel, a main switch on the back panel, a spindle mechanically and electrically connecting the lever of the starting switch with a lever of the main switch, and electric circuits and connections within the casing providing two terminals for connection to the main leads and three terminals for connection to the motor leads.

3. A starter for electric motors, comprising a casing divided into compartments by front and back insulating panels, a box with a seal door at each side of said casing, a fuse in each box, a removable front to said casing, a removable back to said casing, a starting switch arranged on the front panel, a rheostat located behind said front panel, a main switch on the back panel, a spindle mechanically and electrically connecting the lever of the starting switch with a lever of the main switch, and electric circuits and connections within the casing providing two terminals for connection to the main leads and three terminals for connection to the motor leads.

4. A starter for electric motors, comprising a casing divided into compartments by front and back insulating panels, a box with a seal door at each side of said casing, a fuse in each box, a removable front to said casing, a removable back to said casing, a starting switch arranged on the front panel, a rheostat located behind said front panel, a hand-operated short circuiting device for the retaining magnet circuit, a main switch on the back panel, a spindle mechanically and electrically connecting the lever of the starting switch with a lever of the main switch, and electric circuits and connections within the casing providing two terminals for connection to the main leads and three terminals for connections to the motor leads.

1,104,759. DRIER-ROLLS FOR PAPER-MACHINES. WILLIAM SHEAHAN, Oregon City, Oreg. Filed July 5, 1913. Serial No. 777,600. (Cl. 34—48.)

1. In a paper making machine, the combination of drier rolls made with ends having peripheral surfaces sunken below the peripheral surface of the body of the roll, and endless carriers bearing in such sunken peripheral surfaces, the carrying surfaces of the latter being located in a plane determined by the thickness of the carriers, so as to cause the carriers to travel approximately at the same speed as the drier rolls while traveling on the latter,



2. In a paper making machine, the combination of drier rolls made with ends having peripheral surfaces sunken below the peripheral surface of the body of the roll, and a flange on the outer extremities of such sunken surfaces, and endless carriers bearing in such sunken peripheral surfaces, the carrying surfaces of the latter being located in a plane determined by the thickness of the carriers, so as to cause the carriers to travel approximately at the same speed as the drier rolls while traveling on the latter.

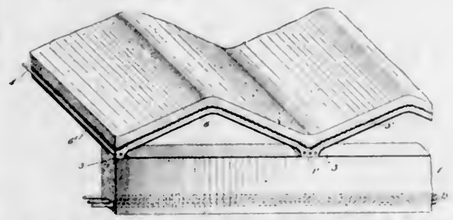
3. In a paper making machine, the combination with the drier rolls, of pieces affixed to the ends of the rolls, which pieces are made with peripheral surfaces sunken below those of the body of the roll, and endless carriers bearing in such sunken surfaces, the carrier carrying faces of such sunken surfaces being located in a plane determined by the thickness of the tapes, so as to cause the carriers to travel approximately at the same speed as the drier rolls while traveling on the latter.

4. In a paper making machine, the combination with the drier rolls, of pieces affixed to the ends of the rolls, which pieces are made with peripheral surfaces sunken below those of the body of the roll, and a flange on the outer extremities of such sunken surfaces, and endless carriers bearing in such sunken surfaces, the carrier carrying faces of such sunken surfaces being located in a plane determined by the thickness of the tapes, so as to cause the carriers to travel at the same speed as the drier rolls while traveling on the latter.

5. In a machine of the character described, in combination with the drier rolls, endless carriers, and supporting means adapted to bring the carrying surfaces of the carriers in the same plane as that of the periphery of the drier rolls, so as to cause said carriers to travel approximately at the same speed as the latter.

REISSUES.

13,775. REINFORCED CONCRETE CONSTRUCTION. WILLIAM L. CHURCH, New York, N. Y., assignor to Ambursen Company, Boston, Mass., a Corporation of New Jersey. Filed June 15, 1914. Serial No. 845,139. Original No. 1,097,915, dated May 26, 1914, Serial No. 717,997. (Cl. 108—1.)



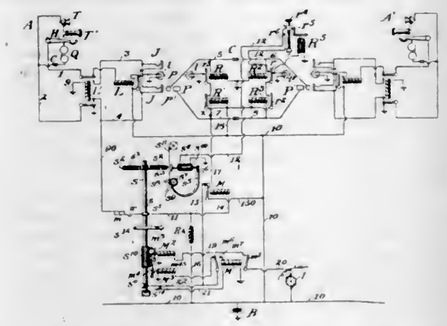
1. The method of forming roofs, consisting in placing spaced pairs of saddles on supports, resting the gutter portions of a sinuous foraminous metallic sheet on said saddles, and applying coatings of cement to both sides of sheet,

2. The method of forming roofs consisting in placing spaced pairs of saddles on supports, connecting each pair of saddles by reinforcing bars, resting the butter portions of a sinuous foraminous metallic sheet on said saddles, and applying coatings of cement to both sides of said sheet and causing one of said coatings to cover said bars.

3. The method of forming roofs, consisting in placing spaced pairs of saddles on supports, resting the gutter portions of a sinuous foraminous metallic sheet on said saddles, and applying coatings of cement to both sides of said sheet and engaging said saddles to form a homogeneous structure.

4. The method of forming roofs consisting in placing spaced sets of reinforcing bars on supports to connect the opposite walls of a building, resting the gutter portions of a sinuous foraminous metallic sheet on said bars, and applying coatings of cement to both sides of said sheet and causing one of said coatings to cover said bars.

13,776. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y., a Corporation of New York. Filed Mar. 25, 1912. Serial No. 686,217. Original No. 956,484, dated Apr. 26, 1910, Serial No. 249,021. (Cl. 179—9.)



1. In a telephone system, subscribers' lines terminating in jacks, cord-circuits terminating in plugs, and call registers less in number than the lines, each call register having a controlling magnet connected with a cord-circuit on one side, and with a switching device on the other, contacts connected to branches from the various line jacks, a numeral selector and register device connected with said switching device and controlled thereby so that when the switch rests upon the contact associated with a particular line the number of that line will be in position to register, and battery connections such that the controlling magnet starts the switching device when a plug is inserted in a jack, but has its condition changed when the switching device has selected the contact of that particular line, substantially as described.

2. In a telephone exchange system, a plurality of subscribers' lines each having a terminal jack, a connecting cord-circuit terminating in a plug, a register having a controlling relay connected on one side to the cord-circuit and on the other to a switch arm in the register, branch wires connected from the respective line jacks to contacts in said register, a stepping magnet and a release magnet adapted to be alternately worked by said control relay according to the position of the switch and register, battery connections such that the controlling magnet is disabled when the register switch is on the contact corresponding to the line in whose jack the plug is inserted and means to register the connection controlled through the cord-circuit by a subscriber, substantially as described.

3. In a telephone system, a plurality of lines, and a printing register therefor comprising a setting spindle, a selector magnet for turning the spindle, controlling means therefor associated with the lines, a type wheel moved by the spindle and magnet, printing mechanism controlled by a printing magnet, a record tape for said mechanism, a tape feed governed by the printing mechanism, and a controlling magnet or relay and a switch actuated in alternating energizations of said controlling magnet to render the register active and to disable it, substantially as described.

4. In a telephone exchange system, a plurality of subscribers' lines having connective terminals, a plurality of connective circuits less than the number of lines and provided with coöperating terminals for interconnecting the lines, in combination with a register system comprising a plurality of registers associated with the connective circuits and adapted to be brought into correlative line-identifying position in the use of said connective circuits, with means separately controlled after a connection is complete to record the same, substantially as described.

5. In a telephone system, a plurality of line circuits, and a plurality of connective circuits less in number than the number of lines, in combination with a register system comprising registers and means for setting the same to identify the lines in the use of the connective circuits, together with means controlled by the subscribers through the telephone lines for determining the final registering or recording acts, substantially as described.

6. In a telephone system, a plurality of subscribers' lines, a number of connective circuits therefor, and a register normally out of connection with the lines, means for starting up and driving the register in the act of making a connection with a line, means to stop the register in position to identify the line, and means under the control of a subscriber for thereafter actuating the register to record the call, substantially as described.

7. In a telephone system, subscribers' lines and means for interconnecting the same for conversation, in combination with a register system comprising the following instrumentalities: relatively fixed contacts and a relatively movable contact, branch circuits associated with the lines and connected to said fixed contacts, line identifying means associated and moving with the movable contact, electromagnetic operating means for said movable contact, a normally incomplete operating circuit adapted to be completed in making connection with a line for talking purposes, and disabling means for the electromagnetic operating means adapted to arrest the movable contact when it reaches the fixed contact connected with the branch associated with the aforesaid line, substantially as described.

8. In a telephone system, a plurality of subscribers' lines, a plurality of connective circuits therefor, and a telephone register having a plurality of contacts associated with the lines, a movable contact individual to the register, a line identifying means connected to and operated with the moving contact, a register actuating circuit controlled in the use of a connection, and separate controlling means for determining the final act of registration after a line has been identified and the register thereby prepared for making a record thereof, substantially as described.

9. In a telephone system, subscribers' lines, connective circuits, register circuits composed in part of branches associated with the connective circuits, and in part of branches associated with the line circuits, and means becoming operative in connecting with a line to match the branches associated with said line and with the connective circuits through a particular register, and thereby to identify the line and select its number for purposes of recording, together with means controlled by the called subscriber for determining the registering acts, substantially as described.

10. In a telephone exchange system, a plurality of subscribers' lines and connective circuits therefor, in combination with a register device comprising a selector switch and a printing wheel, a number of contacts in the switch connected to lines available for calling purposes, a number of characters on the printing wheel corresponding with the said contacts and movable to come into printing position simultaneously with the closing of the switch on the corresponding contacts, and means controlled by a

subscriber for printing the number set up by the printing wheel, substantially as described.

11. In a telephone system, a plurality of line circuits with a register therefor having connections to the respective lines and comprising a type printer, a printing platen and magnet, means for moving the type printer to bring a desired line designation into printing position, and means to close the circuit of the printing magnet during use of the line called, substantially as described.

12. In a telephone system, a plurality of line circuits, with connections to a recorder, the same comprising a printing register and a selector, the latter determining the line calling, and the former recording its number when the called subscriber responds, substantially as described.

13. In a telephone system, subscribers' lines and connective circuits therefor, a register for said lines comprising a number wheel and a selector, with line connections for the selector, means whereby the latter controls the number wheel to set it to the proper number, and means for printing the number only when two subscribers are connected with both lines completed for conversation, substantially as described.

14. In a telephone system, a plurality of line-circuits, and a telephone register therefor comprising a selector for determining the line calling, and means for recording the indication of the selector, upon the response of the called subscriber, substantially as described.

15. A register system for telephone systems comprising branch wires and switch terminals therefor connected to jack contacts of the various lines in the exchange, a register selector having a controlling circuit connected to a cord conductor and adapted to be brought into connection with the said branch wire of a line when the cord is connected with that line by the insertion of its plug in the line jack, means for supplying current to said controlling circuit through the cord connection, a register switch arm adapted to sweep over the said switch terminals when connection is made with a line, the arrangement being such that when the switch arm comes upon the contact corresponding to the line connected, a short circuit for the controlling circuit is established and the selector stops; together with recording means set to the number of the line connected by the action of the selector, and actuated to record by the action of the called subscriber, substantially as described.

16. In a telephone exchange system, a call register adapted to be associated with a line by the act of making connection therewith for conversation, means in said register to thereupon select and identify the line, a controlling magnet for said register, and a circuit for said magnet controlled at two points, one a contact in the connective apparatus, and the other a contact in the register mechanism, the latter being controlled by the register in selecting and identifying the line, substantially as described.

17. In a telephone exchange system, subscribers' lines, connective apparatus therefor, and call registering apparatus common to a number of lines and associated with and controlled through the connective apparatus so as to be brought into operation only when lines are connected for conversation, substantially as described.

18. In a telephone exchange system, a call register comprising one or more type surfaces, a record surface coöperating therewith, means operable in the use of the connective apparatus in its several steps, to set the type so as to properly indicate the data of any given connection, and means controlled by the called subscriber to print from the type when set, substantially as described.

19. In a telephone exchange system, subscribers' lines and connective circuits therefor, a register associated with said lines, means to set the register in correlative indicating position with a line with which connection is made, means operating when the lines are completed for conversation to record a call, and means for rendering said recording means inoperative.

20. In a telephone exchange system, subscribers' lines and connective circuits therefor, a register associated with said lines, means to set the register in correlative indicating position with the calling line, means operated by an act on the part of the called subscriber when connection is made to print the indications set up by the register, and means associated with the connective circuits for rendering the printing means inoperative, substantially as described.

21. In a telephone exchange system, subscribers' lines and operators' connective circuits therefor, a register associated with said lines, means to set the register in correlative indicating position with respect to the called line, means forming a part of the connective circuits and controlled by the called subscriber when connection is made for printing the indications set up by the register, and means associated with the connective circuits and controlled by the operator to render said last named means inoperative, substantially as described.

22. In a telephone exchange system, subscribers' lines and operators' connective circuits therefor, a register associated with said lines, means to set the register in correlative indicating position with respect to the called line, a printing magnet for printing the indications set up by the register, signal means controlled by the called subscriber and controlling said magnet so that the printing operation is effected by an act on the part of the called subscriber, and means controlled by the operator for preventing a reprint of the indication when a recall is desired, substantially as described.

23. In a telephone exchange system, subscribers' lines and terminal connective devices therefor, means for distributing the lines among said connective terminal devices for the purpose of initiating connections, without regard to the numbers by which the lines are known; call registers each having a number of line indications comprising those of lines associated with certain parts of the connective terminal apparatus, and means to change and adjust said register indications in accordance with changes in the terminal connections of the corresponding lines, substantially as described.

24. In a telephone exchange system, a plurality of subscribers' lines and a plurality of connective circuits in combination with a register normally dissociated from the lines, means for starting up and driving the register in the act of making a connection with the line, means for rendering said driving means inoperative with the register in position to identify the line, and means associated with the connective circuits and under control of a subscriber for thereafter actuating the register to record the call, substantially as described.

25. In a telephone system, a plurality of subscribers' lines and a number of connective circuits therefor, in combination with a register normally dissociated from the lines, means controlled in the act of making a connection with the line for driving said register step by step, means to render said driving means inoperative at a point where the register will be in position to identify the line, and means associated with the connective circuits and under the control of a subscriber for thereafter actuating the register to record the call, substantially as described.

26. In a telephone system, a plurality of subscribers' lines and a number of connective circuits therefor, in combination with a selector switch normally dissociated from the line, means operating in the act of making a connection with the line for driving said switch, an indicating device controlled by said switch, means to stop the movement of the switch so that the indicating device will be in position to identify the line, a printing magnet and a circuit therefor, and means under the control of the called subscriber for completing the circuit of said printing magnet whereby said magnet is actuated to record the call, substantially as described.

27. In a telephone system, the combination with a plurality of subscribers' lines and a number of connective circuits therefor, in combination with a registering system which comprises the following instrumentalities; relatively fixed contacts and a relatively movable contact, branch circuits associated with the lines and connected to said fixed contacts, line identifying means associated and moving with the movable contact, operating means for said movable contact, controlling means therefor, a normally incomplete circuit for said controlling means adapted to be completed for making a connection with the line, disabling means for said operating means adapted to arrest the movable contact when it reaches the fixed contact connected with the branch associated with the aforesaid line, and means also under control of the controlling means for returning said movable contact to normal, substantially as described.

28. In a telephone system, subscribers' lines and a plurality of connective circuits therefor, a register associated with said lines, means to set the register in indicating position with respect to the calling line, means to print the indications set up by the register, means associated with the connective circuits for rendering said printing means inoperative, means for locking said last named means in operating position, and means controlled by the called subscriber for releasing said locking means, substantially as described.

29. In a telephone system, a plurality of line circuits, and a plurality of connective circuits less in number than the number of lines, in combination with a register system comprising registers, and means for setting the same to identify the lines in use with the connective circuits, said register system operating through and in conjunction with the connective circuits, together with means forming a part of the connective circuits and controlled by the subscriber through the telephone lines for determining the final registering or recording acts, substantially as described.

30. In a telephone system, a plurality of circuits, and a plurality of connective circuits less in number than the number of lines, in combination with a register system comprising registers, and means for setting the same to identify the lines in use with the connective circuits, said register system operating through and in conjunction with the connective circuits, means forming a part of the connective circuit for determining the final registering or recording acts, and means under control of the operator for rendering said last named means inoperative when a recall is desired, substantially as described.

31. In a telephone exchange system, subscribers' lines, connective apparatus therefor, call registering apparatus common to a number of lines for selectively recording a call, said call registering apparatus being controlled for selection through said connective apparatus, and for recording through a subscribers' line.

32. In a telephone exchange system, subscribers' lines, link circuits for interconnecting the lines, call registering apparatus common to a number of lines and adapted to be actuated to selectively register a call from any of said lines, when connected.

33. In a telephone exchange system, a plurality of line circuits, link circuits coöperating with line talking terminals for purposes of interconnection, and call registering apparatus associated with the link circuits and containing separate testing terminals of the lines, with connections whereby a calling line is selected and the call registered without interfering with the talking circuit.

34. In a telephone registering system, subscribers' lines and central office connective circuits, a register switch associated with the latter and having contacts associated with the former, means for automatically starting said switch when connection is effected with a subscribers' line and moving the same until it makes connection with its corresponding line terminal, a printing wheel connected with the switch to be turned during the operation thereof to bring the number corresponding to the connected line into printing position, means to print said number, and means to disconnect the switch as regards its connection with the line or associated circuits when the connective circuits are idle, substantially as described.

35. In a telephone registering system, subscribers' lines and central office connective circuits, a register switch associated with each of the latter and having contacts associated with the former, means for automatically starting said switch when connection is effected with a subscriber's line and moving the same until it makes connection with its corresponding line terminal, a printing wheel connected with the switch to be turned during the operation thereof to bring the number corresponding to the connected line into printing position, means to print said number, and means to disconnect the switch as regards its connection with the line or associated circuits when its connective circuit is idle, substantially as described.

36. A telephone registering system comprising an automatic selector switch and an associated register, together with circuit connections whereby said switch will automatically select a connected line, and the register will record the designation thereof, substantially as described.

37. A telephone registering system comprising an automatic selector switch and an associated register, together with circuit connections whereby said switch will automatically select a calling line, and the register will record the designation thereof, substantially as described.

38. A telephone exchange system having a plurality of lines and means for interconnecting them, together with registers less in number than the number of lines and comprising actuating means operable upon initiating a connection between two lines and registering means operable when the connection is complete and effected, substantially as described.

39. A telephone register in combination with a plurality of lines, comprising means for producing a record, and means responsive to consecutive calls to produce successive action, said register being actuated jointly by an operator and the called subscriber for each connection, substantially as described.

40. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line connected, means to record the call on the register charged to the line selected, and means to indicate the operator or connective device through whom or which the connection was effected, substantially as described.

41. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line calling, means to record the call, and means brought under the control of the subscriber called to charge the call to the line calling when the connection is completed and the call is answered, substantially as described.

42. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line calling, means to record the call, and means brought under the control of the subscriber called in completing the connection, to determine whether or not the call shall be charged, substantially as described.

43. In a telephone registering system, subscribers' circuits and central office circuits and a register associated with the latter, means to set and actuate the register when connection is effected between lines, and means under the control of an operator to register the identity of the operator, substantially as described.

44. A telephone registering system comprising a register common to a plurality of lines, means associated with the register and actuated in initiating a connection with the calling line to determine the line calling, and means controlled in completing the connection to determine whether the call shall be charged or not, substantially as described.

45. A telephone register comprising actuating means automatically operable upon initiating a connection to select and identify the line with which connection is made, and coöperating registering means operable only when the called subscriber answers, substantially as described.

46. A telephone registering system comprising in combination, a register common to a plurality of lines, said register having means actuated by a calling subscriber for registering his number, and means actuated by the

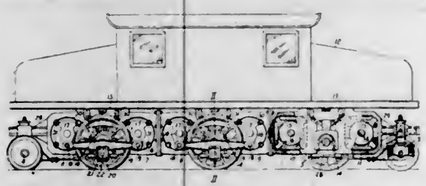
called subscriber for recording an answered call, with means actuated by the operator for registering the operator's number.

47. A telephone register common to a plurality of lines and adapted to record the numbers of connections made, and comprising means wherethrough it is controlled jointly by the called subscriber and by the operator.

48. In a telephone exchange system, subscribers' lines, means for interconnecting them, and a recorder for a plurality of lines comprising a frame, a series of line terminals mounted on said frame, a spindle and switch-arm supported in the frame and coöperating with said terminals to select the line calling, a printing wheel having numbers corresponding to the line terminals and each adapted to come into printing position when connection has been made with its line terminal, and a printing magnet having a platen adapted to print but one number at a time, substantially as described.

49. In a telephone exchange system, a plurality of lines, means for interconnecting the same, and a recording system therefor, comprising a selector switch having a spindle carrying a type wheel and a contact arm, a set of contacts in operative relation to said switch-arm, each contact associated with a particular line and so connected as to have its electrical condition changed when connection is effected with its line, a motor for the switch, a starting relay associated with connective apparatus and adapted to be energized when connection is effected with a line, said starting relay controlling the motor, together with means for stopping the motor when the switch-arm touches the contact associated with the calling line.

13,777. ELECTRIC LOCOMOTIVE. JOSEPH LE CONTE DAVIS, deceased, Pittsburgh, Pa., by Westinghouse Electric & Mfg. Co., a Corporation of Pennsylvania, assignee. Filed Feb. 25, 1914. Serial No. 821,099. Original No. 1,074,841, dated Oct. 7, 1913, Serial No. 609,945. (Cl. 105—259.)



1. A railway vehicle comprising wheel axles, and a plurality of driving motors having frames which together constitute the entire frame of the locomotives.

2. A railway vehicle comprising wheel axles, and a plurality of driving motors arranged in pairs having their armatures operatively connected to the axles and having their field magnet frames joined together to constitute the vehicle frame.

3. A railway vehicle comprising wheel axles, a pair of driving motors for each axle, Scotch yoke connections between the armatures of each pair of motors and the corresponding axle, and yokes joining the motor frames together over the axles.

4. A railway vehicle comprising a plurality of wheel axles, and electric driving motors having armatures connecfed to the wheel axles in pairs and having field magnet frames which together constitute a yieldingly supported locomotive frame.

5. A railway vehicle comprising a plurality of wheel axles, a frame yieldingly supported thereon, a body mounted on the frame and a plurality of driving motors arranged in pairs and respectively associatel with, and operatively connected to, the wheel axles, the locomotive frame being composed of the joined frames of the driving motors.

6. A locomotive frame comprising a plurality of independent magnetizable frames secured rigidly together in abutting relation,

7. A locomotive frame embodying a plurality of magnetizable motor members constituting entire and inseparable longitudinal units of said frame.

8. A railway locomotive embodying driving wheels and a plurality of driving motors having their armatures operatively connected to said wheels and their magnetizable frames rigidly associated to constitute inseparable units of the locomotive frame.

9. A railway locomotive frame embodying driving wheels and a plurality of driving motors having magnetizable frames which are rigidly secured one to the other in end to end relation, each frame constituting an entire and inseparable longitudinal unit of said locomotive frame.

10. A locomotive frame comprising a plurality of independent sections rigidly secured together in abutting relation, one of said sections constituting a magnetizable motor frame.

11. A locomotive frame comprising three independent sections rigidly secured together in abutting relation, and the middle section constituting a magnetizable motor frame.

12. A locomotive frame comprising a magnetizable motor frame, end members rigidly secured in abutting relation thereto, and guiding trucks pivotally associated with said end members.

13. A locomotive frame comprising a magnetizable motor frame, end members rigidly secured in abutting relation thereto, and pedestal members, axles, and wheels associatel with said end members.

14. A locomotive frame comprising a magnetizable motor frame, end members rigidly secured in abutting relation thereto, guiding trucks pivotally associated with said end members, and pedestal members, axles and wheels associated with said end members.

15. A locomotive running gear comprising a plurality of separate longitudinal sections of substantially the full width thereof secured directly and rigidly together in abutting relation, each of said sections constituting a complete and inseparable part of said running gear.

16. A locomotive frame embodying a magnetizable inclosed motor member which constitutes an entire portion of the frame throughout its length; and driving wheels outside of said motor member.

17. A locomotive frame embodying at least one magnetizable inclosed motor member which constitutes an entire and inseparable longitudinal unit of said frame, and driving wheels outside of said motor member.

18. A locomotive frame embodying a plurality of independent detachable rigidly joined longitudinal sections, one of said sections constituting a stationary frame of a driving unit.

19. A locomotive frame embodying a plurality of independent detachable rigidly joined longitudinal sections, one of said sections constituting a magnetizable stationary member of an electric motor.

20. An electric locomotive frame embodying a twin motor structure constituting an entire longitudinal portion of said frame and a plurality of end frame portions secured thereto.

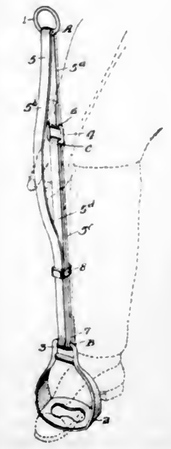
21. A locomotive frame comprising an integral magnetizable stationary member adapted to receive a pair of rotatable armatures, and longitudinally projecting frame portions coöperating with the ends of said magnetizable member and secured thereto.

22. A locomotive frame embodying a plurality of electric motors having field magnet members and armatures and a common shaft operatively associated with said armatures, the field magnet members of said motors constituting an integral structure and a complete and inseparable unit of said locomotive frame.

23. A locomotive frame embodying a unitary twin motor magnetizable frame having a centrally disposed opening, a pair of armatures associated therewith, and a shaft disposed in said opening and operatively connected to said pair of armatures, said magnetizable frame being a complete and inseparable unit of said locomotive frame.

24. A locomotive frame comprising a magnetizable motor member, projecting end portions secured to said motor member, and driving wheels associated with said end portions.

13,778. QUICKLY-ADJUSTABLE STIRRUP-LEATHER. JOHN W. KERR, Orlando, Fla., assignor to Kerr Adjustable Strap Co., Inc. Filed June 6, 1914. Serial No. 843,576. Original No. 1,072,958, dated Sept. 9, 1913, Serial No. 783,365. (Cl. 54—46.)



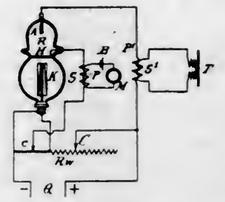
1. A connecting member comprising a continuous length of flexible material having a connecting link to which one end of said material is connected, said material thence passing from said link to a point and bent to form a loop, thence extended in a reverse direction, beyond said link and bent to form another loop, thence extended to said link and passed through the same, and the end thence extended to a point within said last named loop and means for holding said end in sliding engagement with said last named loop.

2. A connecting member comprising a continuous length of flexible material having a connecting link to which one end of said material is connected, said material thence passing from said link to a point and bent to form a loop, thence extended in a reverse direction beyond said link and bent to form another loop, thence extended to said link and passed through the same from the outside, and the end thence extended to a point within said last named loop, and lying in alinement with the two sides thereof and means for holding said end in sliding engagement with said last named loop.

3. A quickly adjustable buckleless leather for stirrups and the like, including end attaching members, an intermediate connecting link, and a flat strap, one end of the strap being secured to the connecting link and the strap being then carried toward one of the end attaching members and threaded through the same, carried to the opposite end attaching member and threaded through the same, carried to the connecting link and threaded through the same, and then carried to the second mentioned end attaching member and secured thereto in slidable relation to the strap passing through the same.

4. A quickly adjustable buckleless leather for stirrups and the like including end attaching eyes, a connecting link, a looped strap having one end thereof secured to the connecting link, the said strap being then carried to one of the end attaching eyes, threaded through the same and carried to the opposite end attaching eye, threaded through the second end attaching eye and carried to the connecting link, threaded through the connecting link and carried to the second end attaching eye to which it is secured, whereby two thicknesses of strap are provided between the connecting link and the first end attaching eye, and three thicknesses of strap between the connecting link and second end attaching eye, and a keeper surrounding the looped strap to hold the different thicknesses thereof together.

13,779. RELAY FOR UNDULATORY CURRENTS. ROBERT VON LIEBEN, deceased, by Ernst von Lieben, administrator, Vienna, Austria-Hungary, and EUGEN REISZ, Berlin, Germany, assignors, by direct and mense assignments, to The Firm of Relais-Gesellschaft M. B. H., Vienna, Austria-Hungary. Filed June 9, 1914. Serial No. 844,039. Original No. 1,038,910, dated Sept. 17, 1912, Serial No. 605,548. (Cl. 179—171.)



1. A relay for undulatory currents comprising a discharge tube, an incandescent metallic oxid cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode, means for supplying said electrodes with current, the potential of the auxiliary electrode being established intermediate between the potentials of the cathode and of the anode.

2. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode, means for supplying said electrodes with current, the difference of potential between the cathode and the auxiliary electrode being less than the difference of potential between the auxiliary electrode and the anode.

3. A relay for undulatory currents comprising a discharge tube, a metallic oxid cathode therein heated to incandesence, a circuit comprising a source of direct current for heating said cathode, an anode, an auxiliary electrode formed with apertures between said cathode and anode, means for supplying said electrodes with current, the potential of the auxiliary electrode being established intermediate between the potentials of the cathode and of the anode.

4. A relay for undulatory currents comprising a discharge tube, a metallic oxid cathode therein heated to incandesence, a circuit comprising a source of direct current for heating said cathode, an anode, an auxiliary electrode formed with apertures between said cathode and anode, means for supplying said electrodes with current, the potential of the auxiliary electrode being intermediate between the terminal potentials of the heating circuit of the cathode.

5. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures and intersecting the space in the discharge tube and substantially dividing it into separate parts, and a source of direct current connected to said auxiliary electrode.

6. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode to cause a drop of potential between the cathode and anode and formed with apertures and intersecting anode and dividing it into separate parts, and a source of direct current connected to said auxiliary electrode.

7. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein embodied in an electric circuit with said cathode, an auxiliary electrode formed with apertures and intersecting the space between the cathode and the anode, a source of direct current connected to said auxiliary electrode, the latter forming a resistance for the currents in the circuit, and means for varying said resistance in accordance with the currents to be reinforced.

8. In a relay for undulatory currents, an exhausted discharge tube, a cathode and an anode therein, embodied in an electric circuit, a grid-like auxiliary electrode intersecting the discharge tube between the cathode and the anode and dividing it in to separate parts, a source of

direct current connected to the auxiliary electrode, the latter forming a resistance for the currents in the circuit, an adjustable resistance between said source of direct current and the auxiliary electrode, and means for varying the resistance of said electrode in accordance with the currents to be reinforced.

9. In a relay for undulatory currents, an exhausted discharge tube, a cathode of metallic oxid filaments heated to incandescence, the filaments being wound on a carrier in the manner of metal filament lamp, an anode embodied in an electric circuit with said cathode, a grid-like auxiliary electrode intersecting the space of the discharge tube and dividing it into separate parts, this electrode being perpendicular to the axis of the carrier, a source of direct current connected to said electrode, the latter thus forming a resistance for the currents in the circuit, an adjustable resistance between the source of direct current and the electrode, and means for varying the resistance of said electrode in accordance with the currents to be reinforced.

10. In a relay for undulatory currents, an exhausted discharge tube, a cathode and an anode therein embodied in an electric circuit, a grid-like auxiliary electrode intersecting the discharge tube between the cathode and the anode and dividing it into separate parts, a source of direct current connected to the auxiliary electrode, an adjustable resistance in the circuit between the source of direct current and the auxiliary electrode, and means to superpose the undulating currents to be reinforced on said circuit.

11. In a relay for undulatory currents, an exhaust discharge tube, a cathode and an anode therein embodied in an electric circuit, an auxiliary cathode embodied in a separate circuit, a grid-like auxiliary electrode intersecting the discharge tube between the auxiliary cathode and the anode and dividing it into separate parts, a source of direct current connected to the auxiliary electrode and the circuit of the auxiliary cathode, and means to superpose the undulating currents to be reinforced on the circuit of the direct current source.

12. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures and intersecting the space in the discharge tube and dividing it into separate parts, means for supplying said electrodes with current, the potential of the auxiliary electrode being established intermediate between the potentials of the cathode and of the anode.

13. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode, and connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and anode, means for supplying said electrodes with current, the potential of the auxiliary electrode being established intermediate between the potentials of the anode and of the cathode, and means for varying the virtual resistance formed by the auxiliary electrode in accordance with the currents to be reinforced.

14. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode, and connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and anode, an adjustable resistance between said source of direct current and the auxiliary electrode, means for supplying said electrodes with current, the voltage of the current supplied to the auxiliary electrode being less than the voltage between the cathode and the anode, and means for varying the virtual resistance formed by the auxiliary electrode in accordance with the currents to be reinforced.

15. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode and connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and anode, an adjustable resistance between said source of direct current and the auxiliary electrode, means for supplying said electrodes with current, the voltage of the current supplied to the auxiliary electrode being less than the voltages between the cathode and the anode and means to superpose the undulating currents to be reinforced on the circuit of the auxiliary electrode.

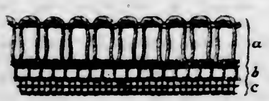
16. A relay for undulatory currents comprising a discharge tube, a cathode and an anode therein, an auxiliary electrode formed with apertures between said cathode and anode intersecting the space in the discharge tube and dividing it into separate parts and connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and of the anode, means for supplying said electrodes with current, the potential of the auxiliary electrode being established intermediate between the potentials of the cathode and of the anode and means to superpose the undulating currents to be reinforced on the circuit of the auxiliary electrode.

17. A relay for undulatory currents comprising a discharge tube, a metallic oxid cathode therein heated to incandescence, the filaments being wound on a carrier in the manner of a metal filament lamp, a circuit comprising a source of direct current for heating said cathode, an anode, an auxiliary electrode formed with apertures between said cathode and anode, this electrode being perpendicular to the axis of the carrier and connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and anode, means for supplying said electrodes with currents, the potential applied to the auxiliary electrode being intermediate between the terminal potentials of the heating circuit of the cathode, and means for varying the virtual resistance formed by the auxiliary electrode in accordance with the currents to be reinforced.

18. A relay for undulatory currents comprising a discharge tube, a metallic oxid cathode therein heated to incandescence, the filaments being wound on a carrier in the manner of a metal filament lamp, a circuit comprising a source of direct current for heating said cathode, an anode, an auxiliary electrode formed with apertures between said cathode and anode, this electrode dividing said tube into two separate parts and being connected with a source of direct current thus forming a virtual resistance in the circuit of the cathode and anode, means for supplying said electrode with current of varying voltage, the potential of the auxiliary electrode being established intermediate between the potentials of the cathode and of the anode, and means for varying the virtual resistance formed by the auxiliary electrode in accordance with the currents to be reinforced.

DESIGNS.

46,104. KNITTED TRIMMING FOR UNDERWEAR. MAX N. AARON, Philadelphia, Pa. Filed May 8, 1914. Serial No. 837,338. Term of patent 7 years.



The ornamental design for knitted trimming for underwear, as shown and described.

46,105. KNITTED TRIMMING FOR UNDERWEAR. MAX N. AARON, Philadelphia, Pa. Filed May 8, 1914. Serial No. 837,339. Term of patent 7 years.



The ornamental design for knitted trimming for underwear, as shown and described.

46,106. PLATE. WILLIAM ABRAMS, Chicago, Ill. Filed May 4, 1914. Serial No. 836,376. Term of patent 3½ years.



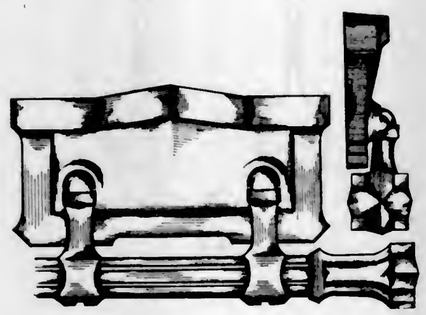
The ornamental design for a plate as shown.

46,107. EMBLEM. JOSEPH H. BECHTOLD, Sioux Falls, S. D. Filed May 27, 1914. Serial No. 841,383. Term of patent 14 years.



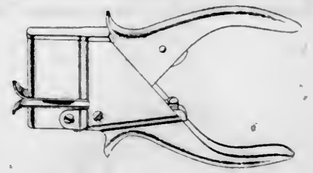
The ornamental design for an emblem, as shown.

46,108. BURIAL-CASKET HANDLE. CHARLES BLESCH, Newport, Ky, assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 27, 1914. Serial No. 821,582. Term of patent 14 years.



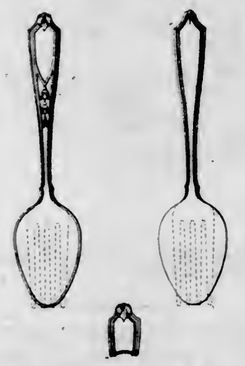
The ornamental design for a burial-casket handle, substantially as shown.

46,109. CASING FOR PAPER-FASTENING DEVICES. GEORGE P. BUMP, La Crosse, Wis. Filed Aug. 16, 1913. Serial No. 785,162. Term of patent 14 years.



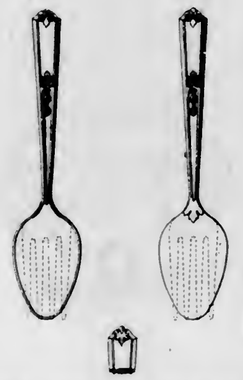
The ornamental design for a casing for paper fastening devices as shown.

46,110. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 24, 1914. Serial No. 820,758. Term of patent 7 years.



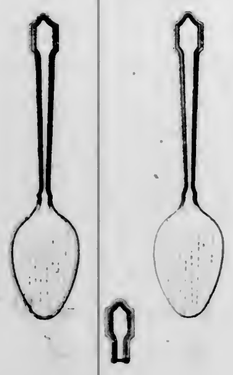
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,111. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 24, 1914. Serial No. 820,759. Term of patent 7 years.



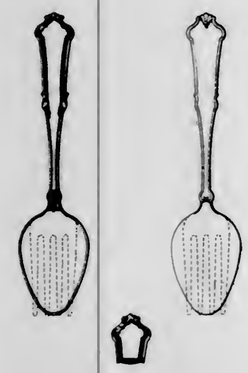
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,112. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 24, 1914. Serial No. 820,760. Term of patent 7 years.



The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,113. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 25, 1914. Serial No. 821,006. Term of patent 7 years.



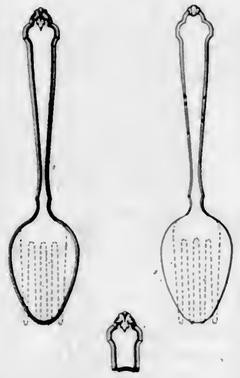
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,114. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 25, 1914. Serial No. 821,007. Term of patent 7 years.



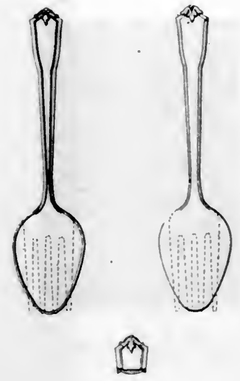
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,115. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 25, 1914. Serial No. 821,008. Term of patent 7 years.



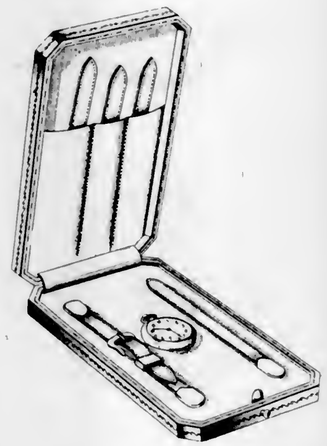
The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,116. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 25, 1914. Serial No. 821,009. Term of patent 7 years.



The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,117. JEWELRY-DISPLAY BOX OR CASE. CHARLES L. DEPOLLIER, New York, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,421. Term of patent 7 years.



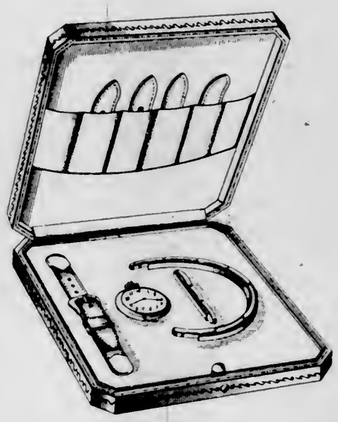
The ornamental design for a jewelry display box or case, as shown.

46,118. JEWELRY-DISPLAY BOX OR CASE. CHARLES L. DEPOLLIER, New York, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,422. Term of patent 7 years.



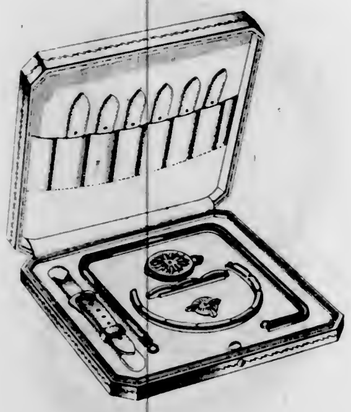
The ornamental design for a jewelry display box or case, as shown.

46,119. JEWELRY-DISPLAY BOX OR CASE. CHARLES L. DEPOLLIER, New York, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,423. Term of patent 7 years.



The ornamental design for a jewelry display box or case, as shown.

46,120. JEWELRY-DISPLAY BOX OR CASE. CHARLES L. DEPOLLIER, New York, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,424. Term of patent 7 years.



The ornamental design for a jewelry display box or case, as shown.

46,121. BRACELET-WATCH. CHARLES L. DEPOLLIER, New York, N. Y., assignor to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed May 25, 1914. Serial No. 840,949. Term of patent 3½ years.



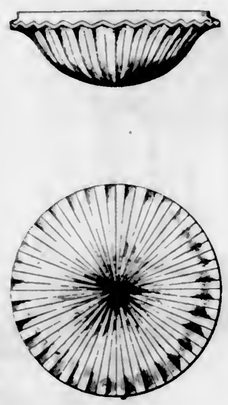
The ornamental design for a bracelet watch, as shown.

46,122. FABRIC. EMILE ERICSON, Pelham, N. Y. Filed Mar. 20, 1914. Serial No. 826,121. Term of patent 3½ years.



The ornamental design for a fabric, as shown and described.

46,123. ARTIFICIAL-LIGHT SHADE. MARSHALL W. GLEASON, New York, N. Y. Filed June 10, 1914. Serial No. 844,351. Term of patent 7 years.



The ornamental design for an artificial-light shade as shown.

46,124. CANDLESTICK. CHARLES H. GUTMANN, Mount Vernon, N. Y., assignor to Lazarus & Rosenfeld, a Copartnership doing business in New York, N. Y. Filed Mar. 28, 1914. Serial No. 828,082. Term of patent 7 years.



The ornamental design for a candle stick as shown.

46,125. BUTTON. JOHN H. HAWLEY, New York, N. Y. Filed June 1, 1914. Serial No. 842,318. Term of patent 3½ years.



The ornamental design for a button as shown and described, or any colorable imitation thereof.

46,126. HOLDER FOR SECURING CROCHET-BALLS TO THE USER'S WRIST. FREDERICK GEORGE HEATH, Headless Cross, near Redditch, England. Filed Apr. 6, 1914. Serial No. 830,058. Term of patent 7 years.



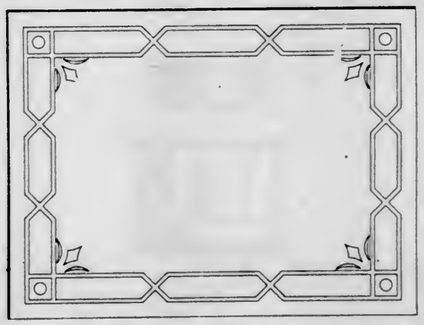
The ornamental design of a holder for securing crochet balls to the user's wrist as shown.

46,127. ARTICLE OF MANUFACTURE. MABEL WOODS HINRICHS, Chicago, Ill., assignor to Burley & Tyrrell Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1914. Serial No. 833,816. Term of patent 14 years.



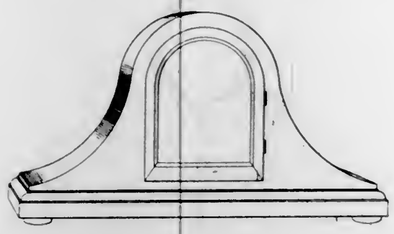
The ornamental design for an article of manufacture as shown.

46,128. CHANGE-HOLDING PLATE. LINDLEY L. JOHNSON, Greenville, Tex. Filed May 5, 1914. Serial No. 836,553. Term of patent 7 years.



The ornamental design for a change holding plate, as shown.

46,129. CLOCK-CASING. ERICH KIENZLE, New York, N. Y. Filed May 22, 1914. Serial No. 840,386. Term of patent 7 years.



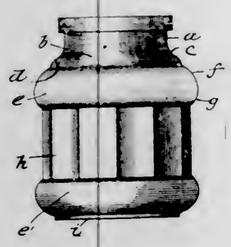
The ornamental design for a clock casing, as shown.

46,130. CASING FOR PENDENT ELECTRIC SWITCHES. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 31, 1912. Serial No. 700,848. Term of patent 14 years.



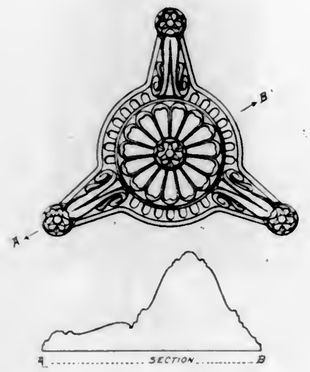
The ornamental design for a casing for pendent electric switches, as shown.

46,131. MUSTARD-BOTTLE. ROY A. LUSK, New York, N. Y. Filed Dec. 26, 1913. Serial No. 808,915. Term of patent 14 years.



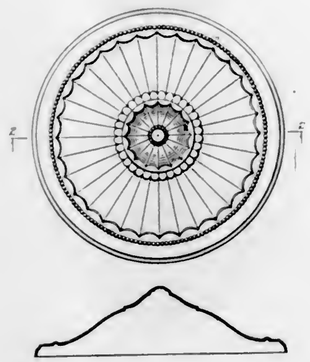
The ornamental design for a mustard bottle substantially as shown and described.

46,132. PLATE FOR DROP-LIGHT FIXTURES. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Company, Chicago, Ill., a Corporation of Illinois. Filed May 20, 1914. Serial No. 839,894. Term of patent 3½ years.



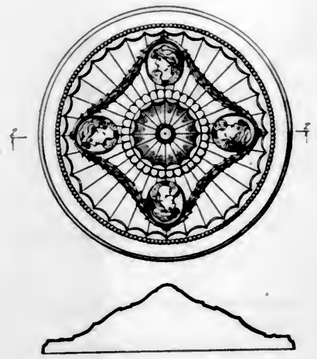
The ornamental design for a plate for drop-light fixture, as shown.

46,133. PLATE FOR LIGHTING-FIXTURES. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1914. Serial No. 845,030. Term of patent 3½ years.



The ornamental design for a plate for lighting fixtures.

46,134. PLATE FOR LIGHTING-FIXTURES. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1914. Serial No. 845,031. Term of patent 3½ years.



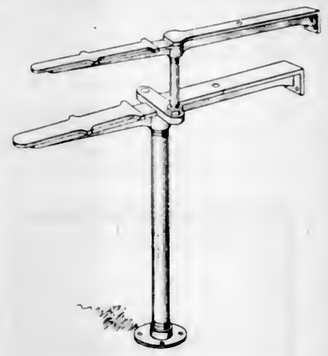
The ornamental design for a plate for lighting fixtures.

46,135. BADGE, PIN, OR SOCIETY-EMBLEM. MARY ELIZABETH NASSAU, Philadelphia, Pa., assignor to The Firm of J. E. Caldwell & Company, Philadelphia, Pa. Filed May 26, 1914. Serial No. 841,166. Term of patent 14 years.



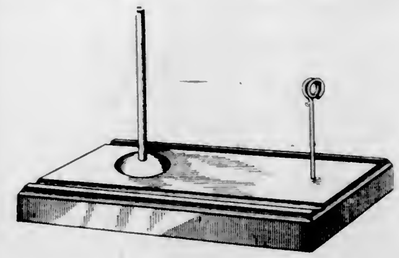
The ornamental design for a badge, pin or society emblem substantially as shown.

46,136. COMBINATION SINK AND TRAY BRACKET. HORACE C. NICHOLS, Brookline, Mass. Filed Apr. 17, 1914. Serial No. 832,644. Term of patent 3½ years.



The ornamental design for a combination sink and tray bracket as shown.

46,137. CROCHET-STAND. WARREN D. REIST, Williamsville, N. Y. Filed Apr. 29, 1914. Serial No. 835,319. Term of patent 14 years.



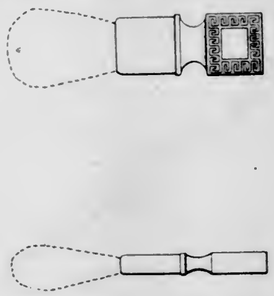
The ornamental design for crochet stand, as shown.

46,138. CASE FOR CLOCKS OR OTHER ARTICLES. ADOLPH TEITELBAUM, New York, N. Y. Filed June 9, 1914. Serial No. 844,074. Term of patent 7 years.



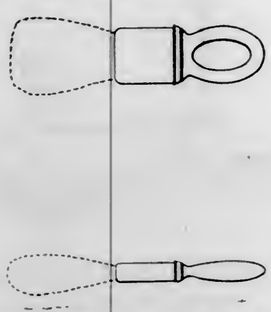
The ornamental design for a case for clocks or other articles, as shown.

46,139. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,579. Term of patent 14 years.



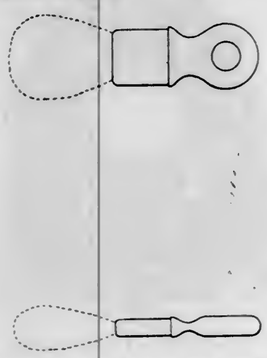
The ornamental design for a shaving brush handle, substantially as shown.

46,140. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,580. Term of patent 14 years.



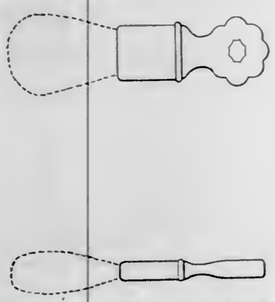
The ornamental design for a shaving brush handle, substantially as shown.

46,141. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,581. Term of patent 14 years.



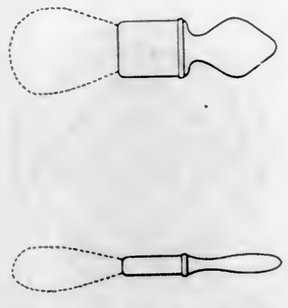
The ornamental design for a shaving brush handle, substantially as shown.

46,142. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,582. Term of patent 14 years.



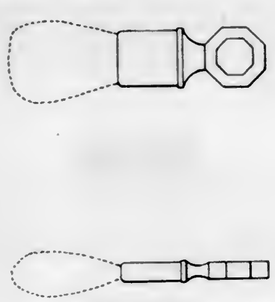
The ornamental design for a shaving brush handle, substantially as shown.

46,143. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,583. Term of patent 14 years.



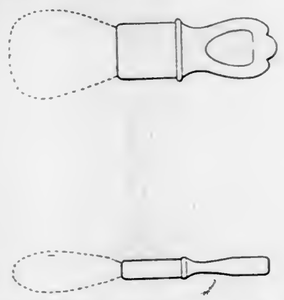
The ornamental design for a shaving brush handle, substantially as shown.

46,144. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,584. Term of patent 14 years.



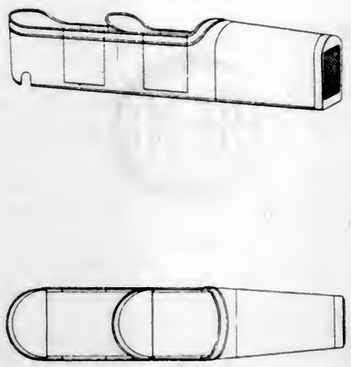
The ornamental design for a shaving brush handle, substantially as shown.

46,145. SHAVING-BRUSH HANDLE. FREDERICK B. THURBER, Providence, R. I., assignor to Tilden-Thurber Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 9, 1914. Serial No. 823,585. Term of patent 14 years.



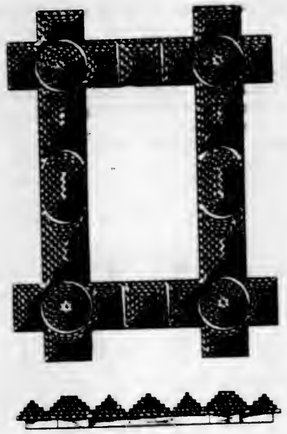
The ornamental design for a shaving brush handle, substantially as shown.

46,146. VEHICLE-BODY. WILLARD IRVING TWOMBLY, New York, N. Y. Filed June 1, 1914. Serial No. 842,319. Term of patent 14 years.



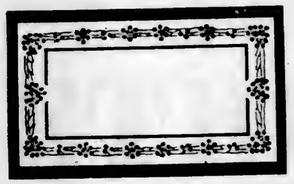
The ornamental design for a vehicle body, as shown.

46,147. PICTURE-FRAME. MICHAEL VASEK, Great Neck, N. Y. Filed May 6, 1914. Serial No. 836,817. Term of patent 7 years.



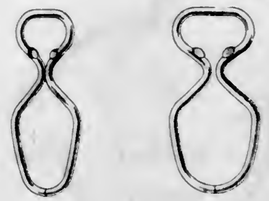
The ornamental design for a picture frame, as shown.

46,148. GRASS RUG OR CARPET. OSSIAN T. WAITE, Oshkosh, Wis., assignor to Waite Grass Carpet Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed May 8, 1914. Serial No. 837,344. Term of patent 3½ years.



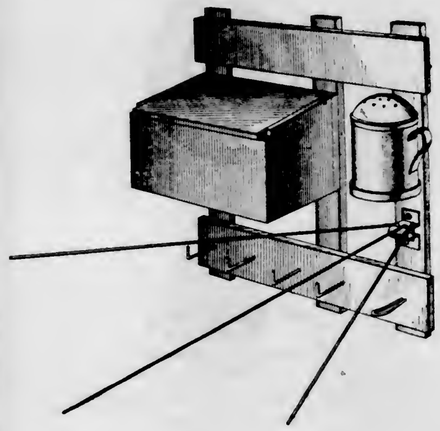
The ornamental design for a grass rug or carpet, substantially as described.

46,149. BOTTLE-CAP REMOVER. EDWIN WALKER, Erie, Pa. Filed Nov. 7, 1911. Serial No. 659,062. Term of patent 14 years.



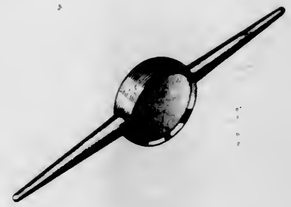
The ornamental design for a bottle cap remover, as shown.

46,150. KITCHEN-RACK. GEORGE L. WEBB, Crestwood, Ky. Filed Apr. 30, 1914. Serial No. 835,536. Term of patent 7 years.



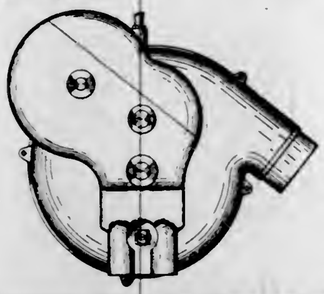
The ornamental design for a kitchen rack, as shown.

46,151. COLLAR-SPACER. JAMES LACHLIN WEIR, Chatham, Ontario, Canada. Filed Mar. 2, 1914. Serial No. 822,068. Term of patent 7 years.



The ornamental design for a collar spacer as shown.

46,152. BLOWER-GEAR CASING. HENRY W. WENDT, Buffalo, N. Y., assignor to Buffalo Forge Co., Buffalo, N. Y. Filed Feb. 24, 1914. Serial No. 820,765. Term of patent 14 years.



The ornamental design for a blower gear casing, as shown.

46,153. BUTTON. JOHN NATZI WHITEHOUSE, Newark, N. J. Filed Apr. 20, 1914. Serial No. 833,309. Term of patent 3½ years.





The ornamental design for a button, as shown.

46,154. BUTTON. JOHN NATZI WHITEHOUSE, Newark, N. J. Filed Apr. 21, 1914. Serial No. 833,563. Term of patent 3½ years.



The ornamental design for a button, as shown.

46,155. BUTTON. JOHN NATZI WHITEHOUSE, Newark, N. J. Filed Apr. 21, 1914. Serial No. 833,564. Term of patent 3½ years.





The ornamental design for a button, as shown.

46,156. GLASS OR SIMILAR ARTICLE. EMANUEL ZAHN, Blumenbach, Austria-Hungary, assignor to L. Straus & Sons, a Copartnership comprising Nathan Straus and Lee Kohns, New York, N. Y. Filed May 15, 1914. Serial No. 838,884. Term of patent 14 years.



The ornamental design for a glass or similar article, as shown.

TRADE-MARKS

PUBLISHED JULY 21, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 33,499. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BRIDGEPORT WOOD FINISHING COMPANY, New Milford, Conn. Filed Mar. 20, 1908.



The word "Bridgeport" is disclaimed.

Particular description of goods.—Prepared Paints, Stains, Varnishes, Wood-Fillers, and Wood-Finishing Fluids.

Claims use since Mar. 5, 1908.

Ser. No. 51,030. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & COMPANY, Chicago, Ill. Filed July 23, 1910.

Auto-Glas

Particular description of goods.—Eye-Protectors.

Claims use since the 21st day of July, 1910.

Ser. No. 60,014. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, CO., Baltimore, Md., and Coraopolis, Pa. Filed Dec. 1, 1911.

PETRO

Particular description of goods.—Engine-Oil.

Claims use since 1904.

Ser. No. 60,306. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN W. JAMES, Jr., Brooklyn, N. Y. Filed Dec. 18, 1911.

CASTO

My trade-mark consists of the word "Casto."

Particular description of goods.—A Medical Compound for Cathartic Purposes.

Claims use since November, 1911.

Ser. No. 61,301. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Feb. 6, 1912.

CIBA

Particular description of goods.—Pharmaceutical Preparations: Acid Acetylosalicylic, Acid Nucleinic, Pur.; Carbonate of Creosote, Chloral Hydrate, Recryst.; Creosote, Dimethylamido-Oxyquinizin, Guaiacol, Cryst.; Guaiacol, Liquid; Carbonate of Guaiacol, Kal. Sulfoguaiacolic, Methylene Blue, Ferrum Nucleinic, Natrium Nucleinicum, Para-Acetphenetidin, Phenolphthalein, Sulfocreosotate of Potassium, Tannin-Albumin, Vanillin, Digifolin, (Obtained from Digitalis-Leaves;) Elbon, (Cinnamoyl-p-Oxyphenylurea;) Peristaltin, (Obtained from the Bark of Cascara Sagrada, *Rhamnus Purshiana*;) Fortossan, (Sodium Salt of the Inosite-Phosphoric Acid Mixed with Sugar of Milk and Common Salt;) Phytin, (Calcium and Magnesium Salt of the Inosite-Phosphoric Acid;) Quinin-Phytin, (Quinin Salt of the Inosite-Phosphoric Acid;) Lipoiodin, (Product Containing Iodin;) Salen, (a Liquid Mixture of Methylsalicylglycolate with Ethylsalicylglycolate;) Salenal, (Ointment Containing a Liquid Mixture of Methylsalicylglycolate with Ethylsalicylglycolate;) Isarol, (Prepared by the Sulfurization of a Sulfureous Product of Distillation Which is Obtained from the Bituminous Schists;) Lithol, (Prepared by the Sulfurization of a Sulfureous Product of Distillation Which is Obtained from the Bituminous Schists;) Vioform, (Iodochloroxyquinolin;) Ferrophytin, (Iron Salt of the Inosite-Phosphoric Acid and of Albumin;) Ferrotuban, (Obtained from the Alt Tuberculin Koch;) Coagulen Ciba, (Prepared from the Blood of Animals or Animal Substance;) Disinfectants, Perfumes, Coal-Tar Colors, Indigo, Artificial; Alizarin, Artificial; Synthetic Tanning Agents.

Claims use since February, 1906.

Ser. No. 61,302. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Feb. 6, 1912.

CIBA

Particular description of goods.—Pharmaceutical Preparations: Acid Acetylosalicylic, Acid Nucleinic, Pur.; Carbonate of Creosote, Chloral Hydrate, Recryst.; Creosote, Dimethylamido-Oxyquinizin, Guaiacol, Cryst.; Guaiacol, Liquid; Carbonate of Guaiacol, Kal. Sulfoguaiacolic, Methylene Blue, Ferrum Nucleinic, Natrium Nucleinicum, Para-Acetphenetidin, Phenolphthalein, Sulfocreosotate of Potassium, Tannin-Albumin, Vanillin, Digifolin, (Obtained from Digitalis-Leaves;) Elbon, (Cinnamoyl-p-Oxyphenylurea;) Peristaltin, (Obtained from the Bark of Cascara Sagrada, *Rhamnus Purshiana;*) Fortossan, (Sodium Salt of the Inosite-Phosphoric Acid Mixed with Sugar of Milk and Common Salt;) Phytin, (Calcium and Magnesium Salt of the Inosite-Phosphoric Acid;) Quinin-Phytin, (Quinin Salt of the Inosite-Phosphoric Acid;) Lipoiodin, (Product Containing Iodin;) Salen, (a Liquid Mixture of Methylsalicylglycolate with Ethylsalicylglycolate;) Salenal, (Ointment Containing a Liquid Mixture of Methylsalicylglycolate with Ethylsalicylglycolate;) Isarol, (Prepared by the Sulfurization of a Sulfureous Product of Distillation Which is Obtained from the Bituminous Schists;) Lithol, (Prepared by the Sulfurization of a Sulfureous Product of Distillation Which is Obtained from the Bituminous Schists;) Vioform, (Iodochloroxyquinolin;) Ferrophytin, (Iron Salt of the Inosite-Phosphoric Acid and of Albumin;) Ferrotuban, (Obtained from the Alt Tuberculin Koch;) Coagulen Ciba, (Prepared from the Blood of Animals or Animal Substance;) Disinfectants, Perfumes, Coal-Tar Colors, Indigo, Artificial; Alizarin, Artificial; Synthetic Tanning Agents.

Claims use since March, 1907.

Ser. No. 69,883. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BOLTÉ & WEYER CO., Chicago, Ill. Filed Apr. 18, 1913.

BONHAM'S MINUTEMAN

Particular description of goods.—Automobile-Pumps.

Claims use since Jan. 2, 1913.

Ser. No. 69,884. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BOLTÉ & WEYER CO., Chicago, Ill. Filed Apr. 18, 1913.

BONHAM'S GATLING

Particular description of goods.—Automobile-Pumps.

Claims use since Jan. 2, 1913.

Ser. No. 70,043. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NITRO-IGNITUM MFG. CO., St. Louis, Mo. Filed Apr. 24, 1913.

Nitro-Ignitum

Particular description of goods.—A Heat-Producer and Smoke-Reducer Used on Coal, Coke, and other Fuels.

Claims use since Feb. 1, 1913.

Ser. No. 70,714. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD DIEHL, Nashville, Tenn. Filed May 28, 1913.



The word "Diehl" being applicant's facsimile signature, the stars, the word "Red," and the diamond-shaped figure being red.

Particular description of goods.—Non-Intoxicating Carbonated Tonic Beverages.

Claims use since March, 1904.

Ser. No. 70,791. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MANUFACTURERS AND RETAILERS COMPANY, Chicago, Ill. Filed May 31, 1913.

MARCO

The word "Marco."

Particular description of goods.—Matches.

Claims use since June 5, 1912.

Ser. No. 70,951. (CLASS 15. OILS AND GREASES.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



The trade-mark consisting of a representation of a red cross.

Particular description of goods.—Machine-Oil.

Claims use since Apr. 26, 1901.

Ser. No. 71,168. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAUD A. KINNEAR, Lisbon, Ohio. Filed June 18, 1913.



The picture shown in the drawing is the fanciful likeness of a maid holding a waiter, on which is shown a cup of steaming beverage. The word "Best" and the name "Mrs. Adoff's" are disclaimed.

Particular description of goods.—A Substitute for Coffee.

Claims use since Mar. 1, 1913.

Ser. No. 72,130. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EASTMAN KODAK COMPANY, Rochester, N. Y. Filed Aug. 2, 1913.

ELON

Particular description of goods.—Photographic Developer.

Claims use since Feb. 1, 1911.

Ser. No. 72,968. (CLASS 37. PAPER AND STATIONERY.) THE GEM SUPPLIES CO. LTD., London, England. Filed Sept. 20, 1913.

GEMESCO

The trade-mark consists in the word "Gemesco."

Particular description of goods.—Account-Books, Albums, Elastic Bands, Copying Baths and Trays, Bill-Files, Pencils, (Lead for,) Cardboard, Copy-Books, Drawing Carbon and Chalks, Letter-Clips, Correspondence-Cards, Water-Reservoirs for Use in Moistening Stamps or in Damping Paper, Tracing-Paper, Millboard, Note-Books, Paper-Weights, Pasteboard, Pattern-Cards, Pencil-Cases, Steel Pens and Penholders, Duplicators for Use in Copying Documents, Diaries, Envelops, Rubber Erasers, Paper-Fasteners, Stationery-Files, Fountain-Pens, Inkstands, Paper-Knives, Lead-Pencils, Screw-Pencils, and Indelible Pencils, Tracing-Linen, Stencil-Plates, Copying-Presses, Rulers, Scoring-Books, Scrap-Books, Sketch-Books, Writing-Slates, Hand-Stamps, Strawboards, Writing-Tablets, and Tags for Papers.

Claims use since June, 1912.

Ser. No. 73,235. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Oct. 6, 1913.

NATIONAL

Particular description of goods.—Washboards.

Claims use since Feb. 1, 1907.

Ser. No. 73,257. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MASON-SEAMAN TRANSPORTATION COMPANY, New York, N. Y. Filed Oct. 7, 1913.

M-S

Particular description of goods.—Doors of Taxicabs and Horse-Drawn and Motor-Propelled Vehicles.

Claims use since Aug. 1, 1913.

Ser. No. 73,404. (CLASS 4. ABRASIVE, DETEGENT, AND POLISHING MATERIALS.) SOCIÉTÉ DES CIRAGES FRANÇAIS, Paris, France. Filed Oct. 15, 1913. Under ten-year proviso.



Particular description of goods.—Boot and Shoe Blacking.

Claims use since about fourteen years prior to Aug. 14, 1883.

Ser. No. 73,405. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SOL. H. SHONINGER, Chicago, Ill. Filed Oct. 15, 1913.

PAPEKIN

Particular description of goods.—Sanitary Napkins or Surgical Bandages.

Claims use since Mar. 1, 1913.

Ser. No. 73,778. (CLASS 17. TOBACCO PRODUCTS.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed Nov. 3, 1913.



The trade-mark comprises a fanciful pictorial portrait of General Nuri Pasha Osman, now deceased. The characters represent, according to the Turkish method of writing, the name Osman.

Particular description of goods.—Cigarettes, Cigars, and Smoking-Tobacco.

Claims use since April, 1878.

Ser. No. 73,935. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SAMUEL SAMUEL & CO., LT'D., Yokohama, Japan. Filed Nov. 12, 1913.



The stars being shown in yellow.

Particular description of goods.—Japanese Cotton Crapes.

Claims use since November, 1910.

Ser. No. 74,139. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) KEYSTONE SHOCK ABSORBER CO., Pittsburgh, Pa. Filed Nov. 22, 1913.



The words descriptive of the goods and the geographical terms following the word "Keystone" being disclaimed.
Particular description of goods.—Shock-Absorbers.
Claims use since Jan. 1, 1913.

Ser. No. 74,249. (CLASS 37. PAPER AND STATIONERY.) BRADNER SMITH & CO., Chicago, Ill. Filed Nov. 29, 1913. Under ten-year proviso.



Particular description of goods.—Paper for Writing and Printing and Envelops.
Claims use since Jan. 21, 1880.

Ser. No. 74,288. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FANNY LISSBERGER, London, England. Filed Dec. 1, 1913.

CYCLAX

Particular description of goods.—Preparations for Beautifying or Preserving the Natural Beauty of the Skin and Hair and for the Treatment of All Blemishes, Imperfections, and Diseases of the Skin, Eyes, and Hair; Also, Dentifrices, Bath-Crystals, Water-Softeners, Perfumery, Sachet-Powder, and Mouth-Washes.
Claims use since Sept. 15, 1902.

Ser. No. 74,527. (CLASS 48. MALT EXTRACTS AND LIQUORS.) G. PSCHORR, Munich, Germany. Filed Dec. 12, 1913.



Particular description of goods.—Beer; Beer Poor in Alcohol; Malt Extracts.
Claims use since Nov. 25, 1912.

Ser. No. 74,584. (CLASS 39. CLOTHING.) MYERS & GROSS, Hartford, Conn. Filed Dec. 13, 1913.

Qualafit

Particular description of goods.—Dresses, Dress-Waists, Shirt-Waists, Underwaists, Chemises, Kimonos, Cloaks, Skirts, and Suits.
Claims use since Dec. 4, 1913.

Ser. No. 74,630. (CLASS 2. RECEPTACLES.) THE CANTON CULVERT COMPANY, Canton, Ohio. Filed Dec. 16, 1913.

ZYRO

Particular description of goods.—Silos.
Claims use since June 1, 1913.

Ser. No. 74,637. (CLASS 38. PRINTS AND PUBLICATIONS.) JOS. G. KITCHELL, New York, N. Y. Filed Dec. 16, 1913.

SUB-CHROMATIC

"Sub Chromatic."
Particular description of goods.—Pictures, Prints, Paintings, Etchings, and Drawings.
Claims use since Nov. 1, 1913.

Ser. No. 74,995. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUSTAVO PAOLO BREITER, Milano, Italy. Filed Jan. 7, 1914.



Disclaiming the words "G. Paolo Breiter" and "Milano" and "Bellezza dei Denti La migliore Polvere per la cura della bocca del colorito e della pelle."
Particular description of goods.—Tooth-Powder, Bathing-Powder, Powder for Mouth-Water, Powders for Face and Body.
Claims use since the month of March, 1912.

Ser. No. 75,313. (CLASS 38. PRINTS AND PUBLICATIONS.) JOS. G. KITCHELL, New York, N. Y. Filed Jan. 20, 1914.

Etchatint

"Etchatint."
Particular description of goods.—Pictures, Prints, Paintings, Etchings, and Drawings.
Claims use since 1899.

Ser. No. 75,743. (CLASS 39. CLOTHING.) MAX WEINROTH, Philadelphia, Pa. Filed Feb. 6, 1914.



Particular description of goods.—Knitted Sweater-Coats, Knitted Jackets, and Knitted Sweaters for Men, Women, and Children, and Knitted Outer Shirts.
Claims use since about Oct. 1, 1913.

Ser. No. 75,812. (CLASS 38. PRINTS AND PUBLICATIONS.) BARSE & HOPKINS, New York, N. Y. Filed Feb. 10, 1914.



No claim being made to the words "The Series."
Particular description of goods.—A Series of Books.
Claims use since Jan. 6, 1914.

Ser. No. 75,829. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C. Filed Feb. 10, 1914.



The right to the exclusive use of all the words except the word "Nosoca" and the monograms "N. C." and "S. C." is hereby disclaimed.
Particular description of goods.—Wheat-Flour.
Claims use since Jan. 1, 1912.

Ser. No. 75,830. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STATESVILLE FLOUR MILL COMPANY, CORP., Statesville, N. C. Filed Feb. 10, 1914.



The right to the exclusive use of all the printed words except the words "Save Trouble" is hereby disclaimed.
Particular description of goods.—Wheat-Flour.
Claims use since about July 1, 1913.

Ser. No. 75,894. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BELL & CO., INC., Orangeburg, N. Y. Filed Feb. 14, 1914.

BELLETS

The word "Bellets."
Particular description of goods.—A Medicinal Remedy for the Treatment of Dyspepsia.
Claims use since Jan. 1, 1914.

Ser. No. 76,095. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT A. WELLS, La Fayette, Ind. Filed Feb. 21, 1914. Under ten-year proviso.

MORRIS'
ENGLISH



Particular description of goods.—Powder for Loss of Appetite, Coughs and Colds, Roughness of the Hair, Inflammation of the Lungs and Bowels, Distemper, Pink-Eye, Epizoötic, Yellow Water, Hidebound, Farcy-Founder, Heaves and Bots, Blood-Purifier, and Spring Tonic; a Vermifuge for Horses, Sheep, and Pigs; Ointment for Spavins, Splints, Buck Shins, Curbs, Puffs and Ringbone, and Blister; Remedy for Colic, Belly-Ache, Cramps, Bloating, Indigestion, Stoppage of Water; Liniment for Spavin, Curb, Splint, Ringbone, Poll-Evil, Sweeny, Tumors, Sprains, Capped Hocks, Cuts, Galls, Rheumatism, Weakness of the Joints, Callouses, Bruises, Frost-Bites, Corns, and Bunions; Remedy for Saddle, Harness, and Collar Galls, Scratches, Cuts, Sore Shoulders, Thrush, Canker, Scalds, Mud-Fever, Grease-Heels, and Sores or Abrasions of the Skin.
Claims use since 1892.

Ser. No. 76,312. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CENTRAL ELECTRIC COMPANY, Chicago, Ill. Filed Mar. 4, 1914.



The words "Central Electric Company" and "Chicago" being hereby disclaimed.

Particular description of goods.—Porcelain, Enamel, Steel Reflectors.

Claims use since Sept. 1, 1913.

Ser. No. 76,334. (CLASS 39. CLOTHING.) VOGUE HAT COMPANY, New York, N. Y. Filed Mar. 4, 1914.



Particular description of goods.—Men's, Women's, and Children's Hats.

Claims use since Oct. 1, 1913.

Ser. No. 76,363. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JELLICO GROCERY COMPANY, Jellico, Tenn. Filed Mar. 5, 1914.

CUMBERLAND CLUB

Particular description of goods.—Coffee.

Claims use since about May, 1913.

Ser. No. 76,544. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE FELTERS COMPANY, New York, Middleville, and Leatershire, N. Y., and Boston and Millbury, Mass. Filed Mar. 11, 1914.



The words "Felts," "Brand," "Quality," and "The Felters Company" being disclaimed.

Particular description of goods.—Felts.

Claims use since October, 1912.

Ser. No. 76,652. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NICKEL PLATE STOVE POLISH CO., Chicago, Ill. Filed Mar. 14, 1914.



The lining is used usually for purposes of shading and not to indicate any particular color.

Particular description of goods.—A Compound for Cleansing and Scouring Carpets and for Removing Dirt, Grease, Oils, Inks, Stains, and Paints from Carpets, Rugs, Draperies, Upholstering, Clothing, and other Materials.

Claims use since Feb. 11, 1914.

Ser. No. 76,709. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANKLIN H. STANLEY, Cleveland, Ohio. Filed Mar. 16, 1914.



The printed matter upon the drawing being disclaimed as a feature of the trade-mark.

Particular description of goods.—Butter.

Claims use since Jan. 1, 1914.

Ser. No. 76,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERBERT F. DUGAN, San Francisco, Cal. Filed Mar. 20, 1914.

KILMOL
SQUIRLGOPHENE

Particular description of goods.—A Chemical Compound for the Destruction of Rodents and other Burrowing Animals.

Claims use since May 15, 1913.

Ser. No. 76,898. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) M. FAKLER BOTTLING CO., Rochester, Minn. Filed Mar. 24, 1914.



Particular description of goods.—Ginger-Ale, Orange Cider, Cherry Cider, Birch-Beer, and Cream-Soda.

Claims use since on or about the 1st day of June, 1911.

Ser. No. 76,974. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JOSEPH SANKEY & SONS LIMITED, Bilston, England. Filed Mar. 26, 1914.

STALLOY

Particular description of goods.—Sheet-Metal Transformer and Dynamo Plates.

Claims use since May, 1906.

Ser. No. 77,016. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUSTUS BLAUVELT, Paterson, N. J. Filed Mar. 28, 1914.

SAND ROOT

Particular description of goods.—A Preparation for the Treatment of Biliousness, Constipation, Stricture, Gravel, Gall-Stones, and other Diseases of the Liver and Bladder, Diabetes, Bright's Disease, and other Diseases of the Kidneys.

Claims use since July 1, 1913.

Ser. No. 77,039. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) H. WENZEL TENT & DUCK CO., St. Louis, Mo. Filed Mar. 28, 1914.

LION BRAND

No claim is made to the exclusive use of the word "Brand."

Particular description of goods.—Tents, Tarpaulins, and Waterproof Bed-Sheets.

Claims use since about Mar. 19, 1914.

Ser. No. 77,040. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) H. WENZEL TENT & DUCK CO., St. Louis, Mo. Filed Mar. 28, 1914.

EAGLE BRAND

No claim is made to the exclusive use of the word "Brand."

Particular description of goods.—Tents, Tarpaulins, and Waterproof Bed-Sheets.

Claims use since about Mar. 19, 1914.

Ser. No. 77,076. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Mar. 30, 1914.

PERFECTO

Particular description of goods.—Men's and Boys' Belts for Personal Wear, Suspenders, Hose-Supporters, Armbands, and Neckties, Cravats, and Neckscarfs.

Claims use since Mar. 1, 1911.

Ser. No. 77,146. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) A. F. CONERY COMPANY, Newark, N. J. Filed Apr. 2, 1914.



Particular description of goods.—Jewelers', Silversmiths', and Dentists' Brushes, Polishing, Wash, and Wire Scratch and Matting Brushes, and Bristle Floor-Brooms.

Claims use since 1885.

Ser. No. 77,206. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWAIIAN PINEAPPLE CO. LTD., Honolulu, Territory of Hawaii. Filed Apr. 4, 1914.

PACIFIC GEMS

Particular description of goods.—Canned Pineapple.

Claims use since August, 1912.

Ser. No. 77,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWAIIAN PINEAPPLE CO. LTD., Honolulu, Territory of Hawaii. Filed Apr. 4, 1914

HAWAIIAN CLUB

Particular description of goods.—Canned Pineapple.

Claims use since August, 1912.

Ser. No. 77,260. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES CURTIS, Chicago, Ill. Filed Apr. 6, 1914.



The applicant's portrait.
Particular description of goods.—A Preparation for the Treatment of Sore, Tired, and Aching Feet.
Claims use since Mar. 6, 1914.

Ser. No. 77,476. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind., and Boston, Mass. Filed Apr. 14, 1914.

RABBIT'S FOOT

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 4, 1914.

Ser. No. 77,477. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE MIANUS MFG. CO., Coscob, Conn. Filed Apr. 14, 1914.

"WAVES OF THE SEA"

Particular description of goods.—Cloakings Made of Woolen and Mixtures of Cotton and Wool.
Claims use since Jan. 5, 1914.

Ser. No. 77,500. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAUNCEY F. YORK, Detroit, Mich. Filed Apr. 15, 1914.

CU-PY-NA

Particular description of goods.—A Remedy for Coughs, Colds, and Hoarseness and for Diseases or Ailments of the Mouth, Nose, Throat, Lungs, and Stomach.
Claims use since about Nov. 1, 1913.

Ser. No. 77,506. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FUERST & KRAEMER, LTD., New Orleans, La. Filed Apr. 16, 1914.



No claim is made to the word "Pralines," this being descriptive.
Particular description of goods.—Candy.
Claims use since about May 1, 1911.

Ser. No. 77,516. (CLASS 17. TOBACCO PRODUCTS.) THE ALZANNE CIGARETTE COMPANY, New York, N. Y. Filed Apr. 17, 1914.

ALZANNE

The name "Alzanne."
Particular description of goods.—Cigarettes.
Claims use since on or about Jan. 1, 1914.

Ser. No. 77,525. (CLASS 10. FERTILIZERS.) EMPIRE COTTON OIL CO., Atlanta, Ga. Filed Apr. 17, 1914.

SUSQUEHANNA

Particular description of goods.—Fertilizers.
Claims use since December, 1904.

Ser. No. 77,543. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE RANDALL-FAICHNEY CO., Boston, Mass. Filed Apr. 17, 1914.

VIKING

Particular description of goods.—Clinical Thermometers, Syringes, and Needles for Syringes for Use in Treatment of Human Beings, Stock, and Poultry, Milk-Fever Apparatus, Milking-Tubes, Veterinary Instruments, and Surgical Instruments for the Treatment of Human Beings, Stock, and Poultry.
Claims use since Mar. 14, 1914.

Ser. No. 77,545. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE SALCURA COMPANY, Milwaukee, Wis. Filed Apr. 17, 1914.



Lined to indicate a blue background and segments of a circle in red, yellow, and blue, our exclusive right to the words "Health," "Beauty," and "Luxury" being disclaimed.
Particular description of goods.—Toilet Soap.
Claims use since Apr. 1, 1914.

Ser. No. 77,619. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CELLA BROTHERS, INC., New York, N. Y. Filed Apr. 21, 1914.

OPTIMUS

Particular description of goods.—Olive-Oil and Macaroni.
Claims use since Jan. 15, 1913.

Ser. No. 77,893. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NEW IDEA SPREADER CO., Coldwater, Ohio. Filed Apr. 30, 1914.

NISCO

Particular description of goods.—Manure-Spreaders, Cultivators, Land-Rollers, Clod-Crushers, Soil-Pulverizers, Garden-Plows, Shovel-Plows, Weeders, Feed-Cutters, Seeders, Small Garden-Cultivators, Harrows, Plows, Planters, and Traction-Engines.
Claims use since Sept. 1, 1913.

Ser. No. 77,908. (CLASS 39. CLOTHING.) ABBOT JACKET MANUFACTURING COMPANY, St. Louis, Mo. Filed May 1, 1914.



Particular description of goods.—Workmen's Aprons.
Claims use since Mar. 20, 1914.

Ser. No. 77,915. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE E. ECKERT, Chicago, Ill. Filed May 1, 1914.

"C-Thru"

Particular description of goods.—Polish for Eyeglasses.
Claims use since Dec. 12, 1913.

Ser. No. 77,937. (CLASS 38. PRINTS AND PUBLICATIONS.) EDWARD G. SIGGERS, Washington, D. C. Filed May 1, 1914. Under ten-year proviso.



Particular description of goods.—A Monthly Paper.
Claims use since 1889.

Ser. No. 77,945. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ARMOUR & COMPANY, Chicago, Ill. Filed May 2, 1914.

BROADWAY

"Broadway."
Particular description of goods.—Soaps.
Claims use since Jan. 1, 1914.

Ser. No. 77,955. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK GLASS, Madison, Ind. Filed May 2, 1914.



Particular description of goods.—Candies.
Claims use since the 5th of October, 1909.

Ser. No. 77,980. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) C. DE WITT LUKENS SURGICAL MANUFACTURING CO., St. Louis, Mo. Filed May 4, 1914.

Oyloidin

Particular description of goods.—Surgical Sutures.
Claims use since July 1, 1908.

Ser. No. 77,996. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S. R. FEIL COMPANY, Cleveland, Ohio. Filed May 5, 1914.

EverSweet

Particular description of goods.—A Toilet Cerate.
Claims use since at least Nov. 1, 1906.

Ser. No. 78,003. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STEWART FOOD COMPANY, Chicago, Ill. Filed May 5, 1914.

FRUIT VIGOR

Particular description of goods.—A Powder for Making a Laxative Tonic Beverage.
Claims use since March, 1906.

Ser. No. 78,035. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE ALBERT STAFFORD, New York, N. Y. Filed May 6, 1914.

DRILOX

Particular description of goods.—Woven Cotton Fabrics.
Claims use since Apr. 1, 1914.

Ser. No. 78,036. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE ALBERT STAFFORD, New York, N. Y. Filed May 6, 1914.

JAGANAGH

Particular description of goods.—Woven Cotton Fabrics.
Claims use since Apr. 1, 1914.

Ser. No. 78,057. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CLEVELAND SALT COMPANY, Cleveland, Ohio. Filed May 7, 1914.

Wymo

Particular description of goods.—Salt.
Claims use since July 15, 1913.

Ser. No. 78,076. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM L. GLATFELTER, Spring Grove, Pa. Filed May 7, 1914.



The term "Spring Grove, Pa." is not claimed.
Particular description of goods.—Milk and Cream, and Cream Alone.
Claims use since Apr. 20, 1914.

Ser. No. 78,122. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ANDREW FISCHER, Baltimore, Md. Filed May 8, 1914.



Particular description of goods.—A Sheepskin and Wool Mitten as a Washing Device.
Claims use since Mar. 10, 1914.

Ser. No. 78,123. (CLASS 39. CLOTHING.) ALBERT R. GARROD, New York, N. Y. Filed May 8, 1914.

"Pediforme"

Particular description of goods.—Leather, Canvas, Cloth, Buckskin, and Rubber Shoes.
Claims use since Mar. 1, 1914.

Ser. No. 78,140. (CLASS 17. TOBACCO PRODUCTS.) THE RANELAGH TOBACCO COMPANY, New York, N. Y. Filed May 8, 1914.



No claim being made to the word "Cigarette."
Particular description of goods.—Cigarettes.
Claims use since Apr. 6, 1914.

Ser. No. 78,151. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) T. D. COOK & Co., Boston, Mass. Filed May 9, 1914.

BARONIAL

Particular description of goods.—Ice-Creams and Ices.
Claims use since June 30, 1908.

Ser. No. 78,173. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MOORE & GIBSON CORPORATION OF NEW YORK, New York, N. Y. Filed May 9, 1914.

TANGO

Particular description of goods.—A Child's Toy-Watch Bracelet.
Claims use since Apr. 28, 1914.

Ser. No. 78,198. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE CARPENTER STEEL COMPANY, Reading, Pa. Filed May 11, 1914.

"COMET"

Particular description of goods.—Tool-Steel.
Claims use since about 1899.

Ser. No. 78,213. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass. Filed May 11, 1914.

RINGER

Particular description of goods.—Golf-Balls.
Claims use since about Nov. 1, 1912.

Ser. No. 78,250. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PHREEBORN G. PAUGH, St. Louis, Mo. Filed May 13, 1914.

P.D.U.

Particular description of goods.—Emergency Dressings.
Claims use since June 1, 1913.

Ser. No. 78,257. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RAMEY CO., Chillicothe, Ohio. Filed May 13, 1914.

DUST-VAC

Particular description of goods.—Vacuum Cleaners and Sweepers.
Claims use since about July 10, 1912.

Ser. No. 78,283. (CLASS 38. PRINTS AND PUBLICATIONS.) THE PEERLESS PATTERN COMPANY, Beacon and New York, N. Y. Filed May 14, 1914.

EVERY WOMAN
HER OWN DRESSMAKER

The words "Every Woman Her Own Dressmaker."
Particular description of goods.—A Quarterly Periodical.
Claims use since Sept. 17, 1912.

Ser. No. 78,300. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BAER MANUFACTURING CO., Philadelphia, Pa. Filed May 15, 1914.



Particular description of goods.—Semaphore Signaling Devices for Use Upon Automobiles and other Vehicles.
Claims use since about February, 1914.

Ser. No. 78,301. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed May 15, 1914.

BETTIJAK

Particular description of goods.—Dolls.
Claims use since May 13, 1914.

Ser. No. 78,327. (CLASS 38. PRINTS AND PUBLICATIONS.) MAX HEYMANN, New York, N. Y. Filed May 16, 1914.

Ready-To-Wear Bulletin

Particular description of goods.—A Trade Publication Issued Periodically.
Claims use since March, 1911.

Ser. No. 78,338. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) C. C. SMOOT & SONS CO., Alexandria, Va. Filed May 16, 1914. Under ten-year proviso.

ALEXANDRIA

Particular description of goods.—Leather in Unmanufactured Form.
Claims use since the year 1880.

Ser. No. 78,367. (CLASS 17. TOBACCO PRODUCTS.) GEORGE ROSE, Kansas City, Mo. Filed May 18, 1914.

PASHA



Particular description of goods.—Cigarettes.
Claims use since Apr. 11, 1914.

Ser. No. 78,380. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN D. BURKE, Montgomery, Ala. Filed May 19, 1914.

R"8730"



No claim being made to symbol "B."
Particular description of goods.—A Remedy for the Blood.
Claims use since May 20, 1894.

Ser. No. 78,412. (Class 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ELISE ARMBRUSTER, LATE MISS HAIBLÉ, Landau, Germany. Filed May 20, 1914.



The picture being fanciful.
Particular description of goods.—Hair-Nets.
Claims use since Dec. 15, 1913.

Ser. No. 78,414. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) FRED W. DOLL, Allentown, Pa. Filed May 20, 1914.

DOLLY-KWIZ

Particular description of goods.—Puzzles.
Claims use since May 8, 1914.

Ser. No. 78,434. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed May 21, 1914.

TOP NOTCH

Particular description of goods.—Fertilizers.
Claims use since 1914.

Ser. No. 78,453. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

ORINOCO

Particular description of goods.—Fertilizers.
Claims use since 1893.

Ser. No. 78,471. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) FLINT AND WALLING MANUFACTURING CO., Kendallville, Ind. Filed May 22, 1914.

F. & W.

Particular description of goods.—Power Washing-Machines (Laundry) and Parts Thereof.
Claims use since Jan. 20, 1913.

Ser. No. 78,494. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) T. B. FENTON, Worden, Ill. Filed May 23, 1914.

C. P. & C.

Particular description of goods.—A Preparation for the Treatment of Hog-Cholera.
Claims use since May 12, 1914.

Ser. No. 78,518. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DENNISON PHARMACAL COMPANY, Chicago, Ill. Filed May 25, 1914.

Tongo

Particular description of goods.—Foot Remedy for Sore, Tender, Tired, Aching, Burning, Swollen, Sweaty, or Ill-Smelling Feet or Body Odors.
Claims use since on or about Mar. 15, 1914.

Ser. No. 78,519. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE B. F. GOODRICH COMPANY, New York, N. Y. Filed May 25, 1914.



The word "Imit."
Particular description of goods.—Rubber Hot-Water Bottles and Fountain-Syringe Bags.
Claims use since about Apr. 18, 1914.

Ser. No. 78,544. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. F. MCLAUGHLIN & COMPANY, Chicago, Ill. Filed May 25, 1914.

OLD COLONY

Particular description of goods.—Tea and Blended Coffee.
Claims use since March, 1891.

Ser. No. 78,578. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHALLENGE CUTLERY CORPORATION, Bridgeport, Conn. Filed May 27, 1914.

CHALLENGE

Particular description of goods.—Razors, Safety-Razors, Pocket-Knives, Lock-Back Knives, Knife Erasers, Budding-Knives, Steel Table-Knives, Butcher-Knives, Pruning-Knives, Awl-Knives, Cotton-Sampling Knives, Banana-Knives, Office-Knives, Hunting-Knives, Daggers, Bowie-Knives, Carvers, Scissors, Pocket-Scissors, Shears, Pruning-Shears, Sheep-Shears, Horse-Fleams, Lamp-Trimmers, Grass-Hooks, Hay-Knives, Scythes, Sharpening-Steels, Horse-Clippers, Toilet-Clippers, Tinners' Snips, Farriers' Knives, Axes, and Hatchets.
Claims use since about 1867.

Ser. No. 78,647. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CO-OPERATIVE ORANGE ASS'N, Lindsay, Cal. Filed May 29, 1914.

PRINCE OF ORANGE

Particular description of goods.—Citrus Fruits.
Claims use since May 14, 1914.

Ser. No. 78,648. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CO-OPERATIVE ORANGE ASS'N, Lindsay, Cal. Filed May 29, 1914.

NATIVE SON

Particular description of goods.—Citrus Fruits.
Claims use since May 14, 1914.

Ser. No. 78,675. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1, 1914.

Beacon

Particular description of goods.—Cotton Goods in the Piece.
Claims use since April, 1905.

Ser. No. 78,683. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. S. CLEMENT AND COMPANY, Van Buren, Me. Filed June 1, 1914.



The portrait being that of one of the applicants, Rose P. Clement.
Particular description of goods.—A Liquid Preparation for External Use for the Skin.
Claims use since Feb. 25, 1914.

Ser. No. 78,686. (CLASS 39. CLOTHING.) HENRY A. DIX & SONS COMPANY, Millville, N. J., and New York, N. Y. Filed June 1, 1914.



A Greek cross in "blue."
Particular description of goods.—Ladies' Tub-Dresses, House-Dresses, Nurses' and Waitresses' Uniforms.
Claims use since Dec. 1, 1913.

Ser. No. 78,696. (CLASS 39. CLOTHING.) FERGUSON WATERPROOF CO., St. Louis, Mo. Filed June 1, 1914.

WATER KING

Particular description of goods.—Waterproof Coats, Jackets, Trousers, Ponchos, Leggings, Aprons, Outer Shirts, Caps, Hats, Capes, and Hat-Covers.
Claims use since about Apr. 25, 1914.

Ser. No. 78,700. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INGERSOLL-RAND COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 1, 1914.

LITTLE DAVID

Particular description of goods.—Fluid-Operated Rotary Drills and Fluid-Operated Riveting and Chipping Hammers.
Claims use since the 7th day of April, 1911.

Ser. No. 78,701. (CLASS 5. ADHESIVES.) KANTOROWICZ & CO., Breslau, Germany. Filed June 1, 1914.

Senegalin

Particular description of goods.—Glue.
Claims use since Sept. 9, 1912.

Ser. No. 78,704. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE F. W. KING OPTICAL COMPANY, Cleveland, Ohio. Filed June 1, 1914.

ISAFE

Particular description of goods.—Eyeglasses and Spectacles.
Claims use since on or about the 1st day of June, 1913.

Ser. No. 78,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. AUERBACH & SONS, New York, N. Y. Filed June 2, 1914.

SPICY LICKERS

Particular description of goods.—Candy.
Claims use since Jan. 1, 1914.

Ser. No. 78,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

22

Particular description of goods.—Alimentary Paste Products.
Claims use since Nov. 11, 1912.

Ser. No. 78,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

COMET

Particular description of goods.—Alimentary Paste Products.
Claims use since September, 1910.

Ser. No. 78,744. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FORT WORTH MACARONI CO., Fort Worth, Tex. Filed June 2, 1914.

O.B.

Particular description of goods.—Alimentary Paste Products.
Claims use since the year 1900.

Ser. No. 78,770. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES F. HUGHES, New York, N. Y. Filed June 3, 1914.

AFTER DINNER

Particular description of goods.—Golf-Game Apparatus, Apparatus for Practising Golf-Strokes, and Apparatus for Playing Indoor Golf.
Claims use since April, 1914.

Ser. No. 78,786. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

"Classic"

Particular description of goods.—Satin Ribbon.
Claims use since February, 1912.

Ser. No. 78,792. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

ADVANCE

Particular description of goods.—Lawn-Mower.
Claims use since January, 1912.

Ser. No. 78,804. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

The Strand

Particular description of goods.—Neckties.
Claims use since February, 1908.

Ser. No. 78,805. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

St. Regis

Particular description of goods.—Neckties.
Claims use since February, 1908.

Ser. No. 78,812. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed June 4, 1914.

Tout Mon Jardin

Particular description of goods.—Perfume, Toilet Water, Creams for the Skin, Face-Powder, Toilet Powder, Talcum Powder, Tooth-Powder, Tooth-Paste, and Bath-Salts.
Claims use since May 29, 1914.

Ser. No. 78,818. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NU LIFE PRODUCTS COMPANY, Titusville, Pa. Filed June 4, 1914.



NU LIFE

Particular description of goods.—Polishes for All Woodwork, Furniture, Floors, Pianos, Automobiles, &c.
Claims use since Apr. 1, 1914.

Ser. No. 78,875. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILLER-ELMER MFG. CO. LTD., New Orleans, La. Filed June 6, 1914.



Particular description of goods.—Candy.
Claims use since Jan. 1, 1914.

Ser. No. 78,888. (CLASS 39. CLOTHING.) STEINBERG BROS., INC., New York, N. Y. Filed June 6, 1914.

WEAR-N-SURE



The letters "S. B." and "Value" shown in the seal thereof not being herein claimed.
Particular description of goods.—Dress-Skirts and Underskirts for Women.
Claims use since May 1, 1914.

Ser. No. 78,919. (CLASS 39. CLOTHING.) L. CANDEE & COMPANY, New Haven, Conn. Filed June 9, 1914.



Consists of a narrow embossed band on the upper margin of a boot or shoe. No claim is made to the representation of a boot or shoe.
Particular description of goods.—Rubber Boots and Shoes.
Claims use since prior to 1876.

Ser. No. 78,921. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAND UNION TEA COMPANY, Brooklyn, N. Y. Filed June 9, 1914.

FLAROMA

Particular description of goods.—Coffee.
Claims use since about May 15, 1914.

Ser. No. 78,934. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. T. SMITH COMPANY, Worcester, Mass. Filed June 9, 1914.



Particular description of goods.—Tea, Coffee, and Cocoa.
Claims use since January, 1900.

Ser. No. 78,948. (CLASS 39. CLOTHING.) K. KATZ & SONS, Baltimore, Md. Filed June 10, 1914.

Katz

The trade-mark, which is a facsimile of the name "Katz" as written by Z. Morton Katz, a member of the firm.
Particular description of goods.—Coats, Trousers, Vests, and Overcoats for Men and Boys.
Claims use since June 1, 1904.

Ser. No. 78,960. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ROBINSON & CO., Richmond, Ind. Filed June 10, 1914.

MONEY MAKER

Particular description of goods.—Ensilage-Cutters or Silo-Fillers and Baling-Presses.
Claims use since March, 1914.

Ser. No. 78,963. (CLASS 5. ADHESIVES.) WILLIAM A. ROCKROHR, Chicago, Ill. Filed June 10, 1914.

TITE WAD

Particular description of goods.—A Rubber Putty for Repairing Various Articles Composed of Rubber.
Claims use since about September, 1910.

Ser. No. 78,974. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

FATIMA

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,975. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

RECRUIT

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,976. (CLASS 46, FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

GOOD LUCK

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,977. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

PICNIC

Particular description of goods.—Chewing-Gum.
Claims use since May 11, 1914.

Ser. No. 78,978. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

PICK

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,979. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

PAY CAR

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,981. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

FAVORITE

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,982. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

POLO

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,983. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

OLD MILL

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,985. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

HOME RUN

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

HORSE SHOE

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,987. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

PIEDMONT

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,989. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. WRIGLEY JR. COMPANY, Chicago, Ill. Filed June 10, 1914.

KING BEE

Particular description of goods.—Chewing-Gum.
Claims use since May 27, 1914.

Ser. No. 78,996. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & SANBORN, Boston, Mass. Filed June 11, 1914.

ESPLANADE

Particular description of goods.—Coffee.
Claims use since Apr. 17, 1914.

Ser. No. 79,075. (CLASS 39. CLOTHING.) INTERWOVEN STOCKING COMPANY, New Brunswick, N. J. Filed June 13, 1914.



Particular description of goods.—Hosiery.
Claims use since Dec. 17, 1913.

Ser. No. 79,082. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MARTIN BAKING CO., Cleveland, Ohio. Filed June 13, 1914.

QUALITY MARCO

Particular description of goods.—Cakes.
Claims use since Mar. 15, 1914.

Ser. No. 79,100. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) COMMONWEALTH ELECTRIC & MANUFACTURING COMPANY, St. Louis, Mo. Filed June 15, 1914.

S.O.S.

Particular description of goods.—Massage Instruments.
Claims use since June 6, 1914.

Ser. No. 79,106. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed June 15, 1914.

HIDDEN FRUIT

Consisting of the words "Hidden Fruit."
Particular description of goods.—Relatively Small Chocolate-Covered Cakes.
Claims use since Jan. 8, 1914.

Ser. No. 79,107. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed June 15, 1914.

OLD FARM

Consisting of the words "Old Farm."
Particular description of goods.—Candies, (Commonly Called Caramels.)
Claims use since Apr. 20, 1914.

Ser. No. 79,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed June 15, 1914.

QUARTERLY

Consisting of the word "Quarterly."
Particular description of goods.—Chocolate Candies, (Commonly Called Chocolate Creams.)
Claims use since May 1, 1914.

Ser. No. 79,138. (CLASS 12. CONSTRUCTION MATERIALS.) THE FAR WEST CLAY CO., Tacoma, Wash. Filed June 16, 1914.

FABRICK

Particular description of goods.—Building Bricks and Blocks.
Claims use since Oct. 8, 1913.

Ser. No. 79,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHOCOLATE PRODUCTS COMPANY, Baltimore, Md. Filed June 16, 1914.

Tango

Particular description of goods.—Chocolate-Covered Nut-Candy.
Claims use since May 15, 1914.

Ser. No. 79,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHOCOLATE PRODUCTS COMPANY, Baltimore, Md. Filed June 16, 1914.

High Jinks

Particular description of goods.—Chocolate Almond Candy.
Claims use since May 15, 1914.

Ser. No. 79,149. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANDREW C. ROSETTER, Appleton, Minn. Filed June 16, 1914.

RED ROSE

Particular description of goods.—Non-Intoxicating Carbonated Tonic Beverages.
Claims use since Feb. 1, 1914.

Ser. No. 79,151. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BALLWEG & GREENWALD, Brooklyn, N. Y. Filed June 16, 1914.



Fortuna

Particular description of goods.—Candies and Chocolates.
Claims use since the 11th day of June, 1914.

Ser. No. 79,155. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) H. MAIMIN CO., INC., New York, N. Y. Filed June 16, 1914.

HMCo

Particular description of goods.—Cloth-Cutting Machines.
Claims use since May 29, 1914.

Ser. No. 79,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DWINELL-WRIGHT CO., Boston, Mass. Filed June 17, 1914.

PIEDMONT

Particular description of goods.—Tea.
Claims use since 1905.

Ser. No. 79,172. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRICK BROS., New Iberia, La. Filed June 17, 1914.

BIG F

Particular description of goods.—Canned Fruits and Vegetables.
Claims use since Apr. 20, 1914.

Ser. No. 79,177. (CLASS 43. THREAD AND YARN.) F. A. PATRICK & CO., Duluth, Minn. Filed June 17, 1914.

Bigger-Than-Weather

Particular description of goods.—Embroidery-Cotton, Embroidery-Silk, Embroidery-Linen, Knitting-Yarn, Crochet-Yarn, Silk Thread, Cotton Thread, Linen Thread, and Sewing-Silks.
Claims use since Dec. 25, 1913.

Ser. No. 79,178. (CLASS 39. CLOTHING.) F. A. PATRICK & CO., Duluth, Minn. Filed June 17, 1914.

Macka-Knit

Particular description of goods.—Knitted Caps, Hoods, Sweaters, Skirts, Gloves, Mittens, Tights, Drawers, Socks, Stockings, and Leggings.
Claims use since Sept. 3, 1912.

Ser. No. 79,183. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JULIUS SCHMID, INC., Astoria, N. Y. Filed June 17, 1914.

Malba

Particular description of goods.—Rubber Ice-Bags.
Claims use since Mar. 1, 1914.

Ser. No. 79,189. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOHN J. WOLF, Philadelphia, Pa. Filed June 18, 1914.

ORGEADE

Particular description of goods.—Sweet Beer.
Claims use since May 18, 1914.

Ser. No. 79,196. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. R. SUTHERLAND, Riverside, Cal. Filed June 18, 1914.

GREEN BANNER

Particular description of goods.—Citrus Fruit.
Claims use since 1905.

Ser. No. 79,197. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. R. SUTHERLAND, Riverside, Cal. Filed June 18, 1914.

BLUE BANNER

Particular description of goods.—Citrus Fruit.
Claims use since 1905.

Ser. No. 79,200. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHANDLER KING, Chattanooga, Tenn. Filed June 18, 1914.

Drip

Particular description of goods.—Non-Intoxicating Carbonated Tonic Beverages and Soda-Water Syrups.
Claims use since Sept. 15, 1913.

Ser. No. 79,219. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JULIUS KING OPTICAL COMPANY, New York, N. Y. Filed June 19, 1914.



Particular description of goods.—Protection-Glasses.
Claims use since May 15, 1914.

Ser. No. 79,223. (CLASS 12. CONSTRUCTION MATERIALS.) KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa. Filed June 19, 1914.

STAR

Particular description of goods.—Insulating Material Consisting of Sheets of Paper or Cloth with Cleanly-Washed Bog Fiber Between Them.
Claims use since June 4, 1913.

Ser. No. 79,225. (CLASS 12. CONSTRUCTION MATERIALS.) KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa. Filed June 19, 1914.

SHEATHLIN

Particular description of goods.—Insulating Material Consisting of Sheets of Strong Kraft Paper with Cured Eel-Grass Quilted Between Them.
Claims use since Feb. 12, 1914.

Ser. No. 79,226. (CLASS 12. CONSTRUCTION MATERIALS.) KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa. Filed June 19, 1914.

"NYCINSUL"

Particular description of goods.—Insulating Material Consisting of Sheets of Paper or Cloth with Hair Felt Between Them.
Claims use since May 20, 1912.

Ser. No. 79,228. (CLASS 12. CONSTRUCTION MATERIALS.) KEYSTONE HAIR INSULATOR CO., Pittsburgh, Pa. Filed June 19, 1914.

MOSSLIN

Particular description of goods.—Insulating Material Consisting of Sheets of Strong Heavy Building-Paper with Cured Eel-Grass Quilted Between Them.
Claims use since Dec. 30, 1913.

Ser. No. 79,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARANKA SZECSENYI, Detroit, Mich. Filed June 19, 1914.



Comprising a portrait of myself.
Particular description of goods.—A Remedy for Heart Trouble.
Claims use since May 5, 1914.

Ser. No. 79,236. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed June 20, 1914.

DIXOID

Particular description of goods.—Prepared Roofings.
Claims use since on or about the 17th day of June, 1914.

Ser. No. 79,244. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MANN EDGE TOOL CO., Lewistown, Pa. Filed June 20, 1914.

KNOT KLIPPER

Particular description of goods.—Axes.
Claims use since 1908.

Ser. No. 79,288. (CLASS 39. CLOTHING.) ABRAMS & MARCUS, New York, N. Y. Filed June 23, 1914.

MARBRO

Particular description of goods.—Dress, Negligée, and Work Shirts.
Claims use since June 15, 1914.

Ser. No. 79,289. (CLASS 39. CLOTHING.) ABRAMS & MARCUS, New York, N. Y. Filed June 23, 1914.

Idol

Particular description of goods.—Dress, Negligée, and Work Shirts.
Claims use since June 15, 1914.

Ser. No. 79,321. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) C. BERRY & Co., Boston, Mass. Filed June 24, 1914.

ASHLAND CLUB

Particular description of goods.—Whisky.
Claims use since June 15, 1914.

Ser. No. 79,327. (CLASS 39. CLOTHING.) FIELD BROS. & GROSS COMPANY, Boston, Mass. Filed June 24, 1914.

GROSSWEIGHT

Particular description of goods.—Leather and Canvas Boots and Shoes.
Claims use since on or about Feb. 1, 1914.

Ser. No. 79,347. (CLASS 39. CLOTHING.) WING PATENT GARMENT CO., New York, N. Y. Filed June 24, 1914.

WING

Particular description of goods.—Children's, Misses', and Women's Outer Garments—viz., Coats and Capes.
Claims use since May 26, 1914.

Ser. No. 79,394. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNION SPECIAL MACHINE COMPANY, Chicago, Ill. Filed June 26, 1914.

Y

Particular description of goods.—Machine-Needles.
Claims use since June 22, 1914.

Ser. No. 79,421. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CENTRAL BREWING COMPANY OF NEW YORK, New York, N. Y. Filed June 29, 1914.

Seminole

Particular description of goods.—Beer.
Claims use since June 15, 1914.

Ser. No. 79,422. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CENTRAL BREWING COMPANY OF NEW YORK, New York, N. Y. Filed June 29, 1914.

Mohawk

Particular description of goods.—Beer.
Claims use since June 15, 1914.

TRADE-MARK REGISTRATIONS GRANTED

JULY 21, 1914.

98,452. MASSAGE-CREAM AND MEDICINES FOR INTERNAL USE TO AID NUTRITION AND INCREASE WEIGHT. THE ADIPOSA COMPANY, Chicago, Ill.
Filed December 12, 1913. Serial No. 74,540. PUBLISHED MAY 19, 1914.

98,453. COFFEE. ALLEN, SLADE & CO., Fall River, Mass.
Filed October 18, 1913. Serial No. 73,462. PUBLISHED APRIL 28, 1914.

98,454. CERTAIN NAMED TOOLS AND MACHINERY. AMERICAN DIE & TOOL CO., Reading, Pa.
Filed March 26, 1914. Serial No. 76,955. PUBLISHED MAY 19, 1914.

98,455. PHOTOGRAVURES. AMERICAN ROTOGRAVURE COMPANY, New York, N. Y.
Filed January 26, 1914. Serial No. 75,423. PUBLISHED MAY 5, 1914.

98,456. CAMERAS, SHUTTERS, COMBINED PRINTING-MACHINE AND DARK-ROOM LAMPS, AND FILMS. ANSCO COMPANY, Binghamton, N. Y.
Filed February 18, 1914. Serial No. 75,977. PUBLISHED MAY 19, 1914.

98,457. CHEMICALS AND PREPARATIONS AND COMPOUNDS THEREOF USED IN PHOTOGRAPHIC PROCESSES. ANSCO COMPANY, Binghamton, N. Y.
Filed February 18, 1914. Serial No. 75,978. PUBLISHED MAY 19, 1914.

98,458. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 9, 1914. Serial No. 77,333. PUBLISHED MAY 19, 1914.

98,459. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 9, 1914. Serial No. 77,334. PUBLISHED MAY 19, 1914.

98,460. CIGAR AND GAS LIGHTING DEVICES IN WHICH A SPARK-PRODUCING ALLOY IS USED FOR IGNITING PURPOSES. LOUIS V. ARONSON, Newark, N. J.
Filed February 21, 1913. Serial No. 68,647. PUBLISHED MAY 12, 1914.

98,461. BREAD. ATLAS BREAD FACTORY, Milwaukee, Wis.
Filed January 26, 1914. Serial No. 75,421. PUBLISHED APRIL 21, 1914.

98,462. PLAYER-PIANOS, PIANO-PLAYERS, AND ACTIONS THEREFOR. AUTO PNEUMATIC ACTION CO., New York, N. Y.
Filed September 7, 1910. Serial No. 51,708. PUBLISHED FEBRUARY 17, 1914.

98,463. MECHANICAL APPARATUS FOR CLEANSING BEER-PIPES. THE BAEHR MANUFACTURING CO., Cleveland, Ohio.
Filed October 27, 1913. Serial No. 73,615. PUBLISHED MAY 19, 1914.

98,464. OIL-CLOTHS. C. M. BAILEY'S SONS & CO., Winthrop, Me.
Filed April 9, 1914. Serial No. 77,336. PUBLISHED MAY 19, 1914.

98,465. CONCENTRATED LIQUID MALT PREPARATION HAVING POWERFUL DIASTASIC PROPERTIES. P. BALLANTINE & SONS, Newark, N. J.
Filed April 21, 1914. Serial No. 77,612. PUBLISHED MAY 19, 1914.

98,466. WHEAT-FLOUR. BECKER & LANGENBERG MILLING COMPANY, Republic, Mo.
Filed February 2, 1914. Serial No. 75,602. PUBLISHED MAY 19, 1914.

98,467. WOOD, COAL, GAS, AND VAPOR STOVES AND FURNACES. ESTATE P. D. BECKWITH, INC., Dowagiac, Mich.
Filed November 28, 1913. Serial No. 74,227. PUBLISHED MAY 12, 1914.

98,468. HYGIENIC AND COSMETIC PREPARATIONS FOR THE HAIR. P. BEIERSDORF & CO., Hamburg, Germany.
Filed August 8, 1913. Serial No. 72,217. PUBLISHED MAY 12, 1914.

98,469. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. ST. LEGER BLACKWELL, Cleburne, Tex.
Filed March 10, 1914. Serial No. 76,487. PUBLISHED MAY 12, 1914.

98,470. MEDICINAL PREPARATION TO BE USED AS A TREATMENT FOR RHEUMATISM. HARVEY BLADES, Chambersburg, Pa.
Filed December 20, 1913. Serial No. 74,698. PUBLISHED MAY 12, 1914.

98,471. CANDY COUGH-DROPS. THE GEORGE BLOME & SON CO., Baltimore, Md.
Filed March 17, 1913. Serial No. 69,082. PUBLISHED MAY 27, 1913.

98,472. REMEDY FOR HEADACHE, RHEUMATISM, AND NEURALGIA. WALTER M. BROWN, Naches, Wash.
Filed March 31, 1914. Serial No. 77,091. PUBLISHED MAY 19, 1914.

98,473. NECKTIES, NECKSCARFS, JABOTS, BELTS FOR PERSONAL WEAR, GARTERS, SUSPENDERS, AND EDGINGS FOR WAISTCOATS. HENRY A. BUDD, New York, N. Y.
Filed March 23, 1914. Serial No. 76,839. PUBLISHED MAY 19, 1914.

98,474. COLD-CREAM. FRANK GAIUS BURKE, New York, N. Y.
Filed March 5, 1914. Serial No. 76,342. PUBLISHED MAY 12, 1914.

98,475. SUITS FOR CHILDREN. ELIZABETH S. CANNON, St. Louis, Mo.
Filed January 26, 1914. Serial No. 75,432. PUBLISHED MAY 19, 1914.

98,476. GINGHAMS AND COTTON PIECE GOODS. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed April 8, 1914. Serial No. 77,301. PUBLISHED MAY 19, 1914.

98,477. UNBLEACHED MUSLIN. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed April 8, 1914. Serial No. 77,302. PUBLISHED MAY 19, 1914.

98,478. WINE. CELLA BROTHERS, INC., New York, N. Y.
Filed April 21, 1914. Serial No. 77,618. PUBLISHED MAY 19, 1914.

98,479. REMEDIES FOR THE TREATMENT OF GOUT AND RHEUMATISM. CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany.
Filed April 1, 1914. Serial No. 77,118. PUBLISHED MAY 19, 1914.

98,480. ELECTRICITY-METERING APPARATUS. CHICAGO ELECTRIC METER COMPANY, Chicago, Ill.
Filed May 23, 1913. Serial No. 70,579. PUBLISHED MAY 19, 1914.

98,481. OIL-STOVES, OIL-HEATERS, AND PORTABLE STEEL OVENS, SAD-IRON HEATERS AND CABINETS. THE CLEVELAND FOUNDRY CO., Cleveland, Ohio.
Filed March 9, 1914. Serial No. 76,461. PUBLISHED MAY 12, 1914.

98,482. DENTAL CREAM. COLGATE & CO., Jersey City, N. J., and New York, N. Y.
Filed November 30, 1912. Serial No. 67,182. PUBLISHED MAY 12, 1914.

98,483. WHEAT-FLOUR. COLUMBIA STAR MILLING CO., Columbia, Ill.
Filed March 11, 1914. Serial No. 76,534. PUBLISHED MAY 19, 1914.

98,484. WHEAT-FLOUR. COLUMBIA STAR MILLING CO., Columbia, Ill.
Filed March 11, 1914. Serial No. 76,536. PUBLISHED MAY 19, 1914.

98,485. LINIMENT FOR EXTERNAL APPLICATION. NICHOLAS CONTOGENES, New York, N. Y.
Filed March 23, 1914. Serial No. 76,840. PUBLISHED MAY 19, 1914.

98,486. LADIES' COLLARS MADE OF NETS, LACES, LAWNS, ORGANDIES. TIMOTHY F. CROWLEY, INCORPORATED, New York, N. Y.
Filed April 8, 1914. Serial No. 77,300. PUBLISHED MAY 19, 1914.

98,487. BOILERS. GEORGE H. DERINGER, Minneapolis, Minn.
Filed March 9, 1914. Serial No. 76,462. PUBLISHED MAY 12, 1914.

98,488. CERTAIN NAMED MEDICAL AND SURGICAL INSTRUMENTS AND APPLIANCES. DEWITT & HERZ, Berlin, Germany.
Filed October 27, 1913. Serial No. 73,619. PUBLISHED MAY 19, 1914.

98,489. CERTAIN NAMED MEDICAL AND SURGICAL INSTRUMENTS AND APPLIANCES. DEWITT & HERZ, Berlin, Germany.
Filed October 27, 1913. Serial No. 73,620. PUBLISHED MAY 19, 1914.

98,490. LIQUID WALL-PAINT. DOZIER & GAY PAINT COMPANY, Jacksonville, Fla.
Filed September 2, 1913. Serial No. 72,615. PUBLISHED MAY 19, 1914.

98,491. MACARONI. DUNKIRK MACARONI CO., Dunkirk, N. Y.
Filed March 14, 1914. Serial No. 76,638. PUBLISHED MAY 19, 1914.

98,492. CANNED SYRUPS. RYLAND W. EAMES, Vale, Oreg.
Filed March 20, 1914. Serial No. 76,794. PUBLISHED MAY 19, 1914.

98,493. PHOTOGRAPHIC DRY-PLATES, SAFE LIGHTS, SAFE-LIGHT LAMPS, AND COLOR-SCREENS. EASTMAN KODAK CO., Rochester, N. Y.
Filed May 2, 1913. Serial No. 70,177. PUBLISHED MAY 19, 1914.

98,494. DICTATING-MACHINES. THOMAS A. EDISON, INCORPORATED, West Orange, N. J.
Filed March 6, 1914. Serial No. 76,394. PUBLISHED MAY 12, 1914.

98,495. SOUND RECORDING AND REPRODUCING APPARATUS. THOMAS A. EDISON, INCORPORATED, West Orange, N. J.
Filed March 6, 1914. Serial No. 76,395. PUBLISHED MAY 12, 1914.

98,496. SHOES MADE OF LEATHER, CANVAS, CLOTH, AND RUBBER. EMERY & MARSHALL CO., Haverhill, Mass.
Filed March 23, 1914. Serial No. 76,847. PUBLISHED MAY 19, 1914.

98,497. DIGESTIVE AND CORRECTIVE FOR STOMACH TROUBLE. JEROME L. FALCONER, New York, N. Y.
Filed April 2, 1914. Serial No. 77,150. PUBLISHED MAY 19, 1914.

98,498. WHEAT-FLOUR AND FEEDS MADE FROM CORN, WHEAT, OATS, OR OTHER GRAINS. FEDERAL MILLING COMPANY, Lockport, N. Y.
Filed March 19, 1914. Serial No. 76,769. PUBLISHED MAY 19, 1914.

98,499. WIRE, METALS IN CERTAIN NAMED FORMS, AND CERTAIN NAMED METAL CASTINGS AND FORGINGS. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany.
Filed November 1, 1913. Serial No. 73,730. PUBLISHED MAY 19, 1914.

98,500. CERTAIN NAMED ELECTRICAL APPARATUS, ACCESSORIES, AND SUPPLIES. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany.
Filed November 1, 1913. Serial No. 73,732. PUBLISHED MAY 19, 1914.

98,501. CERTAIN NAMED MACHINES AND PARTS THEREOF. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany.
Filed November 1, 1913. Serial No. 73,733. PUBLISHED MAY 19, 1914.

98,502. PNEUMATIC AND SOLID RUBBER VEHICLE-TIRES. THE FISK RUBBER COMPANY, Chicopee Falls, Mass.
Filed January 26, 1914. Serial No. 75,449. PUBLISHED MAY 5, 1914.

98,503. DISINFECTANT AND AIR-PURIFIER. HARRY V. FLAMHAFT, St. Louis, Mo.
Filed March 5, 1914. Serial No. 76,357. PUBLISHED MAY 19, 1914.

98,504. CHEWING-GUM. FRANK H. FLEER CORPORATION, Philadelphia, Pa.
Filed February 19, 1914. Serial No. 76,030. PUBLISHED MAY 19, 1914.

98,505. CHEWING-GUM. FRANK H. FLEER CORPORATION, Philadelphia, Pa.
Filed February 20, 1914. Serial No. 76,050. PUBLISHED MAY 19, 1914.

98,506. PREPARED ICINGS AND FONDANT-CREAMS. FRENCH FONDANT CO., Philadelphia, Pa.
Filed March 19, 1914. Serial No. 76,708. PUBLISHED MAY 19, 1914.

98,507. WASHING FLUID. GAFFNEY BROTHERS, New York, N. Y.
Filed March 13, 1914. Serial No. 76,602. PUBLISHED MAY 12, 1914.

98,508. MALT EXTRACTS. GEHE & CO., AKTIENGESELLSCHAFT, Dresden, Germany.
Filed January 10, 1913. Serial No. 67,819. PUBLISHED MAY 19, 1914.

98,509. LUBRICATING OILS AND GREASES. GENERAL OIL MANUFACTURING COMPANY, New York, N. Y.
Filed February 12, 1913. Serial No. 68,515. PUBLISHED MAY 19, 1914.

98,510. DRESS, NEGLIGÉE, AND WORK SHIRTS. HENRY GERHARDT, Hazleton, Pa.
Filed April 4, 1914. Serial No. 77,203. PUBLISHED MAY 19, 1914.

98,511. LUBRICATING-OILS, MINERAL OILS USED FOR ALL KINDS OF LUBRICATING PURPOSES. GIBBS-BROWN OIL & GASOLINE COMPANY, St. Louis, Mo.
Filed February 4, 1914. Serial No. 75,673. PUBLISHED MAY 19, 1914.

98,512. PREPARATION FOR THE TREATMENT OF HEADACHE AND RHEUMATISM. GEORGE G. GIBSON, Philadelphia, Pa.
Filed December 4, 1913. Serial No. 74,359. PUBLISHED MAY 19, 1914.

98,513. AUTOMOBILE TRUSS-RODS FOR PROTECTING REAR HOUSING AND WHEELS FROM SPREADING. VIOLA V. GILKES, Philadelphia, Pa.
Filed March 31, 1914. Serial No. 77,101. PUBLISHED MAY 19, 1914.

98,514. SWITCHES, WALL-SWITCHES, SOCKETS, AND PULL-SOCKETS. GORDON ELECTRIC & MFG. CO., Chicago, Ill.
Filed April 10, 1914. Serial No. 77,375. PUBLISHED MAY 19, 1914.

98,515. CANNED FRUITS, CANNED VEGETABLES, CANNED FISH, EVAPORATED VEGETABLES, AND COFFEE. GROSSFELD & ROE CO., Chicago, Ill.
Filed February 20, 1914. Serial No. 76,051. PUBLISHED MAY 19, 1914.

98,516. SOLIDIFIED LINIMENT. HALL & WENCK, Rochester, N. Y.
Filed March 19, 1914. Serial No. 76,770. PUBLISHED MAY 19, 1914.

98,517. DUPLICATING APPARATUS. THE HEKTOGRAPH MFG. & DUPLICATING CO., New York, N. Y.
Filed December 11, 1913. Serial No. 74,517. PUBLISHED MARCH 24, 1914.

98,518. HERB SALVE PREPARATION. BARBARA HENDEL, Middle Village, N. Y.
Filed January 9, 1914. Serial No. 75,055. PUBLISHED MAY 19, 1914.

98,519. ELASTIC RUBBER ROOF-CEMENT. THE ESTATE OF J. G. HETZEL, Newark, N. J.
Filed February 25, 1914. Serial No. 76,136. PUBLISHED MAY 19, 1914.

98,520. CANDY. NAPOLEON HILL, Chicago, Ill.
Filed February 2, 1914. Serial No. 75,611. PUBLISHED MAY 19, 1914.

98,521. BOILER-CLEANING COMPOUND. THE HILL & GRIFFITH CO., Cincinnati, Ohio.
Filed April 7, 1914. Serial No. 77,284. PUBLISHED MAY 19, 1914.

98,522. BLOCK SUGAR. JEROME HIRSHFELD, New York, N. Y.
Filed February 14, 1914. Serial No. 75,896. PUBLISHED MAY 19, 1914.

98,523. COFFEE. JOHN HOFFMANN & SONS CO., Milwaukee, Wis.
Filed March 16, 1914. Serial No. 76,683. PUBLISHED MAY 19, 1914.

98,524. SCOURING-SOAP. THE HOLBROOK MFG. CO., Jersey City, N. J.
Filed February 13, 1914. Serial No. 75,886. PUBLISHED MAY 12, 1914.

98,525. NECKTIES. WILLIAM HOLLINS & COMPANY, LIMITED, London, England.
Filed April 10, 1913. Serial No. 69,699. PUBLISHED MAY 19, 1914.

98,526. SELF-RISING FLOUR. HOPKINSVILLE MILLING CO., Hopkinsville, Ky.
Filed January 10, 1914. Serial No. 75,091. PUBLISHED MAY 19, 1914.

98,527. CANNED SALMON AND CLAMS. HOQUIAM PACKING COMPANY, Hoquiam, Wash.
Filed January 10, 1914. Serial No. 75,087. PUBLISHED MAY 19, 1914.

98,528. DRINK OR SUBSTITUTE FOR COFFEE. BENNO HUBER, Seattle, Wash.
Filed January 14, 1914. Serial No. 75,178. PUBLISHED MAY 19, 1914.

98,529. CURED AND FRESH HAMS, SHOULDERS, (PICNIC;) BACKS, BELLIES, BUTTS, JOWLS, AND SIDES, (BACON.) INDIANAPOLIS ABATTOIR COMPANY, Indianapolis, Ind.
Filed April 11, 1912. Serial No. 62,848. PUBLISHED MAY 19, 1914.

98,530. CERTAIN NAMED FOODS. INDIANAPOLIS ABATTOIR COMPANY, Indianapolis, Ind.
Filed April 11, 1912. Serial No. 62,849. PUBLISHED MAY 19, 1914.

98,531. SHORTENING. INTERSTATE COTTON OIL REFINING CO., Sherman, Tex.
Filed February 2, 1914. Serial No. 75,613. PUBLISHED MAY 19, 1914.

98,532. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED AILMENTS. B. F. JACKSON, Arcade, N. Y.
Filed August 26, 1913. Serial No. 72,528. PUBLISHED MAY 12, 1914.

98,533. EYEGLASS-REELS. GEO. S. JOHNSTON COMPANY, Chicago, Ill.
Filed March 9, 1914. Serial No. 76,468. PUBLISHED MAY 19, 1914.

98,534. ANTISEPTIC TABLETS AND ANTISEPTIC VAGINAL SUPPOSITORIES. JOHN H. KEGEL, Chicago, Ill.
Filed March 14, 1914. Serial No. 76,647. PUBLISHED MAY 19, 1914.

98,535. CERTAIN MEDICINES AND REMEDIES FOR CERTAIN NAMED DISEASES. THE KING COMPANY, Rockford, Ill.
Filed June 6, 1913. Serial No. 70,902. PUBLISHED MAY 12, 1914.

98,536. TOILET SOAP. JAMES S. KIRK & COMPANY, Chicago, Ill.
Filed January 5, 1914. Serial No. 74,973. PUBLISHED MAY 5, 1914.

98,537. CHEESE. LAKE ZURICH CREAMERY CO., Palatine, Ill.
Filed January 29, 1914. Serial No. 75,531. PUBLISHED MAY 19, 1914.

98,538. CERTAIN NAMED ELECTRICALLY-HEATED COOKING UTENSILS, SHAVING-MUGS, AND THE LIKE. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed February 27, 1914. Serial No. 76,217. PUBLISHED MAY 19, 1914.

98,539. CANNED VEGETABLES, SAUER-KRAUT, AND PORK AND BEANS. THE H. T. LANGE CO., Eau Claire, Wis.
Filed March 23, 1914. Serial No. 76,862. PUBLISHED MAY 19, 1914.

98,540. CHEWING-GUM. L. P. LARSON, JR., CO., Chicago, Ill.
Filed February 3, 1914. Serial No. 75,652. PUBLISHED MAY 19, 1914.

98,541. REMEDY FOR CATARRH AND ASTHMA. JACOB A. LE BLANC, Lynn, Mass.
Filed March 24, 1914. Serial No. 76,902. PUBLISHED MAY 12, 1914.

98,542. AERATED BEVERAGES. AGUSTIN FORTUNY LLOPART, Barcelona, Spain.
Filed December 22, 1913. Serial No. 74,782. PUBLISHED MAY 19, 1914.

98,543. PREPARATION FOR THE TREATMENT OF DROPSY. ANNA A. LOECK, Colton, S. D.
Filed February 10, 1914. Serial No. 75,824. PUBLISHED MAY 12, 1914.

98,544. BISCUITS, CAKES, AND COOKIES. LOOSE-WILES BISCUIT COMPANY, Boston, Mass.
Filed May 25, 1912. Serial No. 63,801. PUBLISHED MAY 19, 1914.

98,545. SKIN-BALM, FACE-CREAM, LIQUID FACE-DRESSING, ROUGE, DEPILATORY, HAIR AND SCALP TONIC, AND SHAMPOO PREPARATION. MARY JOSEPHINE MARTIN, Portland, Oreg.
Filed May 12, 1913. Serial No. 70,380. PUBLISHED MAY 12, 1914.

98,546. COTTON PIECE GOODS. MASSACHUSETTS COTTON MILLS, Lowell, Mass.
Filed April 16, 1914. Serial No. 77,512. PUBLISHED MAY 19, 1914.

98,547. SARDINES. MENZEL & Co., New York, N. Y.
Filed October 31, 1913. Serial No. 73,713. PUBLISHED MARCH 31, 1914.

98,548. REMEDY FOR INDIGESTION. NEAL TABLET COMPANY, Newton, Mass.
Filed March 5, 1914. Serial No. 76,374. PUBLISHED MAY 12, 1914.

98,549. MEDICINES MADE IN TABLET, POWDER, OR LIQUID FORM FOR CERTAIN NAMED AILMENTS. THE NEW YORK PHARMACAL ASSOCIATION, Yonkers, N. Y.
Filed March 27, 1912. Serial No. 62,454. PUBLISHED JULY 15, 1913.

98,550. HAND-CLEANING COMPOUND. JOSEPH T. NORMAN, Nanticoke, Pa.
Filed May 15, 1913. Serial No. 70,433. PUBLISHED MAY 5, 1914.

98,551. STOVE-POLISH. NU-SHINE M'F'G. Co., Arlington, N. J.
Filed March 19, 1914. Serial No. 76,775. PUBLISHED MAY 12, 1914.

98,552. NUTS AND NUT-MEATS, BOTH RAW AND PREPARED. THE NUT HOUSE, Seattle, Wash.
Filed December 16, 1913. Serial No. 74,641. PUBLISHED MAY 19, 1914.

98,553. MEAT-SAUCE. THE OLD VINCENNES PRESERVING COMPANY, Vincennes, Ind.
Filed October 8, 1913. Serial No. 73,266. PUBLISHED MAY 19, 1914.

98,554. HAIR-GROWER AND REMOVER OF DANDRUFF. AURELIA SERAFINA O'MAHONEY, Boston, Mass.
Filed December 15, 1913. Serial No. 74,605. PUBLISHED MAY 19, 1914.

98,555. CULTIVATORS AND GRAIN-CULTIVATORS. TIMOTHY LEO O'NEIL, La Salle, Ill.
Filed April 11, 1913. Serial No. 69,729. PUBLISHED MAY 19, 1914.

98,556. ANTISEPTIC VETERINARY LINIMENT. PEARSON'S ANTISEPTIC COMPANY, LTD., London, England.
Filed March 28, 1912. Serial No. 62,484. PUBLISHED MAY 19, 1914.

98,557. BISCUITS. PEEK, FREAN & Co., LIMITED, London, England.
Filed March 7, 1914. Serial No. 76,448. PUBLISHED MAY 19, 1914.

98,558. LAXATIVE TABLETS. GEO. C. PIERCE, Kansas City, Mo.
Filed November 15, 1912. Serial No. 66,923. PUBLISHED MAY 19, 1914.

98,559. GLASS CHIMNEYS AND GLASS GLOBES. PITTSBURGH LAMP, BRASS & GLASS COMPANY, Pittsburgh, Pa.
Filed December 17, 1913. Serial No. 74,658. PUBLISHED MAY 12, 1914.

98,560. CANDY. POWELL'S, New York, N. Y.
Filed July 17, 1913. Serial No. 71,815. PUBLISHED NOVEMBER 11, 1913.

98,561. TANNERS' BARK, QUEBRACHO-BARK, TANNING EXTRACTS, CORROSIVES, AND CATECHU-TANNIC ACID. L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany.
Filed February 6, 1914. Serial No. 75,730. PUBLISHED MAY 19, 1914.

98,562. TANNERS' BARK, QUEBRACHO-BARK, TANNING EXTRACTS, CORROSIVES, AND CATECHU-TANNIC-ACID PRESERVER FOR LEATHER. L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany.
Filed February 6, 1914. Serial No. 75,733. PUBLISHED MAY 19, 1914.

98,563. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. CHARLES PROFUMO, New Orleans, La.
Filed March 21, 1914. Serial No. 76,820. PUBLISHED MAY 12, 1914.

98,564. REMEDY FOR HEADACHE AND NEURALGIA. B. C. REMEDY COMPANY, Durham, N. C.
Filed March 20, 1914. Serial No. 76,788. PUBLISHED MAY 12, 1914.

98,565. MEDICAMENTS FOR TREATING HAIR. ANGEL J. RISTORCELLI, New York, N. Y.
Filed March 30, 1914. Serial No. 77,074. PUBLISHED MAY 19, 1914.

98,566. MEDICAMENTS FOR TREATING HAIR. ANGEL J. RISTORCELLI, New York, N. Y.
Filed March 30, 1914. Serial No. 77,075. PUBLISHED MAY 19, 1914.

98,567. KERCHIEFS AND HANDKERCHIEFS. J. ROBINSON & COMPANY, New York, N. Y.
Filed March 27, 1914. Serial No. 77,003. PUBLISHED MAY 19, 1914.

98,568. SAWS AND SAW-BLADES. ROBERT RÖNTGEN, Remscheid, Germany.
Filed March 24, 1913. Serial No. 69,301. PUBLISHED MAY 19, 1914.

98,569. WOVEN TEXTILE DRIVING-BELTS AND WOVEN TEXTILE MACHINE-BELTING. ROSSENDALE-REDDAWAY BELTING & HOSE Co., Newark, N. J.
Filed December 18, 1913. Serial No. 74,679. PUBLISHED MAY 12, 1914.

98,570. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed April 9, 1914. Serial No. 77,358. PUBLISHED MAY 19, 1914.

98,571. FOOD-CABINETS. LOUIS T. SCHUBERTH, Chicago, Ill.
Filed March 27, 1914. Serial No. 77,007. PUBLISHED MAY 12, 1914.

98,572. WHEAT-FLOUR. SCHULTZ, BAUJAN & Co., Beardstown, Ill.
Filed March 23, 1914. Serial No. 76,879. PUBLISHED MAY 19, 1914.

98,573. WHEAT-FLOUR. THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo.
Filed March 30, 1914. Serial No. 77,113. PUBLISHED MAY 19, 1914.

98,574. SOAP, SCOURING-POWDER, WASH-DAY COMPOUNDS, WINDOW-CLEANERS, FLOOR-CLEANERS, WALL-PAPER CLEANERS, METAL-POLISH. JOHN SEXTON & COMPANY, Chicago, Ill.
Filed September 16, 1912. Serial No. 65,789. PUBLISHED APRIL 1, 1913.

98,575. CERTAIN NAMED PRODUCTS OF RUBBER MANUFACTURE. WILLIAM B. SHELP, Houston, Tex.
Filed December 9, 1913. Serial No. 74,481. PUBLISHED MAY 12, 1914.

98,576. SUBSTITUTE FOR COFFEE. SIMAS, VASCONCELLOS & Co., New Bedford, Mass.
Filed December 11, 1911. Serial No. 60,176. PUBLISHED MAY 19, 1914.

98,577. COTTON-SEED. W. A. SIMPKINS, Raleigh, N. C.
Filed July 9, 1913. Serial No. 71,627. PUBLISHED MAY 12, 1914.

98,578. FOOT-POWDERS. GEORGE A. SIPP COMPANY, Weehawken, N. J.
Filed April 8, 1914. Serial No. 77,316. PUBLISHED MAY 19, 1914.

98,579. JEWELRY FOR PERSONAL ADORNMENT. SLOAN & COMPANY, Newark, N. J., and New York, N. Y.
Filed April 17, 1914. Serial No. 77,548. PUBLISHED MAY 19, 1914.

98,580. REMEDIES FOR PNEUMONIA, PILES, HEADACHE, BROW AGUE, AND BURNS. HELEN WAKEMAN SMITH, Watkins, N. Y.
Filed January 12, 1912. Serial No. 60,773. PUBLISHED MAY 19, 1914.

98,581. FLOWER, GRASS, VEGETABLE, AND FIELD SEEDS. SPRINGFIELD SEED COMPANY, Springfield, Mo.
Filed September 17, 1913. Serial No. 72,924. PUBLISHED FEBRUARY 3, 1914.

98,582. JEWELRY FOR PERSONAL WEAR. STANDARD NECKCHAIN COMPANY, Providence, R. I.
Filed March 21, 1914. Serial No. 76,827. PUBLISHED MAY 19, 1914.

98,583. KEROSENE-LAMPS. STANDARD OIL CO. OF NEW YORK, New York, N. Y.
Filed February 19, 1914. Serial No. 76,041. PUBLISHED MAY 12, 1914.

98,584. REMEDY FOR ECZEMA, RINGWORM, PIMPLES, ITCH, SKIN IRRITATION AND INFLAMMATION. CHARLES M. STEIN, New York, N. Y.
Filed April 6, 1914. Serial No. 77,256. PUBLISHED MAY 19, 1914.

98,585. WOOLEN PIECE GOODS. S. STEIN & Co., New York, N. Y.
Filed May 17, 1910. Serial No. 49,772. PUBLISHED JULY 16, 1912.

98,586. COVER-PAPER IN SHEETS. O. M. STEINMAN, INC., New York, N. Y.
Filed July 22, 1913. Serial No. 71,891. PUBLISHED MAY 19, 1914.

98,587. TOOTH-POWDER. WILLIAM STONES, Manchester, England.
Filed March 5, 1914. Serial No. 76,381. PUBLISHED MAY 19, 1914.

98,588. SARDINES. THE SUNSET PACKING COMPANY, West Pembroke, Me., and New York, N. Y.
Filed March 28, 1914. Serial No. 77,033. PUBLISHED MAY 19, 1914.

98,589. WHEAT-FLOUR. CHARLES TIEDEMANN MILLING COMPANY, O'Fallon, Ill.
Filed February 12, 1914. Serial No. 75,879. PUBLISHED MAY 19, 1914.

98,590. WHEAT-FLOUR. CHARLES TIEDEMANN MILLING Co., O'Fallon, Ill.
Filed February 27, 1914. Serial No. 76,224. PUBLISHED MAY 19, 1914.

98,591. CIGARS. H. TRAISER & COMPANY, INCORPORATED, Boston, Mass.
Filed March 28, 1912. Serial No. 62,460. PUBLISHED MAY 12, 1914.

98,592. ENVELOPS. 2-B-TWEEN ENVELOPE Co., Washington, D. C.
Filed December 17, 1913. Serial No. 74,660. PUBLISHED MAY 19, 1914.

98,593. MOVING-PICTURE FILMS. UNIVERSAL FILM MANUFACTURING COMPANY, New York, N. Y.
Filed April 13, 1914. Serial No. 77,458. PUBLISHED MAY 19, 1914.

98,594. MOVING-PICTURE FILMS. UNIVERSAL FILM MANUFACTURING COMPANY, New York, N. Y.
Filed April 13, 1914. Serial No. 77,459. PUBLISHED MAY 19, 1914.

98,595. SMOKING-TOBACCO, CIGARS, AND CIGARETTES. ARSÈNE J. VAN EXEM, New York, N. Y.
Filed January 15, 1914. Serial No. 75,210. PUBLISHED MAY 12, 1914.

98,596. CERTAIN NAMED MEASURING INSTRUMENTS, CALCULATING-MACHINES, AND THE LIKE. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,762. PUBLISHED MAY 19, 1914.

98,597. ARTIFICIAL FLOWERS. NORTHAM WARREN, New York, N. Y.
Filed April 13, 1914. Serial No. 77,467. PUBLISHED MAY 19, 1914.

98,598. DANDRUFF REMEDY. THE R. L. WATKINS COMPANY, Cleveland, Ohio.
Filed March 9, 1914. Serial No. 76,486. PUBLISHED MAY 12, 1914.

98,599. CLOTHING—NAMELY, MACKINAWS, WOOLEN SHIRTS, STORM-VESTS, AND TROUSERS. THE LAWRENCE WEBSTER Co., Malone, N. Y.
Filed June 10, 1913. Serial No. 71,002. PUBLISHED MAY 19, 1914.

98,600. INCANDESCENT INVERTED GAS-LAMPS AND BURNERS AND MANTLES USED IN CONNECTION THEREWITH. WELSBACH COMPANY, Gloucester City, N. J.
Filed January 17, 1911. Serial No. 53,941. PUBLISHED MAY 5, 1914.

98,601. CARTRIDGES, EMPTY SHELLS, PRIMERS, AND SHOT. THE WESTERN CARTRIDGE Co., Alton, Ill.
Filed June 13, 1912. Serial No. 64,166. PUBLISHED MAY 19, 1914.

98,602. CHEWING AND SMOKING TOBACCO. WEYMAN-BRUTON COMPANY, New York, N. Y.
Filed January 24, 1913. Serial No. 68,105. PUBLISHED MAY 12, 1914.

98,603. COOLING COMPOUND FOR CUTTING AND GRINDING. THE WHITE & BAGLEY COMPANY, Worcester, Mass.
Filed January 15, 1914. Serial No. 75,218. PUBLISHED MAY 12, 1914.

98,604. ALSIKE-SEED, ALFALFA-SEED, LAWN-SEEDS, SEED-GRAIN, AND SEED-CORN. WHITNEY-ECKSTEIN SEED Co., Buffalo, N. Y.
Filed December 6, 1913. Serial No. 74,426. PUBLISHED MAY 5, 1914.

98,605. SOAP. MILLARD F. WINDSOR, Buffalo, N. Y.
Filed December 6, 1913. Serial No. 74,431. PUBLISHED MAY 12, 1914.

98,606. ATHLETIC KNIT GOODS—NAMELY, SWEATERS AND JERSEYS. WILLIAM H. WYE, Needham, Mass.
Filed February 27, 1914. Serial No. 76,227. PUBLISHED MAY 19, 1914.

98,607. FRESH FRUITS. YAKIMA VALLEY FRUIT GROWERS ASSOCIATION, North Yakima, Wash.
Filed July 2, 1912. Serial No. 64,543. PUBLISHED AUGUST 20, 1912.

98,608. WHEAT-FLOUR. ZABEL & SON, Lanesville, Ind.
Filed January 15, 1914. Serial No. 75,219. PUBLISHED MAY 19, 1914.

98,609. FILTER MASSE. CHARLES ZOLLER Co., New York, N. Y.
Filed July 5, 1913. Serial No. 71,550. PUBLISHED SEPTEMBER 23, 1913.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

INTERNATIONAL UNION FOR THE PROTECTION OF INDUSTRIAL PROPERTY.

Convention of the Union of Paris, March 20, 1883, for the Protection of Industrial Property.

Revised at Brussels December 14, 1900, and at Washington June 2, 1911.

His Majesty the Emperor of Germany, King of Prussia, in the name of the German Empire; His Majesty the Emperor of Austria, King of Bohemia, etc., and King Apostolic of Hungary, for Austria and for Hungary; His Majesty the King of the Belgians; the President of the United States of Brazil; the President of the Republic of Cuba; His Majesty the King of Denmark; the President of the Dominican Republic; His Majesty the King of Spain; the President of the United States of America; the President of the French Republic; His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Territories Beyond the Seas, Emperor of India; His Majesty the King of Italy; His Majesty the Emperor of Japan; the President of the United States of Mexico; His Majesty the King of Norway; Her Majesty the Queen of the Netherlands; the President of the Provisional Government of the Republic of Portugal; His Majesty the King of Servia; His Majesty the King of Sweden; the Federal Council of the Swiss Confederation; the Government of Tunis:

Having judged it expedient to make certain modifications and additions to the International Convention of March 20, 1883, concerning the creation of an International Union for the Protection of Industrial Property, revised at Brussels December 14, 1900, have named for their plenipotentiaries, to wit:

His Majesty the Emperor of Germany, King of Prussia: M. le Dr. Haniel von Haimhausen, Conseiller de l'Ambassade de S. M. l'Empereur d'Allemagne à Washington; M. Robolski, Conseiller supérieur de Régence, Conseiller rapporteur au Département Impérial de l'Intérieur; M. le Prof. Dr. Albert Osterrieth;

His Majesty the Emperor of Austria, King of Bohemia, etc., and King Apostolic of Hungary: For Austria and for Hungary: S. Exc. M. le Baron Ladislas Hengelmuller de Hengervár, son Conseiller intime son Ambassadeur extraordinaire et plénipotentiaire à Washington. For Austria: S. Exc. M. le Dr. Paul Chevalier Beck de Mannagetta et Lerchenau, S. Conseiller intime, Chef de Section au Ministère I. R. des Travaux publics et Président de l'Office I. R. des Brevets d'invention. For Hungary: M. Elemér de Pompéry, Conseiller ministériel à l'Office Royal hongrois des Brevets d'invention;

His Majesty the King of the Belgians: M. Jules Brunet, Directeur général au Ministère des Affaires étrangères; M. Georges de Ro, Sénateur suppléant, Délégué de la Belgique aux Conférences pour la protection de la Propriété industrielle de Madrid et de Bruxelles; M. Albert Capitaine, Avocat à la Cour d'appel de Liège;

The President of the United States of Brazil: M. R. de Lima e Silva, Chargé d'Affaires des États-Unis du Bresil à Washington;

The President of the Republic of Cuba: S. Exc. M. Rivero, Envoyé extraordinaire et Ministre plénipotentiaire de Cuba à Washington;

His Majesty the King of Denmark: M. Martin J. C. T. Clan, Consul Général du Danemark à New York;

The President of the Dominican Republic: S. Exc. M. Emilio C. Joubert, Envoyé extraordinaire et Ministre plénipotentiaire de la République Dominicaine à Washington;

His Majesty the King of Spain: S. Exc. Don Juan Riaño y Gayangos, S. Envoyé extraordinaire et Ministre plénipotentiaire à Washington; S. Exc. Don Juan Florez Posada, Directeur de l'École des ingénieurs de Madrid;

The President of the United States of America: M. Edward Bruce Moore, Commissioner of Patents; M. Frederick P. Fish, Avocat à la Cour suprême des États-Unis et à la Cour suprême de l'État de New York; M. Charles H. Duell, ancien Commissaire des brevets, ancien Juge à la Cour d'appel du District de Colombie, Avocat à la Cour suprême des États-Unis et à la Cour suprême de l'État de New York; M. Robert H. Parkinson, Avocat à la Cour suprême des États-Unis et à la Cour suprême de l'État de l'Illinois; M. Melville Church, Avocat à la Cour suprême des États-Unis;

The President of the French Republic: M. Lefèvre-Pontalis, Conseiller de l'Ambassade de la République française à Washington; M. Georges Breton, Directeur de l'Office national de la Propriété industrielle; M. Michel Pelletier, Avocat à la Cour d'appel de Paris, Délégué aux Conférences pour la protection de la Propriété industrielle de Rome, de Madrid, et de Bruxelles; M. Georges Maillard, Avocat à la Cour d'appel de Paris;

His Majesty the King of the United Kingdom of Great Britain, Ireland and the British Territories Beyond the Seas, Emperor of India: M. Alfred Mitchell Innes, Conseiller de l'Ambassade de S. M. Britannique à Washington; Sir Alfred Bateman, K. C. M. G., ancien Comptroller General of Commerce, Labor and Statistics; M. W. Temple Franks, Comptroller General of Patents, Designs, and Trade-Marks;

His Majesty the King of Italy: Nob. Lazzaro dei Marchesi Negrotto Cambiaso, Conseiller de l'Ambassade de S. M. le Roi d'Italie à Washington; M. Emilo Venezian, Ingénieur, Inspecteur du Ministère de l'Agriculture, du Commerce et de l'Industrie; M. le Dr. Giovanni Battista Ceccato, Attaché commercial à l'Ambassade de S. M. le Roi d'Italie à Washington;

His Majesty the Emperor of Japan: M. K. Matsui, Conseiller de l'Ambassade de S. M. l'Empereur du Japon à Washington; M. Morio Nakamatau, Directeur de l'Office des brevets;

The President of the United States of Mexico: M. José de las Fuentes, Ingénieur, Directeur de l'Office des brevets;

His Majesty the King of Norway: M. L. Aubert, Secrétaire de la Légation de S. M. le Roi de Norvège à Washington;

Her Majesty the Queen of the Netherlands: M. le Dr. F. W. J. G. Snyder van Wissenkerke, Directeur de l'Office de la Propriété industrielle, Conseiller au Ministère de la Justice;

The President of the Provisional Government of the Republic of Portugal: S. Exc. le Vicomte de Alte, Envoyé extraordinaire et Ministre plénipotentiare du Portugal à Washington;

His Majesty the King of Servia;

His Majesty the King of Sweden: S. Exc. M. le Comte Albert Ehrensvärd, son Envoyé extraordinaire et Ministre plénipotentiare à Washington;

The Federal Council of the Swiss Confederation: S. Exc. M. Paul Ritter, Envoyé extraordinaire et Ministre plénipotentiare de Suisse à Washington; M. W. Kraft, Adjoint du Bureau Federal de la Propriété intellectuelle à Berne; M. Henri Martin, Secrétaire de la Légation de Suisse à Washington;

The President of the French Republic for Tunis: M. de Peretti de la Rocca, Premier Secrétaire de l'Ambassade de la République française à Washington;

Who, after having been given their full respective powers, made in good and due form, have agreed upon the following articles:

ARTICLE 1. The contracting countries constitute a State of Union for the Protection of Industrial Property.

ART. 2. The subjects or citizens of each of the contracting countries shall enjoy in all the other countries of the Union, with regard to patents of invention, models of utility, industrial designs or models, trade-marks, trade-

names, the statements of place of origin, suppression of unfair competition, the advantages which the respective laws now grant or may hereafter grant to the citizens of that country. Consequently, they shall have the same protection as the latter and the same legal remedies against any infringements of their rights, provided they comply with the formalities and requirements imposed by the national laws of each State upon its own citizens. Any obligation of domicile or of establishment in the country where the protection is claimed shall not be imposed on the members of the Union.

ART. 3. The subjects or citizens of countries which do not form part of the Union, who are domiciled or own effective and *bona fide* industrial or commercial establishments in the territory of any of the countries of the Union, shall be assimilated to the subjects or citizens of the contracting countries.

ART. 4. (*a*) Any person who shall have duly filed an application for a patent, utility model, industrial design or model, or trade-mark, in one of the contracting countries, or the successor or assignee of such person shall enjoy, for the purpose of filing application in the other countries, and subject to the rights of third parties, a right of priority during the periods hereinafter specified.

(*b*) Consequently, the subsequent filing in one of the other countries of the Union, prior to the expiration of such periods, shall not be invalidated by acts performed in the interval, especially, by another application by publication of the invention or the working of the same, by the sale of copies of the design or model, nor by the use of the mark.

(*c*) The periods of priority above referred to shall be twelve months for patents and models of utility, and four months for industrial designs and models, as also for trade-marks.

(*d*) Whoever shall wish to avail himself of the priority of an anterior filing, shall be required to make a declaration showing the date and the country of this filing. Each country shall determine at what moment, at the latest, this declaration must be executed. This information shall be mentioned in the publications issued by the competent Administration, particularly on patents and the specifications relative thereto. The contracting countries shall require of one who makes a declaration of priority the production of a copy of the application (specification, drawings, etc.) previously filed, certified to be a true copy by the Administration which shall have received it. This copy shall be dispensed from any legalization. It may be required that it be accompanied by a certificate of the date of filing, issuing from this Administration, and of a translation. Other formalities shall not be required for the declaration of priority at the time of the filing of the application. Each contracting country shall determine the consequences of the omission of the formalities prescribed by the present article, unless these consequences exceed the loss of the right of priority.

(*e*) Later other justifications can be demanded.

ART. 4½. Patents applied for in the different contracting countries by persons admitted to the benefit of the Convention in the terms of articles 2 and 3, shall be independent of the patents obtained for the same invention in the other countries, adherent or not to the Union.

This provision shall be understood in an absolute manner, particularly in the sense that the patents applied for during the term of priority are independent, as much from the point of view of the causes of nullity and of forfeiture as from the point of view of the normal duration.

It applies to all patents existing at the time of entrance into force.

It shall be likewise, in case of accession of new countries for patents existing on both sides at the time of accession.

ART. 5. The importation, by the patentee, into the country where the patent has been granted, of articles manufactured in any of the countries of the Union shall not entail forfeiture.

However, the patentee shall be obliged to work his patent according to the laws of the country into which he introduces the patented objects, but with the restriction that the patent shall not be liable to forfeiture because of non-working in one of the countries of the Union until after a term of three years, from the date of the filing of the application in that country, and only in case the patentee shall fail to show sufficient cause for his inaction.

ART. 6. Every trade-mark regularly registered in the country of origin shall be admitted to registration and protected as that in the other countries of the Union.

However, there may be refused or invalidated:

(1) Marks which are of a nature to infringe rights acquired by third parties in the country where protection is claimed.

(2) Marks devoid of all distinctive character, or even composed exclusively of signs or data which may be used in commerce, to designate the kind, quality, quantity, destination, value, place of origin of the products, or the time of production, or become common in the current language or the legal and steady customs of commerce of the country where the protection is claimed.

In the estimation of the distinctive character of a mark, all the circumstances existing should be taken into account, particularly the duration of the use of the mark.

(3) Marks which are contrary to morals and public order.

The country where the applicant has his principal establishment shall be considered as the country of origin.

If this principal establishment is not located in one of the countries of the Union, that to which the applicant belongs shall be considered as country of origin.

ART. 7. The nature of the product on which the trade-mark is to be applied cannot, in any case, be an obstacle to the filing of the mark.

ART. 7½. The contracting countries agree to admit for filing and to protect marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if these associations do not possess an industrial or commercial establishment.

Each country shall be judge of the special conditions under which an association may be admitted to have the marks protected.

ART. 8. Trade-names shall be protected in all the countries of the Union without the obligation of filing, whether it be a part or not of a trade-mark.

ART. 9. Any product bearing illegally a trade-mark or a trade-name shall be seized at importation in those of the countries of the Union in which this mark or this trade-name may have a right to legal protection.

If the laws of a country do not admit of seizure on importation, the seizure shall be replaced by prohibition of importation.

The seizure shall be likewise effected in the country where illegal affixing shall have been made, or in the country into which the product shall have been imported.

The seizure shall be made at the request of the public ministry, or any other competent authority, or by an interested party, individual or society, in conformity to the interior laws of each country.

The authorities shall not be required to make the seizure in transit.

If the laws of a country admit neither of the seizure on importation nor the prohibition of importation, nor seizure in said country, these measures shall be replaced by the acts and means which the law of such country would assure in like case to its own citizens.

ART. 10. The provisions of the preceding article shall be applicable to any product bearing falsely, as indication of place of production, the name of a definite locality, when this indication shall be joined to a fictitious or borrowed trade-name with an intention to defraud.

The interested party is considered any producer, manufacturer or merchant, engaged in the production, manufacture or commerce of such product, and established either in the locality falsely indicated as place of production or in the region where this locality is situated.

ART. 10½. All the contracting countries agree to assure to the members of the Union an effective protection against unfair competition.

ART. 11. The contracting countries shall accord, in conformity with their national laws, a temporary protection to patentable inventions, working models, industrial models or designs, as well as to trade-marks, for products exhibited at international expositions, official or officially recognized, organized in the territory of one of them.

ART. 12. Each of the contracting countries agrees to establish a special service for industrial property and a central office for the communication to the public of patents, working models, industrial models or designs and trade-marks. This service shall publish, as often as possible, an official periodical.

ART. 13. The International Office instituted at Berne under the name of "Bureau international pour la protection de la propriété industrielle" is placed under the high authority of the Government of the Swiss Confederation, which regulates its organization and supervises its operation.

The International Bureau shall centralize information of any nature relative to the protection of industrial property, and form it in a general statistical report which shall be distributed to all Administrations. It shall proceed to considerations of common utility interesting to the Union and shall edit, with the aid of the documents put at its disposal by the different Administrations, a periodical in the French language on questions concerning the object of the Union.

Numbers of this periodical, like all the documents published by the International Bureau, shall be distributed among the Administrations of the countries of the Union, in proportion to the number of contributive units mentioned below. Copies and supplementary documents which shall be requested, either by the said Administrations, or by societies or individuals, shall be paid for separately.

The International Bureau shall hold itself at all times at the disposition of the members of the Union, to furnish them special information of which they may have need, on the questions relative to the international service of industrial property. It shall make an annual report of its management which shall be communicated to all members of the Union.

The official language of the International Bureau shall be French.

The expense of the International Bureau shall be borne in common by the contracting countries. They may not, in any case, exceed the sum of sixty thousand francs per year.

In order to determine the contributive part of each of the countries in this sum-total of the expenses, the contracting countries and those which later join the Union shall be divided into six classes, each contributing in proportion to a certain number of units, to wit:

	Units.
Class 1	25
Class 2	20
Class 3	15
Class 4	10
Class 5	5
Class 6	3

These coefficients shall be multiplied by the number of countries of each class, and the sum of the products thus obtained will furnish the number of units by which the total expenses are to be divided. The quotient will give the amount of the unit of expense.

Each of the contracting countries shall designate at the time of its accession, the class in which it wishes to be ranked.

The Government of the Swiss Confederation shall supervise the expenses of the International Bureau, make necessary advances and draw up annual statements of accounts which shall be communicated to all the other Administrations.

ART. 14. The present Convention shall be submitted to periodical revisions with a view to introducing improvements in it of a nature to perfect the system of the Union.

To this end Conferences of the delegates of the contracting countries shall be held successively in one of the said countries.

The Administration of the country where the Conference is to be held shall prepare, with the concurrence of the International Bureau, the works of such Conference.

The Director of the International Bureau will assist at the meetings of the Conferences and take part in the discussions without a vote.

ART. 15. It is understood that the contracting countries reserve to themselves respectively the right to make separately, between themselves, special arrangements for the protection of industrial property, in so far as these arrangements may not interfere with the provisions of the present Convention.

ART. 16. The countries which have not taken part in the present Convention shall be permitted to adhere to it upon their request.

Notice of adhesion shall be made through diplomatic channels to the Government of the Swiss Confederation, and by the latter to all the others.

It shall entail complete adhesion to all the clauses and admission to all the advantages stipulated by the present Convention, and shall take effect one month after the notification made by the Government of the Swiss Confederation to the other unionist countries, unless a later date shall have been indicated by the adhering country.

ART. 16½. The contracting countries have the right to adhere at any time to the present Convention for their colonies, possessions, dependencies, and protectorates, or for certain ones of them.

They may, to this end, either make a general declaration by which all their colonies, possessions, dependencies and protectorates are included in the adherence, or expressly name those included therein, or simply indicate those excluded from it.

This declaration shall be made in writing to the Government of the Swiss Confederation and by the latter made to all the others.

The contracting countries can, under like conditions, renounce the Convention for their colonies, possessions, dependencies and protectorates, or for certain ones of them.

ART. 17. The fulfilment of the reciprocal obligations contained in the present Convention is subordinated, in so far as need be, to compliance with the formalities and regulations established by the constitutional laws of those of the contracting countries which are bound to secure the application of the same which they engage to do with the least possible delay.

ART. 17½. The Convention shall remain in force an indefinite time, until the expiration of one year from the day when the renunciation shall be made.

This renunciation shall be addressed to the Government of the Swiss Confederation. It shall affect only the country giving such notice, the Convention remaining operative as to the other contracting countries.

ART. 18. The present act shall be ratified, and the ratifications filed in Washington, at the latest, April 1, 1913. It shall be put into execution, among the countries which shall have ratified it, one month after the expiration of this period of time.

This act, with its Final Protocol, shall replace, in the relations of the countries which shall have ratified it: the Convention of Paris, March 20, 1883; the Final Protocol annexed to that act; the Protocol of Madrid, April 15, 1891, relating to the dotation of the International Bureau, and the Additional Act of Brussels, December 14, 1900. However, the acts cited shall remain binding on the countries which shall not have ratified the present act.

ART. 19. The present act shall be signed in a single copy, which shall be filed in the archives of the Government of the United States. A certified copy shall be sent by the latter to each of the unionist Governments.

In witness whereof, the respective plenipotentiaries have signed the present act.

Done at Washington, in a single copy, the second day of June, 1911.

For Germany: Haniel von Haimhausen, H. Roboiski, Albert Osterrieth. For Austria and for Hungary: L. Baron de Hengelmuller, Ambassadeur d'Autriche-Hongrie. For Austria: Dr. Paul Chevalier Beck de Mannagetta et Lerchenau, Chef de Section et Président de l'Office I. R. des Brevets d'invention. For Hungary: Elemér de Pompéry, Conseiller ministériel à l'Office Royal hongrois des Brevets d'invention. For Belgium: J. Brunet, Georges de Ro, Capitaine. For Brazil: R. de Lima e Silva. For Cuba: Antonio Martin Rivero. For Denmark: J. Clan. For the Dominican Republic: Emilio C. Joubert. For Spain: Juan Riaño y Gayangos, J. Florez Posada. For the United States of America: Edward Bruce Moore, Melville Church, Charles H. Duell, Robt. H. Parkinson, Frederick P. Fish. For France: Pierre Lefèvre-Pontalis, G. Breton, Michel Pelletier, Georges Maillard. For Great Britain: A. Mitchell Innes, A. E. Bateman, W. Temple Franks. For Italy: Lazzaro Negrotto Cambiaso, Emilio Venezian, G. B. Ceccato. For Japan: K. Matsui, Morio Nakamatsu. For the United States of Mexico: J. De las Fuentes. For Norway: Ludwig Aubert. For the Netherlands: Snyder van Wissenkerke. For Portugal: J. F. H. M. da Franca, Vte. D'Alte. For Servia: ——— ———. For Sweden: Albert Ehrensvärd. For Switzerland: P. Ritter, W. Kraft, Henri Martin. For Tunis: E. de Peretti de la Rocca.

FINAL PROTOCOL.

At the time of the proceeding to the signing of the act concluded on this day, the undersigned plenipotentiaries are agreed upon the following:

To ARTICLE 1. The words "Propriété industrielle" (industrial property) shall be taken in their broadest acceptation; they extend to all production in the domain of agricultural industries (wines, grains, fruits, animals, etc.), and extractives (minerals, mineral waters, etc.).

To ART. 2. (*a*) Under the name of patents are comprised the different kinds of industrial patents admitted by the laws of the contracting countries, such as patents of importation, patents of improvement, etc., for the processes as well as for the products.

(*b*) It is understood that the provision in article 2 which dispenses the members of the Union from obligation of domicile and of establishment has an interpretable character, and must, consequently, be applied to all the rights granted by the Convention of March 20, 1883, before the entrance into force of the present act.

(*c*) It is understood that the provisions of article 2 do not infringe the laws of each of the contracting countries, in regard to the procedure followed before the courts and the competency of those courts, as well as the election of domicile or the declaration of the selection of an attorney required by the laws on patents, working models, marks, etc.

To ART. 4. It is understood that, when an industrial model or design shall have been filed in a country by virtue of the right of priority based on the filing of a working model, the term of priority shall be only that which article 4 has fixed for industrial models and designs.

To ART. 6. It is understood that the provision of the first paragraph of article 6 does not exclude the right to require of the depositor a certificate of regular registration in the country of origin, issued by competent authority.

It is understood that the use of badges, insignia or public decorations which shall not have been authorized by competent powers, or the use of official signs and stamps of control and of guaranty adopted by a unionist country, may be considered as contrary to public order in the sense of No. 3 of article 6.

However, marks, which contain, with the authorization of competent powers, the reproduction of badges, decorations or public insignia, shall not be considered as contrary to public order.

It is understood that a mark shall not be considered as contrary to public order for the sole reason that it is not in conformity with some provision of laws on marks except in the case where such provision itself concerns public order.

The present Final Protocol, which shall be ratified at the same time as the act concluded on this day, shall be considered as forming an integral part of this act, and shall be of like force, value and duration.

In witness whereof the respective plenipotentiaries have signed the present Protocol.

Done at Washington, in a single copy, June 2, 1911.

Haniel von Haimhausen, H. Robolski, Albert Osterrieth, L. Baron de Hengelmuller, Dr. Paul Chevalier Beck de Mannagetta et Lerchenau, Elemér Pompéry, J. Brunet, Georges de Ro, Capitaine, R. De Lima e Silva, J. Clan, Juan Riaño y Gayangos, J. Florez Posada, Edward Bruce Moore, Melville Church, Charles H. Duell, Frederick P. Fish, Robt. H. Parkinson, Emilio C. Joubert, Pierre Lefèvre-Pontalis, Michel Pelletier, G. Breton, Georges Maillard, A. Mitchell Innes, A. E. Bateman, W. Temple Franks, Lazzaro Negrotto Cambiaso, Emilio Venezian, G. B. Ceccato, K. Matsui, Morio Nakamatsu, J. De las Fuentes, Snyder van Wissenkerke, J. F. H. M. Da Franca, Vte. D'Alte, Albert Ehrensvärd, P. Ritter, W. Kraft, Henri Martin, E. De Peretti de la Rocca, Ludwig Aubert, Antonio Martin Rivero.

And whereas the said Convention has been duly ratified by the United States of America, Germany, Austria-Hungary, the Dominican Republic, Spain, the French Republic, Great Britain, Italy, Japan, the United Mexican States, Norway, the Netherlands, Portugal, Switzerland and Tunis, and the ratifications were deposited with the Government of the United States, on the first day of April, one thousand nine hundred and thirteen;

Now, therefore, be it known that I, WOODROW WILSON, President of the United States of America, have caused the said Convention to be made public, to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this twenty-ninth day of April, in the year of our Lord, one thousand nine hundred and thirteen, and of the Independence of the United States of America the one hundred and thirty-seventh.

[SEAL.] WOODROW WILSON.

By the President:

JOHN B. MOORE,
Acting Secretary of State.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Ufford dress-form patent, No. 908,910, *Held* not infringed. *Hall-Borchert Dress Form Co.* v. *Ellanam Adjustable Dress Form Co.*, 213 Fed. Rep., 341.

(U. S. D. C.) The Meissner patent, No. 529,236, for a furnace-grate, construed and *Held* not infringed. *Meissner* v. *Westinghouse Mach. Co.*, 213 Fed. Rep., 485.

(U. S. C. C. A.) The Ehrlich patent, No. 560,089, for a cash-register, claim 18 *Held* void as too broad and claims 1, 2, 19, 24, 25, 36, and 37 not infringed. *National Cash Register Co.* v. *Gratigny*, 213 Fed. Rep., 463.

(U. S. C. C. A.) The Morgan patent, No. 632,020, for a furnace for heating ingots or billets preparatory to rolling, *Held* valid and infringed. *Morgan Const. Co.* v. *Forter-Miller Engineering Co.*, 213 Fed. Rep., 451.

(U. S. C. C. A.) The D'Arcy patent, No. 726,817, for a spring-cushion structure, claims 1 and 2 *Held* void for anticipation and lack of patentable invention. *D'Arcy* v. *Sheffield Car Co.*, 213 Fed. Rep., 483.

(U. S. C. C. A.) The Victor patent, No. 863,120, for gearing for washing-machines, *Held* valid and infringed. *Horton Mfg. Co.* v. *White Lily Mfg. Co.*, 213 Fed. Rep., 471.

(U. S. D. C.) The Tilt patent, No. 988,229, for a shock-absorber for automobiles, *Held* valid and infringed by the device of the Jacquet patent, No. 1,015,682. *Blackledge* v. *J. M. Shock Absorber Co.*, 213 Fed. Rep., 478.

(U. S. C. C. A.) The Coldwell-Gildard reissue patent, No. 11,923, claim 23, for a warp stop-motion for looms, *Held* valid and claim 25 invalid as not for the same invention disclosed in the original patent, No. 637,234. *Stafford Co.* v. *Coldwell-Gildard Co.*, 213 Fed. Rep., 468.

Disclaimers.

1,082,523.—*Harry A. Hoke* and *Clarence J. Barley*, Altoona, Pa. PISTON-PACKING. Patent dated December 30, 1913. Disclaimer filed July 10, 1914, by the patentees.

"Enter this disclaimer to, and disclaim the entire subject matter claimed in, said Letters Patent."

854,670.—*Frederik Vilhelm Schödt*, Copenhagen, Denmark. APPARATUS FOR THE EXTRACTION OF DUST FROM CARPETS AND OTHER ARTICLES. Patent dated May 21, 1907. Disclaimer filed July 11, 1914, by the assignee, *Patents Selling & Exporting Company, Aktieselskab.*

Enters its disclaimer—

"Of the claims numbered 9 and 11 of said patent, which are in the following words:

"9. In dust extracting apparatus, a suction mouthpiece, means for drawing dust and air therethrough, means for absorbing the dust in a relatively large quantity of liquid in advance of the outlet of said dust and air drawing means, such apparatus having means for discharging the liquid containing the dust out of the apparatus, in such manner so as to avoid clogging of the apparatus.

"11. In dust extracting apparatus, a pump for drawing dust and air therethrough, means for introducing substantially continuously into the apparatus a relatively large quantity of liquid sufficient to slime the dust, but insufficient to break the vacuum, such apparatus maintaining a body of liquid through which the air is compelled to rise before it is discharged by the pump and means for discharging the dust laden liquid out of the apparatus."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 9, 1914.

Joseph G. Hibbs, Jr., his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Isaac A. Sheppard & Co., of Fourth street and Montgomery avenue, Philadelphia, Pa., the application of Josephine L. Hibbs, (trading as E. A. Hibbs,) William L. Levis, Charles U. Levis, and Thomas J. Close, executors of said Josephine L. Hibbs, deceased, of northeast corner of Bread and Quarry streets, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered August 30, 1881, No. 8,613, to Joseph G. Hibbs, Jr., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Joseph G. Hibbs, Jr., at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph G. Hibbs, Jr., his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 2, 1914.

The Leib Lubricating Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of William E. Benson, 353 Minnesota street, St. Paul, Minn., for registration of a trade-mark and trade-mark registered March 13, 1883, No. 10,114, to The Leib Lubricating Company, 196–198 Chicago street, Buffalo, N. Y., and a notice of such declaration sent by registered mail to said The Leib Lubricating Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Leib Lubricating Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 204—No. 4. TUESDAY, JULY 28, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 28, 1914	1015
PANAMA-PACIFIC EXPOSITION	1015
ADVERSE DECISIONS IN INTERFERENCE	1015
APPLICATIONS UNDER EXAMINATION	1016
PATENTS GRANTED	1017
REISSUES	1310
DESIGNS	1314
TRADE-MARKS—REGISTRATION APPLIED FOR	1323
TRADE-MARK REGISTRATIONS GRANTED	1339
TRADE-MARK REGISTRATIONS RENEWED	1342
TRADE-MARK REGISTRATIONS CANCELED	1342
LABELS AND PRINTS	1343
COMMISSIONER'S DECISIONS—	
Ex parte Wahrmann	1345
Ex parte Sanford	1346
Ex parte McCollum	1346
DECISIONS OF THE U. S. COURTS—	
Schmidt v. Tait	1347
ADJUDICATED PATENTS	1348
INTERFERENCE NOTICES	1348

ISSUE OF JULY 28, 1914.

Patents	837—	No. 1,104,760 to No. 1,105,596,	inclusive.
Designs	39—	No. 46,157 to No. 46,195,	inclusive.
Trade-Marks	117—	No. 98,610 to No. 98,726,	inclusive.
Labels	15—	No. 17,864 to No. 17,878,	inclusive.
Prints	11—	No. 3,680 to No. 3,690,	inclusive.
Reissues	4—	No. 13,780 to No. 13,783,	inclusive.
Total	1023		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	2	North Carolina	2	3
Arizona	....	....	North Dakota	6	....
Arkansas	5	....	Ohio	50	6
California	31	4	Oklahoma	9	....
Colorado	8	....	Oregon	2	1
Connecticut	26	5	Pennsylvania	89	11
Delaware	3	....	Rhode Island	10	....
Florida	4	....	South Carolina	2	....
Georgia	5	....	South Dakota	2	....
Idaho	2	....	Tennessee	3	2
Illinois	91	16	Texas	17	....
Indiana	19	2	Utah	6	....
Iowa	14	1	Vermont	2	....
Kansas	7	....	Virginia	8	....
Kentucky	7	3	Washington	19	1
Louisiana	6	....	West Virginia	2	....
Maine	3	....	Wisconsin	13	2
Maryland	11	7	Wyoming	2	....
Massachusetts	51	9			
Michigan	31	1	Alaska, District of	....	....
Minnesota	12	2	Canal Zone	....	....
Mississippi	1	....	District of Columbia	10	1
Missouri	18	4	Hawaii Territory	3	....
Montana	2	....	Philippine Islands	....	....
Nebraska	8	....	Porto Rico	....	....
Nevada	....	1	U. S. Army	....	....
New Hampshire	1	....	U. S. Navy	....	....
New Jersey	34	3			
New Mexico	1	1	Total to residents of the United States	772	129
New York	110	41			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	1	....
Austria-Hungary	5	....	Newfoundland	....	....
Belgium	2	....	New South Wales	1	....
British India	....	....	New Zealand	....	2
Brazil	....	....	Norway	1	....
British West Indies	....	....	Portugal	....	....
Canada	15	....	Queensland	....	....
Colombia	....	....	Roumania	....	....
Cuba	....	1	Russia	1	....
Denmark	....	....	Scotland	....	....
Dominican Republic	....	....	South Australia	1	....
Dutch East India	....	....	Spain	1	....
England	21	5	Sweden	1	....
France	11	3	Switzerland	2	....
Germany	35	2	Transvaal, South Africa	1	....
Greece	....	....	Wales	1	....
Guatemala	....	....	Western Australia	1	....
Ireland	1	....			
Italy	1	....	Total to residents of foreign countries	104	13
Japan	1	....			
Mexico	....	....			

Panama-Pacific Exposition.

In compliance with the provisions of the act approved September 18, 1913, (H. R. 7595, Public No. 14,) a branch office of the United States Patent Office has been opened at San Francisco, Cal., for the purpose of issuing certificates of proprietorship, as provided in said act.

THOMAS EWING,
Commissioner.

Adverse Decisions in Interference.

PATENT NO. 698,614.

On June 13, 1914, a decision was rendered that Jacob C. Wolfe was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 698,614, for type-writing and adding machines, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 705,409.

On June 18, 1914, a decision was rendered that Oscar L. Ingram was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 705,409, for accounting attachments for type-writers, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 894,170.

On June 24, 1914, a decision was rendered that Nathaniel G. Warth was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 6, 12, 16, 19, 20, 22, and 23 of his Patent No. 894,170, for telephone repeater systems, and no appeal having been taken within the time allowed such decision has become final.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 25, 1914.

Room No	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	June 6	563
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 2	June 16	528
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 7	July 21	77
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Feb. 10	July 2	655
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 22	June 8	417
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 30	June 12	562
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 15	June 3	583
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 14	June 26	1116
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 6	May 29	593
235	10. Carriages and Wagons	Mar. 20	June 18	883
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 11	June 16	311
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 14	June 1	1037
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 6	June 25	436
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 16	June 26	521
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 19	June 25	990
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	May 15	723
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 18	June 26	217
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 9	June 17	266
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 2	June 2	333

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 24	June 8	399
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 7	June 5	425
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 9	240
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 3	May 14	486
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 9	June 19	595
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 15	June 17	272
106	26. Electricity, Generation; Motive Power	Sept. 15	May 21	835
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 2	June 10	488
65	28. Internal-Combustion Engines	Mar. 25	June 23	610
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 8	June 19	480
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 4	June 23	273
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 11	June 4	359
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 9	626
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	June 10	337
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 4	401
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 9	June 25	569
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 9	June 12	623
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 7	June 18	719
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 11	June 19	677
321	39. Water Distribution	Mar. 23	June 8	540
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	June 15	1078
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 15	June 26	449
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 4	June 22	382
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 3	340

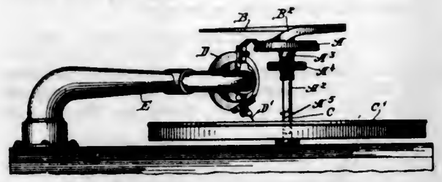
Oldest new case, Sept. 15; oldest amended, May 14.
Total number of applications awaiting action 23,014

Room No.		Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 22	June 3	933
	Designs	June 18	June 29	247
	Labels and Prints	July 10	July 11	87

PATENTS

GRANTED JULY 28, 1914.

1,104,760. REPEATING DEVICE FOR DISK TALKING-MACHINES. LAWRENCE ABRAHAM, New York, N. Y. Filed Dec. 26, 1913. Serial No. 808,711. (Cl. 181—3.)



1. In a repeating device for talking machines the combination with a revolving disk support and a movable needle supporting arm adapted for horizontal and vertical movement with respect to the disk, of an annular track member in a plane parallel to said disk and concentric with the axis thereof, a spiral track taking off from the inner face of said annular track rising over the same and extending in a plane above the plane of the annular track to a point a predetermined distance from the said annular track and means for supporting said annular and spiral tracks and revolving them in unison with said disk support.

2. In a repeating device for talking machines the combination with a revolving disk support and a movable needle supporting arm adapted for horizontal and vertical movement with respect to the disk of an annular track member in a plane parallel to said disk and concentric with the axis thereof, a spiral track taking off from the inner face of said annular track, rising over the same and extending in a plane above the plane of the annular track to a point a predetermined distance from the said annular tracks, means for supporting said annular and spiral tracks and revolving them in unison with said disk support, and means carried by said needle arm adapted to engage said annular track and ride upon said spiral track to lift said needle and carry it outward to the starting point of said record.

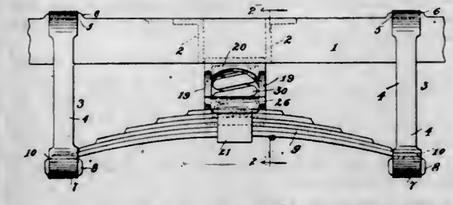
3. In a repeating device for talking machines the combination with a revolving disk support and a movable needle supporting arm adapted for horizontal and vertical movement with respect to the disk of a circular track and a spiral track adapted to coöperate, each in a different plane, means for revolubly supporting said tracks a predetermined distance above said disk, a movable pawl pivotally supported on said needle support and adapted to engage and ride upon said tracks and means for limiting the movement of said pawl.

4. In a repeating device for talking machines the combination with a revolving disk support and a movable needle supporting arm adapted for horizontal and vertical movement with respect to the disk of a circular track having a beveled outer face and a connected spiral track each in a different plane, the inner end of said spiral track dipping to the plane of said circular track on the inner face thereof, means for adjustably supporting said circular and spiral tracks at a predetermined distance above the disk, and movable means carried by the needle support adapted to coöperate with said tracks to lift the needle at the end of a record and carry it to the starting point, substantially as described.

5. In a repeating device for talking machines the combination with a revolving disk support and a movable needle supporting arm adapted for horizontal and vertical movement with respect to the disk of a circular track beveled on its outer face and lying in a plane parallel to and above said disk, a spiral track in a plane above said circular track, and having its inner end inclined and brought to the level of said circular track and coincident with the inner face thereof, the outer end of said spiral track being located at a predetermined radial distance from said circular track, means for supporting said tracks and revolving the same in unison with the disk and a pivoted pawl supported upon said needle arm in position to engage the beveled face of said circular track and ride up the same and engage and follow said spiral track whereby the needle is lifted at the end of the record of a disk and carried to the starting point automatically.

[Claims 6 to 9 not printed in the Gazette.]

1,104,761. CAR-TRUCK. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 5, 1913. Serial No. 788,191. (Cl. 105—239.)



1. In a car truck, the combination with a truck frame, body supporting springs supported on the truck frame, a truck bolster, links or spring seats extending from the said body supporting springs and movably connected with the bolster, and further springs extending between the links or spring seats and the bolster at a point between the body supporting springs and the said movable connection.

2. In a car truck, the combination with a truck frame, body supporting springs supported on the truck frame outside of the wheel gage, a truck bolster, links or spring seats extending from the said body supporting springs and movably connected with the bolster, and further springs extending between the links or spring seats and the bolster at a point within the wheel gage and between the body supporting springs and the said movable connection.

3. In a car truck, the combination with a truck frame, leaf springs supported on the truck frame, links or spring seats extending from the leaf springs, a truck bolster, means for movably connecting the inner ends of the said links or spring seats with the bolster, and a spring extending between said links or spring seats and the bolster at a point between said leaf springs and said movable connection.

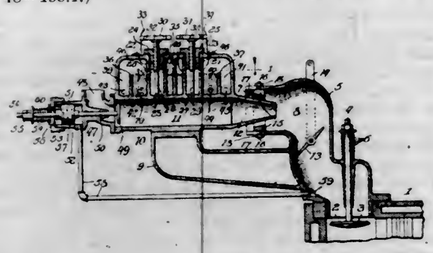
4. In a car truck, the combination with a truck frame, longitudinally disposed leaf springs supported on the truck frame, links or spring seats extended inwardly from the spring seats, a cross bolster, means for movably connecting the bolster with said links, and a spring extending between each of said links and the bolster at a point between the leaf springs and said movable connection.

5. In a car truck, the combination with a truck frame, longitudinally disposed leaf springs supported by the truck frame, links or spring seats extending inwardly from said

leaf springs, a cross bolster, means for movably connecting the bolster to said links, and an upwardly disposed spiral spring extending between each of said links and the bolster at a point between the leaf springs and said movable connection.

[Claims 6 to 10 not printed in the Gazette.]

1,104,762. CARBURETER. GUSTAV A. F. AHLBERG, Chicago, Ill. Filed Nov. 28, 1910. Serial No. 594,522. (Cl. 48—155.1.)



1. A carbureter comprising carbureting and mixing-chambers, each having an air inlet and a mixture discharge outlet, the discharge outlet of said carbureting-chamber leading into said mixing-chamber, said carbureting-chamber being provided with a fuel inlet and being adapted to vary its fuel feed in conformity to the varying degree of vacuum therein, means, operable from without said carbureter, for regulating the volume of fluid to be admitted to said mixing chamber and means, controllable by the vacuum in advance of said regulating means in said mixing-chamber for varying the area of the air inlet to said carbureting-chamber.

2. A carbureter comprising carbureting and mixing-chambers, the first for mixing fuel and air and the second for mixing the mixture so obtained with an increased volume of air, said carbureting-chamber being provided with an air inlet, a fuel inlet and a mixture outlet, the latter leading to said mixing-chamber, said mixing-chamber being in turn provided with an induction and a discharge opening, the former of which is open to the atmosphere, means, operable from without said carbureter for controlling the volume of fluid to be admitted to said mixing-chamber, means for normally maintaining a minimum opening in the air passage leading to said carbureting chamber and vacuum controlled means governable by a vacuum formed in advance of the regulating-valve of said mixing-chamber for varying the area of said air-opening to said carbureting chamber.

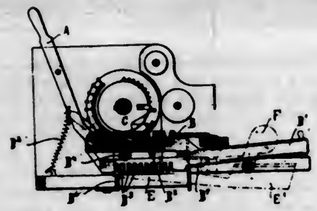
3. A carbureter comprising carburetnig and mixing chambers, each having an air inlet and a mixture discharge outlet, the discharge outlet of said carbureting chamber leading into said mixing-chamber, said carbureting-chamber being provided with a fuel inlet and being adapted to vary its fuel feed in conformity to the varying degree of vacuum therein, means, operable from without said carbureter, for regulating the volume of fluid to be admitted to said mixing-chamber, means for normally adjusting the relative area of the air openings leading to said respective carbureting and mixing-chambers to produce an air and fuel mixture of predetermined quality when a maximum quantity of air is admitted to said mixing-chamber and means controllable by the vacuum in advance of said regulating means in said mixing-chamber for varying the area of the air inlet to said carbureting-chamber.

4. A carbureter, comprising a carbureting-chamber having air and fuel inlets adjusted with respect to each other to produce a mixture of excessive richness and a discharge nozzle, a pipe communicating with the atmosphere to form an induction conduit as well as a mixing-chamber, the discharge nozzle of said carbureting chamber being projected into the open end thereof with a space between the two to form an injector, a regulating valve within said mixing-chamber operable from without, for restricting the passage therein and regulating the volume of fluid admitted thereto, and means controllable by the vacuum in advance of said regulating-valve in said mixing-chamber for varying the area of the air inlet to said carbureting-chamber.

5. A carbureter, comprising a carbureting chamber having air and fuel inlets and a discharge nozzle, means for governing the maximum flow of fuel to said chamber, a conduit communicating with the atmosphere to form an induction passage as well as a mixing-chamber, the discharge nozzle of said carbureting-chamber being projected into the open end thereof with a space between the two for the inflow of atmospheric air, a regulating-valve within said mixing-chamber, operable from without, for restricting the passage therein and regulating the volume of fluid admitted thereto, and means, controllable by the vacuum in advance of said regulating-valve in said mixing-chamber for varying the air inlet to said carbureting-chamber.

[Claim 6 not printed in the Gazette.]

1,104,763. SETTING-GEAR FOR CALCULATING-MACHINES. WILHELM AUGUSTIN, Charlottenburg, Germany. Filed Apr. 2, 1913. Serial No. 758,319. (Cl. 235—73.)



1. In a calculating machine, a rotatable setting wheel, a manually operable slide arranged therebelow, means intermediate said slide and wheel for transmitting motion from the slide to the wheel, and manually operable means for rendering said transmitting means inoperative.

2. In a calculating machine, a rotatable setting wheel, pins carried thereby, a spring-influenced toothed slide arranged below said wheel and adapted to engage said pins, and means for depressing the slide whereby the latter is thrown out of engagement with the pins.

3. In a calculating machine, a rotatable setting wheel, pins carried thereby, a spring-influenced toothed slide arranged below said wheel and adapted to engage said pins, a horizontally oscillatable lever, and means controlled by said lever for depressing the slide whereby the latter is thrown out of engagement with the pins.

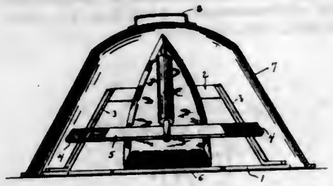
4. In a calculating machine, a rotatable setting wheel, pins carried thereby, a spring-influenced toothed slide arranged below said wheel and adapted to engage said pins, a horizontally oscillatable lever, means controlled by said lever for depressing the slide whereby the latter is thrown out of engagement with the pins, and means for holding the depressed slide against longitudinal displacement.

5. In a calculating machine, a rotatable setting wheel, pins carried thereby, a spring-influenced toothed slide arranged below said wheel and adapted to engage said pins, a horizontally oscillatable lever, means controlled by said lever for depressing the slide whereby the latter is thrown out of engagement with the pins, and means for returning the slide to its zero position.

[Claims 6 and 7 not printed in the Gazette.]

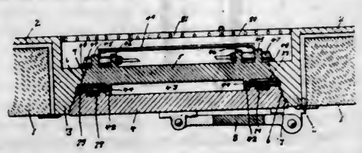
1,104,764. FLAT-IRON HOLDER. MARY A. BAIRD, Sterling, Ill. Filed June 30, 1911. Serial No. 636,286. (Cl. 126—227.)

A device of the class named, comprising an angular metal base, the bars of which are provided with outwardly projected ledges; legs projecting upwardly and inwardly from said base, at the angles thereof; an angular frame supported at its angles by the upper ends of said legs; and a frame fixed to said legs midway their ends, and comprising bars some of which lie outside of and parallel with



the bars of said angular frame, and spaced apart therefrom.

1,104,765. DOOR CONSTRUCTION FOR VAULTS AND THE LIKE. HARRY F. BALOUN, Cleveland, Ohio, assignor of one-half to Lansford F. Sherry, Canton, Ohio. Filed Jan. 5, 1914. Serial No. 810,497. (Cl. 109—4.)



1. For vaults and the like, an inner door and an outer door, independent locking means for each of said doors for independently locking the same to the jamb, the locking means of the outer door adapted to connect the inner door and outer door together, when said locking means is in the fully retracted position, and to permit separation of said doors when said locking means is in the partially retracted position, and said inner door provided with safety locking means adapted to assume two alternative positions, one in which said means connects the inner and outer doors together without locking said inner door to the jamb and the other in which said means locks said inner door to the jamb, while permitting said doors to be separated from each other.

2. For vaults and the like, an inner door and an outer door, independent locking means for each of said doors for independently locking the same to the jamb, the locking means of the outer door adapted to connect the inner door and outer door together, when said locking means is in the fully retracted position, and to permit separation of said doors when said locking means is in the partially retracted position, and said inner door provided with safety locking means adapted to assume two alternative positions, one in which said means connects the inner and outer doors together without locking said inner door to the jamb and the other in which said means locks said inner door to the jamb, while permitting said doors to be separated from each other, and means for normally preventing said safety locking means from being actuated except when said doors are in locked position in the jamb.

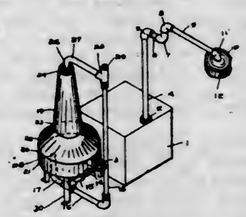
3. For vaults and the like, inner and outer doors, the inner door, on its outer face, provided with an outwardly projecting flange, and the outer door provided, on its inner face, with an inwardly projecting flange, said flanges adapted to assume telescopic relation when said doors are in the closed position in the jamb, said flanges provided with registering bolt apertures, locking bolts slidably mounted within said apertures and adapted to assume an extended locked position wherein said bolts engage said jamb, but do not engage the flange of the inner door, an intermediate position, in which said bolts do not engage either said jamb or said flange of said inner door and a fully retracted position in which they extend into the apertures of the flange on the inner door, but do not engage said jamb, and means for actuating said bolts.

4. For vaults and the like, inner and outer doors, each door provided with independent locking means for locking the same to the jamb, said doors adapted to be removed from said jamb in connected condition, said outer door adapted to be removed from said jamb independent of said inner door, said inner door provided with safety bolt-work adapted to be actuated to assume two alternative positions, one in which said inner door is freed from said outer doors, but locked to the jamb, and the other, in which said inner door is freed from said jamb, but connected to said outer door and safety bolt-actuating means on said outer door adapted to move into and out of operative connection with said safety bolt mechanism on the inner door, as said outer door is moved respectively toward and from said inner door.

5. For vaults and the like, inner and outer doors provided with concentric telescoping flanges on their adjacent faces, and one of said doors provided with locking bolts adapted to assume three several positions, the first in which said bolts engage only the flanges of one door, the second in which said bolts engage the flanges of said door and the jamb and the third in which said bolts engage the flanges of both doors.

[Claims 6 to 10 not printed in the Gazette.]

1,104,766. YEAST-TESTER. ARTHUR JOHN BANKS, St. Lambert, Quebec, Canada. Filed Aug. 4, 1913. Serial No. 782,928. (Cl. 23—30.)



1. In a yeast tester, a gage glass, a vessel adjacent to said gage glass and connected therewith at the upper and lower ends, a liquid receptacle communicating with the connections between said gage glass and said vessel at the lower end and having a gas inlet at the upper end, a gas generator, a support for said generator, and connections from said support to said gas inlet.

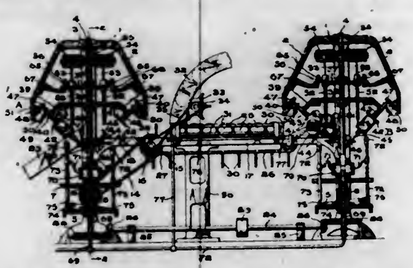
2. In a yeast tester, a gage glass, a vessel associated with said gage glass and having its side wall converging from the bottom to the top, said vessel being at the bottom connected with said gage glass and at the top connected with said gage glass, a liquid receptacle having an outlet at the lower end thereof connected with the lower connections of said gage glass and said vessel, and a gas inlet at the upper end, a container for the yeast and fermentable substance, a support for said container, and pipes leading from said container to said gas inlet.

3. In a yeast tester, a gage glass, a vessel associated with said gage glass and adjacent thereto, said vessel having a base portion and a side wall converging inwardly to an upper reduced portion, the side wall of said upper reduced portion converging to the top, a pipe communicating from the top of said vessel to said gage glass, a pipe communicating from the bottom of said vessel to said gage glass, a liquid receptacle having an outlet at the lower end thereof and a gas inlet at the upper end, a pipe having a cut off valve intermediate of the length thereof connecting said outlet to said lower connection between the vessel and the gage glass, a pipe leading from said gas inlet and having a laterally extending branch at the upper end thereof, a pipe having its socket at the outer end swinging at the end of said branch pipe, a yeast container and a valve in the joint between said branch pipe and said swinging pipe.

4. In a yeast tester, in combination, a liquid receptacle having a gas inlet at the upper end and a liquid outlet at the lower end, a vessel supported on a level with the level of the liquid in said receptacle and having sides tapering from the lower end to the upper end, a connection between said outlet and said vessel, a gage glass connected to the top of said vessel and to the bottom of said vessel

through the connection to said liquid receptacle, a stand pipe extending upwardly from said gas inlet, a swinging arm in pipe form having a socket at the end thereof, and a flask held in said socket.

1,104,767. CAN-SOLDERING MACHINE. HENRY S. BECHTEL, Philadelphia, Pa. Filed Dec. 10, 1913. Serial No. 805,684. (Cl. 113—76.)



1. A can soldering machine comprising a frame, a vertical shaft supported in the frame, and a circular series of can clamps carried by the shaft, a table fixed to the frame below the series of clamps, a cam on the table, a relatively large gear fixed to turn with the shaft and located below the series of clamps and above the table, and a series of burners carried by the gear and movable by the cam toward and away from the can clamps, substantially as described.

2. A can soldering machine comprising a frame, a vertical shaft supported in the frame, and a circular series of can clamps carried by the shaft, a table fixed to the frame below the series of clamps, a cam on the table, a relatively large gear fixed to turn with the shaft and located below the series of clamps and above the table, a series of burners supported to move vertically through openings in the gear and at their lower ends engaging the cam, substantially as described.

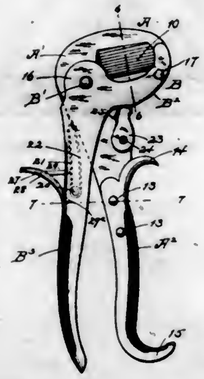
3. A can soldering machine comprising a frame, a vertical shaft supported in the frame, and a circular series of can clamps carried by the shaft, a table fixed to the frame below the series of clamps, a cam on the table, a relatively large gear fixed to turn with the shaft and located below the series of clamps and above the table, a series of burners carried by said gear and movable by said cam to move said burners into proximity to the cans in the clamps, and means operated by said gear to feed the cans to the clamps, substantially as described.

4. A can soldering machine comprising a frame, a vertical shaft supported in the frame, and a circular series of can clamps carried by the shaft, a table fixed to the frame below the series of clamps, a cam on the table, a relatively large gear fixed to turn with the shaft and located below the series of clamps and above the table, a series of burners carried by the gear and movable by the cam toward and away from the can clamps, said shaft hollow throughout a portion of its length constituting a gas pipe, a gas chamber secured around the shaft and communicating with the interior thereof, and a series of flexible pipes connecting said chamber with the respective burners, substantially as described.

5. A can soldering machine comprising a frame, a vertical shaft supported in the frame, and a circular series of can clamps carried by the shaft, a table fixed to the frame below the series of clamps, a cam on the table, a relatively large gear fixed to turn with the shaft and located below the series of clamps and above the table, a series of burners supported to move vertically through openings in the gear and at their lower ends engaging the cam, said shaft hollow throughout a portion of its length constituting a gas pipe, a gas chamber secured around the shaft and communicating with the interior thereof, and a series of flexible pipes connecting said chamber with the respective burners, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,104,768. PRUNING OR LIKE IMPLEMENT. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Dec. 22, 1911. Serial No. 667,382. (Cl. 30—11.)



1. In a pruning implement, the combination of a cutting member comprising substantially parallel jaw portions one of which has its edge located above the edge of the other, a distance piece extending between said jaw portions near the extremities thereof, and a blade having a beveled edge movable between said jaw portions, said blade being provided at one end with a depending guard to abut said distance pin; substantially as described.

2. Pruning shears comprising a cutting member with spaced jaw portions, a second cutting member straddled by and pivoted to the first member, a dog straddling the shank of the second member and pivoted to said member, said dog having means to engage the lower edges of the aforesaid spaced jaw portions, and means on the shank of said second member to support said dog in a laterally directed inoperative position; substantially as described.

3. In a pruning or like implement, the combination of a member having spaced jaw portions, a second member straddled by and pivoted to the first member, and a dog straddling the shank of the second member and engageable with said spaced jaw portions to lock said members together; substantially as described.

4. In a pruning or like implement, the combination of a member having spaced jaw portions, a second member straddled by and pivoted to the first member, and a locking device to lock said members in closed position, comprising a sheet metal plate bent to straddle the shank of said second member and pivoted thereto; substantially as described.

5. In a pruning or like implement, the combination of a member having a jaw and a handle portion, a second member pivoted to the first and having a jaw and a shank portion, and a locking dog straddling said shank portion and having oppositely projecting lugs; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,104,769. OPTICAL SYSTEM FOR PRISM-CARRYING DEVICES. ERNST BERNICK, Friedenau, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed Oct. 23, 1908. Serial No. 459,208. (Cl. 88—2.7.)

1. A prism combination for deflecting into the same direction rays coming from opposite directions, comprising two prisms cemented together, having substantially parallel surfaces facing in the directions from which the rays enter, one of which is provided with a roof surface, a coating or layer in the cement surface between the prisms extending through a part of same and being reflective on both sides and so arranged in relation to said roof surface that the rays striking the reflective coating on one side pass, after reflection by the roof-surfaces, to the non-reflecting part of the cement surface, through which they pass, whereas the rays striking the other side of the reflective coating pass after reflection directly out of the prism-body.

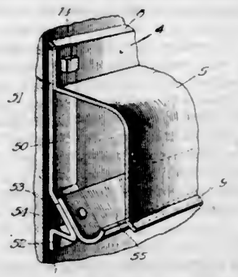


2. A prism combination for deflecting into the same direction rays coming from opposite directions, comprising two prisms cemented together, having substantially parallel surfaces facing in the directions from which the rays enter, one of which is provided with a roof surface, a further reflecting surface at right angles to the edge of said roof surface forming a so-called triple mirror with same, a coating or layer in the cement surface between the prisms extending through a part of same and being reflective on both sides and so arranged in relation to the faces of said triple mirror that the rays striking the reflective coating on one side pass after reflection by the faces of the triple mirror to the non-reflecting part of the cement surface, through which they pass, whereas the rays striking the other side of the reflective coating pass after reflection directly out of the prism-body, for the purpose of producing images of the objects at both sides of the prism combination, inverted relatively to each other.

3. An optical distance measuring instrument comprising two objectives and two sets of reflecting devices arranged at a distance from each other, each of the objectives adapted to coöperate with one of the two sets of reflecting devices, at least one of said sets of reflecting devices having an even number of reflecting surfaces, an image uniting body or ocular prism between said two objectives and sets of reflecting devices, and an ocular in front of said image uniting body or ocular prism, said ocular prism comprising two prisms cemented together having substantially parallel surfaces facing in the direction toward said two objectives and sets of reflecting devices, one of which is provided with a roof surface, a coating or layer in the cement surface between the prisms extending through a part of same and being reflective on both sides and so arranged in relation to said roof surface that the rays striking the reflective coating one one side pass after reflection by the roof surfaces to the non-reflecting part of the cement surface through which they pass toward the ocular, whereas the rays striking the other side of the reflective coating pass after reflection directly out of the prism-body likewise toward the ocular.

4. An optical distance measuring instrument comprising two objectives and two sets of reflecting devices arranged at a distance from each other, each of the two objectives adapted to coöperate with one of the two sets of reflecting devices, the said sets of reflecting devices differing from each other by an even number (inclusive zero) of reflecting surfaces, an image uniting body or ocular prism between said two objectives and sets of reflecting devices and an ocular in front of said image uniting body or ocular prism, said ocular prism comprising two prisms cemented together having substantially parallel surfaces facing in the directions toward said two objectives and reflectors cooperating therewith, one of which is provided with a roof surface, a further reflecting surface at right angles to the edge of said roof surface forming a so-called triple mirror with same, a coating or layer in the cement surface between the prisms extending through a part of same and being reflective on both sides and so arranged in relation to the faces of said triple mirror that the rays striking the reflective coating on one side pass after reflection by the faces of the triple mirror to the non-reflecting part of the cement surface through which they pass toward the ocular, whereas the rays striking the other side of the reflective coating pass after reflection directly out of the prism-body likewise toward the ocular.

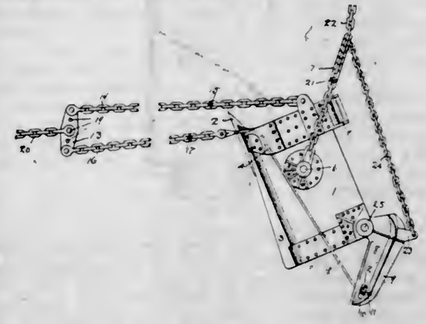
1,104,770. DOOR-HANGER. LOUIS A. BITTORF, Sterling, Ill., assignor to National Manufacturing Company, Sterling, Ill., a Corporation of Illinois. Original application filed Nov. 9, 1911, Serial No. 659,436. Divided and this application filed Sept. 23, 1912. Serial No. 721,773. (Cl. 16—7.)



1. A door hanger track structure comprising brackets each having a straight elongated upper portion to lie against the building, an outwardly and downwardly extending portion forming an inclined shoulder, and a right-angle portion constituting a brace for the latter; and a track plate extending over the inclined shoulders of the brackets and secured thereto and projecting beyond the same to form the track.

2. A door hanger track structure comprising brackets each having a straight elongated upper portion to lie against the building, an outwardly and downwardly extending portion forming an inclined shoulder, a right-angle portion constituting a brace for the latter, and a straight lower portion to lie against the building; and a track plate extending over the inclined shoulders of the brackets and secured thereto and projecting beyond the same to form the track.

1,104,771. DRAG-LINE BUCKET. OSCAR B. BJORGE, Duluth, Minn., assignor to Clyde Iron Works, Duluth, Minn., a Corporation of Maine. Filed Mar. 20, 1912. Serial No. 684,984. (Cl. 37—54.)



1. In mechanism of the character described, the combination of supporting means; a shovel pivoted thereto forward of its center of gravity when loaded; a gate movably attached to the shovel and arranged to close and bear against the rear end thereof; and forwardly hauling means attached to the gate and slidable relatively to the shovel and arranged, when under tension, to close the gate and thereby pull the shovel forwardly.

2. In mechanism of the character described, the combination of supporting means; a shovel pivoted thereto forward of its center of gravity when loaded; a gate pivoted to the rear end of the shovel and arranged to close and bear against such end; and forwardly hauling means attached to the gate below its pivotal axis and slidable relatively to the shovel.

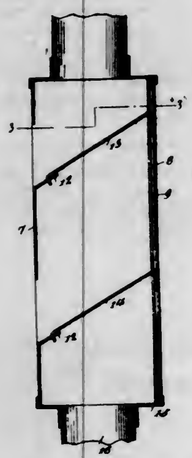
3. In mechanism of the character described, the combination of supporting means; a shovel pivoted thereto forward of its center of gravity when loaded; a gate pivoted to the shovel at substantially the top of the rear end thereof and arranged to close and bear against such end; and forwardly hauling means attached to the gate below its pivotal axis and slidable relatively to the shovel.

4. In mechanism of the character described, the combination of supporting means; a shovel pivoted thereto forward of its center of gravity when loaded; a gate pivoted to the rear end of the shovel and arranged to close and bear against such end; forwardly hauling means attached to the gate below its pivotal axis and slidable relatively to the shovel; and a cable attached to the supporting means and to the gate rearward of its pivotal axis and limiting downward movement of the gate at its point of attachment thereto.

5. In mechanism of the character described, the combination of supporting means; a shovel attached thereto forward of its center of gravity when loaded, the shovel being provided near the front of its sides with guides; a gate pivoted to the shovel at substantially the top of the rear end thereof and arranged to close and bear against such end; and a forwardly hauling cable extending across and attached to the gate below its pivotal axis and extending slidably through said guides.

[Claim 6 not printed in the Gazette.]

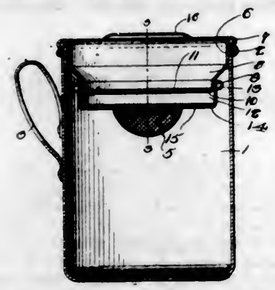
1,104,772. STRAINER FOR WATER-PIPES. FRANK L. BLACK, Kings Mills, Ohio. Filed Apr. 26, 1913. Serial No. 763,879. (Cl. 210—4.)



A device of the character described including a casing, said casing comprising a sheet of metal, the opposite ends of which are overlapped to provide a double rear wall, strainers arranged in said casing, one end of each of which is secured to the front wall of said casing, and the opposite end thereof engaged between the rear walls, caps arranged on the opposite ends of said casing for holding said rear walls in engagement with said strainers, and adapted for engagement with inlet and outlet pipes.

1,104,773. SANITARY MILKING VESSEL. IRA EARNEST BRADSHAW, Unionville, Mo. Filed July 26, 1913. Serial No. 781,377. (Cl. 31—14.)

In a device of the class described the combination of a hollow body, of a primary strainer carried by the upper portion of said body, said primary strainer comprising a vertical side fitting snugly within said body, an inclined side formed upon the lower portion of said vertical side, a depending collar integrally formed upon the lower portion of said inclined side and terminating in an inwardly bent flange, a wire filtering mesh fixedly secured to said flange for forming a filter for said primary strainer, an auxiliary strainer carried by said primary strainer, said auxiliary strainer comprising a circular body having an integral flange at its lower end, a wire filter fixedly



secured to said last mentioned flange, said circular body of said auxiliary section adapted to fit upon said depending collar of said primary section, whereby said wire filters will be placed in alinement and said strainer capable of being separated for cleaning the same.

1,104,774. TIRE FOR VEHICLES. REGINALD B. CALCUTT, Chicago, Ill. Filed July 28, 1913. Serial No. 781,577. (Cl. 152—8.)



1. A tire for vehicles comprising a cylindrical body of suitable material, a coiled wire core enveloped within and extending longitudinally through the same, and a sleeve of the same shape in cross-section as said body and having a continuous bore therethrough in alinement with the ends of said coil which extend beyond the end of said body and enter and are secured within said sleeve.

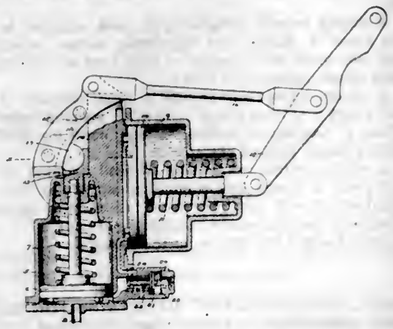
2. A tire for vehicles comprising a coiled wire core, a substantially concentric cylindrical body within which said core is enveloped to within a short distance of the ends thereof, and a sleeve conforming in cross-section to said body and having a continuous bore therethrough in alinement with the ends of said coil, which latter enter said bore and are connected within the same.

3. A tire for vehicles comprising a coiled wire core, a concentric cylindrical body within which said core is molded and enveloped to within a short distance of the ends thereof, and a sleeve conforming in cross-section to said body and having a continuous bore therethrough in alinement with the ends of said coil, a tubular core within said sleeve within which said ends are inserted and connected together.

1,104,775. FLUID-PRESSURE BRAKE. FRANCIS L. CLARK, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1906. Serial No. 341,668. (Cl. 188—1.)

1. In a fluid pressure brake, the combination with a primary brake cylinder and piston and a second opposing brake cylinder and piston, of a driving connection between the primary piston and the brake rigging and a movable resistance wedge for opposing the backward movement of the driving connection to thereby prevent lost motion of the second piston when its pressure is exerted upon the brake rigging.

2. In a fluid pressure brake, the combination with a brake cylinder and piston for exerting a preliminary pressure on the brake rigging and a second brake cylinder and piston opposing the first brake cylinder and piston for exerting the final pressure, of an operating connection between the first piston and the brake rigging and a movable wedge for opposing the backward movement of the operating connection in any position of the first piston to thereby prevent lost motion of the second piston upon the application of pressure to said second piston.



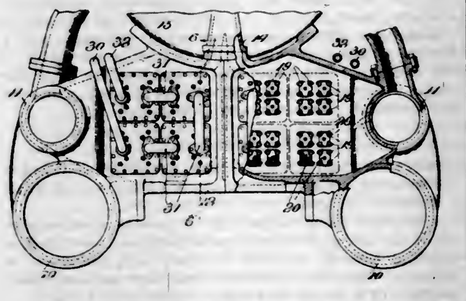
3. In a fluid pressure brake, the combination with a brake cylinder and piston for exerting a preliminary pressure on the brake rigging and a second brake cylinder and piston opposing the first brake cylinder and piston for exerting the final pressure, of a driving connection between the first piston and the brake rigging and a movable wedge for opposing the backward movement of the driving connection.

4. In a fluid pressure brake, the combination with a small or primary brake cylinder and piston for taking up the slack and bringing the shoes against the wheels, and a larger brake cylinder and piston for applying the final pressure to the brake rigging, of a wedge mechanism whereby the large piston may act positively on the rigging at whatever position it is applied by the small piston.

5. In a fluid pressure brake, the combination with a small brake cylinder and piston, and a larger brake cylinder and piston, of a wedge mechanism operating at the time of movement of the small piston for preventing lost motion of the large piston when its pressure is exerted upon the brake rigging.

[Claims 6 to 11 not printed in the Gazette.]

1,104,776. FEED-WATER HEATER FOR LOCOMOTIVES. FRANK H. CLARK, New York, N. Y., and GEORGE R. SMITH, Portsmouth, Va. Filed Nov. 26, 1913. Serial No. 803,354. (Cl. 121—14.)



1. The combination with a locomotive having its saddle formed into a chamber into which the cylinders directly exhaust and from which the exhaust nozzle leads, and a feed water heater located in said chamber between said exhaust ports and nozzle.

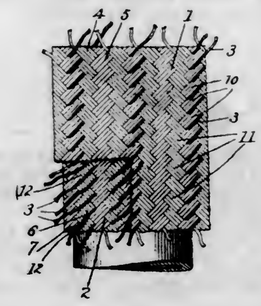
2. The combination with a locomotive having its saddle formed into a chamber into which the cylinders directly exhaust and from which the exhaust nozzle leads, and a feed water heater formed of a plurality of independently removable and interchangeable units located in the said chamber.

3. The combination with a locomotive having its saddle formed into a chamber into which the cylinders directly exhaust and from which the exhaust nozzle leads, the cross section of the steam space of the chamber being greater than the cross section of either the exhaust passages of the cylinder or the nozzle.

4. The combination with a locomotive having its saddle formed into a chamber with which the exhaust ports and nozzle connect, and a feed water heater in said chamber composed of a plurality of serially connected units the last unit of the series being adjacent an exhaust port.

5. The combination with a locomotive having its saddle formed into a chamber with which the exhaust ports and nozzle connect, and a feed water heater in said chamber composed of two sets of serially connected units, the first unit of each set being adjacent an exhaust port.

1,104,777. BRAIDED FABRIC FOR HOSE. HENRY Z. COBB, Winchester, Mass., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Sept. 30, 1912. Serial No. 723,038. (Cl. 28—25.)



1. The improved braided fabric comprising distinct parallel braided tubular webs, one of which has extra strands extending in one direction and a series of interlocking strands which unite said parallel webs and which pass alternately through said webs in a direction transverse to said extra strands.

2. The improved fabric which comprises two distinct parallel braided tubular webs, each of which has extra strands extending in one direction and a series of interlocking strands which unite the said parallel webs and pass through each of the said webs in a parallel direction, and transversely with respect to the corresponding extra strands of the respective webs.

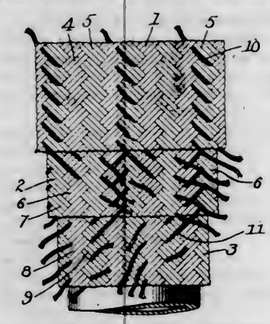
3. The improved braided fabric comprising two distinct parallel braided tubular webs, each of which has extra strands extending in one direction only, and a series of interlocking strands which unite said parallel webs and which pass through each of said webs in one direction only, transversely with respect to the direction of the interlocking strands of the respective webs, the sum of the extra strands of each web being equal to the number of interlocking strands.

1,104,778. BRAIDED FABRIC FOR HOSE. HENRY Z. COBB, Winchester, Mass., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Sept. 30, 1912. Serial No. 723,039. (Cl. 28—25.)

1. The improved fabric which consists of an odd number of distinct and parallel tubular braided webs, and a series of interlocking strands between each of said parallel webs, the respective sets of interlocking strands running in opposite directions.

2. The improved braided fabric comprising three dis-

tinct parallel tubular braided webs and a series of interlocking strands between each of the said adjacent webs,



said interlocking strands running helically about the article in opposite directions.

1,104,779. CIGAR AND PROCESS OF MAKING SAME. FRANKLIN S. COOLEY, Brookline, Mass. Filed July 17, 1913. Serial No. 779,434. (Cl. 131—52.)



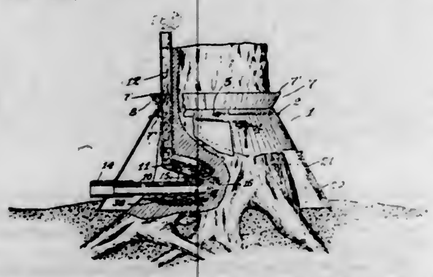
1. A cigar comprising a body composed of a series of leaves or sheets of tobacco, said body having closely compressed and relatively loose areas, and which body is rolled upon itself to form the cigar.

2. A cigar comprising a corrugated body of tobacco composed of a series of leaves or sheets, said body being rolled upon itself with the corrugations extending lengthwise of the cigar, said corrugations affording longitudinal air passages.

3. The improved cigar comprising a filler composed of a corrugated sheet of compressed tobacco rolled upon itself and a wrapper, one projecting edge of which is folded over the inner edge of the filler and the other edge of which serves to secure the rolled filler in place.

4. The improved process of making a cigar which consists in superposing a plurality of sheets of moist tobacco, subjecting the same to pressure in a mold to compress the tobacco, and to form longitudinal corrugations therein, and then rolling the same upon itself to form the cigar.

1,104,780. STUMP-BURNER. AMOS J. COOVER, Seattle, Wash. Filed Mar. 11, 1913. Serial No. 753,519. (Cl. 110—21.)



1. A stump burner comprising a hood adapted to be placed about the stump, said hood comprising vertically arranged sections overlapping at their side edges, and flexible means for drawing the upper edge portions of said hood sections firmly against the stump.

2. A stump burner comprising a hood comprising vertically disposed tapering sections one having its vertical side edge portions overlapping the side edges of the other section, and a flexible tie member normally passing around said hood for holding its sections in position about the stump.

3. A stump burner comprising a hood adapted to be placed about a stump, and supporting means extending around the upper edge portion of said hood for holding a packing means against the stump.

4. A stump burner comprising a hood adapted to be placed about a stump, and a removable packing supporting ring at the upper portion of said hood for holding a packing means against the stump.

5. A stump burner comprising a hood adapted to be placed about a stump, and a packing support at the upper portion of said hood formed of overlapping sections for holding a packing means against the stump.

[Claims 6 and 7 not printed in the Gazette.]

1,104,781. TIME-OPERATING MECHANISM FOR ELECTRIC SWITCHES. LLOYD GROFF COPEMAN, Flint, Mich., assignor to Copeman Electric Stove Company, Flint, Mich., a Corporation of Michigan. Filed July 28, 1911. Serial No. 641,005. (Cl. 161—27.)



1. The combination with an alarm clock mechanism, of a winding stem therefor, a switch actuating arm having a slotted bearing for detachably engaging said stem, a transversely extending key on said stem for engaging said slotted bearing, a threaded stud beyond said key, and a winding handle engaging said threaded stud and provided with a clamping face for engaging said arm.

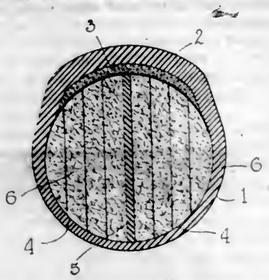
2. The combination with an alarm clock mechanism and a winding stem therefor, of a switch actuating arm having a detachable sliding engagement with said stem, and a key for winding said stem, said arm being attachable to the stem after the latter has been turned to place the alarm mechanism under the desired tension and said key serving to clamp said arm to said stem.

1,104,782. COMPOSITION FOR FINISHING WALLS. ROBERT M. CRAIG, Paterson, N. J. Filed Aug. 2, 1912. Serial No. 712,942. (Cl. 134—53.)

A moisture proof composition for coating walls consisting of one half pint of powdered mineral wax, one quart of Portland cement, one pint of table salt, one quart of saturated solution of washing soda, and one and three-quarters of a gallon of water.

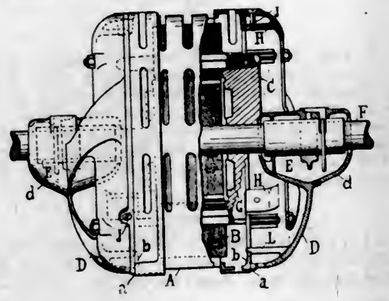
1,104,783. TIRE. WALTER DRABOLD and AUGUSTUS P. MOTT, Detroit, Mich. Filed Mar. 26, 1914. Serial No. 827,347. (Cl. 152—5.)

A tire comprising a tube having a tread, layers of fabric embedded in the inner side of the tread of said tube, a central vertical resilient partition throughout the length of said tube and dividing the tube into compartments, and yieldable laminated fillers of felt completely filling the



compartments of said tube and arranged in parallelism with sides of said partition.

1,104,784. DYNAMO-ELECTRIC-MACHINE FRAME. GANO DUNN, East Orange, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Apr. 19, 1910. Serial No. 556,358. (Cl. 171—252.)



1. In a dynamo-electric machine, the combination of a rotor, inclosing means consisting of a stator frame with faced ends and faced end shields provided with bearings for the rotor, one of the inclosing parts having rigidly attached elastic centering portions engaging the other part, means for springing the centering portions, and means for clamping together the parts of the inclosing means, substantially as described.

2. In a dynamo-electric machine, the combination of a rotor, a stator frame with faced ends, faced end shields provided with bearings for the rotor and elastic centering portions rigidly attached thereto and engaging the stator frame, means for springing the centering portions and means for clamping the end shields to the stator frame, substantially as described.

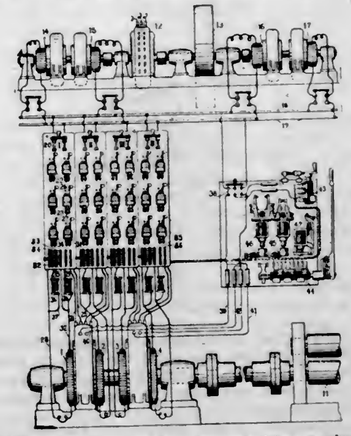
3. In a dynamo-electric machine, the combination of a rotor, a stator frame with faced ends, faced end shields provided with bearings for the rotor and elastic centering portions rigidly attached thereto and having outwardly facing bearing points in engagement with the interior of the stator frame, means for springing the centering portions, and means for clamping the end shields to the stator frame, substantially as described.

4. In a dynamo-electric machine, the combination of a rotor, a stator frame with faced ends, faced end shields provided with bearings for the rotor and elastic centering lugs rigidly attached thereto and engaging the stator frame, means for springing the centering lugs and means for clamping the end shields to the stator frame, substantially as described.

5. In a dynamo-electric machine, the combination of a rotor, a stator frame with faced ends, faced end shields provided with bearings for the rotor and elastic centering lugs rigidly attached thereto and having outwardly facing bearing points in engagement with the interior of the stator frame, means for springing the centering lugs and means for clamping the end shields to the stator frame, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,104,785. MOTOR-CONTROL SYSTEM. GANO DUNN, New York, N. Y., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Jan. 4, 1913. Serial No. 740,167. (Cl. 172—239.)



1. The combination of a driven machine, a plurality of electric motors therefor, a separate set of contactors for controlling the admission and rheostatic control of current to the armature of each motor, and means for insuring the closure at different times of the corresponding admission contactors and the corresponding resistance-controlling contactors, substantially as described.

2. The combination of a driven machine, a plurality of electric motors therefor, a separate set of contactors for controlling the admission and rheostatic control of current to the armature of each motor, and means for insuring the closure at different times in a definite order of the corresponding admission contactors, and the closure at different times in a reversed order, as to the motors controlled, of the corresponding resistance-controlling contactors, substantially as described.

3. The combination of a driven machine, a plurality of electric motors therefor, a common source of supply for the motors, a separate set of contactors for controlling the admission and rheostatic control of current to the armature of each motor, and means for insuring the closure at different times of the corresponding admission contactors and the corresponding resistance-controlling contactors, substantially as described.

4. The combination of a driven machine, a plurality of electric motors therefor, positive mechanical interconnections for the machine and motors, separate contactors for controlling the armature circuit in each motor, and means for insuring the closure at different times of the corresponding admission contactors, substantially as described.

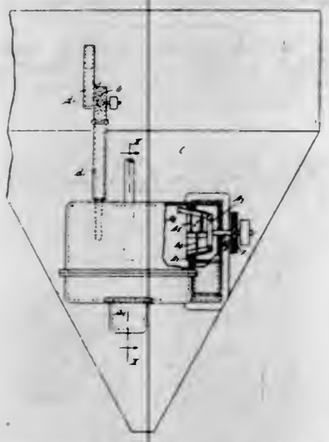
5. The combination of a driven machine, a plurality of electric motors therefor, positive mechanical interconnections for the machine and motors, a separate set of contactors for controlling the admission and rheostatic control of current to the armature of each motor, and means for insuring the closure at different times of the corresponding admission contactors and the corresponding resistance-controlling contactors, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,104,786. APPARATUS FOR THE MANUFACTURE OF LEAD OXID. WILLIAM ECKFORD, Rhyl, Wales. Filed Oct. 1, 1912. Serial No. 723,386. (Cl. 75—19.)

1. In combination, a lead melting pot, a settling chamber, a rotary hopper one end of which opens directly into

the pot and through which the pot communicates with the chamber, and means for rotating the hopper; substantially as described.



2. In combination, a lead melting pot, a settling chamber, a casing connecting the pot to the chamber, a rotary hopper one end of which opens directly into the pot located in said casing, and means for rotating the hopper; substantially as described.

3. In combination, a lead melting pot, a settling chamber, a casing connecting the pot to the chamber, a rotary hopper of taper configuration located in said casing the larger end of the hopper making a rotatable joint with the lead melting pot casing and the other end opening into said casing, and means for rotating the hopper; substantially as described.

4. In combination, a lead melting pot, a settling chamber, a tape ring rotary hopper, through which said pot communicates with said chamber, the larger end of which opens directly into the pot, and means for rotating the hopper; substantially as described.

5. In combination, a lead melting pot, a settling chamber, a rotary hopper through which said pot communicates with said chamber, provided with transverse diaphragms extending partly across the hopper, and means for rotating the hopper; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

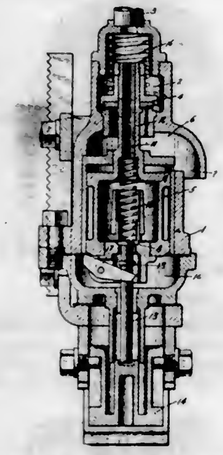
1,104,787. AUTOMATIC TRAIN-STOP DEVICE. ALEXANDER ENGLAND, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 31, 1911. Serial No. 657,728. (Cl. 188—1.)

1. The combination with a train brake pipe, of a main valve for venting air from said brake pipe, a piston normally subject on opposite sides to atmospheric pressure for operating said valve, mounted in said piston for venting air from the brake pipe to one side of said piston to thereby open said main valve.

2. The combination with a train brake pipe, of a main valve for venting air from said brake pipe, a piston normally subject on opposite sides to atmospheric pressure for operating said valve, an auxiliary valve having a seat in said piston for venting air from the train brake pipe to one side of said piston, and a spring acting on said piston in opposition to the brake pipe pressure to close the main valve upon a predetermined reduction in brake pipe pressure.

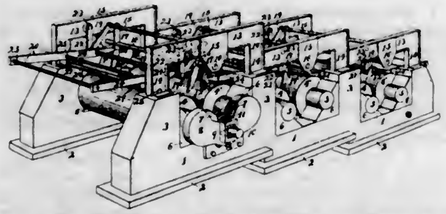
3. A valve device for air brakes comprising a main vent valve, a piston for operating said valve, a pilot valve for varying the pressure on said piston, and means controlled by the piston for maintaining the pilot valve open.

4. A valve device for air brakes comprising a main vent valve, a piston for operating said valve, a pilot valve adapted to be initially opened for varying the pressure on said piston, and means operated by said piston for maintaining said pilot valve open while the piston is in its open position.



5. A valve device for air brakes comprising a main vent valve, a piston for operating said valve, a pilot valve adapted to be initially opened for varying the pressure on said piston, and a pivoted arm adapted upon movement of the piston to contact with a fixed abutment at one end, thereby rocking the arm to effect the movement of the pilot valve by operative engagement of the opposite end with said valve.

1,104,788. AUTOMATIC FEED MECHANISM FOR ROLLING-MILLS. WILSON H. FORBES, Detroit, Mich. Filed Aug. 18, 1913. Serial No. 785,205. (Cl. 80—44.)



1. In a rolling mill having a supporting frame with rolls journaled therein, a feed mechanism comprising a table suspended above said rolls, depending triggers pivotally suspended above said rolls and having locked engagement with said table, and means carried by one of said rolls for releasing said triggers from locked engagement with said table.

2. In a rolling mill having a supporting frame with rolls journaled therein, a feed mechanism comprising a table movably suspended above said rolls, depending triggers pivotally suspended above said rolls and having locked engagement with said table, means carried by said triggers for imparting motion to said table, and means carried by one of said rolls for releasing said triggers from locked engagement with said table.

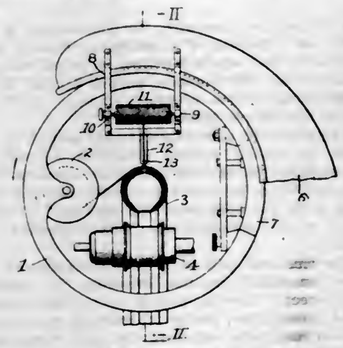
3. In a rolling mill having a supporting frame with rolls journaled therein, a feed mechanism comprising a table pivotally suspended above said rolls, depending triggers pivotally suspended above said rolls and having a linked connection at their upper ends with said table and a locked engagement at their lower ends with said table, and means carried by one of said rolls for swinging said triggers to release said table and impart motion thereto.

4. In a rolling mill having a supporting frame with rolls journaled therein, brackets mounted on the periphery of said rolls to rotate therewith, a table pivotally suspended above said rolls, triggers pivotally suspended above said rolls, their lower ends having locked engagement with said table and depending in the path of travel of said brackets, their upper ends having linked connection with said table, and means for rotating said rolls to cause said brackets to engage said triggers.

5. In a rolling mill having a supporting frame with a pair of rolls journaled therein, a feed mechanism comprising a table for carrying the billet movably suspended above said rolls, means for actuating said table suspended above said rolls, means carried by one of said rolls for engaging said actuating means to discharge and receive said billet from said table, and means carried by the other of said rolls for discharging said billet from said rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,104,789. MACHINE FOR INCLOSING CORDS IN TIRE-WRAPPERS. EDMUND W. FOTHERGILL, Hartford, Conn., assignor to Hartford Rubber Works Company, Hartford, Conn., a Corporation of Connecticut. Filed May 22, 1913. Serial No. 769,327. (Cl. 242—6.)



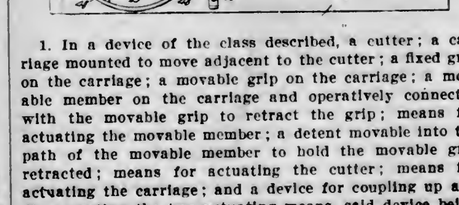
1. The combination with a machine for wrapping a strip of fibrous material helically about an annular body, comprising a rotatable annular shuttle, a support for a coil of fibrous material carried thereon, of a support for a spool of filamentary material adjacent said shuttle outside of the plane of rotation thereof, and a guide located adjacent the path of the surface of said annular body for delivering said filamentary material to be inclosed within said fibrous material.

2. The combination with a machine for wrapping a strip of paper tightly about a tire casing, comprising a rotatable annular shuttle, supporting means for the coil of said paper carried thereon, of a support for a spool of filamentary material mounted outside the plane of rotation of said shuttle, and a guide located adjacent the path of the surface of said tire casing for delivering said filamentary material at the point on said casing at which it is to be inclosed with said paper.

1,104,790. PAPER-HANGER'S BOARD. FRED O. B. FOWLEA, Groveland, Mass. Filed Sept. 12, 1913. Serial No. 789,429. (Cl. 45—116.)

1. A knock-down paper hanger's board, comprising two side strips adapted to extend the length of the board, a series of intermediate sections of oblong form adapted to be held edge to edge between said strips either transversely or longitudinally with relation thereto, and detachable connecting means to hold said strips in engagement with said sections, substantially as described,

2. A knock-down paper hanger's board, comprising two side strips adapted to extend the length of the board, a series of intermediate sections of oblong form adapted to be held edge to edge between said strips either transversely or longitudinally with relation thereto, and a clamping device arranged to be detachably connected to the under side of said strips and to draw them into engagement with said sections, substantially as described.

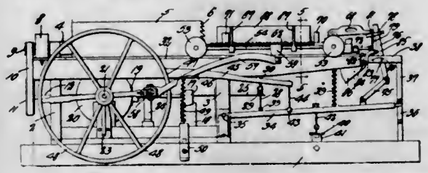


3. A knock-down paper hanger's board, comprising two side strips having oppositely formed interlocking edges, a series of oblong intermediate sections having correspondingly formed edges, one end and one side edge of each section being arranged to receive the edge of one strip and its other end and side edge being arranged to receive the edge of the other strip, and detachable clamping means to hold said strips in engagement with said sections, substantially as described.

4. A knock-down paper hanger's board, comprising two side strips the adjacent longitudinal edges thereof having a corresponding tongue and groove respectively, a series of oblong intermediate sections each having a tongue on one end and side edge and a groove on the other end and side edge adapted to receive the tongue and groove of said strips, and means for detachably holding said strips in position against said sections, substantially as described.

5. A knock-down paper hanger's board, comprising two side strips adapted to extend the length of the board, a series of intermediate sections of oblong form adapted to be held edge to edge between said strips either transversely or longitudinally with relation thereto, the sum of the shorter dimensions of a predetermined number of said sections and the sum of the longer dimensions of another predetermined number of said sections, each being approximately equal to the total length of said strips, and means for detachably holding said strips in engagement with said sections when in position, substantially as described.

1,104,791. WOODWORKING-MACHINE. JAMES E. GIBBS, Dickson, Tenn. Filed Jan. 9, 1913. Serial No. 741,067. (Cl. 143—85.)



1. In a device of the class described, a cutter; a carriage mounted to move adjacent to the cutter; a fixed grip on the carriage; a movable grip on the carriage; a movable member on the carriage and operatively connected with the movable grip to retract the grip; means for actuating the movable member; a detent movable into the path of the movable member to hold the movable grip retracted; means for actuating the cutter; means for actuating the carriage; and a device for coupling up and disconnecting the two actuating means, said device being operatively connected with the detent to move the detent into the path of the movable member simultaneously with the disconnecting of the two actuating means.

2. In a device of the class described, a cutter; a carriage mounted to move adjacent to the cutter; a fixed grip on the carriage; a movable grip on the carriage; a movable member on the carriage and operatively connected with the movable grip to retract the same; a de-

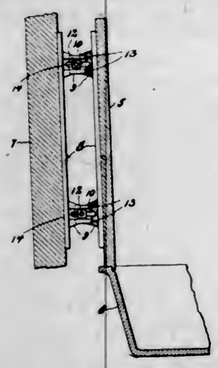
tent movable into the path of the movable member to hold the movable grip retracted; means for actuating the cutter; means for actuating the carriage; a device for coupling up and disconnecting the two actuating means, the said device being operatively connected with the detent to move the detent into the path of the movable member simultaneously with the disconnecting of the two actuating means; and a pivoted trip actuable by the carriage and coacting with the movable member to actuate the movable member, the trip constituting a guide for directing the movable member onto the detent.

3. In a device of the class described, a supporting structure; a carriage mounted to reciprocate on the supporting structure; a fixed grip on the carriage; a movable grip on the carriage; a movable member operatively connected with the movable grip; a trip pivoted to the supporting structure and coacting with the movable member to actuate the latter; and means on the carriage for actuating the trip.

4. In a device of the class described, a supporting structure; a carriage mounted to move thereon; a fixed grip upon the carriage; a movable grip upon the carriage; a movable member operatively connected with the movable grip; a trip pivoted to the supporting structure and coacting with the movable member to actuate the same; means on the carriage for actuating the trip; and a detent upon the supporting structure and movable into engagement with the trip and the movable member.

5. In a device of the class described, a supporting structure including a stop; a trip pivoted to the supporting structure and adapted to rest upon the stop; means for moving the trip toward the stop; a carriage mounted to move upon the supporting structure; a fixed grip on the carriage; a movable grip on the carriage; a movable member mounted on the carriage and operatively connected with the movable grip, the movable member lying above the trip; and means on the carriage for engaging the trip to elevate the trip and to cause the latter to elevate the movable member; and a movable detent mounted upon the supporting structure and supporting the trip and movable member to maintain the movable grip retracted, the trip constituting a guide adapted to direct the movable member onto the detent.

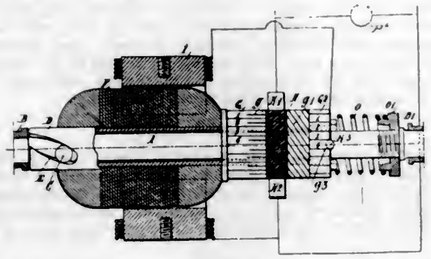
1,104,792. FASTENING FOR SPLASH-BOARDS. JOHN E. GRAY, Louisville, Ky. Filed July 28, 1913. Serial No. 781,703. (Cl. 248—30.)



1. A fastening comprising complementary bracket members, each of which comprises a base plate having outstanding lugs which are slotted longitudinally, the members being positioned in opposite relation, with the lugs of one base plate overlapping the lugs of the other base plate, and the slots thereof registering, and fastening bolts passing through the registering slots.

2. A fastening comprising complementary bracket members, each of which comprises a base plate having outstanding lugs which are slotted longitudinally, and said lugs having outstanding longitudinal flanges on one side extending along opposite sides of the slots, the members being positioned in opposite relation, with the lugs of one base plate overlapping the lugs of the other base plate, and the slots thereof registering, and fastening bolts passing through the registering slots.

1,104,793. ELECTRICAL GENERATING SYSTEM. LEON VICTOR GRILLET and JEAN BAPTISTE TRUCHETET, Paris, France. Filed Oct. 18, 1911. Serial No. 655,325. (Cl. 171—221.)



1. In an electrical generator, the combination of a field structure, an armature, a commutator having its segments axial at its ends, but oblique between the ends, a brush contacting with the axial portion thereof, but having longitudinal motion relatively thereto and a brush moving on the oblique portion.

2. In an electrical generator the combination of a field structure, an axially moving armature, a commutator rigidly connected thereto and having its segments axial at its ends but oblique between the ends in order that it may coöperate with the brushes of the generator to regulate the supply of said armature upon axial movement of said commutator.

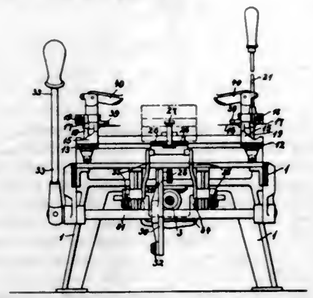
3. In an electrical generator, the combination of a field structure, an axially-movable armature, a commutator rigidly connected thereto, a pair of brushes contacting with said commutator, means for varying the number of commutator segments embraced by said brushes upon axial movement of the armature, and means for causing axial movement of said armature with variation of speed thereof.

4. In an electrical generator, the combination of a field structure, an axitally-movable armature, a commutator rigidly connected thereto and having its segments axial at its ends but oblique between the ends, a pair of brushes, one contacting with the axial segments at one end of said commutator, and the other contacting normally with the axial segments at the opposite end of said commutator, but adapted upon axial movement of the armature to contact with the oblique segments at the middle portion of the commutator in order to vary the number of segments embraced by the pair.

5. In an electrical generator, the combination of a field structure, an armature, a commutator rigidly connected thereto, a pair of brushes contacting with said commutator, a field winding upon said field structure in electrical connection with said brushes, and means for varying the number of commutator segments embraced by said brushes upon axial movement of said armature and commutator.

1,104,794. APPARATUS FOR TURNING CIGAR-BUNCHES IN THE MOLDS. JACOB HACK, Hanau, Germany, assignor to Wilhelm Eberhard, Hanau, Germany. Filed Sept. 16, 1912. Serial No. 720,666. (Cl. 131—9.)

1. A cigar bunch turning device of the character described comprising in combination, a bi-partite mold, means supporting the two parts of said mold for holding them in their mutual positions, rails carried by said supporting means, rollers upon said rails for adjusting the molds in position upon their supports, means for withdrawing both parts of the mold from the bunches and for returning them into their original positions, prongs supporting the cigar bunches adapted to be rotated for 90 degrees upon the withdrawal of both parts of said mold from said bunches, and crank arms carrying said prongs, longitudinally slotted bars for the reception of bars at the ends of said crank arms, crank arms pivotally supported on said rails, and a hand lever on one of said last-named crank arms for effecting the rotation of said prongs and the cigar bunches held thereby.



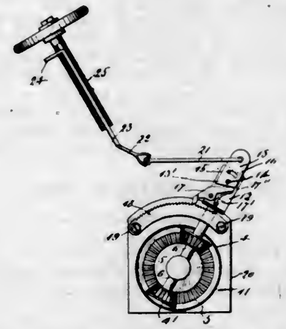
2. A cigar bunch turning device of the character described comprising in combination, a bi-partite mold, a spring controlled adjustable frame supporting both parts of said mold for holding them in their mutual position, rails carried by said supporting frame, rollers upon said rails for adjusting the molds in position upon their supports, means for withdrawing both parts of the mold from the bunches and for returning them into their original positions, prongs supporting the cigar bunches adapted to be rotated for 90 degrees upon the withdrawal of both parts of said mold from said bunches and crank arms carrying said prongs and pins at their ends, longitudinally slotted bars for the reception of the pins at the ends of said crank arms, longitudinally adjustable crank arms pivotally supported on said rails, and a hand lever on one of said last-named crank arms for effecting the rotation of said prongs and the cigar bunches held thereby.

3. A cigar bunch turning device of the character described comprising in combination, a bi-partite mold, means supporting the two parts of said mold for holding them in their mutual position, rails carried by said supporting means, means for withdrawing both parts of the mold from the bunches and for returning the same into their original position, prongs supporting the cigar bunches and adapted to be rotated for 90 degrees upon the withdrawal of both parts of said mold from said bunches, and crank arms carrying said prongs pivotally supported on said rails, half of their number turned to the left and the other half to the right for allowing the turning of one-half of the said prongs in one, and of the other half in the opposite direction, substantially as described and for the purpose set forth.

1,104,795. MAGNETO. EWALD HÄHNLEN, Roxbury, Mass., assignor to Holtzer-Cabot Electric Company, a Corporation of Massachusetts. Filed Aug. 22, 1912. Serial No. 716,362. (Cl. 123—149.)

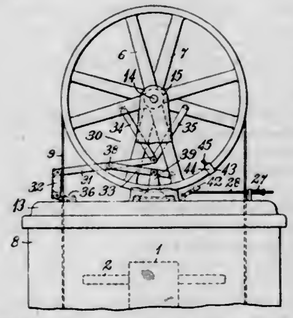
1. In a motor vehicle the combination with a magneto generator of driving means for said generator, differential gearing connecting said driving means and magneto, a pawl and ratchet for maintaining the members of said differential gearing in fixed position, a pivoted lever arranged to throw said pawl out of coöperation with said ratchet, and means associated with the steering post of said motor vehicle for actuating said pivoted lever.

2. In a motor vehicle the combination with a magneto generator of driving means for said generator, a gear actuated by said driving means, a gear fixed to said generator, a gear meshing with said gears, a stud carrying the last mentioned gear, a pawl having pivotal connection with said stud, a ratchet coöperating with said pawl, and means for throwing said pawl out of engagement with said ratchet.



3. The combination with a magneto generator, of driving means therefor, a gear actuated by said driving means, a gear fixed to the generator, a stud pivoted centrally of said gears, a gear carried by said stud and meshing with said gears, a stationary segmental ratchet, a spring pressed pawl carried by said stud normally engaging the teeth of said ratchet, means for rotating said stud about its pivot, and means for simultaneously releasing said pawl from engagement with the teeth of said ratchet.

1,104,796. ELECTRIC-CIRCUIT REGULATOR. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1908. Serial No. 420,058. (Cl. 171—119.)



1. In an electric regulator, the combination with a stationary core member, sheaves or pulleys rotatably mounted above the core member, and movable coils surrounding the core member and suspended from the pulleys, of means for rendering the movements of the pulleys interdependent.

2. In an electric regulator, the combination with a stationary core member, pulleys rotatably mounted above the core member and movable coils surrounding the core member and so suspended from the pulleys as to effect opposite rotative movements of the pulleys when they move toward or away from each other, of means for rendering the rotative movement of each pulley dependent upon that of the other.

3. In an electric regulator, the combination with a stationary core member, pulleys rotatably mounted above the core member and a pair of movable coils suspended from the pulleys, diametrically opposite points of each coil being connected to both pulleys, of means for permitting only concurrent rotative movements of the pulleys in opposite directions.

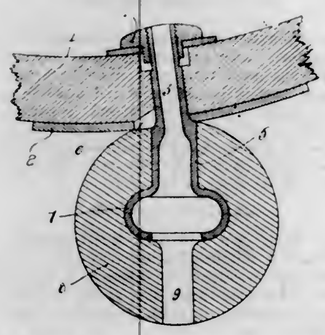
4. In an electric regulator, the combination with a stationary core member, sheaves or pulleys mounted above

the core member, and movable coils surrounding the core member and suspended from the pulleys, of a stationary shaft, a sleeve movably mounted thereon and links severally connecting the pulleys to the sleeve.

5. In an electric regulator, the combination with a stationary core member, pulleys rotatably mounted above the core member and movable coils surrounding the core member and so suspended from the pulleys that an approaching or receding motion of the coils is accompanied by rotative movements of the pulleys in opposite directions, of a stationary shaft, a sleeve movably mounted thereon and links severally connecting the pulleys to the sleeve.

[Claims 6 to 14 not printed in the Gazette.]

1,104,797. ELASTIC TIRE FOR VEHICLES. HEINRICH HARTMANN, Etterbeek, near Brussels, Belgium. Filed Feb. 18, 1913. Serial No. 749,264. (Cl. 152—9.)



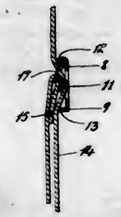
1. In a vehicle tire, the combination with a felly provided with a plurality of apertures, of a rim having corresponding apertures and mounted on said felly, a member mounted in each of said apertures, said member comprising a radial portion, a circumferentially extending nose on said radial portion adapted to engage a cut out portion adjacent the aperture, an enlarged portion adjacent said radial portion forming a shoulder, an enlarged head adjacent said portion, an elastic ball provided with an axial aperture therethrough, said aperture fitting the enlarged portion and the head of said member, said member having an aperture in line with the aperture of said ball, whereby an unbroken passage is formed through said ball and said member, and means for fastening said member to said felly.

2. In a vehicle tire, the combination with a felly and a rim provided with corresponding apertures, of a member positioned in one of said apertrues comprising a radial portion, a larger portion adjacent said radial portion adapted to hold a ball thereon, said ball holding portion being angularly disposed with relation to the radial portion, means for holding the angular portion in position comprising a shoulder adjacent said portion, and means for holding said member on said felly.

3. In an elastic tire, the combination with a plurality of resilient sections, of a rim, a fastening means for each of said resilient sections, said fastening means comprising angularly disposed hollow members one of said members being adapted to engage a recess in each one of the sections and the rim, an enlarged shoulder upon said hollow member adapted to engage the recess in the resilient section to expand the recess to frictionally hold the parts together, and means for fastening the members to the wheel and the rim.

4. In an elastic tire, a rim, a fastening device extending from the said rim and inclined thereto, an enlargement on the outer end of said fastening member, an elastic member provided with a relatively smaller recess therein adapted to receive the fastening device, whereby the enlargement will expand the elastic member to cause it to frictionally engage said fastening device with great pressure.

1,104,798. BUCKLE. JOHN F. HARTNETT, Bridgeport, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 18, 1912. Serial No. 691,568. (Cl. 24—191.)

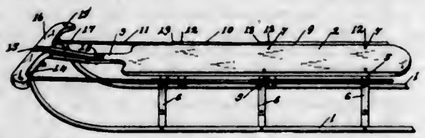


1. The combination with a buckle comprising a slotted plate having end members, a top member, a bottom member and an intermediate member, of a rearwardly extending socket at each end of said top member and integral therewith, a deflecting member integral with said top member intermediate said sockets extending rearwardly beyond said sockets, a loop member pivoted in said sockets and rearwardly extending teeth on said bottom member.

2. The combination with a buckle comprising a slotted plate having end members, a top member, a bottom member and an intermediate member depressed rearwardly of the plane of the top and bottom members, of a rearwardly extending socket at each end of said top member and integral therewith, a deflecting member integral with said top member intermediate said sockets extending rearwardly beyond said sockets, a loop member pivoted in said sockets and adapted when under strain to bear against said intermediate member and rearwardly extending teeth on said bottom member.

3. The combination with a buckle comprising a slotted plate having end members, a top member, a bottom member and an intermediate member, of a rearwardly extending socket at each end of said top member and integral therewith, a deflecting member integral with said top member intermediate said sockets, a loop member pivoted in said sockets and a rearwardly extending friction member on said bottom member.

1,104,799. STEERING-SLED. ADELBERT C. HIMEBAUGH, Burr Oak, Mich. Filed Feb. 13, 1913. Serial No. 748,144. (Cl. 21—94.)

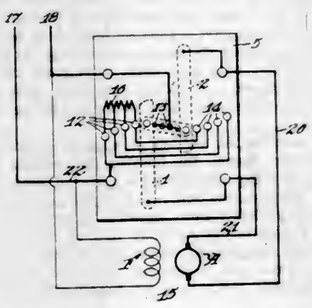


1. In a steering sled, the combination of the flexible runners, a body, a plurality of knees to which the runners are secured, the front knee being slidably associated with the body, the other knees being rigidly secured thereto, the side members of the front rigidly secured knee being flexible, raves consisting of a plurality of sections, the rear sections being rigidly secured to the knees which are rigidly secured to the body with their front ends projecting beyond the front rigidly secured knee, the rear ends of the intermediate rave sections being pivoted to the forwardly projecting ends of the rear rave sections, their front ends being rigidly secured to the front movable knee with their front ends projecting forwardly beyond the same, the rear ends of the front rave sections being pivotally secured to the forwardly projecting ends of the intermediate rave sections and rigidly secured to the front ends of the runners, a cross bar connecting the front ends of the runners, and means for swinging the front ends of the runners and the pivoted rave sections laterally, all coacting for the purpose specified.

2. In a steering sled, the combination of the flexible runners, a body, a plurality of knees to which the runners are secured, the front knee being slidably associated with the body, the other knees being rigidly secured thereto, raves consisting of a plurality of sections, connected by vertical pivots, the pivots being disposed in front of but adjacent to the said front movable knee and the said rigidly secured knee at the rear thereof, the forward ends of the front rave sections being secured to the forward ends of the runners, a cross bar connecting the forward ends of the runners and raves, and means for swinging the front ends of the runners and the pivoted rave sections laterally, all coacting for the purpose specified.

3. In a steering sled, the combination of the flexible runners, a body, a plurality of knees to which the runners are rigidly secured to the body, the side members of the front rigidly secured knee being flexible, raves consisting of a plurality of pivoted sections, the pivots being vertically disposed in front of but adjacent to the front rigidly secured knee, the forward ends of the front rave sections being connected to the forward ends of the runners, a cross bar connecting the forward ends of the runners and raves, and means for swinging the front ends of the runners and the pivoted rave sections laterally, all coacting for the purpose specified.

1,104,800. MOTOR-CONTROLLER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 16, 1911. Serial No. 654,977. (Cl. 172—179.)



1. A combined rheostat and reversing device comprising two simultaneously movable contact members having adjacent contact portions, stationary coöperating contacts for said members, certain of the same being disposed between said members to be engaged by either of the same and resistance connected to certain of said contacts to be controlled by either of said contact members while the other contact member engages the former of said contacts.

2. A combined rheostat and reversing device comprising two pivoted arms projecting in opposite directions from their pivots and having their free ends contiguous, said arms being adapted for connection to opposide sides of a circuit, coöperating stationarily mounted contacts, certain of said contacts being disposed between said arms in the range of both and adapted for connection to one side of a second circuit and other of said contacts being disposed on opposite sides of said arms and adapted for connection to resistances and to the other side of said second circuit.

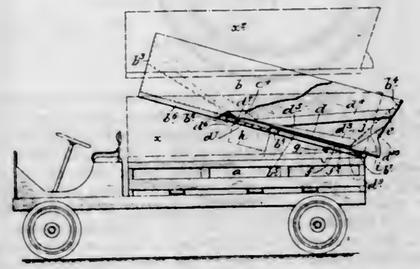
3. A combined rheostat and reversing device comprising two pivoted arms projecting in opposite directions from their pivots and having their free ends contiguous, said arms being adapted for connection to opposite sides of a circuit, an insulating link connecting said arms, a series of contacts between said arms in the range of both and adapted for connection to one side of a second circuit, two other series of contacts each in the range of one of said arms, and resistances connected to said last two mentioned series of contacts.

4. In a controlling device for electric motors in combination, two simultaneously movable contact members connected to opposite sides of the motor armature, a set of contacts connected to one side of the supply circuit and adapted to be engaged by either of said arms, and two other sets of contacts connected to the other side of the supply circuit, one set for each of said arms, and resistances connected to said last two mentioned sets of contacts.

5. In a controlling device for electric motors in combination, an insulating panel, a pair of contact arms pivotally mounted upon said panel, said arms projecting in opposite directions from their pivots, an insulating link connecting the free ends of said arms, a series of contacts between said arms, and a series of resistance contacts on each side of said intermediate contacts.

[Claims 6 to 9 not printed in the Gazette.]

1,104,801. DUMPING-BODY FOR COAL-TRUCKS. WILLIAM H. HUNT, New York, N. Y. Filed Sept. 19, 1913. Serial No. 790,788. (Cl. 21—86.)



1. In a coal truck body having a central and rear discharge opening, supplemental bottoms inclined both toward the longitudinal center of the body and toward the transverse center thereof, inclined chutes arranged centrally in said bottoms, one of said chutes being operative in alternate positions to close either the rear discharge opening or the central opening for the purpose described.

2. A coal truck body having inwardly and downwardly inclined rear end and side walls and provided with central and rear discharge openings in combination with inclined supplemental front and rear bottoms having centrally and longitudinally disposed inclined chutes, one chute being fixed and the other being movable downwardly and toward and from the longitudinal center of the body to open or close either of said discharge openings.

3. A coal truck body having inwardly and downwardly inclined rear and side walls, and central and rear discharge openings, supplemental inclined bottoms and depressed chutes formed therein, one chute being movable downwardly and toward and from the longitudinal center of the body, tracks secured in the central opening and beneath the front end of the movable chute, and rollers on said movable chute adapted to ride over said tracks for the purpose described.

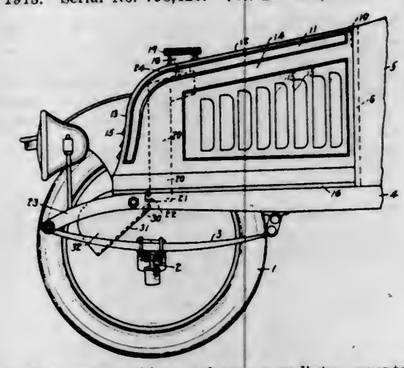
4. A coal truck body having central opposite side and rear delivery openings, the end portions of said body being provided with bottoms which are inclined downwardly and toward the central side openings, a fixed chute arranged in the bottom of the front end portion, and a movable chute arranged in the bottom of the rear end portion and adapted to register with the rear delivery opening when in its lowermost position.

5. A coal truck body having central side and rear delivery openings, the opposite end portions of said body being provided with supplemental bottoms which are inclined downwardly and inwardly toward the side openings and are adapted to discharge therethrough, the supplemental bottom of the front end portion of the body being provided with a fixed chute, and the supplemental bottom

of the rear end portion of the body being provided with a chute having a movable bottom adapted, in one position, to register with the rear delivery opening.

[Claims 6 to 8 not printed in the Gazette.]

1,104,802. AUTOMOBILE-HOOD. ROBERT C. HUPP, assignor to E. E. Hupp, Detroit, Mich. Filed Oct. 31, 1913. Serial No. 798,426. (Cl. 21—90.)



1. In a motor vehicle, a frame, a radiator mounted on the frame, a hood attached to the frame and inclosing the radiator at the top, sides and front down to the level of the bottom of the radiator so as to protect it from the weather, the bottom of the hood being open at its forward end, and an air deflector so arranged as to deflect air upwardly through the open bottom of the hood into contact with the radiator when the vehicle is running.

2. In a motor vehicle, a frame, a radiator mounted on the frame, a hood attached to the frame and inclosing the radiator at the top, sides and front down to the level of the bottom of the radiator so as to protect it from the weather, the bottom of the hood being open at its forward end, and a scoop-shaped air deflector secured to the frame, said deflector being adapted to deflect air upwardly through the open bottom of the hood into contact with the radiator when the vehicle is running.

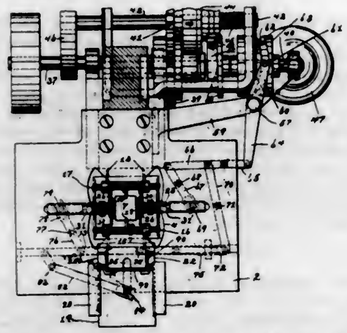
3. In a motor vehicle, a frame, a radiator mounted on the frame, a pivot on the frame, a hood attached to the pivot so as to swing vertically thereon, the hood having a top, front and sides that inclose the radiator down to the level of the bottom thereof and protect it from the weather, the bottom of the hood being open at the forward end, and an air deflector arranged to deflect air upwardly through the open bottom of the hood into contact with the radiator when the vehicle is running.

4. In a motor vehicle, a frame comprising side bars and a cross-piece extending between the side bars, a radiator mounted on the cross-piece, a body on the frame, said body comprising a dash board, a pivot mounted on the dash board near its upper edge, a hood secured thereto and adapted to swing vertically thereon, said hood normally inclosing the radiator at the top, sides and front, the bottom of the hood being open forward of the radiator, and a member attached to the cross-piece and projecting downwardly and forwardly therefrom, said member being adapted to deflect air upwardly through the opening forward of the radiator into contact with the radiator and to prevent mud or dirt from splashing upwardly against the radiator when the vehicle is running.

5. In a motor vehicle, a frame comprising side bars and a cross-piece extending between the side bars, a radiator mounted on the cross-piece, a body on the frame, said body comprising a dash board, a pivot mounted on the dash board near its upper edge, a hood secured thereto and adapted to swing vertically thereon, said hood normally inclosing the radiator at the top, sides and front, the bottom of the hood being open forward of the radiator, and a scoop-shaped member attached to the cross-piece and projecting downwardly and forwardly therefrom, said member being adapted to deflect air upwardly into contact with the radiator and to prevent mud or dirt from splashing upwardly against the radiator when the vehicle is running.

[Claims 6 and 7 not printed in the Gazette.]

1,104,803. MACHINE FOR BAILING PAPER PAILS. HARRY A. INMAN, Amsterdam, N. Y. Original application filed May 3, 1911, Serial No. 624,812. Divided and this application filed Dec. 8, 1911. Serial No. 664,608. (Cl. 140—93.)



1. In a machine for bailing paper-pails or the like, and in combination, a form adapted to be inserted within the body of the pail; and bail-inserting-and-clenching mechanism comprising in part a member interposed between the body of the pail and its lapping side-wings, said member being coöperative with said form to support the body of the pail thereupon, and coöperative with said wings to support the same against the thrust of the bail-inserting mechanism.

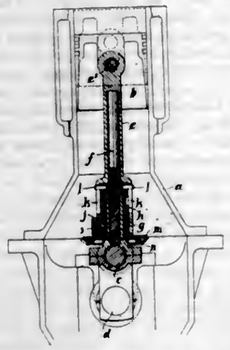
2. In a machine for bailing paper-pails or the like, and in combination, means for holding in position a formed pail having lapping side-wings; a plate adapted to occupy a position between the body of the pail and said lapping wings and provided with an opening to receive the end of the bail; a bail-carrier movable to and from a position opposite said side-wings; means for driving the ends of the bail through said side-wings when the bail-carrier is opposite thereto; and means for bending the ends of the bail.

3. In a machine for bailing paper-pails or the like, and in combination, a form adapted to be inserted within the body of the pail; and a bail-inserting-and-clenching mechanism comprising in part a member interposed between the body of the pail and its lapping side-wings, said member being coöperative with said form to support the body of the pail thereupon, and coöperative with said wings to support the same against the thrust of the bail-inserting mechanism, and in part clenching-mechanism movable in the space between the body of the pail and said lapping side-wings.

4. In a machine for bailing paper-pails or the like, and in combination, means for supporting a formed pail having lapping side-wings; a plate adapted to occupy a position between the body of the pail and said lapping side-wings, and provided with an opening to receive the end of the bail; means for forcing the end of the bail through said lapping side-wings; and a clenching-member movable in the space between said plate and said lapping side-wings.

5. In a machine for bailing paper-pails or the like, and in combination, means for holding in position a formed pail having lapping side-wings; a plate adapted to occupy a position between the body of the pail and said lapping wings, and provided with an opening to receive the end of the bail; a bail-carrier movable to and from a position opposite said side-wings: means for driving the ends of the bail through said side-wings when the bail-carrier is opposite thereto; and a clenching-member movable in the space between said plate and said lapping side-wings.

1,104,804. FOUR-CYCLE INTERNAL-COMBUSTION ENGINE. THOMAS SPENCER JAMES, Peckham, London, England. Filed June 13, 1913. Serial No. 773,551. (Cl. 123—78.)



1. In an internal combustion engine, the combination of a cylinder, piston and crank shaft, a telescopic piston rod connecting the crank shaft and piston, means including a rotating element operable with and mounted on the telescopic shaft to separate and expand the telescopic shaft, whereby to cause the piston to travel farther outwardly on the exhaust stroke than it does on the other strokes in the cycle of operation, and means on the crank shaft for operating the rotating element.

2. An internal combustion engine having a telescopic piston rod, a crank pin a pinion on the crank pin, a pinion co-axial with the piston rod and meshing with the piston on the crank pin, a drum connected to the pinion and having in it a cam track, and a projection on one member of the telescopic piston rod to engage the cam track and increase the throw of the piston.

3. An internal combustion engine having a telescopic piston rod comprising inner and outer parts a crank pin, a drum within the outer part, said drum having in it a cam track and fixed to it a pinion, a roller mounted upon the outer part of the piston rod adapted to travel in the cam track, pins in the inner part of the piston rod adapted to travel slots in the outer part of the rod and a pinion in the crank pin adapted to drive the pinion on the drum.

4. An internal combustion engine having a piston furnished with a telescopic rod comprising inner and outer parts adapted to slide one on the other a crank pin, slots in the outer part, pins projecting from the inner part into the said slots, a pinion coaxial with the piston rod and having on it a drum provided with a cam track in which a roller carried by the outer part of the piston rod is adapted to travel and a pinion on the crank pin adapted to drive the pinion having the drum.

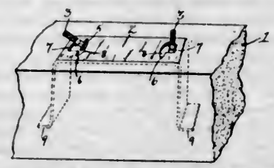
5. In an internal combustion engine, the combination of a cylinder, piston and crank shaft, means including a telescopic piston rod and cam thereon interposed between the crank shaft and piston to cause the latter to make a longer stroke outwardly when exhausting the burnt gases than it does when making the other strokes in the cycle of operation, and means for operating the cam.

[Claims 6 to 11 not printed in the Gazette.]

1,104,805. CONCRETE-ANCHOR. WILLIAM D. JAMES, Fort Atkinson, Wis. Filed July 8, 1912. Serial No. 708,093. (Cl. 72—105.)

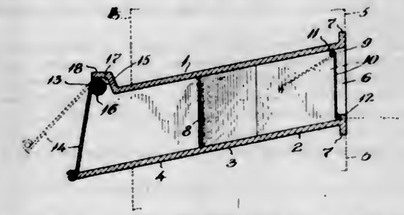
1. As an article of manufacture, an anchorage member comprising a strip of metal having a flat central portion elbowed at its respective ends to form anchor legs and the extremities of said legs being also elbowed to form feet, adapted, with the legs, to be embedded in a body of concrete with the central portion flush with the surface of a floor, said central portion being provided with bolt receiving key slot apertures adjacent to said first mentioned elbows, substantially as described.

2. A concrete stable floor provided with a pair of shallow pockets in its upper surface having side and bottom walls of concrete, and both pockets covered by a strip of metal forming metallic top and outer end walls of said pockets, said end walls being extended downwardly and anchored in the concrete below the outer ends of said



pockets and said metal top wall being flush with adjacent portions of the floor and provided with bolt receiving apertures laterally enlarged in one portion to permit manipulation of a bolt head therethrough, and adapted to facilitate the attachment of stanchions, mangers, or posts to said floor, substantially as described.

1,104,806. SCUPPER. SAMUEL KAHN, New York, N. Y. Filed Dec. 16, 1913. Serial No. 807,152. (Cl. 169—20.)



1. In a scupper, the combination of a box-like receiving portion having parallel sides, a portion tapering away from said receiving portion, a discharge for said tapering portion, smaller than said receiving portion, and an automatically movable valve, having a less area than the cross-section of the receiving portion, and mounted in and normally closing said receiving portion.

2. A scupper provided with a receiving portion and a discharge portion which has a cross-section relatively smaller than said receiving portion, the side walls at least of said receiving portion being parallel, in combination with a controlling valve mounted in the passage through said receiving portion, and having an area which is substantially that of the cross-section of the passage through said receiving portion, said parallel side walls permitting said valve to have an inward swinging movement, whereby a free passage through the scupper is provided.

3. In a scupper, the combination of a box-like receiving portion having parallel sides, a portion tapering away from said receiving portion, a discharge for said tapering portion, smaller than said receiving portion, and an automatically movable valve, having a less area than the cross-section of the receiving portion, and mounted in and normally closing said receiving portion, and a second valve at the end of said discharge.

1,104,807. ELECTRIC INCANDESCENT LAMP. ARTHUR S. KNIGHT, Newark, N. J., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed May 16, 1910. Serial No. 561,577. (Cl. 176—29.)



1. An incandescent lamp comprising a tubular shell having terminal wires projecting into its opposite ends, insulating bodies carrying reversely bent conducting members, certain of which are connected to the terminal wires,

and a plurality of filaments stretched between the remaining conducting members.

2. An incandescent lamp comprising a tubular shell having terminal wires projecting into its opposite ends, insulating bodies carrying reversely bent conducting members, certain of which are connected to the terminal wires, a plurality of filaments stretched between the remaining conducting members, and resilient means interposed between one of the leading-in-wires and the corresponding conducting member.

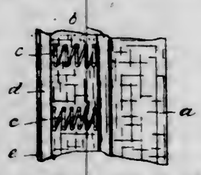
3. An incandescent lamp comprising a tubular shell having terminal wires projecting into its opposite ends, insulating bodies carrying reversely bent conducting members, certain of which are connected to the terminal wires, a plurality of filaments stretched between the remaining conducting members, a rigid member connecting the insulating body at one end of the lamp to the leading-in wire at the other end.

4. An incandescent lamp comprising a tubular shell having terminal wires projecting into its opposite ends, insulating bodies carrying reversely bent conducting members, certain of which are connected to the terminal wires, a plurality of filaments stretched between the remaining conducting members, resilient means interposed between one of the leading-in wires and the corresponding conducting member, and a rigid member connecting the insulating body at one end of the lamp to the leading-in wire at the other end.

5. An incandescent lamp comprising a tubular shell having terminal members projecting into its opposite ends, a rod within the shell extending longitudinally thereof, insulating bodies at opposite ends of the rod, resilient means interposed between one of said bodies and said rod, filament supporting members carried by the said bodies, and a filament stretched between the said supporting members.

[Claims 6 to 9 not printed in the Gazette.]

1,104,808. PROTECTING-GARMENT FOR AVIATORS. RICHARD KOCKAOW, Nieder-Lausitz, Germany. Filed Oct. 10, 1913. Serial No. 794,465. (Cl. 244—1.)

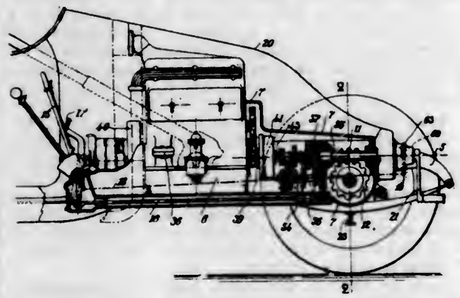


A protecting garment for aviators, such garment being composed of two layers of aluminium covered by felt, and spring elements spacing said layers, substantially as and for the purpose set forth.

1,104,809. TRANSMISSION-GEAR FOR MOTOR-VEHICLES. JOSEPH LAVIOLETTE, Amsterdam, Netherlands. Filed Nov. 3, 1913. Serial No. 798,998. (Cl. 21—90.)

1. In a motor vehicle, the front wheels of which are driving and steering wheels, the combination with a common gear case for the engine, change speed gear, and the differential mechanism, the said gear case being suspended at three points, of two cross-shafts jointed by means of a Cardan joint to the shafts of the differential, of two hollow journals provided at the ends of the front axle and carrying two vertical pins, of an extensible universal joint for coupling each cross-shaft to the hub of each driving wheel, of a sleeve on which rotates the hub of each driving wheel which sleeve is mounted pivotally on two vertical pins of the hollow journal, and of a sleeve protecting each cross-shaft and connected to the hollow journal and to the gear case of the change speed gear by means of air tight joints with spherical surfaces.

2. In a motor vehicle, the front wheels of which are driving and steering wheels, an engine, a clutch cup mounted at the front end of the engine shaft, a hollow shaft rotating concentrically in the said cup in alinement with the engine shaft and forming the primary shaft of the change speed gear, a drum or pulley mounted on the said hollow shaft in the interior of the said cup, a series of clutch disks sliding on but rotating with the said pulley, a series of clutch disks sliding in the interior of the said cup and participating in its movement of rotation, the latter disks being arranged between the disks mounted on the pulley, a solid spindle rotating in the interior of the hollow shaft in line with the engine shaft, a disk mounted at the end of the said solid spindle for acting by pressure on the clutch disks the said disks sliding in the interior of the cup but rotating with the latter, a clutch spring acting to move the solid spindle longitudinally for the purpose of pressing the clutch disks against each other by means of the said disk, a second hollow shaft arranged in line with the first and surrounding the solid spindle a worm cut on the said second hollow shaft and engaging with a corresponding toothed wheel mounted on the casing of the differential mechanism, a series of loose gears mounted on the first hollow shaft forming the primary shaft of the change speed gear which gear wheels can be brought into engagement with the corresponding gear wheels mounted on a shaft parallel to the said hollow shaft and forming the secondary shaft of the change speed gear, a gear wheel mounted on the second hollow shaft for engaging with a corresponding gear wheel of the above-mentioned secondary shaft, a claw clutch provided on the gear wheel of the second hollow spindle and on the adjoining loose gear of the first hollow shaft, a head mounted at the end of the solid spindle, a throwing into gear spring acting on the said head, a starting handle which can engage with the said head, a disengaging lever operated by a pedal for acting on the said head in the direction opposite to that of the throwing into gear spring, a brake drum mounted at the end of the second hollow shaft, and an extensible segment brake arranged in the interior of the said drum and mounted on a fixed disk secured to the gear case of the change speed gear mechanism.



3. In a motor vehicle, the front wheels of which are driving and steering wheels, a mechanism comprising the engine, the change speed gear and the differential connected together in one and the same gear case forming a single block and mounted in front of the frame, a front axle with hollow journals, laminated suspension springs provided between the frame and the axle, a differential mechanism mounted in the gear case of the change speed gear and having the same axial plane as that of the axle, a lever for controlling the loose gears of the change speed gear, which lever is mounted on the common gear case forming a single block, a brake mechanism provided in front of the gear case for the change speed gear and the differential, a case secured in front of the said gear case and arranged in front of the brake mechanism, the said second gear case containing the disengaging mechanism, a starting handle rotatably mounted in the front end of the said gear case, the whole substantially as hereinbefore described and shown in the drawing and for the purposes illustrated.

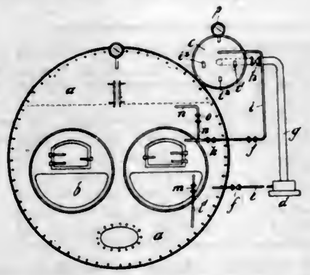
1,104,810. EXTRACTION OF ARSENIC OR ANTIMONY FROM ORES CONTAINING THE SAME. HAROLD ALLMAN LEWIS and FREDERICK GLYN PRICE, Cobalt, Ontario, Canada; said Price assignor to said Lewis, Oruro, Bolivia. Filed Mar. 8, 1912. Serial No. 682,543. (Cl. 75—66.)

1. A process for use in the removal of arsenic or antimony from ores or products containing the same consisting in mixing with the ore sulfur and sulfid of an alkaline element and in heating the mixture until reaction takes place.

2. A process for use in the removal of arsenic or antimony from ores or products containing the same consisting in mixing with the ore sulfur and a sulfid of an alkaline element and in heating the mixture until reaction takes place, and then leaching the product of the reaction.

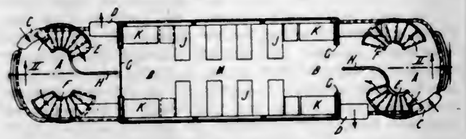
3. A process for use in the removal of arsenic or antimony from ores or products containing the same consisting in heating the ore with sulfur and with a sulfid of an alkaline element.

1,104,811. STEAM-GENERATOR. EDWARD MAKIN, Manchester, England. Filed Aug. 15, 1913. Serial No. 784,852. (Cl. 122—140.)



In combination, a main generator having an internally fired flue, a primary generator in said flue, a pressure header and pump, pipes connecting said header and said pump to said generators, a back pressure valve in the pipe between said header and said primary generator, a relief pipe having one end communicating with the pipe between said primary generator and said valve and having its other end communicating with said main generator at a point above said flue, and a valve in said relief pipe.

1,104,812. TRAM-CAR. CHARLES WILLIAM MALLINS, Liverpool, England. Filed Jan. 21, 1913. Serial No. 743,377. (Cl. 105—199.)

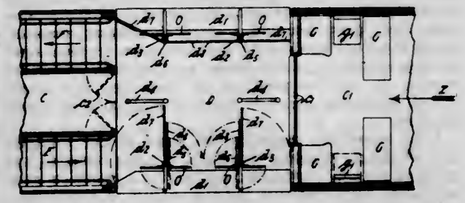


1. In a double deck tramcar in combination, a platform at each end, an upper deck extended over the said platform, a separate exit and entrance for each platform located on the same side of the platform, two stairways at each end of the car connecting the respective platforms with the upper deck, a doorway at each end leading to the interior of the lower deck, and a barrier for each platform extending from the center of said door way across the platform and dividing the platform into two portions, the one communicating with the entrance and one stairway and the other communicating with the exit and the other stairway, substantially as described.

2. In a double deck tramcar in combination, a platform at each end, an upper deck extended over the said platform, a separate exit and entrance for each platform located on the same side of the platform, an ascending stairway from each platform to the upper deck which stairway when in the rear of the car slopes upwardly and forwardly, and a descending stairway to each platform which stairway when in the rear of the car slopes downwardly and forwardly, a doorway at each end leading to the interior of the lower deck, and a barrier for each platform extending from the center of said doorway across the platform and dividing the platform into two portions, the one communicating with the entrance and the ascending staircase and the other communicating with the exit and the descending staircase, substantially as described.

3. In a double deck tramcar, in combination, a platform at each end of the car, an upper deck extending over the said platform, a separate entrance and exit for each platform, said entrance and exit being located in respect to each platform so that they are on the near side when the platform is in the rear of the car, two spiral stairways at each end of the car connecting the respective platforms with the upper deck, said two stairways being on opposite sides of the platform and being spiral stairways of the same hand, a doorway at each end leading to the interior of the lower deck, and a barrier for each platform extending from the center of the said doorway to the inside framework of the stairway on the exit and entrance side of the platform, said barrier dividing the platform into two parts, one, the smaller part, communicating with the exit and the stairway adjacent thereto, and the other, the larger part, communicating with the entrance and the stairway on the opposite side, and including an unobstructed space between the said entrance and stairway and adjacent to the end rail of the platform, adapted to accommodate the driver or conductor, substantially as described.

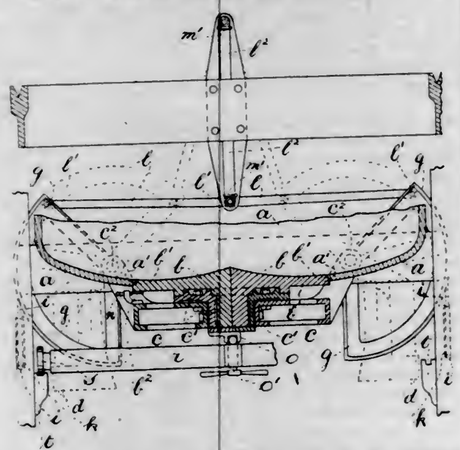
1,104,813. TRAM-CAR. CHARLES WILLIAM MALLINS, Liverpool, England. Filed Jan. 21, 1913. Serial No. 743,378. (Cl. 105—205.)



1. In a double decker tramcar in combination:—a central platform dividing the lower deck into two compartments; a doorway from each compartment to the platform; two separate stairways from the platform to the upper deck; two stanchions dividing the side entrance to the platform into two wing sections and one central section; barriers extending respectively from opposite the center of each of the doorways to the adjacent stanchion, one of the said barriers dividing off a portion of the platform which communicates with one half of one of the doors, one of the staircases and one of the wing sections of the side entrance, and the other barrier dividing off a portion of the platform which communicates with one half of the other door and the other wing section of the side entrance, the remaining portion of the platform communicating with the other staircase and the other halves of two doors; substantially as described.

2. In a double deck tramcar in combination:—a central platform dividing the lower deck into two compartments; a doorway from each compartment to the platform; two separate stairways from the platform to the upper deck; two stanchions on each side of the platform dividing each side entrance to the platform into two wing sections and a central section; two barriers one opposite the center of each of the doorways; two pivoted barriers on each stanchion adapted when extended to completely close the said entrance, and when folded together to connect the respective barriers to the respective stanchions; substantially as described.

1,104,814. DOUGH-KNEADING MACHINE. JOHN WILLIAM VICTOR MASON, Manchester, England. Filed Dec. 10, 1912. Serial No. 735,879. (Cl. 107—30.)

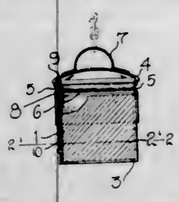


1. In means for operating the doors of the rotatable pans of dough kneading machines, a hinge mounted and operated external to the pan, and having a relatively rotatable door part mounted thereon, and arresting means for stopping the said door part at a predetermined position relatively to said hinge for enabling the pan to be opened without interfering with its motion, substantially as herein set forth.

2. In means for operating the doors of the rotatable pans of dough kneading machines, a hinge mounted and operated external to the pan, and having a relatively rotatable door part mounted thereon, movement arresting means for stopping the said door part at a predetermined position relatively to said hinge and retaining means for keeping the relative positions of hinge and door undisturbed, while the latter is open, substantially as herein set forth.

3. In means for operating the doors of the rotatable pans of dough kneading machines, a hinge mounted and operated external to the pan, and having a relatively rotatable door part mounted thereon, a bolt and projection device for arresting the movement of said door part, a spring bolt device for retaining the door part and hinge in the desired relative positions, while the pan is open, and means for moving said hinge for the purpose of opening said pan, substantially as herein set forth.

1,104,815. CHALK-HOLDER. NICHOLAS MICHANEK, St. Joseph, Mo. Filed Apr. 6, 1914. Serial No. 830,039. (Cl. 46—8.)

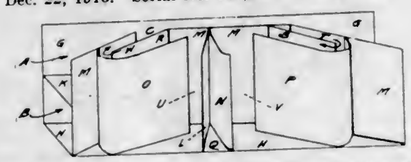


1. A chalk holder comprising a shell having an inwardly extending flange at one end, a cap mounted upon the opposite end of said shell, said cap having an inwardly extending rib formed thereon, a leaf spring connected at one end within said shell, and the opposite end of said spring projecting from the shell for engagement with the rib on said cap, as and for the purpose described.

2. A chalk holder comprising a shell having an inwardly extending flange at its outer end, a cap for engagement with the inner end of said shell to close the same, said cap having an inwardly extending rib formed thereon, a leaf spring connected at one end to the inner periphery of said shell adjacent its outer end, the free end of said spring projecting beyond the inner end of said shell, the free end of said spring being curved so that the same is normally spaced from the inner periphery of said shell, the projecting portion of said spring being curved to form a latch, the latch being normally disposed out of longitudinal alinement with said rib, said latch being moved inwardly upon application of the chalk within the shell, whereby the latch is securely locked in engagement with the rib on said cap.

3. The combination with a block of chalk having a longitudinal groove in its periphery, of a holder comprising a shell having an inwardly extending flange at one end, said shell being adapted to receive the chalk, a cap for closing the opposite end of said shell, said cap having an inwardly extending rib formed thereon, a leaf spring connected at one end to the inner periphery of said shell adjacent its inner end, the body of said spring engaging the groove in the periphery of said chalk and the opposite end of said spring projecting within said cap for engagement within said rib, as and for the purpose described.

1,104,816. VENTILATING DEVICE. CHANT A. MILLER, St. Louis, and ROYAL V. MILLER, St. Joseph, Mo. Filed Dec. 22, 1913. Serial No. 808,204. (Cl. 98—22.)



1. In a ventilator adapted to ventilate sleeping car berths, cars, vehicles, rooms and the like, an upper horizontally disposed outer air passage having open ends; a similar lower outer air passage directly beneath said upper passage; an inner air chamber for said upper passage said chamber having an open side opening into said ventilated apartment; an air duct whereby said upper passage and said air chamber are connected said duct being inclined toward the center of said upper passage at its juncture therewith; another air chamber having an open side opening into said ventilated apartment; and another air duct whereby said lower passage is connected with said other air chamber said other duct being inclined toward the center of said lower passage at its juncture therewith.

2. In a ventilator adapted to ventilate sleeping car berths, cars, vehicles, rooms and the like, an upper outer air passage horizontally disposed and having flared open ends; a similar lower outer air passage directly beneath said upper passage; an inner air chamber for said upper air passage said chamber having a flaring open side opening into said ventilated apartment; an air duct whereby said upper air passage and said chamber are connected said duct being inclined toward the central portion of said upper passage at its juncture therewith said duct and chamber together forming an S shaped air conduit the transverse area of which increases from said juncture to said apartment; another similarly formed inner air chamber; and another air duct whereby said lower air passage is connected with said other air chamber said other duct being reversely inclined to the inclination of the first mentioned duct at its juncture with said lower passage.

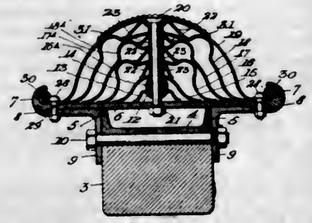
3. In a device of the character described, an upper air passage having open ends; a similarly formed lower air passage beneath said upper air passage said air passages being adapted to have air pass and reversely pass therethrough; air conducting means connected with said upper passage said conducting means being adapted to conduct air exhaust from an apartment while air is passed through said upper passage and to conduct air into said apartment while air is reversely passed through said upper passage; other air conducting means connected with said lower passage said other conducting means being adapted to conduct air therefrom into said apartment while the air is being exhausted through the first mentioned conducting means and to exhaust air from said apartment through said lower passage while air is being admitted through said first mentioned conducting means, the conducting means for both of said passages being so positioned that while air is being exhausted through either one of said conducting means that said exhausted air passes alongside of and against the air inlet end portion of both said upper and lower passages for warming the same.

4. In a ventilator, an outer air passage having both ends open and being adapted to have air pass and reversely pass therethrough; a port formed through one side of said passage; an inner air chamber having a flaring open side adapted to open into an apartment; a return bent air duct having one of its end portions inclined toward the central portion of said passage and connected therewith through said port and its other end opening into said chamber said duct being of greater transverse area at its ported end than the area of said port and together with said chamber forming tortuous air conducting means the transverse area of which increases from the ported end thereof to and including the flaring open side of said chamber.

5. A ventilator adapted to ventilate sleeping car berths, cars, vehicle, rooms and the like, comprising a vertical outer back wall; a top; a bottom; a horizontal partition and a vertical partition forming two outer horizontal passages for passage of air therethrough, one passage being above the other, said vertical partition having its end portions so inclined that the ends of said passages are widened thereby, and having a left port formed therethrough at the juncture of the left one of its inclined portions and its uninclined portion, said port opening into the upper one of said outer air passages with its outer or left edge farther than its right edge from said outer back wall; an inner air chamber opening into said ventilated apartment; an air duct one end of which is connected with said vertical partition and communicates through said port with the upper one of said outer air passages the ported end portion of said duct being extended from said partition toward the left end thereof at an incline thereto, said duct being farther extended in a tortuous form and opening into said inner air chamber said duct also being of greater transverse area than the area of said port at its juncture therewith and increasing therefrom in said transverse area to and including its opening into said chamber; and a similarly formed right port for the bottom one of said outer air passages said right port being similarly provided with a reversely arranged air duct and inner air chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,104,817. RESILIENT TIRE FOR AUTOMOBILE AND OTHER VEHICLE WHEELS. JOHN J. A. MILLER, Denver, Colo. Filed Aug. 5, 1913. Serial No. 783,087. (Cl. 152—8.)



1. In a resilient tire, the combination with a rim, of a plurality of spaced circular concentric members having annular corrugations, said members being made up of a plurality of segmental plates, and bolts which extend loosely through said plates and through said rim, having retaining means, such as nuts, on their inner ends, the corrugations of one member bearing upon the member just beyond.

2. In a resilient tire, the combination with a rim, of a plurality of spaced concentric circular members having annular corrugations, those of one member bearing against the adjoining member, said members being made of a plurality of segmental plates substantially semi-circular in cross section, bolts extending through the outer plates along their edges, and through the rim, which permit lateral and endwise expansion of the plates, and radially-disposed bolts which extend through the arch portions of said plates and loosely through the rim, and having nuts on their inner ends.

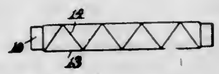
3. In a resilient tire, the combination with a rim, of a plurality of spaced circular corrugated concentric members, and a plurality of interposed supplemental members, each comprising a plurality of segmental plates substantially semi-circular in cross section, which overlap at their ends, bolts extending loosely through said overlapping ends and midway of the length of the plates, said bolts being slidably mounted in the rim and having nuts on their inner ends, there being inclined slots adjacent to the edges of the outer plates, and bolts which extend through said slots and through the rim.

4. In a resilient tire, the combination with a rim, of a plurality of concentric continuous members substantially semi-circular in cross section, each of which comprises a plurality of segmental corrugated plates, the corrugations of one plate engaging the adjoining plate, the edges of said plates resting upon the rim, annular cushioning rings interposed between each two of said members, each comprising a plurality of segmental plates bow-shaped in cross section, said rings lying between the corrugations of said members, a resilient saddle on the rim, a resilient cushioning element in said saddle, a resilient band bow-shaped in cross section which rests on said cushioning element, and on the rim, and supports the innermost cushioning ring, an outer member comprising a plurality of plates which overlap at their ends and are provided with slots adjacent to their edges, bolts which extend through all of the tire members and loosely through the rim, bolts which extend through the slots in the edges of the outer plates, and resilient blocks on the first mentioned bolts between the plates.

5. In a resilient tire, the combination with a rim, of a plurality of tire members, each made up of corrugated plates which are substantially semi-circular in cross section, and overlap at their ends, an outer member comprising a plurality of overlapping plates, cushion rings interposed between said tire members, which are also made of plates which overlap at their ends, their bearing edges lying between the corrugations of the plate, the plates of one member and its cushioning ring, alternating with those of the adjoining member and its cushion ring, radial bolts slidable in said rim, which pass alternately through the overlapping ends of one set of plates and the centers of the adjoining plates, resilient blocks on the bolts between each cushion ring and the next adjoining member, and a continuous resilient support for the innermost cushioning ring, an endless resilient saddle on the rim, and a resilient element therein which engages said resilient support, and means for securing the edges of the outer plates to the rim so as to permit of lateral and endwise expansion of said plates.

[Claims 6 and 7 not printed in the Gazette.]

1,104,818. THREAD-PACKAGE. CHARLES P. MITCHELL, Arlington Heights, Mass. Filed June 7, 1909. Serial No. 500,970. (Cl. 242—161.)



1. A package comprising a plurality of concentric sections, each section being composed of a plurality of wrappings of thread, the number of winds in each wrapping of

each section decreasing from its initial wrapping outward, and the winds in the initial wrapping of each section exceeding the number of winds in the outer wrapping of the next preceding section.

2. A package with tapering ends comprising a plurality of concentric sections, each section being composed of a plurality of wrappings of thread, the number of winds in each wrapping of each section decreasing from its initial wrapping outward, and the winds in the initial wrapping of each section exceeding the number of winds in the outer wrapping of the next preceding section.

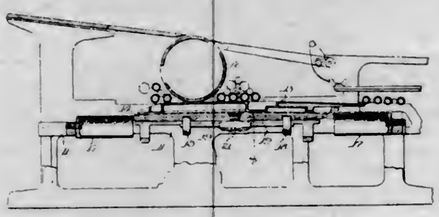
3. A package comprising a core; and a plurality of concentric sections thereon, each section being composed of a plurality of wrappings of thread, the number of winds in each wrapping of each section decreasing from its initial wrapping outward, and the winds in the initial wrapping of each section exceeding the number of winds in the outer wrapping of the next preceding section.

4. A package with tapering ends comprising a core; and a plurality of concentric sections thereon, each section being composed of a plurality of wrappings of thread, the number of winds in each wrapping of each section decreasing from its initial wrapping outward, and the winds in the initial wrapping of each section exceeding the number of winds in the outer wrapping of the next preceding section.

5. A package comprising a plurality of sections each one of which starts with a wrapping having a predetermined number of winds, the number of winds decreasing as the size of the section increases, and each superimposed section starting with a wrapping having a greater number of winds than contained in the outer wrapping of the preceding section.

[Claim 6 not printed in the Gazette.]

1,104,819. BED-CUSHIONING DEVICE FOR PRINTING-PRESSES. SIVERT MOE, Chicago, Ill., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1912. Serial No. 707,408. (Cl. 101—5.)



1. The combination, with a stationary member, and a reciprocatory member mounted thereon to travel in an arcuate path, of dash pot cushioning mechanism, one of the dash pot elements rigidly mounted on the stationary member with its axis at a slight angle to the path of the reciprocating member, the other dash pot element attached to and moving in the same general direction as the reciprocatory member, and means to guide the movably mounted element in a path parallel to a chord of the arc traversed by the reciprocating member and in alinement with the fixed element, substantially as described.

2. The combination, with a stationary member, and a reciprocatory member mounted thereon to travel in an arcuate path, of dash pot cushioning mechanism comprising a cylinder element rigidly mounted upon the stationary member and a piston element attached to and moving in the same general direction as the reciprocatory member, and means to guide the piston element in alinement with the axis of the cylinder element in a path corresponding to a chord of the arc traversed by the reciprocating member and substantially as described.

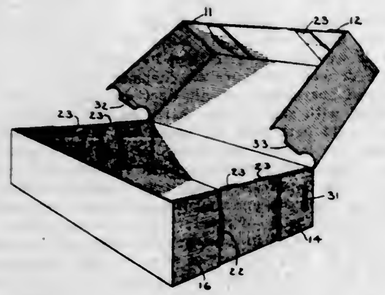
3. The combination, with a stationary member, and a reciprocatory member mounted thereon to travel in a curvilinear path, of dashpot cushioning mechanism comprising a cylinder and piston elements, one of said elements rigidly mounted on the stationary member and the other element carried by the reciprocatory member, a connection between the last named element and the reciprocatory element to permit of transverse relative movement, and means to guide the movable element in a rectilinear path in alinement with the axis of the stationary element, substantially as described.

4. The combination, with a stationary member, and a reciprocatory member mounted thereon to travel in a curvilinear path, of dash pot cushioning mechanism comprising a cylinder element rigidly mounted on the stationary member and a piston element carried by the reciprocatory member, a connection between the piston element and the reciprocatory member to permit of rocking and transverse relative movement, and means to guide the piston element in a rectilinear path in alinement with the axis of the cylinder element, substantially as described.

5. In a printing press, the combination, with the frame and a reciprocatory bed traveling longitudinally thereof in a curvilinear path, of cushioning mechanism comprising dash pot elements carried one by the frame and the other by the bed, one of the dash pot elements rigidly mounted, the other dash pot element mounted to provide for lateral and rocking movement, and means to guide the reciprocating element along a rectilinear path in alinement with the stationary element, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

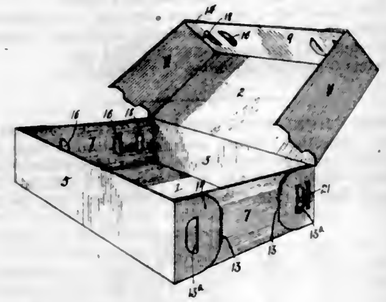
1,104,820. PAPER BOX. GEORGE L. MORRISON, Hudson, Mich. Filed Sept. 19, 1913. Serial No. 790,643. (Cl. 229—36.)



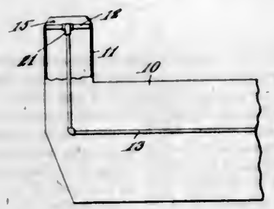
In a box and cover blank having foldable parts forming walls and flanges of the box and cover, tongues located at the ends of parts forming opposed side walls and flanges of the box and cover, and slots located in parts forming adjoining walls and flanges of the box and cover, said tongues having ears located on opposite sides thereof to engage the adjoining side walls at the ends of the slots when inserted in the slots, the tongues located at the ends of the rear wall of a box having slots, the ends of the side flanges of the cover having short centrally located tongues insertible into said last mentioned slots and between the end walls of the box and the tongues of the back of the boxes for holding the side flanges of the cover to the ends of the box.

1,104,821. KNOCKDOWN BOX. GEORGE L. MORRISON, Hudson, Mich. Filed Dec. 31, 1913. Serial No. 809,645. (Cl. 229—36.)

In a knock-down box, two separably connected walls, one having a pair of slots which are spaced longitudinally thereof and the other having an end extension for lapping the adjacent end of the slotted wall, said extension having inner and outer end portions hingedly connected along a line transverse thereto and having the same spaced relation as the slots and the outer end portion having tongues projecting in opposite directions from its inner and outer ends for insertion into respective slots of the slotted wall, the inner tongue projecting inwardly beyond the hinged line of connection between the inner and outer end portions of the extension and movable with the outer end portion of the extension when such portion has hinged movements relative to the inner end portion of the extension.



1,104,822. SPARK-EXTINGUISHER AND SMOKE-CONSUMER. PATRICK MULLOY and HENRY FIRMINHAC, Mercer, Wis. Filed Nov. 9, 1912. Serial No. 730,451. (Cl. 110—142.)



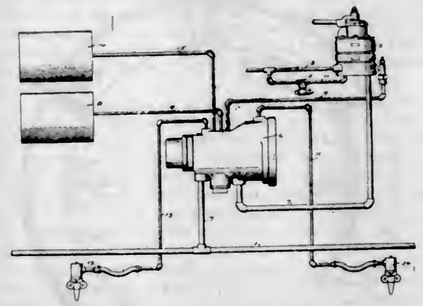
1. The combination with a boiler, a smoke stack, and a throttle, of a spraying ring attached to the said smoke stack, a pipe communicating therewith and with the boiler below the normal water level thereof, and means actuated by the said throttle controlling the amount of water supplied to said spraying ring.

2. In an apparatus of the class described, the combination of a smoke stack, a boiler, a throttle, a spraying ring secured to the inner surface of said smoke stack, a pipe communicating therewith and with the boiler below the normal level thereof, a supply valve in said pipe, a regulating valve in said pipe, and a controlling valve in said pipe secured to and actuated by said throttle.

3. In apparatus of the class described, the combination with a locomotive stack, a locomotive boiler, and a locomotive throttle, of a ring carried by the upper inner edge of the said stack and provided with a plurality of openings extending therethrough, a pipe communicating with said ring and with the locomotive boiler below the water line of the latter, a supply valve located in said pipe adjacent the boiler connection thereof, a controlling valve located beyond the said supply valve and actuated by and in conjunction with the locomotive throttle, and a regulating valve located beyond said controlling valve.

4. In apparatus of the class described, the combination with a locomotive boiler, a smoke stack, and a throttle, of a frusto-conical shield secured to said smoke stack at its upper end, a spraying ring disposed within and housed by the said frusto-conical shield, a pipe communicating with said ring and with the locomotive boiler below the water line thereof, supply, controlling and regulating valves located in said pipe, and the said controlling valve actuated by and in conjunction with the locomotive throttle.

1,104,823. AUTOMATIC TRAIN-BRAKE-CONTROL APPARATUS. HOWARD M. P. MURPHY, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 5, 1907. Serial No. 387,182. (Cl. 188—1.)



1. An automatic train brake control apparatus comprising a valve device having a normal position and movable in one direction from the normal position to effect a gradual reduction in train pipe pressure and produce a service application of the brakes and movable in the opposite direction from the normal position to effect a sudden reduction in train pipe pressure and produce an emergency application of the brakes, and means for automatically actuating said valve device.

2. An automatic train brake control apparatus comprising a valve adapted to effect a gradual reduction in one position and a sudden reduction in train pipe pressure in another position, upon movement to either position from an independent normal position, to thereby produce respectively a service and an emergency application of the brakes, a piston for actuating said valve and means for automatically operating said piston.

3. An automatic train brake control apparatus comprising a valve adapted to effect a gradual reduction in one position and a sudden reduction in train pipe pressure in another position, upon movement to either position from an intermediate normal position, to thereby produce respectively, a service and an emergency application of the brakes, a piston, normally subject to opposing fluid pressures for actuating said valve, and an automatically operated valve for varying the pressure on one side of said piston to actuate the same.

4. An automatic train brake control apparatus comprising a valve and actuating piston therefor, normally subject to opposing fluid pressures, a vent valve adapted to vent fluid from one side of said piston to actuate said valve, to effect a gradual reduction in train pipe pressure and produce a service application of the brakes, and another vent adapted to release fluid from the opposite side of said piston to actuate said valve to effect a sudden reduction in train pipe pressure and produce an emergency application of the brakes.

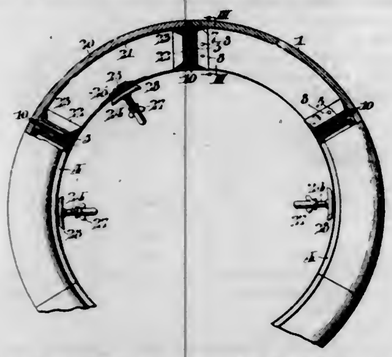
5. An automatic train brake control apparatus comprising a valve device, means for actuating said valve device to thereby effect a gradual reduction in train pipe pressure in one position and a sudden reduction in another, and a yielding resistance means for returning said valve device to an intermediate position.

[Claims 6 to 9 not printed in the Gazette.]

1,104,824. PNEUMATIC TIRE. CHARLES M. PAPON, Philadelphia, Pa., assignor of one-half to Eugene Bleyer, Laverock, Pa. Filed Dec. 3, 1912. Serial No. 734,667. (Cl. 152—22.)

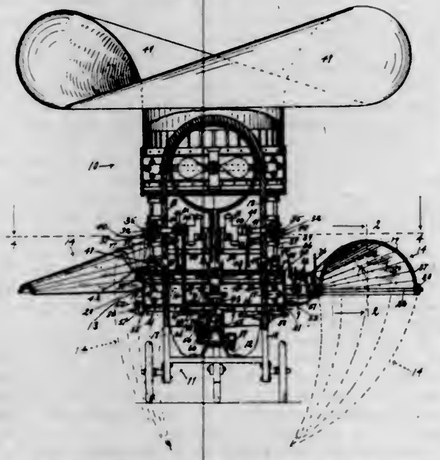
1. In a pneumatic tire, comprising a plurality of independently removable segment portions, the combination of a casing segment having a longitudinal slot; independent dished end plugs having tapered annular walls fitting snugly within the respective ends of said casing segment, and secured therein to form a substantially tight joint,

with the inner wall of the casing; and an inner pneumatic tube segment, having end portions which conform externally in shape to the inner surface of the end plugs of the casing segment, substantially as set forth.



2. In a pneumatic tire, comprising a plurality of independently removable segment portions, the combination of a casing segment having a longitudinal slot; independent dished end plugs having tapered annular walls fitting snugly within the respective ends of said casing segment, said end plugs having projecting portions which extend into the ends of said slot, said end plugs and projections being secured in position by a substantially tight joint, with the wall of the casing; and a layer of rubber applied over the entire exterior end surface of each end plug and the surrounding end portion of the casing, substantially as set forth.

1,104,825. ROTATABLE FLOAT APPARATUS. MARTIN PEARSON, Los Angeles, Cal. Filed Oct. 16, 1913. Serial No. 795,580. (Cl. 244—19.)



1. The combination with a flying machine, of collapsible floats rotatively mounted thereon and consisting of frames and bags affixed to said frames, and means for holding the bags against the frames in deflated condition.

2. The combination with a flying machine, of inclined frames, collapsible bags affixed to said frames, and means on the flying machine for rotating said inclined frames.

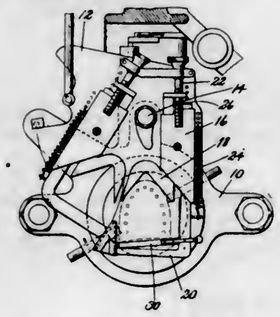
3. The combination of a flying machine, collapsible floats consisting of inclined frames and bags affixed to said frames, means on said flying machine for adjusting the floats in position, and means on said flying machine for rotating said floats.

4. The combination of a flying machine, collapsible floats carried thereby and consisting of inclined frames and bags affixed to said frames, means for holding said bags against said frames in deflated condition, and means on said flying machine for rotating said floats.

5. The combination of a flying machine, a ring mounted rotatably thereon, collapsible floats adjustably mounted on the ring, and means for rotating said ring.

[Claims 6 and 7 not printed in the Gazette.]

1,104,826. HEEL-ATTACHING MACHINE. JOSEPH H. POPE, Hamilton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 15, 1907, Serial No. 402,285. Renewed Feb. 6, 1912. Serial No. 675,909. (Cl. 1—32.)



1. A holder for heel lifts, having in combination, a rear gage for engaging the rounded end of a lift and a breast gage formed to engage the breast of the lift at a plurality of points having provision for simultaneously varying the positions of said points for the purpose of accommodating lifts with breasts of different or reverse obliquity.

2. A holder for heel lifts, having in combination, a rear gage formed to engage the curved end of a lift and a breast gage comprising a member formed to engage the breast of the lift at a plurality of points and arranged to be adjusted into two opposite angular positions to accommodate right and left heel lifts, having oblique breasts.

3. A holder for heel lifts, having in combination, a normally fixed rear gage formed to engage the curved end of a lift and a spring-pressed breast gage arranged to press a lift into engagement with said rear gage and formed to engage at a plurality of points a lift having an oblique breast edge and to maintain said lift with its longitudinal median line in vertical alinement with the longitudinal median line of the holder.

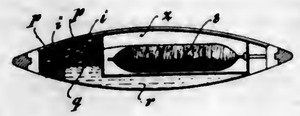
4. A holder for heel lifts, having in combination, a rear gage for engaging the curved end of a lift, a breast gage constructed to engage the lift at its breast corners, the portion of the breast gage engaged by one breast corner being in advance of that engaged by the other breast corner, and means whereby the relation between said portions of the breast gage may be reversed by adjustment of a single member.

5. In a heel attaching machine, a holder comprising gages arranged to retain a heel lift in predetermined position by engagement with the edge of said lift, said gages having corrugations extending in a direction parallel with the face of the lift.

[Claims 6 to 12 not printed in the Gazette.]

1,104,827. TREATMENT OF FABRICS DURING WEAVING. EMIL PREIN, Hanover, Germany, assignor to Prein-Gewebe Actien-Gesellschaft, Hanover-Linden, Germany, a Firm. Original application filed Sept. 9, 1910, Serial No. 581,200. Divided and this application filed Dec. 30, 1912. Serial No. 739,361. (Cl. 139—46.)

1. A process for treating weft threads of a fabric, consisting in brushing the threads in one direction at the point at which the threads are woven into the fabric, and moistening or damping said threads to secure to said threads the fibers laid down by the brushing.

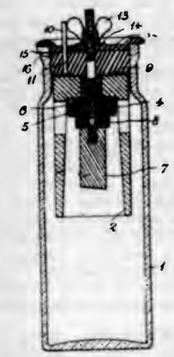


2. A process for treating weft threads of a fabric, consisting in laying down the fibers projecting from the threads at the point at which the weft threads are woven into the fabric, and securing said fibers to said weft threads by moistening.

3. A process for treating the weft threads of a fabric, consisting in simultaneously moistening said threads and brushing them in one direction at the point where the threads are woven into the fabric.

4. A process for treating the weft threads of a fabric, consisting in damping or moistening a pad and applying said pad in one direction to the threads at the point where the latter are woven into the fabric.

1,104,828. GALVANIC BATTERY. JOHN EDWARD PRESTON, Stockport, England. Filed Nov. 12, 1910. Serial No. 591,976. (Cl. 204—53.)



1. In combination as a removable stopper unit for the containing vessel of a closed galvanic battery cell, a screw bolt, insulated positive and negative elements mounted thereon one within the other to form one element of a clamp, conducting means connected to said electrodes, an elastic disk fitted over said bolt above said clamp element, a cover plate on said bolt surmounting the disk and forming the complementary clamp element, and means arranged on said bolt above said cover plate for confining all parts of the unit thereon and for screwing the clamping elements towards one another to put clamping pressure on the opposite faces of said elastic disk to produce by compression and radial flow of said elastic disk (*a*) a fluid tight sealing of the containing vessel and (*b*) a fluid tight jointing between the electrodes and their conductors substantially as described.

2. In combination as a removable stopper unit for the containing vessel of a closed galvanic battery cell, a screw bolt, insulated positive and negative elements mounted thereon one within the other to form one element of a clamp, conducting means connected to said electrodes with the component parts of said clamping element arranged to be immovably bound in relation one to the other under clamping pressure, an elastic disk fitted over said bolt above said clamp element, a cover plate on said bolt surmounting the disk and forming the complementary clamp element, and means arranged on said bolt above said cover plate for confining all parts of the unit thereon and for screwing the clamping elements towards one another to bind all the component parts of the unit immovably together and to put clamping pressure on the opposite faces of said elastic disk to produce by compression and radial flow of said elastic disk (*a*) a fluid tight sealing of the containing vessel and (*b*) a fluid tight jointing between the electrodes and their conductors substantially as described.

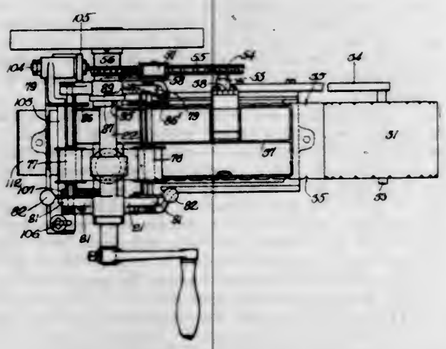
3. In combination as a removable stopper unit for the containing vessel of a closed galvanic battery cell, a screw bolt, positive and negative electrodes mounted thereon one within the other, conducting means connected to said electrodes, an insulating member on said bolt insulating the electrodes and supporting the outside electrode, said electrodes and insulating member co-acting to form one element of a clamp, an elastic disk fitted over said bolt above said clamping element, a cover plate on said bolt surrounding the disk and forming the complementary clamping element, and a nut upon the end of said bolt projecting from the cover plate for confining all parts of the unit thereon, and for drawing the clamping elements towards one another to bind all the component parts of the unit immovably together and to put clamping pressure on the opposite faces of said elastic disk to produce by compression and radial flow of said elastic disk (*a*) a fluid tight sealing of the containing vessel and (*b*) a fluid tight jointing between the electrodes and their conductors substantially as described.

4. In combination as a removable stopper unit for the containing vessel of a closed galvanic battery cell, a screw bolt, positive and negative electrodes mounted thereon one within the other a flanged insulating member on said bolt insulating the electrodes and supporting the outside and correspondingly flanged electrode, said electrodes and insulating member co-acting to form one element of a clamp, an elastic disk fitted over said bolt above said clamping element, a cover plate on said bolt surrounding the disk and forming the complementary clamping element, a conducting plate on the flanged end of the outside electrode and having a terminal passing through said disk and cover plate the aforesaid screw bolt forming also the terminal for the inside electrode, and a nut upon the end of said bolt projecting from the cover plate for confining all parts of the unit thereon, and for drawing the clamping elements towards one another to bind all the component parts of the unit immovably together and to put clamping pressure on the opposite faces of said elastic disk to produce by compression and radial flow of said elastic disk (*a*) a fluid tight sealing of the containing vessel and (*b*) a fluid tight jointing between the electrodes and their conductors substantially as described.

5. In combination as a removable stopper unit for the containing vessel of a closed galvanic battery cell, a screw bolt, positive and negative electrodes mounted thereon one within the other, a flanged insulating member on said bolt insulating the electrodes and supporting the outside and correspondingly flanged electrode, said electrodes and insulating member co-acting to form one element of a clamp, an elastic washer interposed between said inside electrode and said insulating member, an elastic disk fitted over said bolt above said clamping element, a cover plate on said bolt surrounding the disk and forming the complementary clamping element, a conducting plate on the flanged end of the outside electrode and having a terminal passing through said disk and cover plate the aforesaid screw bolt forming also the terminal for the inside electrode, and a nut upon the end of said bolt projecting from the cover plate for confining all parts of the unit thereon, and for drawing the clamping elements towards one another to bind all the component parts of the unit immovably together and to put clamping pressure on the opposite faces of said elastic disk to produce (*a*) a fluid tight sealing of the containing vessel and (*b*) a fluid tight jointing between the electrodes and their conductors substantially as described.

[Claim 6 not printed in the Gazette.]

1,104,829. PRINTING-MACHINE. ALBERT H. RAY, Ashland, Mass. Filed Apr. 24, 1912. Serial No. 692,854. (Cl. 101—23.)



1. A machine of the character described, comprising a printing mechanism including a platen and a movable chase for printing upon a continuous notched web, a cutting mechanism for separating the printed portion of said web, mechanism including jaw members each bearing a plurality of teeth for feeding a notched strip step by step by its notches to the printing and cutting mechanisms and positioning it laterally with respect to said printing mechanism, and driving mechanism for operating the first-mentiond mechanisms to feed, print and cut the web in the order named.

2. A machine for operating upon a continuous web having notches in its side edges, comprising a platen and a reciprocatory chase for printing upon successive portions of sad web, a feeding mechanism having means for a non-pressural engagement of the web by its notches, feeding it step by step longitudinally and positioning it laterally on said platen.

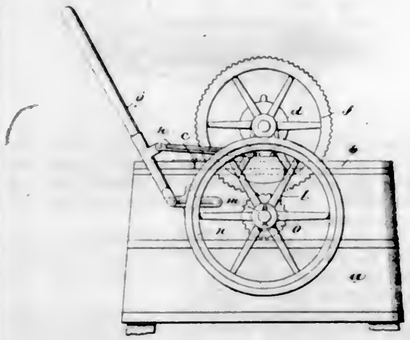
3. A machine for operating upon a continuous web having regularly spaced notches in its edges, comprising a platen and a reciprocatory chase for printing upon successive portions of the web; cutting mechanism for separating the printed portions from the web; and feeding mechanism comprising members bearing a plurality of teeth for engaging the notches in the web, and means for imparting a four-motion feeding movement to said members to feed the web to the printing and cutting mechanism and laterally position it with respect to the printing mechanism.

4. A machine for operating upon a continuous web having regularly spaced notches in its edges, comprising a platen and a reciprocatory chase for printing upon successive portions of the web; cutting mechanism for separating the printed portions from the web; and feeding mechanism comprising members bearing a plurality of teeth for engaging the notches in the web, and instrumentalities for moving said members in opposite directions to engage and release the notched edges of the web without compressing it and for reciprocating said members longitudinally of the web to feed it to the printing and cutting mechanisms.

5. A machine for operating upon a continuous web having notches in its side edges, comprising a platen and a reciprocatory chase for printing upon successive portions of said web, and a feeding mechanism comprising members bearing a plurality of teeth for engaging non-pressurally the notches in the web, and instrumentalities for reciprocating the said members longitudinally of said web and for moving the members toward and from the web to engage it during the forward feeding movement of said members and to release it during the receding movement of said members.

[Claims 6 to 10 not printed in the Gazette.]

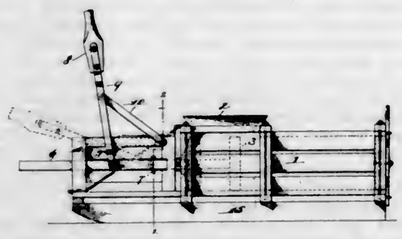
1,104,830. WASHING-MACHINE GEARING. JOSHUA W. REAMS, Richmond, Va., assignor to Richmond Cedar Works, Richmond, Va., a Corporation of Virginia. Filed Feb. 27, 1912. Serial No. 680,212. (Cl. 74—7.)



1. In a washing machine gearing, the combination of a stationary support, an upwardly swinging support, a driving shaft mounted on one side of said swinging support, a gear-wheel mounted on the outer end of said driving shaft, a hanger rigidly connected to said swinging support and depending down alongside of the stationary support, a fly-wheel and a pinion which meshes with said gear-wheel both being mounted to rotate in the lower end of said hanger below the periphery of said gear-wheel, and an operating lever connected to said gear-wheel.

2. In a washing machine gearing, the combination of a stationary support, an upwardly swinging support, a driving shaft mounted on one side of said swinging support, a gear wheel-mounted on the outer end of said driving shaft, a hanger rigidly connected to said swinging support and depending down alongside of the stationary support, a fly-wheel and a pinion which meshes with said gear-wheel mounted to rotate in the lower end of said hanger below the periphery of said gear-wheel and in vertical alinement with said drive-shaft when said swinging support is in a horizontal position, and an operating lever connected to said gear-wheel.

1,104,831. BALING-PRESS. ROBERT BENGIMAN REDDING and JAMES WILLIAM BARNETT, Oakwood, Tex. Filed Feb. 4, 1914. Serial No. 816,645. (Cl. 100—4.)



1. In a baling press a frame forming a track-way, upper and lower sets of rollers adjacent said track-way, a plunger bar working in the track-way and between said rollers, an operating handle pivotally connected to said plunger bar, and links pivotally connected to said frame and also to said handle, said links being adapted to fold upon opposite sides of said frame as the plunger moves inwardly.

2. In a baling press, a suitable frame, a plunger bar adapted to travel in said frame, an operating handle, said handle being provided with suitable members adapted to straddle the frame, and pivotally connected to said bar, links pivotally connected to the upper rear portion of the frame and adapted to fold over the sides of the frame, said links also being pivotally connected to the inner faces of the members of the handle, as and for the purpose set forth.

1,104,832. ORCHARD-HEATER. FRANK M. SALMON, Waverly, Mo. Filed Oct. 29, 1913. Serial No. 798,127. (Cl. 158—91.)



In a device of the class described, a rectangular receptacle open at its upper end, and an angular plate within said receptacle, one portion of said plate arranged in an inclined position and spaced from the upper edge of one side wall of the receptacle, the remaining portion of said plate being arranged in a vertical position and having its lower edge resting upon the bottom of the receptacle and provided with spaced notches, as and for the purpose set forth.

1,104,833. DIAPHRAGM FOR THE SOUND-BOXES OF TALKING-MACHINES. JOHN SCHMITTINGER, Philadelphia, Pa., assignor to Hosmer W. Hanna, Philadelphia, Pa. Filed May 15, 1912. Serial No. 697,534. (Cl. 181—11.)



1. A diaphragm for sound recording and reproducing machines, comprising a disk of previously tanned animal fiber hardened and toughened by the action of formaldehyde.

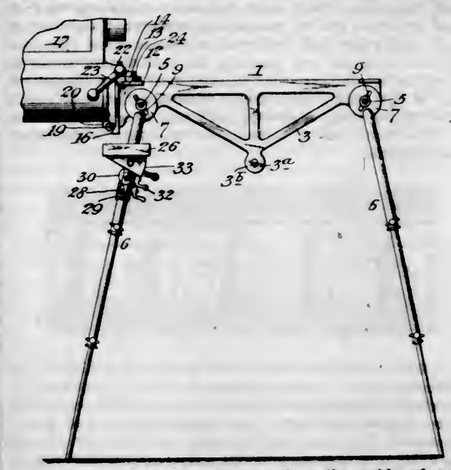
2. A diaphragm for sound recording and reproducing machines, comprising a disk of previously tanned animal fiber hardened and toughened by the action of formaldehyde and caustic potash.

3. A diaphragm for sound recording and reproducing machines, comprising a disk of calf skin previously tanned to the form of vellum, hardened and toughened by the action of formaldehyde.

4. A diaphragm for sound recording and reproducing machines, comprising a disk of calf skin previously tanned to the form of vellum, hardened and toughened by the action of formaldehyde and caustic potash.

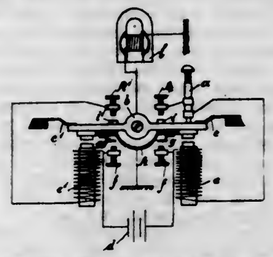
1,104,834. SUPPORTING STRUCTURE FOR PROJECTING APPARATUS. EBERHARD SCHNEIDER, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,578. (Cl. 248—45.)

In a supporting structure of the character described the combination of the bed of a stand having an extension with a guide on the outer lower end thereof, a bracket having a pair of ears clamped to said extension, a rod having a groove supported in said ears, means connected with one of said ears to allow the rotation of said rod and prevent its movement in the direction of its longitudinal axis, means to rotate the rod, a lamp house having a pair of pierced ears, the said ears supported on the said rod, a screw pin supported in one of the ears of the lamp house and registering with the groove of said rod, a bracket at the base of the lamp house, a roller journaled



in the latter bracket bearing against the guide of said extension.

1,104,835. MAGNETO IGNITION DEVICE. FRITZ SCHRÖTER and FRANZ L. MÄDLER, Wilmersdorf-Berlin, Germany. Filed Jan. 23, 1913. Serial No. 743,708. (Cl. 123—148.)



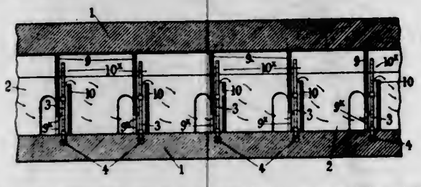
1. In a magneto ignition device of the class described the combination with the primary winding of the magneto armature, of a source of direct current, and electromagnetic means for causing the current from said source to flow alternately in opposite directions through said primary winding.

2. In a magneto ignition device of the class described, the combination with the primary winding of the magneto, of a battery, said battery being divided into two parts, one of the poles of each part being grounded and the other poles being electrically connected to contacts, said second mentioned poles being of opposite polarity, and means for alternately connecting said contacts to one terminal of said primary winding, the other terminal of said winding being grounded.

1,104,836. GAS-FIRED CONTINUOUS KILN. PAUL SCHWARZ, Cook, England. Filed Oct. 23, 1911. Serial No. 656,225. (Cl. 25—134.)

1. The combination with a gas fired pottery kiln of the Hoffmann type, as hereinbefore specified, comprising a structure containing an endless canal to receive the goods to be treated, the roof of said canal extending continuously in horizontal lines around the kiln, said structure having subjacent gas conduits, a number of passageways through the outer wall communicating with said canal, and flues from said canal communicating with an internal main flue and uptake—of pairs of vertical division walls extending transversely across said canal, each pair of

said division walls comprising a front wall and a rear wall at a short distance from said front wall, said front wall extending from said horizontal extending roof of said canal but leaving an opening adjacent to the floor of said canal, and said rear wall extending from the floor of said canal but not reaching the roof thereof so as to leave an opening adjacent to said roof, and a transverse row of upstanding gas burners located within said canal, between the walls composing each pair of said transverse division walls, and in communication with said subjacent gas conduits.



2. The combination with a gas fired pottery kiln of the Hoffmann type as hereinbefore specified, comprising a structure containing an endless canal to receive the goods to be treated, the roof of said canal being arched transversely of the canal and extending continuously around the kiln; said structure having subjacent gas conduits, a number of passageways through the outer wall communicating with said canal, and flues from said canal communicating with an internal main flue and uptake—of pairs of vertical division walls extending transversely across said canal to divide said canal into compartments each compartment having one of said passageways through said outer wall of said structure and at least one flue communicating with said internal main flue and uptake, each pair of said division walls comprising a front wall and a rear wall at a short distance from said front wall, said front wall extending from the said continuously extending roof of said canal but having through openings adjacent to the floor of said canal, and said rear wall extending from the floor of said canal but not reaching the roof thereof so as to leave an opening adjacent to said roof, and transverse rows of upstanding gas burners in the form of perforated tubes within said canal in communication with said subjacent gas conduits, one of said rows of gas burners being located between the walls composing each pair of said transverse division walls.

3. A gas fired pottery kiln having, in combination, a main structure containing an endless canal to receive the goods and provided with passageways for goods and air in its outer wall and with gas conduits and escape flues in communication with said canal, the roof of said canal extending continuously in horizontal lines around the kiln and a horizontal floor extending continuously below said roof, transverse rows of upstanding gas burners in the form of vertical perforated pipes within said canal, and pairs of vertical division walls between which the rows of gas burners are located; the front wall of each pair extending downward from said roof but leaving an opening adjacent to said floor, and the rear wall of each pair extending upward from said floor and leaving an opening adjacent to said roof; substantially as hereinbefore specified, for the purposes set forth.

1,104,837. CORE-MAKING DEVICE. WESLEY M. SCOTT and WILLIAM JOHNSTON, Dayton, Ohio. Filed Apr. 18, 1914. Serial No. 832,807. (Cl. 22—10.)

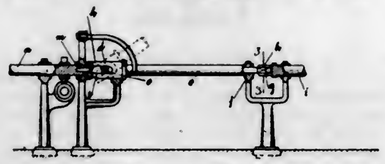


1. A core-making device comprising a hollow member, a receiver secured to said member, a plunger movable from said receiver into the hollow member, and penetrating means carried by said plunger to produce a vent hole in the core.

2. A core-making device comprising a hollow member, a plunger movable into and out of said member, a trough-shaped extension on said member to receive the plunger and core, and a rod secured to said plunger to produce a vent hole in said core.

3. A core-making device comprising a barrel, a semi-cylindrical receiver secured thereto, a plunger movable from said receiver into said barrel, and a rod carried by said plunger to produce a vent hole in the core.

1,104,838. MEANS FOR CONNECTING SHAFTS. EUGEN SEBASTIAN, Saarau, Silesia, Germany, assignor to Company Plugge & Holtfort, Dortmund, Germany. Filed Aug. 7, 1911. Serial No. 642,844. (Cl. 64—29.)



1. In means for connecting shafts the combination with a permanently approximately horizontal shaft and a hinged shaft situated approximately in line therewith and capable of turning upward on the end of the permanently horizontal shaft, of means for coupling the two shafts together, when they are in line, and means for automatically locking the hinged shaft in its turned-up position by the action of gravity, as set forth.

2. In means for connecting shafts the combination with a permanently approximately horizontal shaft and a hinged shaft situated approximately in line therewith and capable of turning upward on the end of the permanently horizontal shaft, of means for coupling the two shafts together, when they are in line, means for automatically preventing the hinged shaft when turned up from falling back out of its turned up position, and means for preventing the hinged shaft from turning sidewise out of its turned-up position, as set forth.

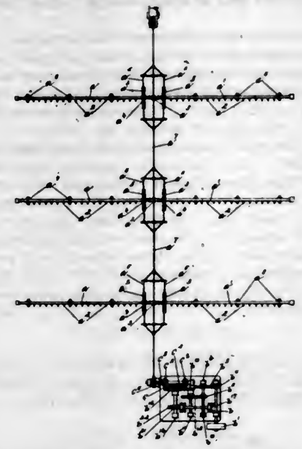
3. In means for connecting shafts the combination with a permanently approximately horizontal shaft and a hinged shaft situated approximately in line therewith and capable of turning upward on the end of the permanently horizontal shaft, of means for coupling the two shafts together, when they are in line, means for automatically preventing the hinged shaft when turned up from falling back out of its turned up position, and means for locking the permanently horizontal shaft, whereby the hinged shaft is prevented from turning sidewise, as set forth.

4. In means for connecting shafts the combination with a permanently approximately horizontal shaft and a hinged shaft situated approximately in line therewith and capable of turning upward on the end of the permanently horizontal shaft, of means for coupling the two shafts together when they are in line, means for automatically preventing the hinged shaft when turned-up from falling back out of its turned up position, and forked guide for preventing the hinged shaft from turning sidewise out of its turned up position, as set forth.

1,104,839. IRRIGATING APPARATUS. CHARLES W. SKINNER, Troy, Ohio, assignor to The Skinner Irrigation Company, Troy, Ohio, a Corporation of Ohio. Filed Feb. 21, 1910. Serial No. 545,036. (Cl. 137—66.)

1. In an irrigating system, a plurality of sprinkler pipes, each of said pipes having a series of nozzles, a water supply connected with said pipes, means for oscillating said pipes simultaneously from a common point, and means for gradually increasing the speed of the oscillatory movement of said pipes from a vertical position of said nozzles, substantially as and for the purpose specified.

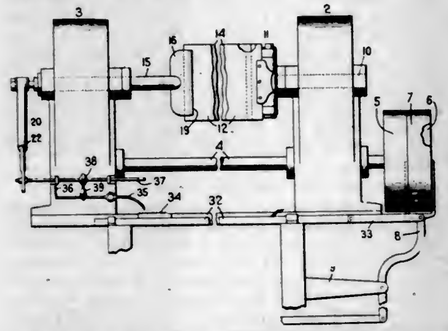
2. In an irrigating system, a plurality of sprinkler pipes, a series of nozzles connected with each of said pipes, a water supply also connected with said pipes, means for oscillating said pipes simultaneously from a common point, and means for gradually increasing the speed of the oscillatory movement of said pipes in either direction from a vertical position of said nozzles, substantially as specified.



3. In a system of irrigation, a plurality of sprinkler pipes, a series of nozzles connected with said pipes, a water supply for said pipes, power operated devices for oscillating said pipes simultaneously from a common point, means for changing the speed of said power operated devices, and means for gradually increasing the speed of the oscillatory movement of said pipes from a vertical position of said nozzles, substantially as specified.

4. In an irritating system, a series of sprinkler pipes, and an operating device for oscillating said pipes in unison, said operating device comprising a gear segment and two pinions adapted to be driven by said segment in opposite directions, the distance between the teeth of said segment being gradually increased from each end of the segment toward the center, substantially as and for the purpose specified.

1,104,840. WINDING-MACHINE. HERBERT E. SMITH, Manchester, N. H. Filed Sept. 8, 1913. Serial No. 788,541. (Cl. 242—61.)



1. A machine of the class described comprising alined rotatable elements, a stiffening blade pivotally connected to one of said rotatable elements and arranged to be clamped by the other rotatable element, a power controlling element movable to cause rotation of said blade and means to prevent movement of the controlling element to cause rotation of the blade except when the blade is properly clamped.

2. A machine of the class described comprising a supporting frame, a pair of alined shafts rotatably mounted therein, a stiffening blade pivotally connected to one of said shafts, a head secured to the other shaft and shaped to receive the free end of said stiffening blade, means for moving one of said shafts axially to release the free end of said stiffening blade, and means controlled by the axially movable head for preventing the application of power to rotate said blade except when said blade is properly engaged by said head.

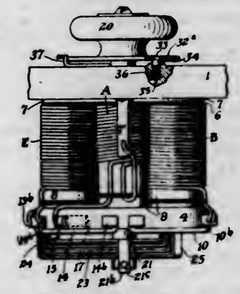
3. A machine of the class described comprising a sliding head, a controlling member connected with said sliding head to be moved thereby, a power controlling element for controlling the power supplied to said machine, and means to prevent the operation of said power controlling element to start the machine except when said controlling element is in a predetermined position, whereby the starting of said machine is prevented except when the sliding head is in proper adjusted position.

4. A winding machine comprising a sliding head, a cam connected with said sliding head to be moved thereby, means for controlling the power supplied to said machine, a toothed element connected to said means and a pawl controlled by said cam and arranged to engage said toothed element whereby starting of the machine is prevented when the sliding head is in certain positions.

5. A winding machine of the class described comprising a supporting frame, a pivoted head and a sliding head rotatably mounted therein, a cam connected with said sliding head to be controlled thereby, a power controlling element for controlling the power supplied to said machine, a toothed element movable on said support and connected to be moved by said power controlling element, a pawl pivotally mounted on said supporting frame and positioned to engage said toothed element to hold said power controlling element against movement in a direction to start the machine, said cam being arranged to engage said pawl to release said movable element when said sliding head is in a certain position whereby accidental starting of the machine when the sliding head is not in proper position is prevented.

[Claim 6 not printed in the Gazette.]

1,104,841. RESISTANCE SET. IRVING B. SMITH, Ambler, Pa., assignor to The Leeds & Northrup Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 12, 1913. Serial No. 753,694. (Cl. 219—48.)



1. The combination with a plurality of resistances, stationary contacts between which some of said resistances are connected, opposing contacts, and a movable contact permanently connected to another of said resistances, movement of said movable contact with respect to said stationary contacts bringing into circuit one after another of said first named resistances, and in position between introduction of successive of said first named resistances bringing into circuit said last named resistance.

2. The combination with a row of separated contacts, of resistances connected to said contacts, opposite to each of said contacts a contact and an insulator, a movable contact member adapted to traverse said contacts and insulators in succession, and a resistance associated with said movable contact member and brought thereby into circuit when engaging only one of said first named contacts and taken out of circuit when simultaneously engaging one of said first named contacts and an opposed contact.

3. The combination with a series of contacts, resistances connected thereto, opposed separated contacts connected to each other, a movable contact adapted to bridge opposing contacts, a resistance having one terminal connected to said movable contact and its other terminal connected to said inter-connected opposing contacts, said movable contact member maintaining contact with each of said first named contacts when in position intermediate neighboring of said opposing contacts.

4. The combination with a block of insulating material, of a contact having a contact surface external to said material, a projection thereon molded in said insulating material and projecting outside of said insulating material to form an external terminal.

5. The combination with a block of insulating material, of a contact, a projection thereon molded in said insulating material and projecting from said insulating material to form a terminal, said projection having an aperture into which said insulating material extends.

[Claims 6 to 16 not printed in the Gazette.]

1,104,842. METHOD OF PLATING. JOSEPH A. SMITH, Attleboro, Mass. Filed Feb. 27, 1914. Serial No. 821,576. (Cl. 204—13.)

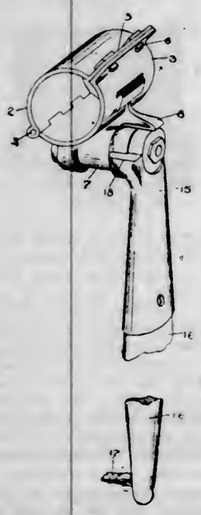
1. The method of plating which consists in coating the base metal with a gold solder, in gold plating the article and in heating the article, substantially as described.

2. The method of plating which consists in electroplating the article with a solder layer having as a constituent some of the plating metal, in electro-depositing on the solder layer a layer of plating metal, and in heating the article in a furnace to unite the article and the solder and plating layers, substantially as described.

3. The method of plating which consists in electrodepositing on the base metal a gold solder layer a gold solder layer, in electro-depositing on the solder layer a gold layer, and in heating the article in a furnace at a temperature of about 1100° Fahrenheit, substantially as described.

4. The method of plating which consists in coating the article with a solder layer having as a constituent some of the plating metal, in coating the solder layer with a layer of plating metal, and in heating the article to unite the solder and plating layers, substantially as described.

1,104,843. LEG-SPREADER FOR HORSES. TÉLESPHORE ST. JEAN, St. Paul, Minn. Filed Oct. 1, 1913. Serial No. 792,736. (Cl. 54—72.)

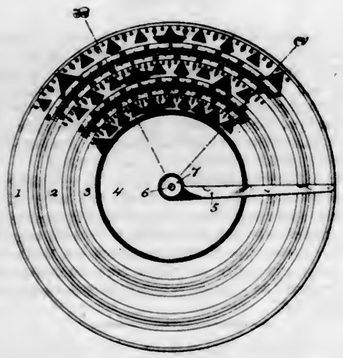


1. A device of the class described comprising a tubular clamp formed of hinged members, a spreader stick having journal support upon the underside of one of said members, a fixed shoulder above the journaled end of the spreader stick and a coöperating shoulder projecting outwardly from one side of the journaled end of the spreader stick.

2. A device of the class described comprising a tubular clamp, a spreader stick having journal support under said clamp, a web connecting said clamp and journal support of said spreader stick and a stop projecting outwardly from the journaled head of said spreader stick upon one side of said web, for the purpose set forth.

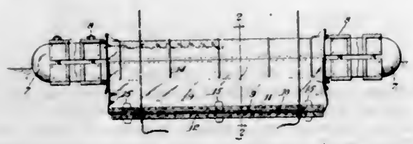
3. A device of the class described comprising in combination with a thill, a tubular bearing part supported transversely underneath said clamp and projecting from one side thereof, a web connecting the projecting part of said bearing part and tubular clamp and serving as a shoulder, a coöperating shoulder carried by the journaled end of said spreader stick at one side of said web, and a squared projection carried by said thill, said clamp having formed therein an oblong rectangular recess to receive said projection.

1,104,844. NAVIGATOR'S APPARATUS. ISAK GUSTAF SUNDELL, Helsingfors, Finland, Russia. Filed Nov. 11, 1910. Serial No. 591,835. (Cl. 73—128.)



The combination of a plurality of concentric scales having nesting portions one within another and each divided into points and degrees similar to the card of a mariner's compass, one or more of the scales being independently adjustable with relation to the remainder thereof, a base upon which the scales are supported, a shouldered screw mounted central of the base, an index device pivoted on the screw against the shoulder of the same to extend across the scales, and a clamp-nut on said screw over said index device.

1,104,845. LIFE-RAFT. ALBERT THOMPSON, Philadelphia, Pa. Filed Apr. 14, 1914. Serial No. 831,811. (Cl. 9—11.)



1. A reversible life raft provided with a vent, two flotative bodies one on either side of said vent, means limiting the movement of said bodies with respect to said vent, and means engaging and holding the upper body away from said vent.

2. A reversible life raft provided with a vent, two flotative bodies one on either side of said vent, means limiting the movement of said bodies with respect to said vent, and pivoted means engaging and holding the upper body away from said vent.

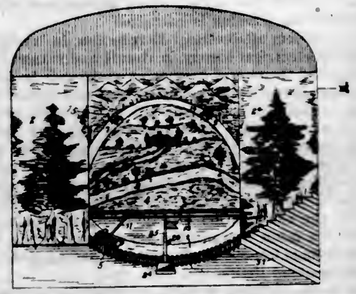
3. A reversible life raft provided with a vent, two flotative bodies one on either side of said vent, means limiting the movement of said bodies with respect to said vent, and weighted means engaging and holding the upper body away from said vent.

4. A reversible life raft provided with a vent, two flotative bodies one on either side of said vent, means limiting the movement of said bodies with respect to said vent, and lever mechanism engaging and holding the upper body away from said vent.

5. A reversible life raft provided with a vent, two flotative bodies one on either side of said vent, means limiting the movement of said bodies with respect to said vent, and weighted lever mechanism engaging and holding the upper body away from said vent.

[Claims 6 to 26 not printed in the Gazette.]

1,104,846. APPARATUS FOR PRODUCING STAGE EFFECTS. HOWARD THURSTON, Coscob, Conn. Filed Dec. 8, 1913. Serial No. 805,313. (Cl. 46—70.)



1. In an apparatus for producing stage effects, the combination of an endless track arranged on a stage, objects adapted to move along said track, a curtain arranged to conceal a portion of the track and having outlined thereon a representation of the portion of the track concealed by the curtain, and means for producing the illusion of objects moving along the track outlined on the curtains.

2. In an apparatus for producing stage effects, the combination of an endless track arranged on a stage, objects adapted to move along said track, means for imparting an increasing speed to the objects as they move along a portion of the track, a curtain arranged to conceal a portion of the track and having outlined thereon a representation of the portion of the track concealed by the curtain, and means for producing the illusion of objects moving along the track outlined on the curtain.

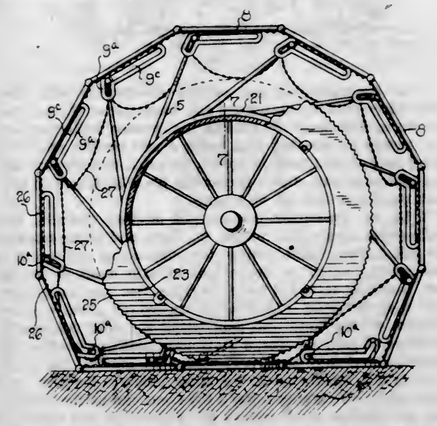
3. In an apparatus for producing stage effects, the combination of an endless track arranged on a stage, objects adapted to move along said track, means for independently propelling said objects, a curtain arranged to conceal a portion of the track and means for producing on the curtain the effect of the continued movement of the objects when the latter have moved onto the concealed portion of the track.

4. In an apparatus for producing illusory effects, the combination of an endless track arranged on a stage, objects adapted to move along said track, means for propelling said objects independently one of the other, a curtain arranged to conceal a portion of the track, and means for producing on the curtain the effect of the continued and independent movement of the objects when the latter have passed from in front of the curtain.

5. In an apparatus for producing stage effects, the combination of an endless track having a portion thereof elevated, objects movable along said track, means for propelling the objects along the track, a curtain arranged to conceal the elevated portion of the track, and means for producing on the curtain the effect of the continued movement of the objects when the latter have passed from in front of the curtain.

[Claims 6 to 10 not printed in the Gazette.]

1,104,847. TRACTION-WHEEL. DARIUS D. TILBURY and HENRY W. TILBURY, Lonoke, Ark. Filed Feb. 7, 1914. Serial No. 817,331. (Cl. 21—150.)



1. A device of the character described including a hub, a band surrounding such hub and capable of movement independently thereof, a flexible rim disposed around the hub and band and comprising a plurality of relatively movable sections, and a tensioning connection between the band and each of the sections.

2. A device of the character described including a hub, a band surrounding such hub and capable of movement independently thereof, a flexible rim disposed around the hub and band and comprising a plurality of relatively movable sections, a tensioning connection between the band and each of the sections, and rims disposed at opposite sides of the band connected to the hub and adapted to engage the inner surfaces of the sections.

3. A device of the character described including a hub, a band surrounding such hub and capable of movement independently thereof, a rim disposed around the hub, tensioning connections between the band and the rim, and rims disposed at opposite sides of the band and connected to the hub.

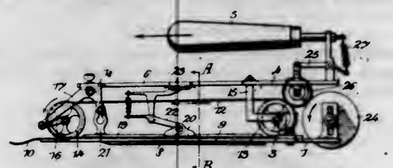
4. A device of the character described including a hub, a band surrounding such hub and capable of movement independently thereof, a rim disposed around the hub, tensioning connections between the band and the rim, and rims disposed at opposite sides of the band and connected to the hub, the inner face of the first mentioned rim and the periphery of the second mentioned rims being toothed and adapted to intermesh.

5. A device of the character described including a hub, a flexible rim disposed therearound and comprising a plurality of relatively movable sections, longitudinally directed spaced plates carried by each of such sections provided with longitudinally disposed slots, and a tensioning member interposed between the hub and each of such sections, such tensioning member having its outer extremity provided with means projected through the slots of the plates whereby such extremity may have movement independently of the sections.

1,104,848. APPARATUS FOR CUTTING BINDING-THREADS. ALOIS TSCHERNE, Rorschach, Switzerland. Filed Nov. 12, 1913. Serial No. 800,595. (Cl. 126—9.)

1. In an apparatus for cutting binding threads, two knife-edges converging toward the front end of the appara-

tus, an endless band, means for moving the latter, a support between said knives, and means for pressing the lower half of said band against said support to hold the threads while they are cut.



2. In an apparatus for cutting binding threads, two knife-edges converging toward the front end of the apparatus, an endless band for holding the threads while they are cut, means for moving said band, a rail resting upon the lower half of said band, a spring actuated presser jaw acting upon said rail, and a stationary plate arranged to support the lower half of said band.

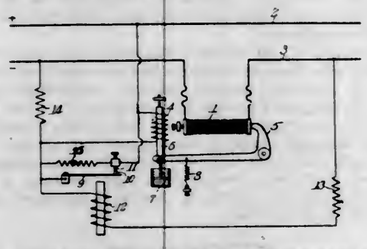
3. In an apparatus for cutting binding threads, two knife-edges converging toward the front end of the apparatus, an endless band, rollers for supporting the latter, a rail resting upon the lower half of said band, a presser jaw, a spring actuated lever carrying said jaw, an adjustable slide carrying said lever, a stationary guide member parallel to the band and supporting the slide adjustably mounted on said member, a stationary plate supporting the lower half of said band, and means for moving the band.

4. In an apparatus for cutting binding threads, two knife-edges converging toward the front end of the apparatus, an endless band, rollers for supporting the latter, a rail resting upon the lower half of said band, a spring actuated presser jaw acting upon said rail, a stationary plate supporting the lower half of said band, a roller provided with a rough surface and rotatable by friction produced during the forward movement of the apparatus upon the fabric, and an intermediate roller arranged to transmit the motion of said first mentioned roller to said band.

5. In an apparatus for cutting binding threads, two knife-edges converging toward the front end of the apparatus, an endless band for holding the threads while they are cut, means for moving said band, a rail resting upon the lower half of said band, a spring actuated presser jaw acting upon said rail, and a stationary plate supporting the lower half of said band and having beveled longitudinal sides, the thin blades forming the knives being clamped to said beveled sides of the plate to cut the binding threads near the fabric surface.

[Claims 6 to 10 not printed in the Gazette.]

1,104,849. VOLTAGE-REGULATOR. WILLIAM A. TURBAYNE, Buffalo, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee. Filed May 1, 1911. Serial No. 624,480. (Cl. 171—229.)



1. A regulator comprising a variable resistance, a winding controlling said resistance, a resistance connected in circuit with said winding, contacts normally short-circuiting said winding but not said resistance, whereby said winding is normally inert, and a voltage coil adapted to the energization of said winding, said coil being connected in circuit through said contacts whereby it is substantially open-circuited by the separation of said contacts.

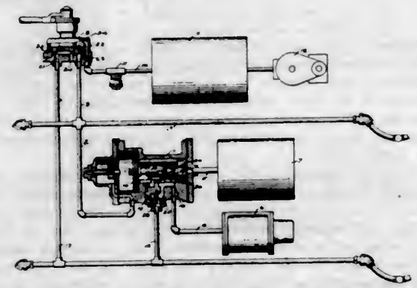
2. A regulator comprising separable contacts, resilient means normally tending to maintain said contacts in engagement, a single voltage coil adapted when energized sufficiently to oppose said resilient means and separate said contacts, said coil being connected in the circuit in which said contacts are included and therefore being substantially open-circuited when said contacts separate, whereby said resilient means again causes the engagement of said contacts to again permit the energization of said voltage coil and a controlling winding the energization of which is also regulated by said contacts.

3. A regulator comprising a variable pressure rheostat, a controlling winding therefor, mechanical connections between said winding and said rheostat including a core for said winding, a bell crank lever connected to said core and a spring acting on said lever to normally maintain the resistance of said rheostat at a minimum value, a device adapted to vibrate rapidly for opening and closing a short circuit around said winding to permit the energization thereof for the purpose of overcoming the tendency of said spring and increasing the resistance of said rheostat, and a voltage responsive coil adapted to cause said vibrations, said coil being connected to said vibrating member whereby it is substantially deënergized whenever said controlling winding is energized.

4. In a system of electrical distribution, in combination, a source of electrical energy, a circuit and translating device supplied thereby, a regulating resistance in said circuit, a controlling winding connected across said circuit, a voltage responsive coil connected across said circuit, a short-circuiting device controlled thereby, said short-circuiting device being adapted to vibrate at a high rate of speed in response to the energization and deënergization of said voltage coil which is connected in circuit with said short-circuiting device, said short-circuiting device controlling also the energization of said controlling winding to regulate the mean energization thereof and hence to confine the voltage impressed on said translating device within predetermined limits.

5. In a car lighting system, a circuit to be regulated, regulating means directly associated therewith, a vibrating short-circuiting device for controlling said means and a voltage coil only for causing said vibrations, said voltage coil being connected across said circuit whereby it responds to variations in the voltage impressed thereon, said coil being connected also in series with said short-circuiting device to increase the rapidity of vibration.

1,104,850. HIGH-PRESSURE EMERGENCY-BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 27, 1907. Serial No. 408,259. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a train pipe and a triple valve, of a brake valve adapted to control the triple valve exhaust port and having means operative in emergency position to supply air to the brake

2. In a fluid pressure brake, the combination with a train pipe and a triple valve, of a brake valve adapted to control the triple valve exhaust port and having ports for opening communication from a source of fluid pressure supply to the brake cylinder in emergency position.

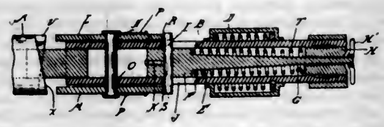
3. In a fluid pressure brake, the combination with a train pipe and a triple valve, of a pipe line communicating with the triple valve exhaust port, a connection from said pipe line to the brake cylinder, and a brake valve having ports for connecting said pipe line to the atmosphere in one position and to a source of fluid pressure in emergency position.

4. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of a brake valve adapted to control the exhaust from the triple valve and having means in one position for venting fluid from the train pipe, and for supplying fluid from another source to the brake cylinder.

5. In a fluid pressure brake, the combination with a train pipe, auxiliary reservoir, triple valve and brake cylinder, of a release pipe connected to the triple valve exhaust port, a check valve controlled connection from the release pipe to the brake cylinder, and a brake valve having means for venting fluid from the train pipe and supplying fluid to the release pipe in emergency position.

[Claims 6 to 8 not printed in the Gazette.]

1,104,851. STARTING-CRANK. WILFRED VALLIER, Pontiac, Mich. Filed Dec. 15, 1911. Serial No. 665,940. (Cl. 123—185.)



1. The combination with the shaft of an explosion engine, of a crank shaft, and means for rotatably coupling said shafts together upon a forward rotation of the crank shaft adapted to automatically and practically instantaneously uncouple said shafts upon a backward rotation of the engine shaft comprising a rockable dog carried by the crank shaft having one end positioned in operative relation to the engine shaft and provided with a bearing at its opposite end and a spring-pressed member having a bearing for engaging said first-mentioned bearing in the normal relation of the parts, said spring pressed member acting automatically to retain the dog in an inoperative position upon the uncoupling of the shafts.

2. The combination with the shaft of an explosion engine, of a tubular crank shaft, a stub shaft carried by the tubular shaft, a dog journaled on said stub shaft and having one end positioned to engage the engine shaft, a spring-pressed member slidably engaging the tubular shaft, and a detachable pin-and-socket engagement between the spring-pressed member and said dog.

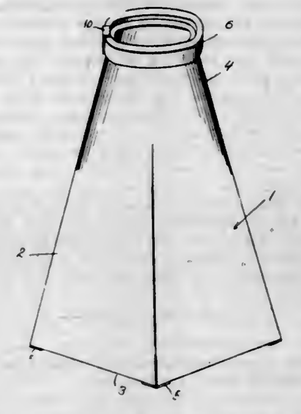
3. The combination with the shaft of an explosion engine, of a tubular crank shaft, a stub shaft carried by the tubular shaft, a dog journaled on said stub shaft and having one end positioned to engage the engine shaft, a spring-pressed member slidably engaging the tubular shaft, a detachable pin-and-socket engagement between the spring-pressed member and said dog, a stop, and means for yieldably holding the dog against said stop.

4. The combination with the shaft of an explosion engine, of a tubular crank shaft, a stub shaft carried by said tubular shaft, complementary dogs journaled upon said stub shaft, each having one end positioned to engage the engine shaft and provided with a segmental bearing at the opposite end, a spring-pressed member slidably arranged within the tubular shaft, and a pin carried by said slidable member normally engaging said segmental bearings.

5. The combination with the shaft of an explosion engine, of a tubular crank shaft, a stub shaft carried by said tubular shaft, complementary dogs journaled upon said stub shaft, each having one end positioned to engage the engine shaft and provided with a segmental bearing at the opposite end, a member slidably arranged within the tubular shaft, a pin carried by said slidable member normally engaging said segmental bearings, a spring having one end bearing against said member, and an adjustable abutment for the opposite end of said spring.

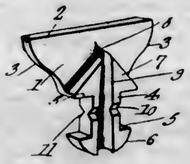
[Claims 6 and 7 not printed in the Gazette.]

1,104,852. CONTAINER. DONALD J. VANDYKE, Cambridge, Mass., assignor of one-half to Joseph Shaine, Cambridge, Mass. Filed Aug. 20, 1913. Serial No. 785,811. (Cl. 229—3.)



The combination with a foldable container having a cylindrical neck, an annular mouth piece, an inwardly extending peripheral flange on the mouth piece adjacent the lower face thereof, said mouth piece being rectangular in cross section, the upper edge of said neck being bent over at right angles to the neck and secured to the upper face of the flange, and a closure cap for the container adapted to fit within the mouth piece and engage the bent over edges of the neck of the container when in sealing engagement with the container.

1,104,853. GRATE-BAR. CALVIN R. WAID, Birmingham, Ala. Filed Feb. 28, 1914. Serial No. 821,752. (Cl. 126—180.)



1. A grate bar including a plurality of units, each formed in a single piece and each having a fuel supporting head and a spacing boss at one side of the head, said boss having downwardly diverging upper edges, there being an air conducting groove extending longitudinally within one side of each unit along the center thereof and up to the apex of the boss, each unit being adapted to fit snugly against the grooved side of the next adjoining unit, and means for holding the units together.

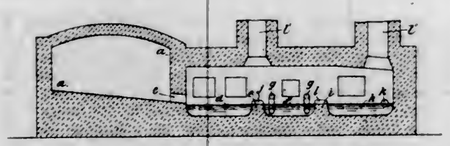
2. A grate bar including a plurality of units, each formed in a single piece and each having a fuel supporting head and a spacing boss at one side of the head, said boss having downwardly diverging upper edges, there being an air conducting groove extending longitudinally within

one side of each unit along the center thereof and up to the apex of the boss, each unit being adapted to fit snugly against the grooved side of the next adjoining unit, said units having recesses in opposed faces thereof, and holding bars secured within the recesses and having their outer faces flush with the corresponding faces of the units.

3. A grate bar including a plurality of units, each formed in a single piece and each having a fuel supporting head and a spacing boss at one side of the head, said boss having downwardly diverging upper edges, there being an air conducting groove extending longitudinally within one side of each unit along the center thereof and up to the apex of the boss, each unit being adapted to fit snugly against the grooved side of the next adjoining unit, said units having recesses in opposed faces thereof, and holding bars secured within the recesses and having their outer faces flush with the corresponding faces of the units, said air conducting grooves gradually diminishing in cross sectional area toward their upper ends.

4. A grate bar including a plurality of units, each formed in a single piece and each having a fuel supporting head and a spacing boss at one side of the head, said boss having downwardly diverging upper edges, there being an air conducting groove extending longitudinally within one side of each unit along the center thereof and up to the apex of the boss, each unit being adapted to fit snugly against the grooved side of the next adjoining unit, said units having recesses in opposed faces thereof, holding bars secured within the recesses and having their outer faces flush with the corresponding faces of the units, trunnions extending outwardly from the end units, and an actuating arm depending from one of the other units.

1,104,854. MANUFACTURE OF SALT. JOHN HERBERT WEBSTER, Carrickfergus, Ireland. Filed Sept. 19, 1912. Serial No. 721,290. (Cl. 127—14.)



1. Process for the manufacture of pure white salt—chlorid of sodium—consisting in agitating salt while it is in a molten state and in a state of flow; subsequently causing it to pasa slowly and quietly through a bath or chamber; and then discharging it continuously.

2. Process for the manufacture of pure white salt—chlorid of sodium—consisting in mechanically agitating flowing molten salt; and subsequently passing the flowing molten salt slowly and quietly through a bath or chamber and continuously discharging the flowing molten purified white salt.

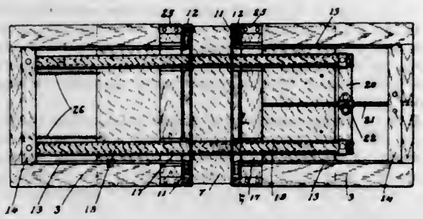
3. Continuous process for the manufacture of pure white salt—chlorid of sodium—consisting in agitating flowing molten salt; passing the flowing molten salt, after it has been agitated, through a bath or chamber; and then continuously discharging the molten purified white salt.

4. Continuous process for the manufacture of pure white salt—chlorid of sodium—consisting in agitating flowing molten salt by blowing or forcing air through it; passing the flowing molten salt, after it has been agitated, through a bath or chamber; and then continuously discharging the molten purified white salt.

5. Process for the manufacture of pure white salt—chlorid of sodium—consisting in agitating flowing molten salt by blowing or forcing air through it and mechanically agitating the flowing body of molten salt; slowly and quietly passing the flowing molten salt, after it has been agitated, through a bath or chamber; and then continuously discharging the molten purified white salt.

[Claims 6 and 7 not printed in the Gazette.]

1,104,855. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Filed Mar. 3, 1913. Serial No. 751,915. (Cl. 129—41.)



1. The combination of the chambered covers; clamping members comprising flat metal bars having strap-like knuckles and pintle ears on their rear sides and longitudinal slots therein alined with said knuckles; supports comprising rods having laterally turned pintles engaging said knuckles on said clamping member bars and cross pieces to which the outer ends of said rods are secured, said supports being arranged in the cover chambers with their cross pieces in engagement with the outer ends of the covers; hinge members connecting said covers to said pintle ears; a binding strip adjusting member; a rotatable screw carried by the cross piece of one of said clamping member supports and having threaded engagement with said adjusting member, the cover containing the screw having a key opening in alinement with the screw; binding strips extending between the covers and through said slots in said clamping member bars, said binding strips being connected to said adjusting member and to the clamping member support cross piece in the other cover; and a back strip telescoping into said cover chambers and having a yielding connection to the support cross piece to which the binding strips are connected, the cover containing the adjusting screw having longitudinal slots in its inner wall, the edges of the slots being notched, and studs arranged in said slots and secured to said back strip whereby said back strip is adjustably connected to the cover.

2. The combination of the chambered covers; clamping members comprising flat metal bars having strap-like knuckles and pintle ears on their rear sides and longitudinal slots therein alined with said knuckles; supports comprising rods having laterally turned pintles engaging said knuckles on said clamping member bars and cross pieces to which the outer ends of said rods are secured, said supports being arranged in the cover chambers with their cross pieces in engagement with the outer ends of the covers; hinge members connecting said covers to said pintle ears; a binding strip adjusting member; a rotatable screw carried by the cross piece of one of said clamping member supports and having threaded engagement with said adjusting member, the cover containing the screw having a key opening in alinement with the screw; and binding strips extending between the covers and through said slots in said clamping member bars, said binding strips being connected to said adjusting member and to the clamping member support cross piece in the other cover.

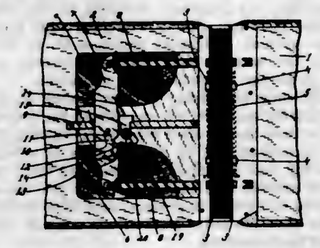
3. The combination of the chambered covers; clamping members comprising flat metal bars having knuckles on their rear sides and longitudinal slots therein alined with said knuckles; supports comprising rods having pintles engaging said knuckles on said clamping member bars and cross pieces to which the outer ends of said rods are secured, said supports being arranged in the cover chambers; hinge members connecting said covers to said clamping members; a binding strip adjusting member; a rotatable screw carried by the cross piece of one of said clamping member supports and having threaded engagement with said adjusting member; binding strips extending between the covers and through said slots in said clamping member bars, said binding strips being connected to said adjusting member and to the clamping member support cross piece in the other cover; and a back strip telescoping into said cover chambers and having a yielding connection to the support cross piece to which the binding strips are connected, and an adjustable connection to the other cover.

4. The combination of the chambered covers; clamping members comprising flat metal bars having knuckles on their rear sides and longitudinal slots therein alined with said knuckles; supports comprising rods having pintles engaging said knuckles on said clamping member bars and cross pieces to which the outer ends of said rods are secured, said supports being arranged in the cover chambers; hinge members connecting said covers to said clamping members; a binding strip adjusting members; a rotatable screw carried by the cross piece of one of said clamping member supports and having threaded engagement with said adjusting member; and binding strips extending between the covers and through said slots in said clamping member bars, said binding strips being connected to said adjusting member and to the clamping member support cross piece in the other cover.

5. The combination of the chambered covers; clamping members; supports comprising rods on which said clamping members are pivotally mounted and cross pieces to which the outer ends of said rods are secured, said supports being arranged within the cover chambers, the covers being hinged to said clamping members; a binding strip adjusting members; a rotatable screw carried by the cross piece of one of said clamping member supports and having threaded engagement with said adjusting member; binding strips extending between the covers and through said clamping members, the openings in said clamping members for said binding strips being in alinement with the pivot connections for said binding members to said support rods, said binding strips being connected to said adjusting member and to the cross piece of the clamping member support in the other cover; and a back strip telescoping into said cover chambers and having an adjustable connection to the cover containing the binding strip mechanism and a yielding connection to the support cross piece in the other cover.

[Claims 6 to 25 not printed in the Gazette.]

1,104,856. TEMPORARY BINDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Continuation in part of application Serial No. 751,914, filed Mar. 3, 1913. This application filed Sept. 22, 1913. Serial No. 791,179. (Cl. 129—41.)



1. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member mounted on said bar, means for holding said adjusting member in its adjusted position on said bar, a slide provided with downwardly projecting bar engaging lugs, whereby the slide is removably engaged with said bar, a pinion mounted on said slide to coact with said bar when the slide is engaged, and a finger piece for rotating said pinion.

2. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member mounted on said bar, means for holding said adjusting member in its adjusted position on said bar, means for actuating said adjusting member comprising a slide removably engaged with said rack and a pinion with said rack when the slide is engaged therewith, and means for turning said pinion.

3. In a temporary binder, the combination of a binding member, a rack bar, an adjusting member for said binding member mounted on said bar, means for holding said adjusting member in its adjusted position on said bar, means for actuating said adjusting member comprising a slide removably engaged with said rack, and means carried by said slide and coacting with said rack for adjusting the slide on the rack and through it, said adjusting member.

1,104,857. SAFETY-RAZOR. FRANCIS WINDHAM, London, England. Filed Apr. 10, 1913. Serial No. 760,331. (Cl. 30—12.)

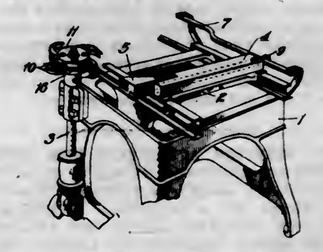


1. In a safety razor the combination of a spring clip of substantially U or loop section adapted to grip a blade between its longitudinal edges, means for supporting a blade within said clip, a comb or guard for the cutting edge of said blade and levers pivoted to the longitudinal edges of the clip and constituting means for opening the clip and guarding the exposed edge of the blade when the razor is not in use, and serving as a handle for operating the razor.

2. In a safety razor, the combination of a spring clip of substantially U or loop section, a comb gripped in place between the longitudinal edges of the clip and serving as a support for a blade which is held in its operative position by the same clip and levers pivoted to the longitudinal edges of the clip and constituting means for opening the clip and guarding the blade when the razor is not in use, and serving as a handle for operating the razor.

3. In a safety razor, the combination of a spring clip of substantially U or loop section, a comb gripped in place between the longitudinal edges of the clip, a double-edged blade removably mounted on the comb and held by the same clip in its operative position so as to expose one cutting edge, and levers pivoted to the longitudinal edges of the clip and constituting means for opening the clip and guarding the exposed edge of the blade when the razor is not in use, and serving as a handle for operating the razor.

1,104,858. WOODWORKING-MACHINE. JOHN F. WOLVIN, St. Clair, Mich. Filed Mar. 25, 1911. Serial No. 616,954. (Cl. 144—198.)



1. In a wood working machine, an edge paneling tool comprising a spindle, a circular spacing member thereon provided with peripheral edging teeth, a pair of disks bearing on each side of the spacing member, a pair of cutters in each disk having bodies with under-cut faces that lie in bearing slots in the disks and blades projecting beyond the disks with cutting edges adapted to incise work from

one outer margin thereof only, the cutting members of one disk alternating with the cutting members of the other disk, and both sets of members coöperating with the edging teeth of the spacing member to form a profile tenoning margin on work fed to the tool, and pins transversely disposed in the disk and adapted to clamp against the beveled faces of the cutters and lock the latter in the slots.

2. In a wood working machine, a tenoning and profiling tool comprising a spindle, a circular spacing member thereon provided with peripheral edging teeth, a pair of disks on the spindle against the sides of the spacing member, a pair of cutters in each disk having bodies with undercut faces that lie in bearing slots in the disk and projecting blades that have obliquely disposed profile cutting edges adapted to incise work along one outer margin thereof only, the paths described by the profile edges of the two sets of cutting members overlapping between the margins of the cutter, and the points of the entrance of the cutting edges of the work being in advance of the points of leaving the work, the disk cutters coöperating with the peripheral teeth of the spacing member upon work fed to the cutter to form the desired profile and tenon face thereon, and tapered pins transversely adjustable through the slotted portions of the disk adapted to bear against the beveled portions of the cutters and retain the latter in the slots.

1,104,859. HOBBING SPECIAL-SHAPED TOOTHED GEARS. NORMAN E. ZUSI, Newark, N. J., assignor to Meisselbach-Catucci Mfg. Co., a Corporation of New Jersey. Filed Dec. 14, 1912. Serial No. 736,683. (Cl. 29—103.)



1. A hob cutter having a cylindrical body with a helical row of cutting teeth upon said body, said helical row beginning with the first tooth having the contour of its cutting edge complete.

2. A hob cutter having a cylindrical body, and a helical row of cutting teeth thereon, said row beginning with the tooth whose cutting edge is of complete contour and whose cutting edges lie in radial planes.

3. A hob cutter having a cylindrical body and a helical row of cutting teeth thereon, the first tooth of which is of complete contour, said row of teeth varying in contour progressively throughout the helix from said first tooth.

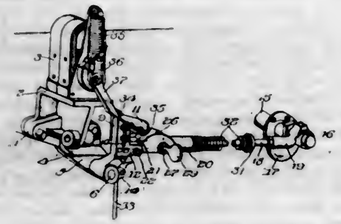
4. A hob cutter having a cylindrical body and a helical row of teeth, with the contours of the cutting edges of said teeth varying progressively throughout the length of the helix.

5. A hob cutter for cutting ratchet teeth having a cylindrical body and a helical row of teeth thereon, the contour of whose cutting edges is determined by the envelop line generated by the retrogressive super-position of a complete ratchet tooth of the form to be cut relative to the corresponding position of some definite point in the cutter tooth.

[Claims 6 to 8 not printed in the Gazette.]

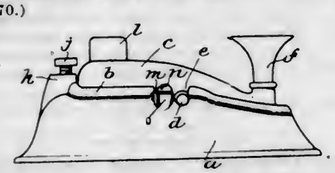
1,104,860. IGNITION APPARATUS FOR INTERNAL-COMBUSTION ENGINES. GEORGE V. AHARA, Toronto, Ontario, Canada, assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed June 5, 1913. Serial No. 771,815. (Cl. 123—164.)

1. In an ignition apparatus for internal combustion engines, the combination with the magneto, of a rocker arm pivotally supported adjacent to the magneto and adapted to engage and operate it, a crank member suitably operated from the engine, a rod connected at one end to said crank member, a sleeve member slidably arranged on the free end of said rod and pivotally connected to said rocker arm said sleeve member having a longitudinal slot therethrough, a cam arranged in said slot and rotatably supported in the sides of the sleeve and adapted to abut the end of said rod, and a spiral spring encircling said rod and secured at one end thereto and at the other end to said sleeve.



2. In an ignition apparatus for internal combustion engines, in combination, a bracket adapted to be secured to the engine cylinder, a magneto rigidly supported on said bracket, an arm extending downwardly from the magneto armature, a rocker arm pivotally supported from the lower portion of said bracket having an offset outer end adapted to engage and operate said magneto arm, a crank member suitably operated from the engine, an adjustable rod connecting said crank and said rocker arm, and a pump rod connected to a lateral projecting lug on the lower end of said rocker arm.

1,104,861. INK-FONT. EDWIN E. ANGELL, Somerville, Mass. Filed Oct. 9, 1912. Serial No. 724,866. (Cl. 120—70.)



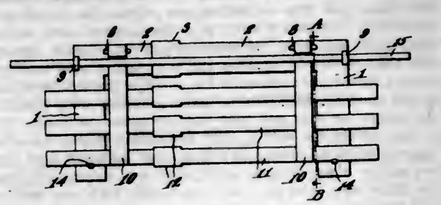
1. An ink font comprising a base, a tank having an outlet at one end, said base having a lip surrounding the tank and having notches, trunnions on the tank occupying said notches and pivotally supporting said tank in a manner such that the latter may be tilted to depress and raise its outlet, and retainers mounted on the base and movable into positions closely overlying said trunnions, whereby to prevent accidental dislodgment of the trunnions from the notches, said retainers having lugs arranged to lie across the ends of the trunnions.

2. An ink font comprising a tank having pivot trunnions and having an outlet at one side of the line of such trunnions, a base having open notches in which said trunnions are contained and on the bottoms of which they have a bearing, and retaining clips mounted upon the base beside such notches and movable across the latter over the trunnions and away therefrom, said clips having lugs arranged to close the outer sides of the notches and cross the ends of the trunnions.

3. In an ink font, the combination of a base having a raised lip with open notches in its upper edge, said notches constituting bearings, and having a boss beside each notch, an ink tank having pivot trunnions contained in said notches, clips pivoted on said bosses, each clip being arranged to swing over the adjacent notch and having a lug extending downwardly to cross the outer side of the notch and the end of the trunnion therein.

4. In an ink font including a tank having trunnions and a base having notches receiving and constituting bearings for said trunnions, clips pivoted to said base beside said trunnions, each formed with a retaining portion and a lug depending from said retaining portion, said retaining portion overlying the notch and said lug crossing the end of the trunnions.

1,104,862. ANDIRON. JAMES W. BAKER, Quitman, Tex. Filed Apr. 25, 1914. Serial No. 834,480. (Cl. 126—298.)



1. The combination with standards having inwardly extending slidably connected arms, bars detachably connected to and extending rearwardly from the standards, and legs supporting the rear ends of the bars, of a gate hingedly connected to and suspended from the arms, said gate being made up of opposed slidably connected members and being shiftable to a substantially horizontal position upon the arms and above the bars.

2. An andiron including standards, slidable connections therebetween, bars extending rearwardly from the standards, means for supporting the rear ends of the bars, a gate hingedly mounted upon the connections and adapted to be extended and shortened during the movement of the standards toward and from each other respectively, said connections between the standards constituting means for supporting the gate in a substantially horizontal position above the bars.

3. An andiron including standards, slidable connections therebetween, bars extending rearwardly from the standards, means for supporting the rear ends of the bars, a gate hingedly mounted upon the connections and adapted to be extended and shortened during the movement of the standards toward and from each other respectively, said connections between the standards constituting means for supporting the gate in a substantially horizontal position above the bars, and means for locking the gate in lowered position.

4. An andiron including standards, slidable connections therebetween, bars extending rearwardly from the standards, means for supporting the rear ends of the bars, a gate hingedly mounted upon the connections and adapted to be extended and shortened during the movement of the standards toward and from each other respectively, said connections between the standards constituting means for supporting the gate in a substantially horizontal position above the bars, brackets extending from the standards, and a rod detachably mounted on the brackets and extending across the gate when said gate is closed.

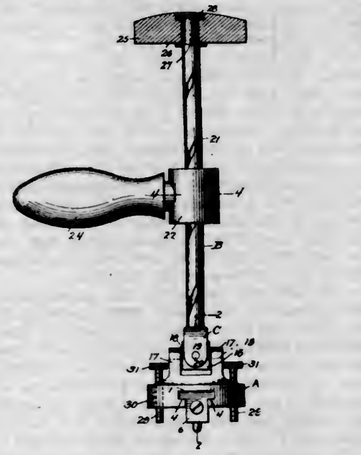
1,104,863. GRINDING-TOOL FOR GAS-ENGINE VALVES. CHESTER L. BALDWIN, Almond, Wis., assignor of one-half to Merle Casey, Almond, Wis. Filed July 30, 1913. Serial No. 781,963. (Cl. 51—4.)

1. A valve grinding tool comprising a head, valve-engaging means thereon, independently adjustable devices on the head engaging the valve and separate from the said means to steady the head with respect to the latter, and means connected with the head for turning the same.

2. A tool of the class described comprising a head, adjustable valve-engaging bits thereon, adjustable devices on the head for engaging the valve to steady the head with respect thereto, and means connected with the head for turning the same.

3. A tool of the class described comprising a head, a pair of adjustable bits thereon, a pair of steadying devices adjustably mounted on the head for engaging the valve and coöperating with the bits to form a four-point contact between the head and valve, and means connected with the head for turning the same.

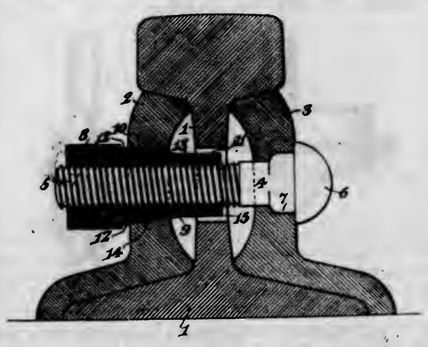
4. A tool of the class described comprising a head, a pair of bits on the head and adjustable in a diametrical line toward and from the center of rotation, a pair of screws arranged in a diametrical line at right angles to the line of the bits and adapted to engage the valve for steadying the head with respect thereto, and means connected with the head for turning the same.



5. A tool of the class described comprising a head, steadying devices mounted on the head at opposite sides of the center thereof for engagement with the valve, valve-engaging means placed at opposite sides of the center of the head thereon, a shaft having a screw thread, a universal connection between the shaft and head, a handle swiveled on the upper end of the shaft, and a sleeve slidable on the shaft and engaging the thread thereof to impart rotation to the shaft.

[Claim 6 not printed in the Gazette.]

1,104,864. RAIL-JOINT. CHARLES E. BALLOU, Roanoke, Va., assignor to Ballou Safety Rail Joint Company, Roanoke, Va., a Corporation of Virginia. Filed Aug. 20, 1913. Serial No. 785,747. (Cl. 239—9.)



1. A rail joint comprising fish plates and bolts, each bolt extending through the fish plates and a rail between them, and a nut for each bolt having a shank portion extending axially from one face of the nut and formed with an acute-taper part of an axial length to extend through a fish plate, and the fish plate where traversed by the nut having a conical passage therethrough in size and shape corresponding to the taper portion of the nut to provide a tight fit throughout the thickness of the fish plate.

2. A rail joint comprising fish plates and bolts extending through the fish plates and a rail between them, and a nut for each bolt having a shank portion axially extending from one face of the nut and provided with an elon-

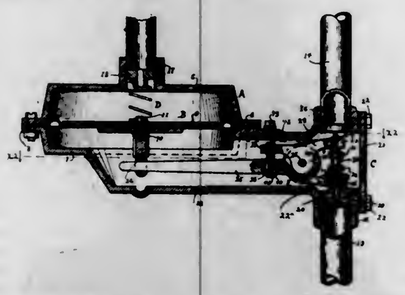
gated acute-taper conical part, and the fish plate where traversed by the nut having a conical passage in size and shape conforming to the taper portion of the nut to provide a tight fit throughout the thickness of the fish plate, the axial extension of the nut being of a length to extend into the web of the intervening rail.

3. A rail joint comprising fish plates adapted to the meeting ends of rails, and bolts extending through the fish plates and intervening rails, each bolt being provided with a nut having a shank extending axially from one face and said shank having end portions of different diameters with an intermediate conical part tapering away from the body of the nut at an acute angle to the longitudinal axis thereof and the corresponding fish plate being provided with a conical passage in size and shape conforming to the conical portion of the shank of the nut, and that portion of the shank of the nut remote from the body of the nut being of a length to extend into the web of the rail between the fish plates.

4. A rail joint comprising fish plates adapted to the meeting ends of rails, and bolts extending through the fish plates and intervening rails, each bolt being provided with a nut having a shank extending axially from one face and said shank having end portions of different diameters with an intermediate conical part tapering away from the body of the nut at an acute angle to the longitudinal axis thereof and the corresponding fish plate being provided with a conical passage in size and shape conforming to the conical portion of the shank of the nut, and that portion of the shank of the nut remote from the body of the nut being of a length to extend into the web of the rail between the fish plates, said rail web having the passage for the end of the nut shank of a diameter to leave a free space thereabout.

5. A bolt having a threaded shank and a nut adapted thereto, said nut being provided with an elongated shank portion extending axially from one side of the nut and provided with an intermediate part of acute-taper conical form and terminating at the end remote from the nut in a cylindrical extension of less diameter than the portion of the shank adjacent to the body of the nut.

1,104,865. GAS-REGULATOR. CHARLES BARRINGTON, Jr., Los Angeles, Cal. Filed Dec. 30, 1913. Serial No. 809,560. (Cl. 50—26.)



1. A gas regulator, comprising a casing having a gas inlet port and outlet opening and a diaphragm within the casing, gas feed control means within the casing and operatively connected with said diaphragm, said casing being provided with an opening; and a closure detachably applied to said opening and with which said gas feed control means are connected for passage through said last named opening; said closure being provided with supporting means for said gas feed control means normally projecting within the casing, said supporting means comprising two pairs of spaced brackets, and said gas feed control means comprising an oscillating arm detachable from the diaphragm and pivotally connected with one pair of said brackets, and a valve for the gas inlet port actuated by said oscillating arm and guided in its movement by the other pair of said brackets.

2. A gas regulator, comprising a casing having a gas inlet port and outlet opening and a diaphragm within the casing, gas feed control means within the casing and operatively connected with said diaphragm, said casing being provided with an opening and; a closure detachably applied to said opening and with which said gas feed control means are connected for passage through said last named opening; said closure being provided with supporting means for said gas feed control means normally projecting within the casing, said supporting means comprising two pairs of spaced brackets, and said gas feed control means comprising an oscillating arm detachable from the diaphragm and pivotally connected with one pair of said brackets, and a valve for the gas inlet port actuated by said oscillating arm and guided in its movement by the other pair of said brackets; and a regulating arm likewise pivotally connected with said brackets with which said oscillating arm is pivotally connected and loosely connected with said valve.

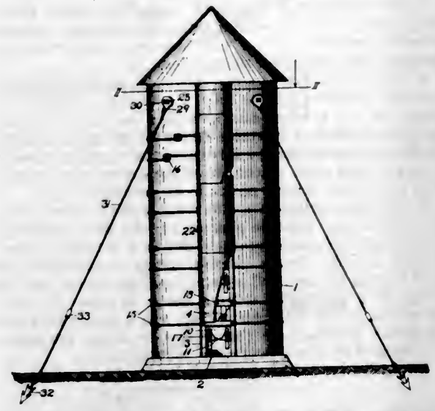
3. A gas regulator, comprising a casing having a gas inlet port and outlet opening and a diaphragm within the casing, gas feed control means within the casing and operatively connected with said diaphragm, said casing being provided with an opening; and a closure detachably applied to said opening and with which said gas feed control means are connected for passage through said last named opening; said closure being provided with supporting means for said gas feed control means normally projecting within the casing, said supporting means comprising two pairs of spaced brackets, and said gas feed control means comprising an oscillating arm detachable from the diaphragm and pivotally connected with one pair of said brackets, and a valve for the gas inlet port actuated by said oscillating arm and guided in its movement by the other pair of said brackets; and a regulating arm likewise pivotally connected with said brackets with which said oscillating arm is pivotally connected and loosely connected with said valve, said regulating arm having a bifurcated end portion receiving a portion of said valve, said valve being provided with detachable means holding the valve to said regulating arm.

4. A gas regulator, comprising a casing having a gas inlet port and outlet opening and a diaphragm within the casing, gas feed control means within the casing and operatively connected with said diaphragm, said casing being provided with an opening; and a closure detachably applied to said opening and with which said gas feed control means are connected for passage through said last named opening; said closure being provided with supporting means for said gas feed control means normally projecting within the casing, said supporting means comprising two pairs of spaced brackets, and said gas feed control means comprising an oscillating arm detachable from the diaphragm and pivotally connected with one pair of said brackets, and a valve for the gas inlet port actuated by said oscillating arm and guided in its movement by the other pair of said brackets; and a regulating arm likewise pivotally connected with said brackets with which said oscillating arm is pivotally connected and loosely connected with said valve; said regulating arm being provided with a threaded pin passed loosely through said oscillating arm and whereby said regulating arm and said valve may be adjusted.

5. A gas regulator, comprising a casing having a gas inlet port and outlet opening and a diaphragm within the casing, gas feed control means within the casing and operatively connected with said diaphragm, said casing being provided with an opening; and a closure detachably applied to said opening and with which said gas feed control means are connected for passage through said last named opening; said closure being provided with supporting means for said gas feed control means normally projecting within the casing, said supporting means comprising two pairs of spaced brackets, and said gas feed control means comprising an oscillating arm detachable from the diaphragm and pivotally connected with one pair of said brackets, and a valve for the gas inlet port actuated by said oscillating arm and guided in its movement by the other pair of said brackets; and a regulating arm likewise pivotally connected with said brackets with which said oscillating arm is pivotally connected and loosely connected with said valve; said regulating arm being provided with a threaded pin passed loosely through said oscillating arm and whereby said regulating arm and said valve may be adjusted; said pin being headed exteriorly of said oscillating arm.

[Claims 6 and 7 not printed in the Gazette.]

1,104,866. SILO. EARLE A. BERRY, Kansas City, Mo. Filed Feb. 1, 1912. Serial No. 674,776. (Cl. 20—1.4.)



1. A silo comprising a body member having hoops extending therearound, and a ladder comprising runners and rungs, and bolts connecting the rungs with the runners and having hooks at their inner ends adapted for receiving the body hoops, substantially as set forth.

2. A silo comprising a body member, a ladder connected with said body member and having runners, and rungs connected with said runners by suitable bolts, and a chute member having edge lips provided with apertures adapted to seat over said bolts for the purpose set forth.

3. A silo comprising a body member, a ladder connected with said body member and having runners and rungs connected with said runners by suitable bolts, and a chute member having edge lips provided with apertures adapted to seat over said bolts and between the ladder runners and rungs.

1,104,867. EXPRESSION DEVICE FOR AUTOMATIC MUSICAL INSTRUMENTS. JOSEPH BLOHUT, Leipzig, Germany, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Nov. 6, 1912. Serial No. 729,756. (Cl. 84—168.)

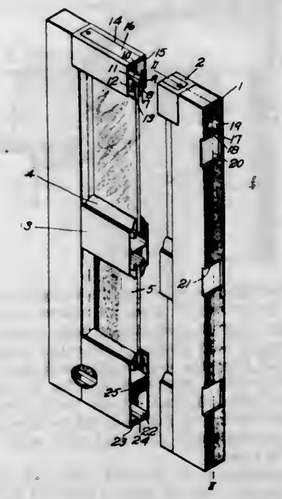


1. In a musical instrument, the combination of a wind chest, a main bellows, tension regulating and expression valves both controlling the passage between the wind chest and the main bellows, said expression valve being slidably applied to said passage and having a port, said regulating valve consisting of a doubled flexible strip one member of which is secured to said slide valve and overlies the port thereof, and a regulating pneumatic communicating with the wind chest and operatively connected with the other member of said strip.

2. In a musical instrument, the combination of a wind chest, a main bellows, tension regulating and expression valves both controlling the passage between the wind chest and the main bellows, said expression valve being slidably applied to said passage and having a port, said regulating valve consisting of a doubled strip of elastic material, one member of which is secured to said slide-valve and coöperates with the port thereof, and actuating means connected with the other member of said strip.

3. In a musical instrument, the combination of a wind chest, a main bellows, tension regulating and expression valves both controlling the passage between the wind chest and the main bellows, said expression valve being slidably applied to said passage and having a port, a guide arranged opposite said slide valve and adjustable relatively thereto, said regulating valve consisting of a doubled elastic strip interposed between said guide and said slide valve, one limb of said strip coöperating with the port of said valve, and actuating means connected with the other limb of the strip.

1,104,868. METAL DOOR. SVEN G. BOLIN, Kansas City, Mo. Filed Feb. 6, 1913. Serial No. 746,466. (Cl. 189—46.)



1. In a metal door, a rail having edge portions turned backwardly into the interior of the rail to form spaced panel faces, each provided with a laterally turned shoulder and inturned lip, a key having a rail portion seated against said shoulders between the lips, and having edge arms and tongues overlying the shoulders and lips, whereby the panel face portions of the rail are held in spaced relation and the key held to the inturned portions of the door rail.

2. In a metal door, a rail comprising panel beads, having inturned edges forming panel faces and having laterally turned shoulders and inturned lips at the inner edges of the panel faces, a panel having an edge portion located between said faces, and a key slidably mounted on the shoulders and lips to clamp the panel faces of the door rail against said panel and form a seat therefor.

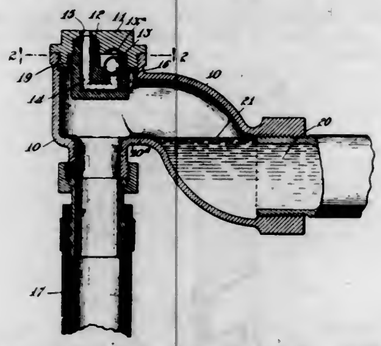
3. In a metal door, a rail comprising spaced beading members having mating bearing faces yieldingly tensioned oppositely and each provided with a laterally directed shoulder and offset lip, of a key having a base adapted to seat on said shoulder between the lips, and arms for inclosing the shouldered parts and holding same in locking position and against said seat, substantially as set forth.

4. In a metal door, stile and rail construction comprising a single piece of sheet metal of substantially U-shaped cross section, having free ends beaded and turned inwardly to form a longitudinal slot, and creased to provide laterally directed shoulders and inturned lips, and a sliding key having a bead for holding said lips and shoulders in alinement and having arms for holding said lips and shoulders to said bead.

5. A metal door comprising stiles and rails, one of which is provided with a slot and with spaced beading members, another of said parts with an opening arranged at right angles to the slot, a panel adapted for projection through the slot and between the beading members to its position in said door, and a key adapted for projection through said opening and over the spaced beading members to clamp the latter against the panel, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,104,869. AUTOMATIC PIPE OR HOSE DRAINING VALVE. LAFAYETTE E. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Filed Oct. 12, 1912. Serial No. 725,414. (Cl. 137—69.)



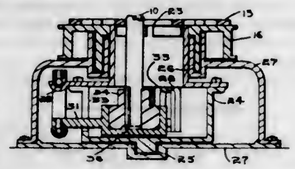
1. The combination in a liquid conveying system of a horizontal liquid supply pipe, an upbent terminal upon the discharge end of said supply pipe, constituting the highest point in said system, preventing gravity-induced flow of liquid from the supply pipe and past which liquid must be forced, a discharge pipe for the liquid forced through the terminal, and an air valve communicating with the terminal and adapted automatically to admit air to the terminal and discharge pipe when the forced flow of liquid ceases.

2. The combination in a liquid conveying system of a horizontal supply pipe, an upbent terminal upon the discharge end of said supply pipe, constituting the highest point in said system, preventing gravity-induced flow of liquid from the supply pipe and past which liquid must be forced, a discharge pipe for the liquid forced through the terminal, and an air valve communicating with the terminal at the highest point thereof and adapted automatically to admit air to the terminal and discharge pipe when the forced flow of liquid through the system ceases.

1,104,870. SIFTER-DRIVING MECHANISM. ALLEN C. BRANTINGHAM, Toledo, Ohio, assignor to Nordyke & Marmon Co., Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 28, 1907. Serial No. 354,400. (Cl. 83—38.)

1. The combination with a sifter, supporting means therefor, and a gyrator for the sifter, of a rotatable steadying means for the sifter to longitudinally actuate the gyrator relatively to the sifter.

2. The combination of a sifter, supporting means therefor, a gyrator for the sifter, and a control device for the sifter comprising a rotatable member engaging the gyrator and rotatable sustaining means carrying the member, said means effective to longitudinally actuate the gyrator relatively to the sifter.



3. The combination of a body, supporting means therefor, a gyrator for the body, a rotatable swingable member mounted independently of the body and supporting the gyrator, and a driver for the gyrator.

4. The combination of a movable body, supporting means therefor, a gyrator for the body, a yieldable rotatable sustainer for the gyrator, said sustainer mounted independently of the body, a rotatable driver for the gyrator, flexible driving means for the driver, and a rotatable element having a fixed axial spacing from the driver and coacting with the flexible driving means to the rotatable driver.

5. The combination of a sifter, supporting means therefor, an orbitally movable gyrator for the sifter including eccentrically weighted rotatable means, a rotatable driver for the gyrator, flexible driving means, a rotatable element having a fixed axial spacing from the driver and coacting with the flexible driving means to guide the driving means to the rotatable driver, and a rotatable yielding device coacting with the gyrator to steady the sifter.

[Claims 6 to 17 not printed in the Gazette.]

1,104,871. WIRE CLOTHES-PIN. JOHN L. BUCKLEY and JAMES W. COIN, Weatherford, Tex. Filed Nov. 27, 1912. Serial No. 733,889. (Cl. 24—261.)

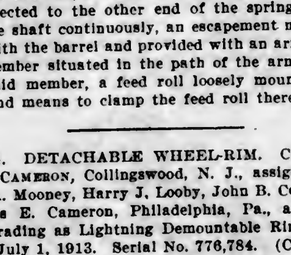


A clothes pin formed from a single length of wire centrally bent to form a coil, the ends of the wire beyond the coil being looped to form opposed jaws arranged to move transverse the axis of the coil, the ends of the loops extending through the coil from opposite ends thereof and terminating beyond the coil in spaced finger pieces the terminal portions of the loop ends being rebent and lying within the coil.

1,104,872. COVER-FASTENER. HARRY BUDD, Independence, Kans. Filed Aug. 26, 1911, Serial No. 646,186. Renewed Dec. 31, 1913. Serial No. 809,722. (Cl. 70—81.)

1. The combination with body and cover members, of plungers carried by one of the members, and a bail carried by the other member and adapted to seat back of the plungers, said bail having a raised handle portion substantially as set forth.

2. The combination with a body member and a cover, of a bail pivotally mounted on the body member and adapted to lie over a part of the cover, and plungers on said cover adapted to hold the bail in locking position, said cover being provided with grooves back of the plungers, and said bail being provided with end members which



are adapted to seat within the grooves, and with a central, raised handle portion.

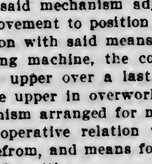
1,104,873. FEED MECHANISM FOR MOVING-PICTURE MACHINES. JOSEPH BUTCHER, Brooklyn, N. Y. Filed Oct. 16, 1911. Serial No. 655,060. (Cl. 88—18.)

1. In a device of the class described, the combination with a shaft, of a spring coiled thereabout and secured at one end thereto, a barrel loosely mounted on the shaft and connected to the other end of said spring, a driving shaft, gearing connecting said driving shaft and the first-named shaft, a plurality of radial arms rigid with the barrel, a slotted let-off member situated in the path of said arms, and gearing connecting said let-off member with the driving shaft.

2. In a device of the class described, the combination with a shaft, of a spring coiled thereabout and secured thereto at one end, a barrel loosely mounted on the shaft and connected to the other end of the spring, means to rotate the shaft continuously, an escapement member connected with the barrel and provided with an arm, a slotted let-off member situated in the path of the arm, means to rotate said member, a feed roll loosely mounted on the barrel, and means to clamp the feed roll thereto.

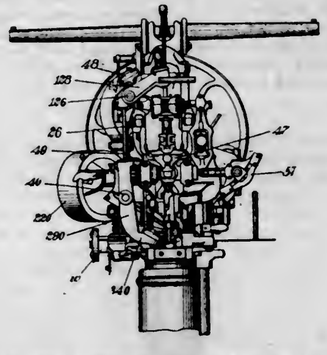
1,104,874. DETACHABLE WHEEL-RIM. CHARLES EDWARD CAMERON, Collingswood, N. J., assignor to William A. Mooney, Harry J. Looby, John B. Connolly, and Charles E. Cameron, Philadelphia, Pa., a Copartnership trading as Lightning Demountable Rim Company. Filed July 1, 1913. Serial No. 776,784. (Cl. 152—21.)

Means for detachably connecting fixed rims and detachable rims which comprise the combination of a plate provided with a right angularly disposed base of approximately half the width of the fixed rim and adapted for attachment to the detachable rim and provided intermediate of its top and bottom with a groove tongue parallel with the base and spaced therefrom for the accommodation of the felly and unnotched portion of the fixed rim, a housing provided with a base having flanges adapted to straddle the felly and whereof one is provided with an opening for the reception of the tongue and with attaching means, a spring arranged in the housing and provided



with a bolt adapted to coöperate with the grooved tongue and with a shank, and a finger eccentric lever attached to the shank and adapted to permit the bolt to operate as a spring bolt and to hold the same in one position, substantially as described.

1,104,875. LASTING AND SEWING MACHINE. JAMES CAVANAGH, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 1, 1909. Serial No. 530,816. (Cl. 12—6.)



1. In a lasting machine, the combination with means for working an upper over a last, of sewing mechanism for securing the upper in overworked position, said parts being arranged for such relative movement as to permit the sewing mechanism to occupy an operative or an inoperative position relative to said means.

2. In a lasting machine, the combination with means for working an upper over a last, of sewing mechanism for securing the upper in overworked position supported for movement to position said mechanism in or out of operative relation to said means.

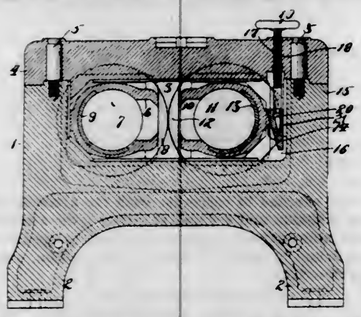
3. In a lasting machine, the combination with means for working an upper over a last, of sewing mechanism for securing the upper in overworked position, and a device for supporting said mechanism adjacent said means and arranged for movement to position said mechanism out of operative relation with said means.

4. In a lasting machine, the combination with means for working an upper over a last, of sewing mechanism for securing the upper in overworked position, a support for said mechanism arranged for movement to locate said mechanism in operative relation with said means or to remove it therefrom, and means for retaining the support in either of said positions.

5. In a lasting machine, the combination with means for working an upper over a last, of sewing mechanism for securing the upper in overworked position, a support therefor, and pivotal means for sustaining said support, the parts being so arranged that the sewing mechanism may be moved about said pivotal means into an inoperative relation to the upper overworking means.

[Claims 6 to 35 not printed in the Gazette.]

1,104,876. HOUSING. ELMER CLARK, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Aug. 27, 1913. Serial No. 786,916. (Cl. 64—52.)



An improved housing, comprising a body having a recess therein, roll bearings mounted in said recess, one of said bearings being shiftable with relation to the other bearing, and being formed with a projection having an inclined face, a hollow frangible wedge slidable upon said inclined face, and provided with a chambered recess having a contracted neck, and an enlarged portion, and a screw extending through said neck and having a head on its lower end movable within said enlarged portion of the recess in the wedge, and a handle wheel at its upper end.

1,104,877. WELL-PACKER. CHARLES P. CLAYTON, Shreveport, La. Filed May 9, 1913. Serial No. 766,497. (Cl. 166—10.)



1. A well-packer comprising a tubular-shaped member that is adapted to be connected to a well-casing so as to form the bottom section of the casing, a packing member or medium surrounding said tubular-shaped member, means for expanding said packing member laterally into snug engagement with the wall of the well so as to prevent water from flowing downwardly around said tubular-shaped member, and a temporary closure for the lower end of said member for preventing said member from becoming clogged when the device is being inserted in the well, said closure being adapted to be removed after the device has been positioned.

2. A combined set-shoe and well-packer comprising a tubular-shaped member that is adapted to be connected to the lower end of a well-casing, an abutment member surrounding said tubular-shaped member and tapered inwardly from its upper toward its lower end, and means consisting of a frangible ring screwed into the lower end portions of said members for preventing said tubular-shaped member and said abutment member from moving longitudinally with relation to each other during the operation of wedging said abutment member in the well.

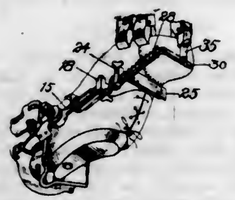
3. A combined set-shoe and well-packer comprising a tubular-shaped member that is adapted to be connected to the lower end of a well-casing, an abutment member surrounding said tubular-shaped member and tapered inwardly from its upper toward its lower end, means consisting of a frangible ring screwed into the lower end portions of said members for preventing said tubular-shaped member and said abutment member from moving longitudinally with relation to each other during the operation of wedging said abutment member in the well, and a temporary plug or closure for the lower end of said tubular-shaped member that is adapted to be destroyed after the device has been positioned properly.

4. A combined set-shoe and well-packer comprising a tubular-shaped member that is adapted to be connected to the lower end of a well-casing, an abutment member surrounding said tubular-shaped member and adapted to be wedged tightly against the wall of the well, a connecting device for fastening said tubular-shaped member and abutment member together when the device is being installed in the well, said device being adapted to be broken so as to release said tubular-shaped member after said abutment member has been seated in the well, a packing member or medium surrounding said tubular-shaped member above said abutment member, means coöperating with said abutment member to compress said packing medium when the tubular-shaped member is forced downwardly with relation to the abutment member, and means for dislodging or unseating said abutment member when said tubular-shaped member is withdrawn from the well.

5. A combined set-shoe and well-packer comprising a tubular-shaped member that is adapted to be connected to the lower end of a well-casing, an abutment member surrounding said tubular-shaped member and adapted to be wedged tightly against the wall of the well, a connecting device for fastening said tubular-shaped member and abutment member together when the device is being installed in the well, said device being adapted to be broken so as to release said tubular-shaped member after said abutment member has been seated in the well, a packing member or medium surrounding said tubular-shaped member above said abutment member, means coöperating with said abutment member to compress said packing medium when the tubular-shaped member is forced downwardly with relation to the abutment member, and a reinforcing device on the lower end of said tubular-shaped member that strikes against a shoulder on said abutment member and thus dislodges or unseats said member when the tubular-shaped member is being withdrawn from the well.

[Claims 6 to 9 not printed in the Gazette.]

1,104,878. TIP-MEASURER FOR PULLING-OVER MACHINES. ABRAM L. COOMBS, Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 8, 1912. Serial No. 702,487. (Cl. 12—4.)



1. A pulling-over machine having, in combination, upper pulling grippers, a heel end rest for the shoe and a tip gage having a shoe engaging edge extending transversely across the forepart of the shoe, said gage being supported for lateral angular adjustment about a center located substantially at the rear end face of the heel to adapt it for right and left crooked lasts.

2. A pulling-over machine having, in combination, means for pulling an upper over a last, a tip gage pivotally supported in the rear of the pulling means and having a plate extending across the shoe adjustable laterally about an axis substantially perpendicular to the plane of the shoe bottom.

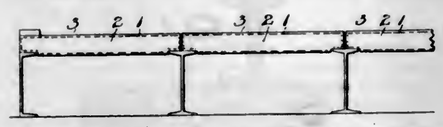
3. A pulling-over machine having, in combination, means for pulling an upper over a last, a heel rest movable laterally to support the heel ends of right and left crooked shoes the foreparts of which are positioned similarly in the pulling-over means, and a tip measuring gage movable laterally with said heel rest and comprising a gage plate extending across the forepart of the shoe and adjustable angularly about an axis substantially perpendicular to the plane of the shoe bottom.

4. A pulling-over machine having a tip gage including a toe end abutment and a tip seam plate, a heel rest and a supporting connection from the heel rest to said gage members.

5. A pulling-over machine having a tip gage including a toe end abutment and a tip seam plate, a heel rest and a supporting connection from the heel rest to said gage members, said connection permitting angular lateral adjustment of the gage members relatively to the heel rest.

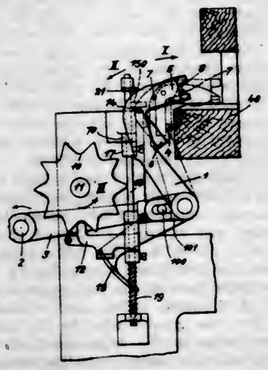
[Claims 6 to 12 not printed in the Gazette.]

1,104,879. BRIDGE-FLOOR. JAMES CHAUNCEY DILDINE, Cameron, Mo. Filed Sept. 30, 1913. Serial No. 792,654. (Cl. 72—64.)



The method of forming a relatively long and wide block or slab for bridge floors consisting of forming a cylindrical skeleton by wires spirally and continuously wound on a reel, placing or weaving longitudinal wires in said cylindrical skeleton, removing the skeleton thus formed from the reel, flattening the same into rectangular shape, and then filling and covering the said skeleton with concrete or other plastic material, substantially as shown and described.

1,104,880. THREAD-CUTTING MECHANISM FOR WEFT-REPLENISHING LOOMS. EDUARD EGLI, Rüti, Switzerland, assignor to Maschinenfabrik Rüti formerly Caspar Honegger, Rüti, Switzerland. Filed May 27, 1913. Serial No. 770,257. (Cl. 130—85.)

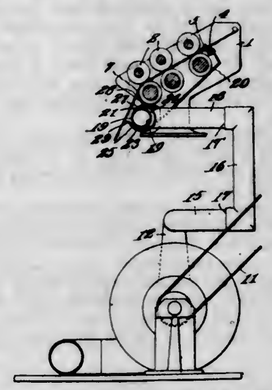


1. In a loom with automatic weft replenishment, the combination of shuttle-feeler shears, a plate resiliently pressed against the movable blade of the shuttle feeler shears, means for positively opening the said shears in the normal or rest position of the shears carrier and means for stopping the movable blade of the temple thread cutter during the time comprised between two replenishments of the weft thread.

2. In a loom with automatic weft thread replenishment, the combination of a forked lever fixed on the controlling shaft for the weft replenishing mechanism, a shuttle feeler shears lever having a cross pin embraced by said fork, a star wheel adapted to be rotated from a member of the loom, a vertically and horizontally movable arm, adapted to be brought into engagement with said star wheel by means of a spring, a vertically movable rod carrying said arm, being pressed up resiliently and provided with a cross pin in the upper part, a movable blade of the shuttle feeler shears adapted to be operated by means of said pin engaging a pin on said blade, a shears lever arm having an inclined surface for disengaging the said arm from said star wheel, on the return stroke of said shuttle feeler shears, and means for stopping the movable blade of the temple thread cutter, during the time comprised between two weft thread replenishments.

3. In a loom with automatic weft thread replenishment, the combination of a forked lever fixed on the controlling shaft for the weft replenishing mechanism, a shuttle feeler shears lever having a cross pin embraced by said fork, a star wheel adapted to be rotated from a member of the loom, a vertically and horizontally movable arm adapted to be brought into engagement with said star wheel by a spring, a vertically movable rod carrying said arm, being pressed up resiliently and provided with a cross pin in the upper part, a movable blade of the shuttle feeler shears provided with a pin adapted to be actuated by said pin, an arm of the shears lever with an inclined surface for disengaging said arm from said star wheel on the return stroke of the shuttle feeler shears, a vertically movable rod, pivoted on the cross pin of the shuttle feeler shears lever, a pawl mounted on the loom framing and adapted to be disengaged by the said rod, a horizontal arm provided on the resiliently upwardly pressed rod, a bell crank lever adapted to be operated by said last mentioned arm, a rocking bar adapted to bear against a lateral finger of the last mentioned lever, and a pin fixed to the movable blade of the temple thread cutter, adapted to be driven by said rocking bar forward into the range of the pawl that is mounted on the loom frame.

1,104,881. DEVICE FOR SPINNING-FRAMES. JAMES D. EZELL and JOHN GROOM KING, Burlington, N. C. Filed Jan. 15, 1914. Serial No. 812,286. (Cl. 118—26.)



1. In a device of the class described, a movable actuating member; a longitudinally movable conduit connected with the actuating member to move therewith, and having an intake opening; and means for creating a suction in the conduit.

2. In a device of the class described, a movable actuating member; a longitudinally movable conduit connected with the actuating member to move therewith, and having an intake opening; means for creating a suction in the conduit; a closure for the opening; and means for controlling the opening.

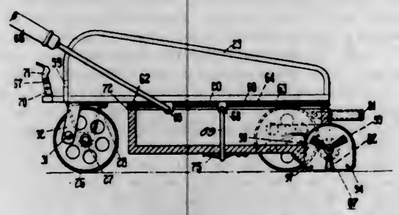
3. In a device of the class described, the combination with a roving guide, of a perforated conduit connected with the roving guide to move therewith; and means for creating a suction in the conduit.

4. In a device of the class described, a movably actuating member; a longitudinally movable conduit connected with the actuating member to move therewith, and having an intake opening; means for creating a suction in the conduit; a closure for the opening; and strand-actuated means for controlling the closure.

5. In a device of the class described, the combination with the roving guide of a spinning machine, of a conduit connected with the roving guide to move therewith and having an opening; a closure for the opening; and means for moving the closure.

[Claims 6 to 10 not printed in the Gazette.]

1,104,882. PNEUMATIC CLEANER. LEONARD L. FERGUSON, Chicago, Ill., assignor to John W. Duntley, Chicago, Ill. Filed June 13, 1912. Serial No. 703,408. (Cl. 15—60.)



1. In a vacuum cleaner, the combination with a suction creating device and operating mechanism therefor, of a detachable sweepings receptacle in communication with said suction-creating device and having a brush adapted for engagement with the surface to be cleaned.

2. In a vacuum cleaner, the combination with a suction creating device and operating mechanism therefor, of a detachable sweeping collecting compartment in communication with said device, a rotary brush mounted in said compartment, and wheels on said detachable compartment engaging with said brush to rotate the same.

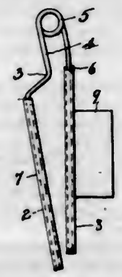
3. In a vacuum cleaner, the combination of a suction creating device, and a detachable dust collecting device having a nozzle adapted for engagement with the surface to be cleaned, a rotating brush, wheels on said dust collecting device for rotating said brush, a brush housing having an opening in communication with said dust collecting device, and means for covering and uncovering said opening.

4. In a vacuum cleaner, a rotative brush, a brush housing including a guard plate bent at its bottom edge to form a trough, and provided with an opening through the bottom of such trough.

5. In a vacuum cleaner, the combination of a suction creating device, a detachable dust collecting device having a part adapted for engagement with the surface to be cleaned, and means for clamping such detachable dust collecting device to the suction creating device, such means comprising bracket members depending from such suction creating device and supporting a rotative shaft having an eccentric part adapted to engage with such dust collecting devices.

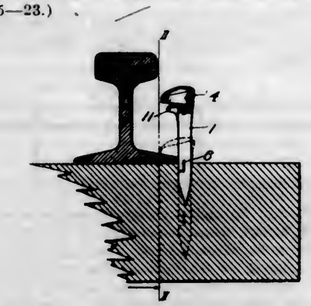
1,104,883. MAIL-HOLDING DEVICE. FRED C. GIESLER, Beaver township, Butler county, Iowa. Filed May 1, 1911. Serial No. 624,279. (Cl. 24—261.)

In a mail-holding device, a spring-frame composed of a single strand of wire bent at each side of its middle forming an open frame, a plate secured to said frame and adapted to receive an indication of the destination of the device, the ends of the wire then bent laterally of the frame aforesaid, then upwardly in a plane substantially



parallel to the frame, then coiled, and the ends extended downwardly, a plate secured to said downwardly-extended ends, said plates normally in close proximity to one another and adapted to receive and hold mail matter, substantially as shown and described.

1,104,884. RAILWAY-SPIKE. JOHN GOICH, Kansas City, Kans. Filed Aug. 2, 1913. Serial No. 782,589. (Cl. 85—23.)

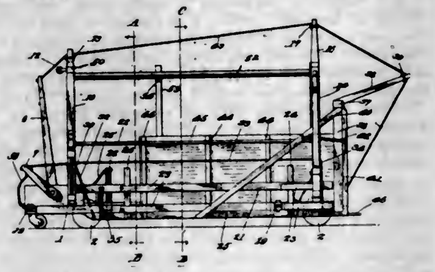


1. A spike comprising a body member having a groove therein, and having a socket at one end of and communicating with the groove; the sides of the spike being slit above the base of the groove to form lips, and a spreader located in said groove and having a head initially located in said socket, whereby the lips are spread outwardly beyond the side faces of the spike body when the spreader is moved longitudinally in its groove.

2. A spike comprising a head and a body member integral with said head, and having a laterally opening groove terminating at its lower end and in an enlarged socket; the sides of the spike being slit longitudinally and transversely adjacent the socket to form loose end lips, a spreader slidably mounted in the groove, and having a head projecting laterally from the upper end of the spike groove and a shoe initially located in the socket and adapted for spreading the loose end lips when the spreader is moved upwardly in its groove, whereby the said lips are spread laterally as the spike is driven.

3. A spike comprising a head and a body member, the former having a downwardly opening socket and the latter having a laterally opening groove communicating with the head socket, and having an enlarged shoe socket at its opposite end; the sides of the spike being slit transversely at the shoe socket and longitudinally thereabove; a spreader slidably mounted in the groove and having a shoe located in the shoe socket, and a head projected transversely from the groove, whereby the spreader head engages a rail prior to the engagement of the rail by the spike head, and whereby the said lips are spread laterally simultaneously with the driving of the spike, substantially as set forth.

1,104,885. STACKER. DAVID M. GRAHAM, Bordulac, N. D., assignor of one-half to E. A. Roach, Bordulac, N. D. Filed Dec. 19, 1912. Serial No. 737,743. (Cl. 56—123.)



1. A machine for forming stacks of grain, including a movably supported main structure, a rack, means for holding the rack in raised position, said rack when released, being adapted to gravitate into contact with the ground, and slidable connections between the rack and main structure whereby a momentary forward movement of the main structure is permitted independently of the rack.

2. A machine for forming stacks of grain, including a movably supported main structure, a rack, means connected to the end portions of the rack for holding it normally in raised position, yielding connections between the front end of the rack and the main structure, and means for successively depositing the back and front ends of the rack upon the ground.

3. A machine for forming stacks of grain, including a movably supported main structure, a rack, means for holding the rack normally elevated, means for releasing the holding means to deposit the rack upon the ground, and yielding means for retarding the gravitation of the front end of the rack.

4. A machine for forming stacks of grain, including a movably supported main structure, a rack, means for supporting the rack in raised position, said rack, when released, being adapted to gravitate into contact with the ground, and slidable connections between the rack and main structure whereby a momentary forward movement of the main structure independently of the rack is permitted subsequent to the gravitation of the rack.

5. A stack forming machine including a movably supported main structure, a rack, means for normally supporting the rack in elevated position, said means, when released, permitting gravitation of the rack into contact with the ground, means for retarding the gravitation of the front end of the rack, and means for permitting a momentary halt in the forward movement of the rack during the gravitation of said rack and during the forward movement of the main structure.

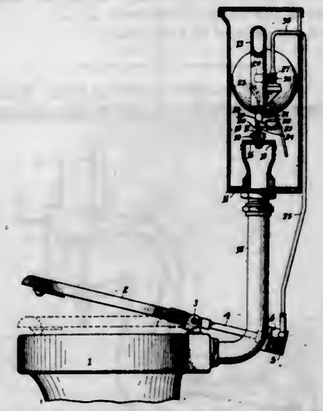
[Claims 6 to 9 not printed in the Gazette.]

1,104,886. TIRE-FILLER. WILLIAM E. GRAVES, Topeka, Kans. Filed Jan. 30, 1911. Serial No. 605,587. (Cl. 106—23.)

A composition of matter for filling tires consisting of the following materials in substantially the proportions stated; viz: ground cork, five pounds, chipped rubber, one-half pound, and flexible glue, the elements of which aggregate two and one-half pounds.

1,104,887. VALVE-OPERATING MECHANISM FOR WATER-CLOSETS. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed July 18, 1913. Serial No. 779,690. (Cl. 4—5.)

1. The combination of a valve adapted to be moved to open and close the same, a pivotal support for said valve, means having connection with said valve whereby the latter may be moved to open and close the same which means is movable independently of said valve, the said means having a part adapted to be engaged to effect movement of the said valve and a movable member acting automatically to engage said part to effect movement thereof for the purpose stated.



2. The combination of a pivotal support having a valve carried thereby, a member pivotally connected to said support and having a part adapted to be engaged for the purpose of effecting movement of said valve support to open said valve, and oscillatable means which when moving in one direction engages the said member and causes pivotal movement thereof and when moving in the opposite direction engages the said member and causes bodily movement thereof to lift said support and open said valve.

3. Mechanism of the character described, comprising, in combination, a valve, a pivoted member having connection therewith, the said member having a weighted arm and also having a cam surface and a part adapted to be engaged to effect opening of the said valve, an oscillatable member adapted when moved in one direction to engage the said cam surface and cause pivotal movement of the said pivoted member to permit passage of said oscillatable member to a point underneath the said part and when moved in the opposite direction to engage said part and cause movement of said member to open said valve, and means for effecting oscillation of the said oscillatable member whereby the same is caused to engage the said part and open the said valve.

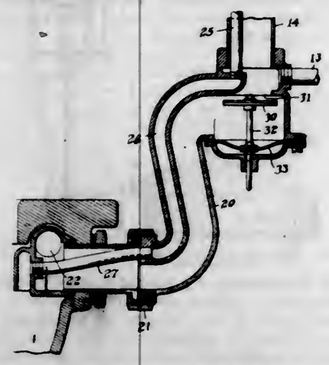
4. Mechanism of the character described, comprising, in combination, a pivoted support having a valve connected thereto, a member pivotally connected with the said support and adapted to cause movement of the latter, the said member having a laterally extending arm and also a weighted arm whereby it is held in normal position, a pivoted lever having a part which is adapted to engage the said pivoted member when moved in one direction to cause pivotal movement independently of the pivoted support, whereby the said pivoted lever may be moved into position with a part thereof underneath the said arm, whereby when the said lever is moved in the opposite direction it will engage the said arm to lift the said pivoted member and the said support to open the said valve, and means acting automatically to cause movement of the said pivoted lever.

5. In a valve mechanism adapted for use in connection with water closet apparatus, the combination of a valve for closing a valve opening, a pivoted actuating member having connection with the said valve, the said actuating member being provided with an upwardly extending curved arm and also with a downwardly and laterally extending arm, and also having a weight connected thereto to hold the same in normal position, a movable member adapted when moved in one direction to engage the said upwardly extending curved arm to effect pivotal movement of the said actuating member whereby the said movable member may be passed into position with a part thereof under-

neath the downwardly extending arm and without affecting said valve and whereby when the said movable member is moved in the opposite direction the said actuating member will be moved in a direction to open the said valve, and means for effecting movement of the said movable member to actuate the said actuating member to cause opening and closing of the said valve.

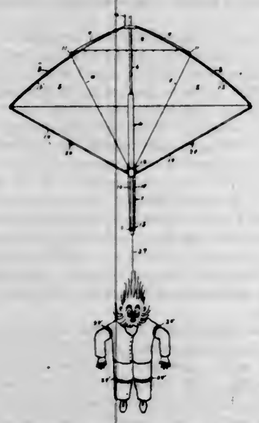
[Claim 6 not printed in the Gazette.]

1,104,888. WATER-CLOSET APPARATUS. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed July 18, 1913. Serial No. 779,691. (Cl. 4—5.)



A water closet apparatus comprising a flush tank, said flush tank having a port for the exit of water, a bowl, a pipe communicating with the said port for conducting water from the said tank, a separate pipe terminating interiorly of the said tank at a point below the closed top of the same, a coupling for connecting the lower ends of the said pipes to the said bowl, said coupling comprising passage-ways for the water and air, the said passage-ways of said coupling being integral, and separate connections for connecting said passage-ways to different portions of the bowl structure.

1,104,889. AEROPLANE AND SAFETY APPLIANCE. HERBERT E. HAWES, New York, N. Y. Filed Sept. 9, 1913. Serial No. 788,920. (Cl. 244—21.)



1. In an aeroplane, a frame having a smooth longitudinal upwardly-opening cavity at the rear thereof, a detachable parachute carried in said cavity, the bottom or expansible end of the same disposed toward the front of the machine, an aviator-harness carried by the parachute, a wind-shield for said cavity detachably held to the upper side-edges of said cavity, a series of simultaneously-operable retaining-catches, therefor, and means for simultaneously releasing the said retaining catches to detach the parachute.

2. A parachute comprising a central staff, ribs hinged thereto at one end thereof, a partial-cover fixed to said ribs, and a movable partial-cover adapted to be spread over the partially covered ribs, means for drawing or spreading said movable cover to complete the supporting-surface of the parachute, and an aviator harness carried thereby.

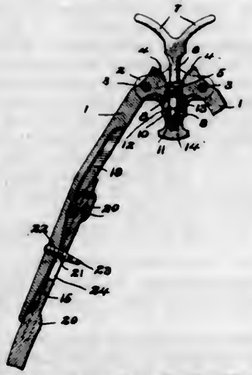
3. The combination with an aeroplane having an upwardly-opening rear cavity, of a parachute carried and retained therein in a horizontal position with the bottom thereof toward the front of the plane and having a cover or supporting-surface in two parts, the fixed or primary part operating to move or launch the parachute from the plane in a gradual or progressive manner and the secondary or movable part adapted to be spread to complete the full extent of the supporting surface after launching, means for retaining the parachute in the cavity, and means for releasing the said retaining means.

4. The combination with an aeroplane having a horizontal longitudinal rear upwardly-opening cavity provided with a removable cover, of means for releasing said cover, a plurality of parachutes carried in said cavity with the bottoms thereof presented toward the front of the plane, a central staff for each, ribs hinged thereto at one end and adapted to be partially expanded or spread while lying in said cavity, an aviator harness connected to each of said parachutes, and means for disconnecting said parachutes from the 'plane simultaneously.

5. In an aeroplane, a frame having a rear upwardly-opening longitudinal cavity, a wind-shield therefor detachably-held to the upper side-edges of said cavity, retaining catches therefor, a parachute carried in said cavity, an aviator-harness carried thereby, manually-actuated means for releasing the retaining catches of the wind-shield, and means for retaining the rear end of the parachute in the cavity until the same is partially spread.

[Claims 6 to 26 not printed in the Gazette.]

1,104,890. CALIPERS OR DIVIDERS. JULIUS HERMANOWITZ, Philadelphia, Pa. Filed Mar. 23, 1914. Serial No. 826,617. (Cl. 33—152.)



1. An instrument of the character described, comprising a frame having side plates, a bar connecting the side plates and having an opening therein, legs pivotally connected to the frame between the side plates and having worm segments, a shaft having a reduced end projected through said opening, a nut screwed onto the reduced end of said shaft, a worm on the shaft engaging the worm segments, and an enlargement on the end of the shaft, substantially as described.

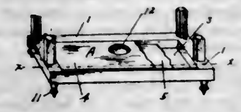
2. An instrument of the character described, comprising a frame having side plates, a bar connecting the side plates and having an opening therein, legs pivotally connected to the frame between the side plates and having worm segments, a shaft having a reduced end projected through said opening, a nut screwed onto the reduced end of said shaft, a worm on the shaft engaging the worm segments, and an enlargement on the end of the shaft, said shaft having an annular shoulder thereon, and a washer around the shaft interposed between the shoulder and the cross bar, substantially as described.

3. An instrument of the character described, comprising a frame, legs pivotally secured in the frame and having worm segments at their ends curved transversely, a worm shaft mounted in the frame and having a worm thereon engaging the segment, means for turning the worm shaft, and means controlling the longitudinal movement of the worm shaft and regulating the quick adjustment of the legs, substantially as described.

4. An instrument of the character described, comprising a frame, legs pivotally connected to the frame, means for moving the legs on their pivots, said legs having longitudinal grooves in their inner faces, attachments adapted to bear against the inner faces of the legs and having longitudinal webs thereon positioned in the grooves of the legs, and means for clamping the attachments against the legs, substantially as described.

5. An instrument of the character described, comprising a frame, legs pivotally connected to the frame, means for moving the legs on their pivots, said legs having longitudinal grooves in their inner faces, attachments adapted to bear against the inner faces of the legs and having longitudinal webs thereon positioned in the grooves of the legs, said attachments having longitudinal slots therein, and screws in the legs having heads thereon adapted to be positioned through the slots of the attachments and when turned at an angle thereto, clamp the attachments against the legs, substantially as described.

1,104,891. BASE FOR ASSAY-BALANCES AND THE LIKE. WILFRID HEUSSER, Salt Lake City, Utah. Filed Dec. 20, 1913. Serial No. 808,048. (Cl. 248—30.)



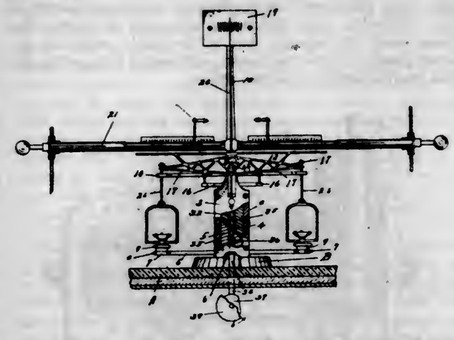
1. In a device of the class described the combination with the case in which assay balances are housed of a metal base having a downwardly extended recess therein; depending bosses on the corners of said base; leveling screws operable in said bosses; and a plate cushioned in said recess having an opening through one side portion thereof within which an assay balance is mounted.

2. In a device of the class described the combination with an assay balance and housing therefor, of a metal base having a downwardly and three upwardly extended recesses formed therein; depending internally threaded bosses on the corners of said base; leveling screws operable in said bosses; and a glass plate cushioned in said downwardly extended recess having an opening therethrough within which the balances are mounted.

3. A base for delicately poised instruments consisting of a metal frame having a depression formed in the upper side; internally threaded depending bosses on the corners of said frame; leveling means operable in said bosses; and a glass plate cushioned in said depression on a plane with the upper side of said frame and provided with an opening therein through which the balance is inserted when secured to said metal frame.

1,104,892. BALANCE. WILFRED HEUSSER, Salt Lake City, Utah. Filed Jan. 14, 1914. Serial No. 812,163. (Cl. 73—99.)

1. In a device of the class described the combination of the metal base; of a guide piece in channel form mounted thereon; standards vertically movable therein; a beam support secured on the upper end of one of said standards and movable therewith; a pan hanger support and a pan rest support secured on the other standard and movable therewith; and means to raise and lower said standards.



2. In a device of the class described the combination with a guide piece in channel form; of vertically movable standards in said channel; means to raise and lower said standards independently of each other; a pan rest support secured on one of said standards having perforations through the end portions; a funnel shaped pan rest carried in each end of said support; and means to adjust said rest laterally.

3. In a device of the class described the combination of a metal base; a guide piece in channel form mounted thereon; standards vertically movable therein; a pan hanger support secured on the upper end of one of said standards; pan hanger frames suspended from said support; a depending stud on each of said frames; and pan rests supported from the lower end of said standard; with means to adjust said rests laterally.

4. In a device of the class described the combination of a base; a guide piece in channel form mounted thereon; standards vertically movable in said channel; a pan hanger support secured on the upper end of one of said standards and provided with open angularly disposed slots therein; and means to widen and lessen the outer ends of said slots for a lateral and longitudinal adjustment.

5. In a device of the class described the combination of a base; a guide piece in channel form mounted thereon; a horizontally projecting pin fastened in said channel; vertically movable standards in said channel each having a longitudinal slot therein adapted to encompass said pin, and a longitudinal chamber in each, opening from said slot to the lower end of the standard; and a spring controlled plunger in each of said chambers bearing against said pin.

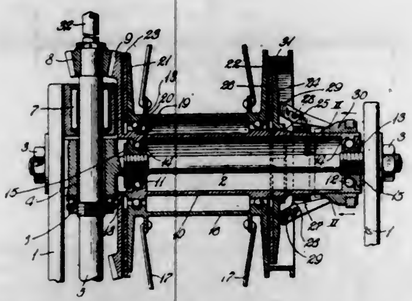
[Claims 6 and 7 not printed in the Gazette.]

1,104,893. GEARING. JOSHUA A. HILL, Essex, Ontario, Canada, assignor of one-half to George W. Rogers, Essex, Canada. Filed July 15, 1913. Serial No. 779,226. (Cl. 74—7.)

1. In a driving hub, the combination with a driven shaft, of a stationary shaft extending at right angles thereto, an inner member revolubly mounted upon said stationary shaft and adapted to have an end thereof driven by said driven shaft, a hub member revolubly mounted upon said inner member capable of longitudinal movement thereon and having friction members with one of said friction members located to frictionally engage the driven end of said inner member, and the other friction member adapted to engage the other friction member of said hub member to lock said hub member for rotation with said inner member.

2. The combination of a tubular hub, outwardly extending flanges on the ends of said hub, frame members at the ends of the hub, a fixed axle connecting the frame members and extending through the hub, a sleeve extending through the hub and surrounding the fixed axle, bear-

ings interposed between the fixed axle and sleeve, bearings interposed between the sleeve and hub, a friction member upon one end of the sleeve to oppose the flange on one end of the hub, a friction disk movable longitudinally upon the sleeve and operatively connected thereto to turn therewith, said disk being arranged to oppose the flange upon the opposite end of the hub, means for applying power to turn the sleeve, and means for moving the disk longitudinally upon the sleeve.

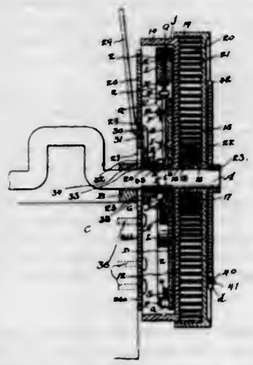


3. The combination of frame members, a fixed axle connecting said members, a sleeve upon the fixed axle, bearings interposed between the sleeve and axle, a friction member extending outwardly from one end of the sleeve, means for applying power to the friction member to turn the sleeve, a tubular hub surrounding the sleeve, bearings interposed between the sleeve and hub, an outwardly extending flange upon one end of the hub to oppose the friction member on the sleeve, an outwardly extending flange on the opposite end of the hub, a friction disk mounted upon the sleeve to oppose said flange, said disk being movable longitudinally upon the sleeve and operatively connected thereto to turn therewith, and means adjustable upon the sleeve toward and from the disk to engage and move the disk toward the hub and move the sleeve and hub relatively in a longitudinal direction.

4. The combination of side frame members, a fixed axle connecting said members and having an enlargement near one end formed with a transverse opening, a sleeve upon the fixed axle, anti-friction bearings interposed between the sleeve and axle, a friction member on one end of the sleeve formed with a friction side surface at the inner side thereof and gear teeth at its periphery, a driving shaft extending through the opening in the enlargement of the axle, a beveled pinion on the rear end of the driving shaft to engage the gear teeth of the friction member on the sleeve, a tubular hub through which the sleeve extends, anti-friction bearings between the sleeve and hub, an outwardly extending flange on the end of the hub adjacent to the friction member on the sleeve, an outwardly extending flange on the opposite end of the hub, a friction disk on the sleeve to oppose said flange and movable longitudinally upon and operatively connected to the sleeve to turn therewith, a ring adjustably secured to the sleeve adjacent to the outer side of the disk, dogs pivotally attached to said ring to engage and move the disk longitudinally upon the sleeve, and a member slidable upon the sleeve to engage and operate the dogs.

5. The combination of side frame members, a fixed axle secured at its ends to said members and formed with an enlargement near one end having a transverse opening therethrough, a sleeve upon the axle, ball bearings interposed between the axle and sleeve a beveled gear on one end of the sleeve having a side face forming a friction surface, a driving shaft extending through the opening in the axle, a bearing on the adjacent frame member for said shaft, a thrust bearing on the shaft engaging the enlargement of the axle, a beveled pinion on the rear end of the shaft in engagement with the gear, a tubular hub through which the sleeve extends an outwardly extending flange on one end of the hub, a friction ring interposed between said flange and the friction surface of the gear, ball bearings interposed between the hub and sleeve, an outwardly extending flange on the opposite end of the hub, a laterally extending flange on said outwardly extending flange forming a friction surface for a brake, a friction disk movable longitudinally upon the sleeve operatively connected thereto to turn therewith, a friction ring interposed between the disk and the adjacent flange on the hub, an adjustable ring on the sleeve, dogs pivotally attached to said ring in engagement with the friction disk, and a cone member movable longitudinally on the sleeve into engagement with the dogs to operate the same.

1,104,894. AUTOMATIC STARTER FOR INTERNAL-COMBUSTION ENGINES. WESLEY W. HODGSON, Ailsa Craig, Ontario, Canada. Filed Apr. 24, 1914. Serial No. 834,104. (Cl. 185—41.)



1. The combination with an engine shaft, of an automatic starter therefor comprising a first disk wheel keyed to said shaft; a second disk wheel loosely mounted on said shaft and provided with a friction rim; a third disk wheel loosely mounted on said shaft and provided with a flange or rim; a coiled spring surrounding said shaft and having its inner end secured to said second mentioned disk wheel and its outer end secured to said third mentioned disk wheel; means co-acting with said third mentioned wheel whereby when this disk wheel is rotated by said spring, the rotary motion thereof will be transmitted to said engine shaft; governing means carried by said starter to be centrifugally moved to clutch said second mentioned disk wheel to said engine shaft through the medium of its friction rim; means whereby said governing means may be manually thrown into action, and means to prevent the rotation of said second-mentioned disk wheel in a direction opposite to the direction of rotation of said engine shaft when said governing means is not clutching said second-mentioned disk wheel to said engine shaft.

2. The combination with an engine shaft, of an automatic starter therefor comprising a first disk wheel keyed to said shaft; a second disk wheel loosely mounted on said shaft and provided with a flange or rim; a third disk wheel loosely mounted on said shaft and provided with a flange or rim; a coiled spring surrounding said shaft and having its inner end secured to said second mentioned disk wheel and its outer end secured to said third mentioned disk wheel; means co-acting with said third mentioned disk wheel whereby when this disk wheel is rotated by said spring, the rotary motion thereof will be transmitted to said engine shaft; governing means comprising a plurality of rods radially mounted in respect of said engine shaft; bearing members carried by said first-mentioned disk wheel in which said rods are mounted; governor weights carried by the outer ends of said rods and positioned underneath the friction rim of said first-mentioned disk wheel; brakes pivoted to said first-mentioned disk wheel and positioned intermediate said friction rim and said

governor weights; means whereby said brakes and governor weights and the rods thereof are held in normal position; a sleeve mounted to move longitudinally on said engine shaft and to rotate therewith, and designed to be operated to force said governor weights and brakes outward through the medium of said rods to clutch said second-mentioned disk wheel to said shaft; lever mechanism for moving said sleeve, and means whereby said second-mentioned disk wheel is held from rotating in a direction opposite to the direction of rotation of said shaft.

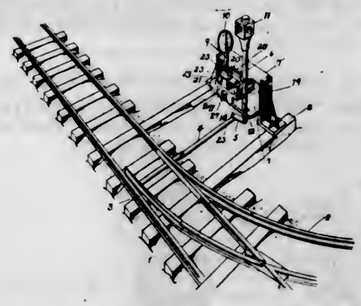
3. The combination with an engine shaft, of an automatic starter therefor comprising a first disk wheel provided with a hub keyed to said engine shaft; a second disk wheel provided with a hub loosely mounted on said engine shaft, and further provided with a friction rim which overhangs said first-mentioned disk wheel; a third disk wheel provided with a hub loosely mounted on said shaft, and further provided with a flange or rim which overhangs the said hubs of said loosely mounted disk wheels; a sleeve mounted over the hubs of said last mentioned disk wheels and fixed to the hub of said second-mentioned disk wheel; a coiled spring positioned between said loosely mounted disk wheels and surrounding said shaft and having its inner end secured to said sleeve and its outer end secured to said flange or rim; a toothed disk wheel fixed to the outer end of said shaft; a plurality of weighted dogs pivoted to said third-mentioned disk wheel and designed to co-act with said toothed disk wheel; a plurality of brakes pivoted to said first-mentioned disk wheel and operating underneath said friction rim; springs whereby said brakes are held in normal position; a plurality of governing means radially mounted in respect of said shaft and carried by said first-mentioned disk wheel and in the path of movement of said brakes by means of which they are held in normal position; a sleeve feathered on the hub of the said first-mentioned disk wheel and designed to move said governing means radially outward at certain times to force said brakes into frictional contact with said friction rim; lever mechanism for moving said sleeve, and means whereby said second-mentioned disk wheel is prevented from rotating in a contrary direction to the engine shaft.

4. The combination with an engine shaft, and the engine frame, of an automatic starter therefor comprising a first disk wheel provided with a hub keyed to said engine shaft; a second disk wheel provided with a hub loosely mounted on said engine shaft, and further provided with a friction rim which overhangs said first-mentioned disk wheel; a third disk wheel provided with a hub loosely mounted on said shaft, and further provided with a flange or rim which overhangs the said hubs of said loosely mounted disk wheels; a sleeve mounted over the hubs of said last-mentioned disk wheels and fixed to the hub of said second-mentioned disk wheel; a coiled spring positioned between said loosely mounted disk wheels and surrounding said shaft and having its inner end secured to said sleeve and its outer end secured to said flange or rim; a toothed disk wheel fixed to the outer end of said shaft; a plurality of weighted dogs pivoted to said third-mentioned disk wheel and designed to co-act with said toothed disk wheel; a plurality of brakes pivoted to said first-mentioned disk wheel and operating underneath said friction rim; springs whereby said brakes are held in normal position; a plurality of governing means radially mounted in respect of said shaft and carried by said first-mentioned disk wheel and in the path of movement of said brakes by means of which they are held in normal position; a sleeve feathered on the hub of the said first-mentioned disk wheel and designed to move said governing means radially outward at certain time with said friction rim; a circular ratchet plate provided with a central opening through which said engine shaft passes, and composed of two parts suitably bolted to said engine frame in such a manner as to permit one of said parts to be removed; dogs pivoted to the friction rim of said first-mentioned disk wheel and designed to co-act at certain time with the teeth of said ratchet plate, and a lever passing through a hole formed in said ratchet plate and having its inner end positioned to co-act with said sleeve to move it longitudinally on said shaft, and means whereby said lever is pivoted to said ratchet plate.

5. The combination with an engine shaft, of an automatic starter therefor comprising a first disk wheel keyed to said shaft; a second disk wheel loosely mounted on said shaft and provided with a flange or rim; a third disk wheel loosely mounted on said shaft and provided with a flange or rim; a coiled spring surrounding said shaft and having its inner end secured to said second mentioned disk wheel and its outer end secured to said third mentioned disk wheel; means co-acting with said third mentioned disk wheel whereby when this disk wheel is rotated by said spring, the rotary motion thereof will be transmitted to said engine shaft; governing means comprising a plurality of rods radially mounted in respect of said engine shaft; bearing members carried by said first-mentioned disk wheel in which said rods are mounted; governor weights carried by the outer ends of said rods and positioned underneath the friction rim of said first-mentioned disk wheel; brakes pivoted to said first-mentioned disk wheel and positioned intermediate said friction rim and said governor weights and governor weights and the rods thereof are held in normal position; a sleeve mounted to move longitudinally on said engine shaft and to rotate therewith and designed to be operated to force said governor weights and brakes outward through the medium of said rods to clutch said second-mentioned disk wheel to said shaft; lever mechanism for moving said sleeve; means whereby said second-mentioned disk wheel is held from rotating in a direction opposite to the direction of rotation of said shaft; a pair of levers pivoted to a support, one of said levers being provided with a brake shoe designed at times to brake against said third mentioned disk wheel to hold it from rotation, and a spring mounted between said levers and whereby energy is transmitted from the operation lever to said shoe-provided lever and which prevents the operator applying sufficient energy to stop the engine after the spring has been wound up.

[Claim 6 not printed in the Gazette.]

1,104,895. SWITCH-STAND. JOHN C. HOLMAN, Kansas City, Mo., assignor of one-fourth to Joseph C. Hill and one-fourth to John Xiyas, Kansas City, Mo. Filed July 19, 1912. Serial No. 710,350. (Cl. 104—25.)



1. In a switch stand, the combination with a staff having means for connection with a switch point, a point lever, and a head connected with the staff and adapted for actuation by the lever or for riding over the lever when actuated by the staff.

2. In a switch stand, the combination with a staff having means for connection with a switch point, a point lever, a head connected with the shaft and adapted for actuation by the lever or for riding over the lever when actuated by the staff, and means for yieldingly tensioning said head toward the lever.

3. In a switch stand, a revoluble staff, a point lever having a crank member thereon, a mounting connected with the staff, a head slidably mounted on said mounting

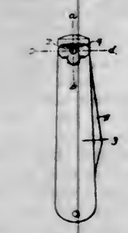
and having ears adapted to lie on opposite sides of the crank member, and means for yieldingly tensioning said head toward the crank member.

4. A switch stand comprising a lever, having a crank at one end provided with a laterally projecting member, a revoluble staff, a head connected with the staff and having a bifurcated portion overlying the member on said crank whereby the head may be moved by the handle member, or may be moved thereover when actuated by the staff, and a point lever connected with said staff.

5. The combination with a lever, having a crank member thereon, of a revoluble staff, a head connected with the staff and having ears straddling the crank member, and a point lever connected with said staff.

[Claims 6 to 11 not printed in the Gazette.]

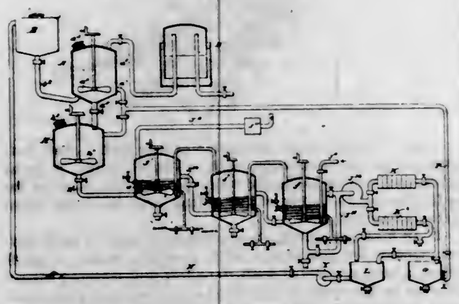
1,104,896. POCKET-KNIFE. ISAAC E. HOTCHKISS, Kensington, Conn. Filed Jan. 22, 1914. Serial No. 813,741. (Cl. 30—10.)



1. A pocket knife having its concavo-convex handle formed from a single piece of sheet metal the two sides connected at the back by a narrow integral web, the web being shorter than the sides of the handle whereby notches are formed at opposite ends, the one end of the handle formed within its outer end with inwardly projecting integral transverse blocks, and a blade pivotally connected between the sides of the handle between said blocks.

2. A pocket knife having its handle portion formed from a single piece of sheet metal and comprising two concavo-convex side pieces connected together by an integral web, the web being shorter than the side pieces whereby notches are formed at opposite ends, a spring located between said side pieces and extending at opposite ends into said notches, the side pieces of the handle formed within its outer end with transversely arranged inwardly projecting integral blocks, and a blade pivoted between the adjacent inner faces of said blocks.

1,104,897. PROCESS OF MAKING BISULFITE OF SODA. HENRY HOWARD, Boston, Mass. Filed Mar. 17, 1913. Serial No. 754,961. (Cl. 23—13.)



1. The process of making a soluble bisulfite, comprising heating a calcium compound in contact with a soluble sulfate and sulfur dioxid in a suitable vehicle, at a temperature between 30° C. and 90° C.

2. The process of making sodium bisulfite, comprising heating a calcium compound in contact with a sodium sulfate and sulfur dioxid, in a suitable vehicle, at a temperature between 30° C. and 90° C.

3. The process of making sodium bisulfite, comprising heating lime-mud in contact with a sodium sulfate and sulfur dioxid, in a suitable vehicle, at a temperature between 30° C. and 90° C.

4. The process of making a soluble bisulfite, comprising heating a calcium compound in contact with a soluble sulfate and sulfur dioxid in a suitable vehicle, at a temperature between 35° C. and 65° C.

5. The process of making sodium bisulfite, comprising heating a calcium compound in contact with a sodium sulfate and sulfur dioxid, in a suitable vehicle, at a temperature between 35° C. and 65° C.

[Claims 6 to 12 not printed in the Gazette.]

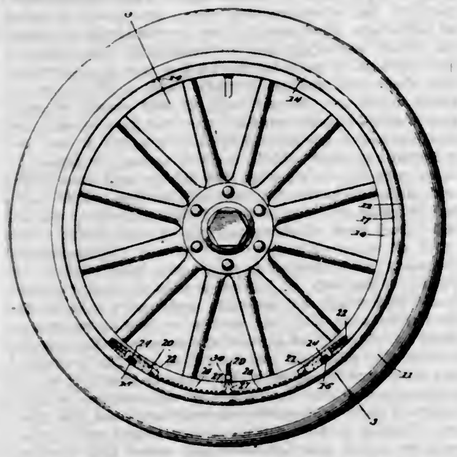
1,104,898. METHOD OF MAKING STORAGE-BATTERY ELECTRODES. HARRY CROSS HUBBELL, Newark, N. J. Filed Nov. 18, 1912. Serial No. 732,146. (Cl. 204—29.)

1. The process of making storage battery electrodes which comprises taking precipitated active material, and without drying, mixing it with suitable conducting elements; drying the mass to a thick dough; forming the dough into cakes, and drying and strongly compressing them.

2. The process of making storage battery electrodes which comprises taking precipitated active material, and without drying, mixing it with suitable conducting elements; drying the mass to a thick dough; forming the dough into cakes, drying said cakes and strongly compressing them edgewise.

3. The process of making storage battery electrodes which comprises taking precipitated active material, and without drying, kneading it into a slime with water; mixing said slime with suitable conducting elements; drying the mass to a thick dough; forming the dough into cakes, and drying and strongly compressing them.

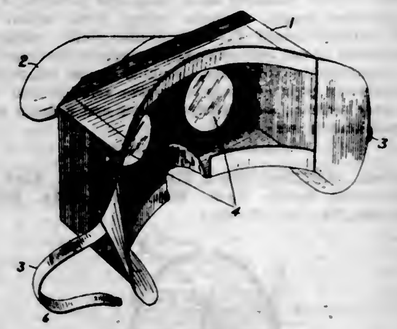
1,104,899. VEHICLE-WHEEL. TRESHAM FITZ EDGAR HUTCHINGS, New York, N. Y. Filed May 26, 1913. Serial No. 770,068. (Cl. 152—21.)



1. A wheel, comprising a rigid felly having a series of full-sided sockets and a series of open-sided sockets disposed at opposite sides of the center of said felly; a pneumatic tire; a rigid rim for said tire, having a series of dowels to fit said sockets; a plurality of spring-actuated locks for holding said dowels within said open-sided sockets; a plurality of rods operatively connected with said locks, the ends of said rods being juxtaposed; and a manipulating member operatively connecting said rods to move the same simultaneously to release said locks.

2. A wheel, comprising a rigid felly having a series of full-sided sockets and a series of open-sided sockets disposed at opposite sides of the center of said felly; a pneumatic tire; a rigid rim for said tire, having a series of dowels to fit said sockets; a plurality of spring-actuated locks for holding said dowels within said open-sided sockets; a plurality of rods operatively connected with said locks, the ends of said rods being juxtaposed; a plunger reciprocatively mounted on said felly; and a plurality of toggle links pivotally connecting said plunger with said rods.

1,104,900. MEANS FOR PRODUCING FROM ARTIFICIAL LIGHTS THE COLOR EFFECT OF DAYLIGHT. HERBERT E. IVES, Mount Airy, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 20, 1913. Serial No. 749,569. (Cl. 88—1.)



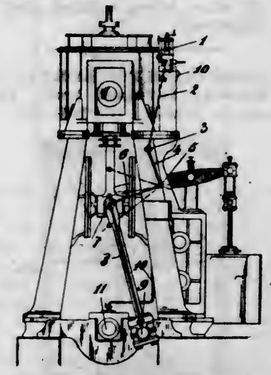
1. An instrument for producing by artificial light the color effect of daylight which comprises the combination with a goggle provided with a frame adapted to exclude light, of a color filter or absorbing screen consisting of transparent media of appropriate color for copying the spectral composition of daylight when used with artificial light.

2. An instrument to be worn like spectacles and provided with means for excluding light and with transparent color filters or absorbing screens adapted to absorb color rays and modify light reaching the eyes from an artificial source to produce the effect of daylinght.

1,104,901. LUBRICATING DEVICE. JUAN D. JARRISON, Barcelona, Spain, assignor to Chemische Fabrik Troisdorf Dr. Hülsberg & Seiler, Oberlar, near Troisdorf, Germany. Filed Mar. 21, 1912. Serial No. 685,162. (Cl. 184—6.)

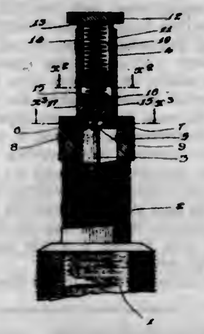
1. An arrangement for lubricating machine parts with consistent grease comprising a grease press, adapted to force the grease and a pipe system consisting of stationary and movable pipes and adapted to conduct the grease to the stationary and the moving machine parts, and a distributer attached to the machine, said distributer adapted to receive the grease from the grease press and conduct it through a system of rigid and articulated pipes to the respective parts to be lubricated, the said distributer consisting of a casing with a plurality of extensions in said casing a coöperating rotatable body, to conduct the grease to the machine parts.

2. An arrangement for lubricating machine parts with consistent grease comprising a grease press, adapted to force the grease and a pipe system consisting of stationary and movable pipes and adapted to conduct the grease to the stationary and the moving machine parts, and a distributer attached to the machine, said distributer adapted to receive the grease from the grease press and conduct it through a system of rigid and articulated pipes to the respective parts to be lubricated, the said distributer consisting of a casing with a plurality of extensions in said casing a coöperating rotatable body, to conduct the grease to the machine parts, and means to vary the supply of grease supplied by said rotatable body.



3. An arrangement for lubricating machine parts with consistent grease comprising a grease press, adapted to force the grease and a pipe system consisting of stationary and movable pipes and adapted to conduct the grease to the stationary and the moving machine parts, and a distributer attached to the machine, said distributer adapted to receive the grease from the grease press and conduct it through a system of rigid and articulated pipes to the respective parts to be lubricated, the said distributer consisting of a casing having a coöperating conical rotatable body, bored to conduct the grease to the machine parts according to the position to which the said conical body is adjusted, the said conical body comprising a rod guided in a socket having such a shape as to allow of a sliding movement but prevent a rotary movement of the said rod, the said socket provided with a suitable gear and adapted to adjust the said conical body by means of said rod into the desired rotated position, the pipe conducting the grease from the grease press to the distributer being secured at one end in a movable joint on the distributer and sliding at the other in an oscillating socket.

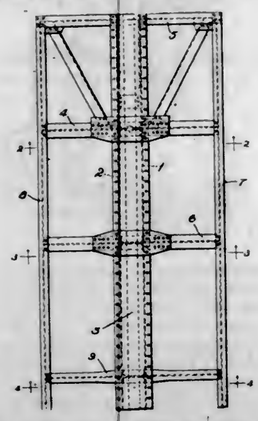
1,104,902. AUTOMATIC RELIEF-VALVE FOR TIRES. VIRGIL O. JARVIS, Hanford, Cal. Filed June 9, 1913. Serial No. 772,497. (Cl. 152—12.)



An automatic relief valve for tires, comprising a shell having an internally threaded socket adapted to be screwed on the end of the tire valve stem, means in said socket for depressing the valve pin of the tire valve, and said shell having an abutment, and a reversible valve provided on one of its faces with a rubber seat for engagement with

said abutment when the valve is in one position, and having a conical recess in its opposite face to receive a ball resting against said abutment when the position of the valve is reversed, a sleeve screwed into said shell, a compression spring within the shell between the valve and sleeve, the sleeve having a thumb piece on the end thereof for adjustment.

1,104,903. UNDERFRAME FOR RAILWAY-CARS. HERBERT R. KEITHLEY, Davenport, Iowa. Filed Nov. 8, 1913. Serial No. 799,839. (Cl. 105—76.)



1. In a car underframe, bolsters, a center sill extending between said bolsters, cantalivers extending laterally from the center sill at a distance from the bolsters considerably less than one-fourth of the span between the bolsters, and means for supporting directly upon the said cantalivers that portion of the load above the sides of the frame in the space between the cantalivers.

2. In a car underframe, bolsters, a center sill extending between said bolsters, cantalivers extending laterally from the center sill at a distance from the bolsters less than one-fourth of the span between the bolsters, and load-carrying side sills supported by the cantalivers and each having a single span in the space between the cantalivers.

3. In a car underframe, bolsters, a center sill extending between the bolsters, load-carrying side sills extending between the bolsters and means for transferring the load carried by the middle portions of the side sills to the center sill at points removed from the bolsters less than one-fourth of the distance between the bolsters.

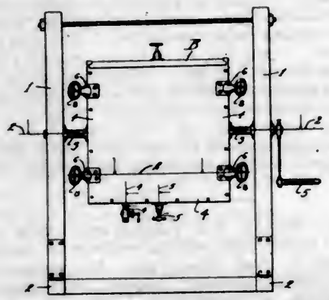
4. In a car underframe, body bolsters, a center sill extending between the bolsters, load-carrrying side sills extending between the bolsters and beyond the same to the end of the frame, and means for transferring the load carried at the middle of the side sills to the center sill at points located at a distance from the bolsters less than one-fourth of the span between the bolsters.

5. In a car underframe, bolsters, a center sill extending between the bolsters, load-carrying side sills extending between the bolsters and beyond the same to the ends of the frame, and cantalivers extending laterally from the center sill to the side sills at a distance from the bolsters less than one-fourth the distance between the bolsters, the side sills each having a single span in the space between the said cantalivers.

[Claims 6 to 16 not printed in the Gazette.]

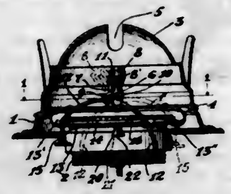
104,904. WASHING-MACHINE. AARON KETO, Fitchburg, Mass. Filed Apr. 1, 1914. Serial No. 828,705. (Cl. 31—18.)

1. In a washing machine, an outer rotary drum, square in cross section, mounted in a frame and provided with an operating handle, an inner rotary drum, square in cross section, formed with reversible walls, clamping means releasably securing said drums together and a drain pipe for said inner drum.



2. In a washing machine, an outer rotary drum, square in cross section, mounted in a frame and provided with an operating handle, an inner rotary drum, square in cross section, formed with removable walls, marginal pins carried by one pair of opposite walls as bearings for the remaining pair of walls, clamping means for releasably securing said walls in operative relation and for releasably securing said drums together and a drain pipe for said inner drum.

1,104,905. EXTINGUISHER FOR BURNERS. EDDY M. KLINTBERG, Seattle, Wash. Filed Jan. 3, 1914. Serial No. 810,194. (Cl. 67—78.)



1. A device of the character described comprising a burner, means for extinguishing the flame thereof, spring actuated means for operating the first means, and pneumatic means controlling the movement of the second means by its spring.

2. A device of the character described comprising a burner, means for extinguishing the flame thereof, spring actuated means for operating the first means, and cushioning means controlling the movement of the second means by its spring.

3. A device of the character described comprising a burner, means for extinguishing the flame thereof, spring actuated means for operating the first means, a compression cylinder, and a plunger operable in the cylinder for controlling the second means.

4. A device of the character described comprising a burner having a base and a movably mounted cap, an extinguisher plate carried by the cap for movement and having a crank portion, and means pivoted on the base having an upwardly extending forked element receiving the crank portion of the plate to form a releasable connection with the extinguisher plate for operating the latter and permitting of movement of the burner cap.

5. A device of the character described comprising a burner, means for extinguishing the flame thereof, rocker means pivoted between its ends for operating the first means, and means for rocking the second means.

[Claims 6 to 9 not printed in the Gazette.]

1,104,906. TREATMENT OF OILS. BELA LACH, Vienna, Austria-Hungary. Filed June 5, 1913. Serial No. 771,873. (Cl. 87—12.)

1. The process of purifying oils which comprises heating the oils with direct steam and with formaldehyde, and subsequently subjecting the oils to treatment with hydrogen.

2. The process of purifying oils which comprises heating the oils with direct steam and with formaldehyde, and subsequently subjecting the oils to treatment with nascent hydrogen.

3. The process of purifying oils which comprises heating the oils with direct steam and with the addition of formaldehyde sufficient to remove the gelatinous and albuminous impurities, and subsequently removing the excess of formaldehyde by treatment with nascent hydrogen.

4. The process of purifying oils which comprises heating the oils with direct steam and with the addition of formaldehyde sufficient to remove the gelatinous and albuminous impurities, and subsequently treating the oils with a metal and acid to generate nascent hydrogen therein.

5. In the art of purifying oils, the process which comprises subjecting the oils to treatment with direct steam and with formaldehyde.

[Claims 6 to 9 not printed in the Gazette.]

1,104,907. PROCESS OF REDUCING CUPROUS CHLORID. FREDERICK LAIST, Anaconda, Mont. Filed Apr. 30, 1914. Serial No. 835,338. (Cl. 75—62.)

1. In the treatment of cuprous chlorid precipitated from solutions containing a soluble chlorid, the process of fusing said cuprous chlorid with a suitable reducing agent and with a metallic compound reacting therewith to form a chlorid slag corresponding in composition to the soluble chlorid aforesaid, and to reduce said cuprous chlorid to the metallic state.

2. In the treatment of cuprous chlorid precipitated from solutions containing a soluble chlorid, the process of fusing said cuprous chlorid with carbonaceous matter, and with a metallic compound reacting therewith to form a chlorid slag corresponding in composition to the soluble chlorid aforesaid, and to reduce said cuprous chlorid to the metallic state.

3. In the treatment of cuprous chlorid precipitated from leaching solutions containing chlorin, the process of fusing said cuprous chlorid with a suitable reducing agent, and with a metallic compound reacting therewith to extract the chlorin from said cuprous chlorid for use in subsequent leaching operations, and to reduce said cuprous chlorid to the metallic state.

4. In the treatment of cuprous chlorid precipitated from leaching solutions containing a soluble metallic chlorid, the process of fusing said cuprous chlorid with a suitable carbonaceous reagent, and with a metallic carbonate reacting therewith to combine with the chlorin of the cuprous chlorid and form a chlorid for use in subsequent leaching operations, and to reduce said cuprous chlorid to the metallic state.

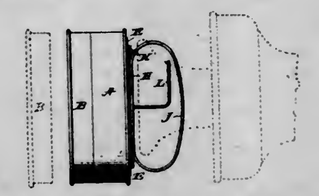
5. In the treatment of cuprous chlorid precipitated from leaching solutions containing a soluble metallic chlorid, the process of fusing said cuprous chlorid with a suitable carbonaceous reagent, and with a carbonate of an alkaline earth whereby the soluble metallic chlorid is regenerated as a chlorid of the alkaline earth, and the cuprous chlorid is reduced to the metallic state.

[Claims 6 and 7 not printed in the Gazette.]

1,104,908. ANTISEPTIC PROTECTOR. THOMAS LAMB, Brooklyn, N. Y. Filed Dec. 9, 1912. Serial No. 935,769. (Cl. 179—185.)

1. An anti-septic protector for telephones comprising a supplemental mouth-piece or cup having its flange disposed forwardly, means extending rearwardly from the cup enabling attachment of the same to a telephone in the normal condition of the latter, and an anti-septic vehicle on the back of the cup interposed between the same and said means, and engaged to be held in place by the latter, substantially as described.

2. An antiseptic protector for telephones comprising an antiseptic vehicle, devices enabling attachment of the same to a telephone transmitter, and other devices enabling the attachment thereof to a telephone receiver, said devices being crossed and provided with means at the opposite ends thereof coöperating with each other to support the antiseptic vehicle.



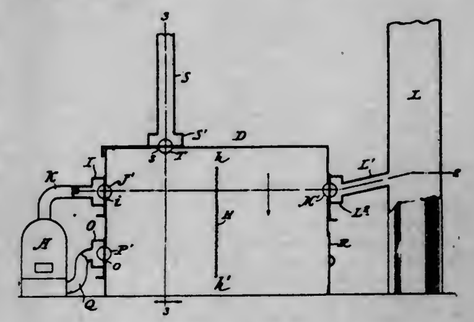
3. An antiseptic protector for telephones comprising a supplemental mouth-piece or cup, an antiseptic vehicle carried thereby, and means enabling attachment of the same to a telephone, said means comprising a plate carrying headed studs, and the back of the mouth-piece or cup having key-hole slots for engagement with said studs.

4. An antiseptic protector for telephones comprising a supplemental mouth-piece or cup, an antiseptic vehicle carried thereby, and means enabling attachment of the same to a telephone, said means comprising a plate carrying headed studs, and the back of the mouth-piece or cup having key-hole slots for engagement with said studs, the antiseptic vehicle being also engaged by said studs.

5. An anti-septic protector for telephones comprising a supplemental mouth-piece or cup having its flange disposed forwardly, means extending rearwardly from the cup enabling attaching of the same to a telephone in the normal condition of the latter, an anti-septic vehicle on the back of the cup interposed between the same and said means, and engaged to be held in place by the latter, and a detachable cover for said anti-septic vehicle adapted to normally protect the same, said cover being formed to constitute, when removed, a cover for the ear of the user, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,104,909. SMOKE-PREVENTER. THOMAS W. LANGAN, Astoria, N. Y. Filed Apr. 22, 1913. Serial No. 762,766. (Cl. 110—183.)



1. In a smoke preventer, the combination with a furnace, of a plurality of smoke chambers having means whereby they may be filled successively with smoke from the furnace, means for admitting air to said chambers so that the air will mix with the smoke, and a stack through which the mixed air and smoke is discharged from either smoke chamber.

2. In a smoke preventer, the combination with a furnace, of a plurality of non-communicating smoke chambers, means for separately filling said chambers with smoke flowing from said furnace, a screen for separating within the chambers the heavy particles of soot contained in the smoke, a draft stack, a separate stack, and means for admitting air to the smoke chambers, whereby the air

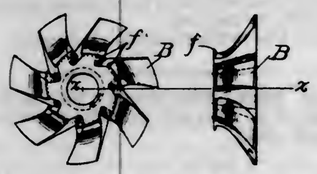
may mix with the smoke and the mixed air and smoke may be discharged through the separate stack.

3. In a smoke preventer, the combination with a furnace, of a plurality of non-communicating smoke chambers, a smoke flue having damper-controlled communication with said smoke chambers for separately filling them with smoke, an outlet flue connected to the stack and having damper-controlled communication with the smoke chambers, a screen positioned within the smoke chambers and between the smoke flue and the outlet flue, and means for admitting air separately to said chambers, whereby the air flowing through said separate chambers and into the stack operates to carry out the smoke present in said chambers.

4. In a smoke preventer, the combination with a furnace, of a plurality of smoke chambers, means by which said chambers may be separately filled with smoke escaping from said furnace, an air inlet to each smoke chamber, doors for controlling the inflow of air through said air inlets to said chambers, and a return flue having damper-controlled communication with said smoke chambers for permitting the outflow of smoke mixed with air from the separate chambers.

5. In a smoke preventer, the combination with a furnace, of a plurality of smoke chambers having means by which they may be filled with smoke escaping from said furnace, a return flue for returning the smoke from the chambers individually to the furnace, a draft stack, a separate stack adapted to connect with said smoke chambers, and means for supplying air to the smoke chambers whereby the smoke mixed with air may flow into the separate stack or flow back to the furnace.

1,104,910. ROTARY CUTTER. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,465. (Cl. 12—91.)



1. A rotary cutter of the character described having a plurality of teeth arranged in a circumferential series, the cutting edge of each tooth comprising portions lying at different radial distances from the axis of the cutter and having portions of said edge lying at maximum and minimum distances from said axis in substantially the same radial plane, the front face of each tooth extending at an acute angle to said plane.

2. A rotary edge trimming cutter larger at one end than at the other and having a plurality of teeth arranged in a circumferential series, said cutter having slots separating adjacent teeth, the front face of each tooth lying in a plane tangent to the surface of a cone extending coaxially through the cutter with its base at the larger end of the cutter, and the portions of the cutting edge of each tooth at its opposite ends lying in substantially the same radial plane.

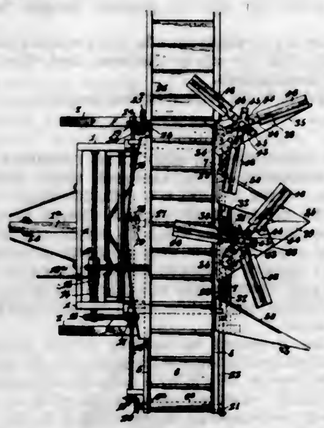
3. A rotary edge trimming cutter having a plurality of teeth arranged in a circumferential series, each of said teeth having the ends of the cutting edge of its bed at different radial distances from the axis of the cutter and lying in substantially the same radial plane, and being so shaped that its front face extends at an acute angle to said plane.

4. A rotary edge trimming cutter larger at one end than at the other and having a plurality of teeth arranged in a circumferential series, said cutter being slotted at such an angle with relation to its axis that the portions of the cutting edge of each tooth at its opposite ends lie in substantially the same radial plane, while the front face of each tooth extends at an acute angle to said plane, and the teeth of said cutter being backed off both laterally and radially.

5. A rotary edge trimming cutter having a plurality of teeth arranged in a circumferential series, the cutting edge of each tooth comprising portions lying at different radial distances from the axis of the cutter, and each tooth being so shaped that its cutting edge has both lateral and radial clearance.

[Claim 6 not printed in the Gazette.]

1,104,911. TWO-ROW HEADER. VICTOR LAUER, Stillwater, Okla. Filed June 3, 1913. Serial No. 771,508. (Cl. 56—131.)



1. A header including cutting mechanism and a reel mounted on a vertical axis and having relatively rigid radial blades extending horizontally with relation to the axis of the reel and presenting front inclined faces extending upwardly and forwardly with relation to the direction of rotation of the reel and adapted to flex or bend the stalks over the cutting mechanism and to facilitate the passage of the reel through the grain.

2. A header including cutting mechanism and a reel mounted on a vertical axis comprising relatively rigid radial horizontal arms extending from the axis of the reel and correspondingly beveled at one side, and blades secured to the beveled sides of the arms and presenting front inclined faces extending upwardly and forwardly with relation to the direction of rotation of the reel and adapted to flex or bend the grain over the cutting mechanism.

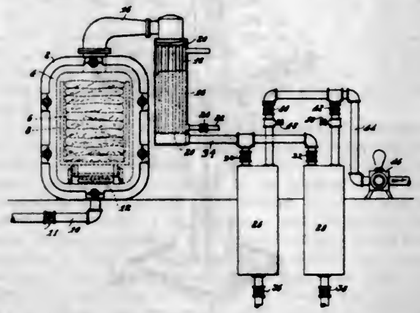
3. A header including cutting mechanism, a reel mounted on a vertical axis and comprising a hub member provided with a plurality of sets of sockets arranged at intervals and having bottom and side walls and open at the top, and a set of radial horizontal arms secured in one set of the said sockets and extending from the axis of the reel, the other or empty socket permitting a new set of arms to be applied to the hub member in event of breakage of the first set without removing the broken arms, and blades secured to the arms and set at an inclination.

4. A header including a frame, cutting mechanism carried by the frame and disposed transversely of the header, a deflector mounted on the frame above the horizontal plane of the cutting mechanism and extending in advance of the said mechanism, a vertical shaft mounted on the deflector in advance of the transverse plane of the cutting mechanism, a reel mounted on the shaft for rotary movement, and gearing housed within the deflector and connected with the vertical shaft for rotating the reel.

5. A header including a frame, cutting mechanism carried by the frame and disposed transversely of the header, a plurality of deflectors mounted on the frame above the horizontal plane of the cutting mechanism and extending in advance of the same for guiding the grain to the said cutting mechanism, said deflectors comprising upper and lower blades and connecting side plates forming housings, vertical shafts mounted on the deflectors, and located in advance of the transverse plane of the cutting mechanism, reels mounted for rotation on the vertical shafts, and gearing arranged within the deflectors and connected with the vertical shafts for rotating the reels.

[Claims 6 to 9 not printed in the Gazette.]

1,104,912. METHOD OF EXTRACTING ROSIN FROM RESINOUS WOOD. FRANK E. LICHTENTHAELER, Newton, Mass. Filed Mar. 17, 1913. Serial No. 754,892. (Cl. 203—6.)



1. The method of extracting rosin from resinous wood which consists in putting the wood in an air-tight receptacle, in exhausting the receptacle and in subjecting the wood to the action of heat and steam to cause the rosin to leave the wood in a vaporous mixture with the steam, and in condensing the vaporous mixture of rosin and steam.

2. The method of extracting rosin from resinous wood which consists in putting the wood in an air-tight receptacle, in exhausting the receptacle to about 2 pounds per square inch absolute pressure and subjecting the wood to steam at a temperature of about 250° centigrade to cause the rosin to leave the wood in a vaporous mixture with the steam, and in condensing the vaporous mixture of rosin and steam.

3. The method of extracting rosin from resinous wood which consists in putting the wood into an air-tight receptacle, in exhausting the receptacle to less than about 3½ pounds per square inch absolute pressure and subjecting the wood to steam at a temperature higher than about 230° centigrade to cause the rosin to leave the wood in a vaporous mixture with the steam, and in condensing the vaporous mixture of rosin and steam.

4. The method of extracting rosin from resinous wood which consists in putting the wood into an air-tight receptacle, in exhausting the receptacle to an absolute pressure less than the critical maximum pressure of vaporization of rosin in the presence of steam and subjecting the wood to steam at a temperature higher than the critical minimum temperature of vaporization of rosin to leave the wood in a vaporous mixture with the steam, and in condensing the vaporous mixture of rosin and steam.

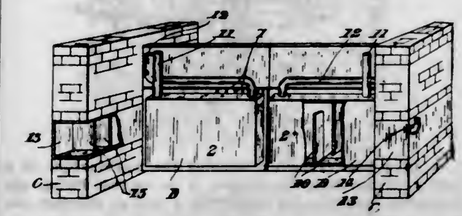
1,104,913. PROCESS FOR THE MANUFACTURE OF SODIUM BISULFATE IN A DIRECTLY-CALCINABLE FORM. PETER LÖFFLER, Vienna, Austria-Hungary. Filed Dec. 10, 1913. Serial No. 805,744. (Cl. 23—13.)

1. A process for producing sodium bisulfate in a directly calcinable form, which consists in mixing gasifiable substances of an organic nature with the hot liquid bi-sulfate, and then allowing the mixture to set, whereby porosity of the mass is produced by the gasification during setting so that the mass is rendered more easily calcinable.

2. A process for producing sodium bisulfate in a directly calcinable form, which consists in mixing cellulose-containing materials with the hot liquid bisulfate, and then allowing the mixture to set, whereby porosity of the mass is produced by the gasification during setting so that the mass is rendered more easily calcinable.

3. As a new product of manufacture sodium bi-sulfate in the form of a black spongy mass, which will burn white when calcined without melting and will produce a neutral sulfate of normal composition.

1,104,914. HEATING OF LOCK AND DOCK GATES, MARINE VESSELS, AND THE LIKE. MALCOLM MACLEOD, Toronto, Ontario, Canada. Filed Nov. 1, 1913. Serial No. 798,769. (Cl. 61—47.)



1. The combination with lock gates of a casing fixed to and extending along the lower part of such gates and designed to form an annular space between the face of such gate and the inner face of the said casing, and means of supplying heat thereto, as and for the purpose specified.

2. The combination with a lock gate of a casing extending on and along the bottom part of such gate, a casing located in the supporting walls of such gate and means of supplying heat thereto, as and for the purpose specified.

3. The combination with lock gates of a casing extending on and along the bottom part of such gate, a casing located in the walls means of protecting such casings and means of supplying heat to such casings, as and for the purpose specified.

4. The combination with lock gates of a casing extending along the bottom part thereof, a casing located in the supporting wall of such lock gate, a rectangular strip of resilient material extending along and above the top of such casings, and means of supplying heat to such casings, as and for the purpose specified.

5. The combination with lock gates of a casing extending on and along the bottom part thereof, baffle plates located in said casing, a casing attached to the supporting wall of such gate, baffle plates located in said casing and means of supplying heat to such casings, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

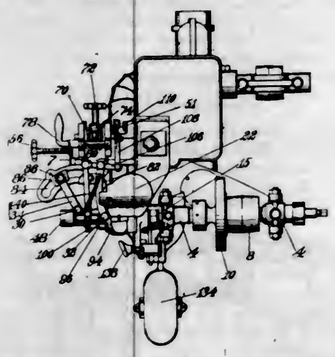
1,104,915. HEEL-TRIMMING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1909. Serial No. 528,554. (Cl. 12—90.)

1. In a heel trimming machine the combination with a rotary cutter, of means under the control of the workman movable to vary the position of the shoe during successive stages of the trimming operation, a guide engaging the counter of the shoe being trimmed and means connected with said first mentioned means for moving the guide toward and from the periphery of the cutter in accordance with successive positions of said first mentioned means.

2. In a heel trimming machine the combination with a rotary cutter, of means for moving the shoe into different positions during successive stages of the trimming operation, means for guiding the shoe as it is presented to the cutter and means for effecting in timed relation to the movement of the first mentioned means a relative movement of said guiding means and said cutter in a direction transverse to the axis of the cutter.

3. In a heel trimming machine the combination with a rotary cutter, of a guide for engaging the counter of the shoe as the shoe is presented to the cutter and means for

giving said guide varying movements in predetermined succession to cause successive portions of the heel to be cut away to different extents.

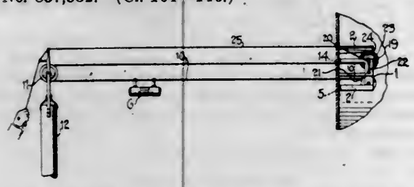


4. In a heel trimming machine the combination of a rotary cutter, means arranged to be moved during the trimming operation for supporting a heel at different elevations while the sides and the rear end of the heel are being trimmed and shoe guiding means arranged for movement during the trimming operation in timed relation to the movement of said first named means for guiding the shoe at one distance from the path of the cutter while the rear end is being trimmed and at a different distance while the sides are being trimmed.

5. In a heel trimming machine the combination of a rotary cutter, a heel rest, means under the control of the workman for moving the heel rest vertically, a guide for the shoe and means arranged to give said guide a predetermined movement transversely of the axis of the cutter in timed relation to the movement of the heel rest.

[Claims 6 to 21 not printed in the Gazette.]

1,104,916. MAIL-CARRYING DEVICE. JAMES T. MCCOLLUM, Dardanelle, Ark. Filed May 9, 1914. Serial No. 837,532. (Cl. 104—146.)

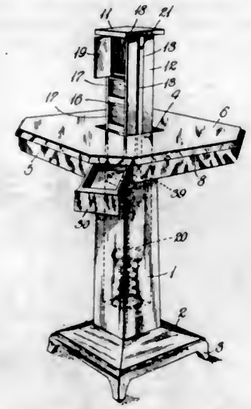


1. A device of the character described comprising a plurality of drums, a flexible member having its extremities connected to certain of such drums and being directed around the remainder, a carrier operatively connected with such flexible member, manual means for positively driving the drums with which the extremities of the flexible member are connected in one direction, and automatic means for imparting movement to such drums in an opposite direction.

2. A device of the character described comprising a plurality of drums, a flexible member having its extremities connected to certain of such drums and being directed around the remainder, a carrier operatively connected with such flexible member, manual means for positively driving the drums with which the extremities of the flexible member are connected in one direction, and automatic means for imparting movement to such drums in an opposite direction, such automatic means being under control of the manually operated means.

3. A device of the character described comprising a plurality of drums, a flexible member having its extremities connected to certain of such drums and being directed around the remainder, a carrier operatively connected with such flexible member, manual means for positively driving the drums with which the extremities of the flexible member are connected in one direction, automatic means for imparting movement to such drums in an opposite direction, and releasable means for controlling the operation of said automatic means.

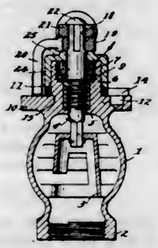
1,104,917. TABLE. LOUIS MILLER, Detroit, Mich. Filed Dec. 4, 1913. Serial No. 804,749. (Cl. 45—70.)



1. A table comprising a hollow pedestal adapted to contain a lift, a table top carried by said pedestal and having a central opening adapted to be closed by the top of the lift arranged therein, longitudinal guide strips carried by said lift, drawers arranged in the table top, locks concealed within the table top for locking the drawers in a closed position, access being had to said locks when the lift of the table pedestal is in an elevated position and a lock operable in said pedestal under the table top and adapted to engage one of said strips to hold said lift in a closed position.

2. A table comprising a pedestal, a table top provided with a central opening, drawers movable in said table top and having the inner ends thereof contiguous to the opening in said table top, means concealed within said table top at the opening thereof for locking said drawers in a closed position, and means adapted to close the opening of said table top.

1,104,918. VALVE. THOMAS G. MOUAT, Cleveland, Ohio. Filed Sept. 25, 1913. Serial No. 791,682. (Cl. 137—4.)

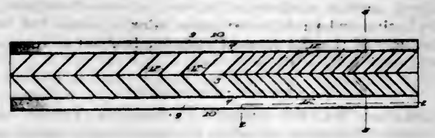


1. In an adjusting valve, the combination, with a casing and a rotatable stem carried thereby, said casing having a hollow threaded extension surrounding said stem provided with a packing gland, and also having an exterior surface of revolution substantially concentric with said stem, of an adjustable member surrounding said extension and having a surface of revolution complementary to said first surface, there being a plurality of recesses in one of said surfaces and a projection extending beyond the other surface adapted to enter any one of said recesses, the angular extent of each of said surfaces being sufficient to cause more or less of the said recesses to be hidden, a projecting part movable with said stem and arranged to engage a portion of said adjustable member whereby the angular movement of said stem may be limited, and means surrounding said extension and engaging said adjustable member, whereby it is held against said first surface and the fact of its adjustability is concealed.

2. In a device of the character described, the combination with a valve casing and a rotatable stem carried thereby, said casing having a ledge surrounding said stem and provided with an arcuate series of recesses, of a movable stop member surrounding said stem and having a segmental portion adapted to overlie and conceal more or less of the said recesses, a stud carried by the lower face of the said stop member and adapted to enter any one of the said recesses to fix the position of the said stop member, means carried by said casing for clamping said stop member against said ledge and a projecting part movable with said stem and arranged to engage a portion of said stop member whereby the angular movement of said stem is limited.

3. In a device of the character described, the combination with a valve casing and a rotatable stem carried thereby, said casing having a substantially cylindrical extension surrounding said stem, of an integral projection surrounding said extension and formed as a surface of revolution concentric with said stem, said projection having in its face a plurality of recesses arranged about said extension, a ring surrounding said extension and lying against the face of said projection, a segmental plate integral with said ring and adapted to overlie and conceal more or less of said recesses, a stud carried by the face of said plate and adapted to enter any one of the said recesses whereby the position of the said plate may be determined, a hollow member surrounding said extension and resting upon said ring, a finger rigid with said stem and adapted to engage a portion of said plate, and means for securing said hollow member in place upon said extension.

1,104,919. RIFFLE-BOX. KARL F. NELSON, Kellogg, Idaho. Filed Feb. 21, 1913. Serial No. 749,904. (Cl. 83—89.)

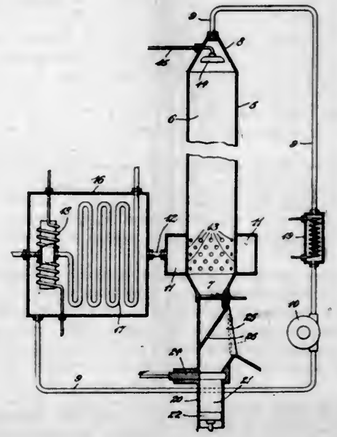


A riffle box having side outlet openings and a series of oblique riffles, the riffles at the discharge end of the box being spaced apart at the longitudinal center line of the box, from which latter they extend divergingly in opposite direction to the sides of the box, the inclination being in the direction of the discharge end of the box.

1,104,920. ART OF MAKING ICE. WILLIAM S. OSBORNE, New York, N. Y., assignor to The Osborne Patented Machinery Co., Inc., a Corporation of New York. Filed Sept. 27, 1911. Serial No. 651,624. (Cl. 62—6.)

1. In the art of producing ice cakes, the process which consists in circulating a current of air upwardly through a chamber, the temperature of the air being at or below the freezing point, discharging water into the upwardly flowing current of air, whereby the water is congealed as it falls by gravity through the current of cold air, collecting and drawing off from said chamber a predetermined quantity of the frozen particles, and then subjecting said quantity of frozen particles to pressure, thereby resulting in a solid cake of ice.

2. In the art of producing ice cakes, the process which consists in circulating in an upward direction and through a chamber a current of air the temperature of which is substantially at or below the freezing point, spraying water into the upwardly flowing current of cold air whereby the water so sprayed is frozen into small individual particles, and then subjecting certain quantities of the frozen particles to compression for solidifying the same into ice cakes.



3. In the art of refrigeration, the process which consists in passing water in a finely divided form downwardly through an upwardly moving long column of cold air, whereby the particles of water are congealed while suspended in the air and produce icy pellets or granules.

4. In the art of refrigeration, the process which consists in circulating a long column of gaseous fluid at a freezing temperature and in an upward direction through a treating chamber, and spraying the material to be frozen in a finely divided condition downwardly into said long column of gaseous fluid, said divided material passing through the gaseous fluid for such a distance as to result in the congelation of the material into icy pellets or granules, and subsequently forming into a mass the icy pellets or granules.
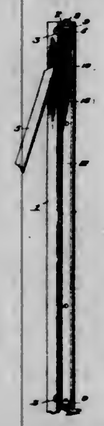
5. In the art of refrigeration, the process which consists in circulating a long column of cold air through a treating chamber, discharging water in a finely divided condition downwardly into such long column of cold air so as to result in icy pellets or granules while suspended in the cold air, conducting the air flowing out of the treating chamber into contact with cold surfaces, returning the cold air back to the treating chamber, and collecting the icy pellets or granules in a chamber separate from the treating chamber.

1,104,921. METAL SIGN-BOARD. GILMAN L. PALMER, Conneaut, Ohio. Filed Oct. 31, 1911. Serial No. 657,791. (Cl. 189—34.)

1. A panel composed of an angle iron frame of rectangular form and a sheet metal covering, the two opposite edges of which are bent along two lines approximately parallel with each other with the extreme edges extending inwardly approximately parallel with the main portion of the sheet metal covering, the outer flanges of opposite sides of the angle iron frame fitting the space between the main portion of the sheet metal covering and the inwardly turned flange at the extreme edge, and the other side of the angle iron resting against the main portion of the sheet metal covering in connection with a support composed, partly, at least, of angle irons, within the angles of which the ends of the panel fit.

2. In a sign board, a panel composed of sheet metal, the opposite edges of which are bent along two parallel lines, and a rectangular angle iron frame which the bent edges of the sheet metal embrace, the angle of the angle iron frame located in the angle formed between the main portion of the sheet metal and the adjacent side flanges

formed by the bend, and a support for the opposite ends of the panel made of angle iron, one flange projecting outwardly to embrace an end of the panel, and means



passing through said outwardly projecting flange and inwardly projecting flange of the end of the panel for securing the end of the panel to the support.

1,104,922. PROCESS FOR THE EXTRACTION OF ZINC FROM ZINC-BEARING REFUSE. RALPH R. PARISH, Waterbury, Conn., assignor to Chase Rolling Mill Co., Waterbury, Conn., a Corporation. Filed May 7, 1914. Serial No. 836,942. (Cl. 75—18.)

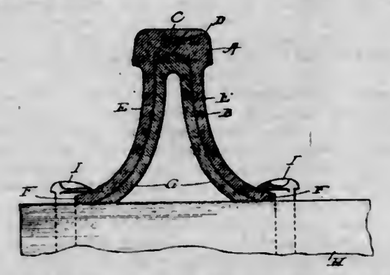
1. A process of recovering zinc from zinc-bearing refuse consisting in gradually introducing such refuse into dilute sulfuric acid agitated with compressed air, the refuse being gradually added and the acid strength of the solution being maintained relatively constant by the addition of acid until the solution contains a high concentration of zinc salts after which the remaining free acid in the solution is neutralized by the addition of an excess of zinc oxid bearing refuse, then agitating the solution with compressed air until all of the iron is precipitated, then removing the insoluble residues from the solution, and then purifying the solution by cementation.

2. A process of recovering zinc from zinc-bearing refuse consisting in gradually introducing such refuse into dilute sulfuric acid agitated with compressed air, the refuse being gradually added and the acid strength of the solution being maintained relatively constant by the addition of acid until the solution contains a high concentration of zinc salts after which the remaining free acid in the solution is neutralized by the addition of an excess of zinc oxid bearing refuse, then agitating the solution with ozonated compressed air until all of the manganese is precipitated, then removing the insoluble residues from the solution, and then purifying the solution by cementation.

1,104,923. RAILROAD-RAIL. GERSHON M. PETERS, Cincinnati, Ohio. Filed Apr. 21, 1913. Serial No. 762,453. (Cl. 239—16.)

1. A combination rail comprising an exterior casing formed with the usual tread and having its supporting sides curved exteriorly and interiorly with a gradually increasing curvature until it reaches the tie, and an interior supporting member fitting in a recess formed in the exterior casing and likewise having its side members curved to contact with the inner surface of the side members of the exterior casing until the lower ends of such interior supporting members likewise contact with the tie.

2. A combination rail comprising the usual solid tread and recessed below such tread in an increasing width of recess so as to form curved side supporting members, and an interior supporting member likewise recessed and contacting on its outer surface with the inner surface of the side supporting members from the tread to the base of such outer casing.

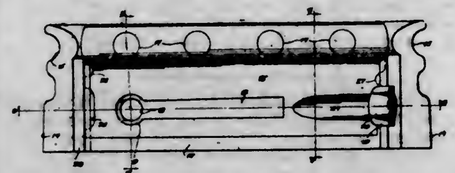


3. A composite rail comprising an outer casing having the usual solid tread and interiorly recessed to form side supporting members extending with a gradually increasing divergent curvature to their base which rests on the tie, in combination with an interior supporting member fitting in such recess and having its side members follow on the curve of the side members of the casing both interiorly and exteriorly until it rests upon the tie, and means for fastening the base of the rail to the tie.

4. A composite rail comprising a solid tread and side wings curving downwardly therefrom with a gradually increasing curvature exteriorly and interiorly until they form a practically horizontal support on the tie, in combination with an interior supporting member fitting between the flanges of the exterior member and likewise having depending flanges the outer surfaces of which correspond to the inner surfaces of the outer casing and follow the outlines thereof to the tie and are provided with a gradually widening interior recess, and means for clamping the base of the rail to the tie.

5. A composite rail comprising an exterior casing having the usual solid tread and vertical supporting side webs formed on a divergent curve interiorly and exteriorly and leaving within a gradually widening recess, in combination with an interior supporting member of similarly curved exterior surface to the interior curved surface of the casing and having a widening interior recess and two members of the rail joint of such longitudinal sections as will break joint with each other.

1,104,924. BRAKE-SHOE. CLIFTON D. PETTIS and PERCY H. BATTEN, Chicago, Ill., assignors, by mesne assignments, to American Brake Shoe & Foundry Company, a Corporation of New Jersey. Filed Dec. 10, 1909. Serial No. 532,317. (Cl. 188—82.)



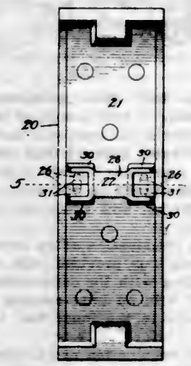
1. A reinforcing back for brake shoes, comprising a plate of tough metal having at one end a corrugation extending inwardly toward the face of the shoe and tapering toward the center of the shoe.

2. A reinforcing back for brake shoes, having at one end an attaching lug provided with a corrugation and having the end portion of the back provided with a corrugation corresponding to that of the lug and joining therewith.

3. A reinforcing back for brake shoes, comprising a plate of tough metal having at one end an attaching lug formed integral therewith, said lug and the end portion of said back being provided with joined corrugations, the inner end of the corrugation in the back being tapered.

4. A brake shoe comprising a cast metal body and a reinforcing back plate of ductile metal, both of said parts having holes formed therethrough to receive an attaching bolt, the hole of the back plate being larger than the hole of the cast metal body, whereby a liner of cast metal is formed within the hole of the back plate.

1,104,925. BRAKE-SHOE. CLIFTON D. PETTIS, Chicago, Ill. Filed July 24, 1912. Serial No. 711,304. (Cl. 188—82.)



1. The combination with a brake shoe, of a lug formed of an integral piece of ductile metal having a crown, side walls, brace walls integral with said side walls and extending laterally therefrom at the edges thereof whereby a channel-shaped formation is given to the side portions of the lug, laterally extending base portions between said brace walls, and locking members at each side of the lug.

2. The combination with a brake shoe, of a lug formed of ductile metal having a crown, side walls extending from said crown to the back of the shoe, brace walls integral with and projecting laterally from each of said side walls, and locking members integral with and projecting from said brace walls.

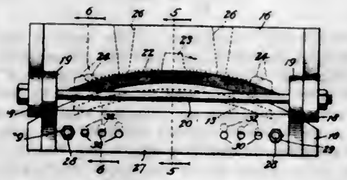
3. The combination with a brake shoe of a lug formed of ductile metal having locking members projecting therefrom and arranged to interlock one with the other.

4. In a brake shoe, the combination with a reinforcing back, of a lug provided with a plurality of locking members engaging said reinforcing back and interlocked with each other.

5. The combination of a brake shoe having a back plate and an attaching lug formed of ductile metal and having a crown and side walls, and locking members outside of said side walls and extending through the back plate of the shoe, the free ends of said locking members being bent to interlock with said back plate.

[Claims 6 to 14 not printed in the Gazette.]

1,104,926. APPARATUS FOR CASTING. CLIFTON D. PETTIS, Chicago, Ill. Filed May 1, 1913. Serial No. 764,825. (Cl. 22—116.)



1. A casting apparatus comprising upper and lower sections provided with means for holding a shell in position between said sections and constructed to form a space outside the walls of said shell when the sections are in closed position to expose the shell to the cooling action of the air, one of said sections being provided with a pouring hole whereby metal may be admitted to the interior of said shell.

2. A casting apparatus comprising upper and lower sections adapted to hold a shell conforming in outline to the shape of a brake shoe in position between said sections and constructed to form a space outside the walls of said shell when the sections are in closed position to expose the shell to the cooling action of the air, said lower section being provided in its upper part with a mold cavity corresponding in outline to the face of the brake shoe and adapted to coincide with the walls of said shell, and means independent of the shell for adjustably holding said sections at different distances apart.

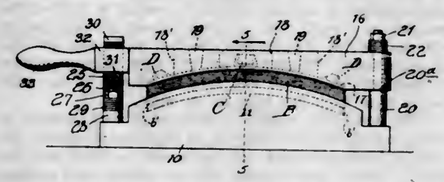
3. A casting apparatus comprising a lower portion provided in its upper part with a mold cavity, and an upper portion formed of movable sections, said upper sections when in closed position being held at a distance above the cavity of the lower section to form a wide space above said cavity.

4. A casting apparatus comprising a lower portion provided in its upper part with a mold cavity and an upper portion formed of sections pivotally connected with the lower portion, said upper sections being formed with downwardly-facing cavities and being held when in closed position at a distance above said lower portion to form a space around the casting made by the mold.

5. A casting apparatus comprising upper and lower portions provided with means for holding a shell in position between them and constructed to form a space outside the walls of said shell when the portions are in closed position to expose the shell to the cooling action of the air, one of said portions being chambered and having a filling of refractory material provided in its upper face with a mold cavity to come opposite said shell.

[Claims 6 to 9 not printed in the Gazette.]

1,104,927. CASTING APPARATUS. CLIFTON D. PETTIS, Chicago, Ill. Filed May 1, 1913. Serial No. 764,826. (Cl. 22—136.)



1. A casting apparatus comprising the combination of a lower portion provided with a mold cavity in its upper part and an upper portion formed of sections to coöperate with said lower portion in holding a shell, said sections being pivotally connected to one end only of the lower portion and being arranged to swing laterally in a plane substantially parallel with the face of the lower section.

2. A casting apparatus comprising the combination of a lower portion and an upper portion formed of sections to coöperate with said lower portion in holding a shell and means for pivotally connecting said sections to one and the same end of the lower portion in manner permitting them to swung in a plane substantially parallel to that of the lower portion and means for holding said swinging sections, when in closed position, at a distance away from said lower portion.

3. A casting apparatus comprising the combination of a lower portion provided with a mold cavity in its upper part, and an upper portion formed of laterally swinging sections to coöperate with said lower portion in holding a shell, said upper portion being adjustable with respect to said lower portion.

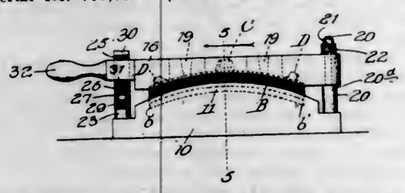
4. A casting apparatus comprising the combination of a lower portion provided with a mold cavity in its upper part, uprights projecting from said lower portion, laterally swinging sections pivotally mounted at one end

upon said uprights and laterally projecting arms at the opposite end of said lower portion adapted to engage the front ends of said laterally swinging sections.

5. A casting apparatus comprising the combination of a lower portion privided with a mold cavity in its upper part, uprights rising vertically from the opposite ends of said lower portion, an upper portion formed of laterally swinging sections pivoted to the uprights at one end of said lower portion, the upright at the opposite ends of said lower portion being provided with laterally projecting arms for engagement with the front ends of said swinging sections.

[Claims 6 to 13 not printed in the Gazette.]

1,104,928. METHOD OF CASTING BRAKE-SHOES. CLIFTON D. PETTIS, Mahwah, N. J. Filed Oct. 6, 1913. Serial No. 793,789. (Cl. 22—203.)



1. The method of forming a reinforced brake shoe that consists in holding against a mold the open side of a metal pan or shell formed of thin ductile metal and having a back and side walls, the side walls being exposed to the air, and pouring molten cast iron into said shell to unite therewith and form the body of the shoe.

2. The method of forming a reinforced brake shoe that consists in holding against a mold the open side of a metal pan or shell formed of thin ductile metal and having back, side and end walls exposed to the air, and pouring molten cast iron into said shell to unite therewith and form the body of the shoe.

3. The method of forming a reinforced brake shoe which consists in holding above the cavity of a mold the open side of a metal pan or shell formed of thin ductile metal and having a back, side and end walls, the side and end walls being exposed to the air, and pouring molten cast iron into said shell and into the cavity of the mold beneath it to form the body of the shoe.

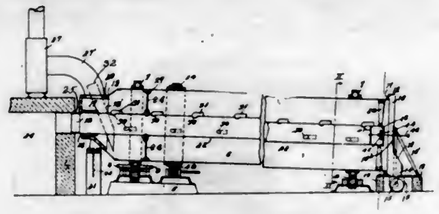
4. The method of casting a brake shoe that consists in placing a metallic shell formed of thin ductile metal and having a back, side and end walls and an open side between a lower mold section and an upper shell-holding means, said shell spanning the space between said mold section and said shell-holding means, and thereafter casting molten iron to form the body of the shoe within said shell, the latter being united to the body of the shoe in the casting operation to reinforce the same and the body projecting through the open side of the shell.

5. The method of casting a brake shoe that consists in placing a shell having a back, side and end walls and open opposite said back between a lower mold section and an upper shell holding means, the body of the shell being held with its open side at a distance from the bottom of the cavity of said mold section and said shell spanning the space between said mold section and said shell-holding means, and thereafter pourning cast metal through the back of said shell to form the body of the shoe, said cast metal uniting with said shell to reinforce the same.

[Claims 6 and 7 not printed in the Gazette.]

1,104,929. MECHANICAL DRIER. WILLIAM E. PRINDLE, Manitowoc, Wis. Filed Feb. 28, 1912. Serial No. 680,464. (Cl. 34—6.)

1. In a mechanical drier, the combination of a drying cylinder having a feed member at its forward end and a discharge opening at its rear end, an inner hot air tube suspended within and rotatable with the drying cylinder and provided with an opening at its forward end leading to a source of heat, and draft outlet openings arranged at intervals lengthwise in the walls of the hot air tube.



2. In a rotatable drier, the combination of an outer drying cylinder having a feed means at its forward end and a discharge outlet at its rear end, an inner tube suspended within the outer cylinder and adapted to have slight longitudinal movement therein said inner cylinder being provided with outlets in its walls communicating with the outer cylinder, and hoods for the said outlet openings.

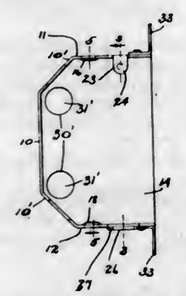
3. In a drier the combination of an outer drying cylinder, an inner hot air flue provided with outlet openings therein communicating with the outer cylinder, said inner flue being provided with an inlet opening at its forward end and an air valve in the inner flue, substantially as described.

4. In a drier the combination of an outer drying cylinder, an inner hot air cylinder, having outlet openings therein and provided with an inlet opening at its forward end, an air valve in the inner cylinder and lifting blades on the inside of the drying cylinder, substantially as described.

5. In a drier, the combination of an outer drying cylinder, an inner cylinder provided with a hot air inlet at its forward end, a hood at the rear end of the drier having a discharge outlet and provided with air inlet openings therein and a valve in the drier.

[Claims 6 to 30 not printed in the Gazette.]

1,104,930. ELECTRIC WALL-BOX. JOSEPH G. RAQUETTE, Cleveland, Ohio, assignor, by direct and mesne assignments, to The Universal Switch Box Co., a Corporation of Ohio. Filed May 25, 1912, Serial No. 699,624. Renewed Feb. 27, 1914. Serial No. 821,573. (Cl. 247—5.)



1. An outlet box comprising a rear wall, a top wall formed integral therewith and provided at one side with a projecting lug which extends outwardly in a plane below the lower surface of said top wall and at its opposite side with a depending ear provided with a screw-hole opening, a bottom wall formed integral with said rear wall and provided at one side with a lug which extends outwardly in a plane above the upper surface of said bottom wall and at its opposite side with a horizontally arranged slotted lip, a side wall provided at its upper end with a slot arranged to register with the lug on the top wall and at its bottom with a slot arranged to register with the lug on the bottom wall and a side wall provided with a key-hole slot arranged to register with the screw-hole in the ear on the top member and at its lower end with a tongue arranged to extend into the slot in the lip on the bottom wall and a screw adapted to pass through the key-hole slot in the last-mentioned side and into the key-hole in the ear depending from the top wall.

2. In a gang construction for outlet boxes, the combination with a complete box having one side thereof provided near its upper end with a key-hole slot and at its lower end with a depending tongue, of a box consisting of a rear wall, top and bottom walls and a permanently secured side wall, said top wall at the open side being provided with a downwardly depending ear having a screw-hole arranged to register with the key-hole slot in the side of the complete box and said bottom wall at the open side having a horizontally extending lip provided with a slot arranged to receive the downwardly extending tongue on the side of the complete box and a screw passing through the key-hole slot in the side of the complete box and into the screw-hole in the depending ear on the top of the open sided box.

3. In a gang construction for outlet boxes, the combination of a complete box having a permanently secured side and a removably secured side, the said permanently secured side being provided near its upper end with an opening for the passage of a screw and along its bottom edge with a downwardly extending tongue and an open sided box, the top wall of which at the open side being provided with a downwardly extending ear provided with an opening for a screw and the bottom wall of said box at the open side thereof being provided with a horizontally extending lip having a slot adapted to receive the vertically depending tongue on the permanently secured side of the complete box and a screw extending through the permanent wall of the complete box into the ear depending from the top wall of the open sided box.

1,104,931. SOCKET FOR INCANDESCENT ELECTRIC LAMPS. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Oct. 27, 1913. Serial No. 797,522. (Cl. 173—362.)

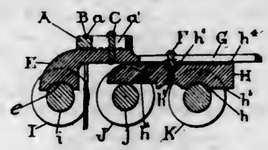


1. A socket for incandescent electric lamps having a sheet metal neck formed on opposite sides with openings and provided with an integral inwardly extending flange forming an opening through the neck, said flange extending beyond the upper edge of the said openings, and a split ring the ends of which are inserted into said openings.

2. A socket having a neck formed integral with the cap, said neck formed with openings on opposite sides and with an integral, inwardly extending flange smaller in diameter than the diameter of the neck forming an opening through the neck, the lower edge of the said flange extending beyond the upper edge of the said openings, and a ring the ends of which are inserted into said openings.

1,104,932. SADDLE FOR THE TOP ROLLS OF SPINNING-FRAMES. ROSS L. REYNOLDS and ALFRED D. MCGRAW, Fall River, Mass. Filed Mar. 4, 1911. Serial No. 612,313. (Cl. 118—22.)

1. A top-roll saddle consisting of a front-saddle having a straight elongated slotted shank adapted to engage the back-saddle on the under side of the front-saddle at two points, a back-saddle longitudinally adjustable with reference to the front-saddle and to the middle-roll, means to retain the longitudinal adjustment between the front-saddle and the back-saddle, a stirrup-carrier engaging the front-saddle, and a stirrup carried by the carrier.

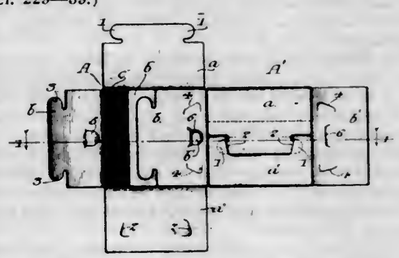


2. In a top roll saddle a front saddle having on the upper side a guide, a stirrup-slide slotted longitudinally and adapted to engage and slide on said guide, a portion of said stirrup-slide being wider horizontally than vertically and adapted to engage a corresponding recess in the stirrup, and a stirrup having a recess adapted to engage said wider portion of the stirrup-slide, said recess being wider than the opening into it.

3. In a top-roll saddle, a front-saddle adapted to engage the back-saddle, a back-saddle, a stirrup-slide mounted on the front-saddle, a stirrup supported on said slide, and means to lock said stirrup and said slide together against vertical motion of the stirrup with respect to the slide.

4. In a top-roll saddle, a front-saddle adapted to engage the back-saddle at two points, a back-saddle, a stirrup-slide engaging the front-saddle and adapted to slide thereon, a stirrup engaging said slide, and means to fasten the stirrup and the slide together against vertical movement of the stirrup with respect to the slide.

1,104,933. DISPLAY STRUCTURE AND CARTON THEREFOR. RALPH R. RICHARDSON, Chicago, Ill., assignor to Chicago Carton Company, Chicago, Ill., a Corporation. Filed Mar. 20, 1911. Serial No. 615,800. (Cl. 229—39.)



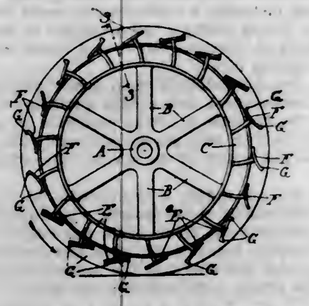
1. A display structure comprising two or more cartons each provided with outer and inner folding flaps at its end, the outer pair of opposite flaps of each carton having tongues and slits arranged to interlock and connect said flaps and close the ends of the carton, one flap of each of the inner pairs having tongues adjacent the outer free edge, the other having slits adjacent its hinged edge and a tongue adjacent the hinge and edge of one of said inner flaps and a slit adjacent with inner edge of the other inner flap, specifically as described.

2. A collapsible display carton having side walls and pairs of outer and inner folding end flaps *a*, *a'* and *b*, *b'*, said outer pairs of flaps *a*, *a'* having interlocking tongues and slits 1 and 2 adapted to interlock to connect the flaps and close the end of the carton, one of said inner flaps *b* having interlocking tongues 3 and 5 adjacent both its outer free edge and its inner hinged edge and the other of said inner flaps *b'* having slits 4 and 6 adjacent its inner hinged edge, said tongues 3 being arranged to interlock with the slits 4 of the flaps of similar cartons to connect the same in offset relation and said tongue 5 being arranged to interlock with the slit 6 of the flaps of similar cartons to connect the same in adjacent relation, substantially as described.

3. A display structure built up of individual cartons each having flaps interlocked to close its ends and each having other flaps interlocked with the corresponding flaps of the adjacent carton to thereby connect the individual cartons of the structure, substantially as described.

4. A display structure built up of individual cartons each having two pairs of opposite flaps at its ends provided with interlocking tongues and slits, one of the pairs of flaps at each end of the carton being interlocked to close the ends of the cartons, the other flaps of adjacent cartons being interlocked to connect the individual cartons into a display structure, substantially as described.

1,104,934. TRACTION-WHEEL. EDWARD ALOYSIUS RUMELY, Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Sept. 28, 1912. Serial No. 722,822. (Cl. 21—218.)



1. A traction wheel provided with an outer continuous tread rim an inner tread located intermediate the tread portion of said tread rim and center portion of the wheel and to one side of said rim made of a plurality of widely extended separated surfaces inclined to the tangent to the continuous tread all of them being inclined in the same direction a free passage between said surfaces inwardly along the continuous tread rim said widely extended tread surfaces being convex.

2. A traction wheel provided with an outer continuous tread rim an inner tread located intermediate the tread portion of said tread rim and center portion of the wheel and to one side of said rim made of a plurality of widely extended separated surfaces inclined to the tangent to the continuous tread all of them being inclined in the same direction a free passage between said surfaces inwardly along the continuous tread rim said widely extended tread surfaces being convex and provided with retaining walls along one side thereof.

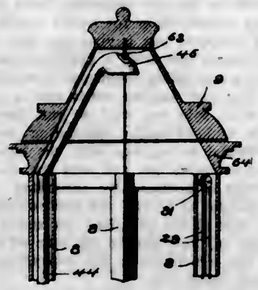
3. A traction wheel provided with an outer continuous tread rim an inner tread located intermediate the tread portion of said tread rim and center portion of the wheel and to one side of said rim made of a plurality of widely extended separated surfaces inclined to the tangent to the continuous tread all of them being inclined in the same direction a free passage between said surfaces inwardly along the continuous tread rim said widely extended tread surfaces being convex and provided with retaining walls along one side thereof and an auxiliary outer continuous tread rim along the opposed side of said widely extended surfaces.

1,104,935. TALKING-MACHINE. CHARLES RUPPEL, Philadelphia, Pa. Filed Oct. 27, 1913. Serial No. 797,538. (Cl. 181—3.)

1. A talking machine comprising a support, a sound tube projecting from the support, and a dome supported upon and hanging freely from the sound tube, substantially as described.

2. A talking machine comprising a support, a sound tube projecting from the support, a dome supported upon and hanging freely from the sound tube, said sound tube and dome directing the sound in the same direction, substantially as described.

3. A talking machine comprising a support, a sound tube projecting upwardly from the support and a dome pivotally supported on the sound tube, said sound tube having an outlet directing the sound downwardly within the dome, substantially as described.

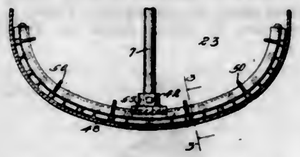


4. A talking machine comprising a cabinet, a dome positioned over the cabinet, and a sound tube projecting upwardly from the cabinet and pivotally supporting the dome, said sound tube having an outlet directing the sound downwardly within the dome, substantially as described.

5. In a talking machine, the combination with a cabinet, four hollow uprights on the cabinet, a dome above the uprights, a sound tube projecting through one of the uprights and supporting the dome, and devices movable in tho other of said uprights and adapted to operate sound producing means, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,104,936. CANDY-MAKING MACHINE. RICHARD J. SAVAGE and CHARLES E. SCHULTZ, Chicago, Ill. Filed June 24, 1912. Serial No. 705,456. (Cl. 127—11.)



1. A candy-making machine comprising a kettle, a shaft projecting thereinto, a channel-iron projecting outwardly from said shaft, a chain in connection with said channel-iron, and connections for said chain projecting into the channel of said channel-iron.

2. A candy-making machine comprising a kettle, a shaft projecting thereinto, a channel-iron projecting outwardly from said shaft, a chain, connections for said chain projecting into the channel of said channel-iron, and a staple connected to said chain and passing over said channel-iron.

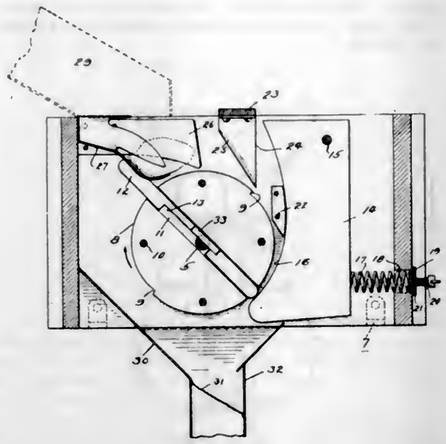
3. A candy-making machine comprising a kettle, a shaft therewithin, a channel-iron secured to said shaft and conforming in shape to the shape of the kettle, and a chain in connection with said channel-iron, said chain comprising a plurality of links, and means thereupon for connecting each link to its neighbor, said means being normally received within the channel of said channel-iron.

4. A candy-making machine comprising a kettle, a shaft therewithin, a channel-iron secured to said shaft and conforming in shape to the shape of the kettle, and a chain in connection with said channel-iron, said chain comprising a plurality of links and means thereupon for connecting each link to its neighbor, said means being normally received within the channel of said channel-iron, said chain being provided also with a staple adapted to encircle said channel-iron.

5. A candy-making machine comprising a kettle, a shaft therewithin, a channel-iron secured to said shaft and conforming in shape to the shape of the kettle, and a chain in connection with said channel-iron, said chain comprising a plurality of links and means thereupon for connecting each link to its neighbor, said means being normally received within the channel of said channel-iron, each of the end links of said chain being provided with staples adapted to encircle said channel-iron.

[Claims 6 to 10 not printed in the Gazette.]

1,104,937. FRUIT-PRESSER. AUGUSTE C. SCHIFFMANN and JOHN B. SCHIFFMANN, Oakland, Cal. Filed Aug. 20, 1913. Serial No. 785,775. (Cl. 100—47.)



1. A device of the character described comprising a frame, a cylinder revolubly mounted therein, an eccentrically faced yielding block mounted in front of said cylinder, diametrically disposed rods slidably mounted in said cylinder having a length greater than the diameter of said cylinder, an angularly disposed cutting knife rigidly mounted over said cylinder and converging guide plates to direct the fruit on said knife.

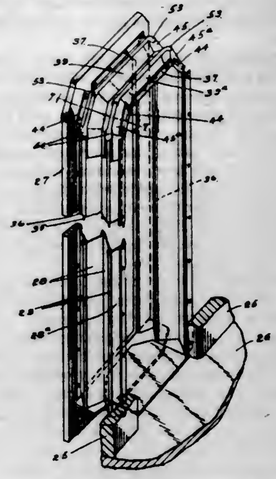
2. A device of the character described comprising a frame, a revoluble cylinder mounted therein, an eccentrically faced block yieldably mounted in front of said cylinder, a cutting knife rigidly mounted over said cylinder guide plates to hold and to direct the fruit on said knife, slidable bars diametrically mounted in said cylinder, said bars having a length greater than the diameter of said cylinder, the projecting ends being adapted to force the fruit through said guide plates and against said knife.

3. A fruit press of the character described comprising the combination with a frame, of a cylinder revolubly mounted therein, a block pivotally mounted in front of said cylinder, the face of said block being eccentric with said cylinder, spring means urging said block toward said cylinder, longitudinal notches in the face of said cylinder adapted to receive the fruit and carry it through the decreasing space between said cylinder and said block, diametrically disposed rods slidably mounted in said cylinder, said rods having a length greater than the diameter of the cylinder, a knife having an angular cutting edge disposed between said cylinder and said drum and converging guide plates adapted to direct the fruit on said knife.

1,104,938. VESTIBULE-DIAPHRAGM FOR RAILWAY PASSENGER-CARS. EDWARD A. SCHREIBER, Chicago, Ill. Filed Jan. 12, 1914. Serial No. 811,598. (Cl. 105—61.)

1. A bellows diaphragm for car vestibules composed of a plurality of supporting members and a plurality of sheet metal panels hinged at opposite edges to said supporting members and forming with said supports a closed collapsing arched structure.

2. A bellows diaphragm structure for car vestibules comprising a plurality of sets of sheet metal panels, the panels of each set being hinged together and supporting elements which sustain said sets of panels and the extremities of the panels of one set overlapping the panels of the adjacent set.



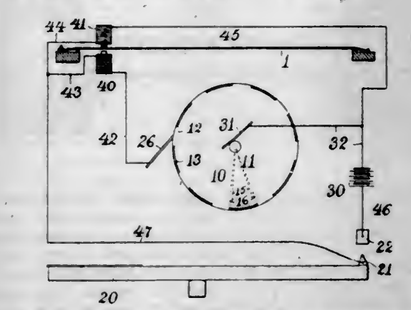
3. A bellows diaphragm structure for car vestibules comprising a plurality of arched rods, and a plurality of sets of metal panels hinged to said rods, the panels of said sets overlapping the panels of adjacent sets.

4. A bellows diaphragm for car vestibules comprising a plurality of arched rods and a plurality of sheet metal panels hinged at opposite edges to said rods and forming with said rods a closed arched collapsible structure.

5. A bellows diaphragm structure for car vestibules comprising a plurality of sheet metal panels provided at their meeting edges with interlocking hinge forming beads, and supporting rods within said beads.

[Claims 6 to 20 not printed in the Gazette.]

1,104,939. ELECTRIC MUSICAL INSTRUMENT. MELVIN L. SEVERY, Arlington Heights, and GEORGE B. SINCLAIR, Winthrop, Mass., assignors to Choralcelo Manufacturing Company, a Corporation of Maine. Filed Feb. 23, 1906. Serial No. 302,331. (Cl. 84—131.)



1. The combination of a magnetically attractive sonorous body, an electromagnet presenting a pole thereto, a source of electricity, a uniformly rotated member having alternate sections of high and low resistance, a brush contacting therewith, and connections between said source, brush, member and magnet, the peripheral length of said low resistance sections being less than that of the high resistance sections by substantially twice the lap of the aforesaid brush.

2. The combination of a sonorous body, an electromagnet for its actuation, a source of electricity, a member having alternate sections of high and low resistance, a brush contacting therewith, means for giving relative motion to said member and brush, and connections between said source, brush, member and magnet, the length of said low resistance sections being substantially less than that of the high resistance sections by an amount twice the lap of said brush.

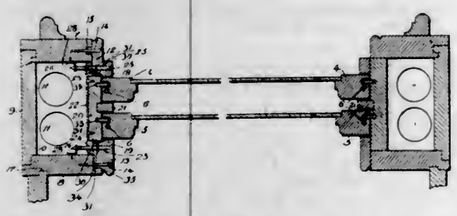
3. The combination of a sonorous body, an electromagnet adapted to actuate the same, a source of electricity, a cylindrical member having alternate sections of high and low resistance, a brush contacting with said member, said brush and member having relative motion, and connections between said source, brush, member and magnet, the peripheral length of said low resistance sections being such that each contact shall be made with its brush throughout an interval equal in duration to substantially the whole of the time consumed by that part of the vibration of said sonorous body wherein the latter is swung toward said magnet, but for no longer time.

4. The combination of a magnetically attractive sonorous body, two electromagnets adapted to actuate the same, a rotating member having alternate high and low resistance sections, a brush contacting with said member, a source of electricity, connections between said magnets, brush, source and member, and a key controlling said connections, said parts being disposed, upon the depression of said key, to bring both of said magnets in circuit simultaneously when one of the conducting parts of said member engages said brush, and to cut out one of said magnets when the non-conducting parts of said member pass said brush.

5. The combination of a magnetically attractive sonorous body, an electromagnet disposed with said body in its field, means for delivering timed electric pulsations to said electromagnet, a second electromagnet disposed with said sonorous body in its field but opposite to and in substantial alinement with the first electromagnet, and connections for delivering continuous current to the second electromagnet, the windings of said electromagnets being unlike in resistance and causing the second electromagnet to be weaker than the first electromagnet when both are simultaneously energized.

[Claims 6 to 10 not printed in the Gazette.]

1,104,940. WINDOW. DIDRIK N. SIRE, Mays Landing, N. J. Filed May 13, 1914. Serial No. 838,225. (Cl. 20—12.)

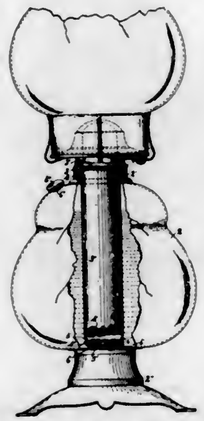


1. The combination, in a window frame, of side members, a stop bead secured to the inner edge of each side member, and overhanging the proximate or opposed sides of said members, a movable stile interposed between said side members, a bracket secured to the outer face of said stile and having its ends projecting beyond the edges thereof, and adjusting screws passing through said stop beads and engaging the projecting ends of said bracket.

2. The combination, in a window frame, of side members, a stop bead secured to the inner edge of each side member and overhanging the opposed sides thereof, a movable stile positioned between said members, a bracket connected to said stile and having its ends extending beyond the side edges thereof, screws carried by said stop beads and engaging the projecting ends of said bracket, and means to hold the screws from longitudinal movement.

3. The combination in a window frame, of side members, a stop bead secured to the inner edge of each side member and overhanging the juxtaposed side thereof, said beads formed with stop shoulders, a movable stile positioned between said members, said stop shoulders forming stops to limit the movement of said stile in one direction, a bracket carried by said stile and having its ends extended beyond the edges thereof, and screws passing through said beads and engaging the projecting ends of said bracket, to adjust said stile, toward and from said stop shoulders.

1,104,941. SAFETY-LAMP. VINCENTÉ SZAMIER, Terryville, Conn. Filed Jan. 9, 1913. Serial No. 740,902. (Cl. 67—81.)



1. The combination with a reservoir and an oil-burner, of a wick-casing and an independently-operable valve, said wick-casing having tabs formed thereon and provided with an interior valve-seat, said valve being held, through the medium of said tabs, in coöperative relation to said valve-seat, with substantially the whole of its lower face exposed to the direct action thereon of the fluid contents of said reservoir, and communication being established laterally between said wick-casing and said reservoir and automatically controlled by the valve aforenamed upon the reservoir being tipped.

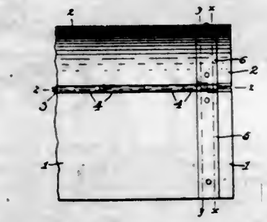
2. The combination with a reservoir and an oil-burner, of a wick-casing and an independently-operable valve, said wick-casing having tabs formed thereon and provided with an interior valve-seat formed integral therewith, said valve being held, through the medium of said tabs, in coöperative relation to said valve-seat, and communication between said wick-casing and said reservoir being duly established and automatically controlled by the valve aforenamed upon the reservoir being tipped.

3. The combination with a reservoir and an oil-burner, of a wick-casing and an independently-operable valve, said wick-casing having tabs formed thereon and provided with an interior valve-seat formed by annularly insetting the wall thereof, said valve being held, through the medium of said tabs, in coöperative relation to said valve-seat, and communication between said wick-casing and said reservoir being duly established and automatically controlled by the valve aforenamed upon the reservoir being tipped.

4. The combination with a reservoir and an oil-burner, of a wick-casing and an independently-operable valve, said wick-casing having tabs formed thereon and provided with an interior valve-seat, said valve being held, through the medium of said tabs, in coöperative relation to said valve-seat and having its lower face recessed and exposed to the direct action thereon of the fluid contents of said reservoir, communication between the latter and said wick-casing being duly established and automatically controlled by the valve aforenamed upon the reservoir being tipped.

5. The combination with a reservoir and an oil-burner, of a wick-casing and an independently-operable valve, said wick-casing having tabs formed thereon and provided with an interior valve-seat formed by annularly insetting the wall thereof, said valve being held, through the medium of said tabs, in coöperative relation to said valve-seat and having its lower face recessed and exposed to the direct action thereon of the fluid contents of the reservoir aforenamed, and communication being established laterally between said wick-casing and said reservoir and automatically controlled, upon the latter being tipped, by the valve aforenamed.

1,104,942. AUTOMOBILE-HOOD. BERT E. THOMPSON, Indianapolis, Ind. Filed Oct. 26, 1912. Serial No. 727,854. (Cl. 74—56.)



1. As an article of manufacture, an automobile hood having hinged sections and stays extending across the sections and both having their inner ends formed into knuckle members lying side by side engaging the pintle of the hinges, substantially as described.

2. As an article of manufacture, an automobile hood having two sections hinged together, a stay secured to and conforming to each section, each of said stays having its inner edge curved to form eyes, said eyes adapted to lie side by side, the knuckles of said hinge being formed by the bent and curved edges of said sections and stays, substantially as described.

3. As an article of manufacture, an automobile hood having two sections each having a stay secured thereto, said stays being arranged in alinement and each stay having a portion thereof terminating at or within the edge of the section and the other portion thereof continued into a curved member adapted to form a knuckle to receive a hinge pintle, the said members of the respective stays being disposed on opposite edges of the stays and out of alinement whereby the knuckles formed by said member will be disposed side by side with respect to the pintle, substantially as described.

1,104,943. PROCESS OF PRODUCING AMINO-ANTHRAQUINONES. RUDOLF UHLENHUTH, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed June 2, 1913. Serial No. 771,331. (Cl. 23—24.)

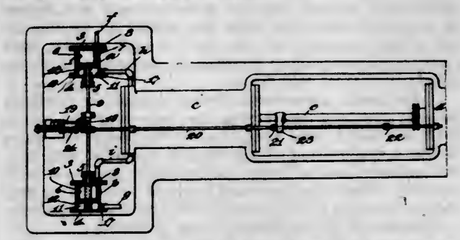
1. The process for producing amino-anthraquinones, which consists in heating an anthraquinonesulfonic acid with aqueous ammonia in such a manner that the sulfurous acid produced by the reaction is transformed into a practically insoluble metallic salt.

2. The process for producing aminoanthraquinones, which consists in heating an alkali salt of anthraquinone sulfonic acid with aqueous ammonia in presence of a soluble barium salt.

3. The process for producing aminoanthraquinones, which consists in heating an alkali salt of anthraquinone sulfonic acid with aqueous ammonia in presence of barium chlorid.

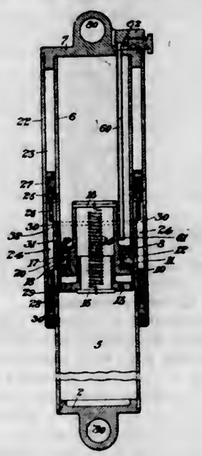
1,104,944. VALVE. RAYMOND EARL WARD and CHARLES CROWL, East Palestine, Ohio. Filed Jan. 30, 1913. Serial No. 745,077. (Cl. 103—66.)

1. The combination with two valves, and a pump cylinder, each valve having a body, a barrel therein, a port within the barrel, a single shaft connecting the two barrels, and connections between the cylinder and the valves for opening and closing the latter.



2. The combination with a valve body, a barrel therein occupying less than the entire length of the body and having a passage therethrough, there being an outlet port from and an inlet port to the body, a pivoted device within the body, and between the barrel and the inlet port, said device being held against rotary movement, and means for yieldingly engaging the device with the body.

1,104,945. FLUID-PRESSURE DEVICE. GEORGE WESTINGHOUSE, Pittsburgh, Pa., assignor to The Westinghouse Air Spring Company, a Corporation of Pennsylvania. Filed Feb. 25, 1910, Serial No. 545,854. Renewed Nov. 26, 1912. Serial No. 733,706. (Cl. 21—50.)



1. An elastic compression device, comprising relatively movable members for varying the volume of the elastic fluid contained in said device, in combination with a pump having a cylinder mechanically connected with one of said movable members and a piston mechanically connected with the other of said members and arranged to increase the pressure on the low pressure side of the sliding joint between said members.

2. An elastic compression device, comprising relatively movable members for varying the volume of the elastic fluid contained in said device, in combination with an external pump having a cylinder mechanically connected with one of said movable members and a piston mechanically connected with the other of said members and arranged to increase the pressure within the pressure cavity of said device.

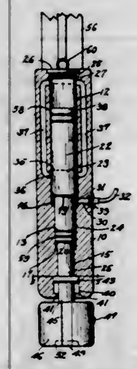
3. An elastic compression device, comprising a cylinder and a plunger adapted for relative movement to vary the volume of the elastic fluid contained in said device, in combination with a pump having a cylinder carried by the plunger and a piston mechanically connected with said cylinder and arranged to increase the pressure within the pressure cavity of said cylinder, upon the proper relative movement of said cylinder and plunger.

4. An elastic compression device, comprising a cylinder and a plunger adapted for relative movement to vary the volume of the elastic fluid contained in said device, in combination with an external pump having a wall formed by a cylinder concentric with and carried by the plunger and a piston carried by the wall of said cylinder, said pump being arranged to increase the pressure within the pressure cavity of said device.

5. An elastic compression device, comprising relatively movable members for varying the volume of the elastic fluid contained in said device, in combination with a pump having a compression cavity carried by one of said movable members and a piston mechanically connected with the other of said members and arranged to discharge fluid at high pressure within the pressure cavity of said device.

[Claims 6 to 34 not printed in the Gazette.]

1,104,946. POWER-HAMMER. JESSE E. WILHELM, Cleveland, Ohio. Filed Oct. 6, 1913. Serial No. 793,565. (Cl. 61—39.)



1. In a pile driver, the combination of a heavy cylinder, a piston therein, means for admitting fluid to a small area at the lower end of the piston and a large area at the upper end of the piston, where the piston is reciprocated, without the use of controlling valves.

2. The combination of a cylinder, means allowing the cylinder to descend by gravity, a piston in the cylinder, means for admitting fluid to a small area of the piston at the lower end to raise the piston, a passage for the fluid adapted to be opened consequent upon the movement of the piston, whereby the fluid is brought to the upper end of the piston having a larger area to return the piston, and means movably carried by the cylinder against which the piston abuts on the downward movement, said means supporting the weight of the cylinder.

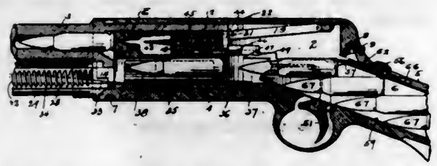
3. The combination of a cylinder, a piston therein having a shoulder, means for admitting fluid against the shoulder and then to the large end of the piston, whereby the piston is reciprocated, a movable head carried by the cylinder, a portion of the piston adapted to abut such head, and means for slidably carrying the cylinder, whereby it may drop by gravity to raise this head and piston with relation to the cylinder after each blow.

4. The combination of a casing having large and small bores, a shoulder formed between them, a piston within the casing having large and small diameters adapted to fit said bores respectively, a passage leading to the large bore adjacent said shoulder, a passage leading from an intermediate point to the opposite end of the large bore, a vertically movable head carried by the lower end of the casing and abutting a portion of the piston, means for slidably carrying the casing so that it may drop by gravity, bringing the piston under this head to separate the shoulders of the piston and of the casing.

5. The combination of a casing having a large bore and a small bore forming shoulders between them, said large bore opening upwardly, removable means for closing said bore, a piston having a large and a small diameter each adapted to fit said bores respectively, a shoulder between said diameters of the piston, a vertical movable head carried by the lower end of the casing, a portion of the piston adapted to abut said head and vertical ways in the sides of the casing adapted to fit suitable guides, whereby the casing may slide downwardly on the piston after each blow to separate the shoulders.

[Claims 6 to 15 not printed in the Gazette.]

1,104,947. AUTOMATIC FIREARM. JOHN O. WINKS, San Francisco, Cal. Filed Mar. 8, 1913. Serial No. 751,679. (Cl. 42—4.)



1. In an automatic firearm, a barrel, a reciprocating breech bolt arranged behind said barrel, means arranged below the forward position of said bolt adapted to support a cartridge and a wedge shaped member attached to said bolt adapted to raise said means as the bolt moves to its rear position.

2. In an automatic firearm, a barrel, a reciprocating breech bolt arranged behind said barrel, a plate arranged below the forward position of said bolt adapted to support a cartridge, and a wedge shaped member attached to said bolt adapted to be moved below said plate and raise the same as the bolt moves to its rear position.

3. In an automatic firearm, a receiver, a barrel attached to said receiver, a tube arranged below said barrel, a reciprocating breech bolt arranged behind said barrel, slides connected to said bolt and extending into said tube, a bar having a wedge shaped rear end attached to said slides at the forward end, and a cartridge supporting plate arranged in said receiver below the forward position of said bolt under which said wedge shaped end is adapted to engage.

4. In an automatic firearm, a receiver, barrel and magazine in combination with a tube arranged below and attached to said barrel, a reciprocating breech bolt arranged in said receiver behind said barrel, slides connected to said bolt and extending into said tube, a bar having a wedge shaped inner end attached to said slides, the lower face of said bar being alined with the bottom of the receiver, a plate arranged on the bottom of the receiver, a cartridge supporting means on said plate and a spring engaging said slides tending to hold the bolt in its forward position.

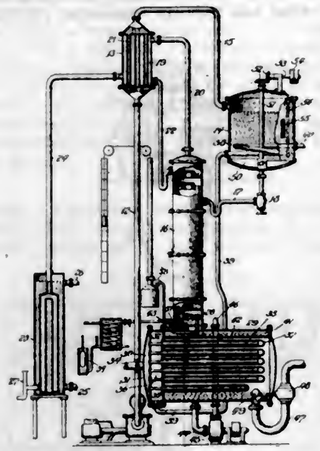
5. In an automatic firearm, a barrel, magazine and receiver in combination with a reciprocating breech bolt arranged in said receiver behind said barrel, slides connected to said bolt and bearing against the bottom of the receiver, a cartridge holder arranged below the forward position of the breech bolt, means for moving a cartridge from the magazine into said holder on the forward movement of the breech bolt, and a wedge shaped member attached to said slides adapted to raise the cartridge holder on the rearward movement of the bolt.

[Claims 6 to 13 not printed in the Gazette.]

1,104,948. DISTILLATION. ADOLPH WOOLNER, Jr., Peoria, Ill. Filed Nov. 3, 1910. Serial No. 590,571. (Cl. 195—15.)

1. The method of distilling, which consists in subjecting the fermented mash in a body to a prolonged heating to develop the flavor and then distilling from said mash its volatile constituents by means of a vapor developed by the concentration of the slop, such vapor being substantially free from objectionable qualities which would tend to injure the developed flavor, substantially as described.

2. The method of distilling, which consists in preliminarily heating the fermented mash, then continuously subjecting the heated mash to a further prolonged heating to develop the flavor, then continuously distilling the volatile constituents of the mash by means of a vapor which is substantially free from objectionable qualities which would tend to injure the developed flavor, substantially as described.



3. The method of distilling, which consists in heating the fermented mash, then continuously subjecting the heated mash to a simultaneous agitation and prolonged heating to develop the flavor, and then continuously distilling the volatile constituents of the mash by means of a vapor developed by the concentration of the slop, such vapor being substantially free from objectionable qualities which would tend to injure the developed flavor, substantially as described.

4. The method of distilling, which consists in heating the fermented mash, then subjecting the heated mash to a prolonged heating to develop the flavor, and then distilling the volatile constituents of the mash by means of a vapor developed by the concentration of the slop, such vapor being substantially free from objectionable qualities which would tend to injure the developed flavor, said first heating of the mash being brought about by the heated volatile constituents of the mash during their distillation, substantially as described.

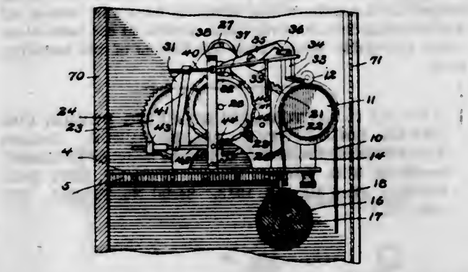
5. The method of distilling, which consists in heating the fermented mash, then subjecting the heated mash to a prolonged heating to develop the flavor, then distilling the volatile constituents of the mash, and then boiling the resulting slop to effect its concentration and produce a vapor employed for the production of said distillation, such vapor being substantially free from objectionable qualities which would tend to injure the developed flavor, said prolonged heating of the mash being occasioned by the action thereon of a heated product of the slop-boiling operation, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,104,949. ELECTRIC RECORDER. JOHN L. ZANDER, Irvington, N. J., assignor to Charles O. Sander, Irvington, N. J. Original application filed Nov. 7, 1912, Serial No. 729,922. Divided and this application filed Jan. 17, 1914. Serial No. 812,652. (Cl. 234—77.)

1. The combination in a graphic recorder of a chart supporting member, a movably mounted ink pad, a pen mounted to normally be out of engagement with the chart on said member, mechanism for periodically interposing the inking pad between the chart and the pen, with a device for periodically actuating the pen to cause it to engage the chart at certain times and to cause it to engage the ink pad at other times.

2. The combination in a graphic recorder of a chart supporting roller, mechanism for turning said roller, a movably supported ink pad adjacent the roller, a pen mounted to form a record on a chart upon the roller, mechanism for periodically moving the ink pad into the line of movement of the pen, and a device for moving the pen alternately into engagement with the chart and with the ink pad.



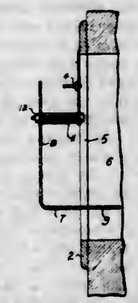
3. The combination in a graphic recorder of a chart supporting structure, a pen mounted to form a record on a chart upon said structure, an ink carrier, means for periodically interposing said carrier between the pen and the chart, and means for periodically moving the pen into an operative position, the same consisting of a member operative on said pen, and a second member for controlling the operation of the first member.

4. The combination in a graphic recorder of a chart supporting member, a pen, means for periodically causing the pen to form a record on a chart carried by said member, the same including a ratchet wheel having teeth of different heights, and an inking member for periodically supplying ink to the pen.

5. The combination with a movable record, a laterally swinging pen, a pivoted ball adapted to engage and depress the pen at any position of its lateral movement, a chart carrier below the pen, an inking pad, and means for periodically moving the inking pad into position below the pen, substantially as described.

[Claim 6 not printed in the Gazette.]

1,104,950. BAFFLE-PLATE DOOR. JOHN ZIMMERMAN, Council Bluffs, Iowa. Filed Jan. 26, 1914. Serial No. 814,302. (Cl. 110—175.)



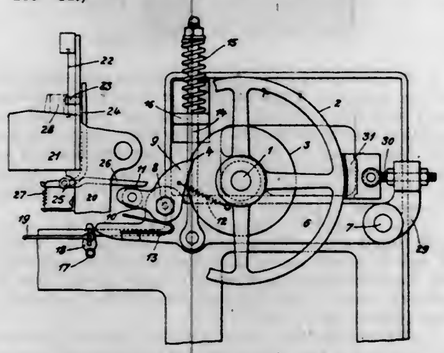
1. A baffle-plate door of the specified class, comprising a swinging door adapted to close the upper portion of the doorway, and an adjustable baffle-plate carried by the swinging door and having two angularly disposed portions, one of those portions being disposed vertically and spaced from the outside of the swinging door, and the other of those portions being disposed horizontally and extending through the under portion of the doorway.

2. A baffle-plate door of the specified class, comprising a swinging door for the upper portion of the doorway, and a slidable bent baffle-plate carried by the swinging door;

the upper portion of the baffle-plate being uniformly spaced from the swinging door, and the lower portion of the baffle-plate being adjustably spaced below that door.

3. A baffle-plate door of the specified class, comprising a swinging door, means for holding the same in different positions of adjustment, a slidable bent baffle-plate carried by the swinging door, and means for holding the baffle-plate in different positions of adjustment relative to the swinging door; the upper portion of the baffle-plate being spaced at a predetermined distance from the outside of the swinging door, and the lower portion of the baffle-plate being adjustably spaced from the bottom of the swinging door.

1,104,951. AUTOMATIC STOPPING DEVICE FOR POWER-LOOMS WITH FIXED REEDS. JOHANN JACOB ZUBLER, Brombach, Germany, assignor to Maschinenfabrik Rüti, formerly Caspar Honegger, Rüti, Switzerland. Filed May 16, 1913. Serial No. 768,082. (Cl. 139—52.)



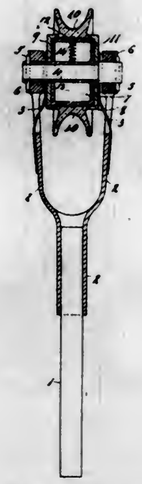
1. In combination, with the frame, the moving lay, the shuttle, the rotary driving member journaled in the frame, including a fly wheel, and provided with a peripheral tooth, and the stopping mechanism to be actuated, of a cushioned lever fulcrumed in the frame and adapted to actuate the stopping mechanism, a pawl carried by and movable upon the lever into and out of the path of the tooth of said member, a brake on said lever engageable with said fly wheel, and means, actuated by the shuttle, for moving the pawl, substantially as described.

2. In combination, with the frame, the moving lay, the shuttle, the rotary driving member journaled in the frame, including a fly wheel, and provided with a peripheral tooth, and the stopping mechanism to be actuated, of a cushioned lever fulcrumed in the frame and adapted to actuate the stopping mechanism, a pawl pivoted on said lever, a spring normally holding the pawl in the path of the tooth, a brake on said lever engageable with said fly wheel, and means, actuated by the shuttle, for moving the pawl out of the path of the tooth, substantially as described.

3. In combination, with the frame, the moving lay, the shuttle, the rotary driving member journaled in the frame, including a fly wheel, and provided with a peripheral tooth, and the stopping mechanism to be actuated, of a lever fulcrumed in the frame and adapted to actuate the stopping mechanism, a rod connected to the lever, a spring cushioning said rod on the frame, a pawl carried by and movable upon the lever into and out of the path of the tooth of said member, a brake on said lever engageable with said fly wheel, and means, actuated by the shuttle, for moving the pawl, substantially as described.

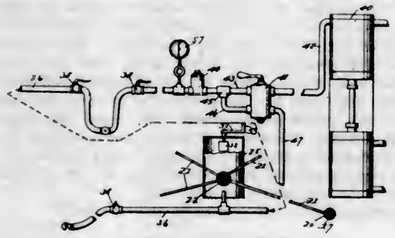
4. In combination, with the frame, the moving lay, the shuttle, the rotary driving member journaled in the frame, including a fly wheel, and provided with a peripheral tooth, and the stopping mechanism to be actuated, of a lever arranged substantially horizontally and fulcrumed in the frame and adapted to actuate the stopping mechanism, a brake carried by said lever rearward of its fulcrum and adapted to peripherally engage said fly wheel, a pawl pivoted on the lever forward of its fulcrum and movable thereon into and out of the path of said tooth, a spring normally holding the pawl in said path, and means, actuated by the shuttle, for moving the pawl out of said path, substantially as described.

1,104,952. LUBRICATING-AXLE FOR TROLLEY-WHEELS. JOHN W. ANDERSON, Hamilton, Ontario, Canada. Filed July 28, 1913. Serial No. 781,572. (Cl. 64—27.)



In a device of the character described the combination with a fixed shaft of a central hollow cylindrical member, cuplike washers surrounding said shaft embracing the opposite ends of said cylindrical member, a flared tread portion mounted both for rotation and axial sliding movement upon said member, a harp and springs bearing between said washers and a part of said harp.

1,104,953. PIPE SYSTEM FOR DISCHARGING WASTE WATER FROM REFRIGERATOR-CARS. JAMES A. APPLEWHITE, Boyd, Tex., assignor of one-half to W. E. Redford, Boyd, Tex. Filed Aug. 26, 1913. Serial No. 786,699. (Cl. 137—78.)

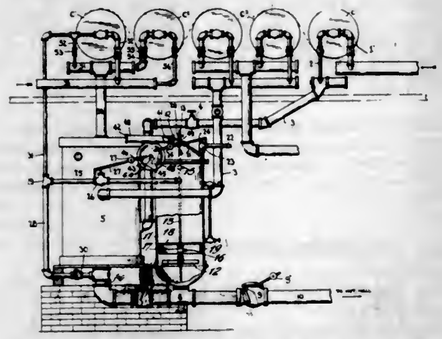


1. Improvements in cars comprising cups in the car floor, a collecting cup, means of communication between the cups whereby water from the first named cups flows into the collecting cup, a tank, means of communication between the collecting cup and the tank, a valve in said means adapted to close by pressure from within the tank, a discharge pipe for the tank, means for supplying air under pressure to the tank for expelling water therefrom, and a valve for closing the discharge pipe after water is expelled from the tank.

2. Improvements in cars comprising a car having openings in its floor, cups in said openings, pipes leading from said cups, a collecting cup into which the pipes discharge, a tank, means of communication between the collecting cup and the tnak, a valve for controlling said means of communication, a discharge pipe for the tank terminating at the side of the car and above the plane of the water in the tank, a valve within the tank for closing the discharge pipe after water is expelled from the tank, and means for supplying air under pressure to the tank.

3. Improvements in cars comprising a car having openings in its floor, a collecting cup, means of communication between the openings in the floor and the collecting cup, a tank, means of communication between the collecting cup and the tank, a valve for controlling said means of communication, a discharge pipe for the tank terminating at the side of the car and above the plane of the water in the tank, a valve within the tank for closing the discharge pipe after water is expelled from the tank, an air pipe in communication with the tank, and means for supplying air to the pipe.

1,104,954. TRAP FOR RETURNING WATER OF CONDENSATION. OTTO BAKER, Sparkill, N. Y. Filed Dec. 2, 1912. Serial No. 734,608. (Cl. 137—101.)

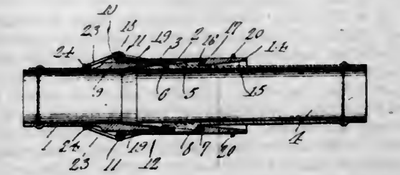


1. An upright cylinder having inlet and outlet openings, valves controlling them, pivoted levers connected with the valve stems and projecting toward each other, and weights for moving said levers to normally close said valves; combined with a centrally pivoted disk disposed between said levers and having arcuate slots in its opposite sides struck around its pivot, stops adjustably mounted in said slots below the lever, a normally horizontal track carried by and across the upper edge of said disks, a moving weight on said track, and means for turning the disk on its pivot and swinging the track over said pivot by the rise and fall of water within said cylinder.

2. An upright cylinder having inlet and outlet openings, valves controlling them, pivoted levers connected with the valve stems and projecting toward each other, and weights for moving said levers to normally close said valves; combined with a centrally pivoted disk disposed between said levers and having arcuate slots in its opposite sides struck around its pivot, stops adjustably mounted in said slots, below the levers, a normally horizontal track carried by and across the upper edge of said disk, a moving weight on said track, a fork projecting from one end of the track, a rod slidable vertically in guides throughout the length of said cylinder and projecting above its top and through said fork, stops on the rod above and below the fork, other stops on the rod within the cylinder, and a float mounted in the latter and loosely surrounding the rod between the last-named stops, for the purpose set forth.

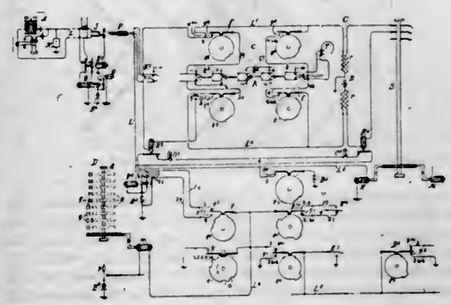
3. An upright cylinder having inlet and outlet openings, valves controlling them, pivoted levers connected with the valve stems and projecting toward each other, and weights for moving said levers to normally close said valves; combined with a disk standing in a vertical plane between said levers and pivoted on a support at one side of said cylinder, the disk having arcuate slots on opposite sides of its pivot, stops adjustably mounted in said slots beneath the free ends of said levers, a substantially horizontal cylinder fixed across the upper edge of said disk and having a fork projecting from one extremity, a rolling ball weight within said cylinder, a vertically movable rod within the first-named cylinder, means for controlling its position by the level of water therein, the upper end of the rod projecting through said fork, and stops on said end above and below the fork, for the purpose set forth.

1,104,955. HOSE-COUPLING. WILLIS J. BELLOWS, Walla Walla, Wash. Filed July 29, 1912. Serial No. 712,192. (Cl. 137—28.)



A pipe coupling comprising a member with a flared conical mouth, a second member provided with an enlarged conical head, the obliquity of the conical surfaces of the first and second mentioned coupling members being the same, a rearwardly extending flange carried by the second mentioned coupling member at the rear portion of the head thereof, the first mentioned coupling member provided with upstanding spaced ears, locking arms pivotally disposed between the said ears, said locking arms provided with an offset flange engaging and interlocking with the flange of the second mentioned coupling member, the said locking arms provided with substantially semi-cylindrical ends with conical inner surfaces, the obliquity of these surfaces being similar to the obliquity of the aforementioned surfaces, pliable gaskets carried by the first and second coupling members allowing for limited axial movement after a sealed joint has been effected therebetween, resilient springs carried by the said upstanding ears of the first mentioned coupling member and the said semi-cylindrical ends of the locking arms, holding the same against radial movement.

1,104,956. TELEPHONE-OPERATOR'S EQUIPMENT. WILLIAM G. BLAUVELT, New York, N. Y., and EDWARD C. MOLINA, Bloomfield, N. J., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed Mar. 14, 1910. Serial No. 549,151. (Cl. 179—27.)



1. In a telephone system, a telephone central station, a connecting circuit thereat, an operator's telephone set normally disconnected from the connecting circuit, automatic switching mechanism interposed between the connecting circuit and telephone set and adapted when started to assume a series of circuit controlling positions, in one of which said telephone set and connecting circuit are connected, and means for starting the travel of the switch-

ing mechanism, said means being operable as an incident to an act of the operator in establishing a connection with the connecting circuit.

2. In a telephone system, telephone lines, a telephone central station, a connecting circuit thereat, an operator's telephone set, automatic switching mechanism interposed between the connecting circuit and telephone set and adapted when started to assume a series of circuit controlling positions, and means for starting the travel of the switching mechanism, said means being operable as an incident to an act of the operator in establishing a connection with the connecting circuit said act being prior to the joining of the operator's telephone and the telephone line of a calling subscriber.

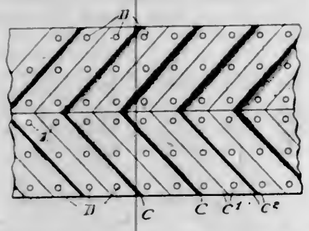
3. In a telephone system, telephone lines, a telephone central station, a connecting circuit thereat, an operator's telephone set, automatic switching mechanism interposed between the connecting circuit and telephone set and adapted when started to assume a series of circuit controlling positions, and means for starting the travel of the switching mechanism, said means being operable as an incident to the act of the operator by which the connecting circuit is joined to the line of a calling subscriber.

4. A telephone system comprising telephone lines and their telephones, connecting circuits therefor, a telephone other than those of said telephone lines, switching mechanisms one individual to each connecting circuit and interposed between its said circuit and said other telephone and having a traveling member adapted to assume a series of circuit controlling positions, and means controlled by the association of a telephone line and a connecting circuit for starting the switching mechanism.

5. A telephone system comprising telephone lines and their telephones, connecting circuits therefor, a telephone, other than those of said telephone lines, switching mechanism interposed between the connecting circuits and said other telephone, means controlled by the association of a telephone line and a connecting circuit for starting the switching mechanism from its normal position, and means controlled by the switching mechanism for stopping its movement in a position to unite said other telephone and connecting circuit.

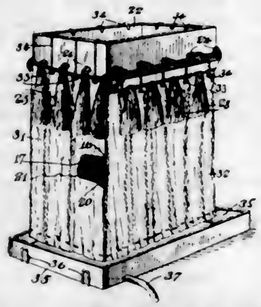
[Claims 6 to 26 not printed in the Gazette.]

1,104,957. TRACTION-WHEEL. WILLIAM T. M. BRUNNEMER, Laporte, Ind., assignor of one-half to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed May 24, 1912. Serial No. 699,464. (Cl. 21—217.)



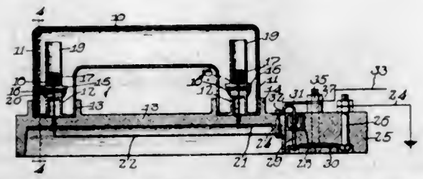
The combination with a cylindrical traction wheel rim of grousers mounted thereon, made up of a plurality of flattened angle bars arranged in two opposed series inclined one to the other and intersecting at the center of the rim, the flanges of said angle bars being bent to conform with the curvature of the rim, the angle summits of said angle bars being outwardly turned to form the cutting edge of the grouser and conform substantially with the curvature of the rim, said angle bar members being so disposed about the rim that the flanges abut one against the other and completely cover the rim and that the angle summits of the successive angle bars overlap so as to form a continuous line tread about the periphery of the wheel, each of said angle bar sections or segments being separately attached to the wheel rim.

1,104,958. COOLER. NANCY L. BURROW, Mountain Park, Okla. Filed Aug. 22, 1912. Serial No. 716,499. (Cl. 62—10.)



In a cooler, a screen covered rectangular frame having legs, metallic shields for said legs and embodying sections of metal formed into sockets and fitted on the legs, said shields having flanged upper ends to prevent the entrance of insects into the frame, liquid evaporative cooling means for the frame, hooks secured to the leg portions of the frame and contacting with the socket portions of the shields and a drain trough supported on said hooks.

1,104,959. VACUUM LIGHTNING-ARRESTER. FRANK SPENCER CHAPMAN, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corportion of Ohio. Filed July 9, 1912. Serial No. 708,445. (Cl. 175—215.)



1. In a lightning arrester, the combination with an evacuated glass vessel having an inwardly projecting glass stem, a pair of electrodes within said vessel, a base of non-conducting, refractory material, a body of asbestos cement which unites the base to said stem, and a hollow element of non-conducting, refractory material on said base open at the top, one of said electrodes being arranged in said hollow element.

2. In a lightning arrester, the combination with an evacuated tube formed with a bend at one end, an electrode arranged in said bend, a second electrode at the other end of said tube, and a non-conducting, refractory shield arranged adjacent the first named electrode so as to prevent direct discharge between said electrodes and protect the wall of said vessel.

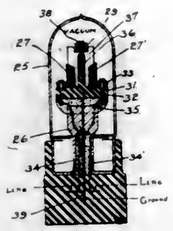
3. In a lightning arrested, the combination with an evacuated tube formed with a bend at one end, an electrode arranged in said bend, a second electrode at the other end of the tube, and a hollow, non-conducting, refractory element open at one end which surrounds the first named electrode.

4. In a lightning arrester, the combination with an evacuated tube having a bend at each end, electrodes located in said bends, and non-conducting, refractory elements associated with said elements and arranged so as to prevent a discharge in a direct line between the electrodes and to protect the adjacent portions of the wall of said vessel.

5. In a lightning arrester, the combination with an evacuated tube having a bend at each end, electrodes located in said bends, and hollow elements open, in each case, at one end and formed of non-conducting, refractory material which surrounds said electrodes, respectively.

[Claims 6 to 14 not printed in the Gazette.]

1,104,960. LIGHTNING-ARRESTER. FRANK SPENCER CHAPMAN, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 24, 1912. Serial No. 738,430. (Cl. 175—30.)



1. A vacuum lightning arrester comprising an evacuated vessel, three electrodes therein, a supporting element within the vessel to which the electrodes are secured and which provides a barrier intervening between two of said electrodes.

2. A vacuum lightning arrester comprising an evacuated vessel, three electrodes therein, a supporting disk to which two of said elements are secured, and a barrier on said disk intervening between said electrodes and supporting the third electrode.

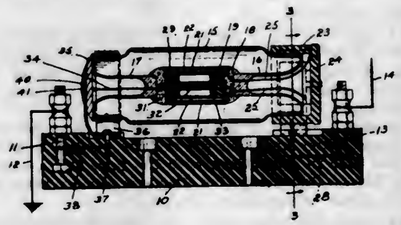
3. A vacuum lightning arrester comprising an evacuated vessel, three electrodes therein, a supporting disk to which two of said electrodes are secured, a barrier between said electrodes which is higher at the ends than in the middle, and means for securing the third electrode to the projecting ends of the barrier so that a space intervenes between said electrode and the middle portion of the barrier.

4. A vacuum lightning arrester comprising an evacuated vessel, a plurality of leading-in wires sealed through the wall of said vessel, electrodes connected severally with said leading-in wires, and a non-conducting element to rigidly hold said electrodes in proper position with respect to each other.

5. A vacuum lightning arrester comprising an evacuated glass vessel having an inturned stem, a base of refractory non-conducting material, one or more electrodes mounted on said base, one or more leading-in wires sealed through said stem and secured to the under side of said base and electrically connected with said electrode or electrodes, and a body of non-combustible cement interposed between said stem and base.

[Claims 6 to 10 not printed in the Gazette.]

1,104,961. LIGHTNING-ARRESTER. PAUL H. CHAPMAN and HENRY M. PINGEN, Toledo, Ohio, assignors to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 2, 1914. Serial No. 816,070. (Cl. 175—30.)



1. A vacuum lightning arrester comprising an evacuated tube, mounting elements arranged in the tube at opposite ends thereof, and electrodes disposed between said elements which, in each case, are secured to one mounting element with the opposite end engaged with the other element, for the purpose described.

2. A lightning arrester comprising an evacuated tube, mounting elements arranged in the tube at opposite ends thereof, electrodes disposed between said elements, and attaching bolts for said electrodes which, in each case, bind the electrode to one element and engage the other element, for the purpose described.

3. A lightning arrester comprising an evacuated tube, mounting elements arranged in the tube at opposite ends thereof, electrodes disposed between said elements, and attaching bolts for said electrodes which, in each case, bind the electrode to one element and provide a projection for engaging the other element.

4. A lightning arrester comprising an evacuated tube, mounting elements arranged in the tube at opposite ends thereof, electrodes disposed between said elements, and attaching bolts for said electrodes having heads which project from the ends of the electrodes, said elements being formed with recesses into which the heads of said bolts fit.

5. A lightning arrester comprising an evacuated tube, mounting elements arranged in said tube at opposite ends thereof, electrodes disposed between said elements which, in each case, are secured to one of said elements, said elements being formed with spacing projections, for the purpose described.

[Claims 6 to 19 not printed in the Gazette.]

1,104,962. PUMP. EDWIN W. CLARK, Chicago, Ill. Filed Oct. 24, 1913. Serial No. 797,028. (Cl. 103—70.)



1. In a double acting pump, the combination of a cylinder having an inlet in the side, plungers in said cylinder above and below said inlet, a two section piston tube, and a coupler nut connecting the sections of the piston tube, said nut having a central passage in communication with the internal passage of the tube and said nut supporting the upper plunger.

2. In a double acting pump, the combination of a cylinder having an inlet in the side, plungers in said cylinder above and below the inlet, a two section piston tube, and a coupler nut engaging the sections of the piston tube, said nut having a central passage in communication with the internal passage of the tube, the upper plunger consisting of a plate screwing onto the upper section of the tube, cup leathers encircling the upper section of the tube, and spacer plates loosely encircling said tube, the lowest spacer plate resting upon said coupler nut.

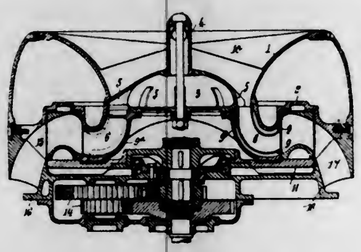
3. In combination, a single integral pump cylinder, a check secured to the upper end thereof, a check in the lower end of said cylinder, said cylinder having swaged converging sides at the lower end, open at the bottom and supporting the lower check, and said cylinder having an

inlet in the side, and two plungers, one above and the other below said inlet and both located between said checks.

4. In a pump, the combination of a cylinder open at the bottom and having an inlet opening at the side, checks at the lower and upper ends of said cylinder, plungers in said cylinder one above and one below the lateral inlet, a piston tube operating said plungers and passing through the upper check, a drop pipe fastened to the upper end of the cylinder, and a combination guide and outlet coupling secured to the upper end of the piston tube, said coupling fitting slidingly within said drop pipe and having vertical passages for the up flow of liquid, said coupling also having an internally threaded socket at the upper end, said socket being closed at the bottom for the purpose described.

5. In a pump, the combination with the cylinder, plungers, checks and piston tube of a drop pipe connecting with the upper end of the cylinder and receiving the upper end of the piston tube, and a combination guide and outlet coupling, said coupling having a central chamber for receiving liquid from the tube and said coupling also having passages leading from said chamber both to the space beneath and outside of the piston tube and to the space above the coupling, whereby liquid from both the inside and the outside of the piston tube is delivered into said chamber and may pass from said chamber up into the drop pipe, and means for securing the coupling to a pump rod above.

1,104,963. PROPELLER. HENRI COANDA, Paris, France. Filed May 29, 1911. Serial No. 630,187. (Cl. 115—14.)



1. In an aerial propeller, the combination with a bell-shaped suction inlet, of a central hollow body in the said bell, a fixed inlet distributer of increasing cross-section, terminating on the one hand at the annular suction cross-section arranged in a plane normal to the axis of the propeller, between the walls of the suction inlet and of the central body, and on the other hand, at a central cylindrical surface coaxial with the axis; movable vanes or buckets arranged on a disk driven by the engine and comprised between cylindrical surfaces coaxial with the axis; and a fixed discharge diffuser with increasing cross-section, comprised between a cylindrical surface coaxial with the axis and a plane at a right angle to the latter.

2. In an aerial propeller, the combination with a suction inlet in the shape of a bell, of guide ribs and a hollow body in said bell, an inlet distributer, distributing boxes in the said distributer, limited by flat lateral surfaces and forming free spaces between their curved walls and those of the distributer; vanes movable relatively to the said distributer and consisting of a ring in which are cut oblique blades with reactional front surfaces; and a discharge diffuser with guide blades.

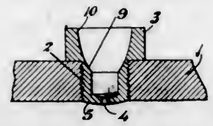
3. In an aerial propeller, the combination with a hollow suction inlet forming a radiator for the engine, of conduits connecting a central hollow body arranged in the suction inlet, to the exhaust of the said engine, openings in the wall of the hollow body, radial conduits forming extension of the body and enabling hot gases to circulate between the walls of the hollow suction inlet and the boxes with which the latter is provided.

1,104,964. CABLE HOIST. LUTHER COBB, Oolitic, Ind., assignor of one-fourth to William E. Clark, one-fourth to Asa C. Clark, and one-half to Curtis Todd, Lawrence county, Ind. Filed June 19, 1911. Serial No. 633,969. (Cl. 57—5.)



In a hoist, a supporting frame having two apertured terminals; an integral rotatable member forming two drums of varied diameters, an intermediate pulley of an average diameter, each of the drums being provided with two circumferential rims, the rims adjacent the pulley acting as the rims for the pulley to assist in maintaining a cable therein, and two oppositely disposed journaling studs, one stud being longer than the other; a block; two independently rotatable pulleys journaled in the block; a cable having its intermediate portion trained over the intermediate pulley and over the two latter pulleys, the terminals of the cable being attached to the respective two drums and designed to be wound upon and unwound from the respective drums; and an actuating pulley keyed upon the longer stud for rotating the integral rotatable member.

1,104,965. NOZZLE. WALTER H. COLES, Troy, Ohio. Filed Nov. 17, 1913. Serial No. 801,336. (Cl. 137—17.)



1. A nozzle having a minute jet inlet of substantially the same length and diameter, and a barrel of a flaring shape so that its wall is out of contact with the jet at ordinary deflections.

2. A nozzle having a minute jet inlet of substantially the same length and diameter, a barrel with walls flaring outwardly from the hole and a mouth at the end of the barrel of a diameter greater than the mean diameter of the barrel.

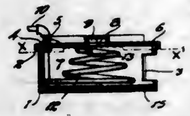
3. A nozzle having a small jet inlet, a concave inner end in the center of which the inlet is located, a barrel long and wide in comparison with the inlet and a mouth at the end of the barrel of a diameter greater than the mean diameter of the barrel.

4. A nozzle having a minute jet inlet of substantially the same length and diameter, a concave inner end in the center of which the jet is located, a barrel long and wide in comparison with the inlet and a mouth at the end of the barrel of a diameter greater than the mean diameter of the barrel.

5. In a nozzle, a means for forming a minute jet, means for protecting the entrance to said jet forming means, means for protecting the jet upon leaving said forming means, said protecting means having a long, flaring barrel so as to be out of contact with the jet in its normal direction.

[Claim 6 not printed in the Gazette.]

1,104,966. OIL-STOVE. JOHN LEE COX, Kenora, Ontario, Canada. Filed Apr. 6, 1914. Serial No. 830,029. (Cl. 158—9.)

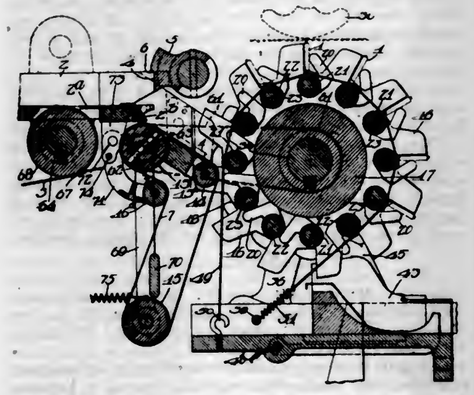


1. An oil stove comprising a pan having an opening in the side thereof, a hinged cover normally closing the pan and provided with a centrally located air opening and a coil contained within the pan having one end communicating with a supply tank and the opposite end thereof formed into a burner, said burner being directed toward the opening in the side of the pan and located adjoining the opening in the top of the pan, as and for the purpose specified.

2. An oil stove comprising a pan having an opening in the side thereof, a hinged cover normally closing the pan, said cover being provided with a centrally located air opening communicating with air inlet ducts formed in the cover and a coil contained within the pan and having one end communicating with a supply tank and the opposite end formed into a burner directed toward the opening in the side of the pan and located at a point adjoining the opening in the cover, as and for the purpose specified.

3. An oil stove comprising a cylindrical pan fitted with a side opening and a top outstanding flanged, a hinged cover normally closing the top of the pan and provided with a centrally disposed air opening communicating with a plurality of radiating air ducts formed in the cover, a coil contained within the pan and having one end communicating with a supply tank and the opposite end formed into a burner, the said burner being directed toward the opening in the side of the pan and being located directly beneath the air inlet opening in the cover and a non-inflammable absorbent material contained in the bottom of the pan beneath the coil, as and for the purpose specified.

1,104,967. ADDRESSING-MACHINE. SANDFORD C. COX, Edison Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed July 27, 1906. Serial No. 327,979. (Cl. 101—1.)



1. In a machine for the purpose described, the combination of means for containing a supply of slugs, a rotary type or slug carrier having means for holding and carrying the type or slugs while being printed from, and means fixed with relation to and movable from the supply-containing means toward said carrier for conducting the slugs into said slug-holding means, said slug-holding means and said slug-conducting means projecting into overlapping planes.

2. In a machine for the purpose described, the combination of means for containing a supply of slugs, a rotary type or slug carrier having means for holding and carrying the type or slugs while being printed from, and means fixed with relation to and movable from the supply-containing means toward said carrier for conducting the slugs into said slug-holding means, said slug-holding means embodying spaced supports for the slugs, and said slug-conducting means projecting into the space between said supports.

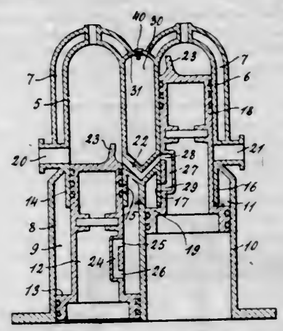
3. In a device for the purpose described, the combination of means for containing a supply of slugs, a rotary type or slug carrier having means for holding and carrying the type or slugs while being printed from, and a conveyer belt moving from the supply-containing means toward said carrier for conducting the slugs into said slug-holding means.

4. In a machine for the purpose described, the combination of means for containing a supply of slugs, a rotary type or slug carrier having means for holding and carrying the type or slugs while being printed from, and an inclined conveyer belt moving from the supply-containing means toward said carrier for conducting the slugs into the slug-holding means.

5. In a machine for the purpose described, the combination of means for containing a supply of slugs, a rotary type or slug carrier having means for holding and carrying the type or slugs while being printed from, and an endless conveyer belt traveling from said supply-containing means toward said carrier for conducting the slugs into said slug-holding means.

[Claims 6 to 13 not printed in the Gazette.]

1,104,968. INTERNAL-COMBUSTION ENGINE. NOBLE E. CROTHERS, Chicago, Ill. Filed Dec. 23, 1912. Serial No. 738,246. (Cl. 123—59.)



1. In an internal-combustion engine, a pair of cylinders having water jackets, and connected by an inlet conduit, and a fuel tank between the cylinders, the side walls of which tank are formed by the corresponding walls of the cylinders, the bottom of the tank being formed by one of the walls of the inlet conduit, and the wall of the water jacket at the top of the cylinders forming the top of the tank.

2. An internal-combustion engine comprising a pair of working cylinders having exhaust ports, pump-chambers in axial alinement with the working cylinders said working cylinders having ported extensions into the pump chambers, a fuel inlet conduit opening at its ends into the respective working cylinders, and oppositely traveling pistons in the working cylinders and the ported extensions thereof, each piston having a plunger which works in the

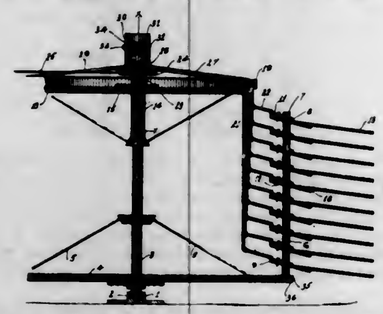
corresponding pump-chamber, and said pistons at the end of their outward travel uncovering the exhaust ports and the respective ends of the conduit, and having ducts which establish communication between the conduit and the ports of the aforesaid extensions into the respective pump-chambers.

3. An internal-combustion engine comprising a pair of working cylinders having exhaust ports, pump-chambers in axial alinement with the working cylinders, said working cylinders having ported extensions into the pump chambers, a fuel inlet conduit opening at its ends into the respective working cylinders, and oppositely traveling pistons in the working cylinders and the ported extensions thereof, each piston having a plunger which works in the corresponding pump-chamber, and said pistons at the end of their outward travel uncovering the exhaust ports and the respective ends of the conduit, and having ducts provided with ports which open through the side of the pistons and establish communication between the conduit and the ports of the aforesaid extensions into the respective pump-chambers.

4. An internal-combustion engine comprising a pair of working cylinders having exhaust ports, pump-chambers in axial alinement with the working cylinders, said working cylinders having ported extensions into the pump chambers, a fuel inlet conduit opening at its ends into the respective working cylinders, and oppositely traveling pistons in the working cylinders and the ported extensions thereof, each piston having a plunger which works in the corresponding pump-chamber, and said pistons at the end of their outward travel uncovering the exhaust ports and the respective ends of the conduit, each piston having a duct provided with ports which open through the side thereof, one of said ports registering with the port of the aforesaid extension into the pump-chamber in which the plunger of the corresponding piston works, and the other port communicating with the corresponding end of the conduit at the end of the inward stroke of the piston.

5. In an internal combustion engine, a working cylinder having a fuel supply conduit, a pump chamber in axial alinement with the working cylinder, said working cylinder having a ported extension into the pump chamber, and a piston in the working cylinder and the ported extension, said piston having a plunger which works in the pump chamber, and said piston also having an outlet duct for the pump chamber, said duct registering with the port of the cylinder extension and the aforesaid fuel supply conduit at the end of the compression stroke of the plunger.

1,104,969. PULP-DISTRIBUTER FOR CONCENTRATORS. WILTON E. DARROW, Sutter Creek, Cal. Filed July 28, 1913. Serial No. 781,552. (Cl. 83—59.)

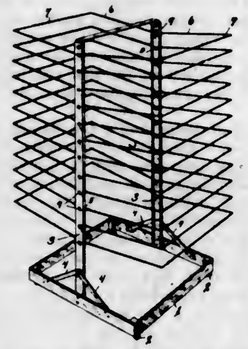


1. A device of the character described comprising a distributing member, a receptacle spaced from said distributing member and adapted to discharge thereon, a plate on said distributing member supporting said receptacle, said plate being adapted to shut off a portion of the discharge from said receptacle upon said distributing member, as described.

2. In a device of the character described comprising a distributing member having an opening at one point, a receptacle spaced from said distributing member and adapted to discharge thereon, a plate on said distributing member supporting said receptacle, said plate being adjacent said opening in said distributing member and adapted to prevent a discharge from said receptacle into said opening, as described.

3. A device of the character described comprising a distributing member, a receptacle discharging on said distributing member, said receptacle having longitudinal slots, a plate secured to said distributing member, a bolt projecting through said plate and one of said slots and a nut on said bolt, as described.

1,104,970. RACK. GEORGE E. DEAN, Albion, Mich., assignor to The Union Steel Screen Company, Ltd., Albion, Mich. Filed Feb. 8, 1912. Serial No. 676,354. (Cl. 211—14.)



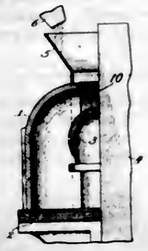
1. In a rack, the combination with the base, of channeled uprights, arranged oppositely and facing inwardly, the arms of the channels having a series of opposed notches therein, supports comprising rectangular frames of wire arranged between said uprights with their side members engaging opposed notches thereof, the side members of said supports having offsets disposed in the channels of the uprights, and hooked bolts passing through said uprights engaging said offsets, all coacting for the purpose specified.

2. In a rack, the combination with the base, of channeled uprights arranged oppositely and facing inwardly, the arms of the channels having a series of opposed notches therein, endless wire supports arranged between said uprights with their side members engaging the notches thereof, the side members of said supports having offsets disposed in the channels of the uprights, and means for securing said supports to said uprights engaging said offsets within the channels of said uprights, all coacting for the purpose specified.

3. In a rack, the combination with a base, of channeled uprights arranged oppositely and facing inwardly, the arms of said channels having a series of opposed notches therein; rod-like supporting arms arranged in said notches; offsets in said arms disposed in the channels of the uprights; and hook-shaped bolts passing through said uprights and engaging the offsets of said supporting arms whereby the arms are immovably secured to the upright, all coacting for the purpose specified.

1,104,971. MOLD. WILLIAM W. DOOLITTLE, Evanston, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1909. Serial No. 470,343. (Cl. 22—27.)

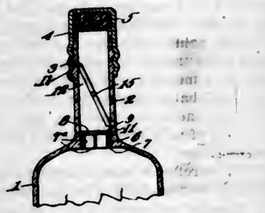
1. A mold forming apparatus comprising in combination, a substantially horizontal supporting plate, a substantially vertical pattern member, a flask member on the supporting plate, one of the said members being movable toward and from the other, and means having telescopic relation with one of the said members for retaining the sand during the formation of the mold.



2. A mold forming apparatus comprising in combination, a substantially horizontal supporting plate, a substantially vertical pattern member, a flask member slidably carried on the supporting plate, and means having telescopic relation with the flask member for retaining the sand during the formation of the mold.

3. A mold forming apparatus comprising in combination, a substantially horizontal supporting plate, a substantially vertical pattern member, a flask member on the supporting plate, one of the said members being movable toward and from the other, and means having telescopic relation with one of said members for retaining the sand during the formation of the mold, the flask member decreasing in cross section from the open face thereof.

1,104,972. NON-REFILLABLE BOTTLE. DAVID LEON DOVER, Seattle, Wash. Filed May 6, 1913. Serial No. 765,966. (Cl. 215—68.)



1. In combination, a bottle neck, and inner and outer juxtaposed valves pivoted therein, each valve being arranged to close the passage through the neck when the valve is swung away from the other valve, the inner valve being adapted to swing open outwardly and to swing against the outer valve when the outer valve is closed, and the outer valve being adapted to swing open toward and against the inner valve.

2. In combination, a bottle neck, an outwardly opening flap valve pivoted therein, and a butterfly valve pivoted within the neck beyond the outer side of the flap valve and arranged to close the passage through the bottle neck when the butterfly valve is in a diagonal position within the bottle neck, the inner end of the butterfly valve being arranged adjacent the pivot of the flap valve when the butterfly valve is closed, and being adapted to wipe along the outer side of the flap valve when the butterfly valve is opened, the flap valve being swingable against one side of the butterfly valve when the butterfly valve is closed.

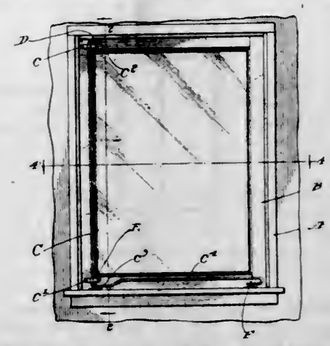
3. In combination, a bottle neck, an outwardly opening buoyant flap valve pivoted therein, and a butterfly valve pivoted within the neck beyond the outer side of the flap valve and arranged to close the passage through the bottle neck when the butterfly valve is in a diagonal position within the bottle neck, the inner end of the butterfly valve being arranged adjacent the pivot of the flap valve when the butterfly valve is closed, and being adapted to wipe along the outer side of the flap valve when the butterfly valve is opened, the flap valve being swingable against one side of the butterfly valve when the butterfly valve is closed, the outer end of the butterfly valve being overbalanced.

4. In combination with a bottle neck, a butterfly valve disposed therein, trunnions slidably engaged to the butterfly valve, and means engageable with the valve and trunnions for projecting the trunnions into pivotal engagement with the bottle neck.

5. In combination with a bottle neck, a butterfly valve disposed therein, trunnions slidably engaging the valve, and a member insertible into the valve between the trunnions to project them into pivotal engagement with the bottle neck.

[Claims 6 to 8 not printed in the Gazette.]

1,104,973. COMBINED WINDOW LOCK AND ADJUSTER. WILLIAM D. DREISKE, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,201. (Cl. 16—22.)



1. A casement window provided with a swinging sash, and mechanism for holding the window sash in either open or closed position, comprising a rod mounted to rotate on the window, provided with locking arms disposed adjacent the corners of the sash, one of said arms being extended to form a handle, said handle having engagement with the window to lock the sash in closed position, and to hold the window open.

2. A casement window provided with a swinging sash, and mechanism for holding the window sash in either open or closed position, comprising a rod mounted to rotate on the window, provided with locking arms disposed adjacent the corners of the sash, one of said arms being extended to form a handle, said handle having engagement with the window to lock the sash in closed position, and to hold the window open, said arms having locking engagement with the window, to firmly close the sash, and said handle being movable toward the sash to close and lock the same.

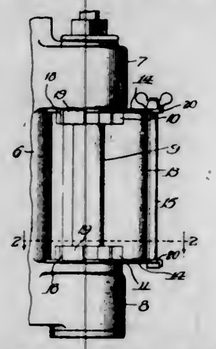
3. A casement window provided with a swinging sash, and mechanism for holding the window sash in either open or closed position, comprising a rod mounted to rotate on the window, provided with locking arms disposed adjacent the corners of the sash, one of said arms being extended to form a handle, said handle having engagement with the window to lock the sash in closed position, and hold the window open, the said rod extending parallel with the free edge of the sash, bearings for said rod, disposed between said arms, and a plurality of devices on the window, serving to provide the means of said engagement with the handle.

4. A casement window provided with a swinging sash, and mechanism for holding the window sash in either open or closed position, comprising a rod mounted to rotate on the window, provided with locking arms disposed adjacent the corners of the sash, one of said arms being extended to form a handle, said handle having engagement with the window to lock the sash in closed position, and to hold the window open, the said rod extending up and down, and said handle being movable in a horizontally disposed plane at the bottom of the window.

5. A casement window provided with a swinging sash, and mechanism for holding the window sash in either

open or closed position, comprising a rod mounted to rotate on the window, provided with locking arms disposed adjacent the corners of the sash, one of said arms being extended to form a handle, said handle having engagement with the window to lock the sash in closed position, and to hold the window open, said handle having a hook with an eye in the end portion thereof, and means on the window for engaging the said hook, adapted to enter said eye.

1,104,974. LUBRICATOR-GLASS SHIELD. FRANK G. DUNBAR, Chicago, Ill., assignor to Sargent Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 7, 1911. Serial No. 648,065. (Cl. 184—97.)



1. A shield for lubricator-glasses, comprising a semi-tubular glass shield, top and bottom plate metal clips provided with alined openings to receive a lubricator-glass and fitting against the top and bottom respectively of the glass shield, the inner faces of the clips being free from obstructions at their fronts to permit of the shield being inserted sidewise between the clips, and means connecting the clips for drawing the same together and clamping them against the ends of the glass shield, the rear edge of each clip being shaped to fit against a portion of a lubricator body to prevent turning of the clip on the lubricator-glass.

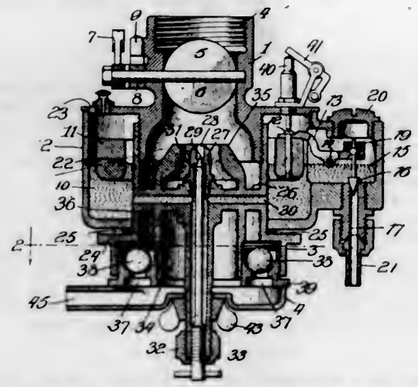
2. A plate metal clip for a lubricator-glass shield having an opening to receive a lubricator tube, portions of the back and side edges of the clip being disposed to form ears at substantially right angles to the clip to embrace the side and back edges of a shield, the back edge of the clip between the ears being shaped to engage a lubricator body and prevent turning of the clip on the lubricator tube, and the face of the plate in front of the ears being free from obstructions, whereby a shield may be positioned upon the plate by sliding the shield sidewise thereon from front to rear and into engagement with the ears.

3. The combination of a lubricator, comprising a body, a sight or gage-glass and the packing nuts therefor, of a shield comprising a pair of clips permanently secured in position by said packing nuts and having provisions for engagement with the body of the lubricator, whereby turning of the clips on the nuts is prevented, a protector disposed between said clips and around the sight or gage-glass, projections formed on said clips for engaging with the rear edges of said protector, said clips being formed to permit the insertion of the protector therebetween from the front, and a bolt connecting the forward portions of said clips, said clips having projections serving to retain the bolt in position.

4. A clip for a lubricator-glass shield, comprising a body formed from a single piece of metal adapted to fit over a packing nut and having the corners projecting at right angles from the plane of the body to engage with the corners of a curved protector, said body being shaped to abut against the body of the lubricator whereby turning of the clip is prevented, and having a slotted ear at the front thereof to receive a protector retaining bolt.

5. A clip for a lubricator-glass shield, comprising a body formed of a single piece of metal having the corners projecting at right angles from the plane of the body to engage with the corners of a protector, said body being shaped to abut against the body of the lubricator to prevent turning of the clip, and having a slotted ear at the front thereof, the extremity of said ear being folded at right angles to the plane of the clip and adapted to receive a protector retaining bolt.

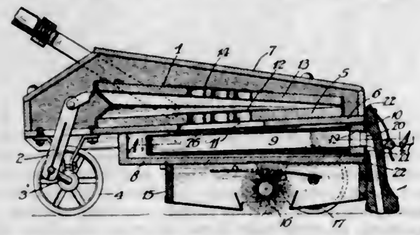
1,104,975. CARBURETER. CHARLES FELSKE, Kokomo, Ind., assignor to Planhard Manufacturing Company, Kokomo, Ind., a Corporation of Indiana. Filed Oct. 12, 1910. Serial No. 586,610. (Cl. 48—155.2.)



1. In a carbureter, a normal air passage; a spray nozzle in said normal air passage; an auxiliary air passage; an annular valve seat member containing a plurality of valve openings in said auxiliary air passage; ball valves normally closing said openings; a member for limiting the lift of said balls; means for adjusting the distance between said valve seat member and said limiting member to vary the lift of said balls; means for locking said members together in their adjusted position, and an intake member common to all of said valve openings held in place by said locking means.

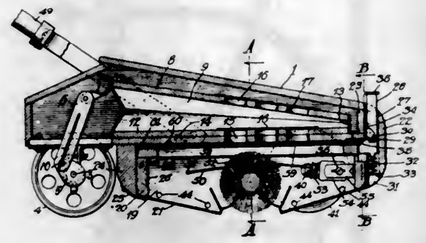
2. In a carbureter, a spray nozzle; a passage surrounding said spray nozzle for the normal admission of air; an auxiliary passage surrounding said normal air passage for the admission of air at high engine suction; an annular valve seat member with a plurality of valves for normally closing said auxiliary passage; a member for limiting the lift of said valves; screw-threaded means for adjusting the distance between said valve seat member and said limiting member to vary the lift of said valves; means for locking said members together in their adjusted position, and an intake member common to both said passages held in place by said locking means.

1,104,976. CLEANING DEVICE. LEONARD L. FERGUSON, Chicago, Ill., assignor to Duntley Pneumatic Sweeper Company, Chicago, Ill., a Corporation of Delaware. Filed Oct. 6, 1913. Serial No. 793,631. (Cl. 83—47.)



An air filtering device for pneumatic carpet sweepers, comprising a mouthpiece having a narrow opening therein, a U-shaped metallic frame secured to said mouthpiece, and a filtering fabric surrounding said frame and secured to said mouthpiece, said frame being suitably dimensioned with respect to the filtering fabric to hold said fabric taut with its opposite faces spaced apart.

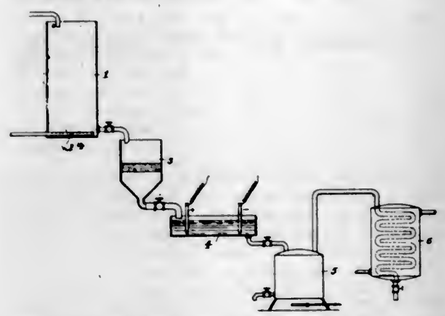
1,104,977. CARPET-SWEEPER. LEONARD L. FERGUSON, Chicago, Ill., assignor to Duntley Pneumatic Sweeper Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 8, 1913. Serial No. 805,306. (Cl. 15—60.)



1. In a carpet sweeper, the combination of suction-creating means, an air filtering device, a sweepings receptacle in communication with said suction-creating means and having spaced openings through the ends thereof, said receptacle being provided with an opening through its bottom, and a brush mounted to rotate in said opening.

2. In a carpet sweeper, the combination of a casing, supporting wheels journaled upon said casing, a plurality of bellows in said casing, connections between said supporting wheels and bellows whereby the latter on rotation of the supporting wheels are operated to create a continuous draft of air, a sweepings receptacle detachably mounted on said casing, and having spaced openings through the ends thereof, said bellows having ports communicating with the sweepings receptacle, an air filtering screen located between said ports and the sweepings receptacle, said receptacle being provided with an opening through its bottom, and a brush mounted to rotate in said opening.

1,104,978. PROCESS OF PRODUCING ACETIC ACID. EDWARD H. FRENCH, Dayton, and JAMES R. WITHROW, Columbus, Ohio. Filed July 9, 1909. Serial No. 506,839. (Cl. 204—24.)

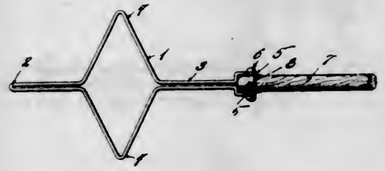


1. The process of producing purified acetic acid directly from acetate of lime obtained in the destructive distillation of wood comprising in adding a mineral acid thereto, distilling off the acetic acid and then subjecting the distillate to electrolysis maintained below the point at which material decomposition of the acetic acid occurs to remove pyroligneous bodies and foreign volatile acids and oils.

2. The process of obtaining refined acetic acid directly comprising subjecting impure acetic acid to electrolysis maintained below the point at which material decomposition of the acetic acid occurs to remove pyroligneous bodies and foreign volatile acids and oils.

3. The process of obtaining refined acetic acid directly comprising subjecting impure acetic acid to electrolysis maintained below the point at which material decomposition of the acetic acid occurs in conjunction with a salt to remove pyroligneous bodies and foreign volatile acids and oils.

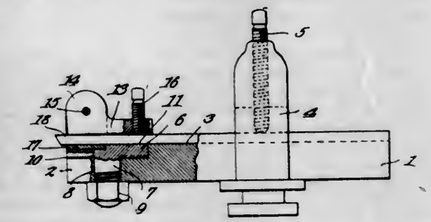
1,104,979. MOP. ELIZABETH FRIES, St. Louis, Mo. Filed Feb. 28, 1914. Serial No. 821,825. (Cl. 15—13.)



1. The improved mop, having a diamond-shaped metallic rod frame formed of a rod doubled upon itself to form a narrow front finger, integral lateral fingers extending from said frame and integral parallel portions at the rear of the frame forming a handle finger, and a suitable handle applied to said handle finger.

2. The improved mop, comprising a metallic rod frame having a diamond shaped body adapted to support mop material, a narrow front finger connected to the front portion of said body, a narrow handle finger connected to the rear portion of said body, and a suitable handle applied to said handle finger.

1,104,980. TOOL-HOLDER. JOHN VALENTINE FRY, Phillipsburg, N. J. Filed Aug. 22, 1913. Serial No. 786,170. (Cl. 29—96.)



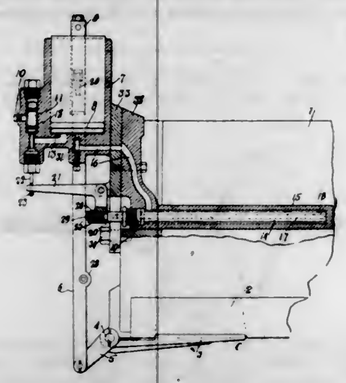
A tool holder embodying a member having a relatively deep upper channel to snugly receive a cutter therein, and having a pair of upstanding ears at one end of and flush with the sides of the said channel, a lever disposed above the channel and having an upstanding ear at one end pivoted between the said ears, and a binding screw carried by the other end of the lever and arranged to engage the bottom of the channel or a cutter fitting in the channel, to clamp the cutter between the first-mentioned end of the lever and the bottom of the channel.

1,104,981. COOKER FOR SEEDS. CHARLES HIRAM FULSON, Atlanta, Ga., assignor to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 5, 1913. Serial No. 804,805. (Cl. 87—6.)

1. The combination, with a stationary cooker having a discharge opening, and a hinged closure for said opening, of an actuating device for said closure, means to control the operation of said actuating device, and a thermostat mounted in said cooker and connected with said controlling means.

2. The combination, with a cooker to contain a quantity of meats to be cooked and having a discharge opening, and a closure for said opening, of an actuating device for said closure, means to control the operation of said actu-

ating device, a thermostat carried by the wall of said cooker and projecting into the meats within the same and connected with said controlling means.



3. The combination, with a cooker having a discharge opening, and a closure for said opening, of a fluid-operated device for actuating said closure, a valve to control the operation of said actuating device, and a thermostat mounted in said cooker and connected with said valve to open the same when the heat within said cooker reaches a predetermined degree.

4. The combination, with a cooker having a discharge opening, and a closure for said opening, of a fluid-operated device for actuating said closure, a valve to control the operation of said actuating device, and a thermostat mounted within said cooker and having a part extending beyond the wall thereof, and a lever interposed between the outer end of said thermostat and said valve, whereby the expansion of said thermostat will actuate said lever to unseat said valve.

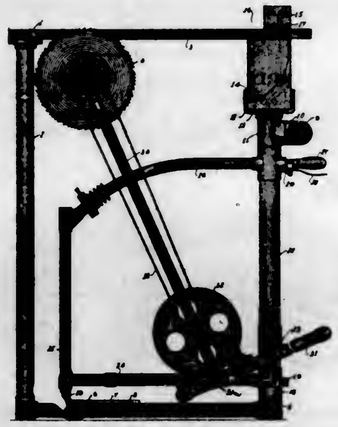
5. The combination, with a cooker having a discharge opening, and a closure for said opening, of a fluid-operated device for actuating said closure, a valve to control the operation of said actuating device, and a thermostat mounted within said cooker and having a part extending beyond the wall thereof, a lever interposed between the outer end of said thermostat and said valve, whereby the expansion of said thermostat will actuate said lever to unseat said valve, and a spring interposed between said lever and said thermostat and arranged to be compressed by the expansion of said thermostat and to expand after said valve has been unseated, thereby completing the movement of said valve.

[Claims 6 to 15 not printed in the Gazette.]

1,104,982. MITER-SAW TABLE. HAROLD J. GAGE, Stockton, Cal., assignor of one-half to Horace O. Camm, Stockton, Cal. Filed May 5, 1913. Serial No. 765,503. (Cl. 143—6.)

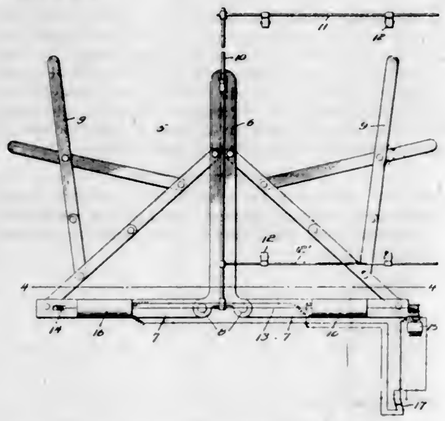
1. A device of the character described comprising the combination with a supporting frame having a slotted table thereon, of a tubular member, members on said supporting frame on which said tubular member is turnable, a pair of branches on said tubular member near its lower end, a projecting frame carried by said branches, a frame pivotally mounted on said projecting frame and projecting under said pair of branches, and a saw mechanism mounted on said pivotally mounted frame and having a saw adapted to engage the slots in said table, as described.

2. A device of the character described comprising the combination with a supporting frame carrying a table provided with slots, a member turnable on said frame, a pair of branches on the lower end of said turnable member, a projecting frame carried by said branches, an adjustable catch on said frame carried by said branches, a guide member on said supporting frame having notches adapted to be engaged by said catch and a saw mechanism pivotally mounted on said frame on said branches and



carrying a saw adapted to engage said slots in said table, as described.

1,104,983. MUSIC-LEAF TURNER. FRANK E. GILES, Scranton, Pa. Filed July 23, 1913. Serial No. 780,748. (Cl. 84—17.)

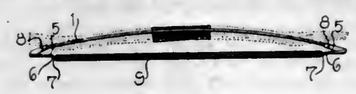


A music leaf turner comprising a center bar having spaced eye terminals at one end, base sections pivotally connected to the eye terminals, jointed braces pivotally connected to the center bar and to the outer ends of the base bars, foldable rack frames pivotally connected to the braces, pintle eyes formed on the center bar, a turning shaft journaled in the pintle eyes, spaced parallel music sheet turning arms fixed to the said shaft and having clips, a lever fixed to the lower end of the shaft between the eyes, and an electrically controlled motor mounted upon one of the base bars and having connection with the lever for operating the same.

1,104,984. SAFETY POCKET-CLASP. CHRISTOPH GLECKLER, Staunton, Ill. Filed Feb. 9, 1914. Serial No. 817,605. (Cl. 2—151.)

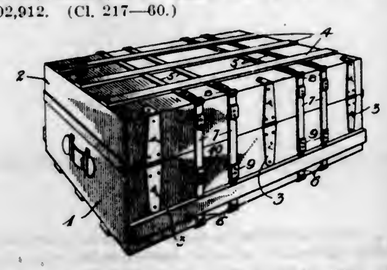
A device of the class described including a strip of elastic material, plates connected to its ends, socket members formed integral with the said plates and arranged at

an angle thereto, and a pin member provided with a pointed head upon each end and adapted to be inserted



within the socket members and held therein by the tension of the elastic strip.

1,104,985. TRUNK CONSTRUCTION. DAVID GOLDSMITH, Newark, N. J. Filed Nov. 25, 1913. Serial No. 802,912. (Cl. 217—60.)



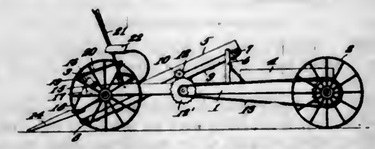
1. In a sectional hinged container, a flexible resilient member carried by adjacent hinged container sections at opposite sides of and spanning the hinge line of said sections, said member extending across said sections when the latter are closed to form a strengthening means therefor and bending when one section is swung on its hinge and relative to the other to provide a supporting spring cushion.

2. In a sectional hinged container, a flexible resilient metal strap spanning the hinge line of adjacent hinged container sections and having its opposite ends carried by said adjacent sections and with its intermediate portion free and spanning said hinge line, said strap providing a strengthening means for said sections when closed and a supporting spring cushion when one of said sections is swung on its hinge and relative to the other and adjacent section.

3. In a sectional hinged container, a flexible resilient metal strap spanning the hinge line of adjacent hinged container sections and having its ends connected with said adjacent sections and with its intermediate portion free and spanning said hinge line, one of said end connections being slidable, and said strap providing a strengthening means for said sections when closed and a supporting spring cushion when one of said sections is swung on its hinge and relative to the other and adjacent section.

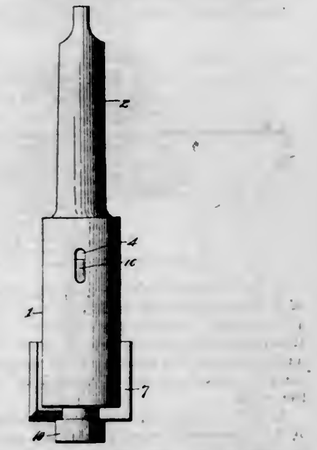
4. In a sectional hinged container, a strap of flexible spring steel carried adjacent its ends by adjacent hinged container sections at opposite sides of and spanning the hinge line of said sections, said strap extending across said sections when the latter are closed to form a strengthening means therefor, and bending when one section is swung on its hinge line and relative to the other to provide a supporting spring cushion for the first of said sections.

1,104,986. GATHERING-MACHINE. FINLEY R. GOODNOUGH, Mecosta, Mich. Filed Sept. 11, 1913. Serial No. 789,357. (Cl. 55—17.)



A gathering machine embodying a wheel mounted frame, an inclined elevator frame fulcrumed to the aforesaid frame, an endless apron carried by the elevator frame, a scoop having its sides pivoted to the sides of the elevator frame at the lower end thereof, the wheel mounted frame having means for supporting the elevator frame when the same is swung downwardly, a bail having its ends pivoted to the sides of the scoop adjacent the pivotal points of the scoop, and actuating means carried by the wheel mounted frame and connected to the said bail for swinging the scoop to and from the ground when the elevator frame is in its lowermost position, and adapted to swing the scoop upwardly to inoperative position and to simultaneously raise the lower end of the elevator frame, the forward end of the scoop being free.

1,104,987. DETACHABLE-BLADE-CONNECTING DEVICE FOR TOOLS. JOHN WILLIS GRIMES, Tyler, Tex. Filed Jan. 12, 1914. Serial No. 811,702. (Cl. 77—58.)



1. The combination with a tool head having an inwardly tapering socket with registering slots in its opposite walls, a blade connecting or securing element shaped to fit within said socket and having a slot extending therethrough positioned to register with the slots in said head when the parts are in operative position, said element having a key in said slot and a blade adapted to extend through the slots in said head and connecting element and having a notch in one edge to engage said key.

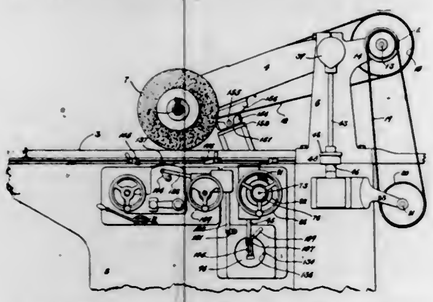
2. The combination with a tool head having an inwardly tapering socket with registering slots in its opposite walls, a blade connecting or securing element shaped to fit within said socket and having a slot extending therethrough positioned to register with the slots in said head when the parts are in operative position, said element having a key at the outer end of said slot and a blade adapted to extend through said head and connecting element and having a notch formed intermediately of the ends of its cutting edge and adapted to engage said key.

3. The combination with a tool head having an inwardly tapering socket with registering slots in its opposite walls, a blade connecting or securing element shaped to fit within said socket and having a slot extending therethrough positioned to register with the slots in said head when the parts are in operative position, said element having a key at the outer end of said slot and a blade adapted to extend through said head and connecting element and having a notch formed intermediately of the ends of its cutting edge and adapted to engage said key, the walls of the slot in said element projecting beyond said key and forming overhanging lips adapted to overlap the edges of the notch in said blade.

4. The combination with a tool head having an inwardly tapering socket with registering slots in its opposite walls at its outer end, a slot extending through said head at the inner end of said socket in a plane at right angles to the

plane of the slots formed in the outer end of said head, a blade connecting element shaped to fit within said socket and having a flattened inner end for engagement with the slot at the inner end of said socket, said element having a slot extending therethrough positioned to register with the slots in the outer end of said head when the parts are in operative position, a blade to extend through the slots in said head and connecting element and coöperating means on said element and blade for locking the blade against longitudinal movement.

1,104,988. METAL-REDUCING MACHINE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed May 26, 1913. Serial No. 770,006. (Cl. 51—12.)



1. In a machine of the class described, the combination of a work carrier, an oscillatory tool carrier provided with a tool, and automatically operative mechanism for relatively operating the carriers to cause the tool to longitudinally traverse the work and for operating one of the carriers to cause the tool to move step by step crosswise of the work.

2. In a machine of the class described, the combination of a reciprocatory work carrier, an oscillatory tool carrier provided with a tool adapted to traverse the work on the reciprocation of the work carrier, and means for automatically moving the tool carrier transversely of the line of reciprocation of the work carrier and partly across the work at approximately the end of each stroke of the work carrier.

3. In a machine of the class described, the combination of a work carrier, an oscillatory tool carrier provided with a tool, and mechanism for relatively operating the carriers to cause the tool to longitudinally and step by step crosswise traverse the work.

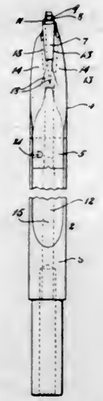
4. In a machine of the class described, the combination of a reciprocatory work-carrier, an oscillatory tool-carrier provided with a tool adapted to longitudinally traverse the work on the reciprocation of said work carrier, and means governed by the work-carrier for causing transverse movement of the tool carrier at predetermined points.

5. In a machine of the class described, the combination of a reciprocatory work carrier, an oscillatory tool carrier provided with a tool adapted to longitudinally traverse the work on the reciprocation of the work carrier, mechanism for automatically reciprocating the work carrier and for moving the tool carrier in the direction of its axis of oscillation at predetermined points, said oscillatory tool carrier being automatically movable about its axis to secure reduction of the work, and a movable support for resisting the oscillatory movement of the tool carrier in the different lateral positions thereof.

[Claims 6 to 37 not printed in the Gazette.]

1,104,989. DRILL. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 15, 1914. Serial No. 812,264. (Cl. 77—68.)

1. A drill having a plurality of cutting-portions, a chip-outlet common to said cutting portions, and a duct extending longitudinally of the drill, having branches leading to the respective cutting portions to convey a lubricant thereto for forcing the chips into said chip-outlet.



2. A drill comprising a shank having a longitudinally extending flute and a wing at approximately right angles to the flute provided with oppositely disposed cutting-edges.

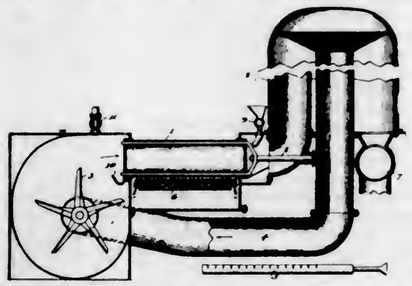
3. A drill comprising a shank having a single flute, and also having a wing at approximately right angles to the entering end of the flute, the wing having oppositely disposed cutting portions and the shank having chip-directing surfaces at the base of the wing leading into said flute.

4. A drill comprising a shank having a flute and a wing, to the base of which said flute leads, said wing having a plurality of cutting portions.

5. A drill comprising a shank having a flute and a wing, to the base of which said flute leads, said wing having a plurality of cutting portions, and its sides being on rearwardly converging angles.

[Claims 6 and 7 not printed in the Gazette.]

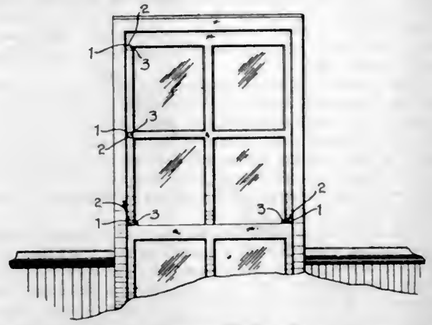
1,104,990. PROCESS FOR POPPING CORN. CHARLES KNOX HARDING, Chicago, Ill. Filed Nov. 23, 1912. Serial No. 733,213. (Cl. 99—11.)



The process of popping corn, which consists in producing pressure within the kernels by the application of heat and exploding the kernels while maintaining a gaseous pressure on the exterior of the kernels less than normal atmospheric pressure.

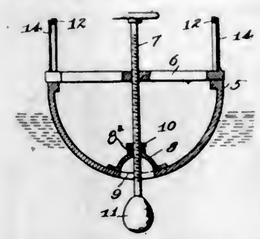
1,104,991. SASH-LOCK. EDSON O. HARVEY, Bancroft, Nebr. Filed Mar. 10, 1913. Serial No. 753,406. (Cl. 16—18.)

A sash lock comprising the combination of a plate having a cam portion provided with an inwardly directed slot, said plate being adapted to be positioned upon the upper sash of a window having a recess formed therein to accommodate the slotted cam portion of the plate; with a right angled lever, a plate adapted to be secured upon the lower window sash and having a rear stop edge, means for pivoting the lever upon the last mentioned plate at the junction of the right angled portion of said lever, a neck portion projecting from one end of the lever and adapted for removable engagement in the slot of the first mentioned plate, and a head formed upon the free end of the neck



portion and adapted for engagement against the rear cam face of the first mentioned plate, movement of the lever in one direction being limited by engagement of the neck portion with the inner wall of the slot in said first mentioned plate while movement of said lever in the opposite direction is limited by engagement of the head with the rear stop edge of the second mentioned plate.

1,104,992. LIFE-BOAT. PETER P. HORVÁTH, Racine, Wis. Filed Jan. 23, 1914. Serial No. 813,929. (Cl. 9—3.)



A boat provided centrally of its bottom with a recess, a cup-shaped housing formed with an upwardly-extending inclined flange mounted on the boat bottom to cover said recess and provided with an upwardly-extending internally-threaded collar extension, a cross-bar secured to the gunwales of the boat and formed with a central opening, a stuffing-box within said collar, a screw extending through said opening and said stuffing-box and a weight on the lower end of said screw adapted to be adjusted by the screw and to be housed within said cup-shaped stand.

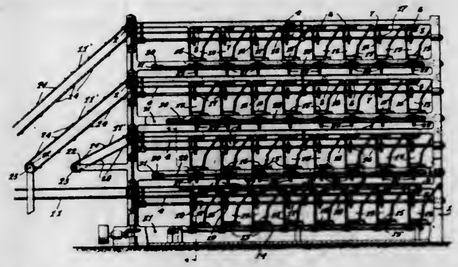
1,104,993. ASSORTING APPARATUS. FRANK KRAMER, Seattle, Wash., assignor of thirty-five one-hundredths to Dale C. Boice, Seattle, Wash. Filed June 18, 1913. Serial No. 774,391. (Cl. 214—6.)

1. In an assorting machine, a frame, a bin having an adjustable bottom, and means mounted on the frame for movement in the bin to remove lumber therefrom.

2. In an assorting machine, a frame, a bin having an adjustable bottom, and means mounted on the frame for movement in the bin to remove lumber therefrom, said means being spaced from the bin bottom to permit of the lumber pieces being deposited on the latter, and said bin bottom being adjustable toward and from the aforesaid means.

3. In an assorting machine, a frame, a plurality of bins each having an adjustable bottom, and means for simultaneously adjusting the bottoms of the bins.

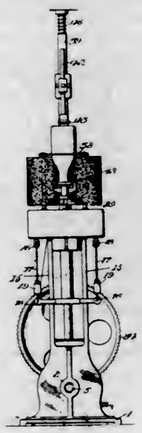
4. In an assorting machine, a frame, a bin thereon, means adapted for removing the lumber from the bin after a pre-determined amount of lumber has been deposited in the bin and means for operating the aforesaid means.



5. In an assorting machine, a frame, assorting means thereon, and bins for receiving the assorted lumber, one wall of each bin being adjustably mounted.

[Claims 6 to 17 not printed in the Gazette.]

1,104,994. BOTTLE-WASHING MACHINE. EMIL LINDERME, Philadelphia, Pa. Filed Mar. 10, 1913. Serial No. 753,212. (Cl. 141—7.)

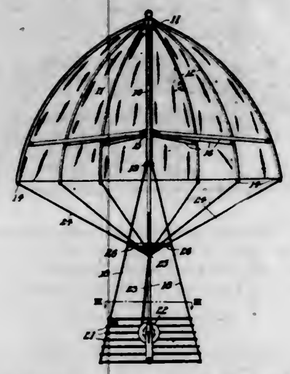


1. A bottle cleaner having in combination, a base, upright supports, a drive shaft, a counter-balanced bottle support, a rotatable shaft provided with a pinion at its upper end, a hollow rotatable shaft carrying an internal brush and having a gear wheel loosely mounted thereon, a series of brushes mounted on said gear, the shaft of one of the brushes extending through said gear and provided with a pinion, a circular rack with which said pinion meshes, whereby a rotary movement is imparted to one of said brushes during the revolution of the brushes around the bottle, an adjustably supported bracket carrying an arm, an adjustable bottle clamping rod mounted in said arm, and means for creating a yielding pressure upon the arm carrying the clamp rod.

2. A bottle cleaner having, in combination, a counter-balanced bottle support, a rotatable brush for cleaning the interior surface of the bottle, a drive shaft, means for rotating the brush, a gear wheel, a jointed pitman pivotally attached to said wear gheel, an adjustably supported bracket having an inwardly extending arm carrying a clamp rod adjustably slidable therein, and outwardly extending arms provided with openings through which the pitman operates, an adjustable collar below the lower outwardly extending arm, a collar on the upper extremity of said pitman, and a spring surrounding the pitman be-

tween the uppermost extending arm and collar for creating a yielding pressure upon the arm carrying the clamping rod.

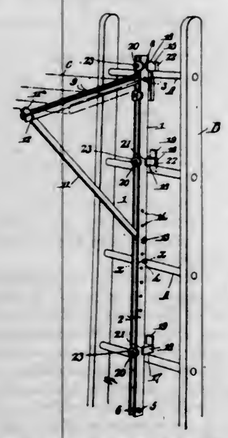
1,104,995. PARACHUTE. LADISLAS LUKI, Columbus, Ohio. Filed May 16, 1914. Serial No. 839,022. (Cl. 244—21.)



1. In a parachute, a central tubular rod, ribs pivoted at their upper ends to said rod, a runner mounted on the rod, stretchers extending between the runner and the ribs, a canvas covering for said ribs, a carriage suspended from the lower end of the rod, ropes connected to the lower ends of the ribs and terminating in a single cable that extends into the carriage, and a windlass within said carriage on which the cable is wound.

2. In a parachute, a central rod, rib pivoted at their upper ends to said rod, a runner mounted on the rod, stretchers extending between the runner and the ribs, a covering for the ribs, side arms connected to the lower ends of the rod, a carriage carried by said side arms, ropes connected to the free ends of the ribs and terminating in a single cable extending into the carriage, means within the carriage on which the cable is wound and unwound for controlling the opening and closing of the ribs and cover, a frame carried by the side arms, and rollers carried by said frame over which said ropes operate in winding and unwinding the cable.

1,104,996. LADDER-JACK. DAVID F. MCHALE, Dunmore, Pa. Filed Sept. 8, 1913. Serial No. 788,598. (Cl. 20—85.)



1. In a ladder jack an elongated body, a supporting arm thereon, a pair of blocks secured to said body and provided with inwardly extending tongues, an intermediate block on said body provided with oppositely extending tongues, one of the first said blocks and said intermediate block being slidably mounted on said body, and means for securing said slidably mounted blocks in position.

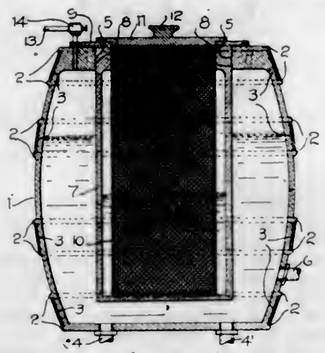
2. In a ladder jack an elongated body, a block on said body, a tongue on said block substantially parallel with said body and spaced therefrom a sufficient distance to receive a ladder rung between them, a slidably mounted wedge-shaped member adapted to coöperate with said block and tongue to clamp upon a rung, and a supporting arm on said body.

3. In a device of the class described, an elongated body portion comprising a pair of parallel spaced bars, an arm pivotally mounted between said bars adjacent one end thereof, a spacing block arranged between said bars adjacent the ends, means preventing movement of said block with relation to said bars, a rung engaging device, and a bolt extending through said device and said spacing block, substantially as described.

4. In a device of the class described, an elongated body, a supporting arm thereon, a rung engaging block slidably mounted thereon, said block being provided with a lateral flange engaging the side of said body, a plate on said block and projecting beyond the end face thereof, there being a lateral flange on said block engaging the edge of said plate and a bolt securing said plate to said block and said block to said body, substantially as described.

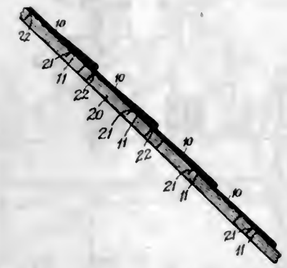
5. In a device of the class described, an elongated body portion comprising spaced parallel bars, a supporting arm thereon, rung engaging blocks slidably mounted on said body, said blocks being provided with lateral flanges engaging said body and a bolt extending through each of said blocks and between the spaced parallel bars for clamping said blocks in adjusted position.

1,104,997. BEER-COOLER. JOSEPH MOSHER, Taft, Cal. Filed Apr. 26, 1913. Serial No. 763,857. (Cl. 62—2.)



A cooling device of the class described comprising an outer transparent container having inlet and outlet ports formed in the bottom thereof, a top for the container formed integral therewith and provided with an enlarged threaded opening, an inner transparent container externally threaded at its upper end for engagement with the threaded opening of the outer container to dispose said inner container within the latter, a laterally extending annular flange formed on the upper peripheral edge of said inner container to contact with the upper face of the top of said outer container, whereby to limit the downward movement of the inner container in the outer container, the wall of said inner container at the upper end thereof being increased in thickness from the inner face thereof, whereby to provide an opening of reduced diameter at the top of said inner container, a second inner container formed of foraminous material and disposed within the aforesaid inner container to fit snugly at its upper end against the wall of the reduced opening of said first mentioned inner container, the upper peripheral edge of the second inner container being disposed slightly below the upper peripheral edge of the first mentioned inner container, a closure for said first mentioned inner container, and means for the admission of air to said outer container.

1,104,998. WEATHERPROOF COVERING. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Mar. 18, 1913. Serial No. 755,133. (Cl. 108—7.)



1. A water-proof weather-proof flexible covering formed of a water-proofed base and coatings of water-proof weather-proof material, and comprising a body portion and a doubled-back portion, said portions being connected by a hinge formed of the covering itself, and the exposed coating of the hinge set in a stretched and elongated condition, and the under or back coating in a compressed condition, so that the double-back portion may be bent back and forth without breaking the coating at the hinge.

2. As a new article of manufacture, a water-proof weather-proof flexible shingle formed of a water-proofed base and a pitch-like coating of weather-proof material, and comprising a body portion of suitable length and breadth and a double back portion to underlie the exposed portion of the shingle, the pitchlike coating at the bend being permanently set in an elongated or stretched condition.

3. As a new article of manufacture, a water-proof weather-proof flexible shingle formed of a water-proofed base and pitch-like coatings of weather-proof material, and comprising a body portion of suitable length and breadth and a doubled-back portion to underlie the exposed portion of the shingle, and a hinge connecting said portions, the exposed coating of said hinge being set in a stretched and elongated condition, and the interior coating being set in a compressed or corrugated condition.

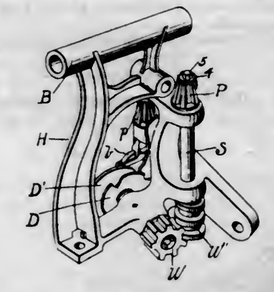
4. A water-proof weather-proof flexible covering formed of a base of felt impregnated with water-proof material and having a coating or facing of a pitch-like weather-proof substance, and comprising a body portion, a doubled-back portion, and a connecting hinge portion, the coating or facing of the hinge portion being set in a stretched and elongated condition so that the doubled-back portion may be manipulated without cracking said stretched or elongated coating or facing of the hinge.

5. The herein described method of making thickened weather-proof and water-proof coverings, which consists in heating the covering to render the water-proof and weather-proof facing thereof relatively soft and pliable, then bending the covering back on itself to form a thickened edge portion, thereby elongating the exposed plastic coating at the bend and permitting the coating to set in an elongated condition.

[Claim 6 not printed in the Gazette.]

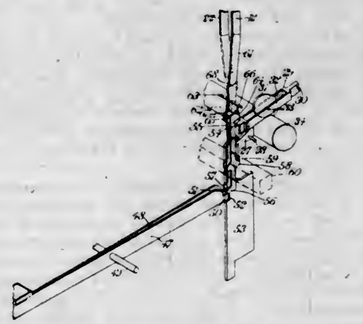
1,104,999. WEAR-COMPENSATING MEANS FOR KNOTTING MECHANISMS. WALTER PARLIAMENT, Watertown, S. D. Filed Apr. 20, 1914. Serial No. 833,219. (Cl. 56—83.)

1. In a device of the character described, the combination with a rotating twine holding disk and a shaft for driving the same, of a pinion on one end of the shaft and having a number of radial notches on its inner end and communicating with its bore, a projection on the shaft and entering one of the notches and a screw entering the end of the shaft and having its head overlying the outer end of the pinion.



2. In a device of the character described, the combination with a rotating twine holding disk and a shaft for driving the same, of a pinion on one end of the shaft and having a number of notches in its inner end and opening into its bore, a transverse key passing through the shaft and projecting from opposite sides thereof, the projecting ends of said key entering two of the notches, and a screw entering the end of the shaft and having its head overlying the outer end of the pinion.

1,105,000. COMPOSING MECHANISM OF TYPOGRAPHICAL MACHINES. HERBERT PEARCE and JOHN ERNEST BILLINGTON, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Oct. 30, 1911. Serial No. 657,435. (Cl. 199—7.)



1. In the composing mechanism of a typographical machine, the combination with a plurality of sets of character finger keys, a corresponding plurality of sets of organs actuated thereby, a single set of intermediate actuating devices, and means operated by the keys whereby said actuating devices are brought into operative relation to the corresponding set of organs.

2. In the composing mechanism of a typographical machine, the combination of two finger keys, two organs controlled thereby, a single intermediate actuating device, and means for shifting said device into operative relation to either key and its corresponding organ.

3. In the composing mechanism of a typographical machine, the combination of two finger keys, two organs controlled thereby, a single intermediate actuating device, and means operated by each key to shift the said actuating device into operative relation to the corresponding organ.

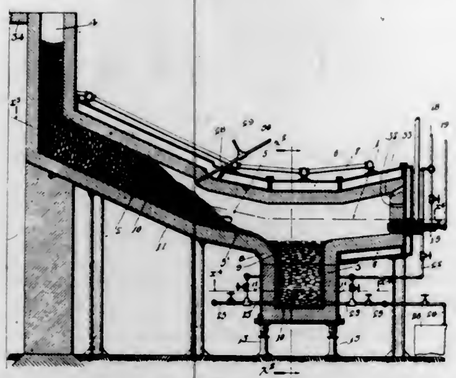
4. In the composing mechanism of a typographical machine, the combination with its character finger keys arranged in pairs and independently movable organs actuated thereby, of a single intermediate device between a pair of

character finger keys and a pair of organs and controlling both the latter.

5. In the composing mechanism of a typographical machine, the combination with its character finger keys arranged in pairs and independently movable organs actuated thereby, of means for so actuating them comprising a single intermediate device between a pair of keys and the corresponding organs.

[Claims 6 to 30 not printed in the Gazette.]

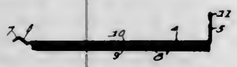
1,105,001. SMELTING-FURNACE. ELFEGO RIVEROLL, Los Angeles, Cal. Filed Nov. 5, 1912. Serial No. 729,676. (Cl. 75—57.)



1. An ore smelting furnace comprising an ore chamber having an inclined bottom for receiving and sustaining a body of ore, a combustion chamber at the bottom of said ore receiving chamber, a crucible below and communicating with said combustion chamber to receive the melted ore as it runs down the inclined bottom of the ore receiving chamber, burner means for directing hot products of combustion through said combustion chamber and over the crucible and into the said ore receiving chamber, a stack for carrying off the products of combustion from the top of said ore receiving chamber, and means for supplying oil together with air to the lower part of said crucible.

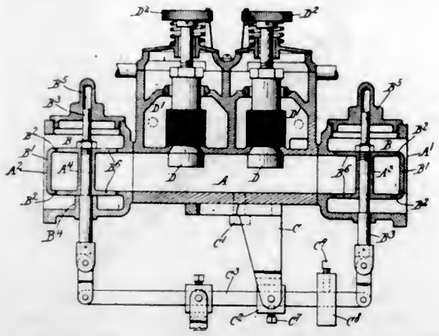
2. In an ore smelting furnace, an ore receiving chamber having an inclined bottom for sustaining a body of ore, said ore receiving chamber increasing in width upwardly from its lower end and downwardly from its upper end to an intermediate portion of greatest width, to aid in sustaining the ore in position and to maintain a large body of ore in position for the melting operation, a stack communicating with the upper end of said ore receiving chamber, a combustion chamber at the lower end of said ore receiving chamber, an opening at the top to receive the ore melted in the ore receiving chamber and running down therefrom, burner means for directing hot products of combustion through said combustion chamber and over said crucible and into the said ore receiving chamber, and means for supplying air and oil to the lower portion of said crucible.

1,105,002. COMBINED RULER AND BLOTTER. EDWARD SCHMIDT, El Paso, Tex. Filed Oct. 27, 1913. Serial No. 797,641. (Cl. 120—2.)



In a ruler, a plate having an upstanding flange at its rear side, said upstanding flange constituting a hand grasp, flanges at the ends of the plate, said flanges being turned under and extending parallel with the under surface of the plate but spaced therefrom, absorbent material having its edges inserted between the flanges and the plate, the front of said plate having a diagonally upwardly extending portion and an integral downwardly extending lip carried by the upwardly extended portion.

1,105,003. CARBURETER. JOHN A. SECOR, Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Sept. 7, 1911. Serial No. 648,022. (Cl. 48—155.1.)



1. A carbureter having a fuel inlet and air intake and mixture discharge ports, and balanced valves controlling said ports, the effective areas of valve opening being directly proportional to the movement of the valve, and means for operating said valves simultaneously but unequally, and a balancing device associated with said valve operating means, whereby the two sides of such movable valve system are at all times in mechanical balance.

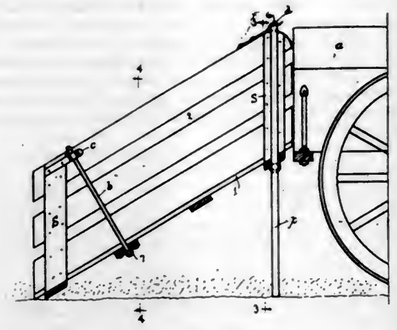
2. A carbureter having fuel inlet and air intake and mixture discharge ports, and balanced piston valves controlling said ports, the effective areas of valve opening being directly proportional to the movement of the valve, and means for operating said valves simultaneously but unequally, and a balancing device associated with said valve operating means, whereby the two sides of such movable valve system are at all times in mechanical balance.

3. A carbureter, having a vacuum chamber having fuel and water inlets each having a nozzle opening into the carbureter chamber separate and distinct one from the other and adapted to vary but unequally their feeds responsive to variations in the vacuum in the carbureter chamber, air intake and mixture discharge ports and balanced piston valves controlling said ports, and means for operating said valves simultaneously but unequally.

4. A carbureter, having a vacuum chamber having fuel and water inlets each having a nozzle opening into the carbureter chamber separate and distinct one from the other and adapted to vary but unequally their feeds responsive to variations in the vacuum in the carbureter chamber, air intake and mixture discharge ports and balanced piston valves controlling said ports, and means for operating said valves simultaneously but unequally, and adjustable connections between the two valves whereby their relation can be varied at will.

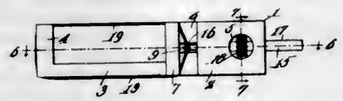
1,105,004. COLLAPSIBLE HOG-CHUTE. RAYMOND J. SMITH, Catlin, Ill. Filed June 23, 1913. Serial No. 775,392. (Cl. 119—99.)

1. A chute of the character described comprising a base, transversely extending cleats secured in spaced relation to the under surface thereof, sides hingedly connected at their lower edges to said base adjacent the outer edges of the latter, each of said sides having one of their corners rounded, clips secured to one of said transverse cleats, an H-shaped supporting member, the latter having its intermediate bar pivotally mounted in said clips and its side members depending downwardly whereby to form supporting standards and projecting upwardly contiguous to said sides whereby to provide supporting arms for the latter, said arms having their extremities extended inwardly and at right angles whereby to overlie the rounded corners of said sides and coact with the latter, and spring clips secured to the upper edge of said sides contiguous to the rounded corners thereof said clips having therein a seat adapted to coact with the right angularly extended extremity of said side supporting members.



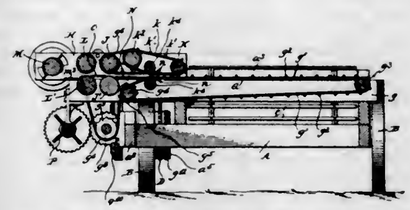
2. A chute of the character described comprising a base, transversely extending cleats secured in spaced relation to the under surface thereof, sides hingedly connected at their lower edges to said base adjacent the outer edges of the latter, each of said sides having one of their corners rounded, clips secured to two of said transversely extending cleats, a bail-shaped member including side arms and an intermediate bar, the latter extending through the clips on one of said cleats and the former projecting upwardly contiguous to said sides whereby to support the latter, spring clips secured to said sides, said clips having therein seats adapted to receive the upper extremity of the arms of said bail-shaped member whereby to lock the latter in adjusted position, an H-shaped member having its intermediate bar pivotally mounted in the clips of the other transversely extending cleat, the sides of said H-shaped member depending downwardly to form supporting standards and extending upwardly contiguous to said hinged sides, whereby to form supporting arms for the latter, said arms having their extremities extending inwardly and at right angles to overlie the rounded corners of said sides, and spring clips secured to the upper edges of said sides contiguous to the rounded corners thereof, said clips adapted to coact with the right angularly extending extremities of said supporting arms of the H-shaped member.

1,105,005. FLOSS TOOTHPICK. RAPHAEL A. SONN, Atlanta, Ga. Filed June 23, 1913. Serial No. 775,354. (Cl. 132—12.)



A dental floss holder comprising a handle provided at one end with an arm terminating in an angularly disposed finger, the handle having a transverse, superficial channel in its side face defining a transverse rib at the inner end of the arm the handle being provided with a transverse opening, there being a guideway in the handle, intersecting the opening and communicating with the channel; a bar mounted to slide in the guideway and provided with floss-engaging means located in the channel, the rib lying in front of the floss-engaging means to serve as a guard therefor; and a nut threaded on the bar within the contour of the opening.

1,105,006. COMBINED RAKE AND STALK-CUTTER. SAMUEL GLENN SPENCER, Payson, Ill. Filed Oct. 19, 1912. Serial No. 726,800. (Cl. 55—118.)

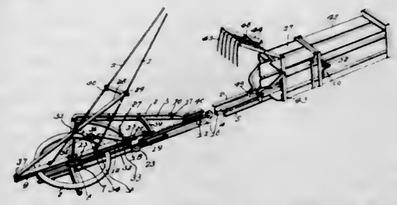


1. In a machine such as described embodying ground wheels, the combination with the upwardly inclined traveling apron, extending transversely of the machine, rake teeth extending beyond the lower end of the apron, whereby the stalks are delivered upon the apron, an endless conveyer traveling at right angles to the apron at the delivery end thereof and upon which the stalks are deposited, a cutting mechanism, feed rolls to which the stalks are delivered by the conveyer, for feeding the stalks to the cutting mechanism, and means intermediate the conveyer and feed rolls for straightening the stalks whereby they may be delivered substantially end on to the cutting mechanism, and driving mechanism driven from the ground wheels.

2. In a machine such as described, the combination with the apron upon which the stalks are deposited, a traveling conveyer running at right angles to said apron, a cutter, feed rolls to which the stalks are delivered by the conveyer for feeding the stalks to the cutter, endless chains located over a portion of said conveyer and traveling at a slower rate than the conveyer, whereby the stalks passing between said chains and conveyer will be caused to lie substantially parallel, and be delivered endwise to the feed rolls and cutter.

3. In a machine such as described, the combination with the apron upon which the stalks are delivered, conveying chains traveling at right angles to said apron, crushing and feed rolls, and guide plates between which the stalks are delivered from the conveyer chains, and guided to the rolls, a cutter for severing the stalks, and driving mechanism.

1,105,007. HAY-PRESS. WILKIN L. SULLIVAN, Jackson, Miss. Filed Mar. 13, 1913. Serial No. 754,152. (Cl. 100—9.)



1. In a hay press, a hopper, a plunger slidable therein, a rod connected to the plunger, a pitman pivotally connected to the rod, a link pivotally connected to the pitman, a frame, means for pivotally connecting the ends of the link remote from the pitman to the said frame, a ratchet wheel rotatably mounted at the junction of the link and pitman, a dog for retaining the ratchet wheel in different positions of adjustment, an arm, a pin carried by the frame and on which the arm is rotatably mounted, means for rotating the arm; the said ratchet wheel being in the path of travel of the arm, whereby the said pitman is moved in one direction by the arm, a lever pivotally connected to the frame, means for connecting one end of the lever to the pitman, said lever having a hooked end adapted to be engaged by the arm and moved thereby for operating the pitman in an opposite direction to that in

which it is moved by the arm when engaging the ratchet wheel.

2. In a hay press, a frame, a reciprocating member, a head connected to the said reciprocating member for pressing material, a pitman connected to the reciprocating member, a link pivoted to the frame and to the pitman, a ratchet wheel rotatably mounted at the junction of the pitman and link, a dog adapted to retain the ratchet wheel stationary, said dog being moved to release the ratchet wheel upon contact with a stationary portion of the frame, an arm, means for rotatably mounting the arm on the frame, whereby the ratchet wheel will be in the path of its travel for communicating motion to the pitman, a lever pivoted to the frame, means for connecting the lever to the pitman, a hook on the end of the lever adapted for intermittent engagement of the arm, whereby movement of the arm is communicated to the pitman and means for rotating the arm.

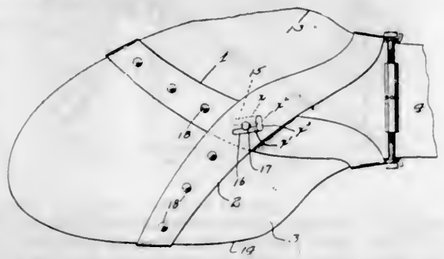
3. In a hay press, a frame, a reciprocating member, a presser head carried thereby, a member with which the presser head coacts for packing material, a pitman connected to the reciprocating member, a link pivoted to the frame and to the pitman, an arm, means for pivotally mounting the arm on the frame, a track for supporting the arm in its travel, anti-friction means interposed between the arm and track, means for moving the arm around the track, a ratchet wheel at the junction of the link, and pitman in the path of travel of the arm whereby movement is communicated to the pitman by the arm, a lever, means for pivotally mounting the lever on the frame, means for connecting one end of the lever to the pitman, and means on the lever adapted to be engaged by the arm for swinging the lever and operating the pitman upon a release of the arm from the ratchet wheel.

4. In a hay press, a frame, a reciprocating member, a presser head carried thereby, a member with which the presser head coacts for packing material, a pitman connected to the reciprocating member, a link pivoted to the frame and to the pitman, an arm, means for pivotally mounting the arm on the frame, a track for supporting the arm in its travel, anti-friction means interposed between the arm and the track, means for moving the arm around the track, a ratchet wheel at the junction of the link and pitman in the path of travel of the arm, whereby movement is communicated to the pitman by the arm, means for effecting the release of the arm from the ratchet wheel, a lever, means for pivotally mounting the lever on the frame, means for connecting one end of the lever to the pitman, means on the lever adapted to be engaged by the arm for swinging the lever and operating the pitman upon a release of the arm from the ratchet wheel.

5. In a hay press, a frame, a reciprocating member therein, a presser head carried by the reciprocating member, a member with which the reciprocating member coacts, means for delivering material to the member, a connection between the reciprocating member and the feeding member, a pitman connected to the reciprocating member, a link pivoted to the pitman and to the frame, a ratchet wheel at the junction of the link and pitman, a dog for holding the ratchet wheel in different positions of adjustment, said dog being released from the ratchet wheel by engaging the portion of the frame, an arm, means for pivotally connecting the arm to the frame, a track, means connected to the arm and engaging the track for guiding the said arm, means for operating the arm, a lever having a hook on its end, means for pivotally connecting the lever to the frame, means for connecting the end of the lever to the pitman, the said hook being engaged by the arm for operating the lever when the arm is released by the ratchet wheel.

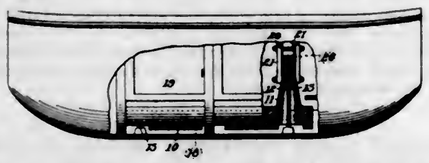
1,105,008. CREEPER. WALTER E. SUTTON, Oakland, Cal., assignor of forty-two one-hundredths to John R. Sutton, Oakland, Cal. Filed Feb. 3, 1913, Serial No. 745,918. Renewed Mar. 30, 1914. Serial No. 828,390. (Cl. 36—62.)

1. A creeper for boots comprising in combination, companion creeper strips disposed in crossed relation and each extending diagonally from a longitudinal midway point of the margin of the sole on one side of the boot across to the opposite side thereof abreast of the shank, the terminals of said strips having sole and shank margin engaging lips and being curved transversely to the plane of their sides to conform to the curvature of the bottom face of the sole and shank thereby lying flat thereagainst, said strips being also curved transversely in opposite directions with respect to their edges to dispose the crossing point in advance of the juncture of the shank and the sole, each strip being provided with an F shaped opening affording relatively long and short registering terminals, a pivot in said openings arranged to be shifted from the long to the short terminals or vice versa to vary the range of grip of the strips, and means connected with the shank ends of the strips for gripping the shank and sole terminals of the strips with the boot substantially as described.



2. A creeper for boots comprising in combination, companion creeper strips disposed in crossed relation and each extending diagonally across the sole from one side of the boot to the other, the terminals of said strips having sole and shank margin engaging lips and each strip being provided with an F shaped opening affording relatively long and short registering terminals, a pivot in said openings arranged to be shifted from the long to the short terminals or vice versa to vary the range of grip of the strip, and means connected with the strip for tightening the same upon the boot.

1,105,009. SHIP CONSTRUCTION. JOHN SZEPESSY, Centerville, Md. Filed Apr. 1, 1914. Serial No. 828,739. (Cl. 9—3.)

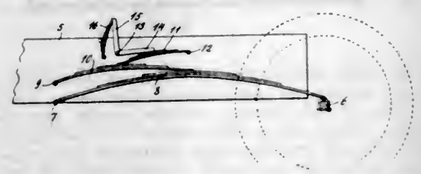


1. A device of the class described comprising a hull, upright posts mounted upon the keel portion of the hull, a ballast member having hollow posts upwardly extending thereon and mounted upon said upright posts, outwardly extending arms adjacent the tops of said hollow posts, anti-friction U-shaped blocks oppositely positioned interiorly of the hull and adapted for the sliding reception of the free opposite ends of said arms, said ballast member provided with arcuate slots adjacent the opposite upper edges thereof, inner sheathing strips within said hull adapted for sliding reception within said slots and a removable cross bar upon each of said hollow posts adapted for limiting the lateral movement of said ballast member.

2. A device of the class described comprising a hull, spaced blocks positioned interiorly and mounted upon the keel portion thereof, upright posts mounted in said blocks, a shiftable ballast member having posts mounted thereon provided with conical sockets therein adapted for seating over said upright posts, said ballast member having curved outer faces and provided with arcuate slots spaced inwardly from said faces, inner sheathing strips carried by said hull and adapted for sliding reception within said slots, U-shaped anti-friction guide blocks carried at opposite points within said hull, oppositely projecting arms carried by said posts and slidably engaging within said guide blocks, upper stop bars adapted to engage the inner sides of the hull upon a tilting of the ballast member, a projecting finger upon each of said stop bars, a depressed socket in the top of each of said posts of the ballast member and adapted for the seating reception of said fingers therein.

3. A device of the class described comprising a hull, upright posts rigidly mounted interiorly upon the keel portion thereof, a ballast member within said hull and having upwardly projecting conical sockets therein for the mounting reception of said upright posts, anti-friction guide means for said ballast member carried by said hull, said ballast member provided with arcuate slots adjacent its opposite edges, inner sheathing strips having their lower edges slidably received within said slots and limiting stop bars carried by said ballast member and adapted for engaging the inner sides of said hull upon the tilting movement of said ballast member.

1,105,010. VEHICLE-SPRINGS. ORTHELLO WATERS, Long Beach, Cal. Filed May 12, 1913. Serial No. 767,105. (Cl. 21—101.)



1. The combination with the body and running gear of a vehicle; of a spring interposed between said body and running gear and pivotally connected thereto, auxiliary springs pivoted to the body, one of said auxiliary springs having its free end in engagement with the first-mentioned spring intermediate the ends thereof, and another auxiliary spring bearing with its free end against the first-mentioned auxiliary spring intermediate the ends of the latter, and a spring opposing the movement of the second-mentioned auxiliary spring.

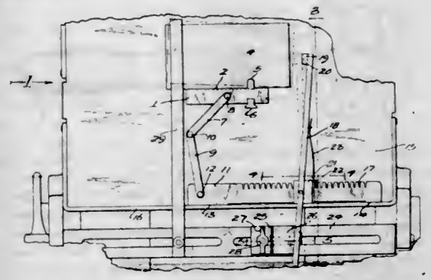
2. The combination with the body and running gear of a vehicle; of a spring interposed between said body and running gear and pivotally connected thereto, auxiliary springs pivoted to the body, one of said auxiliary springs having its free end in engagement with the first-mentioned spring intermediate the ends thereof, and another auxiliary spring bearing with its free end against the first-mentioned auxiliary spring intermediate the ends of the latter, a bell-crank lever fulcrumed on the body and having one of its arms engageable by the second-mentioned auxiliary spring, and a spring engaging the other arm of the bell-crank lever.

3. The combination with the body and running gear of a vehicle; of a series of pivoted springs interposed between said body and running gear, said springs being in engagement with each other and arranged as a compound lever, the first spring of the series being connected to the running gear, and the last spring of the series being connected to the vehicle body, and means for supporting the vehicle body from the last-mentioned spring.

4. The combination with the body and running gear of a vehicle; of a series of pivoted springs interposed between said body and running gear and arranged as a compound lever, a bell-crank lever having one of its arms engaging the last spring of the series, and a spring engaging the other arm of the bell-crank lever.

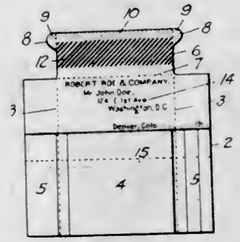
5. The combination with the body and running gear of a vehicle; of a spring interposed between said body and running gear, an auxiliary spring arranged as a lever and connected at one end to the vehicle body, the opposite end of said auxiliary spring being free and engaging the first-mentioned spring intermediate the ends thereof, and means for supporting the vehicle body from the auxiliary spring.

1,105,011. FEED-GAGE. LEE H. WILSON, Westgate, Cal. Filed Oct. 6, 1913. Serial No. 793,563. (Cl. 101—22.)



In a feed gage an attaching plate having notches in its upper edge; flanges extending backwardly at right angles from the lower edge of the attaching plate and adapted to be inserted between the lower edge of a press platen and the lower bail; a vertical gage bar; a finger extending from the upper end of the vertical gage bar and adapted to press against the press tympan; a clip embracing the attaching plate, said vertical gage bar being pivotally connected to the clip; a tooth extending from the clip and adapted to engage the notches of the attaching plate, a spring rigidly connected to the clip and slidingly connected to the gage bar, the tension of the spring being exerted to throw the upper end of the gage bar outwardly, the lower end of the gage bar extending a considerable distance below the clip and adapted to fit above the gripper bar of the press; a base adapted to fit against the gripper bar; and an inclined cam extending from the base over the gripper finger of the press so that the lower end of the gage bar will work against the cam thereby moving the gage bar in and out upon the tympan.

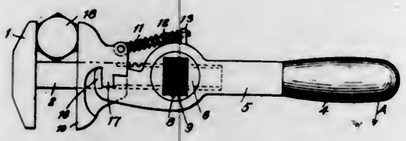
1,105,012. COMBINED WRITING-SHEET AND ENVELOP. ARTHUR W. WRIGHT, Trinidad, and PHIL H. KNOWLTON, Denver, Colo. Filed Apr. 2, 1913. Serial No. 758,448. (Cl. 120—74.)



As a new article of manufacture, a combined writing sheet and envelop comprising a sheet and a sealing flap which when folded upon the sheet along a determinate line coincident with the upper edge of the same, covers the upper portion of the inner or writing surface of the sheet and which when folded along the said line after the sheet is folded upon itself along a determinate line, engages the outer surface of the same, the said sheet being capable of being folded along a transverse line and the said flap having means for its attachment to the said outer surface of the sheet, and, upon its inner surface, a coating of transfer material for the production of an im-

pression of matter written upon its outer surface, upon the upper portion of the inner surface of the sheet, which it covers when it is folded along its said folding line, prior to the folding of the sheet upon itself.

1,105,013. WRENCH. MICHAL ZAPOTOCZNY, Wilmerding, Pa. Filed Jan. 30, 1914. Serial No. 815,573. (Cl. 81—126.)



1. In a wrench, the combination of a handle, a stem pivotally connected thereto and having a jaw at its outer end, means for adjusting the stem with relation to the handle, a jaw slidably mounted on the stem, a spring exerting its force against said handle and sliding jaw to yieldingly hold said stem and handle in a fixed relative position and to yieldingly hold the sliding jaw outwardly and coöperating detents on said sliding jaw and handle for limiting the movement of the sliding jaw in both directions on said stem.

2. In a wrench, the combination of a handle, a stem pivotally connected thereto and having a jaw at its outer end, means for adjusting the stem with relation to the handle, a jaw slidably mounted on the stem, a spring exerting its force against said handle and sliding jaw to yieldingly hold said stem in alinement with said handle and to yieldingly hold the sliding jaw toward said stem jaw and in work-engaging position, coöperating detents on said handle and sliding jaw effective when the handle and stem are in alinement to hold the sliding jaw in fixed position with relation to the handle, but ineffective for such purpose when the handle and stem are out of alinement with each other.

3. In a wrench, the combination of a handle having a gripping portion and two side plates extending therefrom, a ring rotatably mounted in said plates and provided with a stem and adjustment-screw slots, an adjustment screw in said last named slot, a stem extending through said stem slot and said screw and provided with a jaw at its outer end, a second jaw slidably mounted on the stem, a compression spring between said slidable jaw and the handle, and detents formed at the outer ends of said plates and effective when the handle is turned in one direction to hold said slidable jaw against longitudinal movement along said stem, but ineffective for such purpose when the wrench handle is turned in the opposite direction.

1,105,014. TRANSFORMER. WALTER M. AUSTIN, Zelienople, Pa. Filed Feb. 23, 1911. Serial No. 610,400. (Cl. 171—124.)



1. A lamina for a transformer core having a hexagonal contour and a hexagonal aperture the short diameter of which is equal to one half of the short diameter of the lamina, said lamina being formed of two elements, one having two sides and the other four sides of the hexagonal contour.

2. A lamina for a transformer core having an outer hexagonal contour and an aperture having a hexagonal contour symmetrical with the outer contour and having the distance between the two contours equal to one fourth the diameter of the lamina measured at right angles to the axis of symmetry of the lamina, said lamina being formed of two blanks, one constituting two and the other four sides of the lamina.

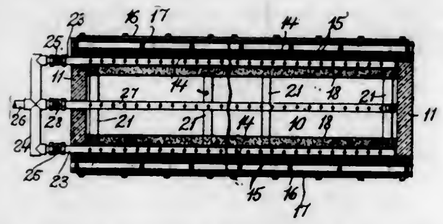
3. A laminated transformer core having radial legs, the laminæ forming the legs each having a curved end adapted to fit snugly against the curved end of the adjacent lamina.

4. A transformer core having radial legs composed of laminæ, each lamina having one end bent to an involute curve to permit the bent ends of the laminæ to fit snugly together and form a hollow cylinder.

5. A transformer core composed of radial legs formed of laminæ each having one end bent to the form of an involute curve, said bent ends being adapted when the core is built up to form a hollow cylindrical core.

[Claim 6 not printed in the Gazette.]

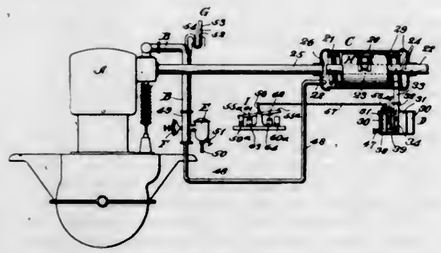
1,105,015. ELECTROLYTIC CELL. DOUGLAS BAYNE AVERST, Wilmington, Del. Filed Feb. 24, 1913. Serial No. 750,175. (Cl. 204—58.)



1. A cell for electrolyzing saline solutions, comprising a body constituting an anode chamber, diaphragms closing the sides of said chamber, cathodes outside said diaphragms, anodes within said body and confronting said diaphragms, and perforated pipes within said chamber and located between the anodes and the diaphragms for delivering air into the body of electrolyte, substantially as and for the purposes herein described.

2. A cell for electrolyzing saline solutions, comprising a body constituting an anode chamber, diaphragms closing the sides of the chamber, cathodes outside the diaphragms, anodes within said body and confronting the diaphragms, a salt receptacle within the said body and immersed in the electrolyte, and valved pipes within the chamber and located respectively between the anodes and between each anode and its confronting diaphragm for delivering air into the body of the electrolyte, substantially for the purposes set forth.

1,105,016. EXPLOSIVE-ENGINE. WILLIAM K. BASSFORD, Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y., a Corporation of New York. Filed July 29, 1911. Serial No. 641,187. (Cl. 123—127.)



1. In combination with a gas engine, means for supplying the same with explosive gaseous materials respectively derived from liquid fuels of different qualities, comprising separate sources of supply of said fuels, valvular means for controlling said sources of supply, means for conducting a fluid heating medium from the engine and the fluid fuel from one of said sources of supply in such relation to each other that the fuel will be heated by said medium in its passage to the engine, said means providing different courses of travel for one of said fluids, whereby the heat imparted to the fuel is variable by changing the relative courses of travel of the fuel and heating medium, a valve for controlling said relative courses of travel, and an operative connection between said valve and the valvular means of the fuels-supply.

2. In combination with a gas engine, a heater communicating with the exhaust thereof, means for supplying the engine with fuels derived from liquids of different qualities, said means including a conduit communicating with the engine, said conduit being of such relation to the heater that the fuel will be heated in its passage to the engine, a container for the respective fuels connected to the conduit in advance of the heater, another means for supplying the engine with fuel derived from a liquid and communicating with the conduit between the heater and the engine and a valve-controlled air inlet communicating with the fuel conduit between the heater and the engine.

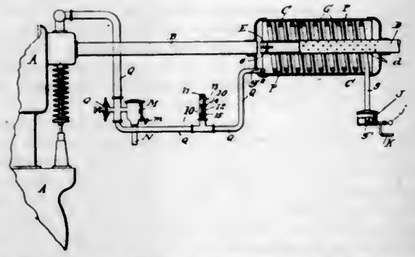
3. In combination with a gas engine, means whereby the same is supplied with explosive gaseous materials respectively derived from liquids of different specific qualities, comprising a heater having valve-controlled means forming courses of travel for a heating medium therethrough and also having means whereby a hydrocarbon fuel may flow through the heater, valved sources of supply of fluids of different specific qualities and means controlled by heat derived from the engine for automatically controlling the valves of the heater and fuel supplies.

4. In combination with a gas engine, valved means through which the same is supplied with explosive gaseous materials respectively derived from liquids of different specific gravities, a heater in the path of travel of one of the gaseous materials, said heater having valve-controlled passages for a heating medium, a thermostat and means controlled by the latter and having connection with the valves of the heater and hydrocarbon-supply means for operating said valves automatically.

5. In combination with a gas engine, separate chambers for fuels of different specific gravities, a heater having means through which said fuels pass, means for vaporizing the fuels, separate valves for controlling the flow of the fuels, the heater also having means forming a plurality of courses of travel therein for a heating medium, a valve for controlling the courses of travel of the heating medium, and a means controlled by heat derived from the engine for automatically operating the valves of the fluid supply and the valve of the heater.

[Claims 6 to 29 not printed in the Gazette.]

1,105,017. EXPLOSIVE-ENGINE. WILLIAM K. BASSFORD, Perth Amboy, N. J. Filed July 5, 1912. Serial No. 707,683. (Cl. 123—122.)



1. In a device of the class described, an internal combustion engine, a heater, a fuel-conductor within the heater, a liquid fuel supply connected to one end of the fuel conductor, a pipe connected to the other end of the fuel conductor and extending to the engine, a carbureter connected to the latter pipe, an indicator connected to the latter pipe between the engine and the heater for indicating the temperature of the fuel passing therethrough, an exhaust pipe leading from the engine to the heater to conduct the exhaust gases of the engine to the heater, a conductor for the exhaust gases leading from the heater, and a valve operatively related to the last-named conductor to cause the course of travel of the exhaust gases to be varied.

2. In a device of the class described, an internal combustion engine, an exhaust pipe leading therefrom, a heater connected to the exhaust pipe, another pipe extending into the heater, said pipes being operatively related to the heater and each other to provide different courses of travel of the exhaust gases within the heater, a valve for controlling said courses of the exhaust gases, a coil inside of the heater, a carbureter connected to one end of the coil to supply a fluid fuel through said coil, a pipe connected to the other end of the coil and extending to the engine, and an indicator connected to the latter pipe, said indicator graduated or marked to indicate the temperature of the heated fluid passing through said pipe, whereby the operator may at the indicated temperature operate said valve as and for the purpose set forth.

3. In a device of the class described, an internal combustion engine, an exhaust pipe leading therefrom, a heater having one end thereof connected to the free end of said exhaust pipe, another pipe extending into said heater and having a valve therein, a coil inside of said heater and surrounding said pipe, a carbureter connected to one end of said pipe, said carbureter being connected to a source of supply of liquid fuel of a certain specific gravity, a pipe connected to the other end of the coil and extending to the engine, a carbureter in said pipe, said carbureter being connected to a liquid fuel supply of different specific gravity from the first fuel supply, an indicator in said pipe between the heater and the second mentioned carbureter, said indicator being graduated and marked to indicate various temperatures of the fuel passing through said pipe whereby at a predetermined temperature the operator may operate the said valve and also operate the carbureters to change from one to another fuel as desired.

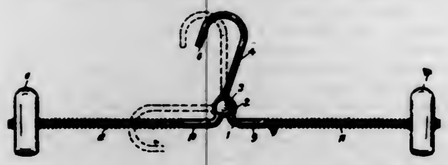
4. In a device of the class described, an internal combustion engine, an exhaust pipe leading therefrom, a heater having one end thereof connected to the exhaust pipe, a pipe extending through the other end of the heater with its inner end adjacent to the outlet end of said exhaust pipe, a valve in the latter pipe, said pipe having a series of perforations in that part within the heater, a coil in the heater and surrounding said latter pipe, an operating handle connected to the valve whereby the valve can be turned to permit the exhaust to pass directly through the pipe, or turned crosswise of the pipe to cause the exhaust to pass around the coils and through the perforations and out of the latter pipe, a carbureter connected to one end of the coil, said carbureter being connected to the kerosene supply, a valve in the carbureter to govern the supply of kerosene, a pipe connected to the other end of the coil and supplying fuel to the engine, a carbureter in said supply pipe, said carbureter being connected to a gasolene supply, a valve in the carbureter to govern said supply, an indicator in the supply pipe between the heater and the last mentioned carbureter, said indicator consisting of a thermometer or thermostat having marks thereon to indicate a high, low and intermediate temperature, and adjustable pointers connected to said indicator and forming a part thereof, whereby the operator can observe the temperature of the fluid passing through the said pipe, operate the valve and turn on and govern the fuel supply according to the temperature indicated, as and for the purpose set forth.

5. In a device of the class described, an internal combustion engine, an exhaust pipe leading therefrom, a heater having one end thereof connected to the exhaust pipe, a pipe extending through the other end of the heater with its inner end adjacent to the outlet end of said exhaust pipe, a valve in the latter pipe, said pipe having a series of perforations in that part within the heater, a coil in

the heater and surrounding said latter pipe, an operating handle connected to the valve whereby the valve can be turned to permit the exhaust to pass directly through the pipe, or turned crosswise of the pipe to cause the exhaust to pass around the coils and through the perforations and out of the latter pipe, a carbureter connected to one end of the coil, said carbureter being connected to the kerosene supply, a valve in the carbureter to govern the supply of kerosene, a pipe connected to the other end of the coil and supplying fuel to the engine, a carbureter in said supply pipe, said carbureter being connected to a gasolene supply, a valve in the carbureter to govern said supply, an indicator in the supply pipe between the heater and the last mentioned carbureter, said indicator consisting of a thermometer or thermostat having marks thereon to indicate a high, low and intermediate temperature, adjustable pointers connected to said indicator and forming a part thereof, whereby the operator can observe the temperature of the fluid passing through the said pipe, operate the valve and turn on and govern the fuel supply according to the temperature indicated, and a series of wires connected to said indicator and adapted to be connected to an alarm or annunciator, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

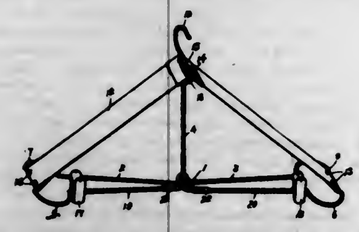
1,105,018. GARMENT HANGER AND STRETCHER. AUGUST E. BLUHM, Rochester, N. Y. Filed Sept, 5, 1912. Serial No. 718,742. (Cl. 223—19.)



1. A garment hanger and stretcher comprising a frame made of a single piece of wire having an eye bent up at an intermediate point therein, a pintle in said eye, a hook pivotally mounted on said pintle, clamps mounted to slide upon the outer ends of said frame, and springs interposed between said clamps and said eye and tending to exert a constant outward pressure on the clamps.

2. A garment hanger and stretcher comprising a frame made of a single piece of wire having an eye bent up at an intermediate point therein, a pintle in said eye, a hook pivotally mounted on said pintle, clamps mounted to slide upon the outer ends of said frame, springs interposed between said clamps and said eye and tending to exert a constant outward pressure on the clamps, and ferrules interposed between the inner ends of said springs and said eye.

1,105,019. COMBINED GARMENT HANGER AND STRETCHER. AUGUST E. BLUHM, Rochester, N. Y. Filed Sept. 5, 1912. Serial No. 718,743. (Cl. 223—19.)

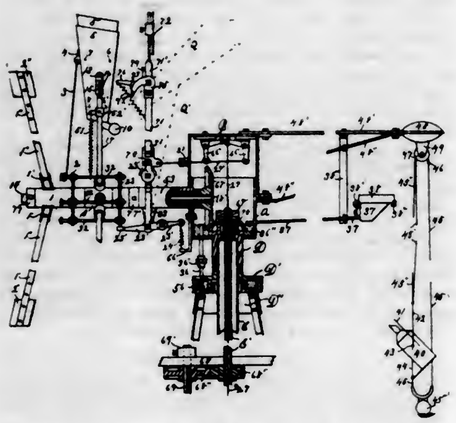


1. A folding wire garment hanger and stretcher, comprising a pintle having two frames pivotally mounted thereon, and an upright support pivotally mounted on said pintle between said frames, each of said frames terminating in an oval-shaped enlargement extending transversely thereto, said enlargements forming shoulders with the inner portion of the frame, a clamp mounted to slide on each of said frames, and a spring interposed between said clamp and said pintle and adapted to exert a constant outward tension on the clamp and to hold said clamp normally against one of the shoulders of the frame.

2. A folding wire garment hanger and stretcher, comprising a pintle having two frames pivotally mounted thereon, and an upright support pivotally mounted on said pintle between said frames, each of said frames terminating in an oval-shaped enlargement extending transversely thereto, said enlargements forming shoulders with the inner portion of the frame, a clamp mounted to slide on each of said frames, a spring interposed between said clamp and said pintle and adapted to exert a constant outward tension on the clamp and to hold said clamp normally against one of the shoulders, and a ferrule interposed between the inner end of the spring and said pintle.

3. A folding wire garment hanger and stretcher, comprising a pintle and two frames pivotally mounted thereon, each of said frames terminating in an enlarged outer portion forming an abrupt shoulder at the junction of said portion with the main part of the frame, a clamp slidably mounted on the frame, and a spring on the frame acting with a constant expansive tendency upon the clamp and adapted to hold said clamp against said shoulder, said spring being yieldable to allow the clamp to be moved to different points on the frame.

1,105,020. WINDMILL. WILLIAM P. BRETT, Decatur, Ill. Filed Apr. 27, 1904. Serial No. 205,208. (Cl. 170—69.)



1. The combination, in a windmill, of a rotatable hub portion, with spokes radiating from said hub portion, tension rods extending from one to the other of said spokes, a sail portion for each of said tension rods, and a tubular pivot portion for each of the said sail portions whereby said sail portions are adapted to oscillate upon said tension rods for the purpose set forth.

2. In a windmill, in combination, a wheel shaft, a windwheel provided with pivotally mounted fans or sails, a governor device in operative connection with the said fans or sails and oscillatorially mounted relative to the said wheel shaft, a brake member in operative connection with the said device, governor fans adapted to actuate said device in one direction and a spring adapted to actuate the said device in the opposite direction, and means adapted to operate in connection with the said brake member whereby the said device may be held against rotation.

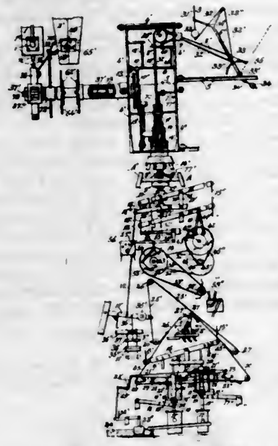
3. The combination, in a windmill, of a wheel carrying sails which are adapted to be turned to and from active and inactive positions, with mechanism adapted to normally hold said sails in their inactive position and to governingly actuate the said sails during the operation of said wheel, and a controller or starting device which is adapted in connection with a predetermined force or velocity of wind to cause the said sails to be turned to their active position.

4. The combination, in a windmill, of a wheel carrying a sail portion that is adapted to be turned to and from active and inactive positions, with mechanism which is adapted to normally hold said sail portion in its inactive position, and a controller device which is adapted in connection with a predetermined force or velocity of wind to cause the said sail portion to take an active position.

5. In combination, a main frame, a rotatable shaft, a windwheel provided with pivotally mounted sails, a governor member provided with outwardly extending arms carrying air resistable fans and so mounted as to be adapted to rotate with and to oscillate independent of the said rotatable shaft, a brake wheel mounted in rigid connection with said governing member, sail controlling rods in operative connection with the said governing member and said pivotally mounted sails, and means for holding the said brake member against rotation.

[Claims 6 to 55 not printed in the Gazette.]

1,105,021. WINDMILL-POWER PLANT. WILLIAM P. BRETT, Decatur, Ill. Filed Jan. 21, 1905. Serial No. 242,171. (Cl. 170—62.)



1. The combination in a windmill power plant of a windwheel comprising sails adapted to active and inactive positions, mechanism for putting said sails into and out of their active positions, a controller comprising a reciprocating sail, connecting devices whereby a predetermined starting force of the wind acting against said reciprocating sail will cause said mechanism to put said windwheel sails into their active positions and whereby a predetermined increase above the said starting force of the wind will cause the said windwheel sails to be put into and held in their inactive positions while said increased force of wind prevails.

2. The combination in a windmill power plant of a windwheel comprising sails adapted to active and inactive positions, mechanism for putting the said windwheel sails into and out of their active positions, a device or cord adapted to reciprocal movement, a weight and suitable connecting parts supported by said device or cord and adapted to normally cause said sails to stand in their inactive positions, a wind actuated controller, and means whereby a predetermined force or velocity of wind will cause said controller to raise and hold said weight in its elevated position for the purpose set forth.

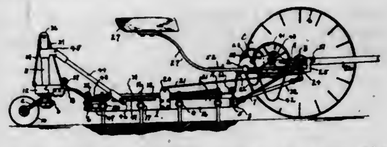
3. In combination a wind wheel, mechanism for putting the sails of said windwheel into and out of their active positions, a part or pull out device comprising a portion of said mechanism and adapted, throughout the greater part of its range of action, to operate independent of the wheel connected parts of said mechanism, a series of weights spaced apart one above the other and normally supported independent of said device, and means connected with said device whereby predetermined forces or velocities of wind will cause it to elevate and support one, any number or all of said weights, for the purpose set forth.

4. The combination in a windmill power plant of a wind wheel with sails adapted to active and inactive positions, a wind actuated controller device, means whereby predetermined wind forces acting on said device and windwheel will cause the movement of said wheel sails to be effected from active to inactive and inactive to active positions respectively, an oscillating sail portion comprising a part, and carried by other moving parts, of said device, and means whereby the said sail portion may be turned to or from the wind independent of the movements of the said other moving parts.

5. The combination in a windmill power plant of a windwheel having sails adapted to active and inactive positions, a controller device responsive to predetermined wind forces and adapted to cause the movement of said sails to or from their active and inactive positions, means adapted, normally, to cause the said windwheel sails to be held in their inactive positions, and means whereby parts of said controller device may be optionally operated from a distant position.

[Claims 6 to 71 not printed in the Gazette.]

1,105,022. HARROW. CALVIN N. CAMPBELL, Missouri Valley, Iowa, assignor of one-fourth to Pearl M. Edwards, Ward, Iowa. Filed Feb. 24, 1914. Serial No. 820,405. (Cl. 55—93.)



1. A harrow comprising a vehicle, a caster wheel, a frame provided with harrow teeth disposed between the vehicle and caster wheel, and devices on the frame connected with the vehicle and caster wheel for elevating said frame.

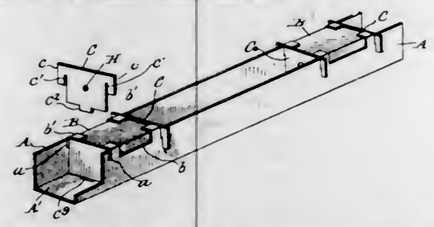
2. A harrow comprising a vehicle, a caster wheel, a frame interposed between the vehicle and caster wheel and provided with tooth-bearing bars, devices on the frame connected with the vehicle for causing a rotatable movement of the tooth-bearing bars, and devices on the caster wheel connected with the frame and vehicle for elevating said frame.

3. In devices for the purpose described, a vehicle, a caster wheel, a primary frame provided with tooth-bearing rollers and interposed between the vehicle and caster wheel, a pair of secondary frames disposed at the sides of the primary frame each being provided with tooth-bearing rollers and adapted to be swung to positions above the primary frame, devices upon the primary and secondary frames connected with the vehicle for elevating said frames, devices upon the vehicle connected with the primary frame and caster wheel for elevating said primary frame, and devices upon said tooth bearing rollers connected with the vehicle for revolubly moving said rollers.

1,105,023. RAILWAY-TIE. JOHN W. CLARK, Jr., Salt Lake City, Utah. Filed Apr. 18, 1914. Serial No. 832,882. (Cl. 238—5.)

1. A railway tie comprising a metal trough-like body, cushion blocks seated in the body and projecting at the top of the body to form rail seats, tongues or extensions on the sides of the tie body adapted to be turned down over the cushion blocks, and transverse holding plates fitting within the trough-like body at each end of the block, and hav-

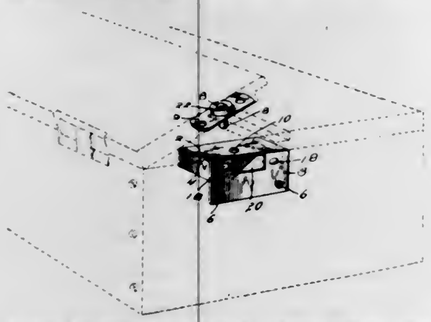
ing lateral extensions interlocking with the sides of the trough-like body to prevent relative longitudinal movement of the cushion blocks and body.



2. A railway tie comprising a metal trough-like body having its sides formed with oppositely disposed vertical slots, cushion blocks seated in the body in proximity to said slots, tongues or extensions formed on the sides of the body adapted to be turned down over the blocks and transverse holding plates having lateral extensions adapted to enter the slots in the sides of the tie body, whereby the plates will be interlocked with the sides to prevent relative longitudinal movement of the blocks and body.

3. A railway tie comprising a metal trough-like body having its side walls provided with oppositely disposed vertical slots, cushion blocks seated within the body in proximity to said slots, oppositely disposed tongues or extensions formed on the sides of the body and adapted to be turned down over the cushion blocks and fastening plates fitting within the body of the tie and having lateral slotted extensions adapted to fit over the sides of the body to prevent relative longitudinal movement of the blocks and body.

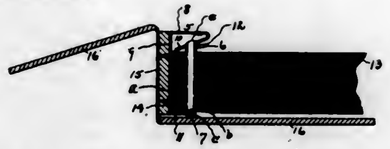
1,105,024. BOX-FASTENER. WILLIAM E. COLLINS, Cambridge, N. Y. Filed Apr. 23, 1914. Serial No. 833,950. (Cl. 70—80.)



A box fastener, comprising a channel shaped casing adapted to fit over the edge of a box side and having a hole in its top member and two holes in its outer side member spaced upon either side of said first-named hole, a plate adapted to be secured to the box lid and having a depending stem adapted to pass through said hole in the top member when the lid is closed, said stem being provided with a transverse hole, and a locking member adapted to be threaded through said holes in said outer side member and said stem.

1,105,025. LEAF-BINDING CLASP. FRANK I. ELLICK, Omaha, Nebr. Filed Apr. 6, 1914. Serial No. 829,763. (Cl. 129—24.)

1. In a leaf holding clasp, a frame consisting of a rectangular, elongated, integral plate bent at right angles near one of its ends to provide a back and a first rectangular wing having an apertured, inwardly projecting, inclined flange terminating near said back to provide a spring, said plate also being bent at right angles in the same direction near its opposite end to provide a second rectangular wing having an inturned part adapted to abut upon said back, and a latch bar mounted on the second wing adapted to have swinging movements for alternately entering and leaving the aperture of the inclined flange of the first wing.

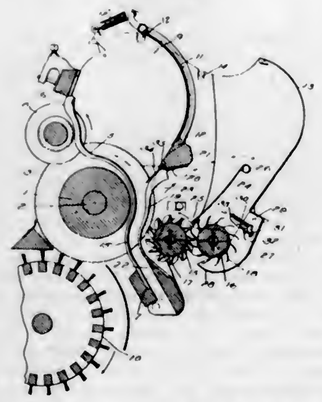


2. In a leaf holding clasp, a frame consisting of a rectangular plate being bent at right angles near one of its ends to provide a back and a first wing having an apertured inturned part disposed inclinedly with reference to said first wing to provide a leaf-spring, said plate also being bent at right angles in the same direction near its opposite end to provide a second wing having an inturned part to provide a mounting for a pivot-pin, and a latch bar mounted on said pivot-pin adapted to engage in the aperture of said leaf-spring, and to have a swinging movement for a release from said aperture when the leaf-spring is depressed.

3. In a leaf-holding clasp, a frame consisting of a metallic plate bent near one of its ends to provide a back and a first outwardly-projecting wing having an apertured inturned part disposed inclinedly with reference to said first wing to provide a leaf-spring, said plate also being bent in the same direction near its opposite end to provide a reinforcing plate and to provide a mounting for a pivot-pin, and a latch bar mounted on the pivot-pin for depressing the leaf-spring and engaging in said aperture during one of its swinging movements.

4. In a leaf holding clasp, a frame, comprising a rectangular apertured back, an outwardly-projecting bracket-member connected with one end of the back and having an inturned resilient part provided with an aperture, an outwardly-projecting wing connected with the opposite end of the back, and a cylindrical latch-bar pivotally mounted at one of its ends on said outwardly-projecting wing for engagement of its opposite end with and to depress the inturned resilient part of said bracket-member for permitting said latch-bar to engage within said aperture.

1,105,026. COTTON-GIN. JOHN R. FORDYCE and WILLIAM R. KEEF, Little Rock, Ark. Filed Sept. 4, 1912. Serial No. 718,465. (Cl. 13—9.)



1. In a cotton gin, the combination of a receiving box or hood having a deflector dividing the same into two compartments, and mounted to provide a passageway for hulls, bolls, and the like over the top of said deflector, a huller separating roller and a huller throwing roller at the lower portion of the box or hood, a series of saws, a series of ribs extending between the saws and having portions to direct hulls, bolls, and waste over the top of the deflector when thrown against the ribs by the throwing roller.

2. In a cotton gin, the combination of a receiving box or hood having a partition dividing it into two compartments, a huller throwing roller in one of said compartments, a huller separating roller in the other of said compartments, a series of saws, a series of ribs extending between the saws, said ribs having throwing portions to direct hulls, bolls, and waste over the partition into the compartment above the huller separating roller.

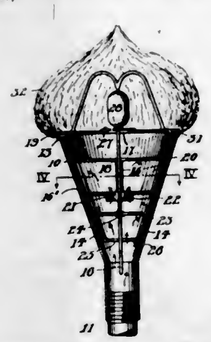
3. In a cotton gin, the combination of a series of gin saws, a receiving box or hood having a partition or deflector therein, dividing the box or hood into two compartments connected by a passageway above said partition or deflector, a huller throwing roller, a series of ribs extending between the saws and having throwing portions separated a distance to permit seed cotton to pass and to throw bolls, hulls and waste out of the zone of action of the saws when projected thereagainst by the huller throwing roller.

4. In a cotton gin, the combination of a series of saws, a receiving box or hood, a huller throwing roller and a huller separating roller in said box or hood, a partition in said box or hood extending upward from a point between said rollers, and a series of saws having throwing portions to permit seed cotton to pass with the saws and to throw bolls, hulls and waste from the saws over the top of said partition.

5. In a cotton gin, the combination of a series of saws, a receiving box or hood, a huller throwing roller and a huller separating roller in said box or hood, said hulled throwing roller having backwardly inclined teeth, and the huller separating roller having forwardly inclined teeth, a partition in said box or hood extending upwardly from a point between said rollers, and a series of saws having throwing portions to permit seed cotton to pass with the saws and to throw bolls, hulls and waste from the saws over the top of said partition.

[Claims 6 to 9 not printed in the Gazette.]

1,105,027. SAFETY GAS-BURNER. JOHN GÁSPÁR, Bridgeport, Conn. Filed Apr. 13, 1914. Serial No. 831,469. (Cl. 67—114.)



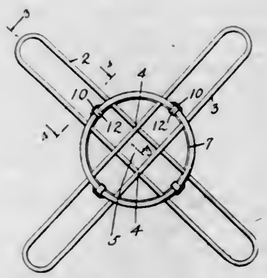
1. A burner comprising a funnel-shaped casing, a frame positioned therein and having a valve seat therethrough, a shiftable rod positioned through said valve seat, a valve secured to said rod, a yoke upon the top of said frame, a ball positioned upon the upper end of said rod and adapted for seating engagement beneath said yoke with said valve in its open position and adapted for disengagement from said yoke.

2. A device of the class described comprising in combination with a gas supply pipe, a funnel-shaped casing mounted upon said pipe, a pan mounted in the open end of said casing and spaced from the inner side thereof providing a gas exit passage, a depending frame upon said pan having a slot in the bottom portion thereof, a disk carried by said frame, a depending flanged valve seat centrally carried by said disk, a valve rod projecting through said slot and valve seat and extending above the top of said pan, a valve positioned upon said rod beneath said valve seat, and means adapted for releasing said rod for closing said valve upon a lateral tilting of said rod.

3. A device of the class described comprising in combination with a gas supply pipe, a funnel-shaped casing mounted upon said pipe, a pan mounted in the open end of said casing and spaced from the inner side thereof providing a gas exit passage, a depending frame upon said pan having a slot in the bottom portion thereof, a disk carried by said frame, a depending flanged valve seat centrally carried by said disk, a valve rod projecting through said slot and valve seat and extending above the top of said pan, a valve positioned upon said rod beneath said valve seat, a yoke upon the top of said pan having a pointed central portion, a ball upon the upper end of said rod contacting beneath said point with said valve in its unseated position and adapted upon a sidewise movement for disengagement from said point upon a seating of said valve.

4. A device of the class described comprising a gas supply pipe, a funnel-shaped casing upon the end of said pipe, a frame mounted within said casing and having perforations therethrough in alinement with said pipe, a valve seat surrounding one of said perforations, a valve rod extending through said perforations, a valve freely pivoted upon said rod and adapted for engagement with said seat, a yoke upon the top of said frame having a central point, a ball upon the top of said rod adapted for normally contacting beneath said point with said valve in its open position, the said valve being adapted for automatic closing upon a side shifting of said rod with said ball disengaged from said point.

1,105,028. REEL. LEWIS W. GILL, New York, N. Y., assignor to Lachman Manufacturing Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 25, 1913. Serial No. 756,630. (Cl. 242—119.)



1. A reel comprising a cylindrical body of non-metallic fibrous material like paper, a retaining framework for said body comprising annular metal end plates and stay members securing said plates to each other and to the body and radiating metal reel arms secured to the body by said plates.

2. A reel comprising a cylindrical body of paper-like material, annular metal end plates seated on the ends of said body, stay members securing said end plates to said body and reel arms comprising radiating members intersecting each other and secured together, said reel arms being secured to the body by said end plates.

3. A reel comprising a cylindrical body of paper-like material, radiating intersecting metal reel arms at each end thereof, metal bands on the outside of said body at each end and having flanges overlapping the edges of said cylinder and means adapted to positively and rigidly secure said bands to the body and fasten the reel arms thereto.

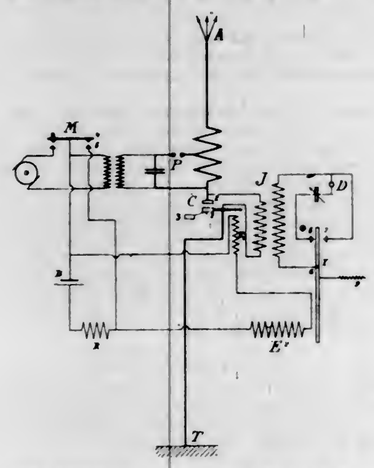
4. A reel comprising a cylindrical body of paper, wire loops crossing each other and secured together forming

reel arms, annular metal end plates on each end of the body and adapted to secure said reel arms to the body and stay members adapted to tie said end plates together.

5. A reel comprising a cylindrical paper body, wire loops intersecting each other and secured together at their intersections to form reel arms, metal bands at each end of said body and provided with recesses for engaging the reel arms and stay members adapted to tie said bands together to secure the arms to the body.

[Claims 6 and 7 not printed in the Gazette.]

1,105,029. AUTOMATIC COMMUTATOR FOR RADIO-TELEGRAPHIC PLANTS WITH INDIRECT EXCITATION. EMILE GIRARDEAU, Paris, France, assignor of one-half to Joseph Bethenod, Paris, France. Filed Dec. 4, 1911. Serial No. 663,772. (Cl. 250—13.)

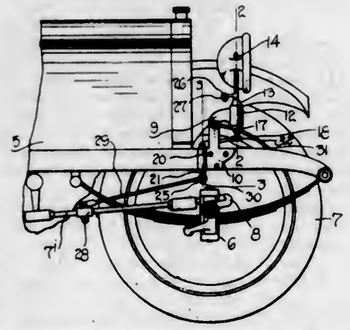


1. In an apparatus for wireless telegraphy the combination of a sender with a circuit comprising a pile or battery, a resistance, and an electro-magnet the armature of which is mounted on an oscillating lever which forms one of the contacts of an interrupter placed between the antenna and the earth and with a second circuit one of the ends of which is branched off between the electro-magnet and the battery, its second end being branched off between the electro-magnet and the resistance, this second circuit comprising an interrupter the movable part of which consists of the sender and opens the said second circuit if the said sender is being depressed.

2. In a receiver for wireless telegraphy an electro-magnet automatically excited by the sending of a signal, a commutator whose spring influenced arm is attracted by the electro-magnet at the moment when a signal is sent, a first circuit of which one end is electrically connected with the arm of the commutator, said circuit comprising the secondary winding of the jigger and a conductor without lumped self induction or capacity which is connected with the contact of the commutator on which the arm of the commutator is pressed when the electro-magnet is excited, said contact forming thus the second end of said first circuit: a second circuit one end of which is placed between the secondary winding of the jigger and the said conductor and the other end of which is on the contact against which bears the arm of the commutator through the action of the spring when the electro-magnet is not excited, this second circuit comprising the detector and a condenser.

3. In an apparatus for wireless telegraphy the combination of a sender with a circuit comprising a pile or battery, a resistance, a protecting commutator of the receiving circuit, a first electro-magnet which, when it is excited operates the protecting commutator of the receiving circuit, and a second electro-magnet the armature of which, when excited, grounds the antenna, and with a second circuit one end of which is branched between the electro-magnets and the battery, its second end being branched off between the electro-magnets and the resistance, this second circuit comprising an interrupter the movable part of which consists of the sender and opens the said second circuit when said sender is being depressed.

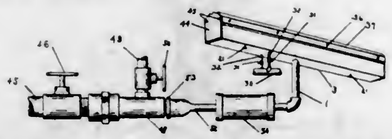
1,105,030. LAMP-OPERATING MECHANISM. JESSE E. GOSSMAN, Goulds, Fla. Filed Feb. 11, 1914. Serial No. 818,076. (Cl. 240—62.)



1. The combination with a vehicle steering mechanism, of lamp supporting brackets secured upon the vehicle frame, lamp carrying yokes mounted in said brackets, a connection between said yokes whereby the lamps are synchronously turned, a pivot rod mounted upon the bracket, connecting means between the said rod and the lamp carrying yoke, and means connecting said pivot rod to the steering mechanism.

2. The combination with a vehicle steering mechanism, of lamp supporting brackets mounted upon the vehicle frame, lamp carrying yokes journaled upon said brackets, connecting means between said yokes, each of said brackets including an attaching plate provided with a bearing sleeve, a vertical rod mounted in the bearing sleeve, arms connected to opposite ends of said rod and extending therefrom in opposite directions with respect to each other, connecting means between the arm on the upper end of said rod and the lamp carrying bracket, and means connecting the arm on the lower end of said rod to the steering mechanism whereby the lamp carrying yokes are turned in the brackets when the steering mechanism is operated.

1,105,031. BURNER. HENRY F. HAGEMEYER, Toledo, Ohio, assignor to The Mechanical Process Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Continuation in part of application Serial No. 732,809, filed Nov. 22, 1912. This application filed Nov. 10, 1913. Serial No. 800,062. (Cl. 158—109.)



1. A burner comprising a burner body provided with a fuel supply duct, a discharge slot for fuel burning supply, and a plurality of chambers in series between said duct and slot, said chambers having different size openings therebetween for pressure equalization.

2. A burner comprising a burner body provided with means for main fuel burning supply embodying a high velocity discharge slot, and said burner body being further provided with means for auxiliary fuel burning supply embodying a less velocity discharge slot parallel to and directed toward said main fuel discharge slot.

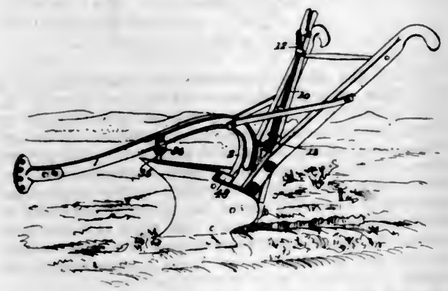
3. A burner comprising a burner body provided with a main high pressure fuel discharge opening having a duct leading thereto, and said burner body being further provided with an auxiliary lower pressure fuel supply discharge opening having a duct leading thereto, said auxiliary discharge opening being directed along and toward the main discharge opening to direct its fuel to travel with the main fuel discharge, thereby diminishing the relative velocity between the fuel of the main discharge opening and the auxiliary discharge opening.

4. A burner comprising a burner body provided with a main discharge slot for fuel burning supply, and a plurality of parallel auxiliary discharge slots for supplemental fuel burning supply directed toward the main discharge slot.

5. A burner comprising a burner body provided with a main discharge slot for fuel burning supply and a pair of auxiliary discharge slots parallel to the main discharge slot, one on each side of the main discharge slot and directed theretoward.

[Claims 6 to 19 not printed in the Gazette.]

1,105,032. REVERSIBLE PLOW. WILHELM KOEHLER, Newkirk, Okla. Filed Jan. 29, 1914. Serial No. 815,137. (Cl. 97—27.)



1. In a plow of the class described, the combination with a beam having a pendent standard, and an auxiliary standard in the rear thereof; of a shaft rotatably mounted in the lower ends of the said standards, and longitudinally shiftable with respect to the standards, a mold board carrying member on one end of the shaft, said member and the standards having opposing interlocking faces adapted to engage each other when the shaft is shifted to its innermost part, and means for holding the said shaft and the mold board carrying member to its shifted position.

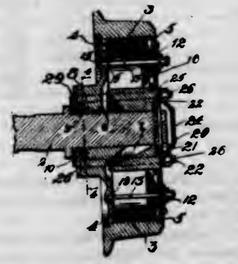
2. In a plow of the class described, the combination with a beam having a pendent standard, and an auxiliary standard in the rear thereof; of a shaft rotatably mounted in the lower ends of the said standards; and longitudinally shiftable with respect to the standards, a mold board carrying member on one end of the shaft, said member and the standards having opposing interlocking faces adapted to engage each other when the shaft is shifted to its innermost part, means for holding the said shaft and the said member to its shifted position, and means for holding the shaft to either of its longitudinally shifted positions, said means including a pivoted lever having a movable connection with the shaft and rack and detent devices for holding the lever to either of its shifted positions.

3. In a plow of the class described, the combination with a beam having a pendent standard, and an auxiliary standard in the rear thereof; of a shaft rotatably mounted in the lower ends of the said standards and longitudinally shiftable with respect to the standards, a mold board carrying member on one end of the shaft, said member and the standards having opposing interlocking faces adapted to engage each other when the shaft is shifted to its innermost part, means for holding the said shaft and the said member to its shifted position, means for holding the shaft to either of its longitudinally shifted positions, said means including a pivoted lever having a movable connection with the shaft and rack and detent devices for holding the lever to either of its shifted positions, and other means for holding the mold board and its carrying member and shaft from turning when the said carrying member is shifted out of a locked engagement with the standard.

4. In a plow of the class described, the combination with a beam having a pendent standard, and an auxiliary standard in the rear thereof; of a shaft rotatably mounted in the lower ends of the said standards and longitudinally shiftable with respect to the standards, a mold board carrying member on one end of the shaft, said head and the standard having opposing interlocking faces adapted to engage each other when the shaft is shifted to its innermost part, means for holding the said shaft and the carrying member to its shifted position, means for holding the shaft to either of its longitudinally shifted positions, said means including a pivoted lever having a movable connection with the shaft, rack and detent devices for holding the lever to either of its shifted positions, other means for holding the mold board and its carrying member and shaft from turning when the said head member is shifted out of a locked engagement with the standard, said means consisting of a member freely hung from the plow beam to drop down between the crotch end of the uppermost plow secured on the mold board.

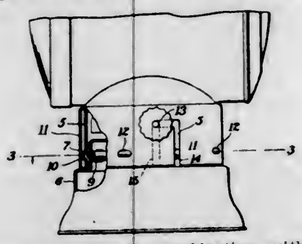
5. In a plow construction, the combination with a beam, a standard connection with the beam whose front edge terminates in a toe-like projection, a shaft rotatably mounted in the standard and having longitudinal movement in its bearings, a mold board carrying member fixedly mountd on the outer end of the shaft to move therewith, said carrying member having a rearwardly extended wing and a hub having a socket and notched end, the standard having a toe-portion shaped to interlock with the said notched end when the shaft is moved to its rearmost limit, a double ended mold board mounted on the said carrying member to turn therewith, plow shares connected to the said mold board and the wings of the head; a lever and pawl, and ratchet devices coöperating therewith for shifting the shaft and its head into and out of locked engagement with the standard, and a supplemental locking device loosely engaging the uppermost of the plow shares for holding the mold board and its carrying member from turning when at the outer or released position.

1,105,033. LUBRICATING-WHEEL. FRANK L. MCCARTY, Superior, Wyo., assignor of one-half to William J. Hallett, Rock Springs, Wyo. Filed Jan. 6, 1913. Serial No. 740,468. (Cl. 64—26.)



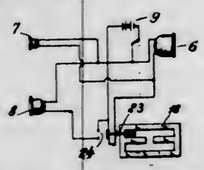
A car wheel having its bore provided with annular enlargement at its inner end, a pair of grease containers carried by the wheel with passages leading to the bore, said bore, between one of said passages and said enlargement, being recessed longitudinally of the bore to provide a passageway, independent means disposed parallel with the bore and within said containers for placing the lubricant under pressure to deliver it to the bore through said passageways, said pressure-applying means being removable as a unit, and each provided with removable means for holding the same inactive at will while the other is free to perform its functions.

1,105,034. COUPLING DEVICE. EDWARD J. MCDADE, Rochester, N. Y., assignor to Pritchard-Stamping Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 8, 1914. Serial No. 830,432. (Cl. 240—50.)



In a coupling-device, the combination, with an inner member, an outer annular member, in which the inner member is to be locked, provided with spaced openings, and a spring-ring interposed between said members and provided with projections extending outwardly through said openings, of a rotatable annular member mounted on said outer annular member, said rotatable member having portions coöperating, in the manner of a cam, with said projections on the spring-ring, whereby the ring, through partial rotation of the rotatable member, may be forced inwardly and held in locking engagement with said inner member.

1,105,035. AUTOMOBILE-LIGHT. ALDEN L. MCMURTRY, Sound Beach, Conn. Filed Aug. 31, 1912. Serial No. 718,004. (Cl. 177—337.)



1. In a motor vehicle, a reversing mechanism, a control lever therefor, adapted to occupy a plurality of vehicle forward positions and a vehicle reverse position, a headlight, a rear search-light, and means dependent upon the control lever for supplying energy to the one or the other of the lights, according as the control lever occupies its vehicle forward or its vehicle reverse positions.

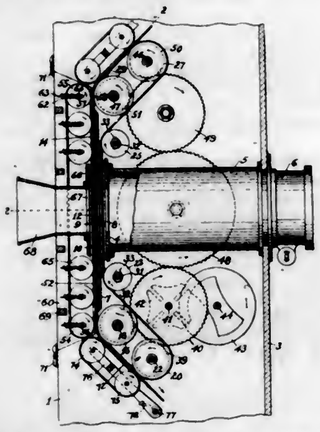
2. In a motor vehicle, a reversing mechanism, a control lever therefor, adapted to occupy a plurality of vehicle forward positions and a vehicle reverse position, a tail lamp, a manually operated switch for said lamp, a headlight, a rear search-light, and means controlled by said switch and dependent upon the control lever for supplying energy to either the head light or the rear search light, according as the control lever occupies its vehicle forward or its vehicle reverse positions.

1,105,036. FILM-FEEDING MECHANISM. PETER J. MUKAUTZ, Chicago, Ill. Filed May 17, 1913. Serial No. 768,223. (Cl. 88—18.)

1. In a film feeding mechanism, the combination of a pair of belts, means for imparting uniform step by step longitudinal movement to the belts, a film arranged against said belts, and means for causing the film to frictionally engage said belts whereby the film will be moved by the belts, substantially as described.

2. In a film feeding mechanism, the combination of a pair of endless belts, means for uniformly moving the belts step by step, a film arranged against said belts, means for slidably supporting the portions of said belts in contact with the film, and means for causing the film to frictionally engage said belts whereby the film will be moved by the belts, substantially as described.

3. In a film feeding mechanism, the combination of a plate, pairs of pulleys arranged at opposite ends of the plate, a pair of belts carried by said pairs of pulleys and adapted to slidably rest against said plate, means for rotating said pairs of pulleys, a film arranged against said belts, and means for causing the film to frictionally engage said belts whereby the film will be moved by the belts, substantially as described.

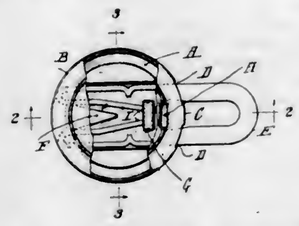


4. In a film feeding mechanism, the combination of a plate, pairs of pulleys arranged at opposite ends of the plate, a pair of endless belts carried by said pairs of pulleys and encircling said plate, one side of each of said belts resting against one side of said plate, pairs of idler pulleys at the other side of the plate engaging said belts, means for moving said idler pulleys in the longitudinal direction of the belts, means for rotating said pairs of pulleys, a film arranged against said belts, and means for causing the film to frictionally engage said belts whereby the film will be moved by the belts, substantially as described.

5. In a film feeding mechanism, the combination of a plate, pairs of pulleys arranged at opposite ends of the plate, a pair of belts carried by said pairs of pulleys and adapted to slidably rest against said plate, means for driving said pairs of pulleys in unison in a step by step manner, a film arranged against said belts, a plurality of pairs of sheaves, and a pair of belts passing around the sheaves for engaging the film to keep it in frictional contact with the first-mentioned pair of belts, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,105,037. SEAL-FASTENING. THOMAS E. MURRAY, New York, N. Y. Filed Mar. 11, 1914. Serial No. 823,860. (Cl. 70—99.)



1. A seal fastening, comprising a casing having side walls and a rim, and two openings in said rim, an inward projection on one of said side walls disposed between said openings, and a shackle in loop form having its arms bent backwardly and inwardly: the said shackle arms entering said openings and, at their ends, engaging said projection.

2. A seal fastening, comprising a casing having side walls and a rim, and two openings in said rim, two inward projections respectively on said side walls, one of said projections being between the other projection and the rim of said casing, and both of said projections being disposed between said openings, and a shackle in loop form having its arms bent backwardly and inwardly: the said shackle arms entering said openings and, at their ends, engaging said projection.

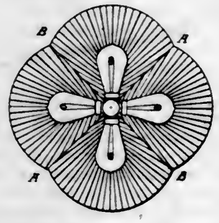
3. A seal fastening, comprising a casing having side walls and a rim, and two openings in said rim, two inward projections on said casing disposed between said openings, and a shackle in loop form having its arms bent backwardly and inwardly; the said shackle arms entering said openings, receiving one of said projections between their bent back portions, and, at their ends, engaging the other projection.

4. A seal fastening, comprising a casing having side walls and a rim, and two openings in said rim, one of said side walls having two inward projections and the other side wall having one inward projection entering between said two projections, said three projections being disposed between said openings, and a shackle in loop form having its arms bent backwardly and inwardly: the said shackle arms entering said openings and receiving one of said three projections between their bent back portions and having their ends adapted to engage successively the two remaining projections.

5. A seal fastening, comprising a sheet metal casing formed of two flanged disks seated one within the other with their flanges overlapping and having two registering openings in said flanges, one of said disks having two struck up inward projections and the other disk having one struck up inward projection entering between said two projections, said three projections being disposed between said openings, and a shackle in loop form having its arms bent backwardly and inwardly: the said shackle arms entering said openings and receiving one of said three projections between their bent back portions and having their ends adapted to engage successively the two remaining projections.

[Claims 6 and 7 not printed in the Gazette.]

1,105,038. REFLECTOR-CLUSTER. OTIS A. MYGATT, New York, N. Y. Filed Aug. 12, 1910. Serial No. 576,849. (Cl. 240—106.)

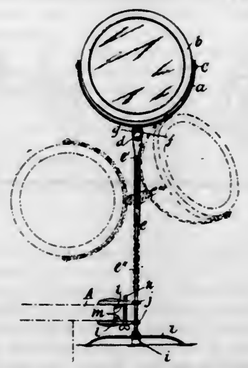


1. In a lighting system, the combination of a plurality of light sources and glass reflecting means above the light sources, said means being provided with reflecting prisms arranged in groups, the prisms of each group being disposed to give the most advantageous lighting results with reference to the nearest light source.

2. In lighting appliances, the combination of a plurality of incandescent bulbs, and a glass reflecting body above the bulbs, said body being provided with the reflecting prisms arranged in groups, the prisms in each group being disposed at suitable angles to give proper reflection with respect to the bulb nearest them.

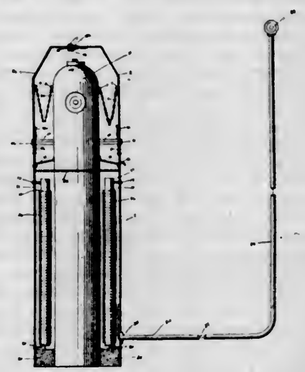
3. In a lighting appliance, the combination of a plurality of light sources, and an integral glass reflecting body above said sources, having specular surfaces arranged above each of the sources to give the most advantageous lighting results with reference to that source.

1,105,039. TOILET-MIRROR. JOHN A. OLBON, Paterson, N. J., assignor to Frank E. Rea, Paterson, N. J. Filed Mar. 17, 1913. Serial No. 754,750. (Cl. 45—97.)



In combination, a support, a mirror, means for securing the mirror to the support and a two-jawed clamp attached to the support and having abutment means between its jaw-portions and opposite gripping surfaces on said jaw portions converging away from the abutment means and co-active therewith to hold or grip a pipe or the like, substantially as described.

1,105,040. NON-FREEZING FIRE-PLUG. CHARLES F. PAULUS, Bethlehem, Pa. Filed Mar. 20, 1913. Serial No. 755,643. (Cl. 137—13.)

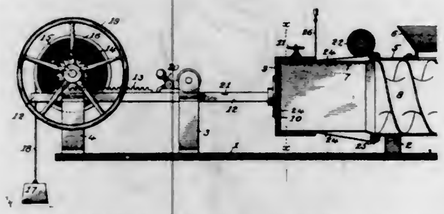


In a non-freezing fire plug, the combination of a casing spaced apart around said plug, a cover adapted to inclose the top of said casing and said plug, a partition mounted between said casing and said plug beneath said cover, said partition having an angular slope downwardly and outwardly from said plug to said casing, a drain pipe through said casing above said partition, means whereby said casing may be fixed solidly at its base in spaced apart relation with respect to said plug, a plurality of electric flue coils spaced apart from each other and around said plug between said casing and said plug, and means for directing a current of electricity to said coils when the outer atmosphere has reached a certain degree of temperature.

1,105,041. YEAST-PACKAGING MACHINE. ELWOOD C. PHILLIPS, Chicago, Ill. Filed Aug. 7, 1913. Serial No. 783,581. (Cl. 100—56.)

1. In a packaging machine, the combination of a receptacle having an outlet trunk, a feeding means associated with said receptacle, an inclosure containing cage

adapted to encompass said outlet trunk and movable longitudinally in relation thereto, means for yieldingly holding the cage toward the outlet trunk, and a cutter carried on said cage in adjacent relation to one end of the same.



2. In a packaging machine, the combination of a receptacle having an outlet trunk, a feeding means associated with said receptacle, an inclosure containing cage adapted to encompass said outlet trunk and movable longitudinally in relation thereto, means for yieldingly holding the cage toward the outlet trunk, a pair of reels associated in right-angle relation on said trunk and adapted to carry rolls of waxed paper, means for engaging the free ends of webs of paper from said rolls, and a cutter carried on said cage in adjacent relation to one end of the same.

3. In a packaging machine, the combination of a receptacle having an outlet trunk, a feeding means associated with said receptacle, an inclosure containing cage adapted to encompass said outlet trunk and movable longitudinally in relation thereto, means for yieldingly holding the cage toward the outlet trunk, the same comprising a carrying bar guided longitudinally and provided with a rack-bar, a shaft carrying a gear wheel engaging said rack bar, a sheave on said shaft and a weight connected by a flexible connection to said sheave, and a cutter carried on said cage in adjacent relation to one end of the same.

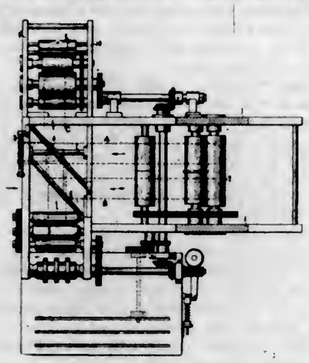
4. In a packaging machine, the combination of a receptacle having an outlet trunk, a feeding means associated with said receptacle, an inclosure containing cage adapted to encompass said outlet trunk and movable longitudinally in relation thereto, a pair of reels associated in right-angle relation on said trunk and adapted to carry rolls of waxed paper, means for engaging the free ends of webs of paper from said rolls, a carrying bar for the containing cage provided with a rack bar, a shaft carrying a gear wheel engaging said rack bar, a sheave on said shaft, a weight connected to said sheave, and a cutter carried on said cage in adjacent relation to the end of the same.

5. In a packaging machine, the combination of a receptacle having an outlet trunk, a feeding means associated with said receptacle, an inclosure containing cage adapted to encompass said outlet trunk and movable longitudinally in relation thereto, means for yieldingly holding the cage toward the outlet trunk, the same comprising in part a carrying bar guided longitudinally and a stop pawl engaging said bar when in its outward position, and a cutter carried on said cage in adjacent relation to one end of the same.

[Claims 6 to 12 not printed in the Gazette.]

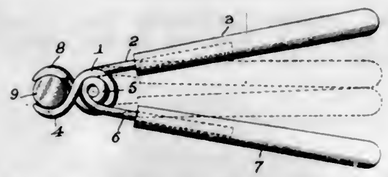
1,105,042. PRINTING APPARATUS. WILLIAM A. PRINGLE, Niagara Falls, N. Y., assignor, by mesne assignments, to American Sales Book Company, Limited, a Corporation of Ontario, Canada. Original application filed Dec. 5, 1906, Serial No. 346,392. Divided and this application filed June 27, 1910. Serial No. 568,998. (Cl. 164—66.)

1. In perforating mechanism for traveling webs, in combination, a plurality of mating cylinders, one of said cylinders being provided with a device having a plurality of spaced members, the other of said cylinders having affixed thereto a plurality of spaced members each of which carries a plurality of perforating points, means for adjusting one of the sets of spaced members toward and from the other, said perforating points being adapted to take between the spaced members upon the other of the cylinders when said cylinders are mutually rotated whereby the web passing therebetween is perforated, and a yielding member mounted adjacent and extending parallel with said perforating points adapted to free the said points from the web when said web has been perforated thereby.



2. In perforating mechanism for printing presses, in combination, a male cylinder provided with a recess in which is set a blade having a plurality of spaced members, each of which is provided with a pair of perforating points, a female cylinder having a recess within which is set a comb device composed of square teeth between each of the teeth of which one of said pairs of perforating points is adapted to be received, a clearing bar mounted in the recess of said male cylinder adjacent the perforating points of said blade adapted to be retracted when said perforating means is co-acting to perforate a web, and spring means for forcing said clearing bar in an outward direction whereby said perforating points will be cleared of said web after each perforating operation.

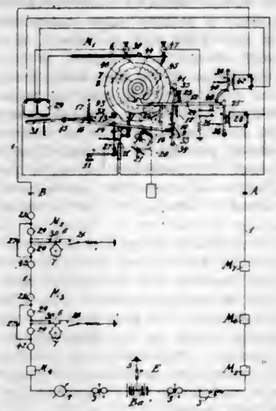
1,105,043. FUSE-TONGS. GUY ROBERTS, Bridgeport, Conn. Filed Sept. 20, 1913. Serial No. 790,889. (Cl. 81—47.)



1. Fuse tongs composed of two members each formed from a single length of material shaped to provide shanks at their inner terminals, said members having an intermediate yielding pivotal connection, the outer terminals of the members projecting forwardly from said pivotal connection and having bent portions that extend transversely of the pivotal connection, the outer ends of the said bent portions being free and terminating adjacent said pivotal connection to form gripping jaws, said jaws being concaved to form seats that extend transversely of the pivotal connection and the gripping surfaces of the jaws being flat.

2. Tongs composed of two members each formed from a single length of material having their inner terminals shaped to provide shanks, the members being arranged in crossing relation and having intermediate portions shaped to permit a yielding connection, the outer terminals being projected forwardly from the pivotal connection and having downwardly and upwardly bent portions, said outer terminals having portions extending transversely of the pivotal connection and the free ends thereof having downwardly and upwardly extending portions and terminating adjacent said pivotal connection to provide jaws having concaved seats that extend transversely of the tongs.

1,105,044. FIRE-ALARM SYSTEM. ERNST SCHUMANN, Charlottenburg, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed June 28, 1913. Serial No. 776,278. (Cl. 177—367.)



1. In a fire-alarm system, the combination of a circuit including a circuit-breaker and an electromagnet; a normally open switch for connecting said circuit to ground, a grounding member for closing said switch, automatic mechanism for actuating said circuit-breaker and driving said grounding member and thereby closing said switch, releasing means for releasing said automatic mechanism and driving the said grounding member into an operative position in which it can be driven by the automatic mechanism and thereby close said switch, and retracting means controlled by said electromagnet for preventing said releasing means driving said grounding member into said operative position.

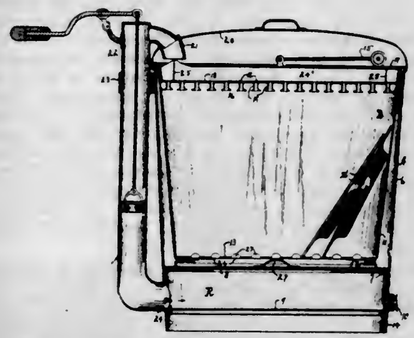
2. In a fire-alarm system, the combination of a circuit including a circuit-breaker, a main electromagnet and two auxiliary electromagnets in series therewith; a normally open switch for connecting said circuit to ground, a grounding member for closing said switch, the unattracted armatures of the auxiliary electromagnets being adapted to hold the grounding member in its switch-closing position, automatic mechanism for actuating said circuit-breaker and driving said grounding member and thereby closing said switch, releasing means for releasing said automatic mechanism and driving the said grounding member into an operative position in which it can be driven by the automatic mechanism and thereby close said switch, and retracting means controlled by said electromagnet for preventing said releasing means driving said grounding member into said operative position.

3. In a fire-alarm system, the combination of a circuit including a main electromagnet comprising two windings, a circuit-breaker connected between the two windings to the one end thereof and two auxiliary electromagnets connected in series with the windings to the other ends thereof; a normally open switch for connecting said circuit to ground, a grounding member for closing said switch, the unattracted armatures of the auxiliary electromagnets being adapted to hold the grounding member in its switch-closing position, automatic mechanism for actuating said circuit-breaker and driving said grounding member and thereby closing said switch, releasing means for releasing said automatic mechanism and driving the said grounding member into an operative position in which it can be driven by the automatic mechanism and thereby close said switch, and retracting means controlled by said electromagnet for preventing said releasing means driving said grounding member into said operative position.

4. In a fire-alarm system, the combination of a circuit including a main electromagnet comprising two windings, a circuit-breaker connected between the two windings to the one end thereof and two auxiliary electromagnets connected in series with the windings to the other ends thereof; a normally open switch for connecting said circuit to ground, a grounding member for closing said switch, the unattracted armatures of the auxiliary electromagnets being adapted to hold the grounding member in its switch-closing position, automatic mechanism for actuating said circuit-breaker and driving said grounding member and thereby closing said switch, a short-circuiting switch normally short-circuiting the main electromagnet and circuit-breaker, arresting means for arresting the short-circuiting switch in its open position, releasing means for opening the short-circuiting switch, releasing said automatic mechanism and driving the said grounding member into an operative position in which it can be driven by the automatic mechanism and thereby close said former switch, and retracting means controlled by said electromagnet for preventing said releasing means driving said grounding member into said operative position.

5. In a fire-alarm system, the combination of a circuit including a circuit-breaker, a main electromagnet and two auxiliary electromagnets in series therewith; a normally open grounded switch electrically connected with the circuit-breaker, a spring influenced grounding lever for closing said switch, each armature of the auxiliary electromagnets being adapted to hold said lever in its switch-closing position; automatic mechanism for actuating said circuit-breaker and driving said lever and thereby closing said switch, a short-circuiting switch normally short circuiting the main electromagnet and circuit-breaker, a catch adapted to be released by the automatic mechanism for holding the short-circuiting switch in its open posititon, a spring-influenced releasing lever normally coacting with the grounding lever and tending to drive the same into engagement with the automatic mechanism, a stop on the releasing lever for arresting the automatic mechanism in the rest-position of the releasing lever, a key-lever normally holding the releasing lever in its rest position and adapted to open said short-circuiting switch, and a lever-arm controlled by the armature of the main electromagnet for driving the releasing lever into its lowest position.

1,105,045. DISH-WASHING APPARATUS. CAROLINE SHIPHERD, Omaha, Nebr. Filed May 16, 1913. Serial No. 768,115. (Cl. 141—9.)



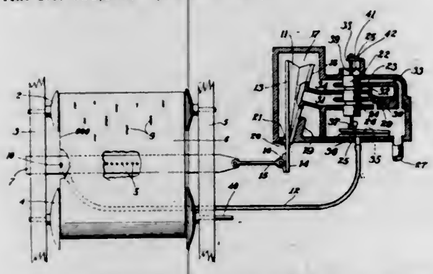
1. A dish-washing apparatus, comprising in combination with an upright tank adapted to contain water and provided between its ends with a strainer, a cylindrical receptacle having an apertured bottom and supported by the strainer while disposed within said tank; a distributing-pan adapted to be removably mounted in the cylindrical receptacle and having upright, intersecting partitions to form compartments with apertured bottoms; and a pump arranged for moving the water from the tank and discharging it within the compartments of the distributing-pan.

2. A dish-washing apparatus, comprising, in combination with an upright tank adapted to contain water and

provided between its ends with a strainer, a cylindrical receptacle having an apertured bottom and supported by the strainer while disposed within said tank; a distributing-pan adapted to be removably mounted in the cylindrical receptacle and having upright partitions with intersecting portions to form compartments with apertured bottoms; a cover provided with a sleeve and adapted to be removably mounted on the tank with the longitudinal middle of its sleeve disposed above the intersecting portions of said partitions; and a pump arranged for moving the water from the tank and discharging it within the sleeve of said cover.

3. A dish-washing apparatus, comprising, in combination with an upright tank, a strainer removably mounted within and above the lower end of the tank, a cover provided with a sleeve and adapted to be removably mounted upon the tank; a cylindrical receptacle supported by the strainer while disposed within said tank; a distributing-pan having a bottom provided with apertures and removably mounted in the cylindrical receptacle, and a pump having a cylinder in communication with the tank below said strainer and arranged to discharge water within the sleeve of said cover.

1,105,046. NOTE-SHEET-GUIDING DEVICE. WILBUR M. STONE, New York, N. Y., assignor to Arthur Conrow, trustee, New York, N. Y. Filed Oct. 7, 1911. Serial No. 653,345. (Cl. 84—161.)



1. A note-sheet guiding device including in combination, a tracker-bar, a music roll, a winding roll for unwinding a note-sheet from said music roll and drawing it across said tracker-bar, a guide opening appurtenant to said tracker-bar adapted to be alternately covered and uncovered by said note-sheet, a chamber, an actuating pneumatic therein pneumatically operable in either direction for shifting said tracker-bar transversely of the note-sheet in either direction respectively, a valve for governing said pneumatic, means for moving said valve, the movement of which valve is constantly governed but not produced by the presence or absence of lateral movement of the note-sheet in either direction relatively to said guide opening, means for moving the tracker-bar from the actuating pneumatic, and means for connecting the device with vacuum producing means.

2. A note-sheet guiding device including in combination, a tracker-bar, a music roll, a winding roll for unwinding a note-sheet from said music roll and drawing it across said tracker-bar, a guide opening appurtenant to said tracker-bar, adapted to be alternately covered and uncovered by said note-sheet, a chamber, an actuating pneumatic therein pneumatically operable in either direction, for shifting said tracker-bar transversely of the note-sheet in either direction respectively, a unitary valve independent of said pneumatic, for governing said pneumatic, and which valve is actuated by atmosphere alternately in opposite directions, the admission of atmosphere to said valve being constantly governed by the presence or absence of lateral movement in either direction of the note-sheet relatively to said guide opening, means for moving said tracker-bar from the actuating pneumatic, and means for connecting the device with vacuum producing means.

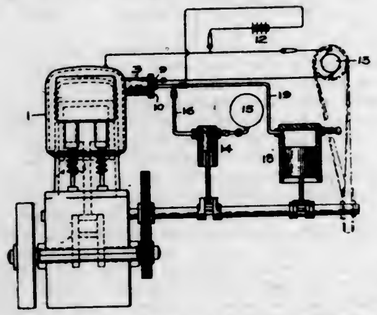
3. In a note-sheet guiding device employing a tracker-bar and a note-sheet traveling thereover, the combination of a chamber, a single actuating pneumatic therein pneumatically operable in either direction for shifting the tracker-bar in either direction respectively transversely of the note-sheet, a unitary valve independent of said pneumatic for governing said pneumatic, a single guide opening in said tracker-bar adapted to be alternately covered and uncovered by the note-sheet, means for actuating the valve from the guide opening, means for actuating the tracker-bar from said pneumatic, and means for connecting the device with vacuum producing means.

4. A note-sheet guiding device including in combination, a note-sheet, a tracker-bar having a guide opening therein, adapted to be alternately covered and uncovered by said note-sheet, a winding roll for drawing said note-sheet across said tracker-bar, an actuating pneumatic, a chamber in which said pneumatic is inclosed, a valve, for at one time letting atmosphere into said pneumatic and also out of said chamber and at another time for letting atmosphere out of said pneumatic and also into said chamber, the movement of which valve is constantly governed but not produced by the presence or absence of lateral movement of the note-sheet relatively to said guide opening, means for actuating the tracker-bar from said pneumatic, and means for connecting the device with vacuum producing means.

5. A note-sheet guiding device including in combination, a tracker-bar, a note-sheet, a winding roll for drawing said note-sheet across said tracker-bar, a single guide-opening appurtenant to said tracker-bar adapted to be alternately covered and uncovered by said note-sheet, a single actuating pneumatic, a chamber in which said pneumatic is inclosed, means for at one time letting atmosphere into said pneumatic and also out of said chamber and at another time for letting atmosphere out of said pneumatic and also into said chamber for moving said tracker-bar transversely of said note-sheet; means, governed by the covering or uncovering of said single guide opening, for actuating the means for letting atmosphere into and out of said pneumatic and chamber respectively, means for connecting said tracker-bar and said pneumatic, and means for connecting the device with vacuum producing means.

[Claims 6 and 7 not printed in the Gazette.]

1,105,047. OIL-ENGINE. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 3, 1910. Serial No. 580,338. (Cl. 123—30.)



1. In combination, an internal combustion engine having a cylinder and piston, the latter being arranged to compress pure air in the cylinder on one of its strokes, a vaporizer opening into the cylinder and comprising a mass of material containing a plurality of passages through which the fuel passes and is finely divided, said material being a relatively poor conductor of electricity, means for passing a current of electricity through said material to heat it to a relatively high temperature, a pump timed to force a charge of fuel through the passages into the cylinder when the piston has partially completed its compression stroke, and a second pump timed to force a charge of air through said material to assist in forcing fuel into the cylinder.

2. The combination with an internal combustion engine, of a vaporizer for oil comprising a mass of granular resistance material located in the path of said oil, means for passing an electric current through said mass, means for forcing the oil through said electrically heated mass, and means for forcing air therethrough also.

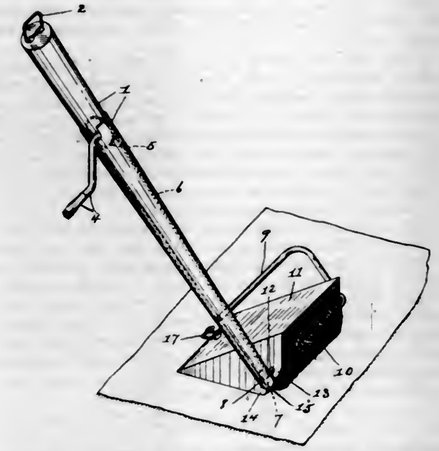
3. The combination with an internal combustion engine, of a vaporizer for oil comprising a tube of refractory material, a filling of granular resistance material, heads of refractory material confining said granular material, an oil pipe communicating with one end of said tube, and a source of electric current in circuit with said resistance material.

4. The combination with the cylinder of an internal combustion engine, of a tube of refractory material communicating with said cylinder, a mass of granular resistance material in said tube having a negative temperature coefficient, retaining heads in said tube, an oil pipe entering the outer end of said tube, and a source of electric current in circuit with said resistance material.

5. The combination with the cylinder of an internal combustion engine, of a tubular projection from said cylinder, a lining of refractory material in said projection, a filling of granular resistance material in said lining, an inner perforated head for said lining, an outer head having an inlet port, an oil pipe communicating with said port, and a source of electric current in circuit with said resistance material.

[Claims 6 to 9 not printed in the Gazette.]

1,105,048. SWEEPER. JAMES HARRY TOWNSEND, Gloversville, N. Y. Filed June 12, 1913. Serial No. 773,194. (Cl. 15—60.)

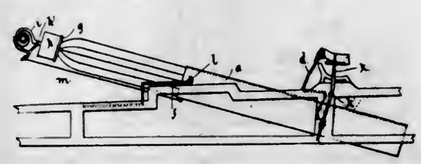


1. In a sweeper and in combination, a hollow handle; an L-shaped bracket mounted upon said handle near its lower end; a pair of cross-shafts rotatively mounted directly upon said handle, the lower of said shafts projecting from one side of the handle and having an end-bearing in said bracket; means to operatively connect said shafts; a brush on said lower shaft between said handle and the bearing portion of said bracket; a dust-pan hung upon said lower shaft between said handle and the bearing portion of said bracket; and an operating handle for the upper shaft located exteriorly of the hollow handle.

2. In a sweeper and in combination, a handle; a brush-shaft projecting laterally from the handle; a dust-pan loosely hung upon the brush-shaft with its receiving edge presented forwardly; detachable means for supporting the dust-pan in a forwardly pointed direction with its bottom substantially parallel with the handle; a brush mounted on said shaft and exposed in advance of the dust-pan, and means for rotating the brush.

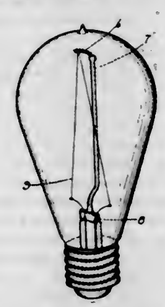
3. In a sweeper and in combination, a handle; a brush-shaft projecting laterally from said handle; a brush on said brush-shaft; and a dust-pan having its ends adapted to embrace the brush and formed with hooks detachably engageable with the brush-shaft at opposite ends of the brush.

1,105,049. SAVING APPARATUS FOR AVIATORS. CORNEILLE GUSTAVE ERNEST TRUMELET-FABER, Paris, France. Filed Oct. 2, 1913. Serial No. 793,028. (Cl. 244—21.)



In a saving apparatus for aviators, a tube containing a spiral spring which is compressed by a plate fixed at the lower end of a handle of a parachute constructed like an umbrella, a spiral spring surrounding this handle for effecting the automatic opening of the parachute, a receptacle filled with compressed gas situated at the upper part of the handle and adapted to be connected with a balloon by means of an automatically operated valve; a locking device maintaining the parachute in the tube and the tube in an appropriate position so that it does not interfere with the manipulation of the flying machine; and a suspension permitting of the tube adopting the vertical position at any inclination of the flying machine.

1,105,050. SUPPORT FOR FILAMENTS. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 14, 1907. Serial No. 378,932. (Cl. 176—39.)



1. The combination with a refractory metal filament of supporting means therefore by which it is yieldingly supported comprising a coiled spring of tungsten engaging with the filament.

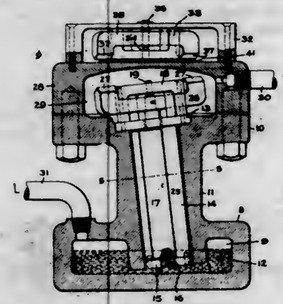
2. The combination of a tungsten lamp filament and a resilient support therefor consisting of tungsten.

3. The combination with a tungsten filament of supporting means therefor comprising a bent wire of tungsten engaging with the filament.

1,105,051. FLUID-METER. JAMES WILKINSON, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1913. Serial No. 749,371. (Cl. 73—167.)

1. In a meter of the character described, the combination of a casing containing a body of fluid adapted to rise

and fall with changes in pressure, a float having an axis oblique to the vertical, which turns as the level of the fluid changes, pivots for the float, a holder attached to the casing which extends below the float into the fluid and carries the lower pivot of the float, and a means for indicating the movements of the float.



2. In a meter of the character described, the combination of a closed casing having two chambers both adapted to contain a body of fluid which moves from one chamber to the other in response to pressure changes, a float adapted to be acted upon by the fluid contained in one of the chambers and which extends longitudinally thereof, the axis of said float being oblique to the vertical, pivots for the float that permit angular movements but prevent lengthwise movement thereof, a support for the lower pivot of the float that is partly submerged in the fluid, and means for communicating angular movements of the float to the outside of the casing.

3. In a meter of the character described, the combination of a closed casing containing a supply chamber or well and a float chamber, the latter extending obliquely to the former, a holder located in and partly filling the float chamber and which extends longitudinally thereof, a relatively long narrow float in the chamber which is pivotally supported by the holder and is moved as the fluid in one chamber moves into the other, the axis of the float being oblique to the vertical, and means for communicating angular movements of the float to the outside of the casing.

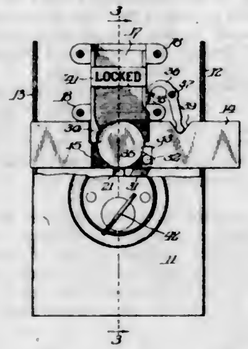
4. In a meter of the character described, the combination of a casing comprising a base containing a supply chamber or well and a neck containing a smaller chamber in communication with the well, a float in the smaller chamber whose axis is inclined to the vertical and which is moved by fluid passing from one chamber to the other, pivots for the float, a holder for the pivots carried by the base and located in the float chamber, a cover for the casing, and a magnetic transmission means, part of which is inside the cover and the remainder outside for causing movements of the float to be indicated outside of the casing.

5. In a meter of the character described, the combination of a casing containing a well and an inclined cylindrical chamber communicating therewith, a relatively long narrow float in the chamber, the outer face of which is concentric with the wall of the chamber, a holder that extends into the chamber and is supported at its upper end, pivots for the float carried by the holder, a magnet moved by the float, a non-magnetic cover therefor, a magnet outside the cover moved by the first, a conduit admitting fluid to the well, and a second conduit admitting fluid to the chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,105,052. LOCK. EDWARD L. WILLIAMS, Santa Cruz, Cal., assignor of one-half to Amos A. Wyckoff, Santa Cruz, Cal. Filed Mar. 27, 1913. Serial No. 757,087. (Cl. 194—70.)

1. In a lock provided with a coin-receiving slot, the combination of a bolt, key-actuated mechanism for operating said bolt, means normally holding said bolt against locking movement, said means being rendered inoperative by a coin upon initial movement of said bolt, and a device operable by said bolt for preventing movement of said means until an initial movement of the bolt has been effected.



2. In a lock provided with a coin slot, the combination of a locking bolt, key-actuated mechanism for operating said bolt, a slide normally positioned to prevent movement of the bolt to locked position, said slide being adapted to be moved into inoperative position by a coin disposed in said slot upon initial locking movement of said bolt, and means connected to said bolt and adapted to engage said slide for preventing movement of the slide into inoperative position except upon movement of the bolt.

3. In a lock, the combination of a sliding bolt provided with a shoulder, a slide normally positioned in the path of said shoulder to prevent movement of the bolt to locked position, and means for normally holding said slide in operative position, said means being connected with said bolt whereby initial movement of the bolt releases the means from the slide.

4. In a lock, the combination of a sliding bolt provided with a shoulder, a slide movable transversely of said bolt and having a portion thereof normally disposed in the path of said shoulder to prevent movement of the bolt to locked position, and a pivotally mounted dog connected with said bolt and normally preventing movement of the slide when the bolt is in unlocked position, said dog being adapted to be withdrawn from operative relation to the slide upon initial movement of the bolt.

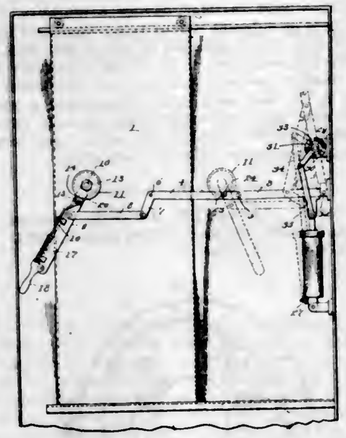
5. In a lock, the combination of a frame provided with a coin receiving aperture, a sliding bolt, key actuated mechanism for operating said bolt, a slide arranged to prevent movement of the bolt from unlocked to locked position, said slide being adapted to be released upon initial locking movement of said mechanism by a coin disposed between a portion of the slide and said mechanism, and means carried by said slide for closing said aperture when the slide is at one end of its travel.

[Claims 6 to 9 not printed in the Gazette.]

1,105,053. DOOR-CONTROLLING DEVICE. EDWARD WYLDE, New York, N. Y., and CHARLES SCHENCK, Chicago, Ill., assignors to Elevator Supply & Repair Company, a Corporation of Illinois. Filed June 20, 1913. Serial No. 774,793. (Cl. 187—31.)

1. An elevator car and mechanism for raising and lowering the same, a controller for said operating mechanism, a door, check mechanism for the door automatically operable at several points during the latter part of the door's closing movement to prevent an opening movement by force applied directly to the door, and mechanism automatically throwing said controller to car-startable position in advance of the closed position of the door, said controller and check mechanism being so arranged that the latter will at least operate at a plurality of points after said controller is thrown.

2. An elevator car and mechanism for raising and lowering the same including a motor, an electric switch controlling said motor, a door, check mechanism for the door automatically operating at several points during the latter part of the door's closing movement to prevent an opening movement by force applied directly to the door, and mechanism automatically throwing said switch to car-startable position in advance of the closed position of the door, said controlling switch and check mechanism being so arranged that the latter will at least operate at a plurality of points after said controlling switch is thrown.



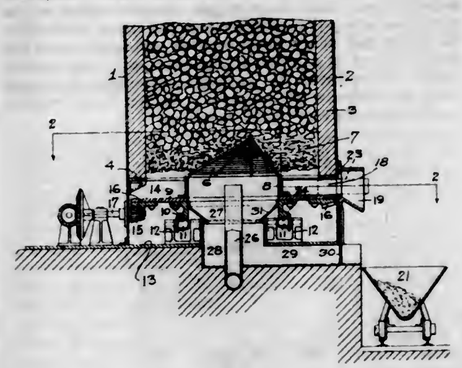
3. An elevator car and mechanism for raising and lowering the same, a controller for said operating mechanism, a door, check mechanism for the door comprising a pawl and a surface engageable thereby, one freely movable across the other by the closing movement of the door, whereby said check mechanism automatically operates at several points during the latter part of the door's closing movement to prevent an opening movement by force applied directly to the door, said pawl being adapted to automatically move out of engageable checking relation to said surface when the door is completely closed, and mechanism automatically throwing said controller to car-startable position in advance of the closed position of the door, said controller and check mechanism being so arranged that the latter will at least operate at a plurality of points after said controller is thrown.

4. An elevator car and mechanism for raising and lowering the same, a controller for said operating mechanism, and at each of a plurality of floors a door, check mechanism for the door automatically operating at several points during the latter part of the door's closing movement to prevent an opening movement by force applied directly to the door, and mechanism automatically throwing said controller to car-startable position in advance of the closed position of the door, said controller and check mechanism being so arranged that the latter will at least operate at a plurality of points after said controller is thrown.

5. An elevator car and mechanism for raising and lowering the same, a controller for said operating mechanism, a door, check mechanism for the door automatically operating at several points during the latter part of the door's closing movement to prevent an opening movement by force applied directly to the door, and mechanism moved by the door and positively connected with said controller and throwing said controller to car-startable position in advance of the closed position of the door, said controller and check mechanism being so arranged that the latter will at least operate at a plurality of points after said controller is thrown.

[Claim 6 not printed in the Gazette.]

1,105,054. GRATE FOR FURNACES. PHILIP VON ZEIPEL, Duquesne, Pa. Filed July 2, 1910. Serial No. 570,103. (Cl. 126—182.)



1. A gas producer having in combination a rotatable grate comprising a centrally located grate portion proper provided with openings adapted to admit the air or steam blast, an annular wall carrying said grate portion, an annular horizontal clinker platform around said wall and at a lower level than said grate portion, an outer shell or wall and a refractory lining carried thereby and terminating above said clinker platform to thereby provide a clinker receptacle thereon, said shell having an outlet from said receptacle, and a scraper at said outlet and extending completely across said clinker receptacle flush with said refractory lining and aforesaid annular wall.

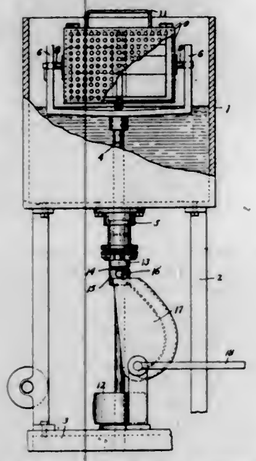
2. A gas producer having in combination a rotatable grate comprising a centrally located grate portion proper provided with openings adapted to admit the air or steam blast, an annular wall carrying said grate portion, an annular horizontal clinker platform around said wall and at a lower level than said grate portion, an outer shell or wall and a refractory lining carried thereby and terminating above said clinker platform to thereby provide a clinker receptacle thereon, said shell having an outlet from said receptacle, and a scraper at said outlet and extending completely across said clinker chamber flush with said refractory lining and aforesaid annular wall, and adapted to remove ashes from said clinker platform and from said annular wall.

3. A gas producer having in combination a rotatable grate comprising a centrally located grate portion proper provided with openings adapted to admit the air or steam blast, an annular wall carrying said grate portion, an annular horizontal clinker platform around said wall and at a lower level than said grate portion, an outer shell or wall and a refractory lining carried thereby and terminating above said clinker platform to thereby provide a clinker receptacle thereon, said shell having an outlet from said receptacle, a guideway attached to said shell at said outlet and a removable scraper comprising a plate adapted to enter said guideway and be supported therein and extending across said clinker receptacle to fit against aforesaid rotary annular wall.

1,105,055. METHOD OF TREATING BUNDLES OF SHINGLES. CHARLES M. ABBOTT, Watertown, Mass., assignor to Samuel Cabot, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Aug. 5, 1911. Serial No. 642,545. (Cl. 91—68.)

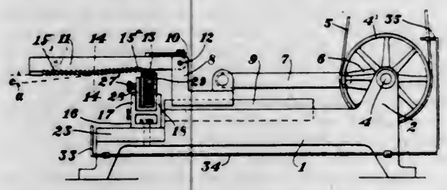
1. The method of treating shingles in the original compact bundles comprising the introduction of the treating liquid within the transverse crevices formed by the laminations and subsequently rotating the bundle on an axis at right angles to the greater length of the shingles to uniformly distribute the liquid along the surfaces of the shingles in contact in the bundle and to expel the excess liquid therefrom.

2. The method of treating shingles in the original compact bundle comprising the dipping of the bundle in the plane of the shingle layers in a suitable treating liquid to permit said liquid to enter the crevices formed by the transverse laminations and draining the excess liquid from the bundle and subsequently rotating said bundle with the shingle layers in a plane at right angles to the greater length of the bundle to uniformly distribute the liquid along the surface of the shingles in contact in the bundles and to expel the said liquid therefrom.



3. The method of treating shingles in the original compact bundle consisting in applying to the bundle a suitable coating and in causing said coating to penetrate in the interstices between the transverse laminations of the bundle and in subsequently rotating said bundle in the plane of the shingle layers to uniformly distribute the liquid along the surfaces of the shingles in contact in the bundle and to expel the excess liquid therefor.

1,105,056. BOOK-LEAVES SLOTTER FOR BOOKBINDING. CHARLES ANS, New York, N. Y. Filed July 13, 1911. Serial No. 638,239. (Cl. 11—2.)



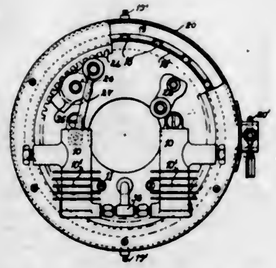
1. A book-leaves slotting machine, comprising a machine base, a saw reciprocatingly mounted on said base, and means to hold the book-leaves to be slotted in position under said saw, said means comprising a rectangular trough-shaped holder, a clamp-jaw adjustable in said holder and adapted to clamp the assembled book-leaves, a holder stock secured on the machine base to be moved laterally of said saw, a rectangular trough-shaped holder socket in said stock to receive said clamp jaw, and an inclined bottom in said socket.

2. A book-leaves slotting machine comprising a machine base, parallel guides on said base, a carriage engaging said guides, a saw attached to said carriage, an outer substantially horizontal series of teeth, an inner inclined series of teeth and an inner substantially horizontal positioning edge on said saw, means to reciprocate said carriage and saw, a holder adapted to hold assembled book-leaves, and positioning and holding means adapted to position and hold said holder in a determined relation to said saw.

3. A book-leaves slotting machine comprising a machine base, parallel guides on said base, a carriage engaging said guides, an elastic saw-tensioning arm in said carriage, a saw pivoted to said carriage and limited in its upward movement by said elastic arm, means to reciprocate said carriage and saw, a holder adapted to hold assembled book-leaves, and positioning and holding means adapted to position and hold said holder in a determined relation to said saw.

4. A book-leaves-slotting machine comprising a machine base, a carriage reciprocatingly mounted on said base, a tool head on said carriage having a plurality of saw-holding slots of different depths to accommodate different widths of saw, a saw mounted in one of said slots, and a holder for the book-leaves to be slotted adjustably secured on said base to properly position the book-leaves under the saw to be used, said holder comprising a stock secured to said base, the stock being laterally adjustable and having a socket provided with an inclined bottom to support the book-leaves at an inclined plane.

1,105,057. INFLATING DEVICE. ROBERT BARNFATHER, London, England. Filed Sept. 2, 1913. Serial No. 787,676. (Cl. 152—11.)



1. An inflating device, comprising a frame, means for mounting said frame beside a vehicle-wheel, means for attaching said frame to the rim of said wheel by direct connections between said frame and said rim so that the frame is carried by the rim, pump cylinders mounted upon said frame, an outer member revolubly mounted upon said frame, means for retaining said outer member stationary, gearing operated by relative movement of said frame and outer member, cranks driven by said gearing, pistons operated by said cranks and reciprocating in said cylinder, inlet and delivery valves to said cylinders, and means for conveying to the wheel-tire the air compressed in each of said cylinders.

2. An inflating device, comprising a frame, a funnel secured centrally of said frame, said funnel serving to center said frame upon the hub-cap of a wheel, means for attaching said frame to said wheel, and means for effecting the inflation of the wheel-tire by the rotation of said wheel.

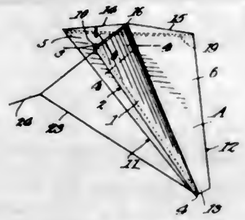
3. An inflating device, comprising a frame, means for attaching said frame beside a vehicle wheel, pump cylinders mounted upon said frame, an outer member revolubly mounted upon said frame, a contractible brake band encircling said outer member, an arresting fork upon which said brake band is mounted, an arm upon which said fork is mounted, a guide engaging said arm, and means for operating said pumping cylinders by the relative rotation of said frame and outer member.

4. An inflating device, comprising a frame, means for attaching said frame beside a vehicle wheel, means for connecting said frame to the rim of said wheel so that said frame is carried by said rim, pump cylinders mounted upon said frame, an outer member revolubly mounted upon roller bearings upon said frame, a contractible brake band encircling said outer member, means for holding said brake band stationary, gearing operated by relative movement of said frame and outer member, cranks driven by said gearing, pistons operated by said cranks and reciprocating in said cylinder, said cranks being set at opposite angles, inlet and delivery valves to each of said cylinders, and means for conveying to the wheel-tire the air compressed in said cylinders.

5. An inflating device, comprising a frame, a funnel secured centrally of said frame, said funnel serving to center said frame upon a vehicle-wheel, arms serving to attach said frame to said wheel, means for adjusting the length of said arm, and means for effecting the inflation of the wheel-tire by the rotation of said wheel.

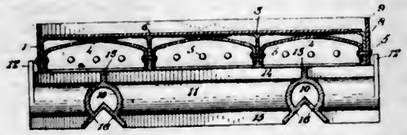
[Claims 6 to 14 not printed in the Gazette.]

1,105,058. KITE. WILLIAM A. BOCHAU, Baltimore, Md. Filed Oct. 31, 1913. Serial No. 798,421. (Cl. 244—22.)



A kite of the character described, comprising a body part, made from a single piece of material and folded longitudinally at its center to form a forwardly projecting angular shaped keel of double thickness extending longitudinally of the kite at its front, and converging from the top to the bottom of said kite, a vertical pocket provided in the fold forming the converging edge of said keel, a stick removably secured therein, a bridle attached to each end of the stick, a transverse pocket provided on the reverse side of the kite near its upper edge, a stick removably secured therein, and means secured upon the back, extending vertically thereof from edge to edge and covering and retaining the meeting edges of the central fold together, substantially as described.

1,105,059. ANNEALING-BOX BOTTOM. JOHN E. BOSSINGHAM, Canton, Ohio. Filed Dec. 4, 1911. Serial No. 663,847. (Cl. 148—14.)



1. An annealing box bottom comprising, a built-up closing member and a supporting member formed of integral, intersecting, tubular portions.

2. In an annealing box bottom, a closing member comprising a main frame formed of channel-shaped portions arranged with the flanges thereof inwardly turned, I-beam supports extending across said main frame and connected thereto, and arch-formed sections connected to said main frame and supports.

3. In an annealing box bottom, a supporting member formed of intersecting tubular portions constituting a skeleton structure.

4. In an annealing box bottom, a supporting member comprising integral, intersecting tubular portions provided with integral top supporting flanges extending upwardly from said portions.

5. In an annealing box bottom, a supporting member made of a single casting comprising longitudinal tubular portions and transverse tubular portions intersecting said longitudinal portions, both longitudinal and transverse portions provided with integral flanges extending upwardly along their upper sides, said transverse portions provided with integral flanges extending downwardly from their under sides, and said longitudinal portions provided with downwardly open ball run-ways formed from integral flanges united at points within the circumferences of said longitudinal portions and having external portions extending downwardly beyond the lower sides of said longitudinal portions and interrupting the flanges on the lower sides of said transverse portions.

1,105,060. CORK ARTICLE AND METHOD OF MAKING THE SAME. HERMAN F. BUSCH, Pittsburgh, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 24, 1911. Serial No. 629,198. (Cl. 106—38.)

1. The method of making artificial cork which consists in mixing cork particles with glycerin and albumen and heating the mixture, the mixture being free from water during at least the final part of the heating operation; substantially as described.

2. The method of making artificial cork, consisting in mixing the cork particles with an aqueous solution of a binder, and glycerin, compressing the maxture, heating it while under pressure and removing the water during the heating operation, substantially as described.

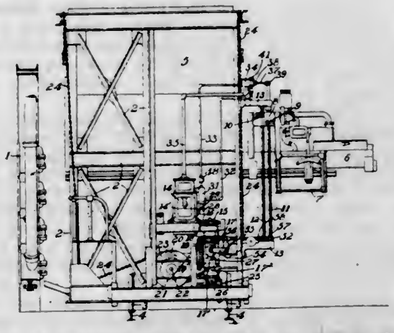
3. The method of making artificial cork, consisting in mixing the cork particles with an aqueous solution of albumen, and glycerin, compressing the mixture, heating it while under pressure and removing the water during the heating operation, substantially as described.

4. The method of making artificial cork, consisting in mixing the cork particles with an aqueous solution of albumen and glycerin, and heating the same in a mold having a porous wall or walls, substantially as described.

5. The method of making artificial cork, consisting in mixing the cork particles with an aqueous solution of a binder, and glycerin and heating the same under pressure in a mold while allowing the water to evaporate and continuing the heating after the water has been removed, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,061. FLUID CONTROL MECHANISM FOR MOTORS. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 22, 1905, Serial No. 261,634. Renewed Jan. 7, 1914. Serial No. 810,880. (Cl. 202—5.)



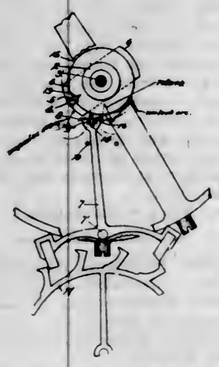
1. In a controlling mechanism for the motors of gas-retort chargers and dischargers, the combination with a motor, of reversing means for said motor, means for simultaneously controlling the flow of the motive agent to said reversing means and to the motor, means for manually actuating said controlling mechanism, and means coöperating with said actuating means at predetermined limits of movement of the latter, whereby to automatically operate said controlling means through said actuating means.

2. In a controlling mechanism for the motors of gas-retort chargers and dischargers, the combination with a

motor, of reversing means for said motor, a fluid-pressure device for actuating said reversing means, means for simultaneously controlling the flow of the motive agent to said fluid-pressure device and to the motor, means for manually actuating said controlling mechanism, and means coöperating with said actuating means at predetermined limits of movement of the latter, whereby to automatically operate said controlling means through said actuating means.

3. In a controlling mechanism for the motors of gas-retort chargers and dischargers, the combination with a motor, of reversing means for said motor, a fluid-pressure device for actuating said reversing means, means for simultaneously controlling the flow of the motive agent to said reversing means and the motor, a vertically-movable support, a lever carried by said support, connections between said lever and controlling mechanism for manually actuating the latter, and means coöperating with the actuating elements of the controlling mechanism at predetermined limits of movement, whereby to automatically operate said controlling means through said actuating elements.

1,105,062. EQUALIZING UNLOCK AND IMPULSE ACTION ESCAPEMENT. EDWARD A. COCHRAN, San Francisco, Cal., assignor of one-fourth to Joe Steiner, San Francisco, Cal. Filed June 25, 1912. Serial No. 705,707. (Cl. 58—121.)



1. In an escapement for time pieces, a pallet lever having a forked impulse end, an impulse roller, and a triangular jewel set in the roller, said jewel having its inner angle in a radial line bisecting the jewel, and its outer angles adapted to engage the inner surfaces of the fork with varying leverages.

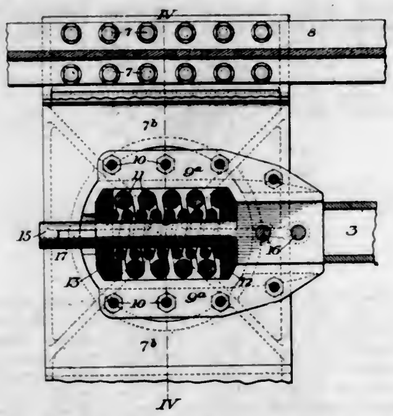
2. In a time piece escapement, an impulse roller having a triangular jewel set in its periphery with its interior angles equi-distant from the radius of the roller passing through the interior angle of the jewel, and a pallet lever having a fork, angles at the opening of the fork, said fork having convexly arcuate inner sides which diverge away from the forked opening, said sides being adapted to alternately engage the exterior angles of the jewel while driving, and said fork angle being adapted to be engaged by the sides of the jewel while being driven.

3. In a time piece escapement, a forked pallet lever and a roller table having an impulse jewel with sides diverging outwardly from a point in a radius of the roller table to form exterior angles, said sides adapted to engage the exterior outer angle of the fork at unlock, and said exterior angles adapted to be engaged by the interior of the fork sides at impulse.

4. In a time piece escapement, an impulse roller table having a wedge-shaped jewel fixed thereon with its acute base angles exposed outwardly, and a pallet lever having its contiguous end forked, the sides of said fork having sides diverging inwardly with convex curvature and adapted to co-act with the roller jewel with variable leverages.

5. In a time piece escapement mechanism, a roller table having a jewel, said jewel having a face, and sides intersecting said face to form the fork operating corners of the jewel, said sides converging toward a common point in the perpendicular which bisects the face of the jewel and coincides with a radius of the impulse roller, said point being located in the perpendicular at a distance from the base greater than the length of the base.

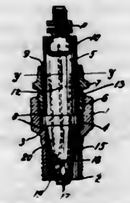
1,105,063. DRAFT-GEAR. WALTER E. COFFIN, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 24, 1911. Serial No. 616,683. (Cl. 213—42.)



1. In a draft gear, the combination with a coupler and coupler shank, of a draft rigging comprised of an inner and an outer casing, the inner casing being mounted for pivotal movement within the outer casing and having an extension projecting through the forward wall of the outer casing, said inner casing having a draft rigging spring and followers therein, the two casings being in substantially horizontal alinement, substantially as described.

2. A draft rigging comprising an outer sectional casing having concaved inner bearing walls, an inner casing within the outer casing and having convex ends adapted to turn upon the concave bearing walls of the outer casing, the outer casing having an opening at its forward end, and the inner casing having an extension projecting through said opening, together with spring and follower mechanism within the inner casing; substantially as described.

1,105,064. SPARK-PLUG. EMORY W. COLE, Wharton, Tex. Filed Sept. 30, 1913. Serial No. 792,544. (Cl. 123—169.)



1. A spark plug comprising an insulating member, an open-ended metallic casing receiving said member, a binding post surmounting the insulating member, a conductor forming a ring encircling the lower end of the insulating member and having contact therewith, and three conductors embedded in the insulating member, two of which project from the lower end of said member forming

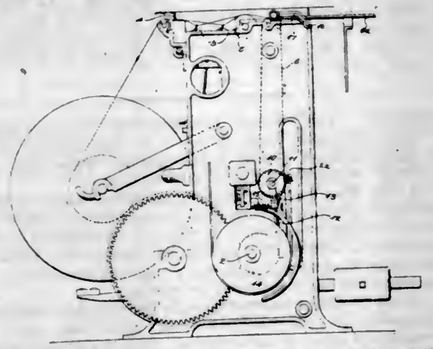
electrodes, and at their upper ends are respectively connected to the binding post and terminated at a sparking distance from the casing, the third conductor having connection at its lower end with said ring and terminating at its upper end a sparking distance from the casing.

2. A spark plug comprising an insulating member, an open-ended metallic casing receiving said member, a binding post surmounting the insulating member, a pair of electrodes mounted upon the lower end of the insulating member, a conductor extending from one of the electrodes to said binding post, a conductor extending from the other electrode to the upper portion of the spark plug and terminating in a spaced relation to the casing, a conductor contiguously encircling the insulating member disposed above the electrodes out of sparking distance from the same, and a conductor extending from the last specified conductor to the upper extremity of the plug.

3. A spark plug comprising an insulating member, having its lower extremity bifurcated, an open ended metallic casing receiving said member, a binding post surmounting the insulating member, a pair of electrodes respectively mounted upon the furcations of the insulating member, a conductor extending from one of the electrodes to said binding post, a conductor connecting at its lower end with the other electrode and having its upper end spaced a sparking distance from the casing, a conductor contiguously encircling the insulating member, above the furcations thereof and out of sparking distance from the electrodes, and a conductor having connection at its lower end with the last specified conductor and having its upper end terminating at a sparking distance from the upper portion of the casing.

4. A spark plug comprising an insulating member, an open-ended casing receiving said member, a pair of electrodes mounted upon the lower end of the insulating member, a conductor mounted upon the insulating member out of sparking distance from its electrode and conductors extending from each electrode, an accumulation of carbon upon the lower end of the insulating member, serving to establish connection between one of the electrodes and the adjacent conductor.

1,105,065. WINDER. HOWARD D. COLMAN, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners as Barber-Colman Company, Rockford, Ill. Filed Dec. 22, 1909. Serial No. 534,435. (Cl. 242—131.)



1. A creel comprising bobbin-supports divided into groups, one of said groups being slidably withdrawable from its normal position among the groups, and means for guiding running threads extending from said group when in either of its positions.

2. A creel comprising a reciprocable bobbin-support, thread-guiding means reciprocable with said support, and a stationary guide for a thread extending from the reciprocable guiding means.

3. The combination, with a cluster of bobbin spindles, of partitions between the spindles to separate the running thread of one bobbin from the other bobbins.

4. In a creel, a bobbin support; a yarn guide above said support; a thread-clamp adjacent to said guide; and means for guiding a thread from the clamp to said guide.

5. A creel comprising a plurality of supports which are slidably mounted for movement with relation to each other, a plurality of bobbin-spindle clusters on each of said supports, and means slidable with each support for guiding threads extending from the clusters.

[Claims 6 to 28 not printed in the Gazette.]

1,105,066. TELEPHONIC TRANSMITTER. JOHN J. COMER, Santa Monica, Cal., assignor, by mesne assignments, to The Webb Talking Picture Company, a Corporation of Delaware. Filed Mar. 4, 1907. Serial No. 360,480. (Cl. 179—124.)



1. A transmitter comprising a diaphragm, a bridge carrying a cup containing granular carbon, two electrodes both of which are carried by the bridge and insulated therefrom and lying on the same side of the granular carbon, and an insulating strip interposed between the electrodes and extending into the granular carbon whereby said strip is caused to serve the twofold purpose of separating the two electrodes and deflecting the path of the current from one electrode to the other, said cup, electrodes and insulating strip being supported from the bridge independently of the diaphragm to relieve the latter from the weight of said parts, and said diaphragm being in contact with the granular carbon and free from positive connection with said parts including the cup, substantially as described.

2. A transmitter comprising a diaphragm, a granular carbon holding cup, the wall whereof is formed of soft loose fibrous material, electrodes on the same side of the granular carbon, and a separator between the electrodes and projecting into the body of the carbon granules transversely across the cup, said separator serving to insulate the electrodes from each other and deflect the path of the current from one electrode to the other, said cup, electrodes and separator being supported independently of the diaphragm to relieve the latter from the weight of said parts, substantially as described.

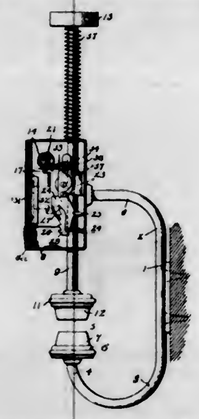
3. A transmitter comprising a diaphragm, granular carbon holding cup, two electrodes both of which are on the same side of the carbon in the cup, and an insulating strip interposed between the two electrodes and projecting into the body of the carbon granules transversely across the cup, said cup, electrodes and separator being supported independently of the diaphragm to relieve the latter from the weight of said parts, and said diaphragm being in contact with the granular carbon and free from positive connection with said parts including the cup, substantially as described.

1,105,067. COAT-HANGER. CHARLES T. DARLING, Stony Brook, N. Y. Filed Sept. 3, 1913. Serial No. 787,977. (Cl. 45—13.)

1. A coat hanger comprising a fixed clamping element, a movable clamping element, means for moving the second element in one direction, means for holding the second element against the action of the moving means, and key-actuated mechanism for controlling the holding means, and comprising a ratchet, a pawl coöperating with said ratchet, a rotary key-receiving barrel, and a shoulder carried by the ratchet and disposed in the path of rotation of the key and operable to prevent withdrawal of the key from the barrel when the second element is in a normal position.

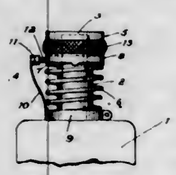
2. A coat hanger comprising a fixed clamping element, a movable clamping element, means for moving the second element in one direction, means for holding the second

element against the action of the moving means, and key-actuated mechanism for controlling the holding means, and comprising a ratchet, a pawl coöperating with said ratchet, a rotary key-receiving barrel, and a shoulder carried by the ratchet and disposed in the path of rotation of the key and



operable to prevent withdrawal of the key from the barrel when the second element is in a normal position; the said barrel having an angular groove therein, and a fixed guard extending in to the said groove and disposed at one side of the axial center of the barrel.

1,105,068. GUARD AND INDICATOR FOR STORAGE VESSELS. FRANK B. EASTON, New York, N. Y. Filed July 23, 1913. Serial No. 780,638. (Cl. 116—58.)



1. A combined guard and indicator for the closure of a storage vessel comprising a ring surrounding the closure and normally shielding the same, means for normally holding the ring in shielding position, said ring having a roughened collar thereon, and a sparking device adjacent to the ring and actuated by the collar to emit sparks when the ring is moved to expose the closure.

2. A combined guard and indicator for the closure of the neck of a storage vessel comprising a ring surrounding the closure and normally shielding the same, a spiral spring encircling said neck and acting to hold the ring in shielding position, a clip encircling the neck, a leaf spring secured to the clip and extending therefrom and carrying a sparking substance at its free end in proximity to the ring, and a roughened collar on the ring to engage the substance and cause the same to emit sparks when the ring is moved to expose the closure.

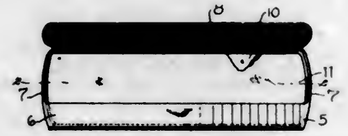
3. A combined guard and indicator for the closure of a storage vessel comprising a ring surrounding the closure and having a roughened collar on its outer face, and a sparking device adjacent to the ring and actuated by the collar to emit sparks when the ring is moved to expose the closure.

4. A combined guard and indicator for the closure of the neck of a storage vessel comprising a ring surrounding the closure, and carrying a roughened collar, a clip secured to the neck, a leaf spring secured to the clip and extending therefrom toward the collar, and carrying a sparking substance at its free end, whereby when the ring is moved the collar will cause the substance to emit sparks.

5. A combined guard and indicator for the closure of a storage vessel comprising means for guarding the closure and means for startling the vision when the guarding means and the vessel are moved relatively to each other to enable the vessel to be opened.

[Claims 6 to 9 not printed in the Gazette.]

1,105,069. ATTACHMENT FOR EYEGLASS-CASES. EDWARD F. FLANAGAN, Washington, D. C. Filed Jan. 29, 1913. Serial No. 744,964. (Cl. 206—5.)



1. The combination with an eye-glass case, of a yieldable base upon which the eye-glasses are adapted to rest, said base comprising a multiplicity of superposed tissue sheets adapted to be arranged upon and entirely cover the inner surface of the body wall of said case, said tissue sheets being singly removable from the body of the case to provide a renewable upper sheet for engagement by the glass lenses.

2. The combination with an eye-glass case, of a pad consisting of a multiplicity of superposed tissue sheets, adapted to be arranged upon and entirely cover the inner surface of the body wall of said case, and means having frictional engagement with the marginal walls of the case body to removably retain the pad therein.

3. The combination with an eye-glass case, of a pad consisting of a backing sheet, a multiplicity of superposed sheets of tissue paper secured at one of their longitudinal edges upon the backing sheet, said pad being adapted for arrangement within the body of the case to entirely cover the inner surface of the body wall thereof, said backing at its edges frictionally engaging the marginal walls of the case body to removably retain the pad in position therein.

4. The combination with an eye-glass case, of a pad consisting of a flexible backing sheet, a multiplicity of superposed tissue paper sheets secured at one of their longitudinal edges upon the backing sheet, said backing sheet being of slightly greater dimensions than the internal dimensions of the case body to entirely cover the inner surface of said case body and frictionally engage at its edges with the marginal walls thereof to removably retain the pad therein.

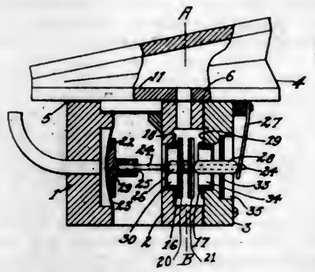
1,105,070. ARTIFICIAL RESISTANCE. GEORGE JACOB GAGE, Hillyard, Wash., assignor to Gage Electric Company, Spokane, Wash., a Corporation. Filed Mar. 31, 1913. Serial No. 757,973. (Cl. 219—76.)

1. An electrical resistance comprising finely divided graphite and carborundum in the proportions of about one part by weight of graphite to seven of carborundum, said ingredients being formed and bound together by a suitable inorganic binding material into a coherent compacted and molded form by pressure and by heating.

2. An electrical resistance comprising graphite and carborundum in the proportions of about one part of graphite to seven of carborundum, these ingredients being formed and bound into a coherent, compacted and molded form by pressure and by heating, the effective binding agent for said materials comprising silica set free from alkaline silicate during the heating of said resistance.

3. An electrical resistance comprising finely divided graphite and carborundum in the proportions of about one part by weight of graphite to seven of carborundum, said ingredients being formed and bound together by a suitable inorganic binding material into a coherent compacted and molded form of pressure and by heating, and said resistance having on one or more sides thereof a heat insulating coating integrally united therewith.

1,105,071. MUSIC-PLAYER VALVE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Original application filed Nov. 11, 1912, Serial No. 730,635. Divided and this application filed Feb. 21, 1913. Serial No. 749,812. (Cl. 84—156.)



1. A music player valve action having a valve board, a valve seat having a main part and a flanged head, and a gasket of yielding material having a part thereof snugly surrounding the main part of said valve seat and between its said head and board, the face of the gasket being attached to said valve board.

2. A music player valve action having a valve board, a valve seat having a main part and a flanged head, and a gasket of yielding material with a hole therein snugly surrounding the main part of said valve seat, the face of the gasket being attached to said valve board, and that part of the gasket adjacent its hole lying between the under part of said flange and the part of the board immediately under said flange.

3. A music player valve action having a valve board with a hole, a valve seat having a main part and a flanged head, with the main part loosely within said hole, and its flanged head extended over said board around said hole, and a gasket of yielding material snugly surrounding the main part of said valve seat between the under part of the flange head and the board, the gasket being attached to said valve board outside of said hole.

4. A music player valve action having a reciprocating motion valve and a pneumatic to actuate same, a hole in a solid part of said pneumatic and opposite to said valve, and in axial alinement with said reciprocating motion and of greater length in that direction than said motion, a valve rod having its inner end resting loosely in said hole and having the valve mounted on said rod, said rod extended through said valve and being freely removable from said hole and the action together with said valve.

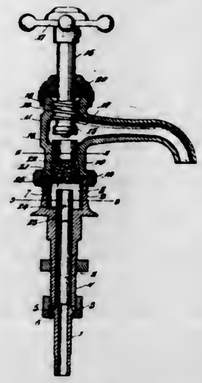
5. A music player valve action having a reciprocating motion valve and a pneumatic to actuate same, a hole in a solid part of said pneumatic and opposite to said valve, and in axial alinement with said reciprocating motion and of greater length in that direction than said motion, a valve rod having its inner end resting loosely in said hole and having the valve mounted on said rod, and said rod extended through said valve, said rod extended into said hole a distance greater than said reciprocating motion.

[Claims 6 to 13 not printed in the Gazette.]

1,105,072. BASIN-COCK. EDWARD A. GEHRKE, Lincoln, Nebr. Filed July 23, 1913. Serial No. 780,810. (Cl. 137—4.)

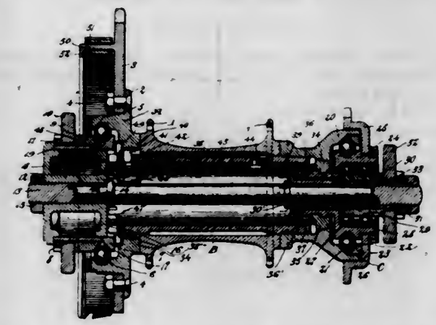
1. In a faucet, a casing having an outlet therein, an inlet pipe, an enlargement at one end of said pipe, said enlargement defining a catch basin, means detachably connecting said enlargement with said casing, an adjustable pipe section carried by said inlet pipe and extending into said basin, and a screen member supported within said casing and in spaced relation to said pipe section beneath the faucet outlet, as and for the purpose set forth.

2. In combination with a faucet having an adjustable valve member, an inlet pipe detachably secured to the said faucet, an enlargement formed upon said inlet pipe, the wall of the said enlargement defining a catch basin, a pipe section mounted upon the upper extremity of said inlet pipe, said pipe section extending into said basin, a filter screen arranged within said faucet over said pipe section and in spaced relation thereto, said screen being closed at



each end, and an adjustable pipe section mounted within said faucet adjacent and above said screen and upon which the said valve is normally seated to close communication between the inlet and outlet of the faucet.

1,105,073. DEMOUNTABLE WHEEL-HUB. CHARLES W. GERHART, Mount Holly Springs, Pa. Filed Dec. 10, 1912. Serial No. 735,996. (Cl. 208—11.)



1. A demountable wheel for motor driven vehicles, comprising a hub embodying two end sections adapted to be journaled in the wheel frame, an intermediate hub section interposed between said end sections and detachable from the end sections without disturbing the latter, and means for locking all of the hub sections together to turn as one, said locking means comprising interfitting teeth on the abutting faces of the hub sections, and a coupling sleeve passing through the intermediate section and detachably connected to the end sections.

2. A demountable wheel for motor driven vehicles, comprising a hub embodying two end sections adapted to be journaled in the wheel frame, an intermediate hub section interposed between said end sections and detachable from the end sections without disturbing the latter, and means for locking all of the hub sections together to turn as one, said locking means comprising interfitting teeth on the abutting faces of the sections, a coupling sleeve passing through the intermediate section and having a threaded engagement with one end section, a shoulder and a locking pin on said sleeve engaging the other end section.

3. A demountable wheel for motor driven vehicles, comprising a hub embodying two end sections adapted to be journaled in the wheel frame, an intermediate hub section interposed between said end sections and detachable

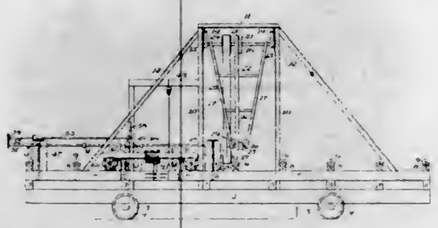
from the end sections without disturbing the latter, means for locking all of the hub sections together to turn as one, said locking means comprising interfitting teeth on the abutting faces of the sections, a coupling sleeve passing through the intermediate section and having a threaded engagement with one end section, and a shoulder and locking pin on said sleeve engaging the other end section, and an axle removably inserted through all of the hub sections and serving to tie the entire hub together, said axle also serving to hold the locking pin against disengagement.

4. A demountable wheel for motor driven vehicles, comprising a hub embodying two end sections adapted to be journaled in the wheel frame, an intermediate hub section interposed between said end sections and detachable from the end sections without disturbing the latter, and means for locking all of the hub sections together to turn as one, said locking means comprising interfitting teeth on the abutting faces of the sections, a removable coupling sleeve passing through the intermediate section and detachably connected with the end sections, an axle passing through all of the sections, and a detachable spacer nut on the axle having a diameter greater than the coupling sleeve.

5. A demountable wheel for motor driven vehicles, comprising a hub embodying two end sections adapted to be journaled in the wheel frame, an intermediate hub section interposed between said end sections and detachable from the end sections without disturbing the latter, and means for locking all of the hub sections together to turn as one, said locking means comprising interfitting teeth on the abutting faces of the hub sections, and a coupling sleeve passing through the intermediate section and detachably connected to the end sections, said sleeve being provided at one end with teeth for engagement with a sleeve turning implement.

[Claims 6 to 9 not printed in the Gazette.]

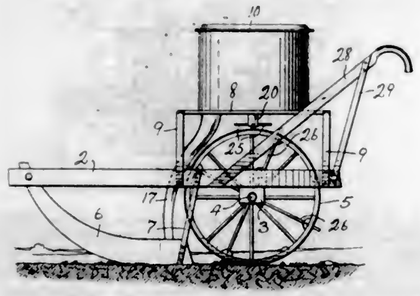
1,105,074. NOTCHING-MACHINE. HOWARD A. GREENE, Pittsburgh, Pa. Filed Apr. 23, 1912. Serial No. 692,588. (Cl. 144—133.)



1. An apparatus for notching timbers comprising a work table along which the work may be advanced longitudinally, a gaining cutter at one side of the table and movable bodily across the position of the work on the table and also out of the path of the work, a work guide disposed longitudinally of the table opposite the gaining cutter, means for adjustably shifting the guide toward and away from the cutter, a series of work-engaging stops, and means to successively move said stops into and out of the path of the endwise movement of the work along the work table for gaging the positions of the notches to be cut by the gaining cutter, substantially as shown and described.

2. An apparatus for notching timbers comprising a work table along which the work may be advanced longitudinally, a gaining cutter at one side of the table and movable bodily across the position of the work on the table and also out of the path of the work, a work guide disposed longitudinally of the table opposite the gaining cutter, means to permit angular adjustment of the guide with respect to the work table, means for adjustably shifting the guide toward and away from the cutter, a series of work-engaging stops, and means to successively move said stops into and out of the path of the endwise movement of the work along the work table for gaging the positions of the notches to be cut by the gaining cutter, substantially as shown and described.

1,105,075. SEEDER. JAMES O. GREENE, Lake City, Fla., assignor of one-third to Joshua L. Edwards and one-third to Robert N. Penland, Watertown, Fla. Filed Oct. 29, 1913. Serial No. 798,073. (Cl. 111—6.)



1. In a seeder of the class described, the combination with a main frame, and rotatable supporting means therefor; of a plate secured on said frame and provided with a discharge opening, a hopper mounted on said plate, the bottom of which is provided with a slot, a dropping plate interposed between the bottom of said hopper and the aforesaid plate, said dropping plate being provided with a plurality of spaced openings adapted to register with the aforesaid slot and discharge opening, a sleeve loosely disposed through the center of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed through the center of said dropping plate to cause the latter to be operated therewith, means to support said sleeve in position, a plurality of radial arms carried on the lower end of said sleeve, and means in connection with the rotatable supporting means of the frame adapted to contact with the radial arms of said sleeve to rotate the latter as the device is propelled.

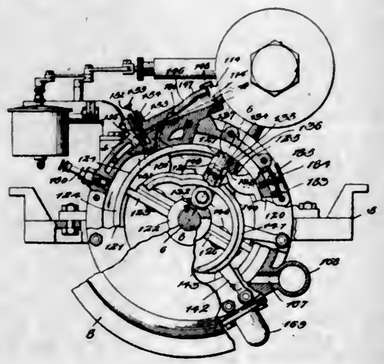
2. In a seeder of the class described, the combination with a main frame; of a plate supported thereabove having a discharge opening therein and also provided with a central opening, a hopper mounted on said plate at the bottom thereof and having an annular slot therein and also provided with a central opening, means securing the sections formed by the annular slot therein together, a dropping plate interposed between said bottom, and the first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot, and said discharge opening, a sleeve loosely disposed in the central opening of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed snugly in the square opening of said dropping plate, means in connection with said sleeve and the bottom of the hopper to rotatably secure the sleeve in position, and means for rotating said sleeve whereby to cause said dropping plate to be rotated.

3. In a seeder of the class described, the combination with a main frame; of a plate supported thereabove having a discharge opening therein and also provided with a central opening, a hopper mounted on said plate, the bottom thereof having an annular slot therein a nd also provided with a central opening, means securing the sections formed by the annular slot therein together, a dropping plate interposed between said bottom and the first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot and said discharge opening, a sleeve loosely disposed in the central opening of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed snugly in the squared opening of said dropping plate, a bolt disposed through said sleeve and through the opening in the bottom of said hopper, means in connection with the upper end of said bolt to rotatably retain said sleeve in position, a plurality of arms removably engaged with the lower end of said sleeve and projecting outwardly therefrom, and means adapted for engagement with said arms to rotate said sleeve and correspondingly rotate said dropping plate.

4. In a seeder of the class described, the combination with a main frame, and supporting means therefor; of a plate supported above said frame having a discharge opening therein, and also provided with a central opening, a hopper mounted on said plate and having the bottom thereof spaced slightly above said plate, said bottom of the hopper being provided with an annular slot and also having a central opening therein registering with the opening of the aforesaid plate, a dropping plate interposed between said bottom and first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot and the discharge opening in the first mentioned plate, a sleeve disposed loosely through the central opening of the first mentioned plate to abut a portion of the dropping plate, the extreme upper end of said sleeve being reduced and squared to be received snugly in the square opening of said dropping plate, a bolt disposed through said sleeve and through the opening in the bottom of said hopper, said bolt having the head thereof disposed in engagement with the lower end of said sleeve, a nut engaged with the upper end of the bolt and contacting with the upper face of the bottom of the hopper, to retain said sleeve in position for rotation, and means for rotating said sleeve to correspondingly rotate the dropping plate between the bottom of the hopper and the first mentioned plate.

5. In a seeder of the class described, a supporting member, a hopper mounted thereon, a dropping plate in connection with the hopper and supporting member, a sleeve-like member depending from the supporting member and having connection with the dropping member to actuate the latter upon the rotation of said depending member, said depending member being provided with a plurality of threaded sockets adjacent its lower end, a plurality of radial arms between the inner ends thereof, threaded into engagement with the threaded sockets of said depending member, and means adapted for engagement with said radial arms to rotate the member carrying the latter.

1,105,076. ROTARY ENGINE. ROBERT B. HAYDEN, Spokane, Wash. Filed Oct. 7, 1912. Serial No. 724,368. (Cl. 123—16.)



1. In a rotary engine, a cylinder provided with an exhaust port, fluid supply means for the cylinder, a rotor concentrically mounted in the cylinder, a plurality of spring pressed radially movable blades arranged in the rotor and normally held in frictional engagement with the wall of the cylinder, an eccentrically disposed stationary track, and means carried by the blades to coöperate with the track in the rotation of the rotor and move the blades inwardly out of frictional engagement with the cylinder wall during a portion of each revolution of the rotor.

2. In a rotary engine, a cylinder having an exhaust port, fluid supply means for the cylinder, a rotor concentrically mounted in said cylinder, spiders secured to the ends of the cylinder, each of said spiders having an eccentrically disposed track surface, and rollers mounted on the blades to coöperate with said eccentric track surface in the rotation of the rotor whereby the blades are moved inwardly out of contact with the cylinder wall during a portion of each revolution of the rotor.

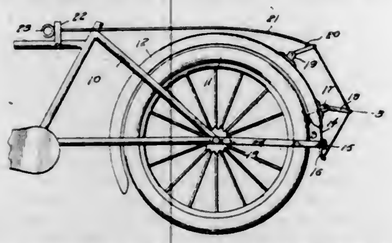
3. In a rotary engine, a cylinder having a central annular rib dividing the cylinder into two chambers, integrally connected rotor sections concentrically mounted in said chambers and spaced from the cylinder wall, a plurality of movable spring pressed blades arranged in each of the rotor sections and normally held in frictional engagement with the wall of the cylinder, the blades in one rotor section being disposed in planes intermediate of the blades in the other rotor section longitudinally of the cylinder, fluid supply means for the cylinder chambers, each of said chambers having an exhaust port, and means to move said blades inwardly and hold the same out of frictional engagement with the cylinder wall during a portion of each revolution of the rotor.

4. In a rotary engine a cylinder having an exhaust port, a head block mounted in the cylinder wall and extending into the same, one end of the head block being curved and merging into the wall of the cylinder, said head block having a main intake port, a by-pass communicating at one end with said port and opening at its other end upon the curved end face of the block, a valve in said by-pass, a rotor concentrically mounted in the cylinder and frictionally engaging the inner face of the head block to normally close the main intake port, a plurality of radially movable blades mounted in the rotor and normally held in engagement with the cylinder wall, the periphery of the rotor being provided with gas receiving pockets adjacent to the blades adapted to receive a charge of gas from the main intake port, igniting means arranged in the cylinder wall adjacent the curved end of the head block, and means for moving said blades inwardly to permit the same to pass beyond the head block, the ends of said blades moving upon the curved end face of the block and preventing the escape of gas from the pockets between the blades and the cylinder wall, said blades successively forming one wall of the explosion chamber to receive the impact of the exploded charge.

5. In a rotary engine, a cylinder having an exhaust port, a head block mounted in the cylinder wall and extending into the cylinder, said block being provided with a main intake port, said head block having a curved end face and a by-pass communicating with the main port and opening upon said curved end face, a foot valve mounted in the head block and normally closing communication between the by-pass and the interior of the cylinder, a rotor concentrically mounted in the cylinder and frictionally engaging the head block to close the main intake port, said rotor being provided in its periphery with a plurality of pockets, a plurality of radially movable blades mounted in the rotor, a spring normally forcing said blades outwardly into frictional engagement with the cylinder wall, igniting means arranged in the cylinder wall adjacent to the curved end face of the head block, a stationary eccentric track having a cam portion, and rollers mounted upon the blades to coact with the eccentric track whereby the blades are moved inwardly and held out of contact with the cylinder wall during a portion of each revolution of the rotor, said eccentric portion of the track permitting of the outward movement of the blades as they successively pass beyond the intake port of the head block to engage the same with the curved end face of the block and prevent the escape of the gas from the rotor pockets, said blades forming one wall of the explosion chamber to receive the impact of the ignited charge.

[Claims 6 to 10 not printed in the Gazette.]

1,105,077. CYCLE-STAND HOLDING AND RELEASE DEVICE. ARTHUR E. HAWKINSON, Chicago, Ill. Filed Dec. 23, 1913. Serial No. 808,430. (Cl. 208—75.)



The combination of a cycle including a frame, a rear wheel rotatably mounted in the frame, a mud guard carried by the frame and circumscribing the rear wheel, a U-shaped stand pivotally connected at the free ends of its arm to the axle of said wheel, a leaf spring secured to and extending from the rear end of the mud guard, said leaf springs being provided with a notch adapted to receive the stand to support the latter in inoperative position, rods pivoted on the mud guard, a cable secured to the free end of the leaf spring and the free ends of the said rods, a guide member on the frame forwardly of the rear wheel through which said cable extends, and a handle on the forward end of the cable whereby a forward pull on the cable will flex the leaf spring rearwardly and release the stand for movement to operative position.

1,105,078. GATE FOR RAILWAY-CROSSINGS. JOHN G. HORNIACK, Hawley, Pa. Filed Mar. 11, 1914. Serial No. 824,011. (Cl. 39—35.)



1. The combination in gates for railroad crossings, of posts upon opposite sides of the railroad track, vertically movable gates pivotally connected near their inner ends on said posts, a link depending from the inner end of each gate, a shaft connecting said links, a lever pivotally connected intermediate of its ends to a suitable support, one end of said lever being pivotally connected to one of said links, and a bar arranged along one rail of the track, one end of said bar bearing upon the opposite end of said lever, the bar being normally disposed above the level of the rail, so that the tread of a wheel of a train moving toward the crossing will depress the bar and actuate the lever to lower the gates, as and for the purpose described.

2. The combination in gates for railroad crossings, of posts on opposite sides of the railroad track, vertically movable gates pivotally connected near their inner ends to said posts, a link depending from the inner end of each gate, a shaft connecting said links, a lever pivotally connected intermediate of its ends to a suitable support, one end of said lever being pivotally connected to one of said links, a bar arranged along one rail of the track and having one end thereof bearing against the opposite end of said lever, a yielding support arranged under said opposite end of the lever to normally hold said bar above the level of the rail, as and for the purpose described.

3. The combination in gates for railroad crossings, of posts upon opposite sides of the railroad track, vertically movable gates pivotally connected near their inner ends to said posts, a link extending from the inner end of each gate, a shaft connecting said links, a lever pivotally connected intermediate of its ends to a suitable support, one end of said lever being pivotally connected to one of said links, a bar arranged along one rail of the track and bearing at one end against the opposite end of said lever, a support arranged below said opposite end of the lever, an upstanding pin formed on said support, a depending pin formed on said opposite end of the lever and arranged in vertical alinement with the first-mentioned pin, an expansion coil spring having its opposite ends engaged around said pins, said spring holding said opposite end of the lever in raised position to hold said bar above the level of the rail, as and for the purpose described.

4. The combination in gates for railroad crossings, of posts arranged on opposite sides of the railroad track, vertically movable gates connected adjacent their inner ends to said posts, a link depending from the inner end of each post, a shaft connecting the lower ends of said links, levers pivotally connected intermediate of their ends to suitable supports arranged upon opposite sides of the crossing, one end of one of the levers being pivotally connected to one of said links, one end of the other lever being pivotally connected to said shaft, bars arranged along one rail of the track on opposite sides of said crossing, one end of each bar being engaged with the free end of one of said levers to normally hold said bars above the level of the rail, as and for the purpose described.

1,105,079. HYDROCARBON-BURNER. GEORGE H. HOVENDEN, Elmwood, Ill., assignor of one-half to William F. Meidroth, Peoria, Ill. Filed Feb. 21, 1914. Serial No. 820,292. (Cl. 158—9.)



1. A hydrocarbon burner including in its construction a hollow casting constituting a retort, a fuel conducting pipe formed into a coil surrounding said retort and connected into one of the walls of and communicating with the interior of the latter and a second hydrocarbon-vapor conducting pipe connected into the wall of the retort and terminating in an upturned portion beneath the retort having a jet orifice adapted for discharging hydrocarbon vapor against said retort, the lower surface of the retort and the plane of said coil lying in close proximity, said retort adapted to deflect the vapor jet to said coil.

2. In combination with a stove, a hydrocarbon burner including in its construction a hollow casting constituting a retort, a pipe connected into one of the walls of the same and communicating with its interior and formed into a coil and having an upturned portion extending up through the top of the stove, connected with a source of fuel, a valve included in the pipe between the burner and the fuel supply, and a pipe connected into the wall of the retort and depending below and terminating beneath it and including a jet orifice adapted for discharging vapor against the under surface of said retort, the latter adapted to deflect the flame upon the pipe coil.

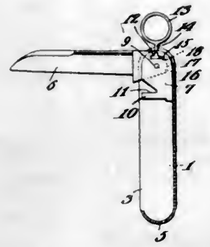
3. The combination with the removable top part of a stove or range, of a burner suspended beneath the same including a hollow member for receiving and vaporizing a hydrocarbon, a pipe for a liquid fuel connected into and communicating with the interior of the member for conducting the fuel thereto and connected through said part of the stove top, and a pipe connected into the wall of the member and communicating with its interior and depending below and beneath said member, and having a jet orifice adapted to discharge vapor from said member against the bottom of said member.

4. The combination with a removable part of a stove top, of a burner suspended beneath the same comprising a hollow member, a pipe connected into the side of the member and communicating with its interior for conveying liquid fuel thereto and extending through and affixed to the said part of the stove top, a valve included in the pipe, and a pipe connected into the wall of the member and communicating with its interior and terminating below and beneath it and having a jet orifice beneath said member adapted for the discharge of vapor against the latter.

5. The combination with a removable part of a stove top of a hydrocarbon burner for connection therewith including a hollow member, a pipe connected into its side and formed into a coil concentric with the walls of said member and extending through and secured to the said removable part and including a pipe extension above it, a valve included in the pipe, a second pipe connected into the wall of the member and communicating with its interior and terminating at its end below and beneath the member and including a discharge orifice adapted to discharge vapor against the bottom of said member, and a starting cup carried by said pipe beneath the said member.

[Claims 6 and 7 not printed in the Gazette.]

1,105,080. KNIFE. ARCHILE J. JACQUES, Attleboro, Mass. Filed Feb. 17, 1913. Serial No. 749,055. (Cl. 30—10.)



1. The combination of a casing, a blade carrying member secured therein, a blade rotatably carried thereby, engaging means secured to said casing and detachable therefrom by rotating about the longitudinal axis thereof, said knife blade constituting a lock for holding the said engaging means against rotation.

2. In a device of the class described, a body member, a blade rotatably secured thereto, the upper portion of said body member provided with alined openings, said openings provided with restricted passages leading therefrom, engaging means secured within said restricted passages, one portion of said blade adapted to retain said engaging means in said restricted passage.

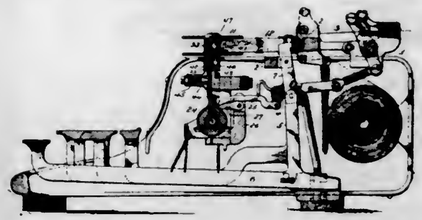
3. The combination of a casing, a member rotatably secured thereto, a member rigidly secured in said casing and provided with apertures adjacent the upper extremity thereof, said apertures provided with an enlarged portion and a restricted portion, chain engaging means provided with a bar secured thereto, said bar adapted to enter within said enlarged portions of said apertures, and to fit within said restricted portions, said rotatable member adapted to confine said bar within said restricted portions to prevent the detachment thereof.

4. A pendant comprising a casing, a blade carrying member secured thereto, said member provided with alined apertures therein, a knife blade pivotally secured to the blade carrying member in said apertures, said blade provided with a depressed portion, said blade carrying member with T-shaped alining slots adjacent the upper extremity thereof, engaging means including an arm extending therefrom, a bar secured to said arm and projecting at right angles thereto, said bar adapted to fit between said blade carrying member and to enter said T-shaped slots, said knife blade adapted to confine said bar to the restricted portion of said T-shaped slots and said depressed portion of the knife blade adapted to allow the detachment of said arm and bar.

5. The combination of a handle, a blade or tool pivotally connected thereto, means in the said handle and coacting with means at the shank of the blade for securing an attaching element thereto, an attaching element coacting with the handle means and blade means and detachably held to said handle, said attaching element locked to said handle with the blade housed in the handle and detachable therefrom when the said blade is rotated from the said closed position.

[Claim 6 not printed in the Gazette.]

1,105,081. TYPE-WRITING MACHINE. ARVID EMANUEL KARLBERG and MARSHALL BIDWELL SARGENT, Owensboro, Ky., assignors to The Stenotype Company, Indianapolis, Ind. Filed Apr. 7, 1914. Serial No. 830,316. (Cl. 197—160.)



1. In ribbon mechanism for typewriting machines, the combination with two ribbon reel shafts, alining shafts, and gearing between said ribbon reel shafts and said alining shafts, of a ratchet wheel between said alining shafts, clutch devices between said ratchet wheel and said alining shafts, a universal bar, key levers actuating said universal bar, a dog carried by the universal bar and engaging the ratchet wheel, and means for shifting said ratchet wheel to shift the clutch devices.

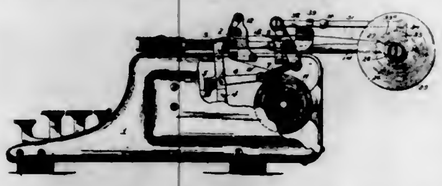
2. In ribbon mechanism for typewriting machines, the combination with ribbon reel shafts, alining shafts, and gearing between said alining shafts and ribbon reel shafts, of a ratchet wheel between said alining shafts, means for actuating said ratchet wheel, clutch devices between the ratchet wheel and alining shafts, a yoke embracing the ratchet wheel, springs for moving said yoke to shift the ratchet wheel and the clutch devices, and means for controlling the operation of said springs.

3. In ribbon mechanism for typewriting machines, the combination with a frame, ribbon reel shafts, alining shafts, and gearing between said alining shafts and the ribbon reel shafts of a ratchet between the alining shafts, means for actuating the ratchet wheel, clutch devices between the ratchet wheel and the alining shafts, a swinging yoke suspended from the frame and embracing the ratchet wheel, and means for actuating said yoke to shift the ratchet wheel and the clutch devices.

4. In a ribbon mechanism for typewriting machines, the combination with a frame, ribbon reel shafts, alining shafts, and gearing between said alining shafts and the ribbon reel shafts, of a ratchet wheel between the alining shafts, means for actuating said ratchet wheel, clutch devices between said ratchet wheel and the alining shafts, a block rigid with the frame, a swinging yoke suspended from said block and embracing the ratchet wheel, an operating arm projecting from said yoke and through a slot in said block, said block also having horizontal sockets, rods longitudinally movable in said sockets, springs between said rods and the operating rod, and means for controlling the movements of said rods to shift said yoke, ratchet wheel and clutch devices.

5. In a ribbon mechanism for typewriting machines, the combination with a frame, a block rigid therewith, ribbon reels having recessed hubs, spring actuated sections for normally closing the recesses in the reel hubs, gearing for actuating the reels, and means for shifting the operative relation of said gearing from one reel to the other, of an operating arm movable in said block, connections between said arm and the gear shifting means, rods longitudinally movable in said block, rollers on said rods and coöperating with the reel hubs, springs in the block between said rod and the operating arm, and a spring-pressed dog carried by the block for holding the operating arm in position to which it may be shifted.

1,105,082. REWINDING MECHANISM FOR TYPEWRITING MACHINES. ARVID EMANUEL KARLBERG and MARSHALL BIDWELL SARGENT, Owensboro, Ky., assignors to The Stenotype Company, Indianapolis, Ind. Filed Apr. 7, 1914. Serial No. 830,317. (Cl. 197—133.)



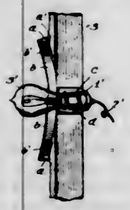
1. The combination with typewriting mechanism and a paper rewinding reel, of ratchet devices connected with said reel and comprising a ratchet wheel and a pawl normally resting by gravity over and engaging said ratchet wheel, an abutment for said pawl when the same is disposed under and out of engagement with the ratchet wheel and a pitman comprising jointed sections, connecting said ratchet devices with a movable part of the typewriting mechanism.

2. The combination with typewriting mechanism and a rewinding reel, of a ratchet wheel secured to the rewinding reel, a loosely mounted part, a gravity pawl carried by said loosely mounted part and normally disposed over and engaging the ratchet wheel, an abutment on said loosely mounted part for the pawl when the latter is disposed under and out of engagement with the ratchet wheel, a pitman comprising jointed sections connecting said loosely mounted part with a movable part of the typewriting mechanism.

3. Rewinding mechanism for typewriting machines, comprising a rewinding reel, a mounting therefor, a ratchet wheel secured to the reel, a part loosely mounted with respect to the reel, a gravity pawl carried by the loosely mounted part and normally disposed over and engaging the ratchet wheel, an abutment for the pawl when it drops by gravity from the ratchet wheel, and an operating pitman connected with said loosely mounted part.

4. Rewinding mechanism for typewriting machines, comprising a reel, a mounting therefrom, a ratchet wheel secured to the reel, a loosely mounted disk having a flange inclosing the ratchet wheel, a gravity pawl carried by said disk and adapted to normally project over the ratchet wheel and engage the same, the flange of said disk constituting an abutment for the free end of the pawl when the disk is turned to dispose said pawl under and out of engagement with the ratchet wheel, an arm projecting from said disk, and an operating pitman connected with said arm.

1,105,083. ELECTRIC-LIGHT SUPPORT. DAVID C. LAMB, Nappanee, Ind., assignor to Lamb Bros. & Greene, Nappanee, Ind., a Corporation of Indiana. Filed Mar. 20, 1914. Serial No. 826,032. (Cl. 211—3.)



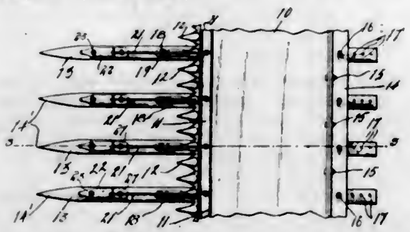
1. A portable electric light support having a pair of arms parallel with each other, a normally straight bar-shaped resilient member from the extremities of which said arms rigidly project at one edge, a middle member attached to said bar, and a socket attaching clamp connected with said middle member; said resilient member being adapted to be flexed, and to press said arms and said middle member against opposite sides of a post or bar so as to render the light support self-attached.

2. A portable electric light support having a pair of arms parallel with each other, a normally straight bar-shaped resilient member from the extremities of which said arms rigidly project at one edge, a middle member attached to said bar, and a socket-attaching clamp connected with said middle member; said arms and resilient member being provided with cushioning means to contact mechanically with the surface of a post or bar.

3. A portable electric light support having a pair of arms parallel with each other, a normally straight bar-shaped resilient member from the extremities of which said arms rigidly project at one edge, a normally upright member supported by said middle member, and a socket clamp attached to said normally upright member.

4. A portable self-attaching electric light support having a pair of arms parallel with each other, a normally straight bar-shaped resilient member from the extremities of which said arms rigidly project at one edge, a middle member attached to said bar and adapted to rest on a table or the like or to be held against a post or the like, a normally upright member integral with said middle member, and a resilient socket clamp rigidly attached at its back to said normally upright member at the extremity of the latter, substantially as hereinbefore specified.

1,105,084. HARVESTER ATTACHMENT. LOUIS S. LINN, Fairmont, Minn. Filed Dec. 29, 1913. Serial No. 809,336. (Cl. 56—129.)

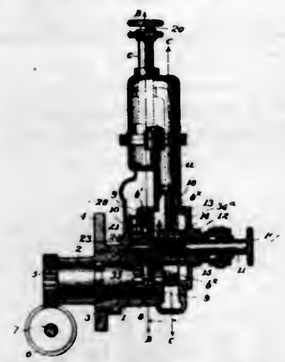


1. A device for lifting fallen grain including parallel dividing bars, upwardly and rearwardly inclined lifting rods carried by the dividing bars, combined shields and securing means connecting the lifting rods to the dividing bars, the said securing means including each a member provided with a hook engaging a perforation in a dividing bar and spaced openings, one of the said spaced openings housing a portion of a lifting rod, and the other a securing bolt passing through an eye in the extremity of a lifting rod and perforations in the dividing bar.

2. A device for lifting fallen grain including a plurality of parallel dividing bars, a plurality of upwardly and rearwardly inclined lifting rods carried respectively by corresponding dividing bars, and a combined shield and securing means for connecting each lifting rod to the related dividing bar including an inverted U-shape member having spaced openings in the web, one of said openings receiving said lifting rod, a securing pin passed through the other of said openings and through the lower end of said rod and through said dividing bar, said web being provided on the front end with a down-turned hook, said hook engaging in a corresponding opening formed in said dividing bar.

1,105,085. OIL-PUMP. ALLEN LOOMIS, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 15, 1907. Serial No. 397,572. (Cl. 184—35.)

1. In a force-feed lubricator, the combination with a pump cylinder, of a plunger therein, a valve-casing, an operating shaft extending into said casing, lost-motion connections between said shaft and plunger for operating the latter, said casing having a valve seat therein, a rotary valve fitting against said seat and geared to said shaft, said seat having an inlet port, two outlet ports at a greater radial distance from the axis of the valve than said inlet port and arranged at opposite sides of the inlet port, and a port located nearer to the axis of the valve than said inlet port and communicating with the pump cylinder, and said valve having diametrically opposite ports arranged to connect said inlet port with the pump cylinder port during each suction stroke of the plunger and having two similar, reversely arranged delivery ports adapted to connect the pump cylinder port with the outlet ports, in succession, during successive compression strokes of the plunger, said delivery ports each comprising two slots in the valve face connected end to end and located at different radial distances from the axis of the valve.



2. In a force-feed lubricator, the combination with a pump cylinder, of a plunger therein, a casing having a valve seat provided with an inlet port, a plurality of outlet ports and a port communicating with the pump cylinder, an operating shaft projecting into said casing and having spur teeth on its inner end, a distributing valve upon said seat, said valve comprising two disks secured together, one disk having port holes cut therethrough and the other disk extending over said holes, one of said disks having spur teeth engaging the teeth on the shaft, and connections between the shaft and plunger for operating the latter.

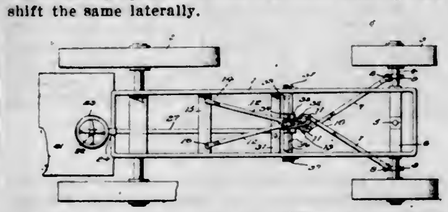
3. In a force-feed lubricator, the combination with a pump cylinder and piston, and a suitable valve seat, of a rotary valve comprising a disk having suitable ports therein and an imperforate disk secured thereto and covering said ports on one side of the first named disk, one of said disks being provided with teeth whereby the valve may be rotated.

4. In a force-feed lubricator, the combination with a pump cylinder and piston, and a suitable valve seat, of a rotary valve comprising a disk arranged to move over the valve seat and having perforations coöperating with the ports of the valve seat, an imperforate disk or plate arranged to cover the perforations at one side of the first named disk, teeth upon one of said disks for rotating the same, and means for yieldingly pressing the said rotary valve to its seat.

1,105,086. STEERING-GEAR FOR TRACTION-ENGINES. HARRY F. MANNING, Peoria, Ill. Filed Feb. 7, 1913. Serial No. 746,951. (Cl. 21—201.)

1. A steering gear for traction engines consisting of steering bars connected to the ends of an axle of the engine and converging from said axle, other steering bars pivoted at their outer ends to the engine frame and converging toward said axle, the inner ends of the last-mentioned steering bars being pivotally connected to the inner ends of the respectively adjacent first-mentioned steering bars, and means for shifting the connected ends of the several steering bars laterally.

2. A steering gear for traction engines consisting of steering bars connected to the ends of an axle of the engine and converging toward the longitudinal axis of the engine, other steering bars pivotally secured at their outer ends to the engine frame and having their inner ends overlapping and pivotally connected to the inner ends of the respectively adjacent first-mentioned steering bars, and means acting upon the second-mentioned steering bars to shift the same laterally.



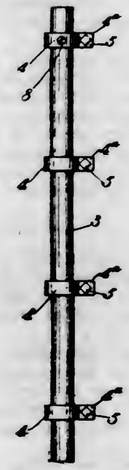
3. The combination with an engine frame and an axle pivotally mounted thereon, of steering bars pivoted upon the engine frame and converging forwardly from their pivots, other steering bars pivotally connected with the opposite ends of the axle and converging rearwardly therefrom toward the first-mentioned steering bars, pivotal connections between the front ends of the first-mentioned steering bars and the rear ends of the adjacent second-mentioned steering bars, and a carriage movable transversely on the engine frame and engaging the first-mentioned steering bars to shift the same laterally.

4. The combination with an engine frame and an axle pivotally mounted thereon, of steering bars pivoted upon the engine frame and converging forwardly from their respective pivots, segment blocks pivoted to the front ends of said steering bars, other steering bars pivoted to said segment blocks and extending toward and pivoted to the ends of the axle, and means acting on the first-mentioned steering bars to shift the same laterally.

5. A steering gear for traction engines consisting essentially of oppositely disposed toggles mounted at the opposite sides of the engine frame and each consisting of a rear steering bar, a segment block pivoted to the end of said steering bar to swing vertically, and a front steering bar pivoted to said segment block to move substantially horizontally.

[Claims 6 and 7 not printed in the Gazette.]

1,105,087. CHANNEL FOR FIRE-SHUTTERS. EDWARD H. MCCLOUD, Columbus, Ohio, assignor to The Kinnear Manufacturing Company, Columbus, Ohio, a Corporation of West Virginia. Filed Oct. 28, 1912. Serial No. 728,031. (Cl. 189—45.)

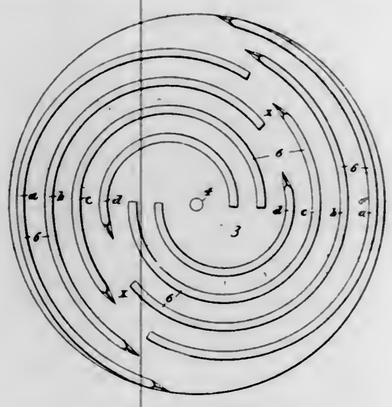


1. The combination with a channel or the like member that is subject to expansion by heat, of means for holding

the same consisting of a plurality of stationary brackets disconnected with but closely surrounding said member, said brackets being suitably spaced to prevent buckling, and means in one of said brackets to hold said member for expansion with reference to another of said brackets.

2. In combination with a channel or the like member that is subject to expansion by heat, of means for holding the same consisting of a plurality of brackets disconnected with but closely surrounding said member suitably spaced to prevent buckling of the member, and means to hold said member at one point to permit expansion of said member with reference to said brackets when the member is subjected to the adequate heat of fire.

1,105,088. POLISHING-WHEEL. DANIEL FREDERICK MCGOVERN, Montpelier, Vt., assignor to C. C. Putnam, Middlesex, Vt., administrator of Medad Wright, deceased, and Prentice C. Wright, deceased. Filed June 16, 1913. Serial No. 773,963. (Cl. 51—11.)



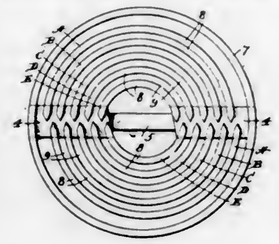
1. A polishing-wheel comprising a plate, and thereon spaced spiral scrolls arranged in sets having channels between them and there being a continuous feed-channel distinct from channels between the scrolls of a set and located between the rear ends of the scrolls of one set and the front ends of the scrolls of the succeeding set and leading from the edge of the plate directly to channels between the scrolls and extending to the inner side of the innermost scroll.

2. A polishing-wheel comprising a plate, and thereon spiral scrolls arranged successively in sets and having channels between them, and there being an open and direct approximately straight continuous feed-channel, distinct from channels between scrolls of a set, and extending from the periphery of the plate between the rear ends of the scrolls of one set and the front ends of the scrolls of the next succeeding set to the inner side of the innermost scroll.

1,105,089. POLISHING-WHEEL. DANIEL F. MCGOVERN, Montpelier, Vt., assignor to C. C. Putnam, executor of Prentice C. Wright, deceased, and administrator of Medad Wright, deceased. Filed Sept. 13, 1913. Serial No. 789,668. (Cl. 51—1.)

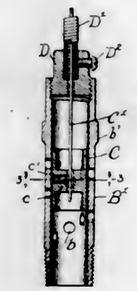
1. A polishing-wheel comprising a holding member, and sets of scrolls secured thereto having channels therebetween, the parts being so arranged that some scrolls of a set terminate in front of the channels between the corresponding scrolls of another set and the scrolls next inwardly thereof.

2. A polishing-wheel comprising a holding member, and sets of scrolls secured thereto having channels therebetween that are open at the top, the parts being so arranged that some scrolls of a set terminate in front of the chan-



nels between the corresponding scrolls of another set and the scrolls next inwardly thereof.

1,105,090. AIR-VALVE FOR CARBURETERS. JOHN C. METZGER, Chicago, Ill. Filed June 15, 1912. Serial No. 703,809. (Cl. 137—26.)



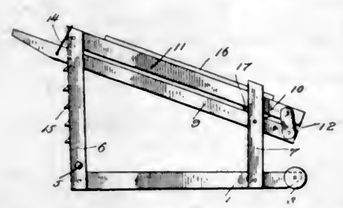
1. A carbureter valve comprising in combination a barrel having a plurality of openings helically arranged in the wall thereof, a plug in one end of said barrel, a coupling engaging the opposite end thereof and adapted to communicate with the interior of the carbureter, a sleeve slidable in said barrel, said sleeve having a transverse partition mediate of the length thereof, a flexible tubular casing secured in the aforesaid plug, a wire extending through said tubular casing and engaging the sleeve partition, and a lever operating through said wire to move said sleeve and regulate the amount of air admitted through the apertures in the barrel, substantially as described.

2. A carbureter valve, comprising in combination a barrel having a plurality of openings helically arranged in the wall thereof, a plug in one end of said barrel, a sleeve slidable in said barrel, said sleeve having a transverse partition mediate of the length thereof, operating mechanism, a tubular casing connecting the aforesaid plug and the operating mechanism, a wire secured to the sleeve partition and extending through said plug and casing to the operating mechanism whereby the sleeve may be moved in the barrel, substantially as described.

1,105,091. WAGON-JACK. FERDINAND MILLER, Covington, Ky. Filed May 10, 1912. Serial No. 696,284. (Cl. 57—101.)

A jack comprising a horizontal supporting frame, two pairs of upright arms disposed in spaced-apart relation, the forward of said pairs being extended above the other, the forward pair of said arms being formed with downwardly and rearwardly inclined edges, a pin spanning said first named pair of arms at their upper ends, a pin spanning said second pair of arms at their upper ends, a lever fulcrumed at one end upon said second-named pivot and limited against movement by said first-named pin, a

second lever disposed over said first-named lever, a link pivotally connected at opposite ends to the ends of the first and second named levers, said second lever being pivoted upon said first named lever and disposed flush with the outer longitudinal edge of said arms, a series of jagged teeth extending in a vertical series outwardly



of said relatively longer arms and having their under surfaces disposed at right angles to said arms, said first lever projecting forwardly of said frame, and a substantially U-shaped link pivotally connected to the operating forwardly projecting end of said first lever, said link arranged to engage the upper U-shaped ends of said first named arms.

1,105,092. EGG-CARRIER. LEWIS E. MILLER, Neodesha, Kans., assignor of one-half to John Morton Miller, Goodland, Kans. Filed Nov. 18, 1913. Serial No. 801,715. (Cl. 217—27.)



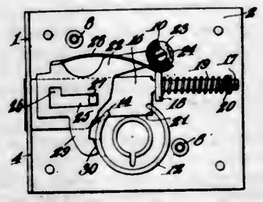
1. An egg carrier embodying sections, a perforated sheet slidable within each section, and means for yieldably sliding each sheet toward the inner edges of the corresponding section.

2. An egg carrier embodying a pair of hinged frames, a perforated sheet movable within each frame, and springs carried by the outer edge portions of the frames for pressing the sheets toward the inner edges of the frames.

3. An egg carrier embodying a pair of coöperable frames, stops carried by the adjoining edge portions of the frames, and perforated sheets movable within the frames, and means carried by the frames for yieldably moving the sheets inwardly toward the stops.

4. An egg carrier embodying complemental sections, complemental spring pressed perforated metallic plates movable within the sections, and yieldable sheets attached to the adjacent sides of the aforesaid plates and having perforations registering with and smaller in diameter than the perforations of the aforesaid plates.

1,105,093. LOCK. JOHN MONZANEY, Harrisburg, Pa., assignor of one-third to Albert M. Keane and one-third to Charles E. McCauley, Harrisburg, Pa. Filed June 9, 1913. Serial No. 772,641. (Cl. 70—75.)



1. In a lock, coöperating elements comprising a bolt and a bolt holding dog; an expansible key including a laterally movable part, said part being adapted to engage one of said coöperating elements when the said part is in advanced position, and being adapted to engage the other of said coöperating elements when the said part is in retracted position.

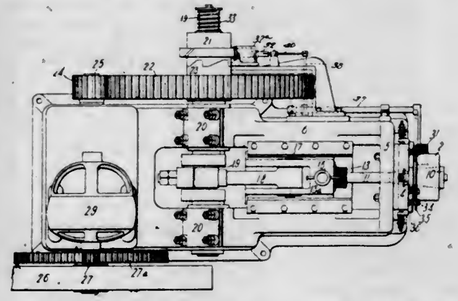
2. In a lock, a ward having spaced openings; a locking bolt; a bolt holding dog; a key including a relatively movable member and means for advancing and retracting the movable member; the movable member being adapted to engage the bolt through one opening when the member is in retracted position, and being adapted to engage the dog through the other opening when in advanced position; and means for actuating the bolt.

3. In a lock, a locking bolt; a bolt holding dog; and an expansible key, the key being adapted to engage the bolt when the key is in contracted condition, and being adapted to engage the dog when the key is in expanded position; and means for actuating the bolt.

4. In a lock, a ward having spaced openings; a locking bolt accessible through one opening; and a bolt holding dog accessible through the other opening.

5. In a lock, a face plate; a curved ward upon the face plate and provided with an opening adjacent its top, the ward having an opening at one side; a support upon the face plate; a locking bolt mounted to slide adjacent the first specified opening in the ward, the locking bolt having a part lying within the ward to constitute a key-engaging shoulder, the bolt being provided with a shank slidably received in the support; a spring surrounding the shank and abutting against the support; adjusting means on the shank and engaging the spring, thereby to hold said part of the bolt normally within the contour of the ward; a pivotally supported dog including a finger located adjacent the opening in the side of the ward; and interlocking elements on the bolt and the dog.

1,105,094. APPARATUS FOR EXPANDING COUPLINGS. OLIVER M. MOWAT, McKeesport, Pa., assignor to The National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Mar. 31, 1910. Serial No. 552,588. (Cl. 153—80.)



1. Apparatus for expanding pipe couplings and the like comprising in combination a segmental expanding die having radially movable sections, a stop to position the couplings on the die, a taper pin lengthwise movable within the die for expanding the die sections, means for adjusting the pin lengthwise within the die, and power means connected to said taper pin for reciprocating the pin within the die in the coupling expanding operations.

2. Apparatus for expanding pipe couplings and the like comprising in combination a segmental expanding die having radially movable sections, a yielding stop to position the couplings on the die, a taper pin lengthwise movable within the die for expanding the die sections, means for contracting the die sections, a reciprocating cross head adjustably connected to the taper pin, and power means for actuating the cross head to reciprocate the taper pin and expand the die sections in the coupling expanding operations.

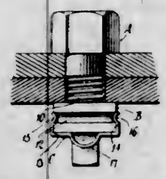
3. Apparatus for expanding pipe couplings and the like comprising an expanding die, a taper pin lengthwise mov-

able within said die for expanding the die sections, means for adjusting the pin lengthwise within the die, and power means connected to said taper pin for reciprocating the pin within the die in the coupling expanding operation.

4. Apparatus for expanding pipe couplings and the like comprising an expanding die, a taper pin lengthwise movable within said die for expanding the same, a cross-head, an adjustable connection between said cross-head and said taper pin for adjusting said pin with relation to said die, and power means for reciprocating said cross-head.

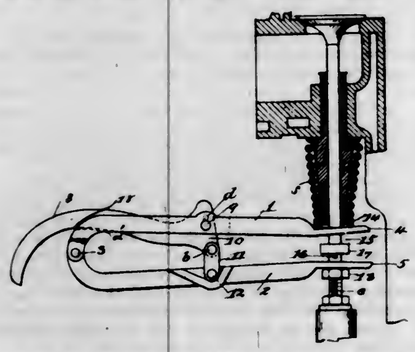
5. In apparatus for expanding pipe couplings and the like the combination with an expansible die having radially movable segments, means engaging with and expanding the die within couplings placed thereon, and a horizontally reciprocating cross head connected to the die expanding means, of a rotary motor for actuating the cross head and die expanding means, and mechanism detachably connecting the motor with said cross head.

1,105,095. NUT-LOCK. VENICE F. NALLY, Charleston, W. Va. Filed July 11, 1911. Serial No. 637,920. (Cl. 151—29.)



In a nut lock, the combination with a bolt having a squared outer end beyond its threads, of a nut having channels in its sides and engaged with the threads of said bolt, and a locking element for the nut, said locking element comprising a plate having its central portion transversely bowed outwardly to provide a rib, said rib being of less width than the nut, said rib being provided centrally with an angular opening of a width transversely of the rib to snugly fit the squared end of the bolt, and to loosely fit the squared end of the bolt longitudinally of the rib, the edge portions of the locking element parallel with the rib being bent to extend beyond the opposite face of the main portion of the locking element from the rib, and having ribs formed therein for engagement in the channels of the nut, said locking element being disposed with its angular opening surrounding the squared end of the bolt and its bent edge portions at opposite sides of the bolt, the ends of said first named rib extending to the edges of the locking element for the reception of a disengaging tool.

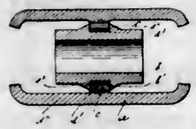
1,105,096. TOOL FOR REMOVING ENGINE-VALVES. STANLEY C. NORTH, Elmira, N. Y. Filed Oct. 2, 1912. Serial No. 723,628. (Cl. 29—87.1.)



A tool of the character described, comprising, a pair of arms hinged together and forked at their free ends, toggle links pivoted together and to said arms and an operating lever for one of said links, said lever adapted to engage one of said arms when the arms are open to prevent the closing of said arms.

1,105,097. BEARING. STEFAN ORBÁN, New York, N. Y. Filed Feb. 6, 1914. Serial No. 817,004. (Cl. 64—10.)

1. The combination with a journal box and a stationary frame, of opposite sets of metal strips or shims interposed between the said box and frame and a split ring carrying said metal strips or shims.



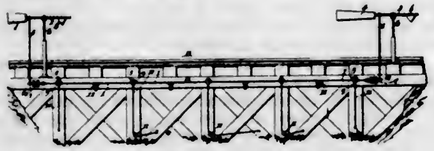
2. The combination with a journal box and a stationary frame, of opposite sets of metal strips or shims and a split ring surrounding the latter, said shims and split ring being interposed between the journal box and the stationary frame.

1,105,098. METHOD OF MAKING ARTIFICIAL CORK. HERBERT PASCHKE, Pittsburgh, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 15, 1911. Serial No. 627,283. (Cl. 106—38.)

1. In the manufacture of artificial cork, the steps which consist in first treating the cork particles with glycerin, then heating the glycerin-treated cork, and then treating the same with an animal glue binder, and again subjecting the material to a heat treatment sufficient to render the binder insoluble; substantially as described.

2. In the manufacture of artificial cork, the steps which consist in first treating the particles of cork with glycerin, and then subjecting them to heat for a considerable period to cause the cork to fully absorb the glycerin, then treating the cork with a solution of albumen, and then again subjecting the material to a temperature sufficient to render the albumen insoluble; substantially as described.

1,105,099. SIGNAL APPARATUS. FRED H. PETTIT, Anthon, Okla. Filed Aug. 13, 1913. Serial No. 784,558. (Cl. 246—49.)

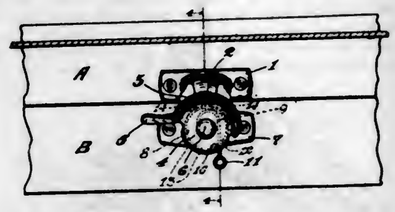


In signal apparatus of the class described, the combination with a bridge, of a wire rod arranged longitudinally of said bridge, supporting pulleys upon said bridge and spaced apart and holding said rod, sheaves upon said rod, flexible connections between said sheaves and the various parts of the bridge structure, and signals controlled by said rod.

1,105,100. SASH-LOCK. EDWARD L. RASMUSSEN, Seattle, Wash. Filed Oct. 21, 1913. Serial No. 796,470. (Cl. 16—30.)

1. In a lock of the character described, a keeper, a locking member mounted for movement toward and from the keeper and provided with a plurality of notches certain of which are adapted to permit of movement of the member in one direction and others to retain the aforesaid member from movement in that direction permitted by the first named notches, and means adapted for engaging in the notches of said member to hold the member in a predetermined position.

2. In a lock of the character described, a keeper, a base plate having a slot therein, a locking member mounted on the plate for rotary movement for engaging the keeper



and having a series of notches on the edge thereof, and means projecting through the slot of the plate for engaging in the notches of the locking member to retain the latter from movement.

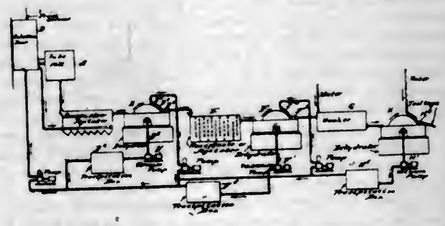
1,105,101. BRIDLE FOR TRACK-RAILS. JOSEPH C. REDMOND, Mount Vernon, N. Y. Filed Nov. 26, 1913. Serial No. 803,315. (Cl. 238—5.)



1. A rail bridle comprising end pieces, a connecting plate secured to said end pieces, said end pieces each comprising a base plate adapted to underlie a rail, an outer brace extending at an angle to said base plate and engaging the ball of said rail, an inner brace extending at an angle from said base plate and engaging the web of said rail, and a block secured between said inner brace and said rail.

2. A rail bridle comprising end pieces, a connecting plate between said end pieces, means for adjusting said end pieces, said braces converging upwardly and engaging a rail on each side thereof and blocks between certain of said braces and their adjacent rail.

1,105,102. PROCESS OF ORE TREATMENT. CYRUS ROBINSON, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed Nov. 29, 1910, Serial No. 594,703. Renewed Dec. 1, 1913. Serial No. 804,114. (Cl. 75—185.)



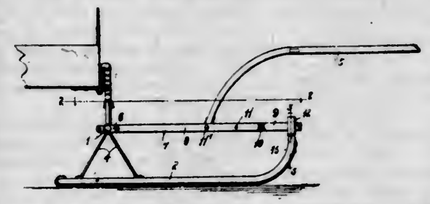
1. The herein described process of ore treatment which consists in mingling an ore mass with a solvent solution to permit the solvent to dissolve a portion of the values from the ore, separating the solution from the ore by a process, as a result of which the ore is left on a surface, removing the ore from the said surface by means of a stream of fresh solvent solution, permitting the said fresh solvent solution to act on the ore which it removes to dissolve further values therefrom, separating the said second solution from the ore, and extracting the values from the said first and second solutions, substantially as set forth.

2. The herein described process of ore treatment which consists in mingling an ore mass with a solvent solution to permit the solvent to dissolve a portion of the values from the ore, separating the solution from the ore, subjecting the ore mass, after the said solution has been separated from it, to the action of a jet of fresh solvent solution, whereby the ore mass is broken up and intimately mixed with the said second solution, permitting the said fresh solvent solution to act on the ore to dissolve further values therefrom, separating the said second solution from the ore and extracting the values from the said first and second solutions, substantially as set forth.

3. The herein described process of ore treatment which consists in part in the mingling of an ore mass with a solvent liquid to permit the solvent to dissolve a portion of the values from the ore, the separation of the said liquid from the ore, and the subsequent subjection of the ore to the action of a second liquid, the said separation of the first liquid from the ore resulting in the collection of the ore on the surface, and the said subjection of the ore to the action of a second liquid being initially effected by forcing a stream of the said second liquid against the ore on the said surface to remove it therefrom, substantially as set forth.

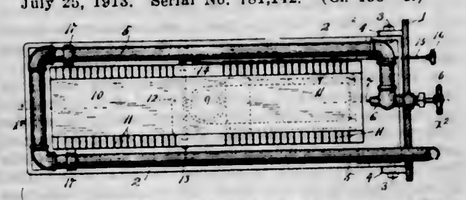
4. The herein described process of ore treatment which consists in mingling a body of ore with a solvent liquid to permit the solvent to dissolve a portion of the values from the ore, separating the greater portion of the solvent liquid from the ore by a process as the result of which the ore and the smaller portion of the solution are left in a mass on a surface, removing the said mass from the said surface by means of a stream of fresh liquid whereby the part of the first liquid remaining in the mass is diluted, separating the liquid from the said resulting mixture, and extracting the values from both of the said separated liquids, substantially as set forth.

1,105,103. SHAFT ATTACHMENT FOR VEHICLE-RUNNERS. OLE G. RUDE, Sacred Heart, Minn. Filed Apr. 20, 1912. Serial No. 692,023. (Cl. 21—48.)



The combination with the front axle of a vehicle, of runners connected thereto, clips carried by the front axle, hitch members having their inner ends connected to said clips, brackets carried by the upturned ends of the runners and carrying the forward ends of said hitch members, said hitch members being formed from single lengths of metal bent upon themselves to provide parallel bars, an offset formed in one of the bars to hold the same spaced apart, bolts adjustably carried by the bars for securing the inner ends of a vehicle shaft to the hitch members.

1,105,104. KEROSENE-GAS GENERATOR AND BURNER. JOHN RYCKMAN, Minneapolis, Minn. Filed July 25, 1913. Serial No. 781,142. (Cl. 158—8.)
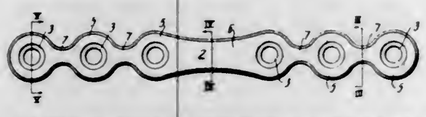


1. The combination with an elongated burner head having an imperforate portion and having gas escape pas-

sages on the opposite sides of said intermediate imperforate portion, of a gas delivery tube connected to said burner head at the intermediate imperforate portion thereof, and a cut-off valve within said burner head located adjacent to the delivery end of said tube and operative to cut off one end portion of said burner head from the supply of gas.

2. A burner of the kind described comprising a marginal channel shape generating pan, an oil delivery pipe following and overlying said generating pan, a burner head supported and surrounded by said oil delivery pipe, a tube receiving from the said oil delivery pipe and delivering into the intermediate portion of said burner head, and a door to which the said generating pan, oil delivery tube and burner head are connected.

1,105,105. SURGICAL APPLIANCE. WILLIAM O'N. SHERMAN, Pittsburgh, Pa. Filed Feb. 10, 1912. Serial No. 676,839. (Cl. 128—52.)



1. A surgical appliance comprising a bone plate having a concave inner surface to contact with the bone and openings in said plate through which screws extend into the bone in securing the plate in position thereon, the concave inner surface of the plate having a curvature whereby the marginal side edges thereof contact with the bone when secured thereon.

2. A surgical appliance comprising a bone plate concavo-convex in cross section and having openings through which screws extend into the bone in fastening the plate in position thereon, the concave inner surface of the plate having a curvature whereby the marginal side edges thereof contact with the bone when secured thereon.

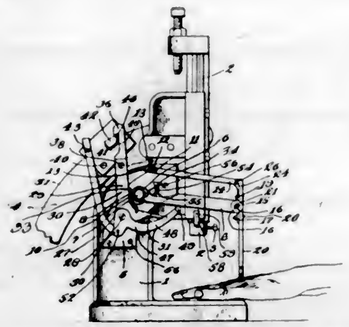
3. A surgical appliance for use in reducing fractures, comprising a bone plate concavo-convex in cross section with the marginal side edges of the plate formed of tangentially arranged reverse curves to provide a plate of sinuous outline, said plate having openings therein through which fastening screws extend into the bone in securing the plate in position thereon.

4. A surgical appliance for use in reducing fractures, comprising a bone plate concavo-convex in cross section and having marginal side edges formed of tangentially arranged reverse curves to provide a plate of sinuous outline, said plate having openings therein through which fastening screws extend into the bone in securing the plate in position thereon, the concave inner surface of the plate having a curvature whereby the marginal side edges thereof contact with the bone when secured thereon.

1,105,106. SAFETY ATTACHMENT FOR FOOT STAMPING AND OTHER PRESSES. WALTER W. SHINSKI, La Salle, Ill. Filed May 15, 1913. Serial No. 767,845. (Cl. 164—107.)

1. In combination with a punching machine having an operating foot lever, a gravity actuated gate carried by the machine, and a mechanism between said gate when the lever is in its normal position, said mechanism adapted to be actuated by the foot lever when raised to prevent the gate from falling by gravitation to its fullest extent, said mechanism including a device adapted to be actuated when said gate completes part of its movement to permit the foot lever to be completely raised or operated.

2. In combination with a punching machine having an operating foot lever, a gravity actuated gate carried by the machine, and a mechanism between said gate and the lever to support the gate when the lever is in its normal position, said mechanism adapted to be actuated by the foot lever when raised to prevent the gate from falling by gravitation to its full limit, said mechanism including a safety catch device to prevent said foot lever from completing its movement in case the gate encounters an obstruction.



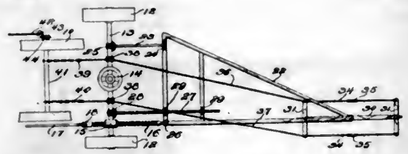
3. In combination with a punching machine having an operating foot lever, a gravity actuated gate carried by the machine, and a mechanism between said gate and the lever to support the gate when the lever is in its normal position, said mechanism adapted to be actuated by the foot lever when raised to prevent the gate from falling by gravitation to its full limit, said mechanism including a safety catch device to prevent said foot lever from completing its movement in case the gate encounters an obstruction, links connecting said gate to the standard of the punching machine, and a device carried by one of said links to actuate said safety device to permit the foot lever to complete its movement in case the gate encounters no obstruction.

4. In combination with a punching machine having an operating foot lever, a gravity actuated gate carried by the machine, and a mechanism between said gate and the lever to support the gate when the lever is in its normal position, said mechanism adapted to be actuated by the foot lever when raised to prevent the gate from falling by gravitation to its full limit, said mechanism including a safety catch device to prevent said foot lever from completing its movement in case the gate encounters an obstruction, links connecting said gate to the standard of the punching machine, and an adjustable device to permit the foot lever to complete its movement in case the gate encounters no obstruction, and means to restore the safety device, when the gate is raised and the foot lever restored to its normal position.

5. In combination with a punching machine having an operating foot lever, a supporting plate secured to the standard of the machine, a gravity actuated detector gate, links connecting said gate to the plate, a clamp having a lateral lug adjustably carried by the foot lever, a bell crank lever pivoted on said plate and having link connections with said clamp and adapted to engage one of said links to support the gate in a raised position against gravitation when the foot lever is in its normal position, said bell crank lever constituting means actuated by the foot lever when raised to permit the link and the gate to fall by gravitation for a certain distance, a safety catch lever pivoted on said plate adapted to engage the lug of the clamp to prevent the foot lever from completing its full movement, provided the gate encounters an obstruction, an adjustable device carried by one of said links to actuate said safety catch lever from the path of said lug to permit the foot lever to complete its full movement, provided no obstruction is encountered, and means for restoring said safety catch lever to its normal position when the gate is raised.

1,105,107. STEERING-GUIDE. JOHN A. STANGE, Regent, N. D. Filed Apr. 29, 1913. Serial No. 764,380. (Cl. 97—81.)

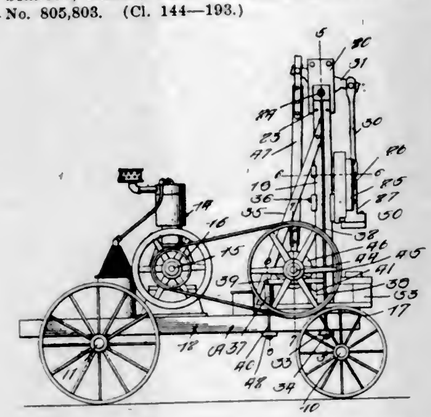
1. A traction engine, a frame positioned in front of said traction engine, means for pivotally connecting one side of said frame with one end portion of the guiding axle of said traction engine, means for slidably connecting the opposite side portion of said frame with the opposite end portion of said axle, a threaded bur carried by said axle, a threaded shaft passing through said bur and rotatably connected with the slidably mounted side of said frame, a carriage pivotally connected with said frame and provided with supporting wheels, means for rotating said threaded shaft, and means for turning the supporting wheels of said carriage.



2. A traction engine provided with a guiding axle, a frame positioned in front of said traction engine, a rod pivotally connecting one side of said frame with one end portion of said axle, a second rod pivotally connected with the opposite end portion of said axle and slidably connected with the opposite side portion of said frame, a bur carried by said axle, a threaded shaft passing through said bur and having its outer end rotatably connected with said frame, pivotally mounted supporting wheels connected with said frame, means for rotating said threaded shaft, and means for guiding said supporting wheels.

3. A traction engine, a frame positioned in front of said traction engine, means for pivotally connecting one side portion of said frame with one end portion of the guiding axle of said engine, guiding means for said frame and axle engaging the opposite side portion of said frame and the opposite end portion of said axle, a rod extending from said axle and slidably connected with said frame, guiding wheels connected with said frame, and means for controlling said guiding wheels.

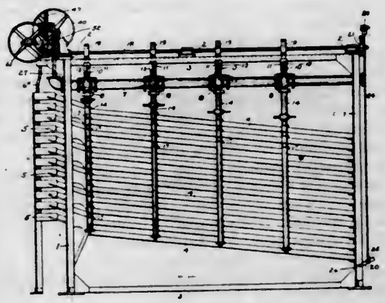
1,105,108. WOOD-SPLITTING MACHINE. GEORGE W. STANTON, Athens, Tenn. Filed Dec. 10, 1913. Serial No. 805,803. (Cl. 144—193.)



1. A wood splitting machine comprising a wheeled body, a floor supported upon said body, uprights rising from said floor, spaced plates between the upper ends of said uprights, bolts securing said plates and uprights together, a rocker arm pivoted between the plates on one of said bolts, a head slidably mounted on said uprights, a splitting knife carried by the head, connections between the head and rock arm whereby the oscillation of the latter will reciprocate the former, and means for oscillating said rocker arm.

2. A wood splitting machine comprising a body, a floor supported upon said body, uprights rising from said floor, bolts connecting the upper ends of said uprights, a cross beam beneath said body, draw rods connected to one of said bolts and disposed against the outer side of said uprights, said draw rods extending through the floor and said cross beams, nuts threaded on the lower end of said draw rods and adapted to engage the cross beam to secure and hold the uprights to the floor, a rocker arm pivoted on one of said bolts, a head slidably mounted on said uprights, a splitting knife carried by the head, connections between the head and rocker arm whereby the oscillation of the latter will reciprocate the former, and means for oscillating said rocker arm.

1,105,109. ORE-CONCENTRATOR. PETER STENGER, Fort Wayne, Ind., assignor to Deister Concentrator Company, Fort Wayne, Ind., a Corporation. Filed Dec. 1, 1913. Serial No. 804,071. (Cl. 83—89.)



1. In an ore concentrator having a plurality of decks, the combination of a plurality of manifolds for discharging water onto each deck at selected longitudinally separated points thereon, a water supply main having a connection with each manifold, means in each connected for controlling the flow of water therethrough, and means to operate the controlling means in succession and at predetermined intervals of time.

2. In an ore concentrator the combination with an inclined deck, of a plurality of fixed water distributers extending transversely of the deck and adapted to discharge wash water onto the deck at selected longitudinally spaced points, and automatically operated means to control the discharge of water from said distributers in succession at predetermined points of time.

3. In an ore concentrator the combination, with an inclined deck, of a plurality of rows of discharge nozzles extending transversely of the table and adapted to discharge water onto the deck at selected longitudinally separated points, and automatically operated means for controlling the discharge of water from said rows of nozzles independently at predetermined points of time, and in order of succession.

4. In an ore concentrator the combination with an inclined table deck, of a series of rows of discharge nozzles arranged transversely of the deck and adapted to discharge water onto the deck at predetermined longitudinally separated points, valves to control the supply of water to each row of nozzles and means to automatically operate the valves independently and at predetermined points of time, and in order of succession.

5. In an ore concentrator having a multiplicity of decks over which materials to be treated are adapted to be passed, the combination of a plurality of wash water means for each deck, each one of said means having a source of water supply in common with one said means for each of the other decks, means to control the flow of water into said sources of water supply independently, means to actuate the controlling means in succession and at predetermined points of time whereby wash water is discharged onto each deck at a plurality of points in succession, the discharge being simultaneous on each deck at any one selected point.

[Claims 6 to 11 not printed in the Gazette.]

1,105,110. BUTTON. JOHN STUART, Saugatuck, Conn., assignor to Clarence Wooster, Newark, N. J. Filed Oct. 16, 1908. Serial No. 457,989. (Cl. 24—90.)



1. A button comprising a body, and a resilient shell formed from thin sheet-material and including an inwardly extending rim, the body fitting snugly between the back of the shell and inner side of the rim, and the shell being capable of enduring stress great enough to change the internal diameter of the rim when the body and shell are pressed together.

2. A button comprising the combination of a perforate resilient hollow part, and a body on which said hollow part fits and whose edge it covers, said hollow part including an inwardly extending rim behind which the edge of the body lies, and the resiliency of said hollow part being effective to contract said rim over the edge of the body, substantially as and for the purpose described.

3. A button comprising a body and a shell in which the body snugly fits, the shell surrounding and extending over and under the edge of the body, and one of said parts including a resilient rim capable of enduring stress great enough to change some of its dimensions when the body and shell are forced together, the form of said rim in the completed button being the same as it was before the body and shell were united.

4. A resilient button-shell made to fit on the body of a button, the shell being formed from thin sheet-material and including an inwardly extending rim behind which the edge of the body lies, and the shell being capable of enduring stress great enough to change the internal diameter of the rim when the body and shell are pressed together.

1,105,111. BUTTON. JOHN STUART, Saugatuck, Conn., assignor of one-half to Clarence Wooster, Newark, N. J. Filed Oct. 11, 1909. Serial No. 522,179. (Cl. 24—90.)



1. A button-rim consisting of a resilient ring comprising two narrow inwardly extending lips made to fit on the face and back of a button near its edge, the form of one of said lips rendering the lip expansible by the action of the button upon it when the rim and button are pressed together, and the resiliency being effective to contract said lip over the edge of the button.

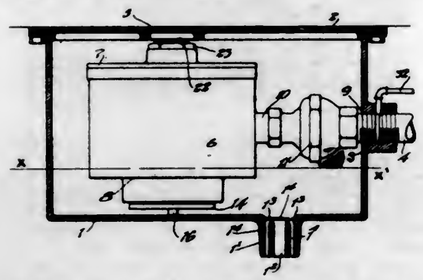
2. A button-rim consisting of a resilient ring comprising two narrow inwardly extending lips made to fit on the face and back of a button near its edge, the form and resiliency of the ring adapting it to be attached to and detached from the button.

3. A button-rim consisting of a resilient ring comprising two narrow inwardly extending lips made to fit on the face and back of a button near its edge, these lips differing in shape, and the form and resiliency of the ring adapting it to be attached to and detached from the button, the ring being applicable to the button with either lip next to the face thereof.

4. The combination with a button of a resilient rim that covers the edge of the button and comprises two narrow lips between which the button fits, the form and resiliency of the rim adapting it to be attached to the button after it and the rim have been separately made.

5. The combination with a button of a facing, and a rim consisting of a resilient ring comprising two inwardly extending lips that fit on the face and back of the button near its edge, the form of the lip that fits on the back of the button rendering this lip expansible by the action of the button upon it when the rim and button are pressed together, and the resiliency being effective to contract said lip over the edge of the button, the face of the latter being covered with the facing.

1,105,112. AUTOMATIC STEAM-TRAP. WILTON TELFER, Winnipeg, Manitoba, Canada. Filed May 14, 1910. Serial No. 561,499. (Cl. 236—10.)



1. A steam trap comprising a cylindrical casing for the reception of steam and liquid, a pressure operated valve controlling the escape of liquid from the casing, a thermostat suspended within the casing, and a valve seat located above the thermostat and adapted to engage with the same when the thermostat is expanded, as and for the purpose specified.

2. A steam trap comprising a receptacle, a cylindrical casing within the receptacle for the reception of steam and liquid, such casing being movable, a pressure operated valve carried by the casing and having the stem thereof engageable with the bottom of the receptacle, such valve being open when the casing is in the lowest position within the receptacle, a thermostat located within the casing, and a valve seat upon which the thermostat seats, as and for the purpose specified.

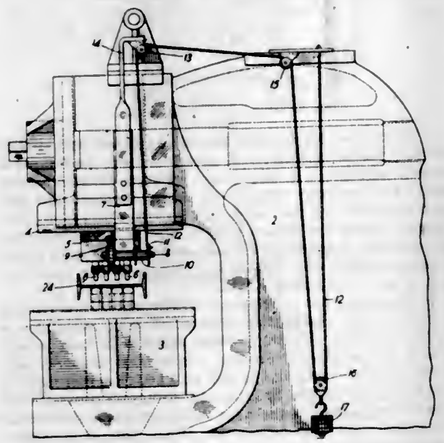
3. A steam trap comprising a closed receptacle, a hollow casing within the receptacle for the reception of steam and liquid, said casing being connected to the receptacle walls by pipes united with a ball and socket joint, a pressure valve operating in an opening formed in the bottom of the casing and adapted to be opened when the casing is in the lowest position within the receptacle, a thermostat supported within the casing, and a hollow tube passing upwardly through the top of the casing, such tube being provided with a valve seat at its lower end engageable with the upper face of the thermostat, as and for the purpose specified.

4. A steam trap comprising a closed receptacle, a hollow casing within the receptacle for the reception of steam and liquid, said casing being connected to the receptacle walls by pipes united with a ball and socket joint, a valve playing over a valve seat formed in the bottom of the casing, such valve having a stem extending downwardly and engaging with the bottom of the receptacle, and being open when the casing is in the lowest position, a tube carried by the top of the casing and passing to the interior thereof, said tube having a valve seat formed at the lower end thereof, and a thermostat located within the casing and engageable when expanded with the valve seat, as and for the purpose specified.

5. A steam trap comprising a receptacle, a hollow movable casing within the receptacle fitted with a top and bottom and secured to the casing walls through a suitable flexible joint, such casing being for the reception of steam and liquid, a removable valve seat located in the bottom of the casing, a vertically slidable valve operating in the valve seat and having a downwardly projecting stem engageable with the bottom of the receptacle, an adjustable tube carried by the top of the casing and passing to the interior thereof, a valve seat located at the lower end of the tube and having an opening therein continuous with the opening in the tube, and a thermostat within the casing adapted to engage when expanded with the latter valve seat, as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,105,113. SPACING DEVICE FOR PUNCHING-MACHINES. JAY K. THOMPSON, Gary, Ind. Filed Sept. 22, 1913. Serial No. 791,020. (Cl. 164—116.)



1. In a punching machine, a spacing device comprising in combination an index finger on the punching machine and a graduated tape coöperating therewith to determine the location of holes to be punched, means on the end of the tape engaging with the materials being punched to move the tape therewith, a rotating reel on which the tape is wound and unwound in punching, and means for rotating the reel arranged to yieldingly resist rotation thereof in unwinding the tape from the reel to thereby maintain the tape under tension in the tape unwinding operations.

2. In a punching machine, a spacing device comprising in combination an index finger on the punching machine and a graduated tape coöperating therewith to determine the location of holes to be punched, means on the end of the tape engaging with the materials being punched to move the tape therewith, a rotating reel on which the tape is wound and unwound in punching, and means for rotating the reel to wind the tape upon its reel after completing the punching operations.

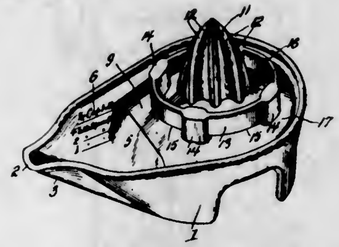
3. In a punching machine, a spacing device comprising in combination an index finger on the punching machine and a graduated tape coöperating therewith to determine the location of holes to be punched, means on the end of the tape engaging with the materials being punched to move the tape therewith, a rotating reel on which the tape is wound and unwound in punching, and means for rotating the reel arranged to yieldingly resist rotation thereof in unwinding the tape from the reel to thereby maintain the tape under tension in the tape unwinding operations, said means being arranged to rotate the reel and wind the tape thereon after completing the punching operations.

4. In a punching machine, a spacing device comprising in combination an index finger on the punching machine and a graduated tape coöperating therewith to determine the location of holes to be punched, means on the end of the tape engaging with the materials being punched to move the tape therewith, a rotating reel on which the tape is wound and unwound in punching, an arm forming a guide engaging with and holding the tape in position in the tape unwinding operations, and means for rotating the reel arranged to yieldingly resist rotation thereof in unwinding the tape from the reel to thereby maintain the tape under tension in the tape unwinding operations.

5. In a punching machine, a spacing device comprising in combination an index finger on the punching machine and a graduated tape coöperating therewith to determine the location of holes to be punched, means on the end of the tape engaging with the materials being punched to move the tape therewith, a rotating reel on which the tape is wound and unwound in punching, a shaft on which said reel is removably secured to rotate therewith, a second reel on said shaft, a flexible connection on the second reel, and a counterweight on the flexible connection arranged to be lifted by and maintain the tape under tension in the unwinding operations of the tape.

[Claim 6 not printed in the Gazette.]

1,105,114. LEMON-JUICE EXTRACTOR. SUYEO TSURU, Newburgh, N. Y. Filed Oct. 7, 1913. Serial No. 793,930. (Cl. 100—49.)



1. A lemon juice extractor consisting of a receptacle having a pouring mouth and having its sides graduated, an extractor arranged to the rear of the receptacle, a ring-shaped strainer surrounding the extractor, said strainer having enlarged reinforcing members spaced from each other and providing inwardly and outwardly extending rounded walls, and the strainer between the reinforcements having its lower edge formed with openings.

2. A lemon juice extractor comprising a juice receiving receptacle, a declivous surface arranged to one side of and above the receptacle, an extractor extending upwardly from the central portion of the declivous surface, a ring-shaped member upon the declivous surface spaced from the extractor and elevated at points above the declivous surface.

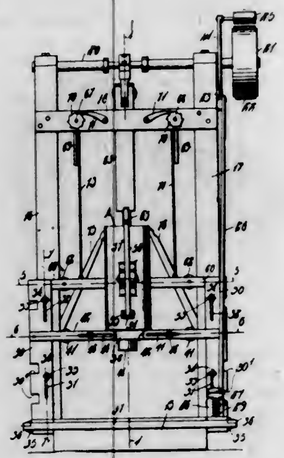
3. An extractor including a juice receptacle, a declivous surface formed with the rear wall of the receptacle and extending above the said receptacle, a cone-shaped extractor arranged centrally of the declivous surface, a ring surrounding the extractor, said ring having openings which communicate with the declivous surface, and the said ring having its inner wall provided with abutments which are adapted to co-act with the extractor in extracting the juice from the fruit.

4. A vessel having a continuous flange, and one portion depressed to provide a receptacle, a declivous surface arranged to the rear of the receptacle and communicating therewith, the portion of the receptacle between the flange of the said declivous surface being inclined toward the receptacle, a cone-shaped extractor arising centrally from the declivous surface, a ring strainer upon the said declivous surface surrounding the extractor and spaced therefrom, the said ring having openings which communicate with the declivous surface and the said ring having spaced inwardly projecting elements, substantially as and for the purpose set forth.

1,105,115. CORKING-MACHINE. JOSEPH J. VOGEL, Springfield, Minn. Filed June 11, 1913. Serial No. 773,121. (Cl. 226—4.)

1. In a corking machine, the combination of a base, a pair of uprights secured to said base, plates disposed against corresponding opposite sides of the uprights, a bar connecting the outer edges of the plates associated with respective uprights, said plates being provided respectively with vertical slots, pins mounted in the up-

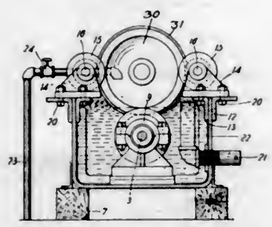
rights and engaged through said slots respectively, nuts threaded on the outer ends of said pins whereby the plates are slidably secured to the uprights, levers pivoted on opposite sides of the base respectively and having one end pivotally connected to said bars, a treadle bar connecting the outer ends of said levers whereby the depression of the treadle bar will simultaneously elevate said plates, a platform slidably mounted between the uprights and adjustably connected to said plates whereby the elevation of the latter will elevate said platform, a cork magazine and feeding device supported by said platform, a plunger for forcing corks delivered by the feeding device from the magazine into the cork receiving opening of a receptacle, and means for reciprocating said plunger.



2. In a corking machine, the combination of a base, a pair of uprights secured to said base, plates mounted on corresponding opposite sides of the uprights for vertical movement, and having their outer edges correspondingly notched, means for simultaneously elevating said plates, a platform slidably mounted between the uprights, plates longitudinally adjustable on opposite edges of the platform at each end of the latter, a bar connecting the free ends of the plates at the same end of the platform and adapted to be engaged in and removed from the notches in the vertically movable plates mounted on the uprights whereby said platform is supported by and adjustable relatively to the vertical movable plates, a cork magazine and feeding device supported by said platform, a plunger for forcing corks delivered by the feeding device from the magazine into the cork receiving opening of a receptacle, and means for reciprocating said plunger.

3. In a corking machine, the combination of a base, a pair of uprights secured to said base, plates mounted on corresponding opposite sides of the uprights for vertical movement, means for moving said plates vertically in unison, said plates having their outer edges correspondingly notched, a platform slidably mounted between the uprights, plates longitudinally adjustable on opposite edges of the platform at each end of the latter, a bar connecting the free ends of the plates at the same end of the platform adapted to be engaged in and removed from the notches in the vertically movable plates mounted on the uprights whereby said platform is supported by and adjustable relatively to the vertical movable plates, means for supporting said platform during the removal and engagement of said bars from and in the notches of the vertical movable plates, a cork magazine and feeding device supported by said platform, a plunger for forcing corks delivered by the feeding device from the magazine into the cork receiving opening of a receptacle, and means for reciprocating said plunger.

1,105,116. APPARATUS FOR TREATING CAR-WHEELS AND SIMILAR CIRCULAR BODIES. SAMUEL S. WALES, Munhall, Pa. Filed May 9, 1913. Serial No. 766,540. (Cl. 148—34.)



1. Apparatus for treating heated car wheels and similar circular bodies comprising a vessel or tank containing a cooling medium, a rotary wheel support in said vessel, means for positively driving the rotary support, said support engaging the rim or wheels carried thereon to frictionally rotate the wheels and thereby bring successively different rim portions of the wheels below the level of the cooling medium, and a guide on the side of the vessel engaging with the rotating wheels.

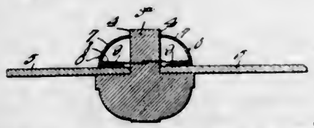
2. Apparatus for treating heated car wheels and similar circular bodies comprising a vessel or tank containing a cooling medium, a rotary wheel support in said vessel, means for positively driving the rotary support, said wheel support engaging the rim of wheels carried thereon to frictionally rotate and thereby bring successively different rim portions of the wheel below the level of the cooling medium, an adjustable guide on the side of the vessel engaging the wheels in the vessel, and means for securing the guides in adjusted position on the vessel.

3. Apparatus for treating heated car wheels and similar circular bodies comprising a vessel or tank containing a cooling medium, a rotary wheel support in said vessel, wheel guiding members on opposite sides of the vessel, and means for positively driving the rotary support, said support frictionally engaging the periphery of wheels carried thereon to thereby rotate the wheels and bring successively different rim portions thereoof below the level of the cooling medium.

4. Apparatus for treating heated car wheels and similar circular bodies comprising a vessel or tank containing a cooling medium, a rotary wheel support in said vessel, idler rollers forming guides on opposite sides of the tank, and means for driving the rotary support, said support frictionally engaging with the rim of wheels carried thereon to rotate and bring successively different rim portions thereof below the level of the cooling medium.

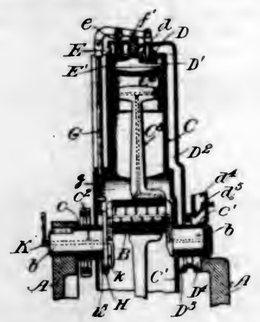
5. Apparatus for treating heated car wheels and similar circular bodies comprising a vessel or tank containing a cooling medium, a rotary wheel support in said vessel, idler rollers forming guides adjustably secured on opposite sides of the tank, means for securing the guide rollers in adjusted position, and means for driving the rotary support, said support frictionally engaging with the rim or wheels carried thereon to rotate and bring successively different rim portions thereof below the level of the cooling medium.

1,105,117. GLAZING-STRIP. THOMAS E. WEAVER, Pelham, Ga., assignor of one-half to Imry O. Spence, Pelham, Ga. Filed Feb. 11, 1913. Serial No. 747,819. (Cl. 20—56.4.)



In combination, a window sash having a rabbet, a window pane seated in the rabbet, a glazing strip bent on a longitudinal line to provide a laterally convexed leaf and a relatively narrow flat leaf, the flat leaf resting against the window pane and the edge of the convexed leaf biting the rabbet, and securing members passed through the convexed leaf directly adjoining the flat leaf and taking into the window sash so as to flex the convexed leaf and cause the flat leaf to bear firmly against the window pane.

1,105,118. MULTICYLINDER ROTARY GAS-ENGINE. FRITZ WEINBERG, Washington, D. C., assignor to Emile Berliner, Washington, D. C. Filed Aug. 14, 1908. Serial No. 448,574. (Cl. 123—44.)



1. The combination with a fixed crank, a plurality of cylinders rotating about the crank, pistons in the cylinders connected with the crank, inlet and exhaust valves on the outer ends of the cylinders, and an operating rod for every cylinder connected at its outer end to the inlet and exhaust valves of its cylinder, of a fixed double loop cam parallel to the plane of rotation of the cylinders and provided with inner and outer cam grooves in its face, a circularly movable segment on the face of the cam for lengthening the outer groove to regulate the time of compression, and shoes on the inner ends of the valve rods traveling in said grooves as the cylinders rotate to actuate the valves during the periods of suction, compression, explosion and exhaust.

2. The combination with a fixed crank, of a plurality of cylinders, rotating about the crank, pistons in the cylinders connected to the crank, inlet and exhaust valves in the cylinder heads, levers pivoted between their ends to the cylinder heads and having loose pivotal connections with the stems of the inlet and exhaust valves, valve rods on the cylinders pivotally connected at their outer ends to the outer ends of the said levers and springs on the valve rods pressing them inwardly, of a fixed double-loop cam parallel with the plane of rotation of the cylinders and having cam grooves in its face and a circularly movable segment on its face to lengthen the inner wall of the outer groove of the cam to vary the compression, and pivoted shoes on the inner ends of the rods traveling around in the said grooves as the cylinders rotate, to actuate the valves during the periods of suction, compression, explosion and exhaust.

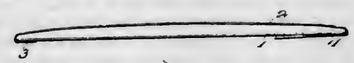
3. In an internal combustion engine, a valve controlling cam comprising a ring having grooves in its face to control the suction, compression, explosion and exhaust periods, and a circularly movable segment on the face of the cam and forming the inner wall of the suction controlling groove to vary the compression period.

1,105,119. PROCESS OF REMOVING THE BITTER TASTE FROM MALT EXTRACTS. RUDOLF WEYERMANN, Bamberg, Germany. Filed Mar. 4, 1914. Serial No. 822,506. (Cl. 99—11.)

1. A process of removing constituents having a bitter taste from malt wort, which consists in indirectly heating the wort to be treated and simultaneously passing steam through the wort.

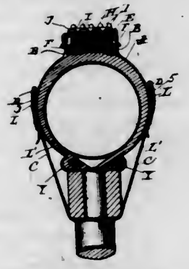
2. A process of removing from colored malt wort constituents having a bitter taste and an offensive odor, consisting in passing steam through the wort while simultaneously heating the same by indirect steam.

1,105,120. LAUNDRY-ENVELOP. GEORGE WORDINGHAM, Milwaukee, Wis. Filed Dec. 17, 1912. Serial No. 737,298. (Cl. 229—87.)



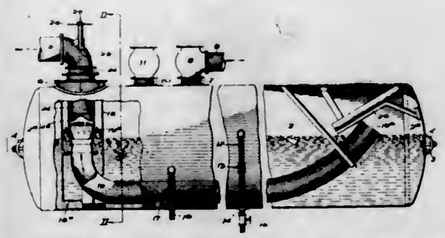
A wrapper for laundried articles consisting of a relatively stiff back having a narrow zone of adhesive applied to its obverse side at each lateral edge thereof, the said lateral edges being parallel, and a relatively thin flexible front initially and permanently secured at one edge to the obverse side of the back through the medium of one of the said zones of adhesive, the said front being of a width considerably greater than the width of the back and being adapted to have a greater or less area of its surplus width folded to lie beneath the back and to be secured thereto through the medium of the other zone of adhesive.

1,105,121. CONVERTIBLE TIRE. ROBERT WRIGHT, Cleveland, Ohio. Filed Jan. 27, 1911. Serial No. 605,031. (Cl. 152—17.)



The combination of a wheel felly, an inner clencher rim thereon, a pneumatic tire on the rim, a metallic outer rim member on the said tire, having clencher edges, and a plurality of rubber tread members held on the outer rim by said edges, said members being of proper size to fit said inner clencher rim upon removal of the pneumatic tire.

1,105,122. STEAM-REGENERATOR. WILLIAM AHLEN, Duquesne, Pa. Filed Aug. 2, 1911. Serial No. 641,968. (Cl. 121—95.)



1. A steam regenerator comprising a regenerator chamber having steam inlet and outlet openings and a water overflow outlet opening, a vacuum chamber surrounding the steam inlet and in communication with the regenerator chamber below the level of the water overflow outlet opening, and a mixing pipe in the regenerator chamber having end portions opening respectively into the regenerator and vacuum chambers above the level of the water overflow outlet opening.

2. A steam regenerator comprising a regenerator chamber having steam inlet and outlet openings and a water overflow outlet opening, a mixing pipe in said chamber extending below and having ends opening above the level of the water overflow outlet opening, and a vacuum chamber communicating with the regenerator chamber below the level of its water overflow outlet opening into which the steam inlet opening and inlet end of said mixing pipe extends.

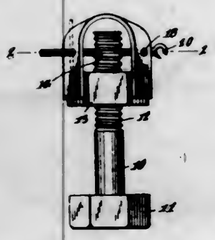
3. A steam regenerator comprising a regenerator chamber having steam inlet and outlet openings and having a water overflow outlet opening, a vacuum chamber surrounding the steam inlet opening and having an open lower end extending below the level of said overflow outlet opening in the regenerator chamber, and a mixing pipe in the regenerator chamber below the level of the overflow outlet opening having end portions extending upwardly above the level of the water overflow outlet opening, the inlet end of said mixing pipe extending into proximity to and forming with the lower end of the steam inlet opening in the vacuum chamber an annular opening connecting the top of the vacuum chamber with the steam inlet and mixing pipes.

4. A steam regenerator comprising a regenerator chamber having steam inlet and outlet openings and having a water overflow outlet opening, a vacuum chamber surrounding the steam inlet opening and having an open lower end extending below the level of said overflow outlet opening in the regenerator chamber, and a mixing pipe in the regenerator chamber below the level of the overflow outlet opening having end portions extending upwardly above the level of the water overflow outlet opening, the inlet end of said mixing pipe extending into proximity to and forming with the lower end of the steam inlet opening in the vacuum chamber, an annular opening connecting the top of the vacuum chamber with the steam inlet and mixing pipes, and means for varying the size of the annular opening formed by the adjacent ends of the steam inlet and the mixing pipes.

5. A steam regenerator comprising a regenerator chamber having steam inlet and outlet openings and a water overflow outlet opening, a vacuum chamber surrounding the steam inlet and in communication with the regenerator chamber below the level of the water overflow outlet opening, and a mixing pipe in the regenerator chamber having a discharge end opening into the regenerator and an inlet end extending into and communicating with the vacuum chamber above the level of the water overflow outlet opening in the regenerator.

[Claims 6 to 10 not printed in the Gazette.]

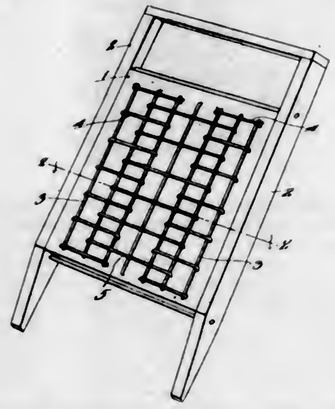
1,105,123. NUT-LOCK. EDWIN A. BARDWELL, Shelburne Falls, Mass. Filed Oct. 18, 1913. Serial No. 796,093. (Cl. 151—29.)



1. A nut lock comprising a bolt having its threaded end portion provided with a transversely extending opening, a nut screwed upon said bolt, a locking strip engaging said nut and formed from a single strip of material bent intermediate its length to provide a U-shaped locking means extending over the end of the bolt with its arms extending along the sides of said nut and bent longitudinally, whereby each arm will engage two faces of the nut, each arm being provided with a plurality of openings positioned upon the opposite sides of the longitudinal center of the arm whereby a selected set of openings may be brought into alinement with the opening of said bolt, and locking means passing through the alined openings of said bolt and arms.

2. In a device of the character described, a bolt provided with a transversely extending opening, a nut carried by said bolt, a locking strip extending across the end of said bolt and having its end portion bent to form arms extending along the sides of said nut, the arms being provided with a plurality of alined openings whereby said locking means may be placed in engagement with the sides of the nut and a selected set of openings brought into alinement with the openings of said bolt, and securing means passing through the alined openings of said bolt and locking means.

1,105,124. WASHBOARD. HENRY C. BUSH, Percilla, Tex. Filed July 2, 1913. Serial No. 777,073. (Cl. 68—29.)

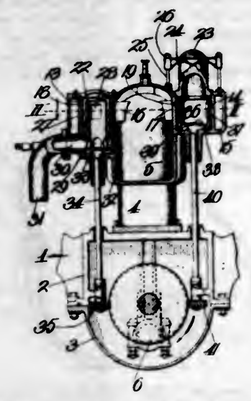


A washboard including a back board, a series of longitudinal wires laid thereon and having their terminals clenched therethrough, two longitudinal series of relatively short side transverse wires laid upon the longitudinal wires, the said transverse wires being spaced from the central longitudinal wire, the outer extremities of the said transverse wires being bent over the side longitudinal strands and clenched through the back board, the inner ends of the said transverse wires being bent over certain of the longitudinal wires between the central and side longitudinal wires and being clenched through the back board, and a longitudinal series of relatively long central transverse wires laid upon the longitudinal wires between the side transverse wires, the ends of the central transverse wires projecting between the ends of the respective side transverse wires and being bent over those longitudinal wires between the ends of the side transverse wires and clenched through the back board, whereby the transverse wires will have double spaced portions at the side and central points, and will have single portions intermediate the said double spaced portions.

1,105,125. VALVE MECHANISM FOR GAS-ENGINES. CHARLES L. COOKSON, Kansas City, Mo. Filed Oct. 19, 1911. Serial No. 655,549. (Cl. 136—7.)

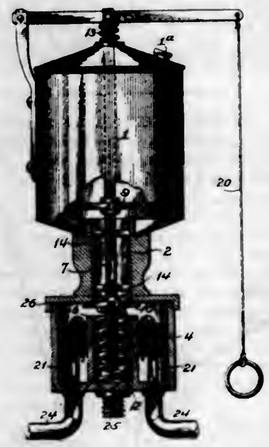
In a valve mechanism for internal combustion engines, a cylindrical valve casing having a removable cap at its upper end, a cylindrical bushing fitting said casing, said casing and bushing being provided with registered inlet ports near their lower ends and registered outlet ports near their upper ends, a hollow cylindrical valve fitting in said bushing and provided with an elongated socket in its lower end and with openings adapted to be registered

with said inlet and outlet ports respectively, and a suitably journaled shaft extending into the lower end of



said casing and having a head fitting removably in said valve socket for rotating said valve.

1,105,126. AUTOMATIC-FEED LUBRICATOR. FREMONT DOYLE, Marion, Ind. Filed July 3, 1913. Serial No. 777,315. (Cl. 184—83.)



1. The combination of a reservoir, an oil cup below the same, a measuring chamber connecting the reservoir and oil cup, a rod, two disk valves rigid on said rod, one of said valves being within the oil cup and adapted to normally rest against the lower end of the measuring chamber for shutting off the supply of oil to the cup, and the other valve located in the reservoir and adapted when lowered to rest on the top of the measuring chamber for closing communication between the latter and the reservoir, a spring for normally holding said valves in their elevated positions, and manually operated means for lowering both valves.

2. The combination of a reservoir, an oil cup below same, a measuring chamber connecting the reservoir and oil cup, a hollow rod passing through the measuring chamber, and terminating in the oil cup for supplying air to the latter, two disk valves rigid on said rod, one within the oil cup and adaptetd to normally rest against the lower end of the measuring chamber for shutting off the supply of oil to the cup, and the other valve located in the reservoir and adapted when lowered to rest on the top of the measuring chamber for closing communication between the latter and the reservoir, a spring for normally holding said valves in their elevated positions, and manually operated means for lowering both valves.

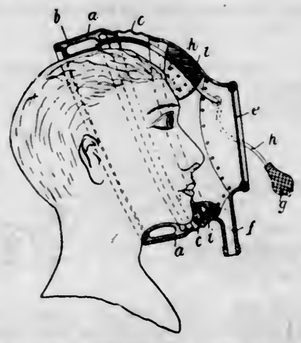
3. The combination of a reservoir, an oil cup, a measuring chamber connecting the reservoir and cup, a hollow rod passing through the reservoir and measuring chamber, and terminating within the cup for supplying air continuously into the latter, disk valves secured to said rod, one valve adapted to close the lower end of the measuring chamber and the other adapted to be moved to close the upper end of said chamber, and means for actuating said hollow rod to close the upper end of the measuring chamber and open the lower end thereof.

4. The combination of a reservoir, an oil cup below and in communication with same, the oil cup being provided with a central compartment open at its top, an air tube passing through the reservoir and terminating within said compartment, a valve for closing communication between the reservoir and cup, a spring for normally holding said valve in its closed position and manually actuated means for moving said valve.

5. The combination of a reservoir, an oil cup below and in communication with same, and provided with a centrally located compartment open at its top, an air tube passing through the reservoir and terminating within said compartment, a disk valve on said tube for closing the opening into the cup from the reservoir, the said valve being located over the open upper end of said central compartment for preventing the entrance of oil into same, means for moving the rod to open the valve, and a spring for holding the rod in its elevated position.

[Claims 6 and 7 not printed in the Gazette.]

1,105,127. SMOKE-MASK FOR RESPIRATION APPARATUS. ALEXANDER BERNHARD DRÄGER, Lubeck, Germany, assignor to Drägerwerk Heinr. und Bernh. Dräger, Lubeck, Germany. Filed Oct. 18, 1910. Serial No. 587,701. (Cl. 128—42.)



1. A smoke mask, consisting of a front rigid face part, a rear inflatable tube which is laid around the head of the wearer, a pliable airtight intermediate part extending from said face part rearwardly to said tube and non-elastic pliable means surrounding said tube and connecting it to said intermediate part.

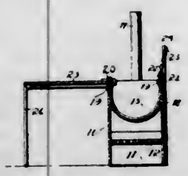
2. A smoke mask, consisting of a front rigid face part, a rear inflatable tube which is laid around the head of the wearer, a pliable airtight intermediate part extending from said face part rearwardly and surrounding said tube with its rear edge.

3. A smoke mask, consisting of a front rigid face part, a rear inflatable tube which is laid around the head of the wearer, a pliable airtight intermediate part extending from said face part rearwardly to said tube and non-elastic pliable means surrounding said tube and connecting it to said intermediate part, said non-elastic pliable means consisting of an adjustable strap.

4. A smoke mask, consisting of a front rigid face part, a rear pneumatic tube which is laid around the head of the wearer, a pliable airtight intermediate part extending from said face part rearwardly to said tube and non-elastic pliable means surrounding said tube and connecting it to said intermediate part, said tube having the shape of a sleeve extending forwardly and being of less perimeter on its front part.

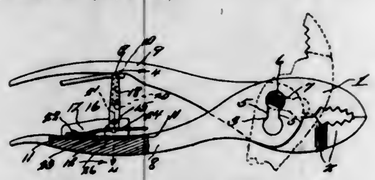
5. A smoke mask, consisting of a front rigid face part, a rear pneumatic tube which is laid around the head of the wearer, a pliable airtight intermediate part extending from said face part rearwardly to said tube and non-elastic pliable means surrounding said tube and connecting it to said intermediate part, said tube having the shape of a sleeve extending forwardly and being of less perimeter on its front part, said front part being solid.

1,105,128. HOG-SCALDING TANK. GILBERT J. FINGERSON, Murdock, Minn. Filed June 8, 1912. Serial No. 702,448. (Cl. 17—7.)



A hog scalding device including a semi-cylindrical tank, a skeleton carcass supporting rack within said tank including a plurality of spaced downwardly bowed cross bars conforming to the contour of and bearing throughout their lengths upon the inner face of said tank, longitudinal bars connecting the ends of said cross bars and disposed below the top edges of said tank, hinges connecting one of said longitudinal bars with one side of said tank at the top edge of the latter, and an operating lever carried by said tank opposite from said hinges and operatively connected to the other of said longitudinal bars for rocking said rack up out of said tank and said hinges.

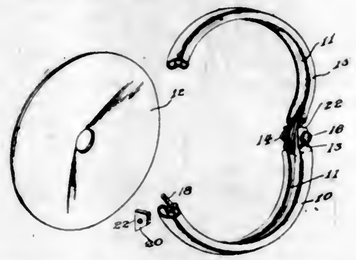
1,105,129. LEATHER-PUNCH FOR PLIERS. STEPHEN A. FREER, El Monte, Cal. Filed Dec. 9, 1913. Serial No. 805,555. (Cl. 7—4.)



In combination with a pair of pivoted members, one acting as a support, the other acting as an abutting member, a trough-shaped holder having dovetail connections with the support to hold the holder thereto, a leather punching member pivoted in the holder adapted to cooperate with the abutting member, the lower end of the punch having a lug, and a leaf spring secured in the holder and having an aperture in the free end to receive said lug to hold the punch in an open position, said leaf spring adapted to engage the end of the punch having the lug to hold the punch in an open position.

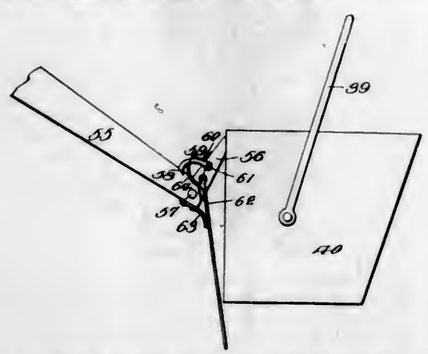
1,105,130. DETACHABLE PACKER-RIM FOR HARROW-DISKS. ROBERT W. GILPIN and JOSEPH B. ROMINE, Codell, Kans. Filed Oct. 8, 1912. Serial No. 724,668. (Cl. 97—64.)

1. A rim for harrow disks formed of tubular sections, one of the sections being formed with longitudinally and transversely disposed slits adjacent one of its terminals to produce ears disposed in opposite directions, said ears being bent upon the portions of the section with which they are formed integral, one of the terminals of the other section being provided with a transversely disposed slit and pressed together to form an extension of less width than the section, said extension being disposed between the ears of the other section, and a pivot pin passing through said ears and said extension.



2. A rim for harrow disks formed of tubular sections each of the sections being formed interiorly with a groove, one of the sections being provided with longitudinal and transverse slits adjacent one of its terminals to produce ears which extend in opposite directions, said ears being bent upon the portions of the section with which they are formed integral, one of the terminals of the other section being formed with a transverse slit and pressed together to form an extension of less width than the section, said extension being disposed between the ears of the other section, and a pivot pin passing through said ears and said extension, said extension being provided with a groove which alines with the groove of the sections.

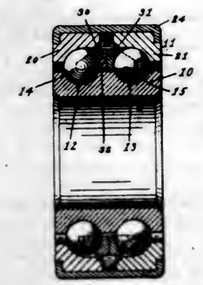
1,105,131. UNLOADING DEVICE. EDWARD C. GLEDHILL, Galion, Ohio, assignor to The Galion Iron Works and Manufacturing Company, Galion, Ohio. Filed Jan. 9, 1913. Serial No. 741,031. (Cl. 214—8.)



1. A cargo handling system including an inclined track, a bucket movable along the track, a chute directed toward the lower portion of the track, an extension swingingly mounted upon one end of the chute, a spring pressed pawl carried by the extension and engaging the chute to normally hold the extension in position to prevent the passage of material through the chute, a swinging member mounted upon the extension and projecting into the path of the bucket, and a pawl engaging finger carried by said member and arranged to release the pawl when said member is engaged by the bucket.

2. A cargo handling system including an inclined track, a bucket movable along the track, a chute directed toward the lower portion of the track, an extension swingingly mounted upon one end of the chute, a spring pressed pawl carried by the extension and engaging the chute to normally hold the extension in position to prevent the passage of material through the chute, a swinging member mounted upon the extension and projecting into the path of the bucket, and a pawl engaging finger carried by said member and arranged to release the pawl when said member is engaged by the bucket, said chute extension, upon release, projecting in the path of the bucket upon its return, whereby the bucket raises the extension to close the chute.

1,105,132. ANTIFRICTION-BEARING. DAVID F. GRAHAM, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Jan. 10, 1910. Serial No. 537,169. (Cl. 64—59.)



1. In an antifriction bearing embodying two rows of antifriction-members, a separator comprising independently movable sections of generally triangular cross-section, the relatively broad inner faces of the said sections abutting, and the said sections having pockets receiving said antifriction-members of the respective said rows; substantially as described.

2. In an antifriction bearing, a race-member having two races and a retaining wall coöperating with each of the same, a row of antifriction members in each of said races and coöperating with one of said retaining walls, and a separator comprising independently movable sections each of which has a retaining wall which coöperates with one of the first mentioned retaining walls and lies a distance from the same less than the diameter of the retained antifriction member, the bearing point of the antifriction member upon its race being upon one side of the center of said antifriction member and the line determined by the edges of said coöperating retaining walls being upon the opposite side of said center, said separator sections also having abutting bearing-faces, whereby said separator sections hold each other against lateral displacement and accidental displacement of the antifriction members is prevented; substantially as described.

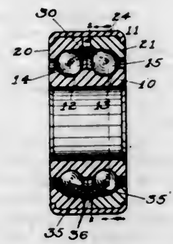
3. A separator for antifriction bearings, said separator comprising independently movable sections each of which is substantially triangular in cross-section and has pockets for antifriction-members, the relatively broad faces of said sections abutting; substantially as described.

4. In an antifriction bearing, the combination with an inner and an outer bearing-member, each provided with a pair of raceways having opposed bearing-faces, and two rows of anti-friction members disposed in said raceways and in rolling contact with said opposed faces respectively, for holding said bearing-members against radial and longitudinal movement relative to each other, of a separator-section carried by each row of anti-friction members, both of said separator-sections being adapted for mutual guidance and loosely supporting each other in their movements with their respective anti-friction members.

5. In an anti-friction bearing, the combination with an inner and an outer bearing-member, each provided with a pair of raceways, having opposed bearing-faces, and two rows of anti-friction members disposed in said raceways and in rolling contact with said opposed faces respectively, for holding said bearing-members against radial and longitudinal movement relative to each other, of a unitary separator-section carried by each row of anti-friction members, both of said separator-sections being adapted for mutual guidance and loosely supporting each other in their movements with their respective anti-friction members.

[Claims 6 and 7 not printed in the Gazette.]

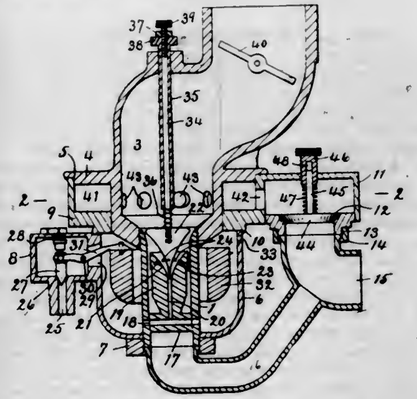
1,105,133. ANTIFRICTION-BEARING. DAVID F. GRAHAM, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Jan. 10, 1911. Serial No. 601,852. (Cl. 64—59.)



1. The combination with a supporting member having a pair of separated raceways, an annulus having a pair of raceways coöperative with those of the supporting member, and a pair of ball-sets in the raceways in the supporting member and annulus, respectively, of a pair of flared separators for said ball-sets, respectively, and having at their adjacent faces flanges contacting with each other for guiding both separators for independent free travel with their ball-sets, respectively.

2. The combination with a supporting member having a pair of separated raceways, an annulus having a pair of raceways coöperative with those of the supporting member, and a pair of ball-sets in the raceways in the supporting member and annulus, respectively, of a pair of separators coöperative with said ball-sets, respectively, each separator having a ball-engaging member disposed angularly relatively to the axis of its travel, and contacting with each other for guiding each other for independent travel relatively to each other.

1,105,134. CARBURETER. ENGELBERT HANEMANN, Holyoke, Mass. Filed Nov. 12, 1913. Serial No. 800,511. (Cl. 48—155.2.)



1. Air and fuel supply means, for a carbureter, comprising an air tube and a fuel nozzle therein, said nozzle being provided with a valve-seat and having a series of air passages opening into said seat from said tube, and an inverted concave conical valve for said seat.

2. Air and fuel supply means, for a carbureter, comprising an air tube and a fuel nozzle therein, said nozzle being provided with a valve-seat and having a series of tangential air passages opening into said seat from the outside of said nozzle, and an inverted concave conical valve for said seat.

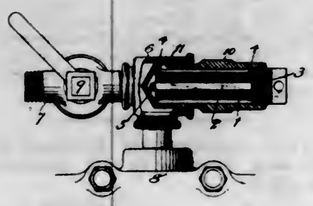
3. Air and fuel supply means, for a carbureter, comprising an air tube and a fuel nozzle therein, said nozzle being provided with a valve-seat and having a series of tangential air passages opening into said seat from said tube, said passages extending upwardly and inwardly, and an inverted concave conical valve for said seat.

4. Air and fuel supply means, for a carbureter, comprising an air tube and a shouldered fuel nozzle within such tube, said nozzle being provided with a valve-seat and having a series of tangential air passages opening at one end beneath the shoulder on said nozzle and at the other end into said valve-seat, and an inverted concave conical valve for said seat.

5. In a carbureter, an air tube, a mixing-chamber directly mounted on and attached to the upper terminal of said tube, said mixing-chamber having an exterior flange, a float-chamber supported from the bottom part of said tube, an annular member, comprising a bottom and sides, surrounding and fitting said mixing-chamber below said flange and forming with said flange an air chamber, said annular member being mounted directly on said float-chamber and being provided with an intake chamber which opens into said air chamber, the latter in turn opening into said mixing chamber, a valve-seat in said intake chamber, and a valve for such seat.

[Claims 6 to 11 not printed in the Gazette.]

1,105,135. OILER. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed May 16, 1910. Serial No. 561,715. (Cl. 184—58.)



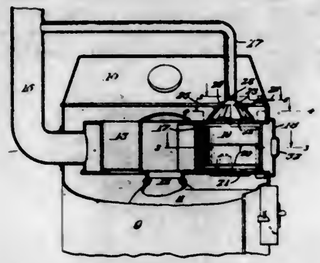
1. A fluid pressure operated engine, a fluid pressure supply passage therefor subject to fluctuations in pressure during the operation of the engine and an oil impregnated material having a substantial portion thereof located with said passage whereby the oil will be extracted little by little from said oil impregnated material by said fluctuations in pressure during the operation of the engine.

2. A fluid pressure operated engine, a fluid pressure supply passage therefor subject to fluctuations in pressure during the operation of the engine and an oil distributing cartridge comprising a porous mass impregnated with oil, having a substantial portion thereof at all times in open communication with said passage whereby the oil will be extracted little by little from said porous mass by said fluctuations in pressure during the operation of the engine.

3. A fluid pressure operated engine, a fluid pressure supply passage therefor subject to fluctuations in pressure during the operation of the engine and an oil distributing cartridge comprising a porous mass impregnated with oil, having a substantial portion thereof located in and at all times in open communication with said passage whereby the oil will be extracted little by little from said porous mass by said fluctuations in pressure during the operation of the engine.

4. A fluid pressure operated engine, a fluid pressure supply passage therefor subject to fluctuations in pressure during the operation of the engine, a chamber in communication with said passage and a lubricant cartridge in the chamber, the cartridge being separated from the walls of the chamber and supported at one end.

1,105,136. FURNACE. ALEXANDER P. HARDER, Rockford, Ill. Filed Apr. 6, 1914. Serial No. 829,953. (Cl. 126—100.)



1. A furnace comprising a hot-air chamber, a combustion-chamber having a flue outlet, a heating-chamber, an oven arranged to be heated by said heating-chamber, having an opening in the lower and upper portions thereof communicating the oven with said hot-air chamber and provided with means above said upper opening having an opening communicating with said upper oven opening and said flue outlet, a movable closure for each of said upper openings, and a connection between said closures for maintaining one open while the other is closed and whereby upon operation of one of the closures, operation of the other will be automatically effected.

2. A hot-air furnace having a hot-air chamber and a combustion-chamber provided with a flue outlet, an oven arranged in the hot-air chamber and having separate passage communications with the hot-air chamber and flue whereby air may pass from the oven both to said hot-air chamber and flue, means for closing said passages, and means for operating said passage closing means so that when one passage is closed the other is automatically opened.

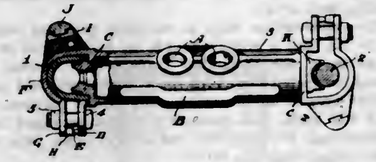
3. A hot-air furnace having a hot-air chamber and a combustion-chamber provided with a flue outlet, an oven arranged in the hot-air chamber and having separate passage communications with the hot-air chamber and flue whereby air may pass from the oven both to said hot-air chamber and flue, means for closing said passages, means for operating said closing means so that when one passage is closed the other is automatically opened, and adjustable means for controlling the volume of air passing from the oven to said passages.

4. In a hot-air furnace, an oven-chamber arranged therein, provided with an opening in its lower portion and a conically shaped hood portion, ports through the sides of said hood portion communicating the oven interior with the hot-air portion of the furnace, a passage leading from the apex of said hood to the exterior of said hot-air portion of the furnace, means for closing said passage, and a conically shaped casing associated with said conical hood so as to close the ports therein, said casing having port openings therethrough and being movable rotatably to move its port openings into and out of communication with the hood ports.

5. In a furnace, the combination with a hot-air chamber, a combustion-chamber and an oven-chamber associated with the former chambers, of separate passages communicating the oven with the exterior and interior of the hot-air chamber whereby air within the oven-chamber may pass both to the exterior and interior of said hot-air chamber, means for closing said passages, and means for operating said closing means for effecting control of said passages simultaneously in predetermined relation.

[Claims 6 to 8 not printed in the Gazette.]

1,105,137. REVERSIBLE STRUT FOR BRAKE-BEAMS. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1911. Serial No. 660,740. (Cl. 188—22.)



1. A one piece strut having tapering grooves for the legs of a compression member, the legs of said compression member being driven into said grooves.

2. A strut having seats for the tension and compression members at its end, the seat for the tension member being located within the seat for the compression member and the seat for the compression member being so shaped as to provide tapering grooves into which the legs of the compression member are wedged.

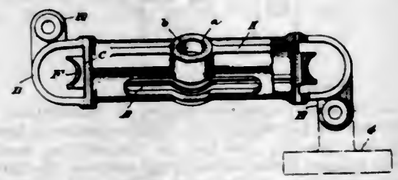
3. A one piece reversible strut provided at each end with means for wedging the compression member in place, and a clamping member for holding the compression member in its wedged position.

4. A one piece reversible strut having walls at each end for embracing the compression member to clamp the same in position, and removable fastening devices at each end for holding said walls in their clamping positions.

5. A strut having third suspension elements at each end.

[Claims 6 to 8 not printed in the Gazette.]

1,105,138. REVERSIBLE STRUT FOR BRAKE-BEAMS. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1911. Serial No. 660,742. (Cl. 188—22.)



1. A reversible strut having seats for the compression and tension members at each end and provided with transversely disposed key openings for the reception of wedge keys whereby the compression member is clamped in position.

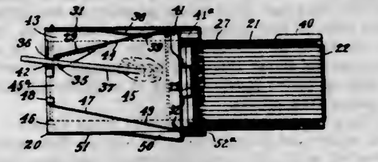
2. A one piece reversible strut having a solid wall at each end forming a seat for the compression member, seats for the tension member located within said solid wall and wedge key openings for receiving wedge keys which cooperate with the legs of the compression member.

3. A reversible strut having solid walls at each end forming seats for the compression member, seats for the tension member located within said walls and wedge key openings traversing the compression member seats.

1,105,139. MATCH-LIGHTER. RICHARD P. HART and THOMAS W. KIRKMAN, New York, N. Y. Filed Feb. 19, 1912. Serial No. 678,709. (Cl. 206—36.)

1. A match-lighter composed of two members mounted for relative movement, one of said members having means for holding a match to be struck, the other member having means for holding a box of matches with its striking-surface in position to draw across the head of the match when relative movement is imparted to said members.

2. A match-lighter composed of a slide adapted to hold a box of matches and provided with an opening on one side to expose the striking-surface of said box, a casing in which said slide is movable, and a match-holder on said casing in operative relation to said opening.



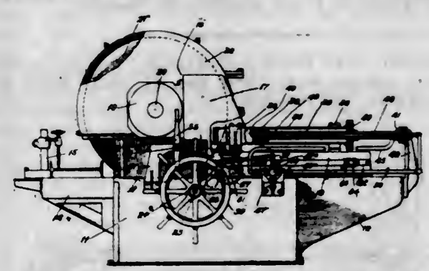
3. A match-lighter composed of a slide open at one end to receive a box of matches and also open on two opposite sides and an intermediate side for manipulation of the box and exposure of its striking-surface, and a casing for said slide having a match-holder in operative relation to the intermediate side opening.

4. A match-lighter composed of a slide open at its front end to receive a box of matches, and also open at one side to expose the striking-surface, a box-slide displacer at the rear end of said slide adapted to enter one end of the box cover, a casing inclosing said slide, and a match-holder on said casing in operative relation to the open side of said slide.

5. A match-lighter comprising a slide adapted to contain matches and also adapted to present a striking-surface, a casing inclosing said slide and open at both ends, and a match-holder on the casing adapted to position a match longitudinally between said casing and slide, in operative relation to said striking-surface.

[Claims 6 to 35 not printed in the Gazette.]

1,105,140. FRICTION CUTTING-MACHINE. EDWARD T. HENDEE, Chicago, Ill. Filed Sept. 18, 1913. Serial No. 790,406. (Cl. 29—69.)



1. In a metal cutting machine, a frame, a high speed motor and direct connected cutting disk guided by and movable on the frame toward and from the work, fluid controlled means for controlling the feed movement of the cutting disk to move the disk toward and away from the work and manual means for also controlling the feed movement of the disk and operable independently of and also in conjunction with the fluid controlled means.

2. In a metal cutting machine, a work support, a high speed motor, and direct connected cutting disk operatively associated with and movable toward and from the work support, a cylinder and a piston therein, one of which is fixed and the other of which is operatively connected to the disk to shift the same toward and from the work support, a four-way valve connected to a source of supplying fluid under pressure and communicating with the cylinder on opposite sides of said piston, means movable with the disk and operative at the limits of its movement to actuate said valve to arrest the disk, manual means to actuate said valve to feed and retract the disk and manual means for shifting the disk, operative independently of or in conjunction with the power means.

3. In a metal cutting machine, a work support, a high speed motor and direct connected cutting disk operatively associated with and movable toward and from the work support, power feed mechanism for the disk comprising a

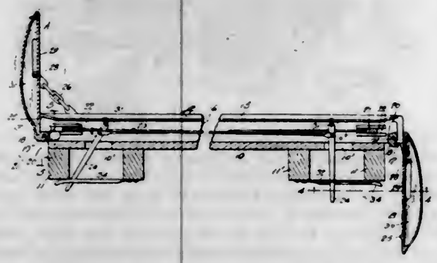
cylinder operatively geared to said disk, a fixed piston therein, a four-way valve connected to a source of supplying fluid under pressure, and connected to the cylinder on opposite sides of said piston, manual means acting on the valve to admit fluid under pressure to the cylinder at either side of said piston, means movable with the disk and operative at the limits of its movement to actuate said valve to arrest the disk, and manual feed means for the disk operative independently of or in conjunction with the power feed means.

4. In a metal cutting machine, a work support, a high speed motor and direct connected cutting disk operatively associated with and movable toward and from the work support, power feed mechanism for the disk comprising a cylinder operatively geared to said disk, a fixed piston therein, a four-way valve connected to a source supplying fluid under pressure and connected to the cylinder on opposite sides of said piston, an actuating lever for said valve, a hand lever operatively connected thereto to open the valve, tripping means movable with the cutting disk and adapted to engage said valve lever at each limit of movement of the disk to close the valve, and hand-feed means for the disk adapted to be operated independently of or in conjunction with the power feed means.

5. In a metal cutting machine, a work support, a carriage movable toward and from the work support, a high speed friction disk and direct connected motor carried by said carriage in operative relation to said work support, a cylinder fixed to and also carried by the carriage, a piston therein, a fixed hollow piston rod fixed to the piston and communicating with the cylinder at one side of the piston, a pipe extending through the hollow piston rod and communicating with the cylinder on the other side of said piston, a four-way valve connected to said pipe and hollow piston rod and to a source supplying fluid under pressure, means for actuating said valve, and manual means to independently feed the carriage toward and from the work.

[Claims 6 to 11 not printed in the Gazette.]

1,105,141. CAR BUNK AND STAKE. WILLARD HOUGHTON, Seattle, Wash. Filed Dec. 11, 1913. Serial No. 805,911. (Cl. 105—173.)



1. In apparatus of the class described, the combination with a car bunk, a stake, a supporting lever therefor, a fulcrum support for the lever and secured to the bunk, and a block movable longitudinally of the bunk for selectively engaging or disengaging the lever to render the same operative or inoperative to support the stake.

2. In apparatus of the class described, a bunk, a stake, a lever provided with a groove to receive the lower end of the stake, a block movable in guideways provided in the bunk for releasably engaging with said lever to hold the same in stake-supporting position.

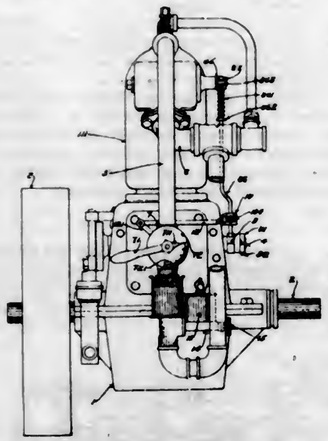
3. In apparatus of the class described, a car bunk, a stake therefor, means engageable with the lower end of said stake for supporting the latter, and flexible connections between the bunk and the stake to prevent the outward tilting of the same with respect to the bunk, said connections being attached to the stake so as to afford limited vertical movements of the stake relative to said connections.

4. The combination with a car-bunk provided with a recess in its end, a stake adapted to be received in the bunk recess, a bar extending transversely through the stake and connected therewith for a limited vertical movement with respect to the stake, flexible connections between said bar and the bunk, and releasable means for supporting said stake.

5. The combination with a car-bunk provided with a recess in its end, a stake adapted to be received in the bunk recess, a bar extending transversely through the stake and connected therewith for a limited vertical movement with respect to the stake, connections between said bar and the bunk, and releasable means arranged to be controlled from the opposite end of the bunk from said stake for supporting the latter.

[Claims 6 and 7 not printed in the Gazette.]

1,105,142. INTERNAL-COMBUSTION ENGINE. CHARLES J. JAGER, Boston, Mass., assignor, by mesne assignments, to Jager Engine Company, Taunton, Mass., a Corporation of Massachusetts. Filed Oct. 17, 1904. Serial No. 228,707. (Cl. 123—108.)



In an internal combustion engine, in combination, the throttle for the fuel supply, the electric sparker or igniter having the operating cam and the transmitting member which is engaged and actuated by the said cam, the igniter eccentric by which the position of the said member is adjusted tangentially with relation to the path of the cam, and a connection from the said throttle to the said igniter eccentric whereby the fuel supply and timing of the sparking are controlled in unison.

1,105,143. CAN CONSTRUCTION. HARRY T. JOHNSON, New York, N. Y.; Nettie F. Johnson administratrix of said Harry T. Johnson, deceased. Filed May 29, 1912. Serial No. 700,365. (Cl. 220—79.)

1. A receptacle or inclosure having an end provided with an upturned slightly flaring rim fitted into the body and having indentations at intervals along the meeting edges of the body and rim to afford openings for the entrance of sealing material into the space between the body and rim.

2. A sheet metal can or inclosure provided with an end having an upturned rim fitted into the body and having indentations at intervals along the meeting edges of the body and rim, said rim being held in place by solder in said indentations.

3. A sheet metal can or inclosure having an end provided with an upturned slightly flaring rim fitting into the body, said upturned rim being indented at intervals to permit the entrance of solder into the space between the upturned portion of the rim and the inner wall of the body, as and for the purpose described.

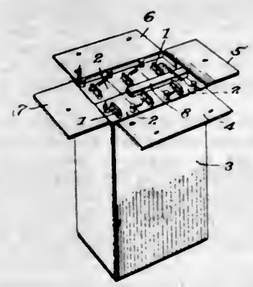
4. A sheet metal can having a body and end formed at their meeting edges to provide a solder holding space located beneath the meeting edges and between the body and the rim of the end, said rim being cut away at intervals and being held in place by solder in the cuts and between the rim and body.



5. A sheet metal receptacle having an end provided with an upturned edge fitted into the body, said edge being provided with cuts and held in place by solder in said cuts.

[Claims 6 and 7 not printed in the Gazette.]

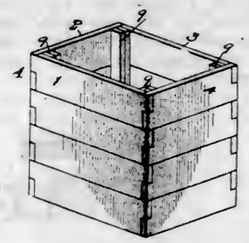
1,105,144. DRY-BATTERY CONTAINER. HARRY T. JOHNSON, New York, N. Y.; Nettie F. Johnson administratrix of said Harry T. Johnson, deceased. Filed July 18, 1912. Serial No. 710,173. (Cl. 204—53.)



1. In a device of the character described, the combination of a plurality of paper containers adapted to hold dry battery cells and arranged in pairs, a paper carton in which said containers are located and fastening means spanning the juncture between the pairs of said containers, said carton having a flap cover secured to said fastening means and provided with openings through which the terminal wires from the batteries pass.

2. In a device of the character described, the combination of a plurality of paper containers adapted to hold dry battery cells, a paper carton in which said containers are located, said carton being provided with overlapping flaps to close the opening thereof and a fastening strip engaging a portion only of the top of each container to secure the same in said carton, some of said flaps being provided with openings through which the terminal wires from the batteries pass and fastening screws securing said flaps to said fastening strip.

1,105,145. METHOD OF SHORING EXCAVATIONS. JOHN J. KENNEDY, New York, N. Y. Filed Jan. 7, 1913. Serial No. 740,701. (Cl. 61—3.)



1. A method of shoring excavations as made, involving the following cycle of operations: first, placing a set of planks having notched ends opposite each other near the top of the excavation; second, placing another set of planks, having similarly notched ends, opposite each other with their ends under the ends of the first mentioned set; third, placing supports under the second set of planks; fourth, removing the earth from under the first set of planks; fifth, placing a set of planks like the first set under the first set, and sixth, withdrawing the supports and placing them under the last set.

2. A method of shoring excavations as made, involving the following cycle of operations: first, placing a set of planks having notched ends opposite each other near the top of the excavation; second, placing another set of planks, having similarly notched ends, opposite each other with their ends under the ends of the first mentioned set; third, placing wedges under the second set of planks; fourth, removing the earth from under the first set of planks; fifth, placing a set of planks like the first set under the first set, and sixth, withdrawing the wedges and placing them under the last set.

3. A method of shoring excavations as made, involving the following cycle of operations: first, placing a set of planks having notched ends, opposite each other near the top of the excavation; second, placing another set of planks, having similarly notched ends, opposite each other with their ends under the ends of the first mentioned set, and thereafter continuously supporting all the planks by alternately placing temporary supports under certain of the planks.

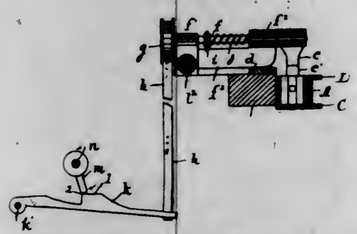
4. A method of shoring excavations as made, involving the following cycle of operations: first, placing a set of planks having notched ends, opposite each other near the top of the excavation; second, placing another set of planks, having similarly notched ends, opposite each other with their ends under the ends of the first mentioned set, and thereafter continuously supporting all the planks by alternately placing a pair of temporary supports under opposite planks.

1,105,146. SHUTTLE-ADJUSTING MECHANISM FOR WEFT-CHANGING LOOMS. CHARLIE G. LAVIGNE, Brunswick, Me., assignor, by direct and mesne assignments, to The Stafford Company, Readville, Mass., a Corporation of New Jersey. Filed Mar. 1, 1906. Serial No. 303,579. Renewed July 10, 1913. Serial No. 778,417. (Cl. 139—85.)

1. In a weft-replenishing loom, in combination, a shuttle-box, a shuttle-positioner, a change-shaft, and means through which the said change-shaft operates the said shuttle-positioner to properly locate the shuttle in the shuttle-box.

2. In a weft-replenishing loom, in combination, a shuttle-box, a rocker having a shuttle-positioning arm, a change-shaft, and means through which the said change-shaft operates the said rocker and its arm to properly position the shuttle in the shuttle-box.

3. In a weft-replenishing loom, in combination, a shuttle-box, a rocker, a shuttle-positioning arm carried by the said rocker, a spring in connection with the said rocker and arm operating to keep said arm normally retracted from the path of the shuttle in entering and leaving the shuttle-box, a change-shaft and actuating means for the said rocker and arm operatively connected with the said change-shaft whereby the arm is moved into the said path and made to move the shuttle, if misplaced, into the desired position in the shuttle-box.

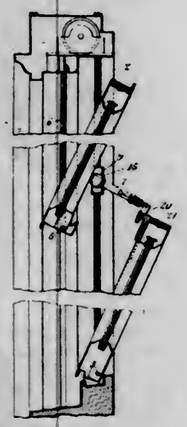


4. In a weft changing loom, the combination with the shuttle box of a shaft journaled above the shuttle, an arm on said shaft adapted to be rotated against the shuttle but normally out of the path of the shuttle, a pulley on said shaft and a strap on said pulley, means for intermittently exerting a pull on said strap, a spring for returning said shaft to and a stop for retaining it in its normal position.

5. In a weft changing loom the combination with the shuttle box of a shaft journaled adjacent to and above the shuttle, an arm on said shaft adapted to be rotated against the shuttle, a pulley on said shaft and a strap on said pulley, a lever to which said strap is secured, a cam for actuating said lever and an intermittently operating shaft to which said cam is secured.

[Claims 6 to 8 not printed in the Gazette.]

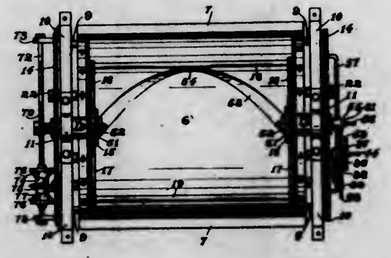
1,105,147. SASH-GUIDE. ELOF R. LEONARD, Woodcliff, N. J. Filed June 12, 1913. Serial No. 773,162. (Cl. 20—43.)



1. The combination, with a frame of a pair of counterbalanced, pivoted sashes, an extensible guide slidably connected at one end to said frame and pivotally connected at the other end to the lower sash, and carrying an antifriction upper-sash guide element.

2. The combination, with a frame of a pair of counterbalanced, pivoted sashes, a guide slidably connected at one end to said frame and pivotally connected at the other end to the lower sash, and carrying an antifriction upper-sash guide element.

1,105,148. DOUGH MIXING AND KNEADING APPARATUS. PHILIPP LINK, Newark, N. J. Filed Dec. 19, 1912. Serial No. 737,586. (Cl. 107—40.)



1. In a dough-mixing apparatus, a main shell or casing, a rotary mixing and kneading element within said casing, and an independently operating dough-holder within said casing adapted to be brought intermittently into scraping relation with a portion of said mixing and kneading element.

2. In a dough-mixing apparatus, a main shell or casing, a rotary mixing and kneading element within said casing, comprising side-arms extending in opposite directions from the points of pivotal support of said mixing and kneading element, longitudinally extending bars between and connected with said side-arms, and an independently operating dough-holder within said casing adapted to be brought intermittently into scraping relation with one of said longitudinally extending bars of said mixing and kneading element.

3. In a dough-mixing apparatus, a main shell or casing, a rotary mixing and kneading element within said casing, comprising side-arms extending in opposite directions from the points of pivotal support of said mixing and kneading element, longitudinally extending bars between and connected with said side-arms, and an independently operating dough-holder within said casing consisting of a pair of curved members meeting in a point adapted to be brought intermittently into scraping relation with one of said longitudinally extending bars of said mixing and kneading element.

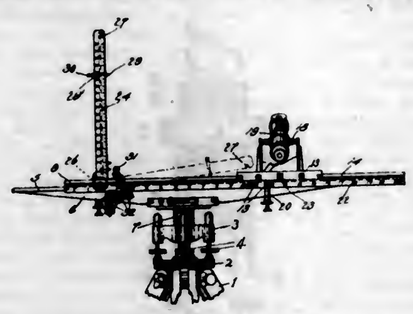
4. In a dough mixing apparatus, a main shell or casing, a rotary frame-like mixing and kneading element within said casing, and an oscillatory dough-holder arranged within said frame-like mixing and kneading element having a movement independent of the movement of said mixing and kneading element, said dough-holder consisting of curved members meeting in a point adapted to be brought intermittently into scraping relation with a portion of said mixing and kneading element.

5. In a dough-mixing apparatus, the combination with a pair of standards having bearing-portions, a short spindle mounted in each bearing-portion, a main shell or casing mounted upon said spindles, each spindle having its inner end-portion extending into the interior of said shell or casing, a rotary mixing and kneading element within said casing and mounted upon said spindles, means for rotating said spindles and said mixing and kneading element, an oscillatory dough-holder in said shell or casing, and means connected with said dough-holder for oscillating the same.

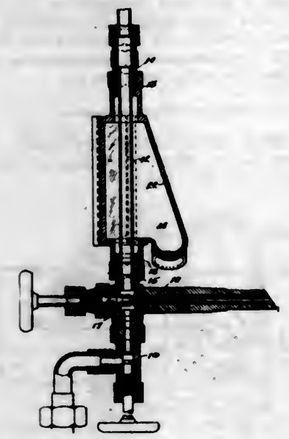
[Claims 6 to 13 not printed in the Gazette.]

1,105,149. TREE-MEASURING INSTRUMENT. CHARLES A. LYFORD and EVERT L. KINMAN, Vancouver, British Columbia, Canada. Filed Aug. 18, 1913. Serial No. 785,238. (Cl. 33—46.)

A tree measuring instrument consisting in a support, a horizontally directed rail mounted on said support, a bar slidable longitudinally on said rail, a block slidable longitudinally of the bar, and a telescope mounted upon said block to be swung in a vertical plane at right angles to the longitudinal axis of said rail.



1,105,150. GAGE-GLASS APPARATUS. DONALD R. MACBAIN, Cleveland, Ohio. Filed Dec. 26, 1912. Serial No. 738,620. (Cl. 73—54.)



1. In combination in gage glass apparatus, a gage glass, a casing surrounding the gage glass and provided with a window and a relief opening leading from one end of the casing, the cross sectional area of the casing increasing from the end remote from the relief opening to the end having said opening.

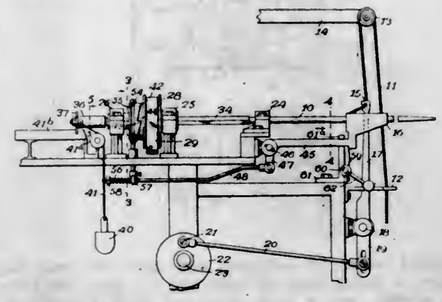
2. In combination in gage glass apparatus, a gage glass, a casing surrounding the gage glass and provided with a window and a relief opening leading from the lower end of the casing, the rear wall of the casing extending downward and inclined to the rear providing an enlargement at the lower end of the casing.

3. In combination in gage glass apparatus, a gage glass, a casing surrounding the gage glass and provided with a window and with a longitudinally inclined rear wall lying opposite the gage glass, there being a relief opening leading from the end of the casing having the larger cross sectional area.

4. In combination in gage glass apparatus, a gage glass, a casing surrounding the gage glass and provided with a window, the said casing having its wall behind the gage glass bulged out from a pocket extending longitudinally of the casing from the upper to the lower portion thereof and providing a relief area, and a vertical pipe of relatively large cross sectional area leading into the lower portion of said relief area, and in approximate alinement with the pocket the rear wall of the relief pocket lying farther from the gage glass than the inner surface of the said window from said gage glass.

5. In combination in gage glass apparatus, a gage glass, a casing surrounding the gage glass and provided with a window, and with a tapering relief pocket having an inclined wall back of the gage glass, and a relief pipe leading from the larger portion of the pocket.

1,105,151. COP-WINDER. JAMES F. MACWILLIAM, Worcester, Mass. Filed June 25, 1913. Serial No. 775,644. (Cl. 242—34.)



1. A cop winder having in combination a vertically movable open-sided cop former, a spindle rotatable therein, driving means for said spindle, and connections from said former to said driving means whereby downward movement of the former from operative position will disconnect the spindle from the driving means.

2. A cop winder having in combination an open-sided movable cop former, a longitudinally movable spindle rotatable therein, driving means for said spindle, connections from said former to said driving means, whereby movement of the former will disconnect the driving means from the spindle, and means to automatically return said spindle to initial longitudinal position.

3. In a cop winder, a movable cop former, a rotatable spindle, driving means therefor comprising a pulley carrying one member of a jaw clutch and a second clutch member longitudinally movable relative to said pulley, and yielding connections from said former to said second member for yieldingly engaging said clutch members when the former is moved to operative position.

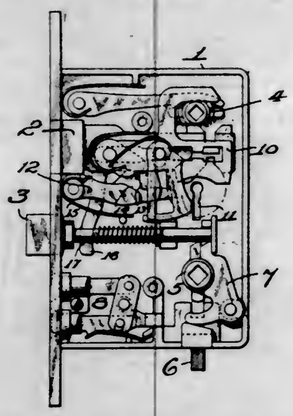
4. In a cop winder, a spindle, driving mechanism therefor, a movable cop former, means to maintain said former in operative position, and connections through which removal of the former from operative position will disconnect said spindle from said driving means.

5. A cop winder having in combination a spindle, driving means therefor including a clutch member longitudinally movable relative to said spindle, a yoke for moving said clutch member longitudinally, a pivot arm supporting a cop former, and a yielding link connecting said pivoted arm to said yoke, whereby the cop former and the clutch member may be moved simultaneously from operative position.

1,105,152. LOCK AND LATCH. GEORGE N. MASON, Mount Penn, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1914. Serial No. 828,675. (Cl. 70—29.)

In a lock and latch construction, the combination of a casing; a locking bolt; means for retracting said bolt from the inside including a thumb knob and its hub; means including a key acting directly on said bolt, for retracting it from the outside; a lever pivotally mounted in the casing immediately below and in contact with said bolt, the free end of which lever lies within the path of the key bit, and being movable in a downward direction by the action of the key bit and also by the movement of the bolt when it is projected; a spring for keeping the

lever normally in raised position; a second lever adapted to be actuated by said pivoted lever when said pivoted lever is moved, said second lever being in engagement with the latch bolt for retracting it; a latch bolt; knob



operated means for actuating said latch bolt from the inside; a thumb latch for actuating the latch bolt from the outside, and a latch retracting lever actuated by both the door knob hub and the thumb latch lever, all substantially as and for the purpose described.

1,105,153. SAW-TOOTH. WILLIAM S. MCLEAN, Vancouver, British Columbia, Canada. Filed Dec. 29, 1913. Serial No. 809,243. (Cl. 143—143.)

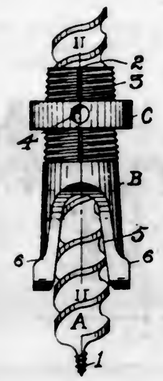


1. An inserted tooth for saws which comprises a body having its side faces substantially parallel, that portion of the tooth which is inserted into the blade having provisions for interlocking with the blade, that portion of the tooth which projects from the blade outwardly being off-set to afford the required set, said off-set being parallel to the plane of the blade in its length, and means providing clearance in the width of the bit from the cutting edge.

2. An inserted tooth for saws which is substantially parallel in width and thickness, that portion of the tooth which is insertible in the blade having provision for interlocking with the blade, that portion of the tooth which projects from the blade being off-set to afford the required set, said off-set being parallel to the plane of the blade in its length and inclined backwardly thereto in its width to afford clearance from the cutting edge.

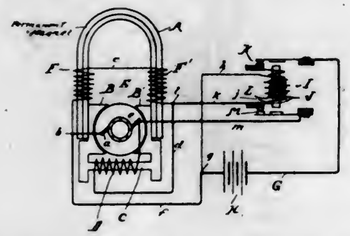
3. An inserted tooth for saws comprising a body of substantially uniform width and thickness throughout its length, that portion of the body which is adapted for insertion into the saw blade, having provision for interlocking with the saw blade, that portion of the body which extends from the saw blade outwardly being twisted and off-set adjacent to the saw blade, whereby the front cutting edge of the tooth will lie to one side of the plane of the blade and substantially parallel thereto, while the rear edges of the body of the tooth will extend parallelly in the plane of the blade, to thereby cause that portion of the side faces of the tooth body which lie beyond the edge of the saw blade to lie in planes extending at an angle to the saw tooth in the width but extending in the same direction as the plane of the saw blade in the length.

1,105,154. BIT-GAGE. ROBERT S. MCMILLEN, Pittsburgh, Pa. Filed July 6, 1912. Serial No. 708,049. (Cl. 145—128.)



A bit-gage comprising a collar adapted to encircle the bit and having integral, depending legs adapted to encounter the material being bored, and spaced sufficiently to allow escape of the chips therebetween, the upper portion of said collar being tapered and threaded exteriorly and split longitudinally, and a clamping-nut adapteted to travel on said threaded portion and compress said split portion to clamp the collar upon the bit.

1,105,155. SELF-REGULATING DYNAMO. THEODOR M. MUELLER, Detroit, Mich. Filed May 15, 1913. Serial No. 767,779. (Cl. 171—227.)



1. The combination of a dynamo constructed to initially operate as a shunt-wound machine composed of a field magnet, shunt windings, means for short circuiting a material part of the magnetic lines of force of the field magnet, electrical means opposing the passing of the magnetic lines of force through said short circuiting means, and an open work-circuit, means for automatically closing the work-circuit and placing said electrical means in the work-circuit to change the dynamo to a compound wound machine when a predetermined voltage is obtained, and means for automatically short circuiting said electrical means and changing said dynamo to a shunt-wound machine when the current production exceeds a predetermined limit.

2. The combination of a dynamo constructed to initially operate as a shunt-wound machine composed of a field magnet, shunt windings, means for short circuiting a material part of the magnetic lines of force of the field magnet, electrical means opposing the passing of the magnetic lines of force through said short circuiting means, and an open work-circuit, means for automatically closing the work-circuit and placing said electrical means in the work-circuit to change the dynamo to a compound wound machine when a predetermined voltage is obtained, and means for automatically short circuiting said electrical means and changing said dynamo to a shunt-wound machine when the current production exceeds a predetermined

limit and for instantaneously reëstablishing said electrical means in the work-circuit upon the falling of the current production below said predetermined limit.

3. The combination of a dynamo composed of a field magnet, shunt windings, a connection between the poles of the field magnet for short circuiting a material part of the magnetic lines of force of the field magnet, a coil upon said connection initially in series with the shunt windings whereby said dynamo operates as a shunt machine, said coil when energized generating magnetic lines of force opposing the short circuiting of the magnetic lines of force of the field magnet through said connection and a normally open work-circuit, means automatically operating when a predetermined voltage is obtained for closing said work-circuit and placing said coil in the work-circuit to change said dynamo to a compound wound machine when a predetermined voltage is obtained, and means for automatically short circuiting said coil and changing said dynamo to a shunt-wound machine when the current production exceeds a predetermined limit, and for reëstablishing said coil in the work-circuit upon the falling of the current production below said predetermined limit.

4. The combination of a dynamo constructed to initially operate as a shunt-wound machine, means for automatically changing said dynamo to a compound wound machine when a predetermined voltage is reached, means for changing said dynamo to a shunt-wound machine when the current production exceeds a predetermined limit and for instantaneously reëstablishing said dynamo as a compound wound machine upon the falling of the current production below said predetermined limit.

1,105,156. FOLDING CRIB AND PLAY-PEN. JAMES EDWIN OLIPHANT, Cleveland, Ohio. Filed Jan. 31, 1914. Serial No. 815,755. (Cl. 5—58.)



1. A folding crib having corner posts, and side and end bars, each end bar having a pivotal connection at one end with a post and a detachable connection at the other end with another post, said pivotal connection including means to lock the bar in position when the crib is set up.

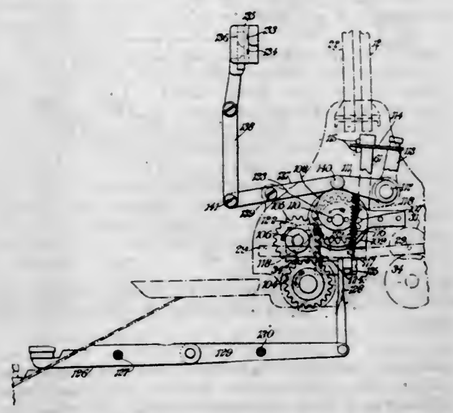
2. A folding crib having corner posts, spacing side and end bars extending between the posts, and foldable end pieces, each end bar being pivotally connected to a post at one end and detachably connected to another post at the other end, and a foldable bottom attached to the side and end pieces.

3. A folding crib having corner posts and side and end bars therebetween, each post having a head with a mortise and a pivoted cap thereon with a corresponding mortise, and each end bar having a tenon at each end adapted to fit in said mortises ad disengageable from the mortise in the head, at one end, to permit the bar to be swung to parallelism with a side bar.

4. A folding crib having corner posts and side and end bars therebetween, each post having a head with mortises therein, and a cap pivoted to the head and having a mortise corresponding to one of said mortises, each side bar having at each end a tenon fitting in one of the mortises in each head, and each end bar having at each end a tenon detachably fitting in the mortises in the head and the cap.

5. A folding crib having corner posts provided at the heads thereof with vertical mortises, side and end bars having vertical tenons fitting in said mortises, the tenons at the ends of one set of bars being removable from the mortises to permit them to be folded parallel to the other set of bars, and flexible side and end pieces attached to said posts and bars.

1,105,157. COMPOSING MECHANISM OF TYPOGRAPHICAL MACHINES. HERBERT PEARCE and JOHN ERNEST BILLINGTON, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Oct. 30, 1911. Serial No. 657,436. (Cl. 199—7.)



1. In composing mechanism for a typographical machine, the combination with a keyboard, a plurality of series of organs actuated thereby, and a power driven shift to connect the key board with any selected series of organs, of a finger key adapted to control the said shift.

2. In composing mechanism for a typographical composing machine, the combination with a keyboard, a plurality of series of organs actuated thereby, and a shift to connect the key board with any selected series of organs, of a finger key adapted to work the said shift and a power driven relay through which the said finger key controls the said shift.

3. In composing mechanism for a typographical composing machine, the combination of keyboard, a plurality of series of organs actuated thereby, a power driven shift to connect the key board with any selected series of organs, and a finger key adapted to work the said shift, the said keyboard comprising half as many character finger keys as there are organs to be actuated by them.

4. In a typographical machine, the combination of a plurality of magazines each provided with a series of escapements, a corresponding plurality of series of actuating devices for the escapements, a keyboard mechanism, a power driven shift to connect the keyboard mechanism with any selected series of actuating devices, and a finger key adapted to control the said shift.

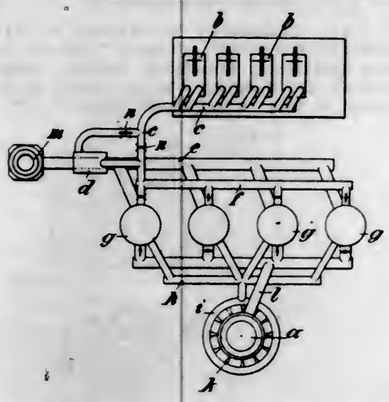
5. In a typographical machine, the combination of a plurality of magazines each provided with a series of escapements, a corresponding plurality of series of actuating devices for the escapements, a single series of operating members, a power driven shift to connect said members with any selected series of actuating devices and a finger key adapted to control said shift.

[Claims 6 to 8 not printed in the Gazette.]

1,105,158. DEVICE FOR UTILIZING THE OFF GASES FROM BLAST-FURNACES FOR PREHEATING THE BLAST. JOSEPH ETIENNE PREGARDIEN, Cologne, Germany, assignor to Fritz Neumann, Aachen, Germany. Original application filed Sept. 10, 1908, Serial No. 452,511. Divided and this application filed Sept. 19, 1912. Serial No. 721,235. (Cl. 75—52.)

In combination with a blast furnace blowers for supplying air to the furnace, preheating devices for the air

connected with the furnace, a heat exchange apparatus built into the discharge from said preheating devices, a conduit connecting the blowers with said heat exchange



apparatus, a by-pass connecting the blowers with the preheating devices directly and valves in said conduit and by-pass.

1,105,159. MAKING PRINTERS' OVERLAYS AND UNDERLAYS. WILLIAM E. RADTKE, Milwaukee, Wis. Filed Nov. 1, 1912. Serial No. 729,085. (Cl. 101—113.)

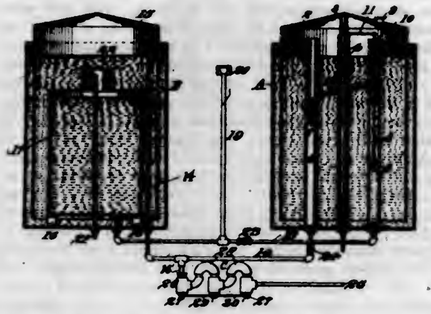
1. The method of producing a printer's overlay and underlay consisting in making an ink impression of a printing-plate upon a printing-press tympan-sheet, then making a similar impression of the same plate upon one side of a sheet of material consisting of a paper base having a soluble in water coating upon both sides thereof, ink of the previous impression being absorbed by the coating of the other side of said sheet; covering the impressions on both sides of the proof with a waterproof powder that combines with the ink of said proof, subjecting the product to a water bath, thereafter sponging away of said coating not protected by the combined ink and waterproof powder, and then drying the product.

2. The method of producing a printer's overlay and underlay consisting in making an ink impression of a printing-plate upon a printing-press tympan-sheet, then making a similar impression of the same plate upon one side of a sheet of material consisting of a paper base having a soluble in water coating upon both sides thereof, ink of the previous impression being absorbed by the coating of the other side of said sheet; covering the impressions on both sides of the proof with with a waterproof powder that combines with the ink of said proof, subjecting the product to a water bath, thereafter sponging away of said coating not protected by the combined ink and waterproof powder, drying the product, thereafter subjecting the same to an oil bath, and finally removing excess of oil therefrom.

1,105,160. CARBURETER. STEPHEN P. SANDERS, Cupertino, Cal. Filed Aug. 12, 1913. Serial No. 784,348. (Cl. 48—166.)

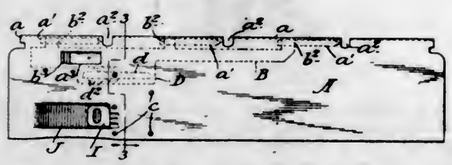
1. A secondary carbureter including in combination with a main carbureter and the discharge pipe thereof, a series of spaced vertical hollow members below said pipe, hollow caps closing the lower ends of said members, a pipe connected to the discharge pipe and extending through one of the endmost of said members and into the hollow cap thereof, connecting pipes between the several hollow caps, elbows leading from the side of one member to the upper end of the next adjacent member, and a service pipe connected to the othr endmost of said members.

2. A secondary sarbureter including in combination with a main carbureter and the discharge pipe thereof, a series of spaced vertical hollow members below said pipe, closures for the lower ends of said hollow members, connecting pipes leading between said hollow members at the lower ends thereof, a pipe connected to the discharge pipe and extending into one of the endmost of said members, connections between the sides of the hollow members and the tops of the next adjacent members, and a service pipe leading from the other endmost member.



3. A secondary carbureter including a combination with a main carbureter and the discharge pipe thereof, a series of spaced vertical hollow members, below said pipe, a connection between the discharge pipe and an endmost of said members to trap any of the hydrocarbon which may enter said discharge pipe, connections between the lower ends of all of said members, other connections between all of said members above the first named connections, and a service pipe connected to the other of the endmost of said members.

1,105,161. LOCKING MECHANISM FOR LOOSE-LEAF BINDERS. JACOB SCHAUB, Logan, Utah, assignor, by mesne assignments, to The Caxton Printers, Limited, Caldwell, Idaho, a Corporation of Idaho. Filed Apr. 28, 1913. Serial No. 763,951. (Cl. 70—47.)



1. In a locking device, the combination of a casing provided adjacent its respective ends with a key seat and with a series of alined wards, a slidable member provided with a longitudinal slot and with traverse notches opening into said slot, said member being positioned for the wards of the casing to occupy the longitudinal slot, a plurality of tumblers positioned within the casing for movement relative to the key seat and to the wards, said tumblers having detents adapted to register with the wards and to enter the notches of the slidable member, and springs acting individually on the tumblers for moving the same to positions across the key seat.

2. In a locking device, a casing provided with a key seat and a series of parallel channels extending in directions crosswise of said key seat, in combination with a slidable member provided with a longitudinal slot and with notches opening into said slot, said slidable member being movable across said longitudinal channels, a plurality of tumblers each slidable in one channel of said casing, and movable across the key seat, said tumblers being provided with detents adapted to enter the notches of the slidable member, and springs acting individually on said tumblers for positioning the end portions thereof across the key seat, said tumblers being normally positioned for the detents thereof to enter the notches of said slidable member.

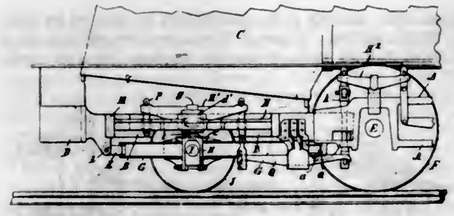
3. In a locking device, the combination of a casing provided with a key seat, a series of alined wards, and a series of channels intersecting with said key seat and extending across the wards, a slidable member provided with a slot and with notches opening into the slot, said member being positioned for the wards to fit into said slot, a series of tumblers slidable within the channels of the casing and movable across the key seat, said tumblers being provided with detents adapted to register with the wards and to enter the notches of the slidable member, and spring cooperating with said tumblers.

4. In a locking device, the combination of a casing provided with a key seat, a slotted and notched member slidable within said casing in a path parallel to the direction of the key seat, a plurality of channeled tumblers slidably positioned within the casing for movement relative to the key seat and slidable member, each tumbler being provided with a fixed detent positioned to enter the slot or one of the notches of said slidable member, and impelling springs each substantially incased within one of said channeled tumblers, said slidable member being projected beyond the casing and accessible for manual manipulation independently of a key which is insertible into the key seat for actuating the tumblers.

5. In a locking device, the combination of a casing provided with a key seat, a slotted and notched member slidable within the casing in a path parallel to the direction of the key seat, a plurality of channeled tumblers slidable within the casing, and across the path of the key seat and the slidable member, each tumbler being provided with a rounded end presented to a key adapted to be inserted into the key seat, each tumbler being provided, also, with a detent in coöperative relation to the slidable member, and springs substantially incased within the tumblers, said slidable member being projected beyond the casing and accessible for manual manipulation independently of a key which is insertible into the key seat for actuating the tumblers.

[Claims 6 to 12 not printed in the Gazette.]

1,105,162. RADIAL TRAILER-TRUCK. VICTOR J. SHEPARD, Lima, Ohio, assignor to Lima Locomotive Corporation, Lima, Ohio, a Corporation of Ohio. Filed May 5, 1914. Serial No. 836,388. (Cl. 105—226.)



1. In a locomotive engine, the combination, with main-frames, and auxiliary frame-bars extended backwardly from such main-frames, of a radial truck-frame pivoted by suitable joint to the main-frame and having journaled-bearings for a single axle and truck-wheels, vertical sockets supported by the auxiliary frame-bars rigidly above the journaled-bearings with a spring-bearing-block movable in each of such sockets and a spring supported by such bearing-block, and the foot of each bearing-block being fitted to rest upon the top of one of the journal bearings, whereby the radial truck may move to various positions beneath the springs, and the vertical movement of the journal-bearings be transmitted to the springs in all the said positions.

2. In a locomotive engine, the combination, with main-frames having rear driving-wheels journaled in bearings therein, of auxiliary frame-bars extended backwardly from such main-frames, a radial truck-frame pivoted by suitable joint to the main-frame and having bearings for a single axle and truck-wheels, each bearing having a horizontal load-plate upon the top, vertical sockets supported by the auxiliary frame-bars rigidly above such load-plates with a spring-bearing-block movable vertically in each of such sockets, and the foot of each bearing-block being fitted to rest upon one of said load-plates.

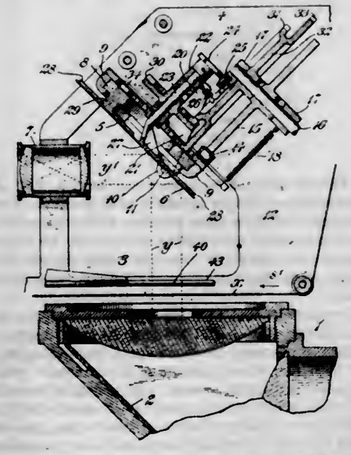
3. In a locomotives engine, the combination, with main-frames having driving-wheels journaled in bearings therein the auxiliary frame-bars extended backwardly from such main frames, of a cross-tie between the main frames in the rear of the driving axle, a radial truck-frame pivoted to such cross-tie and having bearings for an axle outside of the wheels, each bearing carrying a flat load-plate upon the top, rigid yokes upon the outsides of the auxiliary frame-bars having each a vertical socket over such load-plate, a spring-bearing-block movable in each socket and having a concave recess upon its under side, and a bearing-plate fitted movably to the flat load-plate of the journal and having a boss fitted to the concave recess.

4. In a locomotive engine, the combination, with main-frames, and auxiliary frame-bars extended backwardly from such main-frames, of a radial truck-frame pivoted by suitable joint to the main-frame and having journal-bearings for a single axle and truck-wheels, vertical sockets supported by the auxiliary frame-bars rigidly above the journal-bearings, a spring-bearing-block movable vertically in each of such sockets, a spring-guide-block fitted within the spring-bearing-block and having a rocking connection therewith, and a spring fitted to the guide-block to support the load on such bearing-block, the spring-bearing-block having a spherical recess upon its under side, and a bearing-plate fitted movably to the flat load-plate of the journal and having a spherical boss engaged with the spherical recess, as and for the purpose set forth.

5. In a locomotive engine, the combination, with main-frames, and auxiliary frame-bars extended backwardly from such main-frames, of a radial truck-frame pivoted to the main-frame and having journal-bearings for a single axle and truck-wheels, each journal-bearing being provided upon the top with a flat load-plate, brackets projected from the outer side of each of the auxiliary frame-bars with a bridge-bar connecting such brackets, a vertical socket in such bridge-bar over the journal-bearing, a spring-bearing-block movable vertically in such sockets, a spring fitted to such bearing-block, and the lower end of the bearing-block fitted to rest upon the journal-bearing, whereby the bearings are movable laterally to various positions beneath such bearing-blocks and transmit their vertical movement thereto in such positions.

[Claim 6 not printed in the Gazette.]

1,105,163. KINEMATOGRAPHIC APPARATUS. MAGNUS SMITH, New York, N. Y., assignor, by mesne assignments, to Continental Motion Picture Company, Inc. Filed Apr. 6, 1910. Serial No. 553,805. (Cl. 88—16.8.)



1. In a projecting apparatus having means for continuously moving a picture film through a beam of light, a plurality of reflectors adapted to be interchangeably posi-

tioned to move in one direction through said light beam, to receive and reflect the picture rays, means for moving said reflectors and means for rocking each reflector to continuously change its angular position with respect to an adjacent reflector and with respect to the film while entering and passing through the beam of light from said film, to cause the image of one picture to fade into the next.

2. In a projecting apparatus having means for continuously moving a picture film through a beam of light, a plurality of reflectors adapted to be interchangeably positioned to move in one direction through said light beam, to receive and reflect the picture rays, means for moving said reflectors and means for rocking each reflector to cause it to enter said beam of light at an angle and continue to change its angular position with respect to an adjacent reflector and with respect to the film while traveling through said beam of light, to compensate for the movement of said film.

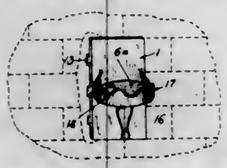
3. In a projecting apparatus having means for moving a picture film through a beam of light, a plurality of reflectors adapted to interchangeably move through said light beam, to receive and reflect the light rays, means for moving said reflectors and means for rocking each reflector to continuously change its angular position with respect to the film while moving through said beam of light.

4. In a projecting apparatus having means for moving a picture film through a beam of light, a plurality of reflectors adapted to interchangeably move through said light beam, to receive and reflect the picture rays, means for moving said reflectors and means for rocking each reflector to continuously change its angular position with respect to an adjacent reflector and with respect to the film while both of said reflectors are passing through the beam of light from said film.

5. In a projecting apparatus having means for moving a picture film through a beam of light, a plurality of reflectors adapted to interchangeably move through said light beam, to receive and reflect the picture rays, means for moving said reflectors and means for rocking each reflector to cause it to enter said beam of light at an angle and continue to change its angular position with respect to an adjacent reflector and with respect to the film while traveling through said beam of light.

[Claims 6 and 7 not printed in the Gazette.]

1,105,164. BATH-ROOM FIXTURE. ELLSWORTH M. STATLER and JAMES A. JOHNSON, Buffalo, N. Y., assignors to William R. Hughes, Pittsburgh, Pa. Filed Oct. 14, 1912. Serial No. 725,596. (Cl. 45—28.)



1. A fixture adapted to form a permanent part of a tile wall, comprising a single integral body formed of vitreous material and having a base member in the form of a thin flat tile arranged to be interlaid with other tiles in cement to form a wall, said tile member being provided with a forwardly projecting fixture member arranged to support an article.

2. A fixture adapted to form a permanent part of a tile wall, comprising a single integral body member formed of a vitreous material and having a base member in the form of thin flat tile arranged to be interlaid with other tiles in cement to form a wall, and a fixture member projecting forwardly from the middle portion of said tile member, said fixture member being smaller than the tile and leaving a portion of its flat front surface exposed on each side of said fixture member and having a horizontal ledge or shelf provided with a depression for receiving and holding an article.

1,105,165. MOTOR-VEHICLE DRIVING MECHANISM. JOHN C. STURGEON, Erie, Pa. Filed Oct. 2, 1913. Serial No. 793,015. (Cl. 121—120.)



1. The combination in a motor vehicle driving gear, of a motor-shaft, a driven shaft, a clutch on the motor-shaft, and a yielding connection between the clutch and driven shaft, substantially as set forth.

2. The combination in the driving-gear of a motor vehicle, of two shafts, clutch members mounted on one of said shafts, and a spring supporting member on the other, and a spring connecting one of said clutch members with said spring supporting member, substantially as set forth.

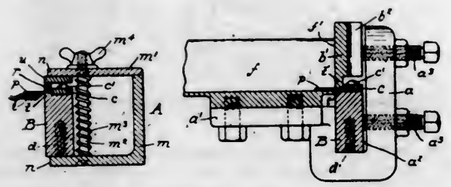
3. The combination in a motor vehicle driving gear, of a motor shaft, a clutch member thereon, a driven shaft in alinement with said motor shaft, and a yielding connection between said clutch and the driven shaft, substantially as set forth.

4. The combination in a motor vehicle driving gear, of a motor shaft, a clutch thereon, a driven shaft in alinement with said motor shaft, a spring support thereon, and a spring connecting one of the clutch members with the spring support on the driven shaft, substantially as set forth.

5. The combination in a motor vehicle driving gear, of a motor shaft, a clutch thereon, a driven shaft in alinement with said motor shaft, a spring support thereon, and a helical spring connected at one end of one of said clutch members, and at the other with the spring support on said driven shaft, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,105,166. MEANS FOR MOUNTING NEEDLES IN TEXTILE COMBS. THOMAS TOWNSEND, Providence, R. I. Filed Nov. 15, 1913. Serial No. 801,124. (Cl. 140—100.)

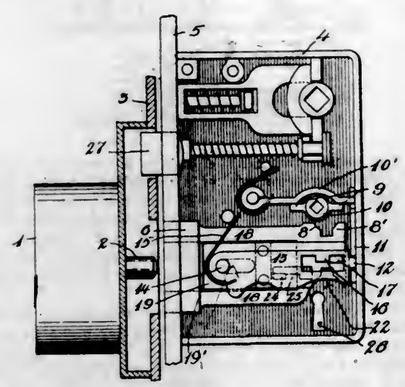


1. A filling-bar of the character described, arranged to be detachably secured to a machine for shaking and segregating a mass of pointed needles or teeth for textile combs, said filling-bar having an edge thereof provided with spaced transverse grooves arranged to receive such needles, a gage strip secured to the said grooved edge of the filling-bar, and a complementary follower member connected to the filling-bar.

2. The combination with one or more brackets arranged to be detachably secured to a machine for segregating a mass of pointed needle-like teeth for use in textile combs, of a filling-bar member or holder removably positioned in said brackets, said bar having its upper face provided with spaced transverse grooves to receive the pointed end portions of such needle-like teeth, a gage strip secured to said grooved face adapted to limit the distance the teeth may be inserted in the bar, a complementary upper bar member having its lower face engaging the said grooved face of the first-named bar member, and manually controlled means for securing the said bar members together as one.

3. The combination of a clamp member having spaced apart upper and lower parallel flanges, one of the flanges being adjustable relatively to the other, a filling-bar member arranged to be positioned in said clamp, an edge of said bar having spaced grooves therein adapted to receive the pointed end portion of short pins or needles, a gage secured to said grooved edge for limiting the position of pins endwise in said grooves, a strip of material adapted to rest flatwise upon the said end portion of pins, a bearing bar engaging the strip throughout its length, and means connected with said clamp arranged to hold said filling-bar, gage, strip and bearing members in position between said flanges.

1,105,167. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 27, 1912. Serial No. 673,872. (Cl. 70—74.)



1. In a lock, the combination of a dead bolt and a secondary bolt, the head of the dead bolt embracing the head of the secondary bolt at the top and both sides thereof, with means for throwing both of said bolts outward and inward together, and means for independently throwing said dead bolt outward and inward, said two means being accessible from opposite sides of the door respectively.

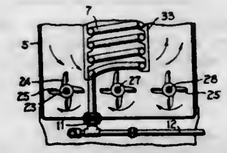
2. In a lock, the combination of a dead bolt and a secondary bolt, the head of the dead bolt embracing the head of the secondary bolt, with means for throwing both of said bolts outward and inward together, and means for independently throwing said dead bolt outward and inward, said two means being accessible from opposite sides of the door respectively.

3. In a lock, the combination of a dead bolt and a secondary bolt, the head of the dead bolt completely surrounding the head of the secondary bolt, with means for throwing both of said bolts outward and inward together, and means for independently throwing said dead bolt outward and inward, said two means being accessible from opposite sides of the door respectively.

4. In a lock, the combination of a dead bolt and a secondary bolt, the head of the dead bolt completely surrounding the head of the secondary bolt, with means for throwing both of said bolts outward and inward together, and means for independently throwing said dead bolt outward and inward, said two means being accessible from opposite sides of the door respectively.

5. The combination of a dead bolt and an auxiliary bolt, the head of the dead bolt embracing the head of the auxiliary bolt, with a key for throwing both of said bolts outward and inward together, and a thumb-turn hub for independently throwing said dead bolt outward and inward, said key and thumb turn-hub being operable from opposite sides of the door respectively.

1,105,168. SYRUP-COOKER. JOHN WERNER, Rochester, N. Y. Filed Dec. 12, 1912. Serial No. 736,444. (Cl. 127—4.)

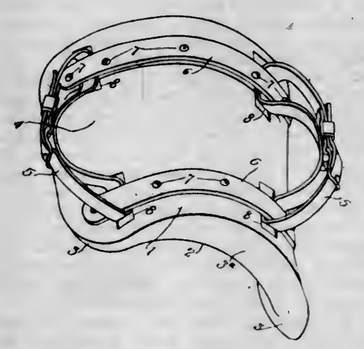


1. A syrup-cooker having, in combination, a syrup-receptacle; heating-coils located in the lower portion of the receptacle and spaced from the bottom and the sides thereof; a series of stirrers located below the heating-coils and close to the bottom of the receptacle, the stirrers having narrow, longitudinal paddles and being rotatably mounted in substantially parallel positions; and means for rotating the stirrers.

2. A syrup-cooker having, in combination, a syrup-receptacle; heating-coils located in the lower portion of the receptacle and spaced from the bottom and the sides thereof, a series of stirrers located below the heating-coils and close to the bottom of the receptacle, the stirrers having narrow, longitudinal paddles and being rotatably mounted in substantially-parallel positions; and means for rotating the stirrers all in the same direction.

3. A syrup-cooker having, in combination, a syrup-receptacle; heating-coils located in the receptacle but spaced from the bottom thereof; a plurality of narrow, elongated stirrers located below the heating-coils and rotatable about substantially-horizontal axes; and means for rotating the stirrers.

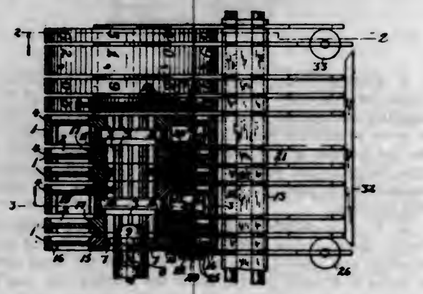
1,105,169. COLLAR-PAD. EARL P. WRIGHT, Marion, Ohio, assignor of one-half to Clark W. Wright, Marion, Ohio. Filed Oct. 23, 1911. Serial No. 656,165. (Cl 54—67.)



As an article of manufacture, a collar pad comprising a single block of wood having a longitudinal groove in the lower portion thereof to receive the upper portion of the neck of the animal, said groove having a rounded base flared upwardly at its ends and having diverging side walls, the lower edge of each side wall being rounded outwardly and curved from end to end, the rounded, curved edges of said side walls merging with the flared ends of said base, said block having a transverse groove in the top thereof to receive the upper portion of the collar, said last-mentioned groove having its lateral edges spaced away from the ends of said block, having its greatest depth at its uppermost portion and tapering gradually outward toward the lateral edges of said block to form a smooth continuous seat for said collar, reinforcing bars extending transversely of said block between said last-mentioned groove and the respective ends of said block, curved to conform to the

contour of the outer surface of said block and rigidly secured thereto, and fastening devices passing about said bars and adapted to secure the pad to said collar.

1,105,170. COMPUTING MECHANISM. WALTER WRIGHT, San Francisco, Cal., assignor, by mesne assignments, to Underwood Computing Machine Company, a Corporation of New York. Filed Sept. 28, 1908. Serial No. 455,226. (Cl. 235—139.)



1. In a computing mechanism, a series of computing wheels, a series of tranafer wheels respectively intermediate between the computing wheels to form a transfer train, a master wheel having a step-by-step motion relatively to the computing wheels, a device for effecting such step-by-step motion, means whereby the computing wheels are successively rotated by said master wheel, and means dependent on the movement of the step-by-step device for disengaging one of the transfer wheels from the corresponding computing wheels to break the train of transfer, substantially as described.

2. In a computing mechanism, a series of computing wheels, a series of tranafer wheels respectively intermediate between the computing wheels, means whereby the computing wheels are successively rotated, and two devices, spaced from each other a distance not less than the width of a plurality of such wheels, for disconnecting the corresponding transfer wheels from their respective computing wheels, whereby transfer is effected only between said points, substantially as described.

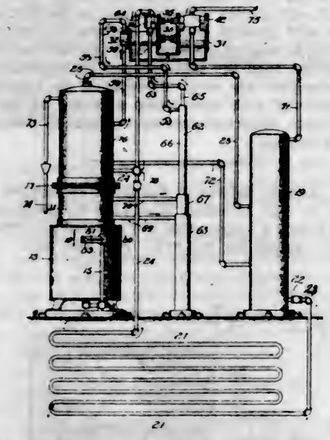
3. In a computing mechanism, a multiple series of computing wheels, a series of transfer wheels respectively intermediate between the computing wheels to form a transfer train, a master wheel having a step-by-step motion relatively to the computing wheels, a device for effecting such step-by-step motion, means whereby the computing wheels are successively rotated by said master wheel, means dependent on the movement of the step-by-step device for disengaging one of the transfer wheels from the corresponding computing wheels to break the train of transfer, and means for locking against rotation, except that caused by the transfer, all wheels except that at the operating point, substantially as described.

4. In a computing mechanism, a series of computing wheels, a series of transfer wheels respectively intermediate between the computing wheels, means whereby the computing wheels are successively rotated, means for disengaging one of the tranafer wheels from the corresponding computing wheels to break the train of transfer, two devices, spaced from each other a distance not less than the width of a plurality of such wheels, for disconnecting the corresponding transfer wheels from their respective computing wheels, whereby transfer is effected only between said points, and means for locking against rotation, except that caused by the transfer, all wheels except that at the operating point, substantially as described.

5. In an apparatus of the character described, a series of computing wheels, a corresponding series of transfer wheels, and means located at a point in the series of wheels for moving a transfer wheel out of transfer engagement with the computing wheel while maintaining the same in rotary engagement therewith, substantially as described.

[Claims 6 to 51 not printed in the Gazette.]

1,105,171. REFRIGERATING APPARATUS. JOHN ZANDER and JOHN LEVEY, Chicago, Ill.; said Levey assignor to said Zander. Filed Apr. 14, 1913. Serial No. 761,021. (Cl. 62—6.)



1. The combination with chambers adapted to contain fluid at different pressures, of a pump for pumping fluid from said low pressure chamber into said high pressure chamber, and vice versa, and means operating when said pump is discharging into either of said chambers to cause the charge next to be pumped to enter the suction end of the pump from the chamber into which the pump is discharging.

2. The combination with chambers adapted to contain fluid at different pressures, of a pump for pumping fluid from said low pressure chamber into said high pressure chamber, and vice versa, and means operating when said pump is discharging into said high pressure chamber to cause fluid from said high-pressure chamber to enter the suction end of the pump, and when said pump is discharging into said low pressure chamber to cause fluid from said low pressure chamber to enter the suction end of the pump.

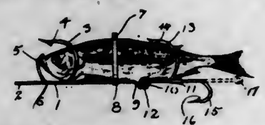
3. The combination with chambers adapted to contain fluid at different pressures, of a pump for pumping fluid from said low pressure chamber into said high pressure chamber, and vice versa, comprising a cylinder, a piston therein, means for actuating said piston, pipes communicating with said chambers, respectively, and opening into one end of said cylinder, check-valves for controlling said pipes, other pipes communicating with said chambers, respectively, and valve means for alternately opening said last referred to pipes to the other end of said cylinder, constructed and arranged to cause the opposite ends of said cylinder to be in communication with one of said chambers during the operation of the pump, in one direction and in communication with the other of said chambers during its operation in the other direction.

4. The combination with chambers adapted to contain fluid at different pressures, of a pump for pumping fluid from said low pressure chamber into said high pressure chamber, and vice versa, comprising a cylinder, a piston in said cylinder, means for operating said piston, and means operating upon the movement of the piston in one direction to admit fluid from one of said chambers into one end of said cylinder and discharge the fluid in the opposite end of said cylinder into said last referred to chamber, and upon the movement of the piston in the opposite direction to discharge the fluid thus introduced into the cylinder, to the other of said chambers and admit fluid from said last referred to chamber into the opposite end of said cylinder.

5. The combination with chambers adapted to contain fluid at different pressures, of a pump for pumping fluid from said low pressure chamber into said high pressure chamber and vice versa, comprising a cylinder, a piston therein, means for actuating said piston, pipes communicating with said chambers, respectively, and opening into one end of said cylinder, inwardly and outwardly opening check-valves for controlling said respective pipes, a valve-chamber in communication with said cylinder containing ports, pipes communicating with said chambers and ports respectively, a valve in said valve chamber for alternately opening said ports to the interior of said chambers and to said cylinder, and means for actuating said valve timed with relation to the movement of said piston for causing said cylinder to be in communication at opposite ends with one of said chambers during the movement of the piston in one direction and with the other of said chambers upon the movement of the piston in the opposite direction.

[Claims 6 to 21 not printed in the Gazette.]

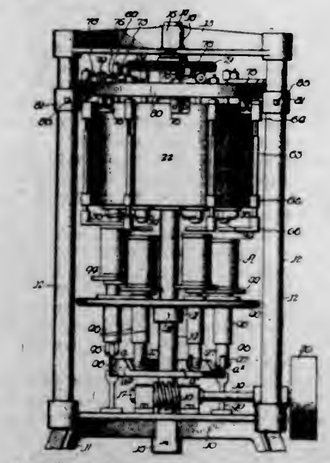
1,105,172. LIVE-BAIT RETAINER. RUDOLPH A. ANSCHUTZ, Spokane, Wash. Filed Sept. 13, 1913. Serial No. 789,610. (Cl. 43—30.)



1. A fish-hook structure comprising in combination, a front portion adapted for connection with a line and provided with a head retaining device for the live bait and an element adapted to be bent about the body of the bait centrally thereof, and a rear portion pivotally connected with the front portion and provided with a tail retaining device and a fish-hook, substantially as described.

2. A live bait cage for minnows comprising in combination, shank portions disposed along the belly of the minnow and pivotally connected with each other, one shank portion having a loop for embracing the minnow near its head and terminating in a hook above its head and provided on its free end with means for attachment to a line, the other portion having a loop embracing the minnow near its tail and terminating in a hook above its tail and the free end of said last named portion terminating in a fish-hook, substantially as described.

1,105,173. CAN-FILLING MACHINE. LEWIS A. BAKER, Elgin, Ill. Filed Jan. 4, 1913. Serial No. 740,151. (Cl. 226—18.)



1. A can filling machine, comprising in combination, a tank provided in its bottom wall with an opening, a measuring chamber in line with said opening, a gravity discharge nipple fixed to the bottom of the tank and extending upwardly through said opening, to which the lower end of the chamber is detachably fixed, a branch passage connected to the nipple below the tank and leading upwardly through the tank bottom and in open communication with th tank, and valves for controlling said nipple and branch passage.

2. A can filling machine comprising, in combination, a tank provided in its bottom wall with an opening, a measuring chamber, a gravity discharge nipple therefor extending through the said opening and screw-threaded to the lower end of the chamber and flanged to bear against the lower side of the tank bottom, screws extending through the flanges and into the tank bottom, an integral hollow branch connected to said nipple below the tank and having an upturned end which extends through the bottom of the tank, and valves for controlling said nipple and branch.

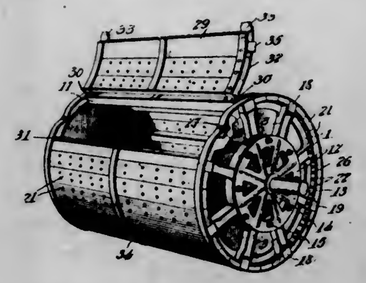
3. The combination with a tank, provided in its bottom with an opening, of a chamber having a screw-thread at its bottom, a screw-threaded, flanged nipple extending through said opening and engaging the screw-thread of the chamber, and a hollow branch connected below said bottom to said nipple and extending through the tank bottom.

4. The combination with the supply tank of a filling machine and a measuring chamber, of a one-piece gravity discharge nipple and a filling branch therefor connected to the tank and to said chamber, a valve at the discharge end of the filling nipple and a valve at the receiving end of the filling branch.

5. The combination with the supply tank of a filling machine and a measuring chamber, of a one-piece gravity discharge nipple and filling branch connected to the tank and chamber, screw-threaded means on the chamber and nipple constructed to fix the chamber to the tank bottom, the filling branch being in open communication with the tank and connected to the nipple below the level of the bottom wall, and valves controlling said nipple and branch.

[Claims 6 to 11 not printed in the Gazette.]

1,105,174. KNOCKDOWN RENEWABLE WASHING-CYLINDER. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed May 28, 1913. Serial No. 770,460. (Cl. 68—18.)



1. A knock-down washing cylinder comprising heads provided with detachable trunnions, said heads being provided with rib sockets, ribs connecting said heads seated in said sockets, bolts extending transversely through said sockets and ribs, staves arranged between said ribs, and hoops surrounding said ribs and staves.

2. A washing cylinder, comprising a head connected together by staves and ribs, said head being provided with radial enlarged portions, a door working between said enlarged portions, hoops surrounding said staves and ribs, and head plates arranged against said head members embedded within said staves and ribs.

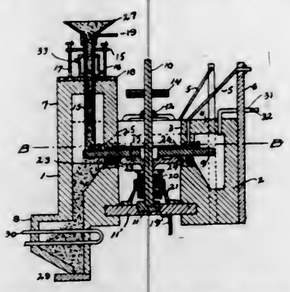
3. A knock-down washing cylinder having head plates provided with rib sockets, ribs arranged in said sockets, bolts for securing said ribs within said sockets, staves provided with shoulders arranged between said heads, said staves and ribs being provided with kerfs, head plates arranged adjacent said heads having their peripheral edges extending into the kerfs of said staves, said head plates being provided with notches, the marginal edges of which extend into the kerfs of said ribs, and hoops surrounding said staves and ribs.

4. A washing cylinder having wooden ribs and staves provided with kerfs, and metal head plates arranged within said kerfs.

5. A knock-down washing cylinder comprising a pair of heads having channel spokes terminating in rib sockets and provided with enlarged portions adjacent the rib sockets, ribs having reduced ends seated in said sockets, staves having reduced ends seated upon the rim of said head, metal head plates arranged within said staves and ribs adjacent the heads of said cylinder and embedded therein, and hoops surrounding said ribs and staves.

[Claims 6 to 8 not printed in the Gazette.]

1,105,175. ROTARY ELECTRIC FURNACE. ARTHUR S. BEMIS, Cleveland, Ohio, assignor to National Carbon Co., Cleveland, Ohio, a Corporation of New Jersey. Filed Jan. 22, 1912. Serial No. 672,618. (Cl. 204—64.)



1. The method of heating material which consist in feeding it into a space whereby it is formed into a pile, passing an electric current through the peak, and then moving it in a direction substantially at right angles to its perpendicular axis.

2. The method of heating granular material which consists in feeding it into a space whereby it is formed into a pile, passing an electric current through the peak of the pile, and then moving it substantially at right-angles to the general direction of current flow.

3. In an electric furnace, furnace walls, a lower electrode, said walls and electrode being relatively rotative about a vertical axis, means for feeding the material onto the electrode and means whereby current is transmitted through the material to the electrode as it emerges from said feeding means.

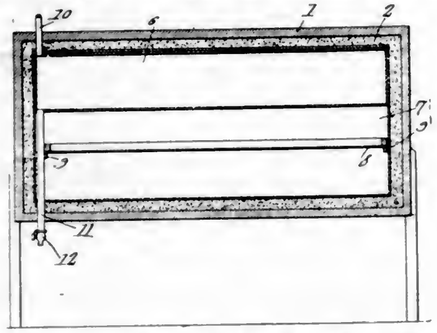
4. In an electric furnace, an electrode rotatable about a vertical axis, means for feeding material thereon, means whereby current is transmitted through the material to said electrode as it emerges from said feeding means, and means for rotating said electrode.

5. In an electric furnace, an electrode rotatable about a vertical axis, a hollow electrode for feeding material thereon, and means for rotating said electrode.

[Claims 6 to 13 not printed in the Gazette.]

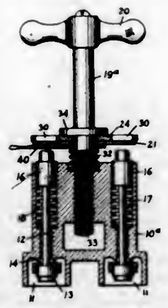
1,105,176. INCUBATOR. GROVER C. BESS, Waukomis, Okla., assignor of one-half to Adnah I. Isbell, Waukomis, Okla. Filed July 25, 1913. Serial No. 781,274. (Cl. 119—38.)

An incubator embodying a case, one side of which has a door extending between the top and bottom of the case, a water tank fitting snugly within the upper portion of the interior of the case, an egg tray supported in the case below the tank, the interior walls of the case being unencumbered above the tray, the top and bottom of the tank having straight upstanding and depending inlet and outlet



tubes, respectively, at one end, the said tubes passing through the top and the bottom of the case, respectively, and a pet cock attached to the lower end of the outlet tube below the bottom of the case.

1,105,177. VALVE. HENRY BLUM, New York, N. Y. Filed July 2, 1913. Serial No. 776,924. (Cl. 137—26.)



1. In a valve structure, the combination of a plurality of bodily-movable valves, a valve-actuating member, and a rotary operating member separate from and having means for moving said valve-actuating member toward and from the valves, said valve-actuating member being also mounted for guided movements relatively to said operating member and the valves so as to actuate said valves selectively.

2. The combination of a valve body, a plurality of parallel plunger valves therein, a valve-actuating member movable toward and from the valves in a direction parallel to their axes, and a rotary member for operating said valve-actuating member, the said valve-actuating member being mounted so as to be shifted transversely of the axes of said valves independently of said rotary operating member and being of such extent as to be capable of displacing one or more of the plunger valves at will.

3. A valve structure comprising a valve body having a plurality of valve chambers and seats, plunger valves cooperating therewith, and a rotary operating shaft mounted in said body and provided with a handle, in combination with a valve-actuating member adapted to be moved longitudinally by said shaft and being pivoted so as to be capable of swinging into positions where it operates one or other of the valves at will.

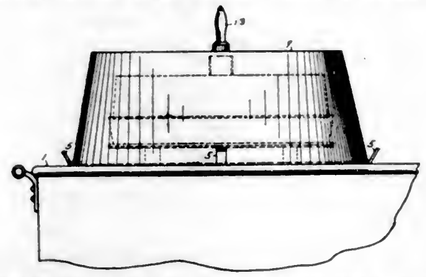
4. In a valve structure, the combination of a plurality of parallel bodily-movable valves, a valve-actuating member, and a rotary operating member axially parallel with said valves and having means for moving the actuating member longitudinally to unseat the same, said actuating member being angularly shiftable about the axis of the operating member for selective actuation of the valve.

5. In a valve structure, the combination of a plurality of plunger valves, an operating shaft, a follower actuated by the shaft, a selective valve-actuating member interposed between said follower and the valves and having an opening receiving the shaft about which it may be rotatably shifted, and a spring for restoring said follower and actuating member, said actuating member being interposed between the spring and follower.

[Claims 6 to 11 not printed in the Gazette.]

1,105,178. BAKING-PAN. DANIEL W. BOGER, Houston, Tex. Filed Oct. 27, 1913. Serial No. 797,464. (Cl. 53—6.)

1. A device of the character described including a supporting platform, a pan mounted thereon, a pan-shaped



covering for the pan, said covering fitting closely on the pan and forming with said pan an inclosed chamber, a hood shaped heat retainer to which said covering is detachably secured and from which it is spaced on all sides, said retainer enveloping said pan and covering and means independent of said pan, pan covering and heat retainer for holding the retainer and covering centered relative to the pan.

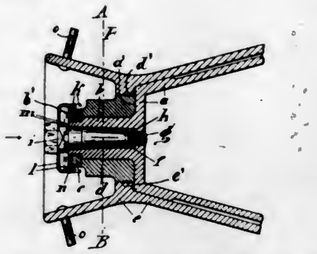
2. A device of the character described, including a circular plate having radiating fingers, whose free ends are upwardly curved, extending therefrom, a supporting platform mounted on said plate and spaced therefrom, a pan mounted on said platform, a covering for the pan, said covering fitting closely on the pan and forming with said pan an inclosed chamber, a hood shaped heat retainer to which said covering is detachably secured, and from which it is spaced, said retainer enveloping said pan and covering and being held centered relative to the pan by means of said fingers.

3. A device of the character described, including a circular plate, smaller in diameter than the burner opening of the stove in connection with which said device is used, supporting fingers radiating from said plate and supporting the plate and having their free ends upwardly curved, a supporting platform mounted on said plate, a pan mounted on said platform, a covering for the pan, said covering forming with said pan, an inclosed chamber, a heat retainer to which said covering is detachably secured and from which it is spaced, said retainer envoloping said pan and covering and directing the flame from the stove burner on all sides of the pan and covering.

1,105,179. VEHICLE-WHEEL. ETTORE BUGATTI, Molsheim, Germany. Filed Mar. 12, 1913. Serial No. 753,775. (Cl. 21—31.)

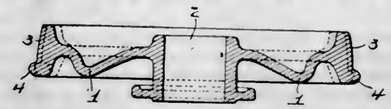
1. In a vehicle-wheel hub, in combination, an outer spoke-supporting hub, an inner hub, a trunnion having radial slots coaxially integral with said inner hub, a sleeve on said trunnion, a screw connection between said sleeve and said outer hub, wedge members radially operable in said trunnion slots, and adjustable means for keeping said wedge members firmly pressed against said sleeve.

2. In a vehicle-wheel hub, in combination, an outer hub, an inner hub, a tubular trunnion extending from said inner hub and having radial slots, a sleeve on said trunnion, a screw connection between said sleeve and said outer hub, means for preventing axial displacement of said sleeve on said trunnion, and means for preventing rotary displacement of said sleeve on said trunnion comprising wedge members operable in said trunnion slots and a conically tapering screw bolt adapted to screw into the inner hub and its taper part coöperating with said wedge members.



3. In a vehicle-wheel hub, in combination, an outer hub, an inner hub, a tubular trunnion to said inner hub having oppositely disposed radial slots, a sleeve on said trunnion, a screw connection between said sleeve and said outer hub for frictionally pressing both said hubs upon one another, means for preventing axial displacement of said sleeve on said trunnion comprising a thread on the reduced free end of said trunnion and a nut fitting this thread, means for preventing rotary displacement of said sleeve on said trunnion, comprising wedge members operable in said trunnion slots and a conically tapering screw bolt, screwing with its inner end into said inner hub and having its other end profiled and its taper part adapted to coöperate with said wedge members, and means for locking said screw bolt and said nut, comprising an axially yieldable cap fitting said profile screw bolt end, a toothed rim at the inner circumference of said cap, a toothed rim at the outer circumference at the outer end of said nut, said two rims adapted to be brought into, and out of, operative engagement with each other by respective axial displacement of said cap, and spring means for ordinarily keeping the said toothed rims in mesh.

1,105,180. METHOD OF MAKING CAR-WHEELS. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Dec. 22, 1913. Serial No. 808,230. (Cl. 29—168.)



1. The process of making a car wheel, consisting in casting a wheel blank of greater diameter than the finished wheel and forging the blank to reduce its diameter.

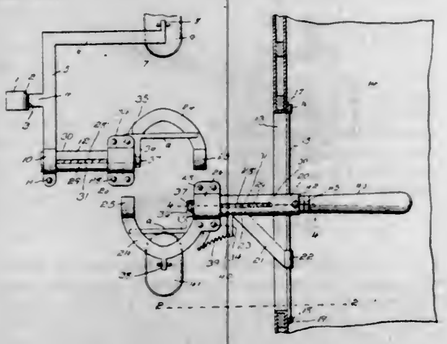
2. The process of making a car wheel consisting in casting a wheel blank of greater diameter than the finished wheel, and subsequently reducing its diameter and increasing the cross sectional area of the rim.

3. The process of making a car wheel consisting in casting a wheel blank of greater diameter than the finished wheel, and with its plate or web distorted, and forging the blank to reduce its diameter, increase the cross sectional area of the rim, and impart final shape to the distorted plate or web.

1,105,181. MAIL DELIVERY AND RECEIVING APPARATUS. JOHN BELL CARTER, Carterville, Ill., assignor of one-half to Amiel Borghi, Herrin, Ill. Filed July 19, 1913, Serial No. 780,047. Renewed Apr. 1, 1914. Serial No. 828,907. (Cl. 258—16.)

1. In a mail bag exchange mechanism for mail cars, a tubular member swiveled to the car provided with a mail

bag receiving arm, a spring-tensioned plunger rod in the tubular member, and a device for holding said rod against the action of the spring, said device constituting means adapted to be automatically actuated by its contact with the mail bag to release the plunger rod, said mail receiving arm having a clip adapted to hold a bag to be delivered, said device having means for further actuating the same to assist in releasing the bag to be delivered.



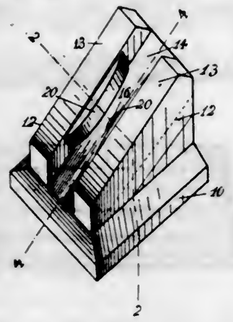
2. In a mechanism for delivering and receiving mail bags to and from a moving train, a tubular member having a mail receiving arm, a spring-tensioned plunger including a plunger rod mounted in the tubular member, a lever provided with a plate including a socket to receive one end of the rod to hold the plunger back in the tubular member against the tension of the spring, said lever adapted to be automatically actuated by a mail bag to withdraw the plate from the path of the plunger rod.

3. In a mechanism for delivering and receiving mail bags to and from a moving train, a tubular member having a mail receiving arm, a spring-tensioned plunger including a plunger rod mounted in the tubular member, a lever provided with a plate including a socket to receive one end of the rod to hold the plunger back in the tubular member against the tension of the spring, said lever adapted to be automatically actuated by a mail bag to withdraw the plate from the path of the plunger rod, said mail bag receiving arm having a clip to receive the loop of a mail bag to be delivered, and means to further actuate said lever to assist in releasing the bag to be delivered.

4. In a mechanism for delivering and receiving mail bags to and from a moving train, a member provided with a plunger rod, a semi-circular mail bag receiving arm connected to the member and having a ring at one end and provided with a mail bag clip, a lever pivoted adjacent the member having a plate provided with a socket to receive one end of the plunger rod, means placed under tension through the medium of the rod engaging said socket to force the plunger rod outwardly to clamp a mail bag against the ring when the lever is contacted with and actuated by a mail bag.

5. In a mechanism for delivering and receiving mail bags to and from a moving car, a rod arranged transversely of the car door opening, a tubular member swiveled on said rod and having slots, a semi-circular mail bag receiving arm carried by one end of the tubular member and provided with a ring at one end, a clip carried by the arm substantially midway of its length to hold a mail bag to be delivered, a plunger including a rod mounted in the tubular member and having a pin extending transversely thereof and through the slots, a lever pivoted adjacent the tubular member having a plate provided with a socket to receive one end of the plunger rod, means placed under tension through the medium of the rod fitting the socket to throw the rod outwardly to clamp a mail bag against said ring, said lever adapted to be automatically actuated by a mail bag contacting therewith, means for further actuating said lever to cause the same to aasist in releasing the bag to be delivered, said pin of the plunger constituting means to be gripped manually for setting the plunger in engagement with the socket.

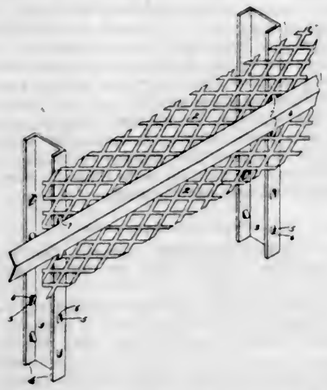
1,105,182. CIGARETTE-BOX OPENER. GEORGE A. CASPERS and JOHN CASPERS, New York, N. Y., assignors, by direct and mesne assignments, of two-thirds to said George A. Caspers and one-third to Samuel H. Fuchs, New York, N. Y. Filed July 8, 1913. Serial No. 777,980. (Cl. 131—59.)



1. An article of the class described, comprising a base, hollow members extending above the upper surface of said base, oppositely disposed contact plates movably engaged in said hollow members, means for maintaining said contact plates normally outward with respect to said hollow members and a cutter rigidly secured in the path between said standards.

2. An article of the class described, comprising a base, a platform over said base, hollow projecting members formed parallel to said platform, along the upper edges thereof and having open adjacent faces, contact elements loosely contained in said projecting members, said contact members set facing each other and having a curved outer face, means for maintaining said contact members normally pressed toward each other and a cutter set in said platform between said projecting members.

1,105,183. LATH-FASTENER. CORNELIUS COLLINS, Burlingame, Cal. Filed Mar. 19, 1913. Serial No. 755,337. (Cl. 72—118.)

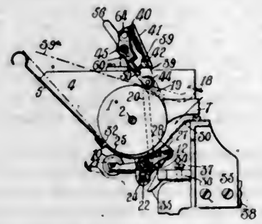


1. A fastener for metal lathing, comprising a support having a pair of oppositely inclined and adjacent tongues struck inwardly and away from the lathing to be supported, and an open member A-shaped in cross section with bendable prongs at the opposite margins thereof insertable and separable by the tongues and adapted to interlock with the openings formed by the striking out of the tongues when pressure is applied to the apex of said A-shaped member.

2. A lath supporting member having a depressed pocket, the ends of which are severed from the contiguous stock to form apertures, and a bendable metallic fastener bent centrally and provided with divergent points on opposite margins in the plane of its length for embracing the mesh of the lath, and which points spread and enter said apertures when pressure is applied at the apex of said fastener.

3. A lath supporting member consisting of a metallic studding having a depressed pocket, the bottom of which is below the outer face of the studding, the ends of the pocket being severed from the contiguous stock to form apertures, and a bendable hipped metallic fastener having marginal divergent points on opposite margins for straddling the strands of said metallic lath, and which points spread and enter said aperture when pressure is applied at the bended hipped portion of the fastener, said hipped portion of the fastener when spread being received into said pocket and lying substantially in the plane of the studding.

1,105,184. TYPE-WRITING MACHINE. CORNELIUS B. CORCORAN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 14, 1912. Serial No. 715,034. (Cl. 197—127.)



1. The combination of a revoluble platen, pressure rolls running upon the under side of the same, means to release said pressure rolls, a paper-guiding apron curving around the under side of the platen and connected to be dropped when said rolls are released, and a separate sloping stationary deflector or guide forward of the platen and permanently spaced apart from the platen in position to cooperate with said apron, when the latter is dropped, to guide the bottom edges of sheets downwardly and backwardly under the platen.

2. The combination of a revoluble platen, pressure rolls running upon the under side of the same, means to release said pressure rolls, a paper-guiding apron curved around the under side of the platen and connected to be dropped when said rolls are released, and a separate stationary sloping deflector or guide forward of the platen and permanently spaced apart from the platen in position to cooperate with said apron, when the latter is dropped, to guide the bottom edges of sheets downwardly and backwardly under the platen; said sloping deflector or shelf mounted upon the fixed frame of the machine, and said platen mounted upon a carriage.

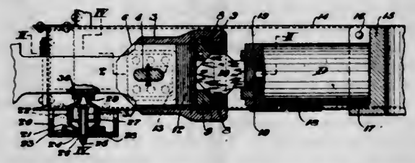
3. The combination of a revoluble platen, pressure rolls running upon the under side of the same, means to release said pressure rolls, a paper-guiding apron curving around the under side of the platen and connected to be dropped when said rolls are released, and a separate stationary sloping deflector or guide forward of the platen and permanently spaced apart from the platen in position to cooperate with said apron, when the latter is dropped, to guide the bottom edges of sheets downwardly and backwardly under the platen, said sloping deflector or shelf mounted upon the fixed frame of the machine, and said platen mounted upon a carriage; said deflector being mounted at one side of the printing point, so that it may coöperate with said apron when the carriage is shifted to one extreme of its run.

4. The combination of a revoluble platen, pressure rolls running upon the under side of the same, means to release said pressure rolls, a paper-guiding apron curving around the under side of the platen and connected to be dropped when said rolls are released, and a separate sloping deflector or guide forward of the platen and normally ineffective but in position to coöperate with said apron, when the latter is dropped, to guide the bottom edges of sheets downwardly and backwardly under the platen, said sloping deflector or shelf mounted upon the fixed frame of the machine, and said platen mounted upon a carriage; said deflector being mounted at one side of the printing point, so that it may coöperate with said apron when the carriage is shifted to one extreme of its run; said roll-releasing means including a part automatically brought into conjunction with a fixed part on the frame when the carriage is so shifted for operation thereby.

5. In a typewriting machine, the combination with a carriage, of a revoluble platen mounted on said carriage, feed rolls to run upon the platen, yielding means upon said carriage normally pressing said rolls against the platen, a finger-piece upon said carriage to release said rolls, means upon the framework of the machine to release said rolls when the platen has been carried beyond the printing field, whereby when the carriage is in the printing field the finger-piece may be manipulated at any time to release the sheets, and whereby when the carriage has traveled beyond the printing field the work sheet may be pulled out and another substituted without manipulating said finger-piece, and a guide mounted upon the framework of the machine to coöperate with the platen when the carriage has traveled to roll-releasing position, for coöperation with said platen to guide sheets introduced bottom end foremost down around the front side of the platen.

[Claims 6 to 37 not printed in the Gazette.]

1,105,185. DRAFT-GEAR. JOHN F. COURSON, Pitcairn, Pa. Filed Jan. 6, 1914. Serial No. 810,583. (Cl. 213—42.)



1. The combination with a drawbar, shock absorbing mechanism associated therewith, and a bearing member, of a rocking centralizing device vertically opposed to the drawbar between it and said bearing member and embodying centralizing erecting means, co-acting with the drawbar and bearing member to support the drawbar at its varying positions and to return it to normal position.

2. The combination with a drawbar, shock absorbing mechanism associated therewith, and a bearing member, of a rocking centralizing device vertically opposed to the drawbar between it and said bearing member adapted to co-act with the drawbar and bearing member to support the drawbar at its varying positions, and provided with a centralizing bolt engaging the bearing member.

3. The combination with a drawbar and shock absorbing mechanism associated therewith, of a bearing member, and a rocking centralizing device embodying a spherical bearing surface co-acting with said bearing member at one end and having a pivotal bearing portion at the other end interposed between the drawbar and said bearing member for returning the drawbar to normal position.

4. The combination with a drawbar and shock absorbing mechanism associated therewith, of a concaved bearing, and a rocking centralizing device interposed between the drawbar and said bearing and provided with a centralizing bolt connection therewith.

5. The combination with a drawbar and a concaved circular bearing member, of a rocking centralizing device having a spherically rounded bottom engaging said bearing and a pivotal terminal engaging the drawbar.

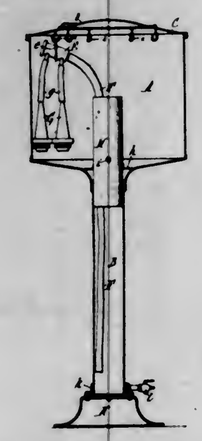
[Claims 6 to 8 not printed in the Gazette.]

1,105,186. SAFETY-SLEEVE FOR HINGES AND THE LIKE. JACOB P. CROWN, Redwood City, Cal. Filed Nov. 15, 1913. Serial No. 801,185. (Cl. 16—108.)



The combination with the leaf of a hinge, of a sleeve into which the leaf is insertible, perforations formed in the bottom of the sleeve, perforations of a larger diameter formed in the top of the sleeve in line with the lower perforations through which screws are inserted to secure the sleeve to the door, and means for securing the leaf in the sleeve.

1,105,187. STERILIZING-TANK. CHARLES B. DALZELL, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed Jan. 12, 1912. Serial No. 670,857. (Cl. 167—3.)



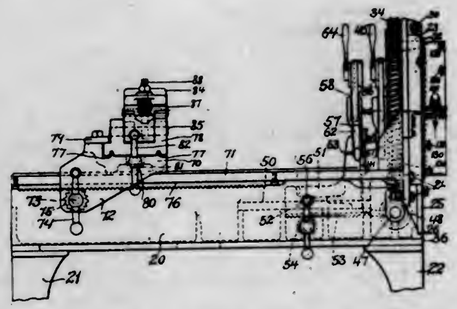
1. A sterilizing tank comprising a hollow column and an enlarged top portion communicating therewith and comprising a bottom which extends outwardly from the upper portion of said column, a peripheral wall extending upwardly from said bottom, a cover resting on said peripheral wall, and devices in said top portion for suspending tubular articles within said top portion and hollow column.

2. A sterilizing tank comprising a hollow column and an enlarged top portion communicating therewith and comprising a bottom which extends outwardly from the upper portion of said column, a peripheral wall extending upwardly from said bottom, and a tubular guide forming an upward continuation of said column and terminating within said top portion.

3. A sterilizing tank comprising a hollow column and an enlarged top portion communicating therewith and comprising a bottom which extends outwardly from the upper portion of said column, a peripheral wall extending upwardly from said bottom, and a tubular guide forming an upward continuation of said column and removably arranged upon the same within said top portion.

4. A sterilizing tank comprising an upper enlarged portion, a lower contracted portion, and a cover consisting of an outer annular portion provided with means for suspending the articles to be immersed in the liquid, and an inner movable portion, substantially as set forth.

1,105,188. MACHINE FOR TWISTING CRANK-SHAFTS. CHARLES C. DODGE, Worcester, Mass. Filed Feb. 12, 1914. Serial No. 818,424. (Cl. 153—78.)



1. In a machine for twisting crank shafts having bearings and crank pins, a hollow head, means for rotating it, jaws extending across the said head on opposite sides of the axis thereof and movable one toward the other to clamp the work between them, and means for securing said jaws to said head to leave an unobstructed space between the jaws on either side of said axis for the transverse adjustment of the work crosswise of the head to bring any crank pin or bearing in alinement with said head.

2. A machine for twisting crank shafts having bearings and crank pins, comprising a rotatable twisting vise, a holding vise, a bed on which said vises are mounted, said twisting vise consisting of a hollow head, jaws on the end thereof crossing the opening therethrough on both sides of the axis and having an unobstructed space between their faces for the transverse adjustment of the crank shaft crosswise of the head to permit any pin or bearing to be positioned in alinement with said axis, means for attaching said jaws to said head, and means for locking said jaws upon the crank arms of the crank shaft.

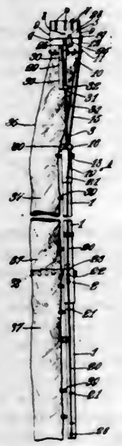
3. A machine for twisting the crank pins and bearings of crank shafts, comprising a rotatable twisting vise and a holding vise, each of said vises having a pair of clamping jaws arranged on both sides of the axis of the twisting vise, each pair of jaws being separated to provide a space extending diametrically across said vises to permit the shaft to be moved longitudinally of said space to locate a crank pin or a bearing thereof in alinement with the axis of the twisting vise.

4. A machine for twisting the crank pins and bearings of crank shafts, comprising a rotatable twisting vise and a holding vise each having a pair of clamping jaws spaced to provide a transverse adjustment of said shaft to locate any pin or bearing in axial alinement with the twisting vise, a bed for supporting said vises, means for effecting the rotation in either direction of the twisting vise, and means for supporting and transversely adjusting said shaft with relation to the holding and twisting vises.

5. A machine for twisting the crank pins and bearings of crank shafts, comprising a rotatable twisting vise and a holding vise each having a pair of clamping jaws spaced to provide a transverse adjustment of said shaft to locate any pin or bearing in axial alinement with the twisting vise, a bed for supporting said vises, means for effecting the rotation in either direction of the twisting vise, transversely movable means for holding and transversely adjusting said shaft with relation to the holding and twisting vises, and mechanism for effecting a relative longitudinal movement of said holding and twisting vises and said transversely movable means, to locate the crank arms of said shaft successively in said holding and twisting vises.

[Claims 6 to 21 not printed in the Gazette.]

1,105,189. FRUIT PICKER OR GATHERER. GEORGE J. FALLKIN, San Jose, Ill. Filed Apr. 9, 1914. Serial No. 830,720. (Cl. 56—99.)



1. In a fruit picker, a pole, a shell carried by the upper end thereof, an annulus mounted for oscillatory movements upon the shell, the shell and annulus having coöperating open ended slots, a transverse guide, an actuating lever having one arm operatively connected to the annulus and having its other arm received by said guide, a pulley carried by one end portion of the guide, an actuating cord connected to the second mentioned arm of the lever and trained over the said pulley, and means for returning the annulus to normal position.

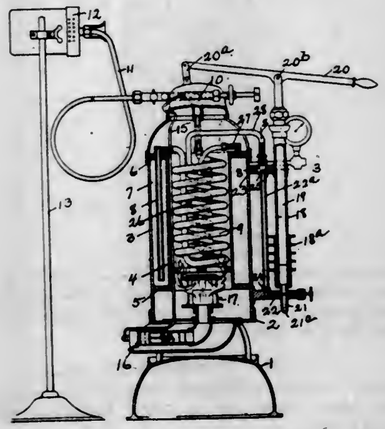
2. In a fruit picker, a pole, a fork attached to the upper end thereof, a shell secured between the arms of the fork, an annulus mounted for limited oscillatory movements upon the shell, the shell and annulus having coöperating open ended slots, a transverse guide secured to the upper end of the pole, an actuating lever fulcrumed to the shell, the actuating lever having an upper arm operatively connected to the annulus and having a lower arm received by the said guide, a pulley carried by one end portion of the guide, and an actuating cord connected to the second mentioned arm of the lever and trained over the said pulley.

3. In a fruit picker, a pole, a fork attached to the upper end thereof, a shell secured between the arms of the fork, an annulus mounted for limited oscillatory movements upon the shell, the shell and annulus having coöperating open ended slots, actuating means carried by the pole and operatively connected to the annulus, a bell crank lever having its elbow fulcrumed to the shell and having one arm operatively connected to the annulus, a slide adjustable upon one arm of the fork, and a retractile spring connecting the slide and the other arm of the said lever.

1,105,190. TORCH. CHRISTIAN G. FILZER, Erie, Pa. Filed Mar. 18, 1913. Serial No. 755,220. (Cl. 158—33.)

1. In a torch, the combination of a reservoir forming a combustion chamber; a main burner; a main connection comprising a vaporizing coil arranged within the combustion chamber and leading from the reservoir to the main burner; an auxiliary burner for vaporizing the fuel; and a second connection for conveying the fuel vaporized by the auxiliary burner to the auxiliary burner, said second connection extending through the combustion chamber.

2. In a torch, the combination of a reservoir in the form of an annular chamber, said chamber forming a combustion chamber; a main burner; a main connection comprising a vaporizing coil arranged within the combustion chamber and leading from the reservoir to the main burner; an auxiliary burner for vaporizing the fuel; and a second connection for conveying the fuel vaporized by the auxiliary burner to the auxiliary burner, said second connection extending through the combustion chamber.



3. In a torch, the combination of a reservoir; a main burner; an auxiliary burner for vaporizing the fuel leading to the main burner; a pump for delivering fuel to the reservoir in proximity to the reservoir; and radiating means on the pump for preventing the formation of vapor in the pump.

4. In a torch, the combination of a reservoir; a main burner; a connection comprising a primary vaporizing coil leading direct from the reservoir to the burner; and a secondary coil connected with the reservoir for creating pressure in the reservoir and varying the pressure in the primary coil.

5. In a torch, the combination of a reservoir; a burner; a primary connection comprising a vaporizing coil leading from the reservoir to the burner; a secondary coil connected with the reservoir; and a single source of supply leading to the secondary coil and the reservoir.

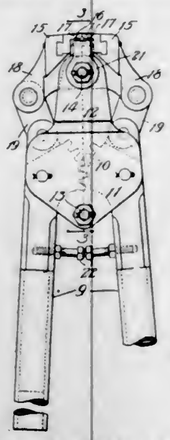
[Claims 6 to 9 not printed in the Gazette.]

1,105,191. TOOL FOR JOINING METAL-STRAP ENDS. ELLSWORTH E. FLORA and JOHN F. MURPHY, Chicago, Ill., assignors to The Seal & Fastener Co., Chicago, Ill., a Corporation of Delaware. Filed Sept. 2, 1913. Serial No. 787,710. (Cl. 81—15.)

1. A tool for joining metal strap-ends having opposite side plates provided with forwardly extending tongue-sections, jaws pivoted together between the side plates and provided with lips, crimping-pins projecting from the inner jaw-faces, a stationary seat for the work provided with marginal flanges embracing the tongue-sections of said side plates and extending transversely across and connecting said plates between the jaws and beneath the lips, handles pivoted between said plates, intermeshing gears on the forward ends of the handles and toggle-links connecting the jaws with the handles.

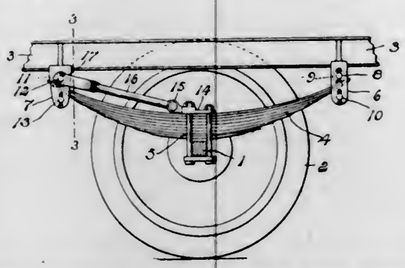
2. A tool for joining metal strap-ends having opposite side plates provided with forwardly extending tongue-sections, jaws pivoted together between the side plates and provided with lips, crimping-pins projecting from the inner jaw-faces, a stationary seat for the work provided

with marginal flanges embracing the tongue-sections of said side plates and extending transversely across and connecting said plates between the jaws and beneath the lips, the marginal flanges of the seat forming rings adapt-



ed to take over the ends of the jaw-arm pivoting bolt, handles pivoted between said plates intermeshing gears on the forward ends of the handles, and toggle-links connecting the jaws with the handles.

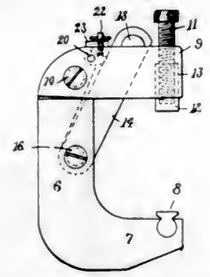
1,105,192. VEHICLE-SPRING. RODOLPHUS FULLER, Detroit, Mich. Filed Aug. 28, 1911. Serial No. 646,446. (Cl. 21—50.)



The combination with a vehicle axle having supporting wheels, semi-elliptic springs secured to the axle intermediate their ends, and a vehicle frame having side members supported upon the ends of said springs in the vertical longitudinal plane of said spring, of downwardly extending ears carried by the frame members and between which the ends of the springs extend, distance rods pivotally connected at one end to the springs near their place of attachment to the axle and provided with forked opposite ends to embrace the said ears, said rods extending longitudinally of said springs in the vertical plane thereof between said springs and frame members, pins extending through the ears adjacent to said vehicle frames and attaching the forked ends of the rods thereto, rollers revolubly mounted upon said pins between said ears and engaged by the ends of the springa to form a rolling contact therefor, and pins arranged transversely of said ears below the ends of said springs and adapted to retain the ends of said springs normally between said ears.

1,105,193. WORK-CLAMP. JULIUS J. GERION, Bridgeport, Conn. Filed Apr. 22, 1914. Serial No. 833,598. (Cl. 144—302.)

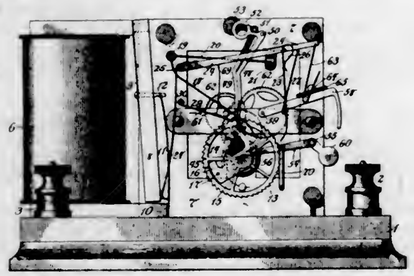
1. In a work-clamp of the class described, the combination of an L shaped jaw member, a co-acting jaw pivotally mounted to the said L shaped jaw and having a slot through its center portion, a yoke pivoted to the said L shaped jaw member and extended through the said slot and having a cross bar to engage the outer edge portion of the said co-acting jaw member in a way to close the same by the operation of the yoke, and a screw for operating the said yoke.



2. In a work clamp of the class described, the combination with a main jaw member, of a co-acting jaw pivotally connected thereto, a yoke pivotally mounted in the said main jaw and extending up through the pivotally connected jaw and having a cross member to engage the outer edge of the said co-acting jaw member, an eccentric cam pivotally mounted within the said co-acting jaw and arranged to engage the back edge of the yoke to force the same forward in a way to close the jaw, and a screw mounted in the said co-acting jaw and arranged to engage the eccentric cam to operate the same and the yoke.

3. In a work clamp of the class described, the combination of an L shaped jaw having an engaging member socketed therein to engage the work, a co-acting jaw pivotally mounted in the said L shaped jaw member, a clamping screw in the outer end of the said co-acting jaw and having upon it a right hand thread to engage the jaw and a left hand thread to engage a work engaging member, a work engaging member mounted upon the said screw and adapted to be operated thereby, a yoke pivoted to one of the said members and adapted to engage the other of said members to operate the same, and a screw for operating the said yoke.

1,105,194. SELECTIVE MECHANICAL OPERATOR. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed May 25, 1905. Serial No. 262,135. (Cl. 177—332.)



1. In combination with a movable machine element, a main impelling device adapted to move said element step by step in one direction, a retaining device adapted to automatically hold said element, disengaging mechanism for said retaining device automatically actuated by movement of said element, a support for said retaining device and a movable restoring device for freeing the retaining device from said support, substantially as described.

2. In combination with a movable machine element, a main impelling device adapted to move said element in one direction by a series of uniform steps, a retaining device adapted to automatically hold said element, disengaging mechanism for said retaining device automatically actuated when said element is moved, and a restoring device for counteracting the effect of said disengaging mechanism, substantially as described.

3. In combination with a movable machine element, a main impelling device adapted to move said element step by step in one direction, a retaining device adapted to automatically hold said machine element, disengaging mechanism for said retaining device automatically actuated when said element is moved, a restoring device for counteracting the effect of said disengaging mechanism and automatic retarded impelling means for said restoring means actuated upon forward movement of the main impelling means, substantially as described.

4. In combination with a machine element adapted to be stepped, means for stepping it uniformly by each one of a series of impulses, a retaining device adapted to automatically hold said element, disengaging mechanism for said retaining device independent of said machine element, and an interfering device operated by said machine element for counteracting the effect of said disengaging mechanism.

5. In combination with a machine element, a main impelling device adapted to move said element step by step in one direction, returning means tending to move said element in the opposite direction, a retaining device adapted to automatically engage with said element to counteract the tendency of said returning means, disengaging mechanism for said retaining device automatically actuated by movement of said element, and a restoring device for counteracting the effect of said disengaging mechanism, substantially as described.

[Claims 6 to 110 not printed in the Gazette.]

1,105,195. MANUFACTURE OF MUCILAGE OR GUM. CONRAD VARLEY GREENWOOD, Blundellsands, near Liverpool, England, assignor to Alfred Stamford White, Chicago, Ill. Filed Feb. 23, 1911. Serial No. 610,397. (Cl. 134—23.)

1. As a new article of manufacture, a product produced by adding tannic acid to a soluble colloidal vegetable carbohydrate, the product being characterized by being soluble in hot or warm water but insoluble in cold.

2. As a new article of manufacture, a precipitated product produced by the addition of tannic acid to a solution of a colloidal vegetable carbohydrate, the product being characterized by being soluble in hot or warm water but insoluble in cold.

3. As a new article of manufacture, a mucilaginous product produced as a precipitate from a mixture of tannic acid and a solution of a colloidal vegetable carbohydrate, said product being characterized by its insolubility in cold water and its solubility in warm water.

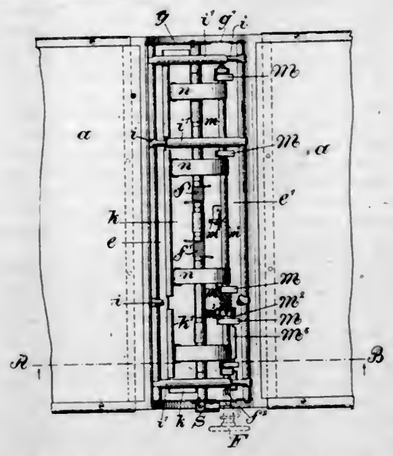
4. The process of manufacturing a new composition of matter soluble in hot or warm water, which consists in mixing a solution of soluble colloidal vegetable carbohydrates with tannic acid; and finally separating the precipitate produced.

5. The process of producing a new composition of matter soluble in hot or warm water, which consists in producing a soluble colloidal carbohydrate from raw vegetable matter; dissolving the same; adding tannic acid to such solution; and finally separating the composition of matter in the form of a precipitate thrown down in the solution.

[Claims 6 to 16 not printed in the Gazette.]

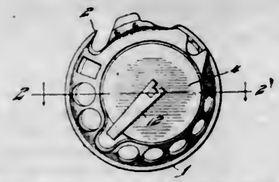
1,105,196. MEANS FOR BINDING BOOKS. KARL WILHELM HANKE, Berlin, Germany. Filed Mar. 31, 1913. Serial No. 757,918. (Cl. 129—4.)

1. In a book having a back and covers flexibly connected to said back, mechanism for removably binding sheets into the back of said book, said mechanism comprising curved metal sheets adapted to turn with their adjacent longitudinal edges around a common shaft, pins carried by one of said curved sheets and hollow pins carried by said other curved metal sheet, the two sets of pins being placed opposite to and adapted to engage each other, a cheek carried by and turning on said common shaft, coiled springs mounted to said common shaft to normally force apart the said cheek and one of the curved metal sheets on the common shaft, a second shaft carried by the said spring-actuated curved metal sheet, flexible means for connecting said second shaft with the said cheek, means for turning said second shaft, and other means for retaining the said second shaft locked in any desired position, substantially as and for the purpose set forth.



2. In a book having a back and covers flexibly connected thereto, mechanism for removably binding sheets into the said back, said mechanism comprising curved metal sheets turning about a common shaft, pins carried by one of said curved metal sheets and hollow pins carried by the opposite curved metal sheet, a cheek carried by and turning on said common shaft, springs mounted to said common shaft, the free ends of said springs acting to force apart the said cheek and one of the curved metal sheets on the common shaft, a second shaft carried in bearings of the said spring-actuated curved metal sheet, flexible means connecting the said second shaft to the said cheek, means for turning the said second shaft, means for locking said second shaft in any desired position, and means for preventing the said second shaft from being excessively turned by its operating key, substantially as and for the purpose set forth.

1,105,197. BOBBIN-HOLDER FOR ROTARY-HOOK MACHINES. RICHARD K. HOHMANN, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed May 5, 1913. Serial No. 765,419. (Cl. 112—38.)



1. A bobbin holder for rotary hook sewing machines comprising a casing having a circumferential bearing rim formed with a hook and having a circular opening in one side wall to admit a bobbin, the said opening being eccentric to the bearing rim and being more widely separated from that portion of the bearing rim immediately behind said hook than from the diametrically opposite portion of

said rim, the side walls extending on an incline from the margin of said opening to the bearing rim, whereby the side walls in that part behind the hook will have a less inclination to the plane of the rim than in the part on the opposite side.

2. A bobbin holder for rotary hook sewing machines comprising a casing having a circumferential bearing rim formed with a hook and having a circular opening in one side wall to admit a bobbin, the said opening being eccentric to the bearing rim and being more widely separated from the bearing rim within that quarter of the circumference immediately behind the hook than in any other portion of the circumference, the side walls of the holder extending on an incline from the margin of the opening to the bearing rim whereby the walls in the quarter behind the hook will have a less inclination toward the plane of the rim than the walls in other portions of the holder.

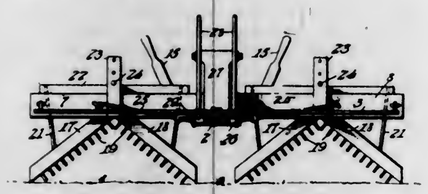
3. A bobbin holder for rotary hook sewing machines comprising a casing having a circumferential bearing rim extending throughout the major portion of a circle, and a circular opening in one side wall to admit a bobbin, the said opening being eccentric to said bearing rim, and the side walls being inclined from said rim to the edge of said bobbin holding opening the inclination of the walls being materially greater on one side of the axis of the holder than on the other.

4. A bobbin holder for rotary hook sewing machines comprising a casing having a circumferential bearing rim formed with a hook near the top facing the top and having a circular opening in one side wall to admit a bobbin, the said opening being eccentric to said bearing rim and its axis being in substantially the same horizontal plane as the axis of the rim and on the side opposite to that carrying the hook.

5. A bobbin holder for rotary hook sewing machines comprising a casing having a circumferential bearing rim formed with a hook near the top facing the top and having a circular opening in one side wall to admit a bobbin, the said opening being eccentric to said bearing rim and its axis being in substantially the same horizontal plane as the axis of the rim and on the side opposite to that carrying the hook, a hollow shaft carried by the rear wall of said casing and extending centrally of said opening and adapted to carry the bobbin, a spring retained member in said shaft, a retaining arm pivoted to said member and adapted to lie across said opening extending downwardly at an angle of about forty five degrees on the side carrying the hook.

[Claim 6 not printed in the Gazette.]

1,105,198. CULTIVATOR. AB HOLLAND, Forrest City, Ark., assignor of one-half to Sydenham B. Trapp, Jr., Forrest City, Ark. Filed May 20, 1913. Serial No. 768,802. (Cl. 97—31.)



1. A cultivator, comprising a body having a pair of tooth bars pivotally mounted upon horizontal pivots and capable of swinging toward and away from each other, a vertical rod carried by each of said tooth bars, an operating bar connecting said rods and mounted upon said body, and means carried by said body for preventing upward movement of said operating bar.

2. A cultivator, comprising a body having a pair of tooth bars pivotally mounted upon horizontal pivots and capable of swinging toward and away from each other, a rod carried by the free end of each of said tooth bars and extending through said body, an operating bar mounted upon said body having a connection with each of said rods, spaced apertured standards extending upwardly from said body, and a pin passing through the apertures of said standard for preventing upward movement of said operating bars.

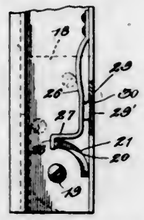
3. A cultivator having a body carrying a bar, said bar having a grooved under face, tooth bars pivotally mounted in the groove of said bar, rods connected to said tooth bars extending through apertures formed in said bar, an operating bar mounted upon said body and connected to said rods, spaced standards carried by said bar, and a pin connecting said standards for preventing upward movement of said operating bar.

4. A cultivator comprising a body currying a bar having a grooved under face, diverging tooth bars pivotally mounted in said groove, rods carried by said tooth bars extending through the apertures formed in said bars, an operating bar connected to said rods, apertured standards carried by said bar, and a pin adjustably mounted in said apertured standards for limiting the upward movement of said operating bar.

5. A cultivator having laterally adjustably mounted tooth bar carrying members, vertically arranged tooth bars carried by said members capable of swinging toward and away from each other, and an adjustable connection between said tooth bar carrying members and said cultivator.

[Claims 6 to 9 not printed in the Gazette.]

1,105,199. ADJUSTABLE SWINGING WINDOW-SASH. THOMAS M. HOUSE, Richmond, Va. Filed Apr. 5, 1912, Serial No. 688,750. Renewed Mar. 12, 1914. Serial No. 824,315. (Cl. 20—49.)

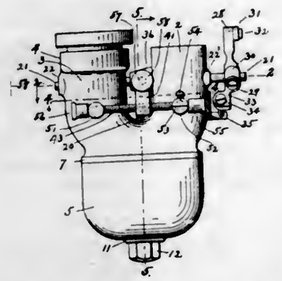


1. The combination with the window frame and a sash mounted therein for sliding and swinging movement, of a spring pressed locking device arranged adjacent to the pivot of the sash, and means carried by the sash to hold the locking device in an ineffective position during the sliding movement of the sash, and adapted to release said locking device for frictional engagement with the window frame at any point in the sliding movement of the sash when said sash is swung out of the frame to its open position to hold said sash against further sliding movement in either direction.

2. The combination with the window frame and sliding stiles mounted therein, a sash pivotally mounted upon said stiles, of leaf springs fixed to the sliding stiles and provided with holding blocks to frictionally engage the window frame, the free ends of said springs being disposed adjacent to the pivots of the sash, lugs carried by the sash to engage said springs and hold the blocks out of frictional engagement with the window frame during the sliding movement of the sash, said lugs when the sash is swung out of the frame releasing the springs to permit the blocks carried thereby to be forced into frictional engagement with the window frame and hold the stiles against sliding movement in either direction when the sash is in its open position.

1,105,200. CARBURETER. ALBERT HOWARTH, Providence, R. I. Filed Sept. 29, 1913. Serial No. 792,411. (Cl. 48—155.1.)

1. In a carbureter, the combination of a rocker shaft mounted in supports; means for rocking said shaft; a throttle valve fastened on said shaft; an air-admission valve fastened on said shaft; a gasolene-supply chamber; a gasolene-regulator discharging into the carbureter; a valve seat for the throttle valve; a valve seat for the air-admission valve; a fixed rod mounted in supports; an adjusting arm movable along said rod; a cam on the rocker shaft; and means from the adjusting arm in contact with said cam adapted to vary the gasolene-supply to the carbureter.



2. In a carbureter, the combination of a carbureter body; a throttle valve; a valve seat for the throttle valve; an air-admission valve; a valve seat for the air-admission valve; a receptacle for gasolene; a gasolene-supply regulator; a spring normally closing the gasolene-supply regulator; a rocker shaft; means to rock said shaft; an eccentrically mounted cam fastened on the rocker shaft; a rod mounted in supports and extending parallel to the rocker shaft; a bent lever mounted movably upon said rod and adjustable thereon; and regulable means intermediate said bent lever and gasolene-supply regulator adapted to open to a predetermined degree the gasolene-supply regulator against the pressure of said spring.

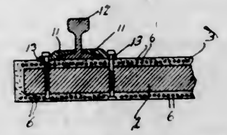
3. In a carbureter, the combination of a carbureter body; a throttle valve; a valve seat for the throttle valve; an air-admission valve; a valve seat for the air-admission valve; a receptacle for gasolene; a gasolene-supply regulator; a rocker shaft; means to rock said shaft; a spring normally closing the gasolene-supply regulator; an eccentrically mounted cam fastened on the rocker shaft; a screw rod mounted parallel to the rocker arm; an arm mounted by a screw thread on the screw rod; an adjusting screw mounted in the last named arm and having its inner end in operative contact with conical surface of said cam; and a link connection between the last named arm and the gasolene-supply regulator, all combined as shown and adapted to operate said two valves and the gasolene-supply regulator in unison and to the same proportionate extents.

4. In a carbureter, the combination of a U-shaped body comprising two parallel tubes opening therefrom each circular in cross section; a straight valve rod mounted rotatably in said tubes diametrically thereof; a lever arm fastened upon one end of said valve rod; a pull rod pivotally connected with the lever arm at the outer end thereof; a circular throttle valve fastened upon the valve rod adapted to open or close at will one of said tubes; an air-intake valve fastened upon said valve rod and always extending in the same plane as the throttle valve, which air-intake valve has a periphery consisting in part of a true arc and the remainder consisting of a straight line or chord of said arc and is adapted to partially close or open at will the other of said tubes; and a gasolene-supply regulator opening into the U-bend of the carbureter adjacent to the inner ends of said tubes.

5. In a carbureter for supplying gasolene to a motor, the combination of a carbureter body comprising two parallel tubes opening therefrom; a valve rod rotatably mounted in said tubes diametrically thereof; a lever arm adapted to rock the valve rod; a throttle valve fastened on the valve rod and adapted to open and close at will one of said tubes; an air-admission valve fastened on the valve rod and adapted to partially open or partially close at will the other of said tubes; a cam fastened on the valve rod and rotatable therewith; a chamber for containing gasolene; a gasolene-supply regulator; a spring normally pressing said regulator on the upper end thereof; a pivotally mounted rocker arm; a screw mounted in the rocker arm and in contact at its inner end with the cam; and a finger piece pivotally mounted upon the rocker arm and having a longitudinal slot at its outer end extending into an annular groove near the top of said regulator.

[Claims 6 to 8 not printed in the Gazette.]

1,105,201. CONCRETE RAILROAD-TIE. RICHARD HENRY JOHNSON, Creston, Wash., assignor of two-thirds to Samuel L. Huddleston, Creston, Wash. Filed Oct. 2, 1913. Serial No. 793,008. (Cl. 238—3.)



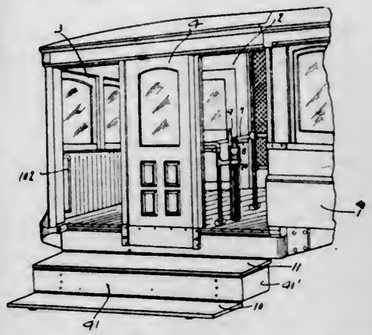
1. A railroad tie comprising a plurality of longitudinal rods, a wire wound spirally around said rods exterior thereto, concrete enveloping said rods and wire, said tie being provided with bolt holes ad said wire being looped around said holes.

2. A railroad tie comprising a plurality of longitudinal reinforcing rods, a circumferential reinforcement embracing said rods and concrete embracing said rods and circumferential reinforcement, and a wooden core for said concrete and closely surrounded thereby, said rods being placed adjacent the edges of said core.

3. A railroad tie comprising in combination, a central wooden core provided with one or more longitudinal dovetailed grooves therein, and a concrete envelop surrounding said core and locking in said grooves.

4. A railroad tie comprising in combination, a central wooden core provided with one or more longitudinal dovetailed grooves, a plurality of longitudinal rods arranged near the corners of said core, a circumferential reinforcement comprising a wire wound spirally around said rods, and a concrete envelop surrounding said core, rods and wire, and interlocking with said dove-tailed grooves.

1,105,202. CAR DOOR AND STEPS. JOHN KING, Spokane, Wash., assignor of one-half to I. I. Shoemaker, Spokane, Wash. Filed Sept. 13, 1913. Serial No. 789,635. (Cl. 105—88.)



1. In a car in combination, a cylinder, a piston for said cylinder, one or more steps, mountings for said steps adapted to slide transversely of the car, connections between said piston and the steps, means for admitting fluid on either side of said piston as desired, a riser for said steps, slidable mountings for said riser, connections

for operating said riser mountings from said piston, said connections being adapted to cause said riser to lag behind the movement of said steps in either direction.

2. In a car in combination, a cylinder, a piston for said cylinder, one or more steps, mountings for said steps adapted to slide transversely of the car, connections between said piston and the steps, one or more doors, connections between said doors and said piston, means for admitting fluid on either side of said piston as desired, a riser for said steps, slidable mountings for said riser, connections for operating said riser mountings from said piston, said connections being adapted to cause said riser to lag behind the movement of said steps in either direction.

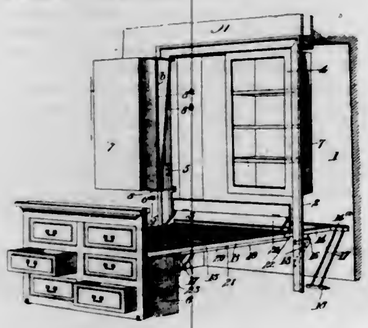
3. In a car in combination, a slidable frame, one or more steps supported and carried by said frame, a riser for said steps, and a support for said riser having slidable connection with said frame.

4. In a car in combination, a slidable frame, one or more steps supported and carried by said frame, a riser for said steps, and a support for said riser having slidable connection with said frame, and means for locking said support in its innermost position.

5. In a car in combination, a slidable frame, one or more steps supported and carried by said frame, a riser for said steps, a support for said riser having slidable connection with said frame, means for locking said support in its innermost position, and means for releasing said support after said frame has moved outwardly a certain distance.

[Claims 6 to 8 not printed in the Gazette.]

1,105,203. FOLDING BED. WILLIAM WALLACE LA VANWAY, Los Angeles, Cal. Filed Oct. 22, 1913. Serial No. 796,654. (Cl. 5—37.)



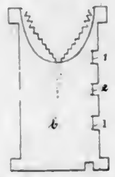
1. The combination with an inclosure having a doorway and bearings or supports within said inclosure at the lower part thereof, of a mattress frame comprising a head section pivoted in said supports and a main section in sliding engagement with the head section, a rest for the foot of said main section movable back and forth into and out of said doorway, and rods pivotally connected together and pivotally connected, respectively, to said rest and to the head of the main section of the mattress frame.

2. The combination with an inclosure having a doorway and bearings or supports within said inclosure at the lower part thereof, of a mattress frame comprising a head section pivoted in said supports and a main section in sliding engagement with the head section, a drawer casing movable back and forth into and out of said doorway, and rods pivotally connected together and pivotally connected, respectively, to said drawer casing and to the head of the main section, said drawer casing adapted to support the foot of the main section when the bed is unfolded.

3. The combination with an inclosure having a doorway and bearings or supports within said inclosure at the lower part thereof, of a mattress frame comprising a head section pivoted in said supports and a main section in sliding engagement with the head section, a drawer casing movable back and forth into and out of said doorway, and rods pivotally connected together and pivotally connected, respectively, to said drawer casing and to the head of the main section, said drawer casing adapted to support the foot of the main section when the bed is unfolded and to close the lower part of said doorway when the bed is folded.

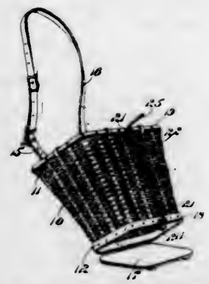
4. The combination with an inclosure having a doorway and bearings or supports within said inclosure at the lower part thereof, of a mattress frame comprising a head section pivoted in said supports and a main section in sliding engagement with the head section, a drawer casing movable back and forth into and out of said doorway, and rods pivotally connected together and pivotally connected, respectively, to said drawer casing and to the head of the main section, said drawer casing adapted to support the foot of the main section when the bed is unfolded and to close the lower part of said doorway when the bed is folded, and hinged doors for closing the upper part of said doorway.

1,105,204. MATRIX FOR LINOTYPE-MACHINES. JACQUES MAYER and CARL MUEHLEISEN, Berlin, Germany, assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 13, 1905. Serial No. 291,555. (Cl. 199—12.)



A linotype matrix having an edge of uniform thickness provided with plural, identical, separately usable character impressions therein and with an additional character impression therein, of a less frequently used kind, whereby the life of the matrix may be prolonged to correspond with the life of the less frequently used character, the said matrix being provided with the usual distributing teeth, and with means coöperating with the mold for locating the several character impressions respectively in position for casting therefrom.

1,105,205. BASKET. EDGAR MAYETTE, Canisteo, and JOHN D. MITCHELL, Hornell, N. Y.; said John D. Mitchell, assignor of one-fourth of the whole right to John H. Mitchell, Hornell, N. Y. Filed June 7, 1912. Serial No. 702,310. (Cl. 56—99.)



A basket including upper and lower rims, side walls disposed therebetween, a bottom hingedly secured to the lower rim, supporting means carried by the upper rim for the supporting of the basket, a pair of alined bearings rigidly fixed to the upper and lower rims adjacent the front of the poised basket and remote from the attachment of the securing means to the upper rim and the hinged connection of the bottom to the lower rim, a rod extending through said bearings provided with a hook-shaped lower portion extending under and locking the bottom in a closed position with respect to the rim, the upper extremity of said rod bent oppositely with respect to the lower portion and at an angle to the top of the basket and projecting thereabove, the said upper rod bend forming a handle for the releasing of the bottom, accessible from above the top of the basket.

1,105,206. PROCESS OF MANUFACTURING ARTIFICIAL COAL FROM PEAT. FREDERICK C. C. TH. AD. OSIUS, Grand Rapids, Mich. Filed Apr. 22, 1911. Serial No. 622,786. (Cl. 44—1.)

1. The process of manufacturing artificial fuel from peat consisting in carbonizing the peat by the action of sulfuric acid into a semi-plastic state, and molding said semi-plastic material into briquets.

2. The process of manufacturing artificial fuel from peat consisting in first disintegrating the peat and then subjecting the separated particles to the action of sulfuric acid, to convert the peat into a semi-plastic state.

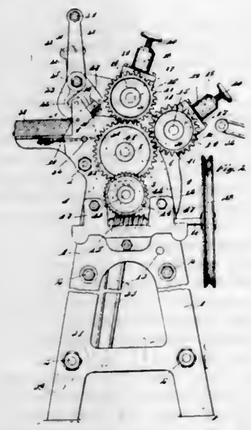
3. The process of manufacturing artificial fuel from organic matter consisting in first separating the moisture therefrom, second in disintegrating the organic matter, then carbonizing the separated particles by the action of sulfuric acid, and then molding said peat when in a plastic state into briquets.

4. The process of manufacturing artificial fuel from organic matter consisting in first separating the moisture from the organic matter by pressing, then disintegrating said matter, then submerging said matter in sulfuric acid until it is carbonized into a semi-plastic state, then removing the sulfuric acid therefrom, and then molding said plastic matter into briquets.

5. The process of manufacturing artificial fuel consisting in first partially removing the moisture from the organic matter, then submerging said matter in sulfuric acid, then removing the sulfuric acid from the matter by submerging the same in water, and then molding said plastic material into briquets.

[Claim 6 not printed in the Gazette.]

1,105,207. IRONING-MACHINE. CLAES F. ROBERG and AUGUST A. MALMBERG, Chicago, Ill. Filed Feb. 12, 1913. Serial No. 747,891. (Cl. 68—9.)



1. In an ironing machine, the combination of an ironing member having a smooth convex side; a plurality of rollers adapted to rotate in contact with said side of said member; oscillatory arms carrying said rollers; means coöperating with said arms for releasably holding said rollers in operative relation with said ironing member; and toggles for moving said rollers out of contact with said ironing member, substantially as described.

2. In an ironing machine, the combination of an ironing member having a smooth convex side; a plurality of rollers adapted to rotate in contact with said side of said ironing member; oscillatory arms carrying said rollers; means for releasably holding said rollers in operative relation with said ironing member; and toggles for moving said rollers out of contact with said side of said ironing member, substantially as described.

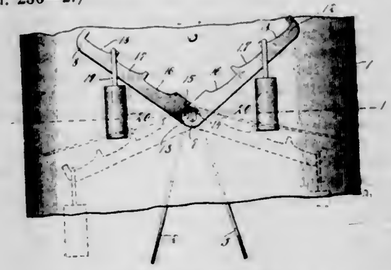
3. In an ironing machine the combination of an oscillatory ironing member having a smooth convex side, the center of curvature of said side being coincident with the center of oscillation of said member; a plurality of rollers adapted to rotate in contact with said side of said ironing member, said ironing member remaining constantly in registration with said rollers; means for releasably holding said rollers in contact with said side of said ironing member; and means for moving said rollers out of contact with said ironing member, substantially as described.

4. In an ironing machine, the combination of an oscillatory ironing member having a smooth convex side, the center of curvature of said side being coincident with the center of oscillation of said member; means for yieldingly holding said ironing member at one of its terminals of oscillation; a roller adapted to rotate in contact with said side of said ironing member; and means for releasably holding said roller in contact with said side of said ironing member, substantially as described.

5. In an ironing machine the combination of an oscillatory hollow ironing member having a smooth convex side; a heating element arranged within said ironing member, the ends of said ironing member being slotted to accommodate said heating element and to permit of oscillation of said ironing member; means for yieldingly holding said ironing member at one of its terminals of oscillation; a roller adapted to rotate in contact with said side of said ironing member; and means for yieldingly holding said roller in contact with said ironing member, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,105,208. FIRE-GOVERNOR. JOSEPH V. ROBINSON, Washington, D. C. Filed Feb. 8, 1911, Serial No. 607,409. Renewed Dec. 6, 1911. Serial No. 664,279. (Cl. 236—2.)



1. In a fire governor, the combination of a pivoted damper wing, and a counterbalance connected with said wing having its point of connection with the wing automatically shiftable radially relative to the pivotal point of the wing as the wing moves in either direction, substantially as described.

2. In a fire governor, the combination of a flue, a pivot rod, sleeves loosely mounted on said rod for engaging bearing openings in said flue, a pair of swinging damper wings secured, respectively, to said rod and sleeves, and automatically shifting means for uniformly counterbalancing said wings throughout their swing, substantially as described.

3. In a fire governor, the combination of a flue having bearing openings, a pivot rod, sleeves loosely mounted on said rod for projecting through bearings in a flue, a pair of swinging damper wings secured, respectively, to said

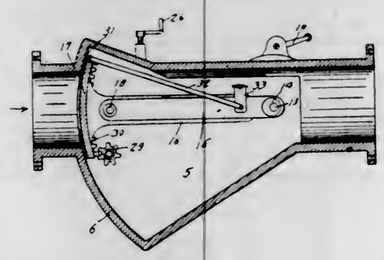
rod and sleeves, a pair of arms provided with spring ferrules for engaging a projecting end of said rod and of the adjacent sleeves, and counterbalance weights carried by said arms, substantially as described.

4. In a fire governor, the combination of a flue having bearing openings, a pivot rod, sleeves loosely mounted on said rod for projecting through bearings in a flue, a pair of swinging damper wings secured, respectively, to said rod and sleeve, a pair of arms provided with spring ferrules for engaging a projecting end of said rod and of the adjacent sleeve, counterbalance weights carried by said arms, and means on said spring ferrules for properly positioning said arms relative to said rod and sleeve, substantially as described.

5. In a fire governor, the combination of a pivoted damper wing, an arm projecting from said wing beyond the pivotal point of the wing and provided with an elongated way, and a counterbalance having a sliding engagement with said elongated way operating to shift automatically its position along the way as the arm moves through its horizontal position, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,105,209. VALVE. JOHN L. SAUCHEREAU, Spokane, Wash. Filed Mar. 25, 1913. Serial No. 756,652. (Cl. 137—5.)



1. A valve device comprising in combination, a casing provided with a passage therethrough and having a valve seat surrounding a portion of said passage, a valve head adapted to coöperate with said seat to close said passage and adapted to be moved toward and be backed away from said seat, means for moving said head when it is backed away from its seat, means for moving said head toward and backing it away from said seat, and a scraper adapted to remove dirt from said seat when said head is moved from an opened to a closed position.

2. A valve device comprising in combination, a casing provided with a passage way therethrough and having a cylindrical inner surface adapted to act as a valve seat, a valve head having a curvature corresponding to that of said seat and adapted to close the passage through said casing, said head being mounted for oscillatory movement, links connected to said head, cams positively engaging said links, and means for operating said cams whereby said head may be positively forced against or withdrawn from said seat, and means for rocking said head from closed to opened position.

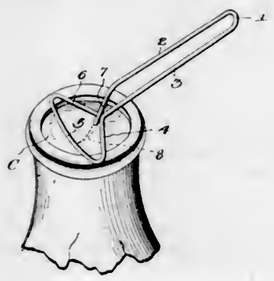
3. A valve device comprising in combination, a casing provided with a passage therethrough and having an interior cylindrical surface adapted to act as a valve seat, a valve head having a curvature corresponding to that of said seat and adapted to close the passage through said casing, said head being attached to the arms and said arms being provided with pivotal projections engaging slots in said casing whereby said head is adapted to be swung and also to be moved toward and away from said seat, positively acting means for moving said head toward and away from said seat, and means for swinging said head from a closed to an opened position.

4. A valve device comprising in combination, a casing provided with a passage therethrough and having an interior cylindrical surface adapted to act as a valve seat, a valve head having a curvature corresponding to that of said seat and adapted to close the passage through said casing, a mounting for said head adapted to be moved toward and away from said seat, said mounting being supported from the casing at points about the center of curvature of the cylindrical surface, positively acting means for moving said mounting, and means independent of said mounting for swinging said head from a closed to an opened position and the reverse.

5. A valve device comprising in combination, a casing provided with a passage therethrough and having a cylindrical valve seat, a curved head adapted to coöperate with said seat to close said passage, said head being mounted for oscillatory movement and being provided with gear teeth on the surface removed from said seat, a mounting for said head adapted to be moved toward and away from said seat, means for operating said mounting, a pinion mounted within said casing and on a shaft extending through said casing and engaging the teeth on said head, and means exterior to said casing for operating said pinion whereby said valve may be moved from a closed to an opened position and the reverse.

[Claims 6 to 9 not printed in the Gazette.]

1,105,210. PAPER-CAP REMOVER. JOSEF SAVOIE, Central Falls, R. I. Filed Feb. 13, 1914. Serial No. 818,592. (Cl. 65—46.)



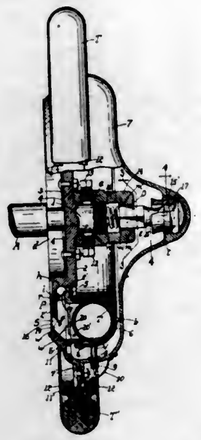
1. In a bottle paper cap remover, a section of wire bent to form a handle which has substantially parallel members, the lower of said members being extended outwardly at an incline on one side thereof to form a side arm and being further extended across said member to form a transverse arm and being bent inwardly to form a corresponding side arm which latter terminates at the inner end of the first named side arm, said transverse arm being centrally and downwardly bowed, the free end of the other member being inclined downwardly and secured to the inner ends of said side arms, said free end being pointed and terminating below and in substantial alinement with said transverse arm.

2. In a bottle cap remover, a handle formed of wire having one end bent to form a triangle and having its other end secured to the apex of the triangle and extending beneath the base of the triangle and having a point which substantially alines in a vertical plane with said base of the triangle.

3. In a bottle cap remover, a handle formed of wire having a lower part which is bent to form a triangle at its forward end and an upper part arranged in spaced parallel relation to the lower part, the forward end of which upper part is bent downwardly at an incline and is secured to the apex of the triangle and has a point at its free extremity which underlies the base of the triangle.

4. In a bottle cap remover, a handle formed of wire having one end bent to form a transverse arm and having its other end secured to the body part of the handle above the arm to provide a finger grip and having its extremity pointed and extending below the arm.

1,105,211. VEHICLE-WHEEL. OSCAR SCHALLER, Webster Groves, Mo. Filed June 26, 1913. Serial No. 775,933. (Cl. 152—46.)



1. In a vehicle-wheel, an axle, an outer tread member flexibly jointed thereto, a resilient member interposed between the tread and the axis of the wheel and disconnected from the tread member, shock-absorbing devices mounted opposite the resilient member and engaging the inner face of the same, and means on the tread member for controlling said devices.

2. In a vehicle-wheel, an inner rotatable section, an outer rotatable section having a yielding movement relatively to the inner section in planes parallel to the plane of rotation of the wheel, an inflatable tube mounted on the inner section, a casing for said tube, and suitable shock-absorbing devices mounted on the inner section opposite the tube, and responding to the yielding movements of the outer section and coöperating with the inflatable tube.

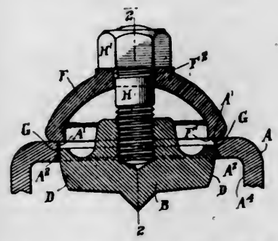
3. In a vehicle-wheel, an inner rotatable section, an outer rotatable section, a flexible joint connecting the sections disposed about the axis of the wheel, and permitting the outer section to yield in the plane of rotation of the wheel, a resilient member interposed between the sections, and suitable shock-absorbers mounted opposite to, and engaging the resilient member and actuated by the yielding movement of the outer section.

4. In a vehicle-wheel, an inner section, an outer section jointed flexibly thereto about the axis of the wheel, an inflatable tube carried by the inner section, a tread member on the outer section, suitable shock-absorbing devices mounted opposite to, and engaging the tube, and means responsive to movements of the outer section due to flexure of the joint for driving the shock-absorbing devices against the tube.

5. In a vehicle-wheel, an inner section, an outer section jointed flexibly thereto about the axis of the wheel, an inflatable tube, an inner channel ring for the tube resting on the inner section of the wheel, an outer casing for the tube coupled to the inner channel ring, the latter being provided with openings opposite the inner peripheral walls of the tube, suitable pockets being formed in the inner wheel section opposite said openings, an oscillating dog in a pocket, movable blocks operating through the openings against the inner walls of the tube and engaged by said dogs, the latter projecting from the pockets and terminating in inclined edges, the outer wheel section being spaced from the outer edge of the inner section and provided with inclined surfaces engaging the inclined edges of the dogs, whereby upon a compression of the tube the dogs are successively forced against the blocks and the latter against the tube and the shocks thus absorbed, and a tread member on the outer wheel section.

[Claims 6 and 7 not printed in the Gazette.]

1,105,212. HAND-HOLE COVER. WILLIAM F. SELLERS and HENRY B. BRADFORD, Edgemoor, Del., assignors to Edge Moor Iron Company, Edgemoor, Del., a Corporation of Delaware. Filed May 24, 1912. Serial No. 699,467. (Cl. 220—124.)



1. A hand hole cover for a round hole in a boiler head or plate having a conical body larger in diameter at its inner end than the hole to be closed and adapted to fit in the hole and against the inner edge which lies inside of the hole, said conical body of the cover being at its larger end cut away or chamfered on opposite sides to reduce its width in one direction to a distance less than the diameter of the hole whereby the cover can be passed edgewise through the hole to be closed and then drawn into the hole until the unchamfered portions of its conical body are arrested by contact with the inside of the hole.

2. A hand hole cover for a round hole in a boiler head or plate comprising a body having a conical outer end portion adapted to enter the hole to be closed, said outer end portion being smaller in diameter at its larger end than said hole and having an inner end portion of larger diameter than said hole but cut away or chamfered at opposite sides to such extent as to permit the cover to be passed edgewise through said hole and a flexible bushing surrounding said conical end portion and adapted to be wedged between and to seal the joint between the latter and the peripheral wall of the hole to be closed.

3. A hand hole cover for a round hole in a boiler head or plate, comprising a conical body larger in diameter at its large end and smaller in diameter at its small end than the hole to be closed, and having opposite sides of its larger end cut away or chamfered to make the corresponding width of the body less than the diameter of the hole whereby the cover may be passed edgewise through the hole, said cover also having a laterally projecting finger extending from its inner portion and adapted to engage a portion of the boiler lying at one side of said hole.

4. The combination of a boiler head of plate having a round hand hole formed therein with a cover for said hole comprising a body having a conical outer end portion adapted to enter said hole, said outer end portion being smaller in diameter at its larger end than said hole and having an inner end portion of larger diameter than said hole cut away or chamfered at opposite sides to such extent as to permit the cover to be passed edgewise through said hole, a flexible bushing surrounding said conical end portion and adapted to be wedged between and to seal the joint between said end portion and the peripheral wall of said hole and a dome shaped clamping yoke having a continuous circular edge lapping over the outer edge of the hole and serving as a stop for said bushing, and means for drawing the cover and yoke together.

5. The combination of a boiler head or plate having a round hand hole formed therein, with a cover for said hole comprising a body having a conical outer end portion adapted to enter said hole, said outer end portion being smaller in diameter at its larger end than said hole and having an inner end portion of larger diameter than said hole but cut away or chamfered at opposite sides to such extent as to permit the cover to be passed edgewise through said hole, said cover having a laterally extending finger projecting from said inner portion and adapted to engage a portion of the boiler lying at one side of said hole, a flexible bushing surrounding said conical end portion and adapted to be wedged between and to seal the

joint between said end portion and the peripheral wall of said hole, and a dome shaped clamping yoke having a continuous circular edge lapping over the outer edge of the hole and serving as a stop for said bushing and means for drawing the cover and yoke together.

[Claim 6 not printed in the Gazette.]

1,105,213. DIVISION-WALL FOR WATER-TUBE BOILERS. WILLIAM F. SELLERS and HENRY B. BRADFORD, Edgemoor, Del., assignors to Edge Moor Iron Company, Edgemoor, Del., a Corporation of Delaware. Filed Sept. 10, 1912. Serial No. 719,512. (Cl. 110—98.)



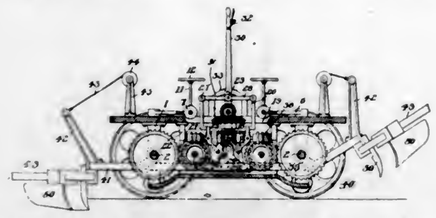
1. In a water tube boiler the combination with a bank of water tubes, of a traverse division wall which divides the intertube space into separate passes for the hot gases, and comprising a skeleton framework formed of metallic bars passing through the spaces between the tubes transversely to the latter, some of said bars extending transversely to others, and a body portion of refractory material plastered on said bars and supported by and securing together said bars and said tubes.

2. In a water tube boiler, the combination with a bank of substantially parallel water tubes arranged in transverse rows, of a division wall dividing the intertube space into separate passes for the hot gases, and comprising a body portion of refractory material and a reinforcing skeleton framework incorporated therein, and comprising two transverse groups of metal bars arranged between the transverse rows of tubes, and means for securing the bars of one group to bars of the other group, said means being adapted to secure the bars thereby connected after the said bars have been separately inserted in place between the said water tubes.

3. In a water tube boiler, the combination with a bank of substantially parallel water tubes arranged in transverse rows, of a division wall dividing the intertube space into separate passes for the hot gases and comprising a body portion of refractory material and a skeleton framework incorporated therein and comprising two transverse rows of wrought metal bars arranged between the transverse rows of tubes, and cast metal sections, also incorporated in said body portion adjacent one edge of the wall and at one side of said wrought metal bars.

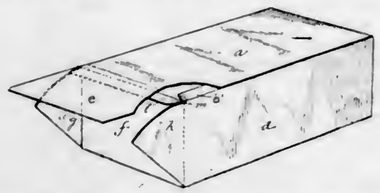
4. In a water tube boiler, the combination with a bank of substantially parallel water tubes arranged in transverse rows of a division wall dividing the intertube space into separate passes for the hot gases, and comprising a body portion of refractory material and a reinforcing skeleton framework incorporated therein, and comprising two transverse groups of flanged metal bars arranged between the transverse rows of tubes and each having a flange transverse to, and flange parallel to the length of the water tubes, the transverse flanges of bars crossing one another abutting against each other and being secured together.

1,105,214. MOTOR-PLOW. JOHN PETER SKRIPEC, Cincinnati, Ohio. Filed June 8, 1912. Serial No. 702,595. (Cl. 21—114.)



A motor plow comprising trucks, a platform supported thereby and provided with a centrally disposed opening, front and rear axles carried by the trucks and provided with traction wheels, gear wheels carried by the axles below the platform, a casing supported from said platform central thereof, transverse shafts journaled in and projecting from said casing, said shafts arranged at the ends of the casing and each being provided with small and large gear wheels, said large gear wheels arranged within said casing and meshing with the gear wheels on the axles, hangers carried by said casing, brackets supported by said casing, oppositely disposed longitudinally extending shafts journaled in said brackets and hangers, and provided with worms meshing with said small gear wheels, a motor carried by said platform, a driving mechanism within and depending from said opening and extending between said longitudinal shafts, an operative connection between the driving mechanism and said motor, and a clutching mechanism extending through said opening for operatively connecting said driving mechanism with one or the other of said longitudinal shafts.

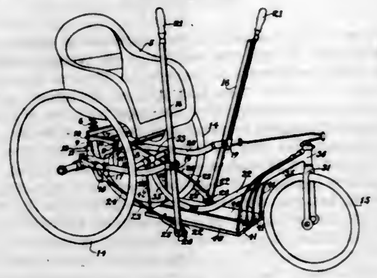
1,105,215. PAPER BOX. ABRAHAM L. SMITH, New York, N. Y., and ALEXANDER H. DREUX, Bloomfield, N. J., assignors to Scoop Folding Box Company, New York, N. Y., a Corporation of New York. Filed Apr. 19, 1910. Serial No. 556,350. (Cl. 229—17.)



In a rectangular paper box, a spout end, consisting of a rectangular end panel forming a continuation of one of the sides of the box, and flaps connecting the edges of the two adjacent sides of the box with the side edges of said panel, said flaps being foldable inwardly on top of said panel and free to swing outwardly beyond the plane of the sides to which they are connected, and said flaps consisting of two sectors of slightly different width whereby on swinging the flaps outwardly in the act of unfolding the spout, the end panel thereof will recede from the mouth or opening of the box; substantially as described.

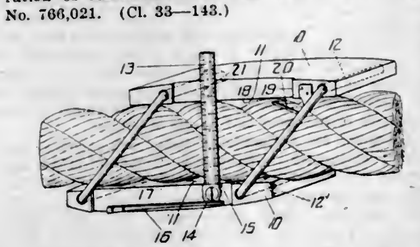
1,105,216. VEHICLE. JAMES C. SMITH, Elyria, Ohio, assignor to The Machine Parts Company, Elyria, Ohio, a Corporation of Ohio. Filed Aug. 7, 1912. Serial No. 713,730. (Cl. 208—113.)

1. In a device of the class described, the combination of a pair of rear wheels and a front wheel, a frame, a transverse member in said frame adjacent said rear wheels, a frame head on said front wheel, a lever and means connecting the lever with the front wheel whereby the vehicle is steered through the front wheel, the lever and said means, a longitudinal backbone member connecting the said frame head with the said transverse member, said backbone member extending downwardly from its junction with said transverse member to a point of maximum depression and inclined thence upwardly to the frame head, a foot rest on either side of said backbone member and suspended between the wheels independently of said back bone member, said foot rest being in substantially the same horizontal plane as the point of maximum depression of the backbone member, substantially vertical rods connecting the rear of the rest to said transverse member, and curved rods connecting the front of the rods to the frame head.



2. In a device of the class described, the combination of a pair of rear wheels and a front-wheel, a frame, a passenger seat supported from said frame, a transverse member in said frame adjacent said rear wheels, a frame head on said front wheel, a lever connected to the frame piece and controllable from the seat, means connecting the lever to the front wheel for steering purposes, an arcuate, longitudinal backbone member between said transverse member and said frame head, said back-bone member curved downwardly from its junction with the transverse member to a point of maximum depression in front of said seat and inclined thence to its point of junction with the frame head, a pair of foot rests, one on either side of said backbone member and suspended between the wheels independently of said backbone member, said foot rests being in substantially the same horizontal plane as the point of maximum depression of the backbone member, means to connect one end of the foot rests to the transverse member, and means to connect the front end of the foot rests to the frame head.

1,105,217. CALIPERS FOR ROPE AND THE LIKE. PHILIP M. STEGMAIER, Plymouth, Mass., assignor to Plymouth Cordage Company, Plymouth, Mass., a Corporation of Massachusetts. Filed May 7, 1913. Serial No. 766,021. (Cl. 33—143.)

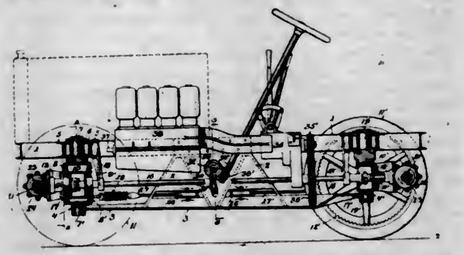


1. Rope calipers comprising two plane faced blocks combined with linkage joining the edges of said blocks and maintaining said plane faces toward and parallel to each other, said plane faces being adapted to bear upon opposite sides of a length of rope, one plane face engaging a plurality of crests on one side of the rope and the other plane face engaging a crest on the other side, whereby the diameter of rope whose crests are not diametrically opposite is indicated by the distance between the plane faces.

2. Rope calipers comprising two blocks having plane surfaces facing each other and adapted to bear upon opposite sides of a length of rope, one plane face engaging a plurality of crests on one side of the rope and the other plane face engaging a crest on the other side, whereby the diameter of rope whose crests are not diametrically opposite is indicated by the distance between the plane faces, and said blocks being provided with long bearings extending parallel to each other through the blocks; combined with links, parallel to each other, and each having integral portions comprising pivots in said bearings.

3. Rope calipers comprising two blocks having plane surfaces facing each other and adapted to bear upon opposite sides of a length of rope, combined with links holding the plane surfaces parallel to each other while movable to and from each other, a scale mounted on one block and movable between parallelism with and perpendicularity to said plane surfaces, and means on the other block to engage and set it when the blocks are moved.

1,105,218. FOUR-WHEEL-DRIVE TRUCK. DAVID S. STEWART, Antigo, Wis., assignor of one-third to Frank A. Hecker, Antigo, Wis., and one-third to Norman C. Woodin, Superior, Wis. Filed Jan. 19, 1914. Serial No. 813,101. (Cl. 21—90.)



1. A truck comprising a main frame having front and rear apertured bolsters, a saddle rigidly suspended from the central portion of the frame having forwardly and rearwardly extended arms provided with apertured hubs in alinement with the bolster apertures, hollow axles carrying upper and lower pivot-pins engageable with the bolster and arm box apertures, front and rear hangers depending from the bolsters, a power-shaft mounted in said hangers having its opposite ends extended into the hollow axles, a spindle journaled in each hollow axle, and a coupling connection between each spindle and juxtaposed drive-shaft end, the coupling connections being alined with the axle pivot-pins, wheels loosely mounted upon the axles, and a counter-shaft carried by each axle in gear connection with its wheels and the related power-shaft spindle.

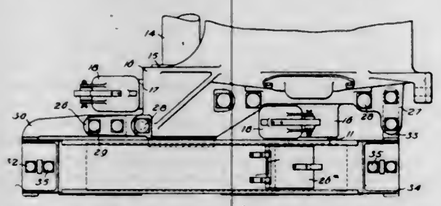
2. A truck comprising a main frame having front and rear apertured bolsters, a saddle rigidly suspended from the central portion of the frame having forwardly and rearwardly extended arms provided with apertured boxes in alinement with the bolster apertures, a horizontally apertured hollow head having upper and lower vertically disposed pivot-pins extending therefrom engageable with the front bolster and juxtaposed aperture of the saddle arm box, a hollow front axle having trunnions engageable with the horizontally disposed head apertures, a rear axle provided with upper and lower pivot-pins extending therefrom engageable with the rear bolster and arm box apertures, front and rear hangers depending from the bolsters, a power-shaft mounted in said hangers having its opposite ends extended into the hollow axles, a spindle journaled in each hollow axle, and a coupling connection between each spindle and juxtaposed drive-shaft end, the coupling connections being alined with the axle pivot-pins, wheels loosely mounted upon the axles, and a counter-shaft carried by each axle in gear connection with its wheels and the related power-shaft spindle.

3. A truck comprising a main frame having front and rear apertured bolsters, a saddle rigidly suspended from

the central portion of the frame having forwardly and rearwardly extended arms provided with apertured hubs in alinement with the bolster apertures, hollow axles carrying upper and lower pivot-pins engageable with the bolster and arm box apertures, front and rear hangers depending from the bolsters, a power-shaft mounted in said hangers having its opposite ends extended into the hollow axles, a spindle journaled in each hollow axle, and a coupling connection between each spindle and juxtaposed drive-shaft end, the coupling connections being alined with the axle pivot-pins, wheels loosely mounted upon the axles, a counter-shaft carried by each axle in gear connection with its wheels and the related power-shaft spindle, and steering mechanism mounted in the saddle having flexible connections to the ends of each axle.

4. A truck comprising a frame having front and rear apertured bolsters, a saddle rigidly secured to the central portion of the frame having forwardly and rearwardly extended arms provided with apertured hubs in alinement with the bolster apertures, a horizontally apertured hollow head provided with upper and lower pivot-pins engageable with the front bolster and aperture of the saddle arm box, a hollow axle provided with horizontally disposed trunnions engageable with the horizontally disposed apertures of the hollow head, a hollow rear axle having upper and lower pivot-pins extending therefrom engageable with the rear bolster aperture and box aperture of the saddle arm, front and rear hangers depending from the bolsters, a power shaft mounted in the hangers having its ends extending into the hollow axles, a spindle journaled in each hollow axle, couplings connecting each spindle and juxtaposed power-shaft end, the couplings being alined with the axle trunnions, brackets extending from the front and rear axles, a counter-shaft carried by each set of brackets, a gear connection between each counter-shaft and the juxtaposed spindle, traction wheels loosely mounted upon each axle, toothed gear-wheels carried by the traction wheels, pinions carried by the pair of counter-shafts engageable with the toothed gear-wheels, and a steering mechanism carried by the frame for simultaneously swinging the aforesaid front and rear axles.

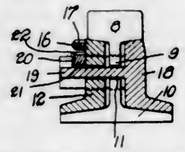
1,105,219. GEAR-CASE CONSTRUCTION. EMMETT W. STULL, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 31, 1910. Serial No. 552,692. (Cl. 74—56.)



In combination, a supporting structure, a gear casing having divisible parts and adjacent thereto, brackets secured to one of said parts, supporting members extending between said supporting structure and said brackets at opposite ends of the divisible casing, said supporting members being removably secured to said brackets, and means by which the other part of said divisible casing is secured to said brackets, said means being independent of said supporting members.

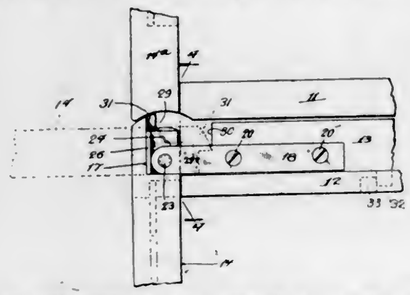
1,105,220. RAIL-JOINT. SAMUEL SWAIN, Grapeville, Pa. Filed Apr. 18, 1914. Serial No. 832,885. (Cl. 239—13.)

1. A rail joint comprising the combination with a pair of track rails having the webs thereof formed with T-shaped slots registering to provide an H-shaped opening, of a pair of splice bars arranged at the sides of said rails, one of said splice bars provided with an H-shaped opening, an H-shaped coupling arm integral with the other of said splice bars and extending through that splice bar provided with the H-shaped opening, a wedge-shaped locking member engaging in said coupling arm exteriorly of that splice bar provided with the H-shaped opening, and means carried by that splice bar provided with an H-shaped opening and engaging in said locking member to prevent longitudinal movement of the locking member.



2. A rail joint comprising the combination with a pair of track rails having the webs thereof formed with T-shaped slots registering to provide an H-shaped opening, of a pair of spliced bars arranged at the sides of said rails, one of said splice bars provided with an H-shaped opening, an H-shaped coupling arm integral with the other of said splice bars and extending through that splice bar provided with an H-shaped opening, a wedge-shaped locking member engaging in said coupling arm exteriorly of that splice bar provided with an H-shaped opening, means carried by that splice bar provided with an H-shaped opening and engaging in said locking member to prevent longitudinal movement of the locking member, and a cam carried by said splice bar provided with an H-shaped opening and engaging said means for maintaining it in engagement with said locking member.

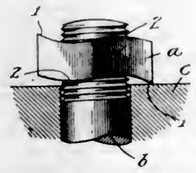
1,105,221. HINGE FOR HORIZONTALLY-DISAPPEARING DOORS. MAURICE TAUSSIG, Chicago, Ill. Filed May 14, 1914. Serial No. 838,459. (Cl. 16—11.)



1. A hinge comprising two hinge leaves, one leaf comprising a straight flat piece, and the other leaf comprising a straight flat main portion, extending at right angles to the other leaf, one end portion thereof being bent at right angles to the main portion and parallel with the other leaf, the two leaves having a pivotal connection at said end portion and said end portion having a right angle bent at its extreme end, forming a lip adapted to strike against the other leaf to limit movement of one leaf relative to the other leaf in one direction.

2. A hanger for horizontally disappearing doors, comprising a stationary, horizontally extending hinge leaf, consisting of a metal strip having screw holes in its main portion, and having an end portion formed with a semi-circular end and a rivet hole co-axial with said curved end; and a companion hinge leaf consisting of a metal strip having a main portion, extending at right angles to the first mentioned leaf and provided with screw holes and an end portion bent parallel to and contiguous with said end portion of the first mentioned leaf and there provided with a rivet hole registering with the rivet hole of the first mentioned leaf, the extreme end of said end portion of the second named leaf being bent to over-lie the end portion of the first mentioned leaf and strike against the same when moved parallel therewith, and a rivet extending through said rivet holes for pivotally connecting said leaves.

1,105,222. LOCK-NUT. WILLIAM J. TOLLERTON, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,890. (Cl. 151—21.)



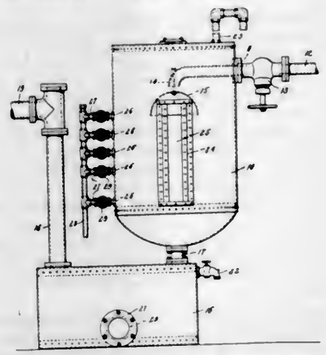
1. A lock-nut having its abutting face shaped to form a beveled edge and a rounded contacting portion on opposite sides of the axis of the nut, said edge being arranged to engage the face against which the nut is forced before the latter is engaged by said rounded contacting portion, substantially as described.

2. In a lock nuf S-shaped in section and having its opposite faces each provided with a projecting beveled edge and a protuberant contacting portion on opposite sides of the axis of the nut, said edge and said contacting portion being arranged to successively engage the face against which the nut is forced, substantially as described.

3. A lock nut S-shaped in section and having reversely curved abutting faces, each provided with a beveled edge and a rounded contacting portion on opposite sides of the axis of the nut, said nut being tapped at a slight angle to the normal line passing through the center of the nut, substantially as described.

4. A lock nut S-shaped in section and having reversely curved abutting faces, each provided with a beveled edge and a rounded contacting portion on opposite sides of the axis of the nut, said nut being tapped at a slight angle to the normal line passing through the center of the nut, and said edges being arranged to engage the part against which the nut is forced before the latter is engaged by said rounded contacting portions, substantially as described.

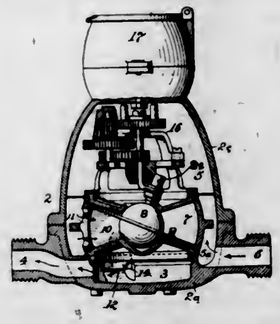
1,105,223. GASOLENE AND OIL SEPARATOR. STEPHEN A. TRAVERS, New York, N. Y., assignor of one-half to John F. Kuhn, New York, N. Y. Filed May 4, 1914. Serial No. 836,197. (Cl. 210—5.)



1. In a gasolene separator, the combination with a closed receptacle for the liquid to be treated, of a container disposed below said receptacle and communicating therewith, a supply pipe leading into said receptacle near its top provided in the longitudinal axis of said receptacle with a downwardly pointing bend, flow retarding and deflecting means in said receptacle below the mouth of said bend, a discharge pipe connected with said container extending upward in parallel relation to said receptacle, said receptacle being provided with a plurality of outlets that are disposed in different horizontal planes, and means for controlling independently of each other said outlets.

2. In a gasolene separator, the combination with a closed receptacle for the liquid to be treated, of a container disposed below said receptacle and communicating therewith, a supply pipe leading into said receptacle near its top provided in the longitudinal axis of said receptacle with a downwardly pointing bend, a bell-shaped deflector in said receptacle below the mouth of said bend, a discharge pipe connected with said container extending upward in parallel relation to said receptacle, said receptacle being provided with a plurality of outlets that are disposed in different horizontal planes, and means for controlling independently of each other said outlets.

1,105,224. WATER-METER. GUSTAV W. TREICHEL, Ambler, Pa. Filed Apr. 7, 1913. Serial No. 759,295. (Cl. 73—167.)



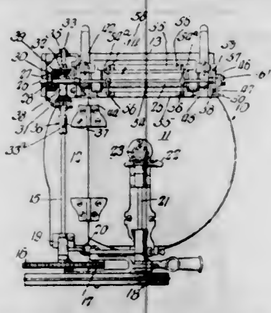
1. In a water meter, the combination of a body part having inlet and outlet ports for connection respectively with the usual street and house mains, and also having a circuitous passage for water connecting the said inlet and outlet ports, operating mechanism for registering the amount of water which passes through the said passage, a valve seat horizontally arranged across said circuitous passage at a point out of alinement with either said inlet or outlet ports, and a freely movable valve piece loosely hinged at one side of the valve seat and adapted to normally depend therefrom under the action of gravity to permit free flow of water through the valve seat in one direction of flow, but adapted to be closed against the valve seat by the pressure of the water flowing in the opposite direction through said passage.

2. In a water meter, the combination of a body part having inlet and outlet ports for connection respectively with the usual street and house mains, and also having a laterally disposed passageway for water, following substantially the contour of the body part and communicating at its respective ends with the said inlet and outlet ports, operating mechanism for registering the amount of water which passes through said passage, a valve seat horizontally arranged across said passage and located out of alinement with either said inlet or outlet port, and at a distance therefrom, and a freely movable volve piece loosely hinged at one side of the valve seat and adapted to normally depend therefrom under the action of gravity to permit free flow of water through the valve seat in one direction of flow, but adapted to be closed against the valve seat by the pressure of the water flowing in the opposite direction through said passage.

1,105,225. STOP MECHANISM FOR WRINGERS. ARBA VAN WORMER, Fort Wayne, Ind., assignor to Horton Manufacturing Company, Fort Wayne, Ind., a Corporation of Indiana. Filed June 3, 1912. Serial No. 701,129. (Cl. 74—46.)

1. In combination with oppositely rotative elements, means for actuating said elements including a continuously rotating member adapted for operating said elements and movable from an inoperative to an operative posi-

tion, a rock-arm for producing movement of said continuously rotating member, a lever having a pin and slot connection with said rock-arm for rocking the same, a stop adapted to limit the movement of said lever when said continuously rotating member reaches its operative position, said stop being positioned to arrest said lever when it has passed a dead center, a trigger member, means adapted for connecting said trigger member to said lever to move said lever beyond the dead center when said trigger member is struck, and means for automatically returning said continuously rotating member to its inoperative position when said lever has passed dead center.



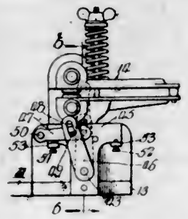
2. In combination with oppositely rotative elements adapted to be operated in either direction, means for actuating said elements including reversing gears, an idle gear adapted to be engaged by one or the other of said reversing gears, and a continuously rotating connecting member movable in either direction from an inoperative intermediate position to an operative position, a controlling member for moving said continuously rotating member, trigger members located at each side of said elements and means acting to move said continuously rotating member from an operative to its inoperative position when one of said trigger members is struck.

3. In combination with oppositely rotative elements adapted to be operated in either direction, means for actuating said elements including reversing gears, an idle gear adapted to be engaged by one or the other of said reversing gears, and a continuously rotating connecting member movable in either direction from an inoperative intermediate position to an operative position, a controlling member for moving said continuously rotating member, yielding means tending to resist the movement of said continuously rotating member from its inoperative to an operative position, means for locking it in either operative position, triggers located at either side of said elements, and mechanism intermediate said trigger members and said locking means for releasing the locking means when either of said trigger members is struck.

4. In combination with oppositely rotative elements adapted to be operated in either direction, means for actuating said elements including reversing gears, an idle gear adapted to be engaged by one or the other of said reversing gears, and a continuously rotating connecting member movable in either direction from an inoperative intermediate position to an operative position, trigger members located at each side of said elements, means tending to return said continuously rotating member to its inoperative position, means for locking said continuously rotating member in an operative position, and mechanism intermediate said trigger member and said locking means for releasing the locking means when either of said trigger members is struck.

5. In combination with oppositely rotative elements adapted to be operated in either direction, means for actuating said elements including reversing gears, an idle gear adapted to be engaged by one or the other of said reversing gears, and a continuously rotating connecting member movable in either direction from an inoperative intermediate position to an operative position, a rock-arm for producing movement of said continuously rotating member, a lever having a pin and slot connection with said rock-arm for rocking the same, a stop adapted to limit the movement of said lever when said continuously rotating member reaches an operative position, said stop being positioned to arrest said lever when it is on a dead center, trigger members located at each side of said elements, means adapted for connecting each of said trigger members to said lever to move said lever beyond the position of dead center when said trigger member is struck, and means for automatically returning said lever to its intermediate position after it has passed the dead center.

1,105,226. REVERSING-GEARING FOR WRINGERS AND THE LIKE. ARBA VAN WORMER, Fort Wayne, Ind., assignor to Horton Manufacturing Company, Fort Wayne, Ind., a Corporation of Indiana. Filed Jan. 9, 1913. Serial No. 741,002. (Cl. 74—58.)



1. In combination with an operating shaft capable of rotation in either direction, means for actuating said shaft including reversing gears, an idle gear adapted to be engaged by one or the other of said reversing gears, a continuously rotating shaft on which said reversing gears are fixed, said shaft being movable in either direction from an inoperative intermediate position to an operative position, a rock-arm and means operatively connecting the same with said shaft, a lever adapted for the operation of said rock-arm and stops adapted to limit the movement of said lever in either direction, said stops being positioned to correspond with the operative positions of said continuously rotating shaft and being separated by an angle of more than 180 degrees described about the fulcrum of said lever.

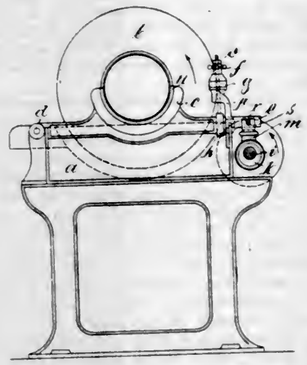
2. In combination with a continuously rotative shaft, and an operating shaft capable of rotation in either direction, and extending at right angles to the first named shaft, an intermediate longitudinally movable shaft in alinement with said first named shaft and non-rotatably connected therewith, spaced reversing gears fixed on said intermediate shaft, an idle gear operatively connected with said operating shaft and adapted to be engaged by either of said reversing gears, a rock-shaft extending at right angles to said intermediate shaft, means operatively connecting said rock-shaft with said longitudinally movable shaft to shift the same lengthwise, a hand-lever operatively connected for rocking said rock-shaft, and stops to limit the movement of said lever in either direction, said stops being arranged to arrest said lever after it has passed a dead center.

3. In combination with a continuously rotative shaft, and an operating shaft capable of rotation in either direction, and extending at right angles to the first named shaft, an intermediate longitudinally movable shaft in alinement with said first named shaft and non-rotatably connected therewith, spaced reversing gears fixed on said intermediate shaft, an idle gear operatively connected with said operating shaft and adapted to be engaged by either of said reversing gears, a rock-shaft extending at right angles to said intermediate shaft, means connecting said rock-shaft with said longitudinally movable shaft to shift the same lengthwise, a hand-lever fulcrumed to swing about a point spaced from said rock-shaft, a rock-arm on said rock-shaft arranged in a plane adjacent to said hand-lever, and a pin and slot connection between said hand-lever and rock-arms.

4. In combination with a continuously rotative driving member and an operating shaft capable of rotation in either direction, an intermediate longitudinally movable shaft, non-rotatably connected with said rotative driving-member, longitudinally spaced reversing gears fixed on said intermediate shaft, means intermediate said reversing gears and said operating shaft for driving said operating shaft, including an idle gear adapted to be engaged by either of said reversing gears, a rock-shaft extending at right angles to said intermediate shaft, a rock-arm operatively connected to said intermediate shaft to shift it in a longitudinal direction, a second rock-arm on said rock-shaft, a controlling lever arranged to throw said second rock-arm, and stops to limit the movement of said lever in either direction positioned to correspond with the operative positions of said reversing gears and adapted to arrest said lever after it has passed a dead center.

5. In combination with a continuously rotative shaft and an operating shaft extending at right angles thereto capable of rotation in either direction, an intermediate longitudinally movable shaft in alinement with said continuously rotated shaft and non-rotatably connected therewith, said reversing gears fixed on said intermediate shaft, an idle gear operatively connected with said operating shaft and adapted to be engaged by either of said reversing gears, a rock-shaft extending parallel to said operating shaft, a rock-arm fixed on said rock-shaft and operatively connected with said longitudinally movable shaft, a second rock-arm on said rock-shaft, a controlling lever fulcrumed in a plane adjacent said second rock-arm and operatively connected therewith, and stops to limit the movement of said lever in either direction, said stops being positioned to correspond with the operative positions of said reversing gears and being adapted to arrest said lever after it has passed a dead center.

1,105,227. KNOTTER OR STRAINER FOR PAPER MANUFACTURE. ROBERT WANDEL, Reutlingen, Germany. Filed Jan. 2, 1914. Serial No. 810,061. (Cl. 92—35.)



1. The improved knotter or strainer comprising a sorting drum, swinging levers supporting said drum, a member supporting the free end of each of said levers, an eccentric and a member connected to said eccentric and adapted to raise the free end of each of said levers but to fall independently thereof.

2. The improved knotter or strainer comprising a sorting drum, swinging levers supporting said drum, a member supporting the free end of each of said levers, an eccentric and a forked member actuated by said eccentric and embracing the free end of each of said levers.

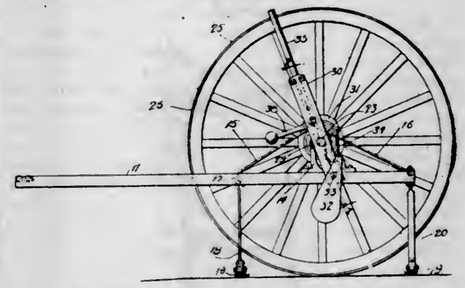
3. The improved knotter or strainer comprising a sorting drum, swinging levers supporting said drum, adjustable straps supporting the free ends of said levers, a shaft, eccentrics on said shaft, forked members slotted at right angles to the fork thereof, straps around said eccentrics, and connected to said forked members, and transverse pins in the free ends of said levers engaging the slots in said forked members.

4. In a knotter or strainer for paper and like pulp, a sorting drum, swinging levers supporting and adapted to reciprocate said drum, bearings on said levers for said drum, friction linings between said bearings and drum, and means for adjusting said linings toward the drum.

5. In a knotter or strainer for paper and like pulp, a sorting drum, swinging levers supporting and adapted to reciprocate said drum, bearings on said levers for said drum, friction linings between said bearings and drum, and adjustable segments between said bearings and linings.

[Claim 6 not printed in the Gazette.]

1,105,228. CART. ANDREW WICKEY, East Chicago, Ind. Filed May 24, 1913. Serial No. 769,609. (Cl. 21—116.)



1. A cart comprising a frame, brackets carried thereby, each formed with an L-shaped slot having a gear rack on one vertical and horizontal edge thereof, an axle or shaft extending through said L-shaped slots, and having teeth intermeshing with the gear racks thereof, supporting wheels mounted upon said axle or shaft, and mechanism for rotating said axle or shaft and thereby raising the frame of said cart and therewith the load.

2. A cart comprising a frame, a pair of carrier bars, below the frame, freely swinging links secured to the frame and supporting said carrier bars, brackets mounted on said frame, each formed with an L-shaped slot, having gear racks on one vertical and horizontal edge thereof, an axle or shaft extending through said L-shaped slots, and having circumferentially arranged teeth intermeshing with the teeth of said gear racks, supporting wheels journaled upon said axle or shaft, and mechanism for rotating said axle or shaft, and thereby raising the frame and load carried by said carrier bars.

3. A cart comprising a frame, load carrying bars supported thereby, brackets supported on said frame, each having an L shaped slot formed therein, which is provided with a gear rack upon one vertical and horizontal edge thereof, an axle or shaft extending through said L shaped slots, and having circumferentially arranged teeth intermeshing with the teeth of said gear racks, a ratchet-wheel secured upon said axle or shaft, a lever pivoted upon said axle or shaft, and having a pawl adapted to engage said ratchet-wheel, a detent pivotally mounted upon said brackets and means for holding said detent in engagement with said teeth of the axle or shaft.

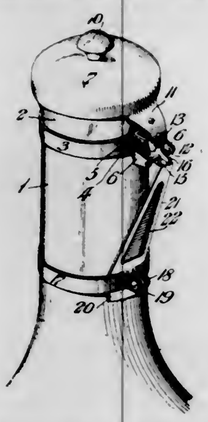
4. A cart comprising a main frame, and load carrying bars secured thereto, brackets secured to said frame, a rotary axle extending through said brackets, wheels journaled upon said axle, frame raising mechanism associated with said axle and brackets, and means between said frame and axle for locking said axle against retrograde movement, said locking means being capable of being disengaged from the axle, thereby releasing said frame, and permitting it to return to a lower position.

5. A cart comprising a main frame, and load carrying bars suspended therefrom, a pair of brackets supported on said frame, each having an L-shaped slot formed with rack teeth on one vertical and horizontal edge, a shaft or axle

extending through said slot and having circumferentially arranged teeth intermeshing with said rack teeth, detents pivoted upon said brackets and engaging the teeth of said shaft or axle, and acting to prevent retrograde movement of said shaft, a pair of supporting wheels journaled on said shaft or axle, means for rotating said shaft to raise the frame, and an arm rigidly secured to said shaft for rotating it in a retrograde direction whenever the detents are disengaged from the teeth thereof.

[Claim 6 not printed in the Gazette.]

1,105,229. CLOSURE. GUNTHER PHILIP WILD, Philadelphia, Pa., assignor to The Caloris Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 24, 1913. Serial No. 775,458. (Cl. 215—34.)



1. In a device of the character stated, a closure adapted to be hinged to swing over the mouth of a bottle or similar container, and an inherently resilient arm adapted to be directly supported upon such bottle or container and movably and detachably connected to said closure to tilt the same open when pressed toward the container.

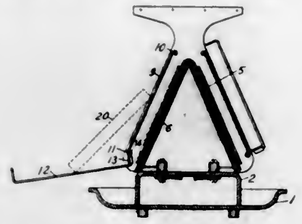
2. In a device of the character stated, a closure adapted to be hinged to swing over the mouth of a bottle or similar container, engaging members carried by said closure, and an inherently resilient arm adapted to be supported upon such bottle or container and movable with respect to said members to engage one thereof to tilt said closure open when pressed toward said bottle and automatically engaging the other member to return said closure to closed position.

3. In a device of the character stated, a closure adapted to be hinged to swing over the mouth of a bottle or similar container, an arm having a forked end and connected to said closure, a spring-arm having means for attaching it to said bottle or container to be actuated when the latter is grasped and having its end engaging said forked end to open the closure when actuated and return it to closed position when released.

4. In a device of the character stated, a band adapted to be clamped around the neck of a bottle or similar container and having a pair of ears, a closure adapted to close the mouth of said bottle or container, an arm connected to said closure and pivotally supported between said ears and formed with a forked end, a band adapted to be clamped around the bottle or container, and a spring-arm movably secured by said band and having its free end engaging the forked end of said arm.

5. In a device of the character stated, a band adapted to be clamped around the neck of a bottle or similar container and having a pair of ears, a closure adapted to close the mouth of such bottle or container and having a lip, an arm upon said lip and having a forked end and a pintle pivoted in said ears, a band adapted to be clamped around the bottle or container, and a spring-arm having one end clamped by said band and having its free end outwardly springing and engaging the end of the forked arm to normally close said closure and to tilt the same open when moved toward the bottle or container.

1,105,230. TOASTER. SPENCER A. WILTSIE, Erie, Pa., assignor, by mesne assignments, to Copeman Electric Stove Company, Flint, Mich., a Corporation of Michigan. Filed Jan. 22, 1912. Serial No. 672,533. (Cl. 219—19.)



1. In a toaster, the combination of a heat producing element; and means for supporting the material to be toasted adjacent to the element comprising a swinging and reversing carrier moving toward and from the same face of the element as it is swung and automatically reversing the material being toasted with said movement.

2. In a toaster, the combination of an upwardly extending heat producing element; and means for supporting the material to be toasted adjacent to the element comprising a swinging reversing carrier moving from and toward the same face of the element to substantially horizontal position when open to permit the sliding of the material to be toasted when open for reversing the face of said material on the carrier.

3. In a toaster, the combination of an upwardly extending heat producing element; and means for supporting the material to be toasted adjacent to the element comprising a swinging reversing carrier moving from and toward the same face of the element to substantially horizontal position when open to permit the sliding of the material to be toasted when open for reversing the face of said material on the carrier, said carrier having a shoulder at its outer edge.

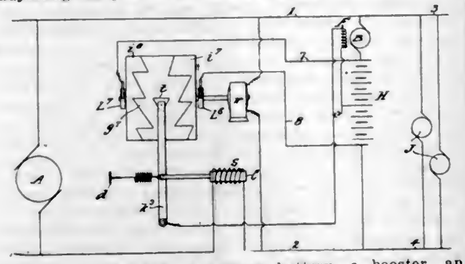
4. In a toaster, the combination of an upwardly extending heat producing element; and means for supporting the material to be toasted adjacent to the element comprising a swinging reversing carrier moving from and toward the same face of the element to substantially horizontal position when open, to permit the sliding of the material to be toasted when open for reversing the face of said material on the carrier, said carrier having a shoulder at its inner and outer edge, the shoulder at the inner edge supporting the material with the carrier in its upper or closed position.

5. In a toaster, the combination of two heat producing elements on opposite faces; means for supporting material to be toasted adjacent to said faces; covers swingingly mounted adjacent to said means and swinging toward and from said means; and a spring extending from one cover to the other and positioned and directioned to be carried to the axis of the hinge with the opening movement of the cover to neutralize the action of the spring on the open cover.

[Claims 6 to 8 not printed in the Gazette.]

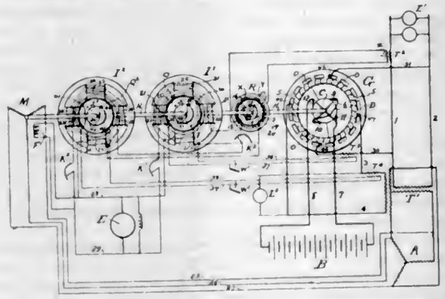
1,105,231. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed July 28, 1906. Serial No. 328,159. (Cl. 171—310.)

1. In combination the field winding of a dynamo electric machine, a source of field excitation sufficient if permanently applied to the field winding to produce excessive field strength, means for intermittently connecting the source to the field winding, said means comprising a stationary contact adjustable in position, and a rotating contact of irregular shape such that a change in the adjustment of the stationary contact will vary the number of contacts in a given time between the two, and means for adjusting the position of the stationary contact.



2. In combination, a storage battery, a booster, an electrical circuit, make and break device operatively independent of changes in the electrical condition of the circuit and adapted to apply intermittently to the booster field a voltage sufficient if permanently applied to provide booster excitation in excess of the operative requirements, means responsive to such changes and adapted to control the make and break device to vary the polarity and relative duration of make and break, and a condenser connected across the terminals of the booster field.

1,105,232. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed Apr. 20, 1909. Serial No. 490,988. (Cl. 171—311.)



1. In combination, a poly-phase source, a load unequally distributed between the phases, a storage battery, and means for taking energy from a lightly loaded phase, storing said energy in the battery during a portion of each cycle and delivering said energy to a more heavily loaded phase during the remainder of each cycle.

2. In combination, a poly-phase source, a single phase work circuit supplying a fluctuating load connected to one phase of the source, a storage battery, rectifying apparatus connected between the battery and all phases of the source, and adapted to receive a constant amount of energy from the phases other than the working phase and to transmit energy to or from the working phase varying with the fluctuations of load thereon, and to transmit the surplus to or from the battery to maintain constant load equally distributed on all phases of the source.

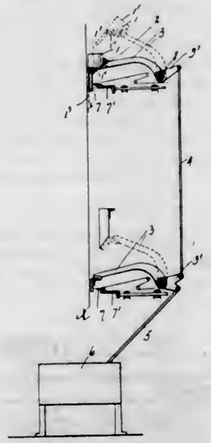
3. An alternating current source and its circuit, a fluctuating load supplied thereby, a storage battery a magnetic circuit all parts of which are relatively fixed, a winding on said magnetic circuit, a commutator connected to said winding, two sets of relatively displaced brushes bearing upon said commutator whereof one set is connected to the storage battery while the brushes of the other set are interconnected by a separate conducting circuit, means for producing relative rotation of brushes and commutator in synchronism with the source, appropriate connections from the winding to the alternating current circuit, a plurality of coils in inductive relation, whereof some are connected in series between the winding and the circuit, and means for transmitting through the others alternating currents of predetermined value in synchronism with the source.

4. An alternating current source and its circuits, a fluctuating load supplied thereby, a storage battery, a magnetic circuit all parts of which are relatively fixed, a winding on said magnetic circuit, a commutator connected to said winding, two sets of relatively displaced brushes bearing upon said commutator whereof one set is connected to the storage battery while the brushes of the other set are interconnected by a separate conducting circuit, means for producing relative rotation of brushes and commutator in synchronism with the source, appropriate connections from the winding to the alternating current circuit, a plurality of coils in inductive relation, whereof some are connected in series between the winding and the circuit, means for transmitting through the others alternating currents in synchronism with the source, and means independent of the load for controlling said currents.

5. An alternating current source, and its circuit, a fluctuating load supplied thereby, a storage battery a magnetic circuit all parts of which are relatively fixed, a winding on said magnetic circuit, a commutator connected to said winding, two sets of relatively displaced brushes bearing upon said commutator whereof one set is connected to the storage battery while the brushes of the other set are interconnected by a separate conducting circuit, means for producing relative rotation of brushes and commutator in synchronism with the source, appropriate connections from the winding to the alternating current circuit, a plurality of coils in inductive relation, whereof some are connected in series between the winding and the circuit, means for transmitting through the others alternating currents in synchronism with the source, and two means for controlling said currents whereof one is independent of the load and the other is responsive thereto.

[Claims 6 to 11 not printed in the Gazette.]

1,105,233. EMBROIDERING-MACHINE. ROBERT ZAHN, Plauen, Germany; Alfred Rietzsch administrator of said Zahn, deceased. Filed Jan. 23, 1913. Serial No. 743,845. (Cl. 112—7.)



1. In a jacquard embroidering machine, the combination with embroidering needles, of an inlay or filling feeding device, comprising storage receptacles for containing inlay or filling pieces and jacquard controlled means for conveying the said inlay pieces into the range of the embroidering needles.

2. In a jacquard embroidering machine, the combination with embroidering needles, of an inlay or filling feeding device, comprising stationary storage receptacles for con-

taining inlay or filling pieces and jacquard controlled means for conveying the inlay pieces from said receptacles into the range of the embroidering needles.

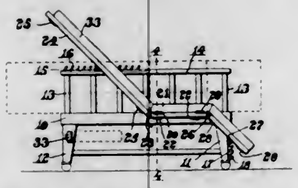
3. In a jacquard embroidering machine, the combination with the embroidering needles, of an inlay or filling feeding device, comprising storage receptacles for containing inlay or filling pieces and jacquard controlled rocking members for bringing the inlay pieces into the range of the embroidering needles.

4. In a jacquard embroidering machine, the combination with embroidering needles, of an inlay or filling feeding device, comprising stationary storage receptacles for containing inlay or filling pieces, there being one receptacle for each embroidering needle, and each having an open bottom, means for normally closing said open bottom and jacquard controlled means for operating said closing means and for conveying the inlay or filling pieces from said receptacles into the range of the said embroidering needles.

5. In a jacquard embroidering machine, the combination with embroidering needles, of an inlay or filling feeding device, comprising stationary storage receptacles for containing inlay or filling pieces, there being one receptacle for each embroidering needle and each having an open bottom, means for normally closing said open bottom and jacquard controlled rocking members for conveying the inlay or filling pieces from said receptacles into the range of the said embroidering needles.

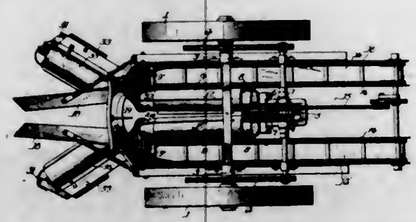
[Claims 6 to 8 not printed in the Gazette.]

1,105,234. RECLINING-CHAIR. JOHN W. R. ANDREWS, Leominster, Mass. Filed Aug. 21, 1912. Serial No. 716,552. (Cl. 155—8.)



In a device of the class described, the combination of two side members, a centrally divided seat portion hinged together and at opposite edges to said side members; a centrally divided back hinged at its lower end by alined hinges to the rear edge of each part of said seat portion; the two parts of said back being hinged together so that the division between the two parts of said seat and said back will be in alinement when said back is moved into a horizontal position; and means for normally retaining said back portion at an angle to said seat portion.

1,105,235. HARVESTER. JOHN F. APPLEBY, Chicago, Ill., assignor to Dixie Cotton Picker Company, Chicago, Ill., a Corporation of South Dakota. Filed Feb. 20, 1911. Serial No. 609,699. (Cl. 56—6.)



1. A harvesting machine including plant product gathering mechanism for operating upon a row of plants; a pair of rake structures, having teeth, supplied in addition to the plant product gathering mechanism and located ahead of the plant product gathering mechanism and carried upon the machine so that each rake structure will diverge from the plant row upon which the plant product gathering mechanism operates and to be close to the ground to be within range of plant product portions that lie loose upon the ground laterally of the row of plants; and means operating while the machine is in forward travel for turning the bottoms of the rake structures toward the plant row to cause the rake teeth to turn transversely with respect to the ground whereby the latter plant product portions may be placed in substantial alinement with the row of plants upon which the machine is operating to enable the plant product gathering mechanism also to gather these latter plant product portions.

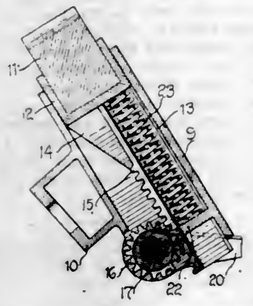
2. A harvesting machine including plant product gathering mechanism for operating upon a row of plants; a rake structure, having teeth, supplied in addition to the plant product gathering mechanism and located upon the machine so as to diverge from the plant row upon which the plant product gathering mechanism operates and to be close to the ground to be within range of plant product portions that lie loose upon the ground laterally of the row of plants; and means operating while the machine is in forward travel for turning the bottom of the rake structure toward the plant row to cause the rake teeth to turn transversely with respect to the ground whereby the latter plant product portions may be placed in substantial alinement with the row of plants upon which the machine is operating to enable the plant product gathering mechanism also to gather these latter plant product portions.

3. A harvesting machine including plant product gathering mechanism for operating upon a row of plants; a rake structure, having teeth, supplied in addition to the plant product gathering mechanism and located upon the machine so as to be close to the ground to be within range of plant product portions that lie loose upon the ground laterally of the row of plants; and means operating while the machine is in forward travel for turning the bottom of the rake structure toward the plant row to cause the rake teeth to turn transversely with respect to the ground whereby the latter plant product portions may be placed in substantial alinement with the row of plants upon which the machine is operating to enable the plant product gathering mechanism also to gather these latter plant product portions.

4. A harvesting machine including plant product gathering mechanism for operating upon a row of plants; a rake structure, having teeth, supplied in addition to the plant product gathering mechanism and located ahead of the aforesaid plant product gathering mechanism and carried upon the machine so as to diverge from the plant row upon which the plant product gathering mechanism operates and to be close to the ground to be within range of plant product portions that lie loose upon the ground laterally of the row of plants; and means operating while the machine is in forward travel for turning the bottom of the rake structure toward the plant row to cause the rake teeth to turn transversely with respect to the ground whereby the latter plant product portions may be placed in substantial alinement with the row of plants upon which the machine is operating to enable the plant product gathering mechanism also to gather these latter plant product portions.

5. A harvesting machine including plant product gathering mechanism for operating upon a row of plants; a rake structure, having teeth, supplied in addition to the plant product gathering mechanism and located ahead of the aforesaid plant product gathering mechanism and carried upon the machine so as to be within range of plant product portions that lie loose upon the ground laterally of the row of plants; and means operating while the machine is in forward travel for turning the bottom of the rake structure toward the plant row to cause the rake teeth to turn transversely with respect to the ground whereby the latter plant product portions may be placed in substantial alinement with the row of plants upon which the machine is operating to enable the plant product gathering mechanism also to gather these latter plant product portions.

1,105,236. HAND-WHEEL LOCKING DEVICE OR BRAKE. FRANKLIN E. ARNDT, Galion, Ohio, assignor to The Galion Iron Works & Manufacturing Company, Galion, Ohio, a Corporation of Ohio. Filed Feb. 28, 1914. Serial No. 821,763. (Cl. 74—13.)



1. A brake of the character described, including a plunger, a casing in which said plunger is movable, the plunger being provided with rack teeth, a pinion meshing with said teeth and journaled in the casing, and a foot treadle on the outside of the casing and connected with said pinion to turn the same.

2. A brake of the character described, including a casing, a plunger movable therein and embodying a rack bar mounted medially of the casing, the casing being provided with a divided ledge through which the rack bar is movable, expansion springs mounted on opposite sides of said rack bar and bearing against the plunger and resting against the ledge, and means for moving said plunger in the casing against the tension of said springs.

3. A brake of the character described, comprising a casing formed near its lower end with a divided ledge, a plunger movable in said casing and including a rack bar movable through said ledge and also including a socket, a brake shoe mounted in said socket, coiled expansion springs mounted within the casing on opposite sides of said rack bar and resting upon said ledge and bearing against the socket, a pinion mounted within the casing and meshing with said rack bar, and means for turning said pinion whereby to move the plunger in the casing against the tension of said springs.

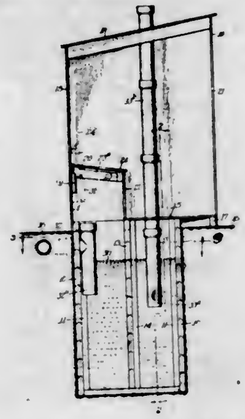
4. A brake of the character described, comprising a casing, a plunger movable therein and consisting of a casting having a socket at one end, a bar of I beam formation formed on one edge with teeth, and a brake shoe mounted in the socket, the casing being formed near one end with a divided ledge and the bar being movable through said ledge, a pinion journaled in said casing and meshing with the teeth of said bar, and a foot treadle operatively connected with said pinion and disposed to one side of the casing on the exterior thereof, as and for the purpose set forth.

5. A brake of the character described, including a casing, a plunger movable therein and embodying a rack bar mounted medially of the casing, expansion springs mounted on opposite sides of said rack bar within the casing and bearing against the plunger, and reacting against portions of the casing, and means for moving said plunger against the tension of said springs.

[Claims 6 to 8 not printed in the Gazette.]

1,105,237. EXCRETA-VAULT. BURTON J. ASHLEY, Chicago, Ill. Filed Oct. 2, 1911. Serial No. 652,426. (Cl. 182—10.)

1. The combination with an excreta vault below the surface of the soil, said vault being open and provided with a house covering over the top thereof, a baffle wall dividing the vault into two communicating divisions, an inlet pipe connected with a suitable source of water supply and emptying into one of said divisions within the vault which said division is adapted to receive the incoming excreta, an outlet pipe below the level of said inlet pipe and leading from the other of said communicating divisions of the vault to which the excreta is admitted only as it passes around the baffle wall, a floor portion for one of said divisions and an elevated seat covering said other division, said floor and seat being commonly supported in part by said baffle-wall.



2. The combination of an excreta vault adapted for burial in the soil and for maintaining a body of liquid, an inlet pipe for flushing water entering said vault above the liquid level and turning downwardly below the liquid level, an upwardly extending pipe leading from said vault for maintaining the level of the liquid therein and having a downwardly extending portion below said liquid level, a vertical baffle-wall dividing said vault into communicating inlet and outlet compartments with which said inlet and outlet pipes respectively communicate, a floor portion covering said outlet compartment and an elevated seat covering and communicating directly with said inlet compartment, the floor and seat being commonly supported in part by said baffle-wall, and a vent pipe communicating with said outlet pipe above the liquid level.

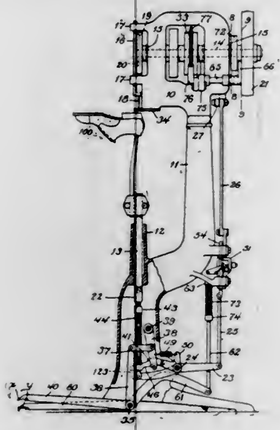
1,105,238. CONTROLLING MECHANISM FOR FASTENER-INSERTING MACHINES. HARRIE A. BALLARD, Somerville, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed May 28, 1906. Serial No. 319,054. (Cl. 1—41.)

1. In a machine of the character described, a frame, a normally retracted jack, a supporting spring for constantly supporting said jack, a treadle, movable means on which said spring rests supported by said frame independently of the treadle, and connections between said treadle and said means whereby the actuation of said treadle moves the spring bodily and thereby moves said jack into operative position, said supporting means and spring when in operative position sustaining the force exerted by the operating mechanism on the work carried by the jack independently of the treadle, whereby the impact on the work is not felt by the operator's foot on the treadle.

2. In a machine of the class described, a normally retracted jack, a treadle which is disconnected from the jack, movable means supported independently of said treadle and the jack and adapted to be actuated by said treadle to raise the jack to operative position, said movable means being adapted when holding said jack in operative position to sustain the force exerted on the work, and a spring on which the jack rests, said spring being supported upon and movable bodily by said movable means to raise said jack.

3. In a machine of the class described, a movable jack for holding the work, a treadle, a spring which supports

the jack, a movable member on which the spring is supported and by which the spring is bodily raised to compress it and to raise the jack, means for supporting said member independently of the treadle, and movable means loosely connected with the treadle for actuating said member.

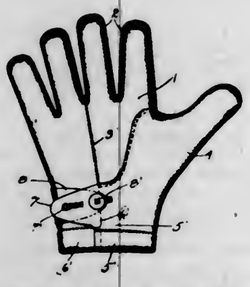


4. In a machine of the class described, a movable jack for supporting the work, a coiled spring sufficiently strong to hold the jack and support the work during the operation thereon, a pivoted member on which the spring is supported and by which the spring is raised to raise the jack, a member pivoted upon the frame of the machine and operating to move said pivoted member, and a treadle having a link connection with the second-mentioned member.

5. In a machine of the class described, a movable jack for the work, means for moving the jack, two treadles arranged side by side, one connected to the jack-moving means and the other being a starting and stopping treadle, said treadles forming a vertical passageway sufficient for the passage therethrough of a foot, and two oppositely disposed ears projecting horizontally, one from each of said treadles toward the other, the ear on the treadle connected to the jack-moving means being normally above and terminating short of the other ear.

[Claims 6 to 15 not printed in the Gazette.]

1,105,239. GLOVE. EDWIN T. BASKIN, Independence, Mo. Filed June 21, 1911. Serial No. 634,539. (Cl. 2—9.)



1. A glove comprising a body member and a thumb member, the body member having finger portions, a palm portion and a wrist portion; said palm and wrist portions having a deep incut in one side, the thumb member having a thumb portion, a ball portion and wrist flaps; said ball portion being open at one side and secured to the palm portion of the body member, strap extensions of unequal length on the wrist flaps, adapted to lie on each side of the wrist portion of the body member, and fastening devices on said strap extensions for securing the glove to the wrist.

2. A glove comprising a body member consisting of a single piece of material cut to form wrist, palm and finger portions, with the stock for the first and fourth fingers left uncut and folded at the center thereof, and with portions of the second and third fingers lying adjacent the free ends of said member; the free ends of said member and the free edges of the finger portions being stitched, and a thumb member consisting of a single piece of material cut to form thumb, ball and wrist portions, folded at the center thereof and stitched along the free edges of the thumb portion; the free edges of the ball portion being stitched to the free edges of the palm portion, for the purpose set forth.

1,105,240. DISPLAY-COVER AND GUARD FOR BOXES. MEYER BAYUK, Glenside, Pa. Filed July 15, 1913. Serial No. 779,097. (Cl. 217—58.)



1. A cover for a box supplemental to the lid thereof provided with laterally turned ears rigid thereon for connection with the sides of said lid and rendering said cover movable with said lid on the hinge of the latter, said ears being connected by a reinforcing plate on said cover.

2. A supplemental cover for a box composed of transparent material, and ears on the rear thereof, said ears being adapted to engage the sides of the lid of the box thereby connecting said cover with said lid and constituting the hinge of the lid as that of said cover and a longitudinally extending rim on the rear of the frame of the cover the same having said ears connected therewith.

3. A supplemental cover for a box composed of transparent material, a longitudinally extending rim on the rear of the frame of said cover, and inturned ears connected with said rim, said ears being adapted to be fitted on the sides of the lid of the box thereby connecting said cover with said lid, the hinge of the latter being common to said cover.

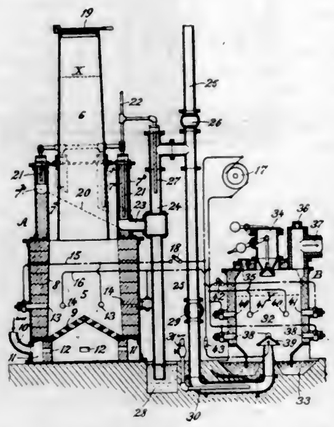
1,105,241. METHOD OF AND APPARATUS FOR PRODUCING GAS. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Jan. 13, 1913. Serial No. 741,796. (Cl. 48—65.)

1. A method of producing gas, which consists in disassociating a gas producing body, washing the gas, and passing the gas through a zone of carbonaceous material heated and maintained at a high temperature by the passage of an electric current therethrough whereby CO_2 carried by the gas is converted into 2CO.

2. A method of producing gas, which consists in disassociating a gas producing body such as sawdust, washing out therefrom such substances as may be absorbed or condensed by water, passing the gas through a zone of carbonaceous material heated and maintained at a high temperature by the passage of an electric current therethrough and converting the CO_2 carried by the gas into 2CO.

3. A method of producing gas, which consists in disassociating a gas producing body to form CO and CO_2, washing the gas to separate tar and ammonia therefrom, then passing the gas through a zone of carbonaceous material heated to and maintained at a high temperature by the passage of an electric current therethrough, and converting the CO_2 of such gas into 2CO.

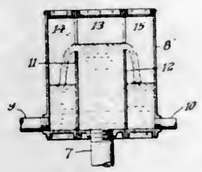
4. A method of producing gas, which consists in disassociating a gas producing body to form CO and CO_2, washing the substances from such gas which may be absorbed or condensed by water, then passing the gas through a zone of carbonaceous material heated to and maintained at a high temperature by the passage of an electric current therethrough, converting the CO_2 by the addition of carbin into 2CO, and then adding to the originally produced gas, the gas derived from the highly heated carbonaceous material.



5. A method of producing gas, which consists in burning sawdust in a closed suction produced, washing the gas set free to remove therefrom all matters which may be absorbed or condensed by water, passing the gas through a suction regenerator or recuperator containing a zone of carbonaceaus material heated to and maintained at a high temperature by the passage of an electric current.

[Claims 6 to 13 not printed in the Gazette.]

1,105,242. DISTRIBUTER FOR SUPPLY-WATER TO FEED-WATER HEATERS. WILLIAM F. BILYEU, Riverton, N. J., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Oct. 28, 1913. Serial No. 797,730. (Cl. 137—78.)



1. In a device of the character stated, a casing having an inlet and a plurality of outlets, said outlets being respectively adapted for connection with separate feed water heaters of different capacity, a plurality of division partitions in said casing forming an inlet chamber having communication with said inlet, and a plurality of supply chambers having communication respectively with said outlets, each of said partitions being provided with a weir, and all of said weirs being located at the same level, said partitions being constructed to entirely prevent, flow of water from one chamber to another below said weirs, and said weirs having crest lengths respectively proportionate to the capacities of the feed water heaters with which the outlets have communication.

2. In a device of the character stated, a casing having an inlet and a plurality of outlets, said outlets being respectively adapted for connection with separate feed water heaters of different capacity, a plurality of removable division plates in said casing forming an inlet chamber having communication with said inlet and a plurality of supply chambers having communication respectively with said outlets, each of said plates having a weir therein at the same distance from the bottom of the plate, said plates being adapted to entirely prevent communication between said chambers below said weirs, said weirs having crest lengths respectively proportionate to the capacities of said feed water heaters, and said crest lengths being substantially constant irrespective of the head of supply water.

1,105,243. PROCESS FOR PRODUCING PLATES, FILMS, OR PELLICLES DETACHABLY SECURED TO A PAPER BACKING OR THE LIKE. JULES BLONDEL and ALEXIS CHOPIN, Paris, France. Filed Mar. 17, 1913. Serial No. 754,949. (Cl. 91—69.)



A method of making plates or films, which consists of coating a support at certain portions with a substance which is non-adhesive with respect to the film material, leaving interspaces between said portions and applying the film material over said non-adhesive material and interspaces.

1,105,244. PROCESS FOR EXTRACTING VANADIUM FROM VANADIUM ORES. HAROLD BOERICKE, Newmire, Colo. Filed Mar. 27, 1912. Serial No. 686,706. (Cl. 75—17.)

1. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with sodium chlorid and a metallic compound of sulfur and applying heat, but without volatilizing the vanadium and permitting the sodium to unite with the vanadium forming a soluble sodium vanadate.

2. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with a haloid salt and an iron compound of sulfur and applying heat.

3. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with a haloid salt and iron sulfate and applying heat.

4. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with sodium chlorid and heating sufficiently in the presence of a metallic compound of sulfur to free the sodium and chlorin, without volatilizing the vanadium, and permitting the sodium to unite with the vanadium forming a soluble sodium vanadate.

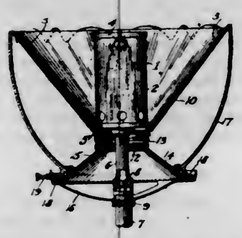
1,105,245. PROCESS FOR EXTRACTING VANADIUM FROM VANADIUM ORES. HAROLD BOERICKE, Vanadium, Colo. Filed Jan. 20, 1914. Serial No. 813,154. (Cl. 75—17.)

1. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with sodium chlorid and heating sufficiently in the presence of sulfur to free the sodium and chlorin, without volatilizing the vanadium, and permitting the sodium to unite with the vanadium forming a soluble sodium vanadate.

2. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with sodium chlorid and a compound of sulfur and applying heat, but without volatilizing the vanadium and permitting the sodium to unite with the vanadium, forming a soluble sodium vanadate.

3. The process of extracting vanadium from vanadium ores, which consists in mixing the said ore with sodium chlorid and a non-metallic compound of sulfur and applying heat, but without volatilizing the vanadium and permitting the sodium to unite with the vanadium, forming a soluble sodium vanadate.

1,105,246. ATTACHMENT FOR USE WITH INCANDESCENT GAS-LAMPS. TRAVERS S. BROWNE, New York, N. Y. Filed Jan. 6, 1912. Serial No. 669,851. (Cl. 240—92.)



1. In a device of the character described, the combination with a globe and globe fixture and an incandescent gas lamp positioned within the globe, of a light diffusing reflector fitting within the globe so as to be substantially concealed in the same, a support mounted on the fixture, and tubular connections between the reflector and the support allowing relative movement therebetween.

2. In a device of the character described, the combination with an incandescent gas light, of an inverted cone-shaped light-diffusing member having walls opaque to light positioned to surround the gas light and direct its rays upwardly against the wall or ceiling, said member having a central threaded flange, and a cone-shaped support having a central threaded flange on which the light-diffusing member is movably mounted so that its position relatively to the gas light may be varied.

3. In a device of the character described, the combination with an incandescent gas light, of a globe, a globe-supporting bracket, a cone-shaped support mounted on the bracket having a central threaded flange, an inverted cone-shaped light-diffusing member arranged to set within the globe having walls opaque to light and provided with a central threaded flange adapted to thread in the flange of the support, the light-diffusing member being positioned so as to surround the gas light and acting to direct its rays upwardly against the wall or ceiling.

4. In a device of the character described, the combination with a globe and globe fixture and an incandescent gas lamp positioned within the globe, of a cone-shaped support having downwardly flaring walls mounted on the globe fixture, a flange on the support, a cone-shaped light-diffusing reflector arranged within the globe, and a central flange on the reflector adapted for movable connection with the flange of the support.

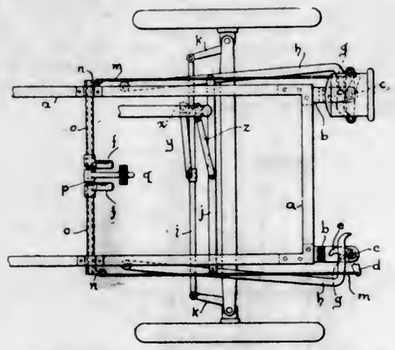
5. In a device of the character described, the combination with an incandescent gas light, of an inverted cone-shaped light-diffusing member having walls opaque to light, a cone-shaped support, and connections between the light-diffusing member and the support forming a walled passage of a diameter less than the diameter of the member or the support.

[Claims 6 to 9 not printed in the Gazette.]

1,105,247. HEADLIGHT CONTROL. FLOYD E. BUMP and STEWART J. BARKMAN, Fenton, Mich. Filed Mar. 16, 1914. Serial No. 824,905. (Cl. 240—62.)

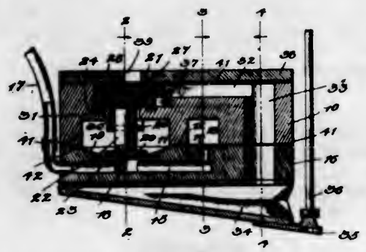
1. The combination with a chassis provided with running gear and steering gear, of a dirigible head-light, an arm attached thereto, a lever provided with a pin, and means for automatically returning the head-light to initial position when the pressure of the pin against the arm is relieved, the said lever and pin being arranged to wipe the said arm and move outward with respect thereto for the purpose of decreasing the rate of turn toward the later stages of the turning.

2. The combination with a chassis provided with running gear and steering gear, of a pair of dirigible headlights, an arm on each headlight, a pair of levers pivoted to the chassis, each one being provided with a pin that wipes the inside face of the adjacent arm, connections between the pair of levers and the steering gear, and means for automatically returning the headlights to initial position when the pin is withdrawn.



3. The combination with a chassis provided with running gear and steering gear, of a pair of dirigible headlights, each being provided with two arms, a pair of levers pivoted to the chassis, each being provided with a pin that wipes the inside face of the adjacent arm, connections between the pair of levers and the steering gear, connections running from the other arms of the dirigible lights to a position adjacent the driver, so that the lights may be also controlled by the driver, and spring means for causing the arms of the dirigible lights to follow the pins as they are retracted.

1,105,248. PNEUMATIC ACTION FOR MUSICAL INSTRUMENTS. PAUL I. BURKS, Louisville, Ky. Filed Sept. 24, 1913. Serial No. 791,447. (Cl. 84—178.)

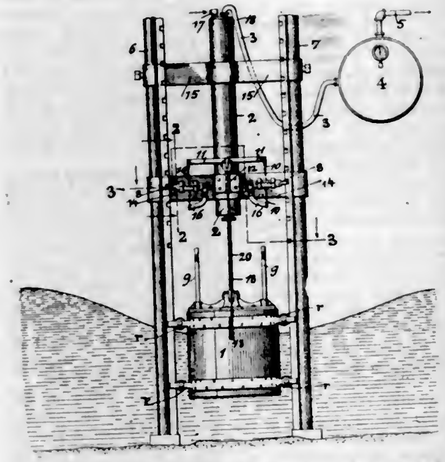


1. In a pneumatic valve action, the combination of a base section provided with a tracker-duct and a depression communicating with said tracker-duct, a diaphragm extending over said depression, an intermediate section having its under-face provided with a main suction channel located over said diaphragm, and having a valve chamber formed in its upper face communicating with said channel by means of an opening forming a valve seat, a valve within said chamber and supported by said diaphragm to coact with said valve seat, the under-face of said intermediate section being further provided with a bleed channel communicating with said tracker-duct of said base section, and a top section placed over said intermediate section, and provided with an opening over said valve.

2. In a pneumatic valve action, the combination of a base section provided with a tracker-duct and a depression communicating with said tracker-duct, a diaphragm extending over said depression, an intermediate section having its under-face cut away to provide a main suction channel located over said diaphragm and having a valve chamber formed in its upper face and communicating with said channel, a valve seat formed integral with the bottom wall of said chamber, a valve within said chamber and supported by said diaphragm to coact with said valve seat, the under-face of said intermediate section being further provided with a bleed channel communicating with said tracker-duct of said base section, and a top section placed over said intermediate section and provided with an opening over said valve and communicating with said longitudinal passage.

3. In a pneumatic valve action, the combination of a base section, provided with a tracker-duct and a depression communicating with said tracker-duct, a diaphragm extending over said depression, a pneumatic carried upon the lower face of said base section, said base being further provided with a vertical passage communicating with said pneumatic, an intermediate section having its under face cut away to provide a main suction channel located over said diaphragm and having a valve chamber formed in its upper face and communicating with said channel, a valve seat formed integral with the bottom wall of said chamber, a valve within said chamber and supported upon said diaphragm and coacting with said valve seat, said intermediate section being provided with a vertical passage communicating with said passage of said base section, the under face of said intermediate section being further provided with a bleed channel intermediate of said suction chamber and said vertical passage communicating with said tracker-duct of said base section, said bleed chamber being free from communication with said suction chamber, the upper face of the intermediate section being provided with a longitudinally extending passage connecting said first-mentioned vertical passages with said valve chamber, and a top section placed over said intermediate section and provided with an opening over said valve and communicating with said longitudinal passage.

1,105,249. TIDE-MOTOR. JAVIER LUIS BUSTOS, Santiago de Chile, Chile. Filed June 27, 1913. Serial No. 776,149. (Cl. 253—10.)



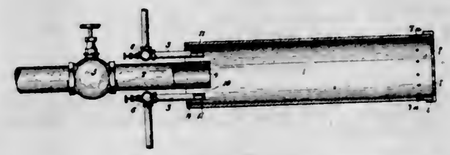
1. A tide-motor, comprising upright posts anchored to the bottom of the sea, a float guided thereon, an air-compressing pump supported on said upright posts, means for locking the pump to said posts, means for releasing the pump from said posts by the upward motion of the float, and means for returning the pump by the downward motion of the float.

2. A tide-motor, comprising fixed upright guide-posts, a float guided thereon, an air-pump supported slidingly on said upright posts, means for locking the pump to said posts, means for releasing the pump from said posts by the upward motion of the float, means for returning the pump with the downward motion of the float, a receiver for the air compressed by the pump, and a flexible valved tube between the pump and receiver.

3. A tide-motor, comprising upright posts anchored to the bottom of the sea and provided with notches, a float guided thereon, an air-compressing pump guided in a cross-bar, a cross-bar attached to the lower portion of the pump, a cross-bar attached to the posts for guiding the upper portion of the pump, spring-bolts in the ends of the lower cross-bar, means between the float and the spring-bolts of the lower cross-bar for releasing them and lifting the pump with the float, a lever-mechanism connected with the spring-bolts, and a chain between said lever-mechanism and the float for releasing the spring-bolts and returning the pump with the float into lowermost position.

4. A tide-motor, comprising a pair of notched posts anchored into the bottom of the sea, a float guided on said posts, an air-compressing pump above the float, a cross-bar for guiding the upper end of the pump, a cross-bar attached to the lower end of the pump, spring-bolts in the ends of the lower cross-bar adapted to engage the notches of the posts, fulcrumed levers connected with the spring-bolts, forked rods on the float for engaging the levers, withdrawing the spring-bolts and raising the pump, a lever-mechanism supported on the lower cross-bar, chains connecting said lever-mechanism with the fulcrumed levers and a chain connecting the lever-mechanism with the float for releasing the spring-bolts and returning the pump with the float into lowermost position.

1,105,250. GAS-BURNER. JOHN E. CARNAHAN, Canton, Ohio. Filed May 18, 1912. Serial No. 698,106. (Cl. 158—109.)



A gas burner including a mixing tube having a distributing baffle at its forward end, and having its rear-end open, a gas pipe of less diameter than the mixing tube, having its forward-outlet end open and inserted a substantial distance into and within the rear-inlet end of the mixing tube forming an annular channel around the inserted end of the gas pipe, and one or more steam pipes having their discharge ends inserted a substantial distance into and within said annular channel and terminating short of the gas pipe.

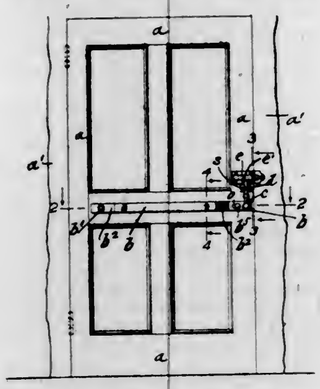
1,105,251. METHOD OF OXIDIZING STEEL OR IRON SHEETS. JOHN E. CARNAHAN, Canton, Ohio. Filed June 9, 1913. Serial No. 772,489. (Cl. 148—41.)

The process of oxidizing steel or iron sheets consisting in first bluing the sheets by an oxidizing process, then heating the sheets in an annealing box to a dark red and introducing steam into the annealing box and cooling the sheets therein in the presence of the steam.

1,105,252. SAFETY ATTACHMENT FOR DOORS. EMIL CARSTENS, New York, N. Y. Filed Sept. 27, 1912. Serial No. 722,686. (Cl. 70—120.)

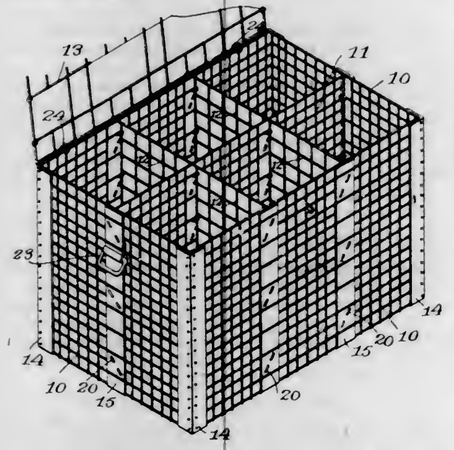
1. A safety attachment for doors comprising a bow-shaped spring bar adapted for application to a door face, means for securing one end of said spring bar thereto, a support which permits a longitudinal sliding movement of the other end of said spring bar, a bolt secured to said door immediately adjacent to the slidable end of said spring bar and provided with an actuator, and a lever fulcrumed to said door adjacent to said bolt and to the slidable end of said bar, said lever being engaged by said spring bar and being operative to engage said actuator to retract said bolt when pressure is exerted on said spring bar.

2. A safety attachment for doors comprising a bow-shaped spring bar adapted for application to a door face, means for securing one end of said spring bar thereto, a support which permits a longitudinal sliding movement of the other end of said spring bar, a latch bolt secured to said door, a locking bolt secured to said door, both said



bolts being immediately adjacent to the slidable end of said spring bar and being provided respectively with actuators, and a lever fulcrumed to said door adjacent to said bolts and to the slidable end of said bar, said lever being engaged by said spring bar and being operative to engage said actuators to retract said bolts when pressure is exerted on said spring bar.

1,105,253. SHIPPING-CRATE. CLARENCE CARVILL, Clinton, Mass. Filed Sept. 23, 1913. Serial No. 791,732. (Cl. 220—111.)

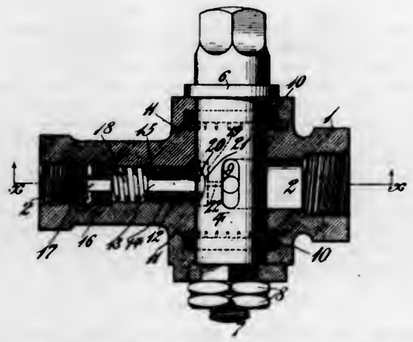


1. A shipping crate for milk cans formed of metallic mesh fabric having partitions forming separate compartments therein, and having a cover permanently attached thereto, said cover being formed of mesh fabric, with certain of the strands omitted, and having strips of sheet material interwoven with the fabric in the position where the strands were omitted, to protect the closures of the cans from dirt and moisture.

2. A shipping crate having in combination, body members, central and transverse partitions forming compartments therein, and connecting means for joining said partitions to said body members, said connecting means comprising a strip of sheet material passed vertically through the meshes of one of said parts and U-shaped staples diagonally crossing a strand of one of said partitions and securing it firmly to said strip.

3. In a shipping crate in combination, metallic mesh body members and partitions, and connecting means therefor, said means comprising a strip of sheet material interwoven in the mesh of one of said body members and diagonally disposed U-shaped staples embracing a strand of a partition and of one of the other parts and securing them both rigidly to said strip.

1,105,254. VALVE-PACKING. SAMUEL S. CASKEY, Philadelphia, Pa., assignor to Caskey Valve Company, Philadelphia, Pa., a Corporation of New York. Filed Jan. 12, 1910. Serial No. 537,688. (Cl. 137—7.)



1. In a device of the character stated, a casing having an opening therein, a bore therethrough and an exhaust bore, a rotatable plug in said opening having a passage therethrough and a branch therefrom, a packing seated in said plug the latter having a port leading from the passage to a point back of said packing, and a sealing bushing in the bore of said casing, said bushing abutting the plug in one position thereof and abutting said packing in another position of said plug and said packing adapted to seat on the wall around the exhaust bore when said bushing is abutting the plug.

2. In a device of the character stated, a casing having an opening therein, a bore therethrough and an exhaust bore, a rotatable plug in said opening having a passage therethrough and a branch therefrom, a packing seated in said plug, the latter having a port leading from the passage to a point back of said packing, and a sealing bushing in the bore of said casing, said packing adapted to seat on the wall around the exhaust bore in one position of the plug and said bushing abutting said packing in another position of the plug, said bushing being forced up against said packing by the pressure fluid in the valve whereby said bushing will be tightly held against the packing.

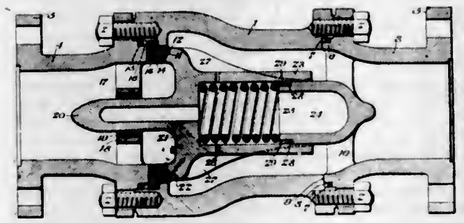
3. In a device of the character stated, a casing having an opening therein, a bore therethrough and an exhaust bore, a sealing bushing in the bore of said casing and in one position of the plug adapted to abut the same and to be forced thereagainst by the pressure fluid, packing between the bushing and the casing, a plug rotatably seated in said opening having a passage therethrough and a branch therefrom and a recess in the side opposite the branch, a port leading to said recess, a packing seated in said recess and adapted to seat on the wall around the exhaust bore in one position of the plug and to co-act with the sealing bushing in another position of the plug, whereby the sealing bushing will prevent leakage should the packing be forced inwardly by the pressure fluid.

4. In a device of the character stated, a casing having an opening therein, a bore therethrough and an exhaust bore, a rotatable plug in said opening having a passage therethrough and a branch therefrom, a movable means carried by said plug adapted to be actuated by pressure fluid to assist in preventing leakage between the plug and

casing, said plug having a port leading from the passage to a point back of said movable means and a sealing bushing in the bore of said casing, said bushing abutting the plug in one position thereof and abutting said movable means in another position of said plug and said movable means adapted to seat on the wall around the exhaust bore when the bushing is abutting the plug.

5. In a device of the character stated, a casing having an opening therein, a bore therethrough and an exhaust bore, a rotatable plug in said opening having a passage therethrough and a branch therefrom, a movable means carried by said plug adapted to be actuated by pressure fluid to assist in preventing leakage between the plug and the casing and a sealing bushing in the bore of said casing, said bushing abutting said plug in one position thereof and abutting said movable means in another position of said plug, and said movable means being adapted to seat on the wall around the exhaust bore when the bushing is abutting the plug.

1,105,255. CHECK-VALVE. SAMUEL S. CASKEY, Philadelphia, Pa., assignor to Caskey Valve Company, Philadelphia, Pa., a Corporation of New York. Filed Feb. 14, 1910. Serial No. 543,790. (Cl. 137—32.)

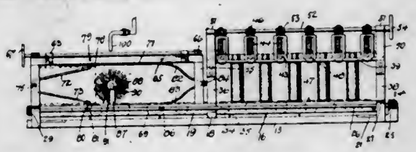


1. In a device of the character stated, a body portion, extensions secured to said body portion, a valve seat removably secured with respect to said body portion, a closure having a stem with a chamber, a tubular extension forming a chamber and having a port through the wall thereof, and with which chamber the chamber of said stem communicates, a hub having a chamber carried by one extension and adapted for sliding engagement with said tubular extension, with the chamber thereof in communication with the chamber of said tubular extension, said port being adapted to retard the escape of fluid from all of said chambers and compressible means to maintain said closure normally in contact with said seat.

2. In a device of the character stated, a body portion, extensions secured to said body portion, packing between each extension and said body portion, a valve seat removably secured with respect to said body portion, packing between said seat and body portion, a closure having a stem with a chamber, a tubular extension forming a chamber and having a port through the wall thereof, and with which chamber the chamber of said stem communicates, a hub having a chamber carried by one extension and adapted for sliding engagement with said tubular extension, with the chamber thereof in communication with the chamber of said tubular extension, said port being adapted to retard the escape of fluid from all of said chambers, a guide for said stem for insuring proper movement of said closure, and compressible means for normally holding said closure in contact with said seat.

1,105,256. BOX-FLAP GLUING AND SEALING MACHINE. CHARLES W. CASTO, Washington, Pa., assignor of one-half to Henry Finkel, Washington, Pa. Filed Mar. 6, 1914. Serial No. 823,040. (Cl. 93—6.)

1. A box flap gluing and sealing machine comprising a flap extending and closing mechanism, means for laterally and vertically adjusting said mechanism, a box flap sealing mechanism, means for vertically and laterally adjusting said sealing mechanism, glue applying means associated with said box flap extending and closing mechanism, means for conveying a box through said mechanisms, and resilient and rotatable retaining elements for the box while being conveyed.



2. A box flap gluing and sealing machine comprising adjustable flap extenders, adjustable flap closers arranged in operative relation with respect to the extenders, glue applying devices positioned between the extenders and closers, two sets of flap sealing elements, means for laterally adjusting one of said sets, means for conveying a box to be engaged by said extenders, openers and elements, resilient and rotatable retaining elements for the box while being conveyed, said rotatable retaining elements formed of two sets, means for vertically adjusting said resilient retaining element, and means for vertically adjusting one of the sets of said rotatable retaining elements.

3. A box flap gluing and sealing machine comprising flap extenders, flap closers, means for applying glue to the flaps after extended and prior to the action of the closers upon the flaps, means for conveying a box to have its flap acted upon by said extenders, glue applying means and closers, a sealing mechanism arranged rearwardly of said closers and including two sets of rotatable sealing elements, means for adjusting one of said sets, retaining elements for said box while being conveyed, and means for vertically adjusting said retaining elements.

4. A box flap gluing and sealing machine comprising an upper and a lower set of transversely extending rollers, two sets of vertically disposed rollers, box flap opening-glue applying and box flap closing mechanism arranged in advance of said rollers, means for laterally and simultaneously adjusting said mechanism and one set of vertical rollers, and means for vertically adjusting said upper set of transverse rollers.

5. A box flap gluing and sealing machine comprising an upper and a lower set of transversely extending rollers, two sets of vertically disposed rollers, box flap opening-glue applying and box flap closing mechanism arranged in advance of said rollers, means for laterally and simultaneously adjusting said mechanism and one set of vertical rollers, means for vertically adjusting said upper set of transverse rollers, and means for conveying a box through said mechanism and between said sets of rollers.

[Claims 6 and 7 not printed in the Gazette.]

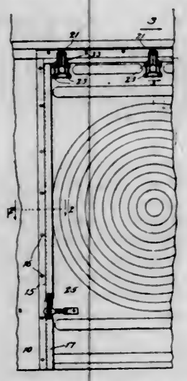
1,105,257. CAR-DOOR MECHANISM. JOSEPH F. COMEE, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Filed Jan. 13, 1913. Serial No. 741,709. (Cl. 20—22.)

1. In car door mechanism, the combination with a door stop and a projecting part against which the front edge of the door will abut when in closed position, of a sliding door provided at its front edge with an outwardly and rearwardly projecting part forming a rearwardly open channel extending from top to bottom of the door, said channel being movable freely into engagement with and disengagement from said door stop.

2. In car door mechanism, the combination with a door stop having an outwardly and rearwardly extending part, of a sliding door having at its front edge a part projecting outwardly and rearwardly from the door and forming a rearwardly open channel, said part being adapted to slide freely into and out of engagement with the rearwardly projecting flange of the door stop.

3. In car door mechanism, the combination with a door stop having an outwardly and rearwardly projecting flange extending from top to bottom of the door, of a sliding door having at its front edge a part projecting outwardly and rearwardly from the door and forming a rearwardly

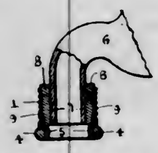
open channel extending from top to bottom of the door, said part being freely movable into and out of engagement with the rearwardly projecting flange of the door, the rear flange of said door stop being outwardly flared.



4. In car door mechanism, the combination with a door stop comprising a vertically disposed Z-bar having an outwardly projecting flange or member and a rearwardly projecting flange or member, and a sliding door having at its front edge a rearwardly open U-shaped metal part comprising an outwardly extending flange or member and an integral rearwardly extending flange or member, said part of the front edge of the door being arranged to move freely inside the rearwardly projecting flange of said Z-shaped bar.

5. In car door mechanism comprising the combination of a door stop having a rearwardly extending flange, of a sliding metal door having its front edge opened outwardly and then rearwardly to form a rearwardly open channel-shaped part arranged to slide freely into and out of engagement with the rearwardly extending flange of said door stop.

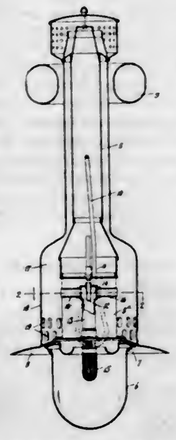
1,105,258. FAUCET-GUARD. LOUIS A. CORNELIUS, Grand Rapids, Mich. Filed May 12, 1913. Serial No. 767,183. (Cl. 137—4.)



In a device of the character described, a tube adapted to be secured to a faucet's nozzle and having on its internal wall a shoulder and a packing member carried on the shoulder, and having on its exterior wall an annular groove and an annular buffer held in the groove, the portion of the tube which forms the shoulder on the inside forming also a portion of the groove on the outside.

1,105,259. INVERTED INCANDESCENT LAMP. PRESTON DAVIES, London, England, assignor to Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany, a Corporation of Germany. Filed Oct. 16, 1913. Serial No. 795,479. (Cl. 67—94.)

1. An inverted incandescent gas or vapor lamp comprising a chimney for the escape of the combustion products and adapted to produce suction, said chimney being divided at its lower end into two separate chimney tubes, a globe located below said chimney tubes and substantially closed for preventing the entrance of secondary air, a mixing tube located between said two chimney tubes and extending into the globe, said mixing tube being provided with openings for supplying air thereto by means of the suction of the chimney, an incandescent mantle carried by said mixing tube, an injector tube at the upper end of the mixing tube and of less diameter than the latter, and a nozzle adapted to deliver a mixture of air and gaseous or vaporized fuel to said injector tube.



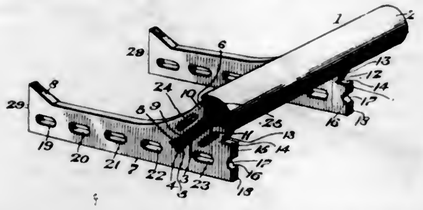
2. An inverted incandescent gas or vapor lamp comprising a chimney for the escape of the combustion products and adapted to produce suction, said chimney being divided at its lower end into two separate chimney tubes, a globe located below said chimney tubes and substantially closed for preventing the entrance of secondary air, a mixing tube located between said two chimney tubes and extending into the globe, said mixing tube being provided with openings for supplying air thereto by means of the suction of the chimney, an incandescent mantle carried by said mixing tube, a chamber surrounding said mixing tube and connected with the outer air, an injector tube at the upper end of the mixing tube and of less diameter than the latter, and a nozzle adapted to deliver a mixture of air and gaseous or vaporized fuel to said injector tube.

3. An inverted incandescent gas or vapor lamp comprising a chimney for the escape of the combustion products and adapted to produce suction, said chimney being divided at it its lower end into two separate chimney tubes, a globe located below said chimney tubes and substantially closed for preventing the entrance of secondary air, a mixing tube located between said two chimney tubes and extending into the globe, an incandescent mantle carried by said mixing tube, transverse tubes located between the chimney tubes and connected with the mixing tube and with the atmosphere, an injector tube at the upper end of the mixing tube and of less diameter than the latter, and a nozzle adapted to deliver a mixture of air and gaseous or vaporized fuel to said injector tube.

1,105,260. METAL-BOUND CURBING. ANTHONY ELTON DAVIS, Philadelphia, Pa., assignor, by direct and mesne assignments, to Clip Bar Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 24, 1914. Serial No. 820,406. (Cl. 94—2.)

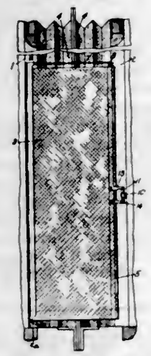
In curbing, a mass of concrete shaped to the face of the curb, a metal corner-bar therefor inserted in said mass of concrete and having a head 2 positioned at the corner of said mass, an integral web 3 extending rearwardly on the axial plane of said head and connected with the sides of said head by obtusely-angled lines, and an integral longitudinal dove-tailed terminal 4 along the inner edge of said web, whereby said corner bar is interlocked with said mass of concrete, in combination with an anchor having a body and pockets as 19, 21, 22 and 23, said pockets 22 and 23 being located on each side of said dove-tailed terminal 4, and said anchor being provided

with upwardly inclined arms 10 and 11 extending on each side of said web, said arms having an opening between them conforming to the shape of said web, and having pockets 24 and 25 located therein on each side of said web, said anchor being also provided at its outer edge with an upper pocket 12 having inclined walls, and



a curved pocket 17, all of said pockets being adapted for the reception of cement, the outer end terminals 15 and 18 of said anchor being flush with the vertical wall of said curbing and being adapted to facilitate the proper positioning of the anchors and curb bar during the act of setting the same.

1,105,261. AUTOMATIC RELEASE MECHANISM FOR VESTIBULE-CURTAINS. JAMES H. DONALDSON, Chicago, and BENJAMIN T. LEWIS, deceased, Chicago, Ill., by Minnie C. Lewis, executrix, La Grange, Ill. Original application filed Apr. 17, 1911, Serial No. 621,667. Divided and this application filed May 9, 1914. Serial No. 837,385. (Cl. 105—266.)



1. In combination, a car vestibule door post, a curtain roller mounted on said post, a device including a catch on the free end of the curtain for securing it to the door post on an adjoining car, a flexible member connected at one end to the post on which the curtain roller is mounted at a point above the curtain, a guide on the free end of the curtain over which said flexible member passes, and means on said flexible member for engaging with said catch and tripping the same when the curtain is drawn out a predetermined distance.

2. In combination, a car vestibule door post, a curtain roller mounted on said post, a device on the free end of the curtain for securing it to the door post on an adjacent car, a catch for maintaining said device in an operative position, a flexible member connected at one end to the door post on which the curtain roller is mounted, a guide at the free end of the curtain over which said flexible member passes, and means on said flexible member for engaging with said catch and tripping the same when the curtain is drawn out a predetermined distance.

3. In combination, a car vestibule door post, a curtain roller mounted on said door post, a curtain on said roller, said curtain having a tubular stiffening member extending along its free edge, a flexible member secured to the aforesaid door post and extending into said tube, a securing device at the free end of the curtain for connecting the curtain to the vestibule door post of an adjacent car, and means on said flexible member for releasing said securing device.

4. In combination, a car vestibule door post, a curtain roller mounted on said door post, a curtain connected at one end to said roller, a tubular stiffening member along the free edge of the curtain, a flexible member secured at one end to said door post and extending at its other end into said tubular member, a fastening device for the free end of said curtain including a catch projecting into said tubular member adjacent to a portion of said flexible member, and means on said flexible member for tripping said catch when the curtain is drawn out a predetermined distance.

1,105,262. WIRE BED-BOTTOM FABRIC. FRANK P. DOOLEY, Chicago, Ill. Filed Apr. 13, 1914. Serial No. 831,511. (Cl. 245—5.)



1. A wire fabric including a plurality of adjacent rows of adjacent units, each unit being in the form of a V-shaped loop having straight sides, which sides terminate, where farthest apart, in hooks, and which sides are joined at their ends opposite the hooks by a minor loop having crossed sides and inturned toward the hooks and affording two separated bights between its sides and the aforesaid sides of the larger loop, these bights formed in each fabric unit of each row being engaged by the hooks in which the adjacent sides of adjacent fabric units in an adjacent row terminate, the sides of each fabric unit in each row forming with the adjacent sides of adjacent fabric units in an adjacent row connected therewith by the hooks of the first fabric unit figures of substantially diamond shape.

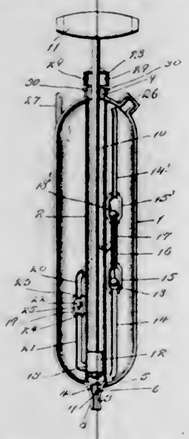
2. A wire fabric including a plurality of adjacent rows of adjacent units, each unit being in the form of a V-shaped loop having sides, which sides terminate, where farthest apart, in hooks, and which sides are joined at their ends opposite the hooks by a minor loop having crossed sides and inturned toward the hooks and affording two separated bights between its sides and the aforesaid sides of the larger loop, these bights formed in each fabric unit of each row being engaged by the hooks in which the adjacent sides of adjacent fabric units in an adjacent row terminate, the sides of each fabric unit in each row forming with the adjacent sides of adjacent fabric units in an adjacent row connected therewith by the hooks of the first fabric unit figures of substantially diamond shape.

3. A wire fabric including a plurality of adjacent rows of adjacent units, each unit being in the form of a V-shaped loop having straight sides, which sides terminate where farthest apart, in hooks, and which sides are joined at their ends opposite the hooks by a minor loop having crossed interlocked sides and inturned toward the hooks and affording two separated bights between its sides and the aforesaid sides of the larger loop, these bights formed

in each fabric unit of each row being engaged by the hooks in which the adjacent sides of adjacent fabric units in an adjacent row terminate, the sides of each fabric unit in each row forming with the adjacent sides of adjacent fabric units in an adjacent row connected therewith by the hooks of the first fabric unit figures of substantially diamond shape.

4. A wire fabric including a plurality of adjacent rows of adjacent units, each unit being in the form of a V-shaped loop having sides, which sides terminate, where farthest apart, in hooks, and which sides are joined at their ends opposite the hooks by a minor loop having crossed interlocked sides and inturned toward the hooks and affording two separated bights between its sides and the aforesaid sides of the larger loop, these bights formed in each fabric unit of each row being engaged by the hooks in which the adjacent sides of adjacent fabric units in an adjacent row terminate, the sides of each fabric unit in each row forming with the adjacent sides of adjacent fabric units in an adjacent row connected therewith by the hooks of the first fabric unit figures of substantially diamond shape.

1,105,263. PORTABLE FIRE-EXTINGUISHER. JOSEPH W. DURKEE, New York, N. Y., assignor to Pyrene Manufacturing Company, a Corporation of Delaware. Filed Jan. 7, 1911. Serial No. 601,490. (Cl. 169—17.)

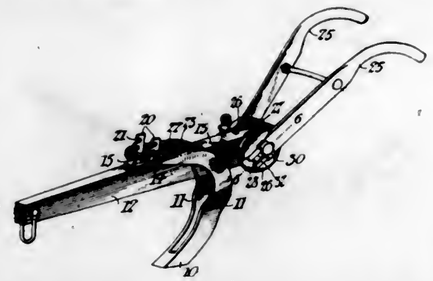


A portable fire extinguisher of the kind described having a receptacle provided with a valved nozzle, a cylinder and piston, spaced valve casings to either side and adjacent the transverse center of said receptacle, an intermediate pipe connecting said casings, suction pipes connected to said casings, a rod working in said intermediate pipe and connecting said valves, and a valved pipe connected at one end to said cylinder adjacent said nozzle and at the other end to said intermediate pipe at a central point thereof, the valve in said pipe being designed to prevent a return flow through said pipe.

1,105,264. PLOW. DAVID H. FLOYD, Atlanta, Ga. Filed July 12, 1913. Serial No. 778,659. (Cl. 97—26.)

1. A plow having a beam, a standard pivoted thereto and having a forwardly extending arm, a slide carried by said beam and having a series of recesses therein, a projection on said arm adapted to enter any one of said recesses and hold said arm in adjusted position in respect to said beam, and means for locking said slide against relative movement in respect to said beam.

2. A plow having a beam, a slide upon the upper surface thereof and having an upwardly extending bracket provided with recesses in the front edge thereof, a plow standard secured to said beam and relatively movable in respect thereto, said standard having a portion projecting adjacent said bracket and adapted to enter into any one of said recesses to lock said share in adjusted position relative to said beam.

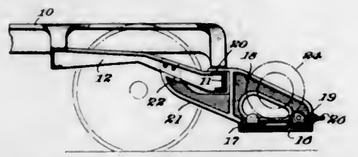


3. A plow having a beam, provided with a slide upon the upper surface thereof, said slide having an upwardly extending bracket provided with recesses in the front edge thereof, a plow standard secured to said beam and relatively movable in respect thereto, said standard having a portion projecting adjacent said bracket, and adapted to enter into any one of said recesses to lock said standard in adjusted position relative to said beam, and means for locking said slide against movement.

4. A plow having a beam, a slide upon the upper surface thereof, and having an upwardly extending bracket provided with recesses in the front edge thereof, a plow standard secured to said beam and relatively movable in respect thereto, said standard having a portion projecting adjacent said bracket and adapted to enter into any one of said recesses upon the proper relative movement of said standard and slide to lock said standard in adjusted position relative to said beam, and an eccentric in engagement with said slide for moving the latter and locking the same against movement.

5. A plow having a beam, provided with a slide upon the upper surface thereof, said slide having an upwardly extending bracket provided with recesses in the front edge thereof, a plow standard pivotally secured to said beam and having a portion projecting forwardly along said standard and terminating adjacent said bracket and having a projection adapted to enter into any one of said recesses to lock said standard in adjusted position relative to said beam, and means for locking said slide against movement.

1,105,265. SUPPORT FOR AXLE-DRIVEN LIGHT-GENERATORS. CHARLES F. FREDE, St. Louis, Mo., assignor to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 5, 1913. Serial No. 765,662. (Cl. 105—238.)



1. An axle driven light generator support comprising a plate, and brackets on the ends thereof, which brackets extend rearwardly from the plate and are adapted to interlock with a truck frame.

2. An axle driven light generator support comprising a plate, brackets on the ends thereof, which brackets extend rearwardly from the plate and are adapted to interlock with a truck frame, and a dynamo base plate adjustably mounted on the first mentioned plate.

3. An axle driven generator support comprising a plate, brackets on the ends thereof, parts of which brackets are adapted to engage over and be attached to a part of a truck frame and other parts of which brackets are adapted to engage beneath and be attached to parts of the truck frame.

4. An axle driven light generator support comprising a plate, brackets on the ends thereof, which brackets extend rearwardly from the plate and are adapted to interlock with a truck frame, a dynamo base plate arranged for sliding movement upon the first mentioned plate, and means for adjusting the position of said dynamo base plate.

5. An axle driven light generator support comprising a plate, brackets on the ends thereof, which brackets extend rearwardly from the plate and are adapted to interlock with a truck frame, a dynamo base plate arranged for sliding movement upon the first mentioned plate, means for adjusting the position of said dynamo base plate, and means for locking the dynamo base plate to the first mentioned plate after said dynamo base plate has been adjusted in position.

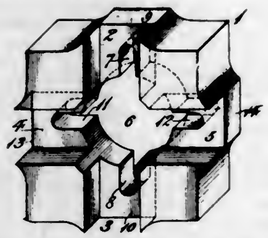
[Claims 6 to 11 not printed in the Gazette.]

1,105,266. BUTTON FOR UNIFORMS. CHARLES FREDERICK GAUNT, Birmingham, England. Filed Nov. 20, 1912. Serial No. 732,559. (Cl. 24—90.)



A button consisting of a filigree body and a shank in the form of a plurality of loops or staples having their legs secured to a plurality of separated portions of the reverse side of the filigree design, and such legs having extensions of the points of connection and conforming to the portions of the design to which they are secured.

1,105,267. INSULATING-BLOCK. ARMOND EDGAR GOETZ, New York, N. Y. Filed Dec. 31, 1913. Serial No. 809,594. (Cl. 247—12.)

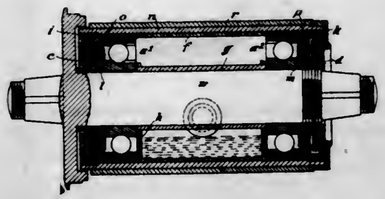


1. As an improved article of manufacture, an insulating block comprising a body portion having vertical and horizontal recesses in the back thereof, a central opening therethrough, and diametrically located recesses extending horizontally and vertically through said central opening.

2. The herein described construction of insulating block having a suitable body portion provided with vertical recesses 2 and 3 therein, horizontal recesses 4 and 5 therein, said recesses being in the rear of said block, a central opening 6 in said block, and vertical and horizontal recesses 7, 8, and 11, 12 respectively, located in the body of said block.

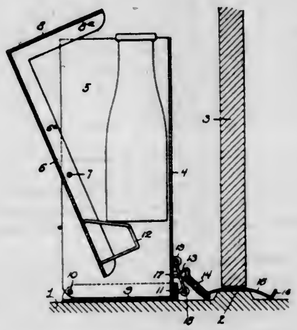
3. The herein described construction of insulating block having a suitable body portion provided with vertical recesses 2 and 3 therein, horizontal recesses 4 and 5 therein, said recesses being in the rear of said block, a central opening 6 in said block, and vertical and horizontal recesses 7, 8, and 11, 12, respectively, located in the body of said block, in combination with a casing inclosing the outer edges of said block.

1,105,268. BALL-BEARING. MAX GOHLKE, Pankow, near Berlin, Germany. Filed Apr. 26, 1912. Serial No. 693,342. (Cl. 64—36.)



In a bicycle bearing, the combination of inner and outer concentric ball race rings, a distance sleeve between said outer ball race rings adapted to hold said ball race rings apart, a bushing surrounding said distance sleeve and said ball race rings, a frame socket adapted to receive said bushing, corresponding cylindrical perforations in said frame socket and said bushing, a pin screwed into said distance sleeve through said perforations and having a conical head, and a split ring having a cylindrical outer face and a conical inner face and adapted to be inserted in said perforations and to be pressed by said conical head of said pin against the cylindrical walls of said perforations.

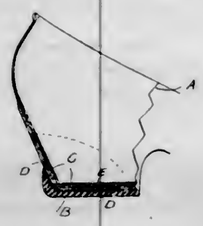
1,105,269. MILK-BOTTLE HOLDER. PETER A. GOOD, Philadelphia, Pa. Filed Jan. 29, 1913. Serial No. 744,891. (Cl. 232—42.)



1. The combination of a door and door frame, with a milk bottle holder having a body with pivoted front carrying the top of the holder and having an internally projecting cam which, by engagement with an inserted bottle, locks said front and top members in closed position, said holder also having a drop bottom, and means permanently connected to the body of the holder and under control of the door whereby when the door is closed said bottle holder is anchored vertically in position upon the door step.

2. The combination of a milk bottle holder having a drop bottom with an inflexible anchor plate connected thereto and constructed to bridge the door sill and to position between the same and the bottom of the closed door, said anchor plate having at its inner end a projecting flange which permits the door to swing over it but prevents withdrawal of the plate when the door is closed.

1,105,270. RUBBER FOOTWEAR. LOUIS J. GROSKY, Cleveland, Ohio. Filed Jan. 5, 1914. Serial No. 810,282. (Cl. 36—5.)



1. The combination with an article of rubber foot wear of a scoop-shaped reinforcing device embedded in the bottom and walls of the heel portion and having openings therethrough into which the rubber projects.

2. The combination with a rubber overshoe, of a scoop-shaped reinforcing device embedded in the bottom and wall of the heel portion and having openings therethrough filled with the rubber, of the contiguous portions of the overshoe, forming in effect rubber rivets through the reinforcing device.

3. The combination with a rubber overshoe, of a scoop-shaped unyielding reinforcing device having a bottom and an integral wall rising from the sides thereof and embedded in the heel portion of the overshoe and having openings through the bottom and side walls, said openings being filled with the rubber of the contiguous parts.

4. The combination with a rubber overshoe, of a metal reinforcing device consisting of a bottom and an integral wall rising from the sides and rear thereof, and having openings through the bottom and wall and being embedded in the bottom and wall of the heel portion of the overshoe, said openings being filled with the rubber of the contiguous layers of the overshoe, the rubber of said layers coming together within the openings and being vulcanized.

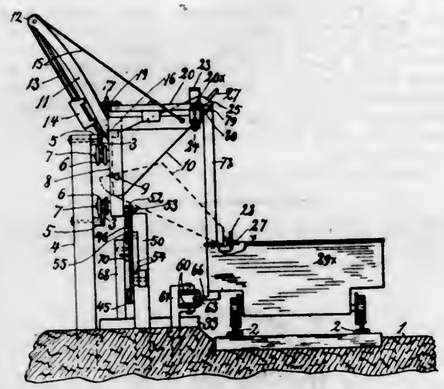
5. The combination with a rubber overshoe, of a scoop-shaped metallic reinforcing device embedded in the bottom and wall of the heel portion of the overshoe and having openings therethrough, said openings being filled with the rubber of contiguous parts, the surface of said reinforcing device being roughened by oxidation to permit vulcanizing the rubber thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,105,271. COALING DEVICE FOR TRAINS IN MOTION. GUST HALL, St. Frances township, Anoka county, Minn. Filed Dec. 23, 1912. Serial No. 738,251. (Cl. 214—1.)

1. The combination with a main track and a car arranged to move thereon and provided with two lateral actuating arms, of an inclined and at its highest end laterally diverging side track near one side of the main track, a carriage movable on the side track and having a pivotally mounted goods-delivering dumping device, a self-locking trip holding the dumping device in normal position, means connected with the carriage for one of the actuating arms to engage and at a gradually increasing speed start the carriage before the car overtakes it; said trip being positioned to be engaged by the second actuating arm on the car when the car has got into position for receiving the goods from the carriage.

2. The combination with a main track and a car arranged to move thereon and provided with two lateral actuating arms, of an inclined and at its highest end laterally diverging side track near the main track, a carriage movable on the side track and having a pivotally mounted dumping device, a self-locking trip holding the dumping device in normal position, means connected with the carriage for one of the actuating arms to engage and at a gradually increasing speed start the carriage before the car overtakes it; said trip being positioned for engagement by the second actuating arm on the car when the car has got into position for receiving the goods from the dumping device; said carriage and the means by which the moving car operates it being returnable to normal position by the weight of the carriage and the inclined position of the side track, and a cushioned buffer for stopping the carriage at its return to normal position.



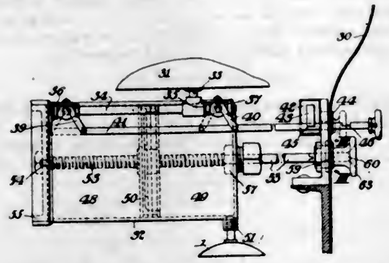
3. In a device of the class described, the combination of a main track and an inclined side track adjacent thereto, a goods-delivering carriage movable on the side track and having a dumping device and a trip holding the same ready for dumping, a car movable on the main track and having an actuating arm arranged to act on the trip and dump the contents of the dumping device into the car, said arm having a vertical movement to allow the carriage to rise and fall with the incline of the side track, and means on the carriage to engage said arm and cause it to so remain in active position or relation to the trip.

4. The combination with a main track and a car arranged to move thereon and provided with two lateral actuating arms, of an inclined and at its highest end laterally diverging side track near the main track, a carriage movable on the side track and having a pivotally mounted dumping device, a self-locking trip holding the dumping device in normal position, means connected with the carriage for one of the actuating arms to engage and at a gradually increasing speed start the carriage before the car overtakes it; said trip being positioned for engagement by the second actuating arm on the car when the car has got into position for receiving the goods from the dumping device; said carriage and the means by which the moving car operates it being returnable to normal position by the weight of the carriage and the inclined position of the side track, and a cushioned buffer for stopping the carriage at its return to normal position.

5. The combination with a main track and a car arranged to move thereon and provided with two lateral actuating arms, of an inclined and at its highest end laterally diverging side track near the main track, a carriage movable on the side track and having a pivotally mounted dumping device, a self-locking trip holding the dumping device in normal position, means connected with the carriage for one of the actuating arms to engage and at a gradually increased speed start the carriage before the car overtakes it; said trip being positioned for engagement by the other actuating arm on the car when the car has got into position for receiving the goods from the dumping device; said carriage and the means by which the moving car operates it being returnable to normal position by the weight of the carriage and the inclined position of the side track, cushioned means for stopping the carriage at its return, and automatically acting means for locking the carriage in the returned position.

[Claims 6 to 12 not printed in the Gazette.]

1,105,272. AUTOMOBILE FUEL-TANK. WILLIAM H. HOLLAR, Philadelphia, Pa. Filed Apr. 12, 1910. Serial No. 554,965. (Cl. 158—46.5.)



1. The combination of a main tank, an auxiliary tank, a conduit therebetween, means for cutting off communication through said conduit, means for locking said cutting off mechanism against unauthorized use, means for varying the working volume of said auxiliary tank, and means for locking said varying means in any one of several adjusted positions.

2. The combination of a main tank, an auxiliary tank, a conduit therebetween, a cut off plug in said conduit, means for locking said plug, a piston operating in said auxiliary tank, and means for locking said piston against unauthorized use in any one of several positions to vary the working volume of said tank.

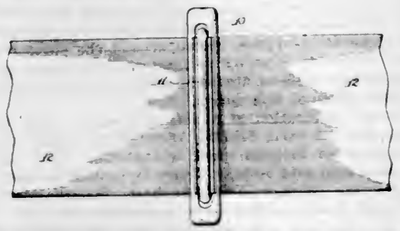
3. The combination of a main tank, an auxiliary tank, a conduit therebetween, means for cutting off communication through said conduit, means for positively varying the working volume of said auxiliary tank, including a rotatable screw shaft in said auxiliary tank and a diaphragm threaded on said shaft, and means for locking said varying means in any one of several adjusted positions.

4. The combination of a main tank, an auxiliary tank, a conduit therebetween, a cut off valve in said conduit, and means for positively varying the working volume of said auxiliary tank, including a movable diaphragm and means for rigidly securing said diaphragm in adjusted position in said auxiliary tank.

5. The combination of a main tank, an auxiliary tank, a conduit between them, means for varying the working volume of said auxiliary tank, and means for locking said varying means in any one of several positions of adjustment.

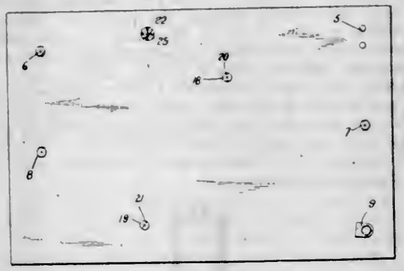
[Claims 6 and 7 not printed in the Gazette.]

1,105,273. BELT-FASTENING DEVICE. CHARLES C. HOWELL, Red Rock, Pa. Filed Aug. 23, 1913. Serial No. 786,283. (Cl. 24—31.)



In a device for fastening the ends of belts, the combination of a metal loop having a wedge-shape opening or slot each side wall of which is pitched at a different inclination, said loop having ribs at the upper ends of the side walls extending for a short distance from each end of the loop, and a wedge-plate having a lower bulged portion and an upper head portion with shoulders at the lower ends of said head portion, as herein shown and for the purpose set forth.

1,105,274. GAME APPARATUS. JAMES F. HUGHES, Yonkers, N. Y. Filed Feb. 19, 1914. Serial No. 819,617. (Cl. 46—61.)



1. Golf game apparatus adapted to be placed upon the playing surface and comprising a base to rest upon the playing surface, two uprights projecting upwardly from the base and spaced apart to permit a ball to pass between them and means for pivotally sustaining the uprights so that they may be turned to any angular position, substantially as set forth.

2. Golf game apparatus adapted to be placed upon the playing surface and comprising a base to rest on the playing surface and two uprights projecting upwardly from the base and spaced apart so that a ball may pass between them, said base being perforated to permit of pivoting it upon the playing surface so that it may be turned to any angular position, substantially as set forth.

3. Golf game apparatus comprising a thin metallic disk adapted to be placed upon the playing surface and two uprights extending upwardly from the base at diametrically opposite points, said uprights being spaced apart to permit a ball to pass between them and said disk being provided with centrally located means for pivoting it upon the playing surface so that it may be turned to any angular position, substantially as set forth.

4. Golf game apparatus adapted to be placed upon the playing surface and comprising a base to rest upon the playing surface, means located centrally upon the base for pivotally mounting the latter on the playing surface so that it may be turned to any angular position and an upright wall extending across the base substantially diametrically and having its ends deflected laterally; substantially as set forth.

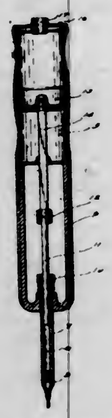
5. Golf game apparatus comprising a thin metallic disk adapted to be placed upon the playing surface and provided with centrally located means for pivoting it upon the playing surface so that it may be turned to any angular position and two uprights projecting upwardly from the base and spaced apart to permit a ball to pass between them, each of the uprights having the sides thereof inclined relatively to a diameter of the disk; substantially as set forth.

1,105,275. HYPODERMIC SYRINGE. RAYMOND E. INGALLS, Seattle, Wash. Filed May 27, 1913. Serial No. 770,167. (Cl. 128—25.)

1. In a device of the class described, the combination with a hollow cylinder, of a piston disposed within said cylinder, of a piston rod attached to said piston, a valve-controlled passage-way to admit fluid under pressure into said cylinder, a bracket associated with one end of said cylinder, said bracket comprising a pair of oppositely-disposed arms of a length substantially equal to the length of said cylinder, a finger hold formed on the lower end of said bracket, a smaller cylinder associated with the lower end of said bracket, a plunger disposed to reciprocate within said smaller cylinder, a second finger hold constituting a connection between the piston rod and the plunger, and a perforated needle provided on the outer end of said smaller cylinder.

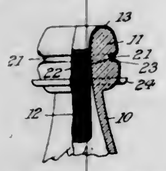
2. In a device of the class described, the combination with a bored cylinder provided with suitable heads, of a

piston disposed within said cylinder and adapted to be moved therein, a piston rod attached to said piston and arranged to extend outwardly through the lower head of said cylinder, controllable means for admitting compressed air into said cylinder through the upper end thereof, an extension bracket fixed to that end of said cylinder through which said piston rod projects outwardly, and a hypodermic syringe secured to the other end of said bracket, said syringe comprising a small cylinder, a plunger rod movable within said small cylinder and connected with said piston rod whereby movement of said piston shall cause movement of said plunger rod, and a finger hold associated with said plunger rod whereby said plunger rod may be moved.



3. In a device of the class described, a frame comprising a pair of oppositely-arranged side bars, a cylinder of large diameter carried by the upper end of said frame, a cylinder of small diameter carried by the lower ends of said frame, a piston disposed within said large cylinder, a piston rod adapted to project through the lower end of said cylinder, a plunger rod disposed within said small cylinder and connected with said piston rod, a finger hold associated with both said piston rod and said plunger rod, and a valve controlled passage-way to admit fluid under pressure into said large cylinder.

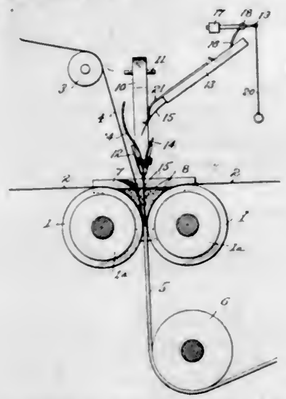
1,105,276. SAFETY-CLOSURE FOR CONTAINERS OF INFLAMMABLE LIQUIDS. MAX JASPER, Berlin, Germany. Original application filed Sept. 18, 1912, Serial No. 720,940. Divided and this application filed Dec. 17, 1912. Serial No. 737,175. (Cl. 220—121.)



1. A bottle adapted to contain inflammable liquids, provided with a heat conductive cap that extends from the interior of the bottle head downwardly over the outer face thereof, to inclose said head, said cap constituting a stopper-seat, a stopper adapted to engage said seat, a heat conductive cribrate member that is attached to the cap and depends from the inner end thereof into the neck of the bottle, and means for irremovably securing the cap to the bottle head, whereby a withdrawal of the cribrate member from the interior of the bottle is prevented in the closed as well as in the open position of the stopper.

2. A bottle adapted to contain an inflammable liquid combined with a heat conductive cap that snugly embraces the exterior of the bottle-head and extends downwardly into the interior of said head, a heat conductive cribrate member depending from the inner end of the cap into the bottle-neck, and means for irremovably securing the cap to the bottle-head whereby the cribrate member is likewise irremovably secured to said head and a removal of the cap and cribrate member from the bottle without destroying cap-securing means is rendered impossible.

1,105,277. MACHINE FOR MAKING METAL-REINFORCED ROOFING. FRANC J. JEWETT, New York, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Oct. 18, 1913. Serial No. 796,078. (Cl. 154—1.)



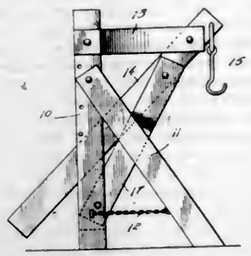
1. The combination of a pair of pressure rolls, cheek pieces for the same forming therewith a liquid cement receptacle, means for feeding sheets of metal down between said rolls and through said receptacle, and means for applying a folded ribbon of fabric along the edge of said metal sheet as it enters said receptacle, together with means for feeding webs of fibrous material between said rolls and said metal sheets, whereby the edges of the ribbon folded around the edges of the metal sheets are cemented to them and overlapped by the edges of the sheets of fibrous material which are cemented to the exterior of said ribbon.

2. The combination of a pair of pressure rolls, cheek pieces for the same forming therewith a liquid cement receptacle, means for feeding sheets of metal down between said rolls and through said receptacle, and means for applying a folded ribbon of fabric along the edge of said metal sheet as it enters said receptacle, said last mentioned means comprising a rotatable shaft journaled at right angles to the rolls, on which said ribbon is wound and a hemmer located at the edge of the path of the metal sheet, together with means for feeding webs of fibrous material between said rolls and said metal sheets, whereby the edges of the ribbon folded around the edges of the metal sheets are cemented to them and overlapped by the edges of the sheets of fibrous material which are cemented to the exterior of said ribbon.

3. The combination of a pair of pressure rolls, cheek pieces for the same forming therewith a liquid cement receptacle, an inclined chute for feeding metal sheets located above said rolls, a brake in said chute for controlling the passage of metal sheets therethrough and V-shaped guides located above said rolls and below the end of said chute, together with means for feeding webs of fibrous material between said rolls and metal sheets and means for feeding ribbons of fibrous material through said V-shaped guides.

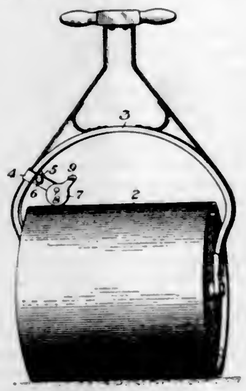
1,105,278. DERRICK. LACY H. JONES, Lewiston, Ill. Filed Apr. 9, 1913. Serial No. 760,021. (Cl. 57—43.)

A derrick comprising a slotted upright, an outwardly extending arm pivoted to the upper end of the upright, a lifting lever pivotally connected near one end to the outer end of the arm and extending through the slot of



the upright, and a pivoted supporting fulcrum link carried in the lower end of the slot of the upright and pivotally connected to the lever below the pivot thereof.

1,105,279. HANDLE-LOCKING DEVICE FOR ROLLERS. GEORGE EMIL KARL, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed Nov. 19, 1913. Serial No. 802,005. (Cl. 55—6.)



1. A roller having a drum, a handle pivoted thereto, and a locking device for locking the handle against movement with relation to the drum; substantially as described.

2. A roller having a drum, a handle pivoted thereto, and a cam pivotally connected to the handle and arranged to engage the drum to lock the two members from movement with relation to each other; substantially as described.

3. A roller having a drum, a handle pivoted thereto, a bracket connected to the handle, and a cam lever pivotally connected to the bracket and arranged to engage the drum; substantially as described.

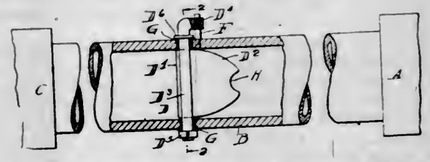
4. A locking device for roller handles, comprising a clamp having jaw members, a bolt for securing said jaw members to each other, and an eccentric cam pivoted to one of said jaw members, substantially as described.

5. A locking device for roller handles, comprising a clamp having jaw members, means for drawing said jaw members to each other, and a locking device connected to one of the jaw members for locking the handle to the roller drum; substantially as described.

1,105,280. AUTOMATIC GOVERNING-VALVE. SAMUEL E. KURTZ, Odebolt, Iowa. Filed July 9, 1909. Serial No. 506,757. (Cl. 50—14.)

1. A regulator valve comprising a passage, a shaft eccentrically mounted therein and having an angular butterfly valve thereon, said valve having wings of different areas.

2. A regulator valve comprising a passage, an angular butterfly valve located eccentrically therein having wings of different actual and different effective areas.



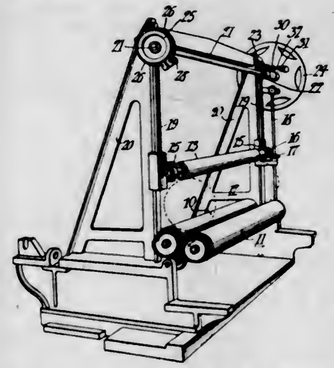
3. A regulator valve comprising a passage, a shaft eccentrically mounted therein and having an angular butterfly valve therein, said valve having wings of different areas, one of said wings being slotted on the side farthest removed from the pivoted point.

4. A regulator valve comprising a passage, a shaft mounted therein having an angular butterfly valve thereon, said valve having wings of different areas and means for preventing the complete closure of one side of the passage of one of said wings.

5. A regulator valve comprising a passage, a shaft mounted therein having an angular butterfly valve thereon, said valve having wings of different effective areas and means for preventing the complete closure of said passage by said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,105,281. PAPER-WINDING MECHANISM. SAMUEL M. LANGSTON, Camden, N. J. Filed Feb. 5, 1913. Serial No. 746,288. (Cl. 242—66.)



1. Winding mechanism including rack bars movable endwise as the roll of material being wound increases in size, gears connected together to rotate simultaneously and intermeshing with said rack bars and adjusting means for rotating one of said gears with respect to the other to secure the uniform application of pressure at both ends of the said roll.

2. Winding mechanism including a bodily movable roller, rack bars operatively connected to the opposite ends of said roller and movable endwise upon said bodily movement, gears rigidly connected together and intermeshing with said rack bar to insure the equal and simultaneous reciprocation of both bars and an adjusting screw for rotating one of said gears on this shaft and in respect to the other gear.

3. Winding mechanism including a bodily movable roller, rack bars movable endwise by the movement of said roller, a shaft, a gear carried thereby and meshing with one of said rack bars, a second gear loosely mounted thereon and meshing with the other of said rack bars, a member fixed on said shaft and adjusting means connecting said fixed member and said loose gear.

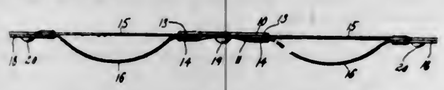
4. Winding mechanism including rack bars movable endwise as the roll of material being wound increases in size.

a shaft, a gear carried thereby and meshing with one of said rack bars, a second gear loosely mounted thereon and meshing with the other of said rack bars, a member fixed on said shaft, and means for locking said second-mentioned gear to said fixed member in circumferentially adjusted position.

5. Winding mechanism including rack bars simultaneously movable endwise upon increases in the size of the roll of material being wound, a shaft, a gear carried thereby and meshing with one of said rack bars, a second gear loosely mounted thereon and meshing with the other of said rack bars, a member fixed on said shaft, spaced lugs carried by said fixed member, a stud carried by said gear and disposed between said lugs, and an adjusting screw for holding said stud in adjusted position between said lugs.

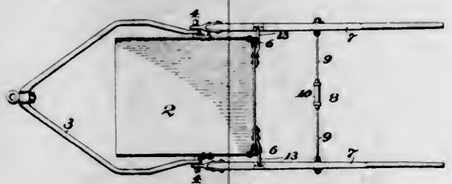
[Claims 6 to 8 not printed in the Gazette.]

1,105,282. GARMENT-SUPPORTER. SAMYL LEIBEL, New York, N. Y. Filed Mar. 14, 1913. Serial No. 754,324. (Cl. 241—8.)



In a garment supporter, the combination with a base plate, of a plurality of resilient bands attached to two parallel edges thereof, the bands attached to each edge being of different lengths, a tab secured to the ends of each set of bands, and fastening devices carried by said tabs and said base plate.

1,105,283. DIRT-SCRAPER. JAMES MACDOUGALL, Phoenixville, Pa. Filed June 21, 1912. Serial No. 704,988. (Cl. 37—40.)

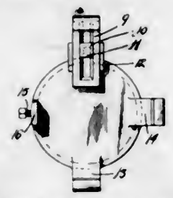


1. In a dirt scraper, a scoop having laterally projecting pivots at each side thereof, a bail pivotally mounted on said pivots, a pair of plates secured to the rear of said scoop and each projecting laterally therefrom, each of said plates having a recess or notch in the extended edge thereof, and also provided with a beveled portion extending from the junction of the top of said plate with the side edge of the scoop, and terminating in said notch or recess, a prong secured to each plate and projecting above the top of the scoop, a pair of handles for said scoop, each of which is movably mounted on one of said pivots and adapted to seat in one of said plate notches, and spring controlled means between said handles for normally holding said handles seated in said notches whereby said scoop and handles are movable together.

2. In a dirt scraper, a scoop having laterally projecting pivots at each side thereof, a bail pivotally mounted on said pivots, a pair of plates secured to the rear of said scoop and each projecting laterally therefrom, each of said plates having a recess or notch in the extended edge thereof, and also provided with a beveled portion extending from the junction of the top of said plate with the side edge of the scoop, and terminating in said notch or recess, a prong secured to each plate and projecting above the top of the scoop, a pair of handles for said scoop, each of which is movably mounted on one of said pivots and adapted to seat in one of said plate notches, a rod secured to one of said handles, a second rod secured to the remaining handle, and spring means between said rods normally holding said handles seated in said notches.

3. In a dirt scraper, a scoop having laterally projecting pivots at each side thereof, a bail movably mounted on said pivots, a pair of plates secured to the rear of said scoop and projecting laterally therefrom at opposite sides of said scoop, each of said plates having a recess or notch in the extended edge thereof, the lower portion of each plate forming the notch projecting beyond the corresponding portion at the upper side of said notch, said plates also provided with a beveled portion extending from the junction of the top of said plate with the side edge of the scoop and terminating at the top of said notch or recess, a prong secured to each plate and projecting above the top of said scoop, a pair of handles for said scoop, each of which is movably mounted on one of said pivots and adapted to seat in one of said plate notches, and spring controlled means normally drawing said handles together to maintain said handles seated in said notches, whereby said scoop and handles are movable together.

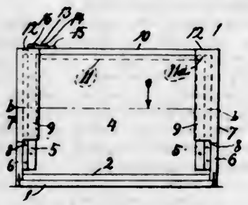
1,105,284. ELECTRICAL OUTLET-BOX AND THE LIKE. ADNAH MCMURTRIE, New York, N. Y., assignor to Thomas & Betts Company, New York, N. Y., a Corporation of New York. Filed Jan. 15, 1906. Serial No. 296,037. (Cl. 247—5.)



1. The combination with an electrical conduit member of the nature of an outlet box, having a seat extending laterally beyond the end of said box, and provided with a guide rib; of an adjustable clamp movable parallel with the base of said box, guided by said rib, to enable attachment of said box to supports of different sizes; and fastening means connecting said clamp with said extended seat portion and operable from outside said box to secure said clamp in adjusted position.

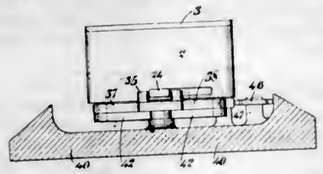
2. The combination with an electrical conduit member of the nature of an outlet box, of adjustable clamping means, to enable adjustable attachment of said box to a suitable support, said clamping means comprising a fixed gripping abutment formed integrally with said box to engage one portion of said support and a movable member to engage another portion of said support and secure said box thereto, substantially as described.

1,105,285. FOLDING BOX OR CRATE. HARRY MCTAVISH, Eldon, Prince Edward Island, Canada. Filed May 23, 1913. Serial No. 769,439. (Cl. 217—15.)



In a folding box, the combination with a bottom, of sections hinged thereto to fold inward upon the bottom and having cleats upon the outer sides of its vertical edges, side sections composed each of a rigid portion secured to the bottom and an upper portion hinged thereto and provided at its ends with grooved cleats in which to receive the cleats of the end sections when the box is set up, a cover adapted to rest upon the ends of the end sections and having cross cleats by which to engage the end sections and prevent their folding, and means for holding said cover in place when the box is set up; the width of said cover being such as to make it fit between the cleats of the end sections when the latter are folded inward and the cover is placed upon them, and the hinged side sections being so held by the rigid side sections as to fold in level position upon the cover and reach substantially together upon the same, and means for holding the hinged side sections in said folded position.

1,105,286. TIME-LOCK. OTTO F. MIETH, Cincinnati, Ohio, assignor, by direct and mesne assignments, to The Ohio Timelock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 27, 1912. Serial No. 693,615. (Cl. 70—26.)



1. In a device of the character specified, the combination with a time lock casing, of bolt actuating devices, a time-controlled releasing bar and a pair of spring actuated locking members, pivotally mounted in the casing, to cooperate when moved in one direction and to act separately when moved in the opposite direction, with means for connecting one member with the bolt actuating mechanism, and the other member with the releasing bar, for locking and unlocking the safe.

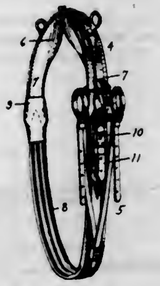
2. In a device of the character specified, the combination with a safe door and locking bolts therefor, with means to prevent actuation of the bolts when retracted, of a time lock casing, a time-controlled releasing bar, a pair of locking members, pivotally mounted in the casing, to coöperate when moved in one direction and to act separately when moved in the opposite direction, with means for connecting one member with the bolt actuating devices, and the other member with the releasing bar, and springs to actuate the locking members when released, whereby the door may be locked upon release of the bolts, and the door may be unlocked by the time actuating mechanism.

3. In a device of the character specified, in combination with a safe door and locking bolts therefor, with means for actuating the bolts, of a pair of locking members, pivotally mounted, one member engaging the bolt actuating means, a catch for locking the other member, a releasing bar under control of the watch movement to release the catch, and a spring to actuate the locking members to retract the locking bolts upon the release of the catch, a dog to lock the bolt actuating means when the bolts are retracted, and means for releasing the dog upon closing the safe door, and a spring for actuating the bolt actuating member to project the bolts when the door is closed.

4. In a device of the character specified, the combination of a casing, a pair of locking members, pivotally mounted in the casing, means for coupling the members together to coöperate when moved in one direction and to act separately when moved in the opposite direction, with separate springs to actuate the members, exerting tension in opposite directions, one spring mounted on one member, the other spring bearing between the casing and said member, whereby one member may be set for actuation without affecting the other member.

5. In a device of the character specified, in combination with a safe door and locking bolts therefor, with means for actuating the bolts, of a pair of locking members, pivotally mounted, one member engaging the bolt actuating means, a catch for locking the other member, a releasing bar under control of the watch movement to release the catch, means for coupling the locking members together to coöperate when moved in one direction and to act separately when moved in the opposite direction, with separate springs to actuate the two members exerting tension in opposite directions, one spring mounted on one member, the other spring bearing between the casing and said member, a dog to lock the bolt actuating means, with pin for releasing the dog projecting from the door, whereby the dog will be released upon closing the door to permit the bolts to be projected by one of the locking members.

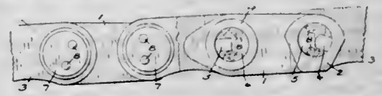
1,105,287. HARNESS SADDLE AND GIRTH. ROY MILLER, Lexington, Ky., and WILLIAM E. SELL, Canton, Ohio, assignors to The Sell Horse Goods Company, Canton, Ohio, a Corporation of Ohio. Filed May 19, 1913. Serial No. 768,418. (Cl. 54—38.)



1. A device of the character described, comprising a harness saddle provided with relatively short skirts, in combination with a relatively long girth of substantially uniform structure and flexibility from end to end and having an inner, smooth, continuous surface, said girth adapted to extend over and upwardly beyond the front flank area of a horse's body on both sides thereof, and adjustable connecting means for connecting the ends of said girth to said skirts in fixed adjustment, above said front flank area, whereby to avoid chafing and irritation of said area, substantially as described.

2. A device of the character described comprising a saddle provided with relatively short skirts in combination with a relatively long, flexible, continuous girth having an inner smooth, surface, said girth adapted to telescopically receive the ends of said skirts, the relative lengths of said skirts and girth being such as to locate the saddle-girth connections substantially at points midway between the ventral and dorsal lines of the horse's body and above the front flank regions.

1,105,288. DRIVE-CHAIN. FRANK L. MORSE, Ithaca, N. Y., assignor to Morse Chain Company, Ithaca, N. Y., a Corporation of New York. Filed June 27, 1908. Serial No. 440,735. (Cl. 74—32.)



1. A drive chain adapted to run upon compensating sprockets and having links composed of side plates, pintles joining said links, rotatable sprocket engaging members on some of said pintles, and non-rotatable members interspersed with said rotatable members upon other pintles of said chain.

2. A drive chain adapted to run upon compensating sprockets and having links composed of side plates, rotatable sprocket engaging members located between said side plates, and other non-rotatable sprocket engaging members interspersed with said rotatable members.

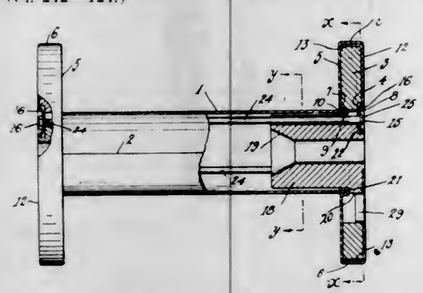
3. A drive chain adapted to run upon compensating sprockets and having adjacent links composed of outside plates and inside plates respectively, pintles connecting said plates, rollers mounted on some of said pintles, and non-rotatable sprocket engaging members interspersed with the rollers upon the other pintles.

4. A drive chain adapted to run upon compensating sprockets and having adjacent links composed of outside plates and inside plates respectively, pintles connecting said plates, and alternate rotatable and non-rotatable sprocket engaging members on said pintles.

5. A drive chain having links composed of side plates, pintles joining said links, rotatable sprocket engaging members on some of said pintles, and rigid heads having bearing faces for engaging straight sided sprockets interspersed with the rotatable members upon other pintles of the chain.

[Claims 6 to 17 not printed in the Gazette.]

1,105,289. BOBBIN. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed July 28, 1913. Serial No. 781,475. (Cl. 242—124.)



1. In a bobbin or spool, the combination of a tubular metallic barrel, plugs in the ends of the barrel and projecting therefrom, annular disks of comparatively soft material surrounding the projecting portions of the plugs, annular metal plates upon the inner faces of the disks, inwardly directed flanges upon the plates embracing the inner margins of the disks, outwardly directed flanges upon the last mentioned flanges in contact with the plugs and forming recesses to receive the ends of the barrel, annular metal plates upon the outer faces of the disks overlapping the ends of the plugs, flanges upon the peripheries of the plates overlapping the disks, and bolts connecting the outer plates.

2. In a bobbin or spool, the combination of a tubular metallic barrel, plugs in the barrel projecting from the ends thereof, wooden disks surrounding the projecting portions of the plugs, annular metal plates upon the inner faces of the disks in contact with the ends of the barrel, annular plates upon the outer faces of the disks overlapping the ends of the plugs, peripheral flanges upon the inner and outer plates overlapping the disks, and bolts connecting the outer plates.

3. In a bobbin or spool, the combination of a tubular metallic barrel, plugs in the barrel projecting from the ends thereof, said ends being provided with enlarged portions, and provided with longitudinal channels, annular wooden disks surrounding the enlarged portions of the plugs, annular metal plates upon the inner faces of the disks provided with seats adapted to receive the ends of the barrel, annular plates upon the outer faces of the disks overlapping the ends of the plugs and provided with openings in their inner margins, flanges upon the peripheries of the inner and outer plates overlapping the disks, and bolts connecting the outer plates passing through the openings and through the channels in the plugs.

4. In a bobbin or spool, the combination of a tubular metallic barrel, plugs in the ends of the barrel projecting beyond the ends of the barrel and provided with longitudinal channels, annular disks upon the projecting portions of the plugs, annular metal plates upon the inner faces of the disks in contact with the ends of the barrel, annular plates upon the outer faces of the disks overlapping the ends of the plugs and provided with openings near their inner margins, said disks and plugs being provided with rectangular depressions, said outer plates being also provided with depressions adjacent the openings and adapted to register with the depressions in the disks and plugs, bolts passing through the openings and through the channels, and heads upon the bolts resting in the depressions of the outer plates.

5. In a bobbin or spool, the combination of a tubular metallic barrel, plugs in the ends of the barrel projecting therefrom, annular disks surrounding the projecting portions of the plugs, annular metal plates upon the outer faces of the disks overlapping the ends of the plugs, flanges upon the peripheries in the inner and outer plates overlapping the disks, bolts connecting the outer plates, said disks being provided with radial cavities, and flanges upon the outer plates frictionally engaging the walls of the cavities.

1,105,290. WELDING-TORCH. EDWARD G. MUELLER, Pittsburgh, Pa. Filed Jan. 30, 1913. Serial No. 745,162. (Cl. 158—109.)



1. A welding torch comprising a hollow handle, a coupling member at one end thereof, an elbow at the opposite end of said handle, a burner carried by said elbow, a casing inclosing the greater part of said burner and in communication with said hollow handle through the medium of said elbow, means for establishing communication between said burner and said coupling member, and means independent of the last mentioned means for circulating a cooling agent throughout said handle and said casing.

2. A welding torch comprising a hollow handle, a coupling member carried by one end thereof, an elbow carried by the opposite end of said handle, a burner supported by said elbow, a casing carried by said elbow and inclosing the greater part of said burner, means arranged concentrically of said handle for establishing communication between said coupling member and said burner, and means extending longitudinally of said handle and said casing for circulating a cooling agent throughout said casing, around said elbow and throughout said handle.

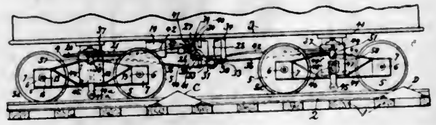
3. A welding torch comprising an inclined hollow handle closed at each end, a burner connected to one end of said handle and disposed at an angle with respect to the latter, means for conducting the constituents of a combustible mixture through the handle to said burner, and means for circulating a cooling medium around said burner and discharging said medium back through said handle.

4. A welding torch comprising an inclined hollow handle closed at each end, a burner connected to one end of said handle and disposed at an angle with respect to the latter, means for conducting the constituents of a combustible mixture through said handle to said burner, a cooling medium conducting pipe extending into said hollow handle and supplying a cooling medium to cool said burner, means for discharging the cooling medium from around the burner back through said handle and an outlet for the cooling medium at the lower end of the handle.

5. A welding torch comprising a coupling member, a sectional hollow handle carried thereby, a burner supported at one end of said handle, means for conducting the constituents of a combustible mixture through said handle to said burner, and means for conducting a cooling medium through said handle and supplying the same to cool said burner, and means whereby said cooling medium is discharged back through said handle for cooling the means for conducting the constituents of the combustible mixture.

[Claims 6 to 17 not printed in the Gazette.]

1,105,291. TRUCK AND AXLE MECHANISM FOR RAILWAY-CARS. MERTON S. MUNN, Stillwater, Minn. Filed Nov. 28, 1913. Serial No. 803,476. (Cl. 105—139.)



1. For operation upon a railway track having a curve and a block fixed near each end of the curve, a car arranged to move on said track and having trucks with axles and wheels; said trucks pivoted underneath the car to turn in passing over curves, a double-acting cylinder fixed underneath the car and having a piston and a piston rod extending therefrom beyond the cylinder, rods operatively connecting the piston rod with the trucks to turn them, a reservoir and means for supplying the reservoir with compressed air, two valves arranged to normally admit compressed air from the reservoir into the two ends of the cylinder, each valve being constructed to shut off the air supply to the cylinder and exhaust air therefrom when turned in a certain position; actuating levers fulcrumed on the trucks arranged to contact with the blocks near the track, and operative connections between said actuating levers and the valves, whereby each valve is alternately turned to active position when the car enters a curve and to idle position when the car leaves the curve.

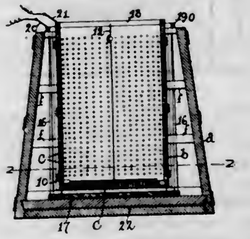
2. For operation upon a railway track having curves to either side from the main track, and blocks fixed outside of each curve, one block near each end thereof, one block being nearer to the track than the other and having each two inclines sloping from the middle of the block toward each end thereof; a car arranged to move in either direction on the track and having swiveled trucks with flanged wheels to roll on the track; a double-acting cylinder fixed transversely underneath the car and having a piston with piston rods extending from both sides of it and out beyond the cylinder, two pairs of bell-crank levers fulcrumed underneath the car and operatively connected one pair with each piston rod, four longitudinal rods arranged two near each side of the car and having each one end pivotally connected with one of the trucks and the other end pivotally connected to one of the bell-crank-levers; means for supplying compressed air into the cylinder, a valve arranged to control the inlet and exhaust of air at each end of the cylinder, four actuating levers mounted one at each side of each truck and arranged to contact with the blocks near the track in the order stated, and operative connections between said actuating levers at each side of the car and the cylinder valve nearest that side of the car; said two levers at each side of the car having at the lower ends each an antifriction wheel, said wheels arranged at each side of the car one to contact with the outer block and the other with the inner block near the side of the track at which they operate; and means for restoring and holding said actuating levers in normal position with sufficient firmness to avoid accidental displacement of them.

3. For operation upon a railway track having curves and blocks fixed near the ends of the curves, a car arranged to move on said track and having trucks with axles and wheels; said trucks pivoted underneath the car to turn in passing over the curves, a double-acting cylinder fixed underneath the car and having a piston and piston rod extending therefrom beyond the cylinder, rods operatively connecting the piston rod with the trucks to turn them, a reservoir arranged to receive compressed air from an air compressor and having a check-valve to prevent return of the air when the compressor is not in active communication with the reservoir; two valves arranged to normally admit compressed air from the reservoir into both ends of the cylinder, each valve being constructed to shut off the air supply to the cylinder and exhaust air therefrom when turned to a certain position; actuating levers carried by the trucks and arranged to contact with the blocks near the track, and operative connections between said actuating levers and the valves, whereby each valve is alternately turned into active position when the car enters a curve and into idle position when the car leaves the curve.

4. For operation upon a railway track having a curve and blocks fixed near each end of the curve, a car arranged to move on said track and having trucks pivoted to turn underneath the car in passing over the curve, said trucks having axles and track wheels thereon, one or both wheels on each axle being revoluble thereon and the axle having a central oil duct with a radial duct for oiling the wheel, and means for closing the central duct at the end of the axle; a truck-turning device carried by the car and having parts arranged to contact with the blocks near the track for the regulation of the action of the device, and means for operating said truck-turning mechanism by compressed air.

5. For operation upon a railway track having a curve and blocks fixed near each end of the curve, a car arranged to move on said track and having trucks pivoted to turn underneath the car in passing over the curve, said trucks having axles and track wheels thereon; one or both wheels on each axle being revoluble thereon, means for oiling said axles in the wheels, a truck-turning device carried by the car and having parts arranged to contact with the blocks near the track for regulating the action of the device, and means for operating the truck-turning device by compressed air, said track wheels having each a cylindrical face and a flange at right angles therewith.

1,105,292. APPARATUS FOR ELECTROPLATING AND THE LIKE. ARTHUR MURPHY, Quincy, Mass. Filed Oct. 22, 1913. Serial No. 796,713. (Cl. 204—11.)



1. In an apparatus of the character described, in combination, a revoluble conical outer vessel, a cylindrical inner perforated vessel, and means interposed between said vessels for connecting them together to permit them to be revolved as one and to permit the inner vessel to be withdrawn from the outer vessel, said means constituting a guide for the inner vessel as it is inserted into and withdrawn from the outer vessel, substantially as described.

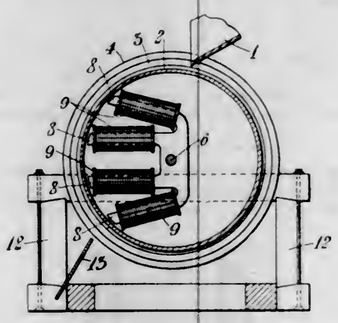
2. In an apparatus of the character described, in combination, a revoluble conical outer vessel, a cylindrical inner perforated vessel, means for connecting the said vessels together to permit them to be revolved as one and to permit the inner vessel to be withdrawn from the outer vessel, a cathode within the perforated inner vessel, and an anode within the outer vessel between it and the perforated inner vessel and removable from the outer vessel without disturbing the inner vessel, substantially as described.

3. In an apparatus of the character described, in combination, a revoluble outer vessel, a perforated vessel located within said outer vessel, and guiding pieces attached to one of said vessels, and grooved strips attached to the other of said vessels for connecting said vessels together to permit them to be revolved as one and to permit the inner vessel to be withdrawn from the outer vessel, substantially as described.

4. In an apparatus of the character described, in combination, a revoluble outer vessel, a perforated vessel located within said outer vessel, means for connecting said vessels together to permit them to be revolved as one and to permit the inner vessel to be withdrawn from the outer vessel, and to guide the inner vessel in its movement into and out of said outer vessel and cathode and anode elements in said vessels and separated from each other, substantially as described.

5. In an apparatus of the character described, in combination, a conical outer vessel open at its top, a cylindrical inner vessel located within the outer vessel and removable therefrom through the open top of the outer vessel, means for revolving the outer vessel, a cathode within the inner vessel, a conducting ring carried by said inner vessel and to which the cathode is connected, and an anode within the outer vessel between it and the inner vessel and removable therefrom without disturbing the inner vessel, and a conducting ring secured to said anode, substantially as described.

1,105,293. MAGNETIC SEPARATOR. HARRY JOHAN HJALMAR NATHORST, Malmberget, Sweden. Filed Mar. 5, 1913. Serial No. 752,027. (Cl. 83—71.)

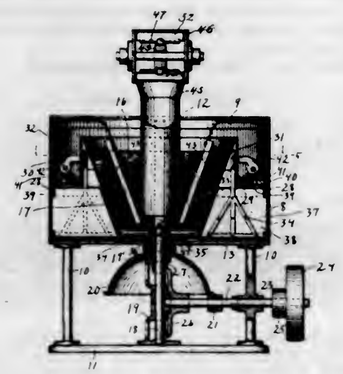


1. In a magnetic separator, the combination of a cylindrical drum formed of a comparatively thick plate of magnetic material without interruptions and arranged to be rotated, a plurality of magnets within the drum with their poles in close proximity to the drum, the polarity of the poles arranged to alternate in the direction of the rotation of the drum, together with means for rotating the drum relatively to the magnets.

2. In a magnetic separator, the combination of a cylindrical drum formed in one piece of a comparatively thick plate of magnetic material without interruptions and arranged to be rotated, a plurality of magnets within the drum with their poles in close proximity to the drum, the polarity of the poles arranged to alternate in the direction of the rotation of the drum, together with means for rotating the drum relatively to the magnets.

3. In a magnetic separator, the combination of a shaft, a cylindrical drum formed of a comparatively thick plate of magnetic material without interruptions and journaled and rotatable on the shaft, a plurality of magnets within the drum fastened to the shaft with their poles in close proximity to the drum, the polarity of said poles arranged to alternate in the direction of the rotation of the drum, a separating board outside of the drum, means applied to the shaft for shifting the position of the magnets relatively to the board, and means for rotating the drum.

1,105,294. STARCH-SEPARATING MACHINE. NELSON C. NEWELL and JOHN A. HARRINGTON, Racine, Wis. Filed Apr. 19, 1913. Serial No. 762,169. (Cl. 83—56.)

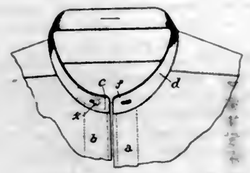


1. A material separating machine, comprising in combination, a casing, an open top revoluble conical screen member mounted therein, means to revolve said screen member, means for feeding material to be separated to the screen member, means forming an annular trough around and below the top outer edge of the screen member with screened openings in the bottom wall thereof, and devices for removing material which does not pass through the bottom of the trough and other devices for removing material which passes both through the screen member and the trough.

2. A material separating machine with a material inlet opening and two outlet openings, comprising, a main receptacle, means to form an annular trough therein with a screened bottom, a cover for the main receptacle, a conical receptacle positioned within the main receptacle and formed in part of screen material, the upper edge of said conical receptacle being open and projecting above the trough, brushes mounted in the main receptacle to extend into the conical receptacle and engage the screen portion thereof, radial arms mounted in the receptacle and carrying flights positioned beneath the annular trough to move the material passing through the screened bottom and the conical receptacle, and brushes connected to the radial arms and extending into the trough, and means for rotating the conical member and the radial arms whereby the material forced from the conical receptacle into the trough and not capable of passing through the screened bottom will leave the receptacle at one outlet and the material passing through the trough bottom and the screen portion of the conical receptacle will pass through the other outlet opening.

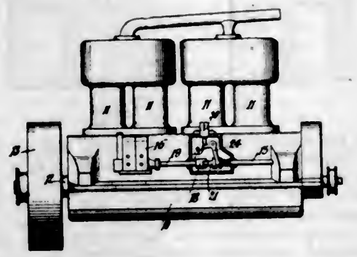
3. A material separating machine, comprising a main receptacle having an annular medial partition forming an annular trough with a screened bottom portion, said receptacle having a foreign matter discharge opening communicating with the trough and an opening in the bottom portion of the receptacle, a cover for the receptacle having a charging opening, a conical receptacle positioned within the main receptacle and having its conical wall formed of screen material, the upper portion of said conical wall extending above the annular partition and spaced vertically therefrom, a brush and a scraper fixed to the main receptacle and extending into the conical receptacle, a radial arm mounted within the main receptacle and provided with a flight, a band covering the vertical space between the annular partition and the upper portion of the conical receptacle carried by the radial arm, a brush connected to said band and extending into the annular trough and engaging the screen thereof, and means for rotating the conical receptacle and the radial arm at different rates of speed.

1,105,295. COLLAR-BUTTON GUARD FOR SHIRTS. ISRAEL R. NORTH, Baltimore, Md. Filed Apr. 2, 1914. Serial No. 828,978. (Cl. 2—41.)



An open-front shirt having a neck-band provided at its overlapped end with a button-hole which opens through the band, and the underlapped end of the neck-band provided on its inner surface with a collar-button guard in the form of a continuous loop folded to lie flat against the neck-band and having a button-hole whose stitches are worked through both the neck-band and one flat side of said loop and which secure the loop to the neck-band, and a row of stitches crosswise of one end of said flat loop and securing said end to the neck-band, and the other end of said flat loop being free and unsecured.

1,105,296. LOCKING MEANS FOR INTERNAL-COMBUSTION MOTORS. CASIN W. OBERT, New York, N. Y. Filed Mar. 5, 1914. Serial No. 822,635. (Cl. 70—90.)



1. A locking means for internal-combustion motors, having a permanent mechanism, comprising an ignition device, a shaft connecting with the ignition device, and means between the shaft and ignition device for connecting or disconnecting and locking in either operative or inoperative position one part of the permanent mechanism.

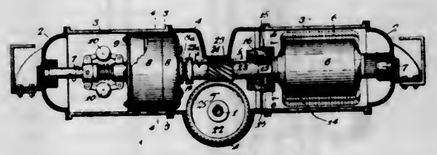
2. A locking means for internal-combustion motors, having a permanent mechanism, comprising an ignition device, a shaft connected with the ignition device, means connecting the ignition shaft with the ignition device, disconnectible means arranged in said connecting means, and means for locking in either operative or inoperative position one part of said disconnectible means.

3. A locking device for internal-combustion motors, comprising the ignition driving shaft, an ignition device, means for connecting the ignition device and the driving shaft, clutch members arranged in said means, one of said members being detachable from the other, a forked and pivoted member arranged to operate said disconnectible clutch member, and a locking device for holding the forked and pivoted member in connected or disconnected position.

4. In a locking means for internal-combustion motors, comprising a motor driving-shaft connected to the magneto, timer or other ignition device, an ignition device, connecting means between the ignition driving shaft and ignition device, clutch members arranged therein, one of said members being movable, a pivoted lever member with forked end arranged to operate the movable member, a spring to coöperate with and for acting on said movable member during the locking or unlocking motion, and a locking device for holding the forked and pivoted member in position.

5. A locking device for internal-combustion motors, comprising a rotational element of the motor connecting with the magneto, timer or other ignition device, an ignition device, a permanent mechanism so combined with the rotational element as to provide disconnectible means between that element and the ignition device, and means for locking such disconnectible means in such inoperative position.

1,105,297. ENGINE-STARTER. HENRY GIBSON O'NEILL, New York, N. Y., assignor of one-half to Conrad Hubert, New York, N. Y. Filed May 29, 1913. Serial No. 770,619. (Cl. 74—34.)



1. An engine starter comprising, in combination, an engine shaft, an engine-starting electric motor at one side of the engine shaft, speed-reducing gearing for the motor at the other side of the engine shaft, and an engine-connected part connected with the engine shaft between the motor and the gearing and connected with the gearing for effecting an engine-starting operation from the motor through the reducing gearing.

2. An engine starter comprising, in combination, an engine shaft, a dynamo-motor at one side of the engine shaft, speed-reducing gearing at the other side of the engine shaft, an engine-connected part connected with the engine shaft between the dynamo-motor and the gearing and connected with the gearing for effecting an engine-starting operation through the gearing from the dynamo-motor operated as a motor, and automatically acting clutching means for discontinuing the operation of the gearing and connecting the engine-connected part with the dynamo-motor to operate the dynamo-motor as a dynamo without the operation of the gearing.

3. An engine starter comprising, in combination, an engine shaft, an engine-starting electric motor at one side of the engine shaft and having its armature shaft arranged transverse to the engine shaft, speed-reducing gearing for the motor at the other side of the engine shaft connected with the armature shaft of the motor, a gear on the engine shaft, and a pinion positioned intermediate of the motor and gearing meshing with the gear on the engine shaft and connected with the gearing for effecting an engine-starting operation from the motor through the reducing gearing.

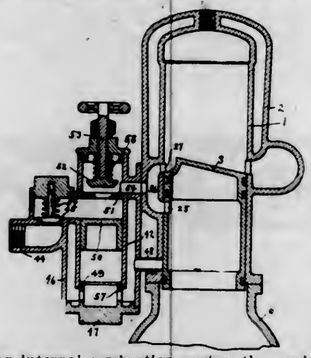
4. An engine starter comprising, in combination, an engine shaft, an engine-starting electric motor at one side of the engine shaft, speed-reducing gearing for the motor at the other side of the engine shaft, a connecting shaft between the motor and the gearing extending transverse to the engine shaft, and an engine-connected sleeve surrounding said connecting shaft and connected with the gearing for effecting an engine-starting operation from the motor through the reducing gearing.

5. An engine starter comprising, in combination, an engine shaft, a dynamo-motor at one side of the engine shaft having an armature shaft extending transverse to the engine shaft to the other side of the engine shaft, speed-reducing gearing connected to the armature shaft at the other side of the engine shaft from the dynamo-motor, an engine-connected sleeve surrounding the armature shaft intermediate the dynamo-motor and gearing, a spiral-toothed gear fixed on the engine shaft, a spiral-toothed pinion rotatable with and slidable longitudinally of the engine-connected sleeve, and clutching means controlling

the gearing and actuated by sliding movement of the spiral-toothed pinion imparted by the spiral-toothed gear on the engine shaft.

[Claims 6 to 18 not printed in the Gazette.]

1,105,298. ENGINE. FREDERICK O. PETERSON, Detroit, Mich., assignor to Bessemer Gas Engine Company, Grove City, Pa., a Corporation of Pennsylvania. Filed Sept. 6, 1911. Serial No. 647,911. (Cl. 123—73.)



1. In an internal combustion engine, the combination of a compression chamber, a cylinder having a transfer passage in its wall connecting to said compression chamber, a piston movable within said cylinder to open and close said passage, a fuel-pump adjacent the engine, an air-pipe connecting the lower end of the pump and the compression chamber, a piston slidable up and down in said pump, a discharge pipe connecting the upper end of the pump to the transfer passage, and a fuel-supply pipe for said pump, the pressure of air in the compression chamber forcing said piston upward and the fuel into said transfer passage.

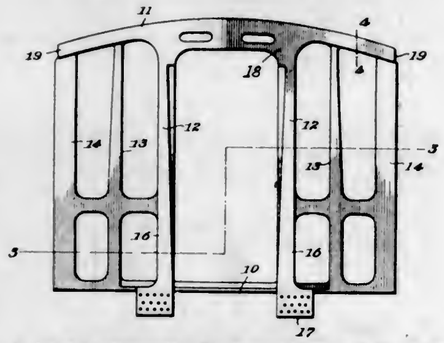
2. In combination with a two-cycle internal combustion engine embodying a crank-case, a cylinder having an inlet port and a passage in its wall connecting to said port and said crank-case, and a piston movable within the cylinder to open and close said port; a hollow body adjacent the engine, an air-pipe connecting the body and the cylinder whose opening into the cylinder is opened and closed by the piston, a fuel-pump within the hollow body actuated by the pressure of the air within the crank-case when the pipe is opened by the piston, a pipe to supply fuel to said pump, and a discharge pipe leading from the pump to the passage in the cylinder wall.

3. In an internal combustion engine, the combination of a cylinder having a passage in its wall and ports at the ends of the same, a piston having a passage through its wall which registers with one port when the other port is opened into the explosion chamber, a fuel pipe connecting into the passage, a fuel supply pipe, a pump to draw the fuel from the supply pipe and to force it into the cylinder, a pressure storage chamber around the pump and connecting to the bore thereof and a pipe connecting to the pump and pressure storage chamber and the engine cylinder whereby the air in the cylinder at the end opposite the explosion chamber will actuate the pump.

4. In an internal combustion engine, the combination of a compression chamber, a cylinder having a passage in its wall and ports connecting the cylinder and passage, a piston slidable within the cylinder and having a passage through its wall which registers with one port when the other port is opened into the explosion-chamber portion of the cylinder, a pump-cylinder adjacent and connected to the engine cylinder, a pump-piston within the pump-cylinder, suction and discharge pipes connecting to one end of said pump-cylinder, said suction pipe connecting to a source of fuel supply and said discharge pipe connecting to the engine cylinder, and a pipe connecting the opposite end of the pump-cylinder and the engine so that the pressure in the compression chamber of the engine may actuate the piston of the pump to force fuel into said passage.

5. In an internal combustion engine, the combination of a compression chamber, a cylinder having a transfer passage in its wall connecting to said compression chamber, a piston movable within said cylinder to open and close said passage, a fuel pump adjacent the engine, a piston slidable in said pump, an air-pipe connecting one end of the pump and the compression chamber, a discharge pipe connecting the other end of the pump to the transfer passage, and a fuel supply pipe for said pump, the pressure of the air in the compression chamber operating said piston to force the fuel into said transfer passage.

1,105,299. CAR-FRAME CONSTRUCTION. HARRY M. PFLAGER, St. Louis, Mo., assignor to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Original application filed Nov. 8, 1912, Serial No. 730,220. Divided and this application filed July 5, 1913. Serial No. 777,567. (Cl. 105—201.)

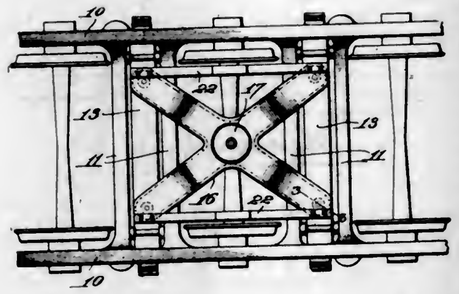


1. In car construction, the combination with an underframe provided on top of its end member with a transversely extending upwardly projecting flange, of a one piece end frame having a continuous base member which rests upon the underframe and bears against the flange thereon, plates depending from the end frame for engagement with the outer face of the end member of the underframe, and brackets integral with and projecting rearwardly from the lower portions of the sides of the end frame, which brackets bear upon the underframe to which the end frame is applied.

2. In car construction the combination with an underframe provided on top of its end member with a transversely extending upwardly projecting flange, of a one piece end frame having a continuous base member which rests upon the underframe and bears against the flange thereon, door posts forming a part of said end frame, the lower portions of which posts are integral with the base member of said end frame, and portions of which posts extend downward beyond the plane occupied by the base member, and which downwardly extending portions are adapted to engage the outer face of the end member of the underframe.

3. In car construction the combination with an underframe provided on top of its end member with a transversely extending upwardly projecting flange, of a one piece end frame having a continuous base member which rests upon the underframe and bears against the flange thereon, door posts forming a part of said end frame, the lower portions of which posts are integral with the base member of said end frame and portions of which posts extend downward beyond the plane occupied by the base member, which downwardly extending portions are adapted to engage the outer face of the end member of the underframe, and fastening means seated in the base member, the downwardly projecting portions of the door posts, and the underframe member with which said last mentioned parts engage.

1,105,300. SIX-WHEEL CAR-TRUCK. HARRY M. PFLAGER, St. Louis, Mo., assignor to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 5, 1913. Serial No. 788,296. (Cl. 105—244.)



1. In a car truck, the combination with a pair of cross bolsters, of a center bolster having pairs of arms with one pair bearing on each cross bolster, and there being a universal joint between each arm and bolster.

2. In a car truck, the combination with a truck frame, of a pair of cross bolsters, yieldingly mounted in said frame, and a substantially X-shaped center bolster supported by said cross bolsters and connected thereto by universal joints.

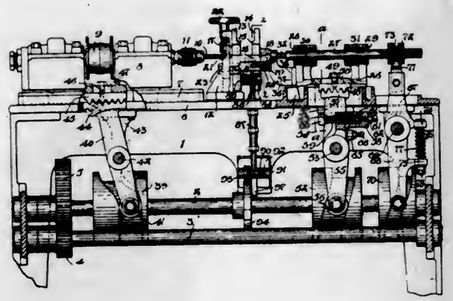
3. In a car truck, the combination with cross bolsters, of a center bolster yieldingly connected to said cross bolsters, and side bearings supported on said center bolster.

4. In a car truck, the combination with a pair of yieldingly mounted cross bolsters, of a center bolster flexibly connected to and supported by said cross bolster, and side bearing supports on said center bolster.

5. In a car truck, a pair of cross bolsters, and a center bolster having a pair of universal joint connections with each cross bolster.

[Claims 6 to 11 not printed in the Gazette.]

1,105,301. WOODWORKING-MACHINE. HENRY N. PIERCE, South Lincoln, Me., assignor to The John MacGregor Company, South Lincoln, Me., a Corporation of Maine. Filed Oct. 7, 1911. Serial No. 653,360. (Cl. 144—14.)



1. A machine for boring partially finished blanks comprising a head stock, a rotatable boring tool carried by said head stock, a centering tool having inclined surfaces converging toward a point in the axial line of said boring tool, the boring and centering tools being so arranged that such axial line is approximately horizontal, a blank feeding guide crossing such axial line having a work-supporting surface parallel to such line and including in its construction a face plate perpendicular to such axial line and to said work supporting surface arranged at the end of the blank remote from said centering tool, a clamp movable toward and from said face plate to clamp a blank against the same after the latter has been positioned by the centering tool, and mechanism for operating the centering tool clamp and boring tool in proper sequence.

2. A machine of the character stated comprising a bed, a head stock movable in a substantially horizontal direction on said bed, a rotating boring tool carried by said head stock with its axis parallel to the line of movement of the latter, a tail stock mounted upon the bed and movable thereon in the same directions as the head stock, a centering tool carried by the head stock in line with the boring tool and having non-parallel faces converging toward a point in the axial line of the boring tool, a face plate crossing such axial line in a plane approximately perpendicular thereto, guiding means for blanks arranged to support such blanks with an end of each substantially in contact with such face plate and also arranged to permit a gravity feed of the blanks, a stop for arresting the lowermost blank when substantially coaxial with such axial line, and mechanism for operating the centering tool to coact with the face plate in centering a blank, and for advancing the boring tool into and withdrawing it from the blank after the latter has been centered.

3. In a machine of the character indicated the combination with a substantially horizontal cutting tool of centering means comprising a face plate having a substantially vertical surface a work support arranged to support a blank with one end thereof adjacent to said plate, a centering tool having inclined faces adapted to engage the opposite end of the blank from the face plate, said faces converging toward a point in the axial line of the cutting tool, and being at some points nearer to the axis and at other points more remote from the axis than the portions of the blank with which they engage said centering tool being movable toward and from the cutting tool.

4. In a machine of the character described the combination of a rotary cutting tool, a centering tool separated from the cutting tool, means for feeding blanks automatically between said cutting tool and said centering tool, a face plate arranged adjacent to an end of the blank which is in position to be operated upon, and against which such blank is pressed by the centering tool, said face plate being so arranged that the blank tends to separate from it under the force of gravity, and the centering tool being constructed both to press the blank against said face plate and to center the blank relatively to the axial line of the cutting tool, and a clamp having a passage to admit the cutting tool, arranged to press on the same end of the blank which is engaged by the centering tool, the centering tool and clamp being co-axial, and relatively movable axially and one being surrounded by the other.

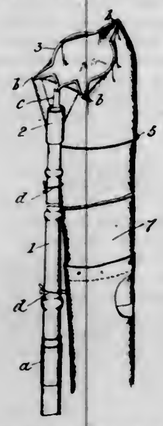
5. A wood-working machine comprising a rotary cutting tool, a carriage for said tool mounted on a horizontal axis movable in the direction of the axis of rotation, a center having inclined surfaces converging toward a point in alinement with such axis and movable along the line thereof, a work guide extending transversely of, and having a supporting portion parallel to, the axial line between the tool and center having a face plate perpendicular to such line, and actuating mechanism for moving said tool and center timed and arranged to move the center against one end of a work piece held by the guide, and the opposite end of such piece against said plate and then to move the tool into the work.

[Claims 6 to 16 not printed in the Gazette.]

1,105,302. FRUIT-PICKER. JOHN A. PINDELL, Cockeysville, Md. Filed Mar. 28, 1913. Serial No. 757,289. (Cl. 56—99.)

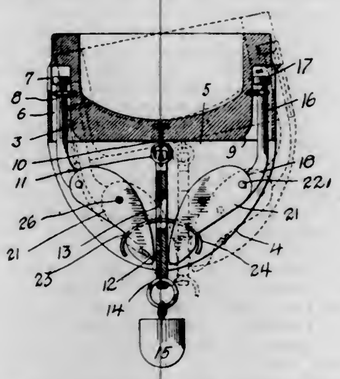
In a fruit picker, a pole having at its upper end an expansible metal collar of volute form provided with clips which extend laterally therefrom, combined with a hoop formed of wire with outwardly extending points, the ends of which wire are brought together and passed through the

clips and then extended to produce a ring, combined with a flexible chute attached at its upper end to the said hoop



and extending downward through the ring, substantially as specified.

1,105,303. LIFE-BOAT. LADISLAUS PREICZER, Pittsburgh, Pa. Filed Feb. 18, 1914. Serial No. 819,532. (Cl. 9—1.)

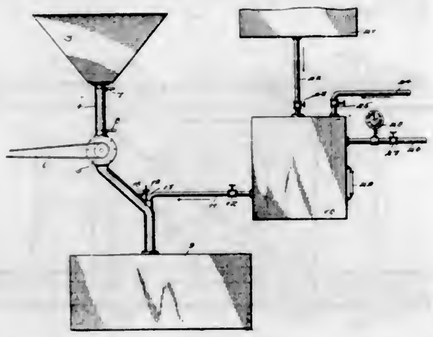


1. A life boat comprising a hull provided with a keel having a transverse opening, a weight and arm loosely connected to the hull and depending below the keel, a pair of vertically movable bars carried by the hull and having curved lower ends arranged in said opening, and rocking arms pivotally connected to the said ends and with the hull, and moving against opposite sides of said arm.

2. A life boat comprising a hull provided with a keel having a transverse opening, a weight and arm loosely connected to the hull and depending below the keel, a pair of vertically movable bars carried by the hull and having curved lower ends arranged in said opening, rocking arms pivotally connected to the said ends and with the hull, and moving against opposite sides of said arm, and means for loosely connecting said rocking arms together.

3. A life boat comprising a hull provided with a keel having a transverse opening, a weight and arm loosely connected to the hull and depending below the keel, a pair of vertically movable bars carried by the hull and having curved lower ends arranged in said opening, rocking arms pivotally connected to the said ends and with the hull and moving against opposite sides of said arm, means for loosely connecting said rocking arms together, and means for limiting downward movement of said rods.

1,105,304. PROCESS OF MAKING CALCIUM ACID PHOSPHATE. ELLIOTT W. REED, Savannah, Ga. Filed July 19, 1913. Serial No. 779,902. (Cl. 71—7.)



1. The herein described process of producing calcium acid phosphate, which consists in thoroughly agitating finely divided phosphate material by means of a current of air, and simultaneously subjecting the same to the action of an acid.

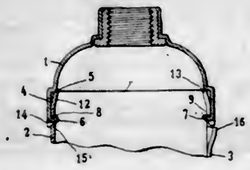
2. The herein described process of producing calcium acid phosphate, which consists in thoroughly agitating powdered phosphate material by means of a current of air, and spraying an acid upon the powdered phosphate material while the same is being subjected to such agitation.

3. The herein described process of producing calcium acid phosphate, which consists in spraying an acid into a moving body of air which is laden with finely divided phosphate material.

4. The herein described process of producing calcium acid phosphate, which consists in rapidly passing air laden with powdered phosphate material through a conduit, spraying sulfuric acid into the phosphate material laden air while the same is in motion, and collecting the calcium acid phosphate formed as a result of the same.

5. The herein described process of producing calcium acid phosphate, which consists in passing air laden with powdered phosphate material through a conduit, passing sulfuric acid through a conduit extending through the first named conduit and spraying the acid into the phosphate material laden air near the outlet end of the conduit through which the phosphate material laden air passes, and collecting the calcium acid phosphate formed as a result of the same.

1,105,305. LAMP-SOCKET SHELL. HENRY E. REEVE, New York, N. Y. Filed Mar. 9, 1911. Serial No. 613,247. (Cl. 173—362.)



1. A lamp socket shell comprising a cap having limited portions of its edge bent inward and upward to form hook-like catches, a compressible body having shoulders for engaging with said hook-like catches, said body having a projecting boss adjacent one of said shoulders which may be pressed to release said shoulder in order to disengage said body from said cap.

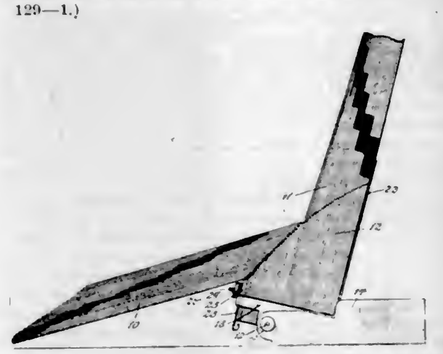
2. A lamp socket shell comprising a cap having an inwardly and upwardly projecting hook-catch and an elastic body having a slot rendering the body compressible adjacent thereto and a notch at one edge of said slot with a shoulder arranged to engage said hook-catch and a projecting boss adjacent said shoulder to facilitate compressing said body and clearing said shoulder from the path of said hook-catch.

3. A socket shell comprising a tubular body and a cap having a dependent rim telescopically engaged over the end of the body, the said cap having a locking shoulder and the body having a compressible portion provided with a locking shoulder adapted to engage with the locking shoulder on the cap to prevent separation of the body and cap, and the body being further provided with an outstanding boss on the said compressible portion disposed adjacent the rim of the cap when the parts are assembled and projecting beyond the plane of the said rim to provide a thumb hold by which the compressible portion of the body may be pressed inwardly without interference with the rim of the cap to disengage the shoulder on the body from the shoulder on the cap and permit separation of the body and cap.

4. In a lamp socket shell, a compressible body having shoulders, a cap having a flange with limited portions of its edge turned inwardly and upwardly into hook-like form for engaging said shoulders, said body having a projecting boss adjacent one of said shoulders by pressure on which the body may be compressed and the adjacent shoulder lifted out of the hook-like catch with which it is engaged.

5. A lamp socket shell comprising a body slotted so as to be compressible at the upper end, a cap for receiving said body, one of said members having openings affording locking shoulders and the other member having hooks bent back on an incline toward the main portion of said member to provide inclined locking shoulders in line with said shoulders when the parts are assembled so as to cause interlocking engagement when the members are relatively tensioned longitudinally and means for aliuing and guiding said member so that when the end of the body is inserted in the cap in proper alinement the parts may be pushed together and the shoulders and hooks will relatively snap past each other.

1,105,306. CARD-INDEX. MAX A. REPELOW, New York, N. Y. Filed Dec. 15, 1913. Serial No. 806,722. (Cl. 129—1.)



1. A device of the class described comprising a group of contiguous flat elements each composed of a thick stud and a relatively thin car hinged thereto, the stub on each successive element being shorter than that on the element next in rear thereof, binding means for holding said stubs together, and means for holding said cards in a position slightly inclined backward from the vertical, substantially as described.

2. A device of the class described comprising a group of contiguous flat elements each composed of a thick stub and a relatively thin card hinged thereto by a close jointed hinge, the stub on each successive element being shorter than that on the element next in rear thereof, binding means for holding said stubs together, and means for holding said cards in a position slightly inclined backward from the vertical, substantially as described.

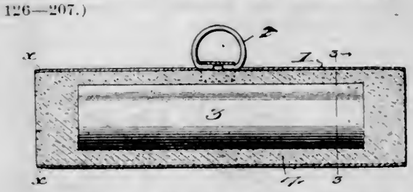
3. A device of the class described comprising a group of contiguous flat elements each composed of a thick stub and a relatively thin card hinged thereto, the stub on each successive element being shorter than that on the element next in rear thereof, a guard stub in front of the other stubs, binding means for holding said stubs together, and means for holding said cards in a position slightly inclined backward from the vertical, substantially as described.

4. A device of the class described comprising a group of contiguous flat elements each composed of a thick stub and a relatively thin card hinged thereto by a close jointed hinge, the stub on each successive element being shorter than that on the element next in rear thereof, a guard stub in front of the other stubs, binding means for holding said stubs together, and means for holding said cards in a position slightly inclined backward from the vertical, substantially as described.

5. A device of the class described comprising a group of contiguous flat elements each composed of a thick stub and a relatively thin card hinged thereto, the stub on each successive element being shorter than that on the element next in rear thereof, binding means for holding said stubs together, said cards being provided individually with tabs arranged in groups disposed longitudinally with respect to the cards, each tab in a group projecting in one direction beyond the edge of the tab behind it, and means for holding said cards in a position slightly inclined backward from the vertical, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,105,307. WARMER. JOHN T. ROBERTS, Washington, D. C. Filed Dec. 1, 1913. Serial No. 803,964. (Cl. 126—207.)



1. In a device for the purpose set forth, a casing, a plastic heat distributing filling the casing, and a radiating core embedded within and entirely surrounded by the plastic material.

2. In a device for the purpose set forth, a sheet metal casing, a filler of plastic heat-distributing material within and filling the casing, and a heat radiating core centrally embedded within the plastic material and co-extensive with the casing.

3. In a device of the class set forth, a casing of thin material, a plastic body of heat distributing material filling and adhesively connected with the casing, and a core of porous material embedded within the plastic material and co-extensive therewith.

4. In a warming device, a casing, a plastic body of heat distributing material tamped within the casing, and a porous core embedded within the heat distributer and extending centrally and longitudinally thereof.

5. In a warming device of the class set forth, a plastic body of heat distributing material, a core embedded within the heat distributer, and a casing co-extensive with and entirely inclosing the plastic distributer.

[Claim 6 not printed in the Gazette.]

1,105,308. BLEACHING SOLUTIONS CONTAINING TITANOUS CHLORID AND METHOD OF PRODUCING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Apr. 18, 1912. Serial No. 691,740. (Cl. 8—2.)

1. The method of producing bleaching solutions which comprises dissolving in dilute hydrochloric acid an alloy of

iron, and titanium containing less than fifty per cent. of titanium, evaporating the resulting solution at temperature below 212 degrees Fahrenheit under reduced atmospheric pressure, therefrom separating resulting crystals of chlorid of iron until titanous chlorid exceeds ferrous chlorid present in said solution, and finally filtering the resulting product to extract therefrom substances undesirable in bleaching solutions.

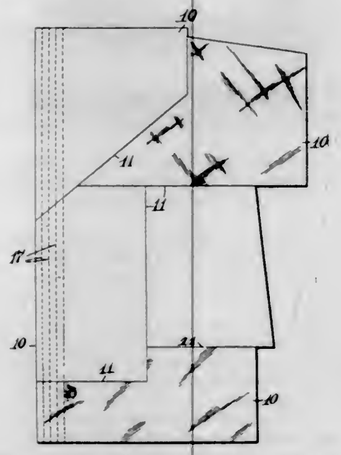
2. The method of producing bleaching solutions which comprises dissolving in dilute hydrochloric acid an alloy of iron and titanium containing less than fifty per cent. of titanium, evaporating the resulting solution, therefrom separating resulting crystals of chlorid of iron until titanous chlorid exceeds ferrous chlorid present in said solution, and finally filtering the resulting product to extract therefrom substances undesirable in bleaching solutions.

3. A bleaching solution characterized as containing titanous chlorid and less ferrous chlorid, and as being substantially free from free chlorin or hydrochloric acid.

4. The method of producing bleaching solutions which comprises dissolving titanium, and more iron than titanium, in dilute hydrochloric acid, evaporating the resulting solution, and therefrom separating resulting crystals of chlorid of iron until titanous chlorid exceeds ferrous chlorid present in said solution.

5. The method of producing bleaching solutions which comprises dissolving titanium, and more iron than titanium, in hydrochloric acid, evaporating the resulting solution, and therefrom separating resulting crystals of chlorid of iron until titanous chlorid exceeds ferrous chlorid present in said solution.

1,105,309. METHOD OF MAKING STRIPS FOR WEAVING AND THE LIKE. LEOPOLD S. SAMUEL and MOSES SAMUEL, Newark, N. J. Filed July 16, 1913. Serial No. 779,355. (Cl. 139—9.)



1. A method of making strips for weaving and the like consisting in the provision of pieces of material, fastening said pieces edge to edge by continuous seams to form a sheet and then cutting the sheet across said seams to form the strips.

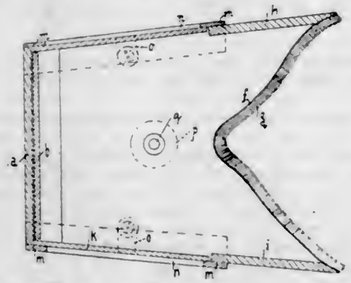
2. A method of making strips for weaving and the like consisting in the provision of pieces of material, sewing said pieces by continuous stitches along their edges to form a sheet and then cutting the sheet into strips, the cuts being arranged so that they cross the seams between the pieces.

3. A method of making strips for weaving and the like consisting in the provision of pieces of material, securing said pieces by their edges to form a sheet, securing tape-like pieces over the seam of the adjoining pieces, and then cutting said sheet into strips.

4. A method of making strips for weaving and the like consisting in the provision of pieces of material fastened edge to edge to form a sheet, laying tape-like pieces over the adjoining edges of the pieces that form the sheet, sewing through the tape-like pieces and through the adjoining edges of the pieces that form the sheet to secure them together, and then cutting the sheet so formed into strips.

5. A mehod of making strips for weaving and the like which consists in the provision of pieces of material placed side by side, placing fibrous material at the junctures of the pieces of material, then sewing through the fibrous material and the adjoining edges of the pieces to secure them together, and then cutting the sheet so formed into strips.

1,105,310. APPARATUS FOR DEMONSTRATING OCULAR FLUORESCENCE. FRIEDRICH ALBIN SCHANZ, Dresden, Germany. Filed Sept. 22, 1913. Serial No. 791,059. (Cl. 88—1.)



1. An apparatus for demonstrating ocular fluorescence, consisting of a box forming a dark chamber and provided on one side with an opening adapted to the shape of the face, and on the opposite side with a mirror arranged in the box, while in one of the other wall surfaces is inserted a dark blue glass plate or the like, through which daylight falls on the eyes of the user holding the apparatus in front of his face.

2. An apparatus for demonstrating ocular fluorescence, comprising a box forming a dark chamber and provided at one side with recessed edges adapted to the shape of the face, and on the opposite side with a mirror arranged in the box, while in one of the other wall surfaces is inserted a dark blue glass plate or the like, through which daylight falls on the eyes of the user holding the apparatus in front of his face, and a covering of suitable yielding material over said recessed edges for closing the same against ingress of light when using the apparatus.

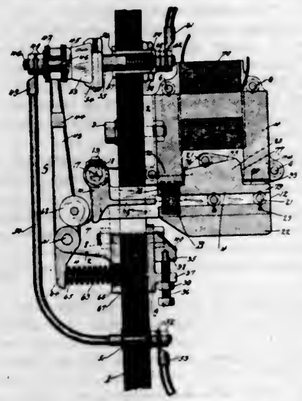
3. An apparatus for demonstrating ocular fluorescence, comprising a box forming a dark chamber and provided at one side with an opening adapted to the shape of the face, and at the opposite side with a mirror arranged in the box, the two lateral walls of the box being provided with openings, a dark blue glass plate secured detachably in place over the opening in one lateral wall, and a plate impervious to light secured detachably in place over the opening in the other lateral wall.

4. An apparatus for observing the fluorescence of the human eye, comprising a dark chamber, a mirror therein, an opening for the eyes opposite the mirror, and means for admitting dark blue colored light to the chamber laterally of the line of vision between the eyes and the mirror.

1,105,311. ALTERNATING-CURRENT ELECTROMAGNETIC SWITCH. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 22, 1907. Serial No. 403,276. (Cl. 175—21.)

1. In an electro-magnetic switch, the combination with an electro-magnet, of an armature therefor, a fixed bracket, a screw-threaded bolt in the bracket, and a stop for the armature slidable on the bracket and connected to said bolt and adjustable thereby.

2. The combination with a support, of a magnet and its armature, a bracket secured to said support, a screw-threaded bolt adjustably connected to the bracket, and a stop slidably held by said bolt on the bracket.



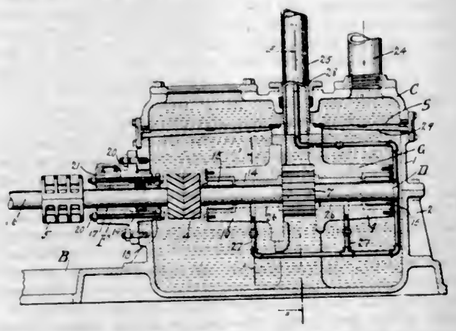
3. The combination with a support and an electro-magnet and its armature, of a bracket secured to the support, a screw-threaded bolt vertically mounted and adjustable in the bracket, a cylindrical extension on the bolt, and a stop formed with a recess to receive such extension.

4. The combination with a vertical base-board, an electro-magnet mounted thereon with its poles extending downwardly, and an armature pivoted to move below the magnet, of a bracket mounted on the base-board and having an outwardly extending lug, a vertical screw-threaded bolt extending through the threaded opening in the lug and vertically adjustable therein, a lock nut on the bolt, a cylindrical extension on the upper end of the bolt, an armature stop or bumper recessed to receive said extension and having a flat vertical surface bearing against and slidable on the vertical face of the bracket and a contact surface in the path of the armature, and a facing of soft material on said contact surface.

5. The combination with an electro-magnet and its armature, of a sleeve carried by one of said parts, a spring connected to the sleeve and forming a stop for the armature, and means for adjusting the sleeve.

[Claims 6 to 13 not printed in the Gazette.]

1,105,312. GEAR-PUMP. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 17, 1910. Serial No. 538,428. (Cl. 103—44.)



1. In pumping apparatus, the combination with intermeshing pump gears, shafts carrying said gears, sleeves located on opposite sides of said gears and in which said shafts are journaled, said sleeves being provided with openings exposing portions of said shafts, and ducts establishing communication between the pressure side of the pump and said openings.

2. In pumping apparatus, the combination with intermeshing pump gears, shafts carrying said gears, sleeves located on opposite sides of said gears and in which said shafts are journaled, said sleeves being provided with openings exposing portions of said shafts, and means for introducing fluid pressure from the pressure side of the pump into the said sleeve openings to counteract the fluid pressure on the said pump gears.

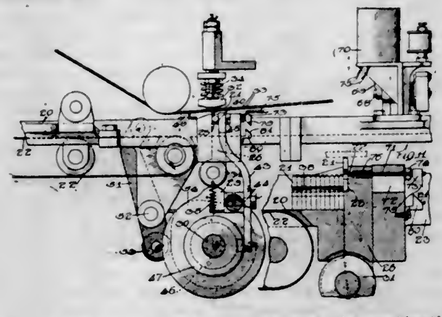
3. In pumping apparatus, the combination with intermeshing pump gears, shafts carrying said gears, sleeves located on opposite sides of said gears and in which said shafts are journaled, said sleeves being provided with openings exposing portions of said shafts, and means for introducing fluid under pressure into the said sleeve openings to counteract the variable pressure to which the gear-carrying shafts are subjected during the operation of the pump.

4. In pumping apparatus, the combination with intermeshing pump gears, shafts carrying said gears, sleeves located on opposite sides of said gears and in which said shafts are journaled, said sleeves being provided with openings exposing portions of said shafts, flexible packing in said sleeve openings, and means for introducing fluid pressure from the pressure side of the pump into said sleeve openings and against said packing and thereby effect a fluid tight joint and at the same time counteract the pressure to which the gear carrying shafts are subjected during the operation of the pump.

5. In pumping apparatus, the combination with intermeshing pump gears, shafts carrying said gears, sleeves located on opposite sides of said gears and in which said shafts are journaled, said sleeves being provided with openings exposing portions of said shafts, anti-friction bearings for said shafts adapted to relieve said sleeves of all wear and friction, and means for introducing a fluid pressure into said sleeve opening to counteract the pressure set up in said bearings due to the action of the pump when operating against a pressure.

[Claim 6 not printed in the Gazette.]

1,105,313. TYPE OR SLUG FEED FOR PRINTING OR ADDRESSING MACHINES. JOSEPH TOMLINSON, New York, N. Y., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed Dec. 23, 1907. Serial No. 407,624. (Cl. 101—1.)



1. In a machine of the class described, the combination of a galley for holding a supply of printing elements, means for directly receiving one of the elements moving it from said supply into a printing position, and returning it to its original position, means for locking the element to the said receiving and moving means, and means for ejecting the said element transversely with respect to the line of feeding movement of said element to the first said means after being printed from and against the tension of the said locking means.

2. In a machine of the class described, the combination of a galley for holding a supply of printing elements,

means for extracting one of said elements to move the same directly from the supply into a printing position and for returning the element to its former position embodying a retainer carried by the extracting means, and means for ejecting the said elements transversely with respect to the line of feeding movement of the element to said extracting means and after being printed from, and against the tension of said retainer.

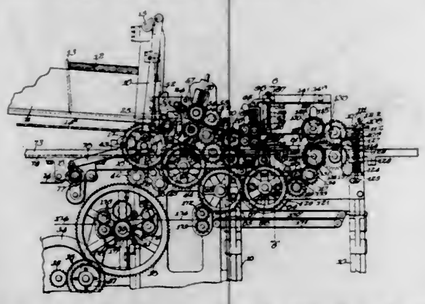
3. In a machine of the class described, the combination of a galley for holding a supply of printing elements, a plunger for extracting one of said elements and moving the same into a printing position, means movable with the plunger for locking the said printing element against displacement with respect to the plunger, and means for releasing and ejecting said element from the plunger after being printed from and in a direction transverse to the direction of movement of the plunger and with respect to the line of feeding movement of the element to the plunger.

4. In a machine of the class described, the combination of a galley for holding a supply of printing elements, a plunger for extracting one of said elements and moving the same into a printing position, means for feeding the elements into a position to be engaged and moved by the plunger, means carried by the plunger for locking the said element to the plunger whereby it may be moved by the plunger against the friction of the supply of elements, and means for ejecting said element from the plunger and transversely with respect to the line of feeding movement of the element to the plunger and after being printed from.

5. In a machine of the class described, the combination of a galley for holding a supply of printing elements, a plunger for extracting one of said elements and moving the same into a printing position, means for feeding the elements into a position to be engaged and moved by the plunger directly from the supply, means carried by the plunger for locking the said element to the plunger whereby it may be extracted from and returned to the supply by the plunger, and means for ejecting the said element from the supply against the tension of the locking means and transversely with respect to the line of feeding movement of the supply, when it is returned thereto after having been printed from.

[Claims 6 to 8 not printed in the Gazette.]

1,105,314. MAILING-MACHINE. JOSEPH TOMLINSON, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed Jan. 20, 1911. Serial No. 603,658. (Cl. 101—46.)



1. In a machine of the character described, the combination of feeding mechanism for the articles, mechanism for applying addresses to the articles, mechanism for folding the articles, means for operating said mechanisms, and means for throwing said folding mechanism into and out of operation at will without disturbing said other mechanisms and while the other mechanisms remain active.

2. In a machine of the character described, the combination of feeding mechanism for the articles, mechanism for applying addresses to the articles, mechanism for folding the articles, means for operating said mechanisms, and means for throwing said address-applying mechanism into and out of operation at will without disturbing said other mechanisms and while the other of said mechanisms remain active.

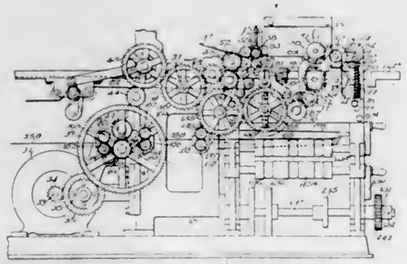
3. In a machine of the character described, the combination of feeding means for the articles, mechanism for applying addresses to the articles, mechanism for folding the articles, a source of power, means connected to said source and common to said mechanisms for operating the latter, and means for rendering either of said folding or address-applying mechanisms active or inactive at will independently of the other and while the other of said mechanisms remains active.

4. In a machine of the character described, the combination of mechanism for supplying the articles, mechanism for folding the articles, mechanism for supplying a wrapper to the folded article, means for operating said mechanisms, and means whereby said wrapper supplying mechanism may be rendered active or inactive at will, while the article supplying and folding mechanisms remain active.

5. In a machine of the character described, the combination of mechanism for supplying the articles, mechanism for applying an address to the articles, mechanism for folding the articles, mechanism for supplying a wrapper to the folded article, means for operating said mechanisms, and means for rendering said address applying mechanism active or inactive at will while the other of said mechanisms remain active, whereby to produce a wrapped article with or without an address as desired.

[Claims 6 to 24 not printed in the Gazette.]

1,105,315. ADDRESSING, FOLDING, AND WRAPPING MACHINE. JOSEPH TOMLINSON, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed Feb. 20, 1911. Serial No. 609,588. (Cl. 101—46.)



1. In a folding machine of the character described, the combination of means for folding the articles, means for imparting another fold to the article after it has been folded by the first said means, conveying mechanism common to both said folding means for receiving and conveying away the folded article, and means controllable at will whereby the article may be delivered directly to the said conveying mechanism in either stage of its folded condition.

2. In a folding machine of the character described, the combination of means for folding the article, means for imparting to the article another fold as it comes from the first said means, conveying mechanism in proximity to the top of the machine for receiving the folded article and conveying it across the top of the machine and above the folding means, said conveying mechanism being supported by the machine, a common source of power for actuating both recited folding means and the conveyer, means whereby the second recited means may be rendered inactive at will, while the first recited means and the conveyer remain active, and means whereby the article may be presented to the conveyer in any stage of its folded condition.

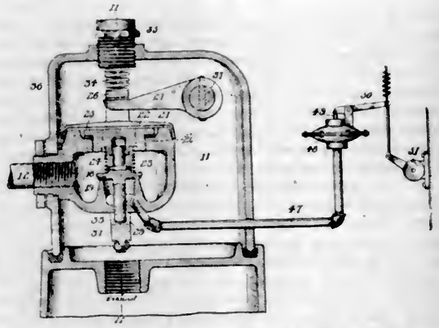
3. In a machine of the character described, the combination of address applying mechanism, means for folding the article as it comes from the said mechanism, means for imparting to the article another fold after it has been folded by the first said means, and means for rendering the second recited means and the address applying mechanism active or inactive without interfering with the operation of the first recited means.

4. In a machine of the character described, the combination of address applying mechanism, means for folding the article as it comes from said mechanism, means for imparting to the article another fold after it has been folded by the first recited means, a common source of power for actuating both of the said means and the address applying mechanism, and means under the control of the operator for rendering the address applying mechanism and the second recited means active or inactive at will while the first recited means remains active.

5. In a machine of the character described, the combination of addressing mechanism, folding mechanism embodying means for giving to the article a plurality of folds as it comes from the addressing mechanism said folding mechanism being adapted to be rendered inactive, and means for ejecting the article as it comes from the addressing mechanism and independently of the folding mechanism while the latter is inactive.

[Claims 6 to 34 not printed in the Gazette.]

1,105,316. APPARATUS FOR THE CONTROL OF BRAKES FOR RAILWAY-VEHICLES. PER UTNE, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1911. Serial No. 666,394. (Cl. 188—1.)

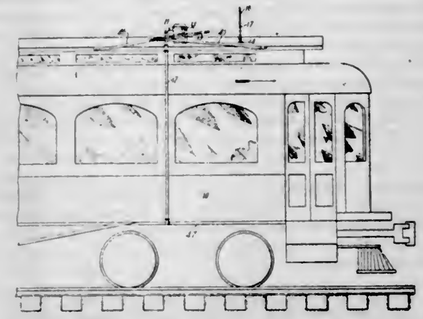


1. In an apparatus for the control of fluid pressure brakes, the combination with a train pipe of a valve in the train pipe biased to closed position, means for opening the valve; a chamber into which the valve exhausts; said chamber comprising a stationary member, and a movable member operatively connected with the valve and fitting loosely over the stationary member whereby the valve will be held open by the outflow of fluid through the valve.

2. In combination, a fluid pressure receptacle, a valve in said receptacle biased to the closed position, a chamber into which said valve exhausts; said chamber comprising two members one of which has conical sides and the other a conical flange adapted to fit over said conical sides one of said members being fixed and the other movable, whereby the area of the opening between said members varies in accordance with the position of the movable member; and connections interposed between the movable member and the valve for holding the valve open a variable amount according to the position of said movable member.

3. In combination, a valve body, means for supplying fluid pressure thereto, a valve in said body biased to the closed position, an exhaust passage in the wall of said body leading from said valve to one of the outside faces of said body, a movable cap fitting over said face and forming with the face a chamber into which the valve exhausts, the opening from said chamber to atmosphere varying in area according to the position of said cap, means for biasing said cap to the closed position, connections interposed between the cap and the valve for holding the valve open a variable amount according to the pressure in said chamber, and means for raising said cap from the said outside face of the body and thereby opening the valve.

1,105,317. APPARATUS FOR THE CONTROL OF RAILWAY CARS OR TRAINS. PER UTNE, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Dec. 18, 1911, Serial No. 666,394. Divided and this application filed Mar. 8, 1913. Serial No. 752,897. (Cl. 246—59.)



1. In combination, a railway vehicle, a trip arm mounted upon the vehicle, means on the vehicle adapted to be operated by the trip arm, a stop arm mounted adjacent the trackway to operate the trip arm, an inclined surface carried by the vehicle for guiding the stop arm into position for operation of the trip arm when the vehicle moves in one direction, and another inclined surface carried by the vehicle for guiding the stop arm out of position for operation of the trip arm when the vehicle moves in the other direction.

2. In combination, a railway vehicle, a trip arm mounted upon the vehicle, means on the vehicle adapted to be operated by said trip arm, a stop arm mounted adjacent the trackway to operate the trip arm, two intersecting inclined surfaces mounted on the vehicle with their acute angle opening toward the direction of traffic for guiding the stop arm into position to operate the trip arm when the vehicle moves in one direction, and a third inclined surface mounted upon the vehicle for guiding the stop arm out of position to operate the trip arm when the vehicle moves in the other direction.

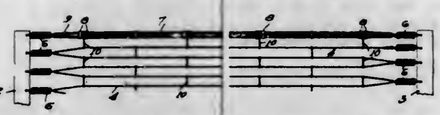
3. In combination, a railway vehicle, two members mounted thereon to form an acute angle opening in the normal direction of movement of the vehicle, one of which members is fixed and the other movable, a stop arm mounted adjacent the trackway and adapted to pass between said members thereby moving the movable member, and means on the vehicle operated by said movable member.

4. In combination, a railway vehicle, a trip arm mounted on the vehicle, means on the vehicle controlled by said arm, a stop arm mounted adjacent the trackway, means on the vehicle for guiding the stop arm into position for operation of the trip arm when the vehicle moves in one direction, and means on the vehicle for guiding the stop arm out of position for operation of the trip arm when the vehicle moves in the other direction.

1,105,318. BORDER FOR BED-SPRINGS. CHARLES M. WAY, Minneapolis, Minn. Filed Mar. 28, 1914. Serial No. 827,897. (Cl. 5—39.)

1. A bed spring comprising cables arranged in parallel relation, end rails, and springs connecting said rails with said cables, a border also having spring connections with said rails and composed of a series of strands placed side

by side and clips for clamping said strands together at intervals and links having one end connected to the adjacent cable and the other end hooked into said border.



2. A bed fabric having a border extending from end to end thereof on each side of the bed, said border being composed of a series of wire strands arranged side by side and clamped together, and means connecting said border at intervals with the bed fabric.

3. A bed fabric having a border on each side of the bed composed of metallic strands arranged in parallel relation and clamped together, and tension members engaging the bed fabric and said border and resisting lateral pull on the fabric.

4. A bed fabric having a border composed of a series of strands placed side by side and clips for clamping said strands together at intervals, and links having one end connected to the adjacent bed fabric and the other end hooked into said border.

1,105,319. RAILROAD-TIE AND FASTENING DEVICE. LOUIS J. BALTZ, Buffalo, N. Y. Filed July 12, 1912. Serial No. 709,022. (Cl. 238—3.)



1. A rail fastening device comprising a member having lugs adapted to embrace the base of the rail at opposite sides thereof and an arm which is adapted to engage the tie at one side thereof, and means engaging the tie for drawing said member in a direction to move said arm into engagement with the side of the tie, said means tending to turn the member to cause said lugs to be pressed into engagement with the opposite sides of the base of the rail, substantially as set forth.

2. A rail fastening device comprising a member having parts adapted to embrace the base of the rail at opposite sides thereof and a part adapted to engage the tie at one side thereof, and means for drawing the member toward the other side of the tie, not more than one of said parts being located in the line of draft, said means tending to turn the member to cause the engaging parts to be drawn into their engaging positions, substantially as set forth.

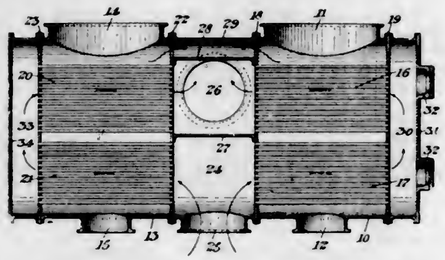
3. A rail fastening device comprising a member having a part adapted to engage the base of the rail at one side thereof, a part adapted to engage the base of the rail at the opposite side thereof, and a part adapted to engage the tie at one side thereof, and means bearing against the tie for drawing said member in a direction to move said tie engaging part into its engaging position, at least two of said engaging parts being out of the line of draft of said drawing means, whereby said means tend to turn said member about one of said engaging parts to move said engaging parts into their engaging positions, substantially as set forth.

4. A rail fastening device comprising two members, each of which has lugs adapted to embrace the base of the rail at opposite sides thereof and an arm which is adapted to engage the adjacent portion of the tie at one side thereof, and means for drawing the two members of the device together at one side of the rail to draw said arms into engagement with the opposite sides of the tie and to draw said lugs into engagement with the opposite sides of the base of the rail, substantially as set forth.

5. A rail fastening device comprising two members, one of which comprises a plate adapted to be placed between the rail and the tie and having upwardly extending lugs at the diagonally opposite corners thereof and adapted to embrace the base of said rail, and a downwardly extending arm adapted to engage one side of a tie, the other member of said fastening device having a downwardly extending arm adapted to engage the other side of said tie, and means at one side of said plate for drawing said downwardly extending arms into engagement with the sides of the tie and which turn said plate to force said lugs into engagement with the base of the rail, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,105,320. SURFACE CONDENSER. EVI W. CHRISTIE, Sewaren, N. J., assignor to Wheeler Condenser and Engineering Company, Carteret, N. J., a Corporation of New Jersey. Filed Nov. 11, 1913. Serial No. 800,249. (Cl. 62—26.)



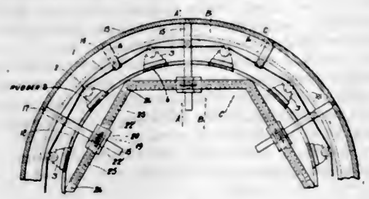
1. A surface condenser comprising a plurality of condenser shells in alinement and each having an exhaust steam inlet and a condensed steam outlet, a tube plate at the ends of each condenser shell, banks of tubes in each condenser shell, a water box casing placed between and secured to the adjacent tube plates of adjoining condenser shells and having inlet and outlet connections, means for equalizing the pressure in the condenser shells, and water box casings at the distant ends of the condenser shells.

2. A surface condenser comprising a plurality of condenser shells placed in alinement and each having an exhaust steam inlet and a condensed steam outlet, a tube plate at the ends of each condenser shell, banks of tubes secured in and extending between the tube plates of each condenser shell, a water box casing placed between and secured to the adjacent tube plates of adjoining condenser shells and having inlet and outlet connections, a partition plate in the said water box casing dividing the same into two compartments, means for equalizing the pressure in the condenser shells, and water box casings at the distant ends of the condenser shells.

3. A surface condenser comprising a pair of similar condenser shells placed in alinement and having an exhaust steam inlet and a condensed steam outlet, a tube plate at the ends of each condenser shell, tubes secured in and extending between the tube plates of each condenser shell, a water box casing placed between and secured to the adjacent tube plates of adjoining condenser shells and having inlet and outlet connections for the circulating water, a partition plate in the said water box casing extending between the adjacent tube plates, in which there are ports through which and the chamber made in the water box casing by the said partition plate, communication is provided between the said condenser shells, and water box casings at the distant ends of the said condenser shells.

4. A surface condenser comprising a pair of condenser shells placed in alinement and each having an exhaust steam inlet and a condensed steam outlet, a tube plate at the ends of each of the condenser shells, tubes in banks secured at their ends in the said tube plates and extending between the same in each of the said condenser shells, a water box casing placed between and secured to the adjacent tube plates of adjoining condenser shells and having inlet and outlet connections for the circulating water, a partition dividing the said water box casing into compartments for the circulating water, a second partition in one of the said compartments of the water box casing extending between the adjacent tube plates, in which ports are provided, through which ports and the chamber made in the water box casing by the second partition a communication is provided between the interior of the condenser shells, and water box casings at the distant ends of the said condenser shells.

1,105,321. RESILIENT WHEEL. ALBERT CLÉRET, Paris, France. Filed Dec. 16, 1912. Serial No. 737,010. (Cl. 152—28.)

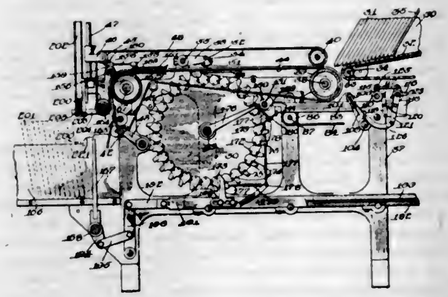


1. A resilient wheel comprising an outer rim, an inner rim, resilient supports carried by one of said rims, inelastic means encircling said supports to transmit pressure to all of said supports simultaneously, and means to support the other rim on said means whereby road shocks are transmitted through the intermediary of said means to said supports.

2. A resilient wheel comprising an outer rim, an inner rim, resilient supports carried by said inner rim, an encircling inelastic band surrounding said supports, and inelastic means to support the outer rim on said band.

3. A resilient wheel comprising an outer rim, an inner rim, resilient supports carried by one of said rims, inelastic means to transmit pressure to all of said supports simultaneously, and means to support the other rim on said means whereby road shocks are transmitted through the intermediary of said means to said supports.

1,105,322. ADDRESSING-MACHINE. SANDFORD C. COX, Edison Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Original application filed Feb. 29, 1904. Serial No. 195,869. Divided and this application filed June 23, 1906. Serial No. 323,015. (Cl. 101—1.)



1. In an addressing machine, the combination of a rotary type carrier, means for conveying the papers in proximity to the type, means for moving the type and paper along together and an oscillatory stamper for pressing the paper against the type, also movable back and forth in the line of movement of the type.

2. In an addressing machine, the combination of a rotary printing surface, means for moving the paper and printing surface along together, a pivoted stamper, means for causing the stamper to engage the paper for pressing the same against the printing surface, said stamper being provided with a curved face struck from its pivot, whereby said stamper will follow the line of the movement of the printing surface, and means for moving the stamper in the opposite direction about its pivot for returning the stamper to its normal position.

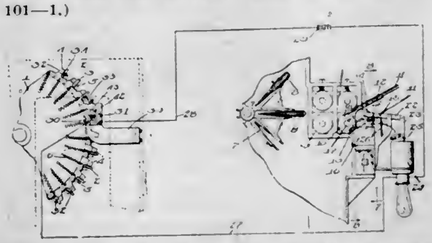
3. In an addressing machine, the combination of a printing surface, means for moving the paper and the printing surface along together, an oscillating stamper for pressing the paper against the printing surface, movable back and forth in the line of movement of the printing surface, said stamper being adapted to be moved in one direction by frictional contact with the paper, and a spring for returning said stamper in the opposite direction when it releases the paper.

4. In an addressing machine, the combination of periodically operating means for applying the address to the paper, means for conveying the papers past the first said means, a stationary paper guide into which the paper passes, a stop coöperating with the guide for positioning the papers, means for adjusting the stop lengthwise of the line of movement of the paper and with relation to said first means to accommodate papers of different sizes, and means for operating said stop in any of its adjusted positions in concert with the address-applying means for releasing the papers after the address is applied to permit the paper to further advance.

5. In an addressing machine, the combination of periodically operating means for applying the address to the paper, conveying tapes for carrying the paper past said first means, slotted guides above and below said tapes for the paper, a stop adjustable lengthwise of the line of movement of the paper and projecting through said slot for engaging the paper and positioning it with relation to the address-applying means, and means operating in concert with said address-applying means for releasing the stop from the paper after the paper has been properly positioned.

[Claims 6 to 41 not printed in the Gazette.]

1,105,323. ADDRESSING-MACHINE. SANDFORD C. COX, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., and New York, N. Y., a Corporation of Maine. Filed June 25, 1907. Serial No. 380,723. (Cl. 101—1.)



1. In a machine for the purpose described the combination of means for addressing papers, means for conveying the paper after it has been addressed, a marking mechanism for placing a mark upon the paper while it is thus conveyed, said addressing means embodying means for holding notched and unnotched printing slugs, and electrical connections whereby said marking means is caused to be actuated by the difference between the notched and unnotched slugs.

2. In a machine for the purpose described the combination of means for addressing papers, means for conveying the papers after the are addressed, a marking means for placing a mark upon some of the papers while being thus conveyed, said addressing means embodying means for holding and carrying differently proportioned printing slugs, electrical means for actuating the said marking means and means controlled by the difference in proportions of the slugs for controlling the said electrical means.

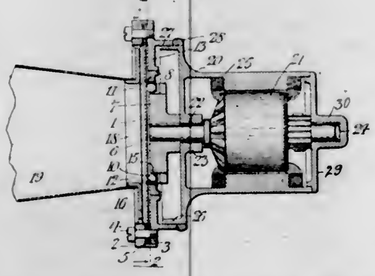
3. In a machine for the purpose described the combination of means for addressing papers embodying means for holding and carrying differently proportioned printing slugs, means for conveying the papers after they are addressed by said slugs, a marking device for placing a mark upon some of the papers while being thus conveyed, a shoe arranged to bear normally against the slugs while being moved in the said carrying means and adapted to be moved back and forth by the difference of proportions of the slugs, and electrical contacts and circuits for actuating said marking means as the shoe is thus moved.

4. In a machine for the purpose described the combination of individual means differently proportioned with respect to each other for addressing papers, means for folding and wrapping papers after they are addressed, a marking device for placing a mark upon some of the papers arranged contiguous to the folding and wrapping means and embodying an electroresponsive device for causing its actuation, and means actuated by the addressing means of certain proportion for closing the circuit through said electroresponsive device.

5. In a machine for the purpose described, the combination of means for addressing the papers, means for wrapping the papers embodying means for conveying the papers away, a shield arranged contiguous to the paper conveying means and along which the paper moves, a marking roller arranged contiguous to said shield for engaging the paper while passing the shield, an electroresponsive device for moving the roller with respect to the shield, a circuit for said electroresponsive device and means for closing said circuit by the addressing means.

[Claims 6 and 7 not printed in the Gazette.]

1,105,324. MECHANICAL HORN. GEORGE C. DEAN, Bronxville, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Original application filed July 10, 1911, Serial No. 637,678. Divided and this application filed Feb. 10, 1913. Serial No. 747,336. (Cl. 177—288.)



1. In a horn, an electric motor having an inclosing cup-shaped shell threaded externally at one end, a removable cap across the open end of the shell and provided with a bearing for the motor shaft, an internally threaded ring screwed upon the threaded end of the shell, an amplifier secured to the ring, a diaphragm in a plane substantially at right angles to the motor shaft having its marginal edges secured between the amplifier and the ring and means on the motor shaft for vibrating said diaphragm.

2. In a horn, an electric motor having a cup-shaped shell of magnetizable material, the base of the shell being threaded externally, an internally threaded ring screwed upon the base of the shell whereby the shell may be adjusted endwise in the ring, means for locking the shell in its adjusted position, a cap across the open end of the shell and provided with a bearing for the motor shaft, a diaphragm secured to the ring and extending across the adjacent end of the shaft, and means on the motor shaft for vibrating the diaphragm.

3. In a horn, a rotary electric motor driving a suitable shaft and having an inclosing shell, carrying field coils, and bearings for the motor shaft, a supporting member, a diaphragm carried thereby and located substantially at right angles to said motor shaft, and means carried by said motor shaft for effecting vibration of said diaphragm, said shell and said diaphragm-supporting member being relatively rotatable to adjust said last mentioned means in respect to the diaphragm.

4. In a horn, a rotary electric motor having an inclosing shell provided with an open end, and carrying the field coils, a removable member extending across one end and provided with a bearing for the motor shaft, a diaphragm in a plane substantially at right angles to said motor shaft, an annular diaphragm supporting member adjustable lengthwise of and upon said shell and means carried by said motor shaft for effecting vibration of said diaphragm, said means being adjustable toward and from said diaphragm upon the relative rotation of said motor shell and said diaphragm supporting member.

5. In a horn, a diaphragm, an annular internally threaded member supporting the same, an electric motor provided with an inclosing cylindrical shell having an axis at an angle to said diaphragm having exterior threaded engagement with the threaded portion of said member, and a rotor driven by said motor and adjustable toward and from said diaphragm upon the rotation of said motor shell in respect to said member.

[Claims 6 to 8 not printed in the Gazette.]

1,105,325. METALLIC TIE. LEE G. EARL, Jacksonville, Fla. Filed May 6, 1913. Serial No. 765,890. Renewed June 18, 1914. Serial No. 845,981. (Cl. 238—5.)



1. A metallic tie including a plurality of sections, the intermediate of said sections being provided with an arm on each end thereof, the said intermediate section being provided with a transverse recess in each end thereof, the said arm having a portion thereof extending upwardly and bisecting said transverse recess, the ends of said tie being adapted for pivotal engagement upon said arms, said ends being provided with transverse recesses on the inner ends thereof, the recesses in said intermediate portion alining with the recesses in said ends whereby to provide a seat for the base flange of a rail and means for preventing the movement of said ends.

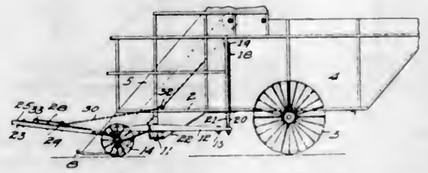
2. A metallic tie including a plurality of sections, the intermediate of said sections being provided with a longitudinal slot therein, arms formed by reducing the ends thereof, the said intermediate portion being further provided with transverse recesses on the opposite ends thereof, shoulders extending upwardly from said arms and adapted to bisect the recesses, the recesses of said intermediate portion alining with recesses in the end portions adapted for the reception of the base flange of a rail, said shoulders extending through said base flange so as to prevent the longitudinal movement thereof.

3. A metallic tie comprising a plurality of sections, the intermediate of said sections being provided with a longitudinal slot therein adapted for the reception of materials for preventing the movement of said tie, arms formed on the opposite ends of said intermediate section, said intermediate section being further provided with recesses in the opposite ends thereof, shoulders extending upwardly and bisecting said recesses, the end portions of said tie being pivotally mounted on said arms and provided with transverse recesses on the inner ends thereof, the recesses of said intermediate portion alining with the recesses of said end portions and adapted to receive the base flange of a rail therein, said shoulders adapted for engagement with said base flange for preventing the movement thereof and a bolt carried by said ends and said arms for holding said ends in a fixed position.

4. A device of the character described including a plurality of pivotally connected solid sections the intermediate of which is provided with an elongated longitudinally extending slot, a multiplicity of studs arranged on the base of said tie, said elongated section having each end thereof reduced so as to provide arms each of which is adapted for engagement beneath a rail, the end sections of said tie engaging said rail for holding the same on said arms, and bolts extending through said ends and said arms, for holding the former, at times, in a fixed position.

5. A device of the character described including a plurality of pivotally connected solid sections the intermediate of which is provided with an elongated longitudinally extending slot, a multiplicity of uniformly spaced apart transversely extending studs arranged on the base of said intermediate section, each end of said elongated section being reduced so as to provide an arm for engagement beneath the base flange of a rail, said opposite ends having portions thereof cut out above said arms in which the one side of said base flange engages, the pivoted ends of said tie having a portion thereof cut out so as to provide a bifurcated end, the branches of the bifurcation engaging with the arms of said elongated section, a bolt for pivotally engaging each of said ends with said elongated section, and a bolt extending through the branches of said bifurcated end and subjacent the expanding recesses of said elongated section and said ends for holding the latter, at times, in a fixed position.

1,105,326. DRAFT-RIGGING. HENRY HENDERSON, Halstad, Minn. Filed Oct. 17, 1913. Serial No. 795,685. (Cl. 21—189.)



1. The combination, with a frame, of draft trucks arranged upon each side thereof, draft tongues for said trucks, means pivotally connecting said trucks with said frame, and flexible means connected to said tongues and having running connections with said frame.

2. The combination, with a wheeled frame having a pick up at its forward end, of a pair of draft trucks arranged upon each side of said frame, the axes of said trucks coinciding substantially with the axis of said pick up, said trucks having draft tongues and means connecting said trucks with said frame.

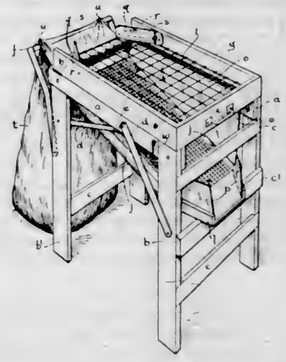
3. The combination, with a wheeled frame, of draft trucks arranged upon each side of said frame, draft tongues for said trucks, a flexible equalizing means attached at its ends to said tongues respectively and having running connections with said wheeled frame, and eveners slidably mounted on said tongues and having running connection with said equalizing means.

4. The combination, with a wheeled frame, of a bolster projecting on each side of said frame, bars pivotally mounted on the projecting ends of said bolster and extending in the front and rear thereof, means adjustably connecting the rear ends of said bars across said frame, and draft trucks pivotally connected with the forward ends of said bars, the adjustable connections between the rear ends of said bars permitting said trucks to be moved inwardly or outwardly with respect to said frame.

5. The combination, with a wheeled frame, of a bolster whereon the forward portion of said frame is pivoted, said bolster being free to swing horizontally beneath said frame, bars pivoted at a point intermediate to their ends on said bolster, trucks pivotally connected with the forward ends of said bars and having draft tongues, means connecting the rear ends of said bars across said wheeled frame, and a flexible equalizing means attached to said tongues and having a running connection with said frame.

[Claims 6 to 9 not printed in the Gazette.]

1,105,327. POTATO-SORTING APPARATUS. W BURKE HODGES, New Hudson, Mich. Filed Mar. 21, 1914. Serial No. 826,158. (Cl. 130—32.)



1. Apparatus for sorting, having in combination, an open-top table, comprising a top frame, a pair of legs for supporting said top frame, a second pair of legs for supporting said top frame, the two pairs of legs being foldable one pair inside the other and into the same plane with the top frame, a screen of larger mesh pivoted at one end to the top of the top frame, and adapted to rest parallel against said top frame, a screen of smaller mesh detachably pivoted to one pair of legs, and means for operatively hanging the free end of the screen of smaller mesh underneath the screen of larger mesh, the said screen of smaller mesh being of less width than the narrower pair of legs and adapted, when detached from its pivot, to lie between the narrower pair of legs in the plane of the top frame and against the screen of larger mesh.

2. Apparatus for sorting, having in combination, a pair of side rails forming the top of an open-top table, a pair of legs pivoted at one end of the side rails to the outside thereof, and foldable into the plane of the side rail at the outside of the side rails, a second pair of legs pivoted at the other end of the side rails to the inside thereof and foldable into the same plane as the side rails and within the said two side rails, a screen of larger mesh pivoted to the top of the side rails at one end and adapted to lie against the side rails, a screen of smaller mesh detachably pivoted to one pair of legs and adapted to lie against the bottom of the screen of larger mesh when detached from its pivoting and to lie between the inside pair of legs, and means for flexibly suspending the free end of the screen of smaller mesh beneath the screen of larger mesh.

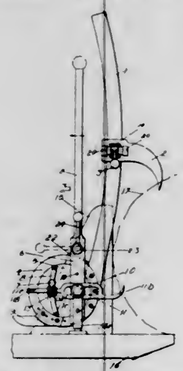
3. Apparatus for sorting, having in combination, a top frame, two pairs of legs foldable, when collapsed, into the same plane as the top frame, a screen of larger mesh pivoted at one end to the top frame and adapted to lie against the top of the top frame when the apparatus is collapsed, a screen of smaller mesh suspended at its free end to the screen of larger mesh and of width narrower than the inside pair of legs, so as to lie between the inside pair of legs, and means for flexibly suspending the free end of the screen of smaller mesh beneath the screen of larger mesh.

4. Apparatus for sorting, having in combination, a top frame, two pairs of legs foldable, when collapsed, into the same plane as the top frame, a screen of larger mesh pivoted at one end to the top frame and adapted to lie against the top of the top frame when the apparatus is collapsed, a screen of smaller mesh suspended at its free end to the screen of larger mesh and of width narrower than the inside pair of legs, so as to lie between the inside pair of legs in the plane of the top frame, a spout for said screen of smaller mesh pivoted to one pair of legs and attachable to the end of the screen of smaller mesh opposite the suspended end, and a pair of wings hinged to the sides of the screen of smaller mesh and

foldable over against the said screen, when the apparatus is collapsed.

5. Apparatus for sorting, having in combination, an open-top table comprising a top frame supported upon legs, an upper screen frame provided with a screen of large mesh, said upper screen frame being pivoted at one end to the top frame and adapted to rest thereupon in horizontal position except when operated by swinging in a vertical arc and striking the same against said top frame, an under screen frame provided with a screen of finer mesh pivoted at its end which lies opposite the pivoted end of the upper screen frame and underneath the table, and a link for holding the free end of said under screen higher than the pivoted end and to the upper screen frame adjacent the upper screen frame's pivoted end, whereby manipulation of the upper screen frame serves to shake the lower screen frame and the bringing of the upper screen frame into an angularity for dumping its contents also facilitates the dumping of the lower screen.

1,105,328. MILL-DOG FOR HEAD-BLOCKS. CORY O. HUNTINGTON, Centralia, Wash., assignor of one-half to George G. Seely, Portland, Oreg. Filed June 19, 1913. Serial No. 774,565. (Cl. 143—126.)



1. In a mill dog, a base, an eccentric disk mounted thereon, an eccentric strap coöperating with the disk, an upright lever fixed upon said strap, a dog secured thereon, a dog mounted upon the disk in coöperative relation thereto, and a lever secured to the disk for rocking it, to effect vertical movement of said dogs.

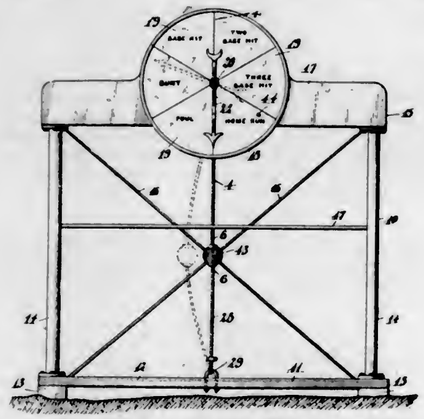
2. In a mill dog, a base, an eccentric disk mounted thereon, an eccentric strap coöperating with the disk, an upright lever fixed upon the said strap, a dog secured thereon, a dog mounted for horizontal adjustment on said disk in coöperative relation to the first mentioned dog and a lever fixed to the disk for rocking it to effect vertical movement of the dogs.

3. In a mill dog, a base, an eccentric disk mounted thereon, an eccentric strap coöperating with the disk, an upright lever fixed upon the said strap, a dog secured thereon, a dog mounted for horizontal adjustment on said disk in coöperative relation to the first mentioned dog, a lever fixed to the disk for rocking it to effect vertical movement of the dogs, and means for varying the angle of the second mentioned dog.

4. In a mill dog, a base, an eccentric disk mounted thereon, an eccentric strap coöperating therewith, an upright lever fixed to said strap, a dog slidably secured on the upright, a dog opposed thereto and adapted to be secured in fixed relation upon the disk, and a forked lever encompassing the strap and disk and rigidly fixed to the disk to prevent lateral relative movement and for effecting vertical movement of said dogs.

5. In a mill dog, a base, a shaft fixed transversely therein, an eccentric mounted upon said shaft, an eccentric strap coöperating therewith, an upright carrying an upper dog, secured to the eccentric strap at the narrow side of the eccentric disk, a lever fixed to the disk, a guide bar secured upon the disk at the broad side thereof, a bracket movable upon said bar and adapted to be locked at any desired point thereon, and an under dog slidably mounted upon said shaft and movable through an aperture in said bracket, whereby the relative angle and longitudinal position of the lower dog may be varied and by shifting said lever, the dogs may be moved toward or from each other.

1,105,329. EXERCISING-MACHINE OR GAMING APPARATUS. DANIEL HERMAN KLEINSCHMIDT, Buffalo, N. Y. Filed Jan. 17, 1914. Serial No. 812,711. (Cl. 73—15.)



1. An apparatus of the kind described, comprising a support, a spring carried by said support, an indicating device including a cable sheave, a cable passing around said sheave having one end secured to said spring and its other end secured to said support, and a spherical element secured to said cable.

2. An apparatus of the kind described, comprising a support, an indicating device on said support, a cylinder adjustable on said support, a coil spring within said cylinder, a rod passing through said coil spring and extending from one end of said cylinder, said spring bearing at one end against said end of said cylinder and being confined against expansive movement by said rod, a cable passing around said sheave and having one end secured to said rod and its other end fixedly attached to said support, and a ball secured to said cable.

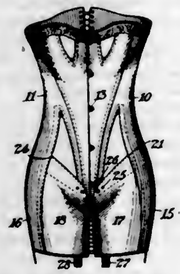
3. An apparatus of the kind described, comprising a support having a table, a cylinder lengthwise adjustable on said table, a coil spring within said cylinder, a rod passing through said spring and having a washer at one end bearing against one end of said spring, said spring bearing at its other end against one head of said cylinder and said rod extending through said head, a cable operatively connected with the indicating device and having one end secured to said rod and its other end secured to a fixed point beneath said table, and a ball secured to said cable.

4. An apparatus of the kind described, comprising a support having a table, a bracket secured to said table, a cylinder adjustably secured to said table in a manner to be movable toward and from said bracket, a bolt extending from one end of said cylinder passing through said bracket, a nut applied to said bolt and bearing against said bracket, a coil spring within said cylinder, a rod passing through said coil spring serving to retain the same in a compressed state, said rod extending through the opposite end of said cylinder, an indicating device supported by said table, a cable operatively connected with said indicating device and having one end secured to said rod and its other end secured to a fixed point beneath said table, and a ball secured to said cable.

5. An apparatus of the kind described, comprising a support having a base, uprights rising from said base and a table secured to the upper ends of said uprights, a cable sheave mounted on said table, a cable passing over said sheave and extending downwardly for connection at one end with said base, said cable being directed laterally from said sheave for yielding connection at its other end to said table, a ball secured to the downwardly extending portion of said cable and adapted to receive a blow from a baseball bat, a disk applied to the side of said table and divided into a series of spaces, said spaces bearing terms of the game of baseball indicating the force of a blow directed against the ball on said cable, an indicating finger movable over said series of spaces, and operative connection between said indicating finger and said cable sheave.

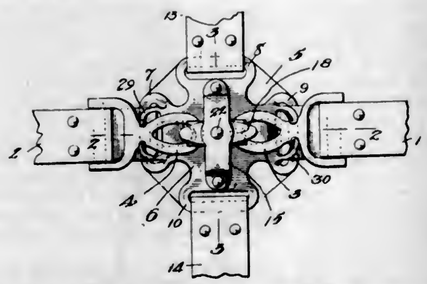
[Claims 6 and 7 not printed in the Gazette.]

1,105,330. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Dec. 30, 1913. Serial No. 809,447. (Cl. 2—73.)



An apparel corset comprising corset body halves, each having a depending skirt extending from the rear medial line thereof forwardly, skirt sections completing the continuity of the said skirts to substantially the front medial line of the corset and extending an appreciable distance below the front meeting edges thereof, each skirt section being connected along one side edge to its skirt and also to a portion of the corresponding corset body half, means for adjustably securing the adjacent front edges of the said skirt sections in position, and tension devices attached to and extending below the lower front edges of the said skirt sections.

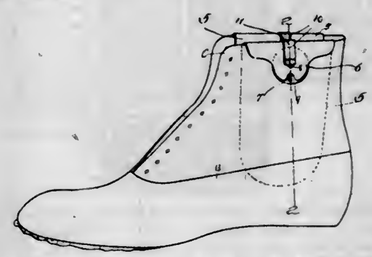
1,105,331. TRACE-ATTACHING DEVICE. WILLIAM KYLLONEN, Oakes, N. D. Filed Mar. 26, 1914. Serial No. 827,296. (Cl. 54—56.)



1. In a harness the combination with a base plate and an arch plate rising therefrom, a pair of integral inwardly curved arms secured beneath the arch plate, and a plate secured to the base plate under the arms having resilient ends formed with cut away portions to engage said arms and provide a retaining space under each arm.

2. In a harness the combination with a base plate and an arch plate rising therefrom, of a pair of integral arms secured to the arch plate and extending inwardly and downwardly therefrom, a head at the end of each arm and a plate secured under said arms having resilient ends formed on compound curves and engaging the arms, and means on the base plate to partially encircle and retain a tug, as described.

1,105,332. SHOE-TOP PROTECTOR. HENRY W. LAMBERT, Stoughton, Mass. Filed Apr. 29, 1912, Serial No. 693,838. Renewed May 29, 1914. Serial No. 841,959. (Cl. 36—72.)

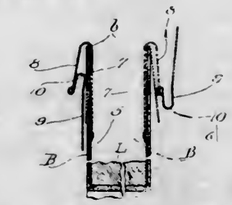


1. A shoe top protector having inner and outer members adapted to receive between them the edge of a shoe upper or top, a stud secured to one of said members, and a clamp having a slotted shank slidably engaged with said stud.

2. A shoe top protector having inner and outer members adapted to receive between them the edge of a shoe upper or top, and a size indicator movably mounted on said outer member.

3. A shoe top protector having integral inner and outer members adapted to receive between them the edge of a shoe top, said outer member having an opening, a disk rotatably mounted on said outer member back of said opening and having size numbers, and a clamp for pressing said members into frictional engagement with the shoe top therebetween, substantially as described.

1,105,333. SUPPORT FOR SHOE-UPPERS. HENRY W. LAMBERT, Stoughton, Mass. Filed Mar. 11, 1912, Serial No. 683,051. Renewed May 29, 1914. Serial No. 841,960. (Cl. 36—72.)

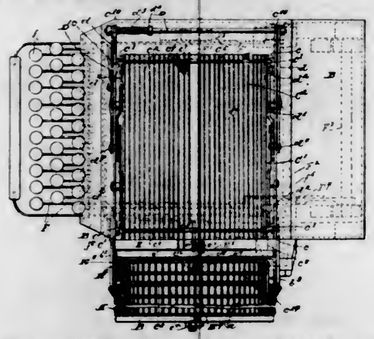


A supporting device for the uppers of shoes comprising a flat supporting member having at its end an integral flap, and a clamping device having two members one of which is fixed to said supporting member and the other of which operates against said flap.

1,105,334. TYPE SETTING AND DISTRIBUTING MACHINE. WALTER S. LISTER, Cleveland, Ohio, assignor to The National Printing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 16, 1908. Serial No. 411,042. (Cl. 101—130.)

1. The combination with a member carrying a font of type in rows, of a second member having a variable range of movement relatively to said first member and directly coöperative therewith to receive type from, or deliver type to, different rows therein in different positions of said second member respectively.

2. The combination of a member carrying a font of type in rows, a movable member directly coöperative therewith to receive type from, or deliver type to, different rows therein in different positions of said second member respectively, and means for limiting the movement of said second member.



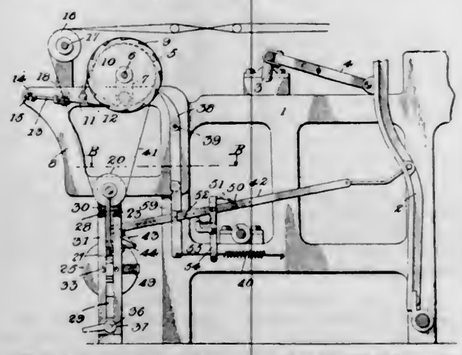
3. The combination of a member carrying a font of type in rows, a movable member directly coöperative therewith to receive type from, or deliver type to, different rows therein in different positions of said second member respectively, and means adapted to limit the movement of said second member to various predetermined distances.

4. The combination of a member carrying a font of type in rows, a movable member directly coöperative therewith to receive type from, or deliver type to, different rows therein in different positions of said second member respectively, and selective mechanism adapted to limit the movement of said second member to any desired distance.

5. The combination of a member adapted to carry type in rows, a second member, adapted in different positions relatively to said first member to receive type from, or deliver type to, different rows therein respectively, means for limiting the movement of said second member, and key-board mechanism adapted to impart movement to said second member and actuate said limiting means.

[Claims 6 to 55 not printed in the Gazette.]

1,105,335. LET-OFF MECHANISM FOR LOOMS. WILLIAM J. LETTON, Paterson, N. J. Filed Dec. 19, 1911. Serial No. 666,793. (Cl. 139—59.)



1. In a loom, a warp beam, a pawl and ratchet for holding the warp beam against rotation, a floating roller for applying stress to the warp threads, a reciprocating bar having its free end in position to be lifted during the rise of the floating roller, and means adapted to coact with the reciprocating bar to cause it to rise during the rise of the floating roller, the said reciprocating bar being provided with means for engaging and tripping the pawl when the floating roller reaches a predetermined height.

2. In a loom, a warp beam, a ratchet and pawl for holding the warp beam against rotation, a weighted roller for applying stress to the warp threads, a reciprocating bar provided with a projection in position to engage and trip the pawl when the bar reaches a predetermined height, a folding finger pivoted to the reciprocating bar and means connected with the weighted roller for engaging the finger and causing it to unfold and lift the reciprocating bar when the floating roller reaches a predetermined height.

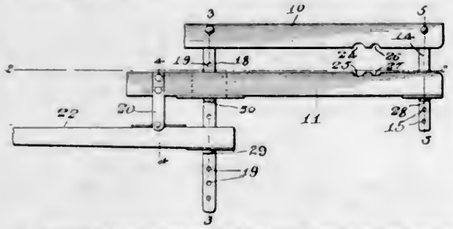
3. In a loom, a warp beam, a ratchet wheel and pawl for holding the warp beam against rotation, a weighted roller for applying stress to the warp threads, a catch connected to rise and fall with the weighted roller, a reciprocating bar provided with a projection for engaging and tripping the pawl, and a spring actuated finger pivoted to the reciprocating bar and adapted to engage the said catch when the latter reaches a predetermined height whereby the reciprocating bar may be lifted and the pawl tripped.

4. In a loom, a warp beam, a pawl and ratchet for holding the warp beam against rotation, a floating weighted roller for applying stress to the warp threads, a reciprocating bar, means coöperating therewith to lift the bar when the weighted floating roller reaches a predetermined height, the said bar being provided with a projection in position to engage and trip the pawl, an inclined plane and a projection carried by the bar in position to ride up the inclined plane when the bar is lifted and thereby further lift and hold the bar momentarily raised.

5. In a loom, a warp beam, means for holding it against rotation, a floating roller for applying stress to the warp threads, a reciprocating bar, means coacting with the reciprocating bar and floating roller for lifting the bar when the roller reaches a predetermined height and thereby temporarily release the warp beam holding means, an inclined plane and a projection carried by the reciprocating bar in position to ride up the inclined plane when the bar is lifted and thereby further raise and maintain the reciprocating bar momentarily in a raised position.

[Claims 6 to 9 not printed in the Gazette.]

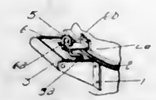
1,105,336. PIPE-CLAMP. CLAIR MCCARD, Divide, Wyo. Filed Jan. 7, 1913. Serial No. 740,672. (Cl. 24—243.)



1. A pipe clamp comprising a pair of coöperating members hingedly connected at one end and provided with registering passages adjacent their other end, an arm pivoted in the passage of one of said members and extending through the passage of the other, said arm being provided with a plurality of openings, an operating lever pivotally mounted on the last named member and having its inner end provided with a passage through which said arm extends, and a pin interchangeably insertible in the openings in said arm outwardly of the inner end of said lever whereby the movement of the outer end of said lever toward the adjacent member will bring the inner end thereof into engagement with said pin and draw said members toward each other.

2. A pipe clamp comprising a pair of coöperating members having registering passages therein adjacent one end, an arm pivoted in the passage of one of said members and extending through the passage of the other member, said arm being provided with a plurality of openings, a pin inserted in one of the openings between the free end of the arm and the adjacent member whereby the members are hingedly connected, said members being further provided with registering passages adjacent their outer ends, an arm pivoted in the last named passage of one member and extending through the last named passage of the other member correspondingly to the first named arm, said last named arm being provided with a plurality of openings, an operating lever pivotally mounted on the member through which said last named arm extends and having its inner end provided with a passage through which said last named arm also extends, and a pin interchangeably insertible in the openings of said last named arm outwardly of the inner end of said lever whereby the movement of the outer end of said lever toward the adjacent member will bring the inner end thereof into engagement with said pin and draw said members toward each other.

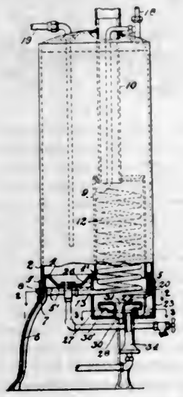
1,105,337. COMBINED WASHBOILER AND TRAY. PETER C. NIELSEN, Portland, Oreg., assignor of one-half to Edwin H. Collis, Portland, Oreg. Filed May 27, 1913. Serial No. 770,164. (Cl. 68—30.)



1. The combination in a wash boiler of a hook rising from one end thereof and curving outwardly terminating below the plane of the upper edge of the boiler, a cover forming a closure for said boiler, a bracket having an aperture therein extending from the end of said cover and adapted to engage upon said hook, and a projection formed upon each corner of said bracket adapted, when the latter is swung upon the hook as a pivot, to engage the terminal portion to limit such movement.

2. The combination in a wash boiler of a support rising from one end thereof, a cover fitted upon the boiler and forming a closure therefor, a horizontal bracket extending from an end of said cover and adapted to loosely engage upon said support, and a projection from said support adapted to engage a projection upon said bracket upon the swinging of the cover in either direction.

1,105,338. STAND-BOILER BURNER-CHAMBER. ROBERT T. PARISEN, Knoxville, Pa., assignor to Lawson Manufacturing Company, Homestead, Pa., a Corporation of Pennsylvania. Original application filed May 28, 1913, Serial No. 770,318. Divided and this application filed Jan. 14, 1914. Serial No. 812,011. (Cl. 122—16.)



1. The combination of a stand boiler, a burner chamber beneath and smaller in cross section than the boiler, the chamber enlarged at one side toward the plane of the vertical side wall of the boiler, and a door-closed opening in said enlargement.

2. The combination of a stand boiler, a burner chamber beneath and smaller in cross-section than the boiler, the chamber enlarged at one side with the enlargement extending to and forming a downward continuation of the upright wall of the boiler, and a door-closed opening in the enlargement.

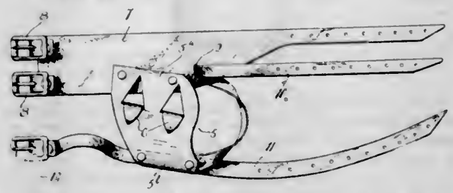
3. The combination of a stand boiler, a burner chamber beneath and smaller in cross-section than the boiler and secured thereto, the chamber enlarged at one side to conform to the contour of the boiler, and a door-closed opening in said enlargement.

4. The combination of a stand boiler, a burner chamber beneath and smaller in cross-section than the boiler and formed with a side enlargement, and a door-closed opening in the enlargement.

5. The combination of a stand boiler, a burner chamber beneath and smaller in cross-section than the boiler and formed with a side enlargement, the chamber and its enlargement being located wholly between the planes of the upright walls of the boiler, and a door-closed opening in the chamber enlargement.

[Claims 6 to 12 not printed in the Gazette.]

1,105,339. HUSKING IMPLEMENT. ROBERT J. PAUL, Gilman, Iowa. Filed May 1, 1912. Serial No. 694,440. (Cl. 130—4.)



In a hand implement, the combination with a rigid plate adapted to form a tool support of an attaching front strap connected intermediate its ends to the front portion of the plate, said strap having a widened end portion provided with a plurality of buckles and a narrow end portion forming a single perforated tongue, said strap also having a slot formed transversely therein adjacent the plate, a second strap connected to the rear of the plate and extending approximately parallel to the front strap, said second strap having a buckle at one end and terminating in a perforated tongue at the opposite end, and a third strap attached at one end to the rear portion of the plate and at one of the points of connection of the second strap with such plate, said third strap then extending longitudinally of the plate and passing through the slot in the front strap, the terminal of said third strap forming a tongue adapted to engage with one of the buckles of the front strap.

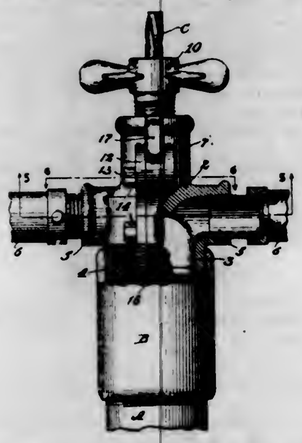
1,105,340. COMBINATION CASING-HEAD AND OIL-SAVER. CLARK F. RIGBY, Butler, Pa. Filed Feb. 7, 1913, Serial No. 746,809. Renewed Dec. 31, 1913. Serial No. 809,760. (Cl. 166—14.)

1. A casing closure open at its lower end and adapted to connect with a well casing and provided with a lateral oil outlet, the upper portion of the closure formed with a cable passage, cable packing means for the passage, the casing closure formed with a cable entering slot which extends from top to bottom thereof, and slot closing means.

2. A casing closure consisting of a hollow body open at its lower end and adapted to connect with a well casing and provided with a lateral oil outlet, the upper portion of the body formed with an integral vertically open stuffing box, packing compressing means for the box, the body including the integral stuffing box formed with a cable inserting slot extending from top to bottom thereof, and a closure for the slot.

3. A casing closure consisting of a hollow body having a vertically open externally threaded lower portion adapt-

ed to connect with the internally threaded collar of a well casing, the body provided with a lateral oil outlet, the upper portion of the body contracted and formed with a cable passage, means within the passage for packing a drilling cable, the body and its contracted upper portion formed with a cable inserting slot extending from top to bottom thereof with the slot intersecting said passage, and a closure for the slot.



4. A casing closure consisting of a hollow body having an open downwardly extending externally threaded portion adapted to connect with a well casing collar, the body having a lateral oil outlet, a vertically open stuffing box integral with the body and forming an upward continuation thereof, the body and stuffing box formed with a cable inserting slot extending from top to bottom thereof, a closure removably secured in the slot with the upper portion of the closure shaped to conform to the contour of the stuffing box and the lower portion of the closure shaped to conform to the lower portion of the body with the outer face of the closure threaded complementary with the threaded lower portion of the body, and vertically divided packing compressing means for the stuffing box adapted to removably embrace the cable.

5. The combination with a well casing provided at its upper end with an internally threaded collar, of a casing closure consisting of a hollow body open at its bottom and threaded externally around the bottom opening for entering and coupling with the internally threaded collar, the body formed with an oil outlet and also open at its top to receive a drilling cable, a closure adapted to removably embrace a drilling cable and close the said top opening, the hollow body formed with a cable-entering slot communicating with the top and bottom openings therein, and a closure removably secured in the slot and conforming in shape to the upper and lower portions of the body.

1,105,341. ALLOY OF IRON. JAMES RAMSEY SPEER, Trappe, Md. Filed Feb. 24, 1914. Serial No. 820,566. (Cl. 75—1.)

1. As a new article of manufacture, an iron alloy containing the following elements in substantially the following proportions: silicon over .1% to 3%; chromium .5% to 1.5%; nickel .25% to 1%; sulfur over .05% to .2%; phosphorus over .12% to 1.5%; manganese over .45% to 1%; and total carbon 1% to 4%.

2. As a new article of manufacture, an alloy containing silicon, sulfur, phosphorus, manganese, carbon, nickel, chromium, and iron, the quantity of nickel being approximately fifty per cent. of the quantity of chromium.

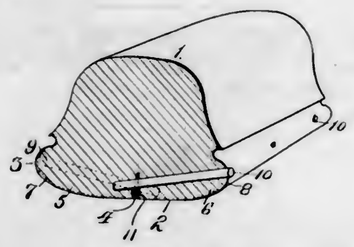
3. As a new article of manufacture, an alloy containing silicon, sulfur, phosphorus, manganese, carbon, nickel, chromium, and iron, the quantity of chromium being largely in excess of the quantity of nickel.

4. An alloy containing iron, silicon, manganese, carbon, nickel, and chromium, the quantity of chromium being largely in excess of the quantity of nickel.

5. An alloy containing iron, silicon, sulfur, phosphorus, manganese, carbon, nickel, and chromium, the quantity of manganese ranging from about .45% to about 1% of the total alloy.

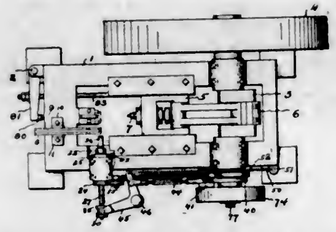
[Claims 6 to 8 not printed in the Gazette.]

1,105,342. VEHICLE-TIRE. CLARK ALLEN SWINEHART, Akron, Ohio. Filed Jan. 24, 1913, Serial No. 743,951. Renewed June 22, 1914. Serial No. 846,699. (Cl. 152—1.)



An elastic tire for vehicles embodying a tread and a base, the latter being provided with internally-extending beads to receive the inturned clencher flanges of a wheel rim, two series of transversely extending cross wires embedded in the base, the members of each series alternating and extending from the beads on one side, and an anchorage embedded within the tire and engaging the cross wires at a point removed from the inner ends of the wires.

1,105,343. FEED MECHANISM. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Feb. 14, 1913. Serial No. 748,367. (Cl. 10—162.)



1. In combination with a blank support and operating tools; a feed mechanism for transferring blanks from said blank support to said operating tools, comprising carrying fingers, reciprocating mechanism, to which said fingers are attached, and means for operating said fingers, whereby the initial movement thereof, after said fingers have engaged said blank, is at an angle to the direction of movement of the blanks within the blank support, and the final movement of said fingers with said blank is in a path substantially parallel with said initial movement, but in the opposite direction.

2. In a device of the character described, the combination with a die; of a delivery chute; means for transferring blanks from said delivery chute to said punch; and means for insuring the positive alinement of said blanks with the opening in said die.

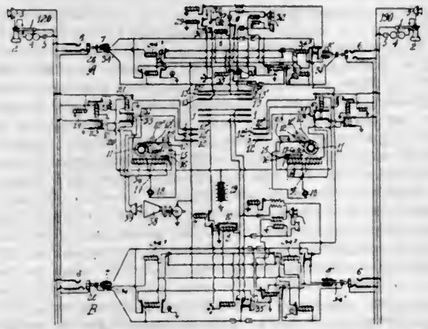
3. In a device of the character described, the combination with a die; of a delivery chute; means for transferring blanks from said delivery chute to said die; and means for positively alining the heads of said blanks with the opening in said die, said means acting upon said blank during the transfer movement thereof from the delivery chute.

4. In a device of the character described, the combination with a die; of a blank support; means for transferring blanks with angular heads from said blank support to said die; and means, in the path traveled by said blank to the die, for rotating said blank about its axis while engaged by said transfer means when the angular sides of the head thereof are not parallel with the angular sides of the opening in the die, so that said head will register with the opening in said die, at the completion of said transfer movement.

5. The combination with a die; of guide plates movably mounted adjacent thereto, having faces thereon that lie opposite each other and in line with opposite faces of the opening in said die, said parallel faces flaring outwardly in said die, said parallel faces flaring outwardly away from said die and forming a throat therebetween wider than the space between the opposite faces of the opening in said die.

[Claims 6 to 19 not printed in the Gazette.]

1,105,344. TELEPHONE SYSTEM. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed June 21, 1909, Serial No. 503,345. Renewed Sept. 14, 1912. Serial No. 720,420. (Cl. 179—27.)



1. A telephone exchange system including lines extending from telephone stations to an exchange, a plurality of groups of operators' link connectors at the exchange for uniting lines in conversation, an operator's telephone outfit for each group of link connectors and common to the link connectors of such group, selecting mechanism governed by calling lines adapted to select and permit the operation of the operator's telephone outfit free to be operated, means made effective by the link connectors of each group that are taken for use to prevent the responsive device associated with such group from being selected for operation, and mechanism governed by the connecting ends of the link connectors and serving, when taken for use, to release the operators' telephone outfits, again to render them free for selection by the calling lines.

2. A telephone exchange system including lines extending from telephone stations to an exchange, a plurality of groups of operators' link connectors at the exchange for uniting lines in conversation, a responsive device for each group of link connectors and common to the link connectors of such group, selecting mechanism governed by calling lines adapted to select and permit the operation of the responsive device free to be operated, means made effective by the link connectors of each group that are taken for use to prevent the responsive device associated with such group from being selected for operation, operators' telephones for the groups of link connectors, switching means governed by the selecting mechanism and actuated by operated selecting mechanism to bring the operators' telephones associated with the selected responsive devices into telephonic association with the calling lines, and mechanism governed by the connecting ends of the link connectors and serving, when taken for use, to release the responsive devices, again to render them free for selection by the calling lines.

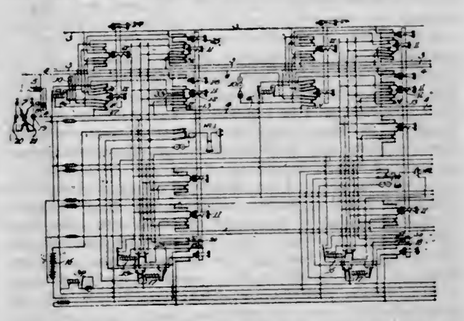
3. A telephone exchange system including lines extending from telephone stations to an exchange, a plurality of groups of operators' link connectors at the exchange for uniting lines in conversation, an operator's telephone outfit for each group of link connectors and common to the link connectors of such group, selecting devices individual to the telephone lines and operated by calling lines to select and permit the operation of the responsive device free to be operated, means made effective by the link connectors of each group that are taken for use to prevent the operator's telephone outfit associated with such group from being selected for operation, and mechanism governed by the connecting ends of the link connectors and serving, when taken for use, to release the operators' telephone outfits, again to render them free for selection by the calling lines.

4. A telephone exchange system including lines extending from telephone stations to an exchange, a plurality of groups of operators' link connectors at the exchange for uniting lines in conversation, a responsive device for each group of link connectors and common to the link connectors of such group, selecting devices individual to the telephone lines and operated by calling lines to select and permit the operation of the responsive device free to be operated, means made effective by the link connectors of each group that are taken for use to prevent the responsive device associated with such group from being selected for operation, operators' telephones for the groups of link connectors, switching means governed by the selecting mechanism and actuated by operated selecting mechanism to bring the operators' telephones associated with the selected responsive devices into telephonic association with the calling lines, and mechanism governed by the connecting ends of the link connectors and serving, when taken for use, to release the responsive devices, again to render them free for selection by the calling lines.

5. A telephone exchange system including lines extending from telephone stations to an exchange, a plurality of groups of operators' link connectors at the exchange for uniting lines in conversation, an operator's telephone outfit for each group of link connectors and common to the link connectors of such group, selecting mechanism governed by calling lines adapted to select and permit the operation of the operator's telephone outfit free to be operated, and means made effective by actuated selecting mechanism to prevent operators' telephone outfits from being again selected while in operated conditions.

[Claims 6 to 54 not printed in the Gazette.]

1,105,345. TELEPHONY. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1911. Serial No. 622,943. (Cl. 179—39.)



1. A telephone system including two telephone lines extending from telephone stations and each extending from its own station to the station of the other line, there being means governed at the telephone stations whereby telephonic connection may be effected between the sta-

tions; a third telephone line; means whereby either of said telephone stations may become connected with the third telephone line, and establish a busy test condition in connection with the third telephone line; and means whereby the telephone of the station initially becoming connected with the third telephone line may be dissociated from said third line without removing said busy test condition and may be again restored to connection with said third line so that during the interval of disconnection of such telephone line the third telephone line may not be appropriated by another station.

2. A telephone system including two telephone lines extending from telephone stations and each extending from its own station to the station of the other line, there being means governed at the telephone stations whereby telephonic connection may be effected between the stations; a third telephone line; means whereby either of said telephone stations may become connected with the third telephone line; apparatus brought into coöperative relation with the third telephone line by the station initially becoming connected therewith for locking out telephonic apparatus of other stations seeking the third telephone line; and means whereby the telephone at the station has initially become connected with the third telephone line may be dissociated from such line without rendering ineffective the lock out condition, and whereby such telephone may be restored to its connection with the third telephone line so that during the interval of disconnection of such telephone line the third telephone line may not be appropriated by another telephone station.

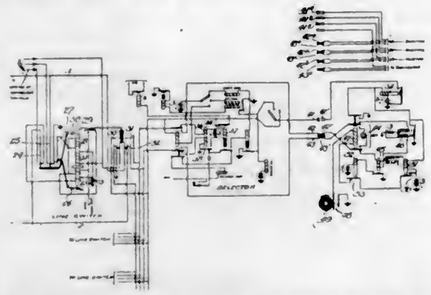
3. A telephone system including two telephone lines extending from telephone stations and each extending from its own station to the station of the other line, there being means governed at the telephone stations whereby telephonic connection may be effected between the stations; a telephone exchange; a trunk line intervening between the stations of the aforesaid lines and said exchange; means whereby either of said telephone stations may become connected with the trunk line; and means whereby the telephone of the station initially becoming connected with the trunk line may be dissociated from said trunk line without removing said busy test condition and may be again restored to connection with said trunk line so that during the interval of disconnection of such telephone line the trunk line may not be appropriated by another station.

4. A telephone system including two telephone lines extending from telephone stations and each extending from its own station to the station of the other line, there being means governed at the telephone stations whereby telephonic connection may be effected between the stations; a telephone exchange; a trunk line intervening between the stations of the aforesaid lines and said exchange; means whereby either of said telephone stations may become connected with the trunk line; apparatus brought into coöperative relation with the trunk line by the station initially becoming connected therewith for locking out telephone apparatus of other stations seeking the trunk line; and means whereby the telephone at the station that has initially become connected with the trunk line may be dissociated from such line without rendering ineffective the locking out condition, and whereby such telephone may be restored to its connection with the trunk line so that during the interval of disconnection of such telephone line the trunk line may not be appropriated by another telephone station.

5. A telephone system including two telephone lines extending from telephone stations and each extending from its own station to the station of the other line, there being means governed at the telephone stations whereby telephonic connection may be effected between the stations; a third telephone line; means whereby either of said telephone stations may become connected with the third telephone line and establish a busy test condition in connection with the third telephone line, and whereby the telephone of the station initially becoming connected with the third telephone line may be dissociated from said third line without removing said busy test condition and may be again restored to connection with said third line so that during the interval of disconnection of such telephone line the third telephone line may not be appropriated by another station; and complemental apparatus at the stations of the first aforesaid telephone lines cooperating with the aforesaid means in performing the function for which it is provided.

[Claims 6 to 14 not printed in the Gazette.]

1,105,346. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1911. Serial No. 628,778. (Cl. 179—17.)



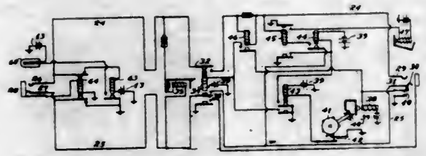
1. A telephone exchange system including a party telephone line connecting a plurality of party telephone line stations with an exchange, said telephone stations having signal receivers responsive to currents of differing character; selecting mechanism at the exchange and operable by the equipment at any of said party telephone line stations, when calling, for extending said party telephone line into connection with other telephone lines; a plurality of sources of signaling current for supplying the signal receivers at the aforesaid telephone stations with current to which said signal receivers are responsive; and means governed at any of said telephone stations, when calling, for causing said selecting mechanism selectively to connect that one of said sources of signaling current with said party telephone line which corresponds to the station upon said party telephone line that is to be signaled by the calling station upon the same line, said selecting mechanism serving to convey signaling current from the selected source to the selected party line station.

2. A telephone exchange system including a party telephone line connecting a plurality of party telephone line stations with an exchange, said telephone stations having signal receivers responsive to currents of differing character; selecting mechanism at the exchange and operable by the equipment at any of said party telephone line stations, when calling; a plurality of sources of signaling current for supplying the signal receivers at the aforesaid telephone stations with current to which said signal receivers are responsive; and means governed at any of said telephone stations, when calling, for causing said selecting mechanism selectively to connect that one of said sources of signaling current with said party telephone line which corresponds to the station upon said party telephone line that is to be signaled by the calling station upon the same line, said selecting mechanism serving to convey signaling current from the selected source to the selected party line station.

1,105,347. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1911. Serial No. 643,340. (Cl. 179—50.)

1. A telephone system including a common battery exchange to which telephone lines extend; a second common battery exchange to which other telephone lines extend; a trunk line intervening between the exchanges to enable the establishment of a connection between a telephone line extending to one exchange and a telephone line extending to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for excluding the common battery of the second exchange from circuit with the link connector united with the trunk line at the second exchange to bring the common battery of the first exchange into operative association with said link connector at the second exchange; and means controlled extraneously of the second exchange for restoring the common battery of the second exchange to its normal relation with the equipment thereat.

ing to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for removing the common battery of the second exchange from its normal relation with the link connector united with the trunk line at the second exchange to bring the common battery of the first exchange into operative association with said link connector at the second exchange; and subscriber controlled means for restoring the common battery of the second exchange to its normal relation with the equipment thereat.



2. A telephone system including a common battery exchange to which telephone lines extend; a second common battery exchange to which other telephone lines extend; a trunk line intervening between the exchanges to enable the establishment of a connection between a telephone line extending to one exchange and a telephone line extending to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for excluding the common battery of the second exchange from circuit with the link connector united with the trunk line at the second exchange to bring the common battery of the first exchange into operative association with said link connector at the second exchange; and means controlled extraneously of the second exchange for restoring the common battery of the second exchange to its normal relation with the equipment thereat.

3. A telephone system including a common battery exchange to which telephone lines extend; a second common battery exchange to which other telephone lines extend; a trunk line intervening between the exchanges to enable the establishment of a connection between a telephone line extending to one exchange and a telephone line extending to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for removing the common battery of the second exchange from its normal relation with the link connector united with the trunk line at the second exchange to bring the common battery of the first exchange into operative association with said link connector at the second exchange; and a magnet brought into circuit with the common battery at the first exchange by the latter means to maintain this common battery in operative association with said link connector, said magnet serving when released to effect the restoration of the normal relation of the common battery at the second exchange with said link connector.

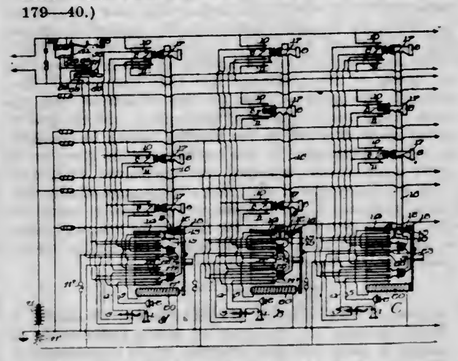
4. A telephone system including a common battery exchange to which telephone lines extend; a second common battery exchange to which other telephone lines extend; a trunk line intervening between the exchanges to enable the establishment of a connection between a telephone line extending to one exchange and a telephone line extending to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for excluding the common battery of the

second exchange from circuit with the link connector united with the trunk line at the second exchange to bring the common battery of the first exchange into operative association with said link connector at the second exchange; and a magnet brought into circuit with the common battery at the first exchange by the latter means to maintain this common battery in operative association with said link connector, said magnet serving when released to effect the restoration of the normal relation of the common battery at the second exchange with said link connector.

5. A telephone system including a common battery exchange to which telephone lines extend; a second common battery exchange to which other telephone lines extend; a trunk line intervening between the exchanges to enable the establishment of a connection between a telephone line extending to one exchange and a telephone line extending to the second exchange, there being link connectors at the second exchange for connecting lines extending to the second exchange and for connecting lines extending to the second exchange with the trunk line in the establishment of a connection between lines extending to the two exchanges; means for removing the common battery of the second exchange from its normal relation with the link connector united with the trunk line at the second exchange; and a magnet brought into serial relation with the common battery at the first exchange by the latter means to maintain this common battery in operative association with said link connector, said magnet serving when released to effect the restoration of the normal relation of the common battery at the second exchange with said link connector.

[Claims 6 to 32 not printed in the Gazette.]

1,105,348. TELEPHONE SYSTEM. CHARLES A. BALS, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed June 24, 1912. Serial No. 705,412. (Cl. 179—40.)



1. An intercommunicating telephone system including telephone lines extending between stations of the system, such stations including telephone receivers and their supporting switch hooks that take part in governing the telephonic association of the stations; electro-magnetically controlled mechanism associated with one of the stations for maintaining the telephonic circuit thereat; switching mechanism supplied in addition to the switch hook for altering the circuit of the electro-magnetically controlled mechanism to effect the telephonic disconnection of the station having such switch hook; and a holding switch for preserving the circuit of the telephone line that has become telephonically disconnected from the line associated with the electro-magnetically controlled mechanism.

2. A telephone system including two telephone lines extending to telephone stations, one of said stations having telephonic equipment that includes a telephone receiver and its supporting switch hook that takes part in governing the telephonic association of its station with its line; electro-magnetically controlled mechanism associated with

the line whose station is provided with the switch hook for maintaining telephonic circuit thereat; switching mechanism supplied in addition to such switch hook for altering the circuit of the electro-magnetically controlled mechanism to effect the telephonic disconnection of the station having such switch hook; and a holding switch for preserving the circuit of the telephone line that has become telephonically disconnected from the line associated with the electro-magnetically controlled mechanism.

3. An intercommunicating telephone system including telephone lines extending between stations of the system, such stations including telephone receivers and their supporting switch hooks that take part in governing the telephonic association of the stations; electro-magnetically controlled mechanism associated with one of the stations for maintaining the telephonic circuit thereat; switching mechanism supplied in addition to the switch hook for altering the circuit of the electro-magnetically controlled mechanism to effect the telephonic disconnection of the station having such switch hook; a holding switch for preserving the circuit of the telephone line that has become telephonically disconnected from the line associated with the electro-magnetically controlled mechanism; and an electro-magnet made effective by the holding switch to maintain the circuit established by the holding switch, there being circuit connections whereby the telephonic equipment whose line is associated with said electro-magnetically controlled mechanism, when again telephonically connected with the line provided with the holding switch, will effect the operation of said electro-magnet to restore the circuit connections it controls.

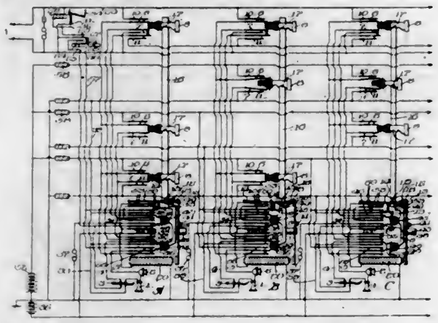
4. A telephone system including two telephone lines extending to telephone stations, one of said stations having telephonic equipment that includes a telephone receiver and its supporting switch hook that takes part in governing the telephonic association of its station with its line; electro-magnetically controlled mechanism associated with the line whose station is provided with the switch hook for maintaining telephonic circuit thereat; switching mechanism supplied in addition to such switch hook for altering the circuit of the electro-magnetically controlled mechanism to effect the telephonic disconnection of the station having such switch hook; a holding switch for preserving the circuit of the telephone line that has become telephonically disconnected from the line associated with the electro-magnetically controlled mechanism; and an electro-magnet made effective by the holding switch to maintain the circuit established by the holding switch, there being circuit connections whereby the telephonic equipment whose line is associated with said electro-magnetically controlled mechanism, when again telephonically connected with the line provided with the holding switch, will effect the operation of said electro-magnet to restore the circuit connections it controls.

1,105,349. SWITCHING MECHANISM. CHARLES A. BALS, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed June 24, 1912. Serial No. 705,413. (Cl. 179—40.)

1. Switching mechanism including a switch actuated bar; a swingingly mounted element 14 adapted to be operated by said bar; an electro-magnet having an armature serving, when unattracted, to hold the element 14 against movement, the bar serving to bring said element 14 into engagement with the armature; a switch; and means whereby said element 14 holds the switch in an actuated position when said element 14 is held by the armature.

2. Switching mechanism including a switch actuated bar; a swingingly mounted element 14 adapted to be operated by said bar; an electro-magnet having an armature serving, when unattracted, to hold the element 14 against movement, the bar serving to bring the element 14 into engagement with the armature; a switch; and a dog whereby the element 14 holds the switch in an actuated position when said element 14 is held by the armature.

3. Switching mechanism including a switch actuated bar; a swingingly mounted element 14 adapted to be operated by said bar; an electro-magnet having an armature serving to hold the element 14 against movement, the bar serving to bring said element 14 into engagement with the armature; a switch; and means whereby said element 14 holds the switch in an actuated position when said element 14 is held by the armature.

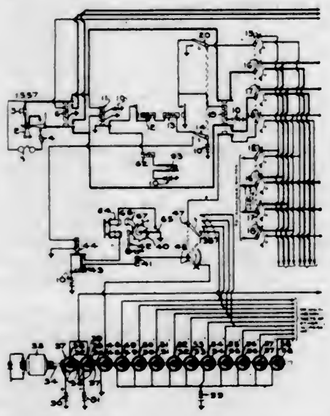


4. Switching mechanism including a switch actuated bar; a swingingly mounted element 14 adapted to be operated by said bar; an electro-magnet having an armature serving to hold the element 14 against movement, the bar serving to bring the element 14 into engagement with the armature; a switch; and a dog whereby the element 14 holds the switch in an actuated position when said element 14 is held by the armature.

5. Switching mechanism including a switch actuated bar; a swingingly mounted element 14 adapted to be operated by said bar; an electro-magnet having an armature serving, when unattracted, to hold the element 14 against movement, the bar serving to bring said element 14 into engagement with the armature; a switch; and a dog for engaging the switch to prevent its movement and released from engagement with the switch by said element when held by the armature.

[Claims 6 to 8 not printed in the Gazette.]

1,105,350. SIGNALING SYSTEM. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed July 15, 1912. Serial No. 709,429. (Cl. 179—21.)



1. A signaling system including a plurality of signaling lines; visual signal receivers; selector switches for selecting signal receivers that are free for selection and associating the same with signaling lines; and means individual to the lines and which differ from each other for causing said signal receivers to give characteristic signals peculiar to the lines.

2. A signaling system including a plurality of signaling lines; recording signal receivers; selector switches for selecting signal receivers that are free for selection and associating the same with signaling lines; and means individual to the lines and which differ from each other for causing said signal receivers to give characteristic signals peculiar to the lines.

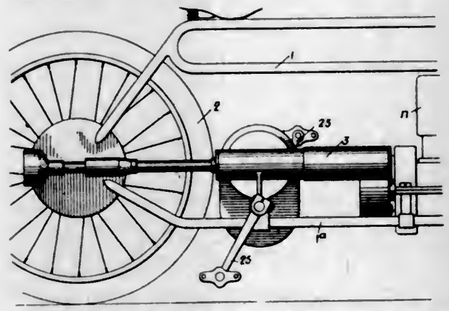
3. A signaling system including a plurality of signaling lines; signal receivers; selector switches for selecting signal receivers that are free for selection and associating the same with signaling lines; means individual to the lines and which differ from each other for causing said signal receivers to give characteristic signals peculiar to the lines; a plurality of circuits for effecting successive operations of each signal receiver; and means set into operation by each signaling line and associated with the selected signal receiver by the operated selector switch for establishing the signal receiver controlling circuits of a signaling line in succession through the selected signal receiver.

4. A signaling system including a plurality of signaling lines; recording signal receivers; selector switches for selecting signal receivers that are free for selection and associating the same with signaling lines; means individual to the lines and which differ from each other for causing said signal receivers to give characteristic signals peculiar to the lines; a plurality of circuits for effecting successive operations of each signal receiver; and means set into operation by each signaling line and associated with the selected signal receiver by the operated selector switch for establishing the signal receiver controlling circuits of a signaling line in succession through the selected signal receiver.

5. A signaling system including a plurality of signaling lines; visual signal receivers; selector switches for selecting signal receivers that are free for selection and associating the same with signaling lines; means individual to the lines and which differ from each other for causing said signal receivers to give characteristic signals peculiar to the lines; a plurality of circuits for effecting successive operations of each signal receiver; and means set into operation by each signaling line and associated with the selected signal receiver by the operated selector switch for establishing the signal receiver controlling circuits of a signaling line in succession through the selected signal receivers.

[Claims 6 to 10 not printed in the Gazette.]

1,105,351. MOTOR-CYCLE DRIVE. JOSEPH G. JONES, Pontiac, Mich. Filed Nov. 15, 1912. Serial No. 731,459. (Cl. 21—90.)



1. In a structure such as described, the combination of a power shaft, a source of power, a clutch between the said source and the shaft, means for operating the clutch, a member movable lengthwise of the shaft, a device for engagement with the said means in order to bring the clutch to operative position, an element fixed to the shaft, the said member being adapted to engage the said element, and other means for turning the said member.

2. A structure such as described, comprising a power shaft, a source of power, a clutch between the source and the shaft, a grooved element slidable lengthwise of the shaft, means for actuating the clutch, a device carried by the shaft adapted to be engaged by the said element, other means engaging the said grooved element for operating the clutch actuating means, and a mechanism for imparting movement to the means which engages the said grooved element.

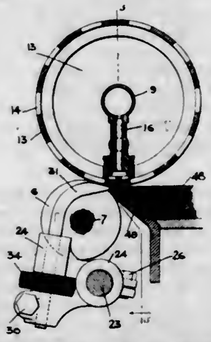
3. In a structure such as described, the combination of a shaft, a two-part clutch, one part being provided with teeth and turning with the shaft, the other being provided with coöperating teeth and also provided with a groove, and being movable lengthwise of the shaft, a clutch between the shaft and the source of power, and means for moving the grooved part of the clutch in order to bring about coöperation of the said elements, thereby turning over the source of power through a preliminary movement of the said shaft.

4. In a structure such as described, the combination of a power shaft, a member extending longitudinally thereof adapted to actuate braking mechanism, the said member having teeth formed at one end, and a second member formed with coöperating teeth and adapted to be moved lengthwise of the shaft, whereby the said member is turned and the braking mechanism is actuated.

5. In a structure such as described, the combination of a power shaft, brake actuating mechanism extending longitudinally thereof, a clutch element constituting part of the said mechanism, a clutch element fixed to the said shaft and spaced from the brake actuating mechanism, a member movable longitudinally of the shaft and positioned between the said clutch elements, the said member being provided with teeth for engagement with either of the said elements, and a revoluble device for engagement with the said member in order to bring it into coöperative relation with either of the said clutch elements.

[Claims 6 to 13 not printed in the Gazette.]

1,105,352. PNEUMATIC PAPER-FEED MECHANISM. OTTO KIRSCH, New York, N. Y. Filed June 22, 1912. Serial No. 705,329. (Cl. 101—41.)



1. In a pneumatic paper feed mechanism, a fixed member having a passageway, there being an opening in the fixed member leading to the passageway, a tube secured to the member and communicating with the opening, a drum in which the tube is disposed for rotating around the tube, a sleeve mounted on the tube, resilient means for holding the sleeve yieldingly against the drum, there being an opening in the drum which periodically communicates with the sleeve when the drum is rotated relatively to the fixed member.

2. In a pneumatic paper feed mechanism, a fixed member having a passageway, there being an opening in the fixed member leading to the passageway, a tube secured to the member and communicating with the opening, a drum in which the tube is disposed for rotating around the tube, a sleeve mounted on the tube, resilient means for holding

the sleeve yieldingly against the drum, there being an opening in the drum which periodically communicates with the sleeve when the drum is rotated relatively to the fixed member, and a valve for commanding the passageway in the tube.

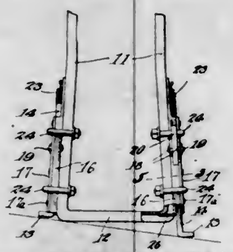
3. In a pneumatic paper feed mechanism, an inclined head, a feed drum disposed above the head and adjacent thereto, a roller disposed below the feed drum, a member spaced from the inclined head and having a terminal disposed below the feed drum and extending in the direction of and substantially to the top of the inclined head, and an adjustable means for holding the member rigid relatively to the axis of the drum.

4. In a pneumatic paper feed mechanism, a head, means disposed above the head for feeding paper over the head, an adjustable member disposed below the said means, spaced from the head and extending forwardly and in the direction of and substantially to the head and means for securing the member rigid relatively to the first means.

5. In a pneumatic paper feed mechanism, a head, a fixed member having a passageway extending therethrough, the said member being provided with an inlet, a revoluble member having a number of openings therein, the said openings being adapted for successive and intermittent registration with the inlet whereby when the pressure within the member having the inlet is reduced successive sheets of paper may be engaged by the said revoluble member and carried forward by reason of the reduction of pressure, the revoluble member being adapted to feed paper in one direction, and over the head, and a member having a terminal disposed below the revoluble member and extending in the opposite direction for determining the thickness of the paper to be passed by the revoluble member.

[Claims 6 to 13 not printed in the Gazette.]

1,105,353. PROP OR STAND FOR SUPPORTING MOTOR-CYCLES. FRANK E. KRONENBITTER, Maywood, Ill. Filed Mar. 4, 1914. Serial No. 822,331. (Cl. 208—77.)

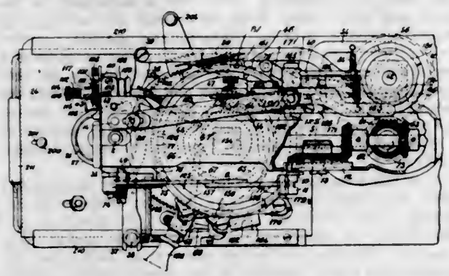


1. The combination with a prop, of a bar carried thereby and slidable in the direction of its length to project from the bottom of the prop, said bar having a foot at its bottom, means for holding the bar in extended position, and a spring connected to the bar for retracting the same.

2. The combination with a prop, of a bar carried thereby and slidable in the direction of its length to project from the bottom of the prop, said bar having a foot at its bottom and a rack, a pawl engageable with the rack, and a spring connected to the bar for retracting the same.

1,105,354. SEWING-MACHINE FOR MAKING THREAD BUTTONS. HEINRICH LAULA, Vienna, Austria-Hungary. Filed Jan. 18, 1910. Serial No. 538,702. (Cl. 112—24.)

1. In a lock stitch sewing machine for making thread buttons, the combination of a shuttle, a needle bar and a needle with means for holding a rigid ring between the needle bar and the shuttle, means for intermittently rotating such rigid ring around its geometrical axis substantially parallel to the needle bar whereby the said ring is caused to make a plurality of consecutive complete revolutions, means for varying the angle through which the ring moves at each step, means for reciprocating the needle longitudinally, means for vibrating the needle radially to the ring whereby the needle is caused to descend alternately inside and outside the ring, means for rendering the vibrating means operative at the beginning of the first named revolution of the ring, means for rendering the vibrating means inoperative at the end of the first named revolution of the ring whereby the needle is caused to reciprocate longitudinally inside the ring only, means for controlling the needle thread tension and means for clamping the needle thread at predetermined moment, whereby the shuttle thread loops formed on the descent of the needle outside the ring are drawn over the top side of such ring to its inside.



2. In a lock stitch sewing machine for making thread buttons, the combination of a shuttle, a needle bar and a needle with means for holding a rigid ring between the needle bar and the shuttle with its geometrical axis substantially parallel to the needle bar, means for intermittently rotating such ring around its geometrical axis whereby such ring is caused to make substantially one complete revolution moving through a predetermined angle at each step, means for intermittently rotating such ring around its geometrical axis whereby the said ring is caused to make a plurality of further complete revolutions, means for reciprocating the needle longitudinally, means for vibrating the needle radially to the ring whereby the needle is caused to descend alternately inside and outside the ring, means for rendering the vibrating means operative at the beginning of the first named revolution of the ring, means for rendering the vibrating means inoperative at the end of the first named revolution of the ring whereby the needle is caused to reciprocate longitudinally inside the ring only, means for controlling the needle thread tension and means for clamping the needle thread at predetermined moment, whereby the shuttle thread loops formed on the descent of the needle outside the ring are drawn over the top side of such ring to its inside.

3. In a lock stitch sewing machine for making thread buttons, the combination of a cloth plate, a shuttle, a needle bar, and a needle with a button feed disk journaled in the said cloth plate, a ring disk fast in the cloth plate, containing the needle hole and located within such button feed disk, the button feed disk and the ring disk being located between the needle bar and the shuttle, means for holding a rigid ring on the ring disk within the button feed disk with its geometrical axis substantially parallel to the needle bar, means for intermittently rotating such ring around its geometrical axis whereby such ring is caused to make substantially one complete revolution moving through a predetermined angle at each step, means for intermittently rotating the button feed disk whereby it is caused to make together with the ring a plurality of further complete revolutions, means for reciprocating the needle longitudinally, means for vibrating the needle radially to the ring whereby the needle is caused to descend alternately inside and outside the ring, means for rendering the vibrating means operative at the beginning of the first named revolution of the ring, means for rendering the vibrating means inoperative at the end of the first named revolution of the ring whereby the needle is caused to reciprocate longitudinally inside the ring only, means for controlling the needle thread tension, means for clamping the needle thread at predetermined moments whereby the shuttle thread loops formed on the descent of the needle outside the ring are drawn over the top side of such ring to its inside.

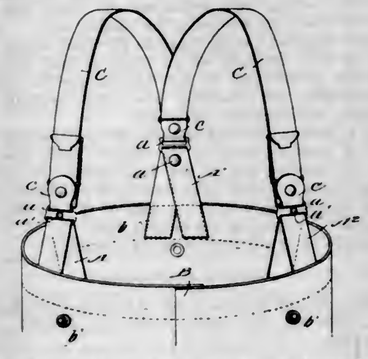
4. In a lock stitch sewing machine for making thread buttons, the combination of a cloth plate, a shuttle, a needle bar and a needle with a button feed disk journaled in the said cloth plate, a ring disk fast in the said cloth plate containing the needle hole, and located within such button feed disk, the button feed disk and the ring disk being located between the needle bar and the shuttle, toothed wheels and a pressing wheel journaled in the button feed disk such wheels being adapted to hold between them a rigid ring with its geometrical axis substantially parallel to the needle bar and centrally on the button feed disk, a spring acting on such pressing wheel and adapted to force it against the said ring, means for intermittently rotating such ring round its geometrical axis whereby such ring is caused to make substantially one complete revolution moving through a predetermined angle at each step, means for intermittently rotating the button feed disk whereby it is caused to make together with the ring a plurality of further complete revolutions, means for reciprocating the needle longitudinally, means for vibrating the needle radially to the ring whereby the needle is caused to descend alternately inside and outside the ring, means for rendering the vibrating means operative at the beginning of the first named revolution of the ring, means for rendering the vibrating means inoperative at the end of the first named revolution of the ring whereby the needle is caused to reciprocate longitudinally inside the ring only, means for controlling the needle thread tension and means for clamping the needle thread at predetermined moments whereby the shuttle thread loops formed on the descent of the needle outside the ring are drawn over the top side of such ring to its inside.

5. In a lock stitch sewing machine for making thread buttons, the combination of a cloth plate, a shuttle, a needle bar and a needle with a button feed disk journaled in the said cloth plate, a ring disk fast in the said cloth plate, containing the needle hole and located within such button feed disk, the button feed disk and the ring disk being located between the needle bar and the shuttle, toothed wheels and a pressing wheel journaled in the button feed disk, such wheels being adapted to hold between them a rigid ring with its geometrical axis, substantially parallel to the needle bar and centrally on the button feed disk, disks loosely mounted on the said toothed wheels and the pressing wheel, such disks being adapted to partly overlap the said ring, means for intermittently rotating such ring around its geometrical axis whereby such ring is caused to make substantially one complete revolution moving through a predetermined angle at each step, means for intermittently rotating the button feed disk, whereby it is caused to make together with the ring a plurality of further complete revolutions, means for reciprocating the needle longitudinally means for vibrating the needle radially to the ring whereby the needle is caused to descend alternately inside and outside the ring, means for rendering the vibrating means operative at the beginning of the first named revolution of the ring, means for rendering the vibrating means inoperative at the end of the first named revolution of the ring whereby the needle is caused to reciprocate longitudinally inside the ring only, means for controlling the needle thread tension, and means for clamping the needle thread at predetermined moments whereby the shuttle thread loops formed on the descent of the needle outside the ring are drawn over the top side of such ring to its inside.

[Claims 6 to 17 not printed in the Gazette.]

1,105,355. COMBINED SUSPENDER-TAB AND BELT-LOOP FOR TROUSERS. ALBERT LEIGHTON, Erie, Pa. Filed June 30, 1913. Serial No. 776,584. (Cl. 2—140.)

1. The combination of trousers provided with fastening means at spaced points below its waist line, and flexible suspended tabs secured at their lower ends to the inside of the waistband at similarly spaced points of the trousers and adapted for connection at their upper ends to suspenders, said tabs being also provided at their upper ends with fastening means to engage the said fastening means of the trousers when the tabs are turned down upon the outer face of the trousers, for the purpose described.

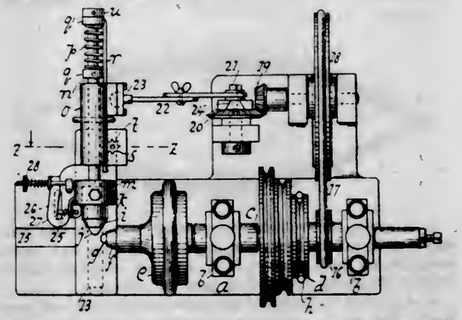


2. The combination with trousers, of suspender tabs secured to and extending upwardly from the waistband of the trousers and adapted to be turned down thereon, and means for fastening the tabs to suspenders when upstanding and to the trousers when turned down whereby to form belt loops at spaced points around the waistband, for the purpose described.

3. The combination with trousers, of tabs suitably connected to the inside of the waistband and extending upwardly therefrom, attaching loops carried by the upper ends of the tabs for connection with suspenders when in upstanding position, and relatively engageable means carried by the tabs and the outer surface of the trousers whereby to secure the tabs in turned down position, for the purpose described.

4. The combination of trousers provided with fastening studs at spaced points below its waist-line, flexible suspender tabs secured at their lower ends to the inside of the waist-band at similarly spaced points of the trousers, and flexible connecting members at the upper ends of the tabs for engagement with suspenders, said flexible connecting members having lower fastening studs and upper fastening sockets, the latter of which are also adapted for engagement with the trouser studs when the tabs are turned down upon the outer face of the trousers, in order to form belt loops substantially as described.

1,105,356. DIAMOND-CUTTING MACHINE. JAMES H. LUDLOW, Jersey City, N. J., and THOMAS W. G. COOK, New York, N. Y. Filed Feb. 19, 1914. Serial No. 819,748. (Cl. 51—11.)



1. In a diamond cutting machine the combination with a pair of dops, of means for rotating one of the dops, and means controlled by the rotating means for rocking the other dop.

2. In a diamond cutting machine the combination with a pair of dops, and means of rotating one of the dops, means controlled by the rotating means for rocking and oscillating the other dop.

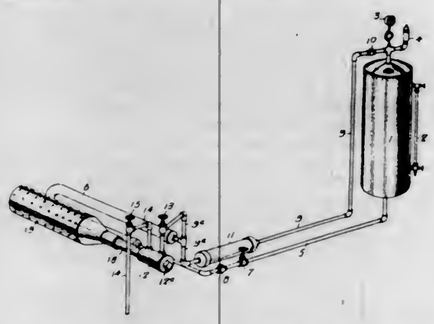
3. In a diamond cutting machine the combination with a pair of dops, of means for rotating one of the dops, means for rocking and oscillating the other dop, and means for vertically adjusting the rocking dop.

4. In a diamond cutting machine the combination with a pair of dops arranged at an angle to each other, of means for rotating one of the dops, means for rocking and oscillating the other dop, means for vertically and universally adjusting the latter dop.

5. In a diamond cutting machine the combination with a pair of dops arranged at an angle to each other, of means for rotating one of the dops, means for rocking and oscillating the other dop, means for yieldingly pressing the rocking dop toward the axis of the rotating dop and means for adjusting the rocking dop.

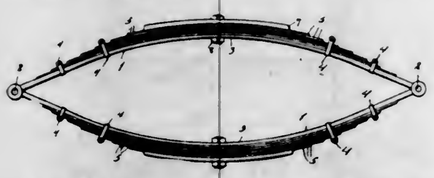
[Claims 6 to 11 not printed in the Gazette.]

1,105,357. OIL-BURNER. ARTHUR D. MARCOTTE, Eunice, La. Filed Feb. 15, 1913. Serial No. 748,561. (Cl. 122—10.)



The improved apparatus for burning crude oil, consisting of a water-tank, a burner, a coil being adapted to be used in a furnace or fire-box, a water or feed pipe connecting bottom of water tank and the lower leg of the coil and provided with a check valve, a vertical steam pipe connected at top with the burner and at mid-length with the upper leg of coil, the lower portion of said pipe extending below the junction with the coil and being connected with the top of the tank, and a condenser and check valve interposed in the steam pipe, as described.

1,105,358. SPRING FOR VEHICLES. FRANCIS L. MARTENETTE, Chico, Cal. Filed Dec. 16, 1912. Serial No. 737,068. (Cl. 21—103.)



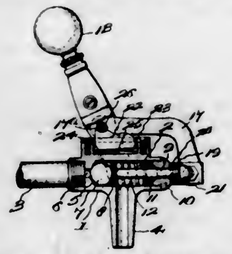
1. A spring for vehicles comprising a master leaf relatively thin at its center, a plurality of thin flat leaves mounted on said master leaf, and an exterior leaf of greater thickness mounted on said flat leaves.

2. A spring for vehicles comprising a master leaf relatively thin at its center, a plurality of thin flat leaves of graduated lengths mounted on said master leaf and an exterior leaf of greater thickness mounted on the shortest of said flat leaves.

3. In a spring for vehicles, a pair of leaves connected at their ends and spaced apart at their centers, said leaves being thinnest at their central portions and increasing in thickness toward their ends, and a plurality of auxiliary leaves secured upon and exteriorly of said first mentioned leaves, said auxiliary leaves being of extreme and uniform thinness and of graduated lengths, and relatively short leaves of greater thickness mounted on said auxiliary leaves.

4. A spring for vehicles comprising leaves connected at their arms and spaced at their central portions, said leaves being thickest at their point of connection with each other and decreasing in thickness toward their centers, a plurality of auxiliary leaves connected with said first named leaves, said auxiliary leaves decreasing in length to form a stepped formation upon the first named leaves and being of extreme and uniform thinness, and exterior leaves of greater thickness but less length than said auxiliary leaves.

1,105,359. FAUCET FOR DISPENSING BEVERAGES. JOHN CHARLES JULIUS MARTENS, New Orleans, La. Filed Dec. 1, 1913. Serial No. 803,986. (Cl. 137—4.)



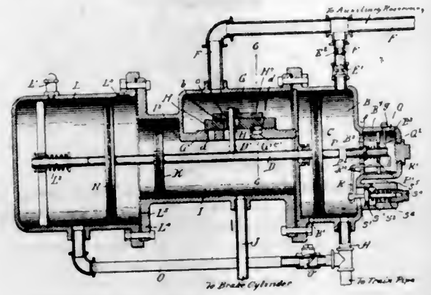
1. In a faucet the combination of a valve casing having a fluid passageway therethrough; a valve for controlling said passageway; a lever fulcrumed on the casing: connections between said lever and the valve; said casing having a recess formed therein; a spring seated detent mounted in said casing recess; and a member mounted on said lever adapted to engage with the spring seated detent and hold the lever in normal position, substantially as described.

2. In a faucet the combination of a valve casing having a fluid passageway therethrough; a valve for controlling said passageway; a lever fulcrumed on the casing; connections between said lever and the valve; said casing having a recess formed therein; a detent block mounted in said casing recess; a leaf spring engaging against said detent block and holding the same under tension; and a bar carried by said lever adapted to engage with said detent block and hold the lever in normal position, substantially as described.

3. In a draft faucet the combination of a casing having a valve seat, and a passage therethrough; a free ball valve mounted to move in said passage, and engage with said valve seat; a head mounted to move in the passage, and having a stem passing through the casing; a cross head mounted on the valve stem; a spring located in the passage and engaging with said head to normally seat the ball valve; a bifurcated lever fulcrumed on the casing; a pair of arms connecting the members of said bifurcated lever with the ends of said cross head; and a spring seated detent mounted on the casing for holding the lever in normal position, substantially as described.

1,105,360. TRIPLE VALVE. HOWARD OTIS MARTIN, Clovis, N. Mex. Filed July 26, 1913. Serial No. 781,352. (Cl. 188—15.)

1. A triple valve, comprising equalizing pressure means having a valved connection with the train pipe and provided with a cylinder and piston, a train line pressure means having an unobstructed connection with the train pipe and provided with a cylinder and piston, the said train line pressure means having a valved connection with the auxiliary reservoir, a brake cylinder pressure means located between the equalizing pressure means and the train line pressure means having an unobstructed connection with the brake cylinder and provided with a cylinder and piston, the said cylinders being in alinement, a stem extending through the alined cylinders and on which the said pistons are fixed to move in unison, an auxiliary reservoir chamber having an unobstructed connection with the auxiliary reservoir, a slide valve controlled by the said stem and controlling communication between the said auxiliary reservoir chamber and the cylinder of the said brake cylinder pressure means and a locking device for the said connected pistons to limit the movement thereof when making service applications, the locking device being controlled by pressure from the train pipe pressure cylinder.



2. A triple valve, comprising a train pipe pressure piston and cylinder having an unobstructed connection with the train pipe and a valve connection with the auxiliary reservoir to prevent return flow of auxiliary reservoir pressure into the train pipe pressure chamber, an equalizing pressure piston and cylinder having a valved connection with the train pipe to prevent return flow of equalizing pressure, an auxiliary reservoir pressure chamber having unobstructed connection with the auxiliary reservoir, a brake cylinder pressure piston and cylinder having unobstructed connection with the brake cylinder, a slide valve intermediate the auxiliary reservoir pressure chamber and the brake cylinder pressure cylinder for controlling the flow of auxiliary reservoir pressure to the brake cylinder, connected pistons reciprocating in the said train pipe pressure cylinder, the equalizing pressure cylinder and the brake cylinder pressure cylinder, the said connected pistons controlling the said slide valve, a locking device for the said connected pistons to limit the movement thereof when making service applications, the locking device being controlled by pressure from the train pipe pressure chamber, and a normally closed emergency valve adapted to connect the train pipe pressure chamber with the atmosphere and controlled by a member of the said locking device.

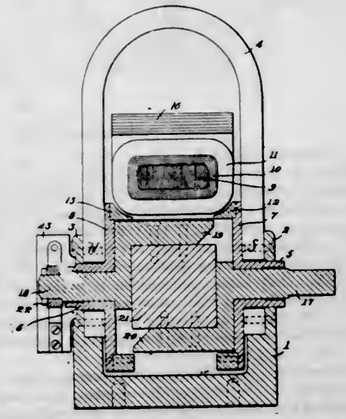
3. A triple valve, comprising a train pipe pressure piston and cylinder having an unobstructed connection with the train pipe and a valved connection with the auxiliary reservoir to prevent the return flow of auxiliary reservoir pressure into the train pipe pressure chamber, an equalizing pressure piston and cylinder having a valved connection with the train pipe to prevent return flow of equalizing pressure, an auxiliary reservoir pressure chamber having unobstructed connection with the auxiliary reservoir, a brake cylinder pressure piston and cylinder having unobstructed connection with the brake cylinder, a slide valve intermediate the auxiliary reservoir pressure chamber and the brake cylinder pressure cylinder for controlling the flow of auxiliary reservoir pressure to the brake cylinder, connected pistons reciprocating in the said train pipe pressure cylinder, the equalizing pressure cylinder and the brake cylinder pressure cylinder, the said connected pistons controlling the said slide valve, a spring-pressed rod in axial alinement with the said connected pistons and adapted to be engaged by the same, a bell crank lever engaging the said rod to hold the same normally against movement to limit the movement of the connected pistons in one direction when applying the brakes, a cylinder opening into the said train pipe pressure chamber, and a spring-pressed piston in the said cylinder and connected with the said bell crank lever.

4. A triple valve, comprising a train pipe pressure piston and cylinder having an unobstructed connection with the train pipe and a valved connection with the auxiliary reservoir to prevent the return flow of auxiliary reservoir pressure into the train pipe pressure chamber, an equalizing pressure piston and cylinder having a valved connection with the pipe to prevent return flow of equalizing pressure, an auxiliary reservoir pressure chamber having unobstructed connection with the auxiliary reservoir, a brake cylinder pressure piston and cylinder having unobstructed connection with the brake cylinder, a slide valve intermediate the auxiliary reservoir pressure chamber and the brake cylinder pressure cylinder for controlling the flow of auxiliary reservoir pressure to the brake cylinder, connected pistons reciprocating in the said train pipe pressure cylinder, the equalizing pressure cylinder and the brake cylinder pressure cylinder, the said connected pistons controlling the said slide valve, a spring-pressed rod in axial alinement with the said connected pistons and adapted to be engaged by the same, a bell crank lever engaging the said rod to hold the same normally against movement to limit the movement of the connected pistons in one direction when applying the brakes, a cylinder opening into the said train pipe pressure chamber, a spring-pressed piston in the said cylinder and connected with the said bell crank lever, and a normally-closed emergency valve adapted to connect the train pipe pressure chamber with the atmosphere and carried by the said rod.

5. A triple valve provided with a slide valve and with a limiting device normally acted upon and held in locked position by train line pressure, and a spring of predetermined pressure for moving said limiting device to released position when the train line pressure is reduced below the spring pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,105,361. IGNITION-DYNAMO. CHARLES THOMAS MASON, Sumter, S. C., assignor to Sumter Electrical Company, a Corporation of South Carolina. Filed May 10, 1912. Serial No. 696,487. (Cl. 123—149.)



1. In a dynamo for ignition, a magnet, rotatable polar extensions on said magnet having a permanent N and S polarity irrespective of their movements in relation to the magnet, curved radial faces on said polar extensions, an adjustable field structure, windings on said field structure, curved faces on said field structure adjacent the radial faces of said polar extensions, and a condenser carried by said field structure.

2. In a dynamo for ignition, a substantially U shaped magnet, movable polar extensions on the extremities thereof and in contact therewith, a support for said extensions, means interposed between said extensions whereby the motion of one is transmitted to the other, a field structure projecting partly into the bend of said magnet, windings on said structure, and a condenser carried thereby.

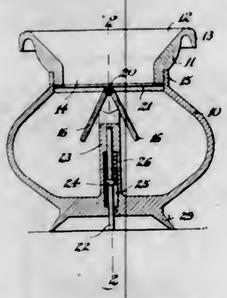
3. In a dynamo for ignition, a substantially U shaped magnet, a rotor formed of polar extensions on said magnet, said rotor consisting of supporting shafts and magnetic conducting elements formed integral therewith, said elements being joined together in the center by a non-magnetic block, and an adjustable field structure having two or more windings and carrying interrupter contacts and a condenser.

4. In a dynamo for ignition, a magnet having poles and rotatable polar extensions having a permanent N and S polarity, a shaft for said extensions, supports for said shaft, a plurality of windings, a core for said windings, extensions on said core forming pole shoes adjacent the path of travel of said polar extensions of said magnet, a condenser carried by said core and connected to one of the windings, and means for varying the angular position of said pole shoes with respect to said magnet poles.

5. In a dynamo for ignition, a base, a magnet fixed to said base, extensions on said base forming bearings, a core structure carried in said bearings, two windings on said core, a condenser carried by said core structure, and means interposed between said magnet and core structure for varying the magnetic flux between them, said means comprising polar extensions on said magnet having definite N and S polarities irrespective of their positions in relation to said magnet.

[Claims 6 to 39 not printed in the Gazette.]

1,105,362. CUSPIDOR. STEVEN MAYER, New York, N. Y. Filed May 8, 1914. Serial No. 837,137. (Cl. 4—38.)



1. A cuspidor, comprising a bowl having a top opening surrounded by a vertical annular flange; a rim upwardly and outwardly flared, having an open centered neck fitting within said flange; a shaft extending across the center of the opening in said rim; a plurality of leaves pivotally mounted on said shaft to form a closure member in said rim; means for spreading said leaves to close the opening in said rim, said means embodying a plunger reciprocatively mounted in said bowl to extend through the bottom thereof; and means operatively connecting said plunger and said leaves to close said leaves when said plunger is moved within said bowl.

2. A cuspidor, comprising a bowl having a top opening surrounded by a vertical annular flange; a rim upwardly and outwardly flared, having an open-centered neck fitting within said flange; a shaft extending across the center of the opening in said rim; a plurality of leaves pivotally mounted on said shaft to form a closure member in said rim; means for spreading said leaves to close the opening in said rim, said means embodying a plunger reciprocatively mounted in said bowl to extend through the bottom thereof; means operatively connecting said plunger and said leaves to close said leaves when said plunger is moved within said bowl; and a plurality of upwardly opening saddle sockets mounted on said bowl below said rim to hold the ends of said shaft, whereby the leaves and shaft may be removed from said bowl for removing the said rim.

1,105,363. MINE-CAR LUBRICATION. JASPER A. MCCASKELL, Salt Lake City, Utah. Filed Aug. 9, 1912. Serial No. 714,187. (Cl. 64—26.)



1. The combination with an axle, of a wheel having a central opening and an enlarged lubricant-containing chamber surrounding the same, a bushing fitted to said opening having perforations connecting with said chamber, a valve-controlled pipe for conducting lubricant under pressure to said chamber, a cup-washer at one end of the bushing forming a tight-joint against the escape of oil along the axle in one direction and a cap detachably fitted to the outer side of the hub and forming an air-tight closure for the outer end of the bushing and axle.

2. The combination with an axle, of a wheel having a central opening, and an enlarged lubricant-containing chamber surrounding the same, a bushing fitted to said opening having perforations connecting with said chamber, a valve-controlled pipe for conducting lubricant under pressure to said chamber, a cup washer at one end of the bushing forming a tight joint against the escape of oil along the axle in one direction, and a cap detachably fitted to the outer side of the hub and forming an air-tight closure for the outer end of the bushing and axle, said cap having lugs projecting from its periphery and said wheel having undercut flanges with open spaces therebetween and adapted to interlock with the lugs on the cap when said cap is given a partial rotation, one of the said lugs of the cap having a ratchet surface and said wheel having a pawl to engage said surface to positively lock the cap to the wheel.

3. The combination with an axle, of a wheel having a central opening, and an enlarged lubricant-containing chamber surrounding the same, said wheel having undercut flanges projecting from the outer face of its hub with open spaces between the flanges, a bushing fitted to said central opening having perforations connecting with said chamber, a valve-controlled pipe for conducting lubricant under pressure to said chamber, a washer at one end of the bushing, forming a tight joint against the escape of oil along the axle in one direction, a cap detachably fitted to the outer side of the hub of the wheel and forming an air-tight closure for the outer end of the bushing and axle, said cup having lugs projecting from its periphery adapted to enter the spaces between the flanges on the wheel and to interlock with these flanges when the cap is given a partial rotation, one of the lugs of said cap having teeth formed on it, and a spring-pressed member of the wheel adapted to engage said teeth to thereby positively lock the cap to the wheel.

4. The combination with an axle, of a wheel having a central opening for the axle, and having a chamber surrounding the same and adapted to contain oil under pressure, a bushing fitted to said opening having openings through it connecting with said chamber, a cup-washer surrounding the axle and abutting one end of the bushing, and a cap detachably fixed to the hub of the wheel and forming substantially an air-tight closure over the outer end of the axle and bushing, said cap having a chambered inner face.

5. The combination with an axle, of a wheel mounted thereon, and having an internal chamber adapted to receive oil under pressure, said chamber having an extension from one side, a piston slidably mounted in said extension and exposed to the pressure of the oil therein, a bushing mounted in and forming a closure for the outer end of the extension, a spring between the bushing and piston and normally held under compression by the pressure of the oil and operating expansively to maintain a pressure on the oil as the supply of oil decreases and external means for adjusting the tension of said spring.

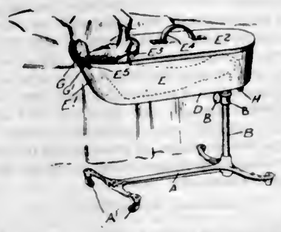
[Claims 6 and 7 not printed in the Gazette.]

1,105,364. HOLDER FOR AN INSECTICIDE. MALCOLM MCKAY, Roxobel, N. C. Filed July 7, 1913. Serial No. 777,688. (Cl. 43—14.)



A holder for a powdered insecticide comprising a bag adapted to receive the powder, and having a mesh which is permeable thereto, an outer bag, and an elastic distending device arranged in the inner bag, as described.

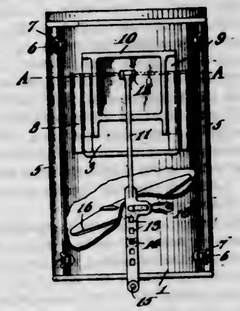
1,105,365. ATTACHMENT FOR ARM-BATHS. ADAMINA MARY MCQUHAE, Toronto, Ontario, Canada. Filed Dec. 16, 1913. Serial No. 807,032. (Cl. 4—27.)



In an arm bath, a bath receptacle having hooks extending laterally from one end thereof and a pneumatic cushion provided with side straps having eyelets designed to extend over the edge of the bath and engage the hooks, as and for the purpose specified.

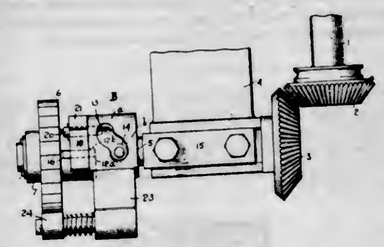
1,105,366. DAMPER. WILLOUGHBY S. MILLER, Reading, Pa., assignor of one-half to James H. Knoll, Reading, Pa. Filed June 7, 1913. Serial No. 772,401. (Cl. 126—293.)

1. A damper comprising a cylinder formed in two sections and having an opening in the side of each section, plates covering the meeting edges of the sections, sliding doors for covering the openings in the sections, rods pivotally connected to the doors and having openings therein, projections secured to the cylinder and engaging the openings in the rods, a plate pivotally mounted within the cylinder, and means connecting the plate with one of the door rods.



2. A damper comprising an expansible cylinder formed in two sections, each section having an opening in the side thereof and slots in the adjacent edges, plates covering the meeting edges, bolts carried by the plates and entering the slots, sliding doors for covering the openings in the sections, vertically swinging rods connected to the doors and having perforations therein, one of said rods having a perforated projection formed on the side thereof, projections on the sections for entering the perforations in the rods, and a plate pivotally mounted in the cylinder and having a crank arm connected thereto, the end of said crank arm passing through the perforation in the projection on one of the rods.

1,105,367. ENGINE-STARTER. FRANK MISKOVSKY, Lynn, Mass. Filed Apr. 30, 1913. Serial No. 764,573. (Cl. 123—185.)



1. In an engine starter, the combination of an engine shaft, a starting shaft normally disengaged from the engine shaft, an actuator, a member operatively connected with the starting shaft to engage and disengage the two shafts and movable with the actuator during the first part of the movement thereof, a fixed member engaging the movable member whereby movement of the latter with the actuator causes said member to move in a direction to engage the starting shaft with the engine shaft, a pivoted device mounted on the movable member, and means on the actuator and with which the device initially engages for moving the said movable member with the actuator, and means for releasing the device from the said means to permit the actuator to rotate the starting shaft after the latter has been shifted by the first mentioned member into engagement with the engine shaft.

2. An engine starter comprising a rotatable and longitudinally movable shaft, an actuator, a ratchet and pawl mechanism between the actuator and shaft, a cam collar on the shaft, means engaging the collar to produce longitudinal movement of the said shaft by the rotation of the collar, a pivoted latch on the collar, means carried by the

ratchet and pawl mechanism with which the latch engages to cause the collar to move with the said mechanism, and a fixed device for releasing the latch when the collar has finished moving the said shaft longitudinally.

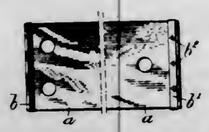
3. An engine starter comprising a rotatable and longitudinally movable shaft, an actuator, a ratchet and pawl mechanism between the actuator and shaft, a cam collar on the shaft, means engaging the collar to produce longitudinal movement of the said shaft by the rotation of the collar, a pivoted latch on the collar, means carried by the ratchet and pawl mechanism with which the latch engages to cause the collar to move with the said mechanism, a fixed device for releasing the latch when the collar has finished moving the said shaft longitudinally, and an abutment on the collar with which the said means engages to restore the collar to normal position on the return movement of the actuator.

4. A starting device for engines, comprising a longitudinally and rotatably movable shaft, a collar thereon having a cam groove, means engaging the groove for imparting longitudinal movement to the shaft by the rotation of the collar, an operating lever operatively connected with the shaft to turn the same, a member carried by the lever, a pivoted hook-shaped latch on the collar arranged to engage the said member for connecting the collar and lever together for simultaneous movement, and a fixed abutment disposed to engage the latch to release the same from said member when the collar has finished moving the shaft longitudinally.

5. A starting device for engines, comprising a longitudinally and rotatably movable shaft, a collar thereon having a cam groove, means engaging the groove for imparting longitudinal movement to the shaft by the rotation of the collar, an operating lever operatively connected with the shaft to turn the same, a member carried by the lever, a pivoted hook-shaped latch on the collar arranged to engage the said member for connecting the collar and lever together for simultaneous movement, and a fixed abutment disposed to engage the latch to release the same from said member when the collar has finished moving the shaft longitudinally, said collar having a groove into which one end of the said member extends for engagement with one end of the groove during the return movement of the lever for restoring the collar to normal position.

[Claims 6 and 7 not printed in the Gazette.]

1,105,368. ELASTIC BEDDING-PLATE. ERNST MÜLLER, Berlin, and ALFRED KAYSER, Wilmersdorf, near Berlin, Germany, assignors to Dübelwerke Gesellschaft mit beschränkter Haftung, Berlin, Germany, a Corporation of Germany. Filed Oct. 10, 1913. Serial No. 794,450. (Cl. 238—2.)



1. In combination with an elastic bedding plate, of suitable material, reinforcing means comprising metallic caps inclosing the ends of said plate, adapted to prevent spreading thereof.

2. In combination with an elastic bedding plate of suitable material, reinforcing means comprising metallic caps inclosing the ends of said plate, adapted to prevent spreading thereof, lugs formed integrally with each of said caps for engagement with said plate, the ends of said caps being recessed internally to form V-shaped members for engaging said plate.

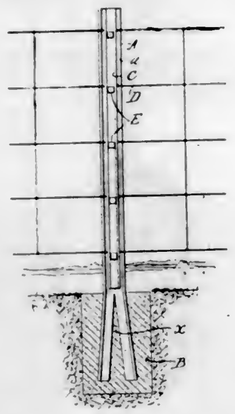
3. In combination with an elastic bedding plate, reinforcing strips driven edgewise into the ends of said bedding plate, each of said strips having bifurcated projecting ends bent in opposite directions to embrace the sides of said bedding plate.

4. In combination with an elastic bedding plate, corrugated metallic reinforcing strips driven edgewise into the ends of said bedding plate, each of said strips being provided with bifurcated projecting ends but at right angles in opposite directions to embrace the sides of said bedding plate.

5. In combination with an elastic bedding plate, reinforcing strips driven into the ends thereof, each provided with bifurcated projecting ends bent in opposite directions to embrace the side of said bedding plate and clenched over the base and top thereof respectively.

[Claim 6 not printed in the Gazette.]

1,105,369. COMBINED FENCE-POST AND TAKE-UP. GEORGE J. MULLER, Baltimore, Md. Filed Apr. 1, 1914. Serial No. 828,784. (Cl. 256—52.)

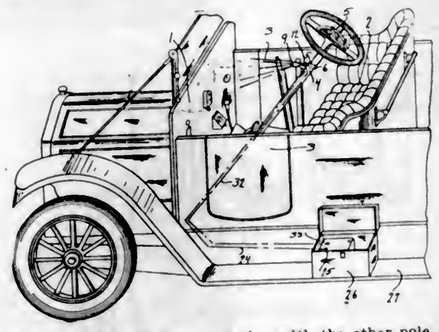


A combined fence post and slack adjuster for flexible metallic fencing composed essentially of two members and means holding them together; to wit, a channel-bar supporting-member having laterally spaced suspending flanges across which the fencing is to lie suspended and having a free intervening space which avoids obstruction to the intrusion of the fencing; a combined retaining and tensioning member having a bearing extended in the direction of the fencing, through which it rests firmly and without rocking upon the portion of the fencing suspended between said flanges; said retaining and tensioning member being proportioned to avoid contact with the supporting member in all adjustments and to leave between its side walls and said suspending flanges, free spaces in which the suspended portions of the fencing may flex; and drawing bolts passing through the members and adjustably intruding the retaining and tensioning member together with the suspended portions of the fencing into the space between the suspending flanges without biting the fencing between the two members.

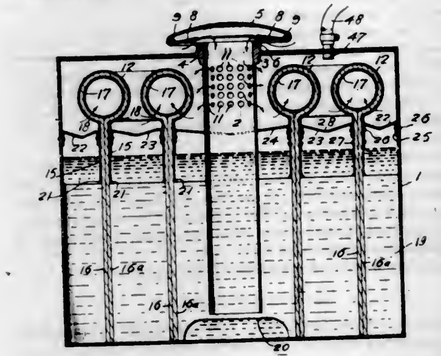
1,105,370. STEERING-POST LIGHT. ALFRED S. OLIVER, Jr., Medical Lake, Wash. Filed Dec. 13, 1913. Serial No. 806,590. (Cl. 240—7.)

1. As a means for illuminating indicators and other paraphernalia between the dash and front seat of an automobile, a steering post between the dash and front seat, an electric lamp, universally movable means for mounting said lamp on said post and provided with a switch for cutting said lamp into and out of circuit, substantially as described.

2. As a means for illuminating indicators and other paraphernalia between the dash and front seat of an automobile, a steering post between the dash and front seat, an electric lamp, clamping means for engagement with the steering post and provided with a switch having one terminal for connection with one pole of a source of circuit, means connecting said lamp with the clamping means for universal movement of the former and electrically connecting said lamp with one terminal of the switch, and a terminal on said lamp for connection with the other pole of the source of circuit, substantially as described.



1,105,371. CARBURETER. WILLIAM J. OMER, Thomas, Okla. Filed May 29, 1914. Serial No. 841,820. (Cl. 48—156.)



1. A device of the character specified, comprising a closed tank having a central filling tube extending through the top thereof, and below the normal level of the liquid fuel, and having openings above the normal level, a removable cover for the tube, said cover having openings, gates or valves normally resting over the openings and closing the same and adapted to open to admit air to the tube, and a tubular structure supported within the tank near the top thereof and above the fuel, said structure comprising straight sections and elbows for connecting the straight sections, the straight sections being split and having the split at the under side and having flanges at the sides of the split depending in approximate parallelism, a sheet of wicking connected with each of the said straight sections, each sheet being doubled upon itself and having the junction within the tube and having the folds extending through the split to near the bottom of the tank, said split tubes having openings for admitting air to the tube through the wicking, the ends of the tubular structure being extended outside the tank, the entrance end having a spring actuated valve for normally closing the same, and screens arranged transversely of the exit end, and a baffle plate arranged transversely of the tank below the tubular structure and having depressions and openings at the bottoms of the depressions.

2. A device of the character specified, comprising a closed tank having a central filling tube extending through the top thereof and below the normal level of the liquid fuel, and having openings above the normal level, a removable cover for the tube, said cover having openings, gates or valves normally resting over the openings and closing the same and adapted to open to admit air to the tube, and a tubular structure supported within the tank near the top thereof and above the fuel, said structure comprising straight sections and elbows for connecting the straight sections, the straight sections being split and having the split at the under side, and having flanges at the sides of the split depending in approximate parallelism, a sheet of wicking connected with each of the said straight sections, each sheet being doubled upon itself and having the junction within the tube and having the folds extending through the split to near the bottom of the tank, said split tubes having openings for admitting air to the tubes through the wicking, the ends of the tubular structure being extended outside the tank, the entrance end having a spring actuated valve for normally closing the same, and screens arranged transversely of the exit end.

3. A device of the character specified, comprising a closed tank having a central filling tube extending through the top thereof and below the normal level of the liquid fuel and having openings above the normal level, a removable cover for the tube, said cover having openings, gates or valves normally resting over the openings and closing the same and adapted to open to admit air to the tube, and a tubular structure supported within the tank near the top thereof and above the fuel, said structure comprising straight sections and elbows for connecting the straight sections, the straight sections being split and having the split at the under side, a sheet of wicking connected with each of the said straight sections, each sheet being doubled upon itself and having the junction within the tube and having the folds extending through the split to near the bottom of the tank, said split tubes having openings for admitting air to the tubes through the wicking, the ends of the tubular structure being extended outside the tank, the entrance end having a spring actuated valve for normally closing the same, and screens arranged transversely of the exit end.

4. A device of the character specified, comprising a closed tank having a central filling tube extending through the top thereof and below the normal level of the liquid fuel and having openings above the normal level, a removable cover for the tube, said cover having openings, gates or valves normally resting over the openings and closing the same and adapted to open to admit air to the tube, and a tubular structure supported within the tank near the top thereof and above the fuel, said structure comprising straight sections and elbows for connecting the straight sections, the straight sections being split and having the split at the under side, a sheet of wicking connected with each of the said straight sections, each sheet being doubled upon itself and having the junction within the tube and having the folds extending through the split to near the bottom of the tank, said split tube having openings for admitting air to the tube through the wicking, the ends of the tubular structure passing outside of the tank, one end being adapted for connection with the engine, and a spring actuated valve normally closing the other end.

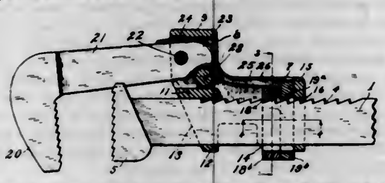
5. A device of the character specified, comprising a closed tank having a filling tube extending through the top thereof and below the normal level of the fuel, said tube having openings above the level of the fuel, a cover for the tube provided with inlet openings, and a tubular structure supported within the tank near the top thereof and above the normal level of the fuel, said structure having sections of split tubing arranged with the split below, and wicking within the split tubes and extending through the split to near the bottom of the tank, said sections having openings, one end of the tubular structure being adapted for connection with the engine, and the other end having a spring actuated normally closed valve, and means for heating the tubular structure.

[Claims 6 to 8 not printed in the Gazette.]

1,105,372. WRENCH. PEARL W. OSBORN, Loveland, Colo., assignor of one-half to Benton L. Bonnell, Loveland, Colo. Filed Mar. 21, 1914. Serial No. 826,376. (Cl. 81—106.)

1. In a wrench, the combination of a shank provided with a jaw and a series of ratchet teeth; a hollow sliding

support mounted on said shank and forming a casing; a pawl member straddling said shank and slidingly contained within said casing adjacent said ratchet teeth; a swinging jaw pivotally mounted on said casing; and a spring element directly interposed between and engaging said swinging jaw and pawl, substantially as described.



2. In a wrench, the combination of a shank provided with a jaw and a series of ratchet teeth; a hollow sliding support mounted on said shank and forming a casing; a pawl comprising a rectangular shaped frame member, surrounding said shank and slidingly housed within said casing, said pawl member having an internal tooth at one end engaging said ratchet and at its other end projecting beyond said casing; a pivoted jaw mounted on said casing; and a spring element interposed between and operatively engaging said pawl member and pivoted jaw, substantially as described.

3. In a wrench, the combination of a shank provided with a jaw and a series of ratchet teeth; a hollow sliding support mounted on said shank and forming a casing having a hollow head; a pawl member straddling said shank and slidingly housed within said casing, said pawl member having an internal tooth at one end engaging said ratchet teeth and at its other end projecting beyond said casing; a second jaw having an arm pivotally mounted in said hollow head, and having its upper edge face slightly spaced from the top of said hollow head; and a spring element having one end disposed between the top of said hollow head and said pivoted jaw arm, and engaging the top edge face of the latter exteriorly of its pivotal axis, the other end of said spring element operatively engaging said pawl member, substantially as described.

4. In a wrench, the combination of a shank provided with a jaw and a series of ratchet teeth; a hollow sliding support mounted on said shank and forming a rear casing, and a forward hollow head surmounting a hollow guide member encompassing said shank and having an upper and lower wall slidingly engaging the upper and lower edge faces of said shank; a pawl member straddling said shank and slidingly housed within said rear casing, said pawl member having an internal tooth at one end engaging said ratchet teeth and at its other end projecting beyond said casing; a swinging jaw having an arm pivotally mounted in said forward hollow head; and a spring element disposed between and operatively engaging said pivoted jaw arm and said pawl member, substantially as described.

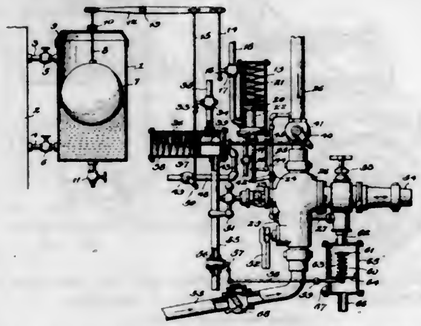
5. In a wrench, the combination of a shank provided with a jaw and a series of ratchet teeth; a casing slidingly encompassing said shank; a pawl member carried by said sliding casing and having a tooth engaging said ratchet teeth; a swinging jaw having an arm pivotally mounted forward of said sliding casing; and a substantially ogee-shaped spring element interposed between and operatively engaging said swinging jaw arm and said pawl member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,373. MECHANISM FOR AUTOMATICALLY OPERATING STEAM-INJECTORS. JASPER D. PATRICK, Montgomery, Ala., assignor of one-third to Alexander Frederick Whiting, Montgomery, Ala. Filed Apr. 20, 1914. Serial No. 833,158. (Cl. 162—1.)

1. The combination with a steam injector, of automatic means to prime said injector, automatic means to control the steam feed of said injector, and means operated by the said steam feed controlling means to automatically stop the operation of said priming means.

2. The combination with a steam injector having a priming valve and a valve to control the steam feed to the injector, of automatic means to operate said priming valve, and automatic means timed to operate at a definite period after the opening of said priming valve to operate said steam feed valve.



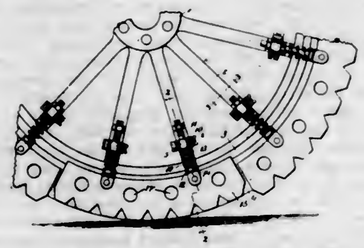
3. The combination with a steam injector having a steam feed valve, of automatic means to operate said valve, and means operable automatically to close said valve upon the failure of the injector to operate after the said valve is opened by the first mentioned automatic means.

4. The combination with a steam injector having a steam feed valve, of float controlled automatic means to operate said valve, and emergency means operable automatically independently of said float controlling means, to close said valve upon the failure of the injector to operate upon the opening of said valve by the float controlled mechanism.

5. The combination with a steam injector having a steam feed valve and an overflow outlet, a float controlled mechanism for automatically operating said feed valve, and mechanism operable from the overflow outlet of said injector to cause said float controlled mechanism to automatically close said feed valve.

[Claims 6 to 13 not printed in the Gazette.]

1,105,374. NON-SKIDDING ATTACHMENT FOR AUTOMOBILE-WHEELS. DANIEL J. PENNO, Trinidad, Colo. Filed Oct. 29, 1913. Serial No. 798,011. (Cl. 21—212.)

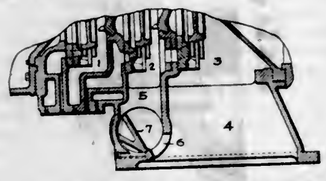


1. In an anti-skidding device of the character described, a plurality of segmental plates, a plurality of bars connected with each of said plates, a spring acting on each of said bars for moving said bars radially, and a clamping bar acting as an abutment for said spring, and as a guiding means for said bars, said clamping member being adjustably connected to a wheel, said clamping member being formed with a pair of clamping arms engaging said wheel, and a pivotally mounted clamping bolt for pinching said arms against said wheel.

2. In an anti-skidding device of the character described, a plurality of segmental plates, a bar connected with each of said plates, a clamping member for holding said bar in position on a wheel, said clamping member being provided with an aperture in which said bar is slidingly

positioned, and a pair of resilient jaws, a clamping bolt arranged at the outer end of said jaws for clamping the jaws against the spoke of a wheel, and a spring associated with said bar and pressing at one end against said segment, and at the other end against said clamping member.

1,105,375. TURBINE. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1912. Serial No. 721,005. (Cl. 121—58.)

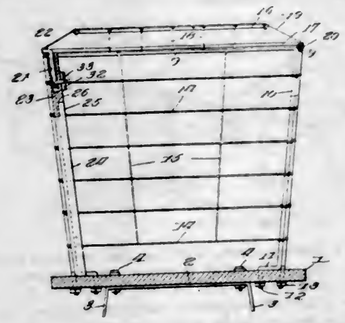


1. The combination in an elastic fluid turbine of the condensing type, of means for connecting an intermediate stage of the condenser when the turbine is run non-condensing, said means comprising a narrow passage of substantially the width of the turbine, and a valve of the rotary type controlling the same.

2. The combination in an elastic fluid turbine of the condensing type, of means for connecting an intermediate stage to the condenser when the turbine is run non-condensing, said means comprising a passage formed by extending the diaphragms on opposite sides of said intermediate stage, and a rotary valve controlling the same.

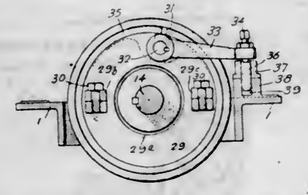
3. In an elastic fluid turbine, the combination of a casing, diaphragms dividing the casing into a plurality of stages, rotors in each stage, and exhaust conduit for the final stage, the walls of the diaphragm of an intermediate stage being extended to form a narrow passage extending substantially across the turbine, one of said extensions also forming a wall of the exhaust conduit and having a horizontally extending port therethrough of substantially the length of the wall, a rotary valve controlling said port, and means for operating said valve.

1,105,376. FRUIT-STAND. ODINEAL ROBERTS, Bonham, Tex. Filed May 12, 1913. Serial No. 766,983. (Cl. 217—36.)



A device of the character specified, comprising a base having supporting brackets and a receptacle connected with the base, a cover hinged to the receptacle at one side thereof, said receptacle comprising side and end frames, each of the said frames comprising a body portion and depending arms, the arms inclining inwardly toward each other toward their lower ends, and each of the said arms having at its lower end an angular portion for engaging the upper face of the base, each of the angular portions having a depending threaded lug at the end remote from the arm, the base having openings for receiving the lugs and nuts engaging the lugs below the base, said side and end frames having intersecting wires for closing said frames, said cover comprising a rectangular frame resting upon the bodies of the side and end frames of the receptacle when the cover is closed, and a frame of smaller area arranged above the first-named frame, the said cover frames being connected by intersecting wires, the supporting brackets for the base being detachably connected therewith.

1,105,377. BRAKING DEVICE FOR REVERSIBLE GEAR MECHANISM. FREDERICK J. ROBINSON, Hampton, Va. Filed Feb. 8, 1912. Serial No. 676,244. (Cl. 74—13.)



1. In a reversing gear mechanism, a base, an annular plate rigidly secured to said base, a shaft arranged to pass through the center of said plate, a drum provided with a hub portion loosely disposed on said shaft, a split ring disposed on the interior of said drum and arranged to be supported by said plate, means carried by the plate for expanding the split ring to cause the engagement of the latter with the drum, said expanding means comprising a wedge disposed between the ends of said split ring, said wedge having a portion journaled in said plate, an arm rigidly secured to the journaled portion of said wedge, and means for engaging the end of the arm to rotate the wedge.

2. In a reversing gear mechanism, a base, a shaft carried upon said base, a drum provided with a hub loosely disposed on said shaft, an annular plate provided with lugs on one side thereof, means for attaching said lugs rigidly to said base, a split expansion ring having inwardly projecting lugs at its ends and being provided with an annular recess arranged to receive the annular plate for supporting the ring on the plate, a wedge rotatably carried by the plate on the side opposite the lugs, said wedge being arranged to enter between the lugs on the split ring, an arm rigidly secured to the pivotal portion of said rotatable wedge on the opposite side of the plate from the split ring, and means for moving the arm to cause the rotation of the wedge.

3. In a reversing gear mechanism, a base, an annular plate rigidly secured to said base, a shaft arranged to pass through the center of the plate, a drum provided with a hub portion loosely disposed on said shaft, a split ring disposed on the interior of said drum and arranged to be supported by said plate, means carried by the plate for expanding the split ring to cause the engagement of the latter with the drum, said expanding means comprising a wedge disposed between the ends of said split ring, said wedge having a portion journaled in said plate, an arm rigidly secured to the journaled portion of said wedge, and means for engaging the end of the arm to rotate the wedge.

1,105,378. PROCESS OF PRODUCING A MIXTURE OF CAMPHENE AND ISOBORNYL ACETATE FROM PINENE HYDROCHLORID. CARL RUDER, Wandsbek, Germany. Filed Feb. 13, 1913. Serial No. 748,154. (Cl. 23—24.)

1. An improved process for producing a mixture of camphene, and the isobornyl ester of a fatty acid from pinene hydrochlorid consisting in heating the same with a fatty acid and the zinc salt of a fatty acid to effect the removal of the chlorin and adding a quantity of another salt of the corresponding fatty acid of a metal whose

chlorid has no condensing action on the terpene compounds, whereby all the zinc chlorid formed during the reaction is converted into the zinc salt of the fatty acid with the formation of the corresponding chlorid of the added metal.

2. An improved process for producing a mixture of camphene and iso-bornyl acetate from pinene hydrochlorid consisting in heating the same with acetic acid, zinc acetate, and the acetate of a metal whose chlorid has no condensing action on the terpene compounds, a portion of the latter salt being added before the commencement of the de-chlorination, and the remainder after the completion of the same so that the necessary quantity of zinc chlorid required for the reaction may be present in the mixture during reaction.

1,105,379. ATTACHMENT FOR BABY-CARRIAGES AND GO-CARTS. ERNEST J. SCHULZE, Spokane, Wash. Filed Nov. 17, 1913. Serial No. 801,518. (Cl. 21—12.)



1. A baby carriage comprising in combination, a main frame, a tractor frame secured to said main frame and projecting forwardly therefrom in an upwardly inclined direction, and a belt trained around said tractor frame.

2. A baby carriage comprising in combination, a main frame, a tractor frame secured to said main frame and projecting forwardly therefrom in an upwardly inclined direction, a belt trained around said tractor frame, and means whereby said tractor frame may be turned into a substantially vertical position.

3. A baby carriage comprising in combination, a main frame, a bracket secured to said frame and extending downwardly therefrom, a tractor frame pivoted to said bracket at its lower end, wheels pivoted on said tractor frame at the opposite ends thereof, and a belt trained around said wheels.

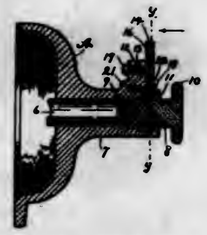
4. A baby carriage comprising in combination, a main frame, a bracket secured to said frame and extending downwardly therefrom, a tractor frame pivoted to said bracket at its lower end, wheels pivoted on said tractor frame at the opposite ends thereof, a belt trained around said wheels, and studs carried on the outer side of said belt.

5. A baby carriage comprising in combination, a main frame, a bracket secured to said frame and extending downwardly therefrom, a tractor frame pivoted to said bracket at its lower end, wheels pivoted on said tractor frame at the opposite ends thereof, a belt trained around said wheels, and toggle links connecting said brackets to said tractor frame at a point forwardly of the point of connection between the tractor frame and the brackets.

[Claim 6 not printed in the Gazette.]

1,105,380. ADJUSTING MECHANISM FOR GRINDING-MILLS. HERBERT W. SPELLMAN and ERNEST TWIGG, New Britain, Conn., assignors to Landers, Frary and Clark, New Britain, Conn., a Corporation. Filed Jan. 10, 1911. Serial No. 601,924. (Cl. 116—49.)

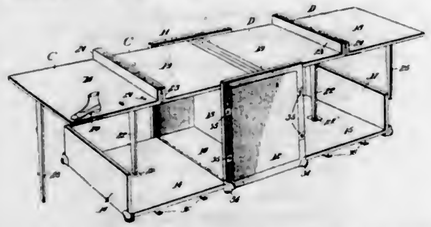
1. The arrangement and combination of a case, an adjusting screw fitted in the said case, a driving gear mounted thereon and arranged for being set in a given position rotatively, an indicator comprising two parts one fixed and the other rotary, the rotary part having a toothed gear for engagement with the said driving gear, guiding and supporting members for said indicator formed respectively in and on the said case and indicator and arranged for relatively sliding one upon the other in the longitudinal direction of the said screw, and a fastening device for securing the said indicator in position upon the said case; whereby the said driving gear and indicator may each be separately set in a given position when the indicator is detached and then assembled properly by a sliding movement of the indicator on the said sliding and supporting members in the line of the axis of the said adjusting screw.



2. The arrangement and combination of a main case, a driving gear mounted in the said main case and arranged for being set in a given position rotatively, a stud for being mounted in a socket in said main case to one side of the axis of the said driving gear, an indicator case separate from the said main case and rigidly mounted on the said stud, and an indicator having a toothed gear rotatively mounted within the said indicator case for engagement with the said driving gear, whereby the said stud, indicator case and indicator may be completed separately from the said main case and driving gear and applied thereto after completion.

3. The arrangement and combination of an adjusting screw, a main case in which the said screw is mounted, a socket having a fixed relation to the said main case, a stud for being mounted in the said socket, an indicator case rigidly mounted on the said stud, an indicator having a toothed gear rotatively mounted within the said indicator case, and means for securing the said stud and connected parts within the said socket of the said case.

1,105,381. DISPLAY-TRUNK. THOMAS H. STOVALL, Richmond, Va., assignor of one-half to John Walters, Charleston, W. Va. Filed Dec. 5, 1913. Serial No. 804,890. (Cl. 190—16.)



1. In a display trunk, a bottom, end walls, a partition between the end walls forming compartments, sides hingedly connected to the bottom, a top for the trunk, and sets of article supporting members composed of foldable parts adapted to be folded and disposed in vertical spaced relation in said compartments and also adapted to be extended into elevated horizontal alinement to provide a display table and means for supporting said foldable parts when extended.

2. In a display trunk, a bottom, end walls permanently connected to the bottom, a partition between the end walls forming opposite compartments, sides hingedly connected to the bottom so that they may swing outwardly or inwardly into coöperative relation with the end walls, top section for the trunk carried by said sides, and sets of article supporting members composed of foldable parts

with the innermost part of each set hingedly connected adjacent the upper edge of said partition whereby the parts may be folded and disposed in said compartments and whereby said parts may be unfolded and extended into elevated horizontal alinement to provie a table, and means for supporting said foldable parts when extended.

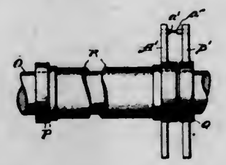
3. In a display trunk, a bottom, end walls permanently connected to the bottom, a partition between the end walls forming opposite compartments, sides hingedly connected to the bottom so that they may swing outwardly or inwardly into coöperative relation with the end walls, top sections for the trunk carried by said sides, and sets of article supporting members composed of foldable parts with the innermost part of each set hingedly connected adjacent the upper edge of said partition whereby the parts may be folded and disposed in said compartments and whereby said parts may be unfolded and extended into elevated horizontal alinement to provide a table, and means connected to each foldable part to support the same when extended.

4. In a display trunk, a bottom, end walls permanently connected to the bottom, a partition between the end walls forming opposite compartments, sides hingedly connected to the bottom so that they may swing outwardly or inwardly into coöperative relation with the end walls, top sections for the trunk carried by said sides, and sets of article supporting members composed of foldable parts with the innermost part of each set hingedly connected adjacent the upper edge of said partition whereby the parts may be folded and disposed in said compartment and whereby said parts may be unfolded and extended into elevated horizontal alinement to provide a table, and a leg hingedly connected to each foldable part so that it may lie flat against the part which it supports when the parts are folded and so that it may be positioned to support the respective part when the latter is extended.

5. In a display trunk, a bottom, end walls, a partition between the end walls, sides hingedly connected to the bottom, top sections, one top section carried by each side, sets of article supporting members composed of foldable parts, the parts of each set having shoulders at their abutting edges and at their abutting shouldered edges hingedly connected together with the innermost part of each set hingedly mounted adjacent the upper edge of said partition so that the parts of each set of supporting members may be disposed in horizontal alinement at right angles to the plane of said partition or be folded and disposed between the end members in substantially parallel relation to said partition, whereby, when the article supporting members are folded and disposed in substantially parallel relation to said partitions, the sides and top sections may be brought into coöperative relation with the ends to thereby inclose the folded article supporting members, the shoulders at the abutting edges of said parts of the supporting members spacing the parts of each set normally away from each other in their folded relation.

[Claim 6 not printed in the Gazette.]

1,105,382. TRANSMISSION-DYNAMOMETER FOR DIRECT OBSERVATION. KYOJI SUYEHIRO, Tokyo, Japan. Filed Feb. 7, 1913. Serial No. 746,959. (Cl. 73—15.)

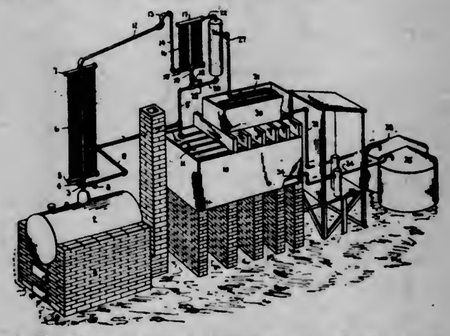


1. In a transmission dynamometer for indicating the torsional stress on a shaft, the combination of indicating means mounted on and rotating with the shaft, and an optional element mounted on the shaft and coöperating with said indicating means to cause a virtual image of said indicating means to appear substantially at the axis of rotation of said shaft.

2. In a transmission dynamometer for indicating the torsional stress on a shaft, the combination of indicating means carried by said shaft, and an optical element carried by said shaft and disposed between said shaft and said indicating means and so positioned relatively thereto as to receive the rays of light from said indicating means and cause a virtual image of said indicating means to appear substantially at the axis of rotation of said shaft.

3. In a transmission dynamometer for indicating the torsional stress on a shaft, the combination of an indicating element carried by the shaft, an optical element carried by the shaft, and coöperating with said indicating element to cause a virtual image of said indicating element to appear substantially at the axis of rotation of said shaft, and means for illuminating one of said elements to cause the image to appear more clearly.

1,105,383. APPARATUS FOR REFINING OIL. JAMES R. TIMMINS, Okmulgee, Okla., assignor of one-fourth to Orlando Swain, Okmulgee, Okla. Filed Apr. 10, 1913. Serial No. 760,307. (Cl. 196—5.)



1. The herein described apparatus for refining oil consisting of a still, a pipe rising therefrom and having a valve, a primary condenser with whose lower end said pipe is connected, a secondary condenser, a pipe connecting the upper end of the first condenser with the lower end of the second condenser, a vapor pipe leading from the upper end of the second condenser to a cooling coil, an oil pipe leading from the lower end of the second condenser to a separate cooling coil, and a branch pipe leading from said oil pipe back to the still and containing a valve.

2. The herein described apparatus for refining oil consisting of a still, a pipe rising therefrom and having a valve, a primary condenser with whose lower end said pipe is connected, a secondary condenser, a pipe connecting the upper end of the first condenser with the lower end of the second condenser, a vapor pipe leading from the upper end of the second condenser, a separator into whose upper end said vapor pipe leads, a vapor outlet pipe leading from the upper portion of the separator to a cooling coil, an oil pipe leading from the lower end of the second condenser to a cooling coil, a second oil pipe leading from the lower end of said separator into the first-mentioned oil pipe and then to said cooling coil, and a branch pipe leading from said oil pipe back to the still and containing a valve.

3. The herein described apparatus for refining oil consisting of a still, a dome thereon, a valved pipe rising from the dome, a manifold with whose lower end said pipe communicates, a second manifold located at a higher level than the first, a pipe connecting the upper cross head of the first manifold with the lower cross head of the second, an arch within the length of this pipe for the purpose set forth, a vapor outlet leading from the upper cross head of the second manifold, means for treating the vapor passing therethrough, an oil outlet leading from the lower cross head of said second manifold, means for treating the oil flowing therethrough, and a branch outlet

leading from the main outlet back to said dome and provided with a valve, for the purpose set forth.

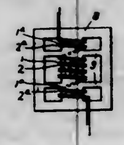
1,105,384. POINT-PROTECTOR FOR IMPALING INSTRUMENTS. JACOB M. TOPPER, Corsica, Pa. Filed Oct. 9, 1913. Serial No. 794,274. (Cl. 24—155.)



1. A hat pin protector having a gripping member comprising a horseshoe magnet constructed with resilient arms having at their ends opposed, frictional pin-gripping faces adapted to be drawn toward each other by their inherent magnetism, and thereby cause increased frictional bearing upon an intervening pin.

2. A hat pin protector having a gripping member comprising a horseshoe magnet constructed with resilient arms having at their ends opposed, frictional pin-gripping faces adapted to be drawn toward each other by their inherent magnetism, and thereby cause increased frictional bearing upon an intervening pin; said arms being enlarged at their gripping ends and in the direction of their gripping faces and transversely to the lines of magnetic flux, whereby to localize the magnetic circuit in the direction which increases the gripping efficiency of the arms.

1,105,385. PROTECTING HIGH-VOLTAGE TRANSFORMERS. MATTHEW O. TROY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 14, 1908. Serial No. 462,644. (Cl. 171—124.)



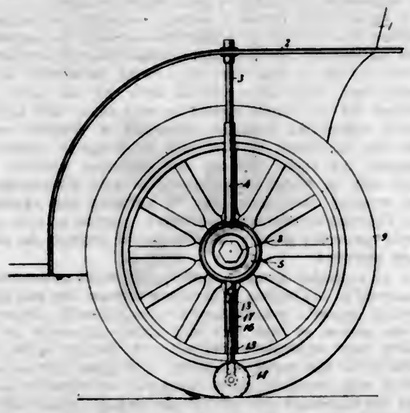
1. In combination, a line carrying electric current, a main transformer connected thereto, and a small auxiliary transformer permanently included in each line connection in series between the line and the corresponding transformer terminal and adapted to take the concentration of potential which develops in the end turns.

2. In combination, line conductors carrying electric current, a main transformer connected thereto, and a small auxiliary transformer permanently connected to the main transformer at each end thereof between it and the corresponding line conductor and adapted to take the concentration of potential which develops in the end turns.

3. In combination, line conductors carrying electric current, a main transformer connected thereto, a small auxiliary transformer permanently connected to the main transformer at each end thereof between it and the corresponding line conductor and adapted to take the concentration of potential which develops in the end turns, and a common magnetic circuit for the main and auxiliary transformers.

1,105,386. ANTISKIDDING DEVICE. JOHN VADAY, Ridgewood, N. J. Filed Jan. 23, 1914. Serial No. 813,888. (Cl. 21—90.)

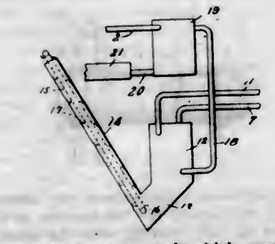
1. In an anti-skidding device of the character described, the combination with a vehicle provided with wheels, of a hub structure fitting over the hub of the wheel, said hub structure being provided with oppositely extending tubular members, a steadying bar connected with said vehicle and telescopically fitting into one of said tubular members for holding the tubular members in proper position, and for preventing a rotation thereof, a reciprocating bar arranged in the other of said tubular members, and an earth engaging member connected with said receprocating bar.



2. In an anti-skidding device of the character described, the combination with a vehicle provided with wheels, of an encircling member adapted to fit over the hubs of said wheels, a pair of tubular members connected with each of said encircling members and extending in an opposite direction therefrom, a steadying bar telescopically fitting into one of said tubular members, a reciprocating bar fitting into the other of said tubular members, a rotating earth engaging member journaled in said reciprocating bar, means for normally holding said reciprocating bar in a lowered position, and means for locking said reciprocating bar in a raised position.

3. In an anti-skidding device of the character described, a hub structure adapted to fit over the hub of a vehicle, a pair of oppositely extending tubular members, a spring arranged in each of said tubular members, a steadying bar adapted to be connected to the vehicle, said steadying bar extending into the upper part of said tubular members, whereby said hub structure and said tubular members are prevented from rotating, said lower tubular member being provided with a longitudinal slot, a reciprocating bar arranged in said lower tubular member, a lug extending from said bar through the slot in said tubular member, whereby said bar is prevented further rotation, a rotatable earth engaging member mounted on said reciprocating bar, a bracing member mounted on said reciprocating bar, and a locking catch adapted to engage said lug for locking said bar and the various parts connected therewith in an elevated position.

1,105,387. PROCESS OF MAKING SALT. CHARLES L. WEIL, St. Clair, Mich., assignor to Diamond Crystal Salt Company, St. Clair, Mich., a Corporation of Michigan. Filed May 31, 1911. Serial No. 630,287. (Cl. 127—16.)



1. The process of graining salt which comprises preheating brine by self-evaporation vapors, placing the preheated brine under pressure, further heating in successive stages to a relatively high temperature adapted to cause deposition of impurities, one such stage being by other self-evaporation vapors and another by steam, filtering the so-heated brine, releasing the pressure on the heated brine in at least two stages in vertically separated apparatus with the brine feed from the lower to the upper in series, returning the vapors from one such stage to serve in preheating and the vapors from another such stage to aid in further heating and causing the self-evaporated brine to undergo further evaporation under atmospheric pressure to produce grained salt.

2. The process of graining salt which comprises preheating adjusted proportions of fresh brine and of residual or tail brine from a final evaporating operation, said preheating being performed by self-evaporation vapors from a later stage, placing the preheated brine under pressure, further heating in successive stages to a relatively high temperature adapted to cause deposition of impurities, one such stage being by other self-evaporation vapors and another by steam, filtering the so-heated brine releasing the pressure in at least two stages in vertically separated apparatus with the brine feed from the lower to the upper in series, returning the vapors from one such stage to serve in preheating and the vapors from another such stage to aid in further heating and causing the self-evaporated brine to undergo further evaporation under atmospheric pressure to produce grains of salt.

3. The process of evaporating brine which comprises producing a supply of purified superheated brine at a temperature of at least 260° F., the heating of the brine being in a plurality of stages, passing such superheated brine successively from below upward through two pressure releasing devices at different levels, whereby the pressure differential is maintained constant, and releasing the pressure in each such device to produce vapors, returning the vapors to serve in producing the heated brine and delivering the brine from the pressure releasing devices into a pan for graining.

4. The process of evaporating brine which comprises preheating brine, placing the brine under pressure, bringing to a temperature of at least 260° F. in a plurality of successive stages, transmitting the brine thus heated through a device adapted to collect deposited matter, releasing the pressure in a plurality of stages, the release in one such stage being sufficient to cause a drop to about 245° F., transferring the heat of the vapors from such a stage to preheated brine and returning the heat of the vapors from a following pressure-releasing stage to aid in the preheating of the brine.

5. The process of evaporating brine which comprises withdrawing self-evaporated brine from a grainer at a temperature of about 200° F., admixing with new brine, preheating the mixed brines with vapor derived from a secondary pressure-releasing stage, placing the preheated brine under pressure, raising its temperature with the aid of vapors from a primary pressure-releasing stage, further heating to bring the temperature to about 260° F. and cause a tendency to deposit impurities, passing the heated brine through a device adapted to collect such impurities, passing the purified brine through a primary and a secondary pressure-releasing stage to furnish the stated vapors and drop the temperature to about 226° F. and transmitting the brine to a grainer.

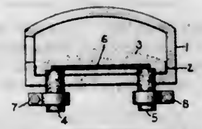
[Claim 6 not printed in the Gazette.]

1,105,388. PROCESS OF MAKING BORON SUBOXID. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 2, 1913. Serial No. 764,981. (Cl. 23—13.)

1. The process of making boron suboxid which consists in heating a mixture of about 7 to 8 parts of sodium borate and about one part of silicon to an elevated temperature to effect a reaction.

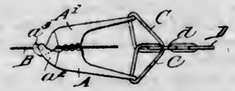
2. The process of making boron suboxid which consists in heating a mixture of about 7 to 8 parts of borax and about one part of silicon to about the boiling temperature of borax to effect reaction.

3. The process of preparing a sub-oxid of boron which consists in intimately mixing in a pulverized state a borate and an oxidizable silicon material and heating said mixture to the boiling point.



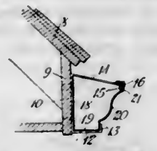
4. The process of preparing a sub-oxid of boron which consists in thoroughly mixing in a pulverized state an alkali borate and silicon, heating said mixture to the boiling point and treating with a solvent for silicon.

1,105,389. WIRE-FENCE CLAMP. ELIAS B. WELLS, Miami, Fla. Filed Aug. 29, 1912. Serial No. 717,691. (Cl. 39—53.)



A wire fence clamp comprising elongated bars having convex inner wire gripping faces and concave upper faces opposite the said wire gripping faces which are provided with diagonal strengthening webs, relatively engageable hooks and eyes formed along the forward longitudinal edges of said clamping bars and adapted to coöperate to form a detachable hinged connection, the opposite edges of said bars being provided with spaced openings and being concavely cut away between the said openings, said bars being further provided with transverse strengthening webs arranged substantially in line with their said openings, and links secured through the said bar openings and adapted to extend inwardly in overlapped relation, for the purpose described.

1,105,390. GUTTER-HANGER. CHARLES W. WHEDON, Medina, N. Y. Filed Feb. 26, 1914. Serial No. 821,257. (Cl. 108—29.)



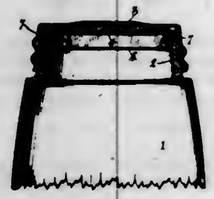
1. A device of the character described, comprising a supporting strap provided with a portion for fitting against a building, and further provided with a bottom portion extending outwardly and upwardly from said first mentioned portion, said strap being further provided with a portion extending outwardly and formed into a cross bar, a gutter resting upon the bottom portion of said supporting strap and provided with a surface to be engaged by said cross bar, said gutter being provided with a portion so fashioned as to simulate the outward appearance of a corresponding portion of a cornice.

2. A gutter hanger, comprising a supporting strap having a vertical member for attachment to a building, a bottom member extending from the lower end of the vertical member and on which the lower part of the gutter is adapted to rest, and a top member extending outwardly from the upper end of the vertical member and adapted for interlocking engagement with the upper part of the front wall of the gutter.

3. A device of the character described, comprising a gutter, and a supporting strap for said gutter, having a vertical member for attachment to a building, a horizontal bottom member having an upturned end and adapted to

be engaged by the lower part of said gutter, the supporting strap having an outwardly extending top member provided at its end with means for engaging the outer upper edge of said gutter.

1,105,391. JAR-CLOSURE. GEORGE H. WOMELSDORF, Philadelphia, Pa., assignor to Reno Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 27, 1910. Serial No. 569,068. (Cl. 215—80.)



1. A sealing closure consisting of a disk of relatively compact stiff material having an integral sealing portion permanently connected to it and consisting of loosely compacted material.

2. A sealing closure consisting of a disk of relatively compact stiff material having an integral sealing portion permanently connected to it and consisting of loosely compacted material impregnated with a substance for maintaining it soft and pliable.

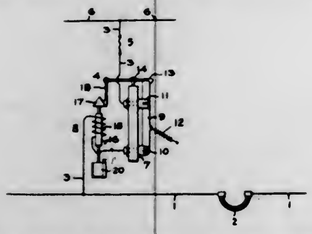
3. A sealing ring of loosely compacted material impregnated with glycerin and coated with a mixture of an oil and collodion.

4. A closure consisting of a disk shaped body of relatively dense sheet material having an integral sealing portion of loosely compacted material coated with a mixture of an oil and collodion.

5. A sealing cap for bottles, embodying an external clamping member and an integral internal packing member, said packing member having a relatively dense contral portion and a relatively soft and elastic margin to form the seat for the mouth of the bottle.

[Claims 6 to 8 not printed in the Gazette.]

1,105,392. CIRCUIT PROTECTION. GILBERT WRIGHT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1913. Serial No. 808,645. (Cl. 175—294.)



1. In an electric circuit, the combination with circuit interrupting means therefor, of means responsive to conditions of excessive current flow therein for causing said circuit interrupting means to open after such conditions have ceased.

2. In an electric circuit, the combination of circuit interrupting means, operating means for said circuit interrupting means not ordinarily capable of actuating the same, and means responsive to conditions of excessive current flow for rendering said operating means capable of actuating said circuit interrupting means and for preventing opening of the latter during the continuance of such conditions.

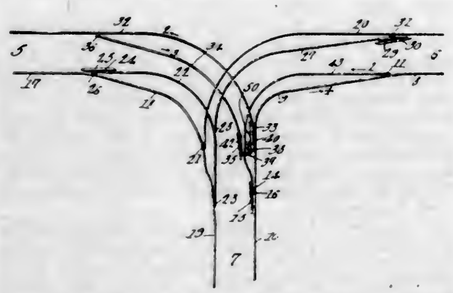
3. In an electric circuit, the combination of a circuit breaker for opening the circuit under conditions of excessive current flow and additional circuit breaker means that comes into action under like conditions but opens only after such conditions have ceased.

4. In an electric circuit comprising a main portion and a branch derived therefrom, the combination of means in the main portion for opening the circuit under conditions of excessive current flow and circuit breaker means in the branch responsive to like conditions therein which opens after the means first mentioned has effectually broken the circuit.

5. In an electric circuit comprising a main portion and a branch derived therefrom, the combination of a circuit breaker in the main portion responsive to conditions of excessive current flow and circuit breaker means in the branch responsive only to current flow heavy enough to bring about the opening of said first mentioned circuit breaker that opens after the first mentioned circuit breaker has effectually broken the circuit and remains open when the first mentioned circuit breaker is closed again, so that the branch remains effectually cut off.

[Claims 6 to 8 not printed in the Gazette.]

1,105,393. RAILROAD-SWITCH. THOMAS L. WYATT, Lynchburg, Va. Filed Oct. 27, 1913. Serial No. 797,668. (Cl. 104—12.)



1. In a device of the class described, a pair of merging primary and secondary tracks, each comprising a main directing rail and an auxiliary directing rail, the directing rails of the secondary track terminating at their inner ends adjacent the intermediate portions of the directing rails of the primary tracks; switch points at the inner ends of the main and auxiliary rails of the secondary track and coöperating with the flange receiving edges of the main and auxiliary rails of the primary tracks; means for connecting the switch points for movement one from the other; and selective switch points coöperating with the outer ends of the auxiliary rails.

2. In a device of the class described, a pair of merging primary and secondary tracks, each comprising a main directing rail and an auxiliary directing rail, the directing rails of the secondary track terminating at their inner ends adjacent the intermediate portions of the directing rails of the primary track; switch points at the inner ends of the main and auxiliary rails of the secondary track and coöperating with the flange receiving edges of the main and auxiliary rails of the primary tracks; a lever; means for supporting the lever intermediate its ends for pivotal movement; and links connecting the ends of the lever with the switch points; and selective switch points coöperating with the outer ends of the auxiliary rails.

1,105,394. FUSE FOR PROJECTILES. KARL ASAK, Raufoss, Norway, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Aug. 27, 1913. Serial No. 786,923. (Cl. 102—37.)

1. A fuse comprising a body, a plurality of relatively movable timing rings, one timing ring being coupled to the body, movable elements for effecting such coupling, and means for displacing said elements without affecting the position of said coupled ring.



2. A fuse comprising a body, a plurality of timing rings, one timing ring being coupled to the body, movable elements for effecting such coupling, and means carried by a movable ring for successively displacing said elements as said latter ring is rotated.

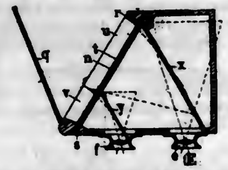
3. A fuse comprising a body, a plurality of timing rings, one timing ring being coupled to the body, a series of movable pins for effecting such coupling, and means carried by a movable ring for successively displacing said pins as said latter ring is rotated.

4. A fuse comprising a body, a plurality of fixed timing rings, a plurality of adjustable timing rings alternately arranged in respect to the fixed timing rings, a series of coupling elements for locking one of said fixed timing rings to the body, and means carried by the adjustable timing rings for displacing said coupling elements as the adjustable rings are rotated.

5. A fuse comprising a body, a plurality of fixed timing rings, a plurality of adjustable timing rings alternately arranged in respect to the fixed timing rings, a series of shiftable pins for locking one of said fixed timing rings to the body, and means carried by the adjustable timing rings for displacing said coupling pins as the adjustable rings are rotated.

[Claims 6 to 9 not printed in the Gazette.]

1,105,395. STEREOSCOPIC APPARATUS. GEORGES BALMITGÈRE, Paris, France. Filed May 14, 1908. Serial No. 432,808. (Cl. 88—29.)

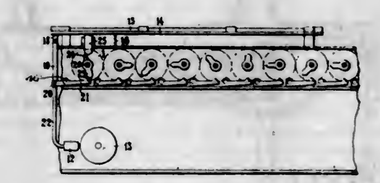


1. A stereoscope for viewing views composed of two images of different sizes, the said stereoscope having eye pieces of different focal lengths, means for supporting the views in the stereoscope in an oblique position relatively to the optical axes of the eye pieces, and means for straightening the images, the said eye pieces being so arranged that the images appear of the same size and at the same distance.

2. A stereoscope for viewing the views composed of two images of different size upon a single plate, the said stereoscope having means for supporting the plate in the stereoscope, in an oblique position relatively to the optical axes of the eye pieces, and reflecting surfaces placed in reverse direction obliquely to the optical axes for straightening the images, the eye pieces being arranged so that the virtual images produced by the reflecting surfaces appear in the same size at the same distance.

3. A stereoscope for viewing views composed of two images of different size upon a single surface, the said stereoscope having eye pieces of different focal lengths, means for supporting the views in an oblique position relatively to the optical axes of the eye pieces, the stereoscope having openings in its wall corresponding to the dimensions and to the position of the two images of the view, and mirrors placed in reverse direction obliquely to the optical axes for straightening the images, the eye pieces being arranged so that the virtual images produced by the mirrors appear of the same size and at the same distance.

1,105,396. SIGNALING DEVICE FOR CALCULATING-MACHINES. BERNHARD BEHR, Dresden, Germany. Filed Dec. 16, 1912. Serial No. 737,008. (Cl. 235—128.)



1. In a calculating machine of the character described, the combination with the frame and a ruler slidable thereon, numeral wheels mounted in a row on the ruler and tens transference devices on the ruler for transferring the tens from one numeral wheel to another, of a gong, means for sounding the gong, and means for causing the ruler in any of its positions to sound said gong when the capacity of the machine is reached.

2. In a calculating machine of the character described, the combination with the frame and a ruler slidable thereon, numeral wheels mounted in a row on the ruler and tens transference devices on the ruler for transferring the tens from one numeral wheel to another, of a gong, means for sounding the gong, said means comprising a bar of a length equal to the distance through which the ruler can be displaced on the frame, and a member carried by the ruler and adapted to be actuated by the last numeral wheel and to coact with said bar and thereby sound the gong when the capacity of the machine is exceeded.

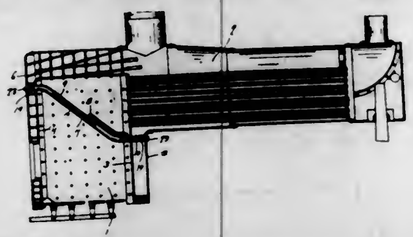
3. In a calculating machine of the character described, the combination with the frame and a ruler slidable thereon, numeral wheels mounted in a row on the ruler and tens transference devices on the ruler for transferring the tens from one numeral wheel to another, of a gong mounted in the frame, means for sounding the gong, said means comprising a bar of a length equal to the distance through which the ruler can be displaced on the frame, said bar being mounted to rock in the frame, and a member carried by the ruler and adapted to be actuated by the last numeral wheel and to coact with said bar and thereby sound the gong when the capacity of the machine is exceeded.

4. In a calculating machine of the character described, the combination with the frame and a ruler slidable thereon, numeral wheels mounted in a row on the ruler and tens transference devices on the ruler for transferring the tens from one numeral wheel to another, of a gong mounted in the frame, means for sounding the gong, said means comprising a bar of a length equal to the distance through which the ruler can be displaced on the frame, said bar being mounted to rock in the frame, a cutting finger, carrying a tooth, mounted on the pivot of the last numeral wheel, and a pin mounted on the ruler and adapted to be driven by the said tooth and rock said bar and thereby sound the gong when the capacity of the machine is exceeded.

1,105,397. ARCH-TUBE SAFETY DEVICE. PAUL BOWERS, Starbuck, Wash. Filed Feb. 9, 1914. Serial No. 817,646. (Cl. 122—507.)

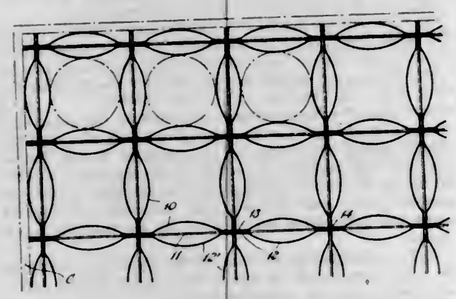
1. In combination, a boiler provided with a fire-box, a tube extending across the fire-box and communicating at its ends with the interior of the boiler, and a valve device at each end of the tube responsive to boiler pressure for automatically and simultaneously closing ingress to both ends of the tube from the boiler when pressure in the former decreases with respect to pressure in the latter, substantially as described.

2. In combination, a boiler provided with a fire-box, a tube extending across the fire-box and communicating at its ends with the interior of the boiler, a valve device responsive to boiler pressure for automatically closing each end of the tube against ingress thereto from the boiler, and springs for normally holding said valve devices in open positions, substantially as described.



3. In combination, a boiler provided with a fire-box, a tube extending across the fire-box and having its ends projecting into the boiler, and a valve closure structure for each end of the tube each comprising a closure having a stem, an adjustable abutment nut on the stem, a guide frame adjustably mounted on the boiler and having guiding engagement with said stem, and a spring coacting with the stem and the guide frame to normally hold the valve closure away from the tube end, substantially as described.

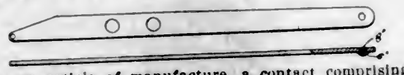
1,105,398. EGG-CARRIER. ISAAC VINCEN BOWLEY, Whiterock, Me. Filed Oct. 8, 1913. Serial No. 794,090. (Cl. 217—34.)



1. In an egg carrier, a filler consisting of a plurality of elements, each element comprising a flat stiff rib and a cushioning strip secured at regularly spaced intervals to one side of the rib, the sections of the strip between the places of connection with the rib being formed into convex cushions, and said element being slitted along said places of connection between the strip and the rib, the connection places being operative on each side of the slits and independently thereof, substantially as and for the purposes set forth.

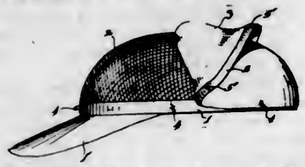
2. In an egg carrier, the combination of a series of filler elements arranged angularly to one another, each of said elements comprising a stiff flat rib and flexible cushioning strips secured upon opposite sides of the rib, said strips being secured along vertically arranged oppositely disposed planes to said rib and the sections thereof between such planes of connection being formed into convex flexible sections spaced from the rib, the planes of connection aforesaid constituting reinforcements or stiffeners for the element and each of said reinforcements being slitted from the end thereof inwardly through substantially one half its length whereby the several elements are connected together.

1,105,399. CONTACT-POINT. JOHN F. CADELL, Baltimore, Md., assignor, by mesne assignments, to Edward E. Clement, Washington, D. C. Filed June 15, 1907. Serial No. 379,166. (Cl. 173—13.)



As an article of manufacture, a contact comprising a metallic strip having a recess formed in one side thereof with a conical boss on the opposite side thereof, the axis of said recess and said boss being coincident, said boss having an opening, a piece of platinum disposed in said opening, one end of said piece of platinum being upset to engage inside the recess, the other end being upset over the edges of the conical boss.

1,105,400. CAP. JOHN WILLIAM BURKE, Proctor, Minn. Filed July 19, 1913. Serial No. 779,931. (Cl. 2—106.)

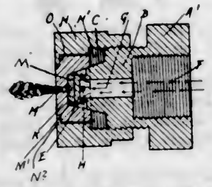


1. A cap comprising a rim, a perforated crown supported by the rim, a plurality of protruding members fixed upon the outer wall of the rim and arranged at proper intervals and a removable cover extending over the crown and having openings corresponding with the protruding members for securing the crown to the rim.

2. A cap comprising a rim, a reticulated crown supported by the rim, a plurality of protruding members fixed upon the outer wall of the rim, designed to engage corresponding apertures within the rim of an auxiliary removable crown.

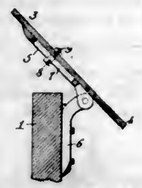
3. A cap comprising a rim, a perforated crown supported by the rim, a plurality of protruding members fixed upon the outer wall of the rim and a removable cover extending over the crown and having its inner and outer faces of different design, and having openings extending therethrough corresponding with the protruding members carried by the rim, whereby the cover can be removably secured to the rim with either face outward.

1,105,401. OIL-BURNER. CHARLES WITHERS BURTON, Vancouver, British Columbia, Canada. Filed Mar. 7, 1913. Serial No. 752,659. (Cl. 137—86.)



An oil burner comprising a nut having an externally threaded reduced portion, a reduced tapered portion and having an annular groove in said reduced tapered portion and a central orifice extending through the nut to a point on a line with the exterior wall of the annular groove and having peripheral openings extending from the interior of the central orifice into the groove, spiral ways extending through the exterior wall of the groove, a cap having a tapered interior periphery fitting the outer end of the tapered exterior periphery of the nut, and forming an atomizing chamber having an orifice leading therefrom, said cap having an annular rabbet formed thereon, and a securing nut extending around the cap and engaging therewith and with the thread of the nut, said securing nut having an annular flange fitting in said rabbet as and for the purpose specified.

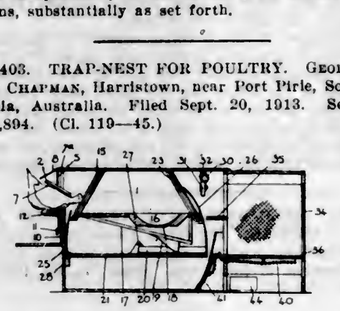
1,105,402. ADJUSTABLE SILO-ROOF. CYRUS W. CHAMBERS and WILLIAM H. CHAMBERS, Cedar Rapids, Iowa. Filed May 15, 1912. Serial No. 697,548. (Cl. 20—1.4.)



1. In a silo tank, the combination of rafters rising to an apex, a series of triangular roof sections hinged to the upper portion of said tank, each roof section being unconnected with any other, hinges for each roof section, one member of each hinge being fixedly attached to said tank and the other member slotted and adapted to be adjustably secured to a roof section near the base thereof, a bolt for each hinge passing through the slotted member thereof and through the roof section, and means associated with said bolt for clamping said roof section to said slotted member, the construction being such that on loosening the bolt of each of its hinges vertical or lengthwise adjustment may be made of said roof section without changing the line of angularity common to itself and the remaining roof sections, substantially as set forth.

2. The combination of a silo tank having rafters running therefrom to an apex, a plurality of substantially triangular roof sections hinged to the upper portion of the tank, each section being slidably adjustable on its hinges independently of and in the pitch of the adjacent sections, substantially as set forth.

1,105,403. TRAP-NEST FOR POULTRY. GEORGE HENRY CHAPMAN, Harristown, near Port Pirie, South Australia, Australia. Filed Sept. 20, 1913. Serial No. 790,894. (Cl. 119—45.)



1. An improved trap nest for poultry comprising a rectangular box-like structure, independent inlet and outlet doors in the ends of same, a nest proper having a hole in its bottom, a rocking beam pivoted beneath the nest proper adapted to be operated by the egg and carrying upon its two ends two closing plates adapted to close inlet and outlet openings in two cross partitions, a slidable door adjacent to the outlet end of the rocking beam when in its lower position operated by a pivoted platform in the rear part of the box, a resetting lever pivoted to the side of the box also operated by the pivoted platform, and a pivotally mounted marking device, all substantially as described.

2. In a trap nest for poultry, an inlet door pivoted upon horizontal trunnions and carrying a tube or tubes placed at right angles to such trunnions and containing a movable weight, the door being so balanced upon its trunnions that it will be held in either open or closed position against a stop as required, in combination with a stationary projecting hood over the door which prevents the door being closed by a hen from outside, substantially as described.

3. In a trap nest for poultry, an inlet door pivoted upon horizontal trunnions and carrying a tube or tubes placed at right angles to the trunnions and containing a movable weight, the door being so balanced upon its trunnions that it will be held in either open or closed position against a stop as required, in combination with a vertically slidable plate below the door held by a suitable screw or catch whereby the size of the opening may be adjusted, substantially as described.

4. In a trap nest for poultry, a casing, inlet and outlet partitions within the casing and arranged respectively in front of and behind the nest proper such partitions having holes through which the hen may pass, in combination with two plates for closing such holes, and a rocking beam pivoted below the nest proper and adapted to be operated by the egg and to the ends of which the said plates are fixedly secured, substantially as described.

5. In a trap nest for poultry, a nest proper having in the center a hole of sufficient size to permit the escape of the egg and beneath the hole a flap attached by spring hinges and beneath the flap a guide of canvas or other flexible material all arranged above a rocking beam carrying two plates upon its two ends adapted to regulate admission to and exit from the nest and carrying a trough upon one end adapted to receive the egg from the nest and be operated thereby, in combination with a vertically slidable door adjacent to the end of such trough and adapted to hold the egg thereon or to release the same when operated by a pivoted platform and suitable connections, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,105,404. AUTOMATIC PISTOL. JOSÉPHINE CLÉMENT and VICTOR LOISELET, Liege, Belgium. Filed May 26, 1914. Serial No. 841,084. (Cl. 42—3.)



An automatic pistol comprising a removable barrel surrounded by the slide and maintained, by the latter, against the frame to which it is only fixed at the front of the latter, characterized by the fact that the barrel carries at the front a lug engaging within the body and closing the front end of the housing for the return spring made in the body, and containing a bolt which prevents longitudinal displacement of the barrel, so that the disengagement of the bolt permits of withdrawing separately, the barrel, the return spring and the slide, without any further disassemblage.

1,105,405. LOW-PRESSURE STEAM-GENERATOR. FRANCIS P. COFFIN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 10, 1912. Serial No. 714,371. (Cl. 122—37.)

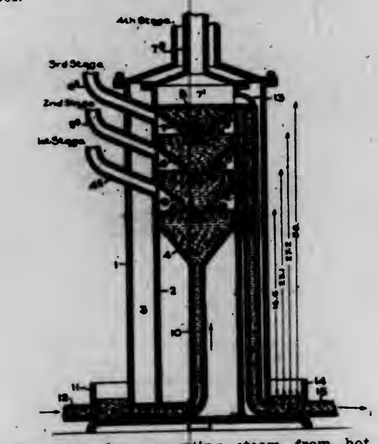
1. Means for generating steam from hot water which comprises a plurality of chambers, means for simultaneously passing hot water through them in series and leading off steam from successive chambers for utilization in the respective stages of a multi-stage turbine.

2. Means for generating steam from hot water which comprises a plurality of chambers, means for passing hot water through them in series, and means for leading off from successive chambers steam of successively lower pressures for utilization in the successive stages of a multi-stage turbine.

3. Apparatus for generating steam at low pressure, consisting in means for maintaining a barometric column of hot water, and means for drawing off steam from said column at different levels corresponding with the stages of a low-pressure turbine.

4. Apparatus for generating steam from hot water comprising a series of communicating receptacles arranged at

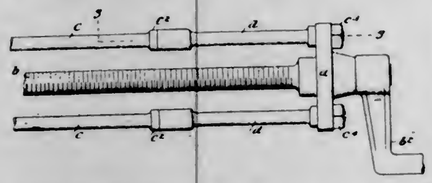
different levels, means for maintaining a barometric column of hot water in said receptacles, and means for drawing off steam from said receptacles at pressures which increase respectively from the lowest to the highest thereof.



5. Apparatus for generating steam from hot water which consists in means for feeding said hot water through a barometric column, chambers at different levels communicating with said column and in which the steam evaporates at different pressures, pipes for leading off the steam from said chambers and a down-flow pipe from the upper chamber to a hot well, said down-flow column of water exerting a thermo-siphon action.

[Claims 6 and 7 not printed in the Gazette.]

1,105,406. DRILL ATTACHMENT. FRANK T. COOK, Miami, Okla. Filed May 2, 1914. Serial No. 835,863. (Cl. 255—45.)



1. In a drilling machine having a feed screw, a crosshead for supporting the same and brace rods for said crosshead; an extension rod adapted for insertion between each brace rod and said crosshead, and means for securing it to each.

2. In a drilling machine having a feed screw, a crosshead for supporting the same and brace rods for said crosshead; an extension rod provided with a male threaded end for engagement with said crosshead and with a female threaded end for engagement with each of said brace rods and adapted for insertion between said crosshead and said brace rods.

3. In a drilling machine having a feed screw, a crosshead for supporting the same, brace rods for said crosshead, and nuts for securing said brace rods to said crosshead; an extension rod for each of said brace rods having a male threaded end to fit a corresponding nut to secure the same to said crosshead, and a female threaded end to fit the end of a corresponding brace rod.

4. In a drilling machine having a feed screw, a crosshead for supporting the same, brace rods for said crosshead, and nuts for securing said brace rods to said crosshead, said brace rods having reduced threaded ends for engagement with said nuts; an extension rod for each of said brace rods having a reduced, externally threaded, end of the same diameter and pitch as the reduced ends of said brace rods and adapted for engagement with said nuts when removed from said brace rods to lock the same to said crosshead, and said extension rods having, each, an internally threaded end for engagement with the reduced, threaded, end of a corresponding brace rod.

1,105,407. KNITTED COLLAR FOR VESTS AND COATS. FRANK GUY CURTIS, Milwaukee, Wis. Filed Apr. 7, 1914. Serial No. 830,165. (Cl. 2—62.)

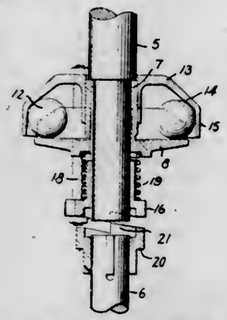


1. A garment having a collar capable of assuming an upstanding or turn-down position, said collar being made of a knitted strip having a longitudinal zone of loose tension forming the outer edge of the collar and a zone of tight tension along the portion fastened to the garment.

2. A garment having a collar capable of assuming an upstanding or lay-down position, said collar being made of a knitted piece doubled longitudinally and having a medial zone of loose tension and marginal zones of tight tension, the zone of loose tension forming the outer edge of the collar and the zones of tight tension forming the inner edge that is fastened to the garment.

3. A garment having a collar capable of assuming an upstanding or lay-down position and made of a knitted piece folded longitudinally, the line of fold forming the outer edge of the collar and the edges being fastened to the garment, the ribs of the collar extending transversely to the folded and attached edges of the collar, and the tension of zones transverse to the ribs progressively decreasing from the attached edge to the outer edge thereof.

1,105,408. RELEASABLE COUPLING WITH AUTOMATIC RETURN. HEINRICH DECHAMPS, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 30, 1913. Serial No. 745,155. (Cl. 74—45.)



1. In a device of the character described, the combination of driving and driven shafts, a member fixed upon one of the shafts, weights carried by the member and moving in response to centrifugal force, an element having a beveled face with which the weights engage to move it axially, a spring opposing the action of the weights, a coupling member splined on one of the shafts, means extending parallel with the shaft to connect said element and member, and a second coupling member mounted on the other shaft and coöperating with the first.

2. In a device of the character described, the combination of driving and driven shafts, a flanged member fixed to rotate with one of the shafts, weights that roll on said flange in response to speed changes, a hood having a beveled surface that engages the weights and is moved thereby, a coupling member splined on the same shaft that carries the flanged member, means connecting the hood and coupling member, a coiled spring interposed between the flanged and coupling members, and a second coupling member mounted on the other shaft and coöperating with the first.

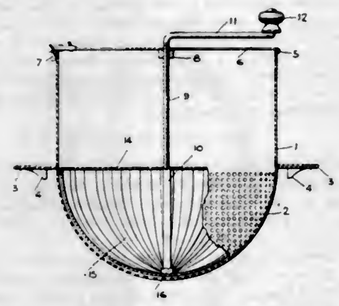
3. In a device of the character described, the combination of driving and driven shafts, a flanged member fixed to rotate with one of the shafts, weights that roll on said flange in response to speed changes, guides for the weights, a hood that completely incloses the weights and has a beveled surface with which the weights engage to move it, a jaw coupling splined on a shaft, rods connecting it with the hood, a coiled compression spring between the coupling and the flange member which opposes the outward movement of the weights, and a second jaw coupling that is carried by the other shaft and engages the first.

4. In a device of the character described, the combination of a driving and a driven shaft, a flanged member fastened to the shaft, guides on one face of the flange arranged to form slots, balls which roll in the slots in response to speed changes, a member that coöperates with and is moved axially by the balls, means opposing the movements of the balls, and a coupling comprising a pair of coöperating elements one of which rotates with one shaft while the other element rotates with the other shaft and means connecting one of said elements to said axially movable member for movement therewith.

5. In a device of the character described, the combination of axially alined driving and driven shafts, a flange fixed to one of said shafts, weights that move on said flange in response to speed changes, a hood slidably mounted on the one shaft adjacent to said flange having a conical surface for engagement with the weights and adapted to be moved axially on the shaft thereby, means opposing the outward movement of the weights, a jaw coupling member slidably mounted on the same shaft as the flange and hood, means connecting the coupling with the hood, and a coöperating coupling fixed to the other shaft.

[Claims 6 and 7 not printed in the Gazette.]

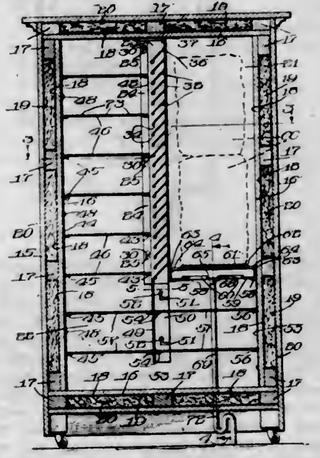
1,105,409. COLANDER. SARAH EMMA DE CREVECOEUR, Colton, Cal. Filed May 23, 1912. Serial No. 699,209. (Cl. 146—9.)



1. In a device of the character described, a receptacle, a presser member arranged in said receptacle formed with a squared aperture near the top and a socket member at the bottom, a shaft threaded at its upper end and formed square in cross section at its lower end for fitting into said socket and said squared aperture, a nut fitting over the threaded portion of said shaft, means for holding said nut stationary in respect to said shaft, and a handle connected with said shaft for rotating the same whereby when said shaft is rotated the same will rotate said presser member and move the same toward and from the bottom of said receptacle according to the direction of rotation of the shaft.

2. In a device of the character described, a receptacle, a presser member arranged in said receptacle formed with a squared aperture near the top and a socket member near the bottom, a shaft threaded at the upper part and squared at the lower part, removably fitting into said squared aperture and said socket, a threaded member fitted over the threaded portion of said shaft, and a removable support for said threaded member.

1,105,410. REFRIGERATOR. FOREST V. DETWILER, Chicago, Ill. Original application filed May 28, 1909, Serial No. 498,979. Divided and this application filed Sept. 3, 1909. Serial No. 516,077. (Cl. 62—10.)



1. In a refrigerator, the combination with an outer casing, of opposite flange members removably secured to the casing with a continuous offset portion having parallel inclined slots open at the upper edge, and other members adapted to be inserted and removably held in the slots and forming a partition to separate the casing into parallel compartments with inclined passages between them.

2. In a refrigerator, the combination of a casing having a chamber therein, a removable metallic partition dividing the chamber into communicating compartments, portions of said partition being cut out and deflected beyond the body portion of the partition, removable supports arranged within the chamber and also provided with portions cut out and deflected beyond the plane of the body portion and coöperating with the deflected portions of the partition, and shelves resting upon the said coöperating portions.

3. In a refrigerator, comprising in combination a food chamber, an ice bunker, and a wall separating the chamber and bunker, said wall comprising spaced uprights removably secured to opposite walls and with portions of their bodies spaced from the adjacent walls, said portions being provided with spaced downwardly inclined recess openings through one edge, and partitions supported by and extending between the uprights, the extremities of the partitions being seated in the respective recesses and projecting into the spaces between the uprights and the adjacent walls of the casing, said partitions being also removable from the casing independently with respect to the uprights and to each other.

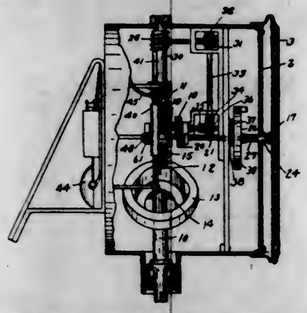
4. A refrigerator comprising in combination a food chamber, an ice bunker, a wall separating the chamber and bunker, said wall comprising uprights and spaced parallel partitions removably engaging the uprights, and means for locking the partitions against displacement.

5. A refrigerator comprising in combination a food chamber, an ice bunker, a wall separating the chamber and

bunker, said wall comprising spaced uprights removably secured to opposite walls and with portions of their bodies spaced from the adjacent walls, said portions being provided with spaced downwardly inclined recess openings through one edge, and partitions supported by and extending between the uprights, the extremities of the partitions being seated in the respective recesses, and means for locking the partitions against displacement.

[Claims 6 to 10 not printed in the Gazette.]

1,105,411. SPEEDOSCOPE. LESTER C. DUNCAN, Lenia, Idaho. Filed Mar. 31, 1913. Serial No. 757,751. (Cl. 73—123.)



1. A speedometer apparatus comprising in combination, a movable pointer for indicating the speed of a vehicle, mechanism for operating said pointer, a second pointer adapted to be moved by said first mentioned pointer in one direction, and means normally tending to move said second mentioned pointer in the direction opposite to that in which it is moved by said first mentioned pointer.

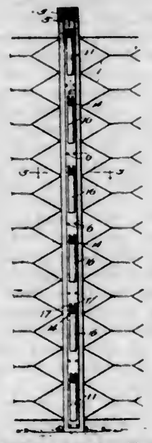
2. A speedometer apparatus comprising in combination, a revoluble spindle, centrifugally operated weights pivoted to said spindle, a pointer for indicating the speed of a vehicle, mechanism for transmitting the movement of said weights to said pointer, a registering pointer adapted to be moved in one direction by said first mentioned pointer, and mechanism geared to said spindle adapted to move said second mentioned pointer in a direction opposite to which it is moved by said first mentioned pointer, said last mentioned mechanism being provided with a sliding connection whereby said second mentioned pointer is permitted to be turned back with the first mentioned pointer.

3. A speedometer apparatus comprising in combination, a revoluble spindle, centrifugally operated weights pivoted to said spindle, a pointer for indicating the speed of a vehicle, mechanism for transmitting the movement of said weights to said pointer, a registering pointer adapted to be moved in one direction by said first mentioned pointer, and mechanism driven from said spindle at a relatively low speed and adapted to move said registering pointer in a direction opposite to which it is moved by said first mentioned pointer.

4. A speedometer apparatus comprising in combination, a revoluble spindle, centrifugally operated weights connected to said spindle, a pointer for indicating the speed of a vehicle, a stem on which said pointer is mounted, mechanism for transmitting the movement of said weights to said stem, a sleeve surrounding said stem, a registering pointer fixed to said stem, means for moving said registering pointer by the motion of said indicating pointer in one direction, a friction drive for moving said sleeve and said registering pointer in the direction opposite to that in which it is moved by said indicating pointer, and a relatively low speed gear intermediate said spindle and said friction drive.

1,105,412. WIRE-HOLDER. STEPHEN E. ELLIOTT, West Salem, Ill. Filed Apr. 14, 1914. Serial No. 831,752. (Cl. 39—53.)

1. A device of the character specified, comprising a pair of bars, one of the bars having on its inner face a longitudinally extending groove, and the other bar having a longitudinally extending rib of less width than the groove, each of the bars having a reinforcing strip on its outer face at the center thereof, each bar having a series of slots extending through the reinforcing strip, the slots extending longitudinally of the bars and being spaced apart at regular intervals, and the slots of one bar registering with the slots of the other bars, a clamping device for each pair of registering slots, each of the said devices comprising a rod having a head adapted to pass through the slots and to engage transversely of the slots, and a handle pivoted to the other end of each rod, each handle having a pair of cam shaped lugs engaging the opposite sides of the rod and pivoted thereto for drawing the rod toward the handle when the handle is turned into parallelism with the bars, one of the bars having laterally extending guide pins on its inner face and near its ends, and the other bar having openings for receiving the guide pins.



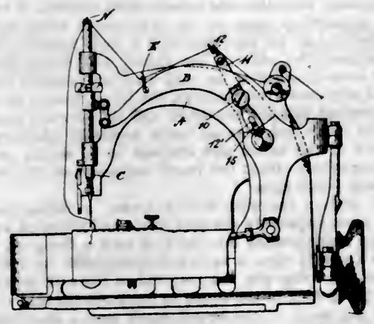
2. A device of the character specified, comprising a pair of bars, each of the bars having a reinforcing strip on its outer face at the center thereof, each bar having a series of slots extending through the reinforcing strip, the slots extending longitudinally of the bars and being spaced apart at regular intervals, and the slots of one bar registering with the slots of the other bars, a clamping device for each pair of registering slots, each of the said devices comprising a rod having a head adapted to pass through the slots and to engage transversely of the slots, and a handle pivoted to the other end of each rod, each handle having a pair of cam shaped lugs engaging the opposite sides of the rod and pivoted thereto for drawing the rod toward the handle when the handle is turned into parallelism with the bars.

1,105,413. THREAD-CONTROLLER FOR SEWING-MACHINES. OLIVER E. ELWELL, Hornell, N. Y., assignor to the Union Special Machine Company, Chicago, Ill., a Corporation. Filed Feb. 11, 1905. Serial No. 245,207. (Cl. 112—26.)

1. A sewing machine including in combination a needle, means for operating the same, including a needle lever, means for taking up the needle thread, a slack thread controller, independent of the needle lever, and operated thereby, said slack thread controller being so constructed as to take up the slack in the needle thread during substantially the entire downward movement of the needle.

2. A sewing machine, including in combination a needle, means for operating the same, including a needle lever, means for taking up the needle thread, a slack thread controller, comprising a thread arm, having a thread eye, said thread arm being connected to and moved by said needle lever, and constructed so as to take up the needle thread during substantially the entire downward movement of the needle.

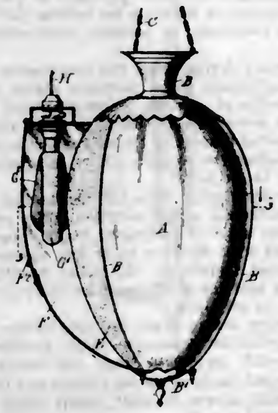
3. A sewing machine including in combination, a needle bar, a thread guide carried thereby, a needle lever, a thread guide carried thereby and a slack thread controller with means for operating it in reverse direction to the movements of the other two thread guides.



4. A sewing machine including in combination, a needle bar, a thread guide carried thereby, a needle lever, a thread guide carried thereby, and a slack thread controller with an operative connection between the same and the needle lever for operating it in a reverse direction to the movements of the other two thread guides.

5. A sewing machine including in combination a needle bar, a thread guide carried by the upper end thereof, a needle lever, a thread guided thereby, a stationary thread guide, a slack thread controller having a thread guide engaging the needle thread between the stationary thread guide and the eye on the needle bar, and means for moving said slack thread controller so that the eye thereof travels in the direction reverse to the direction of the movement of the eye on the needle lever, whereby said slack thread controller and the eye on the needle lever are moved in opposite directions, while the needle is moving downwardly, so that a pull on the needle thread is exerted during substantially the entire downward movement of the needle.

1,105,414. ILLUMINATING DEVICE. GEORGE T. FIELDING, New York, N. Y. Filed July 29, 1913. Serial No. 781,802. (Cl. 240—107.)

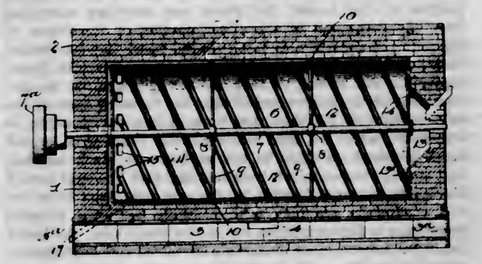


1. In an illuminating device, the combination of a vessel of diaphanous material, a cloudy liquid filling the said vessel, a series of lights adapted to be intermittently burned and arranged in the rear of the said vessel, differently colored media between the said lights and the rear of the said vessel, whereby the refraction of the rays of light emanating from the said lights is retarded by the cloudy particles in the said fluid, and the said cloudy fluid appears in rapid succession in the various colors of the said media and in the various colors produced by the blending of the colors of the said media.

2. In an illuminating device, the combination of a vessel of diaphanous material, a liquid contained in the said vessel and rendered cloudy by the addition of a substance tending to retard the refraction of light through the said liquid, a casing held on the rear of the vessel and having an open front into which extends the rear of the said vessel, a series of incandescent electric lamps arranged in the said casing one along side the other, the said electric lamps having differently-colored bulbs and the said electric lamps being adapted to be intermittently burned to produce irregular flashing of the lamp lights, the refraction of the rays of light emanating from the said lamps being retarded by the retarding substance in the liquid, the latter appearing in rapid succession in the various colors of the bulbs and in the various colors produced by the blending of the said bulb colors.

3. In an illuminating device, the combination of a vessel of diaphanous material, a liquid contained in the said vessel and rendered cloudy by the addition of a substance and tending to retard the refraction of light through the said liquid, a casing held on the rear of the vessel and having an open front into which extends the rear of the said vessel, means for removably fastening the casing in position on the said vessel, a series of incandescent electric lamps arranged in the said casing one along side the other, the said electric lamps having differently colored bulbs, the colors being primary colors, the said electric lamps being adapted to be intermittently burned to produce irregular flashing of the lamp lights, the refraction of the rays of light emanating from the said lamp being retarded by the retarding substance in the liquid, the latter appearing in rapid succession in the various colors of the bulbs and in the various colors produced by the blending of the said bulb colors.

1,105,415. PROCESS OF PREPARING A STOCK FOOD. GEORGE B. FRENCH, Fremont, Nebr.; Belle T. French executrix of said George B. French, deceased. Filed Nov. 21, 1904. Serial No. 233,730. (Cl. 99—11.)



1. The process of preparing a stock food consisting in cutting and shredding all the parts of a food plant which grow above the ground and have nutritious qualities, and grinding the cut and shredded mass into a comminuted form.

2. The process of preparing a stock food consisting in cutting and shredding all the parts of a food plant which grow above the ground and have nutritions qualities, drying the cut and shredded mass and grinding the dried product into a comminuted form.

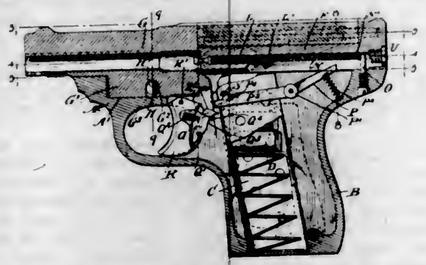
3. The process of preparing a stock food consisting in cutting and shredding all the parts of a food plant which grow above the ground and have nutritious qualities, salting and drying the cut and shredded mass and grinding the dried product into a comminuted form.

4. The process of preparing a stock food consisting in cutting and shredding all the parts of an Indian corn plant which grow above the ground and have nutritions

qualities, drying the cut and shredded mass, and grinding the dried product into a comminuted form.

5. The process of preparing a stock food which consists in cutting and shredding all parts of a food plant which grow above the ground and have nutritious qualities, drying the cut and shredded mass under agitation, and then grinding the dried product into a comminuted form.

1,105,416. AUTOMATIC HAND-FIREARM. ANDREW FYARERO, Worcester, Mass., assignor to Warner Arms Corporation, New York, N. Y. Filed Mar. 13, 1914. Serial No. 824,400. (Cl. 42—3.)



1. A firearm provided with a frame having a forward projection a distance from the top of the frame, the latter having a breech block bearing above the said projection and having recoil rod bearings above the breech block bearing in the upper portion of the frame, a barrel removably fastened to the said projection and having its bore in alinement with the said breech block bearing and having its rear end abutting against the forward end of the frame and closing the forward ends of the said recoil rod bearings, a breech block mounted to slide in the said breech block bearing, and recoil rods moving with the said breech block and mounted to slide in the said recoil rod bearings.

2. A firearm provided with a frame having a forward projection a distance from the top of the frame, the latter having a breech block bearing and recoil rod bearings located above the said breech block bearing in the upper portion of the frame, the recoil rod bearings extending from the front end of the upper portion of the frame to the rear end thereof and being spaced apart in a horizontal direction, a barrel removably attached to the said frame projection and having its rear end abutting against the forward end of the frame and closing the forward ends of the said recoil rod bearings, the bore of the barrel being in alinement with the said breech block bearing, a breech block mounted to slide in the said breech block bearing, and spring-pressed recoil rods moving with the said breech block and mounted to slide in the said recoil rod bearings.

3. A firearm provided with a frame having a forward projection a distance from the top of the frame, the latter having a breech block bearing and recoil rod bearings located above the said breech block bearing in the upper portion of the frame, the recoil rod bearings extending from the front end of the upper portion of the frame to the rear end thereof and being spaced apart in a horizontal direction, a barrel removably attached to the said frame projection and having its rear end abutting against the forward end of the frame and closing the forward ends of the said recoil rod bearings, the bore of the barrel being in alinement with the said breech block bearing, a breech block mounted to slide in the said breech block bearing and provided at its rear end with a head normally abutting against the rear of the frame, and spring-pressed recoil rods attached to the said head and slidably engaging the said recoil rod bearings.

4. A firearm provided with a frame having a forward projection a distance from the top of the frame, the latter having a breech block bearing and recoil rod bearings located above the said breech block bearing in the upper portion of the frame, the recoil rod bearings extending from the front end of the upper portion of the frame to the rear end thereof and being spaced apart in a horizontal direction, a barrel removably attached to the said frame projection and having its rear end abutting against the forward end of the frame and closing the forward ends of the said recoil rod bearings, the bore of the barrel being in alinement with the said breech block bearing, a breech block mounted to slide in the said breech block bearing and provided at its rear end with a head normally abutting against the rear of the frame, and spring-pressed recoil rods attached to the said head and slidably engaging the said recoil rod bearings, the bore of the barrel being in alinement with the said breech block bearing, and a stop held in the frame and extending through the said slot into the said bore, the rear end of the firing pin spring abutting against the said stop.

5. A firearm provided with a frame, a spring-pressed breech block slidable in the said frame and provided with a bore and a slot leading into the said bore, a firing pin slidable in the said bore, a spring pressing with its forward end the said firing pin, the rear end of the said firing pin spring being fixed in the frame to compress the said spring during the recoil of the breech block, and a stop held in the frame and extending through the said slot into the said bore, the rear end of the firing pin spring abutting against the said stop.

[Claims 6 to 8 not printed in the Gazette.]

1,105,417. ROTARY DRYING-DRUM. KARL HEINRICH GOTTLIEB ALBERT GERLACH, Nordhausen, Germany. Filed Aug. 7, 1913. Serial No. 783,490. (Cl. 34—5.)



1. In a rotary drying drum the combination of a plurality of longitudinal radial partition plates, central rings arranged some distance apart from one another and adapted to form a central support for said radial partition plates, and means engaging the outer periphery of the rings and the inner periphery of the drum for holding the radial partition plates removably in position, substantially as set forth.

2. In a rotary drying drum the combination of a plurality of longitudinal radial partition plates, each composed of a series of separate plates separated by a gap, central rings arranged some distance apart and adapted to form a central support of the said separate plates, and means for holding the separate plates in proper position, substantially as set forth.

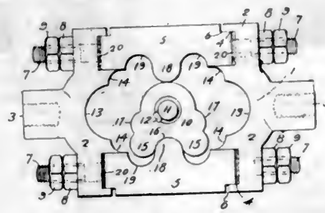
3. In a rotary drying drum the combination of a plurality of longitudinal radial partition plates provided on each side with a set of tangential mixing vanes, central rings arranged some distance apart and adapted to form an open central support for the radial partition plates, and means to hold the radial partition plates in position, substantially as set forth.

4. In a rotary drying drum the combination of a plurality of longitudinal removable radial partition plates, central removable supporting rings, and means provided on said rings and on the drum for guiding and holding the removable radial plates in their proper radial position, substantially as set forth.

5. In a rotary drying drum the combination with the drum proper of a plurality of longitudinal partition plates each composed of a series of removable separate plates, of vanes or wings on each side thereof, the set of vanes or wings on each side being straight while the set of vanes on the other side are bent, of central removable supporting rings, and of means for guiding and holding the said removable separate plates and the central removable rings in their proper relative positions, substantially as set forth.

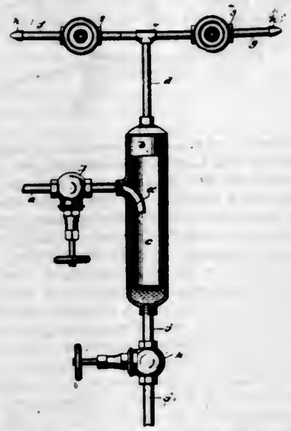
[Claims 6 to 8 not printed in the Gazette.]

1,105,418. MECHANICAL MOVEMENT. CHARLES W. GIFT, Waynesboro, Pa. Filed May 6, 1913. Serial No. 765,817. (Cl. 74—27.)



A device of the character specified, comprising a reciprocating member and a rotating member, said rotating member comprising a wheel having half its circumference concentric and having on the other half a central depression and a tooth on each side thereof, said teeth and depression being formed on semi-circular arcs of the same circle, said wheel having a tooth on the outer side of each of the first-named teeth formed on one-half the same arc, the reciprocating member comprising oppositely arranged cross heads each having an opening at each end and a central internal recess fitting the concentric portion of the wheel, and side bars connecting the adjacent ends of the cross head, each bar having a threaded stem at each end for engaging an opening of the cross head, a series of washers on each stem between the bar and the cross head, each bar having on its inner face a central tooth and lateral depression of the same size as the teeth of the wheel.

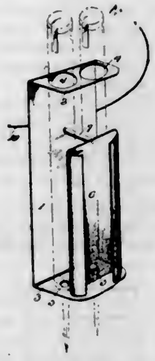
1,105,419. STEAM-VAPOR SPRAY. WILLIAM H. GOUGH, Valley Falls, R. I. Filed Oct. 30, 1912. Serial No. 728,602. (Cl. 137—58.)



1. A steam-vapor-spray apparatus comprising a steam-supply pipe having a downwardly extended delivery end, a vertically elongated hollow member forming a vertically extended expansion chamber into which said pipe extends horizontally, said chamber member having a central terminal collar at its domed and otherwise closed upper end, a pipe extending vertically upward from said collar, a coupling at the upper end of this pipe, a plurality of horizontal pipes in communication with said chamber through said coupling and said vertically extending pipe, vapor-spray nozzles having drip-preventing chambers at the extremities of said horizontal pipes, and means for draining said expansion chamber.

2. In a vapor-spray apparatus supplied with steam only, the combination with a horizontal steam pipe, of a vertically elongated hollow member forming a vertically extended expansion chamber into which said steam pipe extends above mid-height of the chamber, and within which said pipe is extended downward, said chamber member having a central terminal collar at its domed and otherwise closed upper end, a pipe extending vertically upward from said collar, a T at the upper end of said vertical pipe, a plurality of horizontal pipes in communication with said chamber through said vertically extending pipe and T, vapor nozzles at the extremities of the last named horizontal pipes, each nozzle having an inlet chamber and a relatively small axial discharge aperture, a drip pipe leading from the lower end of said expansion chamber, and means for regulating the flow through each of said horizontal pipes and through said drip pipe, substantially as hereinbefore specified.

1,105,420. TORPEDO AND FUSEE HOLDER. SHERMAN S. GREEN, Snohomish, Wash. Filed Jan. 24, 1914. Serial No. 814,068. (Cl. 206—16.)



1. A fusee and torpedo holder comprising a body having upper and lower forwardly projecting portions provided with openings to accommodate fusees, and a torpedo chamber mounted on said lower portion and spaced from said body, said chamber being open at its upper end and formed in its front with a longitudinal slot, said lower forwardly projecting portion of the body forming the bottom for said torpedo chamber.

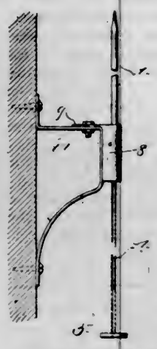
2. A fusee and torpedo holder comprising a plate having upper and lower forwardly extended parallel portions formed with openings to accommodate fusees, a chamber mounted on said lower portion and consisting of a plate bent back upon itself at its sides with an intervening space between its longitudinal edges, and a brace connecting said latter plate to the first mentioned plate.

1,105,421. SUPPORT FOR PAPER-FILES. JOSEPH W. GREGORY, Seat Pleasant, Md. Filed Jan. 20, 1914. Serial No. 813,238. (Cl. 129—22.)

1. In a device of the kind described, the combination with a needle having a cord attached thereto, of a sleeve open at its upper end to receive said needle and having a closure at the lower end and slotted throughout its entire length and partly across the bottom to receive the cord.

2. In a paper filing device, the combination with a needle having a cord attached thereto, of a holder for said needle comprising a sleeve partially closed at its lower end, and slotted from top to bottom, said sleeve receiving the needle, and said slot affording a passage way for entry and removal of the cord.

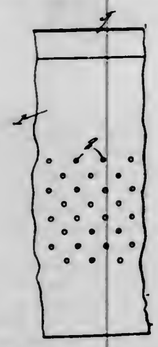
3. The combination with a needle having an eye at the end opposite to its point end and a cord attached to said eye, of a sleeve partially closed at its lower end and slotted from top to bottom, said sleeve being adapted to receive the needle at its upper end and to receive the cord through said slot, and a flange carried by the top of said sleeve.



4. A holder of the kind described comprising a sleeve having a rearwardly extending flange substantially flush with its upper end and slotted at the front from top to bottom, and laterally and rearwardly extending wings carried by said sleeve and upon opposite sides of said slot, as and for the purpose set forth.

5. A paper filing device comprising a cord having a top at one end and a needle at the opposite end and a socket adapted to receive the needle, the side and bottom of said socket being adapted to receive the thread.

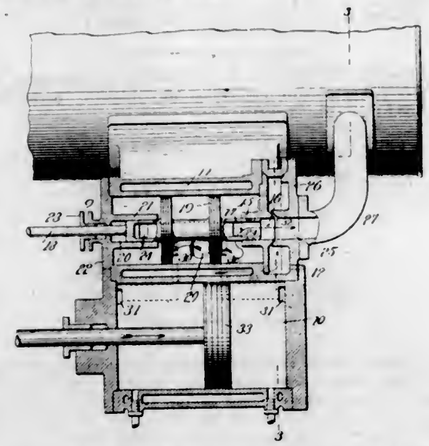
1,105,422. COMBINATION BASE AND COUNTER FLASHING. SAMUEL M. GRIFFITHS, Binghamton, N. Y. Filed Apr. 18, 1914. Serial No. 832,926. (Cl. 108—26.)



1. In a device of the class described, a counter flashing comprising a plate reversely bent upon itself to form a main wing and to form coöperating parts including an auxiliary wing and a holding loop connecting the wings, the auxiliary wing being extended below the loop; a securing element passing through the auxiliary wing below the loop; and a base flashing pinched between the loop and the auxiliary wing, the base flashing being foldable across the loop to permit the insertion of the securing element, one of said coöperating parts having a projection engaging the base flashing.

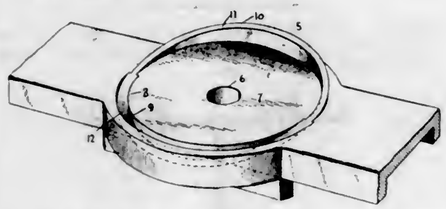
2. In a device of the class described, a counter flashing comprising a plate reversely bent upon itself to form main and auxiliary wings and a holding loop connecting the wings, the loop serving to space the wings transversely to define a cement receiving recess to the rear of the main wing, and a base flashing engaged between the loop and the auxiliary wing.

1,105,423. ENGINE-CYLINDER. ALBERT WILLIAM GUSTAFSON, Jersey City, N. J. Filed Sept. 24, 1912. Serial No. 722,022. (Cl. 121—105.)



In combination with an engine cylinder having a hollow wall to form an air jacket for said cylinder; a reciprocating valve; a hollow valve rod having an opening to receive the exhaust from said cylinder; an exhaust pipe spaced apart from said valve rod to form an injector gap; and a chamber surrounding said gap in open communication with the air space surrounding said cylinder.

1,105,424. FIFTH-WHEEL. EDGAR SERENO HALL, Belfry, Mont. Filed Dec. 31, 1912. Serial No. 739,479. (Cl. 21—24.)



1. In an article of the class described, a member having an opening for a bolt, extending through one of its faces, and a groove in the face at one side of and concentric with the opening, and a flange on the face at the other side, and concentric with the opening, the member being adapted to be disposed with its flange and groove in engagement with a flange and groove on a similar member.

2. In an article of the class described, two companion members each having an opening for a bolt, extending through one of its faces, and a groove in the face at one side of and concentric with the opening, and a flange on the face at the other side and concentric with the opening, the members being normally disposed with the flanges engaging the companion members in the grooves.

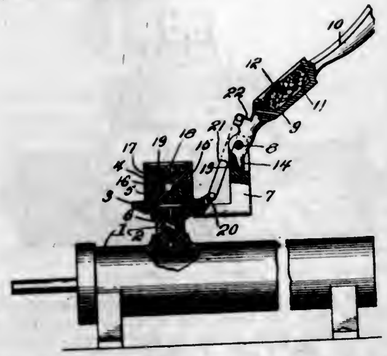
3. In an article of the class described, two companion members each having an opening for a bolt, extending through one of its faces, and a groove in the face at one side of and concentric with the opening, a flange on the face at the other side and concentric with the opening, the flange having a surface which forms a continuation of the bottom of the groove, the companion members being disposed with the flanges engaging the grooves in companion members.

4. In an article of the class described, two companion members each having an opening for a bolt, extending through one of its faces, and a groove in the face at one side of and concentric with the opening, a flange on the face at the other side and concentric with the opening, the face of the member between the groove and the flange being disposed obliquely relatively to the axis of the opening, the companion members being disposed with the flanges engaging the companion members at the groove.

5. In an article of the class described, two companion members each having an opening for a bolt, extending through one of its faces, and a groove in the face at one side of and concentric with the opening, and a flange on the face at the other side and concentric with the opening, the members being normally disposed with the flanges engaging the companion members in the grooves, and flanges extending from the other faces of the members for embracing additional members.

[Claims 6 and 7 not printed in the Gazette.]

1,105,425. DENTAL CASTING APPARATUS. HARRY V. HART, Quincy, Ill. Filed Dec. 8, 1913. Serial No. 805,263. (Cl. 22—69.)



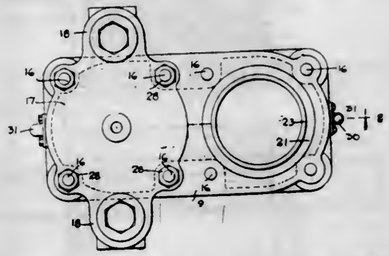
1. An apparatus of the character described embodying a vacuum producing appliance, a mold communicating therewith, a controlling valve in the line of communication, a steam pressure producing element adapted to be disposed over the mold so as to be heated therefrom, and a connecting means between said element and the valve for opening and closing the valve in the opposite movements of said pressure producing element.

2. A dental inlay or casting apparatus comprising a vacuum producing apparatus, a mold supported in communication therewith, a controlling valve in the line of communication, a pivotally mounted element having means for forming steam pressure under heat from the mold, said element being movable into and out of engagement with the mold, and connecting means between said element and the valve for opening the valve when said element is disposed upon the mold and closing the valve when said element is moved away from the mold.

3. A dental inlay or casting apparatus comprising a vacuum pump, a mold support, a mold adapted to be mounted upon said support and placed in communication with the vacuum pump, a controlling valve in the line of communication, a pivotally mounted pressure producing element having a cup for the reception of a material adapted to absorb moisture, said cup being movable down upon the mold so that the said material will be subjected to the heat of the mold for the generation of steam pressure, and valve controlling means operated upon the movement of said element toward and from the mold to open and close the valve.

4. A dental inlay or casting apparatus comprising a vacuum pump, a nipple rising therefrom, a valve controlling the passage in said nipple, a plate mounted on the nipple, a mold adapted to rest upon said plate and to communicate with the vacuum pump through the nipple, a member pivotally mounted and provided with a chamber containing a body of moisture absorbing material, said member being movable down upon the mold to bring the moisture absorbing material into contact with the mold for the generation of steam, crank elements connected with the valve and pivotally mounted member, and a link connecting said crank elements.

1,105,426. MULTICYLINDER INTERNAL-COMBUSTION ENGINE. SIDNEY H. HART, Houston, Tex. Filed Dec. 30, 1910. Serial No. 600,114. (Cl. 123—173.)



1. In an internal combustion engine, the combination of a plurality of cylinders each cylinder having an annular flange the ends of said cylinders projecting beyond said flanges; a water jacket unit infolding said cylinders and provided with openings through which the ends of said cylinders are extended, the walls of said jacket adjacent said openings being rabbeted to receive the flanges on said cylinders; and a plurality of single heads for said cylinders, each having an explosion compartment and faced for mounting on said jacket, the faced end of each of said heads being rabbeted to rest over the flange and end of each of said cylinders to form a tortuous passage from said head to the exterior of each cylinder to hold a suitable packing.

2. In an internal combustion engine, the combination of a water jacket having oppositely disposed openings of different diameters the edges of said jacket surrounding said openings being rabbeted to form seats opening in the same direction; a plurality of open ended cylinders for disposition within said jacket, said cylinders having each two annular flanges, one of said flanges on each cylinder being adapted to pass through one of said openings to rest in the rabbet surrounding the other opening, and one of said flanges on each cylinder being rabbeted to form a joint with the rabbet surrounding the other opening, the joint formed by the said second mentioned flanges and the rabbeted edges supporting the same forming a double internal angle to pocket the packing for said joint; said cylinders projecting beyond said flanges and a plurality of separable heads arranged for bolting on said jacket, each head having a rabbeted opening to rest over one of said cylinders to maintain same seated on said flanges.

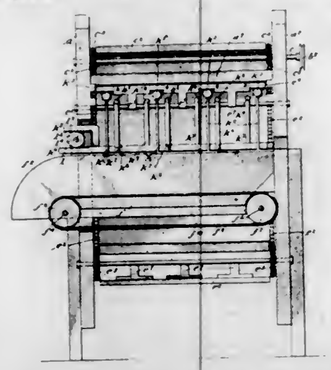
1,105,427. POTATO-SORTER. ERNEST HELLFACH, Walhalla, N. D. Filed May 5, 1914. Serial No. 836,425. (Cl. 130—32.)

1. An assorting machine, comprising a frame provided with a hopper and a plurality of delivery points, conveyer means from said hopper to the individual delivery points, stationary, longitudinally arranged, grid bars suitably spaced, and adjustable grid bars arranged between said stationary grid bars in pairs, and means for adjusting said pairs of bars, said grid bars being arranged intermediate said hopper and said delivery points.

2. An assorting machine, comprising a frame provided with a hopper and a plurality of delivery points, a grid consisting of a plurality of stationary bars and a plurality of movable bars arranged in pairs therebetween, means for adjusting the bars of each pair toward or from each other, conveyer means to said grid, and conveyer means from said grid to each delivery point.

3. An assorting machine, comprising a frame provided with a hopper and a plurality of delivery points, a grid

consisting of a plurality of stationary bars and a plurality of movable bars arranged in pairs therebetween, means for adjusting the bars of each pair toward or from each other, conveyer means to said grid, conveyer means along said grid, and conveyer means from said grid to each of said delivery points.

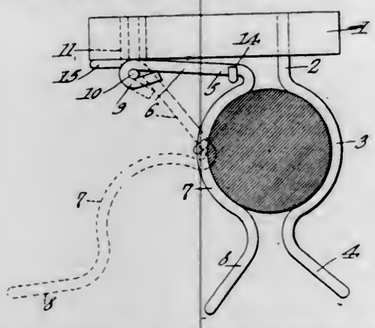


4. An assorting machine, comprising a frame provided with a hopper and a plurality of delivery points, a grid consisting of a plurality of stationary bars and a plurality of movable bars arranged in pairs therebetween, means for adjusting the bars of each pair toward or from each other, conveyer means to said grid, conveyer means along said grid provided with fingers extending between each pair of said movable bars, and conveyer means to each of said delivery points from said grid.

5. An assorting machine comprising a frame provided with a hopper and a plurality of delivery points, a grid consisting of a plurality of stationary bars and a plurality of movable bars arranged in pairs therebetween, a rack connected with one of each pair of movable bars, a supplemental rack connected with the other of each pair of movable bars, a pinion in engagement with said racks, means for actuating said pinion to move said racks and thereby said movable bars of each pair toward or from each other, conveyer means to said grid, conveyer means along said grid, and conveyer means from said grid to each of said delivery points.

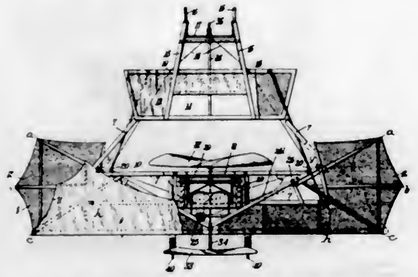
[Claims 6 to 8 not printed in the Gazette.]

1,105,428. BROOM-HOLDER. STEPHEN W. HEMSTREET, Audubon, Iowa. Filed Feb. 10, 1914. Serial No. 817,840. (Cl. 24—254.)



A holder embodying a back, a stationary gripping member embodying a doubled wire having its terminals engaged to the back, having the intermediate portions of its arms curved to provide a jaw, and having its free portion bent angularly to form a lip, a pivoted gripping member embodying a doubled wire having its terminal portions bent angularly, having its intermediate portions curved to form a jaw coöperating with the aforesaid jaw, and having its bent portion bent to form a lip coöperating with the aforesaid lip, one terminal portion of the pivoted gripping member being formed with an eye, and the other terminal portion having a spindle engaging through the said eye, bearings embracing the said spindle and engaged to the back, the terminal portions of the pivoted gripping member normally propecting toward the terminal portions of the stationary gripping member, and a spring disposed upon the said spindle and having its terminal portions engaging the back and one of the terminals of the pivoted gripping member, to normally swing the said gripping member toward the back and stationary gripping member.

1,105,429. BIPLANE. ERNST W. F. HERRMANN, San Antonio, Tex. Filed Nov. 21, 1911. Serial No. 661,603. (Cl. 244—14.)



1. In a flying machine, a plane having swinging ends, a steering post, the lower end of which is mounted in a ball and socket joint, a pair of half circular wheels carried by the post, a pair of pulleys disposed on opposite sides of the steering post, a vertically disposed wheel operatively connected with each swinging end of the plane, and a flexible connection secured to each vertically disposed wheel, passed around the pulleys at the sides of the steering post and looped in opposite directions about the half circular wheels on the steering post.

2. In a flying machine, a plane having swinging ends, a pivoted steering post, wheels on the post, a pair of pulleys disposed on opposite sides of the steering post adjacent thereto and between which the steering post is adapted to swing, a flexible connection passed around the pulleys and looped in opposite directions about the wheels on the steering post, and means connected with the swinging ends of the plane and operated by the said flexible connection.

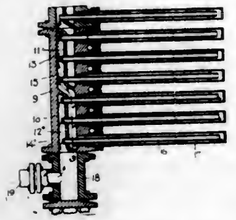
3. In a steering mechanism, a steering post, a support, a ball-and-socket connection between said post and said support, a pair of arms rigidly attached to said post, said arms curving downward from said post, so as to bring the outer ends thereof in a line passing through the center of said connection, flexible connections attached to the ends of said arms, a pair of semi-circular wheels disposed in opposite directions on said post, a pair of shafts disposed on opposite sides of said post and rigidly mounted on said support, a pair of pulleys carried by each of said shafts, and a flexible connection attached to each of said wheels, each passing about one of said pairs of pulleys.

4. In a flying machine, a pair of rear planes arranged one above the other, pairs of braces extending rearwardly beyond the planes, a vertically disposed rudder mounted between each pair of braces, a strut connecting the rudders, a steering post, and flexible connections between the post and strut of the rudders.

5. In a flying machine, a plane having swinging ends, a steering post mounted to turn and swing and provided with oppositely projecting arms and wheels, pulleys on opposite sides of the steering post, a flexible connection passed around the pulleys and looped in opposite directions about the wheels on the steering post, means connected with the swinging ends of the plane and operated by the flexible connection, pivoted rudders, and a flexible connection connecting the arms of the steering post with the rudders.

[Claims 6 to 9 not printed in the Gazette.]

1,105,430. VAPOR-CONDENSER. GEORGE MICHAEL HILGER, Chicago, Ill. Filed June 28, 1913. Serial No. 776,307. (Cl. 62—6.)



1. A vapor condenser, comprising a vertical distributing column having an inlet at the lower end thereof and an outlet at the upper end thereof, said column being provided with a plurality of gas-receiving and gas-distributing chambers; a plurality of superposed circulating pipe laterals operatively and progressively connecting said receiving and distributing chambers, said receiving chambers each being provided with a series of guide grooves leading from the openings of said laterals in said chamber to the bottom of said chamber; and a water-cooling system arranged to deliver water initially upon the uppermost of said laterals.

2. A vapor condenser, comprising a vertical distributing column having an inlet at the lower end thereof and an outlet at the upper end thereof, said column being provided with a plurality of gas-receiving and gas-distributing chambers; a plurality of superposed circulating pipe laterals operatively and progressively connecting said receiving and distributing chambers, said receiving chambers each being provided with a series of guide grooves leading from the openings of said laterals in said chamber to the bottom of said chamber; a series of drain pipes opening from each of said receiving chambers, at the bottom thereof, to drain the condensed liquid therefrom; and a water-cooling system arranged to deliver water initially upon the uppermost of said laterals.

1,105,431. ENVELOP AND LIKE FASTENER. FREDERICK JOSEPH HODGSON, London, England. Filed May 31, 1913. Serial No. 771,125. (Cl. 229—78.)

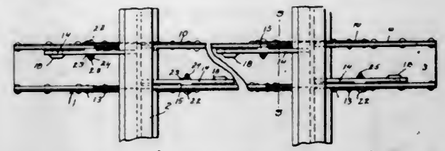


1. A fastener for an envelop comprising a former having a curved pointed extended cutting edge, the former having an integral plate provided with extended prongs, whereby the pointed cutting edge may be driven through an envelop and the fastener bent upon itself to cause the former to engage and bend the prongs to seal said envelop and to embed the curved pointed extended cutter in the envelop.

2. A fastener for envelops, comprising a former, having a cutting edge to facilitate entry into an envelop, and a plate integral with said former and adapted to be bent into superposition therewith, said former having an annular depression and a central convexity, and said plate having a plurality of spikes arranged near its edge and adapted, when the plate and former are pressed together, to enter said annular depression and to be bent and guided by the same toward and into engagement with the central convexity and then by the latter toward and into engagement with the aforesaid plate for the purpose of producing a double clench, substantially as hereinbefore set forth.

3. A fastener for envelops, comprising a former having a curved pointed extended cutting edge and an annular depression, the former having an integral neck and a plate extended therefrom, said plate having a plurality of extended spikes, said neck having means to facilitate bending the spikes engaging in and bent by the annular depression when the former and plate are bent toward each other, substantially as hereinbefore set forth.

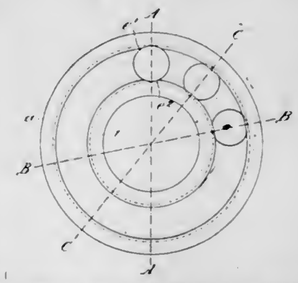
1,105,432. METAL RAIL-TIE. JOHN I. HOFFMAN, Arden, W. Va. Filed Apr. 27, 1914. Serial No. 834,759. (Cl. 238—5.)



1. A rail tie comprising a base plate, upstanding flanges formed on the sides of the base plate, side plates integral with the flanges and extending downwardly below the base plate on opposite sides thereof, fastening means inserted through the side plates and flanges, said flanges and upper portions of the side plates being provided with openings to receive rails and clamping plates arranged at the ends of the tie and engaging the bases of the rails.

2. A rail tie consisting of a single piece of metal comprising a metallic base plate, an upstanding flange formed on each side of said plate, the material being bent downwardly back upon the outer faces of the flanges to a point considerably below the base plate, and bent upwardly back upon the outer faces of the downwardly bent portions and disposed flush with the upper edges of the flanges and downwardly and upwardly bent portions, reinforcing plates secured upon the outer faces of the last named upwardly bent portions and being bent around the under edges of the downwardly and upwardly bent portions to engage the inner faces of the downwardly bent portion, fastening means inserted through the downwardly and upwardly bent portions, flanges and reinforcing plates to secure the flanges, portions and reinforcing plates to each other, said flanges and upper extremities of the reinforcing plates and downwardly and upwardly bent portions being provided with openings to receive rails, the upper surface of the base plate designed to engage the bases of the rails and fastening means at the ends of the tie to clamp the bases of the rails.

1,105,433. BALL-BEARING WITH SEVERAL ROWS OF BALLS. OSKAR HOFFMANN, Willich, near Crefeld, Germany. Filed May 16, 1914. Serial No. 838,939. (Cl. 64—36.)

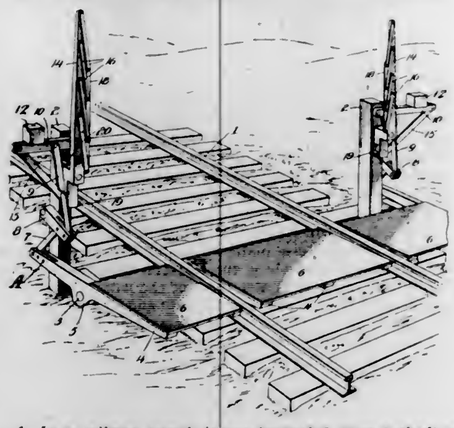


1. A ball bearing comprising inner and outer rings having a plurality of ball raceways and provided with lateral slots which when in register form filling openings for

inserting the balls from one side of the rings into the first raceway, said rings also having slots connecting said raceway to the adjacent raceway, the latter slots being circumferentially displaced when the first mentioned slots are in register but permitting, when brought into register, the balls to be passed from the first raceway into the adjacent raceway.

2. A ball bearing comprising inner and outer rings having a plurality of ball raceways and provided with lateral slots which when in register form filling openings for inserting the balls from one side of rings into the first raceway, said rings also having slots connecting said raceway to the adjacent raceway, the latter slots permitting the balls to be passed from the first raceway into the adjacent raceway and having a center line coincident with that of the first mentioned slots and extending obliquely across the ring.

1,105,434. RAILWAY CATTLE-GUARD. HENRY E. HOPKINS, Waverly, Tenn. Filed Dec. 27, 1912. Serial No. 738,906. (Cl. 39—42.)

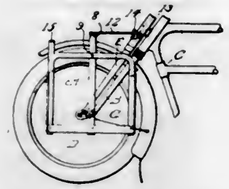


1. In a railway guard, levers journaled upon a shaft, a link for certain of said levers, platforms for the levers, a pivoted finger centrally connected with the link, a twisted bar connected with the free end of the finger, a pivoted weight carrying arm pivotally connected with the twisted arm, a bar pivoted to the free end of the weight carrying arm, a pivoted gate bar connected to each of the pivoted bars and a guard frame comprising swinging rods and a pivoted connecting bar for the rods, and the said rods being loosely connected with the gate bars.

2. In a railway cattle guard, posts adapted to be disposed in the opposite sides of the rails, levers between the rails and on the outside of the rails, a shaft for the levers, a platform for the levers, the outer levers being provided with extensions, a link adjustably connected with each of said extensions, a finger pivotally connected to each of the posts and loosely connected with each of the links, a vertical bar connected with the free end of each of the fingers, a member pivotally connected with the free end of each bar, said member being also pivotally connected with the post, said member being slotted and provided with an adjustable weight, a gate bar pivoted adjacent one of its ends to each of the posts, a swinging foldable frame connected with each of the gate bars, and a connecting member between the weight carrying member and each of the gate bars.

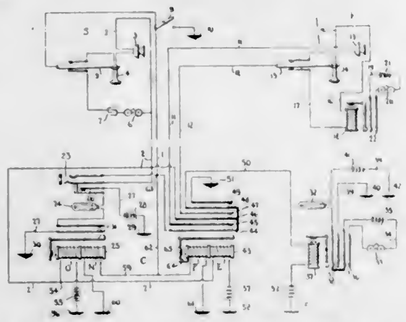
1,105,435. LUGGAGE-CARRIER. EDGAR A. HOWELL, Terrell, Tex. Filed July 29, 1913. Serial No. 781,851. (Cl. 224—32.)

A luggage carrier comprising spaced frames, said frames consisting of U-shaped side members having the ends of said side members bent at an angle, bar members connecting the extremities of the side members and extending upwardly to form ends for the frames, the extremities of said bar members being bent at an angle and connected to the upper portion of the U-shaped side members, an arch connected to the side members at intermediate points of the same for holding said frames in spaced relation, the ends of said arch being bent at angles and connected to



the bottoms of the frames whereby to form braces for the spaced frames, said arch members having attaching openings located at distant points from the bottoms of the frames, a supporting bar connected to the arch for holding the carrier in upright position, and a brace connected to the side members of each frame for preventing vibration of said frames.

1,105,436. POLICE AND FIRE ALARM SYSTEM. GEORGE L. HUGHES, Chicago, Ill., assignor of one-half to Robert E. Cooper, Hopkinsville, Ky. Filed Feb. 12, 1913. Serial No. 747,974. (Cl. 179—5.)



1. In a telephone system, the combination with a central station, and a plurality of subscribers' stations between which communication may be established through the central station; of a differential relay having two coils, one being permanently included in the main line, a switch at the subscriber's station to shunt the other coil through the ground without interrupting the subscriber's circuit, a special station, and means operated by said relay for establishing telephonic communication between the subscriber's station and the special station.

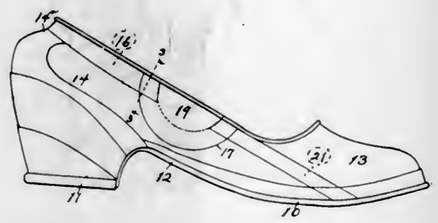
2. In a telephone system, the combination with a central station, and a plurality of subscribers' stations between which communication may be established through the central station, the central station including a double wound line relay; of a special station, a differential relay for the special station and provided with oppositely wound coils, wiring connecting the two relays in parallel and permanently connecting the special station relay on the main line, a switch at the subscriber's station for shunting one of the coils of the special station relay through the ground without interrupting the subscriber's circuit, and means operated by said special station relay for establishing telephonic communication between the subscriber's station and the special station.

3. In a telephone system, the combination with a central station, and a plurality of subscribers' stations between which communication may be established through the central station; of a differential relay having two coils, one being permanently included in the main line, a switch at the subscriber's station to shunt the other coil through the ground without interrupting the subscriber's circuit, a special station, means operated by said relay for establishing telephonic communication between the subscriber's station and the special station, and means for permanently locking said relay after it has been actuated, whereby it will be retained in actuated position until released manually by an authorized person.

4. In a telephone system, the combination with a central station, and a plurality of subscribers' stations between which communication may be established through the central station; of a differential relay having two coils; one being included in the main line, a switch at the subscriber's station to shunt the other coil through the ground without interrupting the subscriber's circuit, a special station, an alarm mechanism at the special station, a movable member operated by said relay for controlling the alarm mechanism and placing the special station in telephonic communication with said subscriber's station when said relay is actuated, and means whereby said removable member can be actuated after communication has been established between central station and subscriber's station.

5. In a telephone system, the combination with a central station and a plurality of subscribers' stations between which communication may be established through the central station, the central station including a double wound line relay; of a special station, a differential relay for the special station having oppositely wound coils, a conductor to connect one of the ends of a coil from each relay, means to connect said conductor to the main line, conductors to ground the opposite ends of the last mentioned coils, batteries for the main line and said relays, said batteries having one of their poles grounded, conductors connecting one of the ends of the other coils of said relays to the remaining poles of said batteries, other conductors connecting the opposite ends of the last mentioned coils to the main line, whereby the two relays are connected in parallel and the special station relay permanently connected to the main line, and means operated by said special station relay for establishing communication between the subscriber's station and the special station.

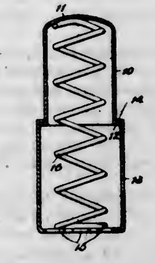
1,105,437. OVERSHOE. ELI A. HUNTER, Des Moines, Iowa. Filed Sept. 21, 1911. Serial No. 650,666. (Cl. 36—5.)



1. An overshoe having an upper, counter and sole, elastic gores between and connecting said upper and counter on either side, said counter being extended upwardly and inwardly and formed with an internal strengthening strip or web adjacent its upper margin, said strengthening strip or web being connected with and terminating at the rear ends of said gores.

2. An overshoe having an upper, counter and sole, elastic gores between and connecting said upper and counter on either side, said counter being extended upwardly and inwardly and being formed with an internal strengthening strip or web adjacent its upper margin, said strengthening strip or web terminating at the rear ends of said gores, the upper being formed with separate strengthening strips which are embedded in the sides of the upper and extend from the forward ends of the gores obliquely toward the sole of the overshoe.

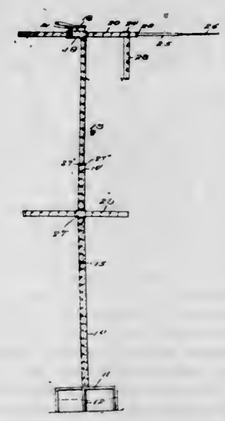
1,105,438. ANTIRATTLER AND SASH-ADJUSTER FOR WINDOWS. HENRY WILLIAM ILLENBERGER, New Orleans, La. Filed Apr. 1, 1914. Serial No. 828,730. (Cl. 16—19.)



1. An anti-rattler and sash adjuster for windows, comprising an inner tube having a rounded end wall and an out-turned flange at its other end, an outer tube having an inturned flange at one end to be contacted by the out-turned flange of the first-mentioned tube to limit the distension of the inner tube and the outer tube, a coiled spring mounted within the tubes, and a series of projections formed at the opposite end of the outer tube to retain said spring from displacement and cause the same to normally distend the inner tube, as and for the purpose described.

2. An anti-rattler and sash adjuster for windows, comprising an inner tube having a closed end wall and an integral outwardly extending flange at its opposite end, an outer and larger tube having an integral inturned flange at one end, said inner tube being adapted to be fitted into the outer tube whereby its closed end will project through the flanged end of the outer tube to dispose the two flanges for engagement to limit the projection of the inner tube with relation to the outer tube, a spring within the tubes tending to normally hold the tubes in the last-named position, means formed at the opposite end of the outer tube and bent over after the application of the spring to form an engaging member for the latter and prevent displacement thereof, said inner tube at its flanged end being adapted to engage said last-named means to limit the inward movement of the inner tube with relation to the onter tube and the compression of the spring.

1,105,439. MEASURE. ALBERT J. JENSEN, Vancouver, British Columbia, Canada. Filed Oct. 4, 1913. Serial No. 793,455. (Cl. 33—8.)



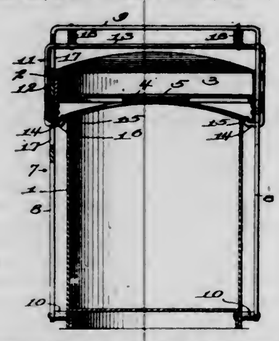
1. In a measuring instrument, the combination with a tubular standard mounted on a base, a rod telescoping

within said standard, a measuring arm carried by said rod, and means for holding the latter in adjusted position; of pins in the sides of the standard at its upper end, a sleeve slidably mounted on the standard and having notches adapted to engage said pins, means for holding the sleeve in adjusted position, and a measuring arm carried by said sleeve.

2. In a measuring instrument, the combination with an adjustable upright having a transversely mortised head at its upper end; of a slotted arm passing through said mortise and having a T-head at one end, means for holding the arm in adjusted position, and a pendent measuring arm having a head at its upper end, its body passing through the slot in said slotted arm, for the purpose set forth.

3. In a measuring instrument, the combination with an upright having a head at its upper end, and an arm adjustable horizontally through said head and itself having a T-head at one end; of an angular socket member having one end mounted on one extremity of said T, and an angular member removably inserted into the other end of the socket member, as and for the purpose set forth.

1,105,440. GARBAGE-CAN. THOMAS A. KEEN, New Orleans, La., assignor to Jacob Israel, New Orleans, La. Filed June 19, 1913. Serial No. 774,664. (Cl. 220—115.)



1. In combination, a can body, a bail having a cross bar and side bars depending from the cross bar and pivoted at their lower ends to said body, a can cover carried by the bail at its upper end, a latch carried by the bail and constructed to coact with the upper end of the can body in locking the body, bail, and cover against relative movement in the closed position of the cover, and spring means for operating said latch in its locking function, the latch including a bar parallel to the cross bar of the bail and in conjunction with said cross bar forming a hand grip, the said bar of the latch being operable to effect the release of the bail and therewith of the can cover from the can body.

2. In combination, a can body, a bail having side bars pivoted at their lower ends to said body and a cross bar connecting the upper ends of said side bars, a can cover carried by the bail at its upper end, a latch carried by the bail and movable in the plane thereof, the latch having a cross bar parallel to the cross bar of the bail and having side bars depending from said cross bar and formed at their lower ends for engagement with the can body to lock said body, bail, and cover against relative movement in the closed position of the cover, and spring means for operating said latch in its locking function.

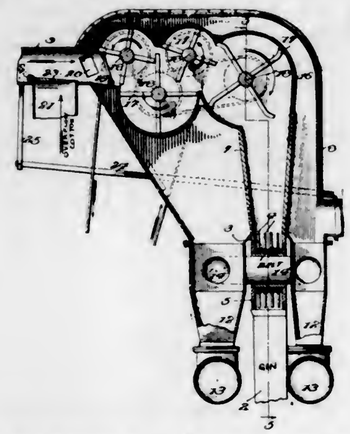
3. In combination, a can body having a circumscribing flange at its upper end, a bail having side bars pivoted at their lower ends to said body, a can cover carried by the bail at its upper end and in its closed position engageable upon said flange, the latter having an opening, a latch carried by the bail and having an end formed to engage in said opening in the closed position of the cover and to thereby lock the body, bail, and cover against relative movement, and spring means for operating said latch in its locking function.

4. In combination, a can body having a circumscribing flange at its upper end, a bail having side bars pivoted at their lower ends to said body and a cross bar connecting the upper ends of said side bars, a can cover carried by the bail at its upper end and in its closed position engageable upon said flange, the latter having openings at diametrically opposite points, a latch carried by the bail and movable in the plane thereof, the latch having a cross bar parallel to the cross bar of the bail and having side bars depending from said cross bar and formed at their lower ends for engagement in the openings in said flange in the closed position of the cover, to thereby lock said body, bail, and cover against relative movement, and spring means for operating said latch in its locking function.

5. In combination, a can body having a circumscribing flange at its upper end, a bail having side bars pivoted at their lower ends to said body and a cross bar connecting the upper ends of said side bars, a can cover carried by the bail at its upper end and in its closed position engageable upon said flange, the latter having openings at diametrically opposite points, a latch carried by the bail and movable in the plane thereof, the latch having a cross bar parallel to the cross bar of the bail and having side bars depending from said cross bar and formed at their lower ends for engagement in the openings of said flange in the closed position of the cover, to thereby lock said body, bail, and cover against relative movement, the side bars of the bail having slots and the cross bar and terminal portions of the latch projecting through said slots, and retractile coil springs connecting the cross bar of the latch and the cross bar of the bail.

[Claim 6 not printed in the Gazette.]

1,105,441. SEED-COTTON CLEANER AND DISTRIBUTER. WILLIAM R. LAMB, Dallas, Tex. Filed June 22, 1912. Serial No. 705,342. (Cl. 13—19.)



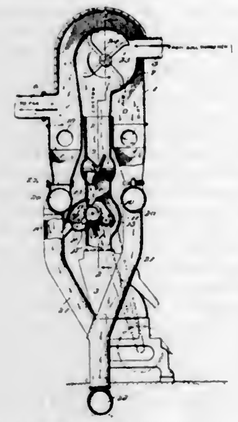
1. In an apparatus for the purpose set forth, the combination of an inlet tube, means for creating a suction through the said tube, a cleaner mechanism interposed in the said tube, dirt and cotton discharge tubes leading from the said cleaner mechanism, a dead air tube connecting the said discharge tubes, and means traveling between the dirt discharging tubes and below the cotton discharging tube for conveying the cleaned cotton from the cleaner mechanism to a gin.

2. In an apparatus for the purpose set forth, the combination of a cleaner casing, a foraminous casing within the cleaner casing having its upper and lower walls spaced from the cleaner casing throughout their extent, a cotton-discharging tube leading directly downward from the said foraminous casing, a train of beaters within the said foraminous casing and moving over the surface of the same, an inlet tube leading through the cleaner casing to the interior of said inner foraminous casing, a suction tube leading from the said cleaner casing, dirt-discharging tubes leading from the bottom of the cleaner casing, and a distributer traveling between the dirt-discharging tubes and below the cotton-discharging tube.

3. In an apparatus for the purpose set forth, the combination of an outer casing, a train of beaters therein, a foraminous casing fitting close to the said beaters, a discharge for the cleaned cotton leading directly from the said beaters, a discharge for the dirt from the outer casing, means for creating a suction through the beaters, means for creating an under current through the discharge for the dirt, and a cotton distributer traveling past the side of the discharge for the dirt and below the discharge for the cotton.

4. The combination of a cleaner casing having outlets for cleaned cotton and for dirt, a distributing belt passing under the outlet for the cotton and between the outlets for the dirt, means for creating a suction through the cleaner casing, and dead air spaces in the outlets for the dirt.

1,105,442. BUR-EXTRACTOR FOR COTTON-FEEDERS. WILLIAM R. LAMB, Dallas, Tex. Filed June 22, 1912. Serial No. 705,343. (Cl. 13—19.)



1. In an apparatus for the purpose set forth, the combination of a casing, a beater therein, a dirt discharging tube leading from the casing, a cotton discharging tube leading from the casing at the side of the dirt discharging tube, a saw disposed within the cotton discharging tube, a rotary picker arranged adjacent the saw and coöperating therewith, an offset on the cotton discharging tube housing said picker, and a discharging spout leading from the said offset into the dirt discharging tube.

2. In an apparatus for the purpose set forth, the combination of a casing, a beater therein, a dirt discharging tube leading from the casing, a cotton discharging tube leading from the casing at the side of the dirt discharging tube, a gang of saws wtihin said tube, guards extending between the saws, a rotary picker arranged in advance of the saws and immediately adjacent thereto, a housing for the rotary picker, and a discharge spout leading from said housing into the dirt discharging tube.

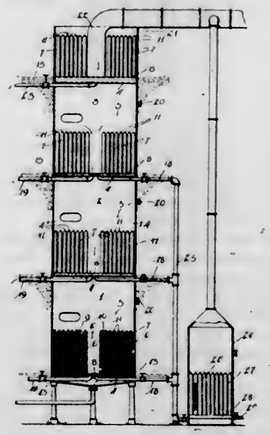
3. In an apparatus for the purpose set forth, the combination of a casing, a separating mechanism therein, a cotton discharging tube leading from the casing, a saw within the said tube adjacent one side thereof, a partition within the tube adjacent and spaced from the opposite side thereof, a valve mounted within the tube at the upper end of said partition, a guard extending from the valve past the saw and diverging from the said partition, and a picker arranged to coact with the saw.

4. An apparatus for the purpose set forth comprising a casing, a beater within the casing, dirt discharging spouts leading from the casing, a cotton conveying tube leading from the casing, a bur extracting mechanism located within the cotton conveying tube, means for creating dead-air spaces in the upper portions of the dirt discharging spouts, and means for creating an under current in the dirt-discharging spouts.

5. An apparatus for the purpose set forth comprising a casing, a beater within the casing, dirt discharging spouts leading from the casing, a cotton conveying tube leading from the casing, a bur extracting mechanism located within the cotton conveying tube, and means for creatitng dead air spaces in the dirt-discharging spouts.

[Claims 6 and 7 not printed in the Gazette.]

1,105,443. MULTIPLE-EFFECT EVAPORATING APPARATUS. ROBERT LOUGHER, Papaikou, Hawaii. Filed June 28, 1912. Serial No. 706,536. (Cl. 127—18.)

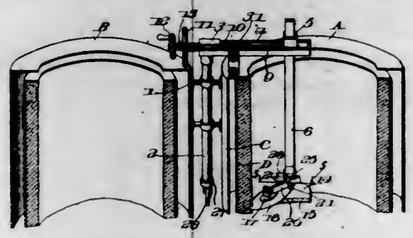


A multiple effect evaporator comprising a plurality of superposed evaporator sections separated by spaced sheets between which are formed water condensing spaces, a pan arranged below the lowermost section, each of the sections having an inlet in its upper portion to receive the liquid to be concentrated and provided in its lower portion with an outlet for the discharge of the concentrated solution, vapor tubes open throughout their length and having their lower ends extending across the water condensing spaces and connected with the lowermost sheets, evaporating tubes closed at their upper ends and extending over the vapor tubes and supported at their lower ends in the uppermost sheets and in communication with the water condensing spaces, pipes leading from the water condensing spaces, a main pipe connecting the several pipes, an evaporator section capping the superposed sections and provided with vapor and evaporating tubes, a pipe leading from the water condensing space of the capping evaporator section, and an auxiliary evaporator having the before mentioned main pipe and the pipe leading from the capping evaporator section connected therewith.

1,105,444. DEVICE FOR REMOVING SUGAR FROM CENTRIFUGAL MACHINES. ROBERT LOUGHER, Papaikou, Hawaii. Filed May 28, 1913. Serial No. 770,453. (Cl. 127—3.)

1. In a device for removing deposits of sugar from centrifugals, the combination with a pair of adjoining centrifugals, of a support rotatably and slidably supported between the centrifugals, means for elevating said support, an arm carried by the support to extend over the top of a centrifugal, said arm being adapted by vertical and rotary adjustments of the support to be disposed over either of said centrifugals, a guard adjustable on the arm, means for adjusting the same, a bar supported by the guard and adapted to depend into the centrifugal over which the arm is arranged, and a rotary cutter carried by said bar.

2. In a device for removing sugar deposits from centrifugals, the combination of a rotary and vertically adjustable support, an arm extending horizontally therefrom, a guard slidably adjustable on the arm, means for adjusting said guard, a bar carried by and pendant from the guard, a concavo-convex cutter wheel supported by the bar to work at an angle thereto, and a guard carried by the bar and arranged in proximity to the concaved face of the cutter.



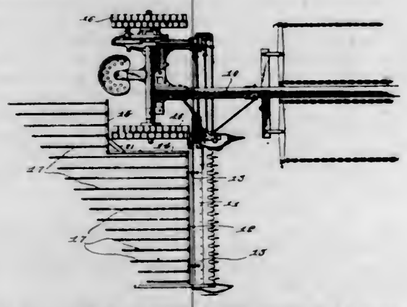
3. In a device for removing sugar deposits from centrifugals the combination of a supporting post, an arm carried thereby, a carriage adjustable on the arm, means for adjusting said carriage, a bar pendant from the carriage, means for vertically adjusting said bar, and a cutting disk carried by the bar.

4. In a device for removing sugar deposits from centrifugals, the combination of a post, an arm carried thereby, a carriage adjustable on the arm, means for adjusting said carriage, a bar pendant from the carriage, a dished disk cutter carried by said bar, means for vertically adjusting the bar, and a guard or shield carried by the bar and arranged in rear of the concaved face of the cutter.

5. In a device for removing sugar deposits from centrifugals, the combination of a post, an arm carried thereby, a carriage adjustable along the arm, means for adjusting the same, a bar pendant from the carriage, means for vertically adjusting said bar, a rotary dished cutter carried by the bar, and a guard or shield upon the bar in rear of and in proximity to the concaved surface of the cutter.

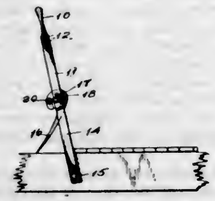
[Claims 6 to 10 not printed in the Gazette.]

1,105,445. PEA-HARVESTER. PETER MACCO, Carney, Mich. Filed Nov. 6, 1912. Serial No. 729,810. (Cl. 56—128.)



A mowing machine attachment comprising a perforated strip extending parallel to the sickle bar of the mower and having a bar extending from its inner end to a point beyond the wheels of the mower, a perforated strip connected with the rear end of said arm and extending partially across the rear portion of the mowing machine, a diagonal bracing strip connecting said arm and last mentioned perforated strip, links carried by said first mentioned perforated strip to connect the same with the sickle bar of a mower, and a plurality of teeth connected with said perforated strips.

1,105,446. FLOOR-JACK. FRANK X. MANNING, Catawissa, Mo., assignor of one-half to William H. Hemker, Catawissa, Mo. Filed Jan. 14, 1914. Serial No. 812,069. (Cl. 57—117.)



1. Apparatus of the character described, comprising a plurality of connected arms having corresponding ends movable laterally toward and away from each other and provided with pivot means, and a holding element pivotally connected with and arranged between the arms to engage a joist to brace the apparatus against improper movement and provided with means to slidably engage and move the ends of the arms away from each other.

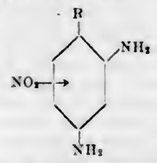
2. Apparatus of the character described, comprising a plurality of connected arms having corresponding ends movable laterally toward and away from each other, pivot means connected with the arms near the laterally movable ends thereof, and a holding element arranged between the arms, pivoted thereto, with one end adapted to engage with a joist to hold the entire apparatus against improper movement in one direction and its opposite end provided with an expanding cam device to slidably engage and move the laterally movable ends of the arms outwardly.

3. Apparatus of the character described, comprising a plurality of connected arms having corresponding ends movable laterally toward and away from each other, pivot means connected with the arms near the laterally movable ends thereof, a holding element arranged between and pivotally connected with the arm with one end thereof adapted to be moved into engagement with a joist to hold the entire apparatus against improper movement in one direction, and means to move the laterally movable ends of the arms outwardly including an element rigidly connected with the holding element for movement thereby.

4. Apparatus of the character described, comprising a plurality of resilient arms connected at corresponding ends and having the opposite corresponding ends thereof laterally movable, a holding element arranged between the arms and provided at one end with a curved head having cam faces to engage with the resilient arms to spread the same while the opposite end of the holding element is adapted for engagement with a joist to hold the entire apparatus against improper movement in one direction, and means connecting the holding element with the resilient arms whereby the former may be swung with relation to the latter.

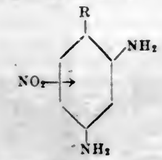
1,105,447. PROCESS FOR DYEING FURS, HAIRS, AND THE LIKE. KARL MARX, Dessau, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Feb. 21, 1913. Serial No. 749,922. (Cl. 8—5.)

1. The hereinbefore-described process for dyeing furs, hairs and the like which consists in applying to the material to be dyed a solution containing an aromatic nitro-meta-diamin of the general formula:



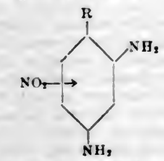
in which formula R means a univalent substituent, and an oxidizing agent.

2. The hereinbefore-described process for dyeing furs, hairs and the like which consists in applying to the material to be dyed a solution containing an aromatic nitro-meta-diamin of the general formula



in which formula R means a univalent carbon containing group and an oxidizing agent.

3. The hereinbefore described process for dyeing furs, hairs and the like which consists in applying to the material to be dyed a solution containing an aromatic nitro-meta-diamin of the general formula:

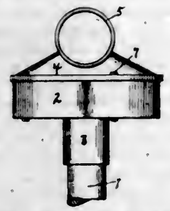


in which formula R means an alkyl group, and an oxidizing agent.

4. The hereinbefore-described process for dyeing furs, hairs and the like which consists in applying to the material to be dyed a solution containing nitro-meta-toluylene-diamin and an oxidizing agent.

5. The hereinbefore-described process for dyeing furs, hairs and the like which consists in applying to the material to be dyed a solution containing nitro-meta-toluylene-diamin and hydrogen-peroxid.

1,105,448. RATCHET-HEAD FOR POST-HOLE DIGGERS. OSCAR H. NAVILLE, Ambia, Ind. Filed Dec. 23, 1910. Serial No. 598,951. (Cl. 74—16.)

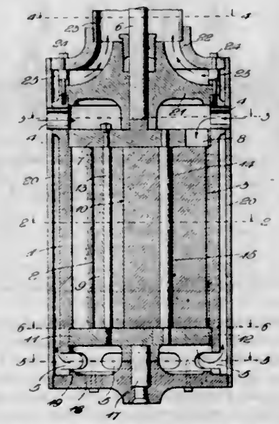


In a ratchet head for post hole diggers, the combination of a base, a conical cap disposed in spaced relation to said base and having its apex cut to form a seat, a handle holding element mounted in said seat, the side walls of said seat extending partially up the sides of said handle-holding element to prevent the same from being twisted out of said seat, means for coupling said base and cap to move in unison, a ratchet wheel interposed between said base and cap and adapted for connection with the tool to be operated, and pawls interposed between said base and cap and engaging said ratchet wheel.

1,105,449. ROTARY ENGINE OR PUMP. JENS NIELSEN, Cedar Falls, Iowa. Filed Dec. 17, 1912. Serial No. 737,347. (Cl. 103—44.)

1. A pump comprising a casing, a rotor journaled in the casing and including spaced plates having ports, a cylinder surrounding the casing and spaced from the same, a head located at one end of the cylinder and closing the same and spaced from the adjacent ported plate, said casing having a liquid passage-way leading into the cylinder and located between the last mentioned plate and head.

2. A pump comprising a casing, a rotor journaled in the casing, a cylinder surrounding the casing and spaced from the same and closed at one end, said casing having passageways located below the rotors which communicate with the interior of the cylinder, said cylinder being provided with an outlet located above the rotor and having a port leading through its side into the casing at a point above the rotor.



3. A pump comprising a casing provided upon its inner side with teeth, a rotor journaled in the casing, a piston journaled in the rotor and having peripheral teeth adapted to mesh with the teeth in the casing, the spaces between the teeth in the casing being deeper radially than the lengths of the teeth upon the piston.

4. A pump comprising a casing provided upon its periphery with interiorly arranged teeth, and at its opposite ends with counterbores, rotatable plates having slightly greater diameters than the inner diameter of the casing and rotatably mounted in the counterbores and having ports formed adjacent their peripheries with their outer walls flush with the inner periphery of the casing, a rotor arranged between the plates and connected therewith, a rotatable toothed piston arranged between the rotatable plates and connected therewith to coöperate with the teeth of the casing, a cylinder surrounding the casing in spaced relation to form a passage employed solely for the discharge of the liquid in an upward direction, and a member arranged in the upper end of the casing for closing the upper end thereof above the upper plate.

5. A pump, comprising a casing, rotatable plates mounted within the opposite ends of the casing, and provided adjacent their peripheries with ports having their outer walls flush with the inner periphery of the casing, a rotor arranged between the plates and connected therewith, a rotatable piston arranged to one side of the rotor and connected with the plates, a cylinder surrounding the casing in spaced relation to provide an outlet passage for the liquid, and means arranged adjacent the upper end of the casing to separate the same from the outlet passage.

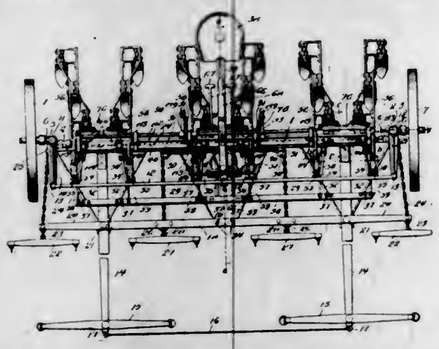
[Claims 6 to 10 not printed in the Gazette.]

1,105,450. THREE-ROW WHEEL CORN-CULTIVATOR. EDWARD W. OWENS, Wagner, S. D. Filed July 5, 1912. Serial No. 707,903. (Cl. 97—35.)

1. A cultivator of the class described comprising a main frame having ground wheels and draft devices, a truck mounted on the main frame for movement laterally thereof, cultivator beams pivotally connected at their front ends to the truck for angular movement in vertical planes, and guides extending downwardly from the truck and to which the cultivator beams are connected for vertical sliding movement.

2. A cultivator of the class described comprising ground wheels and draft devices, a truck mounted on the main

frame for movement laterally thereof, said truck having downwardly extending bars on its front side and downwardly extending guides on its rear sides and cultivator beams pivotally connected at their front ends to said bars for vertical angular movement and slidably connected to said guides for vertical movement thereon.

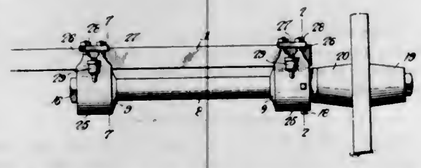


3. A cultivator of the class described comprising ground wheels and draft devices, a truck mounted on the main frame for movement laterally thereof, said truck having downwardly extending bars on its front side and downwardly extending guides on its rear sides and cultivator beams pivotally connected at their front ends to said bars for vertical angular movement thereon, and means carried by said truck to raise and lower the cultivator beams.

4. A cultivator of the class described comprising a main frame having ground wheels and draft devices, a truck mounted on the main frame for movement laterally thereof, said truck having downwardly extending bars on its front side and downwardly extending guides on its rear side and cultivator beams pivotally connected at their front ends to said bars for vertical and also horizontal angular movement and slidably connected to said guides for vertical movement thereon, said guides being adjustable toward and from each other.

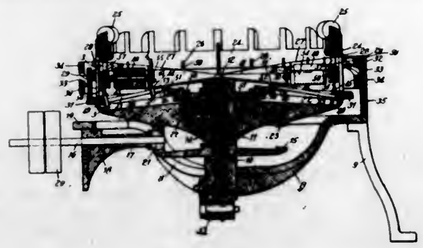
5. A cultivator of the class described comprising a main frame having an axle beam and also having draft devices and ground wheels, a truck mounted directly on the axle beam for lateral movement, means to shift the truck laterally, and earth working devices carried by and connected to the truck, said earth working devices being vertically movable and said truck having means mounted thereon and carried thereby to raise and lower the earth working devices.

1,105,451. BALL-BEARING AXLE. ARTHUR LEE PASCHALL, Olaa, Hawaii. Filed Nov. 29, 1912. Serial No. 734,121. (Cl. 21—153.)



A spindle bearing attachment for non-rotating vehicle axles, embodying a tubular spindle casing having the opposite end portions thereof enlarged forming hollow cylindrical bearing containers, axle clips embracing such enlarged portions of the casing, a rotary wheel carrying spindle one end portion of which is inclosed by said casing and the other end portion of which is squared and projects beyond said casing, a radial bearing for said spindle within each enlarged portion of the casing, and an end thrust bearing for said spindle in each enlarged portion of said casing.

1,105,452. BRAIDING-MACHINE. ANKER PETERSEN, Winthrop, Mass., assignor to Boston Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 29, 1912. Serial No. 680,574. (Cl. 28—4.)



1. A braiding machine having, in combination, a carrier support, a plurality of pairs of rotatable members mounted on said carrier support, a series of thread-mass carriers each having rollers thereon adapted to engage one of said pairs of rotatable members, a strand guide support, a series of strand guides mounted on said support, mechanism adapted to create a relative rotary motion between said supports, means to actuate said strand guides to move strands over and under said thread-mass carriers, a flange extending downwardly from said strand guide support provided with an annular groove in the under face thereof and rollers arranged on said thread-mass carriers out of the path of the strands carried by said strand guides adapted to project into said groove, to maintain the equilibrium of said carriers and prevent the same from becoming disengaged from their respective pair of rotatable supports.

2. A braiding machine having, in combination a strand guide support, a series of strand guides mounted thereon, having strands leading therefrom to a center, a thread-mass carrier support having a series of segmental apertures, a pair of rotatable shafts radially disposed within each of said apertures and journaled at opposite ends thereof, rolls secured to opposite ends of said shafts respectively, a pinion secured upon each of said shafts respectively, a bevel gear adapted to engage said pinions, mechanism adapted to rotate said thread-mass carrier support relatively to said strand carrier support and said bevel gear, a series of thread-mass carriers carried by said rotatable shafts, rollers mounted at opposite ends of said carriers adapted to rotatably engage the rolls on said pairs of shafts respectively, means adapted to retain said carrier rollers and said rolls in their rotatable engagement, and mechanism adapted to actuate said strand guides to move strands over and under said thread-mass carriers.

3. A braiding machine having, in combination, a strand guide support, a series of strand guides mounted thereon having strands leading therefrom to a center, a flange on said support, a thread-mass carrier support, a plurality of pairs of rotatable members mounted on said support, rolls located adjacent to each of the ends of said rotatable members, a series of thread-mass carriers, a roller at each end of said thread-mass carriers, having rolling engagement with the rolls on the adjacent ends of said pairs of rotatable members respectively, a pair of rollers mounted upon said thread-mass carriers, the centers of the rollers constituting said pair being located above the centers of said first named rollers and upon opposite sides of a vertical plane containing the axes of both of said first mentioned rollers and adapted to engage said flange to retain said rolls and said first mentioned rollers in rotatable engagement.

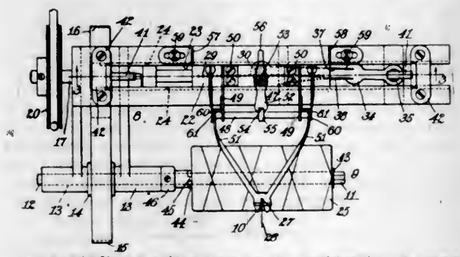
4. A braiding machine having, in combination, a strand guide support, a series of strand guides mounted thereon having strands leading therefrom to a center, a flange on said support provided with a groove, a thread-mass carrier support, a plurality of pairs of rotatable members mounted on said support, rolls located adjacent to each of the ends of said rotatable members, a series of thread-mass carriers, a roller located at each end of said thread-

mass carriers, having rolling engagement with the rolls on the adjacent ends of said pairs of rotatable members respectively, a second pair of rollers mounted upon said thread-mass carriers, their centers located above the centers of said first named rollers and upon opposite sides of a vertical plane containing the axes of both of said first mentioned rollers and adapted to engage said groove to retain said rolls and said first mentioned rollers in rotatable engagement.

5. A braiding machine having, in combination, a stationary central supporting tube, a sleeve rotatable on said tube having a bevel gear secured thereto, a series of strand guides, a strand guide support rotatably mounted on said sleeve and provided with a bevel gear, a bevel pinion adapted to engage said first and second mentioned bevel gears, and to impart a rotary motion thereto in opposite directions, a thread-mass carrier support secured upon said sleeve and provided with a series of rotatable members, pinions secured on said rotatable members respectively, a series of thread-mass carriers having rollers thereon adapted to engage said rotatable members, mechanism adapted to actuate said strand guides to move strands over and under said thread-mass carriers, a bevel gear secured to said stationary tube having teeth adapted to engage said pinions whereby said rotatable members may be rotated by the rotation of said carrier support to feed said strands between the contacting faces of said rollers and said rotatable members.

[Claim 6 not printed in the Gazette.]

1,105,453. WINDING-MACHINE. ANKER PETERSEN, Winthrop, Mass., assignor to Boston Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 6, 1912. Serial No. 735,198. (Cl. 242—43.)



1. A winding machine having, in combination, a rotary spindle adapted to support and rotate a yarn mass core, a frame, a carrier slide, means to reciprocate said carrier slide on said frame longitudinally relatively to said spindle, a traveler carried by said carrier slide, a lever pivoted on said carrier slide and engaging said traveler, and stops on said frame adapted to engage and rock said lever during the latter portion of the movement of said carrier slide in opposite directions, to move said traveler in the direction of movement of said carrier slide and at a relatively greater speed than that of said carrier slide.

2. A winding machine having, in combination, a yarn winding spindle, a carrier slide, means to reciprocate said carrier slide longitudinally relatively to said spindle, a yarn guide arranged on said carrier slide to rock substantially in the plane of rotation of said spindle, said yarn guide being also arranged to slide on said carrier slide longitudinally relatively to the axis of said spindle in opposite directions, resilient means adapted to retain said yarn guide in its normal position on said carrier slide, and means adapted to move said yarn guide on said carrier slide in opposite directions for predetermined distances during the reciprocations of said carrier slide.

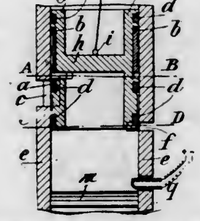
3. A winding machine having, in combination, a yarn winding spindle, a carrier slide, means to reciprocate said carrier slide longitudinally relatively to said spindle, a yarn guide arranged upon said slide to rock substantially in the plane of rotation of said spindle, said yarn guide being also arranged to slide on said carrier slide longitudinally relatively to the axis of said spindle in opposite directions, means to move said yarn guide on said carrier slide during the latter part of the movement of said carrier slide in opposite directions, and means to return said yarn guide to its normal position on said carrier slide during the first part of the return movement of said carrier slide in opposite directions.

4. A winding machine having, in combination, a yarn winding spindle, a carrier slide, means to reciprocate said carrier slide longitudinally relatively to said spindle, a shaft pivotally and slidably arranged on said carrier slide and having a collar secured thereon, a yarn guide secured to said shaft and adapted to be sustained by said spindle, means adapted to yieldingly retain said shaft in its central position relatively to said carrier slide, a lever pivoted on said carrier slide having a forked end adapted to straddle said collar, and stops adapted to be engaged by said lever at predetermined points during the reciprocations of said slide, to move said shaft and said yarn guide on said carrier slide longitudinally relatively to said spindle.

5. A winding machine having, in combination, a frame, a yarn winding spindle, journaled to rotate in said frame, a slide arranged to reciprocate in guides on said frame, a yarn guide pivotally and slidably arranged on said slide adapted to engage said spindle and to be rocked on said slide as the yarn being wound on said spindle increases the diameter thereof, a driving shaft operatively connected with said spindle, means operated by said driving shaft adapted to impart a reciprocating movement to said slide to move said yarn guide longitudinally relatively to the axis of said spindle, and means actuated by the reciprocations of said slide adapted to move said yarn guide on said carrier slide longitudinally relatively to the axis of said spindle.

[Claims 6 to 9 not printed in the Gazette.]

1,105,454. INTERNAL-COMBUSTION ENGINE. PIERRE PICTET, Geneva, Switzerland, and MARCEL VERNAZ, Annemasse, France. Filed Oct. 27, 1913. Serial No. 797,546. (Cl. 123—188.)



1. In an internal combustion engine, the combination of a cylinder formed with an inlet and an outlet port, a working piston operating in the cylinder, a hollow distributing piston operating in the cylinder, said distributing piston having a partition and an inlet port below the partition, the outer periphery of the distributing piston having a recess with which the inlet port in said piston registers, a slidable element fitting in the recess and bearing against the inner wall of the cylinder, the said element being of less length than the length of the recess, means for reciprocating the distributing piston, and means for reciprocating the working piston faster than the distributing piston, whereby when the distributing piston descends, the slidable element will be frictionally held against the wall of the cylinder and uncover the inlet port in said piston and will be subsequently moved by said piston and a charge will be admitted and will be compressed between said two pistons.

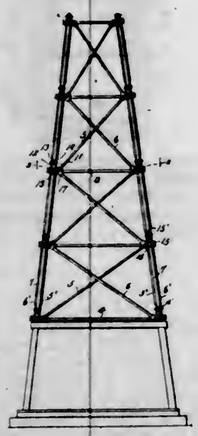
2. In an internal combustion engine the combination of a cylinder formed with an inlet and an outlet port, a

working piston operating in the cylinder, a hollow distributing piston operating in the cylinder, said distributing piston having a partition and an inlet port formed at one side of the partition, the outer periphery of the distributing piston having a recess with which the inlet port registers, a slidable element fitting in the recess and bearing against the inner wall of the cylinder, the said element being of less length than the length of the recess, means for reciprocating the distributing piston, and means for reciprocating the working piston faster than the distributing piston, whereby when the distributing piston moves in one direction the slidable element will be frictionally held against the wall of the cylinder and uncover the inlet port in said piston and will be subsequeatly moved by said piston and a charge will be admitted and will be compressed between said two pistons.

3. In an internal combustion engine, the combination of a cylinder formed with inlet and outlet ports, a working piston operating in the cylinder, a hollow distributing piston having a partition and formed with an inlet port below said partition, a slidable sleeve operating in a recess formed between the piston and the cylinder, the sleeve being of less length than the recess, and the sleeve being in frictional engagement with the cylinder, means for reciprocating the distributing piston, and means for reciprocating the working piston faster than the distributing piston, whereby when the distributing piston descends the sleeve will be frictionally held against the wall of the cylinder and uncover the inlet port in said piston and will be subsequently moved by said piston and a charge will be admitted and will be compressed between said two pistons.

4. In an internal combustion engine, the combination of a cylinder formed with inlet and outlet ports, a working piston operating in the cylinder, a hollow distributing piston having a partition and operating in the cylinder and formed with an inlet port below said partition and adapted to register with the inlet port in the cylinder, means mounted on and operated by the distributing piston to open the inlet ports on one stroke and close said inlet ports on the next succeeding stroke, the said latter means including a slide valve, frictionally held against the cylinder until moved by the distributing piston, means for operating said distributing piston, and means for operating the working piston twice as fast as said distributing piston.

1,105,455. DERRICK. WILLIAM J. RAWSON, Lewis Run, Pa. Filed Nov. 26, 1913. Serial No. 803,281. (Cl. 189—19.)



1. A knock down derrick including uprights, each consisting of sections, reinforcing pipes crossing the joints between the abutting ends of adjacent upright sections and secured to one of said sections, collars upon the adjacent ends of upright sections, and sets of connections coupled to each upright above and below the collars of connecting sections and uniting said upright to adjacent uprights, each set of connections comprising a cross piece extending between like joints of adjacent uprights, a bracing upright extending between connected sections of an upright at one level to the connected sections of an adjacent upright at a higher level, and bolts uniting the adjoining ends of the cross piece and brace and clamping the same to the first-named upright.

2. A knock down derrick including uprights, and sets of connections between each pair of uprights, each set of connections comprising a cross piece and a bracing member formed to provide clips disposed on opposite sides of an upright, bolts uniting said clips at opposite sides of the upright, and another bracing member joined to one of said bolts.

3. A knock down derrick including uprights, each consisting of sections, reinforcing pipes crossing the joints between the abutting ends of adjacent upright sections and secured to one of said sections, collars upon the adjacent ends of upright sections, and sets of connections coupled to each upright above and below the collars of connecting sections and uniting said upright to adjacent uprights, each set of connections comprising a cross piece extending between like joints of adjacent uprights, a bracing upright extending between connected sections of an upright at one level to the connected sections of an adjacent upright at a higher level, bolts uniting the adjoining ends of the cross piece and brace and clamping the same to the first-named upright, and a second brace connected with one of said uprights and in like manner clamped with the cross piece to an adjacent upright at the joint of the next lower level.

4. A derrick comprising corner uprights formed of coupled sections, front and rear cross pieces, cross braces cooperating therewith, said braces being arranged between the cross bars or adjacent tiers of the derrick and one brace of each set being formed with the cross bars to provide clamping members engaging the uprights, bolts connecting the clamping members and to certain of which the other braces are attached, and corresponding side cross pieces and braces, the front cross bars and coöperating braces being connected with the uprights below the joints and the rear cross bars and coöperating braces being connected with the uprights above the joints.

1,105,456. DENTAL LATHE-FILE. WALTER F. RICHARDS, Quincy, Ill. Filed Mar. 18, 1912. Serial No. 684,649. (Cl. 29—78.)



A dental lathe file, having, a thin flat V-form blade provided with straight oppositely beveled lateral edges converging at an angle, a flat working face having a series of transverse serrations, a plane back surface, and a three-sided point formed by the beveled lateral edges and the opposite face of the file, said beveled lateral edges being reduced to comparative thinness and said transverse serrations extending to the extremity of said point.

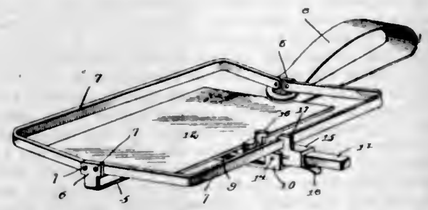
1,105,457. FELT POLISHING-STICK. GEORGE A. ROBERTS, Wollaston, Mass. Filed Jan. 29, 1913. Serial No. 744,942. (Cl. 51—1.)

In a device of the character described comprising an elongated stick, provided with a tapered end, said stick being formed with a longitudinal cylindrical bore opening out of its tapered end, and a fibrous strip of a slightly larger diameter than the diameter of said bore, said fibrous



strip having its body spirally expanded within said bore and having a greater length than said bore.

1,105,458. TRAP. LONZO B. ROGERS, Brinkley, Ark. Filed Jan. 10, 1914. Serial No. 811,483. (Cl. 43—23.)



1. In a trap of the class described, a pair of swinging jaws, means for closing said jaws, a movable bait support, and means slidably adjustable thereon for locking engagement with one of the jaws for permitting the release of said jaws on a prescribed movement of the support.

2. In a trap of the class described, a pair of spring operated jaws, a movable bait supporting member having an angularly disposed bar, a duplex locking member mounted on said bar, a spring secured to the bottom of said locking member, and a pin carried by the spring to connect said member and bar to retain the former in adjusted position.

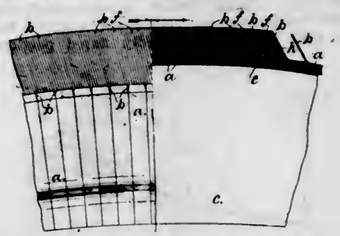
3. A trap comprising a base, a pair of spring operated jaws mounted thereon, a member extending laterally from said base and provided with upstanding ears, a bait support pivoted between said ears, and a duplex locking member adjustable thereon for alternately engaging one of said jaws to permit the release of said jaws on a prescribed movement of said support.

4. In a trap of the class described, a pair of spring operated jaws, a movable bait support, a locking member adjustable on said support and including a pair of spaced vertically disposed catch hooks opening toward each other and adapted to alternately engage one of said jaws to permit said jaws to be moved to closed position on a prescribed movement of said support, and means for holding said locking member in adjusted position.

5. In a trap of the class described, a pair of swinging jaws, means for closing said jaws, a movable bait support, and means slidable on said support for interchangeable locking engagement with one of the jaws for permitting the release of said jaws on a prescribed movement of the support.

[Claims 6 to 10 not printed in the Gazette.]

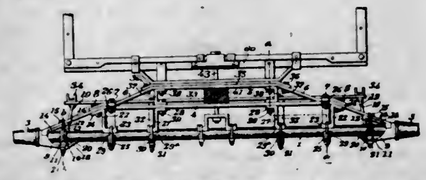
1,105,459. TIRE FOR VEHICLE-WHEELS. FREDERICK ROSE, Liverpool, and ANDREW RAE, Seacombe, England. Filed June 9, 1911. Serial No. 632,192. (Cl. 152—16.)



1. A wheel tire comprising a series of stepped plies of fabric extending continuously in one direction and inclination from the inner surface of the stepped plies to the outer surface thereof, each of the stepped plies having a part extending in one piece therewith in an outward direction from said outer surface at an angle oblique to the radius of the tire; and blocks of laminated fabric, the laminated members of which are at the same oblique inclination as the inclination of the parts extending outwardly from the said outer surface; substantially as set forth.

2. A wheel tire comprising a series of stepped plies of fabric extending continuously in one direction and inclination from the inner surface of the stepped plies to the outer surface thereof, each of the stepped plies having a part extending in one piece therewith which is slitted inwardly from the outer edge so as to constitute three pieces which extend in an outward direction from said outer surface at an angle oblique to the radius of the tire; and blocks of laminated fabric, the laminated members of which are at the same oblique inclination as the inclination of the parts extending outwardly from the said outer surfaces; the outer surfaces of the laminated members and the outer edges of the plies forming the tread of the tire, substantially as set forth.

1,105,460. WAGON-GEAR. DANIEL T. SEALE, Ozark, Ala. Filed Apr. 29, 1913. Serial No. 764,374. (Cl. 21—5.)

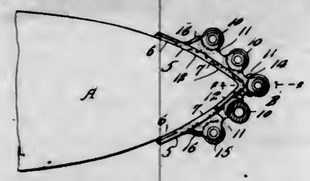


In a vehicle, an axle, a lower spanner bar on the upper side of the axle, spacer brackets between the axle and lower spanner bar, clip blocks and clip bolts securing the lower spanner bar and the said spacer brackets on the axle, an upper spanner bar having its ends bolted on the lower spanner bar, and spacer brackets between the lower spanner bar and the intermediate portion of the upper spanner bar.

1,105,461. FENDER FOR SHIPS. GEORGE R. SHIPMAN, Norfolk, Va. Filed Mar. 6, 1914. Serial No. 823,009. (Cl. 114—220.)

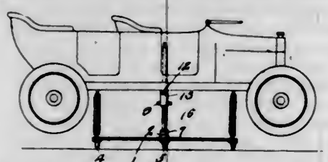
1. The combination with a ship's hull, of a plurality of rollers journaled exteriorly thereof at one or more points of the same, the said rollers being disposed vertically and in close parallel relation to each other, frames for rotatably supporting the rollers and adapted to be fixed to the said hull, an outwardly flared portion on the frame at the outer side of the outermost rollers to serve in deflecting small obstacles against the latter for preventing the said obstructions from working between the rollers and the frame.

2. The combination with a ship's hull, of a plurality of rollers journaled exteriorly thereof at one or more points of the same, the said rollers being disposed vertically and in close parallel relation to each other, frames for rotatably supporting the rollers and adapted to be fixed to the said hull, an outwardly flared portion on the



frame at the outer side of the outermost rollers to serve in deflecting small obstacles against the latter for preventing the said obstructions from working between the rollers and the frame, abutments arranged between the hull and the rollers and formed with raceways, and bearing balls arranged within the raceways and working against said rollers intermediate the ends thereof.

1,105,462. AUTO-REST. GUSTAF SJOLANDER, Midland, Mich. Filed Oct. 22, 1913. Serial No. 796,681. (Cl. 57—15.)



1. The combination with a motor driven vehicle, of a truck located beneath and carried by the body of the vehicle, a jack screw for raising and lowering said truck, said jack screw being operable from above the floor of the vehicle, and yieldable body balancing connections between said truck and vehicle body.

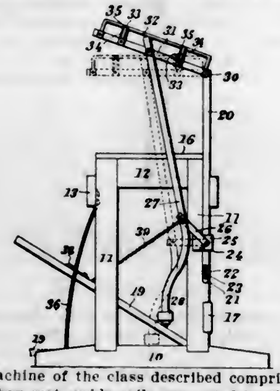
2. The combination with a motor driven vehicle, of a truck located beneath the body of the vehicle, caster wheels adapted to support said truck, a jack screw for raising and lowering said truck, said jack screw being operable from above the floor of the vehicle, a nut through which said jack screw is threaded, a brace connecting said nut rigidly with the frame of the machine, and springs interposed between said truck and the frame of the vehicle.

3. The combination with a motor driven vehicle, of a truck mounted below the body of the vehicle, a jack screw for raising and lowering said truck, said jack screw having a ball and socket connection with the truck and being operable from above the floor of the vehicle, a nut through which said jack screw is threaded, a brace rigidly supporting said nut and connected to the frame of the machine, and balancing connections betweeen said truck and the frame of the vehicle.

1,105,463. BOX-PRESS. JAY F. SMITH, Hotchkiss, Colo., assignor of one-third to Milo F. Towne and one-third to Watson S. Coburn, Hotchkiss, Colo. Filed Nov. 8, 1913. Serial No. 799,977. (Cl. 100—57.)

1. A machine of the class described comprising a frame having a box rest, guide rails supported by the frame and adapted to guide a box upon the rest, vertical standards connected to the ends of the frames, arms swingingly connected to the upper ends of the standards, clamping frames carried by the arms, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, and means carried by the frame for locking the treadle in lowered position.

2. A machine of the class described comprising a frame having a box rest, guide rails supported by the frame and adapted to guide a box upon the rest, vertical standards connected to the ends of the frames, arms swingingly connected to the upper ends of the standards, clamping frames carried by the arms, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box, and resilient members carried by the arms for automatically adjusting the cover of the box with relation to the latter on the lowering of the clamping frames.



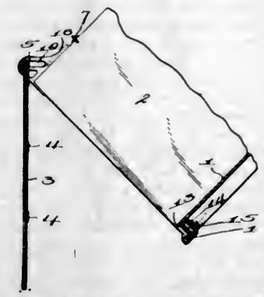
3. A machine of the class described comprising a frame having a box rest, guide rails supported by the frame and adapted to guide a box upon the rest, vertical standards connected to the ends of the frames, arms swingingly connected to the upper ends of the standards, clamping frames carried by the arms, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box, and resilient members carried by the arms for automatically adjusting the cover of the box with relation to the latter on the lowering of the clamping frames, and brackets carried by the frame and engaged by the standards.

4. A machine of the class described comprising a frame having a box rest, guide rails supported by the frame and adapted to guide a box upon the rest, vertical standards connected to the ends of the frames, arms swingingly connected to the upper ends of the standards, clamping frames carried by the arms, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box, resilient members carried by the arms for automatically adjusting the cover of the box with relation to the latter on the lowering of the clamping frames, and brackets carried by the frame and engaged by the standards, arms swingingly connected to the ends of the frames, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, and clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box.

5. A machine of the class described comprising a frame having a box rest, guide rails supported by the frame and adapted to guide a box upon the rest, vertical standards connected to the ends of the frames, arms swingingly connected to the upper ends of the standards, clamping frames carried by the arms, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box, resilient members carried by the arms for automatically adjusting the cover of the box with relation to the latter on the lowering of the clamping frames, brackets carried by the frame and engaged by the standards, arms swingingly connected to the ends of the frames, a foot treadle connected with the frame, means connecting the foot treadle to the swinging arms whereby on the lowering of the treadle the clamping frames will act upon the cover of the box for pressing it thereon, means carried by the frame for locking the treadle in lowered position, clamping fingers carried by the arms and engageable with metallic straps for holding the same in proper relation to the cover of a box, and rollers carried by the frame and engaged by the standards.

[Claims 6 to 8 not printed in the Gazette.]

1,105,464. TAIL-GATE FOR DUMP-CARS. CHARLES W. STICKLER, Lansford, Pa. Filed Sept. 23, 1913. Serial No. 791,349. (Cl. 21—21.)



1. The combination of a dumping body, a tail gate pivotally mounted thereon, means for holding the lower portion of the gate in closed position, and means operative by the rearward pressure of the load against the gate for automatically unfastening the lower portion of the gate when the body is tilted into dumping position.

2. The combination of a dumping body, a tail gate pivotally mounted thereon, means for holding the lower portion of the gate in closed position, and means operative by the rearward pressure of the load against the gate for automatically lifting the gate to release it from said holding means when the body is tilted into dumping position.

3. The combination of a dumping body, a tail gate pivotally mounted thereon, means for holding the lower portion of the gate in closed position, and means operative by the pressure of material against the gate in the body as the latter is tilted into dumping position for releasing the gate from said holding means.

4. The combination of a dumping body, a tail gate, means for holding the lower portion of the gate in closed position, and means operative by pressure of the load rearwardly against the gate to produce rearward tilting of the gate to lift the same to release it from said holding means and to pivotally support the gate.

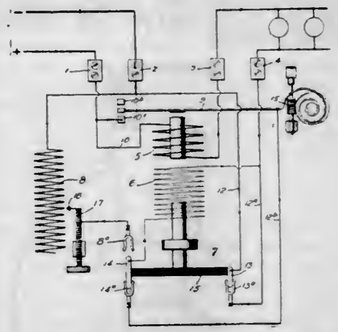
5. The combination of a body, a tail gate, a catch to hold the lower portion of the gate in closed position, members having upwardly and outwardly inclined slots, and pivot means on the gate to operate in said slots to lift the gate and thereby release it from said catch when the upper portion of the gate is tilted outwardly.

[Claims 6 and 7 not printed in the Gazette.]

1,105,465. EXCESS-ELECTRIC-CURRENT INDICATOR. JOHN STONE, Pittsburgh, Pa., assignor to Excess Indicator Company, a Corporation of Pennsylvania. Filed Feb. 9, 1912. Serial No. 676,550. (Cl. 175—268.)

1. The combination of a main line electric circuit, electro-responsive mechanism associated therewith for intermittently opening and closing the main line circuit upon a certain excess demand and means for automatically changing the connections of said electro-responsive mechanism to cause it to keep the main line substantially open during a greater excess demand.

2. The combination of a lamp circuit, electro-responsive mechanism associated therewith for intermittently opening and closing the lamp circuit when a predetermined excess demand is imposed on the circuit, a resistance and means for automatically changing the connections of said electro-responsive mechanism when a greater load is imposed on the circuit to cause it to include said resistance in series with the lamps to reduce the strength of the current flowing through the circuit and thereby dim the lamps.



3. In an excess electric current indicator, a device comprising incoming and outgoing circuit terminals, a magnet, an armature, a switch operated thereby, a second switch operated by said magnet and closed by a predetermined movement of the armature in a direction to open the first switch, connections for including the magnet, terminals and second named switch in series, and a resistance connected between one of the terminals and the second switch.

4. A main electric circuit, a magnet in the main circuit comprising a series coil, a circuit in shunt with the line, a magnet in the shunt circuit, a contact, an armature responsive to the series coil magnet to engage the contact to close the shunt circuit and energize the magnet therein, a switch responsive to the shunt coil, a resistance connected to the line but normally in open circuit with relation to the line, a switch in the main circuit operated simultaneously with the first mentioned switch and a switch closed by the opening movement of the first named switch to include the resistance in series with the second named coil and in shunt with said main switch when said coil has operated the first mentioned switch to open the shunt circuit.

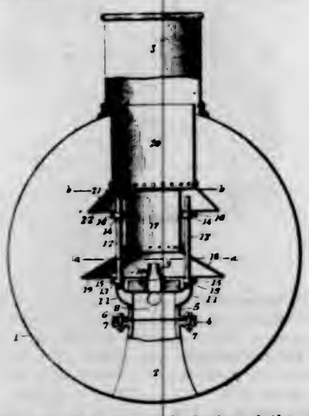
5. The combination of a main line, electro-responsive mechanism associated therewith for intermittently opening and closing the main line circuit upon a predetermined excess current demand on the line and means for automatically changing the electrical connections of said electro-responsive mechanism to cause it to cease intermittently opening and closing the circuit and to reduce the strength of the current in the main line during a greater excess demand on the main line.

1,105,466. DRAFT DEVICE AND SPARK-ARRESTER. JOHN J. SULLIVAN, Parsons, Pa. Filed Sept. 3, 1913. Serial No. 787,951. (Cl. 110—151.)

1. A draft device of the class described comprising a nozzle box adapted to be connected to the exhaust pipe of a steam engine and having an upwardly directed nozzle and also provided with upwardly directed blow pipes, in combination with a draft pipe having a flared or enlarged intake lower end, the said draft pipe being arranged above the nozzle box so that the nozzle of the nozzle box discharges upwardly through the draft pipe and the said blow pipes discharge upwardly around and without the said draft pipe, the said blow pipes extending upwardly through the enlarged intake lower portion of the draft pipe and being provided with supporting means for said draft pipe.

2. A draft device of the class described comprising a nozzle box adapted to be connected to the exhaust pipe of a steam engine and having an upwardly directed nozzle and also provided with upwardly directed blow pipes, in combination with a draft pipe having a flared or enlarged intake lower end, the said draft pipe being arranged above the nozzle box so that the nozzle of the nozzle box discharges upwardly through the draft pipe and the said

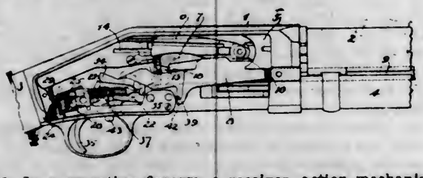
blow pipes discharge upwardly around and without the said draft pipe, the said blow pipes extending upwardly through the enlarged intake lower portion of the draft pipe and being provided with supporting means for said draft pipe, and the said draft pipe being vertically adjustable on said blow pipes.



3. A spark arrester and draft device of the class described comprising a nozzle box adapted to be connected to the upper end of an exhaust steam pipe and provided with an upwardly directed nozzle and also with upwardly directed blow pipes spaced from the nozzle, in combination with a draft pipe having an enlarged intake lower end and arranged above the nozzle box, the said nozzle being arranged to discharge upwardly through the draft pipe and the said blow pipes being arranged around and without said draft pipe, and a second draft pipe of greater diameter than the first named draft pipe and having an enlarged intake lower end in which the upper end of the first-named draft pipe is arranged.

4. A spark arrester and draft device of the class described comprising a nozzle box adapted to be connected to the upper end of an exhaust steam pipe and provided with an upwardly directed nozzle and also with upwardly directed blow pipes spaced from the nozzle, in combination with a draft pipe having an enlarged intake lower end and arranged above the nozzle box, the said nozzle being arranged to discharge upwardly through the draft pipe and the said blow pipes being arranged around and without said draft pipe, and a second draft pipe of greater diameter than the first-named draft pipe and having an enlarged intake lower end in which the upper end of the first-named draft pipe is arranged, each of the draft pipes having a screen at its lower intake end through which the said blow pipes extend and have vertical adjustment on said blow pipes.

1,105,467. REPEATING FIREARM. CARL GUSTAF SWEBILIUS and HANS T. R. HAMITZ, New Haven, Conn., assignors to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 12, 1914. Serial No. 811,517. (Cl. 42—16.)



1. In a repeating firearm, a receiver, action mechanism therein including a combined breech block and locking bolt, an action rod operatively connected with said combined breech block and locking bolt, a safety locking lever cooperating with the action rod and combined breech block and locking bolt to hold said parts in the locked up position, with means for moving said safety locking lever to release said parts, said means being operable automatically by the recoil of the arm, and including a movable inertia block arranged to operatively engage said safety locking lever, with a latch for engaging said inertia block in the position in which it is caused to stand by the recoil of the gun, a part of said breech mechanism being arranged to cast off said latch to release the inertia block and means to automatically reset the latter in its normal position when the breech mechanism is retracted.

2. In a repeating firearm, a receiver, a combined breech block and locking bolt, the rear part of which is arranged to be moved into locking engagement with one of the walls of the receiver, an action rod, a movable link between the action rod and the breech locking end of the combined breech block and locking bolt, a movable stop shoulder carried by said link, a shoulder on the rear part of the combined breech block and locking bolt arranged to be blocked by said stop shoulder when the gun is locked up, and means normally operating to hold said stop shoulder in said blocking position while the gun is locked up.

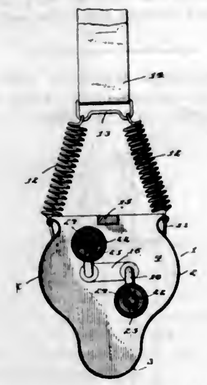
3. In a repeating firearm, a receiver, a combined breech block and locking bolt, the rear part of which is arranged to be moved into locking engagement with one of the walls of the receiver, an action rod, a movable link between the action rod and the breech locking end of the combined breech block and locking bolt, a movable stop shoulder carried by said link, a shoulder on the rear part of the combined breech block and locking bolt arranged to be blocked by said stop shoulder when the gun is locked up, means normally operating to hold said stop shoulder in said blocking position while the gun is locked up, with means for automatically releasing said stop shoulder upon the discharge of the gun.

4. In a repeating firearm, a receiver, a combined breech block and locking bolt, the rear part of which is arranged to be moved into locking engagement with one of the walls of the receiver, an action rod, a movable link between the action rod and the breech locking end of the combined breech block and locking bolt, a movable stop shoulder carried by said link, a shoulder on the rear part of the combined breech block and locking bolt arranged to be blocked by said stop shoulder when the gun is locked up, means normally operating to hold said stop shoulder in said blocking position while the gun is locked up, with means for automatically releasing said stop shoulder upon the discharge of the gun, and with manually operable means for releasing said stop shoulder at any time.

5. In a repeating firearm, a receiver, a combined breech block and locking bolt including a head portion arranged for reciprocation only and a tail portion arranged to both reciprocate and oscillate, an abutment shoulder on the receiver arranged to be engaged by the tail portion of the combined breech block and locking bolt when the gun is locked up, a reciprocating action rod arranged to enter the front of the receiver for operating the aforesaid parts, a link connection between said action rod and the tail portion of said combined breech block and locking bolt, a supporting ledge having an inclined portion at its rear, the rear end of said link being supported by and movable upon said ledge, a stop shoulder carried by said link and movable therewith and relatively thereto, a connection between said stop shoulder and said action rod for permitting the first part of the rearward movement of the action rod to shift said stop shoulder, a shoulder on the tail portion of the breech block and locking bolt arranged to be blocked by said stop shoulder when the latter stands in its advanced position, means normally operating to hold said stop shoulder against movement when the gun is locked up, with means for casting off said safety locking lever upon the discharge of the gun.

1,105,468. COW-MILKER. KARL A. TERVO, West Quincy, Mass. Filed Mar. 27, 1914. Serial No. 827,684. (Cl. 31—96.)

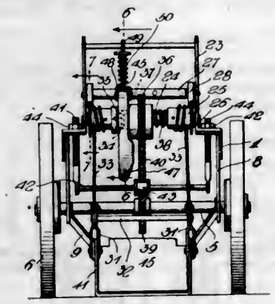
1. A milker comprising a receptacle having curved walls, crank shafts journaled for rotation in the receptacle, sleeves loosely mounted upon the cranks of the shafts, coiled springs surrounding the sleeves, and cylinders of soft material surrounding the coiled springs.



2. A milker comprising a receptacle having curved walls, crank shafts journaled for rotation in the receptacle, cylinders of soft pliable material surrounding the cranks of the shafts and coiled springs interposed between the cylinders and the cranks of the shafts the convolutions of the coils of said springs varying in diameter.

3. A milker comprising a receptacle having curved walls, crank shafts journaled for rotation in the receptacle, cylinders of soft pliable material mounted upon the cranks of the shafts and springs interposed between the cylinders and the cranks of the shafts said springs having a series of convolutions, the springs extending from end to end of the cylinders, the convolutions of the springs varying in diameter the larger convolutions normally bearing against the inner surfaces of the cylinders, the smaller convolutions snugly receiving the cranks of the shafts and the intermediate convolution being spaced from the cylinders and the shafts.

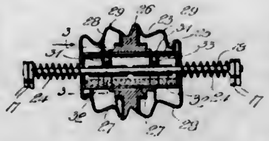
1,105,469. WHEEL-SCRAPER. EZRA M. UTTERBACK, Macksburg, Iowa. Filed Sept. 3, 1913. Serial No. 787,937. (Cl. 37—33.)



1. A machine of the character described, comprising a frame, traction wheels to support the same, a normally approximately horizontal scoop arranged below the frame, links pivotally connected with the rear portion of the scoop and with the frame, elements pivotally connected with the forward end of the scoop, a transverse rod connecting the elements, a transverse shaft mounted upon the frame near and above the elements, drums carried by the transverse shaft, cables attached to the elements and the drums to be wound thereabout, driving connecting means between the traction wheels and the transverse shaft, clutch mechanism for controlling the operation of the transverse shaft by the driving connecting means, and a depending reciprocatory member operating the clutch mechanism and having its lower end forked to receive the transverse rod therein whereby the same moves the member to operate the clutch mechanism.

2. A machine of the character described, comprising a wheeled frame, a normally approximately horizontal scoop arranged below the frame, means pivotally connecting the scoop with the frame, a transverse rotatable shaft connected with the frame and arranged above the scoop, operative connecting means between the transverse rotatable shaft and the scoop for elevating the scoop upon the rotation of the shaft, a clutch member rigidly mounted upon the transverse rotatable shaft, a spring pressed coacting clutch member rotatably mounted upon the transverse shaft and adapted to engage and disengage the first named clutch member, driving means for the second named clutch member, a reciprocatory shifting member provided near its upper end with a longitudinal slot for receiving portions of the clutch members, adapted to disengage the clutch members upon its upward movement, and having its lower end forked, a rearwardly extending manually operated lever disposed above the reciprocatory shifting member and pivotally connected therewith, spring means to urge the forward end of the lever downwardly, and an element connected with the scoop and adapted to engage within the lower forked end of the shifting member to automatically move the same.

1,105,470. LUBRICATING TROLLEY-WHEEL. JOHN L. VAN STEENBURG, Erie, Pa. Filed Oct. 21, 1912. Serial No. 727,025. (Cl. 64—26.)



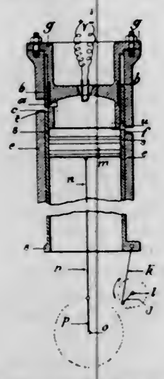
A wheel comprising a cylinder interior oil holding casing, a shaft extending axially through the casing, hollow segmental spokes arranged within the interior casing in transverse sets with their apertured outer enlarged ends secured to the periphery of the interior casing and their inner reduced ends provided with apertured sleeves which are rotatably mounted upon the shaft, an annular hub mounted upon the interior casing substantially equidistantly between the ends thereof, and outer casings surrounding the opposite ends of the interior casing to engage the said ends and the ends of the hub.

1,105,471. INTERNAL-COMBUSTION ENGINE. MARCEL VERNAZ, Annemasse, France, and PIERRE PICTET, Geneva, Switzerland. Original application filed Oct. 27, 1913, Serial No. 797,546. Divided and this application filed Jan. 6, 1914. Serial No. 810,629. (Cl. 123—188.)

1. In an internal combustion engine, the combination of a cylinder formed with an inlet port and an outlet port, a head at the end of the cylinder, said head extending into the cylinder and spaced from the walls thereof to form a recess, the head having an inlet opposite the inlet port in the cylinder, a sleeve operating in the cylinder, the upper end of the sleeve sliding in the recess, said sleeve having inlet and exhaust ports which at predetermined times register with the inlet and exhaust ports in the cylinder, a resilient valve interposed between the head and the cylinder and slidable frictionally by the sleeve to control the admission of a charge to the cylinder, means for reciprocating the sleeve in the cylinder to operate the valve and admit a charge, a piston operating in the sleeve, and means for operating the piston, the sleeve operating means operating the sleeve twice as fast as the speed of the piston.

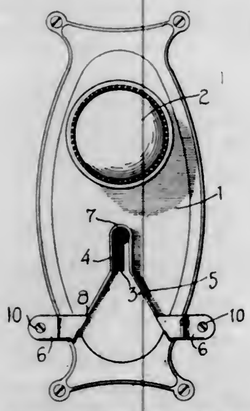
2. In an internal combustion engine, the combination of a cylinder formed with inlet and exhaust ports, a head extending within the cylinder and spaced from the walls of the latter to form a recess, the outer wall of the head

having a recess and said head having an inlet port opposite the inlet port in the cylinder and registering with the recess in the wall, a resilient valve mounted in the recess, in the head, said valve being of less length than that of the recess, a sleeve in the cylinder, the upper end of the sleeve operating in the recess formed between the head and the cylinder, said sleeve having inlet and exhaust ports which at predetermined times register with the corresponding ports in the cylinder and head, a piston operating in the sleeve, means for reciprocating the piston, and means for reciprocating the sleeve twice as fast as the reciprocation of the piston.



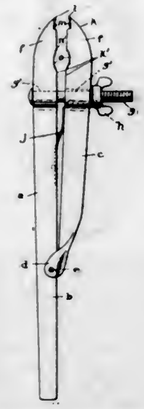
3. In an internal combustion engine, the combination of a cylinder formed with an inlet port and an outlet port, a head at the end of the cylinder, said head extending into the cylinder and spaced from the walls thereof to form a recess, a sleeve operating in the cylinder, the upper end of the sleeve sliding in the recess, said sleeve having inlet and exhaust ports which at predetermined times register with the inlet and exhaust ports in the cylinder, a resilient valve interposed between the head and the cylinder and slidable frictionally by the sleeve to control the admission of a charge to the cylinder, means for reciprocating the sleeve in the cylinder to operate the valve and admit a charge, a piston operating in the sleeve, and means for operating the piston, the sleeve operating means operating the sleeve twice as fast as the speed of the piston.

1,105,472. KEY-GUIDE. IRVING E. WADE, Gravity, Iowa. Filed Oct. 7, 1913. Serial No. 793,825. (Cl. 70—16.)



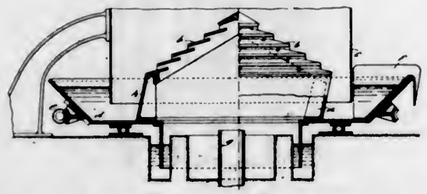
A keyhole guide comprising a U-shaped member, angular extensions formed integral with the free ends of the arms of the U-shaped member, the free ends of the extensions being bent back upon themselves to form rearward projections, and lateral extensions formed on the rearward projections and provided with apertures for the reception of screws whereby the device may be firmly held in place.

1,105,473. COMBINED WRENCH AND VISE. FRED L. WALKER, Burlington, Iowa. Filed Nov. 30, 1910. Serial No. 594,966. (Cl. 81—18.)



In a wrench, a straight body member, and a straight supplementary member having an offset end provided with a direct pivotal connection with the body member, both members being adapted, when adjusted together, to have their inner lateral faces substantially in contact, said members having at their ends beveled outer lateral faces, and substantially straight inward-offset, longitudinal parallel-toothed jaw faces in substantial alinement with the longitudinal axes of the members and located within and having an oblique relation to the inner lateral faces of the members, and meeting said beveled outer lateral faces in sharp acute-angle edges, and stop shoulders at the inner ends of said jaw faces between the same and the inner lateral faces of the members, and means for adjusting the members with relation to each other.

1,105,474. GAS-PRODUCER. JACOB A. WEIL, Stockton-on-Tees, England. Filed May 16, 1914. Serial No. 839,146. (Cl. 48—66.)



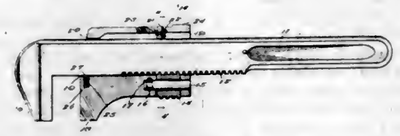
1. In a gas producer of the type herein referred to, a grate the cylindrical portion of which is an oblique cylinder.

2. In a gas producer of the type herein referred to, a casing and a grate the cylindrical portion of which is an oblique cylinder, the base of the said grate being concentric with the said casing.

3. In a gas producer of the type herein referred to, a grate, a cylindrical portion of the said grate constructed as an oblique cylinder and a corrugated periphery to the said cylindrical portion.

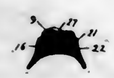
4. In a gas producer of the type herein referred to, a cylindrical portion of the said grate constructed as an oblique cylinder and having its base concentric with the said casing, and a corrugated periphery to the said cylindrical portion.

1,105,475. WRENCH. CHARLES D. WILSON, Toledo, Ohio. Filed Feb. 13, 1914. Serial No. 818,573. (Cl. 81—146.)



In a wrench, a rigid jaw and handle member having a rack along one side; a movable jaw slidable upon the handle member; means carried by the movable jaw for adjustably engaging the rack; a resilient member holding the adjusting member yieldingly in engagement with the rack; a ball carried by the movable jaw; and a spring arranged to hold the ball in yielding engagement with the rack side of the handle member.

1,105,476. ARTIFICIAL TOOTH. ROBERT MORSE WITHYCOMBE, Sydney, New South Wales, Australia. Filed Oct. 15, 1913. Serial No. 795,332. (Cl. 32—9.)



1. An artificial tooth structure comprising a socketed tooth-supporting member; a yielding cushion arranged wholly within said socket, at the bottom thereof; and a tooth fitted in said socket and having its base disposed directly against and completely concealing said cushion, whereby a portion of the pressure of mastication is taken up by the cushion.

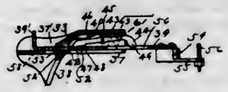
2. An artificial tooth structure comprising a tooth-supporting collar; a yielding cushion disposed wholly within said collar, at the bottom thereof; and a tooth fitted in said collar and having its base disposed directly against and completely concealing said cushion, whereby a portion of the pressure of mastication is taken up by the cushion.

3. An artificial tooth structure comprising a tooth-supporting collar; a yielding cushion made of dough-like particles of flexible rubber disposed wholly within said collar, at the bottom thereof; a tooth fitted in said collar and having its base disposed directly against and completely concealing said cushion, whereby a portion of the pressure of mastication is taken up by the cushion, said collar and tooth constituting companion parts, one of which is provided with an orifice for the passage of the rubber particles therethrough; and a closure disposed in said orifice.

4. An artificial tooth structure comprising a tooth-supporting collar; a yielding cushion made of dough-like particles of flexible rubber disposed wholly within said collar, at the bottom thereof; a tooth fitted in said collar and having its base disposed directly against and completely concealing said cushion, whereby a portion of the pressure of mastication is taken up by the cushion, said tooth being provided with a vertical orifice for the passage of the rubber particles therethrough; and a closure disposed in said orifice.

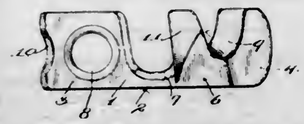
1,105,477. VENDING-MACHINE. THOMAS WOODS, Syracuse, N. Y. Filed May 27, 1912. Serial No. 700,001. (Cl. 194—93.)

In a vending machine, a coin-gun comprising a hollow frame, a reciprocating coin-plate slidable in said frame having a socket for receiving a coin, and having an elongated slot spaced from said socket, a rocking dog carried by said frame above said plate, one end of said dog normally positioned in said slot when said plate is in the coin-receiving position for limiting the release-movement of said plate the opposite end of said dog having a tooth



adapted to be forced downwardly into said socket when empty for preventing the full vending-movement of said plate, a spring for forcing and holding said tooth in said socket, and means for preventing the repetition of the vending-movement of said plate unless a second coin is inserted in said plate.

1,105,478. GAME ADJUNCT. JOHN W. AMES, East Rutherford, N. J. Filed May 23, 1914. Serial No. 840,581. (Cl. 46—6.)



1. A device of the character set forth having a base provided with a flat engaging face and two blocks upright from the base and located at opposite ends thereof, one block being arranged in the longitudinal plane of the base and having an opening therein extending between its front and rear faces, the device having a relatively wide and deep groove intermediate said blocks and extending between its front and rear faces on an axis generally parallel to the axis of the opening, the other block having a relatively wide and deep groove which extends between its front and rear faces and has its axis converging forwardly toward the axis of said first-named groove.

2. A device of the character set forth having a base provided with a flat engaging face and two blocks upright from the base and located at opposite ends thereof, one block being arranged in the longitudinal plane of the base and having an opening therein extending between its front and rear faces, the device having a relatively wide and deep groove intermediate said blocks and extending between its front and rear faces on an axis generally parallel to the axis of the opening, the other block having a relatively wide and deep groove which extends between its front and rear faces and has its axis converging forwardly toward the axis of said first-named groove, said last-named block also having its front face co-planar with the front faces of the base and of said first-named block and having its rear face oblique and converging forwardly and outwardly to its front face.

3. A device of the character set forth having a base provided with a flat engaging face and two blocks upright from the base, and located at opposite ends thereof, one block being arranged in the longitudinal plane of the base and having an opening therein extending between its front and rear faces, the said opening having an uninterrupted annular wall, the device having a relatively wide and deep groove intermediate said blocks and extending between its front and rear faces on an axis generally parallel to the axis of the opening, the other block having a relatively wide and deep groove which extends between its front and rear faces and has its axis converging forwardly toward the axis of said first-named groove.

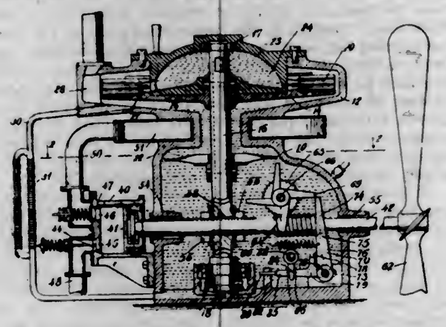
4. A device of the character set forth having a base provided with a flat engaging face and two blocks upright from the base and located at opposite ends thereof, one block being arranged in the longitudinal plane of the base and having an opening therein between its front and rear faces, and a relatively shallow groove in its outer

end face also extending between its front and rear faces, the device having a relatively wide and deep groove intermediate said blocks and extending between its front and rear faces on an axis generally parallel to the axis of the opening, the other block having a relatively wide and deep groove which extends between its front and rear faces and has its axis converging forwardly toward the axis of said first-named relatively wide and deep groove.

5. A device of the character set forth having a base provided with a flat engaging face and two blocks upright from the base and located at opposite ends thereof, one block being arranged in the longitudinal plane of the base and having an opening therein between its front and rear faces, and a relatively shallow groove in its outer end face also extending between its front and rear faces, the said opening having an uninterrupted annular wall, the device having a relatively wide and deep groove intermediate said blocks and extending between its front and rear faces on an axis generally parallel to the axis of the opening, the other block having a relatively wide and deep groove which extends between its front and rear faces and has its axis converging forwardly toward the axis of said first-named relatively wide and deep groove.

[Claims 6 to 8 not printed in the Gazette.]

1,105,479. COMPRESSOR. EMIL ANDERSON, New York, N. Y., assignor to Anderson Gas Turbine Company, Newark, N. J., a Corporation of New Jersey. Original application filed Jan. 5, 1912, Serial No. 669,690. Divided and this application filed Apr. 15, 1912. Serial No. 690,736. (Cl. 230—27.)



1. The combination of a fluid pump cylinder, a receiver, a piston in said cylinder, a rotary and reciprocatory shaft connected with said piston, means for producing such an end thrust on the shaft as to force fluid into said receiver, gearing associated with said shaft, whereby the latter is positively moved in one direction and means for releasing the shaft from said gearing whereby the shaft is moved in the opposite direction by said end thrust.

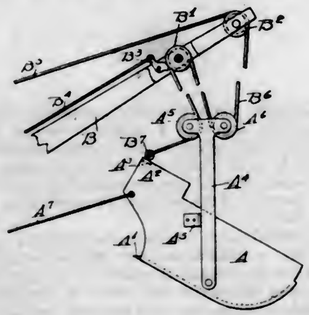
2. The combination with a receiver, of a fluid pump cylinder, a piston in said cylinder, a rotary and reciprocatory shaft operatively connected with said piston, a propeller on said rotary and reciprocatory shaft, and means associated with said shaft whereby the said shaft is moved positively in one direction to draw fluid into said pump cylinder and is then released, said shaft being moved in the opposite direction by the end thrust of the propeller to force the fluid into said receiver.

3. The combination of a rotary and reciprocatory shaft, gearing arranged to rotate said shaft and cause it to move longitudinally in one direction, a propeller tending to produce an end thrust in the opposite direction, means operable by the longitudinal movement of said shaft for releasing said gearing to allow the shaft to be moved longitudinally in the opposite direction by the end thrust of the propeller.

4. The combination of a rotary and reciprocatory shaft, a gear loosely splined on said shaft, a worm on said shaft, a second shaft, a worm wheel rotatable with said second shaft, a series of fingers on said second shaft, a lever arranged to be engaged by said fingers to hold said second shaft against rotation whereby when said first mentioned shaft is rotated it is moved longitudinally in one direction, said lever being arranged to be tripped by said first mentioned shaft to free said second shaft, whereby said first mentioned shaft is moved longitudinally in the opposite direction by end thrust.

5. The combination of a cylinder, a piston movable within said cylinder, a shaft rotatably and slidably mounted, said shaft being rotarily connected with said piston, a worm wheel rotatable with said shaft and slidable thereon, a worm on said shaft, a second shaft, a worm wheel rotatable with said second shaft, a star wheel on said second shaft, a lever arranged to be engaged by said star wheel to hold said second shaft against rotation, whereby when said first mentioned shaft is rotated it is moved longitudinally in one direction, said lever being arranged to be tripped thereby to free said second shaft, whereupon said first shaft is moved longitudinally in the opposite direction by end thrust thereon.

1,105,480. DRAG-LINE EXCAVATOR. SVANTE ROBERT WILLIAM MATTSSON BAGER, Milwaukee, Wis., assignor to Bucyrus Company, South Milwaukee, Wis., a Corporation of Wisconsin. Filed May 3, 1913. Serial No. 765,241. (Cl. 37—54.)



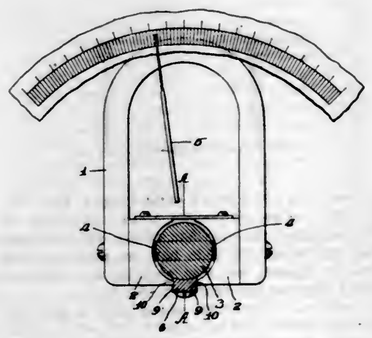
1. In a drag line excavator, the combination of an excavating bucket with a hoisting line having a downwardly depending loop and a downwardly depending end, the latter being attached to the bucket adjacent the front thereof, a hoisting bail attached to the bucket back of the center of gravity thereof and having a movable connection both with the downwardly depending loop and with the free end of the line, and a drag line attached to the bucket.

2. In a drag line excavator, the combination of an excavating bucket with a hoisting line having a downwardly depending loop and a downwardly depending end, the latter being attached to the bucket adjacent the front thereof, a hoisting bail attached to the bucket back of the center of gravity thereof and having two pulleys, one engaging the loop and the other that portion of the line having the free end and a drag line attached to the bucket.

1,105,481. ELECTRICAL MEASURING INSTRUMENT. RICHARD P. BROWN, Philadelphia, Pa., assignor to Keystone Electrical Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 12, 1913. Serial No. 747,907. (Cl. 171—95.)

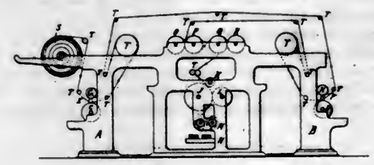
1. The combination with a magnet and a core which is partially surrounded by the poles of said magnet, of a bar or bracket of non-magnetic material secured longitudinally to said core and adapted to be slidably engaged and carried by adjacent opposite tips of the pole pieces of said magnet.

2. The combination with a magnet and a core which is partially surrounded by the poles of said magnet, of a



bracket of non-magnetic material for carrying said core the opposite sides of which are longitudinally grooved and adapted to engage the tips of the poles of the magnet.

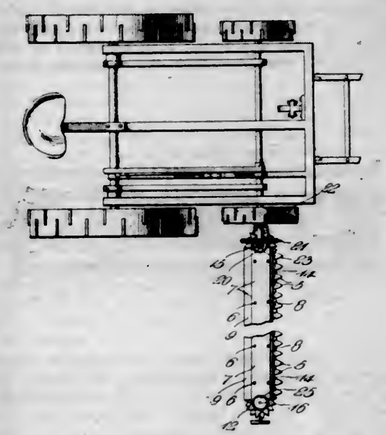
1,105,482. COMBINED PRINTING-MACHINE FOR TEXT AND INTAGLIO FINE PRINTING. AUGUST RUBGERT, Mülhausen, Germany, assignor to Elsässische Maschinenbau-Gesellschaft, Mülhausen, Germany. Filed July 17, 1913. Serial No. 779,564. (Cl. 101—117.)



In a rotary printing machine, a frame comprising supporting legs and parallel upper arms, a web supply roll supported on the parallel arms adjacent one end thereof, intaglio printing cylinders operating adjacent the respective ends of the frame, and impression cylinders coöperating therewith, said printing cylinders operating below the plane of the parallel arms, guide cylinders supported by the frame, a series of relief printing cylinders supported intermediate the length of the parallel arms, and impression cylinders coöperating therewith, cutting means supported under the series of relief printing cylinders for severing the web into sheets, and means for operating the cylinders, whereby the printing cylinders print on both sides of the web.

1,105,483. CUTTING APPARATUS. WILLIAM L. CAMPBELL, Lincoln, Nebr. Filed Nov. 27, 1911. Serial No. 662,731. (Cl. 56—42.)

In apparatus of the character described, the combination with a relatively stationary vertical shaft, of spaced upper and lower gear wheels rotatably mounted thereon and provided upon their inner faces with bevel gears integral therewith, a sleeve arranged upon the stationary shaft and clamped thereto, a stub-shaft carried by the sleeve, a bevel gear rotatable on the stub-shaft and meshing with the said bevel gears to cause them to rotate in opposite directions, a bevel gear mounted upon the upper face of the upper bevel gear and integral therewith, means to rotate the last named bevel gear, endless chains trained about the gear wheels, and cutting blades attached to the inner adjacent sides of the links of the



chains to travel between the spaced gear wheels in close proximity to each other.

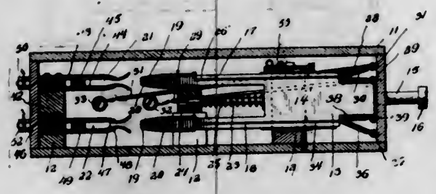
1,105,484. APPARATUS FOR AUTOMATICALLY PHOTOGRAPHING PERSONS MOVING ALONG A CONFINED WAY. BURRELL CANNON, Longview, Tex. Filed June 4, 1913. Serial No. 771,759. (Cl. 234—12.)

Apparatus for photographing persons moving along a confined way, consisting of a camera having rollers and a film carried by said rollers, said camera having its lens in position to photograph persons moving along said way, and automatically-resetting means in said way having an operating connection with the shutter and with a film-carrying roller of the camera, said means being adapted to be successively actuated by persons moving along said way to successively move said shutter and expose a portion of the film, and at intermediate times to successively move said film to expose a different portion thereof upon the succeeding movement of said shutter.

1,105,485. INTERCOMMUNICATING TELEGRAPH OR TELEPHONE DEVICE. AUGER C. CARLSON, Butler, Pa. Filed Feb. 6, 1912. Serial No. 675,775. (Cl. 179—176.)

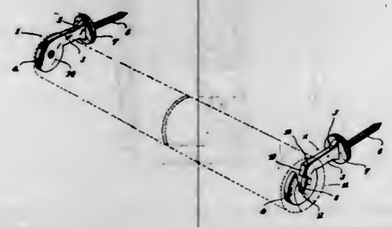
1. An interconnecting device for telegraph and telephone lines comprising a substantially rectangular casing, pairs of jacks secured to one end wall of said casing and

spaced apart, supports within said casing and spaced apart therein, plugs slidably mounted upon said supports and each having one end forked to enter the adjacent pair of jacks and the opposite end formed with a shank projecting outwardly of the adjacent end wall of the casing, and tension means interposed between the forked extremities of each plug and acting upon the latter to hold the same normally disengaged from the companion jacks.



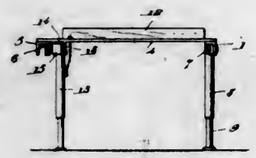
2. An interconnecting device for telegraph and telephone lines comprising a substantially rectangular casing, pairs of jacks secured to one end wall of said casing and spaced apart, supports within said casing and spaced apart therein, plugs slidably mounted upon said supports and each having one end forked to enter the adjacent pair of jacks and the opposite end formed with a shank projecting outwardly of the adjacent end wall of the casing, stationary guides interposed between the limbs of the bifurcated end of each plug, a guide rod secured to the plug and disposed within the adjacent guide, and a coiled expansion spring surrounding said guide and acting upon the plug to hold the latter normally disengaged from the companion jacks.

1,105,486. SHADE-ROLLER BRACKET. GEORGE D. CARON, Danielson, Conn., assignor to Joseph Bodo, Danielson, Conn. Filed Oct. 22, 1912. Serial No. 727,221. (Cl. 156—24.)



A shade roller bracket comprising a member provided with an integral attaching portion and a head carried by the attaching portion and having a trunnion receiving slot therein, including outer walls lying to one side of the vertical center of the head and arranged in substantially superimposed relation, a shoulder connecting said outer walls with each other and extending at right angles to the plane of said walls, an inner wall terminating at its outer end slightly below the uppermost outer wall and inclined downwardly and outwardly in the direction of the vertical center of the head and toward the lower end of the lowermost outer wall so that the slot is of an increased width intermediate its upper and lower ends and then restricted from its intermediate portion and gradually flared to the upper end of the head and a connecting bottom wall lying parallel with the shoulder and serving when engaged against the trunnion to hold the latter operatively disposed beneath said shoulder.

1,105,487. BEDSTEAD EXTENSION. OSCAR R. CASSELL, New York, N. Y. Filed Dec. 6, 1913. Serial No. 805,101. (Cl. 5—41.)



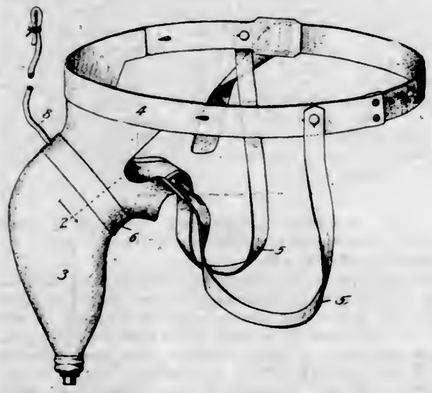
1. A bedstead attachment comprising a side bar, end bars pivotally connected thereto, means carried by the end bars for engaging the side bar of the bedstead, supporting legs carried by the side bar, an auxiliary side bar arranged to support the free ends of the end bars and supporting legs for the auxiliary side bar.

2. A bedstead attachment comprising a side bar, end bars pivoted thereto and arranged to support a spring mattress frame, means for connecting the end bars to the bedstead, adjustable supporting legs carried by the side bar, an auxiliary side bar arranged to freely engage beneath the terminals of the end bars and supporting legs for the auxiliary side bar.

3. A bedstead attachment comprising a side bar, adjustable supporting legs removably connected thereto, end bars pivotally mounted upon the side bar and arranged to receive the mattress frame, means for connecting the terminals of the end bars to a bedstead, an auxiliary side bar freely engaging the end bars beneath the terminals thereof, adjustable supporting legs for the auxiliary side bar and means for removably connecting them to said bar.

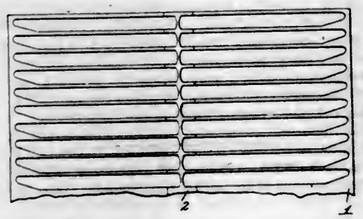
4. A bedstead attachment comprising a side bar, supporting legs for the side bar removably connected thereto, end bars pivotally mounted upon the side bars and having means to connect with the bedstead, an auxiliary side bar freely engaged beneath the terminals of the end bars, supporting legs for the auxiliary side bar, means for removably connecting them thereto and adjustable extensions mounted upon the legs of the main and auxiliary side bars.

1,105,488. URINAL. CHARLES E. CLARE, Chicago, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1913. Serial No. 763,322. (Cl. 128—51.)



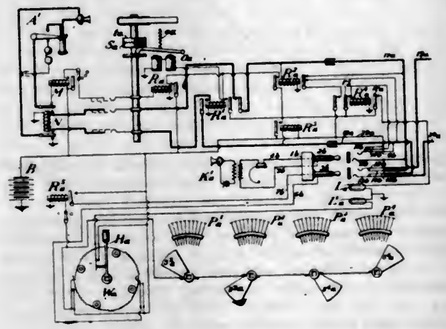
In a urinal, a pouch, an elastic inflatable annulus at the mouth thereof, and a flexible non-elastic band surrounding said annulus, for the purpose set forth.

1,105,489. ELECTRICAL CONTACT. EDWARD E. CLEMENT, Washington, D. C. Filed Sept. 29, 1906. Serial No. 336,737. (Cl. 173—13.)



A blank for electrical contacts, comprising a sheet of base metal, having a narrow strip of unoxidizable precious metal applied longitudinally to its central portion and forced into close adherence with its substance, so as to form an integral mass therewith.

1,105,490. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Original application filed Nov. 26, 1906, Serial No. 345,167. Divided and this application filed Apr. 23, 1908. Serial No. 428,865. (Cl. 179—27.)



1. In a telephone exchange system, the combination with a plurality of lines to be interconnected, automatic switching apparatus for effecting such interconnection, and manual controlling means for the switching apparatus comprising a variable signal transmitter, a motor constantly driving the same, a set of push buttons forming part of the variable signal transmitter and adjustable to determine the signal to be transmitted, and means operated from the transmitter normally preventing transmission through the buttons, but adapted to be set so as to commence said transmission at a definite predetermined point in each cycle of operation of the transmitter, together with manually operated means for connecting the transmitter and the parts operated therefrom to the switching apparatus.

2. In a telephone exchange system, a plurality of lines to be interconnected, a number of trunk circuits less than the number of lines, automatic switches connected to the trunk circuits containing line multiples, a number of operators' senders less than the number of trunks, with means responsive to changes in the lines, controlling certain of said automatic switches to connect the trunks to calling lines, a jack for each trunk and a terminal plug for each sender, adapted to connect the senders to the trunks in order to control certain other of the automatic switches.

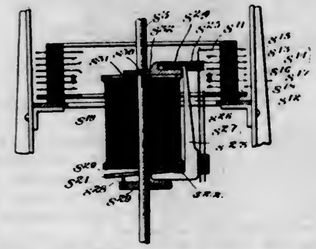
3. In a telephone exchange system, a plurality of lines to be interconnected, a number of trunk circuits less than the number of lines, automatic switches associated with the trunks containing line terminals, and an operator's sending device, an operator's telephone, a jack for each trunk, and a terminal plug member common to both the sending device and the operator's telephone and adapted through the jacks to connect them to any of the trunks.

4. A semi-automatic telephone exchange system comprising a plurality of lines to be interconnected, a number of automatic switches less than the number of lines, a number of operators' sending or controlling devices less than the number of switches, a similar number of operators' telephones, a plurality of jacks connected to the several switches whereby access can be had to any of the switches for directive purposes, and terminal plug members common each to both an operator's telephone and sending device and adapted to coöperate with the jacks of any switch, whereby all of the operators' sets and sending devices are rendered interchangeable, are simultaneously connected to the switch connections, and are entirely separated from the switch connections when not in use, substantially as described.

5. A semi-automatic telephone exchange system comprising a plurality of lines to be interconnected, a number of automatic switches less than the number of lines, and a number of operators' sending or controlling devices less than the number of switches, a like number of operators' telephones, with means to bring a sending device and operator's telephone into temporary association with the various switches, for actuating the same, comprising a pair of jacks for each trunk and a pair of rigidly connected plugs adapted to connect with any pair of jacks, one of said plugs connecting with the sending device and the other with the operator's telephone, whereby the operator's sets aforesaid are rendered interchangeable, and are entirely disconnected when not in use, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,105,491. ELECTRICAL SELECTIVE SWITCH. EDWARD E. CLEMENT, Washington, D. C. Original application filed Apr. 12, 1906, Serial No. 311,388. Divided and this application filed Mar. 16, 1912. Serial No. 684,366. (Cl. 179—27.5.)



1. An automatic selector switch comprising in combination a row of contacts, an operating member for the same, having a normally continued regular movement along the said row of contacts, and selectively controlled actuating means for the operating member adapted automatically to cause the operating member to effect circuit connections through any determined one of said row of contacts.

2. A selector switch comprising in combination a plurality of groups of contacts the contacts of which are adapted to coöperate with each other to effect circuit connections, an operating member adapted to be moved from group to group of said contacts and to effect the coöperation of the same, and selectively controlled actuating means for the operating member adapted to cause the operating member to effect the coöperation of the contacts of any determined one of said groups after said group has been reached by the operating member in its movement.

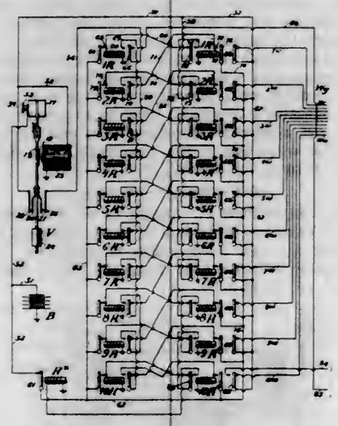
3. An automatic selector switch comprising a row of contacts, a coöperating circuit closing member adapted to effect the closure of circuits through said contacts and to be moved past said contacts normally disengaged therefrom, and actuating means for the operating member adapted automatically to cause the operating member to effect circuit connections through any determined one of said row of contacts.

4. An automatic selector switch comprising in combination, a plurality of groups of terminal contacts, a plug member adapted to effect circuits through the contacts of said groups, and adapted to be moved automatically past said groups of contacts, and selectively controlled actuating means adapted automatically to operate the plug member to effect circuit connections through any determined one of said groups of contacts.

5. An automatic selector switch comprising in combination, a row of contacts, an operating member for the same adapted to be moved along said row, electromagnetic actuating means for causing the operating member to effect circuit connections through any desired contact of the row, and a test wiper moving with the operating member along the row of contacts, and controlling the circuit of the said actuating means.

[Claims 6 to 20 not printed in the Gazette.]

1,105,492. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Oct. 26, 1907, Serial No. 399,283. Renewed Apr. 28, 1914. Serial No. 835,046. (Cl. 179—27.)



1. An impulse sending device comprising the following instrumentalities: a group of impulse transmitting conductors, a common vibrator furnishing impulses thereto, and means to govern said impulses in recurring cycles so as to supply a predetermined distinctive number of impulses to each conductor in each cycle.

2. An impulse sending device comprising the following instrumentalities: a group of impulse transmitting conductors, a common vibrator furnishing impulses thereto, means governing said impulses in recurring cycles so as to supply a predetermined distinctive number of impulses to each conductor in each cycle, and means for selectively connecting said conductors with a transmission circuit.

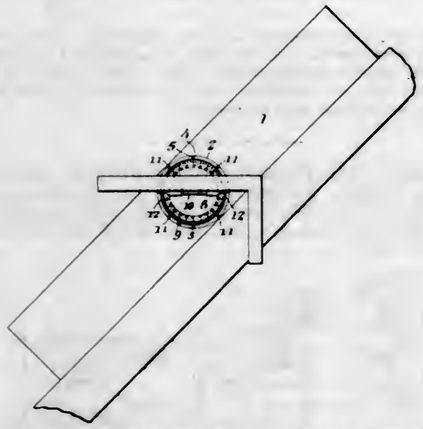
3. An impulse sending device comprising the following instrumentalities: a group of impulse transmitting conductors, a common vibrator furnishing impulses thereto, means governing said impulses in recurring cycles so as to supply a predetermined distinctive number of impulses to each conductor in each cycle, and a set of switching devices corresponding to and connected with the respective conductors and adapted to selectively connect the same to a transmission circuit.

4. An impulse sending device comprising the following instrumentalities: a group of impulse transmitting conductors, a single impulse producing device therefor, means distributing the impulses from said device in recurring cycles so as to supply a predetermined distinctive number of impulses to each of said transmitting conductors during each cycle, and a set of switching keys corresponding to and connected with the respective transmitting conductors each adapted when operated to connect its conductor with a transmission circuit.

5. An impulse sending device comprising the following instrumentalities: a group of impulses transmitting conductors, a single impulse producing device therefor, means distributing the impulses from said device in recurring cycles so as to supply a predetermined distinctive number of impulses to each of said transmitting conductors during each cycle, switching means associated with said conductors and adapted to selectively connect the same with a transmission circuit, and means to produce successive selective transmission during a plurality of cycles.

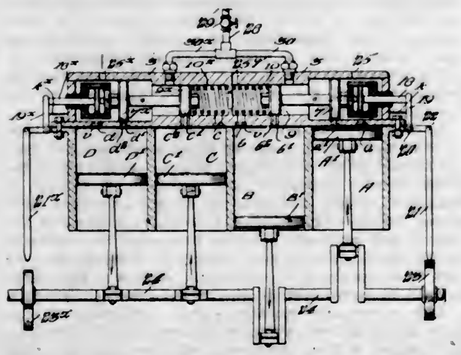
[Claims 6 to 22 not printed in the Gazette.]

1,105,493. LEVEL. SIMON M. COLLINS, Pueblo, Colo. Filed June 10, 1913. Serial No. 772,820. (Cl. 33—213.)



A device of the class described comprising an elongated rectangular stock, a rotatable disk mounted within one face of the stock, a spirit tube attached fixedly to the said disk, means being provided by which the degree of angular adjustment of the disk with respect to the stock may be determined, means by which the disk may be locked in any of its different adjusted positions, and a pair of relatively spaced studs projecting outwardly from the outer face of the rotatable disk for engagement by a straight edge device mounted upon the disk.

1,105,494. COMBINED AIR COMPRESSOR AND MOTOR. DAVID E. CROUSE and CHARLES G. EIDSON, Annapolis, Md., and THOMAS DAVIS, Wilkinsburg, Pa., assignors to The Auto Air Appliance Company, Baltimore, Md., a Corporation of Maryland. Filed June 6, 1913. Serial No. 772,079. (Cl. 230—37.)



1. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and

an outlet check valve, and an inlet port and an outlet port, a valve casing common to all of said cylinders, slide valves in said valve casing for controlling the ports of each cylinder, and means for shifting said slide valves to alternately cover and uncover said inlet and said outlet ports when the device is used as a motor, the shutting off of the motive fluid serving to permit the valve-actuating devices to move the valve so as to cover all of said ports.

2. In a combined air motor and compressor, a cylinder, a piston therein, said cylinder having an inlet check valve and an outlet check valve, and an inlet port and an exhaust port, a valve casing, a piston valve disposed within said valve casing for controlling said ports, an auxiliary cylinder disposed within said valve casing, said cylinder having a rigid connection with said piston valve, an auxiliary piston within said auxiliary cylinder, a piston rod or stem connected to the said auxiliary piston and arranged to project through said valve casing, means for supplying fluid pressure in the interior of said auxiliary cylinder, and movable means outside of said valve casing for engaging the end of said auxiliary piston rod for moving the latter.

3. In a combined air motor and compressor, a crank shaft, a cam on said crank shaft, a cylinder within said cylinder arranged to be operated by said crank shaft, said cylinder having an inlet check valve and an outlet check valve, and an inlet port and an exhaust port, a valve casing, a piston valve disposed within said valve casing for controlling said ports, an auxiliary cylinder disposed within said valve casing, said cylinder having a rigid connection with said piston valve, an auxiliary piston within said auxiliary cylinder, a piston rod or stem connected to the said auxiliary piston and arranged to project through said valve casing, means for supplying fluid pressure in the interior of said auxiliary cylinder, movable means outside of said valve casing for engaging the end of said auxiliary piston rod for moving the latter, said last named movable means comprising a bell-crank lever, one end of the bell-crank lever being in the path of said auxiliary piston stem, and a cam rod pivotally connected with the other end of the bell-crank lever and arranged to be engaged by the cam on said crank shaft.

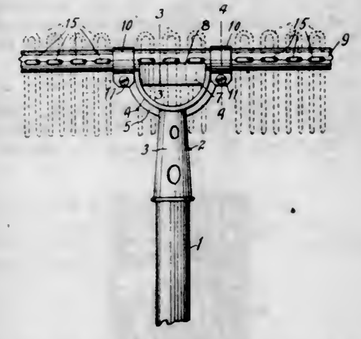
4. In a combined air motor and compressor, a cylinder, a piston therein, an inlet check valve and an outlet check valve for said cylinder, said cylinder also having an inlet port and an exhaust port, a valve casing, a piston valve within said casing for controlling said ports, a reciprocating member disposed outside of said valve casing, a rod arranged to extend through the end of said valve casing in the path of said reciprocating member for moving said piston valve, and means for varying the position of the rod with respect to the reciprocating member, thereby varying the length of stroke of the piston valve.

5. In a combined air motor and compressor, a main cylinder, a piston therein, said cylinder having an inlet port and an exhaust port, a valve casing, a piston valve disposed within said casing for controlling said ports, said piston valve having a stem provided with a passage, an auxiliary cylinder disposed within said valve casing and having rigid connection with said piston valve, the interior of said auxiliary cylinder having communication with said passage, a piston within said auxiliary cylinder having a stem arranged to extend through one end of said cylinder and outside the valve casing, a bell-crank lever arranged to engage the end of the stem of said auxiliary piston, means for reciprocating said bell-crank lever, and means for admitting compressed air on one side of said piston valve, the passage of air into the interior of said auxiliary cylinder serving to move said auxiliary piston thereby extending the stem of the latter toward the reciprocating member..

[Claims 6 and 7 not printed in the Gazette.]

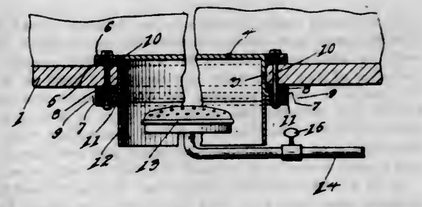
1,105,495. REVERSIBLE SELF-CLEANING RAKE. JAMES G. CROZER, Cedar Rapids, Iowa. Filed Jan. 28, 1914. Serial No. 814,907. (Cl. 55—10.)

In a reversible self-cleaning rake, a socket having a fork, a cylindrical tooth carrying bar extending transversely across the terminals of said fork, straps encircling said bar and removably connected to the fork to hold the bar thereagainst, a plurality of teeth extending transversely through the bar projecting on opposite sides



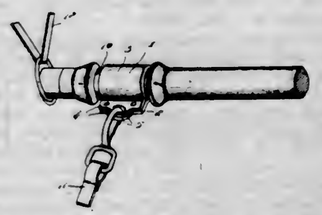
thereof, and a stop block arranged between the arms of said fork having an outwardly projecting lip to receive the upper ends of certain of said teeth to limit the rotation of the bar in one direction during a working stroke.

1,105,496. COMBINED WASHTUB AND HEATER. CHARLES R. CUSTIS, Harrison, N. J. Filed Sept. 30, 1913. Serial No. 792,538. (Cl. 126—350.)



A combined washtub and heater, comprising a washtub provided with an opening in the bottom thereof, a heat condenser fitted in said opening, said condenser comprising a cylindrical portion having an imperforate top, packing rings surrounding the condenser, an extended member to confine the heat within the condenser, and a burner disposed below the condenser for keeping the water in the tub at the required temperature.

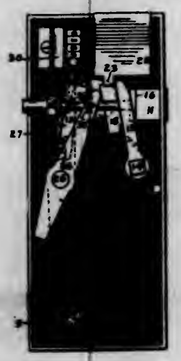
1,105,497. CLIP. WILLIAM E. DAVIS, Burket, Ind. Filed Dec. 14, 1912. Serial No. 736,840. (Cl. 21—77.)



A choke strap connection for neck yokes including a clip comprising independent members, each member including a semi cylindrical connection having a radially disposed edge flange, the edge of one member opposing the flange being formed with a centrally arranged lip bent to provide a part at right angles to the edge and a further part at approximately right angles to the first mentioned part, the first mentioned part being wholly within the plane of the member, the similar edge of the opposing

member having a right angle offset flange, a portion of which is approximately parallel to the opposing edge flange of such member, while the remaining portion of said offset flange is at right angles to the first mentioned portion, said latter portion being formed with a slot to wholly receive the said lip, the first mentioned edge flanges of the members being formed with registering bolt receiving openings and with registering strap receiving openings.

1,105,498. COIN-CONTROLLED LOCK. EDWIN E. DOUGHERTY and UBERTUS W. BASTON, Indianapolis, Ind. Filed Sept. 18, 1913. Serial No. 790,549. (Cl. 194—83.)



1. In a coin controlled lock, a bolt having a head and a shoulder near said head and also having an inner flange-plate, a knob-shaft having an arm bearing against the shoulder of the bolt, said arm forming a part of a coin receptacle, a spring pressing the arm against the bolt, a second arm forming the remaining part of a coin receptacle pivoted at its lower end and contacting with said flange-plate of the bolt near its upper end and means carried by the second arm to hold the coin in said receptacle.

2. In a coin controlled lock, a bolt having a head and a shoulder near said head and also having an inner flange-plate, a knob-shaft having an arm bearing against the shoulder of the bolt said arm having plate extensions forming a part of a coin receptacle, a spring pressing the arm against the bolt, a second arm forming the remaining part of a coin receptacle pivoted at its lower end and contacting with said flange-plate of the bolt near its upper end, a plate pivoted to said second arm to hold the coin in said receptacle and a chute to direct the coin to said receptacle.

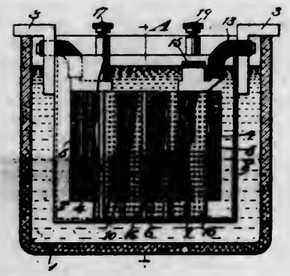
3. In a coin controlled lock, a bolt having a head and a shoulder near said head and also having an inner flange-plate, a knob-shaft having an arm bearing against the shoulder of the bolt said arm having plate extensions forming a part of a coin receptacle, a spring pressing the arm against the bolt, a second arm forming the remaining part of a coin receptacle pivoted at its lower end and contacting with said flange-plate of the bolt near its upper end, a plate pivoted to said second arm to hold the coin in said receptacle, a chute to direct the coin to said receptacle, and a stop between the two arms to limit the movement of each arm in the direction of the other arm.

4. In a coin controlled lock, a bolt having a head and a shoulder near said head and also having an inner flange-plate, a knob-shaft having an arm bearing against the shoulder of the bolt said arm having plate extensions forming a part of a coin receptacle, a spring pressing the arm against the bolt, a second arm forming the remaining part of a coin receptacle pivoted at its lower end and contacting with said flange-plate of the bolt near its upper end when the bolt is in its outer shot position, a counter, means for operating the counter operated by said second arm when the latter is actuated by said first arm through a coin and a plate pivoted to said second arm to hold the coin in said receptacle during the advance movement of the second arm to operate the counter.

5. In a coin controlled lock, a bolt having a head and a shoulder near said head and also having an inner flange-plate, a knob-shaft having an arm bearing against the shoulder of the bolt said arm having plate extensions forming a part of a coin receptacle, a spring pressing the arm against the bolt, a second arm forming the remaining part of a coin receptacle contacting with said flange-plate of the bolt near the upper end of said second arm, a second knob-shaft to which the second arm is pivtoed, means carried by the second arm to hold the coin in said receptacle and a lever on the second knob-shaft contacting with the flange-plate on the bolt to retract the bolt by rocking the shaft.

[Claim 6 not printed in the Gazette.]

1,105,499. STORAGE-BATTERY PLATE. RUDOLPHE DRAMBOURG, New York, N. Y. Filed July 19, 1913. Serial No. 780,005. (Cl. 204—29.)



1. A storage battery comprising an outer cell, a hollow unit within said cell fitted to hold electrolyte, a plurality of plates of different polarity supported within said unit, and plates secured to the inner and outer walls of said unit.

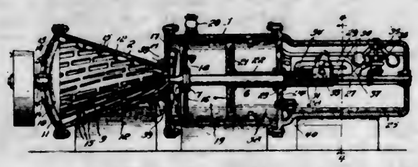
2. A storage battery comprising an outer cell, a hollow unit within said cell fitted to hold electrolyte, three plates, two of one polarity and one of another polarity supported within said unit, and plates secured to the inner and outer walls of said unit.

3. A storage battery comprising an outer cell, a hollow unit within said cell fitted to hold electrolyte, an odd number of plates supported within said unit, the majority of said plates being of one polarity and the minority of another polarity, and plates secured to the inner and outer walls of said unit.

4. In a storage battery plate, a grid slab comprising a grid composed of lead like material and a filling composed of oxid of red lead, litharge, charcoal, bone-ash, graphite, sulfur, oxid of magnesium, sulfuric acid and glycerin.

5. In a storage battery plate, a grid slab comprising a grid composed of antimony, iron pyrite, and lead; and a filling composed of oxid of red lead, litharge, charcoal, bone-ash, graphite, sulfur, oxid of magnesium, sulfuric acid and glycerin.

1,105,500. INTERNAL-COMBUSTION TURBINE-ENGINE. WILLIS ENGLES, Paw Paw, Mich. Filed May 27, 1913. Serial No. 770,187. (Cl. 123—9.)



1. An internal combustion turbine engine, comprising a cylinder, a reciprocatory piston working therein, a rotor provided with vanes, a rotor casing located at one end of said cylinder and in communication with the combustion space thereof, a rotor shaft carrying said rotor and extending through said piston, a displaceable compression abutment, automatically controlling said communication, and means actuated by said shaft for advancing said piston in its compression stroke.

2. An internal combustion turbine engine, comprising a cylinder, a reciprocatory piston working therein, a rotor provided with vanes, a cone shaped rotor casing located at one end of said cylinder and in communication with the combustion space thereof, a rotor shaft carrying said rotor and extending through said piston, a displaceable compression abutment, automatically controlling said communication, and means actuated by said shaft for advancing said piston in its compression stroke.

3. An internal combustion turbine engine, comprising a cylinder, a reciprocatory piston working therein, a rotor provided with vanes, a rotor casing located at one end of said cylinder and in communication with the combustion space thereof, a rotor shaft carrying said rotor and extending through said piston, said shaft being provided with a circular gas port, a displaceable compression abutment, automatically controlling said communication, and means actuated by said shaft for advancing said piston in its compression stroke.

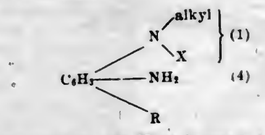
4. An internal combustion turbine engine, comprising a cylinder, a reciprocatory piston working therein, a rotor provided with vanes, a rotor casing located at one end of said cylinder and in communication with the combustion space thereof, a rotor shaft carrying said rotor and extending through said piston, a displaceable compression abutment, surrounding said shaft and working at its periphery in contact with the cylinder wall automatically controlling said communication, and means actuated by said shaft for advancing said piston in its compression stroke.

5. An internal combustion turbine engine, comprising a cylinder, a reciprocatory piston working therein, a rotor provided with vanes, a rotor casing located at one end of said cylinder and in communication with the combustion space thereof, a rotor shaft carrying said rotor and extending through said piston, a displaceable compression abutment automatically controlling said communication, a tubular piston rod extending from said piston through the cylinder head and embracing said shaft, and means for throwing said rod and shaft into and out of engagement at opposite ends of the throw of the piston whereby said piston is advanced in its compression stroke by said shaft and released at the limit of said stroke.

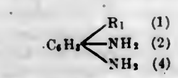
[Claims 6 to 11 not printed in the Gazette.]

1,105,501. DYES FOR DYEING FURS, HAIRS, AND THE LIKE. ARNOLD ERLENBACH and KARL MARX, Dessau, Germany, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Nov. 6, 1912. Serial No. 729,874. (Cl. 8—5.)

1. As new articles of manufacture new dyes for furs, hairs and the like comprising an aromatic para-diamin of the general formula:

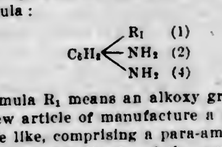


in which formula R and X each mean a univalent substituent, and an aromatic meta-diamin of the general formula:

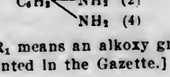


in which formula R_1 means an alkoxy group.

2. As new articles of manufacture new dyes for furs, hairs and the like comprising an aromatic para-diamin of the general formula:

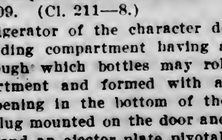


in which formula R means a univalent inorganic substituent, and X means a univalent organic substituent, and an aromatic meta-diamin of the general formula:

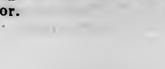


in which formula R_1 means an alkoxy group.

3. As new articles of manufacture new dyes for furs, hairs and the like comprising an aromatic para-diamin of the general formula:

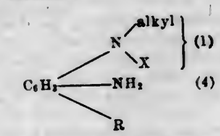


in which formula R means a hydrogen atom and X means an alkyl group, and an aromatic meta-diamin of the general formula:



in which formula R_1 means an alkoxy group.

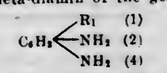
4. As new articles of manufacture new dyes for furs, hairs and the like comprising an aromatic para-diamin of the general formula:



in which formula R means a hydrogen atom and X means a methyl group, and an aromatic meta-diamin of the general formula:

in which formula R_1 means an alkoxy group.

5. As a new article of manufacture a new dye for furs, hairs and the like, comprising a para-aminodimethylaniliin and an aromatic meta-diamin of the general formula:



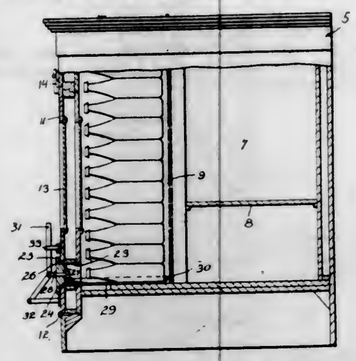
in which formula R_1 means an alkoxy group.

[Claim 6 not printed in the Gazette.]

1,105,502. DISPENSING-REFRIGERATOR. EDWARD C. FAIN, Wetumpka, Ala. Filed Sept. 18, 1913. Serial No. 790,509. (Cl. 211—8.)

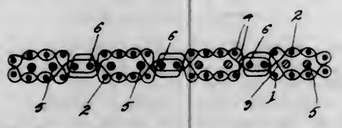
1. A refrigerator of the character described including a bottle holding compartment having an opening in its bottom through which bottles may roll, a door closing said compartment and formed with an opening alined with the opening in the bottom of the compartment, a removable plug mounted on the door and closing the opening therein and an ejector plate pivotally secured to said plug, and extending inwardly under a bottle, the removal of said plug causing the bottle to be ejected through the opening in the door.

2. A bottle dispensing refrigerator including a bottle holding compartment formed with an opening in its bottom through which bottles are adapted to roll through the force of gravity, a door closing the front side of the compartment and formed with a circular opening in alinement with the opening formed in the bottom of the compartment, a plug removably fitted within said opening, an ejector plate hingedly connected at one end to said plug and extending under the opening formed in the bottom of the compartment, said ejector plate being formed on its rear end with a lip adapted to engage a bottle, and a pivoted lever to which said plug is connected, a movement of the lever away from the refrigerator causing the plug to be withdrawn and the ejector plate to draw a bottle through the opening formed in the door.



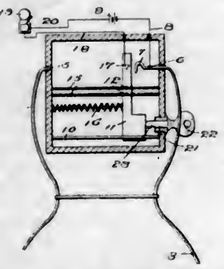
3. A bottle dispensing refrigerator including a bottle holding compartment, said compartment being formed with inclined bottom sections terminating in spaced relation to each other, whereby a discharge opening is formed, a stop plate secured at one side of the discharge opening, a door closing the compartments and formed with a circular opening opposite the discharge opening in the compartment, a plug removably fitted within the opening formed in the door, a bracket secured to the inner face of said plug, an elongated ejector plate pivotally secured at one end to said bracket and having a lip formed on its other end, the ejector plate being concavo-convex in cross section and extending under the opening formed in the bottom of the compartment, an arm extending forwardly from the door under the opening formed therein, an angular lever pivotally secured at one end to said arm and pivotally connected intermediate its ends to the plug, and means for locking the lever in such position as to hold the plug in its opening, a removal of the plug causing the ejector plate to draw a bottle from the compartment and project the same through the opening formed in the door.

1,105,503. WOVEN FABRIC. ELLA NEILSON GAILLARD, New York, N. Y., assignor of one-fourth to Rebecca M. Hallenback and Agnes Hallenback, New York, N. Y. Filed Sept. 30, 1913. Serial No. 792,670. (Cl. 139—9.)



A fabric composed of face warp threads arranged in sets, back warp-threads arranged in sets and opposed to the face warp-threads, stuffing warp-threads interposed between corresponding sets of face and back warp-threads, face and back weft-threads interwoven first with the face warp threads and then with the back warp threads or vice versa, and binder-threads, the face weft-threads passing behind the binder-thread and the back weft-threads passing in front of the binder-threads.

1,105,504. COAT AND HAT PROTECTOR. EDWARD GARGON, Philadelphia, Pa. Filed Apr. 16, 1913. Serial No. 761,624. (Cl. 177—314.)

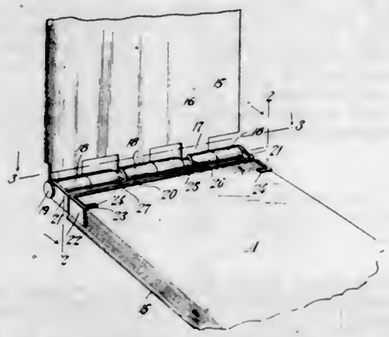


1. In a coat and hat protector a box structure, a wire coat and hat guard having the ends thereof terminating within the box structure, an electric alarm circuit having a movable terminal adapted to move toward and away from one of the ends of the wire guard, said end being spaced from the contact when the guard is in normal position, the other terminal of the alarm circuit being connected to the wire guard, and selecting means adapted to move said movable contact away from said end of the wire guard.

2. A coat and hat protector comprising a pivotally mounted wire guard, an electric alarm circuit having one end connected to the wire guard, a movable contact connected to the alarm circuit adapted to move toward and away from one end of the guard, selecting means adapted to move said movable contact, said wire guard adapted to swing to engage the movable contact when the latter has been moved toward said end.

3. A coat and hat protector comprising a box structure, a block slidably mounted within said box structure, an electric alarm circuit having one terminal carried by the block, a wire guard pivotally mounted upon the box structure and having an end extending into the box structure, the other terminal of the alarm circuit being connected to said end, selecting means adapted to move the block, and resilient means for holding the block against said selecting means, a terminal carried by the block adapted to move in proximity to the said end of the guard and engage said end when the wire guard is swung pivotally about the box.

1,105,505. COVER FOR BLANK BOOKS. JOHN W. GEARHART, Fresno, Cal. Filed Jan. 29, 1913. Serial No. 745,000. (Cl. 11—35.)



1. A blank book cover comprising side members, a pintle with which said side members are hingedly connected, a filler clamp supported pivotally on the pintle between the side members, and movable devices for locking one side member in fixed relation to the filler clamp while the other side member is free to move.

2. A book cover comprising side members having arms provided with terminal sleeves, a pintle extending through the sleeves of the two side members, a filler clamp pivoted on the pintle, and reversely disposed gravity actuated hook levers pivoted on the filler clamp and engaging the arms of the side members for locking one side member of the cover in fixed relation to the filler clamp while the other side member is free to move.

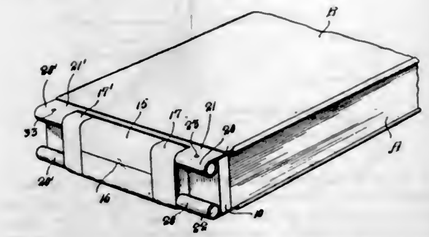
3. A book cover comprising side members having arms provided with terminal sleeves, a pintle extending through the sleeves of the two side members, a filler clamp pivoted on the pintle, and reversely disposed members pivoted on the filler clamp and having terminal hooks to engage the arms of the side members for locking one side member of the cover in fixed relation to the filler clamp while the other side member is free to move.

4. A book cover comprising side members, a pintle with which the side members are hingedly connected, a filler clamp pivoted on the pintle between the side members, and movable devices associated with the filler clamp for locking one side member in fixed relation to said filler clamp while the other side member is free to move.

5. A book cover comprising side members, each provided at one edge with arms having terminal sleeves, a pintle engaging the sleeves of the two side members, and a filler clamp pivoted on the pintles between the side members, said filler clamp having pivoted locking members to engage the arms of the side members.

[Claims 6 to 10 not printed in the Gazette.]

1,105,506. BLANK-BOOK COVER. JOHN W. GEARHART, Fresno, Cal. Filed Mar. 18, 1913. Serial No. 755,191. (Cl. 11—35.)



1. In a book cover, a back member consisting of a sheet metal body constituting a filler clamp, said body being provided with wings bent toward each other and connected together to form a housing, and locking devices in said housing.

2. In a book cover, a back member consisting of a sheet metal body provided along its upper and lower edges with wings, said wings being bent toward each other and connected together to form a housing, locking devices in said housing, and hinged side members adapted to be engaged by the locking members.

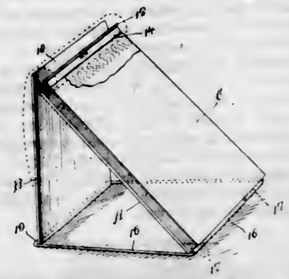
3. In a book cover, a back member consisting of a sheet metal body having oppositely extending wings, said wings being bent toward each other and connected together to form a housing, bearing blocks secured on the back member adjacent to the housing formed by the wings, and locking members in said housing.

4. In a book cover, a back member constituting a filler clamp and a housing, bearing blocks secured on the back member and each provided with transverse bores, side cover members having sleeves, pintles secured in the sleeves and engaging the bores of the blocks, and locking devices within the housing.

5. In a book cover, a back member having a housing, bearing blocks secured on the back member and having transverse bores, locking members within the housing, said locking members including diagonal cross bars each having a notched pintle member extending within a bore of the proximate bearing block, and a screw threaded sleeve positioned adjacent to the other bearing block, side cover members provided with sleeves adjacent to the respective bearing blocks, a pintle seated in a sleeve of each side member and having a threaded end extending through a bore of the proximate bearing block and engaging the threaded sleeve positioned adjacent thereto, and pintle members secured in other sleeves of the side members and extending within bores of the proximate bearing block in the direction of the notched pintle members of the locking members, said pintle members which are secured in the sleeves of the side cover members being provided with slidable spring projected members.

[Claims 6 and 7 not printed in the Gazette.]

1,105,507. BLANK-BOOK COVER. JOHN W. GEARHART, Fresno, Cal. Filed Mar. 21, 1913. Serial No. 755,973. (Cl. 11—11.)

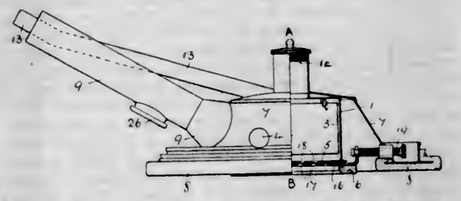


1. A book cover comprising side cover members and a flexible back member connecting the same, one of said side cover members having an upstanding rigid flange provided with filler attaching means, and a yoke pivotally connected with one side cover member, spanning the other side cover member and including a bridge piece adapted to rest in the angle between the flexible back member and the upstanding rigid flange.

2. A book cover for blank leaves comprising side cover members, a flexible back member connecting the same and a filler support adjacent to the back member, and a yoke pivotally connected with one side cover member and adapted to span the filler support and the other side cover member.

3. A book cover comprising side cover members and a flexible back member connecting the same, one of said side cover members including a metallic reinforcing plate having an upturned flange adjacent to the back member and constituting a filler support and having at its opposite end a rolled portion forming a sleeve, and a yoke pivoted in said sleeve and adapted to span the filler support and the other side cover member.

1,105,508. BRONZING APPARATUS. FREDERICK GILBERT, Edgbaston, Birmingham, England. Filed May 17, 1913. Serial No. 768,312. (Cl. 91—59.)



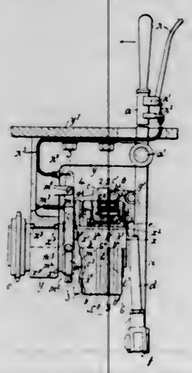
1. A portable bronzing head comprising a receptacle having at its under side outlets and a pad and having combined therewith an air duct through which a current of air may be directed upon the powder escaping through said outlets, and a hood arranged in surrounding relation to said receptacle and also provided on its underside with a pad, said hood providing a space which opens at the under side of the head and through which air may be drawn by suction.

2. In a bronzing apparatus, a portable bronzing head having a container provided at its under side with outlets and a pad and having also a hood or cover in spaced surrounding relation to said container and opening to the under side of said head, a suction fan, a pipe connecting said fan and said hood or cover to provide for a suction current of air through said hood, the container having combined therewith an air duct through which a current of air may be directed on the material escaping through said outlets, and a pipe connecting said air duct and the exhaust side of the fan.

3. A portable bronzing head having spaced pads on its under face and an opening in one of said pads and including a container arranged to discharge powdered materail through said opening, a hood surrounding the container and communicating with the space between the pads, an air conductor through which a current of air may be discharged upon the material escaping from the container and a suction pipe connected to the hood.

4. A portable bronzing head having spaced pads on its under face and an opening in one of said pads and including a container arranged to discharge powdered material through said opening, a hood surrounding the container and communicating with the space between the pads, an air conductor through which a current of air may be discharged upon the material escaping from the container and a suction pipe connected to the hood and arranged to form a handle for said head.

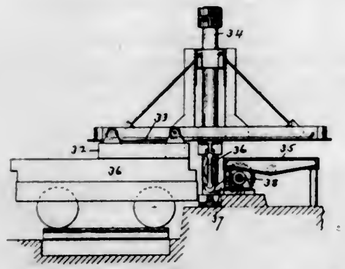
1,105,509. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WALTER VILLA GILBERT, East Ham, England. Filed Nov. 22, 1912. Serial No. 732,876. (Cl. 123—185.)



1. Apparatus for starting internal combustion engines and the like comprising, in combination, a rotary driven member constructed as a clutch member, a pivotally mounted primary lever, a pair of crank members rotatably mounted on the rotary clutch member, a pair of links on opposite sides of the axis of the rotary clutch member and respectively connected at one end to the lever and at the other end to the respective cranks, multi-axial joints at said connections, a second rotary clutch member adapted to engage the first, inclined faces on said clutch members for separating said clutch members should a backfire occur, a fork and tension means for holding the clutch members out of engagement, a secondary lever pivoted on the primary lever, means for transmitting movement from the secondary lever to the fork to cause it to hold the clutch members in engagement, and a pair of free wheel devices adapted to drive in the same direction for connecting the respective cranks one at a time to the rotary driven member.

2. Apparatus for starting internal combustion engines and the like comprising, in combination, a rotary driven member constructed as a clutch member, a hand primary lever adapted to oscillate in a plane parallel to the axis of the rotary clutch member, a pair of crank members mounted on the rotary clutch member, a pair of links on opposite sides of said axis and respectively directly connected at one end to the lever and at the other end to the respective cranks, joints at said connections permitting relative turning movements in more than one direction between the links and the lever and between the links and the cranks and having axes of turning in alinement with the links, a pair of free wheel mechanisms adapted to drive in the same direction interposed between the cranks and the rotary clutch member, a second rotary clutch member adapted to be held in engagement with the first clutch member, inclined faces on said clutch members for separating said clutch members should a backfire occur, a fork and tension means acting thereon for normally holding the clutch members out of engagement, a secondary lever pivoted on the primary lever, and flexible means for transmitting movement from the secondary lever to the fork for holding the clutch members in engagement.

1,105,510. BRIQUETING APPARATUS. NILS V. HANSELL, Bloomfield, N. J., assignor to American Grondal Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1912. Serial No. 669,582. (Cl. 25—45.)



1. In a briqueting apparatus, a suction box having a permeable top, a movable mold box supported on said permeable top during the fill thereof with wet briquet material, pneumatic means for removing through said permeable top of the suction box the excess moisture in the briquet material in the mold and means for shifting the mold to discharge position after the extraction of said excess moisture.

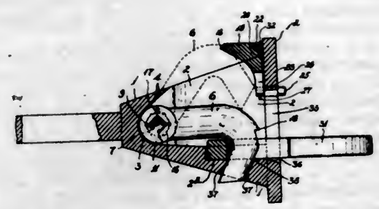
2. In a briqueting apparatus, a suction box in fixed position and having a permeable top, a movable mold box resting on said top during the fill thereof with wet briquet material, pneumatic means for removing through said permeable top of the suction box the excess moisture in the briquet material in the mold and a mold carrying frame for lifting the mold from the top of said suction box and shifting it to discharge position.

3. In a briqueting apparatus, a mold, a carrying frame and stationary uprights on which said frame is vertically movable, a permeable bottom for the mold-box in fixed position, pneumatic means for removing excess moisture through said permeable bottom from material in said mold-box and means whereby said old box may be shifted, when raised, from position over said permeable bottom to discharge position, substantially as described.

4. In a briqueting apparatus, a suction box having a permeable top, a mold-box and a supporting frame therefor vertically adjustable over said suction box to lift the mold-box from the latter and means whereby said mold-box may be moved horizontally on said supporting frame to discharge position.

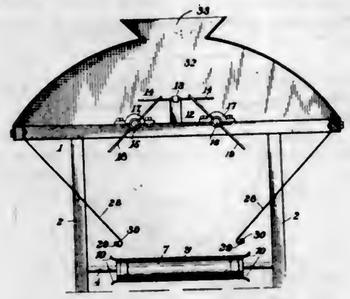
5. In a briqueting apparatus, a stationary suction box with permeable top, a vertically movable frame overlying said suction box, and a mold-box horizontally movable on said frame from position above said suction box to discharge position, substantially as described.

1,105,511. BUFFER AND COUPLING FOR RAILWAY AND ROAD VEHICLES. JAMES FOWLER HARKER, Johannesburg, Transvaal, South Africa. Filed Mar. 13, 1913. Serial No. 754,004. (Cl. 213—51.)



An automatic railway buffer-coupling comprising a coupling member pivotally supported within said buffer, a gravity catch pivoted to the buffer and adapted to engage the coupling member to retain it in its uncoupled position, means connected with said catch comprising a pair of arms which extend outwardly in opposite directions, and a pair of pins which project through holes in the front of the buffer and on opposite sides thereof so that the catch is automatically released by the contact therewith of the opposite buffer.

1,105,512. WASTE-CLEANING MACHINE. GEORGE W. HARNES, Alliance, Nebr. Filed Aug. 19, 1913. Serial No. 785,555. (Cl. 19—9.)

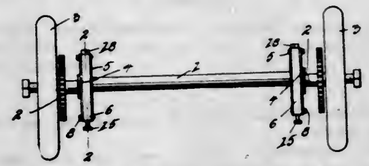


1. In a machine of the class described, the combination of a fixed comb, and a pair of revolving combs on opposite sides of the fixed comb, a pair of downwardly converging inclined grates spaced apart and arranged under the revolving combs, and a carrier below and between the said grates and on which the latter discharges.

2. In a machine of the class described, the combination of a fixed comb, and a pair of revolving combs on opposite sides of the fixed comb, a pair of downwardly converging inclined grates spaced apart and arranged under the revolving combs, and a carrier below and between the said grates and on which the latter discharges, the said endless carrier being provided with spaced flight bars.

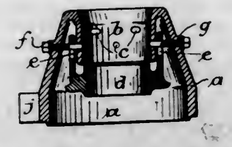
1,105,513. VEHICLE-AXLE. ARTHUR R. HARTMANN, Houston, Tex. Filed Sept. 23, 1913. Serial No. 791,390. (Cl. 21—187.)

1. In a structure of the character described, a pair of stub axles, a plate secured to the inner end of each stub axle, a rectangular frame secured to each of said plates, a cover plate secured to each frame, a block vertically movable within each of the frames, a main axle having its ends rigidly secured to said blocks, the cover plates being longitudinally slotted to permit a vertical movement of the main axle relative to the stub axles, a plurality of spiral springs positioned above and below each of said blocks, and adjusting screws threaded through the frames into engagement with said springs, whereby the tension thereof may be varied.



2. In a structure of the character described, a stub axle, a housing formed on one end thereof, a block vertically movable within said housing, a main axle connected to said block, and adjustable means for cushioning the upward movement of the block.

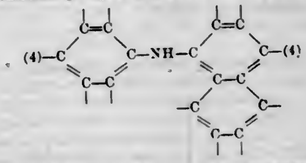
1,105,514. STEAM-EXHAUST NOZZLE. PETER THOMAS HAYWARD and WILLIAM PATRICK SANDERSON, Collie, Western Australia, Australia. Filed July 28, 1913. Serial No. 781,625. (Cl. 110—152.)



A steam exhaust nozzle for locomotives, comprising a hollow, frusto-conical casing formed with a plurality of apertures; a vertical, annular wall arranged within the interior of said casing and having its upper end joined to the corresponding casing end; a deflecting sleeve loosely encircling said wall for vertical movement relative thereto in either direction, and provided with a plurality of vertical slots corresponding in number to the apertures in the casing; and a plurality of inwardly projecting members having their outer ends mounted in said apertures and their inner ends engage with said wall, said members passing loosely through said slots to support said sleeve in place and limit its said movement.

1,105,515. SULFURIZED DYES AND PROCESS OF MAKING SAME. HEINRICH HEIMANN, Dessau, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Oct. 16, 1912. Serial No. 726,124. (Cl. 8—1.)

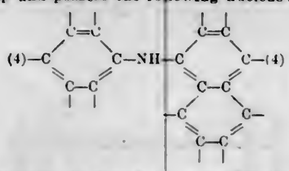
1. The manufacture of new sulfurized dyes fast to washing and to chlorin by acting with a sulfurizing agent upon those 4-hydroxydiarylamins in which one aryl residue is a phenyl group and the other aryl residue is a naphthyl group and in which one of the two 4-positions contains a hydroxyl group, which parent materials contain no sulfonic group and possess the following nucleus:



in which diagram the figures (4) represent the two 4-positions referred to.

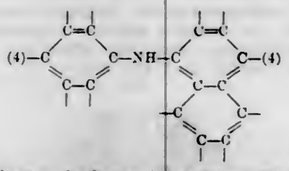
2. The manufacture of new sulfurized dyes fast to washing and to chlorin by acting with sulfur upon those 4-hydroxydiarylamins in which one aryl residue is a phenyl group and the other aryl residue is a naphthyl

group, and in which one of the two 4-positions contains a hydroxyl group which parent materials contain no sulfonic group and possess the following nucleus:



in which diagram the figures (4) represent the two 4-positions referred to.

3. The manufacture of new sulfurized dyes fast to washing and to chlorin by acting with sulfur in the presence of a substance being a liquid at the temperatures in question upon those 4-hydroxydiarylamins in which one aryl residue is a phenyl group and the other aryl residue is a naphthyl group and in which one of the two 4-positions contains a hydroxyl group, which parent materials contain no sulfonic group and possess the following nucleus:



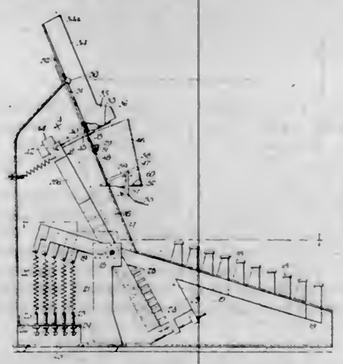
in which diagram the figures (4) represent the two 4-positions referred to.

4. The manufacture of new sulfurized dyes fast to washing and to chlorin by acting with a sulfurizing agent upon 4-hydroxyphenyl-1-naphthylamin.

5. The manufacture of a new sulfurized dye fast to washing and to chlorin by acting with sulfur upon 4-hydroxyphenyl-1-naphthylamin.

[Claims 6 to 8 not printed in the Gazette.]

1,105,516. COIN-DELIVERING MACHINE. BENJAMIN C. HOEFER, Chicago, Ill. Filed May 26, 1911. Serial No. 629,593. (Cl. 133—4.)



1. In a coin delivering machine, a magazine comprising a channel adapted to receive a stack of coins, actuating mechanism, a pivoted ejector connected with said mechanism and arranged to extend into said channel, and a locking member having a movement in accordance with the movement of the ejector and independently connected with said actuating mechanism and arranged to be engaged by coins in said channel to hold it in its free position.

2. In a coin delivering machine, a magazine comprising a channel adapted to receive a stack of coins, a swinging member, an ejector pivoted to the upper end of said member and arranged to extend through a slot into said channel to engage the coins, means tending to hold said ejector at the upper end of said slot, a locking member independently pivoted to said swinging member, and means tending to hold said locking member in arresting engagement with a stationary part, said locking member being arranged to be engaged by coins in said channel to be held out of such arresting engagement.

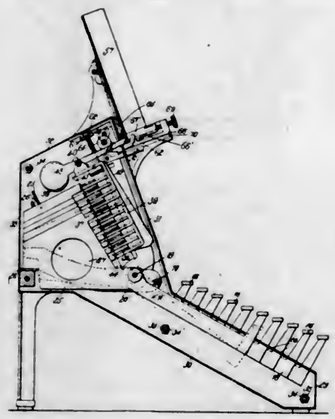
3. In a coin delivering machine, a magazine comprising a channel adapted to receive a stack of coins, a swinging member, an ejector pivoted to the upper end of said member and arranged to extend through a slot into said channel to engage the coins, means tending to hold said ejector at the upper end of said slot, a locking member independently pivoted to said swinging member and a weight hung to swing closely about said pivot to counterbalance said locking member to hold it in arresting engagement with a stationary part, said locking member being arranged to be engaged by coins in said channel to be held out of such arresting engagement.

4. In a coin delivering machine, a magazine, ejector mechanism associated therewith, oscillating operating selecting key bars mechanically connected with said ejector mechanism, said key bars being of different lengths, and adjustable resilient means for holding said key bars in their normal positions and arranged so that the power required to operate each key will be approximately the same.

5. In a coin delivering machine, a coin magazine, ejector mechanism associated therewith, and a plurality of keys for operating said ejector mechanism, said keys being of different lengths and being so arranged that those involving the delivery of the greatest amount of coin are the longest, and adjustable resilient devices for maintaining said keys in their normal positions and arranged so that the power required to operate each key will be approximately the same.

[Claims 6 to 11 not printed in the Gazette.]

1,105,517. COIN-DELIVERING MACHINE. BENJAMIN C. HOEFER, Chicago, Ill. Filed Mar. 25, 1912. Serial No. 686,062. (Cl. 133—4.)



1. In a coin delivering machine, the combination of a pivot rod, a plurality of U-shaped bars hung obliquely above said rod, stops at the rear of said bars, a plurality of pivotally mounted selector key bars hung from said rod, code projections on each of said key bars for engaging with one or more of said U-shaped bars, an ejector mechanism associated with said bars, and a magazine with which said ejector mechanism is associated.

2. In a coin delivering machine, the combination of a pivot rod, a plurality of U-shaped bars hung obliquely above said rod, a plurality of pivotally mounted selector key bars hung upon said rod, code projections on each of said key bars for engaging with one or more of said U-shaped bars, stops in the rear of said U-shaped bars extending forwardly a greater distance than the code projections on said key-bars, stops for limiting the forward movement of said U-shaped bars, said U-shaped bars resting against the rear stops by their own weight, ejector mechanism associated with said bars, and a magazine with which said ejector mechanism is associated.

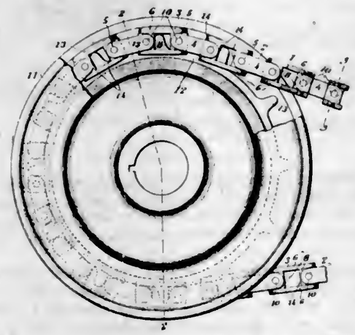
3. In a coin delivering machine, the combination of a coin magazine, ejector mechanism associated therewith, a plurality of keys for operating said ejector mechanism, said keys being of different lengths and being so arranged that those involving the greatest amount of coin are the longest, said keys having weighted ends to retain them in their normal position.

4. In a coin delivery machine, the combination of a magazine comprising a channel adapted to receive coins, a pivot member, actuating means adapted to oscillate about said pivot member, said actuating means being held in the normal position by the weight thereof, an ejector pivotally connected to said actuating means and arranged to extend through a slot into said channel to engage the coins, means for adjusting the engaging end of said ejector, and a locking member independent of said ejector but adapted to move therewith, said locking member being held in an unlocked position by the coins in said channel.

5. In a coin delivering machine, the combination of a magazine comprising a channel adapted to receive coins, a pivot member, actuating means adapted to oscillate about said pivot member, said actuating means being positioned upon said pivot member so that the weight thereof serves to hold said means in the normal position, an ejector connected to said actuating means and arranged to extend through a slot in the channel to engage the coins, devices for adjusting the engaging end of said ejector, and a locking member independent of said ejector but adapted to move therewith, said locking member being held in an unlocked position by the contents of said channel.

[Claims 6 to 17 not printed in the Gazette.]

1,105,518. UNIVERSAL-LINK CHAIN. JOHN J. IRVIN, Bellwood, Pa. Filed Feb. 15, 1913. Serial No. 748,638. (Cl. 74—31.)



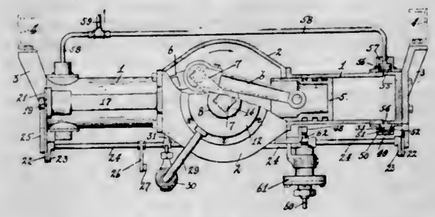
The combination of a sprocket wheel having a groove or channel in the periphery thereof, said groove or channel forming side plates or flanges, an annular recess in the base of the grooved periphery of less width than the groove, forming annular bearing shoulders within the groove on opposite sides of the recess, and spaced series of transversely registering lugs projecting radially from said shoulders, and a chain comprising sets of links composed of opposed pairs of plates and fulcrum blocks to which said plates are pivotally coupled for universal motion, said opposing sets of plates being respectively arranged at right angles to each other and in planes respectively parallel with and at right angles to the plane of rotation of the wheel, the innermost plates of one set being arranged to travel within the recess and the opposed plates of the other set being arranged to travel upon said bearing shoulders and presenting end abutment surfaces to engage said radial lugs.

1,105,519. DOLL-SUPPORT. KATE M. JESSUP, Centerville, Ind. Filed Jan. 23, 1911. Serial No. 604,024. (Cl. 211—24.)



A doll support comprising a base, a rod rising from the same, a slide comprising a tube for slidably engaging the rod, said tube being provided at its upper end with a vertical blade adapted to move with the tube in parallel relation to the rod, said blade being provided with apertures, tapes having their central portions threaded in the apertures, said tapes being movable with the blade, the terminals of said tapes being adapted to be tied when the tapes are passed around a doll to hold said doll in binding engagement with the blade and movable therewith, whereby the doll may be supported in a sitting or standing position.

1,105,520. STARTER FOR INTERNAL-COMBUSTION ENGINES. CLARENCE L. JOHNSTON, Oakland, Cal., assignor to Hiram T. Hall, Oakland, Cal. Filed Feb. 25, 1913. Serial No. 750,504. (Cl. 230—37.)



1. An engine starter including an air storage reservoir, an air actuated motor convertible from a motor to a compressor and vice versa, means for admitting air from the air storage reservoir to the motor for operating the same to start the engine, means for shutting off the flow of air thereto upon the starting of the engine to convert the motor into a compressor, a valve controlled air supply inlet to the motor, a valve controlled connection from the motor to the storage reservoir adapted for recharging the air storage reservoir when said motor is acting as a compressor, means for connecting the motor with the engine shaft upon the starting of the motor to start the engine, means connecting the motor and engine shaft and actuated upon the starting of the engine for operating the compressor and means for actuating the last mentioned means whereby said last mentioned means will be rendered inoperative on the air in the storage reservoir attaining a predetermined pressure.

2. An engine starter including an air storage reservoir, an air actuated motor convertible from a motor to a com-

pressor and vice versa, means for admitting air from the storage reservoir to the motor for operating the same to start the engine, means for shutting off the flow of air thereto upon the starting of the engine to convert the motor into a compressor, a valve controlled air supply inlet to the motor, a valve controlled connection from the motor to the reservoir adapted for recharging the air storage reservoir when the motor is acting as a compressor, a clutch mechanism interposed between the motor and the engine shaft, said mechanism including a pawl which is thrown into operation upon the starting of the motor to start the engine, a second pawl operating independently of the first pawl and thrown into operation upon the starting of the engine for operating the compressor, and means for throwing said last mentioned pawl into inoperative position on the air in the air storage reservoir attaining a predetermined pressure.

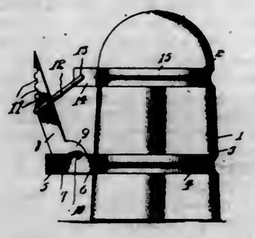
3. An engine starter including an air storage reservoir, an air actuated motor convertible from a motor to a compressor and vice versa, said motor comprising cylinders having pistons mounted therein and a crank shaft connecting the pistons, means connecting the crank shaft and engine shaft, a valve controlled connection between the air storage reservoir and the cylinders, means for opening and closing said connection, means operated by the rotation of the crank shaft for alternately admitting air under pressure from the air storage reservoir to the cylinders when said connection is opened for operating the motor to start the engine, a valve controlled air supply inlet to the cylinders, a second valve controlled connection therefrom to the storage reservoir adapted when the first connection is closed for converting a motor into a compressor to be operated by the engine for recharging the air storage reservoir, and means for disconnecting the motor and the engine when the air in the storage tank reaches a predetermined pressure.

4. An engine starter including an air storage reservoir, an air actuated motor convertible from a motor to a compressor and vice versa, said motor comprising oppositely disposed fixed cylinders having pistons mounted therein, a crank shaft connecting said pistons, means connecting the crank shaft and engine shaft, a valve controlled connection between the air reservoir and the cylinders, means for opening and closing said connection, a rotary valve carried by the crank shaft and disposed between the valve which controls said connection and the air storage reservoir and adapted upon the opening of said valve controlled connection for alternately admitting air under pressure from the air storage reservoir to the cylinders for operating the motor to start the engine, a valve controlled air supply inlet to the cylinders, a second valve controlled connection therefrom adapted when the first connection is closed for converting the motor into a compressor to be operated by the engine for recharging the air storage reservoir, means connecting the motor and engine shaft and operating independently of the first mentioned connection between the motor and said shaft, said last mentioned means being thrown into action when the engine starts whereby the motor is operated as a compressor, and means thrown into operation by the air in the storage tank when the same reaches a predetermined pressure for rendering the second mentioned connection between the motor and engine inoperative.

5. An engine starter including an air storage reservoir, an air operated motor convertible from a motor to a compressor and vice versa, said motor comprising cylinders having pistons mounted therein, a crank shaft connecting said pistons, the cylinders being provided with intake and exhaust channels, a connection between the air storage reservoir and the cylinders through said channels, said connection including a valve which consonantly admits air from the reservoir to one cylinder and receives the exhaust of air from the other cylinder, means for connecting the crank shaft with the engine shaft whereby the motor acts as a starter, and means adapted to periodically connect the crank shaft and the engine shaft whereby the motor will be actuated to supply air under pressure to the reservoir.

[Claims 6 to 8 not printed in the Gazette.]

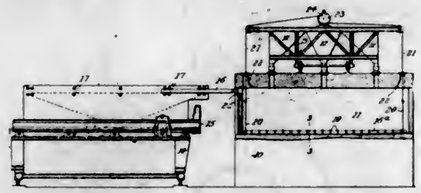
1,105,521. INSULATOR ATTACHMENT. JOHN A. KEPHART, Wellston, Okla. Filed Aug. 15, 1913. Serial No. 784,994. (Cl. 173—313.)



1. The combination with an insulator, of a wire holding device comprising a split band surrounding said insulator and having the ends thereof outturned and formed with notches in the upper edges thereof, a lever pivoted between its ends and formed with a heel coöperating with said notches to hold a wire in position, and means carried by said insulator for locking said lever against movement.

2. The combination with an insulator, of a wire holding device comprising a split band surrounding said insulator and having the ends thereof outturned and formed with notches in the upper edges thereof, a lever pivoted between its ends and formed with a heel coöperating with said notches to hold a wire in position, a second band surrounding said insulator, and a loop carried by said second band and designed to engage said lever to hold the latter against movement.

1,105,522. METHOD OF AND MEANS FOR WORKING COKE-OVENS. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill. Filed Nov. 15, 1913. Serial No. 801,107. (Cl. 202—8.)



1. Method of preparing a charge for a top-charged oven chamber which consists in dropping finely grained coal from above into said chamber thereby effecting a packing of said coal, and subsequently loosening up said packed coal.

2. Method of preparing a charge for a top-charged oven chamber which consists in dropping finely grained coal from above into said chamber thereby effecting a packing of said coal, and subsequently loosening up said packed coal from the bottom upward.

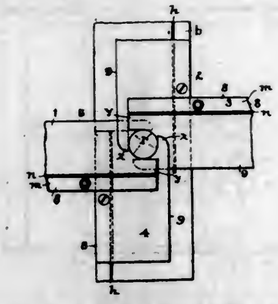
3. Method of preparing a charge for a top-charged oven chamber which consists in dropping finely grained coal from above into said chamber thereby effecting a packing of said coal, and subsequently raising a loosening member through the coal.

4. Method of working a coke oven which consists in placing a loosening means on the bottom of the coking chamber, filling a charge of coal over said means, and raising said means through the coal.

5. A coke oven having a coking chamber, a coal loosening member, means for depositing said member on the bottom of said chamber, and means for raising said member off said bottom.

[Claims 6 and 7 not printed in the Gazette.]

1,105,523. REVERSIBLE WINDOW-SASH. CHARLES OTTO KUEHNY, Lakewood, Ohio, assignor of one-fourth to Wendelin Kuehny, one-fourth to August Kuehny, and one-fourth to J. H. Jansen, Cleveland, Ohio. Filed Sept. 23, 1912. Serial No. 721,806. (Cl. 20—49.)

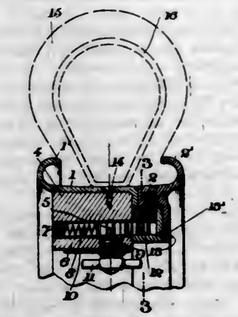


1. In combination a sash, a supplemental stile, a central pivot connecting said sash and said stile, plates fixed on said sash and stile having recesses with side projections at their adjacent ends abutting said pivots, said projections being overlapped and underlapped successively by the corresponding portions of the opposite plates about said pivot.

2. A window sash and a fixed casing, a carrier for the sash slidably mounted in said casing and provided with a trunnion at its middle of which the sash is pivoted and free to swing into a completely reversed position, thus bringing the outside of the window into a vertical position within the window for cleansing, and fixed plates on said sash and carrier, respectively, substantially in alinement with each other, said plates having each a substantially semi-circular recess fitting closely against said pivot, said plates each having projections at the sides of said recesses overlapping about said pivots, one of said projections on each side of the sash entering beneath the similar projection on the supplemental stile and the other projection on said plate overlapping the other plate on said stile.

3. A window sash and sliding carrier therefor having pivots on which the sash is adapted to be bodily inverted and the said sash and carrier having separate sheet metal strips on their edges provided with recessed inner ends overlapped about said pivots and the outer edges of said plates having doubled flanges at right angles to the body thereof their full outer length and extending past the said pivots in each plate, whereby a weather seal is maintained about said pivots and the sash is adapted to be inverted.

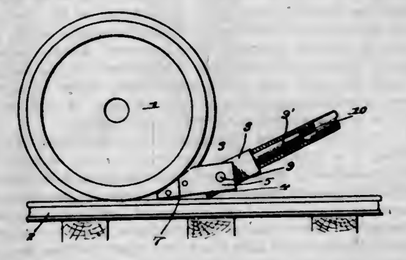
1,105,524. WHEEL-RIM. EUGÈNE LAURENT, St. Etienne, Loire, France. Filed July 16, 1912. Serial No. 709,807. (Cl. 152—21.)



1. A wheel rim comprising in combination a fixed rim part, said rim part being formed to provide a substantially U-shaped groove at one edge of the said part, the outer wall of the said groove being nearer to the axis of the wheel than that portion of the rim part upon which the tire is carried, a projecting ledge from the said rim part, a layer of packing material upon the said projecting ledge, a separable rim part, an inwardly projecting flange from the said separable rim part adapted to bear against the said outer wall of the said groove, an extension of the said inwardly projecting flange adapted to press upon the said layer of packing material upon the said projecting ledge, a segment adapted to fit within the groove in the movable rim part, pivoted lever means for expanding the said segment to lock the parts in assembled relation, and means for wedging the said expanded segment in position within the said groove in the said movable rim part.

2. A wheel rim comprising in combination a fixed rim part formed with a groove at one edge of the same, a flange on the outer wall of the said fixed rim part, a segment, and means for expanding and wedging the said segment within the groove in the inner face of the movable rim part, comprising an operating lever formed with a longitudinal slot, a pair of levers connected at one end of each of their extremities to one end of the said segment, their other extremities being connected by a pin sliding within the said slot, a link connected at one end to said pair of levers, its other end being attached to the other extremity of the segment and a block carried on the inner face of the said operating lever adapted when the segment is expanded to engage the under face of the said link and maintain the same and consequently the segment in position within the said groove in the movable rim part.

1,105,525. CAR-PUSHER. CHARLES MAYS, Philadelphia, Pa. Filed Jan. 10, 1914. Serial No. 811,485. (Cl. 105—70.)



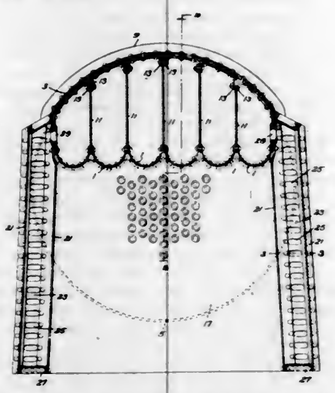
1. In a device for the purpose set forth, a substantially rectangular shoe having a beveled corner forming a toe, the shoe to the rear of its toe having a central opening, a fulcrum member including a rectangular bead pivoted within the opening of the shoe adjacent the upper corner thereof opposite the toe, whereby the said fulcrum member may be swung below the shoe, and a handle for the fulcrum member.

2. In a car wheel pusher, a shoe having a beveled corner comprising a toe which is adapted to be arranged against the tread of the car wheel, a fulcrum member pivotally connected to the shoe, a handle for the fulcrum member whereby the said fulcrum member may be rotated to bring one of its corners below the shoe in contact with the rail upon which the car wheel rests to force the toe of the shoe against the wheel to move the said wheel upon the rail.

1,105,526. FIRE-BOX CONSTRUCTION. JAMES M. MCCLELLON, Everett, Mass. Filed June 23, 1910. Serial No. 568,507. (Cl. 122—496.)

1. In a fire-box, the combination of crown sections extending in a direction from the front to the rear of the fire-box and each of convexed channel form with flanges projecting upward away from the interior of the fire-box; a top spaced above said sections and forming a steam and water circulation chamber therebetween; and means con-

necting said flanges with said top to contribute to the support of said sections.



2. In a fire-box, the combination of crown sections extending in a direction from the front to the rear of the fire-box and each of convexed channel form with flanges projecting upward away from the interior of the fire-box; a top spaced above said sections and forming a steam and water circulation chamber therebetween; means connecting said flanges with said top to contribute to the support of said sections; and hollow walls secured to the outer sections and communicating with said chamber.

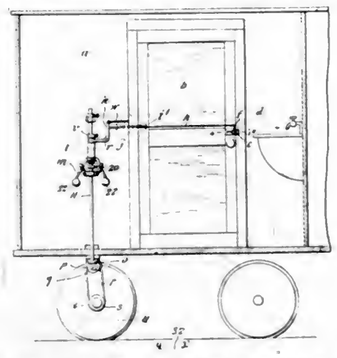
3. In a fire-box, the combination of crown sections extending in a direction from the front to the rear of the fire box and each of convexed channel form with flanges projecting upward away from the interior of the fire-box; a top spaced above said sections and forming a steam and water circulation chamber therebetween; means connecting said flanges with said top to contribute to the support of said sections; and walls comprising series of hollow steam generating sections secured to some of said crown sections and communicating with said chamber.

4. In a fire-box, the combination of crown sections extending in a direction from the front to the rear of the fire-box and each of convexed channel form with flanges projecting upward away from the interior of the fire-box; a top spaced above said sections and forming a steam and water circulation chamber therebetween; means connecting said flanges with said top to contribute to the support of said sections; and a flue sheet formed to conform to the under contours of said sections.

1,105,527. LATCH. JULIAN E. MINNER, Jamestown, N. D. Filed July 2, 1912. Serial No. 707,335. (Cl. 105—265.)

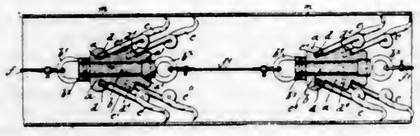
1. In combination with a vehicle, of a shaft in the vehicle having means connected with the running gear of the vehicle whereby the shaft is revolved, a governor mounted on the shaft, the said governor including a slidable sleeve which is mounted upon the shaft, a door having a keeper, and a latch connected with the governor adapted to engage the keeper of the door when the vehicle is stopped and the shaft ceases to rotate.

2. In combination with a vehicle having a door and a keeper for the door, of a pulley connected with one of the wheels of the vehicle, a bracket upon the under body of the vehicle, a shaft journaled upon the bracket, a pulley upon the shaft, an endless member engaging the pulley of the shaft and the pulley of the vehicle, the said shaft being provided with a beveled wheel, a second shaft arranged at right angles to the first named shaft and having its lower extremity projecting through the base of the vehicle the said projecting portion of the said second shaft having a beveled wheel co-acting with the beveled wheel of the first named shaft, bearings for the second named shaft, a slidable sleeve upon the said second shaft, a stop member for the sleeve, a ball governor supported upon the said second shaft and having its weighted arms co-acting with the sleeve, a pivoted substantially Y-shaped member having one of its arms co-acting with the sleeve, one of the angular arms of the said Y-shaped mem-



ber having a longitudinal extension notched to provide a latch which is adapted to engage with the keeper of a door, and a spring connected with the third arm of the Y-shaped member and adapted to normally sustain the latch into engagement with the keeper.

1,105,528. MACHINE FOR CLEANING WATER-MAINS. JOHN W. NELSON, New York, N. Y. Filed Aug. 14, 1912. Serial No. 715,024. (Cl. 137—70.)



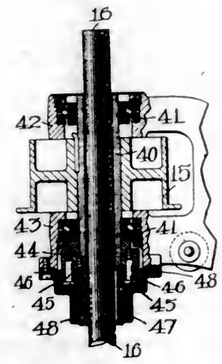
A machine for cleaning water-mains, which comprises a gang of scrapers arranged in line with each other, and flexible connections between the scrapers, each scraper being composed of a core, two groups of inclined sockets arranged in staggering relation with each other, and radiating spring-scrapers inserted into said sockets, the first scraper being provided with spring-scrapers having upwardly-bent and pointed ends, the second scraper being provided with spring-scrapers having serrated ends, and the third scraper being provided with spring-scrapers having chisel-shaped ends for removing successively all the sediments from the interior of the main.

1,105,529. SPINDLE-DRIVING MECHANISM. ALBERT E. NEWTON, Worcester, Mass., assignor, by mesne assignments, to Reed-Prentice Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 30, 1910. Serial No. 594,863. (Cl. 74—21.)

1. In a device of the character described, the combination of a pulley, a sleeve fixed thereto and extending beyond the ends thereof, bearings for said sleeve beyond the ends of the pulley, a driving collar rotatable with the pulley, a second collar, a loose connection between the two collars, and a spindle keyed to the second collar and passing through the sleeve.

2. In a device of the character described, the combination of a pulley, a sleeve therein, a spindle passing freely through the sleeve, bearings for the spindle beyond the ends thereof, a collar rotatable with the pulley and located below the same and beyond the bearings thereof, a second collar to which the spindle is splined, and a loose connection between the two collars.

3. In a device of the character described, the combination of a frame having two hubs in vertical alinement with a space between them, a sleeve passing across said space, bearings in the two hubs for the sleeve, a pulley fixed to the sleeve and located between the two hubs, a driving collar fixed to said sleeve, headed screws projecting from the collar, a second collar through which said screws loosely pass, and a spindle passing through the sleeve and through both collars and keyed to the second collar, said spindle being movable longitudinally therein.



4. In a device of the character described, the combination of a frame having two hubs in vertical alinement with a space between them a sleeve passing across said space, bearings in the two hubs for the sleeve, a pulley fixed to the sleeve and located between the two hubs, a driving collar fixed to said sleeve, headed screws projecting from the collar, a second collar through which said screws loosely pass, a spindle passing through the sleeve and through both collars and keyed to the second collar, said spindle being movable longitudinally, one of said collars being located in one of said hubs and the other projecting from it, and a cap on the end of the latter hub in which said other collar is located.

5. In a device of the character described, the combination of a frame having two hubs in vertical alinement with a space between them, a sleeve passing across said space, bearings in the two hubs for the sleeve, a pulley fixed to the sleeve and located between the two hubs, a driving collar fixed to said sleeve below the pulley and below the lower bearing, headed screws projecting downwardly from the bottom of said collar, a second collar through which said screws loosely pass, a spindle passing through the sleeve and through both collars and keyed to the second collar, said spindle being movable longitudinally thereon, and a cap on the bottom of the lower hub fitting the lower collar.

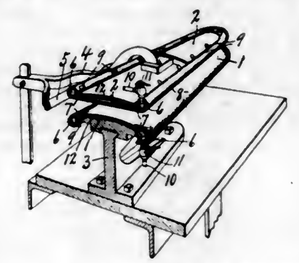
[Claim 6 not printed in the Gazette.]

1,105,530. GARMENT-PRESSING MACHINE. THEODORE D. PALMER, Syracuse, N. Y., assignor to T. D. Palmer Company, Syracuse, N. Y., a Corporation. Filed Jan. 30, 1911. Serial No. 605,575. (Cl. 68—9.)

1. In a garment pressing machine, two co-acting pressing elements provided with impervious presser faces, one of which elements is movable toward and from the other; a conduit running along the marginal edge of one of said elements and provided with lateral branch passages directing steam across the presser face of such element.

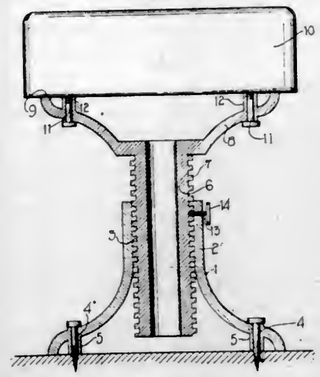
2. In a garment pressing machine a buck; an impervious press plate movable toward and from the buck; a conduit running entirely around the press plate and provided with branch passages extending inwardly across the lower surface of the press plate; and a screen covering the inner face of said press plate.

3. In a garment pressing machine, two pressing elements, consisting of metal plates having their marginal edges provided with steam conduits having branch passages extending laterally across the pressing faces of



said plates, and a metal screen covering the meeting faces of said plates.

1,105,531. REVOLVING MEAT-BLOCK. FRED PFLEIDERER, Jr., Superior, Nebr. Filed Aug. 2, 1913. Serial No. 782,743. (Cl. 17—9.)



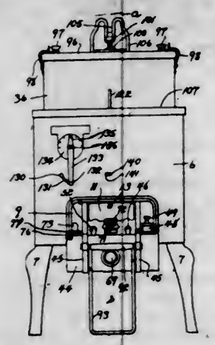
A pedestal for meat blocks comprising an elongated hollow base having an annular bearing seat, a reduced hollow standard extending upwardly from the base and communicating at its lower end with the interior thereof, apertured studs depending from the base and terminating in the plane of the bearing seat, an enlarged hollow circular head having an annular bearing seat, a reduced hollow stem depending from the head and entering the standard, apertured studs extending upwardly from the head and terminating in the plane of the bearing seat, and means for rotatably and adjustably connecting the stem within the standard.

1,105,532. COOKING APPARATUS. ROSS M. G. PHILLIPS, West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn., a Corporation. Filed May 7, 1914. Serial No. 836,952. (Cl. 126—39.)

1. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the said spacing-mechanism, a fuel tank connected with the preheater, and an air-escape valve connected with the said tank and automatically opened by the movement of the said movable part to stop the feeding of fuel from the tank to the preheater.

2. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure

for the said ingress draft-passage, spacing-mechanism for holding the food-container above the preheater in spaced relation thereto, means for automatically controlling the function of the spacing-mechanism in releasing the container which descends upon the preheater for the closing of its said ingress draft-passage, a fuel tank connected with the preheater, an air-pump for the fuel tank, and an air-escape valve connected with the tank and automatically opened by the descent of the food-container to stop the feeding of fuel from the tank to the preheater.



3. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the said spacing-mechanism, a fuel tank connected with the preheater, an air-pump for the fuel tank, and an air-escape valve connected with the said tank and automatically opened by the movement of the said movable part to stop the feeding of fuel from the tank to the preheater.

4. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the said spacing-mechanism, a fuel-tank connected with the preheater, an air-pump for the fuel tank, an air-escape valve connected with the said tank and automatically opened by the movement of the said movable part to stop the feeding of fuel from the tank to the preheater, and a visual fluid-level indicator mounted in the tank.

5. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the said spacing-mechanism, a fuel-tank connected with the preheater, an air-pump for the fuel-tank, an air-pressure signal, an air-escape valve connected with the said tank and automatcially opened by the movement of the said movable part to stop the feeding of fuel from the tank to the preheater, and a visual fluid-level indicator mounted in the tank.

[Claims 6 to 12 not printed in the Gazette.]

1,105,533. MOP-HEAD. BENJAMIN P. POLLOCK, Chicago, Ill., assignor of one-half to Charles E. Krebs, Chicago, Ill. Filed Feb. 10, 1913. Serial No. 747,265. (Cl. 15—57.)

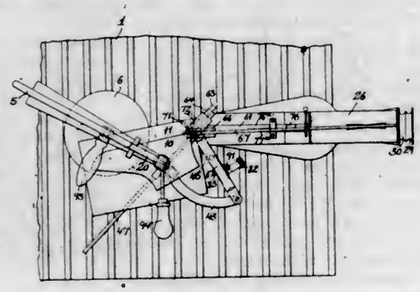
1. As a new article of manufacture, a mop-head of the character described, comprising a body portion consisting of a number of aggrouped, pliable strands of material, a strip of fabric extending transversely thereof, said strip of fabric having a lengthwise fold, and stitched to said body portion on each side of said fold, and a strong, tough filler in said fold, substantially, and for the purpose set forth.



2. As a new article of manufacture, a mop-head of the character described, comprising a body portion consisting of a number of aggrouped, pliable strands of material, a strip of fabric secured to said body portion, and extending transversely thereof, said strip having a lengthwise fold stitched to form an envelop and a strong, tough filler in said envelop, forming a grip adapted to be grasped between the jaws of a mop-holder.

3. As a new article of manufacture, a mop-head of the character described, comprising a body portion, consisting of a large number of aggrouped, pliable strands of material, a strip of fabric extending around said body midway between the ends of said strands and stitched thereto, said strip having a lengthwise fold between its side edges stitched to form an envelop, and a strong, tough piece of material inclosed in said lengthwise fold and together with said strip of material, adapted to form a grip capable of being grasped between the jaws of a mop-holder.

1,105,534. POWER CUTTING, GRADING MACHINE. ALBERT F. PRESTON, Boston, Mass. Filed Oct. 10, 1912. Serial No. 725,075. (Cl. 164—48.)



1. A pattern grading and cutting machine, comprising a table or base, a cutter head secured to said table, a model and blank holding jack resting movably on the table, the latter being composed of alternating strips of metal and wood of which the metal strips rise above the wooden strips to diminish the frictional resistance to sliding movement of the jack, a proportional motion mechanism connecting the jack and cutter head, and a model guide connected to a part of said proportional motion mechanism.

2. A pattern grading and cutting machine, comprising a movable jack for holding the model pattern and the blank, a stationary cutter head, a proportional motion linkage connected to the jack and including a member movable proportionately to, and through distances less than, the movements of the jack, a cutter head, cutting means on the cutter head, a slide on the cutter head adjustable transversely of said cutting means, a pivot connecting said linkage to said slide, a guideway carried by said member, and a model guide slide adjustably held in said guideway.

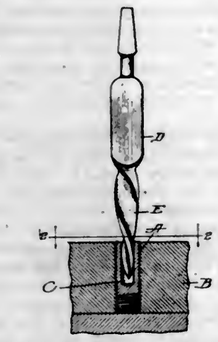
3. A machine of the character described, comprising, a cutter head, a cutter therein, a proportional motion mechanism, a movable model and blank holder connected with said mechanism, a pivot connected with said mechanism, a slide carrying said pivot and mounted adjustably on the cutter head, a model guide, and a slide carrying said guide and mounted adjustably on a portion of said mechanism.

4. A machine of the character described, comprising, a cutter head, a cutter therein, a proportional motion mechanism, a movable model and blank holder connected with said mechanism, a pivot connected with said mechanism, a slide carrying said pivot and mounted adjustably on the cutter head, a model guide, and a slide carrying said guide and mounted adjustably on a portion of said mechanism, and an index means associated with said slides to designate and measure the adjustments thereof.

5. A machine of the character described, comprising, a cutter head, a cutter therein, a proportional motion mechanism, a movable model and blank holder connected with said mechanism, a pivot connected with said mechanism, a model guide connected with a part of said mechanism which is movable toward and from said pivot, means for securing the pivot at different points on the cutter head, means for securing the model guide at different points relative to said part, and indexes associated with said pivot and said guide for measuring the adjustments thereof.

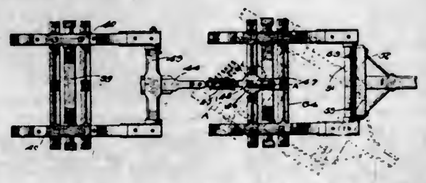
[Claims 6 to 18 not printed in the Gazette.]

1,105,535. SCREW-EXTRACTOR. JULIUS O. ROBERTS, Salina, Kans. Filed Mar. 24, 1913. Serial No. 756,334. (Cl. 145—50.)



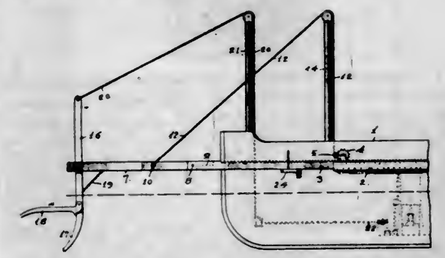
A hand tool for extracting broken off screws comprising an operating portion, the latter bearing spiral, edged ribs and being sufficiently tapered to adapt it when the tool is inserted in an opening drilled in the screw to be removed, to bite into the walls of such opening when the tool is turned in the direction necessary to unscrew said screw, to thereby cause said screw to turn with said tool.

1,105,536. SLEIGH. WILLIAM J. ROECKER, Three Lakes, Wis. Filed May 1, 1913. Serial No. 764,974. (Cl. 21—48.)



A device of the class described comprising a forward sled, a rear sled, said rear sled provided with a forwardly extending tongue, said forward sled provided with a plurality of transversely extending members, a bridge plate connecting said transversely extending members, a rotating plate pivotally mounted upon one of said transversely extending members, said rotating plate provided with a rearwardly extending tongue, and a coil spring connecting said forward tongue of said rear truck and said rearwardly extending tongue of said forward truck for constituting an expansible and yieldable connection between said rearward and forward trucks for permitting the independent swinging of said forward truck relative to said rearward truck.

1,105,537. AUTOMATIC SHIP REVERSING DEVICE. JOHN A. SAVOY, San Francisco, Cal. Filed Aug. 14, 1913. Serial No. 784,832. (Cl. 114—145.)



1. In an automatic reversing device for ships, the combination of suitable casings secured to either side of the ship; racks slidably mounted within the casings; a transverse shaft extending through the ship; pinions secured to the ends of the transverse shaft and adapted to engage the racks; a V-shaped member pivotally secured to the outer ends of the racks; means for supporting the V-shaped member; a trigger pivotally secured to the outer end of the V-shaped member; a horizontal extension pivotally secured to the lower end of the trigger; and a cable secured to the upper end of the trigger and to the reversing lever of the engine which propels the ship and adapted to reverse the said lever when the trigger encounters an obstruction.

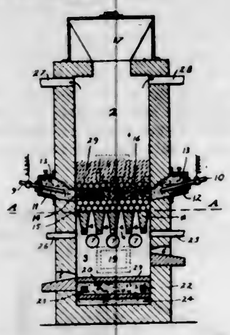
2. In an automatic reversing device for ships, the combination of suitable casings secured to either side of the ship; racks slidably mounted within the casings; a transverse shaft extending through the ship; a pinion on each end of the transverse shaft and adapted to engage the racks; a V-shaped member pivotally secured to the outer ends of the racks; lateral extensions secured to the V-shaped member; suitable drums on the transverse shaft; cables secured to the lateral extensions on the V-shaped member and to the drums on the transverse shaft; means for rotating the transverse shaft in either direction; a trigger pivotally secured to the outer end of the V-shaped member; a horizontal extension pivotally secured to the lower portion of the trigger; and a suitable cable secured to the upper end of the trigger and to the reversing lever of the engine which propels the ship so that when the trigger meets an obstruction the upper end of the trigger will be moved forward and reverse the engine by means of the said cable.

1,105,538. ELECTRIC FURNACE. HEINRICH F. D. SCHWAHN, Belleville, Ill. Filed Sept. 26, 1912. Serial No. 722,464. (Cl. 204—64.)

1. In an electric smelting and refining furnace of the character herein described, the combination of two chambers, an upper chamber provided with a resister over checkers upon a false bottom dividing the furnace into said two chambers, and checkers adjacent to and above said resister.

2. In an electric smelting and refining furnace of the character herein described, the combination of two chambers, an upper chamber provided with a resister and checkers, and a lower chamber or well with a series of con-

densers attached thereto, and means for heating the well, as and for the purpose described.



3. In an electric smelting and refining furnace of the character herein described, the combination of checkers and a resister with the resister-bed, the resister consisting of carbonaceous materials in contact with carbon electrodes; and means for charging and recharging or maintaining of the resister, and means for relieving said resister of the reduced and refined metal automatically, and means for the charging of the raw materials and reducing gases, and means for the discharging of the resultant product and spent gases, substantially as described.

4. In an electric smelting and refining furnace of the character herein described, the combination therein of two chambers resultant from a horizontally placed false bottom between the walls of the furnace, and upon which a carbon resister in combination with refractory checkers is so arranged as to permit the passage of the reducing gases and of the reduced non-volatile and volatile metals formed in the resister into the chamber or well beneath the false bottom, and means for heating the well, and a series of condensers attached to the well, as and for the purpose specified.

5. In an electric smelting and refining furnace of the character herein described, the combination therein of two chambers resultant from a false bottom placed between the walls of the furnace and upon which a carbon resister in combination with refractory checkers is so arranged as to prevent the direct contact of the unfused charge with said resister but permit the passage of the reducing and fluxing gases, and of the fused non-volatile and volatile metals through said resister into the chamber or well beneath the false bottom, and means for heating the well, and a number of condensers attached to the well, as and for the purpose specified.

1,105,539. DRAINING CULVERT OR CASING. ANDREW SMITH, San Mateo, Cal., assignor to Smith Metal Perforating Company, San Mateo, Cal. Original application filed Apr. 13, 1909, Serial No. 489,642. Divided and this application filed Mar. 25, 1912. Serial No. 686,102. (Cl. 61—9.)



1. A sheet metal culvert section provided with circumferential corrugations and with draining apertures, substantially as and for the purpose specified.

2. A culvert section provided with circumferential corrugations presenting externally convex and concave portions, and draining apertures in the said concave portions.

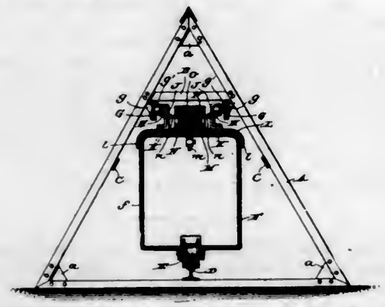
3. A sheet metal culvert section provided with transverse corrugations presenting externally concave and convex portions and apertures located in the concave portions.

4. A sheet metal drainage casing provided with circumferential corrugations and with sheared draining slits.

5. A sheet metal drainage casing provided with transverse corrugations presenting externally concave and convex portions and sheared draining slits located in the concave portions.

[Claim 6 not printed in the Gazette.]

1,105,540. MONORAILROAD. THOMAS CARL SPELLING, New York, N. Y. Filed June 8, 1914. Serial No. 843,765. (Cl. 105—234.)



1. In a railroad system of the character described, a suitable car-way having guide rails at the sides thereof, oppositely disposed rollers carried by the car adapted to engage said rails, and means for resiliently maintaining said rollers in engagement with the rails comprising spring plates secured to the car and carrying the rollers at their free ends.

2. In a railroad system of the character described, a suitable car-way having guide rails at the sides thereof, oppositely disposed rollers carried by the car adapted to engage said rails, and means for resiliently maintaining said rollers in engagement with the rails comprising spring plates secured to the car and carrying the rollers at their free ends, said plates consisting of two members nested together fastened at one end to the car, and separated at the other end to accommodate the rollers therebetween.

3. In a railroad system of the character described, a suitable car-way having guide rails at the sides thereof, oppositely disposed rollers carried by the car adapted to engage said rails, and fluid pressure means for resiliently maintaining said rollers in engagement with the rails.

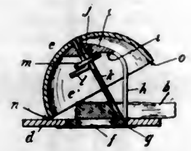
4. In a railroad system of the character described, a suitable car-way having guide rails at the sides thereof, oppositely disposed rollers carried by the car adapted to engage said rails, and fluid pressure means for resiliently maintaining said rollers in engagement with the rails, comprising a cylinder mounted at the top of the car, and pistons working in said cylinder and connected to said rollers.

5. In a railroad system of the character described, a suitable car-way having rails at the sides thereof, oppositely disposed rollers carried by the car adapted to engage said rails, and means for resiliently maintaining said rollers in engagement with the rails comprising piston-like members connected to the rollers, and a spring interposed therebetween acting normally to force said rollers apart.

[Claims 6 to 16 not printed in the Gazette.]

1,105,541. SHOE-LACE FASTENER. CHOBEY TAKETOSHI, Portland, Oreg. Filed Aug. 27, 1913. Serial No. 787,019. (Cl. 24—147.)

1. A fastener for laced shoes, comprising a standard formed with a horizontally projecting portion; a keeper made with a hollow spherical head and having a perpendicular shank affixed to the under side of said head, said shank inserted through a laterally elongated orifice therefor provided in the projecting portion of the standard; and a collar secured on the shank portion extending below said projecting portion of the standard; the parts being adapted to permit the keeper to be moved laterally by the tension of an encircling lace.



2. A fastener for laced shoes comprising a standard formed with a horizontally projecting portion; a keeper made with a hollow spherical head and having a perpendicular shank affixed to the under side of said head, said shank inserted through a laterally elongated orifice therefor provided in the projecting portion of the standard; holding means on the shank portion extending below said projecting portion of the standard; and the parts being adapted to permit the keeper to be moved laterally by the tension of an encircling lace.

3. A fastener for laced shoes comprising a standard formed with a horizontally projecting portion; a keeper made with a hollow spherical head and having a perpendicular shank affixed to the under side of said head, said shank inserted through a laterally elongated orifice therefor provided in the projecting portion of the standard; means holding the shank against being removed from said horizontally projecting portion of the standard; and the parts being adapted to permit the keeper to be moved laterally by the tension of an encircling lace.

1,105,542. NECKTIE-CLASP. EDWARD P. TOBIE, Providence, R. I. Filed Aug. 23, 1913. Serial No. 786,217. (Cl. 24—84.)

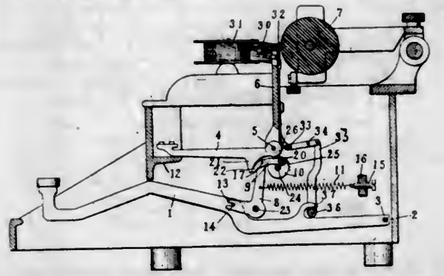


1. A tie clasp embodying in a single piece an oblong body portion having at one end a hooked member and at the opposite end bent upon itself to form a spring arm, said spring arm having an inward bend toward the body portion and terminating at its free end in a loop, said inward bend and loop adapted to distribute the pressure of said arm over the article engaged with a minimum of contacting surface.

2. A tie clasp embodying in a single piece an oblong body portion having at one end a hooked member the end portion of which is inclined toward the body portion and at the opposite end bent upon itself to form a spring arm, said spring arm having an inward bend toward the body portion and terminating at its free end in a loop, said inward bend and loop adapted to distribute the pressure of said arm over the article engaged with a minimum of contacting surface.

3. A tie clasp comprising in a single piece of spring material a body portion terminating at one end in a hook and at the opposite end bent upon itself to form an end loop and a spring arm, said arm having at its free end a loop, a portion of which is designed to contact with said body, and between said loop and bend formed with an intermediate bend toward the body to form a plurality of spaced contact points.

1,105,543. TYPE-WRITING-MACHINE KEY AND TYPE-BAR OPERATING MECHANISM. JESSE ALEXANDER, New York, N. Y., assignor of one-half to Charles B. Nichols, New York, N. Y., and one-half to Oscar Ebeling, Brooklyn, N. Y. Continuation of application Serial No. 664,759, filed Dec. 9, 1911. This application filed Apr. 14, 1913, Serial No. 760,979. Renewed Mar. 20, 1914. Serial No. 825,991. (Cl. 197—34.)



1. In a key and type bar mechanism, a pivoted key lever, a pivoted type bar having a projecting shoulder and a series of teeth, a disk having teeth meshing with the teeth of said type bar, a link connected to said disk and having one end adapted to coöperate with said shoulder on said type bar and an intermediate lever connecting said link and said key lever.

2. In a key and type bar mechanism, a pivoted key lever, a pivoted intermediate lever connected thereto, a pivoted type bar having gear teeth and a projecting shoulder, a toothed disk meshing with the gear teeth on said type bar and a link connected to said intermediate lever, adapted to engage the shoulder of said type bar and having a lost motion connection with said toothed disk.

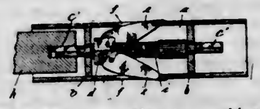
3. In a key and type bar mechanism, a key lever, an intermediate lever connected thereto, a pivoted type bar having gear teeth, a toothed disk meshing therewith and a link pivoted to said intermediate lever and having a lost motion connection with said toothed disk.

4. In a key and type bar mechanism, a pivoted type bar having a downwardly projecting shoulder and a series of gear teeth, a toothed disk meshing with said gear teeth, a member connected to said toothed disk and adapted to engage said shoulder and a key lever connected to operate said member.

5. In a key and type bar mechanism, a pivoted type bar having a downwardly projecting shoulder and a series of gear teeth, a toothed disk meshing with said gear teeth, a member having a lost motion connection with said toothed disk and adapted to engage said shoulder and means for operating said member.

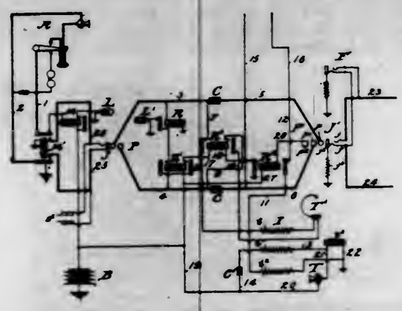
[Claims 6 to 9 not printed in the Gazette.]

1,105,544. KEYHOLE-GUARD. FRANZ BERGER-HAHNEL, Ullgersdorf, near Bodenbach, Austria-Hungary. Filed July 16, 1913. Serial No. 779,388. (Cl. 70—8.)



A keyhole guard comprising in combination, an open-ended shell having slots in its walls and a laterally projecting outer rib, bridges in said shell, a screw-spindle revolubly mounted in said bridges, a nut on that part of the spindle lying between said bridges, key-operated square portions on the ends of said spindle projecting beyond said bridges, and pivotal wings so arranged on said nut that they are disposed within the shell but prevented from entirely entering the latter upon the nut being screwed into one of its end positions while they project transversely therefrom upon the nut being screwed in other directions, substantially as described and shown.

1,105,545. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Apr. 10, 1914. Serial No. 831,048. (Cl. 179—27.)



1. In a telephone system, a continuously driven multiple signal impulse transmitting device, together with automatic switches for connecting lines, controlled by said transmitting device.

2. In a telephone system, a system of continuously driven commutators, producing impulses continuously, and a bank of selecting keys adapted to select from said commutators the impulses desired for any specific selection, together with automatic line connecting switches controlled thereby.

3. In a telephone system, a system of continuously driven commutators producing impulses continuously, and a plurality of impulse selecting devices adapted to select from said commutators the impulses desired for any specific selection together with automatic line connecting switches controlled thereby.

4. In a telephone system, a system of continuously driven commutators producing selective impulses continuously, and a plurality of sets of selecting keys adapted to select from said commutators the impulses desired for any specific selection, together with automatic line connecting switches controlled thereby.

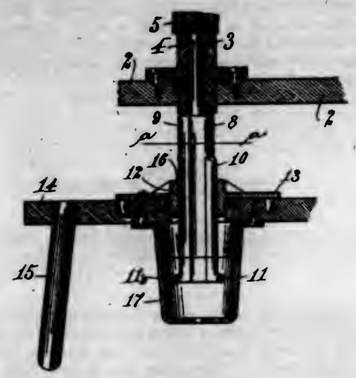
5. In a telephone system, a system of continuously revolving commutators producing in each revolution a complete cycle of selective impulses in the maximum required for any possible selection; and means for excerpting from any cycle the impulses required for any specific selection, together with automatic line connecting switches controlled thereby.

[Claims 6 to 53 not printed in the Gazette.]

1,105,546. MOUNTING OF DOLLY-WHEELS AND DASHERS. JAMES L. COFFIELD, Dayton, Ohio, assignor to The Coffield Motor Washer Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 7, 1914. Serial No. 810,738. (Cl. 68—15.)

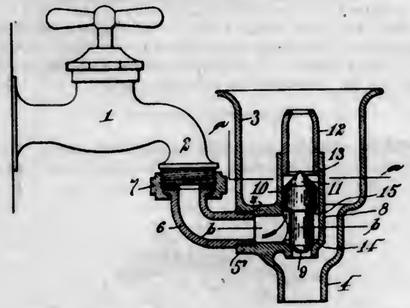
1. In a device of the type specified, the combination with a dolly-wheel having its axial opening provided with inwardly projecting oppositely disposed lugs, of a shaft having a plurality of longitudinal ribs two of which terminate below the upper end of said shaft, and lugs extending between said ribs and closing the space between said ribs on two opposite sides of the shaft, said lugs being adapted to coöperate with the lugs and the axial opening of the dolly-wheel and maintaining said dolly-wheel upon the shaft.

2. In a device of the character specified, the combination with the dasher having a central opening with oppositely disposed inwardly projected lugs, of a shaft a portion of which is enlarged and provided with a series of longitudinal and uniformly separated ribs which engage said lugs to impart reversed oscillatory movement to said dasher, some of said ribs extending the entire length of said enlarged portion and others being of less length than said enlarged portion, and oppositely disposed shoulders on the lower end of said enlarged portion and extending between one of the shorter and one of the longer ribs and



coöperating with the lugs at the central opening of the dasher to maintain the dasher in an operative position.

1,105,547. SANITARY DRINKING-CUP. PETER T. COFFIELD and JAMES L. COFFIELD, Dayton, Ohio, assignors to The Coffield Motor Washer Company, Dayton, Ohio, a Corporation of Ohio. Filed Feb. 11, 1914. Serial No. 818,141. (Cl. 137—109.)



1. In a device of the character specified, a casing having a main water inlet and upper and lower discharge openings, and a valve member mounted therein actuated by the water pressure and adapted to control the passage of water through one or the other of said discharge openings according to the force exerted thereon by the water.

2. A drinking fountain adapted to be permanently attached to a water faucet and comprising a shell having an internal boss provided with horizontal and vertical openings communicating one with the other, a drinking tube communicating with the vertical opening, and a fluid actuated valve controlling the water passage to said drinking tube and to the lower opening, said valve normally closing the lower opening and establishing a communication with the drinking tube.

3. In a device of the character specified, a casing having a main water inlet and outlet and a jet for drinking purposes, and a fluid actuated duplex valve member adapted to normally close the main outlet and maintain a communication with the drinking jet, the position of said valve member depending upon the force of the incoming water.

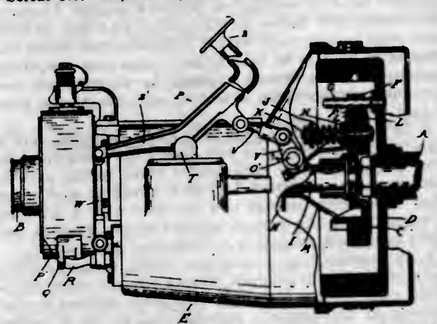
4. In a device of the character specified, a casing having a main water inlet and outlet and a jet for drinking purposes, and a valve member adapted to normally close the main outlet and to maintain a communication between the main inlet and said drinking jet, said valve

member having an annular shoulder against which the water impinges to reverse said valve member when the force of the water exceeds the weight of said valve member.

5. In a device of the character specified, a casing having a main water inlet and outlet and a drinking jet, a valve member having an enlarged portion lying within the entrance to the drinking jet and providing an annular passage therearound and an annular shoulder therebelow, said valve member being adapted to normally close the main outlet and maintain a communication between the drinking jet and the inlet and to be reversed when the force of the water exceeds the weight of said valve member.

[Claim 6 not printed in the Gazette.]

1,105,548. CLUTCH AND BRAKE CONTROL FOR MOTOR-VEHICLES. HOWARD E. COFFIN, Detroit, Mich., assignor to Chalmers-Detroit Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 9, 1908. Serial No. 461,776. (Cl. 21—90.)



1. In a motor vehicle, the combination with the motor shaft, the transmission and a casing for the transmission, of a clutch intermediate said motor shaft and transmission, a brake applied to the transmission, a pedal lever fulcrumed on said casing, a rocker for releasing said clutch, a link connecting said rocker with said pedal lever upon one side of the fulcrum of the latter, a lever for actuating said brake, and a link connecting said last-mentioned lever with the pedal lever upon the opposite side of the fulcrum of the pedal lever.

2. In a motor vehicle, the combination with the motor shaft, the transmission and a casing for the transmission, of a clutch intermediate said motor shaft and transmission, a brake applied to the transmission, a pedal lever fulcrumed on said casing, a rocker for releasing said clutch, a link connecting said rocker with said pedal lever upon one side of the fulcrum of the latter, a lever for actuating said brake, a link connecting said last-mentioned lever with the pedal lever upon the opposite side of the fulcrum of the pedal lever, and a lost-motion connection between said pedal lever and said last-mentioned link.

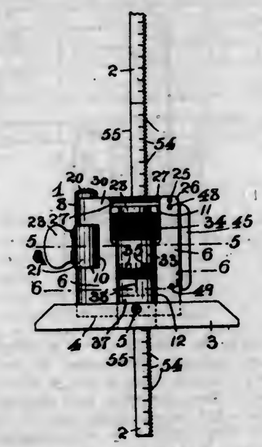
3. In a motor vehicle, the combination with the motor shaft, the transmission and a casing for said transmission, having a projection thereon, of a clutch intermediate said motor shaft and transmission, a brake applied to the transmission, and a single pedal lever fulcrumed on the projection of said casing, connected with said brake and clutch for successively releasing said clutch and applying said brake, the connections between the pedal lever and the brake and clutch being respectively upon opposite sides of and at points spaced from the fulcrum of the latter and independent of said fulcrum.

4. In a motor vehicle, the combination with the motor shaft and transmission, of a clutch intermediate said motor shaft and transmission, a brake applied to the transmission, a pedal lever fulcrumed intermediate its ends, a connection between the clutch and the lever upon one side of and at a distance from the pedal lever fulcrum, and a connection between the brake and said lever upon the opposite side of and at a distance from said fulcrum, said connections being secured to the lever independent of its fulcrum.

5. In a motor vehicle, the combination with the motor shaft, the transmission and transmission casing, of a clutch intermediate the motor shaft and the transmission, a brake applied to the transmission, a pedal lever fulcrumed intermediate its ends upon the casing, a connection between the clutch and the lever upon one side of and at a distance from the fulcrum of the latter, and a connection between the brake and the lever upon the opposite side of and at a distance from said fulcrum, said connections being secured to the lever independent of the fulcrum thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,105,549. MICROMETER-HEAD. LOUIS CORDIER, Newark, N. J. Filed Feb. 26, 1914. Serial No. 821,292. (Cl. 33—170.)



1. A micrometer head comprising a pair of body-members having a receiving space between them, a tubular micrometer cylinder rotatably connected with said body-members, a scale extending through said receiving space and movably disposed in said micrometer cylinder, and a clamping means in said receiving space adapted to be brought into engagement with the scale for moving said scale into its operative engagement with said micrometer-cylinder.

2. A micrometer head comprising a pair of body-members having a receiving space between them, a tubular micrometer cylinder rotatably connected with said body-members, a scale extending through and movably disposed in said micrometer cylinder, a clamping means in said receiving space adapted to be brought into engagement with the scale for moving said scale into its operative engagement with said micrometer-cylinder, and means also arranged in said receiving space for moving said scale out of its operative engagement with said micrometer-cylinder.

3. A micrometer head comprising a pair of body-members having a receiving space between them, a tubular micrometer cylinder rotatably connected with said body-members, a scale extending through and movably disposed in said micrometer cylinder, a clamping element in said receiving space, and a cam-member pivotally connected with said body-members coöperating with said clamping element for bringing said scale into operative engagement with said micrometer cylinder.

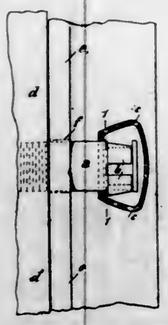
4. A micrometer head comprising a pair of body-members having a receiving space between them, a tubular micrometer cylinder rotatably connected with said body-members, a scale extending through and movably disposed in said micrometer cylinder, a clamping element in said receiving space, a cam-member pivotally connected with said body-members coöperating with said clamping element for bringing said scale into operative engagement

with said micrometer cylinder, and means also arranged in said receiving space for moving said scale out of its operative engagement with said micrometer-cylinder.

5. A micrometer head comprising a pair of body-members having a receiving space between them, a tubular micrometer cylinder rotatably connected with said body-members, a scale extending through and movably disposed in said micrometer cylinder, a clamping element in said receiving space, a spring-plate in engagement with said clamping element, and a cam-member pivotally connected with said body-members coöperating with said spring-plate and said clamping element for bringing said scale into operative engagement with said micrometer cylinder.

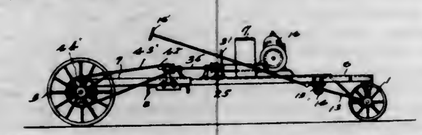
[Claims 6 to 15 not printed in the Gazette.]

1,105,550. SEAL-LOCK. VINCENZO DEL LUNGO, Florence, Italy. Filed Aug. 27, 1913. Serial No. 786,970. (Cl. 70—23.)



In a safety lock, the combination of a cylindrical stud provided with an annular recess near its outer end; a pair of relatively movable parts to one of which the inner end of the stud is fixed, the other part provided with an opening in which the intermediate part of the stud is received; a split ring received in said recess and having a cylindrical inner face and a conical outer face, the extreme inner and outer diameters of the ring being normally greater than the inner diameter of the recess and the diameter of the stud respectively; and a cap adapted to inclose said ring and having an annular shoulder of a smaller internal diameter than the largest normal diameter of the ring, and adapted to fit closely on said stud.

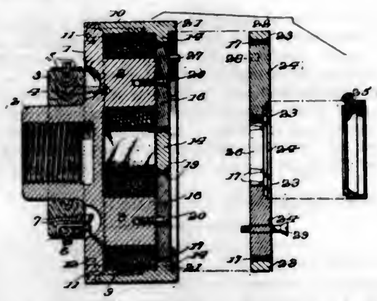
1,105,551. TRACTOR. GRANVILLE C. DORT, Plain City, Ohio, assignor of one-half to Richmond P. Dort, Westerville, Ohio. Filed Mar. 3, 1913. Serial No. 751,754. (Cl. 21—114.)



The combination in a tractor of a front frame and a motor supported thereon, a rear frame having traction wheels with driving sprockets, and a pair of intermediate transverse bars connecting said frames and extending beyond the sides of the frames, a transmission shaft on the front frame actuated from the motor, a pair of independent counter shafts actuated from the transmission shaft, a driving shaft for each countershaft operatively connected to the sprocket wheels, and each said driving shaft having a bearing adjustable on the transverse bars.

1,105,552. MAGNETIC CHUCK. LOUIS W. DOWNES, Providence, R. I. Filed Apr. 22, 1911. Serial No. 622,674. (Cl. 29—107.)

1. In combination, a magnetic chuck, a separable work-holding plate therefor comprising a plurality of magnetic sections secured together by non-magnetic material and having a work holding recess, said sections constituting pole extensions of the chuck.



2. In a magnetic chuck, the combination of a casing of magnetic material forming one pole of a magnet, a magnet core therein and means for energizing said core, a separable work-holding plate having a work-holding recess and adapted to be held by said magnet poles and comprising magnetic sections secured together by non-magnetic material and corresponding in number with the magnet poles of said chuck.

3. In combination, a magnetic chuck provided with a plurality of magnet cores and means for energizing the same and a separable work-holding plate having a work-holding recess and adapted to be retained by said chuck when in working position and provided with a plurality of magnetic sections secured together by non-magnetic material and constituting pole extensions of said chuck.

4. In combination, a magnetic chuck, a work-holding plate adapted to be retained thereon when in working position, comprising a plurality of magnetic sections secured together by non-magnetic material and having a central opening for the purpose described.

5. In combination, a plurality of magnet cores having coils for energizing them, a casing in the magnetic circuit of said cores surrounding the same and extending beyond their free ends to form a retaining rim and a work-holding plate adapted to be retained in working position within said rim and comprising a plurality of magnetic sections secured together by non-magnetic material.

[Claims 6 to 17 not printed in the Gazette.]

1,105,553. TOOL. DANIEL W. EDWARDS, Rockford, Ill., assignor to Greenlee Bros. & Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 19, 1913. Serial No. 762,401. (Cl. 77—71.)



A boring tool having a cylindrical shank formed intermediate its ends with one or more lateral extensions which have longitudinally spaced abutments and have opposite sides substantially tangent with said shank sides.

1,105,554. PREPARATION FOR DYEING HAIRS, FURS, AND THE LIKE. ARNOLD ERLENBACH, Dessau, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Original application filed Apr. 9, 1910, Serial No. 554,515. Divided and this application filed Sept. 19, 1910. Serial No. 582,699. (Cl. 8—6.)

1. As new compositions of matter, new preparations for dyeing hairs, furs and the like comprising an aromatic para-diamin of the general formula:

$$C_6H_3 \begin{cases} NH_2 & (1) \\ NH_2 & (4) \\ R & (3) \end{cases}$$

in which formula R means a univalent inorganic substituent composed at most of three inorganic elements, and an aromatic meta-diamin of the general formula:

$$C_6H_3 \begin{cases} R' & (1) \\ NH_2 & (2) \\ NH_2 & (4) \end{cases}$$

in which formula R' means an oxyalkyl group.

2. As new compositions of matter, new preparations for dyeing hairs, furs and the like comprising an aromatic para-diamin of the general formula:

$$C_6H_3 \begin{cases} NH_2 & (1) \\ NH_2 & (4) \\ R & (3) \end{cases}$$

in which formula R means a hydrogen atom, and an aromatic meta-diamin of the general formula:

$$C_6H_3 \begin{cases} R' & (1) \\ NH_2 & (2) \\ NH_2 & (4) \end{cases}$$

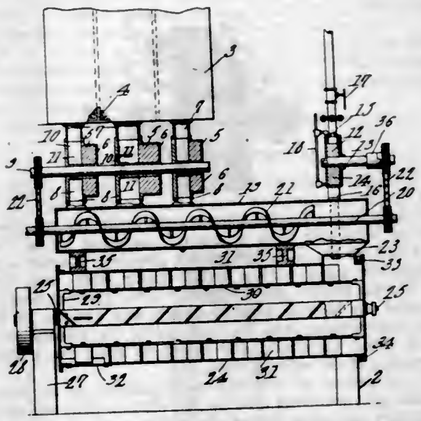
in which formula R' means an oxyalkyl group, which new preparations in the dry state when powdered form dark gray to dark brown or black powders being rather soluble in water and difficultly soluble in ether and benzene, whereas they are rather soluble in alcohol, acetone and glacial acetic acid, these new preparations producing on hairs, furs and the like in combination with an oxidizing agent bluish-black to blue black or black tints of great stability.

3. As a new composition of matter, a new preparation for dyeing hairs, furs and the like, comprising paraphenylenediamin and meta-diaminoanisol, which new preparation in the dry state when powdered forms a dark gray to dark brown or black powder which is rather soluble in water to a bluish-red to dark bluish-red, which solution on addition of ferric chlorid becomes dark yellowish red to dark brownish red and which solution on the addition of potassium bichromate at once separates a dark violet precipitate, whereas by the addition of hydrogen-peroxid and a small quantity of a caustic alkali it becomes at first lighter and browner, then dark brown and separates afterward a dark precipitate, which new composition is difficultly soluble in ether and benzene and dissolves in alcohol to a dull violet solution and in acetone and glacial acetic acid to a dark bluish-red solution, this new preparation producing on hairs, furs and the like in combination with an oxidizing agent bluish-black to blue-black of a great stability.

1,105,555. MIXING-MACHINE. BION B. FARNHAM, Buffalo, N. Y. Filed Nov. 11, 1913. Serial No. 800,357. (Cl. 99—2.)

1. A mixing machine comprising a mixing chamber, said mixing chamber provided with longitudinally extending rows of angularly disposed rotatable plates, the majority of the rows provided with the plates inclined in one direction, and the remaining rows provided with the plates inclined in the other direction, to thoroughly agitate the mass within the mixing chamber and to accomplish its gradual but interrupted transportation from one end of the chamber to the other.

2. A mixing machine comprising a mixing chamber, means for delivering material to be mixed thereto, said mixing chamber provided with stub shafts extending in the end walls thereof, spiders carried by said stub shafts and arranged interiorly of said mixing chamber, longitudinally extending beams secured to the extremities of said spiders, angularly disposed plates carried by said beams and adapted to agitate the material in contact therewith.



3. A mixing machine comprising a mixing chamber, means for delivering material to be mixed thereto, said mixing chamber provided with stub shafts extending in the end walls thereof, spiders carried by said stub shafts and arranged interiorly of said mixing chamber, longitudinally extending beams secured to the extremities of said spiders, angularly disposed plates carried by said beams and adapted to agitate the material in contact therewith, and the majority of said plates inclined to force the material in contact therewith in one direction, and the minority of said plates inclined in the opposite direction to move the material in contact therewith in the opposite direction.

4. A mixing machine comprising a plurality of positively driven measuring valves, means for feeding dry solids thereto, a conveying and mixing chamber disposed beneath and communicating with said valves adapted to intermix the various solids discharged from said valves while in a dry state, and a liquid measuring and discharge valve adapted to supply a liquid to the mixed solids after the same have traversed the said conveying and mixing chamber.

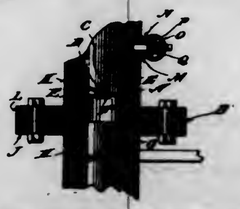
5. A mixing machine comprising a plurality of independent bins adapted to receive solid material therein, a plurality of positively driven measuring valves communicating with said bins, a conveying and mixing chamber disposed beneath and communicating with said valves adapted to thoroughly intermix the solids discharged from said measuring valves, and a liquid discharge valve positively driven in a definite gear ratio with the solid measuring valves and adapted to discharge a liquid to the mixed mass of solids.

[Claims 6 and 7 not printed in the Gazette.]

1,105,556. DEVICE FOR PREVENTING BACK-FIRING. CYRUS E. FOUTS, Wyoming, Ill., assignor of one-half to Frank E. Hartz, Wyoming, Ill. Filed June 2, 1913. Serial No. 771,247. (Cl. 137—32.)

1. In a device for the purposes set forth, the combination of a tubular part, two valve portions to lie upon the open end of the same adapted to tightly close it, said portions being hinged across the said open end, and adapted to be lifted by the suction through the part, a member extending across the open end beneath the hinge of the valve portions, the latter lying thereon when closed, said member adapted to prevent flame passing through the hinge portions into the said tubular part.

2. In a device for the purposes set forth, the combination of a tubular part, a member extending across the open end of the same, and a pair of hingedly related valve portions normally lying upon the end of the tubular part and upon said member and adapted to tightly close said tubular part, their hinged portions lying adjacent to and upon said member.



3. In a device for the purposes set forth, the combination of a tubular part, a member extending across the open end of the said part at its greatest diameter and having its upper surface substantially flush with the end of said tubular part, a pair of valve portions hinged adjacent the member parallel thereto and adapted to lie upon said member and the said end of the tubular part to be lifted therefrom, and means to limit the lifting movement of the valve portion.

4. An article of manufacture consisting of an open tubular part including a flange surrounding it at one end, a member extending across the opening of said part at its other end substantially at its greatest diameter, an extension projecting from said other end at diametrically opposite sides of the latter, one lying opposite each end of the said member, and a pair of valve portions hinged between the extensions and adapted to normally lie upon the member and upon the end of said tubular portion, the extensions adapted to limit the movement of the valve portions in one direction.

5. An article of manufacture consisting of an open tubular part, including a flange at one end lying in a plane substantially perpendicular to the axis of said tubular part, a member extending across the opening of the part at its other end and leaving an opening at each side thereof, an extension projecting from said other end at diametrically opposite sides of the latter, one lying opposite each end of the said member, and a pair of valve portions hinged between the extensions and supported between them, said portions adapted to normally lie upon the member and upon the end of said tubular portion, the same including notches opposite the edges of the extensions and in planes substantially perpendicular to the hinge, the said extensions adapted to limit the movement of the valve portions in one direction.

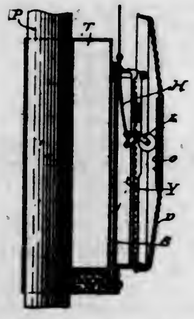
1,105,557. ARRESTER FOR STRONG CURRENTS. HAROLD W. GARTON, Brooklyn, N. Y. Filed July 22, 1913. Serial No. 780,424. (Cl. 175—315.)



1. A lightning arrester adapted to prevent the flow of normal currents to ground but to convey abnormal currents thereto, comprising a housing or support having line and ground terminal devices at its opposite ends, and a third terminal device adjacent to the ground terminal, and a spark gap device between the ground and third terminal, a rectangular member or body having hygroscopic properties interposed between the line and ground terminals in said housing, with rectangular aluminum plates each extending over an end and a side of said member and in contact therewith, connected with the line and third terminals respectively.

2. A lightning arrester adapted to convey abnormal currents from a line wire to ground, comprising a case or housing of porcelain, having a rectangular cavity in its under side, of line and ground terminal devices at its opposite ends, and a third terminal device adjacent to the ground terminal, and a spark gap device between the ground and third terminals of an electrolytic member or body, interposed between said line and ground terminals with plates of aluminum at its opposite ends, one of which is in contact with the end and underside, with a branch to the line terminal, and the other in contact with the opposite end and upper surface which bears under the end of the third terminal.

1,105,558. PIPE THERMOSTATIC MOTOR. EDWARD S. HALSEY, Lynn, Mass., assignor to Halsey Manufacturing Co., Wilmington, Del., a Corporation of Delaware. Filed July 12, 1909. Serial No. 507,070. (Cl. 236—6.)



1. A temperature regulator for heaters, comprising, in combination with a conduit through which the heated fluid to be regulated flows, a tank mounted on the conduit, shaped to embrace and make contact over an extended area with the same, said tank containing a volatile liquid, the boiling point of which is near approximately the temperature desired to be maintained, a motor apparatus consisting of flexible diaphragms nested one within the other and hermetically sealed together at their peripheries, mounted on the tank and normally convexedly distorted away therefrom, a tube leading from the tank and opening into the space between the diaphragms, and motion-transmitting mechanism located between the tank and motor apparatus arranged to be actuated by movement of the inner diaphragm of the latter.

2. In a temperature regulator for a water heating system, an elongated metal pressure tank having a curved wall to closely fit a circulation pipe of the system, said tank having portions extending around to the opposite side of said pipe and having means for clasping the same to said pipe, a flexible operating expansive chamber supported at a distance from said tank, and valve operating mechanism located between said tank and expansive chamber.

3. In a thermostatic motor the following described lever system; to transmit, redirect, and multiply the motion of an actuating diaphragm; a diaphragm; a frame "Y" fixed to said diaphragm; a bell crank "L" pivoted in said frame; two obtusely angular levers "H" and "H" pivoted on said frame one on each side of said bell crank each of said levers having a long outer arm and a short inner arm; one arm of said bell crank engaged with and worked by said diaphragm the other arm of said bell crank engaged with and working the two short inner arms of said obtuse levers; two equal connecting links "J" and "J" hinged together at a common point "K" in junction with an operating ligament said connecting rods being of such length and so pivoted in eyes in the two outer ends of said levers as to form an approximate but imperfect rhombus or equilateral parallelogram described by the levers "H" and "H" and the rods "J"

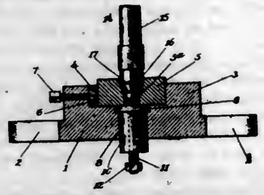
and "J" whereby a minimum travel of said operating ligament may be produced.

4. A thermostatic motor having an elastic, normally flexed corrugated metal diaphragm provided with regularly distributed concentric and substantially radial creases or corrugations, the said diaphragm when not under pressure having its central portion at one side of the plane of its periphery and movable under pressure toward said plane.

5. In a thermostatic motor, an elastic, concave concentrically corrugated metal diaphragm provided with a plurality of radial creases intersecting the concentric corrugations, the said diaphragm being formed to present a central portion when not subjected to pressure, at one side of the plane of its marginal portion, the said central portion being movable under pressure toward said plane.

[Claims 6 to 8 not printed in the Gazette.]

1,105,559. RING-FORMING APPARATUS. HENRY HENRICH, New York, N. Y. Filed Dec. 15, 1910. Serial No. 597,452. (Cl. 29—8.)



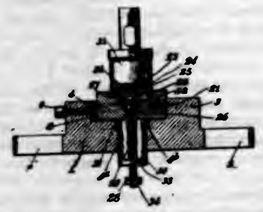
1. In a finger ring-forming apparatus a female die and a male die having a conical seat for the whole interior surface of the ring and an annular seat at the base of the cone extending around said first mentioned seat.

2. In a finger ring-forming apparatus a female die having a tapered seat for the ring and a male die having a conical seat for the whole interior surface of the ring said last mentioned seat being similar in shape to the tapered seat and an annular seat at the base of the cone extending around said first mentioned seat upon the male die.

3. In a finger ring-forming apparatus, a female die having a conical seat and a male die having a central tapering projection and an annular seat extending around the same at a point opposite the wider portion of said conical seat, the smallest diameter of the conical set of the female die being smaller than the largest diameter of the central projection of the male die.

4. In a finger ring-forming apparatus, a female die having a conical seat, and a male die having a conical projection and an annular seat extending around the same at a point opposite the wider portion of said conical seat, the smallest diameter of the conical seat of the female die being smaller than the largest diameter of the central projection of the male die.

1,105,560. RING-FORMING APPARATUS. HENRY HENRICH, New York, N. Y. Filed Jan. 17, 1912. Serial No. 671,664. (Cl. 29—8.)



1. In a ring forming apparatus, two female dies each having a conical forming surface and a cylindrical center pin.

2. In a ring forming apparatus, two female dies each having a conical forming surface and a cylindrical removable center pin.

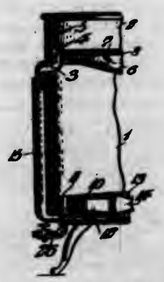
3. In a ring forming apparatus, two female dies each having a conical forming surface, a cylindrical center pin, and a spring support for the center pin.

4. In a ring forming apparatus, two female dies each having a conical forming surface, a cylindrical removable center pin, and a spring support for the center pin.

5. In a ring forming apparatus, two female dies and a cylindrical center pin, each of said dies having a forming surface in the shape of a cone and a plane connected by a curved surface.

[Claims 6 to 9 not printed in the Gazette.]

1,105,561. DISH CLEANER AND DRIER. EUSEBIUS E. HERSHEY, Philadelphia, Pa. Filed Aug. 11, 1913. Serial No. 784,054. (Cl. 141—8.)



1. In a dish washer, a vessel, and a base member adapted to close the bottom of said vessel composed of a body having centrally therein a propeller chamber, a passage which extends horizontally from the circumference of said body to said chamber, and a vertically extending port, the latter being between the center and circumference of said body and adapted to communicate with the interior of said vessel and with said passage.

2. A vessel, a water supply receptacle therein, a deflector in said vessel below said receptacle, a propelling member in the base of said vessel constructed to forcibly throw the water centrally upward into direct contact with the articles to be cleansed, a conveyer of water from said receptacle to said member, a conveyer for air from the atmosphere to said member, an outlet pipe for air from said vessel, and an air passage intermediate of said deflector and receptacle in communication with said air outlet pipe.

1,105,562. TRACTOR. JAMES B. HILL, Raceland, La. Filed July 25, 1912. Serial No. 711,509. (Cl. 21—150.)



1. In a tractor the combination with a frame, and a transverse axle, of connected runners mounted to oscillate upon the axle, a shaft journaled upon and extending transversely of the runners, an endless apron extending around the runners and including hingedly connected tread strips, spaced rollers movable with the apron, and sprockets upon the transverse shaft and engaging the rollers, there being webs upon the sprockets and adapted to be seated within the spaces between the rollers.

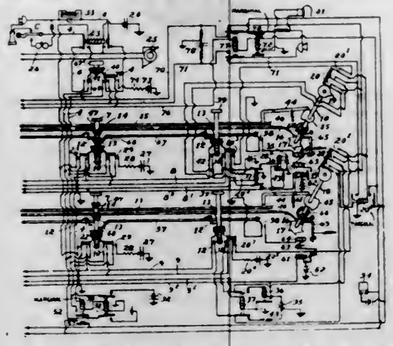
2. In a tractor, the combination with a main frame, of an axle including transversely extending oppositely disposed channel beams, flanged bearing strips secured to the beams, the flanges at the ends of said strips outstanding,

connected runners having openings therein for the reception of the axle, said end flanges constituting means for preventing lateral displacement of the runners relative to the axle, an endless apron mounted upon the runners, and means for actuating the apron.

3. In a tractor, a runner having a depending longitudinal flange along the center of the bottom thereof, an endless apron extending around the runner and including hingedly connected tread strips, a pair of spaced rollers extending between every two adjoining tread strips and movable with the apron, said rollers being movable along the runner and said flange being extended between the rollers, and sprockets supported in line with the runner for engaging the rollers to actuate the apron.

4. In a tractor, the combination with a frame and a transverse axle, of connected runners mounted for oscillation upon the respective end portions of the axle, there being a central longitudinal flange depending from each runner, parallel tread strips extending under the two runners and hingedly connected to form an endless apron, pairs of spaced rollers interposed between every two tread strips, one pair of rollers being disposed below each runner, the flange being extended between the rollers of each pair, and sprockets alined with the runners and engaging the rollers to actuate the apron.

1,105,563. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1911. Serial No. 643,336. (Cl. 179—70.)



1. A telephone exchange system including a plurality of telephone lines extnding to an exchange; a plurality of link connectors for joining said lines in telephonic connection; a plurality of switches for each link connector, each switch being individual to a telephone line, these switches having contacts and circuit connections that enable them to connect the lines to which they are individual with the link connector to which they are common whereby lines may be telephonically connected; and an operator's telephone provided with circuit connections governed by said switches and serving to enable the telephonic connection thereof with the telephone lines.

2. A telephone exchange system including a plurality of telephone lines extending to an exchange; a plurality of link connectors for joining said lines in telephonic connection; a plurality of switches for each link connector, each switch being individual to a telephone line, these switches having contacts and circuit connections that enable them to connect the lines to which they are individual with the link connector to which they are common whereby lines may be telephonically connected; an operator's telephone provided with circuit connections governed by said switches and serving to enable the telephonic connection thereof with the telephone lines; and a source of signaling current provided with circuit connections governed by said switches and serving to enable the connection thereof with the telephone lines.

3. A telephone exchange system including a plurality of telephone lines extending to an exchange; a plurality of link connectors in interchangeable relation to calling lines and in interchangeable relation to called lines for joining said lines in telephonic connection; a plurality of operator controlled switches for and individual to each link connector, each switch being individual to and permanently associated with a telephone line, these switches having contacts and circuit connections that enable them to connect the lines to which they are individual with the link connector to which they are common whereby lines may be telephonically connected; and means jointly controlled by the switches that connect calling and called lines with the same link connector for preventing the connection of an additional telephone line with this link connector.

4. A telephone exchange system including a plurality of telephone lines extending to an exchange; a plurality of link connectors in interchangeable relation to calling lines and in interchangeable relation to called lines for joining said lines in telephonic connection; a plurality of operator controlled switches for and individual to each link connector, each switch being individual to and permanently associated with a telephone line, these switches having contacts and circuit connections that enable them to connect the lines to which they are individual with the link connector to which they are common whereby lines may be telephonically connected; and mechanical means jointly controlled by the switches that connect calling and called lines with the same link connector for mechanically preventing such operation of an additional switch associated with this link connector that would connect the telephone line to wnich this additional switch is individual with this link connector.

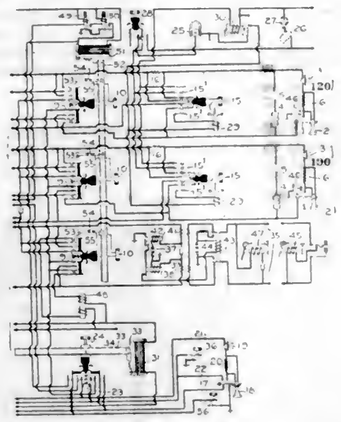
5. A telephone exchange system including a plurality of telephone lines extending to an exchange; a plurality of link connectors in interchangeable relation to calling lines and in interchangeable relation to called lines for joining said lines in telephonic connection; a plurality of switches for and individual to each link connector, each switch being individual to and permanently associated with a telephone line, these switches having contacts and circuit connections that enable them to connect the lines to which they are individual with the link connector to which they are common whereby lines may be telephonically connected; and means jointly controlled by switches that connect calling and called lines with the same link connector for preventing inclusion of the operator's telephone in connection with the connected lines.

[Claims 6 to 28 not printed in the Gazette.]

1,105,564. TELEPHONY. CHARLES A. BALS, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1913. Serial No. 776,027. (Cl. 179—70.)

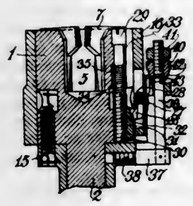
1. A telephone system including a telephone line extending from a station to an exchange; a signaling current generator; a key for including the signaling current generator in circuit with the telephone line; a magnet included in the path of the current and whose armature, when released, serves to hold the key in depressed position, this armature freely permitting a depression of the key when signaling current is to be applied to the line; switching mechanism governed by the key for removing signaling current from the holding magnet after such signaling current has been initially applied to the line and reincluding the magnet in circuit with the generator upon partial release of the key to permit the key to be held by the armature of the magnet in its partially released position; a signaling bridge at the station of the line of sufficient resistance to prevent the signaling current from operating the magnet; and a telephone bridge at the station sufficiently lacking in resistance to permit such current to operate the magnet then to release the key.

2. A telephone system including a link connector; a telephone line extending from a station to said link connector; a trunk line extending from said link connector to an exchange; keys individual to said line and common to the link connector; a source of signaling current; an electro-magnet for connecting said source of signaling current with the trunk line to operate a signal device at the exchange to which said trunk line extends; and circuit connections established by said link and keys for



associating said electro-magnet with the equipment of the station of said telephone line whereby said signaling current may be applied to the trunk line by the operation of the equipment at said station.

1,105,565. SELF OPENING OR RELEASING THREAD-CUTTING DIE. FRANKLIN JUDGE, Greenfield, Mass. Filed Feb. 2, 1914. Serial No. 816,033. (Cl. 10—97.)



1. In an automatic die-head, the combination, of a member formed with an axially arranged recess and radial openings therein, die members pivotally mounted in said recess, means to normally move said members to an open position, a stem, a cam-device secured to the stem, a slidable ring, means on the ring to engage the cam-device to impart a rotary and longitudinal motion to the ring, pawl element, means to adjust said element, a latch carried by the ring to engage said pawl to retain the die-members in a closed position, a sleeve engaging said ring, a second sleeve, a second ring adjustable on the second sleeve to determine the position of the die-members with relation to each other, and means to position the pawl with relation to the latch.

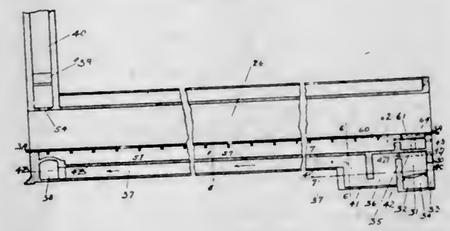
2. In a self-opening die, the combination, a die-head, die-members pivotally mounted therein, said members having inclined outer edges, a cylindrical sleeve to engage the inclined outer edges, the inner ends of the die-members having a recess to receive the pivots and inner extension portions, spring actuated devices mounted in the die-head to engage the extension portions of each die-member, a cam-device, a member having projections thereon to engage said cam-device, means to retain the die-members in a closed position, means to adjust the retaining means, and operative devices between the cylindrical sleeve and the member having projections thereon to cause the retaining means to operate to release the die-members when a pulling force is transmitted to the die-head, as described.

3. In a self-opening die, the combination, of a die-head, die-members pivotally mounted therein, spring actuated plungers engaging the inner ends of said members, a cylindrical sleeve on the die-head to cam said members into a closed position, manual means to move said sleeve to close the members, a latch on the sleeve, a pawl with which the latch is adapted to engage, a threaded rod to adjust said pawl, a stem to secure the die-head to a suitable support, means operated from the sleeve to cause the unlocking of the latch when a relative motion between the die-head and stem is produced, as described.

4. In a self-opening die, the combination, of a recessed die-head, die-members pivotally mounted therein, means to normally move said members into an open position, a cylindrical sleeve, a cam-device secured to the die-head, a member having projections thereon to engage the cam-device, a latch pivotally secured to the last-mentioned member, a pawl to retain the latch in its locking position, a device to operate the pawl for adjusting the position of the die-members relative to each other, a stem to secure the device to a suitable support, whereby upon a relative movement between the die-head and the stem, the latch will be disengaged from the pawl and the member with its latch cammed to an inoperative position, as described.

5. In a self-opening die-device, the combination, a recessed die-head, die-members mounted therein and their outer edges having inclined surfaces, a stem to secure the die-head to a fixed support, a cylindrical sleeve or shell movably mounted on the die-head to cam said members into a closed position when the sleeve is moved outwardly thereon, means to move said sleeve on the die-head, means to lock the sleeve in its forward position to retain the die-members in a closed position, means to effect the release of the sleeve upon a relative motion between the die-head and the stem being produced, a tension device to permit said relative motion, spring actuated devices to coöperate with the die-members to move the sleeve to its inoperative position and open the members, and manually operated means to reset the sleeve and close the die-members, as described.

1,105,566. HEATING SYSTEM FOR DRIERS. ITHAMAR M. JUSTICE, Dayton, Ohio. Filed Mar. 11, 1912. Serial No. 682,976. (Cl. 110—73.)

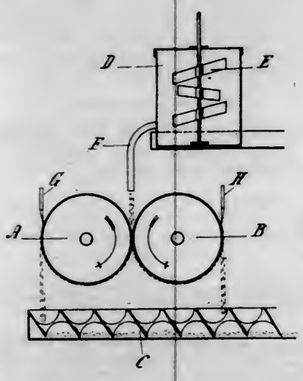


1. In a heating system for driers the combination of a heating element comprising: a furnace, an expansion chamber which is divided into two parts by a baffle wall, and a substantially horizontal flue, the three parts of the heating element being in horizontal succession and bounded by rectilineal side walls; a horizontal air duct adjacent to and coextensive with each side wall, each wall forming one wall of the adjacent duct; an inlet for air at one end of each duct, and baffles extending alternately upward from the bottom and downward from the top of each duct around which air must pass in traversing the ducts; the top of each duct having a succession of apertures beginning at a point beyond where the flue taps the expansion chamber, the tops being entirely removed therebeyond.

2. In a heating system for driers a furnace having an upper chamber isolated from products of combustion, a pair of baffles extending toward each other from its sides and dividing the chamber into two parts whose only communication is through a narrow space between the opposing edges of said baffles; inlet apertures in the upper part of the front wall of the chamber, one of them close to each side wall, and a horizontal slit at the top of the rear wall of the chamber for the emission of heated air.

3. In a heating system for driers the combination of a heating element comprising: a furnace, an expansion chamber which is divided by a baffle wall into two parts, and a substantially horizontal flue, the three parts of the heating element being in horizontal succession and bounded by rectilineal side walls; a horizontal air duct adjacent to and coextensive with each side wall, each wall forming one wall of the adjacent duct, an inlet for air at one end of each duct, and baffle walls extending alternately upward from the bottom and downward from the top of each duct around which air must pass in traversing the ducts, the top of each duct being removed from a point beyond where the flue taps the expansion chamber; and a chamber above the furnace only having a pair of baffles extending toward each other from its sides and dividing the chamber into two parts whose only communication is through a narrow space between the opposing edges of the baffles, inlet apertures in the front wall of the chamber, one of them close to each side wall, and a horizontal slit in the rear wall of the chamber for the emission of heated air.

1,105,567. PROCESS OF MANUFACTURING ADHESIVES GIVING WITH COLD WATER STRONG CEMENTING MASSES. JULIUS KANTOROWICZ, Breslau, Germany. Filed Aug. 17, 1909. Serial No. 513,338. (Cl. 87—17.)



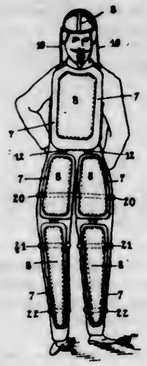
1. The process of manufacturing substances which will form with cold water strong adhesives, the said process consisting in mixing starch containing substances in comminuted state with cold water in sufficient amount to obtain a liquid mixture, adding a chemical improving the adhesiveness of starch and subjecting the said mixture in thin layers to a temperature of over 100 degrees centigrade sufficient for converting the starch into paste and driving the water out of the said paste.

2. The process of manufacturing substances which will form with cold water strong adhesives, the said process consisting in mixing starch containing substances in comminuted state with cold water in sufficient amount to obtain a liquid mixture, adding a chemical of alkaline reaction and subjecting the said mixture in thin layers to a temperature of over 100 degrees centigrade sufficient for converting the starch into paste and driving the water out of the said paste.

1,105,568. COMPOSITION OF MATTER. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-third to Dickson Q. Brown, New York, N. Y., and one-third to Albert R. Ledoux, Cornwall, N. Y. Filed Nov. 3, 1911. Serial No. 658,370. (Cl. 106—23.)

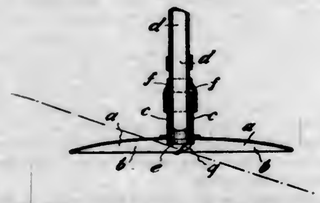
The herein described composition of matter, molded in the forms of corks and vulcanized, and consisting of guayule, eleven parts; balata, ten parts; sulfur, one part; and woodpulp, five to twenty parts, proportioned to produce the kind of corks required substantially as described.

1,105,569. PNEUMATIC SUIT FOR AVIATORS. NAZAIRE LACROTTE, Paris, France. Filed Nov. 4, 1913. Serial No. 799,162. (Cl. 2—190.)



A pneumatic combination for aviators and motorists, comprising a helmet, a breast plate, thigh guards and shin guards each of these parts being constituted by a central core formed by india rubber elements of rectangular form, one face of which is flat and the other arched arranged in separate boxes or compartments formed by vertical and horizontal strips sewn to two incasing pieces of canvas, the central core being confined between layers of compressed and quilted cotton and elastic cotton with the interposition of a cork plate in the cotton, the whole being contained in an envelop, the outer face of which is covered with a sheet of leather or skin for preventing the said envelop from being torn in contact with sharp angled objects.

1,105,570. SEED OR LIKE DRILL. RICHARD N. LEA, Manitou, Manitoba, Canada, and FREDERICK MACKENZIE LEA, Birmingham, England. Filed Oct. 3, 1912. Serial No. 723,800. (Cl. 111—11.)

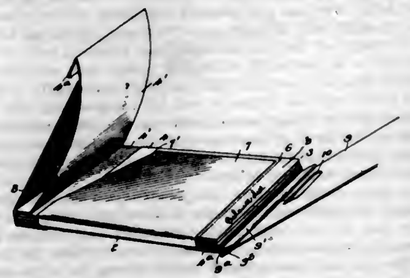


1. A disk seed drill wherein the disks are arranged at an acute angle to the horizontal plane and with their forward edges lowest in combination with means for feeding the seed to the underside of the disks.

2. A disk seed drill wherein the disks are arranged at an acute angle to the horizontal plane and with their forward edges lowest, said disks being concave on the underside, in combination with means for feeding the seed to the underside of the disks.

3. A disk seed drill wherein the disks are arranged at an acute angle to the horizontal plane and with their forward edges lowest, in combination with feed tubes leading the seed to the undersides of the disks and deflectors to throw the seed toward the leading edges of the disks.

1,105,571. MANIFOLDING-BOOK. BERT C. MAXWELL, Canton, Ohio, assignor to Julius Whiting, Jr., trustee, Canton, Ohio. Filed Jan. 16, 1908. Serial No. 411,156. (Cl. 11—23.)



1. In a manifolding book, the combination of a plurality of sets of original and duplicate slips, each set formed from a single sheet of paper folded transversely nearer to one of its ends than to the other and perforated along a line parallel to said line of fold and adjacent thereto, to form an original slip and a duplicate slip, the line of fold being substantially unweakened whereby one of said slips has a short inseparable folded-over section between the said line of fold and the said line of perforations, the said folded-over end of one slip of each set being arranged to fold over and inclose the folded-over end of the prior-used slip, means for binding the ends of the longer slips of said sets opposite to the ends connected with the shorter slips together, and a transfer sheet arranged to be interposed between the slips of each set of slips.

2. In a manifolding book, the combination of a plurality of sets of original and duplicate slips, each set formed from a single sheet of paper transversely folded nearer to one of its ends than to the other along a substantially unweakened line and perforated along a line parallel to said line of fold and adjacent thereto to form a relatively short original slip, and a duplicate slip having a short inseparable folded-over section between the said line of fold and the said line of perforations, arranged to fold over and inclose the folded-over section of the prior-used duplicate slip, means for holding the ends of the duplicate slips opposite to the ends carrying the folded-over sections in pad form, and a transfer sheet arranged to lie between the original and duplicate slips of the set of slips.

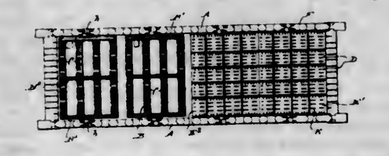
3. In a book, the combination of a plurality of sets of slips, each set formed from a single sheet of paper folded transversely intermediate of its ends along a substantially unweakened line and weakened along a line parallel to and adjacent to said line of fold, so as to provide an inseparable folded-over end at one end of one of the said slips of each set when the other slip of the set is detached along the said weakened line for inclosing the folded-over end of the previously-used slip, and means for binding that end of one slip of each set opposite to the end adjacent the folded-over end of the set to corresponding ends of similar slips of the remaining sets to form a book.

4. In a manifolding book, the combination of a plurality of sets of original and duplicate slips, each set formed from a single sheet of paper folded transversely intermediate of its ends and weakened along a line parallel to and adjacent to said line of fold to provide a folded-over end at one end of one of the slips of the set when the other slip thereof is detached along the said weakened line, said folded-over end having a space designated on its upper surface to receive notations of the amount to be forwarded or of the balance due.

5. In a manifolding book, the combination of a plurality of superposed sets of slips, each set formed from a single sheet of paper folded transversely intermediate of its ends along a substantially unweakened line to form two slips, one longer than the other, the shorter slip being weakened along a line parallel to the line of fold to provide an inseparable folded over-end when the said shorter slip is detached along said weakened line, means binding together the ends of the longer slips opposite to the ends connected with the shorter slips, and a suitable transfer means between the slips of a set and extending only from the free end of the shorter slip substantially to the said weakened line.

[Claims 6 and 7 not printed in the Gazette.]

1,105,572. ANTHRACITE-BURNING GRATE FOR FURNACES. WILLIAM MCCLAVE, Scranton, Pa., assignor to McClave-Brooks Company, Scranton, Pa., a Corporation of Pennsylvania. Filed Mar. 21, 1913. Serial No. 755,939. (Cl. 126—180.)



1. In a grate for burning fine fuel, the combination with the bearer bars, of dumping sections journaled in the bearer bars and each embodying a plurality of socketed bars extending longitudinally of the axis of the section, each socketed bar having mounted therein a series of independent fuel bearing caps, said caps being rigidly supported in fixed relation to each other throughout the entire section and each having therein a plurality of elongated air admission openings and a plurality of elongated edge slots extending through the fuel bearing surface.

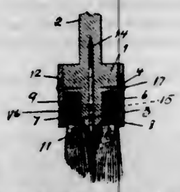
2. In a grate for fine fuel, the combination with the bearer bars, of dumping sections journaled in said bearer bars and each section comprising a rigid frame formed by a plurality of longitudinally arranged socketed bars rigidly connected by end pieces carrying the journals for the section, each of said socketed bars having mounted therein a series of independent rectangular fuel bearing caps located above the frame and each held rigidly with relation to all of the other caps of the section, each cap having elongated downwardly flaring air admission openings therein and elongated downwardly flaring air admission edge slots, the edge slots of each section being arranged opposite an unbroken edge of the adjacent section.

3. In a grate for burning fine fuel, the combination with the bearer bars, of dumping sections journaled in said bars, each section comprising a rigid frame formed by a series of longitudinally extending parallel bars each having a series of elongated sockets therein and end pieces carrying journals on which the section is supported, each of said socketed bars having rigidly mounted therein a series of substantially rectangular fuel bearing caps having edge slots and elongated air admission openings, said sections being spaced apart a distance substantially equal to the width of the slots and openings and said slots and openings being distributed uniformly throughout the whole grate area, whereby air is admitted uniformly to all portions of the fuel carried by the grate.

4. In a grate for burning fine fuel, a pivoted dumping section comprising a rigid frame formed by a series of parallel bars each having a series of equally spaced elongated socket openings therein and a multiplicity of fuel bearing caps having flattened shanks seating in said socket openings, each of said fuel bearing caps being substantially rectangular on its fuel bearing face and each having elongated air admission openings extending through said face, the edges of each cap in proximity to the edge of an adjacent cap in the section being provided with air admission slots, whereby the air entrance openings are

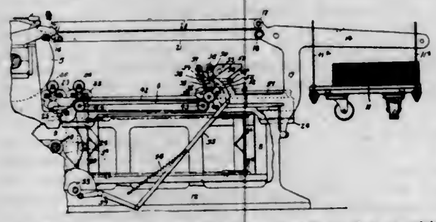
uniformly distributed without material reduction in the fuel supporting surface and the cumulative effect of edge growth in the sections is obviated.

1,105,573. BRUSH. HUGH P. MCMILLAN, Baltimore, Md., assignor to Wm. A. Tottle & Co., a Firm composed of William A. Tottle and Morton P. Tottle, Baltimore, Md. Filed Oct. 11, 1910. Serial No. 586,426. (Cl. 15—36.)



A flat brush having a handle with a brush block at the inner end of the handle which block has a crosswise-extending narrow plug projecting downwardly from the center of its under side which plug is of less width and thickness than the width and thickness of the brush block whereby to leave an integral overhanging shoulder on the block all the way around the narrow plug; a metal shell having a long and narrow socket to receive the plug on the block and also having an integral outwardly-extending flange around its upper edge which flange is of less width than the overhanging shoulder on the block; means extending into the plug from the under side of the shell socket to secure the shell to the block; bristles having their butt ends around the sides and ends of the shell and beneath the integral outward flange of the latter; a band having an edge against the overhanging shoulder of the brush block and its inner side seated against the edge of the outward flange of the shell and a ferrule around the band and the brush block and extending both below and above the flange on the shell.

1,105,574. PRINTING-PRESS. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Aug. 8, 1912. Serial No. 714,010. (Cl. 101—78.)



1. In a printing press, the combination of a machine frame, an impression cylinder, a horizontal endwise reciprocating type bed, an ink table movable with the type bed, sheet receiving means located at the delivery end of the machine frame beyond the path of the ink table, sheet conveying devices extending from the impression cylinder at an elevation above the type bed and beyond the delivery end of the machine frame, and adapted to deliver the sheets to the receiving means, form inking rollers located adjacent to the impression cylinder in position for the passage of the ink table beneath the same, an ink fountain mounted upon the machine frame at a distance above the level of the ink table, a plurality of ink transferring and applying rollers, arranged in a vertically extending group and adapted to transfer the ink from the ink fountain downwardly to the ink table, said ink fountain and transferring and applying rollers being located between the outer end of the path of movement of the ink table and the outer end of the frame and actuating means giving rotative movement to said ink transferring and applying rollers.

2. In a printing press, the combination of a machine frame, an impression cylinder, a horizontal endwise reciprocatory type bed, a horizontal ink table moving with the type bed, sheet receiving means located at the delivery end of the machine and embracing a piling table movable in a vertical path adjacent to the outer end of the path of the ink table, sheet conveying devices extending from the impression cylinder at an elevation above the type bed and ink table and adapted to deliver the sheets to the piling table, form inking rollers located adjacent to the impression roller in position for the passage of the ink table beneath the same, an ink fountain supported on the frame of the machine at a distance above the level of the ink table, a plurality of ink transferring and applying rollers arranged in a vertically extending group, and adapted to convey the ink from said ink fountain downwardly to said ink table, said ink fountain and ink transferring and applying rollers being located between the outer and inner ends of the path of movement of the ink table, and actuating means imparting rotative movement to said transferring and applying rollers.

3. In a printing press, the combination of a machine frame, an impression cylinder, a horizontal reciprocating type bed, an ink table moving with the type bed, an ink fountain mounted upon the machine frame above the level of the ink table and provided with means for controlling the flow of ink therefrom, a plurality of vertically arranged ink transferring and applying rollers adapted to transfer the ink from said ink fountain downwardly to the ink table, said ink fountain and transferring and applying rollers being located inwardly from the outer end of the path of movement of the ink table, and a fixed table mounted upon the machine frame above the ink table and below the level of the ink fountain, with one of its edges adjacent to the ink delivery controlling means of said fountain.

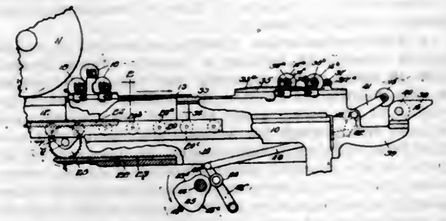
4. In a printing press, the combination of a machine frame, an impression cylinder, a horizontal reciprocating type bed, an ink table moving with the type bed, an ink fountain mounted upon the machine frame above the level of the ink table and provided with means for controlling the flow of ink therefrom, a plurality of vertically arranged ink transferring and applying rollers adapted to transfer the ink from said ink fountain downwardly to the ink table, said ink fountain and transferring and applying rollers being located inwardly from the outer end of the path of movement of the ink table, and a fixed member mounted upon the machine frame and extending across the same above the ink table and adjacent to the outer end of the said ink table when the latter is at the outward limit of its stroke; said fixed member forming a guard for the operator.

5. In a printing press, the combination of a machine frame, an impression cylinder, a horizontal reciprocating type bed, an ink table moving with the type bed, a vertically movable sheet receiving means located adjacent to the delivery end of the machine and beyond the path of the ink table, sheet conveying devices extending from said impression cylinder at an elevation above the type bed to the sheet receiving means, an ink fountain mounted above said ink table and located inwardly from the delivery end of the machine adjacent to the inner end of the path of movement of the ink table, a plurality of ink transferring rollers arranged in a vertically extending group and adapted to transfer the ink from the ink fountain downwardly to the ink table, and a fixed table mounted above said type bed and below the ink fountain and extending from said ink fountain toward the delivery end of the machine.

[Claim 6 not printed in the Gazette.]

1,105,575. PRINTING-PRESS. ROBERT MIEHLE, Plymouth, Ind., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed July 11, 1913. Serial No. 778,471. (Cl. 101—78.)

1. In a printing press, the combination of a reciprocating ink table, a distributing roller, a movable member having reciprocatory movement upon the frame and moving thereon at a less speed than that of the reciprocating ink table, said member being provided with a frictional bearing surface adapted to act on said distributing roller to impart rotative movement thereto.



2. In a printing press, the combination of a reciprocating bed, an ink table moving with said bed, a distributing roller provided with a friction surface, a slider frame, and a plurality of rollers mounted on said slider frame and supporting said reciprocating bed; said slider frame being provided with a frictional bearing surface adapted to engage said friction surface of said roller.

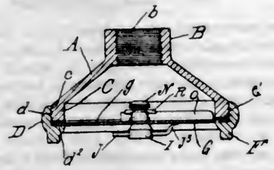
3. In a printing press, the combination with the press frame, of a reciprocating ink table, a distributing roller, a slider frame mounted on the press frame and supporting the reciprocating ink table, said slider frame having reciprocatory movement at a less speed than that of the ink table and being provided with a frictional bearing surface adapted to act on said distributing roller to impart rotative movement thereto.

4. In a printing press, the combination of a reciprocating bed, an ink table moving with said bed, a distributing roller provided with an annular friction surface materially smaller in diameter than said distributing roller, a slider frame, anti-friction rollers mounted on the slider frame and supporting said reciprocating bed; said slider frame being provided with a frictional bearing surface adapted to engage said friction surface of said roller, and driving means acting to impart positive reciprocatory movement to said slider frame at one-half of the speed of the reciprocating bed.

5. In a printing press, the combination of a reciprocating bed, an ink table moving with said bed, a distributing roller provided with an annular friction surface of a diameter materially less than that of said distributing roller, a slider frame, a plurality of anti-friction rollers supporting said reciprocating bed and in rolling engagement with a bearing surface of the press frame, and means for imparting a reciprocatory movement to said slider frame corresponding in a direction to, and at a speed materially less than, that of the said bed; said slider frame being provided with an arm carrying a shoe provided with an upwardly facing, frictional bearing surface adapted to engage said friction surface of said roller and to impart an initial rotative movement to said distributing roller.

[Claims 6 to 14 not printed in the Gazette.]

1,105,576. SHOWER-HEAD. ALBERT S. NEWTON, Providence, R. I. Filed Apr. 8, 1914. Serial No. 830,349. (Cl. 137—83.)

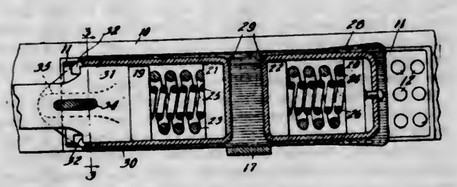


1. In a shower head, the combination with a body, of a plate upon the body provided with a series of perforations, and with a central opening, a pin rotatably mounted in the opening provided upon its inner end with a longitudinally disposed transverse slot, and with external threads, an arm passing through the slot and in contact with the surface of the plate, a spring member in the slot engaging the arm, and a nut upon the spring member provided with threads engaging the first mentioned threads.

2. In a shower head, the combination with a body, of a plate upon the body provided with a series of perforations, and with a central opening, a pin rotatably mounted in the opening provided upon its inner end with a longitudinally disposed transverse slot, and with external threads, an arm passing through the slot and provided with a recess in its lower margin to loosely receive a portion of the pin and of greater depth than the height of the unslotted portion of the pin above the plate, a spring member in the slot resting upon the arm, and a nut provided with threads engaging the first mentioned threads above the spring member.

3. In a shower head, the combination with a body, of a plate upon the body provided with a series of perforations, and with a central opening, a pin rotatably mounted in the opening provided upon its inner end with a longitudinally disposed transverse slot, and with external threads, an arm traversing the slot and provided with a recess in its lower margin to loosely receive a portion of the pin, and provided with a recess in its upper margin, a curved spring member traversing the slot and resting in the last mentioned recess, and a nut upon the threads engaging the spring member.

1,105,577. TANDEM DRAFT-RIGGING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed July 24, 1911. Serial No. 640,078. (Cl. 213—42.)



1. In a tandem draft rigging, a draft yoke having a hollow rectangular head, rear end piece and an intermediate hollow thimble all integrally formed, substantially as specified.

2. In a tandem draft rigging the combination with a draw bar, of a yoke having spaced arms, a rear end piece and an intermediate hollow thimble, said thimble being formed integrally with the arms of the yoke, and means for connecting said yoke and draw bar, substantially as specified.

1,105,578. PROCESS OF PURIFYING GAS. CHARLES J. O'DONNELL and ALBERT F. KUNBERGER, Philadelphia, Pa., assignors to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1913. Serial No. 761,880. (Cl. 48—220.)

1. The process of purifying gas which consists in removing carbon bi-sulfid by passing the gas through hot and dry ferric oxid, substantially as described.

2. The process of purifying gas which consists in removing carbon bi-sulfid by passing the gas through hot and dry previously precipitated hydrated ferric oxid, substantially as described.

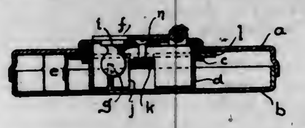
3. The process of purifying gas which consists in removing carbon bi-sulfid by passing the gas through hot ferric oxid having the probable formula $Fe_2O_3.\frac{1}{2}(H_2O)$.

4. The process of purifying gas which consists in heating ferric oxid to substantially from 400° to 450° F. and passing the gas through the same, thereby removing carbon bi-sulfid.

5. The process of purifying gas which consists in heating yellow or ocher iron oxid and passing the gas through the same.

[Claim 6 not printed in the Gazette.]

1,105,579. TAPE CASE AND WINDING-DRUM. GEORGE F. PUTNAM and HENRY H. WESSENDORFF, Flint, Mich., assignors, by mesne assignments, to The Lufkin Rule Co., Saginaw, Mich., a Corporation of Michigan. Filed July 26, 1913. Serial No. 781,345. (Cl. 242—84.8.)



1. The combination with a tape case provided on one side with a central opening and a turned-in lip, of a bearing unit journaled wholly in one side of the case by doubling the turned-in lip upon the bearing unit and a drum fastened to the bearing unit, substantially as described.

2. The combination with a tape case having a side wall provided with a central opening, of a bearing unit journaled wholly in one side of the case, a tape drum exposed only at the side of the case that journals the bearing unit, a screw for removably fastening the tape drum at its exposed end to the bearing unit so that when the drum is detached from the bearing unit the drum may be removed through the central opening, and a crank for turning the drum pivoted to the drum and arranged to overlie the screw when the crank is held against the drum in closed relation, substantially as described.

3. The combination with a tape case provided with a turned-in lip, of a bearing unit journaled wholly in one side of the case, comprising a ring rotatably held by said lip and a cross strip with a threaded central aperture, a drum notched on the sides to straddle the cross strip and a screw passed through the end of the drum and adapted to run into the threads of the aperture of the cross strip, substantially as described.

4. The combination, with a tape case having only two side walls and a peripheral inclosure, one of the side walls being provided with a central opening, of a tape drum passing through said central opening and terminating short of passing into the opposite side wall, and means for journaling and supporting said tape drum wholly upon the side wall through which it passes.

5. The combination of a tape case comprising only two side walls and a peripheral inclosure, one of the side walls being provided with a central opening, of a tape drum passing through said central opening and terminating short of passing into the opposite side wall, a bearing unit journaled wholly within the side wall through which the drum passes and adjacent the said central opening, and a fastening device for detachably connecting the bearing unit and the drum, said fastening device being exposed at the outside so that it may be operated to disconnect the drum and the bearing unit without disassembling the tape case.

1,105,580. ROAD-BED AND PROCESS OF MAKING SAME. BENJAMIN F. RICHARDSON, Philadelphia, Pa., assignor to Unionite Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 31, 1913. Serial No. 809,743. (Cl. 94—1.)

1. The process herein described of making a roadbed which consists in forming a concrete base of cement, stone and stone grit; applying thereto a binder consisting of bitumen dissolved in a light hydrocarbon of the benzol series sufficiently fluid to carry the bitumen into the pores of the concrete before the solvent body avaporates and to coat the concrete surface with a bituminous body upon evaporation; then applying mastic to form a wear-surface to said bituminous-surfaced concrete, and finally rolling said mastic.

2. The process herein described of making a roadbed which consists in forming a concrete base of cement, stone and stone grit; applying thereto a binder consisting of bitumen dissolved in benzol and sufficiently fluid to carry the bitumen into the pores of the concrete before the benzol evaporates and to coat the concrete surface with a bituminous body upon evaporation; then applying rock asphalt and bitumen free from sand to said bituminous-surfaced concrete to form a wear-surface, and finally rolling said mastic.

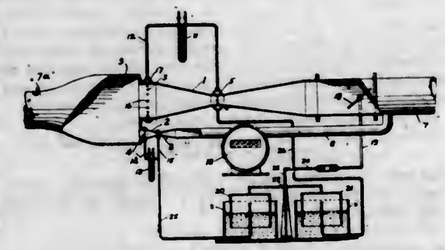
3. The process herein described of making a roadbed which consists in forming a smooth-surfaced concrete base in which sand is omitted; applying to said surface a thin solution of bitumen dissolved in a light hydrocarbon of the benzol group in which the proportions of solvent and bitumen are substantially equal; said solution being sufficiently fluid to carry the bitumen into the pores of the concrete before evaporation of the solvent takes place and to leave upon evaporation a bituminous coating upon the surface of the concrete ready to receive a wear-surface of asphalt or equivalent material, then applying mastic to said bituminous-coated surface, and finally rolling said mastic.

4. The process herein described of making a roadbed which consists in forming a smooth-surfaced concrete base in which sand is omitted; applying to said surface a thin solution of bitumen dissolved in benzol in which the proportions of solvent and bitumen are substantially equal; said solution being sufficiently fluid to carry the bitumen into the pores of the concrete before evaporation of the solvent takes place and to leave upon evaporation a bituminous coating upon the surface of the concrete ready to receive a wear-surface of asphalt or equivalent material, then applying rock asphalt and bitumen to said bituminous-coated concrete surface to form a wear-surface, and finally rolling said wear-surface.

5. A pavement having a base of concrete made up of stone and cement in which the surface consists of stone, stone grit and cement, a binder consisting of bitumen in solution of one of the light hydrocarbons applied to the surface of such concrete, said binder entering the pores of the concrete and leaving a bituminous body upon the surface of the same after evaporation, and a top course of rock asphalt with bitumen applied directly to said bitumen surfaced concrete, said top course being self-healing; the binder being free of stone or sand.

[Claims 6 to 8 not printed in the Gazette.]

1,105,581. REGISTERING-METER FOR GAS AND THE LIKE. JOHN M. RUSBY, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1911. Serial No. 601,093. (Cl. 73—68.)



1. A meter comprising the combination of valveless proportional measuring devices arranged in parallel, a registering meter operatively arranged in respect to one of said devices, and a variable resistance arranged for cooperation with the other of said devices and responsive to variation in the differential pressures existing in said devices due to changes in flow and adapted to restore said devices to the same working condition by balancing its resistance with the registering meter, substantially as described.

2. A registering meter comprising the combination of valveless proportional measuring devices arranged in parallel, a registering meter arranged in series with one of said devices and causing a variable resistance, and a variable resistance arranged in series with the other of said devices and responsive to differences in pressure due to changes of flow in said devices and adapted to equalize the pressures in said devices by balancing its resistance with the resistance of the registering meter.

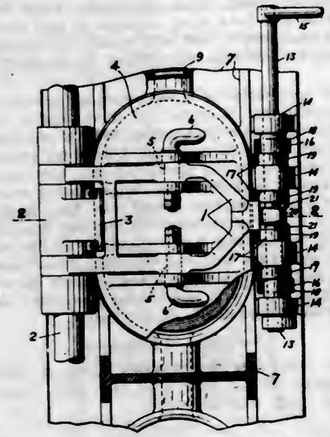
3. In a registering meter the combination of valveless proportional measuring devices, and means operated by a departure from equality in the drop in pressure of said devices and adapted to automatically equalize the drop of pressure in each device, thereby keeping the same substantially equal.

4. In a registering meter the combination of valveless proportional measuring devices, a register for one of said devices, and means responsive to inequalities between the drop of pressure at each device and adapted to restore and keep the same drop of pressure at each of said devices.

5. A meter comprising the combination of valveless proportional measuring devices respectively provided with gages for measuring their drops of pressure, a registering meter connected with one of said devices, a resistance connected with the other of said devices, and adjustable differential means responsive to difference in drop of pressure on the devices and adapted to operate said resistance, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,105,582. CLAMP FOR VERTICAL-GAS-RETORT DOORS. JOHN HAWLEY TAUSSIG, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1913. Serial No. 743,026. (Cl. 48—124.)



1. A clamp for vertical gas retort doors comprising the combination of a rotatable operating shaft, a pair of cantalivers having their free ends adapted to operate on a part of the door, a pair of eccentrics on said shaft provided with straps connected to one of said levers, and a lug on the shaft for turning the straps and levers, substantially as described.

2. A clamp for vertical gas retort doors comprising the combination of a rotatable operating shaft, a pair of cantalivers having their free ends adapted to operate on a part of the door, a pair of eccentrics on said shaft provided with straps connected to one of said levers, a lug on the shaft for turning the straps and levers, and a fixed back stop for the straps and levers, substantially as described.

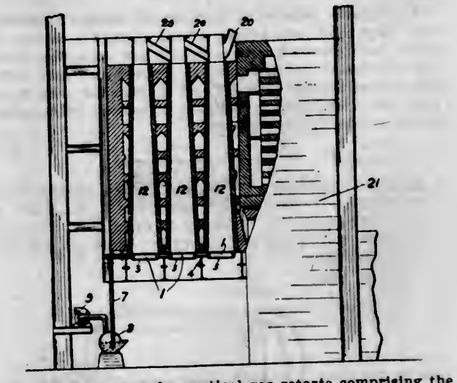
3. A clamp for vertical gas retort doors comprising the combination of a rotatable operating shaft, a pair of cantalivers, a link connecting the free ends of the cantalivers, a pair of eccentrics on said shaft provided with straps connected to one of said levers, and a lug on the shaft for turning the straps and levers, substantially as described.

4. A clamp for vertical gas retort doors comprising the combination of a cantaliver, an operating shaft, an eccentric on said shaft having a strap connected with the lever, and an eccentric on the shaft struck from two centers and provided with a strap for effecting a quick lift, substantially as described.

5. A clamp for vertical gas retort doors comprising the combination of an operating shaft, a cantaliver, an eccentric and strap connecting the lever and shaft, a second eccentric struck from two centers and arranged on the shaft and provided with a strap connected with the lever, and cams applied to the faces of the second eccentric and its strap, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,583. BASE-CLOSURE FOR VERTICAL GAS-RETORTS. JOHN HAWLEY TAUSSIG, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1913. Serial No. 743,027. (Cl. 202—6.)



1. A base closure for vertical gas retorts comprising the combination of a door having two parts with accessible gas space between and whereof one part operates as a seal and the other as a charge support, and a door frame provided with a gas off-take communicating with said space, substantially as described.

2. A base closure for vertical gas retorts comprising the combination of a door, a charge supporting cover applied near one edge of the face of the door with accessible space between the cover and door, a support between the cover and door near the other edge of the latter, and means for drawing off gas from said space.

3. A base closure for vertical gas retorts comprising the combination of a door frame having door openings, alined gas ducts opening through the walls of the openings, doors adapted to seal the openings below the ducts, and charge supporting covers arranged above the ducts and adapted to permit of the passage of gas thereto.

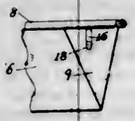
4. A base closure for vertical gas retorts comprising the combination of a door frame having door openings, gas ducts opening through the walls of the openings, doors adapted to seal the openings below the ducts, and charge supporting covers arranged above the ducts and adapted to permit of the passage of gas thereto.

5. A base closure for vertical gas retorts comprising the combination of a door frame provided with openings and with ducts communicating with the openings, means for drawing off gas through the ducts, doors below the ducts, and charge supporting covers above the ducts past which gas may be drawn to the ducts.

1,105,584. BREAD-PAN. WILLIAM A. WHALEN, Baltimore, Md., assignor of one-half to John A. Ostendorf, Baltimore, Md. Filed Oct. 6, 1913. Serial No. 793,531. (Cl. 53—6.)

1. A plural number of rectangular shaped individual loaf bread-pans each having at the corners V-shaped ex-

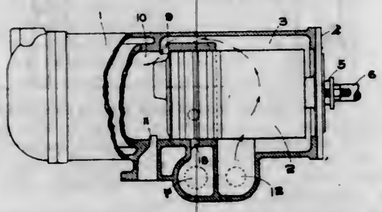
terior folds; a bar extending across two or more of said pans and contacting with said V-shaped folds; and a rivet whose stem extends through the said bar and V-shaped fold and whose head is between the fold and the outer surface of the pan-wall, whereby there is no exposure of rivet at the inner side of the pan.



2. A plural number of rectangular shaped individual loaf bread-pans each having folds that lay against the exterior wall of the pan; a bar extending across two or more of said pans and in contact with said folds; and a rivet through said bar and fold with the head of the rivet concealed between the fold and the outer surface of the pan-wall.

3. A plural number of rectangular shaped individual loaf bread-pans each having at the corners V-shaped exterior folds provided with a slot; a bar extending across two or more of said pans and in contact with said folds; and a rivet through said bar and through the slots in the fold, the head of the rivet being in contact with the exterior surface of the pan-wall.

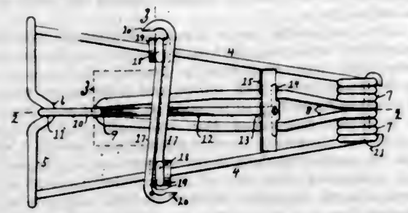
1,105,585. CYLINDER FOR VALVELESS, TWO-CYCLE, INTERNAL-COMBUSTION MOTORS. CLEMENT E. AMON, Franklin, Pa., assignor to Charles H. Sheasley, Franklin, Pa. Filed Apr. 12, 1913. Serial No. 760,755. (Cl. 123—74.)



1. A cylinder for valveless two-cycle, internal-combustion motors, having a combustion-chamber and a pump-chamber therein in combination with a piston of uniform diameter throughout its length operable within said chambers and adapted to be positioned wholly within said combustion-chamber when at the rearward limit of its stroke and to have a portion only of its forward end positioned within said pump chamber when at the forward end of its stroke, said pump-chamber being of larger diameter than said piston; there being a fuel-inlet-port passing through the wall of said cylinder and positioned and adapted to be piston-controlled for the admission of fuel to said pump-chamber, also a fuel passage in said cylinder leading from said pump-chamber to said combustion-chamber the opening of said passage into said combustion-chamber being positioned and arranged to be piston-controlled, an auxiliary fuel-inlet leading directly into said pump-chamber, and manually operated valves for controlling the passage of fuel into said auxiliary inlet, for the purpose set forth.

2. A cylinder for valveless two-cycle internal-combustion motors having a combustion-chamber and a pump-chamber therein, in combination with a piston of uniform diameter throughout its length operable within said chambers, said pump-chamber being of larger diameter than said piston, there being a fuel-inlet port passing through the wall of said cylinder positioned and adapted to be piston-controlled for the admission of fuel to said pump-chamber, also a fuel passage in said cylinder leading from said pump-chamber to said combustion chamber, the opening of said passage within said combustion-chamber being positioned and arranged to be piston-controlled, an auxiliary fuel-inlet leading directly into said pump-chamber, and means, other than the piston, for controlling the passage of fuel into said auxiliary inlet.

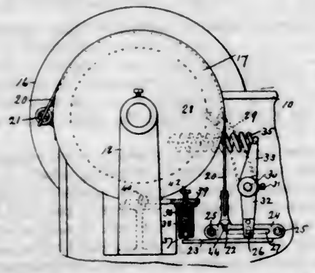
1,105,586. GOPHER-TRAP. WILLIAM BUCK, Paxico, Kans. Filed Apr. 30, 1913. Serial No. 764,557. (Cl. 43—23.)



1. The combination of a continuous spring wire forming two legs of a base, a spring coil, and a forwardly-extending spring arm; a rod connecting the two legs at the forward end of the trap, said coil being at the rear end, and said connecting rod having an offset bearing, a latch for said spring arm comprising a single rod having a loop engaging said offset bearing, a short portion engaging said spring arm, and a long portion extending rearwardly, a trigger for engaging said long portion, said trigger being pivoted to said spring arm, and a pair of transversely disposed jaws, each jaw being pivoted to one of the base legs and extending thence across and resting freely upon said spring arm, said jaws being actuated by said spring arm, and said legs being formed with washers on opposite sides of each jaw to prevent longitudinal displacement of said jaws.

2. The combination of a continuous spring wire forming two legs of a base, a spring coil at one end of the trap, and a forwardly-extending spring arm; a rod connecting the two legs at the forward end, a latch for engaging the forward and free end of the spring arm, said latch being pivoted to said connecting-rod and extending rearwardly, a trigger pivoted to said spring arm for engaging said latch, and a pair of transversely disposed impaling jaws pivoted to the opposite legs respectively of the base near the front end of the trap and extending across said spring arm and resting freely thereon and actuable thereby, said legs being provided with washers for preventing said jaws from moving longitudinally of said legs.

1,105,587. LET-OFF FOR LOOMS. ABEL E. CHERNACK, Providence, R. I. Filed Nov. 14, 1912. Serial No. 731,330. (Cl. 139—58.)



1. A let-off motion for warp beams, comprising a friction wheel to rotate with the beam, a friction device therefor, a brake lever acting upon the friction device, a power means to act upon the brake lever, means to prevent longitudinal movement of the lever, and means for automatically varying the pivot point of the lever in proportion as the diameter of the beam diminishes, for the purpose set forth.

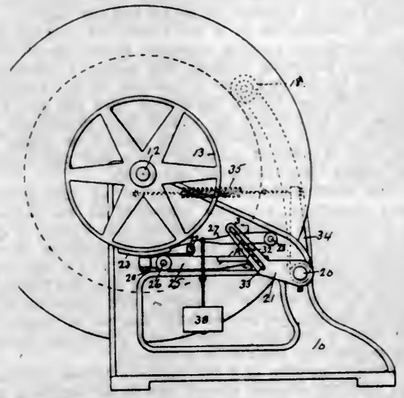
2. A let-off motion for warp beams, comprising a friction wheel to rotate with the beam, a friction strap therefor, a brake lever acting upon the friction strap, a spring to act upon the brake lever, means to prevent longitudinal movement of the lever and means for automatically varying the pivot point of the lever as the diameter of the beam diminishes, for the purpose described.

3. A let-off motion for warp beams, comprising a friction wheel to rotate with the beam, a friction strap therefor, a brake lever of the second order acting upon the friction strap, a spring to act upon one end of the lever, a movable pivot for the other end of the lever with a connection to the brake strap between, means to prevent longitudinal movement of the lever, and means for automatically moving the pivot outwardly as the diameter of the beam diminishes.

4. A let-off motion for warp beams, comprising a friction wheel to rotate with the beam, a friction strap therefor, a brake lever acting upon the friction strap, a power means to act upon the brake lever, means to prevent longitudinal movement of the lever, a spring-pressed roller to bear against the warp beam and a movable pivot for the lever, connected with said roller to move such pivot as the diameter of the beam diminishes, for the purpose set forth.

5. A let-off motion for warp beams, comprising a friction wheel to rotate with the beam, a friction strap therefor, a brake lever acting upon the friction strap, a power means to act upon the lever, slotted bars between which the lever is held and guided, means to prevent longitudinal movement of the lever, a pivot pin for said lever in the slots of the bars, and means for automatically moving the pivot in the slotted plates, as the diameter of the beam diminishes.

1,105,588. LET-OFF FOR LOOMS. ABEL E. CHERNACK, Providence, R. I. Filed May 2, 1913. Serial No. 765,138. (Cl. 139—58.)



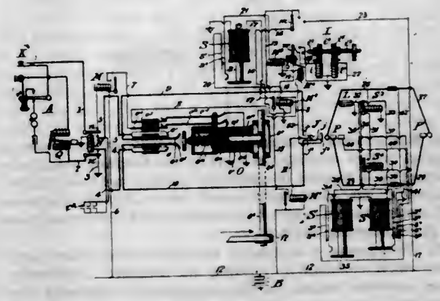
1. A let-off motion for warp beams, comprising a brake wheel to rotate with the beam, a friction device therefor, a brake lever to act upon the friction device, a power means to act upon the brake lever, and means for automatically diminishing the leverage of said brake beam at an accelerated speed with relation to the diminution of the warp roll.

2. A let-off motion for warp beams, comprising a brake wheel to rotate with the beam, a friction device therefor, a brake lever to act upon the friction device, a power means to act upon the brake lever, a movable bearing piece for the lever, and an arm controlling the position of the bearing piece, the controlling portion of said arm being so inclined to the path of adjustment of the bearing piece as to diminish the leverage of the brake lever at an accelerated speed with relation to the diminution of the diameter of the warp roll.

3. A let-off motion for warp beams, comprising a brake wheel to rotate with the beam, a friction device therefor, a brake lever to act upon the friction device, a power lever, a movable bearing piece between the brake lever and power lever, and an arm to move the bearing piece to change the leverage of both said levers as the diameter of the warp roll diminishes.

4. A let-off motion for warp beams, comprising a brake wheel to rotate with the beam, a friction device therefor, a brake lever to act upon the friction device, a power lever, a movable bearing piece between the brake lever and power lever, and an arm to move the bearing piece to change the leverage of both said levers as the diameter of the warp roll diminishes, the controlling portion of said arm being inclined to the path of adjustment of the bearing piece, whereby the change of leverage is progressive with relation to the diminution of the diameter of the warp roll.

1,105,589. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Dec. 28, 1905. Serial No. 293,630. (Cl. 179—27.)



1. In a telephone exchange system, a plurality of line circuits, circuit terminals for the lines, an indicating device associated with the circuit terminals, means adapted to automatically connect the same to a calling line in response to a call, means for controlling the same thereafter over the line, means for manually initiating a connection and extending the same in accordance with the indications, and electromagnetically controlled switching devices brought into connection with the manual means for automatically completing the connection thereafter, substantially as described.

2. In a telephone exchange system, a plurality of subscribers' lines and connective apparatus therefor composed of separable elements as follows: answering terminals, indicators associated with said terminals, means adapted to automatically connect the same with the lines in response to calls thereover, means for thereafter controlling the same over the lines, manually operated devices for connecting the lines through one or more links in accordance with said indications, and automatic switches electromagnetically controlled therethrough to complete the connections, substantially as described.

3. In a telephone exchange system a plurality of subscribers' lines, and connective apparatus therefor comprising the following instrumentalities: a number of answering terminals less than the number of lines, automatic means for connecting a calling line with an idle one of said terminals, a number indicator associated with each terminal, means for extending the connection in accordance with the indications thereof, and automatic means for completing the connection, substantially as described.

4. In a telephone exchange system a plurality of subscribers' lines and means for interconnecting the same comprising the following instrumentalities: a number of answering terminals less than the number of lines, automatic means for connecting a calling line with an idle terminal, an indicator associated with each terminal, and adapted to be controlled through the calling line circuit,

means for extending the connection in accordance with the indication when set, and automatic means for completing the connection, substantially as described.

5. In a telephone exchange system a plurality of lines and means for interconnecting the same comprising the following instrumentalities: a number of answering terminals less than the number of lines, an indication set including a numerical indicator adapted to be controlled through the calling line circuit and means for automatically connecting a calling line to an idle answering terminal, and adapted to be controlled over the calling line, and connective apparatus adapted to be manually brought into association with the indication set, and thereafter to be automatically controlled through the calling line, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

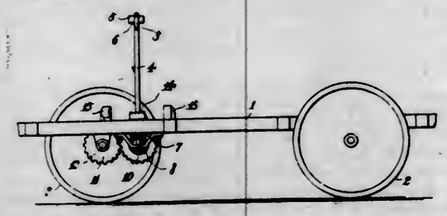
1,105,590. METHOD OF MOUNTING FOR AND BY TUBULAR DEVICES. JAMES HERMAN ABBOTT, Philadelphia, Pa. Original application filed June 16, 1911, Serial No. 633,518. Divided and this application filed Oct. 12, 1912. Serial No. 725,366. (Cl. 29—84.)



1. The process of securing a tubular fastener upon a support which consists in forcing the fastener longitudinally upon a support of generally uniform sectional shape altered at one point until a part of the tubular member has passed over the altered section and has been reshaped by the succeeding section.

2. The process of securing a tubular member upon a support which consists in forming the support of differing cross sectional shapes having substantially the same perimeter in contiguous sections and forcing the tubular member so as to lie partly upon each of the differing sections of the support.

1,105,591. SAWMILL. DAVID L. ADAMS, Aylett, Va. Filed Sept. 19, 1913. Serial No. 790,727. (Cl. 143—125.)

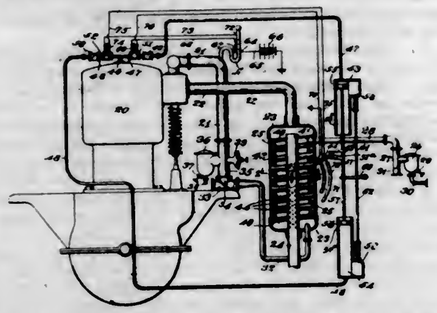


1. The combination with a saw mill carriage, of a dog, a rotary shaft geared to and driven by one of the wheels of said carriage and having said dog mounted to turn loosely thereon, and ratchet elements on said shaft and dog brought into coöperative relation when the dog is unsupported by a log, whereby the dog is moved out of the path of the saw.

2. The combination with a saw mill carriage, of a dog, a rotary shaft geared to and driven by one of the wheels of said carriage and having said dog mounted to turn loosely thereon, ratchet elements on said shaft and dog brought into coöperative relation when the dog is unsupported by a log, whereby the dog is moved out of the path of the saw, and means operating automatically to disengage said ratchet elements after such movement of the dog.

3. The combination with a saw mill carriage, of a dog, a rotary shaft geared to and driven by one of the wheels of said carriage and having said dog mounted to turn loosely thereon, ratchet elements on said shaft and dog brought into coöperative relation when the dog is unsupported by a log, whereby the dog is moved out of the path of the saw, and means in the form of a cam for elevating said dog and disengaging said ratchet elements after the dog has been so moved.

1,105,592. EXPLOSIVE-ENGINE. WILLIAM K. BASSFORD, Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y., a Corporation of New York. Filed Apr. 28, 1911. Serial No. 623,898. (Cl. 123—119.)



1. The combination of a gas engine and means for supplying the same with fuels derived from liquids of different qualities, said means including a pipe communicating with the engine, carbureters for the respective fuels connected to said pipe, said carbureters being severally adapted for use, a heater between the carbureters and through which the pipe passes, and a valve controlled air inlet in the pipe between the heater and the engine.

2. The combination of a gas engine, an exhaust pipe leading therefrom, a heater connected to the exhaust pipe, a fuel pipe extending through said heater, a carbureter connected to the fuel pipe in advance of the heater, a second carbureter having connection with the fuel pipe between the heater and the engine, said carbureters respectively having connection with sources of supply of liquid fuels of different qualities, and a fuel pipe leading to the engine from the second carbureter.

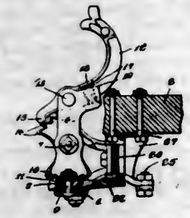
3. The combination of a gas engine, an exhaust pipe leading therefrom, a heater connected to the exhaust pipe, a fuel pipe extending through said heater, a carbureter connected to the fuel pipe in advance of the heater, an auxiliary air-supply connected to the fuel pipe, a second carbureter having connection with the fuel pipe between the heater and the engine, said carbureters respectively having connection with sources of supply of liquid fuels of different qualities, and a fuel pipe leading to the engine from the second carbureter.

4. The combination of a gas engine, a heater communicating with the exhaust thereof, means for supplying the engine with fuels derived from liquids of different qualities, said means including a conduit communicating with the engine, said conduit and heater being in such relation to each other that one of the fuels will be heated on its passage to the engine, a carbureter for the respective fuels communicating with said conduit, one of the carbureters being located in advance of the heater and the other between the heater and the engine and a valve-controlled air inlet communicating with the conduit between the heater and the engine.

5. The combination of a gas engine, an exhaust pipe leading therefrom, a heater connected to the exhaust pipe, a fuel pipe extending through said heater, a carbureter connected to said pipe in advance of the heater, a second carbureter having connection with the pipe between the heater and the engine, said carbureters respectively having connection with sources of supply of liquid fuels of different qualities, and a fuel pipe leading to the engine from the second carbureter, said carbureters being severally usable and the first mentioned fuel pipe having valve controlled means through which it may be opened to the atmosphere on the side which leads to the heater, when the first mentioned carbureter is not in use.

[Claims 6 to 23 not printed in the Gazette.]

1,105,593. DRAFT-SHIFTING MEANS FOR SULKY-PLOWS. WILLIAM H. LEE, Syracuse, N. Y., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed July 2, 1912. Serial No. 707,144. (Cl. 97—36.)



1. In a plow, the combination of an element for controlling the direction of the line of draft relatively to the line of travel of the plow, said element being shiftable, and mechanism for shifting the draft controlling element comprising right and left substantially parallel operating members, and means for transmitting the movement of said members to the draft controlling element, substantially as and for the purpose described.

2. In a plow, the combination of an element for controlling the direction of the line of draft relatively to the line of travel of the plow, said element being shiftable, and mechanism for shifting the draft controlling element comprising right and left operating members including levers movable in vertically extending planes, and means for transmitting the movement of the levers to the draft controlling element, substantially as and for the purpose specified.

3. In a plow, the combination of an element for controlling the direction of the line of draft relatively to the line of travel of the plow, said element being shiftable, and mechanism for shifting the draft controlling element comprising right and left operating members including levers movable in substantially vertical planes, and a rocking member pivoted between its ends and coacting on opposite sides of its pivot with said levers, substantially as and for the purpose set forth.

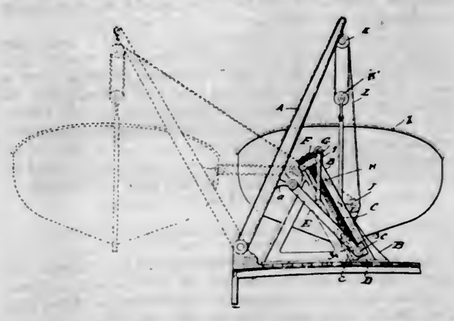
4. In a plow, the combination of an element for controlling the direction of the line of draft relatively to the line of travel of the plow, said element being shiftable, and mechanism for shifting the draft controlling element comprising right and left operating members including pivoted levers movable about their pivotal axes in substantially vertical planes, and a pivoted rocking member movable about its axis in a substantially horizontal plane and coacting on opposite sides of its pivot with said levers, substantially as and for the purpose described.

5. In a plow, the combination of an element for controlling the direction of the line of draft relatively to the line of travel of the plow, said element being shiftable, and mechanism for shifting the draft controlling element comprising right and left levers movable in substantially parallel vertical planes and provided with gear teeth, and means for transmitting the movement of the levers to said element comprising a member pivoted between its ends between said levers and being provided on opposite sides of its pivot with teeth coacting with the teeth of the levers, substantially as and for the purpose described.

[Claims 6 to 18 not printed in the Gazette.]

1,105,594. DAVIT FOR LOWERING AND RAISING SHIPS' BOATS. ANDREAS P. LUNDIN and HARRY W. BROADY, Bayside, N. Y.; said Broady assignor to said Lundin. Filed Aug. 1, 1912. Serial No. 712,640. (Cl. 9—22.)

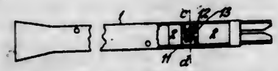
1. The combination with a davit arm pivoted at its lower end to swing freely in a vertical plane to both sides of a perpendicular position, of a frame secured to the deck of a vessel, a screw supported in said frame in an inclined position to have rotary movement only, a nut threaded on the screw, a link connecting said nut and davit arm and means for rotating the screw.



2. The combination with a davit arm pivoted at its lower end to swing freely in a vertical plane to both sides of a perpendicular position, of a frame secured to the deck of a vessel, a screw supported in said frame to have rotary movement only, a nut threaded on the screw, a link connecting a point on the davit arm intermediate its ends with the said nut, and a flexible connection between the load and a moving part of the mechanism for exerting a balancing pull on the davit in two directions during the movement of said davit in one direction.

3. The combination with a davit arm pivoted at its lower end to swing freely in a vertical plane to both sides of a perpendicular position, of a frame secured to the deck of a vessel, a screw supported in said frame to have rotary movement only, a nut threaded on the screw, a link connecting a point on the davit arm intermediate its ends with the said nut, a pulley mounted on said frame intermediate the ends of said screw and a rope extending from the load over a pulley at the top of the davit, thence led over said pulley on the frame and connected to a traveling part of the mechanism.

1,105,595. HAIR-CURLER. CHARLES NESSLER, London, England. Filed June 7, 1913. Serial No. 772,334. (Cl. 132—18.)



1. A curler comprising the combination of a tube upon which the hair may be coiled and secured, a member projecting from the end of said tube and adapted to be held against rotation, the said tube and member being capable of relative rotary movement and means for permitting the one to be turned with respect to the other in one direction but not in the other.

2. A curler comprising the combination of a tube upon which the hair may be coiled and secured, a member projecting from the end of said tube and adapted to be held against rotation, the said tube and member being capable of relative rotary movement and a clutching device arranged between the two and permitting one to be turned with respect to the other in one direction but not in the other.

3. A curler comprising the combination of a tube upon which the hair may be coiled and secured, a member projecting from the end of said tube and adapted to be held against rotation, the said tube and member being capable of relative rotary movement and a clutching device arranged between the two and comprising a resilient finger projecting from one of said parts and engaging with its end the other said part so as to engage it when moved in one direction but not in the other.

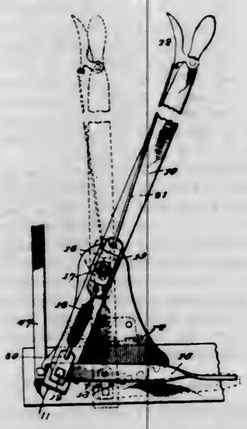
4. A curler comprising the combination of a tube upon which the hair may be coiled and secured, a rod-like mem-

ber within said tube and projecting from one end thereof and adapted to be held against rotation, an engaging device mounted on said rod-like member and comprising a resilient wire passed through said rod-like member and having its ends projecting therefrom and adapted to engage the interior of the tube and permit relative rotary movement in one direction but not in the other.

5. A curler comprising the combination of a tube upon which the hair may be coiled and secured, a member projecting from the end of said tube and provided with a notch for receiving the binding cord near the roots of the portion of hair to be curled to secure said member to the hair, the said tube and member being capable of relative rotary movement in one direction but not in the other, whereby the coiled hair on said tube may be tightened by the relative rotary movement of said tube and member.

[Claims 6 to 9 not printed in the Gazette.]

1,105,596. HAND-LEVER MECHANISM. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Feb. 18, 1911. Serial No. 609,347. (Cl. 74—39.)



1. A lever mechanism comprising, in combination, a pivotally adjustable and longitudinally movable lever, elements coöperating to hold the lever against pivotal movement, one of said elements being movable with the lever, and means for moving the lever longitudinally, comprising an actuating member which is movable relatively to the lever.

2. A lever mechanism comprising, in combination, a pivotally adjustable lever, elements coöperating to hold the lever against pivotal movement, one of said elements being movable with the lever, the lever being movable longitudinally to free said elements from each other and means for moving the lever longitudinally, comprising an actuating member having pivotal connection with the lever and a member supported to take the strains and cause the lever to yield when said pivoted member is moved.

3. A lever mechanism comprising, in combination, a pivotally adjustable lever, elements coöperating to hold the lever against pivotal movement, one of said elements being movable with the lever, the lever being movable longitudinally to free said elements from each other and means for moving the lever longitudinally, including a grip having pivotal connection with the lever, a fixed member and a connection between the grip and fixed member, the fixed member being arranged to take the strains imposed thereon by the connection so as to cause the lever to yield when the grip is moved pivotally.

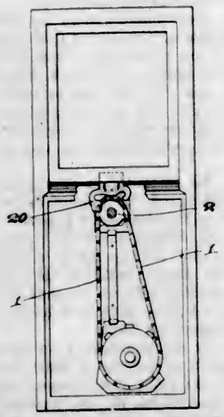
4. A lever mechanism comprising a pivotally-adjustable and longitudinally-movable lever, elements for holding the same against pivotal-movement, adapted to be freed from each other by longitudinal movement of the lever, and means for imparting such movement to the lever, comprising an actuating member having pivotal connection with the lever and a member having one end connected to the actuating member and its other end connected to a part which is fixed against movement with the longitudinal movement of the lever.

5. A lever mechanism comprising a pivotally-adjustable and longitudinally-movable lever, a rack and a projection relatively disposed to hold the lever against pivotal movement and to be freed from each other by longitudinal movement, a spring for holding the rack and projection in engagement with each other, and means for moving the lever longitudinally against the action of said spring, comprising an actuating member having pivotal connection with the lever and a member having one end connected to the actuating member and its other end connected to a part which is fixed against movement with the longitudinal movement of the lever.

[Claims 6 to 21 not printed in the Gazette.]

REISSUES.

13,780. MEANS FOR OPENING AND CLOSING CARRIAGE-WINDOWS. JOHANN ALTRICHTER, Judenburg, Austria-Hungary, assignor, by mesne assignments, to Perfect Window Regulator Company, a Corporation of Maine. Filed Sept. 15, 1911. Serial No. 649,578. Original No. 948,603, dated Feb. 8, 1910, Serial No. 431,446. (Cl. 39—97.)



1. In an arrangement for operating windows by means of chain gear, means for operating and locking the same and comprising a chain pinion provided with notches and having a driving shoulder, cam surfaces leading to said shoulder, a rotatable spindle provided with an operating handle, arms carried by said spindle and adapted to ridge on said cam surfaces and a bolting device on said spindle and provided with projections for engaging the notches in said pinion.

2. In a device for moving and fastening carriage windows with chain gear, a chain pinion having on one face shoulders (11, 11′) and slanting surfaces (16, 16′) on both sides of said shoulders ascending toward the same, a spindle (8) adjustable longitudinally and adapted to rotate the chain pinion, said spindle being provided at its inner end with perpendicular arms (12, 12′), a coiled spring (17, 17′) surrounding the inner end of the spindle and adapted to press the said spindle arms (12, 12′) against the said slanting surfaces of the chain pinion, a bolting arrangement (13, 13′), rotatably seated upon the spindle and having projections (14, 14′), in combination with notches on the chain pinion adapted to receive the projections (14, 14′).

3. In a window operating apparatus, driving mechanism, an operating handle therefor, a plate secured to and depending from the window and a connection between said mechanism and said plate and adapted to raise the window and on a continued movement of said handle after the window is closed to force the window over the weather rail.

4. A window operating apparatus comprising a chain drive, a plate secured to the window and provided with a cam on its surface and a lifting-pin carried by the chain and provided with a portion adapted to ride on the cam of said plate to force the window transversely to its plane.

5. In a window-operating apparatus, the combination of a chain drive, a plate secured to the window and provided with a cam on its surface, a lifting-pin attached to the body of a chain link and connected with said plate to raise the window and provided with a part adapted to ride on the cam of said plate and force the window transversely to its plane.

6. In a window operating apparatus, the combination with the weather rail, of driving mechanism for raising and lowering the window and a plate secured to the window and adapted to raise and lower the same, said plate being provided with a surface cam adapted to be engaged by the raising and lowering means and thereby to move the window transversely to its plane.

7. A window operating apparatus comprising a cam plate secured to the window and means engaging said plate and adapted to raise and lower the window, said means acting on the cam of said plate to force the window transversely to the plane thereof and over the weather rail.

8. In a window operating apparatus, the combination of a chain drive, a cam plate secured to the window and a cam follower carried by the chain drive, said cam follower being adapted to coöperate with the cam plate to raise and lower the window and by a movement across said plate move it transversely to the plane thereof.

9. In a window operating apparatus, the combination of a plate secured to the window, a chain drive for said plate, a lifting pin connecting said plate and chain drive, a cam surface on said plate and means attached to said lifting pin coöperating with said cam surface to force the window transversely to the plane thereof.

10. In a device for fastening and moving carriage windows, a chain drive, a projection (19) fixed to said drive, a plate (20) fastened to the window and provided with a guiding curve for the said projection, said plate having along the guiding curve a bearing fillet (27), in combination with a shoulder (28) on said projection adapted to engage the bearing fillet, substantially as set forth.

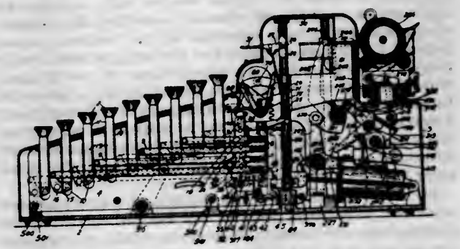
11. In a device for operating carriage windows, a driving mechanism, a lifting-pin carried by said mechanism, a plate fastened to the window and provided with a guiding curve for said lifting-pin, a cam along said guiding curve and a shoulder on said lifting-pin adapted to engage said cam.

12. A window operating apparatus comprising a plate provided with a cam surface on the face thereof, means coöperating with said plate and adapted to raise and lower the window, said means being provided with a part acting on said cam and adapted to move the window transversely to the plane thereof and over the weather rail.

13,781. PRINTING MECHANISM FOR ADDING-MACHINES. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, Dover, Del., a Corporation of Delaware. Filed May 23, 1914. Serial No. 840,643. Original No. 1,069,152, dated Aug. 5, 1913, Serial No. 440,399. (Cl. 235—60.)

1. A rack and type plate provided with a projection at a distance from the rack and in substantially the same plane therewith and a second projection on the opposite edge of the rack and substantially in the same plane therewith and a flange adapted to carry types in a different plane.

2. A series of type carriers, a series of type actuators one for each carrier, means for moving each actuator to energize it, means for releasing it after such energization, and devices, one carried by each actuator, adapted when its actuator is moved to move the adjacent actuator of lower order and to hold it until its actuator is released.



3. Two type actuators, one of higher and the other of lower order in denominational relation, each provided with an energizing spring, means for moving the actuator of higher order against the tension of its energizing spring, and a device carried by the actuator of higher order for similarly and automatically moving the actuator of lower order against its spring when it has not otherwise been so moved.

4. Two type actuators, one of higher and the other of lower order in denominational relation, each provided with an energizing spring, means for moving the actuator of higher order against the tension of its energizing spring, and a device carried by the actuator of higher order for similarly and automatically moving the actuator of lower order against its spring when it has not otherwise been so moved, comprising an arm on the actuator of higher order projecting over into the plane of the actuator of lower order.

5. A series of type actuators arranged in denominational order, means for moving each one of them independently, and an arm on each actuator extending into the plane of movement of its neighboring actuator of lower order, whereby when any actuator is moved all of the actuators of lower order are bodily moved.

6. A series of type carriers, a series of type actuators, means for moving all of the carriers automatically to a zero printing position, and means for moving any of them to numeral printing position, means for automatically moving the type actuator of any carrier moved to a numeral printing position, an arm on each type actuator extending toward the right into the plane of movement of its adjacent actuator whereby when any type carrier is moved beyond a zero printing position the arm on its actuator bodily moves all of the type actuators of lower order thereof to coöperate with the type carriers at a zero printing position.

7. A series of type actuators, a series of triggers one for each actuator, means for moving each trigger separately, means for moving all of the triggers together as a series, a key on a keyboard, and means for preventing their movement, including a multiple detent operated by the key.

8. In a calculator, the combination with a printing mechanism arranged to print a plurality of characters side by side simultaneously, of a paper carriage to receive the impression and which is shiftable transversely to the line of such impression, means for so shifting the paper carriage automatically as each line is printed, an inking ribbon, a universal bar for controlling the printing mechanism, a shaft from which the universal bar is supported, an arm fast on said shaft, and a guide member carried on said arm and arranged to support the ribbon to shift it to the printing position at each operation of the universal bar.

9. The combination of a series of type actuators, a series of triggers one for each actuator, an abutment on each trigger, means for moving the triggers separately, means for moving the triggers simultaneously, a multiple detent provided with a series of hooks each arranged to engage the abutment portion of a trigger, and a controlling key connected with the detent to shift the detent to

engage the triggers and hold them away from position for engagement with the actuators.

10. In a calculator, the combination of a series of type actuators, a series of triggers one for each actuator, an abutment on each trigger, means for shifting the triggers simultaneously at each operation of the machine, means for controlling such movement of the triggers individually to cause the movement to engage some of the triggers with the actuators, a multiple detent having a series of hooks arranged to engage said abutments respectively, and a key connected wtih the detent to shift it to engage the triggers and thereby prevent all of the triggers in their simultaneous movement from engagement with the actuators.

11. In a calculator, the combination of a series of type actuators, a series of triggers one for each actuator, an abutment on each trigger, a frame on which the triggers are pivoted that is movable to bodily shift the triggers simultaneously to thereby bring the triggers to engage the actuators, means for moving the triggers individually on their pivots to control their engagement with their actuators, a multiple detent mounted to swing on said frame and provided with hooks arranged to engage said abutments respectively, and a key connected with the detent to shift the detent on the frame to engage the triggers and hold them from engagement with their actuators upon movement of the frame.

12. In a calculator, the combination of a series of type carriers, a series of actuators one for each carrier, a series of triggers one for each actuator and arranged to engage the respective carrier, an abutment on each trigger, whereby the triggers are bodily moved simultaneously, said triggers being prevented by the type carriers when in normal position from engagement with the actuators upon movement by said means, but permitted to engage the actuators upon advancement of the type carriers to a printing position, a multiple detent having hooks arranged to engage said abutments respectively, and a key connected with the detent to shift it to thereby engage the triggers and prevent their engagement with the acuators upon movement of the triggers.

13. In a calculator, the combination of a series of type carriers, a series of actuators one for each carrier, a series of triggers one for each actuator and arranged to engage the respective carrier, an abutment on each actuator, a movable frame on which all of the triggers are pivoted whereby the triggers are bodily moved simultaneously, said triggers being prevented by the type carriers when in normal position from engagement with the actuators upon movement of said frame, but permitted to engage the actuators upon advancement of the type carriers to a printing position, a multiple detent pivoted on the frame and provided with hooks arranged to engage said abutments respectively, and a key connected with the detent to shift it to thereby engage the triggers and prevent their engagement with the actuators upon movement of the frame.

14. In a calculator, a series of type carriers, a series of type actuators coöperating therewith, a corresponding series of energizing levers, a spring for each lever, and a series of triggers each arranged to move one of the actuators against its lever to charge the spring thereof to impel the actuator when released from the trigger, said triggers being controlled by the respective type carriers.

15. In a calculator, a series of type carriers, a series of type actuators coöperating therewith, a corresponding series of energizing levers, a spring for each lever, and a series of triggers each arranged to move one of the actuators against its lever to charge the spring thereof to impel the actuator when released from the trigger, said triggers being engaged by the respective type carriers in the normal position of the carriers to prevent the triggers engaging their actuators and the triggers being released upon advance of the carrier to a printing position to permit engagement with the actuators.

16. In a calculator, a series of type carriers, a series of type actuators coöperating therewith, a corresponding series of energizing levers, a spring for each lever, a universal bar controlling the type carriers, a frame rigidly connected with said bar, a series of triggers pivoted on said frame and each adapted for engagement with one of the said actuators as the triggers are bodily advanced by the frame, said triggers being independently movable on the frame and normally engaged with the type carriers respectively thereby preventing their engagement with the actuators in the normal position of the carriers, but released to engage a respective actuator upon any type carrier being advanced to printing position.

17. In a calculator, a series of type carriers, a series of type actuators coöperating therewith, a corresponding series of energizing levers, a spring for each lever, a universal bar controlling the type carriers, a frame rigidly connected with said bar, a series of triggers pivoted on said frame and each adapted for engagement with one of the said actuators as the triggers are bodily advanced by the frame, said triggers being independently movable on the frame and normally engaged with the type carriers respectively and thereby preventing their engagement with the actuators in the normal position of the carriers, but released to engage a respective actuator upon any type carrier being advanced to printing position; and a stop bar arranged to be engaged by the triggers as advanced by their frame and trip them from the actuators.

18. In a calculator, a series of type carriers, a series of type actuators coöperating therewith, a corresponding series of energizing levers, a spring for each lever, a series of triggers each arranged to move one of the actuators against its lever to charge the spring thereof to impel the actuator when released from the trigger, means for bodily advancing the triggers to bring them to engage the actuator, and means for releasing the triggers from the actuators during their advancement.

19. In a calculator, the combination of a type actuator, and an energizer lever therefor, the lever having an annular portion, and the actuator having a recess with two angular walls that jointly maintain the actuator in normal position, and which walls are independently operative to cause the lever to swing the actuator in opposite directions.

20. In a calculator, the combination of a type actuator, and an energizer lever therefor, the lever having an annular portion, and the actuator having a recess with two angular walls located on opposite sides of the axis of the actuator that jointly maintain the actuator in normal position, and which walls are independently operative to cause the lever to swing the actuator in opposite directions.

13,782. PROCESS AND APPARATUS FOR THE MANUFACTURE OF STEEL. NORMAN E. MACCALLUM, Phoenixville, Pa., assignor of one-fourth to Frank P. Norris, Phoenixville, Pa., and one-fourth to The Phoenix Iron Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 26, 1914. Serial No. 841,167. Original No. 1,057,564, dated Apr. 1, 1913, Serial No. 671,480. (Cl. 75—94.)

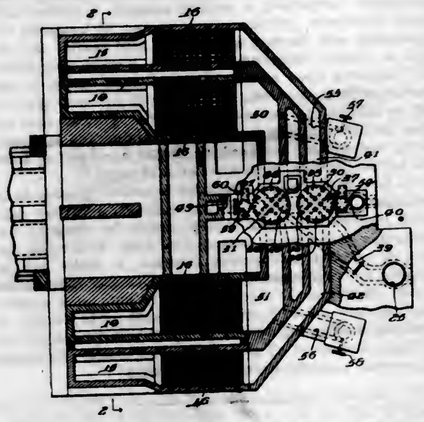
1. The combination with two regenerators, of means for supplying either of said regenerators selectively with gaseous fuel and the other regenerator with air.

2. The combination with two regenerators, of means for supplying either of said regenerators selectively with gaseous fuel, and the other regenerator with air, and means for reversing the process by supplying the first mentioned regenerator with air and the second mentioned regenerator with gaseous fuel.

3. In a furnace, the combination with a hearth, of a pair of regenerators communicating with said hearth, and means for supplying either of said regenerators selectively with air and the other regenerator with gaseous fuel.

4. In a furnace, the combination with a hearth, of two pairs of regenerators communicating therewith, means for supplying either regenerator of either pair selectively with air and the other with gaseous fuel, and means for directing exhaust gases from the hearth simultaneously outwardly through the other pair of regenerators.

5. The process which comprises the steps of passing air, exhaust gases of combustion, gaseous fuel, and exhaust gases of combustion consecutively and in the order named through a regenerator chamber.



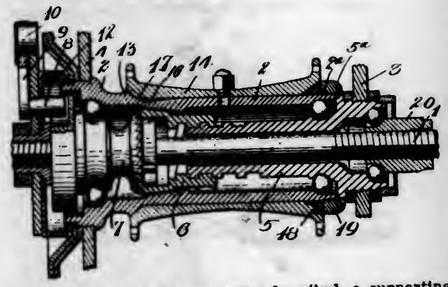
6. In the manufacture of steel, the process which consists of passing gases of combustion from a furnace outwardly through a regenerator, then passing air inwardly through the regenerator, then passing gases of combustion outwardly from the furnace through the regenerator, and then passing gaseous fuel inwardly through the regenerator.

7. The process of keeping clean the interior regenerative surfaces of a heated regenerator chamber of an open hearth steel furnace, which comprises the steps of passing air and combustible gas in relative alternation through such regenerator chamber, each such alternation being maintained a sufficient time to remove any deposits from such surfaces.

8. The process of removing incombustible deposits from an air regenerator, which comprises the step of passing combustible gas through such regenerator in relative alternation with the passage of air therethrough.

9. A process for removing or preventing accumulations of incombustible deposits, such for instance as iron oxid, in regenerators of open hearth steel furnaces, which consists in passing fresh air from time to time through the gas regenerators and fresh gaseous fuel through the air regenerators.

13,783. COASTER HUB-BRAKE. CHARLES WALFRID SVENSON, New Britain, Conn., assignor to The American Hardware Corporation, Hartford, Conn., a Corporation of Connecticut. Filed June 9, 1914. Serial No. 844,015. Original No. 1,097,568, dated May 19, 1914, Serial No. 782,419. (Cl. 208—57.)



1. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a driving member carried by and rotatable on said arbor, means within said carrier and operable by movement of said member to clutch and unclutch the same with said carrier, a wheel hub arranged to seat over said carrier, and means for detachably holding said wheel hub in driving engagement with said carrier.

2. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a driving member carried by and rotatable on said arbor, means operable by movement of said member to clutch and unclutch the same with said carrier, and a wheel hub arranged to slide longitudinally over said carrier and means for interlocking said parts against independent rotation, said interlocking being effected by said longitudinal movement of said hub on said carrier.

3. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier, means operable by movement of said foot-controlled member to clutch and unclutch said foot-controlled member with said carrier, a wheel hub arranged to seat over said carrier, and means for detachably holding said wheel hub in driving engagement with said carrier.

4. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier, means operable by movement of said foot controlled member to clutch and unclutch the same with said carrier, and a wheel hub arranged to slide longitudinally over said carrier and coöperating interlocking means on said hub and carrier arranged to interlock by longitudinal movement of said parts.

5. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier, braking mechanism coöperating with said carrier, means operable by movement of said foot controlled member in one direction to clutch the same with said carrier and operable by movement in the reverse direction to unclutch the same and to operate said braking mechanism, a wheel hub arranged to seat over said carrier, and means for detachably holding said wheel hub in driving engagement with said carrier.

6. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier, braking mechanism coöperating with said carrier, means operable by movement of said foot controlled member in one direction to clutch the same with said carrier and operable by movement in the reverse direction to unclutch the same and to operate said braking mechanism, and a wheel hub arranged to slide longitudinally on said carrier and coöperating interlocking means on said hub and carrier arranged to interlock by longitudinal movement of said parts.

7. In a device of the character described, an assembled unitary coaster brake mechanism embodying a supporting arbor, a carrier rotatable thereon, braking means coöperating with said carrier, clutch mechanism coöperating with said carrier, a driving member rotatable about said arbor and a clutch actuating member connected thereto and cooperating with said clutch mechanism and braking means to clutch said member to said carrier in one direction of movement of said driving member and to unclutch the same and operate said braking means in the reverse direction of movement, and a wheel hub separate from said carrier and said coaster brake mechanism and arranged to be seated over said carrier and in driving engagement therewith without disturbing the adjustment of the assembled coaster brake mechanism.

8. In a device of the character described, an assembled unitary coaster brake mechanism embodying a supporting arbor, a carrier rotatable thereon, braking means coöperating with said carrier, clutch mechanism coöperating with said carrier, a driving member rotatable about said arbor and a clutch actuating member connected thereto coöperating with said clutch mechanism and braking means to

clutch said member to said carrier in one direction of movement of said driving member and to unclutch the same and operate said braking means in the reverse direction of movement, a wheel hub separate from said carrier and said coaster brake mechanism and arranged to be slid longitudinally on said carrier without disturbing the adjustment of the assembled coaster brake mechanism, and means on said hub and carrier coöperating on such relative longitudinal movement to interlock in driving engagement.

9. In a device of the character described, an assembled unitary coaster brake mechanism embodying a supporting arbor, a carrier rotatable thereon, a power-controlled driving member fixedly carried by said carrier, braking means coöperating with said carrier, clutch mechanism coöperating with said carrier, a clutch-actuating member rotatably mounted on said arbor, a foot-controlled driving member detachably fixed to said clutch-actuating member, said actuating member coöperating with said clutch mechanism and braking means to clutch said member to said carrier in one direction of movement of said driving member, and to unclutch the same and operate said braking means in the reverse direction of movement, and a wheel hub separate from said carrier and said coaster brake mechanism and arranged to be seated on said carrier upon the removal of said foot-controlled driving-member from said clutch actuator, said hub and carrier being arranged to detachably interlock in driving engagement.

10. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a driving member carried by and rotatable on said arbor, means operable by movement of said member to clutch and unclutch the same with said carrier, a wheel hub arranged to slide longitudinally on said carrier, coöperating means on said carrier and wheel hub arranged upon such relative longitudinal sliding movement to detachably key said parts together in interlocked driving relation, and means to retain said wheel hub on said carrier and against longitudinal movement.

11. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier, means operable by movement of said foot controlled member to clutch and unclutch the same with said carrier, a wheel hub arranged to slide longitudinally on said carrier, coöperating means on said carrier and wheel hub arranged upon such relative longitudinal sliding movement to detachably key said parts together in interlocked driving relation, and means to retain said wheel hub on said carrier and against longitudinal movement.

12. In a device of the character described, a supporting arbor, a carrier rotatable thereon, a foot controlled driving member carried by and rotatable on said arbor, a power controlled driving member fixedly carried by said carrier braking mechanism coöperating with said carrier, means operable by movement of said foot controlled member in one direction to clutch the same with said carrier and operable by movement in the reverse direction to unclutch the same and to operate said braking mechanism, a wheel hub arranged to slide longitudinally on said carrier, cooperating means on said carrier and wheel hub arranged upon such relative longitudinal sliding movement to detachably key said parts together in interlocked driving relation, and means to retain said wheel hub on said carrier and against longitudinal movement.

13. In a device of the character described, a coaster brake mechanism including an arbor, a carrier mounted for rotation relatively to said arbor, a rotatable driver, with means for coupling and uncoupling said driver and carrier for coasting, driving or braking, and a wheel hub removably mounted upon said carrier and independent of said coaster brake mechanism, with means for locking said hub on said carrier against independent rotation.

14. In a device of the character described, a coaster brake mechanism comprising a central support, a carrier associated therewith, driving means, means for coupling and uncoupling said driving means with said carrier for conjoint or relative independent rotation, a wheel hub detachably mounted upon said hub carrier and independent of said coaster brake mechanism, with means to lock said mounted hub on said carrier against independent rotation.

15. In a device of the character described, coaster brake mechanism comprising a central support, a carrier associated therewith, driving means, means for coupling and uncoupling said driving means with said carrier for conjoint or relative independent rotation, a wheel hub detachably mounted upon said carrier and independent of said coaster brake mechanism, with means to lock said mounted hub on said carrier against independent rotation, said hub being slidable longitudinally on said carrier, and said parts having coöperating interlocking means arranged to interlock by longitudinal movement of said parts.

16. In a device of the character described, coaster brake mechanism comprising a central support, a carrier associated therewith, driving means, means for coupling and uncoupling said driving means with said carrier for conjoint or relative independent rotation, a wheel hub detachably mounted upon said hub carrier and independent of said coaster brake mechanism, said hub being slidable longitudinally on said carrier, and said parts having cooperating interlocking means arranged to interlock by longitudinal movement of said parts, said means comprising coöperating wedging keys and key-ways.

DESIGNS.

46,157. CASING FOR HAND SPRAYING APPARATUS. CHARLES H. ALLEN, Syracuse, N. Y. Filed Apr. 11, 1913. Serial No. 760,556. Term of patent 14 years.



The ornamental design for a casing for hand spraying apparatus as shown.

46,158. TOY FIGURE. ESTELLE ALLISON, San Francisco, Cal. Filed Apr. 28, 1914. Serial No. 835,043. Term of patent 7 years.



The ornamental design for a toy figure, substantially as shown.

46,159. ORANGE AND GRAPE-FRUIT KNIFE. JOHN L. ANDERSON, Ogden, Utah. Filed June 22, 1914. Serial No. 846,692. Term of patent 14 years.



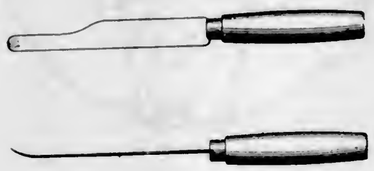
The ornamental design for an orange and grape fruit knife, as shown.

46,160. VANITY-CASE. ABRAHAM BIENENZUCHT, New York, N. Y. Filed May 15, 1914. Serial No. 838,883. Term of patent 3½ years.



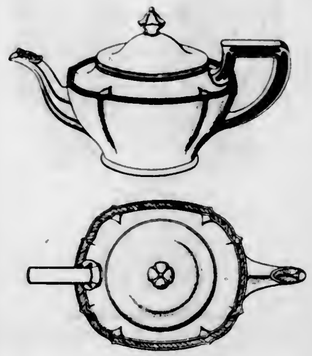
The ornamental design for a vanity case as shown.

46,161. FRUIT AND VEGETABLE KNIFE. HARVEY BOSWORTH, Plattsburg, N. Y. Filed June 16, 1914. Serial No. 845,493. Term of patent 14 years.



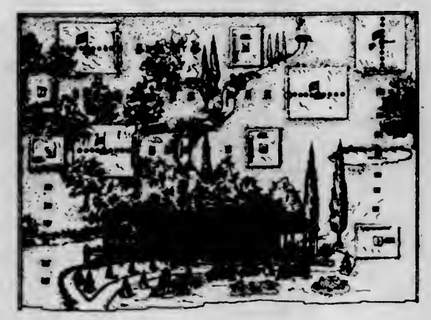
The ornamental design for a fruit and vegetable knife, as shown.

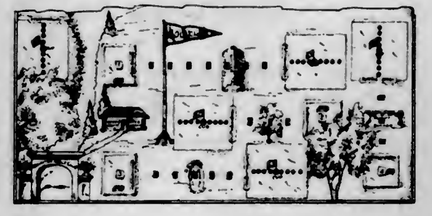
46,162. TEAPOT OR SIMILAR ARTICLE. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 11, 1914. Serial No. 824,065. Term of patent 14 years.



The ornamental design for a tea pot or similar article, as shown.

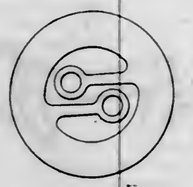
46,163. GAME-BOARD. SAMUEL M. DOWST, Chicago, Ill. Filed May 22, 1914. Serial No. 840,384. Term of patent 14 years.





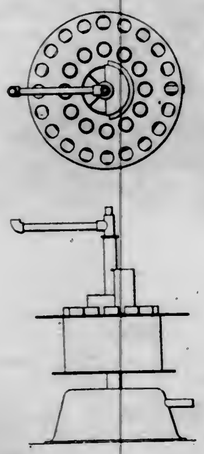
The ornamental design for a game-board, as described and shown.

46,164. VALVE. WILLIAM S. FAIRHURST, New York, N. Y. Filed June 4, 1913. Serial No. 771,771. Term of patent 14 years.



The ornamental design for a valve, as shown.

46,165. STAND FOR HOLDING CIGARS, PIPES, MATCHES, AND LIGHTERS. HENRY FINK, Newark, N. J. Filed May 22, 1914. Serial No. 840,385. Term of patent 14 years.



The ornamental design for a stand for holding cigars, pipes, matches and lighters, as shown.

46,166. BOTTLE. JOHN J. GAVIN, Baltimore, Md., assignor to Carr-Lowrey Glass Co., Baltimore, Md. Filed May 8, 1914. Serial No. 837,336. Term of patent 7 years.



The ornamental design for a bottle, as shown.

46,167. GARMENT. FRED C. KELLER and CHARLES E. OATHOUT, Cleveland, Ohio, assignors to K. & E. Blouse Makers, a Firm composed of E. K. Hays, Louis H. Hays, and G. P. Waltzfelder, Cleveland, Ohio. Filed May 1, 1914. Serial No. 835,766. Term of patent 14 years.



The ornamental design for a garment as shown.

46,168. PINCUSHION. HYMAN KIRSCHBRAUN, San Francisco, Cal. Filed Jan. 20, 1914. Serial No. 813,341. Term of patent 14 years.



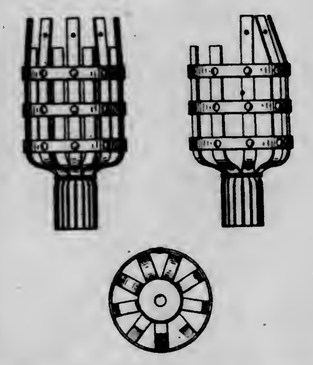
The ornamental design for a pin cushion, as shown.

46,169. PLATE. ANDREW J. KUOPF, Maywood, Ill. Filed Apr. 4, 1914. Serial No. 829,636. Term of patent 3½ years.



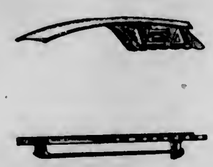
The ornamental design for a plate as shown.

46,170. POOL-TABLE POCKET. JOSEPH W. JOHNSON, Kansas City, Mo., assignor to Theodore R. Treiber, Kansas City, Mo. Filed May 11, 1914. Serial No. 837,948. Term of patent 14 years.



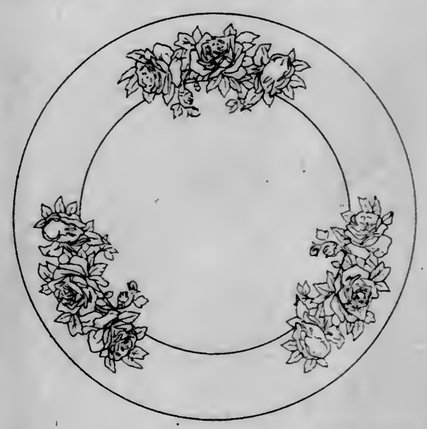
The ornamental design for a pool table pocket, as shown.

46,171. PIN, BROOCH, OR SIMILAR ARTICLE OF JEWELRY. OZRO C. LANPHEAR, Galesburg, Ill. Filed May 23, 1912. Serial No. 699,330. Term of patent 14 years.



The ornamental design for a pin, brooch, or similar article of jewelry, as shown.

46,172. PLATE OR SIMILAR ARTICLE. WILLIAM L. LARGE, Brooklyn, N. Y., assignor to The Owen China Co., Minerva, Ohio, a Corporation of Ohio. Filed Apr. 3, 1914. Serial No. 829,370. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

46,173. PLATE OR SIMILAR ARTICLE. WILLIAM L. LARGE, Brooklyn, N. Y., assignor to The Owen China Co., Minerva, Ohio, a Corporation of Ohio. Filed Apr. 3, 1914. Serial No. 829,371. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

46,174. PLATE OR SIMILAR ARTICLE. WILLIAM L. LARGE, Brooklyn, N. Y., assignor to The Owen China Co., Minerva, Ohio, a Corporation of Ohio. Filed Apr. 3, 1914. Serial No. 829,372. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

46,175. RIBBON, AND PARTICULARLY FOR BROCADED WOVEN RIBBON. JOSEPH W. MACLAREN, New York, N. Y., and EMIL SPECK, Passaic, N. N. J. Filed Apr. 18, 1914. Serial No. 832,980. Term of patent 7 years.



The ornamental design for ribbon and particularly for brocaded woven ribbon, as shown.

46,176. TEXTILE FABRIC. HIRAM R. MALLINSON, New York, N. Y. Filed June 2, 1914. Serial No. 842,475. Term of patent 3½ years.



The ornamental design for a textile fabric as shown.

46,177. PAPER SHEET OR SIMILAR ARTICLE. CLARA L. MEAD, Rahway, N. J., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed May 29, 1914. Serial No. 841,919. Term of patent 14 years.



The ornamental design for a paper sheet or similar article, substantially as shown.

46,178. PAPER SHEET OR SIMILAR ARTICLE. CLARA L. MEAD, Rahway, N. J., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed June 2, 1914. Serial No. 842,477. Term of patent 14 years.



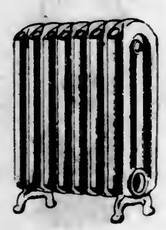
The ornamental design for a paper sheet or similar article, substantially as shown and described.

46,179. PAPER SHEET OR SIMILAR ARTICLE. CLARA L. MEAD, Rahway, N. J., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed June 3, 1914. Serial No. 842,788. Term of patent 14 years.



The ornamental design for a paper sheet or similar article, substantially as shown.

46,180. RADIATOR. JOHN OGDEN, Cardington, Pa. Filed May 26, 1914. Serial No. 841,162. Term of patent 14 years.



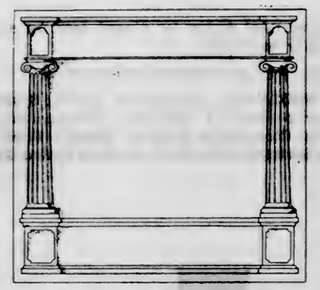
The ornamental design for a radiator, as shown.

46,181. CUFF-BUTTON. ANTHONY PALUCH, Detroit, Mich. Filed June 1, 1914. Serial No. 842,322. Term of patent 3½ years.



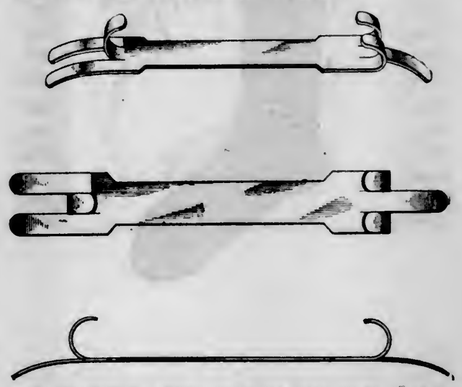
The ornamental design for a cuff button, as shown.

46,182. LABEL-BLANK. GABRIEL A. PETIT, Chicago, Ill., assignor to Imperial Player Roll Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1914. Serial No. 841,922. Term of patent 14 years.



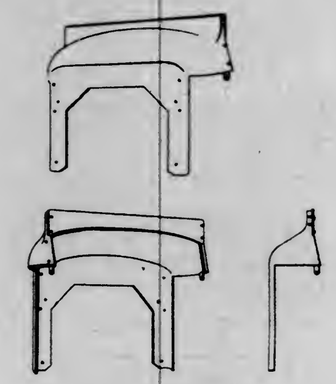
The ornamental design for a label blank, as shown.

46,183. POT AND COVER LIFTER. KARL PROCHASKA, Vienna, Austria-Hungary. Filed May 8, 1914. Serial No. 837,341. Term of patent 14 years.



The ornamental design for a pot and cover lifter, as shown.

46,184. COWL-DASH FOR AUTOMOBILES. JOHN SCHNEIDER and HENRY SCHNEIDER, Ann Arbor, Mich. Filed May 11, 1914. Serial No. 837,953. Term of patent 3½ years.



The ornamental design for a cowl dash for automobiles substantially as shown.

46,185. STOCKING. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 28, 1913. Serial No. 781,654. Term of patent 14 years.



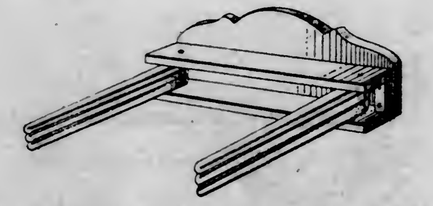
The ornamental design for a stocking as shown and described.

46,186. STOCKING. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 28, 1913. Serial No. 781,656. Term of patent 14 years.



The ornamental design for a stocking as shown and described.

46,187. COMBINED SHELF AND CLOTHES-RACK. AXEL M. SIMENSON, Cooperstown, N. D. Filed Apr. 27, 1914. Serial No. 834,843. Term of patent 7 years.



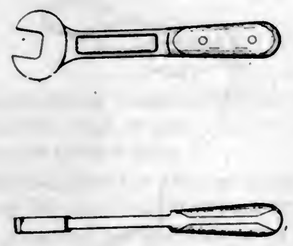
The ornamental design for a combined shelf and clothes rack, as shown.

46,188. PEN-WIPER. EDNA Z. TEAM, Camden, S. C. Filed May 14, 1914. Serial No. 838,584. Term of patent 7 years.



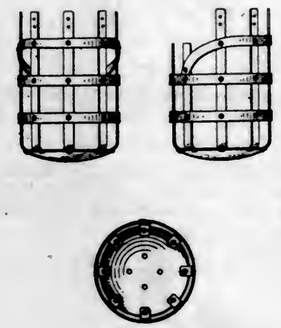
The ornamental design for a pen-wiper, as shown.

46,189. SOLID WRENCH. WILLIAM S. THOMSON, Plantsville, Conn., assignor to The H. D. Smith & Company, Plantsville, Conn., a Corporation. Filed Nov. 17, 1911. Serial No. 660,907. Term of patent 3½ years.



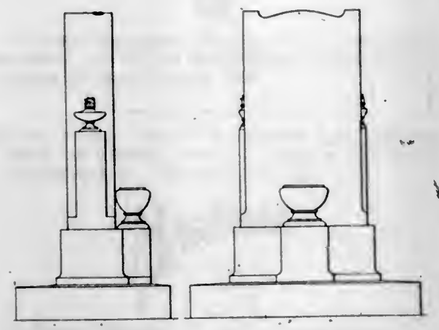
The ornamental design for a solid wrench, as shown.

46,190. POOL-TABLE POCKET. THEODORE R. TREIBER and JOSEPH W. JOHNSON, Kansas City, Mo. Filed May 11, 1914. Serial No. 837,950. Term of patent 14 years.



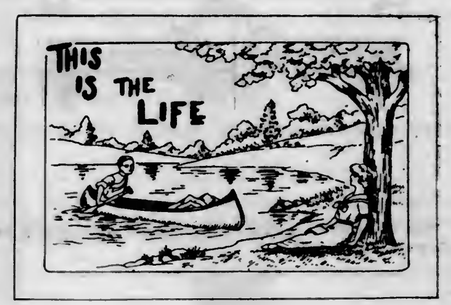
The ornamental design for a pool table pocket, as shown.

46,191. MONUMENT. WALTER R. TRIGG, Rockford, Ill. Filed May 8, 1914. Serial No. 837,333. Term of patent 7 years.



The ornamental design for a monument, as shown.

46,192. PILLOW-TOP. HENRY WEIL, New York, N. Y. Filed May 18, 1914. Serial No. 839,460. Term of patent 3½ years.



The ornamental design for a pillow top, as shown.

46,193. PILLOW-TOP. HENRY WEIL, New York, N. Y. Filed May 18, 1914. Serial No. 839,459. Term of patent 3½ years.



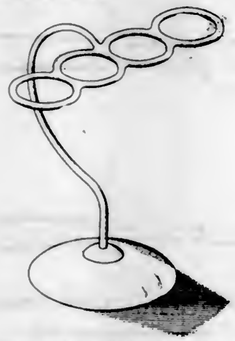
The ornamental design for a pillow top, as shown.

46,194. VALANCE. CARL WEILERT, Chicago, Ill., assignor to E. L. Mansure Company, Chicago, Ill., a Corporation of Illinois. Filed May 11, 1914. Serial No. 837,952. Term of patent 3½ years.



The ornamental design for a valance, substantially as shown and described.

46,195. ICE-CREAM-CONE HOLDER. WILLIAM A. G. WILSON, Bridgeport, Conn., assignor to The Artistic Bronze Co., Bridgeport, Conn., a Corporation of Connecticut. Filed May 27, 1914. Serial No. 841,392. Term of patent 3½ years.



The ornamental design for an ice cream cone holder, as shown.

TRADE-MARKS

PUBLISHED JULY 28, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 52,956. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK S. ARMSTRONG, New York, N. Y. Filed Nov. 26, 1910.



Particular description of goods.—Coffee.
Claims use since Oct. 15, 1910.

Ser. No. 62,963. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SAN-KNIT-ARY TEXTILE MILLS INCORPORATED, Philadelphia, Pa. Filed Apr. 18, 1912.



Particular description of goods.—Towels, Washcloths, Bath-Mitts, and Knitted Quilts, Sheets, and Blankets.
Claims use since January, 1907.

Ser. No. 67,964. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNBARS, LOPEZ & DUKATE CO., New Orleans, La. Filed Jan. 17, 1913.

MAGNOLIA

Particular description of goods.—Canned Shrimp.
Claims use since about Jan. 1, 1903.

Ser. No. 69,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STONE-ORDEAN-WELLS COMPANY, Duluth, Minn. Filed Mar. 18, 1913.



Particular description of goods.—Canned Clams, Corn-Starch, Canned Lobster, Canned Oysters, Canned Sardines, Canned Sliced Beef, Dried Fruits, Currants, Raisins, Flaked Corn, Farina, Popcorn, Sago, Tapioca, Rice, Alimentary Paste, Gelatin, Bird-Seed, Molasses, Vinegar, Coffee, Flavoring Extracts for Foods, Spices, Dried Fruit-Peels, Plain and Candied; Olives, Pickles, Honey, Fruit Jellies, Fruit Preserves, Fruit Jams, Mince-Meat, Tomato Catsup, Chilli Sauce, Horse-Radish, Mustard, Canned Fruits, Canned Vegetables, Dried Beef, Cereal Breakfast Foods, Canned Baked Beans and Canned Saur-Kraut, Hominy, Dill Pickles, Sour Gherkins, and Herbs for Seasoning Food.
Claims use since 1908.

Ser. No. 69,679. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM C. KEIM, Vicksburg, Miss. Filed Apr. 9, 1913.

ZEZMAH

Particular description of goods.—A Remedy for Skin Diseases.
Claims use since Nov. 20, 1912.

Ser. No. 69,983. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ISADORE DAVID WOLFSON, New York, N. Y. Filed Apr. 21, 1913.

LEVI INDESTRUCTO

Particular description of goods.—Neckscarfs.
Claims use since Nov. 1, 1912.

Ser. No. 70,326. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VICTOR ROYKÓ, Tissaujlak, Austria-Hungary. Filed May 9, 1913.



The signature being a facsimile of that of the applicant.

Particular description of goods.—Tooth-Powder, Mouth-Wash, Pectoral Tea, Aromatic Extract of Bitter Almonds, Oriental Fumigating Material, Mustache-Cosmetic, Hair-Wash, Face-Salve, Face-Cream, Face-Powder, and Extract Prepared from the Green Shucks of Walnuts.

Claims use since Nov. 14, 1887.

Ser. No. 70,357. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) FRANCISCO ROVIRA ROVIRA, Barcelona, Spain. Filed May 10, 1913.



Particular description of goods.—Cigarette-Paper.

Claims use since the 19th of October, 1912.

Ser. No. 70,539. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. COOPER & NEPHEWS, Berkhamsted, England, and Chicago, Ill. Filed May 21, 1913.



Particular description of goods.—Insecticides.

Claims use since Jan. 1, 1910.

Ser. No. 70,792. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANUFACTURERS AND RETAILERS COMPANY, Chicago, Ill. Filed May 31, 1913.

MARCO

Particular description of goods.—Tea, Coffee, Macaroni, Spaghetti, Noodles, Corn-Starch, Rolled Oats, Corn Flakes, Rice, Holland Rusks, Pancake-Flour, Buckwheat, Wheat, and Corn Flour, Chocolate and Cocoa, Canned Fish, Condensed Milk, Mustard, Catsup, Peanut-Butter, Spices, Flavoring Extracts, Fruit Preserves, Jelly and Jelly-Powders, Pork and Beans.

Claims use since June 5, 1912.

Ser. No. 70,913. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARSH COMMISSION COMPANY, Pine Bluff, Ark. Filed June 6, 1913.



Particular description of goods.—Corn Products—Namely, Cornmeal, Grits, Corn Chops, Mixed Feed, Hominy Feed, Hominy Feed Meal, Unbolted Cornmeal.

Claims use since January, 1911.

Ser. No. 70,926. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Castor-Oil, Cholera and Diarrhea Remedy, Quinin, Antiseptics, Headache Remedy, Laxatives, Syrup of Sarsaparilla, Emulsion Cod-Liver Oil, Wine of Cod-Liver Oil, Beef, Iron, and Wine, Nerve-Stimulant, Massage-Cream, Ammonia, Douches, Toothache Remedy, Insecticide, Essence of Pepsin, Smallpox Remedy, Anticonstipation, Spavin Remedy, Rat and Roach Paste, a Preparation for the Treatment of and Deodorizer for Tired and Swollen Feet, Corn Remedy, Colic Remedy, Injections, Dyspepsia-Tablets, Dandruff Remedy, Catarrh Remedy.

Claims use since Apr. 26, 1901.

Ser. No. 70,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Castor-Oil, Baking-Powder, Soothing-Syrup, Cholera and Diarrhea Remedy, Worm-Destroyer, Cough Remedy, Liniment, Quinin, Antiseptics, Headache and Neuralgia Remedy, Laxatives, Rheumatism Remedy, Medicinal Tonic, Kidney and Liver Remedy, Syrup of Sarsaparilla, Emulsion Cod-Liver Oil, Wine of Cod-Liver Oil, Beef, Iron, and Wine, Nerve-Stimulant, Chill, Ague, and Fever Remedy, Massage-Cream, Dental Cream, Tooth Powder and Wash, Salve, Ointment, Ammonia, Toilet Water, Hair-Tonic, Douches, Toothache Remedy, Insecticide, Essence of Pepsin, Smallpox Remedy, Anticonstipation, Spavin Remedy, Rat and Roach Paste, a Preparation for the Treatment of and Deodorizer for Tired and Swollen Feet, Corn Remedy, Colic Remedy, Injections, Dyspepsia-Tablets, Dandruff Remedy, Talcum Powder, Cold Remedy, Catarrh Remedy.

Claims use since April 26, 1901.

Ser. No. 70,928. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



The picture being fanciful.

Particular description of goods.—Castor-Oil, Baking-Powder, Soothing-Syrup, Quinin, Antiseptics, Neuralgia Remedy, Laxatives, Rheumatism Remedy, Emulsion Cod-Liver Oil, Wine of Cod-Liver Oil, Beef, Iron, and Wine, Nerve-Stimulant, Massage-Cream, Dental Cream, Tooth Powder and Wash, Salve, Ointment, Shaving-Lotions, Ammonia, Toilet Water, Hair-Tonic, Douches, Toothache Remedy, Insecticide, Essence of Pepsin, Smallpox Remedy, Spavin Remedy, Rat and Roach Paste, a Preparation for the Treatment of and Deodorizer for Tired and Swollen Feet, Corn Remedy, Injections, Dandruff Remedy, Talcum Powder, Cold Remedy.

Claims use since Apr. 26, 1901.

Ser. No. 70,929. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Castor-Oil, Baking-Powder, Soothing-Syrup, Cholera and Diarrhea Remedy, Worm-Destroyer, Cough Remedy, Liniment, Quinin, Antiseptics, Headache and Neuralgia Remedy, Laxatives, Rheumatism Remedy, Medicinal Tonic, Kidney and Liver Remedy, Syrup of Sarsaparilla, Emulsion Cod-Liver Oil, Wine of Cod-Liver Oil, Beef, Iron, and Wine, Nerve-Stimulant, Chill, Ague, and Fever Remedy, Massage-Cream, Dental Cream, Tooth Powder and Wash, Salve, Ointment, Ammonia, Toilet Water, Hair-Tonic, Douches, Toothache Remedy, Insecticide, Essence of Pepsin, Smallpox Remedy, Spavin Remedy, Rat and Roach Paste, a Preparation for the Treatment of and Deodorizer for Tired and Swollen Feet, Corn Remedy, Colic Remedy, Injections, Dyspepsia-Tablets, Dandruff Remedy, Talcum Powder, Cold Remedy, Catarrh Remedy.

Claims use since July 5, 1905.

Ser. No. 71,477. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EMMANUEL DE TREDY, Zurich, Switzerland. Filed July 2, 1913.



No claim is made to the words "La Superiorite Est L'Essence Du Succes."

Particular description of goods.—Dental Cement.

Claims use since Jan. 1, 1912.

Ser. No. 71,593. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD ROBERT BULE, New York, N. Y. Filed July 8, 1913.



No claim being made to the use of the word "Carbon-Not," the circle being printed in red.

Particular description of goods.—A Composition of Matter Adapted to Remove Carbonaceous Deposits from Internal-Combustion Engines.

Claims use since July 5, 1913.

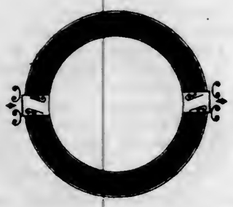
Ser. No. 72,974. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HELIOS MANUFACTURING COMPANY, Philadelphia, Pa. Filed Sept. 20, 1913.



Particular description of goods.—Secondary Batteries and Arc-Lamps.

Claims use since Aug. 5, 1908.

Ser. No. 73,016. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PITTSBURGH BREWING COMPANY, Pittsburgh, Pa. Filed Sept. 23, 1913.



Particular description of goods.—Beer, Ale, and Porter.
Claims use since about Feb. 4, 1899.

Ser. No. 73,305. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOCIETÀ UMBRO-EMILIANA, Bologna, Italy. Filed Oct. 10, 1913.



No claim is made to the words "Estratto Di Pomodoro Concentrato Nel Vuoto Garanito Puro All'Analisichimica Società Umbro Emiliana Bologna" in the central portion of the mark.
Particular description of goods.—Tomatoes.
Claims use since 1908.

Ser. No. 73,520. (CLASS 37. PAPER AND STATIONERY.) PAPER SALES COMPANY, Chicago, Ill. Filed Oct. 20, 1913.



Applicant disclaims the right to the exclusive use of the words "The Soluble Paper of Superfine Texture."
Particular description of goods.—Toilet-Paper.
Claims use since on or about Sept. 1, 1913.

Ser. No. 73,957. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STANDARD MILLING COMPANY, New York, N. Y. Filed Nov. 13, 1913.



The words "Minneapolis Flour Man'f'g Co.," "Fancy," "Trade-Mark," "Patent," and "Minneapolis, Minn." being disclaimed.
Particular description of goods.—Wheat-Flour.
Claims use since Dec. 7, 1889.

Ser. No. 74,848. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) V. LOPEZ & COMPANY, New York, N. Y. Filed Dec. 26, 1913.



The word "Brand" being disclaimed. The trade-mark consists of the word "D Roja."
Particular description of goods.—A Compound of Butter, Salt Brine, and Corn-Syrup.
Claims use since Jan. 1, 1910.

Ser. No. 75,024. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HENRY L. CRUTTENDEN, Northfield, Minn. Filed Jan. 8, 1914.

JIFFY

Particular description of goods.—Dental-Cement Tubes.
Claims use since on or about Mar. 1, 1903.

Ser. No. 75,034. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) L-P-C MOTOR COMPANY, Racine, Wis. Filed Jan. 8, 1914.



No claim being made to the word "Lewis."
Particular description of goods.—Automobiles.
Claims use since the 4th day of November, 1913.

Ser. No. 75,374. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM UNDERWOOD COMPANY, Boston, Mass. Filed Jan. 22, 1914.



Particular description of goods.—Canned Fish, Ham, Poultry, and Beef.
Claims use since Feb. 4, 1868.

Ser. No. 75,692. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SMITH, KLINE & FRENCH CO., Philadelphia, Pa. Filed Feb. 4, 1914.

ESKAY'S

Particular description of goods.—A Food for Infants and Invalids.
Claims use since Oct. 15, 1896.

Ser. No. 75,774. (CLASS 10. FERTILIZERS.) R. A. WOOLDRIDGE COMPANY, Baltimore, Md. Filed Feb. 7, 1914.

FAIR AND SQUARE

Particular description of goods.—Fertilizers.
Claims use since Dec. 6, 1887.

Ser. No. 75,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SALVATORE F. SELLARO, New York, N. Y. Filed Feb. 9, 1914.

Codo

Particular description of goods.—A Medicinal Tonic.
Claims use since Jan. 26, 1914.

Ser. No. 75,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MATT VOELKER, Waterloo, Wis. Filed Feb. 9, 1914.



I disclaim the words "Pop-Corn." The picture used in said trade-mark is a picture of a baby of the applicant.
Particular description of goods.—Popcorn.
Claims use since some time in the year 1913.

Ser. No. 75,832. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOS. J. PETERS, Perrine, Fla. Filed Feb. 10, 1914.



Particular description of goods.—Fresh Tomatoes.
Claims use since 1907.

Ser. No. 76,175. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ESCOFFIER (1907) LIMITED, London, England. Filed Feb. 26, 1914.



A shield divided diagonally into two parts, the upper half being blue in color and having the words "The Escoffier" thereon in gold and also a scroll in gold, while the lower half is gold in color and has the facsimile signature "A. Escoffier" thereon in red. The shield is surmounted by a smaller shield having a gold-colored border with a coat-of-arms printed in blue, red, and gold in the center.
Particular description of goods.—Chutney, Pickles, and Condiment Sauces.
Claims use since the 1st day of January, 1903.

Ser. No. 76,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HILLS BROTHERS COMPANY, New York, N. Y. Filed Feb. 28, 1914.

CAMEL

Particular description of goods.—Figs.
Claims use since January, 1893.

Ser. No. 76,370. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCCLINTON'S, LTD., Donaghmore, Ireland. Filed Mar. 5, 1914.

SHEILA

The trade-mark consists of the word "Sheila."
Particular description of goods.—Perfumery, Perfumed Tooth-Soap, Preparations for the Teeth and Hair, Sachet-Powders, Preparations for Beautifying and Preserving the Skin, Toilet Waters, Toilet Powders, Creams, Glycerin, and Oils for Medical Purposes.
Claims use since about the 29th of June, 1907.

Ser. No. 76,586. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH LINHART, New York, N. Y. Filed Mar. 12, 1914.

CRACKERLAX

Particular description of goods.—Laxative Biscuits.
Claims use since Jan. 1, 1914.

Ser. No. 76,589. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COSTAS SARANTIDES, New York, N. Y. Filed Mar. 12, 1914.

Baklava

Particular description of goods.—Special Turkish Pastry, Which Consists of a Combination of Flour, Almonds, Butter, and Sugar and Cut into Pieces in Triangular Form and Placed in a Tray for Sale.
Claims use since Feb. 15, 1914.

Ser. No. 76,668. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARMEL WINE COMPANY, New York, N. Y. Filed Mar. 16, 1914.

CARMEL

Particular description of goods.—Foods—Namely, Honey, Olive-Oil, and Almonds.
Claims use on honey since the 1st day of June, 1901, on olive-oil since the 1st day of July, 1906, and on almonds since the 1st day of January, 1904.

Ser. No. 76,725. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BREWSTER, GORDON & Co., Rochester, N. Y. Filed Mar. 18, 1914. Under ten-year proviso.

ORIENTAL

Particular description of goods.—Tea, Molasses, Rice, Popcorn, Rolled Oats, Pearl-Barley, Bird-Seed, Dried Vegetables.
Claims use since 1892.

Ser. No. 76,799. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OXOLA MANUFACTURING COMPANY, Baltimore, Md. Filed Mar. 20, 1914.

OXOLA

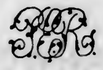
Particular description of goods.—Shortening Compound Composed of Refined Beef-Fat and Cotton-Seed Oil.
Claims use since Dec. 1, 1894.

Ser. No. 76,855. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HILLS BROTHERS COMPANY, New York, N. Y. Filed Mar. 23, 1914.



Particular description of goods.—Figs and Dates.
Claims use since January, 1893.

Ser. No. 76,907. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PEARL E. REIFSCHNEIDER, Lawton, Okla. Filed Mar. 24, 1914.



Particular description of goods.—Toilet Preparation to Prevent Perspiration Under Arms, Also for Odorous and Sweaty Feet.
Claims use since May 8, 1908.

Ser. No. 76,997. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MAGNUS & LAUER, San Francisco, Cal. Filed Mar. 27, 1914.

Ironport

Particular description of goods.—A Syrup for Soda Fountain Beverages.
Claims use since Jan. 1, 1905.

Ser. No. 77,053. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAUL DE MARTINI, Brooklyn, N. Y. Filed Mar. 30, 1914.



"Paul De Martini" being a facsimile of Paul De Martini, the applicant, the picture shown being fanciful.
Particular description of goods.—Macaroni, Noodles, and Spaghetti.
Claims use since Dec. 1, 1913.

Ser. No. 77,066. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JNO. E. MAGERL & Co., Camden, N. J., and Philadelphia, Pa. Filed Mar. 30, 1914.



Particular description of goods.—Woolen Piece Goods.
Claims use since Jan. 25, 1914.

Ser. No. 77,086. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE Y. YASUMURA, Seattle, Wash. Filed Mar. 30, 1914.



No claim being made to the words "Of Ice Cream Cones."
Particular description of goods.—Ice-Cream Cones.
Claims use since Mar. 1, 1914.

Ser. No. 77,112. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WILFORD HALL LABORATORIES, Port Chester, N. Y. Filed Mar. 31, 1914.



The applicant makes no claim to the registration of the words "Headache Bandage" appearing on the labels containing the trade-mark. The picture shown in the trade-mark is fanciful.
Particular description of goods.—Headache-Bandages.
Claims use since Mar. 12, 1914.

Ser. No. 77,124. (CLASS 39. CLOTHING.) BERNARD N. FRANK, New York, N. Y. Filed Apr. 1, 1914.

Bernard

Particular description of goods.—Shirt-Waists.
Claims use since the year 1906.

Ser. No. 77,129. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES H. KRUG, Dayton, Ohio. Filed Apr. 1, 1914. Under ten-year proviso.

HYRE'S

Particular description of goods.—Liniment.
Claims use since the year 1885.

Ser. No. 77,180. (CLASS 39. CLOTHING.) HARRY GOLDBERG, New York, N. Y. Filed Apr. 3, 1914.



Particular description of goods.—Oil-Clothes—Namely, Trousers, Jackets, and Coats.
Claims use since Jan. 1, 1903.

Ser. No. 77,191. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK E. BLOCK CO., Atlanta, Ga. Filed Apr. 2, 1914.



Particular description of goods.—Candy.
Claims use since 1886.

Ser. No. 77,292. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY COMPANY, Boston, Mass. Filed Apr. 7, 1914.

Sugar Moons

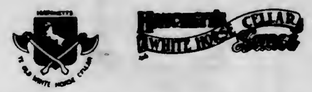
Particular description of goods.—Candy, Wafers, Lozenges, and Tablets.
Claims use since Mar. 24, 1914.

Ser. No. 77,308. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HARBAUER COMPANY, Toledo, Ohio. Filed Apr. 8, 1914.

PET

Particular description of goods.—Soup, Purée, and Catsup.
Claims use since Mar. 9, 1914.

Ser. No. 77,364. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PERCY STEET, New York, N. Y. Filed Apr. 9, 1914.



No claim being made to the terms 'Hatchetts." both occurrences, and "Sauce."
Particular description of goods.—Sauce Put Up in Bottles.
Claims use since Jan. 1, 1914.

Ser. No. 77,419. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLLAND FOOD CORPORATION, New York, N. Y. Filed Apr. 11, 1914.



No claim being made to the words "Brand," "Sweetened," "Condensed," "Milk," "From Holland," "Trade Mark."

Particular description of goods.—Condensed Milk.

Claims use since on or about Dec. 20, 1913.

Ser. No. 77,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLLAND FOOD CORPORATION, New York, N. Y. Filed Apr. 11, 1914.



No claim being made to the words "Sweetened," "Condensed Milk," "Brand," "Prepared in Holland," "Aurore Condensed Milk Co., Rotterdam," "Trade Mark."

Particular description of goods.—Condensed Milk.

Claims use since on or about Dec. 20, 1913.

Ser. No. 77,422. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed Apr. 11, 1914.



The body of the sack being white and the top being red, no claim being made to the representation of a sack.

Particular description of goods.—Wheat-Flour.

Claims use since Mar. 16, 1914.

Ser. No. 77,452. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOUTHERN SYRUP COMPANY, Montgomery, Ala. Filed Apr. 13, 1914.



No claim being here made to the exclusive use of the word "Brand."

Particular description of goods.—Table-Syrups.

Claims use since Oct. 11, 1905.

Ser. No. 77,570. (CLASS 39. CLOTHING.) C. W. REYNOLDS CO., Petersburg, N. Y. Filed Apr. 18, 1914.

Autocrat

Particular description of goods.—White and Fancy Shirts, Negligée and Dress Shirts, Night-Shirts, and Pajamas.

Claims use since Jan. 13, 1896.

Ser. No. 77,654. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARK A. MITCHELSON, New York, N. Y. Filed Apr. 22, 1914.



Particular description of goods.—Laundry Blue.

Claims use since Mar. 1, 1914.

Ser. No. 77,727. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HARRY E. KERSTINE, Philadelphia, Pa. Filed Apr. 24, 1914.

Palace

Particular description of goods.—Diamonds, Rubies, Emeralds, Sapphires, Pearls, Jewelry for Personal Adornment, Semiprecious Stones—Namely, Garnet, Amethyst, Bloodstone, Sardonyx, Turquoise, Opal, Topaz, Tourmalin, Aquamarine, Jade, Moonstone, Cat's-Eye, Lapis Lazuli, Matrix, Olivin, and Peridot—and Novelties in Jewelry for Personal Adornment.

Claims use since about Oct. 11, 1909.

Ser. No. 77,729. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUGENE MOULIÉ, Jacksonville, Fla. Filed Apr. 24, 1914.

PONCE de LEON

Particular description of goods.—Perfumes and Sachet-Powder.

Claims use since the month of February, 1914.

Ser. No. 77,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CALVERT MANUFACTURING CO., Baltimore, Md. Filed Apr. 25, 1914.

BIS-KO

Particular description of goods.—A Preparation for Making Biscuits Containing Flour, Milk, Shortening, Salt, and Baking-Powder.

Claims use since November, 1913.

Ser. No. 77,781. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN R. HUGHES, Spokane, Wash. Filed Apr. 27, 1914.

KILZT

Particular description of goods.—Preparations for the Treatment of Colds, Headaches, La Grippe, Neuralgia, and Rheumatism.

Claims use since June 1, 1913.

Ser. No. 77,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRANEX COMPANY, Grand Rapids, Mich. Filed Apr. 28, 1914.

BRANEX

Particular description of goods.—Cereal Products, an Especially-Milled Outer Covering of the Wheat-Berry Having, Not Only Nourishing but Medicinal Properties; a Flaky Substance Similar in its Physical Characteristics to Clean Wheat-Bran.

Claims use since Mar. 14, 1914.

Ser. No. 77,821. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRANEX COMPANY, Grand Rapids, Mich. Filed Apr. 28, 1914.

LACTOBRAN

Particular description of goods.—Cereal Products, an Especially-Milled Outer Covering of the Wheat-Berry Having, Not Only Nourishing but Medicinal Properties; a Flaky Substance Similar in its Physical Characteristics to Clean Wheat-Bran.

Claims use since Mar. 25, 1914.

Ser. No. 77,870. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) SWIFT AND FISHER, North Attleboro, Mass. Filed Apr. 29, 1914.

SF

Particular description of goods.—Gold and Silver Jewelry for Personal Wear Comprising Link-Buttons, Brooches, Pendants, Scarf-Pins, Hat-Pins, Cuff-Pins, Veil-Pins, Chains, Fobs, Tie-Clips, Ear-Screws.

Claims use since July 29, 1912.

Ser. No. 77,909. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOONE COUNTY MILLING & ELEVATOR CO., Columbia, Mo. Filed May 1, 1914.



Which includes a ring printed in red.

Particular description of goods.—Poultry and Stock Food.

Claims use since Oct. 1, 1912.

Ser. No. 77,951. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHIBOSABURO CHIBA, Seattle, Wash. Filed May 2, 1914.

GONOQUE

コンキユー

The trade-mark consists of a horizontal panel having the word "Gonoque" outlined thereon and centrally beneath this a vertical panel having the equivalent of the above name outlined thereon in Japanese characters.

Particular description of goods.—Medicines for Treatment of Venereal Diseases.

Claims use since Apr. 1, 1914.

Ser. No. 77,985. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN C. O'DELL, Rome, Ga. Filed May 4, 1914.

Carva

Particular description of goods.—A Non-Alcoholic Carbonated Flavored Beverage and Syrup for Making the Same.

Claims use since Apr. 28, 1914.

Ser. No. 77,994. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOSEPH WIESENFELD, Baltimore, Md. Filed May 4, 1914.

"FISHNEEL"

Particular description of goods.—Fish-Tongs.

Claims use since July 1, 1913.

Ser. No. 78,029. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUBEN M. LEONARD, Salisbury, N. C. Filed May 6, 1914.

R.M. Leonard's

Consisting of a facsimile of the applicant's signature, the words "Rub It In" not forming a part of the mark.

Particular description of goods.—Application for Pneumonia, Congestion, or Inflammation of the Lungs, Croups, and Colds.

Claims use since Apr. 21, 1914.

Ser. No. 78,089. (CLASS 37. PAPER AND STATIONERY.) NICOLS, DEAN & GREGG, St. Paul, Minn. Filed May 7, 1914.

KEEPTRAK

Particular description of goods.—Cards of a Blank Nature Used for Bookkeeping Systems.
Claims use since Jan. 1, 1913.

Ser. No. 78,150. (CLASS 12. CONSTRUCTION MATERIALS.) CHICAGO FIRE BRICK CO., Chicago, Ill. Filed May 9, 1914.

CFBCOXX

Particular description of goods.—Bricks, Tile Pipe, Flue-Lining, Wall-Copings, and Sewer-Pipes.
Claims use since November, 1911.

Ser. No. 78,219. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRIEDRICH FELLENBERG, Erlenbach, Switzerland. Filed May 12, 1914.

HERBAZID

Particular description of goods.—Pharmaceutical Preparations for Medicinal Baths.
Claims use since the 1st day of April, 1913.

Ser. No. 78,248. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed May 13, 1914.

ANOLA NBC

Particular description of goods.—Biscuit and Sugar Wafers.
Claims use since at least May 12, 1914.

Ser. No. 78,275. (CLASS 15. OILS AND GREASES.) W. R. GRACE & CO., New York, N. Y. Filed May 14, 1914.



VENCEDOR

Particular description of goods.—Kerosene.
Claims use since Apr. 26, 1914.

Ser. No. 78,278. (CLASS 32. FURNITURE AND UPHOLSTERY.) T. M. JAMES & CO., New York, N. Y. Filed May 14, 1914.

READY-PAK

Particular description of goods.—Window-Shades.
Claims use since May 5, 1914.

Ser. No. 78,296. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AUTO STROP SAFETY RAZOR CO., LD., London, England. Filed May 15, 1914.

7 o'clock

Particular description of goods.—Safety-Razors and Safety-Razor Blades.
Claims use since Feb. 13, 1913.

Ser. No. 78,316. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SALINOS COMPANY, Minneapolis, Minn. Filed May 15, 1914.

SALINOS

Particular description of goods.—A Medicinal Preparation to be Used as a Cathartic and Laxative and to Regulate the Action of the Bowels.
Claims use since about May 1, 1914.

Ser. No. 78,354. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. KURZMANS SONS, New York, N. Y. Filed May 18, 1914.

CeKay

Particular description of goods.—Cotton and Silk Crape Piece Goods.
Claims use since the 3d day of May, 1914.

Ser. No. 78,366. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PARDRIDGE MFG. CO., Detroit, Mich. Filed May 18, 1914.

THE AMERICAN GENTLEMAN

Particular description of goods.—A Menthol-Inhaler.
Claims use since the 10th day of April, 1914.

Ser. No. 78,382. (CLASS 39. CLOTHING.) MILES L. BLEECKER, New York, N. Y. Filed May 19, 1914.

THE BLUE BIRD SHOE

The word "Shoe" being hereby disclaimed.
Particular description of goods.—Boys' and Girls' Shoes Made of Leather.
Claims use since Feb. 1, 1912.

Ser. No. 78,385. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. A. FOLGER & CO., San Francisco, Cal. Filed May 19, 1914.

SHASTA



Particular description of goods.—Tea.
Claims use since 1894.

Ser. No. 78,450. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

EXCELLENZ

Particular description of goods.—Fertilizers.
Claims use since 1912.

Ser. No. 78,488. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BAY STATE MILLING CO., Winona, Minn. Filed May 23, 1914.

DE LUXE

Particular description of goods.—Wheat-Flour.
Claims use since October, 1909.

Ser. No. 78,491. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EUSTIS CITRUS GROWERS ASSOCIATION, Eustis, Fla. Filed May 23, 1914.

POND LILY

The words "Pond Lily."
Particular description of goods.—Citrus Fruits—viz., Oranges, Tangerines, Grape-Fruit, Lemons, and Limes.
Claims use since Nov. 8, 1913.

Ser. No. 78,492. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EUSTIS CITRUS GROWERS ASSOCIATION, Eustis, Fla. Filed May 23, 1914.

OUR HOBBY

The words "Our Hobby."
Particular description of goods.—Citrus Fruits—viz., Oranges, Tangerines, Grape-Fruit, Lemons, and Limes.
Claims use since Nov. 8, 1913.

Ser. No. 78,497. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Filed May 23, 1914.

HARVEST BLEND

No claim is made for the word "Blend" as a part of said trade-mark.
Particular description of goods.—Coffee.
Claims use since May 1, 1914.

Ser. No. 78,499. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Filed May 23, 1914.

HERALD BLEND

No claim is made for the word "Blend" as a part of said trade-mark.
Particular description of goods.—Coffee.
Claims use since May 1, 1914.

Ser. No. 78,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. GREENHUT CO., formerly Greenhut-Siegel Cooper Co., Inc., New York, N. Y. Filed May 23, 1914.

POPULAR BLEND

No claim is made for the word "Blend" as a part of said trade-mark.
Particular description of goods.—Coffee.
Claims use since Nov. 1, 1896.

Ser. No. 78,511. (CLASS 37. PAPER AND STATIONERY.) THE WHITAKER PAPER COMPANY, Cincinnati, Ohio. Filed May 23, 1914.

Regional

Particular description of goods.—Writing and Printing Papers.
Claims use since May 15, 1914.

Ser. No. 78,545. (CLASS 37. PAPER AND STATIONERY.) AUTOGRAPHIC REGISTER COMPANY, Hoboken, N. J. Filed May 26, 1914.

SHOUPERIOR

Particular description of goods.—Autographic Registers.
Claims use since the month of January, 1909.

Ser. No. 78,546. (CLASS 37. PAPER AND STATIONERY.) AUTOGRAPHIC REGISTER COMPANY, Hoboken, N. J. Filed May 26, 1914.

SHOUPERIOR

Particular description of goods.—Paper for Autographic Registers.
Claims use since the month of January, 1909.

Ser. No. 78,550. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEO. BORGFELDT & CO., New York, N. Y. Filed May 26, 1914.

A-1-de-De-Cup

Particular description of goods.—Military Hair-Brushes.
Claims use since Apr. 15, 1914.

Ser. No. 78,555. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGIA MEDICINE CO., Wrightsville, Ga. Filed May 26, 1914.

Live--Raid

Particular description of goods.—Remedy for Liver and Stomach Troubles.
Claims use since Apr. 19, 1914.

Ser. No. 78,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORTIMER WILLIAMS, Petersburg, Va. Filed May 26, 1914.

Pigago

Particular description of goods.—Peanuts, Peanut-Butter, Salted Peanuts, and Peanut-Candy.
Claims use since Oct. 1, 1912.

Ser. No. 78,598. (CLASS 39. CLOTHING.) FANNIE WEISSMAN BROWN, Milwaukee, Wis. Filed May 28, 1914.

Mme. La Vida

The word "Corset" being disclaimed.
Particular description of goods.—Corsets.
Claims use since May 23, 1914.

Ser. No. 78,605. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LEON F. CAUMONT, New York, N. Y. Filed May 28, 1914.

YANKEE

Particular description of goods.—Four-in-Hand-Necktie Forms and Holders.
Claims use since May, 1911.

Ser. No. 78,656. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS A. GEHRUM, Detroit, Mich. Filed May 29, 1914.

"Comfyfoot"

Particular description of goods.—Foot-Powder.
Claims use since May 15, 1914.

Ser. No. 78,664. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ADOLPHE SCHWOB, New York, N. Y. Filed May 29, 1914. Under ten-year proviso.

Centaur

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since the year 1881.

Ser. No. 78,665. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ADOLPHE SCHWOB, New York, N. Y. Filed May 29, 1914. Under ten-year proviso.

Alpine

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since the year 1882.

Ser. No. 78,671. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BALDPATE CO., New York, N. Y. Filed June 1, 1914.

BALDPATE

Particular description of goods.—Hair-Tonic.
Claims use since May 1, 1914.

Ser. No. 78,677. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEACON MANUFACTURING CO., Providence, R. I., and New York, N. Y. Filed June 1, 1914.

Beacon

Particular description of goods.—Steamer-Rugs.
Claims use since April, 1905.

Ser. No. 78,707. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ABRAHAM MENDELSOHN, Chicago, Ill. Filed June 1, 1914.



Particular description of goods.—Mops and Parts Thereof.
Claims use since May 1, 1914.

Ser. No. 78,719. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED DRUG COMPANY, Boston, Mass. Filed June 1, 1914.

KLENZO

Particular description of goods.—Cold-Cream, Tooth-Paste, and Tooth-Wash.
Claims use since prior to Apr. 1, 1914.

Ser. No. 78,731. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEO. BORGFELDT & CO., New York, N. Y. Filed June 2, 1914.

VOGUE

Particular description of goods.—Hair, Tooth, and Nail Brushes.
Claims use since about May 1, 1914.

Ser. No. 78,735. (CLASS 10. FERTILIZERS.) BEATEY'S UNADULTERATED AGRICULTURAL PHOSPHATE COMPANY OF NEW ENGLAND, Boston, Mass. Filed June 2, 1914.

BEATEY'S FERTILIZER

No claim being made for the right for registration of the words "Beatey's" and "Fertilizer."
Particular description of goods.—Fertilizers.
Claims use since May 2, 1914.

Ser. No. 78,749. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HUBERT J. MIDDLETON, New York, N. Y. Filed June 2, 1914.

STONE GINGER

No claim is made in this application to the printed word "Ginger" shown in the drawing.
Particular description of goods.—Ginger-Beer.
Claims use since prior to May 19, 1914.

Ser. No. 78,815. (CLASS 37. PAPER AND STATIONERY.) MINNEAPOLIS PAPER COMPANY, Minneapolis, Minn. Filed June 4, 1914.

H

Particular description of goods.—Wrapping-Paper.
Claims use since June 1, 1909.

Ser. No. 78,835. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE H. W. K. COMPANY, Providence, R. I. Filed June 5, 1914.

HWK

Particular description of goods.—Jewelry for Personal Adornment.
Claims use since Jan. 1, 1914.

Ser. No. 78,930. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PARDRIDGE MFG. CO., Detroit, Mich. Filed June 9, 1914.

THE AMERICAN LADY

Particular description of goods.—A Menthol-Inhaler.
Claims use since the 10th day of April, 1914.

Ser. No. 78,935. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SWISS DRUG COMPANY, Findlay, Ohio. Filed June 9, 1914.

KAMOX

Particular description of goods.—Ointment and Salves.
Claims use since Apr. 10, 1914.

Ser. No. 78,950. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE LAMSON COMPANY, Boston, Mass. Filed June 10, 1914. Under ten-year proviso.

LAMSON

Particular description of goods.—Store Furniture.
Claims use since before Feb. 20, 1895.

Ser. No. 78,972. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE A. WILHELM COMPANY, Reading, Pa. Filed June 10, 1914.

ROOKWOOD

Particular description of goods.—Ready-Mixed Paints, Including Brilliant Gold Paint and Brilliant Aluminum Paint.
Claims use since the year 1898.

Ser. No. 79,009. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NIAGARA SPRAYER COMPANY, Middleport, N. Y. Filed June 11, 1914.



Particular description of goods.—Lime-Sulfur Solution, Bordeaux Arsenate, Arsenate of Lead, Bordeaux Paste, and Soluble Sulfur.
Claims use since May 1, 1913.

Ser. No. 79,021. (CLASS 11. INKS AND INKING MATERIALS.) B. G. VOLGER MANUFACTURING COMPANY, Passaic, N. J. Filed June 10, 1914.

NEW DEPARTURE

Particular description of goods.—Self-Inking Stamp-Pads.
Claims use since Dec. 14, 1908.

Ser. No. 79,022. (CLASS 11. INKS AND INKING MATERIALS.) B. G. VOLGER MANUFACTURING COMPANY, Passaic, N. J. Filed June 10, 1914. Under ten-year proviso.

EXCELSIOR

Particular description of goods.—Self-Inking Stamp-Pads.
Claims use since 1891.

Ser. No. 79,026. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO. INC., New York, N. Y. Filed June 12, 1914. Under ten-year proviso.

JAVA

Particular description of goods.—Toilet Powders.
Claims use since January, 1879.

Ser. No. 79,032. (CLASS 39. CLOTHING.) C. GOTZIAN & COMPANY, St. Paul, Minn. Filed June 12, 1914.

Sady Comfort

Particular description of goods.—Ladies', Misses', and Children's Shoes Made of Leather or Leather and Rubber or Rubber.
Claims use since Mar. 18, 1914.

Ser. No. 79,039. (CLASS 39. CLOTHING.) OSHINSKY & VALENTINE, New York, N. Y. Filed June 12, 1914.

PARK SQUARE

Comprising the words "Park Square."
Particular description of goods.—Dress and Negligée Shirts, Night-Shirts, and Pajamas.
Claims use since 1913.

Ser. No. 79,042. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE SHERWIN-WILLIAMS COMPANY, Cleveland, Ohio. Filed June 12, 1914.

REXPAR

Particular description of goods.—Varnish or Paint to be Used on Wood or Metal Surfaces.
Claims use since May 5, 1914.

Ser. No. 79,050. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) C. BRUNO & SON, INC., New York, N. Y. Filed June 13, 1914. Under ten-year proviso.

BRUNO

Particular description of goods.—Accordions, Altos, $E_{\flat}$; Altos, Circular; Altos, Bell-Front or Solo; Ballad-Horns, Banjos, Banjorines, Banjo-Mandolins, Baritones, $B_{\flat}$, Upright; Bass, $B_{\flat}$, Upright; Bass, $E_{\flat}$, Upright; Bass, $E_{\flat}$, Contra; Bass, $BB_{\flat}$, Contra; Bassoons, Batons, Bicycle-Bugles, Bugles, Castanets, Clarinets, Concert-Horns, Concertinas, Contra Basses, Contra-Bass Guitars, Cornets, Cymbals, Double Basses, Double-Bass Bows, Double-Bass Bridges, Bass-Drums, Snare-Drums, Euphoniums, Fifes, Flageolets, Flutes, Flute-Swabs, Fog-horns Not Electrically Operated, French Horns, Guitars, Harmonicas, Harp-Guitars, Helicons, Mandolas, Mandolinettos, Mandolins, Piccolos, Post-Horns Not Electrically Operated, and Signal-Horns Not electrically Operated; Gut, Steel, Silk, and Covered Strings for Banjos, Banjorines, Guitars, Harps, Harp-Guitars, Mandolins, Violas, Violins, Zithers, and Double Basses; Tambourines; Tenors, $B_{\flat}$, Upright; Trombones, Violas, Violins, Violin-Bows, Violin-Bow Hair, Violin-Bridges, Violoncellos, Violoncello-Bows, and Zithers.
Claims use since 1834.

Ser. No. 79,130. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WOOLSON SPICE COMPANY, Toledo, Ohio. Filed June 15, 1914.

CHATEAU

Particular description of goods.—Baking-Powder.
Claims use since Mar. 28, 1914.

Ser. No. 79,198. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIKER & HEGEMAN CO., New York, N. Y. Filed June 18, 1914.

PETROFOL

Particular description of goods.—Medicinal Oil for the Treatment of Constipation with a Purely Mechanical Action.
Claims use since June 13, 1914.

Ser. No. 79,207. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. O. WRIGHT, Winnipeg, Canada. Filed June 18, 1914.

Foaline

Particular description of goods.—An Internal Remedy for Mares to Procure Immunity for the Foals from a Certain Disease Known as Omphalitis or Navel Disease.
Claims use since Jan. 19, 1914.

Ser. No. 79,229. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE MEALY MANUFACTURING COMPANY, Baltimore, Md. Filed June 18, 1914.

"DUO"

Particular description of goods.—Watch-Bracelets.
Claims use since July 26, 1912.

Ser. No. 79,238. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed June 20, 1914.

PROTEXIT

Particular description of goods.—Prepared Roofings.
Claims use since on or about the 25th day of May, 1911.

Ser. No. 79,242. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MAATSCHAPPIJ VEREENIGDE VAN DER BURG'S JAPANLAK FABRIEKEN, (UNITED VANDERBURG'S JAPANLAC- AND VARNISH WORKS,) Rotterdam, Netherlands. Filed June 20, 1914.

CABINOL

Particular description of goods.—Paints, Varnishes, and Lacquers, (Dry, Paste, and Ready-Mixed.)
Claims use since January, 1909.

Ser. No. 79,266. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MONROE PHARMACAL COMPANY, Chicago, Ill. Filed June 22, 1914.

NILODOX

The word "Nilodox."
Particular description of goods.—Antiseptic Preparations.
Claims use since Mar. 16, 1914.

Ser. No. 79,270. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed June 22, 1914.

PATSA-CO

Particular description of goods.—Dry and Ready-Mixed Paints, Enamels, Stains, Wall-Paints, Lacs, Fillers, and Varnish.
Claims use since June 15, 1914.

Ser. No. 79,278. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL ROLLER, New York, N. Y. Filed June 22, 1914.

LYSAROL

Particular description of goods.—The Treatment of Tuberculosis.
Claims use since Jan. 1, 1912.

Ser. No. 79,279. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL ROLLER, New York, N. Y. Filed June 22, 1914.

ROLLERINE

Particular description of goods.—Hay-Fever, Catarrhal Conditions, and Eye-Wash.
Claims use since June 1, 1912.

Ser. No. 79,281. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD MONTGOMERY STOLWORTHY, Cincinnati, Ohio. Filed June 22, 1914.

TARLAND

Particular description of goods.—A Preparation for the Prevention and Treatment of Hay-Fever.
Claims use since Feb. 15, 1914.

Ser. No. 79,285. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed June 22, 1914.

TEXALENE

Particular description of goods.—Naphtha, Benzin, and Gasolene.
Claims use since Nov. 20, 1912.

Ser. No. 79,293. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. R. GRACE & CO., New York, N. Y. Filed June 23, 1914.



Particular description of goods.—Turpentine.
Claims use since May 5, 1914.

Ser. No. 79,358. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) IMPERIAL RUBBER CO., New York, N. Y. Filed June 25, 1914.

MINERALAC

Particular description of goods.—Mixed Paints and Varnishes.
Claims use since the year 1900.

Ser. No. 79,365. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MELVILLE CLARK PIANO COMPANY, Chicago, Ill. Filed June 25, 1914.

Solo-art

Particular description of goods.—Player-Pianos and Piano-Players.
Claims use since June 12, 1914.

Ser. No. 79,374. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE SHERWIN-WILLIAMS COMPANY, Cleveland, Ohio. Filed June 25, 1914.

Lastico

Particular description of goods.—A Paint for Metal Surfaces.
Claims use since Feb. 1, 1912.

Ser. No. 79,388. (CLASS 15. OILS AND GREASES.) THE INTEROCEAN OIL COMPANY, Pierre, S. D., and New York, N. Y. Filed June 26, 1914.

GOVOLINE

Particular description of goods.—Lubricants.
Claims use since the 1st of June, 1914.

Ser. No. 79,395. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALKER DRUG COMPANY, Schenectady, N. Y. Filed June 26, 1914.

SPARTO

Particular description of goods.—An Effervescent Remedy for Headache, Neuralgia, and Nervousness.
Claims use since about May 10, 1914.

Ser. No. 79,452. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM S. GODWIN, Baltimore, Md. Filed June 29, 1914.

S/A

Particular description of goods.—Antiseptics.
Claims use since Apr. 15, 1914.

[Vol. 204. No. 4.]

TRADE-MARK REGISTRATIONS GRANTED

JULY 28, 1914.

98,610. DRAPERY MATERIAL. A. THEO. ABBOTT & Co., Philadelphia, Pa.
Filed March 17, 1914. Serial No. 76,712. PUBLISHED MAY 26, 1914.

98,611. SELF-RISING WHEAT-FLOUR. THE ACME MILLS, Hopkinsville, Ky.
Filed March 5, 1914. Serial No. 76,391. PUBLISHED MAY 26, 1914.

98,612. RUM. ENRIQUE ALDABÓ, Habana, Cuba.
Filed July 15, 1912. Serial No. 64,734. PUBLISHED MAY 26, 1914.

98,613. BUTTER. ALBUQUERQUE CREAMERY, Albuquerque, N. Mex.
Filed March 2, 1914. Serial No. 76,266. PUBLISHED MAY 26, 1914.

98,614. ARTICLE OF MANUFACTURE CONSISTING OF A METAL SPACE OR QUAD OF SPECIAL DESIGN. AMERICAN TYPE FOUNDERS COMPANY, Jersey City, N. J.
Filed April 12, 1913. Serial No. 69,734. PUBLISHED MAY 26, 1914.

98,615. OLEOMARGARIN. AMMON & PERSON, Jersey City, N. J.
Filed February 26, 1914. Serial No. 76,158. PUBLISHED MAY 26, 1914.

98,616. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 2, 1914. Serial No. 77,140. PUBLISHED MAY 26, 1914.

98,617. PRODUCT CONSISTING OF CERTAIN NAMED FOODS. ARMOUR & COMPANY, Chicago, Ill.
Filed February 7, 1914. Serial No. 75,745. PUBLISHED MAY 26, 1914.

98,618. CHEWING-GUM. AUTOSALES GUM AND CHOCOLATE COMPANY, New York, N. Y., assignor, by mesne assignments, to The Sterling Gum Company, Inc., a Corporation of New York.
Filed February 20, 1913. Serial No. 68,631. PUBLISHED APRIL 22, 1913.

98,619. KNIT AND WOVEN UNDERWEAR. AVALON KNITWEAR COMPANY, Utica, N. Y.
Filed May 1, 1914. Serial No. 77,906. PUBLISHED MAY 26, 1914.

98,620. PLUG-TOBACCO. BAILEY BROTHERS, INC., Winston-Salem, N. C.
Filed March 4, 1914. Serial No. 76,307. PUBLISHED MAY 19, 1914.

98,621. CAKES. ANTHONY BARLET, New York, N. Y.
Filed January 9, 1914. Serial No. 75,047. PUBLISHED MAY 26, 1914.

98,622. COFFEE AND MIXTURES OF COFFEE AND CHICORY. HENRY T. BATTERTON, Birmingham, Ala.
Filed April 30, 1913. Serial No. 70,121. PUBLISHED MAY 26, 1914.

98,623. GRINDING-DISKS. CHARLES H. BESLY & COMPANY, Chicago, Ill.
Filed February 16, 1914. Serial No. 75,920. PUBLISHED MAY 19, 1914.

98,624. CERTAIN NAMED LEATHER ARTICLES. GEO. BORGFELDT & CO., New York, N. Y.
Filed January 26, 1914. Serial No. 75,430. PUBLISHED MARCH 3, 1914.

98,625. CANNED COD-FISH-BALLS, CANNED BROWN BREAD, AND CANNED BAKED BEANS. BOSTON FOOD PRODUCTS COMPANY, East Boston, Mass.
Filed February 2, 1914. Serial No. 75,604. PUBLISHED MAY 26, 1914.

98,626. CIGARS. BRESLIN & CAMPBELL, INC., Boston, Mass.
Filed March 13, 1914. Serial No. 76,598. PUBLISHED MAY 19, 1914.

98,627. CAR-TRUCKS. THE J. G. BRILL COMPANY, Philadelphia, Pa.
Filed March 25, 1914. Serial No. 76,917. PUBLISHED MAY 26, 1914.

98,628. TRUNKS, PORTMANTEAUS, BOXES, CASES, BAGS, KNAPSACKS, SATCHELS, AND HOLD-ALLS, PORTFOLIOS AND POCKET-BOOKS. J. B. BROOKS & COMPANY, LIMITED, Birmingham, England.
Filed February 24, 1914. Serial No. 76,098. PUBLISHED MAY 26, 1914.

98,629. TROUSERS AND SUITS FOR MEN AND YOUTHS. ABRAHAM A. BROWN, New York, N. Y.
Filed April 24, 1914. Serial No. 77,719. PUBLISHED MAY 26, 1914.

98,630. SOAP. CALLAHAN MANUFACTURING CO., Seattle, Wash.
Filed November 25, 1912. Serial No. 67,100. PUBLISHED MAY 19, 1914.

98,631. COTTON PIECE GOODS. CARSON, PIRIE, SCOTT & Co., Chicago, Ill.
Filed April 17, 1913. Serial No. 69,844. PUBLISHED MAY 26, 1914.

98,632. HANDKERCHIEFS. CARSON, PIRIE, SCOTT & Co., Chicago, Ill.
Filed April 17, 1913. Serial No. 69,846. PUBLISHED MAY 26, 1914.

98,633. FROZEN MEAT, PRESERVED MEAT, AND BACON. THE CHRISTCHURCH MEAT COMPANY, LIMITED, Christchurch, New Zealand, and London, England.
Filed February 20, 1914. Serial No. 76,045. PUBLISHED MAY 26, 1914.

98,634. FROZEN MUTTON AND LAMB. THE CHRISTCHURCH MEAT COMPANY, LIMITED, Christchurch, New Zealand, and London, England.
Filed February 20, 1914. Serial No. 76,046. PUBLISHED MAY 26, 1914.

98,635. CONCRETE CONSTRUCTIONS IN SIDEWALKS AND CURBS. CLIP BAR MANUFACTURING COMPANY, Philadelphia, Pa.
Filed January 19, 1911. Serial No. 53,977. PUBLISHED MAY 26, 1914.

98,636. MONTHLY MAGAZINES. CLOUD PUBLISHING COMPANY, Chicago, Ill.
Filed March 28, 1914. Serial No. 77,018. PUBLISHED MAY 19, 1914.

98,637. CERTAIN NAMED CLOTHING FOR MEN AND WOMEN. PHILIP MICHAEL COHEN, Cheetham, Manchester, England.
Filed August 22, 1913. Serial No. 72,489. PUBLISHED MAY 26, 1914.

98,638. CAPS. JAMES A. COHOON, St. Louis, Mo.
Filed April 4, 1914. Serial No. 77,197. PUBLISHED MAY 26, 1914.

98,639. BABY-CARRIAGES AND GO-CARTS. P. & L. COMFORT BABY CARRIAGE CO. INC., New York, N. Y.
Filed February 3, 1914. Serial No. 75,658. PUBLISHED MAY 26, 1914.

98,640. MACARONI, SPAGHETTI, VERMICELLI, NOODLES, ELBOWS, AND ALPHABETS. DALPINI MACARONI COMPANY, St. Louis, Mo.
Filed March 2, 1914. Serial No. 76,270. PUBLISHED MAY 26, 1914.

98,641. CLEANSER FOR LINENS. GEORGE E. DARROW, Eugene, Oreg.
Filed March 10, 1914. Serial No. 76,492. PUBLISHED MAY 19, 1914.

98,642. HAIR-NETS. EMIL DAVID, New York, N. Y.
Filed June 23, 1913. Serial No. 71,288. PUBLISHED MAY 26, 1914.

98,643. CERTAIN NAMED LAMPS, LANTERNS, AND BURNERS. R. E. DIETZ COMPANY, New York, N. Y.
Filed February 4, 1914. Serial No. 75,669. PUBLISHED MAY 19, 1914.

98,644. PORCELAIN, GLASS, AND VITREOUS-WARE STOPPLES FOR BOTTLES. JOHN WALTER DOUGLASS, Philadelphia, Pa., assignor to Protective "Freflo" Stopple Company, Dover, Del., a Corporation of Delaware.
Filed April 7, 1914. Serial No. 77,269. PUBLISHED MAY 19, 1914.

98,645. METAL STOPPLES FOR BOTTLES. JOHN WALTER DOUGLASS, Philadelphia, Pa., assignor to Protective "Freflo" Stopple Company, Dover, Del., a Corporation of Delaware.
Filed April 13, 1914. Serial No. 77,436. PUBLISHED MAY 19, 1914.

98,646. RUBBER VEHICLE-TIRES AND INNER TUBES. DREADNAUGHT TIRE & RUBBER CO., Baltimore, Md.
Filed February 26, 1914. Serial No. 76,172. PUBLISHED MAY 19, 1914.

98,647. MEN'S HALF-HOSE AND OTHER HOSIERY. DURBIN-MELLON HOSIERY COMPANY, Williamstown, Pa.
Filed November 10, 1913. Serial No. 73,882. PUBLISHED MAY 26, 1914.

98,648. SILK, SILK AND COTTON, AND SATIN PIECE GOODS. SAMUEL EISEMAN & CO., New York, N. Y.
Filed April 24, 1914. Serial No. 77,722. PUBLISHED MAY 26, 1914.

98,649. LEATHER BOOTS AND SHOES. EMERSON SHOE CO., Rockland, Mass.
Filed April 13, 1914. Serial No. 77,438. PUBLISHED MAY 26, 1914.

98,650. NEEDLES FOR HAND-SEWING, TOILET-PINS, HAIR-PINS, KNITTING-PINS, BODKINS, AND CROCHET-HOOKS. J. ENGLISH & SON LIMITED, Redditch, England.
Filed February 26, 1914. Serial No. 76,174. PUBLISHED MAY 26, 1914.

98,651. CERTAIN LUNCHES. EXCHANGE BUFFET CORPORATION, New York, N. Y.
Filed October 11, 1913. Serial No. 73,311. PUBLISHED MAY 26, 1914.

98,652. COTTON TWILLS. FARNSWORTH, HOYT & CO., Boston, Mass.
Filed February 26, 1914. Serial No. 76,178. PUBLISHED MAY 26, 1914.

98,653. FEED COMPOSED OF CERTAIN NAMED GRAINS. FEDERAL MILLING COMPANY, Lockport, N. Y.
Filed March 2, 1914. Serial No. 76,272. PUBLISHED MAY 26, 1914.

98,654. LUBRICATING-OILS. THE FRANKLIN OIL & GAS COMPANY, Bedford, Ohio.
Filed March 14, 1914. Serial No. 76,641. PUBLISHED MAY 26, 1914.

95,655. AUTOMOBILES, BODIES, RUNNING-GEARS, AND CHASSIS. FORD MOTOR COMPANY, Detroit, Mich.
Filed June 24, 1912. Serial No. 64,353. PUBLISHED MAY 26, 1914.

98,656. WOMEN'S AND MISSES' CLOTH SUITS. BEN GERSHEL & CO., New York, N. Y.
Filed April 8, 1914. Serial No. 77,305. PUBLISHED MAY 26, 1914.

98,657. CANDY. GUTH CHOCOLATE COMPANY, Baltimore, Md.
Filed February 5, 1914. Serial No. 75,701. PUBLISHED MAY 26, 1914.

98,658. PETTICOATS, PRINCESS-SLIPS, AND LADIES' MUSLIN AND SILK UNDERWEAR. HARRIS BROS. & BARNETT, New York, N. Y.
Filed May 1, 1914. Serial No. 77,923. PUBLISHED MAY 26, 1914.

98,659. LADIES' COMBINATION-GARMENTS. HARRISON & ROSENBERG, New York, N. Y.
Filed April 24, 1914. Serial No. 77,725. PUBLISHED MAY 26, 1914.

98,660. ENAMELED, STEEL, OR IRON WARE. HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill.
Filed March 30, 1914. Serial No. 77,061. PUBLISHED MAY 26, 1914.

98,661. LINEN WASHABLE HAT. HIRSCHBERG & CO., New York, N. Y.
Filed April 27, 1914. Serial No. 77,776. PUBLISHED MAY 26, 1914.

98,662. CHANDELIERS, BRACKETS, AND PEDESTALS FOR HOLDING AND SUPPORTING GAS AND ELECTRIC LIGHTS. HOLOPHANE GLASS CO., New York, N. Y.
Filed April 10, 1908. Serial No. 34,001. PUBLISHED MAY 19, 1914.

98,663. TRUNKS, PORTMANTEAUS, PORTFOLIOS, AND TRAVELERS' BAGS. INNOVATION TRUNK COMPANY, New York, N. Y.
Filed February 27, 1914. Serial No. 76,213. PUBLISHED MAY 26, 1914.

98,664. MONTHLY MAGAZINE. C. W. JEWETT, Bemidji, Minn.
Filed March 13, 1914. Serial No. 76,605. PUBLISHED MAY 19, 1914.

98,665. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed April 8, 1913. Serial No. 69,658. PUBLISHED MAY 26, 1914.

98,666. LIVER REMEDY. LA FAYETTE GRAVES DURR, Nashville, Tenn.
Filed July 31, 1913. Serial No. 72,058. PUBLISHED MAY 19, 1914.

98,667. APPARATUS FOR DEVELOPING PHOTOGRAPHIC PLATES, FILMS, AND PAPERS IN DAYLIGHT. ALEXANDRE LAMBLIN, Lille, France.
Filed April 1, 1914. Serial No. 77,132. PUBLISHED MAY 26, 1914.

98,668. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed April 10, 1914. Serial No. 77,379. PUBLISHED MAY 26, 1914.

98,669. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed April 10, 1914. Serial No. 77,380. PUBLISHED MAY 26, 1914.

98,670. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed April 10, 1914. Serial No. 77,381. PUBLISHED MAY 26, 1914.

98,671. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed April 10, 1914. Serial No. 77,382. PUBLISHED MAY 26, 1914.

98,672. KID GLOVES. J. & D. LEHMAN CO., New York, N. Y.
Filed April 10, 1914. Serial No. 77,383. PUBLISHED MAY 26, 1914

98,673. OUTER SUITS FOR BOYS. LOTH-HOFFMAN CLOTHING CO., St. Louis, Mo.
Filed April 20, 1914. Serial No. 77,591. PUBLISHED MAY 26, 1914.

98,674. CANDY. THE ROBT. F. MACKENZIE CO., Cleveland, Ohio.
Filed January 29, 1914. Serial No. 75,533. PUBLISHED MAY 26, 1914.

98,675. CANDY. THE ROBT. F. MACKENZIE CO., Cleveland, Ohio.
Filed January 29, 1914. Serial No. 75,536. PUBLISHED MAY 26, 1914.

98,676. CERTAIN CLEANSING-PASTE. MAHON & STANLY, New York, N. Y.
Filed November 14, 1913. Serial No. 73,986. PUBLISHED MAY 19, 1914.

98,677. FLOUR. MAYHEW MILLING CO., Owensboro, Ky.
Filed January 19, 1914. Serial No. 75,301. PUBLISHED APRIL 21, 1914.

98,678. CYCLE-CARS. WILLIAM H. MCINTYRE, Auburn, Ind.
Filed February 26, 1914. Serial No. 76,186. PUBLISHED MAY 26, 1914.

98,679. FRUIT FLAVORS FOR FOODS. MCMONAGLE & ROGERS, INCORPORATED, Middletown, N. Y.
Filed September 5, 1913. Serial No. 72,692. PUBLISHED MAY 26, 1914.

98,680. CERTAIN NAMED CLOTHING. MOORE, EADY & MURCOTT GOODE LIMITED, Leicester, England.
Filed January 27, 1914. Serial No. 75,484. PUBLISHED MAY 26, 1914.

98,681. PASTE AND LIQUID SHOE-POLISH AND CLEANING COMPOUNDS FOR SHOES. GUY D. NOTTINGHAM, Baltimore, Md.
Filed February 26, 1914. Serial No. 76,189. PUBLISHED MAY 19, 1914.

98,682. METAL-POLISH. OLEUM PRODUCTS COMPANY, Scranton, Pa.
Filed February 28, 1914. Serial No. 76,252. PUBLISHED MAY 19, 1914.

98,683. CHEMICAL COMPOUNDS FOR PRESERVING BOILER METALS AND REMOVING OIL AND SCALE FROM BOILERS. THE PEROLIN COMPANY OF AMERICA, Chicago, Ill.
Filed October 3, 1913. Serial No. 73,182. PUBLISHED MAY 19, 1914.

98,684. CHEMICAL COMPOUNDS FOR PRESERVING METALS AND REMOVING OIL AND SCALE FROM BOILERS. THE PEROLIN COMPANY OF AMERICA, Chicago, Ill.
Filed October 15, 1913. Serial No. 73,399. PUBLISHED MAY 19, 1914.

98,685. LEATHER AND CANVAS SHOES. THE PITTS SHOE COMPANY, Montgomery, Ala.
Filed March 23, 1914. Serial No. 76,873. PUBLISHED MAY 26, 1914.

98,686. LUBRICATING-OILS. PLATT & WASHBURN REFINING COMPANY, New York, N. Y.
Filed April 28, 1914. Serial No. 77,847. PUBLISHED MAY 26, 1914.

98,687. CLEARING-PANS, HOP-JACKS, BEER-HOPPERS, AND BREW-KETTLES AND PARTS THEREOF. WILHELM PONNDORF, Cassel, Germany.
Filed November 13, 1913. Serial No. 73,956. PUBLISHED MAY 26, 1914.

98,688. LEADS, SLUGS, AND BLOCKS. ROLLAND M. POWELL, Ridley Park, Pa.
Filed February 10, 1914. Serial No. 75,826. PUBLISHED MAY 26, 1914.

98,689. BOOTS AND SHOES AND SLIPPERS OF LEATHER OR TEXTILE MATERIAL. POWELL BROTHERS SHOE COMPANY, New York, N. Y., assignor to W. H. McElwain Company, Boston, Mass., a Corporation of Massachusetts.
Filed December 24, 1912. Serial No. 67,577. PUBLISHED MAY 26, 1914.

98,690. CANNED TUNA. PREMIER PACKING CO., San Diego, Cal.
Filed January 26, 1914. Serial No. 75,463. PUBLISHED MAY 26, 1914.

98,691. CANNED FRUITS AND CANNED VEGETABLES. H. G. PRINCE & COMPANY, Fruitvale, Cal.
Filed December 13, 1913. Serial No. 74,589. PUBLISHED MAY 26, 1914.

98,692. UNDERWEAR OF ALL KINDS OF MATERIALS AND DESCRIPTIONS. ROBERT REIS & CO., New York, N. Y.
Filed April 8, 1914. Serial No. 77,319. PUBLISHED MAY 26, 1914.

98,693. CERTAIN NAMED CLOTHING. ROBERT REIS & CO., New York, N. Y.
Filed April 8, 1914. Serial No. 77,320. PUBLISHED MAY 26, 1914.

98,694. CERTAIN NAMED CLOTHING. ROBERT REIS & CO., New York, N. Y.
Filed April 8, 1914. Serial No. 77,321. PUBLISHED MAY 26, 1914.

98,695. MACARONI, VERMICELLI, AND SPAGHETTI. ANTONIO RICCHEZZA, Philadelphia, Pa.
Filed November 10, 1913. Serial No. 73,897. PUBLISHED MAY 26, 1914.

98,696. LEATHER-OIL. WM. C. ROBINSON & SON CO., Baltimore, Md.
Filed February 21, 1914. Serial No. 76,089. PUBLISHED MAY 19, 1914.

98,697. CERTAIN NAMED TOOLS AND PARTS THEREOF. SARGENT & COMPANY, New Haven, Conn.
Filed January 4, 1912. Serial No. 60,606. PUBLISHED MAY 26, 1914.

98,698. CERTAIN NAMED HARDWARE SUPPLIES. SARGENT & COMPANY, New Haven, Conn.
Filed January 4, 1912. Serial No. 60,607. PUBLISHED MAY 26, 1914.

98,699. LOCKS, LATCHES, KEYS, PADLOCKS, STRIKE-PLATES, LOCK-ESCUTCHEONS, LOCK-CASES, AND LOCK-FRONTS. SARGENT & CO., New Haven, Conn.
Filed January 4, 1912. Serial No. 60,608. PUBLISHED MAY 26, 1914.

98,700. CERTAIN NAMED MEASURING INSTRUMENTS. SARGENT & CO., New Haven, Conn.
Filed February 14, 1912. Serial No. 61,465. PUBLISHED MAY 26, 1914.

98,701. HEN'S EGGS. SCHERMERHORN-SHOTWELL COMPANY, Des Moines, Iowa.
Filed February 9, 1914. Serial No. 75,793. PUBLISHED MAY 26, 1914.

98,702. BONNET-WIRE. JOSEPH W. SCHLOSS CO., New York, N. Y.
Filed September 30, 1913. Serial No. 73,133. PUBLISHED MAY 26, 1914.

98,703. SILK GLOVES AND SILK UNDERWEAR. SCHUYLKILL SILK MILLS, Reading, Pa.
Filed April 20, 1914. Serial No. 77,599. PUBLISHED MAY 26, 1914.

98,704. KNITTED UNDERWEAR. J. H. SEMEL & CO., New York, N. Y.
Filed March 15, 1913. Serial No. 69,060. PUBLISHED MAY 26, 1914.

98,705. SHOES OF CANVAS AND LEATHER. SHAFT-PIERCE SHOE CO., Faribault, Minn.
Filed July 23, 1913. Serial No. 71,917. PUBLISHED MAY 26, 1914.

98,706. EVAPORATED MILK. THE SHEBOYGAN EVAPORATED MILK CO., Sheboygan, Wis.
Filed March 7, 1914. Serial No. 76,450. PUBLISHED MAY 26, 1914.

98,707. LUBRICATING-OIL. THE SINGER MANUFACTURING COMPANY, Elizabeth, N. J.
Filed March 4, 1914. Serial No. 76,331. PUBLISHED MAY 26, 1914.

98,708. LEATHER BOOTS, SHOES, AND SLIPPERS. CHARLES E. SLATER, Boston, Mass.
Filed March 20, 1914. Serial No. 76,804. PUBLISHED MAY 26, 1914.

98,709. PADLOCKS, DOOR-LOCKS, RIM-LOCKS, AND NIGHT-LATCHES. THE SLAYMAKER LOCK MANUFACTURING CORPORATION, Lancaster, Pa.
Filed October 29, 1913. Serial No. 73,662. PUBLISHED APRIL 7, 1914.

98,710. CERTAIN NAMED TOOLS AND MOTORS. SMITH & HEMENWAY COMPANY, INC., New York, N. Y.
Filed April 18, 1914. Serial No. 77,574. PUBLISHED MAY 26, 1914.

98,711. SMOKING-TOBACCO, SNUFF, CHEWING-TOBACCO, AND CIGARETTES. SOCIÉTÉ JOB, ANCIENS ETABLISSEMENTS BARDOU-JOB ET PAUILHAC, Perpignan, France.
Filed February 28, 1914. Serial No. 76,258. PUBLISHED MAY 19, 1914.

98,712. FOOD PREPARATION FOR DOGS, CATS, AND OTHER ANIMALS. SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J.
Filed March 5, 1914. Serial No. 76,382. PUBLISHED MAY 26, 1914.

98,713. TEMPERATURE-INDICATING INSTRUMENTS. STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill.
Filed March 30, 1914. Serial No. 77,079. PUBLISHED MAY 26, 1914.

98,714. TOILET SOAP. SWIFT AND COMPANY, Chicago, Ill.
Filed March 7, 1914. Serial No. 76,453. PUBLISHED MAY 19, 1914.

98,715. MAGNETIC COMPASSES. TAYLOR INSTRUMENT COMPANIES, Rochester, N. Y.
Filed April 15, 1914. Serial No. 77,497. PUBLISHED MAY 26, 1914.

98,716. METAL FENCING. TIGER FENCE & MACHINE COMPANY, Clarksville, Tenn.
Filed April 9, 1914. Serial No. 77,350. PUBLISHED MAY 26, 1914.

98,717. WHEAT-FLOUR. C. TRESSELT & SONS, Fort Wayne, Ind.
Filed February 26, 1914. Serial No. 76,197. PUBLISHED MAY 26, 1914.

98,718. MACHINE-NEEDLES. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed April 22, 1914. Serial No. 77,665. PUBLISHED MAY 26, 1914.

98,719. WORSTED PIECE GOODS. UNITED STATES WORSTED CO., Boston, Mass., assignor to United States Worsted Company, a Corporation of Massachusetts.
Filed August 12, 1912. Serial No. 65,198. PUBLISHED MAY 26, 1914.

98,720. PORTLAND CEMENT. UNIVERSAL PORTLAND CEMENT CO., Chicago, Ill.
Filed June 15, 1912. Serial No. 64,210. PUBLISHED MAY 26, 1914.

98,721. RYE AND BOURBON WHISKIES. VALLEY PARK DISTILLERY, Valley Park, Mo.
Filed April 27, 1914. Serial No. 77,817. PUBLISHED MAY 26, 1914.

98,722. AWNINGS, TENTS, CANOPIES, AWNING AND TENT FITTINGS AND FIXTURES. THE WAGNER MANUFACTURING CO., Cleveland, Ohio.
Filed December 13, 1913. Serial No. 74,603. PUBLISHED MAY 19, 1914.

98,723. CERTAIN NAMED VEHICLES AND PARTS THEREFOR. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,760. PUBLISHED MAY 26, 1914.

98,724. NON-INTOXICATING DRINK MADE OF A SYRUP UNDER A SECRET FORMULA. JOHN C. WELLER & JOSEPH L. NALLY, Louisville, Ky.
Filed May 2, 1913. Serial No. 70,192. PUBLISHED APRIL 21, 1914.

98,725. [WITHDRAWN.]

98,726. SHOES AND SLIPPERS MADE OF LEATHER. WICHERT & GARDINER, New York, N. Y.
Filed April 15, 1914. Serial No. 77,498. PUBLISHED MAY 26, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,402. REFINED PETROLEUM. THE ATLANTIC REFINING CO., Philadelphia, Pa.
Registered August 12, 1884. Renewed August 12, 1914.

TRADE-MARK REGISTRATIONS CANCELED.

95,200. HOSIERY AND CERTAIN NAMED KNITTED UNDER AND OUTER WEAR. ELEANOR M. BEEBE, New York, N. Y.
Registered February 10, 1914. Canceled July 14, 1914.

LABELS

REGISTERED JULY 28, 1914.

17,864.—*Title:* "BOLGIANO'S 'SQUARE-DEAL.'" (For Poultry Food.) J. BOLGIANO & SON, Baltimore, Md. Filed July 7, 1914.

17,865.—*Title:* "HAZELNUT KISSES." (For Candy and Confections.) BUNTE BROTHERS, Chicago, Ill. Filed July 2, 1914.

17,866.—*Title:* "GA-LO." (For Cigars.) GEO. E. BURCH, Medina, N. Y. Filed March 16, 1914.

17,867.—*Title:* "VERMOUTH M. CHAUVAIN & CIE." (For Vermuth.) M. CHAUVAIN & CIE., Cette, France. Filed July 7, 1914.

17,868.—*Title:* "I B CO." (For Buckles.) INTERNATIONAL BUCKLE COMPANY, New Britain, Conn. Filed July 6, 1914.

17,869.—*Title:* "MARCO." (For Cakes.) THE MARTIN BAKING CO., Cleveland, Ohio. Filed June 13, 1914.

17,870.—*Title:* "BROOKVILLE." (For Whisky.) JOHN MORRIS, Washington, D. C. Filed July 7, 1914.

17,871.—*Title:* "REMOVALIN." (For a Medicinal Preparation.) SAMUEL SIDNEY PENN, New York, N. Y. Filed January 24, 1914.

17,872.—*Title:* "P-A-P-P PREVENTOLINE ANTISEPTIC POCKET PACKET.' (For an Antiseptic.) DAVID ANGUS SMITH, Wonder, Nev. Filed March 18, 1914.

17,873.—*Title:* "EVERBEST EGGS." (For Eggs.) SONOMA COUNTY POULTRY PRODUCERS' FEDERATION, Petaluma, Cal. Filed July 7, 1914.

17,874.—*Title:* "544." (For Remedy for Hog-Cholera.) THE THIELE LABORATORIES COMPANY, Columbus, Ohio. Filed June 15, 1914.

17,875.—*Title:* "FAIRFIELD." (For Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed June 18, 1914.

17,876.—*Title:* "WAGNER'S." (For Canned Pork and Beans with Tomato Sauce.) MARTIN WAGNER COMPANY, Baltimore, Md. Filed July 6, 1914.

17,877.—*Title:* "BABY BOUNCE." (For Baby-Jumpers or Infant-Exercisers.) L. P. WHITCOMB, Oshkosh, Wis. Filed July 8, 1914.

17,878.—*Title:* "EXPOSITION STATIONERY." (For Fine Stationery.) WHITE & WYCKOFF MFG. CO., Holyoke, Mass. Filed February 10, 1914.

PRINTS

REGISTERED JULY28, 1914.

3,680.—*Title:* "TRICOFERO DE BARRY." (For a Hair-Tonic.) BARCLAY & Co., New York, N. Y. Filed April 16, 1914.

3,681.—*Title:* "QUÉ CONTENTO." (For Soap.) BARCLAY & Co., New York, N. Y. Filed April 16, 1914.

3,682.—*Title:* "REUTER'S SOAP." (For Soap.) BARCLAY & Co., New York, N. Y. Filed May 21, 1914.

3,683.—*Title:* "HILLS BROS. TEA AND COFFEE SAN FRANCISCO." (For Tea and Coffee.) HILLS BROS., San Francisco, Cal. Filed July 1, 1914.

3,684.—*Title:* "BUTT RIGHT IN WITH YOUR OLD JIMMY PIPE." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,685.—*Title:* "P. A. MAKES A PIPE SMOKE A REAL MAN'S GAME!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 10, 1914.

3,686.—*Title:* "OH, THAT REMINDS ME." (For Beer.) THE SCHOENHOFEN BREWING CO., Chicago, Ill. Filed July 8, 1914.

3,687.—*Title:* "A CASE OF GOOD JUDGMENT." (For Beer.) THE PETER SCHOENHOFEN BREWING CO., Chicago, Ill. Filed July 8, 1914.

3,688.—*Title:* "HOLLANDER BRAND BEER." (For Beer.) THE CONRAD SEIPP BREWING CO., Chicago, Ill. Filed July 11, 1914.

3,689.—*Title:* "HARVARD." (For Cigars.) H. TRAISER & Co., INC., Boston, Mass. Filed July 8, 1914.

3,690.—*Title:* "ITS REAL GENUINE KNO-BLUR." (For Carbon-Paper.) UTICA CARBON & WAX PAPER CO., Utica, N. Y. Filed November 7, 1913.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE WAHRMANN.

Decided June 12, 1914.

LABELS—SUBJECT-MATTER—REGISTRATION.

Where the matter presented is properly a label and is distinctively original, *Held* that the statute does not deny registration because the feature thereof which imparts originality is used or is capable of being used as a trade-mark.

ON APPEAL.

LABEL FOR METAL-POLISH.

Mr. E. G. Siggers for the applicant.

EWING, *Commissioner:*

This is an appeal from the refusal of the Examiner of Trade-Marks to register a label.

The ground of the refusal is that the distinctive matter which makes it registrable as a label is marked "Trade-Mark."

The provision under which this registration is pending is section 3 of the act of 1874, which reads as follows:

SEC. 3. That in the construction of this act the words "engraving, cut, and print" shall be applied only to pictorial illustrations or works connected with the fine arts, and no prints or labels designed to be used for any other articles of manufacture shall be entered under the copyright law, but may be registered in the Patent Office. And the Commissioner of Patents is hereby charged with the supervision and control of the entry or registry of such prints or labels, in conformity with the regulations provided by law as to copyright of prints, except that there shall be paid for recording the title of any print or label, not a trade-mark, six dollars, which shall cover the expense of furnishing a copy of the record, under the seal of the Commissioner of Patents, to the party entering the same.

It has been held by the Attorney-General that this act of 1874 was not repealed by the Copyright Act of 1909, (35 Stats. at L., 1075.)

In the brief for the appellant it is argued that the only artistic feature of the label, the picture of a bank-building, is not a trade-mark. It is, however, marked "Trade-Mark," and doubtless without respect to whether it is registered here the attempt is made to acquire trade-mark rights under the common law. The applicant can hardly be permitted to mark the picture of the bank-building on his label a trade-mark and contend here that he does not mean it for a trade-mark.

The early authorities bearing upon the broad question presented are *ex parte Godillot*, (6 O. G., 642;) *ex parte Orcutt & Son*, (8 O. G., 277;) *ex parte Park*, (12 O. G., 2;) *ex parte Simpson & Sons*, (10 O. G., 333,) and *ex parte Davids & Co.*, (15 O. G., 94.)

In *United States, ex rel. The Willcox & Gibbs Sewing Machine Co.*, v. *E. M. Marble* (22 O. G., 1366) the Supreme Court of the District of Columbia issued a peremptory writ of mandamus requiring the Commissioner to register a label. The court held that the Commissioner was not authorized to determine that a label should not be admitted to registration because its distinctive feature might constitute a trade-mark, that the Librarian of Congress had no such authority before the matter was transferred to the Patent Office by the act of 1874, and that by this act the Commissioner of Patents is given—

control of the entry or registry of such prints or labels in conformity with the regulations provided by law as to copyright of prints. (See also *U. S., ex rel. Schumacher and Ettlinger*, v. *Marble, Commissioner*, 3 Mackey, 32.)

In *ex parte Moodie* (28 O. G., 1271) Commissioner Butterworth declined to follow this opinion, and upon application to the court it was held that the Commissioner cannot be mandamused to register a label.

In *ex parte Wiesel* (36 O. G., 689) Commissioner Montgomery, following the doctrine laid down in the Moodie case, held that an alleged label which is, in fact, a trade-mark is not entitled to registration as a label.

In *ex parte Mahn* (82 O. G., 1210) is was held by Acting Commissioner Greeley that a label of artistic merit, indicating pictorially or otherwise the article or the contents of the article to which it is intended to be applied, is registrable regardless of the fact that it may include matter capable of sequestration as a trade-mark. Mr. Greeley says:

* * * If the subject-matter itself is purely trade-mark matter and does not come within the recognized requirements of the label as to indication of contents as well as originality and artistic merit * * * it cannot be registered as a label.

I think this an accurate statement. A trade-mark and a label differ in that a label must include descriptive matter which a trade-mark may not include; and a label must be a writing of an author, a condition which does not apply in the case of a trade-mark.

It being established, however, that the matter presented is properly a label, and that it is distinctively original, so that it can be copyrighted, I see no reason under the statute for denying registration because the feature thereof which imparts originality is used or is capable of use as a trade-mark.

The act of 1874 does not prohibit the registration of a print or label which is a trade-mark, but merely provides that for recording a label, not a trade-mark, the fee shall be six dollars.

The label in question is not a trade-mark, and no trade-mark rights are acquired by registering it. I think the label should be registered.

The Examiner of Trade-Marks is overruled.

EX PARTE SANFORD.

Decided February 19, 1914.

DESIGN—PATENTABILITY.

Where applicant has obtained a design patent for a pitcher, including its top, and later without undue delay filed an application for the top alone, which could not be included in a single patent with the pitcher including the top, *Held* that the patent is not a bar to the allowance of the application.

APPEAL from Examiners-in-Chief.

DESIGN FOR A PITCHER-TOP.

Messrs. Kay & Totten for the applicant.

NEWTON, *Assistant Commissioner:*

This is an appeal from the decision of the Board of Examiners-in-Chief affirming the Primary Examiner's refusal of a claim for a design for "a pitcher-top as shown."

Applicant's own patents, Nos. 40,600 and 40,601, are the main references bearing on the patentability of the present claim. Applicant's device seems to be patentable as a design over the other references.

Applicant's prior patents cover designs wherein the entire pitcher, including its top, is claimed, and the only bar to applicant's present claim is involved in the question whether after applicant has taken out these patents on the whole pitcher, including the top, he has a right to separately patent the top, which he alleges is made detachable from the pitcher and is sold separately therefrom.

Following the analogy in the well-established practice relating to mechanical patents set forth in *ex parte Mullen and Mullen*, (1890, C. D., 9, 3d case,) if applicant could not include the pitcher-top alone and the pitcher including the top in one patent, which seems to be true in the present case, and he first patents the entire pitcher, including the top, then comes back without undue delay and elects to patent the top *per se* separately from the pitcher including the top, which he has done in this case, no sufficient reason is seen why he should not be allowed to do so. This position is strengthened by the decision in *Graff, Washbourne & Dunn* v. *Webster et al.*, (189 Fed. Rep., 902.)

I see no force in the contention that to be allowable this application for the pitcher-top should have been copending with the applications for applicant's design patents for the pitcher including the top. The statutes are silent as to copending applications, and the reason for copending applications is satisfied if the later application is filed with sufficient promptness to negative laches, which seems to have been done in the present case.

Nor is there any objection to a design simply because the respective features thereof are shaped for "utilitarian purposes," if these features also perform the function of ornamentation.

I see nothing, therefore, to bar the allowance of this application, and the decision of the Board of Examiners-in-Chief is reversed.

EX PARTE MCCOLLUM.

Decided March 27, 1914.

REJECTION — COMBINATION OF REFERENCES — WHEN APPLICABLE.

In determining the patentability of a claim over features found only in a plurality of references it is necessary to consider the structural differences specified in the claims, as well as their functional difference or result. If the structures of the several references cannot be combined without the exercise of invention, even though the result is old, the claim should be allowed. If the structures of the references may be combined or substituted one for the other and the combined function or result is new, the claim should be allowed. It is only when both the structural features found in the references may be combined without invention to meet the structure called for by the claim and the function or result involves no invention that the claim should be rejected.

APPEAL from Examiners-in-Chief.

INTERNAL-COMBUSTION ENGINE.

Messrs. Foster, Freeman, Watson & Coit and *Mr. Herbert J. S. Dennison* for the applicant.

NEWTON, *Assistant Commissioner:*

This is an appeal from a decision of the Board of Examiners-in-Chief affirming the Primary Examiner in his final rejection of the following claims:

27. In an internal combustion engine a fixed cylinder, a cylindrical slide valve rigid against internal pressure co-axial with and outside the cylinder, inlet and outlet ports both controlled by the slide valve, a piston in the fixed cylinder, and means whereby the valve is moved to close the cylinder ports during the compression and explosion cycles of the engine.

28. In an internal combustion engine, a fixed cylinder, a cylindrical slide valve rigid against internal pressure, co-axial with and outside the cylinder, inlet and outlet ports both controlled by the slide valve, means for cooling the fixed cylinder within the cylindrical valve, a piston in the fixed cylinder, and means whereby the valve is moved to close the cylinder ports during the compression and explosion cycles of the engine.

29. In an internal combustion engine, a fixed cylinder a cylindrical slide valve rigid against internal pressure co-axial with and outside the cylinder, inlet and outlet ports both controlled by the slide valve, a cylindrical casing outside of the slide valve, means for cooling the cylindrical casing outside the slide valve, a piston in the fixed cylinder, and means whereby the valve is moved to close the cylinder ports during compression and explosion cycles of the engine.

30. In an internal combustion engine, a fixed cylinder, a cylindrical slide valve rigid against internal pressure co-axial with and outside the cylinder, inlet and outlet ports both controlled by the slide valve, a cylindrical casing outside the slide valve, means for cooling the fixed cylinder within the cylindrical valve and the cylindrical casing outside the slide valve, a piston in the fixed cylinder, and means whereby the valve is moved to close the cylinder ports during the compression and explosion cycles of the engine.

The references relied upon are as follows: Herreshoff, 280,311, June 26, 1883; Nitcher, 561,603, January 9, 1896; Turcot *et al.*, French, 396,558, April 15, 1909.

The invention in controversy is an internal-combustion engine in which a single cylindrical valve serves both to admit the gases at the proper time into the cylinder of the engine and also to permit their expulsion therefrom at the proper time.

As understood, applicant is the first to do this in an internal-combustion engine with a single cylindrical valve. The Knight engine referred to by the Board of Examiners-in-Chief acted somewhat similarly; but that engine had two cylindrical valves, one within the other, and so does the device of the Turcot *et al.* French patent. In order to be able with his one valve to perform the functions of the two valves in the Turcot *et al.* construction, applicant not only has to move his single cylindrical

valve endwise, but also gives it a twist or turning motion, and with this compound motion he has performed with one cylindrical valve in an internal-combustion engine what heretofore has required two. This seems to be invention of the first order. The only question is whether the appealed claims are specific enough to include a new characteristic feature of applicant's valve to distinguish it from the prior art.

These claims do not include the compound motion referred to; but just where invention in this case begins to split off from the prior art is exceedingly difficult to express. The claims call for a "cylindrical slide valve." The Turcot *et al.* French patent has two cylindrical slide-valves, and of course if it has two it has one; but neither of the Turcot *et al.* valves C or D controls both the inlet and outlet ports. One of the Turcot *et al.* valves controls the inlet and the other the outlet port; but the ground of rejection has been that in view of such valves as that shown in Herreshoff there would be no invention in closing both the inlet and outlet valves of the Turcot *et al.* patent with one cylindrical valve. This might be true if the cycles of opening and closing the valves in, say, a four-stroke-cycle type of internal-combustion engine were not so different from the steam-engine, say, of the Herreshoff or Nitcher type.

In such an internal-combustion engine a downward stroke of the piston acts to draw in a charge of gas. Then the inlet-opening must be open and the exhaust-opening closed. On an upward or compression stroke of the piston both inlet and exhaust openings must be closed. On the second downward stroke of the piston following an explosion both inlet and exhaust openings must be closed, and, finally, on the second upward stroke of the piston, when the gases are rejected, the exhaust-openings must be open and the inlet-openings must be closed.

No such opening and closing of the valves in the Herreshoff or Nitcher engines could be so timed, and certainly these engine-valves do not suggest how to convert the Turcot *et al.* double cylindrical valves into a single cylindrical valve.

When legitimate combination claims, such as those appealed, are rejected on two or more references, the trend of the best authorities indicates that at least one of the references ordinarily should show the general combination claimed. This the Turcot *et al.* patent does. Then if the specific features claimed and shown by the other reference or references may be substituted without such changes as require invention and perform the function intended the two references may be legitimately combined against the claim; otherwise not. If the Herreshoff or Nitcher valve were substituted for the Turcot *et al.* valve structure, a device would result which could not perform the function of an internal-combustion engine.

Legitimate combination claims are for constructions or mechanisms for performing a function, and it is improper to reject them on ideas extracted from various references unless those ideas are accompanied by constructions that may be put together without so changing them as to require invention to adapt them to perform the desired result.

In determining the patentability of a claim over features found only in a plurality of references it is necessary to consider the structural differences specified in the claims, as well as their functional difference or result. If the structures of the several references cannot be combined without the exercise of invention, even though the result is old, the claim should be allowed. If the structures of the references may be combined or substituted one for the other and the combined function or result is new, the claim should be allowed. It is only when both the structural features found in the references may be combined without invention to meet the structure called for by the claim and the function or result involves no invention that the claim should be rejected.

Applying these rules to claim 27, the broadest of the appealed claims, it is not legitimately anticipated by the references and may be allowed.

Claim 28 is drawn on the same general lines as claim 27, with the addition of means for cooling the fixed cylinder, and is regarded patentable over claim 27 and the references.

Claims 29 and 30, besides specifying the features of claim 27, call for means for cooling the cylindrical casing outside the slide-valve. Applicant does not seem to show any such means and certainly does not describe any such means. The history of these claims is that they were suggested from another application which clearly shows and describes such means. Possibly the inlet 7 of applicant might be called—

means for cooling the cylindrical casing outside of the slide valve,

but it is not so described and is ordinarily not regarded as a cooling means.

It must be held, therefore, that applicant is not entitled to make claims 29 and 30. Applicant has presented four claims covering very much the same construction as his appealed claims, but somewhat more limited. He should be allowed to substitute his claims numbered 27 and 28 for present claims 27 and 28 or add said claims to his present claims, if he so desires.

The decision of the Board of Examiners-in-Chief denying patentability to claims 27 and 28 is reversed. Their decision denying claims 29 and 30 is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

SCHMIDT *v.* TAIT.

Decided April 16, 1914.

1. APPEALS FROM COMMISSIONER OF PATENTS TO COURT OF APPEALS—FAILURE TO FILE RECORD WITHIN FORTY DAYS—EXTENSION OF TIME.

Assuming, without deciding, that the Commissioner may have the power to grant an extension of the time for filing the record, that power, as is the case with the courts, can only be exercised before the expiration of the forty days provided by the rule.

2. SAME—SAME—FURTHER PROCEEDINGS.

Where S. failed to file his record with the clerk of the court within the forty days allowed by the rule and thereafter T. filed a motion in the Patent Office requesting further proceedings, in accordance with the decision of the Commissioner, *Held* that it was the duty of the Commissioner to grant appellee's motion to take further proceedings necessary to dispose of his case, as though no notice of appeal had ever been given.

Mr. Frank E. Barrows for the appellee.

SHEPARD, *C. J.:*

The appellee Tait has filed a motion to docket and dismiss the appeal in this case which was taken by Schmidt from a decision of the Commissioner of Patents in an interference case.

The decision of the First Assistant Commissioner awarding priority to Tait was rendered December 3, 1913. A motion for rehearing was denied by the Assistant Commissioner and notice of appeal was entered January 8, 1914. The record was not filed with the clerk of this court within the forty days allowed therefor by the rule, which expired February 28th. March 16th, Tait filed a motion in the Patent Office requesting the further proceedings necessary to the final disposition of his application in accordance with the decision awarding him priority. (See Rule XXI, sec. 2.) This motion was denied by the Assistant Commissioner on March 26, and an order was entered by him extending the time for filing the record to April 7. The record has not been filed; but it appears that a second motion for rehearing was filed by Schmidt on March 30 and the same is depending.

Rule XV, section 1, relating to docketing and dismissing appeals when the transcript shall not have been filed within forty days from the perfection of appeal was devised to apply to causes tried in the supreme court of the District, and undertaken to be appealed therefrom. Section 6 of Rule XXI, relating to appeals from the Commissioner of Patents reads as follows:

The appeals from the Commissioner of Patents shall be subject to all the rules of this court provided for other cases therein, except where such rules, from the nature of the case, or by reason of special provisions inconsistent therewith, are not applicable.

On an *ex parte* motion, and without the benefit of argument, we prefer not to determine whether, under the foregoing section, the Commissioner of Patents has the power to grant an extension of the time for filing the record; or whether a party to a cause decided by the Commissioner in his favor that has been appealed therefrom, is entitled to the right to docket and dismiss the appeal as provided in Rule XV; for the determination of neither point is essential.

The exhibits attached to the appellee's motion show that the extension of time was granted after the forty-day period had expired, and presumably, upon an application for extension filed thereafter also.

Assuming, without deciding, that the Commissioner may have the power to grant an extension of the time for filing the record, that power, as is the case with the courts, could only be exercised before the expiration of the forty days provided by the rule. The appellant having failed to file his record within the forty days from notice of his appeal, it was the duty of the Commissioner to grant appellee's motion to take further proceedings necessary to dispose of his case, "as though no notice of appeal had ever been given." (Rule XXI, sec. 2.)

Doubtless, the motion for further proceedings will now be granted. For this reason, and also because of the depending motion for rehearing, it is not necessary to determine whether the rule relating to docketing and dismissing appeals applies to decisions of the Commissioner of Patents; and the motion to that end will be dismissed without prejudice. By referring to the pending motion for rehearing we are not to be construed as intimating that after the expiration of the forty days from the entry of notice of appeal, the Commissioner has the power to grant a rehearing. That question is not before us.

The motion is dismissed without prejudice.

Dismissed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Arrott patent, No. 633,941, for a dredger for pulverulent material, *Held* void for prior public use of the device. *Standard Sanitary Mfg. Co.* v. *Iron City Mfg. Co.*, 213 Fed. Rep., 638.

(U. S. C. C. A.) The Crowe patent, No. 668,495, for a grate-bar, construed and *Held* not infringed. *Crowe* v. *Oscar Barnett Foundry Co.*, 213 Fed. Rep., 633.

(U. S. D. C.) The Barnes patent, No. 862,861, for a drilling-machine, *Held* void for lack of invention. *W. F. & John Barnes Co.* v. *Vandyck, Churchill Co.*, 213 Fed. Rep., 636.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 16, 1914.

The Criterion Publication Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Home Pattern Company, 615 West Forty-third street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered March 25, 1902, No. 37,983, to The Criterion Publication Co., of 156 Fifth avenue, New York, N. Y., and a notice of such declaration sent by registered mail to The Criterion Publication Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Criterion Publication Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 9, 1914.

Joseph G. Hibbs, Jr., his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Isaac A. Sheppard & Co., of Fourth street and Montgomery avenue, Philadelphia, Pa., the application of Josephine L. Hibbs, (trading as E. A. Hibbs,) William L. Levis, Charles U. Levis, and Thomas J. Close, executors of said Josephine L. Hibbs, deceased, of northeast corner of Bread and Quarry streets, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered August 30, 1881, No. 8,613, to Joseph G. Hibbs, Jr., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Joseph G. Hibbs, Jr., at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph G. Hibbs, Jr., his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *Acting Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JULY, 1914.

[The decisions of the Court of Appeals of the District of Columbia are indicated by a star (*), and of the United States Circuit Court of Appeals by the letter d.]

TABLE OF CASES.

	Page.		Page.
d Cincinnati Traction Co. v. Pope	675	Sanford. *Ex parte*	1346
*Cross v. Rusby	321	* Schmidt v. Tait	1347
McCollum. *Ex parte*	1346	* Sutton, Steele, and Steele v. Wentworth	320
Rusby v. Cross	319	Wahrmann. *Ex parte*	1345

SUBJECT-MATTER INDEX.

	Page.
* Appeal to the Court of Appeals of the District of Columbia, time for filing record extended by Commissioner only before expiration of limit of time, Schmidt v. Tait	1347
Claims, rejection of, on combined references, *ex parte* McCullom	1346
d Construction of section 4886, Revised Statutes, Cincinnati Traction Co. v. Pope	675
d Construction of specifications and patents, not anticipated, discloses invention and is held infringed, Cincinnati Traction Co. v. Pope	675
Construction of statutes, *ex parte* Wahrmann	1345
Design, patent for whole article no bar to patent for a part, *ex parte* Sanford	1346
* Interference, priority awarded to opponent where the other party could not make claim, Sutton, Steele, and Steele v. Wentworth	320
* Question of *res adjudicata*, Cross v. Rusby	321
Second interference, Rusby v. Cross	319
Labels, registration not to be refused because feature is usable as trade-mark, *ex parte* Wahrmann	1345
d "Manufacture," an article used in a method of doing business may be so classed under the statute, Cincinnati Traction Co. v. Pope	675
d The term as used in patent law defined, Cincinnati Traction Co. v. Pope	675
* Motion for further proceedings, Schmidt v. Tait	1347
* Priority of invention, award in accordance with evidence, Cross v. Rusby	321
Rusby v. Cross	319
* Sutton, Steele, and Steele v. Wentworth	320
Res adjudicata, Cross v. Rusby	321
Rusby v. Cross	319
* Sutton, Steele, and Steele v. Wentworth	320
Second interference after limit of appeal, Rusby v. Cross	319
* Sutton, Steele, and Steele v. Wentworth	320
References, combination of, when claims should be rejected, *ex parte* McCollum	1346

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JULY, 1914.

[The decisions of the Court of Appeals of the District of Columbia are indicated by a star (*), and the United States Circuit Court of Appeals by the letter d.]

ANTICIPATION.

See Particular Patents.

APPEAL FROM THE EXAMINERS-IN-CHIEF.

See Priority of Invention, 2.

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

1. FROM COMMISSIONER OF PATENTS—FAILURE TO FILE RECORD WITHIN FORTY DAYS—EXTENSION OF TIME.
Assuming, without deciding, that the Commissioner may have the power to grant an extension of the time for filing the record, that power, as is the case with the courts, can only be exercised before the expiration of the forty days provided by the rule.
[*Schmidt *v.* Tait, 1347.

2. FURTHER PROCEEDINGS.
Where S. failed to file his record with the clerk of the court within the forty days allowed by the rule and thereafter T. filed a motion in the Patent Office requesting further proceedings, in accordance with the decision of the Commissioner, *Held* that it was the duty of the Commissioner to grant appellee's motion to take further proceedings necessary to dispose of his case, as though no notice of appeal had ever been given.
[*Id.

APPLICATION AND PATENT.

See Priority of Invention, 1.

AUTHORITY OF THE COMMISSIONER OF PATENTS.

See Appeal to the Court of Appeals of the District of Columbia, 1.

BAR TO PATENT.

See Designs.

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

1. PATENTS—SUBJECTS OF PATENTS—"MANUFACTURE"—STREET-RAILROAD TRANSFER-TICKET.
A street-railroad transfer-ticket devised to keep a check on passengers and conductors with respect to the time when used, in part by means of a coupon, the body portion when the coupon is detached being receivable only during the forenoon hours, may properly be classed as an article to be used in a method of doing business and as such is a "manufacture" within the meaning of Revised Statutes section 4886, (U. S. Comp. St., 1901, p. 3382,) and a proper subject of a patent.
[d Cincinnati Traction Co. *v.* Pope, 675.

2. SAME—SAME—SAME.
The term "manufacture" as used in the patent law has a very comprehensive sense, embracing whatever is made by the art or industry of man, not being a machine, a composition of matter, or a design.
[d Id.

CONSTRUCTION OF STATUTES.

See Construction of Specifications and Patents, 1; Labels.

DATE OF FILING APPLICATION.

See Priority of Invention, 1.

DELAY IN FILING RECORD.

See Appeal to the Court of Appeals of the District of Columbia.

DESIGNS.

PATENTABILITY.
Where applicant has obtained a design patent for a pitcher, including its top, and later without undue delay filed an application for the top alone, which could not be included in a single patent with the pitcher including the top, *Held* that the patent is not a bar to the allowance of the application.
[*Ex parte* Sanford, 1346.

DISCLOSURE OF INVENTION.

See Particular Patents.

EXTENSION OF TIME.

See Appeal to the Court of Appeals of the District of Columbia, 1.

FUNCTION.

See Rejection of Claims.

INFRINGEMENT.

See Particular Patents.

INTERFERENCE.

See Priority of Invention.

INVENTION.

See Particular Patents; Rejection of Claims.

LABELS.

SUBJECT-MATTER—REGISTRATION.
Where the matter presented is properly a label and is distinctively original, *Held* that the statute does not deny registration because the feature thereof which imparts originality is used or is capable of being used as a trade-mark.
[*Ex parte* Wahrmann, 1345.

LIMIT OF APPEAL.

See Priority of Invention, 2.

LIMIT OF TIME.

See Appeal to the Court of Appeals of the District of Columbia.

MOTION FOR FURTHER PROCEEDINGS.

See Appeal to the Court of Appeals of the District of Columbia, 2.

NEW RESULT.

See Rejection of Claims.

NOTICE OF APPEAL.

See Appeal to the Court of Appeals of the District of Columbia, 2.

OLD RESULT.

See Rejection of Claims.

PARTICULAR PATENTS.

POPE—NO. 805,153—TRANSFER TICKET—VALIDITY AND INFRINGEMENT.

The Pope patent, No. 805,153, for a time-limit transfer-ticket for use by street-railroads, etc., was not anticipated and discloses patentable invention: also *Held* infringed.

[[a]Cincinnati Traction Co. *v.* Pope, 675.

PATENTABILITY.

See Designs; Particular Patents; Rejection of Claims.

PRIORITY OF INVENTION.

1. RES ADJUDICATA.

Where after a decision in favor of R. in an interference involving applications of R. and C. a second interference was declared between the same application of R. and a patent of C. having an earlier filing date, the issue of which was clearly readable upon the application of C. involved in the prior interference, *Held* that priority in the second interference was properly awarded to R., as the question was *res adjudicata* between R. and C.

[Rusby *v.* Cross, 319.

2. SAME.

Where after a decision by the Examiners-in-Chief in an interference proceeding involving the applications of W. and S., S., and S., awarding priority to W. for the reason that S., S., and S. could not make the claim, and no appeal was taken therefrom, another interference was declared between the same applications on a count suggested by the Examiners-in-Chief in their decision, but which was not adopted by S., S., and S. until after the limit of appeal had expired, *Held* that the question of priority as between W. and S., S., and S. is *res adjudicata*.

[[a]Sutton, Steele, and Steele *v.* Wentworth, 320.

3. SAME.

Held that the question of priority was *res adjudicata* between C. and R. and priority was properly awarded to R.

[[a]Cross *v.* Rusby, 321.

REFERENCES.

See Rejection of Claims.

REGISTRATION OF LABELS.

See Labels.

REJECTION OF CLAIMS.

COMBINATION OF REFERENCES—WHEN APPLICABLE.

In determing the patentability of a claim over features found only in a plurality of references it is necessary to consider the structural differences specified in the claims, as well as their functional difference or result. If the structures of the several references cannot be combined without the exercise of invention, even though the result is old, the claim should be allowed. If the structures of the references may be combined or substituted one for the other and the combined function or result is new, the claim should be allowed. It is only when both the structural features found in the references may be combined without invention to meet the structure called for by the claim and the function or result involves no invention that the claim should be rejected.

[*Ex parte* McCollum, 1346.

RES ADJUDICATA.

See Priority of Invention.

RIGHT TO MAKE CLAIM.

See Priority of Invention, 2.

SECOND INTERFERENCE.

See Priority of Invention, 1, 2.

TERMINOLOGY.

See Construction of Specifications and Patents.

TRADE-MARKS.

See Labels.

BANGOR PUBLIC
OCT 21 1914
LIBRARY

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JULY, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

A. F. Daum Company. (See Goldman and Daum, assignors.)
A. J. Lindemann & Hoverson Co. (See Camp, Key D., assignor.)
Aalborg, Christian, Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Electric-circuit regulator. No. 1,104,796; July 28; Gaz. vol. 204; p. 1029.
Abbott, Charles M., Watertown, assignor to Samuel Cabot, Inc., Boston, Mass. Treating bundles of shingles. No. 1,105,055; July 28; Gaz. vol. 204; p. 1119.
Abbott, George L., Morriston, Fla. Crushing-mill. No. 1,103,727; July 14; Gaz. vol. 204; p. 572.
Abbott, James H., Philadelphia, Pa. Mounting for and by tubular devices. No. 1,105,590; July 28; Gaz. vol. 204; p. 1308.
Abbott, William H., Gwinn, Mich. Spring-wheel. No. 1,104,752; July 21; Gaz. vol. 204; p. 965.
Abetz, Joseph, New Britain, Conn. Base for lanterns. No. 1,103,014; July 7; Gaz. vol. 204; p. 275.
Abraham, Lawrence, New York, N. Y. Repeating device for disk talking-machines. No. 1,104,780; July 28; Gaz. vol. 204; p. 1017.
Abrams, Jesse E., Canonsburg, Pa., and I. F. Warme, Syracuse, N. Y., assignors, by mesne assignments, to Continental Can Company, Inc. Can-closing machine. No. 1,103,643; July 14; Gaz. vol. 204; p. 543.
Acme Electric Heater Company. (See Schneider, George J., assignor.)
Acme Furnace Equipment Company, The. (See Quinn, John C., assignor.)
Acme Machine Tool Company, The. (See Pearson, James R., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Erlenbach, Arnold, assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Erlenbach and Marx, assignors.)
Actien Gesellschaft für Anilin Fabrikation. (See Heimann, Heinrich, assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Marx, Karl, assignor.)
Adamee, Jacob H., assignor of one-third to J. H. Stone, Durham, N. C. Cutting mechanism for knitting-machines. No. 1,103,922; July 14; Gaz. vol. 204; p. 637.
Adams, Arthur H., Sparkill, assignor to Western Electric Company, New York, N. Y. Ratchet mechanism. No. 1,104,464; July 21; Gaz. vol. 204; p. 865.
Adams, David L., Aylett, Va. Sawmill. No. 1,105,591; July 28; Gaz. vol. 204; p. 1308.
Adams, James F., assignor to The Canister Company, Phillipsburg, N. J. Machine for preparing fibrous canbodies. No. 1,104,465; July 21; Gaz. vol. 204; p. 865.
Adams, Walter S., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,104,761; July 28; Gaz. vol. 204; p. 1017.
Adams & Westlake Company, The. (See Hamm, William S., assignor.)
Adamson, John S., assignor of one-half to D. J. Lynch, Houston, Tex. Display-rack. No. 1,103,728; July 14; Gaz. vol. 204; p. 572.
Addometer Corporation. (See Lotterhand, Jason C., assignor.)
Addressograph Company. (See Duncan, Joseph S., assignor.)
Adjustable Horse Collar Co. (See Friberg, John G., assignor.)
Adkins, Joe A. (See Westbrook, John A., assignor.)
Adolfson, John P., Chokio, Minn. Curry-brush. No. 1,103,644; July 14; Gaz. vol. 204; p. 544.
Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,103,240; July 14; Gaz. vol. 204; p. 403.
Aero Manufacturing Company *et al.* (See Hogan, George L., assignor.)
Ahara, George V., Toronto, Ontario, Canada, assignor to Fairbanks, Morse & Company, Chicago, Ill. Ignition apparatus for internal-combustion engines. No. 1,104,860; July 28; Gaz. vol. 204; p. 1052.
Ahlberg, Gustav A. F., Chicago, Ill. Carbureter. No. 1,104,762; July 28; Gaz. vol. 204; p. 1078.
Ahlen, William, Duquesne, Pa. Steam-regenerator. No. 1,105,122; July 28; Gaz. vol. 204; p. 1141.
Ahlstrom, Frederick, and J. F. Oelerich, Chicago, Ill. Window-screen. No. 1,102,995; July 7; Gaz. vol. 204; p. 267.
Aitken, Allan J., Buffalo, N. Y., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa. Valve. No. 1,103,241; July 14; Gaz. vol. 204; p. 403.
Akers, Maurice L., assignor to Pendleton Iron Works, Pendleton, Oreg. Attachment for grain-drills. No. 1,104,602; July 21; Gaz. vol. 204; p. 915.
Akins, Edwin J., Moundsville, W. Va. Road-grading machine. No. 1,103,242; July 14; Gaz. vol. 204; p. 404.
Akins, Edwin J., Moundsville, W. Va. Earth scoop and elevator. No. 1,104,031; July 21; Gaz. vol. 204; p. 716.
Aktiebolaget Ljungströms Angturbin. (See Ljungström, Birger, assignor.)
Aktiebolaget Mjölkningsmaskin Omega. (See Lindström, Knut I., assignor.)
Aktschourin, Jacoub, Aktschourin-Tupik, Russia. Manufacturing resin-soap and resin. No. 1,103,336; July 14; Gaz. vol. 204; p. 435.
Alanko, Jacob, and T. Toivonen, Astoria, Oreg. Measuring-machine. No. 1,103,856; July 14; Gaz. vol. 204; p. 615.
Alberger, Alvan H., *et al.*, executors. (See Alberger, Louis R.)
Alberger, Blanche D., *et al.*, executors. (See Alberger, Louis R.)
Alberger Condenser Company. (See Alberger, Louis R., assignor.)
Alberger, Louis R., deceased, Greenwich, Conn.; B. D. Alberger, S. C. Ross, New York, and A. H. Alberger, Hamburg, N. Y., executors, assignors to Alberger Condenser Company. Steam-condenser. No. 1,102,380; July 7; Gaz. vol. 204; p. 55.
Albert, Kurt, Wiesbaden, Germany. Open-hearth furnace. (Reissue.) No. 13,763; July 7; Gaz. vol. 204; p. 276.
Alberti, Nicholas, Chicago, Ill. Wood wind instrument. No. 1,103,462; July 14; Gaz. vol. 204; p. 476.
Alberti, Nicholas, Chicago, Ill. Wood wind instrument. No. 1,103,555; July 14; Gaz. vol. 204; p. 508.
Albin, Jeremiah W., Babylon, N. Y. Lock-washer. No. 1,103,337; July 14; Gaz. vol. 204; p. 435.
Albright, Noah M., Washington, D. C. Power transmission and lubricator therefor. No. 1,102,709; July 7; Gaz. vol. 204; p. 170.
Aldrich, William O., assignor to The Whitin Machine Works, Whitinsville, Mass. Metallic creel. No. 1,104,286; July 21; Gaz. vol. 204; p. 804.
Alexander, Jesse, assignor of one-half to C. B. Nichols, New York, and one-half to O. Ebeling, Brooklyn, N. Y. Type-writing-machine key and type-bar operating mechanism. No. 1,105,543; July 28; Gaz. vol. 204; p. 1291.
Alexander, Robert F., Kramer, Ind. Straining device for funnels. No. 1,104,603; July 21; Gaz. vol. 204; p. 915.
Alexander, Soloman, Longbeach, assignor to Automatic Printer Company, Los Angeles county, Cal. Printing attachment for wrapping-paper reels. No. 1,102,627; July 7; Gaz. vol. 204; p. 143.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Telephone system. No. 1,102,628; July 7; Gaz. vol. 204; p. 143.
Allan, William N., San Antonio, Tex. Automobile-headlight. No. 1,103,857; July 14; Gaz. vol. 204; p. 615.
Allen, Charles J., San Jose, Cal. Oil-heating device. No. 1,103,121; July 14; Gaz. vol. 204; p. 360.
Allen, Ernest G., assignor of one-fourth to P. H. King and one-fourth to E. Kohl, Aberdeen, Wash. Weather-strip. No. 1,104,399; July 21; Gaz. vol. 204; p. 842.
Allen, Harry E. (See Maupin, Allen, and Baldwin.)
Allen, Sherman T., Los Angeles, and G. A. Cleaveland, Jr., Glendale, Cal. Valve mechanism for internal-combustion engines. No. 1,104,466; July 21; Gaz. vol. 204; p. 866.
Allis-Chalmers Manufacturing Company. (See Englesson, John E., assignor.)
Allis-Chalmers Manufacturing Company. (See Menningen, Joseph F., assignor.)
Allis-Chalmers Manufacturing Company. (See Pfau, Arnold, assignor.)
Allis-Chalmers Manufacturing Company. (See Stull, Emmett W., assignor.)

Allmand, John T., assignor to Fisher Closed Body Co., Detroit, Mich. Pivot. No. 1,104,238; July 21; Gaz. vol. 204; p. 787.

Alshuler, Clarence S., *et al.*, executors. (See Alshuler, Moses.)

Alshuler, Damon T., *et al.*, executors. (See Alshuler, Moses.)

Alshuler, Moses, deceased, Waukegan, Ill.; D. T. and C. S. Alshuler and C. A. Rubovits, executors. Lady's house-dress. No. 1,102,973; July 7; Gaz. vol. 204; p. 260.

Alsruhe, Urban S., Towson, Md. Playing-cards. No. 1,104,724; July 21; Gaz. vol. 204; p. 956.

Altrichter, Johann, Judenburg, Austria-Hungary, assignor, by mesne assignments, to Perfect Window Regulator Company. Means for opening and closing carriage-windows. (Reissue.) No. 13,780; July 28; Gaz. vol. 204; p. 1310.

Amberg, Walter E., assignor of one-half to C. M. Garrett, Chicago, Ill. Staple for fences and other purposes. No. 1,104,094; July 21; Gaz. vol. 204; p. 739.

Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-vise. No. 1,103,243; July 14; Gaz. vol. 204; p. 404.

Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-vise. No. 1,103,896; July 14; Gaz. vol. 204; p. 629.

Ambursen Company. (See Church, William L., assignor.)

American Arch Company. (See Willett, Alfred H., assignor.)

American Automatic Press Company. (See Rea, Edward J. F., assignor.)

American Brake Shoe & Foundry Company. (See Davis, Nathan H., assignor.)

American Brake Shoe & Foundry Company. (See Harling, William H., assignor.)

American Brake Shoe & Foundry Company. (See Pettis and Batten, assignors.)

American Can Company. (See Hodgson, John G., assignor.)

American Can Company. (See Hothersall, John M., assignor.)

American Can Company. (See Rudolphi, Frank, assignor.)

American Can Company. (See Sharp, Lee C., assignor.)

American Can Company. (See Weber, George W., assignor.)

American Cyanamid Company. (See Landis, Walter S., assignor.)

American Fog Signal Company. (See Snyder, Clara B., assignor.)

American Graphophone Company. (See Emerson, Manwaring, and Reynard, assignors.)

American Graphophone Company. (See Funnell, George L., assignor.)

American Grondal Company. (See Hansell, Nils V., assignor.)

American Hardware Corporation, The. (See Stone, Elmer B., assignor.)

American Hardware Corporation, The. (See Svenson, Charles W., assignor.) (Reissue.)

American Hardware Corporation, The. (See Voight, Henry G., assignor.)

American Key Can Company. (See McColl, Francis P., assignor.)

American Lacing Hook Co. (See Havener, Arthur R., assignor.)

American Laundry Machinery Company. (See Cooper, Daniel M., assignor.)

American Machine & Manufacturing Company. (See Davidson, Joseph, assignor.)

American Perforator Company. (See Day, Alfred L., assignor.)

American Player Action Company. (See Turney, Eugene T., assignor.)

American Radiator Company. (See Eggleston, Lewis W., assignor.)

American Sales Book Company. (See Greig, Walter, assignor.)

American Sales Book Company. (See Pringle, William A., assignor.)

American Steel & Wire Company, The. (See Baluss, Hamilton, assignor.)

American Stove Company. (See Meacham, Benjamin E., assignor.)

American Stove Company. (See Roy, Joseph, assignor.)

American Stove Company. (See Ruppel, Henry, assignor.)

American Stove Company. (See Stockstrom, Louis, assignor.)

American Telephone and Telegraph Company. (See Blauvelt and Molina, assignors.)

American Telephone and Telegraph Company. (See Cunningham and Horner, assignors.)

American Telephone and Telegraph Company. (See Gray and Molina, assignors.)

American Telephone and Telegraph Company. (See Kitsee, Isidor, assignor.)

American Telephone and Telegraph Company. (See O'Connell, Joseph J., assignor.)

American Telephone and Telegraph Company. (See Rhodes, Frederick L., assignor.)

American Well Works. (See Chapman, Matthew T., assignor.)

Ames, John W., East Rutherford, N. J. Game adjunct. No. 1,105,478; July 28; Gaz. vol. 204; p. 1269.

Amon, Clement E., assignor to C. H. Sheasley, Franklin, Pa. Cylinder for valveless two-cycle internal-combustion motors. No. 1,105,585; July 28; Gaz. vol. 204; p. 1306.

Amphion Piano Player Company, The. (See Doman, Lewis B., assignor.) (Reissue.)

Amsden, Fred. (See Hanna, Filbin, and Amsden.)

Andersen, Ferdinand. (See Manthorpe and Hansen, assignors.)

Andersen, Lauritz W., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn. Electric holder. No. 1,103,122; July 14; Gaz. vol. 204; p. 361.

Anderson, Carl J., Chicago, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Spool for electro-magnets. No. 1,104,032; July 21; Gaz. vol. 204; p. 716.

Anderson, Claire P., Lawson, Mo. Headlight-turning mechanism. No. 1,103,338; July 14; Gaz. vol. 204; p. 435.

Anderson, Clarence H., St. Peter, Minn. Cultivator. No. 1,102,381; July 7; Gaz. vol. 204; p. 55.

Anderson Electric Car Company. (See Bacon, George M., assignor.)

Anderson, Emil, New York, N. Y., assignor to Anderson Gas Turbine Company, Newark, N. J. Compressor. No. 1,105,479; July 28; Gaz. vol. 204; p. 1270.

Anderson, Emil A., Swea City, Iowa. Variable-speed gearing. No. 1,103,926; July 21; Gaz. vol. 204; p. 681.

Anderson, Ernst G. K., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Separable attachment-plug. No. 1,103,244; July 14; Gaz. vol. 204; p. 404.

Anderson Gas Turbine Company. (See Anderson, Emil, assignor.)

Anderson, John G. L., Providence, R. I. Propelling attachment for life-preservers. No. 1,103,729; July 14; Gaz. vol. 204; p. 572.

Anderson, John W., Hamilton, Ontario, Canada. Lubricating-axle for trolley-wheels. No. 1,104,952; July 28; Gaz. vol. 204; p. 1084.

Anderson, Leo M. and M. L., Ramsey, N. J. Combined feeder, fountain, and heater. No. 1,102,629; July 7; Gaz. vol. 204; p. 144.

Anderson, May L. (See Anderson, Leo M. and M. L.)

Anderson, Nils O., San Francisco, Cal. Electric switch. No. 1,102,562; July 7; Gaz. vol. 204; p. 119.

Anderson, Sigurd E., Des Moines, Iowa. Truss or bridge for hoops of silos. No. 1,103,339; July 14; Gaz. vol. 204; p. 436.

Anderson, Thyra, Salina, Kans. Invalid-rest. No. 1,103,730; July 14; Gaz. vol. 204; p. 573.

Anderson, Vance J., Chicago, Ill. Safety street-car fender. No. 1,102,563; July 7; Gaz. vol. 204; p. 120.

Anderson, Walter H., assignor to Kino Limited, Wellington, New Zealand. Electric control for kinematograph apparatus. No. 1,103,858; July 14; Gaz. vol. 204; p. 616.

Andrews, George R. (See Andrews, Robert E. and G. R.)

Andrews, John W. R., Leominster, Mass. Reclining-chair. No. 1,105,234; July 28; Gaz. vol. 204; p. 1182.

Andrews, Robert E. and G. R., Mount Gilead, N. C. Mop-holder. No. 1,102,849; July 7; Gaz. vol. 204; p. 219.

Andrus, Burton L., Washington, D. C. Lock for mail-bags. No. 1,103,015; July 7; Gaz. vol. 204; p. 275.

Angell, Edwin E., Somerville, Mass. Ink-font. No. 1,104,861; July 28; Gaz. vol. 204; p. 1052.

Annable, Warren W., assignor of four-twentieths to F. Z. Pantlind, one-twentieth to P. A. Jones, one-twentieth to T. Friant, and one-twentieth to T. S. White, Grand Rapids, Mich. Gearing for axles of automobiles. No. 1,104,160; July 21; Gaz. vol. 204; p. 760.

Ans, Charles, New York, N. Y. Book-leaves slotter for bookbinding. No. 1,105,056; July 28; Gaz. vol. 204; p. 1120.

Anschutz, Rudolph A., Spokane, Wash. Live-bait retainer. No. 1,105,172; July 28; Gaz. vol. 204; p. 1159.

Ansonia Clock Company, The. (See Treganza, Howard J., assignor.)

Anton, Frenk. (See Halinka and Anton.)

Appel, Moses, Johnstown, Pa. Condenser for zinc-vapors. No. 1,103,123; July 14; Gaz. vol. 204; p. 361.

Apple Electric Company, The. (See Apple, Vincent G., assignor.)

Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Means for starting and controlling internal-combustion engines. No. 1,104,467; July 21; Gaz. vol. 204; p. 866.

Appleby, John F., assignor to Dixie Cotton Picker Company, Chicago, Ill. Harvester. No. 1,105,235; July 28; Gaz. vol. 204; p. 1182.

Applewhite, James A., assignor of one-half to W. E. Redford, Boyd, Tex. Pipe system for discharging waste water from refrigerator-cars. No. 1,104,953; July 28; Gaz. vol. 204; p. 1084.

Applin, Eby R., Waupun, Wis. Stocking drying and shaping form. No. 1,103,245; July 14; Gaz. vol. 204; p. 405.

Arcade Manufacturing Company. (See Tscherning, Henry, assignor.)

Archer, John. (See Jardine and Archer.)

Arden, Thomas R., Philadelphia, Pa., assignor to The S. S. White Dental Manufacturing Company. Dental crown-post extractor. No. 1,102,850; July 7; Gaz. vol. 204; p. 219.

Armspear Manufacturing Company. (See Spear, Furman D., assignor.)

Armstrong Bros. Tool Company. (See Turner, Harry, assignor.)

Armstrong Cork Company. (See Busch, Herman F., assignor.)

Armstrong Cork Company. (See Paschke, Herbert, assignor.)

Armsworth, Willis, Cerro Gordo, Ill. Cap for drain-tiles. No. 1,103,391; July 14; Gaz. vol. 204; p. 452.

Arndt, Franklin E., Galion, Ohio. Burial-vault. No. 1,104,604; July 21; Gaz. vol. 204; p. 915.

Arndt, Franklin E., assignor to The Galion Iron Works & Manufacturing Company, Galion, Ohio. Hand-wheel locking device or brake. No. 1,105,236; July 28; Gaz. vol. 204; p. 1183.

Arnold, Frank K., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H. Paper-feeder. No. 1,104,741; July 21; Gaz. vol. 204; p. 961.

Arnold, Frank K., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H. Machine for making paper-tube sections. No. 1,104,742; July 21; Gaz. vol. 204; p. 962.

Arnold, Frank M., Clarion, Pa. Support for rugs to be cleaned. No. 1,103,019; July 14; Gaz. vol. 204; p. 325.

Arnold, Frank P., Carbondale, Pa., and G. F. Wedeman, Washington, D. C. Means for treating ores. No. 1,104,239; July 21; Gaz. vol. 204; p. 787.

Arnold, Frank P., Carbondale, Pa., and G. F. Wedeman, Washington, D. C. Treating ores. No. 1,104,287; July 21; Gaz. vol. 204; p. 804.

Arrowsmith, James W., Morristown, N. J. Instep-support. No. 1,103,463; July 14; Gaz. vol. 204; p. 477.

Arrowsmith, James W., Morristown, N. J. Instep-support. No. 1,103,464; July 14; Gaz. vol. 204; p. 477.

Arrowsmith, James W., Morristown, N. J. Bunion shield and corrector. No. 1,103,465; July 14; Gaz. vol. 204; p. 477.

Arrowsmith, James W., Morristown, N. J. Instep-arch support. No. 1,103,466; July 14; Gaz. vol. 204; p. 478.

Asak, Karl, Raufoss, Norway, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Fuse for projectiles. No. 1,105,394; July 28; Gaz. vol. 204; p. 1240.

Ashley, Burton J., Chicago, Ill. Excreta-vault. No. 1,105,237; July 28; Gaz. vol. 204; p. 1183.

Ashley, Owen G., Tolchester Beach, Md. Bottle-opener. No. 1,103,731; July 14; Gaz. vol. 204; p. 573.

Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,102,465; July 7; Gaz. vol. 204; p. 86.

Aslakson, Baxter M., Salem, Ohio. Gas-engine. No. 1,104,337; July 21; Gaz. vol. 204; p. 821.

Asman, Charles W., Knoxville, Tenn., assignor to Draper Company, Hopedale, Mass. Feeler stop-motion. No. 1,103,340; July 14; Gaz. vol. 204; p. 436.

Aspinwall, Lewis A., assignor to Aspinwall Manufacturing Company, Jackson, Mich. Potato-planter. No. 1,104,725; July 21; Gaz. vol. 204; p. 956.

Aspinwall Manufacturing Company. (See Aspinwall, Lewis A., assignor.)

Astruck, John H., New York, N. Y. Telescopic post for stands and similar articles. No. 1,103,246; July 14; Gaz. vol. 204; p. 405.

Atwood, Albert A. (See Myers, Hubert A., assignor.)

Audibert, Stephen R., Fort Kent, Me. Toothed jaw for wrenches. No. 1,103,927; July 21; Gaz. vol. 204; p. 681.

Augustin, Wilhelm, Charlottenburg, Germany. Setting-gear for calculating-machines. No. 1,104,763; July 28; Gaz. vol. 204; p. 1018.

Auli Brothers Paper and Box Company, The. (See Feldmeyer, William F., assignor.)

Auli Brothers Paper and Box Company, The. (See Zell, James H., assignor.)

Austin, Ernest C., assignor to E. C. Austin Limited, Wellington, New Zealand. Means for facilitating the opening of containers. No. 1,103,859; July 14; Gaz. vol. 204; p. 616.

Austin, Walter M., Zellenople, Pa. Transformer. No. 1,105,014; July 28; Gaz. vol. 204; p. 1104.

Austin, Walter M., Swissvale, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Fluid-pressure-regulating mechanism. No. 1,103,020; July 14; Gaz. vol. 204; p. 325.

Auto Air Appliance Company, The. (See Crouse, Eidson, and Davis, assignors.)

Auto Utilities Manufacturing Company. (See Breidert, George C., assignor.)

Autogenwerk Sirius, Gesellschaft mit beschränkter Haftung. (See Canzler and Samesreuther, assignors.)

Automatic Coin-Wrapping Machine Company. (See Batdorf, Charles S., assignor.)

Automatic Drill Chuck Corporation. (See Emrick, George W., assignor.)

Automatic Electric Company. (See Setter, Michael, assignor.)

Automatic Printer Company. (See Alexander, Soloman, assignor.)

Automatic Recording Safe Company, The. (See Fisher, Charles, assignor.)

Automatic Stove Co., The. (See Phillips, Ross M. G., assignor.)

Autoplate Company of America, The. (See Johnston, Robert T., assignor.)

Autosales Gum & Chocolate Company. (See Grover and Barber, assignors.)

Avery, William W., *et al.* (See Northup, Frank, assignor.)

Avram, Mois H., New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Manufacturing artificial stone. No. 1,102,851; July 7; Gaz. vol. 204; p. 219.

Ayerst, Douglas B., Wilmington, Del. Electrolytic cell. No. 1,105,015; July 28; Gaz. vol. 204; p. 1104.

Aylsworth, Jonas W., *et al.* (See Snelling, Walter O., assignor.)

Aylsworth, Jonas W., assignor to Condensite Company of America, East Orange, N. J. Composition and manufacturing the same. No. 1,102,630; July 7; Gaz. vol. 204; p. 144.

Aylsworth, Jonas W., assignor to Condensite Company of America, East Orange, N. J. Plastic composition and making same. No. 1,102,631; July 7; Gaz. vol. 204; p. 145.

Aylsworth, Jonas W., assignor to Condensite Company of America, East Orange, N. J. Enamel lacquer or varnish composition. No. 1,102,632; July 7; Gaz. vol. 204; p. 145.

Aylsworth, Jonas W., assignor to Condensite Company of America, East Orange, N. J. Insulating composition. No. 1,102,633; July 7; Gaz. vol. 204; p. 145.

Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Glen Ridge, N. J. Plastic phenolic condensation product and forming the same. No. 1,102,634; July 7; Gaz. vol. 204; p. 145.

Ayres, Frank W., and R. A. Barnett, Fruitvale, Cal. Signal-sign for vehicles. No. 1,102,564; July 7; Gaz. vol. 204; p. 120.

B. A. Ballou and Company. (See Heaton, Charles D., assignor.)

B. F. Avery & Sons. (See Ray, Charles T., assignor.)

B. F. Goodrich Company, The, *et al.* (See Wagenhorst, James H., assignor.)

B. F. Sturtevant Company. (See Bentley, Oliver D. H., assignor.)

Babb, Jesse D., Dallas, Ga. Sash-lock. No. 1,102,710; July 7; Gaz. vol. 204; p. 170.

Babcock, Frank H. (See Bethune and Babcock.)

Babcock, Ira J. (See McNeill and Babcock.)

Babcock & Wilcox Company, The. (See Hoxie, William D., assignor.)

Babcock & Wilcox Company, The. (See Irish, David J., assignor.)

Babcock & Wilcox Company, The. (See Peabody and Irish, assignors.)

Babitzky, Josef, Cleveland, Ohio. Lifting device. No. 1,104,338; July 21; Gaz. vol. 204; p. 822.

Bach, Niels B., Modjoherto, Java. Making superior sugar. No. 1,104,095; July 21; Gaz. vol. 204; p. 739.

Bachmann, Christof, Bagby, Cal. Section-holder for hives. No. 1,103,467; July 14; Gaz. vol. 204; p. 478.

Bachmann, Christof, Bagby, Cal. Beehive. No. 1,103,468; July 14; Gaz. vol. 204; p. 478.

Back, John R., Worcester, Mass. Spindle and gear bearing for lathes. No. 1,103,645; July 14; Gaz. vol. 204; p. 544.

Bacon, George M., assignor to Anderson Electric Car Company, Detroit, Mich. Control mechanism for motor-vehicles. No. 1,104,161; July 21; Gaz. vol. 204; p. 760.

Baddeley, Rose M., Onehunga, New Zealand. Skeleton frame and receptacle. No. 1,103,646; July 14; Gaz. vol. 204; p. 544.

Badische Anilin & Soda Fabrik. (See Blangey, Louis, assignor.)

Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)

Badische Anilin & Soda Fabrik. (See Bosch and Mittasch, assignors.)

Badische Anilin & Soda Fabrik. (See Graul, Otto, assignor.)

Bager, Svante R. W. M., Milwaukee, assignor to Bucyrus Company, South Milwaukee, Wis. Drag-line excavator. No. 1,105,480; July 28; Gaz. vol. 204; p. 1270.

Bailey, Anna D., New York, N. Y. Dress-form. No. 1,102,711; July 7; Gaz. vol. 204; p. 170.

Bailey, Bert, Regan, N. D. Wagon. No. 1,103,556; July 14; Gaz. vol. 204; p. 509.

Bair, Floyd M., Grand Ledge, Mich. Apple-sizer. No. 1,103,647; July 14; Gaz. vol. 204; p. 545.

Baird Corn Husker Co. (See Baird, William S., assignor.)

Baird, Mary A., Sterling, Ill. Flat-iron holder. No. 1,104,764; July 28; Gaz. vol. 204; p. 1018.

Baird, William S., Chicago, Ill., assignor to Baird Corn Husker Co. Corn-harvesting machine. No. 1,102,227; July 7; Gaz. vol. 204; p. 3.

Baker, Andrew C., Albion, Mich. Dump-wagon. No. 1,102,852; July 7; Gaz. vol. 204; p. 220.

Baker, Bert C., Fostoria, assignor of one-half to A. M. Smith, Prairie Depot, and one-half to E. S. Smith, Toledo, Ohio. Fence-post mold. No. 1,103,247; July 14; Gaz. vol. 204; p. 405.

Baker, J. L. (See Knox, George, assignor.)

Baker, James W., Quitman, Tex. Andiron. No. 1,104,862; July 28; Gaz. vol. 204; p. 1053.

Baker, Lewis A., Elgin, Ill. Can-filling machine. No. 1,105,173; July 28; Gaz. vol. 204; p. 1159.

Baker, Nelson M. (See Stevenson and Baker.)

Baker, Nelson M. (See Wells and Baker.)

Baker, Otto, Sparkill, N. Y. Trap for returning water of condensation. No. 1,104,954; July 28; Gaz. vol. 204; p. 1085.

Baldwin, Chester L., assignor of one-half to M. Casey, Almond, Wis. Grinding-tool for gas-engine valves. No. 1,104,863; July 28; Gaz. vol. 204; p. 1053.

Baldwin Company, The. (See Gally, Robert A., assignor.)

Baldwin Locomotive Works, The. (See Henderson, George R., assignor.)

Baldwin, Springfield. (See Maupin, Allen, and Baldwin.)

Balfour, John F., Edinburgh, Scotland. Apparatus for localizing the effect of mine explosions. No. 1,102,228; July 7; Gaz. vol. 204; p. 3.

Ball, Andrew J., Fort Worth, Tex. Automatic weighing-machine. No. 1,103,469; July 14; Gaz. vol. 204; p. 479.

Ball, Harry, assignor to Worcester Manufacturing Company, Worcester, Mass. Door-check. No. 1,103,648; July 14; Gaz. vol. 204; p. 545.

Ball, Waldon S., San Francisco, Cal. Lock. No. 1,103,897; July 14; Gaz. vol. 204; p. 629.

Ballard, Harrie A., Ashland, assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass. Shoe-sewing machine. No. 1,103,732; July 14; Gaz. vol. 204; p. 573.

Ballard, Harrie A., Boston, assignor to The Boylston Mfg. Company, South Boston, Mass. Making lasts. No. 1,104,743; July 21; Gaz. vol. 204; p. 962.

Ballard, Harrie A., Somerville, assignor to The Boylston Manufacturing Company, Boston, Mass. Controlling mechanism for fastener-inserting machines. No. 1,105,238; July 28; Gaz. vol. 204; p. 1183.

Ballersby, A. G., *et al.* (See Tucker, Junius E., assignor.)

Ballinger, Charles E. (See McNutt and Ballinger.)

Ballou, Charles E., assignor to Ballou Safety Rail Joint Company, Roanoke, Va. Rail-joint. No. 1,104,864; July 28; Gaz. vol. 204; p. 1053.

Ballou Safety Rail Joint Company. (See Ballou, Charles E., assignor.)

Ballou, William, Bellingham, Minn. Lock for engine-hoods. No. 1,102,229; July 7; Gaz. vol. 204; p. 3.

Balmitgère, Georges, Paris, France. Stereoscopic apparatus. No. 1,105,395; July 28; Gaz. vol. 204; p. 1241.

Baloun, Harry F., Cleveland, assignor of one-half to L. F. Sherry, Canton, Ohio. Door construction for vaults and the like. No. 1,104,765; July 28; Gaz. vol. 204; p. 1019.

Bals, Charles A., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephone system. No. 1,105,348; July 28; Gaz. vol. 204; p. 1223.

Bals, Charles A., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Switching mechanism. No. 1,105,349; July 28; Gaz. vol. 204; p. 1224.

Bals, Charles A., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,105,564; July 28; Gaz. vol. 204; p. 1298.

Baltz, Louis J., Buffalo, N. Y. Railway-tie and fastening device. No. 1,105,319; July 28; Gaz. vol. 204; p. 1212.

Balusa, Hamilton, Kennett Square, Pa., assignor to The American Steel & Wire Company, Hoboken, N. J. Testing instrument. No. 1,104,753; July 21; Gaz. vol. 204; p. 965.

Banks, Arthur J., St. Lambert, Quebec, Canada. Yeast-tester. No. 1,104,766; July 28; Gaz. vol. 204; p. 1019.

Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Turbo-compressor. No. 1,102,635; July 7; Gaz. vol. 204; p. 146.

Banning & Banning. (See Schneider, Adolph, assignor.)

Banzett, William H., Bergenfield, N. J., assignor to Mercantile Corporation, New York, N. Y. Machine for making window-envelop blanks. No. 1,104,162; July 21; Gaz. vol. 204; p. 761.

Barbarou, Marius, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St.-Denis, France. Casing for Cardan joints. No. 1,102,853; July 7; Gaz. vol. 204; p. 220.

Barber Asphalt Paving Company, The. (See Aitken, Allan J., assignor.)

Barber-Colman Company. (See Colman, Howard D., assignor.)

Barber, Earl E. (See Grover and Barber.)

Barber, George H. (See Smith and Barber.)

Barber, Howard E., and J. W. McFarland, Cherry Tree, Pa. Telephone system for trains. No. 1,104,605; July 21; Gaz. vol. 204; p. 915.

Barcalo Manufacturing Co. (See Vallone, Charles, assignor.)

Barcalo Manufacturing Co. (See Vallone and Illig, assignors.)

Bardwell, Edwin A., Shelburne Falls, Mass. Nut-lock. No. 1,106,123; July 28; Gaz. vol. 204; p. 1142.

Barker, James, Detroit, Mich. Flexible-hinge leaf. No. 1,103,911; July 14; Gaz. vol. 204; p. 634.

Barker, Melville H., Boston, Mass. Supporting and driving means for centrifugal machines. No. 1,103,341; July 14; Gaz. vol. 204; p. 436.

Barkman, Stewart J. (See Bump and Barkman.)

Barnard & Leas Manufacturing Company. (See Cornwall, John B., assignor.)

Barnes, David F., Coleridge, Nebr. Binder-sickle guard or tooth. No. 1,104,240; July 21; Gaz. vol. 204; p. 787.

Barnes, John C. (See Latta, John W., assignor.)

Barnes & Kobert Manufacturing Company, The. (See Kobert, Frank P., assignor.)

Barnes, Marion M., Lovilia, Iowa. Motor. No. 1,102,636; July 7; Gaz. vol. 204; p. 146.

Barnett, James W. (See Redding and Barnett.)

Barnett, Robert A. (See Ayres and Barnett.)

Barney and Smith Car Company, The. (See Heater, Jacob D., assignor.)

Barnfather, Robert, London, England. Inflating device. No. 1,105,057; July 28; Gaz. vol. 204; p. 1120.

Barnickle, Frank E., Tierra Buena, Cal. Tobacco-pipe protector. No. 1,103,168; July 14; Gaz. vol. 204; p. 378.

Barnum Trunk Company. (See Thiss, George R., assignor.)

Barranger, Joseph E., Philadelphia, Pa. Steam-generator. No. 1,103,248; July 14; Gaz. vol. 204; p. 406.

Barrett, George L., Springfield, Ohio. Signaling device. No. 1,103,860; July 14; Gaz. vol. 204; p. 616.

Barrington, Charles, Jr., Los Angeles, Cal. Gas-regulator. No. 1,104,865; July 28; Gaz. vol. 204; p. 1054.

Barrow, James M., Athens, La. Anti-rail-spreading device. No. 1,103,021; July 14; Gaz. vol. 204; p. 325.

Barry, David R., Beaumont, Tex. Friction-clutch. No. 1,104,400; July 21; Gaz. vol. 204; p. 842.

Barthelmess, Emil, Neuss, Germany. Pulverizing-mill. No. 1,103,557; July 14; Gaz. vol. 204; p. 509.

Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Knockdown renewable washing-cylinder. No. 1,105,174; July 28; Gaz. vol. 204; p. 1159.

Barton, Joseph, J. Melbourn, F. Needham, and J. G. Green, Cle Elum, Wash. Lantern. No. 1,102,854; July 7; Gaz. vol. 204; p. 220.

Bary, Henry M. B., Philadelphia, Pa. Vertical loader for weighing-scales. No. 1,104,401; July 21; Gaz. vol. 204; p. 843.

Baskin, Edwin T., Independence, Mo. Glove. No. 1,105,239; July 28; Gaz. vol. 204; p. 1184.

Bason, George F., New York, N. Y. Tank. No. 1,103,470; July 14; Gaz. vol. 204; p. 480.

Bassett, Alvin J., assignor to Sharp-Bassett Gas Producer Company, Milwaukee, Wis. Gas-filter. No. 1,103,249; July 14; Gaz. vol. 204; p. 406.

Bassford, William K., Perth Amboy, N. J. Explosive-engine. No. 1,105,017; July 28; Gaz. vol. 204; p. 1105.

Bassford, William K., Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y. Explosive-engine. No. 1,105,016; July 28; Gaz. vol. 204; p. 1104.

Bassford, William K., Perth Amboy, N. J., assignor to Universal Oil Converter Company, Long Island City, N. Y. Explosive-engine. No. 1,105,592; July 28; Gaz. vol. 204; p. 1308.

Baston, Ubertus W. (See Dougherty and Baston.)

Batdorf, Charles S., Brooklyn, N. Y., assignor to Automatic Coin-Wrapping Machine Company. Coin sorting and computing machine. No. 1,103,124; July 14; Gaz. vol. 204; p. 362.

Bate, Ira D., West Jefferson, Ohio. Attachment for threshing-machine feeders. No. 1,104,033; July 21; Gaz. vol. 204; p. 717.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Filling packages. No. 1,104,726; July 21; Gaz. vol. 204; p. 956.

Bates, Arthur, A. E. Jerram, and J. Gouldbourn, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,103,928; July 21; Gaz. vol. 204; p. 681.

Bates, Charles A., Vernon Hill, Va. Pulverizer. No. 1,102,230; July 7; Gaz. vol. 204; p. 4.

Bates, Eddo V., Lowell, assignor of one-half to R. B. Robinson, Dracut, Mass. Breast for carding-machines. No. 1,103,649; July 14; Gaz. vol. 204; p. 545.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Batten, Percy H. (See Pettis and Batten.)

Baucom, Carson D. (See Schroeder and Baucom.)

Bauer, Arthur M., Akron, Ohio. Rail-joint. No. 1,104,241; July 21; Gaz. vol. 204; p. 788.

Bauer, Johan G. L., Chicago, Ill. Treadle mechanism. No. 1,103,471; July 14; Gaz. vol. 204; p. 480.

Bayard, Morris L. (See Buerger, Charles B., assignor.)

Bayer, Joseph, Jr., New York, N. Y., assignor, by mesne assignments, to Noesting Pin-Ticket Company, Inc. Fastening device. (Reissue.) No. 13,769; July 14; Gaz. vol. 204; p. 639.

Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Valve for compressors. No. 1,102,316; July 7; Gaz. vol. 204; p. 33.

Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Valveless percussive tool. No. 1,102,317; July 7; Gaz. vol. 204; p. 33.

Bayley, Harry F., Milwaukee, Wis. Metal-frame and concrete sidewalk, &c. No. 1,103,472; July 14; Gaz. vol. 204; p. 480.

Bayuk, Meyer, Glenside, Pa. Display-cover and guard for boxes. No. 1,105,240; July 28; Gaz. vol. 204; p. 1184.

Beach, Clarence E., Binghamton, assignor to G. O. Knapp, New York, N. Y. Clutch mechanism. No. 1,103,022; July 14; Gaz. vol. 204; p. 325.

Beach, Joseph H., *et al.* (See Tree, Eber B., assignor.)

Beam, Frank B., Anamosa, Iowa. Combined dish-drainer, steamer, roaster, or baking-pan. No. 1,103,169; July 14; Gaz. vol. 204; p. 378.

Beatty, Harry T., and A. Reese, assignors to The Massillon Wire Basket Co., Massillon, Ohio. Wire basket. No. 1,104,096; July 21; Gaz. vol. 204; p. 739.

Beatty, Ross J. (See Snyder, Parke T., assignor.)

Becher, James A., Chicago, Ill. Die-head. No. 1,102,712; July 7; Gaz. vol. 204; p. 171.

Bechman, Henry F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Associating, cutting, and folding apparatus. No. 1,102,637; July 7; Gaz. vol. 204; p. 146.

Bechtel, Henry S., Philadelphia, Pa. Can-soldering machine. No. 1,104,767; July 28; Gaz. vol. 204; p. 1020.

Beck, Paul, Munich, Germany. Base-line telemeter. No. 1,103,023; July 14; Gaz. vol. 204; p. 326.

Beck, William O., Ridgefield, N. J., assignor to Western Electric Company, New York, N. Y. Telephone coin-register. No. 1,103,650; July 14; Gaz. vol. 204; p. 546.

Becker, Amalie M., *et al.*, executors. (See Hofmann, Ernst G.)

Becker, Frank J., Independence, Mo. Door-support. No. 1,102,855; July 7; Gaz. vol. 204; p. 221.

Becker, Joseph, Washington, D. C. Photographic camera. No. 1,103,342; July 14; Gaz. vol. 204; p. 437.

Becker, Joseph, Washington, D. C. Adjusting and regulating automatically-focused enlarging or copying cameras. No. 1,103,343; July 14; Gaz. vol. 204; p. 437.

Becker, Paul, assignor to M. M. Koch, Cleveland, Ohio. Stove lid or cover. No. 1,104,163; July 21; Gaz. vol. 204; p. 761.

Becker, Richard M., New York, assignor to J. T. Underwood, Brooklyn, N. Y. Combined type-writing and computing machine. No. 1,104,408; July 21; Gaz. vol. 204; p. 866.

Beebe, Norman H., Wichita, Kans., and G. W. Duvall, assignors to Lee Broom & Duster Co., Davenport, Iowa. Broom-banding machine. No. 1,103,861; July 14; Gaz. vol. 204; p. 617.

Beer, Levi W., East Mansfield, Ohio. Land-roller. No. 1,103,929; July 21; Gaz. vol. 204; p. 682.

Begg, Alexander L. W., New York, N. Y. Railway system. No. 1,102,231; July 7; Gaz. vol. 204; p. 4.

Behr, Bernhard, Dresden, Germany. Signaling device for calculating-machines. No. 1,105,396; July 28; Gaz. vol. 204; p. 1241.

Behr, Claus F. G., New York, N. Y. Folding carriage and invalid-chair. No. 1,102,565; July 7; Gaz. vol. 204; p. 121.

Behrns, Edmund, Buffalo Lake, Minn. Stacker. No. 1,103,733; July 14; Gaz. vol. 204; p. 574.

Bek, Ernst G., Pforzheim, Germany. Chain. No. 1,104,606; July 21; Gaz. vol. 204; p. 916.

Belknap, Herbert F., Marshfield, Mass. Draft-pipe cap. No. 1,103,734; July 14; Gaz. vol. 204; p. 574.

Bell, John C., assignor to Hyatt Roller Bearing Company, Harrison, N. J. Roll-grading machine. No. 1,104,727; July 21; Gaz. vol. 204; p. 957.

Bellamy, John B. (See Taliaferro and Bellamy.)

Bellows, Willis J., Walla Walla, Wash. Hose-coupling. No. 1,104,955; July 28; Gaz. vol. 204; p. 1085.

Belot, Alfred. (See Bonnet, Belot, Vassallo, and Emery.)

Bemis, Arthur S., assignor to National Carbon Co., Cleveland, Ohio. Rotary electric furnace. No. 1,105,175; July 28; Gaz. vol. 204; p. 1160.

Benedict, Herschel A., East Orange, N. J. Car-hoist. No. 1,102,232; July 7; Gaz. vol. 204; p. 4.

Benjamin Electric Manufacturing Company. (See Anderson, Ernst G. K., assignor.)

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin, George H., New York, N. Y. Apparatus for manufacturing steel. No. 1,102,382; July 7; Gaz. vol. 204; p. 55.

Benjamin, George H., New York, N. Y. Method of and apparatus for producing gas. No. 1,105,241; July 28; Gaz. vol. 204; p. 1184.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Subbase for cluster-sockets. No. 1,102,383; July 7; Gaz. vol. 204; p. 56.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Incandescent-electric-lamp socket. No. 1,102,638; July 7; Gaz. vol. 204; p. 147.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Pull-switch socket. No. 1,102,639; July 7; Gaz. vol. 204; p. 147.

Benjamin, Reuben B., assignor to Benjamin Electric Mfg. Company, Chicago, Ill. Moisture-proof twin socket. No. 1,102,640; July 7; Gaz. vol. 204; p. 148.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Separable attachment-plug. No. 1,103,250; July 14; Gaz. vol. 204; p. 406.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Separable attachment-plug. No. 1,103,251; July 14; Gaz. vol. 204; p. 407.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Reflector-shade. No. 1,103,252; July 14; Gaz. vol. 204; p. 407.

Bennett, Ashley C., Minneapolis, Minn. Carbureter. No. 1,103,930; July 21; Gaz. vol. 204; p. 682.

Bennett, Ashley C., Minneapolis, Minn. Intake-manifold. No. 1,103,931; July 21; Gaz. vol. 204; p. 683.

Bennett, George W., Massillon, Ohio, assignor to S. Mollet. Clamp for printing-presses. No. 1,103,862; July 14; Gaz. vol. 204; p. 617.

Bennett, Horatio S., Cleveland, Ohio. Burner. No. 1,103,253; July 14; Gaz. vol. 204; p. 407.

Benoit, Elphege F., North Yakima, Wash. Loaf-sugar scoop. No. 1,104,097; July 21; Gaz. vol. 204; p. 739.

Bentley, Oliver D. H., assignor to B. E. Sturtevant Company, Boston, Mass. Governor. No. 1,103,024; July 14; Gaz. vol. 204; p. 326.

Benton, Francis E., Stoughton, Mass. Shoe-last. No. 1,103,735; July 14; Gaz. vol. 204; p. 574.

Benton, Walter L., Houston, Tex. Motor-tricycle. No. 1,103,254; July 14; Gaz. vol. 204; p. 408.

Berg, John O., New York, N. Y. Tool for treating artificial stone. No. 1,102,856; July 7; Gaz. vol. 204; p. 221.

Berger, Frank, Baltimore, Md. Perfume-atomizer. No. 1,104,607; July 21; Gaz. vol. 204; p. 916.

Berger-Hahnel, Franz, Ullgersdorf, near Bodenbach, Austria-Hungary. Keyhole-guard. No. 1,105,544; July 28; Gaz. vol. 204; p. 1291.

Berger, Max, and R. Weisbach, San Francisco, Cal.; said Berger assignor to said Weisbach. Amusement device. No. 1,103,558; July 14; Gaz. vol. 204; p. 509.

Berger, Otto, New York, N. Y. Lubricator for elevator-guides. No. 1,102,641; July 7; Gaz. vol. 204; p. 148.

Bergeron, Arthur, Ironwood, Mich. Gear-cutter attachment for lathes. No. 1,103,125; July 14; Gaz. vol. 204; p. 362.

Beringer, Emil, and W. Zimmer, Charlottenburg, assignors to Reichhold, Flügger & Boeckling, lac-varnish manufacturers, Hamburg, Germany. Preserving wood-oil from congealing on being subjected to heat. No. 1,103,473; July 14; Gaz. vol. 204; p. 481.

Berliner, Emile. (See Weinberg, Fritz, assignor.)

Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Pliers or similar tool. No. 1,102,384; July 7; Gaz. vol. 204; p. 56.

Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Pruning or like implement. No. 1,104,768; July 28; Gaz. vol. 204; p. 1020.

Bernick, Ernst, assignor to Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Optical system for prism-carrying devices. No. 1,104,769; July 28; Gaz. vol. 204; p. 1020.

Berquist, Henry A., St. Croix Falls, Wis. Railway-tie and rail-fastener. No. 1,102,857; July 7; Gaz. vol. 204; p. 222.

Berry, Ambrose, Guntersville, Ala. Wire-fastener. No. 1,103,932; July 21; Gaz. vol. 204; p. 683.

Berry, Earle A., Kansas City, Mo. Silo. No. 1,104,866; July 28; Gaz. vol. 204; p. 1055.

Beseman, Edward J., Los Angeles, Cal. Amusement apparatus. No. 1,104,469; July 21; Gaz. vol. 204; p. 867.

Beskow, Knut J., and A. Ramén, Helsingborg, Sweden. Roasting-furnace. No. 1,104,288; July 21; Gaz. vol. 204; p. 804.

Besley, Lewis S., Salt Lake City, Utah. Thermostatic circuit-controller. No. 1,102,566; July 7; Gaz. vol. 204; p. 121.

Bess, Grover C., assignor of one-half to A. J. Isbell, Waukomis, Okla. Incubator. No. 1,105,176; July 28; Gaz. vol. 204; p. 1160.

Bessemer Gas Engine Company. (See Peterson, Frederick O., assignor.)

Bethenod, Joseph. (See Girardeau, Emile, assignor.)

Bethune, John G., and F. H. Babcock, Punxsutawney, Pa. Shock-absorber. No. 1,102,858; July 7; Gaz. vol. 204; p. 222.

Bett, James R., Lord, Md., assignor to R. B. Bett, Chehalis, Wash. Hat-mirror. No. 1,104,608; July 21; Gaz. vol. 204; p. 916.

Bett, Robert B. (See Bett, James R., assignor.)

Bettendorf Company, The. (See Taylor, Ralph G., assignor.)

Blava, Louis, New York, N. Y., assignor to National Musical String Company, New Brunswick, N. J. Machine for making wire strings for pianos and other musical instruments. No. 1,102,233; July 7; Gaz. vol. 204; p. 5.

Bickford, Henry R., Monterey, Cal. Pressure-regulating device. No. 1,103,474; July 14; Gaz. vol. 204; p. 481.

Bilbrough, William H., Elmira Heights, N. Y. Union suit. No. 1,103,255; July 14; Gaz. vol. 204; p. 408.

Billington, John E. (See Pearce and Billington.)

Bilson, Christian P., Chicago, Ill. Hand implement. No. 1,104,470; July 21; Gaz. vol. 204; p. 867.

Bilyeu, William F., Riverton, N. J., assignor to Warren Webster & Company. Distributer for supply-water to feed-water heaters. No. 1,105,242; July 28; Gaz. vol. 204; p. 1185.

Binko, Leonora, London, England. Drawing appliance. No. 1,102,974; July 7; Gaz. vol. 204; p. 260.

Birch, Frank B., Philadelphia, Pa. Packing for journal-boxes. No. 1,103,025; July 14; Gaz. vol. 204; p. 327.

Bird, John M., Fort Worth, Tex. Valve. No. 1,103,475; July 14; Gaz. vol. 204; p. 481.

Biro, Julius E., Fairchance, Pa. Fender. No. 1,103,392; July 14; Gaz. vol. 204; p. 452.

Bishop, Storrs M., Schenectady, N. Y. Power-shovel. No. 1,103,476; July 14; Gaz. vol. 204; p. 482.

Bissell, Walter. (See Gosswiller, Michael F., assignor.)

Bittorf, Louis A., assignor to National Manufacturing Company, Sterling, Ill. Door-hanger. No. 1,104,770; July 28; Gaz. vol. 204; p. 1021.

Bjorge, Oscar B., assignor to Clyde Iron Works, Duluth, Minn. Drag-line bucket. No. 1,104,771; July 28; Gaz. vol. 204; p. 1021.

Black, Frank L., Kings Mills, Ohio. Strainer for water-pipes. No. 1,104,772; July 28; Gaz. vol. 204; p. 1022.

Blackwell, Wellington P., Denver, Colo. Door-holder. No. 1,102,859; July 7; Gaz. vol. 204; p. 222.

Blain, Floyd M., Central Point, Oreg. Baby-jumper. No. 1,104,609; July 21; Gaz. vol. 204; p. 916.

Blake Crusher and Pulverizer Company. (See Blake, Henry H., assignor.)

Blake, Henry H., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa. Bottom construction for furnaces. No. 1,104,402; July 21; Gaz. vol. 204; p. 843.

Blake, Henry H., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa. Apparatus for utilizing low-grade fuels. No. 1,104,403; July 21; Gaz. vol. 204; p. 844.

Blake, Henry H., assignor to Blake Crusher and Pulverizer Company, Pittsburgh, Pa. Apparatus for distributing pulverized fuel. No. 1,104,404; July 21; Gaz. vol. 204; p. 844.

Blake and Johnson Company, The. (See Weiss, Karl, assignor.)

Blake, Samuel H., Pittsfield, Mass., assignor to General Electric Company. Flaming-arc lamp. No. 1,104,339; July 21; Gaz. vol. 204; p. 822.

Blake, William H., Jersey City, N. J. Tire for wheels. No. 1,102,860; July 7; Gaz. vol. 204; p. 223.

Blakeslee, Raymond I. (See Hill, Aaron, assignor.)

Blanchard, George N., and O. G. Minzenmayer, San Francisco, Cal. Receiver for telephones. No. 1,104,610; July 21; Gaz. vol. 204; p. 917.

Blangey, Louis, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Dinitro-diamino-benzophenone. No. 1,104,611; July 21; Gaz. vol. 204; p. 917.

Blatchford, Frank, Brookline, assignor to Wright Manufacturing Company, Lawrence, Mass. Reinforcing-strip for button-flies. No. 1,103,559; July 14; Gaz. vol. 204; p. 510.

Blauvelt, William G., New York, N. Y., and E. C. Molina, Bloomfield, N. J., assignors to American Telephone and Telegraph Company. Telephone-operator's equipment. No. 1,104,956; July 28; Gaz. vol. 204; p. 1085.

Blaw Steel Construction Company. (See Venable, William M., assignor.)

Bleyer, Eugene. (See Papon, Charles M., assignor.)

Bliss, Donald M., Stamford, Conn., assignor of two-fifths to C. J. Henschel, New York, and one-fifth to F. W. Wood, Brooklyn, N. Y. Electromagnetic telegraph. No. 1,102,234; July 7; Gaz. vol. 204; p. 5.

Bliss, Donald M., Orange, N. J., assignor to Bliss Talking Machine Co. Phonograph sounding-board. No. 1,104,340; July 21; Gaz. vol. 204; p. 822.

Bliss, Elmer F., Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company. Signal system. No. 1,102,861; July 7; Gaz. vol. 204; p. 223.

Bliss, Henry P., assignor to W. & B. Douglas, Middletown, Conn. Hand-portable pumping apparatus. No. 1,104,098; July 21; Gaz. vol. 204; p. 740.

Bliss Talking Machine Co. (See Bliss, Donald M., assignor.)

Blofield, Arthur E., New York, N. Y. Combination-tool and bevel-gage. No. 1,103,344; July 14; Gaz. vol. 204; p. 438.

Blohut, Joseph, Leipzig, Germany, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Expression device for automatic musical instruments. No. 1,104,867; July 28; Gaz. vol. 204; p. 1055.

Blondel, Jules, and A. Chopin, Paris, France. Producing plates, films, or pellicles detachably secured to a paper backing or the like. No. 1,105,243; July 28; Gaz. vol. 204; p. 1185.

Blossfeld, Emil, San Francisco, Cal. Leather belting. No. 1,104,341; July 21; Gaz. vol. 204; p. 823.

Bluefeider, Samuel, New York, N. Y. Safety device for street-railway curves. No. 1,103,256; July 14; Gaz. vol. 204; p. 408.

Bluhm, August E., Rochester, N. Y. Garment hanger and stretcher. No. 1,105,018; July 28; Gaz. vol. 204; p. 1106.

Bluhm, August E., Rochester, N. Y. Combined garment hanger and stretcher. No. 1,105,019; July 28; Gaz. vol. 204; p. 1106.

Blum, Henry, New York, N. Y. Valve. No. 1,105,177; July 28; Gaz. vol. 204; p. 1160.

Bochau, William A., Baltimore, Md. Kite. No. 1,105,058; July 28; Gaz. vol. 204; p. 1121.

Bodey, Edward J., Cincinnati, assignor to The Eclipse Folding Machine Company, Sidney, Ohio. Suction-cleaner. No. 1,104,612; July 21; Gaz. vol. 204; p. 917.

Bodey, Edward J., Cincinnati, assignor to The Eclipse Folding Machine Company, Sidney, Ohio. Suction-cleaner. No. 1,104,613; July 21; Gaz. vol. 204; p. 918.

Bodo, Joseph. (See Caron, George D., assignor.)

Body, Joseph F., Philadelphia, Pa. Hair-pin. No. 1,103,393; July 14; Gaz. vol. 204; p. 452.

Boelzner, Philip C. (See Snyder and Boelzner.)

Boericke, Harold, Newmire, Colo. Extracting vanadium from vanadium ores. No. 1,105,244; July 28; Gaz. vol. 204; p. 1185.

Boericke, Harold, Vanadium, Colo. Extracting vanadium from vanadium ores. No. 1,105,245; July 28; Gaz. vol. 204; p. 1185.

Boger, Daniel W., Houston, Tex. Baking-pan. No. 1,105,178; July 28; Gaz. vol. 204; p. 1161.

Bohlman, Ernest A., Cedar Rapids, Iowa, assignor to Peerless V Belt Company, Chicago, Ill. Metallic link chain. No. 1,103,026; July 14; Gaz. vol. 204; p. 327.

Bohm, Oscar H. (See Elmore and Bohm.)

Boice, Dale C. (See Kramer, Frank, assignor.)

Boirault, Louis, Paris, France. Centering device for car-couplings. No. 1,102,862; July 7; Gaz. vol. 204; p. 223.

Boischevalier, Henri de, assignor of one-third to L. Chevrolet, Detroit, Mich. Radiator. No. 1,103,011; July 7; Gaz. vol. 204; p. 274.

Bojas, Frank J., Detroit, Mich. Wrench. No. 1,102,863; July 7; Gaz. vol. 204; p. 224.

Bolin, Sven G., Kansas City, Mo. Metal door. No. 1,104,868; July 28; Gaz. vol. 204; p. 1055.

Boll, George W., Wichita, Kans. Stack-cover. No. 1,102,466; July 7; Gaz. vol. 204; p. 86.

Bollinger, George, Jr., Cincinnati, Ohio. Decorative device. No. 1,103,257; July 14; Gaz. vol. 204; p. 409.

Boltless Rail Joint Company, The. (See Young, Jefferson D., assignor.)

Bolton, Henry S. (See Danley and Bolton.)

Bomeister, Carl. (See Sondheim and Veit, assignors.)

Bond, Otis D. (See Glover, Charles G., assignor.)

Bondaschа, Charles W., assignor of one-third to A. Chattaway and one-third to C. L. Chattaway, Hazzard, Pa. Curtain-pole. No. 1,104,614; July 21; Gaz. vol. 204; p. 918.

Bonnell, Benton L. (See Osborn, Pearl W., assignor.)

Bonnot, Joseph, A. Beiot, J. Vassallo, and R. Emery, Marseille, France. Airship. No. 1,104,242; July 21; Gaz. vol. 204; p. 788.

Bookout, Louis L. (See Padgett and Bookout.)

Boor, Theodore A., Ashville, Ohio. Starter for internal-combustion engines. No. 1,103,736; July 14; Gaz. vol 204; p. 575.

Borden, Bradford, Warren, assignor, by mesne assignments, to The Hart Manufacturing Company, Cleveland, Ohio. Taper-thread-cutting tool. No. 1,102,713; July 7; Gaz. vol. 204; p. 171.

Borden's Condensed Milk Company. (See Hausheer, Bernard, assignor.)

Borel, Joseph, and F. Grange, Annecy, France. Press-button. No. 1,102,975; July 7; Gaz. vol. 204; p. 260.

Borghi, Amiel. (See Carter, John B., assignor.)

Borland, Bruce, Chicago, Ill. Motor control. No. 1,103,027; July 14; Gaz. vol. 204; p. 327.

Bornmann, Ernst, assignor to J. A. Topf & Soehne, Erfurt, Germany. Drying or cooling granular materials. No. 1,102,714; July 7; Gaz. vol. 204; p. 172.

Borwick, Matthew, *et al.* (See Walker, William F., assignor.)

Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing hydrogen and apparatus therefor. No. 1,102,716; July 7; Gaz. vol. 204; p. 172.

Bosch, Carl, and A. Mittasch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Purification of mixtures containing nitrids. No. 1,102,715; July 7; Gaz. vol. 204; p. 172.

Bosch, Firm of Robert. (See Schäfer, Max, assignor.)

Bosch, Firm of Robert. (See Woerner, Eugen, assignor.)

Boss Manufacturing Company. (See Waller, Peter A., assignor.)

Bossingham, John E., Canton, Ohio. Annealing-box bottom. No. 1,105,059; July 28; Gaz. vol. 204; p. 1121.

Bostock, William F., Providence, R. I. Applying protectors to shoes. No. 1,103,170; July 14; Gaz. vol. 204; p. 378.

Boston Machinery Company. (See Petersen, Anker, assignor.)

Bottenstein, Leopold, Albany, N. Y. Smoke-washer. No. 1,102,996; July 7; Gaz. vol. 204; p. 267.

Boum, Joseph. (See Hall, Walter W., assignor.)

Bourquin, Numa. (See Willson and Bourquin.)

Boutell Manufacturing Company. (See Boutell, William H., assignor.)

Boutell, William H., assignor to Boutell Manufacturing Company, Rochester, N. Y. Fruit or vegetable slicing machine. No. 1,102,467; July 7; Gaz. vol. 204; p. 86.

Bowdidge, Thomas H. (See Gentle, Cuthbert, assignor.)

Bower, Robert A., assignor to Sniles Company, Incorporated, San Francisco, Cal. Sealing-plug for electrical water-heaters. No. 1,103,171; July 14; Gaz. vol. 204; p. 378.

Bowers, Paul, Starbuck, Wash. Arch-tube safety device. No. 1,105,397; July 28; Gaz. vol. 204; p. 1241.

Bowker, Ernest S., Chicago, assignor of one-half to A. H. Eminger, Gibson City, Ill. Method and apparatus for forming curved walls. No. 1,103,863; July 14; Gaz. vol. 204; p. 618.

Bowley, Isaac V., Whiterock, Me. Egg-carrier. No. 1,105,398; July 28; Gaz. vol. 204; p. 1242.

Bowser, Allen A., Fort Wayne, Ind. Pump. No. 1,102,468; July 7; Gaz. vol. 204; p. 87.

Bowser, Lafayette E., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Automatic pipe or hose draining valve. No. 1,104,869; July 28; Gaz. vol. 204; p. 1056.

Boyce, Harrison H., Oyster Bay, N. Y. Diaphragm signal-horn. No. 1,103,933; July 21; Gaz. vol. 204; p. 683.

Boyce, Harrison H., Oyster Bay, N. Y., assignor to E. V. Hartford, Deal, N. J. Shock-absorber. No. 1,102,864; July 7; Gaz. vol. 204; p. 224.

Boylston Manufacturing Company, The. (See Ballard, Harrie A., assignor.)

Boylston Manufacturing Company, The. (See Erickson, Edward, assignor.)

Boysen, Boy S. (See Miller, Leonard, assignor.)

Boysen, Friedrich C., Darby, Pa. Box-opener. No. 1,103,126; July 14; Gaz. vol. 204; p. 363.

Brackelsberg, Carl A., Stockum, Dusseldorf, Germany. Manufacturing pure iron or manganese metal from pure or impure iron or manganese-metal oxids. No. 1,103,258; July 14; Gaz. vol. 204; p. 409.

Brackett, Ernest W., assignor to Splitdorf Electrical Company, Newark, N. J. Magneto-mounting. No. 1,102,385; July 7; Gaz. vol. 204; p. 57.

Braden, Charles C., Winslow, Ariz. Folding chair. No. 1,104,615; July 21; Gaz. vol. 204; p. 918.

Bradford, Henry B. (See Sellers and Bradford.)

Bradley, Franklin F., assignor to Bradley & Vrooman Company, Chicago, Ill. Apparatus for coating objects with subdivided material. No. 1,104,471; July 21; Gaz. vol. 204; p. 867.

Bradley, Joseph H. (See Scroggins, Robert H., assignor.)

Bradley & Vrooman Company. (See Bradley, Franklin F., assignor.)

Bradshaw, Ira E., Unionville, Mo. Sanitary milking vessel. No. 1,104,773; July 28; Gaz. vol. 204; p. 1022.

Bradshaw, Richard, Toronto, Ontario, Canada. Spring-mattress. No. 1,103,028; July 14; Gaz. vol. 204; p. 327.

Braine, Bancroft G., assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 1,103,394; July 14; Gaz. vol. 204; p. 453.

Brannen, Richmond E., and L. Wallace, Willcox, Ariz. Switch construction. No. 1,103,934; July 21; Gaz. vol. 204; p. 683.

Bransford, Joseph, Bakersfield, Cal. Door latch and lock. No. 1,102,567; July 7; Gaz. vol. 204; p. 122.

Brantingham, Allen C., Toledo, Ohio, assignor to Nordyke & Marmon Co., Indianapolis, Ind. Sifter-driving mechanism. No. 1,104,870; July 28; Gaz. vol. 204; p. 1056.

Brees, James W., and O. L. Hupp, Indianapolis, Ind. Adjustable sectional railway-crossing. No. 1,102,235; July 7; Gaz. vol. 204; p. 6.

Breidert, George C., assignor to Auto Utilities Manufacturing Company, Chicago, Ill. Ventilator. No. 1,104,472; July 21; Gaz. vol. 204; p. 867.

Brell, Julius, New York, N. Y. Garment-fastener. No. 1,103,651; July 14; Gaz. vol. 204; p. 546.

Brennan, Daniel, Woodlawn, Pa. Charging-ladle. No. 1,102,236; July 7; Gaz. vol. 204; p. 6.

Brenner, John G., Hulme, Manchester, England. Garment-hanger. No. 1,104,099; July 21; Gaz. vol. 204; p. 740.

Brenner, Paul C., Chicago, Ill. Flim-winding mechanism. No. 1,104,616; July 21; Gaz. vol. 204; p. 919.

Brett, William J., Coventry, assignor to F. Jellings, Leeds, England. Flushing-valve. No. 1,102,469; July 7; Gaz. vol. 204; p. 87.

Brett, William P., Decatur, Ill. Windmill. No. 1,105,020; July 28; Gaz. vol. 204; p. 1106.

Brett, William P., Decatur, Ill. Windmill-power plant. No. 1,105,021; July 28; Gaz. vol. 204; p. 1107.

Bridgeport Brass Company. (See Clark, Walter R., assignor.)

Bright, Claude H., Jr., Memphis, Tenn. Impression or transfer device. No. 1,104,617; July 21; Gaz. vol. 204; p. 919.

Briner, Robert F., Saratoga, Wyo. Trap-nest. No. 1,102,386; July 7; Gaz. vol. 204; p. 57.

Brink, George B., assignor to Tufting Machine Supply Company, Detroit, Mich. Cushion-mold. No. 1,103,477; July 14; Gaz. vol. 204; p. 482.

Brion, Samuel J. (See Cilley and Brion.)

Britt, Oliver W., San Francisco, Cal. Vehicle-tire. No. 1,103,478; July 14; Gaz. vol. 204; p. 482.

Britten, William M., Los Angeles, Cal. Oil-burner. No. 1,102,387; July 7; Gaz. vol. 204; p. 58.

Broady, Harry W. (See Lundin and Broady.)

Brockman, A. F. (See Leonard, William C., assignor.)

Brockway, George F., Eden, Iowa. Cross-tie. No. 1,103,652; July 14; Gaz. vol. 204; p. 547.

Brodsky, Frank. (See Prochazka, Gustav, assignor.)

Brogan, Michael F., Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,103,935; July 21; Gaz. vol. 204; p. 684.

Bronnert, Emile, Niedermorschweiler, near Mulhausen, assignor to Vereinigte Glanzstoff-Fabriken A.-G., Elberfeld, Germany. Production of threads, films, or plates. No. 1,102,237; July 7; Gaz. vol. 204; p. 6.

Brooks, Frank M., New York, N. Y. Gas-burner. No. 1,104,473; July 21; Gaz. vol. 204; p. 868.

Brooks, Harry, assignor of one-fourth to A. W. Craig and one-fourth to D. S. Leppe, Uniontown, Pa. Convertible arm-chair and folding bed. No. 1,104,618; July 21; Gaz. vol. 204; p. 919.

Brophy, Joseph, Bergland, Mich. Road-machine. No. 1,103,936; July 21; Gaz. vol. 204; p. 684.

Brothers, Eli, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,103,937; July 21; Gaz. vol. 204; p. 685.

Broughton, Lyman D., Hartford, Conn., assignor to Underwood Typewriter Company. Type-writing machine. No. 1,102,238; July 7; Gaz. vol. 204; p. 6.

Brown, Alexander T., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y. Gearing. No. 1,104,243; July 21; Gaz. vol. 204; p. 788.

Brown, Anna, Vancouver, Wash. Bed. No. 1,104,619; July 21; Gaz. vol. 204; p. 920.

Brown, Dickson Q., *et al.* (See Kendall, Edward D., assignor.)

Brown, George F., Galt, Ontario, Canada. Copy-holder. No. 1,104,100; July 21; Gaz. vol. 204; p. 740.

Brown, George W. A., assignor of two-thirds to G. P. Mills and Clement Talbot Limited, London, England. Carbureter. No. 1,103,864; July 14; Gaz. vol. 204; p. 618.

Brown, James A., assignor to W. F. Cox, Cedar Rapids, Iowa. Valve-actuating gear for explosion-engines. No. 1,102,717; July 7; Gaz. vol. 204; p. 172.

Brown, James W., Brooklyn, N. Y. Re-forming of films of electrolytic lightning-arresters. No. 1,104,620; July 21; Gaz. vol. 204; p. 920.

Brown, Landy B. (See Ries, Harry B., assignor.)

Brown, Lewis A., Horine, Mo. Safety-bar. No. 1,104,101; July 21; Gaz. vol. 204; p. 741.

Brown-Lipe Gear Company, The. (See Brown, Alexander T., assignor.)

Brown, Martin W., New York, N. Y. Reversing mechanism for engines. No. 1,104,621; July 21; Gaz. vol. 204; p. 920.

Brown, Richard P., assignor to Keystone Electrical Instrument Company, Philadelphia, Pa. Electrical measuring instrument. No. 1,105,481; July 28; Gaz. vol. 204; p. 1270.

Brown, Robert S., assignor to The New Britain Machine Company, New Britain, Conn. Spindle-adjusting mechanism. No. 1,103,479; July 14; Gaz. vol. 204; p. 483.

Brown, Theodore P., Worcester, Mass., assignor to Simplex Player Action Company. Folding pedal for pneumatic musical instruments. No. 1,103,480; July 14; Gaz. vol. 204; p. 483.

Brown, Thomas E., Pecos, Tex. Fly-trap. No. 1,102,642; July 7; Gaz. vol. 204; p. 149.

Brown, Thomas E., New York, N. Y., and C. T. Westlin, Arlington, N. J., assignors to Cotton Machinery Company, New York, N. Y. Machine for use in gathering cotton. No. 1,103,653; July 14; Gaz. vol. 204; p. 547.

Brown, Walter F., Worcester, Mass. Steering-gear. No. 1,102,239; July 7; Gaz. vol. 204; p. 7.

Brown, William. (See Dodds and Brown.)

Brown, William S., assignor to W. S. Murrian, trustee, Knoxville, Tenn. Steam-engine valve-gear. (Reissue.) No. 13,770; July 14; Gaz. vol. 204; p. 639.

Browne, Hugh M., Cheyney, Pa. Tobacco-pipe stem. No. 1,102,865; July 7; Gaz. vol. 204; p. 225.

Browne, Travers S., New York, N. Y. Attachment for use with incandescent gas-lamps. No. 1,105,246; July 28; Gaz. vol. 204; p. 1186.

Brownlee, Dalmar T. (See Spacke, Brownlee, and Spacke.)

Bruk, John, Boston, Mass. Marking-gage. No. 1,103,172; July 14; Gaz. vol. 204; p. 379.

Brundage, Seth W., assignor to C. W. Parker, Leavenworth, Kans. Knockdown carousel. No. 1,102,866; July 7; Gaz. vol. 204; p. 225.

Brunnemer, William T. M., assignor of one-half to M. Rumely Company, Laporte, Ind. Traction-wheel. No. 1,104,957; July 28; Gaz. vol. 204; p. 1086.

Brunswick, Robert B., Philadelphia, Pa. Button-hook attachment for pencil-ferrules. No. 1,104,244; July 21; Gaz. vol. 204; p. 789.

Bryan, Daniel B., deceased, Flushing, N. Y.; M. B. Bryan, administratrix. Oscillating door. No. 1,102,568; July 7; Gaz. vol. 204; p. 122.

Bryan, Mary B., administratrix. (See Bryan, Daniel B.)

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant Electric Company. (See Seeley, Frank E., assignor.)

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bubb, William F., Mountain View, Cal. Triple offset for plows. No. 1,102,643; July 7; Gaz. vol. 204; p. 149.

Buck, William, Paxico, Kans. Gopher-trap. No. 1,105,586; July 28; Gaz. vol. 204; p. 1306.

Buck, William R., New Milford, Conn. Distributer. No. 1,104,342; July 21; Gaz. vol. 204; p. 823.

Buckeye Iron and Brass Works. (See Fulson, Charles H., assignor.)

Buckeye Steel Castings Company, The. (See Bush, Samuel P., assignor.)

Buckley, John L., and J. W. Coin, Weatherford, Tex. Wire clothes-pin. No. 1,104,871; July 28; Gaz. vol. 204; p. 1056.

Buckley, John J., Boston, Mass. Fly-paper holder. No. 1,103,259; July 14; Gaz. vol. 204; p. 409.

Bucknam, Worthy C., Jersey City, N. J., assignor to Davis-Bournonville Company, New York, N. Y. Pantograph. No. 1,104,289; July 21; Gaz. vol. 204; p. 805.

Bucyrus Company. (See Bager, Svante R. W. M., assignor.)

Budn Company. (See Jenkins, Merrill L., assignor.)

Budd, Harry, Independence, Kans. Cover-fastener. No. 1,104,872; July 28; Gaz. vol. 204; p. 1056.

Buddle, George T., Chicago, Ill. Combination table-lock and opener. No. 1,103,029; July 14; Gaz. vol. 204; p. 328.

Budlong, Frank M., assignor of one-third to J. M. Curragh, San Jose, Cal. Closure for bottles, jars, &c. No. 1,103,737; July 14; Gaz. vol. 204; p. 575.

Buerger, Charles B., New York, N. Y., assignor of one-half to M. L. Bayard, Woodbine, N. J. Dosing device for controlling the flow of sewage to sprinkling-filters. No. 1,104,474; July 21; Gaz. vol. 204; p. 868.

Buffalo Foundry & Machine Company. (See Sleeper, Oliver S., assignor.)

Buffalo Pitts Company. (See Todd, Marquis J., assignor.)

Bugatti, Ettore, Molsheim, Germany. Vehicle-wheel. No. 1,105,179; July 28; Gaz. vol. 204; p. 1161.

Bühren, Walther, assignor to W. Post, Iserlohn, Germany. Producing the ears in needles having bulges at both sides of a groove previously produced by stamping. No. 1,103,481; July 14; Gaz. vol. 204; p. 483.

Builders Iron Foundry. (See Connet, Frederick N., assignor.)

Bump, Floyd E., and S. J. Barkman, Fenton, Mich. Headlight control. No. 1,105,247; July 28; Gaz. vol. 204; p. 1186.

Bump, George P., La Crosse, Wis., assignor to Bump's Perfected Paper Fastener Co. Machine for fastening paper or like sheets together. No. 1,104,622; July 21; Gaz. vol. 204; p. 921.

Bump's Perfected Paper Fastener Co. (See Bump, George P., assignor.)

Bundy, Charles L., Minor, Kans. Force-feed oiler. No. 1,104,102; July 21; Gaz. vol. 204; p. 741.

Buonicore, Anthony, New York, N. Y. Cushion-shackle. No. 1,104,343; July 21; Gaz. vol. 204; p. 823.

Burdett, James E., assignor of one-half to J. T. Dwyer, Claremont, N. H. Necktie-presser. No. 1,102,569; July 7; Gaz. vol. 204; p. 123.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrolytic cell. No. 1,104,754; July 21; Gaz. vol. 204; p. 966.

Burgert, August, assignor to Elsässische Maschinenbau-Gesellschaft, Mülhausen, Germany. Combined printing-machine for text and intaglio fine printing. No. 1,105,482; July 28; Gaz. vol. 204; p. 1271.

Burgess, Arthur. (See Rehfuss, Burgess, and Rehfuss.)

Burgess, Newton A., New York, N. Y., assignor to Batters Patent Vacuum Filter Company, Inc. Apparatus for filtering valuable compounds. No. 1,103,345; July 14; Gaz. vol. 204; p. 438.

Burke, John W., Proctor, Minn. Cap. No. 1,105,400; July 28; Gaz. vol. 204; p. 1242.

Burkhart, Ralph R., Spokane, Wash. Hame. No. 1,104,623; July 21; Gaz. vol. 204; p. 921.

Burks, Paul I., Louisville, Ky. Pneumatic action for musical instruments. No. 1,105,248; July 28; Gaz. vol. 204; p. 1186.

Burlin, Charles T., assignor to The Whitin Machine Works, Whitinsville, Mass. Presser for fliers. No. 1,103,654; July 14; Gaz. vol. 204; p. 547.

Burns, Leslie C., Union Hill, N. J. Marine steering-gear. No. 1,103,738; July 14; Gaz. vol. 204; p. 575.

Burroughs, Eugene W., Norfolk, Va. Electric-motor wrench. No. 1,102,240; July 7; Gaz. vol. 204; p. 7.

Burrow, Nancy L., Mountain Park, Okla. Cooler. No. 1,104,958; July 28; Gaz. vol. 204; p. 1086.

Burton, Charles W., Vancouver, British Columbia, Canada. Oil-burner. No. 1,105,401; July 28; Gaz. vol. 204; p. 1242.

Burton, John H. (See Verstraelen, Michael, assignor.)

Bury, George W., Clinton, Ky. Package-binder. No. 1,102,470; July 7; Gaz. vol. 204; p. 87.

Busch, Carl F. W., Bellaire, Ohio. Drop-light attachment. No. 1,103,395; July 14; Gaz. vol. 204; p. 453.

Busch, Edward, assignor to The National Automatic Tool Company, Dayton, Ohio. Bearing for spindles for multiple drills. No. 1,102,471; July 7; Gaz. vol. 204; p. 88.

Busch, Herman F., assignor to Armstrong Cork Company, Pittsburgh, Pa. Cork article and making the same. No. 1,105,060; July 28; Gaz. vol. 204; p. 1121.

Busch-Sulzer Bros.-Diesel Engine Company. (See Cochud, Jules, assignor.)

Bush, Henry C., Percilla, Tex. Washboard. No. 1,105,124; July 28; Gaz. vol. 204; p. 1142.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Making car-wheels. No 1,105,180; July 28; Gaz. vol. 204; p. 1161.

Bustos, Javier L., Santiago de Chile, Chile. Tide-motor No. 1,105,249; July 28; Gaz. vol. 204; p. 1187.

Butcher, Joseph, Brooklyn, N. Y. Feed mechanism for moving-picture machines. No. 1,104,873; July 28; Gaz. vol. 204; p. 1057.

Butters, Charles, London, England. Recovery of gold and silver from refractory ores. No. 1,103,346; July 14; Gaz. vol. 204; p. 439.

Butters Patent Vacuum Filter Company. (See Burgess, Newton A., assignor.)

Buttner, Joseph, Baltimore, Md. Aeroplane. No. 1,104,624; July 21; Gaz. vol. 204; p. 921.

Byerly, William A. (See Gibbs, James E., assignor.)

Byers, Wilford J. W., Atoka, Okla. Dry closet. No. 1,103,260; July 14; Gaz. vol. 204; p. 409.

Byron Jackson Iron Works. (See Paulsmeier, Albert C., assignor.)

C. A. Cook Company. (See Kilberg and Johnson, assignors.)

C. A. Eaton Company. (See Eaton, Charles C., assignor.)

C. F. Pease Company, The. (See Pease, Charles F., assignor.)

Cable Excavator Company, The. (See Hadsel, Alvah D., assignor.)

Cade, Robert S., assignor of one-half to A. E. Jackson, Canton, Ohio. Shoe-repairing machine. No. 1,103,347; July 14; Gaz. vol. 204; p. 439.

Cadell, John F., Baltimore, Md., assignor, by mesne assignments, to E. E. Clement, Washington, D. C. Contact-point. No. 1,105,399; July 28; Gaz. vol. 204; p. 1242.

Cafferty, Anthony, Mahanoy City, Pa. Sounding-wheel toy. No. 1,103,030; July 14; Gaz. vol. 204; p. 328.

Cairns, Joseph W. (See Cairns, Robert and J. W.)

Cairns, Robert and J. W., Watertown, Wis. Coin-delivery machine. No. 1,104,405; July 21; Gaz. vol. 204; p. 845.

Calcutt, Reginald B., Chicago, Ill. Tire for vehicles. No. 1,104,774; July 28; Gaz. vol. 204; p. 1022.

Caler, Francis M., Inglewood, Cal. Game apparatus. No. 1,103,865; July 14; Gaz. vol. 204; p. 618.

Calfee, Andrew J., Leadvale, Tenn. Rail-joint. No. 1,104,406; July 21; Gaz. vol. 204; p. 845.

Calhoun, John W., Connellsville, Pa. Water-meter system. No. 1,103,655; July 14; Gaz. vol. 204; p. 548.

Calhoun, Washington L., Tarrytown, Ga. Cotton-chopper. No. 1,102,868; July 7; Gaz. vol. 204; p. 225.

California Corrugated Culvert Company. (See Thorsby, Karl J., assignor.)

California Fruit Canners Association. (See Keast, Alfred J., assignor.)

Callahan, James J., Fort Kent, Me. Cushion device. No. 1,102,570; July 7; Gaz. vol. 204; p. 123.

Callow, Cecil B., London, England, assignor to G. A. E. Kohler, Chicago, Ill. Interlock. No. 1,102,318; July 7; Gaz. vol. 204; p. 33.

Callow, John M., Salt Lake City, Utah, assignor to Metals Recovery Company, Augusta, Me. Ore-concentrating apparatus. No. 1,104,755; July 21; Gaz. vol. 204; p. 966.

Caloris Company, The. (See Wild, Günther P., assignor.)

Calvin, Janet S., administratrix. (See Calvin, John C.)

Calvin, John C., deceased, Buffalo, N. Y.; J. S. Calvin, administratrix. Clutch device. No. 1,103,560; July 14; Gaz. vol. 204; p. 510.

Camel Company. (See Comee, Joseph F., assignor.)

Cameron, Archibald B., *et al.* (See Walker, William F., assignor.)

Cameron, Charles E., Collingswood, N. J., assignor to Lightning Demountable Rim Company, Philadelphia, Pa. Detachable wheel-rim. No. 1,104,874; July 28; Gaz. vol. 204; p. 1057.

Camm, Horace O. (See Gage, Harold J., assignor.)

Camp, Key D., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Igniter. No. 1,102,241; July 7; Gaz. vol. 204; p. 7.

Campbell, Calvin N., Missouri Valley, assignor of one-fourth to P. M. Edwards, Ward, Iowa. Harrow. No. 1,105,022; July 28; Gaz. vol. 204; p. 1107.

Campbell, Hardy W., Bethany, Nebr. Disk subsurface-packer. No. 1,103,938; July 21; Gaz. vol. 204; p. 685.

Campbell, Matthew D., Boston, Mass. Fly-trap. No. 1,103,656; July 14; Gaz. vol. 204; p. 548.

Campbell, William L., Lincoln, Nebr. Cutting apparatus. No. 1,105,483; July 28; Gaz. vol. 204; p. 1271.

Canadian Tobacco Utilities Limited. (See Woodcock, William G., Jr., assignor.)

Canady, Joseph F., Jersey City, N. J. Apparatus for regulating combustion in furnaces. No. 1,102,718; July 7; Gaz. vol. 204; p. 173.

Canister Company, The. (See Adams, James F., assignor.)

Cannon, Burrell, Longview, Tex. Apparatus for automatically photographing persons moving along a confined way. No. 1,105,484; July 28; Gaz. vol. 204; p. 1271.

Cannstatter Misch- und Knetmaschinen-Fabrik Cannstatter-Dampf Backefenfabrik Werner & Pfleiderer. (See Schmidt, Otto, assignor.)

Cano, Arthur A. (See Cano, Vernon, A. A., and L.)

Cano, Lewis. (See Cano, Vernon, A. A., and L.)

Cano, Vernon, A. A., and L., New York, N. Y. Electrical-circuit controller. No. 1,103,657; July 14; Gaz. vol. 204; p. 548.

Cantoni, Chautems et Compagnie *et al.* (See Cantoni, Chautems, and Degrange, assignors.)

Cantoni, Humbert, Voghera, Italy, J. Chautems and E. Degrange, assignors to Cantoni, Chautems et Compagnie and E. Degrange, Geneva, Switzerland, Manufacture of cream of tartar. No. 1,103,638; July 14; Gaz. vol. 204; p. 549.

Canzler, Carl, and R. Samesreuther, Düren, assignors to Autogenwerk Sirius, Gesellschaft mit beschränkter Haftung, Dusseldorf, Germany. Alloy for welding copper and nickel. No. 1,103,482; July 14; Gaz. vol. 204; p. 483.

Capece, Giovanni, Providence, R. I. Artificial-stone cement. No. 1,103,483; July 14; Gaz. vol. 204; p. 484.

Capehart, Ida E., New Brighton, Pa. Curtain-fixture. No. 1,102,976; July 7; Gaz. vol. 204; p. 260.

Capian, Eva, Philadelphia, Pa. Garment. No. 1,104,625; July 21; Gaz. vol. 204; p. 922.

Capobianco, Vincent, New York, N. Y. Non-refillable bottle. No. 1,103,348; July 14; Gaz. vol. 204; p. 439.

Carence, Thomas, Kansas City, Mo. Pencil-holder. No. 1,102,242; July 7; Gaz. vol. 204; p. 7.

Carhartt, Hamilton. (See Kratz, Oscar E., assignor.)

Carlson, Auger C., Butler, Pa. Intercommunicating telegraph or telephone device. No. 1,105,485; July 28; Gaz. vol. 204; p. 1271.

Carlson, John F., Des Moines, Iowa. Stencil-rack. No. 1,102,243; July 7; Gaz. vol. 204; p. 8.

Carlson, Walter C., Milwaukee, Wis. Confectionery-box. No. 1,104,344; July 21; Gaz. vol. 204; p. 824.

Carmer, James R., Wilmington, Del., and C. O. Keagy, Philadelphia, Pa. Railway card-holder. No. 1,102,869; July 7; Gaz. vol. 204; p. 226.

Carnahan, John E., Canton, Ohio. Gas-burner. No. 1,105,250; July 28; Gaz. vol. 204; p. 1187.

Carnahan, John E., Canton, Ohio. Oxidizing steel or iron sheets. No. 1,105,251; July 28; Gaz. vol. 204; p. 1187.

Caron, George D., assignor to J. Bodo, Danielson, Conn. Shade-roller bracket. No. 1,105,486; July 28; Gaz. vol. 204; p. 1272.

Carpenter, Henry A., Sewickley, assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Fluid control mechanism for motors. No. 1,105,061; July 28; Gaz. vol. 204; p. 1121.

Carpenter, Paul. (See Visscring and Carpenter.)

Carpenter, Peter J., Jr., Dobbs Ferry, N. Y. Work-bench. No. 1,104,103; July 21; Gaz. vol. 204; p. 741.

Carpenter, William P. (See Williams, William W., assignor.)

Carr, P. B., *et al.* (See Penn, Ralph L., assignor.)

Carr, Quincy. (See Cole and Carr.)

Carr, Raymond H., and J. C. Maddux, assignors of one-fourth to said Carr, one-half to said Maddux, and one-fourth to A. J. McKelvey, Kingman, Ariz. Shock-absorber. No. 1,102,644; July 7; Gaz. vol. 204; p. 149.

Carreyn, Charles, Detroit, Mich. Flush-tank. No. 1,102,870; July 7; Gaz. vol. 204; p. 216.

Carroll, Charles J., Baltimore, Md. Plate for securing weatherproofing. No. 1,102,871; July 7; Gaz. vol. 204; p. 227.

Carroll, David G., assignor of one-half to J. E. Lane, Atlanta, Ga. Sash-weight. No. 1,103,866; July 14; Gaz. vol. 204; p. 619.

Carstens, Emil, New York, N. Y. Safety attachment for doors. No. 1,105,252; July 28; Gaz. vol. 204; p. 1187.

Carter, Chapel S., assignor to The H. C. Cook Company, Ansonia, Conn. Marker or clip. No. 1,103,031; July 14; Gaz. vol. 204; p. 328.

Carter, John B., Carterville, assignor of one-half to A. Borghi, Herrin, Ill. Mail delivery and receiving apparatus. No. 1,105,181; July 28; Gaz. vol. 204; p. 1161.

Carter, John M., assignor of one-half to A. C. Henry, Memphis, Tenn. Automatic retainer for air-brakes. (Reissue.) No. 13,771; July 14; Gaz. vol. 204; p. 640.

Carver, George W., Charleston, S. C. Mail-box signal. No. 1,102,977; July 7; Gaz. vol. 204; p. 261.

Carvill, Clarence, Clinton, Mass. Shipping-crate. No. 1,105,253; July 28; Gaz. vol. 204; p. 1188.

Cary, Edwin S. (See Gibbs, Earl J., assignor.)

Cary, Julia M., Ridgefield, Conn. Producing color effects and the apparatus therefor. No. 1,104,407; July 21; Gaz. vol. 204; p. 845.

Casey, Merle. (See Baldwin, Chester L., assignor.)

Cash, Ernest W., Hampton Wick, England. Speed-indicator. No. 1,102,319; July 7; Gaz. 204; p. 34.

Caskey, Edgar M., Chicago, Ill., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind. Device for controlling oil-burners. No. 1,102,472; July 7; Gaz. vol. 204; p. 88.

Caskey, Samuel S., assignor to Caskey Valve Company, Philadelphia, Pa. Valve-packing. No. 1,105,254; July 28; Gaz. vol. 204; p. 1188.

Caskey, Samuel S., assignor to Caskey Valve Company, Philadelphia, Pa. Check-valve. No. 1,105,255; July 28; Gaz. vol. 204; p. 1189.

Caskey Valve Company. (See Caskey, Samuel S., assignor.)

Casler, Herman, Canastota, N. Y. Stair-carpet holder. No. 1,103,261; July 14; Gaz. vol. 204; p. 410.

Casler, Herman, Canastota, N. Y. Stair-carpet holder. No. 1,103,262; July 14; Gaz. vol. 204; p. 410.

Casparis, Sylvio, *et al.* (See Mambourg, Leopold, assignor.)

Caspers, George A. and J., assignors of two-thirds to said George A. Caspers and one-third to S. H. Fuchs, New York, N. Y. Cigarette-box opener. No. 1,105,182; July 28; Gaz. vol. 204; p. 1162.

Caspers, John. (See Caspers, George A. and J.)

Cassell, Oscar R., New York, N. Y. Bedstead extension. No. 1,105,487; July 28; Gaz. vol. 204; p. 1272.

Cassella Color Company. (See Herz, Richard, assignor.)

Castel, Maurice, Iron Mountain, Mich. Self-winding clock. No. 1,104,345; July 21; Gaz. vol. 204; p. 824.

Casto, Charles W., assignor of one-half to H. Finkel, Washington, Pa. Box-flap gluing and sealing machine. No. 1,105,256; July 28; Gaz. vol. 204; p. 1189.

Catron, John J., Bonham, Tex. Fluid-dispensing apparatus. No. 1,103,939; July 21; Gaz. vol. 204; p. 685.

Caudell, Uel M., Evansville, Ind. Acetylene-gas generator. No. 1,103,561; July 14; Gaz. vol. 204; p. 511.

Cauffiel, Joseph. (See Koshalko, Charles, assignor.)

Cauvel, Edward H., Oil City, Pa. Trolley-guide. No. 1,104,104; July 21; Gaz. vol. 204; p. 741.

Cavanagh, James, Jr., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting and sewing machine. No. 1,104,875; July 28; Gaz. vol. 204; p. 1057.

Caxton Printers, The. (See Schaub, Jacob, assignor.)

Central Railway Signal Company. (See Clark, Robert M., assignor.)

Central Railway Signal Company. (See Dutcher, Frank, assignor.)

Central Railway Signal Company. (See Edmands, John W., assignor.)

Central Trust Company of New York, trustee. (See Turbayne, William A., assignor.)

Cerney, James J. and J. F., Cleveland, Ohio. Hand-truck. No. 1,102,872; July 7; Gaz. vol. 204; p. 227.

Cerney, Joseph F. (See Cerney, James J. and J. F.)

Chadbourne, Edward M., Tacoma, Wash. Asphaltic pavement. No. 1,103,127; July 14; Gaz. vol. 204; p. 363.

Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)

Chalmers Detroit Motor Company. (See Coffin, Howard E., assignor.)

Chalmers, Ernest, Birmingham, England. Swivel. No. 1,104,408; July 21; Gaz. vol. 204; p. 845.

Chalmers, Robert. (See Gibb, Menzies, and Chalmers.)

Chambers, Cyrus W. and W. H., Cedar Rapids, Iowa. Adjustable silo-roof. No. 1,105,402; July 28; Gaz. vol. 204; p. 1243.

Chambers, Robert A., St. Elmo, Tenn. Concrete fence-post. No. 1,104,626; July 21; Gaz. vol. 204; p. 922.

Chambers, William H. (See Chambers, Cyrus W. and W. H.)

Champion, Matthew, assignor to The Champion Rivet Company, Cleveland, Ohio. Machine for heading bolts and rivets. No. 1,103,659; July 14; Gaz. vol. 204; p. 549.

Champion Rivet Company. (See Champion, Matthew, assignor.)

Chapel, George H., Howell, Mich. Eyeglasses. No. 1,104,034; July 21; Gaz. vol. 204; p. 717.

Chapman, Eunice E., Petersburg, Tenn. Churn. No. 1,104,627; July 21; Gaz. vol. 204; p. 922.

Chapman, Frank S., assignor to The National Electric Specialty Company, Toledo, Ohio. Vacuum lightning-arrester. No. 1,104,959; July 28; Gaz. vol. 204; p. 1086.

Chapman, Frank S., assignor to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,104,960; July 28; Gaz. vol. 204; p. 1087.

Chapman, George A., assignor to Minerals Separation, Limited, London, England. Ore concentration. No. 1,102,874; July 7; Gaz. vol. 204; p. 227.

Chapman, George A., and S. Tucker, assignors to Minerals Separation, Limited, London, England. Ore concentration. No. 1,102,873; July 7; Gaz. vol. 204; p. 227.

Chapman, George H., Harristown, near Port Pirie, South Australia, Australia. Trap-nest for poultry. No. 1,105,403; July 28; Gaz. vol. 204; p. 1243.

Chapman, Matthew T., assignor to The American Well Works, Aurora, Ill. Well-sinking apparatus. No. 1,104,409; July 21; Gaz. vol. 204; p. 846.

Chapman, Paul H., and H. M. Pingen, assignors to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,104,961; July 28; Gaz. vol. 204; p. 1087.

Chapman, William L., New York, N. Y. Fountain-pen. No. 1,103,349; July 14; Gaz. vol. 204; p. 440.

Chappell, Marvin L., Berkeley, Cal. Acid-proof packing material. No. 1,102,473; July 7; Gaz. vol. 204; p. 88.

Charles, Merrill S., Los Angeles, Cal. Removable attachment for compensating malarticulation of teeth. No. 1,104,290; July 21; Gaz. vol. 204; p. 805.

Charleston S. C. Mining & Manufacturing Company. (See Wright, Robert H., assignor.)

Charlton, Demetrius F., Marquette, Mich. Photographic-dark-room lamp. No. 1,104,245; July 21; Gaz. vol. 204; p. 789.

Chase Rolling Mill Co. (See Parish, Ralph R., assignor.)

Chattaway, Arthur, *et al.* (See Bondascha, Charles W., assignor.)

Chattaway, C. Leonard, *et al.* (See Bondascha, Charles W., assignor.)

Chautems, Jean. (See Cantoni, Chautems, and Degrange.)

Chavez, Candido, Mexico, Mexico. Making substitutes for animal wool. No. 1,104,105; July 21; Gaz. vol. 204; p. 741.

Chedeville, Maurice J. A., Paris, France. Bridle. No. 1,102,474; July 7; Gaz. vol. 204; p. 89.

Chellew, Clarence R., Peoria, Ill. Fastener for receptacle-covers. No. 1,104,035; July 21; Gaz. vol. 204; p. 717.

Chemisch-Metallurgische Industrie Gesellschaft mit beschränkter Haftung. (See Mayer and Havas, assignors.)

Chemische Fabrik Griesheim Elektron. (See Singer and Milarch, assignors.)

Chemische Fabrik Troisdorf, Dr. Hülsberg & Seiler. (See Jarrijou, Juan D., assignor.)

Chernack, Abel E., Providence, R. I. Let-off for looms. No. 1,105,587; July 28; Gaz. vol. 204; p. 1306.

Chernack, Abel E., Providence, R. I. Let-off for looms. No. 1,105,588; July 28; Gaz. vol. 204; p. 1307.

Cheting, Chung, San Francisco, Cal. Shrimp-net. No. 1,103,173; July 14; Gaz. vol. 204; p. 379.

Chevrolet, Louis. (See Boischevalier, Henri de, assignor.)

Chi-Ill-Electric Company. (See Nilsson, Emil B., assignor.)

Chicago Carton Company. (See Richardson, Ralph R., assignor.)

Chicago-Cleveland Car Roofing Company. (See Russell, Thomas N., assignor.)

Chicago Railway Equipment Company. (See Harrison, Philip B., assignor.)
Chicago Varnish Company. (See Gustave F., assignor.)
Chidley, Joseph, Cleveland, Ohio, assignor to L. Parish, New York, N. Y. Lookout device for windows and the like. No. 1,102,320; July 7; Gaz. vol. 204; p. 34.
Childress, Clarence P., Schuyler, Nebr. Fly-killing device. No. 1,103,032; July 14; Gaz. vol. 204; p. 329.
Chittenden, George B., Chilito, Ariz. Extracting copper. No. 1,104,410; July 21; Gaz. vol. 204; p. 846.
Chopin, Alexis. (See Blondel and Chopin.)
Choralcelo Manufacturing Company. (See Severy and Sinclair, assignors.)
Christensen, Hans, Seattle, Wash. Telephone-indicator. No. 1,102,719; July 7; Gaz. vol. 204; p. 173.
Christie, Evi W., Sewaren, assignor to Wheeler Condenser and Engineering Company, Carteret, N. J. Surface condenser. No. 1,105,320; July 28; Gaz. vol. 204; p. 1212.
Chrystal, Louis. (See Sissis, Bernhard, assignor.)
Church, William L., Newton Center, assignor to Amburgen Company, Boston, Mass. Protective coating for metallic members. No. 1,104,346; July 21; Gaz. vol. 204; p. 825.
Church, William L., New York, N. Y., assignor to Amburgen Company, Boston, Mass. Reinforced concrete construction. (Reissue.) No. 13,775; July 21; Gaz. vol. 204; p. 968.
Churning, Edward C. (See McFarland and Churning.)
Cilley, Leon L., and S. J. Brion, Addison, N. Y. Hasp-hook. No. 1,102,720; July 7; Gaz. vol. 204; p. 174.
Cincinnati Grinder Company, The. (See Kimmel, George C., assignor.)
Clarage, Edson D., Cleveland, Ohio. Lock for clutch-pedals. No. 1,102,875; July 7; Gaz. vol. 204; p. 228.
Clare, Charles E., assignor to Sharp & Smith, Chicago, Ill. Urinal. No. 1,105,488; July 28; Gaz. vol. 204; p. 1272.
Clark, Asa C., *et al.* (See Cobb, Luther, assignor.)
Clark, Claude D., New York, N. Y. Barrel-making machine. No. 1,103,562; July 14; Gaz. vol. 204; p. 512.
Clark, Edwin W., Chicago, Ill. Pump. No. 1,104,962; July 28; Gaz. vol. 204; p. 1087.
Clark, Elmer, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio. Housing. No. 1,104,876; July 28; Gaz. vol. 204; p. 1058.
Clark, Ernest G., De Kalb, assignor to Melville Clark Piano Company, Chicago, Ill. Range-extending device for pneumatic piano-player action. No. 1,104,164; July 21; Gaz. vol. 204; p. 762.
Clark, Francis L., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Fluid-pressure brake. No. 1,104,775; July 28; Gaz. vol. 204; p. 1022.
Clark, Frank H., New York, N. Y., and G. R. Smith, Portsmouth, Va. Feed-water heater for locomotives. No. 1,104,776; July 28; Gaz. vol. 204; p. 1023.
Clark, George E., assignor to George P. Clark Company, Windsor Locks, Conn. Elevating-truck. No. 1,102,876; July 7; Gaz. vol. 204; p. 228.
Clark, John P. (See Conger, Charles A., assignor.)
Clark, John W., Jr., Salt Lake City, Utah. Railway-tie. No. 1,105,023; July 28; Gaz. vol. 204; p. 1107.
Clark, Joseph C., San Angelo, Tex. Lawn-mower. No. 1,104,291; July 21; Gaz. vol. 204; p. 805.
Clark, Norris E., Plainville, Conn. Metal fabric. No. 1,104,475; July 21; Gaz. vol. 204; p. 869.
Clark, Norris E., Plainville, Conn. Metal fabric. No. 1,104,476; July 21; Gaz. vol. 204; p. 869.
Clark, Norris E., Plainville, Conn. Metal-working. No. 1,104,477; July 21; Gaz. vol. 204; p. 870.
Clark, Norris E., Plainville, Conn., assignor to The National Metal Fabric Company, New York, N. Y. Apparatus for manufacturing expanded metal. No. 1,103,033; July 14; Gaz. vol. 204; p. 329.
Clark, Norris E., Plainville, Conn., assignor to The National Metal Fabric Company, New York, N. Y. Machine for making expanded metal. No. 1,103,034; July 14; Gaz. vol. 204; p. 329.
Clark, Peter T., Roxbury, Mass. Cover for beer-cases and the like. No. 1,102,877; July 7; Gaz. vol. 204; p. 228.
Clark, Robert M., Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Fuse-cap. No. 1,103,263; July 14; Gaz. vol. 204; p. 410.
Clark, Roswell M., Kansas City, Mo. Spring-wheel. No. 1,103,563; July 14; Gaz. vol. 204; p. 512.
Clark, Thomas E., Detroit, Mich. Automatic wireless train-control apparatus. No. 1,104,165; July 21; Gaz. vol. 204; p. 762.
Clark, Walter R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Controlling mechanism for hydraulic presses and the like. No. 1,103,035; July 14; Gaz. vol. 204; p. 329.
Clark, Walter R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Controlling mechanism for hydraulic presses and the like. No. 1,103,036; July 14; Gaz. vol. 204; p. 330.
Clark, Walter R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Controlling mechanism for hydraulic presses and the like. No. 1,103,037; July 14; Gaz. vol. 204; p. 330.
Clark, William E., *et al.* (See Cobb, Luther, assignor.)
Clarke, Fisher R., Stockton, Cal. Bag-fastener. No. 1,103,264; July 14; Gaz. vol. 204; p. 411.
Clarke, Harry O., Pasadena, Cal. Hand concrete-mixer. No. 1,103,484; July 14; Gaz. vol. 204; p. 484.
Clarke, Matthew, Wilkes-Barre, Pa. Square. No. 1,103,564; July 14; Gaz. vol. 204; p. 513.
Clarke, Nelson H., Cincinnati, Ohio. Illusion apparatus. No. 1,103,485; July 14; Gaz. vol. 204; p. 484.
Clarke, William E., Toronto, Ontario, Canada. Inking-pad. No. 1,102,721; July 7; Gaz. vol. 204; p. 174.
Claussen, Walter E., New York, N. Y. Machine for making receptacles. No. 1,103,940; July 21; Gaz. vol. 204; p. 685.
Clautice, George J., assignor to Lyon Conklin & Company, Baltimore, Md. Self-heating soldering-iron. No. 1,102,997; July 7; Gaz. vol. 204; p. 267.
Clayton, Charles P., Shreveport, La. Well-packer. No. 1,104,877; July 28; Gaz. vol. 204; p. 1058.
Cleaveland, George A., Jr. (See Allen and Cleaveland.)
Clemens, August, Alliance, Ohio. Load-holding device for hoists and the like. No. 1,103,038; July 14; Gaz. vol. 204; p. 331.
Clement, Edward E. (See Cadell, John F., assignor.)
Clement, Edward E., Washington, D. C. Establishing variable conductive paths for electrical communication. No. 1,103,898; July 14; Gaz. vol. 204; p. 630.
Clement, Edward E., Washington, D. C. Electrical contact. No. 1,105,489; July 28; Gaz. vol. 204; p. 1273.
Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,105,490; July 28; Gaz. vol. 204; p. 1273.
Clement, Edward E., Washington, D. C. Electrical selective switch. No. 1,105,491; July 28; Gaz. vol. 204; p. 1273.
Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,105,492; July 28; Gaz. vol. 204; p. 1274.
Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,105,545; July 28; Gaz. vol. 204; p. 1292.
Clement, Edward E., Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y. Telephone-exchange system. (Reissue.) No. 13,776; July 21; Gaz. vol. 204; p. 969.
Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,105,589; July 28; Gaz. vol. 204; p. 1307.
Clément, Joséphine, and V. Loiselet, Liege, Belgium. Automatic pistol. No. 1,105,404; July 28; Gaz. vol. 204; p. 1243.
Clement Talbot Limited *et al.* (See Brown, George W. A., assignor.)
Cléret, Albert, Paris, France. Resilient wheel. No. 1,105,321; July 28; Gaz. vol. 204; p. 1213.
Cleveland, Benjamin L., East Chattanooga, Tenn. Tie-plate. No. 1,102,244; July 7; Gaz. vol. 204; p. 8.
Cleveland, George H., Waco, Tex. Scrip-holder. No. 1,103,739; July 14; Gaz. vol. 204; p. 576.
Clip Bar Manufacturing Company. (See Davis, Anthony E., assignor.)
Cloud, William H., Twin Falls, Idaho. Stove-lid. No. 1,103,565; July 14; Gaz. vol. 204; p. 513.
Clyde Iron Works. (See Bjorge, Oscar B., assignor.)
Coan, John, Kansas City, Mo. Tire-armor. No. 1,103,396; July 14; Gaz. vol. 204; p. 453.
Coanda, Henri, Paris, France. Propeller. No. 1,104,963; July 28; Gaz. vol. 204; p. 1088.
Coates, Alice, Hamilton, New Zealand. Hat-pin guard. No. 1,103,899; July 14; Gaz. vol. 204; p. 630.
Coatta, James E., Oswego, N. Y. Musical-chime support. No. 1,102,388; July 7; Gaz. vol. 204; p. 58.
Cobb, Elmer M., South Portland, assignor to Southworth Machine Company, Portland, Me. Autogrip form-truck. No. 1,103,486; July 14; Gaz. vol. 204; p. 484.
Cobb, George B., Jr., assignor to Vesta Manufacturing Co., Philadelphia, Pa. Gas-burner. No. 1,103,566; July 14; Gaz. vol. 204; p. 513.
Cobb, Henry Z., Winchester, Mass., assignor to Revere Rubber Company. Braided fabric for hose. No. 1,104,777; July 28; Gaz. vol. 204; p. 1023.
Cobb, Henry Z., Winchester, Mass., assignor to Revere Rubber Company. Braided fabric for hose. No. 1,104,778; July 28; Gaz. vol. 204; p. 1023.
Cobb, Luther, assignor to J. D. Martin, Bedford, Ind. Carbureter. No. 1,102,722; July 7; Gaz. vol. 204; p. 174.
Cobb, Luther, Oolitic, assignor of one-fourth to W. E. Clark, one-fourth to A. C. Clark, and one-half to C. Todd, Lawrence county, Ind. Cable hoist. No. 1,104,964; July 28; Gaz. vol. 204; p. 1088.
Coburn, Watson S., *et al.* (See Smith, Jay F., assignor.)
Cocanari, Silvio, Vieux-Dieu, Belgium. Colored kinematographic film. No. 1,102,878; July 7; Gaz. vol. 204; p. 228.
Cochaud, Jules, Zurich, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Air-compressor system for oil-engines. No. 1,102,321; July 7; Gaz. vol. 204; p. 35.
Cochran, Edward A., assignor of one-fourth to J. Steiner, San Francisco, Cal. Equalizing unlock and impulse action escapement. No. 1,105,062; July 28; Gaz. vol. 204; p. 1122.
Cochran, John J., St. Louis, Mo. Means for creating and supplying explosive mixture to explosive-engines. No. 1,102,475; July 7; Gaz. vol. 204; p. 89.
Cochran, Joseph E., assignor to S. W. and J. T. Cochran, Elkhart, Ind. Internal-combustion engine. No. 1,103,487; July 14; Gaz. vol. 204; p. 485.

Cochran, Joseph E., assignor to S. W. and J. T. Cochran, Elkhart, Ind. Internal-combustion engine. No. 1,103,488; July 14; Gaz. vol. 204; p. 485.
Cochran, Joseph T., *et al.* (See Cochran, Joseph E., assignor.)
Cochran, Robert B., Washington, N. J., assignor to Morgans & Wilcox Mfg. Company, Middletown, N. Y. Knife-grinder. No. 1,103,941; July 21; Gaz. vol. 204; p. 686.
Cochran, Stuart W., *et al.* (See Cochran, Joseph E., assignor.)
Cockshaw, Herbert, New York, N. Y. Chain. No. 1,102,645; July 7; Gaz. vol. 204; p. 150.
Coddington, Edwin D., North Milwaukee, Wis. Backing for cement-coated walls. No. 1,103,174; July 14; Gaz. vol. 204; p. 380.
Coffelder, Thomas N., Detroit, Mich. Tube-flanging machine. No. 1,104,166; July 21; Gaz. vol. 204; p. 763.
Coffield, James L. (See Coffield, Peter T. and J. L.)
Coffield, James L., assignor to The Coffield Motor Washer Company, Dayton, Ohio. Mounting of dolly-wheels and dashers. No. 1,105,546; July 28; Gaz. vol. 204; p. 1292.
Coffield Motor Washer Company, The. (See Coffield, James L., assignor.)
Coffield Motor Washer Company, The. (See Coffield, Peter T. and J. L., assignors.)
Coffield, Peter T. and J. L., assignors to The Coffield Motor Washer Company, Dayton, Ohio. Sanitary drinking-cup. No. 1,105,547; July 28; Gaz. vol. 204; p. 1292.
Coffin, Francis P., Schenectady, N. Y., assignor to General Electric Company. Low-pressure steam-generator. No. 1,105,405; July 28; Gaz. vol. 204; p. 1243.
Coffin, Howard E., assignor to Chalmers Detroit Motor Company, Detroit, Mich. Clutch and brake control for motor-vehicles. No. 1,105,548; July 28; Gaz. vol. 204; p. 1293.
Coffin, Walter E., assignor to The National Malleable Castings Company, Cleveland, Ohio. Draft-gear. No. 1,105,063; July 28; Gaz. vol. 204; p. 1122.
Cogan, Henry. (See Keller and Cogan.)
Cohen, Frank W. (See Yates and Cohen.)
Cohen, Morris J., South Hampstead, London, England. Necktie. No. 1,104,411; July 21; Gaz. vol. 204; p. 846.
Cohn, Gerson. (See Jones, Edward S., assignor.)
Coin, James W. (See Buckley and Coin.)
Colardeau, Louis J. E., and J. Richard, Paris, France. Automatic device for controlling the operation of photographic apparatus. No. 1,104,412; July 21; Gaz. vol. 204; p. 847.
Colby, Alson B., assignor to Electric Security Company, Portland, Oreg. Alarm for protecting permutation-locks. No. 1,102,571; July 7; Gaz. vol. 204; p. 123.
Cole, Charles F., and Q. Carr, Huntington, W. Va. Gas-burner. No. 1,103,397; July 14; Gaz. vol. 204; p. 454.
Cole, Clark M., Erie, Pa. Ice-creeper. No. 1,102,646; July 7; Gaz. vol. 204; p. 150.
Cole, Emory W., Wharton, Tex. Spark-plug. No. 1,105,064; July 28; Gaz. vol. 204; p. 1122.
Cole, Eugene M., Charlotte, N. C. Agitating-disk for planters. No. 1,104,246; July 21; Gaz. vol. 204; p. 789.
Cole, Eugene M., Charlotte, N. C. Agitator and feeder for fertilizer-distributers. No. 1,104,247; July 21; Gaz. vol. 204; p. 790.
Coleman, Clyde J., New Rochelle, assignor to C. Hubert, New York, N. Y. Engine-starter. No. 1,102,322; July 7; Gaz. vol. 204; p. 35.
Coleman, Clyde J., New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation. Refrigerating apparatus. No. 1,102,998; July 7; Gaz. vol. 204; p. 268.
Coleman, Clyde J., New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation. Refrigerating apparatus. No. 1,102,999; July 7; Gaz. vol. 204; p. 268.
Coles, Walter H., Troy, Ohio. Nozzle. No. 1,104,965; July 28; Gaz. vol. 204; p. 1088.
Coley, John A., assignor to M. E. Coley, Somerville, N. J. Feather-fabric machine. No. 1,104,628; July 21; Gaz. vol. 204; p. 923.
Coley, Mabel E. (See Coley, John A., assignor.)
Collett, Henry A. (See Wernet and Collett.)
Collins, Charles H., Albany, N. Y. Tapestry-carpet-setting frame. No. 1,103,128; July 14; Gaz. vol. 204; p. 363.
Collins, Cornelius, Burlingame, Cal. Lath-fastener. No. 1,105,183; July 28; Gaz. vol. 204; p. 1162.
Collins, Roderick G., Jr., New York, N. Y. Pneumatic despatch system. No. 1,102,323; July 7; Gaz. vol. 204; p. 36.
Collins, Roderick G., Jr., New York, N. Y. Terminal for pneumatic-despatch apparatus. No. 1,102,324; July 7; Gaz. vol. 204; p. 36.
Collins, Simon C., Falmouth, Pa. Rail-fastener. No. 1,103,129; July 14; Gaz. vol. 204; p. 363.
Collins, Simon M., Pueblo, Colo. Level. No. 1,105,493; July 28; Gaz. vol. 204; p. 1274.
Collins, William E., Cambridge, N. Y. Box-fastener. No. 1,105,024; July 28; Gaz. vol. 204; p. 1108.
Collins, William P., Boston, Mass. Rotary brake mechanism. No. 1,102,325; July 7; Gaz. vol. 204; p. 37.
Collins, Willis E., Asheville, N. C. Treating cereals. No. 1,103,660; July 14; Gaz. vol. 204; p. 549.
Collis, Edwin H. (See Nielsen, Peter C., assignor.)
Colman, Howard D., assignor to Barber-Colman Company, Rockford, Ill. Winder. No. 1,105,065; July 28; Gaz. vol. 204; p. 1123.
Colonial Trust Company, The, trustee. (See Dow, Herbert H., assignor.)
Colonial Trust Company, The, trustee. (See Kasley, Alexander T., assignor.)
Colt, Le Baron C., Bristol, R. I. Sole-rolling machine. No. 1,102,389; July 7; Gaz. vol. 204; p. 59.
Columbia-Knickerbocker Trust Company, trustee. (See Oakley and Pentecost, assignors.)
Columbia Nut and Bolt Company. (See Meredith-Jones, Hubert, assignor.)
Comee, Joseph F., assignor to Camel Company, Chicago, Ill. Car-door mechanism. No. 1,105,257; July 28; Gaz. vol. 204; p. 1189.
Comer, John J., Santa Monica, Cal., assignor, by mesne assignments, to The Webb Talking Picture Company. Telephonic transmitter. No. 1,105,066; July 28; Gaz. vol. 204; p. 1123.
Commercial Camera Company. (See Greene, John S., assignor.)
Company Plugge & Holtfort. (See Sebastian, Eugen, assignor.)
Concie, William R., Spokane, Wash. Key-fastening device. No. 1,104,106; July 21; Gaz. vol. 204; p. 742.
Condensite Company of America. (See Aylsworth, Jonas W., assignor.)
Conger, Charles A., Oakland, Cal. Closure for condiment-holders and the like. No. 1,102,879; July 7; Gaz. vol. 204; p. 229.
Conger, Charles A., Oakland, assignor of one-half to J. P. Clark, Alameda, Cal. Salt and pepper shaker. No. 1,102,978; July 7; Gaz. vol. 204; p. 261.
Conner, Leslie O., and G. R. Hale, Narrows, Va. Artificial leg. No. 1,104,413; July 21; Gaz. vol. 204; p. 847.
Connerton, Michael J., Danville, Ky. Switch-chair. No. 1,104,629; July 21; Gaz. vol. 204; p. 923.
Connet, Frederick N., Providence, R. I. Speed-changing device. No. 1,103,923; July 14; Gaz. vol. 204; p. 638.
Connet, Frederick N., assignor to Builders Iron Foundry, Providence, R. I. Integrating and recording apparatus for meters. No. 1,102,723; July 7; Gaz. vol. 204; p. 174.
Connor, George W., Bear Wallow, assignor of one-half to A. H. Sims, Shelby, and one-half to R. P. Robinson, Forest City, N. C. Tilling-machine. No. 1,102,979; July 7; Gaz. vol. 204; p. 261.
Connor, M. W. (See Hilliard, James M., assignor.)
Conover, Harvey, Evanston, Ill., assignor to Thos. Cusack Company. Box. No. 1,103,489; July 14; Gaz. vol. 204; p. 486.
Conrow, Arthur, trustee. (See Stone, Wilbur M., assignor.)
Constable, Albert, trustee. (See Farrell, Thomas J., assignor.)
Continental Can Company. (See Abrams and Warme, assignors.)
Continental & Commercial Trust & Savings Bank, trustee. (See Miehle, Robert, assignor.)
Continental Motion Picture Company. (See Smith, Magnus, assignor.)
Cook and Co. (See Vöster and Jungbauer, assignors.)
Cook, Frank T., Miami, Okla. Drill attachment. No. 1,105,406; July 28; Gaz. vol. 204; p. 1244.
Cook, Thomas W. G. (See Ludlow and Cook.)
Cooke, Samuel B. (See Crouch and Cooke.)
Cookson, Charles L., Kansas City, Mo. Valve mechanism for gas-engines. No. 1,105,125; July 28; Gaz. vol. 204; p. 1142.
Cooley, Franklin S., Brookline, Mass. Cigar and making same. No. 1,104,779; July 28; Gaz. vol. 204; p. 1024.
Coombs, Abram L., Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Tip-measurer for pulling-over machines. No. 1,104,878; July 28; Gaz. vol. 204; p. 1058.
Cooper, Benson P., Ithaca, N. Y. Wheel. No. 1,103,398; July 14; Gaz. vol. 204; p. 454.
Cooper, Benson P., Ithaca, N. Y. Wheel. No. 1,103,399; July 14; Gaz. vol. 204; p. 454.
Cooper, Daniel M., Rochester, N. Y., assignor, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio. Stop mechanism for machinery. No. 1,102,880; July 7; Gaz. vol. 204; p. 229.
Cooper, Daniel M., Rochester, N. Y., assignor, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio. Stop mechanism for machinery. No. 1,103,867; July 14; Gaz. vol. 204; p. 619.
Cooper, Robert E. (See Hughes, George L., assignor.)
Cooper, William, Denver, Colo. Preparing ore-dust for smelting. No. 1,103,400; July 14; Gaz. vol. 204; p. 455.
Cooper, William, Denver, Colo. Ammunition. No. 1,103,740; July 14; Gaz. vol. 204; p. 576.
Coover, Amos J., Seattle, Wash. Stump-burner. No. 1,104,780; July 28; Gaz. vol. 204; p. 1024.
Copeland, Elisha S., Bethune, S. C. Land-marker. No. 1,104,630; July 21; Gaz. vol. 204; p. 923.
Copeman Electric Stove Company. (See Copeman, Lloyd G., assignor.)
Copeman Electric Stove Company. (See Wiltsie, Spencer A., assignor.)

Copeman, Lloyd G., assignor to Copeman Electric Stove Company, Flint, Mich. Time-operating mechanism for electric switches. No. 1,104,781; July 28; Gaz. vol. 204; p. 1024.

Corbin, Horace, assignor of one-half to J. C. Halm, Jr., Toledo, Ohio. Aeroplane. No. 1,104,347. July 21; Gaz. vol. 204; p. 825.

Corcoran, Cornelius B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,103,900; July 14; Gaz. vol. 204; p. 630.

Corcoran, Cornelius B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,105,184; July 28; Gaz. vol. 204; p. 1163.

Cordier, Louis, Newark, N. J. Micrometer-head. No. 1,105,549; July 28; Gaz. vol. 204; p. 1293.

Cordray, James M., Los Angeles, Cal. Rain-maker. No. 1,103,490; July 14; Gaz. vol. 204; p. 486.

Corff, Edward, Chicago, Ill. Gage. No. 1,103,265; July 14; Gaz. vol. 204; p. 411.

Corkery, John, Rockdale, New South Wales, Australia. Automatic coupling. No. 1,102,245; July 7; Gaz. vol. 204; p. 8.

Corkhill, Charles S., Ontario, Cal. Cultivator. No. 1,103,350; July 14; Gaz. vol. 204; p. 440.

Cormier, Reuben S., New Bedford, Mass. Picture-hanger. No. 1,103,491; July 14; Gaz. vol. 204; p. 486.

Cornelius, Louis A., Grand Rapids, Mich. Faucet-guard. No. 1,105,258; July 28; Gaz. vol. 204; p. 1190.

Cornwall, John B., assignor to Barnard & Leas Manufacturing Company, Moline, Ill. Grain-scourer. No. 1,104,631; July 21; Gaz. vol. 204; p. 924.

Corona Manufacturing Co. (See Harris, Edward E., assignor.)

Corwin, Elmer R., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephone system. No. 1,105,344; July 28; Gaz. vol. 204; p. 1221.

Corwin, Elmer R., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,105,345; July 28; Gaz. vol. 204; p. 1221.

Corwin, Thomas P., Kenton, Ohio. Hay-loader. No. 1,103,942; July 21; Gaz. vol. 204; p. 686.

Cory, Loretto, Shelbyville, Ind. Game apparatus. No. 1,102,724; July 7; Gaz. vol. 204; p. 175.

Cory, Wilbur G., New York, N. Y., assignor to Standard Motor Truck Company, Pittsburgh, Pa. Double-folding car-step. No. 1,103,008; July 7; Gaz. vol. 204; p. 273.

Cottini, Girolamo. (See Cottini, Guilelmo and G.)

Cottini, Guilelmo, Springfield, and G. Cottini, Holyoke, Mass. Toilet-paper package. No. 1,104,414; July 21; Gaz. vol. 204; p. 847.

Cottini, Guilelmo, Springfield, and G. Cottini, Holyoke, Mass. Toilet-paper machine. No. 1,104,415; July 21; Gaz. vol. 204; p. 848.

Cotton Gathering Corporation. (See O'Shaughnessy, James F., assignor.)

Cotton Machinery Company. (See Brown and Westlin, assignors.)

Cotton, William H., Salem, N. Y. Thermo poultry-fountain. No. 1,102,572; July 7; Gaz. vol. 204; p. 124.

Coughlin, Michael F., Stoughton, assignor to F. H. Kennard, Newton Center, Mass. Varnish and making same. No. 1,103,266; July 14; Gaz. vol. 204; p. 411.

Coughlin, Michael F., Stoughton, assignor to F. H. Kennard, Newton Center, Mass. Composition containing sulfite-waste and shellac. No. 1,103,267; July 14; Gaz. vol. 204; p. 411.

Coulombe, Ignace, Fall River, Mass. Loom attachment. No. 1,103,661; July 14; Gaz. vol. 204; p. 549.

Coupel, Elphege J. B., Morgan City, La. Dough-raiser. No. 1,103,268; July 14; Gaz. vol. 204; p. 412.

Coups, Charles A., Belleville, N. J. Wire-cloth for use on paper-making machines. No. 1,103,943; July 21; Gaz. vol. 204; p. 687.

Courson, John F., Pitcairn, Pa. Draft-gear. No. 1,105,185; July 28; Gaz. vol. 204; p. 1163.

Courson, Oliver H., Memphis, Tenn. Combined rail-brace and tie-plate. No. 1,102,725; July 7; Gaz. vol. 204; p. 175.

Coverdill, Joseph H., Indianapolis, Ind. Plastering-machine. No. 1,103,269; July 14; Gaz. vol. 204; p. 412.

Covert, Fred W., assignor to Covert Manufacturing Company, Watervliet, N. Y. Flame-fastener. No. 1,102,476; July 7; Gaz. vol. 204; p. 89.

Covert Manufacturing Company. (See Covert, Fred W., assignor.)

Cowell, Marcus R., Minneapolis, Minn. Coupling for traction-engines. No. 1,103,868; July 14; Gaz. vol. 204; p. 619.

Cowen, Max, New York, N. Y. Riding-habit. No. 1,104,632; July 21; Gaz. vol. 204; p. 924.

Cowles, Edward P., Sparta, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,103,567; July 14; Gaz. vol. 204; p. 514.

Cowperthwaite, William T., Mount Eden, Auckland, New Zealand. Silent flushing apparatus. No. 1,104,292; July 21; Gaz. vol. 204; p. 805.

Cox, Albert M., Mattie, S. C. Ground cutter and pulverizer. No. 1,103,741; July 14; Gaz. vol. 204; p. 576.

Cox, Charles A., McLeansboro, Ill. Fastener for barrel-heads. No. 1,103,401; July 14; Gaz. vol. 204; p. 455.

Cox, John L., Kenora, Ontario, Canada. Oil-stove. No. 1,104,966; July 28; Gaz. vol. 204; p. 1089.

Cox Multi-Mailer Company. (See Cox, Sandford C., assignor.)

Cox Multi-Mailer Company. (See Tomlinson, Joseph, assignor.)

Cox, Sandford C., Edison Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Addressing-machine. No. 1,104,967; July 28; Gaz. vol. 204; p. 1089.

Cox, Sandford C., Edison Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Addressing-machine. No. 1,105,322; July 28; Gaz. vol. 204; p. 1213.

Cox, Sandford C., Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., and New York, N. Y. Addressing-machine. No. 1,105,323; July 28; Gaz. vol. 204; p. 1213.

Cox, W. F. (See Brown, James A., assignor.)

Coyle, Andrew M., New York, N. Y., assignor, by mesne assignments, to Gurney Electric Elevator Company, Honesdale, Pa. Elevator safety device. No. 1,102,246; July 7; Gaz. vol. 204; p. 9.

Coyle, Andrew M., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Elevator-door lock. No. 1,102,477; July 7; Gaz. vol. 204; p. 90.

Craft, John D., Evansville, Ind. Vehicle-tire. No. 1,103,568; July 14; Gaz. vol. 204; p. 514.

Craig, Alexander W., *et al.* (See Brooks, Harry, assignor.)

Craig, John F., Longbeach, Cal. Dredge. No. 1,104,248; July 21; Gaz. vol. 204; p. 790.

Craig, Robert M., Paterson, N. J. Composition for finishing walls. No. 1,104,782; July 28; Gaz. vol. 204; p. 1024.

Craig, William B., Martinsville, Ill. Rotary power mechanism. No. 1,102,247; July 7; Gaz. vol. 204; p. 9.

Crane Company. (See Doolittle, William W., assignor.)

Crawford McGregor and Canby Co., The. (See Eastman, Earnest A., assignor.)

Crecelius, Theodore E. (See Feldmann and Crecelius.)

Creighton, Nelson B., New York, N. Y. Valve. No. 1,103,944; July 21; Gaz. vol. 204; p. 687.

Crepeau, Ovid, South Bend, Ind. Rasp for clover-hullers and the like. No. 1,102,980; July 7; Gaz. vol. 204; p. 262.

Cressy, Walter, Gloucester, Mass. Spraying apparatus. No. 1,104,633; July 21; Gaz. vol. 204; p. 924.

Crisp, Thomas, Jayton, Tex. Water-wheel. No. 1,104,167; July 21; Gaz. vol. 204; p. 763.

Crocker-Wheeler Company. (See Dunn, Gano, assignor.)

Crompton & Knowles Loom Works. (See Whitmore, Fred A., assignor.)

Cronholm, Frederick N., Sunnyside, Wash. Mold for concrete pipe. No. 1,103,270; July 14; Gaz. vol. 204; p. 412.

Crothers, Noble E., Chicago, Ill. Internal-combustion engine. No. 1,104,968; July 28; Gaz. vol. 204; p. 1089.

Crouch, Frank J., and S. B. Cooke, Portland, Oreg. Swinging leg for beds. No. 1,104,249; July 21; Gaz. vol. 204; p. 790.

Crouse, David E., C. G. Eldson, Annapolis, Md., and T. Davis, Wilkinsburg, Pa., assignors to The Auto Air Appliance Company, Baltimore, Md. Combined air compressor and motor. No. 1,105,494; July 28; Gaz. vol. 204; p. 1274.

Crowder, Clarence A., Burlington, Iowa. Gaseous-fuel heater. No. 1,102,478; July 7; Gaz. vol. 204; p. 90.

Crowl, Charles. (See Ward and Crowl.)

Crown Hardware Manufacturing Company, The. (See Hartzell, Forest H., assignor.)

Crown, Jacob P., Redwood City, Cal. Safety-sleeve for hinges and the like. No. 1,105,186; July 28; Gaz. vol. 204; p. 1164.

Crozer, James G., Cedar Rapids, Iowa. Reversible self-cleaning rake. No. 1,105,495; July 28; Gaz. vol. 204; p. 1275.

Crump, Minnie, Pineville, Ky. Cake-mixer. No. 1,103,271; July 14; Gaz. vol. 204; p. 413.

Cubberley, William P. (See Reeves, Clifton, assignor.)

Cudell, Frank E., Cleveland, Ohio. Means for pouring metal into core-molds. No. 1,103,039; July 14; Gaz. vol. 204; p. 331.

Cummiskey, William M. (See Gurney and Cummiskey.)

Cunningham, James, Riverton, N. J., and W. H. Horner, New York, N. Y., assignors to American Telephone and Telegraph Company, Boston, Mass. Connection for collcases and cables. No. 1,103,130; July 14; Gaz. vol. 204; p. 364.

Curd, Frederick W. (See Picken, Archibald, assignor.)

Curley, Robert S., and J. Moss, Newton, assignors to Saco-Lowell Shops, Boston, Mass. Evener. No. 1,102,726; July 7; Gaz. vol. 204; p. 176.

Curragh, John M. (See Budlong, Frank M., assignor.)

Currie, Alfred, Delhi, N. Y. Ice-cutting machine. No. 1,104,634; July 21; Gaz. vol. 204; p. 925.

Curtis, Frank G., Milwaukee, Wis. Knitted collar for vests and coats. No. 1,105,407; July 28; Gaz. vol. 204; p. 1244.

Curtiss, Clarence E., assignor of two-thirds to R. B. Kellogg, Grand Rapids, Mich. Hydraulic clutch. No. 1,104,168; July 21; Gaz. vol. 204; p. 763.

Curtiss, Glenn H., Hammondsport, N. Y. Flying-machine. No. 1,104,036; July 21; Gaz. vol. 204; p. 717.

Custer, Edgar A., assignor to The Custer Sandless Casting Company, Philadelphia, Pa. Casting iron in permanent molds. No. 1,104,037; July 21; Gaz. vol. 204; p. 718.

Custer, Merlin E., Carbonado, Wash. Automatic starting-box. No. 1,103,662; July 14; Gaz. vol. 204; p. 550.

Custer Sandless Casting Company, The. (See Custer, Edgar A., assignor.)

Custis, Charles R., Harrison, N. J. Combined washtub and heater. No. 1,105,496; July 28; Gaz. vol. 204; p. 1275.

Cutler-Hammer Mfg. Co., The. (See Anderson, Carl J., assignor.)

Cutler-Hammer Mfg. Co., The. (See Denhard, Harry W., assignor.)

Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)

Cutler-Hammer Mfg. Co., The. (See Hyatt, Charles E., assignor.)

Cutler-Hammer Mfg. Co., The. (See Zimmer, Paul H., assignor.)

Cutler, Joseph C. (See Larimer, William J., assignor.)

D. H. Burrell & Company. (See Dalzell, Charles B., assignor.)

Dake, Charles W., and C. P. McGinnis, assignors to Pyle-National Electric Headlight Company, Chicago, Ill. Recorder. No. 1,104,250; July 21; Gaz. vol. 204; p. 790.

Dalsing, John P., Oneida, Kans. Plow. No. 1,102,326; July 7; Gaz. vol. 204; p. 37.

Dalton Adding Machine Company. (See Landsiedel, Harry, assignor.)

Dalton, Van Broadus, Cincinnati, Ohio. Dental model. No. 1,102,390; July 7; Gaz. vol. 204; p. 59.

Daly, John J., New Brunswick, N. J., assignor to E. W. McCarty, New York, N. Y. Door-check. No. 1,102,727; July 7; Gaz. vol. 204; p. 176.

Daly, William L., Schenectady, N. Y. Refrigerating-pail. No. 1,103,016; July 7; Gaz. vol. 204; p. 275.

Dalzell, Charles B., assignor to D. H. Burrell & Company, Little Falls, N. Y. Sterilizing-tank. No. 1,105,187; July 28; Gaz. vol. 204; p. 1164.

Damman, Charles H., Chicago, Ill. Shirt-holder. No. 1,103,742; July 14; Gaz. vol. 204; p. 576.

Damschen, Gerhard P. A., Oconomowoc, Wis. Lightning-arrester. No. 1,104,038; July 21; Gaz. vol. 204; p. 718.

Danley, Robert J. M., and H. S. Bolton, Toluca, Mexico. High-tension switch. No. 1,102,728; July 7; Gaz. vol. 204; p. 176.

Dantzer, James. (See Dantzer, Robert and J.)

Dantzer, Robert and J., Lille, France. Velvet-weaving. No. 1,104,635; July 21; Gaz. vol. 204; p. 925.

Darling, Charles T., Stony Brook, N. Y. Coat-hanger. No. 1,105,067; July 28; Gaz. vol. 204; p. 1123.

Darmstadter, Herbert M., Chicago, Ill. Formillion. No. 1,102,729; July 7; Gaz. vol. 204; p. 177.

Darnall, John C., Staunton, Va. Barrel-heading press. No. 1,103,175; July 14; Gaz. vol. 204; p. 380.

Darrasse, Etienne R. (See Gloess and Darrasse.)

Darrasse, Leon P., Jr. (See Gloess and Darrasse.)

Darrow, Wilton E., Sutter Creek, Cal. Pulp-distributer for concentrators. No. 1,104,969; July 28; Gaz. vol. 204; p. 1090.

Daughtry, John M. (See Stephenson, William C., assignor.)

Daum, Albert F. (See Goldman and Daum.)

Daum, Albert F., Pittsburgh, Pa. Fuse. No. 1,102,981; July 7; Gaz. vol. 204; p. 262.

Davenport, Birge W., Minneapolis, Minn. Starter for internal-combustion engines. No. 1,102,479; July 7; Gaz. vol. 204; p. 90.

Davidson, Alexander. (See Phelan, Richard M., assignor.)

Davidson, Andrew J., assignor of one-fourth to G. W. Davidson and one-fourth to C. Davidson, Baggs, Wyo. Hay-stacker. No. 1,103,492; July 14; Gaz. vol. 204; p. 486.

Davidson, Carl, *et al.* (See Davidson, Andrew J., assignor.)

Davidson, George W., *et al.* (See Davidson, Andrew J., assignor.)

Davidson, Joseph, East Point, Ga., assignor of one-half to American Machine & Manufacturing Company. Hydraulic pump. No. 1,103,569; July 14; Gaz. vol. 204; p. 514.

Davidson, Thomas R., Westmount, Quebec, Canada. Metal-pickling. No. 1,104,107; July 21; Gaz. vol. 204; p. 742.

Davies, Charles W. T., New York, N. Y. Buttonhole for articles of wearing-apparel. No. 1,102,881; July 7; Gaz. vol. 204; p. 229.

Davies, Preston, London, England, assignor to Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany. Inverted incandescent lamp. No. 1,105,259; July 28; Gaz. vol. 204; p. 1190.

Davis, Anthony E., assignor to Clip Bar Manufacturing Company, Philadelphia, Pa. Metal-bound curbing. No. 1,105,260; July 28; Gaz. vol. 204; p. 1190.

Davis, Bemiss N., New Orleans, La. Automatic car stop and derailer. No. 1,102,882; July 7; Gaz. vol. 204; p. 230.

Davis-Bournonville Company. (See Bucknam, Worthy C., assignor.)

Davis-Bournonville Company. (See Burdett, John B., assignor.)

Davis, Calvin R., Chicago Heights, assignor, by mesne assignments, to Emerson-Brantingham Company, Rockford, Ill. Fertilizer-distributer. No. 1,103,272; July 14; Gaz. vol. 204; p. 413.

Davis, Charles B., New York, N. Y. Brewing apparatus, &c. No. 1,102,647; July 7; Gaz. vol. 204; p. 150.

Davis, Charlie F., Shawnee, Okla. Cultivator. No. 1,104,636; July 21; Gaz. vol. 204; p. 925.

Davis & Furber Machine Company. (See Rundlett, William D., assignor.)

Davis, Harry E., Chicago, Ill. Filing-case or the like. No. 1,103,945; July 21; Gaz. vol. 204; p. 687.

Davis, John T., Alameda, assignor to Davis Topping Company, San Francisco, Cal. Evaporating and distilling apparatus. No. 1,103,946; July 21; Gaz. vol. 204; p. 688.

Davis, Joseph L., deceased, Pittsburgh, Pa., assignor to Westinghouse Electric & Mfg. Co. Electric locomotive. (Reissue.) No. 13,777; July 21, Gaz. vol. 204; p. 972.

Davis, Nathan H., Philadelphia, Pa., assignor to American Brake Shoe & Foundry Company, Jersey City, N. J. Metal cutting and bending machine. No. 1,102,327; July 7; Gaz. vol. 204; p. 37.

Davis, Philip A., Bisbee, Ariz. Adjustable bracket. No. 1,102,480; July 7; Gaz. vol. 204; p. 91.

Davis, Thomas. (See Crouse, Eidson, and Davis.)

Davis Topping Company. (See Davis, John T., assignor.)

Davis, William E., Burket, Ind. Clip. No. 1,105,497; July 28; Gaz. vol. 204; p. 1275.

Davis, William R., Wills Point, assignor of one-half to P. T. Hardee, Chandler, Tex. Bagging-stretcher. No. 1,102,391; July 7; Gaz. vol. 204; p. 59.

Davison, Charles W., W. Herriot, E. T. Spidy, and F. A. Mattson, Winnipeg, Manitoba, Canada. Shocking-machine. No. 1,105,273; July 14; Gaz. vol. 204; p. 414.

Dawson, Mose, Los Angeles, Cal. Fireproof partition No. 1,102,883; July 7; Gaz. vol. 204; p. 230.

Day, Alfred L., assignor to American Perforator Company, Chicago, Ill. Clutch-trip-actuating device. No. 1,103,570; July 14; Gaz. vol. 204; p. 515.

Day, Charles, and G. E. Windeler, Stockport, England, assignors to General Electric Company. Cam and adjusting device therefor. No. 1,104,637; July 21; Gaz. vol. 204; p. 926.

Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)

De Carmelo, Tony C., Painesville, Ohio. Repairing damaged toe-boxes. No. 1,103,493; July 14; Gaz. vol. 204; p. 487.

De Crevecoeur, Sarah E., Colton, Cal. Colander. No. 1,105,409; July 28; Gaz. vol. 204; p. 1245.

De Grandpré, George D., Providence, R. I. Warp-thread-tension indicator for dressers. No. 1,103,131; July 14; Gaz. vol. 204; p. 364.

De la Fresnaye, Jean. (See Féval and De la Fresnaye.)

De Leeuw, Adolph L., Cincinnati, Ohio. Vehicle-wheel. No. 1,104,479; July 21; Gaz. vol. 204; p. 870.

De Matteis, John B., assignor of one-half to S. Wira, New York, N. Y. Safety-envelop. No. 1,104,169; July 21; Gaz. vol. 204; p. 764.

De Minico, Frank, assignor to Pollard-Alling Manufacturing Company, New York, N. Y. Addressing-machine. No. 1,104,170; July 21; Gaz. vol. 204; p. 764.

De Nike, Joseph H., Albany, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Plait-folder for sewing-machines. No. 1,103,663; July 14; Gaz. vol. 204; p. 550.

De Ros, Dudley, Islington, London, England. Means of securing wire to standards. No. 1,102,394; July 7; Gaz. vol. 204; p. 60.

De Vignier, Robert M., Hollis Terrace, assignor to Western Electric Company, New York, N. Y. Semaphore signaling system. No. 1,104,480; July 21; Gaz. vol. 204; p. 871.

De Vilbiss, Thomas D., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind. Controlling device for fuel-oil supply. No. 1,102,482; July 7; Gaz. vol. 204; p. 91.

Deagan, John C., Chicago, Ill. Musical instrument. No. 1,104,478; July 21; Gaz. vol. 204; p. 870.

Dean, George C., Bronxville, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company. Mechanical horn. No. 1,105,324; July 28; Gaz. vol. 204; p. 1214.

Dean, George E., assignor to The Union Steel Screen Company, Ltd., Albion, Mich. Rack. No. 1,104,970; July 28; Gaz. vol. 204; p. 1090.

Dean, John R., North Girard, Pa. Garment-stay. No. 1,104,108; July 21; Gaz. vol. 204; p. 742.

Dechamps, Heinrich, Charlottenburg, Germany, assignor to General Electric Company. Releasable coupling with automatic return. No. 1,105,408; July 28; Gaz. vol. 204; p. 1244.

Decker, Mal M., Burr Oak, Kans. Cultivator. No. 1,104,293; July 21; Gaz. vol. 204; p. 805.

Decker, William M., Buffalo, N. Y. Child's folding carriage. No. 1,102,248; July 7; Gaz. vol. 204; p. 9.

Dedio, Thomas, Dnipro, Alberta, Canada. Ship's table. No. 1,104,251; July 21; Gaz. vol. 204; p. 791.

Deffenbaugh, William, Wichita, Kans. Music-leaf turner. No. 1,104,638; July 21; Gaz. vol. 204; p. 926.

Degrange, Emile. (See Cantoni, Chautems, and Degrange.)

Degrange, Emile, *et al.* (See Cantoni, Chautems, and Degrange, assignors.)

Dehler, Lee R., Gary, Ind. Calf-weaner. No. 1,103,743; July 14; Gaz. vol. 204; p. 577.

Deininger, John, Ulm, Germany. Ice-crusher. No. 1,103,132; July 14; Gaz. vol. 204; p. 364.

Deister Concentrator Company. (See Stenger, Peter, assignor.)

Deitsch Brothers. (See Rath, William C., assignor.)
Del Lungo, Vincenzo, Florence, Italy. Seal-lock. No. 1,105,550; July 28; Gaz. vol. 204; p. 1294.
Deleuil, Lazare S., Paris, France. Machine for printing in relief. No. 1,102,884; July 7; Gaz. vol. 204; p. 230.
Demers, Nazaire, Manchester, N. H. Hand-threading shuttle. No. 1,104,416; July 21; Gaz. vol. 204; p. 848.
Démichel, Alphonse, Paris, France. Artificial horizon for sextants. No. 1,104,639; July 21; Gaz. vol. 204; p. 926.
Dempster Mill Manufacturing Company. (See Elliott, William, assignor.)
Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric resistance unit. No. 1,102,249; July 7; Gaz. vol. 204; p. 10.
Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Heating device. No. 1,102,392; July 7; Gaz. vol. 204; p. 59.
Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric resistance unit. No. 1,102,393; July 7; Gaz. vol. 204; p. 60.
Denhard, Harry W., San Francisco, Cal., assignor, by mesne assignments, to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric heater. No. 1,103,274; July 14; Gaz. vol. 204; p. 414.
Denner, Charlotte L., Santa Rosa, Cal. Bead-crocheting needle. No. 1,104,640; July 21; Gaz. vol. 204; p. 927.
Denton, Arthur. (See Ogden, Joseph, assignor.)
Derflinger, Calvin O., assignor of one-half to J. W. Morgan, Riverton, Va. Car-coupling. No. 1,102,648; July 7; Gaz. vol. 204; p. 150.
Desmond, John, Wilmette, assignor to W. S. Potwin, Chicago, Ill. Controlling-valve for pressure-gages. No. 1,102,730; July 7; Gaz. vol. 204; p. 177.
Destrez, Leon A., Paris, France. Machine for covering fabrics and other objects with material in the form of powder. No. 1,103,947; July 21; Gaz. vol. 204; p. 688.
Detwiler, Forest V., Chicago, Ill. Refrigerator. No. 1,105,410; July 28; Gaz. vol. 204; p. 1245.
Deutsche Gasglublicht Aktiengesellschaft (Auergesellschaft.) (See Davies, Preston, assignor.)
Deutscher, Herman H., Carrollton, Mo. Farm-gate. No. 1,102,481; July 7; Gaz. vol. 204; p. 91.
Dever, Joseph P. (See Friedmann, Harry, assignor.)
Dexter Folder Company. (See Groom, Jacob, assignor.)
Diamond Crystal Salt Company. (See Weil, Charles L., assignor.)
Dick, Kerr & Company. (See Scoular, James A., assignor.)
Dickinson, Joseph H. (See Evers and Dickinson.)
Dickinson, Robert, Victoria, British Columbia, Canada. Indicator for automobiles. No. 1,104,171; July 21; Gaz. vol. 204; p. 765.
Dickson, George S. R., New York, N. Y. Steam-packing. No. 1,103,744; July 14; Gaz. vol. 204; p. 577.
Dienstbach, Carl, assignor of one-third to W. L. Fairchild and one-third to W. L. Fairchild, trustee, New York, N. Y. Flying-machine. No. 1,104,039; July 21; Gaz. vol. 204; p. 718.
Dietrich, William, Chicago, Ill. Casting-machine. No. 1,104,728; July 21; Gaz. vol. 204; p. 957.
Dildine, James C., Cameron, Mo. Bridge-floor. No. 1,104,879; July 28; Gaz. vol. 204; p. 1059.
Dilyock, Harry, assignor of one-half to J. Smith, Boston, Mass. Locked cop-tube holder. No. 1,104,172; July 21; Gaz. vol. 204; p. 765.
Dinsmoor, George W., Lawrence, Mass. Applying covering to boards and other articles. No. 1,103,402; July 14; Gaz. vol. 204; p. 455.
Dittmann, Hermann. (See Kielblock and Dittmann.)
Diven, George M., *et al.* (See Tree, Eber B., assignor.)
Dix, Samuel C. H., Cheltenham, England. Collapsible grate. No. 1,102,649; July 7; Gaz. vol. 204; p. 151.
Dixie Cotton Picker Company. (See Appleby, John F., assignor.)
Dixon, Allen, Nashville, Tenn. Fireplace-fender. No. 1,102,328; July 7; Gaz. vol. 204; p. 38.
Dixon, Amos F., Newark, N. J., assignor to Western Electric Company, New York, N. Y. Printing-telegraph receiver. No. 1,103,133; July 14; Gaz. vol. 204; p. 365.
Dixon, Theodore, and P. Grigsby, West Baden, Ind. Internal-combustion engine. No. 1,103,571; July 14; Gaz. vol. 204; p. 515.
Dobson, Frederick W., Tamworth, England. Bleaching cellulose wood-pulp. No. 1,104,109; July 21; Gaz. vol. 204; p. 743.
Dobson, James, Philadelphia, Pa. Producing upon the surface of pile fabrics an imitation of the irregular curly appearance of Astrakhan fur and the like. No. 1,102,483; July 7; Gaz. vol. 204; p. 91.
Dobson, James, Philadelphia, Pa. Mechanism for producing upon the surface of pile fabrics an imitation of the irregular curly appearance of Astrakhan fur and the like. No. 1,102,484; July 7; Gaz. vol. 204; p. 92.
Dodds, Joseph, Fauldhouse, and W. Brown, Cambusland, Scotland. Coal-conveyer. No. 1,104,481; July 21; Gaz. vol. 204; p. 871.
Dodge, Charles C., Worcester, Mass. Machine for twisting crank-shafts. No. 1,105,188; July 28; Gaz. vol 204; p. 1164.
Doman, Lewis B., assignor to The Amphion Piano Player Company, Syracuse, N. Y. Self-playing musical instrument. (Reissue.) No. 13,764; July 7; Gaz. vol. 204; p. 277.
Donaldson, James H., and B. T. Lewis, deceased, Chicago; M. C. Lewis, executrix, La Grange, Ill. Automatic release mechanism for vestibule-curtains. No. 1,105,261; July 28; Gaz. vol. 204; p. 1191.
Dooley, Frank P., Chicago, Ill. Wire bed-bottom fabric. No. 1,105,262; July 28; Gaz. vol. 204; p. 1191.
Doolittle, William W., Evanston, assignor to Crane Company, Chicago, Ill. Mold. No. 1,104,971; July 28; Gaz. vol. 204; p. 1090.
Dorment, Frank C., assignor to Wireless Vibrator Company, Detroit, Mich. Massage-vibrator. No. 1,102,885; July 7; Gaz. vol. 204; p. 231.
Dorr, John V., Denver, Colo. Disposal of tailings. No. 1,103,351; July 14; Gaz. vol. 204; p. 440.
Dorr, John V., Denver, Colo. Apparatus for the disposal of tailings. No. 1,103,352; July 14; Gaz. vol. 204; p. 440.
Dort, Granville C., Plain City, assignor of one-half to R. P. Dort, Westerville, Ohio. Tractor. No. 1,105,551; July 28; Gaz. vol. 204; p. 1294.
Dort, Richmond P. (See Dort, Granville C., assignor.)
Double Body Bolster Company. (See Frede, Charles F., assignor.)
Double Body Bolster Company. (See Pflager, Harry M., assignor.)
Double Body Bolster Company. (See Westlake, Charles T., assignor.)
Dougherty, Edwin E., and U. W. Baston, Indianapolis, Ind. Coin-controlled lock. No. 1,105,498; July 28; Gaz. vol. 204; p. 1276.
Douglas, W. & B. (See Bliss, Henry P., assignor.)
Dover, David L., Seattle, Wash. Non-refillable bottle. No. 1,104,972; July 28; Gaz. vol. 204; p. 1091.
Dow, Herbert H., Midland, Mich., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Conserving heat. No. 1,103,948; July 21; Gaz. vol. 204; p. 689.
Downes, Louis W., Providence, R. I. Magnetic chuck. No. 1,105,552; July 28; Gaz. vol. 204; p. 1294.
Downey, Richard F., assignor of one-half to H. Loewenbach, Milwaukee, Wis. Washing-machine. No. 1,102,395; July 7; Gaz. vol. 204; p. 60.
Doyle, Claud D., *et al.*, trustees. (See Finlayson, Alexander W., assignor.)
Doyle, Fremont, Marion, Ind. Automatic-feed lubricator. No. 1,105,126; July 28; Gaz. vol. 204; p. 1143.
Doyle, William J., assignor to The Monitor Stove and Range Company, Cincinnati, Ohio. Hinge for molders' flasks. No. 1,102,573; July 7; Gaz. vol. 204; p. 124.
Drabold, Walter, and A. P. Mott, Detroit, Mich. Tire. No. 1,104,783; July 28; Gaz. vol. 204; p. 1024.
Dräger, Alexander B., assignor to Drägerwerk Heinr. und Bernh. Dräger, Lübeck, Germany. Smoke-mask for respiration apparatus. No. 1,105,127; July 28; Gaz. vol. 204; p. 1143.
Drägerwerk Heinr. und Bernh. Dräger. (See Dräger, Alexander B., assignor.)
Drake, Frank E., Radcliffe, Iowa. Postal-call-box system. No. 1,102,886; July 7; Gaz. vol. 204; p. 231.
Drambourg, Rudolphe, New York, N. Y. Storage-battery plate. No. 1,105,499; July 28; Gaz. vol. 204; p. 1276.
Draper, Charles F., Montreal, Quebec, Canada. Collapsible core. No. 1,103,664; July 14; Gaz. vol. 204; p. 551.
Draper, Charles T., assignor to The Draper Manufacturing Company, Cleveland, Ohio. Reversible gate for steel barrels. No. 1,103,176; July 14; Gaz. vol. 204; p. 380.
Draper Company. (See Asman, Charles W., assignor.)
Draper Company. (See Koechlin, Albert G., assignor.)
Draper Company. (See Stimpson, Edward S., assignor.)
Draper Manufacturing Company, The. (See Draper, Charles T., assignor.)
Dravo, William M. (See Roadman and Dravo.)
Dreiske, William D., Chicago, Ill. Combined window lock and adjuster. No. 1,104,973; July 28; Gaz. vol. 204; p. 1091.
Drenan, Harry W. (See Youngman and Drenan.)
Dreux, Alexander H. (See Smith and Dreux.)
Drosin, Louis, *et al.* (See Grabau, Hans E., assignor.)
Dübelwerke Gesellschaft mit beschränkter Haftung. (See Müller and Kayser, assignors.)
Duchez, Jerome M., Sacramento, Cal. Convertible table. No. 1,103,869; July 14; Gaz. vol. 204; p. 620.
Duckworth, Joseph C., Williamston, S. C. Key for rotary elements. No. 1,103,403; July 14; Gaz. vol. 204; p. 455.
Dudley, Sarah E. (See Thurston and Dudley.)
Duffy, Thomas I., assignor to E. C. Sales Co., Chicago, Ill. Tire-carrier and lamp-supporting bracket. No. 1,104,173; July 21; Gaz. vol. 204; p. 765.
Duffy, Thomas I., assignor to E. C. Sales Co., Chicago, Ill. Rear axle for motor-vehicles. No. 1,104,174; July 21; Gaz. vol. 204; p. 766.
Dunbar, Frank G., assignor to Sargent Company, Chicago, Ill. Lubricator-glass shield. No. 1,104,974; July 28; Gaz. vol. 204; p. 1092.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Addressing-machine. No. 1,102,396; July 7; Gaz. vol. 204; p. 61.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Type-die. No. 1,102,397; July 7; Gaz. vol. 204; p. 61.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Type-die. No. 1,102,398; July 7; Gaz. vol. 204; p. 62.
Duncan, Lester C., Lenia, Idaho. Speedoscope. No. 1,105,411; July 28; Gaz. vol. 204; p. 1246.

Dunham, Bert G., Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, New York, N. Y. Automatic telephone system. No. 1,103,572; July 14; Gaz. vol. 204; p. 516.
Dunham Company, The. (See Karl, George E., assignor.)
Dunham, Millard L., New York, N. Y. Piston-ring. No. 1,103,912; July 14; Gaz. vol. 204; p. 634.
Dunham, Samuel E., New York, N. Y. Fastener forming and driving machine. No. 1,103,404; July 14; Gaz. vol. 204; p. 456.
Dunham, William P., Los Angeles, Cal. Vacuum-cup-releasing device for lamps. No. 1,104,252; July 21; Gaz. vol. 204; p. 791.
Dunkley Company. (See Dunkley, Samuel J., assignor.)
Dunkley, Samuel J., assignor, by mesne assignments, to Dunkley Company, Kalamazoo, Mich. Machine for peeling peaches and other fruit. No. 1,104,175; July 21; Gaz. vol. 204; p. 766.
Dunn, Gano, East Orange, assignor to Crocker-Wheeler Company, Ampere, N. J. Dynamo-electric-machine frame. No. 1,104,784; July 28; Gaz. vol. 204; p. 1025.
Dunn, Gano, New York, N. Y., assignor to Crocker-Wheeler Company, Ampere, N. J. Motor-control system. No. 1,104,785; July 28; Gaz. vol. 204; p. 1025.
Dunn, John. (See Townsend, Robert V., assignor.)
Dunn, John F., New York, N. Y. Buckle. No. 1,103,275; July 14; Gaz. vol. 204; p. 415.
Dunn, Moses H., Los Angeles, Cal. Hydrocarbon-burner. No. 1,102,329; July 7; Gaz. vol. 204; p. 38.
Dunphee, Henry W., Leominster, Mass. Display-box. No. 1,104,253; July 21; Gaz. vol. 204; p. 791.
Duntley, John W. (See Ferguson, Leonard L., assignor.)
Duntley Pneumatic Sweeper Company. (See Ferguson, Leonard L., assignor.)
Duplex Manufacturing Company. (See Meyer, Julius A., assignor.)
Duplex Printing Press Company. (See Bechman, Henry F., assignor.)
Durkee, Joseph W., New York, N. Y., assignor to Pyrene Manufacturing Company. Portable fire-extinguisher. No. 1,105,263; July 28; Gaz. vol. 204; p. 1192.
Dusman, Charles F., *et al.* (See Walker, William F., assignor.)
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,102,887; July 7; Gaz. vol. 204; p. 232.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,102,888; July 7; Gaz. vol. 204; p. 232.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,102,889; July 7; Gaz. vol. 204; p. 232.
Duvall, George W. (See Beebe and Duvall.)
Dwight, Arthur S., New York, N. Y., assignor, by mesne assignments, to Dwight and Lloyd Metallurgical Company. Apparatus for roasting and sintering ores. No. 1,102,982; July 7; Gaz. vol. 204; p. 262.
Dwight and Lloyd Metallurgical Company. (See Dwight, Arthur S., assignor.)
Dwyer, John T. (See Burdett, James E., assignor.)
Dye, Frederic W., Dayton, Ohio. Carton. No. 1,103,177; July 14; Gaz. vol. 204; p. 381.
Dyer, Frank L., *et al.* (See Snelling, Walter O., assignor.)
Dyson, Alfred H., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Automatic switch for telephone systems. No. 1,103,040; July 14; Gaz. vol. 204; p. 331.
Dyson, Harry. (See Gaunt and Dyson.)
E. C. Austin Limited. (See Austin, Ernest C., assignor.)
E. C. Sales Co. (See Duffy, Thomas I., assignor.)
E. I. du Pont de Nemours Powder Company. (See Maaland, Walter E., assignor.)
E. R. Knott Machine Company. (See Worsey, Charles H., assignor.)
Earl, Lee G., Jacksonville, Fla. Metallic tie. No. 1,105,325; July 28; Gaz. vol. 204; p. 1214.
Earnshaw, George F., assignor to Earnshaw Knitting Company, Chicago, Ill. Abdominal band. No. 1,102,250; July 7; Gaz. vol. 204; p. 10.
Earnshaw Knitting Company. (See Earnshaw, George F., assignor.)
Eastman, Earnest A., assignor of one-half to The Crawford McGregor and Canby Co., Dayton, Ohio. Last-turning machine. No. 1,104,040; July 21; Gaz. vol. 204; p. 719.
Eastman Kodak Company. (See Folmer, William F., assignor.)
Easton, Frank B., New York, N. Y. Guard and indicator for storage vessels. No. 1,105,068; July 28; Gaz. vol. 204; p. 1124.
Eastwood, Albert B., Rochester, N. Y. Stocking-form. No. 1,104,348; July 21; Gaz. vol. 204; p. 825.
Eaton, Charles C., assignor to C. A. Eaton Company, Brockton, Mass. Making shoes. No. 1,103,913; July 14; Gaz. vol. 204; p. 634.
Eaton, Charles C., assignor to C. A. Eaton Company, Brockton, Mass. Shoe. No. 1,103,914; July 14; Gaz. vol. 204; p. 634.
Eaton, Horace P. (See Newman and Eaton.)
Eaton, Willie G., Nashua, N. H., assignor to Nashua Manufacturing Company, Shuttle. No. 1,102,890; July 7; Gaz. vol. 204; p. 232.
Ebeling, Oscar, *et al.* (See Alexander, Jesse, assignor.)
Eberhard, Wilhelm. (See Hack, Jacob, assignor.)
Eberhardt, Henry J., assignor to Newark Gear Cutting Machine Co., Newark, N. J. Gear-cutting machine. No. 1,104,482; July 21; Gaz. vol. 204; p. 871.
Eckberg, Arvid W., and C. Stohlberg, Jamestown, N. Y. Pivoted and sliding window. No. 1,103,276; July 14; Gaz. vol. 204; p. 415.
Eckford, William, Rhyl, Wales. Apparatus for the manufacture of lead oxid. No. 1,104,786; July 28; Gaz. vol. 204; p. 1025.
Ecklyn, Charles N., assignor to Standard Electric Works, Racine, Wis. Agitator. No. 1,103,949; July 21; Gaz. vol. 204; p. 689.
Eclipse Folding Machine Company, The. (See Bodey, Edward J., assignor.)
Eddelbuttel-Reimers, Gustav R., Geneva, Wash. Strut-cover of stream-line surface. No. 1,104,254; July 21; Gaz. vol. 204; p. 792.
Eddy, Oscar H., assignor to W. Eddy Plow Company, Greenwich, N. Y. Sulky-plow. No. 1,102,891; July 7; Gaz. vol. 204; p. 233.
Edge Moor Iron Company. (See Sellers and Bradford, assignors.)
Edmands, John W., Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-fusee. No. 1,103,277; July 14; Gaz. vol. 204; p. 415.
Edmands, John W., Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-fusee. No. 1,103,278; July 14; Gaz. vol. 204; p. 415.
Edmands, John W., Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Fusee-cap. No. 1,103,279; July 14; Gaz. vol. 204; p. 416.
Edmondson, E. A., *et al.* (See Taylor, Nicholas, assignor.)
Edwards, Daniel W., assignor to Greenlee Bros. & Company, Rockford, Ill. Tool. No. 1,105,553; July 28; Gaz. vol. 204; p. 1294.
Edwards, Joshua L., *et al.* (See Greene, James O., assignor.)
Edwards, Pearl M. (See Campbell, Calvin N., assignor.)
Edwards, Victor E., assignor to Morgan Construction Company, Worcester, Mass. Rolling-mill plant. No. 1,104,349; July 21; Gaz. vol. 204; p. 826.
Eggart, Karl, assignor to Firm of A. Saurer, Arbon, Switzerland. Jacquard-card-perforating machine. No. 1,104,641; July 21; Gaz. vol. 204; p. 927.
Eggert, Theodore R., *et al.* (See Tree, Eber B., assignor.)
Eggleston, Lewis W., Wheaton, assignor to American Radiator Company, Chicago, Ill. Steam-radiator. No. 1,104,350; July 21; Gaz. vol. 204; p. 826.
Egli, Eduard, assignor to Maschinenfabrik Rüti formerly Casper Honegger, Rüti, Switzerland. Thread-cutting mechanism for weft-replenishing looms. No. 1,104,880; July 28; Gaz. vol. 204; p. 1059.
Egly, Georg, Treptow, assignor to Gebrueder Siemens & Co., Berlin, Germany. Electric heater. No. 1,103,353; July 14; Gaz. vol. 204; p. 441.
Egry Register Company, The. (See Jensen, Hans L., assignor.)
Egry Register Company, The. (See Nickol and Stern, assignors.)
Ehlert, Arthur W., Lebanon, Oreg. Railway-spike. No. 1,102,485; July 7; Gaz. vol. 204; p. 92.
Eibig, Paul. Nieder-Schönhausen, Germany, assignor to General Electric Company. Bearing for electric meters. No. 1,104,176; July 21; Gaz. vol. 204; p. 766.
Eidson, Charles G. (See Crouse, Eidson, and Davis.)
Eiker, Thaddeus B., Allenhurst, N. J. Carbureter. No. 1,103,178; July 14; Gaz. vol. 204; p. 381.
Eilau, Adolph J., Chicago, Ill. Milliner's iron. No. 1,102,399; July 7; Gaz. vol. 204; p. 62.
Eisenhütten-Aktien-Verein Düdelingen. (See Kihn, Nicolas, assignor.)
Ekstrom, Oscar A. (See Lundahl and Ekstrom.)
Ela, Edgar W., administrator. (See Ela, Jonathan C.)
Ela, Jonathan C., deceased, Woburn, assignor of one-fourth to J. W. Grimes, Reading, and one-fourth to H. S. Riley, Woburn, Mass.; E. W. Ela, administrator. Awning-frame and hinges therefor. No. 1,102,251; July 7; Gaz. vol. 204; p. 10.
Elam, William E., Washington, D. C. Tobacco-pipe cleaner. No. 1,103,134; July 14; Gaz. vol. 204; p. 365.
Electric Controller and Manufacturing Company, The. (See Frost, Homer E., assignor.)
Electric Controller and Manufacturing Company, The. (See Hall, Jay H., assignor.)
Electric Meat Curing Company, The. (See Lincoln, John C., assignor.)
Electric Security Company. (See Colby, Alson B., assignor.)
Electro Dental Manufacturing Company. (See Schramm, Adolph W., assignor.)
Electrochemische Werke, G. m. b. H. (See Faehr, Paul, assignor.)
Elevator Supply & Repair Company. (See Wylde and Schenck, assignors.)
Ellick, Frank I., Omaha, Nebr. Leaf-binding clasp. No. 1,105,025; July 28; Gaz. vol. 204; p. 1108.
Ellicott, Francis, Ruxton, Md. Means for lubricating engine-cylinders. No. 1,103,354; July 14; Gaz. vol. 204; p. 441.
Elliott, Stephen E., West Salem, Ill. Wire-holder. No. 1,105,412; July 28; Gaz. vol. 204; p. 1246.

Elliott, William, assignor to Dempster Mill Manufacturing Company, Beatrice, Nebr. Bearing. No. 1,104,041; July 21; Gaz. vol. 204; p. 719.
Elliott, William E., Grand Rapids, Mich. Arbor-press. No. 1,103,179; July 14; Gaz. vol. 204; p. 381.
Elliott, William E., Grand Rapids, Mich. Multiple-spindle drill. No. 1,103,180; July 14; Gaz. vol. 204; p. 382.
Elliott, William E., Grand Rapids, Mich. Braiding-machine. No. 1,103,181; July 14; Gaz. vol. 204; p. 382.
Elliott, William E., Grand Rapids, Mich. Arbor-press. No. 1,103,182; July 14; Gaz. vol. 204; p. 383.
Ellis, Carleton, Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 1,102,330; July 7; Gaz. vol. 204; p. 38.
Ellis, Carleton, Montclair, N. J., assignor of two-thirds to Ellis-Foster Company and one-third to C. L. Parsons, Washington, D. C. Oxidation. No. 1,103,017; July 7; Gaz. vol. 204; p. 275.
Ellis-Foster Company *et al.* (See Ellis, Carleton, assignor.)
Ellis, John H., Prescot, England. Electrical insulator. No. 1,102,252; July 7; Gaz. vol. 204; p. 10.
Ellison, Albert R., Brookline, Mass. Treating pontianak. No. 1,104,744; July 21; Gaz. vol. 204; p. 903.
Elmore, Guy H., Swarthmore, Pa., and O. H. Bohm, Birmingham, Ala. Jig. No. 1,102,574; July 7; Gaz. vol. 204; p. 124.
Elsässische Maschinenbau-Gesellschaft. (See Burgert, August, assignor.)
Elsässische Maschinenbau Gesellschaft. (See Mertens, Eduard, assignor.)
Elwell, Oliver E., Hornell, N. Y., assignor to The Union Special Machine Company, Chicago, Ill. Thread-controller for sewing-machines. No. 1,105,413; July 28; Gaz. vol. 204; p. 1246.
Ely, A. Victor. (See Sykes, Henry T., assignor.)
Emerick, Louis W., receiver. (See Parker, Clark W., assignor.)
Emerson-Brantingham Company. (See Davis, Calvin R., assignor.)
Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)
Emerson, Victor H., New York, N. Y., G. A. Manwaring, Bayonne, N. J., and J. K. Reynard, New York, N. Y., assignors to American Graphophone Company, Bridgeport, Conn. Composite-disk sound-record. No. 1,102,253; July 7; Gaz. vol. 204; p. 11.
Emery, Rose. (See Bonnot, Belot, Vassallo, and Emery.)
Eminger, Albert H. (See Bowker, Ernest S., assignor.)
Emmons, Henry T., Brookline, Mass. Finishing hat-bodies. No. 1,103,183; July 14; Gaz. vol. 204; p. 383.
Emmrich, Otto R., Manasha, Wis. Barrel. No. 1,104,351; July 21; Gaz. vol. 204; p. 826.
Emrick, George W., Brooklyn, N. Y., assignor, by mesne assignments, to Automatic Drill Chuck Corporation, Detroit, Mich. Drill-chuck. No. 1,104,255; July 21; Gaz. vol. 204; p. 792.
Engelmann, Max, and B. Merkel, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Production of cyanamid. No. 1,102,892; July 7; Gaz. vol. 204; p. 233.
England, Alexander, Wilkinsburg, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Automatic train-stop device. No. 1,104,787; July 28; Gaz. vol. 204; p. 1026.
Engles, Willis, Paw Paw, Mich. Internal-combustion turbine-engine. No. 1,105,500; July 28; Gaz. vol. 204; p. 1276.
Englesson, John E., Kristinehamn, Sweden, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Time-element power-limiting device. No. 1,102,781; July 7; Gaz. vol. 204; p. 177.
Ensminger, Kossuth J., Hamersville, Ohio. Means and device to control and regulate the flow of surface water. No. 1,104,483; July 21; Gaz. vol. 204; p. 872.
Ensor, Joseph W., Marcus, S. D. Vehicle tongue attachment. No. 1,102,650; July 7; Gaz. vol. 204; p. 151.
Epstein, Eli, Boston, Mass. Cylinder-lock. No. 1,102,893; July 7; Gaz. vol. 204; p. 233.
Erickson, Charles A., Plattsburg, N. Y. Pneumatic suspension for vehicles. No. 1,104,294; July 21; Gaz. vol. 204; p. 806.
Erickson, Edward, assignor to The Boylston Manufacturing Company, Boston, Mass. Heel-compressing machine. No. 1,104,177; July 21; Gaz. vol. 204; p. 767.
Erickson, Peter E., assignor to P. E. Erickson & Son, Inc., Port Chester, N. Y. Tool for repairing tires. No. 1,104,642; July 21; Gaz. vol. 204; p. 927.
Erie City Iron Works. (See Selden, Edward P., assignor.)
Erixon, Gustave A., *et al.* (See Goetzinger, Charles P., assignor.)
Erlandsson, Hedvig L., Chicago, Ill. Lamp-bracket. No. 1,104,352; July 21; Gaz. vol. 204; p. 827.
Erlenbach, Arnold, Dessau, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Preparation for dyeing hairs, furs, and the like. No. 1,105,554; July 28; Gaz. vol. 204; p. 1295.
Erlenbach, Arnold, and K. Marx, Dessau, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Dye for dyeing furs, hairs, and the like. No. 1,105,501; July 28; Gaz. vol. 204; p. 1277.
Errico, Gennaro, Waterbury, Conn. Fly-paper holder. No. 1,103,950; July 21; Gaz. vol. 204; p. 690.
Erwin, Herbert E., New Britain, and H. M. Gorsline, Bristol, assignors to The New Britain Machine Company, New Britain, Conn. Check-controlled apparatus. No. 1,102,894; July 7; Gaz. vol. 204; p. 233.
Esche, William, assignor of one-half to E. B. Loewenbach, Milwaukee, Wis. Shoemaker's jack. No. 1,104,484; July 21; Gaz. vol. 204; p. 872.
Essex Rubber Company. (See Redfield, Clifford S., assignor.)
Estabrooks, George H., Brooklyn, N. Y. Piston packing-ring. No. 1,103,573; July 14; Gaz. vol. 204; p. 516.
Eureka Mower Company. (See Gilroy, William E., assignor.)
Evers, Cyrus, New York, N. Y., and J. H. Dickinson, Montclair, N. J. Logging-engine. No. 1,103,135; July 14; Gaz. vol. 204; p. 365.
Everson, Elsworth E., Brilliant, Ohio. Fence construction. No. 1,104,485; July 21; Gaz. vol. 204; p. 873.
Eves, Joshua V., Belfast, Ireland. Machine for hackling and spreading flax and other long-stapled fibers. No. 1,102,895; July 7; Gaz. vol. 204; p. 234.
Ewald, Henry C., Louisville, Ky. Bed-cover holder. No. 1,103,494; July 14; Gaz. vol. 204; p. 487.
Excelsior Steel Furnace Company, The. (See Scherer, Albert G., assignor.)
Excelsior Stove and Manufacturing Company. (See Heidbreder and Ohnemus, assignors.)
Excess Indicator Company. (See Stone, John, assignor.)
Eyers, George, Marshfield, Wis. Road-scraper. No. 1,103,951; July 21; Gaz. vol. 204; p. 690.
Ezell, James D., and J. G. King, Burlington, N. C. Device for spinning-frames. No. 1,104,881; July 28; Gaz. vol. 204; p. 1059.
F. L. Schmidt Company. (See Novick, Abraham, assignor.)
F. W. Spacke Machine Company, The. (See Lowe, John D., assignor.)
F. W. Spacke Machine Company, The. (See Spacke, Brownlee, and Spacke, assignors.)
Fabel, Christine M., Oceanpark Heights, Cal. Composition for pie-crust or the like. No. 1,103,355; July 14; Gaz. vol. 204; p. 441.
Faber, Ernst, Berlin, Germany. Fuse for projectiles. No. 1,102,732; July 7; Gaz. vol. 204; p. 178.
Faehr, Paul, Bitterfeld, assignor to Electrochemische Werke, G. m. b. H., Berlin, Germany. Pyrophoric alloy. No. 1,102,575; July 7; Gaz. vol. 204; p. 125.
Faehrmann, John M., Houston, Tex. Tourist's glass. No. 1,104,643; July 21; Gaz. vol. 204; p. 927.
Faehrmann, John M., Houston, Tex. Tourist's glass. No. 1104,644; July 21; Gaz. vol. 204; p. 928.
Fain, Edward C., Wetumpka, Ala. Dispensing-refrigerator. No. 1,105,502; July 28; Gaz. vol. 204; p. 1277.
Fairbanks, Leonard M., New Haven, Conn., assignor to The H. G. Thompson & Son Co. Hacksaw-frame. No. 1,103,495; July 14; Gaz. vol. 204; p. 487.
Fairbanks, Morse & Company. (See Ahara, George V., assignor.)
Fairchild, Walter L., trustee. (See Dienstbach, Carl, assignor.)
Fallkin, George J., San Jose, Ill. Fruit picker or gatherer. No. 1,105,189; July 28; Gaz. vol. 204; p. 1165.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Engelmann and Merkel, assignors.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Hansen, Christian, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Vagt, August, assignor.)
Farbwerke vorm. Meister Lucius & Brüning. (See Uhlenhuth, Rudolf, assignor.)
Farkas, Karl, Glen Ridge, N. J. Automatic fusion device for making metallic-filament supports. No. 1,104,295; July 21; Gaz. vol. 204; p. 806.
Farnham, Bion B., Buffalo, N. Y. Mixing-machine. No. 1,105,555; July 28; Gaz. vol. 204; p. 1295.
Farquhar, Harry D., New York, N. Y. Multiplying attachment for cameras. No. 1,103,745; July 14; Gaz. vol. 204; p. 577.
Farrand Company, The. (See Leadbeter, Richard A., assignor.)
Farrell, Thomas J., Nadeau, Kans., assignor to A. Constable, trustee, Elkton, Md. Therapeutic apparatus. No. 1,103,000; July 7; Gaz. vol. 204; p. 269.
Faugeron, Ernest G., assignor of one-half to Societe Anonyme des Faienceries de Creil et Montereau, Montereau, France. Apparatus for baking porcelain and similar substances in continuous furnaces with movable hearths. No. 1,103,184; July 14; Gaz. vol. 204; p. 384.
Faust, Casper, Oshkosh, Wis. Bridge-gates. No. 1,102,254; July 7; Gaz. vol. 204; p. 11.
Fay, John L., St. Louis, Mo. Ground-anchor. No. 1,103,185; July 14; Gaz. vol. 204; p. 384.
Feaster, John C., Skedee, Okla. End-gate for lumber-wagons. No. 1,104,645; July 21; Gaz. vol. 204; p. 928.
Fegley, Thomas J., and G. O. Leopold, assignors to North Bro's. M'f'g. Co., Philadelphia, Pa. Drill. No. 1,103,746; July 14; Gaz. vol. 204; p. 578.
Fehrentz, Peter. (See Winter, Albert, assignor.)
Feilbach, Arthur O., North Milwaukee, assignor to Feilbach Motor Company, Milwaukee, Wis. Seat-support for motor-cycles. No. 1,102,255; July 7; Gaz. vol. 204; p. 11.
Feilbach Motor Company. (See Feilbach, Arthur O., assignor.)

Feldmann, Louis, Jr., and T. E. Crecelius, assignors to Multiplex Display Fixture Company, St. Louis, Mo. Display-rack. No. 1,103,136; July 14; Gaz. vol. 204; p. 366.
Feldmann, Louis, Jr., and T. E. Crecelius, assignors to Multiplex Display Fixture Company, St. Louis, Mo. Wing or leaf for display-racks. No. 1,104,486; July 21; Gaz. vol. 204; p. 873.
Feldmeyer, William F., assignor to The Auil Brothers Paper and Box Company, Dayton, Ohio. Paper pail. No. 1,103,186; July 14; Gaz. vol. 204; p. 384.
Feldt, Adolf. (See Spiess and Feldt.)
Fellmeth, Jacob W. (See King and Fellmeth.)
Felsberg, Arthur P., Newark, N. J. Heat-regulating device. No. 1,103,574; July 14; Gaz. vol. 204; p. 517.
Felser, Harry L., *et al.* (See Hale, William H., assignor.)
Felske, Charles, assignor to Planhard Manufacturing Company, Kokomo, Ind. Carbureter. No. 1,104,975; July 28; Gaz. vol. 204; p. 1092.
Felt, Charles E., Chicago, Ill. Pasteurizing-machine. No. 1,102,486; July 7; Gaz. vol. 204; p. 92.
Femia, Rocco G., *et al.* (See Hale, William H., assignor.)
Fenner, George P., New London, Conn. Printing-press. No. 1,103,665; July 14; Gaz. vol. 204; p. 551.
Fenner, Harry B., Omaha, Nebr. Automobile engine-starter. No. 1,102,651; July 7; Gaz. vol. 204; p. 151.
Fenton, Richard F. (See Ferguson and Fenton.)
Ferguson, Benjamin T., and R. F. Fenton, Standard, La. Sparking plug. No. 1,103,187; July 14; Gaz. vol. 204; p. 385.
Ferguson, Leonard L., assignor to J. W. Duntley, Chicago, Ill. Pneumatic cleaner. No. 1,104,882; July 28; Gaz. vol. 204; p. 1060.
Ferguson, Leonard L., assignor to Duntley Pneumatic Sweeper Company, Chicago, Ill. Cleaning device. No. 1,104,976; July 28; Gaz. vol. 204; p. 1092.
Ferguson, Leonard L., assignor to Duntley Pneumatic Sweeper Company, Chicago, Ill. Carpet-sweeper. No. 1,104,977; July 28; Gaz. vol. 204; p. 1093.
Ferguson, Samuel, Schenectady, N. Y., assignor to General Electric Company. System of electrical distribution. No. 1,102,733; July 7; Gaz. vol. 204; p. 178.
Ferguson, Samuel, Schenectady, N. Y., assignor to General Electric Company. System of electrical distribution. No. 1,103,018; July 7; Gaz. vol. 204; p. 276.
Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Barn-door track. No. 1,104,353; July 21; Gaz. vol. 204; p. 827.
Féval, Léon, and J. De la Fresnaye, Paris, France. Treatment of caoutchouc, gutta-percha, and like substances. No. 1,102,487; July 7; Gaz. vol. 204; p. 93.
Ficker, Nicholas T., New York, N. Y. Time-card. No. 1,103,575; July 14; Gaz. vol. 204; p. 517.
Fielding, George T., New York, N. Y. Illuminating device. No. 1,105,414; July 28; Gaz. vol. 204; p. 1247.
Fields, John D., Butte, Mont. Electrolytic apparatus. No. 1,104,640; July 21; Gaz. vol. 204; p. 929.
Fierz, Hans E., Basel, Switzerland. Extraction of nickel from mixtures of nickel and other metals. No. 1,103,747; July 14; Gaz. vol. 204; p. 578.
Fife, Robert F., Canton, Ohio. Stack-flashing. No. 1,103,666; July 14; Gaz. vol. 204; p. 552.
Filbin, James D. (See Hanna, Filbin, and Amsden.)
Filippi, Antoine P., Paris, France. Driving and sustaining surfaces applicable to navigation in air and water. No. 1,103,188; July 14; Gaz. vol. 204; p. 385.
Filzer, Christian G., Erie, Pa. Torch. No. 1,105,190; July 28; Gaz. vol. 204; p. 1165.
Finch, Albert E. (See Kamp and Finch.)
Fingerson, Gilbert J., Murdock, Minn. Hog-scalding tank. No. 1,105,128; July 28; Gaz. vol. 204; p. 1144.
Finkel, Henry. (See Casto, Charles W., assignor.)
Finkelstein, Abraham R., Brooklyn, N. Y. Automobile-guard. No. 1,104,647; July 21; Gaz. vol. 204; p. 929.
Finkelstein, Morris F., New York, N. Y. Electric fitting for circuit-wiring. No. 1,103,748; July 14; Gaz. vol. 204; p. 578.
Finkelstein, Morris F., New York, N. Y. Electrical fitting. No. 1,103,749; July 14; Gaz. vol. 204; p. 579.
Finlayson, Alexander W., Detroit, Mich., assignor to F. S. Stoepel and C. D. Doyle, trustees. Heater. No. 1,103,356; July 14; Gaz. vol. 204; p. 441.
Firminhac, Henry. (See Mulloy and Firminhac.)
Fischer, Frederick P., Chicago, Ill. Couch. No. 1,104,487; July 21; Gaz. vol. 204; p. 873.
Fischer, Henry T. G., Indianapolis, Ind. Trap. No. 1,102,896; July 7; Gaz. vol. 204; p. 234.
Fischer, Martin, Zurich, Switzerland, assignor to Fischer Motor Corporation. Combustion-engine. No. 1,103,901; July 14; Gaz. vol. 204; p. 631.
Fischer Motor Corporation. (See Fischer, Martin, assignor.)
Fischer, William C., East Hampton, Conn. Mantel. No. 1,102,897; July 7; Gaz. vol. 204; p. 234.
Fischer, William C., Phoenixville, Conn. Incubator and brooder. No. 1,103,189; July 14; Gaz. vol. 204; p. 385.
Fisher, Alva J., Evanston, assignor to Hurley Machine Company, Chicago, Ill. Safety device for power-wringers. No. 1,102,331; July 7; Gaz. vol. 204; p. 39.
Fisher, Charles, Oak Park, assignor, by mesne assignments, to The Automatic Recording Safe Company, Chicago, Ill. Savings-bank. No. 1,102,256; July 7; Gaz. vol. 204; p. 12.
Fisher Closed Body Co. (See Allmand, John T., assignor.)
Fisher, Frederick, Marlboro, Mich. Internal-combustion engine. No. 1,102,400; July 7; Gaz. vol. 204; p. 62.
Fisher, William J., Memphis, Tenn. Check-controlled apparatus. No. 1,103,952; July 21; Gaz. vol. 204; p. 690.
Flagge, Phillipp F., Milwaukee, Wis., assignor, by mesne assignments, to A. L. Lawrence, Cleveland, Ohio. Sheet-metal-jointing machine. No. 1,103,953; July 21; Gaz. vol. 204; p. 690.
Flaherty, Frederick J., Waltham, Mass. Organ. No. 1,104,648; July 21; Gaz. vol. 204; p. 929.
Flanagan, Edward F., Washington, D. C. Attachment for eyeglass-cases. No. 1,105,069; July 28; Gaz. vol. 204; p. 1124.
Flanagan, Mark T. (See Roberts, George B., assignor.)
Flawith, George, Melrose Highlands, Mass. Lubricating-packing. No. 1,102,332; July 7; Gaz. vol. 204; p. 39.
Fleischmann, Lionel, Berlin, Germany, assignor to General Electric Company. System of motor control. No. 1,102,488; July 7; Gaz. vol. 204; p. 93.
Fleming, Frank, Sacramento, Cal. Fluid-pressure-operated lubricant-cup. No. 1,104,178; July 21; Gaz. vol. 204; p. 767.
Fletcher, Hartley, Thaon-les-Vosges, assignor to A. E. Verge, Vincennes, France. Dyeing with anilin-black. No. 1,102,898; July 7; Gaz. vol. 204; p. 235.
Flintkote Manufacturing Company. (See Overbury, Frederick C., assignor.)
Flora, Ellsworth E., and J. F. Murphy, assignors to The Seal & Fastener Co., Chicago, Ill. Tool for joining metal-strap ends. No. 1,105,191; July 28; Gaz. vol. 204; p. 1165.
Floyd, David H., Atlanta, Ga. Plow. No. 1,105,264; July 28; Gaz. vol. 204; p. 1192.
Föckerer, Herman. (See Staab and Föckerer.)
Folding-Stand Company. (See Stone, Harry A., assignor.)
Folley, David E., Medford, Mass. Puzzle. No. 1,102,576; July 7; Gaz. vol. 204; p. 125.
Folmer, William F., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic ray-filter. No. 1,104,179; July 21; Gaz. vol. 204; p. 768.
Foote, Colin W., Rochester, Mich. Sled-brake. No. 1,104,649; July 21; Gaz. vol. 204; p. 930.
Foote, Jeff J., Atlanta, Ga. Trunk. No. 1,102,257; July 7; Gaz. vol. 204; p. 12.
Forbes, Ida R. (See McGowen, Francis J., assignor.)
Forbes Lithograph Manufacturing Company, The. (See Thomson, David F., assignor.)
Forbes, Wilson H., Detroit, Mich. Automatic feed mechanism for rolling-mills. No. 1,104,788; July 28; Gaz. vol. 204; p. 1026.
Fordyce, John R., and W. R. Keef, Little Rock, Ark. Cotton-gin. No. 1,105,026; July 28; Gaz. vol. 204; p. 1108.
Forlong, Elizabeth H. M. J. F., New York, N. Y. Portable garment-hanger. No. 1,104,180; July 21; Gaz. vol. 204; p. 768.
Forsberg, Oscar F., Yonkers, assignor to Western Electric Company, New York, N. Y. Cash-receptacle for coin-collectors. No. 1,104,042; July 21; Gaz. vol. 204; p. 720.
Forster, Guy E., *et al.* (See Grueninger, Edward, assignor.)
Forster, Harry J., Chicago, Ill. Drill-extension device. No. 1,104,110; July 21; Gaz. vol. 204; p. 743.
Forsyth Brothers Company. (See Forsyth, George H., assignor.)
Forsyth, George H., assignor to Forsyth Brothers Company, Chicago, Ill. Sash-balance. No. 1,103,496; July 14; Gaz. vol. 204; p. 487.
Fothergill, Edmund W., assignor to Hartford Rubber Works Company, Hartford, Conn. Machine for inclosing cords in tire-wrappers. No. 1,104,789; July 28; Gaz. vol. 204; p. 1027.
Fouts, Cyrus E., assignor of one-half to F. E. Hartz, Wyoming, Ill. Device for preventing back-firing. No. 1,105,556; July 28; Gaz. vol. 204; p. 1295.
Fowler, Fred O. B., Groveland, Mass. Paper-hanger's board. No. 1,104,790; July 28; Gaz. vol. 204; p. 1027.
Fowler, William, *et al.* (See Waid, James F., assignor.)
Fox, Austen H., New York, and A. W. Lenderoth, Stapleton, N. Y. Automatic reversing-switch. No. 1,103,405; July 14; Gaz. vol. 204; p. 456.
Fox, Charles H., Bakersfield, Cal. Pump. No. 1,103,190; July 14; Gaz. vol. 204; p. 386.
Fox, Joseph C., Seattle, Wash. Supplemental seat attachment for motor-cycles and the like. No. 1,102,899; July 7; Gaz. vol. 204; p. 235.
Fox, Thomas A., Newark, N. J., assignor to The Steffens-Amberg Co. Rosette for bridles. No. 1,103,576; July 14; Gaz. vol. 204; p. 518.
Frager, Alphonse J. (See Ghandan and Frager.)
Fram, Robert S., Vandalia, Ill. Beating-engine. No. 1,103,280; July 14; Gaz. vol. 204; p. 416.
Frame, Leland A., Coalinga, Cal. Fluid-gage. No. 1,103,750; July 14; Gaz. vol. 204; p. 579.
Frame, William J., Carmunnock, and H. L. Galloway, Kilmacolm, assignors to Saveoil Creosoting Machine Company, Limited, Glasgow, Scotland. Apparatus for impregnating porous material. No. 1,104,488; July 21; Gaz. vol. 204; p. 874.
Frank B. Cook Company. (See Bals, Charles A., assignor.)
Frank B. Cook Company. (See Corwin, Elmer R., assignor.)
Frank B. Cook Company. (See Johnson, Morton L., assignor.)

Frank B. Cook Company. (See Newburn, Charles C., assignor.)

Frank, Julius D., and A. D. Huard, Alpena, Mich. Internal-combustion engine. No. 1,103,497; July 14; Gaz. vol. 204; p. 488.

Frank Mossberg Company. (See Mossberg, Frank, assignor.)

Franklin Knitting Mills. (See Kellner and Werms, assignors.)

Frary, Robert S., and W. W. Macfarren, Pittsburgh, Pa. Sash-holder. No. 1,102,489; July 7; Gaz. vol. 204; p. 94.

Fraschini, Oreste, Milan, Italy. Vehicle-brake. No. 1,103,751; July 14; Gaz. vol. 204; p. 579.

Frauchiger, Arnold, San Francisco, Cal. Direction-indicator. No. 1,103,495; July 14; Gaz. vol. 204; p. 488.

Frede, Charles F., assignor to Double Body Rolster Company, St. Louis, Mo. Support for axle-driven light-generators. No. 1,105,265; July 28; Gaz. vol. 204; p. 1192.

Free, William Y., Carr, assignor of one-half to G. F. Tucker, Blountstown, Fla. Duplex hay-press. No. 1,102,983; July 7; Gaz. vol. 204; p. 263.

Freer, Stephen A., El Monte, Cal. Leather-punch for pliers. No. 1,105,129; July 28; Gaz. vol. 204; p. 1144.

French, Belle T., executrix. (See French, George B.)

French, Edward H., Dayton, and J. R. Withrow, Columbus, Ohio. Producing acetic acid. No. 1,104,978; July 28; Gaz. vol. 204; p. 1093.

French, George B., deceased, Fremont, Nebr.; B. T. French executrix. Preparing a stock food. No. 1,105,415; July 28; Gaz. vol. 204; p. 1247.

French, Robert H., Sherman, assignor of one-half to S. C. Rowe, Beverly, Cal. Safety automatic railway-switch. No. 1,103,577; July 14; Gaz. vol. 204; p. 518.

Friant, Thomas, *et al.* (See Annable, Warren W., assignor.)

Friberg, John G., Malden Rock, Wis. Neck-pad. No. 1,102,901; July 7; Gaz. vol. 204; p. 235.

Friberg, John G., assignor to Adjustable Horse Collar Co., Malden Rock, Wis. Horse-collar. No. 1,102,900; July 7; Gaz. vol. 204; p. 235.

Fridgen, Joseph E., Glen Ullin, N. D. Hopper-tally. No. 1,102,258; July 7; Gaz. vol. 204; p. 12.

Friedmann, Harry, assignor of one-half to J. P. Dever, Baltimore, Md. Neckband for garments. No. 1,102,490; July 7; Gaz. vol. 204; p. 94.

Fries, Elizabeth, St. Louis, Mo. Mop. No. 1,104,979; July 28; Gaz. vol. 204; p. 1093.

Fries, Howard J., Seattle, Wash. Holder and sterilizer for dental burs. No. 1,104,650; July 21; Gaz. vol. 204; p. 930.

Friese, Robert, Charlottenburg, assignor to Siemens-Schuckertwerke, G. m. b. H., Berlin, Germany. Regenerating oil used for electrical purposes. No. 1,103,499; July 14; Gaz. vol. 204; p. 488.

Frischmann, Thomas, Cleveland, Ohio. Molding-machine. No. 1,103,281; July 14; Gaz. vol. 204; p. 416.

Frodigh, Ernest W. T. and R. S. G., Worcester, Mass. Tag-stringing machine. No. 1,102,259; July 7; Gaz. vol. 204; p. 13.

Frodigh, Roland S. G. (See Frodigh, Ernest W. T. and R. S. G.)

Frost, Homer E., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric-motor controller. No. 1,103,954; July 21; Gaz. vol. 204; p. 691.

Fry, John V., Phillipsburg, N. J. Tool-holder. No. 1,104,980; July 28; Gaz. vol. 204; p. 1093.

Fryc, Lee E., San Francisco, Cal. Tire-protector. No. 1,104,181; July 21; Gaz. vol. 204; p. 768.

Fuchs, George D. (See Kiefer, Fred, assignor.)

Fuchs, Samuel H. (See Caspers, George A. and J., assignors.)

Fudge, Raymond E., West Haven, assignor to The Rowland Machine Company, New Haven, Conn. Wrapping-machine. No. 1,103,500; July 14; Gaz. vol. 204; p. 488.

Fuegmann, Paul G., and F. H. Hummel, West New York, N. J. Sanitary bottle. No. 1,103,752; July 14; Gaz. vol. 204; p. 580.

Fulda, Edward, New York, N. Y. Multiweld secondary. No. 1,103,041; July 14; Gaz. vol. 204; p. 332.

Fuller, Rodolphus, Detroit, Mich. Vehicle-spring. No. 1,105,192; July 28; Gaz. vol. 204; p. 1166.

Fullerton, Richard H., Beverly, Mass. Attachment for slippers. No. 1,103,191; July 14; Gaz. vol. 204; p. 386.

Fulson, Charles H., Atlanta, Ga., assignor to Buckeye Iron and Brass Works, Dayton, Ohio. Cooker for seeds. No. 1,104,981; July 28; Gaz. vol. 204; p. 1093.

Fulweiler, John E., Philadelphia, Pa. Thermostatic controlling-valve. No. 1,103,667; July 14; Gaz. vol. 204; p. 552.

Funnell, George L., London, England, assignor to American Graphophone Company, Bridgeport, Conn. Sound-box. No. 1,104,182; July 21; Gaz. vol. 204; p. 768.

Furber, Frederick M., Beachmont, Mass. Priming-cup. No. 1,103,137; July 14; Gaz. vol. 204; p. 366.

Fynn, Valère A., London, England. Rotary converter. No. 1,103,192; July 14; Gaz. vol. 204; p. 386.

Fynn, Valère A., London, England. Alternate-current generator. No. 1,104,183; July 21; Gaz. vol. 204; p. 768.

Fynn, Valère A., London, England, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Dynamo-electric machine. No. 1,104,184; July 21; Gaz. vol. 204; p. 769.

Fyrberg, Andrew, Worcester, Mass., assignor to Warner Arms Corporation, New York, N. Y. Automatic hand-firearm. No. 1,105,416; July 28; Gaz. vol. 204; p. 1248.

G. B. Farrington Company, The. (See Johnson, De Witt C., assignor.)

G. B. Lewis Company. (See Mollart, Lobegott, assignor.)

Gage Electric Company. (See Gage, George J., assignor.)

Gage, George J., Hillyard, assignor to Gage Electric Company, Spokane, Wash. Artificial resistance. No. 1,105,070; July 28; Gaz. vol. 204; p. 1124.

Gage, Harold J., assignor of one-half to H. O. Camm, Stockton, Cal. Miter-saw table. No. 1,104,982; July 28; Gaz. vol. 204; p. 1094.

Gagnebin, William T., Omaha, Nebr. Concrete construction. No. 1,104,651; July 21; Gaz. vol. 204; p. 930.

Gahr, Arthur O., Milbank, S. D. Frame for agricultural implements. No. 1,103,924; July 14; Gaz. vol. 204; p. 638.

Gaillard, Ella N., assignor of one-fourth to R. M. and A. Hallenback, New York, N. Y. Woven fabric. No. 1,105,503; July 28; Gaz. vol. 204; p. 1278.

Gale, Ernest L., Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Motor-controlling apparatus. No. 1,102,491; July 7; Gaz. vol. 204; p. 94.

Gale, Warren D., Waterville, Quebec, Canada. Internal-combustion engine. No. 1,103,282; July 14; Gaz. vol. 204; p. 416.

Gallon Iron Works & Manufacturing Company, The. (See Arndt, Franklin E., assignor.)

Gallon Iron Works and Manufacturing Company, The. (See Gledhill, Edward C., assignor.)

Gallagher, Joseph D., *et al.* (See Thompson, Henry E., assignor.)

Gallagher, Percy L., *et al.* (See Thompson, Henry E., assignor.)

Galloway, George. (See Whitehead, Layland, and Galloway.)

Galloway, Hope L. (See Frame and Galloway.)

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Musical-instrument-roll adjuster. No. 1,103,138; July 14; Gaz. vol. 204; p. 366.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Piano-case slide-door device. No. 1,103,193; July 14; Gaz. vol. 204; p. 387.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Piano-pedal support. No. 1,103,753; July 14; Gaz. vol. 204; p. 580.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Air-valve. No. 1,103,754; July 14; Gaz. vol. 204; p. 581.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Musical-instrument-roll-gearing shift and brakes. No. 1,103,871; July 14; Gaz. vol. 204; p. 620.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Musical-instrument pumper connection. No. 1,103,872; July 14; Gaz. vol. 204; p. 621.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Piano-playing-control system. No. 1,104,729; July 21; Gaz. vol. 204; p. 957.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Music-player valve. No. 1,105,071; July 28; Gaz. vol. 204; p. 1125.

Gamble, Edward H., London, England. Three-color photography for printing-surfaces, making transparencies, and the like. No. 1,102,902; July 7; Gaz. vol. 204; p. 236.

Gamble, Edward H., London, England. Production of photomechanical-printing surfaces. No. 1,102,903; July 7; Gaz. vol. 204; p. 236.

Gamble, Frederick O., Chicago, Ill. Dental floss-holder. No. 1,102,401; July 7; Gaz. vol. 204; p. 63.

Gammeter, William F., Cadiz, Ohio. Stock-shell for winding fabrics. No. 1,104,296; July 21; Gaz. vol. 204; p. 807.

Gapp, John, Scranton, Pa. Track-sanding device. No. 1,102,577; July 7; Gaz. vol. 204; p. 125.

Gardner, James W. S., Saylesville, R. I. Automatic headlight-turning device. No. 1,103,755; July 14; Gaz. vol. 204; p. 581.

Gargon, Edward, Philadelphia, Pa. Coat and hat protector. No. 1,105,504; July 28; Gaz. vol. 204; p. 1278.

Garness, Ole N., Bellingham, Wis. Saw-set. No. 1,103,668; July 14; Gaz. vol. 204; p. 553.

Garon, George E., Manchester, N. H. Chalk-holding means. No. 1,103,955; July 21; Gaz. vol. 204; p. 691.

Garrett, Carlton M. (See Amberg, Walter E., assignor.)

Garton, Harold W., Brooklyn, N. Y. Arrester for strong currents. No. 1,105,557; July 28; Gaz. vol. 204; p. 1296.

Gáspár, John, Bridgeport, Conn. Safety gas-burner. No. 1,105,027; July 28; Gaz. vol. 204; p. 1109.

Gatewood, William F., Pierce City, Mo. Farm-gate. No. 1,102,578; July 7; Gaz. vol. 204; p. 125.

Gault, Mary V. (See Siegmann, William, assignor.)

Gaunt, Charles F., Birmingham, England. Button for uniforms. No. 1,105,266; July 28; Gaz. vol. 204; p. 1193.

Gaunt, Joseph S., Manchester, and H. Dyson, Huddersfield, England. Filer-frame for spinning, doubling, and the like. No. 1,103,194; July 14; Gaz. vol. 204; p. 387.

Gaydon, Harry A., Croydon, England. Sound-producing device. No. 1,102,260; July 7; Gaz. vol. 204; p. 13.

Gearhart, John W., Fresno, Cal. Cover for blank books. No. 1,105,505; July 28; Gaz. vol. 204; p. 1278.

Gearhart, John W., Fresno, Cal. Blank-book cover. No. 1,105,506; July 28; Gaz. vol. 204; p. 1279.

Gearhart, John W., Fresno, Cal. Blank-book cover. No. 1,105,507; July 28; Gaz. vol. 204; p. 1279.

Gearing, Harry, Los Angeles, Cal., assignor of one-fourth to C. J. O'Neill and one-fourth to G. P. Ritter, District of Columbia. Multiphase electric motor. No. 1,103,501; July 14; Gaz. vol. 204; p. 489.

Geary, Albert. (See Lautenbacher and Geary.)

Geb, George F., Franklin, Mass. Lawn-mower. No. 1,102,734; July 7; Gaz. vol. 204; p. 179.

Gebhardt, Frank R., Monsey, N. Y. Automatic water-temperature-control system. No. 1,103,756; July 14; Gaz. vol. 204; p. 581.

Gee, Norman E., Altoona, Pa. Locomotive-stoker. No. 1,103,406; July 14; Gaz. vol. 204; p. 457.

Gee, Norman E., Altoona, Pa. Mechanical stoker for firing locomotive-furnaces. No. 1,103,407; July 14; Gaz. vol. 204; p. 457.

Gehnrich, Hermann, New York, N. Y. Portable oven. No. 1,104,652; July 21; Gaz. vol. 204; p. 931.

Gehrke, Edward A., Lincoln, Nebr. Basin-cock. No. 1,105,072; July 28; Gaz. vol. 204; p. 1125.

Gehrke, Frank, Rochester, Mich. Ice-cutting machine. No. 1,102,904; July 7; Gaz. vol. 204; p. 236.

Geisel, Emanuel, Philadelphia, Pa. Resilient wheel. No. 1,103,502; July 14; Gaz. vol. 204; p. 489.

Gemmer Manufacturing Company. (See Van Dresser, William C., assignor.)

Gendron, Marcal, Paris, France. Distributing device for automatic compressed-air starting apparatus for internal-combustion engines. No. 1,103,001; July 7; Gaz. vol. 204; p. 270.

General Chemical Company. (See Kéler and Weindel, assignors.)

General Chemical Company. (See Nield, John H., assignor.)

General Chemical Company. (See Stout, Harry H., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Blake, Samuel H., assignor.)

General Electric Company. (See Coffin, Francis P., assignor.)

General Electric Company. (See Day and Windeler, assignors.)

General Electric Company. (See Dechamps, Heinrich, assignor.)

General Electric Company. (See Elbig, Paul, assignor.)

General Electric Company. (See Ferguson, Samuel, assignor.)

General Electric Company. (See Fleischmann, Lionel, assignor.)

General Electric Company. (See Helm, Max, assignor.)

General Electric Company. (See Johannesen, Svend E., assignor.)

General Electric Company. (See Junggren, Oscar, assignor.) (Reissue.)

General Electric Company. (See Kruh, Osias O., assignor.)

General Electric Company. (See Mapelsden, Harold H., assignor.)

General Electric Company. (See Potter, William B., assignor.)

General Electric Company. (See Rice, Richard H., assignor.)

General Electric Company. (See Schiebeler, Carl, assignor.)

General Electric Company. (See Shallor, Frank E., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Troy, Matthew O., assignor.)

General Electric Company. (See Wagner, Paul, assignor.)

General Electric Company. (See Weiler, Wilhelm, assignor.)

General Electric Company. (See Weintraub, Ezechiel, assignor.)

General Electric Company. (See Whitney, Willis R., assignor.)

General Electric Company. (See Wilkinson, James, assignor.)

General Electric Company. (See Wright, Gilbert, assignor.)

General Railway Signal Company. (See Howe, Winthrop K., assignor.)

Genillon, Marie J. F., Lyon, France. Vehicle-wheel. No. 1,102,492; July 7; Gaz. vol. 204; p. 94.

Gentile, Domenick, Jersey City Heights, N. J. License-number illuminator. No. 1,103,873; July 14; Gaz. vol. 204; p. 621.

Gentle, Cuthbert, Dorchester, assignor to T. H. Bowdidge, Boston, Mass. Funnel. No. 1,104,354; July 21; Gaz. vol. 204; p. 827.

George Fletcher and Company. (See Rudder, Frank P., assignor.)

George, Maud S., St. Louis, Mo. Garment. No. 1,104,185; July 21; Gaz. vol. 204; p. 769.

George P. Clark Company. (See Clark, George E., assignor.)

Gerber, Arthur U. (See Mock and Gerber.)

Gerber, Dwight, Bellevue, Pa. Dump-wagon. No. 1,104,111; July 21; Gaz. vol. 204; p. 743.

Gerhart, Charles W., Mount Holly Springs, Pa. Demountable wheel-hub. No. 1,105,073; July 28; Gaz. vol. 204; p. 1125.

Gerion, Julius J., Bridgeport, Conn. Work-clamp. No. 1,105,193; July 28; Gaz. vol. 204; p. 1166.

Gerken, John H., and L. Hebenstreit, Pittsburg, Kans. Detachable calk. No. 1,104,417; July 21; Gaz. vol. 204; p. 849.

Gerlach, Karl H. G. A., Nordhausen, Germany. Rotary drying-drum. No. 1,105,417; July 28; Gaz. vol. 204; p. 1248.

Gerster, William V., Pittsburgh, Pa. Automatic stop for sound-reproducing machines. No. 1,104,489; July 21; Gaz. vol. 204; p. 874.

Geussenhainer, Edwin, Neumünster, Germany. Bath. No. 1,103,139; July 14; Gaz. vol. 204; p. 367.

Gey, Theodore A., Norristown, Pa. Bottle-stopper. No. 1,104,418; July 21; Gaz. vol. 204; p. 849.

Gianini, Mario, New York, N. Y. Machine for facilitating packing. No. 1,102,493; July 7; Gaz. vol. 204; p. 95.

Gibandan, Etienne, Chateau de la Coupe, near Narbonne, and A. J. Frager, Paris, France. Alcoömeter. No. 1,102,905; July 7; Gaz. vol. 204; p. 237.

Gibb, Alexander, St. Martin's Abbey, T. G. Menzies, Ferry Craig, North Queensferry, and R. Chalmers, Rhufaada, Newport, Scotland. Driving and extracting piles, posts, and the like. No. 1,102,652; July 7; Gaz. vol. 204; p. 152.

Gibbs, Earl J., assignor of one-half to E. S. Cary, Evansville, Wis. Electric-fuse cut-out. No. 1,102,579; July 7; Gaz. vol. 204; p. 126.

Gibbs, James D., Louisville, Ky. Railway interline ticket. No. 1,103,757; July 14; Gaz. vol. 204; p. 581.

Gibbs, James E., Dickson, Tenn. Woodworking-machine. No. 1,104,791; July 28; Gaz. vol. 204; p. 1027.

Gibbs, James E., Cincinnati, Ohio, assignor of one-half to W. A. Byerly, Bridgewater, Va. Electric massage instrument. No. 1,103,669; July 14; Gaz. vol. 204; p. 553.

Gibbs, James E., Cincinnati, Ohio, assignor of one-half to W. A. Byerly, Bridgewater, Va. Door-check. No. 1,104,653; July 21; Gaz. vol. 204; p. 931.

Gibney, Charles T., Laporte City, Iowa. Oiler. No. 1,102,333; July 7; Gaz. vol. 204; p. 39.

Gibson, Calder C., Buffalo, N. Y. Air-cushion for rubber stamps. No. 1,103,670; July 14; Gaz. vol. 204; p. 553.

Giddens, Lewis D., Wilson, N. C. Clock. No. 1,104,043; July 21; Gaz. vol. 204; p. 720.

Giesler, Fred C., Beaver township, Butler county, Iowa. Mail-holding device. No. 1,104,883; July 28; Gaz. vol. 204; p. 1060.

Giffee, J. B., *et al.* (See Penn, Ralph L., assignor.)

Gift, Charles W., Waynesboro, Pa. Mechanical movement. No. 1,105,418; July 28; Gaz. vol. 204; p. 1249.

Gilbert, Frederick, Edgbaston, Birmingham, England. Bronzing apparatus. No. 1,105,508; July 28; Gaz. vol. 204; p. 1279.

Gilbert, Walter V., East Ham, England. Starting device for internal-combustion engines. No. 1,105,509; July 28; Gaz. vol. 204; p. 1280.

Giles, Frank E., Scranton, Pa. Music-leaf turner. No. 1,104,983; July 28; Gaz. vol. 204; p. 1094.

Gill, Edwin R., Yonkers, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company. Selective mechanical operator. No. 1,105,194; July 28; Gaz. vol. 204; p. 1166.

Gill, Lewis W., assignor to Lachman Manufacturing Company, New York, N. Y. Reel. No. 1,105,028; July 28; Gaz. vol. 204; p. 1109.

Gillette, Herbert B., Grand Rapids, Mich. Pneumatic tire. No. 1,104,186; July 21; Gaz. vol. 204; p. 769.

Gilliam Manufacturing Company, The. (See White, Harry B., assignor.)

Gilliland, Charles B., Chicago, Ill. Tobacco-pipe. No. 1,104,654; July 21; Gaz. vol. 204; p. 932.

Gillis, Benjamin F., Watertown, Wis. Wheel for traction-engines. No. 1,104,655; July 21; Gaz. vol. 204; p. 932.

Gilman, George H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Chuck-retaining device. No. 1,103,009; July 7; Gaz. vol. 204; p. 273.

Gilman, George H., and L. A. Knights, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Drill-bit-rotating device. No. 1,103,002; July 7; Gaz. vol. 204; p. 270.

Gilmore, Allen R. (See Stevens, Samuel J., assignor.)

Gilpin, Robert W., and J. B. Romine, Codell, Kans. Detachable packer-rim for harrow-disks. No. 1,105,130; July 28; Gaz. vol. 204; p. 1144.

Gilroy, William E., assignor to Eureka Mower Company, Utica, N. Y. Check-row corn-planter. No. 1,103,357; July 14; Gaz. vol. 204; p. 442.

Girardeau, Emile, assignor of one-half to J. Bethenod, Paris, France. Automatic commutator for radiotelegraphic plants with indirect excitation. No. 1,105,029; July 28; Gaz. vol. 204; p. 1110.

Gisholt Machine Company. (See McCabe, Horace B., assignor.)

Giuliani, Alfredo, assignor of one-fourth to J. J. Walker and one-fourth to M. A. Scudi, New York, N. Y. Composition railway-tie. No. 1,104,258; July 21; Gaz. vol. 204; p. 793.

Glass, Perley R., Brookline, assignor to P. R. Glass Company, Boston, Mass. Edge-finishing. No. 1,102,494; July 7; Gaz. vol. 204; p. 95.

Glass, Perley R., Brookline, assignor to P. R. Glass Company, Boston, Mass. Edge-finishing machine. No. 1,102,495; July 7; Gaz. vol. 204; p. 95.

Glazier, Charles H., Hubbardston, Mass. Jug. No. 1,104,490; July 21; Gaz. vol. 204; p. 875.

Gleckler, Christoph, Staunton, Ill. Safety pocket-clasp. No. 1,104,984; July 28; Gaz. vol. 204; p. 1094.

Gledhill, Edward C., assignor to The Gallon Iron Works and Manufacturing Company, Gallon, Ohio. Unloading device. No. 1,105,131; July 28; Gaz. vol. 204; p. 1144.

Gleich, Franklin, Alliance, Ohio. Blowpipe. No. 1,102,984; July 7; Gaz. vol. 204; p. 263.

Gloess, Marie P. P., L. P. J. and E. R. Darrasse, Paris, France. Treatment of seaweeds for the extraction of their elements. No. 1,103,283; July 14; Gaz. vol. 204; p. 417.

Glover, Charles G., assignor to himself and to O. D. Bond, Thetford, Vt. Envelop. No. 1,103,758; July 14; Gaz. vol. 204; p. 582.

Glynn, Stephen A., and B. L. Quayle, East Ely, Nev. Liquid-controlled alarm apparatus. No. 1,104,419; July 21; Gaz. vol. 204; p. 840.

Gnatzig, Paul, Madison, Wis. Wheelbarrow. No. 1,103,759; July 14; Gaz. vol. 204; p. 582.

Goddard, Lester J., Havenna, Ohio. Displaying apparatus. No. 1,102,735; July 7; Gaz. vol. 204; p. 179.

Goddard, Robert H., Worcester, Mass. Rocket apparatus. No. 1,102,653; July 7; Gaz. vol. 204; p. 152.

Goddard, Robert H., Worcester, Mass. Rocket apparatus. No. 1,103,503; July 14; Gaz. vol. 204; p. 489.

Godfrey, John G. (See Whitcomb and Godfrey.)

Goeden, Peter, Chicago, Ill. Incinerator. No. 1,103,956; July 21; Gaz. vol. 204; p. 691.

Goetz, Armond E., New York, N. Y. Insulating-block. No. 1,105,267; July 28; Gaz. vol. 204; p. 1193.

Goetz, John, West Allis, assignor to The Kempsmith Manufacturing Co., Milwaukee, Wis. Cutter-coupling for milling-machines. No. 1,104,044; July 21; Gaz. vol. 204; p. 721.

Goetzinger, Charles P., assignor of one-third to G. A. Erixon and one-third to J. E. Paymal, Guthrie, Okla. Rail-joint. No. 1,104,636; July 21; Gaz. vol. 204; p. 932.

Gohlke, Max, Pankow, near Berlin, Germany. Ball-bearing. No. 1,105,268; July 28; Gaz. vol. 204; p. 1193.

Golch, John, Kansas City, Kans. Railway-spike. No. 1,104,884; July 28; Gaz. vol. 204; p. 1060.

Goldberg, Abraham, New York, N. Y. Garment. No. 1,104,657; July 21; Gaz. vol. 204; p. 933.

Goldberg, J. Louis. (See Shuminski, Piotr, assignor.)

Goldberg, Shepard J. (See Mendelson and Goldberg.)

Golden, Joseph A., New York, N. Y. Moving-picture camera. No. 1,102,261; July 7; Gaz. vol. 204; p. 14.

Goldhammer, William N., St. Louis, Mo. Cooking stove and range. No. 1,103,140; July 14; Gaz. vol. 204; p. 367.

Goldmann, Paul E., and A. F. Daum, assignors to A. F. Daum Company, Pittsburgh, Pa. Fuse. No. 1,102,985; July 7; Gaz. vol. 204; p. 263.

Goldschmidt, Rudolf, Darmstadt, Germany. Apparatus for and method of receiving electric waves. No. 1,104,256; July 21; Gaz. vol. 204; p. 792.

Goldschmidt, Rudolf, Darmstadt, Germany. High-frequency generator. No. 1,104,257; July 21; Gaz. vol. 204; p. 793.

Goldsmith, David, Newark, N. J. Trunk construction. No. 1,104,985; July 28; Gaz. vol. 204; p. 1095.

Good, John, New York, N. Y. Spinning or twisting machine. No. 1,102,334; July 7; Gaz. vol. 204; p. 40.

Good, Peter A., Philadelphia, Pa. Milk-bottle holder. No. 1,105,269; July 28; Gaz. vol. 204; p. 1193.

Goodell-Pratt Company. (See Hapgood, Oscar D., assignor.)

Goodfellow, Joseph P., Blaine, Wash. Canning machinery. No. 1,104,658; July 21; Gaz. vol. 204; p. 933.

Goodnough, Finley R., Mecosta, Mich. Gathering-machine. No. 1,104,986; July 28; Gaz. vol. 204; p. 1095.

Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Chain attachment. No. 1,103,760; July 14; Gaz. vol. 204; p. 582.

Goodyear Tire and Rubber Company, The. (See Clark, Elmer, assignor.)

Goodyear Tire & Rubber Company, The, *et al.* (See Wagenhorst, James H., assignor.)

Gordon, Frederick A., Spokane, Wash. Syringe-nozzle. No. 1,104,659; July 21; Gaz. vol. 204; p. 933.

Gordon, George, Saginaw, Mich. Snap-seal. No. 1,102,262; July 7; Gaz. vol. 204; p. 14.

Gordon, William, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,102,906; July 7; Gaz. vol. 204; p. 237.

Gordon, William, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,103,957; July 21; Gaz. vol. 204; p. 692.

Gordon, William R., Kinloch, Mo. Air-craft. No. 1,103,195; July 14; Gaz. vol. 204; p. 388.

Gorrell Steel Spike Lock Railroad Tie Corporation. (See Gorrell, William R., assignor.)

Gorrell, William R., Alhambra, Cal., assignor to Gorrell Steel Spike Lock Railroad Tie Corporation, Havre de Grace, Md. Combined insulating and fastening means for rails. No. 1,104,660; July 21; Gaz. vol. 204; p. 934.

Gorsline, Hathaway M. (See Erwin and Gorsline.)

Goss, John H., assignor to Scovill Manufacturing Company, Waterbury, Conn. Socket-cap. No. 1,103,504; July 14; Gaz. vol. 204; p. 490.

Goss Printing Press Company, The. (See Johnston, Robert T., assignor.)

Goss Printing Press Company, The. (See Raabe, Otto L., assignor.)

Gossman, Jesse E., Goulds, Fla. Lamp-operating mechanism. No. 1,105,030; July 28; Gaz. vol. 204; p. 1110.

Gosswiller, Michael F., assignor of one-half to W. Bissell, Troy, Mont. Bolt-lock. No. 1,103,902; July 14; Gaz. vol. 204; p. 631.

Gough, George, Yale, Mich. Coffin-fastener. No. 1,102,335; July 7; Gaz. vol. 204; p. 40.

Gough, William H., Valley Falls, R. I. Steam-vapor spray. No. 1,105,419; July 28; Gaz. vol. 204; p. 1249.

Gould, Edwin J., assignor to The Ludlow-Saylor Wire Company, St. Louis, Mo. Fly-trap. No. 1,103,578; July 14; Gaz. vol. 204; p. 518.

Gould Storage Battery Company. (See Rabenalt, Gustav H., assignor.)

Gouldbourn, Joseph. (See Bates, Jerram, and Gouldbourn.)

Gover, Harry S., Bel Air, Md. Street-rail sleeper. No. 1,103,761; July 14; Gaz. vol. 204; p. 582.

Grabau, Hans E., assignor of one-half to M. Wallach and one-half to L. Drosin, New York, N. Y. Bath-spray. No. 1,102,736; July 7; Gaz. vol. 204; p. 180.

Grady, Charles B., West Orange, N. J. Concrete structure. No. 1,102,580; July 7; Gaz. vol. 204; p. 126.

Graham, Charles E. (See Staples, Elisha S., assignor.)

Graham, David F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,105,132; July 28; Gaz. vol. 204; p. 1145.

Graham, David F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,105,133; July 28; Gaz. vol. 204; p. 1145.

Graham, David M. (See Roach, Edson A., assignor.)

Graham, David M., assignor of one-half to E. A. Roach, Bordulac, N. D. Stacker. No. 1,104,885; July 28; Gaz. vol. 204; p. 1061.

Graham, Richard W., Berkeley, Cal. Automatic hydraulic casing-jack. No. 1,104,355; July 21; Gaz. vol. 204; p. 828.

Grand Rapids Show Case Company. (See Vanderveld, Anthony, assignor.)

Grange, François. (See Borel and Grange.)

Grant, Herbert M., Visalia, Cal. Roller-platform for scales. No. 1,103,505; July 14; Gaz. vol. 204; p. 490.

Grasselli Chemical Company. (See Lihme, Ieus P., assignor.)

Graul, Otto, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing 2.3-dihalogen-2-methylbutane and homologues thereof. No. 1,102,654; July 7; Gaz. vol. 204; p. 152.

Graul, Otto, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing isoolefins. No. 1,102,655; July 7; Gaz. vol. 204; p. 153.

Graves, William E., Topeka, Kans. Tire-filler. No. 1,104,886; July 28; Gaz. vol. 204; p. 1061.

Gray, Ernest A., Boston, and E. C. Molina, Arlington, Mass., assignors to American Telephone and Telegraph Company. Telephone central switching system. No. 1,102,907; July 7; Gaz. vol. 204; p. 238.

Gray, John E., Louisville, Ky. Fastening for splash-boards. No. 1,104,792; July 28; Gaz. vol. 204; p. 1028.

Gray, Leonidas W., and G. H. Knowles, Rushville, Ill. Coupling for wagons. No. 1,103,042; July 14; Gaz. vol. 204; p. 332.

Gray, William H., Eddyville, Iowa. Apple-sorter. No. 1,102,496; July 7; Gaz. vol. 204; p. 96.

Green, Albert L., Mingo Junction, Ohio. Wrench. No. 1,103,408; July 14; Gaz. vol. 204; p. 457.

Green, John E., Boston, Mass. Bottle-stopper remover. No. 1,102,497; July 7; Gaz. vol. 204; p. 96.

Green, John G. (See Barton, Melbourne, Needham, and Green.)

Green, Morgan A., Montpelier, Idaho. Freight-car step. No. 1,104,661; July 21; Gaz. vol. 204; p. 934.

Green, Sherman S., Snohomish, Wash. Torpedo and fusee holder. No. 1,105,420; July 28; Gaz. vol. 204; p. 1249.

Greenawalt, John E., Denver, Colo. Metallurgical furnace. No. 1,103,196; July 14; Gaz. vol. 204; p. 388.

Greenawalt, John E., Denver, Colo. Charge-car. No. 1,104,491; July 21; Gaz. vol. 204; p. 875.

Greene, Howard A., Pittsburgh, Pa. Notching-machine. No. 1,105,074; July 28; Gaz. vol. 204; p. 1126.

Greene, James O., Lake City, assignor of one-third to J. L. Edwards and one-third to R. N. Penland, Watertown, Fla. Seeder. No. 1,105,075; July 28; Gaz. vol. 204; p. 1126.

Greene, John S., Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I. Photographic-print-treating apparatus. No. 1,102,737; July 7; Gaz. vol. 204; p. 180.

Greenlee Bros. & Company. (See Edwards, Daniel W., assignor.)

Greenway, Henry H., Clare, South Australia, and A. H. P. Lowry, Prahran, Victoria, Australia. Ore concentration. No. 1,102,738; July 7; Gaz. vol. 204; p. 180.

Greenwood, Conrad V., Blundellsands, near Liverpool, England, assignor to A. S. White, Chicago, Ill. Manufacture of mucilage or gum. No. 1,105,195; July 28; Gaz. vol. 204; p. 1167.

Gregory, Joseph W., Seat Pleasant, Md. Support for paper-files. No. 1,105,421; July 28; Gaz. vol. 204; p. 1249.

Greig, Walter, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada. Manifolding sales-book. No. 1,102,739; July 7; Gaz. vol. 204; p. 181.

Greiner, Friedrich, Schwäbisch Gmünd, assignor to O. Schlick, Berlin, Germany. Lubricating device. No. 1,102,263; July 7; Gaz. vol. 204; p. 14.

Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Casing-cutter. No. 1,104,492; July 21; Gaz. vol. 204; p. 875.

Griepe, August W. H. (See Murray and Griepe.)

Grier, Garrett L., Milford, Del. Sanitary dental impression-tray. No. 1,104,662; July 21; Gaz. vol. 204; p. 934.

Griffin, Anthony J., New York, N. Y. Submarine boat. No. 1,103,958; July 21; Gaz. vol. 204; p. 692.

Griffin, Charles H., Cleburne, Tex. Device for handling marble slabs. No. 1,103,409; July 14; Gaz. vol. 204; p. 458.

Griffin, George A., Felton, Minn. Deep-well pump. No. 1,102,908; July 7; Gaz. vol. 204; p. 238.

Griffiths, Samuel M., Binghamton, N. Y. Combination base and counter flashing. No. 1,105,422; July 28; Gaz. vol. 204; p. 1250.

Griffiths, William U., Philadelphia, Pa. Valve-operating mechanism for water-closets. No. 1,104,887; July 28; Gaz. vol. 204; p. 1061.

Griffiths, William U., Philadelphia, Pa. Water-closet apparatus. No. 1,104,888; July 28; Gaz. vol. 204; p. 1062.

Grigsby, Pete. (See Dixon and Grigsby.)

Grillet, Leon V., and J. B. Truchetet, Paris, France. Electrical generating system. No. 1,104,793; July 28; Gaz. vol. 204; p. 1028.

Grimes, James W., *et al.* (See Ela, Jonathan C., assignor.)

Grimes, John W., Tyler, Tex. Detachable blade-connecting device for tools. No. 1,104,987; July 28; Gaz. vol. 204; p. 1095.

Groll, Charles P. (See Groll, William F. and C. P.)

Groll, William F. and C. P., Waldo, Ohio. Means for starting internal-combustion engines. No. 1,104,356; July 21; Gaz. vol. 204; p. 828.

Groom, Jacob, assignor to Dexter Folder Company, Pearl River, N. Y. Sheet-deflecting device. No. 1,104,663; July 21; Gaz. vol. 204; p. 935.

Grosert, Thomas, and E. Unger, New York, N. Y.; said Grosert assignor to said Unger. Hair-steaming device. No. 1,103,506; July 14; Gaz. vol. 204; p. 491.

Grosky, Louis J., Cleveland, Ohio. Rubber footwear. No. 1,105,270; July 28; Gaz. vol. 204; p. 1194.

Grover, Albert D., Malden, and E. E. Barber, Boston, Mass., assignors to Autosales Gum & Chocolate Company, New York, N. Y. Coin-testing device for coin-controlled machines. No. 1,103,197; July 14; Gaz. vol. 204; p. 389.

Grueninger, Edward, assignor of one-half to F. J. Trenbeit and G. E. Forster, Cincinnati, Ohio. Automatic gas-valve for down-spouts. No. 1,103,043; July 14; Gaz. vol. 204; p. 332.

Gruenstern, Albert, Everett, Wash. Washboiler. No. 1,103,671; July 14; Gaz. vol. 204; p. 553.

Gruver, Joseph H., Baltimore, assignor of one-half to F. Norris, Jr., Raspeburg, Md. Non-refillable bottle. No. 1,104,420; July 21; Gaz. vol. 204; p. 849.

Gruver, Joseph H., Baltimore, assignor of one-half to F. Norris, Jr., Raspeburg, Md. Non-refillable-bottle stopper. No. 1,104,421; July 21; Gaz. vol. 204; p. 850.

Gsell, Henry A., Paris, France. Apparatus for discharging matches. No. 1,102,498; July 7; Gaz. vol. 204; p. 96.

Gubelman, William S., Buffalo, N. Y. Coaster-brake. No. 1,102,402; July 7; Gaz. vol. 204; p. 63.

Guerne, Alfred A., Kalamazoo, Mich. Harrow. No. 1,103,284; July 14; Gaz. vol. 204; p. 417.

Guggenheim, Edgar, assignor to M. W. Schloss Mfg. Co., New York, N. Y. Supporting-belt. No. 1,104,664; July 21; Gaz. vol. 204; p. 935.

Gunnarson, John, Bettendorf, Iowa. Life-boat. No. 1,104,745; July 21; Gaz. vol. 204; p. 963.

Gunstone, Arthur F. (See Shoobridge and Gunstone.)

Gurley, Frank, High Point, N. C. Show-case. No. 1,104,297; July 21; Gaz. vol. 204; p. 807.

Gurney Electric Elevator Company. (See Coyle, Andrew M., assignor.)

Gurney Electric Elevator Company. (See Gurney and Cummiskey, assignors.)

Gurney, Howard F., Hackensack, N. J., and W. M. Cummiskey, assignors to Gurney Electric Elevator Company, Honesdale, Pa. Actuating mechanism for elevator safety devices. No. 1,102,264; July 7; Gaz. vol. 204; p. 14.

Gustafson, Albert W., Jersey City, N. J. Engine-cylinder. No. 1,105,423; July 28; Gaz. vol. 204; p. 1250.

Gwirtz, Jacob L., Philadelphia, Pa. Clasp. No. 1,104,259; July 21; Gaz. vol. 204; p. 793.

H. Maimin Company. (See Maimin, Mayer R., assignor.)

H. C. Cook Company, The. (See Carter, Chapel S., assignor.)

H. G. Thompson & Son Co., The. (See Fairbanks, Leonard M., assignor.)

H. W. Johns-Manville Company. (See Jewett, Franc J., assignor.)

Haas, Samuel, New York, N. Y. Holder for spools. No. 1,102,740; July 7; Gaz. vol. 204; p. 181.

Hack, Jacob, assignor to W. Eberhard, Hanau, Germany. Apparatus for turning cigar-bunches in the molds. No. 1,104,794; July 28; Gaz. vol. 204; p. 1028.

Hackney, Leslie S., St. Paul, Minn. Plow-lift for gang-plows. No. 1,104,187; July 21; Gaz. vol. 204; p. 770.

Haden, Robert B., Cincinnati, Ohio. Insulator. No. 1,102,656; July 7; Gaz. vol. 204; p. 153.

Hadley, Thomas J., Winnipeg, Manitoba, Canada. Electrical insulating compound. No. 1,103,285; July 14; Gaz. vol. 204; p. 417.

Hadsel, Alvah D., assignor to The Cable Excavator Company, Philadelphia, Pa. Cable-excavator. No. 1,103,762; July 14; Gaz. vol. 204; p. 583.

Haff, Maximilian M. (See Willson and Haff.)

Hafner, William G., Clay, N. Y. Bark-rossing machine. No. 1,102,657; July 7; Gaz. vol. 204; p. 153.

Hagemeyer, Henry F., assignor to The Mechanical Process Manufacturing Company, Toledo, Ohio. Burner. No. 1,105,031; July 28; Gaz. vol. 204; p. 1110.

Hager, Irvin U., Alliance, Nebr. Fuel-regulator. No. 1,103,198; July 14; Gaz. vol. 204; p. 389.

Haggin, James B., *et al.* (See Kendall, Edward D., assignor.)

Hähnlen, Ewald, Roxbury, Mass., assignor to Holtzer-Cabot Electric Company. Magneto. No. 1,104,795; July 28; Gaz. vol. 204; p. 1029.

Haist, Wade E., Albia, Iowa. Receptacle. No. 1,102,499; July 7; Gaz. vol. 204; p. 97.

Hale, Frank W., assignor to Tuners Supply Company, Somerville, Mass. Tool for boring piano-action parts. No. 1,103,507; July 14; Gaz. vol. 204; p. 491.

Hale, George R. (See Conner and Hale.)

Hale, William H., assignor of one-third to H. L. Felser and one-third to R. G. Femia, Pittsburgh, Pa. Lock. No. 1,104,493; July 21; Gaz. vol. 204; p. 876.

Halinka, George, and P. Anton, Detroit, Mich. Saw-setting tool. No. 1,102,500; July 7; Gaz. vol. 204; p. 97.

Hall, Allen E., Philadelphia, Pa. Shock-absorber. No. 1,102,265; July 7; Gaz. vol. 204; p. 15.

Hall, Edgar S., Belfry, Mont. Fifth-wheel. No. 1,105,424; July 28; Gaz. vol. 204; p. 1250.

Hall, Frank H., Yonkers, N. Y. Game appliance. No. 1,103,579; July 14; Gaz. vol. 204; p. 518.

Hall, Gust, St. Frances township, Anoka county, Minn. Coaling device for trains in motion. No. 1,105,271; July 28; Gaz. vol. 204; p. 1194.

Hall, Hiram T. (See Johnston, Clarence L., assignor.)

Hall, Jay H., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric control system. No. 1,103,959; July 21; Gaz. vol. 204; p. 693.

Hall Switch & Signal Company. (See Gill, Edwin R., assignor.)

Hall, Walter W., assignor of one-half to J. Boum, Brooklyn, N. Y. Game apparatus. No. 1,102,501; July 7; Gaz. vol. 204; p. 97.

Hallam-Rice Company. (See Tufts, Harry W., assignor.)

Hallenback, Agnes, *et al.* (See Gaillard, Ella N., assignor.)

Hallenback, Rebecca M., *et al.* (See Gaillard, Ella N., assignor.

Hallett, Herbert L., Kansas City, Mo. Display-pedestal. No. 1,103,286; July 14; Gaz. vol. 204; p. 417.

Hallett, William J. (See McCarty, Frank L., assignor.)

Halley, Henry W., Hutchinson, Kans. Ventilating and disinfecting means for shoes. No. 1,103,874; July 14; Gaz. vol. 204; p. 622.

Halm, Jacob C., Jr. (See Corbin, Horace, assignor.)

Halsey, Edward S., Lynn, Mass., assignor to Halsey Manufacturing Co., Wilmington, Del. Pipe thermostatic motor. No. 1,105,558; July 28; Gaz. vol. 204; p. 1296.

Halsey Manufacturing Co. (See Halsey, Edward S., assignor.)

Hamblin, Walter J., Perth, Western Australia, Australia. Pipe-wrench. No. 1,104,730; July 21; Gaz. vol. 204; p. 958.

Hamersley, John, New Comerstown, Ohio. Refrigerating apparatus. No. 1,104,665; July 21; Gaz. vol. 204; p. 935.

Hamill, William W., Glasgow, Scotland. Carbureter. No. 1,104,494; July 21; Gaz. vol. 204; p. 876.

Hamilton, Geo. W., *et al.*, executors. (See Hamilton, Thomas S.)

Hamilton, Gerome H., Oregon City, Oreg. Saving gold from sand. No. 1,104,112; July 21; Gaz. vol. 204; p. 743.

Hamilton, Milo A., Scotts, Mich. Chuck. No. 1,104,113; July 21; Gaz. vol. 204; p. 744.

Hamilton, Thomas S., deceased, King City, Cal.; W. J. Hamilton, executors. Scarf-holding collar and G. W. Hamilton, executors. Scarf-holding collar attachment. No. 1,103,508; July 14; Gaz. vol. 204; p. 491.

Hamilton, W. J., *et al.*, executors. (See Hamilton, Thomas S.)

Hamilton, William J., Flint, Mich. Radiator. No. 1,103,010; July 7; Gaz. vol. 204; p. 273.

Hamm, William S., Hubbard Woods, Ill., assignor to The Adams & Westlake Company. Window-sash and weather-guard therefor. No. 1,102,403; July 7; Gaz. vol. 204; p. 64.

Hammack, Martin V., Kansas City, Mo. Trousers appliance. No. 1,104,188; July 21; Gaz. vol. 204; p. 770.

Hammerly, Richard, New York, assignor of one-half to F. E. Tilly, Woodhaven, N. Y. Automatic train-stop. No. 1,103,763; July 14; Gaz. vol. 204; p. 583.

Handilite Manufacturing Company. (See McAneny, Michael, assignor.)

Hanemann, Engelbert, Holyoke, Mass. Carbureter. No. 1,105,134; July 28; Gaz. vol. 204; p. 1145.

Hanger, James E., Jr., St. Louis, Mo. Artificial limb. No. 1,103,960; July 21; Gaz. vol. 204; p. 693.

Hanitz, Hans T. R. (See Swebilius and Hanitz.)

Hanke, Karl W., Berlin, Germany. Means for binding books. No. 1,105,196; July 28; Gaz. vol. 204; p. 1167.

Hanna, Benjamin M., Pittsburgh, Pa. Eyeglasses. No. 1,102,909; July 7; Gaz. vol. 204; p. 238.

Hanna, Benjamin M., Pittsburgh, Pa. Manufacture of glass articles. No. 1,103,961; July 21; Gaz. vol. 204; p. 693.

Hanna, Benjamin M., Pittsburgh, Pa. Spectacle-glass. No. 1,103,962; July 21; Gaz. vol. 204; p. 694.

Hanna, Cyrus T., Philadelphia, Pa. Distilling apparatus. No. 1,102,910; July 7; Gaz. vol. 204; p. 238.

Hanna, Frank W., Defiance, Iowa. Self-registering water-meter. No. 1,103,410; July 14; Gaz. vol. 204; p. 458.

Hanna, Gustav H., J. D. Filbin, and F. Amsden, Cleveland, Ohio. Carrier or truck for cans. No. 1,102,658; July 7; Gaz. vol. 204; p. 154.

Hanna, Hosmer W. (See Schmittinger, John, assignor.)

Hansbrough, George W., San Francisco, Cal. Lock connection for structural members. No. 1,102,502; July 7; Gaz. vol. 204; p. 98.

Hansell, Nils V., Bloomfield, N. J., assignor to American Grondal Company, New York, N. Y. Briqueting apparatus. No. 1,105,510; July 28; Gaz. vol. 204; p. 1280.

Hansen, Arthur I. (See Manthorpe and Hansen.)

Hansen, Axel, Cottage Grove, Oreg. Shears. No. 1,104,495; July 21; Gaz. vol. 204; p. 876.

Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Oiler. No. 1,105,135; July 28; Gaz. vol. 204; p. 1146.

Hansen, Christian, Leverkusen, near Cologne, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Producing sulfur and sulfates. No. 1,102,911; July 7; Gaz. vol. 204; p. 239.

Hansen, Robert, assignor to National Auto Cycle Company, Stockton, Cal. Attachment for motor-cycles. No. 1,102,659; July 7; Gaz. vol. 204; p. 154.

Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Metal-reducing machine. No. 1,104,988; July 28; Gaz. vol. 204; p. 1096.

Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Drill. No. 1,104,989; July 28; Gaz. vol. 204; p. 1096.

Hanson, John H., and J. W. Steele, Chicago, Ill. Fuse-plug. No. 1,103,411; July 14; Gaz. vol. 204; p. 458.

Hantsch, Arthur, Linden, N. J. Calculating-machine. No. 1,103,875; July 14; Gaz. vol. 204; p. 622.

Hapgood, Clarence H., Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J. Weighing-scale. No. 1,104,496; July 21; Gaz. vol. 204; p. 877.

Hapgood, Oscar D., Orange, assignor to Goodell-Pratt Company, Greenfield, Mass. Valve-grinder. No. 1,102,581; July 7; Gaz. vol. 204; p. 127.

Hardee, P. T. (See Davis, William R., assignor.)

Harder, Alexander P., Rockford, Ill. Furnace. No. 1,105,136; July 28; Gaz. vol. 204; p. 1146.

Hardie, Robert, Ashfield, near Sydney, New South Wales, Australia. Dental articulator. No. 1,102,741; July 7; Gaz. vol. 204; p. 181.

Harding, Charles K., Chicago, Ill. Popping corn. No. 1,104,990; July 28; Gaz. vol. 204; p. 1096.

Hardman, Peck & Company. (See Parnham and Hattemer, assignors.)

Hari, Paul, Portland, Oreg., assignor to Oregon Envelope Company. Envelop. No. 1,104,298; July 21; Gaz. vol. 204; p. 807.

Haring, Howard, Suffern, N. Y. Railway-tie. No. 1,103,764; July 14; Gaz. vol. 204; p. 584.

Haring, William H., Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Steel back and lug for brake-shoes. No. 1,102,582; July 7; Gaz. vol. 204; p. 127.

Harker Fire Extinguisher & Fumigator Company Limited, The. (See Harker, George, assignor.)

Harker, George, Petersham, near Sydney, New South Wales, assignor to The Harker Fire Extinguisher & Fumigator Company Limited, Sydney, Australia. Apparatus for scrubbing and cooling gases for use in fumigating and fire-extinguishing and like purposes. No. 1,103,509; July 14; Gaz. vol. 204; p. 492.

Harker, James F., Johannesburg, Transvaal, South Africa. Buffer and coupling for railway and road vehicles. No. 1,105,511; July 28; Gaz. vol. 204; p. 1281.

Harlé & Co. (See Harlé, Frédéric A. H., assignor.)

Harlé, Frédéric A. H., assignor to Harlé & Co., Paris, France. Mooring apparatus for submarine mines. No. 1,103,510; July 14; Gaz. vol. 204; p. 492.

Harley, William S., Milwaukee, Wis. Bearing. No. 1,103,044; July 14; Gaz. vol. 204; p. 333.

Harlow, Walter C., Brooklyn, N. Y., and H. L. Towle, Glenside, Pa. Door-knob. No. 1,103,963; July 21; Gaz. vol. 204; p. 694.

Harlow, William S., Swampscott, Mass. Switch. No. 1,103,511; July 14; Gaz. vol. 204; p. 492.

Harnes, George W., Alliance, Nebr. Waste-cleaning machine. No. 1,105,512; July 28; Gaz. vol. 204; p. 1281.

Harrington, Edward J., North Girard, Pa. Internal-combustion motor. No. 1,102,912; July 7; Gaz. vol. 204; p. 239.

Harrington, John A. (See Newell and Harrington.)

Harrington, Leslie, Chicago, Ill., assignor, by mesne assignments, to E. G. Hoffman, L. H. Moore, and H. P. Moses, Fort Wayne, Ind. Elastic wheel. No. 1,103,512; July 14; Gaz. vol. 204; p. 493.

Harris, Edward E., assignor to Corona Manufacturing Co., Valliant, Okla. Ratchet-wheel and the like. No. 1,104,666; July 21; Gaz. vol. 204; p. 936.

Harris, Florence M., Brooklyn, N. Y. Bed. No. 1,103,765; July 14; Gaz. vol. 204; p. 584.

Harris, Hollis H., assignor of one-half to W. L. Hiller, Lorain, Ohio. Device for removing threaded nuts. No. 1,104,497; July 21; Gaz. vol. 204; p. 877.

Harris, John L. (See Leslie and Harris.)

Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Reversible strut for brake-beams. No. 1,105,137; July 28; Gaz. vol. 204; p. 1147.

Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Reversible strut for brake-beams. No. 1,105,138; July 28; Gaz. vol. 204; p. 1147.

Hart, Gerald W., West Hartford, assignor to The Hart Manufacturing Company, Hartford, Conn. Switch. No. 1,103,199; July 14; Gaz. vol. 204; p. 389.

Hart, Gerald W., West Hartford, assignor to The Hart Manufacturing Company, Hartford, Conn. Snap-switch. No. 1,103,412; July 14; Gaz. vol. 204; p. 459.

Hart, Harry V., Quincy, Ill. Dental casting apparatus. No. 1,105,425; July 28; Gaz. vol. 204; p. 1251.

Hart Manufacturing Company, The. (See Borden, Bradford, assignor.)

Hart Manufacturing Company, The. (See Hart, Gerald W., assignor.)

Hart, Richard P., and T. W. Kirkman, New York, N. Y. Match-lighter. No. 1,105,139; July 28; Gaz. vol. 204; p. 1147.

Hart, Sidney H., Houston, Tex. Multicylinder internal-combustion engine. No. 1,105,426; July 28; Gaz. vol. 204; p. 1251.

Hartenstein, Herman L., Chicago, Ill. Graphophone-clock. No. 1,104,260; July 21; Gaz. vol. 204; p. 794.

Hartford, Edward V. (See Boyce, Harrison H., assignor.)

Hartford Rubber Works Company. (See Fothergill, Edmund W., assignor.)

Hartmann, Arthur R., Houston, Tex. Vehicle-axle. No. 1,105,513; July 28; Gaz. vol. 204; p. 1281.

Hartmann, Carl, Corona, N. Y. Flying-machine. No. 1,104,114; July 21; Gaz. vol. 204; p. 744.

Hartmann, Heinrich, Etterbeek, near Brussels, Belgium. Elastic tire for vehicles. No. 1,104,797; July 28; Gaz. vol. 204; p. 1030.

Hartnett, John F., assignor to The Warner Brothers Company, Bridgeport, Conn. Buckle. No. 1,104,798; July 28; Gaz. vol. 204; p. 1030.

Hartwell, F. Harvey, *et al.* (See Lyman, Don, assignor.)

Hartz, Frank E. (See Fouts, Cyrus E., assignor.)

Hartzell, Forest H., assignor to The Crown Hardware Manufacturing Company, Dayton, Ohio. Music-sheet shifter. No. 1,103,200; July 14; Gaz. vol. 204; p. 390.

Harvey, Edson O., Bancroft, Nebr. Sash-lock. No. 1,104,991; July 28; Gaz. vol. 204; p. 1090.

Hasburg, John W., Chicago, Ill. Glass-washing machine. No. 1,104,498; July 21; Gaz. vol. 204; p. 877.

Hassel, Nels H., Chicago, Ill. Foldable slipper. No. 1,104,357; July 21; Gaz. vol. 204; p. 828.

Hasselbusch, Louis, Philadelphia, Pa. Carrier or conveyer. No. 1,102,913; July 7; Gaz. vol. 204; p. 240.

Hastings, Clive, Atchison, Kans. Supplemental tire for vehicle-wheels. No. 1,102,914; July 7; Gaz. vol. 204; p. 240.

Hasty, Jesse J., Seattle, Wash. Poultry drinking-fountain. No. 1,103,413; July 14; Gaz. vol. 204; p. 459.

Hattemer, Justus. (See Parnham and Hattemer.)

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,742; July 7; Gaz. vol. 204; p. 182.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,743; July 7; Gaz. vol. 204; p. 182.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Turbine. No. 1,102,744; July 7; Gaz. vol. 204; p. 183.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Turbine. No. 1,102,745; July 7; Gaz. vol. 204; p. 183.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,746; July 7; Gaz. vol. 204; p. 183.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Strainer. No. 1,102,747; July 7; Gaz. vol. 204; p. 184.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,748; July 7; Gaz. vol. 204; p. 184.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,749; July 7; Gaz. vol. 204; p. 184.

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,102,915; July 7; Gaz. vol. 204; p. 240.

Haupt, Rudolf, Hanover, Germany. Detachable wheel-rim. No. 1,103,003; July 7; Gaz. vol. 204; p. 271.

Hausburg, Otto E., New York, N. Y. Portable watchman's clock. No. 1,102,266; July 7; Gaz. vol. 204; p. 15.

Hausen, Raymond F., assignor to Pittsburgh Carbon Brush Company, Pittsburgh, Pa. Carbon brush. No. 1,104,115; July 21; Gaz. vol. 204; p. 744.

Hausheer, Bernard, Norwich, assignor to Borden's Condensed Milk Company, New York, N. Y. Solder-placing machine. No. 1,104,261; July 21; Gaz. vol. 204; p. 794.

Havas, Bela. (See Mayer and Havas.)

Havener, Arthur R., Waltham, Mass., assignor to American Lacing Hook Co. Hopper. No. 1,103,580; July 14; Gaz. vol. 204; p. 519.

Hawes, Herbert E., New York, N. Y. Aeroplane and safety appliance. No. 1,104,889; July 28; Gaz. vol. 204; p. 1062.

Hawkins, Charles A. (See Schneider, John G., assignor.)

Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Folding paper-board box and stay therefor. No. 1,102,750; July 7; Gaz. vol. 204; p. 185.

Hawkins, Laurence A., Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company. Signal system. No. 1,102,916; July 7; Gaz. vol. 204; p. 241.

Hawkins, Laurence A., Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, Block-signal system. No. 1,102,917; July 7; Gaz. vol. 204; p. 241.

Hawkinson, Arthur E., Chicago, Ill. Cycle-stand holding and release device. No. 1,105,077; July 28; Gaz. vol. 204; p. 1128.

Hawley, Thornton W., Oakland, Cal. Spring-wheel. No. 1,103,045; July 14; Gaz. vol. 204; p. 333.

Hayden, Robert B., Spokane, Wash. Rotary engine. No. 1,105,076; July 28; Gaz. vol. 204; p. 1127.

Hayes, George B., Eagleville, Conn. Means for threading shuttles. No. 1,103,414; July 14; Gaz. vol. 204; p. 460.

Hayward, Peter T., and W. P. Sanderson, Collie, Western Australia, Australia. Steam-exhaust nozzle. No. 1,105,514; July 28; Gaz. vol. 204; p. 1281.

Healey, James A., Wakefield, Mass., assignor to Parker Brothers, Incorporated, Portland, Me. Game apparatus. No. 1,102,986; July 7; Gaz. vol. 204; p. 263.

Heany, John A., Washington, D. C. Electric heating device. No. 1,104,499; July 21; Gaz. vol. 204; p. 878.

Heany, John A., Flint, Mich., assignor, by mesne assignments, to A. E. L. Leckie, Washington, D. C. Electric starting and generating mechanism for vehicles. No. 1,103,672; July 14; Gaz. vol. 204; p. 554.

Heap & Sons, William. (See Heap, William, assignor.)

Heap, William, assignor to W. Heap & Sons, Grand Haven, Mich. Closet-flushing apparatus. No. 1,103,141; July 14; Gaz. vol. 204; p. 367.

Heard, Eugene N., Oakland, Cal. Lock. No. 1,102,660; July 7; Gaz. vol. 204; p. 154.

Heater, Jacob D., assignor to The Barney and Smith Car Company, Dayton, Ohio. Curtain-fixture. No. 1,104,358; July 21; Gaz. vol. 204; p. 829.

Heath, Charles W., Sioux Falls, S. D. Shock-absorber for motor-cycles. No. 1,104,500; July 21; Gaz. vol. 204; p. 878.

Heath, Charles W., Sioux Falls, S. D. Shock-absorber for motor-cycles. No. 1,104,501; July 21; Gaz. vol. 204; p. 879.

Heaton, Charles D., Providence, R. I., assignor to B. A. Ballou and Company, Incorporated. Safety-catch. No. 1,102,503; July 7; Gaz. vol. 204; p. 98.

Hebenstreit, Louis. (See Gerken and Hebenstreit.)

Hebert, Joseph P. (See Myre and Hebert.)

Hecker, Frank A., *et al.* (See Stewart, David S., assignor.)

Hector, Goah W., Charleston, Mo. Handsaw. No. 1,102,918; July 7; Gaz. vol. 204; p. 242.

Hedstrom, John P., Big Rapids, Mich. Adjustable head for band-saw grinders. No. 1,102,504; July 7; Gaz. vol. 204; p. 98.

Heidbreder, George E., and A. Ohnemus, assignors to Excelsior Stove and Manufacturing Company, Quincy, Ill. Stove-top support. No. 1,103,673; July 14; Gaz. vol. 204; p. 554.

Heidenheim, Isidore, *et al.* (See Negovatich, Peter, assignor.)

Heim, Joseph J., and W. Nottberg, Kansas City, Mo. Frost-remover. No. 1,102,336; July 7; Gaz. vol. 204; p. 40.

Heimann, Heinrich, Dessau, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Sulfurized dye and making same. No. 1,105,515; July 28; Gaz. vol. 204; p. 1281.

Heimar, Haynie H., Durham, N. C. Nut-lock. No. 1,104,731; July 21; Gaz. vol. 204; p. 958.

Heinzelman, Reginald, Belleville, Ill., assignor to The Timken Roller Bearing Company, Canton, Ohio. Roller-bearing. No. 1,102,404; July 7; Gaz. vol. 204; p. 64.

Helffach, Ernest, Walhalla, N. D. Potato-sorter. No. 1,105,427; July 28; Gaz. vol. 204; p. 1251.

Helm, Max, Pankow, Germany, assignor to General Electric Company. Bearing for measuring instruments. No. 1,104,189; July 21; Gaz. vol. 204; p. 770.

Hemker, William H. (See Manning, Frank X., assignor.)

Hemleb, Martin, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Embroidering-machine. No. 1,102,405; July 7; Gaz. vol. 204; p. 65.

Hemstreet, Stephen W., Audubon, Iowa. Broom-holder. No. 1,105,428; July 28; Gaz. vol. 204; p. 1252.

Hendee, Edward T., Chicago, Ill. Friction cutting-machine. No. 1,105,140; July 28; Gaz. vol. 204; p. 1147.

Henderson, Edwin D. (See Rosner, Max, assignor.)

Henderson, George R., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Radial truck. No. 1,104,667; July 21; Gaz. vol. 204; p. 936.

Henderson, George W. and O., Ridge Farm, Ill. Corn-harvesting machine. No. 1,103,766; July 14; Gaz. vol. 204; p. 584.

Henderson, Henry, Halstad, Minn. Draft-rigging. No. 1,105,326; July 28; Gaz. vol. 204; p. 1215.

Henderson, Matthew, assignor to The James Morrison Brass Manufacturing Company, Limited, Toronto, Ontario, Canada. Water-jet lifter. No. 1,102,505; July 7; Gaz. vol. 204; p. 99.

Henderson, Olen. (See Henderson, George W. and O.)

Henderson, Samuel, Nekoma, Ill. Stove-grate. No. 1,102,267; July 7; Gaz. vol. 204; p. 16.

Henderson, Thomas A. (See Pearson, James H., assignor.)

Hendler, Max, Staunton, Ill. Clock-synchronizer. No. 1,103,581; July 14; Gaz. vol. 204; p. 519.

Henrich, Henry, New York, N. Y. Ring-forming apparatus. No. 1,105,559; July 28; Gaz. vol. 204; p. 1297.

Henrich, Henry, New York, N. Y. Ring-forming apparatus. No. 1,105,560; July 28; Gaz. vol. 204; p. 1297.

Henrickson, Oscar, Pinewood, Fla. Pipe and bolt puller. No. 1,103,767; July 14; Gaz. vol. 204; p. 585.

Henry, Asa C. (See Carter, John M., assignor.) (Reissue.)

Henry, Eugene E. (See Mitchell and Henry.)

Henschel, Charles J., *et al.* (See Bliss, Donald M., assignor.)

Henschen, John. (See Hill and Henschen.)

Hensell, Walter S. (See Stoteimyer and Hensell.)

Henson, Abraham L., Fort Collins, Colo. Flying-machine. No. 1,104,045; July 21; Gaz. vol. 204; p. 721.

Herbst, William H., Dedham, Mass. Means for cleaning and turning bags. No. 1,104,668; July 21; Gaz. vol. 204; p. 937.

Herle, Frank, Chicago, Ill. Boiler-tube cleaner. No. 1,104,262; July 21; Gaz. vol. 204; p. 795.

Hermanowitz, Julius, Philadelphia, Pa. Calipers or dividers. No. 1,104,890; July 28; Gaz. vol. 204; p. 1062.

Hermens, William A., Forest Grove, Oreg. Machine for sowing land-plaster. No. 1,103,768; July 14; Gaz. vol. 204; p. 585.

Herndon, Calaway, Wagoner, Okla. Rail-joint. No. 1,103,964; July 21; Gaz. vol. 204; p. 694.

Herndon, D. C., *et al.* (See Tucker, Junius E., assignor.)

Herr Engine Company, The. (See Morton, Samuel S., assignor.)

Herreshoff, James B., Jr., assignor to Nichols Copper Co., New York, N. Y. Bessemerizing copper matte. No. 1,103,925; July 14; Gaz. vol. 204; p. 639.

Herriot, William. (See Davison, Herriot, Spidy, and Mattson.)

Herrmann, Ernst W. F., San Antonio, Tex. Biplane. No. 1,105,429; July 28; Gaz. vol. 204; p. 1252.

Herrmann, Robert, New York, N. Y. Tourist folding hat. No. 1,103,876; July 14; Gaz. vol. 204; p. 622.

Hershey, Euseblus E., Philadelphia, Pa. Dish cleaner and drier. No. 1,105,561; July 28; Gaz. vol. 204; p. 1297.

Herz, Richard, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company. Red vat dyestuffs and making same. No. 1,103,004; July 7; Gaz. vol. 204; p. 271.

Hess, Henry, Philadelphia, Pa. Method of and apparatus for tempering iron and steel articles. No. 1,103,358; July 14; Gaz. vol. 204; p. 442.

Hester, William J., Portland, Oreg. Window-lift. No. 1,102,506; July 7; Gaz. vol. 204; p. 99.

Heusser, Julius, Monroe, Wis. Hay-fork. No. 1,103,287; July 14; Gaz. vol. 204; p. 418.

Heusser, Wilfrid, Salt Lake City, Utah. Balance. No. 1,103,513; July 14; Gaz. vol. 204; p. 493.

Heusser, Wilfrid, Salt Lake City, Utah. Base for assay-balances and the like. No. 1,104,891; July 28; Gaz. vol. 204; p. 1063.

Heusser, Wilfrid, Salt Lake City, Utah. Balance. No. 1,104,892; July 28; Gaz. vol. 204; p. 1063.

Hewitt, Wallace B., Upper Troy, assignor to H. G. Sanford, New York, N. Y. Coiling apparatus. No. 1,103,201; July 14; Gaz. vol. 204; p. 391.

Hewitt, William B., Holyoke, Mass., assignor to International Steam Pump Company. Deep-well pump. No. 1,102,583; July 7; Gaz. vol. 204; p. 127.

Heycock, Harold F., Dunedin, New Zealand. Pneumatic tire. No. 1,103,877; July 14; Gaz. vol. 204; p. 623.

Hickok, Lester E., *et al.* (See Reynolds, Clifford W., assignor.)

Hicks, John, Calgary, Alberta, Canada. Gas-burner. No. 1,102,751; July 7; Gaz. vol. 204; p. 185.

Hidden, Charles P., New York, N. Y. Expression device for player-pianos and the like. No. 1,102,661; July 7; Gaz. vol. 204; p. 154.

Hidden, Charles P., New York, N. Y. Expression device for player-pianos and the like. No. 1,103,582; July 14; Gaz. vol. 204; p. 520.

Hlertz, Arthur E., Bridgeport, Conn. Automatic valve for gas-fixtures. No. 1,104,116; July 21; Gaz. vol. 204; p. 744.

Hlett, James I., Rockmart, Ga. Combined comb and brush. No. 1,102,919; July 7; Gaz. vol. 204; p. 242.

Higgin Manufacturing Company, The. (See Stein, Edward, assignor.)

Higgins, Joseph E., Grand Island, Nebr. Eyeglasses. No. 1,103,046; July 14; Gaz. vol. 204; p. 333.

Higham, Harry W., Sanderstead, and P. Risley, Gunnersbury, England, assignors to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,102,752; July 7; Gaz. vol. 204; p. 186.

Hildebrand, Paul, Munich, Germany. Electric-current transformer. No. 1,102,507; July 7; Gaz. vol. 204; p. 100.

Hildebrand, William R., New York, N. Y. Printing-press attachment. No. 1,104,669; July 21; Gaz. vol. 204; p. 937.

Hilger, George M., Chicago, Ill. Vapor-condenser. No. 1,105,430; July 28; Gaz. vol. 204; p. 1253.

Hill, Aaron, assignor of one-fourth to R. I. Blakeslee, Los Angeles, Cal. Caster and fitting. No. 1,102,508; July 7; Gaz. vol. 204; p. 100.

Hill, Cyrus, and J. Henschen, Iona, Fla. Cabinet. No. 1,102,920; July 7; Gaz. vol. 204; p. 242.

Hill, James B., Raceland, La. Tractor. No. 1,105,562; July 28; Gaz. vol. 204; p. 1297.

Hill, Joseph C., *et al.* (See Holman, John C., assignor.)

Hill, Joshua A., assignor of one-half to G. W. Rogers, Essex, Ontario, Canada. Gearing. No. 1,104,893; July 28; Gaz. vol. 204; p. 1063.

Hill, Ralph N., Montclair, N. J., assignor to Western Electric Company, New York, N. Y. Selective signaling system. No. 1,103,288; July 14; Gaz. vol. 204; p. 418.

Hill, Ralph N., Montclair, N. J., assignor to Western Electric Company, New York, N. Y. Selective signaling system. No. 1,103,583; July 14; Gaz. vol. 204; p. 520.

Hillard, James M., Gulfport, assignor of one-half to M. W. Connor, Columbia, Miss. Turpentine-extractor. No. 1,103,878; July 14; Gaz. vol. 204; p. 623.

Hiller, Walter L. (See Harris, Hollis H., assignor.)

Himebaugh, Adelbert C., Burr Oak, Mich. Steering-sled. No. 1,104,799; July 28; Gaz. vol. 204; p. 1030.

Hind Steel & Wire Works Inc. (See Renton, George W., assignor.)

Hineman, John, Cedar Rapids, Iowa. Lawn-mower sharpener. No. 1,103,584; July 14; Gaz. vol. 204; p. 521.

Hines, Joseph H., Prescott, Ariz. Pipe-threading machine. No. 1,104,046; July 21; Gaz. vol. 204; p. 721.

Hintz, John F., Brillion, Wis. Muffler. No. 1,103,769; July 14; Gaz. vol. 204; p. 586.

Hirsh, Allan M., Montclair, N. J., and J. C. Mitchell, Newport News, Va. Manufacture of concrete pipe. No. 1,102,584; July 7; Gaz. vol. 204; p. 128.

Hist, John, Berea, Ohio. Water-ballast land-roller. No. 1,104,502; July 21; Gaz. vol. 204; p. 879.

Hitner, Harry F., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Glass-drawing apparatus. No. 1,103,585; July 14; Gaz. vol. 204; p. 521.

Hoagland, Frank O., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn. Cartridge-shell. No. 1,103,202; July 14; Gaz. vol. 204; p. 391.

Hoagland, Frank O., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn. Cartridge-shell. No. 1,103,203; July 14; Gaz. vol. 204; p. 391.

Hobbs, James E., Coulsden, assignor to Ransome-verMehr Machinery Company, Limited, London, England. Drying apparatus. No. 1,102,662; July 7; Gaz. vol. 204; p. 155.

Hodges, Irene, San Francisco, Cal. Raising and lowering mechanism for curtains. No. 1,102,921; July 7; Gaz. vol. 204; p. 242.

Hodges, W. Burke, New Hudson, Mich. Potato-sorting apparatus. No. 1,105,327; July 28; Gaz. vol. 204; p. 1215.

Hodgson, Frederick J., London, England. Envelop and like fastener. No. 1,105,431; July 28; Gaz. vol. 204; p. 1253.

Hodgson, Firm of George. (See Kay, Joseph, assignor.)

Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Can lacquering or coating machine. No. 1,104,503; July 21; Gaz. vol. 204; p. 879.

Hodgson, Wesley W., Alisa Craig, Ontario, Canada. Automatic starter for internal-combustion engines. No. 1,104,894; July 28; Gaz. vol. 204; p. 1064.

Hoefer, Benjamin C., Chicago, Ill. Coin-delivering machine. No. 1,105,516; July 28; Gaz. vol. 204; p. 1282.

Hoefer, Benjamin C., Chicago, Ill. Coin-delivering machine. No. 1,105,517; July 28; Gaz. vol. 204; p. 1282.

Hoelemann, Richard, Brooklyn, N. Y. Safety attachment for power-presses. No. 1,102,509; July 7; Gaz. vol. 204; p. 100.

Hofacker, Anton, Newark, N. J. Sleigh attachment for vehicles. No. 1,103,415; July 14; Gaz. vol. 204; p. 460.

Hofen, William C., San Francisco, Cal. Vehicle-wheel. No. 1,102,406; July 7; Gaz. vol. 204; p. 65.

Hoffman, Edward F., Glandorf, Ohio. Tooth-brush. No. 1,103,879; July 14; Gaz. vol. 204; p. 623.

Hoffman, Edward G., *et al.* (See Harrington, Leslie, assignor.)

Hoffman, Frederick P., Uniontown, Pa. Toy pistol. No. 1,103,416; July 14; Gaz. vol. 204; p. 460.

Hoffman, John I., Arden, W. Va. Metal rail-tie. No. 1,105,432; July 28; Gaz. vol. 204; p. 1253.

Hoffman, Valentine, assignor of one-fourth to Selz Schwab & Company, Chicago, Ill. Controller for shoe machinery. No. 1,103,204; July 14; Gaz. vol. 204; p. 391.

Hoffman, Willis L., Jersey City, N. J. Pocket-clip for retaining articles. No. 1,102,922; July 7; Gaz. vol. 204; p. 243.

Hoffmann, Ernst G., deceased, New Rochelle; A. W. Kiddle, New York, N. Y., and A. M. Becker, Frankfort-on-the-Main, Germany, executors. Cage for ball-bearings. No. 1,103,965; July 21; Gaz. vol. 204; p. 694.

Hoffmann, Oskar, Willich, near Crefeld, Germany. Ball-bearing with several rows of balls. No. 1,105,433; July 28; Gaz. vol. 204; p. 1253.

Hoffmann, Simon, New York, N. Y., assignor, by mesne assignments, to Locomotive Superheater Company, Wilmington, Del. Boiler with fire-tube superheater. No. 1,104,756; July 21; Gaz. vol. 204; p. 967.

Hogan, Daniel, St. Louis, Mo. Steam-generating apparatus. No. 1,103,205; July 14; Gaz. vol. 204; p. 392.

Hogan, George L., New York, N. Y., assignor of one-fourth to W. E. Holland and three-fourths to Aero Manufacturing Company, Chicago, Ill. Vapor-burning apparatus. No. 1,104,732; July 21; Gaz. vol. 204; p. 959.

Hogan, Peter E., Atlanta, Tex. Listing attachment for plows. No. 1,103,770; July 14; Gaz. vol. 204; p. 586.

Hoge, Charles L., Carterville, Mo. Means for separating ores. No. 1,104,117; July 21; Gaz. vol. 204; p. 745.

Hohmann, Richard K., assignor to National Sewing Machine Company, Belvidere, Ill. Bobbin-holder for rotary-hook machines. No. 1,105,197; July 28; Gaz. vol. 204; p. 1167.

Hohn, John, Baldwin, Iowa. Wrench. No. 1,104,190; July 21; Gaz. vol. 204; p. 771.

Hoke, John I., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,104,191; July 21; Gaz. vol. 204; p. 771.

Holinger, Emil F., McKeesport, Pa. Manufacturing seamless tubes. No. 1,103,966; July 21; Gaz. vol. 204; p. 695.

Holland, Ab, assignor of one-half to S. B. Trapp, Jr., Forrest City, Ark. Cultivator. No. 1,105,198; July 28; Gaz. vol. 205; p. 1168.

Holland, Joseph E. (See Milton and Holland.)

Holland, William E., *et al.* (See Hogan, George L., assignor.)

Hollar, William H., Philadelphia, Pa. Automobile fuel-tank. No. 1,105,272; July 28; Gaz. vol. 204; p. 1195.

Holliday, Charles O., assignor of one-half to J. A. Richter, Kearney, Nebr. Washing-machine. No. 1,102,268; July 7; Gaz. vol. 204; p. 16.

Holliday, Ivar G., Boise, Idaho. Attachment for feeding cards to type-writers. No. 1,104,504; July 21; Gaz. vol. 204; p. 880.

Hollwell, Charles. (See Whittaker and Hollwell.)

Holloway, George, Sandusky, Ohio. Internal-combustion engine. No. 1,103,047; July 14; Gaz. vol. 204; p. 334.

Holman, John C., assignor of one-fourth to J. C. Hill and one-fourth to J. Xiyas, Kansas City, Mo. Switch-stand. No. 1,104,895; July 28; Gaz. vol. 204; p. 1065.

Holmes, Clay W., *et al.* (See Tree, Eber B., assignor.)

Holmes, Lawrence, Los Angeles, Cal. Upending bed. No. 1,102,585; July 7; Gaz. vol. 204; p. 128.

Holstein, Samuel, New York, N. Y. Undergarment. No. 1,104,047; July 21; Gaz. vol. 204; p. 722.

Holtfoth, Joachim T., Kalamazoo, Mich. Shutter-operating device. No. 1,104,118; July 21; Gaz. vol. 204; p. 745.

Holtzer-Cabot Electric Company. (See Hähnlen, Ewald, assignor.)

Holworthy, Herbert F., Church Stretton, England. Exercising apparatus. No. 1,104,505; July 21; Gaz. vol. 204; p. 880.

Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Keyboard mechanism for line-composing machines. No. 1,102,923; July 7; Gaz. vol. 204; p. 243.

Hooks, Jesse J., Run, Tex. Attachment for seed-planters. No. 1,102,924; July 7; Gaz. vol. 204; p. 243.

Hopkins, Charles L., Binghamton, N. Y. Photographic-film pack. No. 1,103,417; July 14; Gaz. vol. 204; p. 461.

Hopkins, Henry E., Waverly, Tenn. Railway cattle-guard. No. 1,105,434; July 28; Gaz. vol. 204; p. 1254.

Horn, Earl D., Gallon, Ohio. Burial-vault. No. 1,104,670; July 21; Gaz. vol. 204; p. 937.

Horn, Ernest H., assignor to Waterbury Clock Co., Waterbury, Conn. Cannon-pinion for timepieces. No. 1,104,422; July 21; Gaz. vol. 204; p. 850.

Hornbeck, Henry S., Elizabeth, N. J. Mechanical musical instrument. No. 1,102,269; July 7; Gaz. vol. 204; p. 16.

Horner, William H. (See Cunningham and Horner.)

Hornlack, John G., Hawley, Pa. Gate for railway-crossings. No. 1,105,078; July 28; Gaz. vol. 204; p. 1128.

Horning, Harry L., Waukesha, Wis. Governor for internal-combustion engines. No. 1,104,119; July 21; Gaz. vol. 204; p. 746.

Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,104,800; July 28; Gaz. vol. 204; p. 1031.

Horton Manufacturing Company. (See Van Wormer, Arba, assignor.)

Horváth, Peter P., Racine, Wis. Life-boat. No. 1,104,992; July 28; Gaz. vol. 204; p. 1097.

Hostetler, David W., Thompsontown, Pa. Railway cross-tie. No. 1,102,663; July 7; Gaz. vol. 204; p. 155.

Hotchkiss, Isaac E., Kensington, Conn. Pocket-knife. No. 1,104,896; July 28; Gaz. vol. 204; p. 1066.

Hothersall, John M., assignor to American Can Company, New York, N. Y. Bung-seal. No. 1,104,506; July 21; Gaz. vol. 204; p. 881.

Hotpoint Electric Heating Company. (See Richardson, Earl H., assignor.)

Hough, Azel C., Janesville, Wis. Shuttle mechanism. No. 1,103,586; July 14; Gaz. vol. 204; p. 521.

Houghton, Willard, Seattle, Wash. Car bunk and stake. No. 1,105,141; July 28; Gaz. vol. 204; p. 1148.

Hounget, Pierre H., Vonda, Saskatchewan, Canada. Holder for cigars and cigarettes. No. 1,102,925; July 7; Gaz. vol. 204; p. 244.

House, Thomas M., Richmond, Va. Adjustable swinging window-sash. No. 1,105,199; July 28; Gaz. vol. 204; p. 1168.

House, Tomas F., Hurst, Mo. Hay-stacker. No. 1,104,671; July 21; Gaz. vol. 204; p. 937.

Houston, Hugh, Lawrence, Mass. Sewing-machine. No. 1,103,587; July 14; Gaz. vol. 204; p. 522.

Hovenden, George H., Elmwood, assignor of one-half to W. P. Meldroth, Peoria, Ill. Hydrocarbon-burner. No. 1,105,079; July 28; Gaz. vol. 204; p. 1128.

Hovey, Selden P., Los Angeles, Cal. Permutation-lock. No. 1,103,771; July 14; Gaz. vol. 204; p. 586.

Howard, Charles L., Washington, D. C. Pneumatically-operated display device. No. 1,102,270; July 7; Gaz. vol. 204; p. 17.

Howard, Henry, Boston, Mass. Making bisulfite of soda. No. 1,104,897; July 28; Gaz. vol. 204; p. 1066.

Howard, Pliny J., assignor to The National Malleable Castings Company, Cleveland, Ohio. Truck side frame. No. 1,104,672; July 21; Gaz. vol. 204; p. 938.

Howarth, Albert, Providence, R. I. Carbureter. No. 1,105,200; July 28; Gaz. vol. 204; p. 1168.

Howe, Leon S., New York, N. Y. Metallic door-mat. No. 1,104,757; July 21; Gaz. vol. 204; p. 967.

Howe, Leon S., Hartford, assignor to The Stanley Works, New Britain, Conn. Box-strapping. (Reissue.) No. 13,765; July 7; Gaz. vol. 204; p. 278.

Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Divided semi-automatic signal-lever. No. 1,103,206; July 14; Gaz. vol. 204; p. 392.

Howell, Charles C., Red Rock, Pa. Belt-fastening device. No. 1,105,273; July 28; Gaz. vol. 204; p. 1195.

Howell, Edgar A., Terrell, Tex. Luggage-carrier. No. 1,105,435; July 28; Gaz. vol. 204; p. 1254.

Howell, Ralph D., Newark, N. J. Stretching and ironing table for laundries. No. 1,104,507; July 21; Gaz. vol. 204; p. 881.

Hoxie, William D., New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Water-tube boiler. No. 1,102,407; July 7; Gaz. vol. 204; p. 66.

Huard, Adelor D. (See Frank and Huard.)

Hubbell, Harry C., Newark, N. J. Making storage-battery electrodes. No. 1,104,898; July 28; Gaz. vol. 204; p. 1066.

Huber, Benno, Seattle, Wash. Producing a coffee substitute. No. 1,103,207; July 14; Gaz. vol. 204; p. 392.

Hubert, Conrad. (See Coleman, Clyde J., assignor.)

Hubert, Conrad. (See O'Neill, Henry G., assignor.)

Hübner, Ida M. M. E., Dresden, Germany. Interconvertible coverlet and wrapper. No. 1,102,408; July 7; Gaz. vol. 204; p. 66.

Huddleston, Samuel L. (See Johnson, Richard H., assignor.)

Hudson, James B., Charlotte, N. C. Re-covering cotton-mill rolls. No. 1,103,772; July 14; Gaz. vol. 204; p. 587.

Huebner, Josef, Chicago, Ill. Making sponge-rubber. No. 1,103,550; July 14; Gaz. vol. 204; p. 442.

Huelsdonk, William A., Le Grand, Cal. Distributer for concentrators. No. 1,104,299; July 21; Gaz. vol. 204; p. 808.

Huelsdonk, William A., Le Grand, Cal. Concentrating-table. No. 1,104,300; July 21; Gaz. vol. 204; p. 808.

Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Adjustable bearing-box for motor-vehicles. No. 1,103,289; July 14; Gaz. vol. 204; p. 418.

Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Hydrocarbon-motor. No. 1,104,423; July 21; Gaz. vol. 204; p. 850.

Huffaker, J. C., administrator. (See Savage, Charley S., assignor.)

Hugg, Francis E. (See Kane and Hugg.)

Huggins, Louis. (See Scott, Leland, assignor.)

Hughes, George L., Chicago, Ill., assignor of one-half to R. E. Cooper, Hopkinsville, Ky. Police and fire alarm system. No. 1,105,436; July 28; Gaz. vol. 204; p. 1254.

Hughes, Harry E., Baltimore, Md. Drainage-tube. No. 1,103,967; July 21; Gaz. vol. 204; p. 695.

Hughes, James F., Yonkers, N. Y. Game apparatus. No. 1,105,274; July 28; Gaz. vol. 204; p. 1195.

Hughes, William R. (See Statler and Johnson, assignors.)

Hult, Carl A. and O. W., Stockholm, Sweden. Governing device for explosion or combustion motors. No. 1,103,290; July 14; Gaz. vol. 204; p. 418.

Hult, Oscar W. (See Hult, Carl A. and O. W.)

Hummel, Friedrich H. (See Fuegmann and Hummel.)

Humphrey, Ernest N., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn. Buckle. No. 1,103,588; July 14; Gaz. vol. 204; p. 522.

Hunold, Ernest, Providence, R. I. Heel-plate blank. No. 1,104,192; July 21; Gaz. vol. 204; p. 771.

Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)

Hunt, William H., New York, N. Y. Dumping-body for coal-trucks. No. 1,104,801; July 28; Gaz. vol. 204; p. 1031.

Hunter, Ell A., Des Moines, Iowa. Overshoe. No. 1,105,437; July 28; Gaz. vol. 204; p. 1255.

Hunter, Harry S., Pittsburgh, Pa. Pneumatic tool. No. 1,102,271; July 7; Gaz. vol. 204; p. 17.

Hunter, Philip V., Heaton, Newcastle-upon-Tyne, England. Distribution of electrical energy. No. 1,104,733; July 21; Gaz. vol. 204; p. 959.

Hunting, Irving A., Plainfield, N. J., assignor to W. S. Morse, Philadelphia, Pa. Web-controlling mechanism. No. 1,103,142; July 14; Gaz. vol. 204; p. 368.

Hunting, Irving A., Plainfield, N. J., assignor to W. S. Morse, Philadelphia, Pa. Web-tension-controlling mechanism. No. 1,103,143; July 14; Gaz. vol. 204; p. 368.

Hunting, Irving A., Plainfield, N. J., assignor to W. S. Morse, Philadelphia, Pa. Web-tension-controlling mechanism. No. 1,103,144; July 14; Gaz. vol. 204; p. 368.

Huntington, Cory O., Centralia, Wash., assignor of one-half to G. G. Seely, Portland, Oreg. Mill-dog for head-blocks. No. 1,105,328; July 28; Gaz. vol. 204; p. 1216.

Huntsman, Robert F. R., Plainfield, N. J. Device for making smoke-rings. No. 1,103,514; July 14; Gaz. vol. 204; p. 494.

Hunyadi, Louis, Cleveland, Ohio. Rail joint and chair. No. 1,104,193; July 21; Gaz. vol. 204; p. 772.

Hupp, Elsie E. (See Hupp, Robert C., assignor.)

Hupp, Oscar L. (See Brees and Hupp.)

Hupp, Robert C., assignor to E. E. Hupp, Detroit, Mich. Automobile-hood. No. 1,104,802; July 28; Gaz. vol. 204; p. 1032.

Hurley Machine Company. (See Fisher, Alva J., assignor.)

Husch, George S. (See Husch, Sylvester B. and G. S.)

Husch, Sylvester B. and G. S., New York, N. Y. Tooth-brush. No. 1,103,515; July 14; Gaz. vol. 204; p. 494.

Huston, John T., Henderson, Tex. Peanut-shelling machine. No. 1,103,291; July 14; Gaz. vol. 204; p. 419.

Hutchings, Tresham F. E., New York, N. Y. Vehicle-wheel. No. 1,104,899; July 28; Gaz. vol. 204; p. 1066.

Hutchison, Miller R., New York, N. Y., assignor to Lovell-McConnell Manufacturing Company. Horn or signaling device. No. 1,102,586; July 7; Gaz. vol. 204; p. 129.

Huthsing, Charles K., St. Louis, Mo. Hose construction. No. 1,104,508; July 21; Gaz. vol. 204; p. 881.

Hyatt, Charles E., East Orange, N. J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,102,337; July 7; Gaz. vol. 204; p. 41.

Hyatt Roller Bearing Company. (See Bell, John C., assignor.)

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hyde, Ralph M., Westfield, N. Y. Furnace-damper regulator. No. 1,104,509; July 21; Gaz. vol. 204; p. 882.

Hydro Manufacturing Company. (See Lawrence, George E., assignor.)

Hydrocarbon Company, The. (See Ross, James C., assignor.)

Hynes Shade Guide Company. (See Richter, Herman F., assignor.)

I. E. Palmer Company, The. (See Palmer, Isaac E., assignor.)

Illenberger, Henry W., New Orleans, La. Antirattler and sash-adjuster for windows. No. 1,105,438; July 28; Gaz. vol. 204; p. 1255.

Illig, John H. (See Vallone and Illig.)

Imperial Brass Manufacturing Company. (See McCanna, John F., assignor.)

Ingalls, Raymond E., Seattle, Wash. Hypodermic syringe. No. 1,105,275; July 28; Gaz. vol. 204; p. 1195.

Ingalsbe, Edward L., Harrison, Nebr. Cross-rein buckle. No. 1,104,672; July 21; Gaz. vol. 204; p. 938.

Ingalsbe, Julius, Basom, N. Y. Fastener for covers of pails. No. 1,103,208; July 14; Gaz. vol. 204; p. 392.

Ingersoll-Rand Company. (See Banner, Otto, assignor.)

Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)

Ingersoll-Rand Company. (See Hansen, Charles C., assignor.)

Inman, Harry A., Amsterdam, N. Y. Machine for bailing paper pails. No. 1,104,803; July 28; Gaz. vol. 204; p. 1032.

Interlaced Curled Hair Company. (See Maussner, Frederick, assignor.)

International Barrel Company. (See Robinson, Edward W., assignor.)

International Steam Pump Company. (See Hewitt, William B., assignor.)

International Time Recording Company of New York. (See Tomlinson, Charles E., assignor.)
International Typesetting Machine Company. (See Homans, Thomas S., assignor.)
Internationale Stegwartbalken-Gesellschaft. (See Wilhelmi, Otto, assignor.)
Interstate Electric & Mfg. Co. (See Scharf, Frank W., assignor.)
Irish, David J. (See Peabody and Irish.)
Irish, David J., New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Apparatus for burning finely-divided fuel. No. 1,102,510; July 7; Gaz. vol. 204; p. 100.
Irons and Russell Company. (See Thatcher, Charles L., assignor.)
Irvin, John J., Bellwood, Pa. Universal-link chain. No. 1,105,518; July 28; Gaz. vol. 204; p. 1283.
Isbell, Adnah I. (See Bess, Grover C., assignor.)
Ishii, Junpachiro, Boston, Mass. Tide-motor. No. 1,104,510; July 21; Gaz. vol. 204; p. 882.
Ishiyama, Risaku, Seattle, Wash. Electric switch. No. 1,104,194; July 21; Gaz. vol. 204; p. 772.
Isom, Bennie, Concord, Nebr. Headlight for automobiles. No. 1,102,409; July 7; Gaz. vol. 204; p. 66.
Israel, Jacob. (See Keen, Thomas A., assignor.)
Ives, Herbert E., Mount Airy, assignor to The United Gas Improvement Company, Philadelphia, Pa. Means for producing from artificial lights the color effect of daylight. No. 1,104,900; July 28; Gaz. vol. 204; p. 1067.
Ivory, James W., Philadelphia, Pa. Device for shaping dental wooden sticks, &c. No. 1,102,753; July 7; Gaz. vol. 204; p. 186.
J. G. Brill Co., The. (See Adams, Walter S., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
Jackson, Alfred A., Norwalk, Conn. Picture-exhibiting device. No. 1,103,360; July 14; Gaz. vol. 204; p. 443.
Jackson, Alonzo E. (See Cade, Robert S., assignor.)
Jackson, George, assignor of one-fourth to J. Jackson, Pottsboro, Tex. Attachment for vehicle-seats. No. 1,103,145; July 14; Gaz. vol. 204; p. 369.
Jackson, Hinton A., assignor of one-half to D. B. Medill, Clinton, Ind. Electric railway-switch. No. 1,102,664; July 7; Gaz. vol. 204; p. 155.
Jackson, John. (See Jackson, George, assignor.)
Jackson, Walter, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in finishing shoes. No. 1,102,511; July 7; Gaz. vol. 204; p. 101.
Jacobs, Josef, Bulsdorf, and A. Nefgen, Siegburg, near Cologne, Germany; said Jacobs assignor to said Nefgen. Cutting device for printing-machines. No. 1,103,292; July 14; Gaz. vol. 204; p. 419.
Jacobs, Maurice L., Brooklyn, N. Y. Greenhouse construction. No. 1,103,773; July 14; Gaz. vol. 204; p. 587.
Jacoby, Benjamin, and C. S. Johnson, assignors to The Marion Steam Shovel Company, Marion, Ohio. Throttle-valve. No. 1,102,410; July 7; Gaz. vol. 204; p. 67.
Jacques, Archile J., Attleboro, Mass. Knife. No. 1,105,080; July 28; Gaz. vol. 204; p. 1129.
Jagemann, Max, New York, N. Y. Cover for tobacco-pipes. No. 1,103,361; July 14; Gaz. vol. 204; p. 443.
Jagenberg, Emil, Dusseldorf, Germany. Device for flattening finished paper bags. No. 1,102,754; July 7; Gaz. vol. 204; p. 187.
Jagenberg, Emil, Dusseldorf, Germany. Machine for making boxes. No. 1,102,755; July 7; Gaz. vol. 204; p. 187.
Jager, Charles J., Boston, assignor, by mesne assignments, to Jager Engine Company, Taunton, Mass. Internal-combustion engine. No. 1,105,142; July 28; Gaz. vol. 204; p. 1148.
Jager Engine Company. (See Jager, Charles J., assignor.)
James Morrison Brass Manufacturing Company, The. (See Henderson, Matthew, assignor.)
James, Thomas S., Peckham, London, England. Four-cycle internal-combustion engine. No. 1,104,804; July 28; Gaz. vol. 204; p. 1033.
James, Willard C., Los Angeles, Cal. Sanitary kitchen, lavatory, and laundry appliance. No. 1,102,411; July 7; Gaz. vol. 204; p. 67.
James, Willard C., Los Angeles, Cal. Combined laundry, kitchen, and pantry appliance. No. 1,102,412; July 7; Gaz. vol. 204; p. 68.
James, William D., Fort Atkinson, Wis. Concrete-anchor. No. 1,104,805; July 28; Gaz. vol. 204; p. 1033.
Jameson, Edgar E., Sunny Side, Miss. Car-seal. No. 1,102,512; July 7; Gaz. vol. 204; p. 101.
Janes, Martin A., Northfield, Mass. Switchboard-plug. No. 1,104,195; July 21; Gaz. vol. 204; p. 772.
Jansen, Alfred W., New York, N. Y. Marker for scales and the like. No. 1,104,424; July 21; Gaz. vol. 204; p. 851.
Jansen, J. H., *et al.* (See Kuehny, Charles O., assignor.)
Janson, Carl A., Rockford, assignor of one-fifth to A. R. Newberg, Chicago, Ill. Differential transmission mechanism. No. 1,103,048; July 14; Gaz. vol. 204; p. 334.
Jansson, Karl E. O., Flushing, assignor to Standard Plunger Elevator Company, New York, N. Y. Hydraulic-elevator stop mechanism. No. 1,102,587; July 7; Gaz. vol. 204; p. 129.
Jardine, Ernest, and J. Archer, Nottingham, England. Braiding-machine for making braided and plaited lace. No. 1,102,926; July 7; Gaz. vol. 204; p. 244.
Jarrijou, Juan D., Barcelona, Spain, assignor to Chemische Fabrik Troisdorf, Dr. Hülsberg & Seiler, Oberlar, near Troisdorf, Germany. Lubricating device. No. 1,104,901; July 28; Gaz. vol. 204; p. 1067.
Jarvis, Virgil O., Hanford, Cal. Automatic relief-valve for tires. No. 1,104,902; July 28; Gaz. vol. 204; p. 1067.
Jas. H. Matthews & Co. (See Matthews, Thomas O., assignor.)
Jasper, Max, Berlin, Germany. Safety-closure for containers of inflammable liquids. No. 1,105,276; July 28; Gaz. vol. 204; p. 1196.
Jelenk, Theodore. (See Tarasch, Louis C., assignor.)
Jellings, Frank. (See Brett, William J., assignor.)
Jenkins, Merrill L., Harvey, Ill., assignor to Buda Company, Chicago, Ill. Casing for motor gearing and starter connections. No. 1,102,338; July 7; Gaz. vol. 204; p. 41.
Jenol, Eugene, and S. Kruchio, Thorpe, W. Va.; said Jenol assignor to said S. Kruchio, R. M. Szabo, and S. Kruchio, Uniontown, Pa. Shock-absorber. No. 1,104,196; July 21; Gaz. vol. 204; p. 772.
Jensen, Albert J., Vancouver, British Columbia, Canada. Measure. No. 1,105,439; July 28; Gaz. vol. 204; p. 1255.
Jensen, Christian J., Preston, Idaho. Subsoiler plow attachment. No. 1,103,293; July 14; Gaz. vol. 204; p. 419.
Jensen, Hans P., San Francisco, Cal. Beet-harvester. No. 1,102,272; July 7; Gaz. vol. 204; p. 18.
Jensen, Hans L., assignor to The Egry Register Company, Dayton, Ohio. Numbering mechanism. No. 1,103,049; July 14; Gaz. vol. 204; p. 335.
Jensen, Nels A., Willmar, Minn. Flagstaff. No. 1,102,413; July 7; Gaz. vol. 204; p. 68.
Jerram, Arthur E. (See Bates, Jerram, and Gouldbourn.)
Jessup, Kate M., Centerville, Ind. Doll-support. No. 1,105,519; July 28; Gaz. vol. 204; p. 1283.
Jester, Eugene L., East Liverpool, Ohio. Earthenware-press. No. 1,103,968; July 21; Gaz. vol. 204; p. 695.
Jewett, Franc J., New York, N. Y., assignor to H. W. Johns-Manville Company. Machine for making metal-reinforced roofing. No. 1,105,277; July 28; Gaz. vol. 204; p. 1196.
Jockmus, Charles H., Ansonia, Conn. Auxiliary air-inlet device for internal-combustion engines. No. 1,103,969; July 21; Gaz. vol. 204; p. 695.
Johannesen, Svend E., Pittsfield, Mass., assignor to General Electric Company. Transformer. No. 1,102,513; July 7; Gaz. vol. 204; p. 101.
John, Frederick H., Middleport, Pa. Auto-wheel. No. 1,102,665; July 7; Gaz. vol. 204; p. 156.
John, Griffith. (See Lindquist, Smith, and John.)
John, Griffith, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Rope-drive elevator. No. 1,102,514; July 7; Gaz. vol. 204; p. 102.
John MacGregor Company, The. (See Pierce, Henry N., assignor.)
Johnson, Andrew J. (See Kilberg and Johnson.)
Johnson, August O., Chicago, Ill. Window-sash. No. 1,103,774; July 14; Gaz. vol. 204; p. 587.
Johnson, Carrie, Seattle, Wash. Belt for catamenial sacks. No. 1,104,674; July 21; Gaz. vol. 204; p. 938.
Johnson, Charles S. (See Jacoby and Johnson.)
Johnson, Chester F., Detroit, Mich. Grease-cup. No. 1,102,414; July 7; Gaz. vol. 204; p. 68.
Johnson, Chester N., Chicago, Ill. Fuse-block. No. 1,102,756; July 7; Gaz. vol. 204; p. 187.
Johnson, De Witt C., Brooklyn, assignor to The G. B. Farrington Company, New York, N. Y. Carton or container. No. 1,103,880; July 14; Gaz. vol. 204; p. 624.
Johnson, Fritz, assignor of one-half to C. Ortgysen, Englewood, Colo. Sanitary drinking-fountain. No. 1,103,775; July 14; Gaz. vol. 204; p. 588.
Johnson, George W., Lufkin, Tex. Relief valve and system for motor or other driven pumps. No. 1,102,273; July 7; Gaz. vol. 204; p. 18.
Johnson, Harry T., deceased, New York, N. Y.; N. F. Johnson, administratrix. Can construction. No. 1,105,143; July 28; Gaz. vol. 204; p. 1148.
Johnson, Harry T., deceased, New York, N. Y.; N. F. Johnson, administratrix. Dry-battery container. No. 1,105,144; July 28; Gaz. vol. 204; p. 1149.
Johnson, James A. (See Statler and Johnson.)
Johnson, John, Stiles, Wis. Loading and unloading device. No. 1,103,209; July 14; Gaz. vol. 204; p. 393.
Johnson, John D. A., Omaha, Nebr. Washing-machine dolly. No. 1,104,263; July 21; Gaz. vol. 204; p. 795.
Johnson, John M., Kansas City, Kans. Automatic and electric fire-alarm system. No. 1,102,666; July 7; Gaz. vol. 204; p. 156.
Johnson, John N., Albuquerque, N. Mex. Self-leveling repeating camera. No. 1,103,418; July 14; Gaz. vol. 204; p. 461.
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,105,346; July 28; Gaz. vol. 204; p. 1222.
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,105,347; July 28; Gaz. vol. 204; p. 1222.
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Signaling system. No. 1,105,350; July 28; Gaz. vol. 204; p. 1224.

Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,105,563; July 28; Gaz. vol. 204; p. 1298.
Johnson, Nettie F., administratrix. (See Johnson, Harry T.)
Johnson, Olof, Hudson, Wis. Rail-joint. No. 1,103,881; July 14; Gaz. vol. 204; p. 624.
Johnson, Oscar F., assignor to The Red Wing Manufacturing Company, Red Wing, Minn. Kitchen-cabinet. No. 1,104,301; July 21; Gaz. vol. 204; p. 808.
Johnson, Richard H., assignor of two-thirds to S. L. Huddleston, Creston, Wash. Concrete railway-tie. No. 1,105,201; July 28; Gaz. vol. 204; p. 1169.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Gun-barrel. No. 1,102,667; July 7; Gaz. vol. 204; p. 156.
Johnston, Clarence L., Oakland, Cal. Numbering-machine. No. 1,102,588; July 7; Gaz. vol. 204; p. 129.
Johnston, Clarence L., assignor to H. T. Hall, Oakland, Cal. Starter for internal-combustion engines. No. 1,105,520; July 28; Gaz. vol. 204; p. 1283.
Johnston, John A., Worcester, Mass. Making road-beds and pavements. No. 1,102,927; July 7; Gaz. vol. 204; p. 244.
Johnston, Robert T., Taunton, Mass., assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J. Stereotype-matrix-making press. No. 1,103,210; July 14; Gaz. vol. 204; p. 393.
Johnston, Robert T., assignor to The Goss Printing Press Company, Chicago, Ill. Form-table. No. 1,104,048; July 21; Gaz. vol. 204; p. 722.
Johnston, William. (See Scott and Johnston.)
Jones, David W. (See Miller and Jones.)
Jones, Edward M., Macon, Ga. Door for crematories. No. 1,102,668; July 7; Gaz. vol. 204; p. 157.
Jones, Edward S., Mobile, Ala., assignor of one-half to G. Cohn. Horse detacher and controller. No. 1,104,049; July 21; Gaz. vol. 204; p. 722.
Jones, Ernest, Birmingham, England. Bracelet and similar article. No. 1,103,776; July 14; Gaz. vol. 204; p. 588.
Jones, John E., Glenfield, N. Y. Extension car-step. No. 1,103,146; July 14; Gaz. vol. 204; p. 369.
Jones, John J. A., Green Island, N. Y. Printing device. No. 1,102,589; July 7; Gaz. vol. 204; p. 130.
Jones, Joseph G., Pontiac, Mich. Motor-cycle drive. No. 1,105,351; July 28; Gaz. vol. 204; p. 1225.
Jones, Lacy H., Lewiston, Ill. Derrick. No. 1,105,278; July 28; Gaz. vol. 204; p. 1196.
Jones, Lenora H. and L. M., Wichita, Kans. Electric sign. No. 1,103,294; July 14; Gaz. vol. 204; p. 420.
Jones, Leroy M. (See Jones, Lenora H. and L. M.)
Jones, Palmer A., *et al.* (See Annable, Warren W., assignor.)
Jones, William R., Summitville, Ind. Balancing and steering device. No. 1,102,515; July 7; Gaz. vol. 204; p. 102.
Jordan, Thomas N., Long Beach, Miss. Spring-wheel. No. 1,103,295; July 14; Gaz. vol. 204; p. 420.
Joy, Harry O., and A. R. Montferrand, Boston, Mass. Combination washing appliance and bath-seat. No. 1,103,516; July 14; Gaz. vol. 204; p. 494.
Joyce, Gerald S., Gloucester, Mass. Electric-lamp socket. No. 1,102,757; July 7; Gaz. vol. 204; p. 187.
Judge, Franklin, Greenfield, Mass. Self opening or releasing thread-cutting die. No. 1,105,565; July 28; Gaz. vol. 204; p. 1299.
Julien, Bartholomew, Omaha, Nebr., assignor to Transportation Utilities Company. Journal-box cooler. No. 1,102,516; July 7; Gaz. vol. 204; p. 102.
Jungbauer, Max. (See Vöster and Jungbauer.)
Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Mixed-pressure turbine. (Reissue.) No. 13,772; July 14; Gaz. vol. 204; p. 641.
Junkers, Hugo, Aix-la-Chapelle, Germany. Piston of engines, compressors, motors, and other machines having reciprocating pistons. No. 1,102,590; July 7; Gaz. vol. 204; p. 130.
Junkers, Hugo, Aix-la-Chapelle, Germany. Method and device for measuring the heating value of fuels. No. 1,103,915; July 14; Gaz. vol. 204; p. 635.
Junquera, Buenaventura, Oviedo, Spain. Treatment of minerals and extracting metal. No. 1,102,339; July 7; Gaz. vol. 204; p. 41.
Justice, Ithamar M., Dayton, Ohio. Heating system for driers. No. 1,105,566; July 28; Gaz. vol. 204; p. 1299.
Kaasa, Ole K., Greenbush, Minn. Motor-vehicle. No. 1,103,419; July 14; Gaz. vol. 204; p. 402.
Kahn, Samuel, New York, N. Y. Scupper. No. 1,104,806; July 28; Gaz vol. 204; p. 1033.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Biased polarized ringer. No. 1,102,415; July 7; Gaz. vol. 204; p. 68.
Kalamazoo Loose Leaf Binder Company. (See Wigginton, George P., assignor.)
Kalfus, Victor, New York, N. Y. Water-boiler appliance. No. 1,104,511; July 21; Gaz. vol. 204; p. 883.
Kalinowski, Alexander J., Lyons, Colo. Multiple-fuse plug. No. 1,103,777; July 14; Gaz. vol. 204; p. 588.
Kalitsch, Friedrich von, Baerentzoren, near Dobritz, Germany. Making waste wood obtained in forestry into briquets. No. 1,102,591; July 7; Gaz. vol. 204; p. 130.
Kamp, John C., and A. E. Finch, Buffalo, N. Y. Pulley. No. 1,102,928; July 7; Gaz. vol. 204; p. 245.
Kane, Forrest H., Charlevoix Mich. Bell-striking device. No. 1,102,340; July 7; Gaz. vol. 204; p. 42.
Kane, Frederick L., Huntington, N. Y. Plaster-support for wall-coverings. No. 1,103,362; July 14; Gaz. vol. 204; p. 443.
Kane, John C., and F. E. Hugg, Detroit, Mich. Heater for automobiles. No. 1,104,120; July 21; Gaz. vol. 204; p. 746.
Kantorowicz, Julius, Breslau, Germany. Manufacturing adhesives giving with cold water strong cementing masses. No. 1,105,567; July 28; Gaz. vol. 204; p. 1300.
Kantro, John D., New York, N. Y. Bell for gas-lights. No. 1,102,592; July 7; Gaz. vol. 204; p. 130.
Karl, George E., assignor to The Dunham Company, Berea, Ohio. Handle-locking device for rollers. No. 1,105,279; July 28; Gaz. vol. 204; p. 1197.
Karlberg, Arvid E., and M. B. Sargent, Owensboro, Ky., assignors to The Stenotype Company, Indianapolis, Ind. Type-writing machine. No. 1,105,081; July 28; Gaz. vol. 204; p. 1129.
Karlberg, Arvid E., and M. B. Sargent, Owensboro, Ky., assignors to The Stenotype Company, Indianapolis, Ind. Rewinding mechanism for type-writing machines. No. 1,105,082; July 28; Gaz. vol. 204; p. 1130.
Karp, Morris, assignor to Passaic Metal Ware Company, Passaic, N. J. Container. No. 1,103,674; July 14; Gaz. vol. 204; p. 554.
Kasley, Alexander T., Swissvale, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Mixture-controlling means for motors. No. 1,102,341; July 7; Gaz. vol. 204; p. 42.
Kay, Joseph, Windhill, Shipley, assignor to Firm of G. Hodgson, Limited, Bradford, England. Loom pattern-chain. No. 1,102,669; July 7; Gaz. vol. 204; p. 157.
Kayser, Alfred. (See Müller and Kayser.)
Keagy, Charles O. (See Carmer and Keagy.)
Keane, Albert M., *et al.* (See Monzaney, John, assignor.)
Keast, Alfred J., Campbell, assignor to California Fruit Canners Association, San Francisco, Cal. Cooker. No. 1,104,425; July 21; Gaz. vol. 204; p. 851.
Keef, William R. (See Fordyce and Keef.)
Keeler Brass Company. (See Kusterer, Carl C., assignor.)
Keen, Thomas A., assignor to J. Israel, New Orleans, La. Garbage-can. No. 1,105,440; July 28; Gaz. vol. 204; p. 1256.
Keen, William H., assignor to Washington Steel & Ordnance Company, Washington, D. C. Armor-piercing projectile. No. 1,102,758; July 7; Gaz. vol. 204; p. 188.
Kees, Frederick D., Beatrice, Nebr. End fixture for siding-clapboards. No. 1,103,050; July 14; Gaz. vol. 204; p. 335.
Keffer, Julia C., Atlantic City, N. J. Sanitary shield. No. 1,102,759; July 7; Gaz. vol. 204; p. 188.
Kehn, Robert, Fairfax, S. D. Wire clothes-pin. No. 1,103,420; July 14; Gaz. vol. 204; p. 462.
Keith, George. (See Keith, James and G.)
Keith, James and G., London, England. Device for lighting and extinguishing gas-lamps. No. 1,103,517; July 14; Gaz. vol. 204; p. 494.
Keithley, Herbert R., Davenport, Iowa. Underframe for railway-cars. No. 1,104,903; July 28; Gaz. vol. 204; p. 1068.
Keler, Hermann von, and A. Weindel, Leverkusen, Germany, assignors, by mesne assignments, to General Chemical Company, New York, N. Y. Producing sulfuric-acid anhydrid according to the contact process. No. 1,102,670; July 7; Gaz. vol. 204; p. 157.
Keller, Frederick, and H. Cogan, Paterson, N. J. Tire. No. 1,104,426; July 21; Gaz. vol. 204; p. 851.
Kellner, Josef, Brooklyn, and S. Werms, New Rochelle, assignors to Franklin Knitting Mills, New York, N. Y. Knitted fabric. No. 1,103,589; July 14; Gaz. vol. 204; p. 522.
Kellogg, Robert B. (See Curtiss, Clarence E., assignor.)
Kellogg Switchboard & Supply Company. (See Dyson, Alfred H., assignor.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Toasted Corn Flake Co., The. (See Valentine, Ralph E., assignor.)
Kelly, John F., Pittsfield, Mass. Expression-controlling means for musical instruments. No. 1,103,590; July 14; Gaz. vol. 204; p. 523.
Kelly, Thomas H., New York, N. Y. Traction device for vehicle-wheels. No. 1,102,274; July 7; Gaz. vol. 204; p. 18.
Kemp, John H. O., Charles Town, W. Va. Fruit-grader. No. 1,103,970; July 21; Gaz. vol. 204; p. 696.
Kempsmith Manufacturing Co., The. (See Goetz, John, assignor.)
Kendall, Edward D., Elizabeth, N. J., assignor of twenty-two one-hundredths to D. Q. Brown, New York, and one-third to A. R. Ledoux, Cornwall, N. Y. Composition of matter. No. 1,103,903; July 14; Gaz. vol. 204; p. 631.
Kendall, Edward D., Elizabeth, N. J., assignor of one-third to D. Q. Brown, New York, and one-third to A. R. Ledoux, Cornwall, N. Y. Composition of matter. No. 1,105,568; July 28; Gaz. vol. 204; p. 1300.
Kendall, Edward D., Elizabeth, N. J., assignor of one-half to C. N. Lindley and one-fourth to J. B. Haggin, New York, N. Y. Apparatus for carbureting air. No. 1,104,427; July 21; Gaz. vol. 204; p. 852.
Kendall, Reginald W., Terre Haute, Ind. Platform-steps for railway passenger-cars. No. 1,102,342; July 7; Gaz. vol. 204; p. 42.

Kendall, William F., Valley Cottage, assignor to Sears Cross & Co., New York, N. Y. Compensating driving mechanism. No. 1,103,778; July 14; Gaz. vol. 204; p. 589.

Kennard, Frederic H. (See Coughlin, Michael F., assignor.)

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,103,051; July 14; Gaz. vol. 204; p. 335.

Kennedy, David S., New York, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,104,512; July 21; Gaz. vol. 204; p. 883.

Kennedy, John J., New York, N. Y. Shoring excavations. No. 1,105,145; July 28; Gaz. vol. 204; p. 1149.

Kenvin, Thomas H., Gary, Ind. Regenerator construction. No. 1,104,513; July 21; Gaz. vol. 204; p. 883.

Kephart, John A., Wellston, Okla. Insulator attachment. No. 1,105,521; July 28; Gaz. vol. 204; p. 1284.

Kerr Adjustable Strap Co. (See Kerr, John W., assignor.) (Reissue.)

Kerr, John W., Orlando, Fla., assignor to Kerr Adjustable Strap Co., Inc. Quickly-adjustable stirrup-leather. (Reissue.) No. 13,778; July 21; Gaz. vol. 204; p. 973.

Kertész, John, Woodbridge, N. J. Signal. No. 1,103,052; July 14; Gaz. vol. 204; p. 336.

Kertész, John, Pottstown, Pa. Life-boat. No. 1,104,428; July 21; Gaz. vol. 204; p. 852.

Keto, Aaron, Fitchburg, Mass. Washing-machine. No. 1,104,904; July 28; Gaz. vol. 204; p. 1068.

Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,102,593; July 7; Gaz. vol. 204; p. 131.

Keystone Electrical Instrument Company. (See Brown, Richard P., assignor.)

Kidd, Archie M. (See Snow, Kidd, and Whaley.)

Kidder, John F., Burlington, Vt. Volumetric meter-tester. No. 1,103,882; July 14; Gaz. vol. 204; p. 624.

Kidder, Wellington P., Boston, Mass., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Ribbon-reversing mechanism for type-writers. No. 1,104,359; July 21; Gaz. vol. 204; p. 829.

Kiddle, Alfred W., *et al.*, executors. (See Hoffmann, Ernst G.)

Kiefer, Fred, assignor of one-half to G. D. Fuchs, Scranton, Pa. Game-board. No. 1,102,594; July 7; Gaz. vol. 204; p. 131.

Kiefer, Karl, Cincinnati, Ohio. Fluid pump or motor. No. 1,103,053; July 14; Gaz. vol. 204; p. 336.

Kiefer, Karl, Cincinnati, Ohio. Closure for containers. No. 1,103,054; July 14; Gaz. vol. 204; p. 336.

Kielblock, Albert, and H. Dittman, Arnstadt, Germany. Door contact-switch. No. 1,103,883; July 14; Gaz. vol. 204; p. 624.

Kihn, Nicolas, assignor to Eisenhütten-Aktien-Verein Dudelingen, Dudelingen, Luxemburg. Preliminary heater. No. 1,104,302; July 21; Gaz. vol. 204; p. 808.

Kilberg, William G., Cambridge, and A. J. Johnson, Somerville, assignors to C. A. Cook Company, Cambridge, Mass. Combined piano and player bench. No. 1,104,675; July 21; Gaz. vol. 204; p. 939.

Killeen, Andrew J. (See Van Ness and Killeen.)

Kilstrom, Axel, Providence, R. I. Eraser for lead-pencils. No. 1,104,514; July 21; Gaz. vol. 204; p. 884.

Kime, Ralph E., Fostoria, Ohio. Garbage-receptacle. No. 1,102,275; July 7; Gaz. vol. 204; p. 19.

Kimmel, George C., assignor to The Cincinnati Grinder Company, Cincinnati, Ohio. Extension-slide. No. 1,102,416; July 7; Gaz. vol. 204; p. 69.

Kimmel, George C., assignor to The Cincinnati Grinder Company, Cincinnati, Ohio. Head-stock for grinders. No. 1,102,417; July 7; Gaz. vol. 204; p. 69.

Kindrick, Jesse H., assignor of one-half to C. B. Siler, Valley Center, Kans. Cot for invalids. No. 1,103,296; July 14; Gaz. vol. 204; p. 420.

King, Charles B., and J. W. Fellmeth, assignors to The Marion Steam Shovel Company, Marion, Ohio. Guide for bowlines. No. 1,103,055; July 14; Gaz. vol. 204; p. 337.

King, David W., Maitland, Mo. Road-grader. No. 1,102,671; July 7; Gaz. vol. 204; p. 157.

King, Dwight D., Warren, Pa. Lamp. No. 1,104,264; July 21; Gaz. vol. 204; p. 795.

King, John, assignor of one-half to I. I. Shoemaker, Spokane, Wash. Car door and steps. No. 1,105,202; July 28; Gaz. vol. 204; p. 1169.

King, John G. (See Ezell and King.)

King, Philip H., *et al.* (See Allen, Ernest G., assignor.)

King, Robert N. (See Morgan, Loren C., assignor.)

King, William P. (See Parks, Frederick R., assignor.)

Kingsbury, Albert, Pittsburgh, Pa. Thrust-bearing. No. 1,102,276; July 7; Gaz. vol. 204; p. 19.

Kingsbury, George P., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,103,363; July 14; Gaz. vol. 204; p. 443.

Kinman, Evert L. (See Lyford and Kinman.)

Kinnear Manufacturing Company, The. (See McCloud, Edward H., assignor.)

Kinney, Howard K., Murray, Okla. Locomotive and car wheel replacer. No. 1,104,676; July 21; Gaz. vol. 204; p. 939.

Kino Limited. (See Anderson, Walter H., assignor.)

Klovsky, Frank, *et al.* (See Klovsky, John, assignor.)

Klovsky, John, Astoria, N. Y., assignor of two-thirds to R. Klovsky, Springfield, Mass., and F. Klovsky, New York, N. Y. Corn-sheller. No. 1,104,677; July 21; Gaz. vol. 204; p. 939.

Klovsky, Richard, *et al.* (See Klovsky, John, assignor.)

Kirk, Morris P., assignor of one-half to J. H. Leavell, Salt Lake City, Utah. Hydraulic classifier. No. 1,102,672; July 7; Gaz. vol. 204; p. 157.

Kirkman, Thomas W. (See Hart and Kirkman.)

Kirsch, Otto, New York, N. Y. Pneumatic paper-feed mechanism. No. 1,105,352; July 28; Gaz. vol. 204; p. 1225.

Kiss, Stephen A., Yonkers, N. Y. Letter-box and collecting-pouch. No. 1,102,760; July 7; Gaz. vol. 204; p. 188.

Kitsee, Isidor, Philadelphia, Pa., assignor to American Telephone and Telegraph Company, New York, N. Y. Cable telegraphy. No. 1,103,421; July 14; Gaz. vol. 204; p. 462.

Klapan, Andy. (See Liska, John, assignor.)

Kleebauer, Charles P. (See Sherman and Kleebauer.)

Kleeboe Company, The. (See Sherman and Kleebauer, assignors.)

Kleinschmidt, Daniel H., Buffalo, N. Y. Exercising-machine or gaming apparatus. No. 1,105,329; July 28; Gaz. vol. 204; p. 1216.

Kliewer, Peter H., Woodburn, Oreg. Attachment for mowing-machines. No. 1,103,779; July 14; Gaz. vol. 204; p. 589.

Kline, Richard E., Los Angeles, Cal., assignor to Oil Well Supply Company, Pittsburgh, Pa. Rotary drilling-rig. No. 1,103,518; July 14; Gaz. vol. 204; p. 495.

Klintberg, Eddy M., Seattle, Wash. Extinguisher for burners. No. 1,104,905; July 28; Gaz. vol. 204; p. 1068.

Kluge, Otto, Golconda, Ill. Mowing-machine. No. 1,102,929; July 7; Gaz. vol. 204; p. 245.

Kluge, William H., Indianapolis, Ind. Emblem. No. 1,103,422; July 14; Gaz. vol. 204; p. 463.

Knapp, George O. (See Beach, Clarence E., assignor.)

Knapp, William G., Alhambra, and C. E. Wilcox, East Bakersfield, Cal. Pipe-wrench. No. 1,102,517; July 7; Gaz. vol. 204; p. 103.

Knauff, Philip J., New York, N. Y. Spring-attaching clip. No. 1,104,678; July 21; Gaz. vol. 204; p. 939.

Kneass, Strickland L., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Coupling-nut. No. 1,103,591; July 14; Gaz. vol. 204; p. 523.

Knickrehm, Charles H. W., Forest Park, Ill. Combination desk and seat for school-rooms. No. 1,103,884; July 14; Gaz. vol. 204; p. 625.

Knight, Arthur S., Newark, N. J., assignor to Westinghouse Lamp Company. Electric incandescent lamp. No. 1,104,807; July 28; Gaz. vol. 204; p. 1033.

Knight, Herbert, New York, N. Y. Composite dramatic production. No. 1,102,595; July 7; Gaz. vol. 204; p. 131.

Knights, Lee A. (See Gilman and Knights.)

Knips, Christoph, Charlottenburg, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany. Protecting pumps from ozone. No. 1,103,211; July 14; Gaz. vol. 204; p. 393.

Knoblock, James B., Chicago, Ill. Pulverizer. No. 1,104,121; July 21; Gaz. vol. 204; p. 747.

Knoedler, Elmer L., assignor to Welsbach Light Company, Gloucester City, N. J. Mantle for inverted incandescent gas-lamps and tying the same. No. 1,104,515; July 21; Gaz. vol. 204; p. 884.

Knoll, James H. (See Miller, Willoughby S., assignor.)

Knowles, George H. (See Gray and Knowles.)

Knowlton, Phil H. (See Wright and Knowlton.)

Knox, George, assignor of one-half to J. L. Baker, Omaha, Nebr. Controlling device for refrigerating systems. No. 1,103,885; July 14; Gaz. vol. 204; p. 625.

Knox, Luther L., Niles, Ohio, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Furnace-door. No. 1,103,297; July 14; Gaz. vol. 204; p. 421.

Knox Pressed & Welded Steel Company. (See Knox, Luther L., assignor.)

Kobert, Frank P., Fairhaven, assignor to The Barnes & Kobert Manufacturing Company, New Haven, Conn. Line or cable clamp. No. 1,103,056; July 14; Gaz. vol. 204; p. 337.

Koch, Max M. (See Becker, Paul, assignor.)

Koch, William. (See Mattern and Koch.)

Kockrow, Richard, Neider-Lausitz, Germany. Protecting-garment for aviators. No. 1,104,808; July 28; Gaz. vol. 204; p. 1034.

Koechlin, Albert G., Basel, Switzerland, assignor, by mesne assignments, to Draper Company, Hopedale, Mass. Thread-severing mechanism for automatic looms. No. 1,104,303; July 21; Gaz. vol. 204; p. 808.

Koehler, Henry L., Louisville, Ky. Printing-press. No. 1,103,147; July 14; Gaz. vol. 204; p. 370.

Koehler, Wilhelm, Newkirk, Okla. Reversible plow. No. 1,105,032; July 28; Gaz. vol. 204; p. 1111.

Koehring Machine Company. (See Lichtenberg, Erich H., assignor.)

Koepplinger, Hermann, Vienna, Austria-Hungary. Cutting and punching machine. No. 1,102,761; July 7; Gaz. vol. 204; p. 189.

Kohl, Edward, *et al.* (See Allen, Ernest G., assignor.)

Kohler, G. A. Edward. (See Callow, Cecil B., assignor.)

Kopf, Henry B., New Haven, Conn. Shipping-crate. No. 1,102,930; July 7; Gaz. vol. 204; p. 245.

Koppers Company, H. (See Koppers, Heinrich, assignor.)

Koppers, Heinrich, Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill. Method of and means for working coke-ovens. No. 1,105,522; July 28; Gaz. vol. 204; p. 1284.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,105,330; July 28; Gaz. vol. 204; p. 1217.

Korlitke, Gustav, New York, N. Y. Safety-stirrup. No. 1,102,762; July 7; Gaz. vol. 204; p. 189.

Koshalko, Charles, assignor of one-half to J. Caufflel, Johnstown, Pa. Street-car fender and snow-sweeper. No. 1,102,763; July 7; Gaz. vol. 204; p. 189.

Kovács, Wendel, Brantford, Ontario, Canada. Spring-beel. No. 1,102,343; July 7; Gaz. vol. 204; p. 43.

Kraemer, Augustus, Tres Pinos, Cal. Pipe-coupling. No. 1,103,212; July 14; Gaz. vol. 204; p. 394.

Krakau, Harry T., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,104,516; July 21; Gaz. vol. 204; p. 885.

Kramer, Andrew A., Kansas City, Kans. Poultry-house. No. 1,104,197; July 21; Gaz. vol. 204; p. 772.

Kramer, Frank, assignor of thirty-five one-hundredths to D. C. Boice, Seattle, Wash. Assorting apparatus. No. 1,104,993; July 28; Gaz. vol. 204; p. 1097.

Kranebiel, John V., Williamsville, N. Y. Washing-machine. No. 1,102,987; July 7; Gaz. vol. 204; p. 204.

Kratky, Frank, New York, N. Y. Life-boat-launching mechanism. No. 1,103,971; July 21; Gaz. vol. 204; p. 696.

Kratz, Oscar E., assignor to H. Carhartt, manufacturer, Detroit, Mich. Safety-pocket. No. 1,103,298; July 14; Gaz. vol. 204; p. 421.

Krawczyk, Stanislaw, Buffalo, N. Y. Life-boat. No. 1,102,764; July 7; Gaz. vol. 204; p. 189.

Krayer, Stephen S., St. Louis, Mo. Gas-engine starter. No. 1,104,050; July 21; Gaz. vol. 204; p. 723.

Krebs, Charles E. (See Pollock, Benjamin P., assignor.)

Kreidl, Ignaz, Vienna, Austria-Hungary. Enameling composition. No. 1,104,679; July 21; Gaz. vol. 204; p. 940.

Krippendorf, Charles H., *et al.* (See Wald, James F., assignor.)

Krna, Steve T. (See Turzik, Paul, assignor.)

Kroger, Peter H., Jr., Wessington Springs, S. D. Corn-planter. No. 1,103,299; July 14; Gaz. vol. 204; p. 421.

Kronenbitter, Frank E., Maywood, Ill. Drop or stand for supporting motor-cycles. No. 1,105,353; July 28; Gaz. vol. 204; p. 1226.

Kropp, Paul, Dresden, Germany. Separator. No. 1,104,051; July 21; Gaz. vol. 204; p. 723.

Kruchio, Sarah, *et al.* (See Jenol and Kruchio, assignors.)

Kruchio, Steve. (See Jenol and Kruchio.)

Krug, Karl, Fechenheim, Frankfort-on-the-Main, Germany. Grinding-machine. No. 1,102,344; July 7; Gaz. vol. 204; p. 43.

Kruh, Oslas O., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 1,104,198; July 21; Gaz. vol. 204; p. 773.

Kucharski, Stanislaus, Berlin, Germany. Arrangement for making living pictures. No. 1,103,057; July 14; Gaz. vol. 204; p. 337.

Kucki, Louis J., Chicago, Ill. Cleaner. No. 1,102,765; July 7; Gaz. vol. 204; p. 190.

Kueller, Mathias, Lake George township, Stearns county, Minn. Quack-grass digger. No. 1,102,518; July 7; Gaz. vol. 204; p. 103.

Kuehny, August, *et al.* (See Kuehny, Charles O., assignor.)

Kuehny, Charles O., Lakewood, assignor of one-fourth to W. Kuehny, one-fourth to A. Kuehny, and one-fourth to J. H. Jansen, Cleveland, Ohio. Reversible window-sash. No. 1,105,523; July 28; Gaz. vol. 204; p. 1285.

Kuehny, Wendelin, *et al.* (See Kuehny, Charles O., assignor.)

Kuhn, John F. (See Travers, Stephen A., assignor.)

Kunberger, Albert F. (See O'Donnell and Kunberger.)

Kuntz, Frank A., New York, N. Y. Temperature-regulator. No. 1,104,680; July 21; Gaz. vol. 204; p. 940.

Kurtz, Samuel E., Odebolt, Iowa. Automatic governing-valve. No. 1,105,280; July 28; Gaz. vol. 204; p. 1197.

Kusterer, Carl C., assignor to Keeler Brass Company, Grand Rapids, Mich. Foot-rest. No. 1,104,360; July 21; Gaz. vol. 204; p. 829.

Kyllonen, William, Oakes, N. D. Trace-attaching device. No. 1,105,331; July 28; Gaz. vol. 204; p. 1217.

L. A. Thompson Scenic Railway Company, The. (See Thompson, La Marcus A., assignor.)

L'Hommedieu, George A., Atlantic City, N. J. Bath-tub attachment. No. 1,104,430; July 21; Gaz. vol. 204; p. 853.

La Salle Company, The. (See Sinner, Emil, assignor.) (Reissue.)

La Vanway, William W., Los Angeles, Cal. Folding bed. No. 1,105,203; July 28; Gaz. vol. 204; p. 1170.

Laborda, Richard, San Francisco, Cal. Foot-operated elevator. No. 1,104,199; July 21; Gaz. vol. 204; p. 773.

Lacene Manufacturing Company. (See Lapham, Paul J., assignor.)

Lacene Manufacturing Company. (See Nichols, Elmer P., assignor.)

Lach, Bela, Vienna, Austria-Hungary. Treatment of oils. No. 1,104,906; July 28; Gaz. vol. 204; p. 1068.

Lachman Manufacturing Company. (See Gill, Lewis W., assignor.)

Lachman, Maurice, New York, assignor to Universal Electric Welding Company, Long Island City, N. Y. Reel. No. 1,103,519; July 14; Gaz. vol. 204; p. 495.

Laclede-Christy Clay Products Company. (See Miller, Robert H., assignor.)

Lacrotte, Nazaire, Paris, France. Safety device for aeroplanes. No. 1,104,429; July 21; Gaz. vol. 204; p. 852.

Lacrotte, Nazaire, Paris, France. Pneumatic suit for aviators. No. 1,105,569; July 28; Gaz. vol. 204; p. 1300.

Lagonda Manufacturing Company, The. (See Hauer, Elmer E., assignor.)

Lagonda Manufacturing Company, The. (See Overly, Charles F., assignor.)

Laist, Frederick, Anaconda, Mont. Reducing cuprous chlorid. No. 1,104,907; July 28; Gaz. vol. 204; p. 1069.

Lake, Eugene, Cooperstown, N. Y. Ice-harvesting machine. No. 1,102,277; July 7; Gaz. vol. 204; p. 20.

Lalor, James D. (See Jahn, Frederick L., assignor.)

Lalor, James D., and F. L. Jahn, Philadelphia, Pa.; said Jahn assignor, by mesne assignments, to said Lalor. Automatic stop-valve. No. 1,103,058; July 14; Gaz. vol. 204; p. 338.

Lamb Bros. & Greene. (See Lamb, David C., assignor.)

Lamb, David C., assignor to Lamb Bros. & Greene, Nappanee, Ind. Electric-light support. No. 1,105,083; July 28; Gaz. vol. 204; p. 1130.

Lamb, George H., London, England. Lock. No. 1,104,052; July 21; Gaz. vol. 204; p. 724.

Lamb, Thomas, Brooklyn, N. Y. Antiseptic protector. No. 1,104,908; July 28; Gaz. vol. 204; p. 1069.

Lamb, William R., Dallas, Tex. Seed-cotton cleaner and distributer. No. 1,105,441; July 28; Gaz. vol. 204; p. 1256.

Lamb, William R., Dallas, Tex. Bur-extractor for cotton-feeders. No. 1,105,442; July 28; Gaz. vol. 204; p. 1257.

Lambert, Henry W., Stoughton, Mass. Shoe-top protector. No. 1,105,332; July 28; Gaz. vol. 204; p. 1217.

Lambert, Henry W., Stoughton, Mass. Support for shoe-uppers. No. 1,105,333; July 28; Gaz. vol. 204; p. 1217.

Lamson Company. (See Thomas, Edward G., assignor.)

Landau, Joseph N., New York, N. Y. Automatic multiple-chuck drill-press. No. 1,104,517; July 21; Gaz. vol. 204; p. 885.

Lande, Max, Brooklyn, N. Y. Sash-lock. No. 1,102,519; July 7; Gaz. vol. 204; p. 104.

Landers, Frary and Clark. (See Spellman and Twigg, assignors.)

Landers, Frary & Clark. (See Walker, George, assignor.)

Landis, Walter S., Niagara Falls, Ontario, Canada, assignor to American Cyanamid Company, Nashville, Tenn. Rendering soluble insoluble phosphates. No. 1,103,059; July 14; Gaz. vol. 204; p. 338.

Landis, Walter S., Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn. Method and means for fixing nitrogen. No. 1,103,060; July 14; Gaz. vol. 204; p. 338.

Landis, Walter S., Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn. Process and apparatus for fixing atmospheric nitrogen. No. 1,103,061; July 14; Gaz. vol. 204; p. 339.

Landis, Walter S., Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn. Method of and apparatus for fixing nitrogen. No. 1,103,062; July 14; Gaz. vol. 204; p. 339.

Landsiedel, Harry, Poplar Bluff, assignor to Dalton Adding Machine Company, St. Louis, Mo. Adding and recording machine. No. 1,103,300; July 14; Gaz. vol. 204; p. 422.

Lane, J. Earl. (See Carroll, David G., assignor.)

Lane, Robert C., *et al.* (See Prentiss, Frederick H., assignor.)

Lang, Charles E., Los Angeles, assignor to Wasson Engineering & Supply Co., Petaluma, Cal. Retrieving-trolley. No. 1,102,673; July 7; Gaz. vol. 204; p. 158.

Lang, George H., Boston, Mass. Printing-machine. No. 1,103,063; July 14; Gaz. vol. 204; p. 339.

Langan, Thomas W., Astoria, N. Y. Smoke-preventer. No. 1,104,909; July 28; Gaz. vol. 204; p. 1069.

Langell, Charles E., Belleville, Kans. Car-door and means for locking same. No. 1,104,265; July 21; Gaz. vol. 204; p. 795.

Langill, Charles H., Boston, Mass. Making sheaves. No. 1,104,200; July 21; Gaz. vol. 204; p. 774.

Langrock Bros. Company. (See Langrock, Joseph H., assignor.)

Langrock, Joseph H., New York, N. Y., assignor to Langrock Bros. Company. Making stencils. No. 1,103,005; July 7; Gaz. vol. 204; p. 272.

Langston, Samuel M., Camden, N. J. Paper-winding mechanism. No. 1,105,281; July 28; Gaz. vol. 204; p. 1197.

Lapham, Paul J., Genoa, Ill., assignor to Lacene Manufacturing Company, Manchester, N. H. Leather-marking machine. No. 1,103,520; July 14; Gaz. vol. 204; p. 496.

Lapointe Machine Tool Co. (See Lapointe, Ralph R., assignor.)

Lapointe, Ralph R., assignor to Lapointe Machine Tool Co., Hudson, Mass. Lubricating mechanism. No. 1,103,301; July 14; Gaz. vol. 204; p. 422.

Larimer, William J., assignor of one-half to J. C. Cutler, Kansas City, Kans. Spool-rack. No. 1,103,302; July 14; Gaz. vol. 204; p. 423.

Larson, Carl A. (See Lundahl and Ekstrom, assignors.)

Larson, Lars, Chicago, Ill. Slag-disintegrating apparatus. No. 1,103,886; July 14; Gaz. vol. 204; p. 625.

Lashar, Walter B., assignor to Weed Chain Tire Grip Company, Bridgeport, Conn. Chain-grip-attaching device. No. 1,103,064; July 14; Gaz. vol. 204; p. 340.

Lassman, Johann M., Taganrog, Russia. Lubricating device for journal-boxes. No. 1,104,361; July 21; Gaz. vol. 204; p. 829.

Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rotary cutter. No. 1,104,910; July 28; Gaz. vol. 204; p. 1070.

Latham Machinery Company. (See Weber and Ostrholm, assignors.)

Latta, John W., assignor of one-half to J. C. Barnes, Lecompte, La. Switch-lug. No. 1,102,931; July 7; Gaz. vol. 204; p. 246.

Laub, George M., Newark, N. J. Garment-cutting apparatus. No. 1,103,364; July 14; Gaz. vol. 204; p. 444.

Lauer, Victor, Stillwater, Okla. Two-row header. No. 1,104,911; July 28; Gaz. vol. 204; p. 1070.

Laula, Heinrich, Vienna, Austria-Hungary. Sewing-machine for making thread buttons. No. 1,105,354; July 28; Gaz. vol. 204; p. 1226.

Lauler, Joseph, *et al.* (See McKenzie, Thomas W., assignor.)

Laurent, Eugène, St. Etienne, Loire, France. Wheel-rim. No. 1,105,524; July 28; Gaz. vol. 204; p. 1285.

Lautenbacher, Jeremiah C., and A. Geary, Schuylkill Haven, Pa. Antiskidding or emergency brake for automobiles. No. 1,102,932; July 7; Gaz. vol. 204; p. 246.

Lautenbacher, Jeremiah C., and A. Geary, Schuylkill Haven, Pa. Non-refillable bottle. No. 1,103,675; July 14; Gaz. vol. 204; p. 557.

Lavigne, Charlie G., Brunswick, Me., assignor to The Stafford Company, Readville, Mass. Shuttle-adjusting mechanism for weft-changing looms. No. 1,105,146; July 28; Gaz. vol. 204; p. 1149.

Laviolette, Joseph, Amsterdam, Netherlands. Transmission-gear for motor-vehicles. No. 1,104,809; July 28; Gaz. vol. 204; p. 1034.

Lawler, William F., Anderson, Ind. Fodder-loading apparatus. No. 1,103,326; July 14; Gaz. vol. 204; p. 431.

Lawnin, Albert W., St. Louis, Mo., assignor of one-half to L. W. Lawnin, Edwardsville, Ill. Liquid-soap dispenser. No. 1,103,521; July 14; Gaz. vol. 204; p. 496.

Lawnin, Louis W. (See Lawnin, Albert W., assignor.)

Lawrence, Albert L. (See Flagge, Philipp F., assignor.)

Lawrence, Edwin O., Port Jefferson Station, N. Y. Cesspool. No. 1,102,674; July 7; Gaz. vol. 204; p. 158.

Lawrence, George E., assignor to Hydro Manufacturing Company, Philadelphia, Pa. Electric make-and-break device. No. 1,103,916; July 14; Gaz. vol. 204; p. 635.

Lawrence, Harry, Callaway, Minn. Stove-lid lifter. No. 1,103,780; July 14; Gaz. vol. 204; p. 589.

Lawson, Jasper C., San Francisco, Cal. Valve-indicator. No. 1,103,917; July 14; Gaz. vol. 204; p. 636.

Lawson Manufacturing Company. (See Parisen, Robert T., assignor.)

Layland, William E. (See Whitehead, Layland, and Galloway.)

Le Roy, Jean A., New York, N. Y. Kinetoscope-shutter-setting device. No. 1,102,767; July 7; Gaz. vol. 204; p. 190.

Lea, Donald H., Westmere Post Office, near Wanganui, New Zealand. Tool for uncapping honey and like purposes. No. 1,104,053; July 21; Gaz. vol. 204; p. 724.

Lea, Frederick M. (See Lea, Richard N. and F. M.)

Lea, Richard N., Manitou, Manitoba, Canada, and F. M. Lea, Birmingham, England. Seed or like drill. No. 1,105,570; July 28; Gaz. vol. 204; p. 1300.

Leadbeter, Richard A., assignor to The Farrand Company, Detroit, Mich. Expression device for pneumatically-operated musical instruments. No. 1,103,213; July 14; Gaz. vol. 204; p. 394.

Leavell, John H. (See Kirk, Morris P., assignor.)

Leckie, A. E. L. (See Heany, John A., assignor.)

Ledoux, Albert R., *et al.* (See Kendall, Edward D., assignor.)

Ledwinka, Joseph, Philadelphia, Pa., assignor to Trackless Trolley Company of America. Overhead crossing. No. 1,102,766; July 7; Gaz. vol. 204; p. 190.

Lee Broom & Duster Co. (See Beebe and Duvall, assignors.)

Lee, Charles F., assignor to W. L. Rohrer, Chicago, Ill. Burglar-alarm. No. 1,104,734; July 21; Gaz. vol. 204; p. 959.

Lee, John A. P., Tucker, Ark. Nut-lock. No. 1,104,681; July 21; Gaz. vol. 204; p. 940.

Lee, William H., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y. Draft-shifting means for sulky-plows. No. 1,105,593; July 28; Gaz. vol. 204; p. 1309.

Leeds & Northrup Company, The. (See Smith, Irving B., assignor.)

Legge, Alfred G., Brockton, Mass. Shoe-form. No. 1,104,304; July 21; Gaz. vol. 204; p. 809.

Lehner, Alfred, Kelsterbach-on-the-Main, Germany. Toy-building for the reproduction of iron technical constructions. No. 1,103,781; July 14; Gaz. vol. 204; p. 590.

Lehr, Gustave, New York, N. Y. Stylus for sound-reproducing machines. No. 1,103,592; July 14; Gaz. vol. 204; p. 524.

Lehtonen, Frank J., Negaunee, Mich. Automobile sled. No. 1,104,682; July 21; Gaz. vol. 204; p. 941.

Leibel, Samyl, New York, N. Y. Garment-supporter. No. 1,105,282; July 28; Gaz. vol. 204; p. 1198.

Leighton, Albert, Erie, Pa. Combined suspender-tab and belt-loop for trousers. No. 1,105,355; July 28; Gaz. vol. 204; p. 1227.

Leinert, Wenzel, New York, N. Y. Liquid-weighing device. No. 1,103,303; July 14; Gaz. vol. 204; p. 423.

Lemale, Charles, Paris, France. Flash steam-generator. No. 1,102,345; July 7; Gaz. vol. 204; p. 43.

Leman, Blanche D., White Plains, N. Y. Combination-garment. No. 1,102,520; July 7; Gaz. vol. 204; p. 104.

Lenderoth, Arnold W. (See Fox and Lenderoth.)

Lent, Cyrenus W., Byron, Cal. Smoke-precipitator. No. 1,103,304; July 14; Gaz. vol. 204; p. 423.

Lenzi, Frank, Boston, Mass. Non-refillable bottle. No. 1,104,201; July 21; Gaz. vol. 204; p. 774.

Leonard, Elof R., Woodcliff, N. J. Sash-guide. No. 1,105,147; July 28; Gaz. vol. 204; p. 1150.

Leonard, John E., Portland, Oreg. Moving-picture machine. No. 1,102,933; July 7; Gaz. vol. 204; p. 246.

Leonard, John E., Portland, Oreg. Moving-picture machine. No. 1,102,988; July 7; Gaz. vol. 204; p. 264.

Leonard, William C., Walla Walla, assignor of one-half to A. F. Brockman, Bickleton, Wash. Automatic feeder for grain-separators. No. 1,104,122; July 21; Gaz. vol. 204; p. 747.

Leopold, George O. (See Fegley and Leopold.)

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Bench-drill. No. 1,103,782; July 14; Gaz. vol. 204; p. 590.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Drill. No. 1,103,783; July 14; Gaz. vol. 204; p. 590.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Change-speed mechanism. No. 1,103,784; July 14; Gaz. vol. 204; p. 591.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Automatic stop for drills. No. 1,103,785; July 14; Gaz. vol. 204; p. 591.

Leppe, Dominick S., *et al.* (See Brooks, Harry, assignor.)

Leslie, Duncan L., and J. L. Harris, Roanoke Rapids, N. C. Paper-making machine. No. 1,104,518; July 21; Gaz. vol. 204; p. 886.

Leuthesser, Fred W., Chicago, Ill. Steam, air, and water trap valve. No. 1,102,768; July 7; Gaz. vol. 204; p. 191.

Levey, John. (See Zander and Levey.)

Levin, Isaac, Brooklyn, N. Y. Adjustable garment-form. No. 1,102,596; July 7; Gaz. vol. 204; p. 132.

Levin, Isaac, New York, N. Y. Garment-form. No. 1,102,597; July 7; Gaz. vol. 204; p. 132.

Levine, Harry, Chicago, Ill. Finishing-machine. No. 1,104,683; July 21; Gaz. vol. 204; p. 941.

Levine, Harry, Chicago, Ill. Polishing-machine. No. 1,104,684; July 21; Gaz. vol. 204; p. 941.

Lewis, Benjamin T. (See Donaldson and Lewis.)

Lewis, George T., assignor of one-half to G. C. Poundstone, Chicago, Ill. Floor-washing device. No. 1,103,786; July 14; Gaz. vol. 204; p. 591.

Lewis, Harold A., and F. G. Price, Cobalt, Ontario, Canada; said Price assignor to said Lewis, Oruro, Bolivia. Extraction of arsenic or antimony from ores containing same. No. 1,104,810; July 28; Gaz. vol. 204; p. 1035.

Lewis, Minnie C., executrix. (See Donaldson and Lewis.)

Lewis, Thomas, Smithfield, Pa. Bevel-gage for squares. No. 1,104,123; July 21; Gaz. vol. 204; p. 748.

Lewless, Mildred, New York, N. Y. Portable radiator-heater. No. 1,102,934; July 7; Gaz. vol. 204; p. 247.

Lewless, Mildred, New York, N. Y. Thermostatic pressure-valve. No. 1,103,787; July 14; Gaz. vol. 204; p. 592.

Lichtenberg, Erich H., assignor to Koehring Machine Company, Milwaukee, Wis. Control mechanism for concrete-mixers. No. 1,103,788; July 14; Gaz. vol. 204; p. 592.

Lichtenthaeler, Frank E., Newton, Mass. Extracting rosins from resinous wood. No. 1,104,912; July 28; Gaz. vol. 204; p. 1071.

Lide, Thomas P. (See Packer, Willard N., assignor.)

Lieben, Ernst von, administrator. (See Lieben and Reisz.) (Reissue.)

Lieben, Robert von, deceased, (E. von Lieben, administrator, Vienna, Austria-Hungary,) and E. Reisz, Berlin, Germany, assignors to Relais-Gesellschaft m. b. H., Vienna, Austria-Hungary. Relay for undulatory currents. (Reissue.) No. 13,779; July 21; Gaz. vol. 204; p. 973.

Liedblad, Carl L., Jamestown, N. Y. Varnish-drying room. No. 1,104,362; July 21; Gaz. vol. 204; p. 830.

Lightning Demountable Rim Company. (See Cameron, Charles E., assignor.)

Lihme, Iens P., Lakewood, assignor to The Grasselli Chemical Company, Cleveland, Ohio. Manufacturing sulfuric acid. No. 1,103,522; July 14; Gaz. vol. 204; p. 496.

Lilley, Alfred L., assignor to The Smith-Worthington Company, Hartford, Conn. Machine for folding leather. No. 1,103,972; July 21; Gaz. vol. 204; p. 696.

Lilley, Robert G., assignor to The Smith-Worthington Company, Hartford, Conn. Horse-collar. No. 1,103,973; July 21; Gaz. vol. 204; p. 697.

Lilliston, Thomas M., Suffolk, assignor to National Machine Corporation, Nansemond, Va. Rotary peanut-stemmer. No. 1,103,305; July 14; Gaz. vol. 204; p. 424.

Lima Locomotive Corporation. (See Shepard, Victor J., assignor.)

Lincoln, John C., East Cleveland, assignor to The Electric Meat Curing Company, Cleveland, Ohio. Apparatus for preserving. No. 1,102,769; July 7; Gaz. vol. 204; p. 191.

Lindahl, Martinis J., Woodburn, Oreg. Adjustable electric-light chandelier. No. 1,104,202; July 21; Gaz. vol. 204; p. 774.

Linder, Oscar, Chicago, Ill., assignor to Western Electric Company, New York, N. Y. Manufacture of non-oxidizing conductors. No. 1,104,054; July 21; Gaz. vol. 204; p. 724.

Linderme, Emil, Philadelphia, Pa. Bottle-washing machine. No. 1,104,994; July 28; Gaz. vol. 204; p. 1097.

Lindgren, Alexus C. (See Smith and Lindgren.)

Lindgren, Carl A. (See Perkins and Lindgren.)

Lindley, Charles N., *et al.* (See Kendall, Edward D., assignor.)

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current-motor control. No. 1,102,521; July 7; Gaz. vol. 204; p. 105.

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current electromagnetic brake apparatus. No. 1,102,522; July 7; Gaz. vol. 204; p. 105.

Lindquist, David L., Yonkers, A. C. Smith, New York, and G. John, Yonkers, N. Y., assignors to Otis Elevator Company, Jersey City, N. J. Brake apparatus for traction-elevators. No. 1,102,523; July 7; Gaz. vol. 204; p. 105.

Lindsay, Leroy J., Seymour, Iowa. Marker for corn-planters. No. 1,103,593; July 14; Gaz. vol. 204; p. 524.

Lindsay, Leroy J., Seymour, Iowa. Automatic door-latch. No. 1,103,594; July 14; Gaz. vol. 204; p. 524.

Lindsey, George F., and G. A. Williams, Birmingham, Ala. Canopy-frame. No. 1,102,418; July 7; Gaz. vol. 204; p. 70.

Lindström, Knut I., Vibynäs, Nykvarn, assignor to Aktiebolaget Mjölkningsmaskin Omega, Flen, Sweden. Milking-machine. No. 1,103,974; July 21; Gaz. vol. 204; p. 697.

Link, Philipp, Newark, N. J. Dough mixing and kneading apparatus. No. 1,105,148; July 28; Gaz. vol. 204; p. 1150.

Linkman, Louis B., Chicago, Ill., assignor to M. Linkman & Company. Smoking-pipe. No. 1,104,203; July 21; Gaz. vol. 204; p. 775.

Linn, Louis S., Fairmont, Minn. Harvester attachment. No. 1,105,084; July 28; Gaz. vol. 204; p. 1130.

Linotype and Machinery Limited. (See Pearce and Billington, assignors.)

Linotype and Machinery Limited. (See Röger, Karl, assignor.)

Linotype and Machinery Limited. (See Whittaker and Holliwell, assignors.)

Lint, Peter H., San Francisco, Cal. Fruit-gatherer. No. 1,104,431; July 21; Gaz. vol. 204; p. 853.

Lipoff, Nathan, New York, N. Y. Non-short-circuiting pick. No. 1,102,935; July 7; Gaz. vol. 204; p. 247.

Lipp, Albert E., Philadelphia, Pa. Camera-shutter. No. 1,102,278; July 7; Gaz. vol. 204; p. 20.

Lipp, Louis, St. Bernard, Ohio. Enameling-dredger. No. 1,103,423; July 14; Gaz. vol. 204; p. 463.

Lipps, Emory J., Fountain Hill borough, Pa. Winding mechanism. No. 1,103,676; July 14; Gaz. vol. 204; p. 555.

Liska, John, assignor of one-half to A. Klapan, Natrona, Pa. Non-skid vehicle-wheel. No. 1,102,598; July 7; Gaz. vol. 204; p. 133.

Lister, Walter S., assignor to The National Printing Machine Company, Cleveland, Ohio. Type setting and distributing machine. No. 1,105,334; July 28; Gaz. vol. 204; p. 1217.

Litle, Thomas J., Jr., Woodbury, assignor to Welsbach Light Company, Gloucester City, N. J. Gas valve or cock. No. 1,104,519; July 21; Gaz. vol. 204; p. 886.

Littig, Joseph, Oelwein, Iowa. Locomotive-wheel-flange oiler. No. 1,102,524; July 7; Gaz. vol. 204; p. 106.

Ljungström, Birger, Stockholm, assignor to Aktiebolaget Ljungströms Ångturbin, Finspång, Sweden. Commutator provided with segments or bars and slip-rings. No. 1,102,525; July 7; Gaz. vol. 204; p. 106.

Lobach, Fred T. (See Miller, Lobach, and Peters.)

Lobdell Car Wheel Company. (See Stuart, Joseph, assignor.)

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Antifriction roller-bearing. No. 1,104,363; July 21; Gaz. vol. 204; p. 830.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Two-part roll for roller-bearings. No. 1,104,364; July 21; Gaz. vol. 204; p. 831.

Lockwood, Edward M., Philadelphia, Pa. Embossing and printing press. No. 1,102,770; July 7; Gaz. vol. 204; p. 192.

Locomotive Arch Brick Company. (See Stevens, Enoch P., assignor.)

Locomotive Superheater Company. (See Hoffmann, Simon, assignor.)

Loewenbach, Erwin B. (See Esche, William, assignor.)

Loewenbach, Hugo. (See Downey, Richard F., assignor.)

Löffler, Peter, Vienna, Austria-Hungary. Manufacture of sodium bisulfate in a directly-calcinable form. No. 1,104,913; July 28; Gaz. vol. 204; p. 1071.

Lofgren, Thor O., Chicago, Ill. Fire-escape apparatus. No. 1,104,685; July 21; Gaz. vol. 204; p. 941.

Logan, Alton L., Edwardsville, Ill. Hopper-door-operating device. No. 1,103,523; July 14; Gaz. vol. 204; p. 497.

Lohr, Emmet M., Kings Mountain, N. C. Cart. No. 1,102,346; July 7; Gaz. vol. 204; p. 44.

Loiselet, Victor. (See Clément and Loiselet.)

London Auto Supply Co. (See McAvoy, Frank J., assignor.)

London, Louis B., New York, N. Y. Inverted-burner gas-lamp. No. 1,103,365; July 14; Gaz. vol. 204; p. 444.

Longyear, Fred L., Lansing, Mich. Oil-can holder. No. 1,103,065; July 14; Gaz. vol. 204; p. 340.

Lookingbill, Carman E. (See McColly, Charles C., assignor.)

Loomis, Allen, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Oil-pump. No. 1,105,085; July 28; Gaz. vol. 204; p. 1130.

Lotter, Franklin, Elkton, Mich. Cultivator-blade. No. 1,103,595; July 14; Gaz. vol. 204; p. 525.

Lotter, Franklin, Elkton, Mich. Decarbonizing-tool for pistons of gas-engines. No. 1,103,596; July 14; Gaz. vol. 204; p. 525.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Carrying means for adding-machines. No. 1,104,686; July 21; Gaz. vol. 204; p. 942.

Lotterhand, Jason C., New York, N. Y., assignor to Addometer Corporation, Dover, Del. Printing mechanism for adding-machines. (Reissue.) No. 13,781; July 28; Gaz. vol. 204; p. 1311.

Lougher, Robert, Papaikou, Hawaii. Multiple-effect evaporating apparatus. No. 1,105,443; July 28; Gaz. vol. 204; p. 1257.

Lougher, Robert, Papaikou, Hawaii. Device for removing sugar from centrifugal machines. No. 1,105,444; July 28; Gaz. vol. 204; p. 1257.

Loughlin, Alice L. T., New York, N. Y. Toilet-brush. No. 1,104,365; July 21; Gaz. vol. 204; p. 831.

Loughlin, James W., Jamaica Plain, Mass. Measuring device. No. 1,102,771; July 7; Gaz. vol. 204; p. 192.

Lovas, John, and S. Sera, Erie, Pa. Delivery-receptacle for letter-carriers. No. 1,104,520; July 21; Gaz. vol. 204; p. 886.

Lovell-McConnell Manufacturing Company. (See Dean, George C., assignor.)

Lowe, John D., assignor to The F. W. Spacke Machine Company, Indianapolis, Ind. Internal-combustion engine. No. 1,102,675; July 7; Gaz. vol. 204; p. 159.

Lowe, Nellie W., Erie, Pa. Garbage-can. No. 1,104,055; July 21; Gaz. vol. 204; p. 724.

Lowell-McConnell Manufacturing Company. (See Hutchison, Miller R., assignor.)

Lowenstein, Samson, New York, N. Y. Hoisting-block. No. 1,104,521; July 21; Gaz. vol. 204; p. 887.

Lowry, Alfred H. P. (See Greenway and Lowry.)

Lucas, Henri L. L. (See Minet and Lucas.)

Ludlow, James H., Jersey City, N. J., and T. W. G. Cook, New York, N. Y. Diamond-cutting machine. No. 1,105,356; July 28; Gaz. vol. 204; p. 1227.

Ludlow-Saylor Wire Company, The. (See Gould, Edwin J., assignor.)

Luepker, Jacob, Millstadt, Ill. Fence. No. 1,102,936; July 7; Gaz. vol. 204; p. 247.

Lufkin Rule Co., The. (See Putnam and Wessendorff, assignors.)

Luki, Ladislas, Columbus, Ohio. Swimming device. No. 1,102,526; July 7; Gaz. vol. 204; p. 106.

Luki, Ladislas, Columbus, Ohio. Parachute. No. 1,104,995; July 28; Gaz. vol. 204; p. 1098.

Lundahl, Joseph W., Thomaston, and O. A. Ekstrom, Litchfield, assignors of one-half to said Lundahl, one-fourth to said Ekstrom, and one-fourth to C. A. Larson, Thomaston, Conn. Automatic ignition system for gas-lights. No. 1,104,522; July 21; Gaz. vol. 204; p. 887.

Lundin, Andreas P., and H. W. Broady, Bayside, N. Y.; said Broady assignor to said Lundin. Davit for lowering and raising ships' boats. No. 1,105,594; July 28; Gaz. vol. 204; p. 1309.

Lurie, William A., Chicago, Ill. Locking-bolt structure. No. 1,102,527; July 7; Gaz. vol. 204; p. 106.

Luther Bros. Co. (See Thompson, James M., assignor.)

Luther Grinder Manufacturing Co. (See Panyard, Thomas R., assignor.)

Lutton, William J., Paterson, N. J. Let-off mechanism for looms. No. 1,105,335; July 28; Gaz. vol. 204; p. 1218.

Lutz, William D., Allendale, assignor to Otis Elevator Company, Jersey City, N. J. Electromagnetic brake mechanism. No. 1,102,528; July 7; Gaz. vol. 204; p. 107.

Luzenski Co., T. (See Luzenski, Teofil, assignor.)

Luzenski, Teofil, assignor to T. Luzenski Co., Berlin, Wis. Moccasin. No. 1,102,279; July 7; Gaz. vol. 204; p. 20.

Lyford, Charles A., and E. L. Kinman, Vancouver, British Columbia, Canada. Tree-measuring instrument. No. 1,105,149; July 28; Gaz. vol. 204; p. 1150.

Lyman, Don, assignor of one-fourth to F. H. Hartwell and one-fourth to R. Wolfe, Twin Falls, Idaho. Life-preserver. No. 1,102,772; July 7; Gaz. vol. 204; p. 192.

Lynch, Denis J. (See Adamson, John S., assignor.)

Lynch, George C., New York, N. Y. Attachment for high chairs. No. 1,103,597; July 14; Gaz. vol. 204; p. 525.

Lyon Conklin & Company. (See Clautice, George J., assignor.)

Lytton, Harry, *et al.* (See McCormick, John I., assignor.)

Lytton, William, *et al.* (See McCormick, John I., assignor.)

M. Linkman Company. (See Linkman, Louis B., assignor.)
M. Rumely Company. (See Brunnemer, William T. M., assignor.)
M. Rumely Company. (See Rumely, Edward A., assignor.)
M. Rumely Company. (See Secor, John A., assignor.)
M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)
MacBain, Donald R., Cleveland, Ohio. Gage-glass apparatus. No. 1,105,150; July 28; Gaz. vol. 204; p. 1151.
MacCormack, George A., assignor to United States Fastener Company, Boston, Mass. Fastener. No. 1,104,204; July 21; Gaz. vol. 204; p. 775.
MacDonald, James M. (See Whitaker and MacDonald.)
MacDougall, James, Phoenixville, Pa. Dirt-scraper. No. 1,105,283; July 28; Gaz. vol. 204; p. 1198.
MacGlashan, William, assignor to The Studebaker Corporation, South Bend, Ind. Brake torque-frame. No. 1,102,529; July 7; Gaz. vol. 204; p. 107.
MacGowan, William, Chicago, Ill. Printing-press roll. No. 1,104,432; July 21; Gaz. vol. 204; p. 853.
MacKay, John F., Trenton, N. J. Brooder. No. 1,103,887; July 14; Gaz. vol. 204; p. 626.
MacQueen, Donald, Port Huron, Mich. Holder for playing-cards. No. 1,104,687; July 21; Gaz. vol. 204; p. 942.
MacWilliam, James F., Worcester, Mass. Cop-winder. No. 1,105,151; July 28; Gaz. vol. 204; p. 1151.
Macbeth-Evans Glass Company. (See Macbeth, George A., assignor.) (Reissue.)
Macbeth, George A., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Method and batch or mixture for making illuminating-glass. (Reissue.) No. 13,766; July 7; Gaz. vol. 204; p. 278.
Maccallum, Norman E., assignor of one-fourth to F. P. Norris, Phoenixville, and one-fourth to The Phoenix Iron Company, Philadelphia, Pa. Process and apparatus for the manufacture of steel. (Reissue.) No. 13,782; July 28; Gaz. vol. 204; p. 1312.
Macco, Peter, Carney, Mich. Pea-harvester. No. 1,105,445; July 28; Gaz. vol. 204; p. 1258.
Macey, Fred J., San Diego, Cal. Carbureter. No. 1,103,789; July 14; Gaz. vol. 204; p. 592.
Macfarren, Walter W. (See Frary and Macfarren.)
Machine Parts Company, The. (See Smith, James C., assignor.)
Mackintosh, Edward D., assignor of one-half to S. S. Hepworth Company, New York, N. Y. Centrifugal-machine unloader. No. 1,102,530; July 7; Gaz. vol. 204; p. 108.
Macleary, Joseph H., Wilmington, Del. Emergency air-brake device. No. 1,103,790; July 14; Gaz. vol. 204; p. 593.
Macleod, Malcolm, Toronto, Ontario, Canada. Heating of lock and dock gates, marine vessels, and the like. No. 1,104,914; July 28; Gaz. vol. 204; p. 1071.
Macy, Luna M., Adel, Iowa. Ice-cutting machine. No. 1,102,989; July 7; Gaz. vol. 204; p. 265.
Maddux, John C. (See Carr and Maddux.)
Mädler, Franz L. (See Schröter and Mädler.)
Magor, Basil, assignor to Magor Car Company, New York, N. Y. Logging-car. No. 1,103,975; July 21; Gaz. vol. 204; p. 697.
Magor Car Company. (See Magor, Basil, assignor.)
Maher, Arthur E., Greensburg, Pa. Strainer for mining-machines. No. 1,103,306; July 14; Gaz. vol. 204; p. 424.
Mahn, Godfrey S., Philadelphia, Pa. Container. No. 1,104,366; July 21; Gaz. vol. 204; p. 831.
Maier, Gustav, Schramberg, Germany. Box-cover fastening. No. 1,103,976; July 21; Gaz. vol. 204; p. 697.
Malmin, Mayer R., assignor to H. Malmin Company, Incorporated, New York, N. Y. Cloth-cutting machine. No. 1,103,791; July 14; Gaz. vol. 204; p. 593.
Makin, Edward, Manchester, England. Steam-generator. No. 1,104,811; July 28; Gaz. vol. 204; p. 1035.
Malaby, Ira B., assignor to N. Mellor, Philadelphia, Pa. Collapsing tool. No. 1,102,937; July 7; Gaz. vol. 204; p. 248.
Malcolm, Edward B., Campbellton, New Brunswick, Canada. Safety device for railway frogs and guard-rails. No. 1,104,305; July 21; Gaz. vol. 204; p. 809.
Mallins, Charles W., Liverpool, England. Tram-car. No. 1,104,812; July 28; Gaz. vol. 204; p. 1035.
Mallins, Charles W., Liverpool, England. Tram-car. No. 1,104,813; July 28; Gaz. vol. 204; p. 1035.
Malmberg, August A. (See Roberg and Malmberg.)
Maloy, James A., Columbus, Ohio. Rail-joint. No. 1,103,677; July 14; Gaz. vol. 204; p. 556.
Malsin, Albert, New York, N. Y. Lady's skirt. No. 1,103,148; July 14; Gaz. vol. 204; p. 370.
Mambourg, Leopold, assignor of one-third to W. O. Taylor and one-third to S. Casparis, Columbus, Ohio. Glass-melting-tank accessory. No. 1,103,066; July 14; Gaz. vol. 204; p. 341.
Manchester, Henry C., and S. S. Riegel, Scranton, Pa. Drifting-valve for locomotive-engines. No. 1,104,306; July 21; Gaz. vol. 204; p. 809.
Mannesmannröhren-Werke. (See Schomburg, Ludwig, assignor.)
Manning, Frank X., assignor of one-half to W. H. Hemker, Catawissa, Mo. Floor-jack. No. 1,105,446; July 28; Gaz. vol. 204; p. 1258.
Manning, Harry F., Peoria, Ill. Steering-gear for traction-engines. No. 1,105,086; July 28; Gaz. vol. 204; p. 1131.
Manshel, Charles. (See Swartz, Fred M., assignor.)
Manson-Olin, Harold, New York, N. Y. Aeroplane. No. 1,103,820; July 14; Gaz. vol. 204; p. 603.
Manthorpe, Marston, Copenhagen, and A. I. Hansen, Hellerup, assignors to F. Andersen, Copenhagen, Denmark. Apparatus for automatically indicating the position of signals on locomotives. No. 1,104,205; July 21; Gaz. vol. 204; p. 775.
Manwaring, George A. (See Emerson, Manwaring, and Reynard.)
Mapelsden, Harold H., Schenectady, N. Y., assignor to General Electric Company. Fluid-flow meter. No. 1,104,433; July 21; Gaz. vol. 204; p. 853.
Marconi, Guglielmo, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y. Means for generating alternating electric currents. No. 1,102,990; July 7; Gaz. vol. 204; p. 265.
Marconi Wireless Telegraph Company of America. (See Marconi, Guglielmo, assignor.)
Marcotte, Arthur D., Eunice, La. Oil-burner. No. 1,105,357; July 28; Gaz. vol. 204; p. 1228.
Marhenke, August H., New York, N. Y. Draft-regulator. No. 1,103,149; July 14; Gaz. vol. 204; p. 371.
Marion Steam Shovel Company, The. (See Jacoby and Johnson, assignors.)
Marion Steam Shovel Company, The. (See King and Fellmeth, assignors.)
Markens, George W., Brooklyn, N. Y. Dice-cup. No. 1,103,366; July 14; Gaz. vol. 204; p. 444.
Marks, David A. (See Shedd, Harry M., assignor.)
Märksch, Paul, Berlin, Germany. Door check and hinge. No. 1,103,792; July 14; Gaz. vol. 204; p. 594.
Marlin Firearms Company, The. (See Swebilius and Hanitz, assignors.)
Marlow, Thomas G., London, assignor to The Pulsometer Engineering Company Limited, Reading, England. Apparatus suitable for drying, heating, cooling, or ventilating. No. 1,102,599; July 7; Gaz. vol. 204; p. 133.
Marmon, Howard C., assignor to Nordyke & Marmon Company, Indianapolis, Ind. Power-train mounting for automobiles. No. 1,103,524; July 14; Gaz. vol. 204; p. 497.
Marr, Walter L., Flint, Mich. Means for increasing the stability of aeroplanes. No. 1,104,056; July 21; Gaz. vol. 204; p. 725.
Marr, Walter L., Flint, Mich. Lubricating system for motors. No. 1,104,057; July 21; Gaz. vol. 204; p. 725.
Marr, Walter L., Flint, Mich. Starting device for explosive-engines. No. 1,104,058; July 21; Gaz. vol. 204; p. 725.
Marr, Walter L., Flint, Mich. Explosive-engine. No. 1,104,059; July 21; Gaz. vol. 204; p. 726.
Marsh, Robert, Weldon, Ill. Tractor. No. 1,103,678; July 14; Gaz. vol. 204; p. 556.
Marshall, Frank F. (See Schorik and Marshall.)
Marshall, John E., Sandiacre, England. Spring-mattress and spring seating-surface. No. 1,102,280; July 7; Gaz. vol. 204; p. 20.
Martenette, Francis L., Chico, Cal. Spring for vehicles. No. 1,105,358; July 28; Gaz. vol. 204; p. 1228.
Martens, John C. J., New Orleans, La. Faucet for dispensing beverages. No. 1,105,359; July 28; Gaz. vol. 204; p. 1228.
Martin, Alfred, Rockford, Ill. Furnace. No. 1,103,888; July 14; Gaz. vol. 204; p. 626.
Martin, Arthur, assignor to The Van Dorn Iron Works Company, Cleveland, Ohio. Filing-cabinet. No. 1,103,598; July 14; Gaz. vol. 204; p. 526.
Martin, Emile F., New Orleans, La. Automobile attachment. No. 1,102,773; July 7; Gaz. vol. 204; p. 103.
Martin, Frederick W., Wichita, Kans. Sectional metal stack-cover. No. 1,103,793; July 14; Gaz. vol. 204; p. 594.
Martin, Howard O., Clovis, N. Mex. Triple valve. No. 1,105,360; July 28; Gaz. vol. 204; p. 1228.
Martin, James D. (See Cobb and Martin.)
Martin, Josef, Munich, Germany. Receptacle for light ashes. No. 1,103,794; July 14; Gaz. vol. 204; p. 594.
Martinchek, Stephan, Posen, Ill. Artificial leg. No. 1,102,774; July 7; Gaz. vol. 204; p. 194.
Martus, William J., assignor to C. A. Powell, Whitesboro, N. Y. Sewing-machine guide. No. 1,103,795; July 14; Gaz. vol. 204; p. 594.
Marvil, Joshua D., *et al.* (See Marvil of V., Joshua H., assignor.)
Marvil, Joshua D., *et al.* (See Marvil of V. and Downs, assignors.)
Marvil of V., Joshua H., assignor of one-third to J. D. Marvil and two-thirds to S. D. Marvil, Laurel, Del.; S. L. Marvil and F. B. Sirman executors of said J. D. Marvil, deceased. Tire-repair patch. No. 1,102,939; July 7; Gaz. vol. 204; p. 248.
Marvil of V., Joshua H., and I. H. Downs, assignors of one-third to J. D. Marvil and two-thirds to S. D. Marvil, Laurel, Del.; S. L. Marvil and F. B. Sirman, executors of said J. D. Marvil, deceased. Blow-out patch. No. 1,102,938; July 7; Gaz. vol. 204; p. 248.
Marvil, Sallie L., *et al.*, executors. (See Marvil of V., Joshua H.)
Marvil, Sallie L., *et al.*, executors. (See Marvil of V. and Downs.)
Marvil, Sirman D., *et al.* (See Marvil of V., Joshua H., assignor.)
Marvil, Sirman D., *et al.* (See Marvil of V. and Downs, assignors.)

Marx, Karl. (See Erlenbach and Marx.)
Marx, Karl, Dessau, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Dyeing furs, hairs, and the like. No. 1,105,447; July 28; Gaz. vol. 204; p. 1258.
Marx, Richard, Philadelphia, Pa. Holder for safety-razor blades. No. 1,103,977; July 21; Gaz. vol. 204; p. 698.
Maschinenfabrik Rüti. (See Egli, Edward, assignor.)
Maschinenfabrik Ruti. (See Zubler, Johann J., assignor.)
Maschinenfabrik Schnarr & Schmitt. (See Schmitt, Rudolf, assignor.)
Masland, Walter E., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Acetylation of dichlorhydrocarbons. No. 1,102,347; July 7; Gaz. vol. 204; p. 44.
Mason, Charles T., Sumter, S. C., assignor to Sumter Electrical Company. Ignition-dynamo. No. 1,105,361; July 28; Gaz. vol. 204; p. 1229.
Mason, George N., Mount Penn, assignor to Reading Hardware Company, Reading, Pa. Lock and latch. No. 1,105,152; July 28; Gaz. vol. 204; p. 1151.
Mason, Gilmore, New York, N. Y. Meter. No. 1,104,688; July 21; Gaz. vol. 204; p. 943.
Mason, John W. V., Manchester, England. Dough-kneading machine. No. 1,104,814; July 28; Gaz. vol. 204; p. 1036.
Mason, Thomas, Killarney, Ireland. Sash-holder for sliding sashes. No. 1,102,531; July 7; Gaz. vol. 204; p. 108.
Massillon Wire Basket Co., The. (See Beatty and Reese, assignors.)
Matchette, Frank J., Milwaukee, Wis. Vacuum cleaning apparatus. No. 1,104,060; July 21; Gaz. vol. 204; p. 726.
Mathesius, Walther, Charlottenburg, Germany. Briqueting iron ores. No. 1,104,124; July 21; Gaz. vol. 204; p. 748.
Matlack, Albert F., Philadelphia, Pa., assignor to Sewage & Garbage Power Co. Treating garbage and sewage sludge. No. 1,102,532; July 7; Gaz. vol. 204; p. 108.
Mattern, William C., and W. Koch, Brooklyn, N. Y. Sash-fastener. No. 1,103,214; July 14; Gaz. vol. 204; p. 394.
Matthew, Amos H., and J. B. Prouty, Colville, Wash. Safety device for ships. No. 1,102,533; July 7; Gaz. vol. 204; p. 109.
Matthews, Herbert C. (See Randolph and Matthews.)
Matthews, Thomas O., assignor to Jas. H. Mathews & Co., Pittsburgh, Pa. Stamp. No. 1,104,367; July 21; Gaz. vol. 204; p. 831.
Mattson, Frank A. (See Davison, Herriot, Spidy, and Mattson.)
Maupin, John D., H. E. Allen, and S. Baldwin, Teague, Tex. Switch stand and lock. No. 1,104,689; July 21; Gaz. vol. 204; p. 943.
Maussner, Frederick, Philadelphia, Pa., assignor to Interlaced Curled Hair Company. Machine for interlacing curled hair. No. 1,104,368; July 21; Gaz. vol. 204; p. 832.
Maxim, Hiram P., Hartford, Conn., assignor to The Waverley Company, Indianapolis, Ind. Driving-gearing for motor-vehicles. No. 1,103,978; July 21; Gaz. vol. 204; p. 698.
Maxwell, Bert C., assignor to J. Whiting, Jr., trustee, Canton, Ohio. Manifolding-book. No. 1,105,571; July 28; Gaz. vol. 204; p. 1301.
Mayer, Frank A., Washington, D. C. Locomotive ash-pan. No. 1,103,424; July 14; Gaz. vol. 204; p. 463.
Mayer, Jacques, and C. Muehleisen, Berlin, Germany, assignors to Mergenthaler Linotype Company. Matrix for linotype-machines. No. 1,105,204; July 28; Gaz. vol. 204; p. 1170.
Mayer, Max, Templehof, and B. Havas, Schoneberg, assignors to Chemisch-Metallurgische Industrie Gesellschaft mit beschränkter Haftung, Berlin, Germany. Enamels and making them. No. 1,104,266; July 21; Gaz. vol. 204; p. 796.
Mayer, Steven, New York, N. Y. Cuspidor. No. 1,105,362; July 28; Gaz. vol. 204; p. 1230.
Mayers, Meyer, New York, N. Y. Skirt. No. 1,104,267; July 21; Gaz. vol. 204; p. 796.
Mayette, Edgar, Canisteo, and J. D. Mitchell; said Mitchell assignor of one-fourth to J. H. Mitchell, Hornell, N. Y. Basket. No. 1,105,205; July 28; Gaz. vol. 204; p. 1170.
Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Leveling-machine. No. 1,104,206; July 21; Gaz. vol. 204; p. 775.
Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-trimming machine. No. 1,104,915; July 28; Gaz. vol. 204; p. 1071.
Mays, Charles, Philadelphia, Pa. Car-pusher. No. 1,105,525; July 28; Gaz. vol. 204; p. 1285.
McAdams, William A., Bay Shore, N. Y. Aluminum alloy. No. 1,104,369; July 21; Gaz. vol. 204; p. 832.
McAneny, Michael, St. Louis, Mo., assignor to Handlilite Manufacturing Company. Cigar-lighter. No. 1,103,307; July 14; Gaz. vol. 204; p. 425.
McAuliffe, Thomas H., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,103,979; July 21; Gaz. vol. 204; p. 699.
McAvoy, Frank J., assignor to London Auto Supply Co., Chicago, Ill. Detachable limousine-body. No. 1,103,599; July 14; Gaz. vol. 204; p. 526.
McBerty, Frank R., New Rochelle, assignor to Western Electric Company, New York, N. Y. Telephone-transmitter. No. 1,102,600; July 7; Gaz. vol. 204; p. 133.
McBerty, Frank R., New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill. Cable and forming and connecting the same. No. 1,104,061; July 21; Gaz. vol. 204; p. 727.
McBerty, Frank R., New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill. Wiring system for telephone-exchanges. No. 1,104,062; July 21; Gaz. vol. 204; p. 727.
McBride, Henry P., Chicago, Ill. Insulating-joint. No. 1,102,775; July 7; Gaz. vol. 204; p. 194.
McCabe, Horace B., Chicago, Ill., assignor to Gisholt Machine Company, Madison, Wis. Attachment for regulating time-recording registers. No. 1,104,125; July 21; Gaz. vol. 204; p. 748.
McCain, Ellsworth L., Detroit, Mich. Safety-razor. No. 1,103,904; July 14; Gaz. vol. 204; p. 631.
McCall, Jerome F., Philadelphia, Pa. Box. No. 1,104,063; July 21; Gaz. vol. 204; p. 728.
McCanna, John F., assignor to Imperial Brass Manufacturing Company, Chicago, Ill. Link-and-lever connection. No. 1,102,776; July 7; Gaz. vol. 204; p. 194.
McCard, Clair, Divide, Wyo. Pipe-clamp. No. 1,105,336; July 28; Gaz. vol. 204; p. 1218.
McCarty, Edward W. (See Daly, John J., assignor.)
McCarty, Frank L., Superior, assignor of one-half to W. J. Hallett, Rock Springs, Wyo. Lubricating-wheel. No. 1,105,033; July 28; Gaz. vol. 204; p. 1111.
McCaskell, Jasper A., Salt Lake City, Utah. Mine-car lubrication. No. 1,105,363; July 28; Gaz. vol. 204; p. 1230.
McCauley, Charles E., *et al.* (See Monzaney, John, assignor.)
McClave-Brooks Company. (See McClave, William, assignor.
McClave, William, assignor to McClave-Brooks Company, Scranton, Pa. Anthracite-burning grate for furnaces. No. 1,105,572; July 28; Gaz. vol. 204; p. 1301.
McClellon, James M., Everett, Mass. Fire-box construction. No. 1,105,526; July 28; Gaz. vol. 204; p. 1285.
McCloud, Edward H., assignor to The Kinnear Manufacturing Company, Columbus, Ohio. Channel for fire-shutters. No. 1,105,087; July 28; Gaz. vol. 204; p. 1131.
McClure, Edward E., and A. J. Wolff, assignors to Portland Iron Works, Portland, Oreg. Key-operated actuating mechanism for engine-gangs. No. 1,102,419; July 7; Gaz. vol. 204; p. 70.
McColl, Francis P., St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill. Soldering-machine. No. 1,103,067; July 14; Gaz. vol. 204; p. 341.
McCollum, James T., Dardanelle, Ark. Mail-carrying device. No. 1,104,916; July 28; Gaz. vol. 204; p. 1072.
McColly, Charles C., deceased; J. McColly, Wayne, Colo., administrator, assignor of one-half to C. E. Lookingbill, Maxwell, Iowa. Bolting mechanism. No. 1,104,434; July 21; Gaz. vol. 204; p. 854.
McColly, Josiah, administrator. (See McColly, Charles C.)
McCoon, Ira, Windsor Locks, Conn. Truck. No. 1,103,796; July 14; Gaz. vol. 204; p. 595.
McCord, Eva T., Chicago, Ill. Hat and coat hanger. No. 1,102,420; July 7; Gaz. vol. 204; p. 70.
McCormick, John H., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,103,068; July 14; Gaz. vol. 204; p. 341.
McCormick, John I., assignor of one-half to H. and W. Lytton, Chicago, Ill. Slot guard or shield. No. 1,104,370; July 21; Gaz. vol. 204; p. 832.
McCoy, Herbert N., Chicago, Ill. Treating radio-active barium compounds. No. 1,103,600; July 14; Gaz. vol. 204; p. 527.
McCoy, James N., Vincennes, Ind. Cooling medium for internal-combustion engines. No. 1,102,777; July 7; Gaz. vol. 204; p. 194.
McCracken, Edward E., Greenville, Pa. Towel-dispensing cabinet. No. 1,104,207; July 21; Gaz. vol. 204; p. 776.
McDade, Edward J., assignor to Pritchard-Stamping Company, Rochester, N. Y. Coupling device. No. 1,105,034; July 28; Gaz. vol. 204; p. 1112.
McDonald, Richard A. (See McIville, Herbert J., assignor.)
McDonnell, Joseph L., Philadelphia, Pa. Car-fender. No. 1,104,435; July 21; Gaz. vol. 204; p. 854.
McFadden, George E., Pullman, Ill. Car-wheel. No. 1,104,208; July 21; Gaz. vol. 204; p. 776.
McFalls, David H., White Plains, N. Y. Toy. No. 1,103,601; July 14; Gaz. vol. 204; p. 527.
McFarland, Earl, and E. C. Churning, Sausalito, Cal. Spark-plug. No. 1,103,797; July 14; Gaz. vol. 204; p. 595.
McFarland, James W. (See Barber and McFarland.)
McGinnis, Crawford P. (See Dake and McGinnis.)
McGinnis, David R., Fresno, Cal. Awning-ventilator. No. 1,103,980; July 21; Gaz. vol. 204; p. 699.
McGinnis, John A., Bridgeport, Ohio, assignor to Wheeling Stamping Company, Wheeling, W. Va. Clutch mechanism. No. 1,103,679; July 14; Gaz. vol. 204; p. 556.
McGlashan, Charles F. (See McGlashan, Ximena, L. G., and C. F.)
McGlashan, Leonora G. (See McGlashan, Ximena, L. G., and C. F.)

McGlashan, Ximena, L. G., and C. F., Truckee, Cal. Entomological mount. No. 1,104,371; July 21; Gaz. vol. 204; p. 833.
McGovern, Daniel F., Montpelier, assignor to C. C. Putnam, Middlesex, Vt., administrator of M. Wright, deceased, and P. C. Wright, deceased. Polishing-wheel. No. 1,105,088; July 28; Gaz. vol. 204; p. 1132.
McGovern, Daniel F., Montpelier, assignor to C. C. Putnam, Middlesex, Vt., executor of P. C. Wright, deceased, and administrator of M. Wright, deceased. Polishing-wheel. No. 1,105,089; July 28; Gaz. vol 204; p. 1132.
McGowen, Francis J., Los Angeles, Cal., assignor of one-third to I. R. Forbes. Telephone signal and recorder. No. 1,102,421; July 7; Gaz. vol. 204; p. 71.
McGrath, John T., Bloomington, Ill. Automatic exhaust drain-cock for steam-engines. No. 1,103,602; July 14; Gaz. vol. 204; p. 527.
McGraw, Alfred D. (See Reynolds and McGraw.)
McGregor, Allan L., Chicago, Ill. Automobile-buffer. No. 1,103,981; July 21; Gaz. vol. 204; p. 699.
McHale, David F., Dunmore, Pa. Ladder-jack. No. 1,104,996; July 28; Gaz. vol. 204; p. 1098.
McHarg, Arthur V. A. (See Murray and McHarg.)
McIlwaine, George W., Rutherford, N. J. Bicycle crank-hanger. No. 1,104,523; July 21; Gaz. vol. 204; p. 888.
McKay, Malcolm, Roxobel, N. C. Holder for an insecticide. No. 1,105,364; July 28; Gaz. vol. 204; p. 1231.
McKechnie, Archibald E. (See Shephard and McKechnie.)
McKelvey, Alvah J. (See Carr and Maddux, assignors.)
McKenee, Joseph H., New York, N. Y. Concrete construction. No. 1,102,991; July 7; Gaz. vol. 204; p. 265.
McKenna, Daniel S., San Francisco, Cal. Electric switch and lock-box therefor. No. 1,103,525; July 14; Gaz. vol. 204; p. 497.
McKenzie, Thomas W., assignor of one-third to J. Lauler and one-third to C. Oeftering, Indianapolis, Ind. Steering-wheel for motor-cars. No. 1,104,524; July 21; Gaz. vol. 204; p. 888.
McKeon, John, Chicago, Ill. Manhole-cover. No. 1,102,422; July 7; Gaz. vol. 204; p. 71.
McKnight, John A., Louisville, Ky., assignor to The Millnite Mfg. Co. Shock-absorber. No. 1,104,064; July 31; Gaz. vol. 204; p. 728.
McLaren, John I. (See Wynn, Thomas H., assignor.)
McLaughlin, William P., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,104,209; July 21; Gaz. vol. 204; p. 777.
McLean, Frank W., Morenci, Ariz. Automatic counting and recording mechanism. No. 1,104,307; July 21; Gaz. vol. 204; p. 810.
McLean, William S., Vancouver, British Columbia, Canada. Saw-tooth. No. 1,105,153; July 28; Gaz. vol. 204; p. 1152.
McLeod, George T., Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Shoemaker's work-bench. No. 1,104,372; July 21; Gaz. vol. 204; p. 833.
McMahon, Robert G., St. Louis, Ill. Lock. No. 1,103,798; July 14; Gaz. vol. 204; p. 596.
McMillan, George T., Bushnell, S. D. Cushioned wheel. No. 1,102,423; July 7; Gaz. vol. 204; p. 72.
McMillan, Hugh P., assignor to W. A. Tottle & Co., Baltimore, Md. Brush. No. 1,105,573; July 28; Gaz. vol. 204; p. 1302.
McMillan, Moses C., Wilmington, Ohio. Hinge for umbrella-ribs. No. 1,103,799; July 14; Gaz. vol. 204; p. 596.
McMillen, Robert S., Pittsburgh, Pa. Bit-gage. No. 1,105,154; July 28; Gaz. vol. 204; p. 1152.
McMurtrie, Adnah, assignor to Thomas & Betts Company, New York, N. Y. Electrical outlet-box and the like. No. 1,105,284; July 28; Gaz. vol. 204; p. 1198.
McMurtry, Alden L., Sound Beach, Conn. Automobile-light. No. 1,105,035; July 28; Gaz. vol. 204; p. 1112.
McNab, Alexander, assignor to The McNab Company, Bridgeport, Conn. Automatic circulator for steam-boilers. No. 1,103,425; July 14; Gaz. vol. 204; p. 463.
McNab Company, The. (See McNab, Alexander, assignor.)
McNabb, William F., Pittsburgh, Pa. Electric fumigator. No. 1,102,424; July 7; Gaz. vol. 204; p. 72.
McNeill, Thomas W., and I. J. Babcock, Chicago, Ill. Smoke-indicator. No. 1,103,603; July 14; Gaz. vol. 204; p. 527.
McNutt, Hiram F., and C. E. Ballinger, Richmond, Ind. Cracker-cutter. No. 1,102,676; July 7; Gaz. vol. 204; p. 159.
McOmber, Pauline S., Hastings, Mich. Stay-pocket. No. 1,102,677; July 7; Gaz. vol. 204; p. 159.
McQueen, Ulysses G., New Rochelle, N. Y. Sash-pulley. No. 1,104,525; July 21; Gaz. vol. 204; p. 888.
McQuhae, Adamina M., Toronto, Ontario, Canada. Attachment for arm-baths. No. 1,105,365; July 28; Gaz. vol. 204; p. 1231.
McTavish, Harry, Eldon, Prince Edward Island, Canada. Folding box or crate. No. 1,105,285; July 28; Gaz. vol. 204; p. 1198.
Meacham, Benjamin E., Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Automatic water-heater. No. 1,103,800; July 14; Gaz. vol. 204; p. 596.
Meacham, Benjamin E., Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Instantaneous water-heater. No. 1,103,801; July 14; Gaz. vol. 204; p. 597.
Means, John H., Mayville, Wis. Cooling system for blast-furnaces. No. 1,102,281; July 7; Gaz. vol. 204; p. 21.
Mechanical Process Manufacturing Company, The. (See Hagemeyer, Henry F., assignor.)
Mechler, Charles F., Chicago, Ill. Composing-stick. No. 1,102,778; July 7; Gaz. vol. 204; p. 195.
Medill, Duncan B. (See Jackson, Hinton A., assignor.)
Medve, Alexander, Mohawk, Mich. Antiskid attachment. No. 1,104,526; July 21; Gaz. vol. 204; p. 889.
Megown, John D., Youngstown, Ohio. Camera-back. No. 1,104,527; July 21; Gaz. vol. 204; p. 889.
Meidroth, William F. (See Hovenden, George H., assignor.)
Meisselbach-Catucci Mfg. Co. (See Zusi, Norman E., assignor.)
Meissner, Otto, Coswig, Germany. Carbureter. No. 1,103,802; July 14; Gaz. vol. 204; p. 597.
Meissner, Otto, Coswig, Germany. Float-chamber for carbureters. No. 1,103,803; July 14; Gaz. vol. 204; p. 598.
Melusse-Schlempe G. m. b. H. (See Stoltzenberg, Hugo, assignor.)
Melbourn, Jesse. (See Barton, Melbourn, Needham, and Green.)
Mellon, George A., St. Louis, Mo. Spring bed-bottom. No. 1,103,526; July 14; Gaz. vol. 204; p. 498.
Mellor, Norman. (See Malaby, Ira B., assignor.)
Melville Clark Piano Company. (See Clark, Ernest G., assignor.)
Melville, Herbert J., Pittsburgh, Pa., assignor of one-half to R. A. McDonald, Chicago, Ill. Rail-stop. No. 1,104,528; July 21; Gaz. vol. 204; p. 889.
Melvin, Samuel A., Meadville, Pa. Sign-holder. No. 1,102,425; July 7; Gaz. vol. 204; p. 72.
Mendelson, Aaron, and S. J. Goldberg, New York, N. Y. Cigarette-box. No. 1,104,529; July 21; Gaz. vol. 204; p. 890.
Menningen, Joseph F., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Connector. No. 1,104,436; July 21; Gaz. vol. 204; p. 854.
Menzies, Thomas G. (See Gibb, Menzies, and Chalmers.)
Mercantile Corporation. (See Banzett, William H., assignor.)
Merchant, Charles, Ottawa, Kans. Foot control for motor-cycles. No. 1,102,940; July 7; Gaz. vol. 204; p. 248.
Meredith, John D., Burkburnett, Tex. Pipe-tongs. No. 1,104,530; July 21; Gaz. vol. 204; p. 890.
Meredith-Jones, Hubert, New York, N. Y., assignor to Columbia Nut and Bolt Company, Incorporated, Bridgeport, Conn. Starting mechanism for explosive-engines. No. 1,104,211; July 21; Gaz. vol. 204; p. 778.
Meredith, Noah E., assignor of forty-nine one-hundredths to J. F. Walsh, Los Angeles, Cal. Valve-grinder. No. 1,104,210; July 21; Gaz. vol. 204; p. 777.
Mergell, George F., Los Angeles, Cal. Electrically-operated railway signal means. No. 1,102,779; July 7; Gaz. vol. 204; p. 195.
Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)
Mergenthaler Linotype Company. (See Kingsbury, George P., assignor.)
Mergenthaler Linotype Company. (See Mayer and Muehleisen, assignors.)
Mergenthaler Linotype Company. (See Muehleisen, Carl, assignor.)
Mergenthaler Linotype Company. (See Wood, William M., assignor.)
Merkel, Benedikt. (See Engelmann and Merkel.)
Merrell, Frederick H., Milwaukee, Wis., assignor to Package Machinery Company, Springfield, Mass. Cube-cutting machine. No. 1,103,604; July 14; Gaz. vol. 204; p. 528.
Merrell, Irving S. and O. E., assignors to Merrell-Soule Company, Syracuse, N. Y. Obtaining the solids from liquids. No. 1,102,601; July 7; Gaz. vol. 204; p. 134.
Merrell, Oliver E. (See Merrell, Irving S. and O. E.)
Merrell-Soule Company. (See Merrell, Irving S. and O. E., assignors.)
Merrill, Alva A., South Dayton, N. Y. Mixing-machine. No. 1,102,348; July 7; Gaz. vol. 204; p. 44.
Merritt, James E., Fargo, N. D. Clothes-drainer. No. 1,103,804; July 14; Gaz. vol. 204; p. 598.
Mertens, Eduard, Freiburg, Breisgau, assignor of one-half to Elsässische Maschinenbau Gesellschaft, Mulhausen, Germany. Rotary intaglio-printing machine. No. 1,103,805; July 14; Gaz. vol. 204; p. 598.
Mertz, Victor E., New York, N. Y. Apparatus for moistening yarn. No. 1,103,806; July 14; Gaz. vol. 204; p. 599.
Messinger, Frederick H., New York, N. Y. Vehicle-wheel. No. 1,103,308; July 14; Gaz. vol. 204; p. 425.
Messiter, Edwin H., Brooklyn, assignor to Weigher Patent Company, New York, N. Y. Weighing mechanism. No. 1,104,268; July 21; Gaz. vol. 204; p. 796.
Metallurgical Engineering & Process Corporation. (See Robinson, Cyrus, assignor.)
Metals Recovery Company. (See Callow, John M., assignor.)
Metzger, John C., Chicago, Ill. Air-valve for carbureters. No. 1,105,090; July 28; Gaz. vol. 204; p. 1132.
Meyer, Julius A., assignor to Duplex Manufacturing Company, St. Louis, Mo. Combined snare strainer and muffler. No. 1,104,373; July 21; Gaz. vol. 204; p. 833.
Meyer, William. (See Sonderegger, Leo, assignor.)
Meyercord, George R., Chicago, Ill. Transfer-picture. No. 1,104,126; July 21; Gaz. vol. 204; p. 749.

Mezei, William, and F. Podmanicky, East Pittsburgh, Pa. Egg-breaker. No. 1,102,780; July 7; Gaz. vol. 204; p. 195.
Michanek, Nicholas, St. Joseph, Mo. Chalk-holder. No. 1,104,815; July 28; Gaz. vol. 204; p. 1036.
Midgley, Herbert, Worcester, Mass. Detachable handle for hand-cards. No. 1,104,531; July 21; Gaz. vol. 204; p. 890.
Midgley, John, and T. G. Mills, Todmorden, England. Stripping mechanism for carding-engines. No. 1,103,150; July 14; Gaz. vol. 204; p. 371.
Miehle Printing Press & Manufacturing Company. (See Moe, Sivert, assignor.)
Miehle, Robert, assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Printing-press. No. 1,105,574; July 28; Gaz. vol. 204; p. 1302.
Miehle, Robert, Plymouth, Ind., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Printing-press. No. 1,105,575; July 28; Gaz. vol. 204; p. 1302.
Miessner, Benjamin J., Washington, D. C. Detector for wireless apparatus. No. 1,104,065; July 21; Gaz. vol. 204; p. 728.
Mieth, Otto F., assignor to The Ohio Timelock Company, Cincinnati, Ohio. Time-lock. No. 1,105,286; July 28; Gaz. vol. 204; p. 1199.
Mighill, Thomas A., Cambridge, Mass. Apparatus for picking up peat-blocks. No. 1,102,781; July 7; Gaz. vol. 204; p. 195.
Mihalyak, John, Bitumen, Pa. Rail-guard. No. 1,103,680; July 14; Gaz. vol. 204; p. 557.
Mikeal, Isham, Mountain Springs, Tex. Baling-compress. No. 1,102,282; July 7; Gaz. vol. 204; p. 21.
Milarch, Ernst. (See Singer and Milarch.)
Milburn, Paul W., Spokane, Wash. Valve for internal-combustion-engine cylinders. No. 1,102,283; July 7; Gaz. vol. 204; p. 22.
Miles, Elizabeth, Evanston, Ill. Maternity-gown. No. 1,104,437; July 21; Gaz. vol. 204; p. 855.
Miller, Carl E. M., New York, N. Y. Lifting-truck. No. 1,104,532; July 21; Gaz. vol. 204; p. 891.
Miller, Carl E. M., New York, N. Y. Lifting-truck. No. 1,104,533; July 21; Gaz. vol. 204; p. 891.
Miller, Carroll A., Rowley, Mass. Fastening device. No. 1,104,690; July 21; Gaz. vol. 204; p. 943.
Miller, Chant A., St. Louis, and R. V. Miller, St. Joseph, Mo. Ventilating device. No. 1,104,816; July 28; Gaz. vol. 204; p. 1036.
Miller, Charles C., Fort Wayne, Ind. Bag. No. 1,102,426; July 7; Gaz. vol. 204; p. 73.
Miller, David L., F. T. Lobach, and C. F. Peters, Egypt, Pa. Folding car-step. No. 1,104,374; July 21; Gaz. vol. 204; p. 834.
Miller, Ferdinand, Covington, Ky. Wagon-jack. No. 1,105,091; July 28; Gaz. vol. 204; p. 1132.
Miller, Franz, Milan, Italy. Motor. No. 1,103,681; July 14; Gaz. vol. 204; p. 557.
Miller, George, Baltimore, Md. Billiard-cue-tip fastener. No. 1,103,807; July 14; Gaz. vol. 204; p. 599.
Miller, George H., Chicago, Ill. Brush holder or receptacle. No. 1,102,284; July 7; Gaz. vol. 204; p. 22.
Miller, John J. A., Denver, Colo. Resilient tire for automobile and other vehicle wheels. No. 1,104,817; July 28; Gaz. vol. 204; p. 1037.
Miller, John M. (See Miller, Lewis E., assignor.)
Miller, Joseph C., Lincoln, Nebr. Piano-hammer. No. 1,104,691; July 21; Gaz. vol. 204; p. 943.
Miller, Leonard, assignor to B. S. Boysen, Brownwood, Tex. Distributing switch mechanism for electric signs and similar devices. No. 1,104,692; July 21; Gaz. vol. 204; p. 944.
Miller, Lewis E., Neodesha, assignor of one-half to J. M. Miller, Goodland, Kans. Egg-carrier. No. 1,105,092; July 28; Gaz. vol. 204; p. 1133.
Miller, Louis, Detroit, Mich. Table. No. 1,104,917; July 28; Gaz. vol. 204; p. 1072.
Miller, Melchior, Le Mars, Iowa. Adjustable tool. No. 1,103,808; July 14; Gaz. vol. 204; p. 599.
Miller, Robert H., assignor to Laclede-Christy Clay Products Company, St. Louis, Mo. Glass-furnace. No. 1,104,375; July 21; Gaz. vol. 204; p. 834.
Miller, Roy, Lexington, Ky., and W. E. Sell, assignors to The Sell Horse Goods Company, Canton, Ohio. Harness saddle and girth. No. 1,105,287; July 28; Gaz. vol. 204; p. 1199.
Miller, Royal V. (See Miller, Chant A. and R. V.)
Miller, Thomas S., South Orange, N. J. Load-transferring apparatus. No. 1,102,534; July 7; Gaz. vol. 204; p. 109.
Miller, Tobias, Youngstown, Ohio. Potato-parer. No. 1,104,212; July 21; Gaz. vol. 204; p. 778.
Miller, William, Gilman, Mont. Automatic air-brake system. No. 1,104,693; July 21; Gaz. vol. 204; p. 944.
Miller, William J., and D. W. Jones, assignors of one-third to J. F. Stone, Columbus, Ohio. Explosion-engine. No. 1,104,438; July 21; Gaz. vol. 204; p. 855.
Miller, Willoughby S., assignor of one-half to J. H. Knoll, Reading, Pa. Damper. No. 1,105,366; July 28; Gaz. vol. 204; p. 1231.
Millnite Mfg. Co., The. (See McKnight, John A., assignor.)
Mills, George P., *et al.* (See Brown, George W. A., assignor.)
Mills, Harry C., Unionville, Conn. Outlet-box. No. 1,103,905; July 14; Gaz. vol. 204; p. 632.
Mills, James, assignor to The Smith & Mills Company, Cincinnati, Ohio. Connecting-rod. No. 1,102,782; July 7; Gaz. vol. 204; p. 196.
Mills, Thomas G. (See Midgley and Mills.)
Milton Bradley Company. (See Severance, John, assignor.)
Milton, John L., and J. E. Holland, Memphis, Tenn. Boltless railway-rail joint and tie-plate combined. No. 1,104,694; July 21; Gaz. vol. 204; p. 945.
Miner, William H. (See O'Connor, John F., assignor.)
Minerals Separation. (See Chapman, George A., assignor.)
Minerals Separation. (See Chapman and Tucker, assignors.)
Minet, Adolphe, and H. L. L. Lucas, Paris, France. Electric furnace. No. 1,103,309; July 14; Gaz. vol. 204; p. 425.
Minner, Julian E., Jamestown, N. D. Latch. No. 1,105,527; July 28; Gaz. vol. 204; p. 1286.
Minzenmayer, Otto G. (See Blanchard and Minzenmayer.)
Mischler, Charles F., Sandusky, Ohio. Fish-cleaning machine. No. 1,103,809; July 14; Gaz. vol. 204; p. 599.
Miskovsky, Frank, Lynn, Mass. Engine-starter. No. 1,105,367; July 28; Gaz. vol. 204; p. 1231.
Mitchell, Charles P., Arlington Heights, Mass. Thread-package. No. 1,104,818; July 28; Gaz. vol. 204; p. 1037.
Mitchell, James L., Santa Paula, Cal. Automatic circuit-breaker. No. 1,104,439; July 21; Gaz. vol. 204; p. 835.
Mitchell, John C. (See Hirsh and Mitchell.)
Mitchell, John D. (See Mayette and Mitchell.)
Mitchell, John H. (See Mayette and Mitchell, assignors.)
Mitchell, Mary P., Eaton, Ohio. Priming mechanism for explosive-engines. No. 1,102,285; July 7; Gaz. vol. 204; p. 22.
Mitchell, Walter F., and E. E. Henry, Astoria, Oreg. Automobile wheel-controlling means. No. 1,104,534; July 21; Gaz. vol. 204; p. 892.
Mittasch, Alwin. (See Bosch and Mittasch.)
Mitten, Philip J., Philadelphia, Pa., assignor to The Near Side Car Company, New York, N. Y. Double-deck vehicle. No. 1,102,602; July 7; Gaz. vol. 204; p. 134.
Mix, Henry O., Nassau, Minn. Box for badges. No. 1,103,810; July 14; Gaz. vol. 204; p. 600.
Moak, William V., Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company. Railway signaling system. No. 1,102,783; July 7; Gaz. vol. 204; p. 196.
Mock, Charles M., and A. U. Gerber, Chicago, Ill. Safety appliance for railway-cars. No. 1,102,784; July 7; Gaz. vol. 204; p. 196.
Mockbee, Charles E., Rolla, assignor of one-half to R. P. Shipley, University, Mo. Lantern. No. 1,103,527; July 14; Gaz. vol. 204; p. 498.
Moe, Sivert, assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Bed-cushioning device for printing-presses. No. 1,104,819; July 28; Gaz. vol. 204; p. 1038.
Moeller, Max E., New York, N. Y. Device for illuminating thermometers and similar instruments. No. 1,103,605; July 14; Gaz. vol. 204; p. 528.
Moeller, William J., Wyoming, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Bag. No. 1,104,308; July 21; Gaz. vol. 204; p. 810.
Moessner, John C., Mount Pleasant, S. C. Thermostatic circuit-closer. No. 1,104,695; July 21; Gaz. vol. 204; p. 945.
Moessner, Oscar, administrator. (See Moessner, Otto.)
Moessner, Otto, deceased, Philadelphia, Pa.; O. Moessner, New Haven, Conn., administrator. Electric-current indicator. No. 1,104,440; July 21; Gaz. vol. 204; p. 856.
Mohlberg, John, Brooklyn, N. Y. Garment-hook. No. 1,102,785; July 7; Gaz. vol. 203; p. 196.
Molina, Edward C. (See Blauvelt and Molina.)
Molina, Edward C. (See Gray and Molina.)
Moline, Herman, Chicago, Ill. Stand for motor-cycles and the like. No. 1,104,696; July 21; Gaz. vol. 204; p. 945.
Moline Plow Company. (See Vingum, Martin J., assignor.)
Moline Plow Company, The. (See Smith and Lindgren, assignors.)
Moline Plow Company, The. (See Stephens, Charles R., assignor.)
Mollart, Lobegott, assignor to G. B. Lewis Company, Watertown, Wis. Box-fastener. No. 1,102,286; July 7; Gaz. vol. 204; p. 22.
Moller, Edvard M., Jersey City, N. J. Combination door and door-step for platforms of cars. No. 1,102,287; July 7; Gaz. vol. 204; p. 23.
Mollet, Samuel. (See Bennett, George W., assignor.)
Moltar, Joseph, Fort Riley, Kans. Holder. No. 1,103,367; July 14; Gaz. vol. 204; p. 445.
Monahan, Louis J., and C. J. Pope, Oshkosh, Wis. Soy-milk product and making the same. No. 1,104,376; July 21; Gaz. vol. 204; p. 835.
Mongan, John P., Minneapolis, Minn. Automatic uncoupler for car-couplings. No. 1,102,941; July 7; Gaz. vol. 204; p 249.
Monitor Stove and Range Company, The. (See Doyle, William J., assignor.)
Montag, Christoph F., Blue Island, Ill. Orthodontia-pliers. No. 1,103,606; July 14; Gaz. vol. 204; p. 529.
Monterastelli, Buanafede, assignor of one-fourth to E. Murray, Passaic, N. J. Automatic stop for railway-trains. No. 1,103,368; July 14; Gaz. vol. 204; p. 445.

Montessori, Maria, Rome, Italy. Educational device. No. 1,103,369; July 14; Gaz. vol. 204; p. 445.
Montferrand, Arthur R. (See Joy and Montferrand.)
Montgomery, Carroll H., White Deer, Tex. Header device. No. 1,104,213; July 21; Gaz. vol. 204; p. 779.
Montgomery, John, Toronto, Ontario, Canada. Tool for boring lock-mortises. No. 1,103,069; July 14; Gaz. vol. 204; p. 342.
Montreuil, Francis H., Chicago, Ill., assignor to Warren Webster & Company, Camden, N. J. Heating system. No. 1,103,215; July 14; Gaz. vol. 204; p. 395.
Monxaney, John, assignor of one-third to A. M. Keane and one-third to C. E. McCauley, Harrisburg, Pa. Lock. No. 1,105,093; July 28; Gaz. vol. 204; p. 1133.
Moore, Ambrose L. and G. D., New Orleans, La. Stump-cutting machine. No. 1,104,535; July 21; Gaz. vol. 204; p. 892.
Moore, Cyrus, Cambridge, Ohio. Window shade and curtain fixture. No. 1,103,982; July 21; Gaz. vol. 204; p. 699.
Moore, Edward Y., Cleveland, Ohio. Hoisting mechanism. No. 1,103,889; July 14; Gaz. vol. 204; p. 627.
Moore, George D. (See Moore, Ambrose L. and G. D.)
Moore, Harrison I., Windsor, Nova Scotia, Canada. Sack-holder. No. 1,103,370; July 14; Gaz. vol. 204; p. 446.
Moore, Hugh K., and R. B. Wolf, Berlin, N. H. Reclaiming waste products in the manufacture of sulfite fiber. No. 1,103,216; July 14; Gaz. vol. 204; p. 395.
Moore, Jacob H., Delavan, Kans. Vertically-adjustable hinge. No. 1,103,607; July 14; Gaz. vol. 204; p. 529.
Moore, Lule H., *et al.* (See Harrington, Leslie, assignor.)
Moore, Otto N., Indianapolis, Ind., assignor to Ohmer Fare Register Company, Rochester, N. Y. Fare-recording machine. No. 1,102,942; July 7; Gaz. vol. 204; p. 249.
Moore, Otto N., Indianapolis, Ind., assignor, by mesne assignments, to Ohmer Fare Register Company, Rochester, N. Y. Fare-register. (Reissue.) No. 13,773; July 14; Gaz. vol. 204; p. 642.
Moore, Pressley A. C., Los Angeles, Cal. Current-motor. No. 1,103,426; July 14; Gaz. vol. 204; p. 464.
Moorhouse, Albert H., Staleybridge, England. Noise-making apparatus. No. 1,103,217; July 14; Gaz. vol. 204; p. 395.
Moranz, Gustave F., assignor to Chicago Varnish Company, Chicago, Ill. Dry-kiln. No. 1,103,608; July 14; Gaz. vol. 204; p. 529.
Morgan Construction Company. (See Edwards, Victor E., assignor.)
Morgan Construction Company. (See Morse, William H., assignor.)
Morgan, John W. (See Derflinger, Calvin O., assignor.)
Morgan, Loren C., Coffeyville, Kans., assignor of one-half to R. N. King, Dayton, Ohio. Transmission mechanism. No. 1,102,603; July 7; Gaz. vol. 204; p. 134.
Morgan, Ralph L., Worcester, Mass. Transmission-gearing. No. 1,102,427; July 7; Gaz. vol. 204; p. 73.
Morgan, Ralph L., Worcester, Mass. Wire-drawing machine. No. 1,103,609; July 14; Gaz. vol. 204; p. 530.
Morgans & Wilcox Mfg. Company. (See Cochran, Robert B., assignor.)
Morgenstern & Brill. (See Oswald, Karl, assignor.)
Moriggl, Carl, assignor to Firm of A. Saurer, Arbon, Switzerland. Warp-tension-regulating mechanism. No. 1,104,377; July 21; Gaz. vol. 204; p. 835.
Moriggl, Carl, assignor to Firm of A. Saurer, Arbon, Switzerland. Machine for punching jacquard-cards for embroidery-machines and the like. No. 1,104,536; July 21; Gaz. vol. 204; p. 892.
Morrell, John A., Pickens, S. C. Cotton-lap-roll truck. No. 1,104,697; July 21; Gaz. vol. 204; p. 946.
Morris, Charles E., Lane, Kans. Throttle-lever-operated controller and accelerator. No. 1,103,151; July 14; Gaz. vol. 204; p. 371.
Morris, Edmund, Grand Rapids, Mich. Lumber-guide. No. 1,104,735; July 21; Gaz. vol. 204; p. 960.
Morris, Edwin S. (See Mulconroy and Morris.)
Morris, John V. (See Oliver, Henry E., assignor.)
Morrison, George L., Hudson, Mich. Paper box. No. 1,104,820; July 28; Gaz. vol. 204; p. 1038.
Morrison, George L., Hudson, Mich. Knockdown box. No. 1,104,821; July 28; Gaz. vol. 204; p. 1038.
Morrison, John E., Arma, Kans. Power-hammer. No. 1,104,269; July 21; Gaz. vol. 204; p. 797.
Morse Chain Company. (See Morse, Frank L., assignor.)
Morse, Frank L., assignor to Morse Chain Company, Ithaca, N. Y. Drive-chain. No. 1,105,288; July 28; Gaz. vol. 204; p. 1199.
Morse, William H., assignor to Morgan Construction Company, Worcester, Mass. Wire-drawing machine. No. 1,103,811; July 14; Gaz. vol. 204; p. 600.
Morse, Willis S. (See Hunting, Irving A., assignor.)
Morse, Willis S., Philadelphia, Pa. Tension-regulator for printing-presses. No. 1,103,152; July 14; Gaz. vol. 204; p. 372.
Morse, Willis S., Philadelphia, Pa. Tension-regulating means for printing-presses. No. 1,103,153; July 14; Gaz. vol. 204; p. 372.
Morse, Willis S., Philadelphia, Pa. Reversing-switch. No. 1,103,154; July 14; Gaz. vol. 204; p. 373.
Morse, Willis S., Philadelphia, Pa. Current-controlling apparatus. No. 1,103,528; July 14; Gaz. vol. 204; p. 499.
Morton, Harold S., Minneapolis, Minn. Automobile brake-actuating mechanism. No. 1,104,066; July 21; Gaz. vol. 204; p. 729.
Morton, Samuel S., Upper Sandusky, assignor, by mesne assignments, to The Herr Engine Company, Portsmouth, Ohio. Traction-engine. No. 1,104,537; July 21; Gaz. vol. 204; p. 893.
Morzycki, Witold. (See Sokolowski, Witold v., assignor.)
Moser, William, Alamosa, Colo. Plate-lifter. No. 1,103,070; July 14; Gaz. vol. 204; p. 342.
Moses, Homer P., *et al.* (See Harrington, Leslie, assignor.)
Mosher, Joseph, Taft, Cal. Beer-cooler. No. 1,104,997; July 28; Gaz. vol. 204; p. 1098.
Mosher, Robert M., Dillon, Mont. Platen-roller release. No. 1,104,538; July 21; Gaz. vol. 204; p. 893.
Moss, Joseph. (See Curley and Moss.)
Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Bobbin. No. 1,105,289; July 28; Gaz. vol. 204; p. 1200.
Mott, Augustus P. (See Drabold and Mott.)
Mouat, Mary, Mount Roskill, Auckland, New Zealand. Sanitary apparatus. No. 1,103,890; July 14; Gaz. vol. 204; p. 627.
Mouat, Thomas G., Cleveland, Ohio. Valve. No. 1,104,918; July 28; Gaz. vol. 204; p. 1072.
Mowat, Oliver M., McKeesport, assignor to The National Tube Company, Pittsburgh, Pa. Apparatus for expanding couplings. No. 1,105,094; July 28; Gaz. vol. 204; p. 1133.
Muehleisen, Carl. (See Mayer and Muehleisen.)
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical casting-machine. No. 1,103,071; July 14; Gaz. vol. 204; p. 342.
Mueller, Edward G., Pittsburgh, Pa. Welding-torch. No. 1,105,290; July 28; Gaz. vol. 204; p. 1200.
Mueller, John B., Pittsburgh, Pa. Article-holder. No. 1,103,682; July 14; Gaz. vol. 204; p. 557.
Mueller, Theodor M., Detroit, Mich. Self-regulating dynamo. No. 1,105,155; July 28; Gaz. vol. 204; p. 1152.
Muhlfeld, John E., Scarsdale, N. Y. Connecting-conduit for locomotives and tenders. No. 1,102,535; July 7; Gaz. vol. 204; p. 109.
Muhlfeld, John E., Scarsdale, N. Y., and H. R. Stafford, Plainfield, N. J. Steam-engine valve-chest. No. 1,103,072; July 14; Gaz. vol. 204; p. 343.
Mukautz, Peter J., Chicago, Ill. Film-feeding mechanism. No. 1,105,036; July 28; Gaz. vol. 204; p. 1112.
Mulconroy, James J., Philadelphia, and E. S. Morris, Oak Lane, Pa. Metallic heel for boots or shoes. No. 1,103,610; July 14; Gaz. vol. 204; p. 530.
Mulder, Jelte R., Roselawn, Ind. Corn-planter. No. 1,104,214; July 21; Gaz. vol. 204; p. 779.
Müller-Brallitz, Erwin, Berlin-Wilmersdorf, Germany. Container for storing photographic plates. No. 1,102,536; July 7; Gaz. vol. 204; p. 110.
Müller, Emil. (See Völler and Müller.)
Müller, Ernst, Berlin, and A. Kayser, Wilmersdorf, near Berlin, assignors to Dübelwerke Gesellschaft mit beschränkter Haftung, Berlin, Germany. Elastic bedding-plate. No. 1,105,368; July 28; Gaz. vol. 204; p. 1232.
Muller, George J., Baltimore, Md. Combined fence-post and take-up. No. 1,105,369; July 28; Gaz. vol. 204; p. 1232.
Mulligan, Thomas F., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Driving mechanism for pumps. No. 1,102,537; July 7; Gaz. vol. 204; p. 110.
Mulligan, Thomas F., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Boring-tool. No. 1,102,538; July 7; Gaz. vol. 204; p. 111.
Mulloy, Patrick, and H. Firminhac, Mercer, Wis. Spark-extinguisher and smoke-consumer. No. 1,104,822; July 28; Gaz. vol. 204; p. 1039.
Multiplex Display Fixture Company. (See Feldmann and Crecelius, assignors.)
Munn, Merton S., Stillwater, Minn. Truck and axle mechanism for railway-cars. No. 1,105,291; July 28; Gaz. vol. 204; p. 1201.
Murayama, Hashime, New York, N. Y. Making transparent models for anatomical study. No. 1,104,067; July 21; Gaz. vol. 204; p. 729.
Murdock, Carruth P., Cincinnati, Ohio. Changeable illuminated sign. No. 1,103,812; July 14; Gaz. vol. 204; p. 600.
Murphy, Arthur, Quincy, Mass. Apparatus for electroplating and the like. No. 1,105,292; July 28; Gaz. vol. 204; p. 1201.
Murphy, Edward J., Barberton, Ohio. Lighting device. No. 1,103,611; July 14; Gaz. vol. 204; p. 530.
Murphy, Francis P., Oakville, Conn. Wheeled broadcasting apparatus. No. 1,102,786; July 7; Gaz. vol. 204; p. 197.
Murphy, Howard M. P., Pittsburgh, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Automatic train-brake-control apparatus. No. 1,104,823; July 28; Gaz. vol. 204; p. 1039.
Murphy, James, Bridgeport, Conn. Police-nipper. No. 1,102,943; July 7; Gaz. vol. 204; p. 249.
Murphy, John F. (See Flora and Murphy.)
Murray, Edward. (See Monterastelli, Buanafede, assignor.)
Murray, George W., Atlantic City, N. J. Gas-broiler. No. 1,103,992; July 21; Gaz. vol. 204; p. 702.

Murray, Milton, Williams Wharf, Va. Non-refillable bottle. No. 1,102,349; July 7; Gaz. vol. 204; p. 44.
Murray, Thomas B., Scotstoun, Scotland. Vehicle-wheel. No. 1,103,813; July 14; Gaz. vol. 204; p. 601.
Murray, Thomas E., New York, N. Y. Protective device for sheathed conductors. No. 1,103,983; July 21; Gaz. vol. 204; p. 700.
Murray, Thomas E., New York, N. Y. Protective casing for line conductors. No. 1,103,984; July 21; Gaz. vol. 204; p. 700.
Murray, Thomas E., New York, N. Y. Electric fuse. No. 1,103,987; July 21; Gaz. vol. 204; p. 701.
Murray, Thomas E., New York, N. Y. Tubular connection-duct. No. 1,103,988; July 21; Gaz. vol. 204; p. 701.
Murray, Thomas E., New York, N. Y. Electric cut-out. No. 1,103,989; July 21; Gaz. vol. 204; p. 701.
Murray, Thomas E., New York, N. Y. Electric cut-out. No. 1,103,990; July 21; Gaz. vol. 204; p. 702.
Murray, Thomas E., New York, N. Y. Connecting device. No. 1,103,991; July 21; Gaz. vol. 204; p. 702.
Murray, Thomas E., New York, N. Y. Electric cut-out. No. 1,103,994; July 21; Gaz. vol. 204; p. 703.
Murray, Thomas E., New York, N. Y. Apparatus for trapping particles in suspension in gas-currents. No. 1,103,995; July 21; Gaz. vol. 204; p. 703.
Murray, Thomas E., New York, N. Y. Seal-fastening. No. 1,105,037; July 28; Gaz. vol. 204; p. 1112.
Murray, Thomas E., and A. W. H. Griepe, New York, N. Y.; said Griepe assignor to said Murray. Device for indicating condition of gas in refrigerating apparatus. No. 1,103,985; July 21; Gaz. vol. 204; p. 700.
Murray, Thomas E., and A. W. H. Griepe, New York, N. Y.; said Griepe assignor to said Murray. Compressor-pump. No. 1,103,986; July 21; Gaz. vol. 204; p. 700.
Murray, Thomas E., and A. V. A. McHarg, New York, N. Y.; said McHarg assignor to said Murray. Protective device for electric circuits. No. 1,103,993; July 21; Gaz. vol. 204; p. 703.
Murrian, William S., trustee. (See Brown, William S., assignor.) (Reissue.)
Murrian, William S., trustee. (See Vissering and Carpenter, assignors.)
Myers, Adolph and L., Birmingham, England. Pen or pencil holder. No. 1,102,350; July 7; Gaz. vol. 204; p. 45.
Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Gear-shifting mechanism. No. 1,102,787; July 7; Gaz. vol. 204; p. 197.
Myers, John H., Buffalo, N. Y. Rotary pump. No. 1,102,288; July 7; Gaz. vol. 204; p. 23.
Myers, Leopold. (See Myers, Adolph and L.)
Mygatt, Otis A., New York, N. Y. Reflector-cluster. No. 1,105,038; July 28; Gaz. vol. 204; p. 1113.
Myre, Charles F., and J. P. Hebert, Chippewa Falls, Wis. Aseptic thermometer-holder. No. 1,103,371; July 14; Gaz. vol. 204; p. 446.
Myrick, Lester W., Gardiner, Oreg. Grinding-machine for band-saws. No. 1,104,698; July 21; Gaz. vol. 204; p. 946.
Nagle Re Blade Knife Company. (See Yerzley, William A., assignor.)
Naglo, Robert, Wiesbaden, Germany. Camera-holder. No. 1,103,814; July 14; Gaz. vol. 204; p. 601.
Nally, Venice F., Charleston, W. Va. Nut-lock. No. 1,105,095; July 28; Gaz. vol. 204; p. 1134.
Nangle, John D. (See Wyckoff and Nangle.)
Nash, Lewis H., South Norwalk, Conn. Water-meter. No. 1,103,612; July 14; Gaz. vol. 204; p. 531.
Nashua Card Gummed & Coated Paper Company. (See Arnold, Frank K., assignor.)
Nashua Manufacturing Company. (See Eaton, Willie G., assignor.)
Nathorst, Harry J. H., Malmberget, Sweden. Magnetic separator. No. 1,105,293; July 28; Gaz. vol. 204; p. 1202.
National-Acme Manufacturing Company, The. (See Smith, Oscar A., assignor.)
National Auto Cycle Company. (See Hansen, Robert, assignor.)
National Automatic Tool Company, The. (See Busch, Edward, assignor.)
National Carbon Co. (See Bemis, Arthur S., assignor.)
National Cash Register Company, The. (See McCormick, John H., assignor.)
National Electric Specialty Company, The. (See Chapman, Frank S., assignor.)
National Electric Specialty Company, The. (See Chapman and Pingen, assignors.)
National Machine Corporation. (See Lilliston, Thomas M., assignor.)
National Malleable Castings Company, The. (See Coffin, Walter E., assignor.)
National Malleable Castings Company, The. (See Howard, Pliny J., assignor.)
National Malleable Castings Company, The. (See Krakau, Harry T., assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Manufacturing Company. (See Bittorf, Louis A., assignor.)
National Metal Fabric Company, The. (See Clark, Norris E., assignor.)
National Musical String Company. (See Biava, Louis, assignor.)
National Printing Machine Company, The. (See Lister, Walter S., assignor.)
National Rapid Transit Company. (See Valentine, Walter D., assignor.)
National Sewing Machine Company. (See Hohmann, Richard K., assignor.)
National Tube Company, The. (See Mowat, Oliver M., assignor.)
Naville, Oscar H., Ambia, Ind. Ratchet-head for post-hole diggers. No. 1,105,448; July 28; Gaz. vol. 204; p. 1259.
Neahr, Jacob E., New York, N. Y. Match-igniting device. No. 1,104,699; July 21; Gaz. vol. 204; p. 946.
Neahr, Will C., Denver, Colo., assignor, by mesne assignments, to The Protective Signal Manufacturing Company. Circuit-closing instrument. No. 1,102,944; July 7; Gaz. vol. 204; p. 250.
Near Side Car Company, The. (See Mitten, Philip J., assignor.)
Needham, Forest. (See Barton, Melbourn, Needham, and Green.)
Neenan Elevator Company. (See Neenan, Michael E., assignor.)
Neenan, Michael E., assignor to Neenan Elevator Company, New York, N. Y. Elevator. No. 1,103,613; July 14; Gaz. vol. 204; p. 531.
Nefgen, August. (See Jacobs and Nefgen.)
Negovatich, Peter, assignor of one-third to I. Heidenheim and one-third to J. Stanovich, Biloxi, Miss. Apparatus for handling seines. No. 1,102,945; July 7; Gaz. vol. 204; p. 250.
Neider, Fred A., Augusta, Ky. Honing-support for safety-razor blades. No. 1,103,427; July 14; Gaz. vol. 204; p. 464.
Nelsen, Alfred N., Longbeach, assignor of one-half to H. J. Woods, Hollywood, Cal. Surf-coaster. No. 1,104,441; July 21; Gaz. vol. 204; p. 856.
Nelson, Emil A., assignor to Rotary Valve Motor Company, Detroit, Mich. Rotary valve. No. 1,103,996; July 21; Gaz. vol. 204; p. 704.
Nelson, John W., New York, N. Y. Machine for cleaning water-mains. No. 1,105,528; July 28; Gaz. vol. 204; p. 1286.
Nelson, Karl F., Kellogg, Idaho. Rifle-box. No. 1,104,919; July 28; Gaz. vol. 204; p. 1073.
Nelson, Samuel M., Hovland, Minn. Clothes-rack. No. 1,103,997; July 21; Gaz. vol. 204; p. 704.
Nelson, William E., De Soto, Miss. Cattle-guard. No. 1,103,372; July 14; Gaz. vol. 204; p. 446.
Nerber, Cecil M. (See Walton and Nerber.)
Nesgood, Della, West Brighton, N. Y. Sanitary support for napkins. No. 1,103,815; July 14; Gaz. vol. 204; p. 601.
Nessler, Charles, London, England. Hair-curler. No. 1,105,595; July 28; Gaz. vol. 204; p. 1309.
Neumann, Fritz. (See Prégardien, Joseph E., assignor.)
New Britain Machine Company, The. (See Brown, Robert S., assignor.)
New Britain Machine Company, The. (See Erwin and Gorsline, assignors.)
New Departure Manufacturing Company, The. (See Graham, David F., assignor.)
New Departure Manufacturing Company, The. (See Rockwell, Albert F., assignor.)
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Jersey Zinc Company. (See Rigg, Gilbert, assignor.)
Newark Gear Cutting Machine Co. (See Eberhardt, Henry J., assignor.)
Newberg, Axel R. (See Janson, Carl A., assignor.)
Newburn, Charles C., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Electric switch. No. 1,103,529; July 14; Gaz. vol. 204; p. 499.
Newburn, Charles C., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Electromagnet. No. 1,103,530; July 14; Gaz. vol. 204; p. 499.
Newell, George T., Jr., assignor to Vesta Manufacturing Company, Passaic, N. J. Water-heater. No. 1,103,614; July 14; Gaz. vol. 204; p. 532.
Newell, Nelson C., and J. A. Harrington, Racine, Wis. Starch-separating machine. No. 1,105,294; July 28; Gaz. vol. 204; p. 1202.
Newhouse, John L., and E. Runkel, Pine Island, Minn. Barber's fan-support and the like. No. 1,103,816; July 14; Gaz. vol. 204; p. 601.
Newman, William P., and H. P. Eaton, Bucyrus, Ohio. Step-ladder. No. 1,102,428; July 7; Gaz. vol. 204; p. 73.
Newton, Albert E., assignor, by mesne assignments, to Reed-Prentice Company, Worcester, Mass. Spindle-driving mechanism. No. 1,105,529; July 28; Gaz. vol. 204; p. 1286.
Newton, Albert S., Providence, R. I. Shower-head. No. 1,105,576; July 28; Gaz. vol. 204; p. 1303.
Nibourel, Alexandre V., Paris, France, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,102,429; July 7; Gaz. vol. 204; p. 73.
Nicholas, Robert G., Clyde, Kans. Safety-pocket. No. 1,102,946; July 7; Gaz. vol. 204; p. 250.
Nichols, Charles B., *et al.* (See Alexander, Jesse, assignor.)
Nichols Copper Co. (See Herreshoff, James B., Jr., assignor.)

Nichols, Elmer P., assignor to Lacene Manufacturing Company, Manchester, N. H. Machine for grade-marking died-out leather pieces. No. 1,104,378; July 21; Gaz. vol. 204; p. 835.

Nickol, Frederick C., and M. C. Stern, assignors to The Egry Register Company, Dayton, Ohio. Autographic register. No. 1,104,127; July 21; Gaz. vol. 204; p. 749.

Niclausse, Albert, Paris, France. Tube for multitubular steam-generators. No. 1,103,531; July 14; Gaz. vol. 204; p. 500.

Niehoff, Ernest, Roanoke, Va. Kite. No. 1,103,817; July 14; Gaz. vol. 204; p. 602.

Nield, John H., Hackensack, N. J., assignor to General Chemical Company, New York, N. Y. Producing hydrochloric acid. No. 1,102,539; July 7; Gaz. vol. 204; p. 111.

Nielsen, Jens, Cedar Falls, Iowa. Rotary engine or pump. No. 1,105,449; July 28; Gaz. vol. 204; p. 1259.

Nielsen, Niels C., Cleveland, Ohio. Folding table. No. 1,103,532; July 14; Gaz. vol. 204; p. 500.

Nielsen, Peter C., assignor of one-half to E. H. Collis, Portland, Oreg. Combined washboiler and tray. No. 1,105,337; July 28; Gaz. vol. 204; p. 1219.

Niemi, David C., Glassport, Pa. Mortising-machine. No. 1,102,678; July 7; Gaz. vol. 204; p. 160.

Nilson, Jacob, Clearbrook, Minn. Carrier. No. 1,103,615; July 14; Gaz. vol. 204; p. 532.

Nilsson, Emil B., assignor to Chi-Ill-Electric Company, Chicago, Ill. Electric-socket plug. No. 1,103,533; July 14; Gaz. vol. 204; p. 500.

Nissen, Jeppe P., Odense, Denmark. Mechanical screwdriver and drilling-machine. No. 1,102,947; July 7; Gaz. vol. 204; p. 250.

Niswanger, Eric W., Hewins, Kans. Skid. No. 1,103,155; July 14; Gaz. vol. 204; p. 373.

Noble, Percy W., Pontiac, Mich. Internal-combustion engine. No. 1,104,442; July 21; Gaz. vol. 204; p. 856.

Noelle, Max, Westminster, London, England. Elevating and discharging apparatus. No. 1,103,616; July 14; Gaz. vol. 204; p. 532.

Noesting Pin-Ticket Company. (See Bayer, Joseph, Jr., assignor.) (Reissue.)

Noiseless Typewriter Company, The. (See Kidder, Wellington P., assignor.)

Noiseless Typewriter Company, The. (See Ronchetti, Joseph A., assignor.)

Norden, Joseph. (See Norden, Mortimer, assignor.)

Norden, Mortimer, assignor to J. Norden, New York, N. Y. Electric sign. No. 1,102,788; July 7; Gaz. vol. 204; p. 197.

Nordyke & Marmon Co. (See Brantingham, Allen C., assignor.)

Nordyke & Marmon Company. (See Marmon, Howard C., assignor.)

Norris, Francis, Jr. (See Gruver, Joseph H., assignor.)

Norris, Frank P., *et al.* (See Maccallum, Norman E., assignor.) (Reissue.)

North Bro's. M'f'g. Co. (See Fegley and Leopold, assignors.)

North Bro's. M'f'g. Co. (See Leopold, George O., assignor.)

North, Israel R., Baltimore, Md. Collar-button guard for shirts. No. 1,105,295; July 28; Gaz. vol. 204; p. 1203.

North, Stanley C., Elmira, N. Y. Tool for removing engine-valves. No. 1,105,096; July 28; Gaz. vol. 204; p. 1134.

Northup, Frank, Ludlow, Vt., assignor of one-eighth to J. Northup, one-eighth to W. W. Avery, one-eighth to J. B. Reid, and one-eighth to R. L. Reid, Alexandria Bay, N. Y. Train-stopping apparatus. No. 1,103,818; July 14; Gaz. vol. 204; p. 602.

Northup, Joseph, *et al.* (See Northup, Frank, assignor.)

Norton, Downes E., London, England. Tobacco-pipe filler and pouch for use therewith. No. 1,104,068; July 21; Gaz. vol. 204; p. 729.

Norton, John, New York, N. Y. Lawn game. No. 1,102,948; July 7; Gaz. vol. 204; p. 251.

Nothacker, Albert J. (See Paulson, Charles J., assignor.)

Nottberg, William. (See Heim and Nottberg.)

Novick, Abraham, Brooklyn, assignor to F. L. Schmidt Company, New York, N. Y. Washer and string attaching mechanism. No. 1,104,128; July 21; Gaz. vol. 204; p. 749.

Nye, George F., Kearney, Nebr. Concrete-mixer. No. 1,103,534; July 14; Gaz. vol. 204; p. 500.

Nymon, Wigo G., Argusville, N. D. Box-car door. No. 1,104,129; July 21; Gaz. vol. 204; p. 750.

Nystrom, Gustav E., Brooklyn, N. Y. Egg-crate guard. No. 1,103,819; July 14; Gaz. vol. 204; p. 603.

O'Connell, Joseph J., Chicago, Ill., assignor to American Telephone and Telegraph Company, Boston, Mass. Emergency signaling system for telephone toll-collecting apparatus. No. 1,103,073; July 14; Gaz. vol. 204; p. 343.

O'Connor, John, Atchison, Kans. Grease-cup. No. 1,103,156; July 14; Gaz. vol. 204; p. 373.

O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Tandem draft-rigging for railway-cars. No. 1,105,577; July 28; Gaz. vol. 204; p. 1303.

O'Donnell, Charles J., and A. F. Kunberger, assignors to The United Gas Improvement Company, Philadelphia, Pa. Purifying gas. No. 1,105,578; July 28; Gaz. vol. 204; p. 1303.

O'Neill, Charles J., *et al.* (See Gearing, Harry, assignor.)

O'Neill, Henry G., assignor of one-half to C. Hubert, New York, N. Y. Engine-starter. No. 1,105,297; July 28; Gaz. vol. 204; p. 1203.

O'Shaughnessy, James F., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y. Machine for use in gathering cotton. No. 1,103,618; July 14; Gaz. vol. 204; p. 533.

O'Shaughnessy, James F., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y. Machine for gathering cotton. No. 1,103,619; July 14; Gaz. vol. 204; p. 534.

O'Shaughnessy, James F., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y. Apparatus for use in gathering cotton. No. 1,103,620; July 14; Gaz. vol. 204; p. 534.

O'Shaughnessy, James F., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y. Machine for use in gathering cotton. No. 1,103,621; July 14; Gaz. vol. 204; p. 534.

O'Shaughnessy, James F., assignor, by mesne assignments, to Cotton Gathering Corporation, New York, N. Y. Apparatus for use in gathering cotton. No. 1,103,622; July 14; Gaz. vol. 204; p. 534.

Oakley Foundry and Engineering Company. (See Oakley, William E., assignor.)

Oakley, William E., assignor to Oakley Foundry and Engineering Company, Astoria, N. Y. Apparatus for burning liquid fuel. No. 1,103,535; July 14; Gaz. vol. 204; p. 501.

Oakley, William E., Millbury, and W. A. Pentecost, Worcester, Mass., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee. Apparatus for burning liquid fuel. No. 1,103,617; July 14; Gaz. vol. 204; p. 533.

Obert, Casin W., New York, N. Y. Locking means for internal-combustion motors. No. 1,105,206; July 28; Gaz. vol. 204; p. 1203.

Odle, Winfield S., Los Angeles, Cal. Casement-window-operating device. No. 1,103,218; July 14; Gaz. vol. 204; p. 395.

Oeftering, Charles, *et al.* (See McKenzie, Thomas W., assignor.)

Oelerich, Joseph F. (See Ahlstrom and Oelerich.)

Ofeldt, August W., Jersey City, N. J. Water-tube boiler. No. 1,104,379; July 21; Gaz. vol. 204; p. 836.

Ogden, Ferris, assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Adjustable grinder. No. 1,103,219; July 14; Gaz. vol. 204; p. 396.

Ogden, Joseph, Manchester, assignor to A. Denton, Ingleside, Marple, county of Chester, England. Apparatus for cutting, grinding, mincing or pulverizing rubber, leather, cereals, or other suitable substances. No. 1,102,789; July 7; Gaz. vol. 204; p. 198.

Ohio Cultivator Company, The. (See Swanson, Starley S., assignor.)

Ohio Timelock Company, The. (See Mieth, Otto F., assignor.)

Ohlson, Olof, Newton, assignor to Waltham Watch Company, Waltham, Mass. Mounting pivot-bearings for timepieces. No. 1,104,700; July 21; Gaz. vol. 204; p. 947.

Ohmer Fare Register Company. (See Moore, Otto N., assignor.)

Ohmer Fare Register Company. (See Ohmer, John F., assignor.)

Ohmer, John F., assignor to Ohmer Fare Register Company, Dayton, Ohio. Printing mechanism for recorders. No. 1,102,949; July 7; Gaz. vol. 204; p. 251.

Ohnemus, Anton. (See Heidbreder and Ohnemus.)

Oil Well Supply Company. (See Greve, Edgar E., assignor.)

Oil Well Supply Company. (See Kline, Richard E., assignor.)

Okuyama, George, Madison, Wis. Street-indicator. No. 1,102,679; July 7; Gaz. vol. 204; p. 160.

Olbon, John A., assignor to F. E. Rea, Paterson, N. J. Toilet-mirror. No. 1,105,039; July 28; Gaz. vol. 204; p. 1113.

Olechna, Peter K., Schenectady, N. Y. Shock-absorber for vehicles. No. 1,104,380; July 21; Gaz. vol. 204; p. 836.

Oliphant, James E., Cleveland, Ohio. Folding crib and play-pen. No. 1,105,156; July 28; Gaz. vol. 204; p. 1153.

Olive, Edwin F., Iron City, Tenn. Hame. No. 1,103,998; July 21; Gaz. vol. 204; p. 704.

Oliver, Alfred S., Jr., Medical Lake, Wash. Steering-post light. No. 1,105,370; July 28; Gaz. vol. 204; p. 1232.

Oliver Chilled Plow Works. (See Hoke, John I., assignor.)

Oliver Chilled Plow Works. (See Springer, William N., assignor.)

Oliver, George L., La Grande, Oreg. Aeroplane. No. 1,102,790; July 7; Gaz. vol. 204; p. 198.

Oliver, Henry E., assignor of one-half to J. V. Morris, Birmingham, Ala. Bonus-determining device. No. 1,104,069; July 21; Gaz. vol. 204; p. 730.

Oliver Typewriter Co., The. (See Stafford, Wilfred, assignor.)

Olson, Gustav A., Albert Lea, Minn. Overhead track. No. 1,103,310; July 14; Gaz. vol. 204; p. 426.

Olson, Swan, Marion, N. D. Trace-carrier. No. 1,103,373; July 14; Gaz. vol. 204; p. 447.

Omer, William J., Thomas, Okla. Carbureter. No. 1,105,371; July 28; Gaz. vol. 204; p. 1233.

Ondrak, Jacob A., Brooklyn, N. Y. Skeleton girdle. No. 1,104,215; July 21; Gaz. vol. 204; p. 779.

Onions, John T., Albany, N. Y. Combination cooking apparatus. No. 1,102,540; July 7; Gaz. vol. 204; p. 112.

Opsal, Anton M., Minneapolis, Minn. Artificial leg. No. 1,102,289; July 7; Gaz. vol. 204; p. 24.

Optische Anstalt C. P. Goerz Aktiengesellschaft. (See Bernick, Ernst, assignor.)

Orbán, Stefan, New York, N. Y. Bearing. No. 1,105,097; July 28; Gaz. vol. 204; p. 1134.

Ord, Craven R., McAdam Junction, New Brunswick, Canada. Rotary engine. No. 1,104,539; July 21; Gaz. vol. 204; p. 894.

Oregon Envelope Company. (See Hari, Paul, assignor.)

Organ, Thomas O., Germantown, Pa. Grease-cup. No. 1,104,540; July 21; Gaz. vol. 204; p. 894.

Orner, Ellis F., Gowen City, Pa. Sprag-brake. No. 1,103,821; July 14; Gaz. vol. 204; p. 603.

Ortgysen, Cornelius. (See Johnson, Fritz, assignor.)

Osborn, Pearl W., assignor of one-half to B. L. Bonnell, Loveland, Colo. Wrench. No. 1,105,372; July 28; Gaz. vol. 204; p. 1233.

Osborne Patented Machinery Co., The. (See Osborne, William S., assignor.)

Osborne, William S., New York, N. Y., assignor to The Osborne Patented Machinery Co., Inc. Making ice. No. 1,104,920; July 28; Gaz. vol. 204; p. 1073.

Osius, Frederick C. C. T. A., Grand Rapids, Mich. Manufacturing artificial coal from peat. No. 1,105,206; July 28; Gaz. vol. 204; p. 1171.

Ostendorf, John A. (See Whalen, William A., assignor.)

Osterholm, William. (See Weber and Osterholm.)

Ostwald, Walter A., Bayfield, Colo. Safety-stirrup. No. 1,104,216; July 21; Gaz. vol. 204; p. 779.

Oswald, Karl, Irvington, N. J., assignor to Morgenstern & Brill. Fastener for hand-bags and the like. No. 1,102,541; July 7; Gaz. vol. 204; p. 112.

Otis Elevator Company. (See Coyle, Andrew M., assignor.)

Otis Elevator Company. (See Gale, Ernest L., Sr., assignor.)

Otis Elevator Company. (See John, Griffith, assignor.)

Otis Elevator Company. (See Lindquist, David L., assignor.)

Otis Elevator Company. (See Lindquist, Smith, and John, assignors.)

Otis Elevator Company. (See Lutz, William D., assignor.)

Otis Elevator Company. (See Sundh, August, assignor.)

Ottershagen, Charles, Portland, Oreg. Cook stove and range. No. 1,102,430; July 7; Gaz. vol. 204; p. 74.

Otto, Werner, Berlin, Germany. High-tension oscillator. No. 1,103,822; July 14; Gaz. vol. 204; p. 603.

Overbury, Frederick C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Laying waterproof roofing. No. 1,102,680; July 7; Gaz. vol. 204; p. 160.

Overbury, Frederick C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Weatherproof covering. No. 1,104,998; July 28; Gaz. vol. 204; p. 1099.

Overcash, John F., Pringhar, Iowa. Hammer. No. 1,103,918; July 14; Gaz. vol. 204; p. 636.

Overly, Charles F., Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Strainer. No. 1,102,701; July 7; Gaz. vol. 204; p. 198.

Overly, Charles F., Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor. No. 1,104,070; July 21; Gaz. vol. 204; p. 730.

Overly, Charles F., Pittsburgh, Pa., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor for driving tools. No. 1,104,071; July 21; Gaz. vol. 204; p. 731.

Owen, Charles S. (See Trefzer and Owen.)

Owens, Charles E., assignor of one-half to J. H. White, Graham, N. C. Temple. No. 1,103,074; July 14; Gaz. vol. 204; p. 343.

Owens, Edward W., Wagner, S. D. Three-row wheel corn-cultivator. No. 1,105,450; July 28; Gaz. vol. 204; p. 1259.

Oxweld Acetylene Company. (See Winans, Milton E., assignor.)

P. E. Erickson & Son. (See Erickson, Peter E., assignor.)

P. R. Glass Company. (See Glass, Perley R., assignor.)

Paasche, Jens A., Chicago, Ill. Pneumatic paint-brush. No. 1,104,217; July 21; Gaz. vol. 204; p. 780.

Pack, Carl O. C., Highland Park, N. J. Roll. No. 1,104,270; July 21; Gaz. vol. 204; p. 797.

Package Machinery Company. (See Merrell, Frederick H., assignor.)

Packard Motor Car Company. (See Cowles, Edward P., assignor.)

Packard Motor Car Company. (See Huff, Russell, assignor.)

Packard Motor Car Company. (See Loomis, Allen, assignor.)

Packer, Willard N., assignor to T. P. Lide, Los Angeles, Cal. Buffer for automobiles. No. 1,104,443; July 21; Gaz. vol. 204; p. 857.

Paddack, Simon D., New York, N. Y. Reproducer for phonographs. No. 1,102,290; July 7; Gaz. vol. 204; p. 24.

Paddack, Simon D., New York, N. Y. Sound-producing diaphragm. No. 1,102,291; July 7; Gaz. vol. 204; p. 25.

Padgett, Hugh H., and L. L. Bookout, Lindale, Tex. Knockdown frame. No. 1,103,823; July 14; Gaz. vol. 204; p. 603.

Page, Frank W., assignor of one-half to B. A. Risley, Wisdom, Mont. Arm rest or support. No. 1,103,824; July 14; Gaz. vol. 204; p. 604.

Palmer, Gilman L., Conneaut, Ohio. Metal sign-board. No. 1,104,921; July 28; Gaz. vol. 204; p. 1073.

Palmer, Isaac E., assignor to The I. E. Palmer Company, Middletown, Conn. Couch-hammock and back-support therefor. No. 1,103,906; July 14; Gaz. vol. 204; p. 632.

Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Couch-hammock and back-rest therefor. No. 1,103,907; July 14; Gaz. vol. 204; p. 632.

Palmer, Isaac E., assignor to The I. E. Palmer Company, Middletown, Conn. Combined back-rest and wind-shield for couch-hammocks. No. 1,103,908; July 14; Gaz. vol. 204; p. 633.

Palmer, Theodore D., assignor to T. D. Palmer Company, Syracuse, N. Y. Garment-pressing machine. No. 1,105,530; July 28; Gaz. vol. 204; p. 1287.

Pantlind, Fred Z., *et al.* (See Annable, Warren W., assignor.)

Panyard, Thomas A., assignor to Luther Grinder Manufacturing Co., Milwaukee, Wis. Friction drive mechanism. No. 1,103,999; July 21; Gaz. vol. 204; p. 704.

Paper Working Machines Co. (See Raffel, Tobias E., assignor.)

Papon, Charles M., Philadelphia, assignor of one-half to E. Bleyer, Laverock, Pa. Pneumatic tire. No. 1,104,824; July 28; Gaz. vol. 204; p. 1039.

Parent, Joseph J., Auburn, Me. Swing-canopy. No. 1,104,309; July 21; Gaz. vol. 204; p. 810.

Parisen, Robert T., Knoxville, assignor to Lawson Manufacturing Company, Homestead, Pa. Stand-boiler. No. 1,104,381; July 21; Gaz. vol. 204; p. 837.

Parisen, Robert T., Knoxville, assignor to Lawson Manufacturing Company, Homestead, Pa. Stand-boiler burner-chamber. No. 1,105,338; July 28; Gaz. vol. 204; p. 1219.

Parish, Le Grand. (See Chidley, Joseph, assignor.)

Parish, Ralph R., assignor to Chase Rolling Mill Co., Waterbury, Conn. Extraction of zinc from zinc-bearing refuse. No. 1,104,922; July 28; Gaz. vol. 204; p. 1074.

Parke Davis & Company. (See Wachter, Frederick, assignor.)

Parke, Davis & Company. (See Whitaker and MacDonald, assignors.)

Parker Brothers. (See Healey, James A., assignor.)

Parker, Charles W. (See Brundage, Seth W., assignor.)

Parker, Clark W., Springfield, Mass., assignor to L. W. Emerick, receiver, Fulton, N. Y. Transmission-gearing. No. 1,103,683; July 14; Gaz. vol. 204; p. 558.

Parker Clock Company, The. (See Wachtelhausen, Henry, assignor.)

Parker Clock Company, The. (See Walker, Eli M., assignor.)

Parker, Frederick R., Chicago, Ill. Telephone signaling system. No. 1,103,909; July 14; Gaz. vol. 204; p. 633.

Parker, George W., New York, N. Y., assignor to The Parker-Russell Mining & Manufacturing Company, St. Louis, Mo. Regulating combustion. No. 1,104,000; July 21; Gaz. vol. 204; p. 705.

Parker-Russell Mining & Manufacturing Company, The. (See Parker, George W., assignor.)

Parkinson, George W., and R. S. Tompkins, Beacon City, N. Y. Cutting attachment for sewing-machines. No. 1,103,825; July 14; Gaz. vol. 204; p. 604.

Parks, Frederick R., Oswego, assignor to W. P. King, Syracuse, N. Y. Automatic poultry-feeder. No. 1,104,701; July 21; Gaz. vol. 204; p. 947.

Parliament, Walter, Watertown, S. D. Wear-compensating means for knotting mechanisms. No. 1,104,999; July 28; Gaz. vol. 204; p. 1099.

Parnham, John H., New York, N. Y., and J. Hattemer, West New York, N. J., assignors to Hardman, Peck & Company, New York, N. Y. Accenting device. No. 1,102,950; July 7; Gaz. vol. 204; p. 251.

Parry Manufacturing Company. (See Parry, Thomas H., assignor.)

Parry, Thomas H., assignor to Parry Manufacturing Company, Indianapolis, Ind. Storm-vehicle-door lock. No. 1,103,075; July 14; Gaz. vol. 204; p. 344.

Parsons, Charles L., *et al.* (See Ellis, Carleton, assignor.)

Parsons, Frederick J. (See Seguin, Emilien, assignor.)

Parsons, Frederick W., assignor to The Parsons & Parsons Company, Cleveland, Ohio. Collar for neckwear. No. 1,102,431; July 7; Gaz. vol. 204; p. 74.

Parsons & Parsons Company, The. (See Parsons, Frederick W., assignor.)

Parsons, William S., Ladywell, assignor to J. Stone & Company Limited, Deptford, England. Apparatus for discharging ashes, clinkers, or other refuse. No. 1,102,351; July 7; Gaz. vol. 204; p. 45.

Paschall, Arthur L., Olaa, Hawaii. Ball-bearing axle. No. 1,105,451; July 28; Gaz. vol. 204; p. 1260.

Paschke, Herbert, assignor to Armstrong Cork Company, Pittsburgh, Pa. Making artificial cork. No. 1,105,098; July 28; Gaz. vol. 204; p. 1134.

Passaic Metal Ware Company. (See Karp, Morris, assignor.)

Patrick, Jasper D., assignor of one-third to A. F. Whiting, Montgomery, Ala. Mechanism for automatically operating steam-injectors. No. 1,105,373; July 28; Gaz. vol. 204; p. 1234.

Patton, Ralph C., Providence, R. I. Lifting-jack. No. 1,102,792; July 7; Gaz. vol. 204; p. 199.
Paul, James W., Davis, W. Va. Portable signal apparatus for mines. No. 1,102,793; July 7; Gaz. vol. 204; p. 199.
Paul, Robert J., Gilman, Iowa. Husking implement. No. 1,105,330; July 28; Gaz. vol. 204; p. 1219.
Pauley, Edward E., Marion, Ind. Airship. No. 1,104,702; July 21; Gaz. vol. 204; p. 947.
Paulsmeier, Albert C., Alameda, assignor to Byron Jackson Iron Works, West Berkeley, Cal. Bearing for centrifugal pumps. No. 1,102,604; July 7; Gaz. vol. 204; p. 135.
Paulson, Charles J., assignor to A. J. Nothacker, New York, N. Y. Transmission mechanism. No. 1,104,444; July 21; Gaz. vol. 204; p. 857.
Paulson, Erland, Knife River, N. D. Shock-carrier. No. 1,103,311; July 14; Gaz. vol. 204; p. 426.
Paulus, Charles F., Bethlehem, Pa. Non-freezing fire-plug. No. 1,105,040; July 28; Gaz. vol. 204; p. 1113.
Paymal, Joseph E., *et al.* (See Goetzinger, Charles P., assignor.)
Peabody, Ernest H., and D. J. Irish, New York, N. Y., assignors to The Babcock & Wilcox Company, Bayonne, N. J. Atomizer or spraying device. No. 1,102,352; July 7; Gaz. vol. 204; p. 45.
Pearce, Herbert, and J. E. Billington, Broadheath, assignors to Linotype and Machinery Limited, London, England. Composing mechanism of typographical machines. No. 1,105,000; July 28; Gaz. vol. 204; p. 1099.
Pearce, Herbert, and J. E. Billington, Broadheath, assignors to Linotype and Machinery Limited, London, England. Composing mechanism of typographical machines. No. 1,105,157; July 28; Gaz. vol. 204; p. 1153.
Pearl, Allen S. (See Young and Pearl.)
Pearson, James H., assignor of one-half to T. A. Henderson, Bloomfield, Ind. Fence-post. No. 1,103,536; July 14; Gaz. vol. 204; p. 501.
Pearson, James R., assignor to The Acme Machine Tool Company, Cincinnati, Ohio. Belt-shifter. No. 1,104,218; July 21; Gaz. vol. 204; p. 780.
Pearson, Martin, Los Angeles, Cal. Rotatable float apparatus. No. 1,104,823; July 28; Gaz. vol. 204; p. 1040.
Pease, Charles, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting or skiving machine. No. 1,104,001; July 21; Gaz. vol. 204; p. 705.
Pease, Charles F., assignor to The C. F. Pease Company, Chicago, Ill. Winding means. No. 1,102,353; July 7; Gaz. vol. 204; p. 46.
Peckenpaugh, John E., Franklin, Tex. Wire-clamp. No. 1,103,157; July 14; Gaz. vol. 204; p. 374.
Pedersen, Carl E., Christiania, Norway. Furnace. No. 1,102,292; July 7; Gaz. vol. 204; p. 25.
Pedersen, Halvor, Jersey City, N. J. Saw-handle. No. 1,102,293; July 7; Gaz. vol. 204; p. 25.
Péducasse, Bernard, Lyon, France. Automatic car-fender and safety-brake. No. 1,103,826; July 14; Gaz. vol. 204; p. 605.
Peerless Motor Car Company, The. (See Wadsworth, George R., assignor.)
Peerless Silo Supply Co. (See Rasmussen, Andrew, assignor.)
Peerless V Belt Company. (See Bohlman, Ernest A., assignor.)
Peisch, Frederick W., Chicago, Ill. Bottle-cover. No. 1,103,827; July 14; Gaz. vol. 204; p. 605.
Pelton, Clyde S., Akron, Ohio. Combined foot-rest and heater. No. 1,102,432; July 7; Gaz. vol. 204; p. 44.
Pelton, Edward W. (See Rowe, Frederick A., assignor.)
Pembroke, Charles J., Rochester, N. Y. Valve mechanism. No. 1,102,605; July 7; Gaz. vol. 204; p. 135.
Pendleton Iron Works. (See Akers, Maurice L., assignor.)
Pendleton, Oder C., Okmulgee, Okla. Steam hat-blocking machine. No. 1,102,542; July 7; Gaz. vol. 204; p. 112.
Penland, Robert N., *et al.* (See Greene, James O., assignor.)
Penn, Ralph L., assignor of one-half to J. S. Randolph, Glencoe, and one-fourth to P. B. Carr and one-fourth to J. B. Giffee, Barnesville, Ohio. Oil-can. No. 1,103,537; July 14; Gaz. vol. 204; p. 502.
Penno, Daniel J., Trinidad, Colo. Non-skidding attachment for automobile-wheels. No. 1,105,374; July 28; Gaz. vol. 204; p. 1284.
Penny, Ludella, Wilson, N. C. Collar-support. No. 1,102,681; July 7; Gaz. vol. 204; p. 160.
Pentecost, William A. (See Oakley and Pentecost.)
Perfect Window Regulator Company. (See Altrichter, Johann, assignor.) (Reissue.)
Perkins, Eben, Bridgewater, Mass. Roost and dropping-board for hen-houses. No. 1,102,794; July 7; Gaz. vol. 204; p. 199.
Perkins Electric Switch Manufacturing Company, The. (See Thomas, George B., assignor.)
Perkins, William H., and C. A. Lindgren, Hathorne, Mass. Automatic laundry-valve. No. 1,103,828; July 14; Gaz. vol. 204; p. 605.
Perry, Almeron H., Genesee, Pa. Steering attachment. No. 1,103,538; July 14; Gaz. vol. 204; p. 502.
Perry, Edna A., Beverly, Mass. Seam of stitches for uniting materials at their abutting edges. No. 1,104,072; July 21; Gaz. vol. 204; p. 731.
Perry, Frederick H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Channelling-machine. No. 1,102,294; July 7; Gaz. vol. 204; p. 25.
Perry, George E., Chicago, Ill. Stamp. No. 1,102,795; July 7; Gaz. vol. 204; p. 200.
Peters, Charles F. (See Miller, Lobach, and Peters.)
Peters, Gershom M., Cincinnati, Ohio. Railway-rail. No. 1,104,923; July 28; Gaz. vol. 204; p. 1074.
Peters, Nellie M., Chicago, Ill. Kimono. No. 1,104,445; July 21; Gaz. vol. 204; p. 858.
Petersen, Anker, Winthrop, assignor to Boston Machinery Company, Boston, Mass. Braiding-machine. No. 1,105,452; July 28; Gaz. vol. 204; p. 1260.
Petersen, Anker, Winthrop, assignor to Boston Machinery Company, Boston, Mass. Winding-machine. No. 1,105,453; July 28; Gaz. vol. 204; p. 1261.
Peterson, Frederick O., Detroit, Mich., assignor to Bessemer Gas Engine Company, Grove City, Pa. Engine. No. 1,105,298; July 28; Gaz. vol. 204; p. 1204.
Pettis, Clifton D., Chicago, Ill. Brake-shoe. No. 1,104,925; July 28; Gaz. vol. 204; p. 1075.
Pettis, Clifton D., Chicago, Ill. Apparatus for casting. No. 1,104,926; July 28; Gaz. vol. 204; p. 1075.
Pettis, Clifton D., Chicago, Ill. Casting apparatus. No. 1,104,927; July 28; Gaz. vol. 204; p. 1075.
Pettis, Clifton D., Mahwah, N. J. Casting brake-shoes. No. 1,104,928; July 28; Gaz. vol. 204; p. 1076.
Pettis, Clifton D., and P. H. Batten, Chicago, Ill., assignors, by mesne assignments, to American Brake Shoe & Foundry Company. Brake-shoe. No. 1,104,924; July 28; Gaz. vol. 204; p. 1074.
Pettit, Elihu R., Philadelphia, Pa. Atomizer. No. 1,103,684; July 14; Gaz. vol. 204; p. 558.
Pettit, Fred H., Anthon, Okla. Signal apparatus. No. 1,105,099; July 28; Gaz. vol. 204; p. 1134.
Pettit, John H., Great Falls, Mont. Embroidery-foot attachment. No. 1,102,433; July 7; Gaz. vol. 204; p. 75.
Petty, Francis M., Swink, Okla. Cattle-guard. No. 1,102,295; July 7; Gaz. vol. 204; p. 26.
Pfau, Arnold, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Time-element power-limiting device. No. 1,103,891; July 14; Gaz. vol. 204; p. 627.
Pfile, William, Freeport, Ill. Concrete-mixer. No. 1,103,685; July 14; Gaz. vol. 204; p. 559.
Pflager, Harry M., assignor to Double Body Bolster Company, St. Louis, Mo. Car-frame construction. No. 1,105,299; July 28; Gaz. vol. 204; p. 1204.
Pflager, Harry M., assignor to Double Body Bolster Company, St. Louis, Mo. Six-wheel car-truck. No. 1,105,300; July 28; Gaz. vol. 204; p. 1205.
Pfleiderer, Fred, Jr., Superior, Nebr. Revolving meat-block. No. 1,105,531; July 28; Gaz. vol. 204; p. 1287.
Pfouts, Leroy S., Canton, Ohio. Motor-vehicle. No. 1,104,446; July 21; Gaz. vol. 204; p. 858.
Phelan, Merton D., Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Horn-controlling mechanism for metallic fastening-machines. No. 1,104,130; July 21; Gaz. vol. 204; p. 750.
Phelan, Richard M., assignor of one-half to A. Davidson, Chicago, Ill. Chaser for cutting screw-threads. No. 1,104,541; July 21; Gaz. vol. 204; p. 894.
Phelps, Homer L., Martinsburg, W. Va. Controlling attachment for dumping-wagons. No. 1,102,434; July 7; Gaz. vol. 204; p. 75.
Phelps, Lewis H. (See Rumpf, Harry J., assignor.)
Philip Carey Manufacturing Company, The. (See Moeller, William J., assignor.)
Phillips, Charles H., Maplewood, Mass., assignor to Phillips Flushing Tank Company, Portland, Me. Flushing-valve for water-closets. No. 1,102,543; July 7; Gaz. vol. 204; p. 112.
Phillips, Elwood C., Chicago, Ill. Yeast-packaging machine. No. 1,105,041; July 28; Gaz. vol. 204; p. 1113.
Phillips Flushing Tank Company. (See Phillips, Charles H., assignor.)
Phillips, Ross M. G., Minneapolis, Minn. Cooking apparatus. No. 1,102,796; July 7; Gaz. vol. 204; p. 200.
Phillips, Ross M. G., West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn. Fireless cooker. No. 1,103,539; July 14; Gaz. vol. 204; p. 502.
Phillips, Ross M. G., West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn. Cooking apparatus. No. 1,105,532; July 28; Gaz. vol. 204; p. 1287.
Phillips, William R., Portland, Oreg. Forming concrete piles in place. No. 1,104,703; July 21; Gaz. vol. 204; p. 948.
Phinney Engineering Co., The. (See Shoman, Fred A., assignor.)
Phoenix-Hermatic Company. (See Tallaferro and Bellamy, assignors.)
Phoenix Iron Company, The, *et al.* (See Maccallum, Norman E., assignor.) (Reissue.)
Pickard, Greenleaf W., Ameshury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y. Detector for wireless telegraphy and telephony. No. 1,104,073; July 21; Gaz. vol. 204; p. 731.
Picken, Archibald, assignor of one-half to F. W. Curd, Norfolk, Va. Speedometer-alarm. No. 1,104,704; July 21; Gaz. vol. 204; p. 948.
Pictet, Pierre. (See Vernaz and Pictet.)
Pictet, Pierre, Geneva, Switzerland, and M. Vernaz, Annemasse, France. Internal-combustion engine. No. 1,105,454; July 28; Gaz. vol. 204; p. 1261.

Pierce, Henry N., assignor to The John MacGregor Company, South Lincoln, Me. Woodworking-machine. No. 1,105,301; July 28; Gaz. vol. 204; p. 1205.
Pierce, Robert C., assignor to The Toledo Electric Welder Company, Cincinnati, Ohio. Electric welding-machine. No. 1,102,797; July 7; Gaz. vol. 204; p. 201.
Pilkington, Herbert M., Arverne, assignor, by mesne assignments, to Title Guarantee & Trust Company, trustee, New York, N. Y. Counting-head. No. 1,103,428; July 14; Gaz. vol. 204; p. 464.
Pindell, John A., Cockeysville, Md. Fruit-picker. No. 1,105,302; July 28; Gaz. vol. 204; p. 1205.
Pineau, Jeremiah M., Quincy, Mass. Life-preserver. No. 1,104,382; July 21; Gaz. vol. 204; p. 837.
Ping, Robert G., assignor of one-half to E. N. Taggart, Audubon, Iowa. Convertible ladder. No. 1,102,682; July 7; Gaz. vol. 204; p. 160.
Pingen, Henry M. (See Chapman and Pingen.)
Pinkerton, Charles B., and A. E. Wason, London, England. Electric starter for motors, alternating or direct current. No. 1,104,758; July 21; Gaz. vol. 204; p. 968.
Pitkin, Arthur F., Schenectady, N. Y. Hand-truck. No. 1,103,429; July 14; Gaz. vol. 204; p. 465.
Pittings, John, Antler, N. D. Washing-machine. No. 1,104,705; July 21; Gaz. vol. 204; p. 948.
Pittsburgh Carbon Brush Company. (See Hausen, Raymond F., assignor.)
Pittsburgh Plate Glass Company. (See Hitner, Harry F., assignor.)
Planhard Manufacturing Company. (See Felske, Charles, assignor.)
Plumb, George T., Johannesburg, Transvaal. Signaling system for mines and the like. No. 1,102,951; July 7; Gaz. vol. 204; p. 252.
Plume & Atwood Manufacturing Company, The. (See Andersen, Lauritz W., assignor.)
Plymire, Fred A. (See Rimmer, Plymire, and Wills.)
Plymouth Cordage Company. (See Stegmaier, Philip M., assignor.)
Pneumatic Tube Appliance Company. (See Stoetzel, Joseph J., assignor.)
Podmanicky, Frank. (See Mezei and Podmanicky.)
Poetter, Heinrich, Dusseldorf, Germany. Lubricating device for axle-bearings. No. 1,104,002; July 21; Gaz. vol. 204; p. 705.
Poffenbarger, William L., St. Louis, Mo., assignor to Pyraform Bottle Manufacturing Company. Paper container. No. 1,103,374; July 14; Gaz. vol. 204; p. 447.
Pohl, Eduard, Rhöndorf-on-the-Rhine, Germany. Making sintered magnesite and dolomite. No. 1,103,375; July 14; Gaz. vol. 204; p. 447.
Polk, Robert T., Smiths Turn Out, S. C. Vending-machine. No. 1,104,271; July 21; Gaz. vol. 204; p. 798.
Pollard-Alling Manufacturing Company. (See De Minico, Frank, assignor.)
Pollock, Benjamin P., assignor of one-half to C. E. Krebs, Chicago, Ill. Mop-head. No. 1,105,533; July 28; Gaz. vol. 204; p. 1288.
Polverino, Giuseppe, New York, N. Y. Picture-holder. No. 1,104,219; July 21; Gaz. vol. 204; p. 781.
Pope, Charles J. (See Monohan and Pope.)
Pope, Joseph H., Hamilton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-attaching machine. No. 1,104,826; July 28; Gaz. vol. 204; p. 1040.
Porter, James R., Holborn, London, England. Aeronautical machine. No. 1,104,542; July 21; Gaz. vol. 204; p. 894.
Porter, James S., Buffalo, N. Y. Bottle-stopper. No. 1,102,296; July 7; Gaz. vol. 204; p. 26.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Rim-winding keyless clock. No. 1,102,798; July 7; Gaz. vol. 204; p. 201.
Portland Iron Works. (See McClure and Wolff, assignors.)
Possons, Minard A., Cleveland, Ohio. Gramophone needle or stylus. No. 1,103,829; July 14; Gaz. vol. 204; p. 606.
Post, Wilhelm. (See Bühren, Walther, assignor.)
Potter, Ellis M., New York, N. Y. Burner for fuel-receptacles. No. 1,104,383; July 21; Gaz. vol. 204; p. 837.
Potter, Henry N., New York, N. Y., assignor to G. Westinghouse, deceased, Pittsburgh, Pa.; H. H. Westinghouse, C. A. Terry, and W. D. Uptegraff, executors. Producing silicon monoxid. No. 1,104,384; July 21; Gaz. vol. 204; p. 838.
Potter, William, New York, N. Y. Window attachment. No. 1,103,376; July 14; Gaz. vol. 204; p. 447.
Potter, William, New York, N. Y. Door. No. 1,103,377; July 14; Gaz. vol. 204; p. 448.
Potter, William B., Schenectady, N. Y., assignor to General Electric Company. Third-rail support. No. 1,104,220; July 21; Gaz. vol. 204; p. 781.
Potwin, William S. (See Desmond, John, assignor.)
Pougnet, Desbarrieres E., London, England. Apparatus for the discharge of water or other liquids in a sprayed form over comparatively large areas. No. 1,102,354; July 7; Gaz. vol. 204; p. 46.
Poundstone, George C. (See Lewis, George T., assignor.)
Powell, Charles A. (See Martus, William J., assignor.)
Power, Charles. (See Shelton, Steere, and Power.)
Power, George S., Nutley, N. J. Fluid-moved valve. No. 1,104,131; July 21; Gaz. vol. 204; p. 751.
Powers, Anthony J., Meridian, Miss. Finishing-machine. No. 1,102,435; July 7; Gaz. vol. 204; p. 75.
Powers, Peter, Carlisle, Nebr. Bundle-supporter for threshers. No. 1,103,312; July 14; Gaz. vol. 204; p. 426.
Pratt, Clyde H. (See Ray, Albert D., assignor.)
Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)
Preble, Andrew C., Chicago, Ill. Automatic check for elevator-doors. No. 1,102,799; July 7; Gaz. vol. 204; p. 201.
Prégardien, Joseph E., Cologne, assignor to F. Neumann, Aachen, Germany. Device for utilizing the off gases from blast-furnaces for preheating the blast. No. 1,105,158; July 28; Gaz. vol. 204; p. 1153.
Preiczer, Ladislaus, Pittsburgh, Pa. Life-boat. No. 1,105,303; July 28; Gaz. vol. 204; p. 1206.
Prein, Emil, Hanover, assignor to Prein-Gewebe Actien-Gesellschaft, Hanover-Linden, Germany. Treatment of fabrics during weaving. No. 1,104,827; July 28; Gaz. vol. 204; p. 1040.
Prein-Gewebe Actien-Gesellschaft. (See Prein, Emil, assignor.)
Preinsler, Charles L., Rheims, France. Device for heating and vaporizing liquids. No. 1,103,830; July 14; Gaz. vol. 204; p. 606.
Prentiss, Frederick H., assignor of one-half to L. B. Prentiss, San Francisco, and one-half to R. C. Lane, Berkeley, Cal. Apparatus for recovering valuable constituents from ores. No. 1,104,132; July 21; Gaz. vol. 204; p. 751.
Prentiss, Leda B., *et al.* (See Prentiss, Frederick H., assignor.)
Preston, Albert F., Boston, Mass. Power cutting, grading machine. No. 1,105,534; July 28; Gaz. vol. 204; p. 1288.
Preston, John E., Stockport, England. Galvanic battery. No. 1,104,828; July 28; Gaz. vol. 204; p. 1041.
Price, Frederick, Philadelphia, Pa. Embroidery-trimming apparatus. No. 1,102,544; July 7; Gaz. vol. 204; p. 113.
Price, Frederick G. (See Lewis and Price.)
Price, Herbert L., Baltimore, Md. Collection-draft, &c., sheet. No. 1,104,310; July 21; Gaz. vol. 204; p. 811.
Pridmore, Edward A., Chicago, Ill. Molding-machine. No. 1,102,606; July 7; Gaz. vol. 204; p. 135.
Priestman, Albert, Philadelphia, Pa. Elevating liquids. No. 1,102,683; July 7; Gaz. vol. 204; p. 161.
Priestman, Albert, New York, N. Y. Apparatus for elevating liquids. No. 1,102,684; July 7; Gaz. vol. 204; p. 161.
Prindall, Martha M., Lynn, Mass. Woman's curtain-drawers. No. 1,102,800; July 7; Gaz. vol. 204; p. 202.
Prindle, William E., Manitowoc, Wis. Mechanical drier. No. 1,104,929; July 28; Gaz. vol. 204; p. 1076.
Pringle, William A., Niagara Falls, N. Y., assignor, by mesne assignments, to American Sales Book Company, Limited. Printing apparatus. No. 1,105,042; July 28; Gaz. vol. 204; p. 1114.
Prior, Robert H., assignor of one-half to A. E. Young, Cedartown, Ga. Seed-planter. No. 1,103,831; July 14; Gaz. vol. 204; p. 606.
Pritchard-Stamping Company. (See McDade, Edward J., assignor.)
Prochazka, Gustav, assignor of one-half to F. Brodsky, New York, N. Y. Engine. No. 1,102,952; July 7; Gaz. vol. 204; p. 252.
Proper, James R., assignor to J. H. Proper, Los Angeles, Cal. Filter. No. 1,102,685; July 7; Gaz. vol. 204; p. 162.
Proper, Joseph H. (See Proper, James R., assignor.)
Prosser, John E., Tulsa, Okla. Drilling-bit. No. 1,104,543; July 21; Gaz. vol. 204; p. 895.
Protective Signal Manufacturing Company, The. (See Neahr, Will C., assignor.)
Proudfit, Alexander C., Princeton, N. J. Coupling for electrical conduits. No. 1,103,220; July 14; Gaz. vol. 204; p. 396.
Prouty, Edgar I., Albany, Oreg. Trousers-hanger. No. 1,102,545; July 7; Gaz. vol. 204; p. 114.
Prouty, Jessie B. (See Matthew and Prouty.)
Pue, Michael E., Marlinton, W. Va. Brake-operating device. No. 1,103,686; July 14; Gaz. vol. 204; p. 559.
Pullman, Irving W., Bristol, Vt. Milk-pail. No. 1,103,431; July 14; Gaz. vol. 204; p. 465.
Pulsometer Engineering Company Limited, The. (See Marlow, Thomas G., assignor.)
Purdy, Joseph S. L. (See Randall, William P., assignor.)
Putnam, C. C., administrator. (See McGovern, Daniel F., assignor.)
Putnam, George F., and H. H. Wessendorff, Flint, assignors, by mesne assignments, to The Lufkin Rule Co., Saginaw, Mich. Tape case and winding-drum. No. 1,105,579; July 28; Gaz. vol. 204; p. 1304.
Pyle-National Electric Headlight Company. (See Dake and McGinnis, assignors.)
Pyraform Bottle Manufacturing Company. (See Poffenbarger, William L., assignor.)
Pyrene Manufacturing Company. (See Durkee, Joseph W., assignor.)
Quayle, Bert L. (See Glynn and Quayle.)
Quentell, William P., Montclair, N. J. Calculating-machine. No. 1,104,385; July 21; Gaz. vol. 204; p. 838.
Quickel, Henry F., Harrisburg, Pa. Furnace-regulator. No. 1,104,311; July 21; Gaz. vol. 204; p. 811.
Quidas, Frederick W., Brooklyn, N. Y. Developing-tray. No. 1,103,076; July 14; Gaz. vol. 204; p. 344.
Quigley, Wirt S., Rockaway Park, N. Y. Oil-burner. No. 1,104,386; July 21; Gaz. vol. 204; p. 838.

Quin, Charles W., Centralia, Wash. Safety device. No. 1,103,221; July 14; Gaz. vol. 204; p. 396.

Quinn, John C., assignor to The Acme Furnace Equipment Company, New York, N. Y. Burning bricks. No. 1,102,546; July 7; Gaz. vol. 204; p. 114.

R. Neumann Hardware Co., The. (See Tueckmantel, Hugo, assignor.)

Raabe, Otto L., Hayes, England, assignor to The Goss Printing Press Company, Chicago, Ill. Movable journal-box. No. 1,102,801; July 7; Gaz. vol. 204; p. 202.

Rabat, Milford J., New York, N. Y. Fountain-syringe pressure-clamp. No. 1,102,953; July 7; Gaz. vol. 204; p. 253.

Rabenalt, Gustav H., Buffalo, N. Y., assignor to Gould Storage Battery Company. Apparatus for treating battery-plates. No. 1,104,272; July 21; Gaz. vol. 204; p. 798.

Rabenalt, Gustav H., Buffalo, N. Y., assignor to Gould Storage Battery Company. Treating battery-plates. No. 1,104,273; July 21; Gaz. vol. 204; p. 798.

Rackoff, Adolph A., New York, N. Y. Cuspidor. No. 1,103,832; July 14; Gaz. vol. 204; p. 607.

Raczynski, Wladimir von, Posen, Germany. Hauling device for agricultural machines. No. 1,104,312; July 21; Gaz. vol. 204; p. 811.

Radtke, William E., Milwaukee, Wis. Making printers' overlays and underlays. No. 1,105,159; July 28; Gaz. vol. 204; p. 1154.

Rae, Andrew. (See Rose and Rae.)

Raeger, George C., Waterloo, N. Y. Expansion-nail. No. 1,104,544; July 21; Gaz. vol. 204; p. 895.

Raffel, Tobias E., New York, N. Y., assignor to Paper Working Machines Co. Tube-machine. No. 1,103,378; July 14; Gaz. vol. 204; p. 448.

Ragan, Charles, Buffalo, N. Y. Tire-inflator. No. 1,103,833; July 14; Gaz. vol. 204; p. 607.

Rail Joint Company, The. (See Braine, Bancroft G., assignor.)

Rail Joint Company, The. (See Wolhaupter, Benjamin, assignor.)

Raines, Richard, New York, N. Y. High-tension-current system. No. 1,103,885; July 14; Gaz. vol. 204; p. 608.

Rainey, Clifton K., Birmingham, Ala. Type-writer escapement mechanism. No. 1,104,003; July 21; Gaz. vol. 204; p. 706.

Raley, John D., New Castle, Colo. Fence-post and wire-holder. No. 1,103,834; July 14; Gaz. vol. 204; p. 607.

Ramen, Arthur. (See Beskow and Ramen.)

Ramsek, Anna. (See Ramsek, Rudolph, assignor.)

Ramsek, Rudolph, assignor to A. Ramsek, St. Louis, Mo. Combined laundry gas-stove and washing-machine boiler. No. 1,103,318; July 14; Gaz. vol. 204; p. 427.

Ramsey, John S., Conshohocken, Pa. Closure for milk-bottles. No. 1,104,706; July 21; Gaz. vol. 204; p. 949.

Randall, Wellington, Varner, Kans. Derrick apparatus. No. 1,104,313; July 21; Gaz. vol. 204; p. 812.

Randall, William P., assignor to J. S. L. Purdy, Le Roy, N. Y. Apparatus for forcing fluids from wells. No. 1,104,133; July 21; Gaz. vol. 204; p. 751.

Randolph, Joseph S., *et al.* (See Penn, Ralph L., assignor.)

Randolph, Peter, and H. C. Matthews, San Francisco, Cal. Metallic studding. No. 1,103,430; July 14; Gaz. vol. 204; p. 465.

Randolph, William, Crows Landing, Cal. Nut. No. 1,102,686; July 7; Gaz. vol. 204; p. 162.

Ranger, Arthur W., London, England. Type setting and distributing machine. No. 1,103,013; July 7; Gaz. vol. 204; p. 275.

Ransome-verMehr Machinery Company. (See Hobbs, James E., assignor.)

Raplee Squier Company, The. (See Raplee, William H., assignor.)

Raplee, William H., Los Angeles, Cal., assignor to The Raplee Squier Company, New Haven, Conn. Attachment for sewing-machines. No. 1,103,836; July 14; Gaz. vol. 204; p. 608.

Raquette, Joseph G., Cleveland, Ohio, assignor to The Universal Switch Box Co. Electric wall-box. No. 1,104,930; July 28; Gaz. vol. 204; p. 1076.

Rasmussen, Andrew, Racine Junction, assignor to Peerless Silo Supply Co., Racine, Wis. Hoop and fastener for silo and like tanks. No. 1,104,134; July 21; Gaz. vol. 204; p. 752.

Rasmussen, Edward L., Seattle, Wash. Sash-lock. No. 1,105,100; July 28; Gaz. vol. 204; p. 1134.

Rath, William C., Brooklyn, N. Y., assignor to Deitsch Brothers. Bag-frame fastener. No. 1,104,707; July 21; Gaz. vol. 204; p. 949.

Rathbone, John S., Mystic, Conn. Folding pipe-rack. No. 1,104,004; July 21; Gaz. vol. 204; p. 708.

Rauskolb, Fred W., Medford, Mass. Mounting for gold-leaf. No. 1,103,222; July 14; Gaz. vol. 204; p. 396.

Rawson, Grant I., and L. B. Shultz, St. Louis, Mo., assignors, by mesne assignments, to said Shultz. Connector for batteries. No. 1,102,355; July 7; Gaz. vol. 204; p. 46.

Rawson, William J., Lewis Run, Pa. Derrick. No. 1,105,455; July 28; Gaz. vol. 204; p. 1262.

Ray, Albert D., assignor of one-half to C. H. Pratt, Cleveland, Ohio. Lubricator-bearing. No. 1,103,432; July 14; Gaz. vol. 204; p. 466.

Ray, Albert H., Ashland, Mass. Printing-machine. No. 1,104,829; July 28; Gaz. vol. 204; p. 1042.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Hand-lever mechanism. No. 1,105,596; July 28; Gaz. vol. 204; p. 1310.

Razniak, Michal, Strathcona, Alberta, Canada. Life-boat. No. 1,104,387; July 21; Gaz. vol. 204; p. 838.

Re, Alfred, New York, N. Y. Safety-lock. No. 1,104,274; July 21; Gaz. vol. 204; p. 799.

Rea, Edward J. F., Hartford, Conn., assignor to American Automatic Press Company, San Francisco, Cal. Side-register device. No. 1,103,433; July 14; Gaz. vol. 204; p. 466.

Rea, Frank E. (See Olson, John A., assignor.)

Reading Crane and Hoist Works. (See Valentine, Herbert S., assignor.)

Reading Hardware Company. (See Mason, George N., assignor.)

Reams, Joshua W., assignor to Richmond Cedar Works, Richmond, Va. Washing-machine gearing. No. 1,104,830; July 28; Gaz. vol. 204; p. 1042.

Rearick, Perry L., Logansport, Ind. Packing-box. No. 1,102,687; July 7; Gaz. vol. 204; p. 162.

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Socket for incandescent electric lamps. No. 1,104,931; July 28; Gaz. vol. 204; p. 1077.

Red Wing Manufacturing Company, The. (See Johnson, Oscar F., assignor.)

Redding, Robert B., and J. W. Barnett, Oakwood, Tex. Baling-press. No. 1,104,831; July 28; Gaz. vol. 204; p. 1042.

Redfern, Edward, Auckland, New Zealand. Tobacco-pipe. No. 1,103,837; July 14; Gaz. vol. 204; p. 608.

Redfield, Clifford S., Brookline, Mass., assignor to Essex Rubber Company, Inc., Trenton, N. J. Rubber sole for boots and shoes. No. 1,103,892; July 14; Gaz. vol. 204; p. 628.

Redfield, Edward E., Glendale, Oreg. Firearm. No. 1,103,687; July 14; Gaz. vol. 204; p. 559.

Redford, W. E. (See Applewhite, James A., assignor.)

Redmond, Joseph C., Mount Vernon, N. Y. Bridle for track-rails. No. 1,105,101; July 28; Gaz. vol. 204; p. 1135.

Reed, Elliott W., Savannah, Ga. Making calcium acid phosphate. No. 1,105,304; July 28; Gaz. vol. 204; p. 1206.

Reed-Prentice Company. (See Newton, Albert E., assignor.)

Reese, Andrew. (See Beatty and Reese.)

Reeve, Henry E., New York, N. Y. Lamp-socket shell. No. 1,105,305; July 28; Gaz. vol. 204; p. 1206.

Reeves, Clifton, Trenton, assignor of one-half to W. P. Cubberley, Robbinsville, N. J. Engine-governor. No. 1,103,077; July 14; Gaz. vol. 204; p. 344.

Rehfuss, John G. (See Rehfuss, Burgess, and Rehfuss.)

Rehfuss, Martin O., A. Burgess, and J. G. Rehfuss, Philadelphia, Pa. Mechanism for cutting the floating threads of lace and other fabrics. No. 1,103,838; July 14; Gaz. vol. 204; p. 608.

Reichhold, Flügger & Boecking. (See Beringer and Zimmer, assignors.)

Reid, Joseph B., *et al.* (See Northup, Frank, assignor.)

Reid, Ralph L., *et al.* (See Northup, Frank, assignor.)

Reid, Robert M., Colorado Springs, Colo. Holder and deliverer for drinking-straws. No. 1,102,297; July 7; Gaz. vol. 204; p. 26.

Reinke, Robert, Chicago, Ill. Lever-locking device. No. 1,102,802; July 7; Gaz. vol. 204; p. 202.

Reisz, Eugen. (See Lieben and Reisz.) (Reissue.)

Reitz, William J., Southwest, Pa. Shade and curtain-pole bracket. No. 1,104,545; July 21; Gaz. vol. 204; p. 896.

Reiss-Gesellschaft m. b. H. (See Lieben and Reisz, assignors.) (Reissue.)

Reiley, George E., Guilford, Conn. Raising and lowering mechanism. No. 1,103,839; July 14; Gaz. vol. 204; p. 609.

Remington Typewriter Company. (See Higham and Risley, assignors.)

Rench, Charles A., Hamilton, Ohio. Portable bath. No. 1,104,314; July 21; Gaz. vol. 204; p. 812.

Renner, Homer G., Portland, Oreg. Trap. No. 1,104,315; July 21; Gaz. vol. 204; p. 812.

Rennerfelt, Ivar, Stockholm, Sweden. Generating heat by means of electric arcs. No. 1,103,379; July 14; Gaz. vol. 204; p. 448.

Reno Manufacturing Company. (See Womelsdorf, George H., assignor.)

Renton, George W., Brooklyn, assignor to Hind Steel & Wire Works Inc., New York, N. Y. Claw-hammer. No. 1,103,380; July 14; Gaz. vol. 204; p. 448.

Repelow, Max A., New York, N. Y. Card-index. No. 1,105,306; July 28; Gaz. vol. 204; p. 1207.

Revere Rubber Company. (See Cobb, Henry Z., assignor.)

Reynard, James K. (See Emerson, Manwaring, and Reynard.)

Reynolds, Charles M., Sparks, Nev. Manufacture of briquets and other articles. No. 1,103,078; July 14; Gaz. vol. 204; p. 344.

Reynolds, Clifford W., Freeport, Ill., assignor of one-fourth to F. E. Wilcox and one-fourth to L. E. Hickok, Mechanicsburg, Pa. Running-gear. No. 1,102,356; July 7; Gaz. vol. 204; p. 47.

Reynolds, John N., Greenwich, Conn., assignor to Western Electric Company, New York, N. Y. Multiple-brush selector. No. 1,103,623; July 14; Gaz. vol. 204; p. 535.

Reynolds, Robert A., Detroit, Mich. Internal-combustion engine. No. 1,103,223; July 14; Gaz. vol. 204; p. 397.

Reynolds, Ross L., and A. D. McGraw, Fall River, Mass. Saddle for the top rolls of spinning-frames. No. 1,104,932; July 28; Gaz. vol. 204; p. 1077.

Rheinische Metallwaaren und Maschinenfabrik. (See Asak, Karl, assignor.)

Rheinische Metallwaaren- und Maschinenfabrik. (See Völler, Karl, assignor.)

Rhodes, Frederick L., Short Hills, N. J., assignor to American Telephone and Telegraph Company. Coil-cases for insertion in cables. No. 1,103,079; July 14; Gaz. vol. 204; p. 345.

Rhodes, Jay B., Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill. Dump-car. No. 1,103,314; July 14; Gaz. vol. 204; p. 427.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Turbine. No. 1,105,375; July 28; Gaz. vol. 204; p. 1235.

Rich, Mark C., Hot Springs, S. D. Manufacture of syrup. No. 1,104,135; July 21; Gaz. vol. 204; p. 752.

Rich, Mark C., Hot Springs, S. D. Manufacture of alfalfa products. No. 1,104,136; July 21; Gaz. vol. 204; p. 752.

Richard, Jules. (See Colardeau and Richard.)

Richards, Walter F., Quincy, Ill. Dental lathe-file. No. 1,105,456; July 28; Gaz. vol. 204; p. 1262.

Richards, Wilton L., East Orange, N. J., assignor to Western Electric Company, New York, N. Y. Electric relay. No. 1,103,688; July 14; Gaz. vol. 204; p. 560.

Richardson, Alonzo A., Chico, Cal. Anchoring device for tape-measures. No. 1,102,436; July 7; Gaz. vol. 204; p. 76.

Richardson, Benjamin F., assignor to Unionite Company, Philadelphia, Pa. Road-bed and making same. No. 1,105,580; July 28; Gaz. vol. 204; p. 1304.

Richardson, Earl H., assignor to Hotpoint Electric Heating Company, Ontario, Cal. Moving display device. No. 1,103,624; July 14; Gaz. vol. 204; p. 535.

Richardson, Edgar J., Sioux City, Iowa. Automobile-radiator. No. 1,103,840; July 14; Gaz. vol. 204; p. 609.

Richardson, Ralph R., assignor to Chicago Carton Company, Chicago, Ill. Display structure and carton therefor. No. 1,104,933; July 28; Gaz. vol. 204; p. 1077.

Richardson, Sidney W., and W. Staveley, Hokitika, New Zealand. Safety apparatus for mining-cages. No. 1,103,841; July 14; Gaz. vol. 204; p. 609.

Richey, Alexander E., Joliet, Ill. Heading-tool. No. 1,103,434; July 14; Gaz. vol. 204; p. 466.

Richmond Cedar Works. (See Reams, Joshua W., assignor.)

Richter, Herman F., assignor to Hynes Shade Guide Company, Los Angeles, Cal. Shade-controller. No. 1,104,221; July 21; Gaz. vol. 204; p. 780.

Richter, Joseph A. (See Holliday, Charles O., assignor.)

Ridgway, George, Kalgoorlie, Western Australia, Australia. Filter for slimes, pulp, and the like. No. 1,103,080; July 14; Gaz. vol. 204; p. 345.

Riegel, Samuel S. (See Manchester and Riegel.)

Ries, Harry W., Collingswood, N. J., and L. B. Brown, Philadelphia, Pa. Game apparatus. No. 1,102,954; July 7; Gaz. vol. 204; p. 253.

Rietzsch, Alfred, administrator. (See Zahn, Robert.)

Rigby, Clark F., Butler, Pa. Combination casing-head and oil-saver. No. 1,105,340; July 28; Gaz. vol. 204; p. 1219.

Rigg, Gilbert, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y. Recovering sulfur in elementary form from pyrite. No. 1,103,081; July 14; Gaz. vol. 204; p. 345.

Rigg, Gilbert, Palmerton, Pa., assignor to New Jersey Zinc Company, New York, N. Y. Preparing pyritiferous zinc-blende for magnetic separation. No. 1,103,082; July 14; Gaz. vol. 204; p. 345.

Riisager, Henrik E., Frederiksberg, Denmark. Rotary kiln. No. 1,103,381; July 14; Gaz. vol. 204; p. 449.

Riker, Carroll L., Jr., New York, N. Y. Clothes-line support. No. 1,103,083; July 14; Gaz. vol. 204; p. 346.

Riley, Herbert S., *et al.* (See Ela, Jonathan C., assignor.)

Riley, Robert S., Providence, R. I. Underfeed furnace. No. 1,103,625; July 14; Gaz. vol. 204; p. 535.

Rimmer, Cedric E., F. A. Plymire, and W. Wills, Luning, Nev.; said Wills assignor of three-tenths to W. L. Rohrer, Canton, Ohio. Carbureter. No. 1,104,222; July 21; Gaz. vol. 204; p. 781.

Risley, Bruce A. (See Page, Frank W., assignor.)

Risley, Philemon. (See Higham and Risley.)

Risser, Arthur I., Chicago, Ill. Speed-reducer. No. 1,104,223; July 21; Gaz. vol. 204; p. 782.

Riter-Conley Manufacturing Company. (See Carpenter, Henry A., assignor.)

Ritter, Gilbert P., *et al.* (See Gearing, Harry, assignor.)

Ritter, Jacob, New York, N. Y. Bag-frame fastener. No. 1,102,437; July 7; Gaz. vol. 204; p. 76.

Riveroll, Elfego, Los Angeles, Cal. Smelting-furnace. No. 1,105,001; July 28; Gaz. vol. 204; p. 1100.

Roach, E. A. (See Graham, David M., assignor.)

Roach, Edson A., assignor of one-half to D. M. Graham, Bordulac, N. D. Stacker. No. 1,104,447; July 21; Gaz. vol. 204; p. 859.

Roadman, John H., Monongahela, and W. M. Dravo, Belle Vernon, assignors to Window Glass Machine Company, Pittsburgh, Pa. Take-down sling for handling glass cylinders. No. 1,102,803; July 7; Gaz. vol. 204; p. 203.

Roarke, Mary E., New York, N. Y. Garment-weight. No. 1,102,438; July 7; Gaz. vol. 204; p. 76.

Roberg, Claes F., and A. A. Malmberg, Chicago, Ill. Ironing-machine. No. 1,105,207; July 28; Gaz. vol. 204; p. 1171.

Roberts, Cameron F., Detroit, Mich. Fountain dust-mop. No. 1,102,439; July 7; Gaz. vol. 204; p. 76.

Roberts, George A., Wollaston, Mass. Felt polishing-stick. No. 1,105,457; July 28; Gaz. vol. 204; p. 1262.

Roberts, George B., New York, assignor of forty-nine one-hundredths to M. T. Flanagan, North Tarrytown, N. Y. Ventilator-window. No. 1,102,955; July 7; Gaz. vol. 204; p. 254.

Roberts, Guy, Bridgeport, Conn. Fuse-tongs. No. 1,105,043; July 28; Gaz. vol. 204; p. 1114.

Roberts, Henry P., Boston, Mass., assignor to Sanitary Cigar Cutter Co. Sanitary cigar-cutter. No. 1,104,137; July 21; Gaz. vol. 204; p. 752.

Roberts, John T., Washington, D. C. Warmer. No. 1,105,307; July 28; Gaz. vol. 204; p. 1207.

Roberts, Joseph P., Bell, Fla. Internal-combustion engine. No. 1,103,842; July 14; Gaz. vol. 204; p. 610.

Roberts, Julius O., Salina, Kans. Screw-extractor. No. 1,105,535; July 28; Gaz. vol. 204; p. 1289.

Roberts, Odineal, Bonham, Tex. Fruit-stand. No. 1,105,376; July 28; Gaz. vol. 204; p. 1235.

Robertson, Charles B., Baltimore, Md. Toy weighing-machine. No. 1,104,138; July 21; Gaz. vol. 204; p. 753.

Robinson, Arthur W., Montreal, Quebec, Canada. Floating discharge-pipe for hydraulic dredges. No. 1,104,275; July 21; Gaz. vol. 204; p. 799.

Robinson, Cyrus, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation. Ore treatment. No. 1,105,102; July 28; Gaz. vol. 204; p. 1135.

Robinson, Edward W., assignor to International Barrel Company, Savannah, Ga. Barrel-head retainer. No. 1,104,546; July 21; Gaz. vol. 204; p. 896.

Robinson, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,102,688; July 7; Gaz. vol. 204; p. 162.

Robinson, Frederick J., Hampton, Va. Braking device for reversible gear mechanism. No. 1,105,377; July 28; Gaz. vol. 204; p. 1235.

Robinson, Henry O., Brookline, Mass., and C. Steadman, Huguenot Park, N. Y. Kiln, furnace, &c. (Reissue.) No. 13,774; July 14; Gaz. vol. 204; p. 644.

Robinson, Joseph V., Washington, D. C. Fire-governor. No. 1,105,208; July 28; Gaz. vol. 204; p. 1171.

Robinson, R. P., *et al.* (See Connor, George W., assignor.)

Robinson, Robert B. (See Bates, Eddo V., assignor.)

Robison, Edward J., Chillicothe, Mo. Bedstead. No. 1,102,956; July 7; Gaz. vol. 204; p. 254.

Roblin, Edwin, Toledo, Ohio. Brake for automobile-trucks. No. 1,103,540; July 14; Gaz. vol. 204; p. 503.

Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,102,547; July 7; Gaz. vol. 204; p. 114.

Rockwell, Fred P., Albert Lea, Minn. Slip-folder. No. 1,104,276; July 21; Gaz. vol. 204; p. 799.

Rodda, Horace W., London, England. Machine for washing plates. No. 1,104,139; July 21; Gaz. vol. 204; p. 753.

Rodden, Richard M., Montreal, Quebec, Canada. Collar. No. 1,102,440; July 7; Gaz. vol. 204; p. 77.

Roderick Lean Manufacturing Company, The. (See Warne, Frederick C., assignor.)

Rodgers, Charles E., Shepherdsville, Ky. Cultivator. No. 1,102,957; July 7; Gaz. vol. 204; p. 254.

Rodgers, Louis E., Chicago, Ill. Apparatus for drying products of clay or the like. No. 1,103,435; July 14; Gaz. vol. 204; p. 467.

Roecker, William J., Three Lakes, Wis. Sleigh. No. 1,105,536; July 28; Gaz. vol. 204; p. 1289.

Roessler & Hasslacher Chemical Co., The. (See Zwingenberger, Otto K., assignor.)

Röger, Karl, Berlin, Germany, assignor to Linotype and Machinery Limited, London, England. Device for wiping the printing-surfaces of intaglio-printing presses. No. 1,102,548; July 7; Gaz. vol. 204; p. 114.

Rogers, George P., Atlantic City, N. J. Clothes-washer. No. 1,102,958; July 7; Gaz. vol. 204; p. 255.

Rogers, George W. (See Hill, Joshua A., assignor.)

Rogers, Lonzo B., Brinkley, Ark. Trap. No. 1,105,458; July 28; Gaz. vol. 204; p. 1263.

Rogers, Ralph F., Chicago, Ill. Removable seat structure. No. 1,103,315; July 14; Gaz. vol. 204; p. 427.

Rogerson, Thomas B., Tollcross, Glasgow, Scotland. Regenerative open-hearth furnace. No. 1,104,448; July 21; Gaz. vol. 204; p. 859.

Rohrer, Josiah H., Philadelphia, Pa. Safety starting-crank. No. 1,104,323; July 21; Gaz. vol. 204; p. 816.

Rohrer, William L. (See Lee, Charles F., assignor.)

Rohrer, William L. (See Rimmer, Plymire, and Wills, assignors.)

Romeiser, Wilhelm, Waldmannslust, near Berlin, Germany. Differential gearing. No. 1,104,005; July 21; Gaz. vol. 204; p. 707.

Romine, Joseph B. (See Gilpin and Romine.)

Ronchetti, Joseph A., Woonsocket, R. I., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Platen-shifting mechanism for type-writers. No. 1,103,158; July 14; Gaz. vol. 204; p. 374.

Roop, William M., Kansas City, Mo., assignor to Wire Fabric Machinery Company, Wire-fabric machine. No. 1,103,316; July 14; Gaz. vol. 204; p. 428.
Root, Francis S., Springfield, Mass. Invalid-lifting device. No. 1,103,436; July 14; Gaz. vol. 204; p. 467.
Root, Frank P., Akron, Ohio. Air-valve for pneumatic tires. No. 1,104,074; July 21; Gaz. vol. 204; p. 732.
Rorke, James E., Bay City, Mich. Spike-retainer. No. 1,103,317; July 14; Gaz. vol. 204; p. 428.
Roscoe, Burton E., Springhill, Nova Scotia, Canada. Thermal pan. No. 1,103,159; July 14; Gaz. vol. 204; p. 374.
Rose, Frederick, Liverpool, and A. Rae, Seacombe, England. Tire for vehicle-wheels. No. 1,105,459; July 28; Gaz. vol. 204; p. 1263.
Rose Label Machine Company. (See Rosenthal, Arthur, assignor.)
Rosenthal, Arthur, assignor to Rose Label Machine Company, Grand Rapids, Mich. Label cutting and folding machine. No. 1,104,316; July 21; Gaz. vol. 204; p. 813.
Rosner, Max, assignor to E. D. Henderson, Jr., New York, N. Y. Fire-escape. No. 1,104,449; July 21; Gaz. vol. 204; p. 860.
Ross, James C., Colorado Springs, Colo., assignor to The Hydrocarbon Company. Treating bituminous material. No. 1,104,140; July 21; Gaz. vol. 204; p. 753.
Ross, Scott C., *et al.*, executors. (See Alberger, Louis R.)
Ross, William R., Morrisdale, Pa. Switch. No. 1,104,547; July 21; Gaz. vol. 204; p. 896.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Metallurgical method. No. 1,104,317; July 21; Gaz. vol. 204; p. 813.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Bleaching solutions containing titanous chlorid and producing the same. No. 1,105,308; July 28; Gaz. vol. 204; p. 1207.
Rotary Valve Motor Company. (See Nelson, Emil A., assignor.)
Rothsten, Nels J., Beloit, Wis. Fly-wheel. No. 1,103,843; July 14; Gaz. vol. 204; p. 610.
Rounds, Daniel, Portland, Me. Repair-jack. No. 1,103,844; July 14; Gaz. vol. 204; p. 610.
Rowe, Frederick A., North Vancouver, British Columbia, assignor of one-half to E. W. Pelton, Vancouver, Canada. Hose-supporter. No. 1,102,804; July 7; Gaz. vol. 204; p. 203.
Rowe, Sidney C. (See French, Robert H., assignor.)
Rowland Machine Company, The. (See Fudge, Raymond E., assignor.)
Roy, Joseph, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-range. No. 1,104,224; July 21; Gaz. vol. 204; p. 782.
Rubovits, Cora A., *et al.*, executors. (See Alshuler, Moses.)
Rubush, George W., Washington, D. C. Machine for washing dishes, cups, and cutlery. No. 1,104,388; July 21; Gaz. vol. 204; p. 839.
Rudder, Frank P., Derby, assignor to George Fletcher and Company, Limited, Litchurch, Derby, England. Steam-generator. No. 1,102,959; July 7; Gaz. vol. 204; p. 255.
Rude, Ole G., Sacred Heart, Minn. Shaft attachment for vehicle-runners. No. 1,105,103; July 28; Gaz. vol. 204; p. 1135.
Ruder, Carl, Wandsbek, Germany. Producing a mixture of camphene and isobornyl acetate from pinene hydrochlorid. No. 1,103,378; July 28; Gaz. vol. 204; p. 1235.
Rudisill, Hiram, Greencastle, Ind. Truss. No. 1,104,141; July 21; Gaz. vol. 204; p. 753.
Rudolph Wurlitzer Manufacturing Company, The. (See Biohut, Joseph, assignor.)
Rudolphi, Frank, Montclair, N. J., assignor to American Can Company, New York, N. Y. Conveyer for sheets of materials. No. 1,104,548; July 21; Gaz. vol. 204; p. 897.
Ruff, Mathew V., Smyrna, Ga. Automatic air-cushion and shock-absorber. No. 1,103,084; July 14; Gaz. vol. 204; p. 346.
Rumely, Edward A., assignor to M. Rumely Company, Laporte, Ind. Traction-wheel. No. 1,104,934; July 28; Gaz. vol. 204; p. 1078.
Rumpf, Harry J., Halethorp, Md., assignor of one-half to L. H. Phelps, Westfield, N. J. Relief-valve. No. 1,102,549; July 7; Gaz. vol. 204; p. 115.
Rundlett, William D., assignor to Davis & Furber Machine Company, North Andover, Mass. Condensing apparatus for carding-machines. No. 1,103,541; July 14; Gaz. vol. 204; p. 503.
Runkel, Emil. (See Newhouse and Runkel.)
Runner, Emma A., Ithaca, N. Y. Glove-finger-turning device. No. 1,104,006; July 21; Gaz. vol. 204; p. 707.
Ruppel, Charles, Philadelphia, Pa. Talking-machine. No. 1,104,935; July 28; Gaz. vol. 204; p. 1078.
Ruppel, Henry, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Means for raising combustion-tubes on blue-flame wick-stoves. No. 1,103,845; July 14; Gaz. vol. 204; p. 611.
Rusby, John M., assignor to The United Gas Improvement Company, Philadelphia, Pa. Registering-meter for gas and the like. No. 1,105,581; July 28; Gaz. vol. 204; p. 1304.
Russell, Andrew L., Midway, Pa. Truck for milk-cans. No. 1,103,689; July 14; Gaz. vol. 204; p. 560.
Russell, Charles D., St. Paul, Minn. Spike. No. 1,103,542; July 14; Gaz. vol. 204; p. 503.
Russell, Nelson J., Minneapolis, Minn. Pump-actuating mechanism for carbureters. No. 1,103,224; July 14; Gaz. vol. 204; p. 397.
Russell, Thomas F., Spokane, Wash. Addressing and inserting machine. No. 1,103,846; July 14; Gaz. vol. 204; p. 611.
Russell, Thomas N., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Car-roof. No. 1,103,085; July 14; Gaz. vol. 204; p. 346.
Ryckman, John, Minneapolis, Minn. Kerosene-gas generator and burner. No. 1,105,104; July 28; Gaz. vol. 204; p. 1135.
S. F. Bowser & Co. (See Caskey, Edgar M., assignor.)
S. F. Bowser & Co. (See De Vilbiss, Thomas D., assignor.)
S. F. Bowser & Company. (See Bowser, Lafayette E., assignor.)
S. F. Bowser & Company. (See Mulligan, Thomas F., assignor.)
S. F. Bowser & Company. (See Wyckoff, Andrew D., assignor.)
S. S. Hepworth Company. (See Mackintosh, Edward D., assignor.)
S. S. White Dental Manufacturing Company, The. (See Arden, Thomas R., assignor.)
Saco-Lowell Shops. (See Curley and Moss, assignors.)
Sales Company. (See Bower, Robert A., assignor.)
Salmon, Frank M., Waverly, Mo. Orchard-heater. No. 1,104,832; July 28; Gaz. vol. 204; p. 1043.
Samaha, Halim N. (See Samaha, Salim N. and H. N.)
Samaha, Salim N. and H. N., Washington, D. C. Food compound. No. 1,102,607; July 7; Gaz. vol. 204; p. 136.
Samesreuther, Richard. (See Canzler and Samesreuther.)
Sampson, Edward J., Grandmound, Iowa. Tractor. No. 1,104,277; July 21; Gaz. vol. 204; p. 800.
Samuel Cabot, Inc. (See Abbott, Charles M., assignor.)
Samuel Cupples Envelope Company. (See Vierengel, Matthew, assignor.)
Samuel, Leopold S. and M., Newark, N. J. Making strips for weaving and the like. No. 1,105,309; July 28; Gaz. vol. 204; p. 1208.
Samuel, Moses. (See Samuel, Leopold S. and M.)
San Diego Aerial Navigation Co. (See Waterman, Russell R., assignor.)
Sander, Charles O. (See Zander, John L., assignor.)
Sanders, Stephen P., Cupertino, Cal. Carbureter. No. 1,105,160; July 28; Gaz. vol. 204; p. 1154.
Sanderson, William P. (See Hayward and Sanderson.)
Sandford, William H., New York, N. Y. Handle of golf-clubs, polo-sticks, and the like. No. 1,102,441; July 7; Gaz. vol. 204; p. 77.
Sanford, Henry G. (See Hewitt, Wallace B., assignor.)
Sanford, Hugh W., Knoxville, Tenn. Mining-car wheel. No. 1,104,549; July 21; Gaz. vol. 204; p. 897.
Sanford, Robert G., Yonkers, N. Y. Electric elevator. No. 1,103,626; July 14; Gaz. vol. 204; p. 536.
Sanitary Can Company. (See Wegner, Fred, assignor.)
Sanitary Cigar Cutter Co. (See Roberts, Henry P., assignor.)
Sargent Company. (See Dunbar, Frank G., assignor.)
Sargent & Company. (See Sargent, Henry B., assignor.)
Sargent & Company. (See Sparks, William E., assignor.)
Sargent, Frederick G., Westford, Mass. Apparatus for selective wireless telegraphing. No. 1,102,442; July 7; Gaz. vol. 204; p. 77.
Sargent, Henry B., assignor to Sargent & Company, New Haven, Conn. Framing-square. No. 1,102,689; July 7; Gaz. vol. 204; p. 163.
Sargent, Marshall B. (See Karlberg and Sargent.)
Sartain, Isaac M., Tracy City, Tenn. Vehicle wheel-tire. No. 1,102,690; July 7; Gaz. vol. 204; p. 163.
Sauchereau, John L., Spokane, Wash. Valve. No. 1,105,209; July 28; Gaz. vol. 204; p. 1172.
Saurer, Firm of Adolph. (See Eggart, Karl, assignor.)
Saurer, Firm of Adolph. (See Moriggl, Carl, assignor.)
Saurer, Hippolyt, Arbon, Switzerland. Jacquard-card-punching machine. No. 1,104,550; July 21; Gaz. vol. 204; p. 897.
Saurer, Hippolyt, Arbon, Switzerland. Machine for punching jacquard-cards. No. 1,104,551; July 21; Gaz. vol 204; p. 898.
Savage, Charley S., deceased, Burfield, Ky.; J. C. Huffaker, administrator. Gate. No. 1,102,691; July 7; Gaz. vol. 204; p. 163.
Savage, Richard J., and C. E. Schultz, Chicago, Ill. Candy-making machine. No. 1,104,936; July 28; Gaz. vol. 204; p. 1078.
Savelsberg, Josef, Papenburg-on-the-Ems, Germany. Sintering smelting products and the like. No. 1,103,318; July 14; Gaz. vol. 204; p. 429.
Saveoil Creosoting Machine Company. (See Frame and Galloway, assignors.)
Savoie, Josef, Central Falls, R. I. Paper-cap remover. No. 1,105,210; July 28; Gaz. vol. 204; p. 1172.
Savoy, John A., San Francisco, Cal. Automatic ship reversing device. No. 1,105,537; July 28; Gaz. vol. 204; p. 1289.
Sayre, Eugene A., Elgin, Ill. Automatic radiating system for internal-combustion engines. No. 1,104,552; July 21; Gaz. vol. 204; p. 898.

Scarborough, Walter M., Lancaster, Pa. Illuminated-lens sign. No. 1,104,008; July 21; Gaz. vol. 204; p. 707.
Scaturro, Antonino, New York, N. Y. Safety baby-hat. No. 1,104,553; July 21; Gaz. vol. 204; p. 899.
Schade, John, Jr., assignor of one-half to A. C. Wessmann, New York, N. Y. Safety device. No. 1,103,437; July 14; Gaz. vol. 204; p. 467.
Schäfer, Max, assignor to Firm of R. Bosch, Stuttgart, Germany. Interrupter for electric ignition-machines. No. 1,104,007; July 21; Gaz. vol. 204; p. 707.
Schaller, Oscar, Webster Groves, Mo. Vehicle-wheel. No. 1,105,211; July 28; Gaz. vol. 204; p. 1173.
Schamell, Otto A., Milwaukee, Wis. Road-roller. No. 1,102,443; July 7; Gaz. vol. 204; p. 78.
Schanz, Friedrich A., Dresden, Germany. Apparatus for demonstrating ocular fluorescence. No. 1,105,310; July 28; Gaz. vol. 204; p. 1208.
Scharf, Frank W., assignor to Interstate Electric & Mfg. Co., Sioux City, Iowa. Electric light and power switchboard. No. 1,102,805; July 7; Gaz. vol. 204; p. 203.
Schaub, Jacob, Logan, Utah, assignor, by mesne assignments, to The Caxton Printers, Limited, Caldwell, Idaho. Locking mechanism for loose-leaf binders. No. 1,105,161; July 28; Gaz. vol. 204; p. 1154.
Scheibert, Rudolph H., Cincinnati, Ohio. Steering-wheel. No. 1,103,438; July 14; Gaz. vol. 204; p. 468.
Schenck, Charles. (See Wylde and Schenck.)
Scherer, Albert G., assignor to The Excelsior Steel Furnace Company, Chicago, Ill. Safety device for clutch-controlled machines. No. 1,102,608; July 7; Gaz. vol. 204; p. 136.
Scherer, Albert G., assignor to The Excelsior Steel Furnace Company, Chicago, Ill. Safety device for clutch-controlled machines. No. 1,102,609; July 7; Gaz. vol. 204; p. 136.
Scherzer, Albert H., Chicago, Ill. Bascule-bridge. No. 1,104,318; July 21; Gaz. vol. 204; p. 814.
Schiebeler, Carl, Wilmersdorf, Germany, assignor to General Electric Company. Hoisting conveyance. No. 1,102,550; July 7; Gaz. vol. 204; p. 115.
Schiff, Sigmund, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,104,278; July 21; Gaz. vol. 204; p. 800.
Schiffmann, Auguste C. and J. B., Oakland, Cal. Fruit-presser. No. 1,104,937; July 28; Gaz. vol. 204; p. 1079.
Schiffmann, John B. (See Schiffmann, Auguste C. and J. B.)
Schindeler, Franz T. M., Cleveland, Ohio. Serving device. No. 1,103,225; July 14; Gaz. vol. 204; p. 397.
Schindler, John L., Friend, Oreg. Governor for explosive-engines. No. 1,102,960; July 7; Gaz. vol. 204; p. 256.
Schisler, Frank J., Winthrop, Minn. Non-explosive oil-can. No. 1,103,319; July 14; Gaz. vol. 204; p. 429.
Schlesinger-Thury, Marie, Berkeley, Cal. Flour-sifter. No. 1,103,528; July 14; Gaz. vol. 204; p. 432.
Schlick, Otto. (See Greiner, Friedrich, assignor.)
Schloss Mfg. Co., M. W. (See Guggenheim, Edgar, assignor.)
Schmehl, Frederick G., East Orange, N. J. Display-stand. No. 1,103,086; July 14; Gaz. vol. 204; p. 347.
Schmidt, Augustus F., Pittsburgh, Pa. Valve mechanism for motors. No. 1,103,087; July 14; Gaz. vol. 204; p. 347.
Schmidt, Edward, El Paso, Tex. Combined ruler and blotter. No. 1,105,002; July 28; Gaz. vol. 204; p. 1100.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Draft-rigging. No. 1,104,554; July 21; Gaz. vol. 204; p. 899.
Schmidt, Henry F., Wilkinsburg, Pa., assignor to The Westinghouse Machine Company. Variable-speed turbine. No. 1,102,357; July 7; Gaz. vol. 204; p. 47.
Schmidt, Otto, Stuttgart, assignor to Cannstatter Misch- und Knetmaschinen-Fabrik Cannstatter-Dampf Backofenfabrik Werner & Pfleiderer, Cannstatt, Germany. Chain conveyer. No. 1,104,708; July 21; Gaz. vol. 204; p. 949.
Schmitt, Peter A., Hamburg, Germany. Manufacture of food-fats, more particularly for the preparation of pastries and the like. No. 1,102,551; July 7; Gaz. vol. 204; p. 115.
Schmitt, Rudolf, assignor to Maschinenfabrik Schnarr & Schmitt, Frankfort-on-the-Main, Germany. Device for feeding the tobacco in cigar-bunching machines. No. 1,102,692; July 7; Gaz. vol. 204; p. 164.
Schmittinger, John, assignor to H. W. Hanna, Philadelphia, Pa. Diaphragm for the sound-boxes of talking-machines. No. 1,104,833; July 28; Gaz. vol. 204; p. 1043.
Schneider, Adolph, assignor to Banning & Banning, Chicago, Ill. Base for bottle-filling machines. No. 1,104,555; July 21; Gaz. vol. 204; p. 899.
Schneider, Alexander M., New York, N. Y. Skirt. No. 1,104,319; July 21; Gaz. vol. 204; p. 814.
Schneider, Eberhard, New York, N. Y. Supporting structure for projecting apparatus. No. 1,104,834; July 28; Gaz. vol. 204; p. 1043.
Schneider, Franklin, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio. Gearing. No. 1,104,736; July 21; Gaz. vol. 204; p. 960.
Schneider, Franklin, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio. Electrical switch. No. 1,104,737; July 21; Gaz. vol. 204; p. 960.
Schneider, George J., assignor to Acme Electric Heater Company, Detroit, Mich. Electrically-heated instrument. No. 1,103,690; July 14; Gaz. vol. 204; p. 560.
Schneider, John G., assignor of one-third to C. A. Hawkins, York, Pa. Nut-lock. No. 1,103,847; July 14; Gaz. vol. 204; p. 611.
Schoelles, Arthur L., Newfane, N. Y. Spinning-machine. No. 1,103,160; July 14; Gaz. vol. 204; p. 375.
Schoendelen, August, Davenport, Iowa. Curtain-fixture. No. 1,104,142; July 21; Gaz. vol. 204; p. 754.
Schoenheit, Ernest, Ambridge, Pa. Sash-balance. No. 1,102,444; July 7; Gaz. vol. 204; p. 78.
Schofield, Robert, New Bedford, assignor to The Whitin Machine Works, Whitinsville, Mass. Sliver-pan for combing-machines. No. 1,102,298; July 7; Gaz. vol. 204; p. 27.
Schomburg, Ludwig, Gelsenkirchen, assignor to Mannesmannröhren-Werke, Dusseldorf, Germany. Pipe-joint packing. No. 1,102,961; July 7; Gaz. vol. 204; p. 256.
Schönfeld, Ferdinand, Zurich, Switzerland. Device for opening tins. No. 1,102,962; July 7; Gaz. vol. 204; p. 256.
Schorik, Frank, and F. F. Marshall, Chicago, Ill. Automatic liquid-measuring device. No. 1,102,806; July 7; Gaz. vol. 204; p. 204.
Schou, Carl, Holte, Denmark. Photographic recording apparatus. No. 1,104,556; July 21; Gaz. vol. 204; p. 900.
Schramm, Adolph W., Riverton, N. J., assignor to Electro Dental Manufacturing Company, Philadelphia, Pa. Switchboard-mounting. No. 1,104,709; July 21; Gaz. vol. 204; p. 950.
Schreiber, Edward A., Chicago, Ill. Vestibule-diaphragm for railway passenger-cars. No. 1,104,938; July 28; Gaz. vol. 204; p. 1079.
Schroeder, John H., and C. D. Baucom, Savannah, Ga. Electrical train-controlling system. No. 1,104,279; July 21; Gaz. vol. 204; p. 801.
Schröter, Fritz, and F. L. Mädler, Wilmersdorf-Berlin, Germany. Magneto ignition device. No. 1,104,835; July 28; Gaz. vol. 204; p. 1043.
Schuch, Emil, Munich, Germany. Recorder. No. 1,103,691; July 14; Gaz. vol. 204; p. 561.
Schultz, Charles E. (See Savage and Schultz.)
Schultz, John, Buffalo, N. Y. Mixing-valve. No. 1,103,439; July 14; Gaz. vol. 204; p. 468.
Schulze, Ernest J., Spokane, Wash. Attachment for baby-carriages and go-carts. No. 1,105,379; July 28; Gaz. vol. 204; p. 1236.
Schuman Company, The. (See Schuman, James B., assignor.)
Schuman, James B., assignor to The Schuman Company, Indianapolis, Ind. Feeder for corn huskers and shredders. No. 1,104,738; July 21; Gaz. vol. 204; p. 960.
Schumann, Ernst, Charlottenburg, assignor to Siemens & Halske, A. G., Berlin, Germany. Fire-alarm system. No. 1,105,044; July 28; Gaz. vol. 204; p. 1115.
Schwab, Edward C., Milwaukee, Wis. Collapsible box. No. 1,102,445; July 7; Gaz. vol. 204; p. 78.
Schwahn, Heinrich F. D., Belleville, Ill. Electric furnace. No. 1,105,538; July 28; Gaz. vol. 204; p. 1289.
Schwarz, Paul, Cook, England. Gas-fired continuous kiln. No. 1,104,836; July 28; Gaz. vol. 204; p. 1043.
Schwarzkopf, Samuel, Toledo, Ohio. Receptacle for burnt matches. No. 1,104,450; July 21; Gaz. vol. 204; p. 860.
Schweitzer, Heinrich, New York, N. Y. Dental pattern wax. No. 1,103,088; July 14; Gaz. vol. 204; p. 347.
Schwieterman, August G., Dayton, Ohio. Thermal motor No. 1,104,320; July 21; Gaz. vol. 204; p. 814.
Scoop Folding Box Company. (See Smith and Dreux, assignors.)
Scott, George, Amsterdam, N. Y. Cloth-cutting machine. No. 1,104,143; July 21; Gaz. vol. 204; p. 754.
Scott, James, Cleveland, Ohio. Electric conductor for trolley-cars. No. 1,104,225; July 21; Gaz. vol. 204; p. 782.
Scott, Leland, assignor of one-half to L. Huggins, St. Joseph, Mo. Internal-combustion engine. No. 1,103,089; July 14; Gaz. vol. 204; p. 347.
Scott, Wesley M., and W. Johnston, Dayton, Ohio. Core-making device. No. 1,104,837; July 28; Gaz. vol. 204; p. 1044.
Scott, William H., Norwich, England. Electric starter for internal-combustion engines. No. 1,104,710; July 21; Gaz. vol. 204; p. 950.
Scoular, James A., Hammersmith, London, assignor to Dick, Kerr & Company, Limited, London, England. Manufacture of metallic filaments for electric incandescent lamps. No. 1,104,557; July 21; Gaz. vol. 204; p. 900.
Scovill, James P., assignor to Trojan Machine Company, Troy, N. Y. Tobacco-stemming machine. No. 1,103,893; July 14; Gaz. vol. 204; p. 628.
Scovill Manufacturing Company. (See Goss, John H., assignor.)
Scriven, Jeremiah A., New York, N. Y. Union garment. No. 1,102,299; July 7; Gaz. vol. 204; p. 27.
Scroggins, Robert H., Vienna, Va., assignor of one-half to J. H. Bradley, Washington, D. C. Wheel-flange lubricator. No. 1,104,321; July 21; Gaz. vol. 204; p. 815.
Scroggins, Robert H., Vienna, Va., assignor of one-half to J. H. Bradley, Washington, D. C. Wheel-flange-lubricating mechanism. No. 1,104,322; July 21; Gaz. vol. 204; p. 815.
Scudi, Michael A., *et al.* (See Guiliani, Alfredo, assignor.)

Seal & Fastener Co., The. (See Flora and Murphy, assignors.)
Seale, Daniel T., Ozark, Ala. Wagon-gear. No. 1,105,460; July 28; Gaz. vol. 204; p. 1263.
Seames, Louis F., Buffalo, N. Y. Bottle-stopper. No. 1,103,692; July 14; Gaz. vol. 204; p. 561.
Sears Cross & Co. (See Kendall, William F., assignor.)
Sebastian, Eugen, Saarau, Silesia, assignor to Company Plugge & Holtfort, Dortmund, Germany. Means for connecting shafts. No. 1,104,838; July 28; Gaz. vol. 204; p. 1044.
Secor, John A., assignor to M. Rumely Company, Laporte, Ind. Carbureter. No. 1,105,003; July 28; Gaz. vol. 204; p. 1100.
Seeley, Frank E., assignor to The Bryant Electric Company, Bridgeport, Conn. Swiveled attachment-plug. No. 1,103,006; July 7; Gaz. vol. 204; p. 272.
Seeley, James E., assignor to Vulcan Coil Co., Los Angeles, Cal. Ozone apparatus. No. 1,102,963; July 7; Gaz. vol. 204; p. 257.
Seely, George G. (See Huntington, Cory O., assignor.)
Segee, Gerard T., Revere, Mass. Window-lock. No. 1,104,558; July 21; Gaz. vol. 204; p. 901.
Seguin, Emilien, assignor of one-half to F. J. Parsons, Montreal, Quebec, Canada. Insulator. No. 1,104,009; July 21; Gaz. vol. 204; p. 708.
Seifert, Karl R. R., Charlottenburg, Germany. Combined sintering and stretching process. No. 1,103,382; July 14; Gaz. vol. 204; p. 449.
Selden, Edward P., assignor to Erie City Iron Works, Erie, Pa. Boiler-bracket. No. 1,104,144; July 21; Gaz. vol. 204; p. 754.
Sell Horse Goods Company, The. (See Miller and Sell, assignors.)
Sell Horse Goods Company, The. (See Sell, William E., assignor.)
Sell, William E. (See Miller and Sell.)
Sell, William E., assignor to The Sell Horse Goods Company, Canton, Ohio. Glove. No. 1,102,552; July 7; Gaz. vol. 204; p. 115.
Sellers, William F., and H. B. Bradford, assignors to Edge Moor Iron Company, Edgemoor, Del. Hand-hole cover. No. 1,105,212; July 28; Gaz. vol. 204; p. 1173.
Sellers, William F., and H. B. Bradford, assignors to Edge Moor Iron Company, Edgemoor, Del. Division-wall for water-tube boilers. No. 1,105,213; July 28; Gaz. vol. 204; p. 1174.
Sellon, Charles A., Alliance, Ohio. Process and system for producing power. No. 1,103,440; July 14; Gaz. vol. 204; p. 469.
Seltzer, William H., Philadelphia, Pa. Action-muffling device for pianos. No. 1,104,280; July 21; Gaz. vol. 204; p. 801.
Selz Schwab & Company. (See Hoffman, Valentine, assignor.)
Sera, Sam. (See Lovas and Sera.)
Setter, Michael, assignor to Automatic Electric Company, Chicago, Ill. Telephone automatic trunk-selecting system. No. 1,104,451; July 21; Gaz. vol. 204; p. 860.
Setzler, Charles, Booneville, Ark. Automobile-fender. No. 1,102,446; July 7; Gaz. vol. 204; p. 78.
Seubert, Eugen, Munich, Germany. Sewage-tank for the purification of sewage. No. 1,102,553; July 7; Gaz. vol. 204; p. 116.
Severance, John, assignor to Milton Bradley Company, Springfield, Mass. Safety appliance. No. 1,103,894; July 14; Gaz. vol. 204; p. 628.
Severson, Ole, Randall, Kans. Farm-gate. No. 1,104,010; July 21; Gaz. vol. 204; p. 708.
Severy, Melvin L., Arlington Heights, and G. B. Sinclair, Medford, Mass. Electromechanical action for musical instruments. No. 1,104,282; July 21; Gaz. vol. 204; p. 802.
Severy, Melvin L., Arlington Heights, and G. B. Sinclair, Winthrop, Mass., assignors to Choralcelo Manufacturing Company. Electrical musical instrument. No. 1,104,939; July 28; Gaz. vol. 204; p. 1079.
Sévigné, Henri A., Winthrop, Mass. Package. No. 1,104,739; July 21; Gaz. vol. 204; p. 961.
Sévigné, Henri A., Winthrop, Mass. Appliance for sealing wrapped packages. No. 1,104,740; July 21; Gaz. vol. 204; p. 961.
Sewage & Garbage Power Co. (See Matlack, Albert F., assignor.)
Sewell, Jonathan, Anaconda, Mont. Packing composition. No. 1,103,441; July 14; Gaz. vol. 204; p. 469.
Seyler, Charles L., Academy, W. Va. Railway-tie. No. 1,102,693; July 7; Gaz. vol. 204; p. 164.
Shallor, Frank E., Pittsfield, Mass., assignor to General Electric Company. Electric flat-iron. No. 1,102,300; July 7; Gaz. vol. 204; p. 27.
Shaine, Joseph. (See Vandyke, Donald J., assignor.)
Sharkey, Albert G., New York, N. Y. Carousel. No. 1,104,145; July 21; Gaz. vol. 204; p. 755.
Sharp-Bassett Gas Producer Company. (See Bassett, Alvin J., assignor.)
Sharp, Lee C., Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y. Machine for performing operations on the ends of can-bodies. No. 1,104,559; July 21; Gaz. vol. 204; p. 901.
Sharp & Smith. (See Clare, Charles E., assignor.)
Shaw, Charles P., Detroit, Mich. Film-burster. No. 1,102,807; July 7; Gaz. vol. 204; p. 205.
Shaw, Juan D., Buenos Aires, Argentina. Four-atroke-cycle engine. No. 1,104,075; July 21; Gaz. vol. 204; p. 732.
Sheahan, William, Oregon City, Oreg. Drier-rolls for paper-machines. No. 1,104,759; July 21; Gaz. vol. 204; p. 968.
Sheasley, Charles H. (See Amon, Clement E., assignor.)
Shedd, Harry M., Roselle, N. J., assignor to D. A. Marks, New York, N. Y. Electric circuit and motor. No. 1,103,693; July 14; Gaz. vol. 204; p. 561.
Sheffman, John, New York, N. Y. Machine for treating chocolate masses. No. 1,103,627; July 14; Gaz. vol. 204; p. 536.
Shelton, Henry T., F. W. Steere, and C. Power, Bunbury, Western Australia, Australia. Collapsible transport-box. No. 1,104,389; July 21; Gaz. vol. 204; p. 839.
Shepard, Victor J., assignor to Lima Locomotive Corporation, Lima, Ohio. Radial trailer-truck. No. 1,105,162; July 28; Gaz. vol. 204; p. 1155.
Shepard, William E., Lincoln, Nebr. Display-cabinet. No. 1,104,711; July 21; Gaz. vol. 204; p. 951.
Shephard, William H., and A. E. McKechnie, London, England. Wireless telegraph or telephone system. No. 1,104,712; July 21; Gaz. vol. 204; p. 951.
Shephard, William H., and A. E. McKechnie, London, England. Wireless telegraph or telephone system. No. 1,104,746; July 21; Gaz. vol. 204; p. 963.
Sherlock, William E., Canton, Ohio. Milk-pail. No. 1,103,090; July 14; Gaz. vol. 204; p. 348.
Sherman, David M., and C. P. Kleebauer, New York, N. Y., assignors to The Kleeboe Company, Inc. Non-refillable bottle. No. 1,103,007; July 7; Gaz. vol. 204; p. 272.
Sherman, William O., Pittsburgh, Pa. Surgical appliance. No. 1,105,105; July 28; Gaz. vol. 204; p. 1136.
Sherman, Willis S., Milwaukee, Wis. End-matcher. No. 1,102,694; July 7; Gaz. vol. 204; p. 164.
Sherman, Willis S., Milwaukee, Wis. Boring-machine. No. 1,102,695; July 7; Gaz. vol. 204; p. 165.
Sherry, Lansford F. (See Baloun, Harry F., assignor.)
Shevill, George R., deceased, Brooklyn, N. Y.; M. E. Shevill, executrix. Treating felt cloth. No. 1,103,694; July 14; Gaz. vol. 204; p. 562.
Shevill, Mary E., executrix. (See Shevill, George R.)
Shiner, Maud E., administratrix. (See Shiner, Oliver J.)
Shiner, Oliver J., deceased; M. E. Shiner, administratrix, Bayonne, N. J. Apparatus for mixing oil with chemicals. No. 1,102,696; July 7; Gaz. vol. 204; p. 165.
Shinski, Walter W., La Salle, Ill. Safety attachment for foot-stamping and other presses. No. 1,105,106; July 28; Gaz. vol. 204; p. 1136.
Shipherd, Caroline, Omaha, Nebr. Dish-washing apparatus. No. 1,105,045; July 28; Gaz. vol. 204; p. 1115.
Shipley, Robert P. (See Mockbee, Charles E., assignor.)
Shipman, George R., Norfolk, Va. Fender for ships. No. 1,105,461; July 28; Gaz. vol. 204; p. 1263.
Shoemaker, I. I. (See King, John, assignor.)
Shoman, Fred A., Milwaukee, Wis., assignor to The Phinney Engineering Co., Chillicothe, Ohio. Machine for snipping beans. No. 1,102,808; July 7; Gaz. vol. 204; p. 205.
Shoobridge, Reginald H., and A. F. Gunstone, Bath, England. Carbureter. No. 1,104,560; July 21; Gaz. vol. 204; p. 901.
Shultz, Llewellyn B. (See Rawson and Shultz.)
Shuminski, Piotr, assignor of one-fourth to J. L. Goldberg, Hamilton, Ontario, Canada. Brake for cars. No. 1,104,226; July 21; Gaz. vol. 204; p. 783.
Sickler, Harley N., Buffalo, N. Y. Slotting, creasing, and slitting machine. No. 1,103,695; July 14; Gaz. vol. 204; p. 562.
Siegmann, William, assignor to M. V. Gault, Baltimore, Md. Making magnesium cement. No. 1,102,358; July 7; Gaz. vol. 204; p. 47.
Siemens & Co., Gebrueder. (See Egly, Georg, assignor.)
Siemens, Friedrich, Berlin, Germany. Regenerative furnace. No. 1,102,359; July 7; Gaz. vol. 204; p. 47.
Siemens & Halske, A. G. (See Schumann, Ernst, assignor.)
Siemens & Halske Aktiengesellschaft. (See Knips, Christoph, assignor.)
Siemens-Schuckertwerke, G. m. b. H. (See Friese, Robert, assignor.)
Silberrad, Oswald, Buckhurst Hill, England. Explosive. No. 1,102,964; July 7; Gaz. vol. 204; p. 257.
Silbert, Gustaf L., Chicago, Ill. Locking device for lamp-sockets. No. 1,102,697; July 7; Gaz. vol. 204; p. 166.
Siler, C. B. (See Kindrick, Jesse H., assignor.)
Simmonds, John J., Iola, Kans. Hydraulic valve. No. 1,103,320; July 14; Gaz. vol. 204; p. 429.
Simmons, Oliver G., Philadelphia, Pa. File. No. 1,104,561; July 21; Gaz. vol. 204; p. 902.
Simmons, William M., Burlington, Iowa. Door-latch-releasing device. No. 1,104,076; July 21; Gaz. vol. 204; p. 733.
Simplex Player Action Company. (See Brown, Theodore P., assignor.)
Simpson, Frank M., Alameda, Cal. Chain wrench. No. 1,104,146; July 21; Gaz. vol. 204; p. 755.
Sims, A. H., *et al.* (See Connor, George W., assignor.)
Sinclair, George B. (See Severy and Sinclair.)
Singer, Fritz, and E. Milarch, Offenbach-on-the-Main, assignors to Chemische Fabrik Griesheim Elektron, Frankfort-on-the-Main, Germany. Making anthraquinone. No. 1,103,383; July 14; Gaz. vol. 204; p. 449.
Singer Manufacturing Company, The. (See Hemleb, Martin, assignor.)

Sinner, Emil, assignor to The La Salle Company, Milwaukee, Wis. Cash-register. (Reissue.) No. 13,767; July 7; Gaz. vol. 204; p. 279.
Sintz, Claude, Detroit, Mich. Driving-wheel. No. 1,102,447; July 7; Gaz. vol. 204; p. 79.
Sire, Didrik N., Mays Landing, N. J. Window. No. 1,104,940; July 28; Gaz. vol. 204; p. 1080.
Sirman, Frank B., *et al.*, executors. (See Marvil of V., Joshua H.)
Sirman, Frank B., *et al.*, executors. (See Marvil of V. and Downs.)
Sizer, Albert W., Kingston-upon-Hull, England. Press. No. 1,102,301; July 7; Gaz. vol. 204; p. 28.
Sjolander, Gustaf, Midland, Mich. Auto-rest. No. 1,105,462; July 28; Gaz. vol. 204; p. 1264.
Skeem, Christian S., Inkom, Idaho. Potato-digger. No. 1,103,321; July 14; Gaz. vol. 204; p. 429.
Skinner, Charles W., assignor to The Skinner Irrigation Company, Troy, Ohio. Irrigating apparatus. No. 1,104,839; July 28; Gaz. vol. 204; p. 1044.
Skinner Engine Company. (See Stevens, Robert G., assignor.)
Skinner Irrigation Company, The. (See Skinner, Charles W., assignor.)
Skinner, Le Grand, Erie, Pa. Steam-engine valve mechanism. (Reissue.) No. 13,768; July 7; Gaz. vol. 204; p. 281.
Skripec, John P., Cincinnati, Ohio. Motor-plow. No. 1,105,214; July 28; Gaz. vol. 204; p. 1174.
Slade, Isaac S., Stone Canon, Cal. Stopper for condiment-holders. No. 1,102,302; July 7; Gaz. vol. 204; p. 28.
Slattery, John, Chrome, N. J. Car-wheel. No. 1,104,562; July 21; Gaz. vol. 204; p. 902.
Slear, Elias F., Collingswood, N. J. Puzzle. No. 1,103,442; July 14; Gaz. vol. 204; p. 469.
Sleeper, Oliver S., assignor to Buffalo Foundry & Machine Company, Buffalo, N. Y. Drying-machine. No. 1,103,443; July 14; Gaz. vol. 204; p. 470.
Sly, Ethan E., Norwalk, Ohio. Automatic auxiliary air-valve for internal-combustion engines. No. 1,102,303; July 7; Gaz. vol. 204; p. 28.
Smith, Abraham L., New York, N. Y., and A. H. Dreux, Bloomfield, N. J., assignors to Scoop Folding Box Company, New York, N. Y. Paper box. No. 1,105,215; July 28; Gaz. vol. 204; p. 1174.
Smith, Allen C. (See Lindquist, Smith, and John.)
Smith, Andrew, assignor to Smith Metal Perforating Company, San Mateo, Cal. Draining culvert or casing. No. 1,105,539; July 28; Gaz. vol. 204; p. 1290.
Smith, Arthur F., Ventura, Cal. Awning for windows. No. 1,104,452; July 21; Gaz. vol. 204; p. 861.
Smith, Asa M., *et al.* (See Baker, Bert C., assignor.)
Smith, Charles L., Brooklet, Ga. Blow-out patch. No. 1,103,848; July 14; Gaz. vol. 204; p. 612.
Smith, Charles P., Marine City, Mich. Attachment for lamp-burners. No. 1,103,696; July 14; Gaz. vol. 204; p. 562.
Smith, Earl S., *et al.* (See Baker, Bert C., assignor.)
Smith, Ernest C., Hoosick Falls, N. Y. Golf-tee. No. 1,103,091; July 14; Gaz. vol. 204; p. 348.
Smith, George D., Bicknell, Ind. Rope or cable lubricator. No. 1,102,965; July 7; Gaz. vol. 204; p. 257.
Smith, George R. (See Clark and Smith.)
Smith & Hemenway Company. (See Woodward, Frank R., assignor.)
Smith, Henry A., Elgin, Ill. Safety ripper and case. No. 1,104,563; July 21; Gaz. vol. 204; p. 902.
Smith, Herbert E., Manchester, N. H. Winding-machine. No. 1,104,840; July 28; Gaz. vol. 204; p. 1045.
Smith, Irving B., Ambler, assignor to The Leeds & Northrup Company, Philadelphia, Pa. Resistance set. No. 1,104,841; July 28; Gaz. vol. 204; p. 1045.
Smith, Jacob. (See Dilyock, Harry, assignor.)
Smith, James C., assignor to The Machine Parts Company, Elyria, Ohio. Vehicle. No. 1,103,226; July 14; Gaz. vol. 204; p. 397.
Smith, James C., assignor to The Machine Parts Company, Elyria, Ohio. Vehicle. No. 1,105,216; July 28; Gaz. vol. 204; p. 1174.
Smith, Jay F., assignor of one-third to M. F. Towne and one-third to W. S. Coburn, Hotchkiss, Colo. Box-press. No. 1,105,463; July 28; Gaz. vol. 204; p. 1264.
Smith, John. (See Utard and Smith.)
Smith, John E., Laurel, and W. F. Sult, Gilman, assignors to Sunlight Hat Co., Marshalltown, Iowa. Ventilated hat. No. 1,103,012; July 7; Gaz. vol. 204; p. 274.
Smith, Joseph A., Attleboro, Mass. Plating. No. 1,104,842; July 28; Gaz. vol. 204; p. 1046.
Smith, Magnus, New York, N. Y., assignor, by mesne assignments, to Continental Motion Picture Company, Inc. Kinematographic apparatus. No. 1,105,163; July 28; Gaz. vol. 204; p. 1155.
Smith Metal Perforating Company. (See Smith, Andrew, assignor.)
Smith & Mills Company, The. (See Mills, James, assignor.)
Smith, Orbin F., and A. C. Lindgren, Moline, Ill., assignors to Moline Plow Company. Plow-adjusting mechanism. No. 1,103,543; July 14; Gaz. vol. 204; p. 504.
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Metal-working machine. No. 1,104,147; July 21; Gaz. vol. 204; p. 755.
Smith, Raymond J., Catlin, Ill. Collapsible hog-chute. No. 1,105,004; July 28; Gaz. vol. 204; p. 1100.
Smith, Sidney, Detroit, Mich. Electrical binding-screw or terminal. No. 1,103,544; July 14; Gaz. vol. 204; p. 504.
Smith, Sidney, Detroit, Mich. Coaster-brake. No. 1,104,453; July 21; Gaz. vol. 204; p. 861.
Smith, Stephen T., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,102,360; July 7; Gaz. vol. 204; p. 48.
Smith, Thomas, San Luis Potosi, Mexico. Packing. No. 1,103,322; July 14; Gaz. vol. 204; p. 430.
Smith, William C., Kansas City, Mo., and G. H. Barber, Osawatomie, Kans. Box-car. No. 1,103,697; July 14; Gaz. vol. 204; p. 563.
Smith, William F., Brooklyn, assignor to Western Electric Company, New York, N. Y. Electromagnetic circuit-controlling device. No. 1,104,077; July 21; Gaz. vol. 204; p. 733.
Smith, William F., Chicago, Ill., assignor to Western Electric Company, New York, N. Y. Twisting-machine. No. 1,104,078; July 21; Gaz. vol. 204; p. 733.
Smith-Worthington Company, The. (See Lilley, Alfred L., assignor.)
Smith-Worthington Company, The. (See Lilley, Robert G., assignor.)
Snelling, Walter O., Pittsburgh, Pa. Treating old wells. No. 1,104,011; July 21; Gaz. vol. 204; p. 709.
Snelling, Walter O., Pittsburgh, Pa., assignor to F. L. Dyer, Montclair, and J. W. Aylsworth, East Orange, N. J. Compound for extinguishing fires. No. 1,103,092; July 14; Gaz. vol. 204; p. 348.
Snow, Albert J., A. M. Kidd, and J. H. Whaley, Taft, Cal. Fishing-tool. No. 1,103,545; July 14; Gaz. vol. 204; p. 504.
Snow, Willis G., Hood River, Oreg. Box-nailing press. No. 1,102,992; July 7; Gaz. vol. 204; p. 266.
Snyder, Cassin, Philadelphia, Pa. Fire-extinguisher. No. 1,104,079; July 21; Gaz. vol. 204; p. 734.
Snyder, Clara B., Fostoria, Ohio, assignor to American Fog Signal Company, Pittsburgh, Pa. Railway-torpedo. No. 1,102,966; July 7; Gaz. vol. 204; p. 257.
Snyder, Curtiss E., South Valley, N. Y. Hand-stamp. No. 1,104,564; July 21; Gaz. vol. 204; p. 902.
Snyder, Parke T., assignor of one-half to R. J. Beatty, Chicago, Ill. Flume construction. No. 1,102,809; July 7; Gaz. vol. 204; p. 205.
Snyder, Parke T., assignor of one-half to R. J. Beatty, Chicago, Ill. Flume. No. 1,102,810; July 7; Gaz. vol. 204; p. 206.
Snyder, Samuel W., and P. C. Boelzner, Mount Morrison, Colo. Car-wheel-flange lubricator. No. 1,104,324; July 21; Gaz. vol. 204; p. 816.
Snypp, Charles E., Gretna, La. Cake-stripper. No. 1,102,698; July 7; Gaz. vol. 204; p. 166.
Société Anonyme des Automobiles Delaunay-Belleville, The. (See Barbarou, Marius, assignor.)
Societe Anonyme des Faienceries de Creil et Montereau. (See Faugeron, Ernest G., assignor.)
Societe Henri Gras & Cie. (See Verneuil, Egiste, assignor.)
Soetens, Edgard, Borgerhout-Antwerp, Belgium. Mechanical dop for polishing (cutting) diamonds. No. 1,103,698; July 14; Gaz. vol. 204; p. 563.
Sokolowski, Witold v., Warsaw, assignor of one-half to W. Morzycki, St. Petersburg, Russia. Automatic coupling for railway-cars. No. 1,104,713; July 21; Gaz vol. 204; p. 952.
Somers, Thomas B., Independence, Kans. Pipe-wrench. No. 1,103,323; July 14; Gaz. vol. 204; p. 430.
Sonderegger, Leo, assignor of one-half to W. Meyer, New York, N. Y. Window-cleaner. No. 1,104,565; July 21; Gaz. vol. 204; p. 903.
Sondhelm, Oscar, New York, and H. M. Veit, Brooklyn, assignors to C. Bomeisler, New York, N. Y. Bottle-stopper. No. 1,102,699; July 7; Gaz. vol. 204; p. 166.
Sonn, Raphael A., Atlanta, Ga. Floss toothpick. No. 1,105,005; July 28; Gaz. vol. 204; p. 1101.
Sonnier, Jean E., Paris, France. Manufacturing metallic torsels. No. 1,104,714; July 21; Gaz. vol. 204; p. 952.
Sooy, Ephraim C. and N. H., Kansas City, Mo. Threshing-machine for standing grain. No. 1,103,324; July 14; Gaz. vol. 204; p. 430.
Sooy, Norman H. (See Sooy, Ephraim C. and N. H.)
Sorenson, Andrew, Maiden Rock, Wis. Agricultural implement. No. 1,102,448; July 7; Gaz. vol. 204; p. 79.
South, William H., Bozeman, Mont. Carpenter's trestle. No. 1,103,699; July 14; Gaz. vol. 204; p. 563.
Southern Investment Co. of Canada Ltd. (See Willson and Haff, assignors.)
Southworth Machine Company. (See Cobb, Elmer M., assignor.)
Spacke, Fred W., D. T. Brownlee, and W. Spacke, assignors to The F. W. Spacke Machine Company, Indianapolis, Ind. Internal-combustion engine. No. 1,102,700; July 7; Gaz. vol. 204; p. 167.
Spacke, William. (See Spacke, Brownlee, and Spacke.)
Sparks, William E., assignor to Sargent & Company, New Haven, Conn. Plane. No. 1,104,454; July 21; Gaz. vol. 204; p. 861.
Sparrow, Simon, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Dynamo-electric machine. No. 1,104,715; July 21; Gaz. vol. 204; p. 952.
Spear, Furman D., assignor to Armspear Manufacturing Company, New York, N. Y. Signal-lamp. No. 1,102,546; July 14; Gaz. vol. 204; p. 505.

Speck, James A., Salem, Oreg. Safety-rail. No. 1,104,080; July 21; Gaz. vol. 204; p. 734.
Speer, James R., Trappe, Md. Alloy of iron. No. 1,105,341; July 28; Gaz. vol. 204; p. 1220.
Spelling, Thomas C., New York, N. Y. Monorailway. No. 1,105,540; July 28; Gaz. vol. 204; p. 1290.
Spellman, Herbert W., and E. Twigg, assignors to Landers, Frary and Clark, New Britain, Conn. Adjusting mechanism for grinding-mills. No. 1,105,380; July 28; Gaz. vol. 204; p. 1236.
Spence, Imry O. (See Weaver, Thomas E., assignor.)
Spencer, Henry M., South Hadley Falls, Mass. Dandy-roll. No. 1,102,554; July 7; Gaz. vol. 204; p. 116.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Valve for cleaning-tools. No. 1,103,547; July 14; Gaz. vol. 204; p. 505.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Cleaning apparatus. No. 1,103,548; July 14; Gaz. vol. 204; p. 505.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Dust-separator. No. 1,103,549; July 14; Gaz. vol. 204; p. 506.
Spencer, Ira H., West Hartford, assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Cleaning apparatus. No. 1,103,628; July 14; Gaz. vol. 204; p. 537.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Cleaning-tool. No. 1,104,148; July 21; Gaz. vol. 204; p. 756.
Spencer, Samuel G., Payson, Ill. Combined rake and stalk-cutter. No. 1,105,006; July 28; Gaz. vol. 204; p. 1101.
Spencer Turbine Cleaner Company, The. (See Spencer, Ira H., assignor.)
Spidy, Edgar T. (See Davison, Herriot, Spidy, and Mattson.)
Spiegel, W. M., *et al.* (See Trec, Eber B., assignor.)
Spiess, Gustav, Frankfort-on-the-Main, and A. Feldt, Obersursel, Germany. Auric compounds from cantharidylethylenediamin and making same. No. 1,104,149; July 21; Gaz. vol. 204; p. 756.
Splitdorf Electrical Company. (See Brackett, Ernest W., assignor.)
Spofford, Christopher S., assignor to Sturgis Steel Go-Cart Co., Sturgis, Mich. Child's carriage. No. 1,103,161; July 14; Gaz. vol. 204; p. 375.
Springer, Ruter W., Springfield, Ill. Fountain-pen. No. 1,104,566; July 21; Gaz. vol. 204; p. 903.
Springer, Ruter W., Springfield, Ill. Fountain-pen. No. 1,104,567; July 21; Gaz. vol. 204; p. 904.
Springer, William N., assignor to Oliver Chilled Plow Works, South Bend, Ind. Gang-plow. No. 1,103,700; July 14; Gaz. vol. 204; p. 563.
Spyker, Jacobus, Amsterdam, Netherlands. Elastic tire for vehicles. No. 1,102,811; July 7; Gaz. vol. 204; p. 206.
Squiller, Samuel, McKees Rocks, Pa. Mail-box lock. No. 1,103,701; July 14; Gaz. vol. 204; p. 564.
St. Jean, Télesphore, St. Paul, Minn. Leg-spreader for horses. No. 1,104,843; July 28; Gaz. vol. 204; p. 1046.
Staab, Wilhelm, and H. Föckerer, Munich, Germany. Body-supporting appliance. No. 1,104,150; July 21; Gaz. vol. 204; p. 756.
Stafford Company, The. (See Lavigne, Charlie G., assignor.)
Stafford, Hal R. (See Muhlfeld and Stafford.)
Stafford, Wilfred, assignor to The Oliver Typewriter Co., Ltd., London, England. Tape-copy-holder attachment for type-writers. No. 1,104,568; July 21; Gaz. vol. 204; p. 904.
Stahl, Emil, East Stroudsburg, Pa. Weft stop-motion for looms. No. 1,102,610; July 7; Gaz. vol. 204; p. 137.
Stalzer, Ernest, New York, N. Y. Glass-grinding machine. No. 1,103,093; July 14; Gaz. vol. 204; p. 348.
Stanard Automobile Manufacturing Company, The. (See Stanard, Frank H., assignor.)
Stanard, Frank H., assignor to The Stanard Automobile Manufacturing Company, Denver, Colo. Hub for positively-driven steering-wheels. No. 1,103,702; July 14; Gaz. vol. 204; p. 564.
Standard Electric Works. (See Ecklyn, Charles N., assignor.)
Standard Motor Truck Company. (See Cory, Wilbur G., assignor.)
Standard Plunger Elevator Company. (See Jansson, Karl E. O., assignor.)
Standard Silica Brick Machinery Company. (See Avram, Mots H., assignor.)
Standfest, George, Rochester, N. Y. Railway-spike. No. 1,103,444; July 14; Gaz. vol. 204; p. 470.
Stanz, Henry J., Bison, Kans. Sash-lock. No. 1,104,081; July 21; Gaz. vol. 204; p. 734.
Stange, John A., Regent, N. D. Steering-guide. No. 1,105,107; July 28; Gaz. vol. 204; p. 1136.
Stanley, Ralph A., Gladstone, Ill. Invalid-bedstead. No. 1,104,390; July 21; Gaz. vol. 204; p. 839.
Stanley Works, The. (See Howe, Leon S., assignor.) (Reissue.)
Stanovich, Jacob, *et al.* (See Negovatich, Peter, assignor.)
Stanton, George W., Athens, Tenn. Wood-splitting machine. No. 1,105,108; July 28; Gaz. vol. 204; p. 1137.
Staples, Elisha S., New Haven, assignor of one-half to C. E. Graham, West Haven, Conn. Non-refillable bottle. No. 1,103,895; July 14; Gaz. vol. 204; p. 629.
Staples, John A., Newburgh, N. Y. Foot-operated control device for automobiles. No. 1,103,094; July 14; Gaz. vol. 204; p. 349.
Staples, John A., Newburgh, N. Y. Foot-control device for automobiles. No. 1,103,095; July 14; Gaz. vol. 204; p. 349.
Star Cement Block Machine Company. (See Yeocum, William, assignor.)
Statler, Ellsworth M., and J. A. Johnson, Buffalo, N. Y., assignors to W. R. Hughes, Pittsburgh, Pa. Bath-room fixture. No. 1,105,164; July 28; Gaz. vol. 204; p. 1156.
Staude, Edwin G., Minneapolis, Minn. Machine for making flexible boxes. No. 1,104,012; July 21; Gaz. vol. 204; p. 709.
Staude, Edwin G., Minneapolis, Minn. Folding and gluing machine. No. 1,104,013; July 21; Gaz. vol. 204; p. 709.
Staveley, William. (See Richardson and Staveley.)
Steadman, Christopher. (See Robinson and Steadman.) (Reissue.)
Stec, John, Michigan City, Ind. Trundle whirligig toy. No. 1,104,227; July 21; Gaz. vol. 204; p. 783.
Steele, John W. (See Hanson and Steele.)
Steere, Frederick W. (See Shelton, Steere, and Power.)
Steffens-Amberg Co., The. (See Fox, Thomas A., assignor.)
Stegmaier, Philip M., assignor to Plymouth Cordage Company, Plymouth, Mass. Callpers for rope and the like. No. 1,105,217; July 28; Gaz. vol. 204; p. 1175.
Stein, Edward, assignor to The Higgin Manufacturing Company, Newport, Ky. Window-screen. No. 1,104,151; July 21; Gaz. vol. 204; p. 757.
Steiner, Joe. (See Cochran, Edward A., assignor.)
Steinmetz, Joseph A., Philadelphia, Pa. Fire-extinguisher apparatus. No. 1,102,812; July 7; Gaz. vol. 204; p. 206.
Stenborg, Andrew F. V., Hibbing, Minn. Fire-escape. No. 1,103,849; July 14; Gaz. vol. 204; p. 612.
Stenger, Peter, assignor to Deister Concentrator Company, Fort Wayne, Ind. Ore-concentrator. No. 1,105,109; July 28; Gaz. vol. 204; p. 1137.
Stenotype Company, The. (See Karlberg and Sargent, assignors.)
Stensland, Albert, Worthing, S. D. Wrench. No. 1,102,449; July 7; Gaz. vol. 204; p. 80.
Stephens, Charles R., assignor to The Moline Plow Company, Moline, Ill. Plow. No. 1,104,569; July 21; Gaz. vol. 204; p. 904.
Stephens, Ernest F., Hawesville, Ky. Subsoil-plow. No. 1,103,446; July 14; Gaz. vol. 204; p. 471.
Stephens, George E., Knoxville, Iowa. Whiffletree-hook. No. 1,102,450; July 7; Gaz. vol. 204; p. 80.
Stephenson, William C., assignor of one-half to J. M. Daughtry, Rocky Mount, N. C. Tool-holder. No. 1,104,014; July 21; Gaz. vol. 204; p. 710.
Stern, Milton C. (See Nickol and Stern.)
Sternberg, Moses J., New York, N. Y. Window-lock. No. 1,103,629; July 14; Gaz. vol. 204; p. 537.
Stevens, Enoch P., assignor to Locomotive Arch Brick Company, Chicago, Ill. Boiler-arch construction. No. 1,103,447; July 14; Gaz. vol. 204; p. 471.
Stevens, Enoch P., assignor to Locomotive Arch Brick Company, Chicago, Ill. Boiler-arch construction. No. 1,103,448; July 14; Gaz. vol. 204; p. 471.
Stevens, Frederick C. (See Clement, Edward E., assignor.)
Stevens, Herbert L., Glen Ridge, N. J. Hat shaping and forming machine. No. 1,103,096; July 14; Gaz. vol. 204; p. 350.
Stevens, John, Launceston, Tasmania, Australia. Fire-alarm. No. 1,102,451; July 7; Gaz. vol. 204; p. 80.
Stevens, Josiah P., Atlanta, Ga. Safety-razor. No. 1,104,570; July 21; Gaz. vol. 204; p. 905.
Stevens, Robert C., Erie, Pa. Heater. No. 1,102,452; July 7; Gaz. vol. 204; p. 80.
Stevens, Robert C., assignor to Skinner Engine Company, Erie, Pa. Steam-superheater. No. 1,102,361; July 7; Gaz. vol. 204; p. 48.
Stevens, Samuel J., assignor of one-half to A. R. Gilmore, St. Louis, Mo. Water-closet-flushing mechanism. No. 1,103,550; July 14; Gaz. vol. 204; p. 506.
Stevens, William B., Trappe, Md. Scalding-machine. No. 1,104,571; July 21; Gaz. vol. 204; p. 905.
Stevenson, Clarence M., Los Angeles, Cal., and N. M. Baker, Southbridge, Mass. Eyeglasses. No. 1,104,152; July 21; Gaz. vol. 204; p. 757.
Stevenson, William J., Milwaukee, Wis. Sewer-cleaner. No. 1,102,304; July 7; Gaz. vol. 204; p. 29.
Steward, Clarence S., Chattanooga, Tenn. Electric beater. No. 1,104,572; July 21; Gaz. vol. 204; p. 905.
Steward, Le Roy T., Chicago, Ill. Receptacle for mail and the like. No. 1,104,153; July 21; Gaz. vol. 204; p. 757.
Stewart, David S., assignor of one-third to F. A. Hecker, Antigo, and one-third to N. C. Woodin, Superior, Wis. Four-wheel-drive truck. No. 1,105,218; July 28; Gaz. vol. 204; p. 1175.
Stewart, James, Catford, England. Bobbin for thread and the like. No. 1,104,325; July 21; Gaz. vol. 204; p. 817.
Stewart, John G., assignor to Stewarts & Lloyds, Limited, Coatbridge, Scotland. Welded joint for steel and iron pipes and tubes. No. 1,103,650; July 14; Gaz. vol. 204; p. 537.
Stewarts & Lloyds. (See Stewart, John G., assignor.)

Stickler, Charles W., Lansford, Pa. Tail-gate for dump-cars. No. 1,105,464; July 28; Gaz. vol. 204; p. 1265.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,104,015; July 21; Gaz. vol. 204; p. 710.
Stiggins, Edward A., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Jack for shoe-machines. No. 1,104,016; July 21; Gaz. vol. 204; p. 710.
Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Tension for loom-shuttles. No. 1,103,097; July 14; Gaz. vol. 204; p. 351.
Stinson, Frederick V., Rockport, Me. Drag. No. 1,104,154; July 21; Gaz. vol. 204; p. 758.
Stinson, John R., Malvern, Ark. Logging-bunk. No. 1,104,391; July 21; Gaz. vol. 204; p. 839.
Stock, William, Passaic, N. J. Milk-bottle. No. 1,104,082; July 21; Gaz. vol. 204; p. 735.
Stocker, George J., St. Louis, Mo. Cooling-tower construction. No. 1,102,813; July 7; Gaz. vol. 204; p. 207.
Stockstrom, Louis, assignor to American Stove Company, St. Louis, Mo. Oil-stove. No. 1,103,703; July 14; Gaz. vol. 204; p. 564.
Stockton, James A., and M. N. Willimon, Tipton, Okla. Hand-operated stalk-cutter. No. 1,104,573; July 21; Gaz. vol. 204; p. 905.
Stoepel, F. S., *et al.*, trustees. (See Finlayson, Alexander V., assignor.
Stoetzel, Joseph J., assignor to Pneumatic Tube Appliance Company, Chicago, Ill. Regulator for pneumatic service systems. No. 1,104,228; July 21; Gaz. vol. 204; p. 783.
Stohlberg, Carl. (See Eckberg and Stohlberg.)
Stoltzenberg, Hugo, Breslau, assignor to Melasse-Schlempe, G. m. b. H., Berlin, Germany. Non-hygroscopic manure-stuff and making same. No. 1,104,326; July 21; Gaz. vol. 204; p. 817.
Stone & Company Limited, J. (See Parsons, William S., assignor.)
Stone, Elmer B., assignor to The American Hardware Corporation, New Britain, Conn. Padlock. No. 1,104,327; July 21; Gaz. vol. 204; p. 817.
Stone, Harry A., assignor to Folding-Stand Company, Inc., New York, N. Y. Folding table. No. 1,104,083; July 21; Gaz. vol. 204; p. 735.
Stone, J. H. (See Adamec, Jacob H., assignor.)
Stone, John, Pittsburgh, Pa., assignor to Excess Indicator Company. Excess-electric-current indicator. No. 1,105,465; July 28; Gaz. vol. 204; p. 1265.
Stone, Joseph H., Okemah, Okla. Blade for cotton-choppers. No. 1,102,362; July 7; Gaz. vol. 204; p. 48.
Stone, Julius F. (See Miller and Jones, assignors.)
Stone, Sol, San Diego, Cal. Paper box. No. 1,104,392; July 21; Gaz. vol. 204; p. 840.
Stone, Wilbur M., assignor to A. Conrow, trustee, New York, N. Y. Note-sheet-guiding device. No. 1,105,046; July 28; Gaz. vol. 204; p. 1116.
Stotelmyer, Joseph R., and W. S. Hensell, Hagerstown, Md. Trolley-wheel mount. No. 1,102,453; July 7; Gaz. vol. 204; p. 81.
Stott, James, Manayunk, Pa. Cutting ornamentation on glass articles. No. 1,103,631; July 14; Gaz. vol. 204; p. 538.
Stout, Harry H., assignor to General Chemical Company, New York, N. Y. Feeding device for roasting-furnaces. No. 1,102,454; July 7; Gaz. vol. 204; p. 81.
Stovall, Thomas H., Richmond, Va., assignor of one-half to J. Walters, Charleston, W. Va. Display-trunk. No. 1,105,381; July 28; Gaz. vol. 204; p. 1236.
Stratton, George M., New Brunswick, N. J. Ligature-holder. No. 1,103,227; July 14; Gaz. vol. 204; p. 398.
Strauss, Jerome A., trustee. (See Wein, Samuel, assignor.)
Strelt, Gabriel, Steisslingen, Baden, Germany. Scythe. No. 1,102,814; July 7; Gaz. vol. 204; p. 207.
Stroupe, Frank, *et al.* (See Taylor, Nicholas, assignor.)
Struensee, Louis C., Oshkosh, Wis. Equalizer-holder. No. 1,102,815; July 7; Gaz. vol. 204; p. 207.
StrzencIwilk, Andrew, Buffalo, N. Y. Hat-pin-point protector. No. 1,103,704; July 14; Gaz. vol. 204; p. 565.
Stuart American Products Company. (See Stuart, Charles V., assignor.)
Stuart, Charles V., Memphis, Tenn. Apparatus for carbureting air. No. 1,102,702; July 7; Gaz. vol. 204; p. 167.
Stuart, Charles V., assignor to Stuart American Products Company, Memphis, Tenn. Carbureting air. No. 1,102,701; July 7; Gaz. vol. 204; p. 167.
Stuart, John, Saugatuck, Conn., assignor to C. Wooster, Newark, N. J. Button. No. 1,105,110; July 28; Gaz. vol. 204; p. 1138.
Stuart, John, Saugatuck, Conn., assignor of one-half to C. Wooster, Newark, N. J. Button. No. 1,105,111; July 28; Gaz. vol. 204; p. 1138.
Stuart, Joseph, assignor to Lobdell Car Wheel Company, Wilmington, Del. Hardening the flanges of cast-steel wheels. No. 1,102,816; July 7; Gaz. vol. 204; p. 208.
Studebaker Corporation, The. (See MacGlashan, William, assignor.)
Stull, Emmett W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Gear-case construction. No. 1,105,219; July 28; Gaz. vol. 204; p. 1176.
Sturgeon, John C., Erie, Pa. Motor-vehicle driving mechanism. No. 1,105,165; July 28; Gaz. vol. 204; p. 1156.
Sturgis Steel Go-Cart Co. (See Spofford, Christopher S., assignor.)
Sturrock, Robert F., Dundee, Scotland. Furnace for boilers. No. 1,103,098; July 14; Gaz. vol. 204; p. 351.
Styll, Harry H., Southbridge, Mass. Ophthalmic mounting. No. 1,103,449; July 14; Gaz. vol. 204; p. 472.
Sullivan, John J., Parsons, Pa. Draft device and spark-arrester. No. 1,105,466; July 28; Gaz. vol. 204; p. 1265.
Sullivan Machinery Company. (See Gilman, George H., assignor.)
Sullivan Machinery Company. (See Gilman and Knights, assignors.)
Sullivan, Wilkin L., Jackson, Miss. Hay-press. No. 1,105,007; July 28; Gaz. vol. 204; p. 1101.
Sult, William F. (See Smith and Sult.)
Sumter Electrical Company. (See Mason, Charles T., assignor.)
Sundell, Isak G., Helsingfors, Finland, Russia. Navigator's apparatus. No. 1,104,844; July 28; Gaz. vol. 204; p. 1046.
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Starting and controlling explosive-engines. No. 1,102,455; July 7; Gaz. vol. 204; p. 82.
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current electromagnetic switch. No. 1,105,311; July 28; Gaz. vol. 204; p. 1208.
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Gear-pump. No. 1,105,312; July 28; Gaz. vol. 204; p. 1209.
Sundquist, John A., Georgetown, Conn. Toy wagon. No. 1,104,574; July 21; Gaz. vol. 204; p. 906.
Sunlight Hat Co. (See Smith and Sult, assignors.)
Süssis, Bernhard, New York, N. Y., assignor of one-half to L. Chrystal, Newark, N. J. Fire-escape. No. 1,103,850; July 14; Gaz. vol. 204; p. 612.
Sussman, Charles J., Corona, N. Y. Cloth-laying machine. No. 1,102,555; July 7; Gaz. vol. 204; p. 116.
Sutton, Charles H., Ohio City, Ohio. Lifting-jack. No. 1,104,328; July 21; Gaz. vol. 204; p. 818.
Sutton, John R. (See Sutton, Walter E., assignor.)
Sutton, Walter E., assignor of forty-two one-hundredths to J. R. Sutton, Oakland, Cal. Creeper. No. 1,105,008; July 28; Gaz. vol. 204; p. 1102.
Sutton, William S., Rockford, Ill. Internal-combustion engine. No. 1,103,325; July 14; Gaz. vol. 204; p. 431.
Suyehiro, Kyoji, Tokyo, Japan. Transmission-dynamometer for direct observation. No. 1,105,382; July 28; Gaz. vol. 204; p. 1237.
Svenson, Charles W., New Britain, assignor to The American Hardware Corporation, Hartford, Conn. Coaster hub-brake. (Reissue.) No. 13,783; July 28; Gaz. vol. 204; p. 1313.
Swain, Orlando. (See Timmins, James R., assignor.)
Swain, Samuel, Grapeville, Pa. Rail-joint. No. 1,105,220; July 28; Gaz. vol. 204; p. 1176.
Swanson, Sturley S., assignor to The Ohio Cultivator Company, Bellevue, Ohio. Cultivator. No. 1,104,329; July 21; Gaz. vol. 204; p. 818.
Swartz, Fred M., assignor of one-half to C. Manshel, Providence, R. I. Spring-hinge. No. 1,102,556; July 7; Gaz. vol. 204; p. 117.
Swartzbaugh, Charles E., Toledo, Ohio. Fireless cooker. No. 1,102,456; July 7; Gaz. vol. 204; p. 82.
Swebilius, Carl G., and H. T. R. Hanitz, assignors to The Marlin Firearms Company, New Haven, Conn. Repeating firearm. No. 1,103,228; July 14; Gaz. vol. 204; p. 398.
Swebilius, Carl G., and H. T. R. Hanitz, assignors to The Marlin Firearms Company, New Haven, Conn. Repeating firearm. No. 1,105,467; July 28; Gaz. vol. 204; p. 1266.
Swensen, Thomas, New York, N. Y. Player-piano. No. 1,102,611; July 7; Gaz. vol. 204; p. 137.
Swinehart, Clark A., Akron, Ohio. Vehicle-tire. No. 1,105,342; July 28; Gaz. vol. 204; p. 1220.
Swope, Sylvanus H., Greenville, Ohio. Bandage-fastener. No. 1,104,575; July 21; Gaz. vol. 204; p. 906.
Sykes, Henry T., assignor of one-half to A. V. Ely, New London, Mo. Gravel-machine. No. 1,104,576; July 21; Gaz. vol. 204; p. 906.
Sykes, William E., Uxbridge, England. Machine for cutting helical teeth of gear-wheels. No. 1,103,851; July 14; Gaz. vol. 204; p. 613.
Symington, Thomas H., Baltimore, Md. Spring-box. No. 1,103,632; July 14; Gaz. vol. 204; p. 538.
Syracuse Chilled Plow Company. (See Lee, William H., assignor.)
Szabo, Rozalia M., *et al.* (See Jenol and Kruchlo, assignors.)
Szamier, Vincenté, Terryville, Conn. Safety-lamp. No. 1,104,941; July 28; Gaz. vol. 204; p. 1080.
Szegel, Mike, Newark, N. J. Water-cycle. No. 1,104,229; July 21; Gaz. vol. 204; p. 784.
Szepessy, John, Centerville, Md. Ship construction. No. 1,105,009; July 28; Gaz. vol. 204; p. 1102.
Szöcs, Eugen, Budapest, Austria-Hungary. Burner for clay-kilns. No. 1,104,017; July 21; Gaz. vol. 204; p. 711.
T. A. Willson & Co. (See Willson and Bourquin, assignors.)

T. D. Palmer Company. (See Palmer, Theodore D., assignor.)
Taggart, Eugene N. (See Ping, Robert G., assignor.)
Taft, Godfrey M. S., Washington, D. C. Pasteurizing apparatus. No. 1,104,716; July 21; Gaz. vol. 204; p. 953.
Taketoshi, Chobey, Portland, Oreg. Shoe-lace fastener. No. 1,105,541; July 28; Gaz. vol. 204; p. 1290.
Taliaferro, Thomas L., and J. B. Bellamy, Wheeling, W. Va., assignors, by mesne assignments, to Phoenix-Hermetic Company, New York, N. Y. Sheet-metal cover for receptacles. No. 1,103,633; July 14; Gaz. vol. 204; p. 538.
Tappe, Edward A., Los Angeles, Cal. Signal apparatus for autovehicles. No. 1,104,281; July 21; Gaz. vol. 204; p. 802.
Tarasch, Louis C., assignor to T. Jelenk, Brooklyn, N. Y. Vending-machine. No. 1,103,919; July 14; Gaz. vol. 204; p. 636.
Taraszir, Andrew, New York, N. Y. Lock. No. 1,102,363; July 7; Gaz. vol. 204; p. 49.
Tartrais, Eugène H., Montmorency, France. Rotary distributer for four-cycle internal-combustion engines. No. 1,102,817; July 7; Gaz. vol. 204; p. 208.
Tassey, Joe C., Nashville, Tenn. Boiler-flue swage. No. 1,102,818; July 7; Gaz. vol. 204; p. 208.
Taussig, John H., assignor to the United Gas Improvement Company, Philadelphia, Pa. Clamp for vertical-gas-retort doors. No. 1,105,582; July 28; Gaz. vol. 204; p. 1305.
Taussig, John H., assignor to The United Gas Improvement Company, Philadelphia, Pa. Base-closure for vertical gas-retorts. No. 1,105,583; July 28; Gaz. vol. 204; p. 1305.
Taussig, Maurice, Chicago, Ill. Hinge for horizontally-disappearing doors. No. 1,105,221; July 28; Gaz. vol. 204; p. 1176.
Taylor, Charles H., Montreal, Quebec, Canada. Meter. No. 1,103,384; July 14; Gaz. vol. 204; p. 449.
Taylor, John, Stoney Stratford, England. Speedometer for motor-cycles. No. 1,102,364; July 7; Gaz. vol. 204; p. 49.
Taylor, John D., Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Electric motor. No. 1,102,819; July 7; Gaz. vol. 204; p. 209.
Taylor, Nicholas, Muskogee, Okla., assignor of one-eighth to F. Stroupe, one-fifth to G. Updegraff, and one-eighth to E. A. Edmondson. Control system for power-transmission mechanism. No. 1,102,557; July 7; Gaz. vol. 204; p. 117.
Taylor, Ralph G., Davenport, assignor, by mesne assignments, to The Bettendorf Company, Bettendorf, Iowa. Operating mechanism for dump-door winding-shafts. No. 1,104,393; July 21; Gaz. vol. 204; p. 840.
Taylor, William N. (See Ward and Taylor.)
Taylor, William O., *et al.* (See Mambourg, Leopold, assignor.)
Tayman, William E., Washington, D. C. Hand truck. No. 1,103,162; July 14; Gaz. vol. 204; p. 375.
Tebow, Oury J. (See Young and Tebow.)
Telephone Improvement Company, The. (See Clement, Edward E., assignor.) (Reissue.)
Telfer, Wilton, Winnipeg, Manitoba, Canada. Automatic steam-trap. No. 1,105,112; July 28; Gaz. vol. 204; p. 1138.
Templeton, William G., Colorado Springs, Colo. Coffee and tea mixer. No. 1,102,305; July 7; Gaz. vol. 204; p. 29.
Terry, Charles A., *et al.*, executors. (See Potter, Henry N.)
Tervo, Karl A., West Quincy, Mass. Cow-milker. No. 1,105,468; July 28; Gaz. vol. 204; p. 1266.
Teste, Etienne, Paris, France. Automatic multiple-note horn. No. 1,103,705; July 14; Gaz. vol. 204; p. 565.
Teter, David G., Nokomis, Ill. Combined clod cutter and crusher. No. 1,103,450; July 14; Gaz. vol. 204; p. 472.
Thatcher, Charles L., assignor to Irons and Russell Company, Providence, R. I. Button. No. 1,104,084; July 21; Gaz. vol. 204; p. 735.
Theune, Charles, Berlin, Germany. Indicator for determining and recording the current velocities and the cross-sections of rivers and the like. No. 1,103,099; July 14; Gaz. vol. 204; p. 351.
Thiss, George R., assignor to Barnum Trunk Company, Minneapolis, Minn. Knockdown table for automobiles. No. 1,104,018; July 21; Gaz. vol. 204; p. 711.
Thomas & Betts Company. (See McMurtrie, Adnah, assignor.)
Thomas, Edward G., Boston, Mass., assignor to Lamson Company, Newark, N. J. Power control. No. 1,104,019; July 21; Gaz. vol. 204; p. 711.
Thomas, George B., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn. Push-button switch. No. 1,102,967; July 7; Gaz. vol. 204; p. 258.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electrical receptacle. No. 1,104,577; July 21; Gaz. vol. 204; p. 907.
Thompson, Aaron L., Lansing, Minn. Vehicle-coupling. No. 1,103,163; July 14; Gaz. vol. 204; p. 376.
Thompson, Albert, Philadelphia, Pa. Life-raft. No. 1,104,845; July 28; Gaz. vol. 204; p. 1046.
Thompson, Bert E., Indianapolis, Ind. Automobile-hood. No. 1,104,942; July 28; Gaz. vol. 204; p. 1081.
Thompson, Gilbert O., Bantry, N. D. Make-and-break igniter. No. 1,102,365; July 7; Gaz. vol. 204; p. 49.
Thompson, Harry H., Hagerstown, Md. Card-rack. No. 1,103,100; July 14; Gaz. vol. 204; p. 352.
Thompson, Henry E., Newark, assignor of three-fourths to P. L. Gallagher, Verona, and one-fourth to J. D. Gallagher, Glen Ridge, N. J. Molding-flask. No. 1,104,085; July 21; Gaz. vol. 204; p. 735.
Thompson, Hezekiah, Windsor, Mo. Shipping-package. No. 1,102,820; July 7; Gaz. vol. 204; p. 209.
Thompson, James M., assignor to Luther Bros. Co., Milwaukee, Wis. Tool-driving mechanism. No. 1,104,747; July 21; Gaz. vol. 204; p. 963.
Thompson, Jay K., Gary, Ind. Spacing device for punching-machines. No. 1,105,113; July 28; Gaz. vol. 204; p. 1139.
Thompson, La Marcus A., assignor to The L. A. Thompson Scenic Railway Company, New York, N. Y. Signaling device for racing-coasters. No. 1,102,821; July 7; Gaz. vol. 204; p. 210.
Thompson, La Marcus A., assignor to The L. A. Thompson Scenic Railway Company, New York, N. Y. Safety device for pleasure-railway cars. No. 1,102,822; July 7; Gaz. vol. 204; p. 210.
Thompson, Milo C., Salem, Iowa. Spring-tensioned rolling cutter. No. 1,103,101; July 14; Gaz. vol. 204; p. 353.
Thompson, Nels F., Kansas City, Mo. Bottle-closure. No. 1,104,578; July 21; Gaz. vol. 204; p. 907.
Thomson, David F., Cambridge, assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass. Display device. No. 1,103,327; July 14; Gaz. vol. 204; p. 432.
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Oil-engine. No. 1,105,047; July 28; Gaz. vol. 204; p. 1116.
Thoren, Adolph H., Leahy, Wash. Water-power wheel. No. 1,103,706; July 14; Gaz. vol. 204; p. 565.
Thorney, Emil. (See Thorney, William and E.)
Thorney, William and E., Denver, Colo. Combustion-engine. No. 1,103,451; July 14; Gaz. vol. 204; p. 472.
Thorsby, Karl J., Oakland, assignor to California Corrugated Culvert Company, West Berkeley, Cal. Cinch for sheet-metal pipe. No. 1,104,579; July 21; Gaz. vol. 204; p. 907.
Thos. Cusack Company. (See Conover, Harvey, assignor.)
Threm, William E., Cincinnati, Ohio. Combined fish-hook and sinker. No. 1,103,707; July 14; Gaz. vol. 204; p. 566.
Thumb, Eugene W., Chicago, Ill. Carton. No. 1,103,708; July 14; Gaz. vol. 204; p. 566.
Thurston, Charles W., and S. E. Dudley, London, England. Book-cover. No. 1,103,102; July 14; Gaz. vol. 204; p. 353.
Thurston, Howard, Coscob, Conn. Apparatus for producing stage effects. No. 1,104,846; July 28; Gaz. vol. 204; p. 1047.
Tigh, Ligh S., Hoboken, N. J. Belt-shifter. No. 1,102,612; July 7; Gaz. vol. 204; p. 137.
Tilbury, Darius D. and H. W., Lonoke, Ark. Traction-wheel. No. 1,104,847; July 28; Gaz. vol. 204; p. 1047.
Tilbury, Henry W. (See Tilbury, Darius D. and H. W.)
Tillou, Frank M., Bayonne, N. J. Automatic pool and billiard cue chalker. No. 1,103,852; July 14; Gaz. vol. 204; p. 613.
Tilly, Frank E. (See Hammerly, Richard, assignor.)
Timken Roller Bearing Company, The. (See Heinzelman, Reginald, assignor.)
Timmins, James R., assignor of one-fourth to O. Swain, Okmulgee, Okla. Apparatus for refining oil. No. 1,105,383; July 28; Gaz. vol. 204; p. 1237.
Tingley, Philo B., New York, N. Y. Line-spacing attachment for writing-machines. No. 1,103,103; July 14; Gaz. vol. 204; p. 353.
Tismer, Paul G., New York, N. Y. Fluid pressure engine. No. 1,103,104; July 14; Gaz. vol. 204; p. 354.
Titanium Alloy Manufacturing Company, The. (See Rossi, Auguste J., assignor.)
Title Guarantee & Trust Company, trustee. (See Pilkington, Herbert M., assignor.)
Tobie, Edward P., Providence, R. I. Necktie-clasp. No. 1,105,542; July 28; Gaz. vol. 204; p. 1291.
Todd, Curtis, *et al.* (See Cobb, Luther, assignor.)
Todd, Frank, Oak Park, Ill. Radiator for automobiles. No. 1,102,366; July 7; Gaz. vol. 204; p. 50.
Todd, Marquis J., assignor to Buffalo Pitts Company, Buffalo, N. Y. Coupling-lock for wheeled vehicles. No. 1,103,452; July 14; Gaz. vol. 204; p. 472.
Toivonen, Thomas. (See Alanke and Toivonen.)
Toledo Electric Welder Company, The. (See Pierce, Robert C., assignor.)
Toledo Scale Company. (See Hapgood, Clarence H., assignor.)
Tollefson, Gilbert, Bagley, Minn. Conveying system. No. 1,103,709; July 14; Gaz. vol. 204; p. 566.
Tollerton, William J., Chicago, Ill. Lock-nut. No. 1,105,222; July 28; Gaz. vol. 204; p. 1177.
Tomlinson, Charles E., Syracuse, assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y. Time-recorder. No. 1,103,105; July 14; Gaz. vol. 204; p. 354.
Tomlinson, Charles E., Syracuse, assignor, by mesne assignments, to International Time Recording Company of New York, Endicott, N. Y. Time-recording machine. No. 1,103,106; July 14; Gaz. vol. 204; p. 355.

Tomlinson, Joseph, New York, N. Y., assignor to Cox Multi-Mailer Company, Augusta, Me. Type or slug feed for printing or addressing machines. No. 1,105,313; July 28; Gaz. vol. 204; p. 1209.
Tomlinson, Joseph, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Mailing-machine. No. 1,105,314; July 28; Gaz. vol. 204; p. 1210.
Tomlinson, Joseph, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Addressing, folding, and wrapping machine. No. 1,105,315; July 28; Gaz. vol. 204; p. 1210.
Tompkins, Ralph S. (See Parkinson and Tompkins.)
Topf, Ludwig, Erfurt, Germany. Apparatus for producing and controlling moistened air in malting-drums. No. 1,104,717; July 21; Gaz. vol. 204; p. 954.
Topf & Soehne, J. A. (See Bornmann, Ernst, assignor.)
Topper, Jacob M., Corsica, Pa. Point-protector for impaling instruments. No. 1,105,384; July 28; Gaz. vol. 204; p. 1238.
Torchiani, Harry, Chicago, Ill. Apparatus for treating barrels. No. 1,102,306; July 7; Gaz. vol. 204; p. 29.
Torgersen, Hjalmar, Ashby, Minn. Tooth for hay-rakes. No. 1,104,020; July 21; Gaz. vol. 204; p. 712.
Tóth, John, Phoenixville, Pa. Railway-crossing gate. No. 1,102,968; July 7; Gaz. vol. 204; p. 258.
Tottle & Co., Wm. A. (See McMillan, Hugh P., assignor.)
Tourjée, Walter H., Factoryville, Pa. Barber's shears. No. 1,103,710; July 14; Gaz. vol. 204; p. 566.
Towery, John H., Cushing, Okla. Engine. No. 1,103,634; July 14; Gaz. vol. 204; p. 539.
Towle, Herbert L. (See Harlow and Towle.)
Towler, Mary E., Hubbard, Tex. Collar-support. No. 1,102,823; July 7; Gaz. vol. 204; p. 211.
Towne, Milo F., *et al.* (See Smith, Jay F., assignor.)
Townsend, Charles H., Berkeley, Cal. Concentrating lamp-shade. No. 1,104,330; July 21; Gaz. vol. 204; p. 819.
Townsend, James H., Gloversville, N. Y. Sweeper. No. 1,105,048; July 28; Gaz. vol. 204; p. 1117.
Townsend, Robert V., Riverside, assignor of one-half to J. Dunn, Providence, R. I. Sheet-music turner. No. 1,102,824; July 7; Gaz. vol. 204; p. 211.
Townsend, Thomas, Providence, R. I. Means for mounting needles in textile combs. No. 1,105,166; July 28; Gaz. vol. 204; p. 1156.
Trackless Trolley Company of America. (See Ledwinka, Joseph, assignor.)
Transportation Utilities Company. (See Julien, Bartholomew, assignor.)
Trapp, Sydenham B., Jr. (See Holland, Ab, assignor.)
Traut & Hine Manufacturing Company, The. (See Humphrey, Ernest N., assignor.)
Travers, Stephen A., assignor of one-half to J. F. Kuhn, New York, N. Y. Gasolene and oil separator. No. 1,105,223; July 28; Gaz. vol. 204; p. 1177.
Tree, Eber B., Chicago, Ill., assignor to J. H. Beach, T. R. Eggert, W. M. Spiegel, C. W. Holmes, and G. M. Diven, Elmira, N. Y. Rotary engine. No. 1,104,331; July 21; Gaz. vol. 204; p. 819.
Trefzer, Jacques A., Detroit, and C. S. Owen, Highland Park, Mich. Dirigible lamp. No. 1,104,021; July 21; Gaz. vol. 204; p. 712.
Treganza, Howard J., assignor to The Ansonia Clock Company, New York, N. Y. Clock. No. 1,103,453; July 14; Gaz. vol. 204; p. 473.
Tregoning, Alfred, Los Angeles, Cal. Irrigating system. No. 1,104,580; July 21; Gaz. vol. 204; p. 908.
Treichel, Gustav W., Ambler, Pa. Water-meter. No. 1,105,224; July 28; Gaz. vol. 204; p. 1177.
Treuheit, Fred J., *et al.* (See Grueninger, Edward, assignor.)
Trevisan, Richard, Worcester, Mass. Cheese-cutter. No. 1,104,718; July 21; Gaz. vol. 204; p. 954.
Trinkaus, Charles J., Chicago, Ill. Hydraulic jack for stump-pullers. No. 1,102,825; July 7; Gaz. vol. 204; p. 211.
Trojan Machine Company. (See Scovill, James P., assignor.)
Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)
Troy, Matthew O., Schenectady, N. Y., assignor to General Electric Company. Protecting high-voltage transformers. No. 1,105,385; July 28; Gaz. vol. 204; p. 1238.
Truchetet, Jean B. (See Grillet and Truchetet.)
Trumelet-Faber, Corneille G. E., Paris, France. Saving apparatus for aviators. No. 1,105,049; July 28; Gaz. vol. 204; p. 1117.
Trussell, Clarence D., assignor to Trussell Manufacturing Company, New York, N. Y. Temporary binder. No. 1,104,394; July 21; Gaz. vol. 204; p. 840.
Trussell Manufacturing Company. (See Trussell, Clarence D., assignor.)
Tscherne, Alois, Rorschach, Switzerland. Apparatus for cutting binding-threads. No. 1,104,848; July 28; Gaz. vol. 204; p. 1047.
Tschernitz, Henry, assignor to Arcade Manufacturing Company, Freeport, Ill. Jarring apparatus for packing granular materials. No. 1,102,367; July 7; Gaz. vol. 204; p. 50.
Tschernitz, Henry, assignor to Arcade Manufacturing Company, Freeport, Ill. Molding-machine. No. 1,103,454; July 14; Gaz. vol. 204; p. 473.
Tsuru, Suyeo, Newburgh, N. Y. Lemon-juice extractor. No. 1,105,114; July 28; Gaz. vol. 204; p. 1139.
Tucker, George F. (See Free, William Y., assignor.)
Tucker, Junius E., Memphis, Tenn., assignor of one-third to D. C. Herndon and one-third to A. G. Ballersby, New York, N. Y. Egg-carrier. No. 1,104,719; July 21; Gaz. vol. 204; p. 954.
Tucker, Stanley. (See Chapman and Tucker.)
Tueckmantel, Hugo, Irvington, N. J., assignor to The R. Neumann Hardware Co. Stay-hinge for bag-frames. No. 1,102,307; July 7; Gaz. vol. 204; p. 30.
Tueckmantel, Hugo, Irvington, N. J., assignor to The R. Neumann Hardware Co. Bag-frame fastener. No. 1,104,455; July 21; Gaz. vol. 204; p. 862.
Tufting Machine Supply Company. (See Brink, George B., assignor.)
Tufts, Harry W., North Attleboro, Mass., assignor to Hallam-Rice Company, Providence, R. I. Tie-clasp. No. 1,103,455; July 14; Gaz. vol. 204; p. 474.
Tunera Supply Company. (See Hale, Frank W., assignor.)
Turbayne, William A., Buffalo, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Voltage-regulator. No. 1,104,849; July 28; Gaz. vol. 204; p. 1048.
Turlur, Paul, Waltrelos, France. Arrangement for dobby and jacquard mechanisms weaving with open shed. No. 1,102,826; July 7; Gaz. vol. 204; p. 212.
Turner, Benjamin B., Baltimore, Md. Electrical connection. No. 1,104,720; July 21; Gaz. vol. 204; p. 954.
Turner, Charles, Chicago, Ill. Extracting oils from solids. No. 1,104,456; July 21; Gaz. vol. 204; p. 862.
Turner, Harry, assignor to Armstrong Bros. Tool Company, Chicago, Ill. Tool-holder. No. 1,103,164; July 14; Gaz. vol. 204; p. 376.
Turner, Walter V., Edgewood, assignor to Westinghouse Air Brake Company, Pittsburgh, Pa. High-pressure emergency-brake. No. 1,104,850; July 28; Gaz. vol. 204; p. 1048.
Turner, William B., Wilmington, Del., assignor to W. B. Turner Machine Company. Leather-finishing machine. No. 1,102,368; July 7; Gaz. vol. 204; p. 51.
Turney, Eugene T., Davenport, Iowa, assignor, by mesne assignments, to American Player Action Company, New York, N. Y. Piano-player. No. 1,102,613; July 7; Gaz. vol. 204; p. 138.
Turzik, Paul, Endicott, assignor of one-half to S. T. Krna, Binghamton, N. Y. Wheel-plow. No. 1,104,230; July 21; Gaz. vol. 204; p. 784.
Tuttle, Manning, Springfield, Mass. Combined wrench and lock for shut-off cocks. No. 1,104,022; July 21; Gaz. vol. 204; p. 712.
Tweit, Jacob M., and J. O. Wise, Ericson, Mont. Washing-machine. No. 1,104,581; July 21; Gaz. vol. 204; p. 908.
Twigg, Ernest. (See Spellman and Twigg.)
Twombly, Willard I., New York, N. Y. Gas-engine. No. 1,102,457; July 7; Gaz. vol. 204; p. 83.
Uhlenhuth, Rudolf, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Producing amino-anthraquinones. No. 1,104,943; July 28; Gaz. vol. 204; p. 1081.
Uhrbrock, Richard H., Towson, Md. Wire-clamp. No. 1,103,711; July 14; Gaz. vol. 204; p. 567.
Uliensaker, Helmer, Hatton, N. D. Sprocket-wheel. No. 1,104,086; July 21; Gaz. vol. 204; p. 735.
Underration, John, Hocking, Iowa. Miner's auger. No. 1,104,231; July 21; Gaz. vol. 204; p. 784.
Underwood Computing Machine Company. (See Wright, Walter, assignor.)
Underwood, John T. (See Becker, Richard M., assignor.)
Underwood Typewriter Company. (See Broughton, Lyman D., assignor.)
Underwood Typewriter Company. (See Corcoran, Cornelius B., assignor.)
Underwood Typewriter Company. (See McLaughlin, William P., assignor.)
Underwood Typewriter Company. (See Nibourel, Alexandre V., assignor.)
Underwood Typewriter Company. (See Robinson, Frank A., assignor.)
Underwood Typewriter Company. (See Schiff, Sigmund, assignor.)
Underwood Typewriter Company. (See Smith, Stephen T., assignor.)
Underwood Typewriter Company. (See Stickney, Burnham C., assignor.)
Underwood, William J., Shafter Lake, Tex. Weed-cutter for plows. No. 1,102,703; July 7; Gaz. vol. 204; p. 168.
Unger, Ernest. (See Grosert and Unger.)
Union Metallic Cartridge Company, The. (See Hoagland, Frank O., assignor.)
Union Special Machine Company. (See De Nike, Joseph H., assignor.)
Union Special Machine Company, The. (See Elwell, Oliver E., assignor.)
Union Steel Screen Company, The. (See Dean, George E., assignor.)
Union Switch and Signal Company, The. (See Bliss, Elmer F., assignor.)
Union Switch and Signal Company, The. (See Hawkins, Laurence A., assignor.)
Union Switch and Signal Company, The. (See Moak, William V., assignor.)
Union Switch & Signal Company, The. (See Taylor, John D., assignor.)

Union Switch & Signal Company, The. (See Utne, Per, assignor.)
Union Switch & Signal Company, The. (See Wallace, Herbert A., assignor.)
Unionite Company. (See Richardson, Benjamin F., assignor.)
United Gas Improvement Company, The. (See Ives, Herbert E., assignor.)
United Gas Improvement Company, The. (See O'Donnell and Kunberger, assignors.)
United Gas Improvement Company, The. (See Rusby, John M., assignor.)
United Gas Improvement Company, The. (See Taussig, John H., assignor.)
United Shoe Machinery Company. (See Ashton, Orrell, assignor.)
United Shoe Machinery Company. (See Bates, Jerram, and Gouldbourn, assignors.)
United Shoe Machinery Company. (See Brogan, Michael F., assignor.)
United Shoe Machinery Company. (See Brothers, Eli, assignor.)
United Shoe Machinery Company. (See Cavanagh, James, Jr., assignor.)
United Shoe Machinery Company. (See Coombs, Abram L., assignor.)
United Shoe Machinery Company. (See Gordon, William, assignor.)
United Shoe Machinery Company. (See Jackson, Walter, assignor.)
United Shoe Machinery Company. (See Latham, Albert, assignor.)
United Shoe Machinery Company. (See Mayo, Benjamin F., assignor.)
United Shoe Machinery Company. (See McAuliffe, Thomas H., assignor.)
United Shoe Machinery Company. (See McLeod, George T., assignor.)
United Shoe Machinery Company. (See Pease, Charles, assignor.)
United Shoe Machinery Company. (See Perry, Frederick H., assignor.)
United Shoe Machinery Company. (See Phelan, Merton D., assignor.)
United Shoe Machinery Company. (See Pope, Joseph H., assignor.)
United Shoe Machinery Company. (See Stiggins, Edward A., assignor.)
United Shoe Machinery Company. (See Winkley, Erastus E., assignor.)
United States Fastener Company. (See MacCormack, George A., assignor.)
United States Tire Company, The, *et al.* (See Wagenhorst, James H., assignor.)
Universal Electric Welding Company. (See Lachman, Maurice, assignor.)
Universal Oil Converter Company. (See Bassford, William K., assignor.)
Universal Switch Box Co., The. (See Raquette, Joseph G., assignor.)
Unruh, Frank, New Orleans, La. Pencil attachment. No. 1,103,712; July 14; Gaz. vol. 204; p. 567.
Updegraff, George, *et al.* (See Taylor, Nicholas, assignor.)
Uptegraff, Walter D., *et al.*, executors. (See Potter, Henry N.)
Utard, Henry, New York, and J. Smith, Brooklyn, N. Y. Dry battery and manufacturing the same. No. 1,102,458; July 7; Gaz. vol. 204; p. 83.
Utne, Per, Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for the control of brakes for railway-vehicles. No. 1,105,316; July 28; Gaz. vol. 204; p. 1211.
Utne, Per, Edgewood Park, assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for the control of railway cars or trains. No. 1,105,317; July 28; Gaz. vol. 204; p. 1211.
Utterback, Ezra M., Macksburg, Iowa. Wheel-scraper. No. 1,105,469; July 28; Gaz. vol. 204; p. 1267.
Vaday, John, Ridgewood, N. J. Antiskidding device. No. 1,105,386; July 28; Gaz. vol. 204; p. 1238.
Vadner, Charles S., Salt Lake City, Utah. Rendering smelter-fumes useful and recovery of their values. No. 1,103,165; July 14; Gaz. vol. 204; p. 376.
Vagt, August, Leverkusen, near Cologne, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Producing sulfonic acids. No. 1,102,827; July 7; Gaz. vol. 204; p. 212.
Vail, George L., Denver, Colo. Condenser. No. 1,103,386; July 14; Gaz. vol. 204; p. 450.
Vail, Robert W., New York, N. Y. Endless-belt conveyer. No. 1,103,635; July 14; Gaz. vol. 204; p. 539.
Valentine, Herbert S., assignor to Reading Crane and Hoist Works, Reading, Pa. Motor-control device. No. 1,102,459; July 7; Gaz. vol. 204; p. 84.
Valentine, Ralph E., assignor to Kellogg Toasted Corn Flake Co., Battle Creek, Mich. Machine for making biscuits of shredded cereal. No. 1,102,614; July 7; Gaz. vol. 204; p. 138.
Valentine, Walter D., Altadena, Cal., assignor to National Rapid Transit Company, Seattle, Wash. Monorailway system. No. 1,102,615; July 7; Gaz. vol. 204; p. 139.
Vales, Edward J., Augusta, Ga. Roving-stop for spinning-frames. No. 1,103,329; July 14; Gaz. vol. 204; p. 432.
Vallens, Eugene, New York, N. Y. Cigar-box. No. 1,102,704; July 7; Gaz. vol. 204; p. 168.
Vallier, Wilfred, Pontiac, Mich. Starting-crank. No. 1,104,851; July 28; Gaz. vol. 204; p. 1049.
Vallone, Charles, assignor to Barcalo Manufacturing Co., Buffalo, N. Y. Antirattling device for sliding-side cribs. No. 1,103,714; July 14; Gaz. vol. 204; p. 568.
Vallone, Charles, and J. H. Illig, assignors to Barcalo Manufacturing Co., Buffalo, N. Y. Machine for coating tubes and the like. No. 1,103,713; July 14; Gaz. vol. 204; p. 567.
Van Dolah, Arthur J., Linnton, Oreg. Crate. No. 1,104,582; July 21; Gaz. vol. 204; p. 908.
Van Dorn Electric Tool Company, The. (See Schneider, Franklin, assignor.)
Van Dorn Iron Works Company, The. (See Martin, Arthur, assignor.)
Van Dresser, William C., assignor to Gemmer Manufacturing Company, Detroit, Mich. Bushing. No. 1,103,107; July 14; Gaz. vol. 204; p. 355.
Van Fleet, Frederick W. and R. S., Forest, Ohio. Corner-joint for screens and other frames. No. 1,102,460; July 7; Gaz. vol. 204; p. 84.
Van Fleet, Rodney S. (See Van Fleet, Frederick W. and R. S.)
Van Nest, Isaac G., and A. J. Killeen, Los Angeles, Cal. Automatic smudge-kindler. No. 1,102,616; July 7; Gaz. vol. 204; p. 139.
Van Norman, Charles E., Springfield, Mass. Grinding-machine. No. 1,102,558; July 7; Gaz. vol. 204; p. 118.
Van Riper, Lewis C., New York, N. Y. Starting device for explosive-engines. No. 1,104,087; July 21; Gaz. vol. 204; p. 736.
Van Steenburgh, George W., Manorkill, N. Y. Spring-tire. No. 1,103,445; July 14; Gaz. vol. 204; p. 470.
Van Steenburg, John L., Erie, Pa. Lubricating trolley-wheel. No. 1,105,470; July 28; Gaz. vol. 204; p. 1267.
Van Wie, Arthur E., Kenosha, Wis. Roof-shoe. No. 1,103,108; July 14; Gaz. vol. 204; p. 356.
Van Wormer, Arba, assignor to Horton Manufacturing Company, Fort Wayne, Ind. Stop mechanism for wringers. No. 1,105,225; July 28; Gaz. vol. 204; p. 1177.
Van Wormer, Arba, assignor to Horton Manufacturing Company. Fort Wayne, Ind. Stop mechanism for wringers and the like. No. 1,105,226; July 28; Gaz. vol. 204; p. 1178.
Vance, William H., Berkeley, Cal. Sash-lock. No. 1,103,229; July 14; Gaz. vol. 204; p. 398.
Vanderveld, Anthony, assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Show-case. No. 1,103,230; July 14; Gaz. vol. 204; p. 399.
Vandyke, Donald J., assignor of one-half to J. Shaine, Cambridge, Mass. Container. No. 1,104,852; July 28; Gaz. vol. 204; p. 1049.
Varian, James A., Norwalk, Conn. Garage. No. 1,102,828; July 7; Gaz. vol. 204; p. 212.
Varley, Benjamin R., assignor to Varley Duplex Magnet Company, Jersey City, N. J. Winding-machine. No. 1,102,369; July 7; Gaz. vol. 204; p. 51.
Varley Duplex Magnet Company. (See Varley, Benjamin R., assignor.)
Varley, Richard, Englewood, N. J. Electrical system. No. 1,103,385; July 14; Gaz. vol. 204; p. 450.
Vassallo, Jean. (See Bonnot, Belot, Vassallo, and Emery.)
Vaughan, Harry L., Chicago, Ill. Throat for bottling-machines. No. 1,104,023; July 21; Gaz. vol. 204; p. 713.
Vaughan, Harry L., Chicago, Ill. Throat for bottling-machines. No. 1,104,024; July 21; Gaz. vol. 204; p. 713.
Vaughan, Harry L., Chicago, Ill. Bottle-opener. No. 1,104,025; July 21; Gaz. vol. 204; p. 714.
Vaughan, Sanford S., Oak Park, Ill. Fire-escape ladder. No. 1,102,461; July 7; Gaz. vol. 204; p. 84.
Vaughn, John G., Guthrie, Mo. Gate. No. 1,104,583; July 21; Gaz. vol. 204; p. 908.
Veit, Harry M. (See Sondheim and Veit.)
Venable, William M., assignor to Blaw Steel Construction Company, Pittsburgh, Pa. Wall-mold. No. 1,103,109; July 14; Gaz. vol. 204; p. 356.
Vereinigte Glanzstoff-Fabriken A.-G. (See Bronnert, Emile, assignor.)
Vergé, Alphonse E. (See Fletcher, Hartley, assignor.)
Vernaz, Marcel. (See Pictet and Vernaz.)
Vernaz, Marcel, Annemasse, France, and P. Pictet, Geneva, Switzerland. Internal-combustion engine. No. 1,105,471; July 28; Gaz. vol. 204; p. 1267.
Verneuil, Egiste, assignor to Societe Henri Gras & Cie., Paris, France. Safety-plug for vessels containing inflammable liquids. No. 1,102,559; July 7; Gaz. vol. 204; p. 118.
Verstraelen, Michael, Inglewood, assignor of one-half to J. H. Burton, Oceanpark, Cal. Note-sheet controller. No. 1,102,969; July 7; Gaz. vol. 204; p. 258.
Vesta Manufacturing Co. (See Cobb, George B., Jr., assignor.)
Vesta Manufacturing Company. (See Newell, George T., Jr., assignor.)
Vibber, Wheeler H., New London, Conn. Suspension-box fitting for electric installation. No. 1,104,395; July 21; Gaz. vol. 204; p. 841.
Vickers, Austin, Asbury Park, N. J. Undergarment. No. 1,104,584; July 21; Gaz. vol. 204; p. 909.

Viereugel, Matthew, Brooklyn, N. Y., assignor to Samuel Cupples Envelope Company, St. Louis, Mo. Machine for making window-envelop blanks. No. 1,104,026; July 21; Gaz. vol. 204; p. 714.
Vingum, Martin J., Stoughton, Wis., assignor to Moline Plow Company. Manure-spreader. No. 1,102,462; July 7; Gaz. vol. 204; p. 85.
Vioran, Raoul L., Chicago, Ill. Sanitary cuspidor. No. 1,103,636; July 14; Gaz. vol. 204; p. 540.
Virginia Refrigerator Corporation. (See Coleman, Clyde J., assignor.)
Vissering, Harry, Chicago, and P. Carpenter, Glenview, Ill., assignors to W. S. Murrian, trustee, Knoxville, Tenn. Valve-gear for steam-engines. No. 1,103,110; July 14; Gaz. vol. 204; p. 356.
Vogel, Joseph J., Springfield, Minn. Corking-machine. No. 1,105,115; July 28; Gaz. vol. 204; p. 1139.
Vogel, Orville A., Gallup, N. Mex. Repeating rifle. No. 1,103,715; July 14; Gaz. vol. 204; p. 568.
Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,105,167; July 28; Gaz. vol. 204; p. 1157.
Volkenborn, Paul, Cologne-Ehrenfeld, Germany. Double skip or kibble for automatically receiving loose material. No. 1,103,387; July 14; Gaz. vol. 204; p. 450.
Völler, Karl, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Setting-key for fuses. No. 1,104,585; July 21; Gaz. vol. 204; p. 909.
Völler, Karl, and E. Müller, Dusseldorf, Germany. Support for gun-carriage wheels. No. 1,104,721; July 21; Gaz. vol. 204; p. 955.
Von Zelpel, Philip, Duquesne, Pa. Grate for furnaces. No. 1,105,054; July 28; Gaz. vol. 204; p. 1119.
Vöster, Fritz, and M. Jungbauer, Augsburg, Germany, assignors to Cook and Co., Manchester, England. Carding-engine. No. 1,103,231; July 14; Gaz. vol. 204; p. 399.
Vulcan Box Toe Process Co., The. (See Youngman and Drenan, assignors.)
Vulcan Coil Co. (See Seeley, James E., assignor.)
W. Eddy Plow Company. (See Eddy, Oscar H., assignor.)
W. B. Turner Machine Company. (See Turner, William B., assignor.)
Wachtelhausen, Henry, assignor to The Parker Clock Company, Meriden, Conn. Hair-spring regulator. No. 1,103,551; July 14; Gaz. vol. 204; p. 507.
Wachter, Frederick, assignor to Parke, Davis & Company, Detroit, Mich. Ampul-holder. No. 1,103,111; July 14; Gaz. vol. 204; p. 357.
Waddell, Alexander, Dunfermline, Scotland. Process and apparatus for the treatment of coal, shale, or the like in vertical retorts. No. 1,103,112; July 14; Gaz. vol. 204; p. 357.
Wade, Irving E., Gravity, Iowa. Key-guide. No. 1,105,472; July 28; Gaz. vol. 204; p. 1268.
Wadsworth, Frank L. O., Sewickley, Pa. Furnace-grate. No. 1,103,232; July 14; Gaz. vol. 204; p. 399.
Wadsworth, George R., assignor to The Peerless Motor Car Company, Cleveland, Ohio. Electrically-operated brake. No. 1,104,586; July 21; Gaz. vol. 204; p. 909.
Wagenhorst, James H., Akron, Ohio, assignor, by mesne assignments, of two-fifths to The B. F. Goodrich Company, New York, N. Y., one-fifth to The Goodyear Tire & Rubber Company, Akron, Ohio, and one-fifth to The United States Tire Company, New York, N. Y. Vehicle wheel-rim. No. 1,103,637; July 14; Gaz. vol. 204; p. 540.
Wagner Electric Manufacturing Company. (See Fynn, Valere A., assignor.)
Wagner Electric Manufacturing Company. (See Sparrow, Simon, assignor.)
Wagner, Isadore, Chicago, Ill. Attachment for radiators. No. 1,104,587; July 21; Gaz. vol. 204; p. 909.
Wagner, Paul, Charlottenburg, Germany, assignor to General Electric Company. Shaft-packing. No. 1,104,588; July 21; Gaz. vol. 204; p. 910.
Waid, Calvin R., Birmingham, Ala. Grate-bar. No. 1,104,853; July 28; Gaz. vol. 204; p. 1049.
Waid, James F., assignor of one-third to C. H. Krippendorf and one-third to W. Fowler, Cincinnati, Ohio. Machine for tacking the shoe upper and counter. No. 1,102,617; July 7; Gaz. vol. 204; p. 140.
Waight, Edward L., San Francisco, Cal. Safety appliance for air-craft. No. 1,103,233; July 14; Gaz. vol. 204; p. 400.
Walt, William B., Jr., New York, N. Y. Wafer. No. 1,102,370; July 7; Gaz. vol. 204; p. 51.
Wales, Charles M., New York, N. Y. Making hollow axles. No. 1,104,088; July 21; Gaz. vol. 204; p. 736.
Wales, Samuel S., Munhall, Pa. Apparatus for treating car-wheels and similar circular bodies. No. 1,105,116; July 28; Gaz. vol. 204; p. 1140.
Walker, Eli M., Meriden, Conn., assignor to The Parker Clock Company. Clock. No. 1,103,552; July 14; Gaz. vol. 204; p. 507.
Walker, Francis J., Jr., Erie, Pa. Storing unfermented fruit-juice. No. 1,103,920; July 14; Gaz. vol. 204; p. 637.
Walker, Fred L., Burlington, Iowa. Combined wrench and vise. No. 1,105,473; July 28; Gaz. vol. 204; p. 1268.
Walker, George, assignor to Landers, Frary & Clark, New Britain, Conn. Weighing-machine. No. 1,103,456; July 14; Gaz. vol. 204; p. 474.
Walker, George O., Walker, Oreg. Insect-catcher. No. 1,102,829; July 7; Gaz. vol. 204; p. 213.
Walker, James J., *et al.* (See Guiliani, Alfredo, assignor.)
Walker, William F., Chicago, assignor of one-eighth to M. Borwick, Cicero, one-fourth to C. F. Dusman and one-eighth to A. B. Cameron, Chicago, Ill. Safety-lock. No. 1,102,830; July 7; Gaz. vol. 204; p. 213.
Wall, Enos A., Salt Lake City, Utah. Roll-adjusting mechanism. No. 1,103,113; July 14; Gaz. vol. 204; p. 358.
Wallace, Andrew H., St. Catharines, Ontario, Canada. Photographic-printing machine. No. 1,103,330; July 14; Gaz. vol. 204; p. 433.
Wallace, Andrew H., St. Catharines, Ontario, Canada. Photographic-printing device. No. 1,103,331; July 14; Gaz. vol. 204; p. 433.
Wallace, Herbert A., New York, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for governing the passage of cars or vehicles along a railway and the control thereof. No. 1,102,831; July 7; Gaz. vol. 204; p. 213.
Wallace, Lem. (See Brannen and Wallace.)
Wallach, Morris, *et al.* (See Grabau, Hans E., assignor.)
Wallbillich, John J., Detroit, Mich. Shaft-coupling. No. 1,103,716; July 14; Gaz. vol. 204; p. 568.
Waller, Peter A., assignor to Boss Manufacturing Company, Kewanee, Ill. Glove. No. 1,103,921; July 14; Gaz. vol. 204; p. 637.
Walsh, John C., Philadelphia, Pa. Shoe-support. No. 1,104,396; July 21; Gaz. vol. 204; p. 841.
Walsh, John F. (See Meredith, Noah E., assignor.)
Walsh, William E., Butte, Mont. Automatic-dumping conveyer. No. 1,104,232; July 21; Gaz. vol. 204; p. 784.
Walshe, Denny E., Grand Saline, Tex. Tag-fastener. No. 1,103,853; July 14; Gaz. vol. 204; p. 614.
Walter, Otto, Hanover, Germany. Vulcanizer. No. 1,104,722; July 21; Gaz. vol. 204; p. 955.
Walters, John. (See Stovall, Thomas H., assignor.)
Waltham Watch Company. (See Ohlson, Olof, assignor.)
Walton, Howard J., and C. M. Nerber, Titusville, Pa. Device for contracting piston-rings. No. 1,103,717; July 14; Gaz. vol. 204; p. 569.
Wandel, Robert, Reutlingen, Germany. Knotter or strainer for paper manufacture. No. 1,105,227; July 28; Gaz. vol. 204; p. 1179.
Ward, Frederick A., and W. N. Taylor, Toledo, Ohio. Gear-grinding machine. No. 1,104,589; July 21; Gaz. vol. 204; p. 910.
Ward, Raymond E., and C. Crowl, East Palestine, Ohio. Valve. No. 1,104,944; July 28; Gaz. vol. 204; p. 1081.
Warme, Ivar F. (See Abrams and Warme.)
Warne, Frederick C., assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio. Cultivator. No. 1,104,027; July 21; Gaz. vol. 204; p. 715.
Warner Arms Corporation. (See Fyrberg, Andrew, assignor.)
Warner Brothers Company, The. (See Hartnett, John F., assignor.)
Warren, George B., Rockford, Ill. Feed box or trough. No. 1,102,371; July 7; Gaz. vol. 204; p. 51.
Warren, Jemima, McComb, Ohio. Supporter. No. 1,103,114; July 14; Gaz. vol. 204; p. 358.
Warren Webster & Company. (See Bilyeu, William F., assignor.)
Warren Webster & Company. (See Montreuil, Francis H., assignor.)
Washburn, Frank S., Nashville, Tenn. Fertilizer and producing the same. No. 1,103,115; July 14; Gaz. vol. 204; p. 358.
Washington Steel & Ordnance Company. (See Keen, William H., assignor.)
Wason, Alfred E. (See Pinkerton and Wason.)
Wasson Engineering & Supply Co. (See Lang, Charles E., assignor.)
Waterbury Clock Co. (See Horn, Ernest H., assignor.)
Waterbury Farrel Foundry and Machine Company, The. (See Wilcox, Richard L., assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Disk harrow. No. 1,104,748; July 21; Gaz. vol. 204; p. 963.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Rake. No. 1,104,749; July 21; Gaz. vol. 204; p. 964.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Plow-lift. No. 1,104,750; July 21; Gaz. vol. 204; p. 964.
Waterman, Russell R., assignor to San Diego Aerial Navigation Co., San Diego, Cal. Attachment for dirigible balloons or gas-bags. No. 1,103,388; July 14; Gaz. vol. 204; p. 451.
Waters, Orthello, Long Beach, Cal. Vehicle-spring. No. 1,105,010; July 28; Gaz. vol. 204; p. 1103.
Waters, Samuel S., Washington, D. C. Recording and indicating device for musical instruments. No. 1,103,553; July 14; Gaz. vol. 204; p. 507.
Watrous, Earl G., Chicago, Ill. Valve. No. 1,103,638; July 14; Gaz. vol. 204; p. 540.
Watson, William L., McKenzie, N. D. Deflating-tool. No. 1,104,028; July 21; Gaz. vol. 204; p. 715.
Watts, William, Louisville, Ky. Buncher and bander. No. 1,104,155; July 21; Gaz. vol. 204; p. 758.
Waugh, James M., Chicago, Ill. Bumping block or post for railways. No. 1,104,332; July 21; Gaz. vol. 204; p. 820.
Waverley Company, The. (See Maxim, Hiram P., assignor.)

Way, Charles M., Minneapolis, Minn. Border for bed-springs. No. 1,105,318; July 28; Gaz. vol. 204; p. 1211.
Weaver, Thomas E., assignor of one-half to I. O. Spence, Pelham, Ga. Glazing-strip. No. 1,105,117; July 28; Gaz. vol. 204; p. 1140.
Webb, De Witt C., Boston, Mass. Radiator attachment. No. 1,102,705; July 7; Gaz. vol. 204; p. 168.
Webb Talking Picture Company, The. (See Comer, John J., assignor.)
Weber, George W., assignor to American Can Company, New York, N. Y. Sifter-top powder-can. No. 1,104,457; July 21; Gaz. vol. 204; p. 862.
Weber, George W., assignor to American Can Company, New York, N. Y. Sheet-metal spool. No. 1,104,458; July 21; Gaz. vol. 204; p. 863.
Weber, Henry, and W. Osterholm, assignors to Latham Machinery Company, Chicago, Ill. Work-support for stapling-machines. No. 1,103,234; July 14; Gaz. vol. 204; p. 400.
Webster, John H., Carrickfergus, Ireland. Manufacture of salt. No. 1,104,854; July 28; Gaz. vol. 204; p. 1050.
Webster, William A., Galesburg, Ill. Hinge. No. 1,102,372; July 7; Gaz. vol. 204; p. 52.
Weckert, Frank A., Solon Springs, Wis. Spring-wheel. No. 1,103,332; July 14; Gaz. vol. 204; p. 434.
Wedeman, George F. (See Arnold and Wedeman.)
Wedeman, Harry, Manhattan, Mont. Spring-wheel. No. 1,104,283; July 21; Gaz. vol. 204; p. 803.
Wedge, Utley, Ardmore, Pa. Manufacture of sulfuric acid. No. 1,104,590; July 21; Gaz. vol. 204; p. 911.
Weed Chain Tire Grip Company. (See Lashar, Walter B., assignor.)
Weeks, Francis D., Salida, Colo. Measured-delivery apparatus. No. 1,103,333; July 14; Gaz. vol. 204; p. 434.
Wegner, Fred, Fairport, assignor to Sanitary Can Company, New York, N. Y. Double-seaming machine. No. 1,104,751; July 21; Gaz. vol. 204; p. 965.
Wehner, George A., Savannah, Ga. Permutation-lock. No. 1,103,116; July 14; Gaz. vol. 204; p. 358.
Weigher Patent Company. (See Messiter, Edwin H., assignor.)
Weil, Charles L., assignor to Diamond Crystal Salt Company, St. Clair, Mich. Making salt. No. 1,105,387; July 28; Gaz. vol. 204; p. 1238.
Weil, Jacob A., Stockton-on-Tees, England. Gas-producer. No. 1,105,474; July 28; Gaz. vol. 204; p. 1268.
Weiland, Charles W., Brooklyn, N. Y. Automatic safety launching device for life-boats. No. 1,104,089; July 21; Gaz. vol. 204; p. 737.
Weiler, Wilhelm, Berlin, Germany, assignor to General Electric Company. Dynamo-electric machine. No. 1,104,233; July 21; Gaz. vol. 204; p. 785.
Wein, Samuel, New York, N. Y., assignor to J. A. Strauss, trustee. Metal alloy. No. 1,102,618; July 7; Gaz. vol. 204; p. 140.
Weinberg, Alexander, Pittsburgh, Pa. Actuating mechanism for signals, &c. No. 1,102,619; July 7; Gaz. vol. 204; p. 140.
Weinberg, Fritz, assignor to E. Berliner, Washington, D. C. Multicylinder rotary gas-engine. No. 1,105,118; July 28; Gaz. vol. 204; p. 1141.
Weindel, Anton. (See Kéler and Weindel.)
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Vapor electric device. No. 1,102,308; July 7; Gaz. vol. 204; p. 30.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Making boron suboxid. No. 1,105,388; July 28; Gaz. vol. 204; p. 1239.
Weir, James G., Glasgow, Scotland. Geared propeller-drive for ships. No. 1,103,117; July 14; Gaz. vol. 204; p. 359.
Weisbach, Rudolph. (See Berger and Weisbach.)
Weiss, David, Cleveland, Ohio. Tooth-brush. No. 1,104,459; July 21; Gaz. vol. 204; p. 863.
Weiss, Heinrich, Vienna, Austria-Hungary. Oil-transformer. No. 1,104,723; July 21; Gaz. vol. 204; p. 955.
Weiss, Joseph W., Baltimore, Md. Collapsible carton. No. 1,104,234; July 21; Gaz. vol. 204; p. 785.
Weiss, Karl, assignor to The Blake and Johnson Company, Waterbury, Conn. Machine for feeding headed blanks. No. 1,104,029; July 21; Gaz. vol. 204; p. 715.
Welch, Lyman W., Grand Rapids, Mich. Revolving-rack show-case. No. 1,104,156; July 21; Gaz. vol. 204; p. 758.
Wells, Elias B., Miami, Fla. Wire-fence clamp. No. 1,105,389; July 28; Gaz. vol. 204; p. 1239.
Wells, Joel C., Southbridge, Mass. Ophthalmic mounting. No. 1,103,389; July 14; Gaz. vol. 204; p. 451.
Wells, Joel C., and N. M. Baker, Southbridge, Mass. Ophthalmic mounting. No. 1,104,157; July 21; Gaz. vol. 204; p. 759.
Welsbach Light Company. (See Knoedler, Elmer L., assignor.)
Welsbach Light Company. (See Little, Thomas J., Jr., assignor.)
Werms, Sidney. (See Kellner and Werms.)
Werner, John, Rochester, N. Y. Syrup-cooker. No. 1,105,168; July 28; Gaz. vol. 204; p. 1157.
Wernet, George L., and H. A. Collett, Philadelphia, Pa. Artificial tooth. No. 1,102,373; July 7; Gaz. vol. 204; p. 52.
Wesolowski, Peter J., Detroit, Mich. Latch. No. 1,104,460; July 21, Gaz. vol. 204; p. 863.
Wessendorff, Henry H. (See Putnam and Wessendorff.)
Wessmann, Alfred C. (See Schade, John, Jr., assignor.)
West, Charles C., Cairo, Ill. Tension device for armature-winding mechanism. No. 1,103,718; July 14; Gaz. vol. 204; p. 569.
West Virginia Malleable Iron Co. (See Woelffel, Ernest H., assignor.)
Westbrook, John A., assignor of one-half to J. A. Adkins, Brady, Tex. Packer for silos. No. 1,104,333; July 21; Gaz. vol. 204; p. 820.
Westerberg, Peter G., New York, N. Y. Elevator-well-door operator and lock. No. 1,104,591; July 21; Gaz. vol. 204; p. 911.
Western Electric Company. (See Adams, Arthur H., assignor.)
Western Electric Company. (See Beck, William O., assignor.)
Western Electric Company. (See De Vignier, Robert M., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Forsberg, Oscar F., assignor.)
Western Electric Company. (See Hill, Ralph N., assignor.)
Western Electric Company. (See Linder, Oscar, assignor.)
Western Electric Company. (See McBerty, Frank R., assignor.)
Western Electric Company. (See Reynolds, John N., assignor.)
Western Electric Company. (See Richards, Wilton L., assignor.)
Western Electric Company. (See Smith, William F., assignor.)
Western Electric Company. (See Wier, Harry B., assignor.)
Western Wheeled Scraper Company. (See Rhodes, Jay B., assignor.)
Westinghouse Air Brake Company. (See Austin, Walter M., assignor.)
Westinghouse Air Brake Company, The. (See Clark, Francis L., assignor.)
Westinghouse Air Brake Company, The. (See England, Alexander, assignor.)
Westinghouse Air Brake Company, The. (See Murphy, Howard M. P., assignor.)
Westinghouse Air Brake Company. (See Turner, Walter V., assignor.)
Westinghouse Air Spring Company, The. (See Westinghouse, George, assignor.)
Westinghouse Electric & Manufacturing Company. (See Aalborg, Christian, assignor.)
Westinghouse Electric & Mfg. Co. (See Davis, Joseph L., assignor.) (Reissue.)
Westinghouse, George. (See Potter, Henry N., assignor.)
Westinghouse, George, Pittsburgh, Pa., assignor to The Westinghouse Air Spring Company. Fluid-pressure device. No. 1,104,945; July 28; Gaz. vol. 204; p. 1081.
Westinghouse, Henry H., *et al.*, executors. (See Potter, Henry N.)
Westinghouse Lamp Company. (See Knight, Arthur S., assignor.)
Westinghouse Machine Company, The. (See Schmidt, Henry F., assignor.)
Westlake, Charles T., assignor to Double Body Bolster Company, St. Louis, Mo. Center-bolster for six-wheel car-trucks. No. 1,102,620; July 7; Gaz. vol. 204; p. 141.
Westlin, Carl T. (See Brown and Westlin.)
Wetmore, Earl P., Toledo, Ohio. Labeling-machine. No. 1,102,832; July 7; Gaz. vol. 204; p. 214.
Weyermann, Rudolf, Bamberg, Germany. Removing the bitter taste from malt extracts. No. 1,105,119; July 28; Gaz. vol. 204; p. 1141.
Weyers, Alois W. F., New Westminster, British Columbia, Canada. Double-stair-grate continuous kiln. No. 1,102,970; July 7; Gaz. vol. 204; p. 258.
Whalen, William A., assignor of one-half to J. A. Ostendorf, Baltimore, Md. Bread-pan. No. 1,105,584; July 28; Gaz. vol. 204; p. 1305.
Whaley, John H. (See Snow, Kidd, and Whaley.)
Whedon, Charles W., Medina, N. Y. Gutter-hanger. No. 1,105,390; July 28; Gaz. vol. 204; p. 1239.
Wheeler Condenser and Engineering Company. (See Christie, Evi W., assignor.)
Wheeler, Perry O., Youngstown, Ohio. Step. No. 1,103,719; July 14; Gaz. vol. 204; p. 569.
Wheeler, Samuel H., Fairfield, Conn. Ventilator. No. 1,102,833; July 7; Gaz. vol. 204; p. 214.
Wheeling, Herbert A., Carthage, Mo. Tire. No. 1,104,158; July 21; Gaz. vol. 204; p. 759.
Wheeling Stamping Company. (See McGinnis, John A., assignor.)
Whitaker, Henry E., and J. M. MacDonald, assignors to Parke, Davis & Company, Detroit, Mich. Apparatus for forming medicinal tablets. No. 1,102,374; July 7; Gaz. vol. 204; p. 52.
Whitcomb, Alonzo W., Worcester, Mass. Metal-planer. No. 1,103,457; July 14; Gaz. vol. 204; p. 474.
Whitcomb, Chester P., Somerville, Mass., and J. G. Godfrey, Steuben, Me.; said Whitcomb assignor to said Godfrey. Metal weather-strip. No. 1,104,334; July 21; Gaz. vol. 204; p. 820.

Whitcomb, John M., Redwood Falls, Minn. Device for sharpening band-cutting knives. No. 1,104,592; July 21; Gaz. vol. 204; p. 911.
White, Alfred S. (See Greenwood, Conrad V., assignor.)
White Company, The. (See White, Rollin H., assignor.)
White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Mechanical music-playing instrument. No. 1,103,854; July 14; Gaz. vol. 204; p. 614.
White, Harry B., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Harness-saddle. No. 1,104,397; July 21; Gaz. vol. 204; p. 842.
White, J. Harvey. (See Owens, Charles E., assignor.)
White, John F., Bloomington, Ill. Flexible transmission and starting device for explosive-engines. No. 1,104,593; July 21; Gaz. vol. 204; p. 912.
White, Rollin H., Cleveland Heights Village, assignor to The White Company, Cleveland, Ohio. Plural-cylinder engine. No. 1,103,639; July 14; Gaz. vol. 204; p. 541.
White, T. Stewart, *et al.* (See Annable, Warren W., assignor.)
White, Thomas F., St. Paul, Minn. Stovepipe-fastener. No. 1,103,235; July 14; Gaz. vol. 204; p. 401.
Whitehead, John H., W. E. Layland, and G. Galloway, Leeds, England. Bearing for the drawing-off rollers of Noble's combing-machines. No. 1,102,834; July 7; Gaz. vol. 204; p. 215.
Whiteman, George W., Philadelphia, Pa. Railway-switch. No. 1,103,720; July 14; Gaz. vol. 204; p. 569.
Whitin Machine Works, The. (See Aldrich, William O., assignor.)
Whitin Machine Works, The. (See Burlin, Charles T., assignor.)
Whitin Machine Works, The. (See Schofield, Robert, assignor.)
Whiting, Alexander F. (See Patrick, Jasper D., assignor.)
Whiting, Herman E., Palmyra, N. Y. Heater for gaseous fuel. No. 1,102,309; July 7; Gaz. vol. 204; p. 30.
Whiting, Julius, Jr., trustee. (See Maxwell, Bert C., assignor.)
Whitmore, Fred A., Philadelphia, Pa., assignor to Crompton & Knowles Loom Works. Loom for weaving tufted or chenille fabrics or carpets. No. 1,102,835; July 7; Gaz. vol. 204; p. 215.
Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Support for filaments. No. 1,105,050; July 28; Gaz. vol. 204; p. 1117.
Whittaker, Matthew H., Manchester, and C. Holliwell, Broadheath, assignors to Linotype and Machinery Limited, London, England. Type bar or slug. No. 1,103,458; July 14; Gaz. vol. 204; p. 475.
Whittlesey, John E., Pittsburgh, Pa. Superheater-boiler. No. 1,102,836; July 7; Gaz. vol. 204; p. 215.
Wickey, Andrew, East Chicago, Ill. Cart. No. 1,105,228; July 28; Gaz. vol. 204; p. 1179.
Widders, Gaisle H., widow. (See Widders, William D.)
Widders, William D., deceased; G. H. Widders, widow, Exeter, Mo. Train-pipe coupling. No. 1,102,837; July 7; Gaz. vol. 204; p. 216.
Widney, Stanley W., Chicago, Ill. Shelf-support for pianos. No. 1,102,375; July 7; Gaz. vol. 204; p. 53.
Width, Lars M., Duluth, Minn. Locking device. No. 1,102,838; July 7; Gaz. vol. 204; p. 216.
Wiedeke, Gustav. (See Wiedeke, Otto, assignor.)
Wiedeke, Otto, assignor to G. Wiedeke, Dayton, Ohio. Tube-expander. No. 1,102,993; July 7; Gaz. vol. 204; p. 266.
Wiedeke, Otto, assignor to G. Wiedeke, Dayton, Ohio. Tube-expander. No. 1,102,994; July 7; Gaz. vol. 204; p. 267.
Wieder, Henry G., London, England. Sound reproducing and recording instrument. No. 1,102,839; July 7; Gaz. vol. 204; p. 216.
Wier, Harry B., Jersey City, N. J., assignor to Western Electric Company, New York, N. Y. Watchcase-receiver. No. 1,102,621; July 7; Gaz. vol. 204; p. 141.
Wigg, Robert W., Middle Brighton, Victoria, Australia. Non-refillable bottle. No. 1,104,594; July 21; Gaz. vol. 204; p. 912.
Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Temporary binder or loose-sheet holder. No. 1,104,855; July 28; Gaz. vol. 204; p. 1050.
Wigglinton, George P., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Temporary binder. No. 1,104,856; July 28; Gaz. vol. 204; p. 1051.
Wilcox, Charles E. (See Knapp and Wilcox.)
Wilcox, Frank E., *et al.* (See Reynolds, Clifford W., assignor.)
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Header. No. 1,104,090; July 21; Gaz. vol. 204; p. 737.
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Thread-rolling machine. No. 1,104,091; July 21; Gaz. vol. 204; p. 737.
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Feed mechanism. No. 1,105,343; July 28; Gaz. vol. 204; p. 1220.
Wilcox & White Company, The. (See White, Frank C., assignor.)
Wild, Gunther P., assignor to The Chloris Company, Philadelphia, Pa. Closure. No. 1,105,229; July 28; Gaz. vol. 204; p. 1180.
Wilder, Denzil M., Shabbona, Ill. Excavating and conveying apparatus for starch. No. 1,102,376; July 7; Gaz. vol. 204; p. 53.
Wilhelm, Jesse E., Cleveland, Ohio. Power-hammer. No. 1,104,946; July 28; Gaz. vol. 204; p. 1082.
Wilhelmi, Otto, assignor of one-half to Internationale Siegwartbalken-Gesellschaft, Lucerne, Switzerland. Producing well-holes, pole-holes, and the like. No. 1,103,334; July 14; Gaz. vol. 204; p. 434.
Wilkinson, James, Boston, Mass., assignor to General Electric Company. Fluid-meter. No. 1,105,051; July 28; Gaz. vol. 204; p. 1117.
Willat, Feliciano C., Montevideo, Uruguay. Smoke-stack cleaner. No. 1,104,030; July 21; Gaz. vol. 204; p. 715.
Willett, Alfred H., assignor to American Arch Company, New York, N. Y. Arch-brick. No. 1,103,236; July 14; Gaz. vol. 204; p. 401.
William Schollhorn Company, The. (See Bernard, William A., assignor.)
William Sellers & Company. (See Kneass, Strickland L., assignor.)
Williams, Allen T., Boston, Mass. Picture-hook. No. 1,103,721; July 14; Gaz. vol. 204; p. 570.
Williams, Edward L., assignor of one-half to A. A. Wyckoff, Santa Cruz, Cal. Lock. No. 1,105,052; July 28; Gaz. vol. 204; p. 1118.
Williams, George A. (See Lindsey and Williams.)
Williams, Henry A., Murphysboro, Ill. Combination go-cart and sulky. No. 1,104,335; July 21; Gaz. vol. 204; p. 821.
Williams, Milton F., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Blower for rotary mills. No. 1,103,237; July 14; Gaz. vol. 204; p. 401.
Williams, Nathaniel, Owosso, Mich. Mail-box. No. 1,103,166; July 14; Gaz. vol. 204; p. 377.
Williams Patent Crusher and Pulverizer Company. (See Ogden, Ferris, assignor.)
Williams Patent Crusher and Pulverizer Company. (See Williams, Milton F., assignor.)
Williams, William W., assignor of one-half to W. P. Carpenter, Indianapolis, Ind. Reserve attachment for fuel-tanks. No. 1,102,971; July 7; Gaz. vol. 204; p. 259.
Williamson, Glenn S., New York, N. Y. Printing-press. No. 1,104,461; July 21; Gaz. vol. 204; p. 864.
Williamson, Samuel S., Philadelphia, Pa. Non-refilling bottle. No. 1,102,560; July 7; Gaz. vol. 204; p. 119.
Willimon, Marvin N. (See Stockton and Willimon.)
Wills, William. (See Rimmer, Plymire, and Wills.)
Willson, Frederick, and N. Bourquin, assignors to T. A. Willson & Co., Incorporated, Reading, Pa. Goggles. No. 1,103,118; July 14; Gaz. vol. 204; p. 360.
Willson, Thomas L., and M. M. Haff, Ottawa, Ontario, assignors to Southern Investment Co. of Canada Ltd., Montreal, Canada. Fertilizing compound. No. 1,103,910; July 14; Gaz. vol. 204; p. 634.
Wilson, Charles D., Toledo, Ohio. Wrench. No. 1,105,475; July 28; Gaz. vol. 204; p. 1269.
Wilson, Charles H., Mount Vernon, N. Y. Thermo-electric pyrometer. No. 1,103,640; July 14; Gaz. vol. 204; p. 542.
Wilson, Lee H., Westgate, Cal. Feed-gage. No. 1,105,011; July 28; Gaz. vol. 204; p. 1103.
Wilson, William W., Los Angeles, Cal. Mechanical movement. No. 1,104,462; July 21; Gaz. vol. 204; p. 860.
Wilton, Ralph P., Wrightsville, Pa. Dispensing apparatus. No. 1,102,377; July 7; Gaz. vol. 204; p. 53.
Wiltsie, Spencer A., Erie, Pa., assignor, by mesne assignments, to Copeman Electric Stove Company, Flint, Mich. Toaster. No. 1,105,230; July 28; Gaz. vol. 204; p. 1180.
Winans, Daniel M., assignor to Winans Machine Co., Binghamton, N. Y. Clothes-line tightener. No. 1,103,722; July 14; Gaz. vol. 204; p. 570.
Winans Machine Co. (See Winans, Daniel M., assignor.)
Winans, Milton E., Newark, N. J., assignor to Oxweld Acetylene Company, Chicago, Ill. Sparking igniter. No. 1,104,092; July 21; Gaz. vol. 204; p. 738.
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Windeler, George E. (See Day and Windeler.)
Windham, Francis, London, England. Safety-razor. No. 1,104,857; July 28; Gaz. vol. 204; p. 1051.
Window Glass Machine Company. (See Roadman and Dravo, assignors.)
Winkler, Carl, Berne, Switzerland. Producing molds for casting stereotype-plates. No. 1,104,595; July 21; Gaz. vol. 204; p. 913.
Winkley, Erastus E., Lynn, Mass. Machine for operating on shoe-heels. No. 1,102,310; July 7; Gaz. vol. 204; p. 31.
Winkley, Erastus E., Lynn, Mass. Machine for operating on shoe-heels. No. 1,102,311; July 7; Gaz. vol. 204; p. 31.
Winkley, Erastus E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-leveling machine. No. 1,104,235; July 21; Gaz. vol. 204; p. 786.
Winks, John O., San Francisco, Cal. Automatic firearm. No. 1,104,947; July 28; Gaz. vol. 204; p. 1082.
Winnie, Albert, Traverse City, Mich. Artificial bait. No. 1,102,312; July 7; Gaz. vol. 204; p. 32.
Winslow, Thomas N., Greensboro, N. C. Triple-leaf ledger. No. 1,103,554; July 14; Gaz. vol. 204; p. 508.

Winter, Albert, assignor to P. Fehrentz, Birmingham, Ala. Razor-sharpening machine. No. 1,102,706; July 7; Gaz. vol. 204; p. 169.
Wira, Samuel. (See De Matteis, John B., assignor.)
Wire Fabric Machinery Company. (See Roop, William M., assignor.)
Wireless Specialty Apparatus Company. (See Pickard, Greenleaf W., assignor.)
Wireless Vibrator Company. (See Dorment, Frank C., assignor.)
Wise, Jeremiah O. (See Twelt and Wise.)
Withrow, James R. (See French and Withrow.)
Withycombe, Robert M., Sydney, New South Wales, Australia. Artificial tooth. No. 1,105,476; July 28; Gaz. vol. 204; p. 1269.
Witte, Paul, Decatur, Ill. Stage-screw. No. 1,103,723; July 14; Gaz. vol. 204; p. 570.
Witter, William S., Toledo, Iowa. Spark-plug. No. 1,104,159; July 21; Gaz. vol. 204; p. 759.
Woelffel, Ernest H., assignor to West Virginia Malleable Iron Co., Point Pleasant, W. Va. Corner-bracket for bed-springs. No. 1,104,336; July 21; Gaz. vol. 204; p. 821.
Woerner, Eugen, Cannstatt, assignor to Firm of R. Bosch, Stuttgart, Germany. Speed-changing device. No. 1,103,335; July 14; Gaz. vol. 204; p. 435.
Wolf, Frederick W., Chicago, Ill. Nut-lock. No. 1,102,840; July 7; Gaz. vol. 204; p. 216.
Wolf, Gustav, New York, N. Y. Damper. No. 1,103,724; July 14; Gaz. vol. 204; p. 571.
Wolf, John, Carlisle, Pa. Rail chair and brace. No. 1,103,119; July 14; Gaz. vol. 204; p. 360.
Wolf, Robert B. (See Moore and Wolf.)
Wolfe, Ruth, *et al.* (See Lyman, Don, assignor.)
Wolff, Andre J. (See McClure and Wolff.)
Wolff, Oscar M., Chicago, Ill. Counter-partition bracket. No. 1,103,459; July 14; Gaz. vol. 204; p. 475.
Wölfl, Joseph, Hildesheim, Germany. Apparatus for making hollow bricks which are closed on all sides. No. 1,102,841; July 7; Gaz. vol. 204; p. 217.
Wolhaupter, Benjamin, New Rochelle, assignor to The Rail Joint Company, New York, N. Y. Crowned-base rail-joint. No. 1,103,460; July 14; Gaz. vol. 204; p. 476.
Wolvin, John F., St. Clair, Mich. Woodworking-machine. No. 1,104,858; July 28; Gaz. vol. 204; p. 1051.
Womelsdorf, George H., assignor to Reno Manufacturing Company, Philadelphia, Pa. Jar-closure. No. 1,105,391; July 28; Gaz. vol. 204; p. 1240.
Wood, Albert D., Canton, N. C. Wood-pulp thickener and save-all. No. 1,103,725; July 14; Gaz. vol. 204; p. 571.
Wood, Earl A., Gem, Idaho. Screen. No. 1,103,167; July 14; Gaz. vol. 204; p. 377.
Wood, Frank W., *et al.* (See Bliss, Donald M., assignor.)
Wood, Herbert D., Phoenix, N. Y. Toilet-paper holder. No. 1,104,284; July 21; Gaz. vol. 204; p. 803.
Wood, William M., New York, N. Y., assignor to Mergenthaler Linotype Company. Typographical casting-machine. No. 1,102,842; July 7; Gaz. vol. 204; p. 217.
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution. No. 1,105,231; July 28; Gaz. vol. 204; p. 1180.
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution. No. 1,105,232; July 28; Gaz. vol. 204; p. 1181.
Woodcock, William G., Jr., Newark, N. J., assignor to Canadian Tobacco Utilities Limited, Toronto, Canada. Tobacco-stemming machine. No. 1,103,641; July 14; Gaz. vol. 204; p. 542.
Woodin, Norman C., *et al.* (See Stewart, David S., assignor.)
Woodland, Frank O., Worcester, Mass. Two-cycle internal-combustion engine. No. 1,104,596; July 21; Gaz. vol. 204; p. 913.
Woodruff, Leonidas D., Hattlesburg, Miss. Fluid-pressure coupling for train-pipes. No. 1,102,522; July 7; Gaz. vol. 204; p. 141.
Woodruff, Leonidas D., Hattlesburg, Miss. Safety-lock for coupling-heads. No. 1,104,597; July 21; Gaz. vol. 204; p. 913.
Woods, Henry J. (See Nelsen, Alfred N., assignor.)
Woods, Thomas, Syracuse, N. Y. Vending-machine. No. 1,105,477; July 28; Gaz. vol. 204; p. 1269.
Woodward, Frank R., Hill, N. H., assignor of one-half to Smith & Hemenway Company, New York, N. Y. Glass-cutter. No. 1,102,843; July 7; Gaz. vol. 204; p. 217.
Woodworth, Rollo E., Cleveland, Ohio. Barrel-stand. No. 1,102,972; July 7; Gaz. vol. 204; p. 259.
Woodyard, Jacob F., Parkersburg, W. Va. Propeller. No 1,103,855; July 14; Gaz. vol. 204; p. 614.
Woolner, Adolph, Jr., Peoria, Ill. Distillation. No. 1,104,948; July 28; Gaz. vol. 204; p. 1082.
Wooster, Clarence. (See Stuart, John, assignor.)
Wootten, Robert C., Danville, Va. Automatic stop device. No. 1,102,707; July 7; Gaz. vol. 204; p. 169.
Worcester Manufacturing Company. (See Ball, Harry, assignor.)
Wordingham, George, Milwaukee, Wis. Laundry-envelop. No. 1,105,120; July 28; Gaz. vol. 204; p. 1141.
Worsey, Charles H., Wilkinsburg, Pa., assignor to E. R. Knott Machine Company, Boston, Mass. Candy-spinning machine. No. 1,102,623; July 7; Gaz. vol. 204; p. 142.
Worsey, Charles H., Pittsburgh, Pa., assignor to E. R. Knott Machine Company, Boston, Mass. Candy-spinner. No. 1,102,624; July 7; Gaz. vol. 204; p. 142.
Wright, Alva B., Ramsey, Ill. Bundling-machine. No. 1,102,844; July 7; Gaz. vol. 204; p. 218.
Wright, Arthur W., Trinidad, and P. H. Knowlton, Denver, Colo. Combined writing-sheet and envelop. No. 1,105,012; July 28; Gaz. vol. 204; p. 1103.
Wright, Clark W. (See Wright, Earl P., assignor.)
Wright, Dexter M., San Francisco, Cal. Timpano-support. No. 1,104,236; July 21; Gaz. vol. 204; p. 786.
Wright, Earl P., assignor of one-half to C. W. Wright, Marion, Ohio. Collar-pad. No. 1,105,169; July 28; Gaz. vol. 204; p. 1157.
Wright, Gilbert, Schenectady, N. Y., assignor to General Electric Company. Circuit protection. No. 1,105,392; July 28; Gaz. vol. 204; p. 1240.
Wright Manufacturing Company. (See Blatchford, Frank, assignor.)
Wright, Robert, Cleveland, Ohio. Convertible tire. No. 1,105,121; July 28; Gaz. vol. 204; p. 1141.
Wright, Robert H., Nashville, assignor to Charleston S. C. Mining & Manufacturing Company, Mount Pleasant, Tenn. Washing and collecting apparatus. No. 1,103,390; July 14; Gaz. vol. 204; p. 451.
Wright, Walter, San Francisco, Cal., assignor, by mesne assignments, to Underwood Computing Machine Company. Computing-mechanism. No. 1,105,170; July 28; Gaz. vol. 204; p. 1158.
Wuest, Edward H., Cincinnati, Ohio. Hand-bag. No. 1,104,463; July 21; Gaz. vol. 204; p. 865.
Wyatt, Thomas L., Lynchburg, Va. Railway-switch. No. 1,105,393; July 28; Gaz. vol. 204; p. 1240.
Wyckoff, Amos A. (See Williams, Edward L., assignor.)
Wyckoff, Andrew D., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Settling-tank. No. 1,102,463; July 7; Gaz. vol. 204; p. 85.
Wyckoff, Robert L., and J. D. Nangle, Independence, Kans. Valve-extractor for wells. No. 1,104,237; July 21; Gaz. vol. 204; p. 786.
Wylde, Edward, New York, N. Y., and C. Schenck, Chicago, Ill., assignors to Elevator Supply & Repair Company. Door-controlling device. No. 1,105,053; July 28; Gaz. vol. 204; p. 1118.
Wynn, Thomas H., assignor of one-half to J. I. McLaren, Hamilton, Ontario, Canada. Automatic feeding device for tack-machines. No. 1,102,625; July 7; Gaz. vol. 204; p. 143.
Wyskosky, Edward, Wilmington, Del. Umbrella. No. 1,104,598; July 21; Gaz. vol. 204; p. 914.
Wysocki, John, Kewanee, Ill. Rail-tie. No. 1,102,845; July 7; Gaz. vol. 204; p. 218.
Xiyas, John, *et al.* (See Holman, John C., assignor.)
Yantis, Guy, Yantis, Tex. Tire. No. 1,104,599; July 21; Gaz. vol. 204; p. 914.
Yarnall, David R., assignor to Yarnall-Waring Company, Philadelphia, Pa. Valve. No. 1,103,120; July 14; Gaz. vol. 204; p. 360.
Yarnall-Waring Company. (See Yarnall, David R., assignor.)
Yates, Benjamin F., and F. W. Cohen, Rochester, Minn. Door-latch. No. 1,102,313; July 7; Gaz. vol. 204; p. 32.
Yauch, Christian, Detroit, Mich. Dormer. No. 1,103,461; July 14; Gaz. vol. 204; p. 476.
Yeocum, William, assignor to Star Cement Block Machine Company, Dallas City, Ill. Brick-machine. No. 1,102,708; July 7; Gaz. vol. 204; p. 170.
Yerzley, William A., Newark, N. J., assignor, by mesne assignments, to Nagle Re Blade Knife Company, Inc., Schenectady, N. Y. Gang work-holder. No. 1,102,314; July 7; Gaz. vol. 204; p. 32.
Young, Augustin E. (See Prior, Robert H., assignor.)
Young, Herbert W., Chicago, and A. S. Pearl, Maywood, Ill. Automobile-switch. No. 1,104,093; July 21; Gaz. vol. 204; p. 738.
Young, Jefferson D., Chattanooga, Okla., assignor to The Boltless Rail Joint Company, Wilmington, Del. Safety boltless rail-joint. No. 1,102,561; July 7; Gaz. vol. 204; p. 119.
Young, Joseph F., and O. J. Tebow, Tipton, Okla. Wire-stretcher. No. 1,104,600; July 21; Gaz. vol. 204; p. 914.
Young, Mathew, Beatrice, Nebr. Elevator for binders. No. 1,102,846; July 7; Gaz. vol. 204; p. 218.
Young, Samuel H., Durden, Ga. Rail-tie-spacing device. No. 1,103,726; July 14; Gaz. vol. 204; p. 571.
Youngman, John, and H. W. Drenan, assignors to The Vulcan Box Toe Process Co., Portsmouth, Ohio. Shoe-form. No. 1,102,464; July 7; Gaz. vol. 204; p. 85.
Zahn, Henry W., Syracuse, Nebr. Harvester and binder. No. 1,102,847; July 7; Gaz. vol. 204; p. 218.
Zahn, Robert, deceased, Plauen, Germany; A. Rietzsch, administrator. Embroidering-machine. No. 1,105,233; July 28; Gaz. vol. 204; p. 1181.
Zander, John, Chicago, Ill. Burner. No. 1,104,601; July 21; Gaz. vol. 204; p. 914.
Zander, John, and J. Levey, Chicago, Ill.; said Levey assignor to said Zander. Refrigerating apparatus. No. 1,105,171; July 28; Gaz. vol. 204; p. 1158.
Zander, John L., assignor to C. O. Sander, Irvington, N. J. Electric recorder. No. 1,104,949; July 28; Gaz. vol. 204; p. 1083.
Zapotoczny, Michal, Wilmerding, Pa. Wrench. No. 1,105,013; July 28; Gaz. vol. 204; p. 1104.
Zeitler, Raymond S., Urbana, Ill. Transmission-gearing. No. 1,102,378; July 7; Gaz. vol. 204; p. 54.

Zell, James H., assignor to The Aull Brothers Paper and Box Company, Dayton, Ohio. Folding box. No. 1,103,238; July 14; Gaz. vol. 204; p. 402.
Zerański, Stanislaw, Warsaw, Russia. Coffin. No. 1,102,626; July 7; Gaz. vol. 204; p. 143.
Zimmer, Paul H., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,102,315; July 7; Gaz. vol. 204; p. 32.
Zimmer, Wilhelm. (See Beringer and Zimmer.)
Zimmerman, James H., Placerville, Cal. Automobile repairer's support. No. 1,104,398; July 21; Gaz. vol. 204; p. 842.
Zimmerman, John, Council Bluffs, Iowa. Baffle-plate door. No. 1,104,950; July 28; Gaz. vol. 204; p. 1083.
Zimmers, Abraham M., Baltimore, Md. Wheel-tire. No. 1,103,642; July 14; Gaz. vol. 204; p. 543.
Zollars, Paul T., Olathe, Kans. Shock-loader. No. 1,102,848; July 7; Gaz. vol. 204; p. 219.
Zoller, Joseph, Chicago, Ill. Pocket-case. No. 1,102,379; July 7; Gaz. vol. 204; p. 54.
Zolling, Richard, Oakland, Cal. Tank-ship. No. 1,103,239; July 14; Gaz. vol. 204; p. 402.
Zubler, Johann J., Brombach, Germany, assignor to Maschinenfabrik Rüti, formerly Caspar Honegger, Rüti, Switzerland. Automatic stopping device for power-looms with fixed reeds. No. 1,104,951; July 28; Gaz. vol. 204; p. 1084.
Zusi, Norman E., Newark, N. J., assignor to Meisselbach-Catucci Mfg. Co. Hobbing special-shaped toothed gears. No. 1,104,859; July 28; Gaz. vol. 204; p. 1052.
Zwingenberger, Otto K., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Heating and evaporating liquids. No. 1,104,285; July 21; Gaz. vol. 204; p. 803.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Aaron, Max N., Philadelphia, Pa. Knitted trimming for underwear. Nos. 46,104–5; July 21; Gaz. vol. 204; p. 975.

Abrams, William, Chicago, Ill. Plate. No. 46,106; July 21; Gaz. vol. 204; p. 975.

Allen, Charles H., Syracuse, N. Y. Casing for hand spraying apparatus. No. 46,157; July 28; Gaz. vol. 204; p. 1314.

Allison, Estelle, San Francisco, Cal. Toy figure. No. 46,158; July 28; Gaz. vol. 204; p. 1314.

American Type Founders Company. (See Benton, Morris F., assignor.)

Anderson, John L., Ogden, Utah. Orange and grapefruit knife. No. 46,159; July 28; Gaz. vol. 204; p. 1315.

Artistic Bronze Co., The. (See Wilson, William A. G., assignor.)

Austin, George B., assignor to Austin and Stone, Inc., Attleboro, Mass. Watch, bracelet, or similar article. No. 46,040; July 7; Gaz. vol. 204; p. 282.

Austin and Stone. (See Austin, George B., assignor.)

Bechtold, Joseph H., Sioux Falls, S. D. Emblem. No. 46,107; July 21; Gaz. vol. 204; p. 975.

Benton, Morris F., Plainfield, assignor to American Type Founders Company, Jersey City, N. J. Font of type. No. 46,041; July 7; Gaz. vol. 204; p. 282.

Berry, George H., Shelton, assignor to International Silver Company, Meriden, Conn. Back for mirrors, brushes, or similar toilet articles. Nos. 46,042–5; July 7; Gaz. vol. 204; p. 283.

Bienenzucht, Abraham, New York, N. Y. Vanity-case. No. 46,160; July 28; Gaz. vol. 204; p. 1315.

Blesch, Charles, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio. Burial-casket handle. No. 46,108; July 21; Gaz. vol. 204; p. 975.

Boch, Louise H., Chicago, Ill. Carrier for valuables. No. 46,081; July 14; Gaz. vol. 204; p. 644.

Bosworth, Harvey, Plattsburg, N. Y. Fruit and vegetable knife. No. 46,161; July 28; Gaz. vol. 204; p. 1315.

Brandt, Carl, assignor to Brandt Leather Company, Boston, Mass. Leather. No. 46,082; July 14; Gaz. vol. 204; p. 645.

Brandt Leather Company. (See Brandt, Carl, assignor.)

Brown, Leslie A., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Sectional border. No. 46,083; July 14; Gaz. vol. 204; p. 645.

Buffalo Forge Co. (See Wendt, Henry W., assignor.)

Bump, George P., La Crosse, Wis. Casing for paper-fastening devices. No. 46,109; July 21; Gaz. vol. 204; p. 975.

Burley & Tyrrell Company. (See Hinrichs, Mabel W., assignor.)

Byrne, John F., assignor to City Button Works, New York, N. Y. Button. No. 46,084; July 14; Gaz. vol. 204; p. 645.

Caldwell & Company, J. E. (See Nassau, Mary E., assignor.)

Carr-Lowrey Glass Co. (See Gavin, John J., assignor.)

Chase, Irwin, assignor to The Elco Company, Bayonne, N. J. Boat-bollard. No. 46,085; July 14; Gaz. vol. 204; p. 645.

City Button Works. (See Byrne, John F., assignor.)

Clark, Willard F., assignor to P. H. Gilleland, Chicago, Ill. Bracket. No. 46,086; July 14; Gaz. vol. 204; p. 645.

Codman, William C., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 46,087; July 14; Gaz. vol. 204; p. 646.

Codman, William C., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. Nos. 46,110–16; July 21; Gaz. vol. 204; pp. 975–7.

Codman, William C., assignor to Gorham Manufacturing Company, Providence, R. I. Teapot or similar article. No. 46,162; July 28; Gaz. vol. 204; p. 1315.

Costigan, William H., Sauquoit, N. Y. Candelabrum. No. 46,046; July 7; Gaz. vol. 204; p. 284.

Crane & Breed Manufacturing Company, The. (See Blesch, Charles, assignor.)

Curtenius, Dwight R., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Kitchen-cabinet. No. 46,047; July 7; Gaz. vol. 204; p. 284.

Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)

Deasy, Peter A., assignor to Deasy Utilities Company, Oakland, Cal. Water-heater. No. 46,048; July 7; Gaz. vol. 204; p. 284.

Deasy Utilities Company. (See Deasy, Peter A., assignor.)

Dennison Manufacturing Company. (See Mead, Clara L., assignor.)

Depollier, Charles L., New York, assignor to Dubois Watch Case Company, Brooklyn, N. Y. Jewelry-display box or case. Nos. 46,117–20; July 21; Gaz. vol. 204; pp. 977–8.

Depollier, Charles L., New York, assignor to Dubois Watch Case Company, Brooklyn, N. Y. Bracelet-watch. No. 46,121; July 21; Gaz. vol. 204; p. 978.

Diamond Match Company, The. (See Merritt, Edwin A., assignor.)

Dieges, Charles J., New York, N. Y. Badge. No. 46,049; July 7; Gaz. vol. 204; p. 284.

Dowst, Samuel M., Chicago, Ill. Game-board. No. 46,163; July 28; Gaz. vol. 204; p. 1315.

Dubois Watch Case Company. (See Depollier, Charles L., assignor.)

E. L. Mansure Company. (See Weilert, Carl, assignor.)

Elco Company, The. (See Chase, Irwin, assignor.)

Embury Manufacturing Co. (See Hill, James H., assignor.)

Ericson, Emile, Pelham, N. Y. Fabric. No. 46,122; July 21; Gaz. vol. 204; p. 978.

Estate of P. D. Beckwith. (See Howes, George W., assignor.)

Fairhurst, William S., New York, N. Y. Valve. No. 46,164; July 28; Gaz. vol. 204; p. 1316.

Farnell, Firm of J. K. (See Scoles, Walter, assignor.)

Fleseler, George, Bellmore, assignor to Hayden W. Wheeler and Co., New York, N. Y. Box or case for holding and displaying watch-bracelets. No. 46,050; July 7; Gaz. vol. 204; p. 284.

Fink, Henry, Newark, N. J. Stand for holding cigars, pipes, matches, and lighters. No. 46,165; July 28; Gaz. vol. 204; p. 1316.

Fischrupp, Frederick A., Whiting, Ind. Electric-lantern base. No. 46,051; July 7; Gaz. vol. 204; p. 284.

Friedley-Voshardt Company. (See Mohrmann, Paul, assignor.)

Gaertner, Rudolf. (See Walklett, Frederick T., assignor.)

Gavin, John J., assignor to Carr-Lowrey Glass Co., Baltimore, Md. Bottle. No. 46,166; July 28; Gaz. vol. 204; p. 1316.

Gebelein, George C., Wellesley, Mass. Door-knocker. No. 46,088; July 14; Gaz. vol. 204; p. 646.

Gibbs, Fred C., South Portland, Me. Milk-bottle holder. No. 46,089; July 14; Gaz. vol. 204; p. 646.

Gilleland, Pierre H. (See Clark, Willard F., assignor.)

Gleason, Marshall W., New York, N. Y. Artificial-light shade. No. 46,123; July 21; Gaz. vol. 204; p. 978.

Goldberg, Shepard J., New York, N. Y. Bottle. No. 46,090; July 14; Gaz. vol. 204; p. 646.

Gorham Manufacturing Company. (See Codman, William C., assignor.)

Greer, Alpheus M., Runnels county, near Goldsboro, Tex. Combined knife and saw. No. 46,091; July 14; Gaz. vol. 204; p. 647.

Gutmann, Charles H., Mount Vernon, assignor to Lazarus & Rosenfeld, New York, N. Y. Candlestick. No. 46,124; July 21; Gaz. vol. 204; p. 979.

H. D. Smith & Company, The. (See Thomson, William S., assignor.)

Hawley, John H., New York, N. Y. Button. No. 46,125; July 21; Gaz. vol. 204; p. 979.

Hawthorne, Ellsworth A., Bridgeport, Conn. Mounting for lamps and lamp-supply containers. No. 46,092; July 14; Gaz. vol. 204; p. 647.

Hayden W. Wheeler and Co. (See Fleseler, George, assignor.)

Heath, Frederick G., Headless Cross, near Redditch, England. Holder for securing crochet-balls to the user's wrist. No. 46,126; July 21; Gaz. vol. 204; p. 979.

Hill, James H., Rochester, assignor to Embury Manufacturing Co., Warsaw, N. Y. Carriage-lamp. No. 46,093; July 14; Gaz. vol. 204; p. 647.

Hinrichs, Mabel W., assignor to Burley & Tyrrell Company, Chicago, Ill. Article of manufacture. No. 46,127; July 21; Gaz. vol. 204; p. 979.

Howes, George W., assignor to Estate of P. D. Beckwith, Inc., Dowagiac, Mich. Heating-stove. No. 46,094; July 14; Gaz. vol. 204; p. 647.

Imperial Glass Company. (See Oldham, Charles W., assignor.)

Imperial Player Roll Company. (See Petit, Gabriel A., assignor.)

International Silver Company. (See Berry, George H., assignor.)

Janette, John T., Chicago, Ill. Air-pump support and casing. No. 46,095; July 14; Gaz. vol. 204; p. 647.

Jewett, Josiah, Jr., Buffalo, N. Y. Cooking-range. No. 46,052; July 7; Gaz. vol. 204; p. 285.

Johnson, Joseph W. (See Treiber and Johnson.)
Johnson, Joseph W., assignor to T. R. Treiber, Kansas City, Mo. Pool-table pocket. No. 46,170; July 28; Gaz. vol. 204; p. 1317.
Johnson, Lindley L., Greenville, Tex. Change-holding plate. No. 46,128; July 21; Gaz. vol. 204; p. 979.
K. & E. Blouse Makers. (See Keller and Oathout, assignors.)
Kalamazoo Stove Company. (See Curtenius, Dwight R., assignor.)
Kaufman, Joseph, New York, N. Y. Cigar-cutter. No. 46,053; July 7; Gaz. vol. 204; p. 285.
Keller, Fred C., and C. E. Oathout, assignors to K. & E. Blouse Makers, Cleveland, Ohio. Garment. No. 46,167; July 28; Gaz. vol. 204; p. 1316.
Klef, Martin, Hondale, N. Mex. Towel-holder. No. 46,096; July 14; Gaz. vol. 204; p. 648.
Klenzle, Erich, New York, N. Y. Clock-casing. No. 46,129; July 21; Gaz. vol. 204; p. 980.
Kirschbraun, Hyman, San Francisco, Cal. Pincushion. No. 46,168; July 28; Gaz. vol. 204; p. 1317.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Casing for pendent electric switches. No. 46,130; July 21; Gaz. vol. 204; p. 980.
Klein, John V., Battle Creek, Nebr. Toy. No. 46,080; July 7; Gaz. vol. 204; p. 290.
Klemm, Edwin O., Saginaw, Mich., assignor of one-half to E. W. Schreiber, Yuma, Ariz. Stool. No. 46,054; July 7; Gaz. vol. 204; p. 285.
Kuopf, Andrew J., Maywood, Ill. Plate. No. 46,169; July 28; Gaz. vol. 204; p. 1317.
Lanphear, Ozro C., Galesburg, Ill. Pin, brooch, or similar article of jewelry. No. 46,171; July 28; Gaz. vol. 204; p. 1317.
Large, William L., Brooklyn, N. Y., assignor to The Owen China Co., Minerva, Ohio. Plate or similar article. Nos. 46,172–4; July 28; Gaz. vol. 204; pp. 1317–18.
Lazarus & Rosenfeld. (See Gutmann, Charles H., assignor.)
Lusk, Roy A., New York, N. Y. Mustard-bottle. No. 46,131; July 21; Gaz. vol. 204; p. 980.
MacLaren, Joseph W., New York, N. Y., and E. Speck, Passaic, N. J. Ribbon, and particularly for brocaded woven ribbon. No. 46,175; July 28; Gaz. vol. 204; p. 1318.
Mallinson, Hiram R., New York, N. Y. Textile fabric. No. 46,176; July 28; Gaz. vol. 204; p. 1318.
Martens, John B., Cleveland, Ohio. Die-holder. No. 46,056; July 7; Gaz. vol. 204; p. 285.
McKee, Raymond E., Chicago, Ill. Broom-holder. No. 46,057; July 7; Gaz. vol. 204; p. 286.
Mead, Clara L., Rahway, N. J., assignor to Dennison Manufacturing Company, Boston, Mass. Paper sheet or similar article. Nos. 46,177–9; July 28; Gaz. vol. 204; pp. 1318–19.
Merritt, Edwin A., New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Holder for book or card matches and the like. No. 46,055; July 7; Gaz. vol. 204; p. 285.
Miller, Arthur K., Peekskill, N. Y. Automobile lamp-globe. No. 46,097; July 14; Gaz. vol. 204; p. 648.
Miller Lock Co. (See Soley, Frank, assignor.)
Mohrmann, Paul, assignor to Friedley-Voshardt Company, Chicago, Ill. Plate for drop-light fixtures. Nos. 46,132–4; July 21; Gaz. vol. 204; pp. 980–1.
Mygatt, Otis A., New York, N. Y. Corrugated pressed-glass shade or reflector. No. 46,058; July 7; Gaz. vol. 204; p. 286.
Mygatt, Otis A., New York, N. Y. Glass shade or reflector. No. 46,098; July 14; Gaz. vol. 204; p. 648.
Nassau, Mary E., assignor to J. E. Caldwell & Company, Philadelphia, Pa. Badge, pin, or society-emblem. No. 46,135; July 21; Gaz. vol. 204; p. 981.
Nerney, George E., Attleboro, Mass. Emblem or badge. No. 46,099; July 14; Gaz. vol. 204; p. 648.
Nichols, Horace C., Brookline, Mass. Combination sink and tray bracket. No. 46,136; July 21; Gaz. vol. 204; p. 981.
Northwood, Harry, Wheeling, W. Va. Spoon-holder or similar article. No. 46,059; July 7; Gaz. vol. 204; p. 286.
Oathout, Charles E. (See Keller and Oathout.)
Ogden, John, Cardington, Pa. Radiator. No. 46,180; July 28; Gaz. vol. 204; p. 1319.
Oldham, Charles W., Steubenville, assignor to Imperial Glass Company, Bellaire, Ohio. Goblet. No. 46,060; July 7; Gaz. vol. 204; p. 286.
Onondaga Pottery Company. (See Walter, Elmer E., assignor.)
Ott, Charles B., Echo Point, W. Va. Artificial-light inclosure. Nos. 46,061–2; July 7; Gaz. vol. 204; pp. 286–7.
Owen China Co., The. (See Large, William L., assignor.)
Paluch, Anthony, Detroit, Mich. Cuff-button. No. 46,181; July 28; Gaz. vol. 204; p. 1319.
Pederson, Seth E., Jud, N. D. Necktie-holder. No. 46,063; July 7; Gaz. vol. 204; p. 287.
Petit, Gabriel A., assignor to Imperial Player Roll Company, Chicago, Ill. Label-blank. No. 46,182; July 28; Gaz. vol. 204; p. 1319.
Pfanschmidt, Charles, assignor to Theo. A. Kochs Co., Chicago, Ill. Seat-frame for barbers' chairs. No. 46,064; July 7; Gaz. vol. 204; p. 287.
Pfau, Charles, Cincinnati, Ohio. Tank. No. 46,065; July 7; Gaz. vol. 204; p. 287.
Pickard, Albert E., Roslyn, N. Y. Bottle. No. 46,066; July 7; Gaz. vol. 204; p. 287.
Pobl, Georg, Melvin, Iowa. Garment-hanger. No. 46,100; July 14; Gaz. vol. 204; p. 648.
Prochaska, Karl, Vienna, Austria-Hungary. Pot and cover lifter. No. 46,183; July 28; Gaz. vol. 204; p. 1319.
R. Wallace & Sons Mfg. Co. (See Brown, Leslie A., assignor.)
Reist, Warren D., Williamsville, N. Y. Crochet-stand. No. 46,137; July 21; Gaz. vol. 204; p. 981.
Rice, Richard H., Lynn, Mass. Automobile-body. No. 46,101; July 14; Gaz. vol. 204; p. 649.
Rossotto, Pasquale, New York, N. Y. Ash-tray. No. 46,102; July 14; Gaz. vol. 204; p. 649.
Schneider, Henry. (See Schneider, John and H.)
Schneider, John and H., Ann Arbor, Mich. Cowl-dash for automobiles. No. 46,184; July 28; Gaz. vol. 204; p. 1320.
Schreiber, Edwin W. (See Klemm, Edwin O., assignor.)
Scoles, Walter, assignor to Firm of J. K. Farnell, London, England. Toy. Nos. 46,069–70; July 7; Gaz. vol. 204; p. 288.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Stocking. Nos. 46,185–6; July 28; Gaz. vol. 204; p. 1320.
Scott & Williams. (See Scott, Robert W., assignor.)
Searight, John R., Detroit, Mich. Pencil-sharpener. No. 46,068; July 7; Gaz. vol. 204; p. 288.
Simenson, Axel M., Cooperstown, N. D. Combined shelf and clothes-rack. No. 46,187; July 28; Gaz. vol. 204; p. 1320.
Soley, Frank, assignor to Miller Lock Co., Philadelphia, Pa. Padlock. No. 46,103; July 14; Gaz. vol. 204; p. 649.
Speck, Emil. (See MacLaren and Speck.)
Straus & Sons, L. (See Zahn, Emanuel, assignor.)
Team, Edna Z., Camden, S. C. Pen-wiper. No. 46,188; July 28; Gaz. vol. 204; p. 1320.
Teitelbaum, Adolph, New York, N. Y. Case for clocks or other articles. No. 46,138; July 21; Gaz. vol. 204; p. 981.
Theo. A. Kochs Co. (See Pfanschmidt, Charles, assignor.)
Thomson, William S., assignor to The H. D. Smith & Company, Plantsville, Conn. Solid wrench. No. 46,189; July 28; Gaz. vol. 204; p. 1321.
Thurber, Frederick B., assignor to Tilden-Thurber Corporation, Providence, R. I. Shaving-brush handle. Nos. 46,139–45; July 21; Gaz. vol. 204; pp. 981–2.
Tilden-Thurber Corporation. (See Thurber, Frederick B., assignor.)
Treiber, Theodore R. (See Johnson, Joseph W., assignor.)
Treiber, Theodore R., and J. W. Johnson, Kansas City, Mo. Pool-table pocket. No. 46,190; July 28; Gaz. vol. 204; p. 1321.
Trigg, Walter R., Rockford, Ill. Monument. Nos. 46,071–2; July 7; Gaz. vol. 204; p. 288.
Trigg, Walter R., Rockford, Ill. Monument. No. 46,191; July 28; Gaz. vol. 204; p. 1321.
Twombly, Willard I., New York, N. Y. Vehicle-body. No. 46,146; July 21; Gaz. vol. 204; p. 983.
Van Raalts, Zealle, New York, N. Y. Net veiling. No. 46,067; July 7; Gaz. vol. 204; p. 288.
Vasek, Michael, Great Neck, N. Y. Picture-frame. No. 46,147; July 21; Gaz. vol. 204; p. 983.
Waite Grass Carpet Company. (See Waite, Ossian T., assignor.)
Waite, Ossian T., assignor to Waite Grass Carpet Company, Oshkosh, Wis. Grass rug or carpet. No. 46,148; July 21; Gaz. vol. 204; p. 983.
Walker, Edwin, Erie, Pa. Bottle-cap remover. No. 46,149; July 21; Gaz. vol. 204; p. 983.
Walklett, Frederick T., Tunstall, England, assignor to R. Gaertner, New York, N. Y. Article of manufacture. Nos. 46,073–6; July 7; Gaz. vol. 204; p. 289.
Walter, Elmer E., assignor to Onondaga Pottery Company, Syracuse, N. Y. Plate. No. 46,077; July 7; Gaz. vol. 204; p. 290.
Wardwell Braiding Machine Company. (See Wardwell, Simon W., assignor.)
Wardwell, Simon W., Providence, R. I., assignor to Wardwell Braiding Machine Company, Portland, Me. Twine-holder. Nos. 46,078–9; July 7; Gaz. vol. 204; p. 290.
Webb, George L., Crestwood, Ky. Kitchen-rack. No. 46,150; July 21; Gaz. vol. 204; p. 983.
Weil, Henry, New York, N. Y. Pillow-top. Nos. 46,192–3; July 28; Gaz. vol. 204; p. 1321.
Wellert, Carl, assignor to E. L. Mansure Company, Chicago, Ill. Valance. No. 46,194; July 28; Gaz. vol. 204; p. 1322.
Weir, James L., Chatham, Ontario, Canada. Collar-spacer. No. 46,151; July 21; Gaz. vol. 204; p. 983.
Wendt, Henry W., assignor to Buffalo Forge Co., Buffalo, N. Y. Blower-gear casing. No. 46,152; July 21; Gaz. vol. 204; p. 984.
Whitehouse, John N., Newark, N. J. Button. Nos. 46,153–5; July 21; Gaz. vol. 204; p. 984.
Wilson, William A. G., assignor to The Artistic Bronze Co., Bridgeport, Conn. Ice-cream-cone holder. No. 46,195; July 28; Gaz. vol. 204; p. 1322.
Zahn, Emanuel, Blumenbach, Austria-Hungary, assignor to L. Straus & Sons, New York, N. Y. Glass or similar article. No. 46,156; July 21; Gaz. vol. 204; p. 984.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. C. Lawrence Leather Co., Boston, Mass. Leather. No. 98,297; July 7; Gaz. vol. 204; p. 314.
A. W. Harris Oil Co., Providence, R. I. Lubricating-oils. No. 98,146; July 7; Gaz. vol. 204; p. 310.
Aaron Peters Laboratories, Inc., Washington, D. C. Paper towels, diapers, and napkins. No. 98,317; July 7; Gaz. vol. 204; p. 315.
Abbott & Co., A. Theo., Philadelphia, Pa. Drapery material. No. 98,610; July 28; Gaz. vol. 204; p. 1339.
Abram Cox Stove Company, Philadelphia, Pa. Ranges, stoves, and heaters. No. 98,252; July 7; Gaz. vol. 204; p. 313.
Acme Mills, The, Hopkinsville, Ky. Self-rising wheat-flour. No. 98,611; July 28; Gaz. vol. 204; p. 1339.
Adiposa Company, The, Chicago, Ill. Massage-cream and medicines to aid nutrition, &c. No. 98,452; July 21; Gaz. vol. 204; p. 1005.
Adjustable Table Company, The, Grand Rapids, Mich. Certain named furniture. No. 98,231; July 7; Gaz. vol. 204; p. 312.
Agus Shade Carrier Company, The, Baltimore, Md. Window-shade carriers, metal curtain-fixtures, and shade-adjusters. No. 98,349; July 14; Gaz. vol. 204; p. 669.
Aladdin Electric Lamp Company, Wilmington, Del. Electric lamps. No. 98,350; July 14; Gaz. vol. 204; p. 669.
Albuquerque Creamery, Albuquerque, N. Mex. Butter. No. 98,613; July 28; Gaz. vol. 204; p. 1339.
Aldabó, Enrique, Habana, Cuba. Rum. No. 98,612; July 28; Gaz. vol. 204; p. 1339.
Allen, Slade & Co., Fall River, Mass. Coffee. No. 98,453; July 21; Gaz. vol. 204; p. 1005.
American Die & Tool Co., Reading, Pa. Certain named tools and machinery. No. 98,454; July 21; Gaz. vol. 204; p. 1005.
American Milk Company, Chicago, Ill. Skimmed powdered milk. No. 98,232; July 7; Gaz. vol. 204; p. 312.
American Rotogravure Company, New York, N. Y. Photogravures. No. 98,455; July 21; Gaz. vol. 204; p. 1005.
American Type Founders Company, Jersey City, N. J. Metal space or quad. No. 98,614; July 28; Gaz. vol. 204; p. 1339.
Ammon & Person, Jersey City, N. J. Oleomargarin. No. 98,615; July 28; Gaz. vol. 204; p. 1339.
Amsterdam Polish Company, Amsterdam, N. Y. Furniture-polish. No. 98,351; July 14; Gaz. vol. 204; p. 669.
Ansco Company, Binghamton, N. Y. Cameras, shutters, combined printing-machine and dark-room lamps, and films. No. 98,456; July 21; Gaz. vol. 204; p. 1005.
Ansco Company, Binghamton, N. Y. Chemicals used in photographic processes. No. 98,457; July 21; Gaz. vol. 204; p. 1005.
Ansonia Clock Company, New York, N. Y. Watches and clocks. No. 98,233; July 7; Gaz. vol. 204; p. 312.
Appleton Company, Lowell, Mass. Cotton piece goods. Nos. 98,352–5; July 14; Gaz. vol. 204; p. 669.
Appleton Company, Lowell, Mass. Cotton piece goods. Nos. 98,458–9; July 21; Gaz. vol. 204; p. 1005.
Appleton Company, Lowell, Mass. Cotton piece goods. No. 98,616; July 28; Gaz. vol. 204; p. 1339.
Armour & Company, Chicago, Ill. Products consisting of certain named foods. No. 98,617; July 28; Gaz. vol. 204; p. 1339.
Aronson, Louis V., Newark, N. J. Certain cigar and cigarette lighting devices. No. 98,234; July 7; Gaz. vol. 204; p. 312.
Aronson, Louis V., Newark, N. J. Cigar and gas lighting devices. No. 98,460; July 21; Gaz. vol. 204; p. 1005.
Arthur Chemical Co., New Haven, Conn. Flavoring extracts for foods. No. 98,111; July 7; Gaz. vol. 204; p. 309.
Asiatic Petroleum Company, Limited, London, England. Certain named burning oils, lubricants, candles, night-lights, and mineral wax. No. 98,112; July 7; Gaz. vol. 204; p. 309.
Asiatic Petroleum Company, Limited, The, London, England. Gasolene, naphtha, lubricating oils and greases, &c. No. 98,235; July 7; Gaz. vol. 204; p. 312.
Asiatic Petroleum Company, Limited, The, London, England. Candles, night-lights, and mineral wax for illuminating and heating purposes. No. 98,236; July 7; Gaz. vol. 204; p. 312.
Atlanta Canning Company, Atlanta, N. Y. Canned vegetables. No. 98,237; July 7; Gaz. vol. 204; p. 312.
Atlantic Macaroni Co., Long Island City, N. Y. Macaroni. No. 98,238; July 7; Gaz. vol. 204; p. 313.
Atlas Bread Factory, Milwaukee, Wis. Bread. No. 98,461; July 21; Gaz. vol. 204; p. 1005.
Attig, John H., Los Angeles, Cal. Eczema-ointment. No. 98,113; July 7; Gaz. vol. 204; p. 309.
Aubry Sisters, Inc., New York, N. Y. Certain named toilet preparation. No. 98,114; July 7; Gaz. vol. 204; p. 309.
Auto Pneumatic Action Co., New York, N. Y. Player-pianos, piano-players, and actions therefor. No. 98,462; July 21; Gaz. vol. 204; p. 1005.
Autosales Gum and Chocolate Company, New York, N. Y., assignor, by mesne assignments, to The Sterling Company. Chewing-gum. No. 98,618; July 28; Gaz. vol. 204; p. 1339.
Avalon Knitwear Company, Utica, N. Y. Knit and woven underwear. No. 98,619; July 28; Gaz. vol. 204; p. 1339.
B. C. Remedy Company, Durham, N. C. Remedy for headache and neuralgia. No. 98,564; July 21; Gaz. vol. 204; p. 1008.
Baehr Manufacturing Co., The, Cleveland, Ohio. Mechanical apparatus for cleansing beer-pipes. No. 98,463; July 21; Gaz. vol. 204; p. 1005.
Bailey Brothers, Inc., Winston-Salem, N. C. Plug-tobacco. No. 98,620; July 28; Gaz. vol. 204; p. 1339.
Bailey's Sons & Co., C. M., Winthrop, Me. Oil-cloths. No. 98,464; July 21; Gaz. vol. 204; p. 1005.
Baker, De Witt C., New York, N. Y. Cycles. No. 98,239; July 7; Gaz. vol. 204; p. 313.
Baker, Molse & Co., Dallas, Tex. Hosiery. No. 98,356; July 14; Gaz. vol. 204; p. 669.
Barber, P. T., Omaha, Nebr. Antiseptic wash for the treatment of pyorrhea alveolaris, &c. No. 98,116; July 7; Gaz. vol. 204; p. 309.
Barlet, Anthony, New York, N. Y. Cakes. No. 98,621; July 28; Gaz. vol. 204; p. 1339.
Barnes, Alfred G., Ravenna, Ohio. Cough-syrup powder. No. 98,117; July 7; Gaz. vol. 204; p. 309.
Barr, David, Chicago, Ill. Rheumatism remedies. No. 98,240; July 7; Gaz. vol. 204; p. 313.
Batterton, Henry F., Birmingham, Ala. Coffee and mixtures of coffee and chicory. No. 98,622; July 28; Gaz. vol. 204; p. 1339.
Baum & Company, Beaumont, Tex. Remedy for sore heads of chickens. No. 98,118; July 7; Gaz. vol. 204; p. 309.
Bayway Chemical Company, Elizabeth, N. J. Certain liquid protective coating. No. 98,119; July 7; Gaz. vol. 204; p. 309.
Becker & Langenberg Milling Company, Republic, Mo. Wheat-flour. No. 98,241; July 7; Gaz. vol. 204; p. 313.
Becker & Langenberg Milling Company, Republic, Mo. Wheat-flour. No. 98,466; July 21; Gaz. vol. 204; p. 1005.
Belersdorf & Co., P., Hamburg, Germany. Hygienic and cosmetic preparations for the hair. No. 98,468; July 21; Gaz. vol. 204; p. 1005.
Ben Gershel & Co., New York, N. Y. Women's and misses' cloth suits. No. 98,656; July 28; Gaz. vol. 204; p. 1340.
Benario, Jakob, Frankfort-on-the-Main, Germany. Adhesive plasters and wound-salves. No. 98,121; July 7; Gaz. vol. 204; p. 309.
Berebaum, Lee E., Chicago, Ill. Hose-supporters and suspenders. No. 98,242; July 7; Gaz. vol. 204; p. 313.
Beyerle Mfg. Co., J. J., Brooklyn, N. Y. Toilet powder. No. 98,122; July 7; Gaz. vol. 204; p. 309.
Blackwell, St. Leger, Cleburne, Tex. Preparation for the treatment of certain named diseases. No. 98,469; July 21; Gaz. vol. 204; p. 1005.
Blades, Harvey, Chambersburg, Pa. Medicinal preparation for rheumatism. No. 98,470; July 21; Gaz. vol. 204; p. 1005.
Boetticher & Kellogg Co., Evansville, Ind. Certain named tools. No. 98,123; July 7; Gaz. vol. 204; p. 309.
Boles, George I., Philadelphia, Pa. Stock-bond registers in printed blank forms. No. 98,243; July 7; Gaz. vol. 204; p. 313.
Bonnet-Brown Sales Service, Chicago, Ill. Prints, publications, pictorial illustrations, and books. No. 98,244; July 7; Gaz. vol. 204; p. 313.
Booth's Distillery Limited, London, England. Straight dry gin. No. 98,245; July 7; Gaz. vol. 204; p. 313.
Boston Food Products Company, East Boston, Mass. Canned cod-fish balls, brown bread, and baked beans. No. 98,625; July 28; Gaz. vol. 204; p. 1339.
Bradley, Porte M., Joplin, Mo. Heating and cooking stoves. No. 98,246; July 7; Gaz. vol. 204; p. 313.
Breslin & Campbell, Inc., Boston, Mass. Cigars. No. 98,626; July 28; Gaz. vol. 204; p. 1339.
Brown, Abraham A., New York, N. Y. Trousers and suits. No. 98,629; July 28; Gaz. vol. 204; p. 1339.
Brown, Albert E., Mobile, Ala. Castor-oil. No. 98,125; July 7; Gaz. vol. 204; p. 309.
Brown, Walter M., Naches, Wash. Remedy for headache, rheumatism, and neuralgia. No. 98,472; July 21; Gaz. vol. 204; p. 1005.
Brueser, William, Kansas City, Mo. Plant food. No. 98,359; July 14; Gaz. vol. 204; p. 669.

Budd, Henry A., New York, N. Y. Necktles, neckscarfs, jabots, belts, &c. No. 98,473; July 21; Gaz. vol. 204; p. 1005.
Burke, Frank G., New York, N. Y. Cold-cream. No. 98,474; July 21; Gaz. vol. 204; p. 1005.
C. I. Hood Co., Lowell, Mass. Tonic for the nerves, blood, and brain. No. 98,284; July 7; Gaz. vol. 204; p. 314.
Caledonia Oil Co. Inc., New York, N. Y. Lubricating compounds, oils, and greases. No. 98,126; July 7; Gaz. vol. 204; p. 309.
Callahan Manufacturing Co., Seattle, Wash. Soap. No. 98,630; July 28; Gaz. vol. 204; p. 1339.
Cannon, Elizabeth S., St. Louis, Mo. Suits for children. No. 98,475; July 21; Gaz. vol. 204; p. 1005.
Capital City Brewing Company, Helena, Mont. Beer. No. 98,360; July 14; Gaz. vol. 204; p. 669.
Carnegie Steel Company, Pittsburgh, Pa. Splice-bars for railway-rails. No. 98,361; July 14; Gaz. vol. 204; p. 669.
Carson, Pirie, Scott & Co., Chicago, Ill. Ginghams and cotton piece goods. No. 98,476; July 21; Gaz. vol. 204; p. 1005.
Carson, Pirie, Scott & Co., Chicago, Ill. Unbleached muslin. No. 98,477; July 21; Gaz. vol. 204; p. 1005.
Carson, Pirie, Scott & Co., Chicago, Ill. Cotton piece goods. No. 98,631; July 28; Gaz. vol. 204; p. 1339.
Carson, Pirie, Scott & Co., Chicago, Ill. Handkerchiefs. No. 98,632; July 28; Gaz. vol. 204; p. 1339.
Cella Brothers, Inc., New York, N. Y. Wine. No. 98,478; July 21; Gaz. vol. 204; p. 1005.
Central Optical Co., Southbridge, Mass. Optical machinery, tools, and supplies used in the preparation, mounting, and fitting of lenses. No. 98,127; July 7; Gaz. vol. 204; p. 309.
Central Trust Company of New York, trustee. (See United States Light & Heating Company, The, assignor.)
Charles H. Besly & Company, Chicago, Ill. Grinding-disks. No. 98,623; July 28; Gaz. vol. 204; p. 1339.
Charles M. Hay Paint Co., Portland, Me. Polish for cleaning and polishing enameled and painted surfaces, &c. No. 98,387; July 14; Gaz. vol. 204; p. 670.
Charles Tiedemann Milling Co., O'Fallon, Ill. Wheat-flour. No. 98,336; July 7; Gaz. vol. 204; p. 315.
Charles Tiedemann Milling Company, O'Fallon, Ill. Wheat-flours. Nos. 98,589–90; July 21; Gaz. vol. 204; p. 1009.
Charles Zoller Co., New York, N. Y. Filter masse. No. 98,609; July 21; Gaz. vol. 204; p. 1009.
Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Remedies for gout and rheumatism. No. 98,479; July 21; Gaz. vol. 204; p. 1005.
Chesman-Reinbolt Co., The, Deerfield, Mich. Remedy for certain named diseases. No. 98,248; July 7; Gaz. vol. 204; p. 313.
Chicago Electric Meter Company, Chicago, Ill. Electricity-metering apparatus. No. 98,480; July 21; Gaz. vol. 204; p. 1006.
Christchurch Meat Company, Limited, The, Christchurch, New Zealand, and London, England. Frozen and preserved meats and bacon. No. 98,633; July 28; Gaz. vol. 204; p. 1339.
Christchurch Meat Company, Limited, Christchurch, New Zealand, and London, England. Frozen mutton and lamb. No. 98,634; July 28; Gaz. vol. 204; p. 1339.
Cipolla, Angelo, Providence, R. I. Certain named non-alcoholic beverages. No. 98,362; July 14; Gaz. vol. 204; p. 669.
Clarksville Medicine Company, Clarksville, Tenn. Preparations for the treatment of certain named diseases. No. 98,128; July 7; Gaz. vol. 204; p. 309.
Clayton Bros., Inc., Bristol, Conn. Scissors and shears. No. 98,129; July 7; Gaz. vol. 204; p. 309.
Cleveland-Akron Bag Co., The, Cleveland, Ohio. Woven textile used in manufacturing bags, certain coverings, and materials. No. 98,363; July 14; Gaz. vol. 204; p. 669.
Cleveland Foundry Co., Cleveland, Ohio. Oil-stoves, portable steel ovens, sad-iron heaters, &c. No. 98,481; July 21; Gaz. vol. 204; p. 1006.
Clip Bar Manufacturing Company, Philadelphia, Pa. Concrete constructions in sidewalks and curbs. No. 98,635; July 28; Gaz. vol. 204; p. 1339.
Cloud Publishing Company, Chicago, Ill. Monthly magazines. No. 98,636; July 28; Gaz. vol. 204; p. 1339.
Cohen, Philip M., Cheetham, Manchester, England. Certain named clothing for men and women. No. 98,637; July 28; Gaz. vol. 204; p. 1339.
Coboon, James A., St. Louis, Mo. Caps. No. 98,638; July 28; Gaz. vol. 204; p. 1339.
Colgate & Co., Jersey City, N. J., and New York, N. Y. Dental cream. No. 98,482; July 21; Gaz. vol. 204; p. 1006.
Columbia Star Milling Co., Columbia, Ill. Wheat-flour. Nos. 98,483–4; July 21; Gaz. vol. 204; p. 1006.
Columbian Rope Company, Auburn, N. Y. Rope. No. 98,364; July 14; Gaz. vol. 204; p. 669.
Columbus Dental Mfg. Company, Columbus, Ohio. Artificial teeth, tooth facings and backings. Nos. 98,365–6; July 14; Gaz. vol. 204; p. 669.
Consolidated Safety Valve Company, The, Bridgeport, Conn. Metallic valves and parts thereof. Nos. 98,367–8; July 14; Gaz. vol. 204; p. 669.
Consumers Importing Co., Newark, N. J. Tea. No. 98,249; July 7; Gaz. vol. 204; p. 313.
Continental Rubber Works, Erie, Pa. Pneumatic tires. No. 98,250; July 7; Gaz. vol. 204; p. 313.
Continental Rubber Works, Erie, Pa. Rubber tubes for pneumatic tires. No. 98,251; July 7; Gaz. vol. 204; p. 313.
Contogeones, Nicholas, New York, N. Y. Liniment. No. 98,485; July 21; Gaz. vol. 204; p. 1006.
Crawford, Nan C., New York, N. Y. Lotion for destroying perspiration odor. No. 98,132; July 7; Gaz. vol. 204; p. 309.
Crompton Company, Crompton, R. I. Certain named textile fabrics. No. 98,253; July 7; Gaz. vol. 204; p. 313.
Crooker, Gertrude M., Elmira, N. Y. Hair-tonic. No. 98,133; July 7; Gaz. vol. 204; p. 309.
Curtis, Frederick W., Akron, Ohio. Wood-polish. No. 98,134; July 7; Gaz. vol. 204; p. 309.
Dalpini Macaroni Company, St. Louis, Mo. Macaroni, spaghetti, vermicelli, &c. No. 98,640; July 28; Gaz. vol. 204; p. 1340.
Darrow, George E., Eugene, Oreg. Cleanser for linens. No. 98,641; July 28; Gaz. vol. 204; p. 1340.
Daumas, Henri, New York, N. Y. Hair-nets. No. 98,254; July 7; Gaz. vol. 204; p. 313.
David, Emil, New York, N. Y. Hair-nets. No. 98,642; July 28; Gaz. vol. 204; p. 1340.
Davies & Sullivan Company, New York, N. Y. Coffee, tea, and olive-oil. No. 98,255; July 7; Gaz. vol. 204; p. 313.
Davis, Uriel, New York, N. Y. Instructive literary compositions published serially. No. 98,256; July 7; Gaz. vol. 204; p. 313.
De Vore, Primrose R., Columbus, Ohio. Artificial flavors and extracts for beverages. No. 98,257; July 7; Gaz. vol. 204; p. 313.
Deitrick, Thos. P., Richmond, Va. Certain named foods. No. 98,258; July 7; Gaz. vol. 204; p. 313.
Denison & Company, Chicago, Ill. Coffee. No. 98,370; July 14; Gaz. vol. 204; p. 669.
Denison & Company, Chicago, Ill. Coffee and tea. No. 98,371; July 14; Gaz. vol. 204; p. 669.
Dentists' Supply Company, The, New York, N. Y. Artificial teeth. No. 98,259; July 7; Gaz. vol. 204; p. 313.
Deringer, George H., Minneapolis, Minn. Boilers. No. 98,487; July 21; Gaz. vol. 204; p. 1006.
Dewitt & Herz, Berlin, Germany. Certain named medical and surgical instruments and appliances. Nos. 98,488–9; July 21; Gaz. vol. 204; p. 1006.
Diamond M'f'g Co. of Del., Wilmington, Del. Athletic union suits of textile fabric. No. 98,372; July 14; Gaz. vol. 204; p. 669.
Dickey, Walter S., Kansas City, Mo. Tile and tile pipe. No. 98,373; July 14; Gaz. vol. 204; p. 669.
Dietetic Food Company, Baltimore, Md. Bread and breadsticks. No. 98,261; July 7; Gaz. vol. 204; p. 313.
Dietetic Food Company, Baltimore, Md. Bran biscuits and crackers. No. 98,262; July 7; Gaz. vol. 204; p. 313.
Douglass, John W., Philadelphia, Pa., assignor to Protective "Freflo" Stopple Company, Dover, Del. Porcelain, &c., stopples for bottles. No. 98,644; July 28; Gaz. vol. 204; p. 1340.
Douglass, John W., Philadelphia, Pa., assignor to Protective "Freflo" Stopple Company, Dover, Del. Metal stopples for bottles. No. 98,645; July 28; Gaz. vol. 204; p. 1340.
Downing Taylor Co., Springfield, Mass. Mince-meat, tomato catchup, corn-starch, and table-syrup. No. 98,335; July 7; Gaz. vol. 204; p. 315.
Dozier & Gay Paint Company, Jacksonville, Fla. Liquid wall-paint. No. 98,490; July 21; Gaz. vol. 204; p. 1006.
Dr. Pyle Veterinary Remedy Co., New Philadelphia, Ohio. Colic, azoturia, distemper, and gall cure, &c. No. 98,197; July 7; Gaz. vol. 204; p. 311.
Dreadnought Tire & Rubber Co., Baltimore, Md. Rubber vehicle-tires and inner tubes therefor. No. 98,646; July 28; Gaz. vol. 204; p. 1340.
Driscoll Bro's & Co., Ithaca, N. Y. Prepared sheet-roofing. No. 98,374; July 14; Gaz. vol. 204; p. 669.
Duebendorf, Mattie M., St. Paul, Minn. Salve. No. 98,135; July 7; Gaz. vol. 204; p. 309.
Dueber Watch Case Mfg. Co., The, Canton, Ohio. Ten-carat-gold watchcases. No. 98,263; July 7; Gaz. vol. 204; p. 313.
Dueber Watch Case Mfg. Co., The, Canton, Ohio. Eighteen-carat-gold watchcases. No. 98,264; July 7; Gaz. vol. 204; p. 313.
Dunkirk Macaroni Co., Dunkirk, N. Y. Macaroni. No. 98,491; July 21; Gaz. vol. 204; p. 1006.
Durbin-Mellon Hosiery Company, Williamstown, Pa. Men's half-hose and other hosiery. No. 98,647; July 28; Gaz. vol. 204; p. 1340.
Durr, La Fayette G., Nashville, Tenn. Liver remedy. No. 98,666; July 28; Gaz. vol. 204; p. 1340.
E. Myers Lye Co., St. Louis, Mo. Powdered lye. No. 98,309; July 7; Gaz. vol. 204; p. 315.
Eames, Ryland W., Vale, Oreg. Canned syrups. No. 98,492; July 21; Gaz. vol. 204; p. 1006.
Eastman Kodak Company, Rochester, N. Y. Photographic-shutter scales. No. 98,136; July 7; Gaz. vol. 204; p. 309.
Eastman Kodak Co., Rochester, N. Y. Photographic dry-plates, safe lights, color-screens, &c. No. 98,493; July 21; Gaz. vol. 204; p. 1006.

Edwards, Thee. W., Columbus, Miss. Cigars. No. 98,265; July 7; Gaz. vol. 204; p. 313.
Eiseman & Co., Samuel, New York, N. Y. Silk, silk and cotton, and satin piece goods. No. 98,648; July 28; Gaz. vol. 204; p. 1340.
Eisenmayer Milling Company, Springfield, Mo. Wheat-flour. No. 98,266; July 7; Gaz. vol. 204; p. 313.
Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co., Zornhoff, near Zabern, Germany. Certain named tools and parts thereof. No. 98,137; July 7; Gaz. vol. 204; p. 309.
Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co., Zornhoff, near Zabern, Germany. Certain named cutlery and tools and parts thereof. Nos. 98,138–9; July 7; Gaz. vol. 204; p. 309.
Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co., Zornhoff, near Zabern, Germany. Certain named tools, machine parts, and mills. No. 98,267; July 7; Gaz. vol. 204; p. 313.
Emerson Shoe Co., Rockland, Mass. Leather boots and shoes. No. 98,649; July 28; Gaz. vol. 204; p. 1340.
Emery & Marshall Co., Haverhill, Mass. Shoes. No. 98,496; July 21; Gaz. vol. 204; p. 1006.
Empire Mattress Company, Chicago, Ill. Mattresses. No. 98,268; July 7; Gaz. vol. 204; p. 313.
Estate of J. G. Hetzel, The, Newark, N. J. Elastic rubber roof-cement. No. 98,519; July 21; Gaz. vol. 204; p. 1007.
Estate P. D. Beckwith, Inc., Dowagiac, Mich. Wood, coal, gas, and vapor stores and furnaces. No. 98,407; July 21; Gaz. vol. 204; p. 1005.
Exchange Buffet Corporation, New York, N. Y. Certain lunches. No. 98,651; July 28; Gaz. vol. 204; p. 1340.
F. A. Hardy & Co., Chicago, Ill. Mountings for spectacles and eyeglasses. No. 98,145; July 7; Gaz. vol. 204; p. 310.
F. A. Hardy & Co., Chicago, Ill. Mountings for spectacles and eyeglasses. No. 98,385; July 14; Gaz. vol. 204; p. 670.
Falconer, Jerome L., New York, N. Y. Digestive and corrective for stomach trouble. No. 98,497; July 21; Gaz. vol. 204; p. 1006.
Farnsworth, Hoyt & Co., Boston, Mass. Cotton twills. No. 98,652; July 28; Gaz. vol. 204; p. 1340.
Federal Milling Company, Lockport, N. Y. Wheat-flour and feeds. No. 98,498; July 21; Gaz. vol. 204; p. 1006.
Federal Milling Company, Lockport, N. Y. Feed composed of certain named grains. No. 98,653; July 28; Gaz. vol. 204; p. 1340.
Felten & Guilleaume Carlswerk Actien-Gesellschaft, Mulheim-on-the-Rhine, Germany. Various metals in certain named forms, and wire. No. 98,140; July 7; Gaz. vol. 204; p. 310.
Felten & Guilleaume Carlswerk Actien-Gesellschaft, Mülheim-on-the-Rhine, Germany. Cords and ropes composed of certain named materials. No. 98,377; July 14; Gaz. vol. 204; p. 669.
Felten & Guilleaume Carlswerk Actien-Gesellschaft, Mülheim-on-the-Rhine, Germany. Metals and metal castings and forgings. No. 98,499; July 21; Gaz. vol. 204; p. 1006.
Felten & Guilleaume Carlswerk Actien-Gesellschaft, Mülheim-on-the-Rhine, Germany. Electrical apparatus and supplies. No. 98,500; July 21; Gaz. vol. 204; p. 1006.
Felten & Guilleaume Carlswerk Actien-Gesellschaft, Mülheim-on-the-Rhine, Germany. Certain named machines and parts thereof. No. 98,501; July 21; Gaz. vol. 204; p. 1006.
Finger, Frederick W., Louisville, Ky. Non-alcoholic malt beverages. No. 98,378; July 14; Gaz. vol. 204; p. 670.
Fire Proof Book and Stationery Co., Oakland, Cal. Fire-proof safes. No. 98,379; July 14; Gaz. vol. 204; p. 670.
Fisk Rubber Company, The, Chicopee Falls, Mass. Pneumatic and solid rubber vehicle-tires. No. 98,502; July 21; Gaz. vol. 204; p. 1006.
Fitzpatrick Bros., Chicago, Ill. Washing compound. Nos. 98,270–1; July 7; Gaz. vol. 204; p. 313.
Flamhaft, Harry Y., St. Louis, Mo. Disinfectant and air-purifier. No. 98,503; July 21; Gaz. vol. 204; p. 1006.
Ford Motor Company, Detroit, Mich. Automobiles, bodies, running-gears, and chassis. No. 98,655; July 28; Gaz. vol. 204; p. 1340.
Foster, Claud H., Cleveland, Ohio. Shock-absorbing devices. No. 98,273; July 7; Gaz. vol. 204; p. 314.
Fowler Sign Company, Tacoma, Wash. Apparatus for lighting public halls by indirect light. No. 98,274; July 7; Gaz. vol. 204; p. 314.
Frank H. Fleer Corporation, Philadelphia, Pa. Chewing-gum. Nos. 98,504–5; July 21; Gaz. vol. 204; p. 1006.
Franklin Oil & Gas Company, Bedford, Ohio. Lubricating-oils. No. 98,654; July 28; Gaz. vol. 204; p. 1340.
Frazier, George W., New York, N. Y. Rubber vaginal douche. No. 98,380; July 14; Gaz. vol. 204; p. 670.
Frederick Ludlam Co., New York, N. Y. Fertilizers. Nos. 98,300–1; July 7; Gaz. vol. 204; p. 314.
French Fondant Co., Philadelphia, Pa. Prepared icings and fondant-creams. No. 98,506; July 21; Gaz. vol. 204; p. 1006.
Fried. Krupp, Aktiengesellschaft, Grusonwerk, Magdeburg-Buckau, Germany. Certain named machines and parts. No. 98,143; July 7; Gaz. vol. 204; p. 310.
Fulton Bag & Cotton Mills, Atlanta, Ga. Disinfectants. No. 98,275; July 7; Gaz. vol. 204; p. 314.
G. V. S. Quackenbush & Co., Troy, N. Y. Hosiery. No. 98,418; July 14; Gaz. vol. 204; p. 671.
Gaffney Brothers, New York, N. Y. Washing fluid. No. 98,507; July 21; Gaz. vol. 204; p. 1006.
Gehe & Co. Aktiengesellschaft, Dresden, Germany. Malt extracts. No. 98,508; July 21; Gaz. vol. 204; p. 1006.
General Oil Manufacturing Company, New York, N. Y. Lubricating oils and greases. No. 98,509; July 21; Gaz. vol. 204; p. 1006.
Geo. Borgfeldt & Co., New York, N. Y. Knives, scissors, and shears. No. 98,124; July 7; Gaz. vol. 204; p. 309.
Geo. Borgfeldt & Co., New York, N. Y. Certain named leather articles. No. 98,624; July 28; Gaz. vol. 204; p. 1339.
Geo. H. Morrill Co., Boston, Mass. Printing and lithographing ink, dry colors, and carbon. No. 98,308; July 7; Gaz. vol. 204; p. 315.
Geo. S. Johnston Company, Chicago, Ill. Eyeglass-reels. No. 98,533; July 21; Gaz. vol. 204; p. 1007.
George Blome & Son Co., The, Baltimore, Md. Candy cough-drops. No. 98,471; July 21; Gaz. vol. 204; p. 1005.
Gerhardt, Henry, Hazleton, Pa. Shirts. No. 98,510; July 21; Gaz. vol. 204; p. 1006.
Gibbs-Brown Oil and Gasoline Company, St. Louis, Mo. Lubricating and mineral oils. No. 98,381; July 14; Gaz. vol. 204; p. 670.
Gibbs-Brown Oil and Gasoline Company, St. Louis, Mo. Lubricating-oils. No. 98,511; July 21; Gaz. vol. 204; p. 1006.
Gibson, George G., Philadelphia, Pa. Preparation for the treatment of headache and rheumatism. No. 98,512; July 21; Gaz. vol. 204; p. 1006.
Gilkes, Viola V., Philadelphia, Pa. Automobile truss-rods. No. 98,513; July 21; Gaz. vol. 204; p. 1007.
Gill Brothers Company, Steubenville, Ohio. Reflector-shades, shades, globes, and reflectors. No. 98,144; July 7; Gaz. vol. 204; p. 310.
Giunta and Son, Pasquale, Philadelphia, Pa. Olive-oil. No. 98,276; July 7; Gaz. vol. 204; p. 314.
Glahn & Son, Henry von, Brooklyn, N. Y. Monthly publications. No. 98,341; July 7; Gaz. vol. 204; p. 316.
Goodman, Cohen & Co., New York, N. Y. Men's negligée and work shirts. No. 98,277; July 7; Gaz. vol. 204; p. 314.
Goodman, Cohen & Co., New York, N. Y. Work and negligée shirts. No. 98,382; July 14; Gaz. vol. 204; p. 670.
Gordon Distilling and Distributing Company, Union, N. J. Blend of straight whiskies and gins. No. 98,383; July 14; Gaz. vol. 204; p. 670.
Gordon Electric & Mfg. Co., Chicago, Ill. Switches and sockets. No. 98,514; July 21; Gaz. vol. 204; p. 1007.
Goss, Thomas, Wilkes-Barre, Pa. Cough-syrup. No. 98,278; July 7; Gaz. vol. 204; p. 314.
Greenberg Miller Co., Inc., New York, N. Y. Leather boots and shoes. No. 98,384; July 14; Gaz. vol. 204; p. 670.
Griswold, Henry S., Phoenix, Ariz. Tire-healing compound. No. 98,279; July 7; Gaz. vol. 204; p. 314.
Grossfeld & Roe Co., Chicago, Ill. Canned fruits, vegetables, and fish, coffee, &c. No. 98,515; July 21; Gaz. vol. 204; p. 1007.
Guth Chocolate Company, Baltimore, Md. Candy. No. 98,657; July 28; Gaz. vol. 204; p. 1340.
Guth, Edwin F., St. Louis, Mo. Chandeliers, &c. No. 98,280; July 7; Gaz. vol. 204; p. 314.
H. Schlinck & Cie. A. G., Hamburg, Germany. Certain named food oils. No. 98,320; July 7; Gaz. vol. 204; p. 315.
H. Traiser & Company, Incorporated, Boston, Mass. Cigars. No. 98,591; July 21; Gaz. vol. 204; p. 1009.
H. G. Harter Co., The, Toledo, Ohio. Remedy for hog diseases. No. 98,147; July 7; Gaz. vol. 204; p. 310.
H. G. Prince & Company, Fruitvale, Cal. Canned fruits and vegetables. No. 98,691; July 28; Gaz. vol. 204; p. 1341.
H. T. Lange Co., The, Eau Claire, Wis. Canned vegetables, sauer-kraut, and pork and beans. No. 98,539; July 21; Gaz. vol. 204; p. 1007.
Hall & Wenck, Rochester, N. Y. Solidified liniment. No. 98,516; July 21; Gaz. vol. 204; p. 1007.
Harris Bros. & Barnett, New York, N. Y. Petticoats, princess-slips, and ladies' underwear. No. 98,658; July 28; Gaz. vol. 204; p. 1340.
Harrison & Rosenberg, New York, N. Y. Ladies' combination-garments. No. 98,659; July 28; Gaz. vol. 204; p. 1340.
Hartford Machine Screw Company, Hartford, Conn. Spark-plugs. No. 98,386; July 14; Gaz. vol. 204; p. 670.
Heilbronn, Joseph P., Manila, Philippine Islands. Writing and printing paper. No. 98,281; July 7; Gaz. vol. 204; p. 314.
Hektograph Mfg. & Duplicating Co., The, New York, N. Y. Duplicating apparatus. No. 98,517; July 21; Gaz. vol. 204; p. 1007.
Helios Manufacturing Company, Philadelphia, Pa. Secondary batteries. No. 98,388; July 14; Gaz. vol. 204; p. 670.
Heller & Co., Firm of B., Chicago, Ill. Laundry bluing and colors. No. 98,148; July 7; Gaz. vol. 204; p. 310.
Hendee Manufacturing Company, Springfield, Mass. Certain named self-propelled vehicles and parts thereof. No. 98,282; July 7; Gaz. vol. 204; p. 314.

Hendel, Barbara, Middle Village, N. Y. Herb salve preparation. No. 98,518; July 21; Gaz. vol. 204; p. 1007.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Enameled, steel, or iron ware. No. 98,660; July 28; Gaz. vol. 204; p. 1340.
Hill & Griffith Co., Cincinnati, Ohio. Boiler-cleaning compound. No. 98,521; July 21; Gaz. vol. 204; p. 1007.
Hill, Napoleon, Chicago, Ill. Candy. No. 98,520; July 21; Gaz. vol. 204; p. 1007.
Hirschberg & Co., New York, N. Y. Linen washable hat. No. 98,661; July 28; Gaz. vol. 204; p. 1340.
Hirshfeld, Jerome, New York, N. Y. Block sugar. No. 98,522; July 21; Gaz. vol. 204; p. 1007.
Hocking Valley Fire Clay Co., The, Nelsonville, Ohio. Bricks. No. 98,389; July 14; Gaz. vol. 204; p. 670.
Holbrook Mfg. Co., The, Jersey City, N. J. Scouring-soap. No. 98,524; July 21; Gaz. vol. 204; p. 1007.
Holophane Glass Co., New York, N. Y. Chandeliers, brackets, and pedestals for gas and electric lights. No. 98,283; July 7; Gaz. vol. 204; p. 314.
Holophane Glass Co., New York, N. Y. Chandeliers, brackets, and pedestals for gas and electric lights. No. 98,662; July 28; Gaz. vol. 204; p. 1340.
Hopkinsville Milling Co., Hopkinsville, Ky. Self-rising flour. No. 98,526; July 21; Gaz. vol. 204; p. 1007.
Hoquiam Packing Company, Hoquiam, Wash. Canned salmon and clams. No. 98,527; July 21; Gaz. vol. 204; p. 1007.
Horton, Frank J., Youngstown, Ohio. Tea, coffee, spices, and flavoring extracts for foods. No. 98,150; July 7; Gaz. vol. 204; p. 310.
Howell, Alexander J., Syracuse, N. Y. Certain named foods. No. 98,151; July 7; Gaz. vol. 204; p. 310.
Huber, Benno, Seattle, Wash. Drink or substitute for coffee. No. 98,528; July 21; Gaz. vol. 204; p. 1007.
Husler Milling & Elevator Company, The, Salt Lake City, Utah. Wheat-flour. No. 98,152; July 7; Gaz. vol. 204; p. 310.
Hydro Carbon Company, Wichita, Kans. Portable vapor-lamps. No. 98,285; July 7; Gaz. vol. 204; p. 314.
I. Blyn & Sons, New York, N. Y. Leather boots and shoes. No. 98,357; July 14; Gaz. vol. 204; p. 669.
I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. No. 98,665; July 28; Gaz. vol. 204; p. 1340.
Immell Bait Co., Blair, Wis. Artificial bait. No. 98,390; July 14; Gaz. vol. 204; p. 670.
Imperial Liquor Company, Seattle, Wash. Scotch blend whisky. No. 98,391; July 14; Gaz. vol. 204; p. 670.
Inderrieden Canning Co., Chicago, Ill. Canned vegetables. Nos. 98,392–5; July 14; Gaz. vol. 204; p. 670.
India Refining Company, Philadelphia, Pa. Cocoa-butter substitute. No. 98,286; July 7; Gaz. vol. 204; p. 314.
India Rubber, Gutta Percha and Telegraph Works Co., Ltd., The, Silvertown, London, England. Cordage, rope, twine, and string. No. 98,396; July 14; Gaz. vol. 204; p. 670.
Indianapolis Abattoir Company, Indianapolis, Ind. Hams, shoulders, backs, jowls, &c. No. 98,529; July 21; Gaz. vol. 204; p. 1007.
Indianapolis Abattoir Company, Indianapolis, Ind. Certain named foods. No. 98,530; July 21; Gaz. vol. 204; p. 1007.
Innovation Trunk Company, New York, N. Y. Trunks, portmanteaus, portfolios, and travelers' bags. No. 98,663; July 28; Gaz. vol. 204; p. 1340.
Integral Waterproofing Company, Jersey City, N. J., and New York, N. Y. Waterproofing material for incorporating in concrete, cement, or the like. No. 98,287; July 7; Gaz. vol. 204; p. 314.
Inter-American Pharmacal Corporation, New York, N. Y. Medicines for nervous affections. No. 98,153; July 7; Gaz. vol. 204; p. 310.
International Oxygen Company, Waverly, N. J., and New York, N. Y. Torches for use in oxo-hydric and oxo-acetylene cutting and welding. No. 98,155; July 7; Gaz. vol. 204; p. 310.
International Paper Company, New York, N. Y. Concentrated waste lyes of the sulfite-cellulose manufacture. No. 98,154; July 7; Gaz. vol. 204; p. 310.
Interstate Cotton Oil Refining Co., Sherman, Tex. Lard substitute. No. 98,288; July 7; Gaz. vol. 204; p. 314.
Interstate Cotton Oil Refining Co., Sherman, Tex. Shortening. No. 98,531; July 21; Gaz. vol. 204; p. 1007.
Italian Importing Company, Des Moines, Iowa. Olive-oil. No. 98,289; July 7; Gaz. vol. 204; p. 314.
J. English & Son Limited, Redditch, England. Needles, toilet, hair, and knitting pins, bodkins, and crochet-hooks. No. 98,650; July 28; Gaz. vol. 204; p. 1340.
J. B. Brooks & Company, Limited, Birmingham, England. Trunks, portmanteaus, boxes, bags, &c. No. 98,628; July 28; Gaz. vol. 204; p. 1339.
J. & D. Lehman Co., New York, N. Y. Kid gloves. No. 98,403; July 14; Gaz. vol. 204; p. 670.
J. & D. Lehman Co., New York, N. Y. Kid gloves. Nos. 98,668–72; July 28; Gaz. vol. 204; p. 1340.
J. G. Brill Company, Philadelphia, Pa. Car-trucks. No. 98,627; July 28; Gaz. vol. 204; p. 1339.
J. H. White Mfg. Co., New York, N. Y. Certain named parts for chandeliers and lighting-fixtures. No. 98,347; July 7; Gaz. vol. 204; p. 316.
J. H. Williams & Co., New York, N. Y. Metal forgings. No. 98,228; July 7; Gaz. vol. 204; p. 312.
J. J. Badenoch Co., Chicago, Ill. Poultry feed. No. 98,115; July 7; Gaz. vol. 204; p. 309.
Jackson, B. F., Arcade, N. Y. Preparation for the treatment of certain named ailments. No. 98,532; July 21; Gaz. vol. 204; p. 1007.
Jacobs, Morris L., New York, N. Y. Metal alloy. No. 98,157; July 7; Gaz. vol. 204; p. 310.
James S. Kirk & Company, Chicago, Ill. Toilet soap. No. 98,536; July 21; Gaz. vol. 204; p. 1007.
Jean Company, C. W., New York, N. Y. Apparatus for preparing copying-cloths. No. 98,158; July 7; Gaz. vol. 204; p. 310.
Jewett, C. W., Bemidji, Minn. Monthly magazine. No. 98,664; July 28; Gaz. vol. 204; p. 1340.
John Hoffmann & Sons Co., Milwaukee, Wis. Coffee. No. 98,523; July 21; Gaz. vol. 204; p. 1007.
John Sexton & Co., Chicago, Ill. Soap, scouring-powder, wash-day compounds, window, floor, and wall-paper cleaners, metal-polish. No. 98,574; July 21; Gaz. vol. 204; p. 1008.
John Wedderburn Co., The, Washington, D. C. Whisky. No. 98,346; July 7; Gaz. vol. 204; p. 316.
Joseph Roas & Company, Irvington, N. J. Manicure and toilet tools. No. 98,423; July 14; Gaz. vol. 204; p. 671.
Joseph Sankey and Sons, Limited, Bilston, England. Iron and steel blooms, billets, bars, and sheets. No. 98,428; July 14; Gaz. vol. 204; p. 671.
Joseph W. Schloss Co., New York, N. Y. Bonnet-wire. No. 98,702; July 28; Gaz. vol. 204; p. 1341.
Joy-o Chemical Company, Toledo, Ohio. Cleaner. No. 98,290; July 7; Gaz. vol. 204; p. 314.
Junghanns & Kolosche, Leipzig, Germany. Electric motors, generators, and dynamo-machines. No. 98,159; July 7; Gaz. vol. 204; p. 310.
Kansas Milling Company, Wichita and St. John, Kans. Wheat-flour. No. 98,291; July 7; Gaz. vol. 204; p. 314.
Katz & Besthoff, Ltd., New Orleans, La. Perfumes, toilet waters, and sachet-powders. No. 98,161; July 7; Gaz. vol. 204; p. 310.
Katz & Besthoff, Ltd., New Orleans, La. Perfumes and powders. No. 98,162; July 7; Gaz. vol. 204; p. 310.
Katz & Besthoff, Ltd., New Orleans, La. Perfumes, toilet waters, and powders. No. 98,163; July 7; Gaz. vol. 204; p. 310.
Katz, Louis B., New York, N. Y. Domestic rectified spirits. No. 98,160; July 7; Gaz. vol. 204; p. 310.
Kavanagh, W. H. J., Chicago, Ill. Certain named melons, cantaloups, and fresh celery. No. 98,202; July 7; Gaz. vol. 204; p. 314.
Kegel, John H., Chicago, Ill. Antiseptic tablets and vaginal suppositories. No. 98,534; July 21; Gaz. vol. 204; p. 1007.
Kelleghan, Thomas F., New York, N. Y. Preventive or protective remedy for venereal diseases. No. 98,164; July 7; Gaz. vol. 204; p. 310.
Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Toasted corn-flakes, wheat-biscuit, krumbles, &c. No. 98,293; July 7; Gaz. vol. 204; p. 314.
Kelly, John A., Forsyth, Mont. Remedy for certain named stomach troubles. No. 98,165; July 7; Gaz. vol. 204; p. 310.
King Co., Rockford, Ill. Certain medicines and remedies for certain named diseases. No. 98,535; July 21; Gaz. vol. 204; p. 1007.
King Philip Mills, Fall River, Mass. Cotton piece goods. No. 98,398; July 14; Gaz. vol. 204; p. 670.
Krausse & Auerbach, London, England. Coffee-making apparatus, (glass.) No. 98,294; July 7; Gaz. vol. 204; p. 314.
Kriegshaber, V. H., Atlanta, Ga. Concrete construction material for floors. No. 98,399; July 14; Gaz. vol. 204; p. 670.
L. Iten & Sons, Clinton, Iowa. Crackers, cookies, biscuits, and cakes. No. 98,156; July 7; Gaz. vol. 204; p. 310.
L. P. Larson, Jr., Co., Chicago, Ill. Chewing-gum. No. 98,540; July 21; Gaz. vol. 204; p. 1007.
La Crosse Knitting Works, La Crosse, Wis. Gloves. No. 98,400; July 14; Gaz. vol. 204; p. 670.
Lacquer-All Manufacturing Company, Dallas, Tex. Lacquer, wood-filler, varnish, &c. No. 98,166; July 7; Gaz. vol. 204; p. 310.
Lake Zurich Creamery Co., Palatine, Ill. Cheese. No. 98,537; July 21; Gaz. vol. 204; p. 1007.
Lamblin, Alexandre, Lille, France. Apparatus for developing photographic plates, &c., in daylight. No. 98,667; July 28; Gaz. vol. 204; p. 1340.
Landenberger & Co., J. W., Philadelphia, Pa. Stockings and underwear. No. 98,401; July 14; Gaz. vol. 204; p. 670.
Landenberger & Co., J. W., Philadelphia, Pa. Stockings. No. 98,402; July 14; Gaz. vol. 204; p. 670.
Landers, Frary & Clark, New Britain, Conn. Certain named electrically-heated cooking utensils, shaving-mugs, and the like. No. 98,538; July 21; Gaz. vol. 204; p. 1007.
Larabee Flour Mills Company, The, Hutchinson, Kans. Wheat-flour. No. 98,295; July 7; Gaz. vol. 204; p. 314.
Larrowe Milling Co., The, Cohocton, N. Y., and Detroit, Mich. Mixed feed for dairy-cattle. No. 98,296; July 7; Gaz. vol. 204; p. 314.
Lawrence Webster Co., The, Malone, N. Y. Mackinaws, woolen shirts, storm-vests, and trousers. No. 98,599; July 21; Gaz. vol. 204; p. 1009.
Le Blanc, Jacob A., Lynn, Mass. Remedy for catarrh and asthma. No. 98,541; July 21; Gaz. vol. 204; p. 1007.

Leach, Charles E., Providence, R. I. Medicaments for preparatory treatment of nervous ailments. No. 98,167; July 7; Gaz. vol. 204; p. 310.
Leiner & Co., George S., New York, N. Y. Bottle-brushes. No. 98,404; July 14; Gaz. vol. 204; p. 670.
Leiner & Co., George S., New York, N. Y. Bath, bottle, glass, house-cleaning, and dairy brushes. No. 98,405; July 14; Gaz. vol. 204; p. 670.
Leon Mann Co., New York, N. Y. Outer coats and suits. No. 98,409; July 14; Gaz. vol. 204; p. 670.
Livingstone Company, The, Baltimore, Md. Bonding cement or concrete. No. 98,406; July 14; Gaz. vol. 204; p. 670.
Llopart, Augustin F., Barcelona, Spain. Aerated beverages. No. 98,542; July 21; Gaz. vol. 204; p. 1007.
Loeck, Anna A., Colton, S. D. Preparation for the treatment of dropsy. No. 98,543; July 21; Gaz. vol. 204; p. 1007.
Logan, Merritt M., Springfield, Mo. Remedy for scalp and skin diseases. No. 98,168; July 7; Gaz. vol. 204; p. 310.
Lone Star Brewing Co., San Antonio, Tex. Beer. No. 98,407; July 14; Gaz. vol. 204; p. 670.
Lookout Medicine Company, Chattanooga, Tenn. Preparations for the treatment of certain named diseases. No. 98,298; July 7; Gaz. vol. 204; p. 314.
Loose-Wiles Biscuit Company, Boston, Mass. Biscuits, cakes, and cookies. No. 98,544; July 21; Gaz. vol. 204; p. 1007.
Loth-Hoffman Clothing Co., St. Louis, Mo. Outer suits for boys. No. 98,673; July 28; Gaz. vol. 204; p. 1341.
Louisville Courier-Journal Company, The, Louisville, Ky. Monthly magazine. No. 98,299; July 7; Gaz. vol. 204; p. 314.
Luyties Brothers, New York, N. Y. Liqueur. No. 98,408; July 14; Gaz. vol. 204; p. 670.
Luyties Pharmacy Company, St. Louis, Mo. Neutralizer and eliminant for the treatment of certain diseases. No. 98,169; July 7; Gaz. vol. 204; p. 310.
MacLaren Imperial Cheese Co., Ltd., Toronto, Ontario, Canada, and Detroit, Mich. Cheese. No. 98,302; July 7; Gaz. vol. 204; p. 314.
Macleay Estate Co., The, Portland, Oreg. Canned salmon. No. 98,170; July 7; Gaz. vol. 204; p. 310.
Mahon & Stanly, New York, N. Y. Certain cleansing-paste. No. 98,676; July 28; Gaz. vol. 204; p. 1341.
Maline Mills, The, Winston-Salem, N. C. Underwear. No. 98,307; July 7; Gaz. vol. 204; p. 315.
Mallory, F. B., Portland, Oreg. Certain named logging tools, machines, and appliances. No. 98,171; July 7; Gaz. vol. 204; p. 310.
Manchester Biscuit Co., Sioux Falls, S. D. Biscuits. No. 98,303; July 7; Gaz. vol. 204; p. 314.
Marcum, Harvey C., Arthur, Tenn. Liniment. No. 98,172; July 7; Gaz. vol. 204; p. 311.
Marshall Field & Company, Chicago, Ill. Hair-nets. No. 98,269; July 7; Gaz. vol. 204; p. 313.
Martin, Mary J., Portland, Oreg. Skin-balm, liquid face-dressing, hair and scalp tonic, shampoo preparation, &c. No. 98,545; July 21; Gaz. vol. 204; p. 1007.
Mason & Hamlin Co., Cambridge, Mass. Pianos and organs. No. 98,304; July 7; Gaz. vol. 204; p. 314.
Massachusetts Cotton Mills, Lowell, Mass. Cotton piece goods. No. 98,546; July 21; Gaz. vol. 204; p. 1007.
Mayer, Max, New York, N. Y. Whisky. No. 98,410; July 14; Gaz. vol. 204; p. 670.
Mayhew Milling Co., Owensboro, Ky. Flour. No. 98,677; July 28; Gaz. vol. 204; p. 1341.
McIntyre, William H., Auburn, Ind. Cycle-cars. No. 98,678; July 28; Gaz. vol. 204; p. 1341.
McMonagle & Rogers, Incorporated, Middletown, N. Y. Fruit flavors for foods. No. 98,679; July 28; Gaz. vol. 204; p. 1341.
Mechanical Rubber Company, The, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Tank float bulbs or balls. No. 98,411; July 14; Gaz. vol. 204; p. 670.
Menzel & Co., New York, N. Y. Sardines. No. 98,305; July 7; Gaz. vol. 204; p. 314.
Menzel & Co., New York, N. Y. Sardines. No. 98,547; July 21; Gaz. vol. 204; p. 1008.
Meyer, Firm of Arnold O., Hamburg, Germany. Hinges, locks, metallic valves, &c. No. 98,173; July 7; Gaz. vol. 204; p. 311.
Meyer & Carmody Import Co., Inc., New York, N. Y. Olives, sardines, peanut-butter, and salad-dressing. No. 98,306; July 7; Gaz. vol. 204; p. 315.
Mezger, Charles A., Brooklyn, N. Y. Spark-plugs. No. 98,174; July 7; Gaz. vol. 204; p. 311.
Moore, Eady & Murcott Goode Limited, Leicester, England. Certain named clothing. No. 98,680; July 28; Gaz. vol. 204; p. 1341.
Mount Barton Chemical Co., Meridian, Miss. Liniment and antiseptic. No. 98,176; July 7; Gaz. vol. 204; p. 311.
N. K. Fairbank Company, The, Chicago, Ill. Edible fats and oils. No. 98,376; July 14; Gaz. vol. 204; p. 669.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 98,177–82; July 7; Gaz. vol. 204; p. 311.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Candy. No. 98,183; July 7; Gaz. vol. 204; p. 311.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 98,310; July 7; Gaz. vol. 204; p. 315.
National Paint & Varnish Company, Cleveland, Ohio. Paints for metal surfaces. No. 98,184; July 7; Gaz. vol. 204; p. 311.
National Tube Company, Pittsburgh, Pa. Metal pipes, tubes, and casings. No. 98,412; July 14; Gaz. vol. 204; p. 670.
Neal Tablet Company, Newton, Mass. Remedy for indigestion. No. 98,548; July 21; Gaz. vol. 204; p. 1008.
New Ideas Company, The, Newark, Ohio. Cleaning compound. No. 98,311; July 7; Gaz. vol. 204; p. 315.
New York Dairy Demonstration Co., New York, N. Y. Milk and cream. No. 98,312; July 7; Gaz. vol. 204; p. 315.
New York Pharmacal Association, The, Yonkers, N. Y. Medicines made in tablet, powder, or liquid form for certain named diseases. No. 98,549; July 21; Gaz. vol. 204; p. 1008.
Nieman, Eva, Cincinnati, Ohio. Medicinal preparation for stimulating and developing the mammary glands. No. 98,185; July 7; Gaz. vol. 204; p. 311.
Norman, Joseph T., Nanticoke, Pa. Hand-cleaning compound. No. 98,550; July 21; Gaz. vol. 204; p. 1008.
Norris Incorporated, Atlanta, Ga. Chocolates, bonbons, and candies. Nos. 98,186–7; July 7; Gaz. vol. 204; p. 311.
Northern Shore Co., Duluth, Minn. Boots and shoes made of rubber and leather. No. 98,413; July 14; Gaz. vol. 204; p. 671.
Nottingham, Guy D., Baltimore, Md. Shoe-polish and cleaning compounds for shoes. No. 98,681; July 28; Gaz. vol. 204; p. 1341.
Novelty Candy Company, New York, N. Y. Candy. No. 98,414; July 14; Gaz. vol. 204; p. 671.
Nu-Shine Mfg. Co., Arlington, N. J. Stove-polish. No. 98,551; July 21; Gaz. vol. 204; p. 1008.
Nut House, The, Seattle, Wash. Nuts and nut-meats. No. 98,552; July 21; Gaz. vol. 204; p. 1008.
O. F. Zurn Co., The, Philadelphia, Pa. Emollient for treating dyed fabrics. No. 98,131; July 7; Gaz. vol. 204; p. 309.
O. M. Steinman, Inc., New York, N. Y. Cover-paper in sheets. No. 98,586; July 21; Gaz. vol. 204; p. 1009.
O'Brien, Charles T., Anderson, Ind. Carbonated soda-fountain beverage and syrup for manufacturing same. No. 98,314; July 7; Gaz. vol. 204; p. 315.
O'Mahoney, Aurelia S., Boston, Mass. Hair-grower and dandruff-remover. No. 98,554; July 21; Gaz. vol. 204; p. 1008.
O'Neil, Timothy L., La Salle, Ill. Cultivators and grain-cultivators. No. 98,555; July 21; Gaz. vol. 204; p. 1008.
Oakland Vinegar & Pickle Co., Saginaw, Mich. Cider vinegar. No. 98,313; July 7; Gaz. vol. 204; p. 315.
Ohio Confection Company, The, Cleveland, Ohio. Candy. No. 98,188; July 7; Gaz. vol. 204; p. 311.
Okadee Company, The, Chicago, Ill. Metallic valves and hose-couplings. No. 98,189; July 7; Gaz. vol. 204; p. 311.
Old Roman Solder Co., New York, N. Y. Adhesive material resembling solder. No. 98,190; July 7; Gaz. vol. 204; p. 311.
Old Vincennes Preserving Company, The, Vincennes, Ind. Meat-sauce. No. 98,553; July 21; Gaz. vol. 204; p. 1008.
Oleum Products Company, Scranton, Pa. Metal-polish. No. 98,682; July 28; Gaz. vol. 204; p. 1341.
P. Ballantine & Sons, Newark, N. J. Concentrated liquid malt preparation. No. 98,465; July 21; Gaz. vol. 204; p. 1005.
P. Fortuna & Del Magro, Lucca, Italy. Olive-oil. No. 98,272; July 7; Gaz. vol. 204; p. 313.
P. & L. Comfort Baby Carriage Co. Inc., New York, N. Y. Baby-carriages and go-carts. No. 98,639; July 28; Gaz. vol. 204; p. 1340.
Pac-Rite Company, Inc., New York, N. Y. Garment-folders. No. 98,315; July 7; Gaz. vol. 204; p. 315.
Patterson-Sargent Company, The, Cleveland, Ohio. Dry and ready-mixed paints, enamels, stains, &c. No. 98,191; July 7; Gaz. vol. 204; p. 311.
Paul F. Beich Company, Bloomington, Ill. Topping for fruit, jelly, and ice-cream. No. 98,120; July 7; Gaz. vol. 204; p. 309.
Pearson's Antiseptic Company, Ltd., London, England. Antiseptic veterinary liniment. No. 98,556; July 21; Gaz. vol. 204; p. 1008.
Pecora Paint Co., Philadelphia, Pa. Cement containing oil for rendering roofs and structures waterproof. No. 98,192; July 7; Gaz. vol. 204; p. 311.
Peek, Frean & Co., Limited, London, England. Biscuits. No. 98,557; July 21; Gaz. vol. 204; p. 1008.
Perolin Company of America, The, Chicago, Ill. Chemical compounds for preserving boiler metals, &c. Nos. 98,683–4; July 28; Gaz. vol. 204; p. 1341.
Perrin & Cie., V., Grenoble, France; London, England, and Gloversville and New York, N. Y. Leather gloves. No. 98,416; July 14; Gaz. vol. 204; p. 671.
Peter A. Frasse & Co., Inc., New York, N. Y. Tool-steel. Nos. 98,141–2; July 7; Gaz. vol. 204; p. 310.
Philip Carey Manufacturing Company, The, Lockland, Ohio. Composition roofing and siding. No. 98,247; July 7; Gaz. vol. 204; p. 313.
Pierce, Geo. C., Kansas City, Mo. Laxative tablets. No. 98,558; July 21; Gaz. vol. 204; p. 1008.

Pitts Shoe Company, The, Montgomery, Ala. Leather and canvas shoes. No. 98,685; July 28; Gaz. vol. 204; p. 1341.

Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Glass chimneys and globes. No. 98,559; July 21; Gaz. vol. 204; p. 1008.

Platt & Washburn Refining Company, New York, N. Y. Lubricating-oils. No. 98,686; July 28; Gaz. vol. 204; p. 1341.

Plummer, William, Camden, N. J. Furniture-polish. No. 98,194; July 7; Gaz. vol. 204; p. 311.

Ponndorf, Wilhelm, Cassel, Germany. Clearing-pans, hop-jacks, beer-hoppers, &c. No. 98,687; July 28; Gaz. vol. 204; p. 1341.

Porzellanfabrik Schönwald A. G., Schönwald, Germany. Porcelains. No. 98,417; July 14; Gaz. vol. 204; p. 671.

Powell Brothers Shoe Company, New York, N. Y., assignor to W. H. McElwain Company, Boston, Mass. Boots, shoes, and slippers. No. 98,689; July 28; Gaz. vol. 204; p. 1341.

Powell, Rolland M., Ridley Park, Pa. Leads, slugs, and blocks. No. 98,688; July 28; Gaz. vol. 204; p. 1341.

Powell's, New York, N. Y. Candy. No. 98,560; July 21; Gaz. vol. 204; p. 1008.

Premier Packing Co., San Diego, Cal. Canned tuna. No. 98,690; July 28; Gaz. vol. 204; p. 1341.

Prenzlau's Fabrikwerke, L., Hamburg, Germany. Tanners' and quebracho barks, tanning extracts, corrosives, &c. Nos. 98,561–2; July 21; Gaz. vol. 204; p. 1008.

Profumo, Charles, New Orleans, La. Preparation for treatment of certain named diseases. No. 98,563; July 21; Gaz. vol. 204; p. 1008.

Protective "Freflo" Stopple Company. (See Douglass, John W., assignor.)

Providol Gesellschaft mit beschränkter Haftung, Berlin, Germany. Disinfectants. No. 98,195; July 7; Gaz. vol. 204; p. 311.

Pru-Va Chemical Co., St. Louis, Mo. Preventive of venereal diseases. No. 98,196; July 7; Gaz. vol. 204; p. 311.

Quaker Cleanser Co., Plainfield, N. J. Cleaner and polisher for woodwork. No. 98,419; July 14; Gaz. vol. 204; p. 671.

R. E. Dietz Company, New York, N. Y. Certain named lamps, lanterns, and burners. No. 98,643; July 28; Gaz. vol. 204; p. 1340.

R. L. Watkins Company, The, Cleveland, Ohio. Dandruff remedy. No. 98,598; July 21; Gaz. vol. 204; p. 1009.

Randolph Milling Company, Baldwin, Ill. Wheat-flour. No. 98,420; July 14; Gaz. vol. 204; p. 671.

Rapson, John S., Elkins Park, Pa. Rubber erasers. No. 98,318; July 7; Gaz. vol. 204; p. 315.

Regesan Ltd., London, England. Certain medicinal and pharmaceutical preparations. No. 98,198; July 7; Gaz. vol. 204; p. 311.

Rex Extract Company, Esopus and New York, N. Y. Flavoring for ice-cream and other confections and food products. No. 98,421; July 14; Gaz. vol. 204; p. 671.

Riechezza, Antonio, Philadelphia, Pa. Macaroni, vermicelli, and spaghetti. No. 98,695; July 28; Gaz. vol. 204; p. 1341.

Rich Tool Company, Chicago, Ill. Metallic valves. No. 98,422; July 14; Gaz. vol. 204; p. 671.

Richardson, A. H., Fond du Lac, Wis. Poultice-powder antiseptic absorbent for allaying inflammation. No. 98,199; July 7; Gaz. vol. 204; p. 311.

Ristorcelli, Angel J., New York, N. Y. Medicaments for treating hair. Nos. 98,365–6; July 21; Gaz. vol. 204; p. 1008.

Robert A. Johnston Co., Milwaukee, Wis. Biscuits and pastry. No. 98,397; July 14; Gaz. vol. 204; p. 670.

Robert Reis & Co., New York, N. Y. Underwear. No. 98,692; July 28; Gaz. vol. 204; p. 1341.

Robert Reis & Co., New York, N. Y. Certain named clothing. Nos. 98,693–4; July 28; Gaz. vol. 204; p. 1341.

Robinson & Company, J., New York, N. Y. Kerchiefs and handkerchiefs. No. 98,567; July 21; Gaz. vol. 204; p. 1008.

Robt. F. Mackenzie Co., The, Cleveland, Ohio. Candy. Nos. 98,674–5; July 28; Gaz. vol. 204; p. 1341.

Roman e hijos, Firm of H. L., Cartagena, Colombia. Remedy and preventive for certain named affections. No. 98,149; July 7; Gaz. vol. 204; p. 310.

Röntgen, Robert, Remscheid, Germany. Saws and sawblades. No. 98,568; July 21; Gaz. vol. 204; p. 1008.

Rossendale-Reddaway Belting & Hose Co., Newark, N. J. Woven textile driving-belts and machine-belting. No. 98,569; July 21; Gaz. vol. 204; p. 1008.

Rouss, Charles B., New York, N. Y. Certain articles of clothing for infants, children, misses, and women. No. 98,424; July 14; Gaz. vol. 204; p. 671.

S. F. Bowser & Company, Fort Wayne, Ind. Oil filtration and circulation apparatus. No. 98,358; July 14; Gaz vol. 204; p. 669.

Salant & Salant, New York, N. Y. Work and negligée shirts. No. 98,425; July 14; Gaz. vol. 204; p. 671.

Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and plushes. Nos. 98,426–7; July 14; Gaz. vol. 204; p. 671.

Salt's Textile Manufacturing Company, Bridgeport, Conn., and New York, N. Y. Velvets and plushes in the piece. No. 98,570; July 21; Gaz. vol. 204; p. 1008.

Samuel Osborn & Co. Limited, Sheffield, England. Certain named machines and tools. No. 98,415; July 14; Gaz. vol. 204; p. 671.

Sanitation & Supply Co., The, New York, N. Y. Paint-removers, cleaners, front-end paint for engines, &c. No. 98,200; July 7; Gaz. vol. 204; p. 311.

Sargent & Co., New Haven, Conn. Locks, latches, keys, &c. No. 98,699; July 28; Gaz. vol. 204; p. 1341.

Sargent & Co., New Haven, Conn. Certain named measuring instruments. No. 98,700; July 28; Gaz. vol. 204; p. 1341.

Sargent & Company, New Haven, Conn. Certain named tools and parts thereof. No. 98,697; July 28; Gaz. vol. 204; p. 1341.

Sargent & Company, New Haven, Conn. Certain named hardware supplies. No. 98,698; July 28; Gaz. vol. 204; p. 1341.

Sari, Fernando R., Washington, D. C. Olive-oil. No. 98,201; July 7; Gaz. vol. 204; p. 311.

Schermerhorn-Shotwell Company, Des Moines, Iowa. Hens' eggs. No. 98,701; July 28; Gaz. vol. 204; p. 1341.

Schnabel, Charles, New York, N. Y. Corsets and gloves. No. 98,429; July 14; Gaz. vol. 204; p. 671.

Schnarr, John, Orlando, Fla. Insecticide. No. 98,202; July 7; Gaz. vol. 204; p. 311.

Schoenfeld, Leo E., Chicago, Ill. Certain named foods. No. 98,321; July 7; Gaz. vol. 204; p. 315.

Schuberth, Louis T., Chicago, Ill. Food-cabinets. No. 98,571; July 21; Gaz. vol. 204; p. 1008.

Schultz, Baujan & Co., Beardstown, Ill. Wheat-flour. No. 98,572; July 21; Gaz. vol. 204; p. 1008.

Schuylkill Silk Mills, Reading, Pa. Silk gloves and underwear. No. 98,703; July 28; Gaz. vol. 204; p. 1341.

Scott County Milling Company, The, Sikeston, Mo. Wheat-flour. No. 98,573; July 21; Gaz. vol. 204; p. 1008.

Scout Gum Co. Inc., Rochester, N. Y. Chewing-gum. No. 98,322; July 7; Gaz. vol. 204; p. 315.

Semel & Co., J. H., New York, N. Y. Knitted underwear. No. 98,704; July 28; Gaz. vol. 204; p. 1341.

Shaft-Pierce Shoe Co., Faribault, Minn. Shoes of canvas and leather. No. 98,705; July 28; Gaz. vol. 204; p. 1342.

Sheboygan Evaporated Milk Co., Sheboygan, Mich. Evaporated milk. No. 98,706; July 28; Gaz. vol. 204; p. 1342.

Shelp, William B., Houston, Tex. Certain named products of rubber manufacture. No. 98,575; July 21; Gaz. vol. 204; p. 1008.

Shotwell & Harris, Houston, Tex. Blouses and waists. No. 98,430; July 14; Gaz. vol. 204; p. 671.

Simas, Vasconcellos & Co., New Bedford, Mass. Substituts for coffee. No. 98,576; July 21; Gaz. vol. 204; p. 1008.

Simpkins, W. A., Raleigh, N. C. Cotton-seed. No. 98,577; July 21; Gaz. vol. 204; p. 1008.

Singer Manufacturing Company, Elizabeth, N. J. Lubricating-oil. No. 98,707; July 28; Gaz. vol. 204; p. 1342.

Sipp Company, George A., Weehawken, N. J. Foot-powders. No. 98,578; July 21; Gaz. vol. 204; p. 1008.

Slater, Charles E., Boston, Mass. Leather boots, shoes, and slippers. No. 98,708; July 28; Gaz. vol. 204; p. 1342.

Slaymaker Lock Manufacturing Corporation, The, Lancaster, Pa. Padlocks, door and rim locks, and night-latches. No. 98,709; July 28; Gaz. vol. 204; p. 1342.

Sloan & Company, Newark, N. J., and New York, N. Y. Jewelry. No. 98,579; July 21; Gaz. vol. 204; p. 1008.

Smith, Cecil E., Detroit, Mich. Ointment for treatment of piles. No. 98,203; July 7; Gaz. vol. 204; p. 311.

Smith, George F., Woodsboro, Md. Salve. No. 98,323; July 7; Gaz. vol. 204; p. 315.

Smith, Helen W., Watkins, N. Y. Remedies for pneumonia, piles, headache, &c. No. 98,580; July 21; Gaz. vol. 204; p. 1008.

Smith & Hemenway Company, Inc., New York, N. Y. Certain named tools and motors. No. 98,710; July 28; Gaz. vol. 204; p. 1342.

Société Job, Anciens Etablissements Bardou-Job et Pauilhac, Perpignan, France. Tobacco, snuff, and cigarettes. No. 98,711; July 28; Gaz. vol. 204; p. 1342.

Society of Chemical Industry in Basle, Basel, Switzerland. Certain pharmaceutical products. No. 98,204; July 7; Gaz. vol. 204; p. 311.

Society of Chemical Industry in Basle, Basel, Switzerland. Pharmaceutical products made of rice-bran. No. 98,205; July 7; Gaz. vol. 204; p. 311.

Softene Company, The, Canton, Ohio. Water-softening compound. No. 98,324; July 7; Gaz. vol. 204; p. 315.

Southern Manufacturing Co., The, Richmond, Va. Baking-powder. No. 98,206; July 7; Gaz. vol. 204; p. 312.

Spencer Turbine Cleaner Company, The, Hartford, Conn. Vacuum-testers. No. 98,207; July 7; Gaz. vol. 204; p. 312.

Sprague, Warner & Company, Chicago, Ill. Canned peas. No. 98,325; July 7; Gaz. vol. 204; p. 315.

Spratt's Patent (America) Limited, London, England, and Newark, N. J. Food preparation for dogs, cats, &c. No. 98,712; July 28; Gaz. vol. 204; p. 1342.

Springfield Seed Company, Springfield, Mo. Seeds. No. 98,581; July 21; Gaz. vol. 204; p. 1009.

Spurlock-Neal Co., Nashville, Tenn. Remedy for catarrh, hay-fever, and cold in the head. No. 98,209; July 7; Gaz. vol. 204; p. 312.

Standard Neckchain Company, Providence, R. I. Jewelry. No. 98,582; July 21; Gaz. vol. 204; p. 1009.

Standard Oil Co. of New York, New York, N. Y. Kerosene-lamps. No. 98,327; July 7; Gaz. vol. 204; p. 315.

Standard Oil Co. of New York, New York, N. Y. Kerosene-lamps. No. 98,583; July 21; Gaz. vol. 204; p. 1009.

Standard Oil Company of New York, New York, N. Y. Certain named oils, candles, greases, and the like. No. 98,431; July 14; Gaz. vol. 204; p. 671.

Standard Oil Company, Richmond, Cal. Engine-distillate of petroleum. No. 98,326; July 7; Gaz. vol. 204; p. 315.

Standard Paper Mfg. Co., Richmond, Va. Blotting-paper. No. 98,328; July 7; Gaz. vol. 204; p. 315.

Stanley Works, New Britain, Conn. Wrought-steel shelf-brackets. No. 98,432; July 14; Gaz. vol. 204; p. 671.

Starry, Wallace G., Roy A., and Monte W. Burd, Harrisburg, Pa. Knit or woven underwear and hosiery. No. 98,433; July 14; Gaz. vol. 204; p. 671.

Stein, Charles M., New York, N. Y. Remedy for eczema, ringworm, pimples, itch, &c. No. 98,584; July 21; Gaz. vol. 204; p. 1009.

Stein & Co., S., New York, N. Y. Woolen piece goods. No. 98,585; July 21; Gaz. vol. 204; p. 1009.

Steiner, Emil E., Lowell, Wash. Carbonated soda-fountain beverage and syrup for manufacturing same. No. 98,329; July 7; Gaz. vol. 204; p. 315.

Stephenson, Charles H., Lynn, Mass. Garbage and refuse receptacles. No. 98,330; July 7; Gaz. vol. 204; p. 315.

Sterling Company, The. (See Autosales Gum and Chocolate Company, assignor.)

Stewart Dickson & Co., Inc., New York, N. Y. Steam and hydraulic packings. No. 98,260; July 7; Gaz. vol. 204; p. 313.

Stewart-Warner Speedometer Corporation, Chicago, Ill. Temperature-indicating instruments. No. 98,713; July 28; Gaz. vol. 204; p. 1342.

Stohr, Dr. Franz, Vienna, Austria-Hungary. Medicated purgative confections. No. 98,209; July 7; Gaz. vol. 204; p. 312.

Stone-Ordean-Wells Company, Duluth, Minn. Certain named foods. No. 98,434; July 14; Gaz. vol. 204; p. 671.

Stonecypher, James H., Westminster, S. C. Insect-destroyer. No. 98,210; July 7; Gaz. vol. 204; p. 312.

Stones, William, Manchester, England. Tooth-powder. No. 98,587; July 21; Gaz. vol. 204; p. 1009.

Strauss Bros. & Co., New York, N. Y. Mouth-harmonicas. No. 98,331; July 7; Gaz. vol. 204; p. 315.

Stroschein, Johann E., Berlin, Germany. Cod-liver oil and oil emulsions. No. 98,211; July 7; Gaz. vol. 204; p. 312.

Strout, Elbridge S., New York, N. Y. Mixed woolen piece goods. No. 98,332; July 7; Gaz. vol. 204; p. 315.

Struthers Co., Peoria, Ill. Lightning-rods and parts thereof and accessories therefor. No. 98,212; July 7; Gaz. vol. 204; p. 312.

Sulzberger & Sons Company, New York, N. Y. Apple-butter, fruit jellies, jams, and preserves. No. 98,435; July 14; Gaz. vol. 204; p. 671.

Sulzberger & Sons Company, New York, N. Y. Fruit jellies and jams. No. 98,436; July 14; Gaz. vol. 204; p. 671.

Sunset Packing Company, The, West Pembroke, Me., and New York, N. Y. Canned herring. No. 98,213; July 7; Gaz. vol. 204; p. 312.

Sunset Packing Company, The, West Pembroke, Me., and New York, N. Y. Sardines. No. 98,588; July 21; Gaz. vol. 204; p. 1009.

Sunshine, Monroe, New York, N. Y. Gas-heated sad-irons and metal supports for same. No. 98,333; July 7; Gaz. vol. 204; p. 315.

Sweet & Co., W. L., New York, N. Y. Wheat, rye, and Graham flour, and cornmeal. No. 98,437; July 14; Gaz. vol. 204; p. 671.

Swift and Company, Chicago, Ill. Toilet soap. No. 98,714; July 28; Gaz. vol. 204; p. 1342.

Swindell Brothers, Baltimore, Md. Nursing-bottles. No. 98,334; July 7; Gaz. vol. 204; p. 315.

Taylor Instrument Companies, Rochester, N. Y. Magnetic compasses. No. 98,715; July 28; Gaz. vol. 204; p. 1342.

Taylor-Wharton Iron & Steel Co., High Bridge, N. J. Steel and iron castings and forgings. No. 98,438; July 14; Gaz. vol. 204; p. 671.

Thomas A. Edison, Incorporated, West Orange, N. J. Electric motors. No. 98,375; July 14; Gaz. vol. 204; p. 669.

Thomas A. Edison, Incorporated, West Orange, N. J. Dictating-machines. No. 98,494; July 21; Gaz. vol. 204; p. 1006.

Thomas A. Edison, Incorporated, West Orange, N. J. Sound recording and reproducing apparatus. No. 98,495; July 21; Gaz. vol. 204; p. 1006.

Thompson and Company, James, New York, N. Y. Canopies for beds. No. 98,439; July 14; Gaz. vol. 204; p. 671.

Tiger Fence & Machine Company, Clarksville, Tenn. Metal fencing. No. 98,716; July 28; Gaz. vol. 204; p. 1342.

Timothy F. Crowley, Inc., New York, N. Y. Ladies' gulmpes or semiwaists. No. 98,369; July 14; Gaz. vol. 204; p. 669.

Timothy F. Crowley, Incorporated, New York, N. Y. Ladies' collars. No. 98,486; July 21; Gaz. vol. 204; p. 1006.

Townsend & Co., E. M., New York, N. Y. Hosiery. No. 98,440; July 14; Gaz. vol. 204; p. 671.

Tresselt & Sons, C., Fort Wayne, Ind. Wheat-flour. No. 98,717; July 28; Gaz. vol. 204; p. 1342.

Tropical Oil Co., The, Cleveland, Ohio. Paint for interior decorating. No. 98,214; July 7; Gaz. vol. 204; p. 312.

Tropical Oil Co., The, Cleveland, Ohio. Paint used on concrete, plaster, brick, or stone. No. 98,215; July 7; Gaz. vol. 204; p. 312.

Tropical Oil Co., The, Cleveland, Ohio. Inside flat oil-paint. No. 98,216; July 7; Gaz. vol. 204; p. 312.

Tropical Oil Co., The, Cleveland, Ohio. Paint for mending leaks. No. 98,217; July 7; Gaz. vol. 204; p. 312.

Truax & Company, C. C., assignor to United Grocers Company, Toledo, Ohio. Lamp-chimneys. No. 98,337; July 7; Gaz. vol. 204; p. 315.

True, Mary E., Epping, N. H. Remedy for rheumatism. No. 98,218; July 7; Gaz. vol. 204; p. 312.

Tryol Products Company, Inc., Buffalo, N. Y. Ointments. No. 98,219; July 7; Gaz. vol. 204; p. 312.

Turnbull, James, Roswell, N. Mex. Fresh apples, pears, peaches, plums, &c. No. 98,338; July 7; Gaz. vol. 204; p. 315.

2-B-Tween Envelope Co., Washington, D. C. Envelops. No. 98,592; July 21; Gaz. vol. 204; p. 1009.

Tyndall, Charles A., New York, N. Y. Remedy for stomach disorders and digestive troubles. No. 98,339; July 7; Gaz. vol. 204; p. 316.

Ungemach, A.-G. Els. Conserven-Fabrik & Import-Gesellschaft, Strassburg, Germany. Coloring-matters for food. No. 98,220; July 7; Gaz. vol. 204; p. 312.

Union Gas Engine Company, San Francisco, Cal. Gas or gasolene engines. No. 98,221; July 7; Gaz. vol. 204; p. 312.

Union Special Machine Company, Chicago, Ill. Machine-needles. No. 98,718; July 28; Gaz. vol. 204; p. 1342.

United Grocers Company. (See Truax & Company, C. C., assignor.)

United States Light & Heating Company, Portland, Me., and New York, N. Y., assignor to Central Trust Company of New York, trustee. Certain named lighting and starting systems and storage batteries and parts thereof. No. 98,222; July 7; Gaz. vol. 204; p. 312.

United States Worsted Co., Boston, Mass., assignor to United States Worsted Company. Worsted piece goods. No. 98,719; July 28; Gaz. vol. 204; p. 1342.

Universal Film Manufacturing Company, New York, N. Y. Moving-picture films. Nos. 98,593–4; July 21; Gaz. vol. 204; p. 1009.

Universal Portland Cement Co., Chicago, Ill. Portland cement. No. 98,720; July 28; Gaz. vol. 204; p. 1342.

Vall, John W., Chicago, Ill. Bedsteads. No. 98,441; July 14; Gaz. vol. 204; p. 671.

Valley Park Distillery, Valley Park, Mo. Rye and Bourbon whiskies. No. 98,721; July 28; Gaz. vol. 204; p. 1342.

Van Exem, Arsène J., New York, N. Y. Pipes, pipe-cleaners, and cigarette-stems. No. 98,223; July 7; Gaz. vol. 204; p. 312.

Van Exem, Arsène J., New York, N. Y. Smoking-tobacco, cigars, and cigarettes. No. 98,595; July 21; Gaz. vol. 204; p. 1009.

Vasa Company, Henderson, Ky. Ointment. No. 98,224; July 7; Gaz. vol. 204; p. 312.

Vola-Vita Company, The, Muskogee, Okla. Scalp and hair tonic. No. 98,340; July 7; Gaz. vol. 204; p. 316.

W. H. McElwain Company. (See Powell Brothers Shoe Co., assignor.)

Waggener, Conrad Y., Salida, Colo. Toilet cream. No. 98,225; July 7; Gaz. vol. 204; p. 312.

Wagner Manufacturing Co., The, Cleveland, Ohio. Awnings, tents, canopies, &c. No. 98,722; July 28; Gaz. vol. 204; p. 1342.

Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Snap-buttons used as garment-fasteners. Nos. 98,442–50; July 14; Gaz. vol. 204; pp. 671–2.

Wamsley, C. L., West Union, Ohio, and Sayre, Okla. Laxative. No. 98,342; July 7; Gaz. vol. 204; p. 316.

Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named measuring instruments, calculating-machines, and the like. No. 98,596; July 21; Gaz. vol. 204; p. 1009.

Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named vehicles and parts therefor. No. 98,723; July 28; Gaz. vol. 204; p. 1342.

Warren, Northam, New York, N. Y. Artificial flowers. No. 98,597; July 21; Gaz. vol. 204; p. 1009.

Wayne County Driers & Packers Fruit Company, Rochester, N. Y. Dried apples. No. 98,343; July 7; Gaz. vol. 204; p. 316.

Weber, Frederick, Philadelphia, Pa. Lead, colored, automatic, ink, and screw pencils. No. 98,344; July 7; Gaz. vol. 204; p. 316.

Weber & Heilbroner, New York, N. Y. Men's and boys' hats. No. 98,345; July 7; Gaz. vol. 204; p. 316.

Weller, John C. & Joseph L. Nally, Louisville, Ky. Non-intoxicating drink. No. 98,724; July 28; Gaz. vol. 204; p. 1342.

Welsbach Company, Gloucester City, N. J. Incandescent inverted gas-lamps, burners, and mantles. No. 98,600; July 21; Gaz. vol. 204; p. 1009.

Western Cartridge Co., Alton, Ill. Cartridges, empty shells, primers, and shot. No. 98,601; July 21; Gaz. vol. 204; p. 1009.

Westmoreland Candy Company, Richmond, Va. Candy. No. 98,226; July 7; Gaz. vol. 204; p. 312.
Weyman-Bruton Company, New York, N. Y. Chewing and smoking tobacco. No. 98,602; July 21; Gaz. vol. 204; p. 1009.
White & Bagley Company, Worcester, Mass. Cooling compound for cutting and grinding. No. 98,603; July 21; Gaz. vol. 204; p. 1009.
Whitney-Eckstein Seed Co., Buffalo, N. Y. Alsike-seed, alfalfa-seed, lawn-seed, &c. No. 98,604; July 21; Gaz. vol. 204; p. 1009.
Wichert & Gardiner, New York, N. Y. Shoes and slippers of leather. No. 98,726; July 28; Gaz. vol. 204; p. 1342.
Wilcox Company, Providence, R. I. Soap. No. 98,348; July 7; Gaz. vol. 204; p. 316.
Wilcox & Gibbs Sewing Machine Co., New York, N. Y. Sewing-machines and parts. No. 98,227; July 7; Gaz. vol. 204; p. 312.
William Hollins & Company, Limited, London, England. Neckties. No. 98,525; July 21; Gaz. vol. 204; p. 1007.
William Peterman Inc., Jersey City, N. J., and New York, N. Y. Insecticides. No. 98,193; July 7; Gaz. vol. 204; p. 311.
William Peterman Inc., Jersey City, N. J., and New York, N. Y. Insecticides. No. 98,316; July 7; Gaz. vol. 204; p. 315.
Windsor, Millard F., Buffalo, N. Y. Soap. No. 98,605; July 21; Gaz. vol. 204; p. 1009.
Wise Brothers, New York, N. Y. Shirts, drawers, overalls, jumpers, &c. No. 98,451; July 14; Gaz. vol. 204; p. 672.
Wm. C. Robinson & Son Co., Baltimore, Md. Leather-oil. No. 98,696; July 28; Gaz. vol. 204; p. 1341.
Wood, Jarvis A., Philadelphia, Pa., and Miami, Fla. Grape-fruit. No. 98,229; July 7; Gaz. vol. 204; p. 312.
Wood-Lane Drug Co., Newbern, N. C. Remedy for treatment of smoking habit. No. 98,230; July 7; Gaz. vol. 204; p. 312.
Woodley Yerba Maté Tea Co., The, Shamrock, Tex. Tea. No. 98,130; July 7; Gaz. vol. 204; p. 309.
Wye, William H., Needham, Mass. Sweaters and jerseys. No. 98,606; July 21; Gaz. vol. 204; p. 1009.
Yakima Valley Fruit Growers Association, North Yakima, Wash. Fresh fruits. No. 98,607; July 21; Gaz. vol. 204; p. 1009.
Zabel & Son, Lanesville, Ind. Wheat-flour. No. 98,608; July 21; Gaz. vol. 204; p. 1009.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Adale Chemical Co., New York, N. Y. "Fum-a-dor." (For a Deodorizer.) No. 17,816; July 7; Gaz. vol. 204; p. 317.
Amalgamated Paint Company, Jersey City, N. J., and New York, N. Y. "Amalgamated Mixed Paint." (For Mixed Paints.) No. 17,838; July 14; Gaz. vol. 204; p. 673.
Aunt Jemima Mills Company, St. Joseph, Mo. "Aunt Jemima's Pancake Flour." (For Flour.) No. 17,839; July 14; Gaz. vol. 204; p. 673.
Bolgiano & Son, J., Baltimore, Md. "Bolgiano's 'Square Deal.'" (For Poultry Food.) No. 17,864; July 28; Gaz. vol. 204; p. 1343.
Bunte Brothers, Chicago, Ill. "Hazelnut Kisses." (For Candy and Confections.) No. 17,865; July 28; Gaz. vol. 204; p. 1343.
Burch, Geo. E., Medina, N. Y. "Ga-Lo." (For Cigars.) No. 17,866; July 28; Gaz. vol. 204; p. 1343.
Chauvain & Cie., M., Cette, France. "Vermouth M. Chauvain & Cie." (For Vermuth.) No. 17,867; July 28; Gaz. vol. 204; p. 1343.
Chodat Company, L., Decatur, Ill. "Louis' Double Wrapped 5¢ Cigar." (For Cigars.) No. 17,817; July 7; Gaz. vol. 204; p. 317.
Cimorosi, Alberto, Glassboro, N. J. "Cimorosi Brand Grand Silver Sizzle." (For Pyrotechnic Novelties.) No. 17,818; July 7; Gaz. vol. 204; p. 317.
Cleveland Wire Spring Co., The, Cleveland, Ohio. "Real Restful Rest." (For Bed-Springs.) No. 17,840; July 14; Gaz. vol. 204; p. 673.
Creme De Menthe Gum Co., Manitowoc, Wis. "Creme De Menthe." (For Pepsin Gum.) No. 17,841; July 14; Gaz. vol. 204; p. 673.
De Martini Macaroni Co., Inc., Brooklyn, N. Y. "De Martini Brand Genova Style." (For Macaroni.) No. 17,842; July 14; Gaz. vol. 204; p. 673.
De Martini Macaroni Co., Inc., Brooklyn, N. Y. "Macaroni Gragnano Style." (For Macaroni.) No. 17,843; July 14; Gaz. vol. 204; p. 673.
Ebling Brewing Company, The, New York, N. Y. "Ebling's Extract of Malt & Hops A Life Preserver." (For Extract of Malt and Hops.) No. 17,819; July 7; Gaz. vol. 204; p. 317.
Folkers, Christian H., Chicago, Ill. "Kraft Cleanser." (For a Cleaning-Powder.) No. 17,844; July 14; Gaz. vol. 204; p. 673.
Fort Worth Macaroni Co., Fort Worth, Tex. "Our Best." (For Macaroni.) No. 17,820; July 7; Gaz. vol. 204; p. 317.
Fort Worth Macaroni Co., Fort Worth, Tex. "Comet." (For Spaghetti.) No. 17,821; July 7; Gaz. vol. 204; p. 317.
Fort Worth Macaroni Co., Fort Worth, Tex. "Q and Q." (For Macaroni.) No. 17,845; July 14; Gaz. vol. 204; p. 673.
G. Mennen Chemical Company, Newark, N. J. "Mennen's Cream Dentifrice." (For a Cream Dentifrice.) No. 17,826; July 7; Gaz. vol. 204; p. 317.
G. Mennen Chemical Company, Newark, N. J. "Mennen's Shaving Cream." (For Shaving-Cream.) No. 17,827; July 7; Gaz. vol. 204; p. 317.
Gladding, Nathan B., Cleveland, Ohio. "Dr. Wells Galvanic Salve Co." (For Salve.) No. 17,822; July 7; Gaz. vol. 204; p. 317.
Golais, Catherine, New York, N. Y. "Madame Golais Sanitary Adjustable Petticoat." (For Petticoats.) No. 17,846; July 14; Gaz. vol. 204; p. 673.
Howland, Edward A., Springfield, Mass. "Good Samaritan." (For Foot-Balm.) No. 17,847; July 14; Gaz. vol. 204; p. 673.
International Buckle Company, New Britain, Conn. "I B Co." (For Buckles.) No. 17,868; July 28; Gaz. vol. 204; p. 1343.
John A. Salzer Seed Co., La Crosse, Wis. "Salzer Seeds." (For Seeds.) No. 17,834; July 7; Gaz. vol. 204; p. 317.
Keystone Polish Co., Philadelphia, Pa. "Keystone Polish Co." (For a Furniture Polish and Cleanser.) No. 17,823; July 7; Gaz. vol. 204; p. 317.
Kilian, Henry F. C., New York, N. Y. "La Famosa." (For Canned Pears.) No. 17,824; July 7; Gaz. vol. 204; p. 317.
Kraus & Co., Baltimore, Md. "Regional Bank." (For Cigars.) No. 17,825; July 7; Gaz. vol. 204; p. 317.
Laks Cigar Co., New York, N. Y. "Las Dalagas." (For Cigars.) No. 17,848; July 14; Gaz. vol. 204; p. 673.
Lewis, Minerva, Birmingham, Ala. "The Wandering Dew Vine Hair Grower." (For a Hair-Tonic.) No. 17,849; July 14; Gaz. vol. 204; p. 673.
Marchosky, Shulem J., New York, N. Y. "Canal Cigarettes." (For Cigarettes.) No. 17,850; July 14; Gaz. vol. 204; p. 673.
Martin Baking Company, The, Cleveland, Ohio. "Marco." (For Cakes.) No. 17,869; July 28; Gaz. vol. 204; p. 1343.
Martin Wagner Company, Baltimore, Md. "Wagner's." (For Canned Pork and Beans with Tomato Sauce.) No. 17,876; July 28; Gaz. vol. 204; p. 1343.
Mills, Charles H., Toledo, Ohio. "Insto Tire Fix." (For a Material for Repairing Pneumatic Tires.) No. 17,832; July 7; Gaz. vol. 204; p. 317.
Monico-Alles Company, New Castle, Pa. "Vitello Brand." (For Macaroni.) No. 17,828; July 7; Gaz. vol. 204; p. 317.
Morris, John, Washington, D. C. "Brookville." (For Whisky.) No. 17,870; July 28; Gaz. vol. 204; p. 1343.
Mouth Hygiene Co., Wilkinsburg, Pa. "Mouth Hygiene Tooth Paste." (For Tooth-Paste.) No. 17,829; July 7; Gaz. vol. 204; p. 317.
Mouth Hygiene Co., Wilkinsburg, Pa. "Mouth Hygiene Tooth Powder." (For Tooth-Powder.) No. 17,830; July 7; Gaz. vol. 204; p. 317.
Olympia Brewing Co., Olympia, Wash. "Olympia Malt Tonic." (For a Tonic.) No. 17,831; July 7; Gaz. vol. 204; p. 317.
Olympia Brewing Co., Olympia, Wash. "Olympia Pale Export." (For Light Beer.) No. 17,852; July 14; Gaz. vol. 204; p. 673.
Penn, Samuel S., New York, N. Y. "Removalin." (For a Medicinal Preparation.) No. 17,871; July 28; Gaz. vol. 204; p. 1343.
Pillsbury Flour Mills Company, Minneapolis, Minn. "Pillsbury's Health Bran." (For Bran.) No. 17,853; July 14; Gaz. vol. 204; p. 673.
Potter & Wrightington, Boston, Mass. "Guardian." (For Dog-Soap.) No. 17,833; July 7; Gaz. vol. 204; p. 317.
Purity Yeast Co., Beresford, S. D. "Purity Yeast." (For Yeast.) No. 17,854; July 14; Gaz. vol. 204; p. 673.
Scott, William, New York, N. Y. "Drink Gray Ape Grape Syrup." (For Grape-Syrup.) No. 17,835; July 7; Gaz. vol. 204; p. 317.
Smith, David A., Wonder, Nev. "P-A-P-P Preventoline Antiseptic Pocket Packet." (For an Antiseptic.) No. 17,872; July 28; Gaz. vol. 204; p. 1343.
Sonoma County Poultry Producers' Federation, Petaluma, Cal. "Everbest Eggs." (For Eggs.) No. 17,873; July 28; Gaz. vol. 204; p. 1343.
Stefanowski, Anthony, Detroit, Mich. "Asche Kayton." (For Cigars.) No. 17,855; July 14; Gaz. vol. 204; p. 673.
Thiele Laboratories Company, The, Columbus, Ohio. "544." (For a Remedy for Hog-Cholera.) No. 17,874; July 28; Gaz. vol. 204; p. 1343.
Ulman & Sons, I., Baltimore, Md. "Wicomico Club." (For Rye Whisky.) No. 17,856; July 14; Gaz. vol. 204; p. 673.
Ulman & Sons, I., Baltimore, Md. "Golden Spray." (For Rye Whisky.) No. 17,857; July 14; Gaz. vol. 204; p. 673.
Ulman & Sons, I., Baltimore, Md. "Old Davy." (For 100-Proof Whisky.) No. 17,858; July 14; Gaz. vol. 204; p. 673.
Ulman & Sons, I., Baltimore, Md. "Ulman's Coon-Club." (For Rye Whisky.) No. 17,859; July 14; Gaz. vol. 204; p. 673.
Ulman & Sons, I., Baltimore, Md. "M. D. & V. Club." (For Straight Whisky.) No. 17,860; July 14; Gaz. vol. 204; p. 673.
Ulman & Sons, I., Baltimore, Md. "Fairfield." (For Whisky.) No. 17,875; July 28; Gaz. vol. 204; p. 1343.
Wagner, Moses, New York, N. Y. "Cannon Roach And Bed Bug Powder." (For an Insecticide.) No. 17,861; July 14; Gaz. vol. 204; p. 673.
Wahrmann, Arthur, Houston, Tex. "First National Bank." (For Metal-Polish.) No. 17,836; July 7; Gaz. vol. 204; p. 317.
Whitcomb, L. P., Oshkosh, Wis. "Baby Bounce." (For Baby-Jumpers or Infant-Exercisers.) No. 17,877; July 28; Gaz. vol. 204; p. 1343.
White & Wyckoff Mfg. Co., Holyoke, Mass. "Florentine Ivory." (For Fine Stationery.) No. 17,837; July 7; Gaz. vol. 204; p. 317.
White & Wyckoff Mfg. Co., Holyoke, Mass. "Exposition Stationery." (For Fine Stationery.) No. 17,878; July 28; Gaz. vol. 204; p. 1343.
Wilcox, J. Fred, Chicago, Ill. "All 'Round The World." (For Cigars.) No. 17,862; July 14; Gaz. vol. 204; p. 673.
William McMurray & Company, St. Paul, Minn. "McMurray's Chocolate Icing." (For Chocolate Icing.) No. 17,851; July 14; Gaz. vol. 204; p. 673.
York-Bradford Co., San Francisco, Cal. "Butter Custard." (For Butter Custard.) No. 17,863; July 14; Gaz. vol. 204; p. 673.

PRINTS.

Auto Strop Safety Razor Co., New York, N. Y. "500 Shaves Guaranteed From 12 Blades The Razor that takes the 'H' out of shave." (For Safety-Razors.) No. 3,654; July 7; Gaz. vol. 204; p. 318.

Barclay & Co., New York, N. Y. "Tricofero de Barry." (For a Hair-Tonic.) No. 3,680; July 28; Gaz. vol. 204; p. 1343.

Barclay & Co., New York, N. Y. "Qué Contento." (For Soap.) No. 3,681; July 28; Gaz. vol. 204; p. 1343.

Barclay & Co., New York, N. Y. "Reuter's Soap." (For Soap.) No. 3,682; July 28; Gaz. vol. 204; p. 1343.

Brooke & Sons, C. M., New York, N. Y. "Brooke's Lemos." (For Lemonade.) No. 3,655; July 7; Gaz. vol. 204; p. 318.

Conrad Seipp Brewing Co., The, Chicago, Ill. "Hollander Brand Beer." (For Beer.) No. 3,688; July 28; Gaz. vol. 204; p. 1343.

Cream of Wheat Co., Minneapolis, Minn. "Look Pleasant, Please." (For Wheat Breakfast Food.) No. 3,672; July 14; Gaz. vol. 204; p. 673.

Fleischmann Company, The, Cincinnati, Ohio, and New York, N. Y. "The best Winter food is Bread." (For Bread and Yeast.) No. 3,656; July 7; Gaz. vol. 204; p. 318.

Fleischmann Company, The, Cincinnati, Ohio, and New York, N. Y. "Follow the Leader." (For Bread and Yeast.) No. 3,657; July 7; Gaz. vol. 204; p. 318.

Fleischmann Company, The, Cincinnati, Ohio, and New York, N. Y. "Bread makes a Hit." (For Bread and Yeast.) No. 3,658; July 7; Gaz. vol. 204; p. 318.

Fleischmann Company, The, Cincinnati, Ohio, and New York, N. Y. "Women Vote." (For Bread and Yeast.) No. 3,659; July 7; Gaz. vol. 204; p. 318.

G. Helleman Brg. Co., La Crosse, Wis. "Old Style Lager." (For Beer.) No. 3,660; July 7; Gaz. vol. 204; p. 318.

H. Traiser & Co., Inc., Boston, Mass. "Harvard." (For Cigars.) No. 3,689; July 28; Gaz. vol. 204; p. 1343.

Hills Bros., San Francisco, Cal. "Hills Bros. Tea and Coffee San Francisco." (For Tea and Coffee.) No. 3,683; July 28; Gaz. vol. 204; p. 1343.

Locomotive Arch Brick Company, Chicago, Ill. "Economy Brick Arches." (For Arch-Bricks.) No. 3,661; July 7; Gaz. vol. 204; p. 318.

Matthes, Max, Wilmington, Del. "German Style Smoked Sausage." (For Sausage.) No. 3,673; July 14; Gaz. vol. 204; p. 673.

Peter Schoenhofen Brewing Co., Chicago, Ill. "A Case Of Good Judgment." (For Beer.) No. 3,687; July 28; Gaz. vol. 204; p. 1343.

Peter Schoenhofen Brewing Company, The, Chicago, Ill. "A Case Of Good Health." (For a Tonic.) No. 3,667; July 7; Gaz. vol. 204; p. 318.

Picture Paster Publicity Co. Inc., New York, N. Y. "Picture Pasters." (For Picture-Pasters.) No. 3,662; July 7; Gaz. vol. 204; p. 318.

Pittsburgh-Hickson Company, East Butler, Pa. "The Test of Fire." (For Brass Beds.) No. 3,674; July 14; Gaz. vol. 204; p. 673.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Just about time you got *yours*." (For Smoking-Tobacco.) No. 3,663; July 7; Gaz. vol. 204; p. 318.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "You lay a bet on P. A. makin's." (For Smoking-Tobacco.) No. 3,664; July 7; Gaz. vol. 204; p. 318.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "It's time you rolled 'em!" (For Smoking-Tobacco.) No. 3,665; July 7; Gaz. vol. 204; p. 318.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "You Can't Get Away from." (For Chewing-Tobacco.) No. 3,666; July 7; Gaz. vol. 204; p. 318.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Every Time You'll Take." (For Chewing-Tobacco.) No. 3,675; July 14; Gaz. vol. 204; p. 673.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Butt right in with your old Jimmy pipe." (For Smoking-Tobacco.) No. 3,684; July 28; Gaz. vol. 204; p. 1343.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "P. A. makes a pipe smoke a real man's game!" (For Smoking-Tobacco.) No. 3,685; July 28; Gaz. vol. 204; p. 1343.

Rudolph Wurlitzer Co., The, Cincinnati, Ohio. "One Man Plays Them All." (For a Combination Automatical Musical Instrument.) No. 3,676; July 14; Gaz. vol. 204; p. 673.

Schoenhofen Brewing Co., The, Chicago, Ill. "Oh, That Reminds Me." (For Beer.) No. 3,686; July 28; Gaz. vol. 204; p. 1343.

Shredded Wheat Company, The, Niagara Falls, N. Y. "The Home of Shredded Wheat' Window Display." (For Shredded Wheat.) No. 3,668; July 7; Gaz. vol. 204; p. 318.

Shredded Wheat Company, The, Niagara Falls, N. Y. "The Shredded Wheat Man." (For Shredded Wheat.) No. 3,669; July 7; Gaz. vol. 204; p. 318.

Standard Pressed Steel Co., Philadelphia, Pa. "Standco." (For Hollow Set-Screws.) No. 3,677; July 14; Gaz. vol. 204; p. 673.

Swift Specific Company, Atlanta, Ga. "Take S. S. S. For The Blood." (For a Blood Remedy.) No. 3,670; July 7; Gaz. vol. 204; p. 318.

Utica Carbon & Wax Paper Co., Utica, N. Y. "Its Real Genuine Kno'-Blur." (For Carbon-Paper.) No. 3,690; July 28; Gaz. vol. 204; p. 1343.

Utz & Dunn Co., Rochester, N. Y. "Style Shoes of Quality." (For Boots or Shoes.) No. 3,678; July 14; Gaz. vol. 204; p. 673.

Waldes & Company, New York, N. Y. "Koh-i-noor Counter Cabinet Display Case." (For Display-Cases.) No. 3,671; July 7; Gaz. vol. 204; p. 318.

Wayne Knitting Mills, Fort Wayne, Ind. "Wayne Knit Hosiery." (For Hosiery.) No. 3,679; July 14; Gaz. vol. 204; p. 673.

DISCLAIMERS.

Hoke, Harry A., and Clarence J. Barley, Altoona, Pa., disclaimer filed by patentees. Piston-packing. No. 1,082,523; disclaimer filed July 10, 1914; Gaz. vol. 204; p. 1014.

Schlödt, Frederik V., Copenhagen, Denmark; disclaimer filed by assignee, Patents Selling & Exporting Company, Aktieselskab. Apparatus for the extraction of dust from carpets and other articles. No. 854,670; disclaimer filed July 11, 1914; Gaz. vol. 204; p. 1014.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JULY, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

Abdominal band. G. F. Earnshaw. No. 1,102,250; July 7; Gaz. vol. 204; p. 10.

Accenting device. J. H. Parnham and J. Hattemer. No. 1,102,950; July 7; Gaz. vol. 204; p. 251.

Acetylation of dichlorhydrocarbons. W. E. Masland. No. 1,102,347; July 7; Gaz. vol. 204; p. 44.

Acid anhydrid according to the contact process, Producing sulfuric-. H. von Köler and A. Weindel. No. 1,102,670; July 7; Gaz. vol. 204; p. 157.

Acid, Manufacture of sulfuric. U. Wedge. No. 1,104,590; July 21; Gaz. vol. 204; p. 911.

Acid, Manufacturing sulfuric. I. P. Lihme. No. 1,103,522; July 14; Gaz. vol. 204; p. 496.

Acid, Producing acetic. E. H. French and J. R. Withrow. No. 1,104,978; July 28; Gaz. vol. 204; p. 1093.

Acid, Producing hydrochloric. J. H. Nield. No. 1,102,539; July 7; Gaz. vol. 204; p. 111.

Acids, Producing sulfonic. A. Vagt. No. 1,102,827; July 7; Gaz. vol. 204; p. 212.

Adding and recording machine. H. Landsiedel. No. 1,103,300; July 14; Gaz. vol. 204; p. 422.

Adding-machines, Carrying means for. J. C. Lotterhand. No. 1,104,686; July 21; Gaz. vol. 204; p. 942.

Addressing and inserting machine. T. F. Russell. No. 1,103,846; July 14; Gaz. vol. 204; p. 611.

Addressing, folding, and wrapping machine. J. Tomlinson. No. 1,105,315; July 28; Gaz. vol. 204; p. 1210.

Addressing-machine. J. S. Duncan. No. 1,102,396; July 7; Gaz. vol. 204; p. 61.

Addressing-machine. F. De Minico. No. 1,104,170; July 21; Gaz. vol. 204; p. 764.

Addressing-machine. S. C. Cox. No. 1,104,967; July 28; Gaz. vol. 204; p. 1089.

Addressing-machine. S. C. Cox. No. 1,105,322; July 28; Gaz. vol. 204; p. 1213.

Addressing-machine. S. C. Cox. No. 1,105,323; July 28; Gaz. vol. 204; p. 1213.

Adhesives giving with cold water strong cementing masses, Manufacturing. J. Kantorowicz. No. 1,105,567; July 28; Gaz. vol. 204; p. 1300.

Adjustable bracket. P. A. Davis. No. 1,102,480; July 7; Gaz. vol. 204; p. 91.

Aeronautical machine. J. R. Porter. No. 1,104,542; July 21; Gaz. vol. 204; p. 894.

Aeroplane. G. L. Oliver. No. 1,102,790; July 7; Gaz. vol. 204; p. 198.

Aeroplane. H. Mansou-Olin. No. 1,103,820; July 14; Gaz. vol. 204; p. 603.

Aeroplane. H. Corbin. No. 1,104,347; July 21; Gaz. vol. 204; p. 825.

Aeroplane. J. Buttner. No. 1,104,624; July 21; Gaz. vol. 204; p. 921.

Aeroplane and safety appliance. H. E. Hawes. No. 1,104,889; July 28; Gaz. vol. 204; p. 1062.

Aeroplane safety device. N. Lacrotte. No. 1,104,429; July 21; Gaz. vol. 204; p. 852.

Aeroplanes, Means for increasing the stability of. W. L. Marr. No. 1,104,056; July 21; Gaz. vol. 204; p. 725.

Agitator. C. N. Ecklyn. No. 1,103,949; July 21; Gaz. vol. 204; p. 689.

Agricultural implement. A. Sorenson. No. 1,102,448; July 7; Gaz. vol. 204; p. 79.

Agricultural-implement frame. A. O. Gahr. No. 1,103,924; July 14; Gaz. vol. 204; p. 638.

Agricultural machines, Hauling device for. W. von Raczynski. No. 1,104,312; July 21; Gaz. vol. 204; p. 811.

Air-brake device, Emergency. J. H. Macleary. No. 1,103,790; July 14; Gaz. vol. 204; p. 593.

Air-brake retainer, Automatic. J. M. Carter. (Reissue.) No. 13,771; July 14; Gaz. vol. 204; p. 640.

Air-brake system, Automatic. W. Miller. No. 1,104,603; July 21; Gaz. vol. 204; p. 944.

Air, Carbureting. C. V. Stuart. No. 1,102,701; July 7; Gaz. vol. 204; p. 167.

Air-carbureting apparatus. C. V. Stuart. No. 1,102,702; July 7; Gaz. vol. 204; p. 167.

Air-carbureting apparatus. E. D. Kendall. No. 1,104,427; July 21; Gaz. vol. 204; p. 852.

Air compressor and motor, Combined. D. E. Crouse, C. G. Eidson, and T. Davis. No. 1,105,494; July 28; Gaz. vol. 204; p. 1274.

Air-craft. W. R. Gordon. No. 1,103,195; July 14; Gaz. vol. 204; p. 388.

Air-craft safety appliance. E. L. Waight. No. 1,103,233; July 14; Gaz. vol. 204; p. 400.

Air-cushion and shock-absorber, Automatic. M. V. Ruff. No. 1,103,084; July 14; Gaz. vol. 204; p. 346.

Air-cushion for rubber stamps. C. C. Gibson. No. 1,103,670; July 14; Gaz. vol. 204; p. 553.

Airship. J. Bonnot, A. Belot, J. Vassallo, and R. Emery. No. 1,104,242; July 21; Gaz. vol. 204; p. 788.

Airship. E. E. Pauley. No. 1,104,702; July 21; Gaz. vol. 204; p. 947.

Alarm: *See* Burglar-alarm; Fire-alarm; Speedometer-alarm.

Alarm apparatus, Liquid-controlled. S. A. Glynn and B. L. Quayle. No. 1,104,419; July 21; Gaz. vol. 204; p. 849.

Alcoömeter. E. Gibaudan and A. J. Frager. No. 1,102,905; July 7; Gaz. vol. 204; p. 237.

Alfalfa products, Manufacture of. M. C. Rich. No. 1,104,136; July 21; Gaz. vol. 204; p. 752.

Alloy, Aluminum. W. A. McAdams. No. 1,104,369; July 21; Gaz. vol. 204; p. 832.

Alloy for welding copper and nickel. C. Canzler and R. Samesreuther. No. 1,103,482; July 14; Gaz. vol. 204; p. 483.

Alloy, Metal. S. Weln. No. 1,102,618; July 7; Gaz. vol. 204; p. 140.

Alloy of iron. J. R. Speer. No. 1,105,341; July 28; Gaz. vol. 204; p. 1220.

Alloy, Pyrophoric. P. Fachr. No. 1,102,575; July 7; Gaz. vol. 204; p. 125.

Amino anthraquinones, Producing. R. Uhlenhuth. No. 1,104,943; July 28; Gaz. vol. 204; p. 1081.

Ammunition. W. Cooper. No. 1,103,740; July 14; Gaz. vol. 204; p. 576.

Ampul-holder. F. Wachter. No. 1,103,111; July 14; Gaz. vol. 204; p. 357.

Amusement apparatus. E. J. Beseman. No. 1,104,469; July 21; Gaz. vol. 204; p. 867.

Amusement device. M. Berger and R. Weisbach. No. 1,103,558; July 14; Gaz. vol. 204; p. 509.

Anatomical study, Making transparent models for. H. Murayama. No. 1,104,067; July 21; Gaz. vol. 204; p. 729.

Andiron. J. W. Baker. No. 1,104,862; July 28; Gaz. vol. 204; p. 1053.

Annealing-box bottom. J. E. Bossingham. No. 1,105,059; July 28; Gaz. vol. 204; p. 1121.

Anthraquinone, Making. F. Singer and E. Millarch. No. 1,103,383; July 14; Gaz. vol. 204; p. 449.

Anti-rail-spreading device. J. M. Barrow. No. 1,103,021; July 14; Gaz. vol. 204; p. 325.

Antiseptic protector. T. Lamb. No. 1,104,908; July 28; Gaz. vol. 204; p. 1069.

Antiskid attachment. A. Medve. No. 1,104,526; July 21; Gaz. vol. 204; p. 889.

Antiskidding device. J. Vaday. No. 1,105,386; July 28; Gaz. vol. 204; p. 1238.

Antiskidding or emergency brake for automobiles. J. C. Lautenbacher and A. Geary. No. 1,102,932; July 7; Gaz. vol. 204; p. 246.

Apple-sizer. F. M. Bair. No. 1,103,647; July 14; Gaz. vol. 204; p. 545.

Apple-sorter. W. H. Gray. No. 1,102,496; July 7; Gaz. vol. 204; p. 96.

Arbor-press. W. E. Elliott. No. 1,103,179; July 14; Gaz. vol. 204; p. 381.

Arbor-press. W. E. Elliott. No. 1,103,182; July 14; Gaz. vol. 204; p. 383.

Arch-tube safety device. P. Bowers. No. 1,105,397; July 28; Gaz. vol. 204; p. 1241.

Arm-chair and folding bed, Convertible. H. Brooks. No. 1,104,618; July 21; Gaz. vol. 204; p. 919.

Arm rest or support. F. W. Page. No. 1,103,824; July 14; Gaz. vol. 204; p. 604.

Armature-winding mechanism, Tension device for. C. C. West. No. 1,103,718; July 14; Gaz. vol. 204; p. 569.

Arsenic or antimony from ores containing the same, Extraction of. H. A. Lewis and F. G. Price. No. 1,104,810; July 28; Gaz. vol. 204; p. 1035.
Article-holder. J. B. Mueller. No. 1,103,682; July 14; Gaz. vol. 204; p. 557.
Ashes, clinkers, or other refuse, Apparatus for discharging. W. S. Parsons. No. 1,102,351; July 7; Gaz. vol. 204; p. 45.
Ashes receptacle, Light-. J. Martin. No. 1,103,794; July 14; Gaz. vol. 204; p. 594.
Asphalt pavement. E. M. Chadbourne. No. 1,103,127; July 14; Gaz. vol. 204; p. 363.
Associating, cutting, and folding apparatus. H. F. Bechman. No. 1,102,637; July 7; Gaz. vol. 204; p. 146.
Assorting apparatus. F. Kramer. No. 1,104,993; July 28; Gaz. vol. 204; p. 1097.
Atomizer. E. R. Pettit. No. 1,103,684; July 14; Gaz. vol. 204; p. 558.
Atomizer or spraying device. E. H. Peabody and D. J. Irish. No. 1,102,352; July 7; Gaz. vol. 204; p. 45.
Atomizer, Perfume-. P. Berger. No. 1,104,607; July 21; Gaz. vol. 204; p. 916.
Auric compounds from cantharidylethylenediamin and making same. G. Spiess and A. Feldt. No. 1,104,149; July 21; Gaz. vol. 204; p. 756.
Auto-rest. G. Sjolander. No. 1,105,462; July 28; Gaz. vol. 204; p. 1264.
Auto-wheel. F. H. John. No. 1,102,665; July 7; Gaz. vol. 204; p. 156.
Autographic register. F. C. Nickol and M. C. Stern. No. 1,104,127; July 21; Gaz. vol. 204; p. 749.
Automatic coupling. J. Corkery. No. 1,102,245; July 7; Gaz. vol. 204; p. 8.
Automatic-feed lubricator. F. Doyle. No. 1,105,126; July 28; Gaz. vol. 204; p. 1143.
Automobile attachment. E. F. Martin. No. 1,102,773; July 7; Gaz. vol. 204; p. 193.
Automobile brake-actuating mechanism. H. S. Morton. No. 1,104,066; July 21; Gaz. vol. 204; p. 729.
Automobile-buffer. A. L. McGregor. No. 1,103,981; July 21; Gaz. vol. 204; p. 699.
Automobile-buffer. W. N. Packer. No. 1,104,443; July 21; Gaz. vol. 204; p. 857.
Automobile-fender. C. Setzler. No. 1,102,446; July 7; Gaz. vol. 204; p. 78.
Automobile fuel-tank. W. H. Hollar. No. 1,105,272; July 28; Gaz. vol. 204; p. 1195.
Automobile-guard. A. R. Finkelstein. No. 1,104,647; July 21; Gaz. vol. 204; p. 929.
Automobile-heater. J. C. Kane and F. E. Hugg. No. 1,104,120; July 21; Gaz. vol. 204; p. 746.
Automobile-hood. R. C. Hupp. No. 1,104,802; July 28; Gaz. vol. 204; p. 1032.
Automobile-hood. B. R. Thompson. No. 1,104,942; July 28; Gaz. vol. 204; p. 1081.
Automobile-indicator. R. Dickinson. No. 1,104,171; July 21; Gaz. vol. 204; p. 765.
Automobile-light. A. L. McMurtry. No. 1,105,035; July 28; Gaz. vol. 204; p. 1112.
Automobile-radiator. F. Todd. No. 1,102,366; July 7; Gaz. vol. 204; p. 50.
Automobile-radiator. E. J. Richardson. No. 1,103,840; July 14; Gaz. vol. 204; p. 609.
Automobile repairer's support. J. H. Zimmerman. No. 1,104,395; July 21; Gaz. vol. 204; p. 842.
Automobile sled. F. J. Lehtonen. No. 1,104,682; July 21; Gaz. vol. 204; p. 941.
Automobile-switch. H. W. Young and A. S. Pearl. No. 1,104,093; July 21; Gaz. vol. 204; p. 738.
Automobile truck-brake. E. Roblin. No. 1,103,540; July 14; Gaz. vol. 204; p. 543.
Automobile wheel-controlling means. W. F. Mitchell and E. E. Henry. No. 1,104,534; July 21; Gaz. vol. 204; p. 892.
Automobiles, Foot-control device for. J. A. Staples. No. 1,103,095; July 14; Gaz. vol. 204; p. 349.
Automobiles, Foot-operated control device for. J. A. Staples. No. 1,103,094; July 14; Gaz. vol. 204; p. 349.
Automobiles, Knockdown table for. G. R. Thiss. No. 1,104,018; July 21; Gaz. vol. 204; p. 711.
Automobiles, Power-train mounting for. H. C. Marmon. No. 1,103,524; July 14; Gaz. vol. 204; p. 497.
Autovehicle signal apparatus. E. A. Tappe. No. 1,104,281; July 21; Gaz. vol. 204; p. 802.
Aviators, Pneumatic suit for. N. Lacrotte. No. 1,105,569; July 28; Gaz. vol. 204; p. 1300.
Aviator's protecting-garment. R. Kockrow. No. 1,104,808; July 28; Gaz. vol. 204; p. 1034.
Aviators, Saving apparatus for. C. G. E. Trumelet-Faber. No. 1,105,049; July 28; Gaz. vol. 204; p. 1117.
Awning for windows. A. F. Smith. No. 1,104,452; July 21; Gaz. vol. 204; p. 861.
Awning-frame and hinges therefor. J. C. Ela. No. 1,102,251; July 7; Gaz. vol. 204; p. 10.
Awning-ventilator. D. R. McGinnis. No. 1,103,980; July 21; Gaz. vol. 204; p. 699.
Axle, Ball-bearing. A. L. Paschall. No. 1,105,451; July 28; Gaz. vol. 204; p. 1260.
Axle-bearing-lubricating device. H. Poetter. No. 1,104,002; July 21; Gaz. vol. 204; p. 705.
Axle for motor-vehicles, Rear. T. I. Duffy. No. 1,104,174; July 21; Gaz. vol. 204; p. 766.
Axle for trolley-wheels, Lubricating-. J. W. Anderson. No. 1,104,952; July 28; Gaz. vol. 204; p. 1084.
Axle, Vehicle-. A. R. Hartmann. No. 1,105,513; July 28; Gaz. vol. 204; p. 1281.
Axles, Making hollow. C. M. Wales. No. 1,104,088; July 21; Gaz. vol. 204; p. 736.
Baby-jumper. F. M. Blain. No. 1,104,609; July 21; Gaz. vol. 204; p. 916.
Badge-box. H. O. Mix. No. 1,103,810; July 14; Gaz. vol. 204; p. 600.
Bag: *See* Hand-bag.
Bag. C. C. Miller. No. 1,102,426; July 7; Gaz. vol. 204; p. 73.
Bag. W. J. Moeller. No. 1,104,308; July 21; Gaz. vol. 204; p. 810.
Bag cleaning and turning means. W. H. Herbst. No. 1,104,668; July 21; Gaz. vol. 204; p. 937.
Bag-fastener. F. R. Clarke. No. 1,103,264; July 14; Gaz. vol. 204; p. 411.
Bag-frame fastener. J. Ritter. No. 1,102,437; July 7; Gaz. vol. 204; p. 76.
Bag-frame fastener. H. Tueckmantel. No. 1,104,455; July 21; Gaz. vol. 204; p. 862.
Bag-frame fastener. W. C. Rath. No. 1,104,707; July 21; Gaz. vol. 204; p. 949.
Bags and the like, Fastener for hand-. K. Oswald. No. 1,102,541; July 7; Gaz. vol. 204; p. 112.
Bagging-stretcher. W. R. Davis. No. 1,102,391; July 7; Gaz. vol. 204; p. 59.
Bait, Artificial. A. Winnie. No. 1,102,312; July 7; Gaz. vol. 204; p. 32.
Bait retainer, Live-. R. A. Anschutz. No. 1,105,172; July 28; Gaz. vol. 204; p. 1159.
Baking-pan. D. W. Boger. No. 1,105,178; July 28; Gaz. vol. 204; p. 1161.
Balance. W. Heusser. No. 1,103,513; July 14; Gaz. vol. 204; p. 493.
Balance. W. Heusser. No. 1,104,892; July 28; Gaz. vol. 204; p. 1063.
Balances and the like, Base for assay-. W. Heusser. No. 1,104,891; July 28; Gaz. vol. 204; p. 1063.
Balancing and steering device. W. R. Jones. No. 1,102,515; July 7; Gaz. vol. 204; p. 102.
Baling-compress. I. Mikeal. No. 1,102,282; July 7; Gaz. vol. 204; p. 21.
Baling-press. R. B. Redding and J. W. Barnett. No. 1,104,831; July 28; Gaz. vol. 204; p. 1042.
Balloons or gas-bags, Attachment for dirigible. R. R. Waterman. No. 1,103,388; July 14; Gaz. vol. 204; p. 450.
Bandage-fastener. S. H. Swope. No. 1,104,575; July 21; Gaz. vol. 204; p. 906.
Bank, Savings-. C. Fisher. No. 1,102,256; July 7; Gaz. vol. 204; p. 12.
Bar: *See* Grate-bar; Safety-bar; Type-bar.
Barber's shears. W. H. Tourjée. No. 1,103,710; July 14; Gaz. vol. 204; p. 566.
Bark-rossing machine. W. G. Hafner. No. 1,102,657; July 7; Gaz. vol. 204; p. 153.
Barrel. O. R. Emmrich. No. 1,104,351; July 21; Gaz. vol. 204; p. 826.
Barrel-head fastener. C. A. Cox. No. 1,103,401; July 14; Gaz. vol. 204; p. 455.
Barrel-head retainer. E. W. Robinson. No. 1,104,546; July 21; Gaz. vol. 204; p. 896.
Barrel-heading press. J. C. Darnall. No. 1,103,175; July 14; Gaz. vol. 204; p. 380.
Barrel-making machine. C. D. Clark. No. 1,103,562; July 14; Gaz. vol. 204; p. 512.
Barrel-stand. R. E. Woodworth. No. 1,102,972; July 7; Gaz. vol. 204; p. 259.
Barrel-treating apparatus. H. Torchiani. No. 1,102,306; July 7; Gaz. vol. 204; p. 29.
Barrels, Reversible gate for steel. C. T. Draper. No. 1,103,176; July 14; Gaz. vol. 204; p. 380.
Base and counter flashing, Combination. S. M. Griffiths. No. 1,105,422; July 28; Gaz. vol. 204; p. 1250.
Basket. E. Mayette and J. D. Mitchell. No. 1,105,205; July 28; Gaz. vol. 204; p. 1170.
Bath: *See* Portable bath.
Bath. E. Geussenhainer. No. 1,103,139; July 14; Gaz. vol. 204; p. 367.
Bath attachment, Arm-. A. M. McQuhae. No. 1,105,365; July 28; Gaz. vol. 204; p. 1231.
Bath-room fixture. E. M. Statler and J. A. Johnson. No. 1,105,164; July 28; Gaz. vol. 204; p. 1156.
Bath-tub attachment. G. A. L'Hommedieu. No. 1,104,430; July 21; Gaz. vol. 204; p. 853.
Battery: *See* Dry battery; Galvanic battery.
Battery-connector. G. I. Rawson and L. B. Shultz. No. 1,102,355; July 7; Gaz. vol. 204; p. 46.
Battery container, Dry-. H. T. Johnson. No. 1,105,144; July 28; Gaz. vol. 204; p. 1149.
Battery plate, Storage-. R. Drambourg. No. 1,105,499; July 28; Gaz. vol. 204; p. 1276.
Battery-plates, Apparatus for treating. G. H. Rabenalt. No. 1,104,272; July 21; Gaz. vol. 204; p. 708.
Battery-plates, Treating. G. H. Rabenalt. No. 1,104,273; July 21; Gaz. vol. 204; p. 798.
Bean-snipping machine. F. A. Shoman. No. 1,102,808; July 7; Gaz. vol. 204; p. 205.
Bearing. W. S. Harley. No. 1,103,044; July 14; Gaz. vol. 204; p. 333.
Bearing. W. Elliott. No. 1,104,041; July 21; Gaz. vol. 204; p. 719.
Bearing. S. Orbán. No. 1,105,097; July 28; Gaz. vol. 204; p. 1134.

Bearing, Antifriction-. A. F. Rockwell. No. 1,102,547; July 7; Gaz. vol. 204; p. 114.
Bearing, Antifriction-. D. F. Graham. No. 1,105,132; July 28; Gaz. vol. 204; p. 1145.
Bearing, Antifriction-. D. F. Graham. No. 1,105,133; July 28; Gaz. vol. 204; p. 1145.
Bearing, Antifriction roller-. C. S. Lockwood. No. 1,104,363; July 21; Gaz. vol. 204; p. 830.
Bearing, Ball-. M. Gohlke. No. 1,105,268; July 28; Gaz. vol. 204; p. 1193.
Bearing-box for motor-vehicles, Adjustable. R. Huff. No. 1,103,289; July 14; Gaz. vol. 204; p. 418.
Bearing, Lubricator-. A. D. Ray. No. 1,103,432; July 14; Gaz. vol. 204; p. 466.
Bearing, Roller-. R. Heinzelmann. No. 1,102,404; July 7; Gaz. vol. 204; p. 64.
Bearing, Thrust-. A. Kingsbury. No. 1,102,276; July 7; Gaz. vol. 204; p. 19.
Bearing with several rows of balls, Ball-. O. Hoffmann. No. 1,105,433; July 28; Gaz. vol. 204; p. 1253.
Bearings, Cage for ball-. E. G. Hoffmann. No. 1,103,965; July 21; Gaz. vol. 204; p. 694.
Bearings, Two-part roll for roller-. C. S. Lockwood. No. 1,104,364; July 21; Gaz. vol. 204; p. 831.
Beating-engine. R. S. Fram. No. 1,103,280; July 14; Gaz. vol. 204; p. 416.
Bed. F. M. Harris. No. 1,103,765; July 14; Gaz. vol. 204; p. 584.
Bed. A. Brown. No. 1,104,619; July 21; Gaz. vol. 204; p. 920.
Bed-bottom, Spring. G. A. Mellon. No. 1,103,526; July 14; Gaz. vol. 204; p. 498.
Bed-cover holder. H. C. Ewald. No. 1,103,494; July 14; Gaz. vol. 204; p. 487.
Bed, Folding. W. W. La Vanway. No. 1,105,203; July 28; Gaz. vol. 204; p. 1170.
Bed-leg, Swinging. F. J. Crouch and S. B. Cooke. No. 1,104,249; July 21; Gaz. vol. 204; p. 790.
Bed-spring border. C. M. Way. No. 1,105,318; July 28; Gaz. vol. 204; p. 1211.
Bed-spring corner-bracket. E. H. Woelffel. No. 1,104,336; July 21; Gaz. vol. 204; p. 821.
Bed, Upending. L. Holmes. No. 1,102,585; July 7; Gaz. vol. 204; p. 128.
Bedstead. E. J. Robison. No. 1,102,956; July 7; Gaz. vol. 204; p. 254.
Bedstead extension. O. R. Cassell. No. 1,105,487; July 28; Gaz. vol. 204; p. 1272.
Bedstead, Invalid-. R. A. Stanley. No. 1,104,390; July 21; Gaz. vol. 204; p. 839.
Beehive. C. Bachmann. No. 1,103,468; July 14; Gaz. vol. 204; p. 478.
Beer-cases and the like, Cover for. P. T. Clark. No. 1,102,877; July 7; Gaz. vol. 204; p. 228.
Beer-cooler. J. Mosher. No. 1,104,997; July 28; Gaz. vol. 204; p. 1098.
Bell for gas-lights. J. D. Kantro. No. 1,102,592; July 7; Gaz. vol. 204; p. 130.
Bell-striking device. F. H. Kane. No. 1,102,340; July 7; Gaz. vol. 204; p. 42.
Belt-fastening device. C. C. Howell. No. 1,105,273; July 28; Gaz. vol. 204; p. 1195.
Belt for catamenial sacks. C. Johnson. No. 1,104,674; July 21; Gaz. vol. 204; p. 938.
Belt-shifter. L. S. Tigh. No. 1,102,612; July 7; Gaz. vol. 204; p. 137.
Belt-shifter. J. R. Pearson. No. 1,104,218; July 21; Gaz. vol. 204; p. 780.
Belt, Supporting-. E. Guggenheim. No. 1,104,664; July 21; Gaz. vol. 204; p. 935.
Belting, Leather. E. Blossfeld. No. 1,104,341; July 21; Gaz. vol. 204; p. 823.
Bench: *See* Shoemaker's work-bench; Work-bench.
Bench-drill. G. O. Leopold. No. 1,103,782; July 14; Gaz. vol. 204; p. 590.
Bevel-gage for squares. T. Lewis. No. 1,104,123; July 21; Gaz. vol. 204; p. 748.
Bicycle crank-hanger. G. W. McIlwaine. No. 1,104,523; July 21; Gaz. vol. 204; p. 888.
Billiard-cue-tip fastener. G. Miller. No. 1,103,807; July 14; Gaz. vol. 204; p. 599.
Binder-elevator. M. Young. No. 1,102,846; July 7; Gaz. vol. 204; p. 218.
Binder or loose-sheet holder, Temporary. G. P. Wigginton. No. 1,104,855; July 28; Gaz. vol. 204; p. 1050.
Binder, Package-. G. W. Bury. No. 1,102,470; July 7; Gaz. vol. 204; p. 87.
Binder, Temporary. C. D. Trussell. No. 1,104,394; July 21; Gaz. vol. 204; p. 840.
Binder, Temporary. G. P. Wigginton. No. 1,104,856; July 28; Gaz. vol. 204; p. 1051.
Binders, Locking mechanism for loose-leaf. J. Schaub. No. 1,105,161; July 28; Gaz. vol. 204; p. 1154.
Binding clasp, Leaf-. F. I. Ellick. No. 1,105,025; July 28; Gaz. vol. 204; p. 1108.
Biplane. E. W. F. Herrmann. No. 1,105,429; July 28; Gaz. vol. 204; p. 1252.
Biscuits of shredded cereal, Machine for making. R. E. Valentine. No. 1,102,614; July 7; Gaz. vol. 204; p. 138.
Bisulfite of soda, Making. H. Howard. No. 1,104,897; July 28; Gaz. vol. 204; p. 1066.
Bit: *See* Drilling-bit.
Bit-gage. R. S. McMillen. No. 1,105,154; July 28; Gaz. vol. 204; p. 1152.
Bituminous material, Treating. J. C. Ross. No. 1,104,140; July 21; Gaz. vol. 204; p. 753.
Blade-connecting device for tools, Detachable-. J. W. Grimes. No. 1,104,987; July 28; Gaz. vol. 204; p. 1095.
Blanks, Machine for feeding headed. K. Weiss. No. 1,104,029; July 21; Gaz. vol. 204; p. 715.
Bleaching solutions containing titanous chlorid and producing the same. A. J. Rossi. No. 1,105,308; July 28; Gaz. vol. 204; p. 1207.
Block: *See* Fuse-block; Hoisting-block; Insulating-block; Meat-block; Railway bumping-block.
Block-signal system. L. A. Hawkins. No. 1,102,917; July 7; Gaz. vol. 204; p. 241.
Blow-out patch. C. L. Smith. No. 1,103,848; July 14; Gaz. vol. 204; p. 612.
Blower for rotary mills. M. F. Williams. No. 1,103,237; July 14; Gaz. vol. 204; p. 401.
Blowpipe. F. Gleich. No. 1,102,984; July 7; Gaz. vol. 204; p. 263.
Board: *See* Game-board; Paper-hanger's board; Phonograph sounding-board; Sign-board; Washboard.
Boards and other articles, Applying covering to. G. W. Dinsmoor. No. 1,103,402; July 14; Gaz. vol. 204; p. 455.
Boat-launching mechanism, Life-. F. Kratky. No. 1,103,971; July 21; Gaz. vol. 204; p. 696.
Boat, Life-. S. Krawczyk. No. 1,102,764; July 7; Gaz. vol. 204; p. 189.
Boat, Life-. M. Raznlak. No. 1,104,387; July 21; Gaz. vol. 204; p. 838.
Boat, Life-. J. Kertész. No. 1,104,428; July 21; Gaz. vol. 204; p. 852.
Boat, Life-. J. Gunnarson. No. 1,104,745; July 21; Gaz. vol. 204; p. 963.
Boat, Life-. P. P. Horváth. No. 1,104,992; July 28; Gaz. vol. 204; p. 1097.
Boat, Life-. L. Preiczer. No. 1,105,303; July 28; Gaz. vol. 204; p. 1206.
Boat, Submarine. A. J. Griffin. No. 1,103,958; July 21; Gaz. vol. 204; p. 692.
Boats, Automatic safety launching device for life-. C. W. Weiland. No. 1,104,089; July 21; Gaz. vol. 204; p. 737.
Bobbin. F. Mossberg. No. 1,105,289; July 28; Gaz. vol. 204; p. 1200.
Bobbin for thread and the like. J. Stewart. No. 1,104,325; July 21; Gaz. vol. 204; p. 817.
Body-supporting appliance. W. Staab and H. Föckerer. No. 1,104,150; July 21; Gaz. vol. 204; p. 756.
Boiler: *See* Stand-boiler; Superheater-boiler; Wash-boiler; Water-tube boiler.
Boiler appliance, Water-. Y. Kalfus. No. 1,104,511; July 21; Gaz. vol. 204; p. 883.
Boiler-arch construction. E. P. Stevens. No. 1,103,447; July 14; Gaz. vol. 204; p. 471.
Boiler-arch construction. E. P. Stevens. No. 1,103,448; July 14; Gaz. vol. 204; p. 471.
Boiler-bracket. E. P. Selden. No. 1,104,144; July 21; Gaz vol. 204; p. 754.
Boiler burner-chamber, Stand-. R. T. Parisen. No. 1,105,338; July 28; Gaz. vol. 204; p. 1219.
Boiler-flue swage. J. C. Tassey. No. 1,102,818; July 7; Gaz. vol. 204; p. 208.
Boiler-furnace. R. F. Sturrock. No. 1,103,098; July 14; Gaz. vol. 204; p. 351.
Boiler-tube cleaner. F. Herle. No. 1,104,262; July 21; Gaz. vol. 204; p. 795.
Boiler with fire-tube superheater. S. Hoffmann. No. 1,104,756; July 21; Gaz. vol. 204; p. 967.
Boilers, Automatic circulator for steam-. A. McNab. No. 1,103,425; July 14; Gaz. vol. 204; p. 463.
Boilers, Division-wall for water-tube. W. F. Sellers and H. B. Bradford. No. 1,105,213; July 28; Gaz. vol. 204; p. 1174.
Bolt and rivet heading machine. M. Champion. No. 1,103,659; July 14; Gaz. vol. 204; p. 549.
Bolt-lock. M. F. Gosswiller. No. 1,103,902; July 14; Gaz. vol. 204; p. 631.
Bolting mechanism. C. C. McColly. No. 1,104,434; July 21; Gaz. vol. 204; p. 854.
Bonus-determining device. H. E. Oliver. No. 1,104,069; July 21; Gaz vol. 204; p. 730.
Book-cover. C. W. Thurston and S. E. Dudley. No. 1,103,102; July 14; Gaz. vol. 204; p. 353.
Book cover, Blank-. J. W. Gearhart. No. 1,105,505; July 28; Gaz. vol. 204; p. 1278.
Book cover, Blank-. J. W. Gearhart. No. 1,105,506; July 28; Gaz. vol. 204; p. 1279.
Book cover, Blank-. J. W. Gearhart. No. 1,105,507; July 28; Gaz. vol. 204; p. 1279.
Book, Manifolding-. B. C. Maxwell. No. 1,105,571; July 28; Gaz. vol. 204; p. 1301.
Book, Manifolding sales-. W. Greig No. 1,102,739; July 7; Gaz. vol. 204; p. 181.
Books, Means for binding. K. W. Hanke. No. 1,105,196; July 28; Gaz. vol. 204; p. 1167.
Bookbinding, Book-leaves slotter for. C. Ans. No. 1,105,056; July 28; Gaz. vol. 204; p. 1120.
Boots and shoes, Machine for use in the manufacture of. O. Ashton. No. 1,102,465; July 7; Gaz. vol. 204; p. 86.
Boots and shoes, Machine for use in the manufacture of. M. F. Brogan. No. 1,103,935; July 21; Gaz. vol. 204; p. 684.
Boring-machine. W. S. Sherman. No. 1,102,695; July 7; Gaz. vol. 204; p. 165.

Boring-tool. T. F. Mulligan. No. 1,102,538; July 7; Gaz. vol. 204; p. 111.
Boron suboxid, Making. E. Weintraub. No. 1,105,388; July 28; Gaz. vol. 204; p. 1239.
Bottle-closure. N. F. Thompson. No. 1,104,578; July 21; Gaz. vol 204; p. 907.
Bottle closure, Milk-. J. S. Ramsey. No. 1,104,706; July 21; Gaz vol. 204; p. 949.
Bottle-cover. F. W. Pelsch. No. 1,103,827; July 14; Gaz. vol. 204; p. 605.
Bottle-filling-machine base. A. Schneider. No. 1,104,555; July 21; Gaz. vol. 204; p. 899.
Bottle holder, Milk-. P. A. Good. No. 1,105,269; July 28; Gaz. vol. 204; p. 1193.
Bottle, Milk-. W. Stock. No. 1,104,082; July 21; Gaz. vol. 204; p. 735.
Bottle, Non-refillable. M. Murray. No. 1,102,349; July 7; Gaz. vol. 204; p. 44.
Bottle, Non-refillable. D. M. Sherman and C. P. Kleebauer. No. 1,108,007; July 7; Gaz. vol. 204; p. 272.
Bottle, Non-refillable. V. Capobianco. No. 1,103,348; July 14; Gaz. vol. 204; p. 439.
Bottle, Non-refillable. J. C. Lautenbacher and A. Geary. No. 1,103,675; July 14; Gaz. vol. 204; p. 555.
Bottle, Non-refillable. E. S. Staples. No. 1,103,895; July 14; Gaz. vol. 204; p. 629.
Bottle, Non-refillable. F. Lenzi. No. 1,104,201; July 21; Gaz. vol. 204; p. 774.
Bottle, Non-refillable. J. H. Gruver. No. 1,104,420; July 21; Gaz. vol. 204; p. 849.
Bottle, Non-refillable. R. W. Wigg. No. 1,104,594; July 21; Gaz. vol. 204; p. 912.
Bottle, Non-refillable. D. L. Dover. No. 1,104,972; July 28; Gaz. vol. 204; p. 1091.
Bottle, Non-refilling. S. S. Williamson. No. 1,102,560; July 7; Gaz. vol. 204; p. 119.
Bottle-opener. O. G. Ashley. No. 1,103,731; July 14; Gaz. vol. 204; p. 573.
Bottle-opener. H. L. Vaughan. No. 1,104,025; July 21; Gaz. vol. 204; p. 714.
Bottle, Sanitary. P. G. Fuegmann and F. H. Hummel. No. 1,103,752; July 14; Gaz. vol. 204; p. 580.
Bottle-stopper. J. S. Porter. No. 1,102,296; July 7; Gaz. vol. 204; p. 26.
Bottle-stopper. O Sondheim and H. M. Veit. No. 1,102,699; July 7; Gaz. vol. 204; p. 166.
Bottle-stopper. L. F. Seames. No. 1,103,692; July 14; Gaz. vol. 204; p. 561.
Bottle-stopper. T. A. Gey. No. 1,104,418; July 21; Gaz. vol. 204; p. 849.
Bottle stopper, Non-refillable-. J. H. Gruver. No. 1,104,421; July 21; Gaz. vol. 204; p. 850.
Bottle-stopper remover. J. E. Green. No. 1,102,497; July 7; Gaz. vol. 204; p. 96.
Bottle-washing machine. E. Linderme. No. 1,104,994; July 28; Gaz. vol. 204; p. 1097.
Bottles, jars, &c., Closure for. F. M. Budlong. No. 1,103,737; July 14; Gaz. vol. 204; p. 575.
Bottling-machine throat. H. L. Vaughan. No. 1,104,023; July 21; Gaz. vol. 204; p. 713.
Bottling-machine throat. H. L. Vaughan. No. 1,104,024; July 21; Gaz. vol. 204; p. 713.
Bowline-guide. C. B. King and J. W. Fellmeth. No. 1,103,055; July 14; Gaz. vol. 204; p. 337.
Box: *See* Badge-box; Bearing-box; Cigar-box; Cigarette-box; Collapsible box; Confectionery-box; Display-box; Electric wall-box; Electrical outlet-box; Feed-box; Folding box; Journal-box; Knockdown box; Letter-box; Mail-box; Outlet-box; Packing-box; Paper box; Paper-board box; Rifle-box; Sound-box; Spring-box; Starting-box; Transport-box.
Box. H. Conover. No. 1,103,489; July 14; Gaz. vol. 204; p. 486.
Box. J. F. McCall. No. 1,104,063; July 21; Gaz. vol. 204; p. 728.
Box-cover fastening. G. Maier. No. 1,103,976; July 21; Gaz. vol. 204; p. 697.
Box-fastener. L. Mollart. No. 1,102,287; July 7; Gaz. vol. 204; p. 22.
Box-fastener. W. E. Collins. No. 1,105,024; July 28; Gaz. vol. 204; p. 1108.
Box-making machine. E. Jagenberg. No. 1,102,755; July 7; Gaz. vol. 204; p. 187.
Box-opener. F. C. Boysen. No. 1,103,126; July 14; Gaz. vol. 204; p. 363.
Box-press. J. F. Smith. No. 1,105,463; July 28; Gaz. vol. 204; p. 1264.
Box-strapping. L. S. Howe. (Reissue.) No. 13,765; July 7; Gaz. vol. 204; p. 278.
Boxes, Machine for making flexible. E. G. Staude. No. 1,104,012; July 21; Gaz. vol. 204; p. 709.
Brace: *See* Rail-brace.
Bracelet and similar article. E. Jones. No. 1,103,776; July 14; Gaz. vol. 204; p. 588.
Bracket: *See* Adjustable bracket; Bed-spring corner-bracket; Boiler-bracket; Counter-partition bracket; Lamp-bracket; Shade and curtain-pole bracket; Shade-roller bracket.
Braiding-machine. W. E. Elliott. No. 1,103,181; July 14; Gaz. vol. 204; p. 382.
Braiding-machine. A. Petersen. No. 1,105,452; July 28; Gaz. vol. 204; p. 1260.
Braiding-machine for making bralded and plaited lace. E. Jardine and J. Archer. No. 1,102,926; July 7; Gaz. vol. 204; p. 244.
Brake: *See* Automobile truck-brake; Car-brake; Coaster-brake; Electrically-operated brake; Emergency-brake; Fluid-pressure brake; Sled-brake; Sprag-brake; Vehicle-brake; Wheel-brake.
Brake apparatus, Alternating-current electromagnetic. D. L. Lindquist. No. 1,102,522; July 7; Gaz. vol. 204; p. 105.
Brake-beams, Reversible strut for. P. B. Harrison. No. 1,105,137; July 28; Gaz. vol. 204; p. 1147.
Brake-beams, Reversible strut for. P. B. Harrison. No. 1,105,138; July 28; Gaz. vol. 204; p. 1147.
Brake-control apparatus, Automatic train-. H. M. P. Murphy. No. 1,104,823; July 28; Gaz. vol. 204; p. 1039.
Brake mechanism, Electromagnetic. W. D. Lutz. No. 1,102,528; July 7; Gaz. vol. 204; p. 107.
Brake mechanism, Rotary. W. P. Collins. No. 1,102,325; July 7; Gaz. vol. 204; p. 37.
Brake-operating device. M. E. Pue. No. 1,103,686; July 14; Gaz. vol. 204; p. 559.
Brake-shoe. C. D. Pettis and P. H. Batten. No. 1,104,924; July 28; Gaz. vol. 204; p. 1074.
Brake-shoe. C. D. Pettis. No. 1,104,925; July 28; Gaz. vol. 204; p. 1075.
Brake-shoes, Steel back and lug for. W. H. Haring. No. 1,102,582; July 7; Gaz. vol. 204; p. 127.
Brake torque-frame. W. MacGlashan. No. 1,102,529; July 7; Gaz. vol. 204; p. 107.
Brakes for railway-vehicles, Apparatus for the control of. P. Utne. No. 1,105,316; July 28; Gaz. vol. 204; p. 1211.
Braking device for reversible gear mechanism. F. J. Robinson. No. 1,105,377; July 28; Gaz. vol. 204; p. 1235.
Bread-pan. W. A. Whalen. No. 1,105,584; July 28; Gaz. vol. 204; p. 1305.
Brewing apparatus, &c. C. B. Davis. No. 1,102,647; July 7; Gaz. vol. 204; p. 150.
Brick, Arch-. A. H. Willett. No. 1,103,236; July 14; Gaz. vol. 204; p. 401.
Brick-machine. W. Yeocum No. 1,102,708; July 7; Gaz. vol. 204; p. 170.
Bricks, Burning. J. C. Quinn. No. 1,102,546; July 7; Gaz. vol. 204; p. 114.
Bricks which are closed on all sides, Apparatus for making hollow. J. Wölfl. No. 1,102,841; July 7; Gaz. vol. 204; p. 217.
Bridge, Bascule-. A. H. Scherzer. No. 1,104,318; July 21; Gaz. vol. 204; p. 814.
Bridge-floor. J. C. Dildine. No. 1,104,879; July 28; Gaz. vol. 204; p. 1059.
Bridge-gates. C. Faust. No. 1,102,254; July 7; Gaz. vol. 204; p. 11.
Bridle. M. J. A. Chedeville. No. 1,102,474; July 7; Gaz. vol. 204; p. 89.
Bridle-rosette. T. A. Fox. No. 1,103,576; July 14; Gaz. vol. 204; p. 518.
Briquetting apparatus. N. V. Hansell. No. 1,105,510; July 28; Gaz. vol. 204; p. 1280.
Briquets and other articles, Manufacture of. C. M. Reynolds. No. 1,103,078; July 14; Gaz. vol. 204; p. 344.
Broadcasting apparatus, Wheeled. F. P. Murphy. No. 1,102,786; July 7; Gaz. vol. 204; p. 197.
Broiler, Gas-. G. W. Murray. No. 1,103,992; July 21; Gaz. vol. 204; p. 702.
Bronzing apparatus. F. Gilbert. No. 1,105,508; July 28; Gaz. vol. 204; p. 1279.
Brooder. J. F. MacKay. No. 1,103,887; July 14; Gaz. vol. 204; p. 626.
Broom-banding machine. N. H. Beebe and G. W. Duvall. No. 1,103,861; July 14; Gaz. vol. 204; p. 617.
Broom-holder. S. W. Hemstreet. No. 1,105,428; July 28; Gaz. vol. 204; p. 1252.
Brush. H. P. McMillan. No. 1,105,573; July 28; Gaz. vol. 204; p. 1302.
Brush, Curry-. J. P. Adolfson. No. 1,103,644; July 14; Gaz. vol. 204; p. 544.
Brush holder or receptacle. G. H. Miller. No. 1,102,284; July 7; Gaz. vol. 204; p. 22.
Brush, Pneumatic paint-. J. A. Paasche. No. 1,104,217; July 21; Gaz. vol. 204; p. 780.
Brush selector, Multiple-. J. N. Reynolds. No. 1,103,623; July 14; Gaz. vol. 204; p. 535.
Brush, Toilet-. A. L. T. Loughlin. No. 1,104,365; July 21; Gaz. vol. 204; p. 831.
Brush, Tooth-. S. B. and G. S. Husch. No. 1,103,515; July 14; Gaz. vol. 204; p. 494.
Brush, Tooth-. E. F. Hoffman. No. 1,103,879; July 14; Gaz. vol. 204; p. 623.
Brush, Tooth-. D. Weiss. No. 1,104,459; July 21; Gaz. vol. 204; p. 863.
Bucket, Drag-line. O. B. Bjorge. No. 1,104,771; July 28; Gaz. vol. 204; p. 1021.
Buckle. J. F. Dunn. No. 1,103,275; July 14; Gaz. vol. 204; p. 415.
Buckle. E. N. Humphrey. No. 1,103,588; July 14; Gaz vol. 204; p. 522.
Buckle. J. F. Hartnett. No. 1,104,798; July 28; Gaz. vol. 204; p. 1030.
Buckle, Cross-rein. E. L. Ingalsbe. No. 1,104,673; July 21; Gaz. vol. 204; p. 938.
Buffing-machine. W. Gordon. No. 1,102,906; July 7; Gaz. vol. 204; p. 237.
Buffing-machine. W. Gordon. No. 1,103,957; July 21; Gaz. vol. 204; p. 692.
Buncher and bander. W. Watts. No. 1,104,155; July 21; Gaz. vol. 204; p. 758.

Bundling-machine. A. B. Wright. No. 1,102,844; July 7; Gaz. vol. 204; p. 218.
Bunion shield and corrector. J. W. Arrowsmith. No. 1,103,465; July 14; Gaz. vol. 204; p. 477.
Burglar-alarm. C. F. Lee. No. 1,104,734; July 21; Gaz. vol. 204; p. 959.
Burner: *See* Fuel-receptacle burner; Gas-burner; Hydro-carbon-burner; Kiln-burner; Oil-burner; Stump-burner.
Burner. H. S. Bennett. No. 1,103,253; July 14; Gaz. vol. 204; p. 407.
Burner. J. Zander. No. 1,104,601; July 21; Gaz. vol. 204; p. 914.
Burner. H. F. Hagemeyer. No. 1,105,031; July 28; Gaz. vol. 204; p. 1110.
Burners, Extinguisher for. E. M. Klintberg. No. 1,104,905; July 28; Gaz. vol. 204; p. 1068.
Burning finely-divided fuel, Apparatus for. D. J. Irish. No. 1,102,510; July 7; Gaz. vol. 204; p. 100.
Bushing. W. C. Van Dresser. No. 1,103,107; July 14; Gaz vol. 204; p. 355.
Button. C. L. Thatcher. No. 1,104,084; July 21; Gaz. vol. 204; p. 735.
Button. J. Stuart. No. 1,105,110; July 28; Gaz. vol. 204; p. 1138.
Button. J. Stuart. No. 1,105,111; July 28; Gaz. vol. 204; p. 1138.
Button-files, Reinforcing-strip for. F. Blatchford. No. 1,103,559; July 14; Gaz. vol. 204; p. 510.
Button for uniforms. C. F. Gaunt. No. 1,105,266; July 28; Gaz. vol. 204; p. 1193.
Button guard for shirts, Collar-. I. R. North. No. 1,105,295; July 28; Gaz. vol. 204; p. 1203.
Button-hook attachment for pencil-ferrules. R. B. Brunswick. No. 1,104,244; July 21; Gaz. vol. 204; p. 789.
Button, Press-. J. Borel and F. Grange. No. 1,102,975; July 7; Gaz. vol. 204; p. 260.
Buttonhole for articles of wearing-apparel. C. W. T. Davies. No. 1,102,881; July 7; Gaz. vol. 204; p. 229.
Cabinet. C. Hill and J. Henschen. No. 1,102,920; July 7; Gaz. vol. 204; p. 242.
Cabinet, Kitchen-. O. F. Johnson. No. 1,104,301; July 21; Gaz. vol. 204; p. 808.
Cabinet, Towel-dispensing. E. E. McCracken. No. 1,104,207; July 21; Gaz. vol. 204; p. 776.
Cable and forming and connecting the same. F. R. McBerty. No. 1,104,061; July 21; Gaz. vol. 204; p. 727.
Cable-hoist. L. Cobb. No. 1,104,964; July 28; Gaz. vol. 204; p. 1088.
Cables, Coil-cases for insertion in. F. L. Rhodes. No. 1,103,079; July 14; Gaz. vol. 204; p. 345.
Cake-mixer. M. Crump. No. 1,103,271; July 14; Gaz. vol. 204; p. 413.
Cake-stripper. C. E. Snypp. No. 1,102,698; July 7; Gaz. vol. 204; p. 166.
Calculating-machine. A. Hantsch. No. 1,103,875; July 14; Gaz. vol. 204; p. 622.
Calculating-machine. W. P. Quentell. No. 1,104,385; July 21; Gaz. vol. 204; p. 838.
Calculating-machines, Setting-gear for. W. Augustin. No. 1,104,763; July 28; Gaz. vol. 204; p. 1018.
Calculating-machines, Signaling device for. B. Behr. No. 1,105,396; July 28; Gaz. vol. 204; p. 1241.
Calipers for rope and the like. P. M. Stegmaier. No. 1,105,217; July 28; Gaz. vol. 204; p. 1175.
Calipers or dividers. J. Hermanowitz. No. 1,104,890; July 28; Gaz. vol. 204; p. 1062.
Calk, Detachable. J. H. Gerken and L. Hebenstreit. No. 1,104,417; July 21; Gaz. vol. 204; p. 849.
Cam and adjusting device therefor. C. Day and G. E. Windeler. No. 1,104,637; July 21; Gaz. vol. 204; p. 926.
Camera-back. J. D. Megown. No. 1,104,527; July 21; Gaz. vol. 204; p. 889.
Camera-holder. R. Naglo. No. 1,103,814; July 14; Gaz. vol. 204; p. 601.
Camera, Moving-picture. J. A. Golden. No. 1,102,261; July 7; Gaz. vol. 204; p. 14.
Camera, Photographic. J. Becker. No. 1,103,342; July 14; Gaz. vol. 204; p. 437.
Camera, Self-leveling repenting. J. N. Johnson. No. 1,103,418; July 14; Gaz. vol. 204; p. 461.
Camera-shutter. A. E. Lipp. No. 1,102,278; July 7; Gaz. vol. 204; p. 20.
Cameras, Adjusting and regulating automatically-focused enlarging or copying. J. Becker. No. 1,103,343; July 14; Gaz. vol. 204; p. 437.
Cameras, Multiplying attachment for. H. D. Farquhar. No. 1,103,745; July 14; Gaz. vol. 204; p. 577.
Camphene and isobornyl acetate from pinene hydrochlorid, Producing a mixture of. C. Ruder. No. 1,105,378; July 28; Gaz. vol. 204; p. 1235.
Can: *See* Garbage-can; Oil-can; Powder-can.
Can-bodies, Machine for performing operations on the ends of. L. C. Sharp. No. 1,104,559; July 21; Gaz. vol. 204; p. 901.
Can-bodies, Machine for preparing fibrous. J. F. Adams. No. 1,104,465; July 21; Gaz. vol. 204; p. 865.
Can carrier or truck. G. H. Hanna, J. D. Filbin, and F. Amsden. No. 1,102,658; July 7; Gaz. vol. 204; p. 154.
Can-closing machine. J. E. Abrams and I. F. Warme. No. 1,103,643; July 14; Gaz. vol. 204; p. 543.
Can construction. H. T. Johnson. No. 1,105,143; July 28; Gaz. vol. 204; p. 1148.
Can-filling machine. L. A. Baker. No. 1,105,173; July 28; Gaz. vol. 204; p. 1159.
Can holder, Oil-. F. L. Longyear. No. 1,103,065; July 14; Gaz. vol. 204; p. 340.
Can lacquering or coating machine. J. G. Hodgson. No. 1,104,503; July 21; Gaz. vol. 204; p. 879.
Canning machinery. J. P. Goodfellow. No. 1,104,658; July 21; Gaz. vol. 204; p. 933.
Candy-making machine. R. J. Savage and C. E. Schultz. No. 1,104,936; July 28; Gaz. vol. 204; p. 1078.
Candy-spinner. C. H. Worsey. No. 1,102,624; July 7; Gaz. vol. 204; p. 142.
Candy-spinning machine. C. H. Worsey. No. 1,102,623; July 7; Gaz. vol. 204; p. 142.
Canopy-frame. G. F. Lindsey and G. A. Williams. No. 1,102,418; July 7; Gaz. vol. 204; p. 70.
Caoutchouc, gutta-percha, and like substances, Treatment of. L. Féval and J. De la Fresnaye. No. 1,102,487; July 7; Gaz. vol. 204; p. 93.
Cap. J. W. Burke. No. 1,105,400; July 28; Gaz. vol. 204; p. 1242.
Car automatic coupling, Railway-. W. v. Sokolowski. No. 1,104,713; July 21; Gaz. vol. 204; p. 952.
Car, Box-. W. C. Smith and G. H. Barber. No. 1,103,697; July 14; Gaz. vol. 204; p. 563.
Car-brake. P. Shuminski. No. 1,104,226; July 21; Gaz. vol. 204; p. 783.
Car bunk and stake. W. Houghton. No. 1,105,141; July 28; Gaz. vol. 204; p. 1148.
Car, Charge-. J. E. Greenawalt. No. 1,104,491; July 21; Gaz. vol. 204; p. 875.
Car-coupling. C. O. Derflinger. No. 1,102,648; July 7; Gaz. vol. 204; p. 150.
Car-coupling. H. T. Krakau. No. 1,104,516; July 21; Gaz. vol. 204; p. 885.
Car-coupling-centering device. L. Boirnult. No. 1,102,862; July 7; Gaz. vol. 204; p. 223.
Car-couplings, Automatic uncoupler for. J. P. Mongan. No. 1,102,941; July 7; Gaz. vol. 204; p. 249.
Car-door and means for locking same. C. E. Langell. No. 1,104,265; July 21; Gaz. vol. 204; p. 795.
Car door and steps. J. King. No. 1,105,202; July 28; Gaz. vol. 204; p. 1169.
Car door, Box-. W. G. Nymon. No. 1,104,129; July 21; Gaz. vol. 204; p. 750.
Car-door mechanism. J. F. Comee. No. 1,105,257; July 28; Gaz. vol. 204; p. 1189.
Car, Dump-. J. B. Rhodes. No. 1,103,314; July 14; Gaz. vol. 204; p. 427.
Car-fender. J. L. McDonnell. No. 1,104,435; July 21; Gaz. vol. 204; p. 854.
Car-fender and safety-brake, Automatic. B. Péducasse. No. 1,103,826; July 14; Gaz. vol. 204; p. 605.
Car fender and snow-sweeper, Street-. C. Koshalko. No. 1,102,763; July 7; Gaz. vol. 204; p. 189.
Car fender, Safety street-. V. J. Anderson. No. 1,102,563; July 7; Gaz. vol. 204; p. 120.
Car-frame construction. H. M. Pflager. No. 1,105,299; July 28; Gaz. vol. 204; p. 1204.
Car-hoist. H. A. Benedict. No. 1,102,232; July 7; Gaz. vol. 204; p. 4.
Car lubrication, Mine-. J. A. McCaskell. No. 1,105,363; July 28; Gaz. vol. 204; p. 1230.
Car platform-steps, Railway-passenger-. R. W. Kendall. No. 1,102,342; July 7; Gaz. vol. 204; p. 42.
Car-pusher. C. Mays. No. 1,105,525; July 28; Gaz. vol. 204; p. 1285.
Car-roof. T. N. Russell. No. 1,103,085; July 14; Gaz. vol. 204; p. 346.
Car safety appliance, Railway-. C. M. Mock and A. U. Gerber. No. 1,102,784; July 7; Gaz. vol. 204; p. 196.
Car safety device, Pleasure-railway-. L. A. Thompson. No. 1,102,822; July 7; Gaz. vol. 204; p. 210.
Car-step, Double-folding. W. G. Cory. No. 1,103,008; July 7; Gaz. vol. 204; p. 273.
Car-step, Extension. J. E. Jones. No. 1,103,146; July 14; Gaz. vol. 204; p. 369.
Car-step, Folding. D. L. Miller, F. T. Lobach, and C. F. Peters. No. 1,104,374; July 21; Gaz. vol. 204; p. 834.
Car step, Freight-. M. A. Green. No. 1,104,661; July 21; Gaz. vol. 204; p. 934.
Car stop and derailer, Automatic. B. N. Davis. No. 1,102,882; July 7; Gaz. vol. 204; p. 230.
Car, Tram-. C. W. Mallins. No. 1,104,812; July 28; Gaz. vol. 204; p. 1035.
Car, Tram-. C. W. Mallins. No. 1,104,813; July 28; Gaz. vol. 204; p. 1035.
Car underframe, Railway-. H. R. Keithley. No. 1,104,903; July 28; Gaz. vol. 204; p. 1068.
Car-wheel. G. E. McFadden. No. 1,104,208; July 21; Gaz. vol. 204; p. 776.
Car-wheel. J. Slattery. No. 1,104,562; July 21; Gaz. vol. 204; p. 902.
Car wheel, Mining-. H. W. Sanford. No. 1,104,549; July 21; Gaz. vol. 204; p. 897.
Car-wheels and similar circular bodies, Apparatus for treating. S. S. Wales. No. 1,105,116; July 28; Gaz. vol. 204; p. 1140.
Car-wheels, Making. S. P. Bush. No. 1,105,180; July 28; Gaz. vol. 204; p. 1161.
Cars, Combination door and door-step for platforms of. E. M. Moller. No. 1,102,287; July 7; Gaz. vol. 204; p. 23.
Cars, Electric conductor for trolley-. J. Scott. No. 1,104,225; July 21; Gaz. vol. 204; p. 782.

Cars or trains, Apparatus for the control of railway. P. Utne. No. 1,105,817; July 28; Gaz. vol. 204; p. 1211.

Cars or vehicles along a railway and the control thereof, Apparatus for governing the passage of. H. A. Wallace. No. 1,102,831; July 7; Gaz. vol. 204; p. 213.

Cars, Steering-wheel for motor-. T. W. McKenzie. No. 1,104,524; July 21; Gaz. vol. 204; p. 888.

Cars, Tail-gate for dump-. C. W. Stickler. No. 1,105,464; July 28; Gaz. vol. 204; p. 1265.

Cars, Tandem draft-rigging for railway-. J. F. O'Connor. No. 1,105,577; July 28; Gaz. vol. 204; p. 1303.

Cars, Vestibule-diaphragm for railway passenger-. E. A. Schreiber. No. 1,104,938; July 28; Gaz. vol. 204; p. 1079.

Carbon brush. R. F. Hausen. No. 1,104,115; July 21; Gaz. vol. 204; p. 744.

Carbureter. L. Cobb. No. 1,102,722; July 7; Gaz. vol. 204; p. 174.

Carbureter. T. B. Elker. No. 1,103,178; July 14; Gaz. vol. 204; p. 381.

Carbureter. F. J. Macey. No. 1,103,789; July 14; Gaz. vol. 204; p. 592.

Carbureter. O. Meissner. No. 1,103,802; July 14; Gaz. vol. 204; p. 597.

Carbureter. G. W. A. Brown. No. 1,103,864; July 14; Gaz. vol. 204; p. 618.

Carbureter. A. C. Bennett. No. 1,103,930; July 21; Gaz. vol. 204; p. 682.

Carbureter. C. E. Rimmer, F. A. Plymire, and W. Wills. No. 1,104,222; July 21; Gaz. vol. 204; p. 781.

Carbureter. W. W. Hamill. No. 1,104,494; July 21; Gaz. vol. 204; p. 876.

Carbureter. R. H. Shoobridge and A. F. Gunstone. No. 1,104,560; July 21; Gaz. vol. 204; p. 901.

Carbureter. G. A. F. Allilberg. No. 1,104,762; July 28; Gaz. vol. 204; p. 1018.

Carbureter. C. Felske. No. 1,104,975; July 28; Gaz. vol. 204; p. 1092.

Carbureter. J. A. Secor. No. 1,105,003; July 28; Gaz. vol. 204; p. 1100.

Carbureter. E. Hanemann. No. 1,105,134; July 28; Gaz. vol. 204; p. 1145.

Carbureter. S. P. Sanders. No. 1,105,160; July 28; Gaz. vol. 204; p. 1154.

Carbureter. A. Howarth. No. 1,105,200; July 28; Gaz. vol. 204; p. 1168.

Carbureter. W. J. Omer. No. 1,105,371; July 28; Gaz. vol. 204; p. 1233.

Carbureters, Float-chamber for. O. Meissner. No. 1,103,803; July 14; Gaz. vol. 204; p. 598.

Carbureters, Pump-actuating mechanism for. N. J. Russell. No. 1,103,224; July 14; Gaz. vol. 204; p. 397.

Card holder, Playing-. D. MacQueen. No. 1,104,687; July 21; Gaz. vol. 204; p. 942.

Card-rack. H. H. Thompson. No. 1,103,100; July 14; Gaz. vol. 204; p. 352.

Cards, Detachable handle for hand-. H. Midgley. No. 1,104,531; July 21; Gaz. vol. 204; p. 890.

Cards, Playing-. U. S. Alsruhe. No. 1,104,724; July 21; Gaz. vol. 204; p. 956.

Cardan joints, Casing for. M. Barbaron. No. 1,102,853; July 7; Gaz. vol. 204; p. 220.

Carding-engine. F. Vöster and M. Jungbauer. No. 1,103,231; July 14; Gaz. vol. 204; p. 399.

Carding-engine-stripping mechanism. J. Midgley and T. G. Mills. No. 1,103,150; July 14; Gaz. vol. 204; p. 371.

Carding-machine breast. E. V. Bates. No. 1,103,649; July 14; Gaz. vol. 204; p. 545.

Carding-machine-condensing apparatus. W. D. Rundlett. No. 1,103,541; July 14; Gaz. vol. 204; p. 503.

Carousel. A. G. Sharkey. No. 1,104,145; July 21; Gaz. vol. 204; p. 755.

Carousel, Knockdown. S. W. Brundage. No. 1,102,866; July 7; Gaz. vol. 204; p. 225.

Carpet holder, Stair-. H. Casler. No. 1,103,261; July 14; Gaz. vol. 204; p. 410.

Carpet holder, Stair-. H. Casler. No. 1,103,262; July 14; Gaz. vol. 204; p. 410.

Carpet-setting frame, Tapestry-. C. H. Collins. No. 1,103,128; July 14; Gaz. vol. 204; p. 363.

Carpet-sweeper. L. L. Ferguson. No. 1,104,977; July 28; Gaz. vol. 204; p. 1093.

Carriage and invalid-chair, Folding. C. F. G. Behr. No. 1,102,565; July 7; Gaz. vol. 204; p. 121.

Carriage, Child's. C. S. Spofford. No. 1,103,161; July 14; Gaz vol. 204; p. 375.

Carriage, Child's folding. W. M. Decker. No. 1,102,248; July 7; Gaz. vol. 204; p. 9.

Carriage-window opening and closing means. J. Altrichter. (Reissue.) No. 13,780; July 28; Gaz. vol. 204; p. 1310.

Carriages and go-carts, Attachment for baby-. E. J. Schulze. No. 1,105,379; July 28; Gaz. vol. 204; p. 1236.

Carrier: *See* Can-carrier; Egg-carrier; Luggage-carrier; Shock-carrier; Tire-carrier; Trace-carrier.

Carrier. J. Nilson. No. 1,103,615; July 14; Gaz. vol. 204; p. 532.

Carrier or conveyer. L. Hasselbusch. No. 1,102,913; July 7; Gaz. vol. 204; p. 240.

Cart. E. M. Lohr. No. 1,102,346; July 7; Gaz. vol. 204; p. 44.

Cart. A. Wickey. No. 1,105,228; July 28; Gaz. vol. 204; p. 1179.

Carton. F. W. Dye. No 1,103,177; July 14; Gaz. vol. 204; p. 381.

Carton. E. W. Thumb. No. 1,103,708; July 14; Gaz. vol. 204; p. 566.

Carton, Collapsible. J. W. Weiss. No. 1,104,234; July 21; Gaz. vol. 204; p. 785.

Carton or container. D. C. Johnson. No. 1,103,880; July 14; Gaz. vol. 204; p. 624.

Cartridge-shell. F. O. Hoagland. No. 1,103,202; July 14; Gaz. vol. 204; p. 391.

Cartridge-shell. F. O. Hoagland. No. 1,103,203; July 14; Gaz. vol. 204; p. 391.

Case: *See* Filing-case; Pocket-case; Show-case; Tape-case.

Casing-cutter. E. E. Greve. No. 1,104,492; July 21; Gaz. vol. 204; p. 875.

Casing-head and oil-saver, Combination. C. F. Rigby. No. 1,105,340; July 28; Gaz. vol. 204; p. 1219.

Cash-register. E. Sinner. (Reissue.) No. 13,767; July 7; Gaz. vol. 204; p. 279.

Cash-register. J. H. McCormick. No. 1,103,068; July 14; Gaz. vol. 204; p. 341.

Caster and fitting. A. Hill. No. 1,102,508; July 7; Gaz. vol. 204; p. 100.

Casting apparatus. C. D. Pettis. No. 1,104,926; July 28; Gaz. vol. 204; p. 1075.

Casting apparatus. C. D. Pettis. No. 1,104,927; July 28; Gaz. vol. 204; p. 1075.

Casting brake-shoes. C. D. Pettis. No. 1,104,928; July 28; Gaz. vol. 204; p. 1076.

Casting iron in permanent molds. E. A. Custer. No. 1,104,037; July 21; Gaz. vol. 204; p. 718.

Casting-machine. W. Dietrich. No. 1,104,728; July 21; Gaz. vol. 204; p. 957.

Catch, Safety-. C. D. Heaton. No. 1,102,503; July 7; Gaz. vol. 204; p. 98.

Cattle-guard. F. M. Petty. No. 1,102,295; July 7; Gaz. vol. 204; p. 26.

Cattle-guard. W. E. Nelson. No. 1,103,372; July 14; Gaz. vol. 204; p. 446.

Cement, Artificial-stone. G. Capece. No. 1,103,483; July 14; Gaz. vol. 204; p. 484.

Cement, Making magnesium. W. Siegmann. No. 1,102,358; July 7; Gaz. vol. 204; p. 47.

Centrifugal machines, Supporting and driving means for. M. H. Barker. No. 1,103,341; July 14; Gaz. vol. 204; p. 436.

Cereals, Treating. W. E. Collins. No. 1,103,660; July 14; Gaz. vol. 204; p. 549.

Cesspool. E. O. Lawrence. No. 1,102,674; July 7; Gaz. vol. 204; p. 158.

Chain. H. Cockshaw. No. 1,102,645; July 7; Gaz. vol. 204; p. 150.

Chain. E. G. Rek. No. 1,104,606; July 21; Gaz. vol. 204; p. 916.

Chain attachment. G. W. Goodridge. No. 1,103,760; July 14; Gaz. vol. 204; p. 582.

Chain, Drive-. F. L. Morse. No. 1,105,288; July 28; Gaz. vol. 204; p. 1199.

Chain-grip-attaching machine. W. B. Lashar. No. 1,103,064; July 14; Gaz. vol. 204; p. 340.

Chain, Metallic link. E. A. Bohlman. No. 1,103,026; July 14; Gaz. vol. 204; p. 327.

Chain, Universal-link. J. J. Irvin. No. 1,105,518; July 28; Gaz. vol. 204; p. 1283.

Chain wrench. F. M. Simpson. No. 1,104,146; July 21; Gaz. vol. 204; p. 755.

Chair: *See* Arm-chair; Folding chair; Rail-chair; Reclining-chair; Switch-chair.

Chair attachment, High-. G. C. Lynch. No. 1,103,597; July 14; Gaz. vol. 204; p. 525.

Chalk-holder. N. Michanek. No. 1,104,815; July 28; Gaz. vol. 204; p. 1036.

Chalk-holding means. G. E. Garon. No. 1,103,955; July 21; Gaz. vol. 204; p. 691.

Chandelier, Adjustable electric-light. M. J. Lindahl. No. 1,104,202; July 21; Gaz. vol. 204; p. 774.

Channeling-machine. F. H. Perry. No. 1,102,294; July 7; Gaz. vol. 204; p. 25.

Check-controlled apparatus. H. E. Erwin and H. M. Gorsline. No. 1,102,894; July 7; Gaz. vol. 204; p. 233.

Check-controlled apparatus. W. J. Fisher. No. 1,103,952; July 21; Gaz. vol. 204; p. 690.

Cheese-cutter. R. Trevisan. No. 1,104,718; July 21; Gaz. vol. 204; p. 954.

Chest: *See* Valve-chest.

Chlorid, Reducing cuprous. F. Laist. No. 1,104,907; July 28; Gaz. vol. 204; p. 1069.

Chocolate masses, Machine for treating. J. Sheffman. No. 1,103,627; July 14; Gaz. vol. 204; p. 536.

Chopper: *See* Cotton-chopper.

Chuck. M. A. Hamilton. No. 1,104,113; July 21; Gaz. vol. 204; p. 744.

Chuck, Drill-. G. W. Emrick. No. 1,104,255; July 21; Gaz. vol. 204; p. 792.

Chuck, Magnetic. L. W. Downes. No. 1,105,552; July 28; Gaz. vol. 204; p. 1294.

Chuck-retaining device. G. H. Gilman. No. 1,103,009; July 7; Gaz. vol. 204; p. 273.

Churn. E. E. Chapman. No. 1,104,627; July 21; Gaz. vol. 204; p. 922.

Chute, Collapsible hog-. R. J. Smith. No. 1,105,004; July 28; Gaz. vol. 204; p. 1100.

Cigar and cigarette holder. P. H. Hounget. No. 1,102,925; July 7; Gaz. vol. 204; p. 244.

Cigar and making same. F. S. Cooley. No. 1,104,779; July 28; Gaz. vol. 204; p. 1024.

Cigar-box. E. Vallens. No. 1,102,704; July 7; Gaz. vol. 204; p. 168.

Cigar-bunches in the molds, Apparatus for turning. J. Hack. No. 1,104,794; July 28; Gaz. vol. 204; p. 1028.

Cigar-bunching machines, Device for feeding the tobacco in. R. Schmitt. No. 1,102,692; July 7; Gaz. vol. 204; p. 164.

Cigar-cutter, Sanitary. H. P. Roberts. No. 1,104,137; July 21; Gaz. vol. 204; p. 752.

Cigar-lighter. M. McAneny. No. 1,103,307; July 14; Gaz. vol. 204; p. 425.

Cigarette-box. A. Mendelson and S. J. Goldberg. No. 1,104,529; July 21; Gaz. vol. 204; p. 890.

Cigarette-box opener, G. A. and J. Caspers. No. 1,105,182; July 28; Gaz. vol. 204; p. 1162.

Circuit-breaker, Automatic. J. L. Mitchell. No. 1,104,430; July 21; Gaz. vol. 204; p. 855.

Circuit-closer, Thermostatic. J. C. Moessner. No. 1,104,695; July 21; Gaz. vol. 204; p. 945.

Circuit-closing instrument. W. C. Nehr. No. 1,102,944; July 7; Gaz. vol. 204; p. 250.

Circuit protection. G. Wright. No. 1,105,392; July 28; Gaz. vol. 204; p. 1240.

Clamp: *See* Fence-clamp; Line or cable clamp; Pipe-clamp; Printing-press clamp; Tie-clamp; Wire-clamp; Work-clamp.

Clapboards, End fixture for siding-. F. D. Kees. No. 1,103,050; July 14; Gaz. vol. 204; p. 335.

Clasp: *See* Binding-clasp; Necktie-clasp; Pocket-clasp.

Clasp. J. L. Gwirtz. No. 1,104,259; July 21; Gaz. vol. 204; p. 793.

Cleaner: *See* Boiler-tube cleaner; Dish-cleaner; Pneumatic cleaner; Seed-cotton cleaner; Sewer-cleaner; Smoke-stack cleaner; Suction-cleaner; Tobacco-pipe cleaner; Window-cleaner.

Cleaner. L. J. Kuckl. No. 1,102,765; July 7; Gaz. vol. 204; p. 190.

Cleaning apparatus. I. H. Spencer. No. 1,103,548; July 14; Gaz. vol. 204; p. 505.

Cleaning apparatus. I. H. Spencer. No. 1,103,628; July 14; Gaz. vol. 204; p. 537.

Cleaning device. L. L. Ferguson. No. 1,104,976; July 28; Gaz. vol. 204; p. 1092.

Cleaning-tool. I. H. Spencer. No. 1,104,148; July 21; Gaz. vol. 204; p. 756.

Clip: *See* Pocket-clip; Spring-attaching clip.

Clip. W. E. Davis. No. 1,105,497; July 28; Gaz. vol. 204; p. 1275.

Clock. H. J. Treganza. No. 1,103,453; July 14; Gaz. vol. 204; p. 473.

Clock. E. M. Walker. No. 1,103,552; July 14; Gaz. vol. 204; p. 507.

Clock. L. D. Giddens. No. 1,104,043; July 21; Gaz. vol. 204; p. 720.

Clock, Graphophone-. H. L. Hartenstein. No. 1,104,260; July 21; Gaz. vol. 204; p. 794.

Clock, Portable watchman's. O. E. Hausburg. No. 1,102,266; July 7; Gaz. vol. 204; p. 15.

Clock, Rim-winding keyless. W. E. Porter. No. 1,102,798; July 7; Gaz. vol. 204; p. 201.

Clock, Self-winding. M. Castel. No. 1,104,345; July 21; Gaz. vol. 204; p. 824.

Clock-synchronizer. M. Hendler. No. 1,103,581; July 14; Gaz. vol. 204; p. 519.

Clod cutter and crusher, Combined. D. G. Teter. No. 1,103,450; July 14; Gaz. vol. 204; p. 472.

Closet: *See* Dry closet.

Closure. G. P. Wild. No. 1,105,229; July 28; Gaz. vol. 204; p. 1180.

Cloth-cutting machine. M. R. Maimin. No. 1,108,791; July 14; Gaz. vol. 204; p. 593.

Cloth-cutting machine. G. Scott. No. 1,104,143; July 21; Gaz. vol. 204; p. 754.

Cloth-laying machine. C. J. Sussman. No. 1,102,555; July 7; Gaz. vol. 204; p. 116.

Clothes-line support. C. L. Riker, Jr. No. 1,103,083; July 14; Gaz. vol. 204; p. 346.

Clothes-line tightener. D. M. Winans. No. 1,103,722; July 14; Gaz. vol. 204; p. 570.

Clothes-pin, Wire. R. Kehn. No. 1,103,420; July 14; Gaz. vol. 204; p. 462.

Clothes-pin, Wire. J. L. Buckley and J. W. Coin. No. 1,104,871; July 28; Gaz. vol. 204; p. 1056.

Clothes-rack. S. M. Nelson. No. 1,103,997; July 21; Gaz. vol. 204; p. 704.

Clothes-washer. G. P. Rogers. No. 1,102,958; July 7; Gaz. vol. 204; p. 255.

Clover-hullers and the like, Rasp for. O. Crepeau. No. 1,102,980; July 7; Gaz. vol. 204; p. 262.

Cluster-sockets, Subbase for. R. B. Benjamin. No. 1,102,383; July 7; Gaz. vol. 204; p. 56.

Clutch and brake control, Motor-vehicle. H. E. Coffin. No. 1,105,548; July 28; Gaz. vol. 204; p. 1293.

Clutch-controlled machines, Safety device for. A. G. Scherer. No. 1,102,608; July 7; Gaz. vol. 204; p. 136.

Clutch-controlled machines, Safety device for. A. G. Scherer. No. 1,102,609; July 7; Gaz. vol. 204; p. 136.

Clutch device. J. C. Calvin. No. 1,103,560; July 14; Gaz. vol. 204; p. 510.

Clutch, Friction-. D. R. Barry. No. 1,104,400; July 21; Gaz. vol. 204; p. 842.

Clutch, Hydraulic. C. E. Curtiss. No. 1,104,168; July 21; Gaz. vol. 204; p. 763.

Clutch mechanism. C. E. Beach. No. 1,103,022; July 14; Gaz. vol. 204; p. 325.

Clutch mechanism. J. A. McGinnis. No. 1,103,679; July 14; Gaz. vol. 204; p. 556.

Clutch-pedal lock. E. D. Clarage. No. 1,102,875; July 7; Gaz. vol. 204; p. 228.

Clutch-trip-actuating device. A. L. Day. No. 1,103,570; July 14; Gaz. vol. 204; p. 515.

Coal-conveyer. J. Dodds and W. Brown. No. 1,104,481; July 21; Gaz. vol. 204; p. 871.

Coal from peat, Manufacturing artificial. F. C. C. T. A. Osius. No. 1,105,206; July 28; Gaz. vol. 204; p. 1171.

Coal, shale, or the like in vertical retorts, Process and apparatus for the treatment of. A. Waddell. No. 1,103,112; July 14; Gaz. vol. 204; p. 357.

Coaster-brake. W. S. Gubelman. No. 1,102,402; July 7; Gaz. vol. 204; p. 63.

Coaster-brake. S. Smith. No. 1,104,453; July 21; Gaz. vol. 204; p. 861.

Coaster hub-brake. C. W. Svenson. (Reissue.) No. 13,783; July 28; Gaz. vol. 204; p. 1313.

Coaster, Surf-. A. N. Nelsen. No. 1,104,441; July 21; Gaz. vol. 204; p. 856.

Coat and hat protector. E. Gargon. No. 1,105,504; July 28; Gaz. vol. 204; p. 1278.

Coat-hanger. C. T. Darling. No. 1,105,067; July 28; Gaz. vol. 204; p. 1123.

Coating for metallic members, Protective. W. L. Church. No. 1,104,346; July 21; Gaz. vol. 204; p. 825.

Coating objects with subdivided material, Apparatus for. F. F. Bradley. No. 1,104,471; July 21; Gaz. vol. 204; p. 867.

Coating tubes and the like, Machine for. C. Vallone and J. H. Illig. No. 1,103,713; July 14; Gaz. vol. 204; p. 567.

Cock, Basin-. E. A. Gehrke. No. 1,105,072; July 28; Gaz. vol. 204; p. 1125.

Coffee and tea mixer. W. G. Templeton. No. 1,102,305; July 7; Gaz. vol. 204; p. 29.

Coffee substitute, Producing a. B. Huber. No. 1,103,207; July 14; Gaz. vol. 204; p. 392.

Coffin. S. Zeranski. No. 1,102,626; July 7; Gaz. vol. 204; p. 143.

Coffin-fastener. G. Gough. No. 1,102,335; July 7; Gaz. vol. 204; p. 40.

Coil-cases and cables, Connection for. J. Cunningham and W. H. Horner. No. 1,103,130; July 14; Gaz. vol. 204; p. 364.

Coiling apparatus. W. B. Hewitt. No. 1,103,201; July 14; Gaz. vol. 204; p. 391.

Coin-collector cash-receptacle. O. F. Forsberg. No. 1,104,042; July 21; Gaz. vol. 204; p. 720.

Coin-controlled lock. E. E. Dougherty and U. W. Baston. No. 1,105,498; July 28; Gaz. vol. 204; p. 1276.

Coin-delivering machine. B. C. Hoefer. No. 1,105,516; July 28; Gaz. vol. 204; p. 1282.

Coin-delivering machine. B. C. Hoefer. No. 1,105,517; July 28; Gaz. vol. 204; p. 1282.

Coin-delivery machine. R. and J. W. Cairns. No. 1,104,405; July 21; Gaz. vol. 204; p. 845.

Coin sorting and computing machine. C. S. Batdorf. No. 1,103,124; July 14; Gaz. vol. 204; p. 362.

Coin-testing device for coin-controlled machines. A. D. Grover and E. E. Barber. No. 1,103,197; July 14; Gaz. vol. 204; p. 389.

Coke-ovens, Method of and means for working. H. Koppers. No. 1,105,522; July 28; Gaz. vol. 204; p. 1284.

Colander. S. E. De Crevecoeur. No. 1,105,409; July 28; Gaz. vol. 204; p. 1245.

Collapsible box. E. C. Schwab. No. 1,102,445; July 7; Gaz. vol. 204; p. 78.

Collar. R. M. Rodden. No. 1,102,440; July 7; Gaz. vol. 204; p. 77.

Collar attachment, Scarf-holding. T. S. Hamilton. No. 1,103,508; July 14; Gaz. vol. 204; p. 491.

Collar for neckwear. F. W. Parsons. No. 1,102,431; July 7; Gaz. vol. 204; p. 74.

Collar, Horse-. J. G. Friberg. No. 1,102,900; July 7; Gaz. vol. 204; p. 235.

Collar, Horse-. R. G. Lilley. No. 1,103,973; July 21; Gaz. vol. 204; p. 697.

Collar-pad. E. P. Wright. No. 1,105,169; July 28; Gaz. vol. 204; p. 1157.

Collar-support. L. Penny. No. 1,102,681; July 7; Gaz. vol. 204; p. 160.

Collar-support. M. E. Towler. No. 1,102,823; July 7; Gaz. vol. 204; p. 211.

Color effects, Process and apparatus for producing. J. M. Cary. No. 1,104,407; July 21; Gaz. vol. 204; p. 845.

Comb and brush, Combined. J. I. Hiett. No. 1,102,919; July 7; Gaz. vol. 204; p. 242.

Combs, Means for mounting needles in textile. T. Townsend. No. 1,105,166; July 28; Gaz. vol. 204; p. 1156.

Combing-machines, Bearing for the drawing-off rollers of Noble's. J. H. Whitehead, W. E. Layland, and G. Galloway. No. 1,102,834; July 7; Gaz. vol. 204; p. 215.

Combing-machines, Sliver-pan for. R. Schofield. No. 1,102,298; July 7; Gaz. vol. 204; p. 27.

Combustion-engine. W. and E. Thorney. No. 1,103,451; July 14; Gaz. vol. 204; p. 472.

Combustion-engine. M. Fischer. No. 1,103,901; July 14; Gaz. vol. 204; p. 631.

Combustion, Regulating. G. W. Parker. No. 1,104,000; July 21; Gaz. vol. 204; p. 705.

Commutator for radiotelegraphic plants with indirect excitation, Automatic. E. Girardeau. No. 1,105,029; July 28; Gaz. vol. 204; p. 1110.

Commutator provided with segments or bars and slip-rings. B. Ljungström. No. 1,102,525; July 7; Gaz. vol. 204; p. 106.

Composing-stick. C. F. Mechler. No. 1,102,778; July 7; Gaz. vol. 204; p. 195.

Composition and manufacturing the same. J. W. Aylsworth. No. 1,102,630; July 7; Gaz. vol. 204; p. 144.

Composition of matter. E. D. Kendall. No. 1,103,903; July 14; Gaz. vol. 204; p. 631.

Composition of matter. E. D. Kendall. No. 1,105,568; July 28; Gaz. vol. 204; p. 1300.

Compressor. E. Anderson. No. 1,105,479; July 28; Gaz. vol. 204; p. 1270.

Computing mechanism. W. Wright. No. 1,105,170; July 28; Gaz. vol. 204; p. 1158.

Concentrating-table. W. A. Huelsdonk. No. 1,104,300; July 21; Gaz. vol. 204; p. 808.

Concentrator-distributer. W. A. Huelsdonk. No. 1,104,299; July 21; Gaz. vol. 204; p. 808.

Concentrators, Pulp-distributer for. W. E. Darrow. No. 1,104,969; July 28; Gaz. vol. 204; p. 1090.

Concrete-anchor. W. D. James. No. 1,104805; July 28; Gaz. vol. 204; p. 1033.

Concrete construction. J. H. McKennee. No. 1,102,991; July 7; Gaz. vol. 204; p. 285.

Concrete construction. W. T. Gagnebin. No. 1,104,651; July 21; Gaz. vol. 204; p. 930.

Concrete construction, Reinforced. W. L. Church. (Reissue.) No. 13,775; July 21; Gaz. vol. 204; p. 908.

Concrete fence-post. R. A. Chambers. No. 1,104,626; July 21; Gaz. vol. 204; p. 922.

Concrete-mixer. G. F. Nye. No. 1,103,534; July 14; Gaz. vol. 204; p. 500.

Concrete-mixer. W. Pfile. No. 1,103,685; July 14; Gaz. vol. 204; p. 559.

Concrete-mixer, Hand. H. O. Clarke. No. 1,103,484; July 14; Gaz. vol. 204; p. 484.

Concrete-mixers, Control mechanism for. E. H. Lichtenberg. No. 1,103,788; July 14; Gaz. vol. 204; p. 592.

Concrete piles in place, Forming. W. R. Phillips. No. 1,104,703; July 21; Gaz. vol. 204; p. 948.

Concrete pipe, Manufacture of. A. M. Hirsh and J. C. Mitchell. No. 1,102,584; July 7; Gaz. vol. 204; p. 128.

Concrete-pipe mold. F. N. Cronholm. No. 1,103,270; July 14; Gaz. vol. 204; p. 412.

Concrete structure. C. B. Grady. No. 1,102,580; July 7; Gaz. vol. 204; p. 126.

Condenser. G. L. Vail. No. 1,103,386; July 14; Gaz. vol. 204; p. 450.

Condenser, Steam-. L. R. Alberger. No. 1,102,380; July 7; Gaz. vol. 204; p. 35.

Condenser, Surface. E. W. Christie. No. 1,105,320; July 28; Gaz. vol. 204; p. 1212.

Condenser, Vapor-. G. M. Hilger. No. 1,105,430; July 28; Gaz. vol. 204; p. 1253.

Condenser, Zinc-vapor. M. Appel. No. 1,103,123; July 14; Gaz. vol. 204; p. 361.

Condiment-holders and the like, Closure for. C. A. Conger. No. 1,102,879; July 7; Gaz. vol. 204; p. 229.

Conductors, Manufacture of non-oxidizing. O. Linder. No. 1,104,054; July 21; Gaz. vol. 204; p. 724.

Conductors, Protective device for sheathed. T. E. Murray. No. 1,103,983; July 21; Gaz. vol. 204; p. 700.

Conduit-coupling, Electrical. A. C. Proudfit. No. 1,103,220; July 14; Gaz. vol. 204; p. 396.

Confectionery-box. W. C. Carlson. No. 1,104,344; July 21; Gaz. vol. 204; p. 824.

Connecting device. T. E. Murray. No. 1,103,991; July 21; Gaz. vol. 204; p. 702.

Connecting-rod. J. Mills. No. 1,102,782; July 7; Gaz. vol. 204; p. 196.

Connector. J. F. Menningen. No. 1,104,436; July 21; Gaz. vol. 204; p. 854.

Contact-point. J. F. Cadell. No. 1,105,399; July 28; Gaz. vol. 204; p. 1242.

Contact-switch, Door. A. Kielblock and H. Dittmann. No. 1,103,883; July 14; Gaz. vol. 204; p. 624.

Container. M. Karp. No. 1,103,674; July 14; Gaz. vol. 204; p. 555.

Container. G. S. Mahn. No. 1,104,366; July 21; Gaz. vol. 204; p. 831.

Container. D. J. Vandyke. No. 1,104,852; July 28; Gaz. vol. 204; p. 1049.

Container-closure. K. Kiefer. No. 1,103,054; July 14; Gaz. vol. 204; p. 336.

Containers, Means for facilitating the opening of. E. C. Austin. No. 1,103,859; July 14; Gaz. vol. 204; p. 616.

Continuous kiln, Double-stair-grate. A. W. F. Weyers. No. 1,102,970; July 7; Gaz. vol. 204; p. 258.

Continuous kiln, Gas-fired. P. Schwarz. No. 1,104,836; July 28; Gaz. vol. 204; p. 1043.

Controller and accelerator, Throttle-lever-operated. C. E. Morris. No. 1,103,131; July 14; Gaz. vol. 204; p. 371.

Converter, Rotary. V. A. Fynn. No. 1,103,192; July 14; Gaz. vol. 204; p. 386.

Convertible table. J. M. Duchez. No. 1,103,869; July 14; Gaz. vol. 204; p. 620.

Conveyer, Automatic-dumping. W. E. Walsh. No. 1,104,232; July 21; Gaz. vol. 204; p. 784.

Conveyer, Chain. O. Schmidt. No. 1,104,708; July 21; Gaz. vol. 204; p. 949.

Conveyer, Endless-belt. R. W. Vail. No. 1,103,635; July 14; Gaz. vol. 204; p. 539.

Conveyer for sheets of material. F. Rudolphi. No. 1,104,548; July 21; Gaz. vol. 204; p. 897.

Conveying system. G. Tollefson. No. 1,103,709; July 14; Gaz. vol. 204; p. 566.

Cooker. A. J. Keast. No. 1,104,425; July 21; Gaz. vol. 204; p. 851.

Cooker, Fireless. C. E. Swartzbaugh. No. 1,102,456; July 7; Gaz. vol. 204; p. 82.

Cooker, Fireless. R. M. G. Phillips. No. 1,103,539; July 14; Gaz. vol. 204; p. 502.

Cooker for seeds. C. H. Fulson. No. 1,104,981; July 28; Gaz. vol. 204; p. 1093.

Cooker, Syrup-. J. Werner. No. 1,105,168; July 28; Gaz. vol. 204; p. 1157.

Cooking apparatus. R. M. G. Phillips. No. 1,102,796; July 7; Gaz. vol. 204; p. 200.

Cooking apparatus. R. M. G. Phillips. No. 1,105,532; July 28; Gaz. vol. 204; p. 1287.

Cooking apparatus, Combination. J. T. Onions. No. 1,102,540; July 7; Gaz. vol. 204; p. 112.

Cooler: *See* Beer-cooler.

Cooler. N. L. Burrow. No. 1,104,958; July 28; Gaz. vol. 204; p. 1086.

Cooling-tower construction. G. J. Stocker. No. 1,102,813; July 7; Gaz. vol. 204; p. 207.

Copper, Extracting. G. B. Chittenden. No. 1,104,410; July 21; Gaz. vol. 204; p. 846.

Copper matte, Bessemerizing. J. B. Herreshoff, Jr. No. 1,103,925; July 14; Gaz. vol. 204; p. 639.

Copy-holder. G. F. Brown. No. 1,104,100; July 21; Gaz. vol. 204; p. 740.

Core, Collapsible. C. F. Draper. No. 1,103,664; July 14; Gaz. vol. 204; p. 551.

Core-making device. W. M. Scott and W. Johnston. No. 1,104,837; July 28; Gaz. vol. 204; p. 1044.

Cork article and making the same. H. F. Busch. No. 1,105,060; July 28; Gaz. vol. 204; p. 1121.

Cork, Making artificial. H. Paschke. No. 1,105,098; July 28; Gaz. vol. 204; p. 1134.

Corking-machine. J. J. Vogel. No. 1,105,115; July 28; Gaz. vol. 204; p. 1139.

Corn huskers and shredders, Feeder for. J. B. Schuman. No. 1,104,738; July 21; Gaz. vol. 204; p. 960.

Corn, Popping. C. K. Harding. No. 1,104,990; July 28; Gaz. vol. 204; p. 1096.

Corn-sheller. J. Klovsky. No. 1,104,677; July 21; Gaz. vol. 204; p. 939.

Corner-joint for screens and other frames. F. W. and R. S. Van Fleet. No. 1,102,460; July 7; Gaz. vol. 204; p. 84.

Corset, Apparel-. D. Kops. No. 1,105,330; July 28; Gaz. vol. 204; p. 1217.

Cot for invalids. J. H. Kindrick. No. 1,103,296; July 14; Gaz vol. 204; p. 420.

Cotton-chopper. W. L. Calhoun. No. 1,102,868; July 7; Gaz. vol. 204; p. 225.

Cotton-chopper blade. J. H. Stone. No. 1,102,362; July 7; Gaz. vol. 204; p. 48.

Cotton-feeders, Bur-extractor for. W. R. Lamb. No. 1,105,442; July 28; Gaz. vol. 204; p. 1257.

Cotton-gathering apparatus. J. F. O'Shaughnessy. No. 1,103,620; July 14; Gaz. vol. 204; p. 534.

Cotton-gathering apparatus. J. F. O'Shaughnessy. No. 1,103,622; July 14; Gaz. vol. 204; p. 534.

Cotton-gathering machine. J. F. O'Shaughnessy. No. 1,103,618; July 14; Gaz. vol. 204; p. 533.

Cotton-gathering machine. J. F. O'Shaughnessy. No. 1,103,619; July 14; Gaz. vol. 204; p. 534.

Cotton-gathering machine. J. F. O'Shaughnessy. No. 1,103,621; July 14; Gaz. vol. 204; p. 534.

Cotton-gathering machine. T. E. Brown and C. T. Westlin. No. 1,103,653; July 14; Gaz. vol. 204; p. 547.

Cotton-gin. J. R. Fordyce and W. R. Keef. No. 1,105,026; July 28; Gaz. vol. 204; p. 1108.

Couch. F. P. Fischer. No. 1,104,487; July 21; Gaz. vol. 204; p. 873.

Counter-partition bracket. O. M. Wolff. No. 1,103,459; July 14; Gaz. vol. 204; p. 475.

Counting and recording mechanism, Automatic. F. W. McLean. No. 1,104,307; July 21; Gaz. vol. 204; p. 810.

Counting-head. H. M. Pilkington. No. 1,103,428; July 14; Gaz. vol. 204; p. 464.

Coupling: *See* Automatic coupling; Car-coupling; Car automatic coupling; Conduit-coupling; Engine-coupling; Hose-coupling; Milling-machine-cutter coupling; Pipe-coupling; Shaft-coupling; Vehicle-coupling; Wagon-coupling.

Coupling device. E. J. McDade. No. 1,105,034; July 28; Gaz. vol. 204; p. 1112.

Coupling-expanding apparatus. O. M. Mowat. No. 1,105,094; July 28; Gaz. vol. 204; p. 1133.

Coupling-head safety-lock. L. D. Woodruff. No. 1,104,597; July 21; Gaz. vol. 204; p. 913.

Coupling with automatic return, Releasable. H. Deschamps. No. 1,105,408; July 28; Gaz. vol. 204; p. 1244.

Cover-fastener. H. Budd. No. 1,104,872; July 28; Gaz. vol. 204; p. 1056.

Cover fastener, Receptacle-. C. R. Chellew. No. 1,104,035; July 21; Gaz. vol. 204; p. 717.

Cover for receptacles, Sheet-metal. T. L. Taliaferro and J. B. Bellamy. No. 1,103,633; July 14; Gaz. vol. 204; p. 538.

Coverlet and wrapper, Interconvertible. I. M. M. E. Hübner. No. 1,102,408; July 7; Gaz. vol. 204; p. 66.

Cracker-cutter. H. F. McNutt and C. E. Ballinger. No. 1,102,676; July 7; Gaz. vol. 204; p. 159.

Crank, Safety starting-. J. H. Rohrer. No. 1,104,323; July 21; Gaz. vol. 204; p. 816.

Crank-shaft-twisting machine. C. C. Dodge. No. 1,105,188; July 28; Gaz. vol. 204; p. 1164.

Crank, Starting-. W. Vallier. No. 1,104,851; July 28; Gaz. vol. 204; p. 1049.

Crate. A. J. Van Dolah. No. 1,104,582; July 21; Gaz. vol. 204; p. 908.

Crate guard, Egg-. G. E. Nystrom. No. 1,103,819; July 14; Gaz. vol. 204; p. 603.

Crate, Shipping-. H. B. Kopf. No. 1,102,930; July 7; Gaz. vol. 204; p. 245.

Crate, Shipping-. C. Carvill. No. 1,105,253; July 28; Gaz. vol. 204; p. 1188.

Cream of tartar, Manufacture of. H. Cantoni, J. Chautems, and E. Degrange. No. 1,103,658; July 14; Gaz. vol. 204; p. 549.

Creel, Metallic. W. O. Aldrich. No. 1,104,286; July 21; Gaz. vol. 204; p. 804.

Creeper. W. E. Sutton. No. 1,105,008; July 28; Gaz. vol. 204; p. 1102.

Crematory-door. E. M. Jones. No. 1,102,668; July 7; Gaz. vol. 204; p. 157.

Crib and play-pen, Folding. J. E. Oliphant. No. 1,105,156; July 28; Gaz. vol. 204; p. 1153.

Cribs, Antirattling device for sliding-side. C. Vallone. No. 1,103,714; July 14; Gaz. vol. 204; p. 568.

Crocheting needle, Bead-. C. I. Denner. No. 1,104,640; July 21; Gaz. vol. 204; p. 927.

Cross-tie. G. F. Brockway. No. 1,103,652; July 14; Gaz. vol. 204; p. 547.

Crusher: *See* Ice-crusher.

Crushing-mill. G. L. Abbott. No. 1,103,727; July 14; Gaz. vol. 204; p. 572.

Cube-cutting machine. F. H. Merrell. No. 1,103,604; July 14; Gaz. vol. 204; p. 528.

Cultivator. C. H. Anderson. No. 1,102,381; July 7; Gaz. vol. 204; p. 55.

Cultivator. C. E. Rodgers. No. 1,102,957; July 7; Gaz. vol. 204; p. 254.

Cultivator. C. S. Corkhill. No. 1,103,350; July 14; Gaz. vol. 204; p. 440.

Cultivator. F. C. Warne. No. 1,104,027; July 21; Gaz. vol. 204; p. 715.

Cultivator. J. I. Hoke. No. 1,104,191; July 21; Gaz. vol. 204; p. 771.

Cultivator. M. M. Decker. No. 1,104,293; July 21; Gaz. vol. 204; p. 805.

Cultivator. S. S. Swanson. No. 1,104,329; July 21; Gaz. vol. 204; p. 818.

Cultivator. C. F. Davis. No. 1,104,636; July 21; Gaz. vol. 204; p. 925.

Cultivator. A. Holland. No. 1,105,198; July 28; Gaz. vol. 204; p. 1168.

Cultivator-blade. F. Lotter. No. 1,103,595; July 14; Gaz. vol. 204; p. 525.

Cultivator, Three-row wheel corn-. E. W. Owens. No. 1,105,450; July 28; Gaz. vol. 204; p. 1259.

Culvert or casing, Draining. A. Smith. No. 1,105,539; July 28; Gaz. vol. 204; p. 1290.

Cup: *See* Dice-cup; Drinking-cup; Grease-cup; Lubricant-cup; Priming-cup.

Curbing, Metal-bound. A. E. Davis. No. 1,105,260; July 28; Gaz. vol. 204; p. 1190.

Current-controlling apparatus. W. S. Morse. No. 1,103,528; July 14; Gaz. vol. 204; p. 499.

Current generator, Alternate-. V. A. Fynn. No. 1,104,183; July 21; Gaz. vol. 204; p. 768.

Current-motor. P. A. C. Moore. No. 1,103,426; July 14; Gaz. vol. 204; p. 464.

Current system, High-tension-. R. Raines. No. 1,103,835; July 14; Gaz. vol. 204; p. 608.

Current velocities and the cross-sections of rivers and the like, Indicator for determining and recording the. C. Theune. No. 1,103,099; July 14; Gaz. vol. 204; p. 351.

Currents, Arrester for strong. H. W. Garton. No. 1,105,557; July 28; Gaz. vol. 204; p. 1296.

Curtain-fixture. I. E. Capehart. No. 1,102,976; July 7; Gaz. vol. 204; p. 260.

Curtain-fixture. A. Schoendelen. No. 1,104,142; July 21; Gaz. vol. 204; p. 754.

Curtain-fixture. J. D. Heater. No. 1,104,358; July 21; Gaz. vol. 204; p. 829.

Curtain-pole. C. W. Bondascha. No. 1,104,614; July 21; Gaz. vol. 204; p. 918.

Curtain raising and lowering mechanism. I. Hodges. No. 1,102,921; July 7; Gaz. vol. 204; p. 242.

Curtains, Automatic release mechanism for vestibule-. J. H. Donaldson and B. T. Lewis. No. 1,105,261; July 28; Gaz. vol. 204; p. 1191.

Cushion: *See* Air-cushion.

Cushion device. J. J. Callahan. No. 1,102,570; July 7; Gaz. vol. 204; p. 123.

Cushion-mold. G. B. Brink. No. 1,103,477; July 14; Gaz. vol. 204; p. 482.

Cushioned wheel. G. T. McMillan. No. 1,102,423; July 7; Gaz. vol. 204; p. 72.

Cuspidor. A. A. Itackoff. No. 1,103,832; July 14; Gaz. vol. 204; p. 607.

Cuspidor. S. Mayer. No. 1,105,362; July 28; Gaz. vol. 204; p. 1230.

Cuspidor, Sanitary. R. L. Vioran. No. 1,103,636; July 14; Gaz. vol. 204; p. 540.

Cutter: *See* Casing-cutter; Cheese-cutter; Cigar-cutter; Clod-cutter; Cracker-cutter; Glass-cutter; Ground-cutter; Rolling cutter; Rotary cutter; Stalk-cutter.

Cutting and punching machine. H. Koeppliuger. No. 1,102,761; July 7; Gaz. vol. 204; p. 189.

Cutting apparatus. W. L. Campbell. No. 1,105,483; July 28; Gaz. vol. 204; p. 1271.

Cutting-machine, Friction. E. T. Hendee. No. 1,105,140; July 28; Gaz. vol. 204; p. 1147.

Cyanamids, Production of. M. Engelmann and B. Merkel. No. 1,102,892; July 7; Gaz. vol. 204; p. 233.

Cycle attachment, Motor-. R. Hansen. No. 1,102,659; July 7; Gaz. vol. 204; p. 154.

Cycle drive, Motor-. J. G. Jones. No. 1,105,351; July 28; Gaz. vol. 204; p. 1225.

Cycle engine, Four-stroke-. J. D. Shaw. No. 1,104,075; July 21; Gaz. vol. 204; p. 732.

Cycle foot control, Motor-. C. Merchant. No. 1,102,940; July 7; Gaz. vol. 204; p. 248.

Cycle seat-support, Motor-. A. O. Feilbach. No. 1,102,255; July 7; Gaz. vol. 204; p. 11.

Cycle-stand holding and release device. A. E. Hawkinson. No. 1,105,077; July 28; Gaz. vol. 204; p. 1128.

Cycle, Water-. M. Szegel. No. 1,104,229; July 21; Gaz. vol. 204; p. 784.

Cycles and the like, Stand for motor-. H. Moline. No. 1,104,696; July 21; Gaz. vol. 204; p. 945.

Cycles and the like, Supplemental seat attachment for motor-. J. C. Fox. No. 1,102,899; July 7; Gaz. vol. 204; p. 235.

Cycles, Prop or stand for supporting motor-. F. E. Kronenbitter. No. 1,105,353; July 28; Gaz. vol. 204; p. 1226.

Cylinder-lock. E. Epstein. No. 1,102,893; July 7; Gaz. vol. 204; p. 233.

Damper. G. Wolf. No. 1,103,724; July 14; Gaz. vol. 204; p. 571.

Damper. W. S. Miller. No. 1,105,366; July 28; Gaz. vol. 204; p. 1231.

Damper regulator, Furnace-. R. M. Hyde. No. 1,104,509; July 21; Gaz. vol. 204; p. 882.

Dandy-roll. H. M. Spencer. No. 1,102,554; July 7; Gaz. vol. 204; p. 116.

Davit for lowering and raising ships' boats. A. P. Lundin and H. W. Broady. No. 1,105,594; July 28; Gaz. vol. 204; p. 1309.

Daylight, Means for producing from artificial lights the color effect of. H. E. Ives. No. 1,104,900; July 28; Gaz. vol. 204; p. 1067.

Decorative device. G. Bollinger. No. 1,103,257; July 14; Gaz. vol. 204; p. 409.

Defuting-tool. W. L. Watson. No. 1,104,028; July 21; Gaz. vol. 204; p. 715.

Delivery apparatus, Measured-. F. D. Weeks. No. 1,103,333; July 14; Gaz. vol. 204; p. 434.

Dental articulator. R. Hardie. No. 1,102,741; July 7; Gaz. vol. 204; p. 181.

Dental burs, Holder and sterilizer for. H. J. Fries. No. 1,104,650; July 21; Gaz. vol. 204; p. 930.

Dental casting apparatus. H. V. Hart. No. 1,105,425; July 28; Gaz. vol. 204; p. 1251.

Dental crown-post extractor. T. R. Arden. No. 1,102,850; July 7; Gaz. vol. 204; p. 219.

Dental floss-holder. F. O. Gamble. No. 1,102,401; July 7; Gaz. vol. 204; p. 63.

Dental impression-tray, Sanitary. G. L. Grier. No. 1,104,662; July 21; Gaz. vol. 204; p. 934.

Dental lathe-file. W. F. Richards. No. 1,105,456; July 28; Gaz. vol. 204; p. 1262.

Dental model. V. Dalton. No. 1,102,390; July 7; Gaz. vol. 204; p. 59.

Dental pattern-wax. H. Schweitzer. No. 1,103,088; July 14; Gaz. vol. 204; p. 347.

Dental wooden sticks, &c., Device for shaping. J. W. Ivory. No. 1,102,753; July 7; Gaz. vol. 204; p. 186.

Derrick. L. H. Jones. No. 1,105,278; July 28; Gaz. vol. 204; p. 1196.

Derrick. W. J. Rawson. No. 1,105,455; July 28; Gaz. vol. 204; p. 1262.

Derrick apparatus. W. Randall. No. 1,104,313; July 21; Gaz. vol. 204; p. 812.

Desk and seat for school-rooms, Combination. C. H. W. Knickrehm. No. 1,103,884; July 14; Gaz. vol. 204; p. 625.

Diamond-cutting machine. J. H. Ludlow and T. W. G. Cook. No. 1,105,356; July 28; Gaz. vol. 204; p. 1227.

Diamonds, Mechanical dop for polishing (cutting). E. Soetens. No. 1,103,698; July 14; Gaz. vol. 204; p. 563.

Dice-cup. G. W. Markens. No. 1,103,366; July 14; Gaz. vol. 204; p. 444.

Die: *See* Type-die.

Die-head. J. A. Becher. No. 1,102,712; July 7; Gaz. vol. 204; p. 171.

Digger: *See* Grass-digger; Potato-digger.

Dihalogen-2-methylbutane and homologues thereof, Producing 2,3-. O. Graul. No. 1,102,654; July 7; Gaz. vol. 204; p. 152.

Dinitro-diamino-benzophenone. L. Blangey. No. 1,104,611; July 21; Gaz. vol. 204; p. 917.

Direction-indicator. A. Frauchiger. No. 1,103,498; July 14; Gaz. vol. 204; p. 488.
Dish cleaner and drier. E. E. Hershey. No. 1,105,561; July 28; Gaz. vol. 204; p. 1207.
Dish-washing apparatus. C. Shipherd. No. 1,105,045; July 28; Gaz. vol. 204; p. 1115.
Dishes, cups, and cutlery, Machine for washing. G. W. Rubush. No. 1,104,388; July 21; Gaz. vol. 204; p. 839.
Dispensing apparatus. R. P. Wilton. No. 1,102,377; July 7; Gaz. vol. 204; p. 53.
Display-box. H. W. Dunphee. No. 1,104,253; July 21; Gaz. vol. 204; p. 791.
Display-cabinet. W. E. Shepard. No. 1,104,711; July 21; Gaz. vol. 204; p. 951.
Display-cover and guard for boxes. M. Bayuk. No. 1,105,240; July 28; Gaz. vol. 204; p. 1184.
Display device. D. F. Thomson. No. 1,103,327; July 14; Gaz. vol. 204; p. 432.
Display device, Moving. E. H. Richardson. No. 1,103,624; July 14; Gaz. vol. 204; p. 535.
Display device, Pneumatically-operated. C. L. Howard. No. 1,102,270; July 7; Gaz. vol. 204; p. 17.
Display-pedestal. H. L. Hallett. No. 1,103,286; July 14; Gaz. vol. 204; p. 417.
Display-rack. L. Feldman, Jr., and T. E. Crecelius. No. 1,103,136; July 14; Gaz. vol. 204; p. 366.
Display-rack. J. S. Adamson. No. 1,103,728; July 14; Gaz. vol. 204; p. 572.
Display-rack wing or leaf. L. Feldmann, Jr., and T. E. Crecelius. No. 1,104,486; July 21; Gaz. vol. 204; p. 873.
Display-stand. F. G. Schmehl. No. 1,103,086; July 14; Gaz. vol. 204; p. 347.
Display structure and carton therefor. R. R. Richardson. No. 1,104,933; July 28; Gaz. vol. 204; p. 1077.
Displaying apparatus. L. J. Goddard. No. 1,102,735; July 7; Gaz. vol. 204; p. 179.
Distillation. A. Woolner, Jr. No. 1,104,948; July 28; Gaz. vol. 204; p. 1082.
Distilling apparatus. C. T. Hanna. No. 1,102,910; July 7; Gaz. vol. 204; p. 238.
Distributer. W. R. Buck. No. 1,104,342; July 21; Gaz. vol. 204; p. 823.
Doll-support. K. M. Jessup. No. 1,105,519; July 28; Gaz. vol. 204; p. 1283.
Door. W. Potter. No. 1,103,377; July 14; Gaz. vol. 204; p. 448.
Door, Baffle-plate. J. Zimmerman. No. 1,104,950; July 28; Gaz. vol. 204; p. 1083.
Door-check. J. J. Daly. No. 1,102,727; July 7; Gaz. vol. 204; p. 176.
Door-check. H. Ball. No. 1,103,648; July 14; Gaz. vol. 204; p. 545.
Door-check. J. E. Gibbs. No. 1,104,653; July 21; Gaz. vol. 204; p. 931.
Door check and hinge. P. Märksch. No. 1,103,792; July 14; Gaz. vol. 204; p. 594.
Door construction for vaults and the like. H. F. Baloun. No. 1,104,765; July 28; Gaz. vol. 204; p. 1019.
Door-controlling device. E. Wylde and C. Schenck. No. 1,105,053; July 28; Gaz. vol. 204; p. 1118.
Door-hanger. L. A. Bittorf. No. 1,104,770; July 28; Gaz. vol. 204; p. 1021.
Door-holder. W. P. Blackwell. No. 1,102,859; July 7; Gaz. vol. 204; p. 222.
Door-mat, Metallic. L. S. Howe. No. 1,104,757; July 21; Gaz. vol. 204; p. 967.
Door, Metal. S. G. Bolin. No. 1,104,868; July 28; Gaz. vol. 204; p. 1055.
Door-operating device, Hopper-. A. L. Logan. No. 1,103,523; July 14; Gaz. vol. 204; p. 497.
Door, Oscillating. D. B. Bryan. No. 1,102,568; July 7; Gaz. vol. 204; p. 122.
Door safety attachment. E. Carstens. No. 1,105,252; July 28; Gaz. vol. 204; p. 1187.
Door-support. F. J. Becker. No. 1,102,855; July 7; Gaz. vol. 204; p. 221.
Door track, Barn-. H. L. Ferris. No. 1,104,353; July 21; Gaz. vol. 204; p. 827.
Door winding-shafts, Operating mechanism for dump-. R. G. Taylor. No. 1,104,393; July 21; Gaz. vol. 204; p. 840.
Dormer. C. Yauch. No. 1,103,461; July 14; Gaz. vol. 204; p. 476.
Dough mixing and kneading apparatus. P. Link. No. 1,105,148; July 28; Gaz. vol. 204; p. 1150.
Dough-raiser. E. J. B. Coupel. No. 1,103,268; July 14; Gaz. vol. 204; p. 412.
Draft device and spark-arrester. J. J. Sullivan. No. 1,105,466; July 28; Gaz. vol. 204; p. 1265.
Draft-gear. W. E. Comin. No. 1,105,063; July 28; Gaz. vol. 204; p. 1122.
Draft-gear. J. F. Courson. No. 1,105,185; July 28; Gaz. vol. 204; p. 1163.
Draft-regulator. A. H. Marhenke. No. 1,103,149; July 14; Gaz. vol. 204; p. 371.
Draft-rigging. E. H. Schmidt. No. 1,104,554; July 21; Gaz. vol. 204; p. 899.
Draft-rigging. H. B. Anderson. No. 1,105,326; July 28; Gaz. vol. 204; p. 1215.
Draft, &c., sheet, Collection-. H. L. Price. No. 1,104,310; July 21; Gaz. vol. 204; p. 811.
Drag. F. V. Stinson. No. 1,104,154; July 21; Gaz. vol. 204; p. 758.
Drainage-tube. H. E. Hughes. No. 1,103,967; July 21; Gaz. vol. 204; p. 695.
Drainer, Clothes-. J. E. Merritt. No. 1,103,804; July 14; Gaz. vol. 204; p. 598.
Drainer, steamer, roaster, or baking-pan, Combined dish-. F. B. Beam. No. 1,103,169; July 14; Gaz. vol. 204; p. 378.
Dramatic production, Composite. H. Knight. No. 1,102,595; July 7; Gaz. vol. 204; p. 131.
Drawers, Woman's curtain-. M. M. Prindall. No. 1,102,800; July 7; Gaz. vol. 204; p. 202.
Drawing appliance. L. Binko. No. 1,102,974; July 7; Gaz. vol. 204; p. 260.
Dredge. J. F. Craig. No. 1,104,248; July 21; Gaz. vol. 204; p. 790.
Dredges, Floating discharge-pipe for hydraulic. A. W. Robinson. No. 1,104,275; July 21; Gaz. vol. 204; p. 799.
Dredger, Enameling-. L. Lipp. No. 1,103,423; July 14; Gaz. vol. 204; p. 463.
Dress, Lady's house-. M. Alshuler. No. 1,102,973; July 7; Gaz. vol. 204; p. 260.
Drier: *See* Mechanical drier.
Dry battery and manufacturing the same. H. Utard and J. Smith. No. 1,102,458; July 7; Gaz. vol. 204; p. 83.
Dry closet. W. J. W. Byers. No. 1,103,260; July 14; Gaz. vol. 204; p. 409.
Dry-kiln. G. F. Moranz. No. 1,103,608; July 14; Gaz. vol. 204; p. 529.
Drying apparatus. J. E. Hobbs. No. 1,102,662; July 7; Gaz. vol. 204; p. 155.
Drying-drum, Rotary. K. H. G. A. Gerlach. No. 1,105,417; July 28; Gaz. vol. 204; p. 1248.
Drying, heating, cooling, or ventilating apparatus. T. G. Marlow. No. 1,102,599; July 7; Gaz. vol. 204; p. 133.
Drying-machine. O. S. Sleeper. No. 1,103,443; July 14; Gaz. vol. 204; p. 470.
Drying products of clay or the like, Apparatus for. L. E. Rodgers. No. 1,103,435; July 14; Gaz. vol. 204; p. 467.
Drill: *See* Bench-drill; Seed or like drill.
Drill. T. J. Fegley and G. O. Leopold. No. 1,103,746; July 14; Gaz. vol. 204; p. 578.
Drill. G. O. Leopold. No. 1,103,783; July 14; Gaz. vol. 204; p. 590.
Drill. B. M. W. Hanson. No. 1,104,989; July 28; Gaz. vol. 204; p. 1096.
Drill attachment. F. T. Cook. No. 1,105,406; July 28; Gaz. vol. 204; p. 1244.
Drill-bit-rotating device. G. H. Gilman and L. A. Knights. No. 1,103,002; July 7; Gaz. vol. 204; p. 270.
Drill-extension device. H. J. Forster. No. 1,104,110; July 21; Gaz. vol. 204; p. 743.
Drill-press, Automatic multiple-chuck. J. N. Landau. No. 1,104,517; July 21; Gaz. vol. 204; p. 885.
Drills, Automatic stop for. G. O. Leopold. No. 1,103,785; July 14; Gaz. vol. 204; p. 591.
Drills, Bearing for spindles for multiple. E. Busch. No. 1,102,471; July 7; Gaz. vol. 204; p. 88.
Drilling-bit. J. E. Prosser. No. 1,104,543; July 21; Gaz. vol. 204; p. 895.
Drilling-rig, Rotary. R. E. Kline. No. 1,103,518; July 14; Gaz. vol. 204; p. 495.
Drinking-cup, Sanitary. P. T. and J. L. Coffield. No. 1,105,547; July 28; Gaz. vol. 204; p. 1202.
Drinking-fountain, Poultry. J. J. Hasty. No. 1,103,413; July 14; Gaz. vol. 204; p. 459.
Drinking-fountain, Sanitary. F. Johnson. No. 1,103,775; July 14; Gaz. vol. 204; p. 588.
Drinking-straws, Holder and deliverer for. R. M. Reid. No. 1,102,297; July 7; Gaz. vol. 204; p. 26.
Drive mechanism, Friction. T. A. Panyard. No. 1,103,999; July 21; Gaz. vol. 204; p. 704.
Driving mechanism, Compensating. W. F. Kendall. No. 1,103,778; July 14; Gaz. vol. 204; p. 589.
Driving-wheel. C. Sintz. No. 1,102,447; July 7; Gaz. vol. 204; p. 79.
Drop-light attachment. C. F. W. Busch. No. 1,103,395; July 14; Gaz. vol. 204; p. 453.
Dust-separator. I. H. Spencer. No. 1,103,549; July 14; Gaz. vol. 204; p. 506.
Dye for dyeing furs, hairs, and the like. A. Erlenbach and K. Marx. No. 1,105,501; July 28; Gaz. vol. 204; p. 1277.
Dyes and making same, Sulfurized. H. Heimann. No 1,105,515; July 28; Gaz. vol. 204; p. 1281.
Dyeing furs, hairs, and the like. K. Marx. No 1,105,447; July 28; Gaz. vol. 204; p. 1258.
Dyeing hairs, furs, &c., Preparation for. A. Erlenbach No. 1,105,554; July 28; Gaz. vol. 204; p. 1295.
Dyeing with aniline-black. H. Fletcher. No. 1,102,898; July 7; Gaz. vol. 204; p. 235.
Dyestuffs and making same, Red vat. R. Herz. No. 1,103,004; July 7; Gaz. vol. 204; p. 271.
Dynamo, Self-regulating. T. M. Mueller. No. 1,105,155; July 28; Gaz. vol. 204; p. 1152.
Dynamometer for direct observation, Transmission-. K. Suyehiro. No. 1,105,382; July 28; Gaz. vol. 204; p. 1237.
Earthenware-press. E. L. Jester. No. 1,103,968; July 21; Gaz. vol. 204; p. 695.
Edge-finishing. P. R. Glass. No. 1,102,494; July 7; Gaz. vol. 204; p. 95.
Edge-finishing machine. P. R. Glass. No. 1,102,495; July 7; Gaz. vol. 204; p. 95.

Educational device. M. Montessori. No. 1,103,369; July 14; Gaz. vol. 204; p. 445.
Egg-breaker. W. Mezel and F. Podmanicky. No. 1,102,780; July 7; Gaz. vol. 204; p. 195.
Egg-carrier. J. E. Tucker. No. 1,104,719; July 21; Gaz. vol. 204; p. 954.
Egg-carrier. L. E. Miller. No. 1,105,092; July 28; Gaz. vol. 204; p. 1133.
Egg-carrier. I. V. Bowley. No. 1,105,398; July 28; Gaz. vol. 204; p. 1242.
Elastic bedding-plate. E. Müller and A. Kayser. No. 1,105,368; July 28; Gaz. vol. 204; p. 1232.
Elastic wheel. L. Harrington. No. 1,103,512; July 14; Gaz. vol. 204; p. 493.
Electric apparatus, Vapor. O. O. Kruh. No. 1,104,198; July 21; Gaz. vol. 204; p. 773.
Electric circuit and motor. H. M. Shedd. No. 1,103,693; July 14; Gaz. vol. 204; p. 561.
Electric-circuit regulator. C. Aalborg. No. 1,104,796; July 28; Gaz. vol. 204; p. 1029.
Electric circuits, Protective device for. T. E. Murray and A. V. A. McHarg. No. 1,103,993; July 21; Gaz. vol. 204; p. 703.
Electric control system. J. H. Hall. No. 1,103,959; July 21; Gaz. vol. 204; p. 693.
Electric-current indicator. O. Moessner. No. 1,104,440; July 21; Gaz. vol. 204; p. 856.
Electric-current indicator, Excess-. J. Stone. No. 1,105,465; July 28; Gaz. vol. 204; p. 1265.
Electric-current transformer. P. Hildebrand. No. 1,102,507; July 7; Gaz. vol. 204; p. 100.
Electric currents, Means for generating alternating. G. Marconi. No. 1,102,990; July 7; Gaz. vol. 204; p. 265.
Electric cut-out. T. E. Murray. No. 1,103,989; July 21; Gaz. vol. 204; p. 701.
Electric cut-out. T. E. Murray. No. 1,103,990; July 21; Gaz. vol. 204; p. 702.
Electric cut-out. T. E. Murray. No. 1,103,994; July 21; Gaz. vol. 204; p. 703.
Electric device, Vapor. E. Weintraub. No. 1,102,308; July 7; Gaz. vol. 204; p. 30.
Electric elevator. R. G. Sanford. No. 1,103,626; July 14; Gaz. vol. 204; p. 536.
Electric fitting for circuit-wiring. M. F. Finkelstein. No. 1,103,748; July 14; Gaz. vol. 204; p. 578.
Electric furnace. A. Minet and H. L. L. Lucas. No. 1,103,309; July 14; Gaz. vol. 204; p. 425.
Electric furnace. H. F. D. Schwahn. No. 1,105,538; July 28; Gaz. vol. 204; p. 1259.
Electric furnace, Rotary. A. S. Bemis. No. 1,105,175; July 28; Gaz. vol. 204; p. 1160.
Electric heater. H. W. Denhard. No. 1,103,274; July 14; Gaz. vol. 204; p. 414.
Electric heater. G. Egly. No. 1,103,353; July 14; Gaz. vol. 204; p. 441.
Electric heater. C. S. Steward. No. 1,104,572; July 21; Gaz. vol. 204; p. 905.
Electric heating device. J. A. Heany. No. 1,104,499; July 21; Gaz. vol. 204; p. 878.
Electric holder. L. W. Andersen. No. 1,103,122; July 14; Gaz. vol. 204; p. 361.
Electric ignition-machines, Interrupter for. M. Schäfer. No. 1,104,007; July 21; Gaz. vol. 204; p. 707.
Electric installation, Suspension-box fitting for. W. H. Vibber. No. 1,104,395; July 21; Gaz. vol. 204; p. 841.
Electric light and power switchboard. F. W. Scharf. No. 1,102,805; July 7; Gaz. vol. 204; p. 203.
Electric-light support. D. C. Lamb. No. 1,105,083; July 28; Gaz. vol. 204; p. 1130.
Electric machine, Dynamo-. V. A. Fynn. No. 1,104,184; July 21; Gaz. vol. 204; p. 769.
Electric machine, Dynamo-. W. Weller. No. 1,104,233; July 21; Gaz. vol. 204; p. 785.
Electric machine, Dynamo-. S. Sparrow. No. 1,104,715; July 21; Gaz. vol. 204; p. 952.
Electric-machine frame, Dynamo-. G. Dunn. No. 1,104,784; July 28; Gaz. vol. 204; p. 1025.
Electric make-and-break device. G. E. Lawrence. No. 1,103,916; July 14; Gaz. vol. 204; p. 635.
Electric motor. J. D. Taylor. No. 1,102,819; July 7; Gaz. vol. 204; p. 209.
Electric motor, Multiphase. H. Gearing. No. 1,103,501; July 14; Gaz. vol. 204; p. 489.
Electric recorder. J. L. Zander. No. 1,104,949; July 28; Gaz. vol. 204; p. 1083.
Electric resistance unit. H. W. Denhard. No. 1,102,249; July 7; Gaz. vol. 204; p. 10.
Electric resistance unit. H. W. Denhard. No. 1,102,393; July 7; Gaz. vol. 204; p. 60.
Electric signs and similar devices, Distributing switch mechanism for. L. Miller. No. 1,104,692; July 21; Gaz. vol. 204; p. 944.
Electric-socket plug. E. B. Nilsson. No. 1,103,533; July 14; Gaz. vol. 204; p. 500.
Electric switch. N. O. Anderson. No. 1,102,562; July 7; Gaz. vol. 204; p. 119.
Electric switch. C. C. Newburn. No. 1,103,529; July 14; Gaz. vol. 204; p. 499.
Electric switch. R. Ishiyama. No. 1,104,194; July 21; Gaz. vol. 204; p. 772.
Electric switch and lock-box therefor. D. S. McKenna. No. 1,103,525; July 14; Gaz. vol. 204; p. 497.
Electric switches, Time-operating mechanism for. L. G. Copeman. No. 1,104,781; July 28; Gaz. vol. 204; p. 1024.
Electric wall-box. J. G. Raquette. No. 1,104,930; July 28; Gaz. vol. 204; p. 1076.
Electric waves, Apparatus for and method of receiving. R. Goldschmidt. No. 1,104,256; July 21; Gaz. vol. 204; p. 792.
Electrical binding-screw or terminal. S. Smith. No. 1,103,544; July 14; Gaz. vol. 204; p. 504.
Electrical-circuit controller. V., A. A., and L. Cano. No. 1,103,657; July 14; Gaz. vol. 204; p. 548.
Electrical communication, Establishing variable conductive paths for. E. E. Clement. No. 1,103,898; July 14; Gaz. vol. 204; p. 630.
Electrical connection. B. B. Turner. No. 1,104,720; July 21; Gaz. vol. 204; p. 954.
Electrical contact. E. E. Clement. No. 1,105,489; July 28; Gaz. vol. 204; p. 1273.
Electrical distribution system. S. Ferguson. No. 1,102,733; July 7; Gaz. vol. 204; p. 178.
Electrical distribution system. S. Ferguson. No. 1,103,018; July 7; Gaz. vol. 204; p. 276.
Electrical distribution system. J. L. Woodbridge. No. 1,105,231; July 28; Gaz. vol. 204; p. 1180.
Electrical distribution system. J. L. Woodbridge. No. 1,105,232; July 28; Gaz. vol. 204; p. 1181.
Electrical energy, Distribution of. P. V. Hunter. No. 1,104,733; July 21; Gaz. vol. 204; p. 959.
Electrical fitting. M. F. Finkelstein. No. 1,103,749; July 14; Gaz. vol. 204; p. 579.
Electrical generating system. L. V. Grillet and J. B. Truchetet. No. 1,104,793; July 28; Gaz. vol. 204; p. 1028.
Electrical insulating compound. T. J. Hadley. No. 1,103,285; July 14; Gaz. vol. 204; p. 417.
Electrical outlet-box and the like. A. McMurtrie. No. 1,105,284; July 28; Gaz. vol. 204; p. 1198.
Electrical receptacle. G. B. Thomas. No. 1,104,577; July 21; Gaz. vol. 204; p. 907.
Electrical selective switch. E. E. Clement. No. 1,105,491; July 28; Gaz. vol. 204; p. 1273.
Electrical switch. F. Schneider. No. 1,104,737; July 21; Gaz. vol. 204; p. 960.
Electrical system. R. Varley. No. 1,103,385; July 14; Gaz. vol. 204; p. 450.
Electrically-heated instrument. G. J. Schneider. No. 1,103,690; July 14; Gaz. vol. 204; p. 560.
Electrically-operated brake. G. R. Wadsworth. No. 1,104,586; July 21; Gaz. vol. 204; p. 909.
Electrodes, Making storage-battery. H. C. Hubbell. No. 1,104,898; July 28; Gaz. vol. 204; p. 1066.
Electrolytic apparatus. J. D. Fields. No. 1,104,646; July 21; Gaz. vol. 204; p. 929.
Electrolytic cell. J. B. Burdett. No. 1,104,754; July 21; Gaz. vol. 204; p. 966.
Electrolytic cell. D. B. Ayerst. No. 1,105,015; July 28; Gaz. vol. 204; p. 1104.
Electromagnet. C. C. Newburn. No. 1,103,530; July 14; Gaz. vol. 204; p. 499.
Electromagnet-spool. C. J. Anderson. No. 1,104,032; July 21; Gaz. vol. 204; p. 716.
Electromagnetic circuit-controlling device. W. F. Smith. No. 1,104,077; July 21; Gaz. vol. 204; p. 733.
Electromagnetic switch, Alternating-current. A. Sundh. No. 1,105,311; July 28; Gaz. vol. 204; p. 1208.
Electroplating and the like, Apparatus for. A. Murphy. No. 1,105,209; July 28; Gaz. vol. 204; p. 1201.
Elevating and discharging apparatus. M. Noelle. No. 1,103,616; July 14; Gaz. vol. 204; p. 532.
Elevator: *See* Binder-elevator; Electric elevator; Foot-operated elevator; Rope-drive elevator.
Elevator. M. E. Neenan. No. 1,103,613; July 14; Gaz. vol. 204; p. 531.
Elevator brake apparatus, Traction-. D. L. Lindquist, A. C. Smith, and G. John. No. 1,102,523; July 7; Gaz. vol. 204; p. 105.
Elevator-door check, Automatic. A. C. Preble. No. 1,102,799; July 7; Gaz. vol. 204; p. 201.
Elevator-door lock. A. M. Coyle. No. 1,102,477; July 7; Gaz. vol. 204; p. 90.
Elevator-guide lubricator. O. Berger. No. 1,102,641; July 7; Gaz. vol. 204; p. 148.
Elevator safety device. A. M. Coyle. No. 1,102,246; July 7; Gaz. vol. 204; p. 9.
Elevator safety devices, Actuating mechanism for. H. F. Gurney and W. M. Cummiskey. No. 1,102,264; July 7; Gaz. vol. 204; p. 14.
Elevator stop mechanism, Hydraulic-. K. E. O. Jansson. No. 1,102,587; July 7; Gaz. vol. 204; p. 129.
Elevator-well-door operator and lock. P. G. Westerberg. No. 1,104,591; July 21; Gaz. vol. 204; p. 911.
Emblem. W. H. Kluge. No. 1,103,422; July 14; Gaz. vol. 204; p. 463.
Embossing and printing press. E. M. Lockwood. No. 1,102,770; July 7; Gaz. vol. 204; p. 192.
Embroidering-machine. M. Hemleb. No. 1,102,405; July 7; Gaz. vol. 204; p. 65.
Embroidering-machine. R. Zahn. No. 1,105,233; July 28; Gaz. vol. 204; p. 1181.
Embroidery-foot attachment. J. H. Pettit. No. 1,102,433; July 7; Gaz. vol. 204; p. 75.
Embroidery-machines and the like, Machine for punching jacquard-cards for. C. Moriggl. No. 1,104,536; July 21; Gaz. vol. 204; p. 892.
Embroidery-trimming apparatus. F. Price. No. 1,102,544; July 7; Gaz. vol. 204; p. 113.

Emergency-brake, High-pressure. W. V. Turner. No. 1,104,850; July 28; Gaz. vol. 204; p. 1048.
Enamel lacquer or varnish composition. J. W. Aylsworth. No. 1,102,632; July 7; Gaz. vol. 204; p. 145.
Enamels and making them. M. Mayer and B. Havas. No. 1,104,266; July 21; Gaz. vol. 204; p. 796.
Enameling composition. L. Kreidl. No. 1,104,679; July 21; Gaz. vol. 204; p. 940.
End-gate for lumber-wagons. J. C. Feaster. No. 1,104,645; July 21; Gaz. vol. 204; p. 928.
End-matcher. W. S. Sherman. No. 1,102,694; July 7; Gaz. vol. 204; p. 164.
Engine: *See* Beating-engine; Carding-engine; Combustion-engine; Cycle-engine; Explosion-engine; Explosive-engine; Fluid-pressure engine; Gas-engine; Internal-combustion engine; Logging-engine; Oil-engine; Rotary engine; Rotary gas-engine; Traction-engine.
Engine. G. Prochazka. No. 1,102,952; July 7; Gaz. vol. 204; p. 252.
Engine. J. H. Towery. No. 1,103,634; July 14; Gaz. vol. 204; p. 530.
Engine. F. O. Peterson. No. 1,105,298; July 28; Gaz. vol. 204; p. 1204.
Engine-cooling medium, Internal-combustion-. J. N. McCoy. No. 1,102,777; July 7; Gaz. vol. 204; p. 194.
Engine coupling, Traction-. M. R. Cowell. No. 1,103,868; July 14; Gaz. vol. 204; p. 619.
Engine-cylinder. A. W. Gustafson. No. 1,105,423; July 28; Gaz. vol. 204; p. 1250.
Engine-cylinders, Means for lubricating. F. Ellicott. No. 1,103,354; July 14; Gaz. vol. 204; p. 441.
Engine-gangs, Key-operated actuating mechanism for. E. E. McClure and A. J. Wolff. No. 1,102,419; July 7; Gaz. vol. 204; p. 70.
Engine-hood lock. W. Ballou. No. 1,102,229; July 7; Gaz. vol. 204; p. 3.
Engine-priming mechanism, Explosive-. M. P. Mitchell. No. 1,102,285; July 7; Gaz. vol. 204; p. 22.
Engine-reversing mechanism. M. W. Brown. No. 1,104,621; July 21; Gaz. vol. 204; p. 920.
Engine-starter. C. J. Coleman. No. 1,102,322; July 7; Gaz. vol. 204; p. 35.
Engine-starter. H. G. O'Neill. No. 1,105,297; July 28; Gaz. vol. 204; p. 1203.
Engine-starter. F. Miskoosky. No. 1,105,367; July 28; Gaz. vol. 204; p. 1231.
Engine-starter, Automobile. H. B. Fenner. No. 1,102,651; July 7; Gaz. vol. 204; p. 151.
Engine starter, Gas-. S. S. Krayer. No. 1,104,050; July 21; Gaz. vol. 204; p. 723.
Engine starter, Internal-combustion-. B. W. Davenport. No. 1,102,479; July 7; Gaz. vol. 204; p. 90.
Engine starter, Internal-combustion-. T. A. Boor. No. 1,103,736; July 14; Gaz. vol. 204; p. 575.
Engine starter, Internal-combustion-. C. L. Johnston. No. 1,105,520; July 28; Gaz. vol. 204; p. 1283.
Engine starting and controlling means, Internal-combustion-. V. G. Apple. No. 1,104,467; July 21; Gaz. vol. 204; p. 866.
Engine-starting device, Explosive-. W. L. Marr. No. 1,104,058; July 21; Gaz. vol. 204; p. 725.
Engine-starting device, Explosive-. L. C. Van Riper. No. 1,104,087; July 21; Gaz. vol. 204; p. 736.
Engine-starting device, Internal-combustion-. W. V. Gilbert. No. 1,105,509; July 28; Gaz. vol. 204; p. 1280.
Engine-starting means, Internal-combustion-. W. F. and C. P. Groll. No. 1,104,356; July 21; Gaz. vol. 204; p. 828.
Engine-starting mechanism, Explosive-. H. Meredith-Jones. No. 1,104,211; July 21; Gaz. vol. 204; p. 778.
Engine steering-gear, Traction-. H. F. Manning. No. 1,105,086; July 28; Gaz. vol. 204; p. 1131.
Engine wheel, Traction-. B. F. Gillis. No. 1,104,655; July 21; Gaz. vol. 204; p. 932.
Engines, Air-compressor system for oil-. J. Cochaud. No. 1,102,321; July 7; Gaz. vol. 204; p. 35.
Engines, Automatic exhaust drain-cock for steam-. J. T. McGrath. No. 1,103,602; July 14; Gaz. vol. 204; p. 527.
Engines, Automatic radiating system for internal-combustion. F. A. Sayre. No. 1,104,552; July 21; Gaz. vol. 204; p. 898.
Engines, Automatic starter for internal-combustion. W. W. Hodgson. No. 1,104,894; July 28; Gaz. vol. 204; p. 1064.
Engines, Auxiliary air-inlet device for internal-combustion. C. H. Jockmus. No. 1,103,969; July 21; Gaz. vol. 204; p. 695.
Engines, Distributing device for automatic compressed-air starting apparatus for internal-combustion. M. Gendron. No. 1,103,001; July 7; Gaz. vol. 204; p. 270.
Engines, Electric starter for internal-combustion. W. H. Scott. No. 1,104,710; July 21; Gaz. vol. 204; p. 950.
Engines, Flexible transmission and starting device for explosive-. J. F. White. No. 1,104,593; July 21; Gaz. vol. 204; p. 912.
Engines, Ignition apparatus for internal-combustion. G. V. Ahara. No. 1,104,860; July 28; Gaz. vol. 204; p. 1052.
Engines, Means for creating and supplying explosive mixture to explosive-. J. J. Cochran. No. 1,102,475; July 7; Gaz. vol. 204; p. 89.
Engines, Rotary distributer for four-cycle internal-combustion. E. H. Tartrais. No. 1,102,817; July 7; Gaz. vol. 204; p. 208.
Engines, Starting and controlling explosive-. A. Sundh. No. 1,102,455; July 7; Gaz. vol. 204; p. 82.
Entomological mount. X., L. G., and C. F. McGlashan. No. 1,104,371; July 21; Gaz. vol. 204; p. 833.
Envelop. C. G. Glover. No. 1,103,758; July 14; Gaz. vol. 204; p. 582.
Envelop. P. Harl. No. 1,104,298; July 21; Gaz. vol. 204; p. 807.
Envelop and like fastener. F. J. Hodgson. No. 1,105,431; July 28; Gaz. vol. 204; p. 1253.
Envelop, Laundry-. G. Wordingham. No. 1,105,120; July 28; Gaz. vol. 204; p. 1141.
Envelop, Safety-. J. B. De Matteis. No. 1,104,169; July 21; Gaz. vol. 204; p. 764.
Equalizer-holder. L. C. Struensee. No. 1,102,815; July 7; Gaz. vol. 204; p. 207.
Equalizing unlock and impulse action escapement. E. A. Cochran. No. 1,105,062; July 28; Gaz. vol. 204; p. 1122.
Eraser for lead-pencils. A. Kilstrom. No. 1,104,514; July 21; Gaz. vol. 204; p. 884.
Evaporating and distilling apparatus. J. T. Davis. No. 1,103,946; July 21; Gaz. vol. 204; p. 688.
Evaporating apparatus, Multiple-effect. R. Lougher. No. 1,105,443; July 28; Gaz. vol. 204; p. 1257.
Evener. R. S. Curley and J. Moss. No. 1,102,726; July 7; Gaz. vol. 204; p. 176.
Excavations, Shoring. J. J. Kennedy. No. 1,105,145; July 28; Gaz. vol. 204; p. 1149.
Excavator-cable. A. D. Hadsel. No. 1,103,762; July 14; Gaz. vol. 204; p. 583.
Excavator, Drag-line. S. R. W. M. Bager. No. 1,105,480; July 28; Gaz. vol. 204; p. 1270.
Exercising apparatus. H. F. Holworthy. No. 1,104,505; July 21; Gaz. vol. 204; p. 880.
Exercising-machine for gaming apparatus. D. H. Kleinschmidt. No. 1,105,329; July 28; Gaz. vol. 204; p. 1216.
Expansion-nail. G. C. Raeger. No. 1,104,544; July 21; Gaz. vol. 204; p. 895.
Explosion-engine. W. J. Miller and D. W. Jones. No. 1,104,438; July 21; Gaz. vol. 204; p. 855.
Explosive. O. Silberrad. No. 1,102,964; July 7; Gaz. vol. 204; p. 257.
Explosive-engine. W. L. Marr. No. 1,104,059; July 21; Gaz. vol. 204; p. 726.
Explosive-engine. W. K. Bassford. No. 1,105,016; July 28; Gaz. vol. 204; p. 1104.
Explosive-engine. W. K. Bassford. No. 1,105,017; July 28; Gaz. vol. 204; p. 1105.
Explosive-engine. W. K. Bassford. No. 1,105,592; July 28; Gaz. vol. 204; p. 1308.
Extractor: *See* Dental crown-post extractor; Lemon-juice extractor; Screw-extractor; Turpentine-extractor.
Eyeglass-cases, Attachment for. E. F. Flanagan. No. 1,105,069; July 28; Gaz. vol. 204; p. 1124.
Eyeglass-mounting. L. F. Adt. No. 1,103,240; July 14; Gaz. vol. 204; p. 403.
Eyeglasses. B. M. Hanna. No. 1,102,909; July 7; Gaz. vol. 204; p. 238.
Eyeglasses. J. E. Higgins. No. 1,103,046; July 14; Gaz. vol. 204; p. 333.
Eyeglasses. G. H. Chapel. No. 1,104,034; July 21; Gaz. vol. 204; p. 717.
Eyeglasses. C. M. Stevenson and N. M. Baker. No. 1,104,152; July 21; Gaz. vol. 204; p. 757.
Fabric: *See* Knitted fabric; Metal fabric; Wire bed-bottom fabric; Woven fabric.
Fabrics an imitation of the irregular curly appearance of Astrakhan fur and the like, Mechanism for producing upon the surface of pile. J. Dobson. No. 1,102,484; July 7; Gaz. vol. 204; p. 92.
Fabrics an imitation of the irregular curly appearance of Astrakhan fur and the like, Producing upon the surface of pile. J. Dobson. No. 1,102,483; July 7; Gaz. vol. 204; p. 91.
Fabrics and other objects with material in the form of powder, Machine for covering. L. A. Destrez. No. 1,103,947; July 21; Gaz. vol. 204; p. 688.
Fabrics during weaving, Treatment of. E. Prein. No. 1,104,827; July 28; Gaz. vol. 204; p. 1040.
Fan-support and the like, Barber's. J. L. Newhouse and E. Runkel. No. 1,103,816; July 14; Gaz. vol. 204; p. 601.
Fare-recording machine. O. N. Moore. No. 1,102,942; July 7; Gaz. vol. 204; p. 249.
Fare-register. O. N. Moore. (Reissue.) No. 13,773; July 14; Gaz. vol. 204; p. 642.
Farm-gate. H. H. Deutscher. No. 1,102,481; July 7; Gaz. vol. 204; p. 91.
Farm-gate. W. F. Gatewood. No. 1,102,578; July 7; Gaz. vol. 204; p. 125.
Farm-gate. O. Severson. No. 1,104,010; July 21; Gaz. vol. 204; p. 708.
Fastener. G. A. MacCormack. No. 1,104,204; July 21; Gaz. vol. 204; p. 775.
Fastener forming and driving machine. S. E. Dunham. No. 1,103,404; July 14; Gaz. vol. 204; p. 456.
Fastener-inserting machines, Controlling mechanism for. H. A. Ballard. No. 1,105,238; July 28; Gaz. vol. 204; p. 1183.
Fastening device. J. Bayer, Jr. (Reissue.) No. 13,769; July 14; Gaz. vol. 204; p. 639.
Fastening device. C. A. Miller. No. 1,104,690; July 21; Gaz vol. 204; p. 943.

Faucet for dispensing beverages. J. C. J. Martens. No. 1,105,359; July 28; Gaz. vol. 204; p. 1228.
Faucet-guard. L. A. Cornelius. No. 1,105,258; July 28; Gaz. vol. 204; p. 1190.
Feather-fabric machine. J. A. Coley. No. 1,104,628; July 21; Gaz. vol. 204; p. 923.
Feed box or trough. G. B. Warren. No. 1,102,371; July 7; Gaz. vol. 204; p. 51.
Feed-gage. L. H. Wilson. No. 1,105,011; July 28; Gaz. vol. 204; p. 1103.
Feed mechanism. R. L. Wilcox. No. 1,105,343; July 28; Gaz. vol. 204; p. 1220.
Feed-water heater for locomotives. F. H. Clark and G. R. Smith. No. 1,104,776; July 28; Gaz. vol. 204; p. 1023.
Feed-water heaters, Distributer for supply-water to. W. F. Bilyeu. No. 1,105,242; July 28; Gaz. vol. 204; p. 1185.
Feeder, Automatic poultry-. F. R. Parks. No. 1,104,701; July 21; Gaz. vol. 204; p. 947.
Feeder, fountain, and heater, Combined. L. M. and M. L. Anderson. No. 1,102,629; July 7; Gaz. vol. 204; p. 144.
Felt cloth, Treating. G. R. Shevill. No. 1,103,694; July 14; Gaz. vol. 204; p. 562.
Felt polishing-stick. G. A. Roberts. No. 1,105,457; July 28; Gaz. vol. 204; p. 1262.
Fence. J. Luepker. No. 1,102,936; July 7; Gaz. vol. 204; p. 247.
Fence clamp, Wire-. E. B. Wells. No. 1,105,389; July 28; Gaz. vol. 204; p. 1239.
Fence construction. E. E. Everson. No. 1,104,485; July 21; Gaz. vol. 204; p. 873.
Fence-post. J. H. Pearson. No. 1,103,536; July 14; Gaz. vol. 204; p. 501.
Fence-post and take-up, Combined. G. J. Muller. No. 1,105,369; July 28; Gaz. vol. 204; p. 1232.
Fence-post and wire-holder. J. D. Raley. No. 1,103,834; July 14; Gaz. vol. 204; p. 607.
Fence-post mold. B. C. Baker. No. 1,103,247; July 14; Gaz. vol. 204; p. 405.
Fender: *See* Automobile-fender; Car-fender; Fireplace-fender; Ship-fender.
Fender. J. E. Biro. No. 1,103,392; July 14; Gaz. vol. 204; p. 452.
Fertilizer and producing the same. F. S. Washburn. No. 1,103,115; July 14; Gaz. vol. 204; p. 358.
Fertilizer-distributer. C. R. Davis. No. 1,103,272; July 14; Gaz. vol. 204; p. 413.
Fertilizer-distributers, Agitator and feeder for. E. M. Cole. No. 1,104,247; July 21; Gaz. vol. 204; p. 790.
Fertilizing compound. T. L. Willson and M. M. Haff. No. 1,103,910; July 14; Gaz. vol. 204; p. 634.
Fifth-wheel. E. S. Hall. No. 1,105,424; July 28; Gaz. vol. 204; p. 1250.
Filament-support. W. R. Whitney. No. 1,105,050; July 28; Gaz. vol. 204; p. 1117.
Filament supports, Automatic fusion device for making metallic. K. Farkas. No. 1,104,295; July 21; Gaz. vol. 204; p. 806.
Filaments for electric incandescent lamps, Manufacture of metallic. J. A. Scoular. No. 1,104,557; July 21; Gaz. vol. 204; p. 900.
File. O. G. Simmons. No. 1,104,561; July 21; Gaz. vol. 204; p. 902.
Files, Support for paper-. J. W. Gregory. No. 1,105,421; July 28; Gaz. vol. 204; p. 1249.
Filing-cabinet. A. Martin. No. 1,103,598; July 14; Gaz. vol. 204; p. 526.
Filing-case or the like. H. E. Davis. No. 1,103,945; July 21; Gaz. vol. 204; p. 687.
Film-burster. C. P. Shaw. No. 1,102,807; July 7; Gaz. vol. 204; p. 205.
Film-feeding mechanism. P. J. Mukautz. No. 1,105,036; July 28; Gaz. vol. 204; p. 1112.
Film-winding mechanism. P. C. Brenner. No. 1,104,616; July 21; Gaz. vol. 204; p. 919.
Filter. J. R. Proper. No. 1,102,685; July 7; Gaz. vol. 204; p. 162.
Filter for slimes, pulp, and the like. G. Ridgway. No. 1,103,080; July 14; Gaz. vol. 204; p. 345.
Filter, Gas-. A. J. Bassett. No. 1,103,249; July 14; Gaz. vol. 204; p. 406.
Filters, Dosing device for controlling the flow of sewage to sprinkling-. C. B. Buerger. No. 1,104,474; July 21; Gaz. vol. 204; p. 868.
Filtering valuable compounds, Apparatus for. N. A. Burgess. No. 1,103,345; July 14; Gaz. vol. 204; p. 438.
Finish-remover. C. Ellis. No. 1,102,330; July 7; Gaz. vol. 204; p. 38.
Finishing machine. A. J. Powers. No. 1,102,435; July 7; Gaz. vol. 204; p. 75.
Finishing-machine. H. Levine. No. 1,104,683; July 21; Gaz. vol. 204; p. 941.
Fire-alarm. J. Stevens. No. 1,102,451; July 7; Gaz. vol. 204; p. 80.
Fire-alarm system. E. Schumann. No. 1,105,044; July 28; Gaz. vol. 204; p. 1115.
Fire-alarm system, Automatic and electric. J. M. Johnson. No. 1,102,666; July 7; Gaz. vol. 204; p. 156.
Fire-box construction. J. M. McClellon. No. 1,105,526; July 28; Gaz. vol. 204; p. 1285.
Fire-escape. A. F. V. Stenborg. No. 1,103,849; July 14; Gaz. vol. 204; p. 612.
Fire-escape. B. Süssis. No. 1,103,850; July 14; Gaz. vol. 204; p. 612.
Fire-escape. M. Rosner. No. 1,104,449; July 21; Gaz. vol. 204; p. 860.
Fire-escape apparatus. T. O. Lofgren. No. 1,104,685; July 21; Gaz. vol. 204; p. 941.
Fire-escape ladder. S. S. Vaughan. No. 1,102,461; July 7; Gaz. vol. 204; p. 84.
Fire-extinguisher. C. Snyder. No. 1,104,079; July 21; Gaz. vol. 204; p. 734.
Fire-extinguisher, Portable. J. W. Durkee. No. 1,105,263; July 28; Gaz. vol. 204; p. 1192.
Fire-extinguishing apparatus. J. A. Steinmetz. No. 1,102,812; July 7; Gaz. vol. 204; p. 206.
Fire-extinguishing compound. W. O. Snelling. No. 1,103,092; July 14; Gaz. vol. 204; p. 348.
Fire-governor. J. V. Robinson. No. 1,105,208; July 28; Gaz. vol. 204; p. 1171.
Fire-plug, Non-freezing. C. F. Paulus. No. 1,105,040; July 28; Gaz. vol. 204; p. 1113.
Fire-shutters, Channel for. E. H. McCloud. No. 1,105,087; July 28; Gaz. vol. 204; p. 1131.
Firearm. E. E. Redfield. No. 1,103,687; July 14; Gaz. vol. 204; p. 559.
Firearm, Automatic. J. O. Winks. No. 1,104,947; July 28; Gaz. vol. 204; p. 1082.
Firearm, Automatic hand-. A. Fyrberg. No. 1,105,416; July 28; Gaz. vol. 204; p. 1248.
Firearm, Repeating. C. G. Swebilius and H. T. R. Hanitz. No. 1,103,228; July 14; Gaz. vol. 204; p. 398.
Firearm, Repeating. C. G. Swebilius and H. T. R. Hanitz. No. 1,105,467; July 28; Gaz. vol. 204; p. 1266.
Fireplace-fender. A. Dixon. No. 1,102,328; July 7; Gaz. vol. 204; p. 38.
Fireproof partition. M. Dawson. No. 1,102,883; July 7; Gaz. vol. 204; p. 230.
Firing, Device for preventing back-. C. E. Fouts. No. 1,105,556; July 28; Gaz. vol. 204; p. 1295.
Fish-cleaning machine. C. F. Mischler. No. 1,103,809; July 14; Gaz. vol. 204; p. 599.
Fish-hook and sinker. W. E. Threm. No. 1,103,707; July 14; Gaz. vol. 204; p. 566.
Fishing-tool. A. J. Snow, A. M. Kidd, and J. H. Whaley. No. 1,103,545; July 14; Gaz. vol. 204; p. 504.
Flagstaff. N. A. Jensen. No. 1,102,413; July 7; Gaz. vol. 204; p. 68.
Flask: *See* Molding-flask.
Flat-iron, Electric. F. E. Shallor. No. 1,102,300; July 7; Gaz. vol. 204; p. 27.
Flat-iron holder. M. A. Baird. No. 1,104,764; July 28; Gaz. vol. 204; p. 1018.
Flax and other long-stapled fibers, Machine for hackling and spreading. J. V. Eves. No. 1,102,895; July 7; Gaz. vol. 204; p. 234.
Fliers, Presser for. C. T. Burlin. No. 1,103,654; July 14; Gaz. vol. 204; p. 547.
Fly-killing device. C. P. Childress. No. 1,103,032; July 14; Gaz. vol. 204; p. 329.
Fly-paper holder. G. Errico. No. 1,103,950; July 21; Gaz. vol. 204; p. 690.
Fly-trap. T. E. Brown. No. 1,102,642; July 7; Gaz. vol. 204; p. 149.
Fly-trap. E. J. Gould. No. 1,103,578; July 14; Gaz. vol. 204; p. 518.
Fly-trap. M. D. Campbell. No. 1,103,656; July 14; Gaz. vol. 204; p. 548.
Fly-wheel. N. J. Rothsten. No. 1,103,843; July 14; Gaz. vol. 204; p. 610.
Flying-machine. G. H. Curtiss. No. 1,104,036; July 21; Gaz. vol. 204; p. 717.
Flying-machine. C. Dienstbach. No. 1,104,039; July 21; Gaz. vol. 204; p. 718.
Flying-machine. A. L. Henson. No. 1,104,045; July 21; Gaz. vol. 204; p. 721.
Flying-machine. C. Hartmann. No. 1,104,114; July 21; Gaz. vol. 204; p. 744.
Float apparatus, Rotatable. M. Pearson. No. 1,104,825; July 28; Gaz. vol. 204; p. 1040.
Floor-jack. F. X. Manning. No. 1,105,446; July 28; Gaz. vol. 204; p. 1258.
Floor-washing device. G. T. Lewis. No. 1,103,786; July 14; Gaz. vol. 204; p. 591.
Flow meter, Fluid-. H. H. Mapelsden. No. 1,104,433; July 21; Gaz. vol. 204; p. 853.
Fluid-dispensing apparatus. J. J. Catron. No. 1,103,939; July 21; Gaz. vol. 204; p. 685.
Fluid-gage. L. A. Frame. No. 1,103,750; July 14; Gaz. vol. 204; p. 579.
Fluid-meter. J. Wilkinson. No. 1,105,051; July 28; Gaz. vol. 204; p. 1117.
Fluid-pressure brake. F. L. Clark. No. 1,104,775; July 28; Gaz. vol. 204; p. 1022.
Fluid-pressure device. G. Westinghouse. No. 1,104,945; July 28; Gaz. vol. 204; p. 1081.
Fluid-pressure engine. P. G. Tismir. No. 1,103,104; July 14; Gaz. vol. 204; p. 354.
Fluid-pressure-regulating mechanism. W. M. Austin. No. 1,103,020; July 14; Gaz. vol. 204; p. 325.
Flume. P. T. Snyder. No. 1,102,810; July 7; Gaz. vol. 204; p. 206.
Flume construction. P. T. Snyder. No. 1,102,809; July 7; Gaz. vol. 204; p. 205.
Flush-tank. C. Carreyn. No. 1,102,870; July 7; Gaz. vol. 204; p. 226.

Flushing apparatus, Silent. W. T. Cowperthwaite. No. 1,104,292; July 21; Gaz. vol. 204; p. 805.
Flushing apparatus, Closet-. W. Heap. No. 1,103,141; July 14; Gaz. vol. 204; p. 367.
Flushing mechanism, Water-closet-. S. J. Stevens. No. 1,103,550; July 14; Gaz. vol. 204; p. 506.
Flushing-valve for water-closets. C. H. Phillips. No. 1,102,543; July 7; Gaz. vol. 204; p. 112.
Fodder-loading apparatus. W. F. Lawler. No. 1,103,326; July 14; Gaz. vol. 204; p. 431.
Folding and gluing machine. E. G. Staude. No. 1,104,013; July 21; Gaz. vol. 204; p. 709.
Folding box. J. H. Zell. No. 1,103,238; July 14; Gaz. vol. 204; p. 402.
Folding box or crate. H. McTavish. No. 1,105,285; July 28; Gaz. vol. 204; p. 1198.
Folding chair. C. C. Braden. No. 1,104,615; July 21; Gaz. vol. 204; p. 918.
Folding table. N. C. Nielsen. No. 1,103,532; July 14; Gaz. vol. 204; p. 500.
Folding table. H. A. Stone. No. 1,104,083; July 21; Gaz. vol. 204; p. 735.
Food compound. S. N. and H. N. Samaha. No. 1,102,607; July 7; Gaz. vol. 204; p. 136.
Food fats more particularly for the preparation of pastries and the like, Manufacture of. P. A. Schmitt. No. 1,102,551; July 7; Gaz. vol. 204; p. 115.
Food, Preparing a stock. G. B. French. No. 1,105,415; July 28; Gaz. vol. 204; p. 1247.
Foot-operated elevator. R. Laborda. No. 1,104,199; July 21; Gaz. vol. 204; p. 774.
Foot-rest. C. C. Kusterer. No. 1,104,360; July 21; Gaz. vol. 204; p. 829.
Foot-rest and heater, Combined. C. S. Pelton. No. 1,102,432; July 7; Gaz. vol. 204; p. 74.
Fork: *See* Hay-fork.
Form, Adjustable garment-. I. Levin. No. 1,102,596; July 7; Gaz. vol. 204; p. 132.
Form, Dress-. A. D. Bailey. No. 1,102,711; July 7; Gaz. vol. 204; p. 170.
Form, Garment-. I. Levin. No. 1,102,597; July 7; Gaz. vol. 204; p. 132.
Form-table. R. T. Johnston. No. 1,104,048; July 21; Gaz. vol. 204; p. 722.
Formillion. H. M. Darmstadter. No. 1,102,729; July 7; Gaz. vol. 204; p. 177.
Fountain: *See* Drinking-fountain; Poultry-fountain.
Frame: *See* Agricultural-implement frame; Awning-frame; Brake torque-frame; Canopy-frame; Carpet-setting frame; Hacksaw-frame; Knockdown frame; Skeleton frame; Truck side frame.
Frost-remover. J. J. Heim and W. Nottberg. No. 1,102,336; July 7; Gaz. vol. 204; p. 40.
Fruit-gatherer. P. H. Lint. No. 1,104,431; July 21; Gaz. vol. 204; p. 853.
Fruit-grader. J. H. O. Kemp. No. 1,103,970; July 21; Gaz. vol. 204; p. 696.
Fruit-juice, Storing unfermented. F. J. Walker, Jr. No. 1,103,920; July 14; Gaz. vol. 204; p. 637.
Fruit-picker. J. A. Pindell. No. 1,105,302; July 28; Gaz. vol. 204; p. 1205.
Fruit picker or gatherer. G. J. Fallkin. No. 1,105,189; July 28; Gaz. vol. 204; p. 1165.
Fruit-presser. A. C. and J. B. Schiffmann. No. 1,104,937; July 28; Gaz. vol. 204; p. 1079.
Fruit-stand. O. Roberts. No. 1,105,376; July 28; Gaz. vol. 204; p. 1235.
Fuel-distributing apparatus, Pulverized-. H. H. Blake. No. 1,104,404; July 21; Gaz. vol. 204; p. 844.
Fuel-receptacle burner. E. M. Potter. No. 1,104,383; July 21; Gaz. vol. 204; p. 837.
Fuel-regulator. I. U. Hager. No. 1,103,198; July 14; Gaz. vol. 204; p. 389.
Fuels, Apparatus for utilizing low-grade. H. H. Blake. No. 1,104,403; July 21; Gaz. vol. 204; p. 844.
Fumigator, Electric. W. F. McNabb. No. 1,102,424; July 7; Gaz. vol. 204; p. 72.
Funnel. C. Gentle. No. 1,104,354; July 21; Gaz. vol. 204; p. 827.
Funnels, Straining device for. R. F. Alexander. No. 1,104,603; July 21; Gaz. vol. 204; p. 915.
Furnace: *See* Boiler-furnace; Electric furnace; Glass-furnace; Metallurgical furnace; Open-hearth furnace; Regenerative furnace; Roasting-furnace; Smelting-furnace; Underfeed furnace.
Furnace. C. E. Pedersen. No. 1,102,292; July 7; Gaz. vol. 204; p. 25.
Furnace. A. Martin. No. 1,103,888; July 14; Gaz. vol. 204; p. 626.
Furnace. A. P. Harder. No. 1,105,136; July 28; Gaz. vol. 204; p. 1146.
Furnace-bottom construction. H. H. Blake. No. 1,104,402; July 21; Gaz. vol. 204; p. 843.
Furnace-cooling system, Blast-. J. H. Means. No. 1,102,281; July 7; Gaz. vol. 204; p. 21.
Furnace-door. L. L. Knox. No. 1,103,297; July 14; Gaz. vol. 204; p. 421.
Furnace feeding device, Roasting-. H. H. Stout. No. 1,102,454; July 7; Gaz. vol. 204; p. 81.
Furnace-grate. F. L. O. Wadsworth. No. 1,103,232; July 14; Gaz. vol. 204; p. 399.
Furnace-grate. P. Von Zelpel. No. 1,105,054; July 28; Gaz. vol. 204; p. 1119.
Furnace-regulator. H. F. Quickel. No. 1,104,311; July 21; Gaz. vol. 204; p. 811.
Furnaces, Anthracite-burning grate for. W. McClave. No. 1,105,572; July 28; Gaz. vol. 204; p. 1301.
Furnaces, Apparatus for regulating combustion in. J. F. Canady. No. 1,102,718; July 7; Gaz. vol. 204; p. 173.
Fuse. A. F. Daum. No. 1,102,981; July 7; Gaz. vol. 204; p. 262.
Fuse. P. E. Goldmann and A. F. Daum. No. 1,102,985; July 7; Gaz. vol. 204; p. 263.
Fuse-block. C. N. Johnson. No. 1,102,756; July 7; Gaz. vol. 204; p. 187.
Fuse cut-out, Electric-. E. J. Gibbs. No. 1,102,579; July 7; Gaz. vol. 204; p. 126.
Fuse, Electric. T. E. Murray. No. 1,103,987; July 21; Gaz. vol. 204; p. 701.
Fuse for projectiles. E. Faber. No. 1,102,732; July 7; Gaz. vol. 204; p. 178.
Fuse for projectiles. K. Asak. No. 1,105,394; July 28; Gaz. vol. 204; p. 1240.
Fuse-plug. J. H. Hanson and J. W. Steele. No. 1,103,411; July 14; Gaz. vol. 204; p. 458.
Fuse plug, Multiple-. A. J. Kalinowski. No. 1,103,777; July 14; Gaz. vol. 204; p. 588.
Fuses, Setting-key for. K. Völler. No. 1,104,585; July 21; Gaz. vol. 204; p. 909.
Fusee-cap. R. M. Clark. No. 1,103,263; July 14; Gaz. vol. 204; p. 410.
Fusee-cap. J. W. Edmands. No. 1,103,279; July 14; Gaz. vol. 204; p. 416.
Fusee, Railway signal-. J. W. Edmands. No. 1,103,277; July 14; Gaz. vol. 204; p. 415.
Fusee, Railway signal-. J. W. Edmands. No. 1,103,278; July 14; Gaz. vol. 204; p. 415.
Gage: *See* Bevel-gage; Bit-gage; Feed-gage; Fluid-gage.
Gage. E. Corff. No. 1,103,265; July 14; Gaz. vol. 204; p. 411.
Gage-glass apparatus. D. R. MacBain. No. 1,105,150; July 28; Gaz. vol. 204; p. 1151.
Galvanic battery. J. E. Preston. No. 1,104,828; July 28; Gaz. vol. 204; p. 1041.
Game adjunct. J. W. Ames. No. 1,105,478; July 28; Gaz. vol. 204; p. 1269.
Game apparatus. W. W. Hall. No. 1,102,501; July 7; Gaz. vol. 204; p. 97.
Game apparatus. L. Cory. No. 1,102,724; July 7; Gaz. vol. 204; p. 175.
Game apparatus. H. W. Ries and L. B. Brown. No. 1,102,954; July 7; Gaz. vol. 204; p. 253.
Game apparatus. J. A. Healey. No. 1,102,986; July 7; Gaz. vol. 204; p. 263.
Game apparatus. F. M. Caler. No. 1,103,865; July 14; Gaz. vol. 204; p. 618.
Game apparatus. J. F. Hughes. No. 1,105,274; July 28; Gaz. vol. 204; p. 1195.
Game appliance. F. H. Hall. No. 1,103,579; July 14; Gaz. vol. 204; p. 518.
Game-board. F. Kiefer. No. 1,102,594; July 7; Gaz. vol. 204; p. 131.
Game, Lawn. J. Norton. No. 1,102,948; July 7; Gaz. vol. 204; p. 251.
Garage. J. A. Varlan. No. 1,102,828; July 7; Gaz. vol. 204; p. 212.
Garbage and sewage sludge, Treating. A. F. Matlack. No. 1,102,532; July 7; Gaz. vol. 204; p. 108.
Garbage-can. N. W. Lowe. No. 1,104,055; July 21; Gaz. vol. 204; p. 724.
Garbage-can. T. A. Keen. No. 1,105,440; July 28; Gaz. vol. 204; p. 1256.
Garbage-receptacle. R. E. Kime. No. 1,102,275; July 7; Gaz. vol. 204; p. 19.
Garment. M. S. George. No. 1,104,185; July 21; Gaz. vol. 204; p. 769.
Garment. E. Caplan. No. 1,104,625; July 21; Gaz. vol. 204; p. 922.
Garment. A. Goldberg. No. 1,104,657; July 21; Gaz. vol. 204; p. 933.
Garment, Combination-. B. D. Leman. No. 1,102,520; July 7; Gaz. vol. 204; p. 104.
Garment-cutting apparatus. G. M. Laub. No. 1,103,364; July 14; Gaz. vol. 204; p. 444.
Garment-fastener. J. Brell. No. 1,103,651; July 14; Gaz. vol. 204; p. 546.
Garment-hanger. J. G. Brenner. No. 1,104,099; July 21; Gaz. vol. 204; p. 740.
Garment hanger and stretcher. A. E. Bluhm. No. 1,105,018; July 28; Gaz. vol. 204; p. 1106.
Garment hanger and stretcher, Combined. A. E. Bluhm. No. 1,105,019; July 28; Gaz. vol. 204; p. 1106.
Garment-hanger, Portable. E. H. M. J. F. Forlong. No. 1,104,180; July 21; Gaz. vol. 204; p. 768.
Garment-hook. J. Mohlberg. No. 1,102,785; July 7; Gaz. vol. 204; p. 196.
Garment-neck-band. H. Friedmann. No. 1,102,490; July 7; Gaz. vol. 204; p. 94.
Garment-pressing machine. T. D. Palmer. No. 1,105,530; July 28; Gaz. vol. 204; p. 1287.
Garment-supporter. S. Leibel. No. 1,105,282; July 28; Gaz. vol. 204; p. 1198.
Garment, Union. J. A. Scriven. No. 1,102,299; July 7; Gaz. vol. 204; p. 27.
Garment-weight. M. E. Roarke. No. 1,102,438; July 7; Gaz. vol. 204; p. 76.
Gas-burner. J. Hicks. No. 1,102,751; July 7; Gaz. vol. 204; p. 185.
Gas-burner. C. F. Cole and Q. Carr. No. 1,103,397; July 14; Gaz. vol. 204; p. 454.

Gas-burner. G. B. Cobb, Jr. No. 1,103,560; July 14; Gaz. vol. 204; p. 513.
Gas-burner. F. M. Brooks. No. 1,104,478; July 21; Gaz. vol. 204; p. 868.
Gas-burner. J. E. Carnahan. No. 1,105,250; July 28; Gaz. vol. 204; p. 1187.
Gas-burner, Safety. J. Gaspár. No. 1,105,027; July 28; Gaz. vol. 204; p. 1109.
Gas-currents, Apparatus for trapping particles in suspension in. T. E. Murray. No. 1,103,995; July 21; Gaz. vol. 204; p. 703.
Gas-engine. W. I. Twombly. No. 1,102,457; July 7; Gaz. vol. 204; p. 83.
Gas-engine. B. M. Aslakson. No. 1,104,337; July 21; Gaz. vol. 204; p. 821.
Gas generator, Acetylene-. U. M. Caudell. No. 1,103,561; July 14; Gaz. vol. 204; p. 511.
Gas generator and burner, Kerosene-. J. Ryckman. No. 1,105,104; July 28; Gaz. vol. 204; p. 1135.
Gas-lights, Automatic ignition system for. J. W. Lundahl and O. A. Ekstrom. No. 1,104,522; July 21; Gaz. vol. 204; p. 887.
Gas, Method of and apparatus for producing. G. H. Benjamin. No. 1,105,241; July 28; Gaz. vol. 204; p. 1184.
Gas-producer. J. A. Weil. No. 1,105,474; July 28; Gaz. vol. 204; p. 1268.
Gas, Purifying. C. J. O'Donnell and A. F. Kunberger. No. 1,105,578; July 28; Gaz. vol. 204; p. 1303.
Gas-regulator. C. Barrington, Jr. No. 1,104,865; July 28; Gaz. vol. 204; p. 1054.
Gas-retort doors, Clamp for vertical-. J. H. Taussig. No. 1,105,582; July 28; Gaz. vol. 204; p. 1305.
Gas-retorts, Bee-closure for vertical. J. H. Taussig. No. 1,105,583; July 28; Gaz. vol. 204; p. 1305.
Gases for use in fumigating and fire-extinguishing and like purposes, Apparatus for scrubbing and cooling. G. Harker. No. 1,103,509; July 14; Gaz. vol. 204; p. 492.
Gases from blast-furnaces for preheating the blast, Device for utilizing the off. J. E. Prégardien. No. 1,105,158; July 28; Gaz. vol. 204; p. 1153.
Gaseous-fuel heater. H. E. Whiting. No. 1,102,309; July 7; Gaz. vol. 204; p. 30.
Gaseous-fuel heater. C. A. Crowder. No. 1,102,478; July 7; Gaz. vol. 204; p. 90.
Gasolene and oil separator. S. A. Travers. No. 1,105,223; July 28; Gaz. vol. 204; p. 1177.
Gate: *See* Bridge-gate; End-gate; Farm-gate; Railway-crossing gate.
Gate. C. S. Savage. No. 1,102,691; July 7; Gaz. vol. 204; p. 163.
Gate. J. G. Vaughn. No. 1,104,583; July 21; Gaz. vol 204; p. 908.
Gates, marine vessels, and the like, Heating of lock and dock. M. Macleod. No. 1,104,914; July 28; Gaz. vol. 204; p. 1071.
Gathering-machine. F. R. Goodnough. No. 1,104,986; July 28; Gaz. vol. 204; p. 1095.
Gear-case construction. E. W. Stull. No. 1,105,219; July 28; Gaz. vol. 204; p. 1176.
Gear-cutting machine. H. J. Eberhardt. No. 1,104,482; July 21; Gaz. vol. 204; p. 871.
Gear for motor-vehicles, Transmission-. J. Laviolette. No. 1,104,809; July 28; Gaz. vol. 204; p. 1034.
Gear-grinding machine. F. A. Ward and W. N. Taylor. No. 1,104,589; July 21; Gaz. vol. 204; p. 910.
Gear-shifting mechanism. H. A. Myers. No. 1,102,787; July 7; Gaz. vol. 204; p. 197.
Gear-wheels, Machine for cutting helical teeth of. W. E. Sykes. No. 1,103,851; July 14; Gaz. vol. 204; p. 613.
Gears, Hobbing special-shaped toothed. N. E. Zusi. No. 1,104,859; July 28; Gaz. vol. 204; p. 1052.
Gearing. A. T. Brown. No. 1,104,243; July 21; Gaz. vol. 204; p. 788.
Gearing. F. Schneider. No. 1,104,736; July 21; Gaz. vol. 204; p. 960.
Gearing. J. A. Hill. No. 1,104,893; July 28; Gaz. vol. 204; p. 1063.
Gearing, Differential. W. Romeiser. No. 1,104,005; July 21; Gaz. vol. 204; p. 707.
Gearing for axles of automobiles. W. W. Annable. No. 1,104,160; July 21; Gaz. vol. 204; p. 760.
Gearing, Transmission-. R. S. Zeitler. No. 1,102,378; July 7; Gaz. vol. 204; p. 54.
Gearing, Transmission-. R. L. Morgan. No. 1,102,427; July 7; Gaz. vol. 204; p. 73.
Gearing, Transmission-. C. W. Parker. No. 1,103,683; July 14; Gaz. vol. 204; p. 558.
Gearing, Variable-speed. E. A. Anderson. No. 1,103,926; July 21; Gaz. vol. 204; p. 681.
Generator: *See* Current-generator; Gas-generator; High-frequency generator; Steam-generator.
Girdle, Skeleton. J. A. Ondrak. No. 1,104,215; July 21; Gaz. vol. 204; p. 779.
Glass: *See* Spectacle-glass; Tourist's glass.
Glass articles, Cutting ornamentation on. J. Stott. No. 1,103,631; July 14; Gaz. vol. 204; p. 538.
Glass articles, Manufacture of. B. M. Hanna. No. 1,103,961; July 21; Gaz. vol. 204; p. 693.
Glass-cutter. F. R. Woodward. No. 1,102,843; July 7; Gaz. vol. 204; p. 217.
Glass cylinders, Take-down sling for handling. J. H. Roadman and W. M. Dravo. No. 1,102,803; July 7; Gaz. vol. 204; p. 203.
Glass-drawing apparatus. H. F. Hitner. No. 1,103,585; July 14; Gaz. vol. 204; p. 521.
Glass-furnace. R. H. Miller. No. 1,104,375; July 21; Gaz. vol. 204; p. 834.
Glass-grinding machine. E. Stalzer. No. 1,103,093; July 14; Gaz. vol. 204; p. 348.
Glass-melting-tank accessory. L. Mambourg. No. 1,103,066; July 14; Gaz. vol. 204; p. 341.
Glass, Method and batch or mixture for making illuminating-. G. A. Macbeth. (Reissue.) No. 13,766; July 7; Gaz. vol. 204; p. 278.
Glass-washing machine. J. W. Hasburg. No. 1,104,498; July 21; Gaz. vol. 204; p. 877.
Glazing-strip. T. E. Weaver. No. 1,105,117; July 28; Gaz. vol. 204; p. 1140.
Glove. W. E. Sell. No. 1,102,552; July 7; Gaz. vol. 204; p. 115.
Glove. P. A. Waller. No. 1,103,921; July 14; Gaz. vol. 204; p. 637.
Glove. E. T. Baskin. No. 1,105,239; July 28; Gaz. vol. 204; p. 1184.
Glove-finger-turning device. E. A. Runner. No. 1,104,006; July 21; Gaz. vol. 204; p. 707.
Gluing and sealing machine, Box-flap. C. W. Casto. No. 1,105,256; July 28; Gaz. vol. 204; p. 1189.
Go-cart and sulky, Combination. H. A. Williams. No. 1,104,335; July 21; Gaz. vol. 204; p. 821.
Goggles. F. Willson and N. Bourquin. No. 1,103,118; July 14; Gaz. vol. 204; p. 360.
Gold and silver from refractory ores, Recovery of. C. Butters. No. 1,103,346; July 14; Gaz. vol. 204; p. 439.
Gold from sand, Saving. G. H. Hamilton. No. 1,104,112; July 21; Gaz. vol. 204; p. 743.
Gold-leaf mounting. F. W. Rauskolb. No. 1,103,222; July 14; Gaz. vol. 204; p. 396.
Golf-tee. E. C. Smith. No. 1,103,091; July 14; Gaz. vol. 204; p. 348.
Gopher-trap. W. Buck. No. 1,105,586; July 28; Gaz. vol. 204; p. 1306.
Governor. O. D. H. Bentley. No. 1,103,024; July 14; Gaz. vol. 204; p. 326.
Governor, Engine-. C. Reeves. No. 1,103,077; July 14; Gaz. vol. 204; p. 344.
Governor, Explosive-engine. J. L. Schindler. No. 1,102,960; July 7; Gaz. vol. 204; p. 256.
Governor for internal-combustion engines. H. L. Horning. No. 1,104,119; July 21; Gaz. vol. 204; p. 746.
Gown, Maternity-. E. Miles. No. 1,104,437; July 21; Gaz. vol. 204; p. 855.
Grader, Road-. D. W. King. No. 1,102,671; July 7; Gaz. vol. 204; p. 157.
Grading machine, Power cutting. A. F. Preston. No. 1,105,534; July 28; Gaz. vol. 204; p. 1288.
Grading machine, Road-. E. J. Akins. No. 1,103,242; July 14; Gaz. vol. 204; p. 404.
Grain-drill attachment. M. L. Akers. No. 1,104,602; July 21; Gaz. vol. 204; p. 915.
Grain-scourer. J. B. Cornwall. No. 1,104,631; July 21; Gaz. vol. 204; p. 924.
Grain-separators, Automatic feeder for. W. C. Leonard. No. 1,104,122; July 21; Gaz. vol. 204; p. 747.
Gramophone needle or stylus. M. A. Possons. No. 1,103,829; July 14; Gaz. vol. 204; p. 606.
Granular materials, Drying or cooling. E. Bornmann. No. 1,102,714; July 7; Gaz. vol. 204; p. 172.
Grass digger, Quack-. M. Kuefler. No. 1,102,518; July 7; Gaz. vol. 204; p. 103.
Grate-bar. C. R. Wald. No. 1,104,853; July 28; Gaz. vol. 204; p. 1049.
Grate, Collapsible. S. C. H. Dix. No. 1,102,649; July 7; Gaz. vol. 204; p. 151.
Gravel-machine. H. T. Sykes. No. 1,104,576; July 21; Gaz. vol. 204; p. 906.
Grease-cup. C. F. Johnson. No. 1,102,414; July 7; Gaz. vol. 204; p. 68.
Grease-cup. J. O'Connor. No. 1,103,156; July 14; Gaz. vol. 204; p. 373.
Grease-cup. T. O. Organ. No. 1,104,540; July 21; Gaz. vol. 204; p. 894.
Greenhouse construction. M. I. Jacobs. No. 1,103,773; July 14; Gaz. vol. 204; p. 587.
Grinder, Adjustable. F. Ogden. No. 1,103,319; July 14; Gaz. vol. 204; p. 396.
Grinder, Knife-. R. B. Cochran. No. 1,103,941; July 21; Gaz. vol. 204; p. 686.
Grinders, Adjustable head for band-saw. J. P. Hedstrom. No. 1,102,504; July 7; Gaz. vol. 204; p. 98.
Grinders, Head-stock for. G. C. Kimmel. No. 1,102,417; July 7; Gaz. vol. 204; p. 69.
Grinding-machine. K. Kruz. No. 1,102,344; July 7; Gaz. vol. 204; p. 43.
Grinding-machine. C. E. Van Norman. No. 1,102,558; July 7; Gaz. vol. 204; p. 118.
Grinding-machine for band-saws. L. W. Myrick. No. 1,104,698; July 21; Gaz. vol. 204; p. 946.
Grinding-mill-adjusting mechanism. H. W. Spellman and E. Twigg. No. 1,105,380; July 28; Gaz. vol. 204; p. 1236.
Ground-anchor. J. L. Fay. No. 1,103,185; July 14; Gaz. vol. 204; p. 384.
Ground cutter and pulverizer. A. M. Cox. No. 1,103,741; July 14; Gaz. vol. 204; p. 576.
Gun-barrel. T. C. Johnson. No. 1,102,667; July 7; Gaz. vol. 204; p. 156.

Gun-carriage-wheel support. K. Völler and E. Müller. No. 1,104,721; July 21; Gaz. vol. 204; p. 955.
Gutter-hanger. C. W. Whedon. No. 1,105,390; July 28; Gaz. vol. 204; p. 1239.
Habit, Riding-. M. Cowen. No. 1,104,632; July 21; Gaz. vol. 204; p. 924.
Hacksaw-frame. L. M. Fairbanks. No. 1,103,495; July 14; Gaz. vol. 204; p. 487.
Hair-curler. C. Nessler. No. 1,105,595; July 28; Gaz. vol. 204; p. 1309.
Hair, Machine for interlacing curled. F. Maussner. No. 1,104,368; July 21; Gaz. vol. 204; p. 832.
Hair-pin. J. F. Body. No. 1,103,393; July 14; Gaz. vol. 204; p. 452.
Hair-spring regulator. H. Wachtelhausen. No. 1,103,551; July 14; Gaz. vol. 204; p. 507.
Hair-steaming device. T. Grosert and E. Unger. No. 1,103,506; July 14; Gaz. vol. 204; p. 491.
Hame. E. F. Olive. No. 1,103,998; July 21; Gaz. vol. 204; p. 704.
Hame. R. R. Burkhart. No. 1,104,623; July 21; Gaz. vol. 204; p. 921.
Hame-fastener. F. W. Covert. No. 1,102,476; July 7; Gaz. vol. 204; p. 89.
Hammer. J. F. Overcash. No. 1,103,918; July 14; Gaz. vol. 204; p. 636.
Hammer, Claw-. G. W. Renton. No. 1,103,380; July 14; Gaz. vol. 204; p. 448.
Hammer, Power-. J. E. Morrison. No. 1,104,269; July 21; Gaz. vol. 204; p. 797.
Hammer, Power-. J. E. Wilhelm. No. 1,104,946; July 28; Gaz. vol. 204; p. 1082.
Hammock and back-rest therefor, Couch-. I. E. Palmer. No. 1,103,907; July 14; Gaz. vol. 204; p. 632.
Hammock and back-support therefor, Couch-. I. E. Palmer. No. 1,103,906; July 14; Gaz. vol. 204; p. 632.
Hammocks, Combined back-rest and wind-shield for couch-. I. E. Palmer. No. 1,103,908; July 14; Gaz. vol. 204; p. 633.
Hand-bag. E. H. Wuest. No. 1,104,463; July 21; Gaz. vol. 204; p. 865.
Hand-hole cover. W. F. Sellers and H. B. Bradford. No. 1,105,212; July 28; Gaz. vol. 204; p. 1173.
Handle: *See* Saw-handle.
Handle of golf-clubs, polo-sticks, and the like. W. H. Sandford. No. 1,102,441; July 7; Gaz. vol. 204; p. 77.
Handsaw. G. W. Hector. No. 1,102,918; July 7; Gaz. vol. 204; p. 242.
Hanger: *See* Bicycle crank-hanger; Coat-hanger; Door-hanger; Garment-hanger; Gutter-hanger; Hat and coat hanger; Picture-hanger; Trousers-hanger.
Harrow. A. A. Guerne. No. 1,103,284; July 14; Gaz. vol. 204; p. 417.
Harrow. C. N. Campbell. No. 1,105,022; July 28; Gaz. vol. 204; p. 1107.
Harrow, Disk. L. E. Waterman. No. 1,104,748; July 21; Gaz. vol. 204; p. 963.
Harrow-disks, Detachable packer-rim for. R. W. Gilpin and J. B. Romine. No. 1,105,130; July 28; Gaz. vol. 204; p. 1144.
Harvester. J. F. Appleby. No. 1,105,235; July 28; Gaz. vol. 204; p. 1182.
Harvester and binder. H. W. Zahn. No. 1,102,847; July 7; Gaz. vol. 204; p. 218.
Harvester attachment. L. S. Linn. No. 1,105,084; July 28; Gaz. vol. 204; p. 1130.
Harvester, Beet-. H. P. Jensen. No. 1,102,272; July 7; Gaz. vol. 204; p. 18.
Harvester, Pea-. P. Macco. No. 1,105,445; July 28; Gaz. vol. 204; p. 1258.
Harvesting machine, Corn-. W. S. Baird. No. 1,102,227; July 7; Gaz. vol. 204; p. 3.
Harvesting machine, Corn-. G. W. and O. Henderson. No. 1,103,766; July 14; Gaz. vol. 204; p. 584.
Hasp-hook. L. L. Cilley and S. J. Brion. No. 1,102,720; July 7; Gaz. vol. 204; p. 174.
Hat and coat hanger. E. T. McCord. No. 1,102,420; July 7; Gaz. vol. 204; p. 70.
Hat-blocking machine, Steam. O. C. Pendleton. No. 1,102,542; July 7; Gaz. vol. 204; p. 112.
Hat-bodies, Finishing. H. T. Emmons. No. 1,103,183; July 14; Gaz. vol. 204; p. 383.
Hat-pin guard. A. Contes. No. 1,103,899; July 14; Gaz. vol. 204; p. 630.
Hat-pin-point protector. A. Strzenciwilk. No. 1,103,704; July 14; Gaz. vol. 204; p. 565.
Hat, Safety baby-. A. Scaturro. No. 1,104,553; July 21; Gaz. vol. 204; p. 899.
Hat shaping and forming machine. H. L. Stevens. No. 1,103,096; July 14; Gaz. vol. 204; p. 350.
Hat, Tourist's folding. R. Herrmann. No. 1,103,876; July 14; Gaz. vol. 204; p. 622.
Hat, Ventilated. J. E. Smith and W. F. Sult. No. 1,103,012; July 7; Gaz. vol. 204; p. 274.
Hay-fork. J. Heusser. No. 1,103,287; July 14; Gaz. vol. 204; p. 418.
Hay-loader. T. P. Corwin. No. 1,103,942; July 21; Gaz. vol. 204; p. 686.
Hay-press. W. L. Sullivan. No. 1,105,007; July 28; Gaz. vol. 204; p. 1101.
Hay-press, Duplex. W. Y. Free. No. 1,102,983; July 7; Gaz. vol. 204; p. 263.
Head-blocks. Mill-dog for. C. O. Huntington. No. 1,105,328; July 28; Gaz. vol. 204; p. 1216.
Header. R. L. Wilcox. No. 1,104,090; July 21; Gaz. vol. 204; p. 737.
Header device. C. H. Montgomery. No. 1,104,213; July 21; Gaz. vol. 204; p. 779.
Header, Two-row. V. Lauer. No. 1,104,911; July 28; Gaz. vol. 204; p. 1070.
Heading-tool. A. E. Richey. No. 1,103,434; July 14; Gaz. vol. 204; p. 466.
Headlight, Automobile-. B. Isom. No. 1,102,409; July 7; Gaz. vol. 204; p. 66.
Headlight, Automobile-. W. N. Allan. No. 1,103,857; July 14; Gaz. vol. 204; p. 615.
Headlight control. F. E. Bump and S. J. Barkman. No. 1,105,247; July 28; Gaz. vol. 204; p. 1186.
Headlight-turning device, Automatic. J. W. S. Gardner. No. 1,103,755; July 14; Gaz. vol. 204; p. 581.
Headlight-turning mechanism. C. P. Anderson. No. 1,103,338; July 14; Gaz. vol. 204; p. 435.
Heat by means of electric arcs, Generating. I. Rennerfelt. No. 1,103,379; July 14; Gaz. vol. 204; p. 448.
Heat, Conserving. H. H. Dow. No. 1,103,948; July 21; Gaz. vol. 204; p. 689.
Heat-regulating device. A. P. Felsberg. No. 1,103,574; July 14; Gaz. vol. 204; p. 517.
Heater: *See* Automobile-heater; Electric heater; Feed-water heater; Gaseous-fuel heater; Orchard-heater; Preliminary heater; Radiator-heater; Water-heater.
Heater. R. C. Stevens. No. 1,102,452; July 7; Gaz. vol. 204; p. 80.
Heater. A. W. Finlayson. No. 1,103,356; July 14; Gaz. vol. 204; p. 441.
Heating device. H. W. Denhard. No. 1,102,392; July 7; Gaz. vol. 204; p. 59.
Heating system. F. H. Montreuil. No. 1,103,215; July 14; Gaz. vol. 204; p. 395.
Heating system for driers. I. M. Justice. No. 1,105,566; July 28; Gaz. vol. 204; p. 1299.
Heel-attaching machine. J. H. Pope. No. 1,104,826; July 28; Gaz. vol. 204; p. 1040.
Heel-compressing machine. E. Erickson. No. 1,104,177; July 21; Gaz. vol. 204; p. 767.
Heel for boots or shoes, Metallic. J. J. Mulconroy and E. S. Morris. No. 1,103,610; July 14; Gaz. vol. 204; p. 530.
Heel-plate blank. E. Hunold. No. 1,104,192; July 21; Gaz. vol. 204; p. 771.
Heel, Spring-. W. Kovács. No. 1,102,343; July 7; Gaz. vol. 204; p. 43.
Heel-trimming machine. B. F. Mayo. No. 1,104,915; July 28; Gaz. vol. 204; p. 1071.
Heels, Machine for operating on shoe-. E. E. Winkley. No. 1,102,310; July 7; Gaz. vol. 204; p. 31.
Heels, Machine for operating on shoe-. E. E. Winkley. No. 1,102,311; July 7; Gaz. vol. 204; p. 31.
High-frequency generator. R. Goldschmidt. No. 1,104,257; July 21; Gaz. vol. 204; p. 793.
High-tension switch. R. J. M. Danley and H. S. Bolton. No. 1,102,728; July 7; Gaz. vol. 204; p. 176.
Hinge. W. A. Webster. No. 1,102,372; July 7; Gaz. vol. 204; p. 52.
Hinge for bag-frames, Stay-. H. Tueckmantel. No. 1,102,307; July 7; Gaz. vol. 204; p. 30.
Hinge for horizontally-disappearing doors. M. Taussig. No. 1,105,221; July 28; Gaz. vol. 204; p. 1176.
Hinge-leaf, Flexible. J. Barker. No. 1,103,911; July 14; Gaz. vol. 204; p. 634.
Hinge, Spring-. F. M. Swartz. No. 1,102,556; July 7; Gaz. vol. 204; p. 117.
Hinge, Vertically-adjustable. J. H. Moore. No. 1,103,607; July 14; Gaz. vol. 204; p. 529.
Hinges and the like, Safety-sleeve for. J. P. Crown. No. 1,105,186; July 28; Gaz. vol. 204; p. 1164.
Hives, Section-holder for. C. Bachmann. No. 1,103,467; July 14; Gaz. vol. 204; p. 478.
Hog-scalding tank. G. J. Fingerson. No. 1,105,128; July 28; Gaz. vol. 204; p. 1144.
Hoisting-block. S. Lowenstein. No. 1,104,521; July 21; Gaz. vol. 204; p. 887.
Hoisting-conveyance. C. Schlebeler. No. 1,102,550; July 7; Gaz. vol. 204; p. 115.
Hoisting mechanism. E. Y. Moore. No. 1,103,889; July 14; Gaz. vol. 204; p. 627.
Hoists and the like, Load-holding device for. A. Clemens. No. 1,103,038; July 14; Gaz. vol. 204; p. 331.
Holder. J. Moltar. No. 1,103,307; July 14; Gaz. vol. 204; p. 445.
Honey and like purposes, Tool for uncapping. D. H. Lea. No. 1,104,053; July 21; Gaz. vol. 204; p. 724.
Hook: *See* Fish-hook; Garment-hook; Hasp-hook; Picture-hook; Whiffletree-hook.
Hook machines, Bobbin-holder for rotary-. R. K. Hohmann. No. 1,105,197; July 28; Gaz. vol. 204; p. 1167.
Hoop and fastener for silo and like tanks. A. Rasmussen. No. 1,104,134; July 21; Gaz. vol. 204; p. 752.
Hopper. A. R. Havener. No. 1,103,580; July 14; Gaz. vol. 204; p. 519.
Hopper-tally. J. E. Fridgen. No. 1,102,258; July 7; Gaz. vol. 204; p. 12.
Horn, Automatic multiple-note. E. Teste. No. 1,103,705; July 14; Gaz. vol. 204; p. 565.
Horn-controlling mechanism for metallic fastening-machines. M. D. Phelan. No. 1,104,130; July 21; Gaz. vol. 204; p. 750.

Horn, Mechanical. G. C. Dean. No. 1,105,324; July 28; Gaz. vol. 204; p. 1214.
Horn or signaling device. M. R. Hutchison. No. 1,102,586; July 7; Gaz. vol. 204; p. 129.
Horse detacher and controller. E. S. Jones. No. 1,104,049; July 21; Gaz. vol. 204; p. 722.
Horses, Leg-spreader for. T. St. Jean. No. 1,104,843; July 28; Gaz. vol. 204; p. 1046.
Hose, Braided fabric for. H. Z. Cobb. No. 1,104,777; July 28; Gaz. vol. 204; p. 1023.
Hose, Braided fabric for. H. Z. Cobb. No. 1,104,778; July 28; Gaz. vol. 204; p. 1023.
Hose construction. C. K. Huthsing. No. 1,104,508; July 21; Gaz. vol. 204; p. 881.
Hose-coupling. W. J. Bellows. No. 1,104,955; July 28; Gaz. vol. 204; p. 1085.
Hose-supporter. F. A. Rowe. No. 1,102,804; July 7; Gaz. vol. 204; p. 203.
House: *See* Poultry-house.
Housing. E. Clark. No. 1,104,876; July 28; Gaz. vol. 204; p. 1058.
Hub, Demountable wheel-. C. W. Gerhart. No. 1,105,073; July 28; Gaz. vol. 204; p. 1125.
Hub for positively-driven steering-wheels. F. H. Stanard. No. 1,103,702; July 14; Gaz. vol. 204; p. 564.
Husking implement. R. J. Paul. No. 1,105,339; July 28; Gaz. vol. 204; p. 1219.
Hydraulic casing-jack, Automatic. R. W. Graham. No. 1,104,355; July 21; Gaz. vol. 204; p. 828.
Hydraulic classifier. M. P. Kirk. No. 1,102,672; July 7; Gaz. vol. 204; p. 157.
Hydraulic jack for stump-pullers. C. J. Trinkaus. No. 1,102,825; July 7; Gaz. vol. 204; p. 211.
Hydraulic presses and the like, Controlling mechanism for. W. R. Clark. No. 1,103,035; July 14; Gaz. vol. 204; p. 329.
Hydraulic presses and the like, Controlling mechanism for. W. R. Clark. No. 1,103,036; July 14; Gaz. vol. 204; p. 330.
Hydraulic presses and the like, Controlling mechanism for. W. R. Clark. No. 1,103,037; July 14; Gaz. vol. 204; p. 330.
Hydrocarbon-burner. M. H. Dunn. No. 1,102,329; July 7; Gaz. vol. 204; p. 38.
Hydrocarbon-burner. G. H. Hovenden. No. 1,105,079; July 28; Gaz. vol. 204; p. 1128.
Hydrocarbon-motor. R. Huff. No. 1,104,423; July 21; Gaz. vol. 204; p. 850.
Hydrogen and apparatus therefor, Producing. C. Bosch. No. 1,102,716; July 7; Gaz. vol. 204; p. 172.
Ice-creeper. C. M. Cole. No. 1,102,646; July 7; Gaz. vol. 204; p. 150.
Ice-crusher. J. Deininger. No. 1,103,132; July 14; Gaz. vol. 204; p. 364.
Ice-cutting machine. F. Gehrke. No. 1,102,904; July 7; Gaz. vol. 204; p. 236.
Ice-cutting machine. L. M. Macy. No. 1,102,989; July 7; Gaz. vol. 204; p. 265.
Ice-cutting machine. A. Currie. No. 1,104,634; July 21; Gaz. vol. 204; p. 925.
Ice-harvesting machine. E. Lake. No. 1,102,277; July 7; Gaz. vol. 204; p. 20.
Ice, Making. W. S. Osborne. No. 1,104,920; July 28; Gaz. vol. 204; p. 1073.
Igniter. K. D. Camp. No. 1,102,241; July 7; Gaz. vol. 204; p. 7.
Igniter, Make-and-break. G. O. Thompson. No. 1,102,365; July 7; Gaz. vol. 204; p. 49.
Igniter, Sparking. M. E. Winans. No. 1,104,092; July 21; Gaz. vol. 204; p. 738.
Ignition device, Magneto. F. Schröter and F. L. Mädler. No. 1,104,835; July 28; Gaz. vol. 204; p. 1043.
Ignition-dynamo. C. T. Mason. No. 1,105,361; July 28; Gaz. vol. 204; p. 1229.
Ignition system. C. F. Kettering. No. 1,102,593; July 7; Gaz. vol. 204; p. 131.
Illuminating device. G. T. Fielding. No. 1,105,414; July 28; Gaz. vol. 204; p. 1247.
Illusion apparatus. N. H. Clarke. No. 1,103,485; July 14; Gaz. vol. 204; p. 484.
Implement, Hand. C. P. Bilson. No. 1,104,470; July 21; Gaz. vol. 204; p. 867.
Impregnating porous material, Apparatus for. W. J. Frame and H. L. Galloway. No. 1,104,488; July 21; Gaz. vol. 204; p. 874.
Impression or transfer device. C. H. Bright, Jr. No. 1,104,617; July 21; Gaz. vol. 204; p. 919.
Incinerator. P. Golden. No. 1,103,956; July 21; Gaz. vol. 204; p. 691.
Incubator. G. C. Bess. No. 1,105,176; July 28; Gaz. vol. 204; p. 1160.
Incubator and brooder. W. C. Fischer. No. 1,103,189; July 14; Gaz. vol. 204; p. 385.
Index, Card-. M. A. Repelow. No. 1,105,306; July 28; Gaz. vol. 204; p. 1207.
Indicator: *See* Automobile-indicator; Direction-indicator; Electric-current indicator; Smoke-indicator; Speed-indicator; Street-indicator; Telephone-indicator; Valve-indicator
Inflating device. R. Barnfather. No. 1,105,057; July 28; Gaz. vol. 204; p. 1120.
Ink-font. E. E. Angell. No. 1,104,861; July 28; Gaz. vol. 204; p. 1052.
Inking-pad. W. E. Clarke. No. 1,102,721; July 7; Gaz. vol. 204; p. 174.
Insect-catcher. G. O. Walker. No. 1,102,829; July 7; Gaz. vol. 204; p. 213.
Insecticide-holder. M. McKay. No. 1,105,364; July 28; Gaz. vol. 204; p. 1231.
Instep-arch support. J. W. Arrowsmith. No. 1,103,466; July 14; Gaz. vol. 204; p. 478.
Instep-support. J. W. Arrowsmith. No. 1,103,463; July 14; Gaz. vol. 204; p. 477.
Instep-support. J. W. Arrowsmith. No. 1,103,464; July 14; Gaz. vol. 204; p. 477.
Insulating and fastening means for rails, Combined. W. R. Gorrell. No. 1,104,660; July 21; Gaz. vol. 204; p. 934.
Insulating-block. A. E. Goetz. No. 1,105,267; July 28; Gaz. vol. 204; p. 1193.
Insulating composition. J. W. Aylsworth. No. 1,102,633; July 7; Gaz. vol. 204; p. 145.
Insulating-joint. H. P. McBride. No. 1,102,775; July 7; Gaz. vol. 204; p. 194.
Insulator. R. B. Haden. No. 1,102,656; July 7; Gaz. vol. 204; p. 153.
Insulator. E. Seguin. No. 1,104,009; July 21; Gaz. vol. 204; p. 708.
Insulator attachment. J. A. Kephart. No. 1,105,521; July 28; Gaz. vol. 204; p. 1284.
Insulator, Electrical. J. H. Ellis. No. 1,102,252; July 7; Gaz. vol. 204; p. 10.
Intake-manifold. A. C. Bennett. No. 1,103,931; July 21; Gaz. vol. 204; p. 683.
Interlock. C. B. Callow. No. 1,102,318; July 7; Gaz. vol. 204; p. 33.
Internal-combustion engine. F. Fisher. No. 1,102,400; July 7; Gaz. vol. 204; p. 62.
Internal-combustion engine. J. D. Lowe. No. 1,102,675; July 7; Gaz. vol. 204; p. 159.
Internal-combustion engine. F. W. Spacke, D. T. Brownlee, and W. Spacke. No. 1,102,700; July 7; Gaz. vol. 204; p. 167.
Internal-combustion engine. G. Holloway. No. 1,103,047; July 14; Gaz. vol. 204; p. 334.
Internal-combustion engine. L. Scott. No. 1,103,089; July 14; Gaz. vol. 204; p. 347.
Internal-combustion engine. R. A. Reynolds. No. 1,103,223; July 14; Gaz. vol. 204; p. 397.
Internal-combustion engine. W. D. Gale. No. 1,103,282; July 14; Gaz. vol. 204; p. 416.
Internal-combustion engine. W. S. Sutton. No. 1,103,325; July 14; Gaz. vol. 204; p. 431.
Internal-combustion engine. J. E. Cochran. No. 1,103,487; July 14; Gaz. vol. 204; p. 485.
Internal-combustion engine. J. E. Cochran. No. 1,103,488; July 14; Gaz. vol. 204; p. 485.
Internal-combustion engine. J. D. Frank and A. D. Huard. No. 1,103,497; July 14; Gaz. vol. 204; p. 488.
Internal-combustion engine. T. Dixon and P. Grigsby. No. 1,103,571; July 14; Gaz. vol. 204; p. 515.
Internal-combustion engine. J. P. Roberts. No. 1,103,842; July 14; Gaz. vol. 204; p. 610.
Internal-combustion engine. P. W. Noble. No. 1,104,442; July 21; Gaz. vol. 204; p. 856.
Internal-combustion engine. N. E. Crothers. No. 1,104,968; July 28; Gaz. vol. 204; p. 1089.
Internal-combustion engine. C. J. Jager. No. 1,105,142; July 28; Gaz. vol. 204; p. 1148.
Internal-combustion engine. P. Pictet and M. Vernaz. No. 1,105,454; July 28; Gaz. vol. 204; p. 1261.
Internal-combustion engine. M. Vernaz and P. Pictet. No. 1,105,471; July 28; Gaz. vol. 204; p. 1267.
Internal-combustion engine, Four-cycle. T. S. James. No. 1,104,804; July 28; Gaz. vol. 204; p. 1033.
Internal-combustion engine, Multicylinder. S. H. Hart. No. 1,105,426; July 28; Gaz. vol. 204; p. 1251.
Internal-combustion engine, Two-cycle. F. O. Woodland. No. 1,104,596; July 21; Gaz. vol. 204; p. 913.
Internal-combustion motor. E. J. Harrington. No. 1,102,912; July 7; Gaz. vol. 204; p. 239.
Internal-combustion turbine-engine. W. Engles. No. 1,105,500; July 28; Gaz. vol. 204; p. 1276.
Invalid-lifting device. F. S. Root. No. 1,103,436; July 14; Gaz. vol. 204; p. 467.
Invalid-rest. T. Anderson. No. 1,103,730; July 14; Gaz. vol. 204; p. 573.
Iron: *See* Flat-iron; Milliner's iron; Soldering-iron.
Iron and steel articles, Method of and apparatus for tempering. H. Hess. No. 1,103,358; July 14; Gaz. vol. 204; p. 442.
Iron or manganese metal from pure or impure iron or manganese-metal oxids, Manufacturing pure. C. A. Brackelsberg. No. 1,103,258; July 14; Gaz. vol. 204; p. 409.
Iron ores, Briqueting. W. Mathesius. No. 1,104,124; July 21; Gaz. vol. 204; p. 748.
Ironing-machine. C. F. Roberg and A. A. Malmberg. No. 1,105,207; July 28; Gaz. vol. 204; p. 1171.
Irrigating apparatus. C. W. Skinner. No. 1,104,839; July 28; Gaz. vol. 204; p. 1044.
Irrigating system. A. Tregoning. No. 1,104,580; July 21; Gaz. vol. 204; p. 908.
Iso-olefins, Producing. O. Graul. No. 1,102,655; July 7; Gaz. vol. 204; p. 153.
Jack: *See* Floor-jack; Hydraulic jack; Hydraulic casing-jack; Ladder-jack; Lifting-jack; Repair-jack; Shoe-machine jack; Shoemaker's jack; Wagon-jack.
Jar-closure. G. H. Womelsdorf. No. 1,105,391; July 28; Gaz. vol. 204; p. 1240.

Jarring apparatus for packing granular materials. H. Tscberning. No. 1,102,367; July 7; Gaz. vol. 204; p. 50.
Jig. G. H. Elmore and O. H. Bohm. No. 1,102,574; July 7; Gaz. vol. 204; p. 124.
Joint: *See* Corner-joint; Insulating-joint; Rail-joint; Railway-rail joint; Welded joint.
Journal-box cooler. B. Julien. No. 1,102,516; July 7; Gaz. vol. 204; p. 102.
Journal-box-lubricating device. J. M. Lassman. No. 1,104,361; July 21; Gaz. vol. 204; p. 829.
Journal-box, Movable. O. L. Raabe. No. 1,102,801; July 7; Gaz. vol. 204; p. 202.
Jug. C. H. Glazier. No. 1,104,490; July 21; Gaz. vol. 204; p. 875.
Key-fastening device. W. R. Concle. No. 1,104,106; July 21; Gaz. vol. 204; p. 742.
Key for rotary elements. J. C. Duckworth. No. 1,103,403; July 14; Gaz. vol. 204; p. 455.
Key-guide. I. E. Wade. No. 1,105,472; July 28; Gaz. vol. 204; p. 1268.
Keyboard mechanism for line-composing machines. T. S. Homans. No. 1,102,923; July 7; Gaz. vol. 204; p. 243.
Keyhole-guard. F. Berger-Hahnel. No. 1,105,544; July 28; Gaz. vol. 204; p. 1291.
Kiln: *See* Continuous kiln; Dry-kiln; Rotary kiln.
Kiln burner, Clay-. E. Szöcs. No. 1,104,017; July 21; Gaz. vol. 204; p. 711.
Kiln, furnace, &c. H. O. Robinson and C. Steadman. (Reissue.) No. 13,774; July 14; Gaz. vol. 204; p. 644.
Kimono. N. M. Peters. No. 1,104,445; July 21; Gaz. vol. 204; p. 858.
Kinematograph apparatus, Electric control for. W. H. Anderson. No. 1,103,858; July 14; Gaz. vol. 204; p. 616.
Kinematographic apparatus. M. Smith. No. 1,105,163; July 28; Gaz. vol. 204; p. 1155.
Kinematographic film, Colored. S. Cocanari. No. 1,102,878; July 7; Gaz. vol. 204; p. 228.
Kinetoscope-shutter-setting device. J. A. Le Roy. No. 1,102,767; July 7; Gaz. vol. 204; p. 190.
Kitchen, lavatory, and laundry appliance, Sanitary. W. C. James. No. 1,102,411; July 7; Gaz. vol. 204; p. 67.
Kite. E. Niehoff. No. 1,103,817; July 14; Gaz. vol. 204; p. 602.
Kite. W. A. Bochau. No. 1,105,058; July 28; Gaz. vol. 204; p. 1121.
Kneading machine, Dough-. J. W. V. Mason. No. 1,104,814; July 28; Gaz. vol. 204; p. 1036.
Knife: *See* Pocket-knife.
Knife. A. J. Jacques. No. 1,105,080; July 28; Gaz. vol. 204; p. 1129.
Knitted collar for vests and coats. F. G. Curtis. No. 1,105,407; July 28; Gaz. vol. 204; p. 1244.
Knitted fabric. J. Kellner and S. Worms. No. 1,103,589; July 14; Gaz. vol. 204; p. 522.
Knitting-machine cutting mechanism. J. H. Adamee. No. 1,103,922; July 14; Gaz. vol. 204; p. 637.
Knob, Door-. W. C. Harlow and H. L. Towle. No. 1,103,963; July 21; Gaz. vol. 204; p. 694.
Knockdown box. G. L. Morrison. No. 1,104,821; July 28; Gaz. vol. 204; p. 1038.
Knockdown frame. H. H. Padgett and L. L. Bookout. No. 1,103,823; July 14; Gaz. vol. 204; p. 603.
Knotting mechanisms, Wear-compensating means for. W. Parliament. No. 1,104,999; July 28; Gaz. vol. 204; p. 1099.
Label cutting and folding machine. A. Rosenthal. No. 1,104,316; July 21; Gaz. vol. 204; p. 813.
Labeling-machine. E. P. Wetmore. No. 1,102,832; July 7; Gaz. vol. 204; p. 214.
Lace fastener, Shoe-. C. Taketoshi. No. 1,105,541; July 28; Gaz. vol. 204; p. 1290.
Ladder, Convertible. R. G. Ping. No. 1,102,682; July 7; Gaz. vol. 204; p. 160.
Ladder-jack. D. F. McHale. No. 1,104,996; July 28; Gaz. vol. 204; p. 1098.
Ladder, Step-. W. P. Newman and H. P. Eaton. No. 1,102,428; July 7; Gaz. vol. 204; p. 73.
Ladle, Charging-. D. Brennan. No. 1,102,236; July 7; Gaz. vol. 204; p. 6.
Lamp. D. D. King. No. 1,104,264; July 21; Gaz. vol. 204; p. 795.
Lamp-bracket. H. L. Erlandsson. No. 1,104,352; July 21; Gaz. vol. 204; p. 827.
Lamp-burner attachment. C. P. Smith. No. 1,103,696; July 14; Gaz. vol. 204; p. 562.
Lamp, Dirigible. J. A. Trefzer and C. S. Owen. No. 1,104,021; July 21; Gaz. vol. 204; p. 712.
Lamp, Electric Incandescent. A. S. Knight. No. 1,104,807; July 28; Gaz. vol. 204; p. 1033.
Lamp, Flaming-arc. S. H. Blake. No. 1,104,339; July 21; Gaz. vol. 204; p. 822.
Lamp, Inverted-burner gas-. L. B. London. No. 1,103,365; July 14; Gaz. vol. 204; p. 444.
Lamp, Inverted incandescent. P. Davies. No. 1,105,259; July 28; Gaz. vol. 204; p. 1190.
Lamp lighting and extinguishing device, Gas-. J. and G. Keith. No. 1,103,517; July 14; Gaz. vol. 204; p. 494.
Lamp-operating mechanism. J. E. Gossman. No. 1,105,030; July 28; Gaz. vol. 204; p. 1110.
Lamp, Photographic-dark-room. D. F. Charlton. No. 1,104,245; July 21; Gaz. vol. 204; p. 789.
Lamp, Safety-. V. Szamier. No. 1,104,941; July 28; Gaz. vol. 204; p. 1080.
Lamp-shade, Concentrating. C. H. Townsend. No. 1,104,330; July 21; Gaz. vol. 204; p. 819.
Lamp, Signal-. F. D. Spear. No. 1,103,546; July 14; Gaz. vol. 204; p. 505.
Lamp socket, Electric-. G. S. Joyce. No. 1,102,757; July 7; Gaz. vol. 204; p. 187.
Lamp socket, Incandescent-electric-. R. B. Benjamin. No. 1,102,638; July 7; Gaz. vol. 204; p. 147.
Lamp socket, Incandescent-electric-. A. C. Recker. No. 1,104,931; July 28; Gaz. vol. 204; p. 1077.
Lamp-socket-locking device. G. I. Silbert. No. 1,102,697; July 7; Gaz. vol. 204; p. 166.
Lamp-socket shell. H. E. Reeve. No. 1,105,305; July 28; Gaz. vol. 204; p. 1206.
Lamps and tying the same, Mantle for inverted incandescent gas-. E. L. Knoedler. No. 1,104,515; July 21; Gaz. vol. 204; p. 884.
Lamps, Attachment for use with incandescent gas-. T. S. Browne. No. 1,105,246; July 28; Gaz. vol. 204; p. 1186.
Lamps, Vacuum-cup-releasing device for. W. P. Dunham. No. 1,104,252; July 21; Gaz. vol. 204; p. 791.
Land-roller. L. W. Beer. No. 1,103,929; July 21; Gaz. vol. 204; p. 682.
Land-roller, Water-ballast. J. Hist. No. 1,104,502; July 21; Gaz. vol. 204; p. 879.
Lantern. J. Barton, J. Melbourn, F. Needham, and J. G. Green. No. 1,102,854; July 7; Gaz. vol. 204; p. 220.
Lantern. C. E. Mockbee. No. 1,103,527; July 14; Gaz. vol 204; p. 498.
Lantern-base. J. Abetz. No. 1,103,014; July 7; Gaz. vol. 204; p. 275.
Last, Shoe-. F. E. Benton. No. 1,103,735; July 14; Gaz. vol. 204; p. 574.
Last-turning machine. E. A. Eastman. No. 1,104,040; July 21; Gaz. vol. 204; p. 719.
Lasts, Making. H. A. Ballard. No. 1,104,743; July 21; Gaz. vol. 204; p. 962.
Lasting and sewing machine. J. Cavanagh, Jr. No. 1,104,875; July 28; Gaz. vol. 204; p. 1057.
Lasting-machine. T. H. McAuliffe. No. 1,108,979; July 21; Gaz. vol. 204; p. 699.
Latch. P. J. Wesolowski. No. 1,104,460; July 21; Gaz. vol. 204; p. 863.
Latch. J. E. Minner. No. 1,105,527; July 28; Gaz. vol. 204; p. 1286.
Latch and lock, Door. J. Bransford. No. 1,102,567; July 7; Gaz. vol. 204; p. 122.
Latch, Automatic door-. L. J. Lindsay. No. 1,103,594; July 14; Gaz. vol. 204; p. 524.
Latch, Door-. B. F. Yates and F. W. Cohen. No. 1,102,313; July 7; Gaz. vol. 204; p. 32.
Latch-releasing device, Door-. W. M. Simmons. No. 1,104,076; July 21; Gaz. vol. 204; p. 733.
Lath-fastener. C. Collins. No. 1,105,183; July 28; Gaz. vol. 204; p. 1162.
Lathe spindle and gear bearing. J. R. Back. No. 1,103,645; July 14; Gaz. vol. 204; p. 544.
Lathes, Gear-cutter attachment for. A. Bergeron. No. 1,103,125; July 14; Gaz. vol. 204; p. 362.
Laundry, kitchen, and pantry appliance, Combined. W. C. James. No. 1,102,412; July 7; Gaz. vol. 204; p. 68.
Lead oxid, Apparatus for the manufacture of. W. Eckford. No. 1,104,786; July 28; Gaz. vol. 204; p. 1025.
Leather-finishing machine. W. B. Turner. No. 1,102,368; July 7; Gaz. vol. 204; p. 51.
Leather-folding machine. A. L. Lilley. No. 1,103,972; July 21; Gaz. vol. 204; p. 696.
Leather-marking machine. P. J. Lapham. No. 1,103,520; July 14; Gaz. vol. 204; p. 496.
Leather pieces, Machine for grade-marking died-out. E. P. Nichols. No. 1,104,378; July 21; Gaz. vol. 204; p. 835.
Ledger, Triple-leaf. T. N. Winslow. No. 1,103,554; July 14; Gaz. vol. 204; p. 508.
Leg, Artificial. A. M. Opsal. No. 1,102,289; July 7; Gaz. vol. 204; p. 24.
Leg, Artificial. S. Martinchek. No. 1,102,774; July 7; Gaz. vol. 204; p. 194.
Leg, Artificial. L. O. Conner and G. R. Hale. No. 1,104,413; July 21; Gaz. vol. 204; p. 847.
Lemon-juice extractor. S. Tsuru. No. 1,105,114; July 28; Gaz. vol. 204; p. 1139.
Letter-box and collecting-pouch. S. A. Kiss. No. 1,102,760; July 7; Gaz. vol. 204; p. 188.
Letter-carrier's delivery-receptacle. J. Lovas and S. Sera. No. 1,104,520; July 21; Gaz. vol. 204; p. 886.
Level. S. M. Collins. No. 1,105,493; July 28; Gaz. vol. 204; p. 1274.
Leveling-machine. B. F. Mayo. No. 1,104,206; July 21; Gaz. vol. 204; p. 775.
Lever-locking device. R. Reinke. No. 1,102,802; July 7; Gaz. vol. 204; p. 202.
Lever mechanism, Hand-. C. T. Ray. No. 1,105,596; July 28; Gaz. vol. 204; p. 1310.
License-number illuminator. D. Gentile. No. 1,103,873; July 14; Gaz. vol. 204; p. 621.
Life-preserver. D. Lyman. No. 1,102,772; July 7; Gaz. vol. 204; p. 192.
Life-preserver. J. M. Pineau. No. 1,104,382; July 21; Gaz. vol. 204; p. 837.
Life-preservers, Propelling attachment for. J. G. L. Anderson. No. 1,103,729; July 14; Gaz. vol. 204; p. 572.
Lifter: *See* Plate-lifter; Stove-lid lifter; Water-jet lifter.

Lifting device. J. Babitzky. No. 1,104,338; July 21; Gaz. vol. 204; p. 822.
Lifting-jack. R. C. Patton. No. 1,102,792; July 7; Gaz. vol. 204; p. 199.
Lifting-jack. C. H. Sutton. No. 1,104,328; July 21; Gaz. vol. 204; p. 818.
Ligature-holder. G. M. Stratton. No. 1,103,227; July 14; Gaz. vol. 204; p. 398.
Light: *See* Automobile-light.
Light-generators, Support for axle-driven. C. F. Frede. No. 1,105,265; July 28; Gaz. vol. 204; p. 1192.
Lighting device. E. J. Murphy. No. 1,103,611; July 14; Gaz. vol. 204; p. 530.
Lightning-arrester. G. P. A. Damschen. No. 1,104,038; July 21; Gaz. vol. 204; p. 718.
Lightning-arrester. F. S. Chapman. No. 1,104,960; July 28; Gaz. vol. 204; p. 1087.
Lightning-arrester. P. H. Chapman and H. M. Pingen. No. 1,104,961; July 28; Gaz. vol. 204; p. 1087.
Lightning-arrester, Vacuum. F. S. Chapman. No. 1,104,959; July 28; Gaz. vol. 204; p. 1086.
Lightning-arresters, Re-forming of films of electrolytic. J. W. Brown. No. 1,104,620; July 21; Gaz. vol. 204; p. 920.
Limb, Artificial. J. E. Hanger, Jr. No. 1,103,960; July 21; Gaz. vol. 204; p. 693.
Limousine-body, Detachable. F. J. McAvoy. No. 1,103,599; July 14; Gaz. vol. 204; p. 526.
Line conductors, Protective casing for. T. E. Murray. No. 1,103,984; July 21; Gaz. vol. 204; p. 700.
Line or cable clamp. F. P. Kobert. No. 1,103,056; July 14; Gaz. vol. 204; p. 337.
Link-and-lever connection. J. F. McCanna. No. 1,102,776; July 7; Gaz. vol. 204; p. 194.
Linotype-machines, Matrix for. J. Mayer and C. Muehleisen. No. 1,105,204; July 28; Gaz. vol. 204; p. 1170.
Liquid-elevating apparatus. A. Priestman. No. 1,102,684; July 7; Gaz. vol. 204; p. 161.
Liquid-fuel-burning apparatus. W. E. Oakley. No. 1,103,535; July 14; Gaz. vol. 204; p. 501.
Liquid-fuel-burning apparatus. W. E. Oakley and W. A. Pentecost. No. 1,103,617; July 14; Gaz. vol. 204; p. 533.
Liquid heating and vaporizing device. C. L. Preinsler. No. 1,103,830; July 14; Gaz. vol. 204; p. 606.
Liquids, Elevating. A. Priestman. No. 1,102,683; July 7; Gaz. vol. 204; p. 161.
Liquids, Heating and evaporating. O. K. Zwingenberger. No. 1,104,285; July 21; Gaz. vol. 204; p. 803.
Liquids, Safety-closure for containers of inflammable. M. Jasper. No. 1,105,276; July 28; Gaz. vol. 204; p. 1196.
Load-transferring apparatus. T. S. Miller. No. 1,102,534; July 7; Gaz. vol. 204; p. 109.
Loading and unloading device. J. Johnson. No. 1,103,209; July 14; Gaz. vol. 204; p. 393.
Lock: *See* Bolt-lock; Clutch-pedal lock; Coin-controlled lock; Coupling-head safety-lock; Cylinder-lock; Elevator-door lock; Engine-hood lock; Mail-bag lock; Mail-box lock; Nut-lock; Padlock; Permutation-lock; Safety-lock; Sash-lock; Seal-lock; Table-lock; Time-lock; Vehicle coupling-lock; Vehicle door-lock; Window-lock.
Lock. A. Taraszir. No. 1,102,363; July 7; Gaz. vol. 204; p. 49.
Lock. E. N. Heard. No. 1,102,660; July 7; Gaz. vol. 204; p. 154.
Lock. R. G. McMahon. No. 1,103,798; July 14; Gaz. vol. 204; p. 596.
Lock. W. S. Ball. No. 1,103,897; July 14; Gaz. vol. 204; p. 629.
Lock. G. H. Lamb. No. 1,104,052; July 21; Gaz. vol. 204; p. 724.
Lock. W. H. Hale. No. 1,104,493; July 21; Gaz. vol. 204; p. 876.
Lock. E. L. Williams. No. 1,105,052; July 28; Gaz. vol. 204; p. 1118.
Lock. J. Monzaney. No. 1,105,093; July 28; Gaz. vol. 204; p. 1133.
Lock. H. G. Voight. No. 1,105,167; July 28; Gaz. vol. 204; p. 1157.
Lock and latch. G. N. Mason. No. 1,105,152; July 28; Gaz. vol. 204; p. 1151.
Lock-mortises, Tool for boring. J. Montgomery. No. 1,103,069; July 14; Gaz. vol. 204; p. 342.
Lock-washer. J. W. Albin. No. 1,103,337; July 14; Gaz. vol. 204; p. 435.
Locks, Alarm for protecting permutation-. A. B. Colby. No. 1,102,571; July 7; Gaz. vol. 204; p. 123.
Locking device. L. M. Width. No. 1,102,838; July 7; Gaz. vol. 204; p. 216.
Locomotive and car wheel replacer. H. K. Kinney. No. 1,104,676; July 21; Gaz. vol. 204; p. 939.
Locomotive ash-pan. F. A. Mayer. No. 1,103,424; July 14; Gaz. vol. 204; p. 463.
Locomotive, Electric. J. L. Davis. (Reissue.) No. 13,777; July 21; Gaz. vol. 204; p. 972.
Locomotives and tenders, Connecting-conduit for. J. E. Muhlfeld. No. 1,102,535; July 7; Gaz. vol. 204; p. 109.
Locomotives, Apparatus for automatically indicating the position of signals on. M. Manthorpe and A. I. Hansen. No. 1,104,205; July 21; Gaz. vol. 204; p. 775.
Logging-bunk. J. R. Stinson. No. 1,104,391; July 21; Gaz. vol. 204; p. 839.
Logging-car. B. Magor. No. 1,103,975; July 21; Gaz. vol. 204; p. 697.
Logging-engine. C. Evers and J. H. Dickinson. No. 1,103,135; July 14; Gaz. vol. 204; p. 365.
Loom attachment. I. Coulombe. No. 1,103,661; July 14; Gaz. vol. 204; p. 549.
Loom for weaving tufted or chenille fabrics or carpets. F. A. Whitmore. No. 1,102,835; July 7; Gaz. vol. 204; p. 215.
Loom let-off. A. E. Chernack. No. 1,105,587; July 28; Gaz. vol. 204; p. 1306.
Loom let-off. A. E. Chernack. No. 1,105,588; July 28; Gaz. vol. 204; p. 1307.
Loom let-off mechanism. W. J. Lutton. No. 1,105,335; July 28; Gaz. vol. 204; p. 1218.
Loom pattern-chain. J. Kay. No. 1,102,669; July 7; Gaz. vol. 204; p. 157.
Loom shuttle-adjusting mechanism, Weft-changing-. C. G. Lavigne. No. 1,105,146; July 28; Gaz. vol. 204; p. 1149.
Loom shuttle tension. E. S. Stimpson. No. 1,103,097; July 14; Gaz. vol. 204; p. 351.
Loom weft stop-motion. E. Stahl. No. 1,102,610; July 7; Gaz. vol. 204; p. 137.
Looms, Thread-cutting mechanism for weft-replenishing. E. Egli. No. 1,104,880; July 28; Gaz. vol. 204; p. 1059.
Looms, Thread-severing mechanism for automatic. A. G. Koechlin. No. 1,104,303; July 21; Gaz. vol. 204; p. 808.
Looms with fixed reeds, Automatic stopping device for power-. J. J. Zubler. No. 1,104,951; July 28; Gaz. vol. 204; p. 1084.
Lubricant-cup, Fluid-pressure-operated. F. Fleming. No. 1,104,178; July 21; Gaz. vol. 204; p. 767.
Lubricating device. F. Greiner. No. 1,102,263; July 7; Gaz. vol. 204; p. 14.
Lubricating device. J. D. Jarrijou. No. 1,104,901; July 28; Gaz. vol. 204; p. 1067.
Lubricating mechanism. R. R. Lapointe. No. 1,103,301; July 14; Gaz. vol. 204; p. 422.
Lubricating-wheel. F. L. McCarty. No. 1,105,033; July 28; Gaz. vol. 204; p. 1111.
Lubricator: *See* Automatic-feed lubricator; Elevator-guide lubricator; Rope or cable lubricator; Wheel-flange lubricator.
Lubricator-glass shield. F. G. Dunbar. No. 1,104,974; July 28; Gaz. vol. 204; p. 1092.
Luggage-carrier. E. A. Howell. No. 1,105,435; July 28; Gaz. vol. 204; p. 1254.
Lumber-guide. E. Morris. No. 1,104,735; July 21; Gaz. vol. 204; p. 960.
Machine unloader, Centrifugal- E D Mackintosh No. 1,102,530; July 7; Gaz. vol. 204; p. 108.
Machinery stop mechanism. D. M. Cooper. No. 1,102,880; July 7; Gaz. vol. 204; p. 229.
Magnesite and dolomite, Making sintered. E. Pohl. No. 1,103,375; July 14; Gaz. vol. 204; p. 447.
Magnetic separator. H. J. H. Nathorst. No. 1,105,293; July 28; Gaz. vol. 204; p. 1202.
Magneto. E. Hähnlen. No. 1,104,795; July 28; Gaz. vol. 204; p. 1029.
Magneto-mounting. E. W. Brackett. No. 1,102,385; July 7; Gaz. vol. 204; p. 57.
Mail and the like receptacle. L. T. Steward. No. 1,104,153; July 21; Gaz. vol. 204; p. 757.
Mail-bag lock. B. L. Andrus. No. 1,103,015; July 7; Gaz. vol. 204; p. 275.
Mail-box. N. Williams. No. 1,103,166; July 14; Gaz. vol. 204; p. 377.
Mail-box lock. S. Squiller. No. 1,103,701; July 14; Gaz. vol. 204; p. 564.
Mail-box signal. G. W. Carver. No. 1,102,977; July 7; Gaz. vol. 204; p. 261.
Mail-carrying device. J. T. McCollum. No. 1,104,916; July 28; Gaz. vol. 204; p. 1072.
Mail delivery and receiving apparatus. J. R. Carter. No. 1,105,181; July 28; Gaz. vol. 204; p. 1161.
Mail-holding device. F. C. Giesler. No. 1,104,883; July 28; Gaz. vol. 204; p. 1060.
Mailing-machine. J. Tomlinson. No. 1,105,314; July 28; Gaz. vol. 204; p. 1210.
Malt extracts, Removing the bitter taste from. R. Weyermann. No. 1,105,119; July 28; Gaz. vol. 204; p. 1141.
Malting-drums, Apparatus for producing and controlling moistened air in. L. Topf. No. 1,104,717; July 21; Gaz. vol. 204; p. 954.
Manhole-cover. J. McKeon. No. 1,102,422; July 7; Gaz. vol. 204; p. 71.
Mantel. W. C. Fischer. No. 1,102,897; July 7; Gaz. vol. 204; p. 234.
Manure-spreader. M. J. Vingum. No. 1,102,462; July 7; Gaz. vol. 204; p. 85.
Manure-stuff and making same, Non-hygroscopic. H. Stoltzenberg. No. 1,104,326; July 21; Gaz. vol. 204; p. 817.
Marble slabs, Device for handling. C. H. Griffin. No. 1,103,409; July 14; Gaz. vol. 204; p. 458.
Marker, Land-. E. S. Copeland. No. 1,104,630; July 21; Gaz. vol. 204; p. 923.
Marker or clip. C. S. Carter. No. 1,103,031; July 14; Gaz. vol. 204; p. 328.
Marking-cage. J. Bruk. No. 1,103,172; July 14; Gaz. vol. 204; p. 379.
Massage instrument, Electric. J. E. Gibbs. No. 1,103,669; July 14; Gaz. vol. 204; p. 553.
Massage-vibrator. F. C. Dorment. No. 1,102,885; July 7; Gaz. vol. 204; p. 231.

Mat: *See* Door-mat.
Match-discharging apparatus. H. A. Gsell. No. 1,102,498; July 7; Gaz. vol. 204; p. 96.
Match-igniting device. J. E. Neahr. No. 1,104,699; July 21; Gaz. vol. 204; p. 946.
Match-lighter. R. P. Hart and T. W. Kirkman. No. 1,105,139; July 28; Gaz. vol. 204; p. 1147.
Match receptacle, Burnt-. S. Schwarzkopf. No. 1,104,450; July 21; Gaz. vol. 204; p. 860.
Mattress and spring seating-surface, Spring-. J. E. Marshall. No. 1,102,280; July 7; Gaz. vol. 204; p. 20.
Mattress, Spring-. R. Bradshaw. No. 1,103,028; July 14; Gaz. vol. 204; p. 327.
Measure. A. J. Jensen. No. 1,105,439; July 28; Gaz. vol. 204; p. 1255.
Measures, Anchoring device for tape-. A. A. Richardson. No. 1,102,436; July 7; Gaz. vol. 204; p. 76.
Measuring device. J. W. Loughlin. No. 1,102,771; July 7; Gaz. vol. 204; p. 192.
Measuring device, Automatic liquid-. F. Schorik and F. F. Marshall. No. 1,102,806; July 7; Gaz. vol. 204; p. 204.
Measuring instrument, Electrical. R. P. Brown. No. 1,105,481; July 28; Gaz. vol. 204; p. 1270.
Measuring instrument, Tree-. C. A. Lyford and E. L. Kinman. No. 1,105,149; July 28; Gaz. vol. 204; p. 1150.
Measuring instruments, Bearing for. M. Helm. No. 1,104,189; July 21; Gaz. vol. 204; p. 770.
Measuring-machine. J. Alanko and T. Toivonen. No. 1,103,856; July 14; Gaz. vol. 204; p. 615.
Measuring the heating value of fuels, Method and device for. H. Junkers. No. 1,103,915; July 14; Gaz. vol. 204; p. 635.
Meat-block, Revolving. F. Pfleiderer, Jr. No. 1,105,531; July 28; Gaz. vol. 204; p. 1287.
Mechanical drier. W. E. Prindle. No. 1,104,929; July 28; Gaz. vol. 204; p. 1076.
Mechanical movement. W. W. Wilson. No. 1,104,462; July 21; Gaz. vol. 204; p. 864.
Mechanical movement. C. W. Gift. No. 1,105,418; July 28; Gaz. vol. 204; p. 1249.
Medicinal tablets, Apparatus for forming. H. E. Whitaker and J. M. MacDonald. No. 1,102,374; July 7; Gaz. vol. 204; p. 52.
Metal, Apparatus for manufacturing expanded. N. E. Clark. No. 1,103,033; July 14; Gaz. vol. 204; p. 329.
Metal cutting and bending machine. N. H. Davis. No. 1,102,327; July 7; Gaz. vol. 204; p. 37.
Metal fabric. N. E. Clark. No. 1,104,475; July 21; Gaz. vol. 204; p. 869.
Metal fabric. N. E. Clark. No. 1,104,476; July 21; Gaz. vol. 204; p. 869.
Metal into core-molds, Means for pouring. F. E. Cudell. No. 1,103,039; July 14; Gaz. vol. 204; p. 331.
Metal, Machine for making expanded. N. E. Clark. No. 1,103,034; July 14; Gaz. vol. 204; p. 329.
Metal-pickling. T. R. Davidson. No. 1,104,107; July 21; Gaz. vol. 204; p. 742.
Metal-reducing machine. B. M. W. Hanson. No. 1,104,988; July 28; Gaz. vol. 204; p. 1096.
Metal-strap ends, Tool for joining. E. E. Flora and J. F. Murphy. No. 1,105,191; July 28; Gaz. vol. 204; p. 1165.
Metal-working. N. E. Clark. No. 1,104,477; July 21; Gaz. vol. 204; p. 870.
Metal-working machine. O. A. Smith. No. 1,104,147; July 21; Gaz. vol. 204; p. 755.
Metallic tie. L. G. Earl. No. 1,105,325; July 28; Gaz. vol. 204; p. 1214.
Metallurgical furnace. J. E. Greenawalt. No. 1,103,196; July 14; Gaz. vol. 204; p. 388.
Metallurgical method. A. J. Rossi. No. 1,104,317; July 21; Gaz. vol. 204; p. 813.
Meter: *See* Flow-meter; Fluid-meter; Registering-meter; Water-meter.
Meter. C. H. Taylor. No. 1,103,384; July 14; Gaz. vol. 204; p. 449.
Meter. G. Mason. No. 1,104,688; July 21; Gaz. vol. 204; p. 943.
Meter integrating and recording apparatus. F. N. Connet. No. 1,102,723; July 7; Gaz. vol. 204; p. 174.
Meter-tester, Volumetric. J. F. Kidder. No. 1,103,882; July 14; Gaz. vol. 204; p. 624.
Meters, Bearing for electric. P. Elbig. No. 1,104,176; July 21; Gaz. vol. 204; p. 766.
Micrometer-head. L. Cordier. No. 1,105,549; July 28; Gaz. vol. 204; p. 1293.
Milk product and making the same, Soy-. L. J. Monahan and C. J. Pope. No. 1,104,376; July 21; Gaz. vol. 204; p. 835.
Milker, Cow-. K. A. Tervo. No. 1,105,468; July 28; Gaz. vol. 204; p. 1266.
Milking-machine. K. I. Lindström. No. 1,103,974; July 21; Gaz. vol. 204; p. 697.
Milking vessel, Sanitary. I. E. Bradshaw. No. 1,104,773; July 28; Gaz. vol. 204; p. 1022.
Mill: *See* Chilian mill; Crushing-mill; Pulverizing-mill; Sawmill; Windmill.
Mill rolls, Re-covering cotton-. J. B. Hudson. No. 1,103,772; July 14; Gaz. vol. 204; p. 587.
Milling-machine-cutter coupling. J. Goetz. No. 1,104,044; July 21; Gaz. vol. 204; p. 721.
Milliner's iron. A. J. Ellau. No. 1,102,399; July 7; Gaz. vol. 204; p. 62.
Mine explosions, Apparatus for localizing the effect of. J. F. Balfour. No. 1,102,228; July 7; Gaz. vol. 204; p. 3.
Mines, Mooring apparatus for submarine. F. A. H. Harlé. No. 1,103,510; July 14; Gaz. vol. 204; p. 492.
Mines, Portable signal apparatus for. J. W. Paul. No. 1,102,793; July 7; Gaz. vol. 204; p. 199.
Miner's auger. J. Underation. No. 1,104,231; July 21; Gaz. vol. 204; p. 784.
Mining-cage safety apparatus. S. W. Richardson and W. Staveley. No. 1,103,841; July 14; Gaz. vol. 204; p. 609.
Mining-machine strainer. A. E. Maher. No. 1,103,306; July 14; Gaz. vol. 204; p. 424.
Minerals and extracting metal, Treatment of. B. Junquera. No. 1,102,339; July 7; Gaz. vol. 204; p. 41.
Mirror, Hat-. J. R. Bett. No. 1,104,608; July 21; Gaz. vol. 204; p. 916.
Mirror, Toilet-. J. A. Olbon. No. 1,105,039; July 28; Gaz. vol. 204; p. 1113.
Mixer: *See* Cake-mixer; Coffee and tea mixer; Concrete-mixer.
Mixing-machine. A. A. Merrill. No. 1,102,348; July 7; Gaz. vol. 204; p. 44.
Mixing-machine. B. B. Farnham. No. 1,105,555; July 28; Gaz. vol. 204; p. 1295.
Mixtures containing nitrids, Purification of. C. Bosch and A. Mittasch. No. 1,102,715; July 7; Gaz. vol. 204; p. 172.
Moccasin. T. Luzenski. No. 1,102,279; July 7; Gaz. vol. 204; p. 20.
Moistening apparatus, Yarn-. V. E. Mertz. No. 1,103,806; July 14; Gaz. vol. 204; p. 599.
Moisture-proof twin socket. R. B. Benjamin. No. 1,102,640; July 7; Gaz. vol. 204; p. 148.
Mold: *See* Concrete-pipe mold; Cushion-mold; Fence-post mold; Wall-mold.
Mold. W. W. Doolittle. No. 1,104,971; July 28; Gaz. vol. 204; p. 1090.
Molder's-flask hinge. W. J. Doyle. No. 1,102,573; July 7; Gaz. vol. 204; p. 124.
Molding-flask. H. E. Thompson. No. 1,104,085; July 21; Gaz. vol. 204; p. 735.
Molding-machine. E. A. Pridmore. No. 1,102,606; July 7; Gaz. vol. 204; p. 135.
Molding-machine. T. Frischmann. No. 1,103,281; July 14; Gaz. vol. 204; p. 416.
Molding-machine. H. Tscherning. No. 1,103,454; July 14; Gaz. vol. 204; p. 473.
Monorailway. T. C. Spelling. No. 1,105,540; July 28; Gaz. vol. 204; p. 1290.
Monorailway system. W. D. Valentine. No. 1,102,615; July 7; Gaz. vol. 204; p. 139.
Mop. E. Fries. No. 1,104,979; July 28; Gaz. vol. 204; p. 1093.
Mop, Fountain dust-. C. F. Roberts. No. 1,102,439; July 7; Gaz. vol. 204; p. 76.
Mop-head. B. P. Pollock. No. 1,105,533; July 28; Gaz. vol. 204; p. 1288.
Mop-holder. R. E. and G. R. Andrews. No. 1,102,849; July 7; Gaz. vol. 204; p. 219.
Mortising-machine. D. C. Niemi. No. 1,102,678; July 7; Gaz. vol. 204; p. 160.
Motor: *See* Current-motor; Electric motor; Hydrocarbon-motor; Internal-combustion motor; Pipe-thermostatic motor; Rotary motor; Thermal motor; Tide-motor.
Motor. M. M. Barnes. No. 1,102,636; July 7; Gaz. vol. 204; p. 146.
Motor. F. Miller. No. 1,103,681; July 14; Gaz. vol. 204; p. 557.
Motor control. B. Borland. No. 1,103,027; July 14; Gaz. vol. 204; p. 327.
Motor control, Alternating-current-. D. L. Lindquist. No. 1,102,521; July 7; Gaz. vol. 204; p. 105.
Motor-control device. H. S. Valentine. No. 1,102,459; July 7; Gaz. vol. 204; p. 84.
Motor-control system. L. Fleischman. No. 1,102,488; July 7; Gaz. vol. 204; p. 93.
Motor-control system. G. Dunn. No. 1,104,785; July 28; Gaz. vol. 204; p. 1025.
Motor-controller. P. H. Zimmer. No. 1,102,315; July 7; Gaz. vol. 204; p. 82.
Motor-controller. C. E. Hyatt. No. 1,102,337; July 7; Gaz. vol. 204; p. 41.
Motor-controller. A. J. Horton. No. 1,104,800; July 28; Gaz. vol. 204; p. 1031.
Motor controller, Electric-. H. E. Frost. No. 1,103,954; July 21; Gaz. vol. 204; p. 691.
Motor-controlling apparatus. E. L. Gale, Sr. No. 1,102,491; July 7; Gaz. vol. 204; p. 94.
Motor gearing and starter connections, Casing for. M. L. Jenkins. No. 1,102,338; July 7; Gaz. vol. 204; p. 41.
Motor governing device, Explosion or combustion. C. A. and O. W. Hult. No. 1,103,290; July 14; Gaz. vol. 204; p. 418.
Motor-locking means, Internal-combustion-. C. W. Obert. No. 1,105,296; July 28; Gaz. vol. 204; p. 1203.
Motor-lubricating system. W. L. Marr. No. 1,104,057; July 21; Gaz. vol. 204; p. 725.
Motor wrench, Electric-. E. W. Burroughs. No. 1,102,240; July 7; Gaz. vol. 204; p. 7.
Motors, alternating or direct current, Electric starter for. C. B. Pinkerton and A. E. Wason. No. 1,104,758; July 21; Gaz. vol. 204; p. 968.

Motors, Cylinder for valveless two-cycle internal-combustion. C. E. Amon. No. 1,105,585; July 28; Gaz. vol. 204; p. 1306.
Motors, Fluid-control mechanism for. H. A. Carpenter. No. 1,105,061; July 28; Gaz. vol. 204; p. 1121.
Motors, Mixture-controlling means for. A. T. Kasley. No. 1,102,341; July 7; Gaz. vol. 204; p. 42.
Mower, Lawn-. G. F. Geb. No. 1,102,734; July 7; Gaz. vol. 204; p. 179.
Mower, Lawn-. J. C. Clark. No. 1,104,291; July 21; Gaz. vol. 204; p. 805.
Mowing-machine. O. Kluge. No. 1,102,929; July 7; Gaz. vol. 204; p. 245.
Mowing-machine attachment. P. H. Kliewer. No. 1,103,779; July 14; Gaz. vol. 204; p. 589.
Mucilage or gum, Manufacture of. C. V. Greenwood. No. 1,105,195; July 28; Gaz. vol. 204; p. 1167.
Muffler. J. F. Hintz. No. 1,103,769; July 14; Gaz. vol. 204; p. 586.
Multiweld secondary. E. Fulda. No. 1,103,041; July 14; Gaz. vol. 204; p. 332.
Music-leaf turner. W. Deffenbaugh. No. 1,104,638; July 21; Gaz. vol. 204; p. 926.
Music-leaf turner. F. E. Giles. No. 1,104,983; July 28; Gaz. vol. 204; p. 1094.
Music-player valve. R. A. Gally. No. 1,105,071; July 28; Gaz. vol. 204; p. 1125.
Music-playing instrument, Mechanical. F. C. White. No. 1,103,854; July 14; Gaz. vol. 204; p. 614.
Music-sheet shifter. F. H. Hartzell. No. 1,103,200; July 14; Gaz. vol. 204; p. 390.
Music turner, Sheet-. R. V. Townsend. No. 1,102,824; July 7; Gaz. vol. 204; p. 211.
Musical-chime support. J. E. Coatta. No. 1,102,388; July 7; Gaz. vol. 204; p. 58.
Musical instrument. J. C. Deagan. No. 1,104,478; July 21; Gaz. vol. 204; p. 870.
Musical instrument, Electrical. M. L. Severy and G. B. Sinclair. No. 1,104,939; July 28; Gaz. vol. 204; p. 1079.
Musical instrument, Mechanical. H. S. Hornbeck. No. 1,102,269; July 7; Gaz. vol. 204; p. 16.
Musical-instrument pumper connection. R. A. Gally. No. 1,103,872; July 14; Gaz. vol. 204; p. 621.
Musical-instrument roll-adjuster. R. A. Gally. No. 1,103,138; July 14; Gaz. vol. 204; p. 366.
Musical-instrument-roll-gearing shift and brakes. R. A. Gally. No. 1,103,871; July 14; Gaz. vol. 204; p. 620.
Musical instrument, Self-playing. L. B. Doman. (Reissue.) No. 13,764; July 7; Gaz. vol. 204; p. 277.
Musical instruments, Electromechanical action for. M. L. Severy and G. B. Sinclair. No. 1,104,282; July 21; Gaz. vol. 204; p. 802.
Musical instruments, Expression-controlling means for. J. F. Kelly. No. 1,103,590; July 14; Gaz. vol. 204; p. 523.
Musical instruments, Expression device for automatic. J. Blohut. No. 1,104,867; July 28; Gaz. vol. 204; p. 1055.
Musical instruments, Expression device for pneumatically-operated. R. A. Leadbeter. No. 1,103,213; July 14; Gaz. vol. 204; p. 394.
Musical instruments, Folding pedal for pneumatic. T. P. Brown. No. 1,103,480; July 14; Gaz. vol. 204; p. 483.
Musical instruments, Pneumatic action for. P. I. Burks. No. 1,105,248; July 28; Gaz. vol. 204; p. 1186.
Musical instruments, Recording and indicating device for. S. S. Waters. No. 1,103,553; July 14; Gaz. vol. 204; p. 507.
Nail: *See* Expansion-nail.
Nailing press, Box-. W. G. Snow. No. 1,102,992; July 7; Gaz. vol. 204; p. 266.
Napkins, Sanitary support for. D. Nesgood. No. 1,103,815; July 14; Gaz. vol. 204; p. 601.
Navigation in air and water, Driving and sustaining surfaces applicable to. A. P. Filippi. No. 1,103,188; July 14; Gaz. vol. 204; p. 385.
Navigator's apparatus. I. G. Sundell. No. 1,104,844; July 28; Gaz. vol. 204; p. 1046.
Neck-pad. J. G. Friberg. No. 1,102,901; July 7; Gaz. vol. 204; p. 235.
Necktie. M. J. Cohen. No. 1,104,411; July 21; Gaz. vol. 204; p. 846.
Necktie-clasp. E. P. Tobie. No. 1,105,542; July 28; Gaz. vol. 204; p. 1291.
Necktie-presser. J. E. Burdett. No. 1,102,569; July 7; Gaz. vol. 204; p. 123.
Needles having bulges at both sides of a groove previously produced by stamping, Producing the ears in. W. Bihren. No. 1,103,481; July 14; Gaz. vol. 204; p. 483.
Nest for poultry, Trap-. G. H. Chapman. No. 1,105,403; July 28; Gaz. vol. 204; p. 1243.
Nest, Trap-. R. F. Briner. No. 1,102,386; July 7; Gaz. vol. 204; p. 57.
Net, Shrimp-. C. Cheting. No. 1,103,173; July 14; Gaz. vol. 204; p. 379.
Nickel from mixtures of nickel and other metals, Extraction of. H. E. Fierz. No. 1,103,747; July 14; Gaz. vol. 204; p. 578.
Nipper, Police-. J. Murphy. No. 1,102,943; July 7; Gaz. vol. 204; p. 249.
Nitrogen, Method and means for fixing. W. S. Landis. No. 1,103,060; July 14; Gaz. vol. 204; p. 338.
Nitrogen, Method of and apparatus for fixing. W. S. Landis. No. 1,103,062; July 14; Gaz. vol. 204; p. 339.
Nitrogen, Process and apparatus for fixing atmospheric. W. S. Landis. No. 1,103,061; July 14; Gaz. vol. 204; p. 339.
Noise-making apparatus. A. H. Moorhouse. No. 1,103,217; July 14; Gaz. vol. 204; p. 395.
Non-skidding attachment for automobile-wheels. D. J. Penno. No. 1,105,374; July 28; Gaz. vol. 204; p. 1234.
Notching-machine. H. A. Greene. No. 1,105,074; July 28; Gaz. vol. 204; p. 1126.
Note-sheet controller. M. Verstraelen. No. 1,102,969; July 7; Gaz. vol. 204; p. 258.
Note-sheet-guiding device. W. M. Stone. No. 1,105,046; July 28; Gaz. vol. 204; p. 1116.
Nozzle. W. H. Coles. No. 1,104,965; July 28; Gaz. vol. 204; p. 1088.
Nozzle, Steam-exhaust. P. T. Hayward and W. P. Sanderson. No. 1,105,514; July 28; Gaz. vol. 204; p. 1281.
Numbering-machine. C. L. Johnston. No. 1,102,588; July 7; Gaz. vol. 204; p. 129.
Numbering mechanism. H. L. Jensen. No. 1,103,049; July 14; Gaz. vol. 204; p. 335.
Nut. W. Randolph. No. 1,102,686; July 7; Gaz. vol. 204; p. 162.
Nut, Coupling-. S. L. Kneass. No. 1,103,591; July 14; Gaz. vol. 204; p. 523.
Nut-lock. F. W. Wolf. No. 1,102,840; July 7; Gaz. vol. 204; p. 216.
Nut-lock. J. G. Schneider. No. 1,103,847; July 14; Gaz. vol. 204; p. 611.
Nut-lock. J. A. P. Lee. No. 1,104,081; July 21; Gaz. vol. 204; p. 940.
Nut-lock. H. H. Heimar. No. 1,104,731; July 21; Gaz. vol. 204; p. 958.
Nut-lock. V. P. Nally. No. 1,105,095; July 28; Gaz. vol. 204; p. 1134.
Nut-lock. E. A. Bardwell. No. 1,105,123; July 28; Gaz. vol. 204; p. 1142.
Nut Lock. W. J. Tollerton. No. 1,105,222; July 28; Gaz. vol. 204; p. 1177.
Nuts, Device for removing threaded. H. H. Harris. No. 1,104,497; July 21; Gaz. vol. 204; p. 877.
Ocular fluorescence, Apparatus for demonstrating. F. A. Schanz. No. 1,105,310; July 28; Gaz. vol. 204; p. 1208.
Oil-burner. W. M. Britten. No. 1,102,387; July 7; Gaz. vol. 204; p. 58.
Oil-burner. W. S. Quigley. No. 1,104,386; July 21; Gaz. vol. 204; p. 838.
Oil-burner. A. D. Marcotte. No. 1,105,357; July 28; Gaz. vol. 204; p. 1228.
Oil-burner. C. W. Burton. No. 1,105,401; July 28; Gaz. vol. 204; p. 1242.
Oil-burners, Device for controlling. E. M. Caskey. No. 1,102,472; July 7; Gaz. vol. 204; p. 88.
Oil-can. R. L. Penn. No. 1,103,537; July 14; Gaz. vol. 204; p. 502.
Oil-can, Non-explosive. F. J. Schisler. No. 1,103,319; July 14; Gaz. vol. 204; p. 429.
Oil-engine. E. Thomson. No. 1,105,047; July 28; Gaz. vol. 204; p. 1116.
Oil from congealing on being subjected to heat, Preserving wood-. E. Beringer and W. Zimmer. No. 1,103,473; July 14; Gaz. vol. 204; p. 481.
Oil-heating device. C. J. Allen. No. 1,103,121; July 14; Gaz. vol. 204; p. 360.
Oil-refining apparatus. J. R. Timmins. No. 1,105,383; July 28; Gaz. vol. 204; p. 1237.
Oil supply, Controlling device for fuel-. T. D. De Vilbiss. No. 1,102,482; July 7; Gaz. vol. 204; p. 91.
Oil-transformer. H. Weiss. No. 1,104,723; July 21; Gaz. vol. 204; p. 955.
Oil used for electrical purposes, Regenerating. R. Friese. No. 1,103,499; July 14; Gaz. vol. 204; p. 488.
Oil with chemicals, Apparatus for mixing. O. J. Shiner. No. 1,102,696; July 7; Gaz. vol. 204; p. 165.
Oils from solids, Extracting. C. Turner. No. 1,104,456; July 21; Gaz. vol. 204; p. 862.
Oils, Treatment of. B. Lach. No. 1,104,906; July 28; Gaz. vol. 204; p. 1068.
Oiler. C. T. Gibney. No. 1,102,333; July 7; Gaz. vol. 204; p. 39.
Oiler. C. C. Hansen. No. 1,105,135; July 28; Gaz. vol. 204; p. 1146.
Oiler, Force-feed. C. L. Bundy. No. 1,104,102; July 21; Gaz. vol. 204; p. 741.
Oiler, Locomotive-wheel-flange. J. Little. No. 1,102,524; July 7; Gaz. vol. 204; p. 106.
Open-hearth furnace. K. Albert. (Reissue.) No. 13,763; July 7; Gaz. vol. 204; p. 276.
Open-hearth furnace, Regenerative. T. B. Rogerson. No. 1,104,448; July 21; Gaz. vol. 204; p. 859.
Ophthalmic mounting. J. C. Wells. No. 1,103,389; July 14; Gaz. vol. 204; p. 451.
Ophthalmic mounting. H. H. Styll. No. 1,103,449; July 14; Gaz. vol. 204; p. 472.
Ophthalmic mounting. J. C. Wells and N. M. Baker. No. 1,104,157; July 21; Gaz. vol. 204; p. 759.
Optical system for prism-carrying devices. E. Bernick. No. 1,104,769; July 28; Gaz. vol. 204; p. 1020.
Orchard-heater. F. M. Salmon. No. 1,104,832; July 28; Gaz. vol. 204; p. 1043.
Ore-concentrating apparatus. J. M. Callow. No. 1,104,755; July 21; Gaz. vol. 204; p. 966.
Ore concentration. H. H. Greenway and A. H. P. Lowry. No. 1,102,738; July 7; Gaz. vol. 204; p. 180.

Ore concentration. G. A. Chapman and S. Tucker. No. 1,102,873; July 7; Gaz. vol. 204; p. 227.
Ore concentration. G. A. Chapman. No. 1,102,874; July 7; Gaz. vol. 204; p. 227.
Ore-concentrator. P. Stenger. No. 1,105,109; July 28; Gaz. vol. 204; p. 1137.
Ore-dust for smelting, Preparing. W. Cooper. No. 1,103,400; July 14; Gaz. vol. 204; p. 455.
Ore roasting and sintering apparatus. A. S. Dwight. No. 1,102,082; July 7; Gaz. vol. 204; p. 262.
Ore treatment. C. Robinson. No. 1,105,102; July 28; Gaz. vol. 204; p. 1135.
Ores, Apparatus for recovering valuable constituents from. F. H. Prentiss. No. 1,104,132; July 21; Gaz. vol. 204; p. 751.
Ores, Means for separating. C. L. Hoge. No. 1,104,117; July 21; Gaz. vol. 204; p. 745.
Ores, Means for treating. F. P. Arnold and G. F. Wedeman. No. 1,104,239; July 21; Gaz. vol. 204; p. 787.
Ores, Treating. F. P. Arnold and G. F. Wedeman. No. 1,104,287; July 21; Gaz. vol. 204; p. 804.
Organ. F. J. Flaherty. No. 1,104,648; July 21; Gaz. vol. 204; p. 929.
Orthodontia-pliers. C. F. Montag. No. 1,103,606; July 14; Gaz. vol. 204; p. 529.
Oscillator, High-tension. W. Otto. No. 1,103,822; July 14; Gaz. vol. 204; p. 603.
Outlet-box. H. C. Mills. No. 1,103,905; July 14; Gaz. vol. 204; p. 632.
Oven, Portable. H. Gehnrich. No. 1,104,652; July 21; Gaz. vol. 204; p. 931.
Overhead crossing. J. Ledwinka. No. 1,102,766; July 7; Gaz. vol. 204; p. 190.
Overshoe. E. A. Hunter. No. 1,105,437; July 28; Gaz. vol. 204; p. 1255.
Oxidation. C. Ellis. No. 1,103,017; July 7; Gaz. vol. 204; p. 275.
Ozone apparatus. J. E. Seeley. No. 1,102,963; July 7; Gaz. vol. 204; p. 257.
Package. H. A. Sévigné. No. 1,104,739; July 21; Gaz. vol. 204; p. 961.
Packages, Filling. A. M. Bates. No. 1,104,726; July 21; Gaz. vol. 204; p. 956.
Packer, Disk subsurface-. H. W. Campbell. No. 1,103,938; July 21; Gaz. vol. 204; p. 685.
Packing. T. Smith. No. 1,103,322; July 14; Gaz. vol. 204; p. 430.
Packing-box. P. L. Rearick. No. 1,102,687; July 7; Gaz. vol. 204; p. 162.
Packing composition. J. Sewell. No. 1,103,441; July 14; Gaz. vol. 204; p. 469.
Packing for journal-boxes. F. B. Birch. No. 1,103,025; July 14; Gaz. vol. 204; p. 327.
Packing, Lubricating-. G. Flawith. No. 1,102,332; July 7; Gaz. vol. 204; p. 39.
Packing, Machine for facilitating. M. Glanini. No. 1,102,493; July 7; Gaz. vol. 204; p. 95.
Packing material, Acid-proof. M. L. Chappell. No. 1,102,473; July 7; Gaz. vol. 204; p. 88.
Packing, Pipe-joint. L. Schomburg. No. 1,102,961; July 7; Gaz. vol. 204; p. 256.
Packing-ring, Piston. G. H. Estabrooks. No. 1,103,573; July 14; Gaz. vol. 204; p. 516.
Packing, Shaft-. P. Wagner. No. 1,104,588; July 21; Gaz. vol. 204; p. 910.
Packing, Steam-. G. S. R. Dickson. No. 1,103,744; July 14; Gaz. vol. 204; p. 577.
Packing, Valve-. S. S. Caskey. No. 1,105,254; July 28; Gaz. vol. 204; p. 1188.
Pad: *See* Collar-pad; Inking-pad; Neck-pad.
Padlock. E. B. Stone. No. 1,104,327; July 21; Gaz. vol. 204; p. 817.
Pail-cover fastener. J. Ingalsbe. No. 1,103,208; July 14; Gaz. vol. 204; p. 392.
Pail, Milk-. W. E. Sherlock. No. 1,103,090; July 14; Gaz. vol. 204; p. 348.
Pail, Milk-. I. W. Pullman. No. 1,103,431; July 14; Gaz. vol. 204; p. 465.
Pail, Refrigerating-. W. L. Daly. No. 1,103,016; July 7; Gaz. vol. 204; p. 275.
Pan: *See* Baking-pan; Bread-pan; Locomotive ash-pan; Thermal pan.
Pantograph. W. C. Bucknam. No. 1,104,289; July 21; Gaz. vol. 204; p. 805.
Paper bags, Device for flattening finished. E. Jagenberg. No. 1,102,754; July 7; Gaz. vol. 204; p. 187.
Paper-board box and stay therefor, Folding. E. M. Hawkins. No. 1,102,750; July 7; Gaz. vol. 204; p. 185.
Paper box. S. Stone. No. 1,104,392; July 21; Gaz. vol. 204; p. 840.
Paper box. G. L. Morrison. No. 1,104,820; July 28; Gaz. vol. 204; p. 1038.
Paper box. A. L. Smith and A. H. Dreux. No. 1,105,215; July 28; Gaz. vol. 204; p. 1174.
Paper-cap remover. J. Savole. No. 1,105,210; July 28; Gaz. vol. 204; p. 1172.
Paper container. W. L. Poffenbarger. No. 1,103,374; July 14; Gaz. vol. 204; p. 447.
Paper-feed mechanism. Pneumatic. O. Kirsch. No. 1,105,352; July 28; Gaz. vol. 204; p. 1225.
Paper-feeder. F. K. Arnold. No. 1,104,741; July 21; Gaz. vol. 204; p. 961.
Paper-hanger's board. F. O. B. Fowler. No. 1,104,790; July 28; Gaz. vol. 204; p. 1027.
Paper holder, Fly-. J. J. Buckley. No. 1,103,259; July 14; Gaz. vol. 204; p. 409.
Paper holder, Toilet-. H. D. Wood. No. 1,104,284; July 21; Gaz. vol. 204; p. 803.
Paper machine, Toilet-. G. and G. Cottini. No. 1,104,415; July 21; Gaz. vol. 204; p. 848.
Paper-machines, Drier-rolls for. W. Sheahan. No. 1,104,759; July 21; Gaz. vol. 204; p. 968.
Paper-making machine. D. L. Leslie and J. L. Harris. No. 1,104,518; July 21; Gaz. vol. 204; p. 886.
Paper-making machines, Wire-cloth for use on. C. A. Coupa. No. 1,103,943; July 21; Gaz. vol. 204; p. 687.
Paper manufacture, Knotter or strainer for. R. Wandel. No. 1,105,227; July 28; Gaz. vol. 204; p. 1179.
Paper or like sheets together, Machine for fastening. G. P. Bump. No. 1,104,622; July 21; Gaz. vol. 204; p. 921.
Paper package, Toilet-. G. and G. Cottini. No. 1,104,414; July 21; Gaz. vol. 204; p. 847.
Paper pail. W. F. Feldmeyer. No. 1,103,186; July 14; Gaz. vol. 204; p. 384.
Paper pails, Machine for bailing. H. A. Inman. No. 1,104,803; July 28; Gaz. vol. 204; p. 1032.
Paper-tube sections, Machine for making. F. K. Arnold. No. 1,104,742; July 21; Gaz. vol. 204; p. 962.
Paper-winding mechanism. S. M. Langston. No. 1,105,281; July 28; Gaz. vol. 204; p. 1197.
Parachute. L. Luki. No. 1,104,995; July 28; Gaz. vol. 204; p. 1098.
Parer, Potato-. T. Miller. No. 1,104,212; July 21; Gaz. vol. 204; p. 778.
Pasteurizing apparatus. G. M. S. Tait. No. 1,104,710; July 21; Gaz. vol. 204; p. 953.
Pasteurizing-machine. C. E. Felt. No. 1,102,486; July 7; Gaz. vol. 204; p. 92.
Patch, Blow-out. J. H. Marvil of V. and I. H. Downs. No. 1,102,938; July 7; Gaz. vol. 204; p. 248.
Peanut-shelling machine. J. T. Huston. No. 1,103,291; July 14; Gaz. vol. 204; p. 419.
Peanut-stemmer, Rotary. T. M. Lilliston. No. 1,103,505; July 14; Gaz. vol. 204; p. 424.
Peat-blocks, Apparatus for picking up. T. A. Mighill. No. 1,102,781; July 7; Gaz. vol. 204; p. 195.
Peeling peaches and other fruit, Machine for. S. J. Dunkley. No. 1,104,175; July 21; Gaz. vol. 204; p. 766.
Pen, Fountain-. W. L. Chapman. No. 1,103,349; July 14; Gaz. vol. 204; p. 440.
Pen, Fountain-. R. W. Springer. No. 1,104,566; July 21; Gaz. vol. 204; p. 903.
Pen, Fountain-. R. W. Springer. No. 1,104,567; July 21; Gaz. vol. 204; p. 904.
Pen or pencil holder. A. and L. Myers. No. 1,102,350; July 7; Gaz. vol. 204; p. 45.
Pencil attachment. F. Unrub. No. 1,103,712; July 14; Gaz. vol. 204; p. 567.
Pencil-holder. T. Carence. No. 1,102,242; July 7; Gaz. vol. 204; p. 7.
Perforating machine, Jacquard-card-. K. Eggart. No. 1,104,641; July 21; Gaz. vol. 204; p. 927.
Permutation-lock. G. A. Wehner. No. 1,103,116; July 14; Gaz. vol. 204; p. 358.
Permutation-lock. S. P. Hovey. No. 1,103,771; July 14; Gaz. vol. 204; p. 586.
Phonograph-reproducer. S. D. Paddack. No. 1,102,290; July 7; Gaz. vol. 204; p. 24.
Phonograph sounding-board. D. M. Bliss. No. 1,104,340; July 21; Gaz. vol. 204; p. 822.
Phosphate, Making calcium acid. E. W. Reed. No. 1,105,304; July 28; Gaz. vol. 204; p. 1206.
Phosphates, Rendering soluble insoluble. W. S. Landis. No. 1,103,059; July 14; Gaz. vol. 204; p. 338.
Photographic apparatus, Automatic device for controlling the operation of. L. J. E. Colardeau and J. Richard. No. 1,104,412; July 21; Gaz. vol. 204; p. 847.
Photographic-film pack. C. L. Hopkins. No. 1,103,417; July 14; Gaz. vol. 204; p. 461.
Photographic plates, Container for storing. E. Müller-Bralitz. No. 1,102,536; July 7; Gaz. vol. 204; p. 110.
Photographic-print-treating apparatus. J. S. Greene. No. 1,102,737; July 7; Gaz. vol. 204; p. 180.
Photographic-printing device. A. H. Wallace. No. 1,103,331; July 14; Gaz. vol. 204; p. 433.
Photographic-printing machine. A. H. Wallace. No. 1,103,330; July 14; Gaz. vol. 204; p. 433.
Photographic ray-filter. W. F. Folmer. No. 1,104,179; July 21; Gaz. vol. 204; p. 768.
Photographic recording apparatus. C. Schou. No. 1,104,556; July 21; Gaz. vol. 204; p. 900.
Photographing persons moving along a confined way, Apparatus for automatically. B. Cannon. No. 1,105,484; July 28; Gaz. vol. 204; p. 1271.
Photography for printing-surfaces, making transparencies, &c., Three-color. E. H. Gamble. No. 1,102,902; July 7; Gaz. vol. 204; p. 236.
Photomechanical-printing surfaces, Production of. E. H. Gamble. No. 1,102,903; July 7; Gaz. vol. 204; p. 236.
Piano action-muffling device. W. H. Seltzer. No. 1,104,280; July 21; Gaz. vol. 204; p. 801.
Piano-action parts, Tool for boring. F. W. Hale. No. 1,103,507; July 14; Gaz. vol. 204; p. 491.
Piano and player bench, Combined. W. G. Kilberg and A. J. Johnson. No. 1,104,675; July 21; Gaz. vol. 204; p. 939.
Piano-case slide-door device. R. A. Gally. No. 1,103,193; July 14; Gaz. vol. 204; p. 387.

Piano-hammer. J. C. Miller. No. 1,104,691; July 21; Gaz. vol. 204; p. 943.
Piano-pedal support. R. A. Gally. No. 1,103,753; July 14; Gaz. vol. 204; p. 580.
Piano, Player-. T. Swensen. No. 1,102,611; July 7; Gaz. vol. 204; p. 137.
Piano-player. E. T. Turney. No. 1,102,613; July 7; Gaz. vol. 204; p. 138.
Piano-player action, Range-extending device for pneumatic. E. G. Clark. No. 1,104,164; July 21; Gaz. vol. 204; p. 762.
Piano-playing-control system. R. A. Gally. No. 1,104,729; July 21; Gaz. vol. 204; p. 957.
Piano-shelf support. S. W. Widney. No. 1,102,375; July 7; Gaz. vol. 204; p. 53.
Pianos and other musical instruments, Machine for making wire strings for. L. Biava. No. 1,102,233; July 7; Gaz. vol. 204; p. 5.
Pianos and the like, Expression device for player-. C. P. Hidden. No. 1,102,661; July 7; Gaz. vol. 204; p. 154.
Pianos and the like, Expression device for player-. C. P. Hidden. No. 1,103,582; July 14; Gaz. vol. 204; p. 520.
Pick, Non-short-circuiting. N. Lipoff. No. 1,102,935; July 7; Gaz. vol. 204; p. 247.
Picker: *See* Fruit-picker.
Picture-exhibiting device. A. A. Jackson. No. 1,103,360, July 14; Gaz. vol. 204; p. 443.
Picture-hanger. R. S. Cormier. No. 1,103,491; July 14; Gaz. vol. 204; p. 486.
Picture-holder. G. Polverino. No. 1,104,219; July 21; Gaz. vol. 204; p. 781.
Picture-hook. A. T. Williams. No. 1,103,721; July 14; Gaz. vol. 204; p. 570.
Picture machine, Moving-. J. E. Leonard. No. 1,102,933; July 7; Gaz. vol. 204; p. 246.
Picture machine, Moving-. J. E. Leonard. No. 1,102,988; July 7; Gaz. vol. 204; p. 264.
Picture machines, Feed mechanism for moving-. J. Butcher. No. 1,104,873; July 28; Gaz. vol. 204; p. 1057.
Picture, Transfer-. G. R. Meyercord. No. 1,104,126; July 21; Gaz. vol. 204; p. 749.
Pictures, Arrangement for making living. S. Kucharski. No. 1,103,057; July 14; Gaz. vol. 204; p. 337.
Pie-crust or the like, Composition for. C. M. Fabel. No. 1,103,355; July 14; Gaz. vol. 204; p. 441.
Piles, posts, and the like, Driving and extracting. A. Gibb, T. G. Menzies, and R. Chalmers. No. 1,102,652; July 7; Gaz. vol. 204; p. 152.
Pin: *See* Clothes-pin; Hair-pin.
Pipe: *See* Blowpipe; Smoking-pipe; Tobacco-pipe.
Pipe and bolt puller. O. Henrickson. No. 1,103,767; July 14; Gaz. vol. 204; p. 585.
Pipe cap, Draft-. H. F. Belknap. No. 1,103,734; July 14; Gaz. vol. 204; p. 574.
Pipe, Cinch for sheet-metal. K. J. Thorsby. No. 1,104,579; July 21; Gaz. vol. 204; p. 907.
Pipe-clamp. C. McCard. No. 1,105,336; July 28; Gaz. vol. 204; p. 1218.
Pipe-coupling. A. Kraemer. No. 1,103,212; July 14; Gaz. vol. 204; p. 394.
Pipe coupling, Train-. W. D. Widders. No. 1,102,837; July 7; Gaz. vol. 204; p. 216.
Pipe-rack, Folding. J. S. Rathbone. No. 1,104,004; July 21; Gaz. vol. 204; p. 706.
Pipe thermostatic motor. E. S. Halsey. No. 1,105,558; July 28; Gaz. vol. 204; p. 1296.
Pipe-threading machine. J. H. Hines. No. 1,104,046; July 21; Gaz. vol. 204; p. 721.
Pipe-wrench. W. G. Knapp and C. E. Wilcox. No. 1,102,517; July 7; Gaz. vol. 204; p. 103.
Pipe-wrench. T. B. Somers. No. 1,103,323; July 14; Gaz. vol. 204; p. 430.
Pipe-wrench. W. J. Hamblin. No. 1,104,730; July 21; Gaz. vol. 204; p. 958.
Pipes, Fluid-pressure coupling for train-. L. D. Woodruff. No. 1,102,522; July 7; Gaz. vol. 204; p. 141.
Pistol, Automatic. J. Clément and V. Loiselet. No. 1,105,404; July 28; Gaz. vol. 204; p. 1243.
Piston of engines, compressors, motors, and other machines having reciprocating pistons. H. Junkers. No. 1,102,590; July 7; Gaz. vol. 204; p. 130.
Piston-ring. M. L. Dunham. No. 1,103,912; July 14; Gaz. vol. 204; p. 634.
Piston-rings, Device for contracting. H. J. Walton and C. M. Nerber. No. 1,103,717; July 14; Gaz. vol. 204; p. 569.
Pistons of gas-engines, Decarbonizing-tool for. F. Lotter. No. 1,103,596; July 14; Gaz. vol. 204; p. 525.
Pivot. J. T. Allmand. No. 1,104,238; July 21; Gaz. vol. 204; p. 787.
Plane. W. E. Sparks. No. 1,104,454; July 21; Gaz. vol. 204; p. 861.
Planer, Metal-. A. W. Whitcomb. No. 1,103,457; July 14; Gaz. vol. 204; p. 474.
Planter attachment, Seed-. J. J. Hooks. No. 1,102,924; July 7; Gaz. vol. 204; p. 243.
Planter, Check-row corn-. W. E. Gilroy. No. 1,103,357; July 14; Gaz. vol. 204; p. 442.
Planter, Corn-. P. H. Kroger, Jr. No. 1,103,299; July 14; Gaz. vol. 204; p. 421.
Planter, Corn-. J. R. Mulder. No. 1,104,214; July 21; Gaz. vol. 204; p. 779.
Planter marker, Corn-. L. J. Lindsay. No. 1,103,593; July 14; Gaz. vol. 204; p. 524.
Planter, Potato-. L. A. Aspinwall. No. 1,104,725; July 21; Gaz. vol. 204; p. 956.
Planter, Seed-. R. H. Prior. No. 1,103,831; July 14; Gaz. vol. 204; p. 606.
Planters, Agitating-disk for. E. M. Cole. No. 1,104,246; July 21; Gaz. vol. 204; p. 789.
Plastering-machine. J. H. Coverdill. No. 1,103,269; July 14; Gaz. vol. 204; p. 412.
Plastic composition and making same. J. W. Aylsworth. No. 1,102,631; July 7; Gaz. vol. 204; p. 145.
Plastic phenolic condensation product and forming the same. J. W. Aylsworth. No. 1,102,634; July 7; Gaz. vol. 204; p. 145.
Plate-lifter. W. Moser. No. 1,103,070; July 14; Gaz. vol. 204; p. 342.
Plate-washing machine. H. W. Rodda. No. 1,104,139; July 21; Gaz. vol. 204; p. 753.
Plates, films, or pellicles detachably secured to a paper backing or the like, Producing. J. Blondel and A. Chopin. No. 1,105,243; July 28; Gaz. vol. 204; p. 1185.
Plating. J. A. Smith. No. 1,104,842; July 28; Gaz. vol. 204; p. 1046.
Pliers or similar tool. W. A. Bernard. No. 1,102,384; July 7; Gaz. vol. 204; p. 56.
Plow. J. P. Dalsing. No. 1,102,326; July 7; Gaz. vol. 204; p. 37.
Plow. C. R. Stephens. No. 1,104,569; July 21; Gaz. vol. 204; p. 904.
Plow. D. H. Floyd. No. 1,105,264; July 28; Gaz. vol. 204; p. 1192.
Plow-adjusting mechanism. O. F. Smith and A. C. Lindgren. No. 1,103,543; July 14; Gaz. vol. 204; p. 504.
Plow attachment, Subsoiler. C. J. Jensen. No. 1,103,293; July 14; Gaz. vol. 204; p. 419.
Plow, Gang-. W. N. Springer. No. 1,103,700; July 14; Gaz. vol. 204; p. 563.
Plow-lift. L. E. Waterman. No. 1,104,750; July 21; Gaz. vol. 204; p. 964.
Plow listing attachment. P. E. Hogan. No. 1,103,770; July 14; Gaz. vol. 204; p. 586.
Plow, Motor-. J. P. Skripec. No. 1,105,214; July 28; Gaz. vol. 204; p. 1174.
Plow, Reversible. W. Koehler. No. 1,105,032; July 28; Gaz. vol. 204; p. 1111.
Plow, Subsoil-. E. F. Stephens. No. 1,103,446; July 14; Gaz. vol. 204; p. 471.
Plow, Sulky-. O. H. Eddy. No. 1,102,891; July 7; Gaz. vol. 204; p. 233.
Plow, Wheel-. P. Turzik. No. 1,104,230; July 21; Gaz. vol. 204; p. 784.
Plows, Draft-shifting means for sulky-. W. H. Lee. No. 1,105,593; July 28; Gaz. vol. 204; p. 1309.
Plows, Plow-lift for gang-. L. S. Hackbey. No. 1,104,187; July 21; Gaz. vol. 204; p. 770.
Plows, Triple offset for. W. F. Bubb. No. 1,102,643; July 7; Gaz. vol. 204; p. 149.
Plows, Weed-cutter for. W. J. Underwood. No. 1,102,703; July 7; Gaz. vol. 204; p. 168.
Plug for vessels containing inflammable liquids, Safety-. E. Verneuil. No. 1,102,559; July 7; Gaz. vol. 204; p. 118.
Plug, Separable attachment-. E. G. K. Anderson. No. 1,103,244; July 14; Gaz. vol. 204; p. 404.
Plug, Separable attachment-. R. B. Benjamin. No. 1,103,250; July 14; Gaz. vol. 204; p. 406.
Plug, Separable attachment-. R. B. Benjamin. No. 1,103,251; July 14; Gaz. vol. 204; p. 407.
Plug, Swiveled attachment-. F. E. Seeley. No. 1,103,006; July 7; Gaz. vol. 204; p. 272.
Plural-cylinder engine. R. H. White. No. 1,103,639; July 14; Gaz. vol. 204; p. 541.
Pneumatic cleaner. L. L. Ferguson. No. 1,104,882; July 28; Gaz. vol. 204; p. 1060.
Pneumatic-despatch-apparatus terminal. R. G. Collins, Jr. No. 1,102,324; July 7; Gaz. vol. 204; p. 36.
Pneumatic-despatch system. R. G. Collins, Jr. No. 1,102,323; July 7; Gaz. vol. 204; p. 36.
Pneumatic-service-system regulator. J. J. Stoetzel. No. 1,104,228; July 21; Gaz. vol. 204; p. 783.
Pocket-case. J. Zoller. No. 1,102,379; July 7; Gaz. vol. 204; p. 54.
Pocket-clasp, Safety. C. Gleckler. No. 1,104,984; July 28; Gaz. vol. 204; p. 1094.
Pocket-clip for retaining articles. W. L. Hoffman. No. 1,102,922; July 7; Gaz. vol. 204; p. 243.
Pocket-knife. I. E. Hotchkiss. No. 1,104,896; July 28; Gaz. vol. 204; p. 1066.
Pocket, Safety-. R. G. Nicholas. No. 1,102,946; July 7; Gaz. vol. 204; p. 250.
Pocket, Safety-. O. E. Kratz. No. 1,103,298; July 14; Gaz. vol. 204; p. 421.
Pocket, Stay-. P. S. McOmber. No. 1,102,677; July 7; Gaz. vol. 204; p. 159.
Point-protector for impaling instruments. J. M. Topper. No. 1,105,384; July 28; Gaz. vol. 204; p. 1238.
Police and fire alarm system. G. L. Hughes. No. 1,105,436; July 28; Gaz. vol. 204; p. 1254.
Polishing-machine. H. Levine. No. 1,104,684; July 21; Gaz. vol. 204; p. 941.
Polishing-wheel. D. F. McGovern. No. 1,105,088; July 28; Gaz. vol. 204; p. 1132.
Polishing-wheel. D. F. McGovern. No. 1,105,089; July 28; Gaz. vol. 204; p. 1132.

Pontianak, Treating. A. R. Ellison. No. 1,104,744; July 21; Gaz. vol. 204; p. 963.
Pool and billiard cue chalker, Automatic. F. M. Tillou. No. 1,103,852; July 14; Gaz. vol. 204; p. 613.
Porcelain and similar substances in continuous furnaces with movable hearths, Apparatus for baking. E. G. Faugeron. No. 1,103,184; July 14; Gaz. vol. 204; p. 384.
Portable bath. C. A. Rench. No. 1,104,314; July 21; Gaz. vol. 204; p. 812.
Post: *See* Concrete fence-post; Fence-post; Telescopic post.
Post-hole diggers, Ratchet-head for. O. H. Naville. No. 1,105,448; July 28; Gaz. vol. 204; p. 1259.
Postal-call-box system. F. E. Drake. No. 1,102,886; July 7; Gaz. vol. 204; p. 231.
Potato-digger. C. S. Skeem. No. 1,103,321; July 14; Gaz. vol. 204; p. 429.
Potato-sorter. E. Hellfach. No. 1,105,427; July 28; Gaz. vol. 204; p. 1251.
Potato-sorting apparatus. W. B. Hodges. No. 1,105,327; July 28; Gaz. vol. 204; p. 1215.
Poultry-fountain, Thermo. W. H. Cotton. No. 1,102,572; July 7; Gaz. vol. 204; p. 124.
Poultry-house. A. A. Kramer. No. 1,104,197; July 21; Gaz. vol. 204; p. 772.
Powder-can, Sifter-top. G. W. Weber. No. 1,104,457; July 21; Gaz. vol. 204; p. 862.
Power control. E. G. Thomas. No. 1,104,019; July 21; Gaz. vol. 204; p. 711.
Power-limiting device, Time-element. J. E. Englesson. No. 1,102,731; July 7; Gaz. vol. 204; p. 177.
Power-limiting device, Time-element. A. Pfau. No. 1,103,891; July 14; Gaz. vol. 204; p. 627.
Power mechanism, Rotary. W. B. Craig. No. 1,102,247; July 7; Gaz. vol. 204; p. 9.
Power-press safety attachment. R. Hoelemann. No. 1,102,509; July 7; Gaz. vol. 204; p. 100.
Power, Process and system for producing. C. A. Sellon. No. 1,103,440; July 14; Gaz. vol. 204; p. 469.
Power-shovel. S. M. Bishop. No. 1,103,476; July 14; Gaz. vol. 204; p. 482.
Power transmission and lubricator therefor. N. M. Albright. No. 1,102,709; July 7; Gaz. vol. 204; p. 170.
Power-transmission mechanism, Control system for. N. Taylor. No. 1,102,557; July 7; Gaz. vol. 204; p. 117.
Preliminary heater. N. Klim. No. 1,104,302; July 21; Gaz. vol. 204; p. 808.
Preserving apparatus. J. C. Lincoln. No. 1,102,769; July 7; Gaz. vol. 204; p. 191.
Press: *See* Arbor-press; Baling-press; Barrel-heading press; Box-press; Drill-press; Earthenware-press; Embossing and printing press; Hay-press; Nailing-press; Printing-press; Stereotype-matrix-making press.
Press, A. W. Sizer. No. 1,102,301; July 7; Gaz. vol. 204; p. 28.
Presses, Safety attachment for foot stamping and other W. W. Shinski. No. 1,105,106; July 28; Gaz. vol. 204; p. 1136.
Pressure-regulating device. H. R. Bickford. No. 1,103,474; July 14; Gaz. vol. 204; p. 481.
Priming-cup. F. M. Furber. No. 1,103,137; July 14; Gaz. vol. 204; p. 366.
Printers' overlays and underlays, Making. W. E. Radtke. No. 1,105,159; July 28; Gaz. vol. 204; p. 1154.
Printing apparatus. W. A. Pringle. No. 1,105,042; July 28; Gaz. vol. 204; p. 1114.
Printing attachment for wrapping-paper reels. S. Alexander. No. 1,102,627; July 7; Gaz. vol. 204; p. 143.
Printing device. J. J. A. Jones. No. 1,102,589; July 7; Gaz. vol. 204; p. 130.
Printing in relief, Machine for. L. S. Deleuil. No. 1,102,884; July 7; Gaz. vol. 204; p. 230.
Printing-machine. G. H. Lang. No. 1,103,063; July 14; Gaz. vol. 204; p. 339.
Printing-machine. A. H. Ray. No. 1,104,829; July 28; Gaz. vol. 204; p. 1042.
Printing-machine cutting device. J. Jacobs and A. Nefgen. No. 1,103,292; July 14; Gaz. vol. 204; p. 419.
Printing-machine for text and intaglio fine printing, Combined. A. Burgert. No. 1,105,482; July 28; Gaz. vol. 204; p. 1271.
Printing machine, Rotary intaglio-. E. Mertens. No. 1,103,805; July 14; Gaz. vol. 204; p. 598.
Printing mechanism for adding-machines. J. C. Lotterhand. (Reissue.) No. 13,781; July 28; Gaz. vol. 204; p. 1311.
Printing mechanism for recorders. J. F. Ohmer. No. 1,102,949; July 7; Gaz. vol. 204; p. 251.
Printing or addressing machines, Type or slug feed for. J. Tomlinson. No. 1,103,313; July 28; Gaz. vol. 204; p. 1209.
Printing-press. H. L. Koehler. No. 1,103,147; July 14; Gaz. vol. 204; p. 370.
Printing-press. G. P. Fenner. No. 1,103,665; July 14; Gaz. vol. 204; p. 551.
Printing-press. G. S. Williamson. No. 1,104,461; July 21; Gaz. vol. 204; p. 864.
Printing-press. R. Miehle. No. 1,105,574; July 28; Gaz. vol. 204; p. 1302.
Printing-press. R. Miehle. No. 1,105,575; July 28; Gaz. vol. 204; p. 1302.
Printing-press attachment. W. R. Hildebrand. No. 1,104,669; July 21; Gaz. vol. 204; p. 937.
Printing-press clamp. G. W. Bennett. No. 1,103,862; July 14; Gaz. vol. 204; p. 617.
Printing-press roll. W. MacGowan. No. 1,104,432; July 21; Gaz. vol. 204; p. 853.
Printing-press tension-regulating means. W. S. Morse. No. 1,103,153; July 14; Gaz. vol. 204; p. 372.
Printing-press tension-regulator. W. S. Morse. No. 1,103,152; July 14; Gaz. vol. 204; p. 372.
Printing-presses, Bed-cushioning device for. S. Moe. No. 1,104,819; July 28; Gaz. vol. 204; p. 1038.
Printing presses, Device for wiping the printing-surfaces of intaglio-. K. Röger. No. 1,102,548; July 7; Gaz. vol. 204; p. 114.
Projectile, Armor-piercing. W. H. Keen. No. 1,102,758; July 7; Gaz. vol. 204; p. 188.
Projecting apparatus, Supporting structure for. E. Schneider. No. 1,104,834; July 28; Gaz. vol. 204; p. 1043.
Propeller. J. F. Woodyard. No. 1,103,855; July 14; Gaz. vol. 204; p. 614.
Propeller. H. Coanda. No. 1,104,963; July 28; Gaz. vol. 204; p. 1088.
Propeller-drive for ships, Geared. J. G. Weir. No. 1,103,117; July 14; Gaz. vol. 204; p. 359.
Pruning or like implement. W. A. Bernard. No. 1,104,768; July 28; Gaz. vol. 204; p. 1020.
Pull-switch socket. R. B. Benjamin. No. 1,102,639; July 7; Gaz. vol. 204; p. 147.
Puller: *See* Pipe and bolt puller.
Pulling-over machines, Tip-measure for. A. L. Coombs. No. 1,104,878; July 28; Gaz. vol. 204; p. 1058.
Pulley. J. C. Kump and A. E. Finch. No. 1,102,928; July 7; Gaz. vol. 204; p. 245.
Pulley, Sash-. U. G. McQueen. No. 1,104,525; July 21; Gaz. vol. 204; p. 888.
Pulp thickener and save-all, Wood-. A. D. Wood. No. 1,103,725; July 14; Gaz. vol. 204; p. 571.
Pulverizer. C. A. Bates. No. 1,102,230; July 7; Gaz. vol. 204; p. 4.
Pulverizer. J. B. Knoblock. No. 1,104,121; July 21; Gaz. vol. 204; p. 747.
Pulverizing-mill. E. Barthelmess. No. 1,103,557; July 14; Gaz. vol. 204; p. 509.
Pump. A. A. Bowser. No. 1,102,468; July 7; Gaz. vol. 204; p. 87.
Pump. C. H. Fox. No. 1,103,190; July 14; Gaz. vol. 204; p. 386.
Pump. E. W. Clark. No. 1,104,962; July 28; Gaz. vol. 204; p. 1087.
Pump, Compressor-. T. E. Murray and A. W. H. Griepe. No. 1,103,986; July 21; Gaz. vol. 204; p. 700.
Pump, Deep-well. W. B. Hewitt. No. 1,102,583; July 7; Gaz. vol. 204; p. 127.
Pump, Deep-well. G. A. Griffin. No. 1,102,908; July 7; Gaz. vol. 204; p. 238.
Pump-driving mechanism. T. F. Mulligan. No. 1,102,537; July 7; Gaz. vol. 204; p. 110.
Pump, Gear-. A. Sundh. No. 1,105,312; July 28; Gaz. vol. 204; p. 1209.
Pump, Hydraulic. J. Davidson. No. 1,103,569; July 14; Gaz. vol. 204; p. 514.
Pump, Oil-. A. Loomis. No. 1,105,085; July 28; Gaz. vol. 204; p. 1130.
Pump or motor, Fluid. K. Kiefer. No. 1,103,053; July 14; Gaz. vol. 204; p. 336.
Pump, Rotary. J. H. Myers. No. 1,102,288; July 7; Gaz. vol. 204; p. 23.
Pumps, Bearing for centrifugal. A. C. Paulsmeier. No. 1,102,604; July 7; Gaz. vol. 204; p. 135.
Pumps from ozone, Protecting. C. Knips. No. 1,103,211; July 14; Gaz. vol. 204; p. 393.
Pumps, Relief valve and system for motor or other driven. G. W. Johnson. No. 1,102,273; July 7; Gaz. vol. 204; p. 18.
Pumping apparatus, Hand-portable. H. P. Bliss. No. 1,104,098; July 21; Gaz. vol. 204; p. 740.
Punch for pliers, Leather-. S. A. Freer. No. 1,105,129; July 28; Gaz. vol. 204; p. 1144.
Punching machine, Jacquard-card-. H. Saurer. No. 1,104,550; July 21; Gaz. vol. 204; p. 897.
Punching machine, Jacquard-card-. H. Saurer. No. 1,104,551; July 21; Gaz. vol. 204; p. 898.
Punching-machines, Spacing device for. J. K. Thompson. No. 1,105,113; July 28; Gaz. vol. 204; p. 1139.
Push-button switch. G. B. Thomas. No. 1,102,967; July 7; Gaz. vol. 204; p. 258.
Puzzle. D. E. Folley. No. 1,102,576; July 7; Gaz. vol. 204; p. 125.
Puzzle. E. F. Slear. No. 1,103,442; July 14; Gaz. vol. 204; p. 469.
Pyrometer, Thermo-electric. C. H. Wilson. No. 1,103,640; July 14; Gaz. vol. 204; p. 542.
Rack: *See* Card-rack; Clothes-rack; Display-rack; Pipe-rack; Spool-rack; Stencil-rack.
Rack. G. E. Dean. No. 1,104,970; July 28; Gaz. vol. 204; p. 1090.
Radiator. W. J. Hamilton. No. 1,103,010; July 7; Gaz. vol. 204; p. 273.
Radiator. H. de Boischevalier. No. 1,103,011; July 7; Gaz. vol. 204; p. 274.
Radiator attachment. D. C. Webb. No. 1,102,705; July 7; Gaz. vol. 204; p. 168.
Radiator attachment. I. Wagner. No. 1,104,587; July 21; Gaz. vol. 204; p. 909.

Radiator-heater, Portable. M. Lewless. No. 1,102,934; July 7; Gaz. vol. 204; p. 247.
Radiator, Steam-. L. W. Eggleston. No. 1,104,350; July 21; Gaz. vol. 204; p. 826.
Radio-active barium compounds, Treating. H. N. McCoy. No. 1,103,600; July 14; Gaz. vol. 204; p. 527.
Raft, Life-. A. Thompson. No. 1,104,845; July 28; Gaz. vol. 204; p. 1046.
Rail-brace and tie-plate, Combined. O. H. Courson. No. 1,102,725; July 7; Gaz. vol. 204; p. 175.
Rail chair and brace. J. Wolf. No. 1,103,119; July 14; Gaz. vol. 204; p. 360.
Rail-fastener. S. C. Collins. No. 1,103,129; July 14; Gaz. vol. 204; p. 363.
Rail-guard. J. Mihalyak. No. 1,103,680; July 14; Gaz. vol. 204; p. 557.
Rail-joint. B. G. Braine. No. 1,103,394; July 14; Gaz. vol. 204; p. 453.
Rail-joint. J. A. Maloy. No. 1,103,677; July 14; Gaz. vol. 204; p. 556.
Rail-joint. O. Johnson. No. 1,103,881; July 14; Gaz. vol. 204; p. 624.
Rail-joint. C. Herndon. No. 1,103,964; July 21; Gaz. vol. 204; p. 694.
Rail-joint. A. M. Bauer. No. 1,104,241; July 21; Gaz. vol. 204; p. 788.
Rail-joint. A. J. Calfee. No. 1,104,406; July 21; Gaz. vol. 204; p. 845.
Rail-joint. C. P. Goetzinger. No. 1,104,656; July 21; Gaz vol. 204; p. 932.
Rail-joint. C. E. Ballou. No. 1,104,864; July 28; Gaz. vol. 204; p. 1053.
Rail-joint. S. Swain. No. 1,105,220; July 28; Gaz. vol. 204; p. 1176.
Rail joint and chair. L. Hunyadi. No. 1,104,193; July 21; Gaz. vol. 204; p. 772.
Rail-joint, Crowned-base. B. Wolhaupter. No. 1,103,460; July 14; Gaz. vol. 204; p. 476.
Rail-joint, Safety boltless. J. D. Young. No. 1,102,561; July 7; Gaz. vol. 204; p. 119.
Rail, Safety-. J. A. Speck. No. 1,104,080; July 21; Gaz. vol. 204; p. 734.
Rail sleeper, Street-. H. S. Gover. No. 1,103,761; July 14; Gaz. vol. 204; p. 582.
Rail-stop. H. J. Melville. No. 1,104,528; July 21; Gaz. vol. 204; p. 889.
Rail support, Third-. W. B. Potter. No. 1,104,220; July 21; Gaz. vol. 204; p. 781.
Rail-tie. J. Wysocki. No. 1,102,845; July 7; Gaz. vol. 204; p. 218.
Rail-tie, Metal. J. I. Hoffman. No. 1,105,432; July 28; Gaz. vol. 204; p. 1253.
Rail-tie-spacing device. S. H. Young. No. 1,103,726; July 14; Gaz. vol. 204; p. 571.
Rails, Bridle for track-. J. C. Redmond. No. 1,105,101; July 28; Gaz. vol. 204; p. 1135.
Railway and road vehicles, Buffer and coupling for. J. F. Harker. No. 1,105,511; July 28; Gaz. vol. 204; p. 1281.
Railway bumping block or post. J. M. Waugh. No. 1,104,332; July 21; Gaz. vol. 204; p. 820.
Railway card-holder. J. R. Carmer and C. O. Keagy. No. 1,102,869; July 7; Gaz. vol. 204; p. 226.
Railway cattle-guard. H. E. Hopkins. No. 1,105,434; July 28; Gaz. vol. 204; p. 1254.
Railway cross-tie. D. W. Hostetler. No. 1,102,663; July 7; Gaz. vol. 204; p. 155.
Railway-crossing, Adjustable sectional. J. W. Brees and O. L. Hupp. No. 1,102,235; July 7; Gaz. vol. 204; p. 6.
Railway-crossing gate. J. Tóth. No. 1,102,968; July 7; Gaz. vol. 204; p. 258.
Railway-crossing gate. J. G. Hornlack. No. 1,105,078; July 28; Gaz. vol. 204; p. 1128.
Railway curves, Safety device for street-. S. Bluefielder. No. 1,103,256; July 14; Gaz. vol. 204; p. 408.
Railway frogs and guard-rails, Safety device for. E. B. Malcolm. No. 1,104,305; July 21; Gaz. vol. 204; p. 809.
Railway-rail. G. M. Peters. No. 1,104,923; July 28; Gaz. vol. 204; p. 1074.
Railway-rail joint and tie-plate combined, Boltless. J. L. Milton and J. E. Holland. No. 1,104,694; July 21; Gaz. vol. 204; p. 945.
Railway signal means, Electrically-operated. G. F. Mergell. No. 1,102,779; July 7; Gaz. vol. 204; p. 195.
Railway signaling system. W. V. Moak. No. 1,102,783; July 7; Gaz. vol. 204; p. 196.
Railway-spike. A. W. Ehlert. No. 1,102,485; July 7; Gaz. vol. 204; p. 92.
Railway-spike. G. Standfest. No. 1,103,444; July 14; Gaz. vol. 204; p. 470.
Railway-spike. J. Golch. No. 1,104,884; July 28; Gaz. vol. 204; p. 1060.
Railway-switch. G. W. Whiteman. No. 1,103,720; July 14; Gaz. vol. 204; p. 569.
Railway-switch. T. L. Wyatt. No. 1,105,393; July 28; Gaz. vol. 204; p. 1240.
Railway-switch, Electric. H. A. Jackson. No. 1,102,664; July 7; Gaz. vol. 204; p. 155.
Railway-switch, Safety automatic. R. H. French. No. 1,103,577; July 14; Gaz. vol. 204; p. 518.
Railway system. A. L. W. Begg. No. 1,102,231; July 7; Gaz. vol. 204; p. 4.
Railway-tie. C. L. Seyler. No. 1,102,693; July 7; Gaz. vol. 204; p. 164.
Railway-tie. H. Haring. No. 1,103,764; July 14; Gaz. vol. 204; p. 584.
Railway-tie. J. W. Clark, Jr. No. 1,105,023; July 28; Gaz. vol. 204; p. 1107.
Railway-tie and fastening device. L. J. Baltz. No. 1,105,319; July 28; Gaz. vol. 204; p. 1212.
Railway-tie and rail-fastener. H. A. Berquist. No. 1,102,857; July 7; Gaz. vol. 204; p. 222.
Railway-tie, Composition. A. Giuliani. No. 1,104,258; July 21; Gaz. vol. 204; p. 793.
Railway-tie, Concrete. R. H. Johnson. No. 1,105,201; July 28; Gaz. vol. 204; p. 1169.
Railway-trains, Automatic stop for. B. Monterastelli. No. 1,103,368; July 14; Gaz. vol. 204; p. 445.
Rain-maker. J. M. Cordray. No. 1,103,490; July 14; Gaz. vol. 204; p. 486.
Raising and lowering mechanism. G. E. Rellay. No. 1,103,839; July 14; Gaz. vol. 204; p. 609.
Rake: *See* Self-cleaning rake.
Rake. L. E. Waterman. No. 1,104,749; July 21; Gaz. vol. 204; p. 964.
Rake and stalk-cutter, Combined. S. G. Spencer. No. 1,105,006; July 28; Gaz. vol. 204; p. 1101.
Rake tooth, Hay-. H. Torgersen. No. 1,104,020; July 21; Gaz. vol. 204; p. 712.
Range, Gas-. J. Roy. No. 1,104,224; July 21; Gaz. vol. 204; p. 782.
Ratchet mechanism. A. H. Adams. No. 1,104,464; July 21; Gaz. vol. 204; p. 865.
Ratchet-wheel and the like. E. E. Harris. No. 1,104,666; July 21; Gaz. vol. 204; p. 936.
Razor-blade holder, Safety-. R. Marx. No. 1,103,977; July 21; Gaz. vol. 204; p. 698.
Razor blades, Honing-support for safety-. F. A. Nelder. No. 1,103,427; July 14; Gaz. vol. 204; p. 464.
Razor, Safety-. E. L. McCaln. No. 1,103,904; July 14; Gaz. vol. 204; p. 631.
Razor, Safety-. J. P. Stevens. No. 1,104,570; July 21; Gaz. vol. 204; p. 905.
Razor, Safety-. F. Windham. No. 1,104,857; July 28; Gaz. vol. 204; p. 1051.
Receptacle. W. E. Haist. No. 1,102,499; July 7; Gaz. vol. 204; p. 97.
Receptacle-making machine. W. E. Claussen. No. 1,103,940; July 21; Gaz. vol. 204; p. 685.
Reclining-chair. J. W. R. Andrews. No. 1,105,234; July 28; Gaz. vol. 204; p. 1182.
Recorder: *See* Electric recorder; Time-recorder.
Recorder. E. Schuch. No. 1,103,691; July 14; Gaz. vol. 204; p. 561.
Recorder. C. W. Dake and C. P. McGinnis. No. 1,104,250; July 21; Gaz. vol. 204; p. 790.
Reel. M. Lachman. No. 1,103,519; July 14; Gaz. vol. 204; p. 495.
Reel. L. W. Gill. No. 1,105,028; July 28; Gaz. vol. 204; p. 1109.
Reflector-cluster. O. A. Mygatt. No. 1,105,038; July 28; Gaz. vol. 204; p. 1113.
Reflector-shade. R. B. Benjamin. No. 1,103,252; July 14; Gaz. vol. 204; p. 407.
Refrigerating apparatus. C. J. Coleman. No. 1,102,998; July 7; Gaz. vol. 204; p. 268.
Refrigerating apparatus. C. J. Coleman. No. 1,102,999; July 7; Gaz. vol. 204; p. 268.
Refrigerating apparatus. J. Hamersley. No. 1,104,665; July 21; Gaz. vol. 204; p. 935.
Refrigerating apparatus. J. Zander and J. Levey. No. 1,105,171; July 28; Gaz. vol. 204; p. 1158.
Refrigerating apparatus, Device for indicating condition of gas in. T. E. Murray and A. W. H. Griepe. No. 1,103,985; July 21; Gaz. vol. 204; p. 700.
Refrigerating systems, Controlling device for. G. Knox. No. 1,103,885; July 14; Gaz. vol. 204; p. 625.
Refrigerator. F. V. Detwiler. No. 1,105,410; July 28; Gaz. vol. 204; p. 1245.
Refrigerator-cars, Pipe system for discharging waste water from. J. A. Applewhite. No. 1,104,953; July 28; Gaz. vol. 204; p. 1084.
Refrigerator, Dispensing-. E. C. Fain. No. 1,105,502; July 28; Gaz. vol. 204; p. 1277.
Regenerative furnace. F. Siemens. No. 1,102,359; July 7; Gaz. vol. 204; p. 47.
Regenerator construction. T. H. Kenvin. No. 1,104,513; July 21; Gaz. vol. 204; p. 883.
Register: *See* Autographic register; Cash-register; Fare-register; Telephone coin-register.
Register device, Side-. E. J. F. Ren. No. 1,103,433; July 14; Gaz. vol. 204; p. 466.
Registering-meter for gas and the like. J. M. Rusby. No. 1,105,581; July 28; Gaz. vol. 204; p. 1304.
Regulator: *See* Damper-regulator; Draft-regulator; Electric-circuit regulator; Fuel-regulator; Furnace-regulator; Gas-regulator; Hair-spring regulator; Temperature-regulator; Voltage-regulator.
Relay, Electric. W. L. Richards. No. 1,103,688; July 14; Gaz. vol. 204; p. 560.
Relay for undulatory currents. R. von Lieben and E. Reisz. (Reissue.) No. 13,779; July 21; Gaz. vol. 204; p. 973.
Repair-jack. D. Rounds. No. 1,103,844; July 14; Gaz. vol. 204; p. 610.
Resilient wheel. E. Geisil. No. 1,103,502; July 14; Gaz. vol. 204; p. 489.
Resilient wheel. A. Cléret. No. 1,105,321; July 28; Gaz. vol. 204; p. 1213.

Resistance, Artificial. G. J. Gage. No. 1,105,070; July 28; Gaz. vol. 204; p. 1124.
Resistance set. I. B. Smith. No. 1,104,841; July 28; Gaz. vol. 204; p. 1045.
Respiration apparatus, Smoke-mask for. A. B. Dräger. No. 1,105,127; July 28; Gaz. vol. 204; p. 1143.
Reversing-switch. W. S. Morse. No. 1,103,154; July 14; Gaz. vol. 204; p. 373.
Reversing-switch, Automatic. A. H. Fox and A. W. Linderoth. No. 1,103,405; July 14; Gaz. vol. 204; p. 456.
Riffle-box. K. F. Nelson. No. 1,104,919; July 28; Gaz. vol. 204; p. 1073.
Rifle, Repeating. O. A. Vogel. No. 1,103,715; July 14; Gaz. vol. 204; p. 568.
Ring: *See* Packing-ring; Piston-ring.
Ring-forming apparatus. H. Henrich. No. 1,105,559; July 28; Gaz. vol. 204; p. 1297.
Ring-forming apparatus. H. Henrich. No. 1,105,560; July 28; Gaz. vol. 204; p. 1297.
Ringer, Biased polarized. W. Kaisling. No. 1,102,415; July 7; Gaz. vol. 204; p. 68.
Ripper and case, Safety. H. A. Smith. No. 1,104,563; July 21; Gaz. vol. 204; p. 902.
Road-bed and making same. B. F. Richardson. No. 1,105,580; July 28; Gaz. vol. 204; p. 1304.
Road-beds and pavements, Making. J. A. Johnston. No. 1,102,927; July 7; Gaz. vol. 204; p. 244.
Road-machine. J. Brophy. No. 1,103,936; July 21; Gaz. vol. 204; p. 684.
Road-roller. O. A. Schamell. No. 1,102,443; July 7; Gaz. vol. 204; p. 78.
Roasting-furnace. K. J. Beskow and A. Ramén. No. 1,104,288; July 21; Gaz. vol. 204; p. 804.
Rocket apparatus. R. H. Goddard. No. 1,102,653; July 7; Gaz. vol. 204; p. 152.
Rocket apparatus. R. H. Goddard. No. 1,102,653; July 14; Gaz. vol. 204; p. 489.
Rod: *See* Connecting-rod.
Roll. C. O. C. Pack. No. 1,104,270; July 21; Gaz. vol. 204; p. 797.
Roll-adjusting mechanism. E. A. Wall. No. 1,103,113; July 14; Gaz. vol. 204; p. 358.
Roll-grading machine. J. C. Bell. No. 1,104,727; July 21; Gaz. vol. 204; p. 957.
Roller: *See* Land-roller; Road-roller.
Roller release, Platen-. R. M. Mosher. No. 1,104,538; July 21; Gaz. vol. 204; p. 893.
Rollers, Handle-locking device for. G. E. Karl. No. 1,105,279; July 28; Gaz. vol. 204; p. 1197.
Rolling cutter, Spring-tensioned. M. C. Thompson. No. 1,103,101; July 14; Gaz. vol. 204; p. 353.
Rolling-mill plant. V. E. Edwards. No. 1,104,349; July 21; Gaz. vol. 204; p. 826.
Rolling-mills, Automatic feed mechanism for. W. H. Forbes. No. 1,104,788; July 28; Gaz. vol. 204; p. 1026.
Roofing, Laying waterproof. F. C. Overbury. No. 1,102,680; July 7; Gaz. vol. 204; p. 160.
Roofing, Machine for making metal-reinforced. F. J. Jewett. No. 1,105,277; July 28; Gaz. vol. 204; p. 1196.
Roost and dropping-board for hen-houses. E. Perkins. No. 1,102,794; July 7; Gaz. vol. 204; p. 199.
Rope-drive elevator. G. John. No. 1,102,514; July 7; Gaz. vol. 204; p. 102.
Rope or cable lubricator. G. D. Smith. No. 1,102,965; July 7; Gaz. vol. 204; p. 257.
Rosin from resinous wood, Extracting. F. E. Lichtenthaeler. No. 1,104,912; July 28; Gaz. vol. 204; p. 1071.
Rotary cutter. A. Latham. No. 1,104,910; July 28; Gaz. vol. 204; p. 1070.
Rotary engine. E. B. Tree. No. 1,104,331; July 21; Gaz. vol. 204; p. 819.
Rotary engine. C. R. Ord. No. 1,104,539; July 21; Gaz. vol. 204; p. 894.
Rotary engine. R. B. Hayden. No. 1,105,076; July 28; Gaz. vol. 204; p. 1127.
Rotary engine or pump. J. Nielsen. No. 1,105,449; July 28; Gaz. vol. 204; p. 1259.
Rotary gas-engine, Multicylinder. F. Weinberg. No. 1,105,618; July 28; Gaz. vol. 204; p. 1141.
Rotary kiln. H. E. Ritsager. No. 1,103,381; July 14; Gaz. vol. 204; p. 449.
Rotary motor. E. E. Hauer. No. 1,102,742; July 7; Gaz. vol. 204; p. 182.
Rotary motor. E. E. Hauer. No. 1,102,743; July 7; Gaz. vol. 204; p. 182.
Rotary motor. E. E. Hauer. No. 1,102,746; July 7; Gaz. vol. 204; p. 183.
Rotary motor. E. E. Hauer. No. 1,102,748; July 7; Gaz. vol. 204; p. 184.
Rotary motor. E. E. Hauer. No. 1,102,749; July 7; Gaz. vol. 204; p. 184.
Rotary motor. E. E. Hauer. No. 1,102,915; July 7; Gaz. vol. 204; p. 240.
Rotary motor. C. F. Overly. No. 1,104,070; July 21; Gaz. vol. 204; p. 730.
Rotary motor for driving tools. C. F. Overly. No. 1,104,071; July 21; Gaz. vol. 204; p. 731.
Rubber footwear. L. J. Grosky. No. 1,105,270; July 28; Gaz. vol. 204; p. 1194.
Rubber, leather, cereals, or other suitable substances, Apparatus for cutting, grinding, mincing, or pulverizing. J. Ogden. No. 1,102,789; July 7; Gaz. vol. 204; p. 198.
Rubber, Making sponge. J. Huebner. No. 1,103,359; July 14; Gaz. vol. 204; p. 442.
Rubber sole for boots and shoes. C. S. Redfield. No. 1,103,802; July 14; Gaz. vol. 204; p. 628.
Rugs to be cleaned, Support for. F. M. Arnold. No. 1,103,019; July 14; Gaz. vol. 204; p. 325.
Ruler and blotter, Combined. E. Schmidt. No. 1,105,002; July 28; Gaz. vol. 204; p. 1100.
Running-gear. C. W. Reynolds. No. 1,102,356; July 7; Gaz. vol. 204; p. 47.
Sack-holder. H. I. Moore. No. 1,103,370; July 14; Gaz. vol. 204; p. 446.
Saddle and girth, Harness. R. Miller and W. E. Sell. No. 1,105,287; July 28; Gaz. vol. 204; p. 1199.
Saddle, Harness-. H. B. White. No. 1,104,397; July 21; Gaz. vol. 204; p. 842.
Safety appliance. J. Severance. No. 1,103,894; July 14; Gaz. vol. 204; p. 628.
Safety-bar. L. A. Brown. No. 1,104,101; July 21; Gaz. vol. 204; p. 741.
Safety device. C. W. Quin. No. 1,103,221; July 14; Gaz. vol. 204; p. 396.
Safety device. J. Schade, Jr. No. 1,103,437; July 14; Gaz. vol. 204; p. 467.
Safety-lock. W. F. Walker. No. 1,102,830; July 7; Gaz. vol. 204; p. 213.
Safety-lock. A. Re. No. 1,104,274; July 21; Gaz. vol. 204; p. 799.
Salt and pepper shaker. C. A. Conger. No. 1,102,978; July 7; Gaz. vol. 204; p. 261.
Salt, Making. C. L. Weil. No. 1,105,387; July 28; Gaz. vol. 204; p. 1238.
Salt, Manufacture of. J. H. Webster. No. 1,104,854; July 28; Gaz. vol. 204; p. 1050.
Sanitary apparatus. M. Mouat. No. 1,103,890; July 14; Gaz. vol. 204; p. 627.
Sash, Adjustable swinging window-. T. M. House. No. 1,105,199; July 28; Gaz. vol. 204; p. 1168.
Sash and weather-guard therefor, Window-. W. S. Hamm. No. 1,102,403; July 7; Gaz. vol. 204; p. 64.
Sash-balance. E. Schoenheit. No. 1,102,444; July 7; Gaz. vol. 204; p. 78.
Sash-balance. G. H. Forsyth. No. 1,103,496; July 14; Gaz. vol. 204; p. 487.
Sash-fastener. W. C. Mattern and W. Koch. No. 1,103,214; July 14; Gaz vol. 204; p. 394.
Sash-guide. E. R. Leonard. No. 1,105,147; July 28; Gaz. vol. 204; p. 1150.
Sash-holder. R. S. Frary and W. W. Macfarren. No. 1,102,489; July 7; Gaz. vol. 204; p. 94.
Sash-holder for sliding sashes. T. Mason. No. 1,102,531; July 7; Gaz. vol. 204; p. 108.
Sash-lock. M. Lande. No. 1,102,519; July 7; Gaz. vol. 204; p. 104.
Sash-lock. J. D. Babb. No. 1,102,710; July 7; Gaz. vol. 204; p. 170.
Sash-lock. W. H. Vance. No. 1,103,229; July 14; Gaz. vol. 204; p. 398.
Sash-lock. H. J. Stang. No. 1,104,081; July 21; Gaz. vol. 204; p. 734.
Sash-lock. E. O. Harvey. No. 1,104,991; July 28; Gaz. vol. 204; p. 1096.
Sash-lock. E. L. Rasmussen. No. 1,105,100; July 28; Gaz. vol. 204; p. 1134.
Sash, Reversible window-. C. O. Kuehny. No. 1,105,523; July 28; Gaz. vol. 204; p. 1285.
Sash-weight. D. G. Carroll. No. 1,103,866; July 14; Gaz. vol. 204; p. 619.
Sash, Window-. A. O. Johnson. No. 1,103,774; July 14; Gaz. vol. 204; p. 587.
Saw-handle. H. Pedersen. No. 1,102,293; July 7; Gaz. vol. 204; p. 25.
Saw-set. O. N. Garness. No. 1,103,668; July 14; Gaz. vol. 204; p. 553.
Saw-setting tool. G. Halinka and F. Anton. No. 1,102,500; July 7; Gaz. vol. 204; p. 97.
Saw table, Miter-. H. J. Gage. No. 1,104,982; July 28; Gaz. vol. 204; p. 1094.
Saw-tooth. W. S. McLean. No. 1,105,153; July 28; Gaz. vol. 204; p. 1152.
Sawmill. D. L. Adams. No. 1,105,591; July 28; Gaz. vol. 204; p. 1308.
Scalding-machine. W. B. Stevens. No. 1,104,571; July 21; Gaz. vol. 204; p. 905.
Scale, Weighing-. C. H. Hapgood. No. 1,104,496; July 21; Gaz. vol. 204; p. 877.
Scales and the like, Marker for. A. W. Jansen. No. 1,104,424; July 21; Gaz vol. 204; p. 851.
Scales, Roller-platform for. H. M. Grant. No. 1,103,505; July 14; Gaz. vol. 204; p. 490.
Scales, Vertical loader for weighing-. H. M. B. Bary. No. 1,104,401; July 21; Gaz. vol. 204; p. 843.
Scoop and elevator, Earth. E. J. Akins. No. 1,104,031; July 21; Gaz. vol. 204; p. 716.
Scraper, Loaf-sugar. E. F. Benoit. No. 1,104,097; July 21; Gaz. vol. 204; p. 739.
Scraper, Dirt-. J. MacDougall. No. 1,105,283; July 28; Gaz. vol. 204; p. 1198.
Scraper, Road-. G. Eyers. No. 1,103,951; July 21; Gaz. vol. 204; p. 690.
Scraper, Wheel-. E. M. Utterback. No. 1,105,469; July 28; Gaz. vol. 204; p. 1267.
Screen: *See* Window-screen.
Screen. E. A. Wood. No. 1,103,167; July 14; Gaz. vol. 204; p. 377.
Screw-driver and drilling-machine, Mechanical. J. P. Nissen. No. 1,102,947; July 7; Gaz. vol. 204; p. 250.

Screw-extractor. J. O. Roberts. No. 1,105,535; July 28; Gaz. vol. 204; p. 1289.
Screw, Stage-. P. Witte. No. 1,103,723; July 14; Gaz. vol. 204; p. 570.
Screw-threads, Chaser for cutting. R. M. Phelan. No. 1,104,541; July 21; Gaz. vol. 204; p. 894.
Scrip-holder. G. H. Cleveland. No. 1,103,739; July 14; Gaz. vol. 204; p. 576.
Scupper. S. Kahn. No. 1,104,806; July 28; Gaz. vol. 204; p. 1033.
Scythe. G. Streit. No. 1,102,814; July 7; Gaz. vol. 204; p. 207.
Seal, Bung-. J. M. Hothersall. No. 1,104,506; July 21; Gaz. vol. 204; p. 881.
Seal, Car-. E. E. Jameson. No. 1,102,512; July 7; Gaz. vol. 204; p. 101.
Seal-fastening. T. E. Murray. No. 1,105,037; July 28; Gaz. vol. 204; p. 1112.
Seal-lock. V. Del Lungo. No. 1,105,550; July 28; Gaz. vol. 204; p. 1294.
Seal, Snap-. G. Gordon. No. 1,102,262; July 7; Gaz. vol. 204; p. 14.
Sealing wrapped packages, Appliance for. H. A. Sévigné. No. 1,104,740; July 21; Gaz. vol. 204; p. 961.
Seam of stitches for uniting materials at their abutting edges. E. A. Perry. No. 1,104,072; July 21; Gaz. vol. 204; p. 731.
Seaming machine, Double-. F. Wegner. No. 1,104,751; July 21; Gaz. vol. 204; p. 965.
Seat structure, Removable. R. F. Rogers. No. 1,103,315; July 14; Gaz. vol. 204; p. 427.
Seaweeds for the extraction of their elements, Treatment of. M. P. P. Gloess, L. P. J. and E. R. Darrasse. No. 1,103,283; July 14; Gaz. vol. 204; p. 417.
Seed-cotton cleaner and distributer. W. R. Lamb. No. 1,105,441; July 28; Gaz. vol. 204; p. 1256.
Seed or like drill. R. N. and F. M. Lea. No. 1,105,570; July 28; Gaz. vol. 204; p. 1300.
Seeder. J. O. Greene. No. 1,105,075; July 28; Gaz. vol. 204; p. 1126.
Seine-handling apparatus. P. Negovatich. No. 1,102,945; July 7; Gaz. vol. 204; p. 250.
Selective mechanical operator. E. R. Gill. No. 1,105,194; July 28; Gaz. vol. 204; p. 1166.
Self-cleaning rake, Reversible. J. G. Crozer. No. 1,105,495; July 28; Gaz. vol. 204; p. 1275.
Separator: *See* Dust-separator; Gasolene and oil separator; Magnetic separator.
Separator. P. Kropp. No. 1,104,051; July 21; Gaz. vol. 204; p. 723.
Serving device. F. T. M. Schindeler. No. 1,103,225; July 14; Gaz. vol. 204; p. 397.
Settling-tank. A. D. Wyckoff. No. 1,102,463; July 7; Gaz. vol. 204; p. 85.
Sewage-tank for the purification of sewage. E. Seubert. No. 1,102,553; July 7; Gaz. vol. 204; p. 116.
Sewer-cleaner. W. J. Stevenson. No. 1,102,304; July 7; Gaz. vol. 204; p. 29.
Sewing-machine. H. Houston. No. 1,103,587; July 14; Gaz. vol. 204; p. 522.
Sewing-machine attachment. W. H. Raplee. No. 1,103,836; July 14; Gaz. vol. 204; p. 608.
Sewing-machine cutting attachment. G. W. Parkinson and R. S. Tompkins. No. 1,103,825; July 14; Gaz. vol. 204; p. 604.
Sewing-machine for making thread buttons. H. Laula. No. 1,105,354; July 28; Gaz. vol. 204; p. 1226.
Sewing-machine guide. W. J. Martus. No. 1,103,795; July 14; Gaz. vol. 204; p. 594.
Sewing-machine plait-folder. J. H. De Nike. No. 1,103,663; July 14; Gaz. vol. 204; p. 550.
Sewing machine, Shoe-. H. A. Ballard. No. 1,103,732; July 14; Gaz. vol. 204; p. 573.
Sewing-machine thread-controller. O. E. Elwell. No. 1,105,413; July 28; Gaz. vol. 204; p. 1246.
Sextants, Artificial horizon for. A. Démichel. No. 1,104,639; July 21; Gaz. vol. 204; p. 926.
Shackle, Cushion-. A. Buonicore. No. 1,104,343; July 21; Gaz. vol. 204; p. 823.
Shade and curtain fixture, Window. C. Moore. No. 1,103,982; July 21; Gaz. vol. 204; p. 699.
Shade and curtain-pole bracket. W. J. Reitz. No. 1,104,545; July 21; Gaz. vol. 204; p. 896.
Shade-controller. H. F. Richter. No. 1,104,221; July 21; Gaz. vol. 204; p. 781.
Shade-roller bracket. G. D. Caron. No. 1,105,486; July 28; Gaz. vol. 204; p. 1272.
Shaft-coupling. J. J. Wallbillich. No. 1,103,716; July 14; Gaz. vol. 204; p. 568.
Shafts, Means for connecting. E. Sebastian. No. 1,104,838; July 28; Gaz. vol. 204; p. 1044.
Sharpener, Lawn-mower. J. Hineman. No. 1,103,584; July 14; Gaz. vol. 204; p. 521.
Sharpening band cutting-knives, Device for. J. M. Whitcomb. No. 1,104,592; July 21; Gaz. vol. 204; p. 911.
Sharpening machine, Razor-. A. Winter. No. 1,102,706; July 7; Gaz. vol. 204; p. 169.
Shears: *See* Barber's shears.
Shears. A. Hansen. No. 1,104,495; July 21; Gaz. vol. 204; p. 876.
Sheaves, Making. C. H. Langill. No. 1,104,200; July 21; Gaz. vol. 204; p. 774.
Sheet-deflecting device. J. Groom. No. 1,104,663; July 21; Gaz. vol. 204; p. 935.
Sheet-metal-jointing machine. P. F. Flagge. No. 1,103,953; July 21; Gaz. vol. 204; p. 690.
Sheller: *See* Corn-sheller.
Shield, Sanitary. J. C. Keffer. No. 1,102,759; July 7; Gaz. vol. 204; p. 188.
Shingles, Treating bundles of. C. M. Abbott. No. 1,105,055; July 28; Gaz. vol. 204; p. 1119.
Ship construction. J. Szepessy. No. 1,105,009; July 28; Gaz. vol. 204; p. 1102.
Ship-fender. G. R. Shipman. No. 1,105,461; July 28; Gaz. vol. 204; p. 1263.
Ship-reversing device, Automatic. J. A. Savoy. No. 1,105,537; July 28; Gaz. vol. 204; p. 1289.
Ship, Tank-. R. Zolling. No. 1,103,239; July 14; Gaz. vol. 204; p. 402.
Ship's safety device. A. H. Matthew and J. B. Prouty. No. 1,102,533; July 7; Gaz. vol. 204; p. 109.
Ship's table. T. Dedio. No. 1,104,251; July 21; Gaz. vol. 204; p. 791.
Shipping-package. H. Thompson. No. 1,102,820; July 7; Gaz. vol. 204; p. 209.
Shirt-holder. C. H. Damman. No. 1,103,742; July 14; Gaz. vol. 204; p. 576.
Shock-absorber. A. E. Hall. No. 1,102,265; July 7; Gaz. vol. 204; p. 15.
Shock-absorber. R. H. Carr and J. C. Maddux. No. 1,102,644; July 7; Gaz. vol. 204; p. 149.
Shock-absorber. J. G. Bethune and F. H. Babcock. No. 1,102,858; July 7; Gaz. vol. 204; p. 225.
Shock-absorber. H. H. Boyce. No. 1,102,864; July 7; Gaz. vol. 204; p. 224.
Shock-absorber. J. A. McKnight. No. 1,104,064; July 21; Gaz. vol. 204; p. 728.
Shock-absorber. E. Jenol and S. Kruchlo. No. 1,104,196; July 21; Gaz. vol. 204; p. 772.
Shock-absorber for motor-cycles. C. W. Heath. No. 1,104,500; July 21; Gaz. vol. 204; p. 878.
Shock-absorber for motor-cycles. C. W. Heath. No. 1,104,501; July 21; Gaz. vol. 204; p. 879.
Shock-absorber, Vehicle. P. K. Olechna. No. 1,104,380; July 21; Gaz. vol. 204; p. 836.
Shock-carrier. E. Paulson. No. 1,103,311; July 14; Gaz. vol. 204; p. 426.
Shock-loader. P. T. Zollars. No. 1,102,848; July 7; Gaz. vol. 204; p. 219.
Shocking-machine. C. W. Davison, W. Herriot, E. T. Spidy, and F. A. Mattson. No. 1,103,273; July 14; Gaz. vol. 204; p. 414.
Shoe. C. C. Eaton. No. 1,103,914; July 14; Gaz. vol. 204; p. 634.
Shoe-finishing machine. W. Jackson. No. 1,102,511; July 7; Gaz. vol. 204; p. 101.
Shoe-form. J. Youngman and H. W. Drenan. No. 1,102,464; July 7; Gaz. vol. 204; p. 85.
Shoe-form. A. G. Legge. No. 1,104,304; July 21; Gaz. vol. 204; p. 809.
Shoe-machine jack. E. A. Stiggins. No. 1,104,016; July 21; Gaz. vol. 204; p. 710.
Shoe-machinery controller. V. Hoffman. No. 1,103,204; July 14; Gaz. vol. 204; p. 391.
Shoe-repairing machine. R. S. Cade. No. 1,103,347; July 14; Gaz. vol. 204; p. 439.
Shoe, Roof-. A. E. Van Wie. No. 1,103,108; July 14; Gaz. vol. 204; p. 356.
Shoe-support. J. C. Walsh. No. 1,104,396; July 21; Gaz. vol. 204; p. 841.
Shoe-top protector. H. W. Lambert. No. 1,105,332; July 28; Gaz. vol. 204; p. 1217.
Shoe upper and counter, Machine for tacking the. J. F. Wald. No. 1,102,617; July 7; Gaz. vol. 204; p. 140.
Shoe-upper support. H. W. Lambert. No. 1,105,333; July 28; Gaz. vol. 204; p. 1217.
Shoe ventilating and disinfecting means. H. W. Halley. No. 1,103,874; July 14; Gaz. vol. 204; p. 622.
Shoes, Applying protectors to. W. F. Bostock. No. 1,103,170; July 14; Gaz. vol. 204; p. 378.
Shoes, Making. C. C. Eaton. No. 1,103,913; July 14; Gaz. vol. 204; p. 634.
Shoes, Making. E. Brothers. No. 1,103,937; July 21; Gaz. vol. 204; p. 685.
Shoemaker's jack. W. Esche. No. 1,104,484; July 21; Gaz. vol. 204; p. 872.
Shoemaker's work-bench. G. T. McLeod. No. 1,104,372; July 21; Gaz. vol. 204; p. 833.
Shovel: *See* Power-shovel.
Show-case. A. Vanderveld. No. 1,103,230; July 14; Gaz. vol. 204; p. 399.
Show-case. F. Gurley. No. 1,104,297; July 21; Gaz. vol. 204; p. 807.
Show-case, Revolving-rack. L. W. Welch. No. 1,104,156; July 21; Gaz. vol. 204; p. 758.
Shower-head. A. S. Newton. No. 1,105,576; July 28; Gaz. vol. 204; p. 1303.
Shutter-operating device. J. T. Holtfoth. No. 1,104,118; July 21; Gaz. vol. 204; p. 745.
Shuttle. W. G. Eaton. No. 1,102,890; July 7; Gaz. vol. 204; p. 232.
Shuttle, Hand-threading. N. Demers. No. 1,104,416; July 21; Gaz. vol. 204; p. 848.
Shuttle mechanism. A. C. Hough. No. 1,103,586; July 14; Gaz. vol. 204; p. 521.
Shuttle-threading means. G. B. Hayes. No. 1,103,414; July 14; Gaz. vol. 204; p. 460.
Sickle guard or tooth, Binder-. D. F. Barnes. No. 1,104,240; July 21; Gaz. vol. 204; p. 787.

Sidewalk, &c., Metal-frame and concrete. H. F. Bayley. No. 1,103,472; July 14; Gaz. vol. 204; p. 480.
Sifter-driving mechanism. A. C. Brantingham. No. 1,104,870; July 28; Gaz. vol. 204; p. 1056.
Sifter, Flour-. M. Schlesinger-Thury. No. 1,103,328; July 14; Gaz. vol. 204; p. 432.
Sign-board, Metal. G. L. Palmer. No. 1,104,921; July 28; Gaz. vol. 204; p. 1073.
Sign, Changeable illuminated. C. P. Murdock. No. 1,103,812; July 14; Gaz. vol. 204; p. 600.
Sign, Electric. M. Norden. No. 1,102,788; July 7; Gaz. vol. 204; p. 197.
Sign, Electric. L. H. and L. M. Jones. No. 1,103,294; July 14; Gaz. vol. 204; p. 420.
Sign-holder. S. A. Melvin. No. 1,102,425; July 7; Gaz. vol. 204; p. 72.
Sign, Illuminated-lens. W. M. Scarborough. No. 1,104,008; July 21; Gaz. vol. 204; p. 707.
Signal: *See* Mail-box signal; Telephone-signal.
Signal. J. Kertész. No. 1,103,052; July 14; Gaz. vol. 204; p. 336.
Signal apparatus. F. H. Pettit. No. 1,105,099; July 28; Gaz. vol. 204; p. 1134.
Signal-horn, Diaphragm. H. H. Boyce. No. 1,103,933; July 21; Gaz. vol. 204; p. 683.
Signal-lever, Divided semi-automatic. W. K. Howe. No. 1,103,206; July 14; Gaz. vol. 204; p. 392.
Signal system. E. F. Bliss. No. 1,102,861; July 7; Gaz. vol. 204; p. 223.
Signal system. L. A. Hawkins. No. 1,102,916; July 7; Gaz. vol. 204; p. 241.
Signals, &c., Actuating mechanism for. A. Weinberg. No. 1,102,619; July 7; Gaz. vol. 204; p. 140.
Signaling device. G. L. Barrett. No. 1,103,860; July 14; Gaz. vol. 204; p. 616.
Signaling device for racing-coasters. L. A. Thompson. No. 1,102,821; July 7; Gaz. vol. 204; p. 210.
Signaling system. M. L. Johnson. No. 1,105,350; July 28; Gaz. vol. 204; p. 1224.
Signaling system for mines and the like. G. T. Plumb. No. 1,102,951; July 7; Gaz. vol. 204; p. 252.
Signaling system, Selective. R. N. Hill. No. 1,103,288; July 14; Gaz. vol. 204; p. 418.
Signaling system, Selective. R. N. Hill. No. 1,103,583; July 14; Gaz. vol. 204; p. 520.
Signaling system, Semaphore-. R. M. De Vignier. No. 1,104,480; July 21; Gaz. vol. 204; p. 871.
Silicon monoxid, Producing. H. N. Potter. No. 1,104,384; July 21; Gaz. vol. 204; p. 838.
Silo. E. A. Berry. No. 1,104,866; July 28; Gaz. vol. 204; p. 1055.
Silo-roof, Adjustable. C. W. and W. H. Chambers. No. 1,105,402; July 28; Gaz. vol. 204; p. 1243.
Silos, Packer for. J. A. Westbrook. No. 1,104,333; July 21; Gaz. vol. 204; p. 820.
Silos, Truss or bridge for hoops of. S. E. Anderson. No. 1,103,339; July 14; Gaz. vol. 204; p. 436.
Sintering and stretching process, Combined. K. R. R. Selfert. No. 1,103,382; July 14; Gaz. vol. 204; p. 449.
Sintering smelting products and the like. J. Savelsberg. No. 1,103,318; July 14; Gaz. vol. 204; p. 429.
Skeleton frame and receptacle. R. M. Baddeley. No. 1,103,646; July 14; Gaz. vol. 204; p. 544.
Skid. E. W. Niswanger. No. 1,103,155; July 14; Gaz. vol. 204; p. 373.
Skip or kibble for automatically receiving loose material, Double-. P. Volkenborn. No. 1,103,387; July 14; Gaz. vol. 204; p. 450.
Skirt. M. Mayers. No. 1,104,267; July 21; Gaz. vol. 204; p. 796.
Skirt. A. M. Schneider. No. 1,104,319; July 21; Gaz. vol. 204; p. 814.
Skirt, Lady's. A. Maisin. No. 1,103,148; July 14; Gaz. vol. 204; p. 370.
Skiving-machine. A. Bates, A. E. Jerrom, and J. Gouldbourn. No. 1,103,928; July 21; Gaz. vol. 204; p. 681.
Slag-disintegrating apparatus. L. Larson. No. 1,103,886; July 14; Gaz. vol. 204; p. 625.
Sled-brake. C. W. Foote. No. 1,104,649; July 21; Gaz. vol. 204; p. 930.
Sled, Steering-. A. C. Himebaugh. No. 1,104,799; July 28; Gaz. vol. 204; p. 1030.
Sleigh. W. J. Roecker. No. 1,105,536; July 28; Gaz. vol. 204; p. 1289.
Sleigh attachment for vehicles. A. Hofacker. No. 1,103,415; July 14; Gaz. vol. 204; p. 460.
Slicing machine, Fruit or vegetable. W. H. Boutell. No. 1,102,467; July 7; Gaz. vol. 204; p. 86.
Slide, Extension-. G. C. Kimmel. No. 1,102,416; July 7; Gaz. vol. 204; p. 69.
Slip-folder. F. P. Rockwell. No. 1,104,276; July 21; Gaz. vol. 204; p. 799.
Slipper attachment. R. H. Fullerton. No. 1,103,191; July 14; Gaz. vol. 204; p. 386.
Slipper, Foldable. N. H. Hassel. No. 1,104,357; July 21; Gaz. vol. 204; p. 828.
Slot guard or shield. J. I. McCormick. No. 1,104,370; July 21; Gaz. vol. 204; p. 832.
Slotting, creasing, and slitting machine. H. N. Sickler. No. 1,103,695; July 14; Gaz. vol. 204; p. 562.
Smelter-fumes useful and recovery of their values, Rendering. C. S. Vadner. No. 1,103,165; July 14; Gaz. vol. 204; p. 376.
Smelting-furnace. E. Riveroll. No. 1,105,001; July 28; Gaz. vol. 204; p. 1100.
Smoke-indicator. T. W. McNeill and I. J. Babcock. No. 1,103,603; July 14; Gaz. vol. 204; p. 527.
Smoke-precipitator. C. W. Lent. No. 1,103,304; July 14; Gaz. vol. 204; p. 423.
Smoke-preventer. T. W. Langan. No. 1,104,909; July 28; Gaz. vol. 204; p. 1069.
Smoke-ring-making device. R. F. R. Huntsman. No. 1,103,514; July 14; Gaz. vol. 204; p. 494.
Smoke-stack cleaner. F. C. Willat. No. 1,104,030; July 21; Gaz. vol. 204; p. 715.
Smoke-washer. L. Botteustein. No. 1,102,996; July 7; Gaz. vol. 204; p. 267.
Smoking-pipe. L. B. Linkman. No. 1,104,203; July 21; Gaz. vol. 204; p. 775.
Smudge-kindler, Automatic. I. G. Van Nest and A. J. Killeen. No. 1,102,616; July 7; Gaz. vol. 204; p. 139.
Snap-switch. G. W. Hart. No. 1,103,412; July 14; Gaz. vol. 204; p. 459.
Snare strainer and muffler, Combined. J. A. Meyer. No. 1,104,373; July 21; Gaz. vol. 204; p. 833.
Soap and resin, Manufacturing resin-. J. Aktschourin. No. 1,103,336; July 14; Gaz. vol. 204; p. 435.
Soap dispenser, Liquid-. A. W. Lawnin. No. 1,103,521; July 14; Gaz. vol. 204; p. 496.
Socket-cap. J. H. Goss. No. 1,103,504; July 14; Gaz. vol. 204; p. 490.
Sodium bisulfate in a directly-calculable form, Manufacture of. P. Löffler. No. 1,104,913; July 28; Gaz. vol. 204; p. 1071.
Solder-placing machine. B. Hausheer. No. 1,104,261; July 21; Gaz. vol. 204; p. 794.
Soldering-iron, Self-heating. G. J. Cauthee. No. 1,102,997; July 7; Gaz. vol. 204; p. 267.
Soldering-machine. F. P. McColl. No. 1,103,067; July 14; Gaz. vol. 204; p. 341.
Soldering machine, Can-. H. S. Bechtel. No. 1,104,767; July 28; Gaz. vol. 204; p. 1020.
Sole-leveling machine. E. E. Winkley. No. 1,104,235; July 21; Gaz. vol. 204; p. 786.
Sole-rolling machine. L. C. Colt. No. 1,102,389; July 7; Gaz. vol. 204; p. 59.
Solids from liquids, Obtaining the. I. S. and O. E. Merrell. No. 1,102,601; July 7; Gaz. vol. 204; p. 134.
Sound-box. G. L. Funnell. No. 1,104,182; July 21; Gaz. vol. 204; p. 768.
Sound-producing device. H. A. Gaydon. No. 1,102,260; July 7; Gaz. vol. 204; p. 13.
Sound-producing diaphragm. S. D. Paddack. No. 1,102,291; July 7; Gaz. vol. 204; p. 25.
Sound-record, Composite-disk. V. H. Emerson, G. A. Manwaring, and J. K. Reynard. No. 1,102,253; July 7; Gaz. vol. 204; p. 11.
Sound reproducing and recording instrument. H. G. Wieder. No. 1,102,839; July 7; Gaz. vol. 204; p. 216.
Sound-reproducing machines, Automatic stop for. W. V. Gerster. No. 1,104,489; July 21; Gaz. vol. 204; p. 874.
Sound-reproducing machines, Stylus for. G. Lehr. No. 1,103,592; July 14; Gaz. vol. 204; p. 524.
Sowing land-plaster, Machine for. W. A. Hermens. No. 1,103,768; July 14; Gaz. vol. 204; p. 585.
Spark-extinguisher and smoke-consumer. P. Mulloy and H. Firminbac. No. 1,104,822; July 28; Gaz. vol. 204; p. 1039.
Spark-plug. E. McFarland and E. C. Churning. No. 1,103,797; July 14; Gaz. vol. 204; p. 595.
Spark-plug. W. S. Witter. No. 1,104,159; July 21; Gaz. vol. 204; p. 759.
Spark-plug. E. W. Cole. No. 1,105,064; July 28; Gaz. vol. 204; p. 1122.
Sparking plug. B. T. Ferguson and R. F. Fenton. No. 1,103,187; July 14; Gaz. vol. 204; p. 385.
Spectacle-glass. B. M. Hanan. No. 1,103,962; July 21; Gaz. vol. 204; p. 694.
Speed-changing device. E. Woerner. No. 1,103,335; July 14; Gaz. vol. 204; p. 435.
Speed-changing device. F. N. Connet. No. 1,103,923; July 14; Gaz. vol. 204; p. 638.
Speed-indicator. E. W. Cash. No. 1,102,319; July 7; Gaz. vol. 204; p. 34.
Speed mechanism, Change-. G. O. Leopold. No. 1,103,784; July 14; Gaz. vol. 204; p. 591.
Speed-reducer. A. L. Rissir. No. 1,104,223; July 21; Gaz. vol. 204; p. 782.
Speedometer-alarm. A. Picken. No. 1,104,704; July 21; Gaz. vol. 204; p. 948.
Speedometer for motor-cycles. J. Taylor. No. 1,102,364; July 7; Gaz. vol. 204; p. 49.
Speedoscope. L. C. Duncan. No. 1,105,411; July 28; Gaz. vol. 204; p. 1246.
Spike. C. D. Russell. No. 1,103,542; July 14; Gaz. vol. 204; p. 503.
Spike-retainer. J. E. Rorke. No. 1,103,317; July 14; Gaz. vol. 204; p. 428.
Spindle-adjusting mechanism. R. S. Brown. No. 1,103,479; July 14; Gaz. vol. 204; p. 483.
Spindle drill, Multiple-. W. E. Elliott. No. 1,103,180; July 14; Gaz. vol. 204; p. 382.
Spindle-driving mechanism. A. E. Newton. No. 1,105,529; July 28; Gaz. vol. 204; p. 1286.
Spinning, doubling, and the like, Filer-frame for. J. S. Gaunt and H. Dyson. No. 1,103,194; July 14; Gaz. vol. 204; p. 387.
Spinning-frame device. J. D. Ezell and J. G. King. No. 1,104,881; July 28; Gaz. vol. 204; p. 1059.

Spinning-frame roving-stop. E. J. Vales. No. 1,103,329; July 14; Gaz. vol. 204; p. 432.
Spinning-frames, Saddle for the top rolls of. R. L. Reynolds and A. D. McGraw. No. 1,104,932; July 28; Gaz. vol. 204; p. 1077.
Spinning-machine. A. L. Schoelles. No. 1,103,160; July 14; Gaz. vol. 204; p. 375.
Spinning or twisting machine. J. Good. No. 1,102,334; July 7; Gaz. vol. 204; p. 40.
Splash-board fastening. J. E. Gray. No. 1,104,792; July 28; Gaz. vol. 204; p. 1028.
Splitting or skiving machine. C. Pease. No. 1,104,001; July 21; Gaz. vol. 204; p. 705.
Spool-holder. S. Hans. No. 1,102,740; July 7; Gaz. vol. 204; p. 181.
Spool-rack. W. J. Larimer. No. 1,103,302; July 14; Gaz. vol. 204; p. 423.
Spool, Sheet-metal. G. W. Weber. No. 1,104,458; July 21; Gaz. vol. 204; p. 863.
Sprag-brake. E. F. Orner. No. 1,103,821; July 14; Gaz. vol. 204; p. 603.
Spray, Bath-. H. E. Grabau. No. 1,102,736; July 7; Gaz. vol. 204; p. 180.
Spray, Steam-vapor. W. H. Gough. No. 1,105,419; July 28; Gaz. vol. 204; p. 1249.
Spraying apparatus. W. Cressy. No. 1,104,633; July 21; Gaz. vol. 204; p. 924.
Spring: *See* Vehicle-spring.
Spring-attaching clip. P. J. Knauff. No. 1,104,678; July 21; Gaz. vol. 204; p. 939.
Spring-box. T. H. Symington. No. 1,103,632; July 14; Gaz. vol. 204; p. 538.
Spring-wheel. T. W. Hawley. No. 1,103,045; July 14; Gaz. vol. 204; p. 333.
Spring-wheel. T. N. Jordan. No. 1,103,295; July 14; Gaz. vol. 204; p. 420.
Spring-wheel. F. A. Weckert. No. 1,103,332; July 14; Gaz. vol. 204; p. 434.
Spring-wheel. R. M. Clark. No. 1,103,563; July 14; Gaz. vol. 204; p. 512.
Spring-wheel. H. Wedeman. No. 1,104,283; July 21; Gaz. vol. 204; p. 803.
Spring-wheel. W. H. Abbott. No. 1,104,752; July 21; Gaz. vol. 204; p. 965.
Sprocket-wheel. H. Ullensaker. No. 1,104,086; July 21; Gaz. vol. 204; p. 735.
Square. M. Clarke. No. 1,103,564; July 14; Gaz. vol. 204; p. 513.
Square, Framing-. H. B. Sargent. No. 1,102,689; July 7; Gaz. vol. 204; p. 163.
Stack-cover. G. W. Boll. No. 1,102,466; July 7; Gaz. vol. 204; p. 86.
Stack-cover, Sectional metal. F. W. Martin. No. 1,103,793; July 14; Gaz. vol. 204; p. 594.
Stack-flashing. R. F. Fife. No. 1,103,666; July 14; Gaz. vol. 204; p. 552.
Stacker. E. Behrns. No. 1,103,733; July 14; Gaz. vol. 204; p. 574.
Stacker. E. A. Roach. No. 1,104,447; July 21; Gaz. vol. 204; p. 859.
Stacker. D. M. Graham. No. 1,104,885; July 28; Gaz. vol. 204; p. 1061.
Stacker, Hay-. A. J. Davidson. No. 1,103,492; July 14; Gaz. vol. 204; p. 486.
Stacker, Hay-. T. F. House. No. 1,104,671; July 21; Gaz. vol. 204; p. 937.
Stage effects, Apparatus for producing. H. Thurston. No. 1,104,846; July 28; Gaz. vol. 204; p. 1047.
Stalk-cutter, Hand-operated. J. A. Stockton and M. N. Willimon. No. 1,104,573; July 21; Gaz. vol. 204; p. 905.
Stamp. G. E. Perry. No. 1,102,795; July 7; Gaz. vol. 204; p. 200.
Stamp. T. O. Matthews. No. 1,104,367; July 21; Gaz. vol. 204; p. 831.
Stamp, Hand-. C. E. Snyder. No. 1,104,564; July 21; Gaz. vol. 204; p. 902.
Stand: *See* Barrel-stand; Display-stand; Fruit-stand; Switch-stand.
Stand-boiler. R. T. Parlsen. No. 1,104,381; July 21; Gaz. vol. 204; p. 837.
Staple for fences and other purposes. W. E. Amberg. No. 1,104,094; July 21; Gaz. vol. 204; p. 739.
Stapling-machine work-support. H. Weber and W. Osterholm. No. 1,103,234; July 14; Gaz. vol. 204; p. 400.
Starch excavating and conveying apparatus. D. M. Wilder. No. 1,102,376; July 7; Gaz. vol. 204; p. 53.
Starch-separating machine. N. C. Newell and J. A. Harrington. No. 1,105,294; July 28; Gaz. vol. 204; p. 1202.
Starting-box, Automatic. M. E. Custer. No. 1,103,662; July 14; Gaz. vol. 204; p. 550.
Stay, Garment-. J. R. Dean. No. 1,104,108; July 21; Gaz. vol. 204; p. 742.
Steam-generating apparatus. D. Hogan. No. 1,103,205; July 14; Gaz. vol. 204; p. 392.
Steam-generator. F. P. Rudder. No. 1,102,959; July 7; Gaz. vol. 204; p. 255.
Steam-generator. J. E. Barranger. No. 1,103,248; July 14; Gaz. vol. 204; p. 406.
Steam-generator. E. Makin. No. 1,104,811; July 28; Gaz. vol. 204; p. 1035.
Steam-generator, Flash. C. Lemale. No. 1,102,345; July 7; Gaz. vol. 204; p. 43.
Steam-generator, Low-pressure. F. P. Coffin. No. 1,105,405; July 28; Gaz. vol. 204; p. 1243.
Steam-generator tube, Multitubular-. A. Niclausse. No. 1,103,531; July 14; Gaz. vol. 204; p. 500.
Steam-injectors, Mechanism for automatically operating. J. D. Patrick. No. 1,105,373; July 28; Gaz. vol. 204; p. 1234.
Steam-regenerator. W. Ahlen. No. 1,105,122; July 28; Gaz. vol. 204; p. 1141.
Steam-trap, Automatic. W. Telfer. No. 1,105,112; July 28; Gaz. vol. 204; p. 1138.
Steel-manufacturing apparatus. G. H. Benjamin. No. 1,102,382; July 7; Gaz. vol. 204; p. 55.
Steel or iron sheets, Oxidizing. J. E. Carnahan. No. 1,105,251; July 28; Gaz. vol. 204; p. 1187.
Steel, Process and apparatus for the manufacture of. N. E. Maccallum. (Reissue.) No. 13,782; July 28; Gaz. vol. 204; p. 1312.
Steering attachment. A. H. Perry. No. 1,103,538; July 14; Gaz. vol. 204; p. 502.
Steering-gear. W. F. Brown. No. 1,102,239; July 7; Gaz. vol. 204; p. 7.
Steering-gear, Marine. L. C. Burns. No. 1,103,738; July 14; Gaz. vol. 204; p. 575.
Steering-guide. J. A. Stange. No. 1,105,107; July 28; Gaz. vol. 204; p. 1136.
Steering-post light. A. S. Oliver, Jr. No. 1,105,370; July 28; Gaz. vol. 204; p. 1232.
Steering-wheel. R. H. Schelbert. No. 1,103,438; July 14; Gaz. vol. 204; p. 468.
Stencil-rack. J. F. Carlson. No. 1,102,243; July 7; Gaz. vol. 204; p. 8.
Stencils, Making. J. H. Langrock. No. 1,103,005; July 7; Gaz. vol. 204; p. 272.
Step. P. O. Wheeler. No. 1,103,719; July 14; Gaz. vol. 204; p. 569.
Stereoscopic apparatus. G. Belmitgère. No. 1,105,395; July 28; Gaz. vol. 204; p. 1241.
Stereotype-matrix-making press. R. T. Johnston. No. 1,103,210; July 14; Gaz. vol. 204; p. 393.
Stereotype-plates, Producing molds for casting. C. Winkler. No. 1,104,595; July 21; Gaz. vol. 204; p. 913.
Sterilizing-tank. C. B. Dalzell. No. 1,105,187; July 28; Gaz. vol. 204; p. 1164.
Stirrup-leather, Quickly-adjustable. J. W. Kerr. (Reissue.) No. 13,778; July 21; Gaz. vol. 204; p. 973.
Stirrup, Safety-. G. Korittke. No. 1,102,762; July 7; Gaz. vol. 204; p. 189.
Stirrup, Safety-. W. A. Ostwald. No. 1,104,216; July 21; Gaz. vol. 204; p. 779.
Stocking drying and shaping form. E. R. Applin. No. 1,103,245; July 14; Gaz. vol. 204; p. 405.
Stocking-form. A. B. Eastwood. No. 1,104,348; July 21; Gaz. vol. 204; p. 825.
Stoker for firing locomotive-furnaces, Mechanical. N. E. Gee. No. 1,103,407; July 14; Gaz. vol. 204; p. 457.
Stoker, Locomotive-. N. E. Gee. No. 1,103,406; July 14; Gaz. vol. 204; p. 457.
Stone, Manufacturing artificial. M. H. Avram. No. 1,102,851; July 7; Gaz. vol. 204; p. 219.
Stone, Tool for treating artificial. J. O. Berg. No. 1,102,856; July 7; Gaz. vol. 204; p. 221.
Stop device, Automatic. R. C. Wootten. No. 1,102,707; July 7; Gaz. vol. 204; p. 169.
Stop mechanism for machinery. D. M. Cooper. No. 1,103,867; July 14; Gaz. vol. 204; p. 619.
Stop-motion, Feeler. C. W. Asman. No. 1,103,340; July 14; Gaz. vol. 204; p. 436.
Stopper: *See* Bottle-stopper.
Stopper for condiment-holders. I. S. Slade. No. 1,102,302; July 7; Gaz. vol. 204; p. 28.
Storage vessels, Guard and indicator for. F. B. Easton. No. 1,105,068; July 28; Gaz. vol. 204; p. 1124.
Stove and range, Cook. C. Ottershagen. No. 1,102,430; July 7; Gaz. vol. 204; p. 74.
Stove and range, Cooking. W. N. Goldhamer. No. 1,103,140; July 14; Gaz. vol. 204; p. 367.
Stove and washing-machine boiler, Combined-laundry gas-. R. Ramsek. No. 1,103,313; July 14; Gaz. vol. 204; p. 427.
Stove-grate. S. Henderson. No. 1,102,267; July 7; Gaz. vol. 204; p. 16.
Stove-lid. W. H. Cloud. No. 1,103,565; July 14; Gaz. vol. 204; p. 513.
Stove-lid lifter. H. Lawrence. No. 1,103,780; July 14; Gaz. vol. 204; p. 589.
Stove lid or cover. P. Becker. No. 1,104,163; July 21; Gaz. vol. 204; p. 761.
Stove, Oil-. L. Stockstrom. No. 1,103,703; July 14; Gaz. vol. 204; p. 564.
Stove, Oil-. J. L. Cox. No. 1,104,966; July 28; Gaz. vol. 204; p. 1089.
Stove-top support. G. E. Heldbreder and A. Ohnemus. No. 1,103,673; July 14; Gaz. vol. 204; p. 554.
Stoves, Means for raising combustion-tubes on blue-flame wick-. H. Ruppel. No. 1,103,845; July 14; Gaz. vol. 204; p. 611.
Stovepipe-fastener. T. F. White. No. 1,103,235; July 14; Gaz. vol. 204; p. 401.
Strainer. E. E. Hauer. No. 1,102,747; July 7; Gaz. vol. 204; p. 184.
Strainer. C. F. Overly. No. 1,102,791; July 7; Gaz. vol. 204; p. 198.

Strainer for water-pipes. F. L. Black. No. 1,104,772; July 28; Gaz. vol. 204; p. 1027.
Street-indicator. G. Okuyama. No. 1,102,679; July 7; Gaz. vol. 204; p. 160.
Stretching and ironing table for laundries. R. D. Howell. No. 1,104,507; July 21; Gaz. vol. 204; p. 881.
Structural members, Lock connection for. G. W. Hansbrough. No. 1,102,502; July 7; Gaz. vol. 204; p. 98.
Structure, Locking-bolt. W. A. Lurie. No. 1,102,527; July 7; Gaz. vol. 204; p. 106.
Strut-cover of stream-line surface. G. R. Eddelbuttel-Reimers. No. 1,104,254; July 21; Gaz. vol. 204; p. 792.
Studding, Metallic. P. Randolph and H. C. Matthews. No. 1,103,430; July 14; Gaz. vol. 204; p. 465.
Stump-burner. A. J. Coover. No. 1,104,780; July 28; Gaz. vol. 204; p. 1024.
Stump-cutting machine. A. L. and G. D. Moore. No. 1,104,535; July 21; Gaz. vol. 204; p. 892.
Suction-cleaner. E. J. Bodey. No. 1,104,612; July 21; Gaz. vol. 204; p. 917.
Suction-cleaner. E. J. Bodey. No. 1,104,613; July 21; Gaz. vol. 204; p. 918.
Sugar from centrifugal machines, Device for removing. R. Lougher. No. 1,105,444; July 28; Gaz. vol. 204; p. 1257.
Sugar, Making superior. N. B. Bach. No. 1,104,095; July 21; Gaz. vol. 204; p. 739.
Sulfite fiber, Reclaiming waste products in the manufacture of. H. K. Moore and R. B. Wolf. No. 1,103,216; July 14; Gaz. vol. 204; p. 395.
Sulfite-waste and shellac Composition containing. M. F. Conghlin. No. 1,103,267; July 14; Gaz. vol. 204; p. 411.
Sulfur and sulfates, Producing. C. Hansen. No. 1,102,911; July 7; Gaz. vol. 204; p. 239.
Sulfur in elementary form from pyrite, Recovering. G. Rigg. No. 1,103,081; July 14; Gaz. vol. 204; p. 345.
Superheater-boiler. J. E. Whittlesey. No. 1,102,836; July 7; Gaz. vol. 204; p. 215.
Superheater, Steam-. R. C. Stevens. No. 1,102,361; July 7; Gaz. vol. 204; p. 48.
Supporter. J. Warren. No. 1,103,114; July 14; Gaz. vol. 204; p. 358.
Surgical appliance. W. O. Sherman. No. 1,105,105; July 28; Gaz. vol. 204; p. 1136.
Suspender-tab and belt-loop for trousers, Combined. A. Leighton. No. 1,105,355; July 28; Gaz. vol. 204; p. 1227.
Sweeper. J. H. Townsend. No. 1,105,048; July 28; Gaz. vol. 204; p. 1117.
Swimming device. L. Luki. No. 1,102,526; July 7; Gaz. vol. 204; p. 106.
Swing-canopy. J. J. Parent. No. 1,104,309; July 21; Gaz. vol. 204; p. 810.
Switch: *See* Automobile-switch; Contact-switch; Electric switch; Electrical switch; Electrical selective switch; Electromagnetic switch; High-tension switch; Push-button switch; Railway-switch; Reversing-switch; Snap-switch.
Switch. G. W. Hart. No. 1,103,199; July 14; Gaz. vol. 204; p. 389.
Switch. W. S. Harlow. No. 1,103,511; July 14; Gaz. vol. 204; p. 492.
Switch. W. R. Ross. No. 1,104,547; July 21; Gaz. vol. 204; p. 896.
Switch-chair. M. J. Connerton. No. 1,104,629; July 21; Gaz. vol. 204; p. 923.
Switch construction. R. E. Brannen and L. Wallace. No. 1,103,934; July 21; Gaz. vol. 204; p. 683.
Switch-lug. J. W. Latta. No. 1,102,931; July 7; Gaz. vol. 204; p. 246.
Switch-stand. J. C. Holman. No. 1,104,895; July 28; Gaz. vol. 204; p. 1065.
Switch-stand and lock. J. D. Maupin, H. E. Allen, and S. Baldwin. No. 1,104,689; July 21; Gaz. vol. 204; p. 943.
Switchboard-mounting. A. W. Schramm. No. 1,104,709; July 21; Gaz. vol. 204; p. 950.
Switchboard-plug. M. A. Janes. No. 1,104,195; July 21; Gaz. vol. 204; p. 772.
Switching mechanism. C. A. Bals. No. 1,105,349; July 28; Gaz. vol. 204; p. 1224.
Swivel. E. Chalmers. No. 1,104,408; July 21; Gaz. vol. 204; p. 845.
Syringe, Hypodermic. R. E. Ingalls. No. 1,105,275; July 28; Gaz. vol. 204; p. 1195.
Syringe-nozzle. F. A. Gordon. No. 1,104,659; July 21; Gaz. vol. 204; p. 933.
Syringe pressure-clamp, Fountain-. M. J. Rabat. No. 1,102,953; July 7; Gaz. vol. 204; p. 253.
Syrup, Manufacture of. M. C. Rich. No. 1,104,135; July 21; Gaz. vol. 204; p. 752.
Table: *See* Concentrating-table; Convertible table; Folding table; Form-table; Saw-table; Ship's table; Stretching and ironing table.
Table. L. Miller. No. 1,104,917; July 28; Gaz. vol. 204; p. 1072.
Table-lock and opener, Combination. G. T. Buddle. No. 1,103,029; July 14; Gaz. vol. 204; p. 328.
Tack-machines, Automatic feeding device for. T. H. Wynn. No. 1,102,623; July 7; Gaz. vol. 204; p. 143.
Tag-fastener. D. E. Walshe. No. 1,103,853; July 14; Gaz. vol. 204; p. 614.
Tag-stringing machine. E. W. T. and R. S. G. Frodigh. No. 1,102,259; July 7; Gaz. vol. 204; p. 13.
Tailings, Apparatus for the disposal of. J. V. Dorr. No. 1,103,352; July 14; Gaz. vol. 204; p. 440.
Tailings, Disposal of. J. V. Dorr. No. 1,103,351; July 14; Gaz. vol. 204; p. 440.
Talking-machine. C. Ruppel. No. 1,104,935; July 28; Gaz. vol. 204; p. 1078.
Talking-machines, Diaphragm for the sound-boxes of. J. Schmittinger. No. 1,104,833; July 28; Gaz. vol. 204; p. 1043.
Talking-machines, Repeating device for disk. L. Abraham. No. 1,104,760; July 28; Gaz. vol. 204; p. 1017.
Tank: *See* Automobile fuel-tank; Flush-tank; Hog-scalding tank; Settling-tank; Sewage-tank; Sterilizing-tank.
Tank. G. F. Bason. No. 1,103,470; July 14; Gaz. vol. 204; p. 480.
Tank reserve attachment, Fuel-. W. W. Williams. No. 1,102,971; July 7; Gaz. vol. 204; p. 259.
Tape case and winding-drum. G. F. Putnam and H. H. Wessendorff. No. 1,105,579; July 28; Gaz. vol. 204; p. 1304.
Teeth, Removable attachment for compensating malarticulation of. M. S. Charles. No. 1,104,290; July 21; Gaz. vol. 204; p. 805.
Telegraph, Electromagnetic. D. M. Bliss. No. 1,102,234; July 7; Gaz. vol. 204; p. 5.
Telegraph or telephone device, Intercommunicating. A. C. Carlson. No. 1,105,485; July 28; Gaz. vol. 204; p. 1271.
Telegraph or telephone system, Wireless. W. H. Shephard and A. E. McKechnie. No. 1,104,712; July 21; Gaz. vol. 204; p. 951.
Telegraph or telephone system, Wireless. W. H. Shephard and A. E. McKechnie. No. 1,104,746; July 21; Gaz. vol. 204; p. 963.
Telegraph receiver, Printing-. A. F. Dixon. No. 1,103,133; July 14; Gaz. vol. 204; p. 365.
Telegraphing, Apparatus for selective wireless. F. G. Sargent. No. 1,102,442; July 7; Gaz. vol. 204; p. 77.
Telegraphy and telephony, Detector for wireless. G. W. Pickard. No. 1,104,073; July 21; Gaz. vol. 204; p. 731.
Telegraphy, Cable. I. Kitsee. No. 1,103,421; July 14; Gaz. vol. 204; p. 462.
Telemeter, Base-line. P. Beck. No. 1,103,023; July 14; Gaz. vol. 204; p. 326.
Telephone automatic trunk-selecting system. M. Setter. No. 1,104,451; July 21; Gaz. vol. 204; p. 860.
Telephone central switching system. E. A. Gray and E. C. Molina. No. 1,102,907; July 7; Gaz. vol. 204; p. 238.
Telephone coin-register. W. O. Beck. No. 1,103,650; July 14; Gaz. vol. 204; p. 546.
Telephone-exchange system. E. E. Clement. (Reissue.) No. 13,776; July 21; Gaz. vol. 204; p. 969.
Telephone-exchange system. E. E. Clement. No. 1,105,490; July 28; Gaz. vol. 204; p. 1273.
Telephone-exchange system. E. E. Clement. No. 1,105,492; July 28; Gaz. vol. 204; p. 1274.
Telephone-exchange system. E. E. Clement. No. 1,105,545; July 28; Gaz. vol. 204; p. 1292.
Telephone-exchange system. E. E. Clement. No. 1,105,589; July 28; Gaz. vol. 204; p. 1307.
Telephone-exchanges, Wiring system for. F. R. McBerty. No. 1,104,062; July 21; Gaz. vol. 204; p. 727.
Telephone-indicator. H. Christensen. No. 1,102,719; July 7; Gaz. vol. 204; p. 173.
Telephone-operator's equipment. W. G. Blauvelt and E. C. Molina. No. 1,104,956; July 28; Gaz. vol. 204; p. 1085.
Telephone-receiver. G. N. Blanchard and O. G. Minzenmayer. No. 1,104,610; July 21; Gaz. vol. 204; p. 917.
Telephone signal and recorder. F. J. McGowen. No. 1,102,421; July 7; Gaz. vol. 204; p. 71.
Telephone signaling system. F. R. Parker. No. 1,103,909; July 14; Gaz. vol. 204; p. 633.
Telephone system. E. F. W. Alexanderson. No. 1,102,628; July 7; Gaz. vol. 204; p. 143.
Telephone system. E. R. Corwin. No. 1,105,344; July 28; Gaz. vol. 204; p. 1221.
Telephone system. C. A. Bals. No. 1,105,348; July 28; Gaz. vol. 204; p. 1223.
Telephone system, Automatic. B. G. Dunham. No. 1,103,572; July 14; Gaz. vol. 204; p. 516.
Telephone system for trains. H. E. Barber and J. W. McFarland. No. 1,104,605; July 21; Gaz. vol. 204; p. 915.
Telephone systems, Automatic switch for. A. H. Dyson. No. 1,103,040; July 14; Gaz. vol. 204; p. 331.
Telephone toll-collecting apparatus, Emergency signaling system for. J. J. O'Connell. No. 1,103,073; July 14; Gaz. vol. 204; p. 343.
Telephone-transmitter. F. R. McBerty. No. 1,102,600; July 7; Gaz. vol. 204; p. 133.
Telephonic transmitter. J. J. Comer. No. 1,105,066; July 28; Gaz. vol. 204; p. 1123.
Telephony. E. R. Corwin. No. 1,105,345; July 28; Gaz. vol. 204; p. 1221.
Telephony. M. L. Johnson. No. 1,105,346; July 28; Gaz. vol. 204; p. 1222.
Telephony. M. L. Johnson. No. 1,105,347; July 28; Gaz. vol. 204; p. 1222.
Telephony. M. L. Johnson. No. 1,105,563; July 28; Gaz. vol. 204; p. 1298.
Telephony. C. A. Bals. No. 1,105,564; July 28; Gaz. vol. 204; p. 1298.
Telescopic post for stands and similar articles. J. H. Astruck. No. 1,103,246; July 14; Gaz. vol. 204; p. 405.
Temperature-regulator. F. A. Kuntz. No. 1,104,680; July 21; Gaz. vol. 204; p. 940.

Temple. C. E. Owens. No. 1,103,074; July 14; Gaz. vol. 204; p. 343.
Testing instrument. H. Baluss. No. 1,104,753; July 21; Gaz. vol. 204; p. 965.
Therapeutic apparatus. T. J. Farrell. No. 1,103,000; July 7; Gaz. vol. 204; p. 269.
Thermal motor. A. G. Schwieterman. No. 1,104,320; July 21; Gaz. vol. 204; p. 814.
Thermal pan. B. E. Roscoe. No. 1,103,159; July 14; Gaz. vol. 204; p. 374.
Thermometer-holder, Aseptic. C. F. Myre and J. P. Hebert. No. 1,103,371; July 14; Gaz. vol. 204; p. 446.
Thermometers and similar instruments, Device for illuminating. M. E. Moeller. No. 1,103,605; July 14; Gaz. vol. 204; p. 528.
Thermostatic circuit-controller. L. S. Besley. No. 1,102,566; July 7; Gaz. vol. 204; p. 121.
Thread-cutting apparatus, Binding-. A. Tscherne. No. 1,104,848; July 28; Gaz. vol. 204; p. 1047.
Thread-cutting die, Self opening or releasing. F. Judge. No. 1,105,565; July 28; Gaz. vol. 204; p. 1299.
Thread-cutting tool, Taper-. B. Borden. No. 1,102,713; July 7; Gaz. vol. 204; p. 171.
Thread-package. C. P. Mitchell. No. 1,104,818; July 28; Gaz. vol. 204; p. 1037.
Thread-rolling machine. R. L. Wilcox. No. 1,104,091; July 21; Gaz. vol. 204; p. 737.
Threads, films, or plates, Production of. E. Bronnert. No. 1,102,237; July 7; Gaz. vol. 204; p. 16.
Threads of lace and other fabrics, Mechanism for cutting the floating. M. O. Rehfuss, A. Burgess, and J. G. Rehfuss. No. 1,103,838; July 14; Gaz. vol. 204; p. 608.
Threshers, Bundle-supporter for. P. Powers. No. 1,103,312; July 14; Gaz. vol. 204; p. 426.
Threshing-machine-feeder attachment. I. D. Bate. No. 1,104,033; July 21; Gaz. vol. 204; p. 717.
Threshing-machine for standing grain. E. C. and N. H. Sooy. No. 1,103,324; July 14; Gaz. vol. 204; p. 430.
Ticket, Railway interline. J. D. Gibbs. No. 1,103,757; July 14; Gaz. vol. 204; p. 581.
Tide-motor. J. Ishii. No. 1,104,510; July 21; Gaz. vol. 204; p. 882.
Tide-motor. J. L. Bustos. No. 1,105,249; July 28; Gaz. vol. 204; p. 1187.
Tie: *See* Cross-tie; Metallic tie; Rail-tie; Railway-tie; Railway cross-tie.
Tie-clamp. H. W. Tufts. No. 1,103,455; July 14; Gaz. vol. 204; p. 474.
Tie-plate. B. L. Cleveland. No. 1,102,244; July 7; Gaz. vol. 204; p. 8.
Tiles, Cap for drain-. W. Armsworth. No. 1,103,391; July 14; Gaz. vol. 204; p. 452.
Tilling-machine. G. W. Connor. No. 1,102,979; July 7; Gaz. vol. 204; p. 261.
Time-card. N. T. Ficker. No. 1,103,575; July 14; Gaz. vol. 204; p. 517.
Time-lock. O. F. Mieth. No. 1,105,286; July 28; Gaz. vol. 204; p. 1199.
Time-recorder. C. E. Tomlinson. No. 1,103,105; July 14; Gaz. vol. 204; p. 354.
Time-recording machine. C. E. Tomlinson. No. 1,103,106; July 14; Gaz. vol. 204; p. 355.
Time-recording registers, Attachment for regulating. H. B. McCabe. No. 1,104,125; July 21; Gaz. vol. 204; p. 748.
Timepieces, Cannon-pinion for. E. H. Horn. No. 1,104,422; July 21; Gaz. vol. 204; p. 850.
Timepieces, Mounting pivot-bearings for. O. Ohlson. No. 1,104,700; July 21; Gaz. vol. 204; p. 947.
Timpano-support. D. M. Wright. No. 1,104,236; July 21; Gaz. vol. 204; p. 786.
Tin-opening device. F. Schönfeld. No. 1,102,962; July 7; Gaz. vol. 204; p. 256.
Tire. H. A. Wheeling. No. 1,104,158; July 21; Gaz. vol. 204; p. 759.
Tire. F. Keller and H. Cogan. No. 1,104,426; July 21; Gaz. vol. 204; p. 851.
Tire. G. Yantis. No. 1,104,599; July 21; Gaz. vol. 204; p. 914.
Tire. W. Drabold and A. P. Mott. No. 1,104,783; July 28; Gaz. vol. 204; p. 1024.
Tire-armor. J. Coan. No. 1,103,396; July 14; Gaz. vol. 204; p. 453.
Tire-carrier and lamp-supporting bracket. T. I. Duffy. No. 1,104,173; July 21; Gaz. vol. 204; p. 765.
Tire, Convertible. R. Wright. No. 1,105,121; July 28; Gaz. vol. 204; p. 1141.
Tire-filler. W. E. Graves. No. 1,104,886; July 28; Gaz. vol. 204; p. 1061.
Tire for automobile and other vehicle wheels, Resilient. J. A. Miller. No. 1,104,817; July 28; Gaz. vol. 204; p. 1037.
Tire for vehicle-wheels. F. Rose and A. Rae. No. 1,105,459; July 28; Gaz. vol. 204; p. 1263.
Tire for vehicle-wheels, Supplemental. C. Hastings. No. 1,102,914; July 7; Gaz. vol. 204; p. 240.
Tire for vehicles, Elastic. J. Spyker. No. 1,102,811; July 7; Gaz. vol. 204; p. 206.
Tire for vehicles, Elastic. H. Hartmann. No. 1,104,797; July 28; Gaz. vol. 204; p. 1030.
Tire-inflator. C. Ragan. No. 1,103,833; July 14; Gaz. vol. 204; p. 607.
Tire, Pneumatic. H. F. Heycock. No. 1,103,877; July 14; Gaz. vol. 204; p. 623.
Tire, Pneumatic. H. B. Gillette. No. 1,104,186; July 21; Gaz. vol. 204; p. 769.
Tire, Pneumatic. C. M. Papon. No. 1,104,824; July 28; Gaz. vol. 204; p. 1039.
Tire-protector. L. E. Frye. No. 1,104,181; July 21; Gaz. vol. 204; p. 768.
Tire-repair patch. J. H. Marvil of V. No. 1,102,939; July 7; Gaz. vol. 204; p. 248.
Tire-repairing tool. P. E. Erickson. No. 1,104,642; July 21; Gaz. vol. 204; p. 927.
Tire, Spring-. G. W. Van Steenburgh. No. 1,103,445; July 14; Gaz. vol. 204; p. 470.
Tire, Vehicle-. O. W. Britt. No. 1,103,478; July 14; Gaz. vol. 204; p. 482.
Tire, Vehicle-. J. D. Craft. No. 1,103,568; July 14; Gaz. vol. 204; p. 514.
Tire, Vehicle-. R. B. Calcutt. No. 1,104,774; July 28; Gaz. vol. 204; p. 1022.
Tire, Vehicle-. C. A. Swinehart. No. 1,105,342; July 28; Gaz. vol. 204; p. 1220.
Tire, Vehicle wheel-. I. M. Sartain. No. 1,102,690; July 7; Gaz. vol. 204; p. 163.
Tire, Wheel-. W. H. Blake. No. 1,102,860; July 7; Gaz. vol. 204; p. 223.
Tire, Wheel-. A. M. Zimmers. No. 1,103,642; July 14; Gaz. vol. 204; p. 543.
Tire-wrappers, Machine for inclosing cords in. E. W. Fothergill. No. 1,104,789; July 28; Gaz. vol. 204; p. 1027.
Tires, Air-valve for pneumatic. F. P. Root. No. 1,104,074; July 21; Gaz. vol. 204; p. 732.
Tires, Automatic relief-valve for. V. O. Jarvis. No. 1,104,902; July 28; Gaz. vol. 204; p. 1067.
Toaster. S. A. Wiltsie. No. 1,105,230; July 28; Gaz. vol. 204; p. 1180.
Tobacco-pipe. E. Redfern. No. 1,103,837; July 14; Gaz. vol. 204; p. 608.
Tobacco-pipe. G. B. Gilliland. No. 1,104,654; July 21; Gaz. vol. 204; p. 932.
Tobacco-pipe cleaner. W. E. Elam. No. 1,103,134; July 14; Gaz. vol. 204; p. 365.
Tobacco-pipe cover. M. Jagemann. No. 1,103,361; July 14; Gaz. vol. 204; p. 443.
Tobacco-pipe filler and pouch for use therewith. D. E. Norton. No. 1,104,068; July 21; Gaz. vol. 204; p. 729.
Tobacco-pipe protector. F. E. Barnickle. No. 1,103,168; July 14; Gaz. vol. 204; p. 378.
Tobacco-pipe stem. H. M. Browne. No. 1,102,865; July 7; Gaz. vol. 204; p. 225.
Tobacco-stemming machine. W. G. Woodcock, Jr. No. 1,103,641; July 14; Gaz. vol. 204; p. 542.
Tobacco-stemming machine. J. P. Scovill. No. 1,103,893; July 14; Gaz. vol. 204; p. 628.
Toe-boxes, Repairing damaged. T. C. De Carmelo. No. 1,103,493; July 14; Gaz. vol. 204; p. 487.
Tongs, Fuse-. G. Roberts. No. 1,105,043; July 28; Gaz. vol. 204; p. 1114.
Tongs, Pipe-. J. D. Meredith. No. 1,104,530; July 21; Gaz. vol. 204; p. 890.
Tongue attachment, Vehicle. J. W. Ensor. No. 1,102,650; July 7; Gaz. vol. 204; p. 151.
Tool. D. W. Edwards. No. 1,105,553; July 28; Gaz. vol. 204; p. 1294.
Tool, Adjustable. M. Miller. No. 1,103,808; July 14; Gaz. vol. 204; p. 599.
Tool and bevel-gage, Combination. A. E. Blofield. No. 1,103,344; July 14; Gaz. vol. 204; p. 438.
Tool, Collapsing. I. B. Malaby. No. 1,102,937; July 7; Gaz. vol. 204; p. 248.
Tool-driving mechanism. J. M. Thompson. No. 1,104,747; July 21; Gaz. vol. 204; p. 963.
Tool-holder. H. Turner. No. 1,103,164; July 14; Gaz. vol. 204; p. 376.
Tool-holder. W. C. Stephenson. No. 1,104,014; July 21; Gaz. vol. 204; p. 710.
Tool-holder. J. V. Fry. No. 1,104,980; July 28; Gaz. vol. 204; p. 1093.
Tool, Pneumatic. H. S. Hunter. No. 1,102,271; July 7; Gaz. vol. 204; p. 17.
Tool, Valveless percussive. L. C. Bayles. No. 1,102,317; July 7; Gaz. vol. 204; p. 33.
Tooth, Artificial. G. L. Wernet and H. A. Collett. No. 1,102,373; July 7; Gaz. vol. 204; p. 52.
Tooth, Artificial. R. M. Withycombe. No. 1,105,476; July 28; Gaz. vol. 204; p. 1269.
Toothpick, Floss. R. A. Sonn. No. 1,105,005; July 28; Gaz. vol. 204; p. 1101.
Torch. C. G. Filzer. No. 1,105,190; July 28; Gaz. vol. 204; p. 1165.
Torch, Welding-. E. G. Mueller. No. 1,105,290; July 28; Gaz. vol. 204; p. 1200.
Torpedo and fusee holder. S. S. Green. No. 1,105,420; July 28; Gaz. vol. 204; p. 1249.
Torpedo, Railway-. C. B. Snyder. No. 1,102,966; July 7; Gaz. vol. 204; p. 257.
Torpedo, Railway signal-. F. Dutcher. No. 1,102,887; July 7; Gaz. vol. 204; p. 232.
Torpedo, Railway signal-. F. Dutcher. No. 1,102,888; July 7; Gaz. vol. 204; p. 232.
Torpedo, Railway signal-. F. Dutcher. No. 1,102,889; July 7; Gaz. vol. 204; p. 232.
Torsels, Manufacturing metallic. J. E. Sonnier. No. 1,104,714; July 21; Gaz. vol. 204; p. 952.
Tourist's glass. J. M. Faehrmann. No. 1,104,643; July 21; Gaz. vol. 204; p. 927.

Tourist's glass. J. M. Fuehrmann. No. 1,104,644; July 21; Gaz. vol. 204; p. 928.
Toy. D. H. McFalls. No. 1,103,601; July 14; Gaz. vol. 204; p. 527.
Toy-building for the reproduction of iron technical constructions. A. Lehner. No. 1,103,781; July 14; Gaz. vol. 204; p. 590.
Toy pistol. F. P. Hoffman. No. 1,103,416; July 14; Gaz. vol. 204; p. 460.
Toy, Sounding-wheel. A. Cafferty. No. 1,103,030; July 14; Gaz. vol. 204; p. 328.
Toy, Trundle whirligig. J. Stec. No. 1,104,227; July 21; Gaz. vol. 204; p. 783.
Toy wagon. J. A. Sundquist. No. 1,104,574; July 21; Gaz. vol. 204; p. 906.
Toy weighing-machine. C. B. Robertson. No. 1,104,138; July 21; Gaz. vol. 204; p. 753.
Trace-attaching device. W. Kyllonen. No. 1,105,331; July 28; Gaz. vol. 204; p. 1217.
Trace-carrier. S. Olson. No. 1,103,373; July 14; Gaz. vol. 204; p. 447.
Track, Overhead. G. A. Olson. No. 1,103,310; July 14; Gaz. vol. 204; p. 426.
Track-sanding device. J. Gapp. No. 1,102,577; July 7; Gaz. vol. 204; p. 125.
Traction-engine. S. S. Morton. No. 1,104,537; July 21; Gaz. vol. 204; p. 803.
Traction-wheel. D. D. and H. W. Tilbury. No. 1,104,847; July 28; Gaz. vol. 204; p. 1047.
Traction-wheel. E. A. Rumely. No. 1,104,934; July 28; Gaz. vol. 204; p. 1078.
Traction-wheel. W. T. M. Brunnemer. No. 1,104,957; July 28; Gaz. vol. 204; p. 1086.
Tractor. R. Marsh. No. 1,103,678; July 14; Gaz. vol. 204; p. 556.
Tractor. E. J. Sampson. No. 1,104,277; July 21; Gaz. vol. 204; p. 800.
Tractor. G. C. Dort. No. 1,105,551; July 28; Gaz. vol. 204; p. 1294.
Tractor. J. B. Hill. No. 1,105,562; July 28; Gaz. vol. 204; p. 1297.
Train-control apparatus, Automatic wireless. T. E. Clark. No. 1,104,165; July 21; Gaz. vol. 204; p. 762.
Train-controlling system, Electrical. J. H. Schroeder and C. D. Baucom. No. 1,104,279; July 21; Gaz. vol. 204; p. 801.
Train-stop, Automatic. R. Hammerly. No. 1,103,763; July 14; Gaz. vol. 204; p. 583.
Train-stop device, Automatic. A. England. No. 1,104,787; July 28; Gaz. vol. 204; p. 1026.
Train-stopping apparatus. F. Northup. No. 1,103,818; July 14; Gaz. vol. 204; p. 602.
Trains in motion, Coaling device for. G. Hall. No. 1,105,271; July 28; Gaz. vol. 204; p. 1194.
Transformer. S. E. Johannesen. No. 1,102,513; July 7; Gaz. vol. 204; p. 101.
Transformer. W. M. Austin. No. 1,105,014; July 28; Gaz. vol. 204; p. 1104.
Transformers, Protecting high-voltage. M. O. Troy. No. 1,105,385; July 28; Gaz. vol. 204; p. 1238.
Transmission mechanism. L. C. Morgan. No. 1,102,603; July 7; Gaz. vol. 204; p. 134.
Transmission mechanism. C. J. Paulson. No. 1,104,444; July 21; Gaz. vol. 204; p. 857.
Transmission mechanism, Differential. C. A. Janson. No. 1,103,048; July 14; Gaz. vol. 204; p. 334.
Transport-box, Collapsible. H. T. Shelton, F. W. Steere, and C. Power. No. 1,104,389; July 21; Gaz. vol. 204; p. 839.
Trap: See Fly-trap; Gopher-trap; Steam-trap.
Trap. H. T. G. Fischer. No. 1,102,896; July 7; Gaz. vol. 204; p. 234.
Trap. H. G. Renner. No. 1,104,315; July 21; Gaz. vol. 204; p. 812.
Trap. L. B. Rogers. No. 1,105,458; July 28; Gaz. vol. 204; p. 1263.
Trap for returning water of condensation. O. Baker. No. 1,104,954; July 28; Gaz. vol. 204; p. 1085.
Tray, Developing-. F. W. Quidas. No. 1,103,076; July 14; Gaz. vol. 204; p. 344.
Treadle mechanism. J. G. L. Bauer. No. 1,103,471; July 14; Gaz. vol. 204; p. 480.
Trestle, Carpenter's. W. H. South. No. 1,103,699; July 14; Gaz. vol. 204; p. 563.
Tricycle, Motor-. W. L. Benton. No. 1,103,254; July 14; Gaz. vol. 204; p. 408.
Trolley-guide. E. H. Cauvel. No. 1,104,104; July 21; Gaz. vol. 204; p. 741.
Trolley, Retrieving-. C. E. Lang. No. 1,102,673; July 7; Gaz. vol. 204; p. 158.
Trolley-wheel, Lubricating. J. L. Van Steenburg. No. 1,105,470; July 28; Gaz. vol. 204; p. 1267.
Trolley-wheel mount. J. R. Stoteimyer and W. S. Hensell. No. 1,102,453; July 7; Gaz. vol. 204; p. 81.
Trousers appliance. M. V. Hammack. No. 1,104,188; July 21; Gaz. vol. 204; p. 770.
Trousers-hanger. E. I. Prouty. No. 1,102,545; July 7; Gaz. vol. 204; p. 114.
Truck. I. McCoon. No. 1,103,796; July 14; Gaz. vol. 204; p. 595.
Truck and axle mechanism for railway-cars. M. S. Munn. No. 1,105,291; July 28; Gaz. vol. 204; p. 1201.
Truck, Autogrip form-. E. M. Cobb. No. 1,103,486; July 14; Gaz. vol. 204; p. 484.
Truck, Car-. W. S. Adams. No. 1,104,761; July 28; Gaz. vol. 204; p. 1017.
Truck, Cotton-lap-roll. J. A. Morrell. No. 1,104,697; July 21; Gaz. vol. 204; p. 946.
Truck, Elevating-. G. E. Clark. No. 1,102,876; July 7; Gaz. vol. 204; p. 228.
Truck for milk-cans. A. L. Russell. No. 1,103,689; July 14; Gaz. vol. 204; p. 560.
Truck, Four-wheel-drive. D. S. Stewart. No. 1,105,218; July 28; Gaz. vol. 204; p. 1175.
Truck, Hand-. J. J. and J. F. Cerney. No. 1,102,872; July 7; Gaz. vol. 204; p. 227.
Truck, Hand-. W. E. Tayman. No. 1,103,162; July 14; Gaz. vol. 204; p. 375.
Truck, Hand-. A. F. Pitkin. No. 1,103,429; July 14; Gaz. vol. 204; p. 465.
Truck, Lifting-. C. E. M. Miller. No. 1,104,532; July 21; Gaz. vol. 204; p. 891.
Truck, Lifting-. C. E. M. Miller. No. 1,104,533; July 21; Gaz. vol. 204; p. 891.
Truck, Radial. G. R. Henderson. No. 1,104,667; July 21; Gaz. vol. 204; p. 936.
Truck, Radial trailer-. V. J. Shepard. No. 1,105,162; July 28; Gaz. vol. 204; p. 1155.
Truck side frame. P. J. Howard. No. 1,104,672; July 21; Gaz. vol. 204; p. 938.
Truck, Six-wheel car-. H. M. Pfinger. No. 1,105,300; July 28; Gaz. vol. 204; p. 1205.
Trucks, Center-bolster for six-wheel car-. C. T. Westlake. No. 1,102,620; July 7; Gaz. vol. 204; p. 141.
Trucks, Dumping-body for coal-. W. H. Hunt. No. 1,104,801; July 28; Gaz. vol. 204; p. 1031.
Trunk. J. J. Foote. No. 1,102,257; July 7; Gaz. vol. 204; p. 12.
Trunk construction. D. Goldsmith. No. 1,104,985; July 28; Gaz. vol. 204; p. 1095.
Trunk, Display-. T. H. Stovall. No. 1,105,381; July 28; Gaz. vol. 204; p. 1236.
Truss. H. Rudisill. No. 1,104,141; July 21; Gaz. vol. 204; p. 753.
Tub: See Washtub.
Tube: See Drainage-tube; Steam-generator tube.
Tube-expander. O. Wiedeke. No. 1,102,993; July 7; Gaz. vol. 204; p. 266.
Tube-expander. O. Wiedeke. No. 1,102,994; July 7; Gaz. vol. 204; p. 267.
Tube-flanging machine. T. N. Coffelder. No. 1,104,166; July 21; Gaz. vol. 204; p. 763.
Tube holder, Locked-cop-. H. Dilycock. No. 1,104,172; July 21; Gaz. vol. 204; p. 765.
Tube-machine. T. E. Raffel. No. 1,103,378; July 14; Gaz. vol. 204; p. 448.
Tubes, Manufacturing seamless. E. F. Hollinger. No. 1,103,966; July 21; Gaz. vol. 204; p. 695.
Tubular connection-duct. T. E. Murray. No. 1,103,988; July 21; Gaz. vol. 204; p. 701.
Tubular devices, Mounting for and by. J. H. Abbott. No. 1,105,590; July 28; Gaz. vol. 204; p. 1308.
Turbine. E. E. Hauer. No. 1,102,744; July 7; Gaz. vol. 204; p. 183.
Turbine. E. E. Hauer. No. 1,102,745; July 7; Gaz. vol. 204; p. 183.
Turbine. R. H. Rice. No. 1,105,375; July 28; Gaz. vol. 204; p. 1235.
Turbine, Mixed-pressure. O. Junggren. (Reissue.) No. 13,772; July 14; Gaz. vol. 204; p. 641.
Turbine, Variable-speed. H. F. Schmidt. No. 1,102,357; July 7; Gaz. vol. 204; p. 47.
Turbo-compressor. O. Banner. No. 1,102,635; July 7; Gaz. vol. 204; p. 146.
Turpentine-extractor. J. M. Hillard. No. 1,103,878; July 14; Gaz. vol. 204; p. 623.
Twisting-machine. W. F. Smith. No. 1,104,078; July 21; Gaz. vol. 204; p. 733.
Type bars or slugs. M. H. Whittaker and C. Holliwell. No. 1,103,458; July 14; Gaz. vol. 204; p. 475.
Type-die. J. S. Duncan. No. 1,102,397; July 7; Gaz. vol. 204; p. 61.
Type-die. J. S. Duncan. No. 1,102,398; July 7; Gaz. vol. 204; p. 62.
Type setting and distributing machine. A. W. Ranger. No. 1,103,013; July 7; Gaz. vol. 204; p. 275.
Type setting and distributing machine. W. S. Lister. No. 1,105,334; July 28; Gaz. vol. 204; p. 1217.
Type-writer escapement mechanism. C. K. Rainey. No. 1,104,003; July 21; Gaz. vol. 204; p. 706.
Type-writer platen-shifting mechanism. J. A. Ronchetti. No. 1,103,158; July 14; Gaz. vol. 204; p. 374.
Type-writer ribbon-reversing mechanism. W. P. Kidder. No. 1,104,359; July 21; Gaz. vol. 204; p. 829.
Type-writers, Attachment for feeding cards to. I. G. Holliday. No. 1,104,504; July 21; Gaz. vol. 204; p. 880.
Type-writers, Tape-copy-holder attachment for. W. Stafford. No. 1,104,568; July 21; Gaz. vol. 204; p. 904.
Type-writing and computing machine, Combined. R. M. Becker. No. 1,104,468; July 21; Gaz. vol. 204; p. 866.
Type-writing machine. L. D. Broughton. No. 1,102,238; July 7; Gaz. vol. 204; p. 6.
Type-writing machine. S. T. Smith. No. 1,102,360; July 7; Gaz. vol. 204; p. 48.
Type-writing machine. A. V. Nibourel. No. 1,102,429; July 7; Gaz. vol. 204; p. 73.
Type-writing machine. F. A. Robinson. No. 1,102,688; July 7; Gaz. vol. 204; p. 162.

Type-writing machine. H. W. Higham and P. Risley. No. 1,102,752; July 7; Gaz. vol. 204; p. 186.
Type-writing machine. C. B. Corcoran. No. 1,103,900; July 14; Gaz. vol. 204; p. 630.
Type-writing machine. B. C. Stickney. No. 1,104,015; July 21; Gaz. vol. 204; p. 710.
Type-writing machine. W. P. McLaughlin. No. 1,104,209; July 21; Gaz. vol. 204; p. 777.
Type-writing machine. S. Schiff. No. 1,104,278; July 21; Gaz. vol. 204; p. 800.
Type-writing machine. A. E. Karlberg and M. B. Sargent. No. 1,105,081; July 28; Gaz. vol. 204; p. 1129.
Type-writing machine. C. B. Corcoran. No. 1,105,184; July 28; Gaz. vol. 204; p. 1163.
Type-writing-machine key and type-bar operating mechanism. J. Alexander. No. 1,105,543; July 28; Gaz. vol. 204; p. 1291.
Type-writing machines, Rewinding mechanism for. A. E. Karlberg and M. B. Sargent. No. 1,105,082; July 28; Gaz. vol. 204; p. 1130.
Typographical casting-machine. W. M. Wood. No. 1,102,842; July 7; Gaz. vol. 204; p. 217.
Typographical casting-machine. C. Muehleisen. No. 1,103,071; July 14; Gaz. vol. 204; p. 342.
Typographical composing-machine. D. S. Kennedy. No. 1,103,051; July 14; Gaz. vol. 204; p. 335.
Typographical machine. G. P. Kingsbury. No. 1,103,363; July 14; Gaz. vol. 204; p. 443.
Typographical machine. D. S. Kennedy. No. 1,104,512; July 21; Gaz. vol. 204; p. 883.
Typographical machines, Composing mechanism for. H. Pearce and J. E. Billington. No. 1,105,157; July 28; Gaz. vol. 204; p. 1153.
Typographical machines, Composing mechanism of. H. Pearce and J. E. Billington. No. 1,105,000; July 28; Gaz. vol. 204; p. 1099.
Umbrella. E. Wyskosky. No. 1,104,598; July 21; Gaz. vol. 204; p. 914.
Umbrella-rib hinge. M. C. McMillen. No. 1,103,799; July 14; Gaz. vol. 204; p. 506.
Underfeed furnace. R. S. Riley. No. 1,103,625; July 14; Gaz. vol. 204; p. 535.
Undergarment. S. Holstein. No. 1,104,047; July 21; Gaz. vol. 204; p. 722.
Undergarment. A. Vickers. No. 1,104,584; July 21; Gaz. vol. 204; p. 909.
Union suit. W. H. Bilbrough. No. 1,103,255; July 14; Gaz. vol. 204; p. 408.
Unloading device. E. C. Gledhill. No. 1,105,131; July 28; Gaz. vol. 204; p. 1144.
Urinal. C. E. Clare. No. 1,105,488; July 28; Gaz. vol. 204; p. 1272.
Vacuum cleaning apparatus. F. J. Matchette. No. 1,104,060; July 21; Gaz. vol. 204; p. 726.
Valve. D. R. Yarnall. No. 1,103,120; July 14; Gaz. vol. 204; p. 360.
Valve. A. J. Aitken. No. 1,103,241; July 14; Gaz. vol. 204; p. 403.
Valve. J. M. Bird. No. 1,103,475; July 14; Gaz. vol. 204; p. 481.
Valve. E. G. Watrous. No. 1,103,638; July 14; Gaz. vol. 204; p. 540.
Valve. N. B. Creighton. No. 1,103,944; July 21; Gaz. vol. 204; p. 687.
Valve. T. G. Mouat. No. 1,104,918; July 28; Gaz. vol. 204; p. 1072.
Valve. R. E. Ward and C. Crowl. No. 1,104,944; July 28; Gaz. vol. 204; p. 1081.
Valve. H. Blum. No. 1,105,177; July 28; Gaz. vol. 204; p. 1160.
Valve. J. L. Sauchereau. No. 1,105,209; July 28; Gaz. vol. 204; p. 1172.
Valve-actuating gear for explosion-engines. J. A. Brown. No. 1,102,717; July 7; Gaz. vol. 204; p. 172.
Valve, Air-. R. A. Gally. No. 1,103,754; July 14; Gaz. vol. 204; p. 581.
Valve, Automatic governing-. S. E. Kurtz. No. 1,105,280; July 28; Gaz. vol. 204; p. 1197.
Valve, Automatic laundry-. W. H. Perkins and C. A. Lindgren. No. 1,103,828; July 14; Gaz. vol. 204; p. 605.
Valve, Automatic pipe or hose draining. L. E. Bowser. No. 1,104,869; July 28; Gaz. vol. 204; p. 1056.
Valve, Automatic stop-. J. D. Lalor and F. L. Jahn. No. 1,103,058; July 14; Gaz. vol. 204; p. 338.
Valve, Check-. S. S. Caskey. No. 1,105,255; July 28; Gaz. vol. 204; p. 1189.
Valve-chest, Steam-engine. J. E. Muhlfeld and H. R. Stafford. No. 1,103,072; July 14; Gaz. vol. 204; p. 343.
Valve, Fluid-moved. G. S. Power. No. 1,104,131; July 21; Gaz. vol. 204; p. 751.
Valve, Flushing-. W. J. Brett. No. 1,102,469; July 7; Gaz. vol. 204; p. 87.
Valve for carbureters, Air-. J. C. Metzger. No. 1,105,090; July 28; Gaz. vol. 204; p. 1132.
Valve for cleaning-tools. I. H. Spencer. No. 1,103,547; July 14; Gaz. vol. 204; p. 505.
Valve for compressors. L. C. Bayles. No. 1,102,316; July 7; Gaz. vol. 204; p. 33.
Valve for down-spouts, Automatic gas-. E. Grueninger. No. 1,103,043; July 14; Gaz. vol. 204; p. 332.
Valve for gas-fixtures, Automatic. A. E. Hiertz. No. 1,104,116; July 21; Gaz. vol. 204; p. 744.
Valve for internal-combustion-engine cylinders. P. W. Milburn. No. 1,102,283; July 7; Gaz. vol. 204; p. 22.
Valve for internal-combustion engines, Automatic auxiliary air-. E. E. Sly. No. 1,102,303; July 7; Gaz. vol. 204; p. 28.
Valve for locomotive-engines, Drifting-. H. C. Manchester and S. S. Riegel. No. 1,104,306; July 21; Gaz. vol. 204; p. 809.
Valve for pressure-gages, Controlling-. J. Desmond. No. 1,102,730; July 7; Gaz. vol. 204; p. 177.
Valve-gear, Steam-engine. H. Vissering and P. Carpenter. No. 1,103,110; July 14; Gaz. vol. 204; p. 356.
Valve-gear, Steam-engine. W. S. Brown. (Reissue.) No. 13,770; July 14; Gaz. vol. 204; p. 639.
Valve-grinder. O. D. Hapgood. No. 1,102,581; July 7; Gaz. vol. 204; p. 127.
Valve-grinder. N. E. Meredith. No. 1,104,210; July 21; Gaz. vol. 204; p. 777.
Valve, Hydraulic. J. J. Simmonds. No. 1,103,320; July 14; Gaz. vol. 204; p. 429.
Valve-indicator. J. C. Lawson. No. 1,103,917; July 14; Gaz. vol. 204; p. 636.
Valve mechanism. C. J. Pembroke. No. 1,102,605; July 7; Gaz. vol. 204; p. 135.
Valve mechanism for gas-engines. C. L. Cookson. No. 1,105,125; July 28; Gaz. vol. 204; p. 1142.
Valve mechanism for internal-combustion engines. S. T. Allen and G. A. Cleaveland, Jr. No. 1,104,466; July 21; Gaz. vol. 204; p. 866.
Valve mechanism for motors. A. F. Schmidt. No. 1,103,087; July 14; Gaz. vol. 204; p. 247.
Valve mechanism, Steam-engine. L. Skinner. (Reissue.) No. 13,768; July 7; Gaz. vol. 204; p. 281.
Valve, Mixing-. J. Schultz. No. 1,103,439; July 14; Gaz. vol. 204; p. 468.
Valve or cock, Gas. T. J. Litle, Jr. No. 1,104,519; July 21; Gaz. vol. 204; p. 886.
Valve, Relief-. H. J. Rumpf. No. 1,102,549; July 7; Gaz. vol. 204; p. 115.
Valve-removing tool, Engine-. S. C. North. No. 1,105,096; July 28; Gaz. vol. 204; p. 1134.
Valve, Rotary. E. A. Nelson. No. 1,103,996; July 21; Gaz. vol. 204; p. 704.
Valve, Steam, air, and water trap. F. W. Leuthesser. No. 1,102,768; July 7; Gaz. vol. 204; p. 191.
Valve, Thermostatic controlling-. J. E. Fulweiler. No. 1,103,667; July 14; Gaz. vol. 204; p. 552.
Valve, Thermostatic pressure-. M. Lewless. No. 1,103,787; July 14; Gaz. vol. 204; p. 592.
Valve, Throttle-. B. Jacoby and C. S. Johnson. No. 1,102,410; July 7; Gaz. vol. 204; p. 67.
Valve, Triple. H. O. Martin. No. 1,105,360; July 28; Gaz. vol. 204; p. 1228.
Valves, Grinding-tool for gas-engine. C. L. Baldwin. No. 1,104,863; July 28; Gaz. vol. 204; p. 1053.
Vanadium from vanadium ores, Extracting. H. Boericke. No. 1,105,244; July 28; Gaz. vol. 204; p. 1185.
Vanadium from vanadium ores, Extracting. H. Boericke. No. 1,105,245; July 28; Gaz. vol. 204; p. 1185.
Vapor-burning apparatus. G. L. Hogan. No. 1,104,732; July 21; Gaz. vol. 204; p. 959.
Varnish and making same. M. F. Coughlin. No. 1,103,266; July 14; Gaz. vol. 204; p. 411.
Varnish-drying room. C. L. Liedblad. No. 1,104,362; July 21; Gaz. vol. 204; p. 830.
Vault, Burial-. F. E. Arndt. No. 1,104,604; July 21; Gaz. vol. 204; p. 915.
Vault, Burial-. E. D. Horn. No. 1,104,670; July 21; Gaz. vol. 204; p. 937.
Vault, Excreta-. B. J. Ashley. No. 1,105,237; July 28; Gaz. vol. 204; p. 1183.
Vehicle. J. C. Smith. No. 1,103,226; July 14; Gaz. vol. 204; p. 397.
Vehicle. J. C. Smith. No. 1,105,216; July 28; Gaz. vol. 204; p. 1174.
Vehicle-brake. O. Fraschini. No. 1,103,751; July 14; Gaz. vol. 204; p. 579.
Vehicle control mechanism, Motor-. G. M. Bacon. No. 1,104,161; July 21; Gaz. vol. 204; p. 760.
Vehicle-coupling. A. L. Thompson. No. 1,103,163; July 14; Gaz. vol. 204; p. 376.
Vehicle coupling-lock, Wheeled-. M. J. Todd. No. 1,103,452; July 14; Gaz. vol. 204; p. 472.
Vehicle-door lock, Storm-. T. H. Parry. No. 1,103,075; July 14; Gaz. vol. 204; p. 344.
Vehicle, Double-deck. P. J. Mitten. No. 1,102,602; July 7; Gaz. vol. 204; p. 134.
Vehicle driving-gearing, Motor-. H. P. Maxim. No. 1,103,978; July 21; Gaz. vol. 204; p. 698.
Vehicle driving mechanism, Motor-. J. C. Sturgeon. No. 1,105,165; July 28; Gaz. vol. 204; p. 1156.
Vehicle, Motor-. O. K. Kaasa. No. 1,103,419; July 14; Gaz. vol. 204; p. 462.
Vehicle, Motor-. E. P. Cowles. No. 1,103,567; July 14; Gaz. vol. 204; p. 514.
Vehicle, Motor-. L. S. Pfouts. No. 1,104,446; July 21; Gaz. vol. 204; p. 858.
Vehicle pneumatic suspension. C. A. Erickson. No. 1,104,294; July 21; Gaz. vol. 204; p. 806.
Vehicle-runners, Shaft attachment for. O. G. Rude. No. 1,105,103; July 28; Gaz. vol. 204; p. 1135.
Vehicle seat attachment. G. Jackson. No. 1,103,145; July 14; Gaz. vol. 204; p. 369.
Vehicle signal-sign. F. W. Ayres and R. A. Barnett. No. 1,102,564; July 7; Gaz. vol. 204; p. 120.

Vehicle-spring. O. Waters. No. 1,105,010; July 28; Gaz. vol. 204; p. 1103.
Vehicle-spring. R. Fuller. No. 1,105,192; July 28; Gaz. vol. 204; p. 1166.
Vehicle-spring. F. L. Martenette. No. 1,105,358; July 28; Gaz. vol. 204; p. 1228.
Vehicle starting and generating mechanism, Electric. J. A. Heany. No. 1,103,672; July 14; Gaz. vol. 204; p. 554.
Vehicle-wheel. W. C. Hofen. No. 1,102,406; July 7; Gaz. vol. 204; p. 65.
Vehicle-wheel. M. J. F. Genillon. No. 1,102,492; July 7; Gaz. vol. 204; p. 94.
Vehicle-wheel. F. H. Messinger. No. 1,103,308; July 14; Gaz. vol. 204; p. 425.
Vehicle-wheel. T. B. Murray. No. 1,103,813; July 14; Gaz. vol. 204; p. 601.
Vehicle-wheel. A. L. De Leeuw. No. 1,104,479; July 21; Gaz. vol. 204; p. 870.
Vehicle-wheel. T. F. E. Hutchings. No. 1,104,899; July 28; Gaz. vol. 204; p. 1060.
Vehicle-wheel. E. Bugatti. No. 1,105,179; July 28; Gaz. vol. 204; p. 1161.
Vehicle-wheel. O. Schaller. No. 1,105,211; July 28; Gaz. vol. 204; p. 1173.
Vehicle-wheel, Non-skid. J. Liska. No. 1,102,598; July 7; Gaz. vol. 204; p. 133.
Vending-machine. L. C. Tarasch. No. 1,103,919; July 14; Gaz. vol. 204; p. 636.
Vending-machine. R. T. Polk. No. 1,104,271; July 21, Gaz. vol. 204; p. 798.
Vending-machine. T. Woods. No. 1,105,477; July 28; Gaz. vol. 204; p. 1269.
Ventilating device. C. A. and R. V. Miller. No. 1,105,816; July 28; Gaz. vol. 204; p. 1036.
Ventilator: *See* Awning-ventilator.
Ventilator. S. H. Wheeler. No. 1,102,833; July 7; Gaz. vol. 204; p. 214.
Ventilator. G. C. Brekkert. No. 1,104,472; July 21; Gaz. vol. 204; p. 867.
Vise, Chain pipe-. G. Amborn. No. 1,103,243; July 14; Gaz. vol. 204; p. 404.
Vise, Chain pipe-. G. Amborn. No. 1,103,896; July 14; Gaz. vol. 204; p. 629.
Voltage-regulator. W. A. Turbayne. No. 1,104,849; July 28; Gaz. vol. 204; p. 1048.
Vulcanizer. O. Walter. No. 1,104,722; July 21; Gaz. vol. 204; p. 955.
Wafer. W. B. Wait, Jr. No. 1,102,370; July 7; Gaz. vol. 204; p. 51.
Wagon. B. Bailey. No. 1,103,556; July 14; Gaz. vol. 204; p. 509.
Wagon-coupling. L. W. Gray and G. H. Knowles. No. 1,103,042; July 14; Gaz. vol. 204; p. 332.
Wagon, Dump-. A. C. Baker. No. 1,102,852; July 7; Gaz. vol. 204; p. 220.
Wagon, Dump-. D. Gerber. No. 1,104,111; July 21; Gaz. vol. 204; p. 743.
Wagon-gear. D. T. Seale. No. 1,105,460; July 28; Gaz. vol. 204; p. 1263.
Wagon-jack. F. Miller. No. 1,105,091; July 28; Gaz. vol. 204; p. 1132.
Wagons, Controlling attachment for dumping-. H. L. Phelps. No. 1,102,434; July 7; Gaz. vol. 204; p. 75.
Wall-covering, Plaster-support for. F. L. Kane. No. 1,103,362; July 14; Gaz. vol. 204; p. 443.
Wall-finishing composition. R. M. Craig. No. 1,104,782; July 28; Gaz. vol. 204; p. 1024.
Wall-mold. W. M. Venable. No. 1,103,109; July 14; Gaz. vol. 204; p. 356.
Walls, Apparatus for forming curved. E. S. Bowker. No. 1,103,863; July 14; Gaz. vol. 204; p. 618.
Walls, Backing for cement-coated. E. D. Coddington. No. 1,103,174; July 14; Gaz. vol. 204; p. 380.
Warmer. J. T. Roberts. No. 1,105,307; July 28; Gaz. vol. 204; p. 1207.
Warp-tension-regulating mechanism. C. Moriggl. No. 1,104,377; July 21; Gaz. vol. 204; p. 835.
Warp-thread-tension indicator for dressers. G. D. De Grandpre. No. 1,103,131; July 14; Gaz. vol. 204; p. 364.
Washboard. H. C. Bush. No. 1,105,124; July 28; Gaz. vol. 204; p. 1142.
Washboiler. A. Gruenstern. No. 1,103,671; July 14; Gaz. vol. 204; p. 553.
Washboiler and tray, Combined. P. C. Nielsen. No. 1,105,337; July 28; Gaz. vol. 204; p. 1219.
Washer: *See* Clothes-washer; Lock-washer; Smoke-washer.
Washer and string attaching mechanism. A. Novick. No. 1,104,128; July 21; Gaz. vol. 204; p. 749.
Washing and collecting apparatus. R. H. Wright. No. 1,103,390; July 14; Gaz. vol. 204; p. 451.
Washing appliance and bath-seat, Combination. H. O. Joy and A. R. Montferrand. No. 1,103,516; July 14; Gaz. vol. 204; p. 494.
Washing-cylinder. Knockdown renewable. W. Bartholomew. No. 1,105,174; July 28; Gaz. vol. 204; p. 1159.
Washing-machine. C. O. Holliday. No. 1,102,268; July 7; Gaz. vol. 204; p. 16.
Washing-machine. R. F. Downey. No. 1,102,395; July 7; Gaz. vol. 204; p. 60.
Washing-machine. J. V. Kranebiel. No. 1,102,987; July 7; Gaz. vol. 204; p. 264.
Washing-machine. J. M. Twelt and J. O. Wise. No. 1,104,581; July 21; Gaz. vol. 204; p. 908.
Washing-machine. J. Pittings. No. 1,104,705; July 21; Gaz. vol. 204; p. 948.
Washing-machine. A. Keto. No. 1,104,904; July 28; Gaz. vol. 204; p. 1068.
Washing-machine dolly. J. D. A. Johnson. No. 1,104,263; July 21; Gaz. vol. 204; p. 795.
Washing-machine gearing. J. W. Reams. No. 1,104,830; July 28; Gaz. vol. 204; p. 1042.
Washtub and heater, Combined. C. R. Custis. No. 1,105,496; July 28; Gaz. vol. 204; p. 1275.
Waste-cleaning machine. G. W. Harnes. No. 1,105,512; July 28; Gaz. vol. 204; p. 1281.
Watchcase-receiver. H. B. Wier. No. 1,102,621; July 7; Gaz. vol. 204; p. 141.
Water-closet apparatus. W. U. Griffiths. No. 1,104,888; July 28; Gaz. vol. 204; p. 1062.
Water-closet-valve-operating mechanism. W. U. Griffiths. No. 1,104,887; July 28; Gaz. vol. 204; p. 1061.
Water-heater. G. T. Newell, Jr. No. 1,103,614; July 14; Gaz. vol. 204; p. 532.
Water-heater, Automatic. B. E. Meacham. No. 1,103,800; July 14; Gaz. vol. 204; p. 596.
Water-heater, Instantaneous. B. E. Meacham. No. 1,103,801; July 14; Gaz. vol. 204; p. 597.
Water-heaters, Sealing-plug for electrical. R. A. Bower. No. 1,103,171; July 14; Gaz. vol. 204; p. 378.
Water-jet lifter. M. Henderson. No. 1,102,505; July 7; Gaz. vol. 204; p. 99.
Water-main-cleaning machine. J. W. Nelson. No. 1,105,528; July 28; Gaz. vol. 204; p. 1286.
Water, Means and device to control and regulate the flow of surface. K. J. Ensminger. No. 1,104,483; July 21; Gaz. vol. 204; p. 872.
Water-meter. L. H. Nash. No. 1,103,612; July 14; Gaz. vol. 204; p. 531.
Water-meter. G. W. Treichel. No. 1,105,224; July 28; Gaz. vol. 204; p. 1177.
Water-meter, Self-registering. F. W. Hanna. No. 1,103,410; July 14; Gaz. vol. 204; p. 458.
Water-meter system. J. W. Calhoun. No. 1,103,655; July 14; Gaz. vol. 204; p. 548.
Water or other liquids in a sprayed form over comparatively large areas, Apparatus for the discharge of. D. E. Pougnet. No. 1,102,354; July 7; Gaz. vol. 204; p. 46.
Water-power wheel. A. H. Thoren. No. 1,103,706; July 14; Gaz. vol. 204; p. 565.
Water-temperature-control system, Automatic. F. R. Gebhardt. No. 1,103,756; July 14; Gaz. vol. 204; p. 581.
Water-tube boiler. W. D. Hoxie. No. 1,102,407; July 7; Gaz. vol. 204; p. 66.
Water-tube boiler. A. W. Ofeldt. No. 1,104,379; July 21; Gaz. vol. 204; p. 836.
Water-wheel. T. Crisp. No. 1,104,167; July 21; Gaz. vol. 204; p. 763.
Weaner, Calf-. L. R. Dehler. No. 1,103,743; July 14; Gaz. vol. 204; p. 577.
Weather-strip. E. G. Allen. No. 1,104,399; July 21; Gaz. vol. 204; p. 842.
Weather-strip, Metal. C. P. Whitcomb. No. 1,104,334; July 21; Gaz. vol. 204; p. 820.
Weatherproof covering. F. C. Overbury. No. 1,104,998; July 28; Gaz. vol. 204; p. 1099.
Weatherproofing, Plate for securing. C. J. Carroll. No. 1,102,871; July 7; Gaz. vol. 204; p. 227.
Weaving and the like, Making strips for. L. S. and M. Samuel. No. 1,105,309; July 28; Gaz. vol. 204; p. 1208.
Weaving, Velvet-. R. and J. Dantzer. No. 1,104,635; July 21; Gaz. vol. 204; p. 925.
Weaving with open shed, Arrangement for dobby and jacquard mechanism. P. Turlur. No. 1,102,826; July 7; Gaz. vol. 204; p. 212.
Web-controlling mechanism. I. A. Hunting. No. 1,103,142; July 14; Gaz. vol. 204; p. 368.
Web-tension-controlling mechanism. I. A. Hunting. No. 1,103,143; July 14; Gaz. vol. 204; p. 368.
Web-tension-controlling mechanism. I. A. Hunting. No. 1,103,144; July 14; Gaz. vol. 204; p. 368.
Weighing device, Liquid-. W. Leinert. No. 1,103,303; July 14; Gaz. vol. 204; p. 423.
Weighing-machine. G. Walker. No. 1,103,456; July 14; Gaz. vol. 204; p. 474.
Weighing-machine, Automatic. A. J. Ball. No. 1,103,469; July 14; Gaz. vol. 204; p. 479.
Weighing mechanism. E. H. Messiter. No. 1,104,268; July 21; Gaz. vol. 204; p. 796.
Welded joint for steel and iron pipes and tubes. J. G. Stewart. No. 1,103,630; July 14; Gaz. vol. 204; p. 537.
Welding-machine, Electric. R. C. Pierce. No. 1,102,797; July 7; Gaz. vol. 204; p. 201.
Well-holes, pole-holes, and the like, Producing. O. Wilhelmi. No. 1,103,334; July 14; Gaz. vol. 204; p. 434.
Well-packer. C. P. Clayton. No. 1,104,877; July 28; Gaz. vol. 204; p. 1058.
Well-sinking apparatus. M. T. Chapman. No. 1,104,409; July 21; Gaz. vol. 204; p. 846.
Wells, Apparatus for forcing fluids from. W. P. Randall. No. 1,104,133; July 21; Gaz. vol. 204; p. 751.
Wells, Treating old. W. O. Snelling. No. 1,104,011; July 21; Gaz. vol. 204; p. 709.
Wells, Valve-extractor for. R. L. Wyckoff and J. D. Nangle. No. 1,104,237; July 21; Gaz. vol. 204; p. 786.

Wheel: *See* Auto-wheel; Car-wheel; Cushioned wheel; Driving-wheel; Elastic-wheel; Engine-wheel; Fifth-wheel; Fly-wheel; Gun-carriage wheel; Lubricating-wheel; Polishing-wheel; Ratchet-wheel; Resilient wheel; Spring-wheel; Sprocket-wheel; Steering-wheel; Traction-wheel; Trolley-wheel; Vehicle-wheel; Water-wheel; Water-power wheel.
Wheel. B. P. Cooper. No. 1,103,398; July 14; Gaz. vol. 204; p. 454.
Wheel. B. P. Cooper. No. 1,103,399; July 14; Gaz. vol. 204; p. 454.
Wheel-flange-lubricating mechanism. R. H. Scroggins. No. 1,104,322; July 21; Gaz. vol. 204; p. 815.
Wheel-flange lubricator. R. H. Scroggins. No. 1,104,321; July 21; Gaz. vol. 204; p. 815.
Wheel-flange lubricator, Car-. S. W. Snyder and P. C. Boelzner. No. 1,104,324; July 21; Gaz. vol. 204; p. 816.
Wheel locking device or brake, Hand-. F. E. Arndt. No. 1,105,236; July 28; Gaz. vol. 204; p. 1183.
Wheel-rim. E. Laurent. No. 1,105,524; July 28; Gaz. vol. 204; p. 1285.
Wheel-rim, Detachable. R. Haupt. No. 1,103,003; July 7; Gaz. vol. 204; p. 271.
Wheel-rim, Detachable. C. E. Cameron. No. 1,104,874; July 28; Gaz. vol. 204; p. 1057.
Wheel-rim, Vehicle. J. H. Wagenhorst. No. 1,103,637; July 14; Gaz. vol. 204; p. 540.
Wheels and dashers, Mounting of dolly-. J. L. Coffield. No. 1,105,546; July 28; Gaz. vol. 204; p. 1292.
Wheels, Hardening the flanges of cast-steel. J. Stuart. No. 1,102,816; July 7; Gaz. vol. 204; p. 208.
Wheels, Traction device for vehicle-. T. H. Kelly. No. 1,102,274; July 7; Gaz. vol. 204; p. 18.
Wheelbarrow. P. Gnatzig. No. 1,103,759; July 14; Gaz. vol. 204; p. 582.
Whiffletree-hook. G. E. Stephens. No. 1,102,450; July 7; Gaz. vol. 204; p. 80.
Wind instrument, Wood. N. Alberti. No. 1,103,462; July 14; Gaz. vol. 204; p. 476.
Wind instrument, Wood. N. Alberti. No. 1,103,555; July 14; Gaz. vol. 204; p. 508.
Windmill. W. P. Brett. No. 1,105,020; July 28; Gaz. vol. 204; p. 1106.
Windmill power plant. W. P. Brett. No. 1,105,021; July 28; Gaz. vol. 204; p. 1107.
Winder. H. D. Colman. No. 1,105,065; July 28; Gaz. vol. 204; p. 1123.
Winder, Cop-. J. F. MacWilliam. No. 1,105,151; July 28; Gaz. vol. 204; p. 1151.
Winding fabrics, Stock-shell for. W. F. Gammeter. No. 1,104,296; July 21; Gaz. vol. 204; p. 807.
Winding-machine. B. R. Varley. No. 1,102,369; July 7; Gaz. vol. 204; p. 51.
Winding-machine. H. E. Smith. No. 1,104,840; July 28; Gaz. vol. 204; p. 1045.
Winding-machine. A. Petersen. No. 1,105,453; July 28; Gaz. vol. 204; p. 1261.
Winding means. C. F. Pease. No. 1,102,353; July 7; Gaz. vol. 204; p. 46.
Winding mechanism. E. J. Lipps. No. 1,103,676; July 14; Gaz. vol. 204; p. 555.
Window. D. N. Sire. No. 1,104,940; July 28; Gaz. vol. 204; p. 1080.
Window antirattler and sash-adjuster. H. W. Illenberger. No. 1,105,438; July 28; Gaz. vol. 204; p. 1255.
Window attachment. W. Potter. No. 1,103,376; July 14; Gaz. vol. 204; p. 447.
Window-cleaner. L. Sonderegger. No. 1,104,565; July 21; Gaz. vol. 204; p. 903.
Window-envelop blanks, Machine for making. M. Vierengel. No. 1,104,026; July 21; Gaz. vol. 204; p. 714.
Window-envelop blanks, Machine for making. W. H. Banzett. No. 1,104,162; July 21; Gaz. vol. 204; p. 761.
Window-lift. W. J. Hester. No. 1,102,506; July 7; Gaz. vol. 204; p. 99.
Window-lock. M. J. Sternberg. No. 1,103,629; July 14; Gaz. vol. 204; p. 537.
Window-lock. G. T. Segee. No. 1,104,558; July 21; Gaz. vol. 204; p. 901.
Window lock and adjuster, Combined. W. D. Dreiske. No. 1,104,973; July 28; Gaz. vol. 204; p. 1091.
Window-operating device, Casement-. W. S. Odle. No. 1,103,218; July 14; Gaz. vol. 204; p. 395.
Window, Pivoted and sliding. A. W. Eckberg and C. Stohlberg. No. 1,103,276; July 14; Gaz. vol. 204; p. 415.
Window-screen. F. Ahlstrom and J. F. Oelerich. No. 1,102,995; July 7; Gaz. vol. 204; p. 267.
Window-screen. E. Stein. No. 1,104,151; July 21; Gaz. vol. 204; p. 757.
Window, Ventilator-. G. B. Roberts. No. 1,102,955; July 7; Gaz. vol. 204; p. 254.
Windows and the like, Lookout device for. J. Chidley. No. 1,102,320; July 7; Gaz. vol. 204; p. 34.
Wire basket. H. T. Beatty and A. Reese. No. 1,104,096; July 21; Gaz. vol. 204; p. 739.
Wire bed-bottom fabric. F. P. Dooley. No. 1,105,262; July 28; Gaz. vol. 204; p. 1191.
Wire-clamp. J. E. Peckenpaugh. No. 1,103,157; July 14; Gaz. vol. 204; p. 374.
Wire-clamp. R. H. Uhrbrock. No. 1,103,711; July 14; Gaz. vol. 204; p. 567.
Wire-drawing machine. R. L. Morgan. No. 1,103,609; July 14; Gaz. vol. 204; p. 530.
Wire-drawing machine. W. H. Morse. No. 1,103,811; July 14; Gaz. vol. 204; p. 600.
Wire-fabric machine. W. M. Roop. No. 1,103,316; July 14; Gaz. vol. 204; p. 428.
Wire-fastener. A. Berry. No. 1,103,932; July 21; Gaz. vol. 204; p. 683.
Wire-holder. S. E. Elliott. No. 1,105,412; July 28; Gaz. vol. 204; p. 1246.
Wire-stretcher. J. F. Young and O. J. Tebow. No. 1,104,600; July 21; Gaz. vol. 204; p. 914.
Wire to standards, Means of securing. D. De Ros. No. 1,102,394; July 7; Gaz. vol. 204; p. 60.
Wireless-apparatus detector. B. J. Miessner. No. 1,104,065; July 21; Gaz. vol. 204; p. 728.
Wood obtained in forestry into briquets, Making waste. F. von Kalitsch. No. 1,102,591; July 7; Gaz. vol. 204; p. 130.
Wood-pulp, Bleaching cellulose. F. W. Dobson. No. 1,104,109; July 21; Gaz. vol. 204; p. 743.
Wood-splitting machine. G. W. Stanton. No. 1,105,108; July 28; Gaz. vol. 204; p. 1137.
Woodworking-machine. J. E. Gibbs. No. 1,104,791; July 28; Gaz. vol. 204; p. 1027.
Woodworking-machine. J. F. Wolvin. No. 1,104,858; July 28; Gaz. vol. 204; p. 1051.
Woodworking-machine. H. N. Pierce. No. 1,105,301; July 28; Gaz. vol. 204; p. 1205.
Wool, Making substitutes for animal. C. Chavez. No. 1,104,105; July 21; Gaz. vol. 204; p. 741.
Work-bench. P. J. Carpenter, Jr. No. 1,104,103; July 21; Gaz. vol. 204; p. 741.
Work-clamp. J. J. Gerlon. No. 1,105,193; July 28; Gaz. vol. 204; p. 1166.
Work-holder, Gang. W. A. Yerzley. No. 1,102,314; July 7; Gaz. vol. 204; p. 32.
Woven fabric. E. N. Gaillard. No. 1,105,503; July 28; Gaz. vol. 204; p. 1278.
Wrapping-machine. R. E. Fudge. No. 1,103,500; July 14; Gaz. vol. 204; p. 488.
Wrench: *See* Chain wrench; Motor-wrench; Pipe-wrench.
Wrench. A. Stensland. No. 1,102,449; July 7; Gaz. vol. 204; p. 80.
Wrench. F. J. Bojas. No. 1,102,863; July 7; Gaz. vol. 204; p. 224.
Wrench. A. L. Green. No. 1,103,408; July 14; Gaz. vol. 204; p. 457.
Wrench. J. Hohn. No. 1,104,190; July 21; Gaz. vol. 204; p. 771.
Wrench. M. Zapotoczny. No. 1,105,013; July 28; Gaz. vol. 204; p. 1104.
Wrench. P. W. Osborn. No. 1,105,372; July 28; Gaz. vol. 204; p. 1233.
Wrench. C. D. Wilson. No. 1,105,475; July 28; Gaz. vol. 204; p. 1269.
Wrench and lock for shut-off cocks, Combined. M. Tuttle. No. 1,104,022; July 21; Gaz. vol. 204; p. 712.
Wrench and vise, Combined. F. L. Walker. No. 1,105,473; July 28; Gaz. vol. 204; p. 1268.
Wrenches, Toothed jaw for. S. R. Audibert. No. 1,103,927; July 21; Gaz. vol. 204; p. 681.
Wringers and the like, Reversing-gearing for. A. Van Wormer. No. 1,105,226; July 28; Gaz. vol. 204; p. 1178.
Wringers, Safety device for power-. A. J. Fisher. No. 1,102,331; July 7; Gaz. vol. 204; p. 39.
Wringers, Stop mechanism for. A. Van Wormer. No. 1,105,225; July 28; Gaz. vol. 204; p. 1177.
Writing-machines, Line-spacing attachment for. P. B. Thigley. No. 1,103,103; July 14; Gaz. vol. 204; p. 353.
Writing-sheet and envelop, Combined. A. W. Wright and P. H. Knowlton. No. 1,105,012; July 28; Gaz. vol. 204; p. 1103.
Yeast-packaging machine. E. C. Phillips. No. 1,105,041; July 28; Gaz. vol. 204; p. 1113.
Yeast-tester. A. J. Banks. No. 1,104,766; July 28; Gaz. vol. 204; p. 1019.
Zinc-blende for magnetic separation, Preparing pyritiferous. G. Rigg. No. 1,103,082; July 14; Gaz. vol. 204; p. 345.
Zinc from zinc-bearing refuse, Extraction of. R. R. Parish. No. 1,104,922; July 28; Gaz. vol. 204; p. 1074.

ALPHABETICAL LIST OF DESIGNS.

Article of manufacture. F. T. Walklett. Nos. 46,073–6; July 7; Gaz. vol. 204; p. 289.
Article of manufacture. M. W. Hinrichs. No. 46,127; July 21; Gaz. vol. 204; p. 979.
Ash-tray. P. Rossotto. No. 46,102; July 14; Gaz. vol. 204; p. 649.
Automobile-body. R. H. Rice. No. 46,101; July 14; Gaz. vol. 204; p. 649.
Automobiles, Cowl-dash for. J. and H. Schneider. No. 46,184; July 28; Gaz. vol. 204; p. 1320.
Badge. C. J. Dieges. No. 46,049; July 7; Gaz. vol. 204; p. 284.
Badge, pin, or society-emblem. M. E. Nassau. No. 46,135; July 21; Gaz. vol. 204; p. 981.
Blower-gear casing. H. W. Wendt. No. 46,152; July 21; Gaz. vol. 204; p. 984.
Boat-bollard. I. Chase. No. 46,085; July 14; Gaz. vol. 204; p. 645.
Book or card matches and the like, Holder for. E. A. Merritt. No. 46,055; July 7; Gaz. vol. 204; p. 285.
Border, Sectional. L. A. Brown. No. 46,083; July 14; Gaz. vol. 204; p. 645.
Bottle. A. E. Pickard. No. 46,066; July 7; Gaz. vol. 204; p. 287.
Bottle. S. J. Goldberg. No. 46,090; July 14; Gaz. vol. 204; p. 646.
Bottle. J. J. Gavin. No. 46,166; July 28; Gaz. vol. 204; p. 1316.
Bottle-cap remover. E. Walker. No. 46,149; July 21; Gaz. vol. 204; p. 983.
Bottle holder, Milk-. F. C. Gibbs. No. 46,089; July 14; Gaz. vol. 204; p. 646.
Bottle, Mustard-. R. A. Lusk. No. 46,131; July 21; Gaz. vol. 204; p. 980.
Bracket. W. F. Clark. No. 46,086; July 14; Gaz. vol. 204; p. 645.
Broom-holder. R. E. McKee. No. 46,057; July 7; Gaz. vol. 204; p. 286.
Brush handle, Shaving-. F. B. Thurber. Nos. 46,139–45; July 21; Gaz. vol. 204; pp. 981–2.
Button. J. F. Byrne. No. 46,084; July 14; Gaz. vol. 204; p. 645.
Button. J. H. Hawley. No. 46,125; July 21; Gaz. vol. 204; p. 979.
Button. J. N. Whitehouse. Nos. 46,153–5; July 21; Gaz. vol. 204; p. 984.
Button, Cuff-. A. Paluch. No. 46,181; July 28; Gaz. vol. 204; p. 1319.
Cabinet, Kitchen-. D. R. Curtenius. No. 46,047; July 7; Gaz. vol. 204; p. 284.
Candelabrum. W. H. Costigan. No. 46,046; July 7; Gaz. vol. 204; p. 284.
Candlestick. C. H. Gutmann. No. 46,124; July 21; Gaz. vol. 204; p. 979.
Carrier for valuables. L. H. Boch. No. 46,081; July 14; Gaz. vol. 204; p. 644.
Casket handle, Burial-. C. Blesch. No. 46,108; July 21; Gaz. vol. 204; p. 975.
Chair seat-frame, Barber's. C. Pfanschmidt. No. 46,064; July 7; Gaz. vol. 204; p. 287.
Cigar-cutter. J. Kaufman. No. 46,053; July 7; Gaz. vol. 204; p. 285.
Clock-casing. E. Kienzle. No. 46,129; July 21; Gaz. vol. 204; p. 980.
Clocks or other articles, Case for. A. Teltelbaum. No. 46,138; July 21; Gaz. vol. 204; p. 981.
Collar-spacer. J. L. Weir. No. 46,151; July 21; Gaz. vol. 204; p. 983.
Crochet-balls to the user's wrist, Holder for securing. F. G. Heath. No. 46,126; July 21; Gaz. vol. 204; p. 979.
Crochet-stand. W. D. Reist. No. 46,137; July 21; Gaz. vol. 204; p. 981.
Die-holder. J. B. Martens. No. 46,056; July 7; Gaz. vol. 204; p. 285.
Drop-light fixtures, Plate for. P. Mohrmann. Nos 46,132–4; July 21; Gaz. vol. 204; pp. 980–1.
Electric switches, Casing for pendent. C. J. Klein. No. 46,130; July 21; Gaz. vol. 204; p. 980.
Emblem. J. H. Bechtold. No. 46,107; July 21; Gaz. vol. 204; p. 975.
Emblem or badge. G. E. Nerney. No. 46,099; July 14; Gaz. vol. 204; p. 648.
Fabric. E. Ericson. No. 46,122; July 21; Gaz. vol. 204; p. 978.
Fabric, Textile. H. R. Mallinson. No. 46,176; July 28; Gaz. vol. 204; p. 1318.
Game-board. S. M. Dowst. No. 46,163; July 28; Gaz. vol. 204; p. 1315.
Garment. F. C. Keller and C. E. Oathout. No. 46,167; July 28; Gaz. vol. 204; p. 1316.
Garment-hanger. G. Pohl. No. 46,100; July 14; Gaz. vol. 204; p. 648.
Glass or similar article. E. Zahn. No. 46,156; July 21; Gaz. vol. 204; p. 984.
Glass shade or reflector. O. A. Mygatt. No. 46,098; July 14; Gaz. vol. 204; p. 648.
Glass shade or reflector, Corrugated pressed-. O. A. Mygatt. No. 46,058; July 7; Gaz. vol. 204; p. 286.
Goblet. C. W. Oldham. No. 46,060; July 7; Gaz. vol. 204; p. 286.
Ice-cream-cone holder. W. A. G. Wilson. No. 46,195; July 28; Gaz. vol. 204; p. 1322.
Jewelry-display box or case. C. L. Depollier. Nos. 46,117–20; July 21; Gaz. vol. 204; pp. 977–8.
Kitchen-rack. G. L. Webb. No. 46,150; July 21; Gaz. vol. 204; p. 983.
Knife and saw, Combined. A. M. Greer. No. 46,091; July 14; Gaz. vol. 204; p. 647.
Knife, Fruit and vegetable. H. Bosworth. No. 46,161; July 28; Gaz. vol. 204; p. 1315.
Knife, Orange or grape-fruit. J. L. Anderson. No. 46,159; July 28; Gaz. vol. 204; p. 1315.
Knitted trimming for underwear. M. N. Aaron. Nos. 46,104–5; July 21; Gaz. vol. 204; p. 974.
Knocker, Door-. G. C. Gebelein. No. 46,088; July 14; Gaz. vol. 204; p. 646.
Label-blank. G. A. Petit. No. 46,182; July 28; Gaz. vol. 204; p. 1319.
Lamp, Carriage-. J. H. Hill. No. 46,093; July 14; Gaz. vol. 204; p. 647.
Lamp-globe, Automobile. A. K. Miller. No. 46,097; July 14; Gaz. vol. 204; p. 648.
Lamps and lamp-supply containers, Mounting for. E. A. Hawthorne. No. 46,092; July 14; Gaz. vol. 204; p. 647.
Lantern base, Electric-. F. A. Fischrupp. No. 46,051; July 7; Gaz. vol. 204; p. 284.
Leather. C. Brandt. No. 46,082; July 14; Gaz. vol. 204; p. 645.
Light inclosure, Artificial-. C. B. Ott. Nos. 46,061–2; July 7; Gaz. vol. 204; pp. 286–7.
Light shade, Artificial-. M. W. Gleason. No. 46,123; July 21; Gaz. vol. 204; p. 978.
Mirrors, brushes, or similar toilet articles, Back for. G. H. Berry. Nos. 46,042–5; July 7; Gaz. vol. 204; p. 283.
Monument. W. R. Trigg. Nos. 46,071–2; July 7; Gaz. vol. 204; p. 288.
Monument. W. R. Trigg. No. 46,191; July 28; Gaz. vol. 204; p. 1321.
Necktie-holder. S. E. Pederson. No. 46,063; July 7; Gaz. vol. 204; p. 287.
Padlock. F. Soley. No. 46,103; July 14; Gaz. vol. 204; p. 649.
Paper-fastening devices, Casing for. G. P. Bump. No. 46,109; July 21; Gaz. vol. 204; p. 975.
Paper sheet or similar article. C. L. Mead. Nos. 46,177–9; July 28; Gaz. vol. 204; pp. 1318–19.
Pen-wiper. E. Z. Team. No. 46,188; July 28; Gaz. vol. 204; p. 1320.
Pencil-sharpener. J. R. Searight. No. 46,068; July 7; Gaz. vol. 204; p. 288.
Picture-frame. M. Vasek. No. 46,147; July 21; Gaz. vol. 204; p. 983.
Pillow-top. H. Well. Nos. 46,192–3; July 28; Gaz. vol. 204; p. 1321.
Pin, brooch, or similar article of jewelry. O. C. Lanphear. No. 46,171; July 28; Gaz. vol. 204; p. 1317.
Pincushion. H. Kirschbraun. No. 46,168; July 28; Gaz. vol. 204; p. 1317.
Plate. E. E. Walter. No. 46,077; July 7; Gaz. vol. 204; p. 290.
Plate. W. Abrams. No. 46,106; July 21; Gaz. vol. 204; p. 975.
Plate. A. J. Kuopf. No. 46,169; July 28; Gaz. vol. 204; p. 1317.
Plate, Change-holding. L. L. Johnson. No. 46,128; July 21; Gaz. vol. 204; p. 979.
Plate or similar article. W. L. Large. Nos. 46,172–4; July 28; Gaz. vol. 204; pp. 1317–18.
Pool-table pocket. J. W. Johnson. No. 46,170; July 28; Gaz. vol. 204; p. 1317.
Pool-table pocket. T. R. Treiber and J. W. Johnson. No. 46,190; July 28; Gaz. vol. 204; p. 1321.
Pot and cover lifter. K. Prochaska. No. 46,183; July 28; Gaz. vol. 204; p. 1319.
Pump support and casing, Air-. J. T. Janette. No. 46,095; July 14; Gaz. vol. 204; p. 647.
Radiator. J. Ogden. No. 46,180; July 28; Gaz. vol. 204; p. 1319.
Range, Cooking-. J. Jewett, Jr. No. 46,052; July 7; Gaz. vol. 204; p. 285.

Ribbon, and particularly for brocaded woven ribbon. J. W. MacLaren and E. Speck. No. 46,175; July 28; Gaz. vol. 204; p. 1318.
Rug or carpet, Grass. O. T. Waite. No. 46,148; July 21; Gaz. vol. 204; p. 983.
Shelf and clothes-rack, Combined. A. M. Simenson. No. 46,187; July 28; Gaz. vol. 204; p. 1320.
Sink and tray bracket, Combination. H. C. Nichols. No. 46,136; July 21; Gaz. vol. 204; p. 981.
Spoon-holder or similar article. H. Northwood. No. 46,059; July 7; Gaz. vol. 204; p. 286.
Spoons, forks, or similar articles, Handle for. W. C. Codman. No. 46,087; July 14; Gaz. vol. 204; p. 646.
Spoons, forks, or similar articles, Handle for. W. C. Codman. Nos. 46,110–16; July 21; Gaz. vol. 204; pp. 975–7.
Spraying apparatus, Casing for hand. C. H. Allen. No. 46,157; July 28; Gaz. vol. 204; p. 1314.
Stand for holding cigars, pipes, matches, and lighters. H. Fink. No. 46,165; July 28; Gaz. vol. 204; p. 1316.
Stocking. R. W. Scott. Nos. 46,185–6; July 28; Gaz. vol. 204; p. 1320.
Stool. E. O. Klemm. No. 46,054; July 7; Gaz. vol. 204; p. 285.
Stove, Heating-. G. W. Howes. No. 46,094; July 14; Gaz. vol. 204; p. 647.
Tank. C. Pfau. No. 46,065; July 7; Gaz. vol. 204; p. 287.
Teapot or similar article. W. C. Codman. No. 46,162; July 28; Gaz. vol. 204; p. 1315.
Towel-holder. M. Kief. No. 46,096; July 14; Gaz. vol. 204; p. 648.
Toy. W. Scoles. Nos. 46,069–70; July 7; Gaz. vol. 204; p. 288.
Toy. J. V. Klein. No. 46,080; July 7; Gaz. vol. 204; p. 290.
Toy figure. E. Allison. No. 46,158; July 28; Gaz. vol. 204; p. 1314.
Twine-holder. S. W. Wardwell. Nos. 46,078–9; July 7; Gaz. vol. 204; p. 290.
Type, Font of. M. F. Benton. No. 46,041; July 7; Gaz. vol. 204; p. 282.
Valance. C. Weilert. No. 46,194; July 28; Gaz. vol. 204; p. 1322.
Valve. W. S. Fairhurst. No. 46,164; July 28; Gaz. vol. 204; p. 1316.
Vanity-case. A. Bienenzucht. No. 46,160; July 28; Gaz. vol. 204; p. 1315.
Vehicle-body. W. I. Twombly. No. 46,146; July 21; Gaz. vol. 204; p. 983.
Veiling, Net. Z. Van Raalts. No. 46,067; July 7; Gaz. vol. 204; p. 288.
Watch, Bracelet-. C. L. Depollier. No. 46,121; July 21; Gaz. vol. 204; p. 978.
Watch-bracelet or similar article. G. B. Austin. No. 46,040; July 7; Gaz. vol. 204; p. 282.
Watch-bracelets, Box or case for holding and displaying. G. Fieseler. No. 46,050; July 7; Gaz. vol. 204; p. 284.
Water-heater. P. A. Deasy. No. 4,048; July 7; Gaz. vol. 204; p. 284.
Wrench, Solid. W. S. Thomson. No. 46,189; July 28; Gaz. vol. 204; p. 1321.

ALPHABETICAL LIST OF TRADE-MARKS.

Adhesive material resembling solder. Old Roman Solder Co. No. 98,190; July 7; Gaz. vol. 204; p. 311.
Adhesive plasters and wound-salves. J. Benario. No. 98,121; July 7; Gaz. vol. 204; p. 309.
Antiseptic absorbent for allaying inflammation. A. H. Richardson. No. 98,199; July 7; Gaz. vol 204; p. 311.
Antiseptic wash for the treatment of pyorrhea alveolaris, &c. P. T. Barber. No. 98,116; July 7; Gaz. vol. 204; p. 309.
Apple-butter, fruit jellies, jams, and preserves. Sulzberger & Sons Company. Nos. 98,435–6; July 14; Gaz. vol. 204; p. 671.
Apples, Dried. Wayne County Driers & Packers Fruit Company. No. 98,343; July 7; Gaz. vol. 204; p. 316.
Apples, pears, peaches, plums, &c., Fresh. J. Turnbull. No. 98,338; July 7; Gaz. vol. 204; p. 315.
Automobile truss-rods. V. V. Glikes. No. 98,513; July 21; Gaz. vol. 204; p. 1007.
Automobiles, bodies, running-gears, and chassis. Ford Motor Company. No. 98,655; July 28; Gaz. vol. 204; p. 1340.
Awnings, tents, canopies, &c. The Wagner Manufacturing Co. No. 98,722; July 28; Gaz. vol. 204; p. 1342.
Baby-carriages and go-carts. P. & L. Comfort Baby Carriage Co. No. 98,639; July 28; Gaz. vol. 204; p. 1340.
Bags, certain coverings, and materials, Woven textile for. The Cleveland-Akron Bag Co. No. 98,363; July 14; Gaz. vol. 204; p. 669.
Bait, Artificial. Immell Bait Co. No. 98,390; July 14; Gaz. vol. 204; p. 670.
Baking-powder. The Southern Manufacturing Co. No. 98,206; July 7; Gaz. vol. 204; p. 312.
Batteries, Secondary. Helios Manufacturing Company. No. 98,388; July 14; Gaz. vol. 204; p. 670.
Bed-canopies. J. Thompson and Company. No. 98,439; July 14; Gaz. vol. 204; p. 671.
Bedsteads. J. W. Vail. No. 98,441; July 14; Gaz. vol. 204; p. 671.
Beer. Capital City Brewing Company. No. 98,360; July 14; Gaz. vol. 204; p. 669.
Beer. Lone Star Brewing Co. No. 98,407; July 14; Gaz. vol. 204; p. 670.
Beer-pipe-cleansing apparatus. The Baehr Manufacturing Co. No. 98,463; July 21; Gaz. vol. 204; p. 1005.
Belts and belting, Woven textile. Rossendale-Reddaway Belting & Hose Co. No. 98,569; July 21; Gaz. vol. 204; p. 1008.
Beverages, Aerated. A. F. Liopart. No. 98,542; July 21; Gaz. vol. 204; p. 1007.
Beverages, Certain named non-alcoholic. A. Cipolla. No. 98,362; July 14; Gaz. vol. 204; p. 669.
Beverages, Non-alcoholic malt. F. W. Finger. No. 98,378; July 14; Gaz. vol. 204; p. 670.
Biscuit. National Biscuit Company. Nos. 98,177–82; July 7; Gaz. vol. 204; p. 311.
Biscuit. National Biscuit Company. No. 98,310; July 7; Gaz. vol. 204; p. 315.
Biscuits. Manchester Biscuit Co. No. 98,303; July 7; Gaz. vol. 204; p. 314.
Biscuits. National Biscuit Company. No. 98,557; July 21; Gaz. vol. 204; p. 1008.
Biscuits and crackers, Bran. The Dietetic Food Company. No. 98,262; July 7; Gaz. vol. 204; p. 313.
Biscuits and pastry. Robert A. Johnston Co. No. 98,397; July 14; Gaz. vol. 204; p. 670.
Biscuits, cakes, and cookies. Loose-Wiles Biscuit Company. No. 98,544; July 21; Gaz. vol. 204; p. 1007.
Blouses and waists. Shotwell & Harris. No. 98,430; July 14; Gaz. vol. 204; p. 671.
Bluing and colors, Laundry. B. Heller & Co. No. 98,148; July 7; Gaz. vol. 204; p. 310.
Boiler-cleaning compound. The Hill & Griffith Co. No. 98,521; July 21; Gaz. vol. 204; p. 1007.
Boilers. G. H. Deringer. No. 98,487; July 21; Gaz. vol. 204; p. 1006.
Boilers, Chemical compound for preserving. The Perolin Company of America. Nos. 98,683–4; July 28; Gaz. vol. 204; p. 1341.
Bonnet-wire. Joseph W. Schloss Co. No. 98,702; July 28; Gaz. vol. 204; p. 1341.
Boots and shoes, Leather. I. Blyn & Sons. No. 98,357; July 14; Gaz. vol. 204; p. 669.
Boots and shoes, Leather. Greenberg Miller Co. No. 98,384; July 14; Gaz. vol. 204; p. 670.
Boots and shoes, Leather. Emerson Shoe Co. No. 98,649; July 28; Gaz. vol. 204; p. 1340.
Boots and shoes, Rubber and leather. Northern Shoe Co. No. 98,413; July 14; Gaz. vol. 204; p. 671.
Boots, shoes, and slippers. Powell Brothers Shoe Company. No. 98,689; July 28; Gaz. vol. 204; p. 1341.
Boots, shoes, and slippers, Leather. C. E. Slater. No. 98,708; July 28; Gaz. vol. 204; p. 1342.
Bottle-stopples, Porcelain, &c. J. W. Douglass. No. 98,644; July 28; Gaz. vol. 204; p. 1340.
Bottle-stopples, Metal. J. W. Douglass. No. 98,645; July 28; Gaz. vol. 204; p. 1340.
Bread. Atlas Bread Factory. No. 98,461; July 21; Gaz. vol. 204; p. 1005.
Bread and bread-sticks. The Dietetic Food Company. No. 98,261; July 7; Gaz. vol. 204; p. 313.
Bricks. The Hocking Valley Fire Clay Co. No. 98,389; July 14; Gaz. vol. 204; p. 670.
Brushes, Bath, bottle, glass, house-cleaning, and dairy. G. S. Leiner & Co. No. 98,405; July 14; Gaz. vol. 204; p. 670.
Brushes, Bottle-. G. S. Leiner & Co. No. 98,404; July 14; Gaz. vol. 204; p. 670.
Butter. Albuquerque Creamery. No. 98,613; July 28; Gaz. vol. 204; p. 1339.
Buttons, Snap-. Waldes & Co. Nos. 98,442–50; July 14; Gaz. vol. 204; pp. 671–2.
Cabinets, Food-. L. T. Schuberth. No. 98,571; July 21; Gaz. vol. 204; p. 1008.
Cakes. A. Barlet. No. 98,621; July 28; Gaz. vol. 204; p. 1339.
Cameras, shutters, lamps, and films. Ansco Company. No. 98,456; July 21; Gaz. vol. 204; p. 1005.
Candles, night-lights, and mineral wax for illuminating and heating purposes. The Asiatic Petroleum Company. No. 98,236; July 7; Gaz. vol. 204; p. 312.
Candy. National Biscuit Company. No. 98,183; July 7; Gaz. vol. 204; p. 311.
Candy. The Ohio Confection Company. No. 98,188; July 7; Gaz. vol. 204; p. 311.
Candy. Westmoreland Candy Company. No. 98,226; July 7; Gaz. vol. 204; p. 312.
Candy. Novelty Candy Company. No. 98,414; July 14; Gaz. vol. 204; p. 671.
Candy. N. Hill. No. 98,520; July 21; Gaz. vol. 204; p. 1007.
Candy. Powell's. No. 98,560; July 21; Gaz. vol. 204; p. 1008.
Candy. Guth Chocolate Company. No. 98,657; July 28; Gaz. vol. 204; p. 1340.
Candy. The Robt. F. Mackenzie Co. Nos. 98,674–5; July 28; Gaz. vol. 204; p. 1341.
Candy cough-drops. The George Blome & Son Co. No. 98,471; July 21; Gaz. vol. 204; p. 1005.
Canned cod-fish balls, brown bread, and baked beans. Boston Food Products Company. No. 98,625; July 28; Gaz. vol. 204; p. 1339.
Canned fruits and vegetables. H. G. Prince & Company. No. 98,691; July 28; Gaz. vol. 204; p. 1341.
Canned fruits, vegetables, and fish, coffee, &c. Grossfeld & Roe Co. No. 98,515; July 21; Gaz. vol. 204; p. 1007.
Canned herring. The Sunset Packing Company. No. 98,213; July 7; Gaz. vol. 204; p. 312.
Canned peas. Sprague, Warner & Company. No. 98,325; July 7; Gaz. vol. 204; p. 315.
Canned salmon. The Macleay Estate Co. No. 98,170; July 7; Gaz. vol. 204; p. 310.
Canned salmon and clams. Hoquiam Packing Company. No. 98,527; July 21; Gaz. vol. 204; p. 1007.
Canned syrups. R. W. Eames. No. 98,492; July 21; Gaz. vol. 204; p. 1006.
Canned tuna. Premier Packing Co. No. 98,690; July 28; Gaz. vol. 204; p. 1341.
Canned vegetables. Atlanta Canning Company. No. 98,237; July 7; Gaz. vol. 204; p. 312.
Canned vegetables. Inderrieden Canning Co. Nos. 98,392–5; July 14; Gaz. vol. 204; p. 670.
Canned vegetables, sauer-kraut, and pork and beans. The H. T. Lange Co. No. 98,539; July 21; Gaz. vol. 204; p. 1007.
Caps. J. A. Cohoon. No. 98,638; July 28; Gaz. vol. 204; p. 1339.
Cartridges, empty shells, primers, and shot. The Western Cartridge Co. No. 98,601; July 21; Gaz. vol. 204; p. 1009.
Castings and forgings, Steel and iron. Taylor-Wharton Iron & Steel Co. No. 98,438; July 14; Gaz. vol. 204; p. 671.
Cement containing oil for rendering roof structures waterproof. Pecora Paint Co. No. 98,192; July 7; Gaz. vol. 204; p. 311.
Cement or concrete, Bonding. Livingstone Company. No. 98,406; July 14; Gaz. vol. 204; p. 670.
Cement, Portland. Universal Portland Cement Co. No. 98,720; July 28; Gaz. vol. 204; p. 1342.
Chafing-dishes, coffee-percolators, &c., Electrically-heated. Landers, Frary & Clark. No. 98,538; July 21; Gaz. vol. 204; p. 1007.
Chandeliers, &c. E. F. Guth. No. 98,280; July 7; Gaz. vol. 204; p. 314.

Chandeliers and lighting-fixtures, Certain parts of. J. H. White Mfg. Co. No. 98,347; July 7; Gaz. vol. 204; p. 316.
Chandeliers, brackets, and pedestals for gas and electric lights. Holophane Glass Co. No. 98,283; July 7; Gaz. vol. 204; p. 314.
Chandeliers, brackets, and pedestals for gas and electric lights. Holophane Glass Co. No. 98,662; July 28; Gaz. vol. 204; p. 1340.
Cheese. MacLaren Imperial Cheese Co. No. 98,302; July 7; Gaz. vol. 204; p. 314.
Cheese. Lake Zurich Creamery Co. No. 98,537; July 21; Gaz. vol. 204; p. 1007.
Chocolates, bonbons, and candies. Norris Incorporated. Nos. 98,186–7; July 7; Gaz. vol. 204; p. 311.
Cigar and cigarette-lighting devices. L. V. Aronson. No. 98,234; July 7; Gaz. vol. 204; p. 312.
Cigar and gas lighting devices. L. V. Aronson. No. 98,460; July 21; Gaz. vol. 204; p. 1005.
Cigars. T. W. Edwards. No. 98,265; July 7; Gaz. vol. 204; p. 313.
Cigars. H. Traiser & Company. No. 98,591; July 21; Gaz. vol. 204; p. 1009.
Cigars. Breslin & Campbell. No. 98,626; July 28; Gaz. vol. 204; p. 1339.
Cleaner. Joyo Chemical Company. No. 98,290; July 7; Gaz. vol. 204; p. 314.
Cleansing compound. The New Ideas Company. No. 98,311; July 7; Gaz. vol. 204; p. 315.
Cleansing-paste. Mahon & Stanly. No. 98,676; July 28; Gaz. vol. 204; p. 1341.
Clearing-pans, hop-jacks, beer-hoppers, &c. W. Ponndorf. No. 98,687; July 28; Gaz. vol. 204; p. 1341.
Clothing, Certain articles of. C. B. Rouss. No. 98,424; July 14; Gaz. vol. 204; p. 671.
Clothing, Certain named. P. M. Cohen. No. 98,637; July 28; Gaz. vol. 204; p. 1339.
Clothing, Certain named. Moore, Eady & Murcott Goode. No. 98,680; July 28; Gaz. vol. 204; p. 1341.
Clothing, Certain named. R. Reis & Co. Nos. 98,693–4; July 28; Gaz. vol. 204; p. 1341.
Coating, Liquid protective. Bayway Chemical Company. No. 98,119; July 7; Gaz. vol. 204; p. 309.
Coats and suits, Outer. Leon Mann Co. No. 98,409; July 14; Gaz. vol. 204; p. 670.
Cocoa-butter substitute. India Refining Company. No. 98,286; July 7; Gaz. vol. 204; p. 314.
Coffee. Denison & Company. No. 93,370; July 14; Gaz. vol. 204; p. 669.
Coffee. Allen, Slade & Co. No. 98,453; July 21; Gaz. vol. 204; p. 1005.
Coffee. John Hoffmann & Sons Co. No. 98,523; July 21; Gaz. vol. 204; p. 1007.
Coffee and coffee and chicory mixtures. H. F. Batterton. No. 98,622; July 28; Gaz. vol. 204; p. 1339.
Coffee and tea. Denison & Company. No. 98,371; July 14; Gaz. vol. 204; p. 669.
Coffee-making apparatus, (glass.) Krausse & Auerbach. No. 98,294; July 7; Gaz. vol. 204; p. 314.
Coffee substitute. Simas, Vasconcellos & Co. No. 98,576; July 21; Gaz. vol. 204; p. 1008.
Coffee-substitute drink. B. Huber. No. 98,528; July 21; Gaz. vol. 204; p. 1007.
Coffee, tea, and olive-oil. Davies-Sullivan Company. No. 98,255; July 7; Gaz. vol. 204; p. 313.
Colic, azoturia, distemper, &c. The Dr. Pyle Veterinary Remedy Co. No. 98,197; July 7; Gaz. vol. 204; p. 311.
Collars, Ladies'. Timothy F. Crowley, Incorporated. No. 98,486; July 21; Gaz. vol. 204; p. 1006.
Coloring-matters for use as ingredients in food. Ungemach, A.-G. Els. Conserven-Fabrik & Import-Gesellschaft. No. 98,220; July 7; Gaz. vol. 204; p. 312.
Combination-garments, Ladies'. Harrison & Rosenberg. No. 98,659; July 28; Gaz. vol. 204; p. 1340.
Compasses, Magnetic. Taylor Instrument Companies. No. 98,715; July 28; Gaz. vol. 204; p. 1342.
Concrete floor-construction material. V. H. Kriegshaber. No. 98,399; July 14; Gaz. vol. 204; p. 670.
Concrete sidewalks and curbs. Clip Bar Manufacturing Company. No. 98,635; July 28; Gaz. vol. 204; p. 1339.
Cooling compound for cutting and grinding. The White & Bagley Company. No. 98,603; July 21; Gaz. vol. 204; p. 1009.
Copying-cloths, Apparatus for preparing. C. W. Jean Company. No. 98,158; July 7; Gaz. vol. 204; p. 310.
Cordage, rope, twine, and string. The India Rubber, Gutta Percha and Telegraph Works Co. No. 98,396; July 14; Gaz. vol. 204; p. 670.
Cords (bare) and ropes of certain named materials. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,377; July 14; Gaz. vol. 204; p. 669.
Corn flakes, wheat-biscuit, krumbles, and wheat flakes, Toasted. Kellogg Toasted Corn Flakes Company. No. 98,293; July 7; Gaz. vol. 204; p. 314.
Corsets and gloves. C. Schnabel. No. 98,429; July 14; Gaz. vol. 204; p. 671.
Cotton piece goods. Appleton Company. Nos. 98,352–5; July 14; Gaz. vol. 204; p. 669.
Cotton piece goods. King Philip Mills. No. 98,398; July 14; Gaz. vol. 204; p. 670.
Cotton piece goods. Appleton Company. Nos. 98,458–9; July 21; Gaz. vol. 204; p. 1005.
Cotton piece goods. Massachusetts Cotton Mills. No. 98,546; July 21; Gaz. vol. 204; p. 1007.
Cotton piece goods. Appleton Company. No. 98,616; July 28; Gaz. vol. 204; p. 1339.
Cotton piece goods. Carson, Pirie, Scott & Co. No. 98,631; July 28; Gaz. vol. 204; p. 1339.
Cotton-seed. W. A. Simpkins. No. 98,577; July 21; Gaz. vol. 204; p. 1008.
Cotton twills. Farnsworth, Hoyt & Co. No. 98,652; July 28; Gaz. vol. 204; p. 1340.
Cough-syrup. T. Goss. No. 98,278; July 7; Gaz. vol. 204; p. 314.
Cough-syrup powder. A. G. Barnes. No. 98,117; July 7; Gaz. vol. 204; p. 309.
Crackers, cookies, biscuits, and cakes. L. Iten & Sons. No. 98,156; July 7; Gaz. vol. 204; p. 310.
Cream, Cold-. F. G. Burke. No. 98,474; July 21; Gaz. vol. 204; p. 1005.
Cream, Massage-. The Adiposa Company. No. 98,452; July 21; Gaz. vol. 204; p. 1005.
Cream, Toilet. C. Y. Waggoner. No. 98,225; July 7; Gaz. vol. 204; p. 312.
Cultivators. T. L. O'Neil. No. 98,555; July 21; Gaz. vol. 204; p. 1008.
Cutlery and tools and parts thereof, Certain named. Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co. Nos. 98,138–9; July 7; Gaz. vol. 204; p. 309.
Cycle-cars. W. H. McIntyre. No. 98,678; July 28; Gaz. vol. 204; p. 1341.
Cycles. De W. C. Baker. No. 98,239; July 7; Gaz. vol. 204; p. 313.
Dandruff remedy. The R. L. Watkins Company. No. 98,598; July 21; Gaz. vol. 204; p. 1009.
Dental cream. Colgate & Co. No. 98,482; July 21; Gaz. vol. 204; p. 1006.
Dictating-machines. Thomas A. Edison, Incorporated. No. 98,494; July 21; Gaz. vol. 204; p. 1006.
Digestive and corrective for stomach trouble. J. L. Falconer. No. 98,497; July 21; Gaz. vol. 204; p. 1006.
Disinfectant and air-purifier. H. V. Flamhaft. No. 98,503; July 21; Gaz. vol. 204; p. 1006.
Disinfectants. Providol Gesellschaft mit beschränkter Haftung. No. 98,195; July 7; Gaz. vol. 204; p. 311.
Disinfectants. Fulton Bag & Cotton Mills. No. 98,275; July 7; Gaz. vol. 204; p. 314.
Drapery material. A. T. Abbott & Co. No. 98,610; July 28; Gaz. vol. 204; p. 1339.
Dress-shields. I. B. Kleinert Rubber Company. No. 98,665; July 28; Gaz. vol. 204; p. 1340.
Drink, Non-intoxicating. J. C. Weller & J. L. Nally. No. 98,724; July 28; Gaz. vol. 204; p. 1342.
Duplicating apparatus. The Hektograph Mfg. & Duplicating Co. No. 98,517; July 21; Gaz. vol. 204; p. 1007.
Dyed fabrics, Emollient for treating. The O. F. Zurn Co. No. 98,131; July 7; Gaz. vol. 204; p. 309.
Eggs, Hens'. Schermerhorn-Shotwell Company. No. 98,701; July 28; Gaz. vol. 204; p. 1341.
Electric motors and generators and dynamo-machines. Junghanns & Kolosche. No. 98,159; July 7; Gaz. vol. 204; p. 310.
Electrical apparatus and supplies. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,500; July 21; Gaz. vol. 204; p. 1006.
Electricity-metering apparatus. Chicago Electric Meter Company. No. 98,480; July 21; Gaz. vol. 204; p. 1006.
Enameled, steel, or iron ware. Hibbard, Spencer, Bartlett & Co. No. 98,660; July 28; Gaz. vol. 204; p. 1340.
Engines, Gas or gasolene. Union Gas Engine Company. No. 98,221; July 7; Gaz. vol. 204; p. 312.
Envelops. 2-B-Tween Envelope Co. No. 98,592; July 21; Gaz. vol. 204; p. 1009.
Eyeglass-reels. Geo. S. Johnston Company. No. 98,533; July 21; Gaz. vol. 204; p. 1007.
Fabrics, Certain named textile. Crompton Company. No. 98,253; July 7; Gaz. vol. 204; p. 313.
Fats and oils, Edible. The N. K. Fairbank Company. No. 98,376; July 14; Gaz. vol. 204; p. 669.
Feed composed of certain named grains. Federal Milling Company. No. 98,653; July 28; Gaz. vol. 204; p. 1340.
Feed for dairy-cattle, Mixed. The Larrowe Milling Co. No. 98,296; July 7; Gaz. vol. 204; p. 314.
Feed, Poultry. J. J. Badenoch Co. No. 98,115; July 7; Gaz. vol. 204; p. 309.
Fencing, Metal. Tiger Fence & Machine Company. No. 98,716; July 28; Gaz. vol. 204; p. 1342.
Fertilizers. Frederick Ludlam Co. Nos. 98,300–1; July 7; Gaz. vol. 204; p. 314.
Filter masse. Charles Zoller Co. No. 98,609; July 21; Gaz. vol. 204; p. 1009.
Flavoring extracts for foods. Arthur Chemical Co. No. 98,111; July 7; Gaz. vol. 204; p. 309.
Flavoring for ice-cream and other confections and food products. Rex Extract Company. No. 98,421; July 14; Gaz. vol. 204; p. 671.
Flavors and flavoring extracts for beverages, Artificial. P. R. De Vore. No. 98,257; July 7; Gaz. vol. 304; p. 313.
Flavors for foods, Fruit. McMonagle & Rogers. No. 98,679; July 28; Gaz. vol. 204; p. 1341.
Flour. Mayhew Milling Co. No. 98,677; July 28; Gaz. vol. 204; p. 1341.
Flour and feeds, Wheat-. Federal Milling Company. No. 98,498; July 21; Gaz. vol. 204; p. 1006.
Flour, Self-rising. Hopkinsville Milling Co. No. 98,526; July 21; Gaz. vol. 204; p. 1007.

Flour, Wheat-. The Husler Milling & Elevator Company. No. 98,152; July 7; Gaz. vol. 204; p. 310.
Flour, Wheat-. Becker & Langenberg Milling Company. No. 98,241; July 7; Gaz. vol. 204; p. 313.
Flour, Wheat-. Eisenmayer Milling Company. No. 98,266; July 7; Gaz. vol. 204; 313.
Flour, Wheat-. Kansas Milling Company. No. 98,291; July 7; Gaz. vol. 204; p. 314.
Flour, Wheat-. The Larabee Flour Mills Company. No. 98,295; July 7; Gaz. vol. 204; p. 314.
Flour, Wheat-. Charles Tiedemann Milling Co. No. 98,336; July 7; Gaz. vol. 204; p. 315.
Flour, Wheat-. Randolph Milling Company. No. 98,420; July 14; Gaz. vol. 204; p. 671.
Flour, Wheat-. Becker & Langenberg Milling Company. No. 98,466; July 21; Gaz. vol. 204; p. 1005.
Flour, Wheat-. Columbia Star Milling Co. Nos. 98,483–4; July 21; Gaz. vol. 204; p. 1006.
Flour, Wheat-. Schultz, Baujan & Co. No. 98,572; July 21; Gaz. vol. 204; p. 1008.
Flour, Wheat-. The Scott County Milling Company. No. 98,573; July 21; Gaz. vol. 204; p. 1008.
Flour, Wheat-. Charles Tiedemann Milling Co. Nos. 98,589–90; July 21; Gaz. vol. 204; p. 1009.
Flour, Wheat-. Zabel & Son. No. 98,608; July 21; Gaz. vol. 204; p. 1009.
Flour, Wheat-. The Acme Mills. No. 98,611; July 28; Gaz. vol. 204; p. 1339.
Flour, Wheat-. C. Tresselt & Sons. No. 98,717; July 28; Gaz. vol. 204; p. 1342.
Flour, &c., Wheat, rye, and Graham. W. L. Sweet & Co. No. 98,437; July 14; Gaz. vol. 204; p. 671.
Flowers, Artificial. N. Warren. No. 98,597; July 21; Gaz. vol. 204; p. 1009.
Food preparation for dogs, cats, &c. Spratt's Patent (America). No. 98,712; July 28; Gaz. vol. 204; p. 1342.
Foods, Certain named. A. J. Howell. No. 98,151; July 7; Gaz. vol. 204; p. 310.
Foods, Certain named. T. P. Deitrick. No. 98,258; July 7; Gaz. vol. 204; p. 313.
Foods, Certain named. L. E. Schoenfeld. No. 98,321; July 7; Gaz. vol. 204; p. 315.
Foods, Certain named. Stone-Ordean-Wells Company. No. 98,434; July 14; Gaz. vol. 204; p. 671.
Foods, Certain named. Indianapolis Abattoir Company. No. 98,530; July 21; Gaz. vol. 204; p. 1007.
Foods, Certain named. Armour & Company. No. 98,617; July 28; Gaz. vol. 204; p. 1339.
Forgings, Metal. J. H. Williams & Co. No. 98,228; July 7; Gaz. vol. 201; p. 372.
Fruit, jelly, and ice-cream topping. Paul F. Beich Company. No. 98,120; July 7; Gaz. vol. 204; p. 309.
Fruits, Fresh. Yakima County Horticultural Union. No. 98,607; July 21; Gaz. vol. 204; p. 1009.
Furniture, Certain named. The Adjustable Table Company. No. 98,231; July 7; Gaz. vol. 204; p. 312.
Furniture-polish. W. Plummer. No. 98,194; July 7; Gaz. vol. 204; p. 311.
Furniture-polish. Amsterdam Polish Company. No. 98,351; July 14; Gaz. vol. 204; p. 669.
Garbage and refuse receptacles. C. H. Stephenson. No. 98,330; July 7; Gaz. vol. 204; p. 315.
Garment-folders. Pac-Rite Company. No. 98,315; July 7; Gaz. vol. 204; p. 315.
Gasolene, naphtha, benzin, lubricating oils and greases, &c. The Asiatic Petroleum Company. No. 98,235; July 7; Gaz. vol. 204; p. 312.
Ginghams and cotton piece goods. Carson, Pirie, Scott & Co. No. 98,476; July 21; Gaz. vol. 204; p. 1005.
Gins, Straight dry. Booth's Distillery Limited. No. 98,245; July 7; Gaz. vol. 204; p. 313.
Glass chimneys and globes. Pittsburgh Lamp, Brass & Glass Company. No. 98,559; July 21; Gaz. vol. 204; p. 1008.
Gloves. La Crosse Knitting Works. No. 98,400; July 14; Gaz. vol. 204; p. 670.
Gloves and underwear, Silk. Schuylkill Silk Mills. No. 98,703; July 28; Gaz. vol. 204; p. 1341.
Gloves, Kid. J. & D. Lehman Co. No. 98,403; July 14; Gaz. vol. 204; p. 670.
Gloves, Kid. J. & D. Lehman Co. Nos. 98,668–72; July 28; Gaz. vol. 204; p. 1340.
Gloves, Leather. V. Perrin & Cie. No. 98,416; July 14; Gaz. vol. 204; p. 671.
Grape-fruit. J. A. Wood. No. 98,229; July 7; Gaz. vol. 204; p. 312.
Grinding-disks. Charles H. Besly & Company. No. 98,623; July 28; Gaz. vol. 204; p. 1339.
Guimpes and semiwaists, Ladies'. Timothy F. Crowley, Inc. No. 98,369; July 14; Gaz. vol. 204; p. 671.
Gum, Chewing-. Scout Gum Co. No. 98,322; July 7; Gaz. vol. 204; p. 315.
Gum, Chewing-. Frank H. Fleer Corporation. Nos. 98,504–5; July 21; Gaz. vol. 204; p. 1006.
Gum, Chewing-. L. P. Larson, Jr., Co. No. 98,540; July 21; Gaz. vol. 204; p. 1007.
Gum, Chewing-. Autosales Gum and Chocolate Company, No. 98,618; July 28; Gaz. vol. 204; p. 1339.
Hair and scalp tonic. The Vola-Vita Company. No. 98,340; July 7; Gaz. vol. 204; p. 316.
Hair-grower and dandruff-remover. A. S. O'Mahoney. No. 98,554; July 21; Gaz. vol. 204; p. 1008.
Hair, Hygienic and cosmetic preparations for. P. Beiersdorf & Co. No. 98,468; July 21; Gaz. vol. 204; p. 1005.
Hair-nets. H. Daumas. No. 98,254; July 7; Gaz. vol. 204; p. 313.
Hair-nets. Marshall Field & Company. No. 98,269; July 7; Gaz. vol. 204; p. 313.
Hair-nets. E. David. No. 98,642; July 28; Gaz. vol. 204; p. 1340.
Hair-tonic. G. M. Crooker. No. 98,133; July 7; Gaz. vol. 204; p. 309.
Hair-treating medicaments. A. J. Ristorcelli. Nos. 98,565–6; July 21; Gaz. vol. 204; p. 1008.
Hams, shoulders, backs, jowls, &c. Indianapolis Abattoir Company. No. 98,529; July 21; Gaz. vol. 204; p. 1007.
Hand-cleaning compound. J. T. Norman. No. 98,550; July 21; Gaz. vol. 204; p. 1008.
Handkerchiefs. Carson, Pirie, Scott & Co. No. 98,632; July 28; Gaz. vol. 204; p. 1339.
Hardware supplies, Certain named. Sargent & Company. No. 98,698; July 28; Gaz. vol. 204; p. 1341.
Harmonicas, Mouth-. Strauss Bros. & Co. No. 98,331; July 7; Gaz. vol. 204; p. 315.
Hat, Linen washable. Hirschberg & Co. No. 98,661; July 28; Gaz. vol. 204; p. 1340.
Hats, Men's and boys'. Weber & Hellbroner. No. 98,345; July 7; Gaz. vol. 204; p. 316.
Hinges, locks, metallic valves, bells other than electric, &c. A. O. Meyer. No. 98,173; July 7; Gaz. vol. 204; p. 311.
Hose and other hosiery, Men's half-. Durbin-Mellon Hosiery Company. No. 98,647; July 28; Gaz. vol. 204; p. 1340.
Hose-supporters and suspenders. L. E. Berebaum. No. 98,242; July 7; Gaz. vol. 204; p. 313.
Hosiery. Baker, Moise & Co. No. 98,356; July 14; Gaz. vol. 204; p. 669.
Hosiery. G. Y. S. Quackenbush & Co. No. 98,418; July 14; Gaz. vol. 204; p. 671.
Hosiery. E. M. Townsend & Co. No. 98,440; July 14; Gaz. vol. 204; p. 671.
Icings and fondant-creams. French Fondant Co. No. 98,506; July 21; Gaz. vol. 204; p. 1006.
Ink, and dry colors, and carbon used for same, Printing and lithographing. Geo. H. Morrill Co. No. 98,308; July 7; Gaz. vol. 204; p. 315.
Insect-destroyer. J. H. Stonecypher. No. 98,210; July 7; Gaz. vol. 204; p. 312.
Insecticide. J. Schnarr. No. 98,202; July 7; Gaz. vol. 204; p. 311.
Insecticides. William Peterman Inc. No. 98,193; July 7; Gaz. vol. 204; p. 311.
Insecticides. William Peterman Inc. No. 98,316; July 7; Gaz. vol. 204; p. 315.
Iron and steel blooms, billets, bars, and sheets. Joseph Sankey & Sons. No. 98,428; July 14; Gaz. vol. 204; p. 671.
Jewelry. Sloan & Company. No. 98,579; July 21; Gaz. vol. 204; p. 1008.
Jewelry. Standard Neckchain Company. No. 98,582; July 21; Gaz. vol. 204; p. 1009.
Kerchiefs and handkerchiefs. J. Robinson & Company. No. 98,567; July 21; Gaz. vol. 204; p. 1008.
Knit and woven underwear. Avalon Knitwear Company. No. 98,619; July 28; Gaz. vol. 204; p. 1339.
Knit or woven underwear and hosiery. W. G. Starry, R. A. & M. W. Burd. No. 98,433; July 14; Gaz. vol. 204; p. 671.
Knitted underwear. J. H. Semel & Co. No. 98,704; July 28; Gaz. vol. 204; p. 1341.
Knives, scissors, and shears. Geo. Borgfeldt & Co. No. 98,124; July 7; Gaz. vol. 204; p. 309.
Lacquer, wood-filler, varnish, &c. Lacquer-All Manufacturing Company. No. 98,166; July 7; Gaz. vol. 204; p. 310.
Lamp-chimneys. C. C. Truax & Company. No. 98,337; July 7; Gaz. vol. 204; p. 315.
Lamps, burners, and mantles, Incandescent inverted gas. Welsbach Company. No. 98,600; July 21; Gaz. vol. 204; p. 1009.
Lamps, Electric. Aladdin Electric Lamp Company. No. 98,350; July 14; Gaz. vol. 204; p. 669.
Lamps, Kerosene-. Standard Oil Co. of New York. No. 98,327; July 7; Gaz. vol. 204; p. 315.
Lamps, Kerosene-. Standard Oil Co. of New York. No. 98,583; July 21; Gaz. vol. 204; p. 1009.
Lamps, lanterns, burners, &c. R. E. Dietz Company. No. 98,643; July 28; Gaz. vol. 204; p. 1340.
Lamps, Portable vapor-. Hydro Carbon Company. No. 98,285; July 7; Gaz. vol. 204; p. 314.
Lard substitute. Interstate Cotton Oil Refining Co. No. 98,288; July 7; Gaz. vol. 204; p. 314.
Laxative. C. L. Wamsley. No. 98,342; July 7; Gaz. vol. 204; p. 316.
Leads, slugs, and blocks. R. M. Powell. No. 98,688; July 28; Gaz. vol. 204; p. 1341.
Leather. A. C. Lawrence Leather Co. No. 98,297; July 7; Gaz. vol. 204; p. 314.
Leather articles, Certain named. Geo. Borgfeldt & Co. No. 98,624; July 28; Gaz. vol. 204; p. 1339.
Lighting and starting systems, storage batteries, and parts thereof and supplies therefor, Certain. The United States Light & Heating Company. No. 98,222; July 7; Gaz. vol. 204; p. 312.
Lighting apparatus for public halls. Fowler Sign Company. No. 98,274; July 7; Gaz. vol. 204; p. 314.

Lightning-rods, and parts thereof and accessories therefor. The Struthers Co. No. 98,212; July 7; Gaz. vol. 204; p. 312.
Linen-cleanser. G. E. Darrow. No. 98,641; July 28; Gaz. vol. 204; p. 1340.
Liniment. H. C. Marcum. No. 98,172; July 7; Gaz. vol. 204; p. 311.
Liniment. N. Contogeones. No. 98,485; July 21; Gaz. vol. 204; p. 1006.
Liniment and antiseptic. Mount Barton Chemical Co. No. 98,176; July 7; Gaz. vol. 204; p. 311.
Liniment, Antiseptic veterinary. Pearson's Antiseptic Company. No. 98,556; July 21; Gaz. vol. 204; p. 1008.
Liniment, Solidified. Hall & Wenck. No. 98,516; July 21; Gaz. vol. 204; p. 1007.
Liqueur. Luyties Brothers. No. 98,408; July 14; Gaz. vol. 204; p. 670.
Locks, latches, keys, &c. Sargent & Co. No. 98,699; July 28; Gaz. vol. 204; p. 1341.
Logging tools, machines, and appliances, Certain named. F. B. Mallory. No. 98,171; July 7; Gaz. vol. 204; p. 310.
Lubricating compounds, oils, and greases. Caledonian Oil Co. No. 98,126; July 7; Gaz. vol. 204; p. 309.
Lunches. Exchange Buffet Corporation. No. 98,651; July 28; Gaz. vol. 204; p. 1340.
Lye, Powdered. E. Myers Lye Co. No. 98,309; July 7; Gaz. vol. 204; p. 315.
Lyes of the sulfite-cellulose manufacture, Concentrated waste. International Paper Company. No. 98,154; July 7; Gaz. vol. 204; p. 310.
Macaroni. The Atlantic Macaroni Co. No. 98,238; July 7; Gaz. vol. 204; p. 313.
Macaroni. Dunkirk Macaroni Co. No. 98,491; July 21; Gaz. vol. 204; p. 1006.
Macaroni, spaghetti, vermicelli, &c. Dalpini Macaroni Company. No. 98,640; July 28; Gaz. vol. 204; p. 1340.
Macaroni, vermicelli, and spaghetti. A. Ricchezza. No. 98,695; July 28; Gaz. vol. 204; p. 1341.
Machines and parts, Certain named. Fried. Krupp, Aktiengesellschaft, Grusonwerk. No. 98,143; July 7; Gaz. vol. 204; p. 310.
Machines and parts thereof, Certain named. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,501; July 21; Gaz. vol. 204; p. 1006.
Machines and tools, Certain named. Samuel Osborn & Co. No. 98,415; July 14; Gaz. vol. 204; p. 671.
Mackinaws, woolen shirts, storm-vests, and trousers. The Lawrence Webster Co. No. 98,590; July 21; Gaz. vol. 204; p. 1009.
Magazine, Monthly. The Louisville Courier-Journal Company. No. 98,299; July 7; Gaz. vol. 204; p. 314.
Magazine, Monthly. C. W. Jewett. No. 98,664; July 28; Gaz. vol. 204; p. 1340.
Magazines, Monthly. Cloud Publishing Company. No. 98,636; July 28; Gaz. vol. 204; p. 1339.
Malt extracts. Gehe & Co. Aktiengesellschaft. No. 98,508; July 21; Gaz. vol. 204; p. 1006.
Malt preparation, Concentrated liquid. P. Ballantine & Sons. No. 98,465; July 21; Gaz. vol. 204; p. 1005.
Manicure and toilet tools. Joseph Ross & Company. No. 98,423; July 14; Gaz. vol. 204; p. 671.
Mattresses. Empire Mattress Company. No. 98,268; July 7; Gaz. vol. 204; p. 313.
Measuring and scientific appliances. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 98,596; July 21; Gaz. vol. 204; p. 1009.
Measuring instruments, Certain named. Sargent & Co. No. 98,700; July 28; Gaz. vol. 204; p. 1341.
Meat-sauce. The Old Vincennes Preserving Company. No. 98,553; July 21; Gaz. vol. 204; p. 1008.
Meats and bacon, Frozen and preserved. The Christchurch Meat Company. No. 98,633; July 28; Gaz. vol. 204; p. 1339.
Medical and surgical instruments and appliances, Certain named. Dewitt & Herz. Nos. 98,488–9; July 21; Gaz. vol. 204; p. 1006.
Medicaments for preparatory treatment of nervous ailments. C. E. Leach. No. 98,167; July 7; Gaz. vol. 204; p. 310.
Medicated purgative confections. Dr. F. Stohr. No. 98,209; July 7; Gaz. vol. 204; p. 312.
Medicinal and pharmaceutical preparations, Certain. Regesan Ltd. No. 98,198; July 7; Gaz. vol. 204; p. 311.
Medicinal, dietetic, and pharmaceutical preparations of cod-liver oil and oil emulsions. J. E. Stroschein. No. 98,211; July 7; Gaz. vol. 204; p. 312.
Medicinal preparation for rheumatism. H. Blades. No. 98,470; July 21; Gaz. vol. 204; p. 1005.
Medicinal preparation for stimulating and developing the mammary glands. E. Nieman. No. 98,185; July 7; Gaz. vol. 204; p. 311.
Medicines and remedies for certain named diseases, Certain. The King Company. No. 98,535; July 21; Gaz. vol. 204; p. 1007.
Medicines for certain named ailments. The New York Pharmacal Association. No. 98,549; July 21; Gaz. vol. 204; p. 1008.
Medicines for nervous affections. Inter-American Pharmacal Corporation. No. 98,153; July 7; Gaz. vol. 204; p. 310.
Melons, cantaloups, and fresh celery. W. H. J. Kavanagh. No. 98,292; July 7; Gaz. vol. 204; p. 314.
Metal alloy. M. L. Jacobs. No. 98,157; July 7; Gaz. vol. 204; p. 310.
Metal-polish. Oleum Products Company. No. 98,682; July 28; Gaz. vol. 204; p. 1341.
Metals in certain forms, and wire, Various. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,140; July 7; Gaz. vol. 204; p. 310.
Milk and cream. New York Dairy Demonstration Co. No. 98,312; July 7; Gaz. vol. 204; p. 315.
Milk, Evaporated. The Sheboygan Evaporated Milk Co. No. 98,706; July 28; Gaz. vol. 204; p. 1342.
Milk, Skimmed powdered. American Milk Company. No. 98,232; July 7; Gaz. vol. 204; p. 312.
Mince-meat, tomato catchup, corn-starch, and table-syrup. Downing Taylor Co. No. 98,335; July 7; Gaz. vol. 204; p. 315.
Motors, Electric. Thomas A. Edison, Incorporated. No. 98,375; July 14; Gaz. vol. 204; p. 669.
Muslin, Unbleached. Carson, Pirie, Scott & Co. No. 98,477; July 21; Gaz. vol. 204; p. 1005.
Mutton and lamb, Frozen. Christchurch Meat Company. No. 98,634; July 28; Gaz. vol. 204; p. 1339.
Necktles. William Hollins & Company. No. 98,525; July 21; Gaz. vol. 204; p. 1007.
Necktles, neckscarfs, jabots, belts, &c. H. A. Budd. No. 98,473; July 21; Gaz. vol. 204; p. 1005.
Needles, Machine-. Union Special Machine Company. No. 98,718; July 28; Gaz. vol. 204; p. 1342.
Needles, pins, bodkins, and crochet-hooks. J. English & Son. No. 98,650; July 28; Gaz. vol. 204; p. 1340.
Neutralizer and eliminant for the treatment of certain diseases. Luyties Pharmacy Company. No. 98,169; July 7; Gaz. vol. 204; p. 310.
Nursing-bottles. Swindell Brothers. No. 98,334; July 7; Gaz. vol. 204; p. 315.
Nuts and nut-meats. The Nut House. No. 98,552; July 21; Gaz. vol. 204; p. 1008.
Oil, Castor-. A. E. Brown. No. 98,125; July 7; Gaz. vol. 204; p. 309.
Oil-cloths. C. M. Bailey's Sons & Co. No. 98,464; July 21; Gaz. vol. 204; p. 1005.
Oil filtration and circulation apparatus. S. F. Bowser & Company. No. 98,358; July 14; Gaz. vol. 204; p. 669.
Oil, Leather-. Wm. C. Robinson & Son Co. No. 98,696; July 28; Gaz. vol. 204; p. 1341.
Oil, Lubricating-. The Singer Manufacturing Company. No. 98,707; July 28; Gaz. vol. 204; p. 1342.
Oil, Olive-. F. R. Sarl. No. 98,201; July 7; Gaz. vol. 204; p. 311.
Oil, Olive-. P. Fortuna & Del Magro. No. 98,272; July 7; Gaz. vol. 204; p. 313.
Oil, Olive-. P. Giunta and Son. No. 98,276; July 7; Gaz. vol. 204; p. 314.
Oil, Olive-. Italian Importing Company. No. 98,289; July 7; Gaz. vol. 204; p. 314.
Oils and greases, Lubricating. General Oil Manufacturing Company. No. 98,509; July 21; Gaz. vol. 204; p. 1006.
Oils, candles, greases, and the like, Certain named. Standard Oil Company. No. 98,431; July 14; Gaz. vol. 204; p. 671.
Oils, Certain food. H. Schlinck & Cie., A. G. No. 98,320; July 7; Gaz. vol. 204; p. 315.
Oils, lubricants, candles, &c., Certain named. The Asiatic Petroleum Company. No. 98,112; July 7; Gaz. vol. 204; p. 309.
Oils, Lubricating-. A. W. Harris Oil Co. No. 98,146; July 7; Gaz. vol. 204; p. 310.
Oils, Lubricating-. Gibbs-Brown Oil and Gasoline Company. No. 98,381; July 14; Gaz. vol. 204; p. 670.
Oils, Lubricating-. Gibbs-Brown Oil and Gasoline Company. No. 98,511; July 21; Gaz. vol. 204; p. 1006.
Oils, Lubricating-. The Franklin Oil & Gas Company. No. 98,654; July 28; Gaz. vol. 204; p. 1340.
Oils, Lubricating-. Platt & Washburn Refining Company. No. 98,686; July 28; Gaz. vol. 204; p. 1341.
Ointment. The Vasa Company. No. 98,224; July 7; Gaz. vol. 204; p. 312.
Ointment, Eczema-. J. H. Attig. No. 98,113; July 7; Gaz. vol. 204; p. 309.
Ointment for piles. C. E. Smith. No. 98,203; July 7; Gaz. vol. 204; p. 311.
Ointments. Tryol Products Company. No. 98,219; July 7; Gaz. vol. 204; p. 312.
Oleomargarin. Ammon & Person. No. 98,615; July 28; Gaz. vol. 204; p. 1339.
Olives, sardines, peanut-butter, and salad-dressing. Meyer & Carmody Import Co. No. 98,306; July 7; Gaz. vol. 204; p. 315.
Optical machinery, tools, and supplies used in fitting lenses. Central Optical Co. No. 98,127; July 7; Gaz. vol. 204; p. 309.
Packings, Steam and hydraulic. Stewart Dickson & Co. No. 98,260; July 7; Gaz. vol. 204; p. 313.
Padlocks, door and rim locks, and night-latches. The Shaymaker Lock Manufacturing Corporation. No. 98,709; July 28; Gaz. vol. 204; p. 1342.
Paint for interior decorating. The Tropical Oil Co. No. 98,214; July 7; Gaz. vol. 204; p. 312.
Paint for leaks. The Tropical Oil Co. No. 98,217; July 7; Gaz. vol. 204; p. 312.
Paint, Inside flat oil-. The Tropical Oil Co. No. 98,216; July 7; Gaz. vol. 204; p. 312.
Paint, Liquid wall-. Dozier & Gay Paint Company. No. 98,490; July 21; Gaz. vol. 204; p. 1006.
Paint removers and cleaners and front-end paint for engines. The Sanitation & Supply Co. No. 98,200; July 7; Gaz. vol. 204; p. 311.

Paint used on concrete, plaster, brick, or stone. The Tropical Oil Co. No. 98,215; July 7; Gaz. vol. 204; p. 312.
Paints, enamels, stains, lacs, &c. The Patterson-Sargent Company. No. 98,191; July 7; Gaz. vol. 204; p. 311.
Paints for metal surfaces. The National Paint & Varnish Company. No. 98,184; July 7; Gaz. vol. 204; p. 311.
Paper, Blotting-. Standard Paper Mfg. Co. No. 98,328; July 7; Gaz. vol. 204; p. 315.
Paper, Cover-. O. M. Steinman, Inc. No. 98,586; July 21; Gaz. vol. 204; p. 1009.
Paper towels, diapers, and napkins. Aaron Peters Laboratories. No. 98,371; July 7; Gaz. vol. 204; p. 315.
Paper, Writing and printing. J. P. Heilbronn. No. 98,281; July 7; Gaz. vol. 204; p. 314.
Pencils, Lead, automatic, ink, and screw. F. Weber. No. 98,344; July 7; Gaz. vol. 204; p. 316.
Perfumes, toilet waters, and powders. Katz & Besthoff. Nos. 98,161–3; July 7; Gaz. vol. 204; p. 310.
Perspiration-odor-destroying lotion. N. C. Crawford. No. 98,132; July 7; Gaz. vol. 204; p. 309.
Petroleum engine-distillate. Standard Oil Company. No. 98,326; July 7; Gaz. vol. 204; p. 315.
Petticoats, princess-slips, and ladies' underwear. Harris Bros. & Barnett. No. 98,658; July 28; Gaz. vol. 204; p. 1340.
Pharmaceutical product, Certain. Society of Chemical Industry in Basle. No. 98,204; July 7; Gaz. vol. 204; p. 311.
Pharmaceutical product made of rice bran. Society of Chemical Industry in Basle. No. 98,205; July 7; Gaz. vol. 204; p. 311.
Photographic dry-plates, safe lights, &c. Eastman Kodak Co. No. 98,493; July 21; Gaz. vol. 204; p. 1006.
Photographic plates, &c., in daylight, Apparatus for developing. A. Lamblin. No. 98,667; July 28; Gaz. vol. 204; p. 1340.
Photographic processes, Chemicals used in. Ansco Company. No. 98,457; July 21; Gaz. vol. 204; p. 1005.
Photographic-shutter scales. Eastman Kodak Company. No. 98,136; July 7; Gaz. vol. 204; p. 309.
Photogravures. American Rotogravure Company. No. 98,455; July 21; Gaz. vol. 204; p. 1005.
Pianos and organs. Mason & Hamlin Co. No. 98,304; July 7; Gaz. vol. 204; p. 314.
Pianos, piano-players, and actions therefor, Player-. Auto Pneumatic Action Co. No. 98,462; July 21; Gaz. vol. 204; p. 1005.
Picture films, Moving-. Universal Film Manufacturing Company. Nos. 98,593–4; July 21; Gaz. vol. 204; p. 1009.
Pipes, pipe-cleaners, and cigarette-stems. A. J. Van Exem. No. 98,223; July 7; Gaz. vol. 204; p. 312.
Pipes, tubes, and casings, Metal. National Tube Company. No. 98,412; July 14; Gaz. vol. 204; p. 670.
Plant food. W. Brueser. No. 98,359; July 14; Gaz. vol. 204; p. 669.
Polish for enameled, painted, and varnished surfaces, Cleaning and polishing. Charles M. Hay Paint Co. No. 98,387; July 14; Gaz. vol. 204; p. 670.
Porcelains. Porzellanfabrik Schönwald A. G. No. 98,417; July 14; Gaz. vol. 204; p. 671.
Powder, Toilet. J. J. Beyerle Mfg. Co. No. 98,122; July 7; Gaz. vol. 204; p. 309.
Powder, Tooth-. W. Stones. No. 98,587; July 21; Gaz. vol. 204; p. 1009.
Powders, Foot-. G. A. Sipp Company. No. 98,578; July 21; Gaz. vol. 204; p. 1008.
Preparation for the treatment of certain named ailments. B. F. Jackson. No. 98,532; July 21; Gaz. vol. 204; p. 1007.
Preparation for the treatment of certain named diseases. S. Blackwell. No. 98,469; July 21; Gaz. vol. 204; p. 1005.
Preparation for the treatment of certain named diseases. C. Profumo. No. 98,563; July 21; Gaz. vol. 204; p. 1008.
Preparation for the treatment of dropsy. A. A. Loeck. No. 98,543; July 21; Gaz. vol. 204; p. 1007.
Preparation for the treatment of headache and rheumatism. G. G. Gibson. No. 98,512; July 21; Gaz. vol. 204; p. 1006.
Preparations for the treatment of certain named diseases, &c. Clarksville Medicine Company. No. 98,128; July 7; Gaz. vol. 204; p. 309.
Preparations for the treatment of certain named diseases. Lookout Medicine Company. No. 98,298; July 7; Gaz. vol. 204; p. 314.
Prints, publications, pictorial illustrations, and books. Bonnet-Brown Sales Service. No. 98,244; July 7; Gaz. vol. 204; p. 313.
Publication, Serial. U. Davis. No. 98,256; July 7; Gaz. vol. 204; p. 313.
Publications, Monthly. H. von Glahn & Son. No. 98,341; July 7; Gaz. vol. 204; p. 316.
Ranges, stoves, and heaters. Abram Cox Stove Company. No. 98,252; July 7; Gaz. vol. 204; p. 313.
Reflector-shades, shades, globes, and reflectors. Gill Brothers Company. No. 98,144; July 7; Gaz. vol. 204; p. 310.
Registers, Stock-bond. G. I. Boles. No. 98,243; July 7; Gaz. vol. 204; p. 313.
Remedies for gout and rheumatism. Chemische Fabrik auf Actien (vorm. E. Schering). No. 98,479; July 21; Gaz. vol. 204; p. 1005.
Remedies for pneumonia, piles, headache, &c. H. W. Smith. No. 98,580; July 21; Gaz. vol. 204; p. 1008.
Remedies, Rheumatism. D. Barr. No. 98,240; July 7; Gaz. vol. 204; p. 313.
Remedy and preventive for certain named affections, &c. H. L. Roman e hijos. No. 98,149; July 7; Gaz. vol. 204; p. 310.
Remedy for catarrh and asthma. J. A. Le Blanc. No. 98,541; July 21; Gaz. vol. 204; p. 1007.
Remedy for catarrh, hay-fever, and head-cold. Spurlock-Neal Co. No. 98,208; July 7; Gaz. vol. 204; p. 312.
Remedy for certain named diseases. The Chesman-Reinbolt Co. No. 98,248; July 7; Gaz. vol. 204; p. 313.
Remedy for certain named stomach troubles. J. A. Kelly. No. 98,165; July 7; Gaz. vol. 204; p. 310.
Remedy for eczema, ringworm, pimples, &c. C. M. Stein. No. 98,584; July 21; Gaz. vol. 204; p. 1009.
Remedy for headache and neuralgia. B. C. Remedy Company. No. 98,564; July 21; Gaz. vol. 204; p. 1008.
Remedy for headache, rheumatism, and neuralgia. W. M. Brown. No. 98,472; July 21; Gaz. vol. 204; p. 1005.
Remedy for hog diseases. H. G. Harter Co. No. 98,147; July 7; Gaz. vol. 204; p. 310.
Remedy for indigestion. Neal Tablet Company. No. 98,548; July 21; Gaz. vol. 204; p. 1008.
Remedy for rheumatism. M. E. True. No. 98,218; July 7; Gaz. vol. 204; p. 312.
Remedy for scalp and skin diseases. M. M. Logan. No. 98,168; July 7; Gaz. vol. 204; p. 310.
Remedy for smoking habit. Wood-Lane Drug Co. No. 98,230; July 7; Gaz. vol. 204; p. 312.
Remedy for sore heads of chickens. Baum & Company. No. 98,118; July 7; Gaz. vol. 204; p. 309.
Remedy for stomach disorders and digestive troubles. C. A. Tyndall. No. 98,339; July 7; Gaz. vol. 204; p. 316.
Remedy for venereal diseases. T. F. Kelleghan. No. 98,164; July 7; Gaz. vol. 204; p. 310.
Remedy, Liver. L. G. Durr. No. 98,666; July 28; Gaz. vol. 204; p. 1340.
Roofing and siding, Composition. The Philip Carey Manufacturing Company. No. 98,247; July 7; Gaz. vol. 204; p. 313.
Roofing, Prepared sheet-. Driscoll Bro's & Co. No. 98,374; July 14; Gaz. vol. 204; p. 669.
Rope. Columbian Rope Company. No. 98,364; July 14; Gaz. vol. 204; p. 669.
Rubber erasers. J. S. Rapson. No. 98,318; July 7; Gaz. vol. 204; p. 315.
Rubber manufacture, Certain named products of. W. B. Shelp. No. 98,575; July 21; Gaz. vol. 204; p. 1008.
Rubber roof-cement, Elastic. The Estate of J. G. Hetzel. No. 98,519; July 21; Gaz. vol. 204; p. 1007.
Rubber vaginal douche. G. W. Frazier. No. 98,380; July 14; Gaz. vol. 204; p. 670.
Rum. E. Aldabó. No. 98,612; July 28; Gaz. vol. 204; p. 1339.
Sad-irons and supports therefor, Gas-heated. M. Sunshine. No. 98,333; July 7; Gaz. vol. 204; p. 315.
Safes, Fireproof. Fire Proof Book and Stationery Co. No. 98,379; July 14; Gaz. vol. 204; p. 670.
Salve. M. M. Duebendorf. No. 98,135; July 7; Gaz. vol. 204; p. 309.
Salve. G. F. Smith. No. 98,323; July 7; Gaz. vol. 204; p. 315.
Salve, Herb. B. Hendel. No. 98,518; July 21; Gaz. vol. 204; p. 1007.
Sardines. Menzel & Co. No. 98,305; July 7; Gaz. vol. 204; p. 314.
Sardines. Menzel & Co. No. 98,547; July 21; Gaz. vol. 204; p. 1008.
Sardines. The Sunset Packing Company. No. 98,588; July 21; Gaz. vol. 204; p. 1009.
Saws and saw-blades. R. Röntgen. No. 98,568; July 21; Gaz. vol. 204; p. 1008.
Saws, hatchets, axes, &c. Boetticher & Kellogg Co. No. 98,123; July 7; Gaz. vol. 204; p. 309.
Scissors and shears. Clayton Bros. No. 98,129; July 7; Gaz. vol. 204; p. 309.
Seeds. Springfield Seed Company. No. 98,581; July 21; Gaz. vol. 204; p. 1009.
Seeds, Alsike, alfalfa, lawn, &c. Whitney-Eckstein Seed Co. No. 98,604; July 21; Gaz. vol. 204; p. 1009.
Sewing-machines and parts. Wilcox & Gibbs Sewing Machine Co. No. 98,227; July 7; Gaz. vol. 204; p. 312.
Shelf-brackets, Wrought-steel. The Stanley Works. No. 98,432; July 14; Gaz. vol. 204; p. 671.
Shirts. Goodman, Cohen & Co. No. 98,277; July 7; Gaz. vol. 204; p. 314.
Shirts. H. Gerbardt. No. 98,510; July 21; Gaz. vol. 204; p. 1006.
Shirts, undershirts, drawers, &c. Wise Brothers. No. 98,451; July 14; Gaz. vol. 204; p. 672.
Shirts, Work and negligée. Goodman, Cohen & Co. No. 98,382; July 14; Gaz. vol. 204; p. 670.
Shirts, Work and negligée. Salant & Salant. No. 98,425; July 14; Gaz. vol. 204; p. 671.
Shock-absorbing devices. C. H. Foster. No. 98,273; July 7; Gaz. vol. 204; p. 314.
Shoe-polish and shoe-cleaning compounds. G. D. Nottingham. No. 98,681; July 28; Gaz. vol. 204; p. 1341.
Shoes. Emery & Marshall Co. No. 98,496; July 21; Gaz. vol. 204; p. 1006.
Shoes and slippers, Leather. Wichert & Gardiner. No. 98,726; July 28; Gaz. vol. 204; p. 1342.

Shoes, Canvas and leather. Shaft-Pierce Shoe Co. No. 98,705; July 28; Gaz. vol. 204; p. 1342.
Shoes, Leather and canvas. The Pitts Shoe Company. No. 98,685; July 28; Gaz. vol. 204; p. 1341.
Shortening. Interstate Cotton Oil Refining Co. No. 98,531; July 21; Gaz. vol. 204; p. 1007.
Silk, silk and cotton, and satin piece goods. S. Eiseman & Co. No. 98,648; July 28; Gaz. vol. 204; p. 1340.
Skin-balm, face-cream, face-dressing, rouge, &c. M. J. Martin. No. 98,545; July 21; Gaz. vol. 204; p. 1007.
Soap. The Wilcox Company. No. 98,348; July 7; Gaz. vol. 204; p. 316.
Soap. M. F. Windsor. No. 98,605; July 21; Gaz. vol. 204; p. 1009.
Soap. Callahan Manufacturing Co. No. 98,630; July 28; Gaz. vol. 204; p. 1339.
Soap, Scouring-. The Holbrook M'f'g Co. No. 98,524; July 21; Gaz. vol. 204; p. 1007.
Soap, scouring-powder, wash-day compounds, &c. John Sexton & Company. No. 98,574; July 21; Gaz. vol. 204; p. 1008.
Soap, Toilet. James S. Kirk & Company. No. 98,536; July 21; Gaz. vol. 204; p. 1007.
Soap, Toilet. Swift and Company. No. 98,714; July 28; Gaz. vol. 204; p. 1342.
Soda-fountain beverage and syrup for manufacturing same, Carbonated. C. T. O'Brien. No. 98,314; July 7; Gaz. vol. 204; p. 315.
Soda-fountain beverage and syrup for manufacturing same, Carbonated. E. E. Steiner. No. 98,329; July 7; Gaz. vol. 204; p. 315.
Sound recording and reproducing apparatus. Thomas A. Edison, Incorporated. No. 98,495; July 21; Gaz. vol. 204; p. 1006.
Space or quad, Metal. American Type Founders Company. No. 98,614; July 28; Gaz. vol. 204; p. 1339.
Spark-plugs. C. A. Mezger. No. 98,174; July 7; Gaz. vol. 204; p. 311.
Spark-plugs. The Hartford Machine Screw Company. No. 98,386; July 14; Gaz. vol. 204; p. 670.
Spectacles and eyeglasses, Mountings for. F. A. Hardy & Co. No. 98,145; July 7; Gaz. vol. 204; p. 310.
Spectacles and eyeglasses, Mountings for. F. A. Hardy & Co. No. 98,385; July 14; Gaz. vol. 204; p. 670.
Spirits, Domestic rectified. L. B. Katz. No. 98,160; July 7; Gaz. vol. 204; p. 310.
Splice-bars for railway-rails. Carnegie Steel Company. No. 98,361; July 14; Gaz. vol. 204; p. 669.
Steel, Tool-. Peter A. Frasse & Co. Nos. 98,141–2; July 7; Gaz. vol. 204; p. 310.
Stockings. J. W. Landenberger & Co. No. 98,402; July 14; Gaz. vol. 204; p. 670.
Stockings and underwear. J. W. Landenberger & Co. No. 98,401; July 14; Gaz. vol. 204; p. 670.
Stove-polish. Nu-Shine M'f'g Co. No. 98,551; July 21; Gaz. vol. 204; p. 1008.
Stoves and furnaces. Wood, coal, gas, and vapor. Estate P. D. Beckwith. No. 98,467; July 21; Gaz. vol. 204; p. 1005.
Stoves and heaters, portable steel ovens, &c., Oil. The Cleveland Foundry Co. No. 98,481; July 21; Gaz. vol. 204; p. 1006.
Stoves, Heating and cooking. P. M. Bradley. No. 98,246; July 7; Gaz. vol. 204; p. 313.
Sugar, Block. J. Hirshfeld. No. 98,522; July 21; Gaz. vol. 204; p. 1007.
Suits, Boys' outer. Loth-Hoffman Clothing Co. No. 98,673; July 28; Gaz. vol. 204; p. 1341.
Suits, Children's. E. S. Cannon. No. 98,475; July 21; Gaz. vol. 204; p. 1005.
Suits, Women's and misses' cloth. B. Gershel & Co. No 98,656; July 28; Gaz. vol. 204; p. 1340.
Sweaters and jerseys. W. H. Wye. No. 98,606; July 21; Gaz. vol. 204; p. 1009.
Switches and sockets. Gordon Electric and Mfg. Co. No. 98,514; July 21; Gaz. vol. 204; p. 1007.
Tablets and vaginal suppositories, Antiseptic. J. H. Kegel. No. 98,534; July 21; Gaz. vol. 204; p. 1007.
Tablets, Laxative. G. C. Pierce. No. 98,558; July 21; Gaz. vol. 204; p. 1008.
Tank float bulbs or balls. The Mechanical Rubber Company. No. 98,411; July 14; Gaz. vol. 204; p. 670.
Tanners' and quebracho barks, tanning extracts, &c. L. Prenzlau's Fabrikwerke. Nos. 98,561–2; July 21; Gaz. vol. 204; p. 1008.
Tea. The Woodley Yerba Mate Tea Co. No. 98,130; July 7; Gaz. vol. 204; p. 309.
Tea. Consumers Importing Co. No. 98,249; July 7; Gaz. vol. 204; p. 313.
Tea, coffee, spices, and flavoring extracts. F. J. Horton. No. 98,150; July 7; Gaz. vol. 204; p. 310.
Teeth, Artificial. Dentists' Supply Company. No. 98,259; July 7; Gaz. vol. 204; p. 313.
Teeth, tooth facings and backings, Artificial. The Columbus Dental Manufacturing Company. Nos. 98,365–6; July 14; Gaz. vol. 204; p. 669.
Temperature-indicating instruments. Stewart-Warner Speedometer Corporation. No. 98,713; July 28; Gaz. vol. 204; p. 1342.
Tile and tile pipe. W. S. Dickey. No. 98,373; July 14; Gaz. vol. 204; p. 669.
Tire-healing compound. H. S. Griswold. No. 98,279; July 7; Gaz. vol. 204; p. 314.
Tires and inner tubes, Rubber vehicle-. Dreadnaught Tire & Rubber Co. No. 98,646; July 28; Gaz. vol. 204; p. 1340.
Tires, Pneumatic. Continental Rubber Works. No. 98,250; July 7; Gaz. vol. 204; p. 313.
Tires, Pneumatic and solid rubber vehicle-. The Fisk Rubber Company. No. 98,502; July 21; Gaz. vol. 204; p. 1006.
Tires, Rubber tubes for pneumatic. Continental Rubber Works. No. 98,251; July 7; Gaz. vol. 204; p. 313.
Tobacco, Chewing and smoking. Weyman-Bruton Company. No. 98,602; July 21; Gaz. vol. 204; p. 1009.
Tobacco, cigars, and cigarettes, Smoking-. A. J. Van Exem. No. 98,595; July 21; Gaz. vol. 204; p. 1009.
Tobacco, Plug-. Bailey Brothers. No. 98,620; July 28; Gaz. vol. 204; p. 1339.
Tobacco, snuff, and cigarettes. Societe Job Anciens Etablissements Bardou-Job et Paulhac. No. 98,711; July 28; Gaz. vol. 204; p. 1342.
Toilet preparations, Certain named. Aubry Sisters. No. 98,114; July 7; Gaz. vol. 204; p. 309.
Tonic for the nerves, blood, and brain. C. I. Hood Co. No. 98,284; July 7; Gaz. vol. 204; p. 314.
Tools and machinery, Certain named. American Die & Tool Co. No. 98,454; July 21; Gaz. vol. 204; p. 1005.
Tools and motors, Certain named. Smith & Hemenway Company. No. 98,710; July 28; Gaz. vol. 204; p. 1342.
Tools and parts thereof, Certain named. Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co. No. 98,137; July 7; Gaz. vol. 204; p. 309.
Tools and parts thereof, Certain named. Sargent & Company. No. 98,697; July 28; Gaz. vol. 204; p. 1341.
Tools, machine parts, and mills, Certain named. Elsässische Werkzeugfabrik Zornhoff vormals Goldenberg & Co. No. 98,267; July 7; Gaz. vol. 204; p. 313.
Torches for use in oxo-hydric and oxo-acetylene cutting and welding. International Oxygen Company. No. 98,155; July 7; Gaz. vol. 204; p. 310.
Trousers and suits. A. A. Brown. No. 98,629; July 28; Gaz. vol. 204; p. 1339.
Trucks, Car-. The J. G. Brill Company. No. 98,627; July 28; Gaz. vol. 204; p. 1339.
Trunks, portmanteaus, &c. Innovation Trunk Company. No. 98,663; July 28; Gaz. vol. 204; p. 1340.
Trunks, portmanteaus, boxes, &c. J. B. Brooks & Company. No. 98,628; July 28; Gaz. vol. 204; p. 1339.
Underwear. The Maline Mills. No. 98,307; July 7; Gaz. vol. 204; p. 315.
Underwear. Robert Reis & Co. No. 98,692; July 28; Gaz. vol. 204; p. 1341.
Union suits of textile fabric, Athletic. Diamond M'f'g Co. of Del. No. 98,372; July 14; Gaz. vol. 204; p. 669.
Vacuum-testers. The Spencer Turbine Cleaner Company. No. 98,207; July 7; Gaz. vol. 204; p. 312.
Valves and hose-couplings, Metallic. The Okadee Company. No. 98,189; July 7; Gaz. vol. 204; p. 311.
Valves and parts thereof, Metallic. The Consolidated Safety Valve Company. Nos. 98,367–8; July 14; Gaz. vol. 204; p. 669.
Valves, Metallic. Rich Tool Company. No. 98,422; July 14; Gaz. vol. 204; p. 671.
Vehicles and parts therefor, Certain named. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 98,723; July 28; Gaz. vol. 204; p. 1342.
Vehicles and parts thereof, Self-propelled. Hendee Manufacturing Co. No. 98,282; July 7; Gaz. vol. 204; p. 314.
Velvets and plushes. The Salt's Textile Manufacturing Company. Nos. 98,426–7; July 14; Gaz. vol. 204; p. 671.
Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 98,570; July 21; Gaz. vol. 204; p. 1008.
Venereal diseases, Preventive of. Pru-Va Chemical Co. No. 98,196; July 7; Gaz. vol. 204; p. 311.
Vinegar, Cider. Oakland Vinegar & Pickle Co. No. 98,313; July 7; Gaz. vol. 204; p. 315.
Washing compound. Fitzpatrick Bros. Nos. 98,270–1; July 7; Gaz. vol. 204; p. 313.
Washing fluid. Gaffney Brothers. No. 98,507; July 21; Gaz. vol. 204; p. 1006.
Watchcases, Eighteen-caret-gold. The Dueber Watch Case Mfg. Co. No. 98,264; July 7; Gaz. vol. 204; p. 313.
Watchcases, Ten-caret-gold. The Dueber Watch Case Mfg. Co. No. 98,263; July 7; Gaz. vol. 204; p. 313.
Watches and clocks. Ansonia Clock Company. No. 98,233; July 7; Gaz. vol. 204; p. 312.
Water-softening compound. The Softene Company. No. 98,324; July 7; Gaz. vol. 204; p. 315.
Waterproofing material for incorporating in concrete, cement, or the like. Integral Waterproofing Company. No. 98,287; July 7; Gaz. vol. 204; p. 314.
Whiskies and gins. Gordon Distilling and Distributing Company. No. 98,383; July 14; Gaz. vol. 204; p. 670.
Whiskies, Rye and Bourbon. Valley Park Distillery. No. 98,721; July 28; Gaz. vol. 204; p. 1342.
Whisky. The John Wedderburn Co. No. 98,346; July 7; Gaz. vol. 204; p. 316.
Whisky. M. Mayer. No. 98,410; July 14; Gaz. vol. 204; p. 670.

Whisky, Scotch blend. Imperial Liquor Company. No. 98,391; July 14; Gaz. vol. 204; p. 670.
Window-shade carriers, metal curtain-fixtures, and shade-adjusters. The Agus Shade Carrier Company. No. 98,349; July 14; Gaz. vol. 204; p. 669.
Wine. Cella Brothers. No. 98,478; July 21; Gaz. vol. 204; p. 1005.
Wire, metals in certain named forms, castings, forgings, &c. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,499; July 21; Gaz. vol. 204; p. 1006.
Wood-polish. F. W. Curtis. No. 98,134; July 7; Gaz. vol. 204; p. 309.
Woodwork cleaner and polisher. Qunker Cleanser Co. No. 98,419; July 14; Gaz. vol. 204; p. 671.
Woolen piece goods. S. Stein & Co. No. 98,585; July 21; Gaz. vol. 204; p. 1009.
Woolen piece goods, Mixed. E. S. Strout. No. 98,332; July 7; Gaz. vol. 204; p. 315.
Worsted piece goods. United States Worsted Co. No 98,719; July 28; Gaz. vol. 204; p. 1342.

ALPHABETICAL LIST OF LABELS.

"All 'Round The World." (For Cigars.) J. F. Wilcox. No. 17,862; July 14; Gaz. vol. 204; p. 673.

"Amalgamated Mixed Paint." (For Mixed Paints.) Amalgamated Paint Company. No. 17,838; July 14; Gaz. vol. 204; p. 673.

"Asche Kayton." (For Cigars.) A. Stefanowski. No. 17,855; July 14; Gaz. vol. 204; p. 673.

"Aunt Jemima's Pancake Flour." (For Flour.) Aunt Jemima Mills Company. No. 17,839; July 14; Gaz. vol. 204; p. 673.

"Baby Bounce." (For Baby-Jumpers or Infant-Exercisers.) L. P. Whitcomb. No. 17,877; July 28; Gaz. vol. 204; p. 1343.

"Bolgiano's 'Square Deal.'" (For Poultry Food.) J. Bolgiano & Son. No. 17,864; July 28; Gaz. vol. 204; p. 1343.

"Brookville." (For Whisky.) J. Morris. No. 17,870; July 28; Gaz. vol. 204; p. 1343.

"Butter Custard." (For Butter Custard.) York-Bradford Co. No. 17,863; July 14; Gaz. vol. 204; p. 673.

"Canal Cigarettes." (For Cigarettes.) S. J. Marchosky. No. 17,850; July 14; Gaz. vol. 204; p. 673.

"Cannon Roach And Bed Bug Powder." (For an Insecticide.) M. Wagner. No. 17,861; July 14; Gaz. vol. 204; p. 673.

"Cimorosi Brand Grand Silver Sizzle." (For Pyrotechnic Novelties.) A. Cimorosi. No. 17,818; July 7; Gaz. vol. 204; p. 317.

"Comet." (For Spaghetti.) Fort Worth Macaroni Co. No. 17,821; July 7; Gaz. vol. 204; p. 317.

"Creme De Menthe." (For Pepsin Gum.) Creme De Menthe Gum Co. No. 17,841; July 14; Gaz. vol. 204; p. 673.

"De Martini Brand Genova Style." (For Macaroni.) De Martini Macaroni Co. No. 17,842; July 14; Gaz. vol. 204; p. 673.

"Dr. Wells Galvanic Salve Co." (For Salve.) N. B. Gladding. No. 17,822; July 7; Gaz. vol. 204; p. 317.

"Drink Gray Ape Grape Syrup." (For Grape-Syrup.) W. Scott. No. 17,835; July 7; Gaz. vol. 204; p. 317.

"Ebling's Extract Of Malt & Hops A Life Preserver." (For Extract of Malt and Hops.) The Ebling Brewing Company. No. 17,819; July 7; Gaz. vol. 204; p. 317.

"Everbest Eggs." (For Eggs.) Sonomo County Poultry Producers' Federation. No. 17,873; July 28; Gaz. vol. 204; p. 1343.

"Exposition Stationery." (For Fine Stationery.) White & Wyckoff Mfg. Co. No. 17,878; July 28; Gaz. vol. 204; p. 1343.

"Fairfield." (For Whisky.) I. Ulman & Sons. No. 17,875; July 28; Gaz. vol. 204; p. 1343.

"First National Bank." (For Metal-Polish.) A. Wahrmann. No. 17,836; July 7; Gaz. vol. 204; p. 317.

"Florentine Ivory." (For Fine Stationery.) White & Wyckoff Mfg. Co. No. 17,837; July 7; Gaz. vol. 204; p. 317.

"544." (For a Remedy for Hog-Cholera.) The Thiele Laboratories Company. No. 17,874; July 28; Gaz. vol. 204; p. 1343.

"Fum-a-dor." (For a Deodorizer.) Adale Chemical Co. No. 17,816; July 7; Gaz. vol. 204; p. 317.

"Ga-Lo." (For Cigars.) G. E. Burch. No. 17,866; July 28; Gaz. vol. 204; p. 1343.

"Golden Spray." (For Rye Whisky.) I. Ulman & Sons. No. 17,857; July 14; Gaz. vol. 204; p. 673.

"Good Samaritan." (For Foot-Balm.) E. A. Howland. No. 17,847; July 14; Gaz. vol. 204; p. 673.

"Guardian." (For Dog-Soap.) Potter & Wrightington. No. 17,833; July 7; Gaz. vol. 204; p. 317.

"Hazelnut Kisses." (For Candy and Confections.) Bunte Brothers. No. 17,865; July 28; Gaz. vol. 204; p. 1343.

"I B Co." (For Buckles.) International Buckle Company. No. 17,868; July 28; Gaz. vol. 204; p. 1343.

"Insto Tire Fix." (For a Material for Repairing Pneumatic Tires. C. H. Mills. No. 17,832; July 7; Gaz. vol. 204; p. 317.

"Keystone Polish Co." (For a Furniture Polish and Cleaner.) Keystone Polish Co. No. 17,823; July 7; Gaz. vol. 204; p. 317.

"Kraft Cleanser." (For a Cleaning-Powder.) C. H. Folkers. No. 17,844; July 14; Gaz. vol. 204; p. 673.

"La Famosa." (For Canned Pears.) H. F. C. Kilian. No. 17,824; July 7; Gaz. vol. 204; p. 317.

"Las Dalagas." (For Cigars.) Laks Cigar Co. No. 17,848; July 14; Gaz. vol. 204; p. 673.

"Louis' Double Wrapped 5¢ Cigar." (For Cigars.) L. Chodat Company. No. 17,817; July 7; Gaz. vol. 204; p. 317.

"M. D. & V. Club." (For Straight Whisky.) I. Ulman & Sons. No. 17,860; July 14; Gaz. vol. 204; p. 673.

"Macaroni Gragnano Style." (For Macaroni.) De Martini Macaroni Co. No. 17,843; July 14; Gaz. vol. 204; p. 673.

"Madame Golais Sanitary Adjustable Petticoat." (For Petticoats.) C. Golais. No. 17,846; July 14; Gaz. vol. 204; p. 673.

"Marco." (For Cakes.) The Martin Baking Co. No. 17,869; July 28; Gaz. vol. 204; p. 1343.

"McMurray's Chocolate Icing." (For Chocolate Icing.) William McMurray & Company. No. 17,851; July 14; Gaz. vol. 204; p. 673.

"Mennen's Cream Dentifrice." (For a Cream Dentifrice.) G. Mennen Chemical Company. No. 17,826; July 7; Gaz. vol. 204; p. 317.

"Mennen's Shaving Cream." (For Shaving-Cream.) G. Mennen Chemical Company. No. 17,827; July 7; Gaz. vol. 204; p. 317.

"Mouth Hygiene Tooth Paste." (For Tooth-Paste.) Mouth Hygiene Co. No. 17,829; July 7; Gaz. vol. 204; p. 317.

"Mouth Hygiene Tooth Powder." (For Tooth-Powder.) Mouth Hygiene Co. No. 17,830; July 7; Gaz. vol. 204; p. 317.

"Old Davy." (For 100-Proof Whisky.) I. Ulman & Sons. No. 17,858; July 14; Gaz. vol. 204; p. 673.

"Olympia Malt Tonic. (For a Tonic.) Olympia Brewing Co. No. 17,831; July 7; Gaz. vol. 204; p. 317.

"Olympia Pale Export." (For Light Beer.) Olympia Brewing Co. No. 17,852; July 14; Gaz. vol. 204; p. 673.

"Our Best." (For Macaroni.) Fort Worth Macaroni Co. No. 17,820; July 7; Gaz. vol. 204; p. 317.

"P-A-P-P Preventoline Antiseptic Pocket Packet." (For an Antiseptic.) D. A. Smith. No. 17,872; July 28; Gaz. vol. 204; p. 1343.

"Pillsbury's Health Bran." (For Bran.) Pillsbury Flour Mills Company. No. 17,853; July 14; Gaz. vol. 204; p. 673.

"Purity Yeast." (For Yeast.) Purity Yeast Co. No. 17,854; July 14; Gaz. vol. 204; p. 673.

"Q and Q." (For Macaroni.) Fort Worth Macaroni Co. No. 17,845; July 14; Gaz. vol. 204; p. 673.

"Real Restful Rest." (For Bed-Springs.) The Cleveland Wire Spring Co. No. 17,840; July 14; Gaz. vol. 204; p. 673.

"Regional Bank." (For Cigars.) Kraus & Co. No. 17,825; July 7; Gaz. vol. 204; p. 317.

"Removalin." (For a Medicinal Preparation.) S. S. Penn. No. 17,871; July 28; Gaz. vol. 204; p. 1343.

"Salzer Seeds." (For Seeds.) John A. Salzer Seed Co. No. 17,834; July 7; Gaz. vol. 204; p. 317.

"The Wandering Dew Vine Hair Grower." (For a Hair-Tonic.) M. Lewis. No. 17,849; July 14; Gaz. vol. 204; p. 673.

"Ulman's Coon Club." (For Rye Whisky.) I. Ulman & Sons. No. 17,859; July 14; Gaz. vol. 204; p. 673.

"Vermouth M. Chauvain & Cie." (For Vermuth.) M. Chauvain & Cie. No. 17,867; July 28; Gaz. vol. 204; p. 1343.

"Vitello Brand." (For Macaroni.) Monico-Alles Company. No. 17,828; July 7; Gaz. vol. 204; p. 317.

"Wagner's." (For Canned Pork and Beans with Tomato Sauce.) Martin Wagner Company. No. 17,876; July 28; Gaz. vol. 204; p. 1343.

"Wicomico Club." (For Rye Whisky.) I. Ulman & Sons. No. 17,856; July 14; Gaz. vol. 204; p. 673.

PRINTS.

"A Case Of Good Health." (For a Tonic.) The Peter Schoenhofen Brewing Company. No. 3,667; July 7; Gaz. vol. 204; p. 318.

"A Case Of Good Judgment." (For Beer.) The Peter Schoenhofen Brewing Co. No. 3,687; July 28; Gaz. vol. 204; p. 1343.

"Bread makes a Hit." (For Bread and Yeast.) The Fleischmann Company. No. 3,658; July 7; Gaz. vol. 204; p. 318.

"Brooke's Lemos." (For Lemonade.) C. M. Brooke & Sons. No. 3,655; July 7; Gaz. vol. 204; p. 318.

"Butt right in with your old jimmy pipe." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,684; July 28; Gaz. vol. 204; p. 1343.

"Economy Brick Arches." (For Arch-Bricks.) Locomotive Arch Brick Company. No. 3,661; July 7; Gaz. vol. 204; p. 318.

"Every Time You'll Take." (For Chewing-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,675; July 14; Gaz. vol. 204; p. 673.

"500 Shaves Guaranteed From 12 Blades The Razor that takes the 'H' out of shave." (For Safety-Razors.) Auto Strop Safety Razor Co. No. 3,654; July 7; Gaz. vol. 204; p. 318.

"Follow the Leader." (For Bread and Yeast.) The Fleischmann Company. No. 3,657; July 7; Gaz. vol. 204; p. 318.

"German Style Smoked Sausage." (For Sausage.) M. Matthes. No. 3,673; July 14; Gaz. vol. 204; p. 673.

"Harvard." (For Cigars.) H. Traiser & Co. No. 3,680; July 28; Gaz. vol. 204; p. 1343.

"Hills Bros. Tea and Coffee San Francisco." (For Tea and Coffee.) Hills Bros. No. 3,683; July 28; Gaz. vol. 204; p. 1343.

"Hollander Brand Beer." (For Beer.) The Conrad Seipp Brewing Co. No. 3,688; July 28; Gaz. vol. 204; p. 1343.

"Its Real Genuine Kno-Blur." (For Carbon-Paper.) Utica Carbon & Wax Paper Co. No. 3,690; July 28; Gaz. vol. 204; p. 1343.

"It's time you rolled 'em!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,665; July 7; Gaz. vol. 204; p. 318.

"Just about time you got *yours*." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,663; July 7; Gaz. vol. 204; p. 318.

"Koh-i-noor Counter Cabinet Display Case." (For Display-Cases.) Waldes & Company. No. 3,671; July 7; Gaz. vol. 204; p. 318.

"Look Pleasant, Please." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 3,672; July 14; Gaz. vol. 204; p. 673.

"Oh, That Reminds Me." (For Beer.) The Schoenhofen Brewing Co. No. 3,686; July 28; Gaz. vol. 204; p. 1343.

"Old Style Lager." (For Beer.) G. Heileman Brg. Co. No. 3,660; July 7; Gaz. vol. 204; p. 318.

"One Man Plays Them All." (For a Combination Automatical Musical Instrument.) The Rudolph Wurlitzer Co. No. 3,676; July 14; Gaz. vol. 204; p. 673.

"P. A. makes a pipe smoke a real man's game!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,685; July 28; Gaz. vol. 204; p. 1343.

"Picture Pasters." (For Picture-Pasters.) Picture Paster Publicity Co. No. 3,662; July 7; Gaz. vol. 204; p. 318.

"Qué Contento." (For Soap.) Barclay & Co. No. 3,681; July 28; Gaz. vol. 204; p. 1343.

"Reuter's Soap." (For Soap.) Barclay & Co. No. 3,682; July 28; Gaz. vol. 204; p. 1343.

"Standco." (For Hollow Set-Screws.) Standard Pressed Steel Co. No. 3,677; July 14; Gaz. vol. 204; p. 673.

"Style Shoes Of Quality." (For Boots and Shoes.) Utz & Dunn Co. No. 3,678; July 14; Gaz. vol. 204; p. 673.

"Take S. S. S. For The Blood." (For a Blood Remedy.) Swift Specific Company. No. 3,670; July 7; Gaz. vol. 204; p. 318.

"The best Winter food is Bread." (For Bread and Yeast.) The Fleischmann Company. No. 3,656; July 7; Gaz. vol. 204; p. 318.

"'The Home of Shredded Wheat' Window Display." (For Shredded Wheat.) The Shredded Wheat Company. No. 3,668; July 7; Gaz. vol. 204; p. 318.

"The Shredded Wheat Man." (For Shredded Wheat.) The Shredded Wheat Company. No. 3,669; July 7; Gaz. vol. 204; p. 318.

"The Test of Fire." (For Brass Beds.) Pittsburgh-Hickson Company. No. 3,674; July 14; Gaz. vol. 204; p. 673.

"Tricofero de Barry." (For a Hair-Tonic.) Barclay & Co. No. 3,680; July 28; Gaz. vol. 204; p. 1343.

"Wayne Knit Hosiery." (For Hosiery.) Wayne Knitting Mills. No. 3,679; July 14; Gaz. vol. 204; p. 673.

"Women Vote." (For Bread and Yeast.) The Fleischmann Company. No. 3,659; July 7; Gaz. vol. 204; p. 318.

"You Can't Get Away from." (For Chewing-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,666; July 7; Gaz. vol. 204; p. 318.

"You lay a bet on P. A. makin's." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,604; July 7; Gaz. vol. 204; p. 318.

DISCLAIMERS.

Dust from carpets, &c., Apparatus for the extraction of. F. V. Schlödt. No. 854,670; date of patent May 21, 1907; disclaimer filed July 11, 1914; Gaz. vol. 204; p. 1014.

Packing, Piston-. H. A. Hoke and C. J. Barley. No. 1,082,523; date of patent Dec. 30, 1913; disclaimer filed July 10, 1914; Gaz. vol. 204; p. 1014.

OFFICIAL GAZETTE

5/25.15
Math

OF THE

BANGOR PUBLIC
NOV 16 1914
LIBRARY

UNITED STATES PATENT OFFICE.

VOLUME CCV.

AUGUST,

1914.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1914.

LIBRARY ROOMS

ERRATA.

1,165,657, page 25, first claim, line 8, for the word "spaced" read *space.*

1,166,675, page 171, strike out all after number—heading, drawing, and claim—and insert the word WITHDRAWN.

1,166,321, page 253, in heading, residence of patentee, for "Genesee, N. Y." read *Geneseo, N. Y.*

1,166,377, page 317, second claim, line 6, for the words "brought independently" read *independently brought.*

1,166,732, page 445, in heading, after residence of patentee, insert *assignor to United States Incinerator Company, Buffalo, N. Y., a Corporation of New York.*

1,166,800, page 468, third claim, line 8, strike out the word "second."

1,166,810, page 472, third claim, line 7, for the word "flexibly" read *flexible;* fourth claim, line 11, for the word "neelde" read *needle.*

1,168,315, page 1096, third claim, line 5, after the word "said" insert the words *shoe-carrying;* same claim, lines 6–7, strike out the words "shoe-carrying."

1,168,782, page 1255, fifth claim, line 4, before the word "down" insert the article *a.*

99,131, (Trade-Mark,) page 1016, in heading, name of registrant, for "Tryon Hosiery Company" read *Tryon Hosiery Manufacturing Company.*

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, August 4, 11, 18, 25	3, 311, 671, 1025
TRADE-MARKS PUBLISHED AND REGISTERED, August 4, 11, 18, 25	277, 633, 987, 1297
LABELS AND PRINTS REGISTERED, August 4, 11, 18, 25	303, 660, 1019
DECISIONS OF THE COMMISSIONER OF PATENTS, August 4, 11, 18, 25	305, 661, 1021, 1323
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1329
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	i

ANNOUNCEMENTS.

	Page.
ADVERSE DECISIONS IN INTERFERENCE—	
Baxter, No. 1,080,191	308
Both, No. 1,024,071	669
Green, No. 969,752	308
Hammers, No. 1,055,743	668
Howe, No. 1,021,604	308
McQuarrie, No. 931,331	307
Savage, No. 944,053	308
APPEALED CASES—	
Briefs in	1,1023
APPLICATIONS—	
Access to pending	309
Condition of pending	2,310,670,1024
CLASSIFICATION—	
Changes in—*Order 2142*	305
Order 2143	305
Order 2144	306,666
Order 2145	1023
DISCLAIMERS—	
Pflueger, Joseph E	669
FOREIGN PATENTS—	
Rule 29	309
INTERFERENCE NOTICES—	
Ayres, Sallie P	1327
Criterion Publication Co., The	308,668
Great Golden Seal Drug Co., The	1327
Kennard & Oudesheys	1327
Seeger, William	1022,1327
Shattuck, Joseph	308,668,1022
NAMES OF APPLICANTS—	
Orders 521 and *600*	1
PATENTS—	
Delivery of—Rule 169	669
List of adjudicated	305,1022
PUBLISHERS' CATALOGUES—	
Request for	1023
RULES OF PRACTICE OF UNITED STATES PATENT OFFICE—	
Changes in Rule 17—*Order 2139*	308
UNITED STATES PATENT OFFICE—	
Branch for Panama-Pacific Exposition	1,309

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 205—No. 1. TUESDAY, AUGUST 4, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 4, 1914	1
PANAMA-PACIFIC EXPOSITION	1
FULL NAMES OF APPLICANTS	1
BRIEFS IN APPEALED CASES	1
APPLICATIONS UNDER EXAMINATION	2
PATENTS GRANTED	3
REISSUES	265
DESIGNS	267
TRADE-MARKS—REGISTRATION APPLIED FOR	277
TRADE-MARK REGISTRATIONS GRANTED	297
TRADE-MARK REGISTRATIONS RENEWED	302
LABELS AND PRINTS	308
ADJUDICATED PATENTS	305
CHANGES IN CLASSIFICATION	305
ADVERSE DECISIONS IN INTERFERENCE	307
CHANGES IN THE RULES OF PRACTICE	308
INTERFERENCE NOTICES	308

ISSUE OF AUGUST 4, 1914.

Patents	760—No.	1,105,597 to No.	1,106,356, inclusive.
Designs	45—No.	46,196 to No.	46,240, inclusive.
Trade-Marks	186—No.	98,727 to No.	98,912, inclusive.
Labels	15—No.	17,879 to No.	17,893, inclusive.
Prints	1—No.	3,691.	
Reissues	3—No.	13,784 to No.	13,786, inclusive.
Total	1010		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	1	North Carolina	8	1
Arizona	2	.....	North Dakota	3	.....
Arkansas	3	.....	Ohio	58	10
California	34	8	Oklahoma	3	.....
Colorado	18	.....	Oregon	3	2
Connecticut	15	4	Pennsylvania	89	15
Delaware	4	1	Rhode Island	3	3
Florida	1	.....	South Carolina	1	1
Georgia	5	4	South Dakota	4	.....
Idaho	1	.....	Tennessee	2	.....
Illinois	59	23	Texas	8	2
Indiana	11	.....	Utah	2	.....
Iowa	12	4	Vermont	1	.....
Kansas	3	2	Virginia	3	.....
Kentucky	3	.....	Washington	9	1
Louisiana	3	2	West Virginia	8	2
Maine	2	.....	Wisconsin	21	2
Maryland	15	2	Wyoming	1	.....
Massachusetts	35	11			
Michigan	22	3	Alaska, District of	.....	.....
Minnesota	19	5	Canal Zone	.....	.....
Mississippi	2	3	District of Columbia	7	.....
Missouri	21	18	Hawaii Territory	3	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	2	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	.....	2	U. S. Navy	.....	.....
New Jersey	36	11			
New Mexico	2	.....	Total to residents of the United States	668	186
New York	113	43			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	6	.....	Netherlands	.....	.....
Belgium	1	1	New South Wales	.....	.....
British India	.....	.....	New Zealand	1	.....
Brazil	1	.....	Norway	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	14	1	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	1	.....
Costa Rica	.....	.....	Scotland	3	.....
Cuba	1	.....	South Australia	.....	.....
Denmark	.....	.....	Spain	.....	1
England	40	4	Sweden	2	.....
Finland	.....	.....	Switzerland	2	1
France	12	1	Transvaal, South Africa	.....	.....
Germany	29	6	Victoria	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	1	1	Total to residents of foreign countries	117	16
Luxemburg	.....	.....			
Mexico	.....	.....			

Panama-Pacific Exposition.

In compliance with the provisions of the act approved September 18, 1913, (H. R. 7595, Public No. 14,) a branch office of the United States Patent Office has been opened at San Francisco, Cal., for the purpose of issuing certificates of proprietorship, as provided in said act.

THOMAS EWING,
Commissioner.

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 1, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	June 15	543
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	June 16	523
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 7	July 27	65
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Feb. 17	July 11	655
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 22	June 15	415
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 4	June 17	568
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 13	June 3	563
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	July 2	1138
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 14	May 29	613
235	10. Carriages and Wagons	Mar. 20	June 20	895
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 20	July 9	309
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 18	June 1	1092
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 10	June 25	425
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 17	July 2	481
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 2	June 26	1012
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	May 15	705
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 18	June 27	215
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 20	June 22	246
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	June 22	335

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 1	June 13	423
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 7	June 12	441
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 9	219
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 10	May 27	475
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 9	July 1	549
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 18	June 29	251
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 22	887
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 6	June 10	486
65	28. Internal-Combustion Engines	Apr. 3	June 23	605
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 10	June 20	496
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 20	June 23	319
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 11	June 12	378
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 13	648
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 1	339
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 4	373
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 20	July 1	540
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 9	June 12	648
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 7	June 18	717
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 17	July 1	675
321	39. Water Distribution	Mar. 25	June 17	535
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	June 23	1062
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 19	July 1	453
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 10	June 23	404
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 16	327

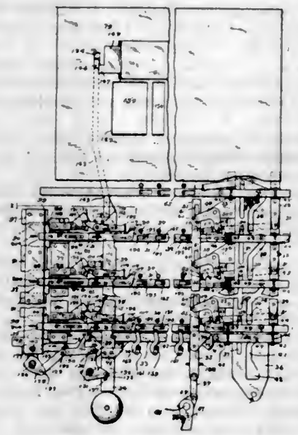
Oldest new case, Sept. 15; oldest amended, May 15.
Total number of applications awaiting action 23,048

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 23	July 1	893
	Designs	June 24	June 29	264
	Labels and Prints	July 17	July 20	107

PATENTS

GRANTED AUGUST 4, 1914.

1,105,597. VOTING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed July 28, 1909. Serial No. 509,991. (Cl. 235—54.)



1. The combination with voting members and a party lever, of a member actuated by the party lever and having an incline, a member actuated by a voting member and having notches and a catch adapted to engage the notches and lock the voting members and to be raised by the incline when the party lever is operated, thereby unlocking the voting members.

2. The combination with voting members and a party lever, of a member actuated by the party lever and having unlocking means, a member actuated by a voting member and having locking means and a catch adapted to engage the locking means to lock the voting members and to be raised by the unlocking means when the party lever is operated, thereby unlocking the voting members.

3. The combination with party levers and voting members, of members having notches, members having inclines, and catches adapted to engage the notches to lock the voting members and to be raised by the inclines to unlock the voting members when a party lever is operated.

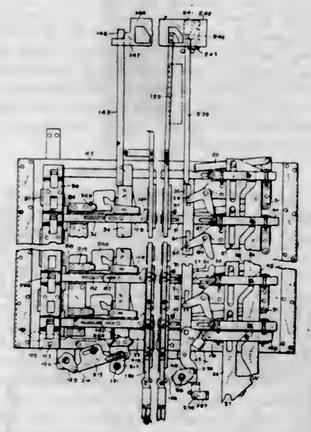
4. The combination with party bars having inclines and resetting bars having notches, of catches adapted to engage the notches to lock the resetting bars and to be raised by an incline when a party bar is operated.

5. The combination with voting members, party bars having inclines and resetting bars having notches, of catches adapted to engage the projections to lock the resetting bars and the voting members and to be raised by an incline when a party bar is operated.

[Claims 6 to 173 not printed in the Gazette.]

1,105,598. VOTING-MACHINE. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Feb. 13, 1911. Serial No. 608,383. (Cl. 235—54.)

1. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, means to release a catch to unlock the voting members in the corresponding line, and means operated independently of the released catch to release the other catches and unlock the voting members in the other lines.



2. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, a locking bar connecting said catches, means to release a catch to unlock the voting members in the corresponding line, and means independent of the released catch for operating said locking bar to release the other catches and unlock the voting members in the other lines.

3. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, means to release a catch to unlock the voting members in the corresponding line, and means operated independently of the released catch by the member which is actuated by the voting members in that line to release the other catches and unlock the voting members in the other lines.

4. The combination with party bars having inclines and resetting bars having notches, of catches adapted to engage the notches to lock the resetting bars and to be raised by an incline when a party bar is operated, and means operated independently of the raised catch by the corresponding resetting bar to raise the other catches.

5. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, a locking bar connecting said catches, means to release a catch to unlock the voting members in the corresponding line, and means carried by the member which is actuated by the voting members in that line for engaging and operating said locking bar to release the other catches and unlock the voting members in the other lines.

[Claims 6 to 159 not printed in the Gazette.]

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 1, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	June 15	543
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	June 10	523
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 7	July 27	65
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Feb. 17	July 11	655
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 22	June 15	415
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 4	June 17	568
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 13	June 3	563
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	July 2	1138
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 14	May 29	613
235	10. Carriages and Wagons	Mar. 20	June 20	895
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 20	July 9	309
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 18	June 1	1092
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 10	June 25	425
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 17	July 2	481
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 2	June 26	1012
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	May 15	705
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 18	June 27	215
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 20	June 22	246
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	June 22	335

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 1	June 13	423
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 7	June 12	441
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 9	219
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 10	May 27	475
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 9	July 1	549
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 18	June 29	251
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 22	887
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 6	June 10	486
65	28. Internal-Combustion Engines	Apr. 3	June 23	605
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 10	June 20	496
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 20	June 23	319
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 11	June 12	378
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 2	June 13	648
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 1	339
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 4	373
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 20	July 1	540
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 9	June 12	648
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 7	June 18	717
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 17	July 1	675
321	39. Water Distribution	Mar. 25	June 17	535
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	June 23	1062
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 19	July 1	453
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 10	June 23	404
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 1	June 16	327

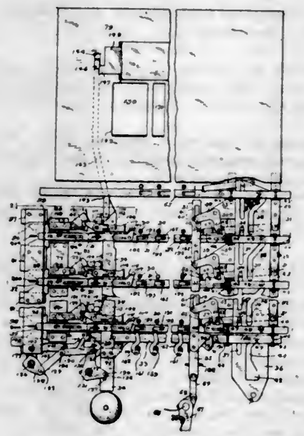
Oldest new case, Sept. 15; oldest amended, May 15.
Total number of applications awaiting action 23,048

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 23	July 1	893
	Designs	June 24	June 29	264
	Labels and Prints	July 17	July 20	107

PATENTS

GRANTED AUGUST 4, 1914.

1,105,597. VOTING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed July 28, 1909. Serial No. 509,991. (Cl. 235—54.)



1. The combination with voting members and a party lever, of a member actuated by the party lever and having an incline, a member actuated by a voting member and having notches and a catch adapted to engage the notches and lock the voting members and to be raised by the incline when the party lever is operated, thereby unlocking the voting members.

2. The combination with voting members and a party lever, of a member actuated by the party lever and having unlocking means, a member actuated by a voting member and having locking means and a catch adapted to engage the locking means to lock the voting members and to be raised by the unlocking means when the party lever is operated, thereby unlocking the voting members.

3. The combination with party levers and voting members, of members having notches, members having inclines, and catches adapted to engage the notches to lock the voting members and to be raised by the inclines to unlock the voting members when a party lever is operated.

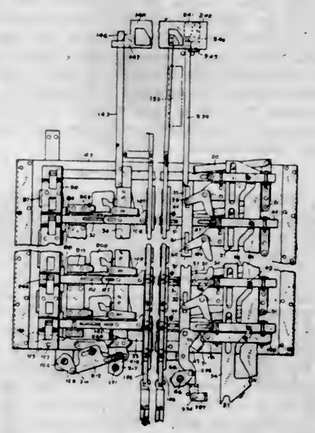
4. The combination with party bars having inclines and resetting bars having notches, of catches adapted to engage the notches to lock the resetting bars and to be raised by an incline when a party bar is operated.

5. The combination with voting members, party bars having inclines and resetting bars having notches, of catches adapted to engage the projections to lock the resetting bars and the voting members and to be raised by an incline when a party bar is operated.

[Claims 6 to 173 not printed in the Gazette.]

1,105,598. VOTING-MACHINE. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Feb. 13, 1911. Serial No. 608,383. (Cl. 235—54.)

1. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, means to release a catch to unlock the voting members in the corresponding line, and means independent of the released catch for operating said locking bar to release the other catches and unlock the voting members in the other lines.



2. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, a locking bar connecting said catches, means to release a catch to unlock the voting members in the corresponding line, and means independent of the released catch for operating said locking bar to release the other catches and unlock the voting members in the other lines.

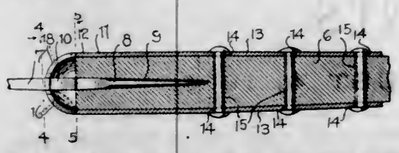
3. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, means to release a catch to unlock the voting members in the corresponding line, and means operated independently of the released catch by the member which is actuated by the voting members in that line to release the other catches and unlock the voting members in the other lines.

4. The combination with party bars having inclines and resetting bars having notches, of catches adapted to engage the notches to lock the resetting bars and to be raised by an incline when a party bar is operated, and means operated independently of the raised catch by the corresponding resetting bar to raise the other catches.

5. The combination with lines of voting members, of members actuated by any voting member in a line and having locking means, catches adapted to engage the locking means to lock the voting members in each line, a locking bar connecting said catches, means to release a catch to unlock the voting members in the corresponding line, and means carried by the member which is actuated by the voting members in that line for engaging and operating said locking bar to release the other catches and unlock the voting members in the other lines.

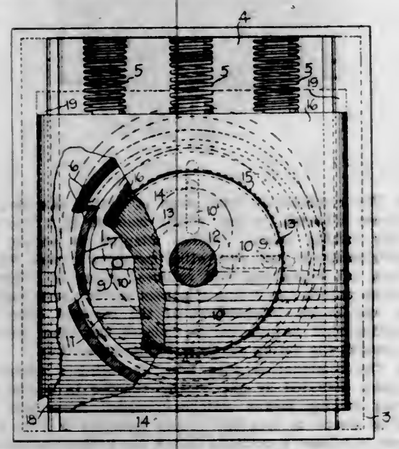
[Claims 6 to 159 not printed in the Gazette.]

1,105,599. TOOL-HANDLE CONNECTION. ROBERT E. ALCORN, Lake Village, Ark. Filed July 23, 1913. Serial No. 780,826. (Cl. 55—101.)



A device of the character described including a shank provided with a tang adapted to be inserted within the end portion of a handle and having laterally directed oppositely extended shoulders adapted to abut the end face of the handle in which the tang is directed and terminating adjacent the periphery thereof, and a ferrule of substantially the same length as the shank and provided with a slot in its head through which the tang and shoulders may be passed, the configuration of the head of the ferrule being such as to closely contact with the outer faces of the shoulders, the inner end of such ferrule being provided with oppositely disposed longitudinally directed arms and means common to both of such arms and adapted to be directed through the handle for holding the ferrule against displacement.

1,105,600. RESILIENT WHEEL. WALTER S. ALLYN, Thompsonville, Ill., assignor of one-half to Thomas G. Puckett, Thompsonville, Ill. Filed June 30, 1913. Serial No. 776,683. (Cl. 21—197.)



1. A device of the class described including a driven axle, a casing therefor, a frame carried by the casing, a plate upon the end of the axle and rotatable within the frame, a slide member movable in said frame, a stub axle having a plate rotatable within the slide member, a disk disposed between said plates and means carried by the plates and engaging the disk to impart motion to the stub axle.

2. A driven axle, a plate carried thereby, a stub axle having a plate formed upon one end, a disk arranged between said plates and means carried by said plates and adapted to engage with the disk to impart motion to the stub axle.

3. A device of the class described including a driven axle, a plate carried thereby, a stub axle having a plate formed upon one end, a disk arranged between said plates and provided with slots, pins carried by said plates and adapted to engage within said slots whereby to impart motion to the stub axle.

4. A device of the class described including a driven axle, a casing thereon, a frame carried by the casing, a plate carried by the axle and rotatable within said frame, a slide member mounted in the frame, and provided with a central opening, a stub axle having a plate rotatable within said opening, coil springs disposed between the slide member and one end of the frame, a disk arranged between said plates and provided with slots, and pins carried by said plates and adapted to be arranged within said slots to impart motion to the stub axle.

5. A driven axle, a casing thereon a frame supported by said casing, a plate rotatably supported in said frame, and having wheel supporting means and said axle and plate having co-acting means to cause the same to rotate in unison.

[Claims 6 and 7 not printed in the Gazette.]

1,105,601. PROCESS OF MAKING A FERMENT. PAUL ALTENFELD, New York, N. Y. Filed Feb. 11, 1913. Serial No. 747,710. (Cl. 99—10.)

1. A process of making a ferment which consists in forming a dough comprising malt and a gelatinized grain, and allowing the dough to ferment at a relatively low temperature.

2. A process of making a ferment which consists in forming a dough comprising malt, rye and corn-flakes, and allowing the dough to ferment.

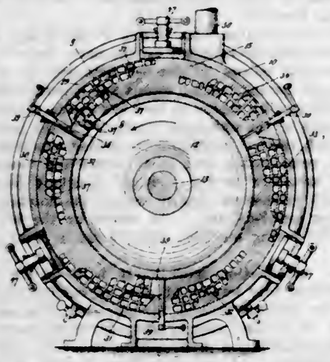
3. A process of making a ferment which consists in forming a dough of malt, rye, corn-flakes and water, and allowing the dough to ferment at a relatively low temperature.

4. A process of making a ferment which consists in mixing malt and rye each in a disintegrated condition adding thereto corn-flakes and sufficient water to form a dough, and allowing the dough to set.

5. A process of making a ferment which consists in mixing malt and rye each in a disintegrated condition, adding thereto corn-flakes and sufficient water to form a dough, and allowing the dough to set from approximately twelve to eighteen hours at a relatively low temperature.

[Claims 6 and 7 not printed in the Gazette.]

1,105,602. TURBINE. EMIL ANDERSON, New York, N. Y., assignor to H. Stanley Todd, New York, N. Y. Filed Nov. 1, 1910. Serial No. 590,175. (Cl. 121—58.)



1. A turbine engine comprising a stationary casing element and a rotary impelling element mounted therein, the said impelling and casing elements being provided with two sets of buckets and two sets of reaction surfaces, the sets of buckets and reaction surfaces being arranged for respective co-engagement, one of the said sets being shorter than the other set in the same element and commencing at a later period in the direction of rotation of the impelling element, whereby one of the said sets upon each of the casing and impelling elements will be in co-engagement during a portion of the rotation of the impelling element and both of the said sets will be in such co-engagement during another portion of the rotation thereof.

2. A turbine engine comprising a casing and a rotary impelling element mounted therein, the said impelling element and casing being provided with a plurality of sets of buckets and reaction surfaces progressively disposed, the several sets being arranged to be successively connected with the preceding sets in the rotation of the rotary element whereby the area of the successive sets will be added to the area of the preceding sets to provide for the expansion of the motive fluid through successive stages.

3. A turbine engine comprising a casing and a rotary impelling element, the said impelling element and casing being provided with a plurality of concentrically disposed sets of buckets and reaction surfaces, the buckets of each of the said sets being uniformly disposed to form complete rings, while the sets of reaction surfaces in the casing element are intermittently disposed to constitute ring segments of progressively decreasing length, the reaction surfaces of the several ring segments of each group being connected at the forward and rearward ends of the said segments.

4. A turbine engine comprising a casing and a rotary impelling element, the said impelling element and casing being provided with a plurality of concentrically disposed sets of buckets and reaction surfaces, the buckets of each of the said sets being uniformly disposed to form complete rings, while the sets of reaction surfaces in the casing element are intermittently disposed to constitute ring segments of progressively decreasing length, the terminal portions of the several sets of ring segments in each group being disposed in substantially the same radial lines, the reaction surfaces of the several ring segments of each group being connected at the approach and terminal ends of the said segments.

5. A turbine engine comprising a stationary casing element and a rotary impelling element mounted to rotate therein, the said casing and impelling elements having adjacent lateral faces, the one having a plurality of concentrically disposed reaction recesses therein and the other with a plurality of concentrically disposed buckets arranged for respective co-engagement with the said reaction recesses, the several sets of reaction surfaces being of progressively decreasing length and arranged to commence at progressively later periods in the rotation of the impelling element, the said engine being provided with cross-over passages which connect the reaction surfaces of the several sets together, whereby in the rotation of the impelling element the area of the succeeding sets of reaction surfaces and buckets may be added to the area of the preceding sets so that the motive fluid may expand therethrough in several stages.

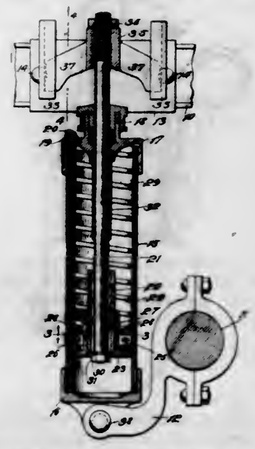
[Claims 6 to 18 not printed in the Gazette.]

1,105,603. SHOCK-ABSORBER. WILLIAM BARDSLEY, Kearney, N. J. Filed Apr. 12, 1913. Serial No. 760,619. (Cl. 21—105.)

1. In combination with the body and axle of a vehicle, a shock-absorber interposed between said parts comprising a liquid checking cylinder containing a piston-rod, piston and coiled spring encompassing said rod within said cylinder and acting to depress the piston and piston-rod, and means connected with the body of the vehicle supporting said rod in its upper position in opposition to the force of said spring and adapted to yield therefrom on the depression of said body.

2. In combination with the body and axle of a vehicle, a shock-absorber interposed between said parts comprising a checking cylinder having a piston-rod, piston and spring acting to depress the piston and piston-rod, and a bracket connected with the body of the vehicle having guiding means for said rod and normally supporting the same in its upper position in opposition to the force of said spring, said bracket being free to recede downwardly independently of said rod on the depression of said body.

3. In combination with the body and axle of a vehicle, a shock-absorber interposed between said parts comprising a checking cylinder having a piston-rod, piston and spring acting to depress the piston and piston-rod, said piston-rod having a frame-member on its upper exposed end, and a bracket connected with the body of the vehicle retaining and affording a guide for said rod and extending below said frame-member to support said rod in its upper position in opposition to the force of said spring and recede therefrom on the depression of said body.



4. In combination with the body and axle of a vehicle, a shock-absorber interposed between said parts comprising a checking cylinder having a piston-rod, piston and spring acting to depress the piston and piston-rod, said piston-rod having a frame-member on its upper exposed end having oppositely extended arms, and a bracket connected with the body of the vehicle having projecting members containing grooves in their facing sides to receive and guide the ends of said arms, said grooves at their lower walls supporting said arms and rod in opposition to the force of said spring and permitting the body of the vehicle to descend without acting on said rod.

5. In combination with the body and axle of a vehicle, a shock-absorber interposed between said parts comprising a checking cylinder having a piston-rod, piston and spring acting to depress the piston and piston-rod, said piston-rod having a frame-member on its upper exposed end having oppositely extended arms, and a bracket connected with the body of the vehicle having projecting members containing grooves in their facing sides to receive and guide the ends of said arms, said grooves at their lower walls supporting said arms and rod in opposition to the force of said spring and permitting the body of the vehicle to descend without acting on said rod, and said projecting members being separated sufficiently to freely receive between them, when necessary, the upper end of said cylinder.

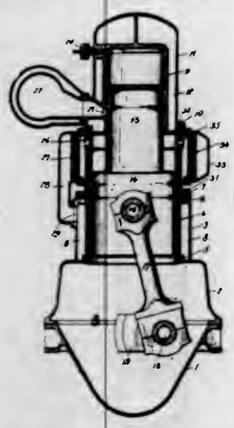
[Claims 6 and 7 not printed in the Gazette.]

1,105,604. ENGINE CONSTRUCTION. CHARLES H. BARTLETT, Elizabeth, N. J., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed June 19, 1911. Serial No. 634,063. (Cl. 123—195.)

1. In an engine construction, a foundation structure including a crank case, an air compressing cylinder, a working cylinder in tandem arrangement with the compressing cylinder, and a supporting housing for the compressing cylinder, an air reservoir or receiver located between the compressing cylinder and housing, connections between the air receiver and working cylinder for admitting compressed air thereto, and a valved connection between the air receiver, and the compressing cylinder.

2. In an engine construction, a foundation structure including a crank case, a part arising therefrom and secured thereto, a housing formed integrally with said part and extending outwardly therefrom, an air compressing cylinder located within said housing and forming an

air receiver in connection with the latter, connections between the air receiver and working cylinder for admitting compressed air thereto, and a valved connection between the air receiver and the compressing cylinder.



3. In an engine construction, a foundation structure including a crank case, a part arising therefrom and secured thereto, a housing formed integrally with said part and extending outwardly therefrom, and an air compressing cylinder located within said housing and forming an air receiver in connection with the latter, the air compressing cylinder being supported by the housing at its lower end and secured to it about midway its length, and valved connections between the air receiver and the working and compressing cylinders whereby free air is compressed in the receiver on one stroke of the piston and discharged therefrom on its succeeding stroke.

4. In an engine construction, a plurality of engine units, a trough like structure arranged below said units and extending throughout their length, a part secured to said trough like structure and having formed integrally therewith a housing for each engine unit, and a compressing cylinder in each housing, said housing and compressing cylinder forming between them an air receiver adapted to receive and supply compressed air at the proper time in the operation of the engine.

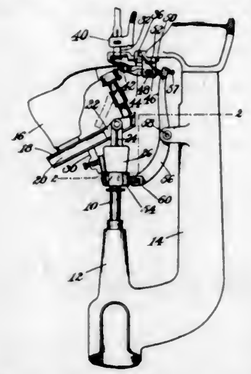
5. In an engine construction, a plurality of engine units, a trough like structure arranged below said units and extending throughout their length, a part secured to said trough and extending the length of the latter, a housing projecting from the part for each engine unit, a working cylinder for each engine unit, a compressing cylinder for each engine unit, and an air receiver for each engine unit formed by the housing and compressing cylinder, the compressing cylinder being supported by the housings and in turn supporting the working cylinders.

[Claims 6 and 7 not printed in the Gazette.]

1,105,605. MACHINE FOR OPERATING UPON BOOTS AND SHOES. ARTHUR BATES and THOMAS BRIGGS, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 2, 1909. Serial No. 505,601. (Cl. 1—19.)

1. A machine of the class described having, in combination, means for attaching a welt to work by successively inserted fastenings, means for guiding the work, and means for causing said last mentioned means to operate during the attaching operation to effect a relative displacement of the work and the unattached portion of the welt transverse to the line of attachment.

2. A machine of the class described having, in combination, means for attaching a welt to work, means for presenting successive portions of the work to the attaching means, and automatic means for effecting a relative displacement of the work and the unattached portion of the welt transverse to the line of attachment as successive portions of the work are presented to the attaching means, said automatic means being controlled as to the time of its operation by the effect of a characteristic of the work upon the presenting action of said presenting means.



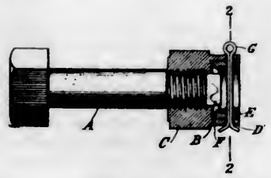
3. In a machine for use in the manufacture of boots and shoes, the combination with means for attaching a welt along the margin of a piece of work by successively inserted fastenings, of means operated automatically through the work for effecting a relative displacement of the work and the unattached portion of the welt transverse to the line of attachment.

4. In a machine for use in the manufacture of boots and shoes, the combination with means for attaching a welt along the margin of a piece of work by successively inserted fastenings, of means operating when predetermined portions of the contour of the work come to the point of operation for effecting a relative displacement of the work and the unattached portion of the welt transverse to the line of attachment.

5. In a machine for use in the manufacture of boots and shoes, the combination with means for attaching a welt along the margin of a piece of work by successively inserted fastenings, of means operating in time relation to and by virtue of the turning of the work for effecting a relative displacement of the work and the unattached portion of the welt transverse to the line of attachment.

[Claims 6 to 11 not printed in the Gazette.]

1,105,606. NUT-LOCK. HARRY W. BEACH, Evanston, Ill. Filed Sept. 9, 1913. Serial No. 788,808. (Cl. 151—5.)



1. A nut lock comprising a bolt provided with an irregular projection extending axially from the screw threaded end thereof, a nut screw threaded on said bolt and provided with a cup extending outwardly in a direction parallel to said projection, in combination with a second cup revoluble within the first cup and provided with a perforation in the bottom thereof to fit over the irregular projection of the bolt, and separate means engaging with the said cups to prevent the one from rotating relatively to the other.

2. A nut lock comprising a bolt provided with an irregular projection extending axially from the screw threaded end thereof, a nut screw threaded to said bolt and provided with a cup extending outwardly in a direction parallel to said projection, in combination with a second cup provided with a perforation in the bottom thereof to fit over the irregular projection of the bolt, said cups provided with a plurality of lateral perforations which are adapted to register with each other, and means engaging with said lateral perforations to prevent said nut from rotating relatively to the bolt.

3. A nut lock comprising a bolt provided with an irregular projection extending axially from the screw-threaded end thereof, a nut screw threaded to said bolt, and provided with a cup extending outwardly in a direction parallel to said projection and provided with a plurality of lateral perforations located substantially in the same cross-sectional plane, in combination with a second cup revoluble within the first cup when the desired adjustment of members is being secured and provided with a perforation in the bottom thereof to fit over the irregular projection on the bolt and also provided with a plurality of lateral perforations located in the same plane with the perforations on the first mentioned cup, and means adapted to engage with said lateral perforations in said cups to prevent the rotation of one relatively to the other.

1,105,607. FERTILIZER AND PROCESS OF MAKING THE SAME. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed May 23, 1912. Serial No. 699,326. (Cl. 71—9.)

1. The herein described process of making a fertilizer from ligno-cellulose, which consists in dividing a mass of ligno-cellulose into separate parts, burning one part to obtain an ash, carbonizing a second part to obtain amorphous carbon and ash, mixing with another part such chemical bodies as are nutritive to plant life, and finally mixing the separate parts.

2. The herein described process of making a fertilizer from ligno-cellulose, which consists in dividing a mass of ligno-cellulose into separate parts, burning one part to obtain an ash, carbonizing a second part to obtain amorphous carbon and ash, mixing with another part ammonia, nitrates and phosphates, and finally mixing the separate parts.

3. The herein described process of making a fertilizer from ligno-cellulose, which comprises dividing a mass of ligno-cellulose into separate parts, carbonizing one part to obtain amorphous carbon and ash, mixing with another part chemical bodies nutritive to plant life, and finally mixing the separate parts.

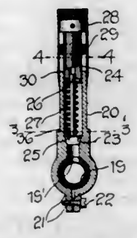
4. The herein described process of making a fertilizer form a mass consisting of ligno-cellulose and sulfate of lime, which consists in dividing a mass of such body into separate parts, burning one part to destroy the organic matters, carbonizing a second part to obtain amorphous carbon, ash and a calcium compound, mixing with another part chemical bodies nutritive to plant life, and finally mixing the separate parts.

5. The herein described process of making a fertilizer from ligno-cellulose which has been subjected to the action of a hydrolyzing acid, which consists in dividing a mass of such treated ligno-cellulose into separate parts, burning one part to obtain an ash, carbonizing a second part to obtain amorpohous carbon and ash, mixing with another part chemical bodies nutritive to plant life, and finally mixing the separate parts.

[Claims 6 to 12 not printed in the Gazette.]

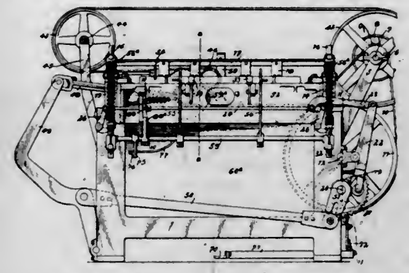
1,105,608. INFLATING DEVICE. SAMUEL E. BENNETT, South Williamsport, Pa. Filed Nov. 7, 1913. Serial No. 799,784. (Cl. 137—28.)

The herein described tire inflating device comprising in combination with an air tube provided with an opening, a pressure regulator including a casing open at both ends, means on one end of the casing to clamp the same upon the tube in communication with the opening thereof, a spring seated valve arranged in one end of said casing, a rod threaded in the other end of said casing, one end of the valve spring bearing against said rod, a sleeve permanently fixed at one of its ends to the other end of said rod and extending longitudinally thereof, the other end of said sleeve being slidably engaged upon the periphery of the valve casing, the latter end of said sleeve and the valve casing being provided with indicating gradu-



ations, and a lock nut threaded upon said rod and adapted for binding engagement with the end of the casing to secure the rod in its adjusted position, said sleeve being provided with opposed finger receiving slots whereby said lock nut may be manipulated.

1,105,609. STAVE-JOINTING MACHINE. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Co., Buffalo, N. Y., a Corporation of New York. Filed Mar. 13, 1913. Serial No. 753,987. (Cl. 147—34.)



1. In a stave jointing machine, in combination with stave blank holding means, a saw, a saw carriage, a bed upon which said carriage travels in horizontal plane, and means for causing said carriage to travel upon a curve on said plane and a curve varying in radius with the width of the stave blank comprising a carriage guide rigidly secured medially, blocks on said carriage engaging said guide, levers pivoted to the free ends of said guide and fulcrumed to a fixed part of the machine, and placing guides for moving a stave blank to position pivoted mediately to said levers.

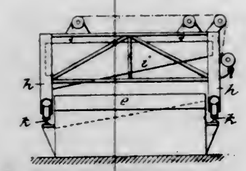
2. In a stave jointing machine, in combination with a saw constantly driven in rotation, means for imparting intermittent movement to other mechanisms coöperating therewith comprising a clutch member constantly driven, a clutch member intermittently driven, a lever for throwing said second-mentioned clutch member in and out of action, a brake for engaging said second clutch member and holding it out of action and against rotation until released by said lever, a bar acting upon said lever, a cam driven by a shaft driven by said clutch, a roller on said bar to contact with said cam for throwing said second member of said clutch out of action, a toggle for causing said bar to throw said clutch member into action, and a treadle governing said toggle.

3. In a stave jointing machine, means for placing and holding a stave blank in position for jointing comprising a rest, placing arms for bearing against the front edge of the stave blank to adjust the same transversely, clamping means for holding said placing arms rigidly during the sawing operation, means for clamping the blank to said rest during the jointing, a saw carriage movable with rela-

tion to the rest, a guide for the saw carriage and means movable in proportion to the movement of the placing arms for adjusting the guide of the saw carriage.

4. In a stave jointing machine, in combination with a saw and a saw carriage, a bed for said carriage for guiding the same in a horizontal plane, a guide for said carriage to direct its movement over a curve to form the bilge curve of a stave, a shaft and a crank thereon for causing reciprocatory movement of said carriage, a lever and connecting rods for connecting said crank with said carriage, levers for bending said carriage guide on curves of varying radii, placing guides for placing a stave blank in position for jointing, and connections between said placing guides and said last-mentioned levers for causing bending of said carriage guide proportional to the width of the stave blank.

1,105,610. APPARATUS FOR CUTTING PLATE-GLASS. MAX BICHEROUX, Aix-la-Chapelle, Germany, assignor to Bicheroux, Lambotte and Cie., Gesellschaft mit beschrankter Haftung, Herzogenrath, Rhineland, Germany. Original application filed July 25, 1912. Serial No. 711,439. Divided and this application filed Oct. 15, 1913. Serial No. 795,303. (Cl. 49—14.)



1. In apparatus for cutting plate glass in plastic condition, the combination with two spaced, stationary, pouring tables in the same plane and having parallel cutting edges adjacent to the space between them, of two cutting blades reciprocating in substantially vertical planes and in position to co-act with said edges, respectively, to divide the glass along the margin of each table.

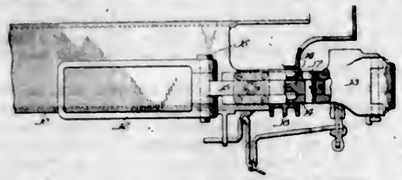
2. In apparatus for cutting plastic plate glass, the combination with two spaced pouring tables fixed in the same plane and having cutting edges adjacent to the space between them, of two connected cutting blades adapted to co-act with said edges, respectively, and arranged to be moved simultaneously in planes perpendicular to the tables into and out of said space to sever along said edges plastic glass spanning the space.

3. In apparatus of the class described, the combination with spaced pouring tables fixed in the same plane and having substantially parallel cutting edges adjacent to the space between them, of two parallel cutting blades having their cutting margins normally slightly more widely separated than are said edges, adapted to co-act with the latter, respectively, and arranged to be reciprocated in the vertical plane of said space to sever glass upon the tables.

4. In apparatus of the class described, the combination with spaced pouring tables fixed in the same plane and having approximately parallel cutting edges next the space between them, of a cutter consisting of two blades connected along their non-cutting margins, having cutting margins adapted to co-act simultaneously with said edges, respectively, and arranged to be forcibly moved into and out of said space to sever and space glass extending across the latter.

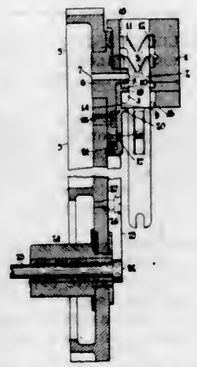
1,105,611. CENTERING DEVICE FOR COUPLINGS. HENRY BLANCHARD, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Sept. 19, 1912. Serial No. 721,213. (Cl. 213—42.)

In a device of the class described, the combination of draft sills carrying draft rigging stops, a yoke, a stem pivoted to and projecting forwardly from said yoke, a bifurcated coupler shank, means for pivoting said stem to said shank at a point near the forward end of said shank, and centering springs carried by said sills and having a



bearing on both said stem and said shank, substantially as described.

1,105,612. MEANS FOR ALINING THE PIECES OF A TYPOGRAPHICAL LINE IN A LINE-PRODUCING MACHINE. BRUNO BLOCH, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 10, 1913. Serial No. 805,724. (Cl. 199—7.)



1. Means for alining the pieces of a typographical line in a line producing machine, consisting of an alining lug for each character on a piece and projecting from the character edge thereof; a mold having a fixed shoulder engaged by said lugs; means in part incorporate with the said mold and in part loosely connected with it, for alining the composed characters against the mold shoulder through the respective alining lugs by direct contact with the latter; and automatic means for actuating the said means for alining.

2. Means for alining the pieces of a typographical line in a line producing machine, consisting of an alining lug for each character on a piece; a mold for the line to be produced carried by a wheel; and automatic means actuated from the axis of the said wheel to aline the alining lugs of the composed line against the said mold.

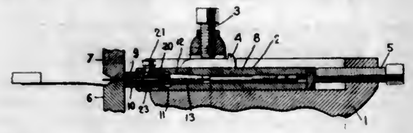
3. Means for alining the pieces of a typographical line in a line producing machine consisting of an alining lug for each character on a piece and projecting from the character edge thereof; a mold wheel; a mold block fast thereto and having a mold cavity registering with the line of pieces; a shoulder parallel with the mold cavity and fast on the mold block; and automatic means actuated from the axis of the mold wheel to aline the alining lugs of the composed line against the said shoulder.

4. In a typographical machine comprising pieces formed with alining lugs, the combination of a mold having a stationary shoulder against which the alining lugs on the pieces are alined; an alining plate contacting directly with the said lugs and automatically and constantly urged away from the said shoulder; and automatic means for making the said plate push the said lugs up to the said shoulder.

5. In means for alining the pieces of a typographical line in a line producing machine, the combination of a mold having a stationary shoulder against which the alining lug on the pieces are alined; an alining plate contacting directly with the said lugs and constantly urged away from the said shoulder by a spring device; and automatic means for making the said plate push the said lugs up to the said shoulder.

[Claims 6 to 17 not printed in the Gazette.]

1,105,613. APPARATUS FOR HEADING NAILS OR TACKS. ALBERT H. BRIGHAM, Whitman, Mass. Filed May 26, 1913. Serial No. 769,812. (Cl. 10—49.)



1. A heading tool comprising a die carrier having a cylindrical bore in its forward end, a centrally bored cylindrical die having an annular recess and mounted for longitudinal movement in the bore of the die-carrier, a friction spring mounted in said annular recess and pressing against the bore of the die carrier to resist relative movement of the die and die carrier, and a heading pin secured in the die carrier and extending into the bore of the die.

2. A heading tool comprising, a die carrier having a cylindrical bore in its forward end, a longitudinally bored cylindrical die having a sliding bearing in the bore of the die carrier, the length of the bearing being greater than the diameter of the bore of the carrier, a tapered split holder fitting within the die-carrier and a heading pin secured in the die carrier by said holder and slidable in the bore of the die the adjacent ends of the holder and die being telescopically connected whereby possibility of deflection of the unsupported portion of the heading pin extending between the holder and the movable die is minimized.

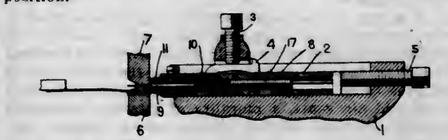
3. A heading tool comprising a die carrier having a cylindrical bore at its forward end, a longitudinally bored cylindrical die having a long sliding bearing in the bore of the die carrier, a tapered holder longitudinally split at one end to provide a plurality of flexible members, and a heading pin secured in the die carrier by said holder and slidable in the bore of the die, the adjacent ends of the holder and die being telescopically connected whereby possibility of deflection of the unsupported portion of the heading pin extending between the die carrier and the movable die is minimized.

4. A heading tool comprising a die carrier, a tapered split holder mounted in the die carrier and having a solid cylindrical head, a heading pin mounted in the holder and a die movable in the die carrier and having a sliding bearing on the cylindrical head of the holder whereby the die is rigidly guided to move in a straight line avoiding transverse strain on the heading pin.

5. A heading tool comprising a die carrier having a cylindrical bore at its forward end and a tapered bore adjacent thereto, a tapered split holder having a solid cylindrical end, the tapered portion of said holder fitting tightly in the tapered bore of the die carrier, a longitudinally bored cylindrical die slidable in the cylindrical bore of the die carrier and bored at its end to fit slidably over the cylindrical end of the split holder, a heading pin secured tightly by the split holder and slidable in the bore of the die and means to limit the movement of the die relative to the die carrier.

1,105,614. APPARATUS FOR HEADING NAILS OR TACKS. ALBERT H. BRIGHAM, Whitman, Mass. Filed June 6, 1913. Serial No. 772,093. (Cl. 10—49.)

1. In a device of the class described, a die carrier having a longitudinal bore, and split longitudinally for a portion of its length, a cylindrical die longitudinally bored and having a long bearing in the bore of the carrier, a heading pin slidable in the bore of the die and extending longitudinally in the bore of the carrier, an adjusting thrust screw threaded into the bore of the carrier and abutting against the heading pin, a longitudinally split holder embracing the heading pin and fitting in the bore of the die carrier and means to clamp the die carrier, split holder, heading pin and thrust screw together in operative position.



2. In a device of the class described, a die carrier having a longitudinal bore and split longitudinally for a portion of its length, a cylindrical die longitudinally bored and having a long bearing in the bore of the carrier, a heading pin slidable in the bore of the die and extending longitudinally in the bore of the carrier, a longitudinally split holder embracing the heading pin and fitting in the bore of the die carrier and means to clamp the carrier, holder and heading pin together.

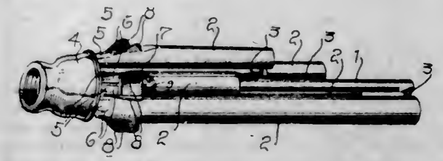
3. In a device of the kind described, a die carrier comprising a body portion and a bushing secured in the end of the body portion, a longitudinally bored die slidable in the bushing and having a radial flange adapted to engage the inner end of the bushing to limit the outward movement of the die and a heading pin secured in the carrier and slidable in the bore of the die.

4. In a device of the kind described, a die carrier comprising a body portion having a longitudinal bore and split for a portion of its length and a bushing removably secured in the end of the body portion, a longitudinally bored die having a long sliding bearing in the bushing and provided with a radial flange adapted to engage the inner end of the bushing and limit the relative movement, a heading pin slidable in the bore of the die and extending longitudinally in the bore of the carrier, a split holder embracing the heading pin and fitting in the split portion of the carrier and means to clamp the carrier, holder and heading pin together.

5. In a device of the class described, a die carrier comprising a body portion having a longitudinal bore and split for a portion of its length, a bushing removably secured in the end of the body portion of the die carrier, a longitudinally bored die having a long sliding bearing in the bushing and provided with a radial flange adapted to engage the inner end of the bushing and limit the relative movement, a heading pin slidable in the bore of the die and extending longitudinally in the bore of the carrier, a thrust adjusting screw threaded in the bore of the carrier and abutting the heading pin, a split holder embracing the heading pin and fitting in the split portion of the carrier, and clamping means to clamp the die carrier at its split portion and thus lock the split holder, heading pin, and thrust screw in operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,105,615. AUTOMOBILE-HORN. CHARLES J. BRINKMANN, Glencoe, Minn. Filed Nov. 1, 1913. Serial No. 798,781. (Cl. 116—19.)

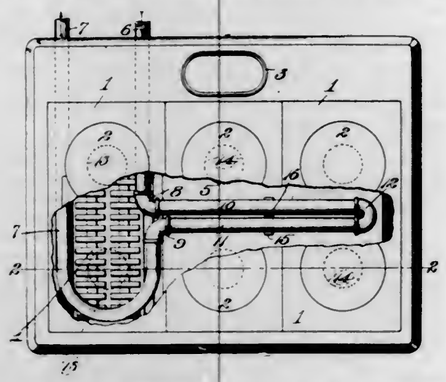


1. A device of the class described comprising a head, a plurality of air vents detachably mounted in said head and projecting therefrom, a central support projecting from the head, a plurality of resonant tubes, each of said tubes having an air escape opening formed therein adjacent its inner end, each tube being split longitudinally

from the inner wall of the opening therein to the inner edge of the tube to provide a pair of wings, the split portion of each tube being adapted for slidable engagement with the projecting end of one of said air vents, and means for loosely connecting the outer end of each tube to the central support.

2. A device of the class described comprising a head, a central support projecting from the head, a plurality of resonant tubes, a plurality of air vents carried by the head and having reduced extended portions, the inner end of each tube being engaged around the extended portion of one of said air vents, a plurality of laterally projecting slip joint members carried by the central support, and a laterally projecting slip joint socket member carried by the outer end of each tube and adapted for engagement with one of said laterally projecting slip joint members carried by the central support.

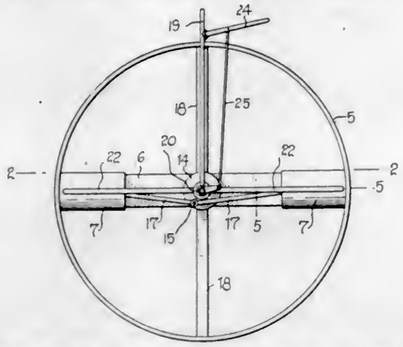
1,105,616. WATER-HEATER FOR COMBINATION STOVES AND RANGES. PAUL A. BRITT, St. Louis, Mo. Filed Dec. 18, 1911. Serial No. 666,503. (Cl. 126—34.)



The improved water-heating device for coal and gas stoves, comprising a U-shaped water-heating pipe to be located in the top of the fire-box, a lateral U-shaped extension projecting at a right-angle from said U-shaped pipe, so that it will extend rearwardly within the space between the stove-top and the oven-top at a central point where the heat is greatest in said space, to prevent warping of the stove-top above it, an elbow for connecting said two U-shaped parts, another elbow, and a pipe connected to said last-mentioned elbow and projecting on the exterior of the fire-box.

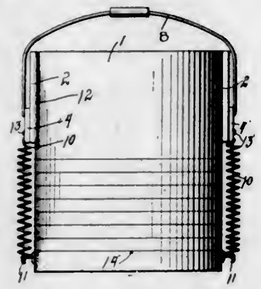
1,105,617. ROTARY ENGINE. FRED CARTER, Letcher, S. D. Filed Mar. 7, 1914. Serial No. 823,202. (Cl. 121—64.)

In a rotary engine, the combination of a stationary shaft, a fly wheel including a rim and a diametrically extending plate secured at its ends to said rim, cylinders mounted upon the opposite ends of said plate, pistons to reciprocate in said cylinders, a sleeve loosely mounted upon said stationary shaft and fixed at one of its ends to said plate, a disk secured upon the latter end of said sleeve and provided with a wrist pin, rods connected to the respective pistons and to said wrist pin, a collar secured upon the other end of said sleeve and provided with an exhaust port, exhaust pipes connecting the inner ends of said cylinders to said collar, a stationary rod extending over the fly wheel and having a vertically disposed end portion, a supply pipe rotatably mounted in the end portion of said rod, a sleeve loosely mounted upon said supply pipe, conducting pipes connected to opposite sides of said sleeve and to the outer ends of the respective cylinders, said supply pipe being provided with an opening with which the ends of said conducting pipes alternately register in the rotation of the fly wheel to supply the actuating fluid to said piston cylinders, and means mounted upon said vertical rod and connected to the supply pipe



whereby the same may be manually rotated, and the fluid supply to the cylinders established or cut off at the will of the operator.

1,105,618. GRAIN WEIGHER AND MEASURER. ANTON B. CHRISTIANSON, Hendricks, Minn. Filed May 14, 1913. Serial No. 767,599. (Cl. 73—46.)



A device of the class described comprising a receptacle, guides carried by the receptacle and diametrically opposite each other, slides comprising body portions, flanges carried by the body portions for engaging the guides, said guides having longitudinal slots formed therein and in which said bodies operate, said bodies having upper and lower perforations formed therein, a bail engaging the upper perforations, hooks carried by the receptacle, coil springs having their upper ends engaged in the lower perforations and their lower ends connected to said hooks, scale plates carried by the receptacle and adjacent the guides, pointers carried by the bodies of the slides and adapted to coact with the scale plates to denote the weight of the contents of the receptacle.

1,105,619. ANTIFOULING PAINT AND VARNISH. LOUIS COLLARDON, West Bromwich, England. Filed Jan. 20, 1913. Serial No. 743,201. (Cl. 134—41.)

1. As a new article of manufacture, a base for antifouling varnishes and paints comprising the product of condensation of a phenol and formaldehyde, with which is combined chemically a poinsonous metallic substance.

2. A process for the production of a base for antifouling varnishes and paints, consisting in mixing a phenol and formaldehyde, adding a salt of a poisonous nature to the mixture, heating it to produce condensation, and to effect the chemical combination of the poisonous body with the condensed product, and adding to the condensed product a solvent thereof.

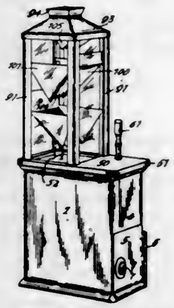
3. A process for the production of a base for antifouling varnishes and paints, consisting in mixing a compound of a poisonous nature with a phenol, adding formaldehyde to the mixture and heating to produce a condensate of a resinous nature, wherein the poisonous body is chemically combined with the condensate, adding a cellulose ester to the said condensate, and then adding a solvent that will dissolve the cellulose ester and the said condensate.

4. A process for the production of a base for antifouling varnishes and paints, consisting in mixing a phenol with a condensing agent and with a salt of arsenic, heating the mixture to produce a condensation product chemically combined with the arsenic, and dissolving the product in a solvent.

5. A process for the production of a base for antifouling varnishes and paints, consisting in mixing a phenol with a condensing agent and with a salt of arsenic, heating the mixture to produce a condensation product chemically combined with the arsenic, adding to the product a cellulose ester, and dissolving the product in a solvent.

[Claim 6 not printed in the Gazette.]

1,105,620. FARE-BOX. WALTER T. COOK, Cleveland, Ohio. Filed Apr. 22, 1913. Serial No. 762,816. (Cl. 232—15.)



1. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover, of a spring lock adapted to prevent the opening of said cover once the same has been closed, means for closing said cover upon the removal of said receptacle from said casing, and a protrudable member coöperating with said lock and adapted to be displaced so as to prevent the insertion of said receptacle into said casing unless said locking parts be in a condition actually to secure said cover.

2. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of an inspection box carried by said casing and having a discharge opening beneath which said receptacle is inserted, displaceable means normally closing said opening, a member movable with said displaceable means and arranged to engage a part of said casing when said receptacle is absent, so as to prevent the moving of said displaceable means out of obstructing position, said member also being arranged to engage a part of said receptacle when said means is in obstructing position so as to prevent the removal of said receptacle until said displaceable means has been moved out of obstructing position, and means for closing said cover upon the removal of said receptacle from said casing.

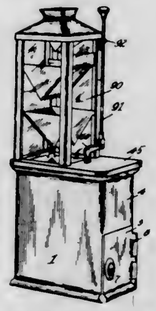
3. In a fare box, the combinatiton, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of means for closing said cover upon the removal of said receptacle from said casing, and means coöperating with said lock and preventing the removal of said receptacle from said casing unless the locking parts be in actual securing engagement with said cover.

4. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and the body of the receptacle having a spring pressed locking member adapted to engage said cover and prevent the opening thereof once the same has been closed, of means for closing said cover upon the removal of said receptacle from said casing, a stop device carried by said receptacle and movable transversely of the direction of movement thereof, means normally holding said stop device in retracted position, and connections between said stop device and said locking member whereby upon the movement of said locking member out of engaging position said stop device will be protruded so as to engage said casing.

5. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of means for closing said cover upon the removal of said receptacle from said casing, means for preventing the accidental locking of said cover prior to its insertion into the casing, and devices carried by the body of the receptacle and preventing its insertion into the casing until said locking-preventing means has been rendered inoperative.

[Claims 6 to 32 not printed in the Gazette.]

1,105,621. FARE-BOX. WALTER T. COOK, Cleveland, Ohio. Filed May 3, 1913. Serial No. 765,250. (Cl. 232—15.)



1. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of an inspection box carried by said casing and having a discharge opening beneath which said receptacle is inserted, displaceable means normally closing said opening, mechanism for operating said displaceable means, and means for closing said cover upon the removal of said receptacle from said casing, said mechanism being formed for interengagement with a part of said cover whereby the closing of said cover will be prevented until said mechanism has been actuated to remove said displaceable means for obstructing position.

2. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of an inspection box carried by said casing and having a discharge opening beneath which the receptacle is inserted, displaceable means normally closing said opening, a pivoted member operatively connected to said displaceable means and adapted to be swung laterally upon displacement of said means, an engaging member carried by said casing and adapted to coöperate with said pivoted member in a manner to prevent the movement thereof, one of said members being arranged to be engaged by a part of said cover when the same is fully inserted beneath said discharge opening so as to permit the swinging of said first member, and means for closing said cover upon the removal of said receptacle from said casing.

3. In a fare box, the combination, with a casing and a receptacle insertible therein, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of an inspection box carried by said casing and having a discharge opening beneath which said receptacle is inserted, displaceable means normally closing said opening, a pivoted member operatively connected to said displaceable means and adapted to be swung laterally upon the displacement of said means, a hook member pivoted to said casing adjacent to said pivoted member and adapted to engage the same in a manner to prevent the movement thereof, said hook member being arranged to be raised out of engagement with said pivoted member when said receptacle is fully inserted beneath said discharge opening, and means for closing said cover upon the removal of said receptacle from said casing.

4. In a fare box, the combination, with a casing and a receptacle insertible therein, of a hopper carried by said casing and having a discharge opening beneath which said receptacle is inserted, a gate for closing the passage through said hopper, means normally maintaining said gate in closed position, a pivoted member operatively connected to said gate so as to be swung laterally simultaneously with the opening thereof, a locking member carried by said casing and adapted to engage said pivoted member when said gate is closed in a manner to prevent the lateral movement thereof, one of said members being arranged to be engaged by a part of said receptacle and displaced out of engagement with the other member so as to permit the free operation of said gate while said receptacle is in receiving position.

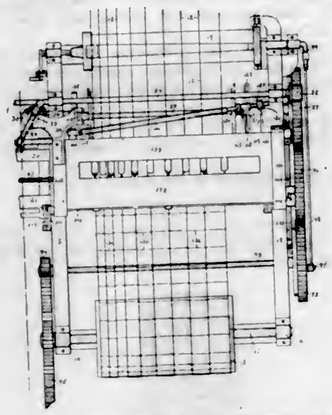
5. In a fare box, the combination, with a rectangular casing and a receptacle insertible between the side walls thereof, said receptacle having a movable cover and a spring lock adapted to prevent the opening of said cover once the same has been closed, of a hopper carried by said casing and having a discharge opening beneath which said receptacle is inserted, a rock shaft journaled at the side of said hopper parallel to said side walls, a leaf carried by said shaft and adapted to obstruct said opening, an arm pivoted to said casing upon an axis parallel to said shaft and depending between said side walls, operative connections between said arm and shaft whereby the same will be swung together, a projecting flange carried by said arm, projecting devices carried by said cover, means for automatically raising said cover upon the introduction of said receptacle into said casing and to guide projecting devices into a position above said flange, whereby removal of said receptacle is prevented except upon the swinging of said arm, and means for closing said cover upon the removal of said receptacle from said casing.

[Claims 6 to 13 not printed in the Gazette.]

1,105,622. FENCE-MACHINE. EVAN W. CORNELL, Adrian, Mich., assignor to Page Woven Wire Fence Company, Adrian, Mich., a Corporation of New Jersey. Filed Aug. 28, 1913. Serial No. 787,158. (Cl. 140—13.)

1. In a fence machine, the combination of a frame, a series of short hollow shafts mounted thereon, revoluble sleeves mounted on said shafts, means to revolve said sleeves intermittently in the same direction and to hold them from turning between revolutions, means to cause fence strands to pass through said shafts, means to feed picket wires across the ends of said sleeve, means to bend the strands at the points of contact with said picket wires and to hold the picket wires against a plurality of said sleeves while said wires are being wound around the strands extending through said sleeves, and means to hold the picket wires against other sleeves while their ends are wound around other strands.

2. In a fence machine, the combination of a frame comprising two parallel bars, a series of short hollow shafts mounted on each of said bars and extending at an angle to the shafts on the other bar, sleeves revolubly mounted on said shafts, means to cause fence strands to pass through said shafts and sleeves intermittently, means to feed picket wires across the ends of said sleeves, means movable at right angles to a plurality of the shafts of each series to bend the strands at the points of contact with said picket wires and to hold the picket wires against the ends of adjacent sleeves while said wires are wound intermediate their ends around the strands extending through said plurality of shafts, means for holding the ends of the picket wires against the ends of the remaining sleeves while said ends are wound around other strands, and means to revolve said sleeves.



3. In a fence machine, the combination of a frame and a series of short hollow shafts mounted thereon in two planes at an angle to each other, revoluble sleeves on said shafts, means to cause fence strands to pass through said shafts, means to feed picket wires across the strands along substantially the line of intersection of the planes, means to hold said wires against the ends of the sleeves, and means to revolve said sleeves intermittently to wind the wires around the strands.

4. In a fence machine, the combination of a frame and a series of short hollow shafts mounted thereon in two planes at an angle to each other, revoluble sleeves on said shafts, means to cause fence strands to pass through said shafts, means to feed picket wires across the strand along substantially the line of intersection of the planes, means to hold said wires against the ends of the sleeves, and means to revolve a series of said sleeves to wind the picket wires around pairs of the strands and then hold them stationary while the remainder of the sleeves are revolved to wind said wires around the other strands.

5. In a fence machine, the combination of a frame and a series of short hollow shafts mounted thereon in two planes at an angle to each other, revoluble sleeves on said shafts, means to cause fence strands to pass through said shafts, means to feed picket wires across the strands along substantially the line of intersection of the planes, means to hold said wires against the ends of the sleeves, and means to revolve two adjacent sleeves of each group of three to wind the picket wires around pairs of strands, and then revolve the remaining sleeve of each group to wind the ends of adjacent wires around the strand extending through said sleeve.

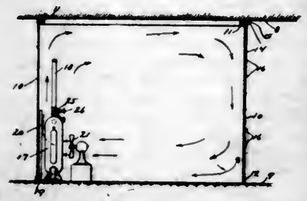
[Claims 6 to 31 not printed in the Gazette.]

1,105,623. VARNISH-KILN. CLIFFORD A. CUTLER, Buffalo, N. Y. Filed May. 28, 1912. Serial No. 700,256. (Cl. 91—55.)

1. A closed air kiln comprising at least one curtained wall, means for radiating heat within the kiln, and means for driving air through said heat radiating means.

2. A closed air kiln comprising curtained walls, means for radiating heat within said wall, means for driving heat through said heat radiating means, and means for sealing the lower edges of said walls.

3. A closed air kiln comprising curtained walls, means for radiating heat within said walls, and means for increasing the humidity of the air contained within said walls.



4. A closed air kiln comprising curtained walls, means for radiating heat within said walls, means for passing air through said heat radiating means, and means for raising and lowering said walls.

5. A closed, unpartitioned air kiln comprising curtain walls, means for radiating heat within said walls, means for driving air through said heat radiating means and means for increasing the humidity of the air contained within said walls.

[Claims 6 to 12 not printed in the Gazette.]

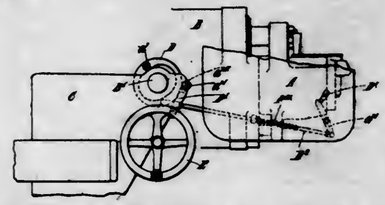
1,105,624. ROPE-CLUTCH FOR HOISTS. ROY DAVIS, Long Beach, Cal. Filed Mar. 7, 1913. Serial No. 753,882. (Cl. 24—134.)



1. A rope clutch comprising a sleeve, a semi-cylindrical plate loosely mounted in said sleeve, a collar on said sleeve having lugs on one side thereof, an inclined arm pivoted at its lower end between and to said lugs, said lower end having a cam shaped portion adapted to extend through an opening in said sleeve and to engage said plate, a collar pivoted to the upper end of said arm and adapted to be connected with the hoisting end of a rope, and a hand line secured to and near the pivotal point of said arm, in combination, as and for the purpose specified.

2. A rope clutch having an elongated vertical sleeve adapted to slide on a hoisting rope, a semi-cylindrical plate loosely mounted within and at one side of said sleeve adapted to frictionally engage said rope and lock said sleeve against movement thereon, a collar around and secured to said sleeve near its center having lugs projecting outwardly therefrom, an arm normally inclined from and pivoted between and to said lugs at its lower end, said lower end having a cam shaped portion adapted to extend through an opening in said sleeve and engage said plate for increasing or diminishing the friction between said plate and said rope, a collar pivoted to the upper end of said arm adapted to be connected with the hoisting end of a rope, and a hand line secured to said arm near its pivotal point for regulating the position of the sleeve on the rope, as described.

1,105,625. PERCUSSIVE FIRING MECHANISM OF BREECH-LOADING GUNS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Oct. 18, 1913. Serial No. 795,854. (Cl. 89—27.)



1. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of a firing device mounted on said non-elevating part, a curved member moved by said device and pivotally mounted on the cradle in co-axial relation with the gun trunnions, a striker releasing member on the gun, and a connecting rod pivoted to said curved member and serving to transmit the pivotal movements of said curved member to the striker releasing member on the gun.

2. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of a firing device mounted on said non-elevating part, a curved member moved by said device, a pivot for said member carried by the cradle and arranged parallel to the gun trunnions, a striker releasing member on the gun and a connecting rod pivoted to said curved member and serving to transmit the pivotal movements of said curved member to the striker releasing member on the gun.

3. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of a firing device mounted on said non-elevating part, a curved plate moved by said device, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing member on the gun and a connecting rod pivoted to said curved plate and serving to transmit the pivotal movements of said curved plate to the striker releasing member on the gun.

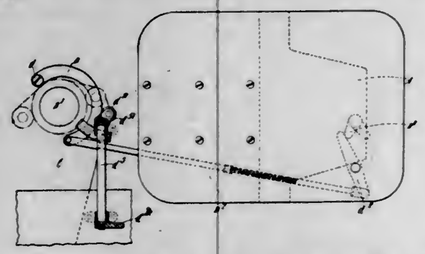
4. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of a firing device mounted on said non-elevating part, a curved plate moved by said device, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing arm on the gun, a lever in contact with said arm and a connecting rod pivoted to said lever and to the curved plate.

5. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of a firing device mounted on said non-elevating part, a curved plate moved by said device, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing arm on the gun, a lever in contact with said arm, a connecting rod pivoted to said lever and to the curved plate, and a guard plate carried by the cradle and covering said means, the lever and the arm, said lever being pivoted to said guard plate.

1,105,626. PERCUSSIVE FIRING MECHANISM. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Original application filed Oct. 18, 1913, Serial No. 795,854. Divided and this application filed Apr. 6, 1914. Serial No. 829,828. (Cl. 89—27.)

1. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved member moved by said trigger and pivotally mounted on the cradle in co-axial relation with the gun trunnions, a

striker releasing member on the gun, and means for establishing an operative relationship between these two members.



2. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved member moved by said trigger, a pivot for said member carried by the cradle and arranged parallel with the gun trunnions, a striker releasing member on the gun and means for establishing an operative relationship between these two members.

3. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved plate moved by said trigger, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing member on the gun, a rod connected to said curved plate and means for connecting said rod to the members on the gun.

4. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a sliding rod passing through the axis of rotation of the elevating device, a vertical shaft rotatably mounted on the non-elevating part of the mounting, an arm on said shaft against which arm the sliding rod bears, another arm on said shaft, a roller on the last mentioned arm, a curved plate against which said roller bears, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing member on the gun, a rod connected to said curved plate and means for connecting said rod to the member on the gun.

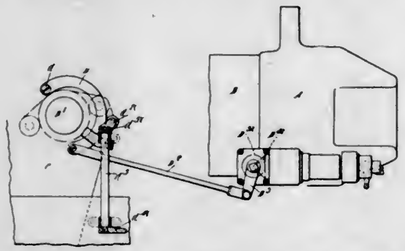
5. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved plate moved by said trigger, a pivot for said plate carried by the cradle and arranged parallel to the gun trunnions, a striker releasing arm on the gun, a lever in contact with said arm and means for connecting said lever to the curved plate on the cradle.

[Claim 6 not printed in the Gazette.]

1,105,627. PERCUSSIVE FIRING MECHANISM. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Original application filed Oct. 18, 1913, Serial No. 795,854. Divided and this application filed Apr. 6, 1914. Serial No. 829,829. (Cl. 89—27.)

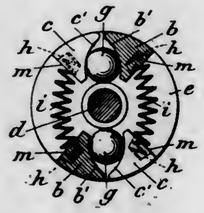
1. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved member moved by said trigger, a pivot for connecting said member to the cradle, a rotary member on the cradle, means for connecting said rotary member to the curved member and a rotary firing member on the gun with which firing member the rotary member on the cradle engages.

2. In percussive firing mechanism for ordnance, the combination with a non-elevating part of the mounting and the gun cradle, of an elevating device on said non-elevating part, a firing trigger on said elevating device, a curved member moved by said trigger, a pivot for connecting said member to the cradle, a rotary member on the



cradle, a rod and gearing for connecting said rotary member to the curved member and a rotary firing member on the gun with which firing member the rotary member on the cradle engages.

1,105,628. APPARATUS FOR AUTOMATICALLY ADJUSTING THE SPARKING PERIOD OF IGNITION SYSTEMS. ANTON DIEMER, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Mar. 10, 1913. Serial No. 753,217. (Cl. 123—117.)



1. In apparatus for automatically adjusting the sparking period of an ignition system relatively to the stroke of an internal combustion engine associated therewith, a rotatable driving element having a bearing surface, a rotatable driven element having a bearing surface, a displacing member adapted to move radially outward between the bearing surfaces in response to centrifugal action and thereby exert a circumferential displacing force to vary the angular relation between the driving and driven elements, and a circumferentially-disposed spring adapted to directly oppose said displacing force; substantially as described.

2. In apparatus for automatically adjusting the sparking period of an ignition system relatively to the stroke of an internal combustion engine associated therewith, a rotatable driving element having symmetrically-disposed bearing surfaces, a rotatable driver element having bearing surfaces, displacing members adapted to move radially outward between the bearing surfaces in response to centrifugal action and thereby exert a circumferential displacing force to vary the angular relation between the driving and driven elements in accordance with the speed of the engine, and symmetrically-disposed springs adapted to directly oppose said displacing force; substantially as described.

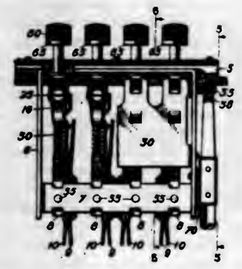
3. In apparatus for automatically adjusting the sparking period of an ignition system relatively to the stroke of an internal combustion engine associated therewith, a rotatable driving element having symmetrically-disposed bearing surfaces, a rotatable driven element having symmetrically disposed bearing surfaces, displacing members adapted to move radially outward between the bearing surfaces in response to centrifugal action and thereby exert a circumferential displacing force to vary the angular relation between the driving and driven elements in accordance with the speed of the engine, and circumferentially-disposed springs adapted to directly oppose said displacing force; substantially as described.

4. In apparatus for automatically adjusting the sparking period of an ignition system relatively to the stroke of an internal combustion engine associated therewith, a rotatable driving element having symmetrically-disposed bearing surfaces, a rotatable driven element having symmetrically disposed bearing surfaces, displacing members adapted to move radially outward between the bearing surfaces in response to centrifugal action and thereby exert a circumferential displacing force to vary the angular relation between the driving and the driven elements in accordance with the speed of the engine, and symmetrically-arranged circumferentially-disposed springs arranged between the elements to directly oppose said displacing force; substantially as described.

5. In apparatus for automatically adjusting the sparking period of an ignition system relatively to the stroke of an internal combustion engine associated therewith, a rotatable driving element having bearing surfaces which advance circumferentially with increasing radial distance from the axis of rotation, a rotatable driven element having bearing surfaces, displacing members adapted to move radially outward between the bearing surfaces in response to centrifugal action and thereby exert a circumferential displacing force to vary the angular relation between the driving and driven elements in accordance with the speed of the engine, and circumferentially-disposed springs adapted to directly oppose said displacing force; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,105,629. FOUR-PARTY KEY. AMOS F. DIXON, Newark, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed June 11, 1910. Serial No. 566,389. (Cl. 179—177.)



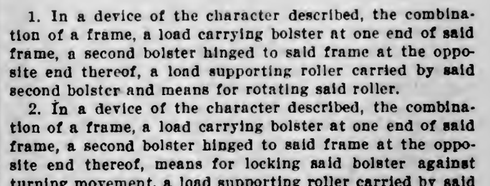
1. In an operating key the combination with a frame work, of contact springs mounted upon said frame work, a key plunger and a spring operating roller carried by said plunger, said plunger embracing an upper and lower rod and a connecting yoke having an upper and lower horizontal plate, and a vertical connecting web for said plates to the inner face of which said spring operating roller is pivotally secured.

2. In an operating key the combination with a frame work, of a swinging latch plate carried thereby, said latch plate being provided on its upper margin with notches and between its upper and lower margins with projecting members, and a plurality of reciprocating key plungers adapted to coöperate with said latch plate, each of said plungers embracing an upper and lower rod and a connecting yoke therefor having an upper and lower horizontal plate, said upper plate having a projecting portion extending through a notch in the upper margin of said latch plate and said lower plate having a portion thereon adapted in the movement of the key plunger to engage a projection on said latch plate to swing said latch plate outwardly.

3. In a key, the combination with a frame-work, a swinging latch plate carried thereby, said latch plate being provided with a notch, locking projections formed integrally with said plate, and a plunger having an integral portion coöperating both with said projections and said notch whereby said plunger may be held in a depressed position and against turning.

4. In a key, the combination with a frame-work, a swinging latch plate carried thereby, said latch plate being provided with a notch, overturned projections on said plate formed of the material adjacent said notch, and a plunger having integrally formed extensions coöperating with said overturned portions and said notch whereby said plunger is locked in a depressed position and prevented from turning.

1,105,630. GOGGLES. LAWRENCE F. DONNELLY, Lansford, Pa. Filed Sept. 3, 1913. Serial No. 787,828. (Cl. 2—149.)

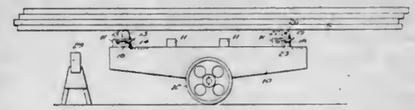


1. A device of the character described, comprising two plates hinged together, a soft binding around the edges of said plates, said plates having elliptical open extensions, wire gauze located against the outer ends of said extensions, and elliptical bands fitting over the extensions and the edges of the gauze binding the latter against the outer ends of the extensions, substantially as described.

2. A device of the character described, comprising two plates hinged together, a soft binding around the edges of said plates, said plates having elliptical open extensions, wire gauze located against the outer ends of said extensions, elliptical bands fitting over the extensions and the edges of the gauze binding the latter against the outer ends of the extensions, and said extensions having perforations in their walls, substantially as described.

3. A pair of goggles comprising two metal plates having hinge connection at their inner ends, said plates adapted to be positioned over and cover the eyes of the user, a soft binding throughout the outer edges of both plates adapted to fit against the face of the user throughout the length of the goggles, said plates having elliptical openings with elliptical open forwardly projecting extensions, bands fitting around the ends of said extensions, and a netting of wire gauze clamped between the forward ends of the extensions and the bands, substantially as described.

1,105,631. TIMBER-DOLLY. EDWIN G. DRAIN, Tacoma, Wash. Filed Nov. 28, 1913. Serial No. 803,507. (Cl. 21—65.)



1. In a device of the character described, the combination of a frame, a load carrying bolster at one end of said frame, a second bolster hinged to said frame at the opposite end thereof, a load supporting roller carried by said second bolster and means for rotating said roller.

2. In a device of the character described, the combination of a frame, a load carrying bolster at one end of said frame, a second bolster hinged to said frame at the opposite end thereof, means for locking said bolster against turning movement, a load supporting roller carried by said second bolster and means for rotating said roller.

3. In a device of the character described, the combination of a frame, a load carrying bolster at one end of said

frame, a second bolster hinged to said frame at the opposite end thereof, a load supporting roller carried by said second bolster and provided upon its face with lumber engaging projections, and means for rotating said roller.

4. In a device of the character described, the combination of a frame, a load carrying bolster at one end of said frame, a second bolster hinged to said frame at the opposite end thereof, a load supporting roller carried by said second bolster, means for rotating said roller, and means for locking said roller against rotation.

5. In a device of the character described, the combination of a frame, hinged bolsters carried by the opposite ends of said frame, means for locking said bolsters against turning movement, a spiked roller carried by one of said bolsters, means for rotating said roller and means for locking said roller against rotation.

1,105,632. LOCK. OTTO P. DRIEBUSCH, Medford, Wis. Filed June 3, 1912 Serial No. 701,330. (Cl. 70—104.)



1. In a device of the character described, a lock comprising casing sections secured together, a member slidably mounted upon one of said casing sections, an extension formed upon said member and projecting downwardly therefrom and shackle members pivotally secured to said member for the purpose described.

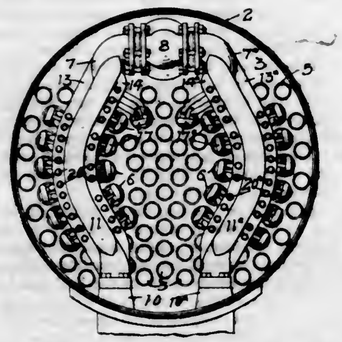
2. In a device of the character described a lock comprising casing sections rigidly secured together, a member slidably mounted upon one of said casing sections, links carried by said member, shackle members pivotally secured to said links, an extension depending from said first mentioned member, whereby said latch members may be closed for the purpose described.

3. In a device of the character described, a lock comprising casing sections rigidly secured together, one of said casing sections provided with spaced apart longitudinally extending slots, a member having pins inserted therethrough, said pins adapted to engage in said slots whereby said member is held in slidable engagement thereto, links carried by said member, shackle members pivotally secured to said links, and an extension depending from said first mentioned member for the purpose described.

4. In a device of the character described, a lock comprising casing sections, one of said casing sections provided with slots, a member having cam surfaces formed on the opposite sides thereof, pins journaled in said member and projecting into said slots to hold said member in slidable relation to the casing sections, links carried by said member, shackle members secured to said links and having portions adapted to engage said cam surfaces so as to move said latch members into and out of engagement for the purpose set forth.

5. In a device of the character described, a lock comprising sections rigidly secured together, each of said members provided with a plurality of openings for reception of fastening means whereby they may be held together, one of said sections provided with spaced apart longitudinally extending slots, a member having pins projecting therefrom, said pins projecting into said slots whereby said member is held in slidable engagement with said sections, an extension depending from said member, links carried by said member, substantial semi-circular latch members carried by said links and means for lowering and raising said members so as to move the upper ends of said latch members into and out of engagement with each other for the purpose described.

1,105,633. SUPERHEATER. GEORGE H. EMERSON and HENRY YOERG, St. Paul, Minn., assignors to Locomotive Superheater Company, a Corporation of Delaware. Filed Jan. 20, 1909. Serial No. 473,235. (Cl. 122—462.)



1. In a boiler, the combination, with a flue sheet and flues and a steam supply pipe, of a relatively narrow superheater header lying entirely to one side of said flues and extending from near the top of the flue sheet to the bottom thereof and having, further, saturated and superheated steam chambers arranged one in front of the other, the header being connected with the steam supply pipe at the top and with the engine cylinders at the bottom, and superheater elements within the flues and having all their ends joined to the two header chambers on the same side thereof but entering said chambers from the rear, the ends of each element as they enter the header being arranged below one another in the order of contiguity of the flues to which the elements belong, whereby separation of any one of said tube ends to said header and the removal of any one or more of said tubes is possible without displacement of said header, or of the other tubes.

2. The combination, with a boiler, flue sheet and rows of flues and a pipe for the saturated steam supply, of relatively narrow superheater headers arranged one on each side of the boiler between rows of flues and extending from the top to the bottom thereof in front of the flue sheet, the upper ends of said headers having a T-coupling connection with said steam supply pipe near the top of said flue sheet and the lower ends of said headers having connections with the cylinders and steam chests near the bottom of said flue sheet, each header having further saturated and superheated steam chambers one in front of the other, and superheating elements within the flues, the element ends of the two rows of flues on opposite sides of a given header being joined to the two chambers thereof on the same side of the header as are the flues containing them but entering said chambers from the rear, whereby separation of any one of said tube ends to said header, and the removal of any one or more of said tubes is possible without displacement of said header, or of the other tubes.

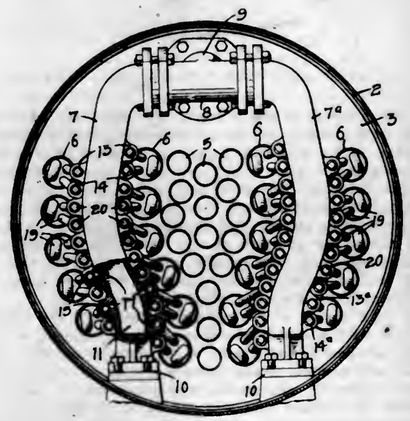
3. The combination, with a locomotive smoke box and flue sheet and flues therefor, and a pipe for the saturated steam supply, of a superheater header arranged within said box, a coupling connecting said header with said steam supply pipe, said header consisting of a single casting having a longitudinal partition dividing it into a compartment for saturated steam and a compartment for superheated steam, said saturated steam compartment communicating through said coupling with said steam supply pipe, and said superheated steam compartment having a connection with the steam chest, and superheating tubes arranged in groups on each side of said header, the ends of the tubes of each group communicating with said chambers respectively on the same side of said header.

4. The combination, with a boiler flue sheet and flues and a saturated steam supply pipe, of superheater headers arranged one on each side of the longitudinal axis of the boiler and near said flue sheet, the upper ends of said headers having a connection with said steam supply pipe, and the lower ends of said headers having connections with the cylinder steam chests, each header comprising an elongated casting having a compartment for saturated steam and a compartment for superheated steam, the former communicating with said steam supply pipe and the latter with the connections leading to the steam chests, superheating tubes arranged in groups on each side of said headers, the tubes of each group being located one above another and each tube in a group having its ends connected respectively with said steam chambers.

5. In a boiler superheater, the combination of a header divided by a partition into an independent compartment for saturated steam and an independent compartment for superheated steam and having a plurality of extenal pockets, some of said pockets on one side of said header communicating with said saturated steam compartment, and the remaining pockets on the same side of the header communicating with said superheated steam compartment, and superheating tubes connected between said saturated and superheated steam pockets.

[Claims 6 to 17 not printed in the Gazette.]

1,105,634. SUPERHEATER. GEORGE H. EMERSON and HENRY YOERG, St. Paul, Minn., assignors to Locomotive Superheater Company, a Corporation of Delaware. Filed Dec. 18, 1909. Serial No. 533,955. (Cl. 122—462.)

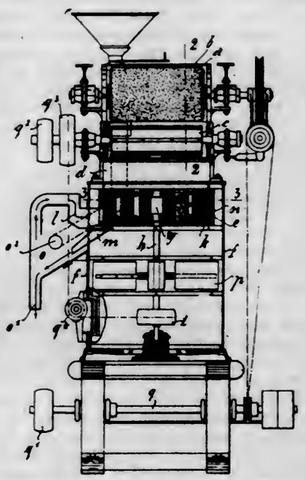


1. A superheater header having saturated and superheated steam chambers formed therein and external bosses formed on the side walls of said steam chambers and projecting laterally therefrom and separated from one another and having sockets communicating with said chambers respectively, the bosses communicating with one chamber being staggered with respect to those communicating with the other chamber on the same side of the header, and superheating tubes communicating with said chambers through said sockets.

2. A superheater comprising a header having longitudinally arranged saturated and superheated steam chambers therein and a series of bosses or lugs projecting from the walls of said chambers on each side of said header and separated from one another, said bosses having sockets therein communicating with said chambers respectively, the bosses communicating with one chamber on one side of said header being staggered with respect to the bosses communicating with the other chamber on the same side, whereby all of the bosses on the same side will be exposed and accessible from the front of the header, and superheater tubes communicating with said chambers on each side of said header through said sockets.

3. A superheater comprising, in combination, a header having saturated and superheated steam chambers therein and two rows of external, longitudinally arranged bosses on each side thereof, said bosses being separated from one another and having transverse pockets therein, passages connecting the pockets in one row of bosses with one of said chambers and the pockets in the other row of bosses on the same side of the header with the other chamber, and superheating tubes having their ends communicating with said chambers respectively through the pockets on the same side of said header.

1,105,635. MACHINE FOR HULLING AND POLISHING RICE. EVARISTO CONRADO ENGELBERG, São Paulo, Brazil. Filed Apr. 15, 1912. Serial No. 690,753. (Cl. 83—36.)



1. The combination with substantially horizontal hulling rollers and their casing, of a substantially vertical polishing chamber into which the casing discharges by gravity, an air chamber having an inlet connecton with the lower portion of the polishing chamber, and an inlet connection with said casing and means to direct a current of air upward through the polishing chamber and casing, thereby inducing a current of air through said air chamber and connections.

2. The combination with horizontal hulling rolls and their casing; of a vertical cylindrical polishing chamber having a perforated bottom and into which said rolls discharge, an air chamber having a downwardly directed air inlet, an inlet connection with the lower portion of the polishing chamber, and an inlet connection with the casing, said polishing chamber having a grain discharge into said air chamber and through its downwardly directed inlet, and a fan blower beneath the polishing chamber to direct a current of air through the casing, thereby causing a suction through said air chamber and its connections.

3. The combination with horizontal hulling rolls, and their casing, of a vertical cylindrical polishing chamber having a roughened internal surface and arranged below said rolls, one side of said cylinder being formed as a sieve, rotary brushes engaging the internal surface of said casing and sieve, air passages connecting the casing of said rollers with the casing of said brushes, a blower arranged in proximity to said sieve and adapted to force a current of air through the sieve into said casings, an air chamber connected with the said passages, an upwardly directed pipe for admitting air to said chamber, a hopper connected with the sieve side of the polishing chamber, and adapted to discharge the grain through the upwardly directed pipe in opposite direction to the air drawn into the latter.

1,105,636. FURNACE-GRATE. OTTO HERMAN ERDMAN, Birmingham, Ala. Filed Feb. 9, 1914. Serial No. 817,397. (Cl. 110—74.)



1. A furnace grate comprising a series of hollow grate bars arranged with air delivering slits in the upper portions thereof and an ash removing opening in the bottom of the same, each of said bars being provided with outwardly extending flanges from the front and rear wall adapted to engage over a front and rear bearing bar for supporting said bars in transverse arrangement longitudinal flanges extending from the sides of said bars, said flanges being provided with grooves in their upper edge, and a series of rounded bars adapted to rest in said grooves and constitute an adjustable seal for preventing the admission of air from the ash pit to the fire box of the furnace, substantially as specified.

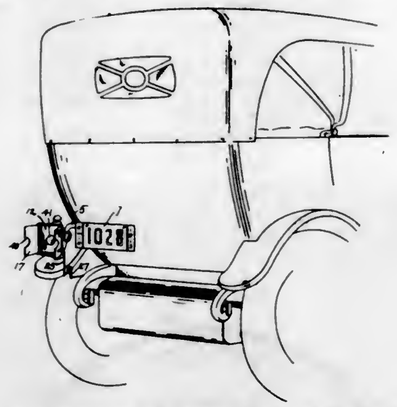
2. A furnace grate, comprising a series of transverse supporting beams, a series of hollow grate bars supported side by side on said beams, an air supply conduit running transversely across the back of the furnace below said beams, a passage in each of said bars adapted to receive the air from said air supply conduit, means for sealing the joint between said air supply conduit and said passage opening into said bars, a series of slits through the top walls of said bars for delivering a forced draft to the bed of fuel supported thereon, a longitudinal opening through each of the bottom walls of said bars, a series of shaker bars pivotally supported below said openings in the bottom of said bars, the pivots being below the center of said openings, connections between said shaker bars whereby said bars may be operated in unison to open or close said openings, and means for adjustably sealing the spaces between the adjacent edges of said grate bars, substantially as specified.

3. In a furnace, the combination of a series of hollow grate bars having openings through their lower sides and laterally extending flanges adjacently disposed across the furnace, rounded rods adjustably closing the spaces between said flanges, a series of shaker bars controlling the openings in the lower sides of said bars, and manually operable connections for jointly operating said shaker bars.

4. A grate, comprising a series of hollow bars, means for supporting said bars side by side, each of said bars comprising an upper and a lower section, the upper section being provided with a fuel supporting wall having a series of transverse slits, a series of depending reinforcing webs on the inner face of said wall and having an upwardly inclined portion at one end thereof, the lower section of each of said bars having converging side walls and an open bottom, bearings formed integral with said lower section at each end thereof, and a bearing in said lower section substantially intermediate of its length, a series of rockable bars pivoted at one end in the bearings formed at the front end of each of said lower sections and at the other end in said intermediate bearings, a second series of rockable bars pivoted in said intermediate bearings and in the bearing formed at the rear end of each bar, said rockable bars being provided with an arcuate face adapted to form a closure between the side walls of each lower section, connections between the front series of rockable bars, connections between the rear series of rockable bars, and manipulative means whereby all of said bars may be rocked in unison in either direction, substantially as specified.

5. A hollow grate bar adapted for use in a forced draft furnace grate, comprising an upper and a lower section, said upper section having an arched fuel supporting wall provided with a series of transverse slits, a series of depending webs formed integral with the inner face of said fuel supporting wall and disposed intermediate of said slits, the forward end of said fuel supporting wall extending obliquely upwardly and having therein a series of transverse slits adapted to deliver transverse jets of air at an acute angle to the jets of air delivered by the slits formed in the main body of the fuel supporting wall, and a passage entering the lower section of said grate bar for delivering a forced draft to the interior of the bar, substantially as specified.

1,105,637. SIGNALING DEVICE FOR AUTOMOBILES. FRANK J. ERNEY, Cleveland, Ohio. Filed June 16, 1913. Serial No. 773,866. (Cl. 240—22.)



1. In a device of the character described, the combination, with a casing of opaque material having a window opening in its side and a pane of translucent material covering said window opening, of one or more shutters of opaque material carried by said casing, and means for moving said shutter or shutters into and out of obstructing position as regards said opening, said shutter or shutters having an aperture therein of different shape and smaller size than said window opening, and the part of said pane with which said aperture registers being of a different color than the remainder of said pane.

2. In a device of the character described, the combination, with a casing of opaque material having a rectangular opening and a pane of translucent material covering said opening, of one or more shutters of opaque material carried by said casing, and means for moving said shutter or shutters into and out of obstructing position as regards said opening, said shutter or shutters having an aperture therein, and the part of said pane opposite said shutter aperture being colored, the remainder of said pane being of a different color.

3. A signal lamp for vehicles, comprising, in combination, a casing of opaque material having a rectangular opening in its side, a pane of transparent material covering said opening, shutters hinged to said casing at opposite sides of said opening, said shutters having their free edges notched so as to provide an aperture when said shutters are closed, means normally holding said shutters in closed position, and means connected to said shutters for opening the same to change the character of the light beam.

4. A signaling device for automobiles, comprising, in combination, a supporting device adapted to be secured to an automobile, a member of opaque material pivoted to said supporting device, the axis of said pivot lying in the plane which is perpendicular to the longitudinal axis of the vehicle, a lamp or burner carried by said supporting device, at the forward side of said member, and means for swinging said member about its axis so as alternately to disclose said light source from the rear of the vehicle and to obstruct the same, the face of said member which is presented toward the light source when in obstructing position being of a bright color and the opposite face being of a dark or neutral color and the angle of rotation of said member being sufficient to display said bright colored face to the rear of the vehicle when said member is moved to unobstructing position.

5. A signaling device for automobiles, comprising, in combination, a casing adapted to be secured to an automobile and having a rearwardly facing window, a lamp or burner within said casing and adapted when lighted, to illuminate said window, an opaque shutter mounted upon a substantially vertical pivot at each side of said window, means for rotating said shutters about their pivots so as alternately to obstruct and to uncover said window, the angle of rotation of said shutters being greater than 90° and the inner faces of said shutters being of a different color than the outer faces thereof so as to render visible the movement of the same in the daytime.

[Claims 6 and 7 not printed in the Gazette.]

1,105,638. DRY-SHORTENING FLOUR. ALVAH W. ESTABROOK, Kansas City, Mo., and HARRY E. WEAVER, Kansas City, Kans., assignors to The Larabee Flour Mills Company, Hutchinson, Kans., a Corporation of Kansas. Filed Aug. 4, 1913. Serial No. 782,892. (Cl. 99—10.)

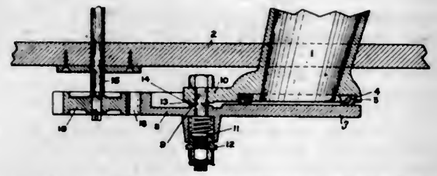
1. A dry-shortening flour containing a comminuted, edible fatty acid.

2. A dry-shortening flour containing comminuted stearic acid.

3. The herein described product, comprising flour having mixed therewith in the dry state a powdered, edible, fatty acid, and gas producing materials.

4. The herein described product, comprising flour having mixed therewith in the dry state powdered stearic acid, and gas producing materials.

1,105,639. CLOSURE FOR HOPPERS. HARRY M. ESTABROOK, Dayton, Ohio, assignor to The Barney and Smith Car Company, Dayton, Ohio, a Corporation of West Virginia. Filed Feb. 3, 1912. Serial No. 675,175. (Cl. 137—5.)



1. The combination, with a receptacle having a substantially vertical discharge opening, of a closure mounted on a substantially vertical axis and adapted to be moved into and out of alinement with said discharge opening, a spring arranged to move said closure about a horizontal axis toward said opening, and means to cause said spring to be compressed when said closure is moved about a vertical axis toward said opening.

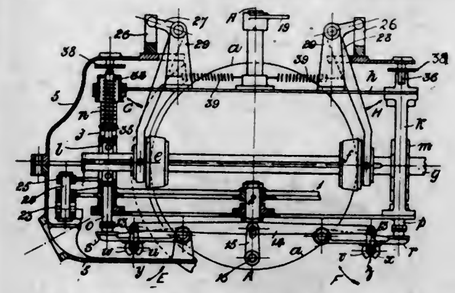
2. The combination with a receptacle, of a closure for the receptacle, a pivot pin connecting the closure and receptacle, a stop carried by the pin on the side of the closure opposite the receptacle, a spring interposed between the closure and stop, and coöperating means respectively carried by the receptacle and closure to compress the spring when the closure is being moved to its operative position and to permit the spring to expand when the closure is being moved to its inoperative position.

3. The combination with a receptacle, of a closure for the receptacle, a pivot pin connecting the closure and receptacle, a stop carried by the pin on the side of the closure opposite the receptacle, a spring interposed between the closure and stop, and coöperating means respectively carried by the receptacle and closure to compress the spring when the closure is being moved to its operative position and to permit the spring to expand when the closure is being moved to its inoperative position, said stop being adjustably mounted on the pin to regulate the tension of the spring.

4. The combination with a receptacle, of a closure for said receptacle, a pivot pin connecting said closure to said receptacle, said closure and receptacle having coöperating bosses surrounding the pivot pin, the bosses having their surfaces beveled toward the receptacle and closure respectively, a spring coiled about the pivot pin and engaging the closure, and a stop carried by the pin and engaging the opposite end of the spring.

5. The combination, with a receptacle having a laterally extending arm, of a closure for the lower end of said receptacle having a lateral extension, a pivot pin connecting said extension to said arm, said arm and said extension having coöperating bosses surrounding said pivot pin, said bosses having their adjacent surfaces beveled toward said receptacle and said closure, respectively, a spring coiled about said pivot pin and engaging said extension, a stop carried by said pin and engaging the opposite end of said spring, and means to move said closure about said pivot pin.

1,105,640. DRIVING-GEAR FOR MOTOR-VEHICLES. THOMAS FRANCIS EVANS, Wilmslow, England. Filed Mar. 20, 1909. Serial No. 484,724. (Cl. 74—26.)



1. In a transmission mechanism for a motor-driven vehicle, driving wheels, two friction disks respectively in connection with the driving wheels affording between them a space tapering in a direction transverse to the axes of the disks, rollers to drive such friction disks, means for moving the rollers toward and away from central parts of the disks, means for moving the rollers from one disk to the other and means for moving either roller transversely both to the direction of movement toward and away from the central parts of the disks and to the direction of movement from one disk to the other.

2. In a transmission mechanism for a motor-driven vehicle, driving wheels, two friction disks respectively in connection with the driving wheels affording between them a space tapering in a direction transverse to the axes of the disks, rollers for driving the friction disks, means for moving the rollers toward and away from central parts of the disks, means for moving the rollers from one disk to the other, and means for moving both of the rollers at once transversely both to the direction of movement toward and away from central parts of the disks and to the direction of movement from one disk to the other.

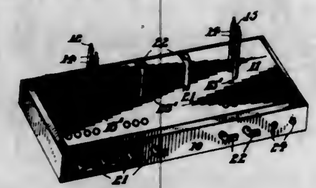
3. In a transmission mechanism for a motor-driven vehicle, driving wheels, two friction disks respectively in connection with the driving wheels affording between them a space tapering in a direction transverse to the axes of the disks, rollers for driving the friction disks, means for moving the rollers toward and away from central parts of the disks, means for moving the rollers from one disk to the other, means for moving both of the rollers at once transversely both to the direction of movement toward and away from central parts of the disks and to the direction of movement from one disk to the other and means for moving either roller transversely both to the direction of movement toward and away from the central parts of the disks and to the direction of movement from one disk to the other.

4. In a transmission mechanism for a motor-driven vehicle, driving wheels, two friction disks respectively in connection with the driving wheels affording between them a space, rollers for driving the friction disks, means for moving the rollers from one disk to the other and means for moving the rollers toward and away from central parts of the friction disks in connection with the means for moving the rollers from one disk to the other whereby the movement of either roller in the direction toward or away from a disk is accompanied by a corresponding movement of such roller toward or away from a central part of such disk, substantially as hereinbefore described.

5. In a transmission mechanism for a motor-driven vehicle, driving wheels, two friction disks respectively in connection with the driving wheels affording between them a tapering space, rollers to drive such friction disks, means for carrying the rollers and for moving them from one disk to the other whereby they are made to engage alternately with the one or the other disk, bell-crank levers in connection with and carried by part of the means for carrying and for moving the rollers and relatively fixed means in position to be engaged by and to move such bell-crank levers during the movement of the rollers toward and away from the disks, substantially as hereinbefore described.

[Claims 6 to 23 not printed in the Gazette.]

1,105,641. ADJUSTABLE FINGER-PIECE EYEGLASS-HOLDER. LUTHER THOS. FEASTER, Fairmont, W. Va. Filed May 12, 1914. Serial No. 838,030. (Cl. 29—89.)



1. A device of the class described, comprising a base provided with pairs of spaced-apart openings transversely-positioned adjacent each end thereof and with a similar opening inwardly positioned and at one side of the rearward ones of each of said pairs of openings, the said base also provided with two intermediately-positioned sockets, rubber covered pins arranged in pairs within the said openings and providing lens-receiving spaces between the pins of each pair thereof, and flat headed studs mounted within said sockets and adapted for the seating of the mountings of said lenses thereon.

2. A device of the class described, comprising a base provided with a plurality of pairs of graded stud-receiving sockets and provided in its upper face with pin-receiving and stud-receiving sockets, pins, rubber sleeves upon said pins for a portion of their length, the said pins adapted for seating in pairs in said pin-receiving sockets, studs provided with flattened laterally-projecting anvil heads and a pair thereof adapted for seating within said stud-receiving sockets, the said pins being adapted for the edge-wise reception of eye-glass lenses therebetween and with the mountings of said lenses seated upon the heads of said studs.

3. A device of the class described, comprising a base, adjustable lens positioning pins removably mounted upon said base, and adjustable lens mount supporting studs mounted upon said base and intermediately positioned with respect to said pins.

1,105,642. INSECTICIDE, FUNGICIDE, AND SOIL ANTISEPTIC. FRANK FORSTER, Orchid, Fla. Filed Apr. 7, 1913. Serial No. 759,429. (Cl. 167—6.)

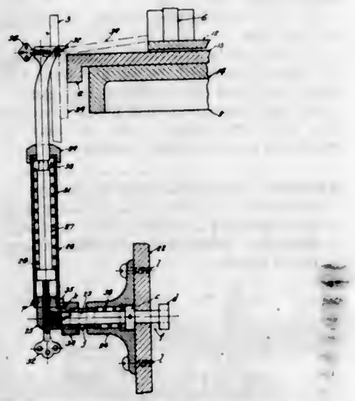
1. An insecticide, fungicide and soil antiseptic consisting of a dry powder made by subjecting a mixture of five per cent., by weight, of copper sulfate mixed with from ten to twenty per cent. of sulfur and from eighty-five to seventy-five per cent. of lime simultaneously, in the presence of moisture, to sufficient heat to cause chemical reactions between said ingredients.

2. An insecticide, fungicide and soil antiseptic consisting of a dry powder composed essentially of sulfur, sulfid of copper, sulfate of calcium and lime.

3. An insecticide, fungicide and soil antiseptic consisting of a dry powder containing the following substances in substantially the proportions as follows: sulfur .80 per cent., sulfid of copper 1.20 per cent., sulfate of calcium 19.50 per cent., sulfid of calcium .50 per cent., and lime 71 per cent.

4. The process of making an insecticide, fungicide and soil antiseptic which consists in mixing together copper sulfate in an amount equal to five per cent. of the whole with from ten to twenty per cent. of sulfur and from eighty-five to seventy-five per cent. of lime and simultaneously subjecting the same, in the presence of moisture, to a temperature sufficient to produce chemical reactions between said ingredients.

1,105,643. MEAT-SLICING MACHINE. ADELBERT L. GARDNER, Norwood Park, Ill., assignor of one-half to Curtis H. Gardner. Filed Mar. 7, 1912. Serial No. 682,170. (Cl. 17—24.)



1. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a stationary rind stripper adjacent the edge of such platform, such stripper being adapted to separate the rind from the meat, and having a surface adapted to engage with such rind and withhold it from the slicing knife.

2. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a stationary rind stripper adjacent the edge of such platform, such stripper having a surface adapted to engage with the rind and withhold it from the slicing knife, and being vertically adjustable.

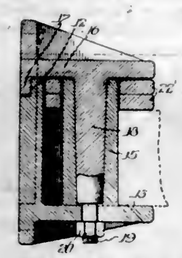
3. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a stationary rind stripper adjacent the edge of such platform, such stripper having a surface adapted to engage with the rind and withhold it from the slicing knife, being vertically adjustable, and having an extensible point and means for extending and retracting such point.

4. The combination with a meat slicing machine, including a base frame with a vertical front wall, a horizontal top, and a meat platform above such top, of a bracket secured to such front wall, a rind stripper supported by such bracket and adjustable about a horizontal axis, a horizontal plate interposed between the top of such base frame and such meat supporting platform, and means for adjusting such plate toward and from the rind stripper.

5. The combination with a meat slicing machine, including a base frame with a vertical front wall, a horizontal top, and a meat platform above such top, of a bracket secured to such front wall, a rind stripper supported by such bracket and adjustable about a horizontal axis, a horizontal plate interposed between the top of such base frame and such meat supporting platform, means for adjusting such plate toward and from the rind stripper, and means for adjusting such rind stripper vertically with respect to such meat platform.

[Claims 6 to 13 not printed in the Gazette.]

1,105,644. POCKET-COUPLING. WILLIAM J. GEDDERT, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Nov. 24, 1913. Serial No. 802,605. (Cl. 213—42.)



1. A coupler pocket comprising a horizontal shelf provided with an upwardly projecting hollow boss, a cover mounted above said shelf, and cover-securing means passing downward through said hollow boss, substantially as described.

2. A coupler pocket consisting of upper and lower members carrying portions interfitting to form a holding connection between the upper and lower members of said pocket, one of said interfitting portions constituting a pivot, substantially as described.

3. In a coupler pocket, the combination of a shelf having an upward projection, a cover, and a projection downward from said cover, said downward projection interfitting with the upward projection on said shelf, one of said projections forming a vertical pin on which a coupler shank may pivot, substantially as described.

4. In a coupler pocket, the combination of a wall adapted to be secured to a car end sill, a shelf projecting outwardly from said wall, a boss projected upwardly from said shelf, a cover adapted to be associated with said wall and shelf, said cover carrying a boss adapted to register and interfit with the boss projected upwardly from said shelf, and means for securing the parts in assembled relation, substantially as described.

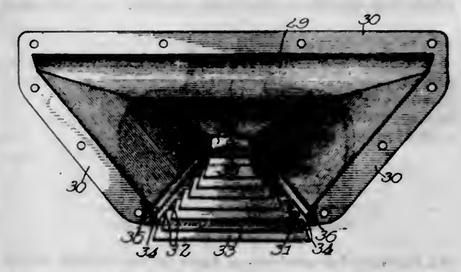
5. In a coupler pocket, the combination of a wall having a right angled shelf, a hollow boss projected upwardly from said shelf, a cover, a pin projected downwardly from said cover into the opening through said hollow boss, and means for securing the parts in assembled relation, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

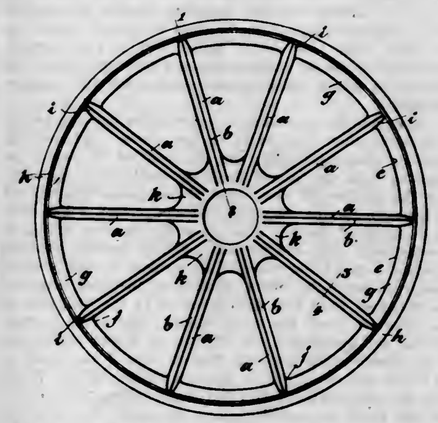
1,105,645. VENTILATOR FOR RAILWAY-CARS. EGBERT H. GOLD, Chicago, Ill. Filed Mar. 28, 1912. Serial No. 686,775. (Cl. 98—22.)

1. A ventilator for a railway car, or the like, consisting of a cowl having an imperforate top, imperforate lateral air-collecting faces extending inwardly and downwardly from the top, an inner side adapted to communicate with the interior of the car, and an open front and under side provided with a slatted structure comprising a plurality of parallel transversely extending downwardly projecting slats.

2. A ventilator for a railway car, or the like, consisting of a cowl having an imperforate top, imperforate lateral air-collecting faces extending inwardly and downwardly from the top, an inner side adapted to communicate with the interior of the car, an open front and under side provided with a slatted structure comprising a plurality of parallel transversely extending downwardly projecting slats, and wings projecting obliquely upwardly and outwardly from the intersections of the top and lateral faces.



1,105,646. ROAD-WHEEL OF AUTOMOBILES AND THE LIKE. GEORGE W. GOODYEAR and ERNEST F. GOODYEAR, Dudley, England; Maria Goodyear, Charles William Goodyear, and Joseph Faulkner executors of said George W. Goodyear, deceased. Filed Nov. 17, 1911. Serial No. 660,905. (Cl. 21—69.)



1. A hollow wheel spoke comprising an elongated tubular body formed of a sheet of metal having one longitudinal portion extending transversely across the hollow interior with the side edge secured to the interior of the spoke body, the other side edge being secured to the body at a point opposite the first named side edge, substantially as described.

2. A hollow wheel spoke comprising an elongated tubular body formed of a sheet of metal having one longitudinal portion extending across the hollow interior of the body and into engagement therewith, the other side edge being secured to the body at a point opposite said first named side edge, substantially as described.

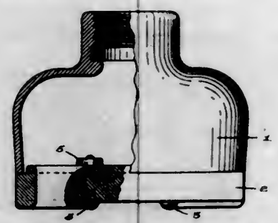
3. A hollow wheel spoke comprising an elongated tubular body formed of one sheet of light metal and having one portion extending transversely across said body, substantially as described.

4. A hollow wheel spoke comprising an elongated body formed of one sheet of light metal and having one portion extending transversely across said hollow body, said transverse portion extending substantially throughout the length of said body, substantially as described.

5. A hollow wheel spoke comprising an elongated tubular one piece body of oval cross section and having an integral transverse portion disposed coincident with the major oval axis of said body, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,647. SCREW-RETAINING DEVICE. EDWIN E. GREAVES, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 10, 1914. Serial No. 823,685. (Cl. 85—32.)



1. A device for retaining a screw in an opening larger in diameter than the shank of the screw, said opening extending entirely through a body, and the head of the screw engaging with one face of the body about one end of the opening, said device engaging with the portion of the screw shank projecting beyond the opposite face of the body and coacting with said face last-named, and comprising a disk having a marginal portion and a central portion offset from the marginal portion in the direction of the end of the screw shank, and provided with a central opening tapering inwardly from the face of the disk opposite to that from which the central portion is offset, the portion of said tapering opening of smaller diameter being of less diameter than the screw thread on the shank, and said device being flexible and slidable lengthwise of the shank from the end thereof toward the head of the screw, substantially as and for the purpose described.

2. A device for retaining a screw in an opening larger in diameter than the shank of the screw, said opening extending through a body, and the head of the screw cooperating with one face of the body, said device engaging with the portion of the screw shank projecting beyond the opposite face of the body, and comprising a disk having a marginal portion and an offset portion having a tapering wall, said disk having a central opening through the same, a portion of the wall of the part of said opening passing through the offset portion of the disk being of less thickness than the major portion of the disk and of less diameter than the screw shank, said offset portion yielding for permitting the disk to be forced lengthwise of the shank from the end thereof toward the head of the screw and closing in to grip the threads of the shank when the disk contacts with the adjacent face of the body and the screw is moved toward the front face thereof, causing a relative movement toward the disk of the end of the shank opposite the head of the screw, substantially as and for the purpose specified.

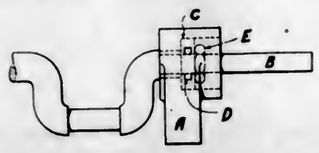
3. A combined cover and securing means therefor, comprising a plate having an opening extending entirely through the same transversely thereof, a screw having a threaded shank passing loosely through said opening and a head for coöperating with one face of the plate for preventing relative movement of the screw in one direction, and a disk of a diameter greater than said opening slidable lengthwise of the shank of the screw in one direction and frictionally engaging the same, said disk being carried by the part of the shank projecting beyond the face of the plate opposite to that with which the head of the screw coacts, and coöperating with said face for limiting the movement of the screw in a second direction, substantially as and for the purpose set forth.

4. A combined cover and securing means therefor, comprising a plate having an opening extending through the same transversely thereof, and a rib extending from one face of the plate concentric to said opening and spaced apart therefrom, providing a recess about one end of the opening, a screw having a head coöperating with the opposite face of the plate, and a threaded shank of less diameter than said opening projecting through the same and beyond the first-named face of the plate, and a flat disk frictionally secured to said projecting portion of the shank and slidable lengthwise thereof in one direction, said disk being adapted to occupy said recess and cooperate with the bottom thereof for preventing accidental detachment of the screw from the plate by a relative movement of the screw in one direction, substantially as and for the purpose described.

5. A screw retaining device comprising a washer having a hollow projected, truncated, substantially conoidal boss, and a perforation at the top of the boss for receiving the screw, the major part of the boss being comparatively flexible and capable of flattening toward the plane of the washer, the wall of the boss being tapered toward the perforation and the margin thereof around the perforation condensed so that it is rigid compared with the major part of the boss, the condensed edge being designed to take into the threads of the screw, substantially as and for the purpose specified.

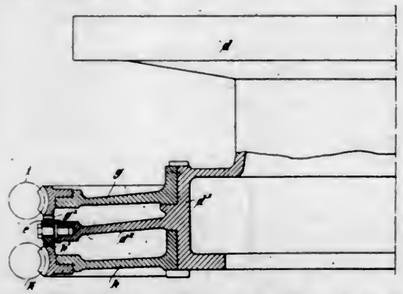
[Claims 6 and 7 not printed in the Gazette.]

1,105,648. CRANK AND TAPPET SHAFT OF LOOMS FOR WEAVING CLOTH. JOHN JAMES GREGSON, Fulwood, near Preston, England. Filed Dec. 31, 1912. Serial No. 739,444. (Cl. 64—36.)



In crank and tappet shafts for looms, in combination, a bearing having a through bore of two diameters and having a shoulder at the junction of said diameters, an internal ring of hardened steel forming a ball race, hardened steel balls within said ball race, said ring fitting the larger diameter and against the shoulder in the said bearing, means for holding the ring against rotation, a shaft having three diameters rotatably mounted with its middle diameter in said ball race, the larger diameter of the shaft forming a collar outside the bearing, an adjusting nut on the end of that part of medium diameter near the smallest diameter, said part being screw-threaded to receive the nut and said nut and collar holding the shaft against longitudinal movement, as set forth.

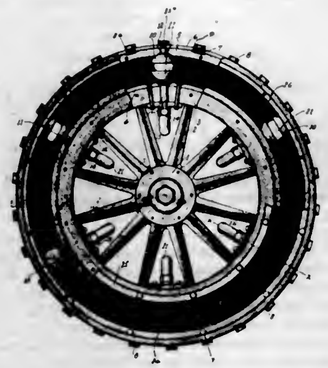
1,105,649. GEAR-CUTTING MACHINE. JULIUS GRUNDSTEIN, Ettlingen, Germany, assignor to Maschinenfabrik Lorenz, Ettlingen, Germany, a Firm. Filed Jan. 27, 1914. Serial No. 814,731. (Cl. 90—4.)



1. In a machine for cutting gear teeth by a helicordal cutter, a rotatable table, a device for transmitting the dividing movement to the table, which device consists of two dividing worm wheels loosely mounted on the table and rotatable in the same direction but with different angular velocities, two worms meshing with said worm wheels and to which motion is imparted from a common driving shaft, the said dividing worm wheels being connected by means of special toothed rims and intermediate gearing mounted on the table.

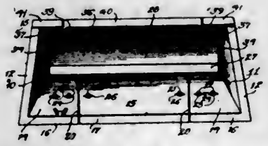
2. In a machine for cutting gear teeth by a helicordal cutter, a rotatable blank-holding table, a pair of dividing worm wheels rotatably mounted on the table, a worm for driving each dividing worm wheel, common driving means for the two worms, and means connecting the dividing wheels to each other and to the table whereby the table and therefore the blank is given an angular speed which is the arithmetical mean of the angular speed of the two dividing worm wheels, for the purpose set forth.

1,105,650. RESILIENT WHEEL. CHARLES H. GUNN, Modesto, Cal., assignor of one-half to Ernest Green, Stanislaus county, Cal. Filed July 7, 1913. Serial No. 777,620. (Cl. 152—36.)



A device of the character described comprising the combination with a wheel, a plurality of pins screw mounted through the entire thickness of the felly and rim of said wheel and provided with projecting stems within the inner periphery of said felly, each of said stems being flattened on one or more sides, a socket member on the outer end of each of said pins, an auxiliary felly spaced from said wheel, and provided with socket members disposed in alinement with the socket members on said pins, resilient means interposed between each pair of said socket members, and means for locking said pins against rotation, such means comprising plates projecting from said stems and secured to said felly, projecting lugs on said plates, washers mounted over said stems, such washers having flat shoulders on their inner surfaces engaging the flat sides of said stems, lugs on said washers engaging the lugs on said plates and caps screw mounted on said stems and engaging said washers to hold them in contact with said plates, as described.

1,105,651. DOME FOR FIREPLACES. WALTER W. GUY, Chicago, Ill., assignor to Colonial Fireplace Co., Chicago, Ill., a Corporation of Illinois. Filed June 5, 1911. Serial No. 631,368. (Cl. 126—288.)



1. In a dome for fire places, the combination of end walls, a lintel formed of slidably connected overlapping sections disposed in alinement, a back bar, bolt and slot connections between said back bar and sections which permit expansion of the lintel, and a damper sustained by said dome.

2. In a dome for fire places, the combination of end walls, a lintel comprising end sections integral with the end walls and an intermediate section slidably connected to the end sections, a back bar, bolt and slot connections between said back bar and sections which permit expansion of the linter, and a damper sustained by said dome.

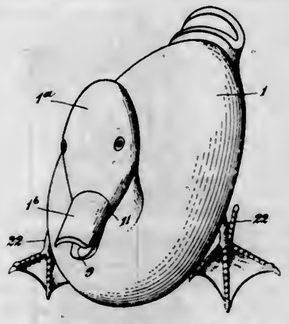
3. In a dome for fire places, the combination of end walls, a lintel comprising sections integrally formed with the end walls and a separately formed intermediate section, a back bar separately formed from the end walls, bolt and slot connections between the lintel sections and back bar which permit expension of the parts, and a damper sustained by said dome.

4. A dome for fire places, comprising end walls, a lintel and a back bar, the central portion of the lintel being formed by a separate plate, and the end portions of said lintel being integral with said end walls, a sliding connection at the joints between said end portions and central plate, an angle bar on the lintel, bolt and slot connections between said bar and said end portions and central plate of the lintel which permit expansion, and a damper pivotally held on the dome.

5. A dome for fire places, comprising end walls and an inclined sectional lintel, an angle bar on the lintel, bolt and slot connections between said bar and lintel, a damper pivotally held on the dome, a longitudinally extending bar adjacent the lower edge of the damper, inward extensions on the end walls, and bolt and slot connections between said extensions and said latter bar which permit expansion.

[Claims 6 to 12 not printed in the Gazette.]

1,105,652. TOY. FRANK H. HALL, Yonkers, N. Y., assignor to Strauss Manufacturing Company, a Corporation of New Jersey. Filed June 27, 1912. Serial No. 706,142. (Cl. 46—45.)



1. A device of the character described comprising a body, a part positioned for movement relatively to the body, a sounding device carried by the body, a supporting means for the body movable relatively thereto, and having means for imparting lateral movement to the body, and connections between the supporting means and the part and the sounding device.

2. A device of the character described comprising a body, parts positioned for reciprocal movement relatively to the body, supporting means for the body movable relatively thereto, and having means for imparting lateral movement to the body, and connections between the supporting means and the parts to reciprocate such parts when the supporting means is moved relatively to the body.

3. A device of the character described comprising a body, a part carried by the body upon which said body may rock, a supporting means co-acting with said part to rock the body, parts positioned adjacent the sides of the body and capable of reciprocable movement, and connections between the supporting means and the movable parts to impart movement thereto when the device is in transit.

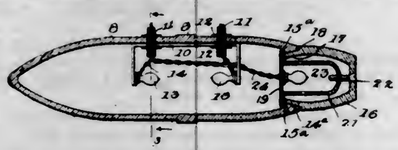
4. A device of the character described comprising a body, a supporting means therefor movable relatively thereto, and movable members connected with the sup-

porting means and movable in unison therewith, said body being provided with guiding means for maintaining the movable members in operative position.

5. A device of the character described comprising a body, a part carried by the body and positioned therebeneath and upon which said body may rock, rotatable supporting means positioned at either side of the part, and a connection alternately raised and lowered by said supporting means and serving to rock the body on the part.

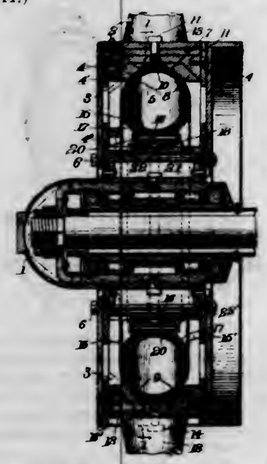
[Claims 6 to 11 not printed in the Gazette.]

1,105,653. SIGN. JOHN A. HANGGI, St. Paul, Minn. Filed Mar. 9, 1912. Serial No. 682,716. (Cl. 40—126.)



In a sign representing an object, the combination with a body portion having a socket, of an end portion constructed to fit in said socket, a partition removably fitted in said body portion and separating the interiors of said portions, a strap secured to said partition and means connecting said strap to the end portion, whereby the partition and the end portion are held in place.

1,105,654. ELASTIC WHEEL. SCHUYLER C. HATFIELD, Baltimore, Md. Filed May 1, 1913. Serial No. 764,831. (Cl. 152—41.)



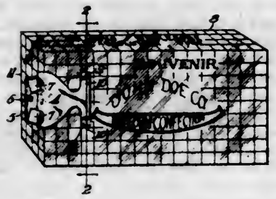
1. In an elastic wheel, a hub movable radially relatively to the wheel proper, a pneumatic pad encircling the hub, a rib on the pad projecting from its inner periphery, the rib being of considerable width in a direction parallel to the axis of the wheel and tapering toward the center of the pad, seating bands encircling the hub, one of the bands being keyed to the hub, the bands having curved portions to form a seat for the tire, each band having a V-shaped member adapted to inclose part of the rib on the tire and means in the form of bolts passing through each said member for securing the bands one to the other and forcing the bands together, clamping the rib between the bands.

2. In an elastic wheel, a wheel member having a central aperture, a hub mounted therein to move radially relatively to the wheel member, an annular pad encircling the hub and engaging with its periphery the inner wall of the aperture in the wheel, the pad having an inwardly projecting rib, two seating bands each having an inwardly disposed curved portion forming a seat for the tire and a V-shaped portion adapted to inclose part of the rib on the tire, the hub and the bands being connected to prevent relative rotation and means for securing the bands to each other and forcing the bands together and clamping the rib between the bands.

3. In an elastic wheel consisting of a wheel member and a hub mounted to move radially in all directions relative to the wheel, an annular pneumatic pad between the hub and the wheel member, means for supporting the pad and securing it to the hub consisting of two annular seating bands curved to fit the pad, an internal rib on the pad, the bands being so placed that their curved portions are oppositely disposed and so related that they form a seat for the curved inner surface of the pad, each of the bands also being provided with a V-shaped extension, the mouth of each V being inwardly disposed and one arm of the V being in the form of a flat flange or band encircling the hub, the V-shaped members serving to inclose the rib on the pad and a bolt parallel to the axle of the wheel and passing through the rib and through each band, and a nut on the bolt by which the members traversed thereby are forced together.

4. In an elastic wheel consisting of a wheel member and a hub movable radially in all directions relatively to the wheel, an annular pneumatic pad between the hub and the wheel member, means for securing the pad to the hub consisting of two annular seating bands curved to fit the pad and an internal rib on the pad, each of the bands being provided, in addition to the curved portion, with a V-shaped extension, one arm of the V forming a flat flange or band encircling the hub, the mouth of each V being turned inward, the V-shaped members serving to inclose the rib on the pad, bolts passing through the bands and the rib and means coöperating with each of the flat bands for preventing rotation of the pad relatively to the hub.

1,105,655. ADVERTISING NOVELTY. ISIDOR HEIDENREICH, Chicago, Ill. Filed Sept. 12, 1913. Serial No. 789,408. (Cl. 46—46.)



1. As a new article of manufacture, the combination with a sheet of paper, of a plate having a portion thereof formed concave and provided with prongs for attaching it to said sheet, with the edge of the concave portion adjacent an edge of said sheet, and a reed stretched across said concave portion.

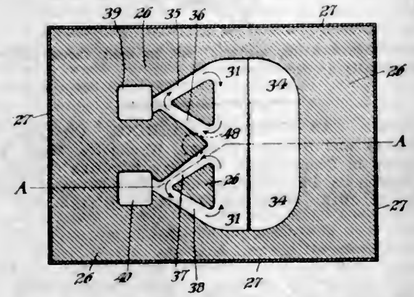
2. As a new article of manufacture, the combination with a sheet of paper, of a plate having a portion thereof formed concave and having a flexible, pointed portion for attaching it to said sheet with the edge of its concave portion adjacent an edge of said sheet, and a reed stretched across said concave portion.

3. As a new article of manufacture, a plate having a portion thereof formed concave, a reed stretched across said concave portion, and prongs for securing said plate to a sheet of paper with the edge of the concave portion adjacent an edge of said sheet, whereby a whistle is produced.

4. As a new article of manufacture, a clip formed of sheet metal concaved at its upper end and having a reed stretched across said concaved portion, and a penetrating prong portion arranged to pass through a card and be bent over for holding said clip in position on said card, with the edge of the concave portion adjacent the edge of the card.

5. As a new article of manufacture, the combination with a sheet of paper, of a plate having a portion thereof formed concave and having a pair of laterally extending arms formed integral therewith, a pair of flexible prongs struck up from said arms for attaching said plate to said sheet with the edge of its concave portion adjacent an edge of said sheet, and a reed stretched across said concave portion.

1,105,656. ELECTRIC-FURNACE PROCESS AND ELECTRIC FURNACE. CARL HERING, Philadelphia, Pa. Filed July 15, 1911. Serial No. 638,615. (Cl. 204—64.)



1. As an improvement in the art of producing motion in a fluid, the method which consists in dividing the fluid into a plurality of masses in channels or tubes disposed at an angle with respect to each other, each of said channels or tubes being open at both ends, and passing electric current through said fluid in said tubes or channels, whereby forces are exerted upon said fluid causing flow thereof through said tubes or channels.

2. As an improvement in the art of producing motion in a fluid, the method which consists in passing electric current through fluid disposed in a tube or channel open at both its ends, and passing electric current through a conductor disposed at an angle with respect to said tube or channel, whereby force is exerted upon said fluid causing flow thereof through said tube or channel.

3. The method of treating fluid material in an electric furnace, which consists in passing electric current through said fluid material disposed between masses of fluid comprising with said fluid material a circulatory system, and passing electric current through a conductor disposed at an angle with the longitudinal extent of said fluid material, whereby said fluid material is caused to flow by the force exerted thereon by the current in said conductor.

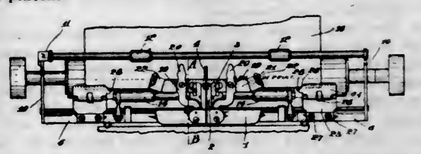
4. The method of treating molten metal in an electric furnace, which consists in passing electric current through said molten metal disposed between masses of conducting fluid comprising with said molten metal a circulatory system, and passing electric current through a conductor disposed at an angle with the longitudinal extent of said molten metal, whereby said molten metal is automatically circulated by the force exerted thereon by the current in said conductor.

5. The method of treating a mass of molten material in an electric furnace, which consists in passing electric current through a portion of said mass of molten material disposed with the remainder of said mass in a circulatory system, and passing electric current through a conductor disposed at an angle with respect to the longitudinal extent of said portion of molten material, whereby said molten material is automatically circulated by the force exerted thereon by the current in said conductor.

[Claims 6 to 53 not printed in the Gazette.]

1,105,657. TYPE-WRITING MACHINE. EDWARD B. HESS, Brooklyn, N. Y., assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed June 12, 1913. Serial No. 773,315. (Cl. 197—187.)

1. The combination of a rotatable transversely movable platen mounted with its printing surface normally in view of the operator, a short horizontally arranged line-gage coöperating with the surface of the platen, mounted to move transversely therewith and located adjacent the end thereof out of the paths of the types and a fixed center scale located at the line of print of the machine, there being spaced beyond the inner end of said short scale to afford a view of the lower edge of a sheet passing around the platen.



2. The combination of a rotatable transversely movable platen mounted with its printing surface normally in view of the operator, a short horizontally disposed gage mounted on the carriage below the platen, extending upwardly toward the line of print and located adjacent the end of the platen out of the paths of the types and a fixed center scale located at the line of print of the machine, there being space beyond the inner end of said short scale to afford a view of the lower edge of a sheet passing around the platen.

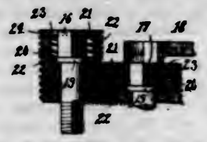
3. In a visible writing machine, the combination with a rotatable transversely movable platen of front feed rolls, a paper pan whose front edge extends beyond said rolls and a short line gage movable transversely with the platen, located adjacent the end of the platen and having its edge extended somewhat beyond the edge of the paper pan.

4. The combination of a rotatable transversely movable platen mounted with its printing surface normally in view of the operator, a short horizontally disposed line-gage coöperating with the surface of the platen mounted to move transversely therewith and located adjacent the end thereof out of the paths of the types, a fixed center scale located at the line of print of the machine, and a guide finger extending across the line of print adjacent the printing point, there being space beyond the inner edge of said short scale to afford a view of the lower edge of a sheet passing around the platen.

5. The combination of a rotatable transversely movable platen mounted with its printing surface normally in view of the operator and two short horizontally disposed line gages having co-incident gaging edges coöperating with said printing surface, mounted to move transversely therewith and respectively located adjacent the ends of the platen out of the paths of the types, there being space between the adjacent ends of the gages to afford observation of the lower end of a sheet in the machine.

[Claims 6 to 9 not printed in the Gazette.]

1,105,658. MEANS FOR PROTECTING COUNTERSUNK SCREW-HEADS. GUSTAVE H. HOLM, Bridgeport, Conn. Filed Feb. 12, 1912. Serial No. 677,106. (Cl. 74—52.)



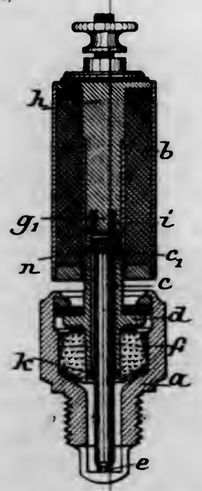
1. The combination with a member having a countersunk screw-head hole and an annular shoulder formed around the inside of the outer edge of the hole, a screw mounted in the hole, a movable cap for inclosing the outer end of the hole and having an opening therethrough to surround the head of the screw, and a spring for normally holding the cap out against the said shoulder to close the hole around the screw.

2. The combination with a member having a countersunk screw head hole containing an annular groove formed around the inside of the outer edge of the hole, of a detachable spring ring to fit in said groove, a movable cap within the hole, and a spring for normally holding the cap out against the said shoulder.

3. The combination with a member having a countersunk hole, containing an annular groove formed around the inside of the outer edge of the hole, of a screw mounted in the hole, a detachable spring ring to fit in said groove, a movable cap for inclosing the space of the hole surrounding the head of the screw, and a spring for normally holding the cap out against the said ring, but adapted to permit the cap to be shoved in for the attachment of a wrench to the screw-head.

4. The combination with a member having a countersunk screw head hole with an annular groove formed around the inside thereof, of a screw having a head of a lesser diameter than the hole, a ring to fit in said groove, a cap movably mounted within the hole and having an opening to receive the said screw head therein, and a spiral spring within the hole and seated between the bottom thereof and the said cap for normally forcing the cap outward.

1,105,659. SPARKING DEVICE FOR INTERNAL-COMBUSTION ENGINES. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed July 29, 1910. Serial No. 574,420. (Cl. 123—154.)

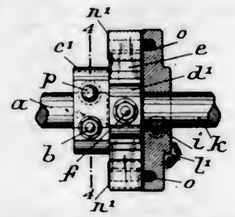


1. In a sparking device for cylinders of internal combustion engines, an electro-magnet coil, a plug insertible in the cylinder and spaced apart from the coil, a contact terminal carried by the plug, an axially movable armature terminal projecting within said coil and normally contacting with said contact terminal, a sleeve loosely surrounding the armature terminal and holding the coil in fixed relation to the plug, and a guide ring of rounded cross-section forming a substantially frictionless guide for the armature terminal; substantially as described.

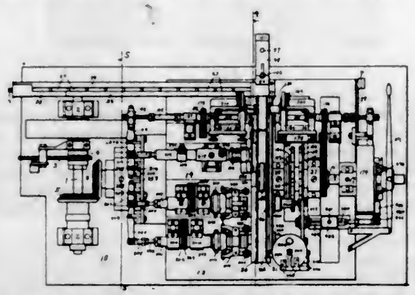
2. In a sparking device for the cylinders of internal combustion engines, an axially-movable armature terminal, a pole-piece therefor, and a coiled spring connecting the armature terminal with the pole-piece, but normally holding them out of contact with each other, said spring engaging threads formed upon the terminal and pole-piece the engaging convolutions of the spring being soldered in place; substantially as described.

1,105,660. COUPLING FOR IGNITION-MACHINES. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Sept. 23, 1910. Serial No. 583,378. (Cl. 64—13.)

In a shaft coupling device for ignition machines for combustion engines, two coupling parts, a magazine of spring plates clamped to one coupling part, cheek pieces rigidly fixed on the other coupling part embracing the said magazine of spring plates, and a fork-shaped block of relatively soft wearing material set in said cheek pieces; substantially as described.



1,105,661. CAN-HEADING MACHINE. CHARLES H. HOOKEY and SAMUEL HOOKEY, Wyandotte, Mich., assignors to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 21, 1913. Serial No. 749,911. (Cl. 113—14.)



1. In a machine for securing heads to the bodies of cans, the combination of a frame, a main shaft mounted thereon, a can body carrier mounted on said main shaft and comprising a pair of disks having pockets in their peripheries to receive can bodies, pairs of movable jaws mounted between said disks and having inwardly extending projections, a cam to force each pair of said jaws together to grip the can bodies, plungers to move said cams, and a cam-faced disk mounted on said main shaft against which the inner ends of said plungers contact in succession in order to be thrust outwardly to cause the jaws to move to their closed position.

2. In a machine for securing heads to the bodies of cans, the combination of a main frame, a main shaft mounted thereon, a can carrier mounted concentric with said main shaft and comprising a pair of annular plates having pockets in their peripheries, a pair of can body gripping devices mounted between said plates at each pocket and adapted to engage the can bodies and hold them securely while the heads are being attached, a stationary cam mounted concentric with said main shaft and engaging the inner ends of said can gripping devices, a slide on said cam to force the can-body gripping devices to operative position in succession, a cam shaft mounted below the main shaft, means mounted on said cam shaft to operate said slide, and means connecting said cam shaft and said can-body carrier for turning said carrier step by step to bring the pockets successively to can receiving position.

3. In a machine for securing heads to the bodies of cans, the combination of a frame, a main shaft revoluble thereon, a sleeve loosely mounted on said shaft and having a pair of notched disks intermediate its ends and having a third disk at one end, a can carrier mounted on said third disk and comprising a pair of annular plates formed with pockets in their peripheries, can-body gripping devices mounted between said plates, one for each pair of pockets, a stationary cam mounted concentric with said shaft and engaged by said can-body gripping devices for controlling

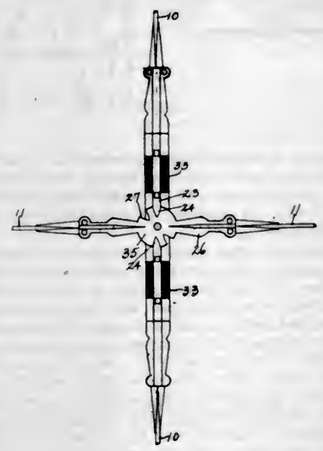
the operation of the same, a reciprocating member engaging one of the notched disks on said sleeve, means to reciprocate said member to turn said sleeve and can-body carrier step by step, and means to engage the other notched disks to lock the same and the can-body carrier at the end of each step.

4. In a machine for securing heads to the bodies of cans, the combination of a frame, a main shaft revolubly mounted thereon, a sleeve loosely mounted on said shaft, a pair of notched disks connected to said sleeve intermediate its ends, a lever mounted on said sleeve adjacent one of said disks, a pawl carried by said lever to engage the adjacent disk to turn the same, a cam shaft below the main shaft and means to revolve the same, a cam on said cam shaft, means whereby said cam may actuate said lever and pawl, a locking mechanism adjacent said second disk and comprising a tooth adapted to enter notches in said disk, a cam on said cam shaft to actuate said locking mechanism, a pair of rings mounted on said sleeve and provided with pockets, and jaws mounted between the rings to engage can bodies.

5. In a machine for securing heads to the bodies of cans, the combination of a frame, a main shaft and a cam shaft mounted on said frame, a can carrier mounted on said frame concentric with the main shaft and comprising a sleeve and a pair of rings having pockets in their peripheries, a pair of jaws mounted between the rings at each pocket, a cam mounted concentric with the rings to cause the jaws to close, means to turn the can carrier step-by-step, and means to lock said carrier after each movement.

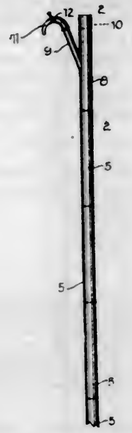
[Claims 6 to 35 not printed in the Gazette.]

1,105,662. INSULATED TROLLEY-CROSSING. FREDRICK C. HORNSTEIN, Indianapolis, Ind. Filed Mar. 6, 1911. Serial No. 612,555. (Cl. 191—37.)



A trolley wire crossing including a pair of crossing trolley wires, a bridge-piece made of insulating material longitudinally over which one of said crossing wires extends, metal pieces secured at each end of said bridge, means for clamping the trolley wire to said metal pieces, a pair of metal pieces secured to said bridge near the middle thereof with fingers projecting toward each other and spaced apart from the body of the bridge, insulating strips between the metal pieces at the end of the bridge and the metal pieces near the middle of the bridge, a metal crossing frame secured to the other trolley wire and provided near its center with a disk adapted to fit in the space between said fingers and the body of said bridge and having oppositely located notches whereby it may be readily put in place or removed.

1,105,663. GAS-LIGHTER. GEORGE WASHINGTON HOSLER, Findlay, Ohio. Filed Mar. 8, 1913. Serial No. 753,070. (Cl. 67—6.)



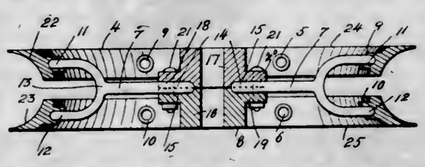
A device of the character described comprising an elongated member having one extremity bifurcated to afford an open-ended slot and provided adjacent such bifurcated end with a tubular projection disposed in substantially the same plane as the slot, and a member extending in and rotatably supported by the projection and being provided with a laterally disposed opening in a side thereof to accommodate the stem of a match or the like.

1,105,664. INSULATED CLEAT. BENNETT G. JANSSON, Malden, Mass., assignor to Blake Signal and Manufacturing Co., Boston, Mass., a Corporation of Massachusetts. Filed July 29, 1912. Serial No. 712,104. (Cl. 173—319.)



A device of the character described, comprising a nail having an insulating cleat compressed tightly thereon, the head of the nail being embedded in one face of the cleat, the other face of the cleat being concaved and having a circular continuous marginal edge to grip wires, the concaved face of the cleat having a central teat surrounding the shank of the nail, said teat having a length not exceeding the radial distance from it to the gripping edge, whereby two wires may be gripped against a supporting surface and held separated by the teat without having said teat oppose the driving of the nail into the supporting surface before the said edge has gripped the wires.

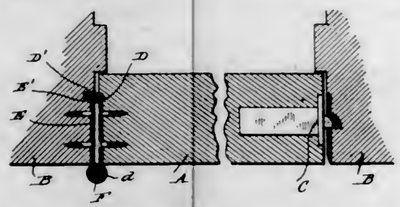
1,105,665. CORN-PLANTER. JOSHUA M. JEFFERIS, Wilmington, Ohio. Filed Oct. 19, 1912. Serial No. 726,748. (Cl. 111—32.)



A device of the character described comprising two circular members having each a concave periphery terminating in a tapered edge, two hubs, each hub being substantially of the width of said circular members, a flange

formed upon each hub, said flanges being arranged in contacting relation, each of said hubs being formed with a recess, the recesses of the adjoining flanges forming sockets with said flanges, a stem arranged in each socket, being interposed between said flanges, bolts clamping said flanges against said stems, and a plurality of U shaped members being integrally formed terminally upon said stem, the arms of each U shaped member engaging the inner surfaces of said circular members at central points whereby said circular members are held separated.

1,105,666. HINGE. GERALD M. JOHNSON, Washington, D. C. Filed Apr. 28, 1914. Serial No. 834,965. (Cl. 16—107.)



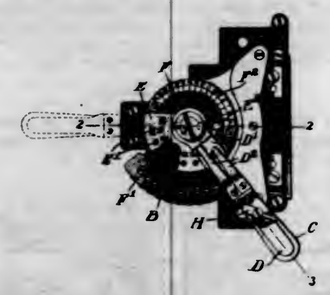
1. A hinge embodying leaves separably connected by a pivotal joint at one edge, the free edge of one of said leaves being provided with a projection extending at substantially right angles to the plane of the leaf and overlapping the edge of the other leaf when the leaves are in closed position.

2. A hinge embodying leaves having pintle bearings at one edge, one of said leaves being provided with a projection extending along the entire length of its free edge and overlapping the corresponding edge of the other leaf when the leaves are folded together and a removable pintle for separably connecting the leaves.

3. A hinge embodying leaves separably connected by a pivotal joint at one edge, the opposite or free edges of the leaves being formed with projections at substantially right angles to the planes of the leaves, said projections overlapping each other when the leaves are folded together.

4. A hinge embodying leaves separably connected at one edge by a pivotal joint, the opposite or free edges of the leaves being formed with oppositely directed edge flanges extending the length of the leaves and overlapping each other when the hinges are folded together.

1,105,667. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 29, 1913. Serial No. 803,687. (Cl. 199—13.)



1. A slug trimming mechanism comprising, in combination, a pair of trimming knives adjustable laterally toward and from each other, and a shiftable handle for so adjusting the knives, the said handle being movable at will from its shifted position without disturbing the adjustment of the knives.

2. A slug trimming mechanism comprising, in combination, a pair of trimming knives adjustable laterally toward and from each other, a shiftable handle for so adjusting the knives and movable at will from its shifted position without disturbing the adjustment of the knives, and means for locking the handle in its new position.

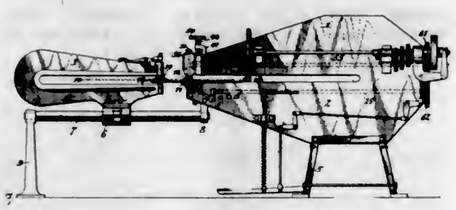
3. A slug trimming mechanism comprising, in combination, a pair of trimming knives adjustable laterally toward and from each other, a shiftable handle to effect the adjustment thereof and movable from its shifted position without disturbing such adjustment, and means for locking the knives in adjusted position.

4. A slug trimming mechanism comprising, in combination, a pair of trimming knives adjustable laterally toward and from each other, a shiftable handle to effect the adjustment thereof and movable from its shifted position without disturbing such adjustment, and means carried by the handle for locking the knives in adjusted position.

5. A slug trimming mechanism comprising, in combination, a pair of trimming knives adjustable laterally toward and from each other, a shiftable handle to effect the adjustment thereof, and an indicator to show such adjustment, the handle being movable from its shifted position without disturbing the indicator.

[Claims 6 to 11 not printed in the Gazette.]

1,105,668. SHEET-SHEARING MACHINE. PAUL H. LANGE and HERBERT L. WEIGEL, Buffalo, N. Y., assignors to Niagara Machine & Tool Works, Buffalo, N. Y., a Corporation of New York. Filed Feb. 24, 1913. Serial No. 750,160. (Cl. 164—63.)



1. A sheet shearing machine comprising a pair of cooperating cutter wheels or disks, one of said disks turning about an inclined axis, and the other disk turning about an upright axis and engaging its front part with the rear part of the other disk.

2. A sheet shearing machine comprising a pair of cooperating cutter wheels or disks, one of said disks being tapered from its small front end to its large rear end and turning about an inclined axis, and the other disk being cylindrical and engaging its front part with the rear part of the other disk and turning about an upright axis.

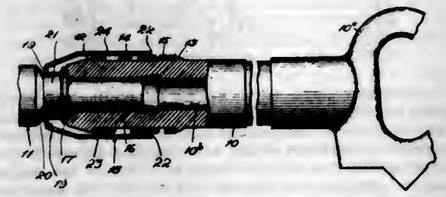
3. A sheet shearing machine comprising coöperating upper and lower cutter wheels or disks, said lower disk turning about an inclined axis and having a cutting edge at its rear end and said upper disk turning about a vertical axis and having a cutting edge at its lower end which engages its front part with the rear part of the cutting edge of the lower disk.

4. A sheet shearing machine comprising coöperating upper and lower cutter wheels or disks, said lower disk turning about an inclined axis and tapering from its small front end toward its large rear end and having a cutting edge on the rear end thereof, and said upper disk turning about a vertical axis and being cylindrical in form and having a cutting edge on the lower end thereof which engages its front part with the rear part of said lower disk.

5. A sheet shearing machine comprising coöperating upper and lower cutter wheels or disks, an inclined spindle carrying said lower disk, a laterally swinging bearing in which said lower spindle is journaled, and a vertical spindle carrying said upper disk.

[Claims 6 to 17 not printed in the Gazette.]

1,105,669. RIVET-SET RETAINER. AXEL LEVEDAHL and REINHOLD A. NORLING, Aurora, Ill., assignors to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Delaware. Filed Jan. 7, 1914. Serial No. 810,717. (Cl. 78—44.5.)



1. In combination with the barrel of a riveting tool, or the like, a rivet set, a retaining member having endwise movement relatively to said barrel and adapted to engage the rivet set, said retaining member comprising a plurality of longitudinal sections having parts adapted to interlock in the movement of said sections relatively to each other in one direction, and means applied to yieldingly resist the endwise movement of said retaining member relatively to said barrel.

2. In combination with the barrel of a riveting tool, or the like, a rivet set, a retaining member having endwise movement relatively to said barrel and adapted to engage the rivet set, and means applied to yieldingly resist both the outward and inward movement of said retaining member relatively to said barrel, embracing resilient members acting toward each other and against the opposite sides of a rigid part of said retaining member.

3. In combination with the barrel of a riveting tool, or the like, a rivet set, a retaining member having endwise movement relatively to said barrel and adapted to engage said rivet set, and means applied to yieldingly resist both the outward and inward movement of said retaining member relatively to said barrel, comprising two helical springs encircling said barrel and acting in opposite directions on said retaining member.

4. In combination with the barrel of a riveting tool, or the like, a rivet set, a retaining member having endwise movement relatively to said barrel and adapted to engage said rivet set, said barrel being provided with two longitudinally spaced, annular shoulders facing toward each other, two helical springs encircling said barrel between and bearing against said shoulders and acting in opposite directions on said retaining member.

5. In combination with the barrel of a riveting tool, or the like, a rivet set, and a retaining member comprising a plurality of longitudinal sections applied to said barrel and adapted to engage said rivet set, said sections having parts adapted to interlock in the movement of said sections relatively to each other in one direction.

[Claims 6 to 15 not printed in the Gazette.]

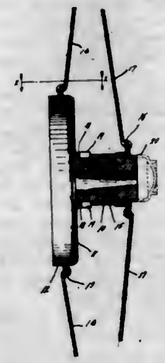
1,105,670. WIRE-WHEEL HUB. THOMAS J. LINDSAY, Indianapolis, Ind. Filed Sept. 6, 1913. Serial No. 788,428. (Cl. 21—31.)

1. A wheel hub, comprising the combination of a main body provided with a spoke flange, and a sleeve slidably mounted on said main body and also provided with a spoke flange, said two spoke flanges being of different size.

2. A wheel hub, comprising the combination of a main body provided with a spoke flange, and a sleeve slidably mounted on said main body and also provided with a spoke flange, said last named flange being of smaller diameter than the first named flange.

3. A wheel hub, comprising the combination of a main body provided with a spoke flange, a sleeve slidably mounted on said main body and also provided with a spoke flange, said two spoke flanges being of different size, and means for preventing relative rotation between said main body and said sleeve.

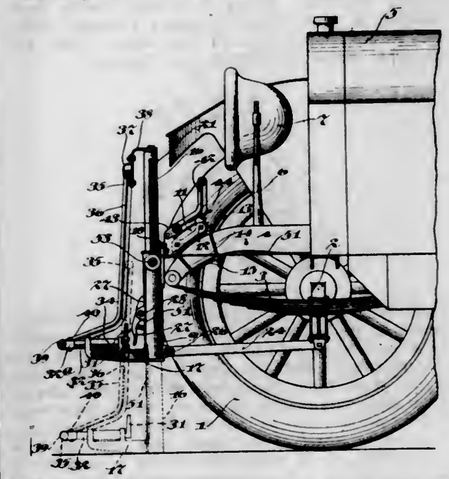
4. A wheel hub, comprising the combination of a main body provided with a spoke flange, a sleeve slidably mounted on said main body and also provided with a spoke flange, said last named flange being of smaller diameter than the first named flange, and means for preventing relative rotation between said main body and said sleeve.



5. In combination, a wheel hub, a brake drum carried thereby, said brake drum being provided with means for holding the inner ends of wire spokes, and a sleeve axially slidable on said hub and provided with a spoke-receiving flange which is smaller in diameter than is said brake drum.

[Claims 6 to 12 not printed in the Gazette.]

1,105,671. AUTOMOBILE-FENDER. WILLIAM A. LINQUIST, Minneapolis, Minn. Filed Jan. 2, 1914. Serial No. 809,987. (Cl. 105—130.)



1. A fender attachment comprising plunger guides, vertically movable plungers supported by said guides, plunger securing devices for holding said plungers in a raised position, and a fender frame provided with a filler and carried by said plungers, and having a part adapted to yield rearwardly and trip said plunger supporting devices.

2. The combination with an automobile frame, of fender supporting guides secured thereto, fender supporting plungers movable vertically through said guides, dogs applied to one of the said members and engageable with the other to hold said plungers raised, and a fender frame carried by said plungers and having its lower transverse bar mounted for rearward movements and provided with means for tripping said dogs to release said plungers.

3. A fender attachment comprising plunger guides, plungers supported for vertical movements, plunger securing devices for holding said plungers in a raised position, forwardly projecting shoes applied to the lower ends of said plungers, dogs for tripping said plunger securing devices, mounted on said shoes, and a fender frame having a filler, the said frame being supported at its lower portion by said dogs, and means supporting the upper portion of said fender frame from the upper portions of said plungers.

4. The combination with an automobile frame, of fender supporting guides secured thereto, fender supporting plungers supported for vertical movements by said guides, dogs applied to one of said members and engageable with the other to hold said plungers raised, forwardly projecting shoes applied to the lower ends of said plungers, forwardly spring-pressed dog tripping bolts mounted on said shoes, and a fender frame having a filler, said frame having its lower bar supported by said tripping bolts, and means on the upper ends of said plungers for engaging the upper bar of said fender frame and supporting and guiding the same.

5. The combination with an automobile frame, of fender supporting guides secured thereto, fender supporting plungers held for vertical movements by said guides, dogs applied to said guides and engageable with said plungers to normally hold the same raised, forwardly projecting shoes applied to the lower ends of said plungers, forwardly spring-pressed dog tripping bolts mounted on said shoes, an approximately rectangular fender frame provided with a filler and having its lower bar supported by the front ends of said tripping bolts, and brackets on the upper ends of said plungers engaging the upper bar of said fender frame and supporting the same with freedom for pivotal and vertical movements.

[Claims 6 to 10 not printed in the Gazette.]

1,105,672. CUTTER. HENRY M. LOOMER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 25, 1914. Serial No. 821,026. (Cl. 12—91.)

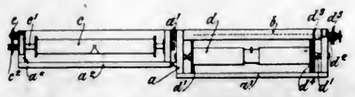


1. A rotary cutter of the tipped back type, having a plurality of teeth arranged in a circumferential series, the cutting edge of each tooth comprising portions lying at different radial distances from the axis of the cutter and each tooth being tipped back about a line lying at such an angle with relation to the axis of the cutter as to give the tooth a lateral as well as a radial clearance.

2. A rotary cutter of the tipped back type larger at one end than at the other, and having a plurality of teeth arranged in a circumferential series, each of said teeth being shaped to provide a line of bend lying at a greater distance from the axis of the cutter at the large end than at the small end of the cutter and being tipped back about said line.

3. A rotary cutter of the tipped back type, having a plurality of teeth arranged in a circumferential series, said cutter being slotted substantially parallel to its axis to form said teeth, the cutting edge of each tooth comprising portions lying at different radial distances from the axis of the cutter, and each tooth being shaped to provide a line of bend lying at such an angle with relation to the axis of the cutter that the tipping back operation gives the tooth a lateral as well as a radial clearance and being tipped back about said line.

1,105,673. AUTOPIANO AND ANALOGOUS MUSICAL INSTRUMENT. CLARENCE EDWARD LYON, Norbury, England. Filed Aug. 10, 1912. Serial No. 714,438. (Cl. 84—161.)



An upright player piano having an opening above the piano action, a roll-box above the piano action comprising upper and lower longitudinal sections hingedly connected together to allow one section to be disposed endwise to the other section, one section being fixed within the casing and the other section forming a closure for the fixed section, said sections containing the upper and lower rolls, respectively, said upper section extending above the case when in operative position and movable into the case through said opening to inoperative position.

1,105,674. WEED-KILLING DEVICE. JOSEPH LYTLE, Jr., Formby, Liverpool, England. Filed Oct. 28, 1913. Serial No. 797,743. (Cl. 47—37.)



1. In a weed-killing device, the combination of a tubular body or socket provided with an opening in its lower end; and a cutting blade adapted to normally close said opening, the blade being provided with a port adapted to register with the opening when the blade is pushed downwardly into the weed, whereby material may be discharged from the tubular body and said port directly onto the weed.

2. In a weed-killing device, the combination of a tubular body or socket provided with an opening in its lower end; a cutting blade carried at the lower end of said body and adapted to close the opening left therein, said blade being likewise provided with a port adapted to be brought into register with the opening in the lower end of the tubular body; and a spring for normally keeping the blade in its lowest position and the opening and port out of alinement.

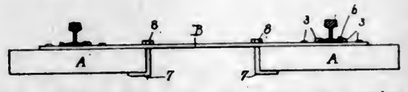
3. In a weed-killing device, the combination of a tubular body or socket provided with an opening at its lower end; a cutting blade slidably mounted upon the lower end of said tubular body and adapted to normally close said opening, said blade being provided wth a port normally out of register with the opening; a spring for holding said blade in its lowest position, with the port and opening out of alinement; and a stop secured to the blade and adapted, as the blade is pushed downwardly into the weed, to arrest the movement of the blade and to thereby cause the port and opening to come into alinement upon a further downward movement of the tubular body, whereby the weed-killing material within the tubular body may pass outwardly through the blade and be deposited directly upon the weed.

4. In a weed-killing device, the combination of a tubular body or socket provided with a hopper-shaped bottom having a lateral discharge opening; a cutting blade slidably mounted over said opening and provided with a port; a spring normally tending to force said blade downwardly and to hold the port and opening out of alinement; and a stop carried by the blade and adapted to arrest the movement of the blade as the same is pushed downwardly and to hereby bring the port and opening into alinement.

5. In a weed-killing device, the combination of a tubular body or socket provided with an opening adjacent its lower end; a cutting blade slidably mounted over said opening, said blade being provided with a port adapted to register with the opening under certain conditions; a spring for normally moving said blade downwardly to carry the port out of register with the opening; a stop mounted upon the blade and adapted to arrest its downward movement by contacting with the ground; and a tubular handle fitted in the tubular body and adapted to contain material to be fed onto the plant after the same has been cut or opened up by the table.

[Claim 6 not printed in the Gazette.]

1,105,675. RAILROAD-TIE. PATRICK J. MADDEN, Deposit, N. Y. Filed Oct. 10, 1913. Serial No. 794,513. (Cl. 238—5.)



1. In a railroad tie, opposite supporting members of wood, a plate mounted thereon forming a binding connection between the members, each end of said plate having a recess therein; projecting lugs projecting from the base of each of said recesses and beyond the upper surface of said plate, one lug projecting vertically at right angles, the other in hooked formation, and each adapted to engage the outer edge of the base of a track rail; a lug in L formation projecting under said support mentioned, and removably mounted in said tie plate.

2. In a railroad tie, opposite supporting members, a perforated plate having a central narrow waist formation mounted on the same; a recess in each end of said plate, lugs projecting upward from the base of said recess, one lug projecting vertically, the other obliquely, each adapted to engage the outer edge of the base of a track rail; a lug in L formation positioned at the inner opposite ends of each of said supporting members and projecting under the same and also removably mounted in said tie plate.

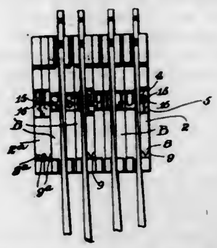
3. A railroad tie comprising opposite supporting members, a perforated binder plate connecting the supporting members, said plate having a recess at each end, lugs projecting upwardly from the base of each recess for engagement with the outer edge of the rail base, and clamping members positioned at the inner opposite ends of each supporting member and extending beneath the supporting members, said clamping members being removably secured to the binder plate.

4. A railroad tie comprising opposite supporting members, a perforated binder plate connecting the supporting members, said plate having a recess at each end, luga projecting upwardly from the base of each recess for engagement with the outer edge of the rail base, and clamping members disposed between the supporting members and removably secured to the binder plate at the inner opposite ends of each supporting member, said clamping members extending beneath the supporting members for securing the plate and supporting members together.

1,105,676. TYPE OR MATRIX. ANDREW L. MARGACH, Utica, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 19, 1913. Serial No. 768,437. (Cl. 199—12.)

1. A type or matrix constructed for circulation in typographical composing machines, comprising a body portion having a character and a movable section provided with an associated character.

2. A type or matrix constructed for circulation in typographical composing machines, comprising a plurality of relatively movable sections provided with characters.



3. A type or matrix constructed for circulation in a typographical composing machine, comprising a body portion and a plurality of movable character-bearing sections.

4. A type or matrix adapted for use in typographical composing machines, comprising a body portion provided with a character, and a plurality of movable sections having associated characters.

5. A type or matrix adapted for use in typographical composing machines, comprising a plurality of separably connected body portions, and a coöperating movable character-bearing section.

[Claims 6 to 19 not printed in the Gazette.]

1,105,677. UNION SUIT. WILLIAM MARLOW, New York, N. Y., assignor to Standard Knitting Mills Company, a Corporation of New York. Filed Feb. 27, 1913. Serial No. 751,015. (Cl. 2—144.)

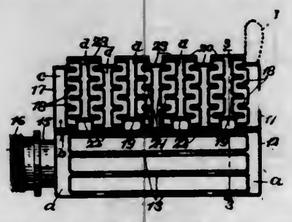


A bifurcated garment comprising a tube of fabric having its front and back slit to the waist line and two triangular pieces, the side edges of each triangular piece secured to the edges of the front and back slits respectively of the tube, each triangular piece slit a short distance on the vertical center line from the bottom, and the edges of the slit of one piece secured to the corresponding edges of the other piece.

1,105,678. WATER-HEATER. JOHN MCCLOSKEY, Boston, Mass. Filed May 17, 1913. Serial No. 768,301. (Cl. 122—356.)

1. A device of the character described, comprising an open bottomed base member having an inner wall forming a fire box and an outer wall forming, with the inner wall, a conduit surrounding the fire box, and an upper member forming a grid having a sinuous, substantially horizontal water conduit constituting a continuation of the conduit in the lower member, and a plurality of substantially vertical gas conduits alternating with the stretches of the sinuous water conduit, said members presenting water-backed surfaces surrounding said gas conduits and absorbing heat from burner flames in the fire box and the heated gases passing therefrom.

2. A water heater comprising an open bottomed base member having an inner wall forming the wall of a fire box, and an outer wall forming with the inner wall a water conduit surrounding said fire box, the base member having an inlet and an outlet for said conduit in close proximity to each other, and an internal barrier between the inlet and outlet whereby liquid entering at the inlet is caused to pass through the entire length of the conduit to the outlet in contact with the wall of the fire box, and an upper member consisting of a plurality of closely spaced sections connected at alternate ends and forming a single tortuous, substantially horizontal water conduit communicating at one end with the outlet of the conduit in the base member, and having a hot water outlet at its opposite end, the opposed sides of said sections forming gas conduits to conduct the products of combustion from the fire box between the opposed walls of the sections, the connected conduits in the base and upper members forming a single continuous conduit through which the same water passes from the entrance of the base conduit to the said delivering outlet, the inner wall of the base member and the opposed walls of the upper member sections forming heat-absorbing water-backed surfaces surrounding said gas conduits and absorbing heat from burner flames in the fire box and the heated gases passing therefrom.



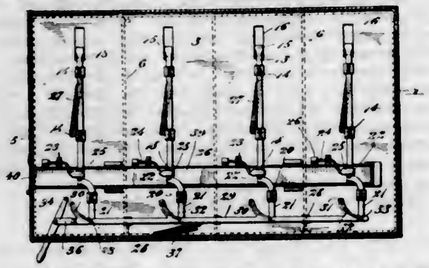
3. A device of the character described, comprising an open-bottomed member having an inner wall forming a fire box and an outer wall forming with the inner wall a conduit surrounding the fire box, a coupling being provided for connecting one end of said passageway with a water supply, and an upper member consisting of a plurality of closely spaced sections connected at alternate ends and forming a grid having a sinuous conduit constituting a continuation of the conduit in the lower member, the entire conduit having substantially the same cross sectional area at all points to insure uniformity of travel of all units of water in the conduit.

4. A device of the character described, comprising an open-bottomed lower member having outer and inner walls forming a conduit surrounding the inner wall, a coupling being provided for connecting one end of said conduit with a water supply, an upper member consisting of a plurality of closely spaced sections connected at alternate ends and forming a single tortuous conduit leading from the conduit in the lower member, the walls of said sections being ribbed in alternating or staggered relationship, the entire conduit having substantially the same cross sectional area at all points to insure uniformity of travel of all units of water therein.

5. A liquid heater comprising a lower member provided with a conduit having means for the admission of liquid thereto, a pair of irregular strips above said lower member, an upper irregular strip, a series of hollow sections confined between said strips and having ribs in staggered relationship, the lower member and sections being connected to form a single conduit for the continuous flow of liquid, the entire conduit having substantially the same cross sectional area at all points.

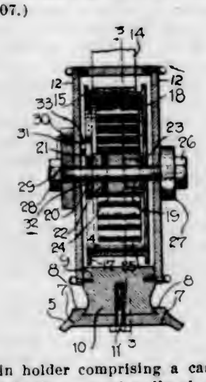
1,105,679. VENDING-MACHINE. LLOYD L. MCLANE, Newark, Del. Filed July 22, 1913. Serial No. 780,513. (Cl. 211—8.)

1. In a newspaper vending machine, a chamber designed to receive the papers to be vended and formed with a delivery opening in the front end wall thereof and a slot in the top wall adjacent to the rear end wall thereof, a second chamber surmounting said first chamber, a delivery arm slidably mounted within said second chamber, a finger formed on the rear end of said arm and projecting through said slot and normally resting upon the top paper, means for moving said arm rearwardly within said chamber, and means for drawing said arm downwardly in the rearward movement thereof whereby the finger will engage the rear end of the top paper, and then pulling said arm forwardly whereby the forward end of the paper will be projected through the delivery opening.



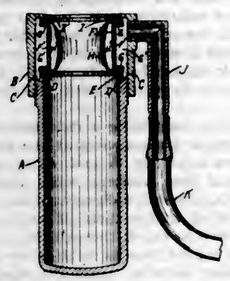
2. In a newspaper vending machine, a casing divided into superposed chambers, partitions dividing the lower chamber into compartments, each designed to receive the papers to be vended, a delivery arm slidably mounted within the upper chamber above each compartment, a finger formed on the rear end of each arm and projecting into the respective compartment and normally resting upon the top of the papers therein, means for moving each arm rearwardly within said chamber, and means for drawing each arm downwardly in the rearward movement thereof whereby the finger will engage the rear end of the paper and then pulling said arm forwardly whereby the forward end of the paper will be projected out of the respective compartment.

1,105,680. CHECKREIN-HOLDER. IRA G. MITCHELL, Meeker, Colo., assignor of one-half to Reuben S. Ball, Meeker, Colo. Filed Sept. 29, 1913. Serial No. 792,466. (Cl. 242—107.)



A check rein holder comprising a casing, a shaft rotatably mounted in the opposed walls of said casing, a drum loosely mounted upon said shaft, connecting means for the check rein attached to the periphery of said drum, a sleeve fixed upon said shaft, a spiral spring secured at its ends to the drum and sleeve respectively, a ratchet on one end of said shaft exteriorly of the casing, a radially movable arm arranged within the casing and provided with a longitudinal slot to receive said shaft, a pin fixed to one end of said arm, the casing wall being provided with a slot through which said pin extends, said pin engaging the teeth of said ratchet to hold said spring under tension and prevent rotation of the shaft when said drum is rotated in one direction, whereby said spring is placed under additional tension to reverse the rotation of the drum.

1,105,681. SUCTION-CUP FOR MILKING-MACHINES. OTTO A. MOLDENHAUER, Watertown, Wis., assignor to Wisconsin Sanitary Cow-Milker Co., Watertown, Wis., a Corporation of Wisconsin. Filed Apr. 28, 1913. Serial No. 764,019. (Cl. 31—102.)



1. A closed bottom suction cup for milking machines, having a flexible teat engaging annulus in its upper portion, the upper and lower margines of which are expanded outwardly and secured to the cup, said cup having an outlet in its upper portion and having a suction cavity exterior to said annulus affording communication between the outlet and the lower portion of the cup.

2. A suction cup for milking machines, having a collar removably secured in its upper end portion, and a flexible teat engaging member extending through the collar, with its ends expanded outwardly and secured thereto,—said cup being closed in its bottom portion and having a suction outlet leading from its upper portion.

3. The combination with a suction cup for milking machines, having a closed bottom portion, of a set of removable teat engaging members of different diameters, each comprising a rigid annular support adapted to be secured to said cup, and a flexible wall of less diameter extending therethrough and having its ends expanded and secured to said support.

4. The combination with a suction cup for milking machines, having a closed bottom portion, of a set of removable teat engaging members of different diameters, each comprising a rigid annular support adapted to be secured to said cup, and a flexible wall of less diameter extending therethrough and having its ends expanded and secured to said support, together with means for applying suction to said cup at a point exterior to said flexible wall.

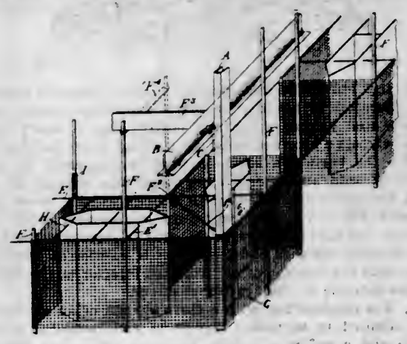
5. A suction cup for milking machines comprising a set of sections and closed at its lower end, the upper section having a suction outlet, and a teat engaging member within the upper section adapted to expand when suction is applied at the outlet.

[Claims 6 to 9 not printed in the Gazette.]

1,105,682. CONCRETE BUILDING CONSTRUCTION. NICHOLAS C. NEWERF, Buffalo, N. Y. Filed May 21, 1909. Serial No. 497,488. (Cl. 72—15.)

1. In concrete wall construction, the combination of a self-supporting metal frame embodying rigid vertical major columns spaced apart along the outer face of the wall forming supports for the frame work of the structure, transverse flexible tension members drawn taut and extending from column to column, rigid vertical reinforcing rods smaller than said columns and placed intermediate the columns and associated with the tension members in proximity to the inner and outer faces of the wall, fine wire mesh netting held by the columns, tension members and intermediate rods to give form to plastic concrete held within the same, all of said members being incorporated in the wall by being incased by the concrete passing through the meshes of the netting.

2. In concrete wall construction, the combination with the major rigid vertical metal corner columns spaced apart along the outer face of the wall, inner and outer flexible transverse tension members spaced apart substantially the thickness of the wall, the outer tension member held by said columns in proximity to the outer face of the wall, rigid vertical reinforcing rods smaller than said columns and placed intermediate the columns substantially in line with the inner face of the wall, said inner tension members being held taut by said rods in proximity to the inner face of the wall and fine mesh netting forms held by said columns, rods and tension members and filled with concrete composition, the whole being incorporated in the body of the wall by being incased in the concrete passing through the meshes of the netting.



3. In concrete wall construction, the combination with the major rigid vertical metal corner columns spaced apart along the outer face of the wall, inner and outer flexible transverse tension members spaced apart substantially the thickness of the wall, the outer tension member being held by said columns in proximity to the outer face of the wall, relatively small rigid vertical reinforcing rods intermediate the columns substantially in line with the inner face of the wall, ties connecting said rods and columns, additional ties extending through the wall space from the inner to the outer tension members, said inner tension members being held taut by said rods in proximity to the inner face of the wall and fine mesh netting forms held by said columns, rods and tension members and filled with concrete composition, the whole being incorporated in the body of the wall by being incased in the concrete passing through the meshes of the netting.
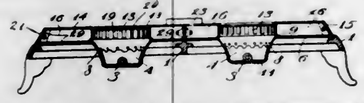
4. In concrete wall construction, the combination with the vertical metal corner columns spaced apart, inner and outer transverse tension members substantially in line with the inner and outer faces of the wall, said outer tension members being held taut by said columns, vertical rods in proximity to the outer face of the wall, other vertical rods located in proximity to the inner face of the wall certain of the outer face rods being in line with the inner face of the wall, tension members held taut by said last mentioned rods, those tension members running along the inner face of the wall extending through the wall and connected to the rods located at the outer face of the wall, and fine mesh netting forms held by said columns, rods and tension members to give form to the faces of the wall and the whole being incorporated in the body of the wall by being incased in the concrete passing through the meshes of the netting.

5. In a hollow concrete wall construction, the combination with the vertically arranged columns and rods, of the permanent fine mesh netting forms, longitudinal flexible tension members supporting the forms between the columns and rods, internal forms within the wall and flexible ties connecting opposite sides of the netting forms and internal forms.

1,105,683. STOVE. CLARENCE A. NOTMAN, Alliance, Ohio. Filed Mar. 18, 1908, Serial No. 421,869. Renewed Jan. 8, 1914. Serial No. 811,096. (Cl. 126—214.)

1. In a stove, the combination, with a heating chamber having top and bottom members providing a space between them, of a burner located with its top below the bottom

member, there being an opening through such bottom member above the burner, and a sleeve adapted to surround and embrace the side surface of the burner and extending through such opening and into the heating chamber, for the purpose of conducting heat into the chamber, such sleeve having an outward bead or projection adapted to engage such bottom member and hold the sleeve in place, the sleeve extending upwardly above the bead and there provided with lateral openings.



2. In a stove, the combination, with a burner, of a member forming a heating chamber supported above said burner and having a top and bottom spaced apart, said member being provided with an opening in its bottom opposite the burner, a sleeve removably supported in said opening, said sleeve depending below the bottom of the said member and formed with prongs at the lower end thereof adapted to be bent into engagement with the burner, the upper portion of the said sleeve extending into the heating chamber and formed with a series of openings to permit the passage of air from the interior of the sleeve to the interior of the heating chamber.

3. The combination with a stove burner, of an air chamber adapted to surmount the same and including a top plate and a suitable bottom, such top plate and bottom having substantially alined openings adapted to stand over the burner of the stove, and a sleeve adapted to surround the burner and extend through the bottom opening and abut the under side of the top, said sleeve having an outward bead adapted to lie over the bottom plate, whereby it is supported by the bottom plate, the wall of said sleeve having lateral openings between the top plate and said bottom, and the top plate having a depressed annular portion within such sleeve.

1,105,684. WEED-PULLER. DANIEL E. NUTTALL, Emsworth, Pa. Filed Feb. 18, 1914. Serial No. 819,545. (Cl. 55—148.)



1. A weed puller, comprising a rigid rod carrying a pair of relatively movable jaws at one end, a spring for moving one of said jaws in one direction, and a handle member for moving it in the other direction, one of said jaws being provided with a plurality of teeth having portions which converge toward the points of the teeth, whereby a root is wedged between said teeth by lifting the device.

2. A weed puller, comprising a rigid rod carrying a pair of relatively movable jaws at one end, means for moving said jaws relatively to each other in both directions, one of said jaws having a plurality of teeth having portions which converge toward the points of the teeth and thereby form a cone-shaped cavity therebetween, whereby a root is wedged in said cavity by lifting the device.

3. A weed puller, comprising a rigid rod having a pair of relatively movable jaw members at one end, means for moving said jaws relatively to each other in both directions, one of said jaw members being provided with a plurality of teeth and a movable cleaning device having portions normally lying in the roots of said teeth and arranged when moved to travel through the spaces between said teeth.

4. A weed puller, comprising a rigid rod having a pair of relatively movable jaw members at one end, means for moving said jaws relatively to each other in both directions, one of said jaw members being provided with a plurality of teeth, a movable cleaning device having portions normally lying in the roots of said teeth and arranged when moved to travel through the spaces between said teeth, a spring for moving said device in one direction, and manually operable means for moving it in the other direction.

5. A weed puller, comprising a rigid rod carrying a rigid jaw member at one end, a movable jaw member connected thereto, means for moving said movable jaw member, said movable member being provided with a plurality of teeth having portions which converge toward their points thereby providing a cone-shaped space therebetween, whereby a root is wedged between said teeth when the device is lifted.

[Claims 6 and 7 not printed in the Gazette.]

1,105,685. STANCHION FOR HAND-RAILS. CHARLES B. O'CONNOR, Portsmouth, Va., assignor of one-half to H. C. Nash, Portsmouth, Va. Filed Nov. 29, 1913. Serial No. 803,855. (Cl. 248—30.)



1. A stanchion for hand-rails including a leg having one of its ends formed to provide an inner jaw for engagement with the hand-rail, an outer jaw engaged with the inner jaw, the proximate edges of said jaws being correspondingly cut out to interengage for preventing displacement of said outer jaw longitudinally of the hand-rail, and means detachably engaged through the jaws and the hand-rail to prevent accidental displacement of the hand-rail from the stanchion.

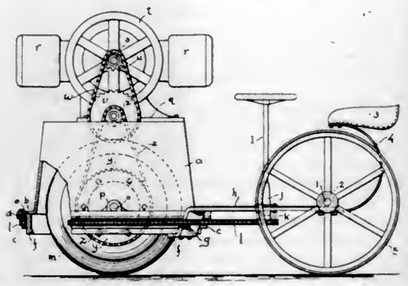
2. A stanchion for hand-rails including a supporting leg having one of its ends formed to provide an inner jaw which is set at an inclination, an outer jaw having the marginal edge thereof interengaged with the marginal edges of the inner jaw, and a screw mounted transversely through the median of the outer jaw and through the hand-rail into engagement with a threaded recess in said inner jaw, whereby the screw is disposed diagonally of said leg to throw the stress of the pull of the hand-rail on the shank of the screw.

3. A stanchion for hand rails in combination with a boiler shell and a tubular hand rail, a bolt having engagement through said shell, a stanchion supporting leg provided with a threaded recess in the one end thereof for engagement with said bolt, a jaw formed on the opposite end of said leg, being diagonally thereon, the inner face of said jaw being semicircular and provided with a cut out portion

communicating with said semicircular portion, an adjustable jaw adapted for engagement with said stationary jaw, and enlargement formed on said adjustable jaw for engagement with the cut out portion of said stationary jaw and provided with a semicircular inner face for registering engagement with the inner face of said stationary jaw, and the screw engaged diagonally through said jaws and said tubular hand rail, for the purpose set forth.

4. A stanchion for hand rails including a leg, the one end of which is flared for engagement with the outer periphery of a flared boiler, a semicircular jaw formed on the opposite end of said leg, the inner face of said jaw being provided with a semi-circular recess and a cut out portion communicating with said recess, an adjustable jaw, an enlargement formed on the inner face of said jaw for engagement with the cut out portion of said first mentioned jaw, said adjustable jaw being provided with a semicircular recess registering with the semicircular recess of the first mentioned jaw, said adjustable jaw being provided with a cut out portion in the outer periphery thereof and approximately midway its ends, a screw engaging diagonally through said adjustable jaw, the head thereof having engagement in said recess and the opposite end provided with screw threads for adjustable engagement with said first named jaw.

1,105,686. TRACTOR. RANSOM E. OLDS, Lansing, Mich. Filed Dec. 13, 1913. Serial No. 806,379. (Cl. 21—114.)

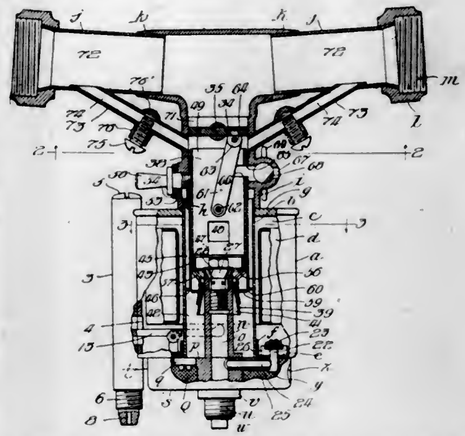


A tractor, having in combination, a platform having a circular base with an inverted receptacle or a housing, rising therefrom, a long bilged roller extending approximately from side to side of said base and journaled in the said platform, the upper part of said platform serving to bridge said roller, a power unit mounted on the top and outside of the said platform, transmission means between the power unit and the roller below, a rear unit connected with the said circular base of the platform in turn-table fashion, and steering means mounted upon the rear unit and connecting with the platform to turn the platform with respect to the rear unit when actuated.

1,105,687. CARBURETER. WILLIAM OTTAWAY, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1913. Serial No. 760,929. (Cl. 123—52.)

1. In a device of the character described, the combination of a mixing chamber provided with a plurality of mixture discharge passages adapted to communicate with the cylinders of an internal combustion engine, a throttle valve located intermediate of the mixing chamber and said mixture discharge passage, and a plurality of auxiliary mixture discharge passages communicating with said mixing chamber and with each of said discharge passages intermediate of the throttle valve and the cylinders of the engine.

2. In a device of the character described, the combination of a mixing chamber provided with an air inlet opening, a plurality of branch mixture outlet passages communicating with the cylinders of an internal combustion engine, a throttle valve adapted to control the discharge of the mixture from said mixing chamber, and a plurality of auxiliary mixture outlet passages connecting each of said branch passages with the mixing chamber intermediate of said throttle valve and the outlet opening of said mixing chamber, and a valve in each of said auxiliary passages.



3. In a device of the class described, the combination of a casing forming a main fluid passage, a throttle valve rotatively mounted on the inside of the main passage, a plurality of branch pipes all communicating with a portion of the main passage located on one side of the throttle valve, and a plurality of auxiliary tubes each having its outlet end connected with a separate branch pipe, and each having its inlet end communicating with the interior of a portion of the casing located on the opposite side of such throttle valve from the branch pipes.

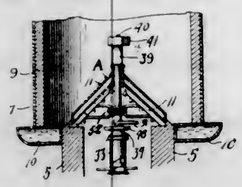
4. In a device of the class described, the combination of a head forming a main combustible fluid passage having an inlet opening at one end adapted to communicate with a mixing chamber and provided with a plurality of diverging branch passages communicating with the main passage, a throttle valve rotatively mounted on the inside of the main passage intermediate said inlet opening and said branch passages, a plurality of tubes each connected at one end with the main passage at a point intermediate the valve and the inlet end of the main passage and each connected at its opposite end with a separate branch passage, independently adjustable regulating means for each by-pass for controlling the effectual area thereof, a main carbureter casing, and means for connecting said head with the main casing of the carbureter.

5. In a device of the class described, the combination of a mixing chamber, a casing forming a mixture outlet passage for said mixture chamber, and provided with a plurality of discharge openings, a plurality of branch pipes connected with said discharge openings of the casing, each of said branch pipes being adapted to communicate with a separate combustion chamber of an engine, a throttle valve located intermediate said casing and the mixing chamber, a plurality of by-pas tubes communicating with the mixing chamber and with each of said pipes, and an independently controlled valve in each of said by-pass tubes.

1,105,688. GAS-PRODUCER. THEODOR H. PAFFRATH, Butler, Pa., assignor to J. Worth Carnahan, Washington, D. C., and A. P. Starr, Butler, Pa., trustees. Filed Oct. 11, 1912. Serial No. 725,242. (Cl. 48—85.2.)

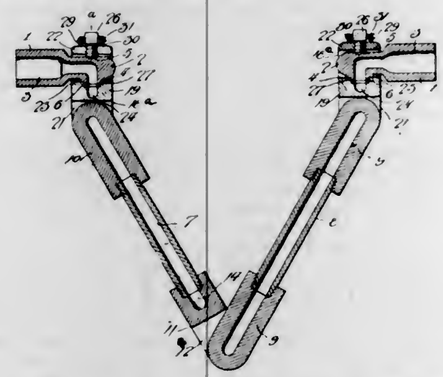
1. In a gas producing apparatus, a slidably journaled shaft, a hydraulic jack having a swiveled connection with the shaft, means for rotating the shaft, the shaft and the head of the jack being formed in alined bores, an inlet pipe communicating with the bore of the jack, a horizontally disposed poker carried by the upper end of the shaft,

said poker being formed with a passage having one end communicating with the bore of the pipe and a pipe communicating with the other end of the passage and extending downwardly through the bore of the shaft.



2. In a gas producing apparatus, a hydraulic jack, a slidably journaled shaft swiveled to the head of the jack, said jack and shaft being formed with alining bores, a basin carried by the head of the jack, an outlet for the basin, an inlet pipe communicating with the bore of the head, a horizontally disposed poker carried by the upper end of the shaft and formed with a bent passage having one end communicating with the bore of the shaft, a pipe communicating with the other end of the passage and extending downwardly through the bore of the pipe and directed outwardly of the pipe to discharge in the basin and means for rotating the shaft.

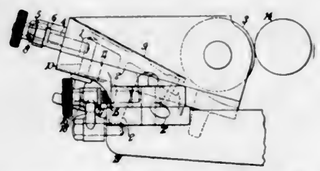
1,105,689. FLEXIBLE PIPE CONNECTION. PETER M. PEACOCK, Columbus, Ohio. Filed June 8, 1912. Serial No. 702,530. (Cl. 137—34.)



1. The herein described flexible train pipe connection for use between a pair of cars and comprising coupling members for the car ends each having an extension flattened on its upper and also its lower side and also having a bore terminating at the flattened lower side, a pair of pipe members having coupling members at their lower ends pivotally connected together for angular movement in a vertical plane and coupling members at their upper ends each having an extension flattened at opposite sides and provided with a bore terminating at one flattened side; angular coupling members connecting the first-named coupling members and those at the upper ends of the pair of pipe members, each angular coupling member also provided in one side and one end with a recess for the reception respectively of the extensions of the first-named coupling members and those at the upper ends of the pair of pipe members, each recess being at right angles to the other and further provided with a duct connecting said recesses; vertical pivots connecting the angular coupling members to the first-named coupling members for angular movement in a horizontal plane and horizontal pivots connecting the coupling members at the upper ends of the pipe members to the angular coupling members for angular movement in a vertical plane.

2. In a flexible train pipe connection of the class described, an angular coupling member provided in one side and in one end respectively with recesses, open at said side and end and at right angles to each other, and with a duct connecting said recesses and communicating with each recess at one side thereof, in combination with a pair of pipe members each having one end in one of said recesses and having a bore terminating at one side thereof and coincident with one end of the duct in the angular coupling member, and pivots connecting the pipe members to the angular coupling member, each of said pivots being concentric with the adjacent underlying end of the duct of the angular coupling member.

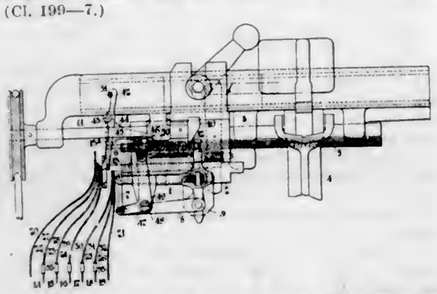
1,105,690. INK-FOUNTAIN FOR PRINTING-PRESSES. HERBERT PEARCE, THOMAS ROBERT GILLETT PARKER, and FRED WESLEY WRIGHT, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed July 22, 1912. Serial No. 710,885. (Cl. 101—74.)



1. The combination in an ink fountain having a fountain frame, a fountain blade, and a fountain roller, of a fountain back adjustable upon the fountain frame relatively to the fountain roller; an adjusting screw at each side of the fountain back and working in it along a line parallel with the adjusting motion of the said back upon the fountain frame; a pair of collars fast upon each of the said screws; and an abutment carried by each side of the fountain frame, capable by being pivoted on the latter, of being engaged with the respective screw between its collars and of being disengaged therefrom.

2. The combination in an ink fountain having a fountain frame, a fountain blade, and a fountain roller, of a fountain back adjustable upon the fountain frame relatively to the fountain roller; an adjusting screw at each side of the fountain back and working in it along a line parallel with the adjusting motion of the said back upon the fountain frame; a pair of collars fast upon each of the said screws; an abutment carried by each side of the fountain frame, capable by being pivoted on the latter, of being engaged with the respective screw between its collars and of being disengaged therefrom; and means for locking each abutment in either of its two positions.

1,105,691. TYPOGRAPHICAL DISTRIBUTING MECHANISM. JAMES PEARSON, Broadheath, England, assignor to Linotype and Machinery Limited, London, England. Filed Sept. 8, 1913. Serial No. 788,505. (Cl. 199—7.)



1. The combination with the font separating part of the distributing mechanism of a multiple font typographical machine and the permanent chutes therefrom to the respective parts for separating the matrices of each font according to character, of means enabling each matrix to select directly and by itself and practically establish a temporary chute for conducting it uninterruptedly to the respective permanent chute.

2. The combination with the font separating part of the distributing mechanism of a multiple font typographical machine and the permanent chutes therefrom to the respective parts for separating the matrices of each font according to character, of means enabling each matrix to select and practically establish a temporary chute for conducting it to the respective permanent chute and automatic means for opening the selected chute wide enough to allow a matrix to drop down it freely.

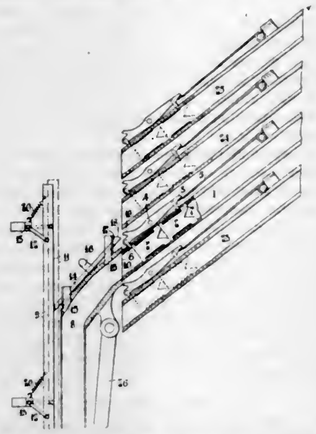
3. The combination with the font separating part of the distributing mechanism of a multiple font typographical machine and the permanent chutes therefrom to the respective parts for separating the matrices of each font according to character, of means enabling each matrix to select directly and by itself and practically establish a temporary chute for conducting it to the respective permanent chute and automatic means for opening the selected chute wide enough to allow a matrix to drop down it freely.

4. The combination with the font separating part of the distributing mechanism of a multiple font typographical machine and the permanent chutes therefrom to the respective parts for separating the matrices of each font according to character, of means enabling each matrix to select and practically establish a temporary chute for conducting it to the respective permanent chute and means actuated by the distributing mechanism for opening the selected chute wide enough to allow a matrix to drop down it freely.

5. In a typographical distributing machine, the combination of matrices each having a font-distinguishing contour, a plurality of distributers, a throat leading thereto, a series of independently pivoted partitions therein and having font distinguishing contours with which those on the matrices can coöperate.

[Claims 6 to 12 not printed in the Gazette.]

1,105,692. TYPOGRAPHICAL COMPOSING-MACHINE. JAMES PEARSON, Broadheath, England, assignor to Linotype and Machinery Limited, London, England. Filed Sept. 8, 1913. Serial No. 788,506. (Cl. 199—7.)



1. In a typographical machine, the combination of a series of escapements, a series of escapements, a series of longitudinally movable actuating rods, means whereby the longitudinal movement of the said rods effects also their bodily edgewise or lateral movement, and a series of members actuated by the edgewise movement of the rods for operating the escapements.

2. In a typographical machine, the combination of a plurality of magazines each provided with a series of escapements, a series of longitudinally movable actuating rods, means whereby the longitudinal movement of said rods effects also their bodily edgewise or lateral movement, and a series of members actuated by the edgewise movement of the said rods for operating the escapements of one or another of the magazines.

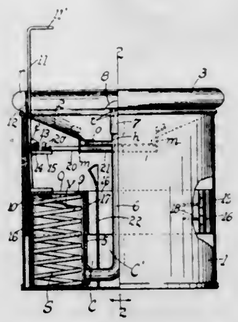
3. In a typographical machine, the combination of a plurality of magazines each provided with a series of escapements, a series of actuating rods, and a corresponding series of operating members in engagement with the said rods and movable into operative relation to the escapements of one or another of the magazines and adapted to maintain their operative engagement with said rods during such movement.

4. In a typographical machine, the combination of a series of longitudinally movable actuating rods and a corresponding series of escapement operating members in engagement therewith, the said operating members being movable to different operative positions and adapted to maintain their operative engagement with said actuating rods during such movement.

5. In a typographical machine, the combination of a series of longitudinally movable rods and a corresponding series of escapement operating members slidably engaged therewith so as to be movable to different operative positions and adapted to maintain their engagement with the rods during such movement.

[Claims 6 and 7 not printed in the Gazette.]

1,105,693. SANITARY CUSPIDOR. MARTIN PLOCHER, St. Louis, Mo. Filed Nov. 14, 1913. Serial No. 801,019. (Cl. 4—40.)



1. In a cuspidor, a suitable container, a piston pump, a locking band coupled to the pump-cylinder and insertible into the container, and means on said band for expanding and driving the same into firm frictional engagement with the container walls for locking said cylinder within the container.

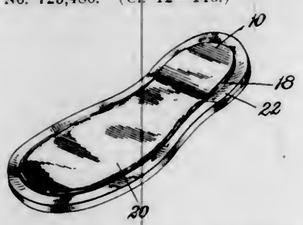
2. In a cuspidor, a suitable container, a piston-pump, a locking band coupled to the pump-cylinder, and insertible into the container, means on said band for expanding and driving the same into firm frictional engagement with the container walls, a stem leading from the pump-piston to a point above the upper edge of the container, and a member leading from the band for guiding said stem.

3. In a cuspidor, the combination of a suitable container, a piston-pump, a band encircling the outer peripheral walls of the pump-cylinder, and insertible into the container conjointly with the pump, a strap passed over the inner peripheral walls of the pump cylinder and coupled to the band, a lever pivoted to one end of the band, a link coupled to the opposite end and to an intermediate point of the lever, the latter oscillating in the general plane of disposition of the band, a stem leading from the piston to a point above the container when the pump is inserted into the container, and a guide arm for said stem coupled to the band at a point opposite the strap aforesaid.

4. In combination with a container, a pump-cylinder, a brake-band carried by the cylinder and insertible into the container conjointly with the pump-cylinder, toggle members on the band for expanding and contracting the same at will, whereby the band may be locked to, or freed from, the container walls, a spring-controlled piston in the cylinder, a piston-rod or stem leading therefrom to a point above the container, an arm fixed to the band and disposed on the inside of the container close to the wall thereof, side flanges on the arm for guiding the stem, a pin on the stem, and means on the arm aforesaid for arresting the pin and thereby arresting the movement of the stem and piston in one direction.

5. In combination with a liquid container, a cover therefor discharging into the container, a pump, a band carried by the pump and insertible conjointly therewith into the container, means for expanding the band and forcing the same into firm engagement with the container walls, means for actuating the pump from a point outside the cover, and a spray device leading from the pump and discharging water on the cover.

1,105,694. PROCESS OF MAKING SOLES FOR SPRING-HEEL SHOES. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 12, 1912. Serial No. 725,480. (Cl. 12—146.)



1. The process of forming a shouldered sole for a spring heel shoe which consists in splitting the heel end of the sole, inserting a wedge between the split portions and then forming a shoulder in said sole extending about the heel end thereof.

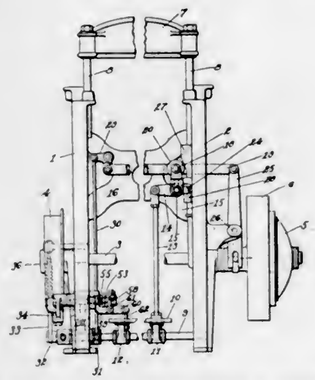
2. The process of forming a shouldered sole for spring heel shoes which consists in splitting the heel end of a sole in such manner that the upper lip of the split sole shall be comparatively thin, inserting a wedge between the lips and securing it in position, then forming a shoulder in said sole, extending about the heel end thereof, which shall cut through the upper lip and into the wedge.

3. The process of making a shouldered sole for spring heel shoes which consists in splitting the heel end of the sole, inserting a wedge between the split portions thereof, forming a spring in said sole to bring the upper surface of the heel end into substantially the same plane as the upper surface of the forepart of the sole, then forming a shoulder about the heel end of the sole extending through the upper part of the split portion into the wedge.

4. The process of preparing a shouldered sole for a spring heel shoe which consists in forming in a sole a shoulder extending from the front of the heel end of the sole on one side through the shank and about the forepart to the front of the heel end of said sole on the other side, splitting the heel end of the sole and inserting a wedge and then forming a shoulder about the heel end of the sole.

1,105,695. SAFETY ATTACHMENT FOR PRESSES. FRANZ MAX REIMANN, Frankfort-on-the-Main, Germany, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 16, 1914. Serial No. 825,033. (Cl. 74—46.)

1. In a machine of the class described, a driving member and a driven member, a clutch for connecting said members, a treadle, and connections between said treadle and said clutch for operating said clutch, said connections comprising a latch arranged to be automatically unlatched as the clutched parts begin to move, a stop yieldingly projected normally into operative position in the path of movement of the driven member, connections between said treadle and said stop for withdrawing said stop from the path of movement of said driven member as said driven member is clutched to said driving member, said connections comprising a latch arranged to be automatically unlatched as the treadle completes its clutch operating movement.



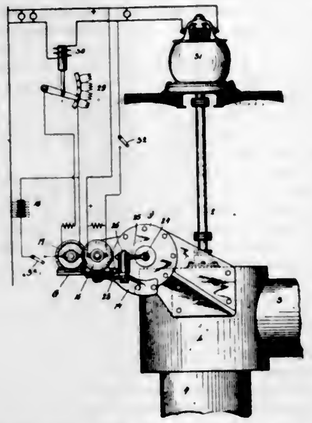
2. In a machine of the class described, a driving member and a driven member, a clutch for connecting said members, and a brake for stopping said driven member when said members are disconnected, a stop projecting normally into the path of movement of said driven member to prevent a repetition of the operation of said driven member in the event that said brake fails to stop said member, a treadle for operating said clutch, and connections between said treadle and said stop for withdrawing said stop from the path of movement of said driven member as the clutch is operated, said connections comprising a latch arranged to be automatically unlatched independently of the operation of any other part of the machine as the treadle completes its clutch operating movement.

3. In a machine of the class described, a driving member and a driven member comprising a reciprocating part, a clutch for connecting said driving member to said driven member, a treadle for operating said clutch, connections between said treadle and said clutch comprising a lever made up of two relatively movable parts normally locked together, and means connected to said reciprocating part for automatically interrupting said connection between the treadle and clutch, as the driven member begins to move, by separating said two-part lever into its relatively movable parts.

4. In a machine of the class described, a driving member and a driven member, a clutch for connecting said driving member to said driven member, a treadle for operating said clutch, connections between said treadle and said clutch comprising a lever formed of two relatively movable parts normally locked together, means connected to said driven member for automatically separating said lever parts as the driven member begins to move, and means also connected to said driven member for completing the clutch operating movement of that part of said lever which remains connected with the clutch in the event that such movement has not been completed before the lever parts are separated.

1,105,696. SPEED-GOVERNOR FOR PRIME MOVERS. GUSTAF RENNERFELT, New York, N. Y., assignor of one-half to August Sundh, Yonkers, N. Y. Filed Oct. 10, 1908. Serial No. 457,056. (Cl. 171—226.)

1. The combination of a prime mover; a source of power independent of the source of power which drives the prime mover and a motor driven by said second source of power: means for automatically increasing the speed of the motor upon an increase in the load of the prime mover, and means for maintaining the speed of the prime mover proportionate to the speed of the motor.



2. A prime mover in the nature of a power driven turbine; together with a dynamo electric machine driven thereby; a system of electrical energy supplied with current therefrom; an electro-motive device driven directly by a part of the current supplied to the system, and a second electro-motive device driven by an independent source of electrical energy; in combination with means for regulating the energy which drives the prime mover and differential gear mechanism driven by the two motive devices and operatively connected to said regulating means; together with electro-magnetically controlled means operatively connected with the dynamo electric machine for regulating the electro-motive device driven by the independent source of electrical energy.

3. A prime mover, a dynamo electric machine driven thereby; a system of electrical energy supplied with current therefrom; an electro-motive device driven directly by a part of the current supplied to the system, and a second electro-motive device driven by an independent source of electrical energy; in combination with means for regulating the energy-which drives the prime mover, and differential gear mechanism driven by the two motive devices and operatively connected to said regulating means; together with means controlled also by the current generated and operatively connected with the second named electro-motive device for regulating the speed thereof.

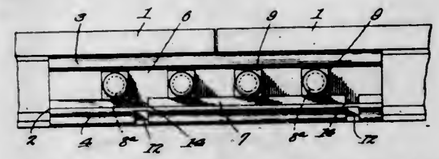
4. A hydraulic turbine having a gate for controlling the amount of water admitted to it; a hydraulic cylinder; a piston therein; connection between the gate and the piston; a valve for the cylinder; a stationary bracket; a plate arranged to slide on the bracket; a motor arranged to slide on the plate; a motor bolted to the plate, and connection between the valve and both the motors.

5. A hydraulic turbine having a gate; a hydraulic cylinder; a piston therein; a valve in the cylinder; a bracket attached to the cylinder; a plate arranged to slide on the bracket; a motor bolted to the plate; a motor arranged to slide on the plate; connection between the valve and both motors; connection between the plate and the piston, and connection between the gate and the piston.

[Claim 6 not printed in the Gazette.]

1,105,697. RAIL-JOINT. JAMES W. REYNOLDS, Chester, Nebr. Filed Apr. 2, 1914. Serial No. 829,109. (Cl. 239—9.)

1. In combination, a pair of angle bars having lower and upstanding flanges, and having longitudinal ribs within the crotches between the said flanges, bolts engaged through the said upstanding flanges, nuts threaded upon the bolts, and a lock washer disposed on each bolt between the corresponding nut and upright flange, the bolt heads and washers being disposed above the said ribs and seating against the said upright flanges, each bolt head engaging the corresponding rib to prevent the rotation of the bolt, and each washer spacing the corresponding nut from the respective rib to clear the same.



2. In combination, a pair of angle bars including lower and upstanding flanges, and having longitudinal ribs within the crotches between the said flanges, bolts engaged through the said upstanding flanges, nuts threaded upon the bolts, a lock washer disposed on each bolt between the respective nut and upstanding flange, the bolt heads and washers being disposed above the ribs and seating against the said upright flanges, each bolt head engaging the respective rib to prevent the rotation of the bolt, each washer spacing the corresponding nut from the respective rib, the said lower flanges and ribs having complementing notches, and spikes engaging the notches of the said lower flanges and having the projecting ends of the heads engaging the notches of the said ribs.

1,105,698. WINDOW-SHADE HANGER. GUSTAVE RICHTER, New York, N. Y. Filed Dec. 30, 1913. Serial No. 809,537. (Cl. 156—27.)

1. The combination with a window frame of roller-supporting brackets constructed to yield to accommodate variations in width of the window frame in different horizontal planes and guides in which said brackets are adjustable vertically.

2. The combination with a window frame of vertical guides and brackets mounted to move in said guides, and provided with arms for supporting a roller which are adapted to yieldingly move toward and from the end of the roller.

3. The combination with a window frame of vertical guides secured thereto and roller-supporting brackets mounted to move in said guides, each comprising a vertical metal strip provided with anti-friction rollers and with a spring arm for supporting a shade roller which yieldingly moves toward and from the roller and toward and from each other on the opposite sides of the roller.

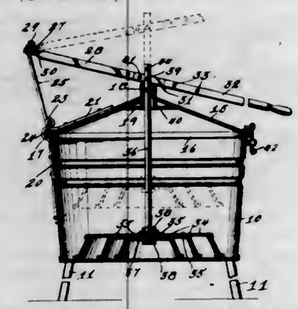
4. A roller-supporting bracket, comprising a metal strip and a spring arm parallel with the strip and having one end attached thereto in combination with a guide in which said metal strip is vertically adjustable.

5. A roller-supporting bracket, comprising a metal strip provided with two roller-supporting spring arms, each of

which has a part attached to the strip and an outer free portion for supporting a roller in combination with a vertically arranged guide in which said metal strip is vertically adjustable.

[Claims 6 to 8 not printed in the Gazette.]

1,105,699. WASHING-MACHINE. STEPHEN RICHMAN ROBERTS, Centralia, Mo. Filed May 3, 1913. Serial No. 765,343. (Cl. 68—19.)



1. A clothes washing machine comprising a tub, a cover for said tub, strips secured to said tub and cover and having their free end portions coiled to form hinge ears positioned in alinement, a pivot pin passing through said hinge ears, strips pivotally mounted upon said pivot pin, a plate pivotally mounted between the free end portions of said last mentioned strips, a lever pivotally connected with said plate and extending across said cover, and a clothes pounder positioned in said tub and having its shaft passing through an elongated opening in said cover, the pivotal mounting of said lever permitting said pounder to have vertical movement through said tub and longitudinal movement in the opening formed in said cover.

2. A washing machine comprising a tub, a cover fitting upon said tub, an elongated neck extending from said cover, a clothes pounder positioned within said tub and having its shaft extending through said neck, a support pivotally connected with said tub, and a lever pivotally connected with said support for universal movement whereby said pounder may be given vertical movement through said tub and longitudinal movement through said neck, said neck guiding the movement of said pounder.

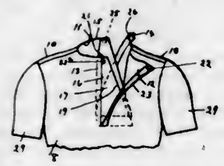
1,105,700. GAGE. HARVEY A. ROBERTSON, Economy, Pa. Filed July 1, 1913. Serial No. 776,883. (Cl. 73—54.)



1. In a gage, the combination of housings adapted to communicate with a source of pressure fluid supply, a casing detachably engaging and communicating with each of the housings, the casing having a relatively small bore for a portion of its length and a relatively large bore for the remaining portion of its length, a gage tube disposed between and extending into the enlarged bores of said casings, a sliding, tubular valve extending through the reduced bore of each of the casings, each of said valves having an annular flange at each end and having a port adjacent its inner end for normally maintaining communication between the respective housing and the gage tube, the outer flange of the valve engaging the tube and being adapted to be held thereby against longitudinal movement while the gage tube remains intact.

2. In a gage, the combination of housings spaced apart and each adapted to communicate with a source of pressure fluid supply, each housing having a tubular extension projecting toward the other, a tubular casing threaded into each of said extensions, each tubular casing having a reduced bore longitudinally of its inner portion and an enlarged bore longitudinally of its outer portion, a gage tube having its opposite ends extending into the enlarged bores of the respective casing, a tubular sliding valve snugly fitting and slidingly mounted in the smaller bore of each casing and having its inner end portions exposed to the contained pressure, each sliding valve having a port establishing communication between the respective housing and gage tube, the outer end of the valve being formed with an annular flange in the enlarged bore of the respective tubular casing resting against the gage tube for enabling longitudinal movement of the valve when the gage becomes broken, the valve upon dislocation of the gage tube having freedom for movement for a distance sufficient for bringing the port within the smaller bore of said casing for closing the port, and a packing gland surrounding the gage and engaging the tubular casing and closing its enlarged bore.

1,105,701. UNION UNDERGARMENT. MICHAEL F. ROBISCHON, Utica, N. Y., assignor of two-fifths to Herbert Robischon, Utica, N. Y. Filed Nov. 6, 1911. Serial No. 658,775. (Cl. 2—144.)

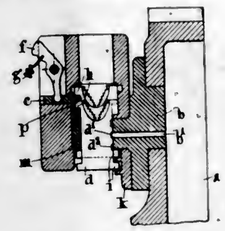


1. A union undergarment of the class entered by means of enlarging the neck opening, having the main body portion formed from one piece of tubular material and slit downwardly from the neck at the front and at the back, about half way to the waist line, triangular placket pieces secured to one edge of each slit and extending beyond the opposite edge of the body and secured thereto at its base and fastening members for holding closed the neck ends of the slitted body.

2. A union undergarment of the class entered by means of an opening at the neck end, having a main body portion formed from one piece of tubular material with a neck opening downwardly from said neck to about half way to the waist line, a slit in front and a slit in the back and triangular placket pieces secured to one edge of each slit and extending beyond the opposite edge of the body and secured thereto at its base and fastening members for holding closed the neck ends of the slitted body.

1,105,702. TYPOGRAPHICAL MACHINE. KARL RÖGER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 2, 1914. Serial No. 809,852. (Cl. 199—7.)

1. In means for holding the variant face matrices of a mixed typographical line in position for being used in a line producing machine, the combination with a font of matrices having reduced lugs so positioned thereon that the vertical adjustment of the matrices according to face, arranges the said lugs in rows separated by a space, of a ledge upon which the said lugs of the elevated matrices rest and under which those of the unelevated matrices stand clear.



2. In means for holding the variant face matrices of a mixed typographical line in position for being used in a line producing machine, the combination with a font of matrices having reduced lugs so positioned thereon that the adjustment of the matrices according to face, arranges the said lugs in rows separated by a space, of a ledge upon which the coöperating row of lugs on the adjusted matrices rest and under which those of the matrices at a lower level in the line, stand clear.

3. In a typographical casting machine, the combination of a mold, a line of matrices each formed with a projecting ear at its upper end, and means for supporting the matrices at different levels in front of the mold and movable to effect their alinement therewith, the said means comprising a ledge to engage beneath the upper ears of the matrices in elevated position, and the matrices having their projecting ears of reduced size and so located as to avoid the supporting ledge when standing in the lower position.

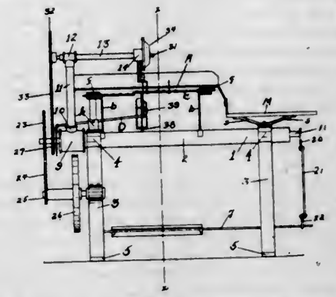
4. In a typographical machine, comprising matrices each formed with a projecting ear at its upper end, the combination of the mold, and the first elevator to present the matrices to the mold and movable to effect their alinement therewith, the said elevator being provided with a ledge to engage beneath the upper ear of the matrices in elevated position, and the matrices having their projecting ears of reduced size and so located as to avoid the supporting ledge when standing in the lower position.

5. In a typographical machine, the combination of a line of matrices each formed with a projecting ear at its upper end, and means for supporting the matrices at different levels, the said means comprising a ledge to engage beneath the upper ears of the matrices in elevated position, and the matrices having their projecting ears of reduced size and so located as to avoid the supporting ledge when standing in the lower position.

[Claim 6 not printed in the Gazette.]

1,105,703. BUNDLE-TIER. ALBERT H. SAXTON, Deerfield, Mich., and JOSEPH J. BACHMAYER, Trilby, Ohio, assignors of one-third to Frank S. Saxton, Blissfield, Mich. Filed Mar. 19, 1912. Serial No. 684,727. (Cl. 100—31.)

1. In a bundle tying machine, the combination with a main shaft and means to rotate the shaft, of bundle tying mechanism comprising a twine carrying needle and a knotter adapted to be operated by the main shaft and normally disconnected therefrom, a downwardly yielding spring supported table frame below the knotter and adapted to be depressed below its normal position by a collection of things moved thereon into position to be tied into a bundle by the knotter and the needle, and to support the bundle while it is being tied, and means to operatively connect the tying mechanism with and disconnect it from the main shaft, said means adapted to be operated to connect by a bundle being moved over the table frame into position to be tied, and to automatically disconnect said mechanism therefrom when the bundle is tied, unless connection is maintained by a following bundle or bundles.



2. In a bundle tying machine, the combination with a main shaft, and means to rotate the shaft, of bundle tying mechanism normally disconnected from the main shaft and comprising a twine carrying needle and a knotter adapted when connected to the main shaft to be conjointly operated thereby to form and tie a twine loop around a bundle beneath the knotter, a downwardly yielding spring supported table frame below the knotter, and adapted to yield to admit a bundle of things pushed along the table between the knotter, and the table, spring pressed means adapted to operatively and automatically connect the tying mechanism with the main shaft, means to hold the connecting means normally disconnected, and a trip bar held normally raised by the disconnecting means, and adapted when depressed to operate the disconnecting means to release the connecting means, whereby the tying mechanism is operated only when the trip bar is depressed and held depressed, said trip bar being adapted to be depressed by a bundle being moved on the depressible table into position for tying, and to be held depressed by the needle until the operation of tying is completed.

3. In a machine for tying bundles, the combination with a main shaft and means to revolve the shaft, of bundle tying mechanism, means mounted on the main shaft to operatively connect the tying mechanism with the main shaft, comprising a fixed clutch member and a spring pressed movable clutch member normally disconnected from the fixed clutch member, comprising a separating member, a spring pressed lever connected to the separating member at one end and adapted to hold the separating member in position normally separating the clutch members, and a trip bar connected to the opposite end of the lever adapted to be normally held in a raised position by the spring pressed lever, and when depressed to operate the lever to release the movable clutch member, said trip bar being in position to be engaged and depressed by a bundle while being moved into position for tying by the tying mechanism.

4. In a bundle tier, the combination of a main frame, a driving shaft journaled in the frame, a rock shaft journaled in the frame parallel with the driving shaft, means to revolve the drifting shaft, a countershaft journaled in the frame above and parallel with the rock shaft, clutch members mounted on the main shaft, one member fixedly and the other loosely mounted thereon, means connecting the loose member with the counter-shaft adapted to rotate the counter-shaft when the loose member is engaged wih the fixed member of the clutch, means connecting the counter-shaft to the rock shaft adapting the counter-shaft to rock the rock shaft through an arc, a twine carrying needle mounted on the rock shaft, a knotter mechanism mounted on the frame above and in the path of the needle, means mounted on the countershaft and connected to the knotter mechanism adapted to operate the knotter mechanism in coöperation with the needle as set forth, a depressible bundle supporting frame, means to yieldingly and normally support the frame hori-

zontally below the knotter mechanism and above the needle, a trip arm carried by the bundle supporting frame, and adapted to be depressed therewith, and independently thereof, and means connecting the trip arm with the loose clutch member adapted to normally hold the trip arm raised and the loose clutch member disconnected from the fixed clutch member, and when the trip arm is depressed, to connect the clutch members, said trip arm being adapted to be depressed by a bundle being moved into position to be tied, to be held depressed by the needle while the bundle is being tied, and to automatically raise the trip arm and disconnect the clutch members when the trip arm is released from engagement with a bundle or the needle.

5. In a bundle tying machine, the combination with a knotter bill and a shuttle, of a guard plate extending horizonally beneath, and having a portion curved up beside the knotter bill, said guard plate having a slot extending vertically in the curved up portion and convergingly to the center of the horizontal portion beneath the knotter bill, and a knife blade secured to the upper side of the horizontal portion between the knotter bill and the shuttle, a rocker needle arm having a twine bearing point portion curved forward and movable by the arm through an arc of 90 degrees or less, upward and forward into the slot of the guard, over the knotter bill and the shuttle, and then backward and downward out of the slot, said needle arm having a pusher arm extending horizontally and transversely forward of the arm below the point portion, and means to relatively operate the several parts, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,105,704. PASSENGER-CAR. RALPH T. SENTER, Buffalo, N. Y., assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y., a Corporation of New York. Filed July 15, 1911. Serial No. 638,635. (Cl. 105—205.)



1. A passenger car comprising a body portion, a front platform, separate ingress and egress passageways on the front platform leading to and from the body portion of the car, cross seats in the body of the car, and longitudinal seats at the sides of the car near the forward end of the body portion to provide standing room and clearance for the passageways.

2. A passenger car comprising a body portion having an inclosed rear end, a front platform divided into separate ingress and egress passageways, cross seats in the body of the car, and longitudinal seats along the sides of the car near the forward end thereof.

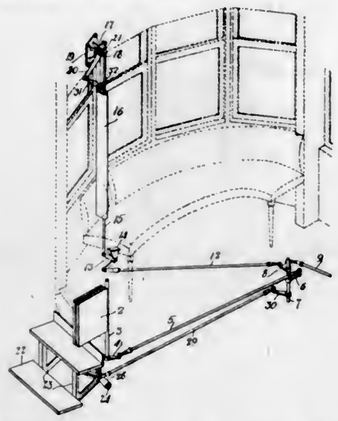
3. A passenger car comprising a body portion having an inclosed rear end, a front platform divided into separate ingress and egress passageways, cross seats in the body of the car, longitudinal seats along the sides of the car near the forward end, and a curved seat along the rear curved end of the car.

4. A passenger car comprising a body portion having an inclosed rear end, a front platform divided into separate ingress and egree passageways, an emergency door in the rear end of the car, a longitudinal seat along the side of the car near said door, a curved seat along the curved end of the car, said latter seat terminating short of the said door.

5. In a passenger car, the combination with the conductor's and motorman's stations at the front end of the car, of separate ingress and egress passageways at said end of the car controlled from that same end, and an emergency door at the rear of the car also controlled from the said front end.

[Claims 6 to 25 not printed in the Gazette.]

1,105,705. STEP AND STEP-OPERATING MECHANISM. RALPH T. SENTER, Philadelphia, Pa., assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y., a Corporation of New York. Original application filed July 5, 1911, Serial No. 638,635. Divided and this application filed Mar. 4, 1912. Serial No. 681,543. (Cl. 105—86.)



1. The combination, with a car frame, of a step comprising brackets, a tread carried by said brackets, means for pivotally supporting said brackets beneath the frame of the car, the pivotal center of said brackets being so arranged that the tread may be moved against the frame of the car and when in this position the remainder of the step structure will lie beneath the frame of the car and the center of gravity of said step structure will lie on that side of said pivotal center opposite the tread.

2. In a passenger car, the combination, with a doorway and a pivoted step therefor, said step having a plurality of treads so arranged that when raised into inoperative position the lower tread of the step will lie against the doorway sill, the upper part of the step structure at the same time being thrown back beneath the car structure.

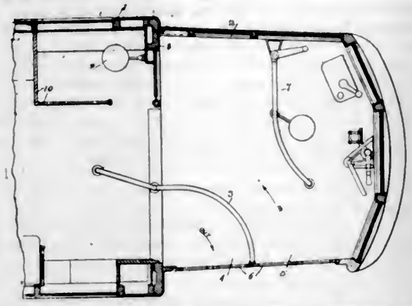
3. In a passenger car, the combination, with a doorway and a pivoted step therefor, said step having a plurality of treads so arranged that when raised into inoperative position the lower tread of the step will lie against the doorway sill, the upper part of the step structure at the same time being thrown back beneath the car structure, and means operable from different parts of the car for controlling the position of said step.

4. In a passenger car, the combination, with a doorway and a pivoted step therefor, said step having a plurality of treads so arranged that when raised into inoperative position the lower tread of the step will lie against the doorway sill, the upper part of the step structure at the same time being thrown back beneath the car structure, operating mechanism to raise and lower said step, and actuating devices arranged in the front and rear portions, respectively, of said car, and a single handle for said actuating devices adapted to be transferred from one to the other thereof.

1,105,706. PASSENGER-VEHICLE. RALPH T. SENTER, Philadelphia, Pa., assignor to The Near-Side Car Company, New York, N. Y., a Corporation of New York. Filed May 22, 1913. Serial No. 769,271. (Cl. 105—205.)

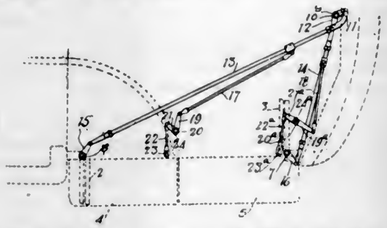
1. The combination, with a car comprising a body portion and a platform, a barrier dividing said platform into separate entrance and exit passageways, a motorman's station on said platform, and a conductor's station within the body of said car near the side wall on that side thereof adjacent to the entrance passageway.

2. In a car, a body portion, a platform separated from said body portion by a bulkhead, a barrier dividing said platform into separate entrance and exit passageways, a motorman's station on said platform, and a conductor's station in the body of the car immediately in the rear of said bulkhead and between the entrance passageway and the adjacent side wall of the car.



3. In a car, a body portion, a platform separated from said body portion by a bulkhead, a barrier dividing said platform into separate entrance and exit passageways, a motorman's station on said platform, and partitions within the body of said car to form a conductor's station immediately in the rear of said bulkhead and between said entrance passageway and the adjacent side wall of said car.

1,105,707. DOOR AND STEP OPERATING MECHANISM. RALPH T. SENTER, Philadelphia, Pa., assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y., a Corporation of New York. Original application filed July 5, 1911, Serial No. 638,635. Divided and this application filed Mar. 4, 1912, Serial No. 681,545. Renewed May 22, 1914. Serial No. 840,364. (Cl. 105—88.)



1. The combination, with a plurality of doors, and a movable step for each of said doors, of a manually controlled device to operate said doors either separately or in unison, and connections between said steps and the respective operating devices to cause each step to be actuated in unison with the corresponding door.

2. The combination, with a plurality of doors, and a hinged step for each of said doors, of a pair of telescoping shafts, means for actuating each of said shafts, rods connecting the respective shafts with the respective doors, other rods connected at one end with the respective first-mentioned rods and at their other ends with the respective steps, and means for connecting said shafts one with the other to cause them to move in unison.

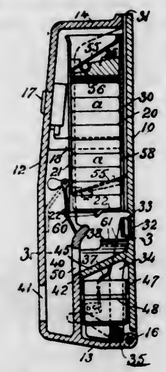
3. The combination, with a door, a rotary supporting rod, to which said door is secured, a step mounted on a horizontal axis adjacent to said door, and a projection carried by said step and extending beyond said axis, of a shaft, means for imparting rotary movement to said shaft, a crank arm secured to said shaft, a second crank arm secured to said supporting rod, a rod connecting said crank arms one to the other, a rock arm, a rod connecting said rock arm with the projection from said step, and a second rod connecting said rock arm with the first-mentioned connecting rod, whereby the manipulation of said shaft will impart movement to said door and said step.

4. The combination, with a plurality of doors, rotary supporting rods to which the respective doors are connected, a step for each of said doors mounted on a horizontal axis and having a projection extending beyond said axis, of vertical shafts each having a crank arm secured thereto, a crank arm secured to the lower end of each of said supporting rods, rods to connect the crank arms of said shafts with the crank arms of the respective door-supporting rods, rock arms supported adjacent to and operatively connected with the projections from the respective steps, and a rod connecting said rock arms with the respective connecting rods, and means for actuating said shafts either individually or in unison.

5. The combination, with a plurality of doors, and a step mounted adjacent to each door and movable into operative and inoperative positions, of a pair of shafts, connections between said shafts and the respective doors and corresponding steps, whereby the manipulation of one shaft will actuate one door and its step and the manipulation of the other shaft will actuate the other door and its step, and means for connecting said shafts so they will move in unison to simultaneously actuate both doors and both steps.

[Claim 6 not printed in the Gazette.]

1,105,708. VENDING-MACHINE. NICHOLAS J. SHAMROY, New York, N. Y. Filed May 18, 1911. Serial No. 627,972. (Cl. 194—75.)



1. In a coin controlled vending machine, the combination of a holder for holding a stack of articles, a delivery chute, a pivotally mounted goods ejector provided with coin slots disposed under and in alinement with the coin chutes for expelling the lowermost article from the holder into the delivery chute by engagements therewith of a coin, a coin chute, and a follower provided with a hinged plate operative when the supply of articles in the holder is exhausted to close the discharge end thereof and to deflect coins from the coin chute and across the holder and into the delivery chute.

2. In a coin controlled vending machine the combination of a holder for holding a stack of articles, a delivery chute, a coin chute, a pivotally mounted coin carrier movable beneath the holder for expelling the lowermost article from the holder to the delivery chute by engagement therewith of a coin carried by the carrier, and a follower movable within said holder and provided with a hinged plate arranged to enter the coin chute to close the discharge end thereof and to deflect the coins therefrom when the supply of articles in the holder is exhausted.

3. In a coin controlled vending machine the combination of a casing provided with a hinged cover and having coin slots at its upper end, a holder for holding a stack of articles, a delivery chute, a coin caute located parallelly with and behind said holders, a rocking coin carrier standing normally in position to receive a coin from the coin chute and movable radially beneath the holder for expelling the lowermost article from the holder to the delivery chute, a

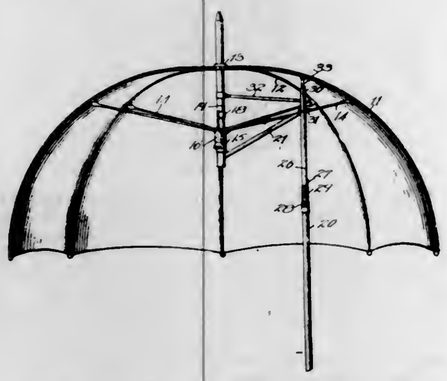
notched coin support for supporting the coin during the expelling movement of the carrier and to prevent its repeated use for obtaining more goods, a removable coin receptacle for receiving the coins from the carrier when moved beyond the coin support, and a follower movable within the holder and provided with a hinged member adapted to close the discharge end of the coin chute and return the operating coin when the holder is empty.

4. In a vending machine the combination of a casing having coin slots at its upper end, a plurality of vertically disposed goods holders, a plurality of fixed coin chutes located behind said holders and having an aperture providing a passage for coins to the goods ejector and to the delivery chute when a holder is depleted of goods, a pivotally mounted goods ejector and a follower provided with a hinged plate, adapted to close the said aperture and to deflect a coin into the delivery chute when the goods holder is depleted.

5. In a vending machine the combination of a casing provided with a hinged cover and having coin slots at its upper end; a plurality of vertically disposed goods holders, a corresponding number of coin chutes located parallelly with and behind said holders and having an aperture for the passage of coins to the goods ejector and to the delivery opening when a holder is empty, a pivotally mounted goods ejector provided with coin slots disposed under the coin chutes and adapted to expel the lowermost article by bringing the operating coin into coöperative engagement with said article, and a follower provided with a movable plate arranged to close the passage to the coin receptacle and deflect the coin into the delivery chute in the event of the goods holder being empty.

[Claims 6 to 9 not printed in the Gazette.]

1,105,709. UMBRELLA. CARL A. SKALSTAD, Chicago, Ill. Filed Apr. 18, 1913. Serial No. 761,935. (Cl. 135—46.)



1. An umbrella comprising a sectional staff, ribs secured to said staff, a runner sliding on said staff and provided with braces secured to said ribs, means for holding said runner on the upper portion of said staff, thereby holding said umbrella in open position, said staff comprising an upper section, and a lower section telescoping within said upper section, said lower section adapted to be drawn downward and then swung laterally into a position out of alinement with said upper section, a loop in one of said braces, said lower section adapted to be swung upwardly so that its upper end projects through said loop, and a guiding link pivoted at one end to one of said ribs and adapted to engage with the upper end of said rod section when thus moved upwardly whereby said rod is supported in its off-set position, and a link connecting the opposite end of said guiding link to said staff.

2. An umbrella comprising a sectional staff having an upper and a lower section, ribs secured to said upper section, said lower section adapted to be swung into a position out of alinement with said upper section, and a guiding link pivoted at one end to one of said ribs and connected at its opposite end by a second link to said staff for supporting said lower section in offset position.

3. An umbrella comprising a sectional staff having an upper and a lower section, ribs secured to said upper section, said lower section adapted to be swung into a position out of alinement with said upper section, a guiding link pivoted at one end to one of said ribs and connected at its opposite end by a second link to said staff for supporting said lower section in offset position, a runner sliding on said staff and provided with braces secured to said ribs, and a loop in one of said braces through which the upper end of said lower section is adapted to pass.

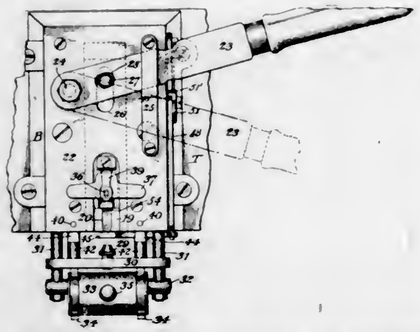
1,105,710. SHEET-METAL RECEPTACLE. ROBERT P. STEWART, Jamestown, N. Y. Filed May 31, 1913. Serial No. 770,847. (Cl. 220—58.)



1. In combination with a can cover having an outwardly extending flange arranged at an acute angle to the cover, a can body having its upper end turned over upon itself and disposed inwardly at an incline to the plane of the body to provide a contracted mouth for the body, the free end portion of said upper end of the can body being inclined upwardly whereby when the cover is seated on said flange a dead air space is provided between the cover and body, said upper end of the can body having a portion thereof bent inwardly and downwardly to engage the upper free edge of the cover flange.

2. In combination with a can cover having an outwardly extending flange and a can body having its upper end turned over upon itself and formed at its free ends with a flange that supports the cover, and a lug integral with the free edge of the cover flange, said lug having an aperture therein to receive a tool whereby the cover may be removed by engaging the tool with the upper end of the can body and depressing the outer end of the tool.

1,105,711. MACHINE FOR FORMING SHANKS ON BUTTONS. MAX STOCKOV and SOLOMON STOCKOV, New York, N. Y. Filed Oct. 11, 1913. Serial No. 794,564. (Cl. 79—2.)



1. In a button-shank forming machine, the combination of a forming die comprising a pair of complemental members, one member of which is fixed and acts as a support for a button blank with a pin inserted in an opening therein, and the other die member supported to have sliding reciprocatory movement relative to the first die member and bend the pin into an eyelet, and said latter die member having a pin about which the eyelet is formed.

2. In a button shanking machine, the combination of a fixed die member consisting of a block having a rectangular recess with the side walls tapering inward at one end, said die member also constituting a support for a button blank having a headed pin inserted in an opening therein; a manually operable clamping member to engage with the pin head and button blank to maintain them in position relative to said die member; a complemental die member supported to have sliding reciprocatory movement and having a portion to engage in the rectangular recess of the other die member, the end of said portion having a concave recess; a pin carried by said latter die member in advance of the concave recessed end and about which the button pin is bent to form the eyelet, said pin having movement transverse to the movement of the die member; means actuated by the button clamp when it is released to impart movement to said latter pin to throw it out of engagement of the formed eyelet; and a lever to impart movement to the slidable die member and pin.

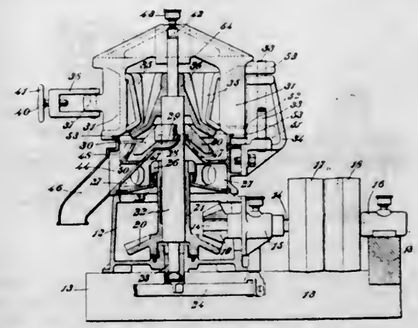
3. In a button shanking machine, the combination of a fixed die member consisting of a block having a rectangular recess with the side walls tapering inward at one end, said die member also constituting a support for a button blank having a headed pin inserted in an opening therein; a manually operable clamping member to engage with the pin head and button blank to maintain them in position relative to said die member; a complemental die member supported to have sliding reciprocatory movement and having a portion to engage in the rectangular recess of the other die member, the end of said portion having a concave recess; a pin carried by said latter die member in advance of the concave recessed end about which the button pin is bent to form the eyelet, said pin having movement transverse to the movement of the die member; a spring to maintain the latter pin in position to engage in the bottom of the rectangular recess of the one die member; means actuated by the button clamp when it is released to impart movement to the pin to throw it out of engagement of the formed eyelet; and a lever to impart movement to the slidable die member and pin.

4. In a button shanking machine, the combination of die mechanism comprising a fixed die member, said die member also serving as a support for a button blank and pin inserted in an opening therein, and a complemental die member supported to have sliding reciprocatory movement relative to the fixed die member to form the pin into an eyelet; and clamping means to maintain the pin and button blank in position relative to the die mechanism, comprising a plate extending transversely of and adapted to have movement toward and away from the die mechanism; a head carried by said plate to engage with the pin and button blank, said head being adjustable toward and away from the plate, a pair of curved fingers connected to the plate and an eccentric between said plate and fingers operable to move the plate toward and away from the die mechanism.

5. In a button shanking machine, the combination of die mechanism consisting of a fixed die member, said die member also constituting a support for a button blank and pin inserted in an opening therein, and a complemental pin bending die member supported to have sliding reciprocatory movement relative to the fixed die member; a forming pin located in advance of and having movement transverse to the movement of the sliding die member and about which the pin is bent to form an eyelet; a carrier for said pin connected to the sliding die member; a spring coöperating with said carrier to maintain the forming pin normally in operative relation with the die members; a lever to impart movement to the slidable die member and forming pin; a plate extending transversely of and movable toward and away from the die mechanism having means to engage with the button blank and pin to clamp them in operative relation to the die mechanism; an eccentric to move the clamping plate toward and away from the die mechanism; and means connected to said plate to throw the forming pin out of the formed eyelet when the clamping plate is recessed.

[Claims 6 to 15 not printed in the Gazette.]

1,105,712. CRUSHING-MILL. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed May 31, 1913. Serial No. 770,960. (Cl. 83—13.)



1. In a crushing mill, a sampling spout communicating with the crushing chamber of the mill and adapted to receive and discharge a predetermined portion of the crushed material, and one or more discharge spouts adapted to take care of the remainder of the crushed material.

2. In a crushing mill, a sampling spout communicating with the crushing chamber of the mill and adapted to receive and discharge a predetermined portion of the crushed material, and one or more discharge spouts adapted to take care of the remainder of the crushed material, the entrance to the said sampling spout from the crushing chamber of the mill being above the level of the entrance or entrances from the chamber of the mill to the said discharge spout or spouts.

3. In a crushing mill, a sampling spout communicating with the crushing chamber of the mill and adapted to receive and discharge a predetermined portion of the crushed material, one or more discharge spouts adapted to take care of the remainder of the crushed material, and a removable hopper forming the entrance to said sampling spout.

4. In a crushing mill, a sampling spout communicating with the crushing chamber of the mill and adapted to receive and discharge a predetermined portion of the crushed material, one or more discharge spouts adapted to take care of the remainder of the crushed material, and a removable hopper forming the entrance to said sampling spout, the top of said hopper being above the level of the entrance or entrances from the chamber of the mill to the said discharge spout or spouts.

5. A crushing mill provided with a sampling spout communicating with the crushing chamber of the mill and adapted to receive a predetermined portion of the crushed material, said spout extending outward so as to discharge the sampled moiety of the crushed material outside of the mill casing.

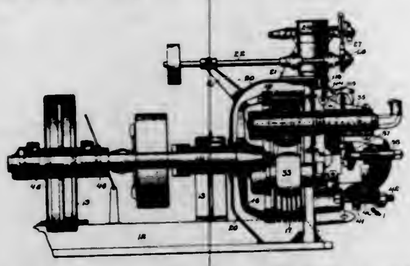
[Claims 6 to 8 not printed in the Gazette.]

1,105,713. CRUSHING-MACHINE. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed Oct. 16, 1909. Serial No. 523,033. (Cl. 83—9.)

1. In a crushing machine, the combination with a rotating spoked or skeleton head, of a rotating foraminous or open-work anvil ring carried thereby, and more or less open on both sides, so that the reduced material may be discharged from both sides thereof, a plurality of crushing rolls coöperating with said ring, and means for forcing said rolls yieldingly outward toward said ring.

2. In a crushing machine, the combination with a rotating spoked or skeleton head, of a foraminous or open-work anvil ring attached to said head to rotate therewith and consisting of a series of spaced annular sections secured

together to afford a grated construction, said anvil ring being more or less open on both sides, so that reduced material may be discharged from both sides thereof, and a plurality of crushing rolls cooperating with said ring.



3. In a crushing mill, the combination with a plurality of rotating anvil rings having interior crushing faces and separated from each other by a space or spaces affording a foraminous formation and on which faces the material is held by centrifugal force, of a plurality of hammer rolls running on the interior of said anvil ring faces and on a track in a predetermined course, and means for forcing said roll or rolls toward said crushing faces by an elastic pressure.

4. In a crushing machine, the combination with a rotating spoked or skeleton head, of a foraminous or open-work anvil ring attached to said head to rotate therewith and consisting of a series of spaced annular sections secured together to afford a grated construction on which the material to be crushed is held by centrifugal force, said anvil ring being more or less open on both sides, so that reduced material may be discharged from both sides thereof, and a plurality of crushing rolls cooperating with said ring, said sections being tapered outwardly to afford flaring spaces between the same.

5. In a crushing machine, the combination with an anvil ring, of a series of hammer rolls, pivoted carriers from which said rolls are supported, springs acting on said carriers to force said rolls yieldingly toward the working face of the anvil ring, and balance springs acting on said carriers and equalizing the action of the said first-named springs.

[Claims 6 to 8 not printed in the Gazette.]

1,105,714. GOGGLES. HARRY H. STYLL, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Filed Mar. 2, 1912. Serial No. 681,145. (Cl. 88—51.)



1. As an article of manufacture, a goggle, comprising a frame, transparent disks mounted in the frame, resilient eye cups carried by said frame, means for locking said eye cups in folded position, and a folding handle pivoted to one side of the goggles and adapted to fold over the same.

2. A goggle, comprising a frame for supporting transparent disks, a handle pivoted to the frame and adapted to fold thereover, and means for locking the handle in folded position and holding the same out of contact with the transparent disks.

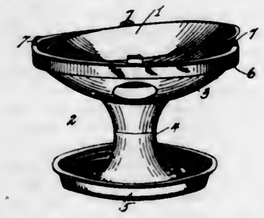
3. As an article of manufacture a goggle including a frame, transparent disks mounted in the frame, resilient eye cup frames carried by the main frame, dust shields carried by the eye cup frames, means for locking the eye cup frames in folded position, a folding handle for the goggle, and means for securing the free end of the handle in folded position and in desired spaced relation to the transparent disks.

4. A goggle, including a frame, transparent disks supported by the frame, a pivot supported by the frame and projecting therefrom at an angle thereto, a main handle section pivotally mounted on the pivot, means for frictionally resisting pivotal movement of the handle section, a supplemental handle section pivoted to the first, means for automatically locking the supplemental handle section in adjusted position, and means for locking the entire handle in folded position in desired spaced relation to the transparent disks of the goggle.

5. In a goggle, the combination with a frame, of lenses mounted therein, a handle section pivoted to one side of the frame, a supplemental handle section pivotally secured to the first mentioned handle section intermediate the ends thereof, means for frictionally locking the main handle section in desired adjusted position relative to the goggle frame, means for frictionally locking the supplemental handle in desired adjusted position relative to the main handle section, and a locking device carried by the goggle frame for engaging the main handle section, said main handle section having a portion thereof exterior to the point of attachment of the supplemental handle adapted for interlocking engagement with the fastener on the frame.

[Claim 6 not printed in the Gazette.]

1,105,715. DISH AND HOLDER FOR ICE-CREAM. RILEY SWEERS, Toledo, Ohio. Filed Feb. 6, 1914. Serial No. 816,869. (Cl. 65—15.)



1. In a device of the described character, a dish-holder adapted for the reception of a substantially circular resilient dish and having a rim and upon its rim dish-engaging devices, the inner circumference of said rim being bowed outwardly at a plurality of points.

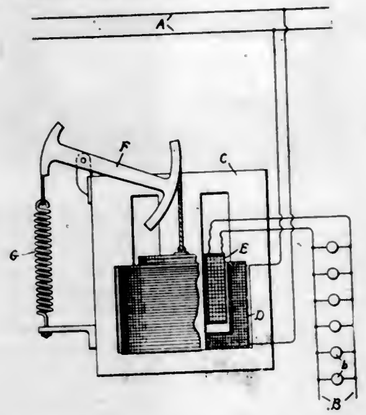
2. In a device of the described character, a holder comprising an extended base and a bowl-like portion having upon its rim a series of inwardly projecting fingers, said rim having outwardly bowed portions between the fingers.

3. In a device of the described character, a thin flexible resilient concavo-convex dish having a substantially level curvilinear upper edge, combined with a holder having a plurality of engaging means with which said dish may be sprung into operative engagement, the rim of said holder having outwardly bowed portions between said engaging means.

1,105,716. SYSTEM OF DISTRIBUTION. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 4, 1911. Serial No. 642,371. (Cl. 171—119.)

1. In combination with a main supply circuit of approximately constant potential, a local circuit containing current translating devices designed for operation on constant potential, and a transformer, through which said local circuit is supplied from the main circuit, comprising two windings relatively stationary in normal operation but automatically relatively movable when the load on the transformer exceeds a predetermined amount.

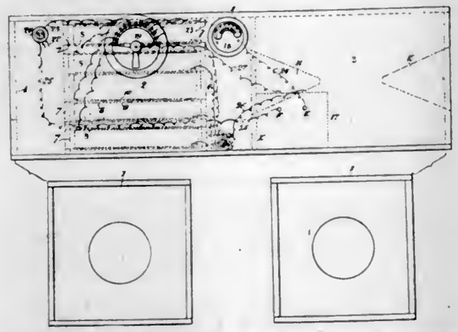
2. In combination with a main supply circuit of approximately constant potential, a local circuit containing current translating devices designed for operation on constant potential, and a transformer, through which said local circuit is supplied from the main circuit, having its windings normally in close, mutually inductive, relation, but relatively movable under the repulsive effect of currents therein exceeding a predetermined amount, and having supporting means for said windings permitting said relative movement when the currents in said windings exceed predetermined amounts.



3. In combination with a main supply circuit of approximately constant potential, a local circuit supplied therefrom containing devices designed for operation on constant potential, a pair of coils through which passes the energy supplied from the main to the local circuit, said coils being normally in close mutual inductive relation but producing a repulsive force on each other when traversed by current, and supporting means for said coils permitting relative movement of said coils when said repulsive force exceeds a predetermined amount.

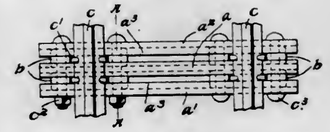
4. The combination with a main supply circuit of approximately constant potential, a local circuit containing current translating devices designed for operation on constant potential, a winding in each of said circuits and in close, mutually inductive relation to each other in normal operation, one of said windings having a portion of its turns axially displaced with respect to the other winding, said windings being relatively movable axially when the repulsion effect between said windings exceeds a predetermined amount.

1,105,717. OZONE-PRODUCER. HUGH ARTHUR THOMSON, Glasgow, Scotland, assignor to Scientific Treatments Limited, Glasgow, Scotland. Filed Aug. 5, 1912. Serial No. 713,270. (Cl. 204—32.)



An apparatus for producing ozone from atmospheric air comprising a series of glass cylinders or tubes each provided internally and externally with an electrode of wire cloth, and affording a tubular passage for air, thereby keeping the condenser cool and preventing the production of oxid of nitrogen, means for supplying a high potential current to said electrodes, and end members provided with holes or openings in which said tubes are supported, said holes or openings being lined with felt to permit expansion of the glass, and said end members being provided with additional holes for passage of air around outside of said tubes to keep the same cool, substantially as described.

1,105,718. RAILWAY-TIE. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa. Filed June 25, 1907. Serial No. 380,648. (Cl. 238—5.)



1. A railway tie having rail bearing portions consisting of a plurality of metallic members and interposed blocks secured to them, one of said metallic members between two of said blocks extending a substantial distance below an outer metallic member, said outer metallic member having a lateral flange.

2. A railway tie consisting of a central metallic member, blocks located on each side of said central member, outer metallic members fitting the upright outer faces of said blocks, said central metallic member extending a substantial distance below said outer metallic members, and means for holding said parts together.

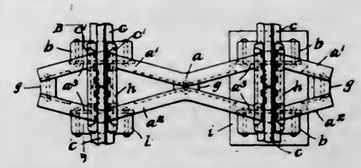
3. A railway tie consisting of a central metallic member, blocks located on each side of said central member at the rail bearings, outer metallic members, having lateral flanges, arranged on the outer faces of said blocks and having their lowermost edges lying a substantial distance above above the bottom of said blocks, and means for holding said parts together.

4. A railway tie consisting of a central metallic member, blocks located on each side of said central member at the rail bearings, outer metallic members, having lateral flanges, arranged on the outer faces of said blocks and having their lowermost edges lying a substantial distance above the bottom face of said central member, and means for securing said parts together.

5. A railway tie consisting of a central metallic member, blocks located on each side of said central member at the rail bearings, outer metallic members standing entirely free from said central member and each outer member being less in height than is the outer face of the block against which it bears, one of said metallic members having a horizontal flange extending along its top.

[Claims 6 to 8 not printed in the Gazette.]

1,105,719. RAILWAY-TIE. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa. Filed June 25, 1907. Serial No. 380,650. (Cl. 238—5.)



1. A railway tie having two side members tied together at their ends and spaced apart under the rail to form two independent rail rests at the same end of the tie, one of said members being bent toward the other member beneath the rail.

2. A railway tie composed of side members tied together at their midlength and spaced apart by a block at their extremities and diverging between said portions to their points of greatest divergence beneath the rail to form independent rail rests.

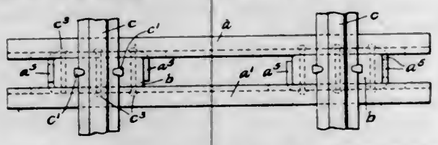
3. A railway tie having two side members extending from rail to rail, said members being spaced apart adjacent to one rail, and each having a separate block attached to it beneath the rail, one of said blocks having a portion projecting inwardly beyond an inside edge of the side member to which it is attached.

4. A railway tie having side members extending from rail to rail and forming two separate rail rests at one end, said members converging at one end, and a separate wooden spiking block attached to each of said rail rests, the greatest distance between said side members being beneath the rail.

5. A railway tie having a horizontally flanged integral member extending continuously from rail to rail and a plurality of separate rail rests at one end, in combination with a tie plate supported by said rail rests and spanning the space between them.

[Claims 6 to 14 not printed in the Gazette.]

1,105,720. RAILWAY-TIE. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa. Filed June 25, 1907. Serial No. 380,651. (Cl. 238—5.)



1. A railway tie having two separate metallic members extending from rail to rail, said members having upright webs from which projections are displaced to extend laterally and form abutments for the upright outer faces of spiking blocks against only one of the upright faces of each of said projections.

2. A railway tie having two separate metallic members extending from rail to rail, said members having horizontal top flanges and having portions of their webs bent out of alinement to form upright bearing faces for engaging the upright outer faces of spiking blocks.

3. A railway tie having two separate metallic members extending from rail to rail, one of said members having an upright web from which a portion is cut loose and bent out of alinement to form an abutment on only one of its faces for engaging the upright outer face of a spiking block.

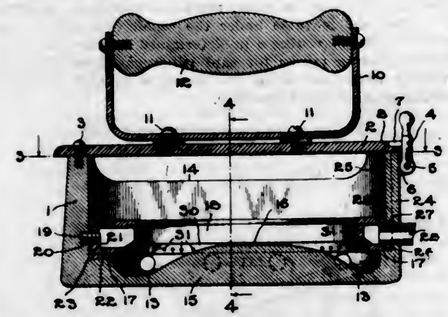
4. A railway tie having spiking blocks and a horizontally flanged metallic member with an upright web extending from rail to rail, said metallic member having a portion of said web forced out of alinement to form an upright bearing face on only one of its sides for one of said spiking blocks, said block contacting on its bottom with the road-bed and having an upright outer face abutting against said bearing face.

5. A railway tie having a metallic member extending from rail to rail with a horizontal flange extending along its top, and a wooden member lying entirely below the top face of said horizontal flange and secured to integral portions displaced from the web of said metallic member.

[Claims 6 to 13 not printed in the Gazette.]

1,105,721. GAS-IRON. WILLIAM E. THORNTON and HENRY E. PARKER, Philadelphia, Pa. Filed May 9, 1914. Serial No. 837,508. (Cl. 158—23.1.)

1. A gas iron comprising a body having an enlargement of the upper face of its bottom, and a supporting ledge around the wall thereof, a burner conforming in shape to the shape of the body supported upon the ledge and having burner orifices directing the flame against the enlargement, said burner having at one end a forwardly projecting lug, said body having a recess to receive the lug, and said body having a recess to receive the lug, substantially as described.



2. A gas iron comprising a body having an enlargement on the upper face of its bottom, and a supporting ledge around the wall thereof, a burner conforming in shape to the shape of the body supported upon the ledge and having burner orifices directing the flame against the enlargement, said burner having at one end a forwardly projecting lug, said body having a recess to receive the lug, and a flange on the bottom of the iron located in a recess in the supporting ledge, substantially as described.

3. A gas iron comprising a body having an enlargement on the upper face of its bottom, and a supporting ledge around the wall thereof, a burner conforming in shape to the shape of the body supported upon the ledge and having burner orifices directing the flame against the enlargement, said burner having at one end a forwardly projecting lug, said body having a recess to receive the lug, said body having a central enlargement at its rear wall, and said burner having a recess in its rear end receiving said enlargement, substantially as described.

4. A gas iron comprising a body having an enlargement on the upper face of its bottom, and a supporting ledge around the wall thereof, a burner conforming in shape to the shape of the body supported upon the ledge and having burner orifices directing the flame against the enlargement, said burner having at one end a forwardly projecting lug, said body having a recess to receive the lug, a flange on the bottom of the iron located in a recess in the supporting ledge, said body having a central enlargement at its rear wall, and said burner having a recess in its rear end receiving said enlargement, substantially as described.

5. A gas iron comprising a body having an enlargement on the upper face of its bottom, and a supporting ledge around the wall thereof, a burner conforming in shape to the shape of the body supported upon the ledge and having burner orifices directing the flame against the enlargement, said burner having at one end a forwardly projecting lug, said body having a recess to receive the lug, said body having a central enlargement at its rear wall, and said burner having a recess in its rear end receiving said enlargement, said burner having a screw-threaded opening in its rear end, a gas supply tube projecting through an opening in the rear wall of the body and screwed into said threaded opening, a valve in said supply pipe, a pilot burner in the body adjacent the burner, and a supply tube connecting the pilot burner with the said valve, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,722. DYEING VEGETABLE FIBERS. JOSEPH TURNER and HARRY DEAN, Huddersfield, England, assignors to Read Holliday & Sons, Ltd., Huddersfield, England. Filed Mar. 18, 1913. Serial No. 755,103. (Cl. 8—5.)

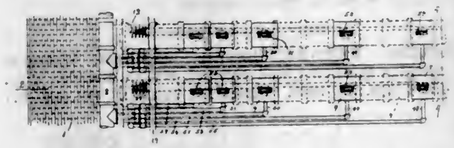
1. The process of treating dyed cotton which comprises subjecting cotton previously dyed with sulfur colors to a bath containing an oxidizing agent and an amino compound.

2. The process of treating dyed cotton which comprises subjecting cotton previously dyed with sulfur colors to an acid bath containing an oxidizing agent and an amino compound.

3. The process of treating dyed cotton which comprises subjecting cotton previously dyed with sulfur colors to a bath containing an oxidizing agent and a mixture of amino compounds.

4. The process of treating dyed cotton which comprises subjecting cotton previously dyed with sulfur colors to an acid bath containing bichromate of soda and an amino compound.

1,105,723. BURNER FOR KILNS. JOHN T. UNDERWOOD, Detroit, Mich., assignor to Underwood Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 3, 1913. Serial No. 798,865. (Cl. 158—99.)



1. The combination of a gas and an air main, a conduit leading from the gas main and having a series of openings in its upper side, valve seats mounted on the conduit around the openings, a valve for each seat, a valve chamber surrounding each valve and having an opening in its upper end, means to operate each valve, and an air pipe extending into each valve chamber and having an upwardly directed nozzle to discharge air through the opening in the top of the valve chamber.

2. The combination of a gas and an air main, a conduit leading from the gas main and having a series of openings in its upper side, valve seats mounted on the conduit around the openings, a valve for each seat, a valve chamber surrounding each valve seat and having an opening in its upper end, telescoping shafts extending parallel to said conduit, one for each chamber, means to actuate each shaft independent of the other, a valve in each valve chamber connected to the end of one of the shafts, and means for conducting air from the air main into each valve chamber.

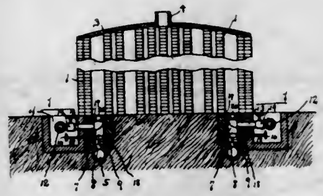
3. The combination of a gas and an air main below the surface of the floor of a kiln, a conduit extending below the floor from the gas main and having a series of openings in its upper side, a valve to close each opening, a valve chamber surrounding each valve and having an opening in its upper end at the level of the floor, telescoping shafts extending through the walls of said chambers, means connecting the shafts to the valves so that any desired valve may be moved from its seat, a pipe extending into each valve chamber from the air main, and an upwardly directed nozzle at the inner end of each pipe to discharge air through the opening in the top of the valve chamber.

4. The combination of a gas and an air main, a conduit leading from the gas main and having a series of openings, tapering plug-valves closing said openings, a valve chamber constructed around each valve and having a discharge opening in its upper end, a series of telescoping shafts extending through the walls of said chambers, a chain mounted on the end of each shaft and connecting to the adjacent valve, means to turn each shaft and hold it in predetermined position, a series of pipes, one for each valve chamber, extending from the air main into said valve chambers, an upwardly directed nozzle at the end of each pipe within the valve chamber to discharge air through the opening in the top of the valve chamber, and means to control the flow of air.

5. The combination of a gas main, a conduit extending therefrom under the floor of a kiln and consisting of lengths of terra cotta pipes, a portion of said lengths having openings in their upper sides, valve chambers extending from the conduit to the surface of the floor and having openings to permit gas to flow into the kiln, a series of shafts extending through the walls of the valve chambers, one for each opening in the conduit, a valve for each opening, a flexible connector for each shaft and valve, and means to turn each shaft independently of the others so that the valve connected thereto may be raised.

[Claims 6 to 9 not printed in the Gazette.]

1,105,724. BRICK-KILN. JOHN T. UNDERWOOD, Detroit, Mich., assignor to Underwood Engineering Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 22, 1913. Serial No. 808,059. (Cl. 25—148.)

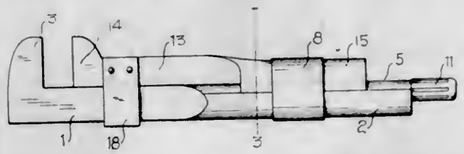


1. In a kiln having imperforate outer walls, the combination of a series of burner openings within the kiln at the floor level thereof, means for conducting air and gas to said openings under pressure where the gas may be burned, said kiln having means to permit the escape of the burnt gases.

2. In a kiln having imperforate outer walls, the combination of a gas conduit below the floors of the kiln, a series of burner chambers connecting to the conduit and having openings into the kiln, a valve in each chamber to control the flow of gas under pressure into the chamber, an air main, a pipe extending from said main into each burner chamber and adapted to discharge air under pressure into the chamber together with the gas, so that during the burning of the materials in the kiln, the pressure within the kiln shall be above that of the atmosphere.

3. The process of burning bricks which consists in arranging them in proper form in a kiln having imperforate outer walls, with air spaces so as to permit the passage of burnt gases between them, and with an outer coating to prevent the escape of the burnt gases except at proper flues, and then forcing air and gas into the bottom of the kiln under pressure where they may be burned, the pressure within the kiln due to the air and gas entering under pressure serving to prevent the entrance of atmospheric air through any openings in the outer coating.

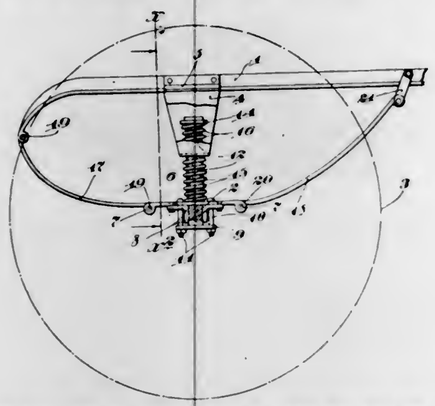
1,105,725. WRENCH. JOSEPH VALIND, Gladstone, Mich., assignor of one-half to August Blomstrom, Wells, Mich., and Alfred Grant, Escanaba, Mich. Filed Nov. 15, 1913. Serial No. 801,219. (Cl. 81—170.)



A device of the class described including a rigid shank, having a jaw formed at its outer end, a handle member formed integral with the shank and provided in its face with a recess and further provided with a longitudinal bore communicating with said recess, a screw member arranged within said recess having a central bore communicating with the bore in the handle, a movable shank having a jaw opposed to the rigid jaw, the inner edge of said handle member having a substantially convex surface, said movable shank having a concave longitudinal recess adapted to receive the convex portion of the handle member, screw

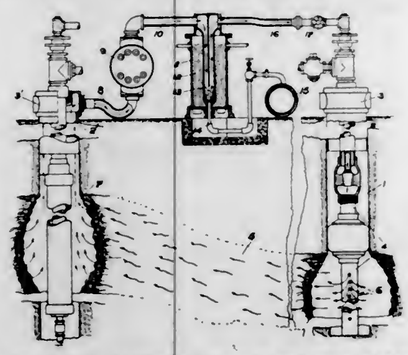
threads formed on the ends of said concave recess and adapted to coact with the screw, and a rod arranged within the bores formed in said screw and handle member and provided with a knob whereby said screw may be rotated to adjust the movable jaw with respect to the rigid jaw, and a metallic band encircling said handle member and movable shank, whereby to prevent lateral movement of either member.

1,105,726. VEHICLE SPRING AND SHOCK-ABSORBER. OLAF A. VICTEL, Granville, N. D. Filed May 16, 1913. Serial No. 768,056. (Cl. 21—50.)



The combination with a vehicle frame and an axle, of a yoke on said frame, a cap plate secured to and resting on said axle, a pair of upwardly projecting plungers, rigidly secured at their lower ends to said cap plate, and working through the transverse portion of said yoke, said plungers being laterally spaced longitudinally of said axle, a follower connecting the upper ends of said plungers and working in said yoke, opposing pairs of coiled springs on said plungers, one pair of said springs being compressed between said axle and yoke, and the other pair thereof, being compressed between said follower and yoke, and a pair of oppositely extended flexible connections, connecting said cap plate to said vehicle frame on opposite sides of said axle.

1,105,727. PROCESS OF PRODUCING GASOLENE. JOHN WILLIAM WAITZ, Oil City, Pa.; Judson D. Trax and William M. Parker executors of said Waitz, deceased. Filed July 6, 1912. Serial No. 708,058. (Cl. 166—21.)

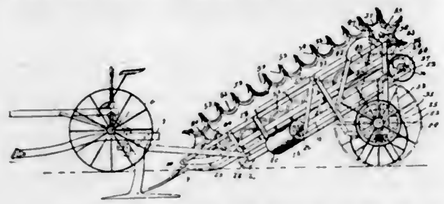


1. The herein described process of producing gasolene, which consists in compressing a suitable fluid, then refrigerating the same, then passing said fluid through a stratum of the earth containing hydro-carbon vapor, then recovering said fluid, then causing a precipitation of the vapor therefrom.

2. The herein described process of producing gasolene, which consists in compressing a suitable gas, then cooling the same, then injecting said gas into a stratum of the earth which contains hydro-carbon fluids and wherein said gas becomes saturated with vapor from such fluids, because of a rise in temperature, then recovering said gas at a suitable point of relief, then causing said vapor to condense.

3. The herein described process of producing gasolene which consists in compressing a suitable gas, then cooling the same then causing said gas to pass into absorptive relation with a hydro-carbon fluid within a well which produces such fluid, whereby said gas becomes saturated with vapors from such fluid due to a rise of temperature then recovering said gas from said well and causing a precipitation of the vapors therein.

1,105,728. BEET-HARVESTER. JACOB H. WALLACE, THOMAS D. MEANS, and JOHN D. MEANS, Boulder, Colo. Filed Apr. 26, 1913. Serial No. 763,754. (Cl. 55—9.)



1. In a beet harvester, a beet digging device, an endless carrier, means for depositing the beets upon said endless carrier in a uniform position, means for drawing the beets to one side of said endless carrier, means on one side of said endless carrier for stopping the beets and a cutting member adjacent the endless carrier for severing the tops of the beets from the beet bodies, whereby the beet tops are carried in one direction and the beet bodies in another.

2. In a beet harvester, a beet digging device, an endless carrier, means for depositing the beets upon said endless carrier in a uniform position, a carrier crossing the path of said endless carrier, beet stopping means at one side of said endless carrier and a cutting member between said beet stopping means and said endless carrier for severing the tops of the beets from the beet bodies whereby the beet tops are carried in one direction and the beet bodies in another direction.

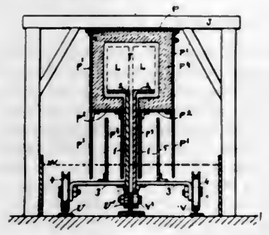
3. In a beet harvester, a beet digging device, an endless carrier, means for depositing the beets on ssid endless carrier in a uniform position, means for drawing the beets to one side of said endless carrier, means at one side of said endless carrier for stopping the beets, a cutting member adjacent the endless carrier for severing the tops of the beets from the beet bodies and means adjacent said cutting member for tipping the beets into position to receive the cutting member, whereby the beet tops are severed from the beet bodies at substantially a right angle to the longitudinal axis of the beet.

4. In a beet harvester, a beet digging device, an endless carrier, means for depositing the beets on said endless carrier in a uniform position, means for drawing the beets to one side of said endless carrier, a grid stop member at one side of said endless carrier, a cutting member adjacent the endless carrier for severing the tops of the beets from the beet bodies and means adjacent said cutting member for tipping the beets into position to receive the cutting member, whereby the beet tops are severed from the beet bodies at substantially a right angle to the longitudinal axis of the beet.

5. In a beet harvester, a beet digging device, an endless carrier, comprising a plurality of blades secured to side members, a spring finger upon each of said blades, means for depositing the beets in the path of said blades in a uniform position, a supplementary carrier crossing the path of said endless carrier, a grid beet stop-member at one side of said endless carrier, a cutting member between said beet stopping member and said endless carrier and a tipping device in the path of said endless carrier and adjacent said cutting member whereby the beets are brought into operative position to receive the cutting member and the severed beet tops are carried in one direction and the beet bodies in another direction.

[Claim 6 not printed in the Gazette.]

1,105,729. ART OF TREATING VEGETABLE AND MINERAL MATTER BY HEAT. ADDISON G. WATERHOUSE, Leonardo, and JOHN H. VAN MATER, Atlantic Highlands, N. J. Filed Aug. 13, 1913. Serial No. 784,571. (Cl. 25—142.)



1. A tunnel kiln for burning brick and other products, consisting of an insulated conduit elevated above its foundation to be isolated therefrom and having an underpassage throughout its length formed between two hanging partitions extending downward from the interior of the elevated conduit into a body of water; with an externally driven mechanism reaching through the water and the passage into the interior of the conduit for carrying material through the same, and a furnace adapted for heating the material while it is being carried through the conduit.

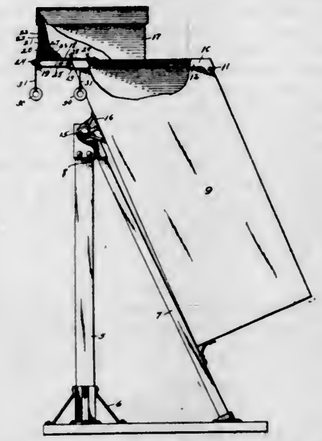
2. A tunnel kiln for burning brick and other products, consisting of an insulating conduit held above its foundation by external isolated supports, and having an underpassage formed between two partitions extending from the interior of the insulated conduit into a body of water used for sealing the interior of the conduit and that of the under passage from the surrounding atmosphere; in combination with externally operated means adapted for supporting and carrying two separate bodies of material through the conduit in opposite directions at the same time, while causing them to be brought in thermal communication so that the heat of one will be transferred directly or indirectly to the other, with means for applying heat to both bodies of such material while being carried through the conduit.

3. In a tunnel kiln for burning brick and other products, an insulated conduit elevated above its foundation to be isolated therefrom and having an under-passage throughout its length formed between two hanging partitions suspended from the elevated conduit and extending downward therefrom into a body of water used for sealing the interior of the passage and that of the elevated conduit from the outer atmosphere.

1,105,730. COMBINED LETTER AND PARCEL-POST MAIL-BOX. JAMES A. WAUGH, Louisiana, Mo. Filed Jan. 2, 1914. Serial No. 809,909. (Cl. 232—40.)

1. In a device of the character described, the combination with a support of a package box pivoted thereto, and swinging therefrom, a hinged cover for said package box, and a letter mail box mounted upon the top of the cover of the package box.

2. In a device of the character described, the combination with a support of a package box pivoted thereto, and swinging therefrom, a hinged cover for said package box, a letter mail box mounted upon the top of the cover of the package box, and projecting over the front edge thereof.



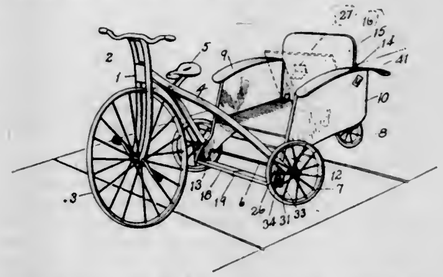
3. In a device of the character described, the combination with a support of a package box pivoted thereto, and swinging therefrom, a hinged cover for said package box, a letter mail box mounted upon the top of the cover of the package box, projecting over the front edge thereof, and a door forming a closure, for said letter mail box.

4. In a device of the character described, the combination with a support of a package box pivoted thereto, and swinging therefrom, a hinged cover for said package box (a letter main box mounted upon the top of the cover of the package box, projecting over the front edge thereof, a door forming a closure for said letter mail box, and flanges upstanding from the bottom of said mail box.

5. In a device of the character described the combination with a support of a package mail box pivoted thereto, and swinging therefrom, means normally supporting said box in inclined position with relation to said support, a hinged top for said box which normally lies in a horizontal plane, and a letter mail box upon said hinged top.

[Claims 6 and 7 not printed in the Gazette.]

1,105,731. COMBINATION VELOCIPEDE AND CART. FRANK B. WELLS, Kansas City, Mo. Filed July 2, 1912. Serial No. 707,323. (Cl. 208—45.)



1. The combination with a velocipede, having an exposed rear axle, of a trailer having notched members adapted to overlie the axle to support the trailer and couple same to the velocipede, for the purpose set forth.

2. The combination with a velocipede, of a trailer comprising downwardly and forwardly projecting members having downwardly facing notches on their rear edges adapted to overlie the rear axle of the velocipede, for the purpose set forth.

3. The combination with a velocipede, having an exposed rear axle, of a trailer comprising sides having

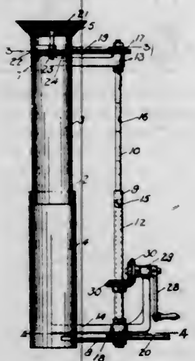
front portions adapted for projection between the rear wheels of the velocipede and having notches adapted for receiving the axle, for the purpose set forth.

4. The combination with a velocipede, of a trailer comprising hingedly connected side and seat members, the latter having portions adapted for pivotal support on the rear axle of the velocipede, a toggle connecting the side members, and a foot rest comprising sections hingedly connected with each other and with the supporting portions of the side members, for the purpose set forth.

5. In a trailer for velocipedes, a frame comprising side members and a rear cross member pivotally connected with the side members, a toggle bar connecting the forward ends of said side members, a seat hingedly mounted between said side members and supported on said cross bar, and adapted to rest on and lock said toggle.

[Claim 6 not printed in the Gazette.]

1,105,732. DISPENSING DEVICE. WILLIAM WEST and LEONARD C. GOFF, Denver, Colo. Filed Aug. 7, 1912. Serial No. 713,843. (Cl. 221—113.)



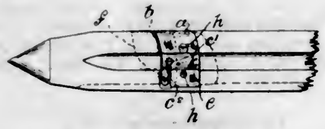
1. A device of the class described comprising an open-ended conduit, a shaft rotatably mounted thereon, sliding gates adapted to open and close said conduit at different points, racks on said gates, and segmental gears fixed on said shaft to operatively engage said racks, and relatively disposed to move said gates successively in opposite directions.

2. A device of the class described comprising an open-ended conduit composed of two telescoping members, a shaft rotatably mounted on said conduit and composed of two adjustably connected members mounted on the two members of the conduit, respectively, means for securing the members of said conduit and said shaft in their adjusted position with relation to each other, gates adapted to open and close the said conduit at different points, and mechanism for converting a rotary movement of said shaft into successive movements of said gates in opposite directions.

3. A device of the class described comprising an open-ended conduit composed of two telescoping members, a shaft rotatably mounted on said conduit and composed of two adjustably connected members mounted on the two members of the conduit, respectively, means for securing the members of said conduit and said shaft in their adjusted position with relation to each other, gates adapted to open and close the said conduit at different points, and mechanism for converting a rotary movement of said shaft into successive movements of said gates in opposite directions, one of the members of said shaft having graduations to indicate the capacity of the portion of said conduit between the two gates, by registration with an end of the other member of the same.

4. A device of the class described comprising an open-ended conduit composed of two telescoping members, a shaft rotatably mounted on said conduit and composed of two adjustably connected members mounted on the two members of the conduit, respectively, means for securing the members of the said shaft in their adjusted position with relation to each other, gates adapted to open and close the said conduit at different points, and mechanism for converting a rotary movement of said shaft, into successive movements of said gates in opposite directions.

1,105,733. DEVICE TO FACILITATE THREADING SHUTTLES. JOHN DEMPSTER WHYTE, Manchester, England. Filed Jan. 30, 1914. Serial No. 815,459. (Cl. 139—46.)



1. A threading device for shuttles comprising a transverse connecting portion having two side portions depending therefrom, each side portion being provided with an eye and with a slot communicating with the eye and extending to one of the edges of the side portion.

2. A threading device for shuttles comprising a transverse connecting portion having two side portions depending therefrom, each side portion being provided with an eye and with a slot communicating with the eye and extending to one of the edges of the side portion, said eyes being coincident with one another.

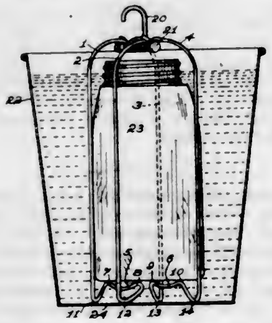
3. A threading device for shuttles comprising a transverse connecting portion having two side portions depending therefrom, each side portion being provided with an eye and with a slot communicating with the eye and extending to one of the edges of the side portion, the forward edge of one of said side portions being convexly curved.

4. A threading device for shuttles comprising a transverse connecting portion having two side portions depending therefrom, each side portion being provided with an eye and with a slot communicating with the eye and extending to one of the edges of the side portion, the forward edge of said connected portion being convexly curved.

5. A threading device for shuttles comprising a transverse connecting portion having two side portions depending therefrom, each side portion being provided with an eye and with a slot communicating with the eye and extending to one of the edges of the side portion, the forward edges of one of said side portions and of said connecting portion being convexly curved.

[Claims 6 to 9 not printed in the Gazette.]

1,105,734. JAR HOLDING AND SPACING MEANS. FRANK WILCOX, Cedar Falls, Iowa. Filed June 23, 1913. Serial No. 775,352. (Cl. 53—1.)

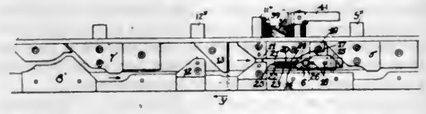


1. Jar-holding and spacing-means, comprising resiliently-connected spring-members, each having an integral cross-connection at its lower end with the cross-connections raised and directed inwardly and medially bowed downwardly, formed by first bending said members to form offset shoulders adapted to rest on the bottom of a containing vessel, and then being reversely bent to form other upwardly-projecting shoulders adapted to support the bottom of a jar clasped between said members.

2. Jar-holding and spacing-means, comprising resiliently-connected spring-members, each having an integral cross-connection at its lower end with the cross-connections raised and directed inwardly and medially bowed downwardly, formed by first bending said members to form offset shoulders adapted to rest on the bottom of a containing vessel, and then being reversely bent to form other upwardly-projecting shoulders adapted to support the bottom of a jar clasped between said members, the resilient-connection between the tops of said members being a cross-axis with the upper ends of the members coiled thereabout to form spring-coils adapted to yieldingly impel the members toward each other.

3. Jar-holding and spacing-means, comprising resiliently-connected spring-members, each having an integral cross-connection at its lower end with the cross-connections raised and directed inwardly and medially bowed downwardly, formed by first bending said members to form offset shoulders adapted to rest on the bottom of a containing vessel, and then being reversely bent to form other upwardly-projecting shoulders adapted to support the bottom of a jar clasped between said members, the resilient-connection between the tops of said members being a cross-axis with the upper ends of the members coiled thereabout to form spring-coils adapted to yieldingly impel the members toward each other, and the upper extremity of one of said members being of greater length and bend upwardly above said coils to form a finger-hold.

1,105,735. CIRCULAR FRENCH-WELT KNITTING-MACHINE. FRANK B. WILDMAN and GEORGE LAWSON BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed Mar. 7, 1913. Serial No. 752,796. (Cl. 66—22.)



1. In a circular knitting machine, an advancing cam, a stitch cam, said advancing cam having a needle path above and below it, a grooved shifting cam for carrying the needles from one cam path to the other, and a switch point between the advancing cam and the shifting cam to divide the needles, substantially as described.

2. In a circular knitting machine, a stitch cam, an advancing cam having a needle path above and another below it, a grooved shifting cam to carry and shift the needles from one needle path to the other, and a radially yielding switch point between the advancing cam and the shifting cam, said switch point having an edge inclining upwardly and radially inwardly from its end with an upwardly inclined surface and a downwardly and outwardly inclined surface, substantially as described.

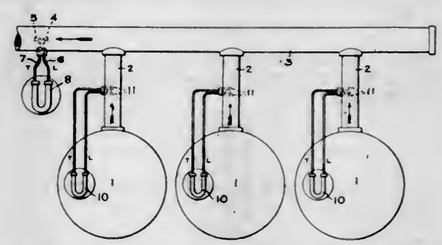
3. In combination with a shifting cam, a cam having a needle path above and below the same and a switch point between said cams having an edge inclining upwardly and inwardly across the needle path, with an upwardly inclined surface, a downwardly and outwardly inclined surface and an outwardly inclined surface along its upper edge, said point being yieldingly mounted, substantially as described.

4. In combination in a circular knitting machine for making double walled welts, a set of dial cams including stitch cams and advancing cams, one of the latter being adjustable into welting position, a set of cylinder cams including two stitch and two advancing cams, one of said advancing cams being adjacent the fixed advancing cam of the dial and having a cam path above and a cam path below it, and a shifting cam in front of said two path advancing cam, means for operating the advancing cam of the dial to form welt fabric on the cylinder needles at one feed, and means for operating the shifting cylinder cam for directing the needles into the lower cam path for making welt on the dial needles at the other feed, substantially as described.

5. In combination in a circular knitting machine for making double walled welts, a set of dial cams including stitch cams and advancing cams, one of the latter being adjustable into welting position, a set of cylinder cams including two stitch and two advancing cams, one of said advancing cams being adjacent the fixed advancing cam of the dial and having a cam path above and a cam path below it, and a shifting cam in front of said two path advancing cam, means for operating the advancing cam of the dial to form welt fabric on the cylinder needles at one feed, and means for operating the shifting cylinder cam for directing the needles into the lower cam path for making welt on the dial needles at the other feed, and a clearing course cam in front of the shifting cam with means for automatically operating the clearing course cam, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,105,736. BOILER-FEED SYSTEM. JAMES WILKINSON, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 31, 1912. Serial No. 700,658. (Cl. 177—351.)



1. The combination with a battery of boilers having a common header and connections whereby the boilers feed into said common header, of a master steam flow meter for said header, an auxiliary flow meter for each connection, and means for indicating at each auxiliary meter the variations of the master meter.

2. The combination with a battery of boilers having a common header and connections whereby the boilers feed into said common header, of a master steam flow meter for said header, an auxiliary flow meter for each connection, and electrical means for indicating at each auxiliary meter the variations of the master meter.

3. The combination with a battery of boilers having a common header and connections whereby the boilers feed into said common header, of a master steam flow meter for said header, an auxiliary flow meter for each connection, a tier of electric lamps adjacent to each auxiliary meter, and means for lighting said lamps in succession as the flow of steam in the header increases and for extinguishing said lamps as said flow diminishes.

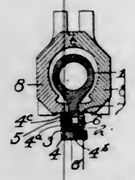
4. The combination with a battery of boilers having a common header and connections whereby the boilers feed into said common header, of a master steam flow meter for said header, an auxiliary flow meter for each connection, and electrical means for indicating at each auxiliary meter and also at a distant station the variations of the master meter.

5. The combination with a battery of boilers having a common header and connections whereby the boilers feed into said common header, of a master steam flow meter for said header, an auxiliary flow meter for each connection, a tier of electric lamps adjacent to each auxiliary meter, means for lighting said lamps in succession as the flow of steam in the header increases and for extinguishing said lamps as said flow diminishes, and a tier of telltale lamps

in series with the aforesaid tier and located at a distant station for indicating thereat the variations of said auxiliary meters.

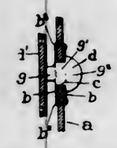
[Claim 6 not printed in the Gazette.]

1,105,737. COLLAPSIBLE CORE. JOHN K. WILLIAMS, Akron, Ohio, assignor of one-half to Williams Foundry and Machine Company, Akron, Ohio, a Corporation of Ohio. Filed Dec. 21, 1912. Serial No. 738,053. (Cl. 18—45.)



A device of the class described, comprising a cylindrical supporting member having an outwardly extending flange at one edge, and a plurality of segmental core sections having inner or base portions seating against said supporting member, said inner portions having laterally extending ribs at one side engaging an annular groove in the flange at its base, and headless bolts for rigidly connecting said core sections and flange, said bolts being fixedly secured to one of said parts and passing through openings in the other part.

1,105,738. SEPARABLE FASTENER. JOHN WINTER, Goshen, Ind. Filed Mar. 26, 1910. Serial No. 551,763. (Cl. 24—222.)



A carriage curtain fastening, comprising inner and outer seat plates to be secured to a curtain and provided with registering slots having each end portions of unequal size and a short connecting passage narrower than either end portion, and a stud plate securable in fixed position to the carriage frame and comprising a base plate having a plane stop and guide surface and a stud projecting centrally at right angles to said surface from said base plate and provided with an outer right-angle shouldered head of corresponding size to the larger end portions of the seat plate slots, a middle right-angle shouldered holding portion adjacent said head of corresponding size to the smaller end portions of said slots, and an inner shank portion of corresponding size to the connecting passages of the slots and extending from said middle portion to said base plate, said inner shank portion being substantially equal in length to said middle holding portion of the stud and to the combined thickness of the curtain and its slotted seat plates, whereby the curtain can only be released from its fastening when its seat plate is in sliding position against and parallel to the stop and guide surface of the base plate of the stud.

1,105,739. STABLE MIXTURE CONTAINING PERBORATES. HELMUTH HERMANN WÜNSCHE, Kirchsteinbek, near Hamburg, Germany, assignor to The Firm of Pearson & Co., Gesellschaft mit beschränkter Haftung, Hamburg, Germany. Filed Feb. 6, 1912. Serial No. 675,871. (Cl. 23—10.)

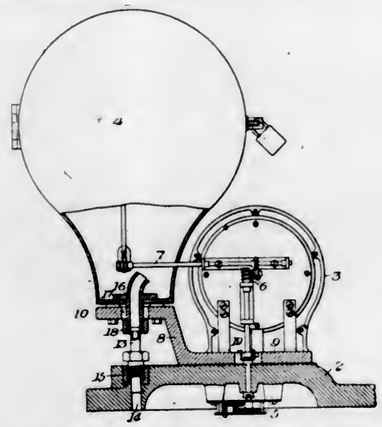
1. The hereindescribed new solid stable mixtures of perborates containing water of crystallization, a solid acid substance and a bi-carbonate, which mixtures yield hydrogen peroxid when treated with water.

2. The hereindescribed new, solid, stable mixtures of perborates containing water of crystallization, a solid acid substance and bi-carbonate of sodium, which mixtures yield hydrogen peroxid when treated with water.

3. The hereindescribed new, solid, stable mixtures of crystalline perborates, a dry solid acid, and a carbonate, yielding when treated with water, peroxid of hydrogen.

4. The herein described new stable mixtures of crystalline per-borates, a carbonate and a dry solid acid substance capable when wetted of liberating peroxid of hydrogen from the perborates and carbonic acid from the carbonate.

1,105,740. VOLUME AND PRESSURE REGISTER FOR FLUIDS. THOMAS B. WYLIE, Pittsburgh, Pa. Filed Apr. 2, 1913. Serial No. 758,384. (Cl. 234—34.)



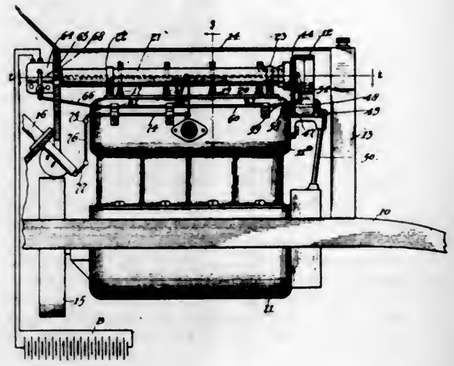
1. Apparatus of the character described, comprising a meter casing having a plurality of instrument supporting surfaces thereon, there being a third surface on said casing, means for securing said instruments to said first mentioned surfaces, and an adjustable disconnectible pipe connection between one of said first mentioned surfaces and said third surface; substantially as described.

2. Apparatus of the character described, comprising a meter casing, a supporting member secured to the top of the meter casing, and having two meter supporting surfaces in different horizontal planes, a meter dial casing detachably secured to one of said supporting surfaces, a volume and pressure registering instrument detachably secured on the other supporting portion, a third surface on said meter casing, and an adjustable disconnectible pipe connection between the third surface and the volume and pressure registering instrument; substantially as described.

3. Apparatus of the character described, comprising a meter casing, a supporting member secured to the top of the meter casing, and having two supporting portions in different horizontal planes, said supporting member having an upwardly and outwardly extending arm, one of said surfaces being on the upper face of said arm, intergeared indicating instruments removably mounted on said surfaces, a third surface on the meter casing below the upwardly and outwardly extending arm of the supporting member, and an adjustable disconnectible pipe connection between the upper surface on said arm and the surface on the meter casing below said arm; substantially as described.

1,105,741. CURRENT CONDUCTING AND DISTRIBUTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. FRANK A. ZIKA, Chicago, Ill., assignor of one-half to James E. Barry, Chicago, Ill. Filed June 9, 1913. Serial No. 772,587. (Cl. 123—167.)

1. A device for the purposes described comprising in combination an engine having a plurality of cylinders and corresponding spark plugs, a relatively fixed conductor supporting member thereon, a plurality of conductors confined therein, terminating at one end thereof, having their inner ends connected to the spark plugs, respectively; a current distributer for coöperation with the outer ends of said conductors and means for relatively oscillating said distributer and conductor terminals to change the spark time.



2. A device of the character described comprising a longitudinally extending current conductor supporting member; a plurality of conductors therein terminating at one end thereof; the other ends thereof spaced apart and projecting radially from said supporting member, adapted for connection to the respective spark plugs, of an engine; rotatable means, for consecutive electrical association with said end terminals; means for rotating said rotatable means, and means for electrically energizing said rotatable means.

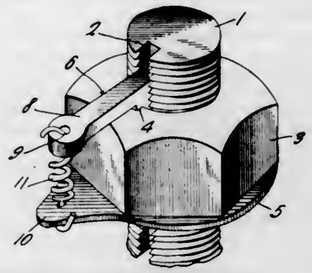
3. A device of the character described, comprising a longitudinally extending current conductor supporting member, adapted to be oscillated upon its support; a plurality of conductors therein terminating at one end thereof; the other end of said conductors spaced apart and projecting laterally from said supporting member, adapted for connection to the spark plugs respectively of an engine; rotatable means for consecutive electrical association with said end terminals; means for rotating said rotatable means; means for oscillating said member, and means for electrically energizing said rotatable means.

4. A device of the character described, comprising a longitudinally extending current conductor supporting member adapted to be oscillated upon its support; a plurality of conductors therein terminating at one end thereof; the other ends thereof spaced apart and projecting laterally from said supporting member, adapted for connection to the respective spark plugs of an engine; rotatable means for consecutive electrical association with said end terminals; means for rotating said rotatable means; means for oscillating said supporting member; two sources of electric current for energizing said rotatable member and a switch controlling said sources of electric current to connect either current source to said rotatable member.

5. A device of the character described comprising a relatively long, oscillatable member; means for supporting said member to permit rotative oscillation thereof; a plurality of current conductors extending through said member and terminating at intervals; laterally projecting terminals connected to the inner ends of said conductors, respectively, each adapted for connection to a spark plug; means to consecutively energize said conductors to be moved in time relation therewith and with the power shaft of an engine with which the device is to be associated and means to rotatively oscillate said member to vary said time relation with reference to said conductors.

[Claim 6 not printed in the Gazette.]

1,105,742. NUT-LOCK. JAMES W. S. BARGER, Eddyville, Ill. Filed Mar. 7, 1914. Serial No. 823,239. (Cl. 151—8.)



1. The combination with a longitudinally grooved bolt and a nut threaded on the bolt and having a longitudinal groove adapted to register with the bolt groove, of a washer mounted on the bolt adjacent one face of the nut, an angular key element, one arm of the key element forming a key engageable with the registering grooves of the nut and bolt, the other arm of the key element seating against the other face of the nut, and means connecting the last mentioned arm of the key element and the washer for retaining the key in engagement with the nut and bolt grooves.

2. The combination with a longitudinally grooved bolt and a nut threaded on the bolt and having a longitudinal groove adapted to register with the bolt groove, of a washer mounted on the bolt adjacent one face of the nut, an angular key element, one arm of the key element forming a key engageable with the registering grooves of the nut and bolt, the other arm of the key element seating against the other face of the nut, and yieldable means connecting the last mentioned arm of the key element and the washer.

3. The combination with a longitudinally grooved bolt, and a nut threaded on the bolt and having a longitudinal groove adapted to register with the bolt groove, of a washer mounted on the bolt adjacent one face of the nut and having a radial apertured lobe, an angular key element having one arm in the form of a key engageable with the registering grooves of the bolt and nut, the other arm of the key element being seatable against the other face of the nut and having an eye at its free end, and a coiled wire spring having its ends engaged through the said eye and apertured lobe.

1,105,743. PROCESS OF BLEACHING COTTON-SEED OIL. CHARLES BASKERVILLE, New York, N. Y. Filed Jan. 24, 1913. Serial No. 744,045. (Cl. 87—12.)

1. The herein-described process of bleaching vegetable oils containing a colloidal coloring-matter, which consists in treating the oil with an inorganic absorbent having the essential qualities of fullers' earth, in presence of an electrolyte, under conditions to coagulate said colloidal coloring-matter.

2. The herein-described process of bleaching vegetable oils containing a colloidal coloring-matter, which consists in agitating the oil at a temperature below 100° C. with an inorganic absorbent having the essential qualities of fullers' earth, in presence of an electrolyte, under conditions to coagulate said colloidal coloring-matter.

1,105,744. PROCESS OF REFINING VEGETABLE AND ANIMAL OILS. CHARLES BASKERVILLE, New York, N. Y. Filed Feb. 15, 1913. Serial No. 748,606. (Cl. 87—12.)

1. The process of refining saponifiable oils, which consists in treating the oil with an organic absorbent impregnated with a refining agent.

2. The process of refining saponifiable oils, which consists in treating the oil with a fibrous vegetable material impregnated with a refining agent.

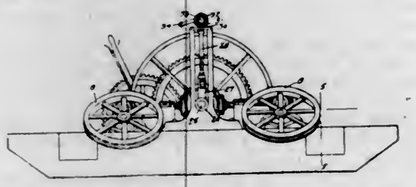
3. The process of refining saponifiable oils containing acids, which consists in agitating the oil with a fibrous vegetable material impregnated with an alkali.

4. The process of refining saponifiable oils containing acids, which consists in agitating the oil with a fibrous vegetable material impregnated with an alkali, and filtering out the fibrous material and contained impurities.

5. The process of refining cottonseed oil containing acid, which consists in agitating the oil with a fibrous vegetable material containing an amount of alkali slightly in excess of that required to neutralize the acid, and filtering out the fibrous material and contained impurities.

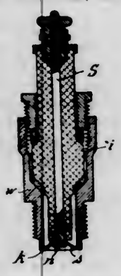
[Claim 6 not printed in the Gazette.]

1,105,745. CURRENT-OPERATED DEVICE. FRANK BERNATZ, Dixon, Mont. Filed Feb. 3, 1913. Serial No. 745,858. (Cl. 170—107.)



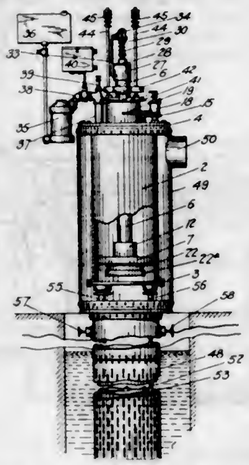
A water elevating device comprising in combination, an endless cable having two substantially parallel lengths, one or more sheaves disposed at each end of said cable around which the cable passes, said sheaves being placed with their axes of rotation inclined both to the vertical and to the horizontal, said parallel lengths of the cable being arranged so that a line perpendicular to them is substantially horizontal, one or more buckets attached to said cable, flexible connections between said cable and said buckets whereby said buckets may hang vertically when in a free position and may automatically tilt when encountering the water, and means for tilting said buckets after they have been removed from the water.

1,105,746. SPARKING PLUG FOR INTERNAL-COMBUSTION ENGINES. ERNST BLATTMANN, Nonnendamm, near Berlin, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed Jan. 17, 1913. Serial No. 742,598. (Cl. 123—169.)



In a sparking plug for internal combustion engines, the combination of a plug casing, an insulator longitudinally mounted therein, an electrode carrier axially mounted in said insulator and comprising a head portion having a transverse bore and projecting from the insulator at the ignition end of the plug and a shank attached to said head portion, a nickel cap completely covering said projecting head portion and having holes registering with said bore, and a nickel pin fitting tightly in said holes and bore and set at its ends at the predetermined sparking distance from said casing.

1,105,747. INTERNAL-COMBUSTION PRESSURE-PUMP. RANSOM Y. BOVEE, Denver, Colo. Filed Dec. 26, 1912. Serial No. 738,663. (Cl. 160—1.)



1. An internal combustion pressure pump comprising a cylinder having at its opposite ends, respectively, an inlet and an outlet for gaseous fluid, a chamber in communication with said outlet and adapted to connect with a source of water-supply, a discharge conduit connected with said chamber, a piston having a reciprocating movement in the cylinder and provided with ports for establishing communication between the portions of the cylinder at opposite sides of the piston, a valve normally closing said ports and adapted to open the same by the explosion of fluid in one of said portions, means for opening said ports, by manually adjusting the valve from a point outside the cylinder, and means for igniting a charge of explosive gases in said cylinder at a determinate point in the movement of the piston.

2. An internal combustion pressure pump comprising a cylinder having at its opposite ends, respectively, an inlet and an outlet for gaseous fluid, a chamber in communication with said outlet and adapted to connect with a source of water-supply, a discharge conduit connected with said chamber, a piston having a reciprocating movement in the cylinder and provided with ports for establishing communication between the portions of the cylinder at opposite sides of the piston, a hollow rod to which the piston is attached, a valve for controlling the flow of gases through said ports and from the interior of the cylinder into the said rod, a stem on said valve extending through said rod, a spring normally holding said valve to close the ports in the piston, and means for igniting a charge of explosive gases in the cylinder at a determinate point in the movement of the piston.

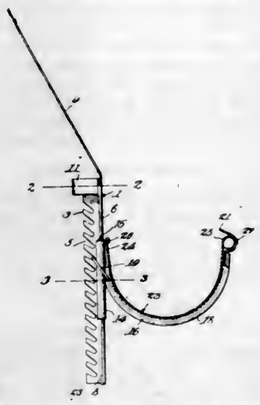
3. An internal combustion pressure pump comprising a cylinder having at its opposite ends, respectively, an inlet and an outlet for gaseous fluid, a chamber in communication with said outlet and adapted to connect with a source of water-supply, a discharge conduit connected with said chamber, a piston having a reciprocating movement in the cylinder and provided with ports for establishing communication between the portions of the cylinder at opposite sides of the piston, a hollow rod attached at its inner end to the piston, a valve for controlling the flow of gases through said ports and from the interior of the cylinder into said rod, a spring normally holding said valve to close the ports in the piston, a valve normally closing the outer end of said rod and adapted to open the same by a flow of gases through the rod, and means for igniting a charge of explosive gases in the cylinder at a determinate point in the movment of the piston.

4. An internal combustion pressure pump comprising a cylinder having at its opposite ends, respectively, an inlet and an outlet for gaseous fluid, a chamber in communication with said outlet and adapted to connect with a source of water-supply, a discharge conduit connected with said chamber, a piston having a reciprocating movement in the cylinder and provided with ports for establishing communication between the portions of the cylinder at opposite sides of the piston, a hollow rod attached at its inner end to the piston, a valve for controlling the flow of gases through said ports and from the interior of the cylinder into said rod, a stem on said valve extending through said rod, a spring normally holding said valve to close the ports in the piston, a cam on said rod adapted to displace the valve by engagement with said stem, and means for igniting a charge of explosive gases in the cylinder at a determinate point in the movement of the piston.

5. In an internal combustion pressure pump, a cylinder having at one of its ends, an inlet for gases and a compression chamber, and at its opposite end, an outlet, a chamber in communication with said outlet and adapted to connect with a source of water-supply, a discharge-conduit in communication with said chamber, a piston having a reciprocating movement in the cylinder, means to establish communication between the portions of the latter at opposite sides of the piston by the explosion of fluid in one of said portions, said piston having a plunger adapted to enter said compression chamber for the formation of a gaseous cushion, a system for automatic lubrication of the surfaces of the cylinder and the compression chamber, and means for igniting a charge of explosive gases in said cylinder at a determinate point in the movement of the piston.

[Claims 6 to 35 not printed in the Gazette.]

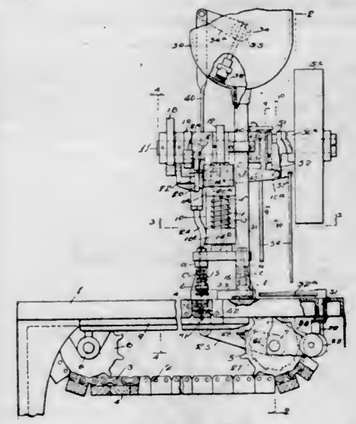
1,105,748. ADJUSTABLE EAVES-TROUGH HANGER. WILLIAM T. BRASWELL, Atlanta, Ga., assignor of one-half to Claude E. Register, Atlanta, Ga. Filed Oct. 17, 1913. Serial No. 795,768. (Cl. 108—29.)



1. In an eaves trough hanger, a back plate, the upper end of which is prolonged to form an adjustable tongue, the edges of the back plate being bent toward each other, below the tongue, to form flanges; a rack bar engaged with the flanges; a traveler mounted to slide along the flanges and including a trough support; and means carried by the traveler for engagement with the rack bar.

2. An eaves trough hanger comprising a rack having teeth; a traveler mounted to move along the rack and including a trough support; and a link pivoted to the trough, and engaged between certain of the teeth, the traveler being upwardly movable to disengage the link from between the teeth, and the link being adapted to swing downwardly, and to engage between others of the teeth, to hold the traveler in adjusted position, the traveler being held upon the rack against movement transversely of the rack, thereby to prevent the traveler from swinging away from the rack when the link is in a depending position.

1,105,749. PRESS. JULIUS G. BREITENSTEIN, Chicago, Ill. Filed May 5, 1913. Serial No. 765,424. (Cl. 79—4.)



1. In combination with a frame, comprising a flat table top having in its upper surface a longitudinal channel, an endless chain of work-holders mounted for traveling in said channel and having their upper work-receiving ends terminating substantially flush with the upper surface of the table top and completely occupying the mouth of the channel so as to leave no access thereto from said surface of the table, and means for impelling the endless chain in said channel.

2. In combination with a frame, comprising a flat table top having in its upper surface a longitudinal channel, an endless chain of work-holders mounted for traveling in said channel having their upper ends occupying the entire width of the channel so as to leave no access thereto below the top surface of said work holders and having their work-receiving mouths adapted to receive the work sliding on the table top surface to enter said mouths.

3. In combination with a frame, comprising a flat table top having in its upper surface a longitudinal channel and endless chain of work-holders mounted for traveling in said channel; a working member mounted for coöperation with said work-holders at an advanced point in the travel of the chain along the channel, said work-holders having their upper ends completely occupying the channel so as to leave no access thereto past said upper ends and having their work-receiving mouths positioned and adapted to receive the work, sliding on the table top surface to enter said mouths.

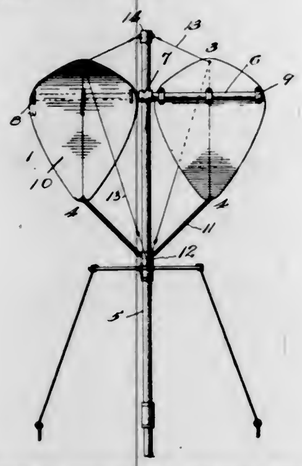
4. In combination with a frame, an endless chain of work-holders, carrying wheels for the chain; a working member and means for reciprocating it toward and from the path of the work holders; means for actuating the chain with alternating steps and halts timed to halt the chain at the latter part of the movement of the working member toward it; a work-material conduit terminating at a distance above the level of the top of the work holders substantially equal to the thickness of said material at one side of the path of the work holder; a support on the frame for lodgement of said work material substantially at the level of the top of the work holder; an escapement device and means for reciprocating it through the space between the discharge end of the conduit and said support timed to so reciprocate it during the retraction of the working member.

5. In combination with the frame, an endless chain of work holders, a driving sprocket wheel for the same; a shaft for said wheel; pawl-and-ratchet mechanism actuating said wheel; a scalloped wheel on said shaft having peripheral recesses at angular intervals equal to the step movement of the sprocket wheel; a support for working material level with the top of the work holders at one side of their path of travel; a pivoted arm and means for

oscillating it over the top of said support, said means comprising an arm having a roller which bears upon the periphery of the scalloped wheel, and means for yieldingly pressing it thereagainst.

[Claims 6 to 10 not printed in the Gazette.]

1,105,750. TRACTOR, PROPELLER, OR HELICOPTER FOR AIRSHIPS. CARL DRYDEN BROWNE, Hot Springs township, Napa county, Cal., assignor to William Kent, trustee, Kentfield, Cal. Filed July 11, 1913. Serial No. 778,599. (Cl. 170—169.)

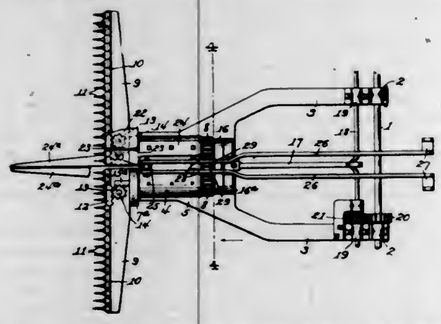


1. A propeller comprising a revoluble shaft, a cross arm, and a pair of approximately diamond-shape blades inclined to the axis of the shaft with their working faces in opposite directions, each said blade having an area located below the cross arm double the area above the arm.

2. A propeller comprising a revoluble shaft, a cross arm and a pair of curved blades extending at an angle approximately 55° to the axis of the shaft, each said blade having its greatest width at its point of attachment to the cross arm, and having an area below the arm approximating double the area above the arm.

3. A propeller comprising a revoluble shaft, a cross arm, and a pair of diamond-shape blades extending across the plane of the shaft approximately at an angle of 55° and having an area below said arm approximately double the size of the area above the arm.

1,105,751. MOWING-MACHINE. JAMES WESLEY BRUCE, Ozark, Ohio. Filed Sept. 6, 1913. Serial No. 788,463. (Cl. 56—78.)



1. The combination with a suitable support, of a housing, a pair of rotatable sleeves mounted in said housing, a laterally extending bar in fixed relation to each sleeve, a cutter-bar mounted on each of said bars, rods extending through said sleeves, means for imparting reciprocating motion to said rods, and means interposed between said rods and said cutter bars whereby motion imparted to the former is communicated to the latter.

2. The combination with a suitable support, of a housing, a pair of rotatable members mounted in said housing, a laterally extending bar in fixed relation to each of said members, a cutter-bar mounted on each of said bars, a gear-rack carried by each cutter-bar, a pinion mounted in operative engagement with each gear-rack, rods extending through said members and having gear-racks in operative engagement with said pinions, and means for imparting reciprocating motion to said rods.

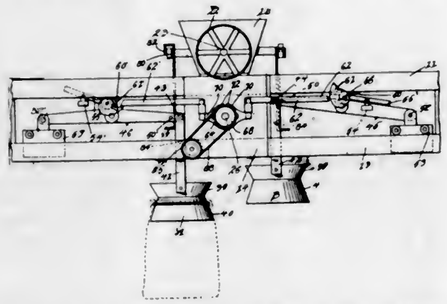
3. The combination with a suitable support, of a housing, a pair of rotatable sleeves mounted in said housing, a laterally extending bar in fixed relation to each sleeve, a cutter-bar mounted on each of said bars, a gear-rack carried by each cutter-bar, a pinion mounted in operative engagement with each gear-rack, and reciprocable means operating through said sleeves and having engagement with said pinions whereby reciprocatory motion is communicated to said cutter-bars.

4. The combination with a suitable support, of a housing, a pair of rotatable sleeves mounted in said housing, a laterally extending bar carried by the front end of each sleeve, a cutter-bar carried by each of said bars, rods extending through said sleeves, means for imparting reciprocatory motion to said rods, means interposed between said rods and said cutter bars whereby motion imparted to the former is communicated to the latter, and means for rotating said sleeves to elevate the laterally extending bars.

5. The combination with a suitable support, of a housing, a pair of rotatable sleeves mounted in said housing, a laterally extending bar carried by the front end of each sleeve, a cutter-bar carried by each of said bars, rods extending through said sleeves, means for imparting reciprocatory motion to said rods, means interposed between said rods and said cutter bars whereby motion imparted to the former is communicated to the latter, pinions mounted on said sleeves, and manually operated means associated with said pinions whereby said sleeves are rotated to elevate the laterally extending bars.

[Claims 6 to 10 not printed in the Gazette.]

1,105,752. AUTOMATIC SACKING AND WEIGHING MACHINE. CLARENCE P. BRUMBY, East Point, Ga. Filed Apr. 22, 1913. Serial No. 762,946. (Cl. 73—169.)



1. An automatic weighing and sacking machine including a plurality of sack holders, a rotor for discharging the material into a sack, means for actuating said rotor, and means operatively connected to said rotor actuating means and automatically controlled by the predetermined weight of the material contained within the receiving sack for reversing the direction of rotation of the said discharge rotor.

2. An automatic weighing and sacking machine including a plurality of sack holders, a rotor for discharging material into a sack, said rotor including a small center section and a pair of larger terminal sections, means automatically controlled by a predetermined weight of material discharged into the receiving sack for selectively rotating the said rotor sections and for reversing the direction of rotation of said rotor sections.

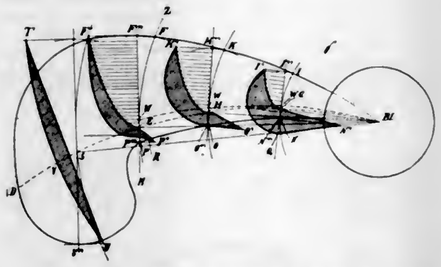
3. An automatic weighing and sacking machine including a plurality of sack holders, a plurality of sacks carried thereby, a rotor adapted to discharge material into a sack, said rotor including a positively driven shaft, a center rotor section keyed on said shaft, a pair of terminal rotor sections loosely mounted on said shaft, and means controlled by a predetermined weight of material contained within the receiving sack for automatically and selectively controlling the rotation of said center and end sections and for automatically reversing the direction of rotation of said center and end sections when the material contained within the receiving sack has reached a predetermined weight.

4. An automatic weighing and sacking machine including a main supporting frame, a discharge rotor mounted therein, said rotor including a positively driven shaft, a center rotor section keyed thereon, a pair of terminal sections loosely mounted thereon, and means automatically controlled by the weight of the grain contained within the receiving sack for selectively controlling the actuating of said center and end sections and for reversing the direction of rotation of the said sections when the weight of the grain in the reversing sack has reached a predetermined point.

5. An automatic weighing and sacking machine including a main supporting frame, a discharge rotor mounted therein, a plurality of sack holders mounted in said frame, and means for automatically reducing the volume of material discharged from the said rotor to a predetermined minimum and for increasing it to a predetermined maximum when the weight of the grain in the receiving sack has reached predetermined points.

[Claims 6 to 16 not printed in the Gazette.]

1,105,753. SCREW-PROPELLER FOR AEROPLANES, AIRSHIPS, VESSELS, AND THE LIKE. OTTO BRUNNER, Saimannsleben, Austria-Hungary. Filed Feb. 15, 1913. Serial No. 748,567. (Cl. 170—159.)



1. In a vane for screw propellers, a front part having an active surface, and a rear part having an active surface, the active surface of the front part being shaped to reflect substantially all the particles of the impinging medium into immediate proximity to the active surface of the rear part; substantially as described.

2. In a vane for screw propellers, a front part having an active surface, a rear part having an active surface, and a peripheral part formed peripherally of said parts, the active surface of the front part being shaped to reflect substantially all of the particles of the impinging medium into immediate proximity to the active surface of the rear part, and the active surfaces of the front and rear parts being shaped to direct the particles of the impinging medium against the active surface of the peripheral part; substantially as described.

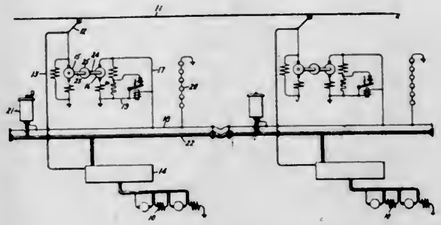
3. In a vane for screw propellers, a front part having an active surface, a rear part having an active surface, and a peripheral part formed peripherally of said parts and having a projection extending in a direction opposite to that of the movement of the vane, the active surface of the front part being shaped to reflect substantially all of the particles of the impinging medium into immediate proximity to the active surface of the rear part, and the active surfaces of the front and rear parts being shaped to direct the particles of the medium against the active surface of the peripheral part; substantially as described.

4. In a vane for screw propellers, a front part having an active surface of conoidal form with its apex in the axis of rotation of the propeller and its generating line formed by a cycloid segment and its leading line formed by an arm of a parabola open in the direction of movement and having its axis in the plane of rotation of the vane, and a rear part adjoining the front part and consisting of a screw surface for the exit of the impinging medium; substantially as described.

5. In a vane for screw propellers, a front part having an active surface of conoidal form with its apex in the axis of rotation of the propeller and its generating line formed by a cycloid segment and its leading line formed by an arm of a parabola open in the direction of movement and having its axis in the plane of rotation of the vane, and a rear part adjoining the front part and having a screw active surface for the exit of the impinging medium, said screw surface being formed by the movement of the cycloid segment along the axis of the propeller and along a line extending obliquely and in a direction opposite to that of the movement of the vane; substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,754. ELECTRIC TRAIN DISTRIBUTION. EUGENE R. CARICHOFF, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 24, 1913. Serial No. 756,398. (Cl. 171—97.)



1. In a train consisting of a plurality of cars, each provided with a driving motor, a distribution system in shunt with the supply circuit of each of the said driving motors, and comprising a transforming means consisting of a motor and a generator driven thereby, means for electrically connecting the several generators and means for preventing the transforming devices from supplying energy to the circuit of the driving motor.

2. In a train consisting of a plurality of cars, an electric distribution system comprising a motor and generator driven thereby for each car, means for electrically connecting the generators and means for preventing any of the motors from being driven as generators upon the failure of a supply of energy thereto.

3. In a train consisting of a plurality of cars, each provided with an electric driving motor, a distribution circuit supplied from the same source as said motor and comprising a motor and a generator driven thereby for each car, means for electrically connecting the several generators and means for preventing any of the motors from being driven as generators upon the failure of a supply of energy thereto.

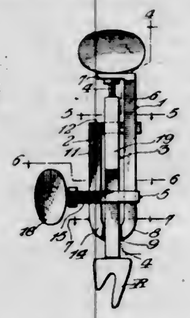
4. In a train consisting of a plurality of cars each provided with an electric driving motor and a trolley whereby energy is supplied thereto, a distribution system also supplied through said trolley and comprising a motor and a generator driven thereby for each car, means for elec-

trically connecting the several generators and means for preventing any one of the motors from being driven as a generator upon the removal of the trolley of the car on which it is mounted.

5. In a train consisting of a plurality of cars each provided with a driving motor and a trolley whereby energy is supplied thereto, a distribution system in shunt with the supply circuit of each of said driving motors and comprising a transforming means consisting of a motor and a generator, means for electrically connecting the several generators and means for preventing the motor of the transforming device of a car from being driven as a generator upon the failure of the supply of energy to the said motor.

[Claims 6 and 7 not printed in the Gazette.]

1,105,755. DENTAL INSTRUMENT. LEWIS A. CHAMBERLIN and CHARLES H. WILLIAMS, De Soto, Mo. Filed May 14, 1914. Serial No. 838,571. (Cl. 32—10.)

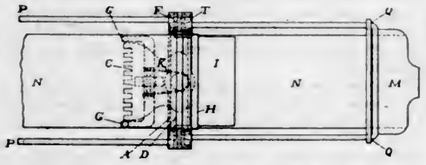


1. A device of the character described comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a clamp for moving said movable jaw toward the fixed jaw and a set screw swiveled in said ear and having a threaded engagement with the adjacent end of said stop member.

2. A device of the character described comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a transverse clamping yoke embracing the two jaw members and the stop member, coacting stops carried by one jaw member and by one end of the yoke, a clamping screw having a threaded engagement with the opposite end of the yoke and bearing against the other jaw member and a set screw swiveled through said ear and having a threaded engagement with the adjacent end of the stop member.

3. A device of the character described, comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a transverse clamping yoke embracing the two jaw members and the stop member and having in its opposite ends a stud receiving opening and a threaded opening, a stop stud carried by one jaw member and disposed in said stud receiving opening, a clamping screw in the threaded opening and bearing against the other jaw member and a set screw swiveled in said ear and having a threaded engagement with the adjacent end of the stop member.

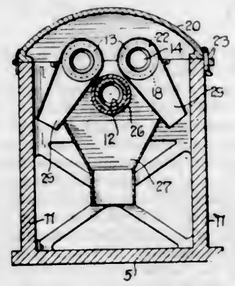
1,105,756. RAZOR. SAMUEL W. CHARLES, Palo Alto, Cal. Filed June 27, 1911. Serial No. 635,591. (Cl. 30—12.)



1. In a razor, the combination with a supporting frame, of an oscillatory blade holder journaled therein and having a blade receiving slot, and opposite reciprocatory latches engaging over the cutting edge of the blade and having overlapped offset portions forming finger pieces that are movable toward and from each other.

2. In a razor, the combination with a frame having a handle and a comb plate, of an oscillatory blade holder mounted on the frame, a blade detachably mounted in the holder and having a cutting edge located at the margin of the comb plate, and oppositely-acting latches slidably mounted on the rear side of the comb plate and provided with offset finger pieces that are movable toward each other, said latches having hooks that detachably engage over the blade to hold the latter in position on the comb plate and being movable outwardly upon the movement of the finger pieces toward each other.

1,105,757. BUTTON-MAKING MACHINE. BOSTON CLAY, Muscatine, Iowa, assignor to James T. Sissel, Muscatine county, Iowa. Filed Feb. 11, 1914. Serial No. 818,139. (Cl. 79—16.)



1. In a blank cutting machine, the combination of a support, of a saw carrying member journally carried thereby, a plurality of saw carrying members also carried by the support and having portions thereof engaging the first member, intermeshing gears formed on the engaging portions of the members, and means for rotating the first mentioned saw carrying member.

2. In a blank cutting machine, the combination with a support, of a tubular saw carrying member journaled therein, a plurality of tubular saw carrying members journally mounted on the support and engaging the first mentioned member to be rotated thereby, a cover hinged to the support and engaging the last mentioned saw carrying members to hold them in relation to the first mentioned member, and means for rotating the first mentioned member.

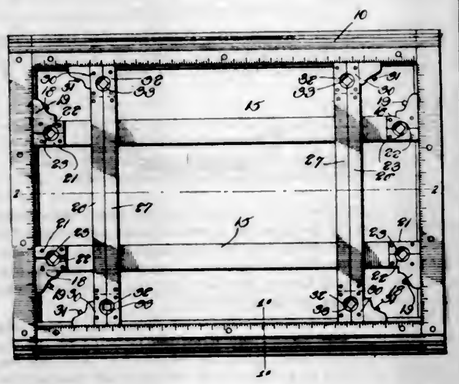
3. A blank cutting machine comprising a support, a tubular saw carrying member journally carried by the support, a plurality of saw carrying members also carried by the support, intermeshing gears formed on the engaging portions of the members, a drive shaft disposed in axial alinement with the first-mentioned member and terminating short of one end of said member, and means connecting the shaft and the first-mentioned member to drive said member and at the same time to permit the blanks to be discharged from the inner end of said member.

4. A button making machine comprising a support, a tubular saw carrying member journaled therein, a shaft in axial alinement with said member, a sleeve formed at the end of said shaft adjacent said member, said sleeve being threaded on the saw carrying member, and the shaft being formed with a skeleton section adjacent the sleeve whereby the blanks projected through the bore of the tubular saw carrying member will fall outwardly through the interstices thereof.

5. A blank cutting machine comprising a casing, a plurality of tubular saw members journally carried on one wall thereof, a shaft journaled in the opposite wall of the casing in axial alinement with one of said members, a plurality of spaced bowed arms extending from said shaft toward one of said members, a sleeve formed at the terminals of said arms for engagement with the member and in alinement therewith, and a chute disposed under the arms and under the discharge ends of the other tubular members.

[Claims 6 and 7 not printed in the Gazette.]

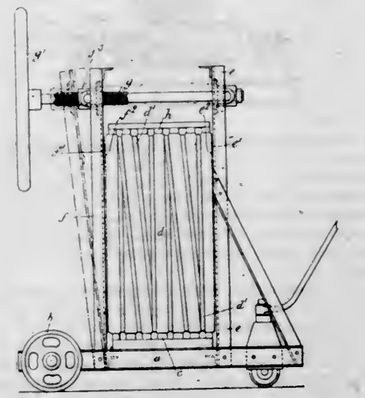
1,105,758. ADJUSTABLE PRINTER'S CHASE. CECIL E. CLIPPINGER and JOHN A. SMITH, Carmi, Ill. Filed Sept. 22, 1913. Serial No. 791,196. (Cl. 101—25.)



1. A chase comprising a frame having the inner faces of its side bars provided with teeth, clamping bars slidably mounted in said frame, each of said clamping bars comprising a major strip and an auxiliary strip, heads carried by said major and auxiliary strips and provided with cut-out portions positioned in alinement and forming pockets, resilient means yieldably holding said major and auxiliary strips in close engagement, cams mounted in said pockets whereby said auxiliary strips may be moved away from said major strips, and pawls engaging the teeth of said frame whereby said bars may be held in an adjusted position.

2. A chase comprising a frame having the inner faces of its side bars provided with teeth, clamping bars slidably mounted in said frame, each of said clamping bars comprising a major strip and an auxiliary strip, heads carried by said major and auxiliary strips and provided with cut-out portions positioned in alinement and forming pockets, resilient means yieldably holding said major and auxiliary strips in close engagement, cams mounted in said pockets whereby said auxiliary strips may be moved away from said major strips, the heads carried by said auxiliary strips extending beyond the side portions of said strips and provided with secondary pockets, spring-actuated pawls carried within said last mentioned pockets engaging the teeth of said frame whereby said bars may be held in an adjusted position, said pawls being carried adjacent said cams for receiving the direct pressure imparted by the rotation of said cams thereby holding said bars more firmly.

1,105,759. APPARATUS FOR ENABLING SAMPLES TO BE TAKEN FROM BALES. ARTHUR ELPHINSTONE CUMMINS, Hampstead, England, assignor of one-half to Robert Bridge, Manchester, England. Filed Feb. 27, 1914. Serial No. 821,623. (Cl. 100—19.)



1. The combination of nippers for gripping a bale on two opposite sides near one end, means for supporting the nippers a short distance from this end of the bale, means for moving the nippers toward each other into engagement with the bale a short distance from the adjacent end thereof, and an abutment for the other end of the bale adapted to prevent its expansion lengthwise when it is unhooped.

2. The combination of a platform adapted to support a bale, a vertical frame fixed to the platform, a frame pivoted to the platform, cross bars fixed to the frames, and means for forcing the pivoted frame toward the fixed frame.

3. The combination of a platform adapted to support a bale, a vertical frame fixed to the platform, a frame pivoted to the platform, cross bars fixed to the frames, a screw pivoted to the fixed frame, and a nut pivoted to the pivoted frame and engaging with the screw.

1,105,760. HOE. BERENT O. DAHL, Viroqua, Wis. Filed Oct. 22, 1912. Serial No. 727,192. (Cl. 55—5.)

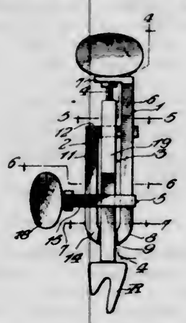
A hoe comprising a blade having a semi-circular portion provided with a cutting edge; an opposed portion having relative angularly-disposed straight edges and an intermediate rounded edge; the body-portion of said blade being centrally cut away; said opposed hoe portions

trically connecting the several generators and means for preventing any one of the motors from being driven as a generator upon the removal of the trolley of the car on which it is mounted.

5. In a train consisting of a plurality of cars each provided with a driving motor and a trolley whereby energy is supplied thereto, a distribution system in shunt with the supply circuit of each of said driving motors and comprising a transforming means consisting of a motor and a generator, means for electrically connecting the several generators and means for preventing the motor of the transforming device of a car from being driven as a generator upon the failure of the supply of energy to the said motor.

[Claims 6 and 7 not printed in the Gazette.]

1,105,755. DENTAL INSTRUMENT. LEWIS A. CHAMBERLIN and CHARLES H. WILLIAMS, De Soto, Mo. Filed May 14, 1914. Serial No. 838,571. (Cl. 32—10.)

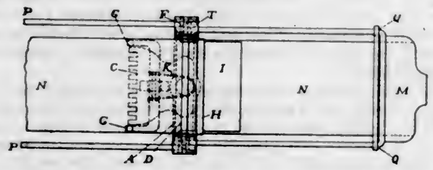


1. A device of the character described comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a clamp for moving said movable jaw toward the fixed jaw and a set screw swiveled in said ear and having a threaded engagement with the adjacent end of said stop member.

2. A device of the character described comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a transverse clamping yoke embracing the two jaw members and the stop member, coacting stops carried by one jaw member and by one end of the yoke, a clamping screw having a threaded engagement with the opposite end of the yoke and bearing against the other jaw member and a set screw swiveled through said ear and having a threaded engagement with the adjacent end of the stop member.

3. A device of the character described, comprising a fixed rectilinear jaw member having a transverse ear at one end, a transverse jaw at its opposite end, and a transverse slot intermediate its ends, the ear, the jaw, and the slot lying in the same longitudinal plane, a rectilinear movable jaw member lying substantially parallel to said fixed member and spaced therefrom, said movable member having a transverse extension on one end and a transverse jaw on its opposite end, said extension having a reduced terminal slidable in said slot, a rectilinear stop member interposed between said fixed and movable jaw members and having a bifurcated portion straddling said jaws and a transversely and longitudinally slotted portion receiving said transverse extension, a transverse clamping yoke embracing the two jaw members and the stop member and having in its opposite ends a stud receiving opening and a threaded opening, a stop stud carried by one jaw member and disposed in said stud receiving opening, a clamping screw in the threaded opening and bearing against the other jaw member and a set screw swiveled in said ear and having a threaded engagement with the adjacent end of the stop member.

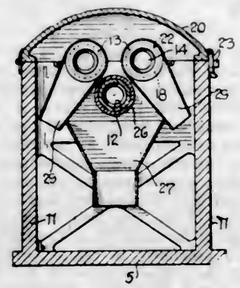
1,105,756. RAZOR. SAMUEL W. CHARLES, Palo Alto, Cal. Filed June 27, 1911. Serial No. 635,591. (Cl. 30—12.)



1. In a razor, the combination with a supporting frame, of an oscillatory blade holder journaled therein and having a blade receiving slot, and opposite reciprocatory latches engaging over the cutting edge of the blade and having overlapped offset portions forming finger pieces that are movable toward and from each other.

2. In a razor, the combination with a frame having a handle and a comb plate, of an oscillatory blade holder mounted on the frame, a blade detachably mounted in the holder and having a cutting edge located at the margin of the comb plate, and oppositely-acting latches slidably mounted on the rear side of the comb plate and provided with offset finger pieces that are movable toward each other, said latches having hooks that detachably engage over the blade to hold the latter in position on the comb plate and being movable outwardly upon the movement of the finger pieces toward each other.

1,105,757. BUTTON-MAKING MACHINE. BOSTON CLAY, Muscatine, Iowa, assignor to James T. Sissel, Muscatine county, Iowa. Filed Feb. 11, 1914. Serial No. 818,139. (Cl. 79—16.)



1. In a blank cutting machine, the combination of a support, of a saw carrying member journally carried thereby, a plurality of saw carrying members also carried by the support and having portions thereof engaging the first member, intermeshing gears formed on the engaging portions of the members, and means for rotating the first mentioned saw carrying member.

2. In a blank cutting machine, the combination with a support, of a tubular saw carrying member journaled therein, a plurality of tubular saw carrying members journally mounted on the support and engaging the first mentioned member to be rotated thereby, a cover hinged to the support and engaging the last mentioned saw carrying members to hold them in relation to the first mentioned member, and means for rotating the first mentioned member.

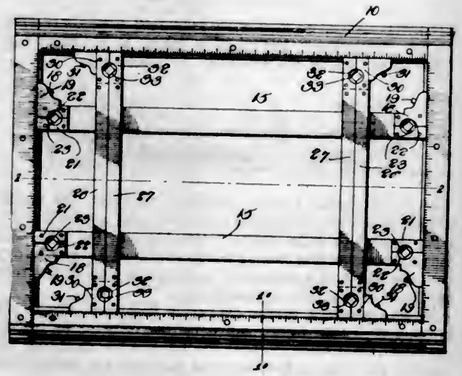
3. A blank cutting machine comprising a support, a tubular saw carrying member journally carried by the support, a plurality of saw carrying members also carried by the support, intermeshing gears formed on the engaging portions of the members, a drive shaft disposed in axial alinement with the first-mentioned member and terminating short of one end of said member, and means connecting the shaft and the first-mentioned member to drive said member and at the same time to permit the blanks to be discharged from the inner end of said member.

4. A button making machine comprising a support, a tubular saw carrying member journaled therein, a shaft in axial alinement with said member, a sleeve formed at the end of said shaft adjacent said member, said sleeve being threaded on the saw carrying member, and the shaft being formed with a skeleton section adjacent the sleeve whereby the blanks projected through the bore of the tubular saw carrying member will fall outwardly through the interstices thereof.

5. A blank cutting machine comprising a casing, a plurality of tubular saw members journally carried on one wall thereof, a shaft journaled in the opposite wall of the casing in axial alinement with one of said members, a plurality of spaced bowed arms extending from said shaft toward one of said members, a sleeve formed at the terminals of said arms for engagement with the member and in alinement therewith, and a chute disposed under the arms and under the discharge ends of the other tubular members.

[Claims 6 and 7 not printed in the Gazette.]

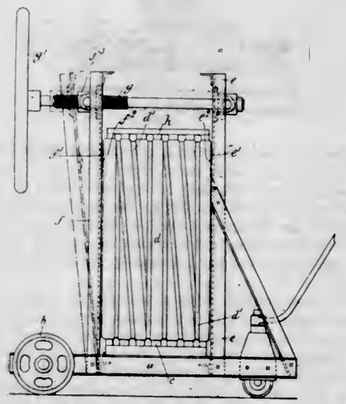
1,105,758. ADJUSTABLE PRINTER'S CHASE. CECIL E. CLIPPINGER and JOHN A. SMITH, Carmi, Ill. Filed Sept. 22, 1913. Serial No. 791,196. (Cl. 101—25.)



1. A chase comprising a frame having the inner faces of its side bars provided with teeth, clamping bars slidably mounted in said frame, each of said clamping bars comprising a major strip and an auxiliary strip, heads carried by said major and auxiliary strips and provided with cut-out portions positioned in alinement and forming pockets, resilient means yieldably holding said major and auxiliary strips in close engagement, cams mounted in said pockets whereby said auxiliary strips may be moved away from said major strips, and pawls engaging the teeth of said frame whereby said bars may be held in an adjusted position.

2. A chase comprising a frame having the inner faces of its side bars provided with teeth, clamping bars slidably mounted in said frame, each of said clamping bars comprising a major strip and an auxiliary strip, heads carried by said major and auxiliary strips and provided with cut-out portions positioned in alinement and forming pockets, resilient means yieldably holding said major and auxiliary strips in close engagement, cams mounted in said pockets whereby said auxiliary strips may be moved away from said major strips, the heads carried by said auxiliary strips extending beyond the side portions of said strips and provided with secondary pockets, spring-actuated pawls carried within said last mentioned pockets engaging the teeth of said frame whereby said bars may be held in an adjusted position, said pawls being carried adjacent said cams for receiving the direct pressure imparted by the rotation of said cams thereby holding said bars more firmly.

1,105,759. APPARATUS FOR ENABLING SAMPLES TO BE TAKEN FROM BALES. ARTHUR ELPHINSTONE CUMMINS, Hampstead, England, assignor of one-half to Robert Bridge, Manchester, England. Filed Feb. 27, 1914. Serial No. 821,623. (Cl. 100—19.)



1. The combination of nippers for gripping a bale on two opposite sides near one end, means for supporting the nippers a short distance from this end of the bale, means for moving the nippers toward each other into engagement with the bale a short distance from the adjacent end thereof, and an abutment for the other end of the bale adapted to prevent its expansion lengthwise when it is unhooped.

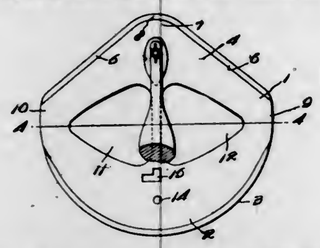
2. The combination of a platform adapted to support a bale, a vertical frame fixed to the platform, a frame pivoted to the platform, cross bars fixed to the frames, and means for forcing the pivoted frame toward the fixed frame.

3. The combination of a platform adapted to support a bale, a vertical frame fixed to the platform, a frame pivoted to the platform, cross bars fixed to the frames, a screw pivoted to the fixed frame, and a nut pivoted to the pivoted frame and engaging with the screw.

1,105,760. HOE. BERENT O. DAHL, Viroqua, Wis. Filed Oct. 22, 1912. Serial No. 727,192. (Cl. 55—5.)

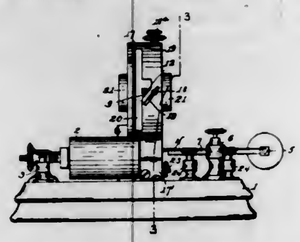
A hoe comprising a blade having a semi-circular portion provided with a cutting edge; an opposed portion having relative angularly-disposed straight edges and an intermediate rounded edge; the body-portion of said blade being centrally cut away; said opposed hoe portions

having each an angular and a circular aperture therethrough; and a shank provided with means for securing



it to said blade through the medium of said apertures in either of said portions, substantially as described.

1,105,761. RELAY SOUNDER ATTACHMENT. SYLVA L. DICKSON, Short Creek, W. Va. Filed Sept. 2, 1913. Serial No. 787,624. (Cl. 178—100.)



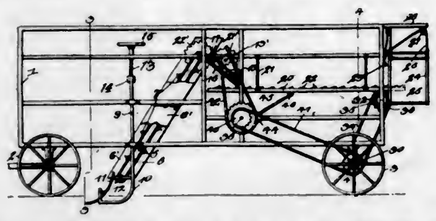
1. The combination with a telegraphic relay having an armature provided with an upright arm, of a pair of metallic diaphragms disposed on opposite sides of said arm and adapted to be struck by the latter at the limits of its movements for producing audible sounds, plates supporting said diaphragms, and a casing supporting said plates, one of said plates being adjustably mounted within said casing.

2. The combination with a telegraphic relay having an armature provided with an upright arm, of a pair of metallic diaphragms disposed on opposite sides of said arm and adapted to be struck by the latter at the limits of its movements for producing audible sounds, plates supporting said diaphragms, and a casing supporting said plates, said casing having inclined slots therein, pins carried by one of said plates and projecting outward through said slots whereby a rotary movement imparted to the plate acts in advance or retract the latter with respect to the other plate, according to the direction of said movement.

3. The combination with a telegraphic relay having an armature provided with an upright arm of a pair of metallic diaphragms disposed on opposite sides of said arm and adapted to be struck by the latter at the limits of its movements for producing audible sounds, plates supporting said diaphragms, a casing supporting said plates, said casing having inclined slots therein, pins carried by one of said plates and projected outward through said slots whereby a rotary movement imparted to the plate acts to advance or retract the latter with respect to the other plate, according to the direction of said movement, and means for securing said movable plate in adjusted position.

1,105,762. ROOT DIGGING AND GATHERING MACHINE. ALFRED R. DITSWORTH, Lonerock, Iowa. Filed Oct. 21, 1912. Serial No. 727,035. (Cl. 130—32.)

In combination with a movably supported separating device and a conveyer terminating thereabove, a plurality of spaced downwardly inclined toothed arms, a plurality of similarly inclined arms supported so as to oscillate immediately above the first mentioned toothed arms, cranks operatively connected with the latter and intermediate their respective lengths, links operatively connected with



the lower ends of said arms, and means operatively connected with the conveyer to operate the crank shaft.

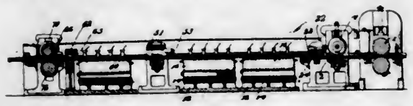
1,105,763. NUT-LOCK. WHITFIELD H. EDWARDS, Tamina, Tex. Filed Oct. 14, 1913. Serial No. 795,040. (Cl. 151—6.)



1. In a device of the character described, the combination with a bolt and a nut threaded thereon, of a Y-shaped member formed of a stem and two flexible prongs, the stem having slidable engagement with the nut and the prongs embracing the bolt, the free ends of said prongs having detachable engagement with the bolt.

2. A device of the character described, comprising a bolt, one end of which is outwardly threaded, said end having a plurality of lengthwise slots arranged around the periphery thereof, a nut having a tapped hole extending therethrough, whose outer end is enlarged so as to form an annular space between said nut and bolt, said nut also having an orifice extending from said annular space through the wall thereof, a Y-shaped member comprising a stem and two flexible prongs, said stem extending through said orifice and said prongs embracing said bolt, an inwardly extending catch carried by the free end of each prong, said catches normally engaging in opposing slots of said bolt.

1,105,764. APPARATUS FOR MAKING WELDED TUBING. WILLIAM C. FRICK, Deal Beach, N. J. Filed July 19, 1909. Serial No. 508,447. (Cl. 219—6.)



1. In apparatus of the character described, the combination of means for feeding a slotted tube, and means for independently heating the opposite edges of the tube, said independent heating means being arranged to alternately heat the edges of a tube, first heating one edge of the tube and then heating the opposite edge.

2. In apparatus of the character described, means for heating a slotted tube comprising two sets of terminals, arranged to alternately heat the edges of a tube, one set heating one edge of the tube and the next set heating the opposite edge of the tube.

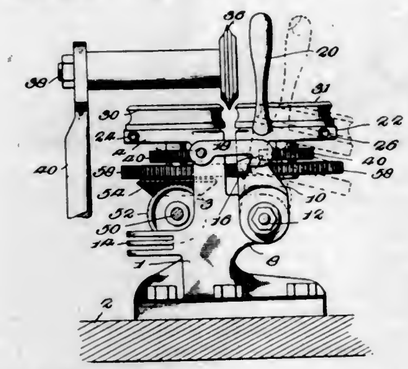
3. In apparatus of the character described, means for heating a slotted tube comprising a plurality of sets of interior and external terminals, arranged to alternately heat the edges of a tube, one set heating one edge of the tube and the next set heating the opposite edge of the tube, in combination with rollers located on the exterior of the tube opposite the external terminals.

4. In apparatus of the character described, means for heating a slotted tube comprising a plurality of sets of interior and external terminals, arranged to alternately heat the edges of a tube, one set heating one edge of the tube and the next set heating the opposite edge of the tube, in combination with rollers located on the exterior of the tube opposite the external terminals, said exterior terminals and said rollers being concave.

5. In apparatus of the character described, means for heating a slotted tube comprising a plurality of sets of interior and external terminals, arranged to alternately heat the edges of a tube, one set heating one edge of the tube and the next set heating the opposite edge of the tube, the interior terminals being insulated on one side so as to heat only one edge.

[Claims 6 to 20 not printed in the Gazette.]

1,105,765. APPARATUS FOR WELDING TUBING. WILLIAM C. FRICK, Deal Beach, N. J. Filed July 19, 1909, Serial No. 508,446. Renewed Jan. 5, 1914. Serial No. 810,512. (Cl. 219—6.)



1. In welding apparatus, a suitable support carrying two series of grooved rollers, and means for positively driving said rollers said rollers being electrically connected, substantially as described.

2. In welding apparatus, a frame carrying a series of rollers in combination with a second frame carrying a series of rollers co-acting with the first series of rollers, one of said frames being movable with respect to the other and said rollers being electrically connected.

3. In welding apparatus, a frame carrying a series of electrically connected rollers in combination with a second frame carrying a series of electrically connected rollers co-acting with the first series of rollers, one of said frames being movable with respect to the other, and each of said frames being water cooled, substantially as described.

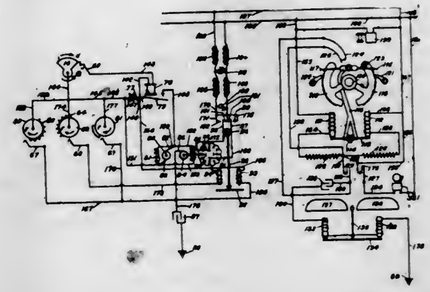
4. In welding apparatus, a frame carrying a series of rollers in combination with a second frame carrying a series of rollers co-acting with the first series of rollers, one of said frames being movable with respect to the other, each of said frames being provided with means for positively driving the rollers, substantially as described.

5. In welding apparatus, a frame carrying a series of rollers in combination with a second frame carrying a series of rollers co-acting with the first series of rollers, one of said frames being movable with respect to the other, each of said frames being water cooled and provided with means for positively driving the rollers, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,105,766. INDIVIDUAL CALLING-KEY. MAURICE F. GEER and RICHARD C. LEAKE, Rochester, N. Y., assignors to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 10, 1911. Serial No. 626,285. (Cl. 177—343.)

1. In a calling key in combination, a part adapted to be operated manually, means operatively connected to said part adapted to generate an electrical current upon the initial movement of said part, means operated by the return of said part to normal, adapted for sending a predetermined number of impulses of electricity in two directions, and to send an additional impulse of definite length in one of said directions, said first mentioned means adapted to continue the generation of electrical current until said impulse of definite length has been sent and to thereafter discontinue.



2. In a calling key, in combination, a part adapted to be operated manually, means actuated by said manual operation to return said part to initial position after being actuated manually, a generator, means actuated by said manual operation of said part adapted on the initial movement of said part to start said generator and continue said generator in operation until said part returns to normal, and means for governing the current generated by said generator, actuated by said part adapted to be operated manually.

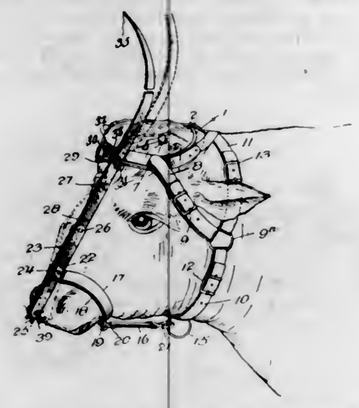
3. In a calling key, in combination, a part to be operated manually, means adapted for returning said part to normal position after being operated manually, a generator, means adapted for starting said generator upon the initial movement of said part manually and for continuing said generator in operation until said part returns to normal, means also set in operation by said manual operation for sending a predetermined number of impulses in one direction from said generator, means also set in operation by said manual operation thereafter acting to send a further predetermined number of impulses from said generator in a reverse direction and means also set in operation by said manual operation thereafter acting to send a single impulse in said first direction.

4. In a calling key, in combination, a shaft, a handle on said shaft, a sector on said shaft, a contact spring in proximity to said sector, a spring having one end fastened to said shaft, a fixed member to which the other end of said spring is fastened, a ratchet wheel attached to said shaft, a pawl pivoted on a gear wheel revoluble about said shaft, a spring fastened to said gear wheel at one end and pressing said pawl into engagement with said ratchet at the other end, a pinion meshing with said gear wheel, a shaft on which said pinion is mounted, a hub fastened to said shaft, a disk having teeth adjustably mounted on said hub, a contact spring mounted in the path of said teeth, a second disk having teeth adjustably mounted on said hub, a contact spring in the path of said teeth, a third disk adjustably mounted on said hub and having a part in the plane of said second mentioned contact spring, a centrifugal governor, a train of gears connecting said second mentioned shaft with said governor, a stop on said hub and a stop on said first mentioned shaft adapted to contact at normal position, and a fixed stop adapted to contact with said stop on said shaft in reverse position.

5. In a calling key, in combination, a source of current, a converter connected to said source in a partial circuit, means to complete said partial circuit by the initial operation of said calling key and to maintain said partial circuit completed until said key returns to normal.

[Claims 6 to 17 not printed in the Gazette.]

1,105,767. ANIMAL POKE AND WEANER. WILLIAM D. GOFF, Joplin, Mo. Filed May 13, 1913. Serial No. 767,336. (Cl. 119—142.)



1. A device of the class described including a brow band arranged to completely encircle the upper portion of the head of an animal, a nose band, straps connecting the brow band and the nose band for retaining the same on an animal, a front lever fulcrumed at an intermediate point on the nose band, and a rear lever pivotally connected at its front end to the front lever and fulcrumed at an intermediate point on the said brow band and having an extended rear arm projecting upwardly and forwardly and adapted when the head of the animal is thrown upwardly to overbalance and swing rearwardly to oscillate the front lever.

2. A device of the class described including a front lever, fulcrumed at an intermediate point and provided with means for engaging the nose of an animal, a rear lever fulcrumed at a point intermediate of its ends and pivotally connected at its front end to the front lever, said rear lever having an extended rear arm curved upwardly and forwardly and terminating in a spur and adapted when the head of the animal is thrown upwardly to overbalance and swing rearwardly to oscillate the front lever and cause the same to engage the nose of the animal, and means for mounting the said lever on the head of an animal.

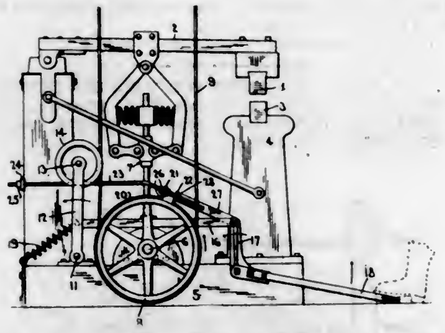
3. A device of the class described including a brow band adapted to encircle the top portion of the head of an animal, a nose band, front side straps extending downwardly and rearwardly from opposite sides of the brow band, rear top straps connected with the brow band and extending downwardly at the back thereof, a throat latch connected with the said straps, means for connecting the throat latch with the nose band, a front lever fulcrumed on the nose band, and a rear lever pivotally mounted on the brow band and connected with the front lever.

4. A device of the class described including a brow band adapted to encircle the top portion of the head of an animal, rear side straps secured to the brow band at opposite sides thereof and crossed in rear of the brow band, each rear strap extending to the other side of the device, front side straps secured to the brow band and extending downwardly and rearwardly, a throat latch connected with the said straps, a nose band, means for detachably connecting the nose band and the throat latch, a front lever fulcrumed on the nose band, and a rear lever pivotally connected to the front lever and detachably fulcrumed on the nose band, said levers and nose band being adapted to be removed and the remaining portion of the device constituting a halter.

5. A device of the class described including a brow band arranged to completely encircle the top of the head of an animal provided with a pliable metallic reinforcing strip adapted to be shaped by bending to fit the head of an animal, a nose band, means for connecting the nose band and the brow band for retaining the same on the head of an animal, and front and rear levers pivotally connected and fulcrumed on the nose band and the brow band, the front lever being provided with means for engaging the nose of an animal.

[Claims 6 and 7 not printed in the Gazette.]

1,105,768. BRAKE FOR TRIP-HAMMERS. EDWARD L. GREENWALD, Dinuba, Cal. Filed May 22, 1913. Serial No. 769,263. (Cl. 74—13.)



1. In a trip hammer of the class described, the combination with a supporting frame, a driving pulley with belt tightening mechanism therefor mounted in said frame, of a brake drum fixed on said pulley, a brake anchoring rod secured to said frame, an expansible brake band engaged with said brake drum and having one end fixed to said anchoring rod and its other end slidably engaged with said rod, and a push bar having a right angular apertured ear slidably mounted on said anchoring rod at the rear of the free end of the brake band, the other end of said push bar being engaged with the operating mechanism of the belt tightener, whereby when the latter is actuated to apply the belt tightening mechanism, the brake band will expand, and when actuated to release the belt tightening mechanism, the band will be forcibly brought into operative engagement with the brake drum.

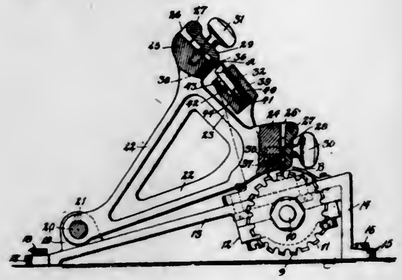
2. In a trip hammer of the class described, the combination with a supporting frame having a driving pulley, a belt tightening mechanism therefor mounted in said frame, of a brake drum fixed on said pulley, an expansible brake band engaged with said drum and having angular laterally projecting apertured lugs at its free ends, a brake anchoring rod fixed to one of said lugs and slidably engaged with the other, the outer end of said rod being secured to said frame and the forward end thereof bent downwardly at an angle, a push bar or link having a laterally extending apertured ear slidably engaged with said rod at the rear of the sliding lug of said brake band, the other end of said push bar being pivotally connected to the operating mechanism of the belt tightener.

1,105,769. KEY-DUPLICATING MACHINE. AUGUST H. GUSSMAN, East Orange, N. J. Filed Feb. 7, 1913. Serial No. 746,781. (Cl. 90—13.2.)

1. A key duplicating machine, comprising a rotary cutter; an anvil having a socket; a finder slidably mounted in said socket to move in a plane parallel to the plane of said cutter; a frame having a plurality of vises fixedly disposed therein and in identical relation to said finder and said cutter, said frame being pivotally mounted to move in a path perpendicular to and to swing in a path parallel with the plane of said cutter; a plurality of adjustable jaws, one mounted on each of said vises; means for tightening said jaws on said vises; and a plurality of spring-seated bed plates mounted in said vises to bear against the face of each of said jaws to provide for holding in adjustment keys and blanks of different thicknesses.

2. A key duplicating machine, comprising a rotary cutter; an anvil having a socket; a finder slidably mounted

in said socket to move in a plane parallel to the plane of said cutter; a frame having a plurality of vises fixedly disposed therein and in identical relation to said finder and said cutter, said frame being pivotally mounted to move in a path perpendicular to and to swing in a path parallel with the plane of said cutter; a plurality of adjustable jaws, one mounted on each of said vises; means for tightening said jaws on said vises; a plurality of spring-seated bed plates mounted in said vises to bear against the face of each of said jaws to provide for holding in adjustment keys and blanks of different thicknesses; and stops mounted one on each of said bed plates to regulate the adjustment of keys and blanks in said vises.



3. A key duplicating machine, comprising a rotary cutter; an anvil having a socket; a finder slidably mounted in said socket; a resilient cushion for said finder; means for regulating the movement of said finder within said socket; and a frame having a plurality of vises fixedly disposed therein and in identical relation to said finder and said cutter, said frame being pivotally mounted to move in a path perpendicular to and to swing in a path parallel with the plane of said cutter.

4. A key duplicating machine, comprising a rotary cutter; an anvil having a socket; a finder slidably mounted in said socket; a resilient cushion for said finder; an adjustable striker mounted in said socket to receive the thrust of said finder; and a frame having a plurality of vises fixedly disposed therein and in identical relation to said finder and said cutter, said frame being pivotally mounted to move in a path perpendicular to and to swing in a path parallel with the plane of the cutter.

5. A key duplicating machine, comprising a rotary cutter; an anvil having a socket; a finder slidably mounted in said socket; a resilient cushion for said finder; an adjusting screw mounted in said socket to determine the movement of said finder in said socket; and a frame having a plurality of vises fixedly disposed therein and in identical relation to said finder and said cutter, said frame being pivotally mounted to move in a path perpendicular to and to swing in a path parallel with the plane of said cutter.

[Claim 6 not printed in the Gazette.]

1,105,770. MINIATURE ELECTRIC LAMP. HERBERT E. GUSTAFSON, Pueblo, Colo. Filed Feb. 25, 1914. Serial No. 820,924. (Cl. 240—73.)



1. A bracket for an electric light comprising a sleeve having a lateral opening therein and a supporting lug extending across one end of said sleeve and adapted to receive attaching means in the direction of the axis thereof.

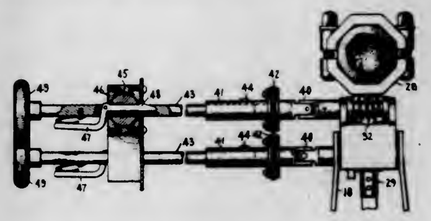
2. A bracket for an electric light comprising a sleeve having a lateral opening therein, a supporting lug extending across one end of said sleeve and adapted to receive attaching means in the direction of the axis of the sleeve, and shade supporting means.

3. A bracket for an electric light comprising a resilient split sleeve, a supporting lug extending across one end of said sleeve and adapted to receive attaching means in the direction of the axis of the sleeve, and shade supporting means.

4. A bracket for an electric light comprising an insulating tube, a resilient split sleeve formed as a continuation thereof, and a lug also carried by said tube and extending across one end of said split sleeve, said lug having a perforation therein adapted to receive an attaching screw in the direction of the axis of the sleeve and a perforation for receiving means for securing a shade thereto.

5. An incandescent electric lamp socket comprising an insulating casing, a pair of poles within said casing adapted to coöperate with a bulb, and a pair of wires connected to said poles respectively, said casing having an opening in its side whereby said wires may pass out above the base of said socket and in a direction at right angles to the axis thereof, in combination with a supporting bracket for said socket having means in the line of the axis of said socket for attaching said bracket to a supporting surface and a lateral opening therein through which said wires may pass.

1,105,771. SEARCH-LIGHT MECHANISM. JOHN L. HALL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 21, 1910. Serial No. 556,685. (Cl. 176—51.)



1. In a searchlight projector or the like, the combination with an electrode support having pivotal mountings at right angles with each other, a pair of adjusting spirals rotatably mounted on parallel axes, and pins engaging the spirals and moved thereby to turn the support on its pivots.

2. In a searchlight projector or the like, the combination with a shaft having a spiral rib extending longitudinally thereof, an electrode holder having a projection engaging said rib, a second shaft parallel with said first shaft having a spiral rib extending transversely of its axis, and a pivoted bearing for rotatably supporting the holder and having a projection engaging said latter rib.

3. In a searchlight projector or the like, the combination with a fixed frame, parallel shafts rotatably mounted therein having spiral ribs extending longitudinally and transversely thereof respectively, a pivoted bearing bracket having a projection engaging one of said ribs, and an electrode holder having a bearing in said bracket and provided with a projection engaging the other of said ribs.

4. In a searchlight projector or the like, the combination with arc lamp mechanism slidably mounted within the projector casing, of electrode adjusting mechanism having telescoping sectional shafts, one section being connected to the adjusting mechanism by a universal joint, while the other section is slidably mounted in a universal bearing in the casing and means for locking the latter section in the casing.

1,105,772. PROCESS OF MAKING GAS FROM OIL. WILLIAM A. HALL, New York, N. Y. Filed June 25, 1913. Serial No. 775,741. (Cl. 48—214.)

1. A process of making a combustible gas, which comprises bringing a mixture containing substantially equal parts of water and oil into contact with a metal having

the property of causing the dissociation of water into its elements, at a temperature of about 650 to 750° C.

2. A process of making a combustible gas, which comprises bringing a mixture containing water and oil into contact with metallic nickel, at a temperature at which nickel cannot remain combined with the oxygen of said water.

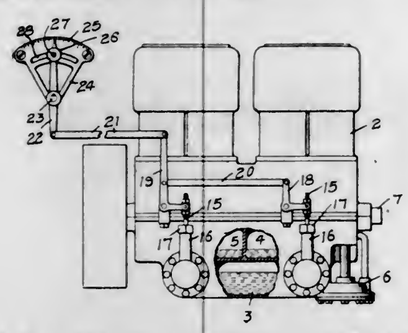
3. A process of making a combustible gas, which comprises bringing a mixture containing water and oil into contact with a metallic nickel containing small amounts of cobalt, at a temperature at which said metals cannot remain combined with the oxygen of said water.

4. A process of making a combustible gas which comprises subjecting a mixture of a mineral oil and water, to the action of metallic nickel at a temperature of about 650 to 750° C.

5. A process of making a combustible gas, which comprises cracking a mineral oil, and simultaneously decomposing water into its elements, and causing the hydrogen from the decomposed water to react with the products of said oil cracking step to produce methane and ethylene, and causing the oxygen from said decomposed water to react with carbon to produce oxids of carbon, said operation being carried out in the presence of a catalytic metal.

[Claim 6 not printed in the Gazette.]

1,105,773. CONSTANT-LEVEL LUBRICATOR. EDMUND E. HANS, Minneapolis, Minn. Filed Apr. 13, 1910. Serial No. 555,217. (Cl. 184—11.)



1. In a crank case, an oil reservoir, means for returning oil from said reservoir to the crank case, an overflow device communicating with the crank case and reservoir, and means operable externally of the crank case for regulating said overflow device to maintain a predetermined level of oil in the crank case.

2. In a crank case, a reservoir, and means for returning oil from said reservoir to the crank case, an overflow pipe communicating with said reservoir and crank case, and mechanism operable externally of the crank case for adjusting said overflow pipe to maintain a predetermined level of oil in the crank case.

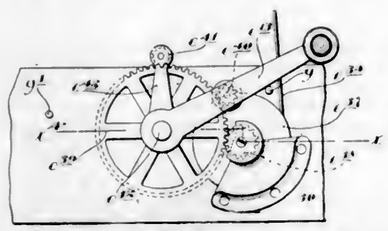
3. In a crank case, an oil reservoir, and means for returning oil to the crank case from said reservoir, an overflow pipe slidably mounted in said crank case and having openings therein, and means operable externally of the crank case for adjusting said pipe to raise or lower the level of oil in said case.

4. In a crank case, a reservoir, a pipe slidably mounted and having its receiving end projecting into said crank case and its opposite end depending within said reservoir, means for normally holding said pipe in its depressed position and permitting it to be pushed upwardly to elevate its opening above the level of the oil in the crank case, and means for raising or lowering said pipe.

5. In a crank case, an oil reservoir, a bushing fitting within an opening in the bottom of said crank case, a slidable overflow pipe, a hub secured to said pipe and slidable in said bushing, a spring interposed between the upper end of said bushing and said hub, and mechanism for adjusting said pipe vertically.

[Claims 6 to 12 not printed in the Gazette.]

1,105,774. VARIABLE-THROW DEVICE. FREDERICK A. HART, Newark, N. J., assignor to John T. Underwood, Brooklyn, N. Y. Original application filed Dec. 10, 1908, Serial No. 466,836. Divided and this application filed Feb. 6, 1912. Serial No. 675,773. (Cl. 74—14.)



1. A variable throw device comprising a main gear, a lever and an arm pivoted on the axis of said main gear, and pinions journaled on said lever and arm, in constant mesh with said main gear and engageable with each other to variably determine the effective movement of said lever.

2. A variable throw device comprising a main gear, a lever and an arm pivoted on the axis of said main gear, a pinion loosely journaled to said lever, another pinion loosely journaled to said arm but having frictional engagement therewith, said two pinions being in constant mesh with said main gear and engageable with each other to variably determine the effective movement of said lever, and a gear meshing with said main gear and having connections for transmitting a variable movement therefrom.

3. A variable throw device including a train of independently and loosely mounted toothed members, two of said members continually intermeshing with a third, one of said members being adjustable relatively to the others, and means for moving one of said members idly until all three members become intermeshed for further, unified movement.

4. A variable throw device including a train of independently and loosely mounted toothed members, two of said members continually intermeshing and all of said members being capable of intermeshing for unified movement, one of said members being adjustable variably in advance of another of said members that the extent of independent movement of said other member may be thereby regulated.

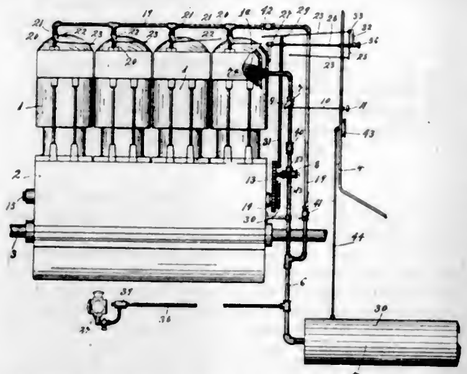
5. A variable throw device comprising a gear wheel and pinions meshing therewith, said pinions having idle movement when separate, one of said pinions being variably adjustable as to its position with respect to the other, and means for moving said other pinion into mesh with said adjusted pinion to permit unified movement of said gear and pinions.

[Claims 6 to 15 not printed in the Gazette.]

1,105,775. STARTER FOR EXPLOSIVE-ENGINES. D. MAURICE HARTSOUGH, Minneapolis, Minn. Filed May 18, 1912. Serial No. 698,191. (Cl. 123—180.)

1. The combination with a multi-cylinder explosive engine, of a storage reservoir adapted to contain an elastic fluid under pressure, conduits connecting the engine cylinders to said reservoir, normally closed starting valves in said conduits, and valve actuating connections including a rotary selector driven from said engine with a properly timed action, and valve actuating rods grouped about said selector and arranged to be successively acted upon by said selector, when the latter is rendered operative, and to thereby progressively open said starting valves in the proper order of succession.

2. The combination with a multi-cylinder explosive engine, of a storage reservoir adapted to contain an elastic fluid under pressure, conduits connecting the cylinder of said engine to said reservoir, normally closed starting valves in said conduits, valve actuating connections comprising a selector rotated from the engine and having a lateral movement, and valve actuating rods independently connected to said starting valves and having circumferentially spaced portions adapted to be operated upon in succession, by said selector, when the latter is moved laterally, and to thereby progressively open said starting valves in the proper order of succession.



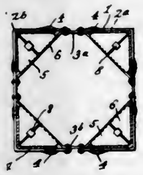
3. The combination with a multi-cylinder explosive engine, of a storage reservoir for containing an elastic fluid under pressure, conduits connecting the engine cylinder to said reservoir, normally closed starting valves in said conduits, a flexible ring, rods independently connecting said starting valves to said ring, and a selector driven from said engine, with a properly timed action, over the face of said ring and movable into action on said ring, to progressively open said starting valves.

4. The combination with an explosive engine of the four-cycle type, of a storage reservoir, charging and starting conduits connecting said reservoir, respectively, to the intermediate portion of one side and to the compression end of the cylinder of said engine, a valve in said charging conduit for controlling the transfer of compressed gas from the engine cylinder into said storage tank, and a valve in said charging conduit for controlling the supply of gas from said tank to the engine cylinder for starting the engine.

5. The combination with an explosive engine of the four-cycle type, of a storage reservoir, charging and starting conduits connecting said reservoir, respectively, to the intermediate portions of one side and to the compression end of the cylinder of said engine, a valve in said charging conduit for controlling the transfer of compressed gas from the engine cylinder into said storage tank, a valve in said charging conduit for controlling the supply of gas from said tank to the engine cylinder for starting the engine, and check valves in said charging and starting conduits.

[Claims 6 to 10 not printed in the Gazette.]

1,105,776. TELEGRAPH-POLE AND THE LIKE. BRODERICK HASKELL, Franklin, Pa. Filed Aug. 12, 1912. Serial No. 714,636. (Cl. 189—251.)

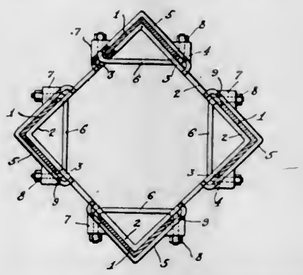


1. A knock down pole comprising uprights, transverse bands having pockets to receive said uprights, said bands having recesses or depressions extending outwardly. at their pocket sections, straps secured to said bands adjacent said pockets, plural removable filling members for each pocket having permanent bulged sections or projections corresponding to the recesses or depressions in the bands, and removable means to expand the filling members.

2. A knock down pole comprising uprights, transverse bands having pockets to receive said uprights, said bands having recesses or depressions extending outwardly at their pocket sections, straps secured to said bands adjacent said pockets, two removable filling members for each pocket, each having a permanent bulged section or projection corresponding to the recess or depression in the bands, and a removable wedge to expand the filling members.

3. A knockdown pole comprising uprights, transverse bands each of which consists of two angular shaped pieces forming inner pockets to receive said upright and having their free ends adjacent each other, two angular shaped straps on the inner sides of the transverse bands with the free ends of said straps adjacent each other and connected to the center sections of said bands and the center sections of the straps connected to the free ends of the transverse bands, and means abutting against said uprights and straps for holding said uprights in the pockets of the bands.

1,105,777. TELEGRAPH-POLE AND THE LIKE. BRODERICK HASKELL, Franklin, Pa. Filed June 14, 1913. Serial No. 773,636. (Cl. 189—25.)



1. A pole comprising a plurality of separated angular uprights, inner transverse bands abutting against the inner side of said uprights, separate and independent clips surrounding and abutting against the corners of the outer side of each of said uprights and their ends extending over and beyond the edges of the uprights, and means engaging the ends of each of the clips for drawing said bands into the angle of the uprights and the clips against the outside of said uprights.

2. A pole comprising a plurality of separated angular uprights, inner transverse bands seated in the angle of said uprights, outside clips surrounding the corners of said uprights and their ends abutting against said bands, and means for drawing said clips and bands together and against said uprights.

3. A pole comprising a plurality of separated angular uprights, transverse bands abutting against the inner side and seated in the angle of said uprights and having holes near the outer edges of the uprights, separate and independent clips surrounding and abutting against the corners of the outer side of each of said uprights and their ends extending over and beyond the edges of the uprights, and having holes corresponding to the holes of said bands, and means passing through the holes of said bands and clips for drawing said bands into the angle of the uprights and the clips against the outside of said uprights.

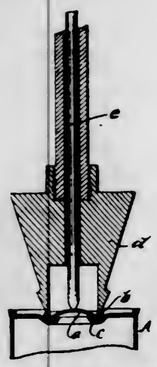
4. A pole comprising a plurality of separated angular uprights, inner transverse bands seated in the angle of said uprights and having holes near the outer edges of tbe uprights, separate and independent outside angular clips surrounding the corners of each of said uprights and having holes at their ends corresponding to the holes of said bands and their ends extending over and beyond the edges of the uprights and abutting against said bands, and U-shaped bolts passing through the holes of

the bands and clips for drawing said clips and bands together and against said uprights.

5. A pole comprising a plurality of separated L-shaped uprights, inner transverse bands seated in the angle of said uprights and having holes near the outer edges of the uprights, outside clips surrounding the corners of said uprights and having holes corresponding to the holes of said bands and their ends abutting against said bands, beveled washers at the holes in said bands and bolts passing through the washers and holes of the bands and clips for drawing said clips and bands together and against said uprights.

[Claim 6 not printed in the Gazette.]

1,105,778. METHOD OF SOLDERING CAPS TO CANS. BERNARD HAUSHEER, Norwich, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed July 27, 1912. Serial No. 711,775. (Cl. 113—112.)



The method of soldering caps to cans which comprises assembling and supporting adjacent the joint between them unmolten solder and flux, melting said solder by approximating thereto without contacting therewith a source of heat, supporting the resulting bath so that said joint is immersed thereby, and maintaining it undisturbed by mechanical agitation until resulting gases have risen out of it, and finally ironing it at a plurality of points simultaneously until the joint is soldered.

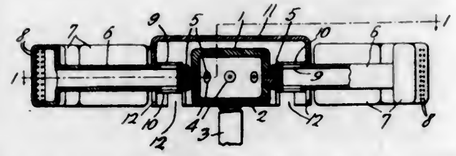
1,105,779. CUFF. GERHARD P. HELMERS, Baltimore, Md. Filed Oct. 31, 1913. Serial No. 798,429. (Cl. 2—79.)



A cuff for link buttons, comprising a body-part having button-holes provided therein, said button-holes being formed in the corners of the cuff adjacent to the outer edge thereof and inclined relative to said edge and parallel with each other, whereby they will cross each other when the cuff is folded with the meeting edges together and the inner surface of the cuff adjacent said meeting edges in contact.

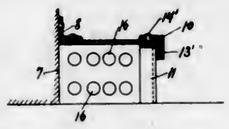
1,105,780. GAS-BURNER. JOHN W. HIGGINS, Jackson, Ohio. Filed May 27, 1914. Serial No. 841,304. (Cl. 158—106.)

1. In a gas burner, a chamber, radial mixing tubes having their inner ends slidably connected to the chamber to communicate with the interior thereof, a hood disposed over the chamber and having its rim provided with downwardly opening slots engaged over the mixing tubes, the mixing tubes having air inlets within the hood, and members mounted upon the mixing tubes within the hood and with which the hood coöperates to assist in holding the mixing tubes in engagement with the chamber.



2. In a gas burner, a chamber having radial nipples, radial mixing tubes having their inner ends slipped over the said nipples, the mixing tubes having air inlets adjacent their inner ends and having burner heads at their outer ends, rotatable controlling valves mounted upon the inner end portions of the mixing tubes to control the passage of air through the air inlets, and a hood disposed over the said chamber, the rim of the hood having downwardly opening slots engaged over the mixing tubes, the hood inclosing the said air inlets and valves and coöperating with said valves to assist in holding the mixing tubes in engagement with the nipples.

1,105,781. GUARD AND CURB. THOMAS A. HILL, New York, N. Y. Filed July 29, 1913. Serial No. 781,768. (Cl. 94—2.)



1. In combination with a structure to be protected, a guard comprising a web portion disposed at an agle to said structure, and adapted to be secured adjacent thereto, and a front depending wearing edge for said web whereby the hubs of vehicles are prevented from striking said structure.

2. In combination with a structure to be protected, a guard comprising a web portion disposed at an angle to said structure and adapted to be secured adjacent thereto, and a front depending wearing edge for said web whereby the hubs of vehicles are prevented from striking said structure, said wearing edge being adapted to be removed.

3. A wheel-guard comprising a central plate having an angle iron at the back adapted to be secured to a post, and an angle iron at the front projecting downwardly from said plate, and means beneath said plate for securing the same in position.

4. A wheel-guard comprising a central plate having an angle iron at the back adapted to be secured to a post, and an angle iron at the front projecting downwardly from said plate, and means beneath said plate for securing the same in position, said means comprising an angle iron beneath said plate and a channel beam, said angle iron, plate and channel beam secured together.

5. A wheel guard comprising a plate having an angle iron at the back, and an angle iron at the front projecting downwardly from said plate, means for securing said guard in position, and means for detachably securing said angle iron at the front of said plate.

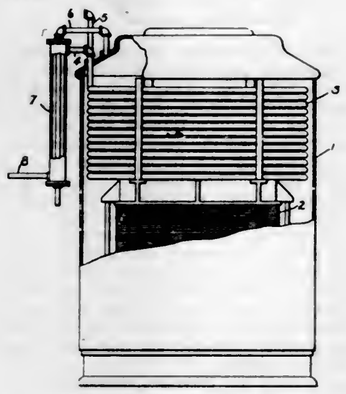
1,105,782. PIPE-WRENCH. THOMAS HINDS, Winnipeg, Manitoba, Canada. Filed July 9, 1913. Serial No. 778,186. (Cl. 81—94.)

A pipe wrench for gripping pipes of fixed different radii comprising a handle presenting a permanent gripping jaw having a constant gripping point for the various sizes of pipes, said jaw presenting teeth contained within the arc of a circle the radius of which is greater than the radius of the largest pipe to be gripped and a pivotally mounted rotary jaw carried by the handle having portions of the margin thereof cut away to present suitably spaced reëntrant curves, the radii of said curves corresponding to the radii of the pipes to be gripped, said pivot



point being contained in a horizontal plane located above the center point of the arc containing the teeth of the stationary jaw and the reëntrant curves being designed so that in the gripped positions of the various pipes the centers of the reëntrant curves lie on a straight line connecting the fixed gripping point of the fixed jaw with the center point of the arc, as and for the purpose specified.

1,105,783. COOLING ELECTRICAL APPARATUS. HENRY M. HOBART, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 11, 1913. Serial No. 800,306. (Cl. 171—124.)

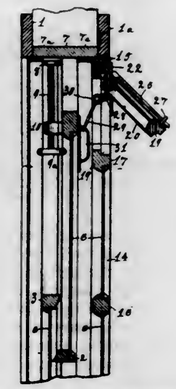


1. The combination with a transformer tank and a transformer therein, of means providing a passageway for the exchange of air between the interior of the tank and the atmosphere and for cooling the air in said passage below the temperature within the tank.

2. The combination with a transformer tank, a transformer and a cooling coil therein and means for supplying a cooling fluid to said coil, of a pipe providing a passageway for the exchange of air between the atmosphere and the interior of the tank and a fluid conducting means about said pipe, said fluid conducting means being connected between the cooling fluid supplying means and the cooling coil.

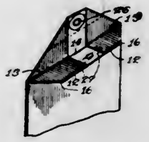
1,105,784. STORM-WINDOW VENTILATOR. ANTON HOERSCH, Menasha, Wis. Filed Apr. 5, 1913. Serial No. 759,170. (Cl. 20—55.)

A window ventilator, comprising a vertically sliding window sash, a storm sash secured in the window opening outside of said sliding sash, a supplemental ventilating sash hinged upon its upper horizontal rail for swinging outwardly, and adapted for filling any space left unfilled by the storm window sash under the window lintel, an angular bent lever pivoted to swing a limited amount within a suitable holder which is secured to the outside of the supplemental sash side rails, a rod extending downward from near the pivotal point of each angular lever, a holder secured near each lower end of the supplemental sash side rails through a hole in which one of said rods slide, an arm extending inward through the supplemental sash rails from the angle of each lever, a closed loop



secured upon the outside of each side rail of the inside sash near its upper end, and an open ended loop connected with each closed loop aforesaid, and with the inward extending arm of each angular lever aforesaid by means of a suitable removable pin or bolt.

1,105,785. CLOSURE FOR ENVELOPS. GEORGE F. HOGAN, Chicago, Ill. Filed Apr. 18, 1913. Serial No. 761,933. (Cl. 229—76.)



1. In a flat merchandise envelop having a longitudinal seam and a closed bottom, a closure for the top comprising corners doubled inward between the front and rear walls of the envelop and lying flat against those walls, the upper end of the envelop being bent over the doubled-in corners and fastened in place.

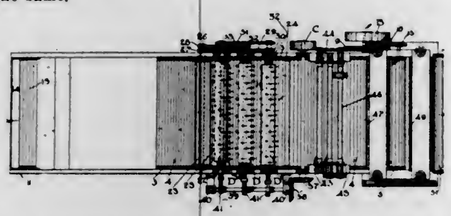
2. A flat merchandise envelop having its corners at the open end thereof doubled inward between the front and rear walls of the envelop and lying flat against those walls, and with the front wall projecting beyond the rear wall, and adapted to bend back to overlap the rear wall and there fasten in place to keep the folded-in portions from coming out again.

3. A merchandise envelop having a longitudinal seam and having a closure comprising a notched rear wall and a front wall projecting beyond the notch, said closure having corners doubled in on either side of this notch to form a flap of that portion of the front wall which projects beyond the notch, said flap being adapted to fold down over the rear wall and there fasten in place to keep the folded-in portions from coming out.

1,105,786. MACHINE FOR MAKING FIBER INSULATING-SHEETS. THEODORE HOHAUS, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Aug. 19, 1912. Serial No. 715,701. (Cl. 154—27.)

1. In a machine for making fiber insulating sheets, the combination with a submerged traveling apron operative to carry the fibrous stock through the water to a point

above the same, of means working in the water and moving transversely across the line of travel of the apron and adapted to distribute and interlace the fibers in their progress through the water, and means operating upon the interlaced fibers to compact and expel water from the same.



2. In a machine for making fiber insulating sheets, the combination with a submerged traveling apron adapted to carry the fibrous stock through and out of the water, of crosswise reciprocating elements working in the water across the line of travel of the apron and adapted to distribute and interlace the fibers in their progress through the water, and compression elements operative upon the thus interlaced fibers, whereby to compact the same and expel water therefrom.

3. In a machine for making fiber insulating sheets, the combination with a submerged traveling apron operative to carry the fibrous stock through and above the water, of means working in the water and having both a rotary movement in the direction of the line of travel of the fibers and also a reciprocating movement across the line of travel thereof, whereby to distribute and interlace the same; and compression devices acting upon the thus interlaced fibers.

4. In a machine for making fiber insulating sheets, the combination with a submerged traveling apron operative to carry the fibrous stock through the water to a point above the same, of a multiplicity of pins having a reciprocating movement in the water across the line of travel of the fibers, whereby to distribute and interlace the same, and having also a rotary movement in the line of travel of the fibers.

5. In a machine for making fiber insulating sheets, the combination with a submerged traveling apron operative to carry the fibrous stock through the water and to a point above the same, of a multiplicity of pins or fingers working oppositely in the water at variable rates of speed across the line of travel of the fibers whereby to distribute and interlace the same, said fingers having also a rotary movement in the direction of the line of travel of the apron.

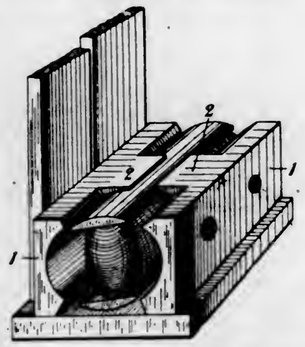
[Claims 6 and 7 not printed in the Gazette.]

1,105,787. APPARATUS FOR IGNITION OF REVERSIBLE INTERNAL-COMBUSTION MOTORS. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Mar. 19, 1910. Serial No. 550,461. (Cl. 123—149.)

1. An electrical ignition system for the production of ignition sparks in either direction of rotation of a reversible internal combustion engine, comprising a magneto ignition machine adapted to generate a sustained voltage within the ignition range throughout the portion of the period of revolution of the engine corresponding approximately to the angular range of adjustment of the ignition period from advanced ignition to retarded ignition, measured on the crank travel, a spark plug or plugs, and means for distributing the generated voltage to the spark plug or plugs at advanced or retarded instants during the period of sustained voltage.

2. An electrical ignition system for the production of ignition sparks in either direction of rotation, of a reversible internal combustion engine comprising a magneto ignition machine adapted to generate a sustained voltage within the ignition range throughout a portion of the period of revolution of the engine corresponding approximately to twice the angle between the point of normal advanced ignition and the dead center, measured on the crank travel, a spark plug or plugs, and means for distributing the generated voltage to the spark plug or plugs at selected instants during the period of sustained voltage.

3. In an ignition system for reversible internal combustion engines, a magneto-electric generator provided with overlapping magnetic parts to generate in either direction of rotation, a current curve with its maximum value substantially sustained throughout an angle approximately equal to twice the angle between the point of normal advanced ignition and the dead center, measured on the crank travel, substantially as described.

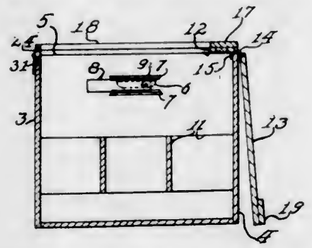


4. In an ignition system for reversible internal combustion engines, a magneto-electric generator of the bobbin type, the pole pieces of the field and the armature of which mutually overlap by an angle 2α approximately equal to twice the angle between the point of normal advanced ignition and the dead center, measured on the crank travel, whereby two overlapping current curves are produced in the two directions of rotation, each having its maximum intensity substantially sustained throughout the angle 2α; substantially as described.

5. In an ignition system for reversible internal combustion engines, a magneto-electric generator of the bobbin type, having its field magnets provided with polar extensions of reduced section, overlapping the armature ends through an angle equal to twice the angle between the dead center of the engine and the point of normal advanced ignition, measured on the crank travel; substantially as described.

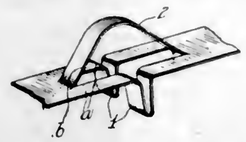
[Claims 6 and 7 not printed in the Gazette.]

1,105,788. BOX. SAMUEL C. HORTON, St. Paul, Minn. Filed Aug. 20, 1910. Serial No. 578,219. (Cl. 217—59.)



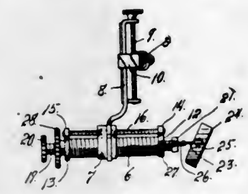
A box, comprising, inclosing side and end walls and bottom, two opposite walls thereof having parallel grooves near their upper edges, a cover sliding in said grooves and lying in one plane to close said box, said cover being formed in two parts hinged to fold on each other when one of said parts is withdrawn from said grooves and one of said parts having a stop to prevent the removal of the same from the grooves in said walls whereby said cover may have one part folded down on the outside of said box and the other part retained in said grooves to maintain said cover in connection with said box when the same is open.

1,105,789. REINFORCED CONCRETE CONSTRUCTION. WILLIAM B. HOUGH, Chicago, Ill., assignor of one-half to Frederick C. Taxis, St. Louis, Mo., and one-half to Metal Building Materials Company, a Corporation of Maine. Filed Jan. 9, 1911. Serial No. 601,575. (Cl. 72—122.)



In reinforced concrete construction, the combination of a plurality of horizontal reinforcing bars, and a combined tie and gage member extending transversely of the bars and consisting of a strip of sheet metal having at points beneath said bars a plurality of longitudinal parallel slits forming several short parallel strap-like portions separate from one another but integral at each end with the main body of the strip, said portions at each side of the strip being bent downwardly from the plane of the body of the strip form legs adapted to rest at their lower ends upon a form-work, and each having its upper end underlying and supporting one of said reinforcing bars, the main body of said strip being substantially straight and horizontal, and the intermediate strap-like portions being bent upwardly from the plane of the body and each overlying and retaining one of said reinforcing bars in place on its supporting legs, whereby the supporting bars are properly spaced from each other and from the form-work.

1,105,790. ADJUSTABLE BRIDGE FOR TRIAL-FRAMES. ALBERT E. INNES, Denver, Colo. Filed Mar. 13, 1913. Serial No. 753,996. (Cl. 88—20.)



1. A trial frame having a hollow screw, a nut carried by the body of the frame in which the screw is threaded, the said screw being journaled in bearings slidably mounted on the frame and being interiorly threaded, a second screw threaded in the first named screw, a bearing in which the second screw is journaled, means for engaging the nose on opposite sides, and an operative connection between the said means and the bearing of the second screw and one of the bearings of the first screw.

2. A trial frame having a hollow screw, a nut carried by the frame in which the said screw is threaded, the screw being journaled in bearings slidably mounted on the body of the frame and being interiorly threaded, a second screw threaded in the first-named screw, a bearing in which the rear extremity of the second screw is journaled, means for engaging the nose on opposite sides, arms on which the said means is mounted, the said arms being pivotally connected with the bearing of the second screw, and links pivotally connecting the said arms with one of the bearings of the first named screw.

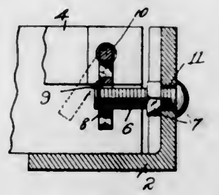
3. A trial frame having a hollow screw threaded both interiorly and exteriorly, a nut carried by the body of the frame in which the said screw is threaded, bearings mounted on the body of the frame in which the opposite extremities of the said screw are journaled, a second screw threaded in the first named screw, a bearing in which the second screw is journaled, pads for engaging the nose on opposite sides, and an operative connection between the said pads and the bearing of the second screw and one of the bearings of the first screw.

4. A trial frame having a hollow screw threaded in a nut carried by the body of the frame, bearings slidably mounted on the frame and in which the said screw is journaled, a second screw passing through the hollow of the first named screw and threaded in the latter, pads for engaging the nose on opposite sides, arms on which the said pads are mounted, the said arms being pivotally connected with the bearing of the second screw, and links pivotally connecting the said arms with a bearing of the first named screw.

5. A trial frame equipped with a screw having a longitudinal perforation, the said screw being journaled both interiorly and exteriorly, a nut carried by the body of the frame and in which the said screw is threaded, bearings in which the said screw is journaled, the said bearings being slidably connected with the body of the frame, a second screw threaded in the longitudinal perforation of the first named screw, a bearing in which the second screw is journaled, pads adapted to engage the nose on opposite sides, arms to which the said pads are secured, the said arms being pivotally connected with the bearing of the second screw, and links pivotally connected with the said arms at one extremity and with one of the bearings of the first named screw at their opposite extremities, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,105,791. MEANS FOR FASTENING FLOOR AND SIDEWALK GRATINGS. WALTER E. IRVING, Glenbrook, Conn. Filed July 7, 1913. Serial No. 777,799. (Cl. 189—84.)



The combination with a grating having a plurality of projecting bars at each end, and a frame for holding the same having end pieces of angle iron, of a threaded bolt loosely fitting in a hole in the vertical flange of the angle iron, a nut for clamping said bolt rigidly to said angle iron in a position parallel to the grating, and a swinging plate perforated to engage said bolt and pivoted to the projecting bars of the grating.

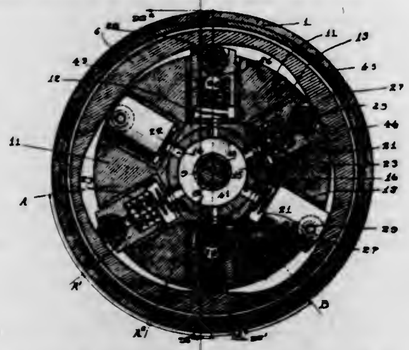
1,105,792. VARIABLE-SPEED POWER-TRANSMITTING DEVICE. ARNOLD HENERY JESSEN, Los Angeles, Cal. Filed June 16, 1913. Serial No. 773,827. (Cl. 192—18.)

1. A driving member, a driven member, a plurality of cylinders carried by one of said members, pistons in said cylinders, a cam against which said pistons bear, and a reducing gearing between said cam and driving member.

2. A driving member, a driven member, a plurality of cylinders carried by one of said members, pistons in said cylinders, a cam against which said pistons bear, a reducing gearing between said cam and driving member, fluid confining means communicating with said cylinders, fluid in said confining means, and means for regulating the cross sectional area of a portion of said confining means to restrict the flow of fluid therethrough.

3. A driving member, a driven member, a cam, reducing gearing between said cam and driving member, means on the driven member and movable thereon and bearing against said cam, and means for restricting the movement of said movable means.

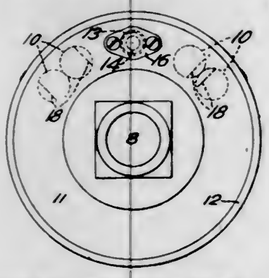
4. A driving member, a pinion thereon, an inside rotor, pinions journaled on the inside rotor and meshing with the first pinion, a cam revoluble on the driving member, an internal gear on said cam meshing with the second named pinion, cylinders formed in the inside rotor, and pistons in the cylinders bearing against said cam.



5. A driving member, a pinion thereon, an inside rotor, pinions journaled on the inside rotor and meshing with the first pinion, a cam revoluble on the driving member, an internal gear on said cam meshing with the second named pinion, cylinders formed in the inside rotor, pistons in the cylinders bearing against said cam, the inside rotor having a central valve chamber with ports extending from the cylinders into the valve chamber, a valve in said valve chamber, and means for adjusting said valve with relation to the inside rotor.

[Claims 6 to 9 not printed in the Gazette.]

1,105,793. AUTOMATIC SIGNALING DEVICE. PETER C. JOHNSON, Halifax, Nova Scotia, Canada. Filed Apr. 10, 1913. Serial No. 760,219. (Cl. 177—10.)



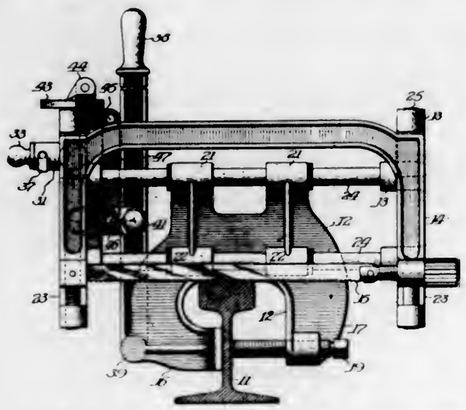
1. A device of the character described comprising the combination with the steering column, steering wheel and signal circuit of a vehicle, said signal circuit having one side thereof grounded on the steering wheel, of an insulating collar fixed to the steering column, a collar fixed to the steering wheel, a plurality of contacts arranged in two groups in the insulating collar, a spring pressed plunger in the second collar electrically connected with the steering wheel, and electrical connections between said contacts and the opposite side of the signal circuit.

2. An automatic signal operating device comprising the combination with a vehicle and a signal circuit of a signal circuit terminal mounted in fixed relation with a movable part of the vehicle steering apparatus, a second signal circuit terminal rigidly mounted in the path of the first terminal, said second terminal being divided into two pairs of circular parts arranged on opposite sides of the normal position of the first terminal each of said circular parts having a flattened portion, the flattened portions of one pair being adjacent each other and the flattened portion of the other pair being arranged with the flattened portions remote from each other.

3. A device of the character described comprising the combination with the steering column, steering wheel and signal circuit of a vehicle, said signal circuit having one side thereof grounded on the steering wheel, of an insulating collar fixed to the steering column, a collar fixed to the steering wheel, a ring fixed to said last named collar and receiving the first mentioned collar, a plurality of contacts arranged in two groups in the insulating collar, a spring pressed plunger in the second collar electrically connected with the steering wheel, and electrical connections between said contacts and the opposite side of the signal circuit, and means for varying the length of said contacts.

4. A device of the character described comprising the combination with the steering column, steering wheel and signal circuit of a vehicle, said signal circuit having one side thereof grounded on the steering wheel, of an insulating collar fixed to the steering column, a collar fixed to the steering wheel, a plurality of contacts arranged in two groups in the insulating collar, a contact in the second collar electrically connected with the steering wheel, electrical connections between said contacts and the opposite side of the signal circuit, and means whereby the contacts close the circuits for periods of time, differing as to length and frequency, according to the direction in which the wheel is turned.

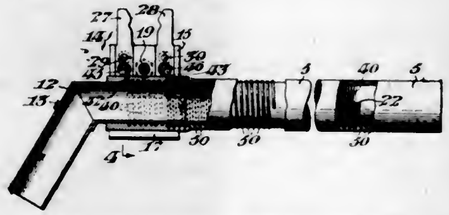
1,105,794. RAIL-SAW. GUSTAVE JOHNSTON, Jamestown, N. Y. Filed Feb. 28, 1912. Serial No. 680,403. (Cl. 29—75.)



1. In a rail saw, the combination of a body provided with a plurality of slide bearings and adapted to be secured to a rail to be sawed, a frame comprising a plurality of rods slidably mounted in said bearings for longitudinal reciprocation across said rail, a plurality of upright guides carried by said frame, one of said guides being provided with threads, a saw holder mounted on said guides for movement toward and from the rail to be sawed, a saw blade carried by said holder, means for reciprocating said frame, mechanism operated by said reciprocating means for rotating said threaded guide during the cutting stroke of the saw, and a threaded block carried by said holder in position to engage said threaded guide whereby the holder is fed toward the work upon rotative movement of said threaded guide, said block being adapted to be withdrawn from operative relation to said guide whereby to permit movement of said saw to inoperative position.

2. In a rail saw, the combination of a body provided with a plurality of slide bearings and adapted to be secured to a rail to be sawed, a frame comprising a plurality of rods slidably mounted in said bearings for longitudinal reciprocation across said rail, a plurality of upright guides carried by said frame, one of said guides being provided with threads, a ratchet wheel mounted on the upper end of said threaded guide, a saw holder mounted on said guides for movement toward and from the rail to be sawed, a saw blade carried by said holder, an operating handle pivoted on said body, a link connecting said handle and said frame whereby the frame is reciprocated, a bell crank lever pivoted on said frame, means connecting one arm of said bell crank lever with said link whereby said bell crank lever is operated upon movement of said handle, and a pawl carried by the other arm of said bell crank lever in position to engage with said ratchet wheel on the upper end of the threaded guide, the connections between said handle and said ratchet wheel being adapted to rotate said ratchet wheel to feed the saw toward the work during the cutting stroke thereof.

1,105,795. FLEXIBLE TUBING. WILLIAM A. JOHNSTON, Prince Bay, N. Y., assignor to The S. S. White Dental Manufacturing Company, a Corporation of Pennsylvania. Filed May 23, 1913. Serial No. 769,382. (Cl. 219—39.)



1. A fluid-conveying tube, having electrical resistance means for heating the fluid passing therethrough, and a coiled spring wire affording reinforcement for the wall of said tube and maintaining it cylindriform.

2. A fluid-conveying tube, formed of flexible material, having electrical resistance embedded in its wall for heating the fluid passing therethrough, and a reinforcing wire coil in the wall of said tube.

3. A fluid-conveying tube, having an electrical resistance disposed therein, a plug connection forming an adjustable collar embracing the end of said tube, having terminal contacts for said resistance, said collar comprising sections having opposed jaws embracing said tube, and a bolt at one side of said tube for adjusting the sections to clamp said tube.

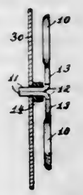
4. A fluid-conveying tube, formed of flexible material, having an electrical resistance wire in the wall thereof with its terminals disposed near one end of said tube, a plug connection forming an adjustable collar embracing the end of said tube and having terminal contacts for engagement with the terminals of said resistance wire, and means for adjusting said collar to clamp the tube on a pipe or suitable fitting.

5. A fluid-conveying tube, having an electrical resistance wire coiled in the wall thereof with its terminals disposed near one end of said tube, a plug connection forming an adjustable collar embracing the end of said tube and having terminal contacts for engagement with the terminals of said resistance wire, said plug connection comprising separable sections having opposed jaws embracing said tube, and means for relatively adjusting said sections to clamp the tube on a pipe or suitable fitting.

[Claims 6 to 17 not printed in the Gazette.]

1,105,796. FASTENER. CARL JOSEPH, Bayonne, N. J. Filed Nov. 8, 1909. Serial No. 526,740. (Cl. 85—1.)

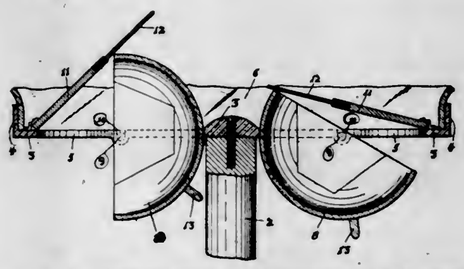
1. A fastener comprising coacting members, each having a stem and an offset holding arm forming a knuckle at their juncture, a tie device that snugly surrounds and connects the members and moves thereon between the stem and the arm past the knuckles as the members pivotally turn on said knuckles, and a stop on one of the stems that limits the movement of the tie device thereon away from the knuckles, said stop overhanging the tie device and being arranged to bear on the article to which the fastener is attached.



2. A fastener comprising co-acting members each having a stem and an offset holding arm forming a knuckle at their juncture, a tie device connecting the members, and a stop carried by one of said stems and spaced sufficiently from the arms to permit the location of the tie on the stems between said stop and the article on which the fastener is mounted.

3. A fastener comprising co-acting members each having a stem and an offset holding arm forming a knuckle at their juncture, a tie device snugly surrounding and connecting the members and movable thereon between the stems and arms past the knuckles, and a stop carried by each stem, said stop being spaced sufficiently from the arms to permit the location of the tie on the stems and in engagement therewith between the stop and the article on which the fastener is mounted.

1,105,797. DISPENSING DEVICE. OTTO KARCHER, Canton, Ohio, assignor of one-half to Joseph L. Russell, Canton, Ohio. Filed Jan. 23, 1914. Serial No. 813,851. (Cl. 211—8.)



1. In a dispensing device, the combination of a receptacle, a frame adapted to support and hold said receptacle, a pivoted cup carried by the frame, a blade adapted to close a portion of the cup, said blade provided with a finger, said finger adapted for contact upon the open rim of the cup.

2. In a dispensing device of the character described, a receptacle, a frame adapted to support said receptacle, a cup pivotally attached to the receptacle supporting frame, a blade formed of a size less than the top of the pivoted cup and a finger connected to said blade and normally extended over the open portion of the cup.

3. In a dispensing device of the character described, a receptacle, a frame adapted to support said receptacle, a cup pivotally attached to the receptacle supporting frame, a blade formed of a size less than the top of the pivoted cup and a finger connected to said blade and normally extended over the open portion of the cup, said finger and blade adapted to be actuated by the pivotal movement of the cup.

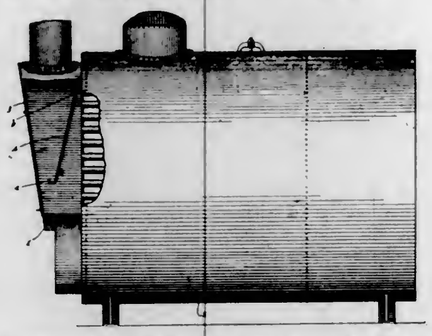
4. In a dispensing device of the character described, an open bottomed receptacle, a frame adapted to support and hold said receptacle, a series of dispensing cups carried by the receptacle supporting frame, said dispensing cups provided with flanges upon their bottom or under sides, and blades hinged to the receptacle supporting frame and means for actuating said blades.

5. In a dispensing device of the character described, the combination of an open bottom receptacle, a support

adapted to hold said receptacle in relatively fixed position with reference to its support, a series of movable receptacles adapted to receive and hold portions of the contents of the receptacle and means for partially closing said movable cups, and means for actuating said closing means.

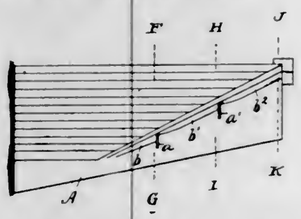
[Claims 6 to 8 not printed in the Gazette.]

1,105,798. DRAFT-EQUALIZER FOR TUBULAR BOILERS. THOMAS J. KENNEDY, Stockton, Cal. Filed Feb. 26, 1913. Serial No. 750,777. (Cl. 110—97.)



A device of the character described comprising the combination with a tubular boiler having a breeching disposed across the end of the tubes, of a plate rigidly secured to each side of said breeching, said plate projecting over the end of said tubes, the upper end of said plate being spaced a distance from the top of said breeching and also a distance from said tubes, the lower end of said plate being spaced a greater distance from said tubes than said upper end is disposed, and a curved portion curving outwardly from said tubes on the lower end of said plate, as described.

1,105,799. PROCESS OF OPERATING ORE-CONCENTRATING TABLES. EDMUND B. KIRBY, St. Louis, Mo. Filed July 1, 1910. Serial No. 569,945. (Cl. 83—88.)

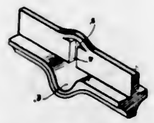


1. The herein described process of concentrating ores which consists in delivering the ore in a pulverized condition onto a concentrating table, in imparting to said table a differential vibration, and in simultaneously discharging a forceful sheet of wash water crosswise of the table in a direction transverse to the direction of the vibration, whereby said pulverized ore is arranged in bands and caused to travel along the table in a direction which is the rsultant of the two stated forces, in removing the front portion of the front band of material at such a distance back from the discharge end of the table that the remaining material before it reaches said discharge end will be rebanded by the combined action of said wash water and differential vibration.

2. The herein described process of concentrating ores which consists in delivering the ore in a pulverized condition onto a concentrating table, in imparting to said table a differential vibration, and in simultaneously discharging a forceful sheet of wash water crosswise of the table in a direction transverse to the direction of the vibration, whereby said pulverized ore is arranged in bands and caused to travel across the table in a direction which is the resultant of the two stated forces, in removing the front portion of the front band of material at such a distance back from the discharge end of the table that the remaining material will be rebanded before it reaches said discharge end by the combined action of said wash water and differential vibration, and in repeating as often as may be required, this removal of the front part of the front band, and subsequent subjection of the material to the combined action of the differential vibration of the table and the forceful sheet of wash water for a long enough time to effect a rebanding of said material.

3. The herein described process of recovering clean values from pulverized ore with the assistance of a concentrating table whereon the wet ore is caused to arrange itself in diagonally disposed overlapping bands by the combined action of (1) the differential lengthwise vibration of the table, and (2) a forceful sheet of wash water which flows transversely across said table, and is caused to travel along said table toward the discharge edge thereof in a direction which is a result of the two stated forces,—said process consisting in removing a large part of the non-overlapping front edge of the front band of said ore at a point on the table such that the remaining ore will be rebanded before it reaches the discharge edge of said table, and in subsequently segregating from the rebanded ore a greater part of the non-overlapping front edge of the newly formed front band.

1,105,800. DEVICE FOR PERFORATING FIGURED IRON. HERMANN KOEPPLINGER, Vienna, Austria-Hungary. Filed Feb. 26, 1912. Serial No. 679,925. (Cl. 164—124.)



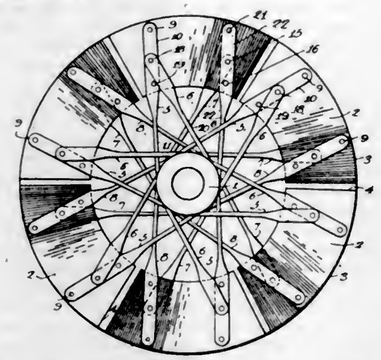
1. In means for making perforations in figured iron bounded by a bent out flange portion and a bent out web-bridge, a punch which consists of a bender provided with cutters corresponding to the perforation in the bent out flange portion of the work piece, a prismatic middle portion corresponding to the central perforation of the web of the work piece and a second bender provided with knife like cutters corresponding to the perforation in the bent out web bridge portion of the work piece.

2. In means for making perforations in figured iron bounded by a bent out flange portion and a bent out web bridge, a punch which consists of a bender provided with cutters corresponding to the perforation in the bent out flange portion of the work piece, a prismatic middle portion corresponding to the central perforation of the web of the work piece and a second bender corresponding to the perforation in the bent out web bridge, said bridge-bender being attached interchangeably to said flange bender.

3. In means for making perforations in figured iron bounded by a bent out flange portion and a bent out web bridge, the combination with a swage for holding the figured iron of a tool guided rectilinearly by the swage in the direction of the figured iron, said swage having means for supporting the web of the figured iron and elastic pressure means by which said supporting means are held against the penetrating tool during its descent.

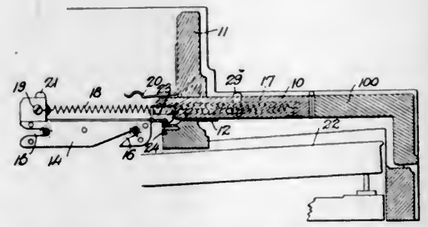
1,105,801. PROPELLER. GRIGORY KOVALEVICH, South Portland, Oreg. Filed Jan. 22, 1914. Serial No. 813,743. (Cl. 170—167.)

1. A propeller, having a central shaft and blades extending inward from the periphery a distance less than the length of a radius and stays connected at their outer ends to a blade and at their inner ends to the shaft, the stays being arranged in pairs, the stays of each pair being secured together near their outer ends and having their inner ends secured to the shaft at points widely separated on its periphery.



2. A propeller having a central shaft and blades extending inward from the periphery a distance less than the length of a radius and stays connected at their outer ends to a blade and at their inner ends to the shaft, the stays being arranged in pairs, the stays of each pair being secured together near their outer ends and having their inner ends secured to the shaft at points widely separated on its periphery and also widely separated longitudinally of its axis.

1,105,802. FALL-BOARD FOR PIANOS. GUSTAVO LAMBIASE, Brooklyn, N. Y. Filed Jan. 27, 1914. Serial No. 814,811. (Cl. 84—119.)



1. In fall boards, the combination with a sliding board, of a spring to retract same, locking means holding the board in its forward position and releasing means.

2. In fall boards, the combination with a sliding board, of retracting means, locking means for holding the board in its closed position and releasing means connected with the board.

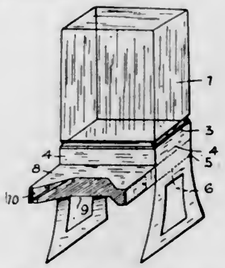
3. In fall boards, the combination with a shifting board, of means for carrying the board backward, a latch retaining it in its forward position and means automatically releasing the board when the board is partly opened.

4. In fall boards, the combination with a sliding back fall, of a hinged front fall, a retracting spring and a latch retaining the sliding back fall in its forward position and released by the front fall.

5. In fall boards for pianos, the combination with a sliding back fall having guides, of blocks with grooves for the guides, a spring connected with the block and the back fall, a cross bar, a latch on the back fall and adapted to engage the cross bar, a plunger controlling the latch and a hinged front fall adapted to strike the plunger and raise the latch.

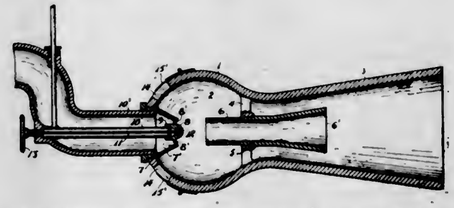
1,105,803. HYGIENIC SUGAR-BOWL. EDWARD LA VINE, Brussels, Belgium. Filed July 19, 1913. Serial No. 779,976. (Cl. 211—8.)

1. A hygienic sugar-bowl, comprising a casing for the sugar pieces, the bottom of which casing being constituted by a clapet device pivotally arranged and being constantly under the action of springs, the said clapet device being terminated, in front of the casing, by an outlet or mouth, wherein the piece of sugar glides when the clapet device is pushed down, for the purpose of preserving the sugar from any exterior contact.



2. A hygienic sugar-bowl comprising in combination, a casing, a collar piece supporting said casing and connected thereto, a clapet-device pivotally secured to said collar, a plurality of stops upon said clapet device for arresting the next to the lowermost piece of sugar, while said lowermost piece slides into the mouth of said clapet-device, and flexible blades for arresting said lowermost piece and for allowing the removal of the same through an opening of said clapet-device.

1,105,804. HYDROCARBON-BURNER. ROBERT W. LAWTON, San Francisco, Cal. Filed Aug. 28, 1912. Serial No. 717,585. (Cl. 158—74.)

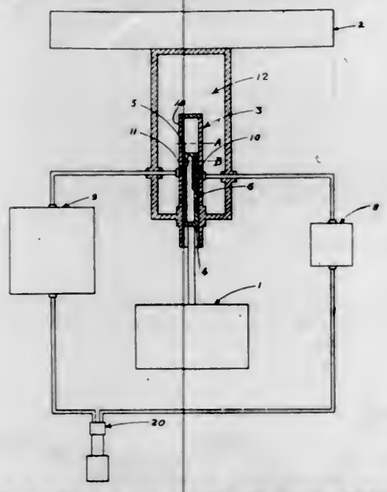


In a hydrocarbon burner, the combination with a base of substantially spherical form, provided with an interior air induction chamber, of an outwardly flaring bonnet projected therefrom, a bridge piece situated within the said base adjacent the rear end portion of the bonnet, an ejector tube supported by said bridge piece to project partly within the bonnet and partly within the air induction chamber of the base, controlled air inlets within the base, a discharge nozzle secured to the said base and within the air induction chamber thereof, a steam supply pipe connected with said nozzle, an oil supply pipe situated within the steam pipe and connected at its forward end to the nozzle and in line with the outlet orifice thereof, an adjustable stem working within the oil supply pipe and carrying at its forward end a valve for controlling the outlet orifice of the nozzle, the discharge nozzle being provided with inclined steam outlets for delivering steam into the induction chamber of the base at an angle to the oil stream, the oil and steam nozzle terminating within the induction chamber of the base in line with and adjacent the ejector tube.

1,105,805. VEHICLE SUSPENSION. BENJAMIN LIEBOWITZ, New York, N. Y. Filed Feb. 27, 1911. Serial No. 611,256. (Cl. 21—50.)

1. In a suspension for vehicles the following elements in combination: a supporting-piston sliding in a supporting-cylinder; gas in said supporting-cylinder under the proper pressure, normally, to secure flotational support of the body of the vehicle; a high pressure space in communication with a hole in the wall of said supporting-

cylinder, which hole is normally covered by said supporting-piston, but which is uncovered by a slot in said supporting-piston when said supporting-piston passes inward beyond a predetermined inward position, said slot being in communication with the interior of said supporting-cylinder; a low pressure space in communication with another hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-pisfon, but which is uncovered when said supporting-piston passes outward beyond a predetermined outward position, said inward and outward positions being not coincident, high and low referring to the normal range of pressures in said supporting-cylinder; a gas supply for maintaining the pressure in said high pressure space within the proper range; and quick-acting-frictional means adapted to render the suspended system non-oscillatory or approximately so.



2. In a suspension for vehicles, the following elements in combination: a supporting-piston sliding in a supporting-cylinder; an additional-chamber in communication with said supporting-cylinder; gas in said additional chamber and supporting-cylinder under the proper pressure, normally, to secure flotational support of the body of the vehicle; a high pressure space in communication with a hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston; a slot in said supporting-piston which is in communication with the interior of the said supporting-cylinder and which uncovers said hole when said supporting-piston passes inward beyond a predetermined inward position; a low pressure space in communication with another hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston but which is uncovered when said supporting-piston passes outward beyond a predetermined outward position, said inward and outward positions being not coincident, high and low referring to the normal range of pressure in supporting cylinder, a gas supply for maintaining the pressures in said high pressure space within the proper range; and quick-acting-frictional means adapted to render the suspended system non-oscillatory or approximately so.

3. In a suspension for vehicles, the following elements in combination: a supporting-piston sliding in a supporting-cylinder; an additional-chamber in communication with said supporting-cylinder through ports in the wall of said supporting-cylinder, which ports are closed or almost closed by said supporting-piston before it reaches its inward limit of positions; gas in said additional chamber and supporting-cylinder under the proper pressure, normally to secure flotational support of the body of the vehicle; a high pressure space in communication with a hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston; a slot in said supporting-piston which is in communication with the interior of said supporting-cylinder, and which uncovers said hole when said supporting-piston passes inward beyond a predetermined inward position; a low pressure space in communication with another hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston, but which is uncovered when said supporting-piston passes outward beyond a predetermined outward position, said inward and outward positions being not coincident, high and low referring to the normal range of pressures in said supporting-cylinder; a gas supply for maintaining the pressure in said high pressure space within the proper range; and quick-acting-frictional means adapted to render the suspended system non-oscillatory or approximately so.

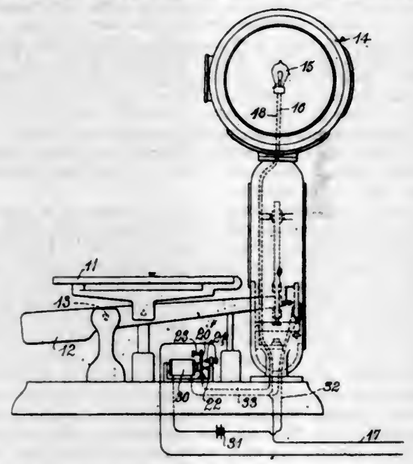
4. In a suspension for vehicles the following elements in combination; a supporting piston sliding in a supporting-cylinder; an additional-chamber in communication with said supporting-cylinder through openings in the wall of said supporting-cylinder, which openings are completely or nearly completely closed by said supporting-piston before it reaches its limit or inward positions, gas in said additional chamber and supporting-cylinder under the proper pressure, normally, to secure flotational support of the body of the vehicle; a high-pressure space in communication with a hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston; a slot in said supporting-piston which is in communication with the interior of said supporting-cylinder and which uncovers said hole when said supporting-piston passes inward beyond a predetermined inward position; a low pressure space in communication with another hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston, but which is uncovered when said supporting-piston passes outward beyond a predetermined outward position, said inward and outward positions being not coincident, high and low referring to the normal range of pressures in said supporting-cylinder; and a gas supply for maintaining the pressure in said high pressure space within the proper range.

5. In a suspension for vehicles, the following elements in combination; a supporting-piston sliding in a supporting-cylinder; an additional-chamber in communication with said supporting-cylinder; gas in said additional chamber and supporting-cylinder under the proper pressure, normally, to secure flotational support of the body of the vehicle; a high pressure space in communication with a hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston; a slot in said supporting-piston which is in communication with the interior of said supporting-cylinder and which uncovers said hole when said supporting-piston passes inward beyond a predetermined inward position; a low pressure space in communication with another hole in the wall of said supporting-cylinder, which hole is normally covered by said supporting-piston, but which is uncovered when said supporting-piston passes outward beyond a predetermined outward position, said inward and outward positions being not coincident, high and low referring to the normal range of pressures in said supporting-cylinder; and a gas supply for maintaining the pressure in the high pressure space within the proper range.

[Claims 6 to 9 not printed in the Gazette.]

1,105,806. COMPUTING-SCALE-ILLUMINATING DEVICE. CHARLES B. LONGSTRETH, Dayton, Ohio, assignor, by direct and mesne assignments, to Jonathan B. Hayward, New York, N. Y. Filed Jan. 4, 1909. Serial No. 470,611. (Cl. 73—101.)

1. The combination with a weighing scale, of an electric illuminating lamp therefor, and a circuit for said lamp; a switch for said lamp circuit; an auxiliary circuit including an element operating upon said lamp switch to hold it open when the auxiliary circuit is closed; a contact device in said auxiliary circuit; and means connected with the movable parts of said scale for controlling said contact device, said means and said contact device being constructed and located to hold said auxiliary circuit closed only when the scale parts are in normal zero position whereby at that time to hold the lamp switch open.



2. The combination with a weighing scale, including a scale lever, of an electric illuminating lamp therefor, and a circuit for said lamp; a switch for said lamp circuit normally closing said circuit; an auxiliary circuit including a solenoid operating upon said lamp switch to hold it open; a contact device in said auxiliary circuit; a contact closer connected with the said scale lever and constructed to engage said contact device when the scale lever is in normal zero position whereby at that time to close said auxiliary circuit and hold the lamp switch open; said contact device being so positioned relative to said scale lever that said contact closer becomes separated from said contact device, to open the auxiliary circuit immediately upon the scale lever moving from normal zero position.

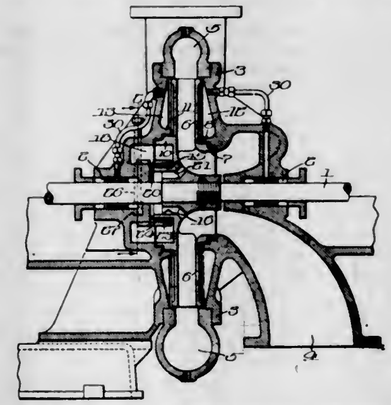
3. The combination with a weighing scale, including a scale lever, of an electric illuminating lamp for the scale, and a circuit for said lamp; a switch for said lamp circuit normally spring drawn into position to close said circuit; an auxiliary circuit including a solenoid operating upon said lamp switch to hold the same open against its spring tension; two contact strips forming a make and break device for said auxiliary circuit; a contact closer carried upon the end of said scale lever and projecting between said contact strips to close the auxiliary circuit when the scale lever is in normal zero position, said contact strips being positioned to be engaged by said contact closer when the scale lever reaches normal zero position and also constructed of such extent as to remain in engagement with said contact closer during the travel of the contact closer beyond the range of its weighing positions.

4. The combination with a weighing scale, including a scale lever, of an electric illuminating lamp for the scale, and a circuit for said lamp; a switch for said lamp circuit normally spring drawn into position to close said circuit; an auxiliary circuit including a solenoid operating upon said lamp switch to hold the same open against its spring tension; two contact strips forming a make and break device for said auxiliary circuit; a contact closer carried upon the end of said scale lever and projecting between said contact strips to close the auxiliary circuit when the scale lever is in normal zero position, said contact strips being positioned to be engaged by said contact closer when the scale lever reaches normal zero position and also constructed of such extent as to remain in engagement with said contact closer during the travel of the contact closer beyond the range of its weighing positions, and means for adjusting said contact strips relative to said scale lever to effect the closing of the circuit therebetween when the scale lever is exactly in zero position.

5. The combination with a weighing scale, including a scale lever, of an electric illuminating lamp for the scale, and a circuit for said lamp; a switch for said lamp circuit normally spring drawn into position to close said circuit; an auxiliary circuit including a solenoid operating upon said lamp switch to hold the same open against its spring tension; two contact strips forming a make and break device for said auxiliary circuit; a contact closer carried upon the end of said scale lever and projecting between said contact strips to close the auxiliary circuit when the scale lever is in normal zero position, said contact strips being positioned to be engaged by said contact closer when the scale lever reaches normal zero position and also constructed of such extent as to remain in engagement with said contact closer during the travel of the contact closer beyond the range of its weighing positions; and means for adjusting the said contact strips relative to each other to effect greater or less bearing pressure upon the said contact closer sliding therebetween.

[Claims 6 to 11 not printed in the Gazette.]

1,105,807. CENTRIFUGAL PUMP. MARTIN B. MACNEILL, Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1912. Serial No. 712,980. (Cl. 103—43.)



1. In a machine of the class described the combination of a rotary impeller having a passage through the hub thereof, a casing having an inlet and a discharge passage, said casing having a balancing chamber on the rear side of the impeller, an annular flange on the casing fitting over the impeller hub, a port in said flange leading from the balancing chamber to the passage through the impeller hub, and a manually controlled valve for controlling the flow through said port.

2. In a machine of the class described the combination of a rotary impeller having a passage through the hub thereof, a casing having an inlet and a discharge passage, said casing having a balancing chamber on the rear side of the impeller in limited communication with the discharge, an annular flange on the casing fitting over the impeller hub, a port in said flange leading from the balancing chamber to the passage through the impeller hub, a rotary sleeve fitting over said flange for controlling the port opening and manually operated means for rotating said sleeve.

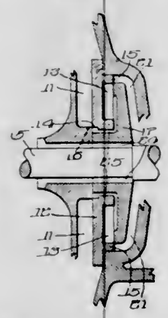
3. In a machine of the class described the combination of a rotary impeller having a passage through the hub thereof, a casing having an inlet and a discharge passage, said casing having a balancing chamber on the rear side of the impeller, an annular flange on the casing fitting over the impeller hub, a port in said flange leading from the balancing chamber to the passage through the impeller hub, a valve for said port, ears upon said valve for operating it, and longitudinally movable elements engaging said ears and extending to a point outside of the casing whereby they may be manually adjusted.

4. In a rotary pump, the combination of a rotary impeller, a casing therefor having an inlet and a discharge passage, a balancing chamber communicating with said discharge passage, a port between said balancing chamber and the inlet, a flange on the impeller hub adapted to automatically control the flow through said port, and a manually operated valve also adapted to control the flow through said port, the control being therefore dependent upon two independent factors, one of which is automatic and the other manual.

5. In a machine of the class described, the combination of a rotary impeller having a passage through the hub thereof, a casing having an inlet and a discharge passage, said casing having a balancing chamber on the rear side of the impeller in limited communication with the discharge, an annular flange on the casing fitting over the impeller hub, a port in said flange leading from the balancing chamber to the passage through the impeller hub, a rotary sleeve fitting over said flange for controlling the port opening, ears on said sleeve on opposite sides of the axis of rotation thereof, and longitudinally movable elements engaging said ears and extending through to the outside of the casing whereby they may be manipulated at will.

[Claims 6 to 9 not printed in the Gazette.]

1,105,808. CENTRIFUGAL PUMP. MARTIN B. MACNEILL, Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1912. Serial No. 712,981. (Cl. 103—43.)



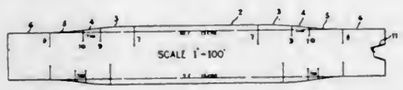
1. In a centrifugal pump, a casing, an impeller in said casing, a piston behind said impeller rigidly connected thereto, said casing having a partition extending from it toward the machine axis, there being a pressure chamber between the partition and the rear of the impeller and a balancing chamber between the partition and the piston, a waste duct leading from said balancing chamber, a pair of coöperating annular shoulders, one on said partition and the other on the impeller hub adapted to permit an increased flow from the pressure chamber into the balancing chamber when the impeller moves toward the pump inlet and throttle the flow when the impeller moves away from the pump inlet, and a second pair of coöperating annular shoulders one on said piston and the other on said casing adapted to permit an increased flow from said balancing chamber to the waste duct when said impeller moves rearward and throttle the flow when said impeller moves forward, said shoulders meeting corner to corner to thereby obtain a highly sensitive control.

2. In a centrifugal pump, turbine, or similar machine the combination of a casing having an inlet and a discharge, a rotary impeller coöperating with the casing to form a pressure chamber between the casing and the rear of the impeller, a balancing piston at the rear of the impeller moving laterally in unison therewith, a centrally apertured partition in said casing forming the rear of said pressure chamber and the front of a balancing chamber, the rear of the balancing chamber being formed by the balancing piston, an annular shoulder formed on said partition concentric with the axis of the machine, a shoulder on said impeller fitting the said shoulder on the partition and adapted to permit increased flow from the pressure chamber through the central aperture of the partition to the balancing chamber when the impeller moves laterally forward toward the inlet of the machine, and vice versa, a second pair of interfitting shoulders, one at the rim of the balancing piston and the other on said casing, said second pair of shoulders being adapted to permit increased flow from the balancing chamber when the piston moves laterally toward the rear and vice versa and a duct leading from the rim of the piston between the casing and the rear of the piston thence forward through the hubs of the piston and impeller to the inlet of the machine.

3. In a centrifugal pump, the combination of a casing, a rotor in said casing, said rotor having a hub with an annular shoulder or corner formed thereon, a balancing piston behind said rotor rotating in unison therewith and having an annular shoulder or corner formed thereon, a pressure chamber and a balancing chamber formed in said casing behind said rotor, the balancing chamber being behind said pressure chamber, and a partition in said casing separating the pressure chamber from the balancing chamber and extending from the casing toward the rotor hub between the rotor and the balancing piston, and said partition having two annular shoulders or corners, one coöperating with the aforesaid shoulder on the hub and the other coöperating with the adjacent shoulder on the balancing piston, substantially as described.

4. In a centrifugal pump, a casing, an impeller in said casing, a piston behind said impeller rigidly connected thereto, said casing having a partition extending from it toward the machine axis, there being a pressure chamber between the partition and the rear of the impeller and a balancing chamber between the partition and the piston, a waste duct leading from said balancing chamber, a pair of coöperating annular shoulders, one on said partition and the other on the impeller hub adapted to permit an increased flow from the pressure chamber into the balancing chamber when the impeller moves toward the pump inlet and throttle the flow when the impeller moves away from the pump inlet, and a second pair of coöperating annular shoulders one on said piston and the other on said casing adapted to permit an increased flow from said balancing chamber to the waste duct when said impeller moves rearward and throttle the flow when said impeller moves forward, said shoulder meeting corner to corner and the shoulders of one pair being capable of interfitting with each other, whereby a lateral movement of the impeller is possible which will hold the flow at the interfitting shoulders substantially constant and at the same time permit a varying flow at the other pair of shoulders.

1,105,809. TEMPLET FOR DRAWING RAILWAY SWITCHES AND CROSSOVERS. HENRY WARDLAW MCALL, Toronto, Ontario, Canada. Filed Apr. 11, 1913. Serial No. 760,470. (Cl. 33—1.)



1. A templet having straight and parallelly arranged edges offset and connected by a compound reverse curve corresponding with the geometrical compound curve of a railway switch or crossover.

2. A templet having a centrally arranged straight edge portion, a tangent curve extending from the end of said central straight edge leading to an angularly set tangent, a curve joined to said tangent and forming the reverse of the aforesaid curve, and a straight edge meeting the latter edge tangentially, said latter straight edge being arranged in parallel relation with the central straight edge portion and spaced a set distance laterally therefrom.

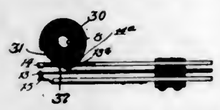
3. A templet having a central straight edge portion and compound reverse curves extending tangentially therefrom and merging into straight end portions arranged one in alinement with the other and spaced a prescribed distance laterally in relation to the central straight edge portion.

1,105,810. LETTERING-TEMPLET. HENRY WARDLAW MCALL, Toronto, Ontario, Canada. Filed May 23, 1913. Serial No. 769,357. (Cl. 101—134.)



A letter templet, comprising, a strip of thin material having a longitudinal slot therein and a raised portion along the base forming a guiding edge and a strip of suitable material adapted to slide upon the slotted strip and engage the guiding edge thereof and having a series of perforations presenting guiding edges for the lettering instrument in forming the letters and numerals.

1,105,811. SEQUENCE-SWITCH. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 5, 1908. Serial No. 451,868. (Cl. 177—348.)



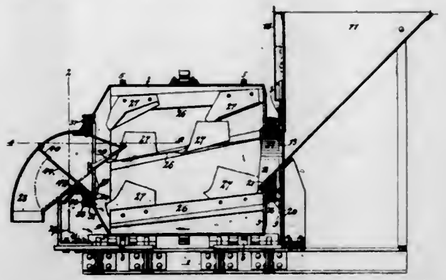
1. In a switching appliance the combination with a rotary shaft, of a cam mounted thereon and having its face cut to three different depths, a plurality of switch springs mounted adjacent said cam, and having contact points at the end thereof, the middle one of said plurality of springs being provided with a projecting portion located intermediate the ends thereof and extending into the path of the cam whereby said middle spring may be moved away from or into contact with either of the other switch springs.

2. In a switching appliance the combination with a rotary shaft, of a cam mounted thereon and having a face cut to three different depths, a switch composed of three parallel contact members insulatively secured together at one end and tangentially mounted in respect to said cam, the intermediate one of said members being provided with a projecting portion which engages said cam and in conjunction therewith controls said intermediate member in its three positions of rest.

3. In a switching appliance the combination with a rotary shaft, of a cam mounted thereon and having a face cut to three different depths, a switch composed of three parallel contact members insulatively secured together at one end and tangentially mounted in respect to said cam, the intermediate one of said members being provided with a projecting portion which engages said cam and in conjunction therewith controls the movement of said intermediate member, and the member next adjacent said cam being provided with a recess into which both the cam and the projecting portion of the intermediate member are adapted to enter, the whole forming a compact structure wherein the parallel contact members are mounted close together and have their contact points located at their free ends where they are readily accessible and wherein the intermediate contact member need only be moved through a short distance in order to contact with one or the other adjacent parallel members, or be maintained out of contact with either of them.

4. In a switching appliance the combination with a rotary shaft, a cam mounted thereon and having its face cut to three different depths, a switch mounted adjacent to said cam having an intermediate spring contact member and two alternate contact members, each having a contact point located at its free end, and a projecting portion located between the ends of said intermediate contact member and maintained in engagement with the edge of said cam to hold said intermediate contact member in a position between said alternate contact members or against one of them, and also to allow it to be brought into engagement with the other alternate contact member depending on which portion of the cam is engaged.

1,105,812. MIXING-MACHINE. ARCHIE MCKAIG, Buffalo, N. Y. Filed Oct. 15, 1912. Serial No. 725,833. (Cl. 71—1.)

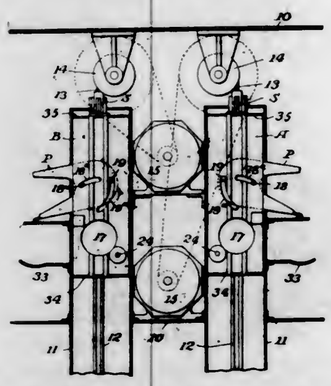


1. A mixing machine comprising a hollow drum rotatable about a horizontal axis and provided with front and rear openings, a discharge spout having its inner end communicating with said front opening, a stationary outwardly inclined chute having its inner end arranged within the drum and its outer end arranged centrally relatively to the inner end of said discharge spout, and a door arranged in said spout and pivoted between its ends for turning the same about a horizontal transverse axis so that upon turning the door into an inwardly inclined position its outer part closes the spout and its inner part opens a space between the outer end of the chute and the spout while upon turning the door into an outwardly inclined position its inner part closes the space between the chute and spout and its outer part opens the spout and the inner and outer parts of the door form a continuation of said chute.

2. A mixing machine comprising a hollow drum rotatable about a horizontal axis and provided with front and rear openings, a discharge spout having its inner end communicating with said front opening, a stationary outwardly inclined chute having its inner end arranged within the drum and its outer end arranged centrally relatively to the inner end of said discharge spout, a door arranged in said spout and pivoted between its ends for turning the same about a horizontal transverse axis so that upon turning the door into an inwardly inclined position its outer part closes the spout and its inner part opens a space between the outer end of the chute and the spout while upon turning the door into an outwardly inclined position its inner part closes the space between the chute and spout and its outer part opens the spout and the inner and outer parts of the door form a continuation of said chute and a flange depending from the upper side of the discharge spout and adapted to be engaged by the outer edge of the door in the closed position of the same.

3. A mixing machine comprising a hollow drum rotatable about a horizontal axis and provided with front and rear openings, a discharge spout having its inner end communicating with said front openings, a stationary outwardly inclined chute mounted on the spout and having its inner end arranged within the drum and its outer end arranged centrally relatively to the inner end of said discharge spout, and a door arranged in said spout and pivoted between its ends for turning the same about a horizontal transverse axis, so that upon turning the door into an inwardly inclined position its outer part closes the spout and its inner part opens a space between the outer end of the chute and the spout, while upon turning the door into an outwardly inclined position its inner part closes the space between the chute and spout and its outer part opens the spout and the inner and outer parts of the door form a continuation of said chute.

1,105,813. AMMUNITION-HOISTING CAR. JOHN F. MEIGS and ROBERT P. STOUT, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Oct. 11, 1909. Serial No. 522,197. (Cl. 89—46.)



1. In an ammunition hoist, the combination with a track or guideway, of a car, a normally closed tilting powder receptacle on the car, and means on the powder receptacle for engaging the track or guideway, the upper part of said track or guideway being constructed to tilt and open the powder receptacle to discharge the powder therefrom.

2. In an ammunition hoist, the combination with a hoisting car, of a tilting powder receptacle thereon, means for closing said receptacle when in its normal position on the car to wholly inclose the powder, and means for tilting the receptacle arranged to open the same and discharge the powder therefrom.

3. In an ammunition hoist, the combination with a car or casing, of a powder receptacle normally mounted therein and having pivot pins extending through slots in the wall of the car or casing, a track or guideway adapted to engage said pivot pins and tilt the receptacle from normal position, and means for closing the receptacle when in normal position.

4. In an ammunition hoist, the combination with a car or casing, of a powder receptacle pivotally mounted in said car or casing, means for closing the receptacle when in one of its positions, a track or guideway, and means connected with the track or guideway for automatically moving the receptacle to and from closed position, to close and open the same.

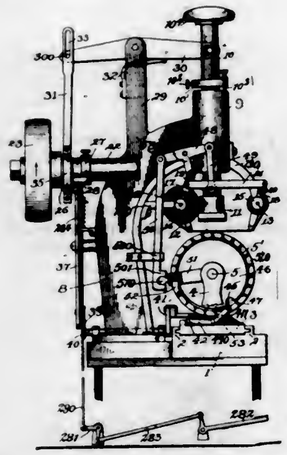
5. In an ammunition hoist, the combination with a car or casing, of a powder receptacle pivotally mounted in said car or casing and provided with two pivotal centers, said car being adapted to swing successively about said pivotal centers for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,105,814. ADDRESSING-MACHINE. NICHOLAS MEYERS, Buffalo, N. Y., assignor to Peter C. Meyers, Buffalo, N. Y. Filed Nov. 20, 1911. Serial No. 661,370. (Cl. 101—1.)

1. An addressing machine comprising a carrier provided with a plurality of address types, a platen movable toward and from said carrier, and means for actuating said platen comprising a plunger carrying said platen, a rock lever connected at one end with said plunger, an eccentric, a shifting rod slidably connected at one end with said lever and provided at its other end with a strap surrounding said eccentric and means for permitting said plunger to be operated manually independently of said eccentric.

2. An addressing machine comprising a carrier provided with a plurality of address types, a platen movable toward and from said carrier, and means for actuating said platen comprising a plunger carrying said platen, a rock lever connected at one end with said plunger, an eccentric, and a shifting rod connected at one end with said lever and provided at its other end with a strap surrounding said eccentric, the connection between said lever and shifting rod being effected by a pin and slot to permit of operating said plunger manually independently of said eccentric.



3. An addressing machine comprising a carrier provided with a plurality of rows of address types, an impression platen adapted to press the article to be printed against said types, means for moving said carrier for bringing said address types successively to the impression position, a plunger carrying said platen, a guide for said plunger, a collar adjustably secured to said plunger, and an adjustable stop screw arranged on said collar and adapted to engage said guide.

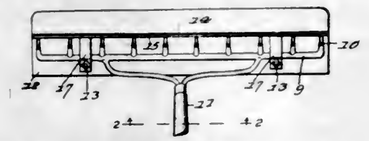
4. An addressing machine comprising a drum which is capable of rotation and also moving lengthwise of its axis, a plurality of address types arranged on the periphery of said drum so as to form a plurality of circumferential rows side by side, a carriage supporting said drum, a platen movable toward and from the drum to produce impressions of said types on the articles to be printed, a plunger carrying said platen, and means for turning said drum comprising an annular row of ratchet teeth mounted on the drum, a yoke pivoted on the carriage and having a bar arranged lengthwise of the drum and a pawl engaging with said ratchet teeth, and a shifting rod operatively connected with said plunger and provided with a fork which receives said bar.

5. An addressing machine comprising a drum which is capable of rotation and also moving lengthwise of its axis, a plurality of address types arranged on the periphery of said drum so as to form a plurality of circumferential rows side by side, a carriage supporting said drum, a platen movable toward and from the drum to produce impressions of said types on the articles to be printed, a plunger carrying said platen, and means for turning said drum comprising an annular row of ratchet teeth mounted on the drum, a yoke pivoted on the carriage and having a bar arranged lengthwise of the drum and a pawl engaging with said ratchet teeth, a shifting bar provided with a fork which receives said bar, a rock lever connected with said rod, and a link connecting said lever with the plunger.

[Claims 6 to 16 not printed in the Gazette.]

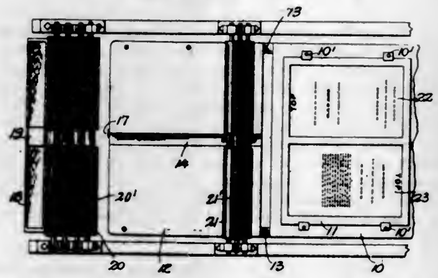
1,105,815. RAKE AND HOE. HERMAN MILLEMAN, Boise, Idaho. Filed Aug. 25, 1913. Serial No. 786,510. (Cl. 55—39.)

In combination with a rake head, a hoe comprising a metal plate folded upon itself to form a head, said plate extending at right angles with relation to the head, said plate having openings, means for securing the hoe to the rake head, said means comprising clips, each of said clips having a shoulder, the said shoulders adapted to extend



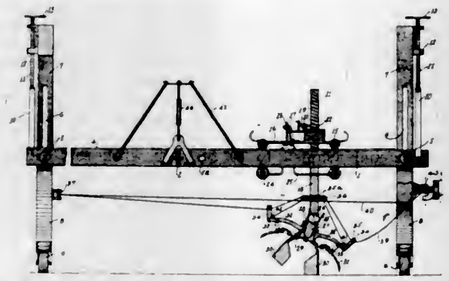
through the openings of the right angled plate, and means for clamping the opposite end of the clip to the hoe head.

1,105,816. PRINTING-PRESS. GEORGE H. MILLER, Brooklyn, N. Y. Filed July 11, 1913. Serial No. 778,500. (Cl. 101—78.)



In a printing press, the combination with a fountain for inks, of a block to loosely fit within same and divide the inks, rollers with grooves to correspond with the location of the block, an ink plate with a groove and inclined perforations, a strip with studs for the perforations and a gravity latch to hold the strip in the groove.

1,105,817. LAND-GRADER. MANUEL P. MONTE, Stockton, Cal. Filed May 14, 1913. Serial No. 767,570. (Cl. 37—39.)



1. A device of the character described comprising a supporting frame, a carrier movable along said supporting frame, a swinging frame on the lower end of said carrier, a cultivating means on each side of said swinging frame, means for moving said carrier forward and backward on said supporting frame and means for swinging said swinging frame when said carrier reaches each end of said supporting frame, as described.

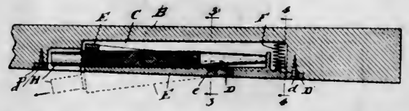
2. A device of the character described comprising a supporting frame, a carrier movable on said supporting frame, a swinging frame on the lower end of said carrier, a cultivating means carried on each side of said swinging frame, means on said carrier for adjusting said swinging frame vertically, and means for swinging said swinging frame, as described.

3. A device of the character described comprising a supporting frame, a carrier movable on said supporting frame, a swinging frame on said carrier, a pair of spaced scrapers mounted on said swinging frame, a cultivator mounted on said swinging frame at a spaced distance from each of said scrapers, and means for swinging said swinging frame, as described.

4. A device of the character described comprising a supporting frame, a carrier movable on said supporting frame, an arm swinging on the lower end of said carrier, a supporting member secured at the lower end of said arm and carrying a pair of spaced scrapers, a guide secured on said supporting member on each side of said arm and adapted to engage the lower end of said carrier, and a cable connected at spaced points at the ends of said supporting frame and adapted to operate said carrier back and forth on said supporting frame and at the same time swing said swinging arm when said carrier reaches each end of said supporting frame, as described.

5. A device of the character described comprising a supporting frame, a carrier movable on said supporting frame and having a vertical beam, an arm pivotally mounted on the lower end of said beam, a supporting frame on the lower end of said arm, a pair of spaced scrapers on said supporting frame, a guide on said supporting frame on each side of said arm, said guides being adapted to engage said vertical beam, a cross member on said vertical beam provided with a pulley at each end, an arm on each of said guides each being provided with a pulley at its outer end, a pair of cables connected with each of said last named arms and projecting over one of the pulleys on said cross member and thence under the pulley on the corresponding arm, and means for operating each of said cables, as described.

1,105,818. MAGAZINE-HANDLE. WILLIAM H. S. MOORE, West Chicago, Ill. Filed June 16, 1913. Serial No. 773,819. (Cl. 145—62.)



1. The combination with a tool handle grip, of a tilting, spring-held nail-set sheath adapted to receive a nail-set mounted on said grip and adapted to be operated by the fingers of the user's hand when the latter is in its normal position while holding the grip, substantially as specified.

2. The combination with a hammer handle, of a nail-set sheath pivoted intermediate its ends in the side of the hammer handle and having one of its ends held in and the other held out by means of a spring, the held out end being opposite the fingers of a hand holding the hammer handle.

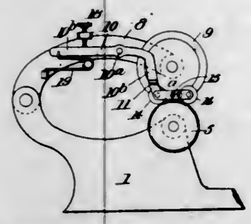
3. The combination with a tool handle-grip, of a movable, disappearing tool-sheath, having a tension device to retain it in normal position, and adapted to receive a supplementary tool, the outer surface of said tool sheath lying flush with the surface of the handle-grip when in normal position, substantially as specified.

4. The combination with a tool handle-grip, of a tool-sheath for a supplementary tool, the sheath being rockably mounted on a pivot located intermediate its ends and disappearing in the side of the grip and having one end held in and the other held out by means of a tension device, the held out end being opposite the fingers of a hand holding the grip.

1,105,819. PRESSER-FOOT. LESLIE WILLIAM MOSES, Baltimore, Md. Filed Jan. 26, 1914. Serial No. 814,553. (Cl. 223—24.)

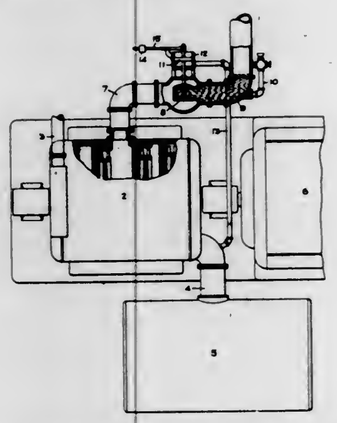
1. In a machine for operating upon hat crowns, the combination with a curved feeding device adapted to receive a hat crown and a member coöperating with said device for operating upon the crown, of a presser foot for holding the crown against said device at the operating point comprising a shank, a centrally pivoted bar on said shank, two rollers on the bar at opposite sides of its piv-

otal point, said rollers projecting below the intermediate portion of the bar and adapted to engage the work in advance of and at the rear of the operating point, and resilient means for pressing said rollers toward the work.



2. The combination with a cylindrical feed roller adapted to receive a hat crown and a cutter having its cutting edge meeting the feed roller for severing the crown, of a presser foot comprising a bar having rollers at its ends, said rollers projecting below the intermediate portion of the bar and adapted to simultaneously engage the work in advance of and at the rear of the cutting point, and resilient means for holding said rollers in engagement with the work.

1,105,820. ELASTIC-FLUID TURBINE. SANFORD A. MOSS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 3, 1914. Serial No. 829,227. (Cl. 121—118.)



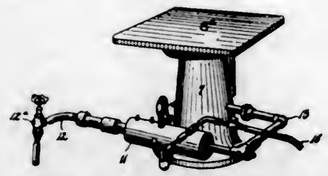
1. The combination of a turbine having a conduit leading from an intermediate stage, a balanced valve in said conduit, a movable abutment connected to the stem of the valve, a condenser, and a pipe connecting one side of said abutment to the condenser, the other side being subjected to a substantially constant pressure.

2. The combination of a turbine having a conduit leading from an intermediate stage, a balanced valve in said conduit, means for biasing the valve to open position, a condenser, a stem for the valve, a movable abutment connected to the stem, one side of which is subjected to substantially constant pressure, and a pipe connecting the other side of the abutment to the condenser.

3. The combination of a turbine, a conduit connected with an intermediate stage, a water sealed valve biased to an open position in the conduit, a cylinder, a piston therein, a stem connecting the valve thereto, and a pipe connecting the cylinder with the condenser so as to cause the valve to remain closed so long as the vacuum is maintained.

4. The combination of a turbine, a conduit connected with an intermediate stage, a valve in the conduit biased to open position, a movable abutment connected to the valve, and means subjecting one side of the abutment to the pressure of the condenser, the other side being subjected to a substantially constant pressure, the pressure on said last-named side being opposed to the biasing force.

1,105,821. JOLT RAMMING-MACHINE. EDGAR H. MUMFORD, Plainfield, N. J. Filed Mar. 9, 1914. Serial No. 823,413. (Cl. 121—19.)



1. In combination with a jarring machine having a cylinder provided with a port therein and a plunger within said cylinder, a valve casing connecting with said port the valve chamber of which extends on both sides of said port, and a valve in said casing for allowing the admission of operating fluid to said cylinder through said port for raising said plunger and adapted to be reversed by means of a piston at one end of and connected to said valve when said plunger has reached its raised position, thereby cutting off the admission of fluid to said cylinder to allow the fluid therein to exhaust through said port and permit said plunger to drop in said cylinder.

2. In combination with a jarring machine hvaing a cylinder provided with a port therein with an opening above the same and a plunger within said cylinder, a valve casing connecting with said port and said opening having a valve chamber extending on each side of the port, and a valve in said casing for allowing the admission of operating fluid to said plunger through said port for raising said plunger and adapted to be reversed by means of a piston at one end of and connected to said valve when said plunger has reached its raised position, by the fluid passing through said opening, thereby cutting off the admission of fluid to said cylinder to allow the fluid therein to exhaust through said port and permit said plunger to drop in said cylinder.

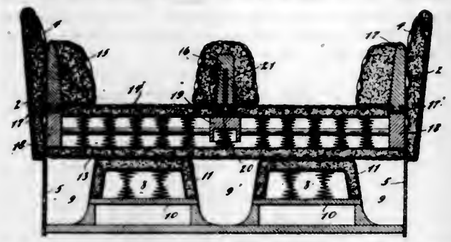
3. In combination with a jarring machine having a cylinder provided with a port therein with an opening above said port and a plunger within said cylinder, a valve casing connecting with said port and opening having a valve chamber extending on each side of said port, and a valve within said casing having a piston connected to an end thereof, said valve allowing the admission of operating fluid to said cylinder through said port for raising said plunger and adapted to be reversed when said plunger has reached its raised position by the fluid passing through said opening and to one end of said piston, thereby cutting off the admission of fluid to said cylinder to allow the fluid therein to exhaust through said port and permit said plunger to drop in said cylinder.

4. In combination with a jarring machine having a cylinder provided with a port therein with an opening above said port and a plunger in said cylinder, a valve casing connecting with said port, and a valve in said casing for allowing the admission of operating fluid to said cylinder through said port for raising said plunger and adapted to be reversed by differential pressure when the plunger uncovers said opening on its upward stroke, thereby cutting off the admission of fluid to said cylinder to allow the fluid therein to exhaust through said port and permit said plunger to drop in said cylinder.

1,105,822. VEHICLE-SEAT. GEORGE F. MURPHY, New York, N. Y. Filed Oct. 31, 1913. Serial No. 798,454. (Cl. 155—37.)

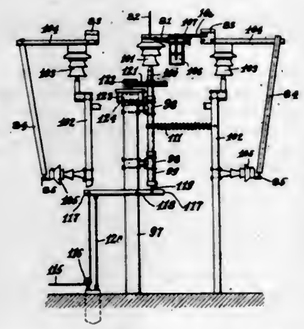
1. A reversible seat provided on both faces with upholstery or other seating surface and having on one face only an arm dividing the seating surface into a plurality of individual seating spaces.

2. A reversible seat provided on both faces with upholstery or other seating surface and having on one face only an arm dividing the seating surface into a plurality



of individual seating spaces, in combination with a seat support provided with a pocket adapted to receive said arm when the latter is directed downward.

1,105,823. AUTOMATIC SWITCH ARRANGEMENT. LLOYD C. NICHOLSON, Buffalo, N. Y. Original application filed Jan. 26, 1912, Serial No. 673,673. Divided and this application filed Feb. 25, 1913. Serial No. 750,477. (Cl. 175—278.)

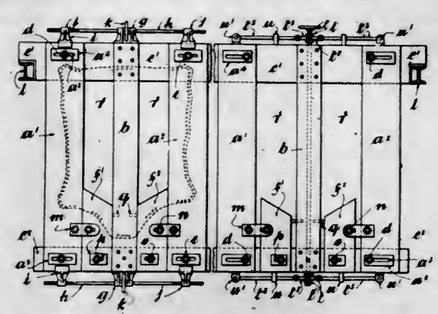


1. The combination of an electrical circuit, a plurality of inclosed fuses, a rotatable member carrying a switch contact adapted to consecutively connect the fuses in series in said circuit, a coil responsive to current variations in said circuit means controlled by said coil for causing said contact to be given a movement in one direction upon a certain current flowing in said circuit, and allowing said contact to be given a movement in another direction upon the blowing out of a fuse in said circuit, and means whereby the last movement of said contact allows the member to rotate to cause the contact to connect another fuse in said circuit.

2. The combination of an electrical circuit, a plurality of fuses, a rotatable switch arm adapted to consecutively connect the fuses in series in said circuit, and a coil responsive to current changes in the circuit for causing the switch arm to move from connection with one fuse to connection with the next fuse after the first fuse has blown out, and separate high potential insulators upon which said fuses and switch arm are carried.

3. The combination of an electrical circuit, a plurality of inclosed fuses, a rotatable member carrying a switch contact adapted to consecutively connect the fuses in series in said circuit, a coil responsive to current variations in said circuit means controlled by said coil for causing said contact to move upon a certain current flowing in said circuit, and allowing said contact to move back upon the blowing out of a fuse in said circuit, and means whereby the last movement of said contact allows the member to rotate to cause the contact to connect another fuse in said circuit, a spring for causing said member to rotate, and high potential insulators upon which said fuses and rotatable member are carried, said coil being carried upon said member.

1,105,824. APPARATUS FOR STRETCHING HIDES, SKINS, AND THE LIKE. ROBERT NOBLETT, Audenshaw, near Manchester, England. Filed Dec. 31, 1912. Serial No. 739,488. (Cl. 149—21.)



1. A stretching apparatus for use in stretching hides, skins, and the like, comprising a pair of parallel carrier members suitably spaced apart, a central transverse member disposed at right angles thereto and having its ends rigidly secured to said members, a pair of similar transverse members arranged one on either side of said rigid member and having their ends slidably connected to said carrier members, a pair of short section members disposed on either side of said rigid transverse member between it and the adjacent slidably movable transverse member and parallel thereto, said section members being slidably connected with said movable transverse members and with said carrier members, and means for causing said movable transverse members to move along said carrier members, away from said rigidly secured transverse member, substantially as described.

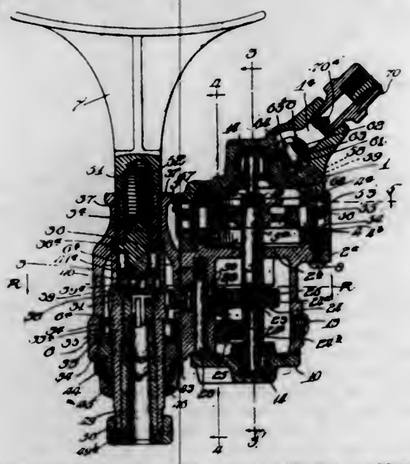
2. In a stretching apparatus for use in stretching hides, skins, and the like, a frame comprising a pair of parallel carrier members suitably spaced apart, a transverse member connecting said members at their central point and having its ends rigidly secured thereto, a pair of movable transverse members arranged on either side of said rigid member and having their ends slidably connected with said carrier members, short section members interposed between said rigid, transverse member and parallel thereto, and having their ends and sides slidably connected with said carrier members, and said movable transverse members, respectively, means for moving said movable transverse members in opposite directions and for moving said section members after said transverse members have been moved a predetermined distance, and means for limiting the movements of said transverse and said section members, substantially as described.

1,105,825. PNEUMATIC TURBINE-DRILL. REINHOLD A. NORLING, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 18, 1913. Serial No. 790,576. (Cl. 121—56.)

1. In a pneumatic rotary turbine drill, the combination of a casing, a rotor, a rotor shaft provided with a piston, a tool spindle mounted in the casing parallel with the rotor shaft, and provided with gear teeth, speed reducing gearing interposed between the tool spindle and the pinion of the rotor shaft, the same comprising a set of gear spindles mounted in said casing and provided with gear wheels meshing with the pinion of the rotor shaft at points thereof diametrically opposed, and driving means interposed between said set of speed reducing gearing and tool spindle.

2. In a pneumatic rotary turbine drill, the combination of a casing, a rotor supported in said casing, a rotor shaft provided with a pinion, a tool spindle mounted in the casing parallel with the rotor shaft, and provided with gear teeth, an intermediate gear wheel mounted in the casing and meshing with the gear teeth of the tool spindle,

and speed reducing gearing interposed between said intermediate gear wheel and the pinion of the rotor shaft the same comprising a set of gear spindles mounted in said casing and in operative connection with said intermediate gear wheel and provided with gear wheels meshing with the pinion of the rotor shaft at points thereof diametically opposed.



3. In a pneumatic rotary turbine drill, the combination of a casing, a rotor, a rotor shaft provided with a pinion, a tool spindle journaled in said casing parallel with the rotor shaft and provided with gear teeth, speed reducing gearing mounted in said casing and comprising a plurality of gear spindles, provided with gear wheels, the corresponding gear spindles of each set intermeshing with each other and with the pinion of the rotor shaft, and driving means interposed between one set of speed reducing gear wheels and the teeth of the tool spindle.

4. In a pneumatic rotary turbine drill, the combination of a casing, a rotor, a rotor shaft provided with a pinion, a tool spindle mounted in the casing parallel with the rotor shaft and provided with gear teeth, speed reducing gearing comprising a plurality of sets of gear spindles rotatively mounted in the casing and provided with gear wheels and pinions, the gear wheels of one of said sets meshing with the pinion of the rotor shaft at points diametrically opposed, the gear wheels of the other of said sets meshing with said pinions of the first mentioned gear spindles, and power transmitting means interposed between the pinions of said last mentioned set of gear spindles and the teeth of said tool spindle.

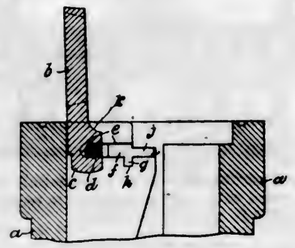
5. In a pneumatic rotary turbine drill, the combination of a casing, a rotor, a rotor shaft provided with a pinion, a tool spindle journaled in said casing parallel with the rotor shaft and provided with gear teeth, an intermediate gear wheel supported in said casing and meshing with the gear teeth of the tool spindle, and speed reducing gearing interposed between said intermediate gear wheel and the pinion of the rotor shaft, and comprising a plurality of gear spindles, provided with gear wheels, the corresponding gear spindles of each set intermeshing with each other and with the said intermediate gear wheel and the pinion of the rotor shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,105,826. VAULT-COVER. RALPH ARTHUR NORTON, Newcastle-upon-Tyne, England. Filed Sept. 18, 1913. Serial No. 790,401. (Cl. 94—7.)

1. In a man-hole, street-box or the like the combination of, a frame; a cover; pivots on said cover; slots in said frame for the reception of said pivots; and removable means for closing said slots to confine said pivots therein and thereby lock said cover against inadvertent removal from the frame.

2. In a man-hole, street-box or the like the combination of, a frame; a cover; a hinge pin loosely mounted in said cover; slots provided on the inside of said frame for the reception of the ends of said hinge pin; and removable locking blocks for closing said slots to confine the ends of said pivots therein and thereby lock said cover against inadvertent removal from the frame.



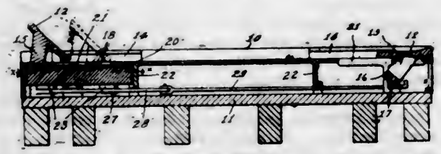
3. In a man-hole, street-box or the like the combination of, a frame; a cover; a hinge pin loosely mounted in said cover; slots provided on the inside of said frame for the reception of the ends of said hinge pin; and removable locking blocks for closing said slots to confine the ends of said pivots therein and thereby lock said cover against inadvertent removal from the frame, said locking blocks being capable of fitment and removal only when said cover is raised.

4. In a man-hole, street-box or the like the combination of, a frame; a cover; pivots on said cover; slots in said frame for the reception of said pivots; removable locking blocks for closing said slots to confine said pivots therein; grooves in the walls of said slots at right angles thereto; and tongues on said blocks adapted to enter said grooves.

5. In a man-hole, street-box or the like the combination of, a frame; a cover; a hinge pin loosely mounted in said cover; open-ended slots in the inside of said frame for the reception of the ends of said pin; grooves in the walls of said slots at right angles thereto, removable locking blocks for closing said slots to confine the ends of said hinge pin therein; and projections on said blocks adapted to enter said grooves.

[Claim 6 not printed in the Gazette.]

1,105,827. LOGGING-BUNK. CHARLES O. DALE, Seattle, Wash., assignor of four-tenths to Axel Peterson, Renton, Wash. Filed Dec. 18, 1913. Serial No. 807,521. (Cl. 105—173.)



1. In a bunk of the class described, the combination with a frame, of a stake associated with said frame, said stake having a beveled portion on its bottom side, and a block, said block having a beveled portion on which the beveled portion of said stake may rest whereby said stake easily may slide off of said block when said block is moved sidewise.

2. In a car bunk of the class described, the combination with a frame, of a stake associated with said frame, a supporting leg provided on said stake, and a block on which said supporting leg may rest said block being adapted to be moved sidewise to permit said supporting leg to drop downwardly to lower said stake.

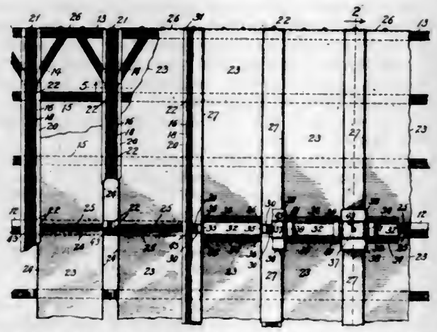
3. In a car bunk of the class described, the combination with a frame, of a stake associated with said frame, pawls provided on said stake, a block on which said stake may rest, said block being provided with notches in which said pawls may engage to prevent said stake from moving outwardly on said frame and means adapted to move said block sidewise to permit said stake to drop downwardly.

4. In a car bunk of the class described, the combination with a frame, of stakes associated with said frame each of said stakes being provided with a supporting leg having an end that is formed at an angle other than a right angle to the plane of such leg and a block having an inclined surface on which the angular end of said supporting leg may rest whereby such leg easily may be caused to slide off of such block.

5. In a car bunk of the class described, the combination with a frame, of stakes associated with said frame, each of said stakes being formed to have a supporting portion that is provided with an angular bearing surface, pawls provided on said angular surface, a block having an inclined surface on which said angular bearing surface may rest whereby said angular bearing surface more easily may be caused to slide off of said block, notches provided in said inclined surface in which said pawls may engage and means whereby said block may be moved sidewise to cause said stake to be lowered.

[Claims 6 to 8 not printed in the Gazette.]

1,105,828. CAR-ROOF. JOHN PEARSON, Chicago, Ill. Filed Aug. 18, 1911. Serial No. 644,756. (Cl. 108—5.)



1. In a car-roof, a series of carlines extending transversely of the car and each having top flanges, a series of metal panels extending from the side to the center of the car between the carlines and having upturned side-flanges under the flanges of the carlines, and caps extending from the side to the center of the car and covering the carlines and upturned flanges of adjacent panels and having their sides inwardly and upwardly bent to engage the body of the panels and underside of the carline-flanges.

2. In a car roof, a series of carlines having vertical webs and upper flanges, a series of metal panels with side flanges extending under the flanges of the carlines and spaced from the carline-webs, and caps covering the flanges of the carlines and the flanges of adjacent panels and having inner side-flanges extending under and against the carline-flanges and resting on the panels at a distance from the panel-flanges.

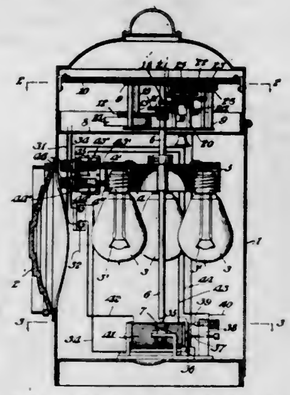
3. In a car roof, a plurality of carlines having vertical webs and upper flanges, a plurality of metal panels having side flanges under the carline-flanges, and carline caps each having a top and sides covering the joint between two panels, the sides of the cap being inturned under the carline-flanges and resting on the panels outside the panel-flanges.

4. In a car roof, a series of mortised purlins, a series of carlines having parts in the mortises of the purlins and flanges seating on the purlins and having upper vertical webs and lateral flanges, metal panels having upturned sides under the flanges of the carlines, and caps having tops and sides covering the joints between the panels, the sides of the caps being inturned under the carline-flanges and filling the space between said flanges and the panels.

5. In a car roof, a series of mortised purlins, a plurality of carlines having lower webs and flanges seating on the purlins and having upper webs and lateral flanges above the purlins, metal panels resting on the purlins between the carlines and having upturned flanges adjacent the upper carline-webs and under the carline-flanges, and carline-caps of inverted trough shape having tops and sides, the latter having flanges inturned under the carline-flanges and resting against the panels outside their flanges and against the carline-flanges.

[Claims 6 to 8 not printed in the Gazette.]

1,105,829. ELECTRIC SIGNALING MECHANISM. OSCAR D. PLUMMER, GEORGE H. HAUSSER, and EARL A. WARNER, Altoona, Pa. Filed Apr. 24, 1913. Serial No. 763,188. (Cl. 175—279.)



1. In an electric signaling mechanism, a plurality of lamps, lamp carrying mechanism, a circuit having an electro-magnet therein, motor mechanism for operating said carrying mechanism whereby said lamps are movable in succession into said circuit, a second circuit having an electro-magnet therein, means whereby said first named electro-magnet controls said second named circuit, and means whereby said second named electro-magnet controls said motor mechanism.

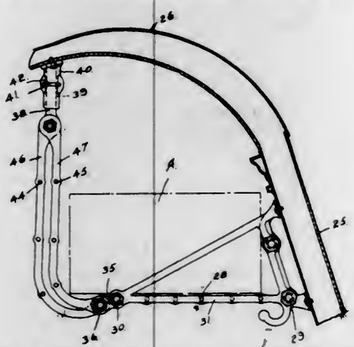
2. In an electric signaling mechanism, a circuit containing an electro-magnet and a pair of contacts, a revoluble carrier having contacts adapted for engaging said contacts first named, a lamp engaged to said carrier in circuit with said second named contacts, motor mechanism for revolving said carrier, stop mechanism for holding said motor, and a circuit having make and break means operated by the action of said electro-magnet, said circuit last named having therein an electro-magnet for controlling said stop mechanism.

3. In an electric signaling mechanism, a circuit containing contacts and an electro-magnet, a revoluble carrier having contacts adapted for engaging said contacts first named, lamps engaged to said carrier in circuit with the contacts thereof, a second circuit containing an electro-magnet and an armature adapted to be attracted by said first named electro-magnet to open said second circuit, motor mechanism for revolving said carrier, stop mechanism for holding said motor mechanism stationary, and means operated by said second named electro-magnet for releasing said stop mechanism.

4. In an electric signaling mechanism, a journaled shaft, a lamp carrier fixed on said shaft, a circuit containing contacts and an electro-magnet, lamps connected with said carrier and adapted for placement in said circuit through said contacts, a circuit containing an electro-magnet and a contact movable by said first named electro-magnet to open said second named circuit, stop mechanism comprising a pawl and ratchet for holding said motor mechanism, and means operated by said second named electro-magnet for disengaging said pawl from said ratchet.

5. In electric signaling mechanism, a lantern containing a light aperture, a shaft journaled in said lantern, a carrier fixed to said shaft, said carrier having lamp sockets and contacts, incandescent lamps in said sockets in circuit with said contacts, a circuit containing contacts adapted for engaging with the respetive contacts in circuit with the respective lamps, an electromagnet in said circuit, a second circuit containing a movable contacting device whereby it is adapted to be closed, said electromagnet being adapted for moving said contacting device to open its circuit, an electro-magnet in said second circuit, a motor for revolving said shaft, stop mechanism comprising clutching means for holding said motor, and means whereby said second named electro-magnet disengages said clutching means and releases said motor.

1,105,830. PARCEL-RACK. EDWARD POSSON, Chicago, Ill., assignor to Fay E. Posson, Park Ridge, Ill. Filed Dec. 26, 1913. Serial No. 808,859. (Cl. 105—5.)



1. In a parcel rack for railway cars and the like, the combination with a supporting element, of a pair of retaining elements at the forward edge of the supporting element which are movable so that one may stand in front of the other, for the purpose described.

2. In a parcel rack for railway cars and the like, the combination with a supporting element, of a retaining element at the forward edge of the supporting element which is mounted so as to be slidable in the direction of its length.

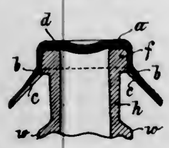
3. In a parcel rack for railway cars and the like, the combination with a supporting element, of a pair of retaining elements at the forward edge of the supporting element which are slidable one over the other.

4. In a parcel rack for railway cars and the like, the combination with a shelf, of upper and lower guide rods arranged adjacent to the forward edge of the shelf, and a gate movably mounted on said guide rods.

5. In a parcel rack for railway cars and the like, the combination with a shelf, of upper and lower guide rods arranged adjacent to the forward edge of the shelf, and a pair of gates slidably mounted on said guide rods and constructed so that they may be moved to positions one in front of the other.

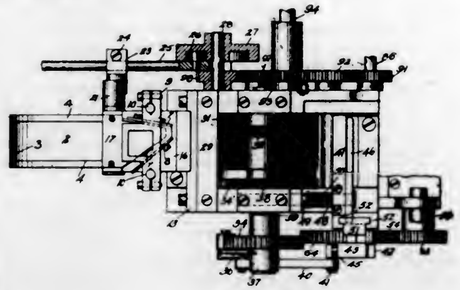
[Claims 6 to 15 not printed in the Gazette.]

1,105,831. BOTTLE-CLOSURE. FRIEDRICH JULIUS POTHS, Hamburg, Germany. Filed May 14, 1914. Serial No. 837,885. (Cl. 215—9.)



A bottle closure comprising a cap, with depending lips and upwardly extending tongues on said lips, and strengthening ribs on said lips and tongues, said tongues being so formed that they will engage with the bottle rim and when pressed against the bottle neck will pull the cap downward over the bottle mouth.

1,105,832. MOUTHPIECE-FORMING MECHANISM. SYDNEY I. PRESCOTT, New York, N. Y., assignor to The American Tobacco Company, New York, N. Y., a Corporation of New Jersey. Filed May 14, 1906. Serial No. 316,686. (Cl. 93—77.)

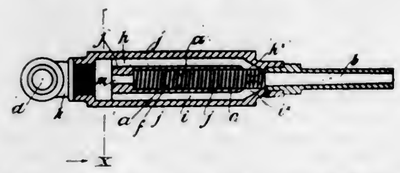


1. In a machine for making cigarette mouthpieces and in combination means for forwarding a strip of mouthpiece material, means for giving the strip a neck forming cut extending inward from one edge of the strip, and a blank severing cut, said cuts intersecting, and blank coiling and mouthpiece inserting means, said means receiving the narrowed neck of the mouthpiece blank formed by the cutting means.

2. In a machine for making cigarette mouthpieces and in combination means for forwarding a strip of mouthpiece material, means for giving the sides of the strip neck forming cuts extending inward toward each other from the edges of the strip and a blank severing cut which intersects the neck forming cuts, and blank coiling and inserting means which receive the narrowed necks of the mouthpiece blanks formed by the cutting means.

3. The combination with means for forwarding a strip of mouthpiece material, of forming knives for producing neck forming cuts in the opposite sides of the strip extending from the edges inward, a severing knife arranged to produce a cut intersecting the forming cuts, a blank coiling mechanism which receives the narrowed neck formed by the cuts, a tube support, and a re-rolling mechanism to which the tube and inserted mouthpiece are delivered.

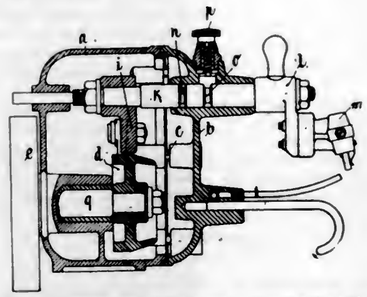
1,105,833. APPARATUS FOR BURNING LIQUID FUEL. SAMUEL WILLIAM PRICE, London, England. Filed Sept. 16, 1913. Serial No. 789,984. (Cl. 158—75.)



1. A liquid fuel burning apparatus comprising a central compartment forming a tubular mixing chamber, a contracted inlet at the inner end thereof for an atomizing fluid under pressure, separate passages in the wall of the said mixing chamber communicating with said inlet and with the outlet of said mixing chamber, a branch inlet for the liquid fuel into the middle portion of the central compartment of the said mixing chamber, and a helical coil of wire in the said central compartment, substantially as described.

2. A liquid fuel burning apparatus comprising a central compartment forming a tubular mixing chamber, a contracted inlet at the inner end thereof for an atomizing fluid under pressure, separate passages in the wall of the said mixing chamber communicating with said inlet and with the outlet of said mixing chamber, and a branch inlet for the liquid fuel into the middle portion of the central compartment of the said mixing chamber, substantially as described.

1,105,834. SHOE MACHINERY. HEINRICH RAAB, Pirmasens, Germany. Filed Jan. 27, 1913. Serial No. 744,462. (Cl. 12—78.)



1. In a machine for polishing or decorating the edges of shoe soles, a shaft, a tool holder mounted on said shaft, a rocker fixed to said shaft, a rotatable cam member, levers pivotally connected to the rocker projecting parts on said levers, and means for holding said projecting parts of the levers in engagement with the periphery of said cam member and for transmitting the motion of the levers to the rocker, said cam member having opposite to each projecting part a part of smaller radius.

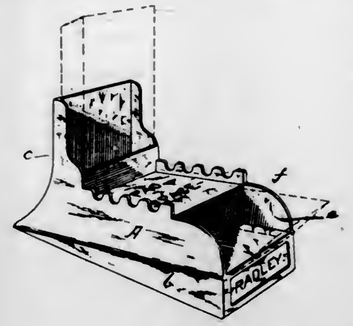
2. In a machine for polishing or decorating the edges of shoe-soles, the combination of a shaft, a tool holder mounted on said shaft, a rocker fixed to said shaft, two levers pivotally connected to said rocker, rollers journaled to the ends of said levers, a rotatable disk, and means for holding said rollers in engagement with the periphery of said disk and for transmitting the motion of said levers to said rocker, said disk being in the form of a regular polygon with an odd number of sides.

3. In a machine for polishing or decorating the edges of shoe soles, the combination of a shaft, a toolholder mounted on said shaft, a rocker fixed to said shaft, projections on said rocker, a rotatable disk, levers pivotally connected to the rocker projecting parts connected with said levers and engaging the periphery of the disk, said disk being in the form of a regular polygon with an odd number of sides, and springs interposed between said projections of said rocker and the levers and operating to press the levers against the periphery of the disk.

4. In a machine for polishing or decorating the edges of shoe soles, a shaft, a tool holder mounted on said shaft, a rocker fixed on said shaft, a rotatable cam member, two levers pivotally connected to said rocker, rollers journaled to the ends of said levers, springs interposed between said levers and the rocker for holding said rollers in engagement with the cam member, said cam member having the shape of a regular polygon with an odd number of sides and said shaft being movable with the tool holder, the rocker and levers fixed thereto longitudinally of its axis, said shaft having two spaced annular grooves therein, and a spring controlled pin carried by the machine casing and adapted to engage one of said grooves to hold the shaft with the levers fixed thereto in operable position relative to said cam and being adapted to engage the other of said grooves to hold the shaft with the levers fixed thereto in inoperative position with respect to the cam.

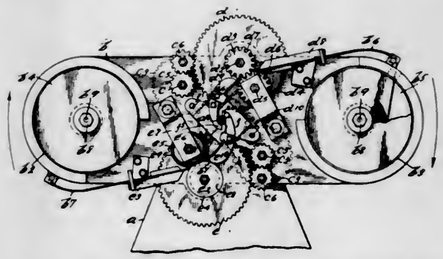
1,105,835. COMBINED PAD-HOLDER AND PAPER-WEIGHT. JOHN JOSEPH RADLEY, New York, N. Y. Filed June 6, 1912, Serial No. 702,055. Renewed Apr. 8, 1914. Serial No. 830,534. (Cl. 129—1.)

1. A combined paper weight and memorandum sheet holder consisting of a single piece comprising, a rectangular body having a compartment formed therein and having a solid wedge-shaped base portion, whereby the bottom of said compartment is gradually inclined downward from the front to the rear portion thereof, and the rear wall of the compartment being inclined forward and upward and the compartment being open at the front end, substantially as described and for the purpose set forth.



2. A combined paper weight and memorandum sheet holder consisting of a single piece comprising, a rectangular body having a compartment formed therein and having a solid wedge-shaped base portion, whereby said compartment is gradually inclined downward from the front to the rear, and the rear wall of the compartment being inclined forward and upward, said compartment being open at the front end, and a compartment formed on the top of the rear portion of the body and integral therewith, substantially as described and for the purpose set forth.

1,105,836. MACHINE FOR MAKING FLEXIBLE TUBULAR ARMOR. EDIA R. RAMSEY and JOHN H. MEYER, Penn Yan, N. Y.; said Meyer assignor to said Ramsey. Filed Feb. 3, 1914. Serial No. 816,282. (Cl. 113—35.)



1. In a machine for making flexible armor from metal strips, the combination with a mandrel for supporting the strips thereon, of driven rolls for grooving the strips longitudinally, means for rotating the said grooving rolls bodily about the axis of the mandrel to thereby wrap the strips shaped by the grooving rolls in coiled interlocking engagement upon the mandrel and an abutment against which the grooved strip bears whereby to force the armor as it is coiled forward off the mandrel.

2. In a machine for making flexible armor from thin metal strips, the combination with a mandrel on which the strips are coiled, of a winding head rotating about the axis of said mandrel and provided with an inclined shoulder for pushing the completed armor off the mandrel, means for supporting a supply of the thin armor strips on the winding head, grooving rolls on the winding head for longitudinally grooving the strips into interlocking shape and means for directing the grooved strips from the grooving rolls to the mandrel in overlapping relation.

3. In a machine for making flexible armor from metal strips, the combination of a relatively stationary mandrel, grooving rolls for transversely curving the strips, means for rotating the grooving rolls bodily about the mandrel to

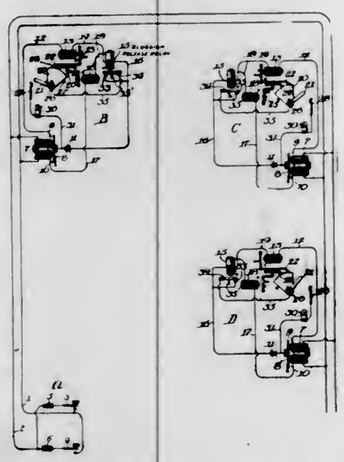
thereby coil the grooved strips in interlocked engagement upon the mandrel and an abutment carried by the said rotating means and against which the grooved strip bears to thereby force the completed armor forward off the mandrel.

4. In a machine for making flexible armor from metal strips, the combination of a rotating coiling head, a fixture plate carried by said head, a centrally disposed mandrel projecting from the face of the fixture plate, said fixture plate having an inclined shoulder extending on an outward slant from a point at one side of the mandrel to the farther side of the mandrel, grooving rolls carried by the rotating coiling head and located adjacent the base of the inclined shoulder and a guide on the inclined shoulder directing the grooved strip issuing from the grooving rolls up said inclined shoulder into engagement with the mandrel at the far side thereof.

5. In a machine for making flexible armor from the metal strips, the combination of a rotating coiling head, a fixture plate carried by said head, a centrally disposed mandrel projecting from the face of the fixture plate, oppositely inclined shoulders carried by the fixture plate at opposite sides of the mandrel, each of said shoulders extending from its lowest point at one side of the mandrel to the farther side of the mandrel and one of the said shoulders being off-set forwardly from the plane of the other shoulder a distance equal to approximately half the width of the strips, grooving rolls carried by the rotating head adjacent the bases of the inclined shoulders and guides each directing one of the grooved strips issuing from the grooving rolls up one of the inclined shoulders and into engagement with the mandrel at the far side thereof to thereby coil the grooved strips in overlapping interlocked engagement upon the mandrel.

[Claims 6 to 18 not printed in the Gazette.]

1,105,837. SIGNAL-RECEIVING DEVICE. CHARLES STANLEY RHOADS, Jr., Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Aug. 8, 1911. Serial No. 642,951. (Cl. 177—332.)



1. A signal receiving device having a step-by-step element, electro-magnetic step-up means for said element, electromagnetic release controlling means for said element, a signal circuit controlled by said element, and electromagnetic means for closing said signal circuit upon cessation of the impulses subsequently to the initial circuit closure by said element.

2. A signal receiving device having a step-by-step element, electromagnetic step-up means for said element, electromagnetic release controlling means for said element, a signal circuit controlled by said element, and means to render said signal circuit inoperative during the release movement of said element after said element has been stepped past its circuit closing position.

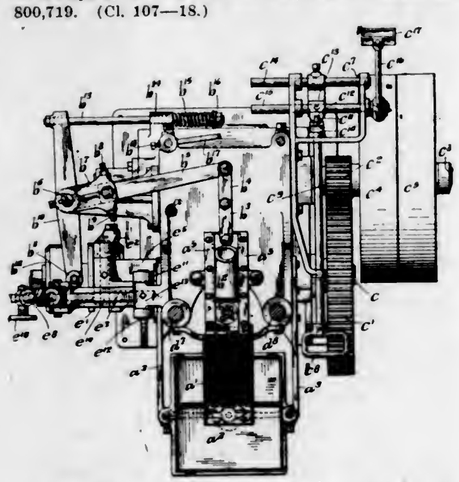
3. A signal receiving device having a step-by-step element, electromagnetic step-up means for said element, electromagnetic release controlling means for said element, a signal circuit controlled by said element, and electromagnetic means operable upon cessation of impulses for closing said signal circuit subsequently to the control by said element.

4. A signal receiving device having a step-by-step element, electromagnetic step-up means for said element, electromagnetic release controlling means for said element, a signal circuit controlled by said element, and electromagnetic means operable conjointly with said step-up and release controlling means for controlling said signal circuit.

5. A signal receiving device having a step-by-step element, electromagnetic step-up means for said element, electromagnetic release controlling means for said element, a signal circuit controlled by said element, and sluggish electromagnetic means for closing said signal circuit upon cessation of the impulses subsequently to the circuit closure thereof by said element.

[Claims 6 to 9 not printed in the Gazette.]

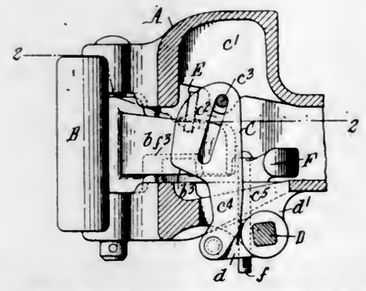
1,105,838. TABLET-MACHINE. EMANUEL L. RICHARDS, Philadelphia, Pa. Filed Nov. 13, 1913. Serial No. 800,719. (Cl. 107—18.)



1. In a machine of the character described, two sets of coöperating plunger-dies, a main shaft carrying a mechanism connected positively with one set of said dies and actuated in a downward direction by a positive draw motion, a cam mounted on said shaft and operated thereby, said cam actuating intermediate mechanism having a rack and pinion connected adjustably with the other set of said dies, said rack and pinion adapted to permit of quick change of movement of said dies, another cam mounted on said shaft, a rotary shaft actuated by said cam through intermediate mechanism, a guide-way and feed-slide therefor, said slide connected by pivoted links with a lever-arm loosely mounted on said rotary shaft, a clamp keyed to said rotary shaft and provided with adjusting bolts bearing against said lever-arm to change the position of said arm and thereby to variably alter the position of said feed-slide for complete discharges of both formed tablets as well as loose matter from said guide-way, substantially as and for the purpose described.

2. In a machine of the character described, two sets of coöperating plunger-dies, a main shaft carrying a mechanism connected positively with one set of said dies and actuated in a downward direction by a positive draw motion, a cam also carried on said shaft and operated thereby and said cam actuating intermediate mechanism having a rack and pinion connected adjustably with the other set of said dies, said rack and pinion adapted to permit of quick change of movement of said dies, and another cam mounted on said shaft, a rotary shaft actuated by said cam through intermediate mechanism, a guide-way and feed-slide therefor, said slide connected by pivoted links with a lever-arm loosely mounted on said rotary shaft, a clamp keyed to said rotary shaft and provided with adjusting bolts bearing against said lever-arm to change the position of said arm and thereby to variably alter the position of said feed-slide for complete discharges of both formed tablets as well as loose matter from said guide-way, and a pivoted locking device adjustably supported and provided with tightening means, whereby said feed-slide is adapted to be locked in one position thereof, to exclude extraneous matter from the die-block of the machine, substantially as described.

1,105,839. CAR-COUPLING. WILLARD F. RICHARDS, Lancaster, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed July 7, 1910. Serial No. 570,757. (Cl. 213—10.)



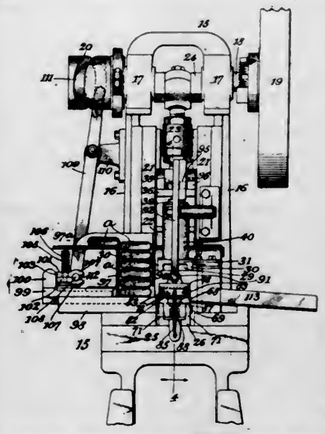
In a coupler, the combination of a swinging knuckle, a knuckle lock mounted in the coupler head to slide vertically and swing forwardly and rearwardly and having an enlarged upper portion adapted to lock the knuckle and a reduced shank depending through a hole in the bottom of the coupler head, and a lock-operating rock-shaft journaled externally at the bottom of the coupler head and having an arm pivoted to said lock shank for raising and swinging the lock, substantially as set forth.

1,105,840. SAFETY FEED MECHANISM FOR BEADING-MACHINES. HANS F. RICHTER, Winston-Salem, N. C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N. C., a Corporation of New Jersey. Filed Apr. 17, 1913. Serial No. 761,837. (Cl. 113—48.)

1. In a machine for beading metallic receptacles, the combination with opposed beading dies movable toward and from each other in a straight line, of a receptacle holder adapted to travel to and from said dies to insert thereinto and withdraw therefrom a receptacle projecting from said holder, said holder having open sides into and out of which the receptacle is inserted and removed, and an open end from which one end of the receptacle projects, means for feeding receptacles into one of the open sides of said holder and discharging them from the opposite open side, and a separable member forming a part of said feeding means adapted to disconnect when a receptacle fails to aline with the inlet opening in the side of the holder.

2. In a beading machine, the combination with beading dies movable in a straight line, of a blank holder adapted to travel to and from said dies to engage a blank therewith and be moved thereby, means for feeding blanks to the holder, a separable member forming a part of said feeding means adapted to disconnect when a blank fails to enter a holder, and yielding means carried by the holder to permit the blank sliding therein whenever it fails to enter the dies.

3. In a beading machine, the combination with beading dies movable in a straight line, of a blank holder adapted to be traversed positively to and from said dies and be moved by said dies at a right angle to its line of traverse for engaging a blank with said dies to be beaded and removing the same therefrom, and yielding means carried by said holder to prevent misplacement of the blank within the dies.

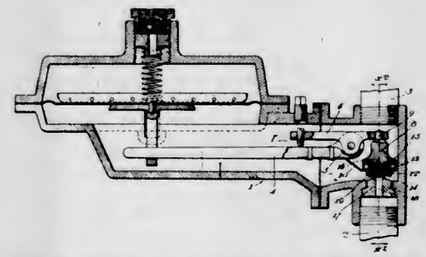


4. In a beading machine, the combination with beading dies movable in a straight line, of a blank movable in two directions at a right angle to each other for placing a blank within said dies and for removing the same, and yielding means carried by the holder to contact with said blank and permit the latter to slide within said holder during the advance of the holder whenever said blank is prevented from entering the dies.

5. In a beading machine, the combination with beading dies movable in a straight line, of a blank holder adapted to reciprocate to and from said dies to engage a blank therewith and be moved thereby when so engaged in a direction perpendicular to its line of reciprocation, means for reciprocating said blank holder, and means for feeding blanks to the holder.

[Claims 6 to 15 not printed in the Gazette.]

1,105,841. GAS-REGULATOR. JAMES R. RICKETTS and HERBERT V. LEAHY, Los Angeles, Cal., assignors to Perfection Gas Regulator Company, Los Angeles, Cal., a Corporation of California. Filed Feb. 25, 1913. Serial No. 750,696. (Cl. 50—26.)



1. In a gas regulator, a valve seat, an oscillating arm, a regulating arm adjustable with respect to the oscillating arm, a valve presser carried by the regulating arm, a valve head supported below the valve presser, abutment means between the valve presser and valve head for pressing the valve head against the seat, there being a connection permitting universal movement between the valve presser and regulating arm, and there being another universal movement between the valve head and said abutment.

2. In a gas regulator, an oscillating arm, a regulating arm adjustable with respect to the oscillating arm, a valve presser loosely carried by the regulating arm, a valve head, means yieldingly supporting the valve head, a valve seat against which the head is adapted to be pressed, and abutment means between the valve presser and valve for moving the valve against its seat.

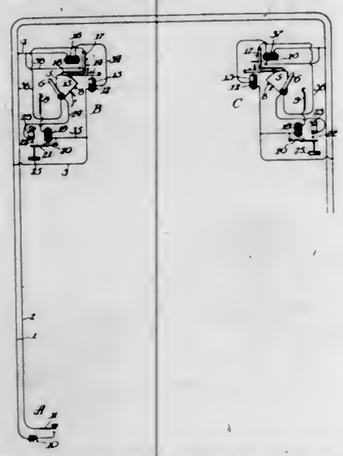
3. In a gas regulator, an oscillating arm, a regulating arm adjustable with respect thereto, a valve presser having a universal connection with the regulating arm, a leaf spring carried by the oscillating arm and bearing against the lower part of the valve presser, a valve seat, a valve head between said seat and valve presser, the valve presser having a convex abutment adapted to bear against the valve head to move the same against said seat, and a coil spring between the valve presser and valve head.

4. In a gas regulator, a movable arm, a regulating arm adjustable with respect to the movable arm, a valve presser loosely carried by the regulating arm and being recessed in its lower part and formed with a convex boss in the recess, a leaf spring secured to the movable arm and bearing against the lower rim of the valve presser and having an opening, a valve head projecting through the opening in said spring and having a flange which rests upon said spring, a coil spring within the recessed portion of the valve presser between the valve presser and valve head, and a valve seat below the valve head.

5. In a gas regulator, a movable arm, a regulating arm adjustable with respect thereto, a valve presser carried by the regulating arm, a valve seat, spring means supporting said valve above said seat, spring means between the valve presser and valve head for exerting a pressure against the valve head, tending to move it toward its seat, and abutment means between the valve presser and valve head, there being a slight clearance between the abutment means and valve head when the valve is opened.

[Claims 6 and 7 not printed in the Gazette.]

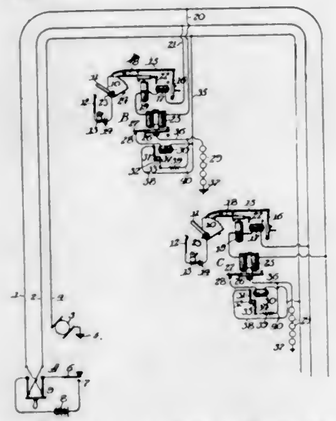
1,105,842. SUBSTATION SIGNALING APPARATUS. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Dec. 14, 1911. Serial No. 665,738. (Cl. 177—342.)



1. In a substation signal-receiving apparatus, the combination of a step-by-step element, a stepping magnet therefor, holding means for said element, a magnet therefor, a signal circuit open at two points, one of which is closed by said stepping means, an electro-magnet and a circuit therefor adapted to be closed by said step-by-step element, means for sluggishly closing the second point of the signal circuit, controlled by said magnet.

2. In a substation signal-receiving apparatus, the combination of a step-by-step element, a stepping magnet therefor, holding means for said element, a magnet therefor, a signal circuit open at two points, one of which is closed by said stepping means, an electromagnet, a circuit therefor adapted to be closed by said step-by-step element, and an armature for said magnet adapted to respond sluggishly to said magnet whereby said signal circuit is closed only after a notable length of time after the closing of said last circuit.

1,105,843. CONTROL SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Filed Aug. 26, 1912. Serial No. 717,090. (Cl. 177—343.)



1. A system of the character described having a plurality of stations united by a circuit, signal-receiving devices at said stations responsive to impulses of both polarities, a relay associated with said circuit responsive to current of one polarity only, switching means controlled by said relay, translating devices controlled by said switching means and auxiliary circuit changing means bridged across said switching means to control the actual breaking of circuit through said translating devices.

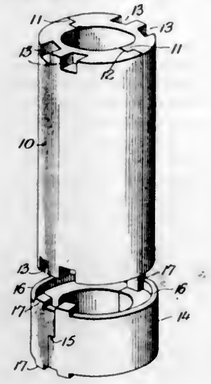
2. A system of the character described having a plurality of stations united by a circuit, step-by-step signal-receiving devices at said stations responsive to current impulses of both polarities, a relay associated with said circuit responsive to one polarity only, switching means controlled by said relay, translating devices controlled by said switching means and auxiliary circuit changing means bridged about said switching means to directly operate said switching means.

3. A system of the character described having a plurality of stations united by a circuit, step-by-step signal-receiving devices at said stations responsive to current impulses of positive and negative polarity, means at a station adapted to impress current of either positive or negative polarity on said circuit, a relay associated with said circuit operatively responsive to impulses of one polarity only, switching means controlled by said relay, translating devices controlled by said switching means and auxiliary circuit changing means bridged about said switching means.

4. A system of the character described having a plurality of stations united by a circuit, step-by-step signal-receiving devices at said stations responsive to current impulses of positive and negative polarity, means at a station adapted to impress current of either positive or negative polarity on said circuit, a relay associated with said circuit operatively responsive to impulses of one polarity only, switching means controlled by said relay, translating devices controlled by said switching means, and a circuit changing relay bridged about said switching means.

5. In a system of the character described, the combination of a signal circuit uniting a main and a plurality of substations, a power circuit extending along substantially the course of said signal circuit, selectors at the substations on said signal circuit, a polarized relay on said signal circuit, translating devices adapted to be fed from said power circuit and controlled by said polarized relay.

1,105,844. PIPE-COVERING. HERMAN SCHAPERJAHN, New York, N. Y. Filed Mar. 5, 1913. Serial No. 751,999. (Cl. 154—44.)



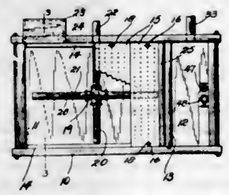
1. In pipe covering, cover sections divided longitudinally and having tongues and sockets so disposed as to enable the adjacent sections to lock their divided parts together.

2. In pipe covering, cover sections divided longitudinally and having tongues and sockets to enable the adjacent sections to lock their parts together with the dividing lines at right angles to each other.

3. In pipe covering, the combination with cover sections divided longitudinally and having recesses, of collars divided longitudinally and having tongues for the recesses and adapted to connect the adjacent sections and lock them together with the dividing lines at right angles, and flanges on the collars to cover the ends of the sections.

4. In pipe covering, the combination with cover sections divided longitudinally and having recesses at their ends, of collars divided longitudinally and adapted to receive the ends of the sections and having tongues to enter the recesses and lock the collars and sections together with their lines of division at right angles.

1,105,845. DYEING APPARATUS. JOSEPH SCHMITZ, Philadelphia, Pa., assignor, by mesne assignments, to Uniform Dyeing Machine Company, a Corporation of New Jersey. Filed May 31, 1913. Serial No. 770,977. (Cl. 8—19.)



1. In dyeing apparatus, a dye tub or tank divided into separate compartments, one of said compartments being provided at its bottom with a liquid distributer, which distributer and the bottom of the other compartment have piped connection with a source of liquid supply and a series of spaced, horizontal, superimposed, perforated shelves fitted to the compartment having the distributer therein.

2. In dyeing apparatus, a dye tub or tank, spaced, horizontal, superimposed, perforated shelves for the goods to be dyed, and a pipe having right angled branches located below the lowest shelf, said branches having lateral apertures so that dye liquor escaping through said apertures, will pass up through the entire mass of material supported by the shelves.

3. In dyeing apparatus, a dye tub or tank, perforated shelves located one directly above the other, detachably secured directly to the dye tub or tank of which the uppermost shelf constitutes a covering shelf and the remaining shelves, goods receiving shelves, and means for circulating dye liquor in either direction through said shelves.

4. Dyeing apparatus comprising a dye tub or tank consisting of a generally rectangular structure divided into separate compartments one of which compartments is provided at its bottom with a liquid distributer which distributer and the bottom of the other compartment have piped connection with a source of liquid supply and a series of superimposed horizontally spaced apertured shelves fitted to the compartment having the distributer therein.

5. Dyeing apparatus comprising a dye tub or tank consisting of a generally rectangular structure divided into separate compartments of which one is relatively large and the other relatively small the larger compartment having therein at its bottom a liquid distributer having piped connection with a source of liquid supply and the smaller compartment having piped connection at its bottom with said source of liquid supply, spaced superimposed plate supports upon the tank walls within the large compartment and a series of perforated plates removably fitted to said supports.

[Claims 6 and 7 not printed in the Gazette.]

1,105,846. WATER-WHEEL. JOHN H. SCHNEIDER, Brooklyn, N. Y. Filed Mar. 7, 1911. Serial No. 612,828. (Cl. 170—116.)



1. The combination with a drum shaped water wheel having longitudinal blades in its periphery and having an entrance for the water at one side, of a chute arranged to receive water and delivering it at the inlet of the drum, the water wheel having at its outlet on the opposite side from the inlet and arranged to have the water pass from the inlet blades across the interior to the outlet blades, the water wheel also having stationary guide blades at the interior arranged to guide the water directly from the inlet to the outlet portion and prevent rotary movement of the water.

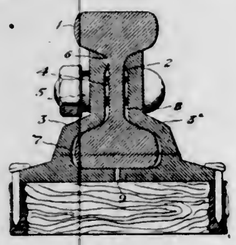
2. The combination with a drum shaped water wheel having longitudinal blades in its periphery and having an entrance for the water at one side, of a chute arranged to receive the water and deliver it at the inlet of the drum, the water wheel having its outlet on the opposite side from the inlet and arranged to have the water pass from the inlet blades across the interior to the outlet blades, the water wheel also having fixed guide blades at the interior arranged to confine the water to a straight path of movement, and located adjacent both the inlet blades and the outlet blades.

3. The combination with a drum shaped water wheel having longitudinal blades in its periphery and having an entrance for the water at one side, of a chute arranged to receive the water and to deliver it at the inlet of the drum, the water wheel having its outlet on the opposite side from the inlet, the water wheel also having stationary guide blades extending across the interior portion of the drum and arranged to direct the water from the inlet blades toward the outlet blades.

4. The combination of a drum shaped water wheel having longitudinal blades in its periphery and having an entrance for the water at one side, the water wheel having its outlet on the opposite side from the inlet and arranged to have the water pass from the inlet blades across the interior to the outlet blades, the water wheel also having stationary guide blades at the interior to guide the water and prevent rotary movement thereof in its passage from the inlet to the outlet portion.

5. The combination with a drum-shaped water wheel having longitudinal blades in its periphery and having an entrance for the water at one side, of a chute arranged to receive the water and deliver it at the inlet of the drum, the water wheel having at its outlet on the opposite side from the inlet and arranged to have the water pass from the inlet blades across the interior to the outlet blades, and a curved fixed blade at the interior of the wheel to receive the water from the wheel blades adjacent one side of the inlet and deliver the same to the blades beyond the inlet.

1,105,847. COMPOUND RAIL. WARREN A. SEELEY, Minneapolis, Minn. Filed Dec. 9, 1913. Serial No. 805,552. (Cl. 239—16.)



1. A railroad rail comprising a body portion of high carbon steel symmetrically formed with respect to top and bottom so as to be inverted or reversed end for end, and reinforcements at each side of identical formation with a clearance magazine at the web adapted to be drawn into water-tight relation thereto, each reinforcement extending the length of the rail and overlapping underneath the body.

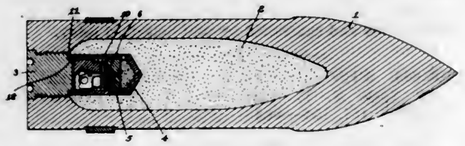
2. A compound rail comprising a reversible double head rail of high-carbon steel, having a tread at the top and bottom, reinforce plates of low-carbon steel equal in length with the rail, at opposite sides thereof, and a sloping wall with adjoining clearance magazine to permit the reinforcement and the rail body to be drawn into water-tight engagement throughout the length of the rail.

3. A compound rail comprising a rail body of high-carbon steel with identical tread surfaces at the top and bottom, and interchangeable reinforce plates of low-carbon steel at the sides having sloping walls to engage the rail web with a wedging action, a clearance magazine to permit the reinforce plates to be drawn into water-tight noncorrosive relation to the rail body and a flange on each reinforce plate overlapping a flange of the companion reinforce plate to form a watertight seal and a support for the rail.

4. A compound rail comprising an I-rail of high-carbon steel with identical shaped treads at top and bottom, and reinforce plates of low-carbon steel at both sides equal in length to the rail provided with sloping walls and engaging at the angle between the web and the rail heads at both sides with water-tight joints, the two plates overlapping at the rail-bottom, the plates being staggered relatively to the rails to form fish-plates at consecutive rail joints.

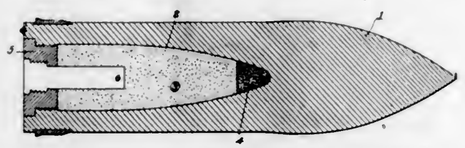
1,105,848. PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed June 6, 1913. Serial No. 772,143. (Cl. 102—39.)

1. A projectile fuse operated by impact and attached to a projectile body by a union secure against light strain and destructible under heavy strain, substantially as described.



2. In a projectile, a fuse normally carried by the projectile body and including a firing member movable in the fuse body on a sudden change in velocity, the union of the said fuse to said projectile body frangible on a sudden and greater change in velocity, substantially as described.

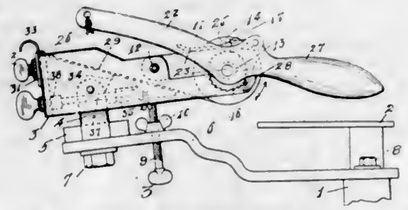
1,105,849. EXPLOSIVE PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed Jan. 14, 1914. Serial No. 811,969. (Cl. 102—30.)



1. The combination within the forwardly tapered cavity of a projectile, of a body of relatively insensitive explosive capable of sustaining without explosion the stress of impact occupying the anterior end of the cavity and a body of a relatively sensitive highpower explosive filling the major portion of the cavity, to rearward of the body of explosive first mentioned substantially as described.

2. The combination, within the forwardly tapered cavity of a projectile, of a body of relatively sensitive high-power explosive, and a body of relatively insensitive explosive capable of sustaining without explosion the stress of impact occupying the tapered end of said cavity, substantially as described.

1,105,850. INK-FOUNTAIN FOR PRINTING-PRESSES. BENEDICT W. SHALLBETTER and WILLIAM T. ABRAMS, Minneapolis, Minn. Filed Feb. 21, 1914. Serial No. 820,189. (Cl. 101—74.)



1. An ink fountain comprising a casing, a feed roller, having tubular trunnions removably journaled in said casing, an ink trough detachably secured within said casing for coöperation with said feed rooler, an intermittently rotated shaft journaled in the tubular trunnions of said feed rooler and removable therefrom, while said feed roller is seated in said casing, and driving connections between said shaft and feed roller, said feed roller and ink trough arranged to be simultaneously removed from said casing.

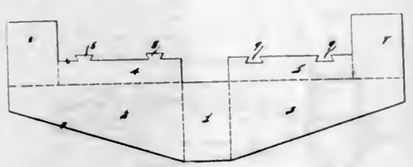
2. An ink fountain comprising a casing, a feed roller having tubular trunnions journaled in open seats in said casing, an ink trough detachably secured within said casing for coöperation with said feed roller, means for adjusting said ink trough toward and from said feed roller, an intermittently rotated shaft removably journaled in the tubular trunnions of said feed roller, driving connections between said shaft and feed roller, said feed roller and ink trough arranged to be simultaneously removed from said casing, and means for locking the tubular trunnions of said feed roller in said open seats, and for locking said shaft against endwise removal from said tubular trunnions.

3. An ink fountain comprising a casing, having hinged side sections, axially alined bearing seats formed in said casing and hinged side sections, a feed roller having a tubular shaft journaled in said seats, an intermittently rotated shaft journaled in the tubular shaft of said feed roller, coöperating lock levers and lock links for securing said hinged side sections onto the tubular shaft of said feed roller, and for securing said intermittently rotated shaft against endwise removal from said tubular shaft, and an ink trough arranged to deliver to said feed roller.

4. An ink fountain comprising a casing, a feed roller having tubular trunnions removably journaled in said casing, an ink trough removably mounted within said casing, for coöperation with said feed roller, a driven shaft journaled in the tubular trunnions of said feed roller and removable therefrom, while said feed roller is seated in said casing, and driving connections between said shaft and feed roller, said feed roller and ink trough arranged to be simultaneously removed from said casing.

5. An ink fountain comprising a casing having hinged side sections, axially alined open bearing seats in said casing, a feed roller having tubular trunnions removably journaled in said open seats, a driven shaft removably journaled in the tubular trunnions of said feed roller, driving connections between said shaft and feed roller, coöperating lock levers and lock links, securing said hinged side sections over said open seats for locking the tubular trunnions of said feed roller against removal therefrom, and for securing said shaft against removal from said tubular trunnions, and an ink trough arranged to deliver to said feed roller.

1,105,851. JOIST-HANGER. LUDLOW S. SHERWOOD, Cleveland, Ohio. Filed Oct. 21, 1911. Serial No. 656,052. (Cl. 20—94.)



A joist hanger constructed of sheet metal with a box member having a divided back provided at its edges with interlocking means.

1,105,852. HINGE. LUDLOW S. SHERWOOD, Cleveland, Ohio. Filed Dec. 26, 1911. Serial No. 667,925. (Cl. 16—25.)

1. In a hinge, the combination of a spring, means for straining said spring from one point in one direction and comprising a barrel or casing for said spring, a second means for straining said spring from another point in opposite direction, a spring attaching member at said other point mounted within said barrel or casing, means for cooperatively connecting said second straining means and said attaching member and for adjusting the tension of said spring, a door swinging lever arranged to act under pressure in one or the opposite direction on one or the other of said straining means and to be acted on by the same, and stopping means in common with both said straining means toward which said straining means are adapted to move under action of said spring to restore said lever to normal position.

2. In a hinge, the combination of a spring, means for straining said spring from one point in one direction and comprising a barrel or casing for said spring, a second means for straining said spring from another point and in opposite direction, a spring attaching member at said other point, mounted within said barrel or casing and having a number of holes, a tension pin for insertion in either of said holes to set the normal spring tension, said pin engaged by said second straining means, a door swinging lever arranged to act under pressure in one or the opposite direction on one or the other of said straining means in common with both said straining means and to be acted on by the same, and stopping means toward which said straining means are adapted to move under action of said spring to restore said lever to normal position.



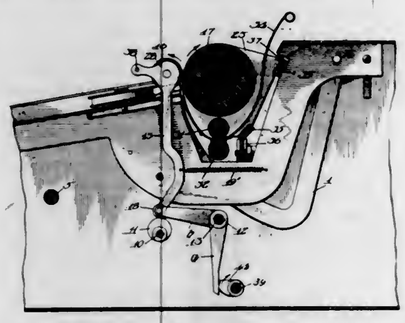
3. In a hinge, the combination of a spring, means for straining said spring from one point in one direction and comprising a stop, a second means for straining said spring from another point and in opposite direction and comprising also a stop, said stops lying in two planes transverse of the axis of the hinge, a door swinging lever arranged to act under pressure in one or the other opposite direction on one or the other of said straining means, and to be acted on by the same, said lever being arranged between said two planes of said stops and provided with abutments on its opposite surfaces to engage said stops, and stopping means against which said straining means are adapted to move said stops and to restore said lever to normal position.

4. In a hinge, the combination of a spring, means for straining said spring from one point in one direction, and provided with a stop, a second means for straining said spring from another point in opposite direction and also provided with a stop, said stops standing outwardly from both of said means, a door swinging lever arranged between said stops to act under pressure in one or the opposite direction on one or the other of said straining means and to be acted on by the same, said lever having a curved slot, abutments on said lever to engage said stops, and stopping means projecting through said slot and toward which said straining means are adapted to move said stops against said stopping means and to restore said lever to normal position.

5. In a hinge, the combination of a spring, means for straining said spring from one point in one direction and comprising a barrel or casing for said spring, said barrel or casing having a transverse slot, a second means for straining said spring from another point in an opposite direction, a spring attaching member at said other point mounted within said barrel or casing, an adjustable pin carried by said attaching member for setting the spring tension to normal, said pin engaged by said second straining means and projecting into said slot of said barrel or casing, a door swinging lever arranged to act under pressure in one or the opposite direction on one or the other of said straining means and to be acted on by the same, and stopping means toward which said straining means are adapted to move under action of said spring to restore said lever to normal position.

[Claims 6 to 8 not printed in the Gazette.]

1,105,853. PAPER-FEED DEVICE FOR COMPUTING-MACHINES, &c. DANIEL W. SHIEK, Chicago, Ill., assignor to Walter L. Milliken, Barnstable, Mass. Filed Apr. 2, 1906. Serial No. 309,477. (Cl. 197—127.)



1. Paper feeding means for computing machines and the like, comprising a longitudinally movable carriage, paper feeding mechanism comprising two coöperating parts arranged to engage the paper between them, one mounted upon and movable with said carriage, and the other rotatably mounted upon the frame of the machine and transversely movable relative to the other part to advance the paper, and reciprocating means for operating said paper feeding mechanism.

2. In a device of the kind described, a longitudinally movable carriage, and a platen mounted thereon, in combination with reciprocating engaging means mounted independently of said carriage arranged to coöperate with said platen to engage the paper between said platen and the engaging means, and mechanism for operating said engaging means to move said paper.

3. In a device of the kind described, a rotatable platen limited to rotate in one direction only, and means for feeding and guiding a sheet of paper in contact therewith, in combination with one or more friction rollers yieldingly maintained in normal contact with the platen to maintain a sheet of paper between said friction rollers and the platen and to rotate the platen, said rollers being limited to rotate in a direction the reverse of that of the platen, and means for moving said rollers upward and downward in contact with the platen.

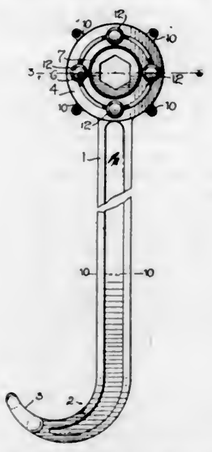
4. In a device of the kind described, a rotatable platen, means for limiting the movement thereof to one direction and reciprocating paper holding means movable in a direction in opposition to the movement of the platen adapted to maintain the paper in proper feeding relation to said platen, in combination with mechanism for reciprocating said paper holding means to advance the paper at each operation of said mechanism.

5. In a device of the kind described, a rotatable platen, means for limiting the rotation thereof to one direction, means for feeding and guiding a sheet of paper in contact therewith, in combination with one or more friction rollers normally in contact with the platen to maintain a sheet of paper between the said friction rollers and the platen, and in contact with the latter, means for limiting the rotation of the rollers to a direction in opposition to that of the platen, and means for reciprocating the rollers in contact with the platen.

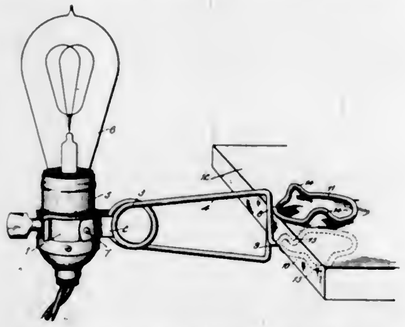
[Claims 6 to 35 not printed in the Gazette.]

1,105,854. RATCHET-WRENCH. JAY R. SHAIVER, Elkhart, Ind. Filed July 23, 1913. Serial No. 780,833. (Cl. 81—60.)

A wrench comprising a shank, an annular chambered head projecting laterally therefrom, and provided with a plurality of tubular teats, the outer ends of which are closed and the inner ends of which open into the chamber of the head, coiled springs arranged in the teats, pawls disposed in the teats and projecting above the inner wall of the head, a socket disposed within the head and having a disk furnished on one side with ratchet teeth to be engaged by the pawls, and a plate fitting around one end of the socket and secured to the head.



1,105,855. SUPPORT FOR ELECTRIC-LAMP SOCKETS. JACOB A. SMITH, Chicago, Ill., assignor to Reliable Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 16, 1913. Serial No. 742,399. (Cl. 248—20.)



1. In a support for an electric lamp socket, the combination of a support for the socket, a member secured to said support, a spring clamp having a plurality of convolutions formed at one end upon opposite sides of said member to secure it to said clamp, said clamp consisting of a bent cylindrical wire or rod of spring material, the ends of which are conformed into opposite clamping surfaces tending to move into engagement with each other by the spring of the clamp and disposed so that they may be moved from each other by pressure exerted upon the clamp.

2. In a support for an electric lamp socket, the combination of a clamping device of spring material having its ends conformed into opposition clamping portions, a plurality of convolutions formed in its middle portion, said convolutions and said clamping portions being connected by main members of the spring clamp, said main members so disposed that pressure upon them will move the said clamping portions away from each other, and a socket support engaging the outer portions of the convolutions.

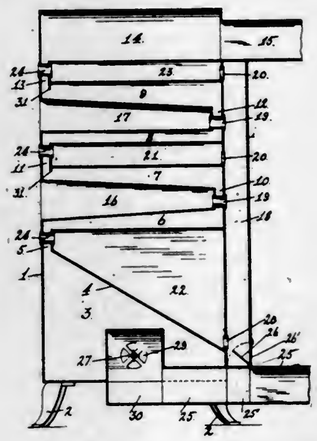
3. In a support for an electric lamp socket, the combination of a clamping device of spring material having its ends conformed into opposite clamping portions, a plurality of convolutions formed in its middle portion, said convolutions and said clamping portions being connected by main members of the spring clamp, said main members so disposed that pressure upon them will move the said clamping portions away from each other, and a socket support secured to the convolutions at a point farthest from the clamping portions.

4. In a support for an electric lamp socket, the combination of a clamping device of spring material having opposite clamping portions formed upon its ends, the central portion of said clamping device being formed into a spring portion tending to hold said clamping device in clamping position, said device also having main members connecting said spring portion with said clamping portions and so disposed that pressure upon them will move said clamping portions away from each other against the tendency of said spring portion, and a socket support carried by said spring portion.

5. In a support for an electric lamp socket, the combination of a clamping device of spring material having opposite clamping portions formed upon its ends, the central portion of said clamping device being formed into a spring portion tending to hold said clamping device in clamping position, said device also having main members connecting said spring portion with said clamping portions and so disposed that pressure upon them will move said clamping portions away from each other against the tendency of said spring portion, a socket support carried by said spring portion, and off-sets in said clamping portions extending outwardly therefrom to engage a rod between them.

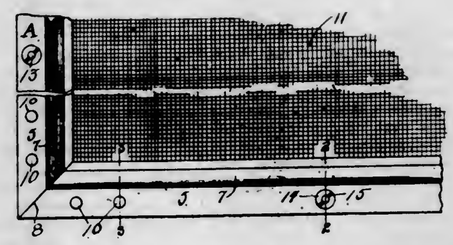
[Claim 6 not printed in the Gazette.]

1,105,856. STOVE. STEPHEN P. SMITH, Berkeley, Cal., assignor of one-fourth to Rumsey L. Rich and one-fourth to Fred A. Nassie, Berkeley, Cal., and one-fourth to Charles W. Keiver, Oakland, Cal. Filed Feb. 6, 1913. Serial No. 746,525. (Cl. 126—70.)



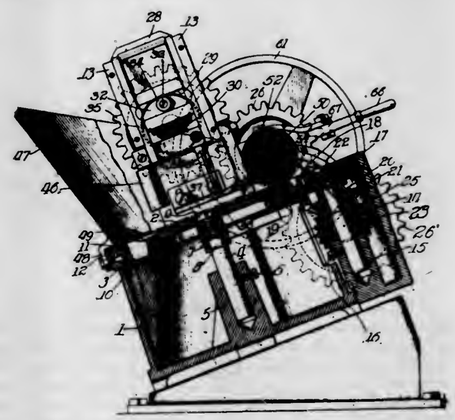
A stove comprising a casing, a combustion chamber arranged at the base of said casing, a flue disposed vertically of the casing at the rear thereof and connected with a fresh air inlet, a heating chamber disposed above the combustion chamber, said heating chamber being spaced from the front wall of the casing, said heating chamber being of greater width at the rear of the casing adjacent the flue than at its end adjacent the front of the casing, the more extensive end of the chamber abutting the flue and communicating with the same through a relatively small opening at the base of the chamber, heating chambers arranged above the first mentioned chamber, said chambers tapering in width from the rear to the front of the casing their smaller ends being disposed adjacent the flue and communicating therewith through relatively small openings, the larger ends of said chambers opening through the front wall of the casing, and a plurality of zigzag flues disposed intermediate the heating chambers and communicating with a stack at the top of the casing.

1,105,857. COMBINATION SCREEN-FRAME. JOHN E. SNOOK, Loganton, Pa. Filed Nov. 12, 1913. Serial No. 800,658. (Cl. 156—14.)



A screen comprising side members each comprising a strip of resilient metal bent longitudinally to form a U-shaped cross section, one of the arms thus formed being inwardly offset, a foraminous member having its edges disposed between the other arms of the members and the offset portions, an angle block of less width than the normal distance between the arms having its legs disposed between the arms of adjacent side members and bolts passed through said angle blocks and arms whereby the members are held to form a frame and at the same time the arm portions and offset portions are resiliently forced together to clamp the foraminous member.

1,105,858. CHERRY SEEDER OR PITTER. JASPER H. STANFIELD, Muskegon, Mich., assignor of one-half to Michigan Washing Machine Company, Muskegon Heights, Mich., and one-fourth to William H. Bozell, Muskegon, Mich. Filed Dec. 30, 1910. Serial No. 600,202. (Cl. 146—5.)



1. In a device of the kind described, a rotatable cell plate provided with a plurality of radial depressions in its face each terminating near the periphery of the plate in a tapering circular fruit receiving aperture extending through the plate, in combination with a pair of stationary guards adapted to substantially close a portion of said apertures, one positioned below and the other above said plate, and means adapted to control the position and movements of said plate.

2. In a device of the kind described, a rotatable cell plate provided with a plurality of radial depressions in its face each terminating near the periphery of the plate in a fruit receiving aperture extending through the plate, in combination with a pair of stationary guards, one positioned below and closing the lower ends of all but approximately one quarter of said apertures and the other positioned above and in close proximity to said cell plate, and means adapted to control the position and movements of said plate.

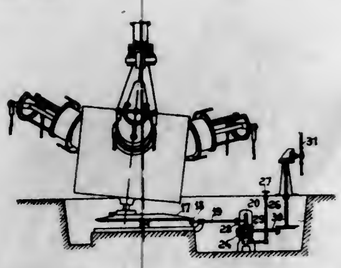
3. In a device of the kind described, an inclined rotatable cell plate provided with a plurality of radial depressions in its face each terminating near the periphery of the plate in an aperture extending through the plate, in combination with a pair of stationary guards adapted to substantially close both ends of a part of said aperture, one positioned below and the other above said cell plate, and means adapted to engage and remove from said apertures any object projecting above the surface of said cell plate, and means adapted to control the position and movements of said plate.

4. In a device of the kind described, a rotatable cell plate provided with a plurality of radial depressions in its face each terminating near the periphery of the plate in a fruit receiving aperture extending through the plate, in combination with a pair of stationary guards adapted to substantially close a portion of said apertures, one positioned below and the other above said cell plate and a rotatable brush adapted to engage and remove from said cells any object projecting above the surface of said cell plate, means for rotating said brush and means adapted to control the position and movements of said cell plate.

5. In a device of the kind described, a rotatable cell plate provided with a plurality of depressions in its face each increasing in depth outward and terminating near the periphery of the plate in a tapering circular aperture extending through the plate, in combination with a pair of stationary guards adapted to substantially close both ends of a part of said apertures, one positioned below and the other above said plate, and means adapted to control the position and movements of said plate.

[Claims 6 to 19 not printed in the Gazette.]

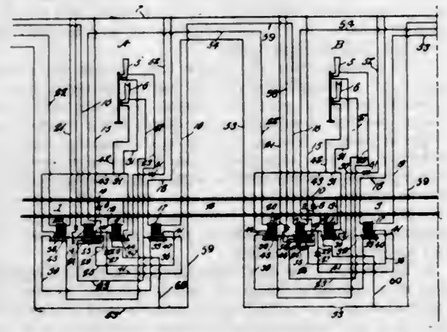
1,105,859. ELECTRIC FURNACE. ERNESTO STASSANO, Turin, Italy. Filed Oct. 15, 1913. Serial No. 795,382. (Cl. 204—64.)



1. In an electric furnace with an oscillating melting chamber, means for imparting motion to the melting chamber by power and by hand at will, comprising a rotatable member controlling said chamber, a shaft arranged to transmit rotation to the said member, a pinion sliding on said shaft for engaging a hand-controlled wheel, and means for bringing said sliding pinion in engagement with the hand-controlled wheel.

2. In an electric furnace with an oscillating melting chamber, means for imparting motion to the melting chamber by power and by hand at will, comprising a rotatable member controlling said chamber, a shaft arranged to transmit rotation to the said member, a pinion sliding on said shaft for engaging a hand-controlled wheel, and a pedal lever for bringing said sliding pinion in engagement with the hand-controlled wheel.

1,105,860. SIGNALING SYSTEM. CHARLES STEPHENS, Barton Heights, Va., assignor, by mesne assignments, to A. H. Calligan, Richmond, Va. Filed Aug. 31, 1909. Serial No. 515,431. (Cl. 246—30.)



1. In a block signal system, a trackway divided into a series of blocks, signal mechanisms at the meeting ends of the blocks, each said mechanism including a translating device and a normally closed circuit holding said translating device normally energized and its signal at clear, and means controlled by the presence of trains in any two blocks separated by one intervening block to break the circuits corresponding to the signals at the ends of the intervening block.

2. In a block signal system, a trackway divided into a series of blocks, a signal at the meeting ends of each two blocks, closed signal-operating circuits each maintaining its signal at clear, each circuit being jointly controlled by the presence or the absence of trains in one of two adjoining blocks and in a thereto non-adjoining block on the opposite side of the meeting end, and also jointly controlled by the presence or the absence of trains in the other of said adjoining blocks and in a thereto non-adjoining block on the opposite side of said meeting end.

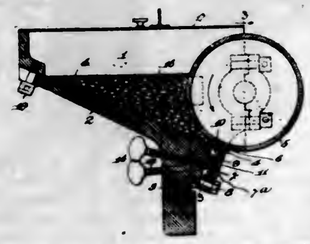
3. In a block signal system, a trackway divided into a series of blocks, a signal at the meeting ends of each two blocks, closed signal-operating circuits each maintaining its signal at clear, each circuit being jointly controlled by the presence of the absence of trains in one of two adjoining blocks and in a thereto non-adjoining block on the opposite side of the meeting end, and also jointly controlled by the presence or the absence of trains in the other of said adjoining blocks and in a thereto non-adjoining block on the opposite side of said meeting end, said circuit being further jointly controlled by the presence or absence of trains in both of said adjoining blocks.

4. In a block signal system, a trackway divided into a series of blocks, a signal located at the meeting ends of each two blocks, a normally closed signal operating circuit maintaining each signal at clear, said circuit comprising a battery, and a motor, each side of the battery connected to the motor by two current paths in parallel, a contact in each of the four current paths, an electromagnet for controlling each contact, the electromagnets for any given signal being controlled by the presence or absence of trains in the blocks as follows, viz. the two magnets on one side of the circuit controlled respectively from one of the blocks at the right of the signal and a thereto non-adjacent block adjoining the block on the left of the signal, and the two magnets on the other side of the motor circuit controlled respectively from the block at the left side of the signal, and a thereto non-adjacent block adjoining the block at the right of the signal, whereby danger signals are set at the ends of each block intervening between two occupied blocks adjacent said intervening block, irrespective of the direction of travel.

5. In a block signal system, a trackway divided into a series of blocks, home and distant signals and operating mechanism therefor at the meeting ends of each two adjoining blocks, closed signal operating circuits maintaining each of said signals at clear, the home signal operating circuit being jointly controlled by the presence or the absence of trains in one of the two adjoining blocks and in a thereto non-adjacent block adjoining the block at the opposite side of the meeting end, and also jointly controlled by the presence or the absence of trains in the other of said adjoining blocks and in a thereto non-adjacent block adjoining the first mentioned block, the distant signal operating circuit being controlled by the presence or the absence of trains in either of the blocks next the two adjoining blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,105,861. INKING DEVICE FOR PRINTING-PRESSES. WARD B. STORY, New York, N. Y., assignor to Ward B. Story Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 1, 1912. Serial No. 723,318. (Cl. 101—74.)



1. An inking device for printing presses, having a reservoir, a roller, a flexible plate associated with the reservoir and in juxtaposition to the roller, a series of moving devices in contact with the plate and with each other, a series of manually actuated adjusting devices, and intermediate devices between the moving devices and adjusting devices, the adjusting devices being fewer in number than the moving devices.

2. An inking device for printing presses, having a reservoir, a roller, a flexible plate associated with the reservoir and in juxtaposition to the roller, a series of moving devices, moving independent contact with the plate and with each other, said moving devices being in pairs, a series of intermediate devices in contact with the moving devices, there being one intermediate device for each two moving devices, and a series of adjusting devices in contact with the intermediate devices, there being one such adjusting device for each intermediate device.

3. An inking device for printing presses, having a reservoir, a roller, a flexible plate associated with the reservoir and in juxtaposition to the roller, a series of balls engaging with the plate and each other, a series of blocks engaging with the balls, each block engaging with a plurality of balls, and an adjusting device engaging with each block for moving the latter and thereby varying the extent of aperture between the plate and roller.

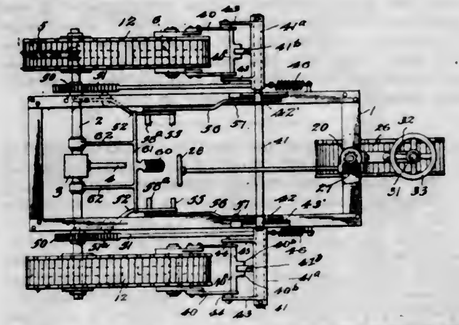
4. An inking device for printing presses, having a reservoir, a roller, a flexible plate associated with the reservoir and in juxtaposition to the roller, a series of balls engaging with the plate, a series of cylindrical blocks, there being a block for each two balls, each block having a circumferential groove, and a series of adjusting bolts, there being one bolt in engagement with the groove of each block, for moving the latter and thereby varying the extent of aperture between the plate and roller.

5. An inking device for printing presses, having a reservoir, a roller, a flexible plate in juxtaposition to the roller, a series of moving devices in contact with the plate and with each other, and a series of manually-actuated adjusting devices, the adjusting devices being fewer in number than the moving devices.

[Claims 6 to 15 not printed in the Gazette.]

1,105,862. TRACTOR. WILLIAM STRAIT, Eau Claire, Wis. Filed Oct. 3, 1911. Serial No. 652,599. (Cl. 21—114.)

1. In a tractor, an axle, tractor wheels mounted thereon, idler wheels, one in front of each tractor wheel, a tractor belt passing around each tractor wheel and its corresponding idler, driving mechanism, elevating means, and means for connecting and disconnecting said elevating means with the driving mechanism for elevating either idler wheel independently.



2. In a tractor, an axle, tractor wheels mounted thereon, idler wheels, one in front of each tractor wheel and its corresponding idler, means for locking either idler in adjusted vertical position, driving mechanism, and means actuated by the driving mechanism for elevating either idler wheel independently.

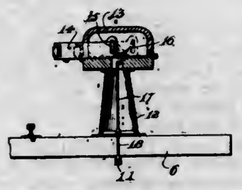
3. In a tractor, a frame, a drive axle, a tractor belt mounted at each side of the frame and connected with the axle, driving mechanism, elevating means actuated by the driving mechanism for elevating one end of either tractor belt, locking means for securing the belt in adjusted position, and controlling means for simultaneously controlling the elevating and locking means.

4. In a tractor, the combination of a driving sprocket, an idler sprocket, a belt passing around the sprockets, a roller support for the belt between the sprockets, a gear turning with the drive sprocket, a link having a rack to engage the gear, means for engaging the rack with the gear, and connections between the link and the idler sprocket whereby the latter is elevated when the rack is engaged.

5. In a tractor, the combination of a frame, an axle, a drive sprocket thereon, an idler sprocket, radius members connecting the sprockets, a tractor belt passing around the sprockets, arms extending forward from the radius member, a lever connected to said arms to elevate the idler sprocket, a laterally rigid segment member supported by the frame, and lugs connected with said arms and embracing said segment member for laterally supporting the front ends of the belt mechanism.

[Claims 6 to 20 not printed in the Gazette.]

1,105,863. RAILWAY SAFETY APPLIANCE. CHARLY A. THORSLEND, Berwyn, Ill. Filed May 19, 1913. Serial No. 768,525. (Cl. 246—59.)



1. A device of the class described comprising a signaling device; a stand positioned at a distance from said signaling device; an elongated member slidably mounted in said stand and having one end extending laterally therefrom and its inner end provided with a laterally extending slot; a crank arm journaled in said stand and engaging said slot; and an operative connection between said crank arm and said signaling device, substantially as described.

2. A device of the class described comprising a signaling device; a stand positioned at a distance from said signaling device; a power switch tripping member slidably mounted in said stand and having a portion extending therefrom, there being a laterally disposed slot at the inner end of said member; a crank arm journaled in said stand and engaging said slot; a bell crank lever pivoted in said stand; a connecting rod connecting one arm of said bell crank lever with said crank arm; and a connecting rod connecting the other arm of said bell crank lever with said signaling device, substantially as described.

1,105,864. METHOD OF MANUFACTURING EXPLOSIVE COMPOUNDS. WILLIAM C. WADDELL, Cleveland, Ohio, assignor to Hoynes Safety Powder Company, Cleveland, Ohio, a Corporation of Delaware. Filed June 27, 1913. Serial No. 776,068. (Cl. 52—1.)

1. The process of forming spherical explosive units or pellets which comprises keeping nuclei of explosive material in tumbling motion with successive additions of pulverulent explosive material of the same nature and of a moistening liquid until spherical bodies form by accretion, the additions of pulverulent explosive in each case being prior to the addition of said moistening fluid.

2. In the manufacture of substantially spherical explosive units or pellets, the process which comprises tumbling substantially dry nuclei of explosive material in the presence of dust like explosive of the same nature, adding a small proportion of moistening liquid and continuing the tumbling, and successively adding more dust-like explosive followed by moistening fluid until said nuclei by accretion have formed substantially spherical units of the size desired.

1,105,865. EXPLOSIVE COMPOUND. WILLIAM C. WADDELL, Cleveland, Ohio, assignor to Hoynes Safety Powder Company, Cleveland, Ohio, a Corporation of Delaware. Filed June 27, 1913. Serial No. 776,069. (Cl. 52—1.)

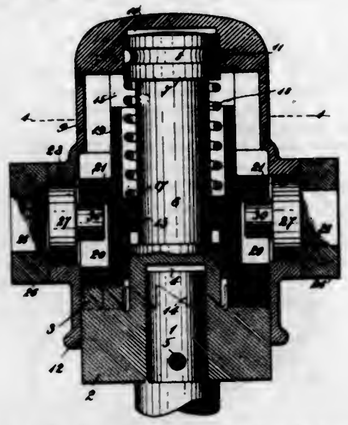


As a new article of manufacture, a blasting explosive especially adapted for use in mining coal and composed of a shot-like aggregate of small, imperforate spherical units, each such unit being of uniform character and density throughout and the several units being substantially uniform in size.

1,105,866. BRAKE-HANDLE. GEORGE A. WEBSTER, Somerville, Mass., assignor to Charles H. Sherburne, Boston, Mass. Filed Feb. 16, 1914. Serial No. 818,860. (Cl. 188—57.)

1. In a brake handle, the combination of a clutch mechanism comprising opposing clutch members one of which is movable rotarily to have engagement with the other of said members or into a disengaging position with relation thereto, a rotatable member exterior to said movable clutch member and rotatable therewith, and a drop lever pivotally mounted upon said exterior rotatable member to fulcrum thereon and have engagement with said movable clutch member for moving the same into a disengaging position with relation to said other clutch member upon the dropping of said lever.

2. In a brake handle, the combination of an exterior rotary member, means for supporting said member, a clutch mechanism comprising opposing clutch members one of which, a movable member, rotates with said exterior rotary member to have engagement with the other of said clutch members, said movable clutch member being movable also into a disengaging position with relation to said other clutch member upon the dropping of said lever, and a drop lever pivotally mounted upon said exterior rotatable member to fulcrum thereon to engage said movable clutch member and move the same into a disengaging position upon the dropping of said lever.



3. In a brake handle, the combination of an exterior rotary member, means for supporting said member, a clutch mechanism comprising opposing clutch members one of which, a movable member, rotates with said exterior rotary member to have engagement with the other of said clutch members, said movable clutch member being movable also into a position of disengagement with relation to said other clutch member, and a brake lever pivotally mounted upon said exterior rotary member to turn thereon and occupy either an out-turned position or a down-turned position, said lever having a part engaging said movable clutch member and maintaining the same in a disengaging position when said lever is occupying its down-turned position.

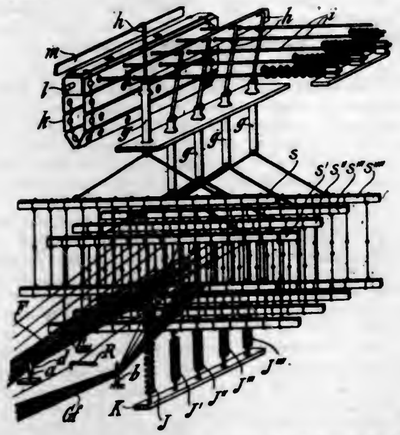
4. In a brake handle, the combination of an exterior member, means for supporting said member to rotate without endwise displacement, a clutch mechanism comprising opposing clutch members of which one is a movable member rotatable with said exterior rotary member to have engagement with the other of said clutch members, said movable clutch member being also displaceable into a disengaging position with relation to said other of the clutch members, and a lever pivotally mounted upon said exterior rotary member for rotating the same and said movable clutch member as said lever is turned, said lever having also an operative engagement with said movable clutch member for lifting the same into a disengaging position upon the pivotal turning of said lever on said exterior rotary member.

5. In a brake handle, the combination of a clutch mechanism comprising opposing clutch members one of which members is movable rotarily to have engagement with the other of said members or into a disengaging position with relation thereto, a rotary casing rotatable with said movable clutch member, and a drop lever pivotally mounted upon said casing for rotating the same and said movable clutch member as said lever is turned laterally said lever being adapted also to have engagement with said movable clutch member and move the same into a disengaging position away from said other clutch member upon the dropping of said lever.

[Claims 6 to 11 not printed in the Gazette.]

1,105,867. APPARATUS FOR SUCCESSIVELY SEPARATING SINGLE THREADS FROM A WARP. MAX WENZEL, Spremberg, Germany. Filed Mar. 13, 1914. Serial No. 824,453. (Cl. 139—94.)

1. In an apparatus for separating single threads successively from a warp drawn in the harness, a warp beam (M) for carrying the old warp, harness (as S, S', S'', S''', S'''') into which the old warp is drawn, means (A) for operating the harness, means for gripping the thread ends of the old warp and for holding the old warp in a horizontal plane; a frame for receiving the warp beam, the harness-operating means and the means for holding the warp, means for operating the harness-operating means to form a shed, means for pressing back non-pieced warp threads when the shed is open and for moving away the thread separated by the formation of the shed from the other threads after the shed is closed, substantially as described and shown.

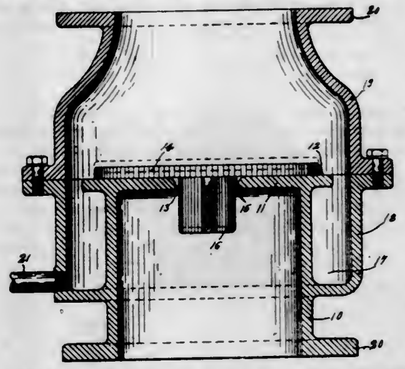


2. In an apparatus for separating single threads successively from a warp drawn in the harness, a warp beam (M) for carrying the old warp, harness into which the old warp is drawn, a shaft arrangement (A) for operating the harness, means for gripping the thread ends of the old warp and for holding the old warp in a horizontal plane; a frame for receiving the warp beam, the shaft arrangement and harness and the means for holding the warp, means for operating the shaft arrangement to form a shed, means for pressing back non-pieced warp threads when the shed is open and for moving away the thread separated by the formation of the shed from the other threads after the shed is closed, substantially as described and shown.

3. In an apparatus for separating single threads successively from a warp drawn in the harness, a warp beam (M) carrying the old warp, harness into which the old warp is drawn, means for operating the harness, means for gripping the thread ends of the old warp and for holding the old warp in a horizontal plane; a frame for receiving the warp beam, the harness-operating means, the harness and the means for holding the warp, means for operating the harness-operating means to form a shed, a finger for pressing back the non-pieced warp threads when the shed is open, means for reciprocating that finger crosswise relatively to the warp threads alternately against the non-pieced warp threads and away from them, the first motion taking place after the opening of the shed and the second after the closing thereof, substantially as described and shown.

4. In an apparatus for separating single threads successively from a warp drawn in the harness, a warp beam (M) for carrying the old warp, a harness into which the old warp is drawn, a dobby (A) for operating the harness, means for gripping the thread ends of the old warp and for holding the old warp in a horizontal plane; a frame for receiving the warp beam, the dobby with the harness and the means for holding the warp, means for operating the dobby to form a shed, a finger for pressing back the non-pieced warp threads when the shed is open, means for reciprocating the said finger crosswise relatively to the warp threads, alternatingly against the non-pieced warp threads and away from them, the first motion taking place after the opening of the shed and the second after the closing thereof, and a hook at the top part of said finger for preventing the thread gripped by the finger from slipping off therefrom, substantially as described and shown.

1,105,868. EXTRACTOR OF LIQUIDS AND SOLIDS FROM GASES. JOHN T. WILKIN, Connersville, Ind., assignor to The Connersville Blower Company, Connersville, Ind., a Corporation of Indiana. Filed May 27, 1914. Serial No. 841,234. (Cl. 48—140.)



1. An extractor for extracting suspended solids of liquid from gas, comprising two members having adjacent surfaces substantially parallel with each other, said members being relatively movable and pressed toward each other, one of said members being provided with an aperture from which each of the surfaces has a radial component and through which the gas to be purified may be supplied to the space between such surfaces, a pocket into which the outer edge of the space between such two surfaces discharges, and a discharge conduit leading from the outer edge of such space.

2. An extractor for extracting suspended solids or liquids from gas, comprising two members having adjacent surfaces, said members being relatively movable and pressed toward each other, one of said members being provided with an aperture from which each of the surfaces has a radial component and through which the gas to be purified may be supplied to the space between such surfaces, a pocket into which the outer edge of the space between such two surfaces discharges, and a discharge conduit leading from the outer edge of such space.

3. An extractor for extracting suspended solids or liquids from gas, comprising two members having adjacent surfaces, said members being relatively movable and pressed toward each other, one of said members being provided with an aperture from which each of the surfaces has a radial component and through which the gas to be purified may be supplied to the space between such surfaces.

4. An extractor for extracting suspended solids or liquids from gas, comprising two members having adjacent surfaces, said members being relatively movable, one of said members being provided with an aperture from which each of the surfaces has a radial component and through which the gas to be purified may be supplied to the space between such surfaces.

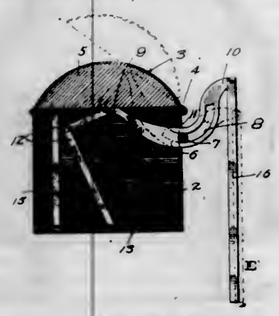
5. An extractor for extracting suspended solids or liquids from gas, comprising two members having adjacent surfaces substantially parallel with each other, one of said members being provided with an aperture from which each of the surfaces has a radial component and through which the gas to be purified may be supplied to the space between such surfaces.

[Claims 6 to 10 not printed in the Gazette.]

1,105,869. MAIL-BOX. ELBERT ANDERSON, Andalusia, Ala. Filed May 3, 1913. Serial No. 765,306. (Cl. 232—45.)

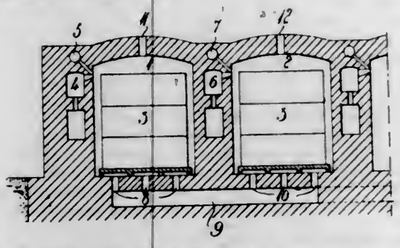
1. In a device of the class described, the combination with a supporting standard, of a trip mechanism, a box carried by said standard, a cover hinged to said box, a cover elevating arm secured to said box and comprising a substantially S-shaped member provided with a longitudi-

nally extending slot, a roller supported upon said box and traveling in said box for facilitating the longitudinal movement of said arm relative to the sides of the box, operating means engaging said arm for raising said cover as the same is swung upon said box, a false bottom carried by said box, means connecting said false bottom and cover for causing said false bottom to be raised as said cover is swung.



2. A mail box comprising a body, a cover hinged to said body, a cover elevating arm secured to said box, said arm comprising a substantially S-shaped member provided with a longitudinally extending slot, a roller supported upon said box and traveling in said slot of said S-shaped arm to facilitate the inward and upward movement of said arm, and means secured to said arm for moving said arm inwardly and upwardly.

1,105,870. REDUCTION OF ORES BY MEANS OF PEAT. PER ANDERSON, Arvika, and ERIK E: SON ODELSTIERNA, Stocksund, Sweden. Filed Apr. 18, 1912. Serial No. 691,703. (Cl. 75—73.)

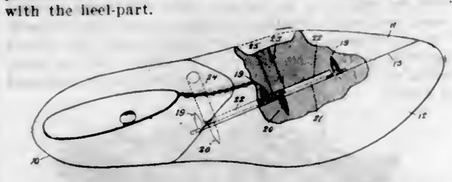


1. A method of obtaining metals from powdered ore consisting in mixing the ore intimately with powdered peat, inclosing the mixture in receptacles and heating said receptacles externally by means of the combustion of gases to such a temperature and for such a time that the ore will be reduced to metal while the ore and the metal are still in a solid state and substantially at rest in the receptacles.

2. A method of obtaining metals from powdered ore consisting in mixing the ore intimately with powdered peat, inclosing the mixture in receptacles and heating said receptacles externally by means of the combustion of gases led alternately in both directions around the receptacles, the heating being carried on to such a temperature and for such a time that the ore will be reduced to metal while the ore and the metal are still in a solid state and substantially at rest in the receptacles.

1,105,871. LAST. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Mfg. Company, South Boston, Mass., a Corporation of New Jersey. Filed Mar. 24, 1909. Serial No. 485,525. (Cl. 12—135.)

1. A last comprising a heel-part, and a forepart divided in two sections of which one has sliding connection with the heel-part by which the last may be shortened, and of which the other section has sliding relation with its complemental section and is movable to and from engagement with the heel-part.

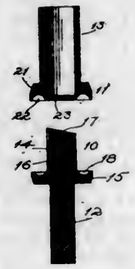


2. A last comprising a heel-part and a forepart divided perpendicularly to the sole into two sections both of which are adapted to abut against the heel-part, said sections being slidably connected so that one is relatively movable in a path substantially parallel to the mean longitudinal curvature of the forepart of the last, and means for connecting the other section with the heel-part.

3. A last divided into a forepart and a heel-part by a transverse section oblique to the bottom of the last, and having its forepart divided into an inner part and an outer part by a longitudinal oblique section intersecting the longitudinal median plane of the last, the rear ends of the inner part and outer part of the forepart of the last being flush.

4. A last comprising a forepart and a heel-part, means for slidingly connecting said parts, said forepart comprising an inner portion and an outer portion having their inner end faces abutting against the confronting face of the heel-part, and having confronting abutting faces oblique to the longitudinal median line of said forepart, and means for slidingly connecting said inner and outer portions of the forepart.

1,105,872. MEANS FOR SETTING EYELETS. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed June 10, 1913. Serial No. 772,830. (Cl. 218—15.)



1. The combination with a punch having recesses, of a die having an eyelet-receiving seat, and provided with teeth defining the die opening and adapted to extend within the recesses of the punch; substantially as described.

2. The combination with a punch having recesses, of a die having an annular seat to receive the flange of an eyelet, and provided with inwardly projecting teeth adapted to extend within the recesses of the punch, the said teeth having surfaces merging into said seat; substantially as described.

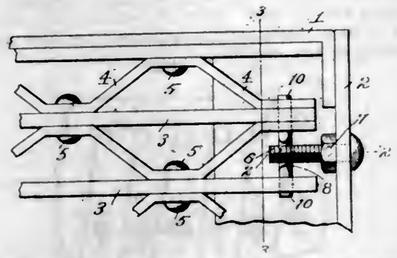
3. The combination with a generally cylindrical punch having flutes extending to the end thereof, of a die having an eyelet-receiving seat and inwardly projecting teeth shaped to fit closely within the flutes of the punch; substantially as described.

4. The combination with punch and die members having seats for the flanges of an eyelet, of projections on one of said members adapted to fit recesses of the other member and deflect or flange the end of the eyelet; substantially as described.

5. The combination with a fluted punch having a shoulder with an annular eyelet-receiving seat, of a die having teeth extending into the flutes of the punch; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,105,873. MEANS FOR FASTENING FLOOR AND SIDEWALK GRATINGS. NATHAN BERSON, New York, N. Y., assignor, by mesne assignments, to Irving Iron Works Company, a Corporation of New York. Filed Dec. 12, 1913. Serial No. 806,342. (Cl. 189—84.)

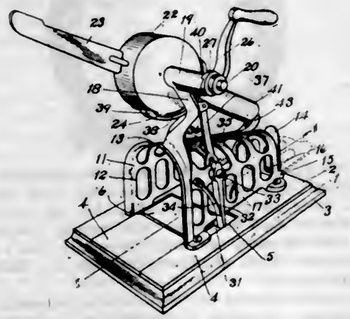


1. The combination with a grating having a plurality of substantially parallel projecting bars at each end, and a frame for holding the said grating having end supporting pieces for the grating, of a projecting member set in the frame and having a roughened under surface extending substantially parallel to the grating, and a swinging member pivoted in the projecting ends of the grating and adapted to engage the roughened under surface of the projecting member.

2. The combination with a grating having a plurality of substantially parallel projecting bars at each end and a frame for holding the said grating having end supporting pieces for the grating, of a projecting member loosely mounted in a hole in the frame, a swinging member pivoted in the projecting ends of the grating and adapted to engage the under surface of the projecting member, and means for fastening said projecting member rigidly in the opening in which it is loosely mounted, so that it will extend parallel to the bars of the grating.

3. The combination with a grating having a plurality of substantially parallel projecting bars at each end and an angle-iron frame for holding said grating, of a bolt set in a perforation in the vertical flange of the angle-iron and extending substantially parallel to the bars of the grating, and a swinging member pivoted in the projecting ends of the grating and adapted to engage the under surface of the projecting portion of the bolt.

1,105,874. RAT-TRAP. JAMES A. BEVERLY, Topeka, Kans. Filed Sept. 3, 1912. Serial No. 718,186. (Cl. 43—24.)



1. In a rat trap, the combination with a supporting base, of a bait box mounted on the base, a standard on the bait box, a shaft revolubly mounted in said standard, a drum revolubly mounted on the shaft and provided with a striking arm, a spring connecting the shaft and drum, trigger mechanism for holding the drum against the tension of the spring, a trip for releasing said trigger, a pivotally mounted dash pot, a pin on the drum, and a piston rod projected into the dash pot and having a slotted end connected with said pin whereby part of the travel of the piston rod is cushioned, substantially as set forth.

2. In a rat trap, the combination with a spring actuated striking arm, of a dash pot comprising a cylinder, a rod slidable in said cylinder and having sliding connection with the striking arm, a piston head comprising a member slidable on the rod, and a member fixed on the rod, said members having relatively large and small apertures, and trigger mechanism for controlling the striking arm.

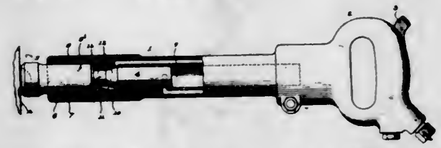
1,105,875. ADJUSTABLE TONGS. ALBERT BEYER, Coleman, Tex. Filed Aug. 14, 1913. Serial No. 784,818. (Cl. 81—82.)



1. A device of the character described including a stock formed with a transverse opening there being an enlargement formed integral with said stock adjacent the opening, a jaw formed with a threaded shank which is adjustably mounted in said opening, the work engaging face of said jaw being disposed substantially parallel with the stock, and a lever having a curved terminal pivotally supported by the stock adjacent the jaw whereby said terminal may coact with the jaw to engage the work.

2. A device of the character described including a stock, a jaw, means for adjusting said jaw transversely of the stock, the terminal of said stock adjacent the jaw being bifurcated, a lever pivoted between the bifurcations of said stock, one terminal of said lever being rounded and movable in the same plane as the jaw to coact with the same to engage the work.

1,105,876. PNEUMATIC TOOL. GOTTLIEB BRIEGEL, Fond du Lac, Wis. Filed Nov. 7, 1913. Serial No. 799,671. (Cl. 121—20.)



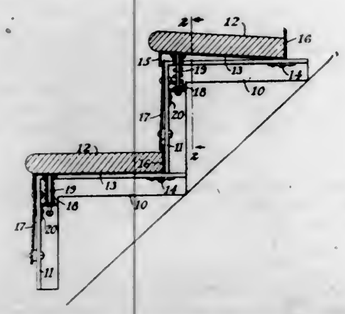
1. A pneumatic implement comprising a barrel, a tool slidably mounted in the forward end of the barrel, and a reciprocatory piston in the barrel arranged to strike the tool, the barrel and the piston having correspondingly tapered surfaces coacting to prevent the piston from being discharged from the barrel.

2. A pneumatic implement comprising a barrel having a forward and a rear bore, said bores communicating with eath other, a tool slidably mounted in the forward bore, and a piston mounted in the rear bore, the forward end of the rear bore being tapered inwardly, and the forward portion of the piston being correspondingly tapered, the tapered portion of the rear bore serving to prevent the piston from being discharged from the barrel.

3. A pneumatic implement comprising a barrel having a forward and a rear bore, said bores communicating with each other, a tool having a shank slidably mounted in the forward bore, a piston slidably mounted in the rear bore, said piston being of less diameter than the shank of the tool, the forward end portion of the piston being of less diameter than the body of the piston, said forward end

portion being connected to the piston body by an annular tapered portion, the forward end of the rear bore being correspondingly tapered to prevent the piston from being discharged from the barrel.

1,105,877. SPRING-TREAD FOR STAIRWAYS. CASPAR BUELLESBACH, New York, N. Y. Filed July 22, 1913. Serial No. 780,613. (Cl. 20—10.)



1. In a stairway and in combination with skeleton side supports, a riser guard plate, a hinged tread, a spring support for said tread and a guard plate applied to said tread extending upward so as to lap under said riser guard plate, substantially as described.

2. In a stairway and in combination with skeleton side supports, a riser guard plate inclined forward so as to leave a space behind its lower edge, a spring support for said tread, and a guard plate applied to said tread extending upward into the space behind said riser guard plate and lapping under the same, substantially as described.

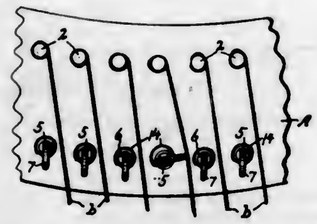
1,105,878. PUZZLE. AUGUST CELUS, Moline, Ill. Filed Dec. 7, 1911. Serial No. 664,338. (Cl. 46—41.)



A puzzle comprising a pliable member provided at its ends with loops which are separated from each other by an intermediate portion of a predetermined length, a sheet capable of being folded upon itself several times each folded section having an aperture within each end, said apertures registering when said sheet is folded, one of said loops being drawn through all the apertures within one end of said sheet, the remaining end of said pliable member then being passed through said loop, and then continued through all of the openings within the other end of said sheet and a second sheet capable of being folded upon itself several times each folded section having an aperture within each end said apertures registering when said sheet is folded the remaining loop of said pliable member being drawn through all the apertures within one end of said last mentioned sheet the opposite end of said pliable member being passed through the remaining apertures and through said last mentioned loop, the intermediate portion of said pliable member being of such a length that when one of said members is unfolded, the other is folded and held to the unfolded member, as and in the manner set forth.

1,105,879. HARP. MELVILLE A. CLARK, Syracuse, N. Y. Filed Nov. 28, 1911. Serial No. 662,858. (Cl. 84—14.)

1. A harp having rotarily adjustable fret keys and retracting springs therefor.



2. A harp having rotarily adjustable fret keys, non-rotatable sleeves therefor and spring connections between the sleeves and their fret keys for returning said fret keys out of contact with the strings.

3. A harp having rotarily adjustable fret keys, stops for limiting the movement of the fret keys in one direction and springs for yieldingly holding their respective keys against said stops.

4. A harp having rotarily adjustable fret keys, separate sets of stops for limiting the movement of their respective keys in reverse directions, and retracting springs for said keys normally holding them out of engagement with the strings.

5. A harp having rotarily adjustable fret keys, separate non-rotatable bearing sleeves for the keys, stops on the bearing sleeves for limiting the turning movement of the corresponding keys, and separate retracting springs for said keys.

[Claims 6 to 12 not printed in the Gazette.]

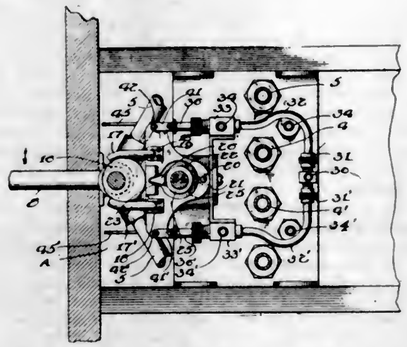
1,105,880. TIRE-SHOE. THOMAS W. COOPER, Caldwell, N. J. Filed Oct. 27, 1913. Serial No. 797,600. (Cl. 152—16.)



1. A tire shoe having reinforcing means embedded therein, comprising a plurality of pivoted links, each link comprising a plate provided with an opening, an open ended casing formed upon the plate, surrounding the opening thereof and extending outwardly therefrom, and a partition arranged within the casing between the inner and outer ends thereof.

2. A tire shoe having reinforcing means embedded therein, comprising a plurality of pivoted links, each link comprising a plate provided with a central opening, an open ended trapezoidal casing formed upon the plate, surrounding the opening thereof, and decreasing in width outwardly with its reduced end flush with the outer surface of the tire shoe, a partition arranged within the trapezoidal casing at a point substantially equi-distantly spaced from the ends thereof, and means connecting the end links with the beads of the tire shoe.

1,105,881. BEER-DISPENSER. WALTER J. COSTELLO, Washington, D. C. Filed Mar. 16, 1912. Serial No. 684,287. (Cl. 225—15.)



1. The combination with a plurality of movable containers, of supply pipes leading thereto, delivery pipes leading from the containers, valve mechanism for controlling the flow through the supply pipes to the containers, valve mechanism for controlling the flow from the containers through the delivery pipes, means for admitting air pressure to the containers, and unitary means under control of the operator for simultaneously actuating the valve mechanisms and the air admission means to all the containers.

2. The combination with a plurality of movable containers, of means for admitting the fluid to the containers, valve mechanism whereby the fluid may be admitted to one of said containers and simultaneously drawn from another of the containers, air conducting means for each of the containers, and mechanism for operating the valve mechanism and controlling the air conducting means.

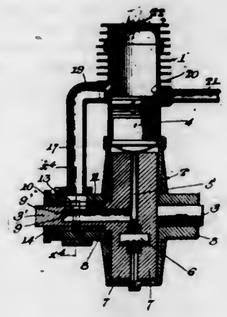
3. The combination with a plurality of containers, of means connecting said containers with a suitable source of fluid supply, means for permitting the fluid to pass into one of said containers while it is being withdrawn from another of the containers, air conducting means for the containers, valve mechanism for the fluid supply means, valve mechanism for the air conducting means and a single element for controlling the operation of both valve mechanisms.

4. The combination with a plurality of containers, of means connecting said containers with a suitable source of liquid supply, means for delivering the liquid from the containers means for admitting air pressure to said containers at predetermined times, and common operating means for controlling the flow of the liquid to and from the containers and simultaneously controlling the air admission means.

5. The combination with a plurality of containers, of means connecting said containers with a suitable source of liquid supply, valve mechanism common to the supply means of the containers, means for conducting the liquid from the containers, valve mechanism for controlling said conducting means, means connected with a suitable source of air supply for supplying air under pressure to the containers at predetermined times, valve mechanism for said air supply means, and a single operating mechanism under the control of the operator for actuating the valve mechanisms of the liquid supply means the liquid conducting means and the air supply means.

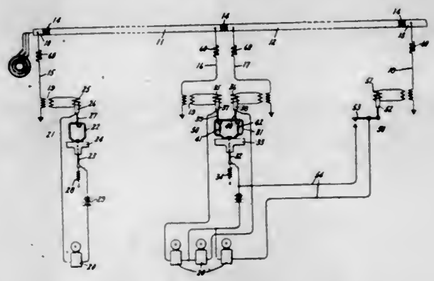
[Claims 6 to 11 not printed in the Gazette.]

1,105,882. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. HENRY J. CRAWFORD, Los Angeles, Cal. Filed Mar. 12, 1913. Serial No. 753,822. (Cl. 123—73.)



An internal combustion engine comprising a cylinder, a crank case, a piston working in said cylinder, a shaft rotatably mounted in said crank case and connected to be operated by the piston, said shaft having a longitudinal passage communicating with the crank case and provided with a lateral port, a valve member having two ports communicating with the lateral port in the shaft, a mixture supply means communicating with one of said ports, a transfer conduit communicating with the other of said ports, said cylinder having an inlet port communicating with said transfer conduit to receive mixture therefrom, and said cylinder being provided with an outlet port.

1,105,883. FAULT-LOCALIZER. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 14, 1913. Serial No. 767,542. (Cl. 175—183.)



1. The combination with a system of distribution including a cable carrying conductors and having a metallic sheath divided into sections insulated from each other, of a connection between a section of the sheath and ground and means for indicating the passage of current over said connection.

2. The combination with a system of distribution including a cable carrying conductors and having a metallic sheath divided into sections insulated from each other, of a connection between each section of the sheath and ground and means related to each connection for indicating the passage of current over the respective connections.

3. The combination with a system of distribution including a cable carrying conductors and having a metallic sheath divided into sections insulated from each other, of a connection between each section of the sheath and ground and means related to each connection for indicating the connection carrying the greatest current.

4. The combination with a system of distribution including a cable carrying conductors and having a metallic sheath divided into sections insulated from each other

transversely to the extension of the cable, of a connection between each section and ground and means related to each connection for indicating the connection carrying the greatest current.

5. In combination with a cable having a plurality of conductors, a metallic sheath surrounding said cable divided into sections, said sections being insulated from each other, of a conducting path from each of said sections to ground, and means operatively related to each conducting path for indicating the passage of current in said path.

[Claim 6 not printed in the Gazette.]

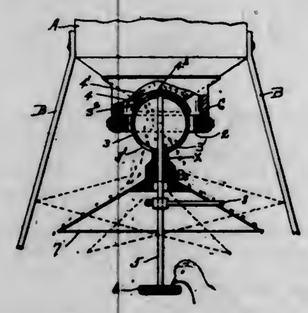
1,105,884. POLE-ANCHOR. STANLEY M. CRITES, St. Martinville, La. Filed Jan. 8, 1913. Serial No. 740,821. (Cl. 189—90.)



1. In an earth anchor, the combination with a stock consisting of a rigid rod; of a cuff, means for connecting said rod and cuff after the rod has been driven into earth, and a fluke consisting of a pointed stake extending at right angles to the stock and movable through said cuff.

2. In an earth anchor, the combination with a stock consisting of a rigid rod adapted to be driven through earth to penetrate an opening formed substantially at right angles to the line of drive, of a cuff, means for connecting the penetrating end of said rod and the cuff when the rod is in position in the earth, and a fluke consisting of a pointed stake extending at right angles to the stock and movable through the cuff.

1,105,885. POULTRY SCRATCH GRAIN-FEEDER. JOHN H. CROWELL, Vineyard Haven, Mass. Filed Nov. 1, 1911, Serial No. 658,018. Renewed Aug. 6, 1913. Serial No. 783,615. (Cl. 119—70.)

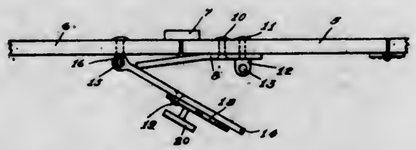


1. An automatic scratch grain feeder for poultry comprising a grain container having an opening in its base, a hollow spherical member provided with perforations in its upper wall and with openings in its lower wall, and mounted below said container opening for universal oscillatory movement, a concavo-convex disk interposed between said opening and spherical member and provided with perforations and arranged to close said container opening and for rotary movement therein to vary the registration of its perforations with those in said spherical member, and also arranged for united universal oscillatory movement of it and said spherical member, an actuating rod secured to said disk and extending therefrom through said spherical member and arranged for rotative movement to rotate said disk and also for oscillating movement in any direction for united universal oscillation of said disk and spherical member, a bait-box carried on said rod, a grain scattering member carried on said rod.

2. An automatic scratch grain feeder for poultry comprising a grain container having a discharge opening in its bottom, a concavo-convex perforated disk arranged to enter and close said discharge opening and for oscillation therein in all directions, a hollow member mounted below and in contact with said disk and provided with perforations in its upper wall adapted to register with said disk perforations, said disk arranged for rotation independently of said hollow member and also for united universal oscillation conjointly with said hollow member, means for independently rotating said disk, and means for the united universal oscillation of said disk and hollow member.

3. In a poultry scratch grain feeder having a grain container provided with a discharge opening in its base, a universally oscillative perforated disk closing and movable in said opening, and a universally oscillative perforated member registering with said disk and mounted below and supporting the latter for universal oscillation, the combination with said parts of an actuating rod secured to said disk, a conical grain scatterer carried on said member below said disk and provided with a serrated slot in its side wall, and a lever carried on said rod and arranged for adjustable engagement with said serrated slot.

1,105,886. HASP-FASTENER. ESTA F. CULBERTSON, Seattle, Wash., assignor of one-half to Alexander Christie, Seattle, Wash. Filed Dec. 11, 1913. Serial No. 805,886. (Cl. 70—83.)

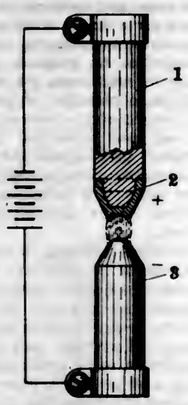


1. A door latch comprising a latch-bar adapted to be pivotally secured at one end to a support and provided at its other end with an opening, a hasp-hook pivotally secured to said latch-bar to swingingly turn thereon, of an eye-bolt whose eye portion is adapted to project through said opening to engage with and be secured by said hasp-hook, a flat spring adapted to be associated with said eye-bolt and to be disposed so that one of its ends may engage with and press against the pivoted end portion of said latch-bar.

2. A door latch comprising a latch bar adapted to be pivotally secured at one end to a support, a spring member secured to another support and disposed so that one portion of it may engage with and press against the inner surface of said latch bar and means for releasably securing the free end of said latch bar to said last named support.

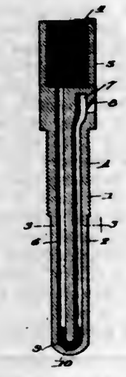
1,105,887. ARC-LAMP ELECTRODE. CHARLES W. DAKE, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 13, 1912. Serial No. 690,593. (Cl. 176—121.)

An arc lamp comprising a pair of metallic electrodes, one of them negative, the other positive, the positive electrode being provided with a metallic sheath on the end thereof in opposition to the end of the negative electrode, said sheath being made up of a material of high fusing



point and adapted to resist disintegration caused by the passage of the current.

1,105,888. HOT-BEARING ALARM. ELMER O. DAVIS, Denver, Colo. Filed Jan. 13, 1913. Serial No. 741,789. (Cl. 116—1.)



1. A device of the character described comprising a casting, a U-passage formed in the casting, a pipe connecting one leg of said passage with a suitable source of fluid supply, the other leg being open to the atmosphere and a fusible plug located in the loop of the U-passage so that, as the temperature of the casting around the plug is raised to a sufficiently high temperature, the plug will be liquefied and will be discharged from the passage, thus permitting the escape of the fluid through the passage.

2. A device of the character described constructed to be used in connection with the air supply system to the brakes of a train, comprising a casting having a U passage formed therein, an air pipe connecting one end of said passage with the train supply system, and the other end of said passage free to exhaust to the atmosphere, the casting so constructed that the loop of the U passage may be placed and held in proximity to the bearing, of a wheel axle, and a fusible plug located in the bend in such a position that as the bearing becomes heated to a great degree, the plug will liquefy and be discharged from the passage by the pressure of the air thus permitting the air to escape and reducing the pressure to such an extent that the brakes will be set.

3. A device of the character described comprising a casting, a U passage formed in the casting, a pipe connecting one end of said passage with a suitable source of air supply, the other end of said passage connecting with a whistle which exhausts to the atmosphere, said casting so constructed that the loop of the U passage may be secured in proximity to the bearing, and a fusible plug so located in said loop that when the temperature in the bearing has risen to a certain degree the plug will be liquefied and will be discharged from the passage by the air causing the whistle to sound an alarm.

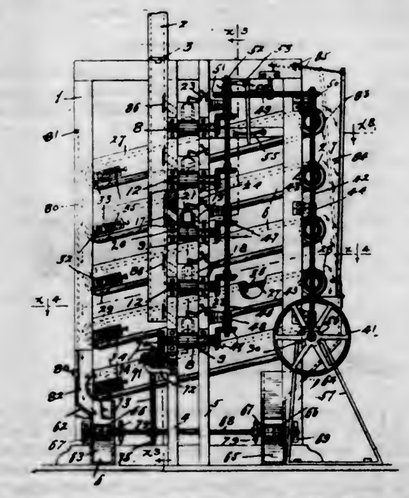
1,105,889. CONNECTOR. GERALD ST. JOHN DAY, Oldham, England. Filed May 20, 1913. Serial No. 768,715. (Cl. 173—324.)



1. In a terminal and cord mounting device, and in combination, an insulating mount having a restricted passsage therein, a conducting wire in said passage having an insulating outer covering in close frictional contact with the wall of said passage, and a contact making terminal electrically connected to said wire, and projecting within said passage, said terminal being independent of direct means of attachment to said mount, and being in close frictional contact with the outer surface of said insulating covering and adapted to grip same, for the purpose and substantially as herein set forth.

2. In a terminal and cord mounting device, and in combination, an insulating mount having a restricted passage therein, a conducting wire in said passage having an insulating outer covering in close frictional contact with the wall of said passage, and a contact making terminal electrically connected to said wire, and having a stem projecting within said passage, said terminal being independent of direct means of attachment to said mount, and said stem being in close frictional contact with the outer surface of said insulating covering, and adapted to grip same, for the purpose and substantially as herein set forth.

1,105,890. BEAN-SORTING MACHINE. PARK L. DAY, Frazee, Minn., assignor of one-half to Frank Kiene, Kennedy, Mich. Filed Apr. 20, 1914. Serial No. 833,241. (Cl. 130—18.)



1. A sorting machine of the kind described, including a traveling endless apron, having an upwardly moving in-

clined surface, a traveling endless bean-distributing belt working transversely over said apron, and means causing the beans to roll from said distributing belt onto said upwardly moving inclined surface, whereby the bad beans will be carried on said surface over the highest point of travel thereof, and the good beans will roll therefrom over the lowest point of travel thereof.

2. A sorting machine of the kind described, including a traveling endless apron, having an upwardly moving inclined surface, a traveling endless bean-distributing belt working transversely over said apron, a gate-equipped open bottom pocket overlying the receiving end of said belt, a feed spout arranged to deliver beans into said pocket, and means causing the beans to roll from said distributing belt onto said upwardly moving inclined surface, whereby the bad beans will be carried on said surface over the highest point of travel thereof, and the good beans will roll therefrom over the lowest point of travel thereof.

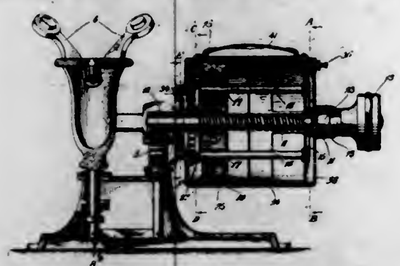
3. A sorting machine of the kind described, including a plurality of traveling endless aprons, each having an upwardly moving inclined surface, a traveling endless bean-distributing belt working transversely over each of said aprons, means causing the beans to roll from said distributing belt onto said upwardly moving inclined surfaces, whereby the bad beans will be carried on said surfaces over the highest point of travel thereof and the good beans will roll therefrom over the lowest point of travel thereof, a gate-equipped open bottom pocket overlying the receiving end of each of said distributing belts, a feed spout, and gate-equipped ports connecting said feed spout with said pockets.

4. A sorting machine of the kind described, including a traveling endless apron having an upwardly moving inclined surface, a traveling endless bean-distributing belt working transversely over said apron, and a plurality of deflectors for scraping the beans from said distributing belt onto said upwardly moving inclined surface, whereby the bad beans will be carried on said surface over the highest point of travel thereof, and the good beans will roll therefrom over the lowest point of travel thereof.

5. A sorting machine of the kind described, including a traveling endless apron having an upwardly moving inclined surface, a traveling endless bean-distributing belt working transversely over said apron, and a plurality of deflector blades in staggered arrangement, set oblique in respect to the direction of travel of said upwardly moving inclined surface, for scraping the beans from said distributing belt onto said upwardly moving inclined surface, whereby the bad beans will be carried on said surface over the highest point of travel thereof, and the good beans will roll therefrom over the lowest point of travel thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,105,891. WEIGHING-MACHINE. ALFRED C. DODGE, Yonkers, N. Y. Filed Jan. 18, 1906. Serial No. 296,623. Renewed Mar. 16, 1914. Serial No. 825,157. (Cl. 73—3.)



1. A weighing machine including in combination, a support for the material to be weighed, a beam, a poise, mechanism mounted on said beam for moving said poise relatively to the beam, means for actuating the mechanism, a plurality of graduated members for indicating the weight of material, said mechanism including connection between the poise and the said indicating members whereby each member is moved in a degree corresponding to its graduations, said indicating members being mounted independently of the poise and arranged to present their respective connections for a single reading.

2. A weighing machine including in combination a support for the material to be weighed, a beam, a poise, mechanism mounted on said beam for moving said poise relatively to the beam, a plurality of graduated members for indicating the weight of the material, connections between the poise and said indicating members whereby each member is moved in a degree corresponding to its graduations, and a casing mounted independently of the poise and arranged about said indicating means so as to conceal the indicating means adjacent to those portions which are to be read.

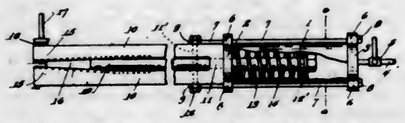
3. A weighing machine including in combination a support for the material to be weighed, a beam, a poise, mechanism for moving said poise relatively to the beam, a plurality of graduated members for indicating the weight of the material, connections between the poise and said indicating members whereby each member is moved in a degree corresponding to its graduations, and a casing fixed on the beam and arranged about said indicating means so as to conceal the indicating means with the exception of those portions which are to be read, said casing and indicating members being also arranged so that the weight may be ascertained at a single reading.

4. A weighing machine including in combination a support for the material to be weighed, a beam, a poise, means for moving said poise relatively to the beam, a plurality of graduated members for indicating the weight of the material, said indicating members being mounted independently of the poise to rotate around the path of travel of the poise, and connections between the poise and said indicating members whereby each member is moved in a degree corresponding to its graduations.

5. A weighing machine including in combination a support for the material to be weighed, a beam, a poise, means for moving said poise relatively to the beam, a plurality of graduated members for indicating the weight of the material, said indicating members being mounted to rotate around the path of travel of the poise, connections between the poise and said indicating members whereby each member is moved in a degree corresponding to its graduations, and a casing mounted independently of the poise and arranged about said indicating means so as to conceal the indicating means with the exception of those portions which are to be read.

[Claims 6 to 26 not printed in the Gazette.]

1,105,892. RIVET-HOLDING DEVICE. DORIN CORBETT DOWDY, Huntington, W. Va. Filed Jan. 25, 1913. Serial No. 744,118. (Cl. 78—53.5.)

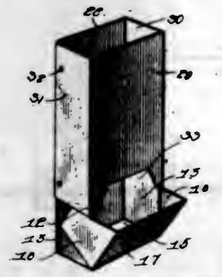


1. In a device of the character described, the combination with an air chamber and a piston operating therein, of a rod operable through movement of said piston, arms arranged in parallel relation and in line with the movement of said rod, and means upon said rod and engaging said arms for forcing the same apart, as and for the purpose set forth.

2. In a device of the character described, the combination with an air chamber having a piston mounted therein, of a pair of yieldable arms arranged in parallelism to extend from one end of said chamber, the said arms being wedge-shaped at their outer extremity, and a rivet holding element upon one of the said arms, means operable through movement of said piston and engageable with said arms for forcing the wedge-shaped extremities apart, as and for the purpose set forth.

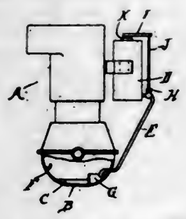
3. In a device of the character described, the combination with an air chamber and a piston operating therein, of a rod operable through movement of said piston, arms arranged in spaced relation and in line with the movement of said rod, said arms being wedge-shaped at their outer extremity, a rivet holding element upon the extremity of one of said arms, of a wedge-shaped head formed upon the free end of said rod and engageable with the wedge-shaped extremities of the respective arms for forcing the latter apart, as and for the purpose set forth.

1,105,893. MATCH-CONTAINER. HUGH J. DOWNEY, Modesto, Cal. Filed June 17, 1913. Serial No. 774,174. (Cl. 206—31.)



A box of the class described comprising an outer casing, said outer casing formed from a blank sheet of material and provided with a cut-out portion near the lower front edge thereof, an elongated aperture formed in the rear face of said casing, an inner match containing section comprising a body formed from a blank sheet of material and provided with a flap at its lower end having rearwardly extending side members to constitute a trough-shape body and capable of being swung flat upon said inner match containing section, said rearwardly extending sides provided with upwardly projecting tongues adapted to lie snugly against the sides of said match containing section, the rear face of said match containing section provided with a small aperture to allow the entrance of a supporting pin for supporting said match containing receptacle upon a support, and said aperture formed within said outer casing adapted to allow a limited longitudinal movement of such outer casing upon said match containing body without removing said receptacle from said support to facilitate the folding of said trough portion of said match containing body snugly against the front face of said match containing body and holding the same in a closed position.

1,105,894. ENGINE-LUBRICATING SYSTEM. GEORGE W. DUNHAM, Detroit, Mich., assignor to Saxon Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 25, 1913. Serial No. 797,181. (Cl. 184—103.)



1. In a lubricating system, the combination with an oil pan of an oil discharge conduit having its end sealed by the normal level of oil within said pan, and a shield partially surrounding the discharge end of said conduit, forming a pocket for maintaining the seal when said pan is tilted in one direction, while permitting discharge of lubricant from said pocket when tilted in the opposite direction.

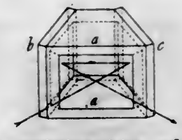
2. In a lubricating system, the combination with an oil pan of an oil discharge conduit having its lower end sealed by the lubricant in said pan at normal level, and a U-shaped shield surrounding the discharge end of said conduit forming a pocket for maintaining the seal when the pan is tilted in one direction and discharging the oil from said pocket when the pan is tilted in the opposite direction.

3. In a lubricating system, the combination with an oil pan of an oil tank, closed from atmospheric pressure at its upper end, a discharge conduit for the oil sealed in said pan when the lubricant is at normal level, and a shield in said pan partially surrounding the discharge end of said conduit, forming a pocket for retaining the lubricant when the pan is tilted in one direction, while permitting a flow of oil from said pocket when tilted in the opposite direction.

4. In a lubricating system, the combination with an oil pan of an oil receptacle above the level of said pan having a discharge conduit sealed in said pan at the normal level of oil therein, a cap for closing the upper end of said tank to relieve the oil from atmospheric pressure, a shut-off for said oil discharge conduit, and means for preventing movement of said cap when said conduit is open, said means being operatively connected with said shut-off and adjustable therewith to an inoperable position when said conduit is closed.

5. In a lubricating system, the combination with an oil pan of an oil tank above said pan, having a discharge conduit sealed in said pan at the normal level of oil, a valve in said discharge conduit, a fill cap for the upper end of said tank, and a guard connected with the stem of said valve extending to intercept the removal of said cap for the upper end of said tank, and a guard connected with the stem of said valve extending to intercept the removal of said cap when said valve is in other than its closed position.

1,105,895. OPTICAL SQUARE. OTTO EPPENSTEIN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed July 17, 1913. Serial No. 779,487. (Cl. 88—1.)



1. Optical square consisting of two reflecting plates and an intermediate member, all three of the same material, the plates being fixed to the intermediate member and silvered on their front sides.

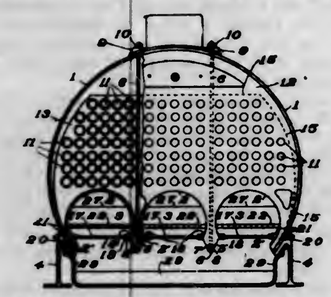
2. Optical square consisting of two reflecting plates and an intermediate member, all three of metal, the plates being fixed to the intermediate member and silvered on their front sides.

1,105,896. STEAM-BOILER. ANGEL FERNÁNDEZ, Habana, Cuba. Filed Mar. 17, 1914. Serial No. 825,392. (Cl. 122—149.)

1. In boilers of the character described the combination of an exterior mantle for said boiler cut away at its lower part, fire-boxes at said cut away part of the boiler, mantles for said fire-boxes also cut away at their lower parts, and inverted horse-shoe pieces riveted to the ends of two adjacent of the intermediary fire-boxes, and means for connecting the ends of the exterior boiler mantles with the ends of the two lateral fire-boxes.

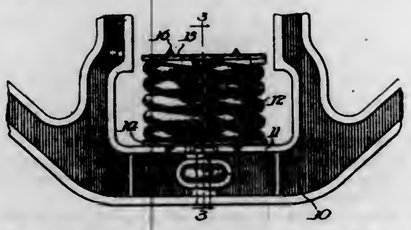
2. In a boiler of the character described the combination of an exterior mantle for said boiler having its lower fifth part cut away, supports for said boiler, fire-boxes below the geometrical axis of said mantle, a mantle for each of said fire-boxes, means for securing the outer ends of said boxes to the outer ends of the mantles, and means for securing the adjacent ends of two of said fire-boxes to each other, an ash pit below said fire-boxes having inclined side walls, nests of tubes within said boiler and means for supporting the vertically arranged nests of said tubes secured to the outer end of the mantle securing means for two adjacent fire-boxes and to the outer face of the boiler mantle respectively.

3. In a boiler of the character described the combination of an exterior mantle for said boiler having its lower fifth part cut away, supports for said boiler, fire-boxes below the geometrical axis of said mantle, a mantle for each of said boxes, means for securing the outer ends of said boiler mantle to the outer ends of the mantles of the two lateral fire-boxes, inverted horse-shoe pieces having their free ends connected with the lower ends of the mantles of two adjacent fire-boxes, a horizontal rod connecting two



of said mantles at the place of connection through said horse-shoe pieces and secured in position, an ash pit below said fire-boxes having inclined side walls and secured to said boiler mantles, rods connecting the ends of each of the fire-boxes, and grate bars resting with their extreme outer ends upon angle irons and with their inner ends upon an inverted T-beam secured to the boiler plates, and rods for connecting said horse-shoe pieces with the top of the boiler mantles.

1,105,897. CAR-TRUCK. GEORGE G. FLOYD, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 23, 1914. Serial No. 826,648. (Cl. 105—243.)



1. In a car truck, the combination of a pair of side frames, each thereof having a spring seat, each frame being provided with a transverse recess beneath said seat, and a tie rod extending between said side frames, said rod being provided with eyes at each end, and a pin connection between said frames and said rod the arrangement being such as to permit a universal movement between the connected frames, substantially as described.

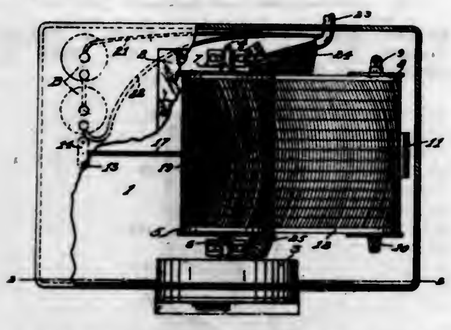
2. In a car truck, the combination of a pair of side frames, a tie rod, means connecting said tie rod to said side frames, said means including curved bearings whereby said side frames are permitted universal movement with relation to each other, substantially as described.

3. In a car truck, the combination of a pair of side frames each thereof having a recess with curved walls, a tie rod connecting said side frames, said tie rod having side frame engaging portions which are curved whereby universal movement between the two side frames is permitted, substantially as described.

4. In a car truck, the combination of a pair of side frames each thereof having a spring seat, a recess beneath said seat, a tie member extending between said frames, and provided with eyes in its ends, and pins coöperating with said side frames and tie member and providing for universal movement between adjacent side frames, substantially as described.

5. In a car truck, the combination of a pair of side frames each thereof having a spring seat, each frame being provided with a transverse and a vertical recess beneath the spring seat, a tie rod having eyes, and a pin in said vertical recess, said pin serving to connect said tie rod to said side frame, substantially as described.

1,105,898. RECORDING-THERMOMETER. WILLIAM L. FRIEDMAN, Oakland, Cal. Filed Nov. 7, 1912. Serial No. 730,070. (Cl. 234—11.)



1. In a recording device, a thermometer, electrical circuits connected therewith, means in the thermometer to close different electrical circuits upon temperature changes, a record strip, a series of magnets connected with said circuits, and a record arm movable over the record strip upon the energizing of said magnets, substantially as described.

2. In a recording device, a thermometer, electrical circuits connected therewith, means in the thermometer to close different electrical circuits upon temperature changes, a record strip, a series of magnets connected with said circuits, a record arm movable over the record strip, and an armature locked in proximity to said magnets and moved thereby when said magnets are energized to cause the record arm to move over the record strip to make a record thereon, substantially as described.

3. In a recording device, a thermometer, electrical circuits connected therewith, means in the thermometer to close different electrical circuits upon temperature changes, a record strip, means to move said record strip at a fixed rate, a series of magnets connected with said circuits, a record arm movable over the record strip, and an armature adjacent the magnets for moving the arm over the record strip to make a record thereon, substantially as described.

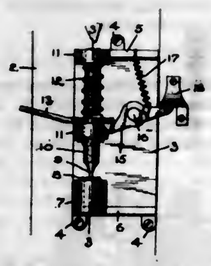
4. In a recording device, a thermometer, electrical circuits connected therewith, means in the thermometer to close different electrical circuits upon temperature changes, a record strip, means to move said record strip longitudinally at a determinate rate, a series of magnets connected with said circuits, a record arm movable over the record strip to make a record thereon, an armature adjacent the magnets, and means to lock the armature adjacent the particular magnet energized, substantially as described.

5. In a recording device, a thermometer, electrical circuits connected therewith, means in the thermometer to close different electrical circuits upon temperature changes, a record strip, means to move said record strip longitudinally at a determinate rate, a series of magnets connected with said circuits, a pivoted armature adjacent each magnet, and an armature carried by the record arm and close enough to the magnets to be locked adjacent the magnet energized by the two next adjacent armatures, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,105,899. BURGLAR-ALARM. WILLIAM H. GEETZ, Philadelphia, Pa., and EDWARD C. FOSTER, Pitman, N. J., assignors of one-third to William E. Alloway, Philadelphia, Pa. Filed Oct. 17, 1913. Serial No. 795,630. (Cl. 116—42.)

1. A burglar alarm of the character described, comprising a base, a barrel integral with the base and adapted to support a cartridge, bearings on the base in line with the barrel, and a plunger mounted in said bearings, of a pin projected through an opening in the plunger, a coiled spring around the plunger between one of the bearings and said pin, and a spring-held tripping lever for holding and controlling the release of the pin and the operation of the plunger, substantially as described.



2. A burglar alarm of the character described, comprising a base, a barrel integral with the base and adapted to support a cartridge, bearings on the base in line with the barrel, and a plunger mounted in said bearings, of a pin projected through an opening in the plunger, a coiled spring around the plunger between one of the bearings and said pin, a pivoted tripping lever on the base, a spring holding said tripping lever in normal position, and means engaged by the tripping lever to cause the release of the pin and the operation of the plunger, substantially as described.

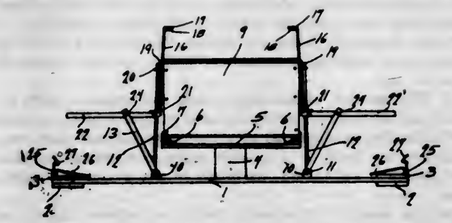
3. A burglar alarm of the character described, comprising a base, a barrel integral with the base and adapted to support a cartridge, bearings on the base in line with the barrel, and a plunger mounted in said bearings, of a pin projected through an opening in the plunger, a coiled spring around the plunger between one of the bearings and said pin, a pivoted tripping lever on the base, a spring holding said tripping lever in normal position, means engaged by the tripping lever to cause the release of the pin and the operation of the plunger, said base having flanges at its upper and lower end, and a casing fitting over said flanges, substantially as described.

4. A burglar alarm comprising a base, a vertically disposed barrel on the base adapted to receive a cartridge, bearings on the base in line with the barrel, a spring-pressed plunger in said bearings, and a pin projecting through the plunger, of a horizontally swinging tripping lever over one end of which said pin is adapted to be positioned to support the plunger in an elevated position, and a pivoted dog adapted to be engaged by the tripping lever to swing the latter out of the path of the pin and permit the plunger to move downwardly and discharge the cartridge, substantially as described.

5. A burglar alarm comprising a base, a vertically disposed barrel on the base adapted to receive a cartridge, bearings on the base in line with the barrel, a spring-pressed plunger in said bearings, and a pin projecting through the plunger, of a horizontally swinging tripping lever over one end of which said pin is adapted to be positioned to support the plunger in an elevated position, a pivoted dog adapted to be engaged by the tripping lever to swing the latter out of the path of the pin and permit the plunger to move downwardly and discharge the cartridge, said lever having a beveled inner end, and a spring secured to the base and engaging said inner end of the lever, holding the latter in normal position, substantially as described.

1,105,900. BOX-LID PRESSER. OSCAR D. GIBBS, Spokane, Wash. Filed Feb. 9, 1914. Serial No. 817,556. (Cl. 100—57.)

1. In a box lid presser, a yielding base, a support on said base, a yielding box rest mounted on and overhanging said support, cleat lid clamping devices pivotally mounted on said base and comprising carriers, claps slidable on said carriers, and handle lever means having pivotal connection coincident with the pivotal connection of the said clamping devices with said base and pivotally connected with said clamping devices to move the latter into clamping relation with said box lid, substantially as described.



2. In a box lid presser, a support, a yielding box rest mounted on said support, cleat lid clamping devices pivotally mounted on a support and comprising carriers, clamps slidable on said carriers, and handle lever means having pivotal connection coincident with the pivotal connection of said clamping devices and pivotally connected with said clamping devices to move the latter into clamping relation with said box lid, substantially as described.

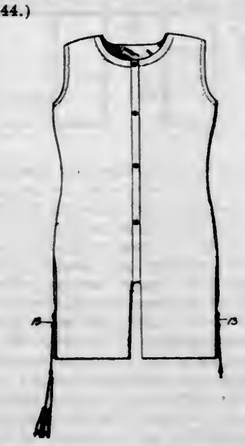
3. In a box lid presser, a yielding base, a support on said base, a yielding box rest mounted on said support and overhanging the same to support a box, and cleat clamping devices mounted on said base for clamping the lid on said box, substantially as described.

4. In a box lid presser, a yielding base, a support on said base, a yielding box rest mounted on said support and overhanging the same to support a box, and cleat clamping devices mounted independently of said box rest for clamping the lid on said box, substantially as described.

5. In a box lid presser, a yielding base, a support on said base, a yielding box rest mounted on said support and overhanging the same to support a box, cleat clamping devices pivotally mounted on said base for clamping the lid on said box, and pivotal means movable over a dead center for shifting said clamping devices into and holding them into a clamping position, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,105,901. UNDERGARMENT. ISRAEL GITENSTEIN, New York, N. Y. Filed July 11, 1913. Serial No. 778,572. (Cl. 2—144.)



An undergarment comprising a pair of drawers, each leg of said drawers provided with a seam on one side, the lower ends only of such seams provided with reinforcing means adapted to strengthen the same and afford supporting means for suspending garters therefrom.

1,105,902. PROCESS OF MANUFACTURING STANNIC CHLORID FROM MATERIALS CONTAINING OXID OF TIN. HANS GOLDSCHMIDT, Essen-on-the-Ruhr, Germany. Filed Feb. 5, 1908. Serial No. 414,438. (Cl. 23—13.)

1. The method of manufacturing anhydrous chlorid of tin from materials containing oxid of tin, which comprises first reducing the oxid of tin under conditons to produce a porous mass containing the tin in a metallic state, and then subjecting the latter to the action of chlorin gas.

2. The method of manufacturing anhydrous chlorid of tin from materials containing oxid of tin, which consists in first reducing the oxid of tin at a sufficiently low temperature to produce a porous mass containing metallic tin and then subjecting the latter to the action of chlorin gas.

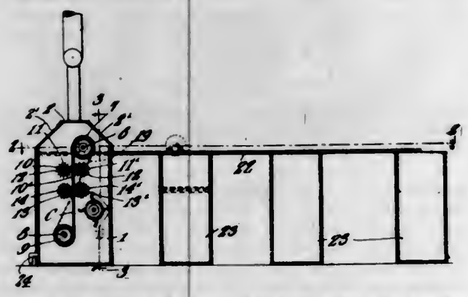
3. The method of manufacturing anhydrous chlorid of tin from materials containing oxid of tin, which comprises first reducing the oxid of tin at a sufficiently low temperature to produce a porous mass containing metallic tin in a finely divided state and then subjecting the latter to the action of chlorin gas.

4. The method of manufacturing anhydrous chlorid of tin from materials containing oxid of tin, which comprises first reducing the oxid of tin at a sufficiently low temperature by means of carbon in a small excess to produce a porous mass containing metallic tin in a finely divided state and then subjecting the latter to the action of chlorin gas.

5. The method of manufacturing anhydrous chlorid of tin from materials containing oxid of tin, which comprises first reducing the oxid of tin at a sufficiently low temperature to produce a porous mass containing metallic tin and then subjecting the latter to the action of chlorin gas under pressure.

[Claims 6 to 39 not printed in the Gazette.]

1,105,903. CARPET-CLEANING APPARATUS. THOMAS J. HABICHT, Charlotte, N. C. Filed Apr. 5, 1912, Serial No. 688,813. Renewed Feb. 2, 1914. Serial No. 816,101. (Cl. 15—8.)

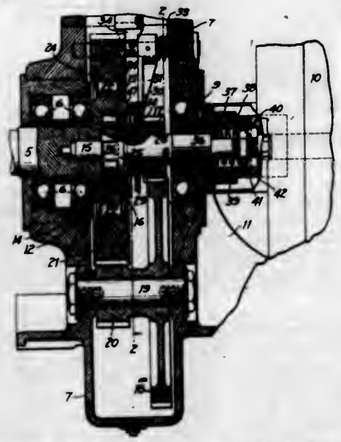


1. In an apparatus of the character described, a reservoir having a dome, two superposed carpet carrying rollers journaled in the reservoir, a beating mechanism and a brushing mechanism interposed between the rollers within the reservoir, a flue to remove the dust and dirt from the reservoir, said dome having a hinged cover, means for removably mounting the upper carrying roller for movement into and out of the dome through the portion thereof controlled by the hinged cover, and means for supporting the removable roller exterior of the reservoir.

2. In an apparatus of the character described, a reservoir having a dome, two superposed carpet carrying rollers journaled in the reservoir, a beating mechanism and a brushing mechanism interposed between the rollers within the reservoir, a hinged cover for one side of the dome, and means for removably mounting the upper carrying roller for movement into and out of the dome through the side controlled by the cover.

3. In an apparatus of the character described, a reservoir having a dome, two superposed carpet carrying rollers journaled in the reservoir, a beating mechanism and a brushing mechanism interposed between the rollers within the reservoir, a hinged cover for one side of the dome, means for removably mounting the upper carrying roller for movement into and out of the cover controlled side of the dome, means for supporting the removable roller exterior of the reservoir, and detachable means for operably connecting the upper and lower rollers together for simultaneously operating said rollers to wind the carpet from one roller to the other.

1,105,904. POWER-TRANSMISSION MECHANISM. EDWARD A. HALBLEIB, Rochester, N. Y., assignor to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed May 28, 1913. Serial No. 770,544. (Cl. 74—59.)



1. Power-transmission mechanism having, in combination, a first rotary element; a second rotary element; a one-direction clutch for connecting said elements, whereby the first element may actuate the second element; a third rotary element coaxial with the second element and normally rotative therewith, but adapted for a limited rotation relatively thereto; gearing through which the second element may actuate the first element, said gearing including a driving-pinion co-axial with the first element but rotatable relatively thereto; a second clutch, for connecting said pinion with the third rotary element; and connections, between the third element and the first-mentioned clutch, whereby the clutch may be thrown out of operation, in consequence of relative rotation of the second and third elements, when the first element and the gearing are reversely rotated, said connections being also adapted to afford a driving-connection whereby the second element may actuate the third element and drive the first element through the second clutch and the gearing; the second clutch being operable to disconnect said pinion from the second element when the first element is actuating the second element.

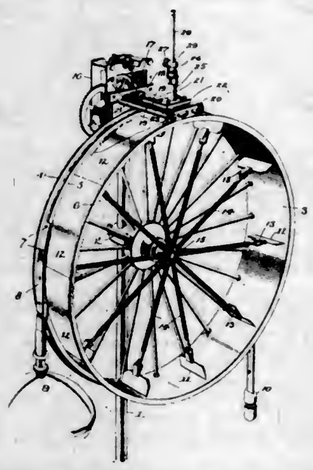
2. Power-transmission mechanism having, in combination, a first rotary element; a second rotary element coaxial therewith; a roller-wedge clutch connecting said elements, whereby the first element may actuate the second element in the normal direction of operation, while the second element may overrun the first element in said direction; a third rotary element, journaled upon the second rotary element and provided with fingers adapted to engage the rollers of said clutch and to throw them into inoperative position in consequence of relative rotation between the third and second elements, the third element being provided also with a clutch-member; gearing through which the second element may actuate the first element, at a reduced speed, in the normal direction of rotation, said gearing including a driving-pinion journaled upon the second element and provided with a clutch-member adapted to coöperate with the clutch-member on the third element; and means for shifting the pinion upon the second element, to disengage it from operative connection, through said clutch-members, with the third element when the first element drives the second element through the roller-wedge clutch.

3. Power-transmission mechanism having, in combination, a first rotary element; a second rotary element coaxial therewith; a roller-wedge clutch, connecting said elements, whereby the first element may actuate the second element in the normal direction of operation, while the second element may overrun the first element in said direction; a third rotary element journaled upon the second rotary element and provided with fingers adapted to engage the rollers of said clutch and to throw them into inoperative position in consequence of relative rotation between the third and second elements, the third element being provided also with a clutch-member; gearing through which the second element may actuate the first element, at a reduced speed, in the normal direction of rotation, said gearing including a driving-pinion journaled upon the second element and provided with a clutch-member adapted to coöperate with the clutch-member on the third element; means for shifting the pinion upon the second element, to disengage it from operative connection with the third element when the first element drives the second element through the roller-wedge clutch; and a second roller-wedge clutch connecting said gearing with the first element and adapted to permit the first element to overrun the gearing in the normal direction of rotation.

1,105,905. ARTIFICIAL-STONE COMPOSITION. WILLIAM HESLOP, Johnstown, Pa. Filed Oct. 5, 1912. Serial No. 724,064. (Cl. 106—32.)

An artificial stone composition comprising substantially 6% of sulfur, 9% of pine tar and 85% of gravel.

1,105,906. RECORDER. WENDELL HESS, Jr., Troy, N. Y., assignor to W. & L. E. Gurley, a Corporation of New York. Filed May 15, 1912. Serial No. 697,459. (Cl. 234—10.)



1. The combination of a record drum provided with a plurality of slots extending across its face; holding mechanism carried by said drum and adapted to engage the ends of a plurality of contiguous record strips inserted through said slots, to hold said strips upon the face of said drum; and means adapted to mark a record on said strips.

2. The combination of a record drum provided with a plurality of slots extending across its face; resilient tension devices carried by said drum; clamps carried by said tension device and adapted to engage the ends of record strips inserted through said slots to hold said strips upon said drum; and means adapted to mark a record on said strips.

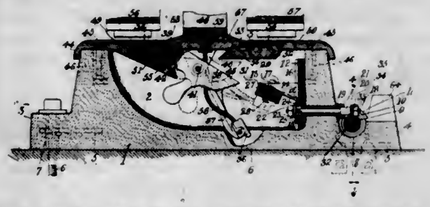
3. The combination of a record drum; means for moving said drum proportionally to the movement of a body; a constant speed driving mechanism; a pair of feed screws driven by said mechanism; a carriage removably mounted on said feed screws and guided solely thereby; and a stylus mounted on said carriage and adapted to mark upon a record sheet carried by said drum.

4. The combination of a record drum having slots extending across its face; means for moving said drum proportionally to the movement of a moving body; a series of clamps adapted to engage the ends of record strips inserted through the slots in the record drum; resilient means connected with said clamps to exert stress upon said record strips; a clock movement; a pair of feed screws driven thereby; a stylus carriage driven and guided solely by said feed screws across the face of said drum; and a stylus mounted in said carriage and adapted to mark upon a record sheet carried by the drum.

5. The combination of a suitable supporting frame; a record drum having transverse slots on its periphery; a series of springs within the drum; means for connecting said springs to the ends of record sheets inserted through said slots; a float; connections between the float and the drum whereby the drum is rotated by the movement of the float; a clock; a pair of lead screws driven by said clock and having their axes parallel to the axis of the drum; a carriage resting on said lead screws in engagement with the threads thereof whereby the carriage is both guided and driven by said screws; a guide carried by the carriage; and a pencil mounted in said guide, so as to mark upon a record sheet carried by the drum.

[Claims 6 and 7 not printed in the Gazette.]

1,105,907. CONTACT SWITCH-BOX. SOLOMON RITTER HIPPLE, Williamsport, Pa., and WALTER LEWIS CONWELL, Montclair, N. J. Filed June 17, 1912. Serial No. 704,152. (Cl. 191—18.)



1. A contact switch box including a fixed contact, a movable contact arranged to engage the fixed contact, and magnetically influenced means for operating said movable contact, said means including pole pieces and an armature, one of the pole pieces being arranged in the path of movement of one face of the armature, the remaining pole piece and the armature being at all times free of contact.

2. A contact switch box including fixed and movable contacts, a swinging armature carrying the movable contact, and pole pieces arranged at opposite sides of the axis of the armature, one pole piece being arranged in the path of movement of one end of the armature and the opposite pole piece having a face concentric with the axis of rotation of the armature.

3. A contact switch box comprising an element with which a collector shoe of a car is adapted to engage, a fixed contact, a movable contact arranged to engage the fixed contact, and magnetically influenced means for operating said movable contact, said means including pole-pieces and an armature, one of said pole-pieces being arranged in the path of movement of one face of the armature and the remaining pole-piece and the armature being at all times free of contact.

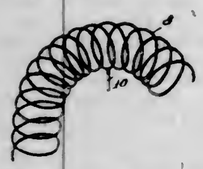
4. A contact switch box having pole pieces and a swinging armature in coöperative relation therewith, a fixed

contact, a movable contact carried by the armature, a fixed element for engaging a collector shoe on a car, and a flexible conductor connected directly to said element and also directly to the movable contact whereby current is supplied to a car.

5. A contact switch-box comprising an element with which a collector shoe of a car is adapted to engage, an armature having a passage through it, magnetic means for moving the armature, a fixed contact, a movable contact carried by the armature to engage the fixed contact, and a flexible conductor connected directly to the movable contact, and also directly to said shoe-engaged element and passed through the passage in the armature.

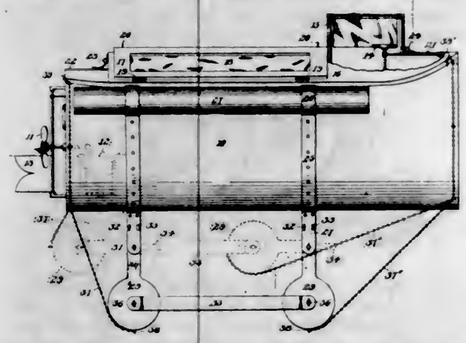
[Claims 6 to 24 not printed in the Gazette.]

1,105,908. INCANDESCENT ELECTRIC LAMP. WILLIAM G. HUGHES, Pittsburgh, Pa. Filed Dec. 16, 1912. Serial No. 737,039. (Cl. 176—40.)



The improved electric incandescent lamp comprising a glass bulb, a filament wound spirally throughout its length with the convolutions at the apex of the filament in closer relation than throughout the remainder of its length, and means for bracing the filament.

1,105,909. LIFE-BOAT. JOZSEF KASSA, Sandcoulee, Mont. Filed May 15, 1914. Serial No. 838,724. (Cl. 9—4.)



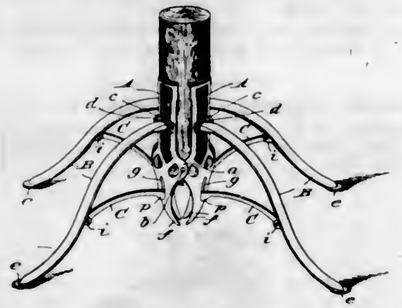
1. A life boat comprising a hull provided with clamp supporting strips oppositely-positioned exteriorly thereof and having circular brackets adjacent the gunwales of the boat, floating buoys mounted within said brackets and extending longitudinally of the boat, bottom extension portions spaced apart upon the bottoms of said strips, and ballast disks hinged between said spaced strip portions beneath the keel of the boat.

2. A device of the class described comprising a boat hull, oppositely-positioned float supporting clamping strips arranged in pairs and substantially surrounding the hull, each pair of clamping strips provided with spaced downwardly-extending ends beneath the keel portion of the hull, spacing blocks between said strip ends, opposite stop lugs and relatively rearwardly-positioned inwardly-projecting spring lugs struck out of said strip ends, pivot pins secured between said pairs of ends below said lugs, weighted ballast disks having integral projecting handles journaled upon said pins and extending between said spaced strip ends and provided with terminal extensions adapted for springing engagement past said spring lugs and in seating contact with said stop lugs.

3. A device of the class described comprising a boat hull, oppositely-positioned float supporting clamping strips arranged in pairs and substantially surrounding the hull, each pair of clamping strips provided with spaced downwardly-extending ends beneath the keel portion of the hull, spacing blocks between said strip ends, opposite stop lugs and relatively rearwardly-positioned inwardly-projecting spring lugs struck out of said strip ends, pivot pins secured between said pairs of ends below said lugs, weighted ballast disks having integral projecting handles journaled upon said pins and extending between said spaced strip ends and provided with terminal extensions adapted for springing engagement past said spring lugs and in seating contact with said stop lugs, pins centrally-positioned through said disks, a link having its ends pivoted to said disk pins and adapted for connecting said disks together for simultaneous movement, a separate chain secured to each of said disks and extending in opposite directions, and an engaging means for the free ends of said chains positioned at opposite ends of the boat and adjacent the deck thereof.

4. A life boat comprising a hull, spring-motor operated propellers carried by said hull, hinged skylight frames upon the deck of said hull, ventilating screens carried by said frames, a pilot house forwardly-positioned upon the deck, a forward and a rear trap door spring-hinged to the deck, and shiftable ballast operating means positioned in close proximity to each of said doors.

1,105,910. STAND. PATRICK H. KELLEHER, Auburn, Me., assignor of one-half to John P. Sutton, Lewiston, Me. Filed Sept. 4, 1913. Serial No. 788,110. (Cl. 248—38.)



1. A stand for the purpose described, comprising jaws grouped about a center and pivotally connected together at intermediate points in their height, legs pivoted to and extending outward from the jaws, and brace bars connected to the legs and adjustable with respect to the lower portions of the jaws and provided with means for engaging the jaws and locking the legs when the latter are spread.

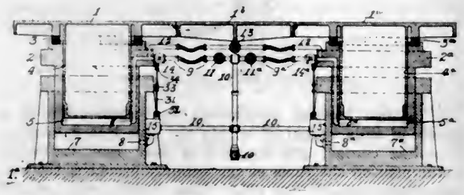
2. A stand for the purpose described, comprising jaws grouped about a center and having lateral enlargements lapped and pivotally connected together and also having depending arms in which are upright slots, legs pivoted to and extending outward from the jaws, and brace bars pivoted to the legs and extending through the slots in the jaw arms and having shoulders adjacent to their inner ends arranged to abut against the outer sides of the jaw arms.

3. A stand for the purpose described, comprising jaws grouped about a center and having lateral enlargements lapped and pivotally connected together and also having depending arms in which are upright slots and in the inner sides of which are recesses or countersinks communicating with the lower ends of the slots, legs pivoted to and extending outward from the jaws and arranged to swing vertically, and brace bars pivoted to the legs and extending through the slots in the jaw arms and having heads at their inner ends and shoulders adjacent to said ends arranged to abut against the outer sides of the jaw arms.

4. A stand for the purpose described, comprising jaws grouped about a center and pivotally connected together at intermediate points in their height and having depending arms inclined inward or toward the center to receive the weight of a tree trunk arranged between the jaws, legs adjustably connected to and extending outward from the jaws, and brace bars connected with the legs and adjustable with respect to the jaws and arranged in one position to lock the legs in their spread position, and in another position to permit of the legs being folded against the jaws.

5. A stand for the purpose described, comprising jaws grouped about a center and having their adjacent portions connected in a flexible manner at intermediate points in their height and also having depending arms, legs adjustably connected to and extending outward from the jaws, and brace bars connected with the legs and adjustable with respect to the jaws and arranged in one position to lock the legs in their spread position and in another position to permit of the legs being folded against the jaws.

1,105,911. MULTIPLEX MOLDING APPARATUS. BERNHARD KELLER, Duisburg-Meiderich, Germany. Filed Apr. 10, 1913. Serial No. 760,217. (Cl. 22—45.)



1. A jarring machine comprising a plurality of units, each having means for independently operating it, and means uniting said units and causing them to operate as one; there being automatic leveling means combined with said units.

2. A jarring machine comprising a plurality of units, each having means for independently operating it, and means uniting said units and causing them to operate as one; there being automatic leveling means combined with said units, and means for adjusting said leveling means at will to enforce uniformity in the leveling means of the different units.

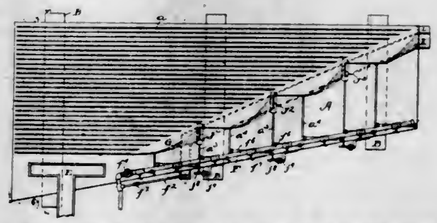
3. A jarring machine comprising a plurality of units, each having means for independently operating it, and means uniting said units and causing them to operate as one; there being automatic leveling means combined with said units, comprising inlet and outlet valves, and means controlled by the elevation of a movable part of the machine, controlling said valves.

4. A jarring machine comprising a plurality of units, each having means for independently operating it, and means uniting said units and causing them to operate as one; there being automatic leveling means combined with said units, comprising inlet and outlet valves, and means controlled by the elevation of a movable part of the machine, controlling said valves; said last-named means comprising a rocking yoke, stems for the inlet and exhaust valves coöperating with said rocking yoke, and a connection between said rocking yoke and said movable part of the machine.

5. A jarring machine comprising a plurality of units, each having means for independently operating it, and means uniting said units and causing them to operate as one; said uniting means comprising fluid pressure supplying and controlling means, and connections through which the control may be exerted on the plurality of units or on the units individually; said last-named means comprising independent valves controlling the supply and exhaust of fluid pressure to the respective units, means for cutting out one of said valves, and an independent fluid pressure conduit through which the unit of the cut-out valve is subjected to the control of the valve left in.

[Claims 6 and 7 not printed in the Gazette.]

1,105,912. CONCENTRATING-TABLE. EDMUND B. KIRBY, Rossland, British Columbia, Canada. Filed Apr. 20, 1903. Serial No. 153,562. (Cl. 83—88.)



1. A concentrating table having a separating portion which is free of riffles, combined with means for imparting differential lengthwise vibration to said table, and means for delivering a forceful sheet of wash water onto said table in a direction which is transverse to the direction of vibration, and is toward the rear side of said table, and means for removing the unlapped part of the front band, said means being located at a point such that after the stated part of said band has been removed the wash water acting on the newly exposed front edge of said banded material will sweep back the overlapping part of the second band and expose a greater part of the remainder of the front band.

2. A concentrating table having a separating portion which is flat and free of riffles, means for differentially vibrating the table in one direction, and means for discharging a forceful sheet of wash water onto said table in a direction which is transverse to the direction of vibration and is toward the rear side of said table, said table having through it a plurality of slots whose rear ends are progressively nearer the rear edge of the table as they are nearer the delivery end thereof, and said slots being in the path of the unlapped part only of the front band, and there being a sufficient distance between said slots to permit the rebanding of the material by the action of the wash water while said material is traveling the distance between said slots.

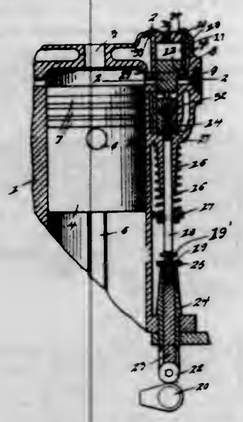
3. A concentrating table having a separating portion which is free of riffles, means for differentially vibrating the table in one direction, and means for discharging a forceful sheet of wash water onto said table in a direction which is transverse to the direction of vibration and is toward the rear side of said table, said table having through it a plurality of slots whose rear ends are progressively nearer the rear edge of the table as they are near the delivery end thereof, and said slots being in the path of the unlapped part only of the front band, and there being a sufficient distance between said slots to permit the rebanding of the material by the action of the wash water while said material is traveling the distance between the slots, and means for varying the position of the rear ends of said slots.

4. A vibrating concentrating table having a wash water supply and a separating portion wherein the previously settled mineral is divided into bands, said separating portion being provided with successive groups of discharge openings on that side of the path of movement of the mineral nearest the wash water supply, one of the members of each group being advanced somewhat nearer than the rest of the grouup toward the wash water supply, each opening having a means for controlling the entrance of mineral thereto.

5. A concentrating table having an opening in it, a cylindrical gate for partially closing said opening, a spring for yieldingly holding said gate beneath the opening, and means for moving said gate.

[Claims 6 to 15 not printed in the Gazette.]

1,105,913. SLIDE-VALVE. HENNING W. LUNDQUIST, St. Louis, Mo. Filed Mar. 19, 1913. Serial No. 755,449. (Cl. 136—8.)



1. In combination with an internal combustion engine cylinder, a valve casing, said valve casing having a recess therein, the upper end of said recess being enlarged, a block slidable within the recess, the upper end of said block being enlarged to conform to the shape of the recess, means to move said block vertically, and the upper wall of the recess provided with a port communicating with the atmosphere to prevent the accumulation of pressure against the enlarged end of the block.

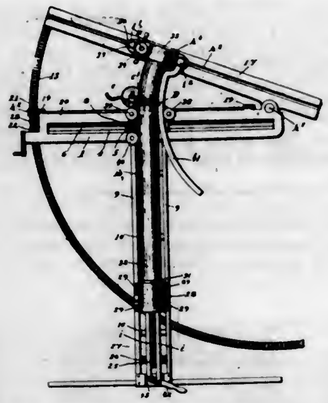
2. The combination with the cylinder of an internal combustion engine of a valve casing carried by said cylinder and having a recess therein, ports extending transversely through the valve casing and communicating with the recess, said recess enlarged at its upper terminal, a block slidably mounted within the recess, said block enlarged at its upper terminal to conform to the shape of the recess and having an aperture intermediate its ends adapted to register with the ports, means for reciprocating the block whereby the port is brought into registration with the port in the casing and means for preventing accumulation of pressure adjacent the enlarged end of said block within the enlarged portion of said recess.

3. The combination with the cylinder of an internal combustion engine, of a valve casing carried by said cylinder and having a recess therein, a block slidably mounted within the recess, said block having its upper terminal enlarged, said recess having its upper terminal enlarged to conform to the shape of said block, a port extending transversely through the casing and communicating with the recess, an aperture intermediate the ends of said block adapted to register with the port, the upper wall of the recess having a port therein communicating with the atmosphere to prevent the accumulation of pressure against the enlarged end of the block and means for reciprocating said block.

4. The combination with the cylinder of an internal combustion engine of a valve casing carried thereby and having a recess therein, said recess enlarged at its upper terminal and reduced at its lower terminal, a block slidably mounted within the recess and having an aperture therein intermediate the ends thereof, said block enlarged adjacent its upper terminal and reduced at its lower terminal to conform to the shape of said recess and means for preventing the accumulation of pressure against the enlarged end of said block within the enlarged portion of the recess.

1,105,914. APPARATUS FOR BENDING PIPES, RODS, &c. JAMES ACTON MILLER, Jersey City, N. J. Filed Sept. 3, 1909. Serial No. 516,147. (Cl. 153—40.)

1. In bending machinery, the combination of a lever movable on a pivotal center, a clamp or holder carried by the lever, a track or guide way movable with respect to the pivotal center of the lever for adjustment at different distances therefrom at right angles to the initial position of the lever, a thrusting and holding carriage guided on the track, means for guiding the article to be bent in its movement along the track, means for conjointly operating the lever and thrust carriage with differential movement and means for cooling a heated article to be bent at the cross plane between the track and initial position of the lever.



2. In pipe bending mechanism, the combination of a system of rolls supported within the pipe linked in pairs in rolling contact and adapted to bear upon the walls of the pipe on the sides of the bending pressure, the corresponding rolls of the pairs being respectively coupled upon and controlled by parallel tail rods projecting from the unbent ends of the pipe and by the reciprocal movement of which the rolls may be swung into contact with the pipe or freed therefrom on the sides of the bending pressure.

3. In pipe bending mechanism, the combination of two pairs of parallel tail rods, a series of rolls pivoted to each pair of rods arranged in opposite pairs, links or bars connecting the pivotal centers of each pair, and comprising a parallel motion, and mechanism connecting the tail rods at one end adapted for reciprocating the pairs of rods relatively to each other to swing the pairs of rolls around the common centers of their connecting links.

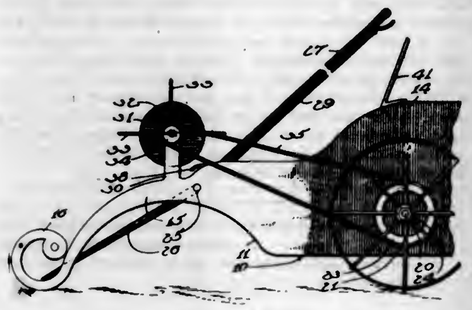
4. In pipe bending mechanism, the combination of two series of rolls, the rolls of each series connected together by parallel rods joining their axes arranged in pairs with the rolls of the opposite series, and the rolls of each pair being coupled together by connecting links joining their axes and mechanism connecting the systems of rods at one end adapted for reciprocating the rods relatively to each other and swinging the pairs of rolls around the common centers of their connecting links.

5. In pipe bending mechanism, the combination of two series of rolls, the rolls of each series connected together by parallel rods joining their axes and arranged in pairs with the rolls of the opposite series, and the rolls of each pair being coupled together by connecting links joining their axes, and a lever corresponding to the transverse links, pivoted to the external ends of the tail rods and adapted through relative movement of the respective rods to move the transverse links at various angles to the walls of the tube to expand or contract the rolls with reference thereto by such inclination of the connecting line of the roll axes.

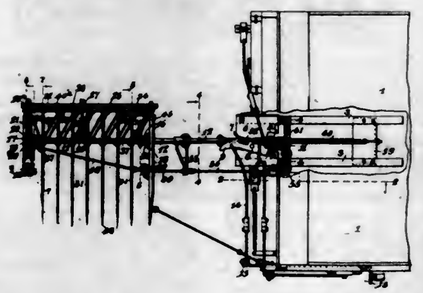
[Claims 6 and 7 not printed in the Gazette.]

1,105,915. COTTON-BOLL HARVESTER. ROBERT W. MONK, Mobeetie, Tex. Filed July 13, 1912. Serial No. 709,230. (Cl. 56—6.)

A cotton boll harvester comprising a body having a pair of sides, each side formed from a blank and comprising an enlarged body, an elongated downwardly curved arm extending from said body, said arm terminating in a reversed rolled portion, said sides adapted to carry a bottom and be carried by supporting wheels, said reversed rolled portions of said arms adapted to slide upon the surface of the ground to support the forward portion of said body, an integral standard extending from each of said curved arms and adapted to carry a rotating drum, and means carried by said arms for conveying cotton bolls up to said drum and into said body.



1,105,916. HAY AND GRAIN LOADER. DAVID M. MYERS, Chaseley, N. D., assignor to Myers Manufacturing Company, Fargo, N. D., a Corporation of North Dakota. Filed June 6, 1913. Serial No. 772,134. (Cl. 214—2.)



1. A shock loading attachment for vehicles comprising a shock engaging and elevating means movable in action from a substantially horizontal position to a substantially upright position and having stabbing tines for engaging the shock, and a support for the rear ends of the tines to which the latter have pivot connections movable on each of two different axes and said support being movable as a whole upon another axis.

2. A shock loading attachment for vehicles, comprising a shock engaging and elevating means provided with stabbing tines each provided at the rear end with an angle extension, a pivot support for each tine having means for the pivotal mounting of the angle extension of the tine, and in turn provided with an extension constituting a pivotal mounting, and a supporting member common to all the tine supports and provided with supporting means in which it is movable on an axis differing from that of the axial movements of the pivotal supports for the tines.

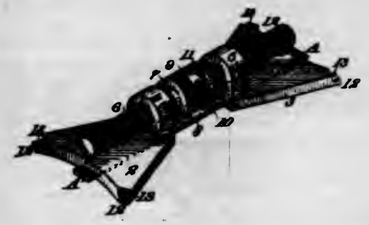
3. A shock loading attachment for vehicles comprising a shock engaging and elevating means provided with stabbing tines for engaging the shock, a support common to all the tines at the ends thereof remote from the stabbing ends and comprising a rod or bar mounted for movement about a longitudinal axis, each tine having the end remote from its stabbing end turned at an angle, and a pivotal connection for each tine comprising a sleeve receiving the angle end of a tine and having a member extending at an angle therefrom and provided with a pivotal bearing in the rod or bar.

4. A shock loading attachment for vehicles comprising a shock engaging and elevating means provided with stabbing tines for engaging the shock, a support common to all the tines at the ends thereof remote from the stabbing ends and comprising a rod or bar mounted for movement about a longitudinal axis, each tine having the end remote from its stabbing end turned at an angle, and a pivotal connection for each tine comprising a sleeve receiving the angle end of a tine and having a member extending at an angle therefrom and provided with a pivotal bearing in the rod or bar, said rod or bar having elastic means for constraining it in one direction of movement about its longitudinal axis.

5. A shock loading attachment for vehicles comprising a beam connected to the vehicle for movement from a substantially horizontal position to a substantially upright position, said beam having bars connected thereto at spaced points, a rod or bar mounted in the first-named bars for movement about its longitudinal axis, an arm fast to said bar, a spring connected to the arm and to the beam for normally constraining the rod toward one limit of its movement, an arch member connected to the first-named bars adjacent the second-named bar, slanting guides extending between the arch member and the beam, and tines each pivotally connected at one end to the second-named bar and extending through the guides in the direction of travel beyond the beam.

[Claims 6 to 11 not printed in the Gazette.]

1,105,917. CENTER-FINDER. JAMES OGG, Pahala, Hawaii. Filed Jan. 5, 1914. Serial No. 810,337. (Cl. 33—191.)

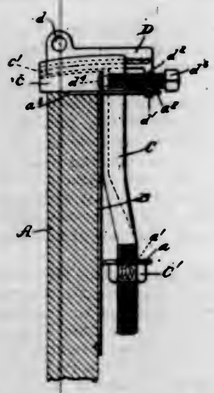


1. A center finding tool comprising a bar having a center opening formed therein, a pair of plates slidably mounted on said bar, lugs formed on the plates, a right and left-hand threaded screw extending through said lugs, and a fixed nut on said screw, having a plurality of openings extending therethrough, any one of which may be brought into alinement with the center opening.

2. A center finding tool comprising a bar having a center opening formed therein, a pair of plates slidably mounted on said bar, lugs formed on the plates, a right and left-hand threaded screw extending through said lugs, a fixed nut on said screw having a plurality of openings extending therethrough, an annular groove formed in the nut, a projecting lug extending into said groove formed on the bar, and means for holding the plates on the bar.

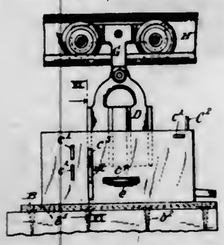
3. A center-finding tool, comprising a bar having a center opening formed therein, a pair of fan-shaped plates slidably mounted on said bar with the flared ends of the plates outermost, lugs formed on the inner ends of said plates, a right and left-hand threaded screw extending through said lugs to move the plates in unison, a fixed nut on said screw having a plurality of openings extending therethrough, any one of which may be brought into alinement with the center opening, and recessed seats formed in the outer corners of the fan-shaped plates, substantially as described.

1,105,918. BARN-DOOR HANGER PART. THOMAS V. PLICE, Ashland, Ohio, assignor to W. V. B. Topping, Ashland, Ohio. Filed May 23, 1912. Serial No. 699,113. (Cl. 16—7.)



In a door hanger part, the combination of a main or body member adapted to be secured to the face of the door and provided with two upper outwardly projecting lugs forming a guide and a lower outwardly projecting lug, likewise forming a guide; a member movably seated in said guides having a lower threaded portion and an upper transversely projecting portion formed with a transverse slide-way; a nut on the said threaded portion and below said lower guide; a member seated in said slide-way and movable therein, said member being provided with a downwardly projecting lug on its outer end, and a screw having threaded engagement with said downwardly projecting lug and rotative engagement with said slidable member, whereby the latter may be adjusted in its slide-way.

1,105,919. DOOR-HANGER. THOMAS V. PLICE, Ashland, Ohio, assignor to W. V. B. Topping, Ashland, Ohio. Filed May 23, 1912. Serial No. 699,114. (Cl. 16—90.)

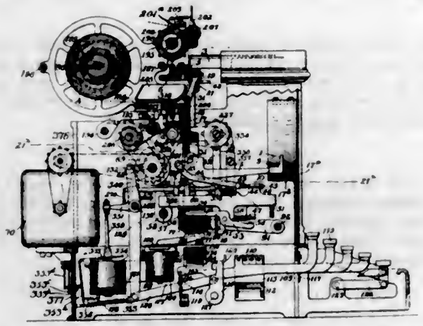


1. In a door hanger, the combination with a guide-member adapted to be secured to the upper edge of a door and adjacent to one end of the latter; of a member slidable thereon, whereby it may be caused to partially project beyond said door end; said slidable member embodying in its construction a vertically movable member and adjusting means for securing same; said adjusting means being operative only when said slidable member is in a position in which it projects beyond the said door end.

2. In a parlor-door hanger, the combination with a guide-member secured to the upper edge of the door adjacent to one end of the latter; of a door-hanger member slidably mounted in said guide-member and consisting of a main or body portion provided with an interior open space, open at the bottom, a vertically slidable member mounted in said space, a screw-member for effecting the sliding movement of such vertically slidable member, and a member hinged to the bottom of said screw-member and arranged so that it may be caused to lie wholly above said guide-member.

3. In a door hanger, the combination of a guide-member secured to the upper edge of the door and adjacent to one end of the latter; of a door-hanger member comprising in its structure a main or body member slidably mounted in said guide-member, a vertically movable member mounted upon said body-member, a screw engaging said vertically movable member and adapted to impart vertical movement thereto, a member hinged to the lower end of said screw and engaged therewith by means of a pin and slot construction, whereby said hinged member is movable on the screw in the direction of its own axis, a spring connected with said hinged member and screw whereby the free end of the former tends to move away from its pivotal axis; said guide-member being provided with a shoulder and said hinged member with a projection adapted to engage said shoulder.

1,105,920. TELEGRAPHY. LOUIS MAXWELL POTTS, Baltimore, Md., assignor, by mesne assignments, to Austin McLanahan, Baltimore, Md. Filed June 17, 1909. Serial No. 502,785. (Cl. 178—27.)



1. The combination with a telegraph line, of transmitting means adapted to impress signals on said line, a receiver having recording mechanism normally at rest and power mechanism constantly operating, means to directly mechanically connect the said mechanisms, and mechanical combination apparatus controlled by said signals and acting to control the connection between the said recording mechanism and the said power mechanism.

2. The combination with a telegraph line, of an automatic transmitter adapted to impress telegraphic signals on said line, and a receiving device operated by said signals and comprising recording mechanism normally at rest and power mechanism continuously operating, means to directly connect said mechanisms, and a mechanical combination mechanism controlled by said signals and acting to control the connection between the said recording mechanism and the said power mechanism.

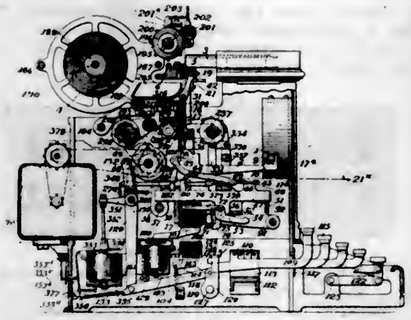
3. The combination with an automatic transmitter comprising transmitting mechanism normally at rest and power mechanism constantly operating, means to effect mechanical connection between said transmitting mechanism and the power mechanism, a controlling form adapted to be fed through said transmitter and acting to control said connection, a recording device controlled by said transmitter and comprising recording mechanism normally at rest and power mechanism continuously operating, means to mechanically connect the recording mechanism to its power mechanism, a combination mechanism controlled by the said transmitter and acting to control the connection between the recording mechanism and its power mechanism, and operative connection between said transmitter and recorder.

4. The combination with a perforated controlling form, of automatic telegraph transmitter mechanism provided with a plurality of contacts and contact controlling mechanism adapted to be controlled by said form, and provided with means to feed said form through said transmitter and to effect relative transverse movement between said contact controlling mechanism and said form, means whereby the movements of said form through said transmitter and the relative movement between said form and contact controlling mechanism are controlled by perforations in the form itself, an automatic recorder controlled by said transmitter and provided with means to receive the signals sent out by said transmitter in printed characters and code perforations in line to line page form, and operative connections between said transmitter and recorder.

5. The combination with a telegraph line, of transmitting means adapted to impress telegraphic signals on said line, and means to record said signals, said recording means comprising a printing machine, provided with a traveling paper carrying carriage, mechanism to feed paper in said carriage, carriage travel imparting mechanism, a power shaft continuously rotating, means to connect said paper feed and carriage travel mechanism to said shaft, a mechanical combination device which acts to control said connection, and selecting means, adapted to actuate the combination device.

[Claims 6 to 49 not printed in the Gazette.]

1,105,921. PUNCHING-MACHINE. LOUIS MAXWELL POTTS, Baltimore, Md., assignor, by mesne assignments, to Austin McLanahan, Baltimore, Md. Original application filed June 17, 1909, Serial No. 502,785. Divided and this application filed Apr. 1, 1910, Serial No. 552,915. Renewed Apr. 17, 1914. Serial No. 832,629. (Cl. 164—113.)



1. A punching machine, comprising a plurality of punches, a plurality of pivoted striker bars for operating said punches and of greater number than said punches, each of said strikers being provided with means to select predetermined punches for operation, and mechanism to operate said striker bars.

2. In a punching machine, the combination with a plurality of punching pins, of a plurality of pivoted striker bars each having a striking head having lugs arranged thereon to operate a different one or combination of said pins, and means to operate said striker bars.

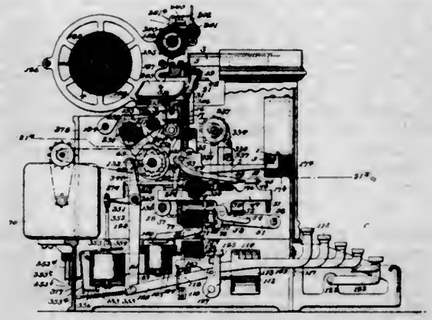
3. In a punching machine, the combination with a plurality of punching pins, a movable stripper plate, a plurality of pivoted anvils, one for each of said pins, said anvils adapted to lie in front of the respective punching pins, a plurality of striker bars each having a striking head arranged to engage a different one of said anvils or combination of said anvils and thereby operate corresponding punching pins, and means to operate said striker bars.

4. A perforating machine, comprising a plurality of character keys, a plurality of punches of lesser number than said character keys, means controlled by said character keys to select a given combination of said punches for the respective keys operated, a plurality of pivoted striker bars adapted to operate said punches, and power operated means controlled by said selecting means to operate said striker bars.

5. A punching machine comprising a plurality of punches, a plurality of pivoted strikers for operating said punches said strikers each having a head arranged to select predetermined punches for operation, power operated mechanism for operating said strikers, selective mechanism for selecting the desired strikers and coupling same to the power mechanism, and a keyboard having keys greater in number than said punches and adapted to operate said selective mechanism.

[Claims 6 to 51 not printed in the Gazette.]

1,105,922. TELEGRAPHY. LOUIS MAXWELL POTTS, Baltimore, Md., assignor, by mesne assignments, to Austin McLanahan, Baltimore, Md. Original application filed June 17, 1909, Serial No. 502,785. Divided and this application filed Mar. 6, 1911. Serial No. 612,577. (Cl. 178—27.)



1. A plurality of machines, each comprising recording mechanism, selecting mechanism for controlling said recording mechanism, a plurality of keylevers, mechanical connection between said keylevers and said selecting mechanism for operating said selecting mechanism locally from said keylevers, electrical means for distant control adapted to operate said selecting mechanism independently of its operation locally by said key levers, electrical transmitting mechanism operated from said key levers; and operative connection between the said transmitting mechanism of one of said machines and said electrical operating means of another of said machines.

2. The combination with a recording mechanism, of selecting mechanism comprising a plurality of slotted shiftable combination bars of lesser number than the characters to be recorded and adapted to be operated in combinations corresponding to the characters to be recorded, for controlling said recording mechanism, a plurality of keylevers, means controlled by said keylevers to operate said selecting mechanism locally, a plurality of magnets one for each of said bars adapted to operate said bars independently of their operation locally by said keylevers, and electrical transmitting mechanism controlled from said keylevers.

3. A plurality of machines, each comprising recording mechanism, permutation selecting mechanism adapted to control the operation of said recording mechanism, a keyboard having mechanical means to operate said selecting mechanism locally, electrical means operative independently of said keyboard mechanism to operate said selecting mechanism by distant control, transmitter mechanism controlled from said keyboard, and operative electrical connection from the transmitter mechanism of one machine to the said electrical operating means for the selecting mechanism of another machine.

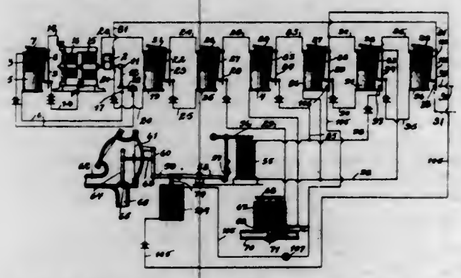
4. A plurality of machines, each comprising a series of selecting combination bars provided with portions of differing elevations, means by which the position of said bars determines the character to be recorded, impression mechanism controlled by said means, a plurality of magnets as great in number as said selecting bars provided with means for operating said bars in combinations corresponding to the combinations of said magnets energized, a plurality of key levers, selecting mechanism forming operative connection between said levers and said combina-

tion bars, transmitter mechanism controlled from said keyboard, and operative electrical connection from said transmitter mechanism of one machine to the said magnets of another machine.

5. A plurality of machines, each comprising constantly running power mechanism, normally idle actuating mechanism, a plurality of recording members from which one at a time is to be selected, a plurality of devices one individual to each of said recording devices to connect the same to said actuating device, a plurality of combination selecting members adapted to select the desired connecting device for a given recording member, means to operate the connecting device thus selected, means including a clutch to connect said actuating mechanism to said same to said actuating device, a plurality of combination mechanism to operate said clutch, electrical means comprising a plurality of magnets one individual to each of said selecting members adapted to operate the same, a keyboard comprising a larger number of keys than said magnets, operative connection between said keyboard and said selecting members whereby the latter may be operated by said keyboard independently of said magnets, transmitter mechanism controlled from said keyboard, and electrical connection from the transmitting mechanism of one machine to the said magnets of another machine.

[Claims 6 to 18 not printed in the Gazette.]

1,105,923. RAILWAY SIGNALING OR TRAIN CONTROL. FRANK WYATT PRENTICE, Toronto, Ontario, Canada, assignor to The Perry-Prentice Electric Company, a Corporation of South Dakota. Filed Mar. 27, 1911. Serial No. 617,699. (Cl. 246—27.)



1. In the train system of a railway control system using Hertzian waves the combination of a coherer; means for rocking the same to produce decoherence; a danger warning receiver; electric means controlling said danger warning receiver; a relay controlling the circuit of the said electric controlling means and in circuit with the coherer; and an antenna connected with the coherer circuit, the relay in the coherer circuit being of a sluggish type and thus adapted to hold closed the circuit of the danger warning receiver an appreciable time after the coherer circuit is broken by the rocking of the coherer.

2. In the train system of a railway control system using Hertzian waves the combination of a coherer; means for rocking the same to produce decoherence; a danger warning receiver; electric means controlling said danger warning receiver; a series of relays the last relay controlling the circuit of the said electric controlling means and in turn controlled by the preceding relay, the first being in circuit with the coherer; and an antenna connected with the coherer circuit, the said relays being of a sluggish type and thus adapted to hold closed the circuit of the danger warning receiver an appreciable time after the coherer circuit is broken by the rocking of the coherer.

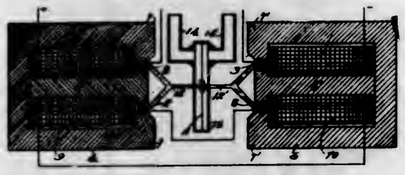
3. In the train system of a railway control system using Hertzian waves the combination of a train control and danger-warning system comprising a coherer; means for agitating the coherer to obtain de-coherence; a signal device, electromagnetic means for operating the signal device; a train pipe valve; electromagnetic means controlling said train pipe valve; a series of relays the first in circuit with the coherer and each controlling the circuit of the next succeeding relay, one relay controlling the signal operating means, a succeeding relay being adapted when energized to close the train-pipe valve controlling means, and a succeeding relay adapted when deënergized to close the circuit of the train-pipe valve controlling means.

4. In a railway control system using Hertzian waves a track system including a main and an auxiliary wave wire offset relatively to one another a train system comprising means adapted to receive waves from one only of said wires at any given time; and means controlled by said receiving means whereby the cessation of wave-sending from the main wave wire conditions the receiving means to receive waves from the auxiliary wave wire instead of from the main.

5. In a railway control system using Hertzian waves a track system including a main and an auxiliary wave wire offset relatively to one another a train system comprising means adapted to receive waves from one only of said wires at any given time; and means controlled by said receiving means whereby the cessation of wave-sending from the main wire conditions the receiving means to receive waves from the auxiliary wave wire instead of from the main, said means being adapted to restore normal conditions on the receiving of waves from the auxiliary wave wire.

[Claims 6 to 8 not printed in the Gazette.]

1,105,924. TELEPHONE. EDWIN S. PRIDHAM and PETER L. JENSEN, Napa, Cal., assignors to Commercial Wireless & Development Company, San Francisco, Cal., a Corporation of Arizona. Filed Aug. 20, 1913. Serial No. 785,694. (Cl. 179—114.)



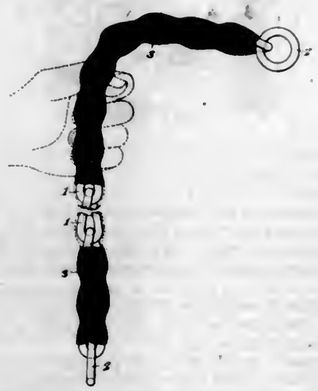
1. In a telephone receiver of the moving coil type including magnetic fields energized by direct current, means for eliminating the disturbing effect of fluctuations of said direct current, said means comprising a conductor, of which said moving coil forms a part, said conductor adapted to be included in the telephone circuit, said conductor being wound in two separate sections, said sections of conductor being respectively subjected to the influence of magnetic fields energized from the same source of current, said two sections of conductor being so electrically connected together that fluctuations of said energizing current are rendered negligible throughout the conductor as a whole.

2. In a telephone receiver of the moving coil type, said receiver including a magnet provided with a substantially annular air gap in which is maintained an intense magnetic field, said magnetic field being produced by direct current flowing through an energizing coil on said magnet, a substantially annular coil disposed to be freely movable in said air gap, said coil attached by a rigid arm to a diaphragm, and means for eliminating the disturbing effect of fluctuations of the direct current energizing said magnet, said means comprising a compensating conductor wound as a coil, said coil being connected electrically in series with said annular coil, and so disposed in a separate magnetic field energized by said direct current that induced electro-motive forces formed in said annular coil by variations of the energizing current are at any instant of time opposed by equal and opposite electro-motive forces in said compensating conductor as hereinbefore described.

3. In a telephone receiver employing magnets energized by direct current, means for eliminating the disturbances in said receiver due to fluctuations of strength of said direct current, said means comprising a conductor wound in two separate sections, said sections being subjected respectively to magnetic fields energized from the same source of current, at least one of said sections being in operative relation with the receiver, and said sections being so electrically connected together that the effects of fluctuations of the energizing direct current are rendered negligible throughout the conductor as a whole.

4. In a telephone receiving instrument, the combination with magnetic fields energized by direct current, of a conductor, said conductor adapted to be included in a telephone circuit, said conductor consisting of more than one section, said sections of conductor respectively subjected to the influence of said magnetic fields, said sections of conductor being so connected together electrically that effects of fluctuations of strength of said magnetic fields are rendered negligible in said conductor, a portion of said conductor being connected by a rigid arm to a diaphragm as hereinbefore described.

1,105,925. LOCKING-CHAIN FOR AUTOMOBILES. WALTER J. REYNOLDS, Providence, R. I. Filed Sept. 15, 1913. Serial No. 789,932. (Cl. 59—78.)



1. A locking chain for automobiles provided with a flexible stiffening sheath of a diameter normally less than the effective diameter of and expanded to receive the chain, whereby when contracted about the chain it will closely hug both the edges and sides of the links.

2. A locking chain for automobiles provided with a fabric sheath of normally less diameter than the effective diameter of the chain, and contracted by its normal tendency about the links of the chain into engagement with both the edges and sides of said links to stiffen said chain.

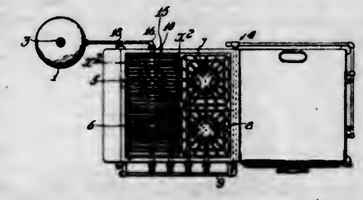
3. A locking chain for automobiles provided with a tubular sheath of woven fabric closely hugging the chain links in edge and side engagement therewith.

4. A locking chain for automobiles provided with a tubular sheath of woven fabric closely hugging the chain links in edge and side engagement therewith and impregnated with waterproofing material.

1,105,926. WATER-GRATE. WILLIAM E. RHODES, Alhambra, and EDWIN W. POTTER, Los Angeles, Cal. Filed Mar. 16, 1914. Serial No. 825,166. (Cl. 126—53.)

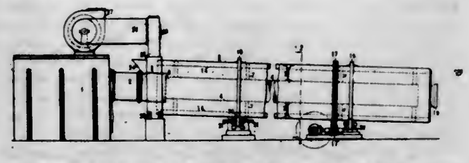
1. In combination with a gas range having gas burners, a water grate comprising a hot water head adapted to be supported by the top of said range, a cold water head below said hot water head, a series of water legs connecting said heads and projecting over the burners of said range, and pipe means for connecting each of said heads with a water tank.

2. In combination with a gas range having gas burners, a water grate comprising a hot water head resting upon and supported by the top of said range, a cold water head beneath said hot water head, a series of water legs between said heads, and pipe means for connecting each of said heads with a water tank, said water legs forming a supporting framework in the same plane as the top of the stove upon which cooking utensils may be placed.



3. In a water heater the combination of a cold water head, a hot water head, a plurality of water legs communicating between the cold water and hot water heads, such water legs forming a horizontal cooking utensil surface at their upper extremities and above the cold water head, means for supplying cold water to the cold water head, and means for drawing hot water from the hot water head.

1,105,927. DRIER. WILLIAM B. RUGGLES, Bayonne, N. J. Filed June 11, 1909. Serial No. 501,454. (Cl. 34—6.)



1. In an apparatus of the character described, in combination, a substantially horizontally disposed, rotatable drum, a source of heat having a flue projecting into said drum, a longitudinal flue within said drum rotatable therewith and having a portion thereof surrounding the flue from said source of heat and a stationary hood surrounding the point of connection between the longitudinal flue and the flue from said source of heat.

2. In an apparatus of the character described, in combination, a rotatable drum, having a central discharge opening at one end, a source of heat, a longitudinal flue within said drum connected with said source of heat through which the heating medium passes, means for directing the material to be dried into said drum, a plurality of buckets arranged about the interior of said drum at one end thereof adapted to catch the material and convey the same further into the drum and means at the opposite end of said drum for ejecting the material after being dried, through the central part thereof.

3. In an apparatus of the character described, in combination, a drum, a source of heat, means for directing the material to be dried into said drum, a plurality of buckets about the interior of said drum adapted to catch the material and convey the same further into the drum, and a plurality of flights or buckets arranged at the opposite end of said drum adapted to catch the material after the same is dried and discharge the same from said drum.

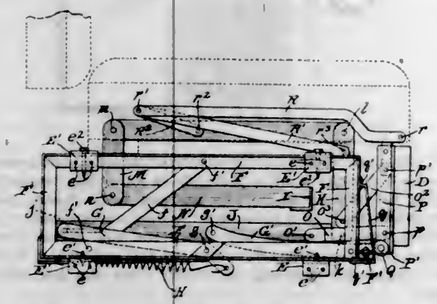
4. In an apparatus of the character described, in combination, a rotatable drum, a source of heat, a longitudinally disposed flue within said drum connected with said source of heat, a plate at the rear end of said drum, and a plurality of flights or buckets mounted on said plate adapted to catch the material after the same is dried and discharge the same from said drum.

5. In an apparatus of the character described, in combination, a horizontally disposed, rotatable drum, a source of heat, a longitudinally disposed flue within said drum connected with said source of heat, a plate at the rear end of said drum, and a plurality of flights or buckets mounted on said plate adapted to catch the material

after the same is dried and discharge the same from said drum, said plate having an opening to permit access to the interior ot said drum.

[Claims 6 to 30 not printed in the Gazette.]

1,105,928. SOFA OR DAVENPORT AND BED. SAMUEL RUSNAK, Chicago, Ill. Filed Nov. 14, 1913. Serial No. 800,953. (Cl. 5—51.)



1. A bed frame having four sides, two of said sides parallel and consisting of a single piece, and the remaining two parallel and respectively forming a collapsible side consisting of a plurality of pieces pivotally attached together and attached to the single piece sides, spanner bars connecting said collapsible sides, one of the end bars of the collapsible sides provided with a slot, in combination with frames arranged to form the base of said bed frame, levers pivotally attached to said frames of said base, one of said levers provided with a pin which is movable in said slot in said end bar, and the other of said levers pivotally attached to said slotted end bar.

2. A bed frame having four sides, two of said sides parallel and consisting of a single piece and the remaining sides parallel and respectively consisting of a plurality of bars to form a collapsible side, the bar at one end of each side of said frame provided with a slot, spanner bars connecting said collapsible sides, in combination with frames arranged to form the base of said bed frame, levers pivotally attached to said frames of said base, one of said levers provided with a pin which is movable in said slot in said end bar, and a spring attached to said last named lever and to said frame of said base, and the other of said levers pivotally attached to said slotted end bar.

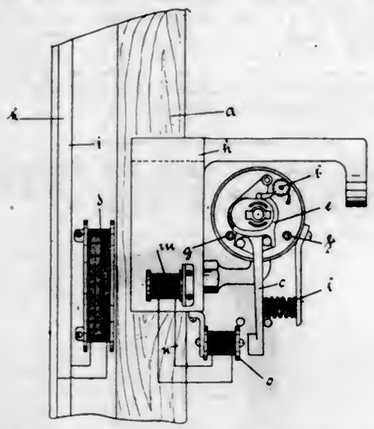
3. In a sofa or davenport and bed, a frame consisting of a back and separable ends, abutments secured to said ends, and additional U-shaped abutments also secured to said ends, said U-shaped abutments provided with apertures therethrough, in combination with additional frames adapted to form the base of a movable bed frame, said additional frames respectively provided with horizontal members, and said members provided with apertures therethrough, the apertures on the lower horizontal members adapted to register and fit over the abutments on said ends, and the apertures in said upper horizontal member adapted to register with the apertures in said U-shaped abutments, and pins fitting in said registered apertures.

4. A collapsible bed frame having four sides, two of said sides parallel and consisting of a plurality of bars pivotally attached together, with the end bars at one end of said sides provided with slots, in combination with a base consisting of frames, levers pivotally attached to said last named frames, one of said levers pivotally attached to said slotted end bars, pins on the remaining levers movable in said slots, and springs attached to said base frames and to said levers having said pins thereon.

5. A collapsible bed frame having four sides, two of said sides parallel and consisting of a plurality of bars pivotally attached together, with the end bars at one end of said sides provided with slots, arms pivotally attached to said slotted end bars, and arms pivotally attached to the bars adjacent to said slotted end bars, in combination with bars pivotally attached to said arms, a rail attached to said last named bars, a base, levers pivoted on said base, springs attached to said base and to said levers, pins on said levers movable in said slots, and additional levers pivotally attached to said base and to said slotted end bars.

[Claims 6 to 13 not printed in the Gazette.]

1,105,929. LUBRICATOR FOR ELEVATOR GUIDE-RAILS. LUDWIG SCHULTHEIS, Frankfort-on-the-Main, Germany. Filed Jan. 24, 1912. Serial No. 673,124. (Cl. 184—21.)



1. In a device of the character described, the combination with a track and a shoe traveling thereon, of a lubricant container mounted on said shoe, means for actuating said lubricant container comprising a temporary magnet carried by said shoe, a permanent magnet mounted on said track adapted to excite the temporary magnet in passing the same, and means whereby the excitation of the temporary magnet releases the oil.

2. In a device of the character described, the combination with a track and a shoe traveling thereon, of a lubricant container mounted on said shoe, a piston in said container, mechanism at the end of said container for moving said piston, including a lever, a temporary magnet for actuating said lever, and means for exciting said temporary magnet.

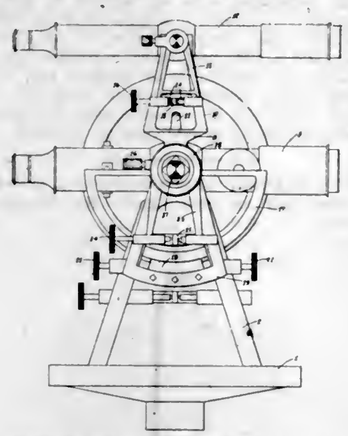
3. In a device of the character described, the combination with a track, of a lubricant container adapted to travel back and forth on said track, mechanism carried by said container for effecting a discharge of lubricant including a temporary magnet, a lever held normally out of contact with said temporary magnet, and means mounted on said track for exciting said temporary magnet whereby said lever is actuated.

4. In a device of the character described, the combination with a track, of a lubricant container adapted to travel back and forth on said track, means for effecting a discharge of lubricant onto the track, consisting of a lever, a temporary magnet, a permanent magnet for exciting said temporary magnet and thereby drawing said lever toward said temporary magnet, and means for normally holding said lever out of contact with said temporary magnet.

1,105,930. GRADE ATTACHMENT FOR TRANSITS. CHESTER A. SCOTT, Stockton, Cal. Filed May 9, 1912. Serial No. 696,120. (Cl. 33—46.)

1. A device of the character described comprising the combination with a transit, of an attachment adapted to be mounted on said transit, such attachment comprising a hub, a sleeve mounted on said hub, a telescope carrying frame mounted on said sleeve, an arc mounted on said sleeve, and means for adjusting the position of said sleeve on said hub, as described.

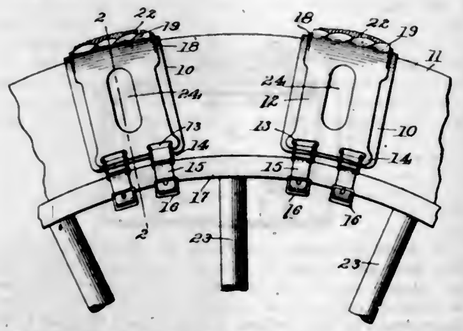
2. A device of the character described comprising the combination with a transit, of an attachment adapted to be mounted on said transit, such attachment comprising a hub, a sleeve mounted on said hub, a telescope carrying frame mounted on said sleeve, a steady bar mounted on said sleeve, a tangent lever mounted on said sleeve, means for holding said members in position on said sleeve, and means for adjusting the position of said sleeve by the operation of said tangent lever, as described.



3. A device of the character described comprising the combination with a transit, of an attachment adapted to be mounted on said transit, such attachment comprising a hub, a sleeve mounted on said hub, a telescope carrying frame on said sleeve, a tangent lever having a collar mounted on said sleeve, and a set screw disposed through said collar and adapted to impinge against said sleeve, as described.

4. A device of the character described comprising the combination with a transit, of an attachment adapted to be mounted on said transit, such attachment comprising a hub, a sleeve mounted on said hub, a collar mounted on said sleeve, a steady bar on said collar, another collar mounted on said sleeve, a tangent lever disposed on said second named collar, means for fixing said second named collar stationary with respect to said sleeve, and a cap screw mounted on the end of said hub and adapted to hold said collars in position on said sleeve, as described.

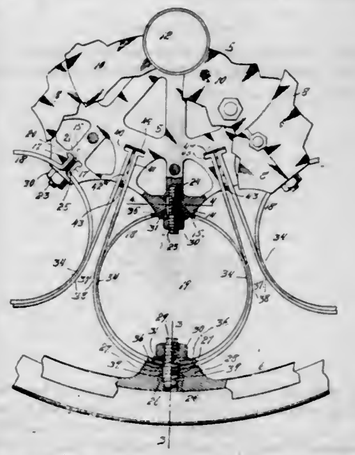
1,105,931. NON-SKID DEVICE. ANDREW SLIPCEVIC, Erie, Pa. Filed Apr. 3, 1914. Serial No. 829,232. (Cl. 152—14.)



1. A device of the class described, comprising a flexible pad adapted to encircle a tire and having slots adjacent its opposte ends, a metallic plate seating upon said pad and having slots adjacent its ends registering with the slots in the pad, links positioned through said slots of the pad and plate, straps extending through said links and secured around the felly of the wheel, upturned opposite parallel flanges upon said plate having perforations therethrough, outwardly bowed helical springs secured in said perforations and positioned in parallelism between said flanges, and spiral metallic bars secured between said flanges alternating with said springs and flatly engaging upon said plate.

2. A device of the class described, comprising a leather pad adapted to encircle a tire, a metallic plate flatly positioned upon the outer surface of said pad, said pad and plate provided with alining slots through their opposite ends, links engaging within said slots, straps positioned through said links and secured around said felly, outwardly projecting marginal flanges upon said plate and positioned at the tread portion thereof, spiral metallic bars secured in flat engagement upon said plate between said flanges and positioned parallel to each other and longitudinal of the tread portion of the plate, said flanges provided with opposite alining perforations, and closely coiled removable helical springs outwardly bowed and having their ends in hooked engagement through said perforations and positioned in alternation with said bars.

1,105,932. SPRING-WHEEL FOR VEHICLES. CICERO G. SMITH, Palisade, Colo., assignor to Smith Spring Wheel Company, a Corporation of Arizona. Filed Feb. 28, 1912, Serial No. 680,479. Renewed Oct. 20, 1913. Serial No. 796,353. (Cl. 152—50.)



1. In a spring wheel, comprising a hub and rim, circular springs interposed between the hub and rim, each spring being composed of two members, the said members having radially bent extremities and the said hub and rim being provided with openings in which said extremities are anchored, and means for regulating the tension of said circular spring members comprising plates or slugs adapted to be employed to separate the said extremities or bring them nearer together.

2. In a spring wheel comprising a hub and rim, spring members interposed between the said hub and rim, said hub having openings in which the inner extremities of said spring members are anchored, said inner extremities having bent portions and plates or slugs adapted to be placed upon one or the other side of said bent portions to regualte the tension of the spring members.

3. A spring wheel for vehicles comprising a rim, a hub, circular springs interposed between the rim and hub and suitably anchored at diametrically opposite points, the said springs tapering from their extremities toward their central portions, which are reduced in thickness, and spoke springs embracing the circular springs on opposite sides, the said spoke springs having their extremities respectively anchored in the rim and hub, the spoke springs being thicker at their extremities and tapering toward their central portions, which are thinnest, the thin por-

tions of the spoke springs engaging the corresponding portions of the circular springs, substantially as described.

4. A spring wheel for vehicles comprising a rim, a hub, circular springs interposed between the rim and hub, each spring being composed of two members, whose extremities are anchored in the rim and hub, the said spring members being thicker at their extremities and tapering toward their central portions, which are relatively thin, and means applied to the inner extremities of the circular spring members for regulating their tension, comprising plates, or slugs, adapted to be employed to separate the said extremities, or bring them nearer together, substantially as described.

5. A spring wheel for vehicles comprising a hub, a rim, circular springs interposed between the hub and rim, each spring being composed of two members, the said members having angle-shaped extremities, and the hub and rim being provided with openings in which said extremities are anchored, the said extremities being provided with central openings, securing bolts threaded into the rim and hub respectively, passing between the said extremities, their opposite sides being adapted to extend through the said openings in the extremities of the spring members, the said extremities being adjustable toward and away from each other, for the purpose of regulating their tension, and means for maintaining the spring extremities in the adjusted position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,105,933. CAST-OFF FOR SUSPENDERS. GUY O. SMITH, Newton, Mass. Filed Jan. 21, 1909. Serial No. 473,506. (Cl. 241—18.)



1. A cast-off for suspenders comprising base and cover members pivotally connected whereby said cover may occupy an open or closed position with relation to said base member, each of said members being provided with parts coöperating with one another to form a releasable clasp for retaining said members when said cover is occupying a closed position and which clasp is broken by the opening of said cover, and a slide socketed to lie between said members and be retained thereby when said cover is closed and releasable therefrom upon the opening of said cover and breaking of said clasp as aforesaid.

2. A cast-off for suspenders comprising base and cover members pivotally connected whereby said cover may occupy an open or closed position with relation to said base member, each of said members being provided with parts coöperating with one another to form a releasable clasp for retaining said members when said cover is occupying a closed position and which clasp is broken by the opening of said cover, and a slide socketed to lie between said members with bearing against said clasp when said cover is occupying a closed position and which slide is releasable from said members upon the opening of said cover and the breaking of said clasp as aforesaid.

3. A cast-off for suspenders comprising base and cover members pivotally connected whereby said cover may be turned to occupy an open or closed position with relation to said base member, said base member having a projecting tongue and said cover being bent to coöperate with said tongue to form a clasp retaining said members when said cover is closed, said clasp being broken by the opening of said cover, and a slide socketed to lie between said members and having bearing against said tongue when said cover is closed and releasable therefrom upon the opening of said cover and breaking of said clasp as aforesaid.

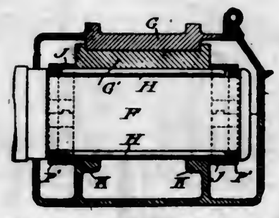
4. A cast-off for suspenders comprising base and cover members pivotally connected whereby said cover may be turned to occupy an open or closed position with relation to said base member, each of said members being provided with parts coöperating with one another to form a releasable clasp for retaining said members when said cover is closed and which clasp is broken by the opening of said cover, and a slide comprising a housing and eyelet contained therein socketed to lie between said members and having bearing against said clasp when said cover is closed and which slide is releasable upon the opening of said cover and breaking of said clasp as aforesaid.

1,105,934. INHALER. ERNEST J. STEVENS, Philadelphia, Pa. Filed July 12, 1913. Serial No. 778,812. (Cl. 128—13.)



The herein described inhaler comprising a tubular barrel having an opening in one side substantially midway between its ends, a longitudinally projecting tubular nipple at one extremity communicating with the interior of the barrel and having its inlet end of the same size as said opening, the nipple being pierced with a transverse aperture intersecting its bore, a plug removably fitting said opening in the barrel and inlet end of the nipple, a perforated cap removably closing the other end of the barrel, a cylindrical perforated holder removably and invertibly disposed within said barrel, and an absorbent within the holder adapted to contain a medicament.

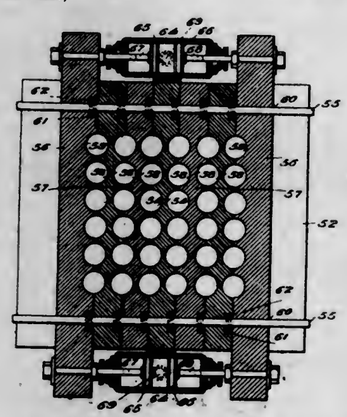
1,105,935. ROLLER-BEARING. HENRY EVANS STONER, Walton-on-Thames, England. Original application filed Dec. 20, 1909, Serial No. 534,020. Divided and this application filed Oct. 6, 1913. Serial No. 793,788. (Cl. 64—62.)



1. A roller bearing comprising an axle-box having on the inner side thereof at each end an annular recess with an integral shoulder or abutment at each end of the recess, a series of rollers on the interior of the axle-box, an independent retainer confined in each of said recesses at the ends of the axle-box between the said oppositely disposed abutments or shoulders at the ends of the recess, each retainer comprising a ring or annulus having a series of spaced grooves in its inner side extending some distance into it in depth radially to receive the ends of said rollers, and a loose or independently rotative thrust-plate or washer adjacent the outer end of the retainer forming an abutment for the ends of the rollers and adapted to take the end thrust thereof.

2. A roller bearing comprising an axle and an axle-box having oppositely disposed integral shoulders or abutments at each end of the box, a series of rollers of uniform diameter arranged between said axle and box, an independent retainer at each end of said axle-box, each retainer comprising a bush having a series of spaced grooves in its inner side extending some distance into it in depth radially, and an independently rotative thrust-plate or washer adjacent the outer end of each retainer forming an abutment for the ends of the rollers and being adapted to take the end thrust of the rollers, the retainers and thrust plates or washers being located outside the effective bearing surface of the rollers on the axle-box and being confined between the oppositely disposed shoulders or abutments at the ends of the axle-box.

1,105,936. SHELL CARRIER AND SHUTTLE. HERBERT TALLEY, Joplin, Mo., assignor, by mesne assignments, to Hercules Powder Company, a Corporation of Delaware. Filed Apr. 24, 1912. Serial No. 692,932. (Cl. 86—20.)



1. In a shell holding shuttle, the combination with a base and a stationary center leaf, of end leaves, intermediate loose leaves disposed between the end leaves and the center leaf, rods projecting from the center leaf which have a loose engagement with the loose leaves, springs interposed between the respective leaves adapted for opening them, and means for moving the end leaves to thereby close the intermediate loose leaves.

2. In a shell holding shuttle, the combination with a base and a stationary center leaf, of end leaves, intermediate loose leaves disposed between the end leaves and the center leaf, rods projecting from the center leaf which have a loose engagement with the loose leaves, springs interposed between the respective leaves adapted for opening them, and a fluid pressure motor for moving the end leaves to thereby close the intermediate loose leaves.

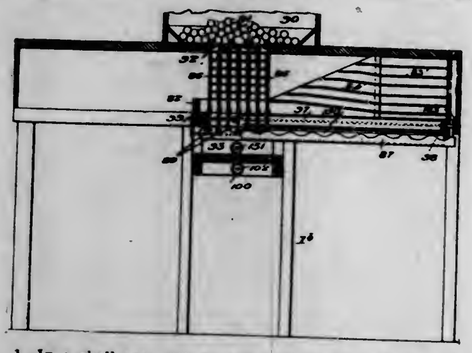
3. In a shell holding shuttle, the combination with a base and a stationary center leaf, of end leaves, intermediate loose leaves disposed between the end leaves and the center leaf, rods projecting from the center leaf which have a loose engagement with the loose leaves, springs interposed between the respective leaves adapted for opening them, stationary cylinders, a pair of pistons in each cylinder operatively connected to the end leaves, and means for admitting fluid pressure to the cylinders to cause the pistons to move the end leaves and thereby close the intermediate loose leaves.

4. In a shell holding shuttle, the combination with movable leaves, of rods loosely connecting said leaves together, springs for opening the leaves, and means for closing the leaves.

5. In a shell holding shuttle, the combination with a stationary leaf, of a movable end leaf, loose leaves interposed between the stationary leaf and the movable end leaf, and a fluid pressure motor coöperating with the movable end leaf to thereby move the intermediate loose leaves.

[Claims 6 to 21 not printed in the Gazette.]

1,105,937. SHELL-ASSEMBLING MACHINE. HERBERT TALLEY, Joplin, Mo., assignor, by mesne assignments, to Hercules Powder Company, a Corporation of Delaware. Filed Apr. 24, 1912. Serial No. 692,933. (Cl. 86—46.)



1. In a shell assembling machine, the combination with division plates for arranging the shells in separated rows, of division shelves for separating the respective shells of the different rows from each other while said rows are stationary.

2. In a shell assembling machine, the combination with division members for arranging the shells in separated rows, of division members for separating the respective shells of the different rows from each other, said sets of division members being adapted for movement in general crosswise relation to each other without displacement of the shells from their initial row arrangement, whereby the shells may be first assembled in rows and the shells of the respective rows then separated from each other when in their initial row arrangement and position.

3. In a shell assembling machine, the combination with division members adapted to assemble the shells in rows arranged substantially vertically, the shells in each row being horizontal and touching each other, of a plurality of shelves, the members of which are adapted to space or separate the individual shells of the respective rows and to support them while the rows of shells remain in their initial arrangement and position.

4. In a shell assembling machine, the combination with division members adapted to assemble the shells in rows arranged substantially vertically, of a plurality of shelves, the members of which are adapted to space or separate the individual shells of the respective rows and to support them, the set of division members and the set of shelves being adapted for relative movement crosswise of each other, whereby the shelves enter sidewise between the shells without displacement of the latter when the shells are in their initial arrangement.

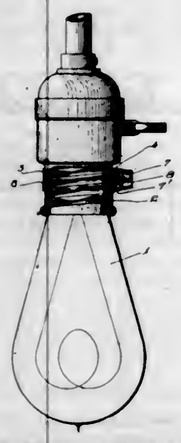
5. In a shell assembling machine, the combination with means for arranging the shells in rows, and shell supporting means adapted for relative crosswise movement to the shells to separate the individual shells of the respective rows when said rows are in initial position, of shell displacing or ejecting means movable crosswise in relation to the means aforesaid and adapted to act on the shells when they are in their initial row position.

[Claims 6 to 22 not printed in the Gazette.]

1,105,938. LOCK FOR PORTABLE ARTICLES. ARTHUR C. TERRILL, Glendale, Cal. Filed Apr. 21, 1913. Serial No. 762,731. (Cl. 173—356.)

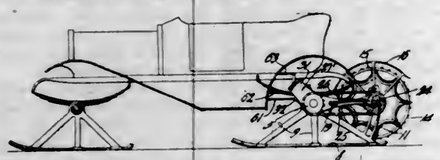
1. A locking device for lamp sockets, comprising a locking member having a frusto conical key receiving portion of circular cross section to receive and fit a frusto conical key.

2. In combination with a lamp socket, a member affixed thereto, and a locking member screwing into the aforesaid member and having a pointed end adapted to engage the lamp base to secure the lamp base in the socket, said locking member having a frusto-conical key receiving portion of circular cross section to receive and fit a frusto-conical key.



3. A locking device for lamp sockets, comprising a locking member having a frusto-conical key receiving portion, of circular cross section, to receive and fit a frusto-conical key and a circular guard flange surrounding said key receiving portion.

1,105,939. SLEIGH ATTACHMENT FOR MOTOR-VEHICLES. JAMES S. THOMSON, Seattle, Wash. Filed Oct. 13, 1913. Serial No. 794,977. (Cl. 21—47.)



1. In a device of the character described, a driving medium, a vertically movable propeller-carrying means, and controllable means for operatively connecting the said means with the driving medium to move the said means vertically.

2. In a device of the character described, a driving medium, a vertically movable propeller-carrying means, and controllable means for operatively connecting the said means with the driving medium to move the said means either upwardly or downwardly.

3. In a device of the character described, a driving medium, a propeller-carrying lever, and controllable means for operatively connecting the lever and driving medium for actuating the lever.

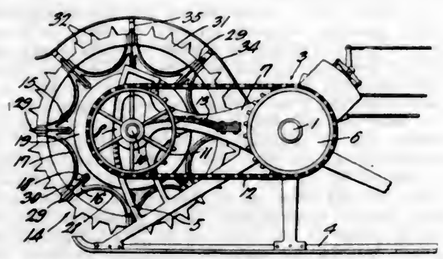
4. In a device of the character described, a rotatory driving medium, a propeller-carrying lever, and independently controllable means for operatively connecting the said lever with the driving medium for swinging the lever in opposite directions.

5. In a device of the character described, a driving medium, a vertically movable propeller-carrying member, and a clutch for operatively connecting the said member and driving medium to move the said member vertically.

[Claims 6 to 41 not printed in the Gazette.]

1,105,940. PROPELLER FOR AUTOSLEIGH MECHANISM. JAMES S. THOMSON, Seattle, Wash. Filed Dec. 9, 1913. Serial No. 805,601. (Cl. 21—47.)

1. A propeller drum including spaced wheels, longitudinal concaved plates secured to the said wheels, and longitudinal traction bars secured to the wheels and extending along the edges of the said plates.



2. A propeller drum including spaced wheels, longitudinal concaved plates secured to the wheels, and toothed sections secured to the wheels and spanning the said plates.

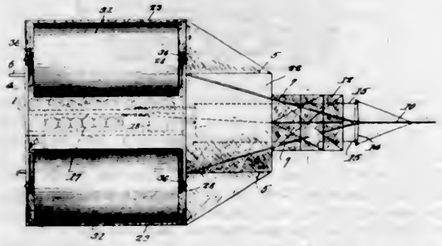
3. A propeller drum including spaced star wheels, having concaved seats between the points, and longitudinal concaved plates secured to said seats of the star wheels.

4. A propeller drum including spaced star wheels having slotted projections, and longitudinal traction bars having shanks secured within the slots of the projections of the star wheels.

5. A propeller drum including spaced star wheels having slotted projections and concaved seats between the projections, longitudinal concaved plates secured to said seats, and longitudinal traction bars having shanks secured within the slots of the said projections.

[Claims 6 to 12 not printed in the Gazette.]

1,105,941. FLYING-MACHINE. JOHN FRANCIS TINER, Uvalde, Tex., assignor of one-half to William A. Timberlake, Uvalde, Tex. Filed Feb. 21, 1913. Serial No. 749,943. (Cl. 244—18.)



1. A flying machine comprising a main or body portion with a longitudinally disposed plane with other longitudinally disposed planes at the sides of the body portion and extending along corresponding edge portions of the main plane, the latter being extended rearwardly from the body portion, and the side planes tapering rearwardly to the rear end of the rear extension of the main plane, and elongated tubular air propellers of substantially the same length as the body of the machine and located on opposite sides of the longitudinal center line of the machine and spaced apart to substantially overlie the side planes.

2. A flying machine comprising a main or body portion with a longitudinally disposed plane with other longitudinally disposed planes at the sides of the body portion and extending along corresponding edge portions of the main plane, the latter being extended rearwardly from the body portion, and the side planes tapering rearwardly to the rear end of the rear extension of the main plane, and elongated tubular air propellers of substantially the same length as the body of the machine and located on opposite sides of the longitudinal center line of the machine and spaced apart to substantially overlie the side planes, the machine having a rudder spaced from the rearward

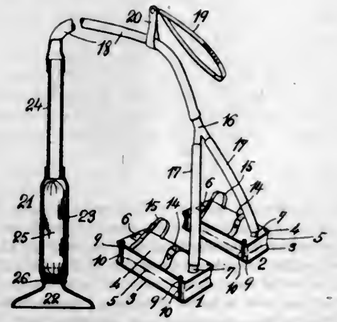
extension of the main plane, and a dip plane between the rear extension of the main plane and the rudder and having a pivotal connection with the machine at a point below the rear extension of the main plane.

3. A flying machine provided with a main or body portion having a longitudinally disposed and laterally convex main plane at the top portion, convex side planes extending from the side margins of the main plane and of substantially the same length, the main plane having a rearward extension from the main frame and the side planes having tapering portions extending to the rear end of the rearward extension of the main plane, a dip plane and rudder to the rear of the rearward extension of the main and side planes with the dip plane located below the uppermost portion of the main plane, and an elongated tubular air propeller of substantially the same length as the main body of the machine and located above the main and side planes on opposite sides of the longitudinal center line of the machine and spaced apart to substantially overlie the side planes.

4. A flying machine provided with a body frame, an aeroplane carried by the upper end of the body frame and extending beyond the rear thereof, side planes extending laterally from the main frame on a level with the main plane and also extending longitudinally of the machine, the main and side planes having rearward extensions, a dip plane at the rear of the rearward extension of the main plane and arranged at a lower level than the main plane, a rudder to the rear of the dip plane, a power motor on the main plane below the aeroplanes, and elongated tubular air propellers above the aeroplanes on opposite sides of the longitudinal center line of the machine, said propellers being of substantially the length of the main and side planes and spaced apart to have the axes of rotation over the side planes.

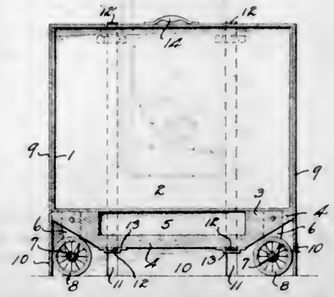
5. A flying machine provided with a body frame, an aeroplane carried by the upper part of the body frame and extending beyond the rear thereof, side planes extending laterally from the main frame on a level with the main plane and also extending longitudinally of the machine, the main and side planes having rearward extensions, a dip plane at the rear of the rearward extension of the main plane and arranged at a lower level than the main plane, a rudder to the rear of the dip plane, a power motor on the main plane below the aeroplanes, and elongated tubular air propellers above the aeroplanes on opposite sides of the longitudinal center line of the machine, said propellers being of substantially the length of the main and side planes and spaced apart to have the axes of rotation over the side planes, the propellers each comprising a cylindrical casing and helically arranged blades therein to direct concentrated streams of air along opposite sides of the center line of the machine in substantially non-interferring relation with the dip plane and rudder.

1,105,942. SUCTION CLEANING APPARATUS. EDWARD M. WARING, New York, N. Y. Filed Mar. 16, 1909. Serial No. 483,844. (Cl. 230—2.)



The combination of a pair of independent bellows adapted to be secured severally to the feet of an operator whereby they may be moved from place to place while being operated, flexible piping connecting the suction inlets of the bellows, and a suction pipe connected to the said flexible piping at an intermediate point of the length thereof whereby a continuous inflow will be established through the suction pipe.

1,105,943. GRIP-TRUCK. JAMES G. WHITESIDE, Youngstown, Ohio. Filed Nov. 8, 1913. Serial No. 799,929. (Cl. 190—38.)



1. An article of baggage comprising a wheeled truck, a case seated on the truck and including a cover section having a skirt-portion adapted to extend over and conceal the truck, and extensible means for clamping the truck and case together.

2. An article of baggage comprising a wheeled truck, a case mounted upon said truck, a telescoping cover section for the case formed with a skirt portion adapted to extend and project below the bottom of said case and form a housing for the truck, and means for clamping the truck, case, and cover together.

3. An article of baggage comprising a wheeled truck, a case mounted upon said truck, a telescoping cover section for the case formed with a skirt portion adapted to extend and project below the bottom of said case and form a housing for the truck, and flexible extensible means for connecting the truck, case and cover so that the cover section may be raised to expose said truck.

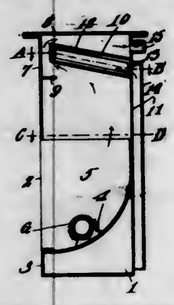
4. An article of baggage comprising a wheeled truck having a storage compartment, a cover section adapted to telescope with the case body carried by the truck and extended to form the concealing skirt about said truck, and extensible means for connecting the cover and truck so that the former may be raised to expose the truck.

5. An article of baggage comprising a wheeled truck having a storage compartment, a cover section adapted to telescope with a case body carried by said truck and extended to project below the bottom of said case body to form a concealing skirt portion for the truck, said skirt portion being provided with clearance notches, and flexible extensible means for connecting the cover and truck so that the cover may be raised to expose the wheeled truck.

1,105,944. HEATING-STOVE. OSCAR CARLOS WILLIAMS, Williamstown, W. Va. Filed July 24, 1912. Serial No. 711,308. (Cl. 126—86.)

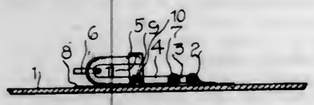
A heater including a casing open at its front, an inwardly directed horizontal flange extending throughout the width of the open front and along the upper edge of the opening, said flange constituting a deflector, an imperforate forwardly and upwardly inclined flat air conducting flue and deflector in the upper portion of the casing and opening at its ends through the sides of the casing, said flue being extended from the back wall of the casing and overhanging, at its front the deflecting flange, the front of said flue being spaced from the front wall of the casing and there being an outlet in the back wall of the casing for combustion products, the said outlet being above the rear end of the conducting flue, and there being a space between said conducting flue and the top of the casing for receiving products of combustion passing to the outlet,

said space gradually increasing in cross sectional area toward the outlet, the said flue being extended continuously along the front, top and bottom thereof and having its upper and lower faces parallel, an air conducting flue upon the back of the casing and extending from a point



above the bottom of the casing up to and discharging into the flat air conducting flue, a rearwardly and upwardly curved deflector extending from the lower edge of the open front of the casing to the back wall of said casing, and a burner within the casing and close to and above said rearwardly and upwardly curved deflector.

1,105,945. BACK-BAND HOOK. NEWTON H. WILLIAMSON, Greenfield, Tenn., assignor of one-half to Peter B. Moseley, Greenfield, Tenn. Filed Nov. 7, 1913. Serial No. 799,760. (Cl. 24—241.)



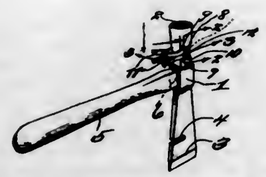
1. A device of the class described comprising a loop, a shank extending laterally from one arm of said loop, a plate having spaced knuckles pivotally connected to said arm of the loop on opposite sides of the shank, said shank being adapted to rest upon the plate and having its free end bent to form a hook, said plate carrying spring locking tongues for locking engagement with the shank and the free end of said hook.

2. A device of the class described comprising a loop, a shank extending laterally from one arm of said loop, a plate having spaced knuckles pivotally connected to said arm of the loop on opposite sides of the shank, said shank being adapted to rest upon the plate and having its free end bent to form a hook, said plate having inwardly extending spring locking tongues formed on the side edges thereof for locking engagement with the shank, and the free ends of said locking tongues being disposed upwardly for engagement with the free end of said book to close the open end of the hook.

3. A device of the class described comprising a plate, a loop hinged to one end thereof, a shank formed on said loop to extend longitudinally of the plate and bear against the same, the free end of said shank being designed to form a hook, inwardly extending spring locking tongues formed on the side edges of said plate and adapted to bear against said shank, said tongues having upwardly extending portions adapted to engage the free end of the hook member.

4. A device of the class described comprising a plate, a loop hinged to one end thereof, a shank formed on said loop to extend longitudinally of the plate and rest against the same, the free end of the shank being designed to form a hook, and inwardly extending spring locking tongues formed on the side edges of the plate, said tongues bearing against said shank, the tongue having upwardly bent portions in spaced relation to one another to form locking lugs to receive the free end of said hook, said locking lugs also closing the open end of said hook, as and for the purpose described.

1,105,946. NAIL-EXTRACTOR. GOTTLIEB WODTLI, Foster, Oreg. Filed Nov. 9, 1912. Serial No. 730,423. (Cl. 145—44.)

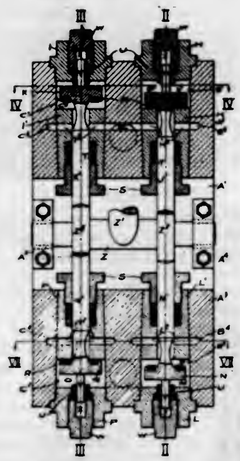


1. A nail extractor comprising a hammer poll diametrically opposite recesses one upon each side, a pair of duplicate flat claw devices arranged in registration opposite one another and disposed in said recesses and extending in the direction of the handle of the hammer and parallel thereto but offset from the hammer end, and a key pin for detachably securing said claw devices in said recesses thereby rendering the same renewable or replaceable.

2. In a nail extractor; a hammer poll having a pair of duplicate claw devices, arranged parallel and diametrically opposite one another, and in registration, and disposed at right angles to the poll and offset from the hammer end thereof.

3. A nail extractor comprising a hammer poll having diametrically opposite V-shaped recesses one upon each side provided with dove-tailed walls, a pair of duplicate claw devices arranged parallel and in registration opposite one another and disposed between the dove-tailed walls of said recesses and extending in the direction of the handle of the hammer and parallel thereto and offset from the hammer end of the poll, the taper of said recesses preventing movement of the claw devices in one direction, and a key passing through the hammer poll adjacent the recesses to prevent movement of the devices in the opposite direction.

1,105,947. HYDRAULIC VALVE. HARRY WOODS, Steubenville, Ohio; Allie Woods administratrix of said Harry Woods, deceased. Filed Jan. 18, 1913. Serial No. 742,876. (Cl. 138—16.)

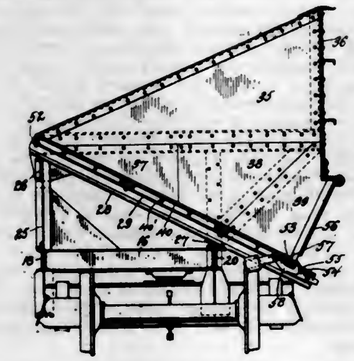


1. In a hydraulic motor controller, a casing having a base member and a lateral member on each end of the base member, an inlet chamber and an exhaust chamber in the base member, a pair of passages in the base member, a separate valve in one lateral member between each passage in the base and the exhaust chamber, a valve between each passage in the base and the inlet chamber, and means for opening the inlet valve to one passage in the base and the exhaust valve from the other passage in the base.

2. In a hydraulic motor controller, a casing having a base member and a lateral member on each end of the base member, an inlet chamber and an exhaust chamber in the base member, a pair of passages in the base member, a separate valve in one lateral member between each passage in the base and the exhaust chamber, a valve between each passage in the base and the inlet chamber, opposing valve stems for the said valves extending in the space between the lateral members, and a pair of cams arranged between the ends of the opposing valve stems.

3. In a hydraulic motor controller, a casing having a base member and a lateral member on each end of the base member, an inlet chamber and an exhaust chamber in the base member, a separate valve in one lateral member between each passage in the base and the exhaust chamber, a valve between each passage in the base and the inlet chamber, opposing valve stems for the said valves extending in the space between the lateral members, and a pair of cams arranged between the ends of the opposing valve stems, the said cams being shaped and arranged to permit all the valves to be seated simultaneously.

1,105,948. DUMP-CAR. SAMSON D. WRIGHT, Cleveland, Ohio. Filed Feb. 9, 1910. Serial No. 542,932. (Cl. 105—186.)



1. In a dump car, in combination, suitable trucks, a framework mounted upon said trucks, a body, and a floor comprising a plurality of cast plates supported on the framework to have free expansion with respect to each other and to have movement bodily in the plane of the floor.

2. In a dump car, in combination, suitable trucks, a framework mounted upon said trucks, a body mounted upon said framework, and a floor comprising a plurality of cast plates supported upon the framework, and having connections between them and with the framework to permit expansion and contraction of the plates and bodily movement in the plane of the floor.

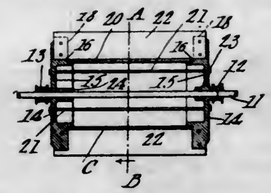
3. In a dump car, in combination, suitable trucks, a framework mounted thereon, a car body mounted on the framework, a floor mounted upon the framework in the bottom of the body, said floor being composed of cast plates having overlapping joints permitting free expansion and contraction of one plate with respect to the other, and means securing the plates to the framework and permitting bodily movement of the plates in the plane of the floor.

4. In a dump car, in combination, suitable trucks, a frame mounted thereon, a body supported by said frame, and a floor mounted in said body upon the frame and comprising a plurality of cast plates having slidable lap joints permitting each plate to expand and contract with respect to the adjacent plate in the plane of the floor, and means securing said plates to the frame and permitting bodily movement of the plates in the plane of the floor.

5. In a dump car, in combination, suitable trucks, a frame mounted thereon, a car body on said frame, a floor for said body and composed of a series of plates having overlapping portions at their adjacent edges, such overlapping portions being provided with openings, the opening of one portion being larger than the opening in the corresponding portion, bolts passing through such openings for securing the plates together but permitting them to move in the plane of the bottom of the car relative to each other, supporting members for said floor, means for securing said floor to said supporting members, and suitable dumping doors.

[Claims 6 and 7 not printed in the Gazette.]

1,105,949. STALK-CUTTER. MARSHALL LEE ADAMS, Goldsboro, N. C. Filed Oct. 16, 1913. Serial No. 795,533. (Cl. 55—61.)



1. A stalk cutter including a shaft, opposed heads thereon, each head having a circular flange, a cylinder interposed between the heads and engaged at its ends by the respective flanges, means extending through the cylinder and the heads and parallel with the shaft for binding the heads upon the cylinder, blades upon the heads, and cutting blades mounted at their ends on said blades on the heads, and separate means for detachably securing the respective cutting blades to the blades on the heads.

2. A stalk cutter including opposed similar heads, each head including a plate, a circular flange upon one face of the plate and formed with a rabbeted free edge, blades outstanding from the flange, and reinforcing webs formed by the plate and integral with the blades, a cylinder interposed between the heads and having its ends engaged by the rabbeted portions of the flanges, means extending longitudinally through the cylinder and secured to the heads for binding the heads against the cylinder, and cutting blades detachably secured at their ends to the blades on the heads.

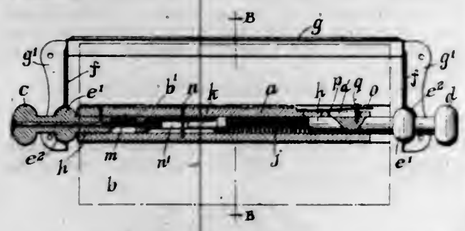
1,105,950. PROCESS OF MANUFACTURING ARTIFICIAL MARBLE. NIELS K. ANDERSEN, Oakland, Cal., assignor of one-third to Charles Duthie, San Mateo, Cal. Filed Apr. 21, 1913. Serial No. 762,711. (Cl. 18—60.)

The hereindescribed process of manufacturing artificial marble and the like, which consists in forming a pasty facing composition therefor by successively mixing together magnesium oxid and lead acetate in a dry state, mixing with the dry mixture a mixture of dissolved magnesium chlorid and dissolved zinc sulfate, and adding a filler to the resultant mixture; pouring the facing composition into a mold; forming a composition for the body of the marble by successively mixing together magnesium oxid, lead acetate and silica in a dry state, mixing with this dry mixture a mixture of dissolved magnesium chlorid and dissolved zinc sulfate, and adding a filler to the resultant mixture; pouring the body composition into said mold upon the facing composition therein, and allowing said compositions to unite and set.

1,105,951. FIXTURE FOR SUPPLYING PAPER, &c., FROM ROLLS. ALFRED BAGNALL, Philadelphia, Pa., assignor to Scott Paper Company, a Corporation of Pennsylvania. Filed Jan. 5, 1912. Serial No. 669,604. (Cl. 211—31.)

1. In a device for the purposes stated, the combination of a frame having bearing sockets provided with slots, a mandrel provided on its ends with knobs having shanks adapted to pass through the slots in the frame and provided with journals adapted to fit the bearing sockets,

said mandrel being extensible, so that its journals may be moved out of the bearing sockets to enable the mandrel to be removed, and manually controlled locking devices carried by the mandrel for locking the same in extended condition.



2. In a device for the purposes stated, the combination of a frame having bearing-sockets provided with slots, a mandrel provided on its ends with knobs having shanks adapted to pass through the slots of the frame and provided with journals adapted to fit the bearing-sockets, one of said knobs being movable longitudinally, and locking devices carried by the mandrel to lock said knob in extended and retracted position.

3. In a device for the purposes stated, the combination of a frame having bearing-sockets provided with slots, a mandrel provided on its ends with knobs having shanks adapted to pass through the slots of the frame and provided with journals adapted to fit the bearing-sockets, one of said knobs being movable longitudinally, and locking devices carried by the mandrel to lock said knob in extended and retracted position, said locking devices consisting of a spring *o* carried by the mandrel and provided with a slot *p* having an enlarged opening at one end and an angular portion *p'* at the other end, and a pin *q* carried by the shank of the movable knob and having an enlargement *q'* fitting the enlarged opening in the slot of the spring.

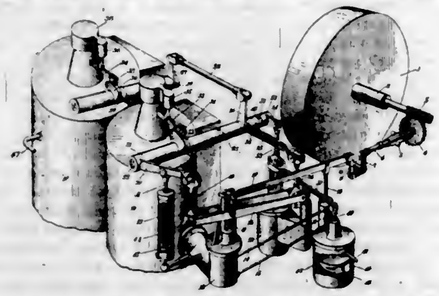
4. In a device for the purposes stated, the combination of a frame having bearing-sockets provided with slots, a mandrel provided on its ends with knobs having shanks adapted to pass through the slots of the frame and provided with journals adapted to fit the bearing-sockets, one of said knobs being movable longitudinally, a spring within the mandrel acting to project the movable knob, and locking devices carried by the mandrel to lock said knob in extended and retracted position.

5. In a device for the purposes stated, the combination of a frame having bearing-sockets provided with slots, a mandrel provided on its ends with knobs having shanks adapted to pass through the slots of the frame and provided with journals adapted to fit the bearing-sockets, one of said knobs being movable longitudinally, a spring within the mandrel acting to project the movable knob, means extending through the other knob to adjust the tension of the spring, and locking devices carried by the mandrel to lock sad knob in extended and retracted position.

[Claims 6 and 7 not printed in the Gazette.]

1,105,952. REGULATING MECHANISM FOR MIXED-PRESSURE ENGINES. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 14, 1914. Serial No. 811,989. (Cl. 121—118.)

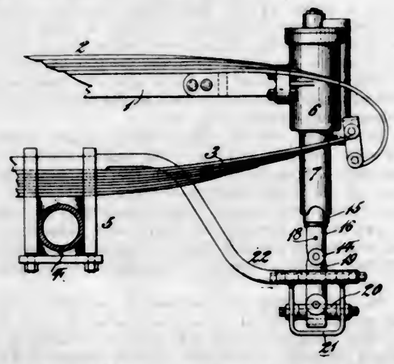
1. In a regulator for mixed pressure engines, a high pressure steam valve, a low pressure steam valve, motors for moving said valves, cams for governing the action of said motors, cam shafts for said cams, an element movable in accordance with the load of the engine, a lever pivoted on said element, a connection between one end of said lever and said high pressure cam shaft, a connection between the other end of said lever and said low pressure cam shaft, a second element movable in accordance with the pressure of the low pressure steam, a connection between said second movable element and said low pressure cam shaft arranged to engage said cam shaft and turn it to close said low pressure valve when the low pressure steam falls off, and resilient means tending to hold said high pressure cam shaft in a position to close its valve.



2. In a regulator for mixed pressure engines, a high pressure steam valve, a low pressure steam valve, a cam shaft for operating said low pressure valve, an element movable in accordance with the low pressure steam pressure, an arm connected to said movable element, a sleeve on said arm journaled adjacent to said cam shaft, a lug on said sleeve for engaging and turning said cam shaft to close the low pressure valve when the low pressure steam falls off, and means to cause the closing of said low pressure valve to open said high pressure valve.

3. In a regulator for mixed pressure engines, a high pressure steam valve, a low pressure steam valve, cam shafts for operating said valves, an element movable according to the load of the engine, a lever pivoted on said element, an arm for moving said high pressure cam shaft attached to one end of said lever, an arm for moving said low pressure cam shaft attached to the other end of said lever, resilient means tending to keep said high pressure cam shaft in a position to close its valve, a second movable element moving in accordance with the pressure of the low pressure steam, and an arm attached to said second movable element having a connection with said low pressure cam shaft adapted to move it to close its valve when the low pressure steam falls off, said motion being transmitted to said lever to open said high pressure valve.

1,105,953. PNEUMATIC SHOCK-ABSORBER. RALPH E. BATES, Philadelphia, Pa., assignor, by mesne assignments, to Automobile Development Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 15, 1913. Serial No. 795,206. (Cl. 21—105.)



1. A shock-absorber, comprising a cylinder, a piston mounted to reciprocate therein, an air compressing element connected with the cylinder, a second air compressing element connected with the piston to move therewith and coöperating with the first-named air-compressing element, and means of communication between one air compressing element and the cylinder upon opposite sides of the piston.

2. A shock-absorber, comprising a cylinder, a piston mounted to reciprocate therein, an air compressing element connected with the cylinder, a second air compressing element connected with the piston to move therewith and coöperating with the first-named air compressing element, means of communication between the first-named air compressing element and the ends of the cylinder upon opposite sides of the piston, and adjustable means for regulating the air pressure of the coöperating air compressing elements.

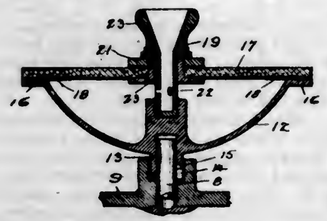
3. A shock absorber, comprising a cushion chamber, a cushion member mounted therein one movable with relation to the other, an air compressing device comprising an element connected with the cushion chamber and a second element connected with the cushion member, and means of communication between the air compressing device and the cushion chamber upon opposite sides of the cushion member.

4. A shock-absorber, comprising a cushion chamber and a cushion member in the same, one of said members movable in its relation to the other and each, respectively, adapted to be connected to a rigid and a movable part of a vehicle, an air-compressing device having its members respectively connected to said cushioning members and communicating with said cushion chamber at opposite sides of said cushion member, and means for regulating the air-pressure of said air-compressing device.

5. A shock-absorber, comprising a piston-cylinder, a piston reciprocable in said cylinder and having a tubular rod forming a plunger cylinder, said cylinder and rod being each adapted to be connected to a rigid and a movable part of a vehicle, an inwardly opening valve in said plunger-cylinder, a tubular plunger in said plunger-cylinder and secured in the head of said cylinder, an inwardly opening valve in the end of said plunger, a duct communicating with the interior of said plunger and with the ends of the piston-cylinder, and valves at the ends of said duct and opening into the piston-cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,105,954. CENTRIFUGAL EXTRACTOR. OSCAR C. BEACH, Los Angeles, Cal., assignor to F. W. Braun, Los Angeles, Cal. Filed Aug. 21, 1912. Serial No. 716,233. (Cl. 127—3.)



1. In a centrifugal extractor, the combination of a concave receptacle adapted to be rotated, a cover of transparent material closing the top of said receptacle and a filtering medium arranged between and separating the cover and the receptacle.

2. In a centrifugal extractor, the combination of a concave receptacle adapted to be rotated, a cover of transparent material closing the top of said receptacle, a filler screw adapted to clamp said cover in position and a filtering medium arranged between the cover and the receptacle.

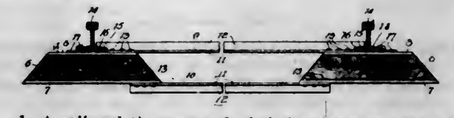
3. In a centrifugal extractor, the combination of a rotatable concave receptacle adapted to hold a quantity of material provided at the bottom with a hub, a plate closing the top of said receptacle, a screw engaging said hub adapted to clamp the cover in place, said screw being hollow to permit the introduction of liquid into the closed receptacle and a filtering medium arranged between the cover and the receptacle.

4. In a centrifugal extractor, the combination of a rotatable concave receptacle adapted to hold a quantity of material, a hub at the bottom of said receptacle, a plate closing the top of said receptacle, a screw engaging said hub adapted to clamp the cover in place, said screw having a passage therein terminating at the upper end in a flaring opening, a second passage extending through said screw and a filtering medium between the receptacle and cover.

5. In a centrifugal extractor, the combination of a receptacle adapted to be rotated, a cover closing said receptacle, and a ring of filtering material arranged between the cover and the receptacle and extending into the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,105,955. RAILROAD-TIE. JAMES O. BLAKE, Gary, Ind. Filed May 4, 1914. Serial No. 836,271. (Cl. 238—6.)



1. A railroad tie composed of chairs spaced apart longitudinally of the tie, and upper and lower bars connecting said chairs together, formed with longitudinally-extending ribs.

2. A railroad tie composed of chairs spaced apart longitudinally of the tie, and upper and lower bars connecting said chairs together, and formed of base-portions and longitudinally-extending ribs, said bars being connected at their base-portions with said chairs.

3. A railroad tie composed of chairs spaced apart longitudinally of the tie, and upper and lower bars overlying at their ends the top and bottom surfaces of said chairs and connected therewith.

4. A railroad tie composed of chairs of metal of approximately H-shape in cross-section, affording upper and lower flanges forming seating surfaces, and means connecting said chairs together in spaced relation.

5. A railroad tie composed of chairs of metal of approximately H-shape in cross-section, affording upper and lower flanges forming seating surfaces, and upper and lower bars overlying at their ends the top and bottom surfaces of said upper and lower flanges, respectively, and connected therewith.

1,105,956. SECTIONAL PORTABLE ELEVATOR. WILLIAM EDWARD BOEHCK, Jersey City, N. J., assignor to New York Revolving Portable Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 19, 1913. Serial No. 762,237. (Cl. 187—11.)

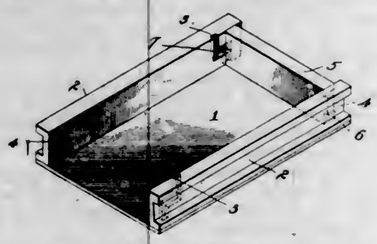


1. A sectional tiering machine having a main frame provided at its upper end with a laterally-extending arm;

an extension section provided at its lower end with a laterally-extending arm, said arms being hingedly connected and said section being normally in prolongation of said main frame; a load-carrying platform mounted to move in said frame and section; and mechanism for raising said platform.

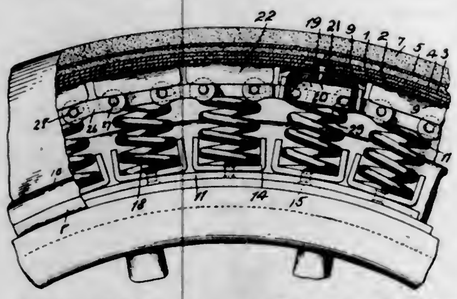
2. A sectional tiering machine having a main frame provided at its upper end with a laterally-extending arm; an extension section provided at its lower end with a laterally-extending arm, said arms being hingedly connected and said section being normally in prolongation of said main frame; a load-carrying platform mounted free to move in said frame and section; a cable one end of which is attached to said load-carrying platform; mechanism for winding up the other end of said cable; and a movable sheave over which said cable runs and which is transferable back and forth between said section and main frame.

1,105,957. PRINTER'S GALLEY. JAMES E. M. BROOKE, Washington, D. C., assignor of one-half to Hadley Y. Brooke, Luverne, Ala. Filed June 12, 1913. Serial No. 773,225. (Cl. 101—53.)



A printer's galley having a double L-shaped slot in the inner face of each side member, the lower portion of each of which extends to the plane of the bottom of the galley, and a vertically disposed elongated slot in the inner face of each side member of the galley disposed directly opposite the lower portion of the double L-shaped slot, and a detachable head piece adapted to fit bodily between the side members and having a lug extending axially from one end midway of the height of the head, and constructed to engage the vertical slot, and a lug extending axially from the other end of the head disposed at the bottom thereof and adapted to engage the lower portion of the double L-shaped slot when the head is in locked position.

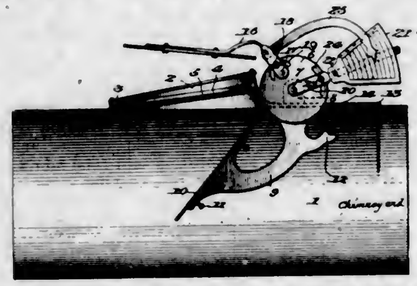
1,105,958. VEHICLE WHEEL-TIRE. EGBERT B. BROWN, Los Angeles, Cal. Continuation of application Serial No. 671,308, filed Jan. 15, 1912. This application filed Sept. 14, 1912. Serial No. 720,413. Renewed Dec. 31, 1913. Serial No. 809,723. (Cl. 152—8.)



1. A vehicle wheel tire comprising a retainer band normally fitting the wheel rim, a series of pockets connected to said band and having outwardly extending end walls only, a radially arranged spring in each pocket, a ring plate fitting against and closing each side of the pockets and forming an annular channel for the pockets and springs, means for flexibly connecting together the outer ends of the springs, a tire casing inclosing the springs and formed with clencher ribs on its marginal edges, clencher rib gripping means carried by the vehicle wheel rim, the ring plates serving as means for locking the clencher ribs in the clencher rib gripping means.

2. A vehicle wheel tire comprising a casing, a spring holding means adapted to extend around a wheel felly, radially arranged springs carried by said holding means, a cap for the outer end of each spring and formed with inwardly extending side walls, a pair of pivoted links connecting together the side walls of adjoining caps at each side thereof, said links being out of contact with the tire casing and forming with the connected caps an endless chain around the tire, and a transversely curved resilient shaper plate carried by each cap and adapted to bear against and conform to the interior of the tire casing.

1,105,959. FURNACE-DAMPER REGULATOR. CARL BRUSS, Milwaukee, Wis. Filed Nov. 29, 1912. Serial No. 734,144. (Cl. 236—2.)



1. In a furnace-damper regulator, the combination with a smoke-flue having an air inlet, of an automatically operating damper comprising an inner valve and an outer valve arranged relatively to said air inlet and connected one with the other so as to move in unison and having a common axis of rotation, both of said valves being actuated by the draft through the smoke-flue.

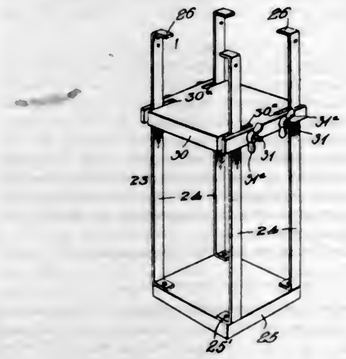
2. In a furnace-damper regulator, the combination with a smoke-flue having an air inlet, of an automatically operating damper comprising an inner valve and an outer valve arranged relatively to said air inlet and connected one with the other to move in unison, and means for adjusting both the inner and the outer valves relatively one to the other and to said air inlet.

3. In a furnace-damper regulator, the combination with a smoke-flue having an air inlet, of an automatically operating damper comprising an inner valve and an outer valve arranged relatively to said air inlet and connected one with the other to move in unison, an oscillating member with which both of said valves are connected and constituting a support for both valves, and a weighted lever adjustably connected with said oscillating member.

4. In a furnace-damper regulator, the combination with a smoke-flue having an air inlet, of an automatically operating damper comprising an inner valve and an outer valve arranged relatively to said air inlet and connected one with the other to move in unison, a weighted oscillating member with which both of said valves are connected and constituting a support for both valves, and a pointer and index scale to indicate changes in adjustment of either the inner or outer valve.

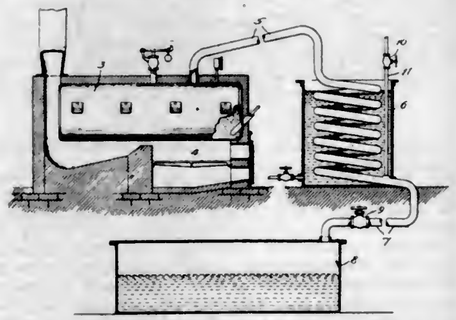
1,105,960. WASHSTAND. GEORGE H. BAYANT, Windsor, N. C. Filed June 4, 1913. Serial No. 771,764. (Cl. 45—38.)

A device of the character set forth comprising a base, two pairs of strap-iron standards disposed in planes through the edges of said base and having their lower ends turned inward into feet secured to such base, their upper ends being turned inward into lugs to support water heating coils, a shelf having two pairs of upright slits cut in its corners and loosely embracing said pairs of standards, screws in the body portion of said shelf and projecting



through its slitted ends, and thumb nuts on said screws, for the purpose set forth.

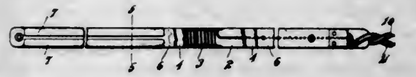
1,105,961. MANUFACTURE OF GASOLENE. WILLIAM M. BURTON, Chicago, Ill., assignor to Standard Oil Company, Whiting, Ind., a Corporation of Indiana. Filed Aug. 25, 1913, Serial No. 786,456. Renewed May 25, 1914. Serial No. 840,959. (Cl. 196—25.)



1. The method of treating the liquid-portions of the paraffin-series of petroleum-distillation having a boiling point of upward of 500° F. to obtain therefrom low-boiling-point products of the same series, which consists in distilling at a temperature of from about 650° F. to about 850° F. the volatile constituents of said liquid, conducting off and condensing said constituents, and maintaining a pressure of from about 4 to about 5 atmospheres on said liquid of said vapors distilling under approximately atmospheric pressure the volatile constituents of the residue of said first distillation and conducting off and condensing said last-named constituents, and finally subjecting the last product of condensation to the first-named treatment.

2. The method of treating the liquid-portions of the paraffin-series of petroleum-distillation having a boiling point of upward of 500° F. to obtain therefrom low-boiling-point products of the same series, which consists in distilling at a temperature of from about 650° F. to about 850° F. the volatile constituents of said liquid, conducting off and condensing said constituents, and maintaining a pressure of from about 4 to about 5 atmospheres on said liquid of said vapors throughout their course to and while undergoing condensation, distilling under approximately atmospheric temperature the volatile constituents of the residue of said first distillation and conducting off and condensing said last-named constituents, mixing this distillate with more of said liquid and subjecting it therewith to said first-named treatment.

1,105,962. ELECTRICALLY-HEATED DEVICE. FREDERICK E. CARLSON, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 4, 1913. Serial No. 804,639. (Cl. 219—21.)



1. In a device of the character described, a handle, a sleeve of polygonal cross section mounted therein, a curler supported in the ends of said sleeve and out of contact with the intermediate portions thereof, and a heating element located within said curler in heat conducting relation with the exposed part thereof.

2. In a device of the character described, a hollow cylindrical curler and an electrical heating element mounted therein, said element comprising a resistance material, heat conducting members located at the opposite sides thereof and in heating relation therewith, and curved resilient flanges springing from an edge of said members and conforming in shape and size to the interior of said curler.

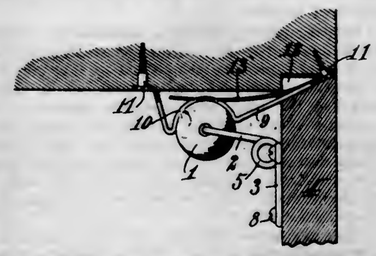
3. In a device of the character described, a handle, a sleeve of polygonal cross section mounted in said handle and projecting from the front end thereof, a curler supported by said sleeve, key slots formed in the forward end of said sleeve at diametrically opposite points, a clip cooperating with said curler and provided with pivot pins adapted to fit within said key slots, a spring adapted to hold said pivot pins in engagement with said sleeve, a comb provided with an expansible tubular back adapted to fit upon said curler, a member of polygonal shape secured to the end of said comb and adapted in size and shape to fit the end of said sleeve and hold the parts against relative turning motion, and an electrical heater located within said curler and in heating relation therewith.

4. In a device of the character described, the combination with a handle and a hollow cylindrical curler supported thereby, and a heating element located within said curler and in heating relation therewith, of diametrically opposite key slots at the forward end of the handle, and a clip provided with pivot pins adapted to enter and interlock with said key slots, and a spring to hold said pins in engagement with said key slots and the clip in operative relation with the curler.

5. In a device of the character described, the combination with the hollow cylindrical body, of an electrical heating element located therewithin, said heating element comprising a thin flat core of mica, a resistance wire coiled about said core, insulating material laid against the sides of said coil, and strips of conducting material laid against the said insulating strips, and curved resilient flanges formed at the edges of said strips of conducting material, conforming in shape and size to the interior of said body.

[Claims 6 to 9 not printed in the Gazette.]

1,105,963. DOOR CHECK AND HOLDER. JOSEPH A. CLEM, Sidney, Ohio. Filed Nov. 22, 1913. Serial No. 802,359. (Cl. 70—119.)

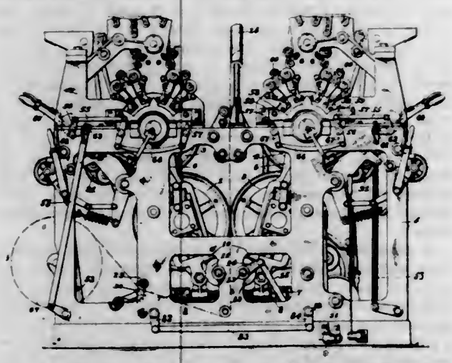


1. A door check and holder, comprising in combination, a roller, a frame upon which said roller is mounted hav-

ing intermediate portions which provide springs for said roller, means for attaching said roller frame to the door, a buffer plate constituting a track attachable to the door frame and consisting of an inclined portion and a recessed portion over and into which said roller travels, and a spring constructed and arranged to offer resistance to the entrance of the roller into said recessed portion, substantially as specified.

2. In a door check and holder, in combination with a roller, a frame adapted to be attached to a door and upon which said roller is mounted, said frame having resilient portions, a bar extending through said resilient portions and providing means for the attachment of said frame to a door, a roller track having inclined and recessed portions over and into which the roller passes, the recessed portion of said track having an opening therein, and a resilient member constructed and arranged to engage the roller through said opening and to offer resistance to the entrance of said roller into said recess.

1,105,964. PRINTING-PRESS. GEORGE R. CORNWALL, Rye, N. Y., assignor to American Planograph Company, a Corporation of West Virginia. Filed July 5, 1907. Serial No. 382,174. (Cl. 101—100.)



1. A printing press including in combination a plurality of planographic form cylinders, two offset cylinders constructed and arranged to form a printing couple and so that one of said offset cylinders receives a design from one of the form cylinders and the other offset cylinder receives a design from another form cylinder and a single mechanism connected to each end of one of said offset cylinders for moving said offset cylinder away from impression with respect to the other offset cylinder without separating it from its form cylinder.

2. A printing press including in combination a plurality of form cylinders, two offset cylinders constructed and arranged to form a printing couple and so that one of said offset cylinders receives a design from one of the form cylinders and the other offset cylinder receives a design from another form cylinder, and automatic means for moving an offset cylinder away from impression with respect to the other offset cylinder without separating it from its form cylinder.

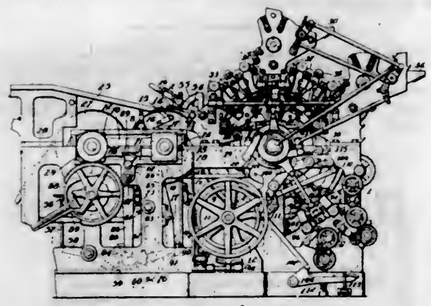
3. A printing press including in combination a plurality of form cylinders, two offset cylinders constructed and arranged to form a printing couple and so that one of said offset cylinders receives a design from one of the form cylinders and the other offset cylinder receives a design from another form cylinder, means for feeding an impression-receiving material between the form cylinders, and means controlled by the impression-receiving material for moving an offset cylinder away from impression with respect to the other offset cylinder without separating it from its form cylinder.

4. A printing press including in combination a plurality of form cylinders, two offset cylinders constructed and arranged to form a printing couple and so that one of said offset cylinders receives a design from one of the form cylinders and the other offset cylinder receives a design from another form cylinder, and means for simultaneously moving each of the said offset cylinders away from impression without separating an offset cylinder from its form cylinder.

5. A printing press including in combination a plurality of form cylinders, two offset cylinders constructed and arranged to form a printing couple and so that one of said offset cylinders receives a design from one of the form cylinders and the other offset cylinder receives a design from another form cylinder, means for feeding an impression-receiving material between the form cylinders, and means controlled by the impression-receiving material for simultaneously moving each of the said offset cylinders away from impression without separating an offset cylinder from its form cylinder.

[Claims 6 to 41 not printed in the Gazette.]

1,105,965. PRINTING-PRESS. GEORGE R. CORNWALL, Rye, N. Y., assignor to American Planograph Company, a Corporation of West Virginia. Filed Nov. 27, 1906, Serial No. 345,350. Renewed Feb. 27, 1914. Serial No. 821,572. (Cl. 101—100.)



1. A printing press including in combination a form cylinder carrying a plurality of forms, an offset cylinder, the press being constructed and arranged so that said cylinders constitute a printing couple and so that a form on said form cylinder will print upon the offset cylinder, automatic sheet-controlling means for supplying sheets to the said printing couple so that a sheet will be printed upon one side by the offset cylinder and upon the other side by one of the forms on the form cylinder, a plurality of inking mechanisms, means for causing one of said inking mechanisms to ink the form which prints upon the offset cylinder, and means for causing another of said inking mechanisms to ink a form upon the form cylinder which prints direct upon the sheet.

2. A printing press including in combination a form cylinder carrying a plurality of forms, an offset cylinder, the press being constructed and arranged so that said cylinders constitute a printing couple and so that a form on said form cylinder will print upon the offset cylinder, automatic sheet-controlling means for supplying sheets to the said printing couple so that a sheet will be printed upon one side by the offset cylinder and upon the other side by one of the forms on the form cylinder, a plurality of inking mechanisms, means for causing one of said inking mechanisms to ink the form which prints upon the offset cylinder, means for causing another of said inking mechanisms to ink a form upon the form cylinder which prints direct upon the sheet, and means for throwing off said inking mechanisms.

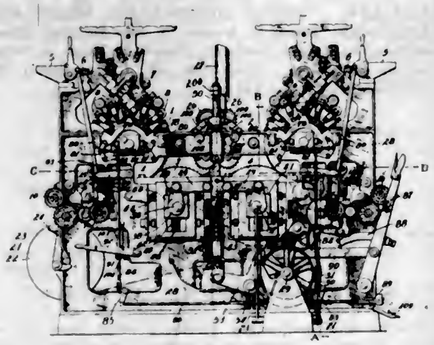
3. A printing press including in combination a form cylinder carrying a plurality of forms, an offset cylinder, the press being constructed and arranged so that said cylinders constitute a printing couple and so that a form on said form cylinder will print upon the offset cylinder, automatic sheet-controlling means for supplying sheets to the said printing couple so that a sheet will be printed upon one side by the offset cylinder and upon the other side by one of the forms on the form cylinder, a plurality of inking mechanisms, means for causing one of said inking mechanisms to ink the form which prints upon the offset cylinder, means for causing another of said inking mechanisms to ink a form upon the form cylinder which prints direct upon the sheet, and means for throwing off said inking mechanisms.

4. A printing press including in combination a form cylinder carrying a plurality of forms, an offset cylinder, the press being constructed and arranged so that said cylinders constitute a printing couple and so that a form on said form cylinder will print upon the offset cylinder, automatic sheet-controlling means for supplying sheets to the said printing couple so that a sheet will be printed upon one side by the offset cylinder and upon the other side by one of the forms on the form cylinder, a plurality of inking mechanisms, means for causing one of said inking mechanisms to ink the form which prints upon the offset cylinder, means for causing another of said inking mechanisms to ink a form upon the form cylinder which prints direct upon the sheet, and means for throwing off both inking mechanisms.

5. A printing press including in combination a form cylinder carrying a plurality of forms, an offset cylinder, the press being constructed and arranged so that said cylinders constitute a printing couple and so that a form on said form cylinder will print upon the offset cylinder, automatic sheet-controlling means for supplying sheets to the said printing couple so that a sheet will be printed upon one side by the offset cylinder and upon the other side by one of the forms on the form cylinder, a plurality of inking mechanisms, means for causing one of said inking mechanisms to ink the form which prints upon the offset cylinder, means for causing another of said inking mechanisms to ink a form upon the form cylinder which prints direct upon the sheet, and means for selectively throwing off either of the inking mechanisms.

[Claims 6 to 44 not printed in the Gazette.]

1,105,966. PRINTING-PRESS. GEORGE R. CORNWALL, Rye, N. Y., assignor to American Planograph Company, a Corporation of West Virginia. Filed Nov. 10, 1906, Serial No. 342,788. Renewed June 20, 1914. Serial No. 846,384. (Cl. 101—100.)



1. A printing press including in combination a form cylinder, an offset cylinder receiving inked impressions from said form cylinder, inking mechanism for said form cylinder, a third cylinder constituting with said offset cylinder a printing couple and between which the impression-receiving material passes to be printed upon by said offset cylinder, and automatic means controlled by said impression-receiving material for causing the offset and form cylinders to separate and for throwing off the inking mechanism from said form cylinder.

2. A printing press including in combination a form cylinder, an offset cylinder, said parts being so constructed and arranged that the offset cylinder will receive inked impressions from the form cylinder, a cylinder constituting with said offset cylinder a printing couple, said cylinders being constructed and arranged so that the offset cylinder is in impression contact with said form cylinder and with said third cylinder during the printing upon the impression receiving material, inking mechanism for said form cylinder, and automatic means for moving the offset cylinder out of contact with its form cylinder and for simultaneously throwing off the inking mechanism from the form cylinder.

3. A printing press including in combination a form cylinder, an offset cylinder so constructed and arranged that the offset cylinder will receive inked impressions from the form cylinder, a cylinder constituting with said offset cylinder a printing couple, said cylinders being constructed and arranged so that the offset cylinder is in impression contact with said form cylinder and with said third cylinder during the printing upon the impression receiving material, inking mechanism for said form cylinder, and automatic means for moving the offset cylinder out of contact with its form cylinder and for simultaneously throwing off the inking mechanism from the form cylinder, the said parts being so constructed and arranged that the angular relation of the form cylinder and offset cylinder will be preserved as they move to and from contact.

4. A printing press including in combination a form cylinder, an offset cylinder, a cylinder arranged to form with the offset cylinder a printing couple, inking mechanism for the form cylinder, and means controlled by the impression-receiving material for moving the offset cylinder away from its form cylinder and for simultaneously throwing the inking mechanism off from the form cylinder.

5. A printing press including in combination two form cylinders, two offset cylinders, one offset cylinder receiving its design from one of said form cylinders and the other offset cylinder receiving its design from the other offset cylinder, said offset cylinders being arranged to perfect an impression-receiving material passing therebetween, inking mechanism for each of said form cylinders, means for throwing off the inking mechanism from both form cylinders, and means which may be set to hold the inking mechanism for one form cylinder out of action while the inking mechanism for the other form cylinder is in action so that the press may print upon one side only of the impression-receiving material, means for regulating the squeeze between said offset cylinders, and automatic impression tripping means controlled by the impression receiving material.

[Claims 6 to 33 not printed in the Gazette.]

1,105,967. CENTRIFUGAL FAN AND PUMP. SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed Nov. 17, 1913. Serial No. 801,446. (Cl. 230—11.)



1. A casing in which the edge of the casing on the suction side is turned inward over the periphery of the negative or intake end of the fan blades toward the positive end of the fan wheel the terminal edge of said turned in portion forming a circle of greater diameter than that of the intake end of the fan wheel and constituting the inlet or eye to the casing.

2. A casing having a part of circular or curved section disposed radially beyond the periphery of the fan wheel

the edge of the casing on the suction side being turned inward over the periphery of the negative or intake end of the fan blades toward the positive end of the fan wheel the terminal edge of said turned in portion forming a circle of greater diameter than that of the intake end of the fan wheel and constituting the inlet or eye to the casing.

3. A casing for centrifugal fans and pumps having a wall which is contiguous to the positive end of the fan wheel and is approximately parallel therewith and which gradually curved outwardly toward the intake side of the casing and then inwardly over toward and approximately as far as the plane in which the negative or intake ends of the blades revolve and in its farther extension curves inward and back toward the positive end of the fan wheel, the terminal edge of this curvature forming a circle of greater diameter than that of the intake end of the fan wheel, and extending more or less over the periphery thereof, but not farther than the neutral part of the blades, which is approximately mid-way of their axial length, an annular space being left between the said terminal edge and the periphery of the wheel through which an induced current of air can pass into the casing from the suction side.

4. A casing for centrifugal fans and pumps having a wall which is contiguous to the positive end of the fan wheel and is approximately parallel therewith and which gradually curves outwardly toward the intake side of the casing said curvature of the casing being carried out beyond the plane in which the intake end of the fan wheel lies, and then inwardly over toward and approximately as far as the plane in which the negative or intake ends of the blades revolve, the terminal edge of this curvature forming a circle of greater diameter than that of the intake end of the fan wheel, and extending more or less over the periphery thereof, but not farther than the neutral part of the blades, which is approximately midway of their axial length, an annular space being left between said terminal edge and the periphery of the wheel through which an induced current of air can pass into the casing from the suction side.

5. A casing having a part of circular or curved section disposed radially beyond the periphery of the fan wheel the edge of the casing on the suction side being turned inward over the periphery of the fan blades toward the positive end of the fan wheel the terminal edge of said turned in portion forming a circle of greater diameter than that of the intake end of the fan wheel and constituting the inlet or eye to the casing said terminal edge being located partly or wholly within the plane of the intake ends of the fan blades.

[Claims 6 and 7 not printed in the Gazette.]

1,105,968. SEWING-MACHINE PULL-OFF. PHILIP DIEHL and MARTIN HEMLEB, Elizabeth, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 18, 1912. Serial No. 731,922. (Cl. 112—26.)



1. In a sewing machine, the combination with a reciprocating needle, and a rotary loop-taker formed with a thread-cavity and with a loop-seizing beak having a path of movement around an axis transverse to said needle, of a non-rotary thread-case disposed within the thread-cavity of said loop-taker and provided with a thread-guiding member at one side of the needle-path, and a reciprocatory pull-off member having operative rectilinear movements in a path substantially parallel with the needle and intermediate the needle-path and said guide-member.

2. In a sewing machine, the combination with a reciprocating needle, and a rotary loop-taker formed with a thread-cavity and with a loop-seizing beak having a path of movement around an axis transverse to said needle, of a non-rotary thread-case disposed within the thread-cavity of said loop-taker and provided with a thread-guiding member at one side of the path of movement of the loop-taker beak, and a reciprocatory pull-off member having operative movements in coaction with said thread guiding member in a plane substantially parallel with the path of movement of the loop-taker beak.

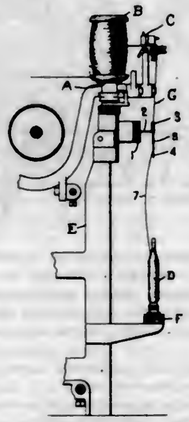
3. In a sewing machine, the combination with feeding mechanism comprising a feed-bar with means for imparting thereto lateral and rising-and-falling movements, a reciprocating needle, and a rotary loop-taker formed with a thread-cavity and with a loop-seizing beak having a path of movement around an axis transverse to said needle, of a non-rotary thread-case disposed within the thread-cavity of said loop-taker and provided with a thread-guiding member at one side of the needle-path, and a pull-off member carried by the feed-bar and movable between said guide-member and the needle-path.

4. In a sewing machine, the combination with a reciprocating needle, a loop-taker formed with a thread-cavity and with a loop-seizing beak, and means for imparting to the loop-taker a plurality of rotations for each reciprocation of the needle, of a non-rotary thread-case carrying a lower thread disposed within the thread-cavity of said loop-taker and provided with a thread-guiding arm over which the lower thread is led to the work, and a reciprocatory pull-off member adapted to engage the lower thread intermediate the thread-case arm and the needle.

5. In a sewing machine, the combination with feeding mechanism comprising a feed-bar with means for imparting thereto lateral and rising-and-falling movements, a reciprocating needle, a loop-taker formed with a thread-cavity and with a loop-seizing beak, and means for imparting to the loop-taker a plurality of rotations for each reciprocation of the needle, of a non-rotary thread-case carrying a lower thread disposed within the thread-cavity of said loop-taker and provided with a thread-guiding arm over which the lower thread is led to the work, and a pull-off member carried by the feed-bar and movable between said guide-member and the needle-path.

[Claim 6 not printed in the Gazette.]

1,105,969. TENSION-CONTROLLING MEANS FOR SPOOLERS. PETER H. DONNELLY, New Bedford, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 15, 1913. Serial No. 748,515. (Cl. 242—147.)



1. In a spooler, tension controlling means interposed between the rotating spool and the upright farrier from which the yarn is drawn, said means comprising an elongated gravity controller located axially above the carrier, for the whirling yarn to wrap around on its way to the spool, and a fixed tubular support for the upper end of and in which the controller is movable vertically, the tension exerted upon the yarn by frictional engagement of the yarn wraps with the controller causing the latter to rise and fall in its support as the tension rises and falls below normal, whereby the number of wraps on the controller will be decreased or increased, respectively, and the tension modified correspondingly.

2. In a spooler wherein the yarn spooled is drawn off the end of an upright cop or bobbin, tension controlling means for the yarn, comprising an upright, longitudinally movable controller in the path of and around which the yarn wraps on its way to the spool, and a fixed support for and below which the controller extends to receive the yarn wraps, increase of tension due to frictional engagement of the wrapped yarn with the controller moving the latter longitudinally to discharge one or more wraps and thereby diminish the friction, a diminution of the tension permitting the controller to descend and receive an additional wrapping of yarn.

3. In a spooler wherein the yarn spooled is drawn off the end of an upright filling-wound yarn mass, tension controlling means for the yarn comprising a metal controller having an elongated, smooth and headed shank located above and co-axial with the yarn mass, to receive one or more wraps as the yarn passes to the spool, and a tubular, fixed support for the controller and below which the latter extends to be engaged frictionally by the enwrapping yarn, the tension varying with the number of wraps, increased tension acting to lift the controller and discharge one or more wraps therefrom while the controller descends by gravity to receive additional wrapping when the tension decreases, the head of the controller limiting its descent and retaining it in the support.

4. In a spooler wherein the yarn spooled is drawn off the end of a cop or bobbin, automatic, frictionally-governed tension controlling means for the yarn, comprising a member located in the path of the yarn to the spool and movable by gravity and by frictional engagement with the yarn, respectively, into position to increase or decrease such engagement and thereby correspondingly increase or decrease the tension exerted by said member upon the yarn, and a fixed support for and in which said member is freely movable longitudinally.

5. In a yarn winding machine the combination of a longitudinally movable tension member and means for maintaining said member with its surface in helical engagement with the yarn, the varying decrease or increase of tension of the yarn causing the tension member to move longitudinally and present a correspondingly greater or less portion of its surface to engagement with the yarn, thus to counteract the variation in tension by a variation in extent of the surface of the tension member in engagement with the yarn.

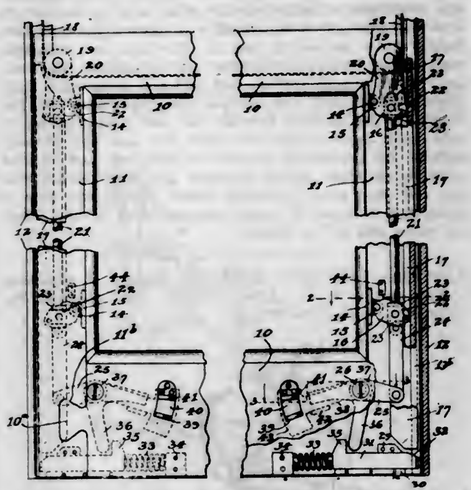
[Claim 6 not printed in the Gazette.]

1,105,970. SASH CONSTRUCTION. GEORGE H. FORSYTH, Chicago, Ill. Filed May 11, 1907. Serial No. 373,052. (Cl. 189—73.)

1. The combination with a hollow metal sash and sash-guide, of an adjusting strip, contained within the sash, one or more links pivotally connecting said adjusting strip to the sash whereby said adjusting strip is thrust outwardly upon a relative movement between the sash and adjusting strip, and means coöperating with said adjusting strip to effect a snug contact with a side wall of the guide in any adjusted position of said sash.

2. The combination with a hollow metal sash and sash-guide, of an adjusting strip, contained within the sash, one or more links pivotally connecting said adjusting strip to the sash, means normally tending to create a relative vertical movement between said sash and adjusting strip whereby the latter through said links is thrust outwardly into engagement with the guide, and means coöperating with said adjusting strip to secure snug contact with a side wall of the guide in any adjusted position of said sash.

3. The combination with a hollow metal sash and sash-guide, of an adjusting strip, contained within the sash, a plurality of links pivotally connecting said adjusting strip to the sash, means normally tending to create a relative vertical movement between said sash and adjusting strip whereby the latter through said links is thrust outwardly into engagement with the guide, and means carried by the sash for positively operating said links in a manner to retract said adjusting strip from the guide.

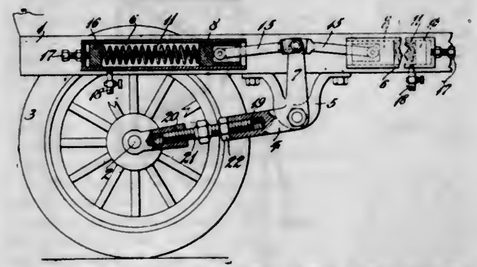


4. The combination with a sash and sash-guide, of an adjusting strip, a plurality of links pivotally connecting said adjusting strip to the sash, means normally tending to create a relative vertical movement between said sash and adjusting strip whereby the latter through said links is thrust outwardly into engagement with the guide, a spring-pressed locking plunger for the sash, and means operating to first retract said locking plunger and subsequently retract said adjusting strip from the guide.

5. The combination with a hollow metal sash and sash-guide, of an adjusting strip, contained within the sash, a plurality of links pivotally connecting said adjusting strip to the sash, means exerting a continuous lifting effect on said adjusting strip, and manually operable means carried by and attached to said sash for overcoming said lifting effect.

[Claims 6 to 20 not printed in the Gazette.]

1,105,971. VEHICLE-SPRING. ANSLEY H. FOX, Philadelphia, Pa., assignor, by direct and mesne assignments, to Automobile Development Company, a Corporation of Delaware. Filed July 5, 1913. Serial No. 777,519. (Cl. 21—101.)

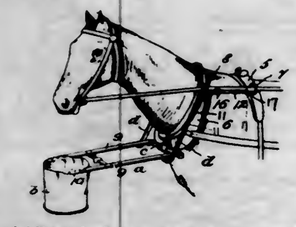


1. In a device of the character stated, a lever in the end of one arm of which a vehicle axle can be supported and adapted to be fulcrumed upon the vehicle frame, cylinders upon the opposite sides of the other arm of said lever, a plunger in each cylinder, a connecting rod pivoted at one end to a plunger in its respective cylinder and the opposite end of each rod pivoted to the said other arm

of said lever, and a cushioning device adapted to bear against each plunger, said devices operating in opposite directions, whereby the cushioning action is exerted upon the other arm of said lever through the medium of said plunger and said rods.

2. In a device of the character stated, an elbow lever adapted to be fulcrumed upon the vehicle frame, cushioning devices acting against one arm of said lever in opposite directions, a socket on the other arm of said lever, a socket adapted to be suitably connected with the vehicle axle, a connecting rod in adjustable and rotatable engagement with said sockets and extending longitudinally thereof, said sockets, rod and arm forming a rigid member, and said rod serving for adjustment of the length of the member between the axle and fulcrum of said lever, and a lock, for said rod and one of said sockets, for preventing rotation of said rod, and so that relative swiveled motion between the other socket and the rod may occur, whereby either end of the axle is permitted to raise or lower independently of the other, on either side of the vehicle.

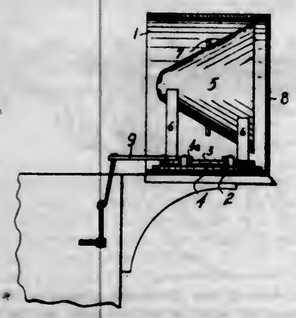
1,105,972. FEED-BAG HOLDER. ROBERT H. GRAHAM, New York, N. Y. Filed Oct. 29, 1913. Serial No. 798,075. (Cl. 119—67.)



1. A folding feed bag support, comprising a frame, foldable cross bars connected to the opposite sides of the frame and arranged to fold in directions at right angles to each other, and means for connecting the frame to the harness.

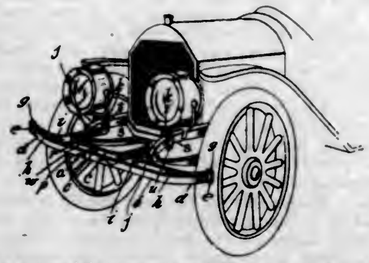
2. A foldable feed bag support, comprising a frame, a feed bag secured to one end portion of the frame, foldable cross bars connected to the opposite sides of the frame and arranged to fold at right angles to each other, hangers pivotally connected to the frame and adapted to be folded onto the frame, said hangers including rigid and flexible sections, the latter of which are adapted to be passed through the terret rings and to connect to the saddle rings of a harness.

1,105,973. ADJUSTABLE HEADLIGHT FOR VEHICLES. CHARLES B. GRAY and WILLIAM E. TETER, Dallas, Tex. Filed May 5, 1913. Serial No. 765,700. (Cl. 240—61.)



A headlight comprising a casing, a circular plate mounted on the floor of said casing, a second circular plate concentrically mounted upon the first plate and supported adjacent to its periphery by rollers recessed in the first plate, a plurality of bracket members secured to the first mentioned plate and overhanging the second preventing lateral displacement of the rotatable plate, a reflector mounted upon the rotatable plate at an elevation thereabove, and means for manually rotating the rotatable plate.

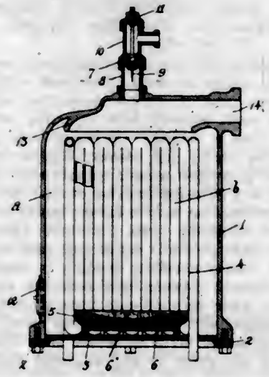
1,105,974. BUMPER FOR VEHICLES. THOMAS A. HOOVER, Fresno, Cal. Filed Apr. 29, 1914. Serial No. 835,099. (Cl. 213—39.)



1. An automobile bumper consisting of a single continuous strip of spring metal the body portion of which is substantially convex outwardly and sufficiently wide to span substantially the front end of the automobile and the end-portions of which are curved first rearwardly and then extend inwardly; a pair of arms which project rearwardly from said inwardly-extending end-portions and which are spaced apart a distance sufficient to engage the side members of the automobile frame and are formed with means for attachment thereto; and a supplementary bar which lies in rear of and substantially parallel to said body portion and the ends of which are connected to said inwardly-extending end-portions.

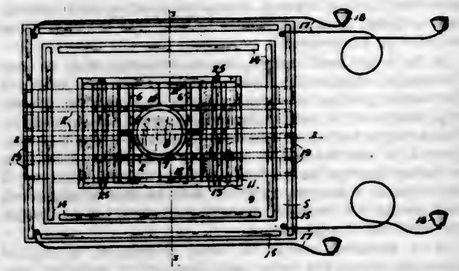
2. An automobile bumper consisting of a single continuous strip of spring metal the body portion of which is substantially convex outwardly and sufficiently wide to span substantially the front end of the automobile and the end-portions of which are curved first rearwardly and then extend inwardly; a pair of arms which project rearwardly from said inwardly-extending end-portions and which are spaced apart a distance sufficient to engage the side-members of the automobile frame and are formed with means for attachment thereto; a supplementary bar which lies in rear of and substantially parallel to said body portion and the ends of which are connected to said inwardly-extending end-portions; and a spacing washer interposed between said body-portion and supplementary bar.

1,105,975. GASIFICATION APPARATUS. SIGMUND HOROWITZ, Lemberg, Austria-Hungary. Filed June 20, 1914. Serial No. 846,254. (Cl. 48—103.)



In a gasification apparatus, the combination of a casing adapted for connection with the explosive chamber of an internal combustion engine and provided with an air inlet and a mixing chamber, a heating coil within said casing forming a gasification chamber in communication with said mixing chamber, said coil being adapted to be connected with the engine exhaust, a support located in the lower portion of said gasification chamber, finely divided inert material carried by said support, electrical means for heating said support and said inert material, a fuel inlet located above said inert material, whereby liquid fuel is dropped upon the latter, and means for regulating the flow of fuel.

1,105,976. LIFE-SAVING RAFT. WILLIAM JACOB, San Leandro, Cal. Filed Jan. 26, 1914. Serial No. 814,508. (Cl. 9—11.)



1. A raft comprising a central platform of heavy wooden beams, heavy beams on each side of said platform, cabin walls secured to said beams on each side, supports secured to the inner sides of all of said beams, and benches upon said supports.

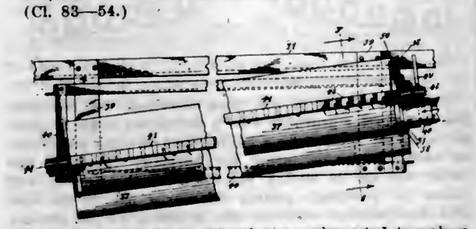
2. A raft comprising a central platform of heavy wooden beams, strips of wood on each side of said platform, spaced apart to furnish water outlets, non-return valves in all of said water outlets, heavy beams over said strips, on each side of the platform, and cabin walls secured to said beams on each side.

3. A raft comprising a central platform of heavy wooden beams, strips of wood on each side of said platform, heavy beams over said strips, cabin walls secured to said beams, and a cylinder on each side of said platform, closed at the outer end and open at the inner end.

4. A raft comprising a central platform of heavy wooden beams, strips of wood on each side of said platform, spaced apart to furnish water outlets, non-return valves in said water outlets, heavy beams over said strips on each side, cabin walls on each side secured to said beams, and screens preventing access to said valves of large objects from the inside of the raft.

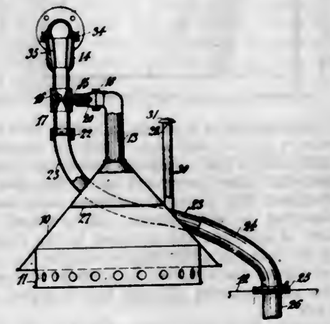
5. A raft comprising a central platform of heavy wooden beams, strips of wood on each side of said platform, spaced apart to furnish water outlets, non-return valves in said water outlets, heavy beams over said strips, cabin walls secured to said beams, ropes secured to the raft and floats secured to the ends of the ropes.

1,105,977. DRY CONCENTRATOR. LEWIS A. W. JOHNSON, Los Angeles, Cal. Filed July 31, 1909, Serial No. 510,516. Renewed Mar. 18, 1912. Serial No. 684,622. (Cl. 83—54.)



In a separator, in combination, an elongated trough, a concentrating table mounted to rotate in said trough on the longitudinal axis of said trough, a substantially circular head rigid with said table and having a blast port therein, a seat receiving said head and having a blast opening therein adapted to register with said blast port when said table is in an upright position, and means or rotating said table and said head to throw said port and said opening out of register to cut off the blast and to dump the concentrates from said table, said table having a plurality of concentrating pockets to retain the concentrates, and means or directing the blast upwardly through said pockets.

1,105,978. CLOTHES-WASHER. ALEXANDER KATZ, New York, N. Y. Filed Oct. 11, 1913. Serial No. 794,581. (Cl. 68—37.)



1. A clothes-washer, comprising a hollow body having a perforated base, an injector connected with the top of said body above the water level therein for drawing air and water therefrom, an outlet-pipe connected with said injector and means for admitting air to said body below the water level therein.

2. A clothes-washer, comprising a hollow conical body having a perforated base, an injector connected with the top of said conical body, an outlet-pipe connected with said injector, and an air-inlet regulator communicating with the interior of said conical body.

3. A clothes-washer, comprising a hollow conical body having a perforated base, an injector connected with the top of said conical body, a perforated partition in the conical body between the base and the top of the same, and an air-inlet regulator communicating with the interior of the conical body below the partition and extending upwardly at the outside of said body above the plane of the top of the same.

1,105,979. ARTIFICIAL STONE. PAUL KUHN, New York, N. Y. Filed Feb. 17, 1913. Serial No. 748,934. (Cl. 106—34.)

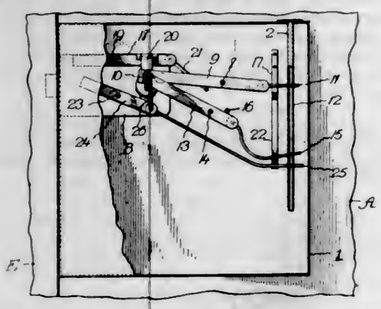
A composition of matter for artificial stone prepared of the following ingredients and proportions: 6 parts of plaster of Paris, 6 parts of Portland cement, 1 part of magnesium carbonate, 4 parts of ashes, 12 parts of shavings, 16 parts of water.

1,105,980. COIN-CONTROLLED LOCK. CHRISTIAN G. LEHMANN, Detroit, Mich. Filed Apr. 28, 1913. Serial No. 764,056. (Cl. 194—45.)

1. The combination of a casing, a lock in said casing, a key for operating the lock, a coin chute, and means independently engaging opposite sides, of the key to prevent the turning thereof and its removal from engagement with the lock, said means being adapted to be successively actuated by a coin passing down the coin chute to release the key.

2. The combination of a casing, a lock in said casing, a bolt forming part of said lock, a coin chute, a key adapted to operate the lock, a member within the casing to lock a key against removal from the lock and against turning

and adapted to support a coin placed in said chute, said member being adapted to be operated by a coin contacting therewith in the coin chute to release the key, and means independent of said bolt operated by the insertion of the key in the lock for releasing the coin.



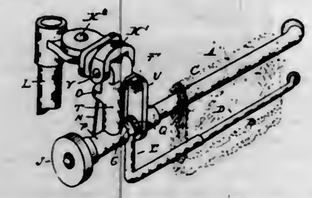
3. The combination of a casing, a lock in said casing, a bolt forming a part of said lock, a key for operating the bolt of said lock, a key engaging member to prevent the longitudinal and rotary movement of the key and adapted to be moved and held out of engagement with the key by a coin deposited on said member, and a second member independent of said bolt and actuated by the insertion of the key in the lock for actuating the member for engaging the key, to release the coil from engagement therewith and permit the reëngagement of said key engaging member with the key.

4. The combination of a casing, a lock in the casing, a bolt forming part of said lock, a key for operating the bolt of the lock provided with a notch, a latch bar to engage in the notch and provided with a notch to receive the key, and adapted to be directly operated by a coin and held by said coin resting on said bar out of engagement with the key, and means actuated independent of said bolt by the insertion of the key in the lock to release the coin.

5. The combination of a casing, a lock in said casing, a bolt forming part of said lock, a key for operating the bolt of the lock, a latch bar to engage the key and prevent its withdrawal from the lock and the turning thereof in one direction to actuate the bolt, a dog to prevent the turning of the key in an opposite direction, means actuated by a coin for turning the latch bar to release the key and permit said key to be turned and withdrawn from engagement with the bolt, said means temporarily supporting the coin, and means actuated independent of said bolt by the insertion of the key in the lock to release the coin, said dog being arranged to be actuated by the coin when released to release the key and permit the same to be turned in a direction opposite to that in which it is held from turning the latch bar.

(Claims 6 to 11 not printed in the Gazette.)

1,105,981. GARMENT-HANGER. AUGUST LEMKE, Detroit, Mich. Filed Mar. 25, 1913. Serial No. 756,705. (Cl. 45—13.)



1. A garment hanger including a garment supporting section, a retaining section spaced from and extending substantially parallel to the supporting section, said retaining section being movable around the supporting section and adapted to engage the supported garment independently of the supporting section and at a point different from the point of engagement of the supporting section with the garment, and supporting means for said sections.

2. In a garment hanger, the combination with an arm forming a support for the garment, of a second arm spaced from and movable about the first-mentioned arm and serving as a retainer, a rotatable bearing carrying the retaining arm, means for rotating the bearing, and a bracket carrying said arms.

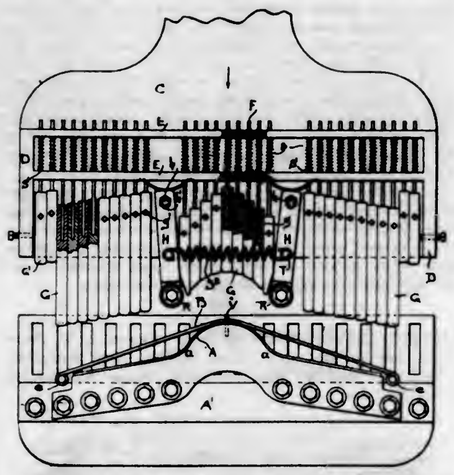
3. In a garment hanger, the combination with an arm for supporting the garment, a bracket to which said arm is connected, a bearing in said bracket, rotatable in relation to the first-mentioned arm, a second arm forming a retainer and movable around said first mentioned arm, said second arm having an inwardly-extending projection connected to said bearing, means for rotating said bearing, and a spring tending normally to hold said bearing in one position of adjustment.

4. In a garment hanger, the combination with an arm forming a support for the garment, a bracket having a horizontal portion to which said arm is connected, a bearing journaled in said horizontal portion, a garment-retaining arm having an inwardly-extending projection connected to said bearing, a knob for rotating said bearing, a spring tending to hold the bearing in one position of adjustment, a support to which said bracket is connected, and means for yieldably retaining the bracket in its initial position of adjustment.

5. A garment hanger including a support, a bracket pivotally connected with said support, a garment supporting section and a retaining section carried by said bracket, said retaining section being spaced from said garment supporting section to engage the supported garment independently of the supporting section and at a point separate from the point of engagement of the supporting section with the garment.

[Claims 6 to 11 not printed in the Gazette.]

1,105,982. DEVICE FOR FORMING SPRINGS. BYRON A. LITCHFIELD and LOUIS ZIMMERMANN, Pontiac, Mich. Filed Feb. 18, 1914. Serial No. 819,317. (Cl. 153—51.)



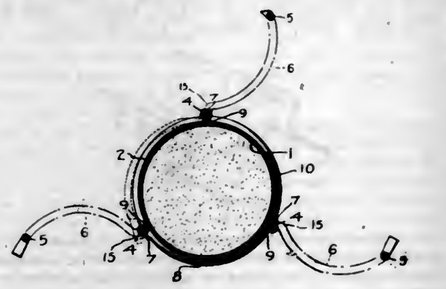
1. In mechanism of the class described, the combination of a former provided with a reëntering angle, a plunger, a thrust bar having a sliding and pivoting movement on said plunger, a spring for normally thrusting the thrust bar on its sliding pivot toward the former, and means for yieldingly pulling the thrust bar to the side of a line parallel with the line of travel of the plunger and toward the high side of the reëntering angle of the former.

2. In mechanism of the class described, the combination of a former provided with a reëntering angle, a plunger adapted to be reciprocated toward and away from the former, a thrust bar having a slot and pin pivoting on said plunger, a bowed spring carried on the plunger and engaging with the pivoted end of the thrust bar, and a spring for yieldingly pulling the thrust bar toward the high side of the reëntering angle of the former.

3. In mechanism of the class described, the combination of a former provided with reëntering angles on each side of its mid portion, a plunger adapted to be reciprocated toward and away from the former, a pair of thrust bars having a sliding and pivoting movement on said plunger on opposite side of the mid portion of the former with one thrust bar in adjacency with each reëntering angle, means for yieldingly forcing each thrust bar longitudinally toward the former, and means for yieldingly connecting the two thrust bars to make them initially converge toward the mid portion of the former.

4. In mechanism of the class described, the combination of a former having reëntering angles in either side of the mid portion, a plunger adapted to be reciprocated toward and away from the former, a plurality of yieldingly pressed plunger bars mounted upon the plunger and yieldingly tending in the direction of the former, a pair of thrust bars having a sliding and pivoting movement to the plunger and located on opposite sides of the mid portion of the former in adjacency one with each reëntering angle, the said two thrust bars being separated by a plurality of plunger bars, means for yieldingly thrusting the thrust bars longitudinally toward the former, and means for yieldingly causing the thrust bars to initially converge, each bar tending toward the high side of the reentering angle.

1,105,983. PORTABLE HEATER. WILLIAM LUNHAM, Bronxville, and WALTER MOORE, New York, N. Y. Filed May 11, 1914. Serial No. 837,722. (Cl. 126—43.)



1. A portable heater, comprising an expansible holder, and vessel supporting frames each comprising legs and a connecting top member hinged by one leg of each at spaced points to the sides of the holder, whereby the frames may fold into compact relation with the holder or be adjusted outward therefrom, in combination with a can burner designed to hold solidified liquid fuel, said burner being of such diameter as to fit forcibly into said expansible holder and to be held at various degrees of vertical adjustment therein.

2. A portable heater, comprising a tubular holder having a distributed series of vertical expansion regions comprising portions of the holder wall bent outward to form external sleeves continuous with the wall portions at opposite sides and affording vertical splits in the internal wall extending from top to bottom of the holder, a can burner designed to contain solidified liquid fuel vertically and frictionally adjustable in said holder, and vessel-supporting frames having one leg of each rotatably received in said sleeves.

3. A portable heater, comprising a tubular holder formed of a strip of sheet metal having sections cut out of its marginal portions at intervals and said marginal portions bent over to form reinforcements, the body portions of the wall of the holder vertically in line with the cut out sections of the said marginal portions being bent outward to form external vertical sleeves, in combination with a can burner designed to contain solidified liquid fuel within said holder, and vessel-supporting frames having one leg of each rotatably received in said sleeves.

4. A portable heater, comprising a tubular expansible holder having ventilating openings in its lower portion, a plurality of vessel-supporting frames each comprising legs and a connecting top member hinged by one leg of each at spaced points to the body, and a can burner designed to contain solidified liquid fuel vertically and frictionally adjustable in said holder.

5. In a portable heater, the combination of a tubular holder, a removable can burner designed to hold solidified liquid fuel vertically and frictionally adjustable in said holder, and collapsible and adjustable vessel-supporting means comprising frames each having legs and a connecting top member hinged by one leg of each at spaced points to the body.

[Claims 6 and 7 not printed in the Gazette.]

1,105,984. APPARATUS FOR THE PRODUCTION OF CONTINUOUS ELECTRICAL OSCILLATIONS. HORACE MANDERS, London, England. Filed Oct. 30, 1909. Serial No. 525,451. (Cl. 250—38.)



1. In apparatus for the production of continuous electrical oscillations, a pair of electrodes of block form, each having a flattened discharge area at and near the axis, and having the portion outside this area at the discharge side thrown back, substantially as described.

2. In apparatus for the production of continuous electrical oscillations, an electrode of block form having a flattened discharge area at and near the axis and having the portion outside this area at the discharge side thrown back and having an insulating material applied to said thrown back portion.

3. In apparatus for the production of continuous electrical oscillations, a pair of electrodes of block form, each having a flattened discharge area at and near the axis and having the portion outside this area at the discharge side thrown back, the anode of said pair consisting of iron and the cathode of cadmium.

4. In apparatus for the production of continuous electrical oscillations, a pair of electrodes of block form each having a flattened discharge area at and near the axis and having the portion outside this area at the discharge side thrown back, in combination with insulating material applied in between the said thrown back portion.

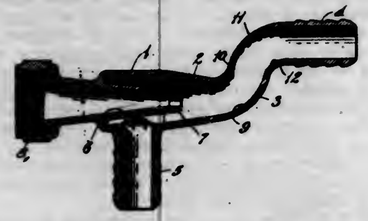
5. In apparatus for the production of continuous electrical oscillations, a pair of electrodes of block form, each having a flattened discharge area at and near the axis and having the portion outside this area at the discharge side thrown back, the flattened discharge area being upon a nipple-like portion projecting from the body of the block, substantially as described.

[Claim 6 not printed in the Gazette.]

1,105,985. EJECTOR. BRYCE W. MCCLYMONT, Detroit, Mich., assignor to Penberthy Injector Co., Detroit, Mich., a Corporation of Michigan. Filed Sept. 11, 1911. Serial No. 648,640. (Cl. 162—1.)

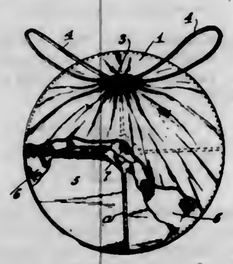
In a lifting ejector, the combination with a power jet, of a casing forming a vacuum chamber around said jet and extending beyond the same in a direction parallel to said jet to provide a discharge arm forming a discharge passage, said passage being provided within striking distance of the jet with an ogee bend having coöperating deflecting surfaces, one being in the inner end of said discharge arm and alining with the jet and the other being in the bend

of said arm and disposed substantially at right angles to the line of discharge from said jet, whereby a single



aqueous air excluding curtain is formed intermediate the ends of the discharge passage.

1,105,986. LADY'S HAT-CASE. MARGARET STEWART MCKENZIE, East Rutherford, N. J. Filed Feb. 4, 1914. Serial No. 816,622. (Cl. 150—52.)



1. A hat case comprising a seamless bag shaped container of fabric with an extensible mouth and means for closing said mouth and a folding bottom for said container, which folding bottom is provided with four quadrant sections of stiff material joined to each other, each section being cut off diagonally at the inner end, substantially as set forth.

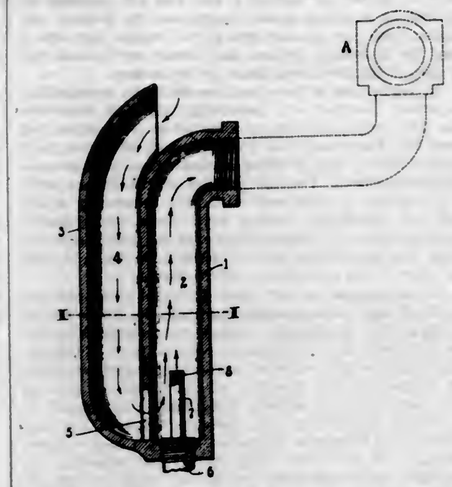
2. A hat case comprising a seamless bag shaped container of fabric with an extensible mouth and means for closing said mouth, a folding bottom comprising four quadrant sections of stiff material, a covering layer on each face of said quadrants and stitching uniting the said two layers along all the contours of said stiffening quadrants, substantially as set forth.

1,105,987. GAS AND AIR MIXER. WILLIAM B. MCSORLEY, St. Louis, Mo., assignor to Majestic Manufacturing Company, St. Louis, Mo., a Corporation. Filed May 31, 1913. Serial No. 770,949. (Cl. 158—118.)

1. A gas and air mixer having an up-duct communicable at its upper end with a burner, having an air delivery down-duct open to the atmosphere at its upper end and communicating with the lower end of said up-duct, both of said ducts being open at their upper ends, and means for delivering gas into said up-duct.

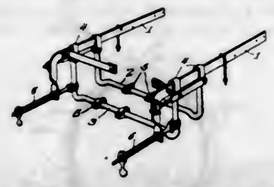
2. A gas and air mixer having a mixing leg provided with an up-duct communicable at its upper end with a burner, having an air delivery leg provided with a down-duct fully open to the atmosphere at its upper end and communicating with the lower end of said up-duct, and means for delivering gas into said up-duct, said gas delivering means being arranged to discharge gas into said up-duct at a point above the point of communication between the lower ends of said ducts, the said legs being closed and integrally connected together at their lower ends, and a wall common to both of said legs being formed between said integrally connected legs.

3. A gas and air mixer comprising a mixing leg having a screw threaded upper end adapted to be connected to a burner, the said mixing leg having an up-duct therein, an air delivery leg integrally connected at its lower end to the lower end of said mixing leg, said integrally connected legs being substantially S-shaped in cross section and the wall uniting said legs being formed with a port



at its lower end, the air delivery leg having a down duct open to the atmosphere at its upper end, both of said integrally connected legs being closed at their lower ends, and means for delivering gas to said up-duct.

1,105,988. GENERATOR-SUSPENSION MEMBER. CLARENCE E. MEAD, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee. Filed Nov. 15, 1911. Serial No. 660,480. (Cl. 105—238.)



1. Supporting means for a car lighting generator, comprising a rod having vertical end portions and a horizontal middle portion, there being an upward bend between said portions.

2. Supporting means for a car lighting generator, comprising a rod having vertical end portions and a horizontal middle portion connected thereto by wide bends, said middle portion being higher than said bends.

3. A support for a car lighting generator having vertical end portions and a horizontal middle portion connected thereto by reverse bends.

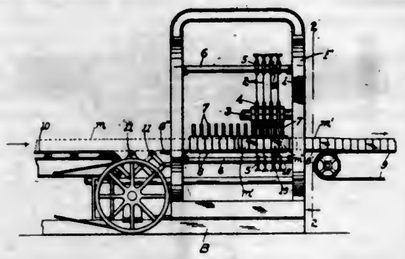
4. A support for a car lighting generator having vertical end portions and a horizontal middle portion connected thereto by wide bends, the ends of said middle portion being bent downwardly to meet said bends.

5. Supporting means for a car lighting generator, comprising a rod having substantially parallel end portions and a transverse middle portion, said middle portion being higher than the bends connecting the various portions.

[Claims 6 to 15 not printed in the Gazette.]

1,105,989. BRICK-CUTTING MACHINE. FRANK W. MILES, St. Louis, Mo. Filed June 16, 1913. Serial No. 773,924. (Cl. 25—20.)

1. In combination with a reciprocating member traversed in a given direction by a column of material to be cut, means on said member for cutting the column into a series of sections with a movement of the member in one direction, independent supports for the severed sections carried by said member a marking roller on one of the supports traversing the sections with a movement of the member in the opposite direction, and means on the member for centering the die on the roller to the first section to be marked.



2. In combination with a reciprocating member traversed in a given direction by a column of material to be cut, cutters on said member operating across the path of travel of said column for cutting the latter into a series of sections with a movement of the member in the direction of the moving column, independent supports for the severed sections carried by said member a marking roller on one of the supports successively engaging the faces of the sections with a movement of the member in a direction opposed to the movement of said column and means on the member for centering the die on the roller to the first section to be marked.

3. In combination with a reciprocating member traversed in a given direction by a column of material to be cut, cutters on said member operating across the path of travel of said column for cutting the latter into a series of sections with a movement of the member in the direction of the moving column, a marking roller on the member permanently engaging the column for successively marking the sections with a movement of the member in a direction opposed to the movement of the column, and means on the member for centering the die on the roller, to the first section to be marked.

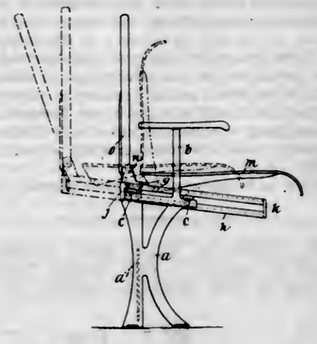
4. In combination with a member moving alternately in opposite directions and traversed by a column of material in one of said directions, means on said member for cutting the column into sections transverse to the direction of movement of the material, independent supports for the severed sections carried by said member a marking roller on one of the supports successively engaging the faces of the sections with a movement of the member in a direction opposed to the movement of the column, and means on the member for centering the die on the roller to the first section to be marked.

5. In a brick cutting machine, a reciprocating carriage provided with platens traversed by a clay column in a direction corresponding to one of the strokes of said carriage, cutters on said carriage for severing the column into bricks in paths across the direction of movement of the column, a marking roller on one of the platens engaging the bottom of the column and marking the bottom faces of the bricks at fixed points with a stroke of the carriage in a direction opposite to the movement of the column, and means on the carriage for presenting the die of the roller to the proper position against the first brick of the series.

[Claims 6 to 9 not printed in the Gazette.]

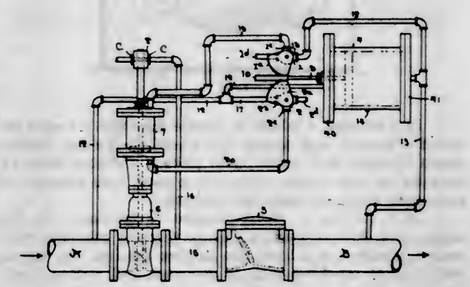
1,105,990. OPERA-CHAIR. NATHAN H. MILLER, Paterson, N. J. Filed Jan. 28, 1913. Serial No. 744,650. (Cl. 155—13.)

1. In combination, a pair of fixed spaced upright structures forming the side standards, rollers journaled in said structure one forward of and lower than the other and each on a horizontal axis, a forwardly inclined frame formed substantially U-shaped in plan and having its extremities extending forwardly and having cross-sectionally T-shaped grooves formed in the outer lateral faces of said extremities and extending longitudinally thereof, each groove receiving one forward and one rearward roller snugly therein, and a seat arranged in said frame, substantially as described.



2. In combination, a row of three or more side standards, a forwardly and rearwardly movable seat-carrying frame arranged between each two side standards, and brackets connecting each frame with the two side standards adjoining the latter, the bracket connecting each side standard and frame being pivoted to one of them and having sliding contact with the other of them forward and rearward of the pivot of said bracket, substantially as described.

1,105,991. DEVICE FOR PREVENTING BACKFLOW IN WATER-SUPPLY SYSTEMS. WALTER E. MILLER, Madison, Wis. Filed Apr. 23, 1913. Serial No. 763,029. (Cl. 137—4.)



1. A pipe line and a check valve therein, in combination with means coöperating with the check valve to inclose a sub-section of the pipe in advance of the valve to receive leakage from the check valve, and a drainage opening from the sub-section automatically opened when said sub-section is inclosed.

2. A pipe line and a check valve therein, in combination with means operated by excess of pressure beyond the check valve and coöperating therewith to inclose a sub-section of the pipe in advance of the valve to receive leakage from the check valve, and a drainage opening from the sub-section automatically opened when said sub-section is inclosed.

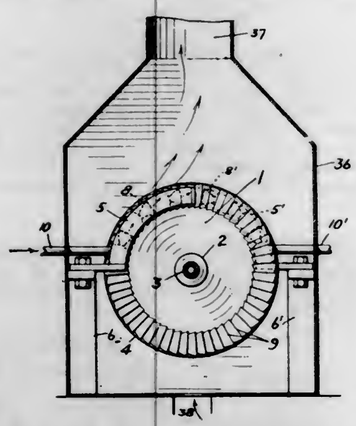
3. A pipe line and a check valve therein, in combination with means coöperating with the check valve to inclose a sub-section of the pipe in advance of the valve to receive leakage from the check valve, a drainage opening from the sub-section automatically opened when said sub-section is inclosed, and means for automatically opening the sub-section to the main pipe line.

4. A pipe line and a check valve therein, in combination with means coöperating with the check valve to inclose a sub-section of the pipe in advance of the valve to receive leakage from the check valve, a drainage opening from the sub-section automatically opened when said sub-section is inclosed and means operated by increase of pressure in the pipe line in advance of the inclosed sub-section for automatically opening the sub-section to the main line.

5. A pipe line and a check valve therein, in combination with means coöperating with the check valve to inclose a sub-section of the pipe in advance of the valve to receive leakage from the check valve, a drainage valve opening from the sub-section automatically opened when said sub-section is inclosed and means operated by increase of pressure in the pipe line in advance of the inclosed sub-section for automatically opening the sub-section to the main line, said opening means also automatically closing the drainage valve.

[Claims 6 to 9 not printed in the Gazette.]

1,105,992. TURBINE. ERNST MÜHL, Philadelphia, Pa., assignor of one-half to Otto Donatz, Trenton, N. J. Filed Aug. 12, 1913. Serial No. 784,299. (Cl. 121—56.)



1. In a turbine, a wheel, a closure therefor, a nozzle inside the closure and facing the wheel, means for forcing steam through said nozzle, said closure provided with an exhaust for said steam, and with a draft hole adapted to force said steam through the exhaust.

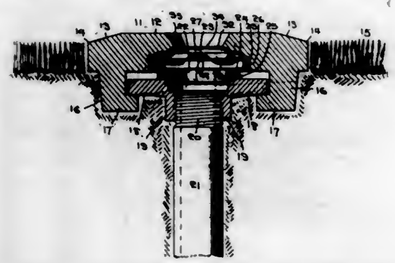
2. In a turbine, a wheel adapted to be moved by the action of a fluid thereon, a closure therefor provided with means adapted to convey the moving fluid to the wheel, said closure provided with an exhaust, and with a draft opening adapted to force the moving fluid through said exhaust.

3. In a turbine, a wheel, a closure therefor, means for conveying steam through the closure to the wheel, said closure provided with an exhaust and with a draft opening to force the steam through the exhaust.

1,105,993. SPRAYER. HOMER S. MUNSON, Redlands, Cal. Filed July 31, 1913. Serial No. 782,251. (Cl. 137—86.)

1 A sprayer comprising a suitable supply pipe, and a recessed body having a top opening in axial alinement with the supply pipe, and a nozzle plate secured in the path of the outflowing water, said nozzle plate being provided with a circular row of alternating raised ribs and depressed grooves adjacent to and parallel with its circumference, the adjacent depressed grooves and raised ribs joining each other in an inclined surface adapted to deflect the water upwardly through the opening in the body.

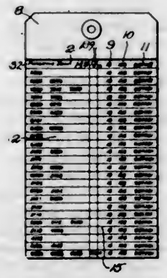
2. A sprayer comprising a nozzle plate flat througout its surface with the exception of a circular row of alternating depressed grooves and raised ribs, an opening being provided at the discharge end of each raised rib and at its junction with the adjacent depressed groove, the opposite end of each raised rib and depressed groove being merged into the succeeding opposite construction by means of an inclined surface adapted to deflect the discharging water upwardly.



3. A sprayer comprising a casing having an opening in the top thereof, a second casing removably supported in said first casing and having the bottom thereof perforated, a nozzle plate supported in said second casing and retained by a cup-shaped cap, and means for supplying water to said first casing.

4. The herein described sprayer comprising a casing having an opening in the top portion thereof, a second casing having a cup-shaped perforated bottom portion and an inverted cup-shaped cap removably mounted upon said cup-shaped bottom portion so that said second casing may be cleaned, a nozzle plate removably supported within said second casing between said cap and bottom portion, said cup-shaped cap having an aperture in the top thereof, a removable bottom member for said first casing adapted to have a supply pipe connected thereto and to nold said second casing against the top portion of said first casing when said bottom member is placed into position, and said second casing being adapted to be unitarily removed from said first casing.

1,105,994. APPARATUS FOR COST SYSTEM. CHARLES H. NICHOLS, Haverhill, Mass., assignor, by mesne assignments, to Automatic Accounting Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 20, 1908. Serial No. 449,447. (Cl. 11—3.)



1. In an apparatus of the kind described, a card containing a set of symbols to distinguish itemized data covering optional selective details comprising a specification of an article of manufacture, and a templet or master card, having means spaced and arranged similarly to certain of the items on said symbol containing card, said means serving as a guide to be coöperative in rendering certain of the distinguishing symbols on said data card distinctive through elimination of the remaining symbols, and converting it into a legible specification for a particular article of manufacture.

2. In an apparatus of the kind described, a card containing a set of symbols to distinguish itemized data covering optional selective details, comprising specification items for a series of similar articles of manufacture, and a master card, or templet, having means spaced and arranged similarly to certain of the symbols on said symbol card, and constituting a cipher specification of a particular article of manufacture, said means being coöperative in rendering certain of the symbols on said symbol card distinctive to convert it into a definite, legible specification.

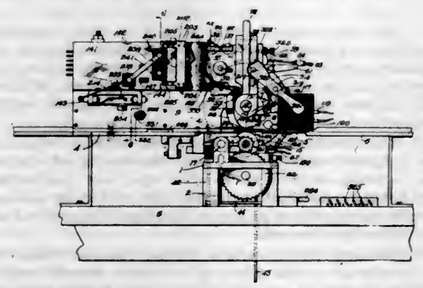
3. In an apparatus of the kind described, a card containing a set of symbols in tabulated arrangement to distinguish itemized data covering optional selective details, comprising a specification of an article of manufacture, and a templet or master card, containing a series of designating means spaced and arranged similarly to certain of the itmes on said symbol card and adapted to coöperate with said symbol card to designate particular scattered symbols on said symbol card to convert the same into a definite specification.

4. In an apparatus of the kind described, a card containing symbols in tabulated arrangement to distinguish itemized data covering optional selective details, comprising specification items for a series of similar articles of manufacture, and a templet or master card, containing perforations spaced and arranged similarly to certain of the symbols on said symbol card, constituting a cipher specification and adapted to coöperate with said symbol card and to identify certain of the symbols thereon and convert the same into a definite legible specification of a particular article of manufacture.

5. In an apparatus of the kind described, a card containing multiple sets of optional selective symbols to indicate itemized data, comprising specification details for a series of similar articles of manufacture, and means constituting a cipher specification for a particular one of such articles of manufacture, arranged to coöperate by a punch or the like with said symbols as located on said symbol card to render distinctive certain of the details thereon, and convert the same into a legible specification for said article of manufacture.

[Claim 6 not printed in the Gazette.]

1,105,995. FACTORY TAG OR TICKET MAKING APPARATUS. CHARLES H. NICHOLS, Haverhill, Mass., assignor to Automatic Accounting Company, Boston, Mass., a Corporation of Massachusetts. Filed June 7, 1909. Serial No. 500,559. (Cl. 164—115.)



1. A machine of the kind described, comprising punching mechanism to feed a card, including a series of independently operable punches, automatic means to control the operation of the punches in a predetermined order of succession throughout the length of the card, and means automatically to repeat a given order of punching.

2. A machine of the kind described, comprising punching mechanism to feed a card, including a series of independently operable punches, automatic means to control the operation of the punches in a predetermined order of succession throughout the length of the card, means automatically to repeat a given order of punching, and means to continue or discontinue the latter at the will of the operator.

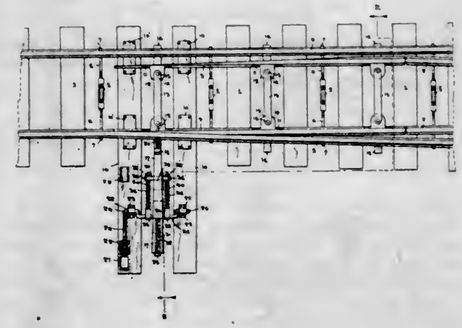
3. A machine of the kind described, comprising punching mechanism to operate on a card, including a series of independently operable punches, combined with controlling mechanism, including a templet, to control the order of operation of said independent punches, means to feed said templet forward during a progressive series of punching operations, and retracting means to bring the templet back to starting position for a new series of punching operations.

4. A machine of the kind described, comprising punching mechanism to operate on a card, including a series of independently operable punches, combined with controlling mechanism, including a templet, to control the order of operation of said independent punches, means to feed said templet slowly forward during a progressive series of punching operations, and means to shift said templet back rapidly to starting position at the end of said series of punching operations.

5. A machine of the kind described, comprising punching mechanism to operate on a card, including a series of independently operable punches, combined with controlling mechanism, including a templet, to control the order of operation of said independent punches, means to feed said templet slowly forward during a progressive series of punching operations, and automatic means to shift said templet back rapidly to starting position automatically at the end of said series of punching operations.

[Claims 6 to 72 not printed in the Gazette.]

1,105,996. RAILROAD-SWITCH. JOHN ORBIK, Hurley, Wis. Filed Feb. 21, 1914. Serial No. 820,226. (Cl. 104—23.)



1. A switch mechanism, in combination with movable switch rails, means for retaining the switch rails in parallel relation, a switch rod associated with one of said retaining means, said switch rod being provided with elongated slots therein, a crank shaft for operating said switch rod, the crank of said shaft extending through one of said slots, and a spring within said switch rod for yieldingly supporting said crank within said slot.

2. A switch mechanism, in combination with movable switch rails, means for retaining the switch rails in parallel relation, a switch rod associated with one of said retaining means, said switch rod being provided with elongated slots therein, a crank shaft for operating said switch rod, the crank of said shaft extending through one of said slots, a spring within said switch rod for yieldingly supporting said crank within said slot, and springs arranged at each side of said switch rod coacting with the spring therein for yieldingly supporting said crank intermediately within said slot.

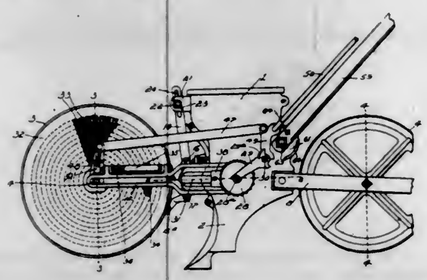
3. A switch mechanism, in combination with movable switch rails, means for retaining the switch rails in parallel relation, a switch rod associated with one of said retaining means, said switch rod being provided with elongated slots therein, a crank shaft for operating said

switch rod, the crank of said shaft extending through one of said slots, a spring within said switch rod for yieldingly supporting said crank within said slot, springs arranged at each side of said switch rod coacting with the spring therein for yieldingly supporting said crank intermediately within said slot, and a cushion spring arranged upon said switch rod adjacent the rails.

4. A switch mechanism, in combination with movable switch rails, means for retaining the switch rails in parallel relation, a switch rod associated with one of said retaining means, said switch rod being provided with elongated slots therein, a crank shaft for operating said switch rod, the crank of said shaft extending through one of said slots, a spring within said switch rod for yieldingly supporting said crank within said slot, springs arranged at each side of said switch rod coacting with the spring therein for yieldingly supporting said crank intermediately within said slot, a cushion spring arranged upon said switch rod adjacent the rails, and a switch lever for operating said crank shaft and said switch rod.

5. A switch mechanism, in combination with movable switch rails, means for retaining the switch rails in parallel relation, a switch rod provided by the elongation of one of said retaining means, said switch rod having transversely arranged elongated slots therein, a crank shaft for operating said switch rod, the crank for said switch rod extending through one of said slots, a slide bar extending through the other of said slots, actuating rods arranged upon said crank at each side of said switch rod, the free ends of said rods slidably connected with said slide bar, a spring within said switch rod, springs arranged upon said actuating rods, a cushion spring upon said switch rod adjacent the rails, said springs coacting with each other to provide a resilient connection between said switch rod and said crank therethrough, and a switch lever for operating said rod and said crank.

1,105,997. PLANTING-MACHINE. CHARLES E. PATRIC, Springfield, Ohio. Filed Apr. 17, 1913. Serial No. 761,665. (Cl. 111—32.)



1. In a planting machine, a hopper, a revoluble seed wheel in said hopper, a carrying wheel, concentric rows of teeth on said carrying wheel, a revoluble shaft extending from said carrying wheel to said hopper and geared to said seed wheel, a shiftable pinion on said shaft together with means for holding the same in different positions of adjustment, a spring arranged to force said shaft toward said wheel to hold said pinion in engagement with the teeth of said carrying wheel, and means for throwing and holding said shaft laterally away from said carrying wheel to disengage said pinion and carrying wheel teeth.

2. In a planting machine, a hopper, a furrow opener at the lower end of said hopper, a revoluble seed wheel in said hopper, a feed shaft connected to said seed wheel, a frame pivoted to said hopper about the axis of said feed shaft, a carrying wheel journaled in the free end of said frame, and a driving mechanism between said carrying wheel and said feed shaft.

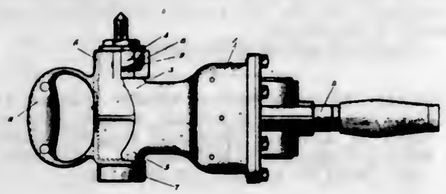
3. In a planting machine, a hopper, a furrow opener at the lower end of said hopper, a seed wheel in said hopper, a feed shaft for driving said seed wheel, a frame pivoted to said hopper about the axis of said feed shaft, a carrying wheel journaled at the free end of said pivoted frame, concentric rows of teeth on said carrying wheel, an operating shaft carried by said pivoted frame, a shiftable pinion on said operating shaft adapted to engage with the teeth of said carrying wheel and driving gears between said operating shaft and feed shaft.

4. In a planting machine, a hopper, a furrow opener at the lower end of said hopper, a seed wheel in said hopper, a feed shaft connected with said seed wheel, a frame pivotally connected to said hopper about the axis of said feed shaft, a carrying wheel at the free end of said frame, a series of concentric rows of teeth on said carrying wheel, an operating shaft carried by said frame, a shiftable pinion on said operating shaft for engagement with the teeth of said carrying wheel, means for holding said pinion in different positions of adjustment, means for throwing said pinion out of engagement with the teeth of said wheel, and driving gears between said operating shaft and feed shaft.

5. In a planting machine, a hopper, a furrow opener at the lower end of said hopper, seeding devices in said hopper, a feed shaft supported by said hopper for driving said feeding devices, a frame pivoted to said hopper about the axis of said feed shaft, a carrying wheel journaled at the free end of said pivoted frame, driving mechanism between said carrying wheel and said feed shaft, and adjustable means connected with said pivoted frame and hopper for raising and lowering said hopper and furrow opener.

[Claims 6 to 8 not printed in the Gazette.]

1,105,998. FLUID-OPERATED DRILL AND HANDLE THEREFOR. CAID H. PECK, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1912. Serial No. 703,765. (Cl. 77—7.)



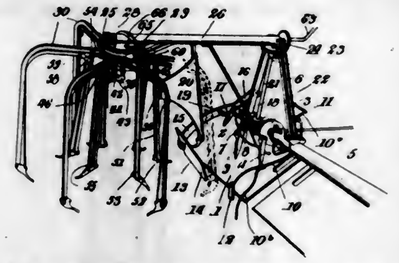
1. The combination with a drilling machine comprising an elongated casing having a spindle bearing at one end, a handle secured to the other end, and handle holding projections on the casing coaxial with the spindle, of a second handle removably secured on said handle holding projections.

2. The combination with a drilling machine comprising an elongated casing with a spindle bearing at one end and a handle secured to the other end, said spindle bearing having ends projecting from said casing, of a second handle having fastening means removably secured on said projecting spindle ends.

3. The combination with a drilling machine comprising an elongated casing adapted for close corner work, a spindle bearing at one end of the casing having ends projecting from said casing, and a fixed handle on the other end, of a handle comprising a grip, a saddle piece for said grip, a collar on one end of the saddle piece fitting around one end of said spindle bearing, and a retaining piece partly surrounding the other end of said spindle bearing and removably secured to said saddle piece.

4. As an article of manufacture, a handle for attachment to a close corner drill comprising a saddle piece, a collar attached to one end of said saddle piece, a retaining piece removably secured to the other end of said saddle piece forming a second collar, and a handle grip on said saddle piece.

1,105,999. SHEAF-SHOCKER. WILLIAM HUMPHREY PERRIN, New Liskeard, Ontario, Canada. Filed July 22, 1912. Serial No. 710,833. (Cl. 56—121.)



1. In a sheaf shocker and in combination, a binder having a binder deck, a sheaf collecting member supported adjacent to the binder deck and to the rear thereof having means adapted to catch the discharged and up-ended sheaves, a follower member located near the edge of the binder deck movable upwardly as a whole from the binder deck and having means to support the stubbleward side of the head of each sheaf while passing from the discharging and up-ending mechanism to the sheaf collecting member, and means for raising said member.

2. In a sheaf shocker and in combination, a binder having a binder deck, a sheaf collecting member supported adjacent to the binder deck and to the rear thereof having means adapted to catch the discharged and up-ended sheaves, a follower member located near the edge of the binder deck movable upwardly as a whole from the binder deck and having means to support the stubbleward side of the head of each sheaf while passing from the discharging and up-ending mechanism to the sheaf collecting member, a pivoted arm supporting the follower member and connected to the collecting member, a cam operatively connected to the arm in such position that when rotated it will raise the arm, and a drive shaft supporting the cam.

3. In a sheaf shocker and in combination, a binder having a binder deck, a sheaf collecting member supported adjacent to the binder deck and to the rear thereof having means adapted to catch the discharged and up-ended sheaves, a follower member located near the edge of the binder deck in the form of a curved plate having an end flared in a stubbleward direction and movable upwardly as a whole from the binder deck and having means to support the stubbleward side of the head of each sheaf while passing from the discharging and up-ending mechanism to the sheaf collecting member, and means for raising said member.

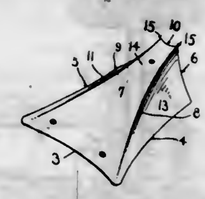
4. In a sheaf shocker and in combination, a binder having a binder deck, a sheaf collecting member supported adjacent to the binder deck and to the rear thereof having a plurality of radial arms with means for retaining the sheaves thereon, central supporting means, and a supporting plate carried by one of the arms extending inwardly therefrom and adapted to form an abutment for the sheaves.

5. In a sheaf shocker and in combination, a binder having a binder deck, a sheaf collecting member supported adjacent to the binder deck and to the rear thereof having a plurality of radial arms with means for retaining the sheaves thereon, central supporting means and a supporting plate carried by one of the arms formed of flexible sheet metal and extending inwardly to form an abutment for the sheaves.

[Claims 6 to 12 not printed in the Gazette.]

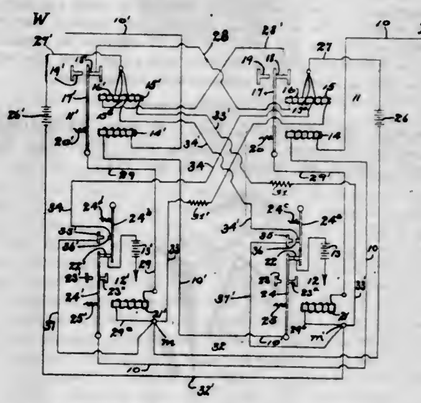
1,106,000. ARCH-SUPPORT. JOHN D. PRICE, Cleveland, Ohio, assignor of one-third to H. G. Powell and one-third to Henry Spies, Cleveland, Ohio. Filed June 13, 1912. Serial No. 703,531. (Cl. 36—76.)

An arch support of the character described comprising a resilient block arranged to be detachably secured to the sole of a shoe beneath the arch thereof, with its inner end abutting the front face of the heel, said block having the opposite sides thereof tapered inwardly and concavo shaped whereby to produce a narrowed tread surface and thereby to increase the resiliency of said support, said block being



gradually tapered from its central portion to the outer end thereof, said tread surface being dished transversely to form two sharp edges whereby to augment the resiliency of said block.

1,106,001. TELEGRAPH-REPEATER. GEORGE L. RAWDON, Cleveland, Ohio. Filed Apr. 24, 1913. Serial No. 763,190. (Cl. 178—71.)



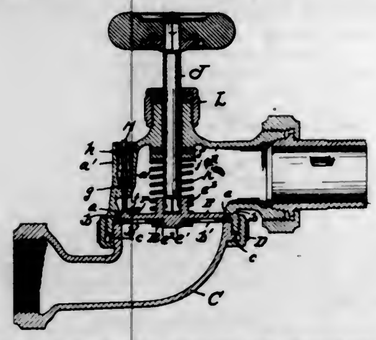
1. In a telegraph repeater, a pair of receiving relays, each having a repeating sounder, a main magnet and a triple wound magnet and means whereby the armature lever of one relay and the armature lever of the same relay's corresponding repeating sounder controls directly two coils of the triple wound magnet of the other relay.

2. In a telegraph repeater, a pair of repeating sounders, a pair of receiving relays, each relay having a main magnet and a triple wound magnet, two coils of said triple wound magnet being equal and oppositely wound, means whereby the armature lever of one relay controls directly one of said two equal and oppositely wound coils of the triple wound magnet of the other relay, and means whereby the third coil or remaining coil of the same triple wound magnet is controlled directly by the armature lever of one of the said repeating sounders.

3. In a telegraph repeater, a pair of receiving relays, each having a repeating sounder, a main magnet and a triple wound magnet, two coils of which are equal and oppositely wound, means whereby the armature lever of one relay controls directly the equal coil of the triple wound magnet of the other relay which is wound oppositely from the equal coil which is always intact and means whereby the third or remaining coil of the same triple wound magnet is controlled directly by the armature lever of one of the repeating sounders.

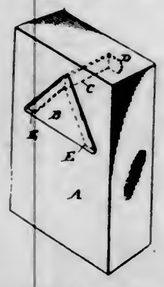
4. In a telegraph repeater, a receiving relay having a main magnet and a triple wound magnet, the triple wound magnet having two equal and oppositely wound coils, one of which is always intact, and a third coil which is wound in the same direction as the coil which is always intact of the said two equal and oppositely wound coils.

1,106,002. VALVE. OLIVER SCHLEMMER, Cincinnati, Ohio. Filed Dec. 7, 1908. Serial No. 466,375. (Cl. 137—7.)



In a device of the class described, the combination of a valve casing; a valve seat in the casing having a port; a rotatable valve having a port adapted to register with the seat port; a permanent stop adapted to limit the movement of the valve at closing position; an inclined curved surface carried by the valve; a rod H adapted to contact with said inclined curved surface, and a pin *h* on the rod taking into a screw slot, substantially as specified.

1,106,003. SUPPORTING DEVICE FOR PACKAGES. ARTHUR H. SCOTT, Philadelphia, Pa. Filed Jan. 24, 1907. Serial No. 353,850. (Cl. 24—154.)



A supporting device for a paper packet which consists of an inverted socket formed of sheet metal having its edges bent over to form oblique grooves and having the metal of one of said edges extended at right angles to and wholly to one side of the plane of the socket to form a tongue for securing the paper packet to the socket.

1,106,004. CONTAINER. CHARLES W. SHEVLIN, Chicago, Ill. Filed Dec. 5, 1912. Serial No. 735,022. (Cl. 93—81.)

1. A method for forming containers comprising the thorough and homogeneous infusion and impregnation of a strip of fibrous material with a cementitious moisture resisting material, the formation of a cylindrical shell, the insertion of said infused strip within said shell, and the pressing of said infused strip so that it will contact with and adhere to the walls of said shell.

2. A method for forming containers comprising the thorough and homogeneous infusion and impregnation of a strip of fibrous material with wax, the formation of a cylindrical shell, the insertion of said waxed strip within said shell, and the pressing and heating thereof so that it will contact with and adhere to the walls of said shell.

3. A method for forming containers comprising the thorough and homogeneous infusion and impregnation of a portion of a strip of fibrous material with a cementitious moisture resisting material, the formation of a cylindrical shell from the unimpregnated portion of said strip, the insertion of the impregnated portion of said strip within said shell, and the pressing thereof so that it will contact with and adhere to the walls of said shell.



4. A method for forming containers comprising the thorough and homogeneous infusion and impregnation of a portion of a strip of fibrous material with wax, the formation of a cylindrical shell from the unimpregnated portion of said strip, the insertion of the waxed portion of said strip within said shell, and the pressing and heating thereof so that it will contact with and adhere to the walls of said shell.

1,106,005. CONTAINER. CHARLES W. SHEVLIN, Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,175. Renewed Mar. 30, 1914. Serial No. 828,389. (Cl. 229—5.)

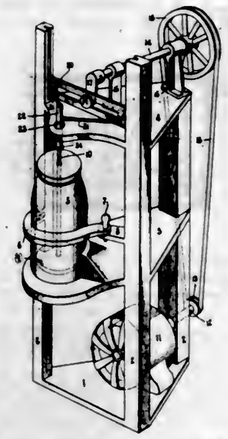


1. A container comprising an outer casing of paper or paper board, and a fibrous lining the fiber of which is completely and homogeneously infused and impregnated with paraffin wax, said lining being within said casing and contacting therewith and adhering thereto throughout its entire extent.

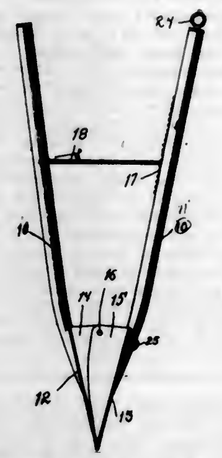
2. A container comprising an outer casing of paper or paper board, and a fibrous lining the fiber of which is completely and homogeneously infused and impregnated with paraffin wax, said lining being within said casing and contacting therewith and adhering thereto throughout its entire extent, and a closure for the bottom thereof comprising a disk having an annular right angle flange adapted to assemble with the walls of said package, and a closure for the top thereof comprising a ring having an annular right angle flange adapted to assemble with the walls of said casing, and a disk adapted to fit within the right angle flange of said ring.

1,106,006. MECHANISM FOR TRANSMITTING MOTION. ORRIE B. SHORES, St. Louis, Mo. Filed Apr. 5, 1913. Serial No. 759,056. (Cl. 74—5.)

A mechanism for transmitting motion comprising, a rotatable shaft, a crank fixed to said shaft provided with a pin, a pair of posts provided with vertical guides, a cross head 20 the ends of which are slidably fitted to said guides, said cross head 20 being formed of a sheet of thin material provided with a horizontal slot in which the pin of said crank operates, a sleeve 22 adapted to receive a reciprocating member, and a pair of converging horizontal connecting arms one of which connects the upper portion of said sleeve to the upper portion of said cross head near one end of the latter, the other connecting rod constituting a connection between the lower portion of said sleeve and the opposite end of said cross head, the sheet of thin material forming said cross head being reinforced by said guides at the points where said connecting arms are secured to the crosshead.



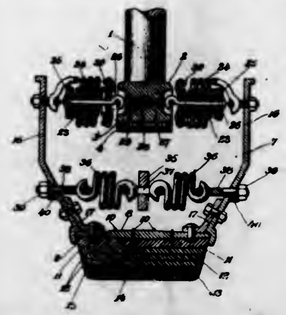
1,106,007. FIRE-STARTER. GEORGE T. SIMMONS, Janesville, Wis. Filed June 5, 1913. Serial No. 772,010. (Cl. 44—2.)



1. In a fire starting device, a pair of flanged members pivotally connected, offset tubular handles connected to the pivoted members, one of said members having an opening therethrough, a slidable perforated plate mounted on one of the pivoted members and arranged for movement over the opening, and an operating means disposed longitudinally through one of the handles and connected to the plate.

2. In a fire starting device, a pair of scoop-like structures pivotally connected, handles connected to the scoop-like members and slightly offset therefrom, means for spreading the handles apart to hold the scoop-like members in closed position, one of said scoop-like members having an opening, a plate slidably mounted within the member and provided with openings for registry with the first named opening, and a rod connected to the plate and extending longitudinally through one of the handles.

1,106,008. SPRING-WHEEL FOR VEHICLES. JOHN F. SIPE and HARRY E. SIPE, New York, N. Y. Filed June 21, 1909. Serial No. 503,276. (Cl. 152—32.)



1. In a spring wheel, the combination of a hub member, a thread member, and a plurality of series of springs between the two members, arranged parallel with the axis of the wheel, some of the springs of each series being on one side of the plane of the wheel and the other springs of said series being on the other side of the plane of the wheel, one or more of the series of springs being attached to both members so as to be in operation all of the time, and one or more of the series of springs being attached to one of the members only and arranged in such relation to the other member as to be moved thereby and brought into operation subsequently to the other series of springs.

2. In a spring wheel, the combination of a hub member, a thread member, and several series of springs between the two members, the springs being set parallel to the axis of the wheel, some of the springs of each series being on one side of the plane of the wheel, and the other springs of that series being on the other side of the plane of the wheel, the springs of the several series being arranged around the wheel alternately, one or more series of springs being attached to both members, and one or more series being attached to one of the members only, and arranged in such relation to the other member as to be moved thereby and brought into operation subsequently to the other series of springs.

3. In a spring wheel, the combination of a hub member, a thread member, and several series of springs between the two members, one series of springs being attached to both members, and a second series of springs connected with one of the members only and passing through openings in the other member so as to be brought into operation after the first series, and a third series of double springs, each double spring consisting of a lighter spring and a heavier spring, one within the other, the lighter spring being attached to one member and the heavier spring to the other, whereby the lighter spring is first brought into operation and then the heavier one, substantially as set forth.

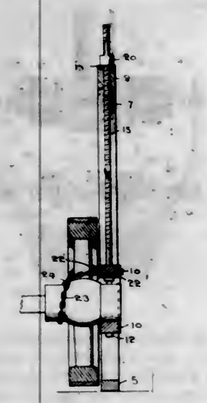
4. In a spring wheel the combination of a hub member, a tread member and a series of double springs connecting the two members, each double spring consisting of a lighter spring and a heavier spring one within the other and arranged to act in an endwise direction, the lighter spring being attached to one member and the heavier spring to the other, whereby the lighter spring is first brought into operation and then the heavier one, substantially as set forth.

5. In a spring wheel the combination of a hub member, a tread member and a series of double springs connecting

the two members, each double spring consisting of a lighter spring and a heavier spring one within the other, the lighter spring being attached to one member and the heavier spring to the other, and means for adjusting the springs relatively to each other, whereby the lighter spring is first brought into operation and then the heavier one, substantially as set forth.

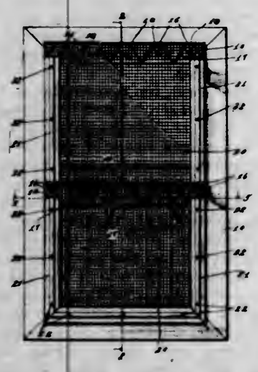
[Claims 6 to 12 not printed in the Gazette.]

1,106,009. SCREW-JACK. JOHN W. SNIDER, Denton, N. C. Filed Oct. 10, 1913. Serial No. 794,480. (Cl. 57—44.)



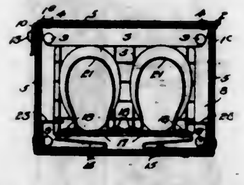
A lifting jack comprising a base, guide bars supported thereby, a cross bar connecting said guide bars, a lifting frame slidable between said guide bars, said frame comprising spaced cross bars, and spaced vertical bars connecting said cross bars, a lifting screw connected to said lifting frame, said screw extending through the cross bar secured to the upper ends of said guide bars, and adapted to be operated by means of a nut, a chain adapted to pass around the hub of a wheel for securing the same to the lifting frame, said hub adapted to rest against the lower cross bar of said frame, and securing means for said chain.

1,106,010. FLY-SCREEN. WILLIAM STOLLEY, Vivian, S. D. Filed Aug. 16, 1913. Serial No. 785,083. (Cl. 156—37.)



A screen comprising a frame provided with an upper and lower opening, substantially V-shaped spacing blocks adjacent the side edges of said openings in said frame, fly exit bars adjacent the upper edges of said openings, wire mesh over said spacing blocks and said fly exit bars covering said openings, said wire mesh having openings adjacent said fly exit bars, strips positioned on said frame and said spacing blocks, said upper strips having their lower ends fitting beneath the upper tapered face of said lower fly exit bar.

1,106,011. SHIPPING-CRATE. MAX SUBERT, New York, N. Y., assignor to Farm Products Distributing Company, New York, N. Y., a Corporation of New York. Filed Feb. 20, 1914. Serial No. 819,985. (Cl. 217—24.)



1. In a receptacle for the shipment of eggs a within-contained egg-supporting tray comprising two-ply bars spaced apart and arranged in pairs, in combination with a plurality of wire loops also arranged in coacting pairs having angular base extensions crimped into position between the plies of each of said bars said loops constituting individual egg holders.

2. In a receptacle for the shipment of eggs a within-contained egg-supporting tray comprising two-play sheet metal bars spaced apart and arranged in pairs, in combination with a plurality of spring wire loops also arranged in coacting pairs having oppositely disposed base extensions at an angle to the plane of said loop and crimped into position between the plies of each of said bars.

3. In a receptacle for the shipment of eggs a within-contained egg-supporting tray comprising a plurality of two-play sheet metal bars spaced apart and arranged in pairs, in combination with upwardly cambered space-bars connecting said sheet metal bars, and a plurality of wire loops also arranged in coacting pairs each loop having angular base extensions crimped into position between the plies of both sheet metal bars of each pair.

4. In a receptacle for the shipment of eggs a within-contained egg-supporting tray comprising two-ply bars spaced apart and arranged in pairs, in combination with a plurality of wire loops also arranged in coacting pairs each loop having angular base extensions crimped into position between the plies of both sheet metal bars of each pair, and springs interposed between said egg-supporting tray and the bottom of the egg receptacle.

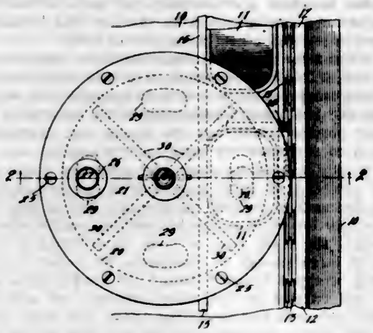
5. In a receptacle for the shipment of eggs a within-contained egg-supporting tray comprising longitudinally arranged two-ply bars spaced apart and arranged in pairs upon opposite sides of the longitudinal center of the receptacle, in combination with upwardly cambered space-bars connecting said longitudinal bars, a plurality of wire loops also arranged in coacting pairs each loop having angular base extensions crimped into position between the plies of both sheet metal bars of each pair, and shock absorbing springs secured to the underside of said tray at approximately its longitudinal center.

[Claims 6 to 8 not printed in the Gazette.]

1,106,012. MEASURING AND FEEDING MECHANISM. WILLIAM E. TAYLOR, Eastport, Me., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 23, 1911. Serial No. 656,210. (Cl. 226—17.)

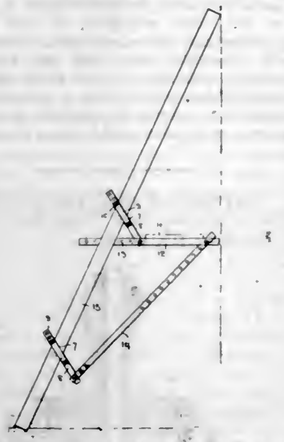
1. A can filling machine comprising, in combination: a measuring and filling mechanism; a vertically extending actuating shaft for said mechanism and having a star wheel thereon; a conveyer having a path of travel below the filling mechanism; a table adapted to support the cans as the same are being moved by the conveyer and at such a level that the cans will engage and operate the star wheel, said mechanism being also supported by said table, substantially as specified.

2. A can filling machine comprising, in combination: a casing having an integral circumferential flange and provided with an opening; a plate detachably secured to said casing and having also an opening out of alinement with said first named opening; a measuring disk rotatable between and engaging the inner surface of both said



casing and said plate and having a plurality of openings therein adapted to aline successively with each of said openings in the casing and plate; an actuating shaft for said measuring disk; means for conveying cans beneath one of said openings; and means for operating said actuating shaft, substantially as specified.

1,106,013. SCAFFOLDING OR ATTACHMENT FOR LADDERS. EDWARD F. VALLILEE, Syracuse, N. Y. Filed Oct. 16, 1913. Serial No. 795,504. (Cl. 20—85.)

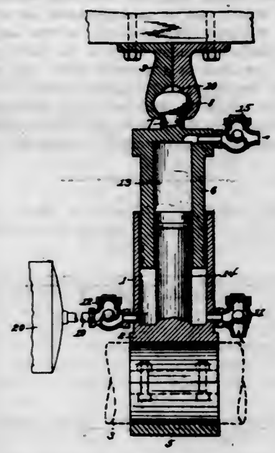


1. In a scaffold support, a bracket consisting of a body, laterally extending arms at the ends of said body, a removable rod connecting said arms, a shank extending from said body oppositely from said arms, and projections on said body intermediate said arms for engaging the rung of a ladder.

2. In a scaffold support, a bracket consisting of a body, laterally extending arms at the ends of said body, a removable rod connecting said arms, a shank extending from said body oppositely from said arms, and means intermediate said arms for engaging the rung of a ladder.

3. In a scaffold support, a bracket consisting of a body, laterally extending arms at the ends of said body each having a plurality of spaced apertures in the free ends thereof, a removable rod positioned through said apertures and connecting said arms, a shank extending from said body oppositely from said arms, and a plurality of projections on said body intermediate said arms for engaging the rung of the ladder.

1,106,014. SHOCK-ABSORBER. RAYMOND R. WALKER, Follansbee, W. Va., assignor of one-half to David Walker, Follansbee, W. Va. Filed Nov. 24, 1913. Serial No. 802,654. (Cl. 21—105.)



1. A shock absorber comprising a cylinder having its lower end adapted for mounting upon a vehicle axle and having an open upper end, means admitting air to and exhausting air from said cylinder, a plunger operating within said cylinder, said plunger being hollow and having its lower end open, an exhaust check-valve in the upper end of said plunger, a stem concentrically disposed within and in fixed relation to said cylinder and operating within the hollow of said plunger whereby a partial vacuum is formed upon withdrawal movement of said stem, and means for connecting said plunger to a vehicle body.

2. A shock absorber comprising a cylinder having its lower end adapted for mounting upon a vehicle axle and having an open upper end, means admitting air to and exhausting air from said cylinder, a plunger operating within said cylinder, said plunger being hollow and having its lower end open, an exhaust check-valve in the upper end of said plunger, a stem concentrically disposed within and having fixed relation to said cylinder and operating within the hollow of said plunger whereby a partial vacuum is formed upon withdrawal movement of said stem, and means for connecting said plunger to a vehicle body, said means permitting lateral movement of the body with respect to said plunger.

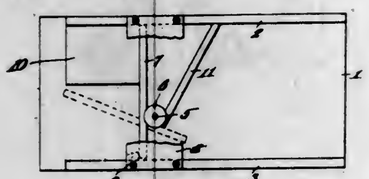
3. A shock absorber comprising a cylinder having its lower end adapted for mounting upon a vehicle axle and having an open upper end, means admitting air to and exhausting air from said cylinder, a plunger operating within said cylinder, said plunger being hollow and having its lower end open, an exhaust check-valve in the upper end of said plunger, a stem concentrically disposed within and having fixed relation to said cylinder and operating within the hollow of said plunger whereby a partial vacuum is formed upon withdrawal movement of said stem, and means for connecting said plunger to a vehicle body, a member adapted for mounting on a vehicle body, and a ball-and-socket connection between said plunger and said member.

4. A shock absorber comprising a cylinder having its lower end adapted for mounting upon a vehicle axle and having an open upper end, means admitting air to and exhausting air from said cylinder, a plunger operating within said cylinder, said plunger being hollow and having its lower end open, an exhaust check valve in the upper end of said plunger, a stem formed integral with and extending vertically from the base of said cylinder, said stem being concentrically disposed within said cylinder and operating within the hollow of said plunger whereby a partial vacuum is formed upon withdrawal movement of said

stem, and means for connecting said plunger to a vehicle body.

5. A shock absorber comprising a cylinder having its lower end adapted for mounting upon a vehicle axle and having an open upper end, air inlet and exhaust check-valves in the lower end of said cylinder, an upright stationary stem disposed concentrically within said cylinder, a hollow cylindrical plunger adapted for having its upper end flexibly connected to a vehicle body, and an exhaust check-valve in the upper end of said plunger, said plunger operating snugly between said stem and the cylinder wall and coöperating with said stem for producing a partial vacuum within said plunger upon withdrawal movement of the latter.

1,106,015. WASTEWAY. ROBERT M. WALL, Americus, Ga. Filed Apr. 19, 1913. Serial No. 762,332. (Cl. 61—47.)



1. A waste way comprising a bottom and sides, a horizontally swinging gate pivoted between the sides, and a deflector extending from one side to the pivot point of the gate.

2. A waste way comprising a bottom and sides, a horizontally swinging gate pivoted between the sides, and a deflector extending diagonally from one side to the pivot point of the gate.

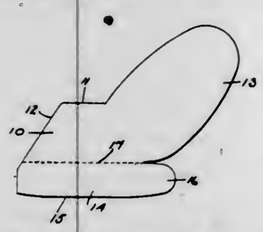
3. A waste way comprising a bottom and sides, a horizontally swinging gate pivoted between the sides, one end of said gate being cut away, and a deflector extending from one side to the pivot point of the gate.

4. A waste way comprising a bottom and sides, a horizontally swinging gate pivoted between the sides, one end of said gate being cut away, and a block over which the cut away portion of the gate swings.

5. A waste way comprising a bottom and sides, a horizontally swinging gate pivoted between the sides, and a deflector extending diagonally from one side to the pivot point of the gate, and limiting the opening movement of the gate.

[Claims 6 and 7 not printed in the Gazette.]

1,106,016. COMBINED HEAD-SHIELD AND BAND FOR CIGARS. DAVID WEISS, Cleveland, Ohio. Filed May 17, 1912. Serial No. 697,849. (Cl. 131—11.)

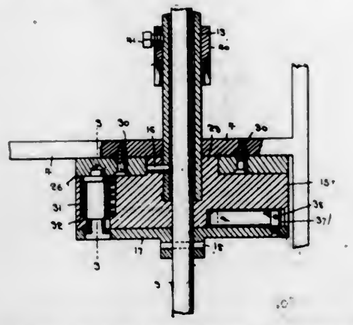


1. A blank for forming a combined band and shield for a cigar, said blank being composed of thin flexible material and comprising a main part or body adapted to be wrapped around the cigar and terminating at its base in a band-forming portion which has the length and arrangement required to surround the cigar upon wrapping said main part or body around the cigar and comprises a tab which forms one end of said band-forming portion, said tab being arranged to overlap the opposite end of said band-forming portion when said band-forming portion surrounds the cigar, the main part or body terminating in a flap which is large enough in dimensions to render it capable of being wrapped spirally around the head-portion of the cigar and twisted at the outer extremity of said head-portion, and said flap extending from said main part or body in the direction in which the aforesaid tab projects and being arranged over and spaced from the top edge of said tab and projecting above said main part or body.

2. A blank for forming a combined band and shield for a cigar, said blank being composed of thin flexible material and comprising a main part or body adapted to be wrapped around the cigar and terminating at its base in a band-forming portion which has the length and arrangement required to surround the cigar upon wrapping said main part or body around the cigar and comprises a tab which forms one end of said band-forming portion, said tab being arranged to overlap the opposite end of said band-forming portion when said band-forming portion surrounds the cigar, the main part or body terminating in a flap which is large enough in dimensions to render it capable of being wrapped spirally around the head-portion of the cigar and twisted at the outer extremity of said head-portion, and said flap projecting above said main part or body and being arranged over the top edge of the aforesaid tab and substantially oval-shaped.

3. A blank for forming a combined band and shield for a cigar, said blank being composed of thin flexible material and comprising a main part or body adapted to be wrapped around the cigar and terminating at its base in a band-forming portion which has the length and arrangement required to surround the cigar upon wrapping said main part or body around the cigar, said main part or body having a top edge which is substantially parallel with said band-forming portion and terminating in a flap which is large enough in dimensions to render it capable of being wrapped spirally around the head-portion of the cigar and twisted at the outer extremity of said head-portion, said flap projecting above and being arranged at one end of the aforesaid edge, and the aforesaid band-forming portion comprising a tab which forms one end of said band-forming portion and is arranged under said flap and adapted to overlap the opposite end of said band-forming portion when said band-forming portion surrounds the cigar.

1,106,017. EXTENSIBLE BILLIARD-TABLE. CYRUS F. WENDELKEN, Newark, Ohio. Filed July 12, 1913. Serial No. 778,684. (Cl. 45—26.)

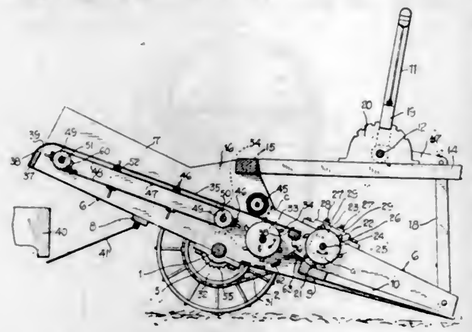


1. The herein described billiard table comprising a table stand and a movable top therefor, a rack bar secured to the under side of said top, a hollow shaft rotatably mounted in said stand, a pinion on said hollow shaft adapted to actuate said rack bar, a shaft extending through said hollow shaft and journaled in said stand and yieldable driving connections between said last mentioned shaft and said hollow shaft.

2. The herein described billiard table comprising a table stand and a movable top therefor, a rack bar secured to said top, a hollow shaft rotatably supported in said stand, a pinion on said hollow shaft adapted to actuate said rack bar, a second shaft rotatable in said hollow shaft and journaled in said stand, yieldable driving connections between said second shaft and said hollow shaft, and means for locking said hollow shaft against rotation.

3. The herein described billiard table comprising a table stand and a movable top therefor, a rack bar secured to said top, a hollow shaft rotatably supported in said stand, a pinion on said hollow shaft adapted to actuate said rack bar, a second shaft rotatable in said hollow shaft, yieldable driving connections between said hollow shaft and said second shaft, and means for automatically locking said hollow shaft against movement imparted through said rack bar.

1,106,018. HARVESTING-MACHINE. ISHAM F. WILCOXSON, Dryden, Okla., assignor of one-half to George W. Metcalf, Dryden, Okla. Filed Sept. 15, 1913. Serial No. 789,910. (Cl. 56—1.)

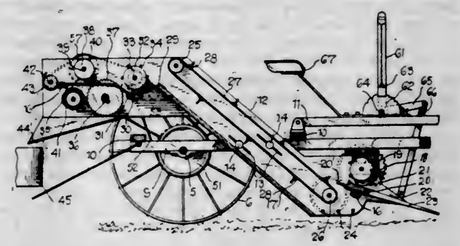


1. A device of the character described including a frame, forwardly projecting teeth positioned at the forward portion of the frame, a toothed roller carried by the frame adjacent the inner ends of the teeth, a second toothed roller carried by the frame and positioned to the rear of the first named roller and in close proximity thereto, spaced rods extending rearwardly of the frame and above the second roller and between which the teeth of the second roller project, a brush roller mounted above the rods in close proximity to the second named roller, and means for rotating the rollers.

2. A device of the character described including a frame, forwardly projecting teeth positioned at the forward portion of the frame, a toothed roller carried by the frame adjacent the inner ends of the teeth, a second toothed roller carried by the frame and positioned to the rear of the first named roller and in close proximity thereto, spaced rods extending rearwardly of the frame and above the second roller and between which the teeth of the second roller project, a brush roller mounted above the rods in close proximity to the second named roller, means for rotating the rollers, and a conveyer positioned beneath the rods rearwardly of the second roller and provided with teeth projecting therebetween.

1,106,019. HARVESTING-MACHINE. ISHAM F. WILCOXSON, Dryden, Okla., assignor of one-half to George W. Metcalf, Dryden, Okla. Filed Nov. 26, 1913. Serial No. 803,229. (Cl. 56—6.)

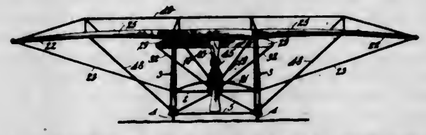
1. In a machine of the character described, a frame, means mounted in the forward end of the frame to strip the cotton from the stalks, an inclined apron arranged in said frame, a toothed roller mounted in the rear end of the frame at the upper end of said apron, a toothed bar disposed beneath said roller, a plurality of spaced parallel rods extending rearwardly from the toothed bar, a transversely disposed conveyer arranged at the rear ends of said rods, a plurality of revoluble saws mounted in the frame beneath said rods and projecting upwardly through the spaces between the same, a toothed roller mounted above the rods rearwardly of the saws, a rotary brush mounted in the frame beneath said rods and contiguous to the saws to engage and remove the cotton therefrom, a toothed roller to direct the bolls rearwardly over the rods to the transverse conveyer whereby they are discharged from the machine.



2. In a machine of the character described, a frame, a toothed cylinder mounted in the forward end of said frame, a plurality of longitudinally disposed tines arranged below and extending in advance of said cylinder, a rearwardly and upwardly inclined endless apron mounted in the frame, a plurality of rods extending rearwardly from the tines to direct the cotton upon the apron, a plurality of transversely disposed rods mounted in the frame beneath the lower end of said apron, and means mounted in the frame rearwardly of the upper end of the apron to receive the cotton and separate the same from the bolls.

3. In a machine of the character described, a frame, a toothed cylinder mounted in the forward end of said frame, a toothed bar arranged below said cylinder, a plurality of longitudinally disposed tines extending forwardly from said bar, a rearwardly extending upwardly inclined apron mounted in the frame, a plurality of spaced rearwardly extending rods fixed to said bar to direct the cotton upon the apron, a plurality of spaced transverse rods mounted in the frame below the forward end of the apron, and means mounted in the rear end of said frame at the upper end of the apron to receive the cotton therefrom and separate the cotton from the bolls and discharge the same from the machine.

1,106,020. AEROPLANE. GEORGE WILDS, Detroit, Mich. Filed July 3, 1913. Serial No. 777,231. (Cl. 244—14.)



1. A flying machine comprising a main frame disposed longitudinally in the line of flight of the machine, a main plane at an interval above the frame with wing planes forming lateral extensions thereof, oscillatory on a main axis transverse to the frame, the wings being independently adjustable angularly on axes transverse to the main axis, a tail plane articulated to the main plane as an extension thereof and pivoted on an axis parallel to the main axis, means for propelling the machine mounted on the frame, and means for manipulating the planes from an operator's station on the frame.

2. A flying machine comprising a main frame disposed longitudinally in the line of flight of the machine, a main plane at an interval above the frame with wing planes forming lateral extension thereof, oscillatory on the main axis transverse to the frame, the wings being independently adjustable angularly on axes transverse to the main axis, a tail plane articulated to the main plane as an extension thereof and pivoted on an axis parallel to the main axis, means for propelling the machine mounted on the frame, and means for manipulating the planes from an operator's station on the frame, the center of gravity of the machine lying below the planes and substantially in vertical alinement with the center of effort of the planes.

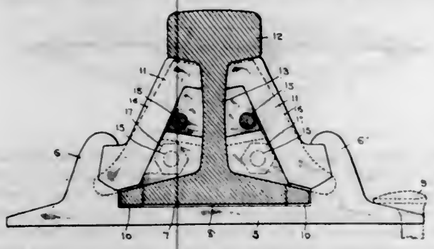
3. A flying machine comprising a main frame disposed longitudinally in the line of flight of the machine, a main plane at an interval above the frame oscillatory on a main axis transverse to the frame, wing planes articulated along their inner margins to the main plane as lateral extensions thereof and tiltable on the main axis with said plane, the wings being independently adjustable angularly on axes transverse to the main axis, a tail plane pivoted on an axis transverse to the main frame and articulated at its forward end to the rear end of the main plane as an extension thereof, means mounted on the main frame for propelling the machine, and means for manipulating the planes from an operator's station on the main frame.

4. A flying machine comprising a main frame disposed longitudinally in the line of flight of the machine, a main plane substantially parallel to the main frame at an interval thereover and angularly movable on an axis transverse to the main frame, wing planes forming lateral extensions of the main plane to which they are articulated to tilt on the same axis of motion, the wings being likewise adjustable angularly on axes transverse to the axis of motion of the main plane, and a tail plane forming an extension of the main plane to which it is articulated and swinging on an axis parallel to the axis of motion of the main plane, the center of effort of the planes being above and substantially in vertical alinement with the center of gravity of the planes.

5. A flying machine comprising a main frame and a substantially unbroken monoplane secured at an interval above the frame, said mono-plane comprising a main plane that is tiltable on an axis transverse to the frame, wings forming lateral extensions of the main plane likewise tiltable on the same axis and independently adjustable angularly on axes transverse to said axis, a tail plane tiltable on an axis parallel to the axis of motion of the main plane, rudder planes forming lateral extensions of the tail plane and swinging on axes substantially co-incident with the margins of the tail plane, and means for manipulating the planes.

[Claims 6 to 19 not printed in the Gazette.]

1,106,021. RAIL-JOINT. JEFFERSON D. YOUNG, Chattanooga, Okla., assignor to The Boltless Rail Joint Company, Wilmington, Del., a Corporation. Filed Nov. 22, 1913. Serial No. 802,403. (Cl. 239—6.)



1. In combination, a supporting base having longitudinal and spaced flanges, brace members adapted to engage between said flanges and the under side of treads of rails, expansive devices adapted to be positioned between the webs of the rails and said bracing members.

2. In combination, a supporting base having spaced longitudinal flanges, rail ends positioned between said flanges, brace members disposed between the treads of said rails and said flanges and expansive devices positioned between said brace members and the opposite sides of the base of said rails.

3. In combination, a supporting base having spaced longitudinal flanges, rail ends positioned between said flanges, brace members disposed between said flanges and the treads of said rails, expansive devices positioned between said brace members and the opposite sides of the bases of said rails, and means for securing said expansible devices in adjusted position.

4. In combination, a base having spaced longitudinal flanges, rail ends positioned between said flanges, brace members disposed between the treads of said rails and said flanges, expansive devices at the meeting point of said rail ends disposed between said brace members and the opposite sides of the bases of said rails.

5. In combination, a base having spaced longitudinal flanges, rail ends positioned between said flanges, brace members positioned between the treads of said rails and said flanges, pairs of oppositely arranged wedge members positioned on opposite sides of the webs of said rails and between the bases of said rails and said brace members, plates disposed over the ends of said brace members and base and means extending through the said plates for drawing said wedge members.

1,106,022. METAL RECEPTACLE. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed Dec. 9, 1912. Serial No. 735,863. (Cl. 220—115.)



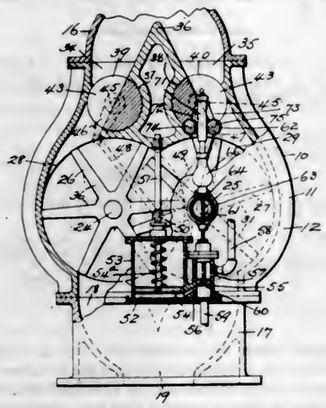
1. The combination with a metal receptacle having a hinged cover, of means for operating the cover, including a rod having its upper end connected to the lid, a foot treadle formed by bending the extreme lower end of the rod, the rear portion of the treadle and the adjacent portion of the rod being in spaced relation to provide a sliding support and guide for the rod, and a support connected to the receptacle for detachably receiving the bent lower end of the rod so that the rod may be vertically slid to open and close the cover, said rod being capable of a lateral swinging movement to connect and disconnect the support engaging guide from the support.

2. A metal receptacle, including a cylindrical body, a plurality of legs supporting the body, each leg being formed of a metallic strip and bent to have a vertical terminal for connection to the outer face of the receptacle, a diametrically disposed plate spanning the top of the body, a lid hingedly connected to said plate, a crank carried by the lid, a rod having its upper end connected to the crank, a foot treadle formed by bending the extreme lower end of the rod, the rear portion of the treadle and adjacent portion of the rod being in spaced relation and providing a slidable support and guide for the rod, said bent end of the rod fitting detachably upon the vertical terminal of the leg that is disposed directly below the crank.

3. A metal receptacle, including a cylindrical body, a plurality of legs supporting the body, each leg being formed of a metallic strip and bent to have a vertical terminal for connection to the outer face of the receptacle, a diametrically disposed plate spanning the top of the body, a lid hingedly connected to said plate, a crank carried by the lid, a rod having its upper end connected to the crank, a foot treadle formed by bending the extreme lower end of the rod, the rear portion of the treadle and adjacent portion of the rod being in spaced relation and providing a slidable support and guide for the rod, said bent end of the rod fitting detachably upon the vertical terminal of the leg that is directly below the crank, said rod being capable of a lateral swinging movement to connect and disconnect the leg engaging guide from the leg of the receptacle.

4. A metal receptacle, including a cylindrical body, a plurality of legs supporting the body, each leg being formed of a metallic strip and bent to have a vertical terminal for connection to the outer face of the receptacle, a diametrically disposed plate spanning the top of the body, a lid hingedly connected to said plate, a crank carried by the lid, a rod having its upper end swingingly connected to the crank, the lower end of the rod being bent to form a horizontal loop and a resilient hook for slidably and detachably engaging the vertical terminal of the leg directly below the crank, the engagement thereof normally holding the rod against swinging movement but permitting the rod to be detached from the leg when swung and also permitting a vertical sliding of the rod relatively to the leg.

1,106,023. HYDRAULIC ROTARY ENGINE. WILLIAM F. ANDREWS, Worcester, Mass., assignor of one-half to George Roper, Brooklyn, N. Y. Filed Oct. 26, 1912. Serial No. 727,881. (Cl. 138—3.)



1. In a hydraulic rotary engine, a casing having an inlet in its top and an outlet in its base; a shaft journaled in the casing, a drive shaft also journaled in the casing; two wheels, each held upon one of the shafts and each of said wheels having a plurality of radially disposed blades which are adapted to intersect when the wheels are rotated; a gear wheel held upon the first shaft; a gear wheel upon the drive shaft and meshing with the gear wheel upon the first shaft; a partition provided centrally of the upper part of the casing whereby a passage is provided between the partition and the opposed walls of the casing; two valves each rotatably held in the sides of the partition and each adapted to control one of said passages; a regulator provided exteriorly of the casing, means connecting the regulator to each of the valves whereby the rotation of the valves may be controlled by said regulator; a governor provided exteriorly of the casing; means connecting the governor with the drive shaft of the engine so as to be operated when the drive shaft is revolved; and means connecting the governor and the regulator whereby the operation of said regulator may be controlled.

2. In a hydraulic rotary engine, a casing having an inlet in its top and an outlet in its base; a shaft journaled in the casing; a drive shaft also journaled in the casing; two wheels, each held upon one of the shafts and each of said wheels having a plurality of radially disposed blades which are adapted to intersect when the wheels are rotated; a gear wheel held upon the first shaft; a gear wheel held upon the drive shaft and meshing with the gear wheel upon the first shaft; a partition provided centrally of the upper part of the casing whereby a passage is provided between the partition and the opposed walls of the casing; two valves each rotatably held in the sides of the partition and each adapted to control one of said passages; a regulator provided exteriorly of the casing, means connecting the regulator to each of the valves whereby the rotation of the valves may be controlled by said regulator; a governor provided exteriorly of the casing; means connecting the governor with the drive shaft of the engine so as to be operated when the drive shaft is revolved; and means connecting the governor and the regulator whereby the operation of said regulator may be controlled.

3. In a hydraulic rotary engine; a casing having an inlet in its top and an outlet in its base; a shaft journaled in the casing; a drive shaft also journaled in the casing; two wheels, each held upon one of the shafts and each of said wheels having a plurality of radially disposed blades which are adapted to intersect when the wheels are rotated; a gear wheel held upon the first shaft; a gear wheel held upon the drive shaft and meshing with the gear wheel upon the first shaft; a wedge-shaped partition provided in the upper part of the casing whereby two passages are provided, said partition having two semi-circular recesses, each provided in one of the sides thereof; two semi-circular valves, each rotatably held in one of the recesses of the partition and each adapted to control one of said recesses; a regulator provided exteriorly upon the front wall of the casing; two cranks, each connecting the regulator to one of the valves whereby the rotation of the valves may be controlled by said regulator; a governor provided also exteriorly of the casing; a bevel gear wheel connected to the governor; a bevel gear wheel provided upon the drive shaft of the engine and meshing with the bevel gear wheel of the governor; and means connecting the governor and the regulator whereby the operation of said regulator may be controlled.

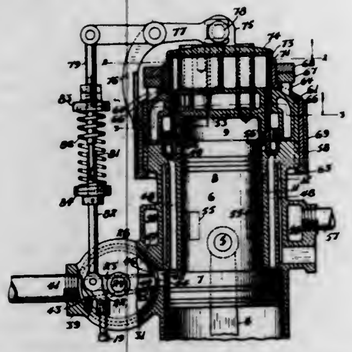
4. In a hydraulic rotary engine; a casing having an inlet and an outlet; a shaft journaled in the casing; a drive shaft also journaled in the casing; two wheels, each held upon one of the shafts and each of said wheels having a plurality of radially disposed blades which are adapted to intersect when the wheels are rotated; a gear wheel held upon the first shaft; a gear wheel held upon the drive shaft and meshing with the gear wheel upon the first shaft; a partition provided in the casing whereby two passages are provided; said partition having two semi-circular recesses, each provided in one of the sides thereof; two semi-circular valves, each rotatably held in one of the recesses of the partition and each adapted to control one of said passages; a cylinder provided exteriorly of the casing; a piston adapted to be reciprocated in the cylinder; means connecting the piston of the cylinder to each of the valves whereby the rotation of the valves may be controlled by the movement of said piston; a governor provided exteriorly of the casing; means connecting the governor with the drive shaft of the engine so as to be operated when the drive shaft is revolved; and means connecting the governor and the cylinder whereby the movement of the piston therein may be controlled.

5. In a hydraulic rotary engine; a casing having an inlet in its top and an outlet in its base; a shaft journaled in the casing; a drive shaft also journaled in the casing; two wheels, each held upon one of the shafts and each of said wheels having a plurality of radially disposed blades which are adapted to intersect when the wheels are rotated; a gear wheel held upon the first shaft; a gear wheel held upon the drive shaft and meshing with the gear wheel upon the first shaft; a partition provided between the front and rear walls in the upper part of the casing whereby two passages are provided; two valves, each adapted to control one of said passages and both of said valves having a short shaft journaled in the walls of the casing; a cylinder provided exteriorly upon the casing; a piston adapted to be reciprocated in the cylinder; two arms, each having one of its ends connected to one of the short shafts of the valves; two arms, each pivotally held upon the opposite end of each of the first arms, and each of said arms having its opposite end pivoted to the rod of the piston of the cylinder; a second cylinder provided upon the wall

of the first cylinder and communicating with said second cylinder by a duct; a valve provided in the second cylinder and having a rod; a governor provided exteriorly of the casing and connected to the rod of the second cylinder; and means connecting the governor with the drive shaft of the engine so as to be operated when said drive shaft is revolved.

[Claims 6 to 10 not printed in the Gazette.]

1,106,024. INTERNAL-COMBUSTION ENGINE. ANTON M. BACH, San Francisco, Cal. Filed June 30, 1913. Serial No. 776,588. (Cl. 123—71.)

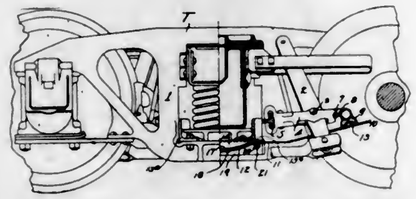


1. In an internal combustion engine, the combination of a cylinder having an upper narrow portion and a lower wider portion, a piston having narrow and wide portions reciprocating respectively in the narrow and wide portions of the cylinder, a crank shaft rotatable by said piston, said cylinder having a port for admitting the combustible mixture into the wide portion of the cylinder adjacent to the end of the narrow portion thereof, and having conduits leading from its wide portion to the farther end of its narrow portion, an annular valve for closing said conduits, a valve casing having inlet and outlet ports communicating respectively with a source of supply of fuel mixture and with the port in the cylinder, a cylindrical valve therein, having ports communicating respectively with said ports, a hollow casting within said valve, having a passage communicating with the inlet and outlet ports of the valve, and a relief chamber adapted to communicate with said conduits to receive the compressed unused gases, and means arranged to be operated by the crank shaft for moving said cylindrical valve within said casing.

2. In an internal combustion engine, the combination of a cylinder having an upper narrow portion and a lower wider portion, a piston having narrow and wide portions reciprocating respectively in the narrow and wide portions of the cylinder, a crank shaft rotatable by said piston, said cylinder having a port for admitting the combustible mixture into the wide portion of the cylinder adjacent to the end of the narrow portion thereof, and having conduits leading from its wide portion to the farther end of its narrow portion, an annular valve for closing said conduits, a valve casing having inlet and outlet ports communicating respectively with a source of supply of fuel mixture and with the port in the cylinder, a cylindrical valve therein, having ports communicating respectively with said ports, a hollow casting within said valve, having a passage communicating with the inlet and outlet ports of the valve, and a relief chamber adapted to communicate with said conduits to receive the compressed unused gases, means arranged to be operated by the crank shaft for moving said cylindrical valve within said casing, and means actuated in unison with said cylindrical valve, for actuating said annular valve.

3. In an internal combustion engine, the combination of a cylinder having an upper narrow portion and a lower wider portion, a piston having narrow and wide portions reciprocating respectively in the narrow and wide portions of the cylinder, a crank shaft rotatable by said piston, said cylinder having a port for admitting the combustible mixture into the wide portion of the cylinder adjacent to the end of the narrow portion thereof, and having conduits leading from its wide portion to the farther end of its narrow portion, an annular valve for closing said conduits, a valve casing having inlet and outlet ports communicating respectively with a source of supply of fuel mixture and with the port in the cylinder, a cylindrical valve therein, having ports communicating respectively with said ports, a hollow casting within said valve, having a passage communicating with the inlet and outlet ports of the valve, and a relief chamber adapted to communicate with said conduits to receive the compressed unused gases, means arranged to be operated by the crank shaft for moving said cylindrical valve within said casing, a spring for holding said annular valve to its seat against the pressure of the compressed combustible mixture, and positive means, actuated in unison with said cylindrical valve, for holding said valve to its seat.

1,106,025. SUSPENSION-SPRING FOR CAR-TRUCKS. CHARLES E. BARBA, Altoona, Pa. Filed Oct. 21, 1913. Serial No. 796,494. (Cl. 188—70.)



1. In a car truck the combination with a truck frame, transverse tie bars, brake beams and brake beam supporting shoes, of a suspension spring arranged longitudinally of the truck having a central concave portion and also having free inclined end portions, and detachable means for rigidly clamping the central concave portion of the spring to the truck.

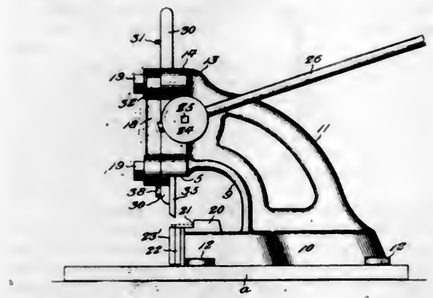
2. In a car truck the combination with the truck frame, transverse tie bars, brake beams and brake beam supporting shoes, of a suspension spring arranged longitudinally of the truck and having a central concave portion and oppositely disposed free inclined end portions, said inclined end portions being unconnected with, but in bearing contact with said brake beam supporting shoes, and detachable means for rigidly clamping the central portion of the spring to the truck.

3. In a car truck the combination with the truck frame, transverse tie bars, brake beams and brake beam supporting shoes, of a clamp detachably fitted to said transverse angle tie bars, a suspension spring having a concave portion adapted to be engaged by the clamp, and means for drawing the spring and clamp together to prevent longitudinal movement of the suspension spring.

4. In a car truck, the combination with the truck frame and brake beam, of a clamp having a suspension spring receiving channel adapted to be fitted to the transverse tie bars of the truck, a suspension spring arranged longitudinally of the truck and lying within the channel of the clamp, and a plurality of bolts which are adapted to bind the spring to the clamp so as to prevent longitudinal movement.

5. In a car truck, the combination with the frame and brake rigging of a clamp having a central channeled portion, the bottom of which presents a convexed suspension spring bearing surface and the depending spaced apart side walls of which are provided with oppositely located alined openings, attaching flanges extending laterally from the channeled portion, a suspension spring arranged longitudinally of the truck and adapted to lie within and be clamped in position within the channeled portion of the binder, and means for entering the openings in the walls of the channel to detachably lock the suspension spring to the clamp.

1,106,026. SLUG-CUTTER. EDGAR F. BARBER, Winston-Salem, N. C. Filed Dec. 5, 1911. Serial No. 664,015. (Cl. 164—47.)



1. A cutter comprising a base having a flat top and a forward straight edge with a stop ledge spaced from said edge, of a knife fixed to said edge having an upper cutting edge one end of which is outwardly curved, said cutting edge along its entire length lying in the same plane as said flat top, a drop knife movably mounted on said base, and means for actuating said drop knife, the cutting edge of said drop knife being beveled and higher at one end said higher beveled end being rounded toward the back, for co-action with said outwardly curved cutting edge.

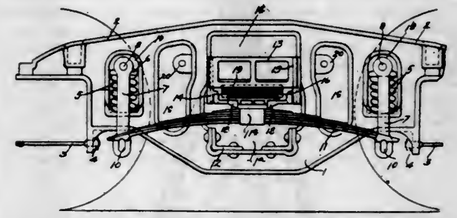
2. A cutter comprising a base having a flat top and a forward straight edge of a knife fixed to said edge having an upper cutting edge one end of which is outwardly curved, said cutting edge along its entire length lying in the same plane as said flat top, a drop knife movably mounted on said base, and means for actuating said drop knife, the cutting edge of said drop knife being beveled and higher at one end said higher beveled end being rounded toward the back; for co-action with said outwardly curved cutting edge.

3. A cutter comprising a base having a flat top and a forward straight edge, a knife fixed to said edge having an upper cutting edge one end of which is outwardly curved, said cutting edge along its entire length lying in the same plane as said flat top, a drop knife movably mounted on said base, means for actuating said drop knife, the cutting edge of said drop knife being beveled and higher at one end, said bevel ending in a point at the higher end from which the edge is rounded toward the back, for co-action with said outwardly curved cutting edge.

1,106,027. SPRING-EQUALIZED TRUCK. FRANKLIN L. BARBER and EDWIN W. WEBB, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed May 25, 1914. Serial No. 840,736. (Cl. 105—243.)

1. In a car truck, the combination with truck side frames having columns, of combined spring caps and roller bases, spring-supported on said side frames, a truck bolster with its ends working between said columns, rollers interposed between said bolster, and combined spring caps, and roller bases, and guide pieces carried by said combined spring caps and roller bases, interposed between said columns and bolster and movable vertically on said columns, said bolster having an endwise movement, in respect to said guide pieces, transversely of the truck.

2. In a car truck, the combination with truck side frames having columns, of combined spring caps and roller bases spring-supported on said side frames, a truck bolster with its ends working between said columns, rollers interposed between said bolster and combined spring caps and roller bases, and guide pieces detachably supported by said combined springs caps and roller bases, interposed between said columns and bolster and movable vertically on said columns, said bolster having an endwise movement, in respect to said guide pieces, transversely of the truck.



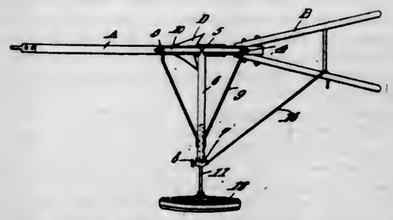
3. In a car truck, the combination with side frames having columns, of combined spring caps and roller bases spring-supported on said side frames, a bolster with its ends working between said columns, lateral motion rollers interposed between said bolster and combined springs caps and roller bases, and channel-shaped guide pieces interposed between said bolster and columns and movable vertically on the latter, said guide pieces, at their lower ends, having ribs and supporting lips that detachably interlock with the ends of the combined spring caps and roller bases.

4. In a car truck, the combination with truck side frames having columns, of front and rear springs mounted on said side frames, longitudinally extended equalizing springs, hangers connecting the ends of said equalizing springs to the said front and rear springs, and a bolster working between the columns of said side frames and supported on the intermediate portions of said equalizing springs.

5. In a car truck, the combination with truck side frames having columns, of front and rear coiled springs seated on said side frames, elliptical equalizing springs extending longitudinally of said side frames to the front and rear of said columns, hangers carried by said coiled springs and connected to the ends of corresponding equalizing springs, and a truck bolster working between said columns and carried by the intermediate portions of said equalizing springs.

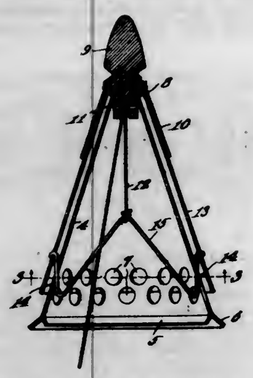
[Claims 6 to 8 not printed in the Gazette.]

1,106,028. FURROW-GAGE. OSCAR B. COLEMAN, Hartsells, Ala. Filed May 22, 1914. Serial No. 840,259. (Cl. 111—24.)



The combination with a plow, of a gage attachment including an arched base strip secured to the beam of the plow and having upstanding terminals, a pivot bolt supported by the treminals, an arm pivotally mounted on the bolt at the center thereof, braces diverging from the outer end of the arm and mounted upon the end portions of the bolt and between the terminals of the base strip, spacing devices upon the bolt and between the braces and the arm, a rod adjustably mounted within the arm, a furrow wheel journaled upon the rod, said wheel including a wooden disk, a reinforcing ring upon each side of the disk at the periphery thereof, and central reinforcing rings at the center of each side of the disk.

1,106,029. ADJUSTABLE VENTILATOR. WILLIAM CRAINE, Brookfield, N. Y. Filed Nov. 25, 1913. Serial No. 803,019. (Cl. 98—4.)



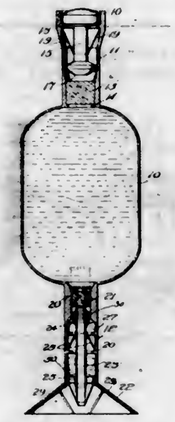
1. A ventilator comprising a stationary tapering member provided with a plurality of openings extending through the side walls thereof, a cap secured to the upper extremity thereof, a movable tapering member fitting over said stationary member and when in contact therewith closing said openings, guiding means secured to the movable member slidably engaging the stationary member, and means engaging said guiding means adapted to raise the movable member out of contact with the stationary member for the exposing of said opening.

2. A ventilator comprising an inner stationary upwardly tapering member provided with a plurality of apertures extending through the side walls thereof, a cap secured to the upper extremity of said member and extending downwardly therein, a flexible element slidably engaging said cap, an outer movable member tapering in an upward direction extending over and adapted to close the said openings, a shield carried by said cap, the side walls thereof extending substantially parallel to and embracing therebeneath the side walls of the stationary and movable members, and means engaging the said movable member for the raising thereof and adapted to guide the movable member for the opening and closing of the said openings.

3. A ventilator comprising a stationary upwardly tapering member provided with a plurality of apertures extending through the side walls thereof, a movable upwardly tapering member extending over and adapted to close the said openings, a shield carried by and spaced a distance from the said stationary member and secured thereto at the top thereof, said shield extending down over the upper portion of the movable member and adapted to house the same therein, a rod extending through openings provided in the side walls of the stationary member and rigidly secured to the said movable member, and flexible means engaging the said rod adapted to move the same upwardly to raise said movable member above and outwardly from said stationary member openings.

4. A ventilator comprising a frusto-conical member, flanges carried by the lower extremity thereof adapted to secure the same to a supporting structure, a cap rigidly secured to the upper extremity of said frusto-conical member extending thereabove and down therein, an outer frusto-conical shield carried by said cap extending for a limited distance down and parallel to the walls of said stationary frusto-conical member, a movable frusto-conical member fitting over and adapted to close a plurality of openings provided in the side walls of the stationary frusto-conical members, said stationary member provided with vertical openings extending therethrough, a rod provided with vertically extending legs slidably housed within said openings and rigidly secured to the outer frusto-conical movable member, a flexible element slidably engaging the cap with one extremity thereof secured to the said rod for the raising and lowering of the movable member for the opening and closing of the openings in the walls of the stationary frusto-conical member.

1,106,030. BOTTLE. MITCHEL E. DEVARNEY, St. Albans, Vt. Filed Feb. 9, 1914. Serial No. 817,528. (Cl. 215—70.)



1. A bottle having a neck, the outer end of which is flared to form a supporting base for the bottle, said flared portion having internal transverse ribs on opposite sides of the mouth of the neck and extending to the edge of the base, and forming pouring spouts, a stopper and a stopper-displacer in said neck, and means for locking the displacer against withdrawal from the neck.

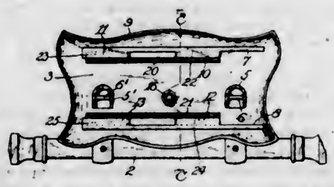
2. A bottle having a neck at each end, stoppers seating in each neck, a guard for one of the stoppers to prevent unseating thereof, a displacer for the other stopper mounted in the neck in which said stopper seats, and means for locking the displacer against withdrawal from the neck.

3. A bottle having a neck at each end, one of said necks having an internal shoulder, a stopper seating in each neck, a guard for the stopper which seats in the shouldered neck said guard comprising a member having a head at outer end seating on the corresponding side of the shoulder and having catches engaging the other side of the shoulder, a displacer for the other stopper mounted in the neck in which said stopper seats, and means for locking the displacer against withdrawal from the neck.

4. A bottle having a neck provided with spaced internal annular shoulders and a seat for a stopper, and a stopper-displacer mounted in the neck and having catches successively engageable with the shoulders to prevent its withdrawal from the neck, said shoulders being located different distances from the stopper seat.

5. A bottle having a neck provided with a contracted inner portion forming a stopper seat, a stopper-displacer mounted in the outer portion of the neck and having a head adapted to enter the stopper seat, said head having side grooves forming liquid passages, and means for preventing withdrawal of the displacer from the neck.

1,106,031. DETACHABLE CASKET-HANDLE. JAMES M. DODDRIDGE, Milton, and JOHN C. BECK, Indianapolis, Ind. Filed Dec. 26, 1911. Serial No. 667,897. (Cl. 16—103.)



1. A handle frame comprising a plate having a continuous bearing flange, and two oppositely arranged guide bars secured to the plate within the confines of the flange, each bar having a lug thereon extending toward the lug of the opposite one of the bars, for connection with and inclosing a holder having a pair of lugs.

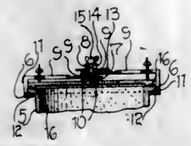
2. A handle frame comprising a plate having a bearing flange, and two guide bars secured to the plate within the confines of the flange, each bar having two lugs spaced apart thereon and extending toward the lugs of the remaining one of the bars, one of the two lugs being arranged at a distance from one end of the bar and the other lug extending from the opposite end of the bar, for connection with and inclosing a holder having two pairs of lugs.

3. A detachable handle comprising a base plate, having two guide bars thereon provided each with a lug, a frame having two guide bars thereon provided each with a lug, the lugs of the guide bars that are on the frame being detachably connected with the lugs of the guide bars that are on the base plate, a set-screw inserted in the frame and seated against the base plate, and a handle on the frame.

4. In a burial casket handle, the combination with a handle of a handle holder comprising a normally upright base plate having two horizontally extending guide bars thereon that extend also outwardly in parallel order, one guide bar above the other, the uppermost one of the guide bars having two upwardly extending lugs thereon, the lower bar having two downwardly extending lugs thereon, a frame connected to the handle and having two guide bars thereon, extending oppositely above and below the upper and lower guide bars of the base respectively and having lugs thereon engaging the aforementioned lugs, said frame having stop-bars thereon engaging one of the lugs of each of the guide bars that are on the base plate, and a set-screw inserted in the frame and seated against said base plate.

5. A detachable casket handle comprising a base plate having two longitudinally extending parallel guide bars thereon, each guide bar having two lugs spaced apart thereon that extend outward away from the lugs of the opposite bar, a frame having two longitudinally extending parallel guide bars on the back thereof having each two inwardly extending lugs spaced apart thereon engaging the aforementioned lugs and removably connecting the frame to the base plate, the frame having a stop bar thereon engaging one of the lugs of one of the guide bars that are on the base plate, the frame having also as inclosing flange extending about all the guide bars, and a handle connected to said frame.

1,106,032. RECEPTACLE-CLOSURE. ALBERT DREWITZ, Syracuse, N. Y. Filed Dec. 29, 1913. Serial No. 809,353. (Cl. 215—87.)

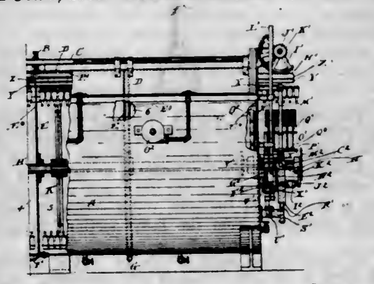


1. The combination with a receptacle top, of a plurality of relatively movable clamping arms adjustable radially with respect to each other and circumferentially with respect to the receptacle top, means carried by the top upon which the inner ends of said arms are fulcrumed and adapted to oscillate, and a screw threaded in each of said arms and adapted for binding engagement with the top whereby said arms may be individually adjusted to engage the same with the receptacle and clamp the top in position upon the upper edge thereof.

2. The combination with a receptacle top, of a threaded bolt centrally fixed thereto, a plurality of relatively adjustable clamping arms having limited radial movement upon said bolt, a nut threaded upon the bolt to retain the arms in connection therewith, means yieldably holding said arms against vertical movement on said bolt, and a screw carried by each of the arms for binding engagement with said top to clamp the same upon the upper edge of a receptacle.

3. The combination with a receptacle top, of a threaded bolt centrally fixed thereto, a plurality of radially disposed clamping arms each provided in one end with an elongated slot for slidable engagement upon the bolt whereby the arms may be radially moved to a limited extent, a washer plate arranged upon said bolt over the inner ends of said arms, a bowed leaf spring on said bolt bearing at its ends on said washer plate, a nut threaded upon the upper end of the bolt to regulate the pressure of said bowed spring, and a set screw carried by each of the clamping arms adapted for binding engagement upon the top to clamp the same upon the upper edge of a receptacle.

1,106,033. APPARATUS FOR HANDLING BOTTLES OR OTHER CONTAINERS. OTTO EICK, Baltimore, Md. Filed Oct. 5, 1905. Serial No. 281,520. (Cl. 126—272.)



1. In an apparatus of the character specified, the combination of a tank provided with a series of chambers or compartments; means for supporting a series of bottle-racks in each of compartments; means for periodically advancing the racks from one compartment to the next; means for spraying water into the upper portion of the various compartments; means for externally heating those compartments in which the highest temperature is to be maintained; and means for cooling the liquid in the last compartment of the series.

2. In an apparatus of the character specified, the combination of a tank provided with a series of chambers or compartments; rotatable means mounted in each of said chambers, for supporting a series of bottle-holding racks therein, said means at their uppermost portions standing above the level of the water in the compartments; and means for spraying water at the desired temperature upon the bottles as they enter and emerge from the water.

3. In an apparatus of the character specified, the combination of a tank; a hollow wall dividing said tank into a plurality of chambers, the upper end of the wall being open; and a water supply-pipe opening into said hollow wall.

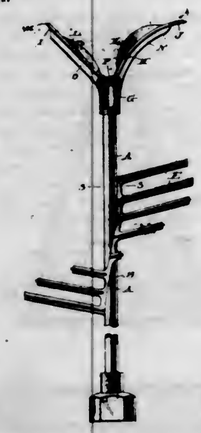
4. In an apparatus of the character specified, the combination of a tank; a partition extending upwardly in said tank, said partition being formed by two walls spaced apart, with the upper edge of one wall lower than that of the other; and a water supply-pipe opening into the space between the walls.

1,106,034. BRUSH FOR CLEANING BOTTLES OR OTHER CONTAINERS. OTTO EICK, Baltimore, Md. Filed June 10, 1907, Serial No. 378,228. Renewed June 3, 1914. Serial No. 842,792. (Cl. 141—7.)

1. The combination of a tube or hollow spindle provided with a spiral slot extending longitudinally thereof; a U-shaped body member mounted within the tube in the rear of the slot, and a series of fingers extending outwardly from said body member through the slot.

2. In combination with a tube or hollow spindle provided with a slot extending longitudinally thereof; a body member substantially semi-circular in cross section ar-

ranged in the tube adjacent to the slot, and a series of fingers extending outwardly from said body member through the slot.



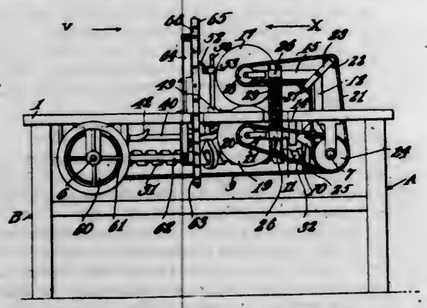
3. The combination with a tube or hollow spindle provided with a spiral slot extending longitudinally thereof, the slot being provided with an enlarged opening at one end; a flexible body portion adapted to be passed through the enlarged opening into the tube and to occupy a position in the rear of the slot, and a series of fingers extending outwardly from the body portion through said slot.

4. In combination with a tube or hollow spindle provided with a spirally arranged slot extending longitudinally thereof, said slot being provided with an enlarged opening at one end; a body portion substantially semicircular in cross section adapted to be passed through said enlarged opening and to occupy a position in the rear of the slot, and a series of fingers extending outwardly from said body portion and through the slot.

5. In combination with a tube or hollow spindle provided with a longitudinally disposed slot having an enlarged opening at each end thereof; a body portion adapted to be passed into the tube through one or the other of said openings and of a length somewhat less than the length of the slot and the openings, and a series of fingers extending outwardly from the body portion through the slot whereby upon shifting the body portion within the tube one or the other of said enlarged openings may be closed.

[Claims 6 to 9 not printed in the Gazette.]

1,106,035. CUTTING AND SLICING MACHINE. ROBERT E. FORMAN, Paris, Ky., assignor of one-half to J. R. Hainline, Mount Sterling, Ky. Filed Jan. 19, 1912. Serial No. 672,129. (Cl. 17—24.)



1. In a device of the class described, a shaft; a frame pivotally mounted upon the shaft, for movement transversely of the shaft, the frame including a fixed arm and a yieldably supported arm; a stop engaging the fixed arm, to limit the movement of the frame in one direction; rotary knives carried by the arms; means for operatively connecting both knives with the shaft; and mechanism for advancing the meat against the knives.

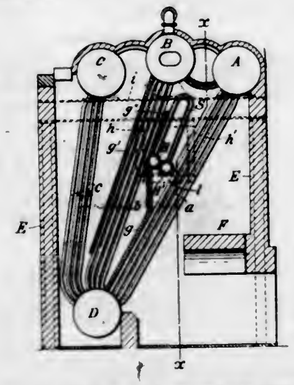
2. In a device of the class described, a supporting structure; a frame mounted for pivotal movement thereon and including a fixed arm and a yieldable arm; a guide carried by the supporting structure; means upon the arms for slidably engaging the guide; spring means for drawing the arms together; rotary cutting knives journaled upon the arms; means for operating the knives; and means for advancing the meat against the knives.

3. In a device of the class described, a supporting structure; a guide carried thereby; a frame pivotally mounted with respect to the supporting structure, the frame including a fixed arm and a yieldable arm, each of which is provided with a projection adapted to slide in the guide; a spring uniting the projections; rotary knives journaled upon the arms; means for operating the knives; and means for advancing the meat against the knives.

4. In a device of the class described, a supporting structure; a guide thereon; a shaft journaled for rotation in the supporting structure; a frame tiltably mounted upon the shaft and including a fixed arm and a yieldably mounted arm, each of which is provided with means engaged in the guide; a spring connecting said means; rotary knives journaled on the arms; pulleys carried by the knives; pulleys carried by the shaft; a belt passed about the pulley of the knife of the fixed arm, and about one of the pulleys upon the shaft; spaced idlers carried by the frame; and a belt trained about the other pulley of the shaft, about the idlers, and about the pulley of the knife of the yieldably mounted arm.

5. In a device of the class described, a supporting structure; a shaft journaled for rotation therein; a guide carried by the supporting structure; a frame movably supported upon the shaft and including a fixed arm and a yieldable arm, each of which is provided with means to slide in the guide; a retractile spring uniting said means; rotary knives journaled upon the arms and belts operatively connecting the knives with the shaft.

1,106,036. SUPERHEATER. ERNEST H. FOSTER, New York, N. Y. Filed Nov. 30, 1912. Serial No. 734,420. (Cl. 122—473.)



1. The combination with a water-tube boiler having a plurality of banks of vertically extending tubes in series as regards the passage of the furnace gases, baffles between the banks for defining the path followed by the gases in passing from one bank to the next, of a superheater comprising a plurality of headers and connecting superheater tubes, supported between the tubes of the front bank and the upper portion of the baffle in the rear of the same, as set forth.

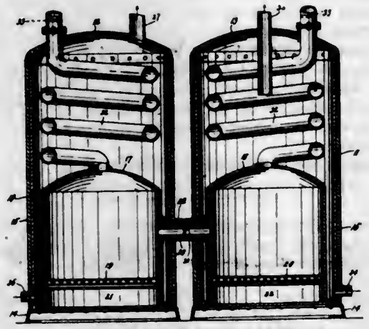
2. The combination with a water tube boiler having a plurality of banks of vertically extending tubes in series as regards the passage of the furnace gases, separated by a baffle over which the gases flow in passing from the front bank to the next, of a superheater comprising a plurality of headers connected by superheating tubes extending upwardly from the headers and supported between the tubes of the front bank and the upper portion of the baffle between the first and second banks, as set forth.

3. The combination with a water tube boiler having a plurality of banks of vertically extending tubes in series as regards the passage of the furnace gases, of baffles between the said banks of tubes for defining the paths followed by the gases, a superheater comprising headers connected by superheating tubes extending upwardly from the headers and located between the first bank of tubes and the upper portion of the baffle between the first and second banks, and supports for said headers depending from the means for suporting the boiler in the setting, as set forth.

4. The combination with a water tube boiler having a plurality of banks of vertically extending tubes in series as regards the passage of the furnace gases, of a baffle extending along the lower portion of the front bank of tubes immediately back of the same, and along the upper portion of the second bank of tubes immediately in front of the same, and a superheater supported in the enlarged path for the gases formed by the upper part of said baffle, back of the first bank of tubes, as set forth.

5. The combination with a water-tube boiler having a plurality of banks of vertically extending tubes in series as regards the passage of the furnace gases, baffles between the banks for defining the path followed by the gases in passing from one bank to the next, of a superheater comprising a plurality of headers and connecting superheater tubes, supported between the tubes of the front bank and the baffle in the rear of the same, as set forth.

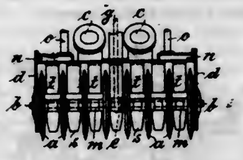
1,106,037. INTERCONNECTED STEAM-BOILER AND WATER-HEATER. HERMAN B. FRIEDMAN, New York, N. Y. Filed Oct. 22, 1913. Serial No. 796,635. (Cl. 122—37.)



The combination with two independent shells that are spaced apart and form a steam boiler and a water heater, respectively, of a fire-box arranged within each shell, a water supply pipe leading to each shell, an outlet pipe connected to each shell, a flue in the form of a coil extending through each shell and connected to each respective fire-box, and a valve controlled connection between said fire-boxes.

1,106,038. CUTTER FOR SUCTION-DREDGERS. OTTO FRÜHLING, Brunswick, Germany. Filed Dec. 14, 1911. Serial No. 665,675. (Cl. 37—45.)

1. In combination with the suction pipe of a suction dredger, a plurality of cutters arranged on a horizontal axis across the mouth of said suction pipe, means to rotate the cutters in a vertical plane so as to cut the material to be dredged into slices attached at their bases to the remainder of the material, and a stationary cutting device arranged in the rear of said cutters so as to cut away said slices at their bases.



2. In combination with the suction pipe of a suction dredger, a plurality of cutters arranged on a horizontal axis across the mouth of said suction pipe, means to rotate the cutters in a vertical plane so as to cut the material to be dredged into slices, a curved hood over said cutters, and wipers intermediate said cutters and depending substantially vertically from the front of said hood almost to the axis of said cutters.

3. In combination with the suction pipe of a suction dredger, a plurality of cutters arranged on a horizontal axis across the mouth of said suction pipe, means to rotate the cutters in a vertical plane so as to cut the material to be dredged into slices attached at their bases to the remainder of the material, a stationary cutting device arranged in the rear of said cutters so as to cut away said slices at their bases, a curved hood over said cutters, and wipers intermediate said cutters and depending substantially vertically from the front of said hood almost to the axis of said cutters.

4. In combination with the suction pipe of a suction dredger, a plurality of rotatably driven cutters arranged at the mouth of said suction pipe, a curved hood over said cutters, a stationary cutting device in the rear of said cutters, and an interchangeable connecting piece between said cutting device and hood to adjust the angle of incidence of the cutting device.

5. In combination with the suction pipe of a suction dredger, a plurality of rotatably driven cutters arranged at the mouth of said suction pipe, a curved hood over said cutters, a stationary cutting device in the rear of said cutters, an interchangeable connecting piece between said cutting device and hood to adjust the angle of incidence of the cutting device and wipers intermediate said cutters and depending substantially vertically from the front of said hood almost to the axis of said cutters.

[Claims 6 to 12 not printed in the Gazette.]

1,106,039. TREATMENT OF SEED-GRAIN. HENRY ERNEST FRY, Godmanstone, Dorchester, England, assignor to Charles Edward De Wolf, London, England. Filed Oct. 10, 1913. Serial No. 794,535. (Cl. 175—311.)

1. The process of treating grain consisting of placing the grain in a solution of a manure and passing an electric current through the solution substantially as described.

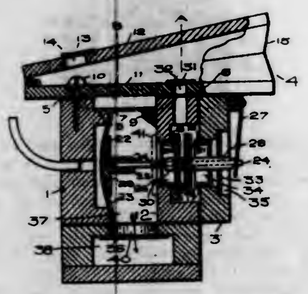
2. The process of treating grain consisting of placing the grain in a solution of nitric acid and passing an electric current through the solution substantially as described.

1,106,040. MUSIC-PLAYER VALVE-ACTION. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Nov. 11, 1912. Serial No. 730,635. (Cl. 84—178.)

1. A music player valve chest having two rails opposite each other with an air space between, a pneumatic having its fixed board or part attached to an edge of each said rail, and an imperforate sheet like air seal from one said rail to the other and across said air space, near the said edges, and adjacent to but separate from said fixed board of the said pneumatic.

2. A music player valve chest having two rails opposite each other with an air space between, a pneumatic having its fixed board or part attached to an edge of each said rail, a rabbet near said edge of one said rail, and a

ledge near said edge of the other said rail, and an imperforate sheet like air seal from said rabbet near the said dege of the one said rail to a ledge near the said edge of the other rail, and adjacent to but separate from said fixed board of the said pneumatic.



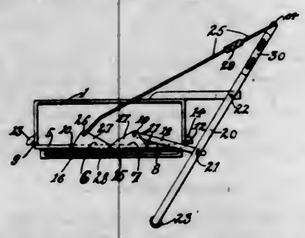
3. A music player valve chest having two rails opposite each other with an air space between, a pneumatic having its fixed board or part attached by a separable joint to an edge of each said rail, and an imperforate sheet like air seal from one said rail to the other and across said air space, near the said edges, and adjacent to but separate from said fixed board of the said pneumatic.

4. A music player valve chest having two rails opposite each other with an air space between, a pneumatic having its fixed board or part attached by a separable joint to an edge of each said rail, a rabbet near said edge of one said rail, and a ledge near said edge of the other said rail, and an imperforate sheet like air seal from a rabbet near the said edge of the one said rail to a ledge near the said edge of the other rail, and adjacent to but separate from said fixed board of the said pneumatic.

5. A music player valve chest having two rails opposite each other with an air space between, a pneumatic having its fixed board or part removably attached to an edge of each said rail, and an imperforate sheet like air seal from one said rail to the other and across said air space, near the said edges, and adjacent to but separate from said fixed board of the said pneumatic.

[Claims 6 to 10 not printed in the Gazette.]

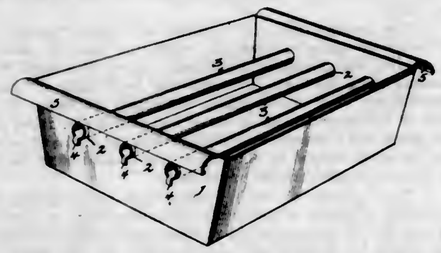
1,106,041. DOORS IN MULTIPLE WITH CONTROL. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Feb. 3, 1913. Serial No. 745,789. (Cl. 39—95.)



1. A support means, a main door hinged at one vertical edge to said support means, a secondary door hinged to the other vertical edge of the main door, said two doors standing in one line when closed, guiding means combined with said secondary door, an arm or crank extended from said secondary door, a pivoted horizontal lever, an actuating connection from said lever to said arm or crank of said secondary door, said arm or crank standing at one side of said line when said doors are closed, and at the other side of said line when said doors are open.

2. A support means, a main door hinged at one vertical edge to said support means, a secondary door hinged to the other vertical edge of the main door, a second pair of doors comprising a main door hinged to the support means and a secondary door hinged to said main door, the said second pair of doors being in reverse order of hinging to that of the first pair but in the same general line when all are closed, guiding means in similar alinement with said general line, means engaging both said secondary doors with said guide means, an arm or crank on each said secondary door, said cranks standing at the same side of said general line as the doors when said doors are open, but standing at the other side of said general line when said doors are closed.

1,106,042. BAKING UTENSIL. GEORGE C. GUMM, Washington, D. C. Filed May 24, 1913. Serial No. 769,674. (Cl. 53—6.)



1. A bake pan having end walls and an open-ended tube removably mounted in said end walls, said tube bridging the space between the end walls.

2. A bake pan having opposing walls, a tube open at the ends removably mounted in said opposing walls, the main length of the tube being disposed wholly within the interior of the pan.

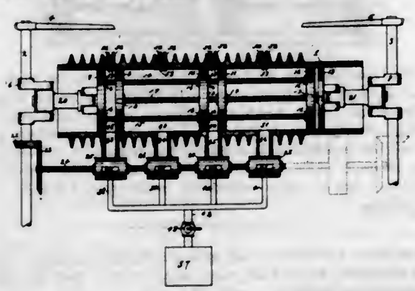
3. A bake pan having opposing walls formed with openings, a tube open at the ends and removably mounted in said openings and closed against the interior of the pan.

4. In a bake pan having end walls, a series of heat conducting tubes open at the ends and mounted in said walls, and hoods formed on the end walls of the pan above and beyond the tubes for arresting and directing heat through said tubes.

5. A bake pan including opposing walls, a tube open at the ends and movably mounted in said walls and extending between them, and means carried by the tube to limit movement thereof in one direction with relation to the walls.

[Claim 6 not printed in the Gazette.]

1,106,043. HYDROCARBON-ENGINE. WILLIAM RICHARD HALLETT, Castor, Alberta, Canada. Filed June 17, 1913. Serial No. 774,252. (Cl. 123—51.)



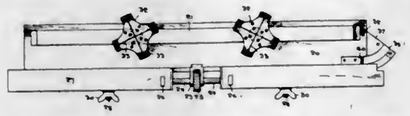
1. A hydro-carbon engine comprising a cylinder having a plurality of pistons reciprocable therein, certain of said pistons relatively immovably connected to form a piston unit and the other of said pistons relatively removably connected to form another piston unit, cranks at the ends

of said cylinder and rods connecting said piston units with said cranks, the spaces between the members of the one piston unit and those of the other forming chambers for the operations required in an engine of the character described and the members of said piston units being sufficiently numerous to provide between them chambers for all of said operations simultaneously, said operations causing the reciprocations of said piston units in opposite directions and the rotation of said cranks.

2. A hydro-carbon engine comprising a cylinder having a plurality of pistons reciprocable therein, rods connecting the alternate pistons into separate groups, those of each group being relatively immovable and the rods connecting the related members of one group passing through the intervening members of the other group, a crank at each end of the cylinder and rods connecting each of said groups with one of said cranks, the spaces between the members of one of said groups and those of the other forming four chambers adapted for simultaneous reception in one chamber of a charge of explosive mixture, the compression in a second chamber of a charge of explosive mixture, the explosion of a charge in a third chamber and the exhaustion of waste gases from the fourth chamber, said operations being constantly repeated, said groups of pistons being thereby oppositely reciprocated and said cranks rotated.

3. A four cycle hydro-carbon engine comprising a cylinder, five pistons and a crosshead in the cylinder, rods connecting the center and two outer pistons to form a three member piston unit and rods connecting the remaining pistons to form a two member piston unit, the rods connecting said three member unit passing through the members of said two member unit and the rods connecting said two member unit passing through the central member of said three member unit and one of the outer members thereof and connecting with the cross head, a crank-shaft at the end of said cylinder and a rod connecting said cross head with said crank-shaft, the piston of said three member unit adjacent the opposite end of the cylinder connecting with a similar shaft in a similar manner, the throw of the cranks on said shafts defining the movement of said piston units to and from each other in said cylinder, the opposing faces of the members of one unit and those of the other forming four chambers each adapted for the four operations, the reception of a charge of explosive mixture, the compression of the charge, the explosion of the charge and the exhaust of the waste gases, said operations following each other in regular rotation in each chamber and producing a half revolution of said shafts at each explosion.

1,106,044. MITER-BOX. JOHN HELLMAN, Brooklyn, N. Y. Filed Sept. 5, 1913. Serial No. 788,283. (Cl. 143—89.)



1. A miter box comprising a base member having the front longitudinal edge thereof provided with a guide rib, a block secured to the front edge of the base at a central portion thereof, a pair of slides provided with grooves to receive said rib and disposed upon opposite sides of the block, a threaded screw journaled in the block and extending into said slides, a thumb piece upon the screw and within the block for rotating the screw to move said slides, a work rest upon the upper face of the base and adjacent the opposite longitudinal edge thereof, a pair of guide blocks having slots therein at right angles to each other, stems projecting from the guide blocks and intercepting the work rest adjacent its opposite ends and rotatably supported upon said base, said base being formed with a recess in its under face adjacent said stems, crank arms keyed to the stems and loosely connected with said slides, plates to cover said recesses in the base, and means for securing the slide in adjusted position.

2. A miter box comprising a base, guide blocks rotatably mounted upon said base adjacent its opposite ends, slides mounted upon the front longitudinal edge of said base, and means for simultaneously moving the slides together and away from each other, crank arms embedded within the base and keyed at an end to said guides, the free end of said crank arms being bifurcated and projecting beyond the front longitudinal edge of the base, pins vertically disposed in the slides and adapted to be loosely engaged by the bifurcations of the extended ends of the arms so that the guides may be rotated, a segmental angle indicator pivoted to one end of the base and adapted to swing with respect thereto, a link connecting the indicator with the pin in one of said slides whereby the angle indicator is swung by the movement of the slides.

3. A miter box comprising a base, guides, stems projecting downwardly from the guides and rotatably supporting the same upon the base, said guides being provided with vertical slots therein at right angles to each other, said slots extending into said stems, a metallic casing covering the guides and stems and secured thereto, said casing being provided with slots to correspond with said before mentioned slots, and means for simultaneously rotating said guides.

1,106,045. PERCOLATOR. HOWARD A. HEYNE, New York, N. Y., assignor of one-half to Walter L. Douglas, New York, N. Y. Filed Apr. 28, 1913. Serial No. 764,061. (Cl. 33—3.)



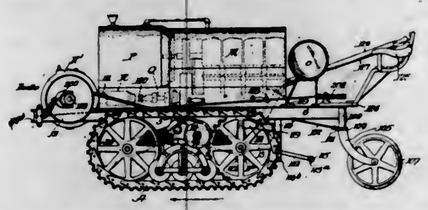
1. A percolator, comprising a cup to hold ground coffee; a circulating tube extending upward through said cup from below the same; a perforated bottom for said cup; and a side wall for said cup, embodying a plurality of leaves operatively connected each with the other and each with said bottom, to move relative each other and said bottom, for expansion of the top opening of said cup.

2. A percolator, comprising a cup to hold ground coffee; a circulating tube extending upward through said cup from below the same; a perforated bottom for said cup; a side wall for said cup, embodying a plurality of leaves operatively connected with each other and with said bottom, to move relative to each other and said bottom, for expansion of the top opening of said cup; and a hollow cover for said cup, having a downwardly-contracted flange inclined to fit the upper edge of said cup under various conditions of expansion.

3. A percolator, comprising a cup to hold ground coffee; a circulating tube extending upward through said cup from below the same; a perforated bottom for said cup; a side wall for said cup, embodying a plurality of leaves operatively connected each with the other and each with said bottom to move relative to each other and said bottom, for expansion of the top opening of said cup; a hollow

cover for said cup, having a downwardly-contracted flange inclined to fit the upper edge of said cup under various conditions of expansion; and a hollow conical member slidably connected with said tube, said member having inclined walls upwardly contracted, said walls having an opening adjacent the bottom thereof for admission of liquid thereto.

1,106,046. TRACTION-ENGINE. ORLEY C. HOUGHTON, Chicago, Ill., assignor to Bullock Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1913. Serial No. 798,474. (Cl. 21—114.)



1. In a traction engine, the combination, of a main frame, a pair of truck frames pivotally connected to said main frame, said truck frames having means constructed to oscillate said truck frames on their pivots, said means including a transverse pivot shaft, bearings pending from said main frame wherein said transverse pivot shaft is journaled, a second transverse shaft in parallel spaced relation to said pivot shaft, bearings pending from said main frame wherein the latter shaft is journaled, short arms at the terminals of said latter transverse shaft, a long, curved arm secured at one end to said latter transverse shaft, latch mechanism on said long arm, a quadrant mounted upon one member of said main frame adjacent to said long arm, said quadrant having notches wherewith said latch mechanism is constructed to engage, links connected at one end to said short arms, track sprockets mounted in said truck frame, shafts on which said sprockets are constructed to rotate, said shafts being located at the terminals of said truck frame, one of said shafts projecting inwardly from said truck frame, said links being connected at the projecting portions of the latter shafts, and brace rods connecting said sprocket shafts medially to said pivot shaft.

2. In a traction engine, having endless tracks on which the tractor is constructed to move, means for steering the tractor by said endless tracks, said means including a main frame, truck frames pivotally connected to said main frame, a sprocket and an idler wheel mounted in each truck frame, an endless track trained over said sprocket and idler wheel, a motor mounted on said main frame, driving mechanism including a pair of friction clutches constructed to separately connect and disconnect said driving mechanism to, and from, said truck sprockets to operate said endless tracks conjointly with, and independently of each other, and mechanism constructed to vary the speed of one or the other of said tracks, said mechanism including treadles adjacent to the rear end of the main frame, rods connecting said treadles to said friction clutches, said friction clutches being normally in engagement with said driving mechanism, whereby by moving one or the other of said treadles, the corresponding friction clutch is partly released to cause retardation of the movement of that one of said endless tracks which is controlled by said friction clutch.

1,106,047. METHOD OF PRODUCING AMYL ACETATE AND ITS HOMOLOGUES. FELIX KAUFLER, Brückl, Austria-Hungary. Filed Feb. 8, 1913. Serial No. 747,154. (Cl. 23—24.)

1. The method of producing amylacetate and its homologues, which comprises reacting with a porous bulky sodium acetate on a mono-chlorin derivative of a suitable hydrocarbon.

2. The method of producing amylacetate and its homologues, which comprises first forming a porous, bulky alkaline metal acetate by saturating anhydrous alkali-metal carbonate with approximately the equivalent quantity of concentrated acetic acid and expelling the major portion of the water by heat below the melting point of the acetate, and reacting on this bulky, alkali-metal acetate with a mono-chlor-derivative of a suitable hydrocarbon.

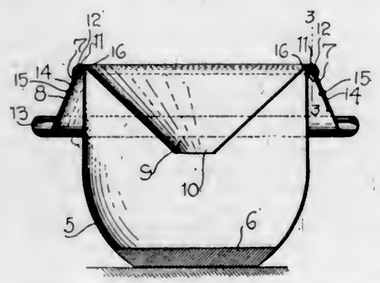
3. The method of producing amylacetate and its homologues, which comprises reacting with an alkali-metal acetate substantially free from water on a mono-chlor-derivative of a suitable hydrocarbon in the presence of a suitable salt capable of acting as a catalyzer.

4. The method of producing amylacetate and its homologues, which comprises reacting with an alkali-metal acetate substantially free from water on a mono-chlor-derivative of a suitable hydrocarbon in the presence of a copper salt capable of acting as a catalyzer.

5. The method of producing amylacetate and its homologues, which comprises first forming a bulky, porous alkali-metal acetate and a catalyzer by reacting on a dry mixture of alkali metal carbonate and copper carbonate with acetic acid sufficient to convert the carbonates into acetates, driving off the water by heating to a temperature below melting, and reacting with the bulky, porous product on a mono-chlor-derivative of a suitable hydrocarbon.

[Claim 6 not printed in the Gazette.]

1,106,048. CUSPIDOR. FORREST D. LANE, Bisbee, Ariz. Filed Dec. 15, 1913. Serial No. 806,854. (Cl. 4—38.)

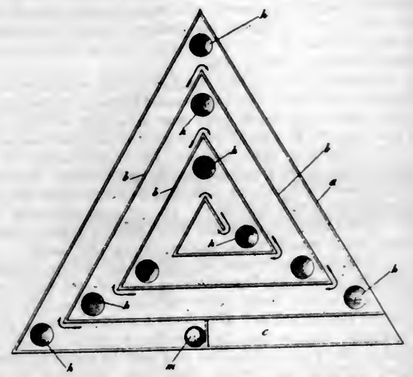


A cuspidor comprising a body having a convex upper edge, a detachable section including an outwardly inclined rim and a central frusto conical portion adapted to extend into the cuspidor body, said detachable section being provided with an annular groove at the juncture of the rim and frusto conical portion to seat upon the upper edge of the cuspidor body, an annular packing strip secured in said groove, and levers pivotally mounted upon the under side of said inclined portion of the detachable section and adapted for binding engagement at one of their ends with the cuspidor body to compress the packing strip upon the upper convex edge thereof and detachably secure said section in position upon the cuspidor body.

1,106,049. TOY PUZZLE. WILLIAM LUDLUM, Jr., Mount Vernon, N. Y., assignor of one-half to J. O. Stevens, Plainfield, N. J. Filed Apr. 4, 1914. Serial No. 829,463. (Cl. 46—41.)

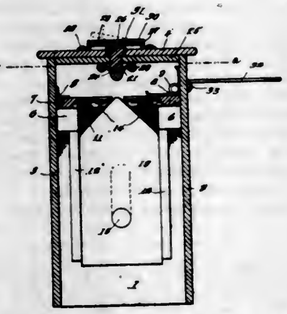
In a toy or puzzle, the combination, in a box, of a floor fixed in position intermediate the upper edge and bottom of said box, a partition consisting of a continuous concentric thin strip set on edge, fixed to said floor and arranged to form acute angles arranged in three series, in three radial lines, said lines being approximately 120° apart, said floor having a series of perforations, each perforation

adjacent an angle, each hole being separated from an angle a sufficient distance to permit the passage of a ball when



moved by gravity suitably graduated, substantially as described.

1,106,050. BOTTLE-RECEPTACLE. JULIUS HARWOOD MASON and HALLOCK BERNARD MASON, Duncan Falls, Ohio. Filed Sept. 27, 1912. Serial No. 722,651. (Cl. 232—41.)



1. In a device of the class described, a receptacle having its cover fastened to prevent removal of an article thereat, article supporting means within the receptacle, and a shifting member to actuate said means for the reception or removal of an article through downward movement.

2. In a device of the class described, a receptacle, article supporting means including an article supporting plate in said receptacle, a rest for said plate, a spring to maintain said plate against said rest, a shifting member movable against said plate, said receptacle having an elongated opening, and an actuating member for said shifting member extending through said opening.

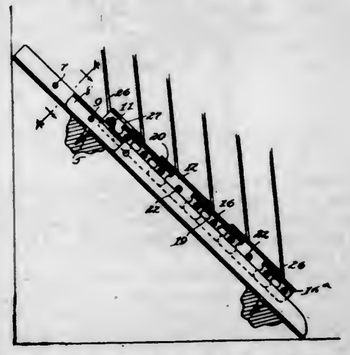
3. In a device of the class described, article supporting means including an article supporting plate, a movable shifting member for said plate, and means on the exterior of the device to directly lock said shifting member against movement to prevent movement of the supporting means and unauthorized removal of an article.

4. In a device of the class described, a receptacle having a cover fastened against opening and having an open bottom, article supporting means including an article supporting plate within the receptacle, a movable shifting member for said plate and means on the exterior of the device to directly lock said shifting member to the receptacle against movement to prevent movement of the supporting means and unauthorized removal of an article.

5. In a device of the class described, article supporting means including an upwardly movable article supporting plate, support means for the plate, means closing said receptacle to prevent removal of an article at the top of the receptacle, and a shifting member for said plate engaging the plate from below.

[Claims 6 to 11 not printed in the Gazette.]

1,106,051. ACCOUNT-FILING DEVICE. PERRY A. MCCASKEY, Lakewood, Ohio. Filed Feb. 4, 1914. Serial No. 816,398. (Cl. 129—34.)



1. In a device of the character described, the combination of a plurality of leaves, a hinge therefor comprising a series of telescoping members slidably connected together, and an independent pivotal connection between each leaf and the hinge member.

2. In a device of the character described, the combination of a plurality of leaves, a hinge therefor comprising a series of telescoping channel members slidably connected, and an independent pivotal connection between each leaf and one of said members.

3. In a device of the character described, the combination of a plurality of leaves, an extensible hinge therefor comprising a plurality of alternate inner and outer channel members, the inner members telescoping within the outer members and the inner members being provided with slots, means projecting from the outer members into the slots of the inner members whereby said members are slidably connected, and means pivotally connecting a leaf to each channel member.

4. In a device of the character described, the combination of a plurality of leaves, an extensible hinge therefor comprising a series of inner and a series of outer channel members, the members of one series alternating with those of the other and the inner members telescoping within the outer members, the members of one of the series having slots in the walls thereof, means carried by the members of the other series and projecting into said walls whereby the channel members are slidably connected, and means pivotally connecting a leaf to each of said members.

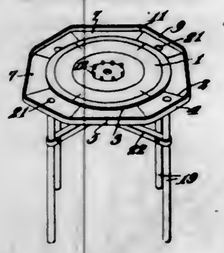
5. In a device of the character described, the combination of a plurality of leaves, an extensible hinge comprising a series of alternating inner and outer channel members, the inner members being telescoped within the outer members and having slots in their side walls and the outer members having means projecting into said slots whereby the inner and outer members are slidably connected, and means pivotally connecting a leaf to each channel member.

[Claims 6 to 17 not printed in the Gazette.]

1,106,052. GAME-BOARD. HENRY GRANT NEWELL, Le Raysville, Pa. Filed May 28, 1913. Serial No. 770,437. (Cl. 46—64.)

1. In a device of the character described, a game board comprising a top and a surrounding ditch piece, the top being raised above the ditch piece, and a band disposed between and secured to the adjoining edges of the top and ditch piece.

2. In a device of the character described, a game board comprising a top and surrounding ditch piece, the top being raised above the ditch piece, and a band disposed between and crimped over the adjoining edges of the top and the ditch piece.

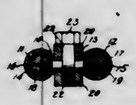


3. In a device of the character described, a game board comprising a top and a surrounding ditch piece, the top being raised above the ditch piece, and means disposed between and connecting the adjoining edges of the top and the ditch piece.

4. In a device of the character described, a game board comprising an offset top and ditch piece providing a recess, playing sheets fitting within the recess, and means carried by the ditch piece for retaining the sheets within the recess.

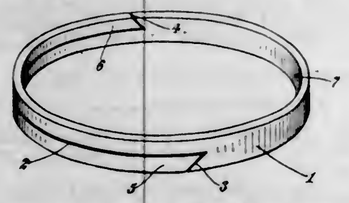
5. In a device of the character described, a game board comprising an offset top and ditch piece providing a recess, playing sheets fitting in the recess, clips carried by the ditch piece for engaging the edges of the sheets to retain them in position, and a lifting member fitting within the recess and having an offset portion overlapping the ditch piece.

1,106,053. CONNECTOR. LOUIS C. NICHOLS, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 29, 1909. Serial No. 535,394. (Cl. 173—263.)



In a device for connecting electrical conductors or the like, a single sleeve-like member of resilient metal having two separated, tubular portions adapted to receive conductors, and webs connecting said tubular portions and forming oppositely disposed external troughs between said tubular portions, and securing means comprising members disposed in said troughs, the effective engagement between said members and said sleeve-like member being within said troughs, and said securing means being effective to draw said webs together to cause said tubular portions to clamp the conductors disposed therein.

1,106,054. PACKING-RING. GEORGE W. OWENS, St. Louis, Mo. Filed June 21, 1913. Serial No. 774,945. (Cl. 121—108.)



1. A packing ring having an arcual cut extending substantially midway of the width and approximately parallel to the side edges of the ring and having its ends terminating at points substantially diametrically opposite to each other and further having oppositely disposed inclined cuts which lead from the opposite side edges of the ring to the respective ends of the arcual cut, whereby the ring is provided with a pair of freely movable parts which have their free ends located at points in substantially diametrically opposed relation to each other.

2. A packing ring having an arcual cut which extends throughout the major circumference thereof and having an inclined cut which leads from one side edge of the ring into one end of the arcual cut to provide a freely movable part, the opposite side edge of the ring having a V-shaped cut which has one end extending through the edge of the opposite side of the ring and has its other end extending through the said arcual cut at approximately the center of the arc of the latter to provide a pair of freely movable parts which have interengaging free ends.

3. A packing ring having an arcual cut which extends throughout the major circumference thereof and having an inclined cut which leads from one side of the ring into one end of the arcual cut to provide a freely movable part, the opposite side of the ring having a short arcual cut parallel to the main arcual cut and also having oppositely disposed inclined cuts which lead from the ends of the short arcual cut into the main cut and through the edge of said opposite side of the ring to provide three freely movable parts on one side of the main arcual cut, and a spring on the interior of the ring secured to the latter.

4. A packing ring having a pair of arcual cuts which have their adjacent ends spaced apart to form a pair of diametrically opposed connecting portions, one inside of the ring having an inclined cut which leads into one end of one arcual cut and also having a second inclined cut which leads into the opposite end of the other arcual cut, the other side of the ring having an inclined cut which leads into the other end of the first named arcual cut, and a spring on the interior of the ring.

5. A packing ring composed of a pair of members each in the form of an incomplete circle having their free ends inclined, each member having a central head on one side thereof which heads extend in opposite directions from each other and have inclined sides to interlockingly engage the inclined ends of the other member.

[Claims 6 to 10 not printed in the Gazette.]

1,106,055. ALLOY. PERCY REXFORD PARSONS, London, and OSWALD SILBERRAD, Buckhurst Hill, England. Filed Mar. 25, 1910. Serial No. 551,535. (Cl. 170—159.)

1. An article intended to withstand erosive action in which the surface exposed to said action is formed of an alloy essentially β or polyhedric in structure; as set forth.

2. A ship's propeller in which at least the metallic surface exposed to erosive action is essentially of β structure; as set forth.

3. A high speed ship's propeller in which at least the metallic surface exposed to erosive action is essentially of β structure; as set forth.

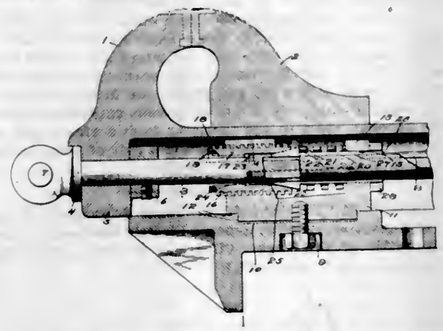
4. A high speed ship's propeller in which at least the surface exposed to erosive action is formed of an alloy of beta structure composed at least principally of copper and zinc in such proportions as correspond to an alloy of substantially equal parts zinc and copper, as set forth.

5. A high speed ship's propeller in which at least the surface exposed to erosive action is formed of a copper-zinc alloy of β structure corresponding to a copper content of between 49 and 58 per cent.; as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,106,056. BENCH-VISE. CHARLES PEKAT, East Gary, Ind., assignor to Continental Foundry and Machine Company, East Gary, Ind., a Corporation of Indiana. Filed June 3, 1913. Serial No. 771,566. (Cl. 81—36.)

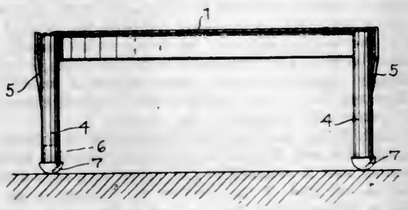
1. A vise comprising a stationary jaw, a movable jaw, a clamping bolt moving with said movable jaw, a clamping screw rotating with said bolt but movable thereon and provided with a bevel, a clamping member surrounding said bolt and provided with a bevel adapted to engage said bevel of the clamping screw, and means engaging the clamping member and strain-block adapted to force the clamping member against the clamping screw as the latter rotates in a predetermined direction.



2. A vise, comprising a stationary jaw, a movable jaw, a clamping bolt moving with said movable jaw, a clamping screw rotating with said bolt, but movable thereon and provided with a bevel, a split clamping member having a beveled surface adapted to engage a beveled clamping screw, said clamping member surrounding the bolt and adapted to grip the same when the beveled surfaces are in contact, means rigid with the immovable jaw guiding the clamping member, and resilient means interposed between said last mentioned means and the split clamping member adapted to hold the beveled surfaces of the clamping member adjacent to the beveled surface of the clamping screw.

3. A vise, comprising a stationary jaw, a movable jaw, a clamping bolt rotatably mounted in and held against axial movement with respect to the movable member, an orificed member rigid with respect to the stationary jaw, a split clamping member extending through the orifice of the fixed member and surrounding the clamping screw, resilient means interposed between the rigid member and the split end of the clamping member, a clamping screw rotatable with the clamping member and movable axially with respect thereto, the end of the clamping screw adjacent to the split end of the clamping member being beveled to correspond to the bevel of the clamping member, and a fixed interiorly threaded screw member engaging the clamping screw.

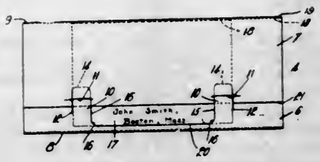
1,106,057. SUPPORTING-TABLE. CHARLES A. PUCKETT, Brooklyn, N. Y. Filed Mar. 19, 1913. Serial No. 755,457. (Cl. 45—48.)



A device of the character described including a top having its marginal portions flexed to form depending flanges, supporting legs soldered to the top and the inner faces of the flanges at adjacent ends of such flanges, and angular brace plates soldered to the outer faces of the flanges at adjacent ends and overlying and soldered to the supporting legs whereby such flanges are held against distortion.

1,106,058. MAILING-FOLDER. GEORGE M. RAND, Brockton, Mass. Filed Oct. 30, 1913. Serial No. 798,205. (Cl. 120—74.)

1. A mailing folder having, in combination, an intermediate portion, flaps formed upon the top and bottom edges of said intermediate portion adapted to be folded back one against the other, the outermost of said flaps being shorter than the inner flap, a card arranged between said flaps adapted to extend beyond the free edge of said outermost flap, tongues formed by slitting said inner flap adapted to interlock with said outermost flap to lock said flaps in their folded positions, the slits forming said tongues adapted to receive the lowermost corners of said card and position said card laterally relatively to said folder and vertically in one direction, with a portion of said card exposed to view, the top of said card adapted to engage the crease of said outermost flap to position said card vertically in the opposite direction.

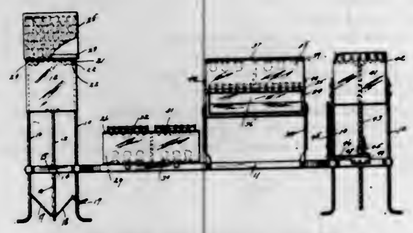


2. A mailing folder having, in combination, an intermediate portion, flaps formed upon the top and bottom edges of said intermediate portion adapted to be folded back one against the other, the outermost of said flaps being shorter than the inner flap, a card arranged between said flaps adapted to engage the crease of said top flap and to project a substantial distance below the free edge of said top flap, said top flap provided with longitudinally disposed slits adjacent the free edge thereof, and tongues formed by slitting the material constituting said bottom flap, said tongues adapted to interlock with the slits in said top flap to retain said flaps in their folded positions, the slits in said bottom flap terminating at substantial distances from the crease of said bottom flap and adapted to receive the lower corners of said card and position said card to prevent lateral and downward movement thereof.

3. A mailing folder having, in combination, an intermediate portion, flaps formed at opposite edges of said intermediate portion adapted to be folded one against the other, the outermost of said flaps being substantially shorter than the inner flap and provided with longitudinally arranged slits, tongues formed on said inner flap adapted to interlock with said outermost flap through said slits, said tongues being formed by slitting said inner flap from points substantially removed from the crease of said flap toward its free edge, thence inwardly longitudinally of said flap, and toward the crease thereof to points substantially nearer said crease than said starting points, and a card arranged between said flaps adapted to engage the crease of said outermost flap and project beyond the free edge thereof, the lowermost corners of said card adapted to project into the slits forming said tongues, whereby said card will be positioned longitudinally and transversely relatively to said folder with a portion thereof exposed to view.

4. A mailing folder having, in combination, an intermediate portion, flaps formed at opposite edges of said intermediate portion adapted to be folded one against the other, the outermost of said flaps being substantially shorter than the inner flap and provided with longitudinally arranged slits, tongues formed on said inner flap adapted to interlock with said outermost flap through said slits, said tongues being formed by slitting said inner flap from points substantially removed from the crease of said flap toward its free edge, thence inwardly longitudinally of said flap, and toward the crease thereof to points substantially nearer said crease than said starting points, and terminating in semicircular slits, and a card arranged between said flaps adapted to engage the crease of said outermost flap and project beyond the free edge thereof, the lowermost corners of said card adapted to project into the slits forming said tongues with the lower edge of said card engaging said semicircular slits.

1,106,059. EGG-HANDLING DEVICE. HARRY E. REX, Des Moines, Iowa. Filed Aug. 25, 1913. Serial No. 786,589. (Cl. 99—6.)



1. In an egg handling device, a supporting frame, a horizontal platform mounted thereon, and a receptacle, open above and below, mounted to slide vertically on said frame and to receive said platform.

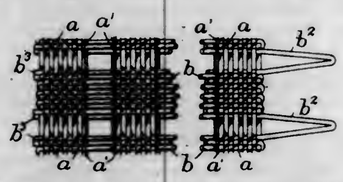
2. In an egg handling device of the class described, a supporting frame, a horizontal platform mounted thereon, a receptacle, open above and below, mounted to slide vertically on said frame and to receive said platform, said receptacle having one wall cut away at its upper edge, and a conveyer, designed to enter said receptacle where said portion is cut away.

3. In an egg handling device, a supporting frame, a horizontal platform mounted thereon, a receptacle, open above and below, mounted to slide vertically on said frame and to receive said platform, means for supporting said receptacle in certain positions the same relative distances apart, and means whereby said supporting means may be released for lowering said receptacle a certain distance.

4. In an egg handling device, a supporting frame, a horizontal platform mounted thereon, a receptacle, open above and below, mounted to slide vertically on said frame and to receive said platform, and adjustable means for supporting said receptacle in various positions.

5. In an egg handling device, a supporting frame, a horizontal platform mounted thereon, a receptacle, open above and below, mounted to slide vertically on said frame and to receive said platform, adjustable means for supporting said receptacle in various positions, said means comprising an upright pivoted below said receptacle, having a plurality of notches, a keeper, a plate therein to engage said notches, a coil spring secured to said upright and to said frame for holding said notches against said plate, and means for drawing said upright away from said plate.

1,106,060. RIVET-CLOTH. JEROME T. RUTLEDGE, Millbury, Mass. Original application filed Nov. 20, 1912, Serial No. 732,427. Divided and this application filed Mar. 22, 1913. Serial No. 756,079. (Cl. 139—9.)

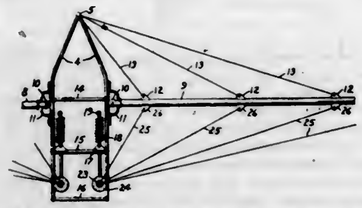


1. A rivet cloth fabric comprising warps arranged in sets of equal numbers having uniform spaces between the sets, and sets of filling threads interwoven with the warp threads and spaced from each other to provide rectangular openings through the fabric free from both warp and filling, each set of filling threads being cut off at one edge of the fabric at the end of the space, all the filling at the other edge of the fabric forming complete loops around the edge warp thread.

2. A rivet cloth fabric comprising warps arranged in sets with spaces between each two adjacent sets and sets of filling threads interwoven with the warps and spaced from each other to provide rectangular openings through the fabric free of both warp and filling, the filling threads at the edges of said sets of filling threads extending beyond the opposite edges of the fabric to form loops.

3. A rivet cloth fabric comprising warps arranged in sets with spaces between each two adjacent sets and sets of filling threads interwoven with the warps and spaced from each other to provide rectangular openings through the fabric free of both warp and filling, the filling threads at the edges of said sets of filling threads extending beyond the opposite edges of the fabric to form a single loop on one side of each of said spaces, and a pair of loops on the other side at the edge of each space.

1,106,061. FLYING-MACHINE. JOSEF SCHROEDER, Tegel, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 2, 1913. Serial No. 765,151. (Cl. 244—121.)



1. In a flying machine, the combination of a frame, wings therefor, a pivot for attaching each wing to the frame, said wing being adapted to move angularly on the pivot, and means for yieldingly supporting the rear portion of each wing comprising a spring that is supported by the frame, a means supported by the spring and movable with respect to the frame, a member extending longitudinally of the wing and movable vertically on the frame and stay-wires which connect said means with the member.

2. In a flying machine, the combination of a frame, wings therefor, means for pivotally attaching the wings to the frame, and means for yieldingly supporting the rear portion of each wing comprising a member attached to the wing which engages the frame and is movable vertically thereon, a spring, one end of which is supported by the frame, a movable means supported by the other end of the spring, and stay-wires that are connected to the member and the movable means.

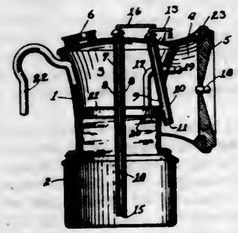
3. In a flying machine, the combination of a frame, a wing on each side thereof and pivotally attached thereto, a member that is attached to and moves with each wing as the latter turns on its pivot, a holder for guiding the end of the member adjacent the frame which permits the member to move vertically relative to the frame, a means yieldingly supported by the frame which is maintained in fixed relation to said member, and diagonal stay-wires that connect the means with the member.

4. In a flying machine, the combination of a frame, a wing on each side thereof and pivotally attached thereto, a member that is attached to and moved with each wing, a roller on one end of the member for guiding it on the frame, a second roller that is also guided on the frame, a spring for supporting the second roller, and stay-wires that unite the second roller with the member.

5. In a flying machine, the combination of a frame, a wing on each side thereof which is pivotally secured thereto, said pivot being located at the front edge of the wing, a member which is attached to the wing in the rear of the pivot, means for transmitting the end thrust of the member to the frame and which permits said member to move vertically with respect to the frame, a means that is movably supported on the frame, stay-wires connecting the means to a plurality of points on the member, and a spring that is carried by the frame for supporting said means.

[Claims 6 and 7 not printed in the Gazette.]

1,106,062. ACETYLENE-LAMP. MEYER STEIN, Springfield, Ill. Filed Dec. 22, 1913. Serial No. 808,297. (Cl. 48—23.)

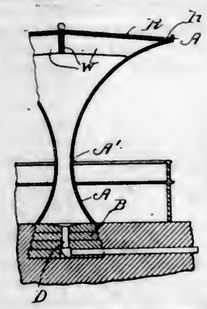


1. A lamp comprising a body providing a water chamber, a carbid container for removable connection with said body, an auxiliary carbid container fixed to said body portion and surrounding the gas outlet from the carbid container, a reflector carried by said auxiliary carbid container, means for feeding water from the water chamber to the main carbid chamber, means for feeding water from the water chamber to the auxiliary carbid container, and a burner providing an outlet for gas generated in either of said carbid containers, substantially as described.

2. The combination with an acetylene lamp, of an auxiliary gas generator positioned between the reflector and the main body of the lamp, the outlet for gas from said auxiliary gas generator being through the same burner as for gas generated in the main lamp.

3. In an acetylene lamp, a water chamber, a main carbid container, an auxiliary carbid container having a reflector in the front wall thereof, means for feeding water from the water chamber to the main carbid container, means for feeding water from the water chamber to the auxiliary carbid container, an outlet into the auxiliary carbid container for gas generated in the main carbid container, and a burner providing an outlet for gas in said front wall of the auxiliary carbid container whereby gas generated in either the main or auxiliary carbid containers may escape, substantially as described.

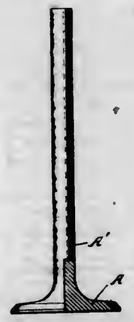
1,106,063. REINFORCED-CONCRETE SHELTER. HARRISON S. TAFT, Seattle, Wash. Filed May 22, 1913. Serial No. 769,213. (Cl. 72—1.)



A reinforced concrete shelter, comprising a canopy, a support therefor, said canopy being an inverted cone, hollow, of concrete reinforced by stays radiating outward to the periphery of the cone, circumferential stays, the said stays embedded in the concrete, and reinforced concrete webs, extending radially from the axis of the cone, the web reinforcement anchored to the cone reinforcement.

1,106,064. VALVE. CHARLES E. THOMPSON, Cleveland, Ohio. Filed Jan. 6, 1911. Serial No. 601,063. (Cl. 137—4.)

1. As a new article of manufacture, a valve having a stem of steel having a character such as will permit it to resist frictional action to a high degree; a cap having its main or body-portion integrally united with said stem and made of steel adapted to resist warping to a high degree; and a cast iron rim or seat-portion integrally united with the said body-portion.



2. As a new article of manufacture, a valve having a stem of cold-rolled steel; a cap having its main or body-portion integrally united with said stem and made from steel of a non-granular molecular structure; and a cast iron rim or seat-portion integrally united with the said body-portion.

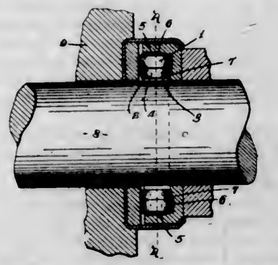
3. As a new article of manufacture, a valve having a stem of cold-rolled steel; a cap having its main or body-portion made of steel adapted to resist warping to a high degree; and a cast iron rim or seat-portion integrally united with the said body-portion.

4. As a new article of manufacture, a valve having a stem of steel having a character such as will resist frictional action to a high degree; a cap integrally united to said stem and made from steel having a non-granular molecular structure; and a cast-iron rim integrally united with the said body-portion.

5. As a new article of manufacture, a valve having a stem of low carbon steel, and a cap having its main or body portion formed of nickel steel and its rim of cast iron.

[Claims 6 and 7 not printed in the Gazette.]

1,106,065. ANTIFRICTION THRUST-BEARING. JAMES N. VANDEGRIFT, Syracuse, N. Y., assignor to Railway Roller Bearing Company, Syracuse, N. Y., a Corporation of New York. Original application filed Dec. 27, 1910. Serial No. 599,275. Divided and this application filed Sept. 22, 1911. Serial No. 650,748. (Cl. 64—50.)

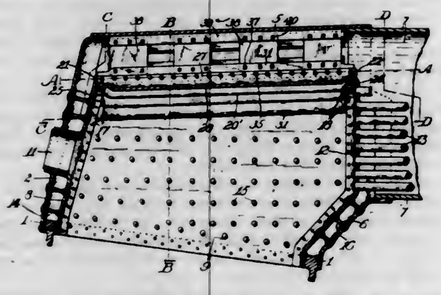


1. An end thrust bearing comprising a part formed with a raceway confined by a circumferential bearing surface and opposite side bearing surfaces, and a series of antifriction members movable in the raceway in direct contact with each other, each member having a large diameter compared with its length and having a spherical end surface at one end for engaging the circumferential surface of the raceway, a cylindrical peripheral surface intermediate of its ends for engaging the side bearing

surfaces of the raceway, and a peripheral conical surface at its other end for engaging the conical surfaces of the next antifriction members, substantially as and for the purpose specified.

2. An end thrust bearing comprising a part formed with a raceway confined by a circumferential bearing surface and opposite side bearing surfaces, and a series of antifriction members in the raceway running in direct contact with each other, the circumferential surface of the raceway being concave in cross section and each antifriction member having a spherical end surface at one end for engaging the concave circumferential surface of the raceway, a cylindrical peripheral surface for engaging the opposite side bearing surfaces of the raceway, and a conical spherical surface at its other end for engaging the conical surfaces of the next antifriction members, one of the side bearing surfaces of the raceway having a conical portion for engaging said conical surfaces of the antifriction members, substantially as and for the purpose set forth.

1,106,066. STEAM-BOILER CONSTRUCTION. JOHN A. WOLMER, Indianapolis, Ind. Filed Dec. 24, 1913. Serial No. 808,598. (Cl. 122—496.)



1. A boiler crown sheet section including an oblong strip having straight flanges on its longer edge portions, the main portion of the strip between the flanges being curved transversely, the strip having end portions between the flanges that do not conform to the curvature of the main portion, being adapted to conform to the tops of fire-door sheets and flue sheets.

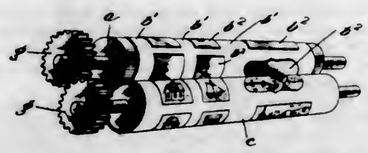
2. In boiler construction, the combination of a plurality of sections, each section being composed of an oblong strip having straight flanges on its longer edge portions, the strip being curved transversely between the flanges from a point distant from one end to a point distant from th opposite end of the strip, the end portions of the strip beyond said curved portion having rivet-holes therein whereby to secure the two end portions respectively to a fire-door sheet and a flue-sheet of a fire-box, and bars secured each between the flanges of two adjacent strips, the end portions of the bars being adapted to be supported respectively on the fire-door sheet and the flue-sheet.

3. In a boiler, the combination with two uprightly arranged side sheets, an uprightly arranged fire-door sheet, and an uprightly arranged flue-sheet, of a crown sheet comprising a plurality of separate sections connected together and collectively extending from one to the other of the side sheets, each of the sections being secured at one end to the fire-door sheet and at its opposite end to the flue-sheet, a marginal one of the sections being secured to one of the side sheets, the opposite marginal one of the sections being secured to the remaining one of the side sheets.

4. In a boiler the combination of two side sheets having each a flange, two bars arranged upon the two flanges respectively, two end sheets having each a flange connected to the side sheets, two crown sheet sections each having flanges, one flange of the two sections being arrangd respectively on the two bars, the sections being secured at opposite ends to the flanges of the two end sheets respectively, rivets securing the bars to the flanges adjacent thereto, and a plurality of crown sheet sections scured at opposite ends to the flanges of the two end sheets respectively between the two crown sheet sections, each of the plurality of sections having two straight flanges thereon, the flanges of adjacent sections being adjacently arranged, bars between the adjacent flanges and secured thereto, and a plurality of stays secured to each of said bars.

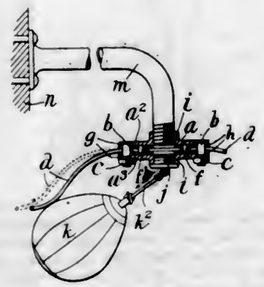
5. In boiler construction, a crown sheet comprising a plurality of separate sections, each section being composed of an oblong strip having straight flanges on its longer edge portions, the strip being curved transversely between the flanges, a plurality of bars secured each between the flangs of two adjacent strips and having offset bearing portions at opposite ends thereof, the bars extending beyond the flanges and having each a plurality of holes therein provided with staying devices, and stays removably connected to said devices.

1,106,067. MEANS FOR KEEPING MARGINS CLEAN IN INTAGLIO-PRINTING. HENRY A. WISE WOOD, New York, N. Y. Filed Jan. 23, 1907. Serial No. 353,631. (Cl. 101—113.)



In an intaglio printing machine, the combination with a substantially uniform intaglio printing member having a plurality of illustrations and margins all of the same height, of an impression member having the surface of its packing which comes directly in contact with a sheet to be printed cut away to a definite sharp outline along lines registering with the edges of the illustrations, whereby it is of reduced height under the margins, and means for causing the elevated portion of the impression member to be positively registered with the illustrations of the printing member.

1,106,068. PUNCHING-BAG HANGER. GEORGE YOERGER, Brooklyn, N. Y. Filed Mar. 4, 1914. Serial No. 822,307. (Cl. 46—69.)



1. A device of the class described comprising a body or head, and means for securing it to a support, said body or head being composed of top and bottom plates secured together and between which are secured radially arranged spring arms all of which are curved in the same direction.

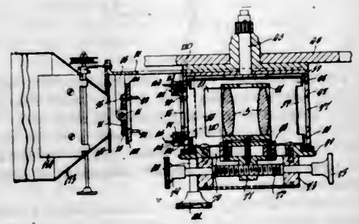
2. A device of the class described comprising a body or head, and means for securing it to a support, said body or head being composed of top and bottom plates secured together and between which are secured radially arranged spring arms all of which are curved in the same direction, said arms being radially adjustable.

3. A device of the class described comprising a body or head portion and means for securing it to a wall or other support, said body or head portion being composed of similar plates between which are secured radially adjustable loop-shaped spring arms all of which are curved in one direction, and a punching bag loosely suspended from one of said plates.

4. A punching bag support, comprising a body portion from the center of which the bag is suspended, said body portion being provided with a plurality of radially arranged spring arms which form a complete circular buffer.

5. A punching bag support, comprising a body portion from the center of which the bag is suspended, said body portion being provided with a plurality of radially arranged spring arms which form a complete circular buffer and which are all curved in the same direction.

1,106,069. KINEMATOGRAPH APPARATUS. WALTER HILLIER ANDERSON, Wellington, New Zealand, assignor to Kino Limited, Wellington, New Zealand, a Corporation of New Zealand. Filed Dec. 4, 1912. Serial No. 734,805. (Cl. 88—18.)



1. In kinematograph apparatus, a cylindrical casing having opposite apertures, a cap upon the casing, a sleeve upon the inner face of the cap, a lens carried in the sleeve, a cylindrical shutter surrounding the lens and located in said casing and having apertures and blanks, and means for rotating the shutter.

2. In kinematograph apparatus, a cylindrical casing having opposite apertures, a cap upon the said casing and having a groove, a slide fitting the groove, a sleeve carried by the slide, a lens carried in the sleeve, means for moving the slide laterally, a cylindrical shutter surrounding the lens and located in said casing and having apertures and blanks and means for rotating the shutter.

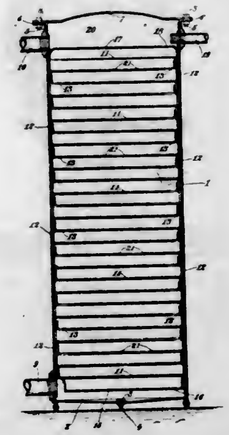
3. In kinematograph apparatus, a cylindrical casing having opposite apertures, a cap upon the said casing and having a groove, a slide fitting the groove, a sleeve carried by the slide, a lens carried in the sleeve, a lug upon the slide, a hood covering the lug, a screw passing through the hood and screwed into the lug, a cylindrical shutter surrounding the lens and located in said casing and having apertures and blanks and means for rotating the shutter.

4. In kinematograph apparatus, an apertured casing, an apertured shutter located therein, means for rotating the shutter, a mouthpiece on the casing, a slide having brackets adapted to be moved toward and from the mouth piece, a film gate pivoted to said brackets, and means for attaching the film gate to the mouth piece of the said casing.

5. In kinematograph apparatus, an apertured casing, an apertured shutter located therein, means for rotating the shutter, a mouthpiece on the casing, a slide having brackets adapted to be moved toward and from the mouth piece, a film gate pivoted to said brackets, vertical friction bars having right-angled ends passing through the gate, horizontal springs projecting the top ends and lower ends respectively of the said bars through the gate and means for attaching the gate to the mouthpiece.

[Claims 6 to 9 not printed in the Gazette.]

1,106,070. CARBURETER. J. FRANK ANDRES, St. Louis, Mo., assignor to United States Safety Gas Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 13, 1912. Serial No. 731,049. (Cl. 48—159.)



1. In a carbureter, the combination of a series of partitions or diaphragms within same, each comprising a hoop having cloth or other fabric stretched across the upper side thereof so as to leave an opening adjacent to one side thereof and string or the like stretched across the lower side of same, said partitions or diaphragms being arranged one on top of another with the openings therein in staggered relation to form a circuitous passage, and means for circulating the hydrocarbon and air through the circuitous passage in opposite directions.

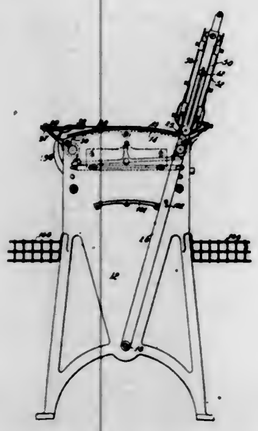
2. A partition or diaphragm for a carbureter comprising a hoop having cloth or other fabric stretched across the upper side thereof so as to leave an opening adjacent to one side thereof and string or the like stretched across the lower side of same.

3. A partition or diaphragm for a carbureter comprising a hoop having cloth or other fabric stretched across the upper side thereof so as to leave an opening adjacent to one side thereof and string or the like stretched across the lower side of same, the cloth or other fabric having a coating or filler, which is impervious to the hydrocarbon and fills the interstices of same to such extent that the hydrocarbon will percolate therethrough and hang in drops on the lower side thereof.

4. In combination with a carbureter having an air-inlet at or adjacent to the bottom thereof and an outlet and a supply pipe at or adjacent to the top of same, of a series of partitions or diaphragms intermediate the inlet and outlet, each partition or diaphragm comprising a hoop having cloth or other fabric stretched across the upper side thereof so as to leave an opening adjacent to one side of same and string or the like stretched across the lower side thereof, said partitions or diaphragms being arranged one on top of another with the openings therein in staggered relation to form a circuitous passage for the hydrocarbon and the air, and the cloth or other fabric having a coating or filler, which is impervious to the hydrocarbon and fills the interstices of the former to such extent that the hydrocarbon will percolate therethrough and hang in drops on the lower side thereof.

5. In a carbureter, a series of partitions each composed of a hoop having fabric stretched across its upper side and fabric engaging means extending across its lower side, the hoops being arranged in superimposed relation to cause said means of an upper partition to limit the extent of upward movement of the fabric of the lower adjacent partition by engagement with the fabric.

1,106,071. DUPLICATING-MACHINE. ALBERT H. BATES, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 27, 1908. Serial No. 429,319. (Cl. 101—11.)



1. The combination of a type bed, a traveling roller platen, and means for automatically feeding sheets of paper which stand in blocks with their lower edges against the platen onto the bed on the advance side of the platen which ever way it is moving.

2. The combination, with the type bed, of a traveling roller platen, and means moving with the platen for holding an upwardly extending block of sheets of paper with its lower edge resting by gravity against the advance side of the platen in position to automatically feed thereby.

3. The combination of a type bed, a traveling platen, means for bodily moving a supply of paper sheets, and means for automatically feeding a sheet onto the bed on the advance side of the platen whichever way it is moving.

4. In a printing mechanism, the combination of a type bed, a frame adapted to oscillate about an axis, a roller platen carried by said frame, and a paper supply carried by said frame with a sheet automatically contacting with the platen.

5. In a printing mechanism, the combination of a bed, a traveling platen, a platen frame, and a paper supply mounted on the platen frame and arranged to carry individual sheets resting against the platen and feed the paper between the bed and platen as the platen travels over the bed.

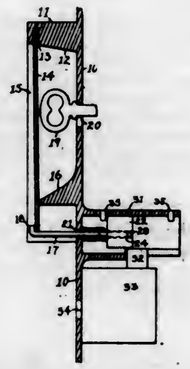
[Claims 6 to 33 not printed in the Gazette.]

1,106,072. FRANGIBLE COVERED GUARD. CLARENCE E. BEACH, Binghamton, N. Y., assignor to George O. Knapp, New York, N. Y. Filed Feb. 5, 1914. Serial No. 816,808. (Cl. 177—372.)

1. A guard consisting of the combination of a chamber, a frangible plate forming one wall of said chamber, a projection from one wall of said chamber adapted to retain an edge of said plate, the opposite wall of said chamber abutting against a side of said plate, the other walls of said chamber extending beyond said plate, said plate extending beyond said abutting wall, a latch engaging the edge of said plate opposite said slot, and means for holding said latch against said plate.

2. A guard consisting of the combination of a chamber, a frangible plate forming one wall of said chamber, a projection adapted to retain the top of said plate, a fulcrum for said plate between the top and bottom thereof, and spring operated means engaging the bottom of said plate and tending to cause movement of said plate around said fulcrum.

3. A guard consisting of the combination of a chamber, a frangible plate forming one wall of said chamber, a projection adapted to retain the top of said plate, the side walls of said chamber extending beyond said plate, a fulcrum for said plate between the top and bottom thereof, and spring operated means engaging the bottom of said plate and tending to cause movement of said plate around said fulcrum.

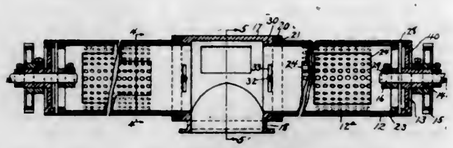


4. A guard consisting of the combination, of a chamber, a frangible plate forming one wall of said chamber, a projection adapted to retain an edge of said plate, a fulcrum for said plate between said edge and the opposite edge thereof, and spring operated means engaging said opposite edge and tending to cause movement of said plate around said fulcrum.

5. A guard consisting of the combination of a chamber, a frangible plate forming one wall of said chamber, a projection adapted to retain an edge of said plate, a fulcrum for said plate between said edge and the opposite edge thereof, spring operated means engaging said opposite edge and tending to cause movement of said plate around said fulcrum, the walls of said chamber extending beyond said plate.

[Claims 6 to 9 not printed in the Gazette.]

1,106,073. WASTE-COLLECTOR FOR COMBING-MACHINES. OTTO A. BELGER, Boston, Mass. Filed Nov. 18, 1913. Serial No. 801,611. (Cl. 19—15.)



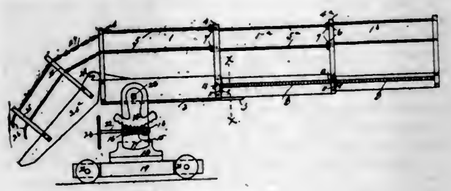
1. In a combing machine of the character described, a waste collector comprising an elongated rotary tube having perforated peripheral zones and an open inner end, a fixed shield within said tube having an open unobstructed inner end projecting through and beyond the inner end of the tube, a bearing rotatively supporting the outer end of the tube and fixedly supporting the outer end of the shield, and a fixed air conduit member formed to fixedly support the inner end of the shield and to rotatively support the inner end of the tube, and provided with an air outlet adapted to be connected with air-exhausting means, the interior of said chamber forming an unobstructed air passage.

2. In a combing machine of the character described, a waste collector comprising an elongated rotary tube having perforated peripheral zones, an open inner end and a head at its outer end provided with a central journal, a fixed shield within said tube having an open unobstructed inner end and a spider at its outer end, the inner end of the shield projecting through and beyond the inner end of the tube, a fixed bearing rotatively supporting the said central journal and fixedly supporting said spider, and a fixed air conduit member formed to fixedly support the inner end of the shield and to rotatively support the inner end of the tube, and provided with an outlet adapted to be connected with air-exhausting means, the said shield and the interior of said chamber forming an unobstructed air passage.

3. In a combing machine of the character described, a waste collector comprising an elongated rotary tube having perforated peripheral zones, an open inner end and a head at its outer end provided with a central journal, a fixed shield within said tube having an open unobstructed inner end and a spider at its outer end, the inner end of the shield projecting through and beyond the inner end of the tube, a fixed bearing rotatively supporting the said central journal and fixedly supporting said spider, and a fixed air conduit member rotatively supporting the inner end of the tube and having an internal annular seat to which the inner end of the shield is attached, said fixed conduit member having an air outlet adapted to be connected with air-exhausting means.

4. In a combing machine of the character described, a waste collector comprising an elongated rotary tube having perforated peripheral zones, an open inner end and a head at its outer end provided with a central journal, a fixed shield within said tube having an open unobstructed inner end and a spider at its outer end, the inner end of the shield projecting through and beyond the inner end of the tube, a fixed bearing rotatively supporting the said central journal and fixedly supporting said spider, and a fixed air conduit member formed to fixedly support the inner end of the shield and to rotatively support the inner end of the tube, and provided with an outlet adapted to be connected with air-exhausting means, the head of the tube being provided with one or more air passages adapted to permit a limited entrance of air into the outer ends of the tube and shield.

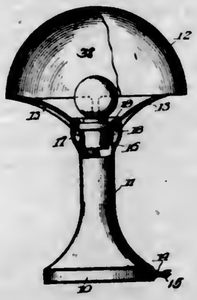
1,106,074. GANG-PLANK. JOSHUA BIDLAKE, Victoria, British Columbia, Canada. Filed Aug. 21, 1911, Serial No. 645,252. Renewed May 6, 1914. Serial No. 836,814. (Cl. 14—72.)



1. The combination in a gangplank of telescopic sections, ratchet and pawl means for holding said sections rigidly extended with relation to each other, a sector and coöperating worm for bringing said sections so extended to various angles and holding the same thereat, and a wheeled platform upon which said gangplank is revolubly mounted.

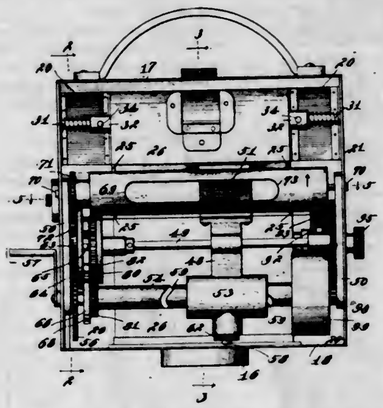
2. The combination in a gangplank of telescopic sections, ratchet and pawl means for holding said sections rigidly extended with relation to each other, an upper frame in which one of said sections is revolubly mounted, a sector and coöperating worm for bringing said extended sections to various angles, a wheeled base frame supporting said first mentioned frame and a pivot bolt connecting said frames to each other whereby the entire structure may be wheeled about and said upper frame revolved upon said pivot bolt.

1,106,075. WITHDRAWN. WILLIAM J. BOHAN, St. Paul, Minn. Filed [illegible], 1913. Serial No. 759,620. (Cl. 240—81.)



An electric lamp fixture comprising, in combination, a stem having a seat for a lamp socket, a shade for a lamp carried by such socket, and arms projecting from the stem and carrying the shade, the stem arms and shade being integral.

1,106,076. MOVING-PICTURE MACHINE. BRUCE BORLAND, Chicago, Ill. Filed July 30, 1908, Serial No. 446,034. Renewed Feb. 16, 1911. Serial No. 608,981. (Cl. 88—18.)



1. In a device of the character described, a film, a suitable lens, mechanism to move the lens back and forth in the direction of the width of the film, and means for supporting and intermittently moving the film in the direction of its length past the lens at the end of the travel of the lens across the film.

2. In a device of the character described, a suitable lens, means for supporting and intermittently moving a film in the direction of its length past the lens, and mechanism for intermittently moving the lens across the film.

3. In a device of the character described, a suitable lens, means for supporting and intermittently moving a film past the lens, mechanism for intermittently moving the lens across the film, and means to automatically actuate the film-moving means at the end of the transverse movement of the lens.

4. In a device of the character described, a suitable lens, means for supporting and moving a film in the direction of its length past the lens step-by-step, mechanism for moving the lens across the film step-by-step, and means to automatically actuate the film-moving means at the end of the transverse movement of the lens.

5. In a device of the character described, a suitable lens, a film holder adjacent the lens, feed-mechanism for moving the film in the direction of its length, a frame for the lens, means for moving the frame step-by-step transversely of the film, and connections between the said feed-mechanism and lens moving-means to actuate the former when the lens reaches its limit of movement.

[Claims 6 to 19 not printed in the Gazette.]

1,106,077. PROCESS FOR THE PRODUCTION OF SHAPED ARTICLES FROM COPPER-AMMONIUM CELLULOSE SOLUTION. EMILE BRONNERT, Niedermorschweiler, Germany, assignor to The Firm of Vereinigte Glanzstoff-Fabriken A.-G., Elberfeld, Germany. Filed Apr. 9, 1913. Serial No. 759,933. (Cl. 18—54.)

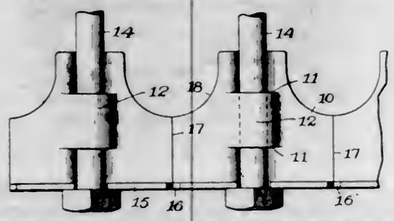
1. A process for the production of shaped articles from copper-ammonium cellulose solutions, comprising introducing a solution of copper ammonium cellulose into a warm solution containing an alkali and a high concentration of a salt of an oxy-acid, thereby obtaining a precipitation of the cellulose.

2. A process for the production of shaped articles from copper-ammonium cellulose solutions, comprising introducing a solution of copper ammonium cellulose into a warm solution containing a low concentration of an alkali and a high concentration of a salt of an oxy-acid, thereby obtaining a precipitation of the cellulose.

3. A process for the production of shaped articles from copper ammonium cellulose solutions, comprising introducing a solution of copper ammonium cellulose into a warm solution containing approximately 2½ per-cent of an alkali and a high concentration of a salt of an oxy-acid, thereby obtaining a precipitation of the cellulose.

4. A process for the production of shaped articles from copper-ammonium cellulose solutions, comprising introducing a solution of copper ammonium cellulose into a warm solution containing an alkali and a high concentration of a salt of lactic-acid, thereby obtaining a precipitation of the cellulose.

1,106,078. PIPE-HANGER. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed June 28, 1913. Serial No. 776,417. (Cl. 248—31.)

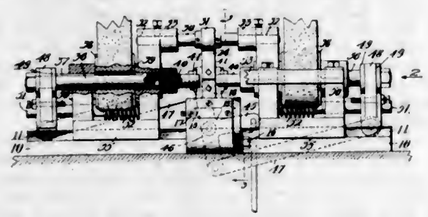


1. As an article of manufacture a pipe hanger consisting of a single piece of sheet metal made in sections separable along vertical lines, and having a plurality of semi-cylindrical projections arranged on the opposite sides thereof and integrally therewith, which, together, constitute a cylindrical passage for the reception of a supporting bolt.

2. As an article of manufacture, a pipe hanger comprising a piece of sheet metal having semi-cylindrical notches at the top for receiving the pipes to be supported and having two longitudinal slits between said notches, the sheet metal being bent alternately in reverse directions above and below each slit into opposite semi-cylindrical forms so as to constitute together a cylindrical passage for a vertical supporting bolt.

3. As an article of manufacture, a pipe hanger having notches at the top for receiving the pipes to be supported and having a slit between said notches, the metal being bent in reverse directions above and below said slit so as to constitute together a passage for a vertical supporting bolt.

1,106,079. MACHINE FOR TRUING AND THE LIKE. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed July 17, 1913. Serial No. 779,494. (Cl. 82—2.)



1. In a machine of the character described, the combination of a reciprocable jaw for holding the work, a second jaw pivotally connected therewith, and means located in fixed position for swinging the pivoted jaw about its pivot when the first jaw in moved to an extreme position in one direction and for locking it against the first jaw when moved to an extreme position in the opposite direction.

2. In a machine of the character described, the combination of a slide, a work-holding jaw fixed thereon open at the top, an upper jaw open at the bottom, movable longitudinally with said slide and adapted to move up and down thereon, and means whereby when the slide moves in one direction horizontally, the upper jaw will be raised, and whereby when the slide moves in the other direction, the upper jaw will first move down and then be clamped in closed position.

3. In a machine of the character described, the combination of a slide, a jaw fixed on top thereof, a second jaw pivoted on said slide above the first jaw, a roll adjustably mounted above said upper jaw, and means whereby when the slide is moved back and forth the roll will engage said upper jaw to open and close it positively.

4. In a machine of the character described, the combination of a slide, a jaw fixed thereon, an upper jaw pivoted on said slide above the first jaw and having an upward projection and a flat surface, and a roll in position to engage said projection when the slide moves in one direction and tip the upper jaw away from the lower jaw, and to engage said flat surface when the slide moves in the opposite direction and force said upper jaw down over the lower jaw and clamp it in that position.

5. In a machine of the character described, the combination of a slide, having a jaw fixed thereon, a second jaw pivoted upon the first jaw and adapted to coöperate therewith, said second jaw having a projection extending upward at one end over the pivot, a substantially flat surface along the top of said second jaw, and a depression between said projection and flat surface, and a roll mounted above the upper jaw in position to engage said projection and surface alternately as the slide reciprocates.

[Claims 6 to 9 not printed in the Gazette.]

1,106,080. KINETOGRAPHIC APPARATUS. AUGUST CHRONIK and LOUIS CHRONIK, New York, N. Y. Filed Mar. 10, 1913. Serial No. 753,397. (Cl. 88—18.4.)

1. In a kinetographic apparatus, reciprocating means for imparting to a portion of the film an intermittent motion, said means comprising an arm having a plurality of feeding fingers adapted to engage the perforations in the film, a swinging arm pivoted to said first named arm, a crank, a link connecting the pin of said crank with said second crank attached to the pin of said first crank, a link connecting the pin of said second crank and said first named arm, and means for imparting a continuous rotation to the shaft of said first crank.

2. In a kinetographic apparatus, reciprocating means for imparting to a portion of the film an intermittent motion, said means comprising an arm having a plurality of feeding fingers adapted to engage the perforations in the film, a swinging arm pivoted to said first named arm, a crank, a link connecting the pin of said crank with said second named arm, a second crank attached to the pin of said first crank, the axes of said two cranks being in alinement and the arm of said second crank projecting toward the shaft of said first crank, a link connecting the pin of said second crank and said first named arm, and means for imparting a continuous rotation to the shaft of said first crank.

3. In a kinetographic apparatus, reciprocating means for imparting to a portion of the film an intermittent motion, said means comprising an arm having a plurality of feeding fingers adapted to engage the perforations in the film, a disk, an arm eccentrically pivoted to said disk and to said first named arm, a crank, a link connecting the pin of said crank with said second named arm, a second crank attached to the pin of said first crank, a link connecting the pin of said second crank and said first named arm, and means for imparting a continuous rotation to said disk and to the shaft of said first crank.

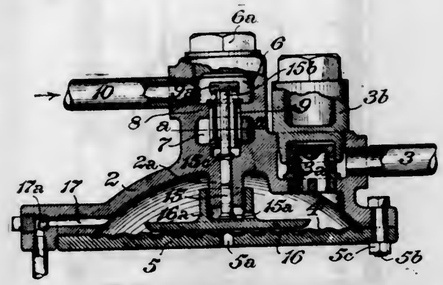
4. In a kinetographic apparatus, reciprocating means for imparting to a portion of the film an intermittent motion, said means comprising an arm having a plurality of feeding fingers adapted to engage the perforations in the film, a disk, an arm eccentrically pivoted to said disk and to said first named arm, a crank, a link connecting the pin of said crank with said second named arm, a second crank attached to the pin of said first crank, the axes of said two cranks being in alinement and the arm of said second crank projecting toward the shaft of said first crank, a link connecting the pin of said second crank and said first named arm, and means for imparting a continuous rotation to said disk and to the shaft of said first crank, said first named crank making two complete revolutions while said disk makes one revolution.

5. In a kinetographic apparatus, reciprocating means for imparting to a portion of the film an intermittent motion, said means comprising an arm having a plurality of feeding fingers adapted to engage the perforations in the film, a disk, an arm eccentrically pivoted to said disk and to said first named arm, a crank, a link connecting the pin of said crank with said second named arm, a second crank attached to the pin of said first crank, the axes of said two cranks being in alinement and the arm of said second crank projecting toward the shaft of said first crank, a link connecting the pin of said second crank and said first named arm, and means for imparting a continuous rotation to said disk and to the shaft of said first crank.

[Claim 6 not printed in the Gazette.]

1,106,081. DRIFTING-VALVE FOR LOCOMOTIVES. FRANCIS J. COLE, Schenectady, N. Y. Filed June 6, 1914. Serial No. 843,348. (Cl. 121—14.)

1. In a drifting valve appliance for locomotives, the combination of a diaphragm chamber communicating with a distribution valve chest, a flexible diaphragm closing one end of said chamber and subject to atmospheric pressure on its outer side, a valve controlling the supply of steam from the boiler to a valve chest independently of the main throttle valve, and means, interposed between said valve and the diaphragm, for unseating said valve by the direct action of the upward movement of the diaphragm induced by the formation of a partial vacuum in the valve chest and diaphragm chamber.



2. In a drifting valve appliance for locomotives, the combination of a diaphragm chamber communicating with a distribution valve chest, a flexible diaphragm closing one end of said chamber, and subject to atmospheric pressure on its outer side, a valve controlling the supply of steam from the boiler to a valve chest independently of the main throttle valve, and an operating stem, interposed between and adapted to bear at opposite ends on, said valve and the diaphragm, and directly transmit upward movement of the diaphragm, induced by the formation of a partial vacuum in the valve chest and diaphragm chamber, to said valve.

3. In a drifting valve appliance for locomotives, the combination of a diaphragm chamber communicating with a distribution valve chest, a flexible diaphragm closing one end of said chamber and subject to atmospheric pressure on its outer side, a valve controlling the supply of steam from the boiler to a valve chest independently of the main throttle valve, means interposed between said valve and the diaphragm for unseating said valve by the direct action of the upward movement of the diaphragm induced by the formation of a partial vacuum in the valve chest and diaphragm chamber, and a check valve interposed between the diaphragm chamber and valve chest and adapted to seat in the direction of the diaphragm chamber.

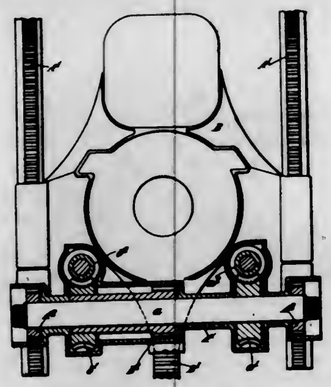
4. In a drifting valve appliance for locomotives, the combination of a diaphragm chamber communicating with a distribution valve chest, a flexible diaphragm closing one end of said chamber and subject to atmospheric pressure on its outer side, a steam supply chamber and a steam delivery chamber fixed on the top of the diaphragm chamber, a steam supply valve controlling communication between said supply and delivery chamber, a pipe for connecting the steam supply chamber with a locomotive boiler, a pipe for connecting the steam delivery chamber with a distribution valve chest, and an operating stem interposed between the diaphragm and steam supply valve, in line axially therewith, and adapted to transmit vertical movement directly from one of said members to the other.

1,106,082. NUT. ARTHUR T. CRANE, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Apr. 9, 1914. Serial No. 830,688. (Cl. 85—32.)



A nut formed from sheet metal and comprising a tubular shank provided at one end with a reversely turned flanged head and at the opposite end with a flaring base.

1,106,083. RANGING AND POINTING GEAR OF ORDNANCE. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, England, assignors to Vickers Limited, Westminster, England. Filed Feb. 1, 1913. Serial No. 745,595. (Cl. 89—41.)



1. In ranging and pointing gear for ordnance, the combination with the gun carriage and the gun cradle, of a rack attached to the carriage, another rack attached to the cradle, a toothed wheel that gears with the rack on the carriage and forms part of the pointing gear, a toothed wheel that gears with the rack on the cradle and forms part of the ranging gear, said toothed wheels being mounted independently and co-axially, a bracket carrying said toothed wheels and means for slidably mounting said bracket on the rack attached to the carriage.

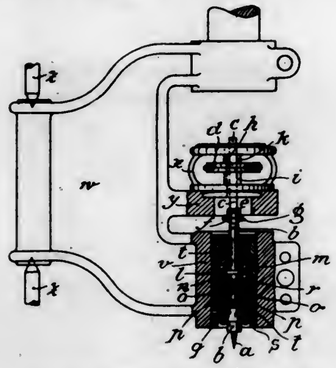
2. In ranging and pointing gear for ordnance, the combination with the gun carriage and the gun cradle, of a rack attached to the carriage, another rack attached to the cradle, a toothed wheel that gears with the rack on the carriage and forms part of the pointing gear, worm gearing for operating said toothed wheel, a second toothed wheel that gears with the rack on the cradle and forms part of the ranging gear, worm gearing for operating said second toothed wheel, said toothed wheels being mounted independently and co-axially, a bracket carrying said toothed wheels and means for slidably mounting said bracket on the rack attached to the carriage.

3. In ranging and pointing gear for ordnance, the combination with the sighting apparatus, the gun carriage and the gun cradle, of a rack attached to the carriage, another rack attached to the cradle, a toothed wheel that gears with the rack on the carriage and forms part of the pointing gear, a toothed wheel that gears with the rack on the cradle and forms part of the ranging gear, said toothed wheels being mounted independently and co-axially, a bracket carrying said toothed wheels and means for slidably mounting said bracket on the rack attached to the carriage, and means for connecting said bracket to the sighting apparatus.

4. In ranging and pointing gear for ordnance, the combination with the sighting apparatus, the gun carriage and the gun cradle, of a rack attached to the carriage, another rack attached to the cradle, a toothed wheel that gears with the rack on the carriage and forms part of the pointing gear, worm gearing for operating said toothed wheel, a second toothed wheel that gears with the rack on the cradle and forms part of the ranging gear, worm gearing for operating said second toothed wheel, said toothed wheels being mounted independently and co-axially, a bracket carrying said toothed wheels and means for slidably mounting said brackets on the rack attached to the carriage, and means for connecting said bracket to the sighting apparatus.

5. In ranging and pointing gear for ordnance, the combination with the sighting apparatus, the gun carriage and the gun cradle, of a rack attached to the carriage, another rack attached to the cradle, a toothed wheel that gears with the rack on the carriage and forms part of the pointing gear, a spindle carrying said toothed wheel, a toothed wheel that gears with the rack on the cradle and forms part of the ranging gear, a sleeve carrying said last mentioned toothed wheel, and arranged co-axially around the spindle, a bracket in which said spindle and sleeve are mounted, means for slidably mounting said bracket on the rack attached to the carriage, and means for connecting said bracket to the sighting apparatus.

1,106,084. ENGRAVING-MACHINE. FRIEDRICH DECKEL, Munich, Germany. Filed Feb. 10, 1913. Serial No. 747,249. (Cl. 90—13.1.)



1. An engraving machine, embodying therein a cutter shaft composed of sections arranged in axial alinement, and a flexible, non-metallic, vibration-absorbing coupling passing directly through adjacent ends of the shaft sections for connecting the same together.

2. An engraving machine, embodying therein a shaft consisting of axially alined sections, a section of gut passing directly through adjacent ends of said shaft sections to connect the latter together, and a cutting tool mounted in the free end of said sectional shaft.

3. An engraving machine, embodying therein, a sectional shaft, a flexible non-metallic coupling passing directly through adjacent ends of the shaft sections for connecting the latter to each other, a cutting tool carried by one of said parts and means carried by the other of said parts, whereby the entire shaft may be rotated.

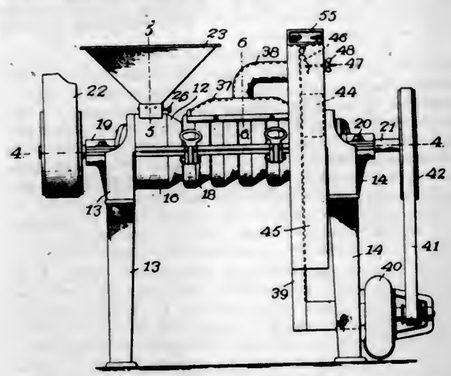
4. An engraving machine, embodying therein a sectional shaft, one part of said shaft having a bifurcated end and the other part of said shaft having a reduced end adapted to be connected with said bifurcated end, a gut connection between said ends, a cutting tool carried by one of said shaft parts, and means carried by the other of said parts, whereby the entire shaft may be rotated.

5. An engraving machine, embodying therein a bi-part shaft, a flexible coupling between the parts of said shaft, means on one of the parts of the shaft whereby the latter may be rotated, a collar formed on the other shaft part, anti-friction bearings adjacent each face of said collar, and means whereby said collar is yieldingly forced into intimate contact with said anti-friction bearings.

1,106,085. HULLING-MACHINE. WILLIAM L. DINES, Jr., Worcester, Mass., assignor to William L. Dines, Jr., Co., Worcester, Mass., a Corporation of Massachusetts. Filed June 11, 1913. Serial No. 772,935. (Cl. 83—37.)

1. In a hull-removing machine, a hull-removing disk having one smooth surface, a corrugated rubbing surface, and a narrow edge portion provided with a plurality of wedge-shaped clearing projections arranged to move the grain axially of said disk toward its smooth surface.

2. A hulling machine having in combination a longitudinally extended casing, a rotary shaft mounted therein, hull-removing means thereon, and a conical ribbed feeding member also mounted upon said shaft to feed the grain axially toward the apex of the cone.



3. A hulling machine having in combination a longitudinally extended casing, a rotating shaft mounted therein, hull-removing means thereon, and feeding means on said shaft comprising a conical shell and spirally arranged feeding ribs thereon to feed the grain axially toward the apex of the cone.

4. A hulling machine having in combination a casing, hull-removing means, and rotatable feeding means comprising a disk only slightly less in diameter than the inclosing casing, a conical shell secured to said disk, and spirally arranged ribs on said conical shell to feel the grain axially toward the apex of the cone.

5. In a hulling machine, a rotating shaft, a bearing for said shaft having a recess therein, and longitudinal adjusting means for said shaft comprising a pair of wedge-shaped collars loosely mounted on said shaft adjacent to said bearing, means including a segmental slot in one collar and a binding screw supported upon the other collar and extending through the slot to hold said collars in adjusted angular relation to each other, and a projection on one of said collars extending into the recess in the bearing and preventing rotation of the collars relative to said bearing but permitting longitudinal adjusting movement relative thereto.

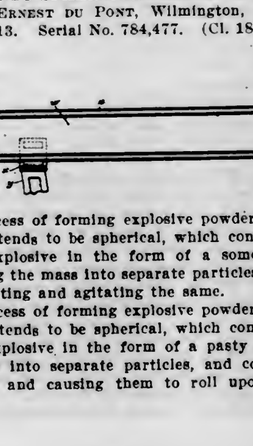
[Claim 6 not printed in the Gazette.]

1,106,086. CEMENT-TILE MACHINE. WILLIAM E. DUNN and HARRY E. DUNN, Chicago, Ill. Filed Mar. 16, 1911. Serial No. 614,770. (Cl. 25—36.)

1. In a tile molding machine, the combination with a frame, a mold on said frame, a drive shaft, a spindle adapted to be rotated and vertically reciprocated in said mold, a packing head mounted upon the upper end of said spindle, and operative connection between said shaft and the spindle, of a plurality of oval shaped packing shoes exially adjusted on said head, by bolts passing through said shoes and head.

2. In a tile molding machine, the combination with a frame, a mold removably clamped on said frame, a drive shaft, a spindle mounted to rotate and reciprocate in said mold, and operative connections between said shaft and the spindle whereby the latter may be driven by hand or motor, of a packing head carried on the upper end of said spindle, said head comprising a flanged circuluar plate, and packing members mounted on said plate at spaced intervals, said members consisting of oval shoes pointed at one end and semi-cylindrical at the other, and means for adjusting said shoes axially to vary their inclinations to the walls of said mold.

3. In a tile machine, the combination with a supporting frame, a drive shaft, a rotatable and slidable vertical spindle operatively connected with said shaft, a packing head mounted on said spindle, die rings removably mounted on said frame, of means for moving said spindle vertically, said means comprising a sleeve on the spindle, a rack on said sleeve, a pinion engaging said rack, a shaft for the said pinion, a worm gear on the pinion shaft, a worm shaft, operative connection between the worm shaft and the drive shaft, and means for throwing the worm out of connection with said worm gear.



4. In a tile machine, the combination with a supporting frame, a drive shaft, a vertical spindle operatively connected with said shaft, and an adjustable packing head on the spindle, of a rack sleeve mounted on said spindle, a pinion engaging said rack, a shaft for said pinion, a worm gear on the pinion shaft, a worm adapted to engage said gear, a worm shaft adapted to throw the worm into and out of mesh with the worm-gear, and operative connection between the worm shaft and the driving shaft.

5. In a tile machine, the combination with a hollow frame forming a casing, a vertical spindle arranged within the casing, a sleeve mounted on said spindle, a rack on said sleeve, a pinion engaging said rack, a shaft for the pinion, a worm gear on said shaft, a worm shaft adapted to rock on a transverse axis for the purpose of throwing the worm into and out of gear, an oil cup for the worm on said worm shaft, a drive shaft on said casing, operative connection between said drive shaft and said spindle, and means connected with the drive shaft for operating said worm shaft.

1,106,087. METHOD OF FORMING EXPLOSIVE BLACK POWDER INTO SPHERICAL GRAINS. FRANCIS I. DU PONT and ERNEST DU PONT, Wilmington, Del. Filed Aug. 13, 1913. Serial No. 784,477. (Cl. 18—55.)



1. The process of forming explosive powder into grains whose shape tends to be spherical, which consists in preparing the explosive in the form of a somewhat pasty mass, dividing the mass into separate particles, and simultaneously heating and agitating the same.

2. The process of forming explosive powder into grains whose shape tends to be spherical, which consists in preparing the explosive in the form of a pasty mass, dividing the mass into separate particles, and conveying the particles, to, and causing them to roll upon, a heated surface.

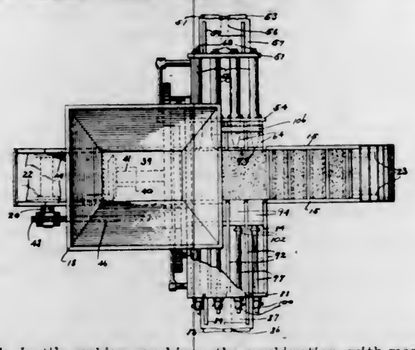
3. The process of forming explosive powder into grains whose shape tends to be spherical which consists in preparing the explosive in the shape of a somewhat pasty mass, dividing the mass into separate particles of non-spherical shape, and bringing the particles into moving contact with a heated surface.

4. The process of forming explosive powder into grains whose shape tends to be spherical which consists in preparing the explosive in the shape of a somewhat pasty mass, dividing the mass into separate cylindrically shaped particles and subjecting them to a rolling motion upon a heated surface.

5. Process of manufacturing black powder in the form of grains whose shape tends to be spherical, which consists in preparing an intimate mixture of water and of niter, charcoal and sulfur in substantially the following proportions: 73 parts of niter, 16 parts of charcoal and 11 parts of sulfur; dividing the mass into separate particles and bringing the separate particles into moving contact with a heated surface.

[Claims 6 and 7 not printed in the Gazette.]

1,106,088. TILE-MAKING MACHINE. CHARLES M. EBERLING, Cleveland, Ohio. Filed Mar. 11, 1912. Serial No. 682,839. (Cl. 25—101.)



1. In tile making machines, the combination, with means for supporting the faces of a plastic unit blank, of a plurality of horizontally mounted cutting elements for separating the blank into units and forming walls between such units, a horizontally-mounted displacing element supported upon the opposite side of said blank-supporting means and intermediately of adjacent cutting elements, means for reciprocating said cutting and opening-forming elements independently of each other, whereby said cutting elements will divide the plastic material into units and the corresponding opening-forming element will form a longitudinal opening through each unit and compress the material outwardly from the opening, said reciprocatory means being arranged to advance said opening-forming elements only after the advance of said cutting elements prior to the retraction thereof, whereby said cutting elements may form walls to receive the compressing pressure of adjacent units.

2. In a tile making machine, the combination, with means for supporting and inclosing a mass of plastic cementitious material, said means including a pair of opposite, parallel, substantially vertical, apertured walls, of a plurality of elongated, horizontally reciprocable knives mounted outside of one of said wals and in alinement with openings therein, a plurality of elongated, horizontally-reciprocable displacing plungers mounted outside of the other wall and in alinement with openings therein, said knives and plungers being supported independently of each other and alternating with each other, means for reciprocating said knives and plungers through their respective apertures, whereby said knives may divide the material into a plurality of tile units and form supporting partitions between adjacent units, and said plungers may form a longitudinal opening through each unit and compress the plastic material outwardly from the opening, said plunger reciprocating means being arranged to operate after the advance movement and prior to the retracting movement of said knife operating means, and means operative after the advance of both said knives and plungers and prior to their retraction for moving inwardly a side of said inclosing means so as to bring additional pressure upon said plastic material.

3. In a tile forming machine, in combination, a pair of movable apertured walls, means for supporting a pallet between said walls, a series of partition-forming knives arranged in line with certain of said apertures, a series of plungers arranged in line with other of said apertures, said knives and plungers being mounted for independent actuation, means for reciprocating said knives and plungers so as to cause them to enter their respective apertures and traverse the pallet between said walls, and means for reciprocating said walls so as to cause them to approach and recede from each other, said plunger reciprocating means being arranged to institute the forward movement of the plungers only after the forward movement of the knives has become substantially completed, and said wall reciprocating means being arranged to institute the forward movement of the walls only after the forward movement of said plungers has been substantially completed.

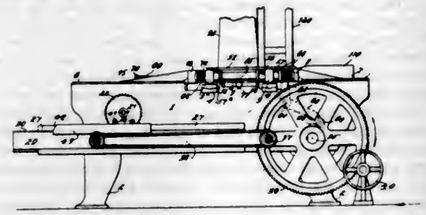
4. In a tile forming machine, in combination, a pair of movable walls having oppositely disposed apertures therein, alternate dividing and opening forming elements arranged in line with said apertures, said dividing and opening-forming elements being mounted for reciprocation independently of each other and adapted, when advanced, to traverse the space between said walls and enter the corresponding apertures in the opposite wall, a pallet support between said walls and spaced therebelow sufficiently to permit said walls and elements to be advanced over the upper face of a pallet thereon, means for reciprocating said elements so as to advance them across the pallet and withdraw them therefrom, said means being arranged to advance, first, said dividing elements, and second, said opening-forming elements, and means for causing said walls to approach and recede from each other, said last named means being arranged to bring said walls most nearly together substantially at the time of maximum advance of said reciprocable elements, said various reciprocating means being arranged to retract first said opening-forming elements, next said dividing elements, and finally said movable walls.

5. In a tile forming machine, in combination, a pair of walls having spaced apertures therein, a series of reciprocable dividing elements mounted outside of one of said walls and arranged in line with alternate apertures, a second series of reciprocable opening-forming elements mounted outside of the other of said walls and arranged in line with the intermediate apertures, both of said elements being adapted, when advanced, to traverse the space between said walls, means between said walls for supporting pallets charged with plastic material, the tops of said pallets being at a height to permit said elements to pass thereover, means for reciprocating both said series of elements to cause them to pierce said plastic material and be withdrawn therefrom, and movable means operative substantially at the end of the advancing movements of said elements for exerting pressure upon said plastic material.

[Claims 6 to 13 not printed in the Gazette.]

1,106,089. CEMENT-WORKING MACHINERY. CHARLES M. EBERLING, Cleveland, Ohio. Filed Feb. 6, 1913. Serial No. 746,436. (Cl. 25—101.)

1. In cement working machinery, the combination, with means for supporting and inclosing a mass of plastic cementitious material, said inclosing means having movable ends and said ends being provided with openings to allow knives and plungers to enter the material therein, of a series of partition forming knives arranged in line with such knife openings, a series of plungers arranged in line with such plunger openings, said knives and plungers being mounted for independent actuation, means for reciprocating said knives and plungers successively so as to cause them to enter the material inclosed in said means and be withdrawn from the same, means for advancing said movable ends after the knives and plungers have entered the material and prior to their withdrawal therefrom, and means for maintaining said movable ends in advanced position until after the withdrawal of said plungers and knives.



2. In cement working machinery, the combination, with means for supporting and inclosing a mass of plastic cementitious material, said inclosing means having movable ends and said ends being provided with openings to allow knives and plungers to enter the material therein, of a series of partition forming knives arranged in line with such knife openings, a series of plungers arranged in line with such plunger openings, said knives and plungers being mounted for independent actuation, means for reciprocating said knives and plungers so as to cause them first to enter the material inclosed in said means and then be withdrawn therefrom, means for advancing said movable ends after the knives and plungers have entered the material and prior to their withdrawal therefrom, means for maintaining said movable ends in advanced position until after the withdrawal of said knives and plungers, and means for limiting the advancing movement of said ends.

3. In cement working machinery, the combination, with means for supporting and inclosing a mass of plastic cementitious material and a reciprocable plunger adapted to be advanced through the material so inclosed, of means for removing plastic material adhering to the end of said plunger prior to the retraction of the same

4. In cement working machinery, the combination, with means for supporting and inclosing a mass of plastic cementitious material, and a reciprocable plunger adapted to be advanced through the material so inclosed, the plunger having a tapered forward end, of means for reciprocating said plunger into and out of the mass so inclosed, and means for removing from the tapered end thereof any cementitious material which may adhere thereto prior to the withdrawing movement of said plunger.

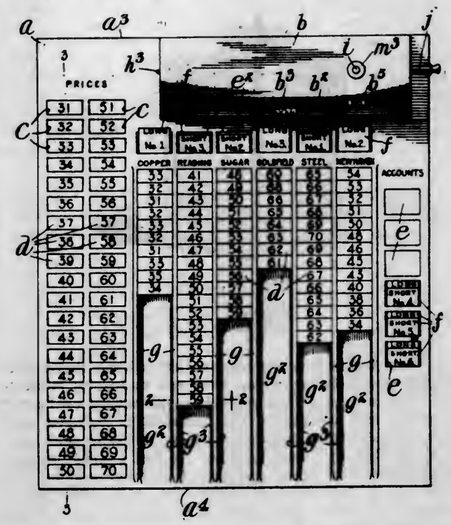
5. In cement working machinery, the combination, with means for supporting and inclosing a mass of plastic cementitious material, said inclosing means having apertures therein, of partition-forming knives mounted in line with alternate apertures, means for reciprocating said knives to cause them to advance into said material and then be withdrawn therefrom, certain of said knives having the full width of said inclosing space so as to divide the material completely into separate tile forming sections, and other knives being of less width than said space so as merely to form apertures in said material, plungers mounted in line with the remaining apertures, said plungers and knives being arranged for movement in the same plane but supported for independent actuation, means for reciprocating said plungers so as to pierce such material and then be withdrawn therefrom, said knife reciprocating means being formed to provide a dwell between the advancing and withdrawing movements of the same, and said plunger reciprocating means being arranged to operate during such period of dwell.

[Claims 6 to 10 not printed in the Gazette.]

1,106,090. GAME DEVICE. CHARLES H. GESSNER, Bergenfield, N. J. Filed Jan. 14, 1914. Serial No. 811,952. (Cl. 46—56.)

1. A stock game device of the class described involving a price tape divided into separate series of numerals each of which comprises a predetermined number of numerals.

2. A stock game device of the class described involving a price tape divided into separate series of numerals each of which comprises a predetermined number of numerals, and which is also provided at predetermined intervals with the legends "Mkt open" and "Mkt closed".



3. A stock game device of the class described involving a price tape divided into separate series of numerals each of which comprises a predetermined number of numerals, and which is also provided at predetermined intervals with the legends "Mkt open" and "Mkt closed", between which are placed at intervals, other legends consisting of "Good statement", "Bear raid", "Bull move", "Bad statement" and "War news".

4. A stock game device of the class described involving a price tape divided into separate series of numerals each of which comprises a predetermined number of numerals, and a name wheel provided with a predetermined number of letter abbreviations indicating the names of predetermined articles to be traded in.

5. In a stock game device of the class described, a base board provided at one end thereof with a box containing a price tape and means for operating the same, said base board being provided at one side with receptacles for price cards and at the other side with receptacles for account cards, and the space between the receptacles for price cards and the receptacles for account cards being divided into longitudinal spaces adapted to receive the price cards, and between which and said box are other spaces adapted to receive the account cards, and between which and said longitudinal spaces are placed the names of the stocks to be traded in.

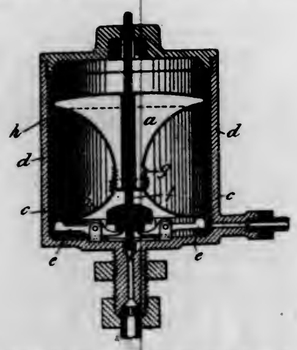
[Claims 6 to 8 not printed in the Gazette.]

1,106,091. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. WALTER GILLETT, London, England. Filed Aug. 29, 1908. Serial No. 450,803. (Cl. 137—104.)

1. In a carbureter, the combination, with the float chamber and means for control of inlet thereto, of a float having bearing upon said inlet controlling means, said float being formed of adjustably united sections and diminished in cross sectional capacity between the normal maximum and normal minimum level of the liquid for the purpose set forth.

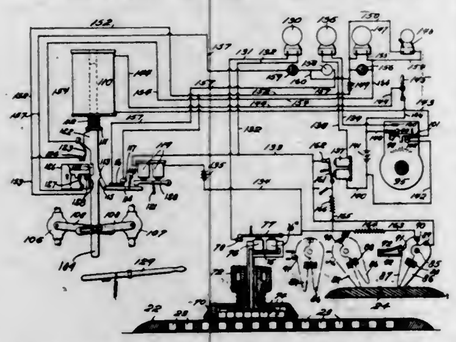
2. In a carbureter, the combination, with the float chamber and means for control of inlet thereto, of a float diminished in cross sectional capacity in a downward direction and a flange adjustably attached to said float having bearing upon said inlet controlling means.

3. In a carbureter, the combination, with the float chamber and means for control of inlet thereto, of a float diminished in cross sectional capacity in a downward direction and a flange screw threaded upon said float having bearing upon said inlet controlling means.



4. In a float valve, the combination, with a liquid containing receptacle having an inlet and means for controlling said inlet, of a float adapted to be buoyed up by the liquid in said receptacle, and connections between said float and said inlet controlling means whereby said inlet is closed when the liquid level has reached a predetermined height, said float being diminished in cross-sectional capacity in a downward direction and such variation in capacity being most pronounced in the neighborhood of the maximum liquid level.

1,106,092. TRAIN CONTROLLING AND STOPPING SYSTEM. GEORGE R. GUILD, Fort Bayard, N. Mex., assignor of one-half to W. J. Browne, Fort Bayard, N. Mex. Filed June 2, 1913. Serial No. 771,237. (Cl. 246—27.)



1. In a train controlling and stopping system the combination with a railway track divided into blocks and each block equipped with an electrically operated semaphore, of a series of magnets located adjacent one of the rails of each block of the track, a source of electrical energy for said magnets, a circuit in which said magnets and the source of electrical energy are located, which circuit is normally closed at one point when the semaphore of the next adjacent block is in a position to indicate safety and open when said adjacent block is occupied by a train, a polarized relay having its armature in circuit with the series of magnets and their source of electrical energy, a circuit and a source of electrical energy for said polarized relay, contacts in said last mentioned circuit which are adapted to be closed by means carried by the locomotive operating on the track, a shoe carried by the locomotive and adapted to pass over the track magnets, a series of coils in said shoe, which coils receive an induced current from the track magnets when current is flowing therethrough, a relay in circuit with the coils of the shoe, and electrically controlled means for actuating the air and steam valves of the locomotive, which last mentioned means is controlled by the relay which is in circuit with the coils of the shoe.

2. In a train controlling and stopping system the combination with a railway track divided into blocks and each block equipped with an electrically operated semaphore, of a series of magnets located adjacent one of the rails of each block of the track, a source of electrical energy for said magnets, a circuit in which said magnets and the source of electrical energy are located, which circuit is normally closed at one point when the semaphore of the next adjacent block is in a position to indicate safety and open when said adjacent block is occupied by a train, a polarized relay having its armature in circuit with the series of magnets and their source of electrical energy, a circuit and a source of electrical energy for said polarized relay, contacts in said last mentioned circuit, which are adapted to be closed by means carried by the locomotive operating on the track, a shoe carried by the locomotive and adapted to pass over the track magnets, a series of coils in said shoe, which coils receive an induced current from the track magnets when current is flowing therethrough, a relay in circuit with the coils of the shoe, electrically controlled means for actuating the air and steam valves of the locomotive, which last mentioned means is controlled by the relay which is in circuit with the coils of the shoe, and a series of electrically operated recording and signaling devices carried by the locomotive, the same being controlled by the action of the relay and said electrically controlled means.

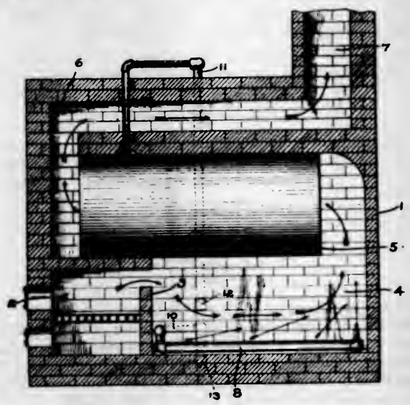
3. In a train controlling and stopping system the combination with a railway track divided into blocks and each block equipped with an electrically operated semaphore, of a series of magnets located adjacent one of the rails ot each block of the track, a source of electrical energy for said magnets, a circuit in which said magnets and the source of electrical energy are located, which circuit is normally closed at one point when the semaphore of the next adjacent block is in a position to indicate safety and open when said adjacent block is occupied by a train, a polarized relay having its armature in circuit with the series of magnets and their source of electrical energy, a circuit and a source of electrical energy for said polarized relay, contacts in said last mentioned circuit, which are adapted to be closed by means carried by the locomotive operating on the track, a shoe carried by the locomotive and adapted to pass over the track magnets, a series of coils in said shoe, which coils receive an induced current from the track magnets when current is flowing therethrough, a relay in circuit with the coils of the shoe, electrically controlled means for actuating the air and steam valves of the locomotive, which last mentioned means is controlled by the relay which is in circuit with the coils of the shoe, and a centrifugal speed control device on the locomotive for controlling the action of the electrically controlled means associated with the air and steam valves.

4. In a train controlling and stopping system the combination with a railway track divided into blocks, each of which is equipped with an electrically operated signal, of a series of magnets located adjacent to one of the rails of each block of the track, a source of electrical energy in circuit with said magnets, which circuit is opened at one point when the adjacent block is occupied by a train, a shoe carried by the locomotive of the train operating on the railway track, which shoe is adapted to pass over the magnets located adjacent to the track, means actuated by said shoe for completely closing said circuit to energize the track magnets when the adjacent block is unoccupied, a series of coils carried by the shoe, which coils receive an induced current from the track magnets when the same are energized, and electrically controlled means for actuating the air and steam valves of the locomotive, which last mentioned means is controlled by the induced current in the coils of the shoe.

5. In a train controlling and stopping system the combination with a railway track divided into blocks and each block equipped with an electrically operated signal, of a series of magnets located adjacent one of the rails of each block of the track, a source of electrical energy in circuit with said magnets, said circuit being normally closed at one point when the signal of the next adjacent block is in a position to indicate safety and open when said adjacent block is occupied by a train, a polarized relay having its armature in circuit with the series of magnets and their source of electrical energy, a circuit and a source of electrical energy for said polarized relay, a shoe carried by a locomotive operating on the track, which shoe is adapted to pass over the track magnets, a series of coils in said shoe, which coils receive an induced current from the track magnets when current is flowing therethrough, a relay in circuit with the coils of the shoe, a plunger operatively associated with and adapted to actuate the steam and air valves of the locomotive, a latch for holding said plunger in set position, and electrically operated means controlled by said last mentioned relay for actuating said latch.

[Claims 6 to 15 not printed in the Gazette.]

1,106,093. FURNACE-CLEANER. CHRISTIAN F. HAHLE, Riverside, N. J. Filed Nov. 4, 1912. Serial No. 729,340. (Cl. 110—79.)

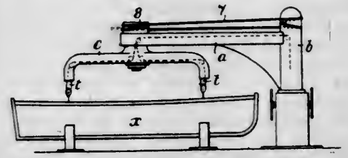


1. An attachment for furnaces comprising a rectangular tubular frame adapted to be positioned in a furnace below the boiler and back of the bridge wall, said rectangular frame having in its sides and ends threaded openings, nozzles threaded into said openings and having steam discharge orifices in their outer ends, of appreciably less diameter than the internal diameter of the nozzles and said nozzles and orifices so formed that the steam discharged from certain of said orifices is transversely of said furnace, from those adjacent the bridge wall rearwardly of the furnace, and from the remainder, upwardly and in the direction of the draft or the furnace, substantially as described.

2. The combination with a steam boiler furnace, of a rectangular tubular frame located in the bottom of the furnace below the boiler and back of the bridge wall, said frame having screw-threaded openings therein, discharge nozzles screwed into said openings and having discharge orifices in their free ends, the nozzles at the end of the frame adjacent the bridge wall discharging rearwardly in the direction of the draft of the furnace, the nozzles in the side members of the frame discharging laterally and rearwardly, the nozzles in the rear member of the frame discharging upwardly in the direction of the draft of the furnace, and means for directing steam from the boiler into the frame at its forward end, substantially as described.

3. The combination with a steam boiler furnace, of a rectangular tubular frame located in the bottom of the furnace, below the boiler and back of the bridge wall, said frame having screw-threaded openings therein, discharge nozzles screwed into said openings and having discharge orifices in their free ends, the nozzles at the end of the frame adjacent the bridge wall discharging rearwardly in the direction of the draft of the furnace, the nozzles in the side members of the frame discharging laterally and rearwardly, the nozzles in the rear member of the frame discharging upwardly in the direction of the draft of the furnace, a steam pipe communicating with the boiler and extending down beside the furnace, a branch pipe connecting the steam supply pipe with the frame at the forward end thereof, and valves in said supply pipe above and below its juncture with the branch pipe, substantially as described.

1,106,094. BOAT-LOWERING APPARATUS FOR VESSELS. WALDEMAR HARBINGER, London, England. Filed Jan. 7, 1914. Serial No. 810,711. (Cl. 212—65.)

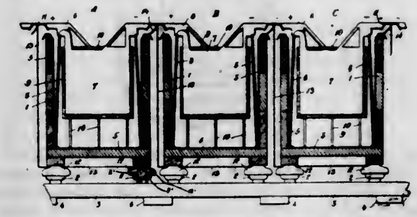


1. A crane comprising a cantaliver beam adapted to be swung on a vertical axis, a cross beam pivotally mounted on the outer end of the cantaliver, means for swinging or rotating the cantaliver and means for keeping the cross beam parallel with the keel of the ship or with any given line, in combination with falls from the cross beam to the base of the crane and means for paying-in and paying-out the falls.

2. A crane comprising a cantaliver beam adapted to be swung on a vertical axis, a cross beam pivotally mounted on the outer end of the cantaliver, means for swinging or rotating the cantaliver and means for keeping the cross beam parallel with the keel of the ship or with any given line, in combination with falls from the cross beam to the base of the crane and means for paying-in and paying-out the falls with means for regulating or braking the same.

3. A crane comprising a cantaliver beam adapted to be swung on a vertical axis, a cross beam pivotally mounted on the outer end of the cantaliver, means for swinging or rotating the cantaliver and means for keeping the cross beam parallel with the keel of the ship or with any given line, in combination with falls from the cross beam to the base of the crane, a winding drum for paying-in and paying-out the falls, a counter balance weight, a rope connecting the said weight to the said drum said rope being adapted to be wound on to the drum as the falls are paid out for the purpose of winding in the falls when the boats are disengaged.

1,106,095. ELECTRICAL BATTERY. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Apr. 22, 1911. Serial No. 622,795. (Cl. 204—29.)



1. A battery cell, comprising a wood tank having a lead lining, positive and negative plates in the tank, a

negative and a positive terminal for the cell, insulators supporting said tank and electrodes situated between said insulators and the tank, said electrodes being connected electrically to the positive terminal of the cell and said lead lining being connected to the negative terminal of the cell, said insulators having upwardly extending petticoats containing oil and said electrodes being in the form of inverted pans having downwardly extending flanges which surround said petticoats.

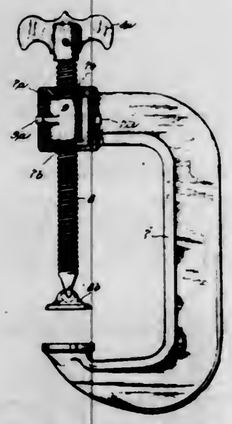
2. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, insulating means supporting said tank and an electrode placed between the insulating means and the tank, said electrode being electrically connected to the positive element of the cell and said lead lining being electrically connected to the negative element of the cell, said insulating means having an upwardly extending petticoat containing oil.

3. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, insulating means supporting said tank and an electrode placed between the insulating means and the tank and means whereby said lead lining is polarized negatively with respect to said electrode, said insulating means having an upwardly extending petticoat containing oil and said electrode being in the form of an inverted pan having a downwardly extending flange to protect the oil in the petticoat.

4. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, an electrode on the outside of the tank, and acting as a support for the tank, and means whereby said lead lining is polarized negatively with respect to said electrode, said electrode being in the form of an inverted pan having a downwardly extending flange.

5. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, insulating means supporting said tank and an electrode placed between the insulating means and the tank, said electrode being electrically connected to the positive element of the cell and said lead lining being electrically connected to the negative element of the cell, said electrode being in the form of an inverted pan having a downwardly extending flange.

1,106,096. QUICK-ACTING CLAMP. GEORGE G. HUNT, Plano, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed July 16, 1913. Serial No. 779,243. (Cl. 144—305.)

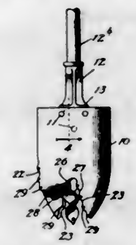


1. A clamp comprising a jaw having bearings therein, a screw mounted to slide freely in said bearings, a chamber in said jaw having in its walls two connecting recesses of different radii, a threaded semi-cylindrical nut arranged in said chamber and adapted to operatively engage said screw when seated in one of said recesses, and to be disengaged from said screw when seated in the other recess, and means for manually operating said nut.

2. A clamp comprising a jaw having bearings therein, a screw mounted to slide freely in said bearings, a chamber in said jaw having recesses of different radii in its side walls and a shoulder at the junction of said recesses, a threaded semi-cylindrical nut arranged in said chamber and adapted to operatively engage said screw when seated in one of said recesses, and to be disengaged from said screw when seated in the other recess, and means for manually operating said nut.

3. A clamp comprising opposed fixed jaws, one of said jaws having a vertical slot in one side wall and a horizontal slot in the opposite wall, also having bearings therein, a screw mounted to slide freely in said bearings, a chamber in said slotted jaw, said chamber having two recesses in its side walls, a threaded semi-cylindrical nut adapted to pass through the vertical slot in said jaw and having a lug projecting through said horizontal slot; said nut adapted to operatively engage said screw when seated in one of said recesses, and to be disengaged therefrom when seated in the other recess.

1,106,097. EARTH-AUGER. WILLIAM L. IWAN, South Bend, Ind. Continuation of application Serial No. 525,446, filed Oct. 30, 1909. This application filed Nov. 14, 1912, Serial No. 731,439. Renewed Jan. 20, 1914. Serial No. 813,281. (Cl. 255—67.)



1. An earth-auger having concavo-convex blades, disposed in opposite relation to each other and provided at their ends with downwardly and inwardly converging portions and above said ends with inwardly-projecting bits formed with cutting-edges, and having downward extensions twisted together into a spiral auger-point.

2. An earth-auger having concavo-convex blades, disposed in opposite relation to each other and provided at their ends with downwardly and inwardly converging portions, above said ends with inwardly projecting bits formed with cutting-edges, and extensions on said inwardly-projecting bits twisted together in flatwise condition, and forming a spiral auger-point extending beyond the lower ends of said inwardly-converging portions.

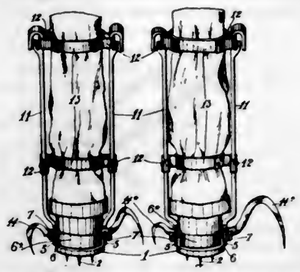
3. An earth-auger having concavo-convex blades provided at their ends with downwardly-projecting portions and with inwardly-projecting portions provided with bits extending in opposite directions, and extensions formed into an auger-point, said inwardly-projecting portions being recessed at the base of the inwardly-projecting bits, for the purpose set forth.

4. An earth-auger having concavo-convex blades provided at their ends with downwardly-projecting portions and with inwardly-projecting bits having cutting surfaces on opposed edges, said inwardly-projecting portions carrying extensions formed into an auger-point, with recesses having cutting-edges formed at the base of said auger-point and said inwardly-projecting bits.

5. An earth-auger having concavo-convex blades provided at their ends with downwardly-projecting portions and with inwardly-projecting bits, the inwardly-projecting bit on each blade being located in advance of its downwardly-projecting portion, and the cutting-edges of said downwardly-projecting portions being convexed, for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

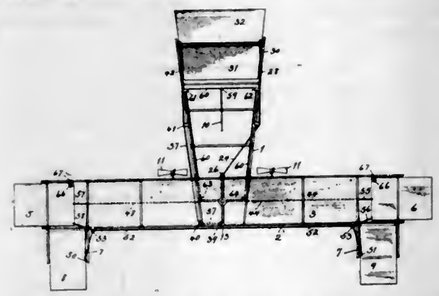
1,106,098. LOGGING-SHOE. ENGELBERT JAWOREK, Crescent City, Cal. Filed Mar. 12, 1914. Serial No. 824,199. (Cl. 36—60.)



1. In a logging shoe, a sole plate provided with spikes, toe-straps secured to said sole plate, heel fastening means secured to said sole plate, a casting secured to the instep of said sole plate, supporting arm, provided with girdles, secured to said casting and anti-slipping means operatively associated with said casting.

2. In a logging shoe, a sole plate provided with spikes, toe-straps secured to said sole plate, adjustable heel fastening means secured to said sole plate, a casting secured to the instep of said sole plate and formed with oppositely disposed angular sockets, shoe supporting means secured to said casting and oppositely disposed hooks terminally embedded in the sockets of said casting.

1,106,099. AEROPLANE. FRANK T. JONES, Baltimore, Md. Filed Nov. 17, 1910. Serial No. 592,780. (Cl. 244—29.)



1. The combination with a frame, of one or more supporting planes on said frame, an equilibrium plane and an aileron pivotally mounted adjacent one another in each side of the supporting plane so as to normally extend in the same plane with the latter, and having their axes at right-angles to one another, and means to simultaneously actuate the said equilibrium planes and ailerons at opposite sides, in relatively opposite directions whereby the former may be moved to slope toward one another at an inverted dihedral angle.

2. The combination with a frame, of one or more supporting planes on said frame, a pair of equilibrium planes pivotally mounted at a point a greater distance from their outer side edges than from their inner side edges, and mechanism for simultaneously moving the inner edges of both the equilibrium planes downwardly and simultaneously moving both of the outer edges upwardly.

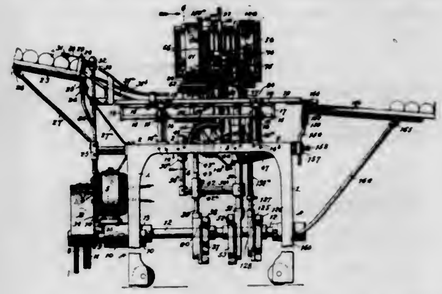
3. The combination with a frame, of one or more supporting planes on said frame, a pair of equilibrium planes pivotally mounted at a point a greater distance from their outer side edges than from their inner side edges, mechanism for simultaneously moving the inner edges of both the equilibrium planes downwardly and simultaneously moving both of the outer edges upwardly, a pair of pivotally-mounted ailerons, and connections between said ailerons, and said mechanism adapted to simultaneously tilt said ailerons in opposite directions with the movement of said equilibrium planes.

4. The combination with a frame, of one or more supporting planes on said frame, a pair of equilibrium planes pivotally mounted so as to swing about longitudinal axes, a pair of ailerons pivotally mounted so as to swing about transverse axes, and mechanism for simultaneously tilting the major portion of said equilibrium planes upward and inclining said ailerons in opposite directions.

5. In an aeroplane the combination with the horizontal upper and lower supporting planes, of a side and front balancing plane, at each end of the said upper supporting plane; a depending aviator-support movable between the upper and lower supporting planes; connections between the aviator-support and the side and front balancing planes at one end of the supporting plane; connections between the aviator-support and the side and front balancing planes at the other end of the supporting plane, tail planes, and connections between the aviator-support and the said tail planes and said connections having adjusting means thereon.

[Claim 6 not printed in the Gazette.]

1,106,100. LABELING-MACHINE. FRED H. KNAPP, Westminster, Md., and CLARENCE W. BLACKSTONE, Chicago, Ill., assignors to Fred H. Knapp Company, Westminster, Md., a Corporation of Maryland. Filed Feb. 20, 1909. Serial No. 479,292. (Cl. 216—39.)



1. In a labeling machine, the combination of a runway adapted to feed cans or the like and an arm constructed and arranged at its respective ends to simultaneously engage and hold successive cans, and means for releasing said engagement.

2. In a labeling machine, the combination of a runway, of an arm above the runway of a length to extend over two cans or the like which are fed along the runway, a pivotal support for the arm intermediate its ends, and means whereby one of said arms may engage one can while the other engages the other can.

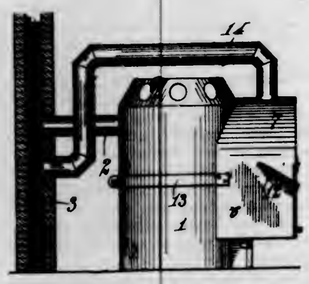
3. In a labeling machine, the combination of an inclined runway adapted to deliver cans or the like, an elongated arm arranged to holdingly engage at its respective ends succeeding cans, and a pivotal connection for said arm whereby one end of the arm may be released from its can while the other end of the arm will maintain its holding engagement on its engaged can.

4. In a labeling machine, the combination of a runway adapted to feed cans or the like, an arm constructed and arranged to simultaneously holdingly engage adjacent its respective ends two successive cans, releasing means for the arm, and means whereby as the forward can is released by one end of the arm, the next succeeding can is held from movement by the opposite end of the arm.

5. In a labeling machine, the combination of a runway adapted to feed cans or the like, and an elongated arm of resilient material constructed and arranged adjacent its respective ends to engage successive cans, and means for releasing said engagement on one can by flexing the arm.

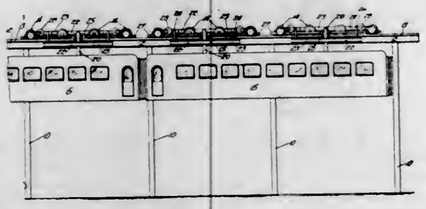
[Claims 6 to 159 not printed in the Gazette.]

1,106,101. DUST-COLLECTOR. GEORGE J. KNAPP and EDWARD L. KNAPP, Dayton, Ohio. Filed Feb. 2, 1914. Serial No. 815,915. (Cl. 126—242.)



A dust collector for furnaces comprising a hood consisting of side walls which are extended upwardly to form a dome which lies above the feed door of the furnace, said hood being inclosed at the front and rear by walls which terminate above said feed dome and the latter of which conforms to the contour of the furnace casing above the feed door, said dome being provided with a central outlet in the top thereof, the edges of the side walls being secured to the furnace casing on opposite sides of the feed door, and a pipe extending from the outlet smoke flue and joining the dust outlet of the hood, said pipe entering the smoke outlet flue at a point below the smoke pipe of the furnace, substantially as specified.

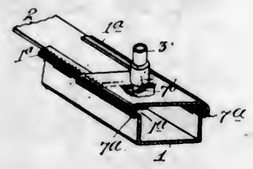
1,106,102. SUSPENDED RAILWAY. BERTHOLD LINDEMANN, Los Angeles, Cal. Filed Oct. 16, 1913. Serial No. 795,439. (Cl. 104—4.)



1. A suspended railway system, comprising in combination a rigid overhead rail, supporting means for the rail at constant intervals so that the rail is uniformly supported as a continuous beam, a car, and multiple wheeled trucks from which the car is suspended, the wheels of the trucks bearing on the rail at points separated by approximately equal distances along the rail, and the weight of the car being evenly distributed between the several wheels, so that the weight of the car is uniformly longitudinally distributed over the rail, substantially as described.

2. A suspended railway system, comprising in combination a rigid overhead rail, supporting means for the rail at constant intervals so that the rail is uniformly supported as a continuous beam, a car, and multiple wheeled trucks from which the car is suspended, the wheels of the trucks bearing on the rail at points separated by approximately equal distances along the rail, the distance between points of bearing of the two outermost wheels being approximately not less than the distance between adjacent supports for the rail, and the weight of the car being evenly distributed between the several wheels, so that the weight of the car is uniformly longitudinally distributed over at least one span of the beam rail, substantially as described.

1,106,103. MEANS FOR SUPPORTING ELECTRIC DEVICES. GEORGE A. LUTZ, Plainfield, N. J. Original application filed Apr. 13, 1906, Serial No. 311,477. Divided and this application filed Jan. 5, 1910. Serial No. 536,472. (Cl. 240—52.)



1. The combination of a conduit having detachable covers, with a foot fitted between said covers and provided with means on opposite sides to spring on the sides of the conduit to clamp the foot thereon, and means to support an electric device upon said foot, the foot having an opening for the passage of a conductor on the side opposite its clamping means.

2. The combination of a conduit, with a foot, having spring acting portions for supporting the foot with respect to the conduit, said foot having a hollow and tubular portion raised above the plane of the conduit, and means connected with said foot for supporting an electric device on the outer portion of the foot beyond the conduit.

3. The combination of a conduit provided with webs, with a foot having spring-acting portions on opposite sides to clamp on said webs to support said foot upon said webs, said foot having a tubular portion raised above the plane of the conduit, and means for connecting an electric device with said tubular portion of said foot.

4. A cap for inclosing the junction of branch conductors with conductors inclosed in a conduit, consisting of a tubular portion and with resilient gripping portions on opposite sides of the tubular portion to clamp the cap in position on the conduit.

1,106,104. EXTENSION-BODY FOR TRUCKS, &c. GEORGE B. MARX, New York, N. Y. Filed June 11, 1913. Serial No. 772,977. (Cl. 21—182.)



1. An extensible body for trucks, etc., having telescoping longitudinal members secured respectively to the forward and rear portions of the body, means to reinforce said members when the truck or body is extended, and means carried by one portion of the body and in operative engagement with said reinforcing means to position automatically said reinforcing means with respect to said members when the body is extended.

2. An extensible body for trucks, etc., having telescoping longitudinal tubes secured respectively to the forward and rear portions of the body and sleeves surrounding the tubes to reinforce the same when the body is extended, latches secured to one portion of the body and in operative engagement with the sleeves to maintain their position with respect to the last named portion of the body when the body is extended, and means carried by a relatively movable portion of the body to disengage automatically the latches from the sleeves at a predetermined point.

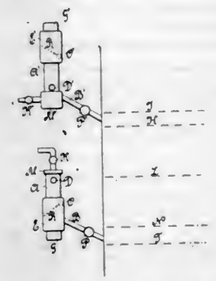
3. An extensible body for trucks, etc., having telescoping longitudinal tubes, means to secure the tubes respectively to the forward and rear portions of the body and blocks through which the securing means for the inner tubes pass interposed between the inner tubes and the

portion of the body to which said inner tubes are secured, the outer tubes being slotted to straddle said blocks to permit the complete telescoping of the tubes.

4. An extensible body for trucks, etc., having telescoping longitudinal tubes, means to secure the tubes respectively to the forward and rear portions of the body, the outer tubes being slotted to embrace the securing means for the inner tubes and sleeves surrounding the outer tubes to embrace and reinforce the slotted portions thereof when the body is extended.

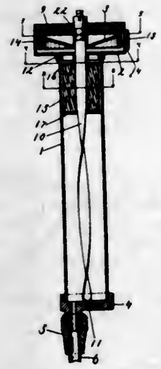
5. An extensible body for trucks, etc., having tubular telescoping reach members secured respectively to the forward and rear portions of the body, independent longitudinal girders secured at one end to one portion of the body and adapted to have their free ends rest on the other portion of the body when the body is shortened.

1,106,105. GAGE-COCK FOR USE ON STEAM-BOILERS. SERGE JNN. MOUROMOFF, St. Petersburg, Russia. Filed May 2, 1913. Serial No. 764,988. (Cl. 116—31.)



In water gage cocks for use on steam boilers and for indicating the maximum and minimum water levels in combination, two transparent receptacles, connections between said receptacles and the boiler, a float in each of said receptacles, one of which floats is adapted to rise when the water in the boiler rises above the maximum level whereas the other float sinks down when the water in the boiler falls below the minimum level, and means for arresting the floats in their highest or lowest positions respectively, and preventing their return into the receptacles even if the water level re-assumes its normal position.

1,106,106. TANK-INDICATOR. HAROLD NEIL PALMER, Jackson, Mich., assignor of one-half to Robert C. Enos, Grand Rapids, Mich. Filed Aug. 5, 1913. Serial No. 783,090. (Cl. 73—82.)



1. In an indicator, the combination of a tube rectangular in cross section; an index member casing on the upper end of said tube having a window at one side; a top plate of insulating material for said casing; a spiral shaft arranged with its upper end extending through said top plate and having a bearing therein, the lower end of the shaft being provided with a bearing pivot having a bearing in the bottom of said tube; a shaft bearing member at the upper end of said tube; an index member having a rim provided with indicia and mounted on said shaft within said casing; a contact plate mounted on said top plate and provided with a binding post; a contact arm on said shaft provided with a brush coacting with said contact plate; a contact member mounted on said top plate with which said arm engages as the shaft revolves, an electric circuit including said contact plate, said contact member and a source of current supply, and a float comprising a body portion and top and bottom plates having projecting corner lugs engaging the corners of the tube, one of said plates being slotted to engage the spiral shaft, whereby the shaft is rotated as the float rises and falls.

2. In an indicator, the combination of a tube rectangular in cross section; an index member casing on the upper end of said tube having a window at one side; a top plate of insulating material for said casing; a spiral shaft arranged with its upper end extending through said top plate and having a bearing therein, the lower end of the shaft being provided with a bearing pivot having a bearing in the bottom of said tube; an index member having a rim provided with indicia and mounted on said shaft within said casing; a contact plate mounted on said top plate and provided with a binding post; a contact arm on said shaft provided with a brush coacting with said contact plate; a contact member mounted on said top plate with which said arm engages as the shaft revolves, an electric circuit including said contact plate, said contact member and a source of current supply, and a float comprising a body portion and top and bottom plates having projecting corner lugs engaging the corners of the tube, one of said plates being slotted to engage the spiral shaft, whereby the shaft is rotated as the float rises and falls.

3. In an indicator, the combination of a tube; an index member casing on the upper end of said tube having a window at one side; a top plate of insulating material for said casing; a spiral shaft arranged with its upper end extending through said top plate and having a bearing therein, the lower end of the shaft being provided with a bearing pivot having a bearing in the bottom of said tube; a shaft bearing member at the upper end of said tube; an index member provided with indicia on its periphery and mounted on said shaft within said casing; a contact plate mounted on said top plate and provided with a binding post; a contact arm on said shaft provided with a brush coacting with said contact plate; a contact member mounted on said top plate with which said arm engages as the shaft revolves, an electric circuit including said contact plate, said contact member and a source of current supply, and a float on said shaft, said float being held against rotative movement whereby the shaft is rotated as the float rises and falls.

4. In an indicator, the combination of a tube; an index member casing on the upper end of said tube having a window at one side; a top plate of insulating material for said casing; a spiral shaft arranged with its upper end extending through said top plate and having a bearing therein, the lower end of the shaft being provided with a bearing pivot having a bearing in the bottom of said tube; an index member provided with indicia on its periphery and mounted on said shaft within said casing; a contact plate mounted on said top plate and provided with a binding post; a contact arm on said shaft provided with a brush coacting with said contact plate; a contact member mounted on said top plate with which said arm engages as the shaft revolves, an electric circuit including said contact plate, said contact member and a source of current supply, and a float on said shaft, said float being held against rotative movement whereby the shaft is rotated as the float rises and falls.

5. In an indicator, the combination of a tube; an index

member casing on the upper end of said tube having a window at one side; a top plate of insulating material for said casing; a spiral shaft arranged with its upper end extending through said top plate and having a bearing therein, the lower end of the shaft being provided with a bearing pivot having a bearing in the bottom of said tube; a shaft bearing member at the upper end of said tube; an index member provided with indicia on its periphery and mounted on said shaft within said casing; a pair of contact members on said top plate; a contact arm on said shaft coacting with said contact members on said plate; an electric circuit including said contact members and a source of current supply; and a float on said shaft, said float being held against rotative movement whereby the shaft is rotated as the float rises and falls.

[Claims 6 to 9 not printed in the Gazette.]

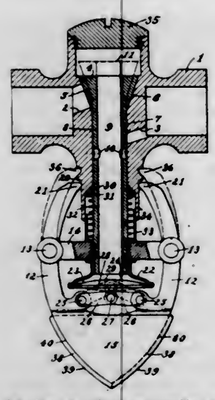
1,106,107. METHOD OF PICKLING BRASS. RALPH R. PARISH, Waterbury, Conn., assignor to Chase Rolling Mill Co., Waterbury, Conn., a Corporation. Filed Jan. 12, 1914. Serial No. 811,741. (Cl. 148—42.)

1. A pickling solution for removing disfiguring blotches appearing upon annealed brass, the said solution consisting of a sulfuric acid solution reinforced by a per-acid or a derivative thereof.

2. A pickling solution for removing disfiguring blotches appearing upon annealed brass, the said solution consisting of a sulfuric acid solution reinforced by a per-sulfuric acid or a derivative thereof.

3. A method of pickling annealed brass consisting in subjecting it to the action of a pickling solution of sulfuric acid which has been reinforced by a per-acid or a derivative thereof.

1,106,108. SAFETY-VALVE. FREDERICK R. PARKER, Chicago, Ill. Filed Sept. 18, 1909, Serial No. 518,306. Renewed Jan. 8, 1914. Serial No. 811,100. (Cl. 67—115.)



1. A valve having a plug normally seated in a seat, means for manually raising the plug from its seat, a diaphragm carried by the plug, the latter having a passage therethrough to the diaphragm whereby the diaphragm is connected with the inlet passage of the valve when the plug is unseated, mechanism under control of the diaphragm for holding the plug out of its seat, and spring mechanism tending to seat the plug, a diminution of the fluid pressure causing the diaphragm to permit the said spring mechanism to automatically seat the plug.

2. A valve having a plug and a seat therefor, means whereby the plug may be raised from its seat and turned to control the valve passage, a pair of arms for holding the plug out of its seat, a coil spring surrounding the plug and tending to seat same, a diaphragm carried by one end of the plug, the latter having a passage longitudinally therethrough whereby the diaphragm is connected with the inlet passage of the valve when the plug is unseated, and mechanism under control of the diaphragm whereby the said arms are held against opration when the plug is out of its seat, whereby the plug is held out of its seat, a diminution of the fluid pressure causing the diaphragm to permit of operation of the mechanism under its control whereby the said spring automatically seats the plug.

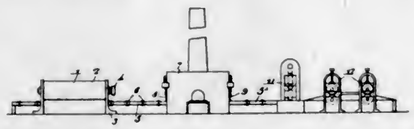
3. In a valve having a plug and a seat therefor, a pair of pivoted arms for holding the plug out of its seat, the ends of the arms being crossed over past each other whereby accidental striking thereof acts against operating them.

4. In a valve of the character specified, valve-controlling mechanism comprising a pair of pivoted arms, the said arms being crossed over each other whereby accidental striking thereof acts against operating them.

5. In a valve having a plug and a seat therefor, and means operable for unseating the plug and then turning it to control the valve passage, pressure-controllable mechanism for holding the plug out of its seat, and spring-controlled mechanism tending to seat the plug, a diminution of the controlling pressure permitting the plug to be automatically seated.

[Claims 6 to 19 not printed in the Gazette.]

1,106,109. METHOD OF TREATING OLD IRON AND STEEL PIPE. DANIEL E. PHILLIPS, Cleveland, Ohio. Filed July 26, 1913. Serial No. 781,348. (Cl. 29—185.)



1. The herein described method of treating old iron and steel pipes consisting of tumbling the same, heating the pipes and passing the same through shaping machines.

2. The herein described method consisting of heating old iron and steel pipes, flattening the ends and passing the same through shaping machines.

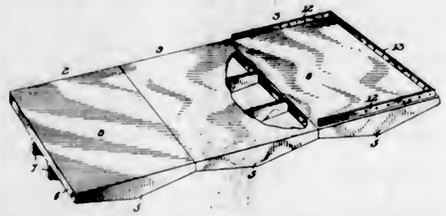
3. The herein described method of treating old iron and steel pipes consisting of tumbling the same to remove the dirt and rust, heating the pipes in a furnace, flattening the ends and then passing them between shaping rollers.

4. The herein described method of treating old iron and steel pipes consisting of heating the same, flattening the ends and passing the same between rollers having restricted annular channels.

5. The herein described method of treating old iron and steel pipes consisting of heating the same and then passing the pipes through shaping machines to form bars, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,106,110. UNDERFRAME FOR CARS. OSWALD S. PULLIAM, Pittsburgh, Pa., assignor, by mesne assignments, to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 17, 1909. Serial No. 508,241. (Cl. 105—76.)



1. A metal underframe for cars and the like, of cantaliver construction comprising two substantially balanced end portions, each formed of an integral casting comprising a body bolster, an end sill, an inner transversely extending end member, and sections of side sills, said end portions adapted to extend forwardly and rearwardly of the truck bolsters, and means connecting the inner transversely extending end members of said end portions.

2. In an underframe for cars and the like, an end portion formed with a floor member having upwardly projecting flanges, a body bolster, an end sill, and sections of side sills, said end portion being adapted to be substantially balanced on the center plate of a truck bolster and to extend approximately equal distances to the front and rear of said bolster.

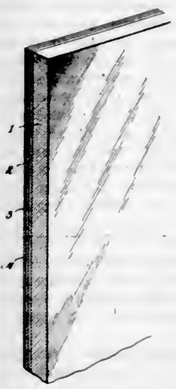
3. A steel underframe for cars and the like of cantaliver construction comprising two end-portions, each comprising an integral structure formed with a body-bolster, a transversely disposed straight inner end sill, sections of side sills and designed to extend forwardly and rearwardly of the truck-bolster and be supported thereby, and means for rigidly connecting said end portions, which connecting means is fixed to the transversely disposed inner end sills of the end portions.

4. A steel underframe for cars and the like comprising two end-portions each formed with a body-bolster, a straight transversely disposed inner end-sill, a section of a side-sill, and a floor member each adapted to be substantially balanced on the center plate of the truck-bolster, and means attached to the inner end sills.

5. A steel underframe for cars and the like comprising two end-portions each formed with a floor-member, a body-bolster, side bearings thereon, a straight transversely disposed end sill, and a section of a side sill, said portions each adapted to be substantially balanced on the center plate of the truck-bolster, and means for rigidly connecting said portions.

[Claims 6 to 11 not printed in the Gazette.]

1,106,111. MOTION-PICTURE SCREEN. LEE O. RATHER, Nashville, Tenn., assignor to Robert H. Waller, Nashville, Tenn. Filed Apr. 21, 1914. Serial No. 833,410. (Cl. 88—24.)



1. A screen for projection pictures comprising a plate glass support with a reflecting backing consisting of a coating of finely divided metal, whiting, and an adhesive.

2. A screen for projection pictures comprising a plate glass support with a reflecting backing consisting of a coating of finely divided metal, whiting, and an adhesive, the said coating being backed up by a coating of shellac and the shellac coating by a coating of varnish.

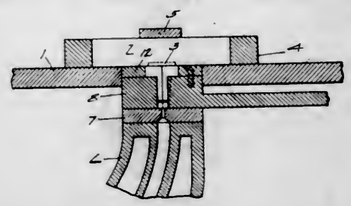
3. A screen for projection pictures comprising a sheet of glass backed up by a coating composed of a mixture of metal powder, whiting, and an adhesive, and a protecting coating of resinous material applied to the first-named coating.

4. A screen for projection pictures comprising a sheet of plate glass of suitable size backed up by a coating composed of a mixture of fine particles of naturally light-reflecting metal with equal parts of a finely divided white mineral substance, and an adhesive for holding the mixture of fine particles together and to the glass.

5. A screen for projection pictures comprising a sheet of plate glass of suitable size backed up by a coating composed of a mixture of fine particles of naturally light-reflecting metal with equal parts of a finely divided white mineral substance, and an adhesive for holding the mixture of fine particles together and to the glass, said coating being backed up by a protecting coating of material resistant to climatic and weather conditions.

[Claim 6 not printed in the Gazette.]

1,106,112. MOLD FOR TYPOGRAPHS. WILLIAM A. READE, Cleveland, Ohio, assignor to The Ludlow Typograph Company, Cleveland, Ohio, a Corporation of Maine. Filed Feb. 27, 1911, Serial No. 611,246. Renewed Nov. 29, 1913. Serial No. 803,859. (Cl. 199—13.)



1. A mold for casting slugs, or lines of type, comprising a body formed with a casting slot of standard dimensions, and a plate secured to the face of said mold-body and formed with a slot registering with but larger than such first-named slot.

2. A mold for casting slugs, or lines of type, comprising a body formed with a casting slot of standard dimensions, and a plate secured to the face of said mold-body and formed with a slot registering with but larger than such first-named slot, all such enlarged slot extending equally on each side of the smaller slot.

3. A mold for casting slugs, or lines of type, comprising a body formed with a casting slot, and adjustable means secured to the face of said mold body adapted to form a slot of variable size in register with such first-named slot.

4. A mold for casting slugs, or lines of type, comprising a body formed with a casting slot, and a sectional plate secured to the face of said mold-body the sections of said plate being adjustable to form a slot of variable size in register with such first-named slot.

5. A mold for casting slugs, or lines of type, comprising a body formed with a casting slot of standard dimensions, and a plate secured to the face of said mold-body and including two sections transversely adjustable on such face so as to form a slot of variable size in register with such first-named slot.

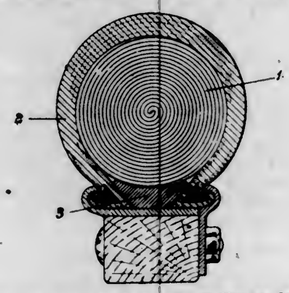
[Claims 6 to 8 not printed in the Gazette.]

1,106,113. TIRE FOR VEHICLES. MARTIN DIEDERICH RUCKER, Purley, England. Filed Jan. 2, 1914. Serial No. 809,946. (Cl. 152—5.)

1. In a tire for vehicles having a cover and an inner core the combination therewith of an expansible seating adapted to receive the core, and when expanded with the ends abutting, to retain the core and cover in fixed relationship.

2. In a tire for vehicles, means for keeping the cover and core in position relative to each other, consisting of a seating having the ends overlapping for assembly, said

seating being capable of expansion until the said ends meet and abut, thereby locking the seating in position



relative to the tire parts, substantially as described and illustrated.

1,106,114. INNER PAD FOR SHOES. ROBERT M. SANDERSON, Akron, and CHAUNCY P. WHISLER, Kenmore, Ohio. Filed July 14, 1913. Serial No. 778,954. (Cl. 36—71.)



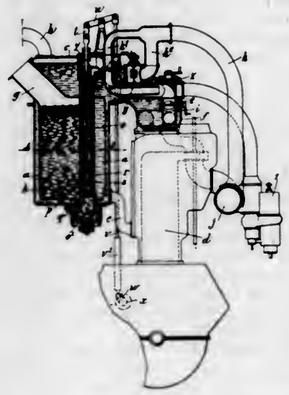
1. In a device of the character described, a pad body having a lower flat face and lateral faces fashioned to fit within the heel portion of a boot or shoe and having an upper face containing a semi-circularly formed depression located in the heel portion of the pad constituting a seat for the marginal portion of the heel of the wearer, and provided with a hump or projection formed by an excess of material arranged approximately centrally of said depression and constituting means for supporting what would otherwise be an unsupported portion of the heel of the wearer.

2. In a device of the character described, a pad body having a lower flat face and lateral faces fashioned to fit within the heel portion of a boot or shoe and having an upper face containing a semi-circular depression constituting a receptacle for the heel of the wearer and further provided with a hump or projection formed by an excess of material positioned centrally of said depression so as to lie approximately under the heel bones of the normal human foot.

3. In a device of the character described, a pad body fashioned to fit within the heel portion of a boot or shoe and having a lateral face upwardly and outwardly-inclined, said pad further provided with a semi-circular depression in its upper face comprising a receptacle for the heel of the wearer and a hump or projection formed by an excess of material arranged approximately centrally of said depression and adjacent the rear end thereof and constituting means for normally supporting the unsupported portion of the heel of the wearer.

1,106,115. CHARGE-FORMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed June 18, 1913. Serial No. 774,487. (Cl. 123—136.)

1. In combination with an internal combustion engine, a jacketed reservoir in which fuel is to be melted by fluid passing through the jacket and heated by the engine, a reciprocating pump and an open receptacle within the said reservoir, the latter being located above the normal level of the melted fuel in the reservoir and fed by said pump, means for discharging fuel from said receptacle to the engine, and connections between the engine and said reciprocating pump adapted to be rendered inoperative when the fuel is solid in the reservoir and active when the fuel is liquid.



2. In combination with an internal combustion engine, a jacketed reservoir in which fuel is to be melted by fluid passing through the jacket and heated by the engine, a reciprocating pump and an open receptacle within the said reservoir, the latter being located above the normal level of the melted fuel in the reservoir and fed by said pump, means for discharging fuel from said receptacle to the engine, and a yielding connection between said pump and a moving part of the engine adapted to operate said pump when the fuel in the reservoir is liquid and to yield when the fuel in the same is solid.

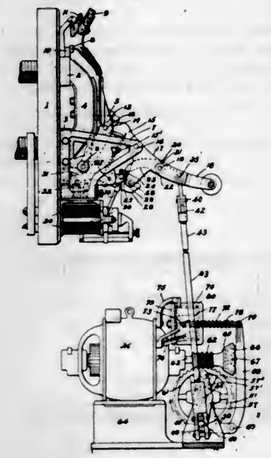
3. In combination with an internal combustion engine, a jacketed reservoir in which fuel is to be melted by fluid passing through the jacket and heated by the engine, a reciprocating pump and an open receptacle within the said reservoir, the latter being located above the normal level of the melted fuel in the reservoir and fed by said pump, means for discharging fuel from said receptacle to the engine, connections between the engine and said reciprocating pump adapted to be rendered inoperative when the fuel is solid in the reservoir and active when the fuel is liquid, and a source of liquid fuel independent of the said reservoir supply for starting the engine.

4. In combination, a constant level reservoir in which fuel is to be melted, a reciprocating pump for pumping liquefied oil in said reservoir, and connections between a source of power and said pump adapted to be rendered inoperative to actuate the pump when the fuel in the reservoir is solid and active when the fuel is liquid.

1,106,116. REMOTE CONTROL SYSTEM. WILLIAM M. SCOTT, Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company, a Corporation of New Jersey. Filed Apr. 23, 1907. Serial No. 369,714. (Cl. 175—294.)

1. In combination, a main switch, a latch for restraining said switch in normal position, a lever for moving said switch to normal position and for actuating said latch to unlock said switch upon reverse movement of said lever, a motor operating always in one direction for actuating said lever in either direction, auxiliary switching mechanism controlling said motor, and a double throw control switch coöperating with said auxiliary switching mechanism, said control switch in one position energizing said motor to actuate said latch and in the other position energizing said motor to actuate said lever in opposite direction to move said main switch to normal position.

2. In combination, a main switch, a latch for restraining said switch in normal position, a lever for moving said switch to normal position and for actuating said latch to unlock said switch upon reverse movement of said lever, a motor operating always in one direction for actuating said lever in either direction, and a double throw control switch and connections controlling said motor, said control switch in one position energizing said motor for actuating said latch to trip said main switch, and in the other position controlling said motor to actuate said lever in opposite direction to move said main switch to normal position.



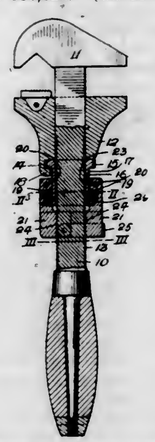
3. In combination, a main switch, a latch for restraining said switch in normal position, a lever for moving said switch to normal position and for actuating said latch to unlock said switch upon reverse movement of said lever, a motor operating always in one direction for actuating said lever in either direction, switching mechanism moving in definite relation with said lever for controlling said motor, and a double throw control switch controlling said motor through said switching mechanism, said control switch in one position energizing said motor to actuate said latch and in the other position energizing said motor to move said main switch to normal position and electro-responsive means for actuating said latch independently of said motor.

4. In combination, a main switch, a latch for restraining said switch in normal position, a lever for moving said switch to normal position and for actuating said latch to unlock said switch upon reverse movement of said lever, a motor operating always in one direction for actuating said lever in either direction, an auxiliary switching mechanism movable in definite relation with said lever, said switching mechanism having a contact controlling energization of said motor for actuating said latch to trip said main switch and another contact controlling energization of said motor for moving said main switch to locked position and means for actuating said latch independently of said motor.

5. In combination, a main switch, a latch for restraining said switch in normal position, a lever for moving said switch to normal position and for actuating said latch to unlock said switch upon reverse movement of said lever, a motor operating always in one direction for actuating said lever in either direction, an auxiliary switching mechanism movable in definite relation with said lever, said switching mechanism having a contact controlling energization of said motor for actuating said latch to trip said main switch and another contact controlling energization of said motor for moving said main switch to locked position, and a double throw control switch controlling said motor through said auxiliary switching mechanism, and electro-responsive means for actuating said latch independently of said motor.

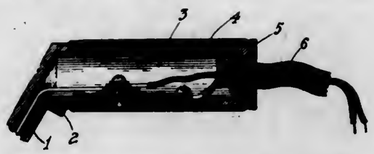
[Claims 6 to 28 not printed in the Gazette.]

1,106,117. WRENCH OF A QUICK-ACTING TYPE. GEORGE E. L. SEMANS, Pittsburgh, Pa. Filed Feb. 27, 1912. Serial No. 680,226. (Cl. 81—156.)



In a wrench having a toothed shank, fixed and movable jaw members thereon and a carrier for controlling the movement of the movable jaw member and moving therewith, said carrier formed with a peripheral recess and having a pair of diametrically opposed longitudinal recesses opening into the peripheral recess, a pair of semi-circular swinging jaws adapted to engage said shank inwardly with respect to the carrier and said jaws being provided with apertured ears disposed in the longitudinal recesses, pins mounted in the carrier for pivotally connecting the said swinging jaws thereto, the said jaws being rotative on the said shank in correspondence with said carrier, and a shiftable bail carried by the swinging jaws and adapted when shifted in one direction to maintain the jaws in engagement with the threads of the shank to prevent the shifting of the movable jaw.

1,106,118. SWITCHBOARD-PLUG. LEMUEL H. SNYDER, White Lake, S. D. Filed May 17, 1909. Serial No. 496,613. (Cl. 173—361.)

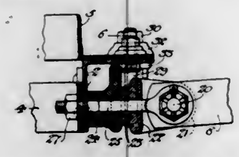


In a switchboard plug, a sleeve contact member, a tubular handle member integral therewith and extending at an angle therefrom, a tip contact member extending through said sleeve contact member into said handle member, cord connection terminals for said tip and sleeve contact members within said handle member, an insulating covering member over said handle member inclosing said terminals and a lock-ring securing said insulating covering member on said tubular handle member, substantially as described.

1,106,119. GANG-PLOW. WILLIAM SOBEY, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Original application filed May 25, 1911, Serial No. 629,269. Divided and this application filed Mar. 20, 1912. Serial No. 685,080. (Cl. 97—60.)

1. In a plow, the combination with a draft frame, of a trailing plow and a connection between said plow and said frame comprising a substantially horizontal pivot transverse to the line of draft, adjustable means for

swinging said pivot in vertical direction and means adjustable in the direction of the line of draft for swinging said pivot horizontally.



2. In a plow, the combination with a draft frame, of a trailing plow and a connection between said plow and said frame comprising a substantially horizontal pivot bolt transverse to the line of draft, and horizontal and vertical bolts arranged substantially at right angles to said pivot bolt for supporting and adjusting one end thereof.

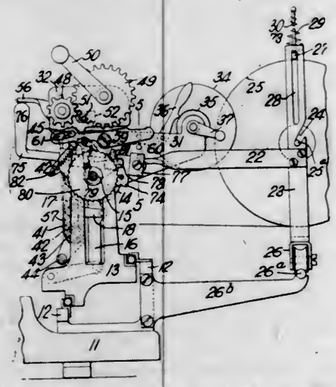
3. In a plow, the combination with a draft frame, of a plow having a pair of beam bars spaced apart at their forward ends, a transverse pivot whereon said beam bars are hung at their forward ends and separate connections between the opposite ends of said transverse pivot and said frame, the connections at one end of said transverse pivot being adjustable.

4. In a plow, the combination with a draft frame, of a plow having a pair of beam bars spaced apart at their forward ends, a transverse pivot bolt engaging the forward ends of said beam bars, said pivot bolt having a swinging connection at one end with said frame, and horizontal and vertical adjustable connections therewith at its opposite end.

5. In a plow, the combination with a draft frame, of a plow having a pair of beam bars spaced apart at their forward ends, a transverse pivot bolt whereon said beam bars are hung at their forward ends, a ball and socket connection between one end of said pivot bolt and said draft frame, and horizontal and vertical adjusting bolts connecting the opposite end of said bolt to said frame.

[Claims 6 to 8 not printed in the Gazette.]

1,106,120. ATTACHMENT FOR TYPE-WRITERS. CECIL J. SWAIM, Montreal, Quebec, Canada. Filed Jan. 22, 1912. Serial No. 672,713. (Cl. 197—134.)



1. In a typewriter, a platen, means for feeding a strip of paper back and forth in spaced apart layers or folds in front of the platen, and means for feeding ink ribbons between the several layers of the paper.

2. In a typewriter, a platen, means for feeding a strip of paper back and forth in spaced-apart layers or folds in front of the platen, and means for shifting all of said layers of paper.

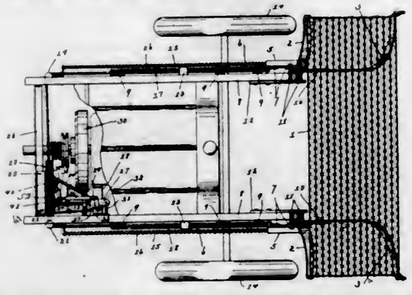
3. In a typewriter, a platen, means for feeding a strip of paper back and forth in spaced apart layers or folds in front of the platen, and means for simultaneously feeding a second sheet of paper.

4. In a typewriter, a typewriter carriage, a platen, means for feeding a strip of paper back and forth in spaced apart layers or folds in front of the platen, means for simultaneously feeding a second sheet of paper, shifting mechanism for moving all of said connected folds and means for simultaneously shifting said second sheet.

5. In a typewriter, the combination with the typewriter carriage and a platen, of means mounted on the carriage for feeding a ribbon of paper back and forth in spaced-apart layers or folds in front of the platen, means controlled by the platen rotating mechanism for shifting said paper feeding device, and means for automatically locking the paper feeding device in such shifted position.

[Claims 6 to 9 not printed in the Gazette.]

1,106,121. AUTOMOBILE-FENDER. GEORGE A. VAN VORST, Scotia, N. Y. Filed June 24, 1913. Serial No. 775,505. (Cl. 105—130.)



1. The combination with a wheeled vehicle, of a foldable fender, comprising a foldable shield, and shield-supporting pivotally connected arms adapted to be folded substantially parallel with each other and to be unfolded to extend said shield across the angle between the arms; a pair of longitudinal tracks mounted upon opposite sides of the vehicle; a carriage upon which a pair of said arms is pivotally mounted movable along each of said tracks; spring-mechanism for moving said carriages forward when released; automatic means for spreading said arms when moved forward; automatic means for folding said arms together when moved rearward; cables connected with the respective carriages to draw the same rearward; means for taking up said cables; and means for releasing said cables.

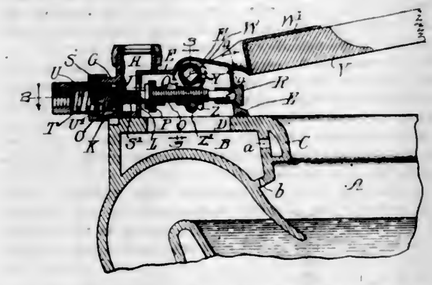
2. The combination with a wheeled vehicle of a foldable fender, comprising a foldable shield, and shield-supporting pivotally connected arms adapted to be folded substantially parallel with each other and to be unfolded to extend said shield across the angle between the arms; a pair of longitudinal tracks mounted upon opposite sides of the vehicle; a carriage upon which a pair of said arms is pivotally mounted movable along each of said tracks; spring-mechanism for moving said carriages forward when released; automatic means for spreading said arms when moved forward; automatic means for folding said arms together when moved rearward; cables connected with the respective carriages to draw the same rearward; a drum upon which said cables are wound; means for rotating said drum to wind the cables thereupon; a detent for preventing an unwinding movement of the drum; and means for releasing said detent.

3. The combination with a wheeled vehicle having an engine-driven wheel, of a fender movable longitudinally of the vehicle; spring-mechanism for moving the fender forward; cable-mechanism for withdrawing the fender; a drum upon which the cable-mechanism is wound; a drum-operating shaft; a bearing support for said drum-operating shaft movable toward and from said engine-driven wheel; a friction pulley on said drum-operating shaft movable with said shaft into and out of engagement with said engine-driven wheel; means for moving said bearing-support toward and from the engine-driven wheel; and a releasable detent to prevent an unwinding movement of the drum.

4. The combination with a wheeled vehicle having an engine-driven wheel, of a fender movable longitudinally of the vehicle; spring-mechanism for automatically moving the fender forward when released; cable-mechanism for withdrawing the fender; a drum upon which said cable-mechanism is wound; a friction pulley operatively connected with said drum movable into and out of engagement with said engine-driven wheel; a releasable detent for preventing an unwinding movement of the drum; lever-mechanism operative in one direction to move said pulley into engagement with said engine-driven wheel, and in the opposite direction to release said detent; and means automatically engageable with said lever-mechanism upon the completion of a predetermined winding movement of the drum whereby said friction pulley is disengaged from the engine-driven wheel.

5. A fender comprising two pair of arms, one of each pair movable toward and from the other thereof, self-folding spring-connections between the ends of each pair of arms, and a foldable shield supported by said spring-connections.

1,106,122. WATER-CLOSET. EARL G. WATAOUS, Chicago, Ill. Filed Aug. 3, 1908. Serial No. 446,503. (Cl. 4—28.)



1. In a water closet of the character described, the casing E having the pipe connections G and H and the chamber J having the valve openings K and L in its rear and front walls, the valve stem Q carrying the valve P cooperating with the opening L, the supplemental valve stem S' fitting in the rear end of the valve stem Q and carrying the valve O coöperating with the opening K, the spring T operating to press the valves and valve stems forward, and the seat V hinged to the casing E and operatively connected to the valve stem Q to force the same and the valves O and P rearward when the seat is depressed; substantially as described.

2. In a water closet of the character described, the casing E having the pipe connections G and H and the chamber J having the openings K and L in its opposite walls, the threaded valve stem Q having its front end supported and guided in the plug R in the front wall of the casing E, the hub Q' threaded upon the valve stem Q, the hinged seat V, an operative connection between said seat and the hub Q' upon the valve stem to cause the latter to be forced rearwardly when the seat is depressed, the coiled spring T pressing the valve stem forwardly and the valves O and P carried by the valve stem and coöperating with the openings K and L, respectively; substantially as described.

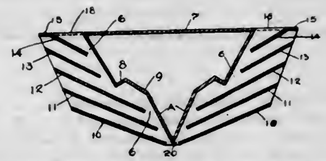
3. In a water closet of the character described, the casing E having the pipe connections G and H and chamber J provided with the valve openings K and L in its opposite walls, the valve stem Q carrying the valves O and P coöperating with the openings K and L, respectively, and supported and guided at its front end in the screw plug R, the hub Q' threaded upon said valve stem, the seat V having its hinges W W journaled in the casing E, and the hub Y mounted on said hinges and provided with the depending arms Z coöperating with the hub Q' to force the latter and the valve stem rearward when the seat is depressed; substantially as described.

4. The combination of the casing E having the pipe connections G and H and the chamber J having the valve openings K and L, the valve stem Q carrying the valve P coöperating with the opening L and the supplemental valve stem S' seated in the rear end of the stem Q and carrying the valve O coöperating with the opening K, the spring T operating to press the valves and valve stem forward, and the seat hinges W W journaled in the casing E and operatively connected with the valve stem Q to force the latter and the valves rearward; substantially as described.

5. The combination of the casing E having the pipe connections G and H and the chamber J having the valve openings K and L in its opposite walls, the valve stem Q supported and guided at its front end in a support in the front wall of the casing E, and carrying the valve P co-perating with the opening L, the supplemental valve stem S' fitting in the rear end of the valve stem Q and carrying the valve O and provided with the flange or disk S fitting the pipe connection G, the housing U coupled to the pipe connection G, the spring T confined in the housing U and operating to press the valve stem and valves forward, and the seat hinges W W journaled in the casing E and operatively connected with the valve stem Q to force the latter and the valves rearward; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,106,123. VENTILATOR. FRANK R. WEBER and CHRISTOPHER J. WEBER, St. Paul, Minn. Filed Feb. 13, 1912. Serial No. 677,279. (Cl. 98—22.)



1. A ventilator having at the rear a pair of spaced foul air inhaust ports, and at each side a plurality of forwardly and inwardly extending side ports, and having also a central opening at the front, and a triangular deflector having one of its apices adjacent to said front port opening, whereby to divide said opening into two parts, said deflector being so positioned as to leave an air passage along each of its side walls leading from the adjacent inhaust port past the side ports on that side to the front port, said side walls being formed intermediately of their length with an inward bend adapted to direct air currents entering through the front port into the side ports.

2. A ventilator having a foul air inhaust port at the rear, and an exhaust port at the front, a plurality of side ports extending forwardly and inwardly from the side of the ventilator and a deflector wall extending from the inner side of the inhaust port forwardly past the inner ends of the side ports to the front port, but spaced apart from the mouths of said side ports so as to leave a common air passage for the inhaust port and side ports extending from the inhaust port past the mouths of the side ports to the front port whereby to cause the air currents entering at the sides to draw and drive the foul air out through said passageway.

3. A ventilator having a foul air inhaust port at the rear and a port at the front, a plurality of spaced ventilating slats extending inwardly from the side of the ventilator so as to form side ports, and a deflector wall extending from the inner side of the inhaust port forwardly and inwardly past the mouths of the side ports to the front port, whereby to form a common passageway for the inhaust port and the side ports, and means for deflecting air entering at the front port out of said passageway and into one of the side ports.

4. A ventilator having a foul air inhaust port at the rear and a port at the front, a plurality of ventilating slats extending inwardly from the side of the ventilator so as to form side ports, and a deflector wall extending from the inner side of the inhaust port forwardly and inwardly past the mouths of the side port to the front port whereby to form a common discharge passageway for the foul air entering the rear of the ventilator and the air currents entering at the sides, said wall being formed intermediate of its length with a bend adapted to deflect the air currents entering through the front port into one of the side ports.

5. A ventilator having at the rear a pair of spaced foul air exhaust ports, and at each side a plurality of forwardly and inwardly extending side ports and having also an opening at the front, and a triangular deflector having one of its apices adjacent said front port-opening whereby to divide said opening into two ports, said deflector being so positioned as to leave an air passage along each of its side walls leading from the adjacent exhaust port past the side ports on that side to the front port.

1,106,124. SAND-BARGE. CHARLES C. WEST, Manitowoc, Wis., assignor to Manitowoc Ship Building & Dry Dock Company, Manitowoc, Wis., a Corporation of Wisconsin. Filed Dec. 14, 1911. Serial No. 665,714. (Cl. 37—9.)



1. A sand barge comprising in combination, a hopper provided with containing bins, a receiving tank at one end of the hopper, a main pipe arranged longitudinally of the barge between one of the bins and the receiving tank, and lateral supply pipes leading from the bins to the main pipe, all of the said pipes being disposed at an angle relative to the plane of the bins.

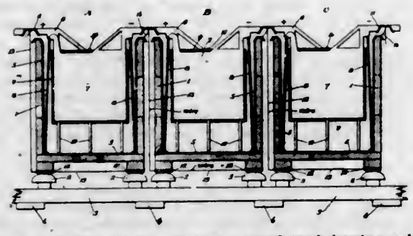
2. In a barge, the combination of a hopper provided with containing bins, a receiving tank at one end of the hopper, a main pipe arranged longitudinally of the barge between one of the bins and the receiving tank, and lateral supply pipes leading from the bins to the main pipe, all of the said pipes being disposed at an angle relative to the plane of the bins, and an overflow pipe leading from the tank substantially as described.

3. A sand barge comprising in combination a sand containing hopper, a localizing receptacle in the barge and located below the plane of the hopper, a pipe connection extending between the hopper and the localizing receptacle and beneath said hopper, said pipe being disposed at an inclination whereby the sand gravitates into the receptacle, and means adapted for elevating the sand out of the receptacle to unload the barge.

4. A sand barge comprising in combination a sand containing hopper, a localizing receptacle located below the plane of the hopper and adjacent one side of the hopper, a conduit disposed centrally of the barge for conveying the sand from the hopper to the receptacle, and lateral branch pipes extending between the hopper and the conduit for tapping the load at points on either side of the median line of the hopper.

5. A sand barge comprising a sand containing hopper provided with an outlet formed in its base, a localizing receptacle in the barge having an inlet opening in its wall disposed to one side of and below the axis of the outlet opening, and a pipe connection between the outlet and inlet and forming a conduit for the passage of the sand to the receptacle, said conduit being disposed lengthwise of the barge and beneath the hopper.

1,106,125. BATTERY. WALTER E. WINSHIP, New York, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 24, 1911. Serial No. 604,316. (Cl. 204—29.)



1. A battery cell, comprising a wood tank having a lead lining, positive and negative plates in the tank, a negative and a positive terminal for the cell, insulators supporting said tank and electrodes situated between said insulators and the tank, said electrodes being connected electrically to the positive terminal of the cell and said lead lining being connected to the negative terminal of the cell.

2. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, insulating means supporting said tank and an electrode placed between the insulating means and the tank, said electrode being electrically connected to the positive element of the cell and said lead lining being electrically connected to the negative element of the cell.

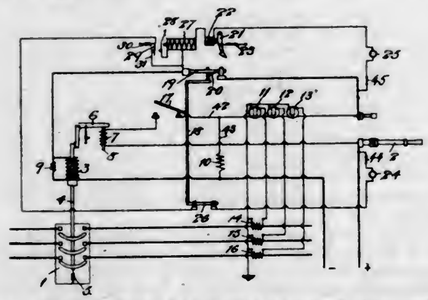
3. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, insulating means supporting said tank and an electrode placed between the insulating means and the tank and means whereby said lead lining is polarized negatively with respect to said electrode so that corrosion of the exterior of said lining is prevented.

4. A battery cell, comprising a tank having a lead lining, positive and negative elements in the cell, an electrode on the outside of the tank and acting as the support for the tank, and means whereby said lead lining is polarized negatively with respect to said electrode so that corrosion of the exterior of said lining is prevented.

5. A battery cell, comprising a tank having a metallic lining, an electrode on the outside surface of the tank, and means whereby said lining is polarized negatively with respect to said electrode so that corrosion of the exterior of said lining is prevented.

[Claims 6 and 7 not printed in the Gazette.]

1,106,126. OPERATING DEVICE FOR ELECTRIC SWITCHES. ARLE TORBJÖRN YTTERBERG, Wisby, Sweden, assignor to William M. Scott, Berwyn, Pa. Filed Mar. 30, 1909. Serial No. 486,766. (Cl. 175—294.)



1. The combination with a main switch, of electro-magnetic means for moving the same to normal position, means for restraining said main switch in normal position, an electro-magnet adapted to actuate said restraining means, a control switch having but one closing position, and circuit connections whereby said control switch

is connected in series with said electro-magnetic means and in parallel with said electro-magnet.

2. In combination, a main switch, electric means for closing it, holding means for maintaining the main switch in closed position, electrical disengaging means adapted to operate the said holding means, a control switch having but one closing position and interposed in the circuit of the main switch closing means and a circuit including the said disengaging means, the said disengaging means being connected in parallel with the control switch.

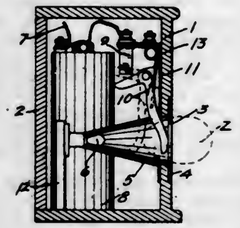
3. The combination with a main switch, of electro-magnetic means for moving the same to normal position, means for restraining said main switch in normal position, an electro-magnet adapted to actuate said restraining means, a control switch having but one closing position, circuit connections whereby said control switch is connected in series with said electro-magnetic means and in parallel with said electro-magnet, and a switch operated in definite relation with said main switch, controlling the circuit of said electro-magnetic means.

4. The combination with a main switch, of electro-magnetic means for moving the same to normal position, means for restraining said main switch in normal position, an electro-magnet adapted to actuate said restraining means, a control switch having but one closing position, circuit connections whereby said control switch is connected in series with said electro-magnetic means and in parallel with said electro-magnet, and means responsive to electrical conditions in the circuit of said main switch controlling the circuit of said electro-magnet.

5. The combination with a main switch, of electro-magnetic means for moving the same to normal position, means for restraining said main switch in normal position, an electro-magnet adapted to actuate said restraining means, a control switch having but one closing position, circuit connections whereby said control switch is connected in series with said electro-magnetic means and in parallel with said electro-magnet, a switch operated in definite relation with said main switch controlling the circuit of said electro-magnetic means, and means locking said last named switch in open position.

[Claims 6 to 40 not printed in the Gazette.]

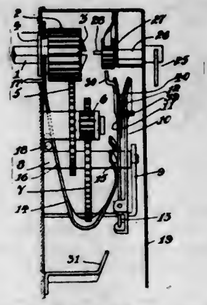
1,106,127. EGG-TESTING DEVICE. MELVIN P. BAKEN, Hayfield, Minn. Filed Feb. 25, 1914. Serial No. 820,847. (Cl. 99—6.)



An egg-testing device comprising a box having an egg-receiving opening, a tubular casing extending from said egg-receiving opening into said box, and an electric circuit within said box having therein a battery, a lamp, and a switch, said lamp being located at the inner end of said casing, and said switch comprising a stationary member and a spring-retracted bell crank, the short arm of said bell crank affording the movable member of said switch, and the long arm thereof working through an opening in said casing, in a position to be engaged and moved by an egg inserted into the receiving opening in said box, to thereby close said switch.

1,106,128. COIN-FREED CLOCK. PHILORUM BONHOMME, Montreal, Quebec, Canada. Filed July 9, 1913. Serial No. 778,107. (Cl. 194—72.)

1. In a coin-freed clock mechanism, the combination with the clock having a winding arbor, of a coin receiving pocket and gears adapted to slowly rotate said pocket from said winding arbor when the clock mechanism is running, stop devices for arresting the rotation of said coin pocket and consequently stopping the clock mechanism after a certain period, a winding key suitably journaled, clutch means on said winding arbor and said winding key, and means to cause engagement of said clutch means through the insertion of a coin into said pocket.



2. In a coin-freed clock mechanism, the combination with the clock having a winding arbor and an alarm, of a coin receiving pocket and gears adapted to slowly rotate said pocket from said winding arbor when the clock mechanism is running, means for arresting said pocket after a certain period of travel with consequent stopping of the clock, means for releasing the alarm at a certain point in the rotation of the pocket, a winding key suitably journaled, clutch means on said winding arbor and said winding key and means to cause the engagement of said clutch means through the insertion of a coin into said pocket.

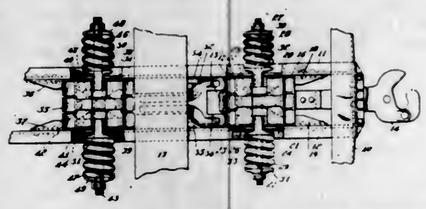
3. In a coin-freed clock mechanism, the combination with a clock having a winding arbor, of a casing at the back of said clock having a coin slot therein, a pinion mounted on said winding arbor, a coin receiving pocket adapted to slowly rotate when the clock mechanism is running, gears to cause said rotation from the winding arbor through the medium of said pinion, said coin pocket having a mouth which moves toward said coin slot when the clock is unwinding, means for stopping the rotation of said pocket with said mouth beneath said slot, a winding key suitably journaled, clutch means on said winding arbor and said key and means to cause the engagement of said clutch means through the insertion of a coin in said pocket.

4. In a coin freed clock mechanism, the combination with a clock having a winding arbor, of a pinion slidably keyed to said winding arbor, a casing having a coin slot therein, a winding spindle journaled in said casing in axial alinement with said pinion and having a clutch tooth adapted for engagement with the clutch teeth on said pinion, a coin receiving pocket and gears connecting said pocket with said arbor pinion to provide for slow rotation of said pocket, means for sliding said pinion and its teeth into engagement with said winding spindle teeth when a coin is placed through said slot into said pocket and means for releasing said coin and clutch teeth after winding.

5. In a coin freed clock mechanism, the combination with a clock having a winding arbor, a casing having a coin slot therein, a coin receiving pocket comprising a fixed jaw and a hinged jaw terminating in a mouth adapted to be positioned beneath said slot, a pinion slidably keyed to said winding arbor and having clutch teeth, a winding spindle journaled in said casing in axial alinement with said pinion and having a corresponding clutch tooth, a train of gears connecting said pinion and said coin pocket and whereby the latter is slowly rotated when the clock is running, a lever engaging said pinion at one end and said hinged jaw at the other end and adapted to move the pinion into engagement with said winding spindle when the jaws are opened by the insertion of a coin therebetween and automatic means for further opening said jaws to drop the coin after winding.

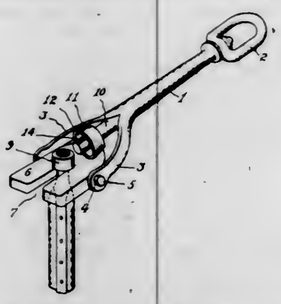
[Claim 6 not printed in the Gazette.]

1,106,129. RAILWAY-CAR. JAMES R. CARDWELL, Chicago, Ill., assignor to Union Draft Gear Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1911. Serial No. 615,753. (Cl. 213—64.)



In combination, a car having a body bolster, draft gear located between the end of the car and the bolster and comprising a follower, a coupler bar, and a yoke attached to the coupler bar and encircling the follower, buffing gear located back of the bolster, and a thrust bar interposed between the draft and buffing gears, the forward end of the thrust bar being bifurcated to inclose the yoke.

1,106,130. SUCKER-ROD ELEVATOR. WILLIAM T. CLINGER, Oil City, Pa. Filed Feb. 24, 1914. Serial No. 820,703. (Cl. 57—9.)



1. In a sucker-rod elevator, the combination of a main bifurcated member; a member pivotally mounted upon the latter and adapted to detachably engage a sucher-rod; a guiding stem rigidly connected with said main member and projecting between said bifurcations; and a slidable member on said guide-member adapted to engage the end of a sucker-rod while held in said pivotally mounted member.

2. In a sucker-rod elevator, the combination of a main member; a member pivotally mounted upon the bifurcations of the latter and adapted to detachably engage a sucker-rod; a guiding-stem rigidly connected with said main member; a slidable sleeve mounted upon said guiding-stem and adapted to engage the end of a sucker-rod while held in said pivotally mounted member; and means for locking said sleeve against sliding movement upon said stem.

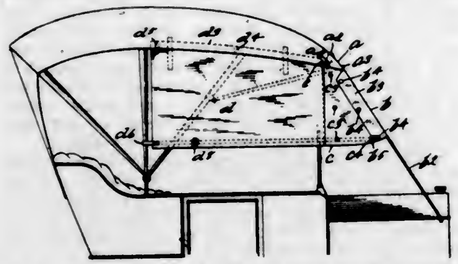
3. In a sucker-rod elevator, the combination of a main-member; a slotted plate pivotally mounted upon the latter; a downwardly extending guiding-stem rigidly connected with said main-member and terminating in a plane above said plate when the latter is in a horizontal position; a sleeve mounted and slidable upon said stem and formed with a recess adapted to engage the end of a sucker-rod; and means for locking said sleeve in such engaging position.

4. In a sucker-rod elevator, the combination of a main-member; a slotted plate pivotally mounted upon the latter; a downwardly extending guiding-stem rigidly connected with said main-member and provided with a tongue, said stem terminating in a plane above said plate when the latter is in a horizontal position; a sleeve mounted and slidable on said stem and provided with a groove adapted to engage said tongue, said sleeve having its lower surface intersected by a recess adapted to engage the end of a sucker-rod.

5. In a sucker-rod elevator, the combination of a main-member; a slotted plate pivotally mounted upon the latter; a downwardly extending guiding-stem rigidly connected with said main-member and provided with a tongue, said stem terminating in a plane above said plate when the latter is in a horizontal position; a sleeve mounted and slidable on said stem and provided with a groove adapted to engage said tongue, said sleeve having its lower surface intersected by a recess adapted to engage the end of a sucker-rod; said tongue being of a length such that said groove may disengage same when in such engaging position.

[Claim 6 not printed in the Gazette.]

1,106,131. VEHICLE-TOP. HYMAN COHEN, Brooklyn, N. Y. Filed Apr. 7, 1913. Serial No. 759,300. (Cl. 21—62.)



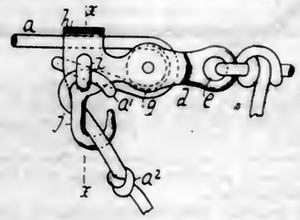
1. A combined vehicle hood and storm curtain, comprising a permanent portion, means for securing the same to a vehicle top at the front edge thereof, front and side members in permanent connection with said permanent portion, means for holding said front and side members together to serve as curtains when the top is up, and means for connecting said side members to said permanent portion when said top is down, said permanent portion forming the back, said front member the top, and said side members the sides and bottom of a hood when said top is down.

2. A combined hood and storm curtain, comprising a permanent portion connected with the front edge of a vehicle top, a front member connected therewith, a side member at each end of said permanent portion, a wing connected with each side member, means for connecting said front and side members and means for connecting said wings with the top, said permanent portion forming the back, said front member the top, said side members the sides, and said wings the bottom of a hood when said top is down.

3. A combined hood and storm curtain, comprising a permanent portion connected with the front edge of a vehicle top, a front member connected therewith, a side member at each end of said permanent portion, a wing connected with each side member, means for detachably connecting said front and side members, means for detachably connecting said wings with said vehicle top on the inner side thereof, with said permanent portion and side members on the outer side of said top, means for holding said side and wing members to the bows of the top, and means for fastening said wing members together and to said permanent portion when the device is used as a hood, said permanent portion serving as the back, said front member as the top, said side members as the sides and said wings as the bottom of said hood, when so employed.

4. A combined hood and storm curtain, comprising a permanent portion connected at its front edge with the front edge of a vehicle top to overlay the same when said top is up, front and side members in connection therewith to serve as curtains when said top is up, said permanent portion serving as the back, said front and side members as the top, sides and bottom when used as a hood, and fasteners for said members for each use as a hood or storm curtain.

1,106,132. CLOTHES-LINE FASTENER. FREDERICK COMES, New York, N. Y. Filed Oct. 24, 1913. Serial No. 797,027. (Cl. 24—129.)

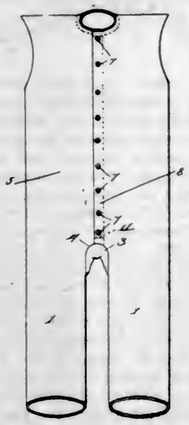


1. In a clothes line fastener, the combination of a block having a securing eye at one of its ends and a recess intermediate its opposite ends, a pulley rotatively mounted in said recess, a guide loop rising from the forward end of said block, and rope end engaging hooks projecting from opposite sides and depending from the forward end of said block.

2. In a clothes line fastener, the combination of a block having a securing eye at one of its ends and a recess intermediate its opposite ends, a pulley rotatively mounted in said recess, a guide loop at the forward end of the block and projecting above the top of said recess, rope end engaging hooks projecting from opposite sides of the forward end of said block, and a hook depending from the forward end of the block and coöperative with the other of said hooks to further secure the free end of a rope.

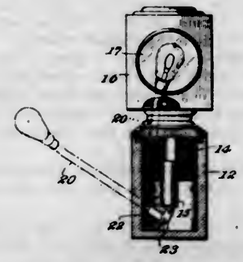
3. In a clothes line fastener, the combination of a block having a securing eye at one of its ends and a recess opening through the top and bottom faces intermediate the ends thereof, a pulley rotatively mounted in said recess, a guide loop at the forward end of the block and projecting above the top of said recess, line end engaging hooks projecting from opposite sides of said block, and a hook depending from said block and coöperating with the other of said hooks to further secure the free end of the line, the shank of said latter hook alining in a vertical plane intermediate the opposite edges of said guide loop.

1,106,133. UNDERWEAR. ROBERT S. COOPER, Kenosha, Wis., assignor to Henry S. Cooper and Horace G. Johnson, Kenosha, Wis. Filed Sept. 13, 1911. Serial No. 649,135. (Cl. 2—144.)



An undergarment having both legs permanently united to each other through the crotch by a gorepiece or gusset insert extending uninterruptedly from leg to leg through the crotch, the front edge of which gorepiece is joined to the front of the body of the garment by a sewed seam which extends continuously without interruption from the inside of one leg up across the front of the crotch region and down the inside of the other leg, and said garment provided with front fly members, having finished edges, and extending from the upper part of the garment down to the front edge of said gorepiece, the lower ends of said fly members being overlapped at the front edge of the gorepiece and sewed thereto by, and within, the same uninterrupted seam which unites said gorepiece to the body across the front crotch region.

1,106,134. SIGNAL FOR MOTOR-VEHICLES. ORPH W. COWGILL, St. Louis, Mo., assignor of ninety one-hundredths to Otto F. Stifel, St. Louis, Mo. Filed Mar. 31, 1913. Serial No. 758,034. (Cl. 177—339.)



1. The combination with a vehicle, of a side light housing on said vehicle, an electrically operated semaphore arm arranged for operation adjacent to said light housing, and a lamp carried by said semaphore arm, which lamp normally occupies the side light housing.

2. The combination with a vehicle, of a side light housing, a semaphore arm mounted for operation upon the vehicle adjacent to said housing, a lamp carried by said semaphore arm, which lamp normally occupies said light housing, and electrically operated means for actuating the semaphore arm.

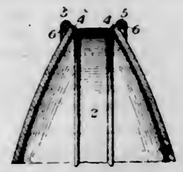
3. The combination with a vehicle side light housing, of an electrically controlled semaphore arranged for operation adjacent to said housing, and a lamp carried by said semaphore arm, which lamp is normally positioned in said housing.

4. The combination with a vehicle lamp housing, of a solenoid adjacent to said lamp housing, a semaphore actuated by said solenoid, and a lamp carried by said semaphore, which lamp is normally located in said housing.

5. A signaling device for motor vehicles comprising a lamp housing adapted to be positioned upon the vehicle, a pivotally mounted semaphore, an electric lamp carried thereby which lamp normally occupies the lamp housing, and an electrically operated means including a solenoid for actuating said semaphore.

[Claims 6 and 7 not printed in the Gazette.]

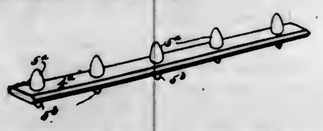
1,106,135. ILLUMINATED SIGN. JOHN L. DAWES, Pittsburgh, Pa. Filed May 14, 1913. Serial No. 767,507. (Cl. 40—131.)



A sign structure comprising a single surrounding band of sheet metal having its ends secured together, the band having circumferential crimped portions at each side,

flanges projecting outwardly beyond the crimped portions at each side, and having internal ring seats, translucent plates at each side engaging the crimped portions, and spring rings removably engaging the ring seats to hold the translucent plates, said plates being removable outwardly from each side face, substantially as described.

1,106,136. FABRIC-CLAMP. FRANK A. DONNELLY and JOHN E. BLANTHORN, New York, N. Y. Filed Apr. 3, 1913, Serial No. 758,568. Renewed Jan. 13, 1914. Serial No. 811,919. (Cl. 5—62.)



1. The combination with a fabric clamp and a fabric, of a soft malleable metal filler for binding said clamp to said fabric by pressure being applied thereto.

2. A fabric clamp comprising a metal plate, marginal rivet holes in said plate and a softer metal filler, the plate adapted to form a clamp and the filler adapted to be flowed by pressure to fill internal interstices in the clamp and to fill the rivet holes and form rivets and hold the clamp closed.

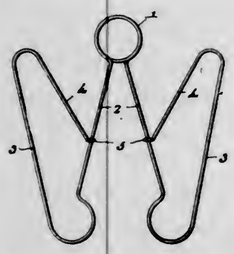
3. A new article of manufacture, a flowable-metal filler for fabric clamps comprising a plate and rivet shanks on said plate.

4. A new article of manufacture, a flowable-metal filler for fabric clamps comprising a plate and series of oppositely outstanding rivet shanks on said plate.

5. A new article of manufacture, comprised of a pair of fabric clamps, a fabric therebetween, retaining means on said fabric, a flowable metal filler therefor, said fabric clamps being so formed as to engage the said fabric retaining means forming a fabric lock therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,106,137. TROUSERS-STRETCHER. WILLIAM E. DOYLE, Bloomfield, N. J. Filed Nov. 1, 1912. Serial No. 728,996. (Cl. 223—19.)

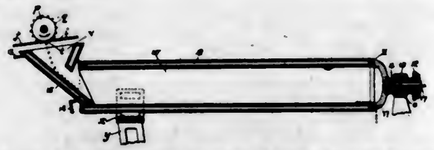


1. A device of the class described formed of a single piece of wire bent at the center to form a spring ring, diverging spring arms, a pair of stretcher arms and a pair of pressure equalizing arms connecting the free ends of the stretcher arms and said spring arms, substantially as described.

2. A device of the class described formed of a single piece of wire bent at the center to form a spring ring, bent intermediate its ends to form a pair of spring arms and a pair of stretcher arms and again bent toward the ends to form a pair of pressure equalizing arms, the ends of the wire being bent to form eyes embracing and slidably mounted upon the spring arms, substantially as described.

1,106,138. APPARATUS FOR FORMING EXPLOSIVE POWDER INTO SPHERICAL GRAINS. FRANCIS I. DU PONT, Wilmington, Del. Filed Aug. 13, 1913. Serial No. 784,478. (Cl. 18—5.)

1. In a machine for forming explosive powder into grains whose shape tends to be spherical, the combination with means adapted to separate the explosive into separate particles, and means presenting a moving heated surface adapted to receive the separate particles and form them into balls.



2. In a machine for forming explosive powder into grains whose shape tends to be spherical, the combination with means adapted to separate the explosive into a multiplicity of particles of non-spherical shape, and means presenting a moving heated surface adapted to receive the separate particles and reshape them into approximately spherical form.

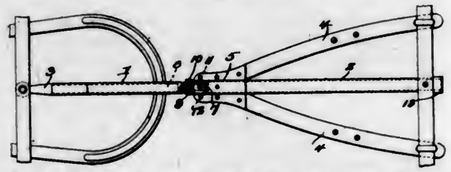
3. In a machine for forming explosive powder into grains whose shape tends to be spherical, the combination with means adapted to separate the explosive into separate particles of non-spherical shape, and means presenting a moving heated surface adapted to receive the separate particles and subject them to a rolling motion (whereby they are rounded) and simultaneously dry them.

4. In a machine for forming explosive powder into grains whose shape tends to be spherical, the combination with means adapted to separate the explosive into a multiplicity of cylindrically shaped particles, a receptacle adapted to receive the particles, means to rotate, and means to heat the receptacle, whereby the particles are simultaneously subjected to heat and to a rolling action, resulting in reshaping the particles into approximately spherical form.

5. In a machine for forming explosive powder into grains whose shape tends to be spherical, the combination with a moving plate having holes, filling means to force the explosive into said holes, a revoluble wheel provided with fingers adapted, in the movement of the plate, to enter said holes and force the plugs outwardly, and means presenting a moving heated surface adapted to receive the plugs and form them into balls.

[Claims 6 to 12 not printed in the Gazette.]

1,106,139. WAGON. HENRY C. FIEGE, Bayfield, Wis. Filed Apr. 14, 1914. Serial No. 831,777. (Cl. 21—39.)



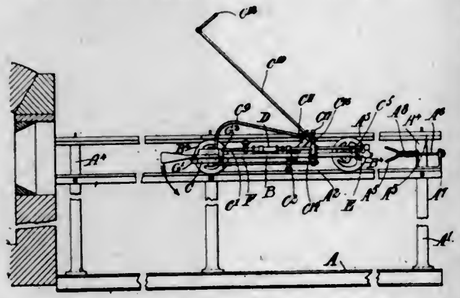
1. In a wagon, a reach comprising two telescoping tubular members, and means adjustably engaging the smaller member exterior of the surrounding member and having a transverse sliding connection with the exterior member.

2. In a wagon having bolsters and hounds, a reach comprising two telescoping tubular members, the forward member entering with the rear member, said rear member being rigidly secured by the hounds to the rear bolster and provided with a transverse slot adjacent its forward end, and means exterior the rear member adjustably engaging the forward member having an extension loosely engaging and slidable within the slot of the rear member.

3. In a wagon having bolsters and hounds, a reach comprising two telescoping tubular members, the forward member entering within the rear member, said rear member engaged by the rear bolster, hound plates securing the forward end of the rear member to the rear hounds, the under side of the rear member and the under bound plate provided with registering transverse slots, an adjusting clamp about the forward member having a rearward extension and means thereon loosely engaging within the slots.

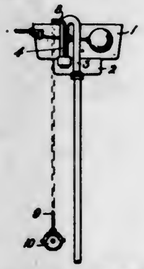
4. In a wagon, having bolsters and hounds, a reach comprising two telescoping tubular members, the forward member entering within the rear member, said rear member engaged by the bolster, hound plates securing the rear member to the rear hounds, the under side of the rear member and under bound plate provided with registering transverse slots, and an adjusting clamp comprising a split ring surrounding the forward member having clamping means upon the upper side and a rearward extension upon the under side provided with a lip of less width than the transverse length of the slots loosely engaging thereon.

1,106,140. APPARATUS FOR MAKING GLASS ARTICLES. JOHN FORSTER, St. Helens, England. Filed Sept. 11, 1908. Serial No. 452,637. (Cl. 49—20.)



In apparatus for manufacturing glass, a reciprocating carriage, a frame pivotally connected to said carriage comprising a plurality of brackets and a plurality of rods connecting said brackets to each other, a plurality of air pipes connected to said frame in parallelism with each other and arranged to move therewith, an air supply pipe connected to one of the last mentioned pipes, right-angle pipes connecting the pipes in parallelism with each other, there being a connection between the last mentioned pipes, a controlling valve in said connection, a blow pipe rotatably mounted in the frame, and a connector connected to one end of the blow pipe and one of the pipes in parallelism with each other, said pipe connections being arranged to supply air to the blow pipe; substantially as described.

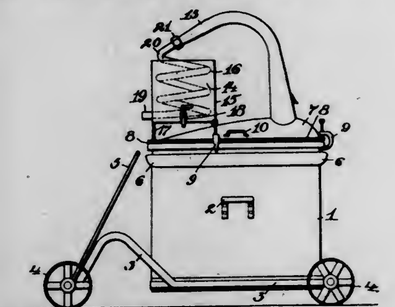
1,106,141. WATER-WASTE-PREVENTING CISTERN. CHARLES GREEN, Jr., London, England. Filed Jan. 8, 1914. Serial No. 811,091. (Cl. 4—5.)



1. In a flushing cistern of the type specified, the combination of a fixed bent siphon pipe within said cistern, said siphon having a long discharge leg and a short inflow leg, an inner case or vessel fixed at the lower end of said short leg, said lower end extending through and to a short distance below the top of said inner case, an air pressure pipe communicating with the interior of and at the top of said case, means to force air through said air pressure pipe into said case, and a pipe extending perpendicularly from the top of said case and communicating with the interior thereof, the free upper end of this pipe being normally closed by water in the cistern.

2. In a flushing cistern of the type specified; the combination with a fixed bent siphon pipe within said cistern, said siphon having a long discharge leg and a short inflow leg, of an inner case or vessel at the lower end of said short leg, said lower end extending through and to a short distance below the top of said inner case, an air pressure pipe communicating at one end with the interior of the top of said case, an air receiving chamber at the other end of said pipe, an air compressing piston adapted to be moved in said chamber to compress air therein and force air through said air pressure pipe to said case, a spring to normally maintain said piston at one end of said chamber, a hollow piston rod connected to and passing through said piston to normally admit air to said chamber, the entrance of air through said piston to said chamber being adapted to be stopped by the hand of the operator when moving said piston within said chamber, and a pipe extending perpendicularly from the top of said case and communicating with the interior thereof, the free upper end of said pipe being normally closed by water in said cistern.

1,106,142. VARNISH-KETTLE. LOUIS HAMBROCK, Jr., Newark, N. J., assignor to Flood & Conklin Co., Newark, N. J., a Corporation of New Jersey. Filed Nov. 21, 1913. Serial No. 802,254. (Cl. 203—3.)



1. In apparatus of the class described, a kettle, a removable domed cover therefor having its highest part at one side and provided with an opening thereat, a tapered conduit extending upwardly from said cover at said opening and terminating in a goose neck of restricted diameter, said conduit being exposed on its exterior to the air, and a water jacketed condenser comprising a worm on the said cover at the side opposite said conduit connection, and said worm being connected to the goose neck of said conduit, substantially as set forth.

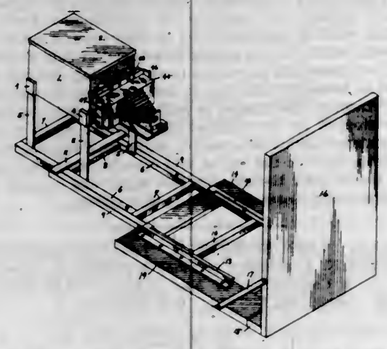
2. A cover for varnish kettles, said cover being provided with an opening, a tapered conduit exposed on the outside to the air and secured to said cover with its larger end about said opening and extending substantially at right angles thereto for a distance exceeding one-half the diameter of the cover, and a removable water jacketed condenser on said cover at the side away from said opening, substantially as set forth.

3. An irregularly domed cover for varnish kettles, said cover having its highest part at one side of the center, an upwardly extending conduit exposed on its exterior to the air, a removable water jacketed condenser comprising a worm on said cover at the side opposite the conduit connection, and means of connection between said worm and conduit, substantially as set forth.

4. In apparatus of the class described, the combination of a wheeled truck, a varnish kettle on said truck, said varnish kettle being provided with a flange near its top for collecting any material which may escape, an irregularly domed cover for said varnish kettle having its highest point at one side and provided with an opening thereat, an upwardly extending conduit exposed on its exterior to the air and tapering to its largest dimension at the neighborhood of its point connection to the domed cover at the highest portion thereof about said opening, a water jacketed condenser upon said cover on the side opposite that where the conduit is connected and comprising a worm, a

removable means of connection between said conduit and worm, and said cover being provided with a capped vent in the space left free and open by the condensation apparatus.

1,106,143. DEVICE FOR PRINTING PHOTOGRAPHS. FREDERICK H. HAMMER, Highland Park, Mich. Filed Aug. 25, 1913. Serial No. 786,355. (Cl. 88—24.)



1. In a projecting device for printing pictures from negatives, the combination of a case, means to adjustably support the same with reference to a printing paper support, a lamp within said case, a reflector mounted within the case around the lamp, a pair of grooved plates of glass mounted adjacent the end of the plate which is toward the paper support, said plates being positioned so that the grooves of one plate are at an angle to the grooves of the other plate and the grooved sides of the two plates are adjacent each other, said case having an opening in the end adjacent said plates, a pair of adjustable clamps mounted adjacent said openings, and a projecting lens mounted between said opening and said paper support.

2. In a projecting device for printing pictures from negatives, the combination of a paper-support and a case, means to support them, said case having an opening in the side toward the support, an electric lamp within the case, a concave reflector mounted at the rear of said lamp, a pair of grooved glass plates mounted between the opening in said case and said lamp to break up the rays of light passing from said lamp and reflector through said opening, a ground glass plate across said opening, a lens and lens holder mounted between the case and the paper-support, and means to secure the lens support to the case.

3. In a projecting device for printing pictures from negatives, the combination of a paper-support and a case, adjustable means to position the same relative to each other, a camera mounted on the case and extending toward the paper-support, said camera and case communicating, a source of light within the case, and a pair of grooved glass plates between the source of light and the camera.

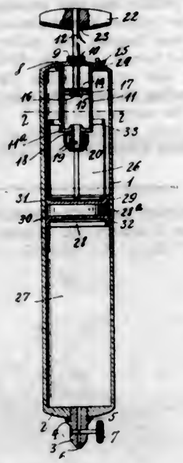
4. In a projecting device for printing pictures from negatives, the combination of a lamp, a lens, a support for the lens and the lamp and for a negative between them, and a pair of grooved glass plates mounted between the negative and lamp.

5. In a projecting device for printing pictures from negatives, the combination of a lamp, a lens, a support for the lens and the lamp and for a negative between them, a pair of grooved glass plates mounted between the negative and lamp, and a concave reflector mounted on the opposite side of the lamp from said plates.

[Claims 6 and 7 not printed in the Gazette.]

1,106,144. CARBON-TETRACHLORID PACKAGE. WILLIAM L. HARRISON, Branford, Conn. Filed Sept. 18, 1913. Serial No. 790,485. (Cl. 23—11.)

1. A carbon tetrachlorid package comprising a container, a charge of carbon tetrachlorid therein, another charge of compressed air in said container, and glycerin, to prevent the formation of hydrochloric acid and other detrimental effects.



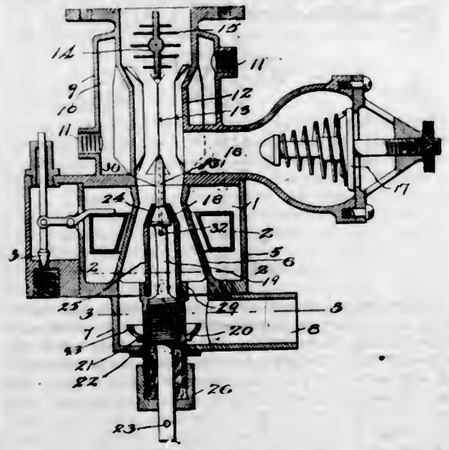
2. A carbon tetrachlorid package comprising a container, a charge of carbon tetrachlorid therein, another charge of compressed gaseous medium in said container, and a glycerin-holding packing at a portion of the container adapted to be reached by the carbon tetrachlorid.

3. A carbon tetrachlorid package comprising a container, a charge of carbon tetrachlorid therein, and glycerin to prevent detrimental effects.

4. A carbon tetrachlorid package comprising a container, a charge of air in said container, another charge of carbon tetrachlorid in the container, and a glycerin barrier between said air and said carbon tetrachlorid.

5. A carbon tetrachlorid package comprising a container, a charge of carbon tetrachlorid therein, another charge of compressed gaseous medium in said container, a follower movable in the container and separating the carbon tetrachlorid from the compressed gaseous medium, and packing, holding glycerin, applied to said follower.

1,106,145. CARBURETER. JOHN T. HAZELTON, Somerville, N. J. Filed Apr. 10, 1912. Serial No. 689,821. (Cl. 48—155.2.)



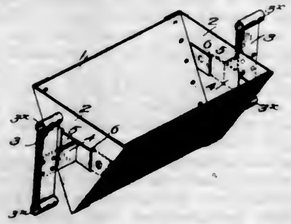
1. In a carbureter, the combination with a nozzle having a contracted mouth and a fuel supply, of a stem threaded into said sleeve and provided with a needle valve, and an extension on said valve having a passage therein communicating with the interior of the nozzle and forming a vaporizing jet.

2. In a carbureter, the combination with a nozzle having a contracted mouth and fuel supply, a threaded stationary sleeve forming a continuation of the nozzle and means for securing the sleeve in the carbureter, of a stem threaded into said sleeve and provided with a needle valve, and an extension on said valve having a passage therein communicating with the interior of the nozzle and forming a vaporizing jet.

3. In a carbureter the combination with a nozzle having a contracted mouth and a fuel supply, and a sleeve secured in the carbureter and having drip cup thereon, of a stem threaded into said sleeve and provided with a needle valve to co-act with said contracted mouth, and an extension beyond said valve having a passage therethrough communicating with the interior of the nozzle and forming an additional vaporizing jet.

4. In a carbureter, the combination of a reservoir, a cover on the reservoir having a mixing tube extending transversely thereon and an air-inlet tube extending from the mixing tube through the reservoir, and a fuel feed tube connected with the reservoir and having a nozzle supported in the air-inlet tube to discharge therein toward the mixing tube, with dual means in the air-inlet tube for controlling the discharge from the nozzle, one of the means being adjustable for capacity and the other relatively smaller and constant in capacity.

1,106,146. EXCAVATING-BUCKET. JOSEPH J. HIGGINS, Silver Creek, Pa. Filed Oct. 15, 1913. Serial No. 795,288. (Cl. 193—6.)



In an elevator bucket, a body portion, end portions secured thereto and provided with vertically extending elongated slots, vertically extending links having loops at their ends, a pair of arms secured to said links at their central portions, said arms being bent laterally, a portion of said arms being arranged to abut the outer side of the end portions, the ends of said arms being bent inwardly and arranged to extend through said openings and being bent back upon themselves to lie close to the inner sides of said end portions.

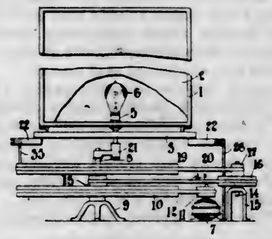
1,106,147. EXPLOSIVE PRIMING COMPOSITION. ARTHUR JAQUES, Redding, Polmont Station, Scotland, and GORDON WELLS, St. Albans, England, assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Filed Oct. 4, 1913. Serial No. 793,437. (Cl. 52—2.)

1. As a new article of manufacture, a mixture of benzoyl peroxid and an explosive, said mixture having a lower temperature of ignition or flashing than such explosive.

2. As a new article of manufacture, a composition consisting of an ordinary priming composition, about 60% to 66%, and benzoyl peroxid, 40% to 33%.

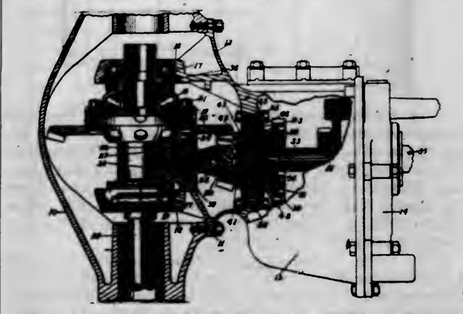
1,106,148. ROTATING SIGN. JOHN SIGFRIED KENDALL, Hamilton, Ontario, Canada. Filed Dec. 15, 1913. Serial No. 806,817. (Cl. 40—77.)

1. In a rotating illuminated sign the combination with means for carrying advertisements, of a wheel supporting the advertisement carrying means, a lamp within the advertisement carrying means, radially extending brackets secured to the wheel and extending exteriorly of the periphery thereof, an electric light circuit, pairs of contact fingers mounted on each of the brackets and insulated therefrom and from each other, said contact fingers connected to the lamp, a pair of contact fingers connected to the electric light circuit, said contact fingers insulated from each other said first mentioned pair of contact fingers being adapted to coact with said last mentioned pairs of contact fingers, a second wheel rotatably mounted below the aforesaid supporting wheel, said supporting wheel situated eccentrically of the second wheel, means for rotating the second wheel, and means connected to the second wheel for engaging each bracket in succession for a predetermined time for rotating the supporting wheel a requisite extent.



2. In a rotating illuminated sign the combination with means for carrying advertisements, of a wheel supporting the advertisement carrying means, a lamp within the advertisement carrying means, radially extending brackets secured to the wheel and extending exteriorly of the periphery thereof, an electric light circuit, pairs of contact fingers mounted on each of the brackets and insulated therefrom and from each other, said contact fingers connected to the lamp, a pair of contact fingers connected to the electric light circuit, said contact fingers insulated from each other said first mentioned pair of contact fingers being adapted to coact with said last mentioned pairs of contact fingers, a second wheel rotatably mounted below the aforesaid supporting wheel, said supporting wheel situated eccentrically of the second wheel, means for rotating the second wheel, and a vertically extending pin mounted on the second wheel, a horizontal roller rotatably mounted on the top of the pin and engaging in succession the respective brackets.

1,106,149. GEARING. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 21, 1913. Serial No. 755,919. (Cl. 74—34.)



1. In a motor vehicle driving gearing, the combination with the driving shaft and the driven shaft arranged at right angles thereto, of a pair of bevel gears connecting said shafts and having their teeth so formed as to cause end thrust of the driving shaft toward the driven shaft when the driving shaft is driving the driven shaft in one direction through said gears, and a thrust bearing for resisting said end thrust.

2. In a motor vehicle driving gearing, the combination with the driving shaft and the driven shaft arranged at right angles thereto, of a pair of bevel gears connecting said shafts and having their teeth so formed as to cause end thrusts of the driving shaft toward the driven shaft when the former is driving the latter forwardly and in the opposite direction when driving rearwardly through said gears, and thrust bearings for resisting the end thrust in both directions.

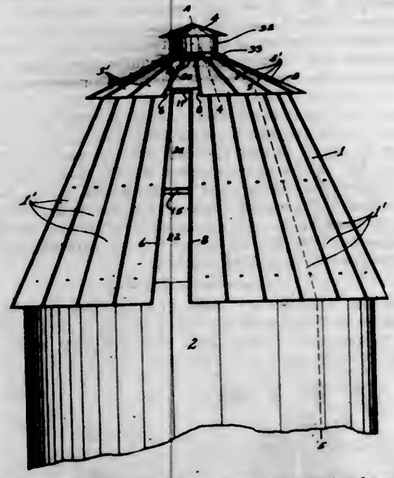
3. The combination with driving and driven shafts arranged at right angles to each other in the same plane, of a pair of bevel gears on said shafts having their teeth so formed as to cause end thrust on the driving shaft toward the driven shaft and on the driven shaft away from the driving shaft, and thrust bearings for said shafts.

4. In a motor vehicle, the combination with the axle casing, the differential housing, and a driven bevel gear thereon, of a bevel pinion driving said gear and having a hollow hub portion, radial supporting bearings between said hub portion and said casing, and another gear having a hub pressed into the hub of said pinion.

5. In a motor vehicle, the combination with the axle casing, the differential housing, and a driven bevel gear thereon, of a bevel pinion driving said gear and having a hollow hub portion, radial supporting bearings between said hub portion and said casing, another gear having a hub pressed into the hub of said pinion, and a driving shaft having a bearing in said latter gear.

[Claims 6 to 10 not printed in the Gazette.]

1,106,150. ROOF FOR SILOS. CHARLES E. MARTIN, Mansfield, Ohio. Filed Feb. 2, 1914. Serial No. 815,888. (Cl. 20—1.4.)

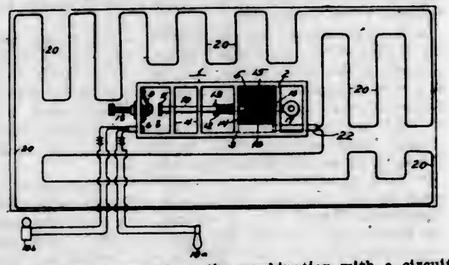


1. In a silo, a roof structure consisting of a base and a crown secured to the base, the base and crown each being composed of flat sections the side edges of which have interlocking joints, the crown and base having door openings formed by omitting a section of each, and doors for closing said door openings having rolled side edges which slidably receive the interlocking parts of the sections adjacent the door openings.

2. In a silo, a roof structure consisting of a base and a crown secured to the base, the base and crown each being composed of flat sections, the side edges of which have interlocking joints, the crown and base having door openings formed by omitting a section of each, doors for closing said door openings having rolled side edges which slidably receive the interlocking parts of the sections adjacent the door openings, latches on the doors pivoted to be movable to engage under the sections adjacent the door openings, and means to secure the upper ends of the doors to prevent lateral movement thereof.

3. In a silo, a roof structure formed of sections the side edges of which have interlocking joints, one of the sections being omitted to provide a door opening, and a door for closing said opening having rolled side edges which slidably receive the interlocking parts of the sections adjacent the door opening.

1,106,151. FIRE-ALARM SYSTEM. GEORGE HENDER MATTHEWS, Uniontown, Pa. Filed Nov. 25, 1913. Serial No. 802,963. (Cl. 177—303.)



1. In an alarm system, the combination with a circuit closer for an alarm circuit, of a spring-actuated device for operating said circuit closer, a fuse normally holding said device withdrawn, a fuse adapted to extend throughout an area where fire might occur a paper tube inclosing said last-mentioned fuse, and an inflammable body to be ignited by said last-mentioned fuse to blow the first-mentioned fuse.

2. In an alarm system, the combination with a box, a circuit-closer for an alarm circuit, in said box, a spring-actuated device in said box for operating said circuit-closer, a fuse normally holding said device withdrawn, inflammable material adjacent to said fuse, and a fuse extending into said box for igniting the inflammable material, said last-mentioned fuse adapted to extend from the box and throughout a room in which a fire is liable to occur.

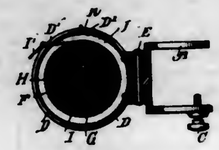
3. In an alarm system, the combination with a box, two circuit closers therein, a spring-actuated rod in the box having a part to close both of said circuit closers simultaneously, a fuse normally holding said rod withdrawn, inflammable material near said fuse, and a fuse entering the box and terminating in close proximity to said inflammable material, said last-mentioned fuse adapted to extend throughout a room in which a fire is liable to occur.

4. In an alarm system, the combination with a box, of a circuit closer therein for closing the circuit of an alarm device, a spring-actuated rod therein, a manually-operable screw for moving said rod to permit the circuit closer to open, a fuse normally holding the rod withdrawn, inflammable material adjacent to the fuse in the box, and a fuse entering the box and terminating in position to ignite said inflammable material, said last-mentioned fuse adapted to extend throughout a room in which a fire is liable to occur.

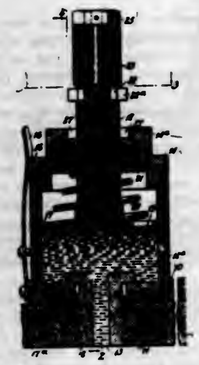
1,106,152. SKIRT-MARKER. CORA E. MCINTOSH, New York, and ORSN A. MCINTOSH, Greene, N. Y. Filed June 2, 1913. Serial No. 771,202. (Cl. 33—87.)

1. In a skirt marker, the combination with a clamp adapted to be fastened to a support a predetermined distance above the floor of a room in which the support is located, a closed casing hinged on the outer end of the said clamp to swing sidewise clear of the clamp and its support, the casing having an opening at its periphery, a spring-operated drum journaled within the said casing, and a chalk line winding and unwinding on the said drum and extending through the said opening to the outside of the casing.

2. In a skirt marker, the combination with a clamp adapted to be fastened to a support a predetermined distance from the floor, of a closed casing hinged on the outer end of said clamp to swing sidewise clear of the clamp and its support, the said casing having a filling opening and a line opening, a spring-operated drum journaled within the said casing, a chalk line winding and unwinding on the said drum and extending through the said line opening, and loose chalk material in the said casing and filled into the casing through the said filling opening.



1,106,153. GREASE-CUP. ROY MERL MUSGROVE and FRED R. HOWARD, Salt Lake City, Utah. Filed Feb. 4, 1914. Serial No. 816,491. (Cl. 184—45.)



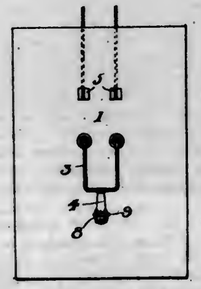
1. A grease cup having a cap, a spring pressed piston in the cup having a piston rod extending through the cap, and a stop on the piston rod, the cap having a passage to permit the stop to pass through the cap, to afford freedom for the piston to move forwardly, and said stop being movable to a position out of line with the said passage to arrest the forward movement of the piston.

2. A grease cup having a cap, a piston operating in the cup and having a piston rod passing through the cap, said rod being formed with an elongated slot extending transversely through the rod, means to advance the piston, a threaded spindle ranging longitudinally of the piston rod to turn relatively to the latter, and a stop disposed in the slot of the piston rod and having threaded engagement with the spindle, said stop being adapted to contact with the cap and limit the forward movement of the piston.

3. A grease cup having a cap, a spring-pressed piston in said cup having a piston rod extending through the cap, and having an elongated slot extending transversely, a spindle ranging longitudinally of the piston rod, and a stop threaded on the spindle and formed with lugs projecting laterally beyond the piston rod, the cap having passages for the stop and its lugs, permitting a forward movement of the piston, the cap furthermore having depressions disposed angularly to the passages, whereby to arrest the lugs and limit the forward movement of the piston.

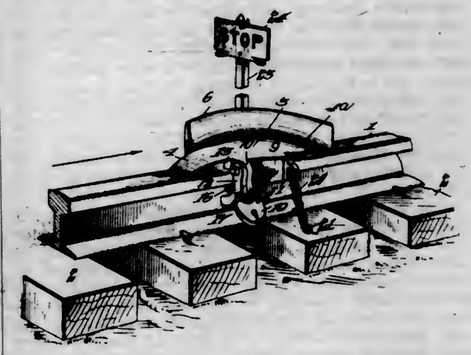
1,106,154. SWITCH-LOCKING DEVICE. JOHN A. NASH, Butler, Pa. Filed Feb. 13, 1913. Serial No. 748,116. (Cl. 70—14.)

A lock for blade switches having an adjustable screw arranged on the base thereof, a pair of jam nuts carried by said screw for maintaining the screw in the adjusted position, and a shackle carried on the upper end of said



lock and adapted for engaging over the handle portion of a switch for locking the said switch in position.

1,106,155. PORTABLE DERAILING DEVICE. WILLIAM P. NEWKIRK, Pueblo, Colo., assignor, by direct and mesne assignments, of one-fourth to Washington D. Isgrig and one-fourth to Charles L. Crooks, Pueblo, Colo. Filed Apr. 22, 1913. Serial No. 762,844. (Cl. 104—127.)



1. A device of the character specified, comprising a plate adapted to be arranged on the tread of a rail longitudinally of the rail, said plate having each of its ends inclined or beveled and having at each side edge a depending web, one of the said webs extending into engagement with the base flange of the rail and the other curving inwardly at its lower end to engage the web at the outer side of the rail and below the tread, said device having an upstanding flange inclined with respect to the rail to deflect the flange of a car wheel from the inner to the outer side of the rail, said device having a groove at one end between the flange and the plate, the web at the outer side of the rail having a transverse lug at each end thereof, each of the said lugs being perforated, a chain connected with one lug and a gripping jaw connected with the other, said jaw having an opening at its upper end registering with the opening of the lug, a bolt traversing the said opening to hinge the jaw to the lug, said jaw curving downwardly and inwardly at its lower end to engage the web of the rail, the jaw and the adjacent lug having registering openings for engagement by the shackle of a pad lock when the said jaw is in engagement with the web of the rail.

2. A device of the character specified, comprising a plate adapted to rest on the tread of a rail, said plate

having each of its ends inclined or beveled toward the rail and having at each side edge a depending web, one of the said webs extending into engagement with the base flange of the rail and the other curving inwardly at its lower end to engage the web at the outer side of the rail and below the tread, said device having an upstanding flange inclined with respect to the rail and extending across the plate, the web at the outer side of the rail having a lug at each end thereof, a chain connected with the lug and adapted for connection with the tie at the other end, a gripping jaw pivoted to the other lug, said jaw curving downwardly and inwardly at its lower end to engage the web of the rail near the base flange, the jaw and the adjacent lug having registering openings when the said jaw is in engagement with the rail for receiving a locking means.

3. A device of the character specified, comprising a plate adapted to rest on the tread of a rail, said plate having each of its ends inclined or beveled toward the rail and having at each side edge a depending web, one of the said webs extending into engagement with the base flange of the rail and the other curving inwardly at its lower end to engage the web at the outer side of the rail and below the tread, said device having an upstanding flange inclined with respect to the rail and extending across the plate, a chain connected with the web at the outer side of the rail at one end thereof, a locking jaw hinged to the other end, said jaw curving downwardly and inwardly to engage the web of the rail, and means for locking the jaw in engagement with the web of the rail.

4. A device of the character specified, comprising a plate having its ends beveled and provided at each side edge with a depending web, one of the said webs being of lesser length than the other and curving inwardly at its lower end, said device being adapted to rest upon a rail with the webs depending on opposite sides thereof, the longer web being adapted to engage the base flange of the rail, said device having an upstanding flange inclined with respect to the rail, and a gripping jaw pivoted to the shorter web, said jaw being adapted to engage the rail below the engagement of the web, means for locking the jaw in place, and means for anchoring the said device to a tie.

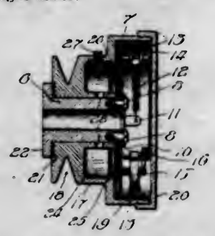
5. A device of the character specified, comprising a plate having its ends beveled and provided at each side edge with a depending web, one of the said webs being of lesser length than the other and curved inwardly at its lower end, said device being adapted to rest upon a rail with the webs depending on opposite sides thereof, the longer web being adapted to engage the base flange of the rail, said device having an upstanding flange inclined with respect to the rail, and a gripping jaw pivoted to the shorter web, said jaw being adapted to engage the rail below the engagement of the web, and means for locking the jaw in place.

[Claim 6 not printed in the Gazette.]

1,106,156. SPEED-REGULATOR. HARRY L. OGG, Newton, Iowa. Filed Feb. 17, 1913. Serial No. 748,818. (Cl. 74—45.)

1. A speed regulator comprising a sleeve, a flange formed integral with one end of the sleeve, a disk detachably secured to the other end of the said sleeve, friction members pivotally secured to the outer face of said disk, a pulley loosely mounted upon said sleeve between the integral flange and the disk, a housing carried by said pulley for inclosing said disk and friction members, means for normally holding said friction members into engagement with the said housing and means for withdrawing said friction members by centrifugal force when a predetermined speed is surpassed.

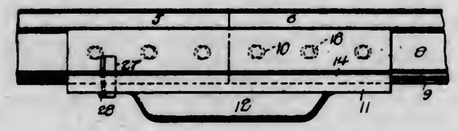
2. A speed regulator comprising a sleeve, a disk member, means for detachably connecting said disk member to one end of said sleeve, friction members pivotally secured to one face of said disk, adjacent the periphery thereof, a circular plate adjustably secured to said disk member, apertured projections formed integrally with the plate and lying diametrically opposite, coil springs connecting said apertured projections with one end of each of said friction members, a grooved pulley loosely mounted upon said sleeve, a housing projecting from one end of said upliey for inclosing said disk member and friction members, said coil springs adapted to normally hold said friction members into engagement with the said housing and means whereby the same will be withdrawn from the housing by centrifugal force.



3. A speed regulator comprising a sleeve, a disk member, means for detachably connecting said disk member to said sleeve, a circular plate, the said circular plate having a pair of arcuate slots formed therein, the said means for holding the disk to the sleeve adapted to extend through the slots whereby the said plate may be adjusted, friction members pivotally secured to said disk, a pulley slidably mounted upon said sleeve, a housing carried by said pulley inclosing said disk member and said friction members, means connecting said friction members with said plate member for normally holding the friction members into engagement with said housing, and means carried by the friction members for withdrawing the same by centrifugal force when a predetermined speed is surpassed.

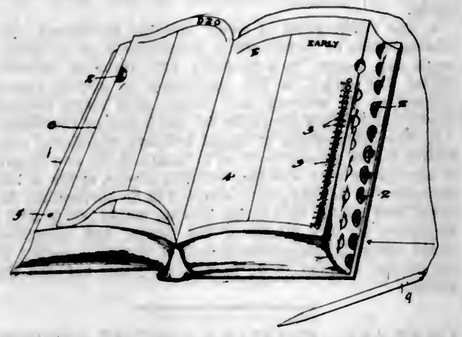
4. A speed regulator, comprising a sleeve, a disk member, a pair of set screws for detachably connecting said disk member to one end of said sleeve, a circular plate having slots formed therein, the said set screws extending through the said slots whereby the plate may be adjusted, friction members pivotally secured upon one face of said plate, an annular flange formed integral with the opposite end of said sleeve, a pulley loosely mounted upon said sleeve between said annular flange and disk member, a housing carried by said pulley for inclosing said disk member and friction members, means connecting said friction members with said plate for normally holding the said friction members into engagement with the said housing, means for withdrawing the said friction members by centrifugal force and means carried by said disk member whereby the inner movement of said friction members will be limited.

1,106,157. COMBINED RAIL CHAIR AND JOINT. HARRY T. PARKS, Cuyahoga Falls, Ohio. Filed Apr. 18, 1914. Serial No. 832,859. (Cl. 239—6.)



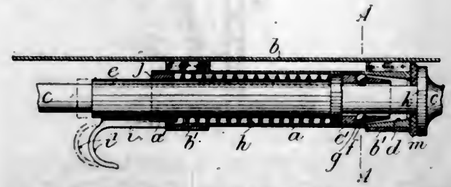
A combined rail chair and joint comprising a chair plate having the longitudinal marginal portions of the upper face thereof provided with vertically extending longitudinally disposed flanges, one of said flanges having its inner side undercut, a splice bar formed integral with the other of said flanges and capable of abutting against one side of a pair of track rails, lugs integral with the inner face of said splice bar and capable of projecting into the webs of the track rails, a removable splice bar capable of engaging the other sides of the track rails and provided with an extension seated upon the upper face of said chair plate, said extension having its outer edge beveled and opposing said undercut inner side, said beveled edge of said extension provided with teeth, a vertically extending angularly disposed retaining member projecting through said undercut flange, said beveled edge and said chair plate and having its lower end bent to engage the lower face of said chair plate to arrest upward movement of said member, and depending longitudinally extending reinforcements integral with the lower face of said chair plate.

1,106,158. MEANS EMPLOYED IN INDEXING SYSTEMS. OCREN GORDON PICKETT, Jefferson City, Mo. Filed Mar. 12, 1913. Serial No. 753,796. (Cl. 11—7.)



In a dictionary vocabulary, an initial indexed leaf having a series of spaced perforations arranged near its outer margin and alphabetically arranged word syllables printed adjacent the spaced perforations, and each succeeding leaf of the vocabulary formed with registering perforations in decreasing arithmetical progression which provide unobstructed holes in the leaves of successively increasing depth, whereby an instrument may be entered in a hole and will contact with a leaf bearing the word-syllable corresponding with a word-syllable on the initial leaf adjacent the hole.

1,106,159. MUD-GUARD FOR MOTOR AND OTHER ROAD-VEHICLES. FREDERICK RAWLINS, Hackney, London, England. Filed Nov. 28, 1913. Serial No. 803,588. (Cl. 21—23.)

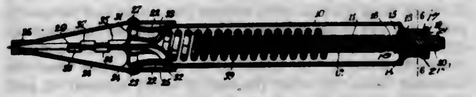


1. In combination, a mud guard, a stationary support therefor, means adapted to enable the mud guard to be automatically attached thereto in the act of placing it in position and means adapted to render the automatic attachment at the support inoperative and hold the same in the inoperative position when the mud guard is to be released.

2. In combination, a mud guard, a stationary supporting spigot therefor, a composite socket upon the mud guard adapted to be slipped into automatic gripping contact with the spigot, and means movable in an axial direction to produce displacement between the members of the composite socket to effect release and in a circumferential direction to prevent return of the members from release to gripping position.

3. For enabling a mud guard to be easily applied to and removed from a stationary supporting rod therefor carried by a vehicle, a composite socket comprising another member adapted to be secured to the underside of the mud guard and having a tapered inner end portion, an inner socket member adapted to move endwise within said outer socket and to slide upon the corresponding supporting rod adapted to extend through it, said inner socket carrying at its inner end balls arranged to act against the tapered inner portion of said outer socket and to then grip the supporting rod, and provided at its outer end with a projecting shoulder or abutment adapted upon partial withdrawal of the inner socket from the outer socket and subsequent partial rotation to engage the adjacent outer end of the outer socket and hold the inner socket in its withdrawn position and a spring acting between said outer and inner sockets and surrounding the latter and serving to cause it to automatically return to its operative position when disengaged from the end of the outer socket.

1,106,160. PENCIL. HERMANN REICHE, Millstone, N. J. Filed June 3, 1910. Serial No. 564,792. (Cl. 120—1.)



1. A pencil, having a tubular body; a tubular coil of flexible marking material spirally arranged and disposed in said body; an elongated eraser disposed centrally within said coil; and means for feeding said coil and said eraser from said body.

2. A pencil, having a tubular body; a coil of elongated flexible marking material spirally disposed in said body; an elongated eraser disposed within said coil; means for adjustably supporting said eraser in said body and coil; and means for independently feeding said marking material.

3. A pencil, having a tubular body; an inner tube open at one end and suspended in said body to provide storage space between said tube and said body; a spirally-coiled flexible marking material disposed in said body and between the inner tube and wall of said body; means for feeding said marking coil from one end of said body, to serve as a marking element for said pencil; an elongated eraser mounted in said inner tube; and means for feeding said eraser from said inner tube.

4. A pencil, having a tubular body; an inner tube open at one end and suspended in said body to provide storage space between said tube and said body; a spirally-coiled flexible marking material disposed in said body and between the inner tube and wall of said body; means for feeding said marking coil from one end of said body, to serve as a marking element for said pencil; an elongated eraser mounted in said inner tube; and a screw-threaded section in said tube to engage said eraser to move the same lengthwise of said tube when revolved therein.

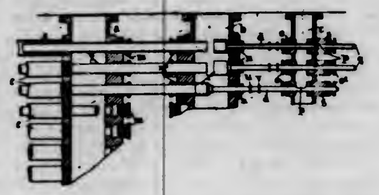
5. A pencil, having a tubular body; an inner tube open at one end and suspended in said body to provide storage space between said tube and said body; a spirally-coiled flexible marking material disposed in said body and between the inner tube and wall of said body; means for feeding said marking coil from one end of said body, to serve as a marking element for said pencil; an elongated eraser mounted in said inner tube; a screw-threaded section in said tube to engage said eraser to move the same lengthwise of said tube when revolved therein; and means engaging said eraser for rotating the same.

[Claim 6 not printed in the Gazette.]

1,106,161. CLEANING TUBULAR AND OTHER VESSELS. THOMAS RIGBY, Dumfries, Scotland, and NILS TESTRUP, London, England, assignors, by mesne assignments, to Wetcarbonizing Limited, London, England. Filed Dec. 6, 1911. Serial No. 664,265. (Cl. 44—3.)

1. Apparatus for heating peat, comprising in combination a plurality of peat heating elements, a vessel receiving the peat therefrom, another vessel at a lower pressure than that existing within the heating elements, and means

by which the latter vessel can be placed in communication with the heating elements while simultaneously disconnecting the latter from the receiving vessel in order thereby to cause dislodgment of peat deposited within the heating elements.



2. Apparatus for heating peat, comprising in combination a plurality of double concentric tubes through which the peat is continuously passed while being heated, a vessel receiving the peat therefrom, another vessel at a lower pressure than that existing within the tubes, and means by which the lower pressure vessel can be placed in communication with any of the double concentric tubes while simultaneously causing the latter to be disconnected from the receiving vessel in order thereby to effect removal of peat deposited within the concentric tubes.

3. Apparatus for heating peat, comprising in combination a plurality of double concentric heating tubes, a vessel in which the outlet ends of said tubes are situated, another vessel at a lower pressure than that existing within said tubes, and means by which the outlet ends of the tubes are utilized to enable the lower pressure vessel to be placed in communication with the interior of the tubes and at the same time be disconnected from the receiving vessel for the purpose of removing peat deposited within the heating tubes.

4. Apparatus for heating peat, comprising in combination a plurality of double concentric heating tubes, a vessel in which the outlet ends of said tubes are situated, another vessel at a lower pressure than that existing within said tubes, a cap adapted to be placed on the outlet end of each tube, a tubular member extending from within each cap to the lower pressure vessel in such a manner that when a cap is placed on the outlet end of any of the heating tubes communication is established between the latter and the lower pressure vessel, and simultaneously disestablished between said tubes and the vessel containing the outlet ends thereof, for the purposes set forth.

5. Apparatus for the treatment of fluid matters, comprising in combination an open-ended tubular element, a vessel in proximity to said apparatus at a lower pressure than that within the tubular element, a cap adapted to be applied to the open end of said element, a tube extending from within said cap and passing through said vessel, said tube having a port near the end remote from the cap, and a bearing within which said tube can be slid longitudinally within said vessel to apply the cap to the open end of the tubular element and at the same time uncover the port in the tube, thereby placing the tubular element and the vessel in communication.

1,106,162. MODEL-BUILDING MATERIAL FOR EDUCATIONAL PURPOSES AND GAMES. ROBERT RÖTHIG, Leipzig-Gohlis, Germany. Filed Apr. 25, 1914. Serial No. 834,333. (Cl. 46—35.)



1. The combination of model building appliances comprising blocks proportioned, as to length, depth and height, in accordance with standard building blocks, and strips, in like proportion to normal joints, adapted to lie between said blocks, said strips bearing marks which afford directions for the laying of the blocks.

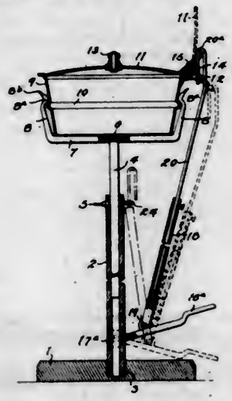
2. The combination of model building appliances comprising blocks proportioned as to length, depth and height, in accordance with standard building blocks, and strips, in like proportion to normal joints, adapted to lie between said blocks, said blocks being of a material adapted to be cut, and said strips bearing marks which afford directions for the laying and cutting of the blocks.

3. The combination of model building appliances comprising blocks proportioned, as to length, depth and height, in accordance with standard building blocks, and strips, in like proportion to normal joints, adapted to lie between said blocks, said blocks being of a material adapted to be cut, and of uniform color throughout, and said strips bearing marks which afford directions for the laying of the blocks.

4. The combination of model building appliances comprising blocks of cork-linoleum proportioned, as to length, depth and height, in accordance with standard building blocks, and strips, in like proportion to normal joints, adapted to lie between said blocks, said strips bearing marks which afford directions for the laying of the blocks.

5. The combination of model building appliances comprising blocks proportioned, as to length, depth and height, in accordance with standard building blocks, strips in like proportion to normal joints, adapted to lie horisontally between said blocks, said strips bearing marks which afford directions for the laying of the blocks, and additional strips similarly proportioned and of the same height as the blocks, adapted to lie in vertical joints between the blocks.

1,106,163. ADJUSTABLE SANITARY CUSPIDOR. JAMES H. SMITH, Buckeystown, Md. Filed May 5, 1914. Serial No. 836,484. (Cl. 4—39.)



1. A device of the character described including a base, an extensible standard projecting upwardly from the base, a supporting frame applied to the upper end of the standard and formed with radial arms terminating in upwardly extending spring fingers having hooked ends, a cuspidor resting removably upon the supporting frame and formed with an annular rib engaged by the hooked ends of the spring fingers, a hinged cover for the cuspidor, a lug projecting from the hinged side of the cover, a foot lever, and an extensible connection between the foot lever and the lug of the cover.

2. A device of the character described including a base, an extensible standard projecting upwardly from the base, a supporting frame upon the standard, a cuspidor mounted upon the supporting frame, means for securing an interlocking connection between the cuspidor and the supporting frame, a hinged cover for the cuspidor, a lug projecting from the hinged side of the cover, a foot lever, and an extensible connecting rod between the foot lever and the lug of the cover.

3. A device of the character described including a base, a standard projecting upwardly from the base, a supporting frame at the upper end of the standard, a cuspidor resting upon the supporting frame, means for retaining the cuspidor in position upon the supporting frame, a hinged cover for the cuspidor, a foot lever, a connecting rod between the foot lever and cover for operating the latter, and means upon the standard for engaging the connecting rod to hold it in an out of the way position when not in use.

4. A device of the character described including a base, an extensible standard projecting from the base, a supporting frame upon the standard, a cuspidor resting upon the supporting frame, means for retaining the cuspidor in position upon the supporting frame, a hinged cover for the cuspidor, a lug projecting from the hinged side of the cover, a foot lever, an extensible connecting rod between the foot lever and the lug of the cover, and means upon the standard for engaging the connecting rod to hold it in an out of the way position when not in use.

5. A device of the character described including a base, a tubular standard projecting from the base, a rod telescoping within the tubular standard, means for locking the rod in an adjusted position, a supporting frame at the upper end of the rod, a cuspidor applied to the supporting frame, means for retaining the cuspidor in position thereon, a hinged cover for the cuspidor, a lug projecting from the hinged side of the cover, a foot lever pivoted upon the lower end of the tubular standard, an extensible connecting rod between the foot lever and the lug of the cover, and a keeper upon the tubular standard adapted to engage the connecting rod to hold it in an out of the way position when not in use.

1,106,164. INSPECTION-CAR. JOZEF STOFA, Elgin, Ill. Filed Jan. 16, 1914. Serial No. 812,602. (Cl. 105—92.)

1. The combination with a car open at its sides and ends, and comprising a floor or platform, a roof, and roof-supporting uprights, of means for closing the ends and sides, consisting of transverse shafts supported in bearings within the ends of the car roof, parallel longitudinal shafts mounted to revolve within the side-portions of the roof, flexible curtains secured at their upper ends to said shafts, weighted bars at the lower ends of said curtains, automatic catches secured to said floor and roof for engaging said weighted bars, one end of each of said shafts extending through the car roof and formed with a key projection.

2. The combination with a car normally open at its sides and ends, and comprising a platform, roof, and roof-supporting standards, of a pair of transverse shafts each supported at one end in a bracket bearing projecting from the roof, and projecting at its opposite end through a bearing formed in the roof alining with said bracket bearing, flexible curtains secured at their upper ends to said shafts and having flexible transparent portions, weighted bars attached to the lower ends of said curtains, spring catches secured to the car floor to engage said bars, and devices for securing said curtains in raised position, each consisting of a spring-controlled catch pivotally-secured to the car roof, an armature on said catch, an electro-magnet for attracting said armature to release the curtain and permit it to unroll by gravity, and an electric circuit including said magnet and a push-button for energizing said magnet.

1,106,165. RAILROAD-TIE. GEORGE H. STRAND, Merrill, Wis. Filed Dec. 13, 1913. Serial No. 806,474. (Cl. 238—5.)



1. A railroad tie having bent resilient portions spaced from each other, and free terminals extending from the said portions in the direction of each other.

2. A railroad tie having bent resilient portions spaced from each other, the free terminals extending over these portions in the direction of each other.

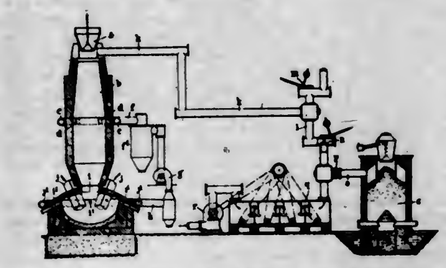
3. A railroad tie having bent resilient portions spaced from each other, and free terminals extending from the said portions in the direction of each other; two rails and means for securing each rail to one of the terminals and to another portion of the tie.

4. In a railroad tie, two members, each having two terminals, one of the terminals on each member being disposed within the other bent terminal on the other member.

5. A railroad tie, two members having their central portions disposed in the same general direction, each of the members having a terminal bent within an inwardly extending terminal on the other member.

[Claims 6 to 11 not printed in the Gazette.]

1,106,166. ELECTRIC FURNACE. NILS TESTRUP, London, England, and THOMAS RIGBY, Dumfries, Scotland, assignors, by mesne assignments, to Wetcarbonizing Limited, London, England. Filed Dec. 6, 1911. Serial No. 664,144. (Cl. 204—63.)



1. An electric smelting furnace comprising in combination a shaft having a gas outlet from the upper end thereof, a crucible at the lower end of the shaft, at least one electrode in said crucible and means placing the crucible in communication with the shaft at a point in the latter between the gas outlet and the crucible, as set forth.

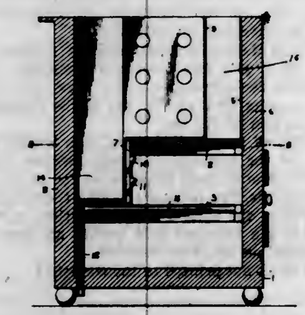
2. An electric smelting furnace comprising in combination a shaft, charging means therefor and a gas outlet therefrom, said outlet being situated near the upper end of the shaft, a crucible at the lower end of the shaft, electrodes in said crucible and means conducting to the crucible gases withdrawn from the shaft at a point between the gas outlet therein and the crucible, as set forth.

3. An electric smelting furnace comprising in combination a shaft, charging means situated near the top thereof, a gas outlet from the shaft near the upper end thereof, by-product recovery means receiving the gases which leave the shaft through said outlet therein, a crucible situated at the lower end of the shaft, electrodes in said cruci-

ble and a conduit to the crucible from said shaft, said conduit branching from the latter at a point between the crucible and the gas outlet in the shaft, as set forth.

4. An electric smelting furnace comprising in combination a shaft, charging means situated near the top thereof, a gas outlet from the shaft near the upper end thereof, ammonia recovery means receiving the gases which leave the shaft through said outlet therein, a crucible situated at the lower end of the shaft, electrodes in said crucible, a conduit to the crucible from said shaft, said conduit branching from the latter at a point between the crucible and the gas outlet in the shaft, and means admitting air to the shaft above said conduit in order to effect preliminary coking of the material supplied to the furnace, as and for the purposes set forth.

1,106,167. ICE-BOX. JACOB W. N. THIES, New York, N. Y. Filed May 7, 1913. Serial No. 766,015. (Cl. 62—10.)

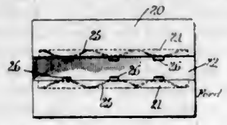


1. A device of the character described, comprising a housing, a lining for the upper portion of the housing, said lining extending from the front of the housing horizontally partially across the same and then downwardly, and horizontally to the back of the housing forming a pocket, the front wall of which has pressed out portions forming vents, a shelf extending from the front of the housing partially across the same and resting upon the first mentioned horizontal portion of the lining, a second shelf extending entirely across the housing below the first shelf and upon which rests the bottom of the pocket of the lining, and a perforated ice receptacle having its rear portion of greater length and depth than the remainder thereof, said receptacle resting upon the upper shelf and fitting in the pocket of the lining.

2. A device of the character described, comprising a housing, a lining for the uper portion of the housing, said lining extending from the front of the housing horizontally partially across the same and then downwardly and horizontally to the back of the housing forming a pocket from the bottom of which extends a drain pipe, a shelf extending from the front of the housing partially across the same above the first mentioned horizontal portion of the lining, a second shelf extending entirely across the housing below the first shelf and upon which rests the bottom of the pocket of the lining, and an ice receptacle having its rear portion of greater length and depth than the remainder thereof, said receptacle resting upon the upper shelf and fitting in the pocket of the lining.

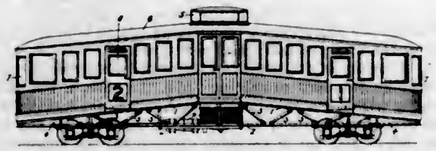
1,106,168. TILE STRUCTURE. FERDINAND THOMAS, New York, N. Y. Filed Feb. 19, 1912, Serial No. 678,461. Renewed Jan. 22, 1914. Serial No. 813,770. (Cl. 72—24.)

In a tile structure having a backing provided with ribs, the edges whereof overhang, and tiles having undercut grooves to register with said ribs to slide longitudinally thereon; a key tile having a groove at the back, said groove being as wide as said ribs, and the sides of said groove being recessed; and a plurality of resilient members



mounted in said recesses to engage one of said ribs after the tile has been forced thereover.

1,106,169. RAILWAY MOTOR-COACH. JOHN G. P. THOMAS, Chiswick, England. Filed Mar. 7, 1913. Serial No. 752,779. (Cl. 105—205.)



1. A self-propelled passenger vehicle having the floor slightly and continuously sloped from the middle toward each end, and having propelling apparatus arranged beneath the middle raised portion of the floor.

2. A self-propelled railway passenger coach, having a sloping floor which at the middle is of greater height and at the ends of less height than the ordinary station platform level, and having doors in the sides intermediate the middle and ends where the floor is at the platform level.

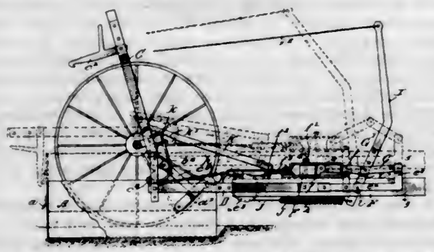
3. In a railway coach, the combination of a central driver's compartment, passenger compartments on either side with floor and roof sloping downward from the driver's compartment to the ends, and inspection windows in the driver's compartment above the roof of the passenger compartments.

4. In a railway vehicle, the combination with the wheels of frame girders comprising horizontal and inclined members connected by stays, flooring upon said inclined members sloping down from the center to either end, a driver's compartment erected at the center, and passenger compartments on either side thereof.

5. In a self-propelled passenger vehicle, the combination with a central driver's compartment, of a roof sloping down from said compartment toward each end, and windows in said compartment above said roof.

[Claims 6 to 8 not printed in the Gazette.]

1,106,170. WHEELED SCRAPER. WILLIAM HORACE VIOLETT, Rifle, Colo. Filed Apr. 16, 1913. Serial No. 761,475. (Cl. 37—33.)



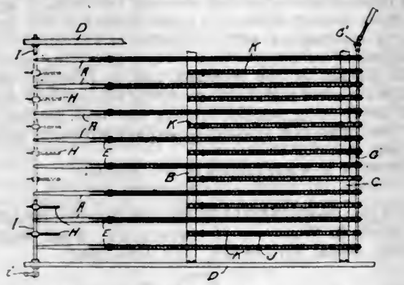
1. The combination with a wheeled scraper embodying a vertically adjustable scoop, of a draft pole directly connected to said scoop, a draft beam pivoted levers normally alined and forming a connection between said beam and said pole and having flexible connections with the scoop whereby to raise the same after filling, and means whereby to move the said levers to render the said connections between the beam and the pole operative and inoperative as desired.

2. The combination of a wheeled shaft having a crank portion, an extension carried by the crank portion, a lever rigidly secured to said crank portion, a vertically adjustable scoop, a pivotal connection between the lever and scoop, a draft pole having connection with the scoop, a transverse draft beam having connection with the extension of the crank portion, connections between the draft beam and draft pole and movable to operative and inoperative positions, a lever pivoted on the draft pole and movable to trip the said connections from an operative to an inoperative position, and means tending to maintain said trip lever in a normal inoperative position and to return the same after an operation.

3. The combination of a wheeled shaft having a crank portion, an extension carried by the crank portion, a lever rigidly secured to said crank portion, a vertically adjustable scoop, a link pivotally connecting the lever with the scoop, a draft pole, rigid connections between the scoop and the said draft pole and including an upright portion, a transverse draft beam freely movable with respect to the draft pole, flexible connections extending rearwardly from the said draft beam and secured to the said extension of the shaft crank, a pair of pivotally connected levers extending between said draft beam and said upright portion of said pole connections, and a trip lever pivoted on the pole and having means whereby to cause flexing of said pivotally connected levers for the purpose described.

4. The combination of a wheeled shaft having a crank portion, an extension carried by the crank portion, a lever rigidly secured to said crank portion, a vertically adjustable scoop, a link pivotally connecting the lever with the scoop, a draft pole, rigid connections between the scoop and said draft pole and including an upright portion, a transverse draft beam freely movable with respect to the draft pole, connections extending rearwardly from the said beam and having connection with the said extension of the shaft crank, a pair of pivotally connected levers extending between the said draft beam and said upright portion of said pole connections, a trip lever pivoted on the pole and having means whereby to cause a flexing of said pivotally connected levers, and flexible connections between said draft beam and said trip lever and tending to return the latter to its normal position after an operation thereof.

1,106,171. LOADER. CARL M. WANGSNESS, Finley, N. D. Filed Dec. 13, 1913. Serial No. 806,482. (Cl. 56—61.)

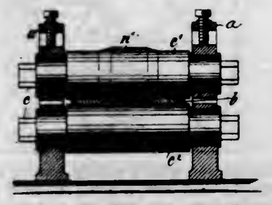


1. In a loader of the character described, the combination of a plurality of gathering teeth, each of which is hollow throughout its length and tapers to a point at its outer end, each of said teeth having an opening in its upper wall adjacent its point and slots through its side walls below the opening, a pin extending transversely through the side wall slots, adjusting screws threaded through portions of the teeth at its opposite sides and bearing against the end portions of the pin, a sprocket wheel journaled on the pin, a driven shaft journaled through the inner ends of the several teeth, a sprocket wheel secured upon said shaft within the inner end of each of the teeth, a conveyer carried by each of the teeth and consisting of an endless chain having outwardly projecting spurs and having its ends passing around the said sprocket wheels, the inner run of each chain passing within the hollow of its respective tooth and having its outer run disposed upon the upper wall of the tooth, and each of the teeth having its side walls bent and offset to provide longitudinal shoulders upon which the lower run of its respective chain is carried to prevent contact of the spurs with the base of the tooth.

2. A loader of the character described comprising a plurality of gathering teeth, each of which is hollow throughout its length and tapers to a point at its outer end, and a conveyer mounted in the hollow of each tooth all for the purposes described.

3. A loader comprising a plurality of teeth hollow throughout their length and pointed at one end, each of the teeth having forward and rear sprocket wheels mounted in the hollow thereof, a conveyer consisting of an endless chain provided with spurs and extending around the said sprocket wheels, the outer run of the chain being disposed upon the upper wall of the tooth and the inner run thereof passing through the hollow of the tooth and each tooth having longitudinal side shoulders therein upon which the inner run of its respective chain is supported in tis travel for the purpose described.

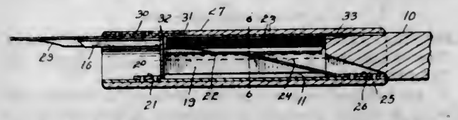
1,106,172. ROLLING-MILL FOR SHEET METAL. JOHANN MARTIN WETCKE, Duisburg, Germany. Filed May 6, 1914. Serial No. 836,698. (Cl. 29—17.)



1. A rolling mill comprising a plurality of bearing frames arranged in pairs, one behind another, and a set of rolls in each pair of bearing frames, the surface of the one roll in the front set being provided with a projection and the surfaces of all the other rolls smooth, whereby, in passing a plate through the rolls a portion thereof only is pressed by the front set of rolls and the remainder thereof by the other rolls.

2. A rolling mill comprising a plurality of bearing frames arranged in pairs, one behind another, and a pair of rolls in each pair of bearing frames, the surface of one roll, in the front set, being provided with a circumferential projection, and the other with a smooth surface, the surfaces of the rolls in the other sets being also smooth, whereby in passing a plate or sheet of metal through the rolls, a portion thereof only is pressed by the front set of rolls and the remainder thereof by the other rolls.

1,106,173. PENHOLDER. EDGAR A. WILLIAMS, Upper Black Eddy, Pa. Filed May 8, 1913. Serial No. 766,392. (Cl. 120—101.)

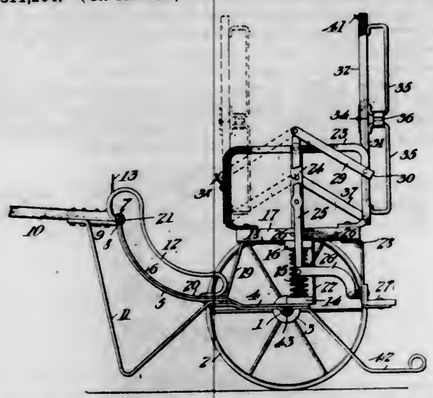


1. In a pen holder a tubular casing, a pair of pen engaging prongs, the casing and prongs being formed from a single piece of flat metal, the casing being formed with a longitudinal recess, a magazine formed within the casing about said recess, an ejector sleeve surrounding the casing and prongs, said sleeve being adapted to clamp a pen point against the prongs, and a spur secured to the interior of the sleeve at a distance from its forward end to engage a pen point and eject it from the magazine into operative position.

2. A pen holder including a cylindrical casing formed from a sheet of flat metal, the forward end of said casing adjacent the meeting edges thereof being shaped to provide a pair of pen engaging prongs, said casing being also formed with a longitudinal recess in the wall thereof, a

magazine formed within the casing and communicating with said recess, a sleeve surrounding the casing and closing the magazine, and a prong carried upon the interior of the sleeve intermediate its ends for engagement with the pen to eject it from the magazine, the sleeve serving to clamp the pen polut against said pen engaging prongs.

1,106,174. COMBINATION GO-CART AND SULKY. HENRY A. WILLIAMS, Murphysboro, Ill. Original application filed Aug. 16, 1913, Serial No. 785,049. Divided and this application filed Jan. 9, 1914. Serial No. 811,204. (Cl. 21—12.)



1. The combination with a vehicle having a seat, of side frames carried by said seat, a sectional back having a pivotal connection with said side frames, said back being formed of sections pivotally connected together, side frames carried by said sections, and means for locking said sections in folded or set-up position.

2. The combination with a carriage provided with a seat having side frames, of a sectional back having a pivotal connection with said side frames and capable of being shifted to either end thereof, and means for locking the back sections together in folded or set-up position.

3. The combination with a vehicle having a spring-supported seat, of a pivoted foot rest arranged at one end of said seat, a fixed foot rest arranged upon the opposite end of said seat, a sectional back having a pivotal connection with said side frames, and a connection between said back and said pivotally mounted foot rest.

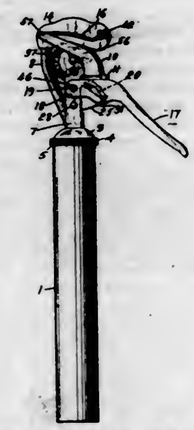
4. The combination with a vehicle, having a seat, of a sectional back carried by said seat, said back being formed of two sections pivotally connected together and capable of being folded back upon themselves, one of said sections being provided with a keeper, and a spring catch carried by the other section coöperating with said keeper for locking said sections together.

1,106,175. AUTOMATIC LIGHTER. HARRY E. WOLFF, New York, N. Y. Filed Nov. 13, 1912. Serial No. 731,188. (Cl. 67—4.1.)

1. An automatic lighter of the character described comprising, a spirit chamber, a standard carried thereby, a laminated sparking wheel carried by the standard, and a self-cocking trigger mechanism consisting of an operating lever, a bell crank lever pivoted to said standard, an operating finger pivoted to said bell crank lever, a trigger carried by said operating lever, and a main spring secured to said standard.

2. An automatic lighter of the character described comprising, a spirit chamber, a standard carried thereby, a wick tube secured to said chamber and extending laterally therefrom, an igniter block carried by the said standard, an operating lever pivoted to the standard, and a laminated sparking wheel pivoted to the standard intermediate the operating lever and said igniting block.

3. In an automatic lighter of the character described, a spirit chamber, a cap carried by said chamber and secured thereto, a wick tube and a standard carried by the cap, said wick tube projecting laterally from the standard, a laminated sparking wheel carried by said standard, an igniting block carried by the standard, an operating lever pivoted to the standard, a bell-crank lever pivoted to the standard, an operating finger pivoted to said bell-crank lever and adapted to impart rotary movement to said sparking wheel, and a self cocking trigger mechanism carried by the said operating mechanism.

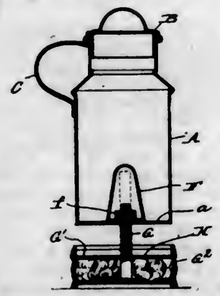


4. In an automatic lighter of the character described, a spirit chamber, a standard carried thereby, a wick tube secured to said chamber and extending laterally therefrom, an igniting block carried within the upper portion of the standard, an operating lever pivoted to said standard, a laminated sparking wheel pivoted to the said standard intermediate of said igniting block and operating lever, a bifurcated finger for operating said sparking wheel, a snuffer pivoted to the said standard, and an arm projecting from the operating lever and pivoted to the said snuffer whereby the snuffer is adapted to cover and uncover the wick tube by the operation of the lever.

5. In a lighter of the character described, a spirit chamber, a standard carried thereby, a wick tube secured to said chamber and projecting laterally therefrom, a sparking block carried within the upper portion of the standard, in combination with a snuffing cap pivoted to the standard, of an integral lock portion projecting over the upper portion of the standard, and of a spring coiled around the pivot carrying the snuffing cap, one free end of said spring being engaged beneath said hook portion and the other free end adapted to contact with and depress the said sparking block.

[Claims 6 to 8 not printed in the Gazette.]

1,106,176. COMBINED LUNCH CARRIER AND HEATER. ALFRED G. WORMSER, Harrisburg, Pa. Filed Sept. 8, 1913. Serial No. 788,735. (Cl. 126—266.)



1. In a combination lunch carrier and heater, the combination with the container having a cylindrical body, closure and handle, and a central screw threaded socket in the bottom, opening downwardly, of a lamp body having a cylindrical wall adapted to receive the lower portion of the container, an annular top against which the bottom of the container seats to form a closure for the lamp body when not in use as a lamp, and a central screw threaded stem rigidly mounted in the lamp body and extending into the socket in the bottom of the container for adjustably connecting the parts with each other.

2. A combined lunch carrier and heater comprising in combination a container having a cylindrical body and a central screw threaded socket in the bottom, a lamp body having a cylindrical wall and annular top adapted to receive and seat the lower portion and bottom of the container, and a screw threaded stem rigidly mounted in the lamp body engaging the screw threaded socket for adjustably connecting the parts to support the container above the lamp when burning and to extinguish the lamp and seat the container when screwed home to prevent loss by evaporation of the fuel.

1,106,177. PEELING-MACHINE FOR WOOD LOGS. ANDERS NICOLAY ANDERSEN, Hougsund, Norway. Filed Mar. 29, 1913. Serial No. 757,590. (Cl. 144—208.)



1. In a peeling machine for removing the bark from logs and the like, the combination of a rotating cutter having an independent movement radially to the log, a knife carried by the cutter holder and adapted to cut through the bark of the log to determine the depth of cut of the cutter.

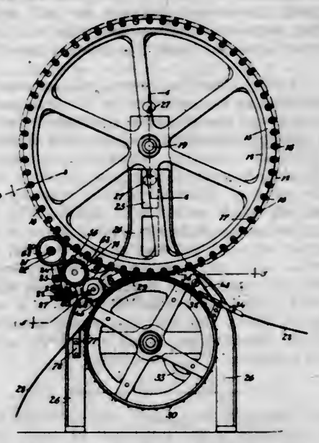
2. In a peeling machine for removing the bark from logs and the like, rotating disk cutters free to move independently of each other radially to the log, and a knife on each of said cutters adapted to cut only through the bark of the log to determine the depth of cut of the cutter.

3. In a peeling machine for removing the bark from logs and the like, the combination of a rotating cutter having an independent movement radially to the log, a knife consisting of a rotating toothed or pointed disk, the teeth or points of the disk being adapted to cut only through the bark of the log to determine the depth of cut of the cutter.

4. In a peeling machine for removing the bark from logs and the like, the combination of a rotatable cutter having an independent movement radially to the wood log, a knife adapted to cut through the bark of the log to determine the depth of cut of the cutter, and means for simultaneously imparting to the wood log a rotating and a longitudinal movement whereby the cutter is caused to peel off the bark along a helical curve.

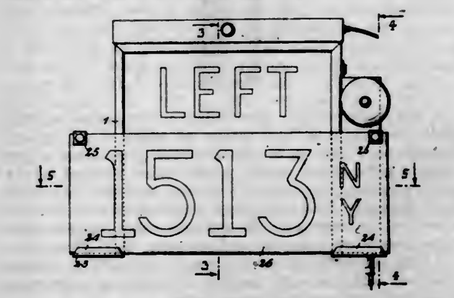
1,106,178. MACHINE FOR PRINTING CLOTHING-TICKETS. ALOISE ANTOINE and ERNEST ANTOINE, Passaic, N. J. Filed Sept. 26, 1913. Serial No. 791,968. (Cl. 101—187.)

1. In a machine as characterized, a rotary printing member comprising a rotary shaft; a thimble for said shaft; a plurality of printing disks for mounting on said thimble, said disks having each a plurality of printing characters projected from the periphery thereof; means for alining said disks and the printing characters thereon; means for clamping said disks on said shaft; means for locking said thimble on said shaft; a movable bearing block for said rotary shaft; means for clamping said block fixedly in service position; an ink-supply drum having a driving shaft disposed in parallel relation to said first-mentioned shaft; an adjustable bearing block for said driving shaft; a bracket supporting said blocks, having a guide slot therefor; and means for adjusting said bearing blocks in said slot.



2. In a machine as characterized, a rotary printing member comprising a rotary shaft; a thimble for said shaft; a plurality of printing disks for mounting on said thimble, said disks having each a plurality of printing characters projected from the periphery thereof; means for alining said disks and the printing characters thereon; means for clamping said disks on said shaft; means for locking said thimble on said rotary shaft; a movable bearing block for said rotary shaft; means for clamping said block fixedly in service position; an ink-supply drum having a driving shaft disposed in parallel relation to said first-mentioned shaft; an adjustable bearing block for said driving shaft; a bracket supporting said blocks, having a guide slot therefor; and a plurality of feed screws, each operatively connected with one of said blocks to alter the relative position thereof.

1,106,179. AUTOMOBILE SIGNAL DEVICE. REMIGIUS D'ANTONIO, New York, N. Y. Filed Jan. 23, 1914. Serial No. 814,010. (Cl. 40—65.)



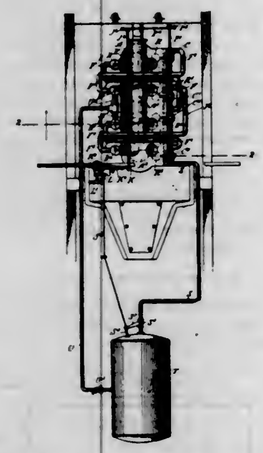
1. In a vehicle signaling device, the combination of a frame arranged to be connected to the rear portion of a vehicle, a plurality of guides arranged in said frame, a plurality of signals arranged in said frame and guided in their movement by said guides, a movable arm for each of said signals for moving the signals to a point where they are disclosed to view, a pull arranged adjacent the seat of said vehicle, and a sliding connecting member connected with said pull and said sliding connecting member being formed with slots of different lengths whereby said arms are successively engaged and moved into view.

2. A vehicle signaling device comprising a supporting frame, a plurality of signals slidingly fitting into said frame, a movable arm for actuating each of said signals, a

sliding member for actuating said arms, said sliding member being provided with slots of different lengths for successively engaging said arms and moving the same, a pull member and a connection between the pull member and said sliding member, whereby said sliding member may be moved to any desired extent for actuating any of said signals.

3. In a vehicle signaling device, the combination of a frame arranged to be connected to the rear portion of a vehicle, a series of visual signals slidingly fitting into said frame, a pivotally mounted arm for each of said signals formed with an operating extension, a sliding member having slots for accommodating said operating extensions, said slots being of different lengths, whereby a certain movement will cause one of said signals to be raised, a further movement a second signal, and so on, a pull member arranged adjacent the seat of said vehicle, a connection between said pull member and said operating slide for moving said slide in one direction, a drum and belt for moving said slide in the opposite direction, a spring for actuating said drum and belt, and means associated with said belt for sounding an alarm each time said sliding member is actuated.

1,106,180. ENGINE-STARTER. HERBERT WALTER BACHELDER, Herkimer, N. Y. Filed Oct. 15, 1913. Serial No. 795,262. (Cl. 123—180.)



1. An engine starter comprising a pressure controlling valve connected with a source of pressure supply and adapted to be opened by the operating mechanism of the exhaust valve of the engine, a manually-controlled actuating mechanism for normally holding the said controlling valve normally open and out of engagement with the said operating mechanism of the exhaust valve, an admission valve connected with the said pressure controlling valve and with an engine cylinder to supply the latter with fluid pressure, and manually controlled actuating mechanism for opening the said admission valve.

2. An engine starter, comprising a pressure controlling valve connected with a source of pressure supply and adapted to be opened by the operating mechanism of the exhaust valve of the engine, a manually-controlled actuating mechanism for normally holding the said controlling valve normally open and out of engagement with the said operating mechanism of the exhaust valve, an admission valve connected with the said pressure controlling valve and with an engine cylinder to supply the latter with fluid pressure, manually-controlled actuating mechanism for opening the said admission valve, and a manually-controlled operating mechanism connected with the said actuating mechanisms for the pressure controlling valve and the said admission valve.

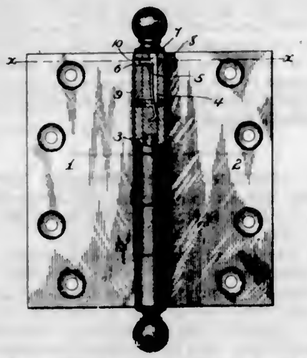
3. An engine starter comprising a pressure controlling valve connected with a source of pressure supply and adapted to be opened by the operating mechanism of the exhaust valve of the engine, a manually-controlled actuating mechanism for normally holding the said controlling valve normally open and out of engagement with the said operating mechanism of the exhaust valve, an admission valve connected with the said pressure controlling valve and with an engine cylinder to supply the latter with fluid pressure, manually-controlled actuating mechanism for opening the said admission valve, a fluid pressure supply tank, a pipe having a valve and connecting the said pressure supply tank with the pressure controlling valve, and a manually-controlled operating mechanism connected with the said actuating mechanisms and with the said pipe valve.

4. An engine starter, comprising a pressure-controlling valve connected with a source of pressure supply and adapted to be opened by the operating mechanism of the exhaust valve of the engine, a manually-controlled actuating mechanism for normally holding the said controlling valve normally open and out of engagement with the said operating mechanism of the exhaust valve, an admission valve connected with the said pressure controlling valve and with an engine cylinder to supply the latter with fluid pressure, manually-controlled actuating mechanism for opening the said admission valve, a fluid pressure supply tank connected with the said pressure-controlling valve, and a pipe connecting one of the engine cylinders with the said pressure-controlling tank to charge the latter with pressure from the engine cylinder.

5. An engine starter, comprising a pressure-controlling valve connected with a source of pressure supply and adapted to be opened by the operating mechanism of the exhaust valve of the engine, a manually-controlled actuating mechanism for normally holding the said controlling valve normally open and out of engagement with the said operating mechanism of the exhaust valve, an admission valve connected with the said pressure-controlling valve and with an engine cylinder to supply the latter with fluid pressure, manually-controlled actuating mechanism for opening the said admission valve, a fluid pressure supply tank connected with the said pressure-controlling valve, a pipe connecting one of the engine cylinders with the said pressure controlling tank to charge the latter with pressure from the engine cylinder, and a check valve in the said pipe.

[Claims 6 to 13 not printed in the Gazette.]

1,106,181. BUTT-HINGE. WALDO R. BALLOU, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 23, 1914. Serial No. 833,907. (Cl. 16—107.)

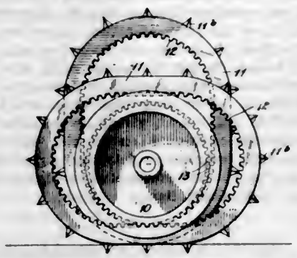


1. A hinge consisting of two leaves, a knuckle of one of which is provided with an annular groove, a connecting pin the latter having a recessed seat, and a spring within said seat and provided with a tongue adapted to enter the groove in said knuckle, whereby the pin will be locked against accidental displacement.

2. A hinge consisting of two leaves and a connecting pin, the latter having a recessed seat, and a spring arm secured within said seat in the pin with its free end passing through a slot in the latter, the free end of said spring projecting beyond the pin and accessible through an open slot in one of the leaves of the hinge.

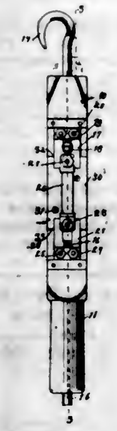
3. A hinge consisting of two leaves and a connecting pin, the pin being provided with a spring tongue adapted normally to rest in a groove or channel of one leaf of the hinge, said leaf being also provided with a slot reaching from the exterior of said leaf to connect with the groove whereby the tongue may be pushed out of engagement with said leaf to permit of the withdrawal of the pin.

1,106,182. TRACTOR-WHEEL. JAMES BEARD, Two Rivers, Cal. Filed Feb. 5, 1914. Serial No. 816,738. (Cl. 21—150.)



In a tractor wheel, separate, self-laying oblong track sections disposed side by side with their major axes in angular relation, and a gear wheel having a peripheral groove and presenting spaced peripheral flanges, the said flanges being of a diameter greater than the minor axes of the said oblong sections and receiving the said sections between them, said flanges overlapping the oblong sections, and coöperating meshing elements on the gear wheel and oblong sections.

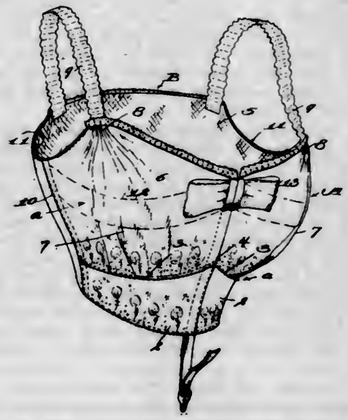
1,106,183. CABLE-HOOK. ARTHUR F. BERGER, Holden, W. Va. Filed July 18, 1913. Serial No. 779,853. (Cl. 173—273.)



1. The combination in a collecting hook for locomotive or other electric machinery of a stock of non-conducting material having a recess in one side face and a longitudinal passage communicating with the recess and opening through one end of the stock, a metallic plate on the bottom wall of said recess, a hook engaged through said passage and bearing upon the outer face of said plate, and a securing device anchoring said hook to the plate, said device being accessible through the recess to permit removal of the hook.

2. The combination in a collecting hook for locomotives, of a stock of non-conducting material having a recess in one side face and longitudinal passages entering said recess and opening through opposite ends of the stock respectively, one of said passages being disposed obliquely to the longitudinal axis of the stock, a metallic plate on the bottom of said recess near the inner end of each of said passages, a fusible connection between said plates, a hook passed through the obliquely disposed passage and having its inner end secured to the adjacent plate, and a conductor wire extending through the other passage and connected to the other plate.

1,106,184. BRASSIÈRE. CHARLES R. DE BEVOISE, Newark, N. J. Filed Jan. 16, 1914. Serial No. 812,581. (Cl. 2—98.)



1. A brassière comprising a front section and a back section, each section consisting of a body member composed of soft inelastic material and a strip of fabric secured to the lower edge of said body member, the fabric strip forming a corset encircling band which has a close fit upon the corset, the back section having a smooth body member and being connected at its sides and throughout the extent of its side edges to the front section, whereby there is no interruption of the continuity of the garment, shoulder straps connecting said section at each side of the garment, the body member of the front section being formed to provide breast receiving and supporting pockets and being fulled throughout its line of attachment to said shoulder straps, and a strip of inelastic material encircling the upper portion of the garment throughout its extent and unyieldably secured thereto, said strip being arranged at such an elevation that it extends across the shoulder-blades and the upper portion of the breasts, one of said sections being made in two co-extensive parts adapted to be mutually connected along a vertically central line.

2. A brassière comprising a front section and a back section, each section consisting of a body member composed of soft inelastic material and a strip of fabric secured to the lower edge of said body member, the fabric strip forming a corset encircling band which has a close fit upon the corset, the back section having a smooth body member and being connected at its sides and throughout the extent of its side edges to the front section, whereby there is no interruption of the continuity of the garment, shoulder straps connecting said sections at each side of the garment, the body member of the front section being formed to provide breast receiving and supporting pockets and being fulled throughout its line of attachment to said shoulder straps, and a strip of inelastic material extending across the upper portion of the front section and unyieldably secured to said section, one of said sections being made in two co-extensive parts adapted to be mutually connected along a vertically central line.

3. A brassière comprising a front section and a back section, each section consisting of a body member composed of soft inelastic material and a strip of fabric secured to the lower edge of said body member, the fabric strip forming a corset encircling band which has a close fit upon the corset, the back section having a smooth body member and being connected at its sides and throughout the extent of its side edges to the front section, whereby there is no interruption of the continuity of the garment, and shoulder straps connecting said sections at each side of the garment, the strip of fabric of the front section having its upper edges inclined along curved lines upwardly to a central apex, the body member of the front section being formed to provide breast receiving and supporting pockets and being fulled throughout its line of attachment to said shoulder straps and shirred throughout its line of attachment to said fabric, one of said sections being made in two co-extensive parts adapted to be mutually connected along a vertically central line, and a strip of inelastic material encircling the upper portion of the garment throughout its extent and unyieldably secured thereto, said strip being arranged at such an elevation that it extends across the shoulder-blades and the upper portion of the breasts.

4. A brassière comprising a front section and a back section, each section consisting of a body member composed of soft inelastic material and a strip of fabric secured to the lower edge of said body member, the fabric strip forming a corset encircling band which has a close fit upon the corset, the back section having a smooth body member and being connected at its sides and throughout the extent of its side edges to the front section, whereby there is no interruption of the continuity of the garment, and shoulder straps connecting said sections at each side of the garment, the strip of fabric of the front section having its upper edges inclined along curved lines upwardly to a central apex, the body member of the front section being formed to provide breast receiving and supporting pockets and being fulled throughout its line of attachment to said shoulder straps and shirred throughout its line of attachment to said fabric strip, one of said sections being made in two co-extensive parts adapted to be mutually connected along a vertically central line, and a strip of inelastic material extending across the upper portion of the front section and unyieldably secured to said section.

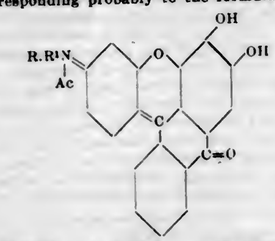
1,106,185. GREEN MORDANT DYESTUFFS AND PROCESS OF MAKING. ERNST BODMER, Basel, Switzerland, assignor to The Firm of Dye-Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Filed July 3, 1913. Serial No. 777,349. (Cl. 8—1.)

1. The described process for the manufacture of green mordant dyestuffs by treating the sulforhodols resulting from the condensation of a pyrogalloisulfonic acid with an aminometaoxybenzoyl-benzoic acid substituted in the amino group, with an agent capable of eliminating or splitting off water, containing at least a sufficient quantity of sulfuric anhydrid to combine with all the water which is formed during the treatment.

2. The process for the manufacture of green mordant dyestuffs by treating the sulforhodols resulting from the condensation of a pyrogalloisulfonic acid with an aminometaoxybenzoyl benzoic acid substituted in the amino group with a fuming sulfuric acid of concentration sufficient to insure that there is during the treatment enough sulfuric anhydrid present to combine with all the water formed.

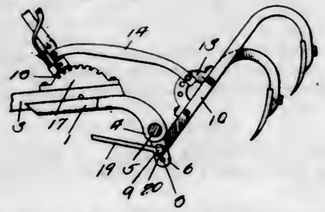
3. The process for the manufacture of green mordant dyestuffs by treating the sulforhodols resulting from the condensation of a pyrogalloisulfonic acid with an amino metaoxybenzoyl-benzoic acid substituted in the amino group with fuming sulfuric acid containing 20–25 per cent. of sulfuric anhydrid.

4. As new products, the described green dyestuffs derived from the violet dyestuffs which result from the condensation of a pyrogalloisulfonic acid with an aminometaoxybensoyl-bensoic acid substituted in the amino group, corresponding probably to the formula



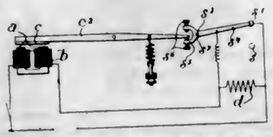
wherein R stands for a neutral monovalent organic radical, R^1 for a neutral monovalent radical and Ac for an acid negative ion constituting black powders which dissolve in water to green solutions from which the dyestuffs may be precipitated by an addition of alkali, in concentrated sulfuric acid to reddish brown solutions becoming green on addition of water, in glacial acetic acid, alcohol, amylalcohol, nitrobenzene and pyridin to pure green solutions and in anilin to green solutions from which the dyestuffs cyrstallize unchanged, giving, when printed on cotton with chrome mordants or tannin, valuable green tints of excellent fastness to washing, soap, chlorin and light and dyeing chrome mordanted wool powerful green tints fast to fulling and light.

1,106,186. PLOW. WILLIAM H. BONKEMEYER, Randleman, N. C. Filed Oct. 2, 1913. Serial No. 793,018. (Cl. 97—36.)



A plow of the class described, the combination with a casting, of a tongue having its rear end connected to the upper surface of the casting, sleeves formed integral with the rear end of the casting, a wheeled axle engaged in said sleeve, hangers connected to the axle, a rod supported by the hangers, beams having their forward ends pivotally connected to the rod and between the hangers, a block disposed betwen the beams and connected thereto, an arch bar connected to the block, a lever pivotally connected to the tongue, an arm pivotally connecting the arch bar and lever, rods connected to the opposite ends of said rod and having their forward ends bolted to the casting, as and for the purpose set forth.

1,106,187. ELECTROMAGNET AND SIMILAR APPARATUS. PIERRE BOSSU, Paris, France, assignor to Société Anonyme des Etablissements L. Blériot, Paris, France. Filed Dec. 14, 1912. Serial No. 736,838. (Cl. 175—335.)



1. The combination with an electro-magnet having an armature movable into contact and released positions relatively thereto, of a resistance of a value to compensate for the effects of the variations of reluctance in the magnetic circuit when the armature is in contact and released positions and means for rendering said entire resistance operative when the armature is in contact position and until the armature is in proximity to its released position and for rendering said entire resistance inoperative during the releasing movement of the armature.

2. The combination with an electro-magnet having an armature movable into contact and released positions relatively thereto, of means including a resistance and contact devices therefor operative automatically to reduce the effective attractive force of the magnet when the armature approaches and is in contact position and maintaining said entire resistance operative until the armature is in proximity to its released position during releasing movement thereof.

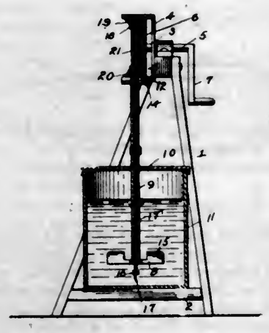
3. The combination with an electro-magnet having an armature movable into contact and released positions relatively thereto, of a resistance adapted to be connected in series with the winding of the electro-magnet and having means for rendering the whole of said resistance operative when the armature is in contact position and for maintaining the same operative while the armature moves from contact position to a position in proximity to released position and thereupon rendering the whole of said resistance inoperative.

4. The combination with an electro-magnet having an armature movable into contact and released positions relatively thereto, of a resistance adapted to be connected in series with the winding of the electro-magnet and having means for rendering it operative when the armature is in contact position and for maintaining it operative while the armature moves from contact position to a position in proximity to released position, said means rendering the resistance inoperative while the armature is in fully released position and while the armature moves from released position to a position in proximity to its contact position.

5. In an electro-magnet, a resistance calculated so as to compensate the variation of reluctance in the magnetic circuit, produced by the passage of the armature from its detached to its contact position, a lever, and contact means coöperative therewith to switch the resistance into circuit, in one of the positions of said lever and in the other position of said lever, to short circuit the resistance, the free end of the said lever being bifurcated, and an extension of the armature engaging with play between the branches of the said fork.

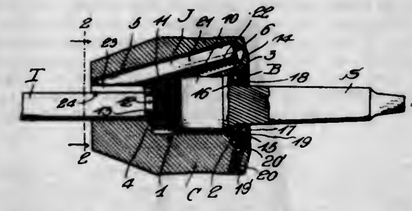
[Claim 6 not printed in the Gazette.]

1,106,188. CHURN. WILLIAM F. BROWN, Cedarville, Ark. Filed May 20, 1913. Serial No. 768,727. (Cl. 31—43.)



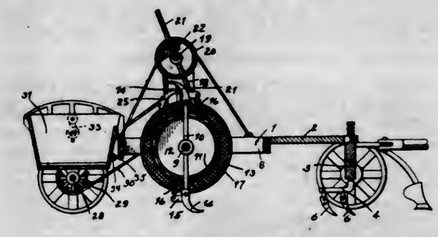
A churn of the type described including agitators, each having opposite end blades with upwardly extending oppositely curved upper edges, said blades being positioned at right angles to each other, concentric shafts carrying said agitators and actuating means for shafts.

1,106,189. CHUCK. ALBERT E. CHURCH, New Britain, Conn. Filed Oct. 16, 1913. Serial No. 795,546. (Cl. 29—128.)



A chuck of the class described comprising a collar having a cavity therein extending from one end of the same and terminating at a point adjacent the opposite end thereof, said collar being provided with a plurality of forwardly converging channels intersecting said cavity midway of the ends of the same and also intersecting one another at their forward ends to form a socket at the forward end of said collar, said channels terminating at their rear ends slightly in advance of the rear face of said collar and radially beyond the wall of said cavity therein to provide closed rear ends for said channels, a head member revolubly mounted in said cavity and provided with a tapered threaded portion, a plurality of elongated jaw members longitudinally movable in said channels and having their inner opposed faces provided with threads for engagement with the tapered threaded portion of said head member, a shank on said head member and projecting rearwardly therefrom through the rear end opening of said cavity and means in connection with the rear end opening of said cavity and a portion of said head member to retain the latter in its operative position in the collar.

1,106,190. MACHINE FOR GATHERING STONES. JAMES B. CONINE, Camp Hill, Ala. Filed Sept. 4, 1913. Serial No. 788,142. (Cl. 55—17.)



1. In a stone gathering machine, the combination with a wheeled frame, of upper and lower drums rotatably supported thereby, the lower drum being provided with spaced slats, bars passing through the lower drum and having their projected ends passing between certain of the slats, pickers pivotally connected to the outer ends of the bars, springs connecting the pickers and slats, rods passable through the upper drum and having their ends adapted to pass the pickers at intervals, and means for driving the drums in opposite directions.

2. In a stone gathering machine, the combination with a wheeled supported frame, of a receptacle supported thereby, vertical uprights supported by the frame, upper and lower drums supported by shafts which are journaled upon the uprights, bars having their central portions connected to the supporting shaft of the lower drum, pickers pivotally connected to the ends of the bars and connected to the lower drum by springs, rods carried by the upper drum, said drums being rotated in opposite directions, whereby the ends of the rods and pickers will pass each other, said rods being adapted to dislodge stones lifted by the pickers to project the same into the receptacle.

1,106,191. BOTTLE. HARRY R. CROOKS, Philadelphia, Pa. Filed Jan. 30, 1914. Serial No. 815,482. (Cl. 150—1.)

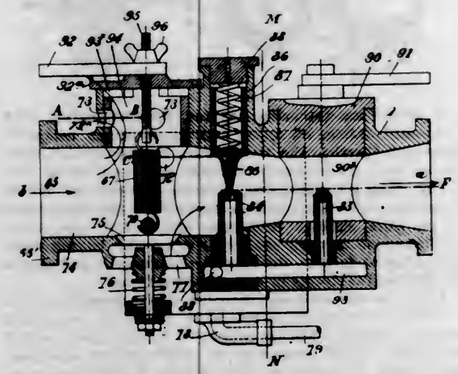


1. A bottle comprising sides of cloth shaped at the bottom by an annular member, and at the top by a pair of annular members, a disk closing the bottom and restrained from displacement by said member, and a disk closure for the top removably secured in place between the members of said pair.

2. A bottle comprising sides of cloth shaped at the bottom by an annular member, and at the top by a pair of annular members, a disk closing the bottom and restrained from displacement by said member, and a disk closure for the top removably secured in place between the members of said pair, the edge of said first member being sealed by plastic material, and the whole device made water-proof by saturation with a suitable material while liquefied.

3. A bottle comprising sides of cloth shaped at the bottom by an annular member, and at the top by a pair of annular members, a disk closing the bottom and restrained from displacement by said member, and a disk closure for the top, removably secured in place between the members of said pair, the edge of said first member being sealed by plastic material, and the whole device stiffened and made water-proof by saturation with liquid paraffin.

1,106,192. CARBURETER. HENRY MARIE LÉON CROUAN, Asnières, France. Filed Mar. 18, 1912. Serial No. 684,502. (Cl. 48—155.2.)



1. In a device of the character described, the combination of a casing formed with a horizontal passage, means for admitting to the passage liquid fuel, a valve for admitting atmospheric air to the passage, means for admitting air under pressure to the passage, and means operated by the increased air pressure and independent of the aforesaid liquid fuel admission means for introducing an increased supply of liquid fuel to the passage.

2. In a device of the character described, the combination of a casing formed with a passage, means for admitting to the passage liquid fuel, a valve for admitting atmospheric air to the passage, means for admitting air under pressure to the passage and means independent of the aforesaid liquid fuel admission means for introducing an increased supply of liquid fuel to the passage, the increased air pressue serving to close the valve to prevent admission of air from the atmosphere.

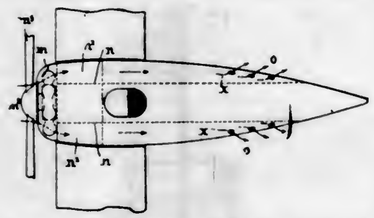
3. In a device of the character described, the combination of a casing provided with a passage and a fuel supply duct, a nozzle communicating with the supply duct and the passage, a second nozzle communicating with the supply duct and the passage, a yieldingly mounted valve normally closing the second mentioned nozzle, a valve for controlling the admission of air to the passage from the atmosphere, and means for supplying air under pressure to the passage, the pressure of the latter air acting on the yieldingly mounted valve to open the second mentioned nozzle to increase the charge of fuel.

4. In a device of the character described, the combination of a casing provided with a passage and a fuel supply duct, a nozzle communicating with the supply duct and the passage, a second nozzle communicating with the supply duct and the passage, a yieldingly mounted valve normally closing the second mentioned nozzle, a valve for controlling the admission of air to the passage from the atmosphere, means for suplying air under pressure to the passage, the pressure of the latter air acting on the yieldingly mounted valve to open the second mentioned nozzle to increase the charge of fuel, and means operable to vent the passage when the air pressure exceeds a predetermined point.

5. In an apparatus of the character described, the combination of a casing provided with a passage and a fuel duct, a nozzle communicating with the duct and the passage, a valve in the passage, said valve being opened to admit air from the atmosphere when a charge of gas is drawn from the nozzle, a second nozzle communicating with the duct and the passage, a needle valve for closing the second mentioned nozzle, a spring acting on the needle valve to normally close the nozzle, means for admitting air under pressure to the flange, the increased air pressure acting on the needle valve opening the second mentioned nozzle, a hollow plug valve for regulating the pressure of air in the passage, and means coöperating with the plug valve and operable by the air for relieving sudden or excess air pressure in the passage.

[Claim 6 not printed in the Gazette.]

1,106,193. AEROPLANE-FUSELAGE. ARMAND JEAN AUGUSTE DEPERDUSSIN, Paris, France. Filed Apr. 22, 1913. Serial No. 762,787. (Cl. 244—30.)



1. A monoblock fuselage or body for aeroplanes, comprising a hollow frame formed of a plurality of superposed layers glued together, each layer consisting of thin plates, the plates of one layer crossing the plates of another layer.

2. A monoblock fuselage or body for aeroplanes comprising a hollow body formed of a plurality of superposed layers glued together each layer consisting of thin and narrow juxtaposed plates, the plates of one layer extending in a different direction to the plates of another layer, the frame being provided with apertures in its sides.

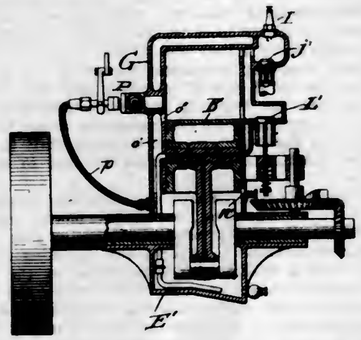
3. A monoblock fuselage or body for an aeroplane, comprising a hollow frame formed of superposed layers, each layer consisting of thin and narrow juxtaposed plates, the plates of one layer crossing the plates of another layer, the frame being provided with an upright at one end, an opening adjacent its other end and a manhole intermediate of its ends.

4. A monoblock fuselage or body for aeroplanes comprising a hollow frame open at one end and formed of a plurality of superposed layers, each consisting of thin plates, the plates of one layer crossing the plates of another layer, and a frame-work carrying the engine and its appurtenances and extending into the hollow frame.

5. A monoblock fuselage or body for aeroplanes, comprising a hollow frame open at one end and formed of a plurality of superposed layers, each layer consisting of thin and narrow juxtaposed plates, a frame work carrying an engine and its appurtenances and arranged in the frame, with the engine outside thereof, and an apertured cover for the open end of the frame and inclosing the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,106,194. INTERNAL-COMBUSTION ENGINE AND METHOD OF OPERATING THE SAME. HERMON E. DUNHAM, Seattle, Wash., assignor to The Hermon E. Dunham Motor Company, Seattle, Wash., a Corporation of Washington. Continuation of application Serial No. 565,859, filed June 8, 1910. This application filed Dec. 17, 1913. Serial No. 807,229. (Cl. 123—75.)



1. In an internal combustion engine, the combination with the cylinder and the piston, and means to supply fuel to the cylinder on the suction stroke, of means to supply air to the cylinder at the ends of the suction and working strokes, for combustion-supporting and scavenging purposes respectively, and an additional fuel supply means operated to supply fuel to the cylinder near the end of the suction stroke, which fuel is consumed in the excess of air in the cylinder.

2. In an internal combustion engine, the combination with the cylinder and piston, and means for supplying carbureted air to the cylinder on the suction stroke, of means for supplying air to the cylinder on alternate outward strokes, and an additional fuel supply means for spraying fuel into the cylinder near the end of the suction stroke, such additional fuel being thereby mixed with the excess of air in the cylinder.

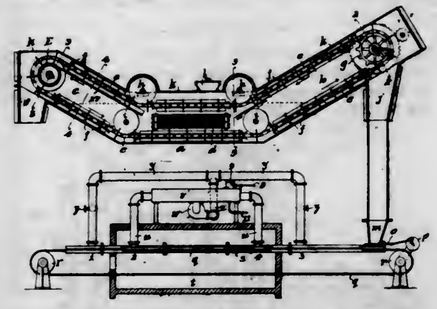
3. In an internal combustion engine, the combination with the cylinder and the piston, and the means for supplying carbureted air to the cylinder on the suction stroke, of means for supplying air to the cylinder on alternate outward strokes of the piston, and an inspirator in the cylinder wall so controlled by the piston as to permit liquid fuel to pass into the cylinder in addition to the carbureted charge.

4. In an internal combustion engine, the combination with the cylinder and the piston, and the means for supplying carbureted air to the cylinder on the suction stroke, of means to supply air to the cylinder on alternate outward strokes of the piston, and means operative on the suction stroke of the piston to supply the cylinder with additional air, said air being mixed with an additional charge of fuel in liquid form.

5. In an internal combustion engine, the combination with the cylinder and the piston, and the means for supplying carbureted air to the cylinder on the suction stroke, of means for supplying air to the cylinder near the end of the suction stroke, means to introduce an additional charge of fuel into the cylinder to mix with such air, and means for varying the amount of fuel so introduced.

[Claims 6 to 12 not printed in the Gazette.]

1,106,195. APPARATUS FOR LIQUID SEPARATION OF SOLIDS. FRANCIS I. DU PONT, Wilmington, Del., assignor to International Haloid Company, a Corporation of Delaware. Filed Feb. 2, 1910. Serial No. 541,545. (Cl. 83—85.)



1. The combination with a tank adapted to hold the separating liquid having an outlet from which the separated constituent is discharged, of a conveyer, a conduit through which the conveyer travels, means to heat the conduit, a condenser, a pipe leading to the condenser from the conduit at a relatively hot part of the latter, a vapor discharge from the condenser and a pipe leading from the vapor discharge to the conduit at a relatively cool part of the latter, and means to deliver material from the tank outlet to the conveyer, said tank, conduit and condenser being closed against direct connection with the external atmosphere.

2. The combination with a tank adapted to hold the separating liquid having an outlet from which the separated constituent is discharged, of a conveyer, a conduit through which the conveyer travels, means to heat the conduit, a condenser, pipes leading to the condenser from the conduit at a relatively hot part of the latter, a vapor discharge from the condenser, pipes leading from the vapor discharge to the conduit at a relatively cooler part of the latter, dampers on the last named pipes, and means to deliver material from the tank outlet to the conveyer, said tank, conduit and condenser being closed aganinst direct connection with the external atmosphere.

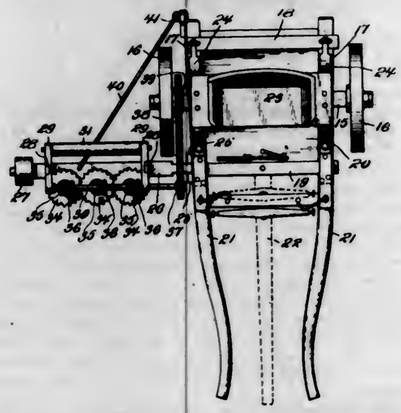
3. The combination with a tank to hold the separating liquid having an outlet from which the separated constituent is discharged, of a conveyer, a furnace, a conduit extending through the furnace and through which the conveyer travels, a condenser, a pipe leading from the conduit, at a relatively hot part of the furnace, to the condenser, a vapor discharge pipe from the condenser and a pipe leading therefrom to the conduit at a relatively cool part thereof, and means to deliver material from the tank outlet to the conveyer, said tank, conduit and condenser being closed against direct connection with the external atmosphere.

4. The combination with a tank to hold the separating liquid having an outlet from which the separated constituent is discharged, of a hopper communicating with the discharge, a conveyer on which said hopper opens, means to deliver material from the hopper to the conveyer, a conduit through which said conveyer travels, means to heat the conduit, a condenser, a pipe leading from a rel-

atively hot part of the conduit to the condenser, a vapor discharge from the condenser, and a pipe leading from the vapor discharge to the conduit at a relatively cool part of the latter, said tank, hopper, conduit and condenser being closed against direct connection with the external atmosphere.

5. The combination with a tank to hold the separating liquid having an outlet from which the separated constituent is discharged, of a hopper communicating with the discharge, a conveyer on which said hopper opens, means to deliver material from the hopper to the conveyer, a conduit through which said conveyer travels, a furnace through which the conduit extends, a condenser, pipes leading from the conduit at a relatively hot part of the furnace, a vapor discharge from the condenser, and pipes leading from the pipe discharge to the conduit outside of the pipes leading from the conduit to the condenser, said tank, hopper, conduit and condenser being closed against direct connection with the external atmosphere.

1,106,196. HARVESTING-MACHINE. JAMES R. ENGLAND, Columbus, Ga., assignor of one-third to Jefferson D. Milford, Columbus, Ga. Filed Jan. 27, 1914. Serial No. 814,819. (Cl. 56—35.)

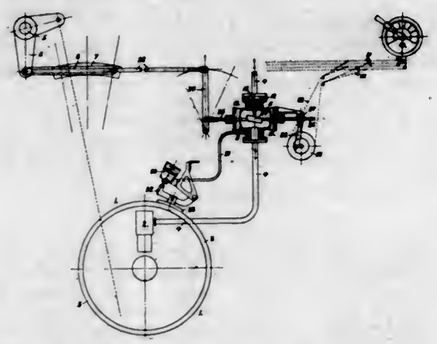


1. In a harvesting machine, a frame having supporting wheels, a sprocket wheel associated with one of said wheels, a bar connected hingedly with the frame in advance of said wheel, a brace rod connecting said bar with the frame in rear of said wheel, and cutting apparatus mounted on the bar, said cutting apparatus including a plurality of upright shafts having rotary cutters, uprights rising from the bar, a substantially horizontal shaft supported by said uprights, interengaging bevel pinions on the upright shafts and the horizontal shaft, a sprocket wheel on the horizontal shaft, and a chain connecting said sprocket wheel with the sprocket wheel associated with the supporting wheel of the frame.

2. In a harvesting machine, a wheel supported frame, a bar connected hingedly with the frame and having a ground wheel at its outer end, vertical cutter carrying shafts carried by the bar, uprights mounted on the bar and having cross heads, a horizontal shaft journaled in the forward ends of the cross heads, interengaging bevel gears on the horizontal shaft and on the cutter carrying shafts, means for transmitting motion to the horizontal shaft from a supporting wheel of the frame, and a roller supported at the rear ends of the cross heads.

1,106,197. CONTROLLING THE STARTING AND WORKING OF ENGINES. ALEXANDER ESPLEN, Liverpool, England. Filed Mar. 21, 1914. Serial No. 826,299. (Cl. 121—98.)

1. In an engine reversing gear, the combination of a rotary power reversing mechanism, a main engine reversing mechanism, manually operating mechanism, a controlling valve on the steam pipe of the reversing mechanism including a cam, means for operating said valve, connections between said manually operating mechanism and the valve operating means to open and close said controlling valve, and mechanism between the main engine reversing mechanism and said valve operating means, whereby the cam is moved to actuate the valve.



2. In an engine reversing gear, the combination of a rotary power reversing mechanism, a main engine reversing shaft connected with the rotary power reversing mechanism, manually operating mechanism, a controlling valve on the steam supply pipe of the engine of the rotary power reversing mechanism, a rocking cam to open and close the valve, a shaft carrying said cam, connections between the manually operating mechanism and the shaft, to operate same, and connecting means between the reversing shaft and the cam carrying shaft to move the latter longitudinally, and cause the cam to operate the valve.

3. In mechanism of the class described, the combination of main engine reversing mechanism, power reversing mechanism, a controlling valve in the supply pipe of the reversing mechanism, a power brake operating on the power reversing mechanism and controlled by the valve, valve operating means, a connection between the latter means and the main engine reversing mechanism, and operating mechanism for operating the valve operating means to open the valve, the valve operating means being moved by the main engine reversing mechanism to close the valve.

4. In mechanism of the class described, the combination of main engine reversing mechanism, power reversing mechanism to operate the main engine reversing mechanism, a valve in the supply pipe of the power reversing mechanism, valve operating means including a shaft and a valve actuating device, means for rocking the shaft to cause the valve actuating device to open the valve, and a connection between the main engine reversing mechanism and the shaft to slide the latter to seek the valve.

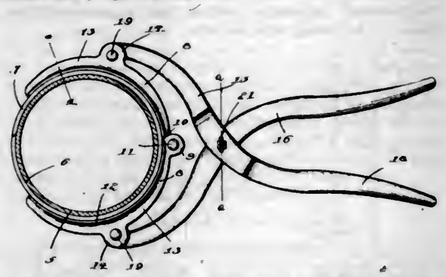
5. In mechanism of the class described, the combination of main engine reversing mechanism, power reversing mechanism including a wheel, means connecting the main engine reversing mechanism and the power reversing mechanism, a valve, valve actuating means including a valve opening element, a connection between the main valve reversing mechanism and the valve actuating means, controlling means to tilt the valve actuating means and the valve opening element, whereby to open said valve, and a brake acting on the wheel when the valve is opened.

[Claim 6 not printed in the Gazette.]

1,106,198. DEVICE FOR COMPRESSING PISTON-RINGS. ARCHIE I. EVERETT, Mount Carmel, Pa. Filed Feb. 7, 1914. Serial No. 817,298. (Cl. 81—3.)

1. A device of the class described comprising a pair of arcuate shaped pivoted jaws of substantially L-shaped formation in cross section adapted to embrace rings on a piston and crossed pivotally connected handles connected with said jaws for operating the latter as described.

2. A device of the class described comprising a pair of arcuate shaped jaws pivotally connected together and adapted to embrace rings on a piston, and a pair of handles pivotally connected with each of said jaws at a point between their ends for operating the latter in the manner and for the purpose described.



3. A device of the class described comprising a pair of arcuate shaped pivoted jaws of substantially L-shape formation in cross section adapted to embrace the rings on a piston, and a pair of cross handles pivotally connected with the lateral flange of each of said jaws at a point between their ends, and adapted to operate said jaws in the manner and for the purpose described.

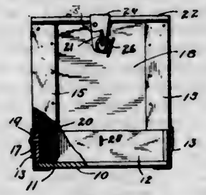
1,106,199. GARMENT. ABRAHAM L. FINK, Buffalo, N. Y. Filed Oct. 2, 1912. Serial No. 723,548. (Cl. 2—63.)



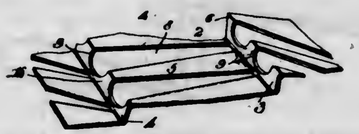
A form for the side of the front of a coat comprising a body section having a curved edge cut substantially on a bias, and a shoulder portion offset outwardly from the said curved edge and terminating in a curved edge, and a lapel section having a straight edge, the said curved edge of the body section throughout its extent being united to the straight edge of the lapel section and the upper edge of the lapel section being provided with a V-shaped recess whose vertex registers with its line of fold and whose inner edge coincides with the curved edge of the said offset shoulder portion.

1,106,200. FOLDING EGG-CRATE. HERMON E. FISHER, Hopkinton, N. Y. Filed Jan. 30, 1913. Serial No. 745,215. (Cl. 217—15.)

In a crate of the class described, a bottom board provided with an upwardly extending peripheral flange forming end and side pieces, straps extending across the bottom of said board at each end thereof and terminating in upwardly extending ears, folding end pieces provided with angle irons at their side edges, said angle irons having downwardly extending portions received between said ears and the side flanges of the bottom member, and bolts passing through said ears, side flanges of the bottom member, and downwardly extending portions of the angle irons.

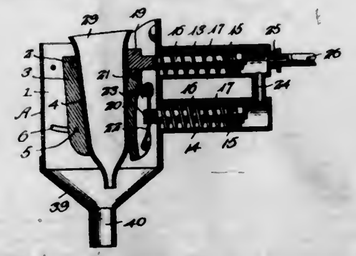


1,106,201. SCREEN OR SIEVE. WILLIAM LOID GEORGE, Hanover, N. Mex. Filed Oct. 4, 1910, Serial No. 585,318. Renewed May 15, 1914. Serial No. 838,894. (Cl. 83—56.)



A sieve body comprising a single piece of material adapted with a series of spaced transverse bends to provide steps dividing the said body into sections, each of the said sections being provided with a plurality of discharge slots intersecting the said steps and having enlarged semi-circular spaced forward edges, said slots tapering rearwardly therefrom and arranged diagonally and extending in one section in opposite directions from the slots of the adjacent section, and the said slots of one section having their small ends in register with and disposed immediately below the said enlarged semi-circular edges of the slots of the adjacent section throughout the whole length of the body.

1,106,202. MILKING-MACHINE. JAMES C. GORDON, Calgary, Alberta, Canada. Filed Sept. 26, 1913. Serial No. 792,018. (Cl. 31—95.)



1. In a milking machine, a teat press comprising a sectional plunger adapted to manipulate a teat, fluid pressure cylinders, connections between said cylinders, a piston in each cylinder, a piston rod connected to each piston and to one of the sections of said plunger, a spring within each cylinder and holding the piston therein normally against movement under the action of fluid pressure and of a strength different from that of the spring in the other cylinder, and a source of fluid supply for said cylinders whereby the pistons therein will be actuated successively against the action of the springs.

2. In a milking machine, a teat press comprising a sectional plunger adapted to manipulate a teat, fluid pressure cylinders, a connection between said cylinders, a piston in each cylinder, a piston rod connected to each piston and to one of the sections of said plunger, a tension de-

vice within each cylinder and holding the piston therein normally against movement under the action of the fluid pressure and of a strength different from that of the tension device in the other cylinder, and a source of fluid supply for said cylinders whereby the pistons therein will be actuated successively against the action of the springs.

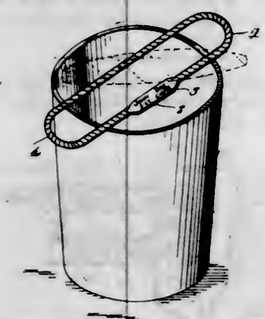
3. In a milking machine, a teat press comprising a sectional plunger adapted to manipulate a teat, fluid pressure cylinders, a connection between said cylinders, a piston in each cylinder, a connection between each piston and one of the sections of said plunger, means in each cylinder holding the piston therein normally against movement under the action of the fluid pressure and of a strength different from that of the means in the other cylinder, and a source of fluid supply for said cylinders whereby the pistons therein will be actuated successively against the action of the springs.

1,106,203. PLANTING IMPLEMENT. ELAM A. GROSS, Camden, N. J. Filed May 28, 1912. Serial No. 700,296. (Cl. 55—67.)



A planting implement comprising a hollow tubular handle portion, a hollow tubular dibble and a hollow tubular shank, said dibble and shank extending in diametrically opposite directions from the ends of the handle portion, substantially at right angles to the latter and the tubular shank having a terminal scoop-like blade with a V-shaped notch at its outer end, said implement being formed of sheet metal.

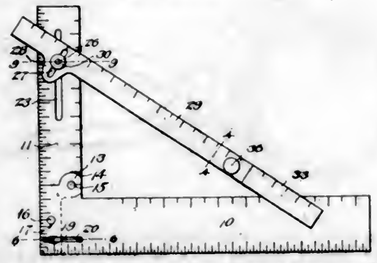
1,106,204. HOLDER. ELAM A. GROSS, Camden, N. J. Filed Apr. 4, 1913. Serial No. 758,866. (Cl. 131—51.)



A holder comprising a member consisting of a single piece of material which is angular in transverse section and formed in the general shape of an ellipse and having its axis throughout its extent lying in the same plane, said member having spaced parallel side portions adapted to afford a support for a pipe, said member being twisted whereby spirally disposed edges are provided at the end portions of the ellipse said spirally disposed edges adapted to prevent the member from slipping when placed upon a support and also adapted to prevent an article placed upon the member from rolling therefrom.

1,106,205. CARPENTER'S TRIANGLE. JOHN GRUNDSTROM, Bullrun, Oreg. Filed Dec. 17, 1912. Serial No. 737,321. (Cl. 33—92.)

1. A device of the class described comprising a base member, a perpendicular member pivotally connected thereto, means including a leaf spring for retaining said members in their extended position, a hypotenuse member formed with a transverse slot, said perpendicular member being formed with a longitudinally extending slot, means coöperating with both the said slots to connect the hypotenuse member and the perpendicular member for relative adjustment, said hypotenuse member including a longitudinally adjustable section, and means including a pinion for adjusting said section.



2. A carpenter's triangle including a base member, a perpendicular member pivotally connected thereto, means for retaining said members in their extended position, said perpendicular member being formed with a longitudinally extending slot, a hypotenuse member formed with an enlargement intermediate its ends, said hypotenuse member being formed with a slot arranged transversely thereof and extending into the enlargement, and fastening means passing through the slots of the hypotenuse member and perpendicular member, whereby the hypotenuse member may be adjusted longitudinally and obliquely with respect to the perpendicular member.

1,106,206. BALANCE-SPRING HAVING ELASTICITY INCREASING WITH A RISE IN TEMPERATURE. CHARLES EDOUARD GUILLAUME, Sèvres, France, assignor to Société des Fabriques de Spiraux Réunies, La Chaux-de-Fonds, Switzerland. Filed Feb. 20, 1912. Serial No. 679,302. (Cl. 58—114.)

1. A balance spring of which the elasticity increases with rise of temperature and which has a high elastic limit, consisting of an alloy of iron and nickel containing between 27 and 31 per cent. of nickel and besides of small quantities of carbon and of silicon at least two metals of the sixth group of the classification of Mendelejeff, each of these metals being in such a proportion between 0.2 and 4 per cent. that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

2. A balance spring of which the elasticity increases with rise of temperature and which has a high elastic limit, consisting of an alloy of iron and nickel containing between 27 and 31 per cent. of nickel and besides of small quantities of carbon and of silicon and of 1 to 4 per cent. of manganese at least two metals of the sixth group of the classification of Mendelejeff, each of these two latter metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon, manganese and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

3. A balance spring of which the elasticity increases with rise of temperature and which has a high elastic limit, consisting of an alloy of iron and nickel containing between 27 and 31 per cent. of nickel and besides of small quantities of carbon and of silicon, chromium and another metal of the sixth group of the classification of Mendelejeff, each of these two metals of said group being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

4. A balance spring of which the elasticity increases with rise of temperature and which has a high elastic limit, consisting of an alloy of iron and nickel containing between 27 and 31 per cent. of nickel and besides of small

quantities of carbon and of silicon and of 1 to 4 per cent. of manganese chromium and another metal of the sixth group of the classification of Mendelejeff, each of these two metals of said group being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon, manganese and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

5. A balance spring of which the elasticity increases with rise of temperature and which has a high elastic limit, consisting of an alloy of iron and nickel containing between 27 and 31 per cent. of nickel and besides of small quantities of carbon and of silicon chromium and tungsten, each of these two latter metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

[Claim 6 not printed in the Gazette.]

1,106,207. BALANCE-SPRING HAVING ELASTICITY INCREASING WITH RISE IN TEMPERATURE. CHARLES EDOUARD GUILLAUME, Sèvres, France, assignor to Société des Fabriques de Spiraux Réunies, La Chaux-de-Fonds, Switzerland. Filed Feb. 20, 1912. Serial No. 679,303. (Cl. 58—114.)

1. A balance spring, of which the elasticity increases with the rise of temperature and with a high elastic limit consisting of an alloy of iron and nickel containing between 27–31 per cent. of nickel and besides of small quantities of carbon and of silicon at least one metal of the sixth group of the classification of Mendeléjeff and at least one metal of the fifth group of the said classification, each of these metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

2. A balance spring of which the elasticity increases with the rise of temperature and which has a high elastic limit made from an alloy of iron and nickel containing between 27–31 per cent. of nickel and besides of small quantities of carbon and of silicon and of 1 to 4 per cent. of manganese at least one metal of the sixth group of the classification of Mendeléjeff and at least one metal of the fifth group of the said classification, each of these metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon manganese and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

3. A balance spring, of which the elasticity increases with the rise of temperature and which has high elastic limit consisting of an alloy of iron and nickel containing between 27–31 per cent. of nickel and besides of small quantities of carbon and of silicon chromium and a metal of the fifth group of the classification of Mendeléjeff, each of these metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

4. A balance spring of which the elasticity increases with the rise of temperature and which has a high elastic limit consisting of an alloy of iron and nickel containing between 27–31 per cent. of nickel and besides of small quantities of carbon and of silicon and of 1 to 2 per cent. of manganese chromium and a metal of the fifth group of the classification of Mendeléjeff, each of these metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon, manganese and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

5. A balance spring of which the elasticity increases with the rise of temperature and which has high elastic limit consisting of an alloy of iron and nickel containing between 27–31 per cent. of nickel and besides of small quantities of carbon and of silicon, chromium and vanadium, each of these metals being in such a proportion between 0.2 and 4 per cent., that the total amount of these metals and of the carbon and silicon in the alloy is between 3.5 and 10 per cent. of the whole alloy.

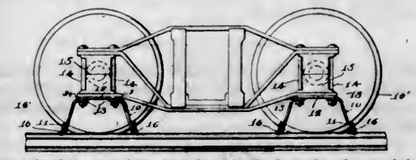
[Claim 6 not printed in the Gazette.]

1,106,208. REINFORCED STOCKING. ARTHUR HALE, Rowlandsville, Md. Filed Nov. 28, 1911. Serial No. 662,884. (Cl. 2—23.)



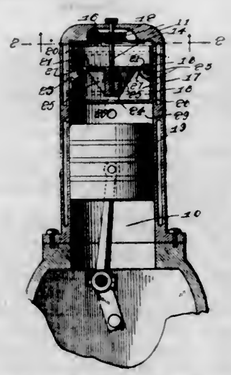
As a new article of manufacture, a stocking having a body portion and an inner and an outer sole portion formed integrally with said body portion, and providing a space between them conforming with the sole of the foot; said sole portions having a mouth between them affording access to said space; and a sole stiffening member fitting within said space and adapted to be inserted and removed therefrom through said mouth, substantially as described.

1,106,209. WHEEL-GUARD. GEORGE W. HALLEY, Nevada, Iowa. Filed Oct. 14, 1913. Serial No. 795,096. (Cl. 105—131.)



A wheel guard formed of a single length of metal bent in substantially U-shaped form and curved at the ends of its bight portion to provide eyes for receiving the usual vertical bolts of a boxing and the free ends of the arms of the U-shaped member being bent to slide over the tread portion of a rail.

1,106,210. GASOLENE-MOTOR. JAMES R. HALTERMAN, Anna, Ill. Filed Nov. 15, 1913. Serial No. 801,179. (Cl. 123—48.)



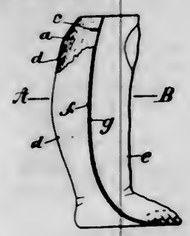
1. An internal combustion engine including a cylinder, a head for said cylinder provided with a cut-out portion forming a chamber, a piston in said cylinder, a head slidably mounted in said cylinder, a plate carried by said head and provided with an internally-threaded sleeve, a stem extending through the head of said cylinder and having its inner end threaded and screwed into the internally-threaded sleeve of said plate, a gear wheel carried by said stem and positioned within the chamber of the head of said cyl-

inder, an adjusting rod extending through said chamber, and a worm screw carried by said adjusting rod and engaging the teeth of said gear wheel whereby said stem may be rotated to meet said head in said cylinder.

2. An internal combustion engine including a cylinder, a piston in said cylinder, a head provided with packing rings slidably mounted in said cylinder between said piston and the head of said cylinder, the space between said head and said piston forming the compression chamber of said cylinder, a plate mounted in said head and provided with openings through which water may pass to permit the interior of said head to be completely filled with water, an internally-threaded sleeve carried by said plate, a stem rotatably mounted and provided with a threaded end portion screwed into the threaded sleeve of said plate, and means for rotating said stem whereby said head may be moved in said cylinder to regulate the size of said compression chamber.

3. In an internal combustion engine, a cylinder, a piston slidably mounted therein, a hollow head slidably mounted in said cylinder between said piston and the head of said cylinder, ledges extending from the inner faces of the walls of said head, a plate in said head resting upon said ledges, securing means passing through said plate into said ledges, an internally-threaded sleeve extending from said plate, bracing webs extending from the sides of said sleeve to said plate to brace said sleeve, a stem rotatably supported in the head of said cylinder and having its inner end threaded and screwed into said sleeve, and means for rotating said stem whereby said head may be moved longitudinally in said cylinder.

1,106,211. HOLLOW ARTICLE MADE OF PAPER, CLOTH, AND THE LIKE. MAX HANDWERCK, Waltershausen, Germany. Filed Jan. 20, 1913. Serial No. 743,182. (Cl. 46—40.)

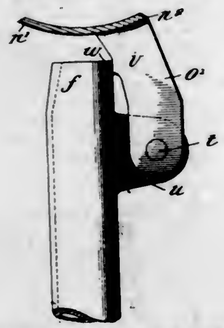


1. An article of manufacture consisting of a hollow body composed of two inner halves of thin substantially non-resistant material joined together at the edges of such halves, and two outer halves of thin substantially non-resistant material somewhat larger in size and having the same shape as the inner halves, the outer halves being applied over the inner halves and united thereto by a glutinous substance, thereby forming a substantially rigid resistive body, the adjacent edges of the outer halves being united to form a point.

2. A hollow article of the class described consisting of two inner halves of thin material having their edges brought together and fastened, and two outer halves of thin material and of larger size, the outer halves being applied over the inner halves and united thereto by an interposed coating of adhesive substance, one of the outer halves being larger than the other whereby the meeting edges of the outer halves will be offset relatively to the joint between the inner halves, the meeting edges of the outer halves being united to form a seam or joint.

3. As an article of manufacture, a hollow body comprising segmental inner halves of thin substantially non-resistant material, such halves having their edges brought together, pins fastening together such meeting edges, and segmental outer halves also of thin substantially non-resistant material of larger size than and applied over and secured to the inner halves by an adhesive, the meeting edges of the outer halves being offset relatively to the meeting edges of the inner halves, the meeting edges of the outer halves being united to form a practically imperceptible joint.

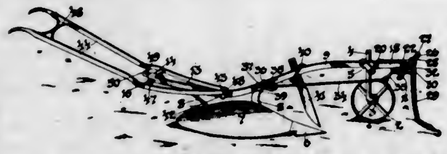
1,106,212. SEWAGE-DISTRIBUTER. JOHN WILLIAM HARTLEY and CYRIL JOHN HARTLEY, Stone, England. Filed Oct. 10, 1913. Serial No. 794,473. (Cl. 137—57.)



1. In a sewage disposal apparatus, means for uniformly distributing sewage over a definite area including an upwardly turned nozzle to which the liquid passes under pressure, a substantially convex spreader plate facing the opening of said nozzle and in spaced relation thereto, said spreader plate having a knife edge on its outer periphery to eliminate capillary action, and a pivotal arm supporting said spreader plate.

2. In a sewage disposal apparatus, means for uniformly distributing sewage over a definite area including an upwardly turned nozzle to which the liquid passes under pressure, a substantially convex spreader plate facing the opening of said nozzle and in spaced relation thereto, said spreader plate having a knife edge on its outer periphery to eliminate capillary action, and a pivotal arm supporting said spreader plate, said arm extending radially of the lower convex side of said spreader plate to intersect the stream of liquid before it leaves the convex surface.

1,106,213. ORCHARD-PLOW. DANIEL HARVEY, Box Hill, Melbourne, Victoria, Australia, assignor to Ralph Edwin Boardman, St. Kilda, and Frank Cameron Schulze, Brunswick, Victoria, Australia. Filed June 7, 1913. Serial No. 772,373. (Cl. 97—21.)



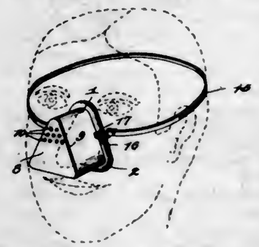
1. In combination, a plow beam, a draft bar pivoted to the plow beam and provided with a loop which straddles the top of said beam, a link engaging the loop on one side of the plow beam and adapted to be shifted from one side to the other of the beam and off the center of same, a connection between the link and the draft bar, handles on the beam, and means for shifting the handles from one side or the other of the center of said beam, according to the position of the loop.

2. In combination, a plow beam, an adjustable draft bar at the outer end of the beam, a yoke pivoted to the plow beam said yoke having longitudinal arms which lie substantially parallel with the beam and a loop which straddles the top of the beam, the yoke having depressions at the bottom of the loop, a link engaging in one of the depressions and adapted to be shifted from one side to the other of the beam and off the center of the latter, a flexible connection between the adjustable draft beam and the

link, handles extending from the beam, and means for shifting the handles from one side to the other of the center of the beam, according to the position of the loop.

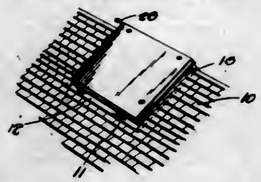
3. In combination, a beam, a pivoted draft bar on the beam, a loop straddling the top of the beam, a link engaging the loop on one side the center of the beam and adapted to be shifted from one side to the other of the loop, and a connection between the draft beam and the link.

1,106,214. INHALER. FREDERICK HEILMAN, Johnstown, Pa. Filed Mar. 17, 1913. Serial No. 754,919. (Cl. 128—13.)



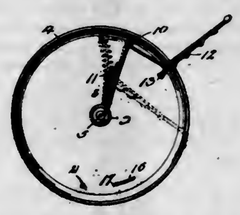
In an inhaler, the combination with a hollow body triangular in plan and open at both ends thereof said body being provided with an opening in the wall forming substantially the bottom of the same, and an outwardly opening valve arranged over said opening; of a closure for the outer end of said hollow body designed to form a medicament receptacle consisting of a pair of telescopic shells each designed triangular in plan to conform to the triangular design of said hollow body, the outer telescopic shell fitting snugly between the walls of the outer end of said body and having a plurality of perforations arranged in the base forming the outer wall of said body, the inner telescopic shell having its base opposed to the base of the outer shell and spaced from the latter to form an inner wall for the closure of said body, said inner wall being provided with an opening adjacent the lower edge thereof, an encircling flange formed on the outer edge of the base portion of said outer shell for abutment with the outer peripheral edge of said hollow body to limit the movement of the receptacle-like closure with respect to the latter and an inwardly opening valve arranged over the opening on the inner wall of said closure.

1,106,215. CUPOLA. FRED H. HEISE, Manson, Iowa. Filed Oct. 17, 1913. Serial No. 795,770. (Cl. 108—1.)



A device of the class described comprising a piramry and an auxiliary section, said sections provided with rigid flanges at their side edges, said primary section provided with a diagonally extending overhanging top flange, said top flange being held rigidly in a diagonal position by means of the remaining flanges of said primary section, a plurality of hinge ears fixedly secured within said primary section adjacent the inner portion of said overhanging top, said auxiliary section provided with integral hinge sleeves formed upon its inner upper portion, said hinged sleeves fitting between the hinge ears of the primary section, a pin passing through said sleeves for hingedly securing said sections together, said diagonal top flange of the primary section overhanging the hinged portion of said section, thereby preventing the water from passing between the said hinged portions, said diagonal overhanging top constituting a stop for the auxiliary section as the same swings in one direction thereby limiting the swinging of said section for preventing the device from opening beyond a predetermined point.

1,106,216. MATCH-STRIKER. CHARLES HILL, New Bedford, Mass. Filed Jan. 3, 1914. Serial No. 810,217. (Cl. 44—6.)



1. A match holding device comprising an apertured casing, a rotatably mounted shaft journaled in the casing, a member mounted for rotation upon the shaft, means for actuating the member independently of the rotation of the shaft, means for holding said member against movement, means for automatically releasing the holding means and a match holder carried by the rotating member and arranged to be projected through the aperture, together with a scratching surface arranged in the path of movement of the match holder.

2. In a match striking device, a casing, a rotatably mounted shaft arranged in the casing, a lever for operating the shaft, means for holding the lever against movement, a member journaled on the shaft for rotation independent of the same, means for actuating the member, means for holding said member against actuation, means for releasing said holding means, a match holder journaled upon said member and arranged to be projected through the aperture in the casing and means for projecting said match holder when the match registers with the aperture together with a match striking surface arranged in the path of the match holder.

1,106,217. SELF-PROPELLED TRUCK. GEORGE M. HOAG, Galveston, Tex. Filed Sept. 5, 1913. Serial No. 788,301. (Cl. 21—90.)



1. In a self propelled vehicle, the combination of a vehicle body having a ring at its forward end, a tractor embraced by the ring, means connecting the tractor and ring whereby the front end of the vehicle body is supported by the tractor, and steering means carried by the tractor and engaging the ring at two points whereby the tractor is maintained centrally within the ring.

2. In a self propelled vehicle, the combination of a vehicle body having a ring at its forward end, a tractor embraced by the ring, means connecting the tractor and ring whereby the front end of the vehicle body is supported by the tractor, and steering means carried by the tractor and engaging the ring at diametrically opposite points whereby the tractor is maintained centrally within the ring.

3. In a self propelled vehicle, the combination of a vehicle body having a ring at its front end, a tractor embraced by the ring, means connecting the tractor and ring whereby the front end of the vehicle body is supported by the tractor, a steering shaft carried by the tractor, and gearing at both ends of said shaft engaging the ring, the said gearing being actuated by the shaft.

4. In a self propelled vehicle, the combination of a vehicle body having a ring at its front end, a rack on said ring, a tractor within the ring, a shaft carried by said tractor, a gear wheel at each end of the shaft, gearing actuated by said gear wheels and meshing with the rack, and means for actuating the shaft.

5. In a self propelled vehicle, the combination of a vehicle body having a ring at its front end, a rack carried by said ring, a tractor within the ring, a shaft carried by said tractor and extending centrally across the ring, gearing carried by the tractor and meshing with the rack, a toothed wheel on each end of said shaft for actuating said gearing, and means for actuating said shaft.

[Claims 6 to 14 not printed in the Gazette.]

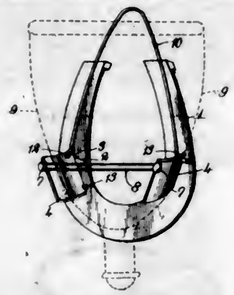
1,106,218. MATCH-SAFE. ALFRED J. HOMBURG, Chicago, Ill. Filed Mar. 18, 1914. Serial No. 825,581. (Cl. 206—28.)



1. In a match safe, the combination with a receptacle adapted to receive matches, of plates on the receptacle and forming continuations of the front and rear walls thereof, said plates being relatively tapered to converge toward their lower ends and form a restricted slot, said plates being further provided with registering cut away portions, flaps mounted to swing on the receptacle and covering the said plates, with the said flaps adapted to relatively converge and have their lower edges normally abut, said flaps having cut away portions registering with cut away portions of the plates, and looped springs having their medial portions loosely supported on the sides of the receptacle and their free ends in rigid connection with the said flaps, whereby the said flaps will be relatively held in closed position to normally hold a match adjacent the restricted slot formed in the said plates, with the said match extending across the cut away portions of the plates and the said flaps.

2. In a match safe, the combination with a receptacle adapted to receive matches, of plates on the receptacle and forming continuations of the front and rear walls thereof, said plates being relatively tapered to converge toward their lower ends and form a restricted slot, said plates being further provided with registering cut away portions, flaps mounted to swing on the receptacle and covering the said plates, with the said flaps adapted to relatively converge and have their lower edges normally abut, said flaps having cut away portions registering with the cut away portions of the plates, looped springs having their medial portions loosely supported on the sides of the receptacle and their free ends in rigid connection with the said flaps whereby the said flaps will be relatively held in closed position to normally hold a match adjacent the restricted slot formed in the said plates, with the said match extending across the cut away portions of the plates and the said flaps, and pointed lugs formed by tapering the sides of the receptacle at their lower ends, with the said pointed lugs lying between the flaps, said pointed lugs projecting downwardly beyond the said tapered plates and lying between the free edges of the said movable flaps.

1,106,219. WHISK-BROOM HOLDER. ALFRED HOYT, Baltimore, Md. Filed Sept. 13, 1912, Serial No. 720,267. Renewed June 11, 1914. Serial No. 844,590. (Cl. 15—6.)



1. A whisk broom holder, comprising a base, pivotally mounted jaws thereon, and a spring hanger connecting said jaws and operating to hold the jaws against the whisk broom.

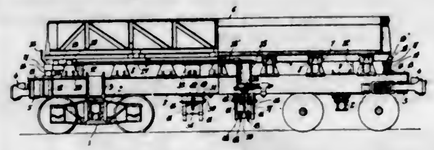
2. A whisk broom holder, comprising a base, pivotally mounted jaws detachable therefrom, and a spring hanger detachably connected with said jaws and operating to hold the jaws against the whisk broom.

3. A whisk broom holder, comprising a base, jaws having headed studs detachably fitted in openings in the base, and a spring hanger connecting said jaws and operating to hold the same against the whisk broom.

4. A whisk broom holder, comprising a base, pivotally mounted jaws thereon, a spring hanger connecting said jaws and operating to hold the jaws against the whisk broom, and stops on the base for limiting the movement of the jaws.

5. A whisk broom holder, comprising a base, pivotally mounted jaws thereon, a spring hanger connecting said jaws and operating to hold the jaws against the whisk broom, and studs on said jaws adapted to receive and hold a flexible broom restrainer.

1,106,220. CAR-DUMPING DEVICE. JOHN J. IRVIN and WILLIAM SHEPPARD, Bellwood, Pa. Filed Feb. 14, 1913. Serial No. 748,399. (Cl. 105—191.)



1. A dump car, embodying a pivotally mounted car body, a self-contained frame for the air dumping mechanism, an air cylinder supported by said frame, a piston in said cylinder, a cross head connected with and actuated by said piston, guiding means on said frame for the cross head, sheaves journaled on the cross head, and connections operated by said sheaves for tilting the car body.

2. A dump car, embodying a pivotally mounted car body, a self-contained frame for the air dumping mechanism, an air cylinder supported by said frame, a piston in said cylinder, a cross head connected with and actuated by said piston, guiding means on said frame for the cross head, sheaves journaled on the cross head, a cable actuated by said sheaves for tilting the car body, and cable guiding sheaves on said frame.

3. A dump car, embodying a pivotally mounted car body, a self-contained frame for the air dumping mechanism, an air cylinder supported by said frame, a piston in said cylinder, a cross head connected with and actuated by said piston, guiding means on said frame for the cross head, sheaves journaled on the cross head, a cable actuated by said sheaves, cable driven sheaves journaled on said frame, a chain sheave operated by the last-named sheaves, and a car body tilting chain actuated by the chain sheave.

4. A dump car, embodying a pivotally mounted car body, a self-contained frame for the air dumping mechanism, an air cylinder supported by said frame, a piston in said cylinder, a cross head connected with and actuated by said piston, guiding means on said frame for the cross head, sheaves journaled on the cross head, a cable actuated by said sheaves, cable driven sheaves journaled on said frame, a cam-shaped chain sheave operated by the last-named sheaves, and a car body tilting chain actuated by the chain sheave.

5. A dump car, embodying a pivotally mounted car body, a self-contained frame for the air dumping mechanism, an air cylinder supported by said frame, a piston in said cylinder, a cross head connected with and actuated by said piston, guiding means on said frame for the cross head, sheaves journaled on the cross head, a cable actuated by said sheaves, cable driven sheaves journaled on said frame, a chain sheave operated by the last-named sheaves, and a car body tilting chain actuated by the chain sheave, said chain sheave being shaped to exert a varying leverage on the body tilting chain.

[Claims 6 and 7 not printed in the Gazette.]

1,106,221. PROCESS OF BLEACHING BEESWAX. GOTTLIEB F. JEHLICKA, Williamsville, Mass. Filed Oct. 15, 1912. Serial No. 725,917. (Cl. 87—19.)

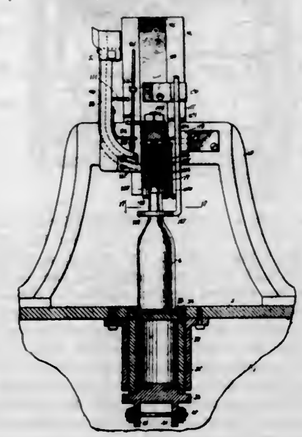
1. The herein-described process of bleaching beeswax, which consists in melting the wax in a suitable receptacle by the direct action of steam, allowing the wax to settle until clear and free from sediment and moisture, withdrawing the wax into a second receptacle and subjecting the same to the action of a slightly alkaline bleaching bath of water, sulfuric acid and peroxid of sodium, heating the bath during the process of treatment, agitating the bath and wax during the bleaching action, withdrawing the wax from the bleaching bath into a bath of cold acidulated water, heating the acidulated water to boiling temperature for a definite period by the injection of steam, and then withdrawing and molding the wax.

2. The herein-described process of bleaching beeswax, which consists in melting the wax, in a suitable receptacle by the direct action of steam, allowing the wax to settle until clear and free from sediment and moisture, withdrawing the wax into a second receptacle and subjecting the same to the action of a bleaching bath of water, sulfuric acid and peroxid of sodium, heating the bath during the bleaching treatment to a temperature of from 160° to 170° F., agitating the bath and wax during the bleaching treatment, withdrawing the wax from the bleaching bath into a bath of cold acidulated water, heating the acidulated water to boiling temperature for a definite period, and then withdrawing and molding the wax.

3. The hereindescribed process of bleaching beeswax, which consists in melting the wax in a suitable receptacle by the direct action of steam, allowing the wax to settle until clear and free from sediment and moisture, withdrawing the wax into a second receptacle and subjecting the same to the action of a slightly alkaline bleaching bath formed approximately of 21 ounces of iron-free sulfuric acid and 1 pound of peroxid of sodium to 12 gallons of water, rendering the bath slightly alkaline by the addition of a small quantity of silicate of soda, heating the bath by the injection of steam during the bleaching action to a temperature of from 160° to 170° F., agitating the bath and wax by the injection of currents of air through the bath during the bleaching action, withdrawing the wax from the bleaching bath into a bath of cold acidulated water, heating the acidulated water to boiling temperature for a definite period by the injection of steam, and then withdrawing and melting the wax.

1,106,222. BOTTLE-CAPPING MACHINE. ARON JOHNSON, New York, N. Y. Filed Mar. 12, 1910. Serial No. 548,767. (Cl. 113—2.)

1. In a bottle capping machine, the combination with a cap affixing mechanism, of a bottle feeding wheel having a plurality of cavities therein, means for feeding bottles to the said wheel, a cam wheel having a plurality of sockets corresponding to said cavities in said feed wheel and a stopping device actuated by the said cam wheel for intermittently obstructing the feeding of the said bottles by the said feeding means to the said feeding wheel.



2. In a bottle capping machine, the combination with a cap affixing mechanism of a continuously driven turntable for feeding bottles, a plurality of strips extending over the said table and forming a passageway, whereby the movement of the bottles is confined, a feed wheel comprising a plurality of superposed star wheels having cavities therein adapted to receive the bottles, means for intermittently driving the said feed wheel, a cam wheel having sockets corresponding to the said cavities in the said feed wheel and connected in driving relation with the said feed wheel, a follower adapted to engage the said cam, a lever operated by the said follower, and a latch resiliently pivoted to the said lever and adapted to prevent the movement of said bottles from said turn-table to said feed wheel.

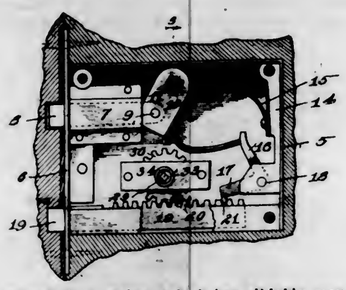
3. In a bottle capping machine, the combination with a frame of a plunger slidingly mounted in the said frame, inclined bottom doors hinged to the said plunger, springs for holding the said doors closed, the said plunger comprising a casing, former mounted in the casing, a cushion mounted in the former, and a spring for normally holding the said cushion in its lowermost position.

4. In a bottle capping machine, the combination with a cap affixing mechanism of a continuously driven turn-table for feeding bottles, a plurality of strips extending over the said table and forming a passageway confining the movement of said bottles, a feed wheel comprising a plurality of superposed star wheels having cavities therein adapted to receive the said bottles, means for intermittently driving the said wheel, a cam wheel having sockets therein corresponding to the said cavities in the said feed wheel and connected in driving relation to the said feed wheel, and a stop adapted to be intermittently projected across said passageway by the said cam wheel to prevent the movement of said bottles from said turn-table to said feed wheel.

5. In a bottle capping machine, the combination with a cap-affixing mechanism, of a cap-feeder, a rod adapted to project into said feeder to prevent the passage of said caps from said feeder to said cap-affixing mechanism, a spring for normally urging said rod into said feeder, and a trip connected to and operated by said cap-affixing mechanism, adapted to remove said rod from projection into said feeder against the tension of said spring.

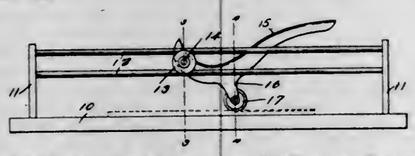
[Claims 6 to 13 not printed in the Gazette.]

1,106,223. DOOR-LOCK. FRANK KARÁCSONYI, Yonkers, N. Y., assignor of one-third to Gergely Blága, Hastings-upon-Hudson, N. Y. Filed Jan. 16, 1914. Serial No. 812,451. (Cl. 70—29.)



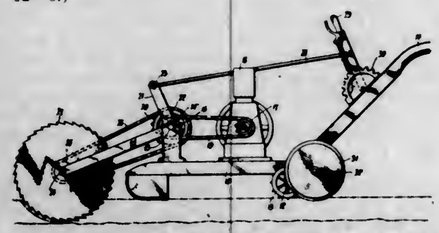
In a door lock, a casing, a lock bar slidably mounted in the casing, and provided with teeth on its upper edge, a hollow shaft journaled in the casing, a toothed wheel mounted on said shaft and engaging the teeth of said lock-bar, a dog pivoted on the outside of the casing and adapted to engage an opening in said hollow shaft, a pivoted dog within the casing engaging the lock bar and provided with an angularly-projecting arm, a latch-bar, a knob-shaft connected with the latch bar by a swinging arm on said knob-shaft, and means for releasing said dog from the lock-bar simultaneously with the operation of the latch-bar, consisting of a bow-spring between said swinging arm and said angular arm.

1,106,224. SHINGLE-CUTTER. JOHN D. KIZER, Scranton, Pa. Filed Sept. 22, 1913. Serial No. 791,163. (Cl. 33—32.)



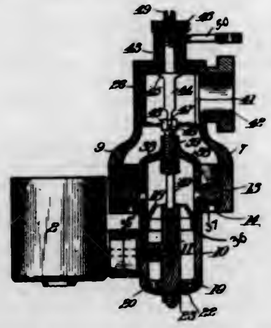
In a shingle cutting device, a suitable base, vertical supports on the opposite ends of the base, a plurality of rods secured to the supports and extending therebetween, said rods being arranged in superimposed pairs, grooved rollers disposed vertically in parallel relation with each other, each roller receiving respectively an upper and lower rod in its groove, a transverse shaft on which the rollers are mounted, a lever pivotally carried by the shaft between the rollers and a rotating cutting wheel carried by the lever and depending therebelow in rear of the pivot of the lever.

1,106,225. ICE-CUTTER. JOSEPH A. KREEGER, Lees Summit, Mo. Filed June 6, 1911, Serial No. 631,549. Renewed Nov. 10, 1913. Serial No. 800,228. (Cl. 62—8.)



An ice cutting machine including a wheeled frame, a motor thereon, a shaft arranged transversely across the forward end of said frame and operatively connected to said motor, a gear on said shaft, a rock frame projecting forwardly beyond said wheled frame comprising spaced L-shaped bars journaled at their elbows for rotation on said shaft, said bars being held in rigid spaced relation through the instrumentality of a rod connecting the up standing legs of said bars and a revoluble shaft connecting the forwardly extending legs of said bars, a gear on the last named shaft, an endless connector trained over both of the above named gears, a circular saw fixed on the rock frame shaft last named, a draw link on said rod for rocking said frame, means connected to said link for locking said rocking frame stationary, and means connected to said draw link for actuating said rocking frame.

1,106,226. CARBURETER. AMHERST G. LAMB, Torrington, Conn., assignor to Excelsior Needle Company, Torrington, Conn., a Corporation of Connecticut. Filed Feb. 13, 1909. Serial No. 477,800. (Cl. 48—155.2.)



1. A carbureter including in combination, an outer casing having a depending base portion and a ledge extending entirely about said casing and forming a valve seat with openings therethrough leading to the outside of said casing, a nozzle extending into said base portion, a vertical partition forming a continuation of the base portion and extending upwardly into said casing, a thimble carried by said partition, said partition having openings therethrough above said thimble, and a valve for automatically controlling the air supply through the openings in said ledge.

2. A carbureter including in combination, an outer casing having a depending base portion and a ledge forming a valve seat with openings therethrough leading to the outside of said casing, a nozzle extending into said base portion, a vertical partition forming a continuation of the base portion and extending upwardly into said casing, a thimble carried by said partition, said partition having openings therethrough above said thimble, a valve for automatically controlling the air supply through the openings in said ledge, other air inlets formed in said base portion, and a manually operated valve for controlling said last named air inlets.

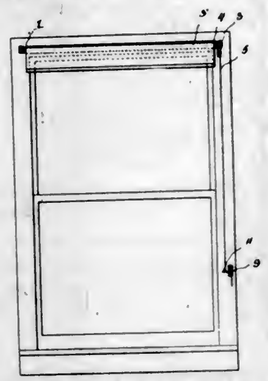
3. A carbureter including in combination, an outer casing having a depending base portion and a ledge extending entirely about said casing and forming a valve seat with openings therethrough leading to the outside of said casing, a nozzle extending into said base portion, a vertical partition forming a continuation of the base portion and extending upwardly into said casing, a thimble carried by said partition, said partition having openings therethrough above said thimble, and a valve for automatically controlling the air supply through the openings in said ledge, said valve being provided in its lower face with a recess adapted to receive a packing.

4. A carbureter including in combination, an outer casing, a nozzle extending into said outer casing, normally stationary supporting arms, a sleeve carried by said supporting arms, a needle valve threaded into said sleeve and coöperating with said nozzle, a throttle valve, and means located within said casing for connecting the throttle valve with said needle valve.

5. A carbureter including in combination an outer casing, a nozzle extending into said outer casing, a needle valve located within said casing, means for supporting said needle valve including a threaded sleeve, a throttle valve, a rod, means whereby said rod is secured to the throttle valve so as to turn therewith, said rod having a reduced portion and said needle valve having spaced ears between which said reduced portion extends whereby the movement of said rod will be imparted to said needle valve.

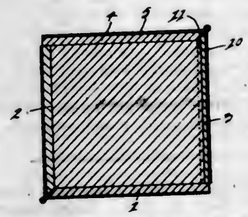
[Claim 6 not printed in the Gazette.]

1,106,227. CURTAIN-SHADE ROLLER. OLEX B. LAURENT, New Roads, La. Filed May 15, 1912. Serial No. 697,525. (Cl. 156—28.)



The combination of a curtain shade roller, brackets in which said roller is journaled, an operating cord for turning said roller, a stationary cord guide located in close proximity to said roller, a cord grip fastened to the window frame at a distance from said cord guide, and a second cord guide arranged at one side of and in the same horizontal plane with said cord grip to produce a sharp bend in the cord before it enters the second cord grip.

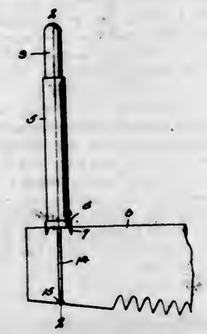
1,106,228. COLLAPSIBLE EGG-CRATE. ANDERSON LEE, Salt Lake City, Utah. Filed June 18, 1913. Serial No. 774,451. (Cl. 217—14.)



1. A folding egg crate comprising a bottom, a top, a front wall, and a rear wall, ends hingedly secured to the front wall, tongues formed at the opposite extremities of the ends, said tongues being adapted to enter grooves formed in the rear walls, said grooves terminating short of the upper edge of the rear wall, and adapted to form a shoulder against which the upper extremities of the tongues are adapted to abut when the device is in its unfolded position.

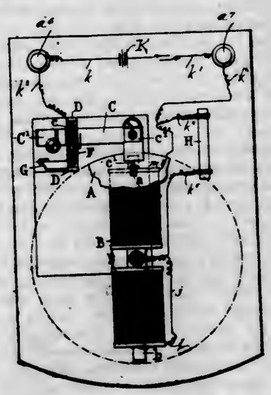
2. In a folding egg crate a front wall, end walls hingedly secured at each extremity of said front wall, a bottom hinged to the front wall, a back wall hinged to the bottom, said back having grooves adjacent each end, said grooves terminating short of the upper extremity of the back and forming shoulders, a top hinged to the back, and tongues formed on the end walls adapted to enter the grooves and abut the shoulders.

1,106,229. CROSSCUT-SAW HANDLE. CHARLES LINDSEY, Waynesboro, Miss. Filed Aug. 5, 1913. Serial No. 783,127. (Cl. 145—112.)



A detachable handle for saw blades comprising a cylindrical barrel, a centrally perforated cap detachably mounted on the end of the barrel, a push member projecting from and slidably fitted in the opposite end of the barrel, the said cap being formed with notches forming seats for the upper edge of the saw blade, an elongated loop adapted to embrace the saw blade and slidable through the cap and having a stem formed with a threaded socket, a connecting rod passed through the push member and detachably engaged in the threaded socket in the stem, and a coiled compression spring mounted within the barrel and surrounding the stem and connecting rod and having its ends engaging the push member and cap respectively.

1,106,230. CONTACT-INTERRUPTER. ALCIDE HECTOR MAITRE and VICTOR HENRI MARTIN, Rouen, France. Filed Aug. 11, 1909. Serial No. 512,355. (Cl. 177—7.)



1. A contact contrivance, comprising in combination with a vibrating body and an electro-magnet acting thereon to vibrate the same, a pivotally mounted contact member completing the circuit through the electro-magnet, a spring normally holding the said member in contact with the vibrating body, said member having a magnetic portion in position to be acted upon by the core of the electro-magnet to move the said contact member out of contact with the vibrating body and break the circuit.

2. A contact contrivance, comprising in combination with a vibrating body and an electro-magnet acting thereon to vibrate the same, a pivotally mounted contact member completing the circuit through the electro-magnet, said member being normally in contact with the vibrating body and having a magnetic portion upon which the core acts to move the said body out of contact with the vibrating body to break the circuit.

3. A contact contrivance comprising in combination with a vibrating body and an electro-magnet acting thereon to vibrate the same, a pivotally mounted contact member completing the circuit through the electro-magnet, a spring normally holding the said member in contact with the vibrating body, and means whereby the completion of the circuit through the magnet will move the contact member out of contact with the vibrating body to break the circuit.

4. A contact contrivance, comprising in combination with a vibrating body and an electro-magnet for vibrating the same, a pivoted lever having one end in contact with the vibrating body, the other end carrying a metallic plate in position to be acted upon by the magnet.

5. A contact contrivance, comprising in combination with a vibrating body and an electro-magnet for vibrating the same, a pivoted lever having one end in contact with the vibrating body, and means operated by the electro-magnet and acting on the opposite end of the lever for swinging said lever to move it out of contact with the vibrating body.

1,106,231. VACUUM-CLEANER. AQUILA BOLTON MARSHALL, New York, N. Y., assignor to American Radiator Co., Brooklyn, N. Y. Filed June 27, 1913. Serial No. 776,087. (Cl. 15—60.)



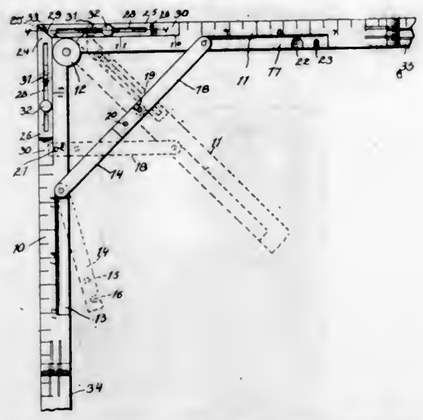
1. In a vacuum cleaner, a suction cleaning tool having a mouth, a valve seat spaced therefrom and having a central valve opening and a valve opening disposed at one side thereof, a resilient valve secured to the inner side of the valve seat for closing the central valve opening and a valve mounted for rotating on the valve seat and having an opening for the passage of air to the central opening in the valve seat, the opening in the second mentioned valve having an extension at one side for uncovering the second valve opening with the rotation of the second mentioned valve.

2. In a vacuum cleaner, a suction cleaning tool having a mouth and a threaded opening spaced therefrom, a valve seat with a thread meshing in the threaded opening, the valve seat having a central valve opening and a valve opening disposed at one side thereof, a resilient valve secured to the inner side of the valve seat for closing the central valve opening, and a valve mounted for rotating on the valve seat and having an opening for the passage of air to the central opening in the valve seat, the opening in the second mentioned valve having an extension at one side for uncovering the second mentioned valve opening with the rotation of the second mentioned valve.

3. In a vacuum cleaner, a suction cleaning tool having a mouth, a valve seat spaced therefrom and having a central opening and a second opening, a resilient valve for normally closing the central opening in the valve seat, and a valve mounted for rotating on the valve seat, the second mentioned valve permitting the passage of air to the central opening in the valve seat at all times, and being adapted for closing the second mentioned opening in the valve seat.

1,106,232. COMBINATION RULE, SQUARE, AND MITER. CHARLES M. MCFARLAND, Linden, Tex., assignor of one-half to W. R. Neal, Linden, Tex. Filed Feb. 18, 1913. Serial No. 749,208. (Cl. 33—117.)

1. The combination with a folding rule of the character described, having longitudinal recesses formed in its inner sections adjacent their inner edges, of brace sections pivotally secured within said recesses, one of said brace sections being formed with a circular opening and an edge opening notch, a headed pin carried upon the other brace section for engagement with the walls of said notch, and a pin carried upon said last mentioned section for engagement with the circular opening, said pins serving to connect the brace sections so as to hold the rule sections at a fixed angle, one of said rule sections being formed with an opening adapted to receive said second mentioned pin, whereby the rule sections may be locked to form another angle smaller than the first mentioned angle.



2. The combination with a rule of the character described, of means for locking the inner sections of said rule at fixed angles and sliding members carried upon said inner sections, said sliding members having beveled faces adapted for engagement with each other, when the rule sections are fixed at an angle of 90°.

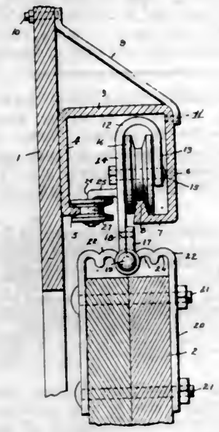
3. The combination with a folding rule of the character described having inner sections provided with recesses, of means for locking the inner sections of said rule at fixed angles, and sliding members carried upon said inner sections, said sliding members comprising parallel strips adapted to slide within the recesses formed in the rule sections, a solid head connecting said strips, the strips being provided with slots and fastening members carried by the inner sections and passing through said slots.

4. The combination with a folding rule of the character described having pivoted sections, of sliding members carried upon said sections, said sliding members having beveled faces for engagement with each other when the rule sections form an angle of 90°, one of the sliding members being formed with a recess and means carried by the other of the sliding members for reception within the recess.

1,106,233. DOOR-HANGER. RUSSELL MUELLER, Glencoe, Mo. Filed Mar. 5, 1914. Serial No. 822,743. (Cl. 16—7.)

1. A door hanger provided with an overhanging flange, rollers journaled between the flange and body portion of the hanger, pintle bearings formed on the lower ends of the hanger, a pintle in said bearings, a track on which the rollers are adapted to be supported, and a supporting member connected to the upper edge of the door and provided with corrugations, said pintle engaging said corrugations, to permit the adjustment of the door toward and from the building.

2. A door hanger comprising a rectangular casing having an upwardly extending supporting track rail, and an outwardly extending guide rail, a door hanger provided with grooved rollers to run on the upwardly extending track rail, and a grooved roller positioned to run upon the outwardly extending rail, and a bracket connected to the upper edge of the door and provided with corrugations and loops and a pintle on the depending end of the hanger to



engage the corrugations for permitting the adjustment of the door relatively to the hanger.

1,106,234. FRUIT-PRESS CHARGER. WILLIAM H. MYERS, Mount Clinton, Va. Filed Dec. 11, 1912. Serial No. 736,165. (Cl. 100—51.)

1. A charger for fruit press including a form and a counterbalance connected with the form to hold the latter in any set position.

2. A charger for fruit press including a form, means for guiding the form in movement and a counterbalance for the weight of the form.

3. A charger for fruit press including a form, means for guiding the form to maintain a horizontal position of the latter in movement and a counterbalance for the weight of the form.

4. A charger for fruit press including a form, guide bars connected to and movable with the form and serving to maintain a horizontal position of the form, carrier chains connected with the form and counterbalance weights carried by said chains.

5. A charger for fruit press including a form and guide frame therefor, guide bars connected to the form to maintain the horizontal position of the latter, chains connected to the guide bars, rollers over which said chains are arranged to travel and counterbalance weights carried by the chains.

[Claims 6 and 7 not printed in the Gazette.]

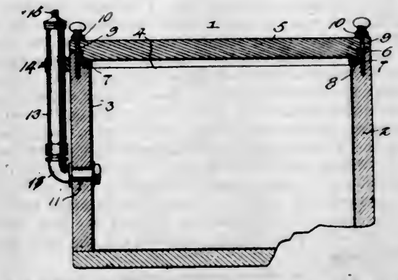
1,106,235. SHIPPING-CRATE FOR EGGS. CHARLES OBENAUER, Binghamton, N. Y. Filed Jan. 20, 1914. Serial No. 813,273. (Cl. 217—24.)

An egg carrier comprising a single length of wire bent intermediate its length to form a spring coil, the terminals of the wire at each end of the coil being extended in the direction of the opposite ends of the coil to provide companion loops normally contacting each other, the free ends



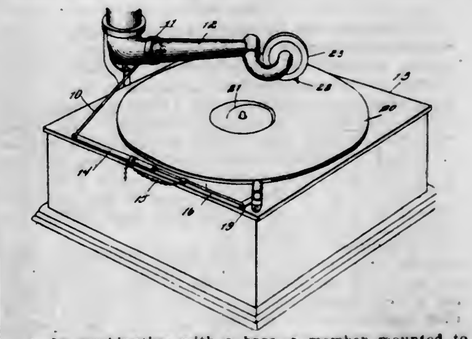
of the loop being passed in opposite directions through the coil and bent to provide means for securing the carrier to a support.

1,106,236. STORAGE-CASE. ALBERT P. ODELL, Lima, Ohio; Helen E. Odell administratrix of said Albert P. Odell, deceased. Filed Mar. 25, 1911. Serial No. 616,869. (Cl. 217—5.)



A storage case comprising a bottom, four sides connected in upright relation to said bottom, a cover formed with a rabbeted portion extending along the four edges thereof whereby a flange is formed, the four sides of said case being formed at their upper ends with a rabbeted portion whereby a continuous shoulder is formed spaced parallel and inwardly from the outer edges of said sides, a lining secured in contact with the bottom and the inner surfaces of the sides of said case, said lining extending in a plane with said shoulders, a packing strip seating over said shoulders continuously, said packing being spaced below the outer edges of said sides and overlying said lining, said cover arranged to be mounted over the outer edges of said sides, screw bolts screw threaded partially into the opposite sides of said case, said screw bolts projecting above and passing through the flanges of said cover, said screw bolts being disposed laterally of said shoulder, and thumb nuts engaging the extremities of said screw bolts to clamp said cover against said packing.

1,106,237. BRAKE FOR PHONOGRAPHS. LOUIS H. OTTO, Cedar Mills, Minn. Filed May 13, 1911. Serial No. 626,888. (Cl. 74—46.)

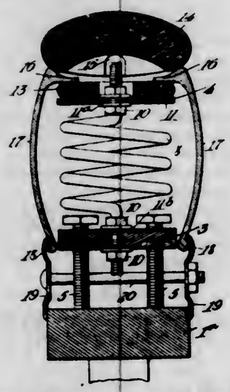


1. In combination with a base, a member mounted to swing thereon and a second member revoluble thereon; the

swinging member being adapted to operate over the revoluble member, and a stop lever for stopping the rotation of the revoluble member, a rod having pivotal connection with the said stop lever, a sleeve slidably receiving the free end of the rod, a second rod rigid on the swinging member and extending at right angles thereto, with the free end of the second rod having pivotal connection with the said sleeve, and means connecting the first mentioned rod with the second mentioned rod for imparting a pull on the first mentioned rod to actuate the said stop lever and stop the rotation of the said revoluble member when the said swinging member reaches the center of the said revoluble member, the advancement of the said rod with the said swinging member being adapted to exert a pull on the said sleeve to actuate the first mentioned rod through the medium of the said connecting means and actuate the said stop lever, the relative outward sliding movement of the first mentioned rod and sleeve being limited by the said means.

2. In combination with a base, a member mounted to swing thereon and a second member revoluble thereon, the swinging member being adapted to operate over the revoluble member, and a stop lever for controlling the rotation of the revoluble member, of a rod having pivotal connection with the said stop lever, a sleeve having slidable connection with the said rod, a second rod rigid on the swinging member and having pivotal connection with the said sleeve, and a chain having connection with the first mentioned rod and with the said sleeve for limiting the sliding movement of the sleeve relatively to the said first mentioned rod, the length of the said chain being adapted to be increased or decreased for holding the said sleeve rigid relatively to the said position when the said chain is in tension.

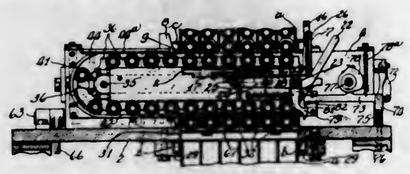
1,106,238. RESILIENT TIRE. THEODORE CHRISTOS PAPADOPOULOS, Dayton, Ohio. Filed Jan. 7, 1913. Serial No. 740,637. (Cl. 152—8.)



1. A resilient tire for vehicle wheels including in combination with the felly, an inner rim member, an outer rim member composed of jointed sections, cushioning means between the two rim members, a continuous flexible ring surrounding the outer rim member, a tread surrounding the flexible ring, side cover members provided at their outer edges with inturned flanges which are interposed between the tread and the flexible ring, and retaining rings attached to the felly and provided with grooves which receive the inner edges of the flexible side plates and permit said inner edges to move outwardly and inwardly while limiting the outward movement thereof.

2. A resilient tire for vehicle wheels including in combination with the felly, a pair of normally concentric inner and outer rim members, adjustable means for holding one of said members spaced from the felly, springs having their ends fastened in the inner and outer rim members, a tread carried by the outer rim member, flexible side cover members provided at their outer edges with inturned flanges which are clamped between the tread and the outer rim member and formed at their inner edges with beads, and retaining rings applied to the opposite sides of the felly and provided with grooves which receive said beads and permit the same to move inwardly and outwardly while limiting the outward movement thereof.

1,106,239. BOBBIN CLEANING AND HANDLING MECHANISM. BURT A. PETERSON, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed May 24, 1911. Serial No. 629,134. (Cl. 118—26.)



1. In a bobbin cleaner, an endless bobbin conveyer, means for imparting a step by step movement to the conveyer, a pressure-fluid nozzle located at one side of the conveyer in the plane of the bobbins lying on the conveyer, and a member located at the side of the conveyer opposite to the nozzle for longitudinally pushing a bobbin lying on the conveyer into contact with the nozzle.

2. In a bobbin cleaner, a pressure fluid nozzle, a tubular clamping member arranged opposite said nozzle, and means for operating said clamping member to clamp a bobbin between said member and said nozzle with its bore in alinement with the nozzle.

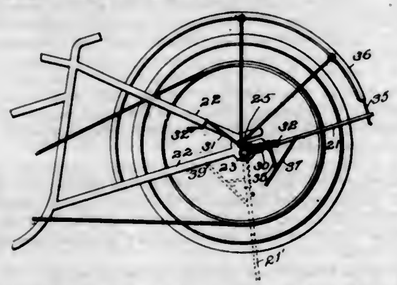
3. In a bobbin cleaner, a pressure fluid nozzle, a tubular clamping member alined with said nozzle, and means for reciprocating said clamping member to clamp and release a bobbin.

4. In a textile machine, a seat upon which a bobbin magazine may be removably placed; a support for another bobbin magazine; mechanisms for transferring bobbins from the first mentioned magazine to the second mentioned magazine; and means for removing yarn from the bobbins while in transit between the magazines.

5. The combination of means for removing yarn from bobbins, means for loading a magazine with bobbins, and means for conveying bobbins from the yarn-removing means to the magazine-loading means.

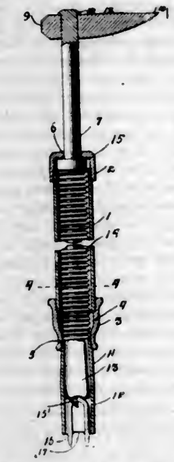
[Claims 6 to 14 not printed in the Gazette.]

1,106,240. AUTOMATIC STAND-LIFTER FOR MOTOR-CYCLES. JESSE C. PIERCE, Tacoma, Wash. Filed May 9, 1912. Serial No. 696,262. (Cl. 208—75.)



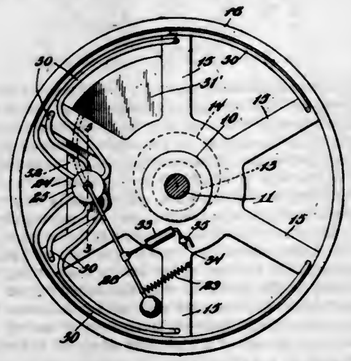
The combination with a cycle frame having a bearing for an axle, of a bolt secured to the frame below the axle, said bolt having an enlarged shank with a shoulder at the end of the shank and spaced from the threaded end of the bolt, a washer carried by the bolt between the shoulder and the frame, a sleeve having an outer flanged end carried by the shank, a coil spring surrounding the sleeve the ends of the spring projecting from the coiled portion, a supporting member pivoted at one end on the bolt, an arm connected with said member at an angle, a brace extending from the member to the arm, said arm being adapted to engage the frame when the supporting member is in a substantially vertical position, the projecting ends of the spring engaging respectively a member of the frame and the supporting member, and means for engaging at times the free end of the supporting member.

1,106,241. STAPLE DRIVER AND PULLER. CALVIN N. RICHARDSON, Waverly, Ill. Filed Jan. 15, 1913. Serial No. 742,176. (Cl. 1—50.)



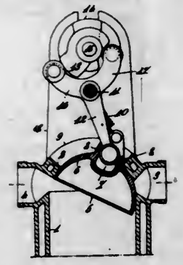
A tool of the class described, comprising a tubular body, a driving rod arranged to reciprocate therein, a sleeve carried by the upper portion of said rod, a coupling connected to one end of the body, a pipe section connected to one end of the coupling, said pipe section terminating in a casing, a driver upon one end of the driving rod and arranged to slidably engage in the casing, said casing being rectangular in cross section to prevent rotation of said driver, and a coil spring surrounding the rod and having one terminal bearing against the sleeve and the other terminal against the upper end of the pipe section.

1,106,242. CENTRIFUGALLY-CONTROLLED CLUTCH. CLAUDE ROBERT, Canon City, Colo. Filed Mar. 15, 1913. Serial No. 754,422. (Cl. 74—45.)



A clutch mechanism comprising a driving element, a driven element, hollow spokes formed on one of said elements, pistons working within said spokes, a cam mounted on the other element and actuating the said pistons, a valve casing carried by one of the elements and having pipes communicating with the spokes and adapted to supply fluid thereto for sustaining the pistons engaged with the cam, an automatic valve working within the casing for changing the course of the fluid, an arm on said valve and having a weighted end for centrifugal action to move the said valves, a dash pot supported by one of the elements, a piston connected with the arm and working within the dash pot, and a spring connected to the arm and to one of the elements.

1,106,243. DISTRIBUTING APPARATUS FOR ENGINES. LOUIS SAUSSARD, Paris, France, assignor to Societe Ballot & Co., Paris, France, a Corporation of France. Filed Nov. 26, 1910. Serial No. 594,290. (Cl. 123—81.)



1. A distributing mechanism of the character described for engines, pumps or the like comprising in combination a cylinder having one end formed on the segment of a sphere and provided with inlet and exhaust openings, a semi-spherical cap arranged within said end and engaging said surface, an oscillating lever engaging said cap, means for controlling said lever, and means for returning the cap into its normal position and for holding the cap against the cylinder.

2. A distributing mechanism of the character described for engines, pumps or the like comprising in combination a cylinder, provided with inlet and exhaust openings and having one end formed with an inner surface in the form of a segment of a sphere, a semi-spherical cap engaging said surface, an oscillating lever, engaging said cap, a grooved cam for oscillating said lever and springs tending to return the cap into its normal position and holding the cap against the inner surface of the cylinder head.

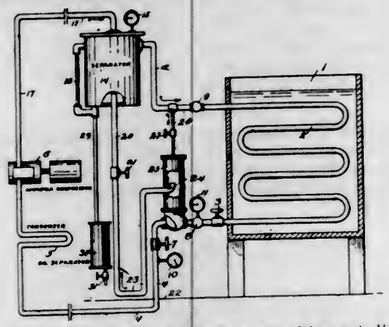
3. A distributing mechanism for gas engines and the like comprising in combination, a cylinder provided with inlet and exhaust openings and having its inner surface at one end arranged in the form of a segment of a sphere, a semi-spherical cap arranged to work against said inner surface so as to govern said ports, a fixed spindle, an oscillating lever mounted on said spindle and engaging said cap, a grooved cam for oscillating said lever, and a spring secured to said spindle and to said cap for holding the same against the inner surface of the cylinder and for retaining the same in normal position.

1,106,244. AMMONIA FORCE-FEED REFRIGERATING SYSTEM. WILLIAM SCHLIEMANN, Washington, D. C., assignor, by direct and mesne assignments, to Louis K. Doelling, New Rochelle, N. Y. Filed Jan. 25, 1911. Serial No. 604,631. Renewed Sept. 18, 1913. Serial No. 790,569. (Cl. 62—6.)

1. In a refrigerating apparatus, a refrigerant liquid supply pipe, an expansion coil, a refrigerant gas discharge pipe, a refrigerant liquid and gas separator connected to the discharge pipe, means for returning the separated liquid from the separator to the inlet end of the expansion coil, and a gas reliever intermediate the said means and the inlet end of the expansion coil.

2. In a refrigerating apparatus, a refrigerant liquid supply pipe, an expansion coil, a refrigerant gas discharge

pipe, a refrigerant liquid and gas separator connected to the discharge pipe, means for returning the separated liquid from the separator to the expansion coil, a gas reliever included in said means, and gas discharge connection between said reliever and said discharge pipe.



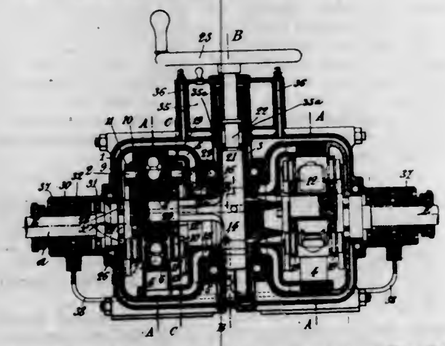
3. In a refrigerating apparatus, a refrigerant liquid supply pipe, an expansion coil, a refrigerant gas discharge pipe, a refrigerant liquid and gas separator connected to the discharge pipe, means for returning the separated liquid from the separator to the expansion coil, a gas reliever intermediate the said means and the inlet end of the expansion coil, and means whereby the gas is led from the reliever into the discharge pipe.

4. In a refrigerating apparatus, a refrigerant liquid supply pipe, an expansion coil, a refrigerant gas discharge pipe, a refrigerant liquid and gas separator connected to the discharge pipe, means for returning the separated liquid from the separator to the expansion coil, a gas reliever intermediate the said means and the inlet end of the expansion coil, and a liquid seal included in said means.

5. In a refrigerating apparatus, a refrigerant liquid supply pipe, an expansion coil, a refrigerant liquid and gas discharge pipe, a refrigerant liquid and gas separator connected to the discharge pipe, means for returning the separated liquid from the separator to the expansion coil, a gas reliever intermediate the said means and the expansion coil, said returning means discharging into said gas reliever.

[Claims 6 to 12 not printed in the Gazette.]

1,106,245. HYDRAULIC TRANSMISSION APPARATUS. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Dec. 15, 1911. Serial No. 666,055. (Cl. 138—3.)



1. In a hydraulic transmission apparatus of the character described, the combination of a plurality of radially disposed revolubly mounted cylinders, pistons working in said cylinders and thrust members having jointed connections with the pistons and provided with lateral projections, guides engaging said projections arranged parallel with the axes of the cylinders whereby lateral thrust of the pistons on the cylinders is avoided and means for reciprocating said thrust members.

2. In a hydraulic transmission apparatus of the character described, the combination of a plurality of radially disposed revolubly mounted cylinders, pistons working in said cylinders and thrust members having ball and socket connections with the pistons and provided with lateral projections, guides engaging said projections arranged parallel with the axes of the cylinders whereby lateral thrust of the pistons on the cylinders is avoided and means for reciprocating said thrust members.

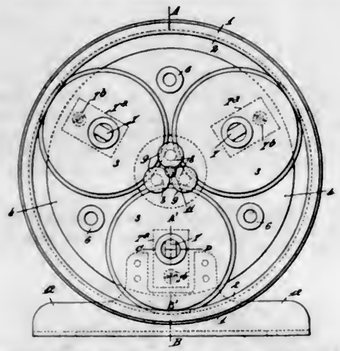
3. In a hydraulic transmission apparatus of the character described, the combination of a plurality of radially disposed revolubly mounted cylinders, pistons working in said cylinders, an adjustable cam for regulating the throw of the pistons, thrust members having jointed connections with said pistons and provided with anti-friction bearings traveling on said cam and means for guiding each thrust member in line with the axis of its cylinder.

4. In a hydraulic transmission apparatus of the character described, the combination of a plurality of radially disposed revolubly mounted cylinders, pistons working in said cylinders, cam disks adjustably mounted and adapted to regulate the throw of said pistons, thrust members having jointed connections with said pistons and provided with anti-friction bearings traveling on said cam disks, means retaining said bearings on said disks as the cylinders revolve, and means guiding each of said thrust members in line with the axes of said cylinders.

5. In a hydraulic transmission apparatus of the character described, the combination of a rotary cylinder motor and a rotary cylinder pump, a separator plate having openings through which said motor and pump may communicate, and means intermediate said plate and each of said elements for centering the latter.

[Claim 6 not printed in the Gazette.]

1,106,246. POWER-TRANSMISSION MECHANISM. MARIE JOSEPH GASTON SCHOEDELIN, Paris, France. Filed Jan. 11, 1913. Serial No. 741,517. (Cl. 74—26.)



1. Power transmission device of the character described, comprising in combination, an elastic rim adapted to be rotated, rollers within said rim in frictional engagement with the inner periphery of the same, a driven shaft between said rollers provided with grooves for positioning said rollers within said rim, side plates for said rim, and means for connecting said side plates, substantially as described.

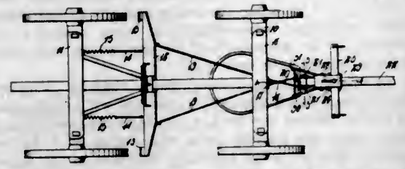
2. Power transmission mechanism comprising in combination, an outer elastic rim adapted to be rotated, rollers within said rim, means for positioning said rollers within said rim, and for supporting the shafts thereof within said rim, rollers in the center of said rim having their central portions in frictional contact with said first named rollers, and a driven shaft between said second named rollers adapted to be driven at a high rate of speed, substantially as described.

3. Power transmission mechanism comprising in combination, an outer elastic rim adapted to be rotated and provided with a flange at each side thereof, rollers within said rim, frictionally guided against the same between the flanges thereof, shafts for said rollers, side plates for said rim providing bearings for the shafts of said rollers through which said shafts extend, means for connecting said side plates, means for rigidly securing said shafts within their bearings, a second set of rollers in the center of said rim provided with flanges and having their central portions in contact with said first set of rollers, and a driven shaft centrally located between said second set of rollers and provided with grooves adapted to be engaged by the flanges of said second set of rollers for driving said shaft at a hight rate of speed.

4. Power transmission mechanism comprising in combination, an outer elastic rim adapted to be rotated provided with a flange at each side thereof, rollers within said rim frictionally guided against the same between the flanges thereof, shafts for said rollers, side plates for said rim constituting bearings for the shafts of said rollers and provided with holes through which said shafts extend with their flattened ends, means for connecting said side plates, plates upon said flattened ends and screws to secure said plates upon said ends for rigidly securing said shafts within their bearings, a second set of rollers in the center of said rim provided with flanges and having their central portions in frictional contact with said first set of rollers, and a driven shaft centrally disposed between the rollers of said second set and provided with annular grooves of small diameter adapted to be engaged by the flanges of the rollers of the second set for driving said shaft at a high rate of speed.

5. Power transmission device of the character described comprising in combination, an elastic rim adapted to be rotated and provided with flanges, rollers within said rim in frictional engagement with the same between the flanges thereof, side plates for said rim, means for connecting said plates, shafts for said rollers extending with their flattened ends through said side plates, pins upon the ends of said shafts, plates upon said ends provided with elongated slots, screws extending through said slots and engaging said pins, for allowing a regulation of the position of said shafts and rollers, means in frictional engagement with said rollers, and a driven shaft provided with grooves adapted to be engaged by said means frictionally engaging said rollers for driving said driven shaft at a high rate of speed, substantially as described.

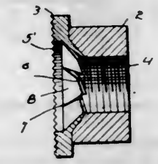
1,106,247. AUTOMATIC WAGON-BRAKE. CHESTER O. SILVER, Trenton, Nebr. Filed May 8, 1913. Serial No. 766,366. (Cl. 21—9.)



1. In a wagon brake, the combination with the running gear of a wagon, of a resiliently held brake beam, a depending arm carried by the front axle of the running gear, connections between the upper end of the arm and the brake beam, a longitudinal housing carried by the draft pole, a doubletree disposed transversely through the housing, the upper wall of the housing being provided with a longitudinal slot, a bolt carried by the doubletree and projecting through the slot, laterally disposed guide rollers carried by the pole, a rearward extension carried centrally on the doubletree, a vertically disposed guide roller carried by the extension, and an endless flexible member having its ends secured to the lower end of the before-mentioned arm and having its intermediate portion trained around all of the said rollers.

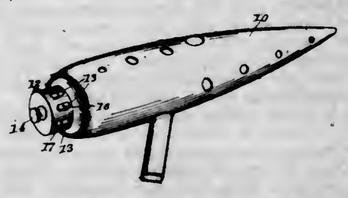
2. In a wagon brake, the combination with the running gear of a wagon, of a resiliently held brake beam, a depending arm carried by the front axle of the running gear, connections between the upper end of the arm and brake beam, a longitudinal housing carried by the draft pole and having a longitudinal slot in the upper wall thereof, a doubletree disposed through the housing, a bolt disposed through the slot of the housing and secured to the doubletree, laterally disposed guide rollers carried by the pole, a vertically disposed guide roller carried by the doubletree, an endless flexible member connected to the lower end of the beforementioned arm and trained around said rollers, and pivotally carried means on the pole for holding the doubletree against slidable movement in the housing.

1,106,248. NUT-LOCK. FRANK M. SIMPSON, Alameda, Cal. Filed Aug. 21, 1913. Serial No. 786,020. (Cl. 151—39.)



In a nut lock the combination with a nut having a funnel shaped concavity on its inner face, of a centrally apertured washer plate, ratchet teeth formed on the annular wall of said concavity, a plurality of gripping ribs formed on the rear face of said washer, a plurality of locking tongues formed on the front face of said washer and arranged arcuately around the edge of the aperture therein, said tongues being spaced at their inner ends from the rear edge of the aperture and face of the washer and being twisted to produce a funnel shaped ratchet conformation of their outer faces, and said tongues being adapted to fit within the concavity and engage said ratchet teeth therein to lock the nut when brought into engagement with said washer.

1,106,249. PITCH-REGULATING DEVICE FOR OCARINAS. FREDERICK D. SMENNER, Fort Wayne, Ind. Filed Aug. 21, 1912. Serial No. 716,250. (Cl. 84—7.)

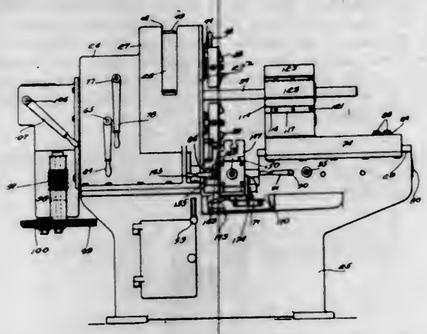


1. A body of the character described having a vent-opening, an apertured casing on the body and encircling the vent-opening, and means movable within the casing to cover or uncover the apertures therein.

2. A body of the character described having a vent-opening, a casing on the body and covering the vent-opening, the said casing being provided with a series of apertures, a member slidable longitudinally within the casing to cover or uncover the apertures therein, and an adjusting screw carried by the casing and having connection with the member for advancing or retracting the same within the casing.

3. A body of the character described having a vent opening, a casing on the body and covering the vent opening, the said casing being provided with a series of apertures, a member slidable longitudinally within the casing to cover or uncover the apertures therein, an adjusting screw carried by the casing and having connection with the member for advancing or retracting the same within the casing, and means carried by the member and engaging the casing for preventing rotation of the member relatively to the casing when the said adjusting screw is actuated.

1,106,250. METAL-WORKING MACHINE. JOHN G. SPEAR, Springfield, Mass. Filed Sept. 13, 1911. Serial No. 649,155. (Cl. 29—38.)



1. In a metal-working machine, a plurality of rotatable work holders disposed about a common axis, tool holders for the several pieces of work, and a slide for carrying the tool holders, said slide having a base and a head both for supporting tool holders, and a neck connecting said head with the base between two tool holders on the base, said head and tool holders on the base having coöperative portions adapted to sustain the torsional stress exerted on the head by the work.

2. In a metal-working machine, a plurality of rotatable work holders disposed about a common axis, tool holders for the several pieces of work, and a slide for carrying the tool holders, said slide having a base adapted to support two tool holders, a neck between said two tool holders, and a head supported by said neck for another tool holder, said head overhanging the tool holders on the base and having faces adapted to bear against said tool holders whereby said tool holders are adapted to sustain the torsional stress exerted on the head by the work.

3. In a metal-working machine, a plurality of rotatable work holders disposed about a common axis, tool holders for the several pieces of work, and a slide for carrying the tool holders, said slide having a base, a neck between two tool holders on the base, and a head supported by said neck for carrying another tool holder, said head having portions overhanging and engaging said two tool holders on the base, and means rigidly connecting said overhanging portions directly to said two tool holders.

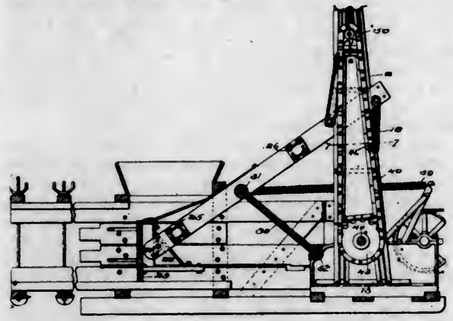
4. In a metal-working machine, means for holding a plurality of pieces of work, a tool slide comprising a base and having provisions for securing two tool holders side by side upon the base in potential working relation to two of said pieces of work, said slide comprising also a portion extending upwardly between the tool holders on the base, said portion having provisions for securing one or more tool holders above those on the base in potential working relation to one or more other pieces of work.

5. In a metal-working machine, a plurality of work holders, a tool slide and power-driven means arranged to move the same, a tool holder affixed to said slide and arranged to coöperate with one of said work holders, a rotatable tool holder and means carried by said slide to carry said rotatable holder to and from potential working relation with another one of said work holders, and power-driven means arranged to rotate said rotatable tool holder while the latter is in working engagement with the work.

[Claims 6 to 13 not printed in the Gazette.]

1,106,251. BALING-PRESS. WALTER W. STOPPLE, Alma, Mich., assignor to Little Giant Hay Press Company, Alma, Mich., a Corporation of Michigan. Filed Nov. 9, 1912. Serial No. 730,525. (Cl. 100—7.)

1. In a baling press, the combination with a compression chamber, and presser head, of a fulcrumed presser beam actuating said pressed head, an endless chain formed with lugs extending therefrom, means pivotally connected with said presser beam engaging said lugs for causing said chain to actuate said presser beam, and means for moving said chain.



2. In a baling press, a compression chamber, a presser head adapted to move within said chamber and compress the matter therein, a presser beam pivotally mounted to said presser head and arranged to move the same, a foundation member, a fulcrum member pivoted at one end to said foundation member and at the other end to said presser beam, a tower structure rigidly secured to said foundation, an endless chain arranged in said tower structure, means for transmitting motion from said chain to the end of said presser beam opposite the end engaging the presser head, and means for moving said chain.

3. In a baling press, a compression chamber, a presser head arranged to move in said compression chamber, a presser beam pivotally mounted at one end on said presser head, a pivotally mounted fulcrum pivotally engaging said presser beam for causing the presser beam to force said presser head into the compression chamber when the end of the presser beam opposite the presser head is lowered, an endless chain formed with lugs thereon, a hook engaging said lugs pivotally mounted on said presser beam for lowering the presser beam, and means for moving said chain.

4. In a baling press, a compression chamber, a presser head arranged to move into said compression chamber, a presser beam arranged to actuate said presser head, a pair of hooks pivotally secured to one end of said presser beam, an endless chain, lugs projecting from one link of said chain and designed to successively engage said hooks for raising and lowering the hooks and the presser beam, a tower extending substantially at right angles to the movement of the presser head for supporting said chain, and means for moving said chain.

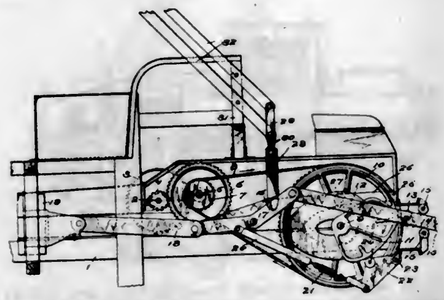
5. In a baling press, a compression chamber, a presser head, a presser beam pivotally connected with said presser head and actuating the head, a pivotally mounted link associated with the presser beam and acting as a fulcrum therefor, a pair of hooks pivotally mounted to the presser beam at the end opposite the presser head, said hooks extending in opposite directions, an endless power chain, a lug extending from one of the links of said power chain and arranged to engage intermittently said hooks for raising and lowering the presser beam, and continuously operating means for moving said power chain.

[Claims 6 to 10 not printed in the Gazette.]

1,106,252. HAY-PRESS POWER MECHANISM. WALTER W. STOPPLE, Alma, Mich., assignor to Little Giant Hay Press Company, Alma, Mich., a Corporation. Filed Apr. 10, 1913. Serial No. 760,294. (Cl. 100—2.)

1. In a hay press power mechanism, a driving cam wheel, a roller engaging the cam wheel, a pivoted member adapted to move with the roller, a pivoted rocker arm pivoted at one end to the pivoted member, and a plunger head operatively connected to the other end of the rocker arm.

2. In a hay press power mechanism, a driving cam wheel, a roller engaging the cam wheel, a draw bar supporting the roller, a rocker arm one end of which is connected to the draw bar, a plunger head, and means connecting the other end of the rocker arm to the plunger head.



3. In a hay press power mechanism, a driven cam wheel, a roller engaging the cam wheel, a draw bar supporting the roller, means for guiding one end of the draw bar, the draw bar adapted to swing about the guide means as a pivot, and a plunger head operatively connected to the other end of the draw bar.

4. In a hay press power mechanism, a driving cam wheel, a roller engaging the cam wheel, a draw bar supporting the roller, fixed means engaging the draw bar and adapted to guide the draw bar, and a plunger head operatively connected to the draw bar, the draw bar adapted to swing about the guide as a pivot.

5. In a hay press power mechanism, a driving cam wheel, a roller engaging the cam wheel, a draw bar supporting the roller, a plunger head operatively connected to the draw bar, and means for guiding the draw bar, said means acting as a center about which the bar oscillates under the action of the cam and roller.

[Claims 6 to 28 not printed in the Gazette.]

1,106,253. ESCAPEMENT FOR RUNNING-GEARS. HEINRICH THIEL, Ruhla, Germany. Filed Feb. 27, 1914. Serial No. 821,594. (Cl. 58—116.)



1. An escapement for clockworks having a balance and an escapement wheel, said balance having a rectilinear back and forward movement.

2. An escapement for clockworks having a balance and an escapement wheel, said balance having a rectilinear back and forward movement in the direction of the axis of revolution of said escapement wheel.

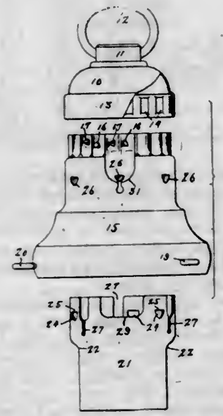
3. An escapement for clockworks comprising an escapement wheel, a balance having a rectilinear back and forward movement in the direction of the axis of revolution of said escapement wheel and constructed with a groove, and a spring tending to drive said balance in one direction, said escapement wheel having teeth constructed to engage one at a time with said groove, thereby giving movement to said balance against the action of said spring.

4. An escapement for clockworks comprising an escapement wheel, a balance having a rectilinear back and forward movement in the direction of the axis of revolution of said escapement wheel and constructed with an obliquely running groove and a spring tending to drive said balance in one direction, said escapement wheel having teeth constructed to engage one at a time with said groove, thereby giving movement to said balance against the action of said spring.

5. An escapement for clockworks comprising an escapement wheel, a balance having a rectilinear back and forward movement in the direction of the axis of revolution of said escapement wheel and constructed with a groove and a spring tending to drive said balance in one direction, said escapement wheel having teeth constructed to engage one at a time with said groove, thereby giving movement to said balance against the action of said spring, the tooth of said escapement wheel next in order to the tooth having passed said groove being adapted to assist the backward movement of said balance in coöperation with said spring.

[Claim 6 not printed in the Gazette.]

1,106,254. SHADE-HOLDER. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 19, 1913. Serial No. 807,752. (Cl. 240—114.)



1. A fitting of the type described comprising a cap, a shade holder, means for latching the latter to the cap in substantially any relative rotary position of the parts, a socket shell and means for latching the latter to the shade holder against endwise separation of the parts.

2. A fitting of the type described comprising a cap, a shade holder sleeving at its upper portion with the cap, means within the sleeved area for latching the shade holder to the cap, a socket shell and means lying outside said sleeved area for latching said shell to the shade holder.

3. A fitting of the type described comprising a cap, a bell-shaped shade holder having its upper portion sleeving with the cap, latching means within the sleeved area for latching the shade holder to the cap, a socket shell and means lying outside said sleeved area for latching said shell to the shade holder.

4. A fitting of the type described comprising a cap, a shade holder, means for latching the latter to the cap in substantially any relative rotary position of the parts, a socket shell inwardly shouldered to engage and support the body of a lamp socket and means for latching said shell to the shade holder.

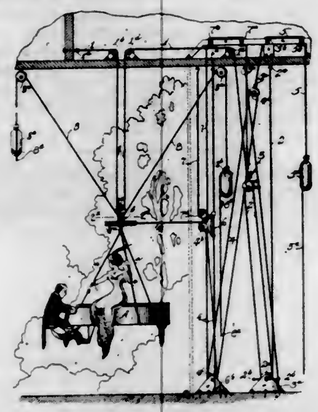
5. A fitting of the type described comprising a cap, a shade holder latching therewith in substantially any relative rotary position of the parts, and means carried by said shade holder for supporting the body of a lamp socket.

[Claims 6 to 8 not printed in the Gazette.]

1,106,255. SPECTACULAR DISPLAY APPARATUS. GEORGE T. THOMPSON, Washington, D. C. Filed Feb. 18, 1914. Serial No. 819,488. (Cl. 46—70.)

1. In a display apparatus, a sling, means for imparting vertical movements to the sling, a flexible connection adapted to impart movements other than vertical to said sling and extending laterally therefrom, a guide-sheave

around which said flexible connection passes, and a connection between said guide-sheave and the elevating means, whereby the guide-sheave is raised and lowered simultaneously with the sling.



2. In a display apparatus, the combination of a sling, a swivel carrying a pulley through which to impart rotation to said sling, a flexible driving connection for said pulley extending laterally therefrom, a guide-sheave for said driving connection having a runner, a guide-rod upon which said runner is mounted, and means for raising and lowering said sling and runner.

3. In a display apparatus, the combination of a sling, a swivel carrying a pulley through which to impart rotation to said sling, a flexible driving connection for said pulley extending laterally therefrom, a guide-sheave for said driving connection having a runner, a guide-rod upon which said runner is mounted, and means for raising and lowering said sling and runner, comprising a suspending cable, a controlling block connected with said cable and having means through which to traverse it, and a connection between said controlling block and said runner.

4. In a display apparatus, a suspending means permitting freedom of lateral movement, a sling connected with said suspending means and having means for imparting rotation thereto, a duplex flexible driving connection for rotating the sling, extending laterally from its rotating means, a guide around which said duplex driving connection extends, a remote guide around which said driving connection passes, and means for yieldingly supporting said remote guide and adapting it to compensate for extension and retraction of the rotating connection resulting from swinging movement of the sling.

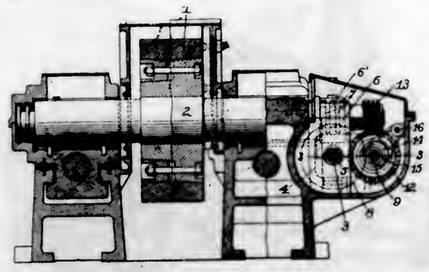
5. In a display apparatus, a sling, a suspending member permitting freedom of swinging movement to said sling, a pulley carried by said sling through which to rotate it, an endless flexible driving member for passing around said pulley, a compensating guide-sheave around which said endless driving member passes, and a yielding support for said compensating sheave.

[Claims 6 to 8 not printed in the Gazette.]

1,106,256. GEARING. BRUCE W. TRAYLOR, New York, N. Y., assignor to Traylor Engineering and Manufacturing Co., a Corporation of Delaware. Filed Nov. 29, 1912. Serial No. 734,147. (Cl. 74—7.)

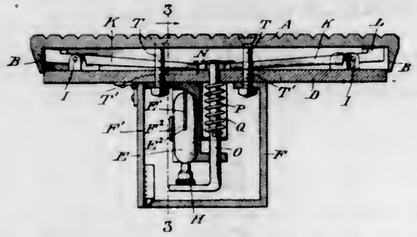
1. In combination with a supporting frame and a rotary member journaled therein, mechanism including a train of gearing by which the rotation of the rotary member automatically effects a slow endwise movement, and means adjustably supporting said mechanism from the main frame whereby the roll and with it said automatic mechanism may be bodily adjusted in relation to the main frame.

2. In combination, a main frame, a rotary member journaled therein, a worm carried by said member, bearing members adjustably carried by the main frame, a pair of transverse shafts journaled in said adjustable members, a worm wheel on one of said transverse shafts engaging the worm, and means whereby the rotation of the other shaft effects endwise movement of the rotary member, substantially as described.



3. In combination a main frame having a gear box at one end thereof, a rotary member journaled in the main frame having a shaft extension projecting into the gear box, a worm carried by said shaft extension, bearing plates adjustably mounted on opposite sides of said gear box, a pair of transverse shafts journaled in said bearing plates, a worm wheel on one of said transverse shafts engaging said worm, gearing between said shafts, means whereby the rotation of the other shaft effects endwise movement of the rotary member, and means interposed between said bearing plates and the sides of the gear box for effecting lateral adjustment of the bearing plates and the entire mechanism within the gear box, substantially as described.

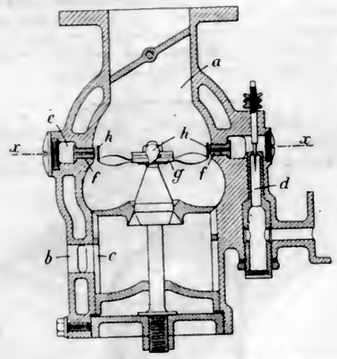
1,106,257. REGISTERING DEVICE. LEE JASON TUBBS, Charleston, S. C. Filed Jan. 6, 1914. Serial No. 810,676. (Cl. 235—99.)



An automatic registering device for door steps, etc., comprising a platform which is apertured, a rod movable through said aperture, a disk fitted to the upper end of the rod, a pin passing through the rod, a spring mounted upon the latter and interposed upon the pin and the under surface of the platform and tending to hold the rod normally at its lowest limit, a step mounted above said platform and chambered on its under surface, levers pivotally mounted upon the platform, their inner ends engaging underneath said disk and their outer ends adapted to normally support the step, causing the latter under pressure to raise said rod by the tilting of the levers, and a register actuated by said rod, as set forth.

1,106,258. CARBURETER. JOHN M. TUCKER and JAMES ARMSTRONG WILDING, London, England. Filed Nov. 1, 1913. Serial No. 798,754. (Cl. 48—155.1.)

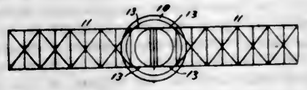
1. In a carbureter, a member having a jet orifice formed therein through which fuel is supplied into the air conduit through the carbureter, a blade which when in proximity to the outlet from said orifice is set edgewise transversely to a jet emerging from the said orifice, and means distinguished from the said blade and adapted to cause relative rotational movement between the said orificed member and the said blade.



2. In a carbureter, a member having a jet orifice formed therein through which fuel is supplied into the air conduit through the carbureter, a blade which when in proximity to the outlet from said orifice is set edgewise transversely to a jet emerging from the said orifice, and a fan adapted to cause relative rotational movement between the said orificed member and the said blade.

3. In a carbureter a member having a fuel supply orifice formed therein so as to direct a jet issuing therefrom at an angle to a given plane, a blade which when in proximity to the outlet from the said orifice is set edgewise transversely to the said jet, and means distinguished from the said blade and adapted to cause relative rotational movement of the said orificed member and the said blade about an axis normal to the said plane.

1,106,259. DRAWBRIDGE. CLAUDE A. P. TURNER, Minneapolis, Minn. Filed Dec. 27, 1913. Serial No. 808,939. (Cl. 14—32.)



1. As an improvement in end lifts of center bearing draw bridges, the combination of a toggle, a toggle pin at the joint, a pair of rotary screws at opposite sides of the toggle pin, connections between the screws and the toggle pin, and means for revolving said screws.

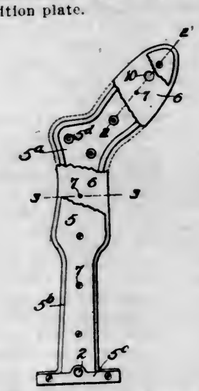
2. As an improvement in end lifts of center bearing draw bridges, the combination of a toggle, a toggle pin at the joint, a pair of rotary screws at opposite sides of the toggle pin, connections between the screws and the toggle pin, and means for revolving said screws, the screws having, respectively, right and left thread.

3. As an improvement in end lifts of center bearing draw bridges, the combination of a toggle, a saddle having a bearing for the toggle pin, threaded openings through the saddle at opposite sides of the pin, a screw passing through each opening, and mans for revolving the screws.

4. As an improvement in end lifts of center bearing draw bridges, the combination of a toggle, a saddle having a bearing for the toggle pin, threaded openings through the saddle at opposite sides of the pin, a screw passing through each opening, said screws having right and left thread, gears on the respective screws, and a driving pinion between the two gears meshing with both of them.

1,106,260. DRYING-FORMER FOR STOCKINGS. CHARLES B. UPP, Reading, Pa., assignor to Daniel W. Snyder, Reading, Pa. Filed Apr. 20, 1914. Serial No. 833,183. (Cl. 34—16.)

1. A drying-former made up of opposed hollow-casing sections and an interposed apertured partition-plate joint-piece, and provided with inlet and outlet means on opposite sides of said partition plate.



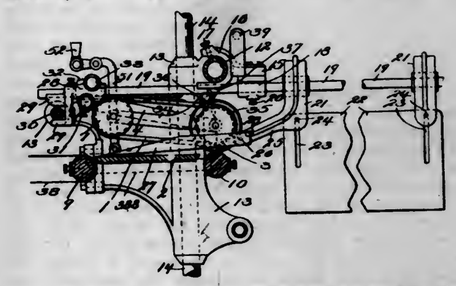
2. A drying-former made up of opposed hollow-casing sections and an interposed apertured partition-plate joint-piece, and provided with inlet and outlet means on opposite sides of said partition plate; the edge portion of the latter extending beyond the opposed hollow-casing sections.

3. A drying-former made up of opposed hollow-casing cast-metal sections and an interposed apertured partition-plate joint-piece of fibrous material, and provided with inlet and outlet means on opposite sides of said partition plate.

4. A drying-former made up of opposed hollow-casing cast-metal sections and an interposed apertured partition-plate joint-piece of fibrous material, and provided with inlet and outlet means on opposite sides of said partition plate; the edge portion of the latter extending beyond the opposed hollow- casing sections.

5. A drying-former made up of opposed hollow-casing sections formed with solid base portions and inlet and outlet openings respectively, an interposed apertured partition-plate joint-piece, and cross-wise clamping bolts for said sections extending through said partition plate.

1,106,261. SHEET-DELIVERY MECHANISM. FREDERICK WILLIAM VICKERY, London, England. Filed June 5, 1911. Serial No. 631,457. (Cl. 101—29.)



1. In a sheet delivery mechanism for machines of the class specified, the combination, with a main supporting element and a carrier to which said element is removably connected; of a presser roller, a bender and a gage connected to said element and movable bodily with the same on the machine and removable bodily with said element from the machine.

2. In a sheet delivery mechanism for machines of the class specified, the combination, with a main supporting element and a carrier to which said element is movably and removably connected; of a pair of brackets and an arm connected to said element and bodily movable and removable with the same on and from the machine, a gage carried by said brackets, a bender pivoted to one of said brackets, and a presser roller carried by said arm.

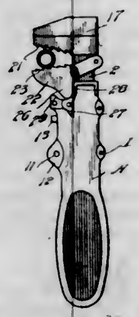
3. In a sheet delivery mechanism for machines of the class specified, the combination, with a longitudinally-disposed rod, and a carrier in which said rod is movably and removably mounted; of a presser roller, a bender, and a gage connected to said rod and movable and removable bodily with the same on and from the machine.

4. In a sheet delivery mechanism for machines of the class specified, the combination, with a longitudinally-disposed rod, and a carrier in which said rod is movably and removably mounted; of a pair of brackets and an arm connected to said rod and movable and removable bodily with the same on and from the machine, a gage carried by said brackets, a bender pivoted to one of said brackets, and a presser roller carried by said arm.

5. In a sheet delivery mechanism for machines of the class specified, the combination, with a main supporting element, a carrier therefor, and a table disposed beneath said element; of a driving roller disposed adjacent one end of said table, an arm pivoted at one end to said element and extending across said table, said arm being provided at its free end with a presser roller normally in frictional engagement with said driving roller, a pulley fast on the supporting shaft of the driven roller, an arm pivoted to said shaft and extending across said table in the opposite direction from the first-named arm, a pulley carried by the second-named arm at its free end, and a band connecting said pulleys.

[Claims 6 to 11 not printed in the Gazette.]

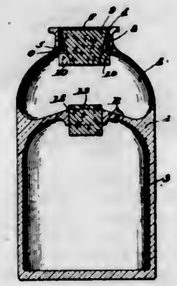
1,106,262. WRENCH. EDWARD BRYANT WADDELL, Jr., Williamson, W. Va., assignor of one-third to G. Deaton Poole and one-third to George W. Brown, Williamson, W. Va. Filed Aug. 8, 1913. Serial No. 783,730. (Cl. 81—92.)



1. The combination with a body portion having a recess in one end thereof, of a shank slidable in the body portion, a stationary jaw at one end of the shank, a swinging jaw slidable on the shank and having a projection adapted to seat within the recess in the end of the body portion, said projection being substantially smaller than the recess whereby when the swinging jaw is swung downward the projection will bind against one wall of the recess, and when the jaw is swung upward said projection will bind against the opposite wall of the recess, a sliding jaw mounted on the shank intermediate the stationary jaw and the swinging jaw and having one gripping face adapted to coöperate with the gripping face of the stationary jaw and another gripping face adapted to coöperate with the gripping face of the swinging jaw.

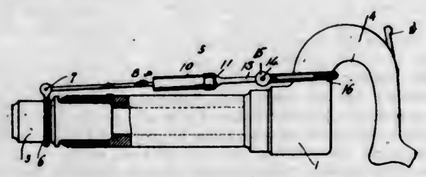
2. The combination with a body portion, of a shank slidable therein, means for locking the shank in adjustable position relative to the body portion, said body portion having a recess in one end thereof to one side of the shank, a stationary jaw at one end of the shank, a swinging jaw having a bifurcated portion to span the shank, and a projection extending from the swinging jaw adjacent the point of junction of the bifurcated portion with the body of the jaw, said projection being adapted to seat in the recess in the end of the body portion, said projection being substantially smaller than the recess whereby when the swinging jaw is swung downward the projection will bind against one wall of the recess and when the jaw is swung upward said projection will bind against the opposite wall of the recess, and a sliding jaw arranged upon the shank between the stationary jaw and the swinging jaw and having gripping faces adapted to coöperate with the stationary jaw and the swinging jaw.

1,106,263. NON-REFILLABLE BOTTLE. ROBERT H. WEATHERSBY and EDWARD E. PUTNAM, Mammoth, Ariz. Filed Mar. 15, 1911. Serial No. 614,662. (Cl. 215—110.)



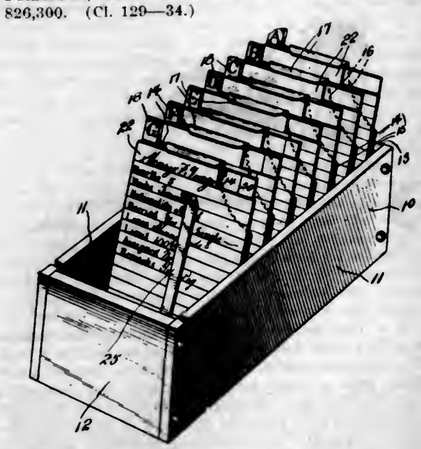
A bottle comprising a hollow body portion having a filling opening, the walls of said body portion at diametrically opposed points terminating inwardly in a direction toward the vertical center of the body portion and forming a concavo-convex partition formed with a dispensing opening, said partition dividing the bottle into an upper and a lower compartment, the filling opening of the body portion being vertically alined with the dispensing opening of the partition, the said partition being of a thickness equal to the thickness of the walls of the lower compartment and of a greater thickness than the walls of the upper compartment, whereby upon the breakage of the upper compartment the said partition is less liable to breakage, the said upper compartment being of the same diameter as the lower compartment, a closure for each compartment, means for positively retaining the closure in the opening of the upper compartment, said means fitting flush with the top surface of the mouth of the filling opening thereby necessitating the breakage of the upper compartment of the bottle in order to gain access to the contents of the lower compartment.

1,106,264. ATTACHMENT FOR TOOLS. FRANK W. WHITE, Brooklyn, N. Y. Filed June 12, 1912. Serial No. 703,351. (Cl. 78—44.5.)



In combination with an ordinary pneumatic hammer provided with the usual handle and provided with a flanged tool which is operated by the hammer, of means for preventing the accidental removal of the tool from the barrel of the hammer, said means including a substantially ring-shaped member which is adapted to be arranged upon the handle, a cylinder connected with the ring-shaped member, a rod having a head arranged within the cylinder, a spring between the outer face of the cylinder and the head of the rod, and a split ring connected to the free extremity of the rod and adapted to encircle the tool.

1,106,265. FILE-BOX. WILLIAM HENRY WHITTLE, Palmesdale, Mich. Filed Mar. 21, 1914. Serial No. 826,300. (Cl. 129—34.)



1. In a file box, the combination with a box body, of a series of record holding members mounted to swing in the body and successively arranged one behind the other, spacing plates formed with the record holding members at their lower ends for spacing the record holding members apart to form pockets when the said record holding members are in normal position, and plates formed with the upper ends of the record holding members for spacing the record holding members apart when the same are in raised position.

2. In a file box, the combination with a box body, of a series of successively arranged record holding members mounted to swing in the box body, and means formed with the record holding members at their upper and lower ends for relatively spacing the record holding members apart.

3. In a file box, the combination with a box body, of a series of successively arranged record holding members in the box body, vertical plates formed at the lower ends of the members for spacing the said record holding members apart when the record holding members are in relatively inclined position in the box body, and laterally extending plates formed with the said record holding members at their upper ends for spacing the record holding members apart when the same are in relatively vertical position within the body.

4. A record holding member for a file box comprising a plate, a laterally extending bottom formed with the plate, a spacing plate formed with the said bottom and lying parallel to the first mentioned plate, means for supporting the record holding member in the box, and a second spacing plate formed with the first mentioned plate and projecting laterally from the upper edge thereof.

5. In a record holding member for a file box, a plate, a bottom formed with the plate, a spacing plate formed with the bottom, a second spacing plate projecting from the upper edge of the first mentioned plate, a rod adapted to be journaled in the box, and a plurality of ears struck from the bottom and having the rod passing therethrough for swingingly supporting the record holding member in the said box.

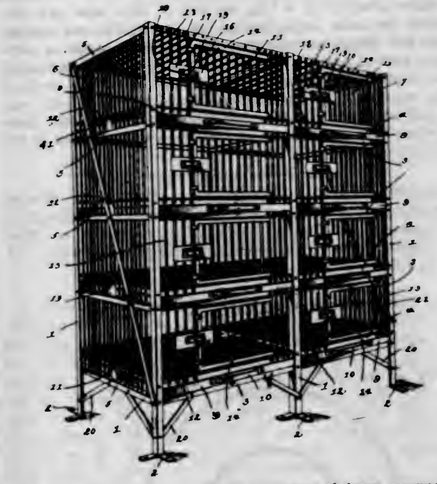
[Claim 6 not printed in the Gazette.]

1,106,266. REGENERATION OF SULFIDS OF THE ALKALIS OR ALKALINE EARTHS. LEONARD PHILIP WILSON, Coventry, England, assignor to Courtaulds Limited, London, England. Filed Sept. 25, 1913. Serial No. 791,879. (Cl. 23—13.)

1. The conversion of soluble polysulfids into monosulfids by the addition to the said soluble polysulfids in aqueous solution of alkaline matter and organic reducing substance.

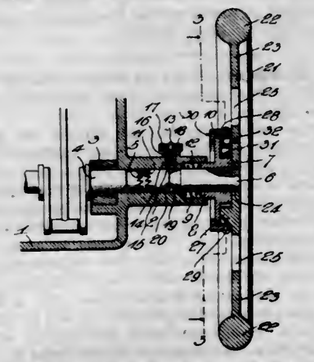
2. The regeneration of solutions which contain polysulfids, and which have been used in the manufacture of artificial silk, by adding alkaline matter and organic reducing substance.

1,106,267. COOP. WALTER R. WILSON, Oakland, Cal. Filed July 18, 1913. Serial No. 779,822. (Cl. 119—17.)



A coop comprising uprights, horizontal bars connected to the uprights at intervals along the vertical length thereof and disposed along the front and rear and vertical sides of the coop, detachable pans located between the uprights at the horizontal bars, and dividing the coop into a series of compartments, relatively short rods connected with the upper and lower horizontal bars at the front of the coop, relatively long rods passing through the horizontal bars at the rear and vertical sides of the coop and extending from the uppermost to the lowermost horizontal bars of the coop, other horizontal bars connected with the uprights at the front of the coop and located in close proximity to the upper edges of the pans, other rods passing transversely through each compartment of the coop and located approximately at the same level as the last mentioned horizontal bars, foraminous false bottoms located between the uprights above the pans and resting upon the last mentioned horizontal bars and the last mentioned rods and doors hingedly mounted between the members of the first and last mentioned sets of horizontal bars at the front of the coop.

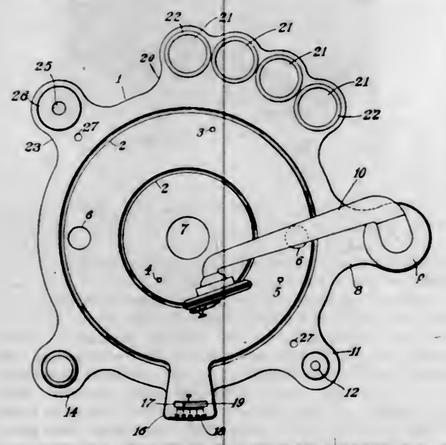
1,106,268. ENGINE-STARTING DEVICE. WALTER H. WINKS, Baltimore, Md. Filed July 15, 1912. Serial No. 709,566. (Cl. 123—185.)



In a cranking mechanism for engines the combination with the crank shaft thereof, of a revolubly mounted

cranking shaft having a clutch connection with said crank shaft, a ratchet gear fixed on said cranking shaft, a radially projecting flange on said gear, a cranking wheel loosely mounted on said cranking shaft and comprising a web having on its outer edge a smooth unbroken rim adapted to be gripped by the operator, a concentrically arranged boss on one side of said web, a wheel retaining member comprising a ring secured to said boss and having on its outer edge a flange adapted to fit over and engage the flange on said gear whereby said wheel is revolubly held in position on the shaft, and a pawl carried by the wheel and adapted to be engaged with the teeth of said ratchet gear whereby the wheel is operatively connected with said cranking shaft when turned in one direction and will run loosely on the shaft when turned in the opposite direction.

1,106,269. TALKING-MACHINE. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Dec. 4, 1912. Serial No. 734,913. (Cl. 181—3.)

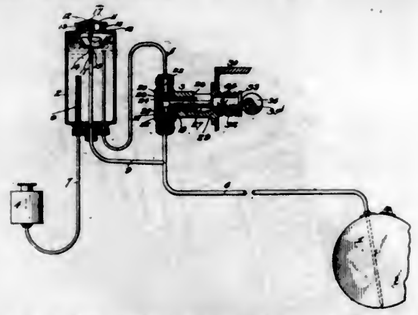


1. A sheet metal motor-board for talking machines, having an approximately circular body portion, with a centrally placed motor-shaft opening therein, and two marginal projections through one of which is a tone-arm opening, and through the other of which there is an oblong slot or opening with a speed-indicating scale adjacent thereto.

2. A sheet metal motor-board for talking machines, having an approximately circular body portion, with a centrally placed motor-shaft opening therein, strengthening corrugations concentric with said motor-shaft opening, and marginal projections from said circular body portion having openings to accommodate the tone-arm, speed-regulator and a start-and-stop element.

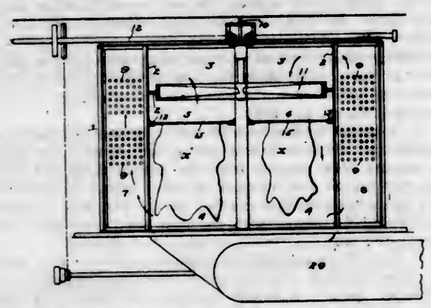
1,106,270. FUEL-DELIVERY SYSTEM. JOSEPH ZAGORA, Racine Wis. Filed Aug. 28, 1913. Serial No. 787,191. (Cl. 158—38.)

1. In a fuel delivery system for motors, the combination with a main supply tank, of an auxiliary tank, a fuel conducting pipe connecting said supply tank with said auxiliary tank, a pump connected to said fuel conducting pipe to lift the fuel from the main tank to the auxiliary tank, an overflow pipe connected at its outer end with said fuel conducting pipe adjacent to the inlet end of said pump and having its opposite end extending upwardly in and to near the upper end of said auxiliary tank, a valve seat on the end of said overflow pipe, a float arranged in said auxiliary tank, a valve carried by said float and adapted to engage said valve seat and to close the end of the overflow pipe until the float is lifted by the rising of fuel in the auxiliary tank, a cap arranged on the upper end of said auxiliary tank and having therein an air vent, and means carried by the float to close said vent when the float is raised.



2. In a fuel delivery system for motors, the combination with a main fuel supply tank, of an auxiliary tank, a fuel conducting pipe to connect said main tank with said auxiliary tank, a pump arranged in said fuel conducting pipe, an overflow pipe connected at its outer end with said fuel conducting pipe near the inlet end of said pump and having its opposite end extending upwardly in and to near the upper end of said auxiliary tank, a valve seat on the upper end of said pipe, a float arranged in said auxiliary tank and having connected therewith a valve stem, said stem projecting above and below the float and having its lower end engaged with the upper end of the overflow pipe, a valve on said end of the valve stem to engage the seat in the upper end of said overflow pipe whereby the latter is closed, a cap on said auxiliary tank and having therein an air vent, a valve seat around the inner end of said vent, a valve on the upper end of said stem to engage said seat and thereby close said vent, a carbureter, and a fuel supply pipe to connect said carbureter with said auxiliary tank.

1,106,271. LEATHER-DRIER. ELWOOD B. AYRES, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 27, 1913. Serial No. 808,981. (Cl. 34—12.)



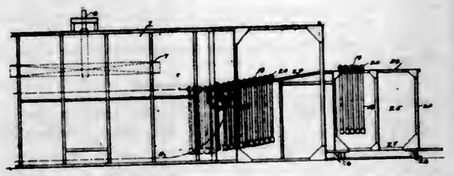
1. The combination in a drier for skins, of a casing having a drying chamber and a heating chamber therein; a circulating fan for circulating heated air through the chambers; two conveyers in the drying chamber; means located on the conveyers from which the skins to be dried are hung transversely to the direction of movement of the conveyers; and means for driving one conveyer at a greater speed than the other.

2. The combination of a casing; two longitudinal conveyers located therein; means for heating the air in the casing; means for circulating the air; two driving shafts located at one end of the machine, one shaft being arranged to drive one conveyer and the other shaft being arranged to drive the other conveyer; and change speed mechanism for driving each shaft so that the speed of the two shafts can be varied at will in order to change the speed of travel of each conveyer.

3. The combination of a casing having a longitudinal drying chamber and heating chambers at each side of the drying chamber; a circulating fan for causing the air to circulate through the chambers; two conveyers in the drying chamber; means for suspending skins from the conveyers; independent means for driving each conveyer; and change speed mechanism for each driving means so that the speed of travel of the conveyers can be independently regulated.

4. The combination in apparatus for drying skins, of a casing having a longitudinally arranged drying chamber; heating chambers at each side of the drying chamber; a series of circulating fans arranged above the drying chamber for circulating the air through the drying chamber and the heating chambers; means, located near the center of the casing, for admitting fresh air; an exhaust fan communicating with the center of the casing for withdrawing the moist air; two conveyers located in the drying chamber; means for independently traversing the conveyers through the casing; and means for which the skins are suspended from the conveyers.

1,106,272. LEATHER-DRIER. ELWOOD B. AYRES, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 29, 1913. Serial No. 809,344. (Cl. 34—12.)



1. The combination in a machine for drying leather, of a casing having a drying chamber therein and heating chambers on each side of the drying chamber; means for circulating air through the drying and heating chambers; a conveyer arranged to travel longitudinally through the drying chamber; and transversely arranged carriers for skins suspended from the conveyer and spaced apart so as to form transverse channels to allow the air to circulate between the skins as they travel through the casing.

2. The combination in a machine for drying skins, of a casing having a drying chamber and a heating chamber; means for circulating air through the heating chamber and drying chamber; conveyer chains extending longitudinally through the casing; and boards mounted on the chains, said boards being arranged transversely to the line of travel so that the boards with the skins attached can be placed close together, allowing air to circulate between the boards carrying the skins.

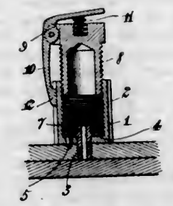
3. The combination in a machine for drying skins, of a casing having a longitndinally arranged drying chamber and heating chambers; a partition above the drying chamber and one on each side thereof separating the drying chamber from the circulating and heating chambers; the transverse partition having openings; fans mounted in the openings for circulating air between the skins; and an exhaust fan communicating with the lower portion of the drying chamber near the center so as to remove the moist air as it accumulates therein.

4. The combination in a drier, of a casing; a drying chamber therein; a conveyer arranged to receive skin carriers and to traverse them through the machine; an inclined rail at the forward end of the machine alining with the conveyer; and a truck having rails alining with the inclined rail and on which the skin carriers are mounted so that the skin carriers can be transferred from the truck onto the inclined rail and from the rail onto the conveyer.

5. The combination in a drier for skins, of a casing having a longitudinal drying chamber; a conveyer located therein; means for driving the conveyer; means for circulating air in the chamber; inclined rails at the discharge end of the machine; an elevator for transferring the skins from the conveyer to the inclined rails; and a truck having rails alining with said inclined rails and arranged to receive the skin carriers from the inclined rals.

[Claims 6 to 8 not printed in the Gazette.]

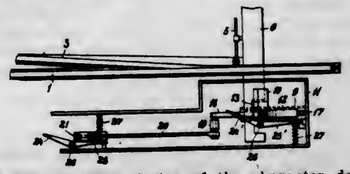
1,106,273. LUBRICATOR. EDWARD A. BACKUS, Little Rock, Ark. Filed Jan. 11, 1913. Serial No. 741,509. (Cl. 184—1.)



1. In a lubricator of the character described, the combination of a cup having an opening in its bottom and provided with a projection rising from the bottom at one side of the opening, a threaded stem adapted to pass through the opening in the bottom of the cup for securing the latter to the part to be lubricated, said threaded stem having a discharge opening and provided with an elastic flange toothed at its outer edge to engage the projection of the cup to prevent movement of the threaded stem after the parts have been positioned.

2. In a lubricator of the character described, the combination of a cup provided in its bottom with a central and a side opening, a pin set in the said side opening and projecting above and below the bottom of the cup, the lower end of the pin serving to secure the cup against rotation when in position, and a threaded stem passing through the said central opening in the bottom of the cup for securing the latter to the part to be lubricated, said threaded stem having an opening and provided with an elastic flange which is toothed at its outer edge to engage the upper end of the aforesaid pin.

1,106,274. SWITCH-OPERATING DEVICE. ERNST VON BÖHLKE, Lemberg, Austria-Hungary. Filed May 28, 1913. Serial No. 770,470. (Cl. 104—24.)



1. Swith operating device of the character described, comprising a spring controlled slide carrying the coupled switch points, and provided with a slot, vertically and horizontally displaceable means at one side of the track within said slot, adapted to be operated by the head of a train for throwing said switch, means for locking the switch in its thrown position, and means for releasing said switch adapted to be operated by the rear end of a train.

2. Switch operating device of the character described, comprising a spring controlled slide carrying the coupled switch points, and provided with a slot, a vertically and horizontally displaceable block at one side of the track within the slot of said slide having an inclined upper face and a shoulder provided with a slot having an inclined face for operatively engaging said slide, means for allowing an elastic displacement of said block in horizontal and vertical direction, said inclined face being adapted to be engaged by an actuating member at the head of a train for throwing the switch, means for lock

ing the switch in its thrown position, and means for releasing said switch adapted to be operated by an actuating member at the rear of the same train.

3. Switch operating device of the character described, comprising a spring controlled slide carrying the coupled switch points, and provided with a slot, a vertically and horizontally displaceable block at one side of the track within the slot of said slide having an inclined upper face and a shoulder provided with a slot having an inclined face for operatively engaging said slide, means for allowing an elastic displacement of said block in horizontal and vertical direction, said inclined face being adapted to be engaged by an actuating member at the head of a train for throwing the switch, a notch in said block adapted to engage said slide for locking the switch in its thrown position and a second block at the same side of the track but at a greater distance from the same than said first named block, having an inclined upper face, means engaging said first named block and connected to said second block adapted to be operated by the operation of said second block through the actuating member upon the rear end of a train for releasing said switch.

4. A switch operating device of the character described, comprising a spring controlled slide carrying the switch points and provided with a slot, vertically and horizontally displaceable means in juxtaposition to the track within said slot, adapted to be operated by actuating organs at the head of a train traveling in one direction for throwing said switch, means for locking the switch in its thrown position, means for releasing said switch adapted to be operated by actuating organs at the rear of the same train, and deflectors juxtaposed to said switch throwing and releasing means for throwing the actuating organs at the head and rear end of a train out of operation during the travel of said train in the opposite direction upon the main line when the wheel flanges serve as switch point operating means, substantially as described.

5. In a device of the character described, two movable blocks adapted to be operated by actuating organs at the head and rear end of a train, in juxtaposition to the track, one of said blocks closer to said track than the other, springs for elastically supporting said block and allowing a movement of the same in vertical direction, a spring secured to one of said blocks for elastically displacing the same in horizontal direction, a bell crank lever connecting both blocks for releasing the block operated by the actuating organ at the head of the train upon its operation by the actuating member at the rear end of the train, means for throwing the switch upon the operation of one of said blocks and for locking the same in its thrown position, and means for unlocking and returning said switch into its normal position upon the operation of the second of said blocks, substantially as described.

[Claim 6 not printed in the Gazette.]

1,106,275. TREATMENT OF PEAT FOR MANURIAL AND OTHER PURPOSES. WILLIAM BEECROFT BOTTOMLEY, London, England. Filed July 15, 1913. Serial No. 779,168. (Cl. 71—10.)

1. A process of treating peat which consists in adding to the moist peat aerobic micro-organisms capable of producing ammonia and allowing these micro-organisms to multiply in the peat.

2. A process of treating peat which consists in adding to the moist peat aerobic micro-organisms capable of producing ammonia and nitrogen-fixing micro-organisms and allowing the said micro-organisms to multiply in the peat.

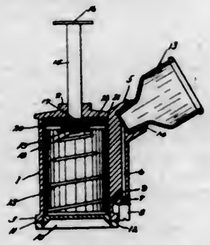
3. A process of treating peat which consists in adding to the peat water containing ammonia-fixing micro-organisms and drying the material after some days.

4. A process of treating peat which consists in adding to the peat water containing ammonia-fixing micro-organisms and nitrogen-fixing micro-organisms and drying the material after some days.

5. A process of treating peat which consists in adding to the peat water containing ammonia-fixing micro-organisms, then sterilizing the material and adding to it nitrogen-fixing micro-organisms.

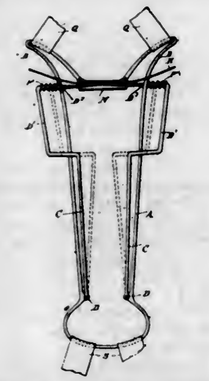
[Claims 6 and 7 not printed in the Gazette.]

1,106,276. HAND MASSAGE DEVICE. HERBERT B. BRADSHAW, Columbus, Ohio, assignor to Charles M. Siebert, Jr., and Louis A. Siebert, Columbus, Ohio. Filed July 12, 1911. Serial No. 638,178. (Cl. 128—9.)



A hand massage device comprising a casing, a cylinder in said casing, an integral formation thereon having a vertical suction passage leading from said cylinder, said formation having a socket formed therein with which the said suction passage communicates, a reciprocable piston in said cylinder, a removable plug forming one end of said cylinder, a clean-out trap in the said suction passage near its point of communication with said cylinder, and a plug threaded into said trap and removable for cleaning the same.

1,106,277. ANIMAL-TRUSS. HENRY ARTHUR BROWN, Antwerp, N. Y. Filed Oct. 22, 1913. Serial No. 796,703. (Cl. 128—27.)



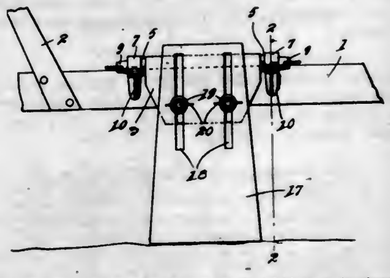
1. An animal truss comprising a frame and means for attaching same to an animal, movable members upon said frame, and means for actuating the members, as the animal to which the device is attached is under strain incident to an evacuation, whereby the members may be so positioned, as to prevent an inversion of the womb of the animal, as set forth.

2. An animal truss, comprising a frame and means for attaching same to an animal, spring pressed members upon the frame, and means for actuating the members, as the animal, to which the device is attached is under strain incident to an evacuation, whereby the members may be so positioned as to prevent an inversion of the womb of the animal, as set forth.

3. An animal truss, comprising a frame having curved extensions at one end thereof, designed to engage on either side of the tail of an animal, means for attaching the frame to the animal, pivotal spring actuated members upon the frame, and cords attached to said members and to the frame securing means, and so arranged that, when the animal is under strain, incident to making an evacuation, said members will be drawn toward each other, and tend to prevent an inversion of the womb of the animal, as set forth.

4. An animal truss comprising a frame with projections at one end thereof designed to engage on either side of the tail of the animal, bent rods pivoted to said frame, means for attaching the frame to the animal, springs interposed between the bent portions of the rods and the frame, and cords attached to said members, and to the frame securing means, as set forth.

1,106,278. PLOW-FENDER. CADWELL L. BRUMFIELD, Sunny Hill, La. Filed Sept. 18, 1913. Serial No. 790,471. (Cl. 97—13.)



A pair of U-shaped clamps each having a horizontally disposed integral arm, a binding screw extending through each clamp for connecting and disconnecting the clamp to and from a plow beam, a supporting plate provided with angularly disposed lugs having perforated bosses adjustably pivoted to the integral arms of the clamps, said supporting plate being disposed between said arms and extending at an angle thereto, and a fender plate adjustably secured to said supporting plate.

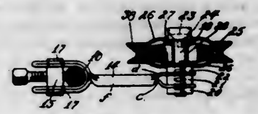
1,106,279. HAND-RAIL COLUMN. CHARLEY J. BURROWS, Parsons, Kans. Filed Apr. 19, 1913. Serial No. 762,290. (Cl. 248—36.)



A column for supporting a locomotive hand rail comprising a base, a column rising from the base and having a split head, one part of the head being integrally formed with the column, a pivot swingingly connecting the other part thereto, a boss formed on the column, a split ear formed on the movable part of the head, a threaded lug permanently engaged in the boss and adapted to be passed into the bifurcation in the ear, a nut detachably engaged on the lug for locking the two parts of the head together, and abutment walls formed on the two parts of the head at one end thereof for engagement with the end of the rail to prevent the sliding of the same through the head.

1,106,280. TENSION DEVICE FOR SPINNING-FRAMES. ROBERT GRANVILLE CARLE, Woonsocket, R. I. Filed Dec. 10, 1913. Serial No. 805,823. (Cl. 248—30.)

1. In a tension device for spinning frames, a bracket for supporting a pulley formed of a single piece bent upon itself with a bifurcated end formed from the doubled portion, said bifurcated end having alining openings, a nut in said openings, and a set screw passing through the nut, the free ends of the metal piece forming the bracket being separated and having openings, substantially as described.

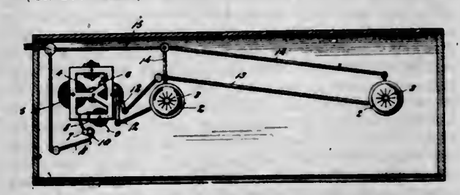


2. In a tension device for spinning frames, a bracket for supporting a pulley formed of a single piece bent upon itself with a bifurcated end formed from the doubled portion, said bifurcated end having alining openings, a nut in said openings, and a set screw passing through the nut, the free ends of the metal piece forming the bracket being separated and having openings, the two portions of the metal piece being held together by a part of one portion engaging the other portion, substantially as described.

3. In combination in a tension device for spinning frames, a bracket formed of a metal piece doubled upon itself and with its free ends separated, a pin passing through openings in the said free ends, a nut on the pin between the free ends adapted to support a pulley, a nut on the pin outside the free ends, substantially as described.

4. In combination in a tension device for spinning frames, a pivoted bracket consisting of a metal piece having an integral depending journal, and having a bifurcated end consisting of an extension folded to a position opposite the end of the main part, said bifurcated end being perforated, a sheave pin held in said openings, a stud or rivet in line with the journal extension, and a bracket having upper and lower members receiving the journal extension and the rivet, substantially as described.

1,106,281. TIME-SWITCH. MICHAEL CHIAVETTA, New York, N. Y. Filed Apr. 19, 1913. Serial No. 762,292. (Cl. 177—346.)

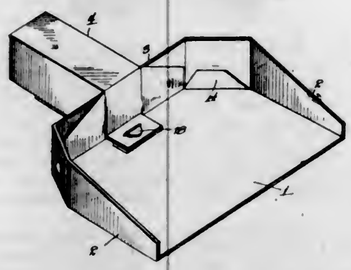


The combination with an electric circuit and a number of lamps connected in multiple therewith, of a time switch located in said circuit and controlling said lamps, said switch comprising a clock gear train, contacts each connected to one side of one of the lamps and disposed in the path of movement of the spokes of one of the wheels of said gear train, said contacts being spaced apart whereby in the movement of the respective gear wheel the flow of current to the lamps will be interrupted and the lamps intermittently illuminated successively, a binding post connected in said circuit, a movable contact under the control of said gear train and normally held in engagement with said binding post, and a power spring for swinging said movable contact out of engagement with said binding post, to break said circuit.

1,106,282. DUST-PAN. WILLIAM E. COATS, Firesteel, S. D. Filed Sept. 8, 1913. Serial No. 788,636. (Cl. 65—20.)

1. A carton shaped to form a dust pan and comprising a sheet of material laterally scored to form side flaps and each side flap being scored to form back flaps, said sheet being scored to form side locking flies and a pan back

thereby forming a pan base, the sides having slits for engagement with said locking flies, a handle extension projecting from the pan back and being longitudinally scored to be folded transversely of its longitudinal axis to form a handle, the top of said handle being connected with the pan back at the line of score forming the juncture thereof, and a bottom portion of said handle being locked to the pan base and against the rear face of the pan back, substantially as described.



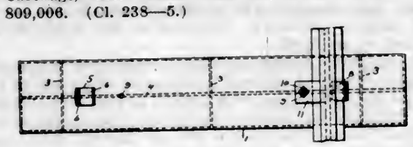
2. A dust pan formed of a folded sheet of material and comprising a pan base, sides and back, the pan back having an extension scored to be folded into a handle on score lines longitudinally of the axis of the handle, one portion of the handle being locked to the pan base and against the pan back, substantially as described.

3. A dust pan formed of a folded sheet of material and comprising a pan base, sides and back, the pan back having an extension scored off from the upper margins thereof and the extension being scored to form a rectangular handle adapted to be folded transversely of its longitudinal axis to form top side and bottom sections with the handle hinged to the back at the score juncture of the top section with the back, the margins of the side sections abutting the back and the bottom section being locked to the pan base, substantially as described.

4. A carton shaped to form a dust pan and comprising a sheet of material laterally scored to form side flaps, each side flap being scored to form corner sections and back flaps, said sheet being scored to form side locking flies and a pan back thereby forming a pan base, a handle extension projecting from the pan back and being longitudinally scored to form top, side and bottom handle sections, the bottom handle sections having locking slits for holding the same in overlapping locked relation, said pan back having a retaining slit and said base having a locking tongue and slot, and one of said bottom handle sections having a projecting end for insertion through said retaining slit and provided with a tongue slit for locking-engagement with said locking tongue on said pan base, the other of said bottom sections having a retaining end for projection through said tongue slot, said corner sections having slits for engagement with said locking flies and the back flaps being disposed between said pan back and said handle, substantially as described.

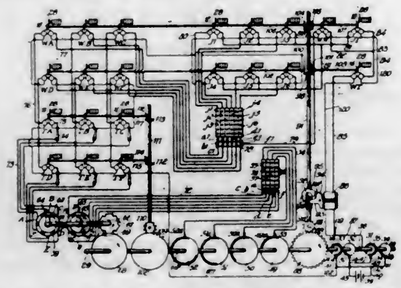
5. A carton shaped to form a dust pan and comprising a sheet of material laterally scored to form side flaps, each side flap being scored to form corner sections and back flaps, said sheet being scored to form side locking flies and a pan back thereby forming a pan base, a handle extension projecting from the pan back and being longitudinally scored to form top side and bottom handle sections, the bottom handle sections having locking slits for holding the same in overlapping locked relation, said pan back having a retaining slit and said pan-base having a locking tongue and slot, and one of said bottom handle sections having a projecting end for insertion through said retaining slit and provided with a tongue slit for locking-engagement with said locking tongue on said pan base, said corner sections having slits for engagement with said locking flies and the back flaps being disposed between said pan back and said handle, substantially as described.

1,106,283. RAILWAY - TIE. MYRON T. CRITTENDEN, Carthage, Mo. Filed Dec. 27, 1913. Serial No. 809,006. (Cl. 238—5.)



A rail tie consisting of a rectangular metallic casing being filled with concrete, a reinforcing rod extending longitudinally through the casing in line with the longitudinal center thereof at a point approximately centrally thereof, said rod secured at its ends to the ends of the casing, transverse rods extending through the casing at points at the center and adjacent to the ends thereof and rail clamping means formed upon the upper face of the casing.

1,106,284. ACCOUNTING SYSTEM. WILLIAM J. CRUMPTON, Evanston, Ill., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed June 28, 1909. Serial No. 504,655. (Cl. 235—92.)



1. In combination, a plurality of wage registers, mechanical means for actuating said registers, electromagnetic means associated with each register for operatively connecting each register with said actuating means, means for successively energizing said connecting means of said registers for periods of time proportional to predetermined rates of wages, a total register, electromagnetic means for connecting said total register with said actuating means, and means for energizing said connecting means on the energization of the connecting means of any of the individual registers.

2. In combination, a plurality of accounting registers, common means for actuating said registers, electrical means associated with each register for intermittently connecting said register with said actuating means, and means for periodically disconnecting said register from said actuating means.

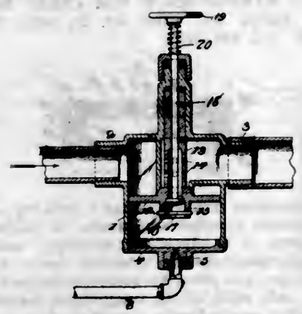
3. In combination, a plurality of accounting registers, a shaft for actuating said registers, a clutch for each of said registers, said clutch adapted to engage said register with said shaft, electromagnetic means for engaging said clutch with said register, and electromagnetic means for periodically disengaging said clutch from said register.

4. In an accounting system, a wage register, a job register, a mechanical source of power for actuating said registers, electromagnetic means associated with each register for mechanically connecting said register with said source of power, and means for electrically joining said electromagnetic connecting means, thereby causing simultaneous actuations of said wage and said job registers.

5. In an accounting system, a plurality of wage registers, a plurality of job registers, a source of mechanical power for actuating said registers, electromagnetic means associated with each register for mechanically connecting said register with said source of power, means for electrically connecting any of said wage registers with any of said job registers, and means for successively energizing the electromagnetic connecting means associated with said wage registers.

[Claims 6 to 43 not printed in the Gazette.]

1,106,285. FLUSHING DEVICE. CHARLES W. DARROW, Glenwood Springs, Colo. Filed Aug. 8, 1912. Serial No. 714,077. (Cl. 137—93.)

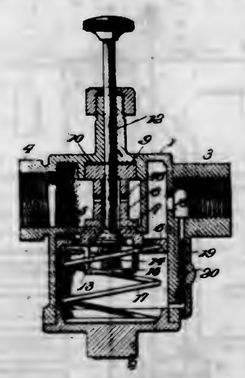


1. In combination with a water supply pipe, a flushing device comprising a casing having an inlet and an outlet, said inlet being connected to said supply-pipe, said outlet having a centrally-arranged tubular portion terminating at its lower end in a valve seat, such valve seat being beneath the plane of the inlet and the plane of the outlet, a valve having a peripheral enlargement of disk-like formation normally held against said seat by water pressure within said casing beneath said valve acting on its lower face, said valve being subjected to water pressure on both its upper and lower faces both when seated and unseated, a by-pass leading from said supply pipe to said casing independent of the inlet to supply water to act directly against the lower face of said valve to hold it seated, a second valve normally seated in the first mentioned valve centrally of said tubular portion, a push rod extending downwardly through said tubular portion for operating said second valve, and a stop depending from the under face of the first valve and with which said second valve may engage for effecting the unseating of said first valve.

2. In combination with a water supply pipe, a flushing device comprising a casing having an inlet and an outlet, said inlet being connected to said supply-pipe, said outlet having a centrally-arranged tubular portion terminating at its lower end in a valve seat, said valve seat being beneath the plane of the inlet and the plane of the outlet, a valve having a peripheral enlargement of disk-like formation normally held against said seat by water pressure within said casing beneath said valve acting on its lower face, said valve being subjected to water pressure on both its upper and lower faces both when seated and unseated, a by-pass leading from said supply-pipe to said casing independent of the inlet to supply water to act directly against the lower face of said valve to hold it seated, a second valve normally seated in the first mentioned valve centrally of said tubular portion, a push rod extending downwardly through said tubular portion for operating said second valve, a sleeve extending upwardly from said first valve through said tubular portion of the outlet, said sleeve having escape ports therein opening into said outlet, and a stop depending from the under face of the first valve and with which said second valve may engage for effecting the unseating of said first valve.

1,106,286. FLUSHING DEVICE. CHARLES W. DARROW, Glenwood Springs, Colo. Filed Jan. 2, 1914. Serial No. 809,066. (Cl. 137—93.)

1. A flushing device comprising a casing having a water-chamber, an inlet, an outlet and a port intermediate said inlet and outlet, a balance valve for closing said port, said valve being in the form of a metallic disk having at its center a cylindrical portion of slightly less cross sectional area than said port and designed to extend through the latter before said valve is seated, said valve being subjected to water pressure on both sides both when seated and unseated, a by-pass connecting said water-chamber with said inlet, a second valve controlling a passageway through said balance valve between said water-chamber and said outlet, a main spring in said water chamber for moving said balance valve to its seat, and a second spring for moving said second valve to its seat.



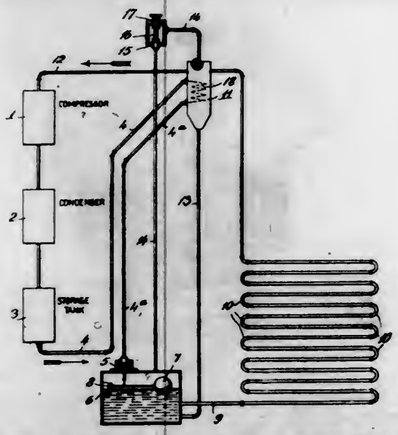
2. A flushing device comprising a casing having a water-chamber, an inlet, an outlet and a port intermediate said inlet and outlet, a balance valve for closing said port, said valve being in the form of a metallic disk having at its center a cylindrical portion of less cross sectional area than said port and designed to extend into the latter before said valve is seated, said valve being subjected to water pressure on both sides both when seated and unseated, a cylindrical sleeve carried by said cylindrical portion and having its outer end formed with a cushioning head, said casing having a recess into which said head is designed to move as said balance valve is moved toward its seat, an actuating valve for controlling a passageway from said water-chamber through said balance valve to said outlet, and a by-pass connecting said water-chamber with said inlet.

3. A flushing device comprising a casing having a water-chamber, an inlet, an outlet and a port intermediate said inlet and outlet, said inlet being throttled or reduced at its inner end, and said casing having a recess in line with said port, a balance valve for closing said port, said valve being in the form of a metallic disk having a cylindrical portion designed to extend through said port, a sleeve carried by said cylindrical portion and having a cushioning head designed to move into said recess as said balance valve is moved toward its seat, an actuating valve for controlling a passageway between said water-chamber and said outlet through said balance valve and said sleeve, and a by-pass connecting said water-chamber with said inlet at a point outside of the throttled portion thereof.

4. A flushing device comprising a casing having a water-chamber, an inlet, an outlet and a port intermediate said inlet and outlet, said inlet being throttled or reduced at its inner end and said outlet and said port being of greater cross sectional areas than said inlet, said casing having a recess in line with said port, a balance valve subjected to water pressure on both sides both when seated and unseated, said valve being in the form of a metallic disk having a cylindrical portion designed to extend through said port, a sleeve carried by said cylindrical portion and having a cushioning head designed to move into said recess as said balance valve is moved toward its seat, said sleeve having perforations forming continuations of a passageway through said valve connecting said water-chamber with said outlet, an actuating valve designed to close said passageway, a spring carried

by said balance valve for holding said actuating valve to its seat, a main spring in said water-chamber acting against said balance valve, and a by-pass connecting said water-chamber with said inlet at a point outside the point at which said inlet is throttled.

1,106,287. REFRIGERATING APPARATUS. LOUIS K. DOELLING, New Rochelle, N. Y. Filed Feb. 28, 1911. Serial No. 611,528. (Cl. 62—6.)



1. In a refrigerating apparatus, a refrigerating coil and suction line for removing expanded refrigerant therefrom, in combination with a liquid reservoir to supply the coil, means for admitting liquid refrigerant thereto at a higher pressure than the suction line pressure and an automatically operable pressure communication between the suction side of the said coil and the reservoir.

2. In a refrigerating apparatus, a liquid reservoir, means for supplying liquid refrigerant thereto, means for automatically controlling the supply of such liquid to the reservoir at a rate equivalent to the rate of outflow therefrom, and automatically acting independent means for controlling the pressure in the reservoir, in combination with a refrigerating coil supplied by the reservoir, and a suction line connected to the upper part of the coil and also connected to said automatically acting means.

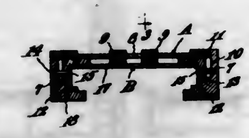
3. In a refrigerating apparatus, a liquid reservoir, means for supplying liquid refrigerant thereto and means for automatically admitting such liquid to the reservoir at a rate equivalent to the rate of outflow therefrom, a refrigerating coil supplied by the reservoir, a suction line connected to the coil, and a normally restricted gas communication between the suction line and reservoir, comprising valve parts suitably organized and tending to maintain a substantially constant difference of pressure therebetween.

4. In a refrigerating apparatus, a liquid reservoir and admission valve therefor, means controlling said valve for automatically admitting liquid refrigerant to said reservoir at a rate equal to the rate of outflow therefrom and automatically acting independent means for controlling the pressure in the reservoir, in combination with a refrigerating coil supplied with liquid from the reservoir, a gas and liquid separator distinct from said reservoir connected to the discharge of the coil, a gas suction line from the coil connected with the separator and also connected to said automatically acting means, and a drain line leading from the separator to the reservoir.

5. In a refrigerating apparatus, a liquid reservoir having an admission valve with means for automatically controlling the same to admit liquid at a rate equal to the rate of outflow from the reservoir, in combination with a refrigerating coil supplied with liquid from the reservoir, a gas and liquid separator connected to the discharge of the coil, a suction line connected with the separator, a liquid drain line adapted to return liquid from the separator to the coil and a normally restricted pressure communication between the suction line and the reservoir adapted to maintain a substantially constant difference of pressure therebetween.

[Claims 6 to 14 not printed in the Gazette.]

1,106,288. BANANA-RACK FOR CARS. BURNLEY S. DUFFY, Elkton, Ky. Filed Oct. 23, 1913. Serial No. 796,939. (Cl. 105—77.)



1. A telescoping rack comprising a plurality of sections, the first section provided with means for hingedly securing the same to a supporting structure, said sections formed with longitudinally extending beams with upper inlying flanges, and inwardly extending stepped base portions, the side walls of the longitudinal beams provided with outlying longitudinally extending slots, outstanding pins carried by the longitudinal beams of the second section and slidably engaging the slots in the longitudinal beams of the first section, and a plurality of longitudinal and cross strips carried by said beams defining a reticulated surface therewith.

2. A rack comprising longitudinal beams with upper inlying flanges and inlying stepped base portions, said beams provided with longitudinal slots intermediate the said flange and base, a second rack slidably disposed within the first mentioned rack and including longitudinal beams with inlying upper flanges and inlying stepped base portions, the bases of the beams of the first and second racks held in sliding relation, the longitudinal beams of the second mentioned rack provided with outlying pins engaging the longitudinal slots in the first mentioned longitudinal beams, and a plurality of longitudinal and cross strips carried by the said longitudinal beams and defining a reticulated surface.

1,106,289. CARBON FUEL. JACOB FRANKLIN DYMOND, Uniontown, Pa. Filed Dec. 30, 1912. Serial No. 739,391. (Cl. 44—2.)

A carbon fuel made up of the following ingredients and in the proportions set forth: charcoal two hundred parts, ten parts each of barium and strontia nitrate, to five parts each of lead nitrate, potassium nitrate and potassium chlorate and formed into suitable sticks or briquets.

1,106,290. PROCESS OF PRODUCING ISOPRENE. RICHARD BLAIR EARLE and LUCAS PETRON KYRIAKIDES, Boston, Mass., assignors to Hood Rubber Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 11, 1911, Serial No. 659,825. Renewed Sept. 25, 1913. Serial No. 791,858. (Cl. 23—24.)

1. A process for producing isoprene, which comprises passing the vapors of methylisopropylketone over a heated dehydrating catalytic agent and separating the isoprene formed from the other products.

2. A process of producing isoprene, which comprises passing the vapors of methylisopropylketone over a dehydrating catalyst heated to between 400° and 600° C. and separating the isoprene formed from the other products.

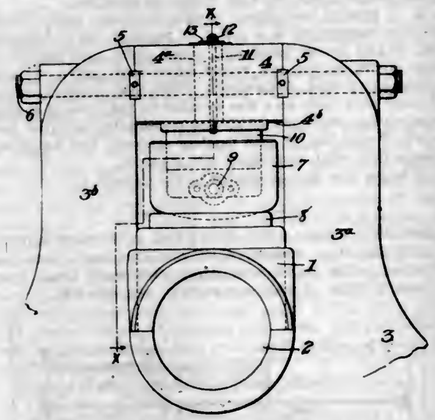
3. A process of producing isoprene, which comprises passing the vapors of methylisopropylketone over heated aluminum silicate and separating the isoprene formed from the other products.

4. A process of producing isoprene which comprises passing the vapors of methylisopropylketone over a heated dehydrating catalyst at less than atmospheric pressure.

5. A process of producing isoprene which comprises passing the vapors of methylisopropylketone over heated aluminum silicate at less than atmospheric pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,106,291. SUGAR-CANE MILL. ARTHUR FREDERICK EWART, Honolulu, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Nov. 7, 1913. Serial No. 799,716. (Cl. 100—47.)



1. In a sugar-cane mill, a housing, a top bearing adapted to move up and down beetween the jaws of said housing, a distance-piece secured between the said jaws, a hydraulic jack operating between the said top bearing and the said distance-piece, and means for adjustably clamping the plunger of the said jack to the distance-piece, substantially as and for the purpose described.

2. In a sugar-cane mill, a housing, a top bearing adapted to move up and down with the movement of the upper roller in the upper gap of the housing, a distance-piece secured between the jaws forming said gap, a hydraulic jack operating between the top bearing and the distance-piece, means for clamping the plunger of the said jack to the said distance-piece in any one of various positions, and means for guiding said plunger to insure alinement, substantially as and for the purpose described.

3. In a sugar-cane mill, a housing, a distance-piece between the jaws of the housing, keys and bolts for removably securing the distance-piece in place, and a hydraulic jack plunger provided with a groove adapted to fit a tongue on the bottom of the distance-piece, for the purpose described.

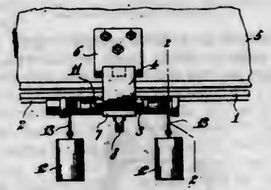
4. In a sugar-cane mill, a housing, a distance-piece between the jaws of the housing, keys and bolts for securing the distance-piece to the housing, and a hydraulic jack plunger provided with a tongue adapted to fit a groove in the bottom of said distance-piece, for the purpose described.

5. In a sugar cane mill, a housing, a top bearing adapted to move up and down between the jaws of said housing, a distance piece secured between the said jaws, a hydraulic jack operating between the said top bearing and the distance piece, said jack comprising a cylinder and a cooperating plunger, one of the same being adjustably carried by said distance piece.

1,106,292. LOCK. WILLIAM FIELDS, Trenton, N. J. Filed Sept. 12, 1913. Serial No. 789,539. (Cl. 94—7.)

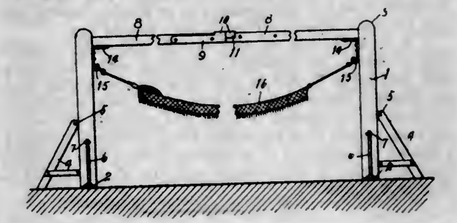
1. In a device of the class described, the combination with a door frame and a door, of hinge members secured to the frame and the door, an intervening curved arm member connected to said hinge members and pivoted to one of them and means carried by one of the hinge members for locking the arm member against movement.

2. In a device of the class described, the combination with a door frame and a door, of hinge members secured to the frame and the door, an intervening curved arm member connected to said hinge members and pivoted to one of them, means carried by one of the hinge members for locking the arm member against movement, and means connected to the arm member and adapted to raise the hinge member on the door and the door when the locking means is released.



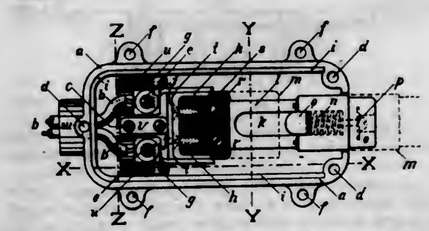
3. In a device of the class described, the combination with a support and a door, of hinge members secured to the support and the door, a curved arm member pivoted to each of the hinge members and adapted to turn the door over the support, means for locking the arm member against movement and means for pivoting the arm member upon one of the hinge members when the locking means is released.

1,106,293. FOLDING HAMMOCK-FRAME. BASIL L. FOGLE, Boyd, Ky. Filed Feb. 16, 1914. Serial No. 818,983. (Cl. 5—32.)



The hereindescribed folding hammock supporting frame comprising upright posts, braces hinged to said posts, a sectional connecting bar hinged at its outer ends to said posts, and means for detachably connecting the inner ends of the sections of said connecting bar, said means comprising overlapping contacting clasps pivoted to said sections, and hooks connected to said posts underneath the sectional connecting bar.

1,106,294. ELEVATOR-DOOR SAFETY DEVICE. EMORY M. FRASIER, San Francisco, Cal., assignor of one-third to George B. Seaman and one-third to Agnes D. Seaman, San Francisco, Cal. Filed Oct. 21, 1911. Serial No. 656,050. (Cl. 177—203.)

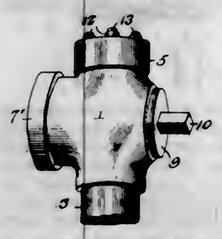


1. A safety switch for elevator doors, including an inclosed base; a pair of insulated contacts fixed on said base; a post extending above the plane of said base; a plunger having a slot engaging said post; a contactor mounted on said plunger in alinement with said fixed

contacts; and a spring interposed between said post and the end of the slot in said plunger.

2. A safety device for elevator doors including, a base; a pair of insulated contacts fixed on said base; an insulated block having a wiping contact plate thereon slidable between said contacts; a plunger fixed to said insulation block; a slot in said plunger; a post on said base extending through said slot; and a spring interposed between said post and the end of said slot.

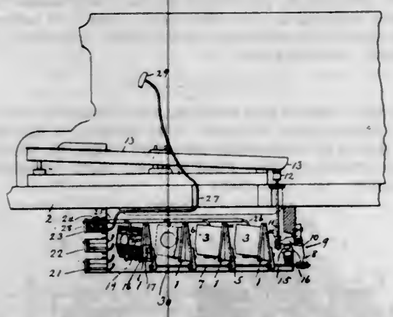
1,106,295. DEVICE FOR CAPPING OIL AND GAS WELLS. FRED S. GAIL, Cody, Wyo. Filed Sept. 23, 1913. Serial No. 791,407. (Cl. 166—15.)



1. A terminal cap for well casings including a hollow body arranged for threaded connection with the casing, said body being formed to provide a valve receiving opening disposed transversely the bore of the body, a manually operable valve adapted to close said opening, the end of the body remote from the casing being exteriorly threaded, a sealing cap designed to be applied thereto, and pipe receiving nipples carried by said sealing cap.

2. A terminal cap for well casings including a hollow body arranged for threaded connection with the casing, said body being formed to provide a valve receiving opening disposed transversely the bore of the body, a manually operable valve adapted to close said opening, the end of the body remote from the casing being exteriorly threaded, a sealing cap designed to be applied thereto, pipe receiving nipples carried by said sealing cap, and plugs adapted to close said nipples.

1,106,296. MUSICAL-INSTRUMENT SELF-PLAYING DEVICE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Dec. 26, 1912. Serial No. 738,574. (Cl. 84—233.)



1. A musical instrument having a keybed, and vertical striker pneumatics in a series of parallel rows longitudinal of and in one horizontal plane under said keybed.

2. A musical instrument having a keybed, and vertical striker pneumatics in a series of parallel rows longitudinal of and in one horizontal plane under said keybed, said striker pneumatics having a hinge to each, and each said hinge being at the top of its striker pneumatic.

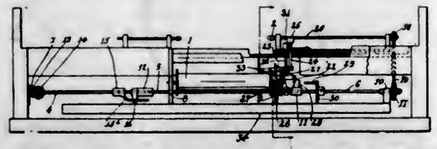
3. A musical instrument having a keybed, and vertical striker pneumatics in a series of parallel rows longitudinal of and in one horizontal plane under said keybed, and a connecting means extended horizontally from a moving part of each said striker to a common line of the other ends of said means.

4. A musical instrument having a keybed, and vertical striker pneumatics in a series of parallel rows longitudinal of and in one horizontal plane under said keybed, said striker pneumatics having a hinge to each, and each said hinge being at the top of its striker pneumatic, and a connecting means extended horizontally from a moving part of each said striker to a common line of the other ends of said means, said connecting means lying in a horizontal plane beneath said rows of striker pneumatics.

5. A musical instrument having a keybed, and vertical striker pneumatics in a series of parallel rows longitudinal of and in one horizontal plane under said keybed, a tone-producing musical action above said table, vertical stickers extended downwardly from said musical action through said table on a line parallel to the rows of striker pneumatics, said rows of striker pneumatics being all forward of said line of said vertical stickers, and actuating means from said strikers to said stickers.

[Claims 6 to 28 not printed in the Gazette.]

1,106,297. MUSIC-ROLL WINDING AND REWINDING APPARATUS. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Nov. 3, 1913. Serial No. 798,871. (Cl. 84—166.)



1. In a music-roll winding apparatus: a take-up spool adapted to wind a music sheet and having a horizontal axis, and a gear therewith, a slide-shaft parallel with and adjacent to said spool, a pinion on said slide-shaft, shift means engaged with and adapted to move said slide-shaft longitudinally of its axis together with said pinion to and from engaged and free positions of said pinion with said gear, a longitudinally stationary drive-shaft in axial alinement with said slide-shaft at one end of said slide-shaft, clutch means revolubly engaging said shafts to each other at their adjacent ends but free for longitudinal motion of said slide-shaft, a rewind shaft in axial alinement with said slide-shaft at the other end of said slide-shaft, clutch means adapted to revolubly engage said slide-shaft to said rewind-shaft when said slide-shaft and its pinion are disengaged from the take-up spool and gear, and means on said rewind-shaft for effecting the operation of mechanism to rewind such music sheet from said take-up spool when said rewind-shaft is so revolubly clutched with said slide-shaft.

2. In a music-roll winding apparatus: a take-up spool having a gear therewith, a shaft parallel to the axis of said spool and divided into three sections as to its length, and couplings connected to the two adjacent ends of each pair of said sections of shaft, one end section and the middle section of said shaft having a constant drive, and the third section having optional drive, the middle section of said shaft having a pinion therewith and adapted to be moved longitudinally, and means for longitudinally moving said middle section of said shaft to a position of said longitudinal movement engaging said pinion with said gear, and to alternatively move said middle section of said shaft to a position of disengagement of said pinion and gear, and coupling means engaged by said movement to revolubly couple said middle section to the optionally revoluble third section, said third section having means for rewinding a music roll when so coupled.

3. In a music-roll winding apparatus: a horizontally disposed take-up spool, a shaft parallel with said spool, said shaft being in three sections as to its length, its middle section lying adjacent the lengthwise dimension of said spool, couplings between said sections, and shifting means engaging said middle section and adapted to shift said section in direction of its length, and means to revolubly engage said middle section with said spool at one position of its said lengthwise movement, means combined with an end section of said shaft for effecting the rewinding of a music-sheet from said spool, and means to revolubly engage said middle section to said rewind section at another position of the lengthwise movement of said middle section.

4. In a music-roll winding apparatus: a take-up spool, a shaft parallel to the axis of said spool, said shaft being of three sections in one axial line with couplings between the sections adapted to allow change of relation of said sections as to lengthwise position and revolution, the middle section being movable in direction of its length, and means to revolubly engage said middle section with said spool at one position of the said lengthwise movement of said middle section.

5. In a music-roll winding apparatus: a take-up spool, a shaft lying adjacent to said spool and parallel to the axis of said spool, means to shift said shaft in direction of its length, means to revolubly engage the shaft with said spool at one position of said movement of said shaft and to be free of said revoluble engagement at another position of said movement, another shaft in axial alinement and revolubly engaged with one end of said first shaft at all times, and drive means to revolve both said shafts together, and a third shaft in axial alinement and engagement with said first shaft at its other end, and means revolubly engaging said third shaft with said first shaft only when said first shaft is free of revoluble engagement with said spool.

[Claims 6 to 11 not printed in the Gazette.]

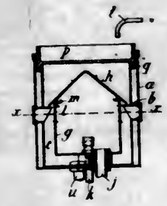
1,106,298. COLORED CEMENT STRUCTURE AND PROCESS OF MAKING SAME. HENRY A. GARDNER, Washington, D. C. Filed Oct. 30, 1913. Serial No. 798,351. (Cl. 106—24.)

1. The process of making colored cement structures which consists in intimately commingling a pigment, an aqueous solution of a resin soap, and a calcareous cementitious material, and permitting the mass to harden.

2. The progress of making colored cement structures, which consists in compounding a pigment with an aqueous solution of a resin soap, incorporating the resulting mixture with a cement or concrete in proportion to impart the desired color, and permitting the mass to harden.

3. A colored cement structure comprising a calcareous cementitious material, a pigment, and the reaction products of a water-soluble resin soap with said cementitious material.

1,106,299. VAPORIZING DEVICE FOR WEAVING APPARATUS. LOUIS EMILE ANDRÉ GILLIER, Troyes, France. Filed Oct. 27, 1913. Serial No. 797,699. (Cl. 28—7.)



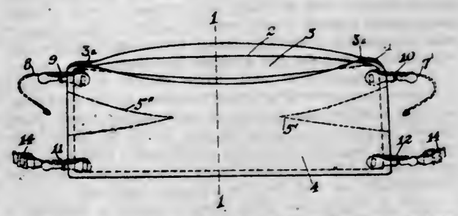
1. In a device for treating threads with vapor, a vaporizing chamber, a steam supply pipe projecting into the said chamber, a roof having a double slope with eaves outside two walls of the said chamber, gutters on the inner edges where the roof meets the said walls, large openings in the said walls for affording a passage for the thread, and means for circulating water about said chamber insuring condensation of steam.

2. In a device for treating threads with vapor, a vaporizing chamber, a steam supply pipe projecting into the said chamber, a roof having a double slope with eaves outside two walls of the said chamber, gutters on the inner edges where the roof meets the said walls, large openings in the said walls for affording a passage for the thread, a casing surrounding the said chamber, a cupped cover closing the said casing, a discharge pipe in the bottom of the chamber and of the said casing, and means for circulating water about said chamber insuring condensation of the steam.

3. In a device for treating threads with vapor, a vaporizing chamber, a steam supply pipe projecting into the said chamber, a roof having a double slope with eaves outside two walls of the said chamber, gutters on the inner edges where the roof meets the said walls, large openings in the said walls for affording a passage for the thread, a casing surrounding the said chamber, a cupped cover closing the said casing, a discharge pipe passing through the bottom of the chamber and of the said casing, a second casing surrounding the first casing for forming with the latter a refrigerating chamber, pipes passing horizontally through the walls of the first and second casing and located opposite openings in the walls of the vaporizing chamber, covers outside for closing the said pipes, openings in the covers for the passage of the thread, and means for circulating water in the refrigerating chamber.

4. In a device for treating threads with vapor, a vaporizing chamber, a steam supply pipe projecting into the said chamber, a roof having a double slope with eaves outside two walls of the said chamber, gutters on the inner edges where the roof meets the said walls, large openings in the said walls for affording a passage to the thread, a casing surrounding the said chamber, a cupped cover closing the said casing, a discharge pipe passing through the bottom of the chamber and of the said casing, a second casing surrounding the first casing for forming therewith a refrigerating chamber, pipes passing horizontally through the walls of the first and second casing and located opposite openings in the walls of the vaporizing chamber, covers outside for closing the said pipes, openings in the covers for the passage of the thread, conduits in the cup-shaped cover for admitting water into the refrigerating chamber, openings in the cover and in the wall of first casing for the passage of water and a discharge pipe in the bottom of the first and second casings.

1,106,300. TOILET DEVICE. GEORGE E. GRAHAM, Candor, N. Y., assignor to William J. Payne, Candor, N. Y. Filed Jan. 20, 1912. Serial No. 672,449. (Cl. 128—3.)



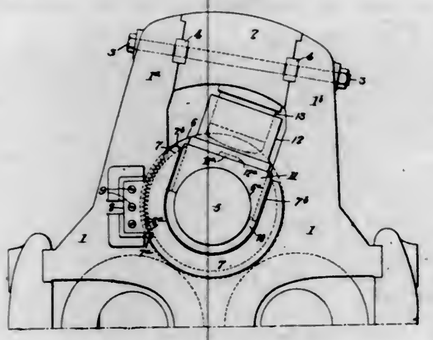
1. A toilet device of the class described comprising an oblong absorbent envelop with a mouth shorter than the side in which it is formed and end folding gore markings and a non-absorbent envelop adapted to line, and to extend beyond the ends of the mouth of said absorbent envelop.

2. A combined wash-cloth and beard-softener comprising an oblong absorbent envelop with a mouth shorter than the side in which it is formed and end folding-gore markings, a non-absorbent and non-conducting envelop adapted to line, and to extend beyond the ends of the mouth of said absorbent envelop, and attachably and adjustably connected with said absorbent envelop, a pair of ear hooks and an elastic band.

3. A toilet device of the class described comprising an absorbent envelop formed by folding a cloth, sewing its ends and short distances inwardly therefrom along its mouthed side and marking end folding gores upon its sides, and a non-absorbent envelop adapted to line said absorbent envelop and to be retained therein by extending beyond the ends of the mouth thereof.

4. In a toilet device of the class described the combination of an absorbent envelop formed by folding an oblong piece of Turkish toweling, sewing its ends and relatively short distances inwardly therefrom along its mouthed side to form a mouth substantially centrally located in and shorter than said side, said inwardly-extended joining adapted to retain a lining member in the envelop; and a non-absorbent envelop adapted to line and lie flat in said absorbent envelop, to be retained therein by said inwardly extended jointures and to serve as an envelop to contain said absorbent envelop, for transporting the same.

1,106,301. SUGAR-CANE MILL. CHRISTIAN J. HEDEMANN, Honolulu, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Oct. 7, 1913. Serial No. 793,885. (Cl. 100—47.)



1. In a sugar-cane mill, three rollers in triangular arrangement, a hydraulic jack for imposing a pressure on the upper of said rollers at an angle to the vertical, and means for altering said angle of applied hydraulic pressure.

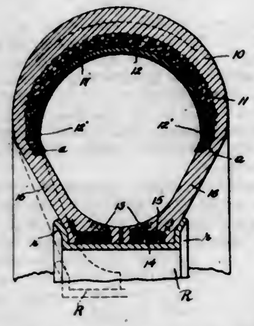
2. In a sugar-cane mill, three rollers, a housing, and a distance-piece removably secured between the jaws of the upper gap in said housing, the bottom of said distant-piece being curved to the arc of a circle the center of which coincides with the axis of one of said rollers, substantially as and for the purpose described.

3. In a sugar-cane mill, three rollers, a housing, a distance-piece secured between the jaws of the upper gap in said housing, the bottom of said distance-piece being curved to the arc of a circle, the center of which coincides with the axis of the top roller, and a hydraulic jack interposed between the top roller and said distance-piece, substantially as and for the purpose described.

4. In a sugar-cane mill, three rollers, a housing, a bushing or the like in the housing, and means for locking the bushing in any desired angular position in said housing, said bushing or the like adapted to guide the top brass with the movement of the top roller, substantially as described.

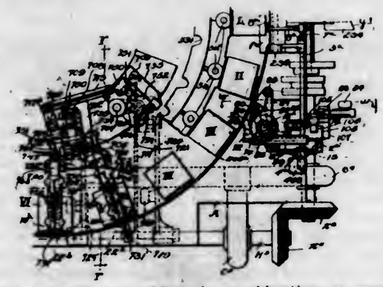
5. In a sugar-cane mill, having three rollers in triangular arrangement, a bushing in the housing adapted to be turned concentrically about the top roller and guide the upper brass of said roller, means for locking the bushing in any desired position, and a hydraulic jack interposed between said upper brass and a distance-piece secured between the jaws of the upper gap in said housing, substantially as described.

1,106,302. RESILIENT TIRE. WILLIAM M. HEINA, New York, N. Y., assignor of twenty-three and one-third one-hundredths to Ernest V. Derks and twenty-three and one-third one-hundredths to Edward Kammler, New York, N. Y., and twenty-three and one-third one-hundredths to August R. Southworth, Westwood, N. J. Filed Apr. 21, 1914. Serial No. 833,381. (Cl. 152—36.)



A tire substantially as herein described, having a crown portion and side portions or wings, the latter being normally separated from each other at their inner ends and movable at such ends toward each other, means in the crown portion for preventing the extension thereof, means at the free ends of the side portions or wings for preventing the same from radial outward expansion, the side portions or wings between the means for preventing radial expansion and the said means for preventing extension being of elastic rubber, and the free portions of the ends of the wings being spread substantially apart prior to the application of the tire to a rim, and a substantially rigid member for spreading the crown portion of the tire to such extent relatively to the free ends of the wings that the elastic portions of the wings will be stretched and inclined inwardly from the sides of said spreading member when applied to a rim, the side portions or wings being thus put under tension, as and for the purpose set forth.

1,106,303. PACKING-MACHINE. OTTO HESSER, Cannstatt, near Stuttgart, Germany, assignor to The Firm of Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, near Stuttgart, Germany. Filed Apr. 27, 1912. Serial No. 693,637. (Cl. 93—6.)



1. In a packing machine, in combination, a movable support; a plurality of packet transporting vessels carried by said support; feeding mechanism for said support to bring its transporting vessels successively to a plurality of stations; charging means comprising a ladle and actuating mechanism therefor located at one of said stations for introducing a packet into a transporting vessel at said station; and a piston and actuating means therefor coöperating with said ladle correctly to position the packet in said transporting vessel.

2. In a packing machine, in combination, a movable support; a plurality of packet transporting vessels, each adapted to receive a packet, carried by said support; feeding mechanism for said support to bring its packet transporting vessels successively to a plurality of stations; releasing means located at one of said stations for operating a packet filling device to cause it to charge a packet; actuating mechanism for said releasing means, and feeler means automatically to prevent the operation of said actuating mechanism in the event of no packet being contained in a transporting vessel, said feeler means comprising a pusher provided with depending fingers and adapted to be lowered into the packet inserted, and positively operated feelers adapted to pass through the openings between said fingers of the pusher and thereby disconnect the releasing means of the filling device from the actuating mechanism for said releasing means, in case no packet has been inserted.

3. In a packing machine, in combination, a movable support; a plurality of transporting vessels carried by said support and each adapted to receive a packet; feeding mechanism for said support; a shaft; a pinion on said shaft; a rack and means for actuating the latter to turn the pinion alternately in opposite directions; pawls mounted for swinging movement; leaf springs carried by said pawls; toothed wheels loosely mounted on the pinion shaft having their teeth engaged by said pawls; and connections between said toothed wheels and said pinion, comprising a ratchet wheel and spring pressed pawl whereby said toothed wheels are caused to turn with the pinion in one direction of movement of the latter only.

4. In a packing machine, in combination, a movable support; a plurality of transporting vessels each comprising a supporting plate, said vessels being carried by said support and each adapted to receive a packet; feeding mechanism for said support; packet seizing means; and actuating mechanism for said packet seizing means to cause the latter to seize the packet, raise it and then release it to cause it to drop upon the supporting plate.

5. In a packing machine, in combination, a movable support; a plurality of transporting vessels each comprising a supporting plate, said vessels being carried by said support and each adapted to receive a packet; feeding mechanism for said support; packet seizing means; and actuating mechanism for the latter constructed and arranged to cause said packet seizing means to seize the packet and raise and lower it so as to cause it to strike upon said supporting plate.

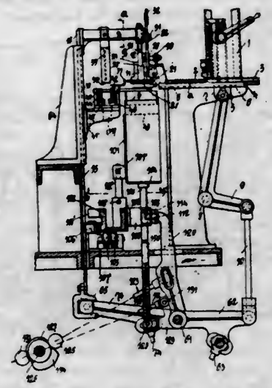
[Claims 6 to 19 not printed in the Gazette.]

1,106,304. MACHINE FOR CHARGING AND CLOSING PAPER BAGS. OTTO HESSER, Cannstatt, near Stuttgart, Germany, assignor to The Firm of Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, near Stuttgart, Germany. Filed May 23, 1913. Serial No. 769,406. (Cl. 93—7.)

1. In a machine for packing and closing paper bags, a plurality of transporting vessels adapted to be intermittently moved for receiving paper bags, vertically guided bottoms for said transporting vessels, clamping devices for immovably holding and releasing said bottoms, a magazine for business-cards, a piston adapted to insert business-cards one after the other in the charged bags and to be yieldingly pressed from above against the contents of any bag, and means on said piston for seizing and releasing the card similar to a pair of tongs.

2. In a machine for charging and closing paper bags, a plurality of transporting vessels adapted to be intermittently moved for receiving paper bags, vertically guided bottoms for said transporting vessels, clamping devices for immovably holding and releasing said bottoms, a magazine for business-cards, and a piston adapted to insert business-cards one after the other in the charged bags and comprising a stationary stop and a movable finger for engaging and pressing a business-card against said stop, said piston being adapted to be yieldingly pressed from above against the contents of any bag.

3. In a machine for charging and closing paper bags, a plurality of transporting vessels adapted to be intermittently moved for receiving paper bags, vertically guided bottoms for said transporting vessels, clamping devices for immovably holding and releasing said bottoms, a magazine for business-cards, a piston adapted to insert business-cards one after the other in the charged bags and to be yieldingly pressed from above against the contents of any bag, movable spreaders fitting the upper edges of any paper bag, and means for spreading said spreaders against the inside of the paper bag and for withdrawing them.



4. In a machine for charging and closing paper bags, a plurality of transporting vessels adapted to be intermittently moved for receiving paper bags, vertically guided bottoms for said transporting vessels, clamping devices for immovably holding and releasing said bottoms, a magazine for business-cards, a piston adapted to insert business-cards one after the other in the charged bags and to be yieldingly pressed from above against the contents of any bag, means for causing the clamping device for any bottom beneath said piston to release this bottom, and means for yieldingly pressing this bottom from below against the charged bag at the same time that said piston is pressed downwardly.

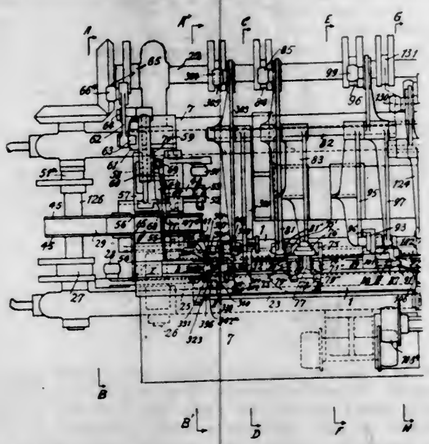
5. In a machine for charging and closing paper bags, a plurality of transporting vessels adapted to be intermittently moved for receiving paper bags, vertically guided bottoms for said transporting vessels, clamping devices for immovably holding and releasing said bottoms, a magazine for business-cards, a piston adapted to insert business-cards one after the other in the charged bags and to be yieldingly pressed from above against the contents of any bag, stationary supports beneath said bottoms, and wedges guided in said supports and adapted to be yieldingly pressed against said bottoms.

1,106,305. MACHINE FOR CLOSING UP PARCELS. OTTO HESSER, Cannstatt, Germany, assignor to The Firm of Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, near Stuttgart, Germany. Filed Sept. 26, 1913. Serial No. 792,053. (Cl. 93—6.)

1. In a machine for closing up parcels with two envelops, of which the outer one has a closing- or labeling-ing, the combination, with a stamp so arranged as to be capable of being introduced into the parcel and to serve as an abutment for parcel lugs, of which said closing or labeling-lug is one, and which are located opposite to one another; folding edges provided at said stamp in the height of the folding to be effected; knife-like projections provided on the stamp at two opposite sides thereof; and means for introducing the said stamp prior to gluing up the said closing- or labeling-lug and closing thus the parcel, substantially as described.

2. In a machine for closing up parcels with two envelops, of which the outer one has a closing- or labeling-

lug, the combination, with a stamp so arranged as to be capable of being introduced into the parcel and to serve as an abutment for parcel lugs, of which said closing- or labeling-lug is one, and which are located opposite to one another; ledges stepped corresponding to the folding edges of the parcel and adapted to press the lugs concerned against the stamp; levers having said ledges affixed to them; a sleeve carrying said levers; a spindle adapted to operate said stamp and passing through said sleeve; an abutment lug forming part of said spindle; means for operating said mechanism, inclusive of another abutment-lug forming part of said means and being adapted to come at several sides in contact with said first abutment lug, substantially as described.



3. In a machine for closing up parcels with two envelops, of which the inner one has four separate lugs and the outer one a closing- or labeling-lug and three coherent lugs, the combination of means for folding inward the two lugs of the inner envelop that are located laterally from said closing lug, and the inner lug situated parallel to the latter, and for folding outward the said closing lug; means for applying a cementing medium to said latter two lugs; means for folding up the fourth lug of the inner envelop and the three coherent lugs of the outer one; means for folding up the said closing lug; means adapted to be lowered in advance of the folding means and to be placed upon the folded up lugs to prevent their re-rising; and means for actuating all said means in the proper succession, substantially as described.

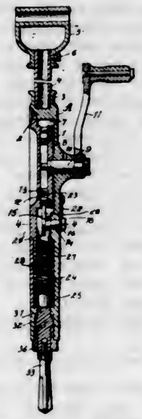
4. In a machine for closing up parcels with two envelops, of which the inner one has four separate lugs and the outer one a closing- or labeling-lug and three coherent lugs, the combination of means for folding inward the two lugs of the inner envelop that are located laterally from said closing lug; and the inner lug situated parallel to the latter, and for folding outward the said closing lug; means for applying a cementing medium to said latter two lugs; means for folding up the fourth lug of the inner envelop and the three coherent lugs of the outer one; means for folding up the said closing lug; a vertically displaceable member adapted to be placed upon the folded up lugs and to prevent their re-rising; a guide-way for said member; a spring so arranged as to be adapted to let the lower end of the said member project downward over the folding tool concerned; and means for actuating all said first-mentioned means in the proper succession; substantially as described.

5. In a machine for closing up parcels with two envelops, of which the inner one has four separate lugs and the outer one a closing- or labeling-lug and three coherent lugs, the combination of means for folding inward the two lugs of the inner envelop that are located laterally from said closing lug, and the inner lug situated parallel to the latter, and for folding outward the said closing lug; means for applying a cementing medium to said latter two lugs; means for folding up the fourth lug of the inner envelop and the three coherent lugs of the outer one; means for folding up the said closing lug; means adapted to be lowered in advance of the folding means and to be placed upon the folded up lugs to prevent their re-rising; said means being further adapted to take laterally upon and over the edge of the folded up lug, as well as upon and around the adjacent parcel sides; and means for actuating all said first-mentioned means in the proper succession; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,106,306. DRILL. JAMES T. HOAL, Atlanta, Ga. Filed Feb. 17, 1913. Serial No. 748,951. (Cl. 255—39.)

1. In a drill of the character described, the combination of a casing, a rotatable member journaled therein, a bell-crank, means carried by said rotatable member for rocking said bell-crank, an eccentric pin forming a pivotal support for the bell-crank, an arm fixed to said pin to turn the same, means for locking the arm in any desired position, comprising a plurality of arcuately arranged spaced lugs formed upon said casing, a hammer pivotally secured to and actuated by said bell-crank, spring means mounted upon said hammer for holding said hammer in its normal outermost position and a drill chuck adapted to be engaged by said hammer.



2. A drill consisting of a casing, a pin rotatably secured in an opening formed in the wall thereof, means for rotating said pin, an eccentric lug formed upon the inner end of said pin, a bell-crank pivotally mounted on said eccentric lug, a hammer reciprocatingly mounted within said casing and operably secured to said bell-crank, spring means mounted upon said hammer for holding said hammer in its normal outermost position, said pin being squared for a portion of its length, an arm fitted upon said squared portion, means for holding said arm thereon, a plurality of lugs arcuately arranged upon said casing, said arm being adapted to fit between certain of said lugs whereby an adjustment of the length of the stroke of said hammer is facilitated.

3. In a device of the character described the combination with a casing, of a hammer reciprocatingly mounted therein, means for reciprocating said hammer mounted within said casing comprising a spring mounted upon said hammer, a bell-crank pivoted upon the upper terminal of said hammer, an annular disk rotatably mounted within said casing, a plurality of pins mounted in spaced relation upon said disk and adapted for engagement with the bell-crank, and an exteriorly operable crank handle secured to said disk and means for regulating the reciprocal action of said hammer comprising a spring arm operatively connected with the bell-crank and means for locking said last named means in adjusted position formed integrally with the casing upon the outer side thereof and adapted for engagement with said arm.

4. In a device of the character described the combination with a casing of a hammer reciprocatingly mounted therein, means for reciprocating said hammer including a spring, a rotatable member journaled within said casing, a plurality of spaced pins mounted upon said rotatable member, a bell-crank operatively connected with the hammer and a crank handle operatively connected with the rotatable member, and means for regulating the reciprocal movement of said hammer comprising a pin rotatably mounted in said casing, an eccentric lug formed on the inner end of said pin and operatively connected with the bell-crank, a spring arm secured to the outer end of said pin, means for securing said spring arm to said pin and means for locking said spring arm in adjusted position comprising a plurality of integrally formed and arcuately arranged lugs carried by said casing.

1,106,307. COLLAPSIBLE LIFE-BOAT. WILLIAM HOPPER, Jefferson, Iowa. Filed Jan. 8, 1914. Serial No. 811,025. (Cl. 9—2.)

1. A boat or structure of the type described including foldable lateral and end members, and a bottom-member,



said lateral members having alining supplemental members with downwardly and inwardly sloping or inclined forward edges, transverse plate members upon the upper edges of said lateral and end members, straps or bars superposing said plates and rod and bar members effecting connection between said plates, and straps and said end and supplemental lateral members.

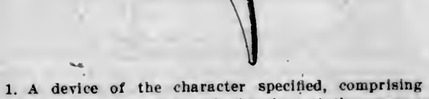
2. A boat or structure of the type described, including a bottom member and collapsible end and lateral members, means effecting connection there-between, a central longitudinal member having connection with said end-members comprising nut-equipped rods extending through end-terminals of said longitudinal member, the nuts of said rods having loop forming extensions to receive a towing-line or provide for the attachment thereto of a block-and tackle of the davits of a vessel.

3. A boat or structure of the type described including a tarpaulin forming a closure for the "hold," said tarpaulin being in sections, the central section itself being in sub-sections and adapted to form a closure for the hatch-way, said tarpaulin sections or members having corded hems with cord-extensions, said boat having a central longitudinal member equipped with apertured studs and angle studs, said boat also being provided with spring-clasps, said cord extensions being engaged with said studs and spring clasps.

4. A boat or structure of the type described including a bottom member and foldable lateral and end members, said lateral and end members being equipped with slidable hook-ended rods engaging keepers secured to said bottom-member, said hook-end rods also extending through brackets secured to said lateral members and through guides on said end-members.

5. A boat or structure of the type described, including a bottom-member and collapsible lateral and end members and means effecting connection there-between, comprising a central longitudinal member, transverse plates resting upon the upper edges of said end and lateral members, and nut-equipped inclined rods pivotally connected to said bottom member and having upper and right-lined portions extending through said transverse plates, and end terminals of said central longitudinal member.

1,106,308. DRAPERY-SUPPORT FOR WINDOWS. GEORGE HORVÁTH, Cleveland, Ohio. Filed Jan. 30, 1914. Serial No. 815,525. (Cl. 156—23.)



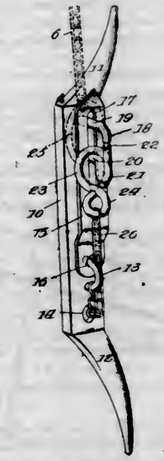
1. A window drapery support comprising a body having parallel channels in its front and a removable plate over said channels, a set of bars in each channel adjustable lengthwise and said bars provided with arms of different lengths to support the drapery.

2. A drapery support for windows having a body and two sets of bars adjustable lengthwise therein, said bars constructed to prevent axial rotation in said body and each set of bars provided with forwardly projecting arms at their ends, the arms on one set of bars being of greater length than the arms on the other set.

3. In window drapery support, a body having parallel channels in its front one above the other, a pair of bars adjustable in each channel and each bar having an arm on its outer end, the arms on the upper pair of bars being of greater length than those on the lower pair of bars and constructed at their outer ends to support a curtain pole thereon.

4. In drapery supports for windows, a body having parallel channels one above the other, a face plate covering said channels and a set of screws through said plate and body and of a length adapted to fix the support upon a window frame.

1,106,309. POLE LATCH AND CAVEL. EDWARD F. JOYCE and WILLIAM B. KAIN, Wheeling, W. Va. Filed Jan. 22, 1914. Serial No. 813,700. (Cl. 248—30.)



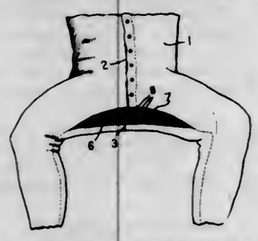
1. A device of the character specified, comprising a cleat, a staple connected with the cleat at the upper end thereof, said staple comprising a body approximately parallel with the adjacent face of the cleat and extending longitudinally thereof, and arms approximately perpendicular to the said face, the staple being adapted for engagement by a ring, said staple having an extension at the lower end of the body to prevent disengagement of

the ring, a hasp pivoted to the staple near its lower end and having a slot for permitting the passage of the staple, and a lock for coöperating with the staple to prevent disengagement of the hasp.

2. A device of the character specified, comprising a support having at one end a staple and at the other a hasp, the hasp being pivoted to the support and having an opening extending longitudinally thereof for permitting the passage of the staple, said staple being adapted for engagement by a ring and comprising a body and arms, and a lock for engaging the staple outside of the hasp to prevent disengagement thereof, said lock comprising an open loop, the body of the staple having an annular reduction and the opening of the loop being adapted to receive the reduction.

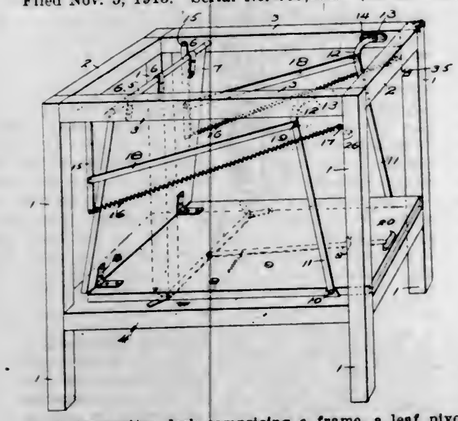
3. A device of the character specified, comprising a support having at one end a staple and at the other a hasp, the hasp being pivoted to the support and having an opening for permitting the passage of the staple, the staple having an extension at the side adjacent to the hasp and having an annular reduction, and a loop having an opening fitting the reduction and forming a lock to prevent disengagement of the hasp.

1,106,310. UNION SUIT. GEORGE W. KELLY, Chicago, Ill. Filed Jan. 27, 1914. Serial No. 814,812. (Cl. 2—144.)



A union suit of textile material having a front opening and a posterior opening, and a closed crotch portion between said openings, comprising a gusset of elastic knitted material extending across the crotch portion, formed of structurally different material from the body portion of the garment, and having alternating sections provided with permanent relatively large openings.

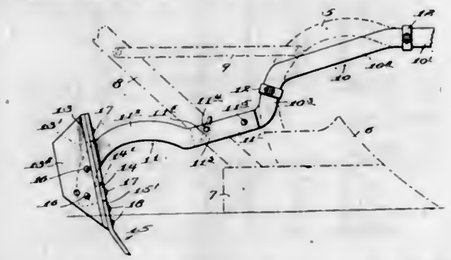
1,106,311. PEDESTAL TYPE-WRITER STAND. CARL A. LEOPOLD and CARL S. LEOPOLD, Burlington, Iowa. Filed Nov. 5, 1913. Serial No. 799,354. (Cl. 45—52.)



1. A typewriter desk comprising a frame, a leaf pivotally connected thereto, a platform hingedly connected to the leaf, a lever pivoted to the bottom of the platform, L-shaped lock members pivotally mounted to the platform in one of the ends thereof, a link pivotally connected to one end of the lever and having the ends thereof pivotally connected to the corners of the L-shaped locks, the frame being provided with notches to receive the free ends of the L-shaped locks as the lever is mounted to cause said free ends to enter the notches when the platform is raised for the purpose of holding the platform in raised position.

2. A typewriter desk comprising a frame, a leaf pivotally connected thereto, a platform hingedly connected to the leaf, a lever pivotally mounted on the bottom of the platform, a link pivotally connected to one end of the lever and having ends extending adjacent the sides of the platform, an L-shaped lock member pivoted to the platform adjacent each side thereof, the pivotal connection of one of said lock members being on one side of the link while the pivotal connection of the other lock member is upon the opposite side of the link, means for connecting the ends of the link pivotally to the L-shaped members, notches formed in the frame, said lever adapted when moved to one side to project the free ends of said L-shaped lock members beyond the sides of the platform to engage their respective notches and thereby support the platform.

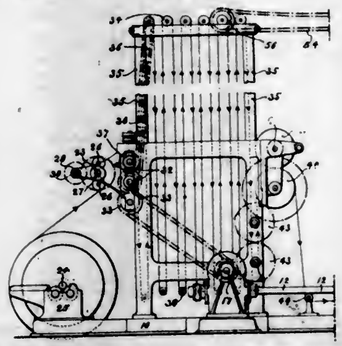
1,106,312. SUBSOIL ATTACHMENT. DEMETRIUS D. LITTLEJOHN, Statesville, N. C. Filed Nov. 24, 1913. Serial No. 802,775. (Cl. 97—32.)



1. A subsoil attachment for goose-neck plows comprising a supporting bar which consists of a front member adapted to be secured to the plow beam, and a separate, vertically-adjustable rear member projecting rearwardly beyond said beam, the first-named member embodying a downwardly-inclined body part adapted for arrangement close to the top of the curved neck of the beam, a horizontal terminal part in advance of and joined to the body part, and a part in the rear of and joined to said body part, the two last-named parts being adapted for conformable arrangement directly against and attachment to the corresponding parts of said beam; and a ground-treating implement connected to the rear member of said bar.

2. A subsoil attachment for goose-neck plows comprising a supporting bar which consists of structurally-separate, front and rear members occupying a vertical plane which is substantially parallel with the plane of the plow beam, the former member embodying a horizontal, front terminal part, a succeeding, downwardly-inclined, body part joined to the rear end of said terminal part, a second downwardly-inclined part joined to the rear end of the first inclined part, and a rear terminal part joined to the lower end of the second inclined part and substantially parallel with the first inclined part, the said first inclined part being adapted for arrangement close to the top of the curved neck of the plow beam, and the said front terminal and second inclined parts for conformable arrangement directly against and attachment directly to the adjacent parts of said neck; and a ground-treating implement carried by the rear member of said bar at its rear end, the said rear member overlapping at its front end the rear terminal part of said front member and being adapted to swing in the aforesaid vertical plane relatively to that member to vary the working depth of said implement, one of said overlapping parts being provided with a transversely-disposed arcuate slot, and the other of such parts with a lateral stud projecting through said slot and having a fastener for holding the rear member in adjusted position.

1,106,313. MULTICOLOR-PRINTING MACHINERY. JOHN MURRAY, Edinburgh, Scotland. Filed Nov. 29, 1913. Serial No. 803,759. (Cl. 101—90.)



1. A multi-color, fine-printing machine for printing a web of paper provided with a series of registration guide-apertures, said machine comprising a series of rotary printing units each having sprocket-wheel guiding devices for engaging the paper apertures, a zigzag jockey-roller unit interposed between adjacent printing units to receive the web and insure the drying of the ink of one impression before the next impression is superposed thereon, means for adjusting the sprocket-wheel guiding devices for each printing unit to insure registration of the impression in succeeding printing units, means for relieving the web from undue strain on the perforations and means for permitting the insertion and adjustment of the web in position, substantially as described.

2. A multi-color, fine-printing machine for printing a web of paper, comprising a series of jockey rollers, a rotary perforating device for forming a series of registration guide apertures in the web, and means for leading the web over said jockey rollers to the perforating device, in combination with a series of rotary printing units each having sprocket-wheel guiding devices for engaging the apertures formed in the web by said perforating device, a zigzag jockey-roller unit interposed between adjacent printing units to receive the web and insure the drying of the ink of one impression before the next impression is superposed thereon, means for adjusting the sprocket-wheel guiding devices for each printing unit to insure registration of the impression in succeeding printing units, means for relieving the web from undue strain on the perforations and means for permitting the insertion and adjustment of the web in position, substantially as described.

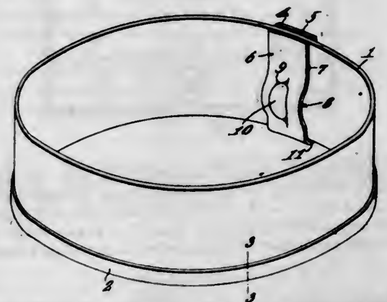
3. A multi-color, fine-printing machine for printing a web of paper provided with a series of registration guide-apertures, said machine comprising a series of rotary printing units each having sprocket-wheel guiding devices for engaging the paper apertures, a zigzag jockey-roller unit interposed between adjacent printing units to receive the web and insure the drying of the ink of one impression before the next impression is superposed thereon, means for adjusting the sprocket-wheel guiding devices for each printing unit to insure registration of the impression in succeeding printing units, and means for relieving the web from undue strain on the perforations as it passes over said sprocket wheel guiding devices, said means comprising lever-supported jockey-pulleys immediately in advance of and following each printing roller and weights adjustable upon said levers and opposed to the drag of the web, for the purpose described.

4. In a multi-color, fine-printing machine for printing a web having a series of guide perforations thereon, a rotary printing unit having an impression cylinder, a sprocket-wheel rotating therewith for engaging the registration perforations in the web, and means for adjusting said sprocket wheel rotarily with relation to the impression cylinder, together with means for locking said sprocket wheel and impression cylinder in relatively adjusted position, for the purpose described.

5. In a multi-color, fine-printing machine for printing a web having a series of guide perforations thereon, a rotary printing unit having an impression cylinder with peripheral groove, a hollow spindle for said cylinder, a sprocket ring arranged in said groove and provided with internal spur teeth, a shaft coaxial with, within and extending beyond the hollow cylinder spindle, a pinion on said shaft operatively engaged with said sprocket ring and means for rotating said shaft to adjust said sprocket rotarily with relation to said cylinder, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,106,314. TRUSS. HENRY DANIEL O'BRIEN, Forsyth, Mont. Filed Apr. 7, 1914. Serial No. 830,251. (Cl. 128—26.)



1. In a truss, a band; a primary reinforcing strip applied transversely to one face of the band; a secondary reinforcing strip substantially co-extensive in lateral extent with the primary reinforcing strip, the secondary reinforcing strip being extended in a continuous extent across one edge of the band and including spaced layers between which the primary reinforcing strip and a portion of the band are inclosed, one layer of the secondary reinforcing strip being secured to the primary reinforcing strip throughout an area substantially co-extensive with the primary reinforcing strip, the other layer of the secondary reinforcing strip being secured to the band along the end of said layer only to define an open ended pad pocket, both layers of the secondary reinforcing strip, the primary reinforcing strip and the band having alined openings; and a pad insertible into the pocket through the open ends thereof, the pad being engaged in the openings.

2. In a truss, a band; a primary reinforcing strip applied to one face of the band; a secondary reinforcing strip extended in a continuous length across one edge of the band and including spaced layers between which the primary reinforcing strip and a portion of the band are inclosed, one layer of the secondary reinforcing strip having an opening and being secured adjacent its end only to the band to define an open ended pad pocket about the opening; and a pad in the pocket and engaged in the opening.

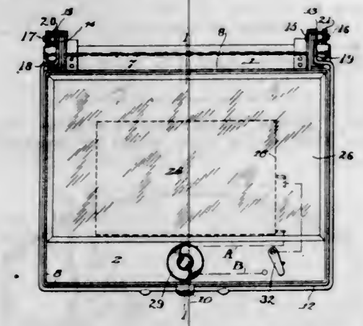
3. In a truss, a belt; a U-shaped strip extended in a continuous length transversely of the belt and across one edge of the belt and comprising spaced layers between which the belt is inclosed, one layer being secured adjacent its end only to the belt to define a pocket open along its upright edges, said layer having an opening; a pad in the pocket and lodged in the opening.

4. In a truss, a belt; a U-shaped strip extended in a continuous length transversely of the belt and across one edge of the belt and comprising spaced layers between which the belt is inclosed, one layer being secured adja-

cent its end only to the belt, to define a pad pocket open along its upright edges; and a pad lodged in the pad pocket.

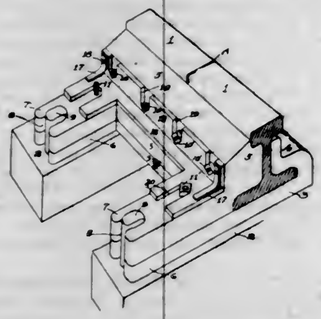
5. In a truss, a belt; a U-shaped strip extended in a continuous length transversely of the belt and across one edge of the belt and comprising spaced layers between which the belt is inclosed; and a pad lodged between the belt and one layer of the strip.

1,106,315. PURSE-MIRROR. WILLIAM J. PAYNE, Candor, N. Y. Filed Dec. 3, 1912. Serial No. 734,680. (Cl. 132—11.)



A purse-like container comprising a pair of oblong frames, a casing united with each frame, a hinge thereto, a threaded hinge pintle, a ball pivoted and a nut running on said pintle and adapted to clamp and angularly fix said hinge ball, and a mirror connected with one of said frames.

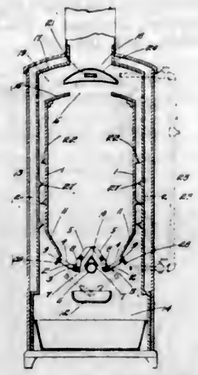
1,106,316. NUT-LOCK. ISAAC PEYTON, Springfield, Ill. Filed July 25, 1913. Serial No. 781,268. (Cl. 151—59.)



1. In a device of the character described, the combination with bolts and nuts uniting rail ends with a supporting plate and a reinforcing member, of a nut locking device having a horizontal lock plate hinged to a vertical lock plate, said lock plates provided with slots adapted to keep said nuts from turning upon said bolts, and springs carried by one of said lock plates and adapted to hold the said lock plates in working position, substantially as described.

2. In a device of the character described, the combination with bolts and nuts uniting rail ends with a supporting plate and a reinforcing member, of a vertical nut locking plate, a horisontal nut locking plate, said nut locking plates provided with slots keeping said nuts from turning upon said bolts, and spring means for holding said locking plates in position, substantially as described.

1,106,317. INCINERATOR. JAMES B. RICKETTS, New York, N. Y., assignor to The Nightingale Company, a Corporation of New York. Filed June 3, 1912. Serial No. 701,176. (Cl. 110—18.)



1. In an incinerator, the combination with a combustion chamber, of a grate element embodying two wings positioned substantially at an angle to each other, one of said wings being provided with a flame opening separate from the openings produced in the grate bars, and a burner positioned in such relation to the grate element that the flame emanating therefrom will pass through the separate flame opening and into direct contact with the material imposed upon said grate element.

2. In an incinerator, the combination with a combustion chamber, of a grate element embodying a material-supporting wing and a second wing extending upwardly from said first named wing, said second wing being provided with a flame opening separate from the openings produced by the bars of said grate element, and a fuel burner separate from the grate, said fuel burner being positioned in such relation to the grate element that the flame from said burner is free to flow through the separate opening in the grate element and into direct contact with the material supported thereon.

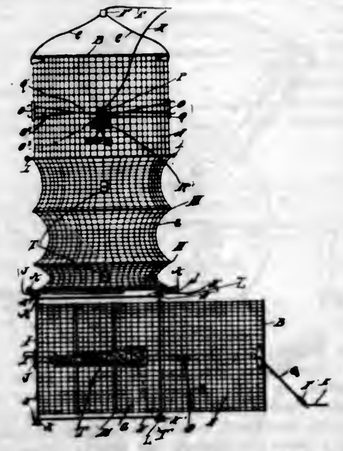
3. In an incinerator, the combination with a combustion chamber, and a fuel burner, of a two-part grate the members of which are pivoted for movement independent of and relatively to said burner, said grate members embodying material supporting wings and other wings extending upwardly from the first named wings, said second named wings being arranged, in the operative position of the grate, to substantially incase the burner and preclude the lodgment of material thereon.

4. An incinerator having a combustion chamber to receive the matter to be incinerated, a grate forming the bottom of the combustion chamber, said grate having a wing portion which extends at an upward inclination within the combustion chamber, and a gas burner separate from the grate and located beneath said wing, said wing being formed with a substantially perpendicular part upon which no material can rest and in which part are provided openings through which passes the gas flame emanating from the burner, whereby the gas flame inpinges directly upon the matter in the combustion chamber.

5. An incinerator having a combustion chamber for the material to be incinerated, a grate forming the bottom of the combustion chamber, said grate being formed in a plurality of disconnected sections, two adjacent sections of which each have wing portions extending at an upward inclination toward each other so that their upper sides diverge from each other downwardly and form an outwardly sloping support for the matter in the combustion chamber, and a gas burner located beneath the grate in the space between the said diverging wing portions of the grate, said grate sections being operable to individually dump the material resting thereon.

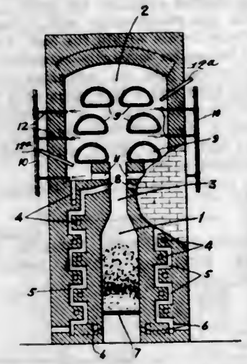
[Claims 6 to 21 not printed in the Gazette.]

1,106,318. FISH-TRAP. CLIFTON ROSS, Utica, Miss., assignor of one-half to William B. Powell, Utica, Miss. Filed Feb. 10, 1914. Serial No. 817,891. (Cl. 43—20.)



A fish trap having a noncollapsible cylindrical portion of open wire meshwork, and a collapsible portion with a bottom of open meshwork, means for raising and lowering the trap, a cross-rod detachably fastened at its ends to the cylindrical portion of the trap at points diametrically opposite each other, said rod having an eye therein, a cord movable through said eye, a bait-carrying member secured to said cord and means for limiting the movement of said cord, substantially as set forth.

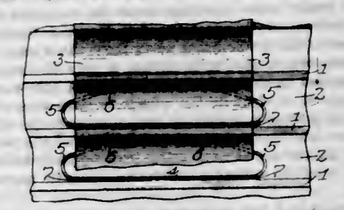
1,106,319. PROCESS OF CONTROLLING COMBUSTION. JOHN M. RUSBY, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1911. Serial No. 608,312. (Cl. 158—117.5.)



1. The process of controlling the temperature effect of combustion of a fluid combustible, which consists in burning the fluid combustible in a chamber and mixing the burning mass by commingling the fluid combustible and air with hot and newly formed products of combustion before the escape of those products of combustion from the chamber.

2. The process of controlling the temperature effect of combustion of a fluid combustible which consists in progressively burning the fluid combustible in a chamber and mixing the burning mass by commingling the fluid combustible and air with the hot and newly formed products of combustion before the escape of those products of combustion from the chamber.

1,106,320. STAIR-CARPET RETAINER. DANIEL W. SHIEK, Chicago, Ill. Filed Aug. 19, 1912. Serial No. 715,798. (Cl. 16—26.)

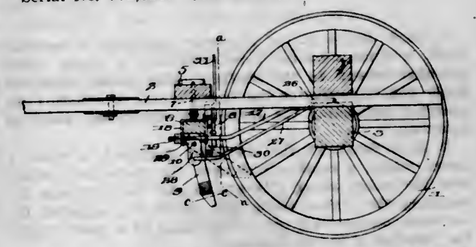


1. A device of the kind described, comprising a bar arranged at the juncture of the tread and riser, engaging means between said bar and the stair tread, and resilient means at each end coöperating with the next higher tread for resiliently maintaining said bar in operative relation to said first mentioned tread.

2. In a device of the kind described, in combination with a bar, provided with means at each end for engagement with a stair tread, and with means at each end cooperating with an adjacent tread for resiliently maintaining said bar in engagement with said first mentioned tread.

3. A device of the kind described, consisting of a bar provided with a lug at each end with a resiliently extending part formed integrally with the bar on each end on the side opposite said lug.

1,106,321. BACK-STOP OR BRAKE FOR VEHICLES. WILLIAM SIVERD, Genesee, N. Y. Filed June 5, 1913. Serial No. 771,830. (Cl. 21—8.)



1. A vehicle back stop comprising a braking element, and a friction ring surrounding a portion of the wheel and having constant frictional engagement with the wheel to shift with the latter in the direction in which the wheel turns, and a connection between the friction ring and the braking element to shift the latter away from braking position when the vehicle moves forwardly.

2. In combination with a vehicle, a back stop therefor comprising a braking element having a bifurcated portion adapted to coöperate with the rim of the vehicle, and a clutch member frictionally movable with the wheel in opposite directions by a wheel of the vehicle and having connection with the braking element to shift the latter into and out of connection with the wheel.

3. In combination with a wheeled vehicle having a movable brake beam carrying shoes for coöperating with the wheels of the vehicle, a back stop comprising a shaft mounted on the brake beam, braking elements carried by said shaft for coöperating with the wheels of the vehicle, and a friction member frictionally coöperating with one of the wheels to be moved in either direction by said wheel, said friction member having connection with the rock shaft to shift the latter in opposite directions.

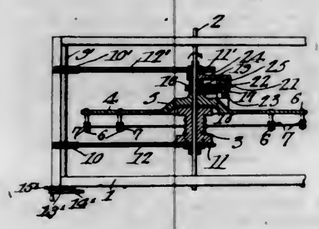
4. The combination with a wheeled vehicle having a movable brake beam carrying shoes for coöperating with the wheels of the vehicle, of a stop for limiting the movement of the brake beam away from the wheels, and a back stop comprising a braking element pivotally mounted on the brake beam for coöperation with one of the wheels of the vehicle, and a friction element moved in either direction by frictional engagement with one of the wheels of

the vehicle and having connection with the braking element to shift the latter in opposite directions.

5. The combination with a wheeled vehicle having a movable brake beam carrying shoes for coöperating with certain wheels of the vehicle, of a stop for limiting the movement of the brake beam away from the wheels, a rock shaft mounted on the brake beam, a pair of braking elements carried by the rock shaft and having bifurcated portions adapted to straddle the wheels to coöperate with the rims of such wheels, a friction device movable in either direction by frictional engagement with one of the wheels of the vehicle, and a rod connecting such friction device with the rock shaft in order to move the latter in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

1,106,322. WELL-DRILLING MACHINE. GEORGE W. SLAUGHTER, Jr., San Augustine, Tex. Filed June 7, 1913. Serial No. 772,450. (Cl. 255—5.)



1. In a device of the character described, a rotating shaft, a drum mounted loosely thereon, a crown wheel mounted loosely on the shaft, a cable wound upon the drum and trained over the crown wheel, and means for operably connecting the shaft with the crown wheel at intervals.

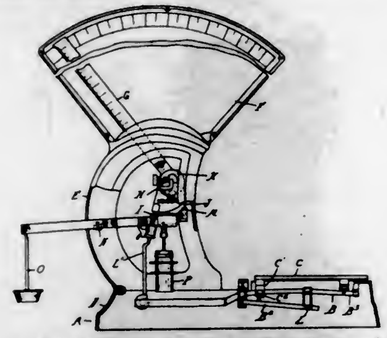
2. In a device of the character described, a drum, a crown wheel, a cable wound upon the drum and trained over the crown wheel, a rotary member having means for engaging the crown wheel, and means for engaging the aforesaid means with the crown wheel at a point during the rotation of the said member.

3. In a device of the character described, a rotating shaft, a drum and a crown wheel mounted loosely thereon, a cable wound upon the drum and trained over the crown wheel, a rotary member carried by the shaft, means carried by the said member for engaging the crown wheel, and means mounted upon the shaft for moving the said means into engagement with the crown wheel at intervals.

4. In a device of the character described, a rotating shaft, a drum and a crown wheel mounted loosely thereon, a cable wound upon the drum and trained around the crown wheel, an arm secured to the shaft, a spring pressed member carried by the said arm, the said member having means to engage the crown wheel, an arm mounted loosely upon the shaft and having a cam to force the said member against the tension of its spring and to thereby engage the aforesaid means with the crown wheel, and means for adjusting the last mentioned arm.

5. In a device of the character described, a rotating shaft, a drum and a crown wheel mounted loosely thereon, a cable wound upon the drum and trained over the crown wheel, the crown wheel having a shoulder, an arm secured rigidly to the shaft, a spring pressed member carried by the said arm, the said member and arm having means for limiting the movement of said member, a pin carried by the said member movable in a path different from the path of the said shoulder, an arm mounted loosely on the said shaft and having a cam to force the said member inwardly against the tension of the spring so as to move the pin into the path of the shoulder, and means for adjusting the last mentioned arm.

1,106,323. COMPUTING-SCALE. WALTER F. STIMPSON, Detroit, Mich., assignor, by mesne assignments, to Estelle H. Stimpson, Detroit, Mich. Filed Nov. 5, 1910. Serial No. 590,868. (Cl. 73—29.)



1. In a scale the combination with a beam, of a recessed counterpoise attached thereto, a guide for said counterpoise in axial alinement therewith and engaging the recess therein, and a shelf on said guide forming a support for detachable weights for said counterpoise.

2. In a scale the combination with a fulcrumed beam, of a tare beam mounted thereon, and off-set from the plane of the fulcrum, and a steelyard rod for operating said beam engaging a portion thereof oppositely off-set from the plane of said fulcrum.

3. In a scale the combination with a platform and index and connecting mechanism therebetween, of a beam or lever forming an element of said connecting mechanism, a tare beam off-set in front of the plane of said beam and mounted on the latter, and a steelyard rod for operating said beam engaging a portion of the latter and oppositely off-set from the tare beam.

4. In a scale, the combination with a frame, of a beam, a recessed counterpoise attached thereto, a shelf on said frame, a guide carried by said shelf engaging the recessed portion of the counterpoise, and a slotted detachable weight adapted to be supported on said shelf with the slotted portion thereof engaging the guide.

5. In a scale, the combination with a base having an extension, platform levers within the base, a platform supported on said levers, an upwardly extending frame above said extension of the base, an indicating section on said frame, an index hand and a tare beam both fulcrumed on said upwardly extending frame, a pendulum weight for said index hand, a steelyard rod connection between said platform levers and beam, and a connection between the latter and the index hand.

[Claims 6 to 10 not printed in the Gazette.]

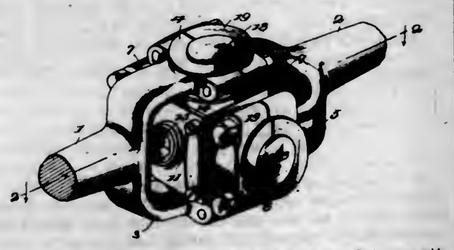
1,106,324. GATE-FASTENER. MARTIN P. TORGRUD, Whalan, Minn. Filed May 13, 1910. Serial No. 561,125. (Cl. 39—101.)



The combination with a frameless gate provided with a stile, a post, of a bracket secured to the top of the post having a bifurcated or forked upper end, a lever pivotally connected to the forked end of the bracket, a loop pivotally connected with the lever and adapted to engage with the upper end of the stile, a U-shaped clasp mounted on

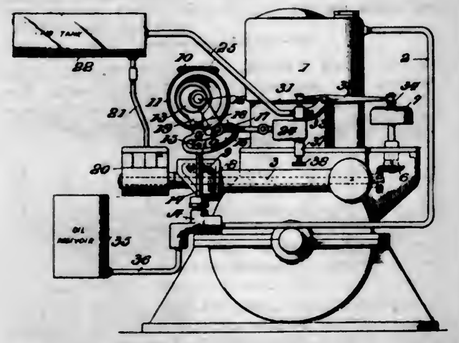
the angular bracket and provided with vertical parallel spring arms between which the lever is received, a lug mounted on one of the arms projecting toward the other arm, said lever engaging the lug and one arm when swung to a horizontal position for causing the arms to be forced apart to permit the lever to pass below the lug whereby the lever will be held in a horizontal position and against the lateral movement, the lug carrying arm being of greater length than the other arm, so that sufficient leverage can be obtained for drawing it away from the opposite arm to allow the lever to be withdrawn from between the arms.

1,106,325. UNIVERSAL JOINT AND SYSTEM OF LUBRICATION THEREFOR. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Mar. 9, 1912. Serial No. 682,808. (Cl. 74—19.)



A universal joint comprising a hollow head to constitute a lubricant reservoir, said hollow head having one side open, a plate closing the said opening of the head, said plate carrying a plug, said head provided with four bearing pins projecting therefrom at right angles to each other, annular packing rings carried by the head and surrounding the said bearing pins, cup-shaped bushings encompassing the bearing pins and engaging the annular packing rings, the head and pins having lubricant passages establishing communication between the reservoir, the annular packing rings, the cup-shaped bushings and the bearing surfaces of the pins and two shaft sections each having substantially U-shaped yokes which embrace the said pins at right angles to each other.

1,106,326. FUEL-GOVERNING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER WINTON, Cleveland, Ohio, assignor to Winton Gas Engine and Manufacturing Company, Cleveland, Ohio. Filed Jan. 21, 1914. Serial No. 813,519. (Cl. 123—140.)



1. The combination with an internal combustion engine, of an engine operated fuel pump, an adjustable variable mechanism for varying the stroke of the pump, a power actuated member controlling the adjustable variable mechanism, means operated by the engine for supplying power for the said power device, and an engine operated governor controlling the power supplied to the power device.

2. The combination with an internal combustion engine, of an engine operated fuel supply, a variable mechanism for the said fuel supply, an engine provided power for moving the variable mechanism, and an engine operated governor controlling the power supply for moving the variable mechanism.

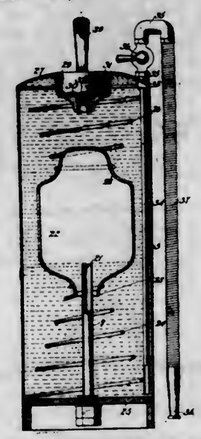
3. The combination with an engine of the type described, of a fuel supply pump operated by the engine, a variable mechanism for controlling the movement of the pump, power actuating mechanism for the variable mechanism, engine provided power for the said power mechanism, and an engine operated governor controlling the power supply according to the speed of the engine and thereby controlling the movement of the fuel pump by the speed of the engine.

4. The combination with an internal combustion engine, of a fuel supply pump therefor, a variable mechanism operated by the engine and connected with the pump to vary the movement thereof, a power actuated mechanism adapted to control the said variable mechanism, an engine power supply for the power actuated mechanism, and an engine operated governor controlling the said engine power supply according to the speed of the engine for the purpose described.

5. The combination with an internal combustion engine, of a fuel supply pump, a variable link mechanism connecting the engine with the pump to vary the movement of the latter, a power actuated mechanism connected with and operating the variable link mechanism, an engine power supply for the power actuated mechanism, and an engine operated governor controlling the said engine power supply for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,106,327. FIRE-EXTINGUISHER. THOMAS ARESON, New York, N. Y. Filed Feb. 19, 1914. Serial No. 819,742. (Cl. 169—12.)



1. In a fire extinguisher, a casing having an inlet and an outlet, a gas reservoir disposed in the casing and having a mouth facing the inlet, means for holding the gas reservoir spaced from the wall of the casing, an inlet tube connected with the inlet and having a terminal extending into the mouth in the gas reservoir and spaced from the side of the said mouth and valves at the outlet and inlet.

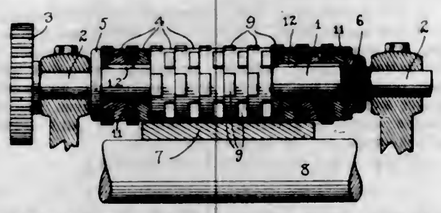
2. In a fire extinguisher, a casing having an inlet and an outlet, a gas reservoir disposed in the casing and having a mouth facing the inlet, springs engaging the ends of the gas reservoir and the ends of the casing for holding the gas reservoir spaced from the walls of the casing, an inlet tube connected with the inlet and having a ter-

minal extending into the mouth in the gas reservoir and spaced from the sides thereof, and valves at the inlet and outlet.

3. In a fire extinguisher, a casing having an inlet and an outlet, a gas reservoir disposed in the casing and having a mouth at its bottom, springs engaging the ends of the gas reservoir and the ends of the casing for holding the gas reservoir relatively to the casing, an inlet tube connected with the inlet and having a terminal extending into the mouth of the gas reservoir, and valves at the inlet and the outlet.

4. In a fire extinguisher, a casing having an inlet at its bottom and an outlet at its top, a pipe connected with the outlet and extending within the casing to a position adjacent the bottom of the casing, a gas reservoir disposed in the casing and having a mouth facing the inlet, springs for holding the gas reservoir relatively to the casing, an inlet tube connected with the inlet and having a terminal extending into the mouth of the gas reservoir and spaced from the sides thereof, and valves at the outlet and the inlet.

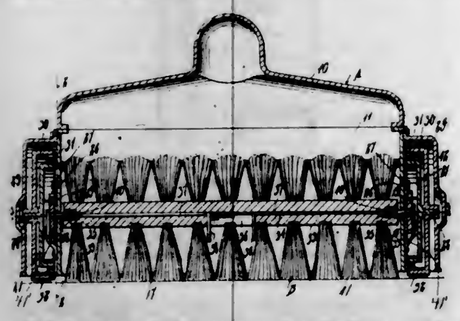
1,106,328. FEED MECHANISM. MICHAEL BROCHU, Grand Rapids, Mich., assignor of one-half to Francis D. Campau, Grand Rapids, Mich. Filed Mar. 27, 1913. Serial No. 757,162. (Cl. 144—250.)



1. A feed roll comprising a rotatable driving shaft, and a plurality of carriers concentric and separably connected therewith, each having a socket opening at the carrier's side and having overhanging walls, and a work-engaging member carried by the carrier in the socket and extending radially beyond the periphery of the carrier.

2. A feed roll comprising a rotatable driving shaft, and a plurality of carriers concentric and separably connected therewith, each having sockets on each side, the sockets on one side being alternately disposed to those on the other side, and having work-engaging members carried by the carriers in the sockets and extending radially beyond the periphery of the carrier.

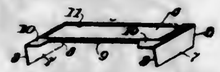
1,106,329. VACUUM-CLEANER. JOHN W. FULPER, Annandale, N. J. Filed Dec. 11, 1913. Serial No. 806,023. (Cl. 15—60.)



1. In a device of the character described, the combination of a casing, a brush rotatably mounted in the casing, traction wheels mounted on said casing for bodily swinging movement and disposed at the ends of the brush respectively and in line therewith, spring means constantly tending to hold the traction wheels at the limit of their swinging movement in one direction, and connections between one of said traction wheels and the brush whereby the rotation of said traction wheel will rotate the brush.

2. In a device of the character described, the combination of a casing, a brush rotatably mounted in the casing, a pinion rotatably mounted on the casing, connections between the pinion on the casing and the brush whereby the rotation of the pinion will rotate the brush, a disk mounted on the casing for bodily swinging movement, a pinion rotatably mounted on the disk and meshing with the pinion mounted on the casing, spring means constantly tending to hold the disk at the limit of its swinging movement in one direction, and a traction wheel rotatably mounted on the disk and operatively connected with the pinion carried by the disk whereby the rotation of the traction wheels will effect the rotation of the last named pinion.

1,106,330. PROTECTING-STRIP FOR MATCH AND OTHER BOXES. ADAM J. HALLER, Wadsworth, Ohio, assignor to The Ohio Match Company, Wadsworth, Ohio, a Corporation of Ohio. Filed Nov. 21, 1913. Serial No. 802,283. (Cl. 229—9.)

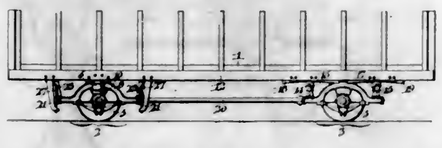


1. A protecting strip for match and other boxes, of a length and width substantially coincident with the length and width of the box and thereby held from lateral displacement, and having end flanges adapted to be interposed between the contents and the ends of the box, and having a cut away portion at one side sufficiently large to expose a portion of some of the contents to render such contents accessible.

2. A protecting strip for match and other boxes, of a length and width substantially coincident with the length and width of the box, so as positively and at all times to cover the underlying contents of the box and having end flanges adapted to be interposed between the contents and the ends of the box, and having a cut away portion at one side sufficiently large to expose a portion of some of the contents to render such contents accessible, the end flanges having beveled edges to facilitate the insertion of the strip.

3. A protecting strip for match boxes, of substantially the length and width of the inside of the box, and having end flanges adapted to be inserted between the matches and the ends of the box, and having one side cut away between its ends so as to expose the handle ends of the matches and leave end portions at opposite ends of the cut away portion of the full width of the box, the strip serving to cover the heads of the matches at all times when within the box.

1,106,331. CAR-TRUCK. JAMES T. HALSEY, Philadelphia, Pa., assignor to Philadelphia Holding Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 4, 1912. Serial No. 729,314. (Cl. 105—137.)



1. The combination with a car-body, an axle, and a pair of wheels carried by said axle; of connecting means intervening between said car-body and the axle, said means including a pivotal member having a vertical axis located upon one side of the median plane between said wheels; a traveling support located upon the other side of said median plane; and a freely movable auxiliary support, independent of said pivotal member, and located upon the same side of said median plane as said pivotal member.

2. The combination, with a car-body, an axle and a pair of wheels carried by said axle; of connecting means intervening between the car-body and the axle, said means including a pivotal support having a vertical axis located upon one side of the median plane between the wheels carried by said axle; a traveling support on the other side of said median plane; and a freely movable auxiliary support independent of the pivotal support and located on the same side of said median plane as said pivotal support.

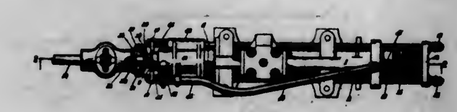
3. The combination with a car-body, an axle and a pair of wheels carried by said axle; of primary supporting means for the car-body intervening between said car-body and the axle, said means being adapted to permit a rotative movement of the car with relation to the axle about a fixed vertical axis located at a lateral distance from the median plane between the wheels carried by the axle; and an auxiliary supporting device intervening between the car-body and the axle, said auxiliary supporting device being independent of the primary supporting means and located on the same side of the median plane as said axis.

4. The combination with a car-body, an axle and a pair of wheels carried thereby; of supporting means for a car-body intervening between said car-body and the axle, said means including a pivotal support located at one side of the median plane between said wheels and axle, a traveling support on the other side of said median plane, and an auxiliary support located at each side of the pivotal support and on the same side of the car-body as the pivotal support; the said auxiliary supports being so disposed as to prevent rocking or tilting movement of the car-body with relation to the pivotal support, or vice versa, while permitting swinging movements of the car-body relative to the axle about said pivotal support.

5. The combination with a car-body, of a truck having an axle and wheels carried thereby, said truck being provided with supporting means for the car-body, including a pivotal support having a substantially definite vertical axis at one side of said truck and a traveling support at the other side of said truck; brackets carried by said truck on the same side thereof as the pivotal support; brackets carried by the car-body and located adjacent to the brackets on said truck; and means for connecting said brackets respectively carried by the truck and car-body, said means being so constructed as to prevent rocking or tilting movement of the car-body with relation to said pivotal support, or vice versa, while permitting swinging movement of the car-body relative to the truck, about said pivotal support as an axis.

[Claim 6 not printed in the Gazette.]

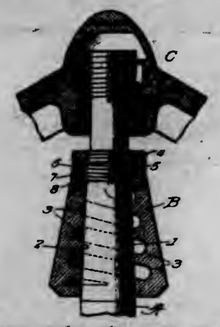
1,106,332. PERCUSSIVE DRILL. JOHN GEORGE LEYNER, Denver, Colo. Filed Oct. 21, 1912. Serial No. 726,893. (Cl. 121—10.)



1. In a fluid operated drill, a drill cylinder and a piston therein having a drill rod projecting forwardly thereof, said drill rod having a fluid conveying bore, a front head on said drill cylinder, a fluid pump cylinder secured to the front head, a piston in said fluid pump having a rod secured to said drill rod, and fluid connections for conveying fluid from said pump to said drill rod bore.

2. In a fluid operated percussive drill, a drill cylinder, a piston therein having a drill rod projecting forwardly thereof, said drill rod and piston having a fluid conveying bore therethrough, a back head for said cylinder, a fluid conveying tube projecting from said back head into said bore, a front head, a fluid pump cylinder secured to the front head, a piston in said pump cylinder secured to said drill rod and a fluid pipe connecting said pump cylinder and said tube.

1,106,333. GYRATORY CRUSHER. JOHN MCINRUE, Chicago Heights, Ill., assignor to Chalmers & Williams, Inc., Chicago Heights, Ill., a Corporation of Illinois. Filed Nov. 29, 1912. Serial No. 733,960. (Cl. 83—10.)



1. In a gyratory crusher, the combination of a gyratory shaft, and a crusher head, said shaft and head being provided with engaging tapered surfaces, and means for securing and maintaining the bearing on said head in strong frictional engagement with the bearing on said shaft, said means comprising right-hand and left-hand nuts threaded to said shaft, both of which bear upon the upper end of said crusher head, and means for connecting said nuts to said head whereby angular movement of said head on the crusher shaft will be imparted to said nuts, substantially as described.

2. In a gyratory crusher, the combination of a gyratory shaft, and a crusher head, said shaft and head being provided with engaging tapered surfaces, and means for securing and maintaining the bearing on said head in strong frictional engagement with the bearing on said shaft, said means comprising right-hand and left-hand nuts having the same pitch threaded to said shaft, both of which bear upon the upper end of said crusher head, and a key which connects said nuts to said head, whereby angular movement of said head on said gyratory shaft will be imparted to said nuts, while permitting movement of said nuts toward and from said head, substantially as described.

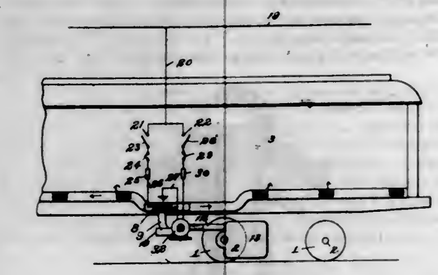
3. In a gyratory crusher, the combination of a gyratory shaft and a crusher head, said shaft and head being provided with engaging tapered surfaces, and means for securing and maintaining the bearing on said head in strong frictional engagement with the bearing on said shaft, said means comprising right-hand and left-hand nuts threaded to said shaft, both of which bear upon the upper end of said head, the upper nut being provided with a recess in its under side to receive the lower nut, and means for connecting said nuts to said head, said connecting means being constructed and arranged to impart angular movement to the nuts with said head relatively to said shaft and to permit movement of said nuts toward and from said head, substantially as described.

1,106,334. CAR-HEATER. WILLIAM S. MENDEN, Brooklyn, N. Y., assignor to Megosin Company, Inc., a Corporation of New York. Filed Mar. 24, 1914. Serial No. 826,900. (Cl. 219—20.)

1. The combination with a vehicle, of a motor therefor, a housing for said motor, a heating device other than said motor, and common means for conveying heated fluid from said heating device and motor housing, said conveying means being adapted to convey heated fluid from either said heating device or motor housing separately.

2. The combination with a vehicle, of a heating device therefor, a motor for said vehicle, a housing for said

motor, and means for supplying heated air to said vehicle from said housing and heating device coöperatively, said means being adapted to deliver heated air from either said heating device alone or from said motor housing alone.



3. The combination with a vehicle, of a motor therefor, a housing for said motor, a heating device other than said motor, and means for conveying heated air from either said heating device or said motor housing.

4. The combination with a vehicle, of an air duct discharging into the body of said vehicle, heating means suitably disposed to heat the air passing through said duct, a thermostat for controlling the operation of said heating means, a motor for the vehicle and a housing for said motor, said housing being connected up to said duct to discharge air heated by the motor into said duct.

5. The combination with a vehicle, of an air duct discharging into the body of said vehicle, heating means suitably disposed to heat the air passing through said duct, a thermostat for controlling the operation of said heating means, a motor for the vehicle, a housing for said motor, a connection extending between said housing and said duct to discharge air heated by the motor therein, and means for opening and closing the connection between said housing and duct.

[Claims 6 to 14 not printed in the Gazette.]

1,106,335. PROCESS FOR MANUFACTURING GUM OR MUCILAGE FROM LOCUST-BEANS. ADRIEN PINEL, Le Houlme, France. Filed July 9, 1912. Serial No. 708,441. (Cl. 87—17.)

1. In the process of treating locust beans for a muscilaginous gum, the step which consists in treating the beans with a solution containing a borate to render the beans brittle.

2. In the process of treating locust beans for a muscilaginous gum, the steps which consists in treating the beans with a solution containing an alkaline hydrate and a borate at a raised temperature, pulverizing the beans so treated, washing the resulting powder with water and dissolving it in an aqueous solution of sugar.

3. In the process of treating locust beans for a muscilaginous gum the steps which consist in decorticating the beans in a solution containing alkaline hydrate at a raised temperature, macerating such decorticated beans in a solution of a soluble borate thus rendering the beans brittle, then pulverizing the beans and washing the resulting powder with water, and finally dissolving the powder in an aqueous solution of sugar.

4. The process of treating locust beans for a muscilaginous gum which consists in treating the beans with a solution containing an alkaline hydrate and a borate the temperature of which solution is between 80 and 100 C., macerating said beans into a solution of a soluble borate to render the same brittle, reducing the beans to a powder and soaking the powder in hot water, then removing the water from the powder and pressing and drying the same, then neutralizing the powder with a mineral acid and finally dissolving said powder in a solution containing sugar.

1,106,336. KNIT ARTICLE AND METHOD OF MAKING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Mar. 7, 1914. Serial No. 823,122. (Cl. 66—4.)



1. A string-work of plain fabric articles such as stockings comprising a continuous connected succession of article blanks and top portions of plain fabric provided with integral welts.

2. A string-work of knit fabric comprising leg and foot portions having therein a certain number of needle wales and top sections having therein a less number of needle wales continuous with recurrent wales of said leg and foot portions.

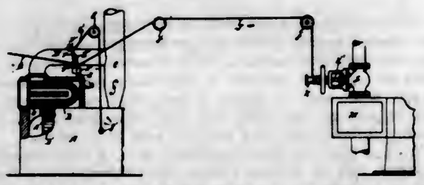
3. A string-work of knit fabric comprising leg and foot portions having therein a certain number of needle wales, top sections having therein fewer needle wales continuous with recurrent wales of said leg and foot portions, said top sections being formed of heavier yarn than the adjacent fabric.

4. A string-work of knit fabric comprising leg and foot portions having therein a certain number of needle wales, top sections having therein fewer needle wales continuous with recurrent wales of said leg and foot portions, said top sections being formed of heavier yarn than the adjacent fabric, said heavier yarn extending beyond said top section into the adjacent fabric.

5. A string-work of knit fabric comprising leg and foot portions having therein a certain number of needle wales, top sections having therein fewer needle wales continuous with recurrent wales of said leg and foot portions, said top section including a portion adapted to be parted to sever the string-work into article blanks, each including a leg and foot and top portions.

[Claims 6 to 16 not printed in the Gazette.]

1,106,337. APPARATUS FOR CONTROLLING STEAM-SUPERHEATERS. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed July 7, 1913. Serial No. 777,701. (Cl. 122—480.)



1. In an apparatus of the character described, a steam-super-heater, a damper-spindle, a damper secured on said spindle to control the flow of heated gases to said super-heater, a weighted lever secured on said damper spindle adapted to automatically operate said damper in one direction, means secured to said lever for operating said damper in the opposite direction, another weighted lever loosely pivoted on said damper spindle adapted to engage the first named lever to counteract the automatic operation of said damper thereby, a steam consuming unit and means operatively connecting said last named lever with a steam consuming unit whereby said last named lever will be moved out of engagement with the first named lever when steam is admitted to said unit, substantially as and for the purpose set forth.

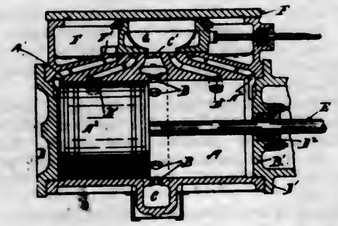
2. In an apparatus of the character described, a steam super-heater, a damper adapted to control the flow of heat conveying medium to said super-heater, mechanism to operate said damper, and mechanism adapted to permit said damper operating mechanism to be operated to open or close said damper when steam is permitted to flow through said super-heater and to cause said damper operating mechanism to close said damper when steam is prevented from flowing through said super-heater, substantially as set forth.

3. In an apparatus of the character described, a steam super-heater, a damper, mechanism for operating said damper adapted to receive manual or automatic control, a steam supply valve, and mechanism operatively connected with said supply valve, whereby said damper operating mechanism will be permitted to open said damper when said supply valve is opened and will be prevented from opening said damper when said supply valve is closed, substantially as set forth.

4. In an apparatus of the character described, a steam super-heater, a damper to control the flow of heat conveying medium thereto, mechanism adapted to open and close said damper, and mechanism adapted to permit said damper operating mechanism to be actuated to open or close said damper while steam is flowing through said super-heater, and to actuate said damper operating mechanism to close said damper when steam is not flowing therethrough, substantially as set forth.

5. In an apparatus of the character described, a steam super-heater, a smoke flue leading therefrom, a damper-spindle therein, a weighted lever secured on said spindle adapted to operate said damper in one direction, another weighted lever pivoted on said spindle and adapted to engage said first named lever and operate it and said damper in the opposite direction, and means secured to said last named lever and connecting with a valve in a steam pipe, connecting with said super-heater, whereby said damper will be closed when steam ceases to flow through said super-heater, substantially as set forth.

1,106,338. STEAM-ENGINE. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Sept. 26, 1913. Serial No. 791,994. (Cl. 121—45.)



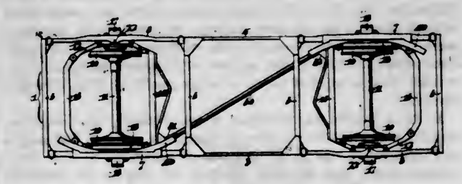
1. In a steam engine, the combination of a cylinder having a steam inlet port at the end thereof, a main exhaust port and an auxiliary exhaust port in the wall thereof located between the inlet port and main exhaust port, a single valve controlling said inlet and auxiliary exhaust ports, and a piston in the cylinder covering and uncovering the main exhaust port, substantially as set forth.

2. In a steam engine, the combination of a cylinder having steam inlet ports at the ends, main exhaust ports at the intermediate portion thereof and auxiliary exhaust ports in the wall of said cylinder between said main exhaust ports and the ends of said cylinder, a piston in said cylinder adapted to cover and maintain said main exhaust ports closed, until the end of its stroke, a valve-chest, a valve therein adapted to alternately open and close said steam inlet ports, and to alternately close said auxiliary exhaust ports, and open said auxiliary ports to the exhaust with the opening of the main exhaust ports by the piston, substantially as set forth.

3. In a steam engine, the combination of a cylinder having steam inlet ports at the ends, main exhaust ports at the intermediate portion, and auxiliary exhaust ports in the wall thereof between said steam inlet ports and said main exhaust ports, and a piston in said cylinder, and a single valve located at one side of said cylinder adapted to open and close said steam inlet ports and said auxiliary exhaust ports, substantially as set forth.

4. In a steam engine, the combination of a cylinder having a steam inlet port at the end thereof, a main exhaust port at the intermediate portion thereof, and an auxiliary exhaust port located in the wall of said cylinder between the main exhaust port and said steam intake port, a single valve controlling said inlet and auxiliary exhaust ports, and a piston in the cylinder covering and uncovering the main and auxiliary exhaust ports, substantially as set forth.

1,106,339. CAR-TRUCK. WILLIAM H. STEVENSON, Chicago, Ill., and GEORGE GIBBS, New York, N. Y., assignors to Philadelphia Holding Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 13, 1912. Serial No. 731,050. (Cl. 105—137.)



1. In an oppositely-pivoted and diagonally-correlated truck system; the combination, with a truck, of a free support, intervening between the car-body and the truck at the non-pivoted side of the latter; and a pair of segmental tracks and rolling supports intervening between the car-body and the truck upon the pivoted side of the latter; said tracks being substantially concentric with the axis of the pivot, and being arranged symmetrically in substantially diametric relation thereto.

2. In an oppositely-pivoted and diagonally-correlated truck system; the combination, with a truck, of a pair of segmental double-inclined tracks and rollers intervening between said car-body and said truck at the non-pivoted side of the latter; and a pair of double-inclined tracks and rollers intervening between the car-body and the truck at the pivoted side of the latter and arranged in substantially diametric relation to the axis of the pivot; said segmental tracks being substantially concentric with the pivot and the inclines upon the non-pivoted side being substantially similar to those upon the pivoted side in vertical depth at similar angular degrees of the respective segments.

3. In an oppositely-pivoted and diagonally-correlated truck system; the combination of a housing; a pair of segmental double-inclined tracks carried by the housing at the non-pivoted side of a truck; rollers carried by the truck and adapted to run upon said tracks respectively; a pair of segmental double-inclined tracks carried by the truck at its pivoted side, said trucks being arranged in substantially diametric relation to the axis of the pivot; and a pair of friction rollers carried by the housing at the pivoted side of the truck arranged in substantially diametric relation to one another and adapted to run upon said last mentioned tracks respectively.

4. In an oppositely-pivoted and diagonally-correlated truck system, comprising a free support intervening be-

tween the car-body and the truck, on the non-pivoted side of the latter; the combination, with the truck, of a socket plate carried at the pivoted side thereof, and having a socket adapted to receive the pivot; a pair of vertically projecting brackets carried by said truck adjacent to said socket; a pair of double-inclined segmental tracks mounted upon each of said brackets, said segments being substantially concentric with the axis of the socket and the points of convergence of the respective double-inclines being located diametrically with relation to said axis.

1,106,340. DEVICE FOR FORMING DISPLAY-SIGNS. ELMER E. BELLAMY, Lakewood, Ohio. Filed Feb. 2, 1914. Serial No. 815,058. (Cl. 40—125.)



1. In a device for forming a display-sign, the combination with a sheet having incisions therein defining a sign character; of a second sheet adjacent and secured to said first-named sheet; said sign character being secured to said second sheet.

2. In a device for forming a display sign, the combination with a flexible sheet having incisions defining a sign character; of a second sheet adjacent to the said first-named sheet and secured thereto by means of adhesive material, said character having its reverse side likewise secured to said sheet by means of adhesive material; the obverse side of said character being provided with adhesive material.

3. In a device for forming display signs, the combination of a flexible sheet having incisions therein defining a sign character; of a second sheet adjacent to the first-named sheet and secured thereto by means of adhesive material applied to longitudinal portions of the opposed faces, such longitudinal portions crossing the sign character; the obverse side of said character being provided with adhesive material.

4. In a device for forming display signs, the combination with a sheet having incisions therein defining a sign character, said character having on its obverse side adhesive material; of a second sheet secured to said first-named sheet adjacent to the reverse side of said character and by means of an adhesive material of lesser adhesiveness than the adhesive material on the obverse side of said character; the latter being secured to said second sheet by means of said last named adhesive material.

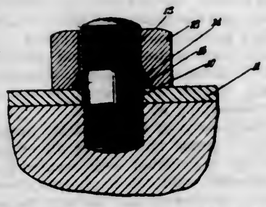
1,106,341. MEASURING INSTRUMENT. WILLIAM H. BRISTOL, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Oct. 2, 1913. Serial No. 792,924. (Cl. 73—110.)



1. A pressure gage, comprising: a suitably perforated casing; a plurality of perforated diaphragms forming an expansible member adapted to vary in length under pressure variations, the perforations of said diaphragms registering with that of said casing and one end of said expansible member being free to move; a member secured to the said free end of the expansible member and extending into the perforations of the diaphragms; a spiral member within the perforations of said diaphragms and engaged by said member extending from the free end of the diaphragms to be oscillated thereby; suitable bearing members for the spiral member and secured to said casing; and a measuring arm attached to said spiral member to move over the said casing as the expansible member varies in length.

2. A pressure gage, comprising: a suitable casing centrally perforated; a plurality of perforated expansible diaphragms, the perforations thereof registering with that of said casing and one end of said diaphragms being fixedly attached to said casing forming therewith a sealed chamber; a suitable inlet thereto for fluid under pressure; a slotted member secured to the free end of said diaphragms and extending into the perforations thereof; a spiral member engaged by the slot of said slotted member; a bracket extending inwardly from said casing into the perforations of said diaphragms and providing a bearing for the spiral member; an arm extending over said casing and providing a second bearing for said spiral member; and an indicating arm attached to said spiral member adapted to move over the said casing as the length of said expansible chamber is varied.

1,106,342. SCREW-FASTENING DEVICE. WILLIAM H. BRISTOL, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 10, 1914. Serial No. 823,671. (Cl. 85—1.)



1. A screw fastening device including a threaded bolt and a threaded nut therefor of larger opening than said bolt, the threads of one of which extend but partly around the same, and means to center said nut with respect to said bolt.

2. A screw fastening device including a threaded bolt, a partly threaded nut of larger opening than said bolt and adapted to fit thereover, and means to center said nut with respect to said bolt.

3. A screw fastening device including a threaded bolt, a nut having an eccentric, threaded opening larger than said bolt and adapted to fit thereover, and means to center said nut with respect to said bolt.

4. A screw fastening device including a threaded bolt, a nut having an eccentric, suitably threaded opening larger than said bolt flaring outwardly at the inner end and adapted to fit thereover, and means to center said nut with respect to said bolt.

5. A screw fastening device including a threaded bolt, a partly threaded nut of larger opening than said bolt and adapted to fit thereover, said opening flaring outwardly and at its immediate inner end being parallel to the said bolt, and means to center said nut with respect to said bolt.

[Claims 6 to 8 not printed in the Gazette.]

1,106,343. PRIMING CHARGE. WILLIAM H. BUELL, New Haven, Conn., assignor to Winchester Repeating Arms Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 21, 1913. Serial No. 796,441. (Cl. 102—18.)

1. As an article of manufacture a casing suitable for use in connection with fire-arms, and a charge therein, said charge containing a mixture of a detonating salt of hydrazoic acid and a nitrated organic body, substantially as and for the purpose described.

2. As an article of manufacture a casing suitable for use in connection with fire-arms, and a charge therein, said charge containing a mixture of a detonating salt of hydrazoic acid and a nitrated carbohydrate, substantially as and for the purpose described.

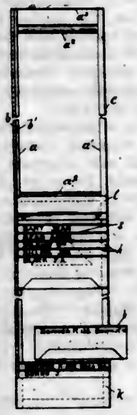
3. As an article of manufacture a casing suitable for use in connection with fire-arms, and a charge therein, said charge containing a mixture of a detonating salt of hydrazoic acid and nitrocellulose, substantially as and for the purpose described.

4. As an article of manufacture a casing suitable for use in connection with fire-arms, and a charge therein, said charge containing a mixture of lead hydrazoate and a nitrated organic body, substantially as and for the purpose described.

5. An an article of manufacture a casing suitable for use in connection with fire-arms, and a charge therein, said charge containing a mixture of lead hydrazoate and a nitrated carbohydrate, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,106,344. INDEX OR INFORMATION RACK. WILLIAM P. DE SAUSSURE, Jr., Englewood Cliffs, and GEORGE S. TIFFANY, Summit, N. J.; said Tiffany assignor, by mesne assignments, to said De Saussure. Filed Feb. 24, 1913. Serial No. 750,269. (Cl. 129—16.)



1. An index or information rack embodying therein a frame, a plurality of independently removable holders mounted in the frame in successively abutting positions, means for retaining the holders normally in position in the frame comprising means carried by the frame for locking one of said holders in position and interlocking means carried by the holders, and means carried by each holder whereby an index sheet or card may be detachably mounted therein.

2. An index or information rack embodying therein a frame, a plurality of independently removable holders slidably mounted in the frame and resting normally in successively abutting positions, means for retaining the holders normally in position in the frame comprising means carried by the frame for locking one of said holders in position and interlocking means carried by the holders, and means carried by each holder whereby an index sheet or card may be detachably mounted therein.

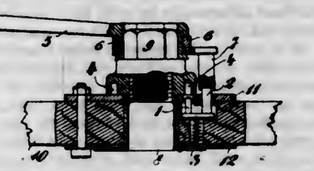
3. An index or information rack embodying therein a frame having parallel side flanges at least one of which has an inwardly extending overhang, a plurality of independently removable holders slidably mounted in the frame between said flanges and extending beneath said overhang and resting normally in successively abutting positions, means for retaining the holders normally in position in the frame comprising means carried by the frame for locking one of said holders in position and interlocking means carried by the holders, and means carried by each holder whereby an index sheet or card may be detachably mounted therein.

4. An index or information rack embodying therein a frame having side flanges one of which has been inwardly extending overhang and the other of which has no such overhang, a plurality of independently removable holders slidably mounted in the frame between said flanges and extending beneath said overhang and resting normally in successively abutting positions, means for retaining the holders normally in position in the frame comprising means carried by the frame for locking one of said holders in position and interlocking means carried by the holders, and means carried by each holder whereby an index sheet or card may be detachably mounted therein.

5. An index or information rack embodying therein a frame, side flanges thereon, at least one of which has an inwardly projecting overhang, a plurality of independently removable holders adapted to be seated and slide between said flanges and extend beneath said overhang, and interlocking means adapted to be rendered operative or inoperative by the sliding movement of said holders, carried by said frame and said holders, whereby all holders in a frame are normally held therein.

[Claims 6 to 18 not printed in the Gazette.]

1,106,345. INTERCHANGEABLE WHEEL OF MOTOR-CARS. MARTIN FISCHER, Zurich, Switzerland, assignor, by mesne assignments, to John T. Pratt, New York, N. Y. Filed Sept. 17, 1912. Serial No. 720,879. (Cl. 21—31.)

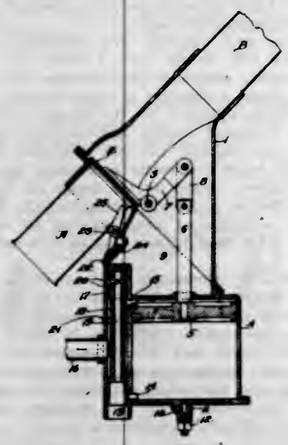


1. An interchangeable wheel for motor cars, a main axle, a wheel hub with flanges adapted to be supported on said axle, a securing cap having threaded engagement with the axle end and having perforations on the inner side of the cap, a depressible pin in the wheel hub adapted normally to project through the wheel hub flange to engage one of the perforations on the locking cap, a peg rigidly connected with the locking pin adapted to project through the wheel hub flange outside of the periphery of the locking cap flange for the purpose described.

2. The combination with an interchangeable wheel for motor cars, a spoke hub, an axle, a screw cap engaging said axle and having an outer angular head and an inner spread flange to engage the outer side of the spoke hub, a flange on the outer side of the spoke hub, a plurality of perforations on the face of the cap flange engaging the spoke hub, a double pin lock, a spring to press said lock so that the two pins normally project through the wheel hub flange, one of said pins being so positioned as to engage the perforations on the cap flange and the other of said pins projecting beyond the cap flange.

3. In combination, an axle threaded at its outer end, a hub provided with a face plate having openings registering with a recess in the hub, a spring seated lock located in said recess, members on said lock adapted to project through the openings in the face plate, and a cap for engaging the threaded end of the axle and having openings to receive one of the members of the lock.

1,106,346. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Nov. 26, 1906. Serial No. 345,060. (Cl. 243—15.)



1 In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected with said valve and adapted to operate in said cylinder, and mechanism adapted to be operated by fluctuations of pressure in said tube to admit air to said cylinder and to move said piston to open said valve.

2. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected with said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air to said cylinder and move said piston to open said valve, and means for causing a return movement of said piston and effecting the closure of said valve.

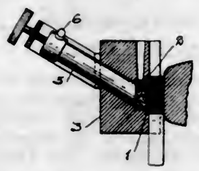
3. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuations of pressure in said tube to admit air to said cylinder and move said piston to open said valve, and means, operated on the insertion of a carrier, for causing a fluctuation of the pressure in said tube to operate said mechanism.

4. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air into said cylinder and move said piston to open said valve, and means for causing a fluctuation of the pressure in said tube to operate said mechanism.

5. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air to said cylinder and move said piston to open said valve, means operated on the insertion of a carrier for causing a fluctuation of the pressure in said tube to operate said mechanism, and means for timing the closure of said valve.

[Claims 6 to 11 not printed in the Gazette.]

1,106,347. ELECTRODE FOR WELDING. ALBERT B. HERRICK, New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 29, 1912. Serial No. 733,973. (Cl. 219—4.)



1. As a new article of manufacture, a welding electrode of laminated structure, the laminæ being disposed transversely of the line of current flow through said electrode.

2. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, such laminæ being of different physical character.

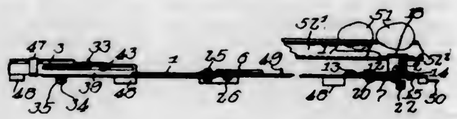
3. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, one of said laminæ being of relatively solid, the other of granular, character.

4. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, the one of said laminæ designed to contact with the article to be welded being of relatively solid, the other of granular, character.

5. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, such laminæ being of unlike chemical composition.

[Claims 6 to 10 not printed in the Gazette.]

1,106,348. EGG-TESTER. JOHN M. IRVINE, Williams Bay, Wis. Filed July 22, 1912. Serial No. 710,866. (Cl. 99—6.)



1. In an egg tester and in combination, a suitable base provided at one end with a lamp, and at the opposite end with means for attachment to a suitable source of energy, and means for yieldingly carrying said lamp, and connecting the same with the said source of energy.

2. In an egg tester and in combination, a suitable base part provided with a lamp at one end yieldingly mounted thereon, a switch arranged proximate said lamp and arranged to coöperate therewith, and means for connecting said lamp and switch with a suitable source of energy.

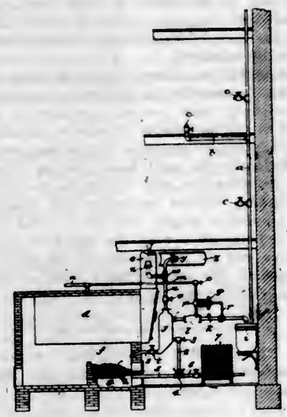
3. In an egg tester and in combination, a suitable handle, provided with a battery at one end and an adjustably supported lamp at the opposite end, a normally open electric circuit connecting said battery and lamp, said lamp being arranged to close the said circuit when the lamp is depressed.

4. In an egg tester and in combination, a suitable handle, provided with a battery at one end and a resiliently supported lamp at the opposite end, a normally open electric circuit connecting said battery and lamp said lamp being arranged to close the said circuit when the lamp is depressed.

5. In an egg tester and in combination, a suitable handle, a battery arranged at one end of said handle, a pair of contact members arranged at said end for connection with the battery, a lamp arranged at the opposite end of said handle, an electric switch comprising a plurality of parts at said end, said lamp being mounted upon one of said switch parts and arranged to coöperate with the other switch part, and means for electrically connecting said switch parts with said contact members.

[Claims 6 and 7 not printed in the Gazette.]

1,106,349. VACUUM CLEANING AND HEATING SYSTEM. FRANK J. MATCHETTE and RICHARD RADDATZ, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 2, 1905, Serial No. 248,106. Divided and this application filed Sept. 30, 1910. Serial No. 584,587. (Cl. 83—47.)

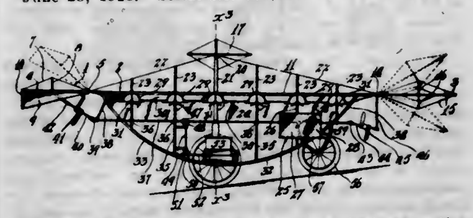


1. In a vacuum cleaning and heating system, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust therethrough, a dust-collector or separator in said system, means for supplying steam to said aspirator for operating the same, and a heating-system connected with the exhaust of said aspirator, said system being provided with valves controlling points of disposition of the exhaust from the aspirator.

2. In a vacuum cleaning and heating system, in combination, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust through the system and to maintain a vacuum therein, means for supplying steam to said aspirator, a dust-collector in the exhaust of said aspirator and provided with a collecting receptacle, said collector having a dust discharge in the collecting receptacle thereof, whereby the collected dust is blown out of the collector on opening said discharge, and a heater connected with said collector at a point above which dust and dirt accumulate therein and receiving the purified air and steam therefrom.

3. In a vacuum cleaning and heating system in combination, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust through said system and maintain a vacuum therein, a steam-generator, including a furnace, adapted to supply steam to said aspirator to operate it, a heater receiving the exhaust of said aspirator, a dust-collector interposed between said aspirator and said heater and having the heater connected therewith at a point above which dust and dirt accumulate in the collector, and a discharge for said dust-collector arranged to discharge the dust collected therein into said furnace.

1,106,350. COMBINATION AEROPLANE AND DIRIGIBLE BALLOON. AUGUST E. MUELLER, Los Angeles, Cal. Filed Nov. 9, 1909, Serial No. 527,095. Renewed June 23, 1913. Serial No. 775,417. (Cl. 244—5.)



1. In an aeroplane, a fish-shaped plane, the front portion of which is pivoted thereto along its rear edge and vertically adjustable, and a rudder underneath said adjustable plane pivoted to the forward end of said portion and carried thereby.

2. An aeroplane comprising a main plane, a front plane pivoted thereto, a rudder pivoted to a vertical post under and carried by the front plane, and a rudder below the main plane near the rear thereof.

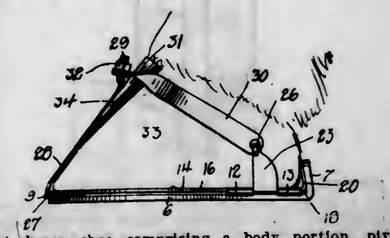
3. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plate, propellers on said shafts, and means for driving said propellers.

4. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plane, propellers on said shafts, means for driving said propellers, a telescopic joint connecting the sind propeller shafts with said front plane, and a universal joint between said propeller shafts and their operating means permitting adjustment of the front plane.

5. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plane, propellers on said shafts, means for driving said propellers, a plurality of propellers at the rear of the main plane and below the same, and longitudinal shafts connected by universal joints to the propellers at each end.

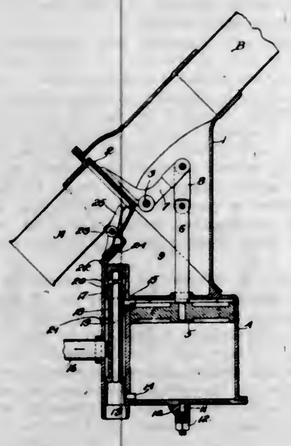
[Claim 6 not printed in the Gazette.]

1,106,351. HORSESHOE. ALEX BALOGH and LAJOS NAGY, St. Catharines, Ontario, Canada. Filed Apr. 18, 1914. Serial No. 832,971. (Cl. 168—22.)



1. A horse shoe comprising a body portion, pivoted coupling members connected to the toe and to the heels

1,106,346. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Nov. 26, 1906. Serial No. 345,060. (Cl. 243—15.)



1. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected with said valve and adapted to operate in said cylinder, and mechanism adapted to be operated by fluctuations of pressure in said tube to admit air to said cylinder and to move said piston to open said valve.

2. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected with said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air to said cylinder and move said piston to open said valve, and means for causing a return movement of said piston and effecting the closure of said valve.

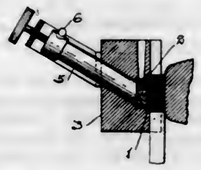
3. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechaniam adapted to be operated by fluctuations of pressure in said tube to admit air to said cylinder and move said piston to open said valve, and means, operated on the insertion of a carrier, for causing a fluctuation of the pressure in said tube to operate said mechanism.

4. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air into said cylinder and move said piston to open said valve, and means for causing a fluctuation of the pressure in said tube to operate said mechanism.

5. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted, a sending station into which carriers are inserted for transmission, means for exhausting air from said tube, a valve normally closing said tube and adapted to open to admit air into said tube for driving carriers, a cylinder, a piston connected to said valve and adapted to operate in said cylinder, mechanism adapted to be operated by fluctuation of pressure in said tube to admit air to said cylinder and move said piston to open said valve, means operated on the insertion of a carrier for causing a fluctuation of the pressure in said tube to operate said mechanism, and means for timing the closure of said valve.

[Claims 6 to 11 not printed in the Gazette.]

1,106,347. ELECTRODE FOR WELDING. ALBERT B. HERRICK, New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 29, 1912. Serial No. 733,973. (Cl. 219—4.)



1. As a new article of manufacture, a welding electrode of laminated structure, the laminæ being disposed transversely of the line of current flow through said electrode.

2. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, such laminæ being of different physical character.

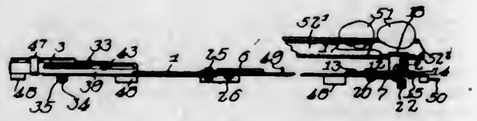
3. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, one of said laminæ being of relatively solid, the other of granular, character.

4. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, the one of said laminæ designed to contact with the article to be welded being of relatively solid, the other of granular, character.

5. As a new article of manufacture, a welding electrode comprising laminæ disposed transversely of the line of current flow through said electrode, such laminæ being of unlike chemical composition.

[Claims 6 to 10 not printed in the Gazette.]

1,106,348. EGG-TESTER. JOHN M. IRVINE, Williams Bay, Wis. Filed July 22, 1912. Serial No. 710,866. (Cl. 99—6.)



1. In an egg tester and in combination, a suitable base provided at one end with a lamp, and at the opposite end with means for attachment to a suitable source of energy, and means for yieldingly carrying said lamp, and connecting the same with the said source of energy.

2. In an egg tester and in combination, a suitable base part provided with a lamp at one end yieldingly mounted thereon, a switch arranged proximate said lamp and arranged to coöperate therewith, and means for connecting said lamp and switch with a suitable source of energy.

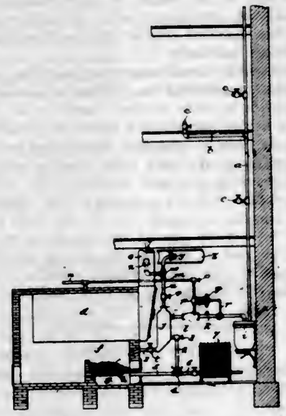
3. In an egg tester and in combination, a suitable handle, provided with a battery at one end and an adjustably supported lamp at the opposite end, a normally open electric circuit connecting said battery and lamp, said lamp being arranged to close the said circuit when the lamp is depressed.

4. In an egg tester and in combination, a suitable handle, provided with a battery at one end and a resiliently supported lamp at the opposite end, a normally open electric circuit connecting said battery and lamp said lamp being arranged to close the said circuit when the lamp is depressed.

5. In an egg tester and in combination, a suitable handle, a battery arranged at one end of said handle, a pair of contact members arranged at said end for connection with the battery, a lamp arranged at the opposite end of said handle, an electric switch comprising a plurality of parts at said end, said lamp being mounted upon one of said switch parts and arranged to coöperate with the other switch part, and means for electrically connecting said switch parts with said contact members.

[Claims 6 and 7 not printed in the Gazette.]

1,106,349. VACUUM CLEANING AND HEATING SYSTEM. FRANK J. MATCHETTE and RICHARD RADDATZ, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 2, 1905, Serial No. 248,106. Divided and this application filed Sept. 30, 1910. Serial No. 584,587. (Cl. 83—47.)

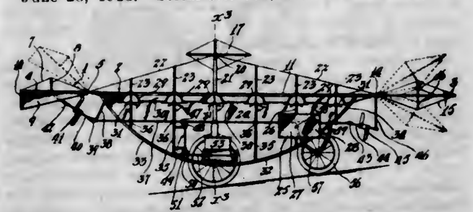


1. In a vacuum cleaning and heating system, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust therethrough, a dust-collector or separator in said system, means for supplying steam to said aspirator for operating the same, and a heating-system connected with the exhaust of said aspirator, said system being provided with valves controlling points of disposition of the exhaust from the aspirator.

2. In a vacuum cleaning and heating system, in combination, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust through the system and to maintain a vacuum therein, means for supplying steam to said aspirator, a dust-collector in the exhaust of said aspirator and provided with a collecting receptacle, said collector having a dust discharge in the collecting receptacle thereof, whereby the collected dust is blown out of the collector on opening said discharge, and a heater connected with said collector at a point above which dust and dirt accumulate therein and receiving the purified air and steam therefrom.

3. In a vacuum cleaning and heating system in combination, a piping-system having means for attachment to a vacuum cleaner, a steam aspirator in communication with a pressure supply and adapted to draw air and dust through said system and maintain a vacuum therein, a steam-generator, including a furnace, adapted to supply steam to said aspirator to operate it, a heater receiving the exhaust of said aspirator, a dust-collector interposed between said aspirator and said heater and having the heater connected therewith at a point above which dust and dirt accumulate in the collector, and a discharge for said dust-collector arranged to discharge the dust collected therein into said furnace.

1,106,350. COMBINATION AEROPLANE AND DIRIGIBLE BALLOON. AUGUST E. MUELLER, Los Angeles, Cal. Filed Nov. 9, 1909, Serial No. 527,095. Renewed June 23, 1913. Serial No. 775,417. (Cl. 244—5.)



1. In an aeroplane, a fish-shaped plane, the front portion of which is pivoted thereto along its rear edge and vertically adjustable, and a rudder underneath said adjustable plane pivoted to the forward end of said portion and carried thereby.

2. An aeroplane comprising a main plane, a front plane pivoted thereto, a rudder pivoted to a vertical post under and carried by the front plane, and a rudder below the main plane near the rear thereof.

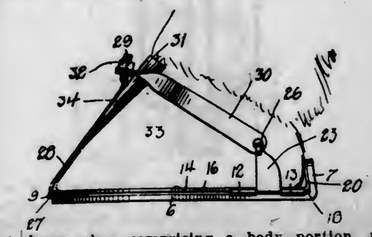
3. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plate, propellers on said shafts, and means for driving said propellers.

4. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plane, propellers on said shafts, means for driving said propellers, a telescopic joint connecting the sind propeller shafts with said front plane, and a universal joint between said propeller shafts and their operating means permitting adjustment of the front plane.

5. An aeroplane comprising a main plane, a front plane pivoted thereto, a plurality of propeller shafts connected to each side of the front plane, propellers on said shafts, means for driving said propellers, a plurality of propellers at the rear of the main plane and below the same, and longitudinal shafts connected by universal joints to the propellers at each end.

[Claim 6 not printed in the Gazette.]

1,106,351. HORSESHOE. ALEX BALOGH and LAJOS NAGY, St. Catharines, Ontario, Canada. Filed Apr. 18, 1914. Serial No. 832,971. (Cl. 168—22.)



1. A horse shoe comprising a body portion, pivoted coupling members connected to the toe and to the heels

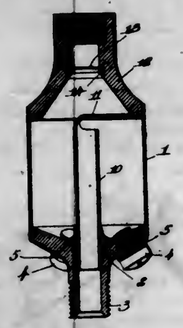
of said body portion, said coupling members being angle-shaped, that coupling member pivoted to the toe of the body portion formed with a threaded shank, attaching members loosely connected to the coupling members, connected to the heels of the shoe body and adapted to be positioned upon said shank, and means mounted upon the shank for connecting the toe coupling member to said attaching members whereby the shoe is detachably connected to the hoof of the animal.

2. A horse shoe comprising a body portion, pivoted coupling members connected to the toe and to the heels of said body portion, said coupling members being angle-shaped, that coupling member pivoted to the toe of the body portion formed with a threaded shank, attaching members loosely connected to the coupling members, connected to the heels of the shoe body and adapted to be positioned upon said shank, means mounted upon the shank for connecting the toe coupling member to said attaching members whereby the shoe is detachably connected to the hoof of the animal, and a protector interposed between a portion of the toe coupling member and portions of said attaching members.

3. A horse shoe comprising a body portion, pivoted coupling members connected to the toe and to the heels of said body portion, said coupling members being angle-shaped, that coupling member pivoted to the toe of the body portion formed with a threaded shank, attaching members loosely connected to the coupling members, connected to the heels of the shoe body and adapted to be positioned upon said shank, means mounted upon the shank for connecting the toe coupling member to said attaching members whereby the shoe is detachably connected to the hoof of the animal, and said shoe body provided with upwardly extending heels.

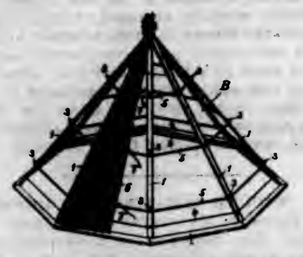
4. A horse shoe comprising a body portion, pivoted coupling members connected to the toe and to the heels of said body portion, said coupling members being angle-shaped, that coupling member pivoted to the toe of the body portion formed with a threaded shank, attaching members loosely connected to the coupling members, connected to the heels of the shoe body and adapted to be positioned upon said shank, means mounted upon the shank for connecting the toe coupling member to said attaching members whereby the shoe is detachably connected to the hoof of the animal, a protector interposed between a portion of the toe coupling member and portions of said attaching members, and said shoe body provided with upwardly extending heels.

1,106,352. GASOLENE AND WATER SEPARATOR. THOMAS DONALD ADAIR, Boston, Mass., assignor to Standard Thermometer Company, Portland, Me., a Corporation of Maine. Filed Dec. 4, 1913. Serial No. 804,623. (Cl. 210—5.)



A gasolene and water separator consisting of a body having a bottom provided with an integral gasolene inlet, a delivery pipe supported inside the inlet and extending upward from the bottom and having a mouth at some elevation thereabove provided with a portion bent at right angles to the direction of the delivery pipe to form a baffle extending across and covering but not closing the mouth of the delivery pipe, and a top having a discharge opening for the gasolene, substantially as described.

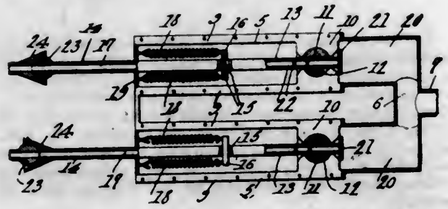
1,106,353. PROTECTING-ROOF FOR HAYSTACKS AND THE LIKE AND PROCESS FOR ITS MANUFACTURE. FRANZ ADAMEC, Martinoves, near Budin, Austria-Hungary. Filed Mar. 6, 1914. Serial No. 822,977. (Cl. 108—3.)



1. A protecting roof of the kind described comprising a plurality of straws, means for connecting the said straws together at several places of their length so that the whole structure assumes the shape of a conic surface cut open along one of its generatrixes, a shorter string secured to one of the edges of said roof and a longer string secured to the other edge of said roof and pegs secured to the ends of said strings, substantially as and for the purpose set forth.

2. A process for manufacturing protecting roofs of the kind described, consisting in tightening around a framework composed of rods secured together at the summit and secured at the bottom to a frame, a plurality of ropes in parallel relation to the said frame and securing same to pegs secured in the said rods, placing straws on the said ropes, securing the said straws to the said ropes by means of strings twisted around a few straws and the said ropes leaving a longer end of the said strings projecting at the top of one of the edges of the said roof and a shorter end at the bottom of the said edges, and securing pegs to the ends of said ends of strings, substantially as and for the purpose set forth.

1,106,354. TRAIN-PIPE COUPLING. ALBERT S. ENGLISH, Anaconda, Mont. Filed Jan. 21, 1914. Serial No. 813,510. (Cl. 188—13.)

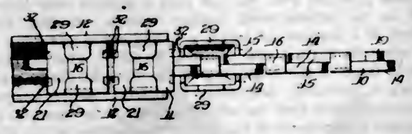


1. A pipe coupling apparatus comprising a pair of similar casings, means extending across the ends thereof holding the same in spaced relation, partitions extending across the casing intermediate the ends thereof, a ball with a bore extending therethrough positioned within said partitions, pipe-like plungers extending through said ball bores and extending into the rear compartments defined by the partitions, supply pipes communicating with said rear compartments, said plungers provided with closed inner ends and with apertures extending through the side walls thereof, said apertures effecting a valve action with the said balls, a flange carried by said plungers intermediate their ends and housed within said casings, resilient means engaging said flange and the walls of said casings adapted to hold the plungers in extended position, and means carried by the extermities of said plungers adapted to effect a tight juncture with the meeting extremities of a second pair of similar plungers.

2. A coupling apparatus comprising an integral frame with spaced parallel casings, partitions extending across the said casings intermediate their ends and dividing the same into front and rear compartments, supply pipes communicating with the said rear compartments, spherical valve members positioned within said partitions and provided with bores extending therethrough, sectional pipe-like plungers slidably mounted within said spherical valve members bores, said plungers provided with apertures extending through the side walls and effecting a valve action with the said spherical valve members, a flanged coupling connecting the sections of said plungers, a plurality of tension springs engaging the front walls of said casings and the said flanged couplings adapted to hold said plungers in extended position, and means carried by the ends of said plungers for effecting a tight juncture with the meeting extremities of a second pair of plungers.

3. A pipe coupling comprising a casing, a partition extending across the casing intermediate the ends thereof, a ball with a bore extending there through positioned within said partition, a pipe-like plunger extending through said ball bore and extending into the rear compartment defined by the partition, a supply pipe communicating with said rear compartment, said plunger provided with a closed rear end and with an aperture extending through the side wall thereof, said aperture effecting a valve action with said bore, resilient means engaging the pipe-like plunger and the wall of said casing, adapted to hold said plunger in an extended position, and means carried by the extremity of said plunger adapted to effect a tight juncture with the meeting extremity of a second and oppositely arranged plunger.

1,106,355. METALLIC POWER-BELT. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to James E. Cagney, Jr., Chicago, Ill. Filed Sept. 16, 1912. Serial No. 720,501. (Cl. 74—64.)



1. A power belt comprising a plurality of pivotally connected links, a substantially V-shaped member carried by each link, the ends of the side walls of said member being bent to engage the sides of the links at the pivotal connections whereby the links are held against disengagement and the side walls intermediate the ends being spaced from the sides of the link.

2. A power belt comprising a series of links pivotally connected together, each link having offset ends so that the outer faces of the links are disposed in common planes, and a metallic housing secured to each link, said housings having side walls diverging from bottom to top to present inclined side faces, the ends of said side walls being bent inwardly to engage the overlapping ends of connected links and prevent the same from becoming disconnected.

3. A power belt comprising a plurality of links pivotally connected together, the ends of each link being laterally offset in opposite directions, and a metallic housing secured to a link, said housing having side walls diverging from bottom to top to present inclined side faces and the ends of said side walls being bent inwardly to engage the outer faces of connected links and prevent said links from becoming disconnected.

4. A power belt comprising a series of links having oppositely offset ends pivotally connected together, and a metallic housing having diverging side walls secured to the top and bottom of a link, the ends of said side walls being bent inwardly to engage the outer faces of interengaged links and retain said links against disengagement.

5. A power belt comprising a series of links having oppositely offset ends provided respectively with a stud and an aperture, the stud of each link being engaged in the aperture of the next link whereby the links are pivotally connected together with their outer faces in alinement, and a housing having diverging side walls carried by a link, said housing having its ends positioned to embrace the outer faces of a plurality of connected links to retain the same in interengagement.

[Claims 6 to 12 not printed in the Gazette.]

1,106,356. METALLIC POWER-BELT. ERNEST A. BOHLMAN, Cedar Rapids, Iowa, assignor to James E. Cagney, Jr., Chicago, Ill. Filed Apr. 14, 1913. Serial No. 760,956. (Cl. 74—64.)



1. A power belt comprising a pair of inter-engaged links, the inter-engagement between the links constituting a flexible connection therebetween, having bearing surfaces throughout the aggregate width of the inter-engaged parts.

2. A power belt comprising a pair of inter-engaged links, the inter-engagement between the links constituting a rocking connection therebetween extending transversely through both inter-engaged links.

3. A power belt comprising a pair of links, each of said links being provided with a stud extending outwardly from its side and an aperture adjacent thereto through which a stud of the other link is disposed.

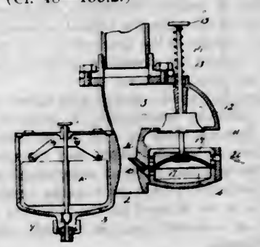
4. A power belt comprising a pair of interengaged links, each of said links being provided with a stud extending outwardly from its side and an aperture, the outer bounding face of said aperture being disposed in substantially a common plane with the inner surface of its stud and the stud on each link being disposed in the aperture of the other link.

5. A power belt comprising a pair of interengaged links, each of said links being provided with a stud extending outwardly from its side and an aperture adjacent each stud, a stud of one link having a rounded inner surface and a stud of the other link a flat inner surface and said stud of each link being inserted within the aperture of the other link.

[Claims 6 to 13 not printed in the Gazette.]

REISSUES.

13,784. CARBURETER. ARTHUR B. BROWNE, Branford, Conn. Filed Apr. 15, 1914. Serial No. 832,002. Original No. 1,067,502, dated July 15, 1913, Serial No. 658,008. (Cl. 48—155.2.)



1. A carbureter having a chamber provided with a primary air inlet and an auxiliary air inlet of variable area, a fuel duct having a normally fixed orifice opening into

said inlet for admitting fuel into said chamber and means responsive to the reduction of pressure created within the primary air inlet by the velocity of the air by its passage through said primary air inlet for varying the area of the auxiliary air inlet thereby inducing a flow of fuel through said fuel duct in proportion to the quantity of air admitted.

2. A carbureter having a mixing chamber provided with a primary air inlet and an auxiliary air inlet of variable area, a fuel duct having a normally fixed orifice opening into said primary air inlet, a vacuum chamber having no communication with said mixing chamber except through the said primary air inlet, in which said vacuum chamber a reduction of pressure caused by the velocity of the air within the said primary air inlet, is made to modify the area of the auxiliary air inlet thereby inducing a flow of fuel through said fuel duct in proportion to the quantity of air admitted.

3. A carbureter having a mixing chamber provided with a primary air inlet and an auxiliary air inlet of variable area, a fuel duct having a normally fixed orifice opening into said primary air inlet, a vacuum chamber having no communication with said mixing chamber except through the primary air inlet, a diaphragm controlled by variations of pressure in the said vacuum chamber and operating to vary the area of the auxiliary air inlet thereby inducing a flow of fuel through said fuel duct in proportion to the quantity of air admitted.

13,785. PROCESS OF MAKING PAVEMENTS. J. Y. McCLINTOCK, Rochester, N. Y. Filed Oct. 27, 1910. Serial No. 589,508. Original No. 957,985, dated May 17, 1910, Serial No. 460,900. (Cl. 94—1.)



1. The process of making pavements, which consists of preparing a suitable foundation, spreading small cubical blocks of vitrified brick or other suitable material on said foundation, raking said blocks together into a compact layer and filling up the space between them, substantially as described.

2. A pavement having a suitable foundation and a wearing surface of small cubical blocks of suitable paving material substantially two inches each way, raked together on the foundation and grouted, substantially as described.

3. A pavement having a suitable foundation and a wearing surface of small cubical blocks of suitable paving material substantially two inches each way, placed together on the foundation and grouted, substantially as described.

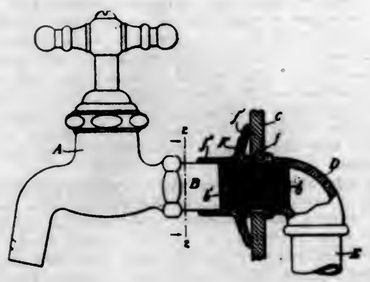
4. A pavement having a suitable foundation and a wearing surface of small cubical molded blocks of suitable paving material substantially two inches each way, placed together on the foundation and grouted, substantially as described.

5. A pavement for horse, wagon and other vehicle traffic, having a suitable foundation, a surface of cubical blocks spread thereon, each of said blocks being substantially two inches in length, width and thickness, each side of said block being suitable for a base or wearing surface, permitting said blocks to be dumped in the roadway and spread out at random on a smooth base in a single compact layer of uniform thickness.

6. A pavement for horse, wagon and other vehicle traffic, having a suitable foundation, a surface of cubical blocks spread thereon, each of said blocks being substantially two inches in length, width and thickness, all the sides of said block being finished substantially alike and each being suitable for a base or wearing surface, permitting said blocks to be dumped in the roadway and spread out at random on a smooth base in a single compact layer of uniform thickness.

7. A pavement having a suitable foundation with a wearing surface thereon composed of small cubical blocks of suitable paving material, substantially two inches each way, the six sides of said blocks being substantially alike, said blocks being arranged closely side by side, substantially as described.

13,786. FAUCET ATTACHMENT. JOSEPH REGAR, Cleveland, Ohio, assignor to The Regar Brass Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 28, 1914. Serial No. 841,666. Original No. 1,078,379, dated Nov. 11, 1913, Serial No. 568,647. (Cl. 137—94.)



1. The combination, in a faucet cock or bib, of a shank having a tapered male thread at the end portion of the shank and a straight male thread on an intermediate portion and a collar having a straight threaded opening adapted to coact with the straight threads on the shank, the straight threads on the shank extending for a considerably greater distance than the threads on the collar, whereby the collar may stand on the straight thread of the shank in advance of the rear end of such thread, and a cylindrical sleeve on the forward side of the collar adapted to extend over the threads on the shank in front of the engaging portion of the collar, irrespective of the position of the collar on such threads.

2. The combination, with a faucet, bib or cock having a shank provided near the end with a tapered male thread and on an intermediate portion with a straight male thread of a number of turns, a collar screw threaded on the straight thread and adapted to stand with its rear face in front of the beginning of the straight thread; and having a forwardly projecting cylindrical sleeve adapted to surround and hide the straight threads in front of the threaded engagement of the collar, irrespective of the position of the collar on the straight thread, the tapered thread being adapted to occupy and firmly seat in a standard female fitting at the rear of a lavatory back or wall, the collar being adapted to simultaneously abut the front face of such back or wall.

3. The combination with a faucet, cock or bib having a shank provided with external threads, the threads adjacent to the end of the shank being tapered and the threads on the intermediate portion of the shank being straight, a collar screw threaded on the straight thread and having a forwardly extending sleeve adapted to hide the straight threads in front of the engagement of the collar, said straight threads at the rear of the collar engagement being adapted to occupy an opening in a lavatory back or wall when the collar engages the front of such back or wall and the tapered thread occupies a standard female fitting abutting the rear of such back or wall.

4. The combination of a faucet, cock or bib having a shank provided with a tapered male thread adjacent to its end, a straight male thread on an intermediate portion of the shank, and a collar having a threaded engagement with the straight thread and adapted to occupy an intermediate position thereon, said collar being provided with a forwardly extending cylindrical sleeve adapted to overhang and cover the straight threads in front of the threaded engagement of the collar and overhang also an unthreaded portion of the shank, said straight threads at the rear of the collar being adapted to extend into a lavatory back or wall of substantial thickness, which is clamped between the collar, and a standard female member pipe fitting embracing the tapered threads and abutting the rear face of such back or wall.

5. The combination with a back, of a faucet, cock or bib having a threaded portion on its shank adapted to extend through the back and project on opposite sides thereof, the threaded portion extending in rear of the back comprising tapered threads to receive a pipe fitting and the portion extending in front of the back comprising straight threads, an internally threaded collar comprising a thin annular flange mounted on the straight threads and adjustable thereon to backs of varying thickness so that the flange will automatically be brought into intimate contact with the back when the cock is rotated to engage the pipe fitting, and means on the collar for concealing the straight threads in all positions of the collar.

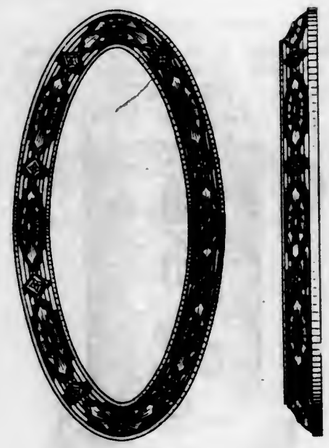
6. The combination with a back, of a faucet, cock or bib having a threaded portion on its shank adapted to extend through the back and project on opposite sides thereof, the threaded portion extending in rear of the back comprising tapered threads to receive a pipe fitting and the portion extending in front of the back comprising straight threads, an internally threaded collar comprising a thin annular rearwardly dished flange mounted on the straight threads and adjustable thereon so that the flange will be automatically brought into intimate contact under pressure with the back when the cock is rotated to engage the pipe fitting, and a thin cylindrical sleeve integral with the collar of sufficient length to conceal the straight threads in all positions of the collar.

7. The combination, with a faucet, cock or bib having a shank on which are tapered threads extending from the rear end of the shank and parallel threads in front of the tapered threads, of a collar comprising an internally threaded ring mounted on the parallel threads, an unthreaded sleeve extending forwardly from the ring and of a diameter sufficiently larger than the threads of the ring to escape the threads on the shank while lying close to the shank in front of its threads and of sufficient length to shield and protect all of the threads in front of the ring, irrespective of the position of the ring on the parallel threads.

8. The combination, with a faucet, cock, or bib having a shank on which are tapered threads extending from the rear end of the shank and parallel threads in front of the tapered threads, of a collar comprising an internally threaded ring mounted on the parallel threads, an unthreaded sleeve extending forwardly from the ring and of a diameter sufficiently larger than the threads of the ring to escape the threads on the shank while lying close to the shank in front of its threads and of sufficient length to shield and protect all of the threads in front of the ring, irrespective of the position of the ring on the parallel threads, and an annular flange adapted to be held by the threaded engagement of said ring against a lavatory back between the flange and a fitting on the tapered thread.

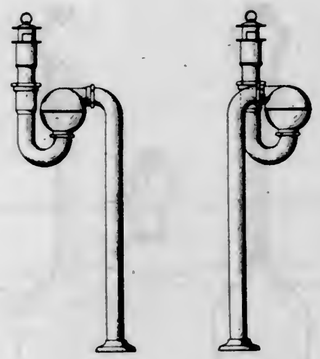
DESIGNS.

46,196. LIGHTING-FIXTURE. GEORGE M. BEARDSLEE and IRA L. FRENCH, Chicago, Ill., assignors to Beardslee Chandelier Manufacturing Company, Chicago, Ill., a Corporation of Delaware. Original application filed Apr. 6, 1914, Serial No. 830,068. Divided and this application filed June 6, 1914. Serial No. 843,589. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

46,197. SANITARY TRAP. JOHN W. BRAGGER, Watertown, N. Y., assignor to J. B. Wise, Inc., Watertown, N. Y., a Corporation of New York. Filed Dec. 6, 1913. Serial No. 805,166. Term of patent 14 years.



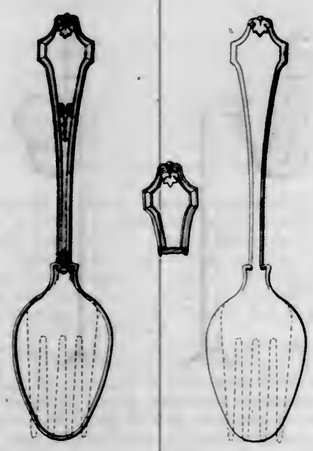
The ornamental design for a sanitary trap, as shown.

46,198. WATER-BAG. FERDINAND FRANCIS BRUCKER, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio. Filed May 23, 1914. Serial No. 840,632. Term of patent 14 years.



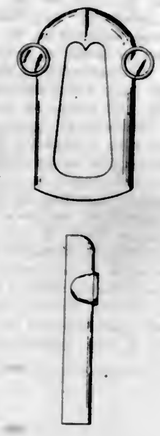
The ornamental design for a hot water bag as shown and described.

46,199. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 24, 1914. Serial No. 820,768. Term of patent 14 years.



The ornamental design for a handle for spoons, forks or similar articles, as shown.

46,200. FRONT END FOR MOTOR-VEHICLES. EVERETT J. COOK, Toledo, Ohio. Filed May 21, 1914. Serial No. 840,132. Term of patent 7 years.



The ornamental design for a front end for motor vehicles, substantially as shown.

46,201. SAVINGS-BANK. VIRGIL P. CRAMER, Elyria, Ohio. Filed Apr. 29, 1914. Serial No. 835,320. Term of patent 14 years.



The ornamental design for a saving bank, as shown.

46,202. SNOW-GUARD FOR ROOFS. ALBERT DANZER, Hagerstown, Md., assignor to Danzer Metal Works, Hagerstown, Md. Filed May 27, 1913. Serial No. 770,256. Term of patent 14 years.



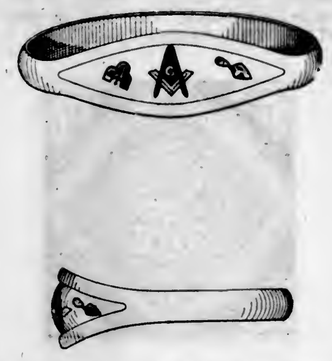
The ornamental design for a snow guard for roofs, as shown.

46,203. BRACELET. DONALD R. DIX, Denver, Colo. Filed Apr. 21, 1914. Serial No. 833,567. Term of patent 7 years.



The ornamental design for a bracelet, substantially as shown.

46,204. BRACELET. DONALD R. DIX, Denver, Colo. Filed Apr. 21, 1914. Serial No. 833,568. Term of patent 7 years.



The ornamental design for a bracelet, substantially as shown.

46,205. BRACELET. DONALD R. DIX, Denver, Colo. Filed Apr. 21, 1914. Serial No. 833,569. Term of patent 7 years.



The ornamental design for a bracelet, substantially as shown.

46,206. BRACELET. DONALD R. DIX, Denver, Colo. Filed Apr. 21, 1914. Serial No. 833,570. Term of patent 7 years.



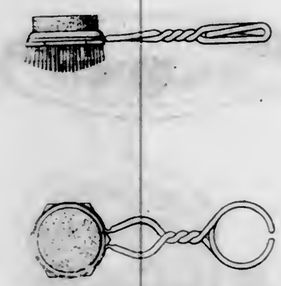
The ornamental design for a bracelet, substantially as shown.

46,207. EMBLEM FOR A RELIGIOUS SOCIETY. HENRY F. ERICHSEN, Chicago, Ill. Filed May 28, 1914. Serial No. 841,662. Term of patent 7 years.



The ornamental design for an emblem for a religious society, as shown.

46,208. LATHERING IMPLEMENT. JAMES L. ERSKINE, Upper Montclair, N. J. Filed Apr. 2, 1912. Serial No. 688,067. Term of patent 14 years.



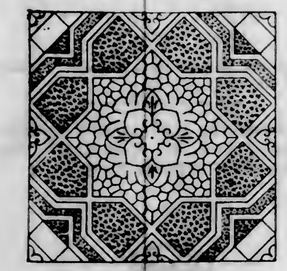
The ornamental design for a lathering implement as shown.

46,209. BORDER-SECTION. GUSTAVE A. HENCKEL, South Orange, N. J. Filed June 2, 1914. Serial No. 842,476. Term of patent 7 years.



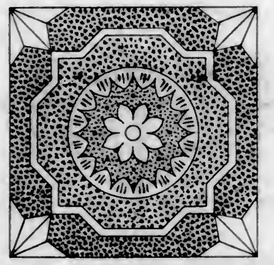
The ornamental design for a border section, as shown.

46,210. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,542. Term of patent 7 years.



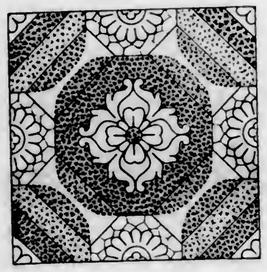
The ornamental design for linoleum oil cloth or floor covering as shown.

46,211. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,543. Term of patent 7 years.



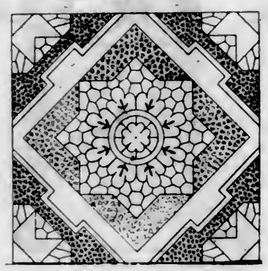
The ornamental design for linoleum oil cloth or floor covering as shown.

46,212. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,544. Term of patent 7 years.



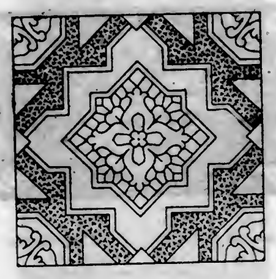
The ornamental design for linoleum oil cloth or floor covering as shown.

46,213. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,545. Term of patent 7 years.



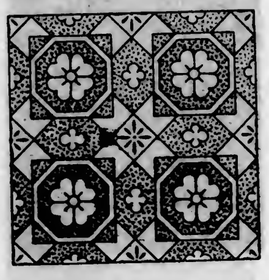
The ornamental design for linoleum oil cloth or floor covering as shown.

46,214. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,546. Term of patent 7 years.



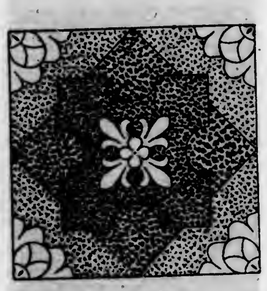
The ornamental design for linoleum oil cloth or floor covering as shown.

46,215. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,547. Term of patent 7 years.



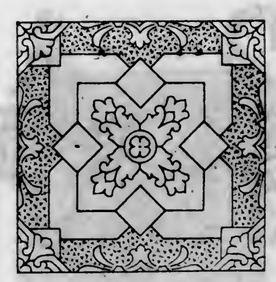
The ornamental design for linoleum oil cloth or floor covering as shown.

46,216. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. HARRY HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,548. Term of patent 7 years.



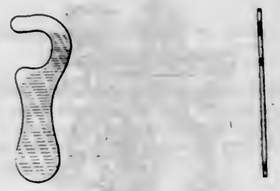
The ornamental design for linoleum oil cloth or floor covering as shown.

46,217. LINOLEUM, OIL-CLOTH, OR FLOOR-COVERING. HARRY HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 26, 1914. Serial No. 847,549. Term of patent 7 years.



The ornamental design for linoleum, oil cloth or floor covering as shown.

46,218. BOTTLE-CAP REMOVER. NELSON L. JACOBUS, West Orange, N. J. Filed May 27, 1914. Serial No. 841,389. Term of patent 7 years.



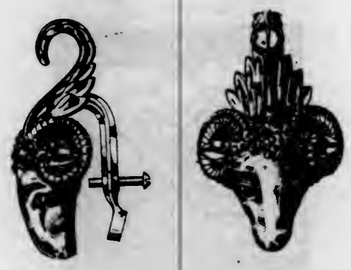
The ornamental design for a bottle cap remover, substantially as shown.

46,219. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed June 3, 1914. Serial No. 842,775. Term of patent 3½ years.



The ornamental design for a hanger for light reflecting bowls, as shown.

46,220. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed June 3, 1914. Serial No. 842,776. Term of patent 3½ years.



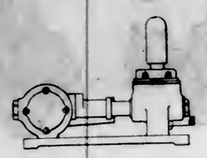
The ornamental design for a clamp for light reflecting bowls, as shown.

46,221. LIGHTING-BRACKET. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed June 18, 1914. Serial No. 845,941. Term of patent 3½ years.



The ornamental design for a lighting bracket, as shown.

46,222. POWER-PUMP CASING. HUGH W. KIMES, Dayton, Ohio, assignor to The Valle-Kimes Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 12, 1912. Serial No. 690,364. Term of patent 7 years.



The ornamental design for a power pump casing, as shown.

46,223. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 9, 1914. Serial No. 844,083. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,224. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 9, 1914. Serial No. 844,084. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,225. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 9, 1914. Serial No. 844,085. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,226. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 9, 1914. Serial No. 844,086. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,227. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 9, 1914. Serial No. 844,087. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,228. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1914. Serial No. 846,392. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,229. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1914. Serial No. 846,393. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,230. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1914. Serial No. 846,394. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,231. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 20, 1914. Serial No. 846,395. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,232. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 27, 1914. Serial No. 847,766. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,233. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 27, 1914. Serial No. 847,767. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,234. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 29, 1914. Serial No. 848,025. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,235. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 29, 1914. Serial No. 848,026. Term of patent 7 years.



The ornamental design for a rug, as shown.

46,236. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed June 29, 1914. Serial No. 848,027. Term of patent 7 years.



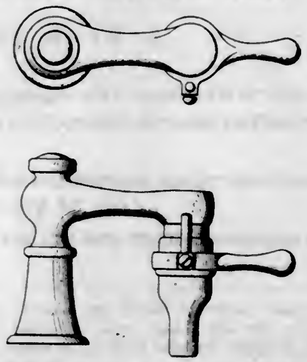
The ornamental design for a rug, as shown.

46,237. CUFF-BUTTON PROTECTOR. ROBERT B. ROGERS, Somerville, Mass. Filed May 21, 1914. Serial No. 840,131. Term of patent 3½ years.



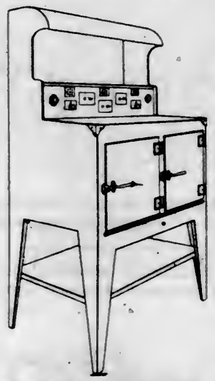
The ornamental design for a cuff button protector, as shown.

46,238. FAUCET. ROBERT G. SAVILL, Philadelphia, Pa., assignor to Thomas M. Savill, Robert G. Savill, and William S. Savill, Philadelphia, Pa., Copartners trading as Thomas Savill's Sons. Filed May 20, 1914. Serial No. 839,912. Term of patent 14 years.



The ornamental design for a faucet substantially as shown.

46,239. ELECTRIC STOVE. ROSWELL A. WHITNEY, Los Angeles, Cal., assignor to Olston Electric Company, Los Angeles, Cal., a Corporation of California. Filed June 3, 1914. Serial No. 842,772. Term of patent 14 years.



The ornamental design for an electric stove as shown.

46,240. HAND-OPERATED MASSAGE DEVICE. BRADFORD L. WILLIAMS, Camden, N. J. Filed May 12, 1914. Serial No. 838,158. Term of patent 3½ years.





The ornamental design for a hand operated massage device, as shown and described.

TRADE-MARKS

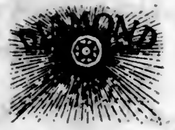
PUBLISHED AUGUST 4, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

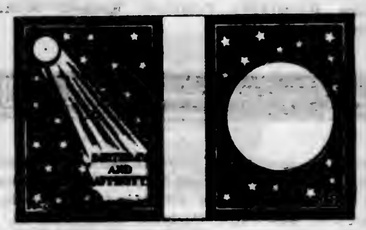
As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 49,786. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) STANSBURY & YOUNG, York, Pa. Filed May 18, 1910.



Particular description of goods.—Furniture-Polish.
Claims use since Nov. 1, 1908.

Ser. No. 49,864. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM B. MULFORD, New York, N. Y. Filed May 21, 1910.



Particular description of goods.—Candy.
Claims use since about the 28th day of March, 1910.

Ser. No. 51,815. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BON-BON COMPANY, New York, N. Y., assignor, by mesne assignments, to The Sterling Gum Company, Inc., a Corporation of New York. Filed Sept. 14, 1910.



The trade-mark comprises a label or wrapper of red, which is adapted to surround one or more sticks of chewing-gum almost the entire length. The wrapper has indicated thereon two rectangular panels outlined by black border-lines. One of the panels contains a smaller panel bounded by curved or wavy lines. The two rectangular panels are separated at their adjacent edges by two narrow panels in black.

Particular description of goods.—Chewing-Gum.
Claims use since about Mar. 1, 1910.

Ser. No. 55,934. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERTH. LEVI & Co., Chicago, Ill. Filed Apr. 24, 1911.



Particular description of goods.—Sausage-Binder.
Claims use since Apr. 13, 1910.

Ser. No. 57,441. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed July 1, 1911.



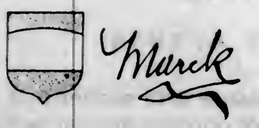
Particular description of goods.—Cordials.
Claims use since the 1st day of June, 1911.

Ser. No. 60,827. (CLASS 12. CONSTRUCTION MATERIALS.) THE UNITED STATES ASPHALT REFINING COMPANY, Pierre, S. D., and New York, N. Y. Filed Jan. 15, 1912.



No claim being made to the word "Asphalt."
Particular description of goods.—Asphalt and Hard, Plastic, or Liquid Asphaltic Residuum Products.
Claims use since the 1st of December, 1911.

Ser. No. 61,693. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARTHA THIBAULT, Paris, France. Filed Feb. 23, 1912.



The word "Marck" being in the handwriting of the applicant, Martha Thibault.

Particular description of goods.—Preparations for the Treatment of Varicose Veins, Varicose Ulcers, Phlebitis, Piles, Varicocele, and Diseases of Females.

Claims use since 1898.

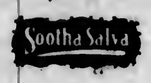
Ser. No. 62,147. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMOS ROGERS, Ottawa, Ontario, Canada. Filed Mar. 13, 1912.

"HEMA-FODA"

Particular description of goods.—A Blood-Restorative.

Claims use since the 10th day of May, 1911.

Ser. No. 62,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMOS ROGERS, Ottawa, Ontario, Canada. Filed Mar. 13, 1912.



Particular description of goods.—An Ointment for Human Use.

Claims use since the 10th day of May, 1911.

Ser. No. 62,415. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHALMERS & WILLIAMS, INC., Chicago, Ill. Filed Mar. 25, 1912.



Applicant claims no right to the exclusive use of the surnames "Chalmers" and "Williams."

Particular description of goods.—Gyratory Crushers.

Claims use since on or about Mar. 1, 1912.

Ser. No. 62,945. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM SCHIELD, St. Louis, Mo. Filed Apr. 17, 1912.



The picture of the devil being in red, no claim being made for the word "Lye" appearing upon the can.

Particular description of goods.—Powdered Lyes.

Claims use since Feb. 1, 1912.

Ser. No. 63,107. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NESTOR JOHNSON, Chicago, Ill. Filed Apr. 24, 1912. Under ten-year proviso.

THE JOHNSON RACER

Particular description of goods.—Skates.

Claims use since Jan. 1, 1893.

Ser. No. 64,448. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GOOD ROADS MACHINERY COMPANY, Kennett Square, Pa. Filed June 27, 1912.



Particular description of goods.—Road-Scrapers, Road-Drags, Rock-Crushers, Road-Rollers, Garden, Lawn, and Field Rollers, Machines for Handling and Screening Stone, Ore, and Coal, Portable Rock-Crushers, Bucket Elevators, Conveyers, Winding Hoisting-Drums, Machines for Distributing Oil and other Liquids on Roads.

Claims use since February, 1912.

Ser. No. 64,595. (CLASS 39. CLOTHING.) VAN ORDEN CORSET CO., Newark, N. J. Filed July 5, 1912.

Surgeo

Particular description of goods.—Corsets.

Claims use since May 11, 1912.

Ser. No. 66,205. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) FLORENCE MANUFACTURING COMPANY, Northampton, Mass. Filed Oct. 9, 1912.

"A CLEAN TOOTH NEVER DECAYS"

Particular description of goods.—Tooth-Brushes.

Claims use since June 16, 1910.

Ser. No. 67,168. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) REFRACTORY ZINC ORE TREATMENT COMPANY, New York, N. Y. Filed Nov. 29, 1912.

Z
ELECTRO
N

The trade-mark consists of the simulation of a cross produced by broken lines consisting of letters disposed to form the outline of the cross, no claim being made to the letters "Z. N." and the word "Electro."

Particular description of goods.—Spelters.

Claims use since Nov. 5, 1912.

Ser. No. 67,421. (CLASS 7. CORDAGE.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Dec. 16, 1912.



Particular description of goods.—Carpet-Warp.

Claims use since July 1, 1912.

Ser. No. 68,065. (CLASS 12. CONSTRUCTION MATERIALS.) STANDARD PORTLAND CEMENT COMPANY, Charleston, S. C. Filed Jan. 22, 1913.



The mark being red in color.

Particular description of goods.—Portland Cement.

Claims use since January, 1906.

Ser. No. 68,417. (CLASS 39. CLOTHING.) A. & L. AUGUST, Fort Worth, Tex. Filed Feb. 10, 1913.



The words and figures—viz., "A. & L. August," "$15.00," "Main at Seventh, 1881, Fort Worth, Texas"—are disclaimed as forming part of the trade-mark.

Particular description of goods.—Gentlemen's Leather, Kid, Canvas, Silk, and Cotton Gloves, Men's and Boys' Hats, Caps, Collars, Cuffs; Gentlemen's and Boys' Clothing—Namely, Coats, Vests, Trousers, Drawers, Undershirts, Overalls, Jumpers, Dress-Shirts, and Hose.

Claims use since Dec. 1, 1912.

Ser. No. 69,776. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NORTHWESTERN NEEDLE COMPANY, Minneapolis, Minn. Filed Apr. 14, 1913.



Particular description of goods.—Sewing-Machine Needles.

Claims use since on or about Jan. 1, 1906.

Ser. No. 69,964. (CLASS 32. FURNITURE AND UPHOLSTERY.) MILWAUKEE CHAIR COMPANY, Milwaukee, Wis., and Chicago, Ill. Filed Apr. 21, 1913.



Particular description of goods.—Chairs.

Claims use since Apr. 3, 1913.

Ser. No. 70,087. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLLIN STREET BAKERY, Corsicana, Tex. Filed Apr. 28, 1913.

FRU-NU-CA

Particular description of goods.—Fruit Cake.

Claims use since Apr. 15, 1913.

Ser. No. 70,176. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed May 2, 1913.

KODIOPTICON

Particular description of goods.—Picture-Projection Apparatus.

Claims use since Feb. 1, 1913.

Ser. No. 70,404. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ADOLPH KLAR, New York, N. Y. Filed May 13, 1913.

Lyonnette

Particular description of goods.—Hair-Nets.
Claims use since Oct. 11, 1912.

Ser. No. 70,493. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNHARD LAUER, Berlin, Germany. Filed May 19, 1913.



The said mark including the portrait and the facsimile signature of the proprietor.
Particular description of goods.—An Internal Remedy for Purifying the Blood and for Laxative Purposes.
Claims use since the early part of the year 1879.

Ser. No. 70,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUBRY SISTERS, New York, N. Y. Filed May 26, 1913.

AS

Particular description of goods.—Massage-Cream, Rouge, Liquid Complexion-Tint, Depilatory Powder, Tooth-Powder, Talcum Powder, Medicated Tooth-Soap, Cold-Cream, Greaseless Cream, Hair-Tonic, Beautifying Cream and Preparation, Dry and Wet Face-Powder, and Perfume.
Claims use since May 1, 1913.

Ser. No. 70,906. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE LOCKE INSULATOR MFG. CO., Victor, N. Y. Filed June 6, 1913.

VICTOR

Particular description of goods.—Insulators.
Claims use since Oct. 13, 1910.

Ser. No. 71,530. (CLASS 48. MALT EXTRACTS AND LIQUORS.) CLAUSEN-FLANAGAN BREWERY, New York, N. Y. Filed July 5, 1913.

Champagne

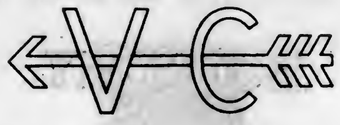
Particular description of goods.—Beer.
Claims use since about June, 1884.

Ser. No. 72,071. (CLASS 15. OILS AND GREASES.) MARSHALL OIL COMPANY OF IOWA, Marshalltown, Iowa. Filed July 31, 1913.

Maroline

Particular description of goods.—Oils and Lubricants for Motor-Cycles.
Claims use since Dec. 31, 1912.

Ser. No. 72,276. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) VIXEN TOOL COMPANY, Philadelphia, Pa. Filed Aug. 9, 1913.



Particular description of goods.—Files.
Claims use since July 1, 1913.

Ser. No. 72,444. (CLASS 39. CLOTHING.) MENDELSON BROS., INC., San Francisco, Cal. Filed Aug. 20, 1913.

Embros

Particular description of goods.—Dress, Negligée, and Under Shirts, Pajamas, Drawers, Ladies' Waists, Bath-Robes, Kimonos, Collars, and Opera-Coats.
Claims use since about Feb. 1, 1907.

Ser. No. 72,693. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATURE CEREAL COMPANY, Minneapolis, Minn. Filed Sept. 5, 1913.

Nature

Particular description of goods.—A Cereal Form of Meal Made from a Mixture of Wheat, Rye, Corn, and Flax.
Claims use since May, 1913.

Ser. No. 72,761. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLIE G. BROCK, Centralia, Ill. Filed Sept. 10, 1913.

VICTOR

Particular description of goods.—A Scalp-Tonic.
Claims use since June 1, 1913.

Ser. No. 72,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORSK HYDRO-ELEKTRISK KVÆLSTOFAKTIESELSKAB, Christiania, Norway. Filed Sept. 12, 1913.



Particular description of goods.—Nitrogen Products, Comprising Nitric Acid and Salts Formed Thereby; Nitrous Acid and Salts Formed Thereby; Nitro-Oxygen Compounds; Nitrids; Cyanids; Cyanamids; Ammonia and Its Salts.
Claims use since 1912.

Ser. No. 72,841. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LES FILS DE L. JARROSSON, Lyon, France. Filed Sept. 13, 1913.



Particular description of goods.—Muslin, Crape Veilings, Satin, Voile, Figured Satin, Chiffon, Crêpe de Chine, Figured Crêpe de Chine, French Crêpe, Gauze, Printed Tissues, Woven Silk Stuffs, Silk Piece Goods, Velvets, and Textile Fabrics of the Class Known as Piece Goods.
Claims use since May 22, 1909.

Ser. No. 72,865. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) JOSEPH SANKEY & SONS, LIMITED, Bilston, England. Filed Sept. 15, 1913.

SANKEY

Particular description of goods.—Metal Wheels for Motor-Vehicles and Stampings in Metal for Motor-Vehicles or other Vehicle Parts.
Claims use since August, 1913.

Ser. No. 72,897. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ROCK ISLAND STOVE COMPANY, Rock Island, Ill. Filed Sept. 16, 1913. Under ten-year proviso.

RIVERSIDE

Particular description of goods.—Heating and Cooking Stoves and Ranges.
Claims use since 1872.

Ser. No. 73,519. (CLASS 37. PAPER AND STATIONERY.) PAPER SALES COMPANY, Chicago, Ill. Filed Oct. 20, 1913.



Applicant disclaims the right to the exclusive use of the words "The Sanitary Paper of Exceptional Texture."
Particular description of goods.—Toilet-Paper.
Claims use since on or about Sept. 1, 1913.

Ser. No. 73,717. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PIESSE & LUBIN, London, England. Filed Oct. 31, 1913.



MUSK DEER

Particular description of goods.—Fumigators; Sweet Sachets; Perfumes; Toilet and Bath Powders; Toilet Creams and Emollients; Hair-Dressings; Mouth-Washes, and Breath-Pastils.
Claims use since 1864.

Ser. No. 73,791. (CLASS 47. WINES.) ELI G. HECHT, Baltimore, Md. Filed Nov. 4, 1913.

Wingrol

Particular description of goods.—Wines.
Claims use since Oct. 1, 1913.

Ser. No. 74,827. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) PALMER & SINGER MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 24, 1913.



Particular description of goods.—Motor-Vehicles.
Claims use since the 15th day of November, 1913.

Ser. No. 74,873. (CLASS 15. OILS AND GREASES.) COLUMBIA WAX WORKS, New York, N. Y. Filed Dec. 29, 1913.



Particular description of goods.—A Paraffin-Wax for Laundry Use and for Kitchen Use in Sealing Covers or Tops of Vessels.
Claims use since January, 1913.

Ser. No. 75,206. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) VIRGINIA FAIRY STONE COMPANY, Beckley, W. Va. Filed Jan. 15, 1914.



Particular description of goods.—A Natural Ornamental Stone for Personal Adornment.
Claims use since Dec. 20, 1913.

Ser. No. 75,231. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE LEADER EVAPORATOR COMPANY, Burlington, Vt. Filed Jan. 16, 1914.

LEADER

Particular description of goods.—Evaporating-Pans and Sugaring-Off Pans.
Claims use since November, 1889.

Ser. No. 75,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLEMAN BARDOS, Jr., New York, N. Y. Filed Jan. 26, 1914.

EMPCO

Particular description of goods.—Sterile Solutions for Intramuscular and Hypodermic Injections.
Claims use since Nov. 17, 1913.

Ser. No. 75,498. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. & W. LINDT, Berne, Switzerland. Filed Jan. 28, 1914.



The words "Berne, Suisse, Switzerland, Fabrique De Chocolat, Spécialité Qualites Fines, Vanille Fin, Finest Swiss Chocolate, Marque Déposée" being disclaimed and the word "Lindt" forming no part of the said trade-mark.
Particular description of goods.—Cocoas, Raw and Prepared Chocolate in Plates, Blocks, Tablets, Sticks, Balls, Powders, or any other Form and Shape; Stuffed Chocolate, Milk and Cream Chocolate, Chocolate Combined with Syrup, Chocolate Combined with Nuts or Fruits of Any Kind, and Chocolate Paste.
Claims use since Nov. 29, 1913.

Ser. No. 75,772. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH, KLINE & FRENCH CO., Philadelphia, Pa. Filed Feb. 7, 1914.

ESKAY'S

Particular description of goods.—Antiseptic Washes; Disinfectants for Body-Surfaces, Instruments, and Body-Cavities; Dressing for Body Surfaces and Wounds; Remedies for Skin Diseases, Syphilis, and other Venereal Diseases; Remedies for Neurasthenia, Paralysis, Albuminuria, Anemia, Marasmus, Wasting Diseases, and Nerve Weakness; Preparations for the Treatment of Tuberculosis.
Claims use since August, 1904.

Ser. No. 75,906. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADOLPH TAMM, St. Louis, Mo. Filed Feb. 14, 1914.

Flatina

Particular description of goods.—Cold-Creams, Massage-Creams, Cleansing-Creams, Face-Powder, Talcum Powder, Tooth-Powder, Bath-Powder, and Skin-Lotion.
Claims use since on or about Jan. 1, 1913.

Ser. No. 75,972. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Feb. 17, 1914.



No claim is made to the use of the words "Peerless" or "American."
Particular description of goods.—Kerosene-Stoves and Kerosene-Heaters.
Claims use since Oct. 27, 1913.

Ser. No. 76,038. (CLASS 32. FURNITURE AND UPHOLSTERY.) NATIONAL BED SPRING CO., Chicago, Ill. Filed Feb. 19, 1914.

RAY

Particular description of goods.—Bed-Springs.
Claims use since Nov. 10, 1913.

Ser. No. 76,073. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. ENGLISH & SON LIMITED, Redditch, England. Filed Feb. 21, 1914. Under ten-year proviso.



Particular description of goods.—Toilet-Pins and Needles for Hand-Sewing.
Claims use since about June 9, 1863.

Ser. No. 76,074. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. ENGLISH & SON LIMITED, Redditch, England. Filed Feb. 21, 1914. Under ten-year proviso.



Particular description of goods.—Needles for Hand-Sewing.
Claims use since about June 9, 1844.

Ser. No. 76,075. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. ENGLISH & SON LIMITED, Redditch, England. Filed Feb. 21, 1914. Under ten-year proviso.

SHARRINGTON

Particular description of goods.—Needles for Hand-Sewing and Knitting-Pins.
Claims use since about Aug. 13, 1847.

Ser. No. 76,133. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GREENSBURG TIRE & RUBBER CO., Greensburg, Pa. Filed Feb. 25, 1914.

PYRAMID

Particular description of goods.—Inner and Outer Tubes for Pneumatic Tires.
Claims use since Nov. 1, 1913.

Ser. No. 76,134. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GREENSBURG TIRE & RUBBER CO., Greensburg, Pa. Filed Feb. 25, 1914.

Red Wing

Particular description of goods.—Inner Tubes for Pneumatic Tires.
Claims use since Nov. 1, 1913.

Ser. No. 76,268. (CLASS 2. RECEPTACLES.) CENTRAL TRADING CORPORATION, Philipsburg, Pa. Filed Mar. 2, 1914.



Particular description of goods.—Kegs, and Especially Powder-Kegs.
Claims use since the 1st day of July, 1913.

Ser. No. 76,288. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) PORZELLANFABRIK SCHÖNWALD A. G., Schönwald, Germany. Filed Mar. 2, 1914.



Particular description of goods.—Porcelain, Earthenware, and Crockery.
Claims use since the 1st day of July, 1911.

Ser. No. 76,309. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEIGH S. BACHE, Boundbrook, N. J., assignor to William W. Smalley, Boundbrook, N. J. Filed Mar. 4, 1914.



Particular description of goods.—Poultry for Breeding Purposes.
Claims use since July 15, 1913.

Ser. No. 76,329. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa. Filed Mar. 4, 1914.



Particular description of goods.—Rubber Balls and Gutta-Percha Balls.
Claims use since Nov. 20, 1913.

Ser. No. 76,338. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany. Filed Mar. 5, 1914.

Tryposafrol

Particular description of goods.—A Remedy for Diseases Caused by Protozoa or Invisible Causes, Sleeping Diseases, Foot and Mouth Disease, Tsetse Disease, Hematuria in Cattle, and Distemper in Dogs.
Claims use since the 26th day of June, 1912.

Ser. No. 76,351. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CRESCENT MILL & ELEVATOR CO., Denver, Colo. Filed Mar. 5, 1914.

PIKE'S PEAK



Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since May 29, 1913.

Ser. No. 76,413. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa. Filed Mar. 6, 1914.

SANTO

The word "Santo."
Particular description of goods.—Rubber Balls and Gutta-Percha Balls.
Claims use since Nov. 20, 1913.

Ser. No. 76,414. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE SANTO RUBBER CO., Wilmington, Del., and Pittsburgh, Pa. Filed Mar. 6, 1914.

CHIEF

The word "Chief."
Particular description of goods.—Rubber Balls and Gutta-Percha Balls.
Claims use since Nov. 20, 1913.

Ser. No. 76,564. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) STA-TITE PACKING RING COMPANY, St. Louis, Mo. Filed Mar. 11, 1914.



No claim is made to the use of the representation of the packing-ring shown in the drawing.
Particular description of goods.—Metallic Packing-Rings.
Claims use since about Sept. 1, 1913.

Ser. No. 76,619. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHANN SCHMIDT, Nuremberg, Germany. Filed Mar. 13, 1914.

Guttamyl

Particular description of goods.—Wafer Capsules, Tablets, or Shells for Administering Medicines.
Claims use since Nov. 20, 1913.

Ser. No. 76,696. (CLASS 10. FERTILIZERS.) LISTERS AGRICULTURAL CHEMICAL WORKS, Newark, N. J., and New York, N. Y. Filed Mar. 16, 1914.

HARVEST QUEEN

Particular description of goods.—Fertilizer.
Claims use since 1882.

Ser. No. 76,702. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE NATIONAL LABORATORIES CO., Cleveland, Ohio. Filed Mar. 16, 1914.



No claim is made to the word "Spray-on."
Particular description of goods.—Liquid Polish and Cleaner for Floors, Woodwork, Furniture, and the Like.
Claims use since the 2d day of March, 1914.

Ser. No. 76,809. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMMA E. CURTIS, Melrose, Mass. Filed Mar. 21, 1914.



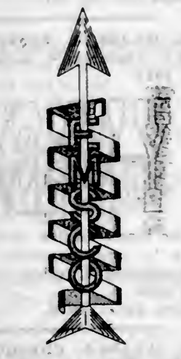
No claim is made to the words "Marshmallow Creme."
Particular description of goods.—A Preparation for Use in Making Desserts, for Use in Coffee and Cocoa, for Use on Sandwiches and Bread, and for Use on Cereals.
Claims use since Jan. 6, 1913.

Ser. No. 77,078. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CONRAD STOEGER, Chicago, Ill. Filed Mar. 30, 1914.

Champagne
Briss

Particular description of goods.—A Non-Intoxicating Beverage or as Commonly Known a Non-Alcoholic Soft Drink.
Claims use since Jan. 1, 1914.

Ser. No. 77,189. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) E. M. SMITH, Los Angeles, Cal. Filed Apr. 3, 1914.



Particular description of goods.—Stitched and Woven Belting.
Claims use since November, 1912.

Ser. No. 77,344. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GOLDEN PHEASANT, San Francisco, Cal. Filed Apr. 9, 1914.



Particular description of goods.—Candies, Cakes, Confectionery, and the Like.
Claims use since Nov. 9, 1904.

Ser. No. 77,428. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE HENRY PROCTOR, Newcastle-upon-Tyne, England. Filed Apr. 11, 1914.



Particular description of goods.—Pastils for Use in Asthma, Catarrh, Coughs, Colds, Hoarseness, and Similar Troubles.
Claims use in England since 1895 and in the United States of America since 1900.

Ser. No. 77,513. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE NATIONAL TIRE COMPANY, Trenton, N. J. Filed Apr. 16, 1914.

NATIONAL

Particular description of goods.—Rubber Tires and Tubes.
Claims use since May, 1913.

Ser. No. 77,578. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) A. BORSIG, Tegel, near Berlin, Germany. Filed Apr. 20, 1914.

Kristall

Particular description of goods.—Pumps and Compressors, Pump-Valves, Wind-Kettles for Pumps, Pump-Conduits.
Claims use since August, 1910.

Ser. No. 77,632. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) A. J. LINDEMANN & HOVERSON CO., Milwaukee, Wis. Filed Apr. 21, 1914.

KEROGAS

Particular description of goods.—Oil-Burning Cook Stoves and Ranges, Heaters, Burners for the Same, and Wicks for said Burners.
Claims use since Apr. 8, 1914.

Ser. No. 77,689. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed Apr. 23, 1914.

BUMPER

Particular description of goods.—Fertilizers.
Claims use since 1911.

Ser. No. 77,804. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914.

DOMESTIC SCIENCE

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1913.

Ser. No. 77,834. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill. Filed Apr. 28, 1914.



Particular description of goods.—Bicycles, Double and Swingle Trees, Neck-Yokes, Toy Wagons, Hand-Trucks, and Wheelbarrows.
Claims use since 1908 as to bicycles; 1912 as to toy wagons; 1913 as to double and swingle trees and neck-yokes, hand-trucks, and wheelbarrows; 1911 as to tire-tape.

Ser. No. 77,890. (CLASS 12. CONSTRUCTION MATERIALS.) MITCHELL-TAPPEN COMPANY, New York, N. Y. Filed Apr. 30, 1914.

S-M-C

Particular description of goods.—A Device for Offset Furring.
Claims use since June 1, 1913.

Ser. No. 77,911. (CLASS 12. CONSTRUCTION MATERIALS.) WILLIAM T. S. CRICHFIELD, Jersey City, N. J., and New York, N. Y. Filed May 1, 1914.

KREOSTONE

The word "Kreostone."
Particular description of goods.—Bituminous Sidewalks and Pavements.
Claims use since Apr. 6, 1914.

Ser. No. 77,940. (CLASS 12. CONSTRUCTION MATERIALS.) VIRGINIA BRIDGE AND IRON COMPANY, Roanoke, Va. Filed May 1, 1914.



Particular description of goods.—Steel Bridges, Girders, and Structural Steelwork.
Claims use since Feb. 1, 1914.

Ser. No. 77,946. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BALTIMORE ENAMEL & NOVELTY COMPANY, Baltimore, Md. Filed May 2, 1914.

BALTO
SWAN WHITE

No claim being made herein to the exclusive right to use the word "White."
Particular description of goods.—Ceramic Enamel.
Claims use since Mar. 30, 1914.

Ser. No. 77,948. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FREDRICK W. BOYER, Cleveland, Ohio. Filed May 2, 1914.

Y-WASH

Consists of the representation of the alphabetical letter "Y" with a "-" and the word "Wash."
Particular description of goods.—Paint and Varnish Cleanser and Polish.
Claims use since Apr. 1, 1914.

Ser. No. 78,053. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARMINDA J. ANDERSON, Leaday, Tex. Filed May 7, 1914.

Cardon Thistle



The trade-mark comprising my portrait, no claim being made for the word "Thistle."
Particular description of goods.—A Medical Preparation Comprising Herbs for Use in Female Complaints.
Claims use since Feb. 17, 1914.

Ser. No. 78,086. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE LISZT CO., New York, N. Y. Filed May 7, 1914.



The picture being that of Franz Liszt, deceased.
Particular description of goods.—Pianos, Self-Playing Pianos, Grands, Self-Playing Grands, Player-Pianos, and Music-Rolls.
Claims use since Dec. 27, 1913.

Ser. No. 78,119. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) WINGER BLUME MFG. CO., Wolcott, Ind. Filed May 7, 1914.

King

Particular description of goods.—Laundry-Washing Machines.
Claims use since May 1, 1912.

Ser. No. 78,145. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE ADVERTOSIGN COMPANY, Chicago, Ill. Filed May 9, 1914.

ADVERTOSIGN

Particular description of goods.—Electric Signs.
Claims use since Nov. 15, 1913.

Ser. No. 78,146. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLASDELL MILK PRODUCER CO., Ballinger, Tex. Filed May 9, 1914.

A B W



Particular description of goods.—A Tonic for Stock, Particularly Cows.
Claims use since Dec. 13, 1913.

Ser. No. 78,155. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUGUSTINE L. FROST, Minneapolis, Minn. Filed May 9, 1914.



The words "The Irish Entire Wheat Bread" being disclaimed.
Particular description of goods.—Entire-Wheat Bread.
Claims use since Apr. 1, 1914.

Ser. No. 78,188. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BRADLEY & HUBBARD MFG. CO., Meriden, Conn. Filed May 11, 1914.

LUMINOR

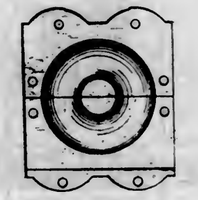
Particular description of goods.—Electric Lamps.
Claims use since Jan. 1, 1914.

Ser. No. 78,194. (CLASS 2. RECEPTACLES.) SAMUEL H. CRAGG, New York, N. Y. Filed May 11, 1914.

"GOOD-BYE MOTH"

The words "Goodbye Moth."
Particular description of goods.—Hanging Bags.
Claims use since Apr. 15, 1914.

Ser. No. 78,200. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE HARTMANN TRUNK CO., Racine, Wis. Filed May 11, 1914.



Particular description of goods.—Trunks, Suitcases, and Bags.
Claims use since Dec. 1, 1913.

Ser. No. 78,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD L. KASTLER, Racine, Wis. Filed May 13, 1914.



Particular description of goods.—Corn in the Form of Cereal Foods.
Claims use since Apr. 25, 1914.

Ser. No. 78,293. (CLASS 38. PRINTS AND PUBLICATIONS.) AUTOMOBILE BLUE-BOOK COMPANY, New York, N. Y. Filed May 15, 1914.



Particular description of goods.—Printed Books.
Claims use since April, 1913.

Ser. No. 78,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROME IMPORTING CO., New York, N. Y. Filed May 15, 1914.



The trade-mark consists of a pictorial representation of an arch, showing a hill with trees in the background, and before which stand a man and a woman, the latter holding an umbrella. Above the arch is a shield showing a wolf giving suckle to Romulus and Remus. A scroll border surrounds the design. The printed matter "Half Gallon," "Superfine Olive Oil for Table and Medicinal Use," "Packed in Italy," "Rome," "Brand" is not claimed to be a part of the trade-mark sought to be registered.
Particular description of goods.—Olive-Oil.
Claims use since Sept. 1, 1912.

Ser. No. 78,341. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) 20TH CENTURY MANUFACTURING CO., Minneapolis, Minn. Filed May 16, 1914.

20th CENTURY
PILE EZER

Particular description of goods.—An Ointment for Hemorrhoids.
Claims use since Mar. 1, 1914.

Ser. No. 78,372. (CLASS 12. CONSTRUCTION MATERIALS.) THE TEXAS COMPANY, Port Arthur, Tex., and New York, N. Y. Filed May 18, 1914.

TEXACO

Particular description of goods.—Composition Felt Roofing.
Claims use since 1907.

Ser. No. 78,404. (CLASS 5. ADHESIVES.) VEREINIGTE LEDERLEIMFABRIKEN VORM. J. E. JENSS AKTIEN GESELLSCHAFT, Uetersen, near Hamburg, Germany. Filed May 15, 1914.

„Jenssin"

Particular description of goods.—Gelatin-Glue.
Claims use since Oct. 1, 1912.

Ser. No. 78,407. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN HONEY PRODUCERS, Sioux City, Iowa. Filed May 19, 1914.



The word "Brand" is not claimed.
Particular description of goods.—Honey.
Claims use since January, 1914.

Ser. No. 78,446. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

BOLL FILLER

Particular description of goods.—Fertilizers.
Claims use since 1913.

Ser. No. 78,493. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) D. D. FELTON BRUSH CO., Atlanta, Ga. Filed May 23, 1914.

FELCO

Particular description of goods.—Brooms, Brushes, and Dusters.
Claims use since Mar. 1, 1914.

Ser. No. 78,507. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WILKING CO. INC., New York, N. Y. Filed May 23, 1914.

BORASH

Particular description of goods.—A Liquid Preparation Recommended for Internal Use for the Expulsion of Uric Acid from the Blood and for Benefiting the Human System.
Claims use since July 1, 1910.

Ser. No. 78,547. (CLASS 15. OILS AND GREASES.) A & V OIL CO., Cambridge, Md. Filed May 26, 1914.

A AND V

Consisting of "A and V."
Particular description of goods.—Lubricating and Cleaning Oil.
Claims use since January, 1913.

Ser. No. 78,549. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BONNEY VISE & TOOL WORKS, INC., Philadelphia and Allentown, Pa., and New York, N. Y. Filed May 26, 1914.



Particular description of goods.—Metal Castings and Forgings Made of Steel, of Iron, of Malleable Iron or Converted Steel, and of Brass.
Claims use since about July 1, 1913.

Ser. No. 78,558. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CHRISTINA J. HIGLEY New York, N. Y. Filed May 26, 1914.

C. J. H.

Particular description of goods.—Hose-Supporters.
Claims use since January, 1911.

Ser. No. 78,568. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMPSON MILLING COMPANY, Lockport, N. Y. Filed May 26, 1914.

STRONG BREAD

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 15, 1913.

Ser. No. 78,615. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill. Filed May 28, 1914.



Particular description of goods.—Single-Barrel Shotguns, Double-Barrel Shotguns, Canvas Ammunition-Bags and Rifle-Sheaths.
Claims use since 1909, as to single-barrel shotguns, double-barrel shotguns; 1911, canvas ammunition-bags and rifle-sheaths.

Ser. No. 78,619. (CLASS 2. RECEPTACLES.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed May 28, 1914.

Universal

Particular description of goods.—Vacuum-Bottles, Alcohol-Flagons, Lunch-Boxes, Bottle-Holders, and Tea-Caddies.
Claims use since Jan. 1, 1912.

Ser. No. 78,625. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) NITEDALS TAENDSTIKFABRIK, Grönvold, near Christiania, Norway. Filed May 28, 1914. Under ten-year proviso.



Particular description of goods.—Matches.
Claims use since the year 1877.

Ser. No. 78,659. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) PULLMAN MFG. COMPANY, Rochester, N. Y. Filed May 29, 1914.

Unit Sash Balances

No claim is made to the words "Sash Balances."
Particular description of goods.—Sash-Balances.
Claims use since July, 1911.

Ser. No. 78,687. (CLASS 12. CONSTRUCTION MATERIALS.) DETROIT STEEL PRODUCTS CO., Detroit, Mich. Filed June 1, 1914.

Lumino

Particular description of goods.—Metal Window-Sash, Metal Doors, Metal Partitions, and Metal Door and Window Frames.
Claims use since Feb. 2, 1914.

Ser. No. 78,706. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. MYER CO., New York, N. Y. Filed June 1, 1914.



Particular description of goods.—Celery Tonic.
Claims use since May 19, 1914.

Ser. No. 78,712. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed June 1, 1914.



The trade-mark being a narrow wholly-red marginal stripe, including the exposed surfaces of the longitudinal and transverse wires forming the selvage, extending onto both surfaces and around the edge of the fabric, the representation of a fabric being not claimed.
Particular description of goods.—Wire Screen-Cloth.
Claims use since Feb. 1, 1914.

Ser. No. 78,713. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAYMOND S. SCOFIELD, Ong, Nebr. Filed June 1, 1914.

U K LIPTUM

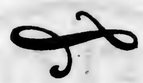
Comprising the letters and word "U K Liptum."
Particular description of goods.—Medicated Ointment.
Claims use since May 1, 1914.

Ser. No. 78,715. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SPRAGUE SANITARY SHIELD CO. INC., Minneapolis, Minn. Filed June 1, 1914.



The circle being in red and the cross in a blue color.
Particular description of goods.—Sanitary Shields.
Claims use since the 10th day of March, 1914.

Ser. No. 78,720. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WAGNER ELECTRIC MANUFACTURING COMPANY, St. Louis, Mo. Filed June 1, 1914.



Particular description of goods.—Electric Motors, Electric Generators, Electric Converters, Electric Transformers, Current-Rectifiers, and Current-Controllers.
Claims use since Feb. 1, 1909.

Ser. No. 78,761. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLOWERREE GROVES, Fort Myers, Fla. Filed June 2, 1914.



Consists of a circle with rays radiating from the outer rim and with a ring of individualized suns about and within the entire inner circle and in the center of this symbol the word "Sunbeam" accompanied by the designation of the fruit and beneath the same the words "Packed by Flowerree Groves."
Particular description of goods.—Citrus Fruits—Namely, Grape-Fruit, Tangerines, and Oranges.
Claims use since November 1904.

Ser. No. 78,765. (CLASS 15. OILS AND GREASES.) THE CONTINENTAL OIL COMPANY, Denver, Colo. Filed June 3, 1914.

CONOCO



Particular description of goods.—Gasolene, Kerosene, and Lubricating-Oil.
Claims use since Apr. 28, 1914.

Ser. No. 78,778. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CHARLES H. PEIRCE, La Fayette, Ind. Filed June 3, 1914.



The words "Don't Turn Your Back on a Good Thing" being disclaimed.
Particular description of goods.—Four-in-Hand Ties.
Claims use since Feb. 28, 1914.

Ser. No. 78,784. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. COLVIN, Chicago, Ill. Filed June 4, 1914.

Papaystase

Particular description of goods.—A Digestive Tablet.
Claims use since Jan. 1, 1908.

Ser. No. 78,797. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

Fairview

Particular description of goods.—Clothes-Wringer.
Claims use since February, 1913.

Ser. No. 78,810. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE FAIR, Chicago, Ill. Filed June 4, 1914.

DEFIANCE

Particular description of goods.—Clothes-Wringer.
Claims use since February, 1910.

Ser. No. 78,822. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) AMERICAN CHEMICAL & MANUFACTURING COMPANY, INC., Norfolk, Va. Filed June 5, 1914.



Particular description of goods.—Ready-Mixed Paints and Waterproofing and Rustproofing Paints.
Claims use since Apr. 21, 1914.

Ser. No. 78,823. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EVELYN R. S. BREWSTER, Chicago, Ill. Filed June 5, 1914.

EB

My trade-mark consists of the letters "E B."
Particular description of goods.—Plate, Solder, and Solder-Flux.
Claims use since December, 1911.

Ser. No. 78,847. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SUN TYPEWRITER COMPANY, Newark, N. J., and New York, N. Y. Filed June 5, 1914.

SUM-A-GRAPH

Particular description of goods.—Adding and Recording Machines.
Claims use since Apr. 30, 1914.

Ser. No. 78,855. (CLASS 39. CLOTHING.) BROWN SHOE COMPANY, INC., St. Louis, Mo. Filed June 6, 1914.

RAIN —or— SHINE

Particular description of goods.—Leather Shoes.
Claims use since Mar. 2, 1914.

Ser. No. 78,857. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CHESBRO MANUFACTURING COMPANY, Oneonta, N. Y. Filed June 6, 1914.

Royal

Particular description of goods.—Lawn-Mower Sharpeners.
Claims use since Mar. 1, 1914.

Ser. No. 78,869. (CLASS 39. CLOTHING.) HAVENS & GEDDES CO., Indianapolis, Ind. Filed June 6, 1914.

BLACK BAT

Particular description of goods.—Hosiery, Underwear—to wit, Knitted or Woven One, Two, or Three Piece Garments for Men, Women, and Children—and Knitted Goods—to wit, Sweaters, Sweater-Coats, Hoods, Petticoats, and Fascinators.
Claims use since Jan. 4, 1910.

Ser. No. 78,878. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE NORMA COMPANY OF AMERICA, New York, N. Y. Filed June 6, 1914.

Norma

Particular description of goods.—Gages, Instruments of High Accuracy for Determining Limited Distances, and Instruments of High Accuracy for Determining Density of Materials.
Claims use since Mar. 17, 1904.

Ser. No. 78,906. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CARLYLE JOHNSON MACHINE CO., Manchester, Conn. Filed June 8, 1914.



The words and abbreviations "The Carlyle Johnson Machine Co., Manchester, Connecticut, The Marine Motor HP No." are hereby specifically disclaimed by applicant.
Particular description of goods.—Hydrocarbon-Engines.
Claims use since May 20, 1914.

Ser. No. 78,908. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) F. KREUGER AND COMPANY, LIMITED, London, England. Filed June 8, 1914.



Particular description of goods.—Matches.
Claims use since Dec. 19, 1913.

Ser. No. 78,929. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES T. MCFADDEN, Pittsburgh, Pa. Filed June 9, 1914.

STERNOL

The word "Sternol."
Particular description of goods.—A Refined Liquid Paraffin to be Used as an Intestinal Lubricant and Laxative.
Claims use since Oct. 20, 1913.

Ser. No. 78,959. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. CARLTON PALMER, Philadelphia, Pa. Filed June 10, 1914.

"Pyorozahn"

Particular description of goods.—A Mouth-Wash.
Claims use since June 2, 1914.

Ser. No. 78,964. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SWABINE CO., Cleveland, Ohio. Filed June 10, 1914.

SWABINE

Particular description of goods.—A Remedy for Sore Throat, Diphtheria, Tonsilitis, Ulcerated Sore Mouth, Hoarseness, and Cold in Head.
Claims use since Apr. 30, 1914.

Ser. No. 78,973. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE A. WILHELM COMPANY, Reading, Pa. Filed June 10, 1914.

ROOKWOOD

Particular description of goods.—Furniture-Polish and Floor-Polish.
Claims use since the year 1898.

Ser. No. 78,995. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE COLUMBUS DENTAL MANUFACTURING CO., Columbus, Ohio. Filed June 11, 1914.



Particular description of goods.—Artificial Teeth and Teeth-Facings.
Claims use since about the 2d day of March, 1914.

Ser. No. 79,040. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RAFAEL DEL CASTILLO & COMPANY, New York, N. Y. Filed June 12, 1914.

PAN

Particular description of goods.—Coffee.
Claims use since June 15, 1913.

Ser. No. 79,058. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



Particular description of goods.—Toilet-Paper.
Claims use since June 19, 1913.

Ser. No. 79,059. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.

Limited

Particular description of goods.—Toilet-Paper.
Claims use since Apr. 16, 1908.

Ser. No. 79,060. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



Particular description of goods.—Toilet-Paper.
Claims use since Jan. 1, 1913.

Ser. No. 79,062. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.

Headlight

Particular description of goods.—Toilet-Paper.
Claims use since Mar. 4, 1898.

Ser. No. 79,066. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



Particular description of goods.—Toilet-Paper.
Claims use since the month of May, 1894.

Ser. No. 79,069. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.

WHITE WINGS

Particular description of goods.—Toilet-Paper.
Claims use since May 23, 1898.

Ser. No. 79,071. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.

Wahnetta

Particular description of goods.—Toilet-Paper.
Claims use since Mar. 19, 1914.

Ser. No. 79,072. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.

FORGET-ME-NOT

Particular description of goods.—Toilet-Paper.
Claims use since Mar. 11, 1903.

Ser. No. 79,122. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. PACE, Shellman, Ga. Filed June 15, 1914.

JP

Particular description of goods.—Remedy for Renal Colic, Diabetes, and Bright's Disease.
Claims use since February, 1905.

Ser. No. 79,139. (CLASS 39. CLOTHING.) PAUL BROTHERS, INC., Philadelphia, Pa. Filed June 16, 1914.

TRESPASSE

Particular description of goods.—Boots, Shoes, and Slippers Made Wholly or in Part of Leather and Cloth.
Claims use since June 3, 1914.

Ser. No. 79,150. (CLASS 23, CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE COLLINS COMPANY, Collinsville, Conn. Filed June 16, 1914.



Particular description of goods.—Axes, Hatchets, Adzes, Augers, Swords, Table and other Knives of Base Metals, (Not Including Surgical Knives,) Chisels, Boring-Bits, Bush-Hooks, Pickaxes, Cleavers, Mattocks, Machetes, Bayonets, and Spears.
Claims use since 1875.

Ser. No. 79,166. (CLASS 37. PAPER AND STATIONERY.) BINNEY & SMITH COMPANY, East Orange, N. J., and New York, N. Y. Filed June 17, 1914.

"SPECTRA"

Particular description of goods.—Crayons.
Claims use since June 8, 1914.

Ser. No. 79,167. (CLASS 37. PAPER AND STATIONERY.) GEO. BORGFELDT & CO., New York, N. Y. Filed June 17, 1914.

EZ-RUE

Particular description of goods.—Thumb-Tacks, Paper-Clips, Tissue-Paper, Blank Books, Writing-Pads, Book-Marks, Paper-Weights, Memorandum-Books, Lead and Novelty Pencils, Penholders, Pencil-Boxes, Pencil-Sharpeners, Writing-Paper and Envelops, Blotters, Rubber and Composition Ink-Erasers, Ink-Wells, Paper-Knives, Gummed-Paper Tape, Common School Rulers.
Claims use since May 1, 1914.

Ser. No. 79,171. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FEARING, WHITON & CO., INC., Boston, Mass. Filed June 17, 1914.

HUBMADE

Particular description of goods.—Cotton Piece Goods.
Claims use since June 8, 1914.

Ser. No. 79,173. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) GREAT WESTERN MFG. CO., Laporte, Ind. Filed June 17, 1914. Under ten-year proviso.

AMERICA

Particular description of goods.—Bicycles.
Claims use since on or about the spring of 1890.

Ser. No. 79,190. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. KING, Thomaston, Ga. Filed June 18, 1914.

NESTLING POWDERS



The portrait shown being that of my daughter, Mary E. King, and no claim being made to the exclusive right to the use of the word "Powders."
Particular description of goods.—A Remedy for the Following Disorders in Infants and Children: Disorders Due to Teething, Indigestion, Colic, Non-Assimilation, Diarrhea, Flatulence, Constipation, Loss of Appetite, Anemia, Inability to Sleep, and Inability to Retain Nourishment.
Claims use since May 12, 1914.

Ser. No. 79,220. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WALKER-MOORE MANUFACTURING CO., Racine, Wis. Filed June 19, 1914.

FORDEZER

Particular description of goods.—Shock-Absorbers.
Claims use at least since Apr. 6, 1914.

Ser. No. 79,245. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PROCALINE CO., New York, N. Y. Filed June 20, 1914.

Procaline

Particular description of goods.—Medicinal Ointment.
Claims use since Apr. 1, 1914.

Ser. No. 79,248. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SENECA CAMERA MFG. CO., Rochester, N. Y. Filed June 20, 1914.



Particular description of goods.—Photographic Cameras, Film-Pack Adapters, and Containers for the Latter.
Claims use since Mar. 1, 1908.

Ser. No. 79,254. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BAKER-SHIPPEE MANUFACTURING CO., Los Angeles, Cal. Filed June 22, 1914.

"WONDER"

Particular description of goods.—Exhausters, Cookers, and Coolers Used in Canning or Preserving Foods.
Claims use since about the 1st day of February, 1914.

Ser. No. 79,256. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DWIGGINS WIRE FENCE COMPANY, Anderson, Ind. Filed June 22, 1914.



Particular description of goods.—Metal Fencing-Gates and Fence-Posts.
Claims use since April, 1907.

Ser. No. 79,264. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MONARCH MOTOR CAR COMPANY, Detroit, Mich. Filed June 22, 1914.

Monarch

Particular description of goods.—Automobiles.
Claims use since May 15, 1913.

Ser. No. 79,282. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD STEPHEN SCHWEITZER, Pittsburgh, Pa. Filed June 22, 1914.

PREV

Particular description of goods.—A Salve for the Treatment of Infectious Diseases of the Respiratory Tract.
Claims use since Jan. 1, 1914.

Ser. No. 79,299. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LIBERTY MOTION PICTURE COMPANY, Wilmington, Del., and Philadelphia, Pa. Filed June 23, 1914.

LIBERTY

Particular description of goods.—Motion-Picture Films.
Claims use since Mar. 17, 1914.

Ser. No. 79,303. (CLASS 39. CLOTHING.) THE PANARD COMPANY, New York, N. Y. Filed June 23, 1914.

Panard

Particular description of goods.—Men's, Women's, and Children's Coats, Suits, Dresses, Waists, Skirts, Kimonos, and Dressing-Sacks.
Claims use since Apr. 15, 1914.

Ser. No. 79,304. (CLASS 2. RECEPTACLES.) O. S. RICHARDS, INC., Brooklyn, N. Y. Filed June 23, 1914.



Particular description of goods.—Box-Shooks.
Claims use since July, 1906.

Ser. No. 79,313. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

18000
RANGE

Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 19th day of June, 1902.

Ser. No. 79,314. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

21000 RANGE

Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 12th day of October, 1912.

Ser. No. 79,316. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

CRENELLE

Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 15th day of May, 1914.

Ser. No. 79,333. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE K-W IGNITION COMPANY, Cleveland, Ohio. Filed June 24, 1914.

K-W

Particular description of goods.—Shock-Absorbers or Auxiliary Springs for Use on Vehicles, Especially Motor-Vehicles.
Claims use since Apr. 17, 1913.

Ser. No. 79,338. (CLASS 2. RECEPTACLES.) THE SCHAFFER TINWARE MANUFACTURING COMPANY, New York and Brooklyn, N. Y. Filed June 24, 1914.



Particular description of goods.—Household Receptacles for Bread and Cake.
Claims use since Dec. 30, 1913.

Ser. No. 79,367. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE MECHANICAL RUBBER COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 25, 1914.

MERUCO

Particular description of goods.—Electrical Insulating-Tape.
Claims use since June 1, 1912.

Ser. No. 79,369. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed June 25, 1914.



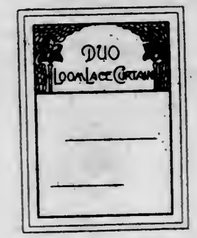
Particular description of goods.—Electric Batteries, Flash-Lights, Electrodes, Brushes for Dynamo-Electric Apparatus, Resistors, and Carbon Specialties.
Claims use since May 14, 1914.

Ser. No. 79,393. (CLASS 39. CLOTHING.) CARL STRAUSS, Paris, France. Filed June 26, 1914.

Carlot

Particular description of goods.—Women's and Children's Blouses and Dresses.
Claims use since Dec. 4, 1913.

Ser. No. 79,397. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PATCHOGUE MFG. CO., New York, N. Y. Filed June 27, 1914.



The exclusive use of the words "Loom Lace Curtain" not being claimed.
Particular description of goods.—Lace Curtains.
Claims use since June 23, 1914.

Ser. No. 79,405. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHIC-A-LAX MANUFACTURING CO., Minneapolis, Minn. Filed June 27, 1914.

CHIC-A-LAX

Particular description of goods.—A Digestive Agent.
Claims use since about the 15th day of April, 1914.

Ser. No. 79,435. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ISIDORE B. MEYER, Denver, Colo. Filed June 29, 1914.

EULYPTAR

Particular description of goods.—Cough Medicines.
Claims use since October, 1913.

Ser. No. 79,476. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BERRY BROTHERS, Detroit, Mich. Filed July 1, 1914.

B B C

Particular description of goods.—Shellac Varnish.
Claims use since Mar. 1, 1891.

Ser. No. 79,490. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) HULSE BROTHERS & DANIEL CO., New York, N. Y. Filed July 1, 1914.

"Windbrella"

Particular description of goods.—Umbrellas.
Claims use since May 16, 1914.

Ser. No. 79,491. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) I. B. KLEINERT RUBBER COMPANY, New York, N. Y. Filed July 1, 1914.

SIMPLEX

Particular description of goods.—Dress and Garment Shields.
Claims use since February, 1909.

Ser. No. 79,493. (CLASS 47. WINES.) MARIANI AND COMPANY, New York, N. Y., and Paris, France. Filed July 1, 1914.

Particular description of goods.—A Wine Appetizer.
Claims use since 1913.

Ser. No. 79,503. (CLASS 10 FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed July 2, 1914.

PELICAN



Particular description of goods.—Fertilizers.
Claims use since December, 1875.

Ser. No. 79,511. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CAMPBELL ELECTRIC COMPANY, Lynn, Mass. Filed July 2, 1914.

Surex

Particular description of goods.—X-Ray Apparatus.
Claims use since September, 1912.

Ser. No. 79,538. (CLASS 37. PAPER AND STATIONERY.) NASHUA CARD GUMMED & COATED PAPER COMPANY, Nashua, N. H. Filed July 3, 1914.

CAMPNIC

The trade-mark consists of the word "Campnic."
Particular description of goods.—Paper Wrappers for Food Products.
Claims use since May 15, 1914.

Ser. No. 79,592. (CLASS 32. FURNITURE AND UPHOLSTERY.) DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill. Filed July 6, 1914.

Inner Strap

Particular description of goods.—Mattresses.
Claims use since June 1, 1914.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 4, 1914.

98,727. ILLUMINATED STRUCTURAL SHOW-WINDOW SIGNS. THE ADVERTOGRAM CO., Chicago, Ill.
Filed March 27, 1914. Serial No. 76,986. PUBLISHED MAY 26, 1914.

98,728. ABRASIVES IN COMMINUTED FORM. THE ALDEN SPEARE'S SONS CO., Cambridge, Mass.
Filed February 16, 1914. Serial No. 75,918. PUBLISHED JUNE 2, 1914.

98,729. ABRASIVES IN COMMINUTED FORM. THE ALDEN SPEARE'S SONS CO., Cambridge, Mass.
Filed February 16, 1914. Serial No. 75,919. PUBLISHED JUNE 2, 1914.

98,730. RIBBONS. B. ALTMAN & CO., New York, N. Y.
Filed April 9, 1914. Serial No. 77,329. PUBLISHED JUNE 2, 1914.

98,731. RIBBONS. B. ALTMAN & CO., New York, N. Y.
Filed April 9, 1914. Serial No. 77,330. PUBLISHED JUNE 2, 1914.

98,732. FERTILIZERS. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed March 16, 1914. Serial No. 76,692. PUBLISHED JUNE 2, 1914.

98,733. BOAT-OARS. ANCHOR SAWMILLS COMPANY, Pelham Manor, N. Y.; Memphis and Jackson, Tenn., and Devall Bluff, Ark.
Filed April 4, 1914. Serial No. 77,193. PUBLISHED JUNE 2, 1914.

98,734. BOAT-OARS. ANCHOR SAWMILLS COMPANY, Pelham Manor, N. Y.; Memphis and Jackson, Tenn., and Devall Bluff, Ark.
Filed April 23, 1914. Serial No. 77,669. PUBLISHED JUNE 2, 1914.

98,735. BOAT-OARS. ANCHOR SAWMILLS COMPANY, Pelham Manor, N. Y.; Memphis and Jackson, Tenn., and Devall Bluff, Ark.
Filed April 23, 1914. Serial No. 77,670. PUBLISHED JUNE 2, 1914.

98,736. SIGNS SUSCEPTIBLE OF BEING MADE BY A PRINTER OR PAINTER AND PLACARDS. W. A. ANDERSON & COMPANY, New York, N. Y.
Filed January 24, 1914. Serial No. 75,396. PUBLISHED MAY 26, 1914.

98,737. CERTAIN NAMED SPICES AND FLAVORING EXTRACTS. ARBUCKLE BROTHERS, New York, N. Y., and Chicago, Ill.
Filed June 30, 1913. Serial No. 71,433. PUBLISHED MARCH 3, 1914.

98,738. MONTHLY PERIODICALS. WILMER ATKINSON CO., Philadelphia, Pa.
Filed April 9, 1914. Serial No. 77,362. PUBLISHED MAY 26, 1914.

98,739. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. HARRIET HUBBARD AYER, New York, N. Y.
Filed June 24, 1913. Serial No. 71,329. PUBLISHED MAY 26, 1914.

98,740. ANTISYPHILITIC. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1914. Serial No. 77,338. PUBLISHED MAY 26, 1914.

98,741. BEER. BÖHMISCHE PILSNER BRAUEREI AKTIEN-GESELLSCHAFT IN PILSEN, Pilsen, Austria-Hungary.
Filed January 20, 1914. Serial No. 75,306. PUBLISHED JUNE 2, 1914.

98,742. ALUMINUM HOT-WATER BOTTLES OF A THERAPEUTIC CHARACTER. GEO. BORGFELDT & CO., New York, N. Y.
Filed March 14, 1914. Serial No. 76,627. PUBLISHED JUNE 2, 1914.

98,743. ANTISEPTIC SOLUTION. THOS. W. BRADLEY, Bluefield, W. Va.
Filed April 13, 1914. Serial No. 77,431. PUBLISHED MAY 26, 1914.

98,744. CERTAIN NAMED CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. BRAME DRUG COMPANY, INC., Northwilkesboro, N. C.
Filed February 10, 1914. Serial No. 75,815. PUBLISHED MAY 26, 1914.

98,745. SOOTHING MEDICINAL OIL FOR INTERNAL AND EXTERNAL USE IN CASES OF CERTAIN DISEASES. BRINSER REMEDY COMPANY, York, Pa.
Filed March 7, 1911. Serial No. 54,913. PUBLISHED MAY 26, 1914.

98,746. TIRE-FILLERS. JOHN A. BURGESS, Toronto, Ontario, Canada.
Filed February 5, 1913. Serial No. 68,322. PUBLISHED JUNE 2, 1914.

98,747. GRASS-SEEDS. D. I. BUSHNELL & CO., St. Louis, Mo.
Filed April 28, 1914. Serial No. 77,822. PUBLISHED MAY 26, 1914.

98,748. CIGARETTES. THE CAMP IMPORTATION CO., INC., New York, N. Y.
Filed February 24, 1914. Serial No. 76,102. PUBLISHED MAY 26, 1914.

98,749. MOTOR-BODIES, MUD-GUARDS, WINDSHIELDS, HOODS, COLLAPSIBLE SEATS, DOOR-LOCKS, LAMP AND BAGGAGE HOLDERS. "CARROSSERIE VAN DEN PLAS," STE.-EN NOM COLLECTIF, Brussels, Belgium.
Filed May 29, 1913. Serial No. 70,744. PUBLISHED JUNE 2, 1914.

98,750. COVER AND BOND, WRITING, AND PRINTING PAPER. THE CENTRAL OHIO PAPER CO., Columbus, Ohio.
Filed April 17, 1914. Serial No. 77,522. PUBLISHED MAY 26, 1914.

98,751. SOAPS AND SOAP POWDERS. COLGATE & CO., Jersey City, N. J., and New York, N. Y.
Filed March 25, 1914. Serial No. 76,922. PUBLISHED MAY 26, 1914.

98,752. FREEZERS AND BEVERAGE-COOLERS. CORDLEY & HAYES, New York, N. Y.
Filed March 18, 1914. Serial No. 76,728. PUBLISHED JUNE 2, 1914.

98,753. ECZEMA AND SKIN ERUPTIONS. DERMIN MFG. CO., Newark and Perth Amboy, N. J.
Filed March 7, 1914. Serial No. 76,431. PUBLISHED MAY 26, 1914.

98,754. LIQUID DENTIFRICE. WILLIAM HENRY DEWENDER, Brooklyn, N. Y.
Filed April 29, 1914. Serial No. 77,859. PUBLISHED MAY 26, 1914.

98,755. HARMONIUM-TONGUES. GEBR. DIX, Untermhaus-Gera, Germany.
Filed May 1, 1914. Serial No. 77,913. PUBLISHED MAY 26, 1914.

98,756. SOAP. DURHAM DUPLEX RAZOR COMPANY, Jersey City, N. J.
Filed March 7, 1914. Serial No. 76,426. PUBLISHED JUNE 2, 1914.

98,757. LIQUID DRESSING AND POLISH FOR LEATHER BOOTS AND SHOES AND LEATHER ARTICLES. JOSEPH J. ECKHARD, Alton, Ill.
Filed March 16, 1914. Serial No. 76,673. PUBLISHED JUNE 2, 1914.

98,758. ARTIFICIAL FISHING-BAIT. THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio.
Filed April 11, 1914. Serial No. 77,412. PUBLISHED JUNE 2, 1914.

98,759. ARTIFICIAL FISHING-BAIT. THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio.
Filed April 11, 1914. Serial No. 77,413. PUBLISHED JUNE 2, 1914.

98,760. CIDER. JOSÉ CIMA Y GARCIA, Oviedo, Spain.
Filed August 8, 1912. Serial No. 65,155. PUBLISHED JUNE 2, 1914.

98,761. REMEDY FOR CHILLS, FEVER, AND MALARIA. JOHN A. GAY, Aberdeen, Miss.
Filed March 24, 1914. Serial No. 76,899. PUBLISHED MAY 26, 1914.

98,762. CIGARS AND CIGARETTES. SOPERIOS J. GEORGIADES, Atlanta, Ga.
Filed January 31, 1914. Serial No. 75,573. PUBLISHED JUNE 2, 1914.

98,763. STENCIL-DUPLICATING APPARATUS AND PAPERS USED IN CONNECTION THEREWITH. DAVID GESTETNER, London, England.
Filed December 13, 1913. Serial No. 74,575. PUBLISHED MAY 26, 1914.

98,764. LIQUORS. FIGLI DI SEBASTIANO GIUSIANA, Turin, Italy.
Filed February 19, 1914. Serial No. 76,028. PUBLISHED JUNE 2, 1914.

98,765. LAUNDRY-WASHING MACHINES AND WASHING-MACHINE WRINGERS. GLOBE MANUFACTURING COMPANY, Perry, Iowa.
Filed May 6, 1912. Serial No. 63,379. PUBLISHED JUNE 2, 1914.

98,766. GAS-MANTLE WITH ATTACHMENTS. GLÜHSTRUMPFFABRIK BASEL, Basel, Switzerland.
Filed July 7, 1913. Serial No. 71,564. PUBLISHED MAY 26, 1914.

98,767. TOILET POWDER. THE GORDON-THORNE CO., Utica, N. Y.
Filed May 4, 1914. Serial No. 77,974. PUBLISHED MAY 26, 1914.

98,768. PAPER FOR PRINTING AND WRITING PURPOSES. GRAHAM PAPER COMPANY, St. Louis, Mo.
Filed April 4, 1914. Serial No. 77,202. PUBLISHED MAY 26, 1914.

98,769. PIANOS. GRINNELL BROS., Detroit, Mich.
Filed January 17, 1914. Serial No. 75,256. PUBLISHED MAY 26, 1914.

98,770. MEDICATED SALVE FOR EXTERNAL USE. JOHN E. GUESS, Kentwood, La.
Filed May 1, 1914. Serial No. 77,919. PUBLISHED MAY 26, 1914.

98,771. ROSARIES. THE H. M. H. COMPANY, Pawtucket, R. I.
Filed April 17, 1914. Serial No. 77,532. PUBLISHED MAY 26, 1914.

98,772. PEACH-TREES. CHARLTON R. HANCOCK, Bonaire, Ga.
Filed April 2, 1914. Serial No. 77,148. PUBLISHED MAY 26, 1914.

98,773. INKS FOR WRITING, PRINTING, AND STAMPING PURPOSES AND THINNERS THEREFOR. B. HELLER & CO., Chicago, Ill.
Filed February 7, 1914. Serial No. 75,761. PUBLISHED MAY 26, 1914.

98,774. SHEAR-KNIVES AND DIE-BLOCKS. HEPPENSTALL FORGE & KNIFE COMPANY, Pittsburgh, Pa.
Filed February 10, 1914. Serial No. 75,820. PUBLISHED JUNE 2, 1914.

98,775. SHEAR-KNIVES AND DIE-BLOCKS. HEPPENSTALL FORGE & KNIFE COMPANY, Pittsburgh, Pa.
Filed February 10, 1914. Serial No. 75,821. PUBLISHED JUNE 2, 1914.

98,776. MACHINES FOR APPLYING OIL TO ANIMALS. THE HOG-JOY COMPANY, Springfield, Ill.
Filed March 23, 1914. Serial No. 76,853. PUBLISHED JUNE 2, 1914.

98,777. POLISH AND CLEANING PREPARATION FOR CERTAIN NAMED ARTICLES. WILLIAM HOLLAND, Slough, England.
Filed March 16, 1914. Serial No. 76,680. PUBLISHED JUNE 2, 1914.

98,778. CEMENTS FOR RUBBER, LEATHER, METAL, AND CHINA, GLUE, LIBRARY-PASTE, AND SEALING-WAX. THE R. M. HOLLINGSHEAD CO., Camden, N. J.
Filed April 25, 1914. Serial No. 77,746. PUBLISHED JUNE 2, 1914.

98,779. SALVES. CHARLES N. HOLMES, Peoria, Ill.
Filed January 16, 1914. Serial No. 75,226. PUBLISHED MAY 26, 1914.

98,780. GAME APPARATUS. GEORGE HENRY HOWARD, Dalston, London, England.
Filed April 30, 1914. Serial No. 77,880. PUBLISHED JUNE 2, 1914.

98,781. REFRIGERATING APPARATUS. THE ICELESS REFRIGERATION COMPANY, Cleveland, Ohio.
Filed April 11, 1914. Serial No. 77,421. PUBLISHED JUNE 2, 1914.

98,782. ARTIFICIAL TEETH. INTERNATIONAL TOOTH COMPANY, Philadelphia, Pa.
Filed April 25, 1914. Serial No. 77,750. PUBLISHED JUNE 2, 1914.

98,783. MEDICATED OINTMENT AND MEDICINAL PREPARATION USED IN TREATING RHEUMATISM AND BLOOD DISEASES. MARSHALL CARSON KANE, Hollis, N. Y.
Filed October 18, 1913. Serial No. 73,478. PUBLISHED MAY 26, 1914.

98,784. VETERINARY MEDICINES FOR TREATING CERTAIN AILMENTS AND DISEASES. WILLIAM L. KELTNER, Dexter, Mo.
Filed February 6, 1914. Serial No. 75,722. PUBLISHED MAY 26, 1914.

98,785. RUM. CHARLES KINLOCH & COMPANY, LIMITED, London, England.
Filed December 5, 1913. Serial No. 74,388. PUBLISHED JUNE 2, 1914.

98,786. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed April 23, 1914. Serial No. 77,676. PUBLISHED JUNE 2, 1914.

98,787. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed April 23, 1914. Serial No. 77,677. PUBLISHED JUNE 2, 1914.

98,788. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed April 23, 1914. Serial No. 77,678. PUBLISHED JUNE 2, 1914.

98,789. LAXATIVE. ALBERT A. KUBRASCH, Chicago, Ill.
Filed December 24, 1913. Serial No. 74,822. PUBLISHED MAY 26, 1914.

98,790. REMEDY FOR HOG-CHOLERA. FRANK KURTH, Wheaton, Minn.
Filed April 30, 1914. Serial No. 77,882. PUBLISHED MAY 26, 1914.

98,791. SALVE. ANNIE LEHMANN, Brooklyn, N. Y.
Filed May 4, 1914. Serial No. 77,982. PUBLISHED MAY 26, 1914.

98,792. MEDICAL COMPOUNDS FOR THE DIGESTIVE ORGANS. DR. LONERGAN'S, Pittsburgh, Pa.
Filed March 22, 1913. Serial No. 69,256. PUBLISHED MAY 26, 1914.

98,793. CERTAIN NAMED PRECIOUS AND IMITATION STONES. THE LOW-TAUSSIG-KARPELES CO., Providence, R. I.
Filed February 18, 1914. Serial No. 76,005. PUBLISHED MAY 26, 1914.

98,794. PREPARATION FOR RELIEF OF CERTAIN NAMED DISEASES. LUYTIES PHARMACY COMPANY, St. Louis, Mo.
Filed March 18, 1914. Serial No. 76,743. PUBLISHED MAY 26, 1914.

98,795. TOOTH-PASTE. MANHATTAN DRUG CO., New York, N. Y.
Filed April 15, 1914. Serial No. 77,491. PUBLISHED MAY 26, 1914.

98,796. INSECTICIDE. FRANKLIN MCGARRETT, Attleboro, Mass.
Filed April 22, 1914. Serial No. 77,655. PUBLISHED MAY 26, 1914.

98,797. MEDICAL PREPARATIONS FOR CERTAIN NAMED USES. ROBERT E. MCINTURFF, McComb, Miss.
Filed April 9, 1914. Serial No. 77,349. PUBLISHED MAY 26, 1914.

98,798. CERTAIN NAMED HAND AND FOOT PROPELLED VEHICLES AND WHEELBARROWS, ALL FOR CHILDREN'S USE. A. MECKY CO., Philadelphia, Pa.
Filed April 18, 1914. Serial No. 77,562. PUBLISHED JUNE 2, 1914.

98,799. BEVERAGES—NAMELY, GINGER-BEER. HUBERT J. MIDDLETON, New York, N. Y.
Filed April 24, 1914. Serial No. 77,728. PUBLISHED JUNE 2, 1914.

98,800. SILVER-PLATED HOLLOW WARE AND SILVER-PLATED TABLEWARE. THE MIDDLETOWN SILVER COMPANY, Middletown, Conn.
Filed November 26, 1913. Serial No. 74,213. PUBLISHED MAY 26, 1914.

98,801. BEER. MISSION BREWING COMPANY, San Diego, Cal.
Filed June 27, 1913. Serial No. 71,408. PUBLISHED JUNE 2, 1914.

98,802. LADIES' HAND-BAGS. MORRIS, MANN & REILLY, Chicago, Ill.
Filed October 1, 1913. Serial No. 73,150. PUBLISHED JUNE 2, 1914.

98,803. GLYCERIN TOILET SOAP. MCLHENS & KROPFF, New York, N. Y.
Filed January 28, 1914. Serial No. 75,503. PUBLISHED MAY 26, 1914.

98,804. EXTRACT OF RADISH FOR RELIEVING INDIGESTION. DR. L. NAUMANN, Dresden-Plauen, Germany.
Filed December 19, 1913. Serial No. 74,689. PUBLISHED MAY 26, 1914.

98,805. DIGESTIVE FERMENT USED IN DYSPEPSIA AND INDIGESTION. JAMES K. NEAGLEY, Pittsburgh, Pa.
Filed April 6, 1914. Serial No. 77,249. PUBLISHED MAY 26, 1914.

98,806. CERTAIN NAMED WINES. DAVID NICHOLSON GROCER COMPANY, St. Louis, Mo.
Filed July 18, 1913. Serial No. 71,834. PUBLISHED JUNE 2, 1914.

98,807. LIQUID CORN-REMOVER AND LIQUID COURT-PLASTER. ERNEST H. NIEMOELLER, St. Louis, Mo.
Filed April 11, 1914. Serial No. 77,425. PUBLISHED MAY 26, 1914.

98,808. FOUNDRY-FACINGS, CHARCOAL, GRAPHITE, AND PLUMBAGO. S. OBERMAYER COMPANY, Cincinnati, Ohio, and Chicago, Ill.
Filed January 5, 1914. Serial No. 74,991. PUBLISHED JUNE 2, 1914.

98,809. MOUSE-TRAPS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed April 11, 1914. Serial No. 77,427. PUBLISHED MAY 26, 1914.

98,810. LEATHER SUBSTITUTE. PEARCE BROS. LEATHER CO., Newark, N. J.
Filed April 4, 1914. Serial No. 77,216. PUBLISHED MAY 26, 1914.

98,811. REMEDY FOR THE TREATMENT OF DISEASES OF THE AIR-PASSAGES. PNEUMO-VAPO-TONE CO., Jackson City, Mo.
Filed March 14, 1914. Serial No. 76,654. PUBLISHED MAY 26, 1914.

98,812. FIRE-EXTINGUISHING COMPOUNDS. PYRENE MANUFACTURING CO., New York, N. Y.
Filed April 3, 1914. Serial No. 77,188. PUBLISHED MAY 26, 1914.

98,813. WHEAT-FLOUR. RED WING MILLING COMPANY, Red Wing, Minn.
Filed January 13, 1914. Serial No. 75,148. PUBLISHED APRIL 28, 1914.

98,814. PASTE FOR MILLINERY PURPOSES. EDWARD J. REILLY, Baltimore, Md.
Filed April 10, 1914. Serial No. 77,393. PUBLISHED JUNE 2, 1914.

98,815. TOILET-PAPER, PAPER TOWELS, NAPKINS, AND TABLE-CLOTHS. RICHARDS-GLOVER COMPANY, Dallas, Tex.
Filed April 6, 1914. Serial No. 77,253. PUBLISHED MAY 26, 1914.

98,816. LEATHER-OIL. WM. C. ROBINSON & SON CO., Baltimore, Md.
Filed February 21, 1914. Serial No. 76,088. PUBLISHED MAY 26, 1914.

98,817. RUBBERIZED FABRICS. ROSENWALD & WEIL, INC., Chicago, Ill.
Filed March 25, 1914. Serial No. 76,947. PUBLISHED JUNE 2, 1914.

98,818. HEADACHE AND NEURALGIA MEDICINE. ROWLAND DRUG CO., Oxford, Miss.
Filed March 13, 1914. Serial No. 76,614. PUBLISHED MAY 26, 1914.

98,819. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed April 29, 1914. Serial No. 77,873. PUBLISHED JUNE 2, 1914.

98,820. BOWS FOR MUSICAL INSTRUMENTS. EUGENE SARTORY, Paris, France.
Filed February 19, 1914. Serial No. 76,040. PUBLISHED MAY 26, 1914.

98,821. MEDICINAL PREPARATION FOR THE ALLEVIATION OF CERTAIN NAMED DISEASES. CHARLES W. SEIGNIOUS, Atlanta, Ga.
Filed April 15, 1914. Serial No. 77,495. PUBLISHED MAY 26, 1914.

98,822. BEER. CONRAD SEIPP BREWING COMPANY, Chicago, Ill.
Filed May 4, 1914. Serial No. 77,988. PUBLISHED JUNE 2, 1914.

98,823. BEER. CONRAD SEIPP BREWING COMPANY, Chicago, Ill.
Filed May 4, 1914. Serial No. 77,989. PUBLISHED JUNE 2, 1914.

98,824. MINERAL WATER AND GINGER-ALE. NATHAN F. SHIVAR, Shelton, S. C.
Filed April 13, 1914. Serial No. 77,456. PUBLISHED JUNE 2, 1914.

98,825. CERTAIN NAMED SEEDS. ARTHUR E. SHULTZ, Olney, Ill.
Filed May 3, 1913. Serial No. 70,220. PUBLISHED JUNE 2, 1914.

98,826. ROACH AND VERMIN POWDER IN BOTTLES. ISADORE SKLAMBERG, Chicago, Ill.
Filed March 18, 1914. Serial No. 76,784. PUBLISHED MAY 26, 1914.

98,827. MINERAL WATERS. SOL DUC HOT SPRINGS COMPANY, Seattle, Wash.
Filed April 20, 1914. Serial No. 77,597. PUBLISHED JUNE 2, 1914.

98,828. MECHANICALLY-OPERATED AUTOMOBILE-HORNS. STANDARD MOTOR PARTS MFG. CO., Philadelphia, Pa.
Filed February 21, 1914. Serial No. 76,092. PUBLISHED MAY 26, 1914.

98,829. PREPARATION FOR THE TREATMENT OF ASTHMA. FRANK D. STRADER, Madison, Wis.
Filed March 27, 1914. Serial No. 77,006. PUBLISHED MAY 26, 1914.

98,830. TOILET SOAP. SWIFT AND COMPANY, Chicago, Ill.
Filed March 7, 1914. Serial No. 76,454. PUBLISHED JUNE 2, 1914.

98,831. TOILET SOAP. SWIFT AND COMPANY, Chicago, Ill.
Filed March 7, 1914. Serial No. 76,455. PUBLISHED MAY 26, 1914.

98,832. PAPER FOR PRINTING PURPOSES. THE TAYLOR-BURT CO., Holyoke, Mass.
Filed February 16, 1914. Serial No. 75,954. PUBLISHED MAY 26, 1914.

98,833. VARNISHES. TOUSEY VARNISH COMPANY, Chicago, Ill.
Filed April 20, 1914. Serial No. 77,600. PUBLISHED JUNE 2, 1914.

98,834. ADVERTISING AND INFORMATIVE PAMPHLETS. CONSTANTINE ANDREW TOWER, New York, N. Y.
Filed May 1, 1912. Serial No. 63,251. PUBLISHED MAY 26, 1914.

98,835. PRINTS AND PUBLICATIONS, AND PARTICULARLY CHARTERS, BOOKS, PAMPHLETS, MUSIC, POST-CARDS, AND WALL-MOTTOES. J. O. C. UNION, Los Angeles, Cal.
Filed April 28, 1913. Serial No. 70,098. PUBLISHED JUNE 2, 1914.

98,836. CERTAIN NAMED CLOTHING. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed April 3, 1914. Serial No. 77,190. PUBLISHED MAY 26, 1914.

98,837. POLISHING-CLOTH. HENRY H. VON SCHLICK, Pittsburgh, Pa.
Filed January 19, 1914. Serial No. 75,303. PUBLISHED MAY 26, 1914.

98,838. HAIR-TONIC, HAIR-DYE, COLD-CREAM, LIQUID SHAMPOO AND HAIR-PRESERVER, FACE-LOTION, AND MASSAGE-CREAM. WARSHAW BROTHERS, New York, N. Y.
Filed April 26, 1912. Serial No. 63,155. PUBLISHED MAY 26, 1914.

98,839. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,899. PUBLISHED JUNE 2, 1914.

98,840. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,900. PUBLISHED JUNE 2, 1914.

98,841. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,901. PUBLISHED JUNE 2, 1914.

98,842. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,903. PUBLISHED JUNE 2, 1914.

98,843. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,904. PUBLISHED JUNE 2, 1914.

98,844. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. CLAUDE I. WHITLOCK, St. Paul, Minn.
Filed March 24, 1913. Serial No. 69,304. PUBLISHED JULY 8, 1913.

98,845. WINE. WILHELMI, HOCK & CO., Frankfort-on-the-Main, Germany.
Filed May 1, 1914. Serial No. 77,942. PUBLISHED JUNE 2, 1914.

98,846. DOLLS AND TOYS. DAVID WOLF, New York, N. Y.
Filed April 2, 1914. Serial No. 77,171. PUBLISHED JUNE 2, 1914.

98,847. SPRAYING APPARATUS. AIR-TIGHT STEEL TANK CO., Pittsburgh, Pa.
Filed December 18, 1913. Serial No. 74,663. PUBLISHED JUNE 2, 1914.

98,848. OLIVE-OIL. ALBERTI IMPORTING AND EXPORTING CO., Boston, Mass.
Filed March 12, 1914. Serial No. 76,574. PUBLISHED JUNE 2, 1914.

98,849. CERTAIN NAMED HARDWARE SUPPLIES. ALLITH-PROUTY COMPANY, Danville, Ill.
Filed June 14, 1912. Serial No. 64,198. PUBLISHED JUNE 2, 1914.

98,850. COTTON PIECE GOODS. AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.
Filed January 23, 1914. Serial No. 75,378. PUBLISHED JUNE 2, 1914.

98,851. CERTAIN NAMED MACHINERY AND ENGINES, NOT ELECTRICAL. ARMSTRONG MFG. CO., Waterloo, Iowa.
Filed March 5, 1914. Serial No. 76,339. PUBLISHED JUNE 2, 1914.

98,852. SPRING AND SOLID EYE SACK, BURLAP, BAG, HOP, AND PACKING NEEDLES. BARR BROS. CO. INC., Oakland, Cal.
Filed April 23, 1914. Serial No. 77,671. PUBLISHED JUNE 2, 1914.

98,853. [WITHDRAWN.]

98,854. FOR TEA AND COFFEE. C. F. BLANKE TEA & COFFEE COMPANY, St. Louis, Mo.
Filed April 29, 1913. Serial No. 70,111. PUBLISHED JUNE 2, 1914.

98,855. COTTON COMFORTS. THE R. BLANKENBURG COMPANY, Philadelphia, Pa.
Filed April 7, 1914. Serial No. 77,265. PUBLISHED JUNE 2, 1914.

98,856. ALLOYS FOR WELDING, REPAIRING, OR UNITING ALUMINUM CASTINGS, CRANK-CASES, MANIFOLDS, AND CABLES. THE CHEMICAL SPECIALTIES CO., Kansas City, Mo.
Filed April 13, 1914. Serial No. 77,434. PUBLISHED JUNE 2, 1914.

98,857. WHEAT-FLOUR. COLUMBIA STAR MILLING CO., Columbia, Ill.
Filed March 11, 1914. Serial No. 76,539. PUBLISHED JUNE 2, 1914.

98,858. POWDERS USED IN PREPARING WHIPPED CREAM, WHIPPED EGGS, AND WHIPPED SALAD-DRESSINGS. CREMOLITE MANUFACTURING CO., Portland, Oreg.
Filed June 11, 1913. Serial No. 71,014. PUBLISHED JUNE 2, 1914.

98,859. POULTRY FOODS. DARLING & COMPANY, Chicago, Ill.
Filed March 13, 1914. Serial No. 76,601. PUBLISHED JUNE 2, 1914.

98,860. SNAP-FASTENERS. THE DE LONG HOOK AND EYE COMPANY, Philadelphia, Pa.
Filed April 29, 1914. Serial No. 77,858. PUBLISHED JUNE 2, 1914.

98,861. WOOD-FINISH. FREDRIC P. DOERR, Ridgewood, N. J.
Filed April 10, 1914. Serial No. 77,372. PUBLISHED JUNE 2, 1914.

98,862. THREAD FOR SEWING PURPOSES. EASTERN THREAD COMPANY, New York, N. Y.
Filed April 6, 1911. Serial No. 55,559. PUBLISHED JUNE 2, 1914.

98,863. HAIR-NETS. EHLERMAN BROTHERS CO., Sioux City, Iowa.
Filed April 13, 1914. Serial No. 77,440. PUBLISHED JUNE 2, 1914.

98,864. CERTAIN NAMED TEXTILE FABRICS. FAULKNER & COLONY MANUFG. CO., Keene, N. H.
Filed March 27, 1914. Serial No. 76,990. PUBLISHED JUNE 2, 1914.

98,865. HATS, BONNETS, AND CAPS. FRANKEL, FRANK & CO., Kansas City, Mo.
Filed March 16, 1914. Serial No. 76,674. PUBLISHED JUNE 2, 1914.

98,866. CANNED AND PRESERVED FRUITS AND VEGETABLES. GOLDEN GATE PACKING CO., San Jose, Cal.
Filed March 11, 1914. Serial No. 76,545. PUBLISHED JUNE 2, 1914.

98,867. GARMENT-FASTENERS. GUSTAVUS GRAY, St. Louis, Mo.
Filed March 23, 1914. Serial No. 76,852. PUBLISHED JUNE 2, 1914.

98,868. HAIR ROLLS AND PUFFS. THE HAIRLIGHT COMPANY, Leominster, Mass.
Filed May 7, 1914. Serial No. 78,079. PUBLISHED JUNE 2, 1914.

98,869. OIL-PAINTS. WILLIAM M. HARRIS, Camden, N. J.
Filed April 28, 1914. Serial No. 77,836. PUBLISHED JUNE 2, 1914.

98,870. LUBRICATING-OILS. A. W. HARRIS OIL CO., Providence, R. I.
Filed March 2, 1914. Serial No. 76,274. PUBLISHED JUNE 2, 1914.

98,871. COFFEE. THE HASEROT COMPANY, Cleveland, Ohio.
Filed April 22, 1913. Serial No. 69,988. PUBLISHED SEPTEMBER 23, 1913.

98,872. FLAVORING EXTRACTS FOR FOODS AND TEA. THE HEEKIN SPICE COMPANY, Cincinnati, Ohio.
Filed December 14, 1912. Serial No. 67,446. PUBLISHED MARCH 4, 1913.

98,873. GOLD PAINTS. LOUIS HEMMERDINGER, New York, N. Y.
Filed March 19, 1914. Serial No. 76,771. PUBLISHED JUNE 2, 1914.

98,874. CRACKERS. JOHNSON EDUCATOR FOOD CO., Boston, Mass.
Filed March 6, 1914. Serial No. 76,406. PUBLISHED JUNE 2, 1914.

98,875. METAL CURTAIN-RODS, PORTIÈRE-RODS, STAIR-RODS, AND FIXTURES THEREFOR. KIRSCH MANUFACTURING COMPANY, Sturgis, Mich.
Filed March 30, 1914. Serial No. 77,064. PUBLISHED JUNE 2, 1914.

98,876. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed April 23, 1914. Serial No. 77,679. PUBLISHED JUNE 2, 1914.

98,877. BUTTER. S. S. LARD, Houston, Tex.
Filed March 12, 1914. Serial No. 76,585. PUBLISHED JUNE 2, 1914.

98,878. CERTAIN NAMED CUTLERY, TOOLS, AND PARTS THEREOF. LEWIS & BENNETT HARDWARE CO., Wilkes-Barre, Pa.
Filed March 9, 1914. Serial No. 76,473. PUBLISHED JUNE 2, 1914.

98,879. TEXTILE RUGS. R. H. MACY & CO., New York, N. Y.
Filed May 1, 1914. Serial No. 77,930. PUBLISHED JUNE 2, 1914.

98,880. HAIR-NETS. MARLOWE MANUFACTURING COMPANY, New York, N. Y.
Filed April 22, 1914. Serial No. 77,656. PUBLISHED JUNE 2, 1914.

98,881. HAIR-NETS. MARLOWE MANUFACTURING COMPANY, New York, N. Y.
Filed April 22, 1914. Serial No. 77,658. PUBLISHED JUNE 2, 1914.

98,882. DUCK. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed January 19, 1912. Serial No. 60,932. PUBLISHED JUNE 2, 1914.

98,883. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 30, 1913. Serial No. 73,682. PUBLISHED JUNE 2, 1914.

98,884. BISCUIT, SUGAR WAFERS, AND CANDY. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 5, 1914. Serial No. 76,375. PUBLISHED JUNE 2, 1914.

98,885. SPECIALLY-TREATED STEEL. THE NATIONAL MALLEABLE CASTINGS COMPANY, Cleveland, Ohio.
Filed April 10, 1914. Serial No. 77,386. PUBLISHED JUNE 2, 1914.

98,886. BLUE-PRINT PAPER AND CLOTH AND CERTAIN NAMED DRAWING MATERIALS. NEW YORK BLUE PRINT PAPER CO., New York, N. Y.
Filed August 27, 1913. Serial No. 72,559. PUBLISHED JUNE 2, 1914.

98,887. COFFEE. J. R. NEWBERRY CO., Los Angeles, Cal.
Filed March 11, 1914. Serial No. 76,557. PUBLISHED JUNE 2, 1914.

98,888. CERTAIN NAMED DISTILLED ALCOHOLIC LIQUORS. DAVID NICHOLSON GROCER COMPANY, St. Louis, Mo.
Filed July 18, 1913. Serial No. 71,835. PUBLISHED JUNE 2, 1914.

98,889. OIL, WHET, SCYTHE, AND ABRASIVE STONES, RUBBING-BRICKS, ENGRAVERS' PENCILS, AND OILSTONE WHEELS. NORTON COMPANY, Worcester, Mass.
Filed April 2, 1914. Serial No. 77,156. PUBLISHED MAY 26, 1914.

98,890. FOOD AND INGREDIENT OF FOODS. OKO COMPANY, Wilmington, Del., and St. Louis, Mo.
Filed March 9, 1914. Serial No. 76,476. PUBLISHED JUNE 2, 1914.

98,891. INGOTS, BARS, PIGS, CASTINGS OF IRON, FORGINGS, AND ALLOYS OF IRON AND STEEL. THE PENNSYLVANIA STEEL COMPANY, Steelton, Pa., and New York, N. Y.
Filed April 24, 1914. Serial No. 77,734. PUBLISHED JUNE 2, 1914.

98,892. CANNED CHERRIES, PEACHES, PEARS, APRICOTS, TOMATOES, BLACKBERRIES, PLUMS, AND GRAPES. PRATT-LOW PRESERVING CO., Santa Clara, Cal.
Filed July 20, 1911. Serial No. 57,747. PUBLISHED JUNE 2, 1914.

98,893. EGGS, WHITE OF EGGS, YOLK OF EGGS. L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany.
Filed February 6, 1914. Serial No. 75,731. PUBLISHED JUNE 2, 1914.

98,894. LADIES' AND CHILDREN'S CERTAIN NAMED MUSLIN UNDERGARMENTS. AARON RATNER, New York, N. Y.
Filed March 17, 1914. Serial No. 76,718. PUBLISHED JUNE 2, 1914.

98,895. HAND FIRE-EXTINGUISHERS. RICHMOND CHEMICAL CO., Wheeling, W. Va.
Filed April 24, 1914. Serial No. 77,737. PUBLISHED JUNE 2, 1914.

98,896. CONVEYING MECHANISM AND PARTS THEREOF FOR CONVEYING AND HOISTING GRANULAR AND LOOSE MATERIALS. ROBINS CONVEYING BELT COMPANY, Passaic, N. J., and New York, N. Y.
Filed April 3, 1912. Serial No. 62,633. PUBLISHED JUNE 2, 1914.

98,897. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed April 29, 1914. Serial No. 77,872. PUBLISHED JUNE 2, 1914.

98,898. ELECTRICAL FUSES. SCHWEITZER AND CONRAD, Chicago, Ill.
Filed March 28, 1914. Serial No. 77,032. PUBLISHED JUNE 2, 1914.

98,899. CANDY. FRANK F. SHMIDT, La Cygne, Kans.
Filed October 25, 1913. Serial No. 73,612. PUBLISHED JUNE 2, 1914.

98,900. CULTIVATOR-SHOVELS. MARION SHRIMPLIN, Tonganoxie, Kans.
Filed December 6, 1913. Serial No. 74,422. PUBLISHED JUNE 2, 1914.

98,901. JUVENILE SUITS. A. SHUMAN & Co., Boston, Mass.
Filed April 8, 1914. Serial No. 77,323. PUBLISHED JUNE 2, 1914.

98,902. WRENCHES. HENRY ADALBERT SMITH, Elgin and Carpentersville, Ill.
Filed January 12, 1912. Serial No. 60,781. PUBLISHED JUNE 2, 1914.

98,903. BREAD. FARRAR TILNEY, New York, N. Y.
Filed December 29, 1911. Serial No. 60,504. PUBLISHED JUNE 2, 1914.

98,904. COTTON AND LINEN PIECE GOODS. TURTLE BROTHERS, New York, N. Y.
Filed April 21, 1913. Serial No. 69,977. PUBLISHED JUNE 2, 1914.

98,905. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed July 16, 1913. Serial No. 71,795. PUBLISHED JUNE 2, 1914.

98,906. COTTON DUCK. WELLINGTON, SEARS & COMPANY, Boston, Mass.
Filed April 8, 1914. Serial No. 77,325. PUBLISHED JUNE 2, 1914.

98,907. DRILLING. WELLINGTON, SEARS & COMPANY, Boston, Mass.
Filed April 9, 1914. Serial No. 77,365. PUBLISHED JUNE 2, 1914.

98,908. COTTON AND WOOLEN HOSIERY, SWEATERS, WOMEN'S AND CHILDREN'S KNIT UNDERWEAR, GLOVES, MITTENS, AND CAPS. WELLWORTH MILLS COMPANY, Minneapolis, Minn.
Filed April 13, 1914. Serial No. 77,465. PUBLISHED JUNE 2, 1914.

98,909. COTTON-DUCK CLOTH. WEST POINT MANUFACTURING CO., Langdale, Ga.
Filed April 8, 1914. Serial No. 77,324. PUBLISHED JUNE 2, 1914.

98,910. CANNED FRUITS, VEGETABLES, AND FISH. WEST SIDE WHOLESALE GROCERY COMPANY, Chicago, Ill.
Filed March 9, 1914. Serial No. 76,485. PUBLISHED JUNE 2, 1914.

98,911. SOAP. CLAUDE I. WHITLOCK, St. Paul, Minn.
Filed May 24, 1913. Serial No. 70,644. PUBLISHED AUGUST 26, 1913.

98,912. COFFEE SUBSTITUTE. THEODOR WOLFRAM, Columbus, Ohio.
Filed March 13, 1914. Serial No. 76,620. PUBLISHED JUNE 2, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

8,525. PETROLEUM. THE ATLANTIC REFINING COMPANY, Philadelphia, Pa.
Registered August 2, 1881. Renewed August 2, 1911.

11,346. PARTS OF PLOWS, INCLUDING COTTON-SWEEPS, COTTON-SCRAPERS, AND BULL-TONGUES, SHOES, AND STAMPS. THE COLLINS COMPANY, Collinsville, Conn.
Registered July 22, 1884. Renewed July 22, 1914.

11,401. STIFFENERS FOR FLEXIBLE GOODS. EDWARD K. WARREN, Three Oaks, Mich., The Warren Featherbone Company, successor.
Registered August 5, 1884. Renewed August 5, 1914.

LABELS

REGISTERED AUGUST 4, 1914.

17,879.—*Title:* "DOUBLE MASTER VIBRATOR." (For Double Master-Vibrators.) THE ALDAY MFG. CO., Cleveland, Ohio. Filed June 13, 1914.

17,880.—*Title:* "DIAMOND LINIMENT." (For a Liniment.) R. W. BLAISDELL, Milwaukee, Wis. Filed March 18, 1914.

17,881.—*Title:* "CREAM NUT." (For Bread.) E. E. BRUBAKER, Carroll, Iowa. Filed June 15, 1914.

17,882.—*Title:* "QUIT-TOBAC." (For Quit-Tobac.) DILLEHAY BROS., New Decatur, Ala. Filed June 17, 1914.

17,883.—*Title:* "CHAS. EICHBAUM'S MINISINK CLUB FROZEN GINGER ALE." (For Ginger-Ale.) CHARLES EICHBAUM, Port Jervis, N. Y. Filed February 11, 1914.

17,884.—*Title:* "HAIR-A-GAIN." (For a Scalp and Hair Food.) HAIR-A-GAIN COMPANY, Portland, Oreg. Filed October 21, 1913.

17,885.—*Title:* "MERMAID BRAND PURE ARTESIAN WATER." (For Artesian Water.) HOLTON POWER COMPANY, Redlands and El Centro, Cal. Filed June 11, 1914.

17,886.—*Title:* "FRENCH RESTAURANT." (For Coffee and Chicory.) IMPORTERS COFFEE CO., LTD., New Orleans, La. Filed July 14, 1914.

17,887.—*Title:* "KEBART'S." (For Clothes.) JOSEPH J. KEBART, New York, N. Y. Filed May 28, 1914.

17,888.—*Title:* "NATURA, NATURES MEDICINE." (For Mineral Water.) GEORGE E. KEELER, Albany, N. Y. Filed May 11, 1914.

17,889.—*Title:* "PINEISLE BEAUTIES." (For Pineapples.) HENRY B. KOPF, New Haven, Conn. Filed June 29, 1914.

17,890.—*Title:* "RISING SUN." (For Canned Pickles.) NORTH AMERICAN MERCANTILE CO., San Francisco, Cal. Filed May 25, 1914.

17,891.—*Title:* "RUSSELL'S IDEAL SANITARY UNFERMENTED INDIVIDUAL GRAPE JUICE CUPETTE." (For a Grape-Juice Product.) WM. H. RUSSELL, Jersey City, N. J. Filed June 20, 1914.

17,892.—*Title:* "NUTRITO." (For a Grape Tonic.) GEORGE W. STEIGER, New York, N. Y. Filed June 17, 1914.

17,893.—*Title:* "BRITANICA." (For Cigars.). FRANK SISKA, Chicago, Ill. Filed July 14, 1914.

PRINTS

REGISTERED AUGUST 4, 1914.

3,691.—*Title:* "LUCO." (For a Silver-Polish.) WILLIAM KNAPPMANN, Brooklyn, N. Y. Filed May 29, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Wolhaupter patent, No. 538,809, for railway-tie plates, *Held* void for lack of invention in view of the prior art. *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed. Rep., 789.

(U. S. D. C.) The Marconi reissue patent, No. 11,913, (original No. 586,193,) for an apparatus for wireless telegraphy, claim 3 *Held* valid, but not infringed. *Marconi Wireless Telegraph Co. of America* v. *National Electric Signaling Co.*, 213 Fed. Rep., 815.

(U. S. D. C.) The Lodge patent, No. 609,154, for improvements in apparatus for wireless telegraphy, *Held* valid and infringed. *Marconi Wireless Telegraph Co. of America* v. *National Electric Signaling Co.*, 213 Fed. Rep., 815.

(U. S. C. C. A.) The Wolhaupter patent, No. 691,332, for railway-tie plates, *Held* void for lack of invention in view of the prior art. *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed. Rep., 789.

(U. S. C. C. A.) The Wolhaupter patent, No. 721,644, for railway-tie plates, *Held* void for lack of invention in view of the prior art. *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed. Rep., 789.

(U. S. C. C. A.) The Jerrems patent, No. 745,625, for feeding mechanism for grass-twine machines, *Held* valid, but not infringed. *Steiger* v. *Waite Grass Carpet Co.*, 213 Fed. Rep., 798.

(U. S. D. C.) The Marconi patent, No. 763,772, for apparatus for wireless telegraphy, *Held* valid and infringed. *Marconi Wireless Telegraph Co. of America* v. *National Electric Signaling Co.*, 213 Fed. Rep., 815.

(U. S. D. C.) The Nathan patent, No. 799,662, for a cover for automobile-tires, *Held* infringed. *Allen Auto Specialty Co.* v. *Niagara Auto Cover Co.*, 213 Fed. Rep., 870.

(U. S. C. C. A.) The Jerrems patent, No. 824,871, for feeding mechanism for grass-twine machines. *Held* valid, but not infringed. *Steiger* v. *Waite Grass Carpet Co.*, 213 Fed. Rep., 798.

(U. S. C. C. A.) The Layne patent, No. 821,653, for a rotary pump, *Held* valid and infringed as to claim 20 and not infringed as to claims 4 and 13. *Van Ness* v. *Layne*, 213 Fed. Rep., 804.

(U. S. C. C. A.) The Hildreth patent, No. 832,384, for a candy-pulling machine, claim 4 construed literally and according to its natural import is void as covering more than complainant actually invented. *Hildreth* v. *Lauer & Suter Co.*, 213 Fed. Rep., 788.

Changes in Classification.

(ORDER No. 2,142.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1914.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 104, Railways, (Division XXXIV,) establish subclasses—

Turntables—

214. Actuating mechanism,
212. Automobile,
216. Bearings and pivot,
211. Car actuated,
215. Locks,
213. Portable.

These subclasses are composed of patents taken from class 104, Railways, subclass 19, Turntables.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,143.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1914.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 197, Typewriting Machines, (Division XXX,) change the titles of subclasses 131, Paper-feeding, Sheet-magazine, Carbon-roll, and 140, Paper-feeding, Leading-edge gages, to read:

Paper-feeding—

131. Sheet, carbon-roll,
140. Edge gages.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,144.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1914.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 16, Builders' Hardware, (Division XX,) establish the following subclasses:

Handles—
169. Insulated—
172. Knobs,
173. Loop,
170. Tool,
171. Valve.

Subclasses 169, 170, and 172 above are composed of patents taken from classes 53, Domestic Cooking Vessels, subclass 3, Coffee and tea pots, and 126, Stoves and Furnaces, subclasses 195, Stove doors and windows, Knobs, and 322, Stove implements, Handles; subclass 171 is composed of patents taken from class 137, Water Distribution, subclass 4, Cocks and faucets, Reciprocating valves, and subclass 173 of patents taken from class 53, Domestic Cooking Vessels, subclass 3, Coffee and tea pots.

In class 45, Furniture, (Division VIII,) establish the following subclasses:

Provision safes—
Evaporative—
132. External,
133. Internal,
134. Porous wall.

These subclasses are composed of patents taken from class 62, Refrigeration, subclasses 10, Refrigerators, and 13, Water-coolers, hereinafter abolished.

In class 53, Domestic Cooking Vessels, (Division XXXII,) establish the following subclass:

11. **Heat insulated.**

This subclass is composed of patents taken from class 62, Refrigeration, subclass 23, Heat-insulated receptacles, hereinafter abolished.

In class 65, Kitchen and Table Articles, (Division VIII,) establish the following subclasses:

Pitchers—
67. Compartment,
66. Spaced wall.

These subclasses are composed of patents taken from classes 62, Refrigeration, subclass 13, Water-coolers, hereinafter abolished, and 65, Kitchen and Table Articles, subclass 31, Pitchers.

In class 99, Preserving, (Division VI,) establish the following subclasses:

15. **Liquid sterilizing.**
14. **Refrigerating.**

Subclass 15 above is composed of patents taken from class 210, Water Purification, subclass 20, Filters, Liquid sterilizers, hereinafter abolished, and subclass 14 of patents taken from class 62, Refrigeration, generally.

In class 121, Steam Engines, (Division XVIII,) establish the following subclasses:

122. **Heat and power plants.**
121. **Miscellaneous.**

These subclasses are composed of patents taken from class 237, Heat Distributing Systems, generally.

In class 126, Stoves and Furnaces, (Division XIX,) establish the following subclass and definition:

Hot-air furnaces—
Combined with boiler—
101.5. Locomotive.

101.5. HOT-AIR FURNACES, COMBINED WITH BOILER, LOCOMOTIVE. Locomotives provided with apparatus for heating air, generally to be conducted to the train of cars for heating purposes.

This subclass is composed for the most part of patents taken from class 237, Heat Distributing Systems, subclass 10, Train, Air, hereinafter abolished.

In same class abolish the following subclasses, with their definitions:

183. **Heating drums—**
184. Air heating attachments,
185. Chimney attachments,
186. Portable heat-radiators—
187. Hot air,
188. Stovepipe—
189. Hot air.

The patents formerly contained in these subclasses have been placed for the most part in class 257, Heat Exchange, hereinafter established.

In same class change the titles of subclasses—

Hot-air furnaces—
100. Combined furnace and cooking stove,
101. Combined furnace and steam or water,

to read—

Hot-air furnaces—
100. Combined with cooking stove,
101. Combined with boiler.

In class 127, Sugar and Salt, (Division VI,) establish the following subclass:

24. **Vacuum coolers.**

This subclass is composed of patents taken from class 62, Refrigeration, subclass 6, Ice-machines, hereinafter abolished.

In class 137, Water Distribution, (Division XXXIX,) establish the following subclasses:

Check-valves—
122. Radiator vent.
Mains and pipes—
112. Baffles.
111. **Miscellaneous.**

Traps—
Float valve—
113. Air port,
Pressure-operated valve—
114. Air port.

Subclass 111 above is composed of patents taken from various classes; subclass 112 of patents taken from classes 34, Driers, subclass 34, Shafts, Vertical, and 110, Furnaces, subclass 97, Furnace structure, Baffles and heat-retainers, and other classes; subclass 113 of patents taken from class 237, Heat Distributing Systems, subclass 26, Traps, Float valve, Air port, hereinafter abolished; subclass 114 of patents taken from class 237, Heat Distributing Systems, subclass 28, Traps, Pressure-operated valve, Air-port, hereinafter abolished, and subclass 122 of patents taken from class 237, Heat Distributing Systems, subclass 19, Steam-radiators, Attachments, hereinafter abolished.

In class 150, Cloth, Leather, and Rubber Receptacles, (Division XL,) establish the following subclass and definition:

0.5. **Miscellaneous.**

0.5. MISCELLANEOUS. Receptacles, covers, protectors, and the like falling within the definition of the class and not otherwise classified.

This subclass is composed for the most part of patents taken from class 62, Refrigeration.

In class 182, Sewerage, (Division XLIII,) establish the following subclass:

Traps—
Liquid seal—
15. Air port.

This subclass is composed of patents taken from class 237, Heat Distributing Systems, subclass 30, Traps, Liquid seal, Air port, hereinafter abolished.

In class 210, Water Purification, (Division XLIII,) establish the following subclass:

24. **Plural receptacle.**

This subclass is composed for the most part of patents taken from class 62, Refrigeration, subclass 13, Water-coolers, hereinafter abolished.

In same class abolish the following subclass:

Filters—
20. Liquid sterilizers.

The patents formerly contained in this subclass have been placed for the most part in class 99, Preserving, subclass 15, Liquid sterilizing, hereinbefore established, and class 257, Heat Exchange, hereinafter established.

In class 215, Bottles and Jars, (Division XL,) establish the following subclass:

118. **Spaced wall.**

This subclass is composed for the most part of patents taken from class 62, Refrigeration, subclass 23, Heat-insulated receptacles, hereinafter abolished, and from other subclasses in class 215, Bottles and Jars.

In class 220, Metallic Shipping and Storing Vessels, (Division XL,) establish the following subclasses:

Cans—
Compartment—
145. Casing,
147. Internal can,
146. Receptacle in cover.
Kettles—
142. Jacketed.

144. **Liquefied gas.**
141. **Miscellaneous.**
Vats—
143. Jacketed.

These subclasses are composed of patents taken from classes 31, Dairy; 62, Refrigeration; 126, Stoves and Furnaces, and 127, Sugar and Salt, generally.

In class 225, Dispensing Beverages, (Division XXXII,) establish the following subclass:

40. **Cooler type.**

This subclass is composed of patents taken from class 62, Refrigeration, subclasses 13, Water-coolers, and 14, Wine-coolers, hereinafter abolished.

In class 236, Dampers, Automatic, (Division XIX,) establish the following subclasses:

19. **Car radiator.**
Expansion—
Air valves—
20. Expanding float,
Expanding fluid—
21. Closed chamber,
22. Open chamber—
23. Float,
Expanding solid—
25. Float,

Expansion—
Air valves—
26. With pressure control.
Traps—
Float valve—
18. Air port,
Pressure-operated valve—
17. Air port.

These subclasses are composed of patents taken from class 237, Heat Distributing Systems, generally.

Establish in Division XXXII the following classes, with the subclasses thereunder:

CLASS 259.—AGITATING. (XXXII.)

Subclasses.

2. **Icecream freezer type.**
1. **Miscellaneous.**

CLASS 261.—GAS AND LIQUID CONTACT APPARATUS. (XXXII.)

Subclasses.

2. **Condensers.**
3. **Coolers.**
4. **Heaters.**
1. **Miscellaneous.**

In class 259 above subclass 1 is composed of patents taken from class 62, Refrigeration, generally, and subclass 2 of patents taken from class 62, Refrigeration, subclass 4, Icecream freezers, hereinafter abolished, and in class 261 above the subclasses are composed of patents taken from class 62, Refrigeration, generally.

In class 62, Refrigeration, (Division XXXII,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions:

CLASS 62.—REFRIGERATION. (XXXII.)

Subclasses.

120. **Absorbing-still condensing-expander.**
128. **Air and liquid coolers.**
129. **Air coolers—**
135. Air pump—
139. Evaporative,
136. Expansion motor—
137. Condenser,
138. Water contact,
140. Condensers,
130. **Ice—**
131. Air pump,
132. Contact—
133. Air pump,
134. Indirect.
2. **Automatic control—**
6. Chamber cooler,
3. Compressor-condenser-expander circuit—
4. Motor control,
8. Expander,
7. Fluid cooler,
5. Still circuit.
Body coolers—
9. Ice receptacle.
26. **Buildings, ice—**
29. Central icebox,
Icebox—
30. Air-pump circuit,
27. Top icebox—
28. Drip-cooled.
10. **Butter-dishes.**
Cars—
25. Liquefied gas.
15. **Cars, ice—**
22. Bottom icebox,
18. Central icebox,
19. End icebox—
21. Cooled air tubes,
20. Drip-cooled, Icebox—
24. Air-pump circuit,
23. Ice casing,
16. Top and end icebox,
17. Top icebox.
115. **Compressor-condenser-expander circuit—**
116. Refrigerator type—
117. Car.
114. **Congelation apparatus.**
168. **Evaporative coolers—**
169. Vacuum.
122. **Gas liquefiers and separators—**
123. Expansion motor.
121. **Gas solidifiers.**
105. **Ice making apparatus—**
109. Atmospheric—
110. Tank,
106. Freezers—
107. Spray,
108. Tank,

CLASS 62.—REFRIGERATION. (XXXII.)—Continued.

Subclasses.

Ice-making apparatus—
111. Separator—
113. Can heater,
112. Heated cutter.
125. **Liquefaction and expansion—**
126. Expanders—
127. Expansion valves.
141. **Liquid coolers—**
154. Evaporative—
156. Air pump,
155. Pressure,
150. Expansion motor,
151. Film plate,
142. **Ice—**
149. Agitator,
144. Barrel,
143. Bottle type,
146. Contact,
145. Filter,
148. Flat plate,
147. Tube,
157. Tank—
166. Agitator,
159. Air injected,
165. Bottom plate,
160. Cooling liquid-circuit—
161. Agitator,
158. Gas expansion,
162. Spur tube,
167. Thawer,
163. Vertical plate—
164. Thawer,
152. Vacuum—
153. Hygroscopic.
124. **Liquid separators.**
1. **Miscellaneous.**
170. **Processes—**
173. Congelation—
174. Icecream,
176. Cooling air,
178. Cooling by vaporization,
171. Cooling chambers,
177. Cooling liquids,
172. Ice making,
175. Liquefaction of gases.
89. **Refrigerators—**
96. Air cooled—
97. Expansion in chamber—
98. Expansion motor,
94. Chemical,
90. Evaporative—
91. Receptacle,
95. Indirectly cooled,
92. Liquefied gas—
93. Absorber,
104. Liquid-contact cooler,
99. Surface cooler—
102. Air-pump circuit,
103. Condenser,
100. Corpse,
101. Liquid circuit.
31. **Refrigerators, ice—**
72. Air-pump circuit,

Refrigerators, ice—
32. Barrel—
33. Liquid cooler,
34. Bottle—
35. Gravity feed,
63. Bottom icebox,
58. Central icebox—
60. Drip tank,
59. Rotary,
88. Covers,
37. Display,
70. Drip-cooled,
71. Elevator,
61. End icebox—
62. Drip-cooled,
73. Evaporative,
68. Ice casing,
67. Ice-cooled air-pipe,
69. Ice tank,
38. Liquid cooler—
43. Coil—
44. Bottle type,
39. Filter—
40. Drip tank,
41. Pressure,
42. Flat plate,
45. Top icebox,
75. Receptacle—
76. Bottle—
77. Rotary,
86. Bottom icebox,
83. Central icebox—
84. Drip-cooled,
78. Corpse,
85. End icebox,
87. Ice casing,
79. Liquid cooler,
80. Top icebox—
82. Drip-cooled,
81. Superposed,
74. Scale,
36. Sideboard,
46. Top icebox—
53. Drip-cooled—
57. Drip casing,
55. Drip tank—
56. Filter,
54. Drip tube,
51. End—
52. Drip tank,
49. Rotary,
50. Superposed,
47. Valved—
48. Door operated,
64. Valved—
65. Door operated,
66. Drawer operated.
12. **Rinks.**
14. **Ships, ice.**
118. **Still-condenser-expander circuit—**
119. Absorber.
11. **Tables.**
13. **Wagons, ice.**

THOMAS EWING,
Commissioner.

Adverse Decisions in Interference.

PATENT No. 931,331.

On June 30, 1914, a decision was rendered that James L. McQuarrie was not the first inventor of the subject-matter covered by claim 3 of his Patent No. 931,331, for a telephone-key, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 944,053.

On June 29, 1914, a decision was rendered that Walter E. Savage was not the first inventor of the subject-matter covered by claims 2, 3, 4, 6, 7, and 8 of his Patent No. 944,053, for a machine for making bottle-blanks, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 969,752.

On July 1, 1914, a decision was rendered that Malcolm Green was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 969,752, for a deflector for furnaces, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,021,604.

On June 23, 1914, a decision was rendered that Harvey E. Howe was not the first inventor of the subject-matter covered by claims 1, 2, and 3 of his Patent No. 1,021,604, for a circuit-breaker, and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,080,191.

On June 27, 1914, a decision was rendered holding that claims 1 to 5 inclusive of the Patent No. 1,080,191, granted to William C. Baxter on December 2, 1913, were not patentable.

Changes in the Rules of Practice.

(ORDER No. 2,139.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 17, 1914.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, the following changes are made in the Rules of Practice in this Office:

Rule 17 is amended by omitting from paragraph (*c*) thereof the words in lines 2 and 3:

who is a citizen or subject of a country granting the same reciprocal rights to citizens of the United States,

and by also omitting the following sentence:

No foreign patent attorney will be recognized in any application filed after June 30, 1908, unless entitled to registration under the provisions of this rule,

so that the rule as amended will read as follows:

17. An applicant or an assignee of the entire interest may prosecute his own case, but he is advised, unless familiar with such matters, to employ a competent patent attorney, as the value of patents depends largely upon the skilful preparation of the specification and claims. The Office cannot aid in the selection of an attorney.

A register of attorneys will be kept in this Office, on which will be entered the names of all persons entitled to represent applicants before the Patent Office in the presentation and prosecution of applications for patent. The names of persons in the following classes will, upon their written request, be entered upon this register.

(*a*) Any attorney-at-law who is in good standing in any court of record in the United States or any of the States or Territories thereof and shall furnish a certificate of the clerk of such United States, State, or Territorial court, duly authenticated under the seal of the court, that he is an attorney in good standing.

(*b*) Any person not an attorney-at-law who is a citizen or resident of the United States and who shall file proof to the satisfaction of the Commissioner that such person is of good moral character and of good repute and possessed of the necessary legal and technical qualifications to enable him to render applicants for patents valuable service and is otherwise competent to advise and assist them in the presentation and prosecution of their applications before the Patent Office.

(*c*) Any foreign patent attorney not a resident of the United States who shall file proof to the satisfaction of the Commissioner that he is registered and in good standing before the patent office of the country of which he is a citizen or subject, and is possessed of the qualifications stated in paragraph (*b*).

(*d*) Any firm will be registered which shall show that the individual members composing such firm are each and all registered under the provisions of the preceding sections.

The Commissioner may require proof of qualifications other than those specified in paragraph (*a*) and reserves the right to decline to recognize any attorney, agent, or other person applying for registration under this rule.

Any person or firm not registered and not entitled to be recognized under this rule as an attorney or agent to represent applicants generally may, upon a showing of circumstances which render it necessary or justifiable, be recognized by the Commissioner to prosecute as attorney or agent certain specified application or applications, but this limited recognition shall not extend further than the application or applications named.

No person not registered or entitled to recognition as above provided will be permitted to prosecute applications before the Patent Office.

THOMAS EWING,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 28, 1914.

Joseph Shattuck, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Pepsinaid Company, Lexington, Ky., for registration of a trade-mark and trade-mark registered November 24, 1896, No. 29,195, to Joseph Shattuck, Nashua, N. H., and a notice of such declaration sent by registered mail to said Joseph Shattuck at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph Shattuck, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 16, 1914.

The Criterion Publication Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Home Pattern Company, 615 West Forty-third street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered March 25, 1902, No. 37,983, to The Criterion Publication Co., of 156 Fifth avenue, New York, N. Y., and a notice of such declaration sent by registered mail to The Criterion Publication Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Criterion Publication Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 205—No. 2. TUESDAY, AUGUST 11, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 11, 1914	309
PANAMA-PACIFIC EXPOSITION	309
FOREIGN PATENTS	309
ACCESS TO PENDING APPLICATIONS	309
APPLICATIONS UNDER EXAMINATION	310
PATENTS GRANTED	311
REISSUES	624
DESIGNS	625
TRADE-MARKS—REGISTRATION APPLIED FOR	633
TRADE-MARK REGISTRATIONS GRANTED	655
LABELS AND PRINTS	660
DECISIONS OF THE U. S. COURTS—	
Rossmann v. Garnier	661
CHANGES IN CLASSIFICATION	666
ADVERSE DECISIONS IN INTERFERENCE	668
INTERFERENCE NOTICES	668

ISSUE OF AUGUST 11, 1914.

Patents	889	No. 1,106,357 to	No. 1,107,244	inclusive.
Designs	31	No. 46,241 to	No. 46,271	inclusive.
Trade-Marks	160	No. 98,913 to	No. 99,072	inclusive.
Labels	6	No. 17,894 to	No. 17,899	inclusive.
Prints	1	No. 3,692.		
Reissues	1	No. 13,787.		
Total	1087			

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	2	3
Arizona	4	.....	North Dakota	4	.....
Arkansas	3	1	Ohio	51	6
California	40	5	Oklahoma	5	.....
Colorado	12	.....	Oregon	7	2
Connecticut	32	6	Pennsylvania	64	4
Delaware	.....	.....	Rhode Island	4	1
Florida	2	1	South Carolina	4	.....
Georgia	3	.....	South Dakota	3	.....
Idaho	2	.....	Tennessee	7	2
Illinois	91	8	Texas	11	1
Indiana	21	5	Utah	2	.....
Iowa	13	1	Vermont	2	1
Kansas	10	1	Virginia	5	28
Kentucky	8	1	Washington	15	.....
Louisiana	3	2	West Virginia	4	.....
Maine	2	1	Wisconsin	25	1
Maryland	10	2	Wyoming	1	.....
Massachusetts	47	11			
Michigan	34	1	Alaska, District of	.....	.....
Minnesota	16	2	Canal Zone	.....	.....
Mississippi	4	.....	District of Columbia	35	.....
Missouri	18	9	Hawaii Territory	1	.....
Montana	3	.....	Philippine Islands	1	.....
Nebraska	12	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	4	.....	U. S. Navy	.....	.....
New Jersey	34	7			
New Mexico	.....	.....	Total to residents of the United States	817	151
New York	129	38			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Mexico	.....	.....
Austria-Hungary	7	.....	Netherlands	.....	1
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	1	.....
Brazil	.....	.....	Norway	1	.....
British West Indies	.....	.....	Portuguese East Africa	.....	.....
Canada	16	1	Queensland	.....	.....
Chile	.....	.....	Russia	.....	.....
China	.....	.....	Scotland	3	.....
Costa Rica	.....	.....	Spain	1	.....
Cuba	.....	.....	Sweden	1	.....
Denmark	.....	.....	Switzerland	4	.....
Dominican Republic	.....	.....	Transvaal, South Africa	.....	.....
England	15	4	Uruguay	.....	.....
France	9	.....	Victoria	.....	.....
Germany	40	8	Western Australia	1	.....
Guatemala	.....	.....			
Ireland	.....	.....	Total to residents of foreign countries	99	16
Italy	.....	2			
Java	.....	.....			
Luxemburg	.....	.....			

Panama-Pacific Exposition.

In compliance with the provisions of the act approved September 18, 1913, (H. R. 7595, Public No. 14,) a branch office of the United States Patent Office has been opened at San Francisco, Cal., for the purpose of issuing certificates of proprietorship, as provided in said act.

THOMAS EWING,
Commissioner.

Foreign Patents.

RULE 29. The receipt of Letters Patent from a foreign government will not prevent the inventor from obtaining a patent in the United States, unless *the application on which the foreign patent was granted was filed more than twelve months prior to the filing of the application in this country, in which case no patent shall be granted in this country.*

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 8, 1914.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	June 19	538
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	June 20	592
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 21	July 31	112
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar. 2	July 20	652
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 29	June 18	437
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 10	July 1	567
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 15	June 13	577
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	July 6	1224
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	May 29	588
235	10. Carriages and Wagons	Mar. 20	June 20	905
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 20	July 13	285
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 20	June 5	1137
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 23	July 6	429
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar 21	July 9	459
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 4	June 30	980
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	May 20	700
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	May 14	July 1	210
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 25	July 3	270
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	June 22	56

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 1	June 17	403
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 7	June 23	436
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 15	213
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 10	June 2	470
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 9	July 6	566
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 6	July 9	234
106	26. Electricity, Generation; Motive Power.	Sept. 15	May 28	916
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 11	June 10	503
65	28. Internal-Combustion Engines	Apr. 10	June 23	605
147	29. Cooperage; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 12	June 20	483
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 2	June 23	330
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 11	June 18	416
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 3	June 27	659
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 10	388
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 4	June 5	362
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 22	July 9	510
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 9	June 12	723
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 11	June 18	695
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Feb. 25	July 2	684
321	39. Water Distribution	Apr. 10	June 17	539
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	July 14	1135
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 24	July 2	467
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 10	June 23	424
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 2	July 1	288

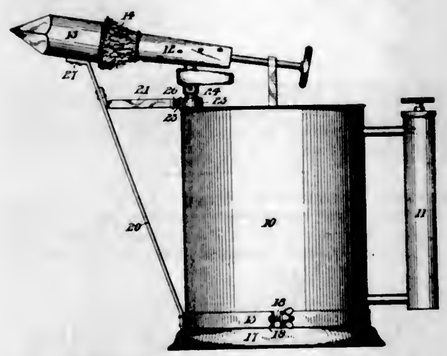
Oldest new case, Sept. 15; oldest amended, May 20.
Total number of applications awaiting action..... 23,416

	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
161	Trade-Marks	May 28	July 1	911
	Designs	July 1	June 29	257
	Labels and Prints	July 17	July 20	101

PATENTS

GRANTED AUGUST 11, 1914.

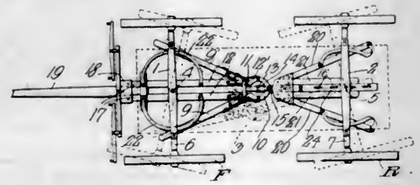
1,106,357. SOLDERING IMPLEMENT. LÖRINCZ BALOGH and GUSZTÁV SZÉLES, Detroit, Mich. Filed May 11, 1914. Serial No. 837,791. (Cl. 158—27.)



1. In combination with a gasolene torch, an encircling ring therefor, an inclined strip carried by said ring, a torch pipe having a burner leading from said torch, a brace upon said strip removably attached to the torch pipe, and a soldering point secured to the upper end of said strip in alinement with the torch burner.

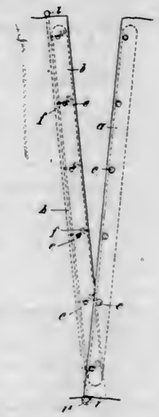
2. A device of the class described, comprising a split ring having the portions thereof hinged together and adapted to encircle a gasolene torch, an inclined strip mounted upon said ring and having an outwardly bent top portion, an outwardly projecting soldering point rigidly secured to the top of said outwardly bent strip portion, an inwardly-extending brace secured to said strip adjacent the top thereof, and a hinged clamp member mounted upon the free end of said brace.

1,106,258. WAGON. EMILIUS CHRISTIAN FERDINAND BECKER, Laurens, S. C. Filed Dec. 19, 1911. Serial No. 666,813. (Cl. 21—145.)



In a wagon, the combination of front and rear wheel-carrying axles, bolsters therefor pivotally secured by king bolts thereto, converging bars rigidly secured to the front and rear axles and extending centrally of the running gear, upper and lower ring-shaped plates rigidly secured to the front converging arms, an auxiliary reach rod slidably disposed between the rear axle converging arms, said auxiliary reach rod provided with a plurality of long narrow slots of limited length, one of said slots receiving the rear king bolt therethrough, the front end of said reach rod pivotally secured to the front axle converging arms, a reach rod secured to the front and rear axles and holding the same in spaced relation, the limited slots of said auxiliary reach rod limiting the relative motions of said auxiliary reach rod and said rear axle.

1,106,359. CLOSING CONTRIVANCE FOR LADIES' WAISTS, BLOUSES, AND CORSETS. KARL BERGNER, Borsdorf, near Leipzig, Germany. Filed June 28, 1913. Serial No. 776,319. (Cl. 24—205.)



A closing contrivance for ladies' waists, blouses and corsets, comprising in combination, a fixed longitudinal flexible bar, a plurality of pins on said bar having notches, another fixed longitudinal flexible bar having a plurality of holes therein for a reception of said pins, a fixed flexible protecting bar behind the latter bar, a plurality of springs between said protecting bar and the perforated bar fixed with one end to the latter and with their free ends adapted to engage said notched pins upon the latter being inserted in said holes, a flexible disengaging rod connected with the free ends of said springs and adapted to be moved against the action of the latter, and a press-button member on the lower end of said disengaging bar, substantially as and for the purpose set forth.

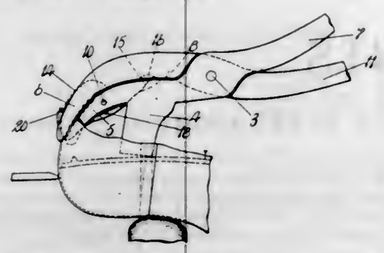
1,106,360. PINCERS. MATTHIAS BROCK, Roxbury, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 30, 1912. Serial No. 674,232. (Cl. 12—109.)

1. Lasting pincers comprising, in combination, jaws, means for closing said jaws, and means movable automatically relatively to the jaws to gather the upper widthwise of the jaws as said jaws are closed upon the upper.

2. Lasting pincers comprising, in combination, a pair of jaws, one of which is provided with a recess, and means pivotally mounted upon the other jaw to carry the stock into said recess as said jaws are closed.

3. Lasting pincers comprising, in combination, jaws, one of which is provided with a recess and a gathering device mounted upon the other jaw comprising a plate pivoted relatively to said jaw and having an extension

arranged to be engaged by the other jaw as the said jaws are closed to effect a rocking of the plate for gathering the stock into the recessed jaw.

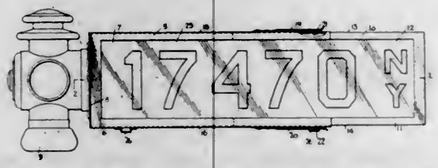


4. Lasting pincers comprising, in combination, a pair of jaws, one of which is provided with a recess, and means movable automatically relatively to the jaws during their closing movement for gathering the stock widthwise of the jaws, said means being constructed to carry the edge portion of the seized stock into said recess farther than it does that portion near the tips of said jaws.

5. Lasting pincers comprising, in combination, a pair of jaws, and gathering means movably mounted upon one of said jaws and operated by the closing movement of the other jaw, said means being constructed to gather the stock from a point remote from the edge of said stock progressively toward the edge of the seized stock.

[Claims 6 to 10 not printed in the Gazette.]

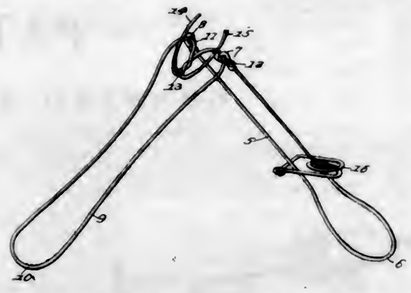
1,106,361. ILLUMINATED INDICATOR. SAMUEL WALCOTT BROWN and WILLIAM HENRY MICHAEL, Colorado Springs, Colo., assignors of one-third to James H. Bruce, Colorado Springs, Colo. Filed Feb. 26, 1913. Serial No. 750,789. (Cl. 40—131.)



A device of the class described comprising a telescopic casing formed of two telescopic members, one of said members having resilient means at the sides thereof; and a projection on each of said resilient means projecting through said sides into said member and said resilient means normally forcing said projection into said casing, the second of said members having depressions in the sides thereof in alinement with said projections and cooperating with the same, each of the depressions having an end wall transverse of the casing length and an inclined bottom, said wall and bottom being so disposed that when the second of said members is forced into the first, the inclined bottom of the depression forces the projection on the resilient member out of the depression; and therefore the same does not interfere with the movement of the second member, but if the second member is made to telescope out of the first, the said projection comes into engagement with the wall of the depression and prevents the outward movement of the second member.

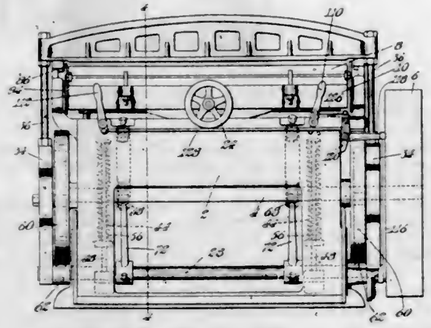
1,106,362. MOP-HOLDER. WILEY T. CARTER, Henderson, N. C. Filed May 22, 1914. Serial No. 840,325. (Cl. 141—10.)

In a mop holder, a handle comprising a length of material bent on itself to form a loop constituting the outer extremity of the handle, the ends of the said length of material having eyes, a handle comprising a length of material bent on itself to form a loop constituting the outer extremity of the handle and having portions extending through the eyes of the first mentioned handle and pivotally mounted therein, the material constituting the second mentioned handle being twisted on itself to retain the two lengths in proper relation to the eyes of the first mentioned handle and the extremities of the



said length of material of the second mentioned handle being diverged and constituting cloth engaging tangs, and means for retaining the handles in position to clamp a cloth therebetween.

1,106,363. CUTTING-MACHINE. LOUIS A. CASGRAIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 12, 1911. Serial No. 654,258. (Cl. 164—23.)



1. In a machine of the class described, a bed, a presser member arranged to swing into and out of parallelism to said bed about an axis below the bed, said presser member being movable toward and away from the bed, when in operative position, to effect a pressing operation, and counterbalancing means arranged to counterbalance said presser member both during its pressing movements and during its swinging movements.

2. In a machine of the class described, a bed, a presser member arranged to swing into and out of operative position over the bed about an axis below the bed, automatic means for moving said presser member positively in both directions, and means for imparting to said presser member a normal tendency to move into operative position over the bed.

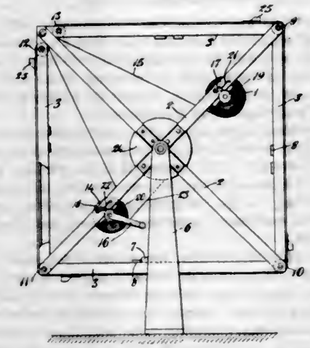
3. In a machine of the class described, a bed, a presser member, lateral supports for said presser member pivoted below the bed, spring supported bearings for said pivots, means for automatically and positively swinging said presser member about its pivots into and out of operative position over the bed, and means for automatically depressing said pivotal bearings against the tension of the supporting springs when the presser member is in operative position over the bed.

4. In a machine of the class described, a bed, a presser member arranged to swing into and out of operative position over said bed about an axis below the bed, means for effecting positively the said swinging movements of the presser member, means for effecting a relative pressing movement of the presser member and bed when the presser member is in operative position, yielding means arranged to resist the operation of said last-mentioned means, and other yielding means arranged to resist the movement of the presser member out of operative position.

5. In a machine of the class described, a bed, a platen, lateral supports for said platen, a rock-shaft arranged below the bed and connecting said lateral supports, bearings in which said rock-shaft is journaled, means for yieldingly supporting said bearings arranged to permit vertical movement thereof, means for guiding said bearings to insure a right line movement, means for automatically and positively swinging said platen and its supports about the axis of said shaft to bring said platen into and out of parallelism to the bed, and means for yieldingly resisting turning movement of said rock-shaft when the platen is moved out of parallelism to the bed.

[Claims 6 to 12 not printed in the Gazette.]

1,106,364. METHOD OF PRINTING ON TARLATAN AND OTHER LIKE FABRICS. FRANK R. CLARK, Cincinnati, Ohio, assignor to The Cincinnati Sand Blast Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 7, 1911. Serial No. 642,673. (Cl. 101—182.)

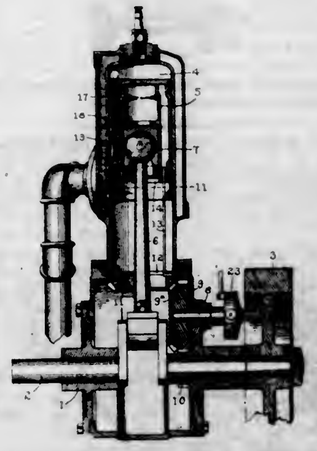


1. The process for printing designs in a plurality of colors on desired portions of a continuous strip of tarlatan and material of like properties, which consists in cutting the designs in direct on a suitable flat plate, taking impressions in reverse on a paper sheet in the colors desired, stretching the desired portion of tarlatan over a flat plate, and impressing manually the paper sheets on the fabric to be printed in rotation without changing the position of the tarlatan on the plate.

2. The process for printing designs on desired portions of a continuous strip of tarlatan and material of like properties, which consists in cutting the design on a suitable flat plate, taking an impression in reverse on a paper sheet, stretching the fabric over a flat plate covered with oilcloth or like ink-repellent covering, and impressing manually the paper sheets on the fabric to be printed.

1,106,365. INTERNAL-COMBUSTION ENGINE. LOUIS FRANCIS CLARK, Grand Rapids, Mich., assignor of one-half to Irving A. Anderson, Grand Rapids, Mich. Filed Nov. 20, 1911, Serial No. 661,369. Renewed Jan. 2, 1914. Serial No. 810,051. (Cl. 123—45.)

1. An internal combustion engine, comprising a crank case, a cylinder mounted on the case and having ports in its side, a piston both reciprocable and rotative in the cylinder and having a port to communicate with said cylinder ports and with the interior of the cylinder, a crank shaft in the case connected to the piston, an annular rotating member within the crank case, means for actuating said member from the crank shaft, and means, extending within the cylinder and carried around near the wall of the same by said rotating member, said means having slidable engagement with the piston, to rotate the same.



2. An internal combustion engine, comprising a crank case, a cylinder mounted on the case and having ports in its side, a piston both reciprocable and rotative in the cylinder and having a port to communicate with said ports and with the interior of the cylinder, a crank shaft in the case connected to the piston, gearing inclosed within the crank case and operated by the shaft and a member extending within the cylinder and carried around near the wall of the same by the gearing and also slidably engaging the piston to rotate the same.

3. An internal combustion engine, comprising a cylinder having an exhaust port and an inlet port in its side and spaced apart, a piston having a vertical passage open at the top and side, and communicating with said ports, a crank shaft below said cylinder, a rod connected to the piston at one end and to the crank shaft at the other end, an annular gear surrounding the connecting rod and spaced apart therefrom, half time gearing connecting the said gear and the crank shaft and a rod carried by the said gear slidably engaging the piston to rotate the same.

4. An internal combustion engine, comprising a cylinder having ports in its side, a piston both reciprocable and rotative in said cylinder and having a lateral opening to communicate with said ports and a vertical passage open at the top and communicating with said opening near the bottom, means for operating said piston, a vertically disposed rod slidable in the side of the piston, a gear carrying the rod around at a distance from the axis of the cylinder and means for rotating said gear operated by the engine.

5. An internal combustion engine, comprising a case, a crank shaft journaled in the case, a cylinder mounted on the case and having an inlet port and an exhaust port in its side spaced apart, a piston both reciprocable and rotative in the cylinder, a rod connecting the piston and crank shaft, an annular miter gear surrounding the connecting rod and spaced apart therefrom, a timer shaft journaled in the case, half time gears connecting said shaft and the crank shaft, a miter gear mounted on said timer shaft and engaging the annular gear to rotate the same and a rod carried by the annular gear and slidably engaging the piston to rotate the same one revolution to each cycle of the engine.

1,106,366. BOTTLE-CLOSURE. ERIK C. CLEMMENSEN and WALTER M. JENKINS, Detroit, Mich. Filed Nov. 6, 1912. Serial No. 729,758. (Cl. 215—53.)

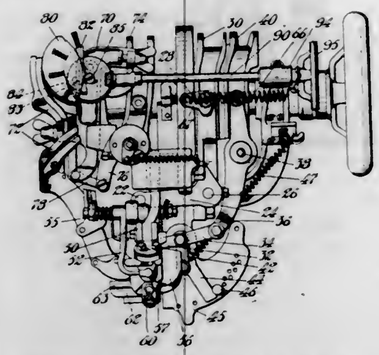
A bottle closure consisting of a flexible disk adapted to be fitted into the mouth of the bottle and a narrow flexible

band embracing said disk and extending over the edges and across the opposite face thereof, the outer portion of



the band normally lying adjacent to the face of the disk and movable relative thereto.

1,106,367. MACHINE FOR INSERTING FASTENERS. DANIEL W. COLBY, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 28, 1911. Serial No. 668,289. (Cl. 218—15.)



1. A machine of the class described having, in combination, work guiding means, fastener inserting means including a work feeding member arranged to engage the work intermittently and being mounted for pivotal movement while in engagement therewith, a substantially rectilinear guideway for controlling part of the movement of said feeding member, and means for actuating said member.

2. A machine of the class described having, in combination, a movable head, a work feeding member mounted therein, a substantially rectilinear guideway arranged to control the feeding movement of said head, and means for returning said head to its initial position along a path independent of said guideway.

3. A machine of the class described having, in combination, a movable head, a work feeding member mounted therein, a guideway, a roller mounted on said head and arranged to run upon said guideway to control the feeding movement of said head, and means for returning said head to its initial position along a path in which the roller is out of engagement with said guideway.

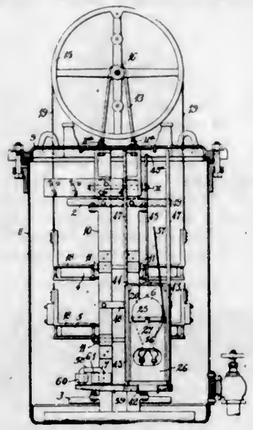
4. A machine of the class described having, in combination, a work feeding member movable toward and from the work to engage and disengage the same and movable also in a substantially triangular path in part of which it feeds the work, and a stationary guideway for controlling its movement along one side of said path.

5. A machine of the class described having, in combination, a work feeding member movable in a three-sided path, cams and connections for controlling said member while moving along two sides of said path, and a guideway for controlling its movement along the third side of said path.

[Claims 6 to 15 not printed in the Gazette.]

1,106,368. ELECTRICAL APPARATUS. FRANK CONRAD, Swissvale, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1908. Serial No. 426,310. (Cl. 171—253.)

1. In electrical apparatus, the combination with a regulator having relatively movable coils, and an inclosing casing therefor, of a current-rectifying device tiltingly mounted within the casing and having a starting coil that is energized by current from one of the regulator coils.



2. In electrical apparatus, the combination with a regulator having relatively movable coils and an inclosing casing therefor, of a current-rectifying device having a starting coil that is energized by current from one of the regulator coils, and a box or casing in which said device is tiltingly and removably supported.

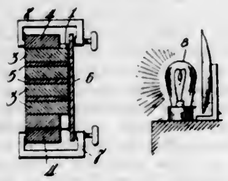
3. In electrical apparatus, the combination with a current-regulating device having a magnetizable core member, relatively movable coils associated therewith, and an auxiliary coil influenced by the core member, of a mercury-vapor rectifying device electrically connected to the regulator, and a starting transformer energized from said auxiliary coil.

4. In electrical apparatus, the combination with a regulator having a magnetizable core member, stationary and movable coils and a low-voltage secondary coil, of a current-rectifying device having two negative terminals, a starting transformer having two windings respectively connected across the terminals of the current rectifier and to the low-voltage secondary coil of the regulator.

5. In electrical apparatus, the combination with a stationary core member, stationary and movable coils influenced thereby and an auxiliary coil encircling the main path of the magnetic flux, of a mercury-vapor rectifying device having two primary terminals connected to the main secondary circuit of the regulator and two negative terminals, and a starting transformer for the rectifier having two windings which are respectively connected across the negative terminals of the rectifier and to the auxiliary coil of the regulator.

[Claim 6 not printed in the Gazette.]

1,106,369. PROCESS OF PRODUCING LETTER-PRESS PRINTING PLATES OR FORMS. GEORGE R. CORNWALL, Rye, N. Y., assignor to American Planograph Company, a Corporation of West Virginia. Filed July 21, 1906. Serial No. 327,131. Renewed Nov. 8, 1912. Serial No. 730,270. (Cl. 101—204.)



1. The process of producing a letter-press printing plate or form which comprises placing upon an impression-receiving surface lines of characters representing a composition, assembling into a form a series of line bars or units having light-sensitive surfaces, imposing upon the surface of the said line units the lines of characters from the impression-receiving surface by the action of light, so that a line of characters will be impressed upon each of the said line units, developing the surfaces of the said line units, making such changes in the said line units as may be necessary or desirable to bring the composed matter to the desired final state, inking the surfaces of the line units, taking an impression therefrom upon an impression-receiving surface, sensitizing the surface of a printing plate, transferring the composed matter from the said impression-receiving surface to the surface of the said plate by the action of light, and preparing the said plate for printing.

2. The process of producing a letter-press printing plate or form which comprises placing upon an impression-receiving surface lines of characters representing a composition, assembling into a form a series of line bars or units having light-sensitive surfaces, imposing upon the surfaces of the said line units the lines of characters from the impression-receiving surface by the action of light, so that a line of characters will be impressed upon each of the said line units, developing the surfaces of the said line units, inking the surfaces of the line units, taking an impression from the said line bars for use in determining what changes are necessary or desirable in order to bring the composed matter into the desired final state, making such changes by way of additions, subtractions, substitutions, transpositions, or otherwise, in the said line units as may be necessary or desirable to bring the composed matter to the desired final state, inking the surfaces of the line units, taking an impression therefrom upon an impression-receiving surface, sensitizing the surface of a printing plate, transferring the composed matter from the said impression-receiving surface to the surface of the said plate by the action of light, and preparing the said plate for printing.

3. The process of producing a letter-press printing plate or form which comprises placing upon a light-transmitting impression-receiving surface lines of characters representing a composition so that the characters and the surrounding surface will possess opposite properties with respect to the transmission of light, sensitizing the surface of certain line units, assembling the said line units into a form, exposing the sensitized surface of the said line units to the action of light through the sheet of impression-receiving material so that a line of characters will be impressed upon each of the said line units, developing the surface of the said line units, making such changes by way of additions, subtractions, substitutions, transpositions, or otherwise, as may be necessary or desirable in order to bring the composed matter into the desired final state, taking an impression from the said line units upon a light-transmitting, impression-receiving surface in such manner that the characters and the surrounding surface of the impression-receiving material will possess opposite properties with respect to the transmission of light, sensitizing the surface of a printing plate, subjecting the sensitized surface of the said plate to the action of light through the impressed sheet of impression-receiving material, and preparing the surface of the said plate for printing.

4. The process of producing a letter-press printing plate or form which comprises placing upon a light-transmitting impression-receiving surface lines of characters representing a composition so that the characters and the surrounding surface will possess opposite properties with respect to the transmission of light, sensitizing the surface of certain line units, assembling the said line units into a form, exposing the sensitized surface of the said line units to the action of light through the sheet of impression-receiving material so that a line of characters will be impressed upon each of the said line units, developing the surface of the said line units, inking the surface of the said line units, taking a proof impression therefrom for use in determining what changes are necessary or desirable in order to bring the composed matter into the desired final state, making such changes by way of additions, subtractions, substitutions, transpositions, or otherwise, as may be necessary or desirable in order to bring the composed matter into the desired final state, inking the said line units, taking an impression from the said line units upon a light-transmitting, impression-receiving surface in such manner that the character and the surrounding surface of the impression-receiving material will possess opposite properties with respect to the transmission of light, sensitizing the surface of a printing plate, subjecting the sensitized surface of the said plate to the action of light through the impressed sheet of impression-receiving material, and preparing the surface of the said plate for printing.

5. The process of producing a letter-press printing plate or form which comprises impressing upon a light-transmitting sheet lines of characters in an opaque medium, assembling into a form a series of line units having light-sensitive surfaces, exposing the sensitive surfaces of the line unit to the action of light through the said impressed sheet, so that a line of characters will be carried upon each of the said line units, developing the surfaces of the said light-sensitive units so that the surface of the said line units will carry the line of characters thereon, making such changes in the said line units by way of additions, subtractions, substitutions, transpositions, or otherwise, as may be necessary or desirable to bring the composed matter into the desired final state, sensitizing the surface of a printing plate, transferring the lines of character from the said line units to the surface of the said plate, developing the surface of the said plate, and preparing the plate for printing.

[Claims 6 to 9 not printed in the Gazette.]

1,106,370. PLACKET-FASTENER. RUTH DIGNAN, Waterloo, Iowa, assignor to Waterloo Skirt & Garment Company, Waterloo, Iowa, a Corporation of Iowa. Filed July 29, 1913. Serial No. 781,815. (Cl. 2—143.)



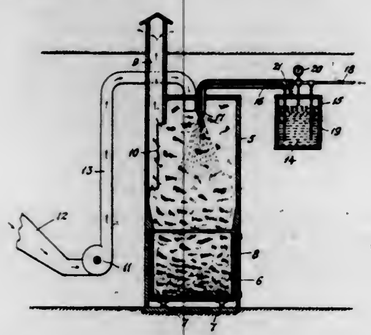
1. Placket fastening-means, comprising a skirt having a placket and waist-band, detachable adjustable securing-means on both the waist-band and the placket, the securing means on the waist-band being a rod having a plurality of crimps and secured along the waist-band longitudinally thereof, and engaging-means on the placket adapted to be detachably engaged adjustably with any of the crimps on said crimped rod.

2. Placket fastening-means, comprising a skirt having a placket and waist-band, detachable adjustable securing-means on both the waist-band and on the placket, the securing-means on the waist-band being rods secured

along the waist-band adjacent to opposite sides of the placket, said rods each having a plurality of crimps, and engaging-means on each corner portion of the placket adapted to be detachably and adjustably engaged with any of the crimps on said rods.

3. A skirt having a placket and waist-band, detachable adjustable securing-means on both the waist-band and on the placket, the securing-means on the waist-band being crimped rods arranged along the waist-band longitudinally under opposite sides of the placket, engaging-means on opposite sides of the placket adapted to be detachably secured in any of the lower bends of the adjacent rods adjustably, and a strip of flexible material placed over the upper bends only of the crimps on each of said rods, each strip, its underlying crimped rod and the waist-band being mutually secured together to leave only the lower bends of the crimps in the rods projecting and free for engagement with said engaging-means on the placket.

1,106,371. ART OF CARROTING FUR. PHILIP C. DONNER, Summit, N. J. Filed Mar. 17, 1914. Serial No. 825,287. (Cl. 38—12.)



1. An improvement in the art of carroting fur which consists in distributing cut raw fur about in an inclosed space and providing a mist of carroting solution in said space in the presence of said fur.

2. An improvement in the art of carroting fur which consists in blowing cut raw fur into a receptacle at the top and spraying a carroting solution into said receptacle into contact with the moving fur therein.

3. An improvement in the art of carroting fur which consists in blowing cut raw fur into a receptacle at the top and spraying a carroting solution into said receptacle at the top into contact with the moving fur therein.

4. An improvement in the art of carroting fur which consists in distributing cut raw fur about in a receptacle and causing said distributed cut raw fur to travel lengthwise of said receptacle and spraying a carroting solution into said receptacle into contact with the moving fur therein.

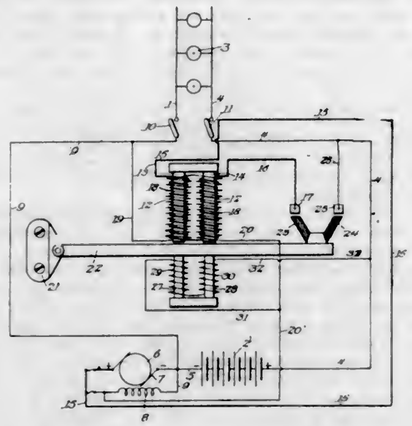
5. An apparatus for carroting fur comprising a chamber adapted to confine a moving distributed mass of cut raw fur and means for producing a mist of carroting solution in said chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,106,372. AUTOMATICALLY-OPERATED SWITCH. CARL WILLIAM EISENMANN, Chicago, Ill. Filed July 1, 1912. Serial No. 706,935. (Cl. 171—313.)

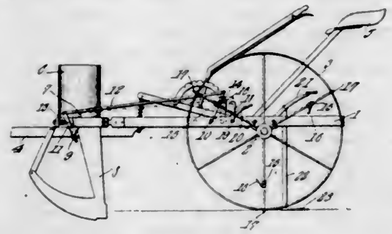
1. An automatically operated switch system comprising in combination, a dynamo, a storage battery, a switch device, a movable support for the contacts thereof, an electro-magnet for holding the switch in its open position, in series circuit with the dynamo and storage battery.

2. An automatically operated switch comprising in combination switch contacts, means for making and breaking connection between said contacts, and an electromagnet for holding the switch in open position connected across the contact posts of the switch and de-energized by the contact fingers when switch is in closed position.



3. An automatically operated switch comprising in combination, switch contact posts and contact fingers, means for making and breaking connection between said contact posts, and contact fingers, and an electromagnet for holding the switch in open position, connected across the contact posts and shunted and deënergized by the contact fingers when switch is in closed position.

1,106,373. CORN-PLANTER. WILLIAM F. ENGELMAN, Nokomis, Ill. Filed Feb. 3, 1914. Serial No. 816,266. (Cl. 111—6.)

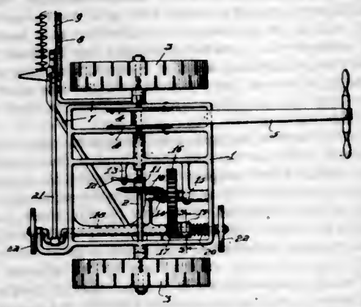


In a planter, a wheel mounted frame, a seed dropper rock shaft carried by the frame, a spring returned arm attached to the said shaft, a lever fulcrumed to the frame adjoining one ground wheel, a link connecting the said arm and lever, a roller carried by the said lever and projecting toward the said ground wheel, clamps carried by certain spokes of the said ground wheel and having oblique cam fingers offset from one side of the wheel and arranged to engage the said roller, and markers disposed upon the tire of the said ground wheel.

1,106,374. MOWER. JOHN P. FORST, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,266. (Cl. 56—19.)

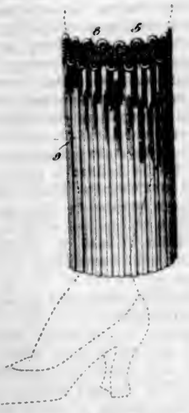
A hand operable mowing machine comprising a substantially rectangular frame; an axle journaled through the central portion of said frame; ground wheels on said axle; a crank shaft journaled in said frame at right angles to and passing under said axle; a fly wheel on each end of said crank shaft outside of said frame; a spring pressed clutch on said crank shaft; a train of gears operatively connecting said axle with said clutch; a bent arm on said frame extending around the crank of said crank shaft and

provided with a bearing engaging said shaft between the crank thereof and one of said fly wheels; and a cutter bar



carried by said frame and operatively connected with said crank shaft, substantially as described.

1,106,375. LEG-COVERING MEANS. ALEXANDRE M. GREAN, New York, N. Y. Filed Aug. 2, 1913. Serial No. 782,648. (Cl. 2—23.)



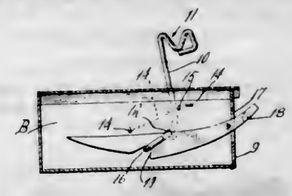
1. As an article of manufacture, a leg-covering device comprising a leg-encircling garter and leg-covering means secured thereto and depending loosely therefrom to encircle the leg and conceal the shape thereof.

2. As an article of manufacture, a leg-covering device comprising a garter arranged to encircle the leg above the calf thereof, and leg-covering means loosely suspended from the garter and of sufficient length to extend substantially to and terminate at the ankle of the wearer, said means loosely surrounding the leg and concealing the shape thereof.

3. As an article of manufacture, a leg-encircling garter consisting of an elastic strap having detachably interlocking head and socket clasps at its ends, an extensible body arranged over and longitudinally of the elastic strap, and leg-hiding fringe secured to the elastic strap in rear of the body and depending below the same and below the strap, said fringe being of sufficient length to extend substantially to and terminate at the ankle and hiding the shape of the leg.

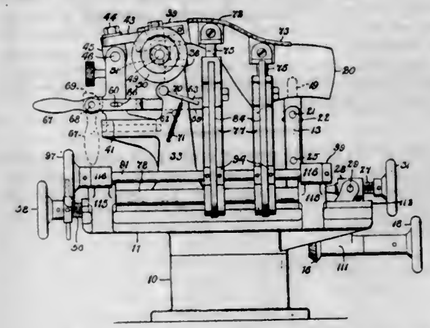
1,106,376. COMBINED MAIL-BOX. HENRY W. HABENICHT, Hartington, Nebr. Filed July 11, 1913. Serial No. 778,538. (Cl. 232—36.)

The combination with a mail box casing, of a flag member having a lateral extension journaled in the wall of the casing and provided inwardly thereof with a crank arm, a pivoted door on the casing provided with a longitudinal slot, a lever pivoted to the door adjacent the intermediate portion of the slot and the under face of one end of the



lever being disposed over the crank arm and provided with a notch to engage the crank arm and rotate the same.

1,106,377. LASTING-MACHINE. WILLIAM S. HAMM, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 30, 1905, Serial No. 267,700. Renewed Oct. 28, 1912. Serial No. 728,268. (Cl. 12—7.)



1. A lasting machine comprising a jack for the last, a series of formers presenting a continuous edge to the sole line of the forepart of the shoe, each former having an outwardly extending flat surface as described, and manually operable means for causing each of said formers independently to exert a yielding pressure against the shoe.

2. A lasting machine comprising a jack for the last, a flexible former adapted to extend horizontally around the toe of a shoe along the line of the inner sole, means for adjusting and contracting said former against the shoe, and rigid formers forming continuations of said flexible former and adapted to be brought independently into contact with each side edge of the shoe along the line of the edge of the inner sole, said rigid formers having outwardly extended flat surfaces substantially as set forth.

3. A lasting machine comprising a jack for the last, a flexible former adapted to extend horizontally around the toe of a shoe along the line of the inner sole, means for adjusting and contracting said former against the shoe, rigid formers forming continuations of said flexible former and adapted to be brought into contact with each side edge of the shoe along the line of the edge of the inner sole, each of said rigid formers having an outwardly extended flat surface, and means for causing each rigid former to exert an independent yielding pressure against the shoe.

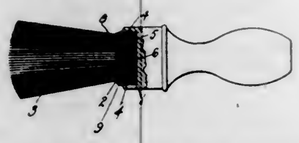
4. A lasting machine comprising a toe-former adapted to extend around the toe of a shoe so that its upper edge is approximately on the plane of the inner sole, formers adapted to extend along the sides of the shoe and having their inner edges recessed for the reception of a welt-strip and forming continuations of the upper edge of the toe-former, and means for causing said side formers to clamp the upper yieldingly against a last.

5. A lasting machine having a last-support and formers having flat surfaces over which the edge of the upper is adapted to be outwardly folded, said formers comprising

a toe-former, rods having arms adapted to rock thereon, and a plurality of formers on each side of the shoe, each former being independently and adjustably mounted on one of said rock-arms.

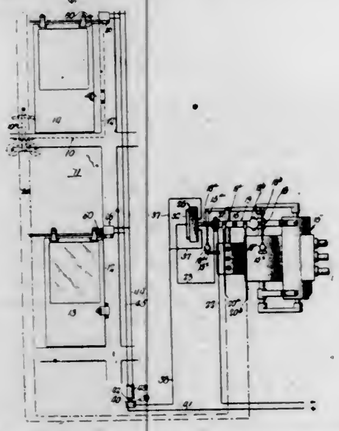
[Claims 6 to 42 not printed in the Gazette.]

1,106,378. SHAVING-BRUSH AND THE LIKE. HERBERT V. HARDMAN, Belleville, N. J. Filed Mar. 5, 1910, Serial No. 547,428. Renewed Jan. 6, 1914. Serial No. 810,658. (Cl. 15—38.)



In a shaving brush, a bristle bunch ferrule consisting of a threaded body having a beveled edge in combination with a back wall having a rectangular recess around the edges of which are inwardly extending integral flanges serving as locking lugs which become embedded in the cement of the bunched head when the latter is inserted in the ferrule in a soft state, so that upon the hardening of the cement these flanges will prevent the bristle bunch from rotating within the ferrule while the bevel prevents the bunch from pulling out.

1,106,379. SAFETY DEVICE FOR ELEVATORS. LEWIS E. HAWK, Chicago, Ill., assignor to Chicago Safety Appliance Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 5, 1914. Serial No. 810,280. (Cl. 187—31.)



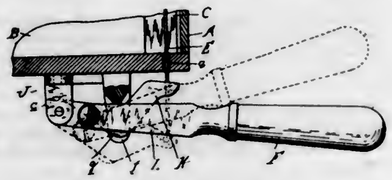
1. A safety device for hydraulic elevators, comprising in combination with an elevator shaft having door openings therein, sliding doors adapted to close said door openings, and a car in said shaft, a controlling valve mechanism for controlling the movement of the car in said shaft, means operable from within the car for operating said controlling valve mechanism including a main operating member and an auxiliary operating member, means normally locking said auxiliary operating member to said main operating member, and means actuated by the opening of any of the doors in said elevator shaft for disconnecting the said auxiliary operating member from said main operating member.

2. A safety device for hydraulic elevators, comprising in combination with an elevator shaft having door openings therein, sliding doors adapted to close said door openings, and a car in said shaft, a controlling valve mechanism for controlling the movement of said car in said shaft, means operable from within the car for operating said controlling valve mechanism including a rock-shaft, a main operating lever fixed on said shaft, an auxiliary operating lever loose on said shaft, means normally locking said auxiliary operating lever to said main operating lever, and means actuated by the opening of any of the doors in said elevator shaft for disconnecting the auxiliary operating lever from said main operating lever.

3. A safety device for hydraulic elevators, comprising in combination with an elevator shaft having door openings therein, sliding doors adapted to close said door openings, and a car in said shaft, a controlling valve mechanism for controlling the movement of the car in said shaft, means operable from within the car for operating said controlling valve mechanism including a rock-shaft, a main operating lever fixed on said shaft, an auxiliary operating lever loose on said shaft, means normally locking said auxiliary operating lever to said main operating lever, means acting to normally retain said main operating lever in neutral position, and means actuated by the opening of any of the doors in the elevator shaft for disconnecting the auxiliary operating lever from the main operating lever.

4. A safety device for hydraulic elevators comprising in combination with an elevator shaft and door openings therein, sliding doors adapted to close said door openings, a car in said shaft, a controlling valve mechanism for controlling the movement of said car in said shaft, a rock-shaft for operating said controlling valve mechanism, a cable operable from within the car for operating said rock-shaft, a main operating lever fixed on said shaft, an auxiliary operating lever adjacent the first named lever loose on said shaft, means for normally retaining said fixed operating lever in neutral position, electrically controlled means carried by said auxiliary operating lever for normally locking the same to said main operating lever and electrically controlled means actuated by the opening of any of the doors in said elevator shaft for disconnecting the said auxiliary operating lever from said main operating lever.

1,106,380. FLUSHING-TANK. WILLIAM LIONEL HEAP, Grand Haven, Mich., assignor to William Heap & Sons, Grand Haven, Mich., a Firm composed of William Heap, William Lionel Heap, and Cecil R. Heap. Filed Mar. 29, 1911. Serial No. 617,652. (Cl. 4—5.)



1. In closet flushing mechanism, the combination with the tank, of the flushing valve and a lever for operating the same, a lever arm pivoted to the tank and connected to the flush valve lever, a hand lever pivoted to the lever arm intermediate its ends adapted to fulcrum upon the tank, and a support and bearing upon the lever arm for the hand lever.

2. A closet flushing mechanism, the combination with the tank, of the flush valve therein and a pivoted lever for operating the same, a bracket upon the tank bottom, a lever arm pivoted to the bracket and a connection between said arm and the flush valve lever, a hand lever pivoted to the lever arm intermediate its ends adapted to fulcrum upon the bracket upon movement in an upward direction, and a support and bearing upon the lever arm for the hand lever.

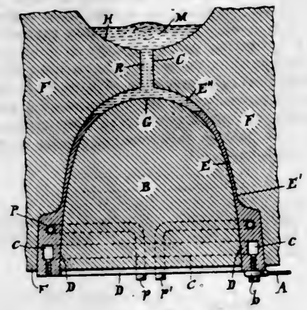
3. In flushing apparatus, the combination with the flushing valve, of a stationary bracket, a lever pivoted to the bracket and connected to the valve, and a handle for actuating said lever in the same direction upon movement thereof in either direction, said handle engaging the lever intermediate the pivot and valve connection when moved in one direction and acting upon the lever at a different point and through a leverage of different class when moved in the opposite direction.

4. In flushing apparatus, the combination with the tank, of a stationary bracket secured to the tank exterior, a flushing valve within the tank, a lever pivoted to the bracket, a connection between the lever and the valve, a handle, an operating connection between the handle and lever for actuating the latter in the same direction upon movement of the handle in either direction, said handle engaging the lever intermediate the pivot and valve connection when moved in one direction and acting upon the lever at a different point and through a leverage of different class when moved in the opposite direction.

5. In closet flushing mechanism, the combination with the tank, of a flushing valve and a lever for operating the same, a lever arm pivoted to the tank and connected to the flush valve lever, a hand lever pivoted to said lever arm, and means engaging said handle upon its movement in either direction for actuating the lever in a single direction.

[Claim 6 not printed in the Gazette.]

1,106,381. ELECTRODE FOR FURNACES. CARL HERING, Philadelphia, Pa. Filed Dec. 12, 1912. Serial No. 736,252. (Cl. 204—64.)



1. The combination with a furnace electrode comprising a shell or cage of conducting material whose conducting paths converge and unite, of a mass of conducting fluid, the current passed to or from said mass through said electrode passing through the union of said conducting paths of said electrode.

2. A furnace electrode comprising a shell or cage of conducting material diminishing in periphery between its ends and whose conducting paths converge and unite.

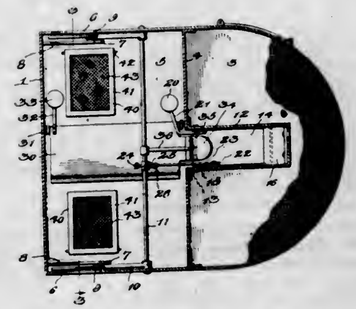
3. The combination with a furnace electrode comprising a shell or cage of conducting material diminishing in periphery from its outer toward its inner end and whose conducting paths converge and unite, of a mass of conducting fluid, the current passed to or from said mass through said electrode passing through the union of said conducting paths of said electrode.

4. A furnace electrode comprising a shell or cage of conducting material varying in thickness between its ends.

5. A furnace electrode comprising a shell or cage of conducting material increasing in thickness from its outer toward its inner end.

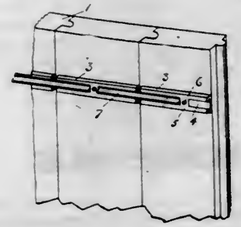
[Claims 6 to 31 not printed in the Gazette.]

1,106,382. ANIMAL-TRAP. LAWRENCE HILDRETH, Lexington, Ky. Filed Oct. 27, 1913. Serial No. 797,660. (Cl. 43—26.)



The herein described trap comprising a body divided by a cross partition into a bait compartment at its front end and a cage at its rear end, the walls having inlet openings into the ends of said compartment and an outlet opening through said partition, a runway whose walls surround said outlet opening and project into the cage and whose open rear end has a stop, a false bottom hinged at its front end within said runway, a rod projecting from said hinged end through the opening in the partition into the bait compartment and carrying a weight normally raising the free end of said false bottom against said stop; a rock shaft, arms projecting therefrom and carrying doors overlying the inlet opening into the bait compartment, an arm rising from said rock-shaft and having an eye, a link pivoted to said false bottom and projecting through said eye and having a head, a treadle hinged at one edge to the bottom of the bait compartment and having a lip at one end projecting through the opening in the partition and provided with a shoulder, a finger on said rock shaft adapted to engage said shoulder, a rod projecting from the hinged edge of said treadle and carrying a weight holding the treadle normally raised, and a lure within said compartment.

1,106,383. STAVE-RETAINING DEVICE FOR SILOS. WILLIAM A. HOLNAGEL, Saginaw, Mich., assignor to Farmer's Handy Wagon Co., Saginaw, Mich., a Corporation of Michigan. Filed Dec. 18, 1912. Serial No. 737,530. (Cl. 217—4.)



1. In a stiffening device, the combination with the staves of a silo, of a socket-member secured to each of the silo-staves, said socket members arranged to extend in spaced relation circumferentially around said silo-staves; and a T-shaped member slidably received in each pair of adjacent socket-members spanning the space therebetween, permitting self-adjustment of the T-shaped members during either expansion or contraction of the silo-staves.

2. In a stiffening device, the combination with the staves of a silo, of a socket member secured to each of the silo staves having a pair of oppositely extending longitudinally disposed slots separated by means of a cross-brace, means for fastening each socket member to a silo stave; and a T-shaped stiffening member having opposite ends slidably received in each pair of adjacent socket members.

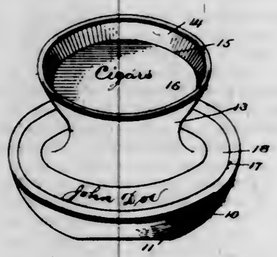
1,106,384. INCANDESCENT BODY FOR ELECTRIC LAMPS. WILLIAM G. HUGHES, Pittsburgh, Pa. Filed Dec. 16, 1912. Serial No. 737,038. (Cl. 176—132.)

1. A filament for incandescent lights composed of drawn uranium in pure metallic state.

2. A filament for incandescent lights composed of annealed and drawn uranium in pure metallic state.

3. A preliminary product to be used in the production of incandescent filaments consisting of uranium chlorid, metallic sodium, and potassium chlorid in substantially the proportions specified.

1,106,385. CHANGE-RECEIVING DEVICE. CHARLES HENRY HYMAN, Denver, Colo., assignor of one-half to William J. Solis, Denver, Colo. Filed Sept. 6, 1913. Serial No. 788,496. (Cl. 133—12.)



1. In a device of the character described, a heavy substantially hemi-spherical body or base, provided with a flattened bottom portion and with an annular groove extending around the top of said body or base, and a short stem extending upward from the body or base and expanded to form a change receptacle, and an elastic ring adapted to receive advertising matter and consisting of a finger contact piece, said ring being seated in a groove in the base.

2. In a device of the character described, a body or base portion of substantially hemispherical shape, a change receptacle supported on said base, a groove in the top of the body or base and a ring seated in said groove.

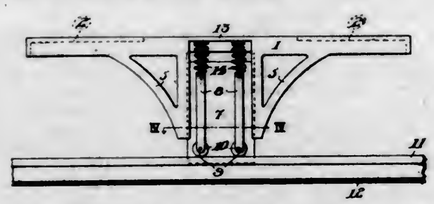
1,106,386. FUEL-VAPORIZER FOR EXPLOSION-ENGINES. HOMER H. INGERSOLL and CLARENCE B. INGERSOLL, Chicago, Ill., assignors, by direct and mesne assignments, to Ingersoll Electric Vaporizer Co., a Corporation of Illinois. Filed Nov. 3, 1913. Serial No. 798,904. (Cl. 219—38.)



1. The combination with a fluid passage, of means for heating the fluid passing through said passage, said means comprising an element of high electrical resistance consisting of a plurality of substantially parallel spaced blades obliquely disposed in transverse arrangement interposed in and traversing said passage, said blades being connected together to form a continuous electrical conductor; and a source of electrical energy connected with said element for passing an electrical current therethrough, substantially as described.

2. The combination with a fluid passage, of means for heating the fluid passing through said passage, said means comprising an elongated flat continuous integral element of high electrical resistance arranged in tortuous formation to constitute substantially parallel spaced blades obliquely disposed in transverse arrangement interposed in and traversing said passage; and a source of electrical energy connected with said element for passing an electrical current therethrough, substantially as described.

1,106,387. RAIL-CONTACT FOR VEHICLES. EUGENE JENOI and JOHN STEVENSON, Jenkins, Ky.; said Jenoi assignor to Steve Kruchio, Rozalia Mary Szabo, and Sarah Kruchio, Uniontown, Pa. Filed May 15, 1913. Serial No. 767,865. (Cl. 191—49.)

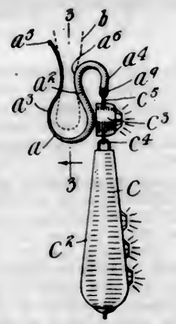


1. A contact for rails comprising a truck frame, a depending guide carried thereby, a bearing plate vertically movable in said guide, parallel hangers carried by the outer side of said bearing plate, contact wheels revoluble between said hangers and said bearing plate, and means engaging the upper ends of said hangers for holding said bearing plate and said hangers in a normally lowered position.

2. In a contact for rails, a truck frame, a bearing plate slidably supported by said frame and extending down on the inner side of the rail, hangers carried by the outer side of said bearing plate, contact wheels revolubly mounted between said hangers and said bearing plate, and yielding means engaging the upper ends of said hangers for holding said hangers in a normally lowered position.

3. In a contact for rails, the combination with a truck frame and a rail, of a depending guide carried by said truck frame, a bearing plate movable in said guide and extending downward at the inner side of said rail, parallel hangers carried by the outer side of said plate, revoluble contact wheels between said hangers and said plate, and coiled compression springs engaging the upper ends of said hangers for holding said contact wheels normally in engagement with said rail.

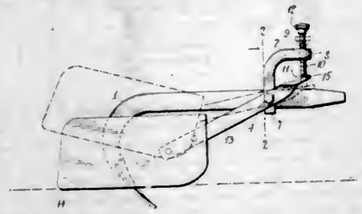
1,106,388. EAR-PENDANT. HENRY F. JUERGENS, New York, N. Y. Filed Nov. 4, 1913. Serial No. 799,069. (Cl. 63—14.)



1. In an ear pendant, an ear attaching member comprising a bottom loop portion which opens upwardly, said loop portion being provided with a front arm which is curved backwardly and then forwardly and provided with a loosely suspended pendant, and with a thin resilient back arm which is curved forwardly and then backwardly and extends above the front arm, and the forward curve of which is opposite the backward curve of said front arm, whereby said arms are adapted to grasp and hold the lobe of the ear.

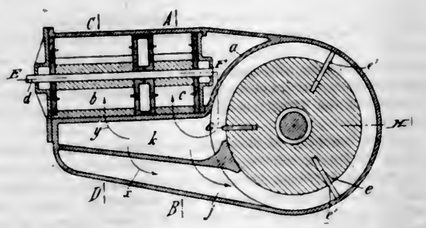
2. In an ear pendant, an ear attaching member comprising a bottom loop portion which opens upwardly, said loop portion comprising a front arm which is curved backwardly and then forwardly and provided with a depending part having a loosely suspended pendant, and with a thin resilient back arm which is curved forwardly and then backwardly whereby said arms are adapted to grasp and hold the lobe of the ear.

1,106,389. ATTACHMENT FOR PLOW-GUARDS. CHARLES R. KECK, Nelsonville, Mo. Filed May 25, 1911. Serial No. 629,436. (Cl. 97—13.)



The combination with a plow beam having a flat underside, of a rod disposed against one side of the beam and having its lower end directed laterally across the beam and provided with a flat upper side engaging the flat underside of the plow beam, a lateral extension on the upper end of the rod disposed substantially parallel to the beam and longitudinally thereof, the free end of the last named lateral extension being directed away from the beam and provided with an opening, a screw movable through said opening, a bar engaging the outer side of the first named bar, a fender attached to the second named bar, a bolt passing through both of said bars and through the plow beam and rigidly securing the first named bar to the plow beam and pivotally supporting the second named bar, and the end of the second named bar remote from the fender being twisted to form a flat plate for contact with the screw whereby the vertical adjustment of said screw will effect a vertical adjustment of the fender.

1,106,390. FLUID TRANSMISSION-GEAR. HUGO LENTZ, Grunwald, near Berlin, Germany. Filed May 23, 1911. Serial No. 629,041. (Cl. 138—3.)

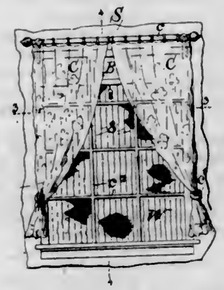


1. A liquid power transmission mechanism comprising a unitary casing, a rotary motor and a rotary pump within said casing in such position that the axis of each is perpendicular to a plane containing the axis of the other, said casing being provided with two substantially parallel conduits connecting the discharge of the pump with the inlet of the motor and the discharge of the motor with the inlet of the pump, communicating at their ends adjacent the motor with the passage for fluid through the motor and lying in the same plane with said passage, and communicating at their opposite ends with the pump through two branches common to both conduits, which passages communicate with the passage for liquid through the pump and lie in the same plane therewith, and a valve for each branch governing the communication between it and both conduits.

2. A liquid power transmission mechanism comprising a unitary casing, a rotary motor and a rotary pump within said casing in such position that the axis of each is perpendicular to a plane containing the axis of the other, said casing being provided with two substantially parallel conduits connecting the discharge of the pump with the inlet of the motor and the discharge of the motor with the inlet of the pump, communicating at their ends adjacent the motor with the passage for fluid through the motor and lying in the same plane with said passage, and communicating at their opposite ends with the pump through two branches common to both conduits, which passages communicate with the passage for liquid through the pump and lie in the same plane therewith, and a valve for each branch governing the communication between it and both conduits, the passage of the valves and the passage through the pumps controlled thereby having the same cross-section.

3. A liquid power transmission mechanism comprising a unitary casing, a rotary motor and a rotary pump within said casing in such position that the axis of each is perpendicular to a plane containing the axis of the other, said casing being provided with two substantially parallel conduits connecting the discharge of the pump with the inlet of the motor and the discharge of the motor with the inlet of the pump, communicating at their ends adjacent the motor with the passage for fluid through the motor and lying in the same plane with said passage, and communicating at their opposite ends with the pump through two branches common to both conduits, which passages communicate with the passage for liquid through the pump and lie in the same plane therewith, and a valve for each branch governing the communication between it and both conduits, the passage of the valves and the passage through the pumps controlled thereby having the same cross-section, whereby the liquid stream upon passing the valves retains the same cross-sectional area, as when passing the pumps.

1,106,391. DEVICE FOR PRODUCING STAGE-RAIN. NETTIE LINTON, Allaben, N. Y. Filed Mar. 25, 1912. Serial No. 686,055. (Cl. 46—70.)



1. In a stage effect for rain, the combination of a scene piece having an opening in it formed for a window, silk gauze covering said opening and having window bars formed on it, a curtain formed of strings of tinsel suspended at one end at the rear of said gauze and some distance from it, a cord from which said strings of tinsel depend, rings secured to said cord, a curtain rod upon which said rings are strung, a spring at each end of and supporting said rod, a bracket secured to the scene piece at each end of said rod and supporting said springs, cords secured to one end-ring by means of which the rings may be moved

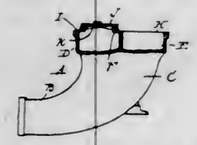
along the rod and a vibratory motion given to the curtain and a lamp throwing light upon the front of the curtain from the rear of the gauze, substantially as set forth.

2. In a stage effect for rain, a window having the opening covered with gauze, a curtain formed of suspended strings of tinsel at the rear and a little distance from the gauze, means of opening and closing said curtain, means of giving a vibratory motion to said curtain and means of throwing light-reflections onto the front of said curtain but from the rear of the gauze, substantially as set forth.

3. In a stage effect for rain, the combination of a surface formed of gauze covering the opening forming the view, a curtain rod at the rear of the gauze and above the soffit of the opening, springs on which said rod is suspended, brackets supporting said springs, a series of rings on said curtain pole, a cord supported by said rings and a series of strings of glittering material suspended at their upper ends from said cord and cords for opening and closing said curtain of strings and giving a vibratory motion to the same, substantially as set forth.

4. In a stage effect for rain, the combination of a surface of gauze covering an opening forming the view, a curtain formed of depending strings of glittering material suspended at the rear of the gauze, means for throwing light-reflections on the front of said curtain from the rear of the gauze and means of giving a vibratory motion to said curtain, substantially as set forth.

1,106,392. STACK-FITTING. JOHN H. LONSKEY, Detroit, Mich., assignor to Central Foundry Specialty Company, Detroit, Mich., a Corporation of Michigan. Filed July 18, 1913. Serial No. 779,785. (Cl. 137—75.)



1. A fitting comprising a body portion and a plurality of hubs of corresponding size, and closure receiving seats formed integral with the hubs and connected thereto by a weakened severable section.

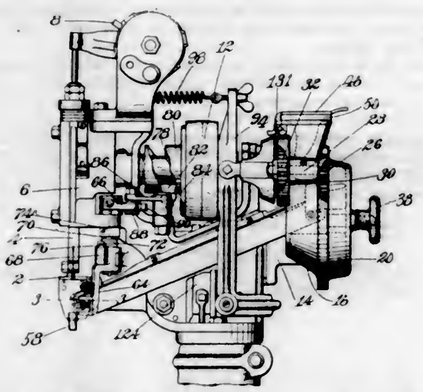
2. A fitting comprising a body portion and a plurality of hubs of corresponding size, cover receiving seats of complementary configuration formed integral with the hubs and each connected to its respective hub by a weakened severable section, and a cover adapted to be engaged with either one of the cover receiving seats.

3. A stack base, comprising a bend and a plurality of hubs of corresponding size and arranged at substantially the same level, and cover receiving seats of complementary configuration formed integral with the hubs and each connected to its respective hub by a weakened severable section.

4. A stack base comprising a bend and a plurality of hubs of corresponding size and capable of being employed for alternate use as clean-out or stack openings, and cover receiving seats of complementary configuration formed integral with the hubs and each connected to its respective hub by a weakened severable section.

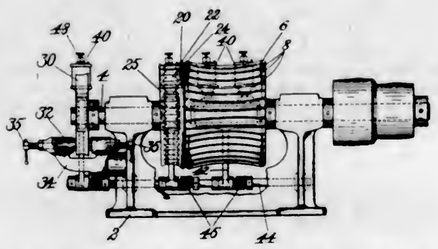
1,106,393. MACHINE FOR INSERTING FASTENINGS. FRED L. MACKENZIE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 2, 1912. Serial No. 668,962. (Cl. 1—6.)

1. In a machine of the class described, a tack pot arranged to rotate about a horizontal axis, a hopper arranged to introduce the tacks into one side of the tack pot, said hopper and said tack pot being provided with vertical abutting faces, and means for rotating said tack pot comprising a peripheral gear forming a flange upon said tack pot having a face substantially flush with the aforementioned vertical face, said hopper being provided with a groove in which the abutting portion of said tack pot is confined together with said peripheral gear.



2. In a machine of the class described, a tack pot arranged to rotate about a horizontal axis, a hopper arranged to introduce the tacks into one side of the tack pot, said hopper and said tack pot being provided with vertical abutting faces and said hopper being provided with a groove in which the abutting portion of said tack pot is confined, and means for rotating said tack pot comprising a peripheral gear also received in said groove and a pinion engaging said gear and confined in an enlargement of said groove.

1,106,394. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed May 19, 1908. Serial No. 433,627. (Cl. 12—51.)



1. In a machine of the class described, a beater provided on its periphery with a plurality of closely adjacent beating surfaces having a relatively large diameter and narrow periphery and means for rotating the beater, said parts being constructed and arranged to act on the side of the shoe in the direction of the length of the edge of the shoe.

2. In a machine of the class described, a rotary beater formed on its periphery with a plurality of closely adjacent beating surfaces, terminating at one end at a distance inside the end of the beater and formed to engage the work by a movement in a plane at a small angle to the plane of the side of the shoe being treated.

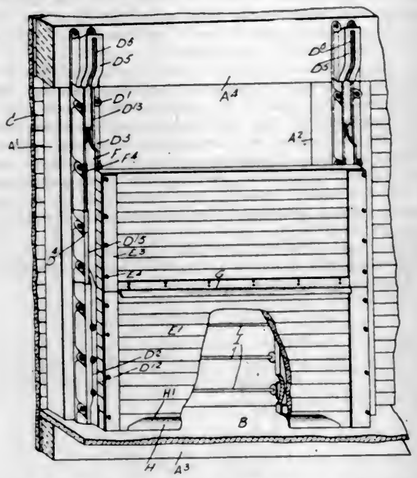
3. In a machine of the class described, a beater comprising a roll provided on its periphery with a plurality of closely adjacent beating surfaces terminating inside the ends of the roll, said roll being flared at one end to overlie the edge of the shoe adjacent to the heel seat and being substantially smooth at the opposite end.

4. In a machine of the class described, a roll adapted to engage the side of the shoe at and adjacent to the edge of the shoe, means to drive said roll, and means for heating the roll comprising friction plugs opposed to each other and engaging opposite sides of the roll.

5. A rotary beater constructed and arranged to engage a lasted shoe at and adjacent to the edge of the shoe and to deliver light rapid blows to the upper on the side of the shoe in the direction of the length of the edge of the shoe, said beater being formed to overlie the edge of the shoe bottom, and means for actuating said beater to treat the parts of the shoe which are inaccessible after the sole is attached.

[Claim 6 not printed in the Gazette.]

1,106,395. GRAIN-CAR DOOR. ANGUS G. MCCORMACK, Port Arthur, Ontario, Canada. Filed Aug. 30, 1912. Serial No. 717,908. (Cl. 20—34.)

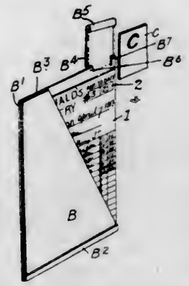


1. In a grain car door, the combination with the side posts of the door, of guide ways secured to the door having the front opening thereof increasing in width in successive sections, a pocket having an arc-shaped lower end into which the guide ways lead, a vertical front slot and an arc-shaped cross wall intermediate of its height, grain door sections, runners connected to the door sections and having lateral projections at their upper ends designed to enter the pocket when the door is raised whereby the upper door section is swingably supported on the arc-shape cross wall and the lower section is swingably supported in the arc-shaped lower end of the pocket, the major portion of the runners being rigidly held in the guide-ways in the closed position of the door and designed to swing outwardly through the front of the sections of increased width to the open position, as and for the purpose specified.

2. In a grain car door, the combination with the side posts of the door, of guide ways secured to the door having the front opening thereof increasing in width in successive sections, a pocket having an arc-shaped lower end into which the guide ways lead, a vertical front slot and an arc-shaped cross wall intermediate of its height, grain door sections, runners having upper lateral flanged pieces at their upper end and fitting within the guide ways so as to slide upwardly into the pocket and lower flanged portions normally held in the lower guide sections and adapted to swing outwardly through the upper enlarged opening of one of the upper sections of the guide ways when the upper lateral flanged piece has entered the pocket, as and for the purpose specified.

3. In a grain car door, the combination with the side posts of the door, of guide ways secured to the door having the front opening thereof increasing in width in successive sections, a groove in the guide way comprising an inner wide portion forming the base of the guide way and an outer grooved portion formed at each side of the vertical opening of the guide way, a pocket having an arc-shaped lower end into which the base of the guide way leads, a vertical front slot and an arc-shaped cross wall intermediate of its height, a grain door comprising sections, side runners secured at each end of each section, lateral flanged pieces at the upper end of each runner fitting within the base or wide portion of the groove of the guideway and having the lateral flanges fitting within the outer groove at each side of the guide way opening whereby when the runner is moved vertically the upper lateral projecting piece is retained in the guide way and carried into the pocket and the lateral flange of the runner is freed so as to swing outwardly through the enlarged opening of the upper guide way so that the door may be swung in proximity to the roof, as and for the purpose specified.

1,106,396. FILING DEVICE. BEVERLY MCDONALD, Picton, Ontario, Canada. Filed May 17, 1913. Serial No. 768,334. (Cl. 129—16.)



1. In a filing device, a check slip container comprising a stiff back piece and a front piece formed of pliable material attached at the bottom to the back piece and having a cut away portion on one side thereof, as and for the purpose specified.

2. In a filing device a receptacle, a series of check slip containers comprising a stiff back piece and a pliable front piece and a visible portion bearing an indicating letter and a series of intermediate pockets also formed with a stiff back piece and a pliable front piece and visibly bearing the customer's name, as and for the purpose specified.

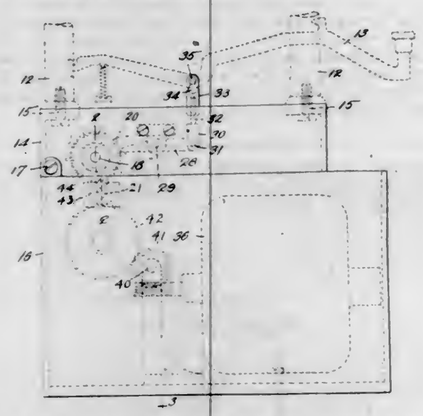
3. In a filing device, a check slip container comprising a sheet metal back piece having an upturned lip at its lower edge and a flexible front piece secured in the lip and cut away at one side from the bottom in an inclined direction, as and for the purpose specified.

4. In a filing device a check slip container comprising a sheet metal back piece having an upwardly extending portion having an overturned lip at its upper end and forwardly stamped lips in proximity to its lower corners and designed to receive an indicating card and a front piece formed of pliable material attached at the bottom to said back piece and having a portion cut away from one side thereof, as and for the purpose specified.

1,106,397. AUTOMATIC TYPE-WRITER OPERATOR. JOHN MCTAMMANY, Stamford, Conn. Filed Feb. 7, 1912. Serial No. 676,144. (Cl. 197—20.)

1. An automatic typewriter operator comprising a perforated master-sheet and mechanism controlled thereby for depressing the keys of a typewriter, said mechanism including a driving member at one side of the sheet, and a rotary driven member at the opposite side of the sheet mounted to project through the sheet when permitted to do so by a perforation, said members being held out of engagement with each other by an imperforate portion of the sheet, and interengaged by a perforated portion of the sheet.

2. An automatic typewriter operator comprising a perforated master-sheet and mechanism controlled thereby for depressing the keys of a typewriter, said mechanism including a driving member at one side of the sheet, a rotary driven member at the opposite side of the sheet mounted to project through the sheet to be engaged with the driving member when permitted to do so by a perforated portion of the sheet, and a lever adapted to be moved by the driven member, and having a coupling member adapted to engage a typewriter key.



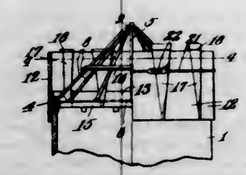
3. An automatic typewriter operator, comprising a perforated master-sheet, a gear toothed feed roll bearing on one side of the master-sheet, a series of star wheels bearing on the opposite side of said sheet, the arms of said wheels being adapted to be held out of engagement with the feed roll by imperforate portions thereof and to move into engagement with teeth of the feed roll through the perforations in the sheet, levers adapted to be moved by the star wheels, and coupling members on said members adapted to engage typewriter keys.

4. An automatic typewriter operator comprising a perforated master-sheet provided with a longitudinal series of feed roll-engaging perforations, a gear toothed feed roll bearing on one side of the master-sheet and having feed pins on its gear teeth adapted to engage said perforations, a series of star wheels bearing on the opposite side of the sheet, and adapted to be relatively engaged with the feed roll through the perforated portions of the sheet, and means operated by the rotation of the star wheels for depressing the keys of a typewriter.

5. An automatic typewriter operator having key-operating mechanism comprising a feed roll having elongated rigid actuating teeth, a master-sheet having key-operating perforations spaced to coincide with the interdental spaces of the feed roll, and a series of rotary members having projections adapted to pass through said perforations.

[Claims 6 to 9 not printed in the Gazette.]

1,106,398. SILO-ROOF. THOMAS F. MEYER, Bristol, Wis. Filed Apr. 16, 1913. Serial No. 761,538. (Cl. 20—1.4.)



1. A silo roof comprising trapezoidal and triangular detachable members, adapted to form interchangeably a conical roof, and a cylindrical wall.

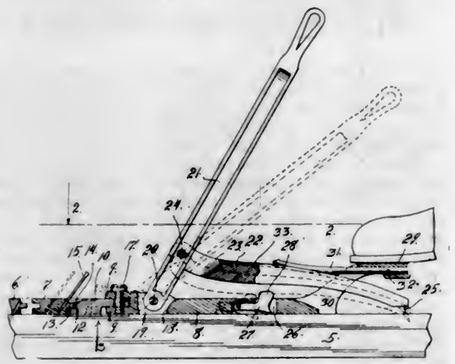
2. The combination with a silo of a roof supporting structure secured thereto, trapezoidal and triangular roof forming members adapted to interlock and form interchangeably a conical roof, and cylindrical silo wall extension.

3. The combination with a silo, of a metallic ring substantially equal in diameter to the diameter of the silo side wall and detachably supported a slight distance thereabove, a roof supporting structure comprising a central post, horizontal members secured to said post and engaging and supported by said ring, a sleeve journaled upon said post, and roof supporting members pivotally secured to said sleeve and to said horizontal members.

4. The combination, with a silo, of a roof supporting structure secured thereto, roof forming members detachably secured to said roof supporting structure, the said roof forming members provided with tongues and grooves adapted to interlock to form a sealed roof, said members adapted to interengage to form a cylindrical wall extension for said silo, and means for holding said cylindrical wall extension rigidly in position.

5. The combination with a silo, of a metallic ring mounted thereabove, trapezoidal members provided with outstanding lugs adapted to rotatably engage said ring, a roof supporting structure detachably secured to said ring and adapted to hold said trapezoidal members in a roof forming position, triangular members supported by said roof supporting structure abutting the upper extremities of said trapezoidal members and meeting in an apex to thereby form a continuous conical roof, said trapezoidal members adapted to rotate upon said ring to a vertical position, said triangular members adapted to interengage said trapezoidal members to thereby form a cylindrical wall extension of said silo.

1,106,399. FLOORING-PINCERS. ULRICH OHLSEN, Denver, Colo., assignor of one-half to Martin Mortensen, Denver, Colo. Filed Feb. 24, 1913. Serial No. 750,064. (Cl. 57—117.)



1. In combination with a support for flooring, a frame bar, the under surface of which is flat and adapted to slide upon the support, a head upon the forward extremity of said bar adapted to engage the edge of a flooring board, an operating lever pivoted to said frame bar, a spur lever pivoted at its forward end to said operating lever and means upon the said frame bar for causing the rear extremity of the spur lever to engage the flooring support during the initial movement of the operating lever.

2. In combination with a support for flooring, a frame bar, the under surface of which is flat and adapted to slide upon the support, a head upon the forward extremity of said bar adapted to engage the edge of a flooring board, an operating lever pivoted at its lower extremity to said frame bar, a spur lever pivoted at its forward end to said operating lever, and means upon said frame bar when downward pressure is applied thereto for causing the rear extremity of the spur lever to engage the flooring support during the initial movement of the operating lever.

3. In combination with a support for flooring, a frame bar, a head upon the forward extremity of said bar adapted to engage the edge of a flooring board, a foot piece upon the frame bar, a lever mechanism mounted upon said bar, and provided with a support engaging spur, and means upon the bar for causing said spur to engage the support automatically upon the initial movement of the lever mechanism.

4. In combination with a support for flooring, a frame bar, a head upon the forward extremity of said bar, adapted to engage the edge of a flooring board, an operating lever pivoted at its lower extremity to said bar, a spur lever pivoted at its forward extremity to said operating lever, means upon said frame bar for causing the rear extremity of the spur lever to engage the flooring support during the initial movement of the spur lever, a second spur mounted in the frame bar and provided with an upwardly extending projection adapted to be engaged by the spur lever and forced downward during the final movement of the operating lever.

5. In combination with a support for flooring, a frame bar, the under surface of which is flat and adapted to slide upon the support, a head upon the forward extremity of said bar adapted to engage the edge of a flooring board, said head being connected with the frame bar by a vertical pivot and a lever mechanism interposed between the bar and support for producing a forward motion of the bar.

[Claims 6 and 7 not printed in the Gazette.]

1,106,400. PADLOCK. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 27, 1913. Serial No. 751,049. (Cl. 70—108.)



1. In a padlock, the combination of a shackle, a pivoted tumbler coöperating therewith, and a substantially U-shaped ward member extending beneath the free extremity of said tumbler and having oppositely extending lugs to position it between the case sections; substantially as described.

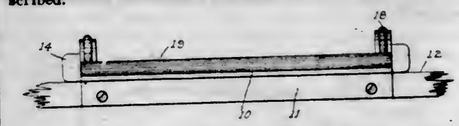
2. In a padlock, the combination with separate case sections and means to secure them together, of a substantially U-shaped member held in place between said sections and having a key bearing at one side and a ward portion at the other side; substantially as described.

3. In a padlock, the combination of a shackle, a pivoted tumbler coöperating therewith, and a member lying beneath the free end of said tumbler and having a key bearing and a stop shoulder for the tumbler; substantially as described.

4. In a padlock, the combination of a shackle, a pivoted tumbler coöperating therewith, and a single member adjacent the free end of said tumbler having a key bearing, a ward portion and a stop shoulder for the tumbler; substantially as described.

1,106,401. SAW-VISE. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Dec. 10, 1913. Serial No. 805,832. (Cl. 76—78.)

1. In a saw vise, the combination of a frame having upwardly and inwardly turned guide portions at the ends, a jaw movable transversely of the frame and having its ends engaged with the respective guide portions, a second jaw, brackets extending forwardly from the upper parts of the respective guide portions, and supporting said second jaw rigidly in front of said movable jaw, and means for adjusting said movable jaw; substantially as described.



2. In a saw vise, the combination of a frame, guide portions on the respective ends of the frame, turned upwardly and inwardly in substantial parallelism with the longitudinal axis of the frame, and providing in conjunction with the frame upper and lower guide surfaces at each end of the latter, a jaw movable transversely of the frame, and having upper and lower surfaces at each end thereof engaging the corresponding upper and lower guide surfaces, brackets extending forwardly from the respective guide portions, a fixed jaw supported from above by said brackets, and located in front of said movable jaw, and means for adjusting the movable jaw; substantially as described.

3. In a saw vise, the combination of an elongated frame, upwardly and inwardly turned guide portions at the respective ends of the frame, located in substantial parallelism to the longitudinal axis of the frame, a jaw movable transversely of the frame, at the upper surface of the latter, and having at its respective ends upper guide surfaces engaging said guide portions, extensions on the respective ends of the movable jaw, facing the upright parts of the guide portions, springs interposed between the respective extensions and the respective upright parts of the guide portions, a fixed jaw rigidly supported from the frame, and means for adjusting the movable jaw relatively to the fixed jaw; substantially as described.

4. In a saw vise, the combination of an elongated frame, upwardly and inwardly turned guide portions on the respective ends of the frame, substantially parallel to the longitudinal axis of the frame, a jaw movable transversely of the frame, and having its ends engaged with the respective guide portions, springs interposed between said guide portions and said jaw, brackets integral with said guide portions, a fixed jaw carried by said brackets in front of said movable jaw, said springs normally separating the jaws, and means for clamping the movable jaw on the work in opposition to said springs; substantially as described.

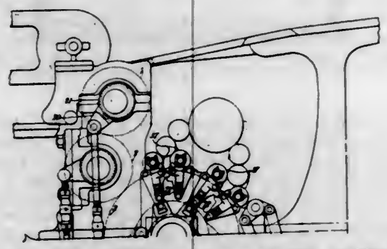
5. A saw vise, comprising a frame having upwardly and inwardly turned keepers at the respective ends, brackets projecting forwardly from said keepers, a fixed jaw, supported by and extending between said brackets, a movable jaw guided transversely of the frame in said keepers, springs interposed between the keepers and opposing portions of the movable jaw, and normally separating the jaws, and means supported on the frame, to engage the movable jaw, and move it toward the fixed jaw in opposition to said springs; substantially as described.

[Claim 6 not printed in the Gazette.]

1,106,402. TRIP MECHANISM OF TWO-REVOLUTION PRINTING-PRESSES. HERBERT PEARCE, THOMAS ROBERT GILLETT PARKER, and FRED WESLEY WRIGHT, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed July 22, 1912. Serial No. 710,882. (Cl. 101—111.)

1. In a two revolution printing press, the combination with its impression cylinder, of a lever reciprocated by the form or plate cylinder; a quadrant gear on an arm of the said lever; a gear loose on a shaft independent of both the said cylinders, engaged by the said quadrant gear and having two abutments; operative connections from the said loose gear to the impression cylinder by which each reciprocation of the quadrant gear, trips and untrips the same; an arm fast to the said shaft; an arcual

recess in the loose gear between its abutments and a pawl and shoulder adapted by being operatively located on opposite sides of the last mentioned arm and in contact with the said recess to be alternately engaged by the respective abutment.



2. In a two revolution printing press, the combination with its impression cylinder, of a lever reciprocated by its form or plate cylinder; a quadrant gear on an arm of the said lever; a gear loose on a shaft independent of both the said cylinders, engaged by the said quadrant gear and having two abutments; operative connections from the said loose gear to the impression cylinder by which each reciprocation of the said quadrant gear, trips and untrips the same; an arm fast to the said shaft; an arcual recess in the loose gear between its abutments; a pawl and shoulder adapted by being operatively located on opposite sides of the last mentioned arm and in con tact with the said recess to be alternatively engaged by the respective abutment; a device loose on the said shaft; a foot pedal; and means operatively connecting the said pedal to the device whereby the actuation of the pedal turns the device about the shaft far enough to engage with the said pawl and hold it out of the path of the operating abutment.

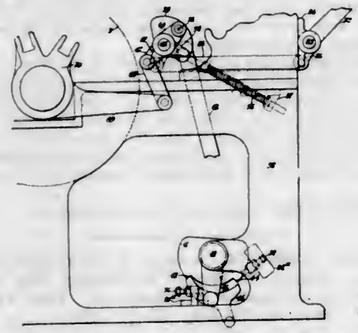
3. In a two revolution printing press, the combination with its impression cylinder, of a lever reciprocated by its form or plate cylinder; a quadrant gear on an arm of the said lever; a gear loose on a shaft independent of both the said cylinders, engaged with the said quadrant gear and having two abutments; operative connections from the loose gear to the impression cylinder adapted to make each reciprocation of the said quadrant gear, trip and untrip that cylinder; an arm fast to the said shaft; an arcual recess in the loose gear between its abutments; a pawl and shoulder adapted by being operatively located on opposite sides of the last mentioned arm and in contact with the said recess, to be alternatively engaged by the respective abutment; a foot pedal; means adapted by being operatively connected to both the said pedal and device to turn the latter about the shaft thereby making it engage the said pawl and hold it out of the path of its actuating abutment; and automatic means for returning both pedal and pawl to their normal positions after the pedal has been released.

4. In a two revolution printing press, the combination with its impression cylinder, of a lever reciprocated by its form or plate cylinder; a quadrant gear on an arm of the said lever; a gear loose on a shaft independent of both the said cylinders, engaged with the said quadrant gear and having two abutments; operative connections from the loose gear to the impession cylinder adapted to make each reciprocation of the quadrant gear, trip and untrip that cylinder; an arm fast to the said shaft; an arcual recess in the loose gear between its abutments; a pawl and shoulder adapted by being operatively located on opposite sides of the last mentioned arm and in contact with the said recess, to be alternatively engaged by the respective abutment; a cam loosely mounted on the said shaft; a foot pedal; a pedal rod; a locking device adapted to lock and release the pedal; a bell crank lever and link connecting the pedal rod and cam; a shoulder on the said pawl and a spring holding the said shoulder in the path of the cam.

5. In a two revolution press in which the form or plate cylinder is in operative contact with its coöperating cylinder throughout each cycle of the press, and in which the impression cylinder makes two revolutions per impression, the combination with the impression cylinder and inking rollers, of automatic means for tripping and untripping the last mentioned cylinder, means under the control of an attendant for occasionally tripping the same cylinder and leaving it tripped for any desired term, and automatic means controllable by an attendant for tripping the inking rollers.

[Claims 6 to 14 not printed in the Gazette.]

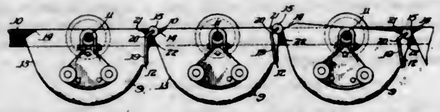
1,106,403. TRIP MECHANISM OF TWO-REVOLUTION PRINTING-PRESSES. HERBERT PEARCE, THOMAS ROBERT GILLETT PARKER, and FRED WESLEY WRIGHT, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Jan. 20, 1913. Serial No. 743,079. (Cl. 101—71.)



1. The combination with a rock shaft forming part of the automatic means for tripping the cylinder inking rollers of a two revolution printing press, of means for manually disconnecting two adjacent and connected members of the said automatic means, for holding them disconnected for the desired time, and for reconnecting them, consisting of an arm fast and a sector plate loose on the said shaft and in parallel planes, a spring plunger working in the said arm to and from the said sector plate in a direction parallel with the said shaft, a socket in the sector plate in which the plunger can engage and a detent to hold the plunger disengaged from the socket.

2. Automatic means for preventing the inking rollers rebounding toward the form or plate cylinder at the moment they reach their tripped position, consisting of an arm fast on a rock shaft of the automatic mechanism for tripping the inking rollers, with a spring rod adapted to push radially along the said arm from a fixed abutment, the arrangement of arm and rod being such that they will be at dead centers at the moment the said rollers reach their tripped position.

1,106,404. CONVEYER-BUCKET. AUGUSTUS T. PERKINS, Chicago, Ill. Filed Mar. 6, 1912. Serial No. 681,966. (Cl. 193—7.)



1. The combination of a conveyer bucket, a deflector, means for supporting said deflector, mounted beneath one end of the bucket, and means comprising a pair of outwardly disposed ears formed on the bucket for limiting the movement of the said deflector.

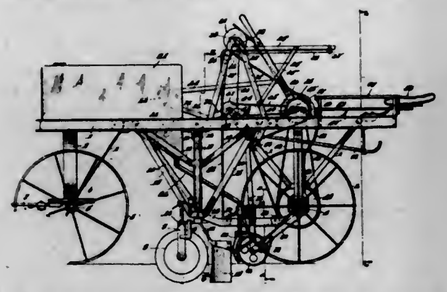
2. The combination of a conveyer bucket, a rotatable deflector and a pair of arms having one end pivotally mounted in apertures provided in the bucket beneath one

end thereof and secured at their other ends to the said deflector, said arms being bent intermediate their ends to permit the deflector to overlie the end of the bucket.

3. The combination of a conveyer bucket having a pair of apertured lugs disposed beneath and adjacent one end thereof, a rotatable cylindrical deflector, and means for supporting said deflector, comprising a pair of curved arms, each having one end pivotally mounted in one of said apertured lugs and the other end projecting into the deflector and secured therein.

4. The combination of a conveyer bucket having its upper edge cut away at one end, a pair of arms pivotally attached to said bucket beneath said cut away portion to oscillate about a fixed pivot, a cylindrical deflector rotatably carried by the upper ends of said arms, said deflector being adapted to be positioned in said cut away portion of the bucket, and means carried by the bucket adjacent said cut away portion and disposed in the path of movement of said arms to limit movement of the deflector away from said bucket.

1,106,405. PLANT-REPLANTER. CHARLES C. POUCHER and RALPH C. POUCHER, Aurora, Ill. Filed May 31, 1913. Serial No. 771,050. (Cl. 55—72.)



1. In a plant replanter, the combination of a furrower; a plant carrier adapted to releasably suspend a plant for replanting; a support for said carrier; means for conveying said carrier from said support to the furrow cut by said furrower; means for automatically transferring said carrier from said support to said conveying means; means for actuating said carrier to release the plant carried thereby when said plant is positioned with its roots projecting into the furrow; and means for pressing the soil about the root of the plant when placed in the furrow, substantially as described.

2. In a plant replanter, the combination of a furrower; a plant carrier adapted to releasably suspend a plant for replanting; a support for said carrier; means for conveying said carrier from said support to the furrow cut by said furrower; means for automatically transferring said carrier fom said support to said conveying means; means for introducing water into the furrow upon the insertion of a plant root therein; means for actuating said carrier to release the plant carried thereby when said plant is positioned with its roots projecting into the furrow; and means for pressing the soil about the roots of the plant when positioned in the furrow, substantially as described.

3. In a plant replanter, the combination of a colter; a furrower arranged behind said colter; a plant carrier adapted to releasably suspend a plant for replanting; a support for said carrier; means for conveying said carrier from said support to the furrow cut by said furrower; means for automatically transferring said carrier from said support to said conveying means; means for actuating said carrier to release the plant carried thereby when said plant is positioned with its roots projecting into the furrow; and means for pressing the soil about the root of the plant when positioned in the furrow, substantially as described.

4. In a plant replanter, the combination of a furrower; a plurality of plant carriers adapted to releasably suspend plants for replanting; means for conveying said carriers from said support to the furrow cut by said furrower; means for independently selecting the carriers supported by said support and automatically transferring the same from said support to said conveying means; means for actuating each of said carriers to release the plant carried thereby when said plant is positioned with its roots projecting into the furrow; and means for pressing the soil about the root of the plant when positioned in the furrow, substantially as described.

5. In a plant replanter, the combination of a vertically adjustable colter; a vertically adjustable furrower arranged behind said colter; a plant carrier adapted to releasably suspend a plant for replanting; a support for said carrier; means for conveying said carrier from said support to the furrow cut by said furrower; means for actuating said carrier to release the plant carried thereby when said plant is positioned with its roots projecting into the furrow; and vertically adjustable means for pressing the soil about the root of the plant when positioned in the furrow, subatantially as described.

[Claims 6 to 27 not printed in the Gazette.]

1,106,406. TITANIC-OXID CONCENTRATE AND METHOD FOR PRODUCING THE SAME. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Nov. 29, 1912. Serial No. 733,942. (Cl. 23—13.)

1. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of a reducing agent so as to produce titanate of said alkali metal and elemental iron in the resulting melt, lixiviating in heated water such melt containing elemental iron, subjecting the thereafter remaining melt to the action of a bath containing sulfuric acid, precipitating out of said bath the therein contained compounds of titanium, and withdrawing and calcining the resulting precipitate.

2. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with caustic soda in presence of a reducing agent so as to produce titanate of soda and elemental iron in the resulting melt, lixiviating in heated water such melt containing elemental iron, subjecting the thereafter remaining melt to the action of a bath containing sulfuric acid, precipitating out of said bath the therein contained compounds of titanium, and withdrawing and calcining the resulting precipitate.

3. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of a reducing agent so as to produce titanate of said alkali metal and elemental iron in the resulting melt, lixiviating in heated water such melt containing elemental iron, subjecting the thereafter remaining melt to the action of a bath containing sulfuric acid, boiling said bath with addition of nitric acid and withdrawing and calcining the resulting precipitate.

4. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with caustic soda in presence of a reducing agent so as to produce titanate of soda and elemental iron in the resulting melt, lixiviating in heated water such melt containing elemental iron, subjecting the thereafter remaining melt to the action of a bath containing sulfuric acid, boiling said bath with addition of nitric acid and withdrawing and calcining the resulting precipitate.

5. In obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, the steps which comprise smelting said substance together with oxid of an alkali metal in presence of a reducing agent until iron oxid is reduced to elemental iron, lixiviating in heated water the melt containing elemental iron and subjecting the undissolved residues to the action of a bath containing sulfuric acid sufficient to dissolve therein compounds of titanium.

[Claims 6 to 21 not printed in the Gazette.]

1,106,407. METHOD FOR CONCENTRATING TITANIC OXID. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Nov. 29, 1912. Serial No. 733,944. (Cl. 23—13.)

1. The method of concentrating titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of a reducing agent; withdrawing iron from the resulting melt; lixiviating the remainder of said melt in water; withdrawing the insoluble portion and subjecting it to the action of an iron-solvent acid so diluted as to dissolve therein ferro, and other compounds excepting the titanic oxid.

2. The method of concentrating titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of a reducing agent; withdrawing iron from the resulting melt; lixiviating the remainder of said melt in water; withdrawing the insoluble portion and subjecting it to the action of a bath containing dilute sulfuric acid.

3. The method of concentrating titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of carbon; withdrawing iron from the resulting melt; lixiviating the remainder of said melt in water; withdrawing the insoluble portion and subjecting it to the action of a bath containing an iron-solvent acid so diluted as to dissolve therein ferro, and other compounds, excepting the titanic oxid.

4. The method of concentrating titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of carbon, withdrawing iron from the resulting melt; lixiviating the remainder of said melt in water; withdrawing the insoluble portion and subjecting it to the action of a bath containing dilute sulfuric acid.

5. The method of concentrating titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises smelting said substance together with oxid of an alkali metal in presence of carbon, withdrawing iron from the resulting melt; lixiviating the remainder of said melt in water; withdrawing the insoluble portion and subjecting it to the action of a bath containing an iron-solvent acid so diluted as to dissolve therein ferro, and other, compounds, excepting the titanic oxid.

[Claims 6 to 10 not printed in the Gazette.]

1,106,408. METHOD FOR CONCENTRATING TITANIC OXID FROM SUBSTANCES CONTAINING IT AND IRON OXID. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Nov. 29, 1912. Serial No. 733,945. (Cl. 23—13.)

1. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises melting said substance together with oxid of an alkali metal, lixiviating the resulting melt in hot water, withdrawing the undissolved residue of said melt and subjecting it to the action of a bath containing acid so dilute as to dissolve therein iron, rather than titanium, compounds.

2. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises melting said substance together with hydroxid of an alkali metal charged as such, lixiviating the resulting melt in hot water, withdrawing the undissolved residue of said melt and subjecting it to the action of a bath containing sulfuric acid so dilute as to dissolve therein iron, rather than titanium, compounds.

3. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises melting said substance together with sodium hydroxid charged as such, lixiviating the resulting melt in hot water, withdrawing the undissolved residue of said melt and subjecting it to the action of a bath containing acid so dilute as to dissolve therein iron, rather than titanium, compounds.

4. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises melting said substance together with sodium hydroxid charged as such, lixiviating the resulting melt in hot water, withdrawing the undissolved residue of said melt and subjecting it to the action of a bath containing sulfuric acid so dilute as to dissolve therein iron, rather than titanium, compounds.

5. The method of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid, which comprises melting said substance together with oxid of an alkali metal, lixiviating the resulting melt in hot water, withdrawing the undissolved residue of said melt, subjecting it to the action of a bath containing acid so dilute ac to dissolve therein iron, rather than titanium, compounds, and finally withdrawing and calcining the undissolved residue.

[Claims 6 to 8 not printed in the Gazette.]

1,106,409. METHOD OF OBTAINING TITANIC OXID. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 6, 1913. Serial No. 746,567. (Cl. 23—13.)

1. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with said substance sulfid of an alkali metal, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

2. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with said substance sodium sulfid, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

3. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with said substance sulfid of an alkali metal, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing sulfuric acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

4. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with said substance sodium sulfid, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, subjecting it to the action of a bath containing acid so dilute as to dissolve therein iron, rather than titanium, compounds, and calcining the undissolved residue.

[Claims 6 to 10 not printed in the Gazette.]

1,106,410. METHOD OF OBTAINING TITANIC OXID. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 6, 1913. Serial No. 746,568. (Cl. 23—13.)

1. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with carbon and said substance sulfate of an alkali metal, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

2. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with carbon and said substance sodium sulfate, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

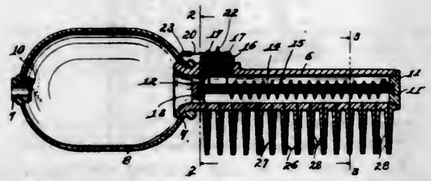
3. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with carbon and said substance sulfate of an alkali metal, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing sulfuric acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

4. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with carbon and said substance sodium sulfate, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, and boiling it in a bath containing sulfuric acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds.

5. The method of obtaining titanic oxid from a substance containing it and iron oxid which comprises charging and melting together with carbon and said substance sulfate of an alkali metal, lixiviating the resulting melt with water, withdrawing the undissolved portion of said melt, boiling it in a bath containing acid so dilute as to dissolve the therein iron, but not the therein titanium, compounds, and calcining the undissolved residue.

[Claims 6 to 10 not printed in the Gazette.]

1,106,411. HAIR-DRYING COMB. GEORGE L. SCHEEL, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,913. (Cl. 34—26.)



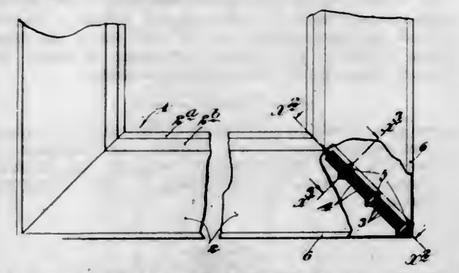
1. A device of the kind described comprising a comb having a hollow body with both ends thereof open; a spider in said body near one end thereof and having a recess therein; a cap provided with a recess therein and fitted in the other end of said body; and a heating element disposed in said hollow body and supported in said recesses, substantially as described.

2. A device of the kind described comprising a comb having a hollow body with both ends thereof open; a spider in said body near one end thereof and having a recess therein; a cap provided with a recess therein and fitted in the other end of said body; a heating element disposed in said hollow body and supported in said recesses; and air pumping means connected with one end of said hollow body and adapted to force air over said heating element, substantially as described.

3. A device of the kind described comprising a comb having a hollow body with one end of said body open; a spider in said body having a recess opening toward the open end of said body; a cap threaded in said body, there being a recess in said cap opening toward said spider; and a heating element in said body with its ends mounted in said recesses, substantially as described.

4. A device of the kind described comprising a comb having a hollow body with a lateral opening therein; an insulating plug in said opening; a wire electrical heating coil in said body with its ends thereof extending through said plug; and means on the outer side of said plug locking the ends of said wire, substantially as described.

1,106,412. METAL WINDOW-SASH. JOSEPH T. SCHLACKS and PERCY L. BARTER, Detroit, Mich., assignors to McCord Manufacturing Company, Detroit, Mich., a Corporation of Maine. Filed July 23, 1913. Serial No. 780,724. (Cl. 189—76.)



1. A metal window sash having a tubular rail, the sides of said rail being bent laterally inward, at their ends, to afford overlapping, laterally spaced flanges, the flanges on the same side of said rail being brought directly together, the flanges on the one side being overlapped with the flanges on the other side, and means securing the same together.

2. A metal window sash having a tubular rail, the sides of said rail being bent laterally inward, at their ends, to afford overlapping, laterally spaced flanges, the flanges on the same side of said rail being brought directly together, the flanges on the one side being overlapped with the flanges on the other side, and means securing the same together, comprising clamping bars and bolts.

3. A metal window sash having tubular rail sections in rectangular arrangement, the sides of said rail sections being bent laterally inward, at their ends, to afford overlapping, laterally spaced flanges, the flanges on the same side of said rail sections being brought directly together at the corners of said sash, the flanges on the one side being overlapped with the flanges on the other side, and means securing the same together, comprising clamping bars and bolts.

1,106,413. DEVICE FOR SHIPPING VIOLIN AND OTHER STRINGS. ERNST REINHOLD SCHMIDT, Markneukirchen, Germany. Filed Mar. 9, 1914. Serial No. 823,508. (Cl. 206—46.)



1. A device of the kind stated, comprising a threaded rod provided at opposite ends with members for attaching

strings, one of said members being movable along the rod, and a nut on said rod, engaging said member to move the same along the rod.

2. A device of the kind stated, comprising a rod, disks thereon, one of which is slidable along the rod, said disks having means at the edges thereof to engage the ends of strings, means to prevent rotation of the movable disk on the rod, and means to adjust the movable disk along the rod.

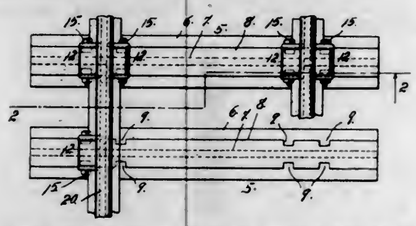
3. A device of the kind stated, comprising a rod, spaced disks thereon having string engaging means, a bracket slidable and non-rotatable on the rod, one of the disks being carried by the bracket, and means to adjust the bracket along the rod, to stretch the strings.

1,106,414. TOGGLE AND CLIP COMBINATION. JACOB FREDERICK SCHOELLKOPF, Dallas, Tex., assignor to North & Judd Manufacturing Company, New Britain, Conn., a Corporation. Filed May 7, 1913. Serial No. 766,075. (Cl. 54—53.)



A toggle and clip combination comprising at one end a yoke suitable for being connected to a chain and a clip for a trace at the other end, and a pintle pin connecting the said yoke and clip, the said clip being of flat U shape, having arms spaced apart suitably to house a trace therebetween, and having the said pintle pin positioned at the apex portion, the said yoke being of open U shape having arms of appreciable length and appreciably spread apart and eyes at the ends of the said arms in alinement for the said pintle pin, and the said clip being of appreciably greater width than the spread of the arms of the said yoke and being provided with cross slots at the said apex portion to fit and to receive the said eyes.

1,106,415. RAILWAY-TIE AND RAIL-CHAIR. GEORGE H. SHANE, Denver, Colo., assignor to The Steel Railway Tie and Appliance Company, Denver, Colo., a Corporation of Colorado. Filed Feb. 16, 1914. Serial No. 818,831. (Cl. 238—4.)



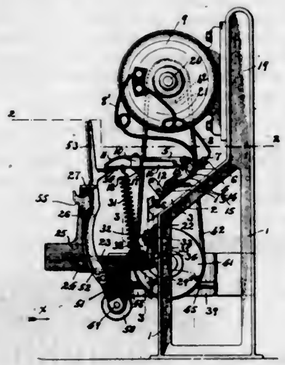
1. The combination of a tie, including a web and top flanges extending in opposite directions therefrom, the said flanges having recesses, a rail chair composed of two companion members having depending flanges adapted to engage and extend below the top of the tie on opposite sides, the chair members having lugs adapted to enter said recesses in the top flanges of the tie, and bolts passing through the flanges of the chair members and the web of the tie, the chair members having parts engaging the base of the rail above the tie and on opposite sides.

2. The combination of a tie having a vertically disposed web and top and bottom flanges extending therefrom on opposite sides, rail chair members having parts extending above the tie, which embrace the rail on opposite sides, flanges extending below the top of the tie and embracing the top flanges of the latter on opposite sides, the rail chair members having floor pieces which connect the depending flanges and extend underneath the track rails, the floor pieces having depending lugs and the top flanges of the tie having recesses adapted to receive said lugs, and suitable means engaging the flanges of the chair members and the web of the tie for securing the chair members and tie in the assembled relation, substantially as described.

3. The combination of a tie, including a web and top flanges extending in opposite directions therefrom, the said flanges having their edges recessed, a rail chair composed of two companion members having depending flanges adapted to engage said recesses and extend below the top of the tie on opposite sides, and bolts passing through the flanges of the chair members and the web of the tie, for the purpose set forth.

4. The combination of a tie, including a web and flanges extending from the top thereof in opposite directions, and rail chair members having depending flanges, the edges of the top flanges of the tie on opposite sides having recesses therein which the flanges of the chair members engage, whereby the rail chair members are locked against longitudinal movement on the tie, the rail chair members having parts above the tie which engage the base of the track rails on opposite sides.

1,106,416. TIME-SWITCH MECHANISM. JAMES A. SKINNER, East Orange, N. J., assignor to Fritz Frederick Uehling, Passaic, N. J. Filed Nov. 21, 1912. Serial No. 732,649. (Cl. 74—46.)



1. In a device of the kind described, the combination with a knife switch-element adapted to control an electrical feed circuit of switch-operating mechanism comprising a lift-lever, a guide-member for supporting said lift-lever, a crank-member for operating said lift-lever, means for automatically moving said guide-member to carry said lift-lever into and out of the path of the movable member of said knife switch-element, and means for rotating said crank-member to actuate the lifting movement of said lift-lever.

2. In a device of the kind described, the combination with a switch-element provided with a pivoted switch-member of switch closing and opening mechanism comprising, a pivoted guide-member provided with a trigger-arm, a coil-spring connected between said trigger-arm and said pivoted switch-member, a lift-lever movably related to said guide-member having means for engaging said pivoted switch-member, a crank-member for actuating said lift-lever, means for rotating said crank-member, and a releasable means engaging said trigger-arm of said guide-member to hold the latter in position to guide said lift-lever in the path of movement of said pivoted switch-member.

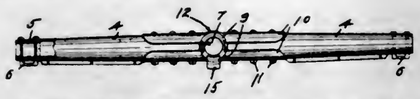
3. In a device of the kind described, the combination with an electric motor of a switch-element adapted to control an electrical feed circuit for said motor, said switch element having a pivoted switch-member, means for closing and opening said pivoted switch-member comprising, a pivoted guide-member provided with a trigger-arm, a coil-spring connected between said trigger-arm and said pivoted switch-member, a lift-lever, a rotatable crank-member connected with the lower end of said lift-lever, the upper end of said lift lever being movably related to said guide-member, said lift-lever having means for engaging said pivoted switch-member, a transmission means driven by said motor and connected with said crank-member, said guide-member being adapted to swing said lift-lever out of and into the path of movement of said pivoted switch-member, and a releasable means adapted to hold said guide-member in normal position to retain said lift-lever in the path of movement of said pivoted switch-member.

4. In a device of the kind described, the combination with an electric motor of a switch-element adapted to control an electrical feed circuit for said motor, said switch element having a pivoted switch-member, means for closing and opening said pivoted switch-member comprising, a pivoted guide-member, a trigger-arm connected with said guide-member, a guide-piece connected with the upper free end of said guide-member, a lift-lever the upper end of which is slidably related to said guide-piece of said guide-member, a supporting-lug extending from said lift-lever adapted to be carried into engagement with said pivoted switch-member, a crank-member to which the lower end of said lift-lever is pivotally connected, a transmission means driven by said motor and connected with said crank-member, a coil-spring connected between said trigger-arm of said guide-member and said pivoted switch-member, a releasable means engaging said trigger-arm for holding said guide-member in normal position, and means for returning said guide-members to normal position after being released from said holding means.

5. In a device of the kind described, the combination with an electric motor of a switch element adapted to control an electrical feed circuit for said motor, said switch element having a pivoted switch-member, means for closing and opening said pivoted switch-member comprising, a lift-lever adapted to be carried in and out of engagement with said pivoted switch-member, a guide-member with which said lift lever is movably related for guiding said lift-lever during its movements, and means driven by said motor for actuating said lift-lever.

[Claims 6 to 13 not printed in the Gazette.]

1,106,417. NECK-YOKE. GUNDER P. SMAAGAARD, Cerrogordo, Minn. Filed Apr. 29, 1914. Serial No. 835,185. (Cl. 21—77.)

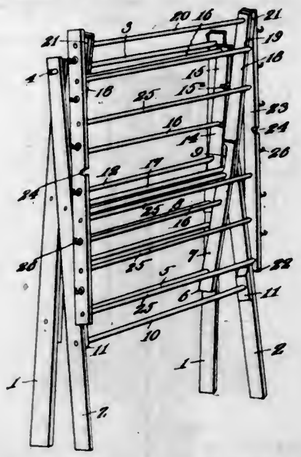


1. A neck yoke comprising a pair of axially alined tubes, a pole socket having at its rear end portion segmental lugs, said pole socket being interposed between the inner ends of said tubes, and upper and lower channel straps connecting said tubes and embracing said pole socket, said straps having in their inner longitudinal edges segmental notches in which said lugs work.

2. A neck yoke comprising a pair of axially alined tubes, a pole socket, having at its forward end a head, and having at its other end upper and lower segmental lugs, said pole socket being interposed between the inner ends of said tubes, and upper and lower channel straps embracing and rigidly secured to the inner end portions of said tubes, said straps being transversely bulged outward to receive said pole socket between its head and segmental lugs, to hold the same against removal from said straps, said straps having in their inner longitudinal edges segmental notches in which the segmental lugs of said pole socket work.

3. A neck yoke comprising a pair of axially alined body members, a pole socket having at its rear end portion, segmental lugs, said pole socket being interposed between the inner ends of said body members, and upper and lower straps connecting said body members, and embracing said pole socket, said straps having, at their inner longitudinal edges, segmental notches, in which said lugs work.

1,106,418. COMBINED CLOTHES-RACK AND TABLE. ISAAC SPRUNGER, Fort Wayne, Ind. Filed Apr. 28, 1913. Serial No. 764,231. (Cl. 68—34.)



1. In a device of the class described, diverging primary and secondary legs; means for preventing a spreading of the legs; a top frame including side bars and rungs connecting the side bars; a main rung forming a pivotal connection between the upper ends of the legs and adapted to fit between certain of the rungs of the top frame to constitute a continuation of the supporting surface of the top frame, the main rung having protruding ends and the side bars of the top frame being supported intermediate their ends by the protruding ends of the main rung; and a support pivoted to one leg and pivoted to one end of the top frame.

2. In a device of the class described, diverging primary and secondary legs; means for connecting the legs pivotally adjacent their upper ends; a horizontally disposed top frame; means for supporting the top frame intermediate its ends; a support pivoted to one end of the top frame; a second frame comprising bars and rungs; means for pivotally supporting the second frame on the primary legs; a rung connecting the secondary legs and adapted to fill between certain of the rungs of the second frame, to constitute a continuation of the supporting surface of said frame, the lower end of the support being pivotally mounted on said rung.

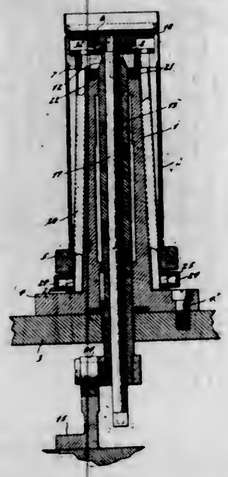
3. In a device of the class described, diverging primary and secondary legs; a top frame; means for supporting the top frame; a second frame including side bars and rungs; means for pivotally supporting the second frame on the primary legs; a rung connecting the secondary legs and adapted to fit between certain of the rungs of the second frame to constitute a continuation of the supporting surface thereof, the side bars of the second frame having means for interlocking with said rung to prevent a spreading of the legs; and a support pivoted to the last specified rung and pivoted to one end of the top frame.

1,106,419. BOTTOMING-MACHINE. ALDEN B. STARR, New York, N. Y. Filed Oct. 2, 1913. Serial No. 792,929. (Cl. 93—55.)

1. In a bottoming machine a rotating dial, a mandrel on said dial over which is positioned the body of the receptacle, means for directing a compressed fluid medium against the bottom of the receptacle to remove the same from the mandrel when said mandrel reaches a determined point in its path, said means comprising a structure removably supported on said mandrel.

2. In a bottoming machine, a mandrel over which is positioned the body of the receptacle, means for directing a compressed fluid medium against the bottom of the re-

ceptacle to remove the same from the mandrel comprising a plurality of tubes arranged around said mandrel, and means supported by said mandrel for uniting the ends of the tubes, said tubes and means forming a unitary structure removable from the mandrel.



3. In a bottoming machine, a rotating dial, a mandrel fastened to said dial over which is positioned the body of the receptacle, means for directing a compressed fluid medium against the bottom of the receptacle to remove it from the mandrel comprising a plurality of tubes mounted on said mandrel and communicating with openings in the dial, and means for admitting compressed fluid to said openings at a predetermined period in the rotation of the dial.

4. In a bottoming machine, a mandrel over which the body of the receptacle is positioned, means for directing a compressed fluid medium against the bottom of the receptacle to remove it from the mandrel comprising a plurality of tubes mounted on said mandrel, a ring for connecting said tubes together at one of their ends, said ring having a conduit therein communicating with each of said tubes and a pipe connected to said last-named ring and opening into said conduit.

5. In a bottoming machine, the combination of a mandrel over which the body of the receptacle is positioned, a solid circular die mounted on said mandrel and adapted to fit within the open end of the tube, means for directing a compressed fluid medium against the bottom of the receptacle to remove it from the mandrel comprising passages arranged longitudinally of the mandrel, said die having openings therein to distribute the air against the inner surface of the bottom of the receptacle.

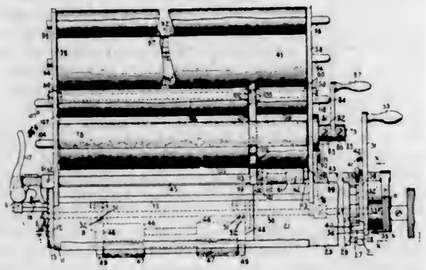
[Claim 6 not printed in the Gazette.]

1,106,420. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 22, 1912. Serial No. 710,903. (Cl. 197—127.)

1. In a typewriting machine, the combination of a platen comprising a plurality of sections, line spacing ratchet wheels for each section, a single hand controlled pawl coöperative therewith, and means for affording differential feeding movemnts of said platen sections.

2. In a typewriting machine, the combination of a platen comprising a plurality of sections constantly free to be rotated independently of each other, and differential line spacing mechanism for advancing said sections differentially, said mechanism comprising a single hand-actuated pawl.

3. In a typewriting machine, the combination of a platen comprising a plurality of sections constantly free to be rotated independently of each other, line spacing mechanism comprising a single pawl, and means for affording an advance of one platen section each time said pawl is actuated and for affording an intermittent advance of another platen section.

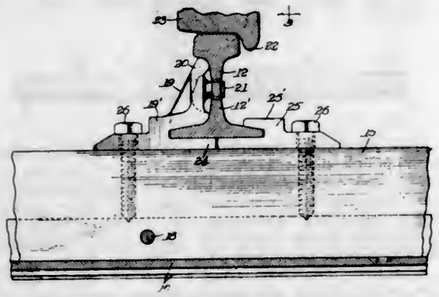


4. In a typewriting machine, the combination of a platen comprising a plurality of independent co-axial sections, line spacing ratchet wheels one for each section and arranged side by side, a hand controlled pawl having a tooth coöperative with both of said ratchet wheels, and means for affording differential action of said pawl on said ratchet wheels.

5. In a typewriting machine, the combination of a platen comprising a plurality of independent co-axial sections, line spacing ratchet wheels one for each section and arranged side by side, and a hand controlled pawl having a tooth coöperative with both of said ratchet wheels, said pawl coöperating with one of said ratchet wheels at each actuation but coöperating only intermittently with the other ratchet wheel.

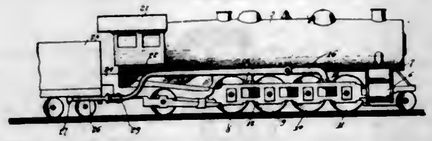
[Claims 6 to 27 not printed in the Gazette.]

1,106,421. MEANS FOR SUPPORTING RAILWAY-RAILS. ALFRED L. STEVENS, Chicago, Ill. Filed May 10, 1913. Serial No. 766,670. (Cl. 238—2.)



A rail support for the meeting ends of rigidly supported railway rails, comprising a tie plate base portion, to underlie the rails; an angular brace portion, extending upwardly from the plate, having on its upper edge a bead adapted for engagement under the head of the rail and a second bead below the first for engagement with the web of the rail at its juncture with the base, the portion of the brace between the two beads being offset from contact with the web of the rail; laterally extending studs, integral with the brace projecting from the offset portion thereof and adapted to engage the usual orifices provided in the webs of the rails, said brace portion at its longitudinal center adjacent the juncture of the rails being transversely enlarged and pocketed at its inner face; and means, for securing the edge portions of the rails to the tie upon the side opposite to that upon which said fitting is placed.

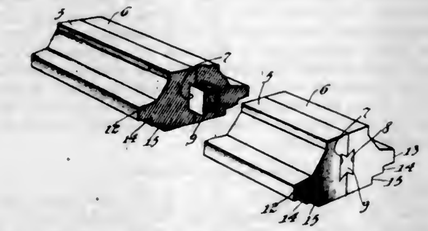
1,106,422. LOCOMOTIVE ATTACHMENT. ALFRED L. STEVENS, Chicago, Ill. Filed Oct. 27, 1913. Serial No. 797,433. (Cl. 105—99.)



1. In combination with a self propelled vehicle having a plurality of pairs of traction wheels, of a U-shaped load-pulling connecting means, having its free ends pivoted to opposite sides of said vehicle in vertical planes between said wheels, with its closed end extending to the rear of the vehicle, and a draw bar carrying a pulley for lateral movement across the closed end of said connecting means.

2. In combination with a locomotive having a plurality of pairs of traction wheels and axles therefor, of truck frames carrying the opposite ends of the axles, yokes secured to the truck frames and extending upwardly therefrom, a U-shaped load pulling connecting means having its free ends pivoted to the said yokes at each side of the locomotive in vertical plane between said traction wheels with its closed end extending to the rear of the locomotive and a laterally movable connecting means for attachment to the load, associated with said closed end.

1,106,423. RAILWAY CROSS-TIE. ALFRED L. STEVENS, Chicago, Ill. Filed Apr. 17, 1914. Serial No. 832,460. (Cl. 238—1.)



A wooden railway tie composed of two major members each having a dove-tailed channel in one of its longitudinal edges, a key for insertion in said channels to hold the member together, said joint thus provided being immediately below the weight bearing surface of the tie.

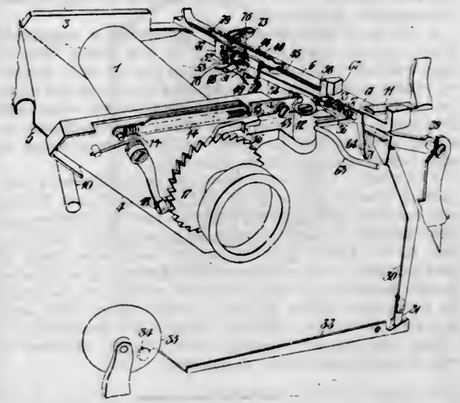
1,106,424. TYPE-WRITING MACHINE. ELISHA EMMANUEL STRONG, Paris, France, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 1, 1913. Serial No. 764,754. (Cl. 197—189.)

1. In a typewriting machine, the combination with a carriage and a line-space mechanism thereon, of a signal device upon the machine frame, and a train of mechanism operated by the line-space mechanism and including parts on the carriage, to actuate the signal on the machine frame after a pre-determined number of operations of said mechanism.

2. In a typewriting machine, the combination of a signal device, means to operate said device as each line of writing nears completion, and additional means causing said device to operate automatically after a predetermined number of lines have been written.

3. In a typewriting machine, the combination with a traveling carriage and a rotary platen thereon, of a signal automatically operated by the travel of the carriage, mechanism to rotate the platen, and means controlled by said mechanism to operate the signal.

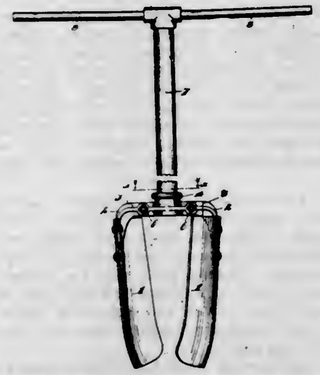
4. In a typewriting machine, the combination with a traveling carriage and a rotary platen carried thereby, of a signal automatically operated when the carriage reaches a pre-determined position in its travel, platen-rotating mechanism, and means causing said signal to operate automatically after a predetermined rotation of the platen.



5. In a typewriting machine, the combination with a carriage and a line-spacer thereon, of a signal upon the machine frame, and a signal-controlling train mounted partly on the carriage and extending to the signal, said train including a device to which a step-by-step movement is imparted by the operation of the line-spacer to actuate the signal on the machine frame after a predetermined number of operations of the line-spacer.

[Cl. 6 to 25 not printed in the Gazette.]

1,106,425. EARTH-AUGER. CHARLES A. SUHR, Chicago, Ill. Filed Jan. 5, 1914. Serial No. 810,394. (Cl. 255—66.)



1. An earth auger comprising two blades; a supporting bracket at the upper end of each of said blades; each of said brackets being provided with a portion of a handle socket coöperating with the portion on the other to complete the socket when said brackets are secured together; means for detachably securing said brackets together; and a handle secured in said socket, substantially as described.

2. An earth auger comprising two blades; a supporting bracket at the upper end of each of said blades, each of said brackets being provided with a portion of a threaded handle socket coöperating with a portion on the other to complete the socket when said brackets are secured together; means for detachably securing said brackets together; and a handle threaded in said socket, substantially as described.

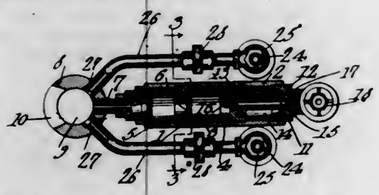
3. An earth auger comprising two blades; a supporting bracket at the upper end of each of said blades, each of

said brackets being provided with a portion of a handle socket coöperating with the portion on the other to complete a socket having a closed bottom when said brackets are secured together; means for detachably securing said brackets together; and a handle secured in said socket, substantially as described.

4. An earth auger comprising two blades; a supporting bracket at the upper end of each of said blades, each of said brackets being provided with a portion of a threaded handle socket coöperating with the portion on the other to complete a socket having a closed bottom when said brackets are secured together; means for detachably securing said brackets together; and a handle threaded in said socket, substantially as described.

5. An earth auger comprising two auger blades; a supporting bracket at the upper end of each of said blades, said brackets extending but slightly above said blades and then turning inwardly sharply at substantially right angles to the blades and overlapping each other, each of said brackets being provided with a portion of a threaded handle socket coöperating with the portion on the other to complete a socket having a closed bottom when said brackets are secured together; means for detachably securing said brackets together; and a handle threaded in said socket, substantially as described.

1,106,426. OIL-BURNER. WALTER MENELIOUS SURFACE, Kingman, Kans. Filed Apr. 15, 1914. Serial No. 832,030. (Cl. 158—75.)



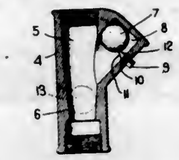
1. In a hydro-carbon burner, communicating primary and secondary mixing chambers, a pressure fluid chamber communicating with the primary mixing chamber, fuel supplying means communicating with the primary mixing chamber, valve-controlled pressure fluid supplying means communicating with the pressure fluid chamber, and a pair of valve-controlled pressure fluid supplying means including converging nozzles attached to the secondary mixing chamber, said secondary mixing chamber having an outlet.

2. In a hydro-carbon burner, a primary mixing chamber having a nipple at one end, a secondary mixing chamber attached to the said nipple and having an opposite outlet, coöperating fuel supplying means and pressure fluid supplying means communicating with the primary mixing chamber, and a pair of pressure fluid supplying means including controlling valves, and converging outlet nozzles attached to the secondary mixing chamber at the opposite sides of the said nipple.

3. In a hydro-carbon burner, a primary mixing chamber having an outlet nipple, a secondary mixing chamber attached to the said nipple and having an opposite outlet, and a pair of valve-controlled pressure fluid supplying means having converging outlet portions connected to the secondary mixing chamber adjacent the said nipple.

1,106,427. AUTOMATIC SHUT-OFF VALVE. JAMES C. TAYLOR, Boston, Mass., assignor of one-third to Charles H. Maiers, Norwood, Mass., and one-third to John Galway, Boston, Mass. Filed July 17, 1913. Serial No. 779,471. (Cl. 137—92.)

1. A valve comprising a casing having a passage therethrough, a portion of the passage being gradually tapered and a laterally disposed portion integral with said casing forming a valve receiving recess having its outer end closed, said recess opening into the passage above the tapered portion, a ball valve mounted in said recess and adapted to fit the tapered portion and a retaining member having a fusible part positioned to normally hold the ball valve in the lateral chamber.

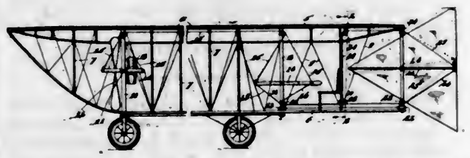


2. An automatic shut-off valve comprising a casing having a straight passage therethrough, a portion thereof being gradually tapered and a laterally disposed portion integral with said casing forming a valve receiving recess having its outer end closed, said recess opening into the passage above the gradually tapered portion, a ball valve mounted in the lateral chamber and a fusible retaining member holding the ball valve in its position in the lateral chamber adapted upon being heated to allow the ball valve to drop into the tapered portion and wedge therein.

3. A valve comprising a casing having a passage therethrough, and a laterally disposed portion integral with said casing forming a valve receiving recess having its outer end closed, said recess opening into the passage, a ball valve mounted in the lateral recess and adapted to fit the passage, and a retaining member having a fusible part positioned to normally hold the ball valve in the lateral recess.

4. An automatic shut off valve comprising a casing having a passage therethrough, a laterally disposed portion integral with said casing forming a valve receiving recess having its outer end closed, said recess opening into said passage, a ball valve mounted in the lateral recess, and a plug fitting an aperture in the wall of said laterally disposed portion, said plug provided with a fusible portion and so positioned as to normally retain the valve in said lateral recess but adapted upon being heated to allow the valve to drop into said passage, substantially as and for the purpose set forth.

1,106,428. AEROPLANE. WALTER E. VERCLAIRE, Chicago, Ill. Original application filed Dec. 23, 1912, Serial No. 738,201. Divided and this application filed Mar. 25, 1914. Serial No. 827,089. (Cl. 244—29.)



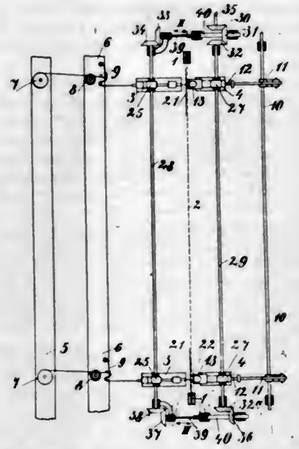
1. In an aeroplane, a frame; a longitudinally slotted post pivoted in said frame; a rudder plane secured in the slot of said post; a horizontally disposed slotted shaft journaled centrally of and in said post; a stabilizing plane secured in the slot of said shaft; and means for operating each of said planes separately from the other, substantially as described.

2. In an aeroplane, a frame; a longitudinally slotted post pivoted in said frame; a rudder plane secured in the slot of said post; a horizontally disposed slotted shaft journaled centrally of and in said post; a stabilizing plane secured in the slot of said shaft; lateral arms on said post; steering cables connected with said arms; and controlling cables connected with the rear edge of said stabilizing plane, substantially as described.

3. In an aeroplane, a frame; a longitudinally slotted post pivoted in said frame; a rudder plane secured in the slot of said post; a horizontally disposed slotted shaft journaled centrally of and in said post; a stabilizing plane secured in the slot of said shaft; lateral arms on said post; steering cables connected with said arms; pulleys at the top and bottom portions of said post; and controlling cables over said pulleys and connected with the rear edge of said stabilizing plane, substantially as described.

4. In an aeroplane, a slotted vertical post rotatably mounted therein; a rudder plane secured in the slot of said vertical post; controlling arms on said vertical post; a second slotted vertical post rotatively mounted in the aeroplane; arms on said second vertical post; cables connecting the arms of said first vertical post with the arms of said second vertical post; stabilizing planes pivotally mounted on said first vertical post; a lever fulcrumed in the slot of said second vertical post for vertical swinging and connected to rotate said second vertical post; and cables connecting said lever with said stabilizing planes, substantially as described.

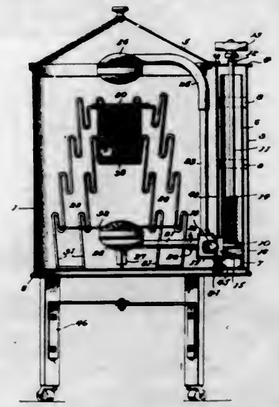
1,106,429. EMBROIDERING-MACHINE. OTTO WALTHER, Chemnitz, Germany. Filed Dec. 31, 1912. Serial No. 739,572. (Cl. 112—7.)



In an embroidering machine, the combination of reciprocating and rotary needle-slides, needles secured thereto, swinging and rotary loopers to co-act with the needles for the formation of chain-stitches, a driving spindle, worms connected to the sides and loopers, worm-wheels to gear with the worms, bevel-gearings to connect the worm-wheels with the driving spindle, and means to allow part of the bevel-gearings to participate in the reciprocating movement of the slides, substantially as and for the purpose set forth.

1,106,430. DISH-WASHING MACHINE. MARY JANE WEAVER, Cincinnati, Ohio. Filed Mar. 5, 1914. Serial No. 822,689. (Cl. 141—9.)

1. A washing machine comprising an open-top tank, a removable cover for closing said open top, said tank provided approximately throughout its vertical length with a recess in its surrounding wall formed by an outward bulge in said wall, said recess having a permanent top wall, a pump barrel arranged in said recess, means removably clamping said barrel to the bulged portion of the wall, said barrel having a foot engaging the tank bottom and a suction inlet near said bottom, said pump provided with operating means extending to the exterior of the tank through said wall, discharge pipes within the tank extending from said barrel to the upper and lower portions of the interior of the tank and there provided with spray heads, said pipes having removabe sections carrying said spray heads and located below and independent of said cover, and removable means in said tank to receive and carry the dishes, substantially as described.



2. A washing machine comprising a tank having an open top and a cover therefor, a pump secured within the tank and having actuating means operative from the exterior thereof, said pump comprising a barrel having a valved inlet from the bottom of the tank and also having a discharge chamber with a discharge outlet from the barrel thereinto provided with a valve to prevent back flow of water from the chamber into the barrel, a pipe in the lower portion of the tank extending from said chamber and provided with an upwardly discharging spray head, and a pipe extending from said chamber to a point below and independently of said cover and provided with a downwardly discharging spray head.

3. A washing machine comprising a tank having a removable cover, a removable dish rack in said tank, a pump having a suction inlet from the bottom of the tank and also having a fixed discharge chamber into which the pump discharges, means to prevent liquid from flowing back from said chamber into the pump, a discharge pipe from said chamber comprising a removable section in the bottom of the tank having a foot and an upwardly discharging spray head, and another discharge pipe from said chamber arranged within the tank below and independent of said cover and above said dish rack and comprising a removable goose neck provided with a downwardly discharging spray head.

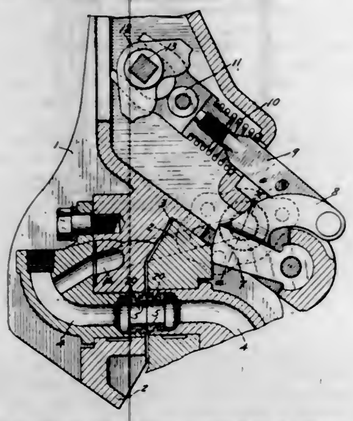
1,106,431. COMBINED CAR AND PIPE COUPLING. HENRY H. WESTINGHOUSE, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 17, 1911. Serial No. 660,805. (Cl. 116—1.)

1. An automatic car coupler comprising a coupler head provided with a projecting portion adapted to engage a similar portion on a counterpart coupler head and an opening in said projecting portion for coupling a fluid pressure conduit, a locking lever for clamping the coupler heads together, and means operated according to the position of the locking lever for venting fluid from said conduit.

2. An automatic car coupler comprising a coupler head provided with a projecting portion adapted to engage a similar portion on a counterpart coupler head and an opening in said projecting portion for coupling a fluid pressure conduit, a locking lever for clamping the coupler heads together, and means operated by said locking lever in positions other than the fully locked position for venting fluid from said conduit.

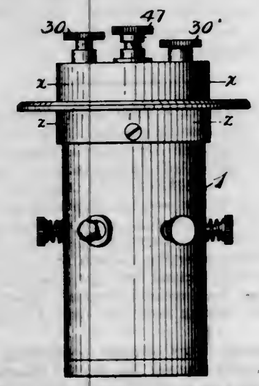
3. An automatic car coupler comprising a coupler head provided with a projecting portion adapted to engage a similar portion on a counterpart coupler head and an opening in said projecting portion for coupling a fluid

pressure conduit, a locking lever for clamping the coupler heads together, fluid pressure operated means for holding said lever in locking position, and a port controlled by said fluid pressure operated means for venting air from said conduit upon failure of said fluid pressure controlled means to fully move to its locking position.



4. An automatic car coupler comprising a coupler head provided with a projecting portion adapted to engage a similar portion on a counterpart coupler head and an opening in said projecting portion for coupling a fluid pressure conduit, a locking lever for clamping the coupler heads together, a piston subject to the fluid pressure of said conduit and having a stem for engaging said locking lever, a port for permitting the escape of fluid under pressure past said piston, and a seat on said piston for closing communication through said port in the fully locked position of said piston.

1,106,432. IGNITION SYSTEM. ERNEST C. WILCOX, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Meriden, Conn., a Corporation of Connecticut. Filed May 10, 1913. Serial No. 766,667. (Cl. 123—165.)



1. In an ignition system, the combination of a battery, an induction coil, an interrupter, contact making means for cutting said elements in and out of circuit normally tending to move to open position, means for retaining said contact making means in closed position when moved thereto, a thermostat controlled by said means and in circuit with said battery when the circuit through said interrupter is completely closed, a buzzer controlled by said thermostat for retracting said retaining means when said circuit through said interrupter is completely closed for a predetermined period.

2. In an ignition system, the combination of a battery, an induction coil, an intetrrupter, contact making means for cutting said elements in and out of circuit normally tending to move to open position, means for retaining said contact making means in closed position when moved thereto, a thermostat controlled by said means and in circuit with said battery when the circuit through said interrupter is completely closed, a buzzer controlled by said thermostat for retracting said retaining means when said circuit through said interrupter is completely closed for a predetermined period, said buzzer being in shunt to said primary coil.

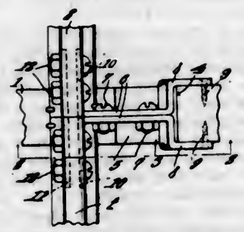
3. In an ignition system, the combination of a battery, an induction coil, an interrupter, contact making means for cutting said elements in and out of circuit normally tending to move to open position, means for retaining said contact making means in closed position when moved thereto, a thermostat controlled by said means and in circuit with said battery when the circuit through said interrupter is completely closed, a buzzer controlled by said thermostat for retracting said retaining means when said circuit through said interrupter is completely closed for a predetermined period, said buzzer being in shunt to said primary coil, and one of the interrupter contacts of said buzzer being carried by the movable portion of said thermostat.

4. In an ignition system, the combination of a battery, an induction coil, an interrupter, a contact making means for cutting said elements in and out of circuit normally tending to move to open position, means for retaining said contact making means in closed position when moved thereto, a thermostat controlled by said means and in circuit with said battery when the circuit through said interrupter is completely closed, a buzzer controlled by said thermostat for retracting said retaining means when said circuit through said interrupter is completely closed for a predetermined period, said buzzer being in shunt to said primary coil, said thermostat consisting of a thermostatic couple and an electric heating coil in proximity thereto, the free end of said couple carrying one of the interrupter contacts of said buzzer.

5. In an ignition system, the combination of two batteries, an induction coil, an interrupter, two contact making means for connecting said batteries one at a time in series with said coil and interrupter, a thormostat controlled by said contact making means and in circuit with either of said batteries when the circuit through either of said batteries and interrupter is completely closed, and means controlled by said thermostat for returning said contact making means to open position when said circuit is completely closed for a predetermined period and an interlocking member blocking one of said contact making means whenever the other is actuated to connect a battery in circuit.

[Claims 6 and 7 not printed in the Gazette.]

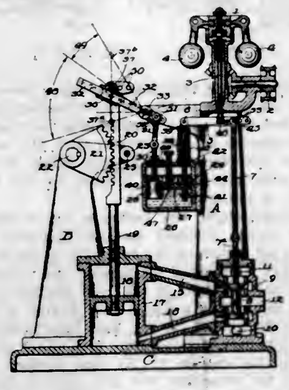
1,106,433. RAIL-BRACE. ROBERT N. WILSON, Colegrove, Pa. Filed May 21, 1914. Serial No. 840,080. (Cl. 239—15.)



1. A rail brace embodying a pair of bars secured together, one pair of ends of the bars being offset away from each other to provide a tie-straddling fork, and the other ends of the bars being bent angularly to provide a fish plate.

2. In combination, a tie, a rail seated thereon, the tie having a recess providing an inclined shoulder facing the rail, and a brace having an inclined fork at one end straddling the tie, the crotch portion of the fork lying in an inclined plane and resting against the said shoulder, and the brace having a portion at its other end to fit the web of the rail.

1,106,434. SPEED-REGULATOR. ELMER E. WOODWARD, Rockford, Ill. Filed Apr. 18, 1912. Serial No. 691,646. (Cl. 121—112.)



1. A speed regulator comprising means for controlling the speed of a prime mover, means for compensating for the time required for the speed of said prime mover to respond to a change of the gate thereof, means for automatically adapting said compensating means to varying loads on said prime mover, and means for limiting said compensation and said adaptation to a portion of the full movement of said speed-controlling means.

2. A speed regulator comprising means for controlling the speed of a prime mover, means for compensating for the time required for the speed to respond to a change of the gate of said prime mover, means for automatically adapting said compensating means to varying loads on said prime mover, and means for limiting said compensation to a portion of the full movement of said speed-controlling means.

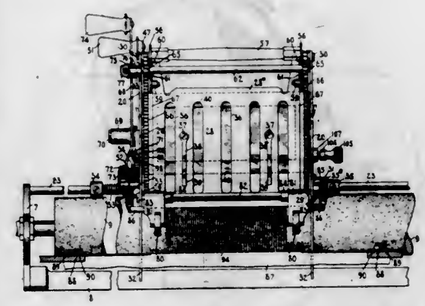
3. A speed regulator comprising means, including fluid pressure mechanism, for controlling the speed of a prime mover, means for compensating for excess effect of said speed-controlling means, means for differentially compensating for varying loads on said prime mover, and means for limiting said differential compensation to a portion of the full movement of said speed-controlling means.

4. A speed regulator comprising means, including fluid pressure mechanism, for controlling the speed of a prime mover, means for compensating for excess effect of said speed-controlling means, and means for differentially compensating for varying loads on said prime mover, said latter means comprising a pivoted lever operatively connecting said compensating means and said mechanism.

5. A speed regulator comprising means, including fluid pressure mechanism, for controlling the speed of a prime mover, means for compensating for excess effect of said speed-controlling means, and means for differentially compensating for varying loads on said prime mover, said latter means comprising a pivoted lever, said lever being operatively connected to said compensating means, a sliding block, one arm of said lever passing through said block, said fluid pressure mechanism adapted to impart to said block rectilinear reciprocatory movement.

[Claims 6 to 16 not printed in the Gazette.]

1,106,435. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed June 28, 1912. Serial No. 706,361. (Cl. 197—130.)



1. In a typewriting machine, the combination of a platen carrier, a platen thereon, and a card container overhanging said platen and pivotally supported on said platen carrier and provided with arms which rest against an abutment on said platen carrier, said container being supported independently of the platen.

2. In a typewriting machine, the combination of a platen; a platen carrier comprising two cross rods or bars; and a card container loosely pivoted on one of said rods or bars and having portions bearing against the other rod or bar, said container being wholly supported independently of said platen.

3. In a typewriting machine, the combination of a platen; a platen carrier comprising a rod or bar at the rear of the platen and a second rod or bar below the platen; and a card container loosely pivoted on said first named rod or bar and extending forward over the platen frame, said container being provided with downwardly extending arms which abut against the second named rod or bar, said container being wholly supported independently of said platen.

4. In a typewriting machine, the combination of a platen; a platen carrier comprising a rod or bar at the rear of the platen and a second rod or bar below the platen; and a card container comprising arms curving downward at the forward and under sides of the platen and adapted to engage with said second named rod or bar through the force of gravity, said container being wholly supported independently of said platen.

5. In a typewriting machine, the combination of a platen; a platen carrier comprising a rod or bar at the rear of the platen, and a second rod or bar below the platen; and a card container pivoted on said first named rod or bar and extending forward over the platen frame, said container being provided with downwardly extending arms which abut against the second named rod or bar; and a spring for assisting to maintain said arms in contactive engagement with the rod or bar against which they rest.

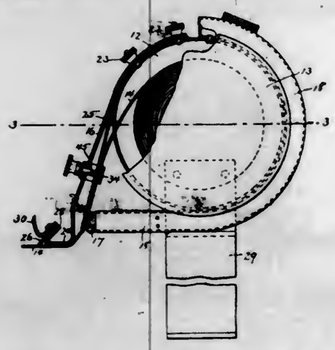
[Claims 6 to 55 not printed in the Gazette.]

1,106,436. ELECTROLYTIC MANUFACTURE OF ALKALI METALS. EDGAR ARTHUR ASHCROFT, London, England. Filed May 23, 1914. Serial No. 840,496. (Cl. 204—21.)

1. An electrolyte for use in the manufacture of alkali metals, containing as essential constituents, alkali hydroxid and alkali cyanid.

2. An electrolyte for use in the manufacture of metallic sodium, containing as essential constituents, caustic soda and sodium cyanid, in substantially the proportions of 63 parts by weight of caustic soda to 30 parts by weight of sodium cyanid.

1,106,437. DEVICE FOR APPLYING GUMMED STRIPS TO PACKAGES, &c. EDWARD C. BALDWIN, Boston, Mass. Filed Dec. 14, 1908. Serial No. 467,347. (Cl. 216—21.)



1. A strip-applying device comprising a strip-holder, a strip-backing member, means for applying and severing the strip, a reservoir movable toward and from the backing member, and having a moistener adapted to act on a strip bearing on the backing member, said moistener being normally retracted from the backing member and strip, and means actuated by a pull on the strip for moving the moistener toward the backing member.

2. A strip-applying device comprising a strip-holder, a strip-backing member, a reservoir movable toward and from the backing member and having a moistener adapted to act on a strip bearing on the backing member, said reservoir being yieldingly held with the moistener retracted from the backing member, a presser-foot pivoted adjacent to the backing member and movable on its pivot by a pull on the strip, and connections between the presser-foot and the reservoir, whereby the reservoir is moved toward the backing member by a movement of the presser-foot.

3. A strip-applying device comprising a strip-holder, a strip-backing member, means for applying and severing the strip, a reservoir movable toward and from the backing member, and having a strip-moistener which is normally retracted from the backing member and strip, and a guide between the backing member and moistener to prevent contact between the strip and moistener, when the latter is retracted.

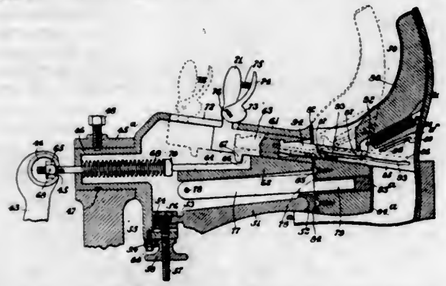
4. A strip-applying device comprising a strip-holder, a strip-backing member, means for applying and severing the strip, oscillatory supports adjacent to the backing member, and a reservoir removably secured to said supports, and provided with a moistener adapted to act on a strip bearing on the backing member, said reservoir being movable with its supports to retract and project the moistener.

5. A strip-applying device comprising a strip-holder, a strip-backing member, oscillatory supports adjacent to the backing member, a reservoir carried by said supports and provided with a moistener, a pivoted presser-foot having an arm, and connections between said arm and the reservoir, whereby a movement imparted to the presser-foot by a pull on the strip is imparted to the reservoir.

[Claims 6 to 8 not printed in the Gazette.]

1,106,438. TREE. HARRIS A. BALLARD, Ashland, Mass., assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed May 7, 1902. Serial No. 106,263. (Cl. 12—116.)

1. In combination, a tree having a leg, a locking member located in said leg, a two-part foot comprising a heel and a forepart, and a complemental locking member connected to the forepart and adapted for engagement with the member in the leg whereby the leg and foot are secured together, said members being substantially parallel with the plane of division of the forepart and the heel part.



2. In combination, a tree having a leg, a movable locking member located in the leg, a foot comprising a forepart and a heel part, and a complemental locking member on the foot adapted for engagement with the member in the leg, the first-mentioned member being movable in parallelism with the plane of division of the heel part and forepart of the foot.

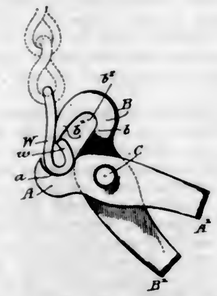
3. In combination, a tree having a leg, a foot having a heel part and a forepart movable relatively to each other, means for attaching the heel part to the end of the leg, and means in the leg for moving the forepart relatively to the heel part and to the front portion of the leg.

4. A tree comprising a leg, a last having a top complemental to the end of the leg, said last having a heel-part and a fore-part, divided from each other on a plane inclined from the bottom of the last upward and forward, means for attaching the heel part to the end of the leg, and means in said leg for moving said fore-part transversely of the adjacent end of the leg.

5. A tree comprising a leg, a last having a top complemental to the end of the leg, said last having a heel-part and a fore-part divided from each other on a plane inclined from the bottom of the last upward and forward, means for attaching the heel part to the end of the leg, an operating spindle or slide in said leg having means for attachment to said fore-part, and means for causing longitudinal relative movement of said heel-part and fore-part.

[Claims 6 to 48 not printed in the Gazette.]

1,106,439. TOOL FOR OPENING AND CLOSING THE LINKS OF CHAINS. LOUIS CONNE, Chicago, Ill., assignor of one-half to Henry Isaacs, Chicago, Ill. Filed July 8, 1908. Serial No. 442,467. (Cl. 81—3.)



A tool for opening and closing chain links comprising two pivoted, relatively long and short, opposing jaws of substantially the same width, each of said jaws having a broad, wedge shaped, edge and a handle, said relatively short jaw having a recessed, curved seat, arranged substantially in line with its handle and extending from its edge to approximately the line of intersection of the jaws, and adapted to receive the looped end of a chain link in the opening and closing operations, said relatively long jaw being U-shaped with the inner faces of the side portions thereof substantially parallel to each other and to the edge of the jaw and at right angles to its handle, the recess between said inner faces being of relatively greater depth than width, the broad, wedge shaped end of said relatively long, U-shaped jaw being arranged to close inside of and adjacent the edge of the opposite, relatively short jaw, with its inner face substantially at right angles to the seat of said relatively short jaw and spaced apart from the inner portions of both of said jaws, whereby the spread portions at the end of the chain link may be received in the recess of said relatively long, U-shaped jaw without pinching the same, substantially as described.

1,106,440. SHEET-ATTACHING DEVICE FOR STENCIL-MACHINES. EDWIN A. COX, Dayton, Ohio, assignor to The Rotospeed Company, Dayton, Ohio, a Corporation of Ohio. Filed May 22, 1912. Serial No. 699,025. (Cl. 101—132.)



1. In a stencil printing machine, in combination with a stencil supporting segment, an angle plate having one of its flanges secured to one end of the segment and its other flange provided with forwardly projecting prongs, an ink pad detachably engaged with some of the prongs, and a stencil sheet having apertures positioned to correspond with the position of all the prongs and attached to all of said prongs.

2. In a stencil printing machine, the combination, with a stencil supporting segment, of a plate attached to the segment and having a portion arranged within the circumference of a circle described on the radius of said segment, said portion of said plate having outwardly projecting prongs, an ink pad having a portion provided with apertures to receive said prongs to attach the pad to the plate, said plate having a second series of prongs arranged in advance of the first series, and a stencil sheet adapted to extend across the apertured portion of said ink pad and having apertures to receive the prongs of said second series.

3. In a stencil printing machine, the combination, with a stencil supporting segment, of a plate attached to and extending in front of said segment, said plate having two series of outwardly projecting prongs, an ink pad, and a stencil sheet mounted in superposed relation on said segment, said ink pad having apertures to receive the prongs of one series and said stencil sheet having apertures to receive the prongs of the other series.

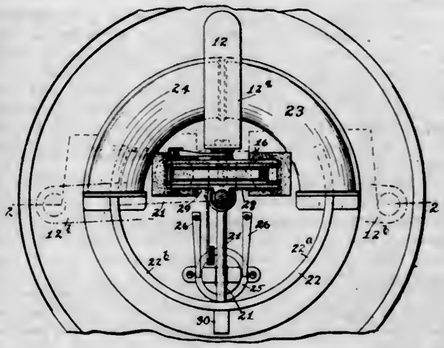
4. An attaching plate for ink pads and stencil sheet of a stencil printing machine, said plate having stepped bearings, and separate rows of prongs inclining from their respective bearings in the direction of movement of the plate.

5. In a stencil printing machine, a stencil supporting segment having an extension at one end thereof, said extension being provided with a bearing surface and with prongs projecting outwardly between the front and rear edges of said bearing surface and inclined in the direction of rotation, and a flexible sheet supported by said segment and having a part engaging said bearing surface and provided with apertures through which said prongs project.

[Claims 6 to 12 not printed in the Gazette.]

1,106,441. SIGNALING MECHANISM. HENRY C. CRUMRINE, Cleveland, Ohio. Filed July 5, 1912. Serial No. 707,679. (Cl. 177—337.)

1. The combination with a vehicle, signaling mechanism for indicating the stopping or turning of the vehicle to the right or left, said signaling mechanism including an arm adapted to be turned on its longitudinal axis and to be swung from upright position to the right or to the left, and separate devices for turning the arm about its longitudinal axis and for swinging the arm from upright position.



2. In combination with a vehicle, signaling mechanism carried thereby for indicating the stopping or turning of the vehicle to the right or left, said signaling mechanism including an arm adapted to be turned on its longitudinal axis and to be swung from upright position to the right or to the left, and means for turning the arm about its longitudinal axis while the arm is in upright position and for swinging the arm in either direction from upright position.

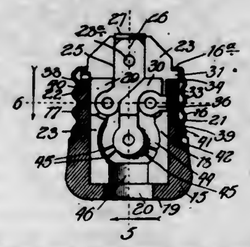
3. In combination with a vehicle, signaling mechanism carried thereby for indicating the stopping or turning of the vehicle to the right or left, said signaling mechanism including an arm adapted to be turned on its longitudinal axis and to be swung from upright position to the right or to the left, means for turning the arm about its longitudinal axis while the arm is in upright position, and for swinging the arm from upright position either to the right or to the left, said means including a plurality of magnets, a source of current, and switching devices under the control of the operator for energizing the magnets.

4. A signaling mechanism including an arm adapted to be turned on its longitudinal axis, and to be swung from normal position to the right or to the left, and means for giving to said arm a turning movement about its longitudinal axis only, or for giving to said arm both a swinging movement to the right or left, and said turning movement.

5. In combination in a signaling mechanism, a movable arm, a magnet for turning said arm about its longitudinal axis, a pair of magnets for swinging said arm from normal position to the right and to the left respectively, and switching means for controlling the energization of said magnets.

[Claims 6 to 11 not printed in the Gazette.]

1,106,442. ELECTRIC PLUG. FREDERICK DEISER, Chicago, Ill., assignor to Chi-Ill-Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 24, 1911. Serial No. 656,457. (Cl. 173—351.)



1. An electric plug comprising relatively rotatable members, a threaded metal shell screwed upon one of said mem-

bers, electrical connections on the other of said members for electric wires, a contact on said last referred to member in circuit with one of said connections, means electrically connecting said shell with the other of said connections, and means on said shell operating when the latter is screwed into place to prevent said members from separating.

2. An electric plug comprising a member provided with electrical connections for electric wires, a contact on said member in circuit with one of said connections, an apertured member and embracing said first-named member, a threaded metal shell on said apertured member, and contacting metal members confined between said first-named member and said apertured member and in circuit, respectively, with the other of said connections and with said shell.

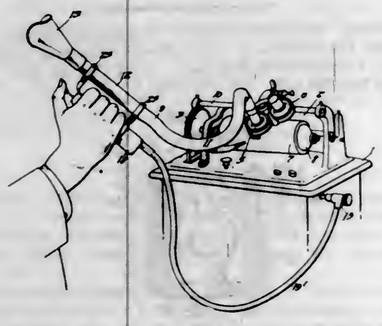
3. An electric plug comprising relatively rotatable members, electrical connections on one of said members for electric wires, a threaded metal shell on the other of said members and embracing the one of said members provided with said electrical connections, a contact on said last referred to member in circuit with one of said connections, and relatively movable contacting metal members one of which is connected with the other of said connections and the other of which engages with said shell, for the purpose set forth.

4. An electric plug comprising relatively rotatable members, electrical connections on one of said members for electric wires, a threaded metal shell on the other of said members and embracing the one of said members provided with said electrical connections, a contact on said last referred to member in circuit with one of said connections, and metal contacting members on said first-named members and confined between transversely opposing portions of the latter, said metal members being connected, respectively, with the other of said connections and with said metal shell.

5. An electric plug comprising relatively rotatable members having transversely-extending opposing surfaces, electrical connections on one of said members for electric wires, a threaded metal shell on the other of said members and embracing the one of said members provided with said electrical connections, a contact carried by said last referred to member and in circuit with one of said connections, contacting curved metal members confined between the opposing surfaces of said first-named members and in circuit, respectively, with the other of said connections and with said shell, for the purpose set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,106,443. CONTROLLING DEVICE. NELSON C. DURAND, Newark, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed May 15, 1912. Serial No. 697,422. (Cl. 181—2.)



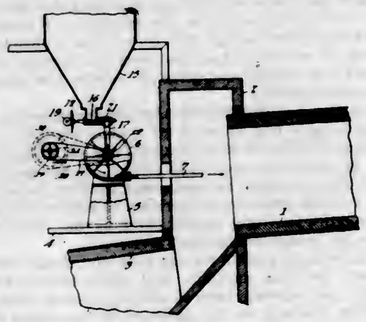
1. In a device of the class described, the combination with phonograph mechanism and operating means therefor, of a sound conveyer having a mouth piece and connected to the phonograph mechanism, and a device applied to said sound conveyer and comprising a member constituting a handle, said handle being offset or spaced from the sound conveyer to enable the same to be grasped by the hand and being provided with controlling means for said operating means, substantially as described.

2. In a device of the class described, the combination with phonograph mechanism and operating means therefor, of a sound conveyer having a mouth piece and connected to the phonograph mechanism, and a device applied to said sound conveyer and comprising a member constituting a handle, said handle being offset or spaced from the sound conveyer to enable the same to be grasped by the hand, said member being provided with controlling means for said operating means in a position adapted to be operated by the thumb, substantially as described.

3. In a device of the class described, the combination with phonograph mechanism and operating means therefor, of a sound conveyer having a mouth piece and connected to the phonograph mechanism, and a device applied to said sound conveyer and comprising a member constituting a handle, said handle being offset or spaced from the sound conveyer to enable the same to be grasped by the hand, said member being provided with pneumatic controlling means for said operating means, substantially as described.

4. In a device of the class described, the combination with phonograph mechanism and operating means therefor, of a sound conveyer having a mouth piece and connected to the phonograph mechanism, and a controlling device for said operating means applied to said sound conveyer, said device comprising a tubular member constituting a handle, said handle being offset or spaced from the sound conveyer to enable the same to be grasped by the hand, and a plunger member mounted within said tubular member and extending beyond one end thereof in a position adapted to be operated by the thumb, substantially as described.

1,106,444. FUEL-FEEDING APPARATUS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Nov. 29, 1907. Serial No. 404,215. (Cl. 110—101.)



1. In a device of the character described, the combination with a closed casing, a series of rotating vanes mounted in the casing, said casing having a peripheral discharge opening arranged tangentially to said vanes, a supply bin, a closed passageway connecting said bin and casing, said passageway being formed with one branch extending from the bin and one branch extending from the casing and being provided with a minute vent at the junction of the two branches, and means located in said first branch for conveying a supply of fuel from the bin to the casing, substantially as described.

2. In a device for feeding pulverized fuel, a closed casing having a peripheral discharge opening, a rotary member mounted within said casing and closely fitting the interior thereof in the vicinity of said opening, means for rotating said rotary member at a high speed, a supply bin a closed passageway between said bin and said casing, and a conveyer in said passageway, said passageway being provided with a minute vent between the conveyer and said casing, substantially as described.

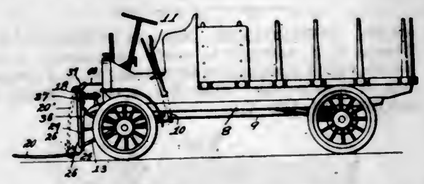
3. In a device of the character described, the combination of a kiln, a supply bin, a closed casing having a nozzle arranged to project fuel into the kiln, a closed passageway connecting said bin and casing, a conveyer in said passageway for supplying fuel to said casing from said bin, said passageway being provided with a minute vent between the conveyer and said casing, and means in said casing adapted to discharge the fuel wholly by impact through said nozzle and into said kiln, substantially as described.

4. In a device of the character described, the combination of a kiln, mechanical means for projecting within and through one end of the kiln and solely by impact, a continuous compact stream of pulverized fuel substantially free from admixed air, and a cooling chamber communicating with the end of the kiln through which the fuel is projected and supplying air to the kiln whereby the stream of fuel will be supplied with a surrounding envelop of air necessary to support combustion, substantially as described.

5. In a device of the character described, the combination of a kiln, means for projecting within the kiln a continuous compact stream of pulverized fuel substantially free from admixed air, and means for supplying the stream of fuel as it enters the kiln with a surrounding envelop of air necessary to support combustion thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

1,106,445. ATTACHMENT FOR VEHICLES. ROBERT FIDLER and PETER NAPIER, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,948. (Cl. 21—90.)



1. The combination with a vehicle having a brake, of a support carried by said vehicle; an obstacle engaging member pivoted to said support; a lever pivoted on said support and having one end connected with said obstacle engaging member; an operative connection between said brake and the other end of said lever; a ratchet rigidly secured on said support; and a pawl carried by said lever and adapted to coöperate with said ratchet, substantially as described.

2. The combination with a vehicle having a brake, of a support carried by said vehicle; an obstacle engaging member pivoted to said support; a lever pivoted on said support and having one end connected with said obstacle engaging member; an operative connection between said brake and the other end of said lever; a ratchet rigidly secured on said support; a pawl carried by said lever and adapted to coöperate with said ratchet; and means for disengaging said pawl from said ratchet, substantially as described.

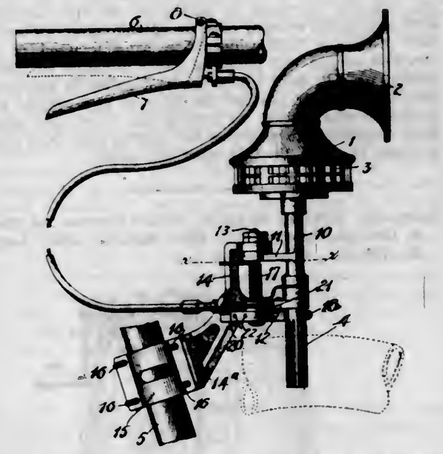
3. The combination with a vehicle having a brake, of a support carried by said vehicle; an obstacle engaging member pivoted on said support and adapted to yield downwardly; a lever pivoted on said support and having one end bifurcated and engaging said obstacle member; an operative connection between the other end of said lever and said brake; a ratchet rigidly secured on said support; and a spring pressed pawl carried by said lever, coöperating with said ratchet and adapted to lock said brake in operative condition upon depression of said obstacle engaging member, substantially as described.

4. The combination with a vehicle having a brake, of a support carried by said vehicle; an obstacle engaging member pivoted on said support and adapted to yield downwardly; a lever pivoted on said support and having one end bifurcated and engaging said obstacle member; an operative connection between the other end of said lever and said brake; a ratchet rigidly secured on said support; a spring pressed pawl carried by said lever, coöperating with said ratchet and adapted to lock said brake in operative condition upon depression of said obstacle engaging member; a manually operable lever; and a connecting link connecting said lever with said pawl and adapted to release the latter from said ratchet to release the brake, substantially as described.

5. The combination with a vehicle having a brake, of an obstacle engaging member operatively connected with said brake; and hinge members supporting said obstacle engaging member, each of said hinge members comprising a rigidly secured portion, a portion pivoted to said obstacle engaging member, a portion pivoted to both of said other portions, and springs normally holding said first and second mentioned portions in overlapped relation, substantially as described.

[Claim 6 not printed in the Gazette.]

1,106,446. CONTROL FOR MECHANICAL SOUND-PRODUCERS. JOHN GORDON, Jr., East Orange, N. J., and ALBERT W. STRINGHAM, Brooklyn, N. Y. Filed Aug. 13, 1910. Serial No. 577,011. (Cl. 116—1.)



1. In an alarm device, the combination of a bracket having a clamp member extending therefrom, a pivot pin carried by said bracket, a sleeve provided with an arm extending therefrom and journaled on said pivot pin, an alarm spindle journaled in said sleeve, a combined back stop and brake extending from said bracket and lying in the arc of swing of said alarm spindle, a spring carried by said bracket and engaging said sleeve to normally swing it in a direction to bring said alarm spindle in engagement with said back stop and brake, and a manually controlled device adapted to swing said sleeve and spindle in the opposite direction and against the force of said spring.

2. In an alarm device, the combination of a bracket having a clamp member extending therefrom, a pivot pin carried by said bracket, a sleeve provided with an arm extending therefrom and journaled on said pivot pin, an alarm spindle journaled in said sleeve, a spring carried by said bracket and engaging said sleeve to normally swing it and its spindle in one direction, a pulley journaled on said pivot pin and connections between said pulley and said sleeve whereby rotation of said pulley may swing said sleeve and alarm spindle in the opposite direction and against the force of said spring, and a flexible operating band wrapped around said pulley.

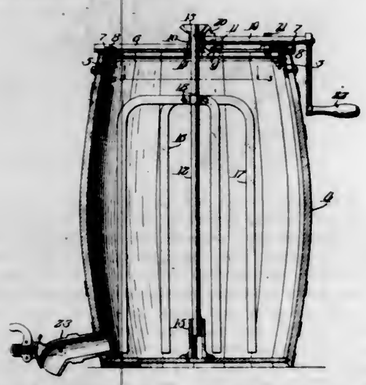
3. In an alarm device, the combination of a bracket having a clamp member extending therefrom, a pivot pin

carried by said bracket, a sleeve provided with an arm extending therefrom and journaled on said pivot pin, an alarm spindle journaled in said sleeve, a back stop and brake adapted to be detachably secured to and extend from opposite sides of said bracket to lie in the arc of swing of said alarm spindle, a reversible coiled spring encircling said pivot pin and having its ends engaging respectively said bracket and said sleeve and normally tending to swing said sleeve in one direction, a pulley journaled on said pivot pin, a pawl connecting said pulley with said sleeve to swing the same therewith, and manually operable means for rotating said pulley to swing said sleeve in a direction opposed to the force of said spring.

4. In an alarm device, the combination of a bracket, an arm pivoted thereto, a sleeve carried by the projecting end of said arm, an alarm spindle journaled in said sleeve, a pulley journaled concentrically with the pivotal axis of said arm and connected with the latter, whereby rotation of said pulley will swing said sleeve and alarm spindle, a flexible operating band wrapped around said pulley and a guide on said bracket for said band.

5. In an alarm device, the combination of a bracket, a pivot pin carried by said bracket, a sleeve provided with an arm journaled on said pivot pin, an alarm spindle journaled in said sleeve, a reversible spring carried by said bracket and adapted to be mounted in positions to swing said sleeve in one direction or the other about said pivot pin, a pulley journaled on said pivot pin and connected with said sleeve whereby rotation of said pulley will swing said sleeve, a flexible operating band adapted to be wrapped around said pulley in either direction so that a tension on said band will swing said pulley in one direction or the other against the force of said spring, and means on said bracket for guiding said band, said means being adjustable to positions for guiding said band when wrapped in either direction upon said pulley.

1,106,447. MIXING DEVICE. SIMON HOEFER and EMIL A. HOEFER, Freeport, Ill. Filed Sept. 22, 1913. Serial No. 791,243. (Cl. 99—2.)



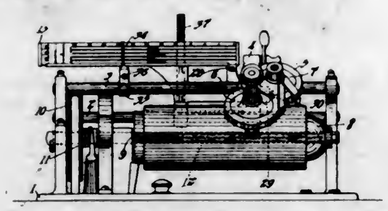
1. In a mixing device, the combination with a support located at the upper portion of a receptacle, of a bracket attached thereto having a vertical bearing and a horizontal bearing spaced to one side of said vertical bearing, the horizontal bearing having its upper half open, a horizontal bearing spaced from said open topped bearing and in alinement therewith, an agitator shaft journaled in said vertical bearing and carrying a bevel-gear above said bearing, a shaft journaled in said horizontal bearings and carrying a bevel-gear intermediate said open topped bearing and vertical bearing, being in mesh at its upper side with said first mentioned bevel-gear, agitating means attached to said agitator shaft, and means for rotating said horizontal shaft.

2. In a mixing device, the combination with a bracket having a vertical bearing and a horizontal bearing spaced from the vertical bearing, the horizontal bearing having its top open, of a horizontal detachable bearing spaced from said open topped bearing and in axial alinement therewith, an agitator shaft journaled in said vertical bearing, a shaft journaled in said horizontal bearings, a bevel-gear connection between said shafts, the bevel-gear of the vertical shaft being located above the said open topped bearing, and in mesh with the upper portion of the bevel-gear on the horizontal shaft, agitating means carried by the vertical shaft, and means for rotating the horizontal shaft.

3. In a mixing device, the combination of a vertical bearing, a shaft journaled therein having a bevel-gear above said bearing and agitating means below same, two spaced horizontal bearings, one being adjacent the vertical bearing and having its top open, a shaft journaled in said horizontal bearings and having a bevel-gear located at the side of said opened topped bearing and being in mesh with the first mentioned bevel-gear in such a manner that the first named bevel-gear holds the horizontal shaft operatively in its open topped bearing, and means for rotating the horizontal shaft.

4. In a mixing device, the combination of a receptacle having a support across its top portion, a vertical axis bearing carried by said support, an agitator shaft journaled in said bearing, a bevel-gear attached to said shaft above said bearing, an open topped horizontal axis bearing carried by the support adjacent the vertical bearing, a shaft journaled in the last mentioned bearing, a bevel-gear attached to the horizontal shaft, the vertical shaft bevel-gear being in mesh with the horizontal shaft bevel-gear in such a manner that the former bevel-gear holds the horizontal shaft operative in said open topped bearing, and means for rotating the horizontal shaft.

1,106,448. PHONOGRAPH. NEWMAN H. HOLLAND, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 2, 1911. Serial No. 663,558. (Cl. 181—2.)



1. In a device of the class described, the combination with a phonograph having a rotatable record support, a carrier arm or sound box support, and means for uniformly progressing said sound box support across said record support, of a memorandum holder, a bracket for detachably securing said holder to said carrier arm, the said bracket having a yoke-shaped portion straddling and secured to the said arm, and a stationary straight edge detachably secured to said phonograph in proximity to the upper face of said holder, substantially as described.

2. In a device of the class described, the combination with a phonograph having a rotatable record support, a back rod, a guide rod, a sound box carrier arm slidably mounted on said guide rod and having an extension mounted on said back rod, and means for uniformly progressing said sound box support across said record support, of a memorandum holder, a bracket for detachably securing said holder to said carrier arm, and a straight edge detachably secured to said guide rod, in proximity to the upper face of said holder, the said bracket having a yoke-shaped portion straddling and secured to said arm, and a second portion resting upon the extension of the carrier arm, substantially as described.

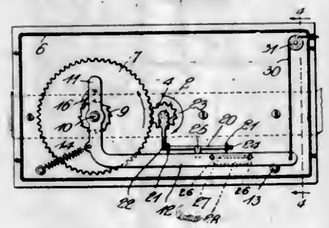
3. In a device of the class described, the combination with a phonograph having a rotatable record support, a carrier arm or sound box support, and means for uniformly progressing said sound box support across said record support, of a memorandum holder, a bracket for detachably securing said holder to said carrier arm, and a stationary straight edge secured to said phonograph in proximity to the upper face of said holder, and extending over substantially the full width of the same, substantially as described.

4. In a device of the class described, the combination with a phonograph having a rotatable record support, a sound box support, and means for producing a relative feeding movement between said supports, of a holder carrying a memorandum sheet having indicating spaces extending longitudinally thereof, and a straight edge located in proximity to said holder and extending over substantially the full width of the indicating spaces of said memorandum sheet, the said holder and straight edge being connected with said phonograph for relative movement proportionately to the relative movement between said record and sound box supports, substantially as described.

5. In a device of the class described, the combination with a phonograph having a rotatable record support, a carrier arm or sound box support, and means for uniformly progressing said sound box support across said record support, of a holder secured to said sound box support and carrying a memorandum sheet having indicating spaces extending longitudinally thereof, and a stationary straight edge secured to said phonograph in proximity to said holder and extending over substantially the full width of the indicating spaces of said memorandum sheet, substantially as described.

[Claim 6 not printed in the Gazette.]

1,106,449. AUTOMOBILE-STARTER. THOMAS HULETT, Chicago, Ill. Filed Nov. 27, 1912. Serial No. 733,874. (Cl. 123—185.)



1. In an engine starter, the combination with the engine shaft having a clutch element, a shaft section in line therewith and having another clutch element, a bearing in which this section is mounted for rotation and longitudinal movement, a wide gear pinion fast on this shaft section, and a spring for throwing said elements normally out of engagement; of a driving gear in constant mesh with said pinion, a ratchet fast on its hub, a lever mounted on a pivot, a pawl carried by said lever and engaging said ratchet, means for swinging the lever, and devices actuated by the movement of the lever in one direction for sliding said shaft section until the clutch elements engage.

2. In an engine starter, the combination with the engine shaft having a clutch element, a shaft section in line therewith and having another clutch element, a bearing in which this section is mounted for rotation and longitudinal movement, a wide gear pinion fast on this shaft section, and a spring for throwing said elements normally out of engagement; of a driving gear in constant mesh with said pinion, a ratchet fast on its hub, a main lever mounted on a pivot concentric with the pivot of said gear and ratchet, manually operable means for swinging said main lever, means for sliding said shaft section until said clutch elements engage, and devices carried by said main lever for actuating said sliding means.

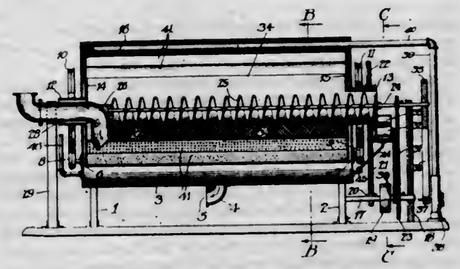
3. In an engine starter, the combination with the engine shaft having a clutch element, a shaft section in line therewith and having another clutch element, a bearing in which this section is mounted for rotation and longitudinal movement, a wide gear pinion fast on this shaft section, and a spring for throwing said elements normally out of engagement; of a driving gear in constant mesh with said pinion, a ratchet fast on its hub, a main lever mounted on a pivot concentric with the pivot of said gear and ratchet, a pawl carried by said lever and engaging said ratchet, manually operable means for swinging said main lever, a rock shaft having an arm provided with a plate standing against the front end of said shaft section and a second arm projecting toward said main lever, and a lifter on the latter for raising the last-named arm.

4. In an engine starter, the combination with the engine shaft having a clutch element, a shaft section in line therewith and having another clutch element, a bearing in which this section is mounted for rotation and longitudinal movement, a wide gear pinion fast on this shaft section, and a spring for throwing said elements normally out of engagement; of a driving gear in constant mesh with said pinion, a ratchet fast on its hub, a main lever mounted on a pivot concentric with the pivot of said gear and ratchet, a pawl carried by said lever and engaging said ratchet, manually operable means for swinging said main lever, a rock shaft having an arm provided with a plate standing against the front end of said shaft section and a second arm projecting toward said main lever, and a lifter consisting of a lip standing beneath said last-named arm, pivots connecting the forward edge of said lip with the rear of said main lever, and a weight depending rigidly from the lip and holding it normally horizontal, for the purpose set forth.

5. In an engine starter, the combination with the engine shaft having a clutch element, a shaft section in line therewith and having another clutch element, a bearing in which this section is mounted for rotation and longitudinal movement, a wide gear pinion fast on this shaft section, and a spring for throwing said elements normally out of engagement; of a driving gear in constant mesh with said pinion, a manually operable lever mechanism for turning said gear at will, a lifter pivoted to said lever and having a lip, means for holding the lip horizontal when the lever ascends and permitting it to turn when the lever descends, and a rock shaft having an arm at one extremity standing in front of said shaft section and another arm at the other extremity standing in position to be raised by said lip when the main lever ascends.

[Claim 6 not printed in the Gazette.]

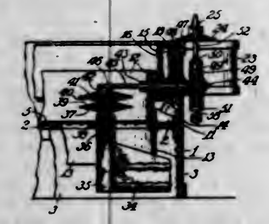
1,106,450. BEER AND HOP SEPARATOR. MAX RICHARD IRRGANG, Chicago, Ill. Filed Nov. 13, 1913. Serial No. 800,822. (Cl. 100—47.)



1. In a device of the class described, the combination with a filtering device comprising a rotary screen having perforated blades for removing semi-solid matter from the bottom of said screen, and a receptacle for collecting filtered liquid, of a conveyer for removing semi-solid matter from said filtering device, means for expressing liquid from said semi-solid matter, and a connection between said means and receptacle for delivering to said receptacle liquid expressed from said semi-solid matter, said connection including a two way valve whereby any desired portion of the liquid passing through said connection may be prevented from entering said receptacle.

2. In a device of the class described, the combination with a filtering device comprising a rotary screen having perforated blades for removing semi-solid matter from the bottom of said screen, and a device for expressing juices from said semi-solid matter and returning the juices to the filtering device.

1,106,451. INCUBATOR AND BROODER. LUTHER J. ISENHOUR, Indianapolis, Ind. Original application filed July 17, 1911, Serial No. 638,994. Divided and this application filed Apr. 22, 1912. Serial No. 692,400. (Cl. 236—6.)



1. An incubator and brooder including an inclosing wall having a slot in its top, a supporting device fixedly supported on the inner side of the wall, a journal-bearing fixedly secured to the supporting device and extending through the slot, a heater on the outer side of the wall, a regulating valve on the heater, a rock-shaft rotatably mounted in the journal-bearing, an arm adjusting head fixedly secured to the outer end of the rock-shaft, an adjusting screw mounted in the head, an arm adjustably connected with the head to be adjusted by the screw relative to the head, the arm being connected with the valve, a crank arm fixed on the inner end of the shaft, and a thermostatic device supported by the wall in contact with the crank arm.

2. An incubator including an inclosing wall having a slot in the top thereof, a heater supported on the outer side of the wall, a regulating valve on the heater, a floor supported on the inner side of the wall, an inner wall on the floor space from the outer wall, a supporting device fixedly supported between the two walls by the inclosing wall, a thermostatic device supported above the floor adjacent to the inner side of the inner wall, a journal-bearing fixedly secured to the supporting device and extending through the two walls, a shaft rotatively mounted in the journal-bearing, a crank arm fixed on the shaft in contact with the thermostatic device, an arm head fixedly secured to the outer end of the shaft and provided with an adjusting screw, and a controlling arm pivotally connected to the outer end portion of the shaft within the head and in contact with the screw, the controlling arm being connected with the regulating valve.

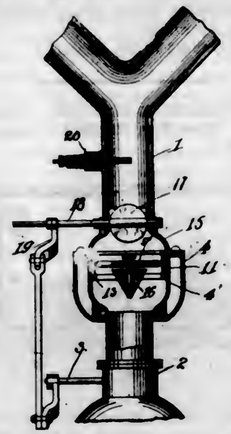
3. In an incubator, the combination of an inclosing wall, a heater exterior to the wall, a regulating valve for the heater, a thermostatic device supported by the inner side of the wall, a journal-bearing fixedly supported and extending through the wall, a rock-shaft mounted in the journal-bearing and having a crank arm thereon extending to the thermostatic device, an arm head comprising a side plate and a top plate, the head being fixedly secured to the rock-shaft, said side plate being vertical, an adjusting screw mounted in the top plate of said head and extending adjacent to the side plate at a distance from the rock-shaft, and a controlling arm pivoted to the rock-shaft adjacent to said side plates and extending in contact with said screw, the controlling arm being connected with the regulating valve.

4. In an incubator, the combination of an inclosing wall, a heater exterior to the wall, a regulating valve for the heater, a thermostatic device supported by the inner side of the wall, a journal-bearing fixedly supported and extending through the wall, a rock-shaft mounted in the journal-bearing and having a crank thereon in contact with the thermostatic device, an arm head fixedly secured to the rock-shaft and comprising a vertical side plate and a lateral bottom plate, an adjusting screw mounted in said bottom plate and extending adjacent to said side plate, and a controlling arm pivoted to said rock-shaft in contact with said screw, the controlling arm being connected with the regulating valve.

5. In an incubator, the combination of an inclosing wall, a heater supported exteriorly to the wall, a thermostatic device supported in proximity to the inner side of the wall, a regulating valve for the heater, a journal-bearing fixedly supported adjacent to the inner side of the wall and extending through the wall, a rock-shaft mounted in the journal-bearing and having a crank arm thereon in contact with the thermostatic device, an arm head fixedly secured to the outer end portion of the rock-shaft and comprising two vertical side plates spaced apart and a transverse plate connected to the side plates, an adjusting screw mounted in the transverse plate, and a controlling arm adjustably connected with the two side plates to be guided thereby, the controlling arm being connected with the regulating valve and extending into contact with the screw.

[Claims 6 to 8 not printed in the Gazette.]

1,106,452. GASOLENE-VAPORIZER. FERDINAND ITTNER, Brooklyn, N. Y., assignor to The Bradford Co., Middletown, Conn., a Corporation of Connecticut. Filed Feb. 27, 1911. Serial No. 611,156. (Cl. 123—122.)



1. The combination of a vaporizing chamber having a heating jacket comprising an inner shell and an outer shell separated by a space for circulation of a heating medium, a self-rotating fan mounted within said chamber and adapted to deliver any moisture deposited upon its blades directly against the heated wall of said chamber formed by the inner shell by a centrifugal action, a carbureter, means for connecting the inlet of said chamber with the carbureter for delivering the mixture produced in the carbureter to the vaporizing chamber and means for connecting the outlet of the vaporizing chamber with the engine manifold.

2. A vaporizer for hydro-carbon mixture, comprising a shell having a heating jacket and an inlet adapted for connection to a pipe leading from the carbureter, a freely rotating fan mounted on an axis in line with said inlet and adapted to be rotated by the stream of mixture received through the inlet and a dispersing cone provided with a bearing for the fan and projecting axially toward the inlet of the shell.

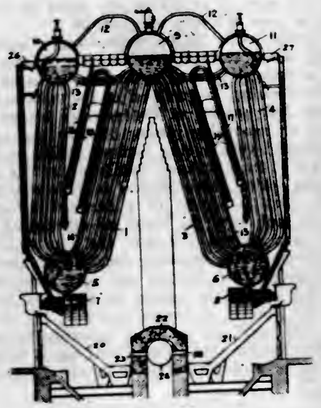
3. In a vaporizer for hydro-carbon mixture, a vaporizer shell having a heating jacket and a frame mounted in one end thereof and carrying the fan, both bearings of which are on the frame, said frame being provided with a dispersing cone projecting toward an inlet adapted for connection to the pipe through which the mixture is received and delivered into a space containing the fan and cone.

4. A vaporizer consisting of a self-rotating fan, a double walled shell within which the fan is centrally mounted as to both bearings, a frame supported in one end of the shell and carrying said fan in position to deliver, by centrifugal action against the inner wall of the shell, any moisture deposited upon its blades in the stream of mixture received through the opposite end of the shell, inlet and outlet openings in said shell arranged in line with the axis of the fan and a moisture receiving cone projecting in line with the axis of the fan from a supporting frame thereof toward the inlet.

5. A vaporizer having a shell provided with inner and outer walls to afford space for a heating medium and with an inlet at one end adapted for connection with the pipe through which the mixture is delivered to the same, a removable fan supporting frame mounted in the opposite end of the shell and having a cone projecting toward the center of the said inlet, and a self-propelled fan mounted in said frame co-axially with the axis of the inlet.

[Claim 6 not printed in the Gazette.]

1,106,453. WATER-TUBE BOILER. DAVID S. JACOBUS, Jersey City, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed July 16, 1912. Serial No. 709,770. (Cl. 122—325.)



1. In combination, a steam boiler, a furnace therefor, a bridge wall having openings therein, and means for admitting air through said openings so as to make it impinge on the top of the fire adjacent the bridge wall for the purpose described.

2. In combination, a steam boiler, a stoker having at its rear a dumping plate, and a bridge wall, said bridge wall having air openings so arranged as to direct the incoming air downward on top of and across the surface of the fire on the dumping plate.

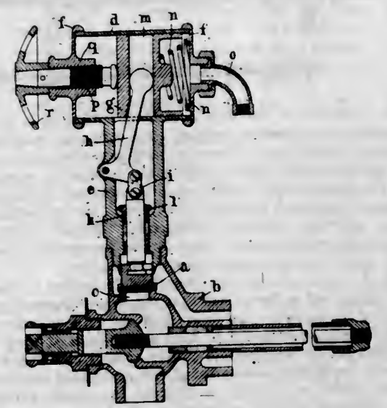
3. In combination, a steam boiler, a furnace therefor, a dumping plate at the rear of the furnace and adjacent a bridge wall, said bridge wall having openings therein, and means for admitting air through said openings so as to make the air impinge on the top of the fire carried by the dumping plate for the purpose of burning the combustible elements contained in the material lying on the dumping plate.

4. In combination, a steam boiler, a centrally disposed combustion chamber extending beneath the boiler, a bridge wall through the center of said chamber, said wall having water boxes in the sides thereof and openings between said boxes, and means for supplying air for combustion through said openings.

5. In combination, a steam boiler, a centrally disposed combustion chamber extending beneath the boiler, a bridge wall through the center of said chamber, said wall having openings in the sides thereof, and means for supplying air for combustion through said openings and for causing air to play downward upon and across the top of the spent fuel adjacent to said wall.

[Claim 6 not printed in the Gazette.]

1,106,454. CONTROL-VALVE. FREDERICK WILLIAM JENNINGS, London, England. Filed Apr. 30, 1912. Serial No. 694,186. (Cl. 236—6.)



A controlling valve for heating systems or for like purposes comprising a valve, a casing therefor, a bracket mounted upon said casing a cylinder mounted upon said bracket, a bell crank lever pivotally mounted upon said bracket, links adapted to connect one end of the bell crank lever with said valve, a piston working in said cylinder, said piston being provided with a transverse head within which the free end of the bell crank lever is adapted to slide, and hand-operated means for controlling the movements of said piston when required.

1,106,455. PROCESS FOR THE PRODUCTION OF ACID CHLORIDS OF THE OXYACIDS. LADISLAUS KARCZAG, Charlottenburg, and EDUARD KOPETSCHNI, Mannheim, Germany. Filed Sept. 5, 1912. Serial No. 718,643. (Cl. 23—24.)

1. The process for the manufacture of acid chlorids of the oxy acids which consist in causing one molecule of a neutral salt of an oxy carboxylic acid to be acted upon by at least one molecule of an oxychlorid whose products of decomposition resulting from this reaction are gaseous at ordinary temperature.

2. The process for the manufacture of acid chlorids of the oxy acids, which consists in causing at least one molecule of thionyl chlorid to act upon one molecule of a salt of an oxy carboxylic acid.

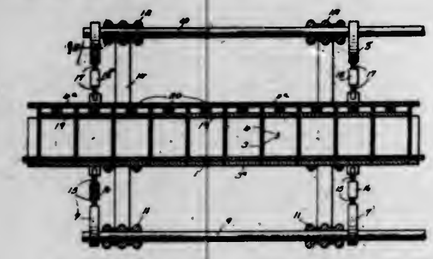
3. The process for the manufacture of salicylic acid which consists in causing one molecule of a neutral salicylate to be acted upon by at least one molecule of an oxychlorid whose products of decomposition resulting from this reaction are gaseous at ordinary temperature.

4. The process for the manufacture of salicylic chlorid which consists in causing at least one molecule of thionyl chlorid to act upon one molecule of a neutral salicylate.

5. The process for the manufacture of acid chlorids of the oxyacids which consists in causing one molecule of a neutral salt of an oxy carboxylic acid to be acted upon, in the presence of an indifferent diluent, by at least one molecule of an oxychlorid whose products of decomposition resulting from this reaction are gaseous at ordinary temperature.

[Claims 6 to 8 not printed in the Gazette.]

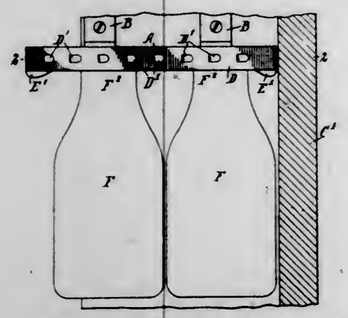
1,106,456. BRICK-MACHINE. JOHN C. KELLEY, Terre Haute, Ind. Filed Oct. 1, 1913. Serial No. 792,825. (Cl. 25—107.)



1. A device of the type described, including a chamber a series of oppositely moving clay severing members positioned within said chamber, said severing plates meeting at the inner ends of their inner strokes or movements at the longitudinal center of said chamber, plates carrying said severing members and means for actuating said clay severing members comprising driven shafts and eccentric screw-threaded and sleeve connections between said cutter-carrying plates and said shafts.

2. A device of the type described including a chamber, an upper and a lower series of edgewise disposed cutters carried by movable plates external of said chamber, said cutters being positioned to meet at the ends of their inner strokes at the longitudinal center of said chamber supplemental resiliently suspended plates positioned between the upper series of cutters to impress the upper surface of the contents of said chamber as the inner edges of said cutters meet, for imparting a smooth or finished upper surface to said contents, and means for actuating said cutters.

1,106,457. SAFETY BOTTLE-HOLDER. HENRY KENNELL, New York, N. Y. Filed July 6, 1912. Serial No. 708,000. (Cl. 232—42.)



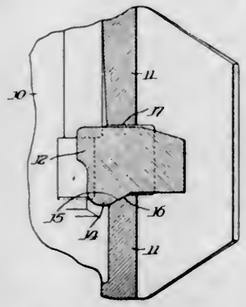
1. A safety bottle holder, comprising a horizontally disposed supporting plate having integral depending sides provided with integral inwardly-extending flanges whereby to form a channel open at both ends, the inner edges of the said flanges being spaced apart to form a lengthwise-extending slot of a width corresponding approximately to the diameter of the neck of the bottle to permit the neck of the bottle to pass through the slot and to allow the bead of the bottle neck to rest on the said flanges, barbs on the said sides and extending toward one of the open ends, and a supporting yoke slidingly engaging the said flanges and adapted to rest thereon, the said yoke being provided with rising sides having integral spring tongues adapted to abut against the said barbs to hold the yoke against return movement, the said yoke having an opening corresponding approximately to the diameter of the neck of a bottle to engage the said neck with the opening and to rest the bead of the bottle neck on the yoke.

2. A safety bottle holder, comprising a plate having depending sides provided with inturned flanges whereby to form a channel open at both ends, barbs on the said sides and extending toward one of the open ends, and a supporting yoke formed of two sections hinged together to permit of removably placing it onto the neck of a bottle, the said yoke having vertical flanges at the sides terminating at their forward ends in outwardly and rearwardly bent spring hooks adapted to glide over the barbs when the yoke is moved in a forward direction and adapted to hook onto the barbs on attempting to move the yoke in a reverse direction.

3. A safety bottle holder, comprising a plate having depending sides provided with inturned flanges whereby to form a channel open at both ends, barbs on the said sides and extending toward one of the open ends, and a supporting yoke formed of two sections hinged together to permit of removably placing it onto the neck of a bottle, the said yoke having vertical flanges at the sides terminating at their forward ends in outwardly and rearwardly bent spring hooks adapted to glide over the barbs when the yoke is moved in a forward direction and adapted to hook onto the barbs on attempting to move the yoke in a reverse direction, the rear ends of the yoke forming outwardly bent spring retaining members adapted to glide over the barbs when moving the yoke forward in the channel and adapted to engage the barbs on attempting to move the yoke in a reverse direction.

4. A safety bottle holder, comprising a plate having depending sides provided with inturned flanges whereby to form a channel open at both ends, barbs on the said sides and extending toward one of the open ends, and a supporting yoke formed of two sections hinged together to permit of removably placing it onto the neck of a bottle, the said yoke having vertical flanges at the sides terminating at their forward ends in outwardly and rearwardly bent spring hooks adapted to glide over the barbs when the yoke is moved in a forward direction and adapted to hook onto the barbs on attempting to move the yoke in a reverse direction, the rear ends forming outwardly-bent spring retaining members adapted to glide over the barbs when moving the yoke forward in the channel and adapted to engage the barbs on attempting to move the yoke in a reverse direction, the said hooks and the said rear end retaining members being spaced apart relative to the said barbs so that one is intermediate adjacent barbs while the other is in engagement with a barb.

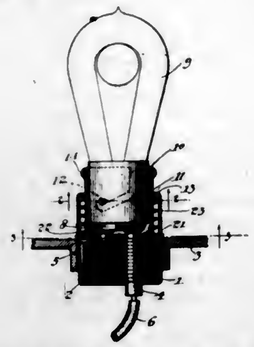
1,106,458. COUPLING-KNUCKLE STOP. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 1, 1914. Serial No. 828,791. (Cl. 213—65.)



1. In a car coupler, the combination of a head having a front wall with an opening therethrough, and a knuckle having a tail provided with a motion-limiting stop, said tail being adapted for passage through the opening in said front wall, said stop being constructed to wedge said knuckle tail against the upper and lower bounding edges of the opening in said front wall, substantially as described.

2. In a car coupler, the combination of a head having a front wall with an opening therethrough, one edge of said opening being beveled, and a knuckle having a beveled motion-limiting stop, the beveled surfaces on said stop and said wall being adapted for coöperation whereby to force said knuckle against an opposite edge of said opening, substantially as described.

1,106,459. LAMP-SOCKET. GEORGE C. KNAUFF, Chicago, Ill. Filed Jan. 13, 1913. Serial No. 741,767. (Cl. 173—328.)



1. In a socket for a lamp having a lateral projection and an axially disposed filament terminal upon its base, an insulating body, a wire terminal carried thereby; a main casing housing the insulating body and having a contracted end projecting beyond the insulating body; an auxiliary casing slidably mounted within the said projecting portion of the main casing and extending beyond the said contracted end, the said auxiliary casing receiving the base of the said lamp and equipped with slots admitting the said projections respectively, each of said slots having a notch at its inner end, the said notches respectively interengaging the said projections to couple the lamp to the socket, the said terminals abutting against each other when the lamp is thus coupled to the socket; the inner end of the auxiliary casing being flared outwardly; and a compression spring interposed between the said casings and abutting at its respective ends against the flared portion of the auxiliary casing and against the said contracted end of the main casing, the said spring tending continuously to slide the inner end of the auxiliary casing toward the insulating body and thereby pressing the said terminals into forcible abutment with each other.

2. In a socket for a lamp having lateral projections and an exposed terminal upon its base, an insulating body, a wire terminal and a main casing both carried by the insulating body; and an auxiliary casing carried by the main casing and receiving the base of the lamp with the said lamp and wire terminals abutting against each other, there being upon the auxiliary casing slot formations admitting the said projections upon the lamp base when the said base is received by the auxiliary casing, the said slot formations terminating in notches interengaging with the said projections to couple the lamp to the socket; and a spring interposed between portions of the said main and auxiliary casings and tending to move the slotted portion of the auxiliary casing toward the insulating body, the distance between the said projections and the abutting surface of the said lamp terminal being greater than the normal distance between the abutting surface of the said wire terminal and the said notches.

3. In a socket for a lamp having lateral projections and an exposed terminal upon its base, an insulating body, a wire terminal and a main casing both carried by the insulating body; an auxiliary casing slidably carried by the main casing and receiving the base of the lamp, the said lamp and wire terminals abutting against each other when the lamp base is thus received by the auxiliary casing; the said main and auxiliary casing being equipped with coacting formations to prevent relative rotation thereof; there being upon the auxiliary casing slot formations admitting the said projections upon the lamp base when the said base is received by the auxiliary casing, the said slot formations terminating in notches; each of the said slots having a downwardly inclined portion, walls of the said inclined portions presenting cam surfaces coacting with the said projections and with the said abutting of the terminals upon rotation of the lamp relative to the casing to slide the auxiliary casing with respect to the main casing to permit the projections to be brought into interengagement with the said notches of the slot formations, thereby coupling the lamp with the socket.

4. In a socket for a lamp having a lateral projection and an axially disposed filament terminal upon its base, an insulating body, a wire terminal carried thereby; a main casing housing the insulating body and having a contracted end projecting beyond the insulating body; an auxiliary casing slidably mounted within the said projecting portion of the main casing and extending beyond the latter, the said auxiliary casing receiving the base of the said lamp and equipped with slots admitting the said projections respectively, each of said slots having a notch at its inner end and a downwardly inclined portion leading thereto; the inner end of the auxiliary casing being flared outwardly; and a spring interposed between the said casings and abutting at its respective ends against the flared portion of the auxiliary casing and against the contracted end of the main casing, the said spring opposing a relative sliding motion of the said casings; walls of the said inclined slot portions affording cam surfaces coacting with the said projections upon rotation of the lamp relative to the auxiliary casing to slide the latter relative to the main casing against the pressure of the said spring to permit the projections to be interlocked with the said notches of the slots.

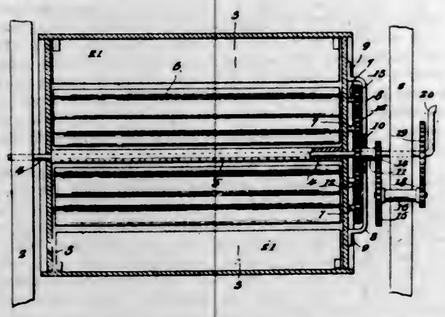
5. In a socket for a lamp having lateral projections upon its base and having the ends of its filament connected respectively to a metallic shell and an axially disposed contact carried by the said base, a main casing connected to one terminal of a circuit; an insulating body mounted in said casing; an axially disposed wire terminal carried by the said insulating body and connected to the other terminal of the circuit; an auxiliary casing slidably mounted within the main casing and slidably fitting the said metallic shell upon the lamp base; and a compression spring interposed between the said casings and abutting at its ends respectively against a portion of each casing to oppose a relative sliding motion of the casings; there being in the auxiliary casing slots admitting the said projections upon the lamp base when the latter is inserted in the auxiliary casing with the said axially disposed terminals abutting against each other; the said slots including inclined portions terminating in notches, walls of the said inclined portions presenting cam surfaces coacting with the said projections and with the said abutting of the axially disposed terminals upon rotation of the lamp relative to the auxiliary casing to slide the latter with respect to the main casing against the pressure of the said spring, thereby permitting the projections to be brought into interengagement with the said notches to effect a coupling of the lamp with the socket.

[Claim 6 not printed in the Gazette.]

1,106,460. COMBINED CHURN AND BUTTER-WORKER. ANDREAS M. KNUDSEN, West Branch, Iowa. Filed July 10, 1913. Serial No. 778,364. (Cl. 31—25.)

1. In a combined churn and butter worker, a rotatable drum, means rotatable within said drum, a plurality of gears operating exteriorly of the drum to rotate the

means therein, a first gear engageable with one of the said plurality of gears to actuate said means, a drum shaft upon which said first mentioned gear is loosely mounted, a second gear rotatable with said first gear, a third gear upon said drum shaft, a pivoted bracket, gears mounted upon said bracket, said gears being movable into and out of mesh with said second and third gears respectively, and means operating automatically to lock the bracket in its adjusted position, as and for the purpose set forth.



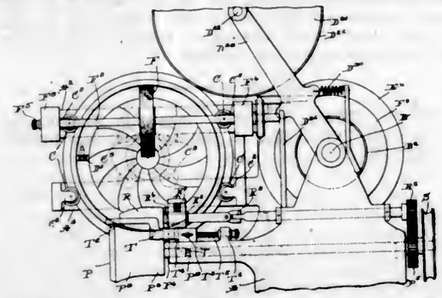
2. In a combined churn and butter worker, a rotatable drum, means rotatable within the drum, a plurality of gears operating exteriorly of the drum to rotate said means therein, a first gear engageable with two of the said plurality of gears, a drum shaft upon which the said first gear is loosely mounted, said drum shaft being rotatable to actuate said drum, a second gear rotatable with said first gear, a third gear upon said drum shaft, a bracket fulcrumed to the support means for the drum, a sleeve rigid with the bracket, a shaft operating within said sleeve, gears mounted upon the respective terminals of said shaft, said gears being movable into and out of mesh with the said second and third gears respectively, and means operating automatically to lock the bracket in its adjusted position to provide for rotation of the drum simultaneously with the rotation of the means therein or independently of said means, as and for the purpose set forth.

3. In a combined churn and butter worker, the combination with a drum, and a plurality of rollers mounted therein, of a shaft upon which said drum is mounted, a sleeve upon said shaft, gears rotatable with said sleeve, a plurality of gears mounted exteriorly of the drum, certain of the said gears meshing with one of the gears rotatable with said sleeve, a pivoted bracket, a shaft carried thereby, a sleeve upon said shaft, gears upon said sleeve, a gear upon said first mentioned shaft, movement of said bracket adapted to bodily move the gears upon said last mentioned sleeve into and out of mesh with one of the gears of said first mentioned sleeve and said last mentioned gear to render the chain of gears exterior of the drum inoperative without effecting operation of the drum.

1,106,461. SKIVING-MACHINE. PAUL F. W. C. KRIPPENDORF, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 30, 1908. Serial No. 430,141. (Cl. 69—9.)

1. A skiving machine comprising a cylindrical rotary knife, and means for rotating it, a pair, one convex and one concave, of coöperating feed rolls mounted transversely of and adjacent to said knife, an edge gage normally located at the minimum section line of the concave feed roll, means for adjusting said gage and said concave feed roll together transversely of the knife to vary the angle of the skiving.

2. A skiving machine comprising a cylindrical rotary knife, and means for rotating it, a pair, one convex and one concave, or coöperating feed rolls mounted transversely of and adjacent to said knife, an edge gage normally located at the minimum section line of the concave feed roll, means for adjusting said gage and said concave feed roll together transversely of the knife to vary the angle of the skiving, and means whereby said gage may be independently adjusted longitudinally of said feed roll.



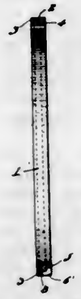
3. A skiving machine comprising a cylindrical rotary knife and means for rotating it, a feeding roll mounted transversely of, within and adjacent to the edge of said knife and having a convex periphery conforming to said knife edge, a second feeding roll coöperating with the first and mounted transversely of, without and adjacent to the edge of said knife and having a concave periphery whose curvature is on a slightly greater radius than that of the knife edge, and means for longitudinally adjusting said concave feed roll transversely of the knife to vary the angle of the skiving.

4. A knife for skiving or other machines comprising a cylindrical knife supporting frame constructed to rotate about the axis of the frame, a cylindrical blade fitting within the frame, and clamping means within the blade for clamping it to the frame.

5. A knife for skiving or other machines comprising a cylindrical knife supporting frame, a cylindrical blade fitting within the frame, and expansible clamping means within the blade for clamping it to the frame.

[Claims 6 to 16 not printed in the Gazette.]

1,106,462. PACKING-RING. JOHN F. KYTLICA, Chicago, Ill. Filed Apr. 9, 1914. Serial No. 830,597. (Cl. 121—108.)



1. A packing ring comprising two annular split sections fitting one within the other; an annular inwardly turned radial flange at one edge of said outer section; an annular outwardly turned radial flange at one edge of said inner section, said outwardly turned flange registering with the unflanged edge of said outer section; and a longitudinally extending flange at the other edge of said inner section registering with the inner edge of said inwardly turned flange, the respective ends of said inner section being slidably overlapped, substantially as described.

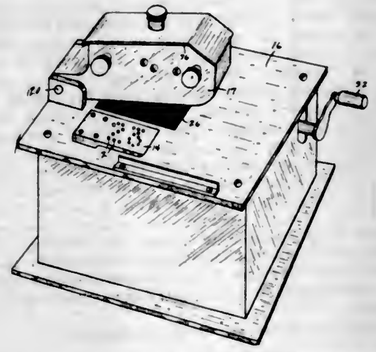
2. A packing ring comprising two annular split sections fitting one within the other; an annular inwardly turned radial flange at one edge of said outer section; an annular outwardly turned radial flange at one edge of said inner section, said outwardly turned flange registering with the unflanged edge of said outer section; and a longitudinally extending flange at the other edge of said inner section registering with the inner edge of said inwardly turned flange, the respective ends of said inner section being slidably overlapped, substantially as described.

3. A packing ring comprising two annular split sections fitting one within the other; an annular inwardly turned radial flange at one edge of said outer section; an annular outwardly turned radial flange at one edge of said inner section, said outwardly turned flange registering with the unflanged edge of said outer section; and a longitudinally extending flange at the other edge of said inner section registering with the inner edge of said inwardly turned flange, the respective ends of said inner section being slidably overlapped, substantially as described.

4. A packing ring comprising two annular split sections fitting one within the other; an annular inwardly turned radial flange at one edge of said outer section; an annular outwardly turned radial flange at one edge of said inner section, said outwardly turned flange registering with the unflanged edge of said outer section; a longitudinally extending flange at the outer edge of said inner section registering with the inner edge of said inwardly turned flange, the respective ends of said inner section being slidably overlapped; and means for preventing relative rotary movement of said sections, substantially as described.

5. A packing ring comprising two annular split sections fitting one within the other; an annular inwardly turned radial flange at one edge of said outer section; an annular outwardly turned radial flange at one edge of said inner section, said outwardly turned flange registering with the unflanged edge of said outer section; a longitudinally extending flange at the outer edge of said inner section registering with the inner edge of said outwardly turned flange, the respective ends of said inner section being slidably overlapped; and an outwardly projecting pin secured in said inner section engaging between the ends of said outer section for preventing relative rotary movement of said section, substantially as described.

1,106,463. CREDIT-MARKING APPARATUS. JOHN J. LEIDIGH, Milwaukee, Wis., assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Feb. 25, 1907, Serial No. 359,053. Renewed Mar. 14, 1912. Serial No. 683,702. (Cl. 101—57.)



1. The combination of a credit punching apparatus provided with an electro-magnetic trip mechanism,—the said punching apparatus including a trip setting device, and electrical means for controlling the punching apparatus from a distant point,—and a dater movably connected with the punching apparatus, and operatively connected with the trip setting mechanism, whereby, when the trip setting mechanism is actuated in one direction, the dater will be simultaneously actuated therefrom, said trip setting mechanism being free to return to normal position independently of the trip after setting the latter.

2. The combination of a credit punching apparatus, and a dating apparatus, both operatively arranged with reference to a ticket receiving plate, and connected with each other with limited independent movement, a common connection for actuating both the credit punching and dating apparatus in one direction, and electro-magnetic means controlling the operation of the credit punching apparatus in the other direction from a distant point, said common actuating connection being free to return to normal position.

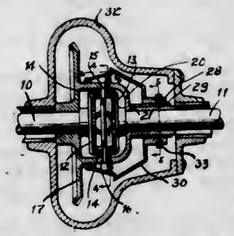
3. The combination of an inclosing casing, credit punching apparatus within the casing, electro-magnetic devices controlling the operation of the punching apparatus from a distant point, adjusting devices operatively connected with the punching apparatus and extending to the exterior of the casing, a dating apparatus and connections for actuating the same from said adjusting device, said adjusting device and dating device being free to return to normal position, independently of the punching device.

4. The combination of an inclosing casing, spring actuated credit punching apparatus within the casing, trip mechanism controlling the operation of the punching apparatus, a trip setting device operative from the exterior of the casing, electro-magnetic means for releasing the trip mechanism, a dating apparatus, and a member unconnected with the trip setting device and arranged to be actuated thereby during the trip setting stroke to also operate the dating apparatus.

5. The combination of an inclosing casing, a punch within the casing, an exterior punch receiving die, dating apparatus movably mounted on the casing adjacent to the die, a punch setting device extending through the casing wall, and connections, adapted to be actuated by the punch setting device for operating the dating apparatus, said dating apparatus being provided with a socket adapted to receive a removable printing key provided with a type character identifying the operator.

[Claims 6 to 18 not printed in the Gazette.]

1,106,464. LOCK FOR DIFFERENTIAL GEARING. CLARENCE G. LIBBERS, Fremont, Mich. Filed June 3, 1913. Serial No. 771,473. (Cl. 74—34.)

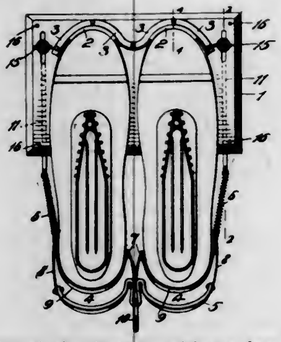


1. The combination with the sectional axle of an automobile, of a driven gear wheel having a hub journaled on both of said axle sections, bevel gear wheels secured on the adjacent ends of said axle sections within said hub, intermediate bevel pinions journaled on said hub and meshing with said bevel gear wheels, of a hinged plate on said hub above one pinion, a pin carried by said plate projecting through said hub and adapted to engage in an opening in the related pinion, a means for normally holding said plate at its outer limit of movement and the pin disengaged from said pinion, and means for depressing said plate against the action of the holding means to engage said pin with said pinion and lock said pinion against rotation on said hub.

2. The combination with the sectional axle of an automobile, of a driven gear wheel having a hub journaled on both of said axle sections, bevel gear wheels secured on

the adjacent ends of said axle sections within said hub, intermediate bevel pinions journaled on said hub and meshing with said bevel gear wheels, of a hinged plate on the exterior of said hub above one pinion, a pin carried by said plate adapted to engage in an opening in said pinion and lock said pinion against rotation, a spring normally holding said plate at its outer limit of movement and said pin disengaged from said pinion, and a shiftable cone embracing said hub and riding upon said plate whereby to depress said plate and engage said pin with said pinion.

1,106,465. EXTERNAL SHOE-TREE. ALFRED L. LOOMIS, Tuxedo Park, N. Y. Filed Feb. 6, 1914. Serial No. 816,875. (Cl. 12—128.)



1. An external shoe-tree comprising a base, toe clips upon said base arranged to hold down the toes of two shoes placed side by side, and a holder attached to said base arranged to be simultaneously applied to the backs of two shoes.

2. An external shoe-tree comprising a base, toe-clips upon said base arranged to hold down the toes of two shoes placed side by side, toe-guides adapted to guide the toes of the shoes into said toe-clips, and a holder attached to said base and arranged to be simultaneously applied to the backs of two shoes.

3. An external shoe-tree comprising a base, a toe-clip upon said base arranged to hold down the toe of a shoe, an element arranged to engage the back of the shoe, and springs connecting said element and said base, said springs being oblique to the surface of said base, so as to exert a forward and downward tension on said element.

4. In an external shoe-tree, a base, a holder comprising a rigid element and a flexible band attached thereto and arranged to fit upon the back of the shoe, and springs connecting said holder with said base.

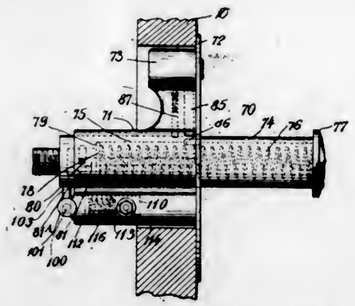
5. In an external shoe-tree, a base, a holder comprising a rigid element and elastically supported flexible bands mounted thereupon, and springs connecting said holder with said base.

[Claims 6 and 7 not printed in the Gazette.]

1,106,466. CONTROL-PEDAL FOR AUTOMOBILES. ALDEN L. MCMURTRY, Sound Beach, Conn. Filed Jan. 4, 1913. Serial No. 740,109. (Cl. 123—179.)

1. A control pedal for automobiles comprising a casing, a plunger therein arranged to be moved longitudinally into a "starting" position, a "stop" position and an intermediate "running" position and a spring arranged to move the plunger automatically from its "starting" to its "running" position, a lock in said casing having a spring pressed bolt normal to the plunger, said plunger being provided with a recess arranged to be brought into register with said bolt when the plunger is given a partial rotation while in its "stop" position and a spring arranged to resist such rotation and to rotate the plunger to its original position when said bolt is released.

2. A control pedal for automobiles comprising a casing, a hollow plunger therein arranged to be moved longitudinally into a "starting" position, a "stop" position and an intermediate "running" position, a spring within the plunger, a movable abutment therefor, the spring being compressed between a part of the plunger and said abutment, a stationary member arranged to arrest the spring abutment when the plunger is moved from its "running" to its "starting" position and to cause the spring automatically to move the plunger back to its "running" position, a lock in said casing having a spring pressed bolt normal to the plunger, said plunger being provided with a recess arranged to be brought into register with said bolt when the plunger is given a partial rotation while in its "stop" position and a spring arranged to resist such rotation and to rotate the plunger to its original position when said bolt is released.



3. A control pedal for automobiles comprising a casing, a plunger therein arranged to be moved longitudinally into a "starting" position, a "stop" position and an intermediate "running" position, a spring arranged to move the plunger automatically from its "starting" to its "running" position and a lock in said casing having a bolt arranged to engage the plunger when said plunger is given a partial rotation while in its "stop" position.

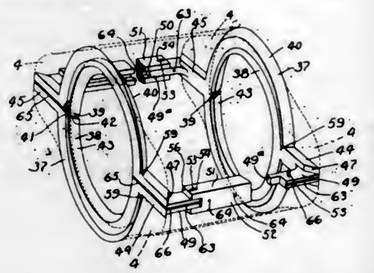
4. A control pedal for automobiles comprising a casing, a hollow plunger therein arranged to be moved longitudinally into a "starting" position, a "stop" position and an intermediate "running" position, a spring within the plunger, a movable abutment therefor, the spring being compressed between a part of the plunger and said abutment, a stationary member arranged to arrest the spring abutment when the plunger is moved from its "running" to its "starting" position and to cause the spring automatically to move the plunger back to its "running" position, a lock in said casing having a spring pressed bolt normal to the plunger, said plunger being provided with a recess arranged to be brought into register with said bolt when the plunger is given a partial rotation while in its "stop" position and a spring arranged to resist such rotation and to rotate the plunger to its original position when said bolt is released.

5. A control pedal for automobiles comprising a casing, a hollow plunger provided with a slot having a longitudinal part and short transverse portions at one end thereof, said plunger being arranged to be moved longitudinally into a "starting" position, a "stop" position and an intermediate "running" position, a spring within the plunger, a washer forming a movable abutment therefor, the spring being compressed between a part of the plunger and said washer, a stationary pin extending through the slot for guiding the movements of the plunger and arranged to arrest the washer when the plunger is moved from its "running" to its "starting" position and to cause the spring automatically to move the plunger back to its "running" position, a non-positive latch for accentuating the "running" and the "stop" positions of the plunger, a lock in the casing having a spring pressed bolt normal to the plunger, said plunger being provided with a recess arranged to be brought into register with said bolt when the plunger is given a partial rotation while in its "stop" position, the transverse portions of the slot being arranged to permit said rotation of the plunger and to prevent longitudinal displacement thereof and a spring arranged to resist such rotation and to rotate the plunger to its original position when said bolt is released.

[Claims 6 to 13 not printed in the Gazette.]

1,106,467. PACKING. WILLIAM NICHOLS MEARS, Brookline, Mass. Filed Oct. 17, 1907. Serial No. 397,788. (Cl. 121—108.)

1. A packing adapted to be interposed between adjacent members comprising a plurality of split rings mounted one within another, said rings having interlocking portions to compel unison expansion movement of said rings, one at least of said rings having an inclined edge not contacting with another of said rings.



2. A packing adapted to be interposed between adjacent members, comprising a plurality of split rings located one within another and the outer one being shaped to pack a right angled joint, the outer edge of the outer ring being inclined from front to rear.

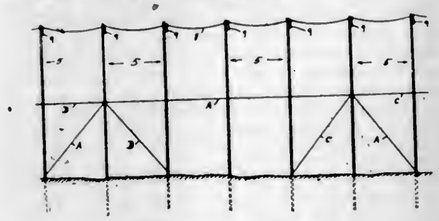
3. A packing adapted to be interposed between adjacent members, comprising a plurality of split rings located one within another and the outer one being shaped to pack a right angled joint, each of said rings being of gradually increasing thickness from the split portion thereof to the diametrically disposed portion, one at least of said rings having an inclined edge to engage one of said members.

4. A packing adapted to be interposed between adjacent members comprising a split ring having a portion extending radially outward from the circumference of said ring, said radial portion contacting with at least one of said members and extending radially therebeyond and transversely thereof.

5. A packing adapted to be interposed between adjacent members comprising a plurality of split rings located one within another, each of said rings being provided with a projection extending radially outward from the circumference of said ring and thence transversely thereof, said radial projections contacting with at least one of said members.

[Claims 6 to 60 not printed in the Gazette.]

1,106,468. ELECTRIC TRANSMISSION-LINE. CHARLES L. MICHOD, Chicago Heights, Ill. Filed Aug. 15, 1912. Serial No. 715,215. (Cl. 189—22.)

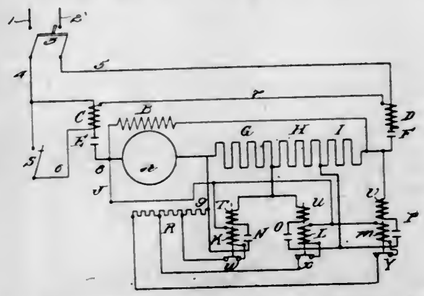


1. In a transmission line the combination of line poles; and a plurality of longitudinally extending independent strain wires rigidly connected to a plurality of poles near the centers thereof and having their ends secured at the ground line to anchoring means, each longitudinal strain wire being rigidly connected at each end of the pole connection to a pole to which an adjacent strain wire is connected.

2. In a transmission line the combination of flexible line poles having a base anchored beneath the ground line; strain wires rigidly connected to a plurality of poles between the top and the ground line; and anchoring means at the ground line connected to said strain wires, each longitudinal strain wire being rigidly connected at each end of the pole connection to a pole to which an adjacent strain wire is connected.

3. In a transmission line the combination of line poles composed of braced members set transversely to the transmission line; a plurality of longitudinally extending independent strain wires each rigidly connected to a plurality of poles near the centers of the poles; and anchoring means at the ends of the strain wires.

1,106,469. AUTOMATIC MOTOR CONTROL. WILLIAM S. MITCHELL, Somerville, Mass., assignor of one-third to Joseph W. Smith, Paterson, N. J. Filed Apr. 17, 1912. Serial No. 691,409. (Cl. 172—179.)



1. In combination, a motor having an armature, a resistance in circuit with the armature, and a controller comprising a series of switches adapted to cut out the resistance step by step, each switch being controlled by an electromagnet, and each electromagnet having a switch operating coil, and a switch holding coil, said operating coils being in shunt and said holding coils being in series with the armature, the operating coils being energized successively as the motor speeds up, and said holding coils being brought successively into series with the armature by the action of the operating coils, whereupon the shunt circuits of the respective operating coils are automatically opened.

2. In combination, a motor having an armature, a resistance in circuit with the armature, and a controller comprising a series of switches adapted to cut out the resistance step by step, each switch being controlled by an electromagnet, and each electromagnet having a switch operating coil and a switch holding coil, the operating coils being energized successively as the motor speeds up to operate said switches successively, and said holding coils being energized successively by the operation of said operating coils and being adapted both to open the circuits of the operating coils respectively, and to maintain a firm closure of said switches.

3. In combination, a motor having an armature, a resistance in circuit with the armature, and a controller comprising a series of switches adapted to cut out the resistance step by step, each switch being controlled by an electromagnet, and each electromagnet having a switch operating coil and a switch holding coil and a control-circuit resistance to which the operating coils are so connected as to be energized successively as the motor speeds up to operate said switches successively, said holding coils being energized successively by the operation of the operating coils and being adapted both to open the circuits of the operating coils respectively and to maintain a firm closure of said switches, and said control-circuit resistance being open circuited when the motor is running at full speed.

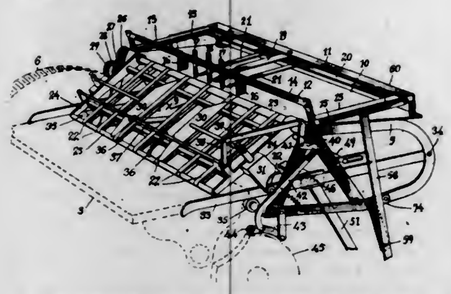
4. In combination, a motor having an armature, a resistance and a series field in circuit with the armature, and a controller comprising a series of switches adapted to cut out the resistance step by step and finally to cut out the series field, each switch being controlled by an electromagnet, and each electromagnet having a switch operating coil and a switch holding coil, the operating coils being

energized successively as the motor speeds up to operate said switches successively, and said holding coils being energized successively by the operation of said operating coils to maintain a firm closure of said switches.

5. In combination, a motor having an armature, a resistance in circuit with the armature, and a controller comprising a series of switches adapted to cut the resistance out or in step by step, each switch being controlled by an electromagnet, and each electromagnet having a switch operating coil and a switch holding coil, the operating coils being energized successively with the acceleration of the motor to operate said switches successively, said holding coils being energized successively by the operation of said operating coils to maintain a firm closure of said switches, and means to energize said operating coils successively in reverse order to that of the accelerating action, and in opposition to the current passing through the holding coils, thereby nullifying the magnetic flux through the holding coils, and allowing said switches to open successively to decelerate the speed of the motor.

[Claim 6 not printed in the Gazette.]

1,106,470. ENVELOP-MANIPULATING MECHANISM. LEWIS E. MORRISON, Newark, N. J., assignor to himself and Matthias Plum, Newark, N. J. Filed Mar. 26, 1908. Serial No. 423,395. (Cl. 101—39.)



1. The combination of a platen press having a movable platen, a movable form member, a platen locking cam, an automatic envelop manipulating mechanism comprising an automatic envelop feeding mechanism, an automatic delivery mechanism, means for operating the said two mechanisms by the movement of the said form member, grippers carried by the said delivery mechanism, means for closing the said grippers by contact with the said platen, means for oscillating the envelop feeding mechanism by the said platen, means for driving the said feeding mechanism and means carried by the latter and operated by the said platen locking cam for arresting the travel of the envelop over the said feeding mechanism at a given point.

2. The combination of a movable platen, an envelop separating mechanism, a feeding mechanism interposed between the latter and the said platen, movable members cooperating with the said platen for raising and lowering the said feeding mechanism and delivery grippers mounted to slide upon the said movable members for removing the printed envelop from the said platen when the said feeding mechanism is lowered.

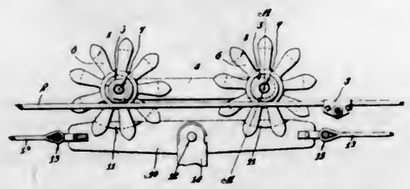
3. The combination of a movable platen, an envelop separating mechanism, a conveying mechanism interposed between the separating mechanism and the said platen for conveying the separated envelop to the latter, a delivery mechanism for removing the printed envelop from the platen and pivoted levers coacting with the platen for supporting the said conveying and the said delivery mechanisms.

4. The combination of a movable platen, a movable form member, envelop separating means, a delivery mechanism, levers pivoted intermediate their ends for operating the said separting means, pivoted levers for operating the said delivery mechanism and means for oscillating all of the said levers in unison and in opposite directions by the said form member.

5. The combination of a movable platen, envelop separating means, envelop feeding means, mechanism for arresting the movement of the separated envelop in the said feeding means while the impression is being taken, means for delivering the printed envelop and mechanism for releasing the unprinted envelop from the said feeding means substantially at the same time the said delivering means remove the printed envelop.

[Claims 6 to 17 not printed in the Gazette.]

1,106,471. WIRE-ROPE TRANSMISSION CARRIAGE. ANDREW OPSAL, Vancouver, British Columbia, Canada. Filed May 21, 1914. Serial No. 840,057. (Cl. 104—132.)



1. A carriage for an overhead transmission system, said carriage comprising an upper frame having a plurality of roller wheels which bear upon the track rope, each roller wheel having a star wheel on each side of it, each star wheel having outwardly projecting shouldered projections which are concentric with the axis of its roller wheel, and an under-track carriage supported from the shouldered projections of the star wheels and including two side plates, each having projections to coöperate with the projections of the star wheel.

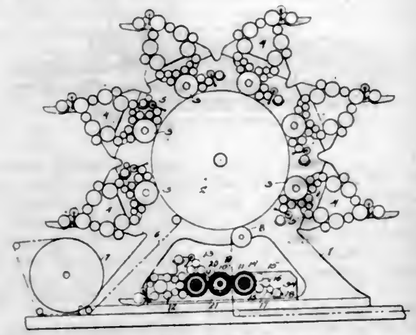
2. A track rope carriage for an overhead transmission system, comprising an upper carriage supported from the track rope on a plurality of rollers, each having a star wheel on each side of it which is independently rotatable on the pin of its roller wheel, each of said star wheels having outwardly projected shouldered projections from its radial arms, the shouldered faces of which are concentric with the axis of its roller wheel, an under-track carriage comprising a pair of side plates having inward projections to engage the shouldered projections of the star wheels, and means for pivotally connecting the load to this under carriage.

3. A carriage for an overhead transmission system, comprising an upper frame composed of two side plates, a roller mounted at each end of the frame on a pin secured in and extending across between the plates, a star wheel rotatably mounted on each end of each roller, the ends of the radial arms of which star wheel are thickened to leave a shoulder which is concentric with the pin, an under-frame composed of two elongated plates secured together the required distance apart each plate having a projection from its upper edge which is curved to an arc corresponding to that of the shouldered projections of the star wheels which star wheel projections are designed to engage the corresponding projections of the under-frame, an attachment to which the load is connected pivotally mounted on a pin extending between the side plates of the under frame, and an attachment at each end of the under frame to which the hauling rope is connected.

1,106,472. PRINTING MECHANISM. GEORGE E. PANCOAST, Brooklyn, N. Y., assignor to American Lithographic Company, a Corporation of New York. Filed Nov. 8, 1902, Serial No. 130,499. Renewed Dec. 3, 1904. Serial No. 235,334. (Cl. 101—112.)

1. In a printing press, the combination with a design member having a yielding surface, of an impression member having a rigid ink-repelling impression surface, substantially as described.

2. In a printing press, the combination with a design member having a yielding surface, of an impression member comprising a support and a removable and replaceable impression device having a rigid ink-repelling impression surface, substantially as described.



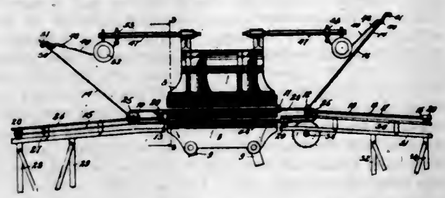
3. In a printing press, the combination with a design member having a yielding surface, of an impression member having a rigid impression surface which when moistened becomes ink-repelling, and means for moistening the impression surface, substantially as described.

4. In a printing press, the combination with a design member having a yielding surface, and an impression member comprising a support and a removable and replaceable impression device having a rigid impression surface which when moistened becomes ink-repelling, and means for moistening the impression surface, substantially as described.

5. In a rotary printing press, the combination with a design cylinder having a yielding surface, of an impression cylinder having an ink-repelling impression surface, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,106,473. EMBOSSING-PRESS. GEORGE E. PANCOAST, Brooklyn, N. Y., assignor to American Lithographic Company, a Corporation of New York. Filed Dec. 10, 1904, Serial No. 236,303. Renewed Apr. 22, 1912. Serial No. 692,542. (Cl. 101—13.)



1. A power press including in combination, a pair of impression members, a pair of workholders, and means for moving said workholders from a position between said impression members to a common feeding position in such manner that when either workholder is in one position the other workholder is in the other position.

2. An embossing press including in combination, a pair of impression members, a pair of die carrying members, and means for moving said die carrying members back and forth from a position between said impression members to a common feed position.

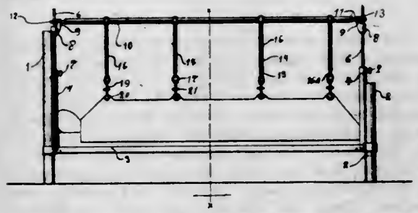
3. An embossing press including in combination, a pair of impression members, a work-holder consisting of die and counter-die carrying members operatively connected with each other, and means for moving said work holder back and forth from a position between said impression members to a feed position at one side of said impression members, and means for operating the work-holder members to receive and discharge sheets.

4. An embossing press including in combination, a pair of impression members, a work-holder consisting of die and counter-die carrying members operatively connected to each other, means for fixing the sheet to be embossed in accurate registering relation to the die and counter-die on said die carrying members, and means for moving said work holder back and forth from between said impression members to a sheet feeding position at one side of said impression members.

5. An embossing press including in combination, a pair of impression members, a work-holder consisting of die and counter-die carrying members operatively connected together, means for moving said work-holder back and forth from a position between said impression members to a sheet feeding position at the side of said impression members, and means for separating said die and counter-die carrying members and holding them separated while the work-holder is in the sheet feeding position.

[Claims 6 to 31 not printed in the Gazette.]

1,106,474. COVERLET-HOLDER. GOTTFRID PERSSON, Lueders, Tex. Filed Jan. 23, 1914. Serial No. 813,829. (Cl. 5—41.)



1. In a device of the character described, the combination with a pair of standards respectively secured to the extremities of a bed, of an elongated member extending horizontally above the bed between said standards, a plurality of elongated members pivotally supported by the first specified member and disposed transversely of the bed above the same, and a plurality of fastening devices carried by each transverse member.

2. In a device of the character described, the combination with a pair of standards extensible in length and respectively secured to the extremities of a bed, of an elongated horizontal member extending above the bed between said standards, a plurality of elongated transverse members pivotally supported by the first specified member above the bed, and a plurality of fastening devices carried by each of said transverse members.

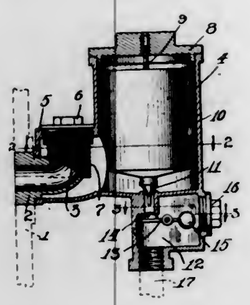
3. In a device of the character described, the combination with a pair of standards respectively secured to the extremities of a bed, of an elongated member extending horizontally above the bed between said standards, means for manually subjecting said member to a vertical adjustment, a plurality of elongated members extending transversely of the bed above the same and pivotally supported by the first specified elongated member, and a plurality of fastening devices carried by each transverse member.

4. In a device of the character described, the combination with a pair of standards respectively secured to the extremities of a bed, of an elongated horizontal member extending above the bed between the two standards, a triangular frame pivotally supported by said elongated member comprising a rigid vertical member depending from said elongated member, a member transverse of the bed to which the lower extremity of the vertical member is rigidly secured, and wires extending between the extremities of the transverse member and the upper end of the vertical member, and a plurality of fastening devices carried by said frame.

5. In a device of the character described, the combination with a pair of extensible standards respectively secured to the extremities of a bed, of an elongated horizontal member extending above the bed between said standards, and a plurality of fastening devices supported by said member.

[Claim 6 not printed in the Gazette.]

1,106,475. RADIATOR VENT-VALVE. WILLIAM B. POINDEXTER, Chicago, Ill., assignor of one-half to Ulysses S. Jenkins, Chicago, Ill. Filed Oct. 3, 1912. Serial No. 723,675. (Cl. 237—19.)



1. A vent valve for radiators embracing a casing affording a float chamber, an inlet in said casing, an outlet in the bottom of said casing, a float in said chamber, a closure connected thereto seating to close said outlet and adapted to be opened by elevation of said float due to the water of condensation from the radiator, a valve connecting the inlet to the float chamber with the radiator, and permitting flow only from the radiator, a valve connected in the discharge passage from the float chamber, and preventing return flow therein, and means permitting attachment of a vacuum pipe with the casing below the last named valve.

2. In a vent valve for radiators a casing, a float valve therein, an outlet in said casing below the line of flotation of said float, a valve connected to said float to open and close said outlet, a valve affording connection between said casing and the radiator, and acting to permit flow only into said casing, a valve controlling the passage from the float valve to prevent return flow thereinto, a vacuum pipe below said valve to receive the discharge therefrom, and removable plugs in said casing positioned to provide upon their removal insertion and adjustment apertures for the respective valves.

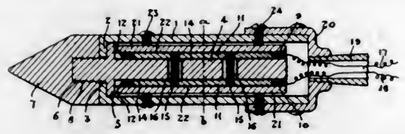
3. In a device of the class described a float chamber, a float therein, an inlet and outlet for said chamber, a valve connected to said float to open and close the outlet in said chamber below the line of flotation of said float, a check valve connected in the inlet to said float chamber to permit a flow thereinto and prevent a flow therefrom, and a valve connected in the outlet from said float chamber beyond said float valve to permit flow from the float chamber and prevent a reverse flow thereinto.

4. The combination with a radiator, of a vent nipple communicating therewith and extending outwardly therefrom, a valve on the outer end of the nipple closing the same against return flow to the radiator, a screen surrounding the discharge end of said nipple, a chambered casing secured on the nipple to receive the discharge therefrom, a float valve therein controlling the discharge from said casing, a vacuum pipe connected with the casing to receive the discharge from the float valve, a chamber below the float valve chamber, a valve therein acting to close the discharge passage from the float valve against return flow, and removable portions in the walls of said casing permitting inspection and removal of the respective valves.

5. In a device of the class described a float chamber, a float therein, an outlet passage in said chamber below the line of flotation of said float, a valve closure connected to said float to move therewith and adapted to open and close said outlet, an inlet passage connected to said float chamber and check valves in each of said passages to permit a flow of fluid therethrough in only one direction.

[Claim 6 not printed in the Gazette.]

1,106,476. ELECTRIC SOLDERING-IRON. JAMES CHARLES ROYCE, Toronto, Ontario, Canada. Filed May 23, 1913. Serial No. 769,396. (Cl. 219—28.)



1. In an electric soldering iron, a soldering point, a core of high heat conductivity secured to said point formed of rectangular shape presenting two broad flat contact surfaces, a pair of electric heating elements engaging the broad flat faces of said core and electrically insulated therefrom, a casing surrounding said core and heating elements and spaced therefrom, and means extending inwardly from said casing and clamping said heating elements against said core.

2. In an electric soldering iron, a soldering point, a core of high heat conductivity secured to said point formed of rectangular shape presenting two broad flat contact surfaces, a pair of electric heating elements engaging the broad flat faces of said core and electrically insulated therefrom, a casing surrounding said core and heating elements and spaced therefrom and forming a dead air space therearound, flat plate members arranged on the outer sides of said heating elements, and set screws extending through said inclosing casing and engaging said plates and clamping said elements in positive contact with the faces of said core.

3. In an electric soldering iron, a soldering point, a core secured to said point formed of rectangular shape presenting two broad flat surfaces extending longitudinally thereof, a pair of long flat heating elements arranged with their flat faces in contact with the broad flat faces of said core, said elements having central cores of metal, clamping members extending through one of said element cores to the other element core and electrically insulated from the main core and forming an electrical connection from the core of one element to the core of the other placing said elements in series connection, and a casing inclosing said core and elements.

4. In an electric soldering iron, a hollow rectangular casing having an inturned flange at one end, a core of high heat conductivity extending longitudinally of said casing and centrally arranged therein, having a flange at one end adapted to engage the flanged end of said casing, a point secured to one end of said core and clamping said core and casing together, a pair of electric heating elements held in close contact with said core and electrically insulated therefrom, flat plate members engaging the outer faces of said heating elements and electrically insulated therefrom, means for clamping said plates in contact with said heating elements, and a hollow handle connected to said casing.

1,106,477. GARMENT-STAY. DAVID SCHULER, Niagara Falls, Ontario, Canada, assignor, by mesne assignments, to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Mar. 8, 1913. Serial No. 752,995. (Cl. 2—76.)



1. A garment stay comprising wire bent into loops or convolutions, and provided with a plurality of supplemental tying or binding wires, each of said wires being threaded through all of the loops or convolutions along one edge of the stay, the two wires being threaded through said loops or convolutions in opposite directions, to thereby produce a flat stay which is flexible flatwise but stiff as against edgewise flexure.

2. A garment stay comprising wire bent into loops or convolutions, and provided along each edge with a plurality of supplemental tying or binding wires threaded through said loops or convolutions in opposite directions, to thereby produce a flat stay which is stiff as against edgewise flexure.

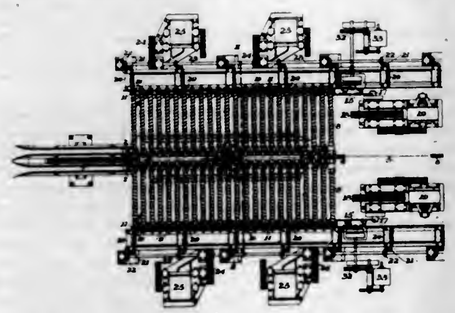
3. A garment stay comprising wire bent back and forth to form oppositely disposed loops or eyes and connecting crossings, and provided at each edge with a plurality of supplemental tying or binding wires threaded through said loops or eyes in opposite directions to thereby produce a flat stay which is flexible flatwise but stiff as against edgewise flexure.

4. A garment stay comprising wire bent back and forth to form oppositely disposed loops or eyes and connecting crossings, said stay being provided at each edge with a plurality of supplemental tying or binding wires threaded through the loops or eyes thereof, thereby forming a stay which is flexible flatwise but stiff as against edgewise flexure in either direction.

5. A garment stay comprising wire bent to form a series of loops or convolusions lying along the edges of the stay, and supplemental tying or binding wires therefor, one of said wires being tightly twisted around the closed ends of the loops or convolutions at each edge of the stay, whereby the stay is stiffened against edgewise flexure.

[Claims 6 to 8 not printed in the Gazette.]

1,106,478. HOTBED. EDWIN E. SLICK, Pittsburgh, Pa. Filed Jan. 28, 1908. Serial No. 413,045. (Cl. 80—42.)



1. A hot bed comprising in combination, a series of lengthwise parallel rotary bar supporting and transferring members, said members having screw threads thereon, and means for rotating said members, said means having spur pinions on the supporting and transferring members, spur gear wheels meshing with the pinions, ratchet wheels for turning the spur gear wheels, a series of rocking arms having pawls engaging the ratchet wheels and means for rocking the arms to thereby actuate the supporting members in transferring bars across the width of the hot bed; substantially as described.

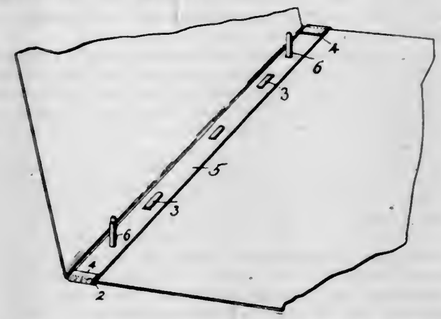
2. A hot bed comprising in combination, a series of lengthwise parallel rotary screw threaded bar supporting members, the screw threads engaging with and moving bars on the supporting members from one end to the other of said members, and means for rotating said members in unison, said means including pinions on the supporting members, gears meshing with the pinions and connecting the supporting members in pairs, ratchets and pawls for turning said gears and means for intermittently actuating the ratchets and pawls to rotate the supporting members; substantially as described.

3. In a hot bed for metal bars, a bar supporting and transferring member having a helical thread thereon, and having guide collars at one of its end portions, and means for rotating said member.

4. In a hot bed for metal bars, a bar supporting and transferring member having a helical thread thereon and having guide collars at one of its end portions, a lifting wing extending between the collars and to the adjacent end portion of the thread and arranged to lift and transfer the bars sidewise when the supporting member is rotated, and means for rotating said member.

5. A hot bed comprising in combination, a series of lengthwise parallel rotary screw threaded bar supporting members, said screw threads engaging with and moving bars on the supporting members from one end to the other thereof and means for rotating said members in unison, said means including gearing connecting the supporting members in pairs, a ratchet and pawl operatively connected to the gearing, swinging arms on which the pawls are mounted, a rod connecting the arms and means for operating the rod to intermittently actuate the arms to turn the supporting members; substantially as described.

1,106,479. LOOSE-LEAF BINDER. GEORGE A. STREETT, Cleveland, Ohio. Filed Apr. 30, 1914. Serial No. 835,361. (Cl. 129—25.)



1. A loose leaf binder comprising a folded cover, a backing strip engaging the cover adjacent the fold, said strip being provided with tongues, certain of the tongues perforating the cover, and all of the tongues being bent to retain the cover to the said strip, and flexible projecting members carried by the strip extending from the strip,—said members being adapted to engage loose leaves.

2. A loose leaf binder comprising a folded cover, a backing strip engaging the cover, tongues formed from a portion of said strip and bent therefrom, certain of said tongues being adapted to perforate the cover, and all of the tongues being bent to retain the cover to the strip, and flexible projecting members carried by the strip and extending therefrom, said members being adapted to engage and retain loose leaves.

3. A loose leaf binder comprising a folded cover, a backing strip having tongues, certain of said tongues being cut from the body of the strip, the said tongues being bent away from the strip, certain of the tongues perforating the cover, and all of the tongues being bent to retain the cover to the strip, and flexible members formed by severing the same from a portion of the strip, the said members being adapted to engage and retain loose leaves.

4. A loose leaf binder comprising a folded cover, a backing strip having tongues formed by severing a portion of the body of the strip, and end tongues formed by bending the ends of the strip, the end tongues being adapted to fold around the adjacent edges of the cover, the intermediate tongues being adapted to perforate the cover, and bent to retain the cover to the strip, and flexible members carried by the strip extending therefrom, said members being adapted to engage and retain loose leaves.

1,106,480. APPARATUS FOR REFINING AND DESILVERIZING LEAD. WILLIAM THUM, Hammond, Ind. Filed Dec. 9, 1910. Serial No. 596,400. (Cl. 75—59.)

1. An apparatus for refining impure lead, comprising: a plurality of crystallizing kettles permanently maintained in fixed position; means connecting a kettle with another of said plurality of kettles for effecting the discharge of

molten metal from one to the other; and means to introduce a suitable fluid under pressure within said kettles to effect the removal of molten metal through the said connecting means.



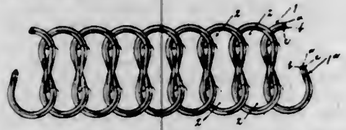
2. An apparatus for refining impure lead, comprising: a series of crystallizing kettles permanently maintained at the same level; means connecting the kettles for effecting the discharge of the contents of one into another; and means to introduce a suitable fluid under pressure within said kettles to effect the removal of the contents through the said connecting means.

3. In an apparatus for refining impure lead: a melting kettle provided with spouts; and a suitable setting for said kettle, the portion of the setting over said spouts being independent of the setting proper and readily removable.

4. In an apparatus for refining impure lead: a melting kettle provided with spouts; a suitable setting for said kettle, the portions of the setting over said spouts being independent of the setting proper and readily removable; and means to retain said removable portions of the setting in position.

5. In an apparatus for refining impure lead; a melting kettle provided at the bottom with two oppositely disposed spouts; a suitable setting for said kettle, comprising a main portion and removable portions, the latter consisting of a plurality of blocks of fire resisting material mounted over said spouts, sheet steel sections about the outer side of said blocks to retain the same in position, and ways connected with the main portion of the setting within which the said sheet steel sections are adapted to slide.

1,106,481. GARMENT-STAY. FRANK L. O. WADSWORTH, Sewickley, Pa., assignor, by mesne assignments, to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 17, 1912. Serial No. 710,007. (Cl. 2—76.)



1. A garment stay comprising a flat wire spring composed of a plural wire strand or strands formed into a series of loops, portions of said strand or strands being under an initial twist or torsional set running in the same direction in corresponding parts of the stay.

2. A garment stay comprising a flat wire spring composed of a plural wire strand or strands formed into a series of loops, portions of said strand or strands being under an initial twist or torsional set running in the same direction in corresponding parts of the stay, said stay being of slightly concaved form in cross section.

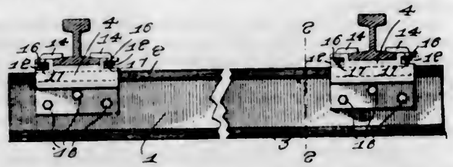
3. A garment stay comprising a flat wire spring composed of a plural wire strand formed into oppositely disposed loops with transverse connecting portions or crossings extending from edge to edge of the stay, said transverse portions or crossings being under an initial twist or torsional set, the twist in all said crossings running in the same direction.

4. A garment stay comprising a flat wire spring composed of a plural wire strand formed into oppositely disposed loops with transverse connecting portions or crossings extending from edge to edge of the stay, said transverse portions or crossings being under an initial twist or torsional set, the twist in all said crossings running in the same direction, said transverse portions or crossings being deflected sideways out of the plane of the stay.

5. A garment stay comprising a flat wire spring composed of a plural wire strand or strands bent to form a series of oppositely disposed loops with the sides of contiguous loops overlapping, the transverse portions or crossing being initially twisted, the twist in all said crossings running in the same direction.

[Claim 6 not printed in the Gazette.]

1,106,482. RAILROAD-TIE. SAMUEL WALL, Harrisburg, Ill. Filed Nov. 8, 1913. Serial No. 799,927. (Cl. 238—4.)



1. In a device of the class described the combination with a tie comprising a base portion and a head portion, said head portion provided with means for receiving a rail, rail engaging members carried by said tie and adapted to engage a rail for holding a rail in firm engagement with said tie, means threaded upon the lower ends of said rail engaging members for preventing the accidental removal of said rail engaging members from said tie, said rail receiving portion of said tie provided with a pocket, a block positioned within said pocket and adapted to support the base of a rail, and said rail receiving portion adapted to constitute means for protecting the lower ends of said rail engaging members to prevent the accidental removal of the rail engaging members from said tie.

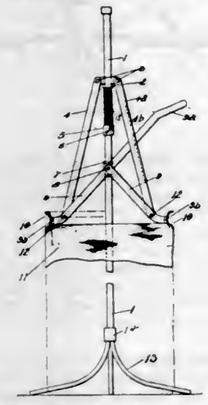
2. In a device of the class described the combination with a tie comprising a substantially I-beam structure, of a chair comprising a body provided with parallel downwardly extending flanges adapted to engage the vertical portion of said tie, said chair provided with laterally extending pockets adapted to receive the head portion of said tie, said chair provided with a block receiving pocket, a filler block positioned within said pocket and adapted to engage the under face of the base of a rail, said chair provided with laterally and longitudinally extending flanges formed upon the sides thereof, said flanges being spaced from the body portion of said chair to constitute channel portions, said flanges provided with notches, rail engaging clips fitting within said notches and engaging a rail for holding the rail in firm engagement with said chair, said rail engaging lips provided with threaded ends, and nuts threaded upon said rail engaging lips and fitting within said channels whereby said nuts will be held from engagement with foreign objects.

1,106,483. BAG-HOLDER. CHARLES H. WOODWARD and JOSEPH W. DOANE, Portland, Oreg. Filed Nov. 12, 1913. Serial No. 800,531. (Cl. 83—26.)

1. The combination with a standard, of a sliding head adjustable upon the standard, a bag spreader comprising a pair of legs pivoted to said head, a pair of arms pivoted to said legs and to a member sliding on the standard, a bag engaging member operatively disposed upon said arms, means for yieldingly supporting the spreader on the standard, and means for expansibly adjusting it.

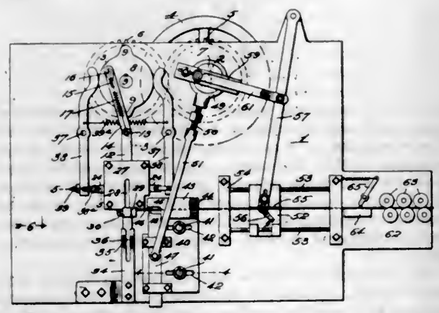
2. The combination with a standard, of a sliding head adjustable upon the standard, a bag spreader comprising a pair of legs pivoted to said head, a pair of arms pivoted to said legs and to a member sliding on the standard, a bag engaging member operatively disposed upon said arms, means for yieldingly supporting the spreader on the standard, a collar fixed upon the standard below the sliding head, a coiled spring interposed between them, and a lever extending from one of said arms transversely of one of said legs, for manipulating the arms to adjust the bag spreader.

3. The combination with a standard, of a sliding head adjustable upon the standard, a bag spreader comprising a pair of legs pivoted to said head, a pair of arms pivoted to said legs and to a member sliding on the standard, bag engaging members oppositely disposed upon said arms, means for yieldingly supporting the spreader on the standard, a collar fixed upon the standard below the sliding head, a coiled spring interposed between them, a lever extending from one of said arms transversely of one of said legs, for manipulating the arms to adjust the bag spreader, and a series of notches formed upon the said leg within the range of movement of said lever, to engage the lever at the desired point of adjustment.



4. The combination with a standard, of a sliding head adjustable upon the standard, a bag spreader comprising a pair of legs pivoted to said head, a pair of arms pivoted to said legs and to a member sliding on the standard, a bag engaging member operatively disposed upon said arms, and means for expansibly adjusting the bag spreader, said means consisting of a rack on one leg and a coöperative prolongation of the corresponding arm.

1,106,484. MACHINE FOR FORMING SPLIT PINS OR COTTER-PINS. IRA J. YOUNG, St. Louis, Mo., assignor to Western Wire Products Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 17, 1912. Serial No. 715,559. (Cl. 29—5.)



1. In a machine for forming split pins, a rigidly fixed slotted forming plate the underside of which is provided with a groove, means for feeding a predetermined section of wire into said groove, means for moving the section of wire into the slot in said plate and a pair of fingers arranged to slide through the forming plate for engaging the section of wire to bend the same tightly around the means which moves the section of wire into the slot.

2. In a machine for forming split pins, a rigidly fixed slotted forming plate in the underside of which is formed a curve, means for feeding a predetermined length of wire into said groove, means for moving said section of wire into the slot in said plate, and a pair of forming members adapted to engage said section of wire while in the slot and form an eye therein.

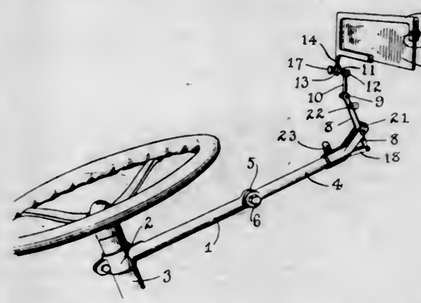
3. In a machine for forming split pins, a rigidly fixed slotted forming plate provided in its underside with a groove, means for feeding a predetermined section of wire into said groove, a pin adapted to traverse said slot and move the section of wire thereinto, and means for engaging said section of wire with pressure to form an eye around the pin.

4. In a machine for forming split pins, a rigidly fixed slotted forming plate provided in its underside with a groove, means for feeding a predetermined section of wire into said groove, a member adapted to engage the section of wire and move the same into the slot in the plate, a pair of forming members arranged to slide through the forming plate toward each other for engaging the section of wire to form an eye around the first mentioned member and means for actuating said forming member.

5. In a machine for forming split pins, a rigidly fixed slotted forming plate provided in its underside with a groove, means for feeding a predetermined section of wire into said groove, a pin adapted to traverse the slot in the plate and move the section of wire thereinto, a pair of forming fingers arranged to slide through the forming plate and adapted to engage the section of wire with pressure to form an eye around the pin, and means for effecting the withdrawal of the pin from the eye.

[Claims 6 to 16 not printed in the Gazette.]

1,106,485. ADJUSTABLE LIGHT-SHIELD FOR AUTOMOBILES. JACOB F. BECKER, Muskegon, Mich., assignor of one-half to H. Chris Hansen, Muskegon, Mich. Filed Apr. 4, 1913. Serial No. 758,808. (Cl. 21—148.)



1. An adjustable light shield comprising, an arm adapted to be attached at one end to a vehicle, a lever pivotally connected to the oher end of said arm, a light shield carried by said pivoted lever, means for automatically moving the lever and shield to operative position, and a detent to relensably hold the lever and shield in inoperative position.

2. An adjustable light shield comprising, an arm adapted to be adjustably attached at one end to a vehicle, and forked at its other end, a lever pivoted in the said fork and engaging a stop, spring actuated means for holding the lever in one position in engagement with the stop, a latch and detent for holding said lever in a second position, and a light shield mounted on said lever.

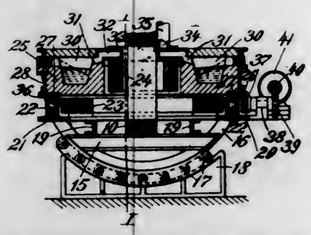
3. An adjustable light shield comprising, an arm adapted to be adjustably attached at one end to a vehicle and forked at its other end, a lever pivoted in the said fork, a rod extending into a longitudinal opening in the end of said arm, a spring to normally retract the rod into said opening, connecting rods to connect the outer end of said rod to the lower end of said pivoted lever, a stop to limit the movement of the pivoted lever to a position substantially at right angles to the said arm, a detent on the arm, a spring latch on the pivoted lever to engage

the said detent to releasably retain the lever in substantially parallel relation to the arm, and a light shield adjustably mounted on the free end of the pivoted lever.

4. An adjustable light shield for automobiles comprising, an arm adapted to be adjustably attached to the steering post thereof, an extension arm pivotally attached to the outer end of the first arm, a lever pivotally mounted on the outer end of the extension arm and limited in its upward movement by a stop and actuated by a spring to hold it yieldably in engagement with the stop, said lever also being adapted to be turned downward and releasably retained in parallel relation to the said extension arm, a vertical arm pivotally attached to the free end of said pivoted lever, a horizontal arm pivotally attached to the upper end of said vertical arm, and a frame provided with a glass light shield and rotatably attached to said horizontal arm.

5. An adjustable light shield for automobiles comprising, an arm adapted to be adjustably attached to the steering post of such automobile, an extension arm pivotally attached to the outer end of the first arm and forked at its outer end, a lever pivoted in the said fork, a stop to limit the movement of the said lever in one direction to a position at substantially right angles to the extension arm, a spring actuated rod located in a longitudinal opening in the outer end of the extension arm and normally retracted into said opening and connected to the lower end of said pivoted lever to yieldably hold the same against the said stop, a detent on the said extension arm, a spring latch on the pivoted lever adapted to engage the said detent to retain the lever in substantially parallel relation to the extension arm, a vertical arm pivotally attached to the free end of the pivoted lever, a horizontal arm pivotally attached to the upper end of said vertical arm, a frame rotatably mounted on said horizontal arm, and a glass serving as a light shield detachably mounted in said frame.

1,106,486. ELECTRIC FURNACE. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Dec. 19, 1913. Serial No. 807,684. (Cl. 204—64.)



1. An induction furnace comprising a closed metallic core, a fixed primary, a movable secondary formed by an annular crucible and a body of metal therein, together with means for rotating the secondary relative to the core and primary.

2. An induction furnace comprising a closed metallic core, a fixed primary, a movable secondary formed by an annular crucible and a body of metal therein, means for rotating the secondary relative to the core and primary, and means communicating with the crucible for exhausting gases therefrom or introducing bodies thereto.

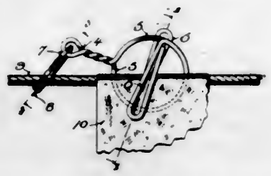
3. An induction furnace comprising a closed metallic core, a fixed primary, a movable secondary formed by an annular crucible and a body of metal therein, means communicating with the crucible for exhausting gases therefrom or introducing bodies thereto, and means for rotating the secondary relative to the core and primary.

4. An induction furnace comprising a closed metallic core, a fixed primary, a movable secondary formed by an annular crucible and a body of metal therein, said crucible having upwardly projecting ribs in the bottom thereof, together with means for rotating the secondary relative to the core and primary.

5. An induction furnace comprising a closed metallic core, a fixed primary, a movable secondary formed by an annular crucible and a body of metal therein, means for rotating the secondary relative to the core and primary, said crucible having a sectional detachable cover.

[Claims 6 and 7 not printed in the Gazette.]

1,106,487. CLOTHES-PIN. JACOB A. BRADLEY, Wabeno, Wis. Filed July 21, 1913. Serial No. 780,115. (Cl. 24—139.)

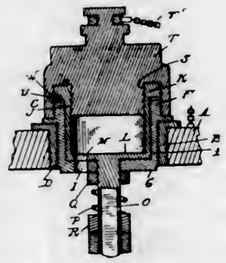


1. A clothespin consisting of a spring-wire bent and twisted to form a shank, parallel circular loops and fingers crossing the loops in opposite directions, each finger embodying two stretches of the wire that is recurved to fashion said finger in which an end of said wire is laid close against an opposing stretch of the same.

2. A clothespin consisting of a spring-wire bent and twisted to form a shank, parallel circular loops and fingers crossing the loops in opposite directions, said fingers being dished to normally bear against the opposing circular loops.

3. A clothespin consisting of a spring-wire bent and twisted to form an eye-shank, parallel circular loops and fingers crossing the loops in opposite directions, together with a hanger caught in said shank.

1,106,488. VALVE. ANDREW J. CALLAGHAN, Jackson, Mich. Filed Apr. 18, 1912. Serial No. 691,615. (Cl. 137—27.)



1. In a valve mechanism, the combination with an outer shell section adapted for insertion within the discharge opening of a container, of an inner shell section rotatable within the outer, said sections having heads provided with ports adapted to be brought into and out of alinement upon the rotation of the inner shell, and means for maintaining said heads in contact, said shells having polygonal wrench engaging portions adapted to aline.

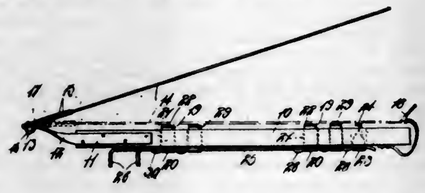
2. In a valve mechanism, the combination with an outer shell section adapted for insertion within the discharge opening of a container, of an inner shell section rotatable within the outer, said sections being provided with ports adapted to be brought into and out of alinement upon rotation of the inner shell, and means for securing the inner shell within the outer, said shells having wrench engaging portions adapted to aline, for the purpose described.

3. In a valve mechanism, the combination with an outer headed shell section adapted for insertion within the discharge opening of a container, of an inner headed shell section rotatable within the outer, means for maintaining the heads of said section in contact, said shells being provided with ports adapted to be brought into and out of alinement upon the rotation of the inner shell and having wrench engaging portions adapted to aline, for the purpose described.

4. In a valve mechanism, the combination with an outer shell section adapted for insertion within the discharge opening of a container, of an inner shell section rotatable within the outer, said sections having ports adapted to be brought into and out of alinement upon the rotation of the inner section, means for maintaining said section in engagement, and means for arresting movement of the inner section in one direction, said sections having polygonal wrench engaging portions alining when the inner section is in said arrested position.

5. In a valve mechanism, the combination with an outer headed shell section adapted for insertion within the discharge opening of a container, of an inner headed shell section rotatable within the outer, said sections being provided with ports adapted to be brought into and out of alinement upon the rotation of the inner section, means for maintaining the heads of said sections in contact, the inner section being internally threaded, and a cap member having a portion engaging said internal threads and closing the inner section and having a portion engaging the outer.

1,106,489. PHOTOGRAPHIC-PRINTING FRAME. LAYARD L. CAMPBELL, New Brighton, N. Y. Filed Feb. 18, 1913. Serial No. 749,225. (Cl. 95—77.)



1. A photographic printing frame embodying a back member, spring plates secured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twisted substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates and means for holding said cover plate toward the back member.

2. A photographic printing frame embodying a back member, spring plates secured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twistetd substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates and means for holding said cover plate toward the back member, said cover plate being held normally spaced from the back member by the spring plates.

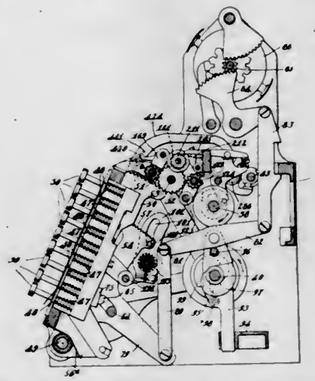
3. A photographic printing frame embodying a back member, spring plates secured to the longitudinal edges of the back near one end and projecting beyond the same, said projecting portions being twisted substantially at right angles and having coiled extremities, a pivot engaged therein, spaced glass holding plates carried by the pivot and having recesses receiving said coiled portions, a glass cover plate held between said spaced plates, means for holding said cover plate toward the back member and gripping members carried by the back member.

4. The combination with a back member and a transparent cover plate for the same; of gripping members carried by the back member, said gripping members embodying angular clips anchored to the back member and movable through the same, said clips having gripping portions overlying the face of the back member and means for moving said gripping portions toward and away from the face of the back member.

5. The combination with a back member and a transparent cover plate for the same; of gripping members carried by the back member, said gripping members embodying angular clips anchored to the back member and movable through the same, said clips having gripping portions overlying the face of the back member, said clips having portions spaced from the back member and bars engaged between said portions and the back member, said bars having cam-like faces to alternately engage between the clips and the back member whereby the gripping portions are similarly moved toward or spaced from the face of the back member.

[Claim 6 not printed in the Gazette.]

1,106,490. CASH-REGISTER. THOMAS CARROLL, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 10, 1904. Serial No. 236,285. (Cl. 235—3.)



1. In an accounting machine, the combination with a series of accumulating devices, of means for securing a record of the amounts accumulated on said devices; and adjustable means for predetermining whether the accumulating devices shall be finally reset to zero or whether the accumulation shall be retained, said adjustable means comprising a key which is adjustable to two different positions corresponding to said two predetermined results and is then depressible to set the necessary devices to effect such result.

2. In an accounting machine, the combination with a series of accumulating devices, of means for printing a final total or a sub-total of the amounts accumulated on said devices; and a totalizing key for predetermining whether a final total or sub-total shall be printed, said key being constructed to be adjusted into two different positions prior to depression, to effect such predetermining, with connecting means actuated upon the depression of the key to coöperate with the devices for controlling the said printing of totals.

3. In an accounting machine, the combination with accumulating devices, and means for printing totals therefrom, of an operable printing controlling element having provisions permitting a plurality of adjustable positions of said element, prior to its depression, the depression of said controlling element serving to cause printing of totals or sub-totals according to the preliminary adjustment of said element.

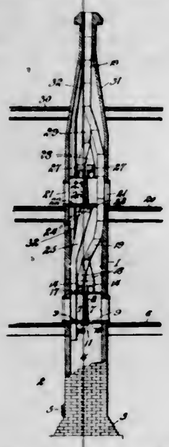
4. In an accounting machine, the combination with a totalizer, and zero setting means for said totalizer normally out of operative relation therewith, of banks of keys controlling said totalizer, plates constructed to lock all said banks of keys, a key controlled device constructed to move said locking plates to positions locking said banks of keys, and connections from said key controlled device

for establishing a coöperative relation between said totalizer and its zero setting means.

5. In an accounting machine, the combination with a series of accumulating devices, of means for recording the final totals and the sub-totals of the amounts accumulated; of an adjustable device for controlling the recording of one of said kinds of totals; and a second adjustable device having provisions for engaging the first adjustable device and adjustable to control the printing of either a final total or a sub-total according to its adjustment to engage with or be disengaged from said first mentioned adjustable device.

[Claims 6 to 54 not printed in the Gazette.]

1,106,491. SAFETY CHIMNEY-THROAT. ERNEST JOSEPH CASA-CALVO, Greenville, Miss. Filed Mar. 6, 1913. Serial No. 752,511. (Cl. 110—184.)

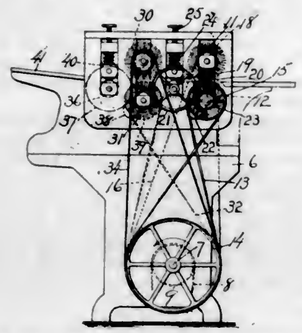


1. The combination of a chimney having an ash pit at its lower portion and provided with opposite fire place openings, a horizontal bottom wall or partition extending across the chimney at the bottoms of the said openings, a vertical wall or partition extending upwardly from the bottom wall and forming separate fire places, said bottom wall being provided with ash openings located at opposite sides of the vertical wall or partition, separate flues connected with the fire places and leading to the upper portion of the chimney, and an ash chute extending from the bottom wall or partition and communicating with the ash pit, said ash chute having its upper end located beneath the vertical wall or partition and being of a size to extend beneath both of the ash openings.

2. A chimney of the class described provided at a plurality of points with opposite fireplace openings, horizontal bottom walls or partitions extending across the chimney at the bottoms of the said openings and dividing the said chimney into separate portions, vertical back walls extending upwardly from the bottom walls and forming separate fireplaces, chimney throats arranged side by side in pairs at the top of the fireplaces and tapered upwardly and having outlets at their opposite ends, and separate flues leading from the chimney throats to the upper portion of the chimney.

3. A chimney of the class described provided at intervals with opposite fireplace openings and having its side walls tapered above the openings and forming upper shoulders, horizontal bottom walls or partitions located at the bottom of the said openings and dividing the chimney into separate portions, tapered back walls extending upwardly from the horizontal bottom walls or partitions and arranged between the tapered portions of the side walls of the chimney, horizontal top walls supported by the said shoulders, tapered chimney throats arranged in pairs and mounted at the said top walls at opposite sides of the back walls, and separate independent flues connected with the chimney throats and extending to the upper portion of the chimney.

1,106,492. MACHINE FOR SMOOTHING FIBER-BOARD. ALBERT WILLARD CASE, Highland Park, Conn. Filed July 21, 1909. Serial No. 508,729. (Cl. 92—68.)



1. In a machine for smoothing the roughened surface of paper board, rotating reducing brushes mounted in the machine frame with their axes parallel substantially to the plane of movement of board through the machine and having bristles formed and mounted to reduce the raised portions of the uneven surface of a sheet of material presented to said brushes, means for rotating the brushes, and means for feeding sheets between said brushes at a rate of surface speed slower than that at which the brushes travel.

2. In a machine for smoothing the roughened surface of paper board, reducing brushes rotatably mounted in the machine frame with their axes parallel substantially to the plane of movement of board through the machine and having bristles constituted to reduce the raised portions of the uneven surface of a sheet of material presented to said brushes, means for rotating the brushes, feed rolls mounted appurtenant to the brushes to feed sheets between the latter, and means for rotating the feed rolls.

3. In a machine for smoothing the roughened surface of paper board, a plural number of sets of reducing brushes mounted in the machine frame, each set consisting of rotating brushes having their bristles constituted to reduce the raised portions of the uneven surface of a sheet of material presented to them, means for rotating the brushes, feed rolls to feed sheets to said brushes, and means for operating the feed rolls at a slower rate of surface speed than that of the brushes.

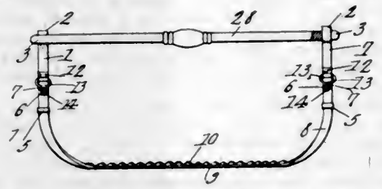
4. In a machine for smoothing the roughened surface of paper board, rotating brushes mounted in the frame of the machine and having bristles constituted to cut away and reduce the raised portions of the uneven surface of a sheet of material presented to them, feed rolls, and means for operating the feed rolls to present a sheet to said brushes moving in the same direction as the meeting surface of the brushes and at slower speed.

5. In a machine for smoothing the roughened surface of paper board, a pair of brushes mounted in the frame and having bristles constituted to reduce and cut away the raised portions of a sheet of material presented to them, means for rotating the brushes each at a speed different from the other but in a direction to pass a sheet between them, a pair of feed rolls, and means for rotating the feed rolls to feed a sheet to the brushes.

[Claims 6 and 7 not printed in the Gazette.]

1,106,493. MASSAGE-BELT. DE FOREST B. CATLIN, Mankato, Minn. Filed Nov. 20, 1913. Serial No. 802,137. (Cl. 128—16.)

1. The combination with an oscillatory member, and two flexible straps attached to the respective ends thereof, of a massage belt having reduced terminals, and coöperative means carried by the terminals thereof and the flexible connection for attaching the belt for oscillation by means of the bar.

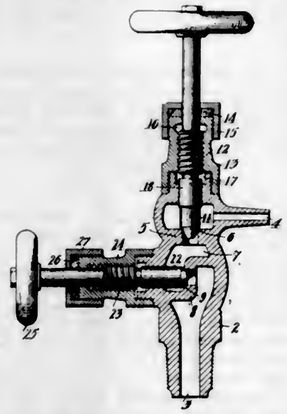


2. The combination with an oscillatory member, and two flexible straps attached to the respective ends thereof, of a massage belt having reduced terminals, coöperative means carried by the terminals thereof and the flexible connection for attaching the belt for oscillation by means of the bar, said coöperating means, including a knob and an engaging slot, and a guide for guiding the terminals of the coöperating members.

3. The combination with an oscillatory bar and two flexible straps connected one at each end thereof, of a massage belt provided with a plurality of parallel transversely disposed ribs upon one face thereof and having its terminals reduced, and coöperating means carried by the terminals of the flexible connections of the bar and the belt for attaching the belt to the flexible connection.

4. The combination with an oscillatory bar and two flexible straps connected one to each end thereof, of a massage belt provided with a plurality of parallel transversely disposed ribs upon one face thereof and having its terminals reduced, the terminals of the belt each being provided with an elongated slot, a fixed guide carried upon the free end of each of the flexible connections for receiving its respective reduced terminal of the belt, and a knob button carried by each flexible connection for entering the slot of the belt terminal to connect the terminal thereto.

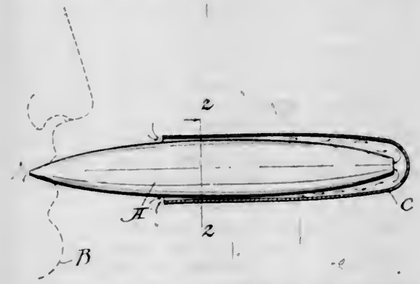
1,106,494. SHUT-OFF FOR GAGE-COCKS. FREDERICK CHENETTE, St. Albans, Vt., and FRANK A. CHENETTE, Worcester, Mass. Filed Nov. 6, 1913. Serial No. 799,483. (Cl. 136—3.)



1. In a locomotive gage cock, the combination with a casing having an inlet at one end and a drip near the other and provided with an integral transverse partition having a valve seat on the outer side thereof, an enlargement behind said partition, a second integral partition having a longitudinal central portion provided with a valve seat in said enlargement, and a passage in the end in alinement with the first valve seat, the walls of said passage being integral with said casing, of a longitudinal bushing screwed on the end of said casing and having a screw thread therein, a gage cock plug provided with a screw threaded portion fitting said screw thread and adapted to control the valve seat in the transverse partition, whereby said bushing and valve will be applied and removed together, said valve having an enlarged cylindrical portion fitting said passage in the end of the casing and guided thereby, a shut off valve arranged transversely to said gage cock plug and adapted to fit the valve seat in the longitudinal partition, said casing having a passage for guiding said shut off valve and said shut off valve having a screw-threaded shank, and a bushing transverse to the first named bushing screwed on said casing and having a screw thread for receiving the shank of the shut off valve, whereby said shut off valve will be removed and replaced with the second bushing.

2. In a locomotive gage cock, the combination with a casing having an inlet at one end and a drip near the other and provided with a transverse partition having a valve seat on the outer side thereof, an enlargement behind said partition, a second partition having a longitudinal central portion provided with a valve seat in said enlargement, and a passage in the end in alinement with the first valve seat, of a longitudinal bushing screwed on the end of said casing and having a screw thread therein, a gage cock plug provided with a screw threaded portion fitting said screw thread and adapted to control the valve seat in the transverse partition, said valve having an enlarged cylindrical portion fitting said passage in the end of the casing, a shut off valve arranged transversely to said gage cock plug and adapted to fit the valve seat in the longitudinal partition, said casing having a passage for guiding said shut off valve and said shut off valve having a screw threaded shank, and a bushing transverse to the first named bushing screwed on said casing and having a screw thread for receiving and guiding the shut off valve, said valve and plug each having a wheel on the end for operating the same.

1,106,495. WIND-SHIELD FOR CIGARS AND CIGARETTES. EDWARD C. CLIFFORD, New York, N. Y. Filed Sept. 8, 1913. Serial No. 788,527. (Cl. 131—51.)



1. A protector or shield for lighted cigars embodying a cap or thimble of non-combustible material arranged to fit loosely about the body of the cigar and to provide air passages around the body of the cigar, said protector being substantially closed about the lighted end of said cigar.

2. A protector or shield for lighted cigars embodying a non-metallic cap or thimble of non-combustible material arranged to fit loosely about the body of the cigar and to provide air passages around the body of the cigar, said protector being substantially closed about the lighted end of said cigar.

3. A protector or shield for lighted cigars embodying a pliable cap or thimble of non-combustible material arranged to fit loosely about the body of the cigar and to provide air passages around the body of the cigar, said protector being substantially closed about the lighted end of said cigar.

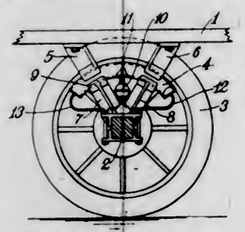
4. A protector or shield for lighted cigars embodying a cap or thimble of non-combustible material adapted to frictionally engage a portion of the body of the cigar and

to provide air passages along the body of the cigar, said protector being substantially closed about the lighted end of said cigar.

5. A protector or shield for lighted cigars embodying a cap or thimble of pliable fireproof paper arranged to fit loosely about the body of the cigar so that air passages are provided around the body of said cigar, said protector being adapted to contain printed matter on the exterior thereof and thus serve as an advertising device.

[Claims 6 and 7 not printed in the Gazette.]

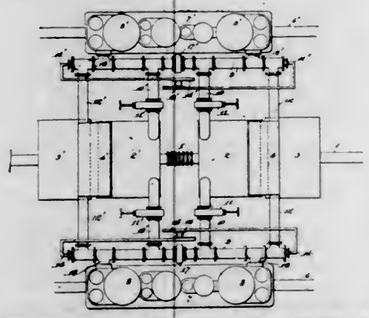
1,106,496. CUSHIONING DEVICE FOR VEHICLES. JOHN H. CLUNE, Springfield, Mass. Filed Aug. 30, 1913. Serial No. 787,472. (Cl. 21—50.)



1. In a cushioning device for vehicles, the combination with the body portion thereof, of a pneumatic member located between said body and the axle of the vehicle, retaining means for the member comprising brackets having their inner ends spaced from each other to receive the pneumatic member, an equalizing chamber having communication with the central and end portions of the pneumatic member, whereby, when a sudden pressure, is communicated to the pneumatic device, a flow of air will take place between the ends and the central portion thereof, as described.

2. In a cushioning device for road vehicles the combination, a flexible pneumatic member located between the body and the axle of the vehicle, means to support said member to permit the body to move fore and aft, an equalizing chamber, means to connect the opposite ends of the pneumatic member with one side of the equalizing chamber, means to connect the opposite side of the equalizing chamber with the central portion of the pneumatic member, the area of the first communication being smaller than the area of the second described communicating means, whereby, when a sudden pressure is imparted to the flexible pneumatic member the air in said member will gradually flow to the equalizing chamber and from there back into the pneumatic member in order to restore the equilibrium of the air in said member, as described.

1,106,497. ELASTIC-FLUID TURBINE. CHARLES G. CURTIS, New York, N. Y., and LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Dec. 15, 1911. Serial No. 665,913. (Cl. 121—58.)

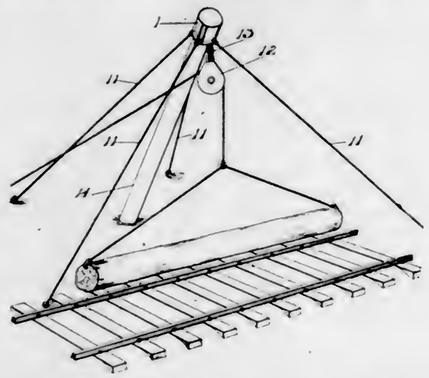


1. The combination with a plurality of turbines on a shaft, and a prime mover on a separate shaft, a condenser, connections from the prime mover to the turbines, connections from the prime mover to the condenser, and means for shutting off the connections to one of the turbines and opening the connections to the condenser.

2. The combination with a plurality of turbines on a center shaft, of a prime mover on a separate shaft, at each side of the center shaft, means for passing working fluid through the prime movers, and from their discharge to the turbines in multiple at full loads, and means for cutting out one of the turbines at low loads.

3. The combination with a plurality of turbines on a center shaft, of a prime mover on a separate shaft, at each side of the center shaft, a condenser, connections from the prime movers to the turbines, connections from the prime movers to the condenser, and means for shutting off the connections to the turbines, and opening the connections to the condenser.

1,106,498. GIN-POLE CAP. CLARENCE E. DOCKENDORFF, Estacada, Oreg. Filed Feb. 21, 1914. Serial No. 820,356. (Cl. 57—129.)



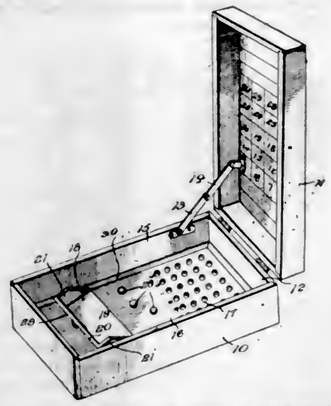
1. A gin pole cap comprising a cylindrical body portion closed at one end, the outer surface being reduced at intervals to a point near the open end to form a supported lateral flange in which are spaced apertures and a pulley block connecting element extending beyond the face of said flange.

2. A gin pole cap comprising a tubular body portion closed at one end, a lateral flange having spaced apertures therein about the open end of said body portion, and a detachable connecting bar secured upon said body portion and extending through said flange below the open end thereof.

1,106,499. GAME APPARATUS. CHARLES J. DYER, Oakland, Cal. Filed Mar. 25, 1913. Serial No. 756,816. (Cl. 46—62.)

1. A game apparatus comprising a box which includes bottom, side and end walls, openings formed in the bottom of the box adjacent one end and disposed to receive game pieces delivered from the other end of the box, a game piece delivering member supported adjacent the end wall of the box remote from said apertures, and a flexible rod secured to the under face of said delivering member, the terminals of said rod extending through eyes secured to the bottom of the box, whereby the delivering member may participate in a pivotal movement, the rod intermediate its ends being flexed during said movement.

2. A game apparatus comprising a substantially rectangular box including a bottom, side walls and end walls, the bottom adjacent one of the end walls being provided with apertures, and a game piece delivering member supported adjacent the other end of the box, said member comprising a base, a rear wall and end walls, a block secured to the under face of the base, and a resilient rod extending longitudinally of the base and secured to said block, the terminals of said rod being supported by the base of the box.



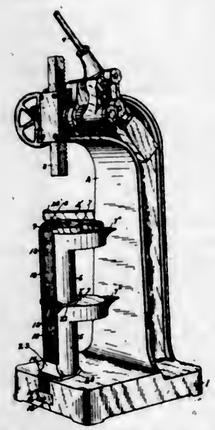
3. A game apparatus comprising a substantially rectangular box including a bottom, side walls and end walls, the bottom adjacent one end being provided with a plurality of apertures, a game piece delivering member mounted at the other end of the box, said member comprising a tray which includes a bottom, end walls and one side wall, and a rod secured to the under face of the bottom adjacent one of its edges, said rod being pivotally mounted on the bottom of the box.

4. A game apparatus including a game board, game pieces, a delivering member therefor, and a resilient mounting flexibly supporting said delivering member and arranged upon the board.

5. A game apparatus including a game board, game pieces, an oscillating delivering member therefor, and a resilient pintle arranged on said board and flexibly supporting the delivering member.

[Claims 6 to 8 not printed in the Gazette.]

1,106,500. ARBOR-PRESS. GARDNER T. EAMES, Kalamazoo, Mich., assignor to G. T. Eames Company, Kalamazoo, Mich. Filed Nov. 4, 1912. Serial No. 729,439. (Cl. 29—85.)



1. In an arbor press, the combination with the base and standard, of work table members comprising columns and beds at the upper ends thereof, the columns having outwardly facing channels extending from top to bottom thereof, said base having an outwardly facing recess registering with said channels, there being an opening through said base from said recess; a slide in said base recess for closing said opening; laterally projecting pivoted supporting arms for said table members, the column of the lower member resting on the base and the column of the upper member resting on the member below when swung to operative position; rearwardly projecting stop arms on said beds adapted to engage said standard when the members are in operative position; and a removable work holder having a pivot pin on its under side, said beds being provided with holes adapted to receive said pin whereby the holder may be shifted from one bed to another.

2. In an arbor press, the combination with the base and standard, of work table members comprising columns and beds at the upper ends thereof, the columns having outwardly facing channels extending from top to bottom thereof, said base having an outwardly facing recess registering with said channels, there being an opening through said base from said recess; a slide in said base recess for closing said opening; laterally projecting pivoted supporting arms for said table members, the column of the lower member resting on the base and the column of the upper member resting on the member below when swung to operative position; and rearwardly projecting stop arms on said beds adapted to engage said standard when the members are in operative position.

3. In an arbor press, the combination with the base and standard, of work table members comprising columns and beds at the upper ends thereof, the columns having outwardly facing channels extending from top to bottom thereof, said base having an outwardly facing recess registering with said channels, there being an opening through said base from said recess; a slide in said base recess for closing said opening; laterally projecting pivoted supporting arms for said table members, the column of the lower member resting on the base and the column of the upper member resting on the member below when swung to operative position; and a removable work holder having a pivot pin on its under side, said beds being provided with holes adapted to receive said pin whereby the holder may be shifted from one bed to another.

4. In an arbor press, the combination with the base and standard, of work table members comprising columns and beds at the upper ends thereof, the columns having outwardly facing channels extending from top to bottom thereof, said base having an outwardly facing recess registering with said channels, there being an opening through said base from said recess; a slide in said base recess for closing said opening; and laterally projecting pivoted supporting arms for said table members, the column of the lower member resting on the base and the column of the upper member resting on the member below when swung to operative position.

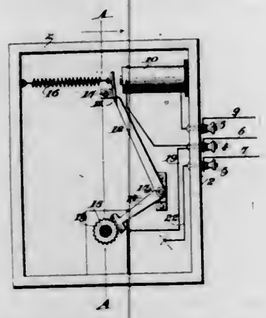
5. In an arbor press, the combination with the base and standard, of work table members comprising columns and beds at the upper ends thereof, the columns having channels extending from top to bottom thereof; laterally projecting pivoted supporting arms for said table members, the column of the lower member resting on the base and the column of the upper member resting on the member below when swung to operative position; rearwardly projecting stop arms on said beds adapted to engage said standard when the members are in operative position; and a removable work holder having a pivot pin on its under side, said beds being provided with holes adapted to receive said pin, whereby the holder may be shifted from one bed to another.

[Claims 6 to 10 not printed in the Gazette.]

1,106,501. CALL-REGISTERING TELEPHONE. FENWICK D. FADER, JOHN TIBB, and JOHN WILFRED TIBB, Vancouver, British Columbia, Canada. Filed Sept. 19, 1913. Serial No. 790,667. (Cl. 179—7.)

1. A recording telephone comprising the combination with a call box which is connected to the wires of the telephone system, means for removably connecting telephone system, means for removably connecting the telephone transmitter and receiver to the wires of the telephone

system in the call box, means within the telephone set for recording each call, and means within the call box for mechanically operating the recording mechanism of the telephone set when a call is connected by the central office, said last named means including an operating lever mechanically connected to the recording mechanism and a lever actuating magnet adapted to be operated by current impulses in the wires of the telephone system substantially as shown and described.



2. A recording telephone, comprising the combination with a call box which is connected to the wires of a telephone system, means for removably connecting a telephone transmitter and receiver to the wires of the telephone system in the call box, means within the telephone set for recording each call and means within the call box for mechanically operating the recording mechanism of the telephone when a call is connected by the central office.

3. A recording telephone, comprising the combination with a call box which is connected to the wires of a telphone system, of a mechanism within the box which is electrically operated by current through the ground wire, of a telephone set having a recording mechanism in it, means for removably connecting the telephone set to the wires of the telephone system, and means for mechanically connecting the operative mechanism within the box to the recording mechanism of the telephone set.

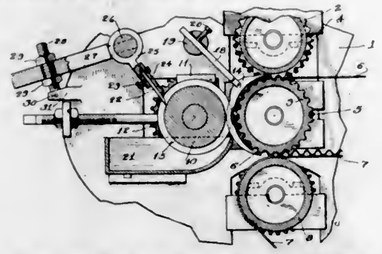
4. A recording telephone, comprising the combination with a call box which is connected to the wires of a telephone system, of a mechanism within the box which is electrically operated by a current through the ground wire, of a telephone set having a recording mechanism in it, means for removably connecting the telephone set to the wires of the telephone system, means for mechanically connecting the operative mechanism within the box to the recording mechanism of the telephone set, and means cooperative with the recording mechanism for antomatically disconnecting the telephone circuit when a predetermined number of calls has been recorded.

5. A recording telephone comprising the combination with a call box to which the wires of a telephone system are connected, a relay within the box the coil of which is connected between one of the wires of the telephone system and the ground wire, means for deriving a mechanical movement from the relay, a telephone having a recording mechanism within its case, means for removably connecting the telephone to the call box and for electrically connecting its circuit to that of the telephone system, means for mechanically connecting the relay mechanism within the box with the recording mechanism of the telephone and means for automatically disconnecting the telephone circuit when a definite number of calls has been recorded.

[Claims 6 to 10 not printed in the Gazette.]

1,106,502. MACHINE FOR MAKING CORRUGATED PAPER. JEFFREY T. FERRES, Los Angeles, Cal. Filed May 7, 1913. Serial No. 766,242. (Cl. 154—31.)

1. In a machine for making corrugated paper, paper conducting means, adhesive applying means adjacent thereto and out of contact with said conducting means, means for holding the paper in contact with the conducting means at separated areas whereby the spring of the paper between said areas causes the paper to contact with the adhesive applying means.



2. In a machine for making corrguated paper, a roller over which the paper is passed, an adhesive roll located out of contact with said roller, and guide means for causing said paper to first contact with said roller and then permit it to spring away therefrom and then cause it to contact with said roller.

3. In a machine for making corrugated paper, a forming roller over which the paper passes, an adhesive roll located adjacent to and out of contact with the forming roller, said adhesive roller having grooves, a series of paper guides received by said grooves and guiding the paper on said forming roller, said paper guides having cutaway portions to permit the paper to move away from the forming roller into contact with the adhesive roller.

4. In a machine for making corrugated paper, a forming roller over which the paper passes, an adhesive roll located adjacent to and out of contact with the forming roller, said adhesive roll having grooves, a series of paper guides received by said grooves and guiding the paper on said forming roller, said paper guides having cutaway portions to permit the paper to spring away from the forming roller into contact with the adhesive roll, and means projecting into said grooves for cleaning the same from adhesive.

5. In a machine for making corrugated paper, a pair of corrugated rollers between which the paper is passed, an adhesive roll located opposite one of said corrugated rollers and out of contact with it, concave guides with recesses for holding the corrugated paper in close contact at separated points with the latter corrugated roller, said recesses guiding the paper in contact with two portions of the corrugated roller, and permitting the paper to spring away from the corrugated roller at that portion of the roller between said first mentioned portions.

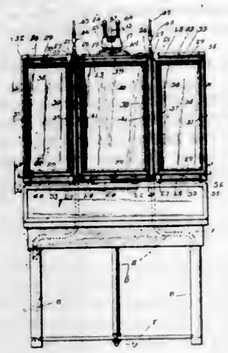
1,106,503. ADJUSTABLE MIRROR. CHARLES LEE FITCHET, San Jose, Cal. Filed Jan. 28, 1913. Serial No. 744,768. (Cl. 45—99.)

1. A support, a horizontal track pivoted on said support, a carriage traveling along said track, a table swiveled on said carriage, a plurality of mirrors supported by said table, means for adjusting the two outermost mirrors bodily in a horizontal circle, and axially on a vertical axis, and axially on a horizontal axis.

2. A support, a horizontal track pivoted on said support, a carriage traveling along said track, a table swiveled on said carriage, a plurality of mirrors supported by said table, means for adjusting the two outermost mirrors bodily in a horizontal circle, and axially on a vertical axis, and axially on a horizontal axis, and means for adjusting the center mirror on a vertical axis.

3. A support, a horizontal track pivoted at one end to said support to swing horizontally, a carriage adapted to travel on said track, a mirror suspended from said carriage, and a pair of guys extended from said support to the forward end of said track, and adapted to swing with said track on its pivot.

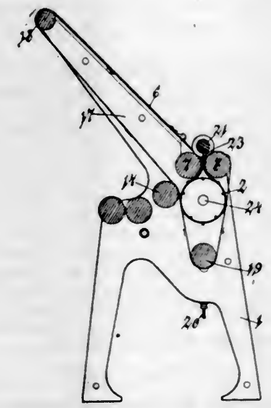
4. A horizontal track, means for supporting the same from one end thereof, a mirror, means for suspending the mirror under said track and permitting the mirror to travel along said track, a flexible connection extending from said means to the front of the track, and means for automatically taking up slack of said flexible connection.



5. A support, comprising a socket, a bracket having a pin projecting into said socket, a track supported by said bracket, a mirror suspended under said track and movable along the track, a pin slidable in said socket, said first pin having a series of slots adapted to be engaged by said pin to hold the track and mirror in various angular positions.

[Claims 6 to 14 not printed in the Gazette.]

1,106,504. BLUE-PRINT-MAKING MACHINE. FREDERICK S. FLOETER, Saginaw, Mich. Filed Aug. 19, 1912. Serial No. 715,808. (Cl. 95—77.5.)

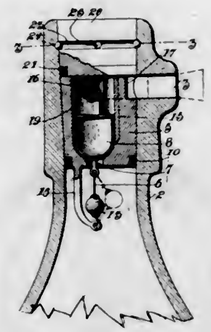


1. In a printing machine, a source of light, a curved supporting surface for sensitized material in proximity thereto, said surface comprising a grill formed of suitably disposed supporting rods spaced apart, a belt carrying said sensitized material, and means for propelling said belt over said grill to expose said material to the action of said light.

2. In a printing machine, a cylindrical grill formed of a plurality of longitudinally disposed rods, and helically wound wires surrounding said rods, a source of light within said cylindrical grill, a belt embracing part of the periphery of said grill, and means for propelling said belt.

3. In a printing machine, a supporting surface comprising a cylindrical grill formed of a plurality of longitudinally disposed rods, and helically wound wires surrounding said rods, said wires at each side of the mid-length of the cylinder being wound in opposite directions.

1,106,505. NON-REFILLABLE-BOTTLE CLOSURE. GEORGE FUSSELL, Chicago, Ill. Filed Sept. 18, 1913. Serial No. 790,491. (Cl. 215—63.)



1. In a non-refillable bottle, a bottle neck having a lateral pouring aperture, a hollow stopper secured within the neck of the bottle the upper edge of the stopper extending above the bottom of the lateral pouring aperture said stopper having an aperture in the bottom end and a passage in the upper part connecting the cavity of the stopper indirectly with the pouring aperture of the bottle, and a buoyant valve seated within the stopper over the bottom aperture.

2. In a non-refillable bottle, a bottle neck having a lateral pouring aperture, a hollow stopper secured within the neck of the bottle the upper edge of the stopper extending above the bottom of the lateral pouring aperture said stopper having an aperture in the bottom end and a passage in the upper part connecting the cavity of the stopper indirectly with the pouring aperture of the bottle, a buoyant valve seated within the stopper over the bottom aperture means for limiting the upward movement of this valve, and means for holding the valve on its seat when the bottle is inclined from the vertical and the fluid pressure without is greater than that within the bottle.

3. In a non-refillable bottle, a bottle neck having a lateral pouring aperture, a hollow stopper secured within the neck of the bottle the upper edge of the stopper extending above the bottom of the lateral pouring aperture said stopper having an aperture in the bottom end and a passage in the upper part connecting the cavity of the stopper indirectly with the pouring aperture of the bottle, a buoyant valve seated within the stopper over the bottom aperture, a flexible connection from the underside of the valve to an attachment projecting downward from the underside of the stopper and a weight about the midlength of said connection.

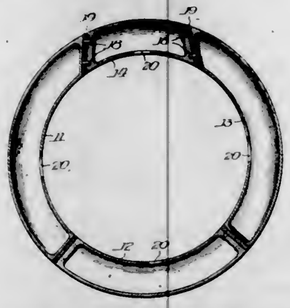
4. In a non-refillable bottle, a bottle neck having a lateral pouring aperture, a hollow stopper secured within the neck of the bottle the upper edge of the stopper extending above the bottom of the lateral pouring aperture said stopper having an aperture in the bottom end and a passage in the upper part connecting the cavity of the stopper indirectly with the pouring aperture of the bottle, said stopper having also a spur downwardly projecting from its underside, a buoyant valve over the aperture in the bottom of the stopper, a weight suspended by a flexible connection to the underside of the valve, said weight connected also by a flexible connection to the downwardly projecting spur of the stopper.

5. In a non-refillable bottle, a bottle neck having a lateral pouring aperture, a hollow stopper seated within the neck of the bottle the upper end of the stopper extending above the bottom of the lateral pouring aperture said stopper having an aperture in the bottom end and an indirect passage from the inside of it communicating with the pouring aperture, and a projection extending downward from its lower end, a buoyant valve seated over the bottom aperture of the stopper, a flexible connection between the

valve and the downward projection from the stopper, a weight in the midlength of that connection, and means for retaining the stopper within the bottle neck.

[Claims 6 to 10 not printed in the Gazette.]

1,106,506. EXPANSIBLE COLLAPSIBLE TIRE-CORE. LEMON GREENWALD, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Apr. 18, 1913. Serial No. 761,920. (Cl. 18—45.)



1. A collapsible tire core composed of segments, distance plates interposed between the adjacent end faces of the segments, and means to hold the distance plates in proper assembled relation to certain of the segments.

2. A collapsible tire core composed of segments, and distance plates interposed between the adjacent end faces of the segments, the distance plates and segments provided with interengaging members.

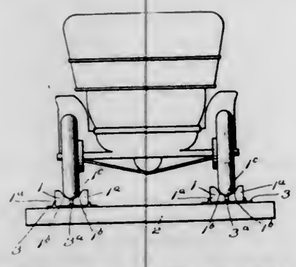
3. A collapsible tire core composed of segments, and distance plates interposed between the adjacent end faces of the segments, the distance plates having pin and socket engagement with certain of the segments.

4. A collapsible tire core composed of segments, and distance plates interposed between the adjacent end faces of the segments, the distance plates provided with pins and certain of the segments with recesses for the reception of the pins.

5. A collapsible tire core composed of hollow segments, the several segments having openings communicating between the interior and the atmosphere, and distance plates interposed between the adjacent end faces of the segments, the distance plates and segments provided with interengaging members.

[Claims 6 to 8 not printed in the Gazette.]

1,106,507. AUTOMOBILE-RAILWAY. JOHN A. GROSE, Sioux Falls, S. D. Filed Dec. 8, 1913. Serial No. 805,476. (Cl. 104—178.)

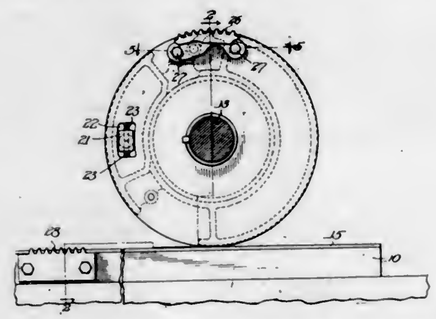


1. A device of the type described, including a track-way formed of rails individually in longitudinal sections or members, means for their retention in position comprising chair-plates adapted to receive said rail-members, said chair-plates having upstanding spacing studs received between said rail-members.

2. A device of the type described, including a track-way formed of upper surface grooved rails individually in longitudinal sections and rail approaches, the approach-ends of the latter being embedded in a plastic material conformed to the outline of the grooved surface of said track-rails.

3. A device of the type described, including a track-way formed of upper surface grooved rails, each rail being constituted of complementally grooved longitudinal members or sections, chair plates receiving said longitudinal members or sections and having upstanding studs received between said sections or members, said rail-members or sections having approaches embedded in a plastic material conformed to the outline of the grooved surface of said rails.

1,106,508. COMPENSATING CYLINDER FOR PRINTING-PRESSES. CARL HENDERSON, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1912. Serial No. 724,257. (Cl. 101—111.)



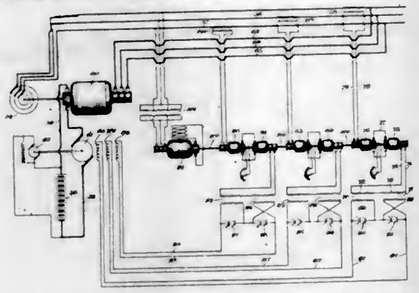
In a printing press, the combination of a reciprocatory bed having bearers on its sides, a rotatable bearer adapted to engage each of the bearers of said bed, one of said rotatable bearers having an aperture therethrough, an impression cylinder carried by said rotatable bearers and rotatable with respect thereto, a driving stud projecting from one end of said cylinder through the aperture in one of said rotatable bearers, said stud being smaller than said aperture, adjustable means for controlling the amount of lost motion between said stud and the edges of said aperture, means for actuating said rotatable bearers and said bed, a rack carried by said bed, and a gear segment carried by said cylinder and adapted to engage said rack at a desired stage of the printing operation, whereby said cylinder and said bed are brought into predetermined relation with each other, substantially as described.

1,106,509. PROCESS FOR DEODORIZING OLEIC AND FATTY ACIDS DERIVED FROM TRAIN OR FISH OILS. WILHELM HERMANN HOFMANN, Hamburg, Germany. Filed Sept. 23, 1913. Serial No. 791,285. (Cl. 87—12.)

The herein described process for deodorizing oleic and fatty acids from train or fish oils which consists in mixing resin with the fatty acids and subjecting the mixture to the action of concentrated sulfuric acid.

1,106,510. ELECTRICAL SYSTEM OF DISTRIBUTION. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Aug. 7, 1909. Serial No. 511,682. (Cl. 171—311.)

1. In an electrical system of distribution, an alternating current circuit, a source of electrical energy therefor, a storage battery and connections whereby it may be charged from said circuit and discharge thereto, including means for causing the battery to discharge fluctuatingly, said fluctuations having substantially the same frequency as the pulsations of the alternating current circuit, said means including a transformer supplied by current responsive to the current in said circuit, and means for short-circuiting said transformer when the electromotive force is in one direction and not in the other.



2. In an electrical system of distribution, an alternating current circuit, a source of electrical energy therefor, a storage battery and connections whereby it may be charged from said circuit and discharge thereto, including means for causing the battery to discharge fluctuatingly, said fluctuations having substantially the same frequency as the pulsations of the alternating current circuit, said means including an auxiliary circuit and means for allowing current to flow in one direction in said circuit but not in the other.

3. In an electrical system of distribution, an alternating current circuit, a source of electrical energy therefor, a storage battery arranged to be charged from said circuit and to discharge thereto, and means for causing the battery to discharge fluctuatingly, said fluctuations having substantially the same frequency as the pulsations of the alternating current circuit, said means including an auxiliary circuit acting to regulate the action of the battery and means for causing a pulsating uni-directional current to flow in said circuit responsive to variations on the alternating current circuit

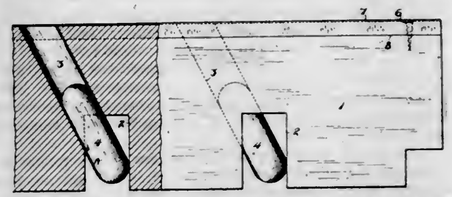
4. In an electrical system of distribution, an alternating current circuit, a source of electrical energy therefor, a storage battery arranged to be charged from said circuit and to discharge thereto, and means for causing the battery to discharge fluctuatingly, said fluctuations having substantially the same frequency as the pulsations of the alternating current circuit, said means including a transformer supplied by current responsive to variations on the alternating current circuit, an auxiliary circuit connected to said transformer, and an aluminum rectifier for causing a pulsating current to be produced in said circuit by the transformer.

5. In an electrical system of distribution, an alternating current circuit, a source of electrical energy therefor, a storage battery arranged to be charged from said circuit and to discharge thereto, and means for causing the battery to discharge fluctuatingly, said fluctuations having substantially the same frequency as the pulsations of the alternating current circuit, said means including an auxiliary circuit, means for producing a plurality of alternating current electromotive forces in said circuit responsive to variations on the alternating current circuit, and means for causing said electromotive forces to produce current in said circuit only in one direction.

[Claims 6 to 41 not printed in the Gazette.]

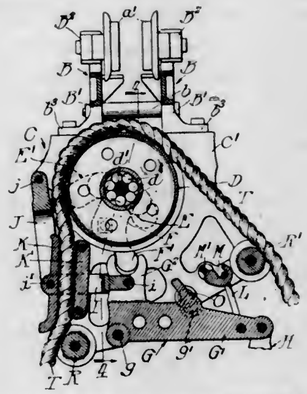
1,106,511. HANGER FOR CLOTHES AND THE LIKE. ROBERT INGENLATH, San Francisco, Cal. Filed June 16, 1913. Serial No. 773,927. (Cl. 34—26.)

In a clothes-hanger, the combination of bars each having a series of recesses in its lower edge, and a series of corresponding oblique cylindrical holes extending from the upper portion of the corresponding recess to the top of the bar, cylindrical latches having rounded ends and slidable in said holes, the recesses having vertical sides



against which the lower portions of the latches are adapted to rest in their lower positions, and means for closing the upper ends of said holes.

1,106,512. HAY-CARRIER. WILLIAM F. JACOBS, Ottawa, Ill., assignor to J. E. Porter Company, Ottawa, Ill., a Corporation of Illinois. Filed July 8, 1912. Serial No. 708,152. (Cl. 212—113.)



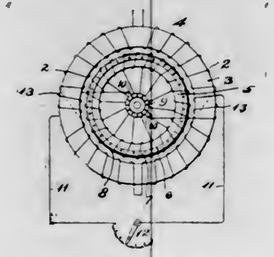
1. In a hay carrier, the combination of a supporting frame, a main sheave movably mounted in said frame, a pair of opposing jaws, one of which is movable, a bell crank lever pivotally mounted in said frame and having operative connection with said sheave and said movable jaw, a draft rope passing over said main sheave, downwardly between said jaws and connected to the extremity of said bell crank lever, the said rope being arranged to support the load between the sheave and the lever, a manually operable rock-shaft pivotally mounted upon said supporting frame, and provided with a hooked arm and a lever arm, to which is attached a hand rope, a link connecting said hooked arm to the extremity of said bell-crank lever, said rock-shaft being adapted to actuate the lever upwardly to release the jaws when the load is upon the elevating rope, and means for retaining the lever in its jaw-releasing position, comprising laterally movable ball plungers retained within casings integral with the supporting frame, and engaging semi-spherical depressions within the lever and springs within the casings arranged to force said ball plungers into engagement with said depressions.

2. In a hay carrier, the combination of a supporting frame, a main sheave movably mounted in said frame, a pair of opposing jaws, one of which is movable, a lever pivotally mounted in the supporting frame and having operative connection with the main sheave and with the said movable jaw, means acting to yieldingly retain said lever in its normal position, comprising semi-spherical depressions in the sides of said lever, ball plungers mounted in the frame and arranged to engage said depressions, and springs arranged to force said ball plungers against the lever.

3. In a hay carrier, the combination of a supporting frame having parallel, vertical side plates, a main sheave movably mounted in said frame, a pair of opposing jaws, one of which is movable, a lever pivoted between the side plates of the supporting frame and having operative connection with the main sheave and with the said movable jaw, said lever being provided with semi-spherical depressions, laterally movable ball plungers arranged to engage said depressions, and springs arranged to force said plungers against the arm, said side plates being provided with casings, within which are located said ball plungers and springs.

4. In a hay carrier, the combination of a supporting frame, having parallel, vertical side plates, a main sheave movably mounted in said frame, a pair of opposing jaws, one of which is movable, a lever pivoted between the side plates of the supporting frame and having operative connection with the main sheave and with the said movable jaw, said lever being provided with semi-spherical depressions, laterally movable ball plungers arranged to engage said depressions, springs arranged to force said plunger against the arm, said side plates being provided with casings, within which are located said ball plungers and springs, and set screws inserted through the outer ends of said casings and bearing on the outer ends of the said springs for varying the tension of the same.

1,106,513. ELECTRIC MOTOR. DUGALD C. JACKSON, Madison, Wis. Filed Mar. 10, 1900. Serial No. 8,202. (Cl. 172—277.)



1. An alternating current motor having an armature provided with suitable conductors, connections whereby a repulsion motor torque may be produced therein and other connections whereby an induction motor torque may be simultaneously produced in the same conductors.

2. In an alternating current motor provided with a main winding and a commutated winding, means for short-circuiting said commutated winding on an axis to produce repulsion motor torque and means for simultaneously partially short-circuiting the several coils of the commutated winding.

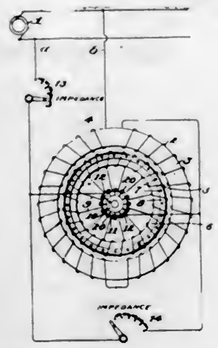
3. In an alternating current motor provided with armature conductors, means for inducing current in said armature conductors, means for causing part of said current to flow through said conductors so as to produce repulsion motor torque means for causing part of said current flowing through said conductors to produce induction motor torque and means for varying the flow of either part of said current.

4. In a dynamo electric machine, the combination with a field magnet of an associated armature core, a winding on said armature core, a commutator to which said winding is connected at suitable intervals, brushes electrically connected together and bearing on said commutator at points removed from the plane of commutation in order to afford repulsion motor torque, and a circuit independent of the commutator and brush circuit for conveying a portion of the current flowing in the armature winding.

5. An alternating current dynamo electric machine having a field magnet with alternating poles fixed in angular position, an armature core subjected to the influence of the field magnet, a commutated armature winding, a commutator therefor, brushes bearing on said commutator, a short circuiting conductor connecting said brushes, and resistances joining commutator segments, said resistances being adapted for inclusion in closed circuit with the corresponding armature coils whereby a commutator brush when bearing upon two commutator segments is brought into parallel relation with the resistances and armature coils connected therewith.

[Claims 6 to 24 not printed in the Gazette.]

1,106,514. DYNAMO-ELECTRIC MACHINE. DUGALD C. JACKSON, Madison, Wis. Filed Dec. 22, 1902. Serial No. 136,143. (Cl. 172—276.)



1. In an alternating current motor the combination with a field winding, of a commutated armature circuit included in series therewith, and a plurality of resistances bridging coils of said armature circuit, substantially as described.

2. In an alternating current motor the combination with a field winding, of an armature provided with a normally short-circuited winding, and with a commutated winding adapted for inclusion in series with said field winding, a plurality of resistances bridging coils of said commutated winding, and means for varying the current through said commutated winding, substantially as described.

3. In an alternating current motor, the combination with a field winding, of a commutated armature circuit included in series therewith, a plurality of conducting branches bridging coils of said armature circuit, and variable impedance adapted for inclusion in parallel with the commutated circuit, substantially as described.

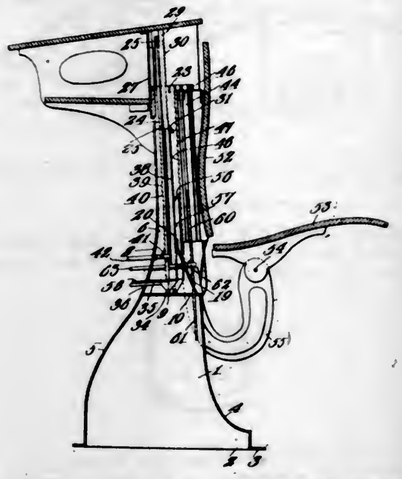
4. In an alternating current motor, the combination with a field winding, of an armature provided with a normally short-circuited winding, and with a commutated winding adapted for inclusion in circuit in series with said field winding, a plurality of conducting branches bridging coils of said commutated winding, and means for varying the current in said field winding, substantially as described.

5. In an alternating current dynamo electric machine, the combination with a field winding, of a source of alternating current, a commutated armature winding connected in series with said source and with said field winding, a segmented commutator to which said winding is connected at suitable intervals in order to produce series motor torque, and means for electrically bridging segments of said commutator.

[Claims 6 and 7 not printed in the Gazette.]

1,106,515. DESK. FREDERICK G. KOLLENBERG, Owensboro, Ky., assignor of one-fourth to William E. Aud and one-fourth to Roy L. McFarland, Owensboro, Ky. Filed Feb. 1, 1913. Serial No. 745,735. (Cl. 155—34.)

1. The combination with a base and a head, of a frame slidably mounted in the head and normally housed therein, said frame having similar toothed portions at the sides thereof, a single pivoted locking strip for simultaneously engaging corresponding teeth at each side of the frame to lock the frame against downward movement, a controlling lever connected to said means, a centrally disposed toothed bar secured to the frame, an elevating lever operable from a point outside of the head, and a dog carried by the lever for engaging the bar to elevate the frame during the oscillation of the lever, all of said levers being grouped back of the upper portion of the base.



2. The combination with a base and an upstanding channeled head thereon, said head having an inturned flange along each side, of a frame mounted to slide within the head and including opposed channeled members, a longitudinally extending toothed flange upon each of said channeled members, cross strips fixedly connecting said channeled members and extending into the channels, outturned flanges upon the channeled members for straddling and slidably engaging the flanges on the head, a desk secured to said outturned flanges, a rack bar fixedly connected to and depending from one of the cross strips, a single pawl normally engaging corresponding teeth upon the toothed flanges on the channeled members, means for shifting the pawl into or out of engagement with said toothed flanges, and oscillatory means engaging the rack bar for elevating said bar and the desk carrying channeled members relative to the head.

3. The combination with a closed base having openings in the top thereof, of an upstanding head integral with the base and open at its top, front and back, said head having inwardly extended flanges along the sides thereof, a frame mounted to slide within the head and including opposed channeled members, said frame having a toothed portion, means engaging the toothed portion for holding the frame against downward movement relative to the head, a rack bar fixedly connected to the frame and extending downwardly therefrom, said rack bar being movable into the opening in the top of the base, and means for actuating the rack bar to elevate the frame relative to the head, and a desk secured to the frame and movable therewith.

1,106,516. ART OF STRETCHING SHEET MATERIAL. LAURENCE S. LACHMAN, New York, N. Y. Filed June 9, 1910. Serial No. 566,052. (Cl. 181—10.)



1. The process herein described, which comprises the steps of rigidly and permanently securing an open frame and a sheet of expansible material together and subjecting the frame to pressure to change its shape and stretch the sheet.

2. The process herein described, which comprises the steps of securing an open frame and a sheet of expansible material together, and subjecting the frame to pressure which changes its form and causes it while assuming the new form to stretch the sheet.

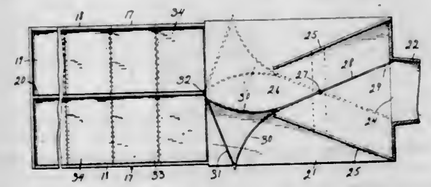
3. The process herein described, which comprises the steps of permanently securing together a sheet of suitable material and a reinforcing frame therefor, and subjecting the frame to pressure which changes its form and causes it while assuming the new form to stretch the sheet.

4. A process of making diaphragms, consisting of a body of sheet material and a reinforcing frame therefor, comprising the steps of permanently securing the sheet at its edges to the frame and first subjecting the frame to pressure to stretch the sheet.

5. A process of making diaphragms consisting of a stretched body of sheet material and a reinforcing frame therefor, comprising the steps of permanently securing the body and frame together and subjecting the frame to pressure which changes its form and stretches the sheet.

[Claims 6 to 9 not printed in the Gazette.]

1,106,517. HEN'S NEST. ERNEST C. MATHEWS, Minneapolis, Minn. Filed Apr. 3, 1913. Serial No. 758,660. (Cl. 119—48.)



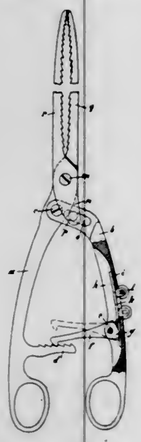
1. A device of the character described including a nest, a guide board, a hollow member affording communication between the nest and the guide board, stationary deflector plates carried by the board, an intermediate deflector plate pivotally supported intermediate its length, the outer end of such intermediate deflector being provided with opposed curved portions while the opposite end portion projects within the hollow member and adapted for contact with the walls thereof and a suitably mounted resilient latch adapted to engage the opposite faces of the intermediate deflector plate to maintain the same normally against movement about its pivot.

2. A device of the character described including a nest, a guide board, a hollow member affording communication between the nest and the guide board, stationary deflector plates carried by the board, an intermediate deflector plate pivotally supported intermediate its length, the outer end of such intermediate deflector being provided with opposed curved portions while the opposite end portion projects within the hollow member and adapted for contact with the walls thereof, a receptacle positioned adjacent the guide board divided longitudinally into compartments with which the intermediate deflector is adapted for alternate coöperation and a resilient latch projecting from the receptacle and intersecting the path of travel of the intermediate deflector plate and adapted to contact with the opposite faces thereof.

3. A device of the character described including a nest, a guide board, a hollow member affording communication between the nest and the guide board, stationary deflector plates carried by the board, an intermediate deflector plate pivotally supported intermediate its length, the outer end of such intermediate deflector being provided with opposed curved portions while the opposite end portion projects within the hollow member and adapted for contact with the walls thereof, a receptacle positioned adjacent the guide board divided longitudinally into compartments

with which the intermediate deflector is adapted for alternate coöperation, a resilient latch projecting from the receptacle and intersecting the path of travel of the intermediate deflector plate and adapted to contact with the opposite faces thereof, and plates pivotally supported within each of the compartments adjacent the upper portion thereof and disposed in overlapping relative relation.

1,106,518. LOCKING DEVICE FOR TONGS OR FORCEPS. HERMANN MATTI, Berne, Switzerland. Filed Apr. 13, 1914. Serial No. 831,545. (Cl. 81—45.)



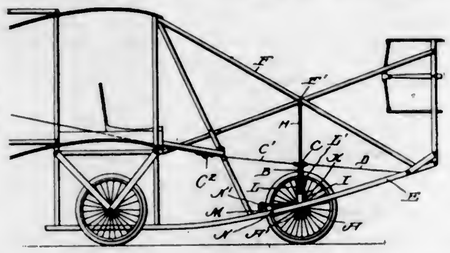
1. A locking gripping appliance, comprising two limbs and two jaws, means pivotally connecting said jaws, operative connections between the limbs and jaws, and means for locking the limbs relatively to one another, comprising two hook members adapted to engage together, one of said members being rigidly attached to one limb, a pivotal connection between the other hook member and the second limb, a slot in said second limb, a member adapted to slide therein, and a spring attached to said sliding member, said spring being adapted when in one position to hold the pivoted hook member in a position to engage with the fixed hook member, and in another position to hold said pivoted hook member in a disengaged position.

2. In a locking gripping appliance, the combination of a pair of jaws and means pivotally connecting the same, a limb integral with one jaw, a second limb and means operatively connecting it with the second jaw, a hook member with a plurality of hook teeth on one limb, a second hook member and means pivotally connecting it to the other limb, said second hook member having a tail piece, a sliding member on the limb bearing said second hook member, and a spring on said sliding member adapted when in one position to press said tail piece in a direction to engage the second hook with the teeth of the first hook, and when moved into another position, to turn said tail piece in such manner as to disengage the second hook from the first.

1,106,519. FRONT WHEEL FOR AEROPLANES. HARRY A. ORME, Wesley Heights, D. C. Filed July 18, 1911. Serial No. 639,097. (Cl. 244—2.)

1. The combination with the skids and side members of an aeroplane, of a flexible connecting bar, a wheel and its supporting frame, brace rods connecting said supporting frame and flexible cross bar and yieldable means connecting the said members of the aeroplane with the wheel supporting frame, as set forth.

2. In an aeroplane the combination with the skids and side members, of a wheel and its supporting frame, yielding connections between said supporting frame and side members and yieldable connections between said supporting frame and skids, said wheel and its supporting frame



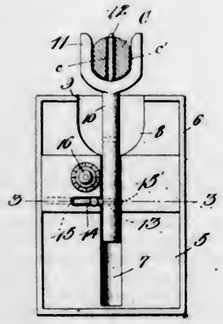
being mounted to turn together with means for so moving said wheel and frame.

1,106,520. SHOE FOR FURNITURE-LEGS. ADAM E. SCHATZ, Mount Vernon, N. Y. Filed May 5, 1911. Serial No. 625,375. (Cl. 155—33.)



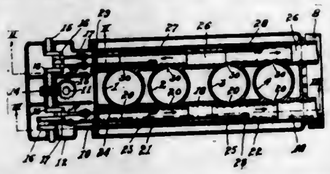
As a new article of manufacture, a sliding shoe for furniture legs, comprising a body portion stamped up from a metal blank in the form of a convexed disk; three or more equidistant integral flattened prongs projecting from the rim of the disk at right angles to its center of convexity; and opposed side spurs near the point of each prong, substantially as described.

1,106,521. LOCKING DEVICE. CHARLES L. SEELEY, La Junta, Colo. Filed Mar. 17, 1911, Serial No. 615,051. Renewed Jan. 13, 1914. Serial No. 811,920. (Cl. 70—90.)



A device of the class described, comprising a casing having a longitudinal guide slot having an enlarged U-shaped upper end, a locking bolt adapted for movement in the longitudinal guide slot and having an enlarged head portion adapted for engagement within the upper enlarged U-shaped end of the guide slot when the locking bolt is in its lowermost position, said head being adapted for engagement around a crank shaft and having a prong for engagement in the crank shaft to lock the latter against rotation and reciprocation when the locking bolt is in extended position, and means carried by the casing for securing the locking bolt in either position.

1,106,522. INTERNAL-COMBUSTION ENGINE. KARL Z. SHETLER, Cleveland, Ohio. Filed Aug. 27, 1913. Serial No. 786,941. (Cl. 123—188.)



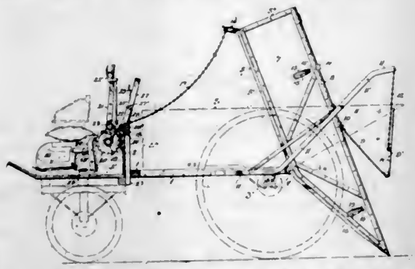
1. In an internal combustion engine, the combination of four cylinders and suitable pistons therefor, each cylinder having an exhaust and an inlet-port communicating with one end of its bore; a fuel-supply duct communicating with all of said inlet-ports; an exhaust duct communicating with all of said exhaust-ports; two valves in each of said ducts, each controlling two ports communicating with the latter; and mechanism adapted to actuate said valves to effect a four cycle action of the engine.

2. In an internal-combustion engine, the combination of four cylinders and suitable pistons therefor, each cylinder having an exhaust and an inlet-port communicating with one end of its bore; a fuel-supply duct communicating with all of said inlet-ports; an exhaust duct communicating with all of said exhaust-ports; two sliding valves in each of said ducts, each controlling two ports communicating with the latter; and mechanism adapted to actuate said valves so as to effect a four cycle action of the engine.

3. In an internal combustion engine, the combination of four cylinders and suitable pistons therefor, each cylinder having an exhaust and an inlet-port communicating with one end of its bore; a fuel-supply duct having its axis extending in a direction right angular with respect to the axis of said cylinders and communicating with all of said inlet-ports; an exhaust duct parallel with said supply duct and communicating with all of the exhaust-ports; two sliding valves in each of said ducts, each controlling two ports communicating with the latter; and mechanism adapted to actuate said valves to effect a four cycle action of the engine.

4. In an internal combustion engine, the combination of a plurality of cylinders and suitable pistons therefor; each cylinder having an exhaust and an inlet-port communicating with one end of its bore; a fuel-supply duct communicating with all of said inlet-ports; an exhaust duct communicating with all of said exhaust-ports; a plurality of hollow sliding valves in each of said ducts controlling the ports communicating therewith; mechanism at one end of the engine adapted to actuate said valves to effect a four cycle action, and including valve rods connected with the interior of said valves, part of said rods extending through those valves nearest to the afore-mentioned end of the engine.

1,106,523. DUMPING-WAGON OR ANALOGOUS CONTAINER. CHARLES G. STREICH, Oshkosh, Wis. Filed Sept. 8, 1913. Serial No. 788,627. (Cl. 21—20.)

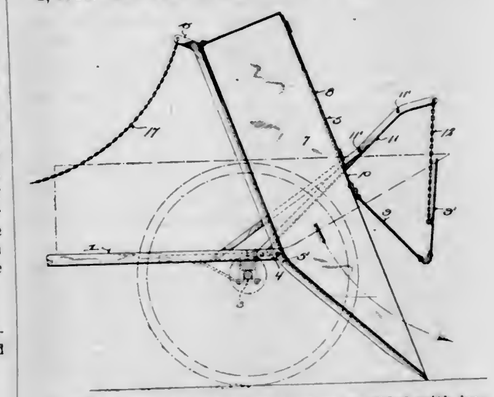


1. In a vehicle having a truck frame, a body pivoted thereon to have a preponderance of weight at its front end, a forwardly disposed windlass carried by the truck frame, a sheave-supporting frame extending from the truck intermediate of the windlass and body, a swinging yoke mounted within the frame, a sheave carried by the yoke, means for adjustably locking the yoke with respect to its frame whereby the position of the sheave is varied, and a chain or cable connecting the forward end of the body and windlass, the chain or cable being adapted to travel over the sheave.

2. In a vehicle having a truck-frame and a body pivotally mounted thereon intermediate of its length to present a preponderance of weight at its front end, and a windlass in chain or cable connection with the front end of the body; the combination of a guide-sheave for the chain or cable, means for securing the guide-sheave in a dumping position whereby the chain or cable will lift the forward end of the body to a predetermined elevation for completing the dumping movement by gravity, and means for shifting the position of the guide-sheave whereby the line of draft of the chain or cable is changed to cause the forward end of the body to be positively drawn downward in a recovery operation to a point where the recovery operation is completed by gravity.

3. In a vehicle having a truck frame, a body pivoted thereon to have a preponderance of weight at its front end, a forwardly disposed windlass carried by the truck frame, a sheave-supporting frame extending over the truck intermediate of the windlass and body, a yoke pivotally mounted within the frame, means for permitting play of the yoke pivoted relative to its supporting frame, a sheave carried by the yoke, and sets of locking brackets carried by the supporting frame for engagement with the yoke, whereby the position of the sheave is varied, and a chain or cable connecting the forward end of the body and windlass, the chain or cable being adapted to travel over the sheave.

1,106,524. WAGON-BODY. CHARLES G. STREICH, Oshkosh, Wis. Original application filed Sept. 8, 1913, Serial No. 788,627. Divided and this application filed Feb. 2, 1914. Serial No. 815,861. (Cl. 21—20.)

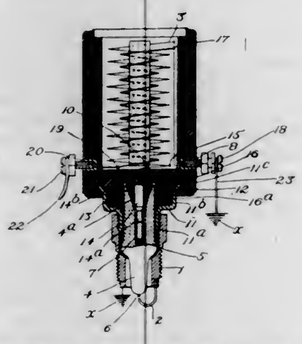


1. In a vehicle having a truck-frame provided with longitudinally spaced side sills, a rear axle secured thereto, and a body pivoted to the side sills of approximately equal width as the width between said sills; the combination of a suspension frame projecting above the body having struts spaced from the truck-frame sills, and provided with horizontally bowed feet that are secured to said sills, the said feet being partly supported upon the rear axle, a door in hinged connection with the body, and chains or cables connecting the free end of the door and the supporting frame.

2. In a vehicle having a truck-frame provided with longitudinally spaced side sills, a rear axle secured thereto, and a body pivoted to the side sills of approximately equal width as the width between said sills; the combination of a suspension frame projecting above the body having struts spaced from the truck-frame sills, and provided with horizontally bowed feet that are secured to said sills

the said feet being partly supported upon the rear axle, a door section in hinged connection with the body, a second door section in hinged connection with the free end of the first mentioned section, and chains or cables connecting the free end of the second door section and supporting frame.

1,106,525. IGNITER. HENRY C. THOMSON, Boston, and HAROLD N. MICHAELSEN, Canton, Mass., assignors to Electric Goods Manufacturing Company, a Corporation of Maine. Filed Feb. 15, 1913. Serial No 748,523. (Cl. 123—169.)



1. In an igniter, in combination with a spark plug having a spark plug shell, and an induction coil; a coil supporting casing embodying a base formed of solidified material originally in a plastic condition, and having a coil inclosing portion carried upon said base, and a casing supporting element embodying at one end a neck engaging the spark plug shell, and at the other a projecting portion permanently embedded in the material forming said base so as to be inseparably attached thereto.

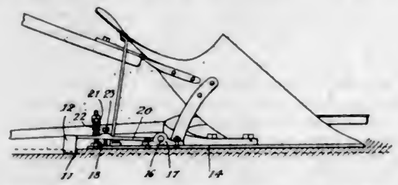
2. In an igniter, in combination with a spark plug having a spark plug shell, and an induction coil; a coil supporting casing embodying a base formed of solidified insulating material originally in a plastic condition and a coil inclosing portion carried upon said base, and a spark plug head-nut supporting said coil upon said spark plug, said head-nut comprising a neck engaging the spark plug shell, a projecting portion permanently embedded in the material forming said base so as to be inseparably attached thereto, and an hexagonal portion connecting said neck and said projecting portion; said hexagonal portion being interiorly lined with insulating material integral with said base.

3. In an igniter, in combination, the center pin surrounded by a projecting pillar of insulating material, outside of which is an annular chamber, a core having its inner end cupped or recessed, and with the contact element located at the inner end of the cup or recess, and the edge or wall lying around the cup or recess at the end of the core and entering within the said annular chamber lying outside the said pillar of insulating material.

4. In an igniter, in combination, a center-pin surrounded by a projecting pillar of insulating material, an annular chamber lying outside of said pillar, a core having its inner end cupped or recessed with a contact element located at the inner or lower end of said cup or recess, and having an edge or wall surrounding the cup or recess at the end of the core and adapted to enter into said annular chamber and to lie outside said projecting pillar.

5. In an igniter, in combination, a spark plug having a spark plug shell, an induction coil, a casing supporting said coil, said casing having a center pin located in the base of the same and surrounded by a projecting pillar of insulating material a spark plug head nut comprising a portion embedded with the casing, an hexagonal portion projecting below said casing, said portions being interiorly filled with insulating material, and a tubular neck, integral with the aforesaid portions and engaging the spark plug shell, the opening in said neck being continued upwardly through the said insulating material filling the upper portions of the head nut to form an annular chamber lying around said projecting pillar, and a porcelain or core having its inner end cupped or recessed, and with a central contact element located at the inner end of the cup or recess, the edge or wall surrounding the cup or recess being adapted to enter into said annular chamber and to lie outside the said pillar.

1,106,526. PLOW. CHARLES J. TUSETH, Osseo, Minn. Filed Jan. 29, 1913. Serial No. 744,890. (Cl. 97—17.)



1. A plow having a landside, a mold-board, and means carried by the plow at the rear thereof for cutting off a vertical slice of the furrow wall of full depth and depositing it in the furrow.

2. A plow having a mold-board, a landside, and means connected therewith and to the rear of the mold-board edge for cutting off a slice of land outside of the landside and of full depth and depositing it in the furrow to widen the furrow.

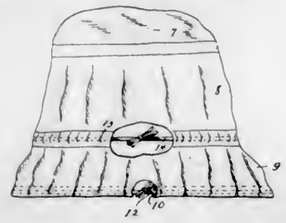
3. A plow having a landside, and means connected with the landside and having a portion extending outwardly beyond the outer plane and to the rear of said landside for cutting off a vertical slice of earth of full depth outside the landside to widen the furrow.

4. A plow having a landside, a frame member secured to said landside, and a vertical blade carried by said frame member outside of the outer plane of said landside and positioned to cut a slice of earth of full depth from the furrow wall and deposit it in the furrow.

5. A plow having a landside, a frame member connected to said landside so as to have freedom of movement relative thereto, a blade carried by said frame member, and means yieldingly holding said frame member in such position that the blade will cut a slice of earth along the furrow wall and outside the outer plane of the landside.

[Claims 6 and 7 not printed in the Gazette.]

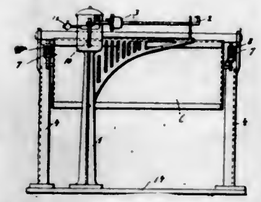
1,106,527. HAT-PROTECTOR. PAUL VELARDO, Somerville, and JOHN VELARDO, Boston, Mass. Filed Nov. 10, 1913. Serial No. 800,092. (Cl. 2—108.)



1. A hat protector formed of a thin, highly elastic material of such amplitude as to embrace both the crown and the brim of a hat, a longitudinally extending, continuous pocket formed at the juncture of the crown embracing portion with the brim embracing portion, a continuous longitudinally extending pocket formed at the edge of the brim embracing portion, and longitudinally elastic cords seated in said pockets.

2. A hat protector formed of a thin, highly elastic material of such amplitude as to embrace both the crown and the brim of a hat, a longitudinally extending, continuous pocket formed at the juncture of the crown embracing portion with the brim embracing portion, a continuous longitudinally extending pocket formed at the edge of the brim embracing portion, longitudinally elastic cords seated in said pockets, and means for adjusting the length of said longitudinally elastic cords.

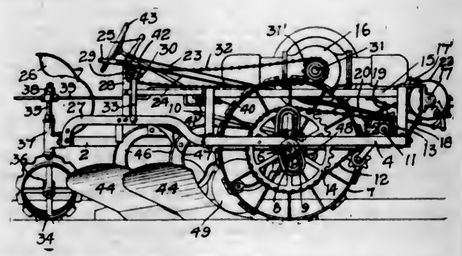
1,106,528. STEELYARD DAIRY-SCALE. ANDERS VIIG, Christiania, Norway. Filed Dec. 15, 1911. Serial No. 665,975. (Cl. 73—3.)



1. A weighing mechanism comprising two uprights 4, a forked support having its arms fulcrumed adjacent their ends on said uprights, a column 1, a scale beam fulcrumed on the column, a link connection between the forked support and scale beam, and a receptacle suspended from the arms of the forked support at points between the fulcrum of the latter and the connection of the beam therewith.

2. A weighing mechanism comprising two uprights 4, a forked support having its arms fulcrumed on top of said uprights, a column 1 outside of the forked support, a scale beam fulcrumed on the column, above the horizontal plane of the forked support, a link connection between the beam and forked support, a receptacle suspended from and having its upper edge above the arms of said support, arms 11 extending from the uprights beyond and above the section of the receptacle that is entirely outside of the forked support, and a bar 12 supported by said arms, for the purpose described.

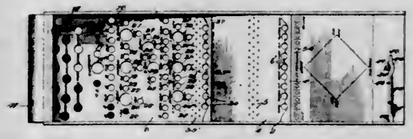
1,106,529. MOTOR-PLOW. WILLIAM L. WALTON and JEROME WAGAR, Bantry, N. D. Filed Aug. 3, 1909. Serial No. 511,055. (Cl. 97—30.)



1. A motor driven plow comprising a rigid frame, traction wheels adjustably mounted in said frame to one side of its transverse center, a guiding wheel adjustably arranged at the rear end of said frame, means for turning said wheel to guide the plow, plows adjustably supported beneath said frame between said traction wheels and guide wheel, a motor mounted on said frame with the center of the weight thereof in advance of the axis of said traction wheels and operatively connected with said traction wheels, said motor acting as a counterbalance for the rear portion of said frame for removing the weight of said frame from said guide wheel, whereby said guide wheel can be easily operated.

2. A motor plow comprising a rigid frame, traction wheels mounted in said frame, a guiding wheel arranged at the rear end of said frame, plows adjustably supported beneath the frame between said traction wheels and said guide wheel, a motor mounted on said frame with the center of the weight thereof in advance of the axis of the traction wheels, a shaft located at the front of said frame, and having driving connection with said motor, a second shaft at the front end of said frame, having driving connection with the traction wheels, and driving connection with said first named shaft, said motor together with said shafts and driving connections, acting as a counterbalance for the rear portion of said frame for removing the weight of said frame from said guide wheel whereby said guide wheel can be easily operated.

1,106,530. GAME-BOARD. FRANK E. WILSON, Lancaster, Ohio. Filed Feb. 25, 1913. Serial No. 750,684. (Cl. 46—61.)



1. A game board having superposed surfaces arranged for the successive movement of a projectile thereover, means arranged upon one of the surfaces for coöperation with the projectile to retain the same in position to indicate a score, and means for releasing the projectile for movement over the other surface, the last-mentioned surface having means thereon for indicating a phase of the score not indicated upon the first-mentioned surface.

2. A game board having superposed members arranged for the movement of a projectile thereover, the upper one of the members having a score-indicating pocket to receive the projectile, and the other member having a score-indicating means thereon, one of the members being displaceable with relation to the other member whereby to release the projectile for movement upon the second-mentioned member.

3. A game board having superposed relatively displaceable members, one of the members having a pocket to receive a projectile, and the other member forming a bottom for the pocket except when the members are displaced, and score-indicating means upon each of the members.

4. A game board including relatively displaceable members arranged for the movement of a projectile thereover, one of the said members being formed with an indicated pocket, and the other member normally forming a bottom for the pocket, the pocket being arranged to receive a projectile and retain the same when the members are in normal position and to discharge the projectile when the members are relatively displaced, and score-indicating means upon the second-mentioned member.

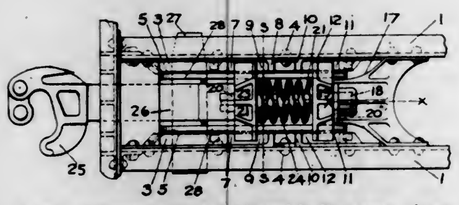
5. A game board, having superposed surfaces arranged for the movement of a projectile thereover, the surfaces having thereon independent score-indicating means, means upon one of the surfaces for retaining a projectile in indicating position thereon, and means whereby one of the surfaces may be displaced with relation to the other to release the projectile.

[Claims 6 to 8 not printed in the Gazette.]

1,106,531. DRAFT AND BUFFING GEAR FOR CARS. IRA O. WRIGHT, Baltimore, Md. Continuation of application Serial No. 434,713, filed May 25, 1908. This application filed Jan. 27, 1910. Serial No. 540,386. (Cl. 213—42.)

1. The combination in a draft gear, comprising sills, slotted links, a front follower, a rear follower, abutments

for the followers, cushioning means between the followers, and a slotted draw bar, of a key passed through the slots in the links and draw bar; and means connecting the rear ends of the link with the rear follower so the forward movement of the draw bar will move the rear follower; the front follower having its vertical side edges recessed for the passage of the links and within which recesses the links are located.



2. The combination in a draft and buffing gear, of supports with slots; abutments for followers, three abutments being located upon the face of each support; a front follower with its edges slotted located at the rear of the front abutments; a rear follower; cushioning means between the followers; a slotted draw bar; slotted draft links located within the slots in the edges of the front follower; means connecting the rear ends of the links with the rear follower; and a single key passed through the draw bar and links and movable within the slots of the supports; the movement of the rear follower in drawing being limited by the said intermediate abutments.

3. The combination in a draft and buffing gear, of supports with slots; cheek plates each with a vertically disposed abutment for a front follower; a front follower located at the rear of the abutments; abutments for a rear follower; a rear follower in front of said abutments; cushioning means between the followers; a slotted draw bar; slotted draft links; means connecting the rear ends of the links with the rear follower for advancing the rear follower in drawing; and a single key passed through the draw bar and links and movable within the slots of the supports; the ends of the said followers being slotted and said draft links being located within the slots of the followers each side of the cushioning means.

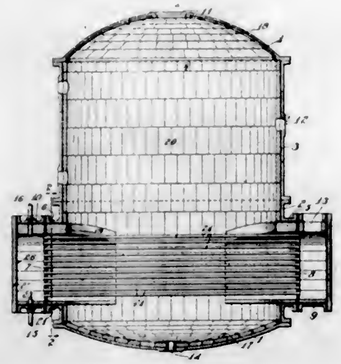
4. The combination in a draft and buffing gear, of supports with slots; cheek plates with abutments for a front follower; a front follower located at the rear of the abutments; abutments for a rear follower; a rear follower in front of said abutments; cushioning means between the followers; a slotted draw bar; slotted draft links; and a single key passed through the draw bar and links and movable within the slots of the supports; the said followers being slotted and also having lugs each integral with a follower located within the slots in the links; and the said links being located within the slots of the followers.

5. The combination in a draft and buffing gear, of supports; abutments for a front follower; a front follower located at the rear of the abutments; abutments for a rear follower; a rear follower having its edges slotted located in front of said abutments; cushioning means between the followers; a slotted draw bar; slotted draft links located within the slots of the rear follower; and a single key passed through the draw bar and links; means being provided in connection with the rear follower and engaged by the links for advancing the rear follower in drawing.

[Claims 6 to 11 not printed in the Gazette.]

1,106,532. EVAPORATOR. EDWARD ZAREMBA and OTTO MANTIUS, Buffalo, N. Y., assignors to Zaremba Company, a Corporation of Maine. Filed Aug. 22, 1912. Serial No. 716,405. (Cl. 127—18.)

1. A vacuum evaporator for operating on corrosive liquor at temperatures higher than atmospheric and at pressures lower than atmospheric, said evaporator having a metal shell and having a protective covering therein of masonry arched to withstand external pressure, steam chests projecting from either side of said shell near its bottom, corrosion resistant plates for said steam chests and straight heater tubes of corrosion resistant metal supported in said plates and traversing the shell of said evaporator to heat the corrosive liquor therein.



2. A metallic vacuum evaporator comprising a vaporizing chamber and a heating surface therein for use in concentrating corrosive liquids as described, said evaporator having its exposed corrodible surfaces lined with material resistant to the corrosive action of the liquid, said lining being arched and self-supporting against pressure on its convex surface and said heating surface comprising acid resistant pipes passing transversely across the lower part of said chamber and contacting with the corrosive liquid therein to heat the same.

3. In an evaporator the combination of a cast iron or steel chamber having an acid resistant lining, heating tubes traversing said chamber and supported at their ends in corrosion resistant flueplates, steamchests opposite the ends of said tubes and wear-resisting linings for said chests protecting the walls thereof from corrosive action of acids passing into the chests with the vapor.

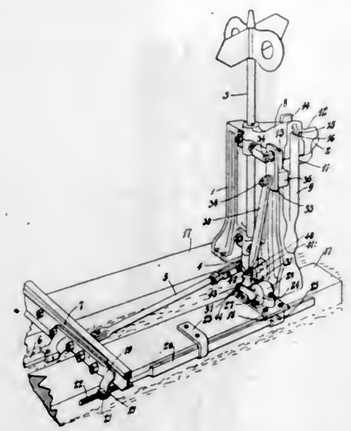
4. In an evaporator, the combination of a metal body having projecting necks, a corrosion resisting plate for each neck to serve as a flueplate, heating tubes traversing said necks and supported by said plates, steam chests opposite the ends of said tubes, and an acid-proof masonry covering located next to the interior walls of said body, said covering being arched to render it self-supporting and adapted to withstand pressure upon its exterior in case of leakage through said metal body.

5. In an evaporator, the combination of a cast iron or steel body having an acid resistant lining, external steam chests on the lower part of said body and each having a corrosion resistant flueplate, and straight heating tubes of corrosion resistant metal traversing said chamber and supported at their ends in said flueplates.

[Claims 6 to 14 not printed in the Gazette.]

1,106,533. INTERLOCKING SWITCH-STAND MECHANISM. FRANK C. ANDERSON, Cincinnati, Ohio. Filed Oct. 15, 1913. Serial No. 795,222. (Cl. 104—25.)

1. In switch-interlocking mechanism, an interlocking-bar connected to the point-rail of a switch, a plunger adapted to engage across said bar, throwing means for said plunger, a switch-operating lever requiring initial movement in one plane before it can be moved in another plane to throw the switch, an interlock-operating lever movable with the switch-operating lever during the initial movement thereof, but disengageable therefrom when the switch-operating lever is moved to throw the switch, and operative connection between the interlock-operating lever and said throwing means for the plunger.



2. In switch-interlocking mechanism, an interlocking-bar connected to the point-rail of the switch, a plunger adapted to engage across said bar, a bell-crank adapted to throw said plunger, a switch-operating lever requiring initial movement in one plane before it can be moved in another plane to throw the switch, an interlock-operating lever movable with the switch-operating lever during initial movement thereof, but disengageable therefrom when the switch-operating lever is moved to throw the switch, and a connecting element from said interlock-operating lever to said bell-crank.

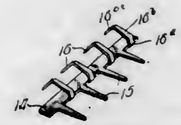
3. In switch-interlocking mechanism, an interlocking-bar connected to the point-rail of a switch, a plunger adapted to engage across said bar, throwing means for said plunger, a switch-operating lever requiring initial movement in one plane before it can be moved in another plane to throw the switch, an interlock-operating lever movable with the switch-operating lever during the initial movement thereof, but disengageable therefrom when the switch-operating lever is moved to throw the switch, operative connection between the interlock-operating lever and said throwing means for the plunger, and means for adjusting said operative connection.

4. In switch-interlocking mechanism, an interlocking-bar connected to the point-rail of the switch, a plunger adapted to engage across said bar, a bell-crank adapted to throw said plunger, a switch-operating lever requiring initial movement in one plane before it can be moved in another plane to throw the switch, an interlock-operating lever movable with the switch-operating lever during initial movement thereof, but disengageable therefrom when the switch-operating lever is moved to throw the switch, a connecting element from said interlock-operating lever to said bell-crank, and means for adjusting the length of said connecting element.

5. In switch-interlocking mechanism, an interlocking-bar connected to the point-rail of the switch, a plunger engaging across said bar, throwing means for said plunger, a switch-operating lever requiring initial movement in one plane before it can be moved in another plane to throw the switch, an interlock-operating lever movable in a plane substantially parallel with the plane of initial movement of the switch-operating lever, a lug carried by the interlock-operating lever, said switch-operating lever having a recess receiving the lugs, said lug being adapted to be disengaged from the recess when the switch-operating lever is moved to throw the switch, and operative connection between said interlock-operating lever and the throwing means for the plunger.

[Claims 6 to 10 not printed in the Gazette.]

1,106,534. FASTENER. JACOB APOLL, Hammond, Ind. Filed Mar. 31, 1913. Serial No. 757,743. (Cl. 20—92.)



1. In combination with two wooden members, a metal fastener for uniting said members, comprising a body member provided with two sets of prongs; the prongs of one set being inserted in one of said wooden members while the prongs of the other set engage the other of said wooden members and have their end portions inserted into said last mentioned wooden member with such end portions disposed transversely with relation to, and directed toward, the plane of said body member, for securing said body member to the last mentioned wooden member.

2. In combination with two wooden members, one of which is provided with a marginal groove, a metal fastener for uniting said members comprising a body-member located in said groove and provided with two sets of prongs; the prongs of one set having their ends bent and inserted into the grooved member in a direction toward said body-member to hold the latter in engagement with said grooved member, and the prongs of the other set being inserted into the other of said wooden members.

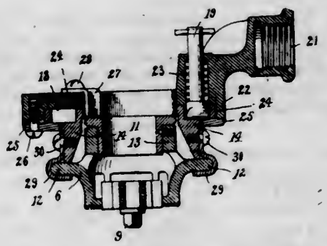
3. In combination with two wooden members, one of which is provided with a marginal groove, a metal fastener comprising a body-member seated in said groove, said body member being provided with two sets of prongs, one set of which are bent and driven into and at the rear of the edge of said grooved member, and the other set of said prongs being inserted into the other of said wooden members.

4. In combination with two wooden members, one of which is provided with a marginal groove, a metal fastener comprising a body-member seated in said groove, said body member being provided with two sets of prongs, one set of which are bent backwardly and driven into the grooved member and the other set extending through and having their pointed ends clenched against the other member.

5. A metal fastener comprising a flat elongated body-member provided on one of its side edges with two sets of laterally extending prongs arranged with the prongs of one set in alternation with the prongs of the other set; the prongs of one set being in the plane of the body member and substantially straight, and the prongs of the other set being bent in planes perpendicular to the body member with their ends directed toward the plane of said body-member.

[Claim 6 not printed in the Gazette.]

1,106,535. ATTACHABLE RATCHET FOR DIE-STOCKS. CHARLES H. ARMSTRONG, Bridgeport, Conn. Filed Sept. 29, 1913. Serial No. 792,263. (Cl. 10—124.)



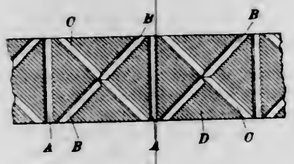
1. In a ratchet of the class described the combination of a fixed member having an annular flange with a series of

radially disposed notches therein, a detachable hook like clamp secured to said fixed member and adapted to engage a die stock for attachment thereto, a movable member operatively mounted upon the flange of the fixed member, a spring actuated pawl carried by the movable member and adapted to engage the notches in the flange of the fixed member.

2. In a device of the class described, the combination with a die stock having ribs, of a fixed member having notched hub portions to engage the ribs and an annular flange with a series of radially disposed notches therein, a detachable hook like clamp secured to said fixed member and adapted to engage the ribs of the die-stock, a rotatable member operatively mounted upon the flange of the fixed member, a spring actuated pawl carried by the movable member and adapted to engage the notches in the flange of the fixed member.

3. In a double acting ratchet of the class described, the combination with a die-stock of a fixed member having notched hub portions to engage the die-stock and provided with an annular notched flange, a pair of oppositely arranged detachable hook like clamps secured to the sides of the fixed member and adapted to engage other ribs of the die-stock, a rotatable member operatively mounted upon the flanged member, an adjustable spring actuated pawl carried by the movable member to engage the notches in the flange of the fixed member and adapted to be set to operate the ratchet either forward or backward.

1,106,536. FILE. JOHN HENRY BARKER, Sheffield, England. Filed May 12, 1914. Serial No. 838,181. (Cl. 29—78.)



1. In a file provided with clearance grooves, the provision of three series of such grooves of which one series is arranged approximately at right angles to the file axis, while the other two series are inclined thereto and to each other substantially as set forth.

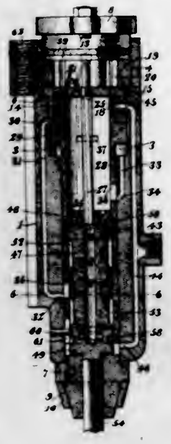
2. In a file provided with clearance grooves, the provision of three series of such grooves of which one series is arranged approximately at right angles to the file axis, another series is parallel with the file-cuts and the third series is at right angles to the file-cuts, substantially as set forth.

3. In a file provided with clearance grooves, the provision of three series of such grooves of which one series is arranged approximately at right angles to the file axis, while the other two series are so disposed in relation thereto and to each other as to divide the file surface into a number of triangular areas of approximately equal size, substantially as set forth.

4. In a file provided with clearance grooves, the provision of three series of such grooves of which one series is transverse, being arranged approximately at right angles to the file axis, while the other two series form diagonals between the members of the transverse series, substantially as set forth.

1,106,537. ROCK-DRILL. GEORGE J. BEAUDIN, Flat River, Mo. Filed Nov. 24, 1913. Serial No. 802,779. (Cl. 121—11.)

1. In a pneumatic drill, the combination of a main cylinder, a reciprocatory liner valve mounted therein and slidable longitudinally thereof, and a tool operating piston mounted in the liner valve, the cylinder being provided with air passages and ports, and the liner valve with corresponding ports arranged to cause air under pressure to directly actuate the liner valve in both directions and to be fed to the piston to drive the latter.



2. In a pneumatic drill, the combination with a cylinder having a longitudinal bore with a part of greater diameter, a reciprocatory liner valve mounted in the bore of the cylinder and provided with an outstanding flange adapted to the portion of the cylinder bore of greater diameter, and a piston mounted in the liner valve and movable lengthwise thereof, the cylinder being provided with air passages and ports and the liner valve with coacting ports to feed air to opposite sides of the outstanding flange of the liner valve to cause reciprocation of the latter, and to the piston to also cause reciprocation thereof.

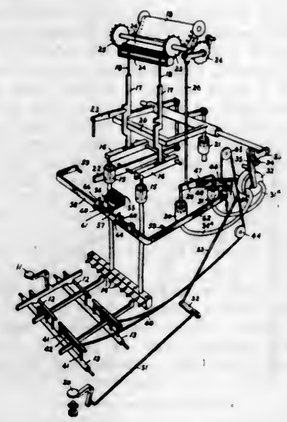
3. In a rock drill, the combination of a cylinder having a longitudinal bore with a portion thereof enlarged, a liner valve of cylindrical form open at both ends and provided with an exterior flange adapted to the portion of the cylinder bore of larger diameter, and a piston mounted in the liner valve for reciprocation therein, the cylinder being provided with air passages and ports and the liner valve being provided with ports related to cause the opening and closing of ports by the reciprocation of the liner valve to feed air to the liner valve to reciprocate the latter and to feed air to the piston to also reciprocate it.

4. In a rock drill, the combination with a cylinder having a longitudinal bore with parts of increased diameter, such cylinder being provided with an air passage opening near opposite ends of the bore, and another air passage opening into the portion of the bore of greater diameter, an open-ended cylindrical liner valve having an exterior flange movable in the bore of the cylinder of greater diameter with the main portion of the liner valve adapted to the main portion of the bore of the cylinder, said liner valve being provided with ports near opposite ends and intermediately, and a tool operating piston mounted in the liner valve, the air passages and ports of the cylinder and liner valve being related to feed compressed air to the liner valve to reciprocate it and to the piston to reciprocate the latter.

5. In a rock drill, the combination with a cylinder having a longitudinal bore, and with air passages and ports, a tubular liner valve open at both ends and mounted in the bore of the cylinder and having a limited extent of reciprocation, certain of the air passages and ports in the cylinder being related to the liner valve to cause reciprocation thereof in both directions by air under the initial pressure, and a tool operating piston mounted in the liner valve.

[Claims 6 to 8 not printed in the Gazette.]

1,106,538. KEYBOARD FOR COMPOSING-MACHINES. CHARLES E. BENHAM, Schenectady, N. Y. Filed Feb. 7, 1914. Serial No. 817,185. (Cl. 164—112.)



1. In an apparatus of the character described, the combination of devices for making records on a ribbon, mechanism for actuating the devices and feeding the ribbon, a repeating key which, so long as it is held in a predetermined position, acts on the mechanism to cause it to actuate one of the devices successively, and means responsive to certain movements of the mechanism for interrupting the action of the key.

2. In an apparatus of the character described, the combination of devices for making records on a ribbon, mechanism for actuating the devices and feeding the ribbon, a repeating key which, when depressed, acts on the mechanism to cause it to successively actuate the same device, a means for disconnecting the key from the mechanism, and a device moving in synchronism with the ribbon for actuating the last named means.

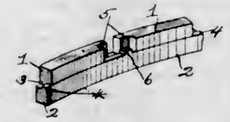
3. In an apparatus of the character described, the combination of a means for making a record on a ribbon, means for actuating it, a controller for the actuating means, mechanism for returning the record making means between operations, a normally idle means organized to first transmit movement from the mechanism to the controller and then release it for automatic operation, a repeating key for putting the last named means into operation, and a device for interrupting the action of the key on the controller.

4. In an apparatus of the character described, the combination of a means for making a record on a ribbon, means for actuating it, a controller for the actuating means, mechanism for returning the record making means between operations, a device moved by the mechanism and acting on the controller in a manner to cause the means to successively act on the ribbon, and a means for interrupting the action of the device on the controller after a predetermined number of record making operations.

5. In an apparatus of the character described, the combination of a punch rod, a motor for actuating it, a controller for the motor, mechanism for retracting the punch rod and moving the ribbon between operations which includes a vibrating member, a connector receiving motion from the member and transmitting it to the controller, said connector being normally idle, a repeating key for putting the connector into service, and a device for interrupting the action of the key on the connector and controller.

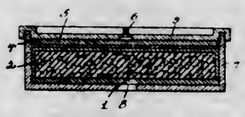
[Claims 6 to 24 not printed in the Gazette.]

1,106,539. PISTON PACKING-RING. JAMES A. BERGER, Schenectady, N. Y. Filed Jan. 14, 1914. Serial No. 812,129. (Cl. 121—108.)



A piston-packing ring comprising upper and lower divided ring-members breaking joints with each other, the lower ring-member having an external horizontal flange along its lower edge and an upwardly extending flange along its inner edge and having a lug formed as an integral upward projection on said upwardly extending flange, the upper ring-member having a depending flange along its outer edge overhanging the external horizontal flange on the lower ring-member and an internal horizontal flange along its upper edge overhanging said upwardly extending flange on the lower ring-member except opposite said lug whereat said internal horizontal flange is notched to engage said lug.

1,106,540. RENEWAL ELEMENT FOR SEMI-DRY-CELL BATTERIES. WILLIAM BROAD, Beaver Falls, Pa. Filed Apr. 17, 1913. Serial No. 761,671. (Cl. 204—38.)



1. A depolarizing member for use in semi-dry cell batteries of the refillable type comprising a portable compact mass having a substantially uniform thickness throughout, one side and the edge of said member having embedded therein an absorbent separating material.

2. A new article of manufacture for use in semi-dry cell batteries of the refillable type, comprising a mass of manganese dioxid and carbon impregnated with suitable chemicals of an excitant nature, said mass being in the form of a cake of a firm external consistency having a substantially uniform thickness throughout, and a suitable absorbent separating material embedded in and protecting one face and the rim of said cake.

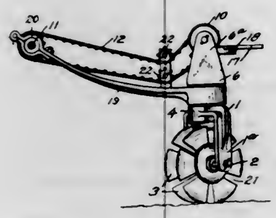
3. In renewable elements for semi-dry cell batteries of the refillable type, a depolarizing member comprising a dry portable compact cake having a substantially uniform thickness throughout, one side and the rim thereof being substantially protected by a suitable absorbent separating material saturated with an excitant electrolyte normally held in a dry state, the entire member being inactive until assembled with suitable electrodes and moistened.

4. In renewal elements for semi-dry cell batteries of the refillable type, a dry integral cake comprising a depolarizing mass of substantially uniform thickness throughout, and an absorbent separating material substantially protecting and closely adhering to one side and the rim of the depolarizing mass, the absorbent material carrying an electrolyte in a dry state, the entire member being inactive until assembled with suitable electrodes and moisture added.

1,106,541. AGRICULTURAL IMPLEMENT. JAMES WESLEY BRUCE, Ozark, Ohio. Filed Sept. 2, 1913. Serial No. 787,582. (Cl. 97—71.)

1. An agricultural implement comprising, in combination with a vehicle carried power-shaft, an upright tubu-

lar member, a horizontally disposed yoke mounted on said member intermediate the ends thereof and having its arms attached to a fixed part of the vehicle, a yoke with downwardly directed arms mounted on the lower end of said member, a shaft journaled in said arms, a gang of earth-working disks on said shaft, a yoke with upright arms mounted on the upper end of said member, a shaft journaled in the last mentioned arms, means intermediate the last mentioned shaft and said power shaft whereby the former is driven, and means interposed between the shaft journaled in the upper yoke and that journaled in the lower yoke whereby motion imparted to the former is communicated to the latter.



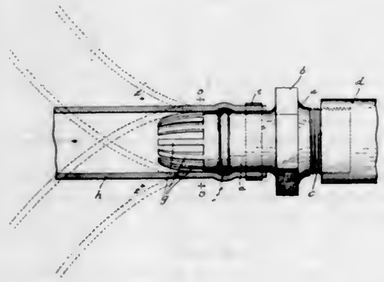
2. An agricultural implement comprising, in combination with a vehicle carried power-shaft, an upright tubular member, a horizontally disposed yoke mounted on said member intermediate the ends thereof and having its arms attached to a fixed part of the vehicle, a yoke with downwardly directed arms mounted on the lower end of said member, a shaft journaled in said arms, a gang of earth-working disks on said shaft, a yoke with upright arms mounted on the upper end of said member, a shaft journaled in the last mentioned arms, means intermediate the last mentioned shaft and said power shaft whereby the former is driven, means interposed between the shaft journaled in the upper yoke and that journaled in the lower yoke whereby motion imparted to the former is communicated to the latter, and means whereby the lower yoke may be adjusted for varying the angle at which the earth-working disks operate with respect to the line of drive.

3. An agricultural implement comprising, in combination with a vehicle carried power-shaft, an upright tubular member, a horizontally disposed yoke mounted on said member intermediate the ends thereof and having its arms attached to a fixed part of the vehicle, a yoke with downwardly directed arms mounted on the lower end of said member, a shaft journaled in said arms, a gang of earth-working disks on said shaft, a yoke with upright arms mounted on the upper end of said member, a shaft journaled in the last mentioned arms, means intermediate the last mentioned shaft and said power shaft whereby the former is driven, a vertical shaft rotatably mounted within said member, gearing between the shaft of the uppermost yoke and said vertical shaft whereby the latter is driven, and gearing between said vertical shaft and the shaft of the lowermost yoke whereby motion imparted to the former is communicated to the latter.

4. An agricultural implement comprising, in combination with a self-propelled carried power-shaft, an upright tubular member, a horizontally disposed yoke mounted on said member intermediate the ends thereof and having its arms attached to a fixed part of the vehicle, a yoke with downwardly directed arms mounted on the lower end of said member, a shaft journaled in said arms, a gang of earth-working disks on said shaft, a yoke with upright arms mounted on the upper end of said member, a shaft journaled in the last mentioned arms, means intermediate the last mentioned shaft and said power shaft whereby the former is driven, a vertical shaft rotatably mounted within said member, gearing between the shaft of the uppermost yoke and said vertical shaft whereby the latter is driven, gearing between said vertical shaft and the shaft of the lowermost yoke whereby motion imparted to the former is communicated to the latter, and means whereby the position of the lowermost yoke on said member may be adjusted for varying the angle of the earth-working disks with respect to the line of drive.

5. An agricultural implement comprising, in combination with a vehicle carried power-shaft, an upright tubular member, a horizontally disposed yoke mounted on said member intermediate the ends thereof and having its arms attached to a fixed part of the vehicle, a yoke with downwardly directed arms mounted on the lower end of said member, a shaft journaled in said arms, a gang of earth-working disks on said shaft, a yoke with upright arms mounted on the upper end of said member, a shaft journaled in the last mentioned arms, means intermediate the last mentioned shaft and said power shaft whereby the former is driven, a vertical tubular shaft rotatably mounted within said member, gearing between the shaft of the uppermost yoke and said vertical shaft whereby the latter is driven, gearing between said vertical shaft and the shaft of the lowermost yoke whereby motion imparted to the former is communicated to the latter, a collar loosely mounted on the shaft of the lowermost yoke, a vertical standard fixed to said collar and extending upward through said tubular shaft, a lever whereby said standard may be partially rotated, and means whereby said lever is maintained in adjusted position.

1,106,542. NIPPLE. PHILIP BUEHNER, Portland, Oreg. Filed Nov. 23, 1912. Serial No. 733,087. (Cl. 137—28.)



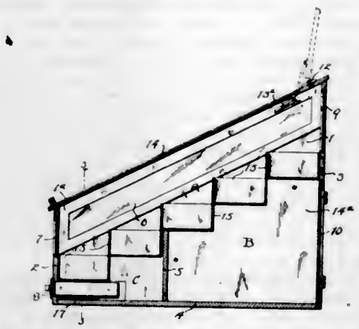
1. A nipple having a central nut portion, a screw-threaded part on one side of said portion, a part of substantially uniform diameter on the other side of said portion, a bead on said second-named part, a plurality of rigid prongs extending from said second-named part, said prongs being formed to turn inwardly to follow the natural curvature of and to be engaged by the sides of a flexible hose on said second-named part, and a ring in back of said bead fastening said flexible hose on said second-named part, the combined areas of the spaces between the prongs being greater than the cross-sectional area of the bore of the uniform portion of the nipple.

2. As an article of manufacture, a nipple having a part of uniform diameter for the reception of a flexible hose, and a rigid longitudinally-slotted extension of ellipsoidal form extending into the hose, the combined areas of the slots being greater than the cross-sectional area of the bore of the uniform part of the nipple.

3. As an article of manufacture, a nipple having a part of uniform diameter for the reception of a flexible hose, and a rigid extension of ellipsoidal form extending into the hose, the wall of said extension having a plurality of openings therethrough the combined areas of the openings being greater than the cross-sectional area of the bore of the uniform part of the nipple.

4. As an article of manufacture, a nipple having a part of uniform diameter for the reception of a flexible hose, and a rigid longitudinally-slotted extension tapering from said part of uniform diameter in ellipsoidal form and extending into the hose, the combined areas of these slots being greater than the cross-sectional area of the bore of the uniform part of the nipple.

1,106,543. BRAID-CABINET. JOHN M. BURNHAM and HERMAN J. SCHNEIDER, Adams, Nebr. Filed Dec. 10, 1913. Serial No. 805,787. (Cl. 211—16.)

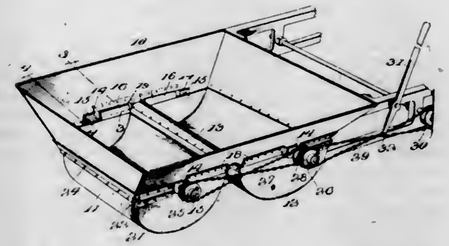


1. A braid cabinet including a casing having sides which are inclined upwardly from the front to the rear thereof, a removable cover normally closing the top of the casing, a thickness of material applied to the inner face of each side of the casing and having the upper edge thereof stepped to provide a series of tray supporting surfaces, and a series of removable trays extending transversely across the casing and resting upon corresponding tray supporting surfaces of the steps, the depth of each tray corresponding to the height of the steps so that the trays when assembled have a stepped relation to each other, and the bottoms and inner sides of the trays cooperating with each other to provide a continuous stepped wall subdividing the interior of the casing into an upper display chamber above the trays and a lower storage chamber under the trays.

2. A braid cabinet including a casing having sides which are inclined upwardly from the front to the rear thereof, the lower portion of the front of the casing having a drawer receiving opening therein, while the back of the casing is provided with an opening, a door normally closing said opening, a removable top normally closing the top of the casing, a thickness of material applied to the inner face of each side of the casing and having the upper edge thereof stepped to provide a series of corresponding tray supporting surfaces having a general inclination corresponding to the inclination of the sides of the casing, a series of removable trays extending transversely across the casing and resting upon corresponding tray supporting surfaces provided by the steps in the thicknesses of material applied to the inner faces of the sides of the casing, said trays being open at the top thereof and the depth of each tray corresponding to the height of the steps so that the trays when assembled have a stepped relation to each other and the bottoms and inner sides of the trays coöperate with each other to provide a continuous stepped wall subdividing the interior of the casing into an upper display chamber above the trays and a lower storage chamber below the trays, the door in the back of the casing opening into the said storage chamber, and a drawer slidable through the drawer receiving opening of the front of the casing.

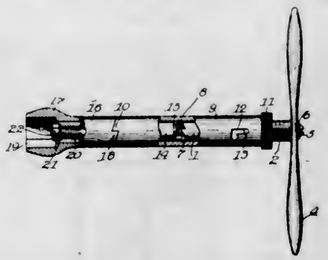
1,106,544. DUMP ASH-PAN FOR LOCOMOTIVES. THOMAS F. CAIN, Montgomery City, and WALTER A. SKINNER, Moberly, Mo. Filed May 13, 1912. Serial No. 697,024. (Cl. 110—168.)

1. A dump ash pan including a body member open at its top and bottom, a centrally disposed transversely extending brace connecting the side walls of the body, a pair of pans swingingly mounted between the ends of the body and the brace to normally form a bottom closure for the body, lips formed on the outer longitudinal edges of the pans for engagement with the outer face of the end walls of the body member whereby the swinging movement of the pans is limited, flanges carried by the opposite terminal portions of the end portions of the pans, said flanges being adapted to engage the lower faces of similar flanges carried by the opposite end portions of the side walls of the body member, flanges carried by the adjacent portions of the end walls of the pans and arranged to engage angularly and inwardly directed flanges carried by the side walls of the body member on opposite sides of the said brace, all of the said flanges being adapted to coact when the pans are in closed position to substantially seal the open bottom of the body member.



2. A dump ash pan including a body member having an open top and bottom and inclined end walls, the end portions of the side walls being provided with outwardly directed flanges and the remaining portions of the side walls being provided with inwardly directed flanges, and a pair of parallelly disposed pans swingingly mounted to normally form a bottom for the body, the outer sides of each pan being provided with outwardly directed lips for engagement against the inclined end walls of the body member, the end portions of the pans being provided with outwardly directed flanges for engagement against the upper face of the inwardly directed flanges of the body member and with flanges engageable with outwardly extending flanges carried by the body side walls.

1,106,545. SOCKET RATCHET-WRENCH. EMILE F. CAMUS, Detroit, Mich. Filed Mar. 16, 1914. Serial No. 824,866. (Cl. 81—60.)



1. A socket ratchet wrench comprising a stem having ratchet teeth thereon, a sleeve having ratchet teeth thereon mounted to slide longitudinally on said stem, a bushing slidably mounted in the end of said sleeve and having ratchet teeth adapted to engage the ratchet teeth of said stem, a socket head on said bushing having ratchet teeth adapted to engage the ratchet teeth of said sleeve, means for holding said bushing slidably with tension against outward movement in said sleeve, means for limiting the longitudinal movement of said sleeve on said stem, and

means for locking said sleeve against movement on said stem.

2. A socket ratchet wrench comprising a stem having ratchet teeth thereon and adapted for attachment to a wrench handle, a sleeve slidably mounted on said stem and having ratchet teeth in one end thereof, a bushing slidably mounted on said stem and having ratchet teeth in one end thereof adapted to engage the ratchet teeth of said stem, a socket head on said bushing having ratchet teeth adapted to engage the teeth of said sleeve, means for holding said bushing slidably against tension on said stem, means for permitting a limited longitudinal movement of said sleeve on said stem, and means for locking said sleeve at the limit of its longitudinal movement with said stem.

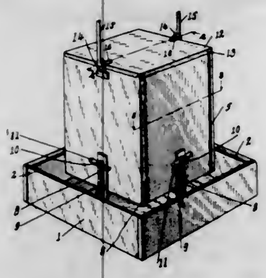
3. A socket ratchet wrench comprising a stem having ratchet teeth thereon and adapted for attachment to a wrench handle at its outer end and having a reduced extension at the inner end thereof, a sleeve slidably mounted on said stem and having ratchet teeth on one end thereof projecting beyond the ratchet teeth on said stem, a bushing surrounding the reduced portion of said stem slidably mounted in the end of said sleeve and having ratchet teeth in the end thereof adapted to engage the ratchet teeth of said stem, a socket head on said bushing having ratchet teeth adapted to engage the ratchet teeth of said sleeve, a slot in said sleeve, a pin in said stem engaging said slot, a threaded nut on said stem adapted to engage the end of said sleeve, a spring on the reduced extension of said stem engaging at one end with said stem and at its opposite end with the end of said bushing, whereby said bushing and head are slidably held in yielding engagement with said stem and sleeve.

1,106,546. PIPE CONNECTION. GEORGE COWLES, Sacramento, Cal. Filed Aug. 19, 1913. Serial No. 785,517. (Cl. 122—216.)



A pipe coupling having an opening at each end a third opening at the side forming a T, and a flange around said coupling in the same plane as the side opening, as shown and described.

1,106,547. FEED DEVICE OR TROUGH. WILLIAM L. CRABILL, Battle Creek, Mich. Filed Mar. 19, 1913. Serial No. 755,531. (Cl. 119—53.)

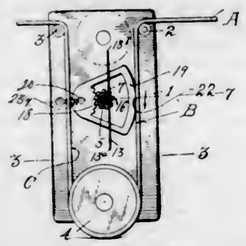


1. In a knock-down feed device, the combination of a shallow pan or trough, a hopper comprising a pair of opposed side walls having inturned flanges on their vertical edges provided with seam members and a pair of opposed coacting side walls having seam members on their vertical edges interlocking with said seam members of said flanges, said wall seam members being engaged by longitudinal telescoping movement of the walls, vertically slotted wall supports projecting upwardly from the bottom of said pan in a spaced relation to the walls thereof, and bolts arranged through each of said side walls engaging said slots, said bolts being provided wtih clamping nuts, whereby the hopper is adjustably supported in said trough in a spaced relation to the sides and bottom thereof, and the walls are retained in their assembled relation.

2. In a knock-down feed device, the combination of a shallow pan or trough, a hopper comprising side walls having interlocking seam flanges on their vertical edges, said wall seam members being engaged by longitudinal telescoping movement of the walls, vertically slotted wall supports projecting upwardly from the bottom of said pan in a spaced relation to the walls thereof, and bolts arranged through each of said side walls engaging said slots, said bolts being provided with clamping nuts, whereby the hopper is adjustably supported in said trough in a spaced relation to the sides and bottom thereof, and the walls are retained in their assembled relation.

3. In a knock-down feed device, the combination of a shallow pan or trough, a knock-down hopper comprising separable side walls, wall supports projecting upwardly from the bottom of said pan in a spaced relation to the walls thereof, and bolts arranged through each of said side walls and supports, whereby the hopper is supported in the trough and its walls are retained in their assembled relation.

1,106,548. BLADE-SHARPENING MECHANISM. WILLIAM H. CRICHTON-CLARKE, New York, N. Y., assignor to Gillette Safety Razor Company, Boston, Mass., a Corporation of Massachusetts. Filed May 16, 1907. Serial No. 374,075. (Cl. 51—16.)



1. A razor stropping machine for stropping a double-edged blade, comprising means for supporting oppositely disposed abrading surfaces, a blade holder and means for causing both edges of said blade to simultaneously engage said abrading surfaces, and means for returning said blade holder to normal position, substantially as described.

2. A razor stropping machine for stropping a double-edged blade, comprising a frame having guides located in position to bend a portion of the strop upon itself to present a pair of parallel oppositely disposed abrading surfaces, a holder for a double edged blade carried by the frame between the position of the pair of parallel surfaces and means actuated by the strop upon the relative movement of said machine and said strop for causing both edges of a blade in said holder to simultaneously engage said abrading surfaces, substantially as described.

3. A razor stropping machine for stropping a double-edged blade, comprising a rocking blade support, adapted to expose both edges of the blade, means for supporting abrading surfaces on opposite sides of said support, in position to be engaged by both sides of both edges of said blade, and means for rocking said support actuated by

the relative movement of the machine and the abrading surfaces, substantially as described.

4. A razor stropping machine for stropping a double-edged blade, comprising a rocking blade support, adapted to expose both edges of the blade, means for supporting abrading surfaces on opposite sides of said support, in position to be engaged by both sides of both edges of said blade, and means for rocking said support actuated by the relative movement of the machine and the abrading surfaces, and means for returning said blade support to normal position, substantially as described.

5. A razor stropping machine for stropping a double-edged blade, comprising a rocking blade support, adapted to expose both edges of the blade, means for supporting abrading surfaces in position to be engaged by both sides of both edges of said blade so disposed that a relative movement of said machine and said abrading surfaces will cause the same to travel in opposite directions on the opposite sides of said blade support, and means actuated by such relative movement for rocking said blade support, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,106,549. DOUBLETREE. WILLIAM H. CROSSLEY, Lewiston, Idaho. Filed Apr. 28, 1913. Serial No. 764,102. (Cl. 21—78.)



1. The combination, with a bar, of a clevis encircling the end of said bar and having a hook provided with a backwardly extending portion and a securing means passing through said backwardly extending portion and diagonally through the end of said bar and anchored therein.

2. The combination, with a bar, of a clevis having a socket therein to receive the end of said bar and provided with a hook having a backwardly extending portion and a bolt passing through said backwardly extending portion and diagonally through the end of said bar and having its inner end inwardly turned and anchored in the rear edge of said bar.

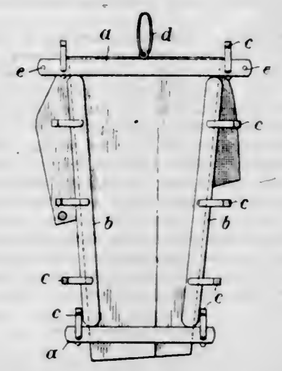
3. A doubletree comprising a bar, a metallic strap extending lengthwise of said bar on the rear edge thereof, a clevis mounted on the end of said bar and provided with a hook, a bolt passing through the end portion of said hook and through said bar and having its inner end engaging said strap and forming therewith a truss construction for bracing and supporting said bar.

4. The combination, with a bar, of a bolt passing diagonally through the end of said bar and having its inner end anchored in the rear portion of said bar, and a clevis mounted on said bar and having a hook formed thereon that is secured to the outer end of said bolt at the end of said bar.

5. The combination, with a bar, of a strap fitting the rear edge thereof, a clevis mounted on the end of said bar and having a backwardly turned hook portion, a bolt passing through said hook and diagonally through the end of said bar and having its inner end inwardly turned and passing through said strap and anchored in the rear edge of said bar.

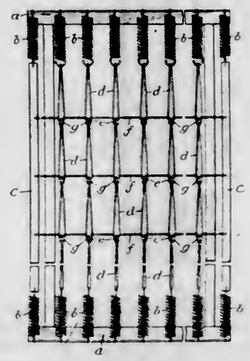
1,106,550. PORTABLE TROUSERS PRESS AND STRETCHER. ARTHUR B. CRUICKSHANK, London, England. Filed May 1, 1913. Serial No. 764,955. (Cl. 223—19.)

A trousers press and stretcher comprising pairs of slats adapted for engaging the edges and the top and bottom portions of trousers, clips for holding the pairs of slats in clamped relation to the trousers, the said slats at the sides



of the trousers having their ends abutting the sides of the slats near the ends of the trousers.

1,106,551. WIRE FABRIC. FRANK P. DOOLEY, Chicago, Ill. Filed Apr. 20, 1914. Serial No. 833,202. (Cl. 245—5.)



1. A wire fabric including a plurality of rows of major wire links; minor wire links uniting adjacent major links in each row of major links; and wire stringers extending across the fabric and uniting the adjacent rows of major fabric units into a fabric, each stringer carrying a transverse row of minor links that are included in the rows of major links that are joined by such stringer, each stringer and the minor wire links carried thereby being integrally formed of the same wire, the major links being in the form of bent wires whose bights engage the stringers at the base portions of the minor links, the ends of the major links opposite their bights being formed into hooks which are received by minor links.

2. A wire fabric including a plurality of rows of major wire links; minor wire links uniting adjacent major links in each row of major links; and wire stringers extending across the fabric and uniting the adjacent rows of major fabric units into a fabric, each stringer carrying a transverse row of minor links that are included in the rows of major links that are joined by such stringer, each stringer and the minor wire links carried thereby being integrally formed of the same wire, the major links being in the form of bent wires whose bights engage the stringers at the

base portions of the minor links which are contracted to form necks and which bights receive and engage such minor link necks, the ends of the major links opposite their bights being formed into hooks which are received by minor links.

3. A wire fabric including a plurality of rows of major wire links; minor wire links uniting adjacent major links in each row of major links; and wire stringers extending across the fabric and uniting the adjacent rows of major fabric units into a fabric, each stringer carrying a transverse row of minor links that are included in the rows of major links that are joined by such stringer, each stringer and the minor wire links carried thereby being integrally formed of the same wire, the major links being in the form of bent wires whose bights are turned to be angular to the general plane of the fabric and engage the stringers at the base portions of the minor links which are contracted to form necks and which bights receive and engage such minor link necks, the ends of the major links opposite their bights being formed into hooks which are received by minor links.

1,106,552. TANK-GAGE. GOTTLIEB G. DUFLOTH, Tolstoy, S. D. Filed Nov. 2, 1911. Serial No. 658,180. (Cl. 73—54.)

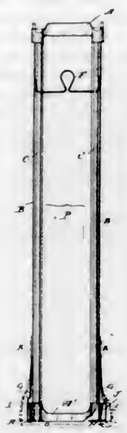


The combination with a glass tube, of caps for the upper and lower ends thereof, the upper cap having a longitudinal opening communicating with the tube and with the atmosphere, the lower cap having a bore therein and a counter bore communicating with the bore, said cap also having a port leading to the counterbore, a pipe attaching member communicating with the port of the cap, laterally extending spaced arms projecting from the caps, rods extending between the arms and parallel to the tube, and means for independently adjusting the effective lengths of said rods, and spaced parallel arms projecting from the caps between the rods and adapted to straddle the edge of a vehicle dash-board to attach the gage thereto.

1,106,553. RECEPTACLE FOR TYPE-HOLDERS. ERNEST H. FREY, Willoughby, Ohio. Filed Nov. 6, 1911. Serial No. 658,754. (Cl. 101—1.)

1. In a receptacle for a series of type holders, a three sided frame member at each end, angle plates comprising side and bottom portions connecting said frames, and arranged to provide an open central space between them extending from frame to frame, means for detachably retaining the type holders, said retaining means located at one end of the receptacle, the other end thereof being open, and longitudinal retaining rods spaced from said side plates and removably inserted in said frame members.

2. In a receptacle for type holders in combination, three sided frames at the upper and lower ends thereof, connecting plates for said frames having side and rear portions, said rear portions being spaced apart to provide a central longitudinal opening, said lower frame being provided with longitudinal grooves on its outer sides, and spring retainers secured to said side portions, said spring retainers being provided with inwardly turned forked extremities, the forks passing on each side of said grooves whereby a means for spreading said spring retainers can be inserted in said grooves.



3. In a receptacle for type holders, said type holders having projections on which designating characters are displayed, a frame at each end of said receptacle, angle strips connecting opposite sides of said frames and forming sides and back portions, said frames being three sided to permit the passage of said projections on said type holders, removable retaining means for preventing the type holders from falling out of the open side of said receptacle, and spring retainers at one end of the receptacle, the other end being open.

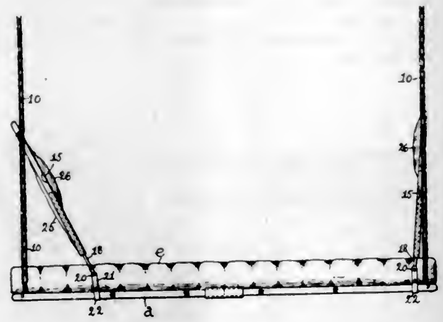
4. In a receptacle for type holders, side and spaced rear walls, three sides connecting members at the ends of said walls providing an unobstructed opening on the fourth side, spring retainers at one end of said receptacle, and removable means for preventing the said type holders from falling out of the said opening.

5. In a receptacle for type holders, a hollow body open at each end and on one side, and a movable retaining device adapted to prevent the type holders from falling out of the open side, a movable follower in one end of the receptacle and movable keepers at the other end.

1,106,554. HAMMOCK. EDGAR L. FULLER, Everett, Mass. Filed May 16, 1911. Serial No. 627,506. (Cl. 5—61.)

1. The combination with a hammock provided with a mattress-supporting frame having side rails, and flexible means connected at their lower ends with the mattress-supporting frame to suspend the same, of a movable back-supporting frame having its upper end interposed between said flexible means and pivotally connected thereto at its opposite sides and having extensible side arms in sliding engagement with the side rails of said mattress supporting frame, substantially as described.

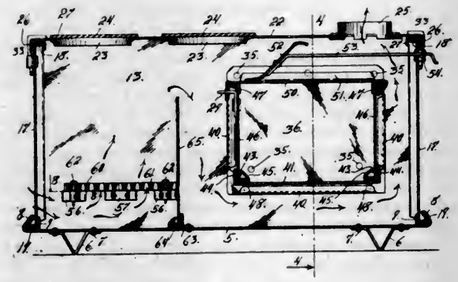
2. The combination with a hammock provided with a mattress supporting frame having side rails, and means to suspend the same, of a movable back supporting frame comprising tubular side arms pivotally connected at their upper ends with said suspending means, rods extended into said tubular arms, and straps pivotally connected with said rods and provided with eyes through which the side rails of the mattress supporting frame extend, substantially as described.



3. The combination with a hammock provided with a mattress-supporting frame having side rails, and link chains connected at their lower ends with the said frame near the ends thereof, of a movable back-supporting frame interposed between the said link chains and having tubular side arms pivoted near their upper ends to said link chains and having extensible lower arms movable in said tubular arms and in sliding engagement with the side rails of said mattress-supporting frame, substantially as described.

4. The combination with a hammock provided with a mattress-supporting frame having side rails, and flexible means connected at their lower ends with the mattress-supporting frame to suspend the same, of a movable back-supporting frame having its upper end pivotally connected at its opposite sides to said flexible means and having extensible side arms in sliding engagement with the side rails of said mattress-supporting frame.

1,106,555. KNOCKDOWN STOVE. LOUIS BENJAMIN GOLDBERG and NATHAN GOLDBERG, Denver, Colo. Filed Feb. 7, 1913. Serial No. 746,777. (Cl. 126—9.)



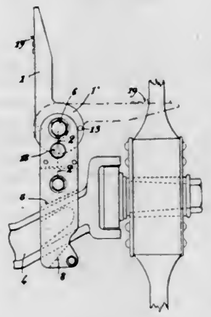
1. In a sheet metal knock down stove, a member provided at one edge with a groove, in cross section, substantially the shape of a right angled triangle, one right side of which is arranged perpendicular to the main portion of the member and the hypothenuse of which extends inwardly and upwardly from the edge of the member, the opening of the groove being adjacent said perpendicular side, and only slightly wider than the thickness of the metal employed, and a second member provided at one edge with a flange bent at right angles to the main portion of the member, said flange being approximately the same width as the widest part of the groove, said members being adapted to be joined only by the insertion of the flange in the groove when the members are substantially parallel to each other after which they may be rocked to positions at right angles to each other.

2. In a knock down stove, a base, a baffle plate, a hinge connection between said base and plate, an abutment upon the base arranged to prevent the hinging of said plate in one direction beyond the vertical position and a removable grate adapted when in the adjusted position to bear against the opposite side of the plate and hold it in the vertical position.

3. In a knock down stove, a base provided with an upwardly opening groove on each edge, side and end plates, each plate having a flange upon its lower edge adapted to be inserted into the corresponding one of said grooves, only when the plate is in approximately a horizontal position, said grooves and flanges being shaped to permit the rocking of said plates to the vertical position, and readily releasable means applied to the upper edge of the plates for locking the latter in the vertical position.

4. In a knock down stove, a base provided with upwardly and inwardly opening grooves on each edge, side and end plates, each plate having an angular flange upon its lower edge adapted to be inserted into the corresponding one of said grooves only when the plate is in an approximately horizontal position extending away from the base, said grooves and flanges being shaped to permit the rocking of said plates to the vertical position, readily releasable means applied to the upper edge of the plates for locking the latter in said position, and means for interlocking the side and end plates when in the vertical position.

1,106,556. LOCKING DEVICE FOR MOTOR-CARS OR OTHER VEHICLES. MARIE JOSEPH GRÉMILLET, Bezons, France, assignor to Felix Massard, Paris, France. Filed May 21, 1913. Serial No. 769,040. (Cl. 21—90.)



1. The combination with a wheeled vehicle, of an arm adjustably supported on a relatively stationary part of the vehicle and movable to and from a position to engage one of the vehicle wheels and prevent rotation thereof, a concealed bolt acting to lock the arm in operative position, and a detachable device for releasing the bolt.

2. The combination with a wheeled vehicle, of an arm pivotally mounted on a relatively fixed support adjacent one of the vehicle wheels, whereby the arm may be turned to and from a position where it will project between spokes of the wheel, a concealed bolt arranged to automatically engage the arm at the end of its movement in either direction, and a detachable device for releasing the bolt.

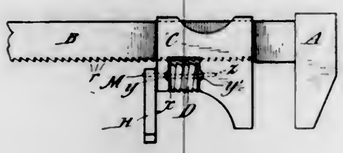
3. The combination with a wheeld vhicle, of an arm adjustably mounted on a relatively stationary support adjacent one of the steering wheels of the vehicle, whereby the arm may be moved to and from a position where it will projct between spokes of the wheel, means on said arm adapted to prevent the wheel from turning about an axis transverse to its horizontal axis when the arm is in operative position, a concealed bolt acting to lock said arm in operative position, and a detachable device for releasing the bolt.

4. The combination with a wheeled vehicle, of an arm adjustably mounted on a relatively stationary support adjacent one of the steering wheels of the vehicle, whereby the arm may be moved to and from a position where it will projct between spokes of the wheel, lateral projections on said arm adapted to extend over the adjacent faces of the spokes between which the arm extends when in operative position, a concealed bolt for locking the arm in operative position, and a detachable device for releasing the bolt.

5. The combination with a motor vehicle, of an arm adjustably supported on a relatively stationary part of the vehicle and movable to and from a position to engage one of the vehicle wheels and prevent rotation thereof, an adjustable electric circuit controlling device adapted to break the circuit when the arm is engaging the wheel and to close said break when the arm is moved from operative position, a concealed bolt acting to lock the arm in operative position, and a detachable device for releasing the bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,106,557. ADJUSTABLE WRENCH. MARTIN R. HALD, Fresno, Cal. Filed Apr. 13, 1914. Serial No. 831,639. (Cl. 81—158.)

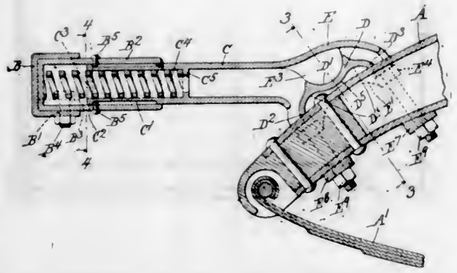


In a wrench the combination of a jaw fixed on one end of a rack, a movable jaw slidably mounted on such rack, a worm adapted to mesh with the teeth of such rack, a pivot of approximately uniform diameter having an eccentric portion, an opening in such movable jaw adapted to contain such worm and to permit operative relation between such worm and such rack, such opening having walls on two sides thereof adapted to support bearings for carrying such pivot, a hole of uniform diameter in such walls and through the lateral center of such worm adapting the worm to be rotatingly carried by such pivot in such relation with such rack that when the wrench is assembled and such eccentric is turned toward such rack the worm will mesh therewith and when such eccentric is turned away from such rack, the worm will be disengaged therefrom, all substantially as described.

1,106,558. AUTOMOBILE-BUMPER. LEWIS P. HALLADAY, Streator, Ill. Filed Mar. 24, 1913. Serial No. 756,324. (Cl. 213—39.)

1. In an automobile bumper a tubular bracket, a thimble slidably mounted on the bracket, a bumper member carried by the thimble and a compressible member located within the thimble and the bracket abutting at one end on the thimble and at the other end on the bracket, said bracket being reduced beneath the thimble and provided with a slotted collar about its forward end and pins carried by the thimble and adapted to abut upon the collar.

2. In an automobile bumper a tubular bracket, a thimble slidably mounted on the bracket, a bumper member carried by the thimble and a compressible member located within the thimble and the bracket abutting at one end on the thimble and at the other end on the bracket, said bracket being reduced beneath the thimble and provided with a slotted collar about its forward end and pins carried by the thimble and adapted to abut upon the collar, the relative positions of said pins and slots being such that when in the assembled relation the pins are out of line with the slots.



3. In an automobile bumper a saddle having a cylindrical bearing thereon and resting upon the automobile frame, a bumper bracket, a pair of lugs downwardly projecting from the bumper bracket on either side and provided with cylindrical surfaces in engagement with said cylindrical bearing and means for holding said saddle and said bracket together in fixed position on the automobile frame.

4. In an automobile bumper, a cradle resting upon the automobile frame, a bumper bracket rotatable with respect to and resting upon the cradle, and means in engagement with the bracket and adjacent and out of contact with the cradle for holding the bumper bracket and cradle in fixed position with respect each to the other and each to the frame.

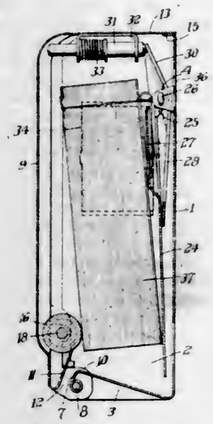
5. In an automobile bumper, a cradle free to rest upon the automobile frame, a segmental, cylindrical bearing on said cradle, a bumper bracket and a segmental, cylindrical projection thereon engaging said bearing on said cradle and means adjacent and out of contact with said cradle for holding said bracket in fixed relation to said cradle and bearing and to the automobile frame.

[Claim 6 not printed in the Gazette.]

1,106,559. CABINET FOR TOILET-PAPER. ERNEST A. HAMILTON, Philadelphia, Pa., assignor to Scott Paper Company, a Corporation of Pennsylvania. Filed Mar. 10, 1914. Serial No. 823,656. (Cl. 211—29.)

1. In a cabinet for dispensing sheets of paper, the combination of a casing, a front pivoted thereto, a holder for the paper package hinged to the casing and free to fall thereinto by gravity, a friction feed roll mounted within the cabinet in front of the holder for the paper package and adapted to disengage the sheets thereof in succession, and spring means arranged between the front and the pivoted holder and made operative when the front is in closed position to apply spring pressure upon the pivoted holder whereby it may press the paper package against the feed roll only when the front is in closed position.

2. In a cabinet for dispensing a sheet of paper, the combination of a casing, a front pivoted to said casing and forming therewith a discharge opening, a holder for the paper package pivoted to said casing, a friction feed roll rotatably mounted within said cabinet adjacent said opening, means for shifting said holder toward said friction roll to hold said paper in frictional engagement with said roll, and spring controlled means normally out of operative contact with the holder and shifting means and made operable by said front when moved to closed position.



3. In a cabinet for dispensing a sheet of paper, the combination of a casing, a front pivoted thereto, a holder for the paper package pivoted to said casing and normally gravity actuated, a presser frame swingingly mounted adjacent said holder, a friction feed roll rotatably mounted within said cabinet, and means operated by said front when in closed position to place said frame under spring pressure whereby said holder is spring actuated by said frame to maintain said package in contact with said roll.

4. In a cabinet for dispensing a sheet of paper, the combination of a casing, a front pivoted to said casing and forming therewith a discharge opening, a holder for the paper package pivoted to said casing, a friction feed roll rotatably mounted within said cabinet adjacent said opening, a spring pressed plunger carried by said front and means located in the path of movement of said plunger for shifting said holder toward said friction roll, whereby in closed position of said front said paper package is maintained in frictional engagement with said roll.

5. In a cabinet for dispensing a sheet of paper, the combination of a casing, a front pivoted to said casing and adapted to open downwardly, a holder for the paper package pivoted to said casing, a friction feed roll rotatably mounted within said cabinet adjacent said opening, means for shifting said holder toward said friction roll to hold said paper in frictional engagement with said roll, and spring controlled means normally independent of the holder but made operable by said front in closed position for actuating said holder means.

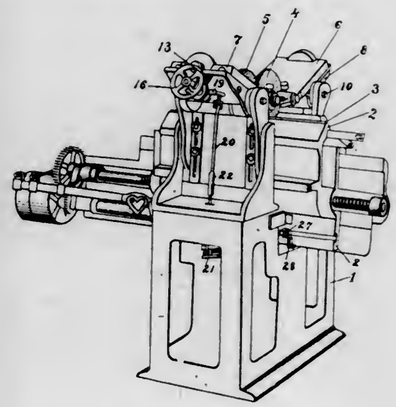
[Claims 6 to 8 not printed in the Gazette.]

1,106,560. KNIFE-GRINDING MACHINE. JOHN P. HEDSTROM, Big Rapids, Mich. Filed June 15, 1912. Serial No. 703,988. (Cl. 51—7.)

1. In a knife grinding machine, the combination with the frame and the knife carriage, of a tiltable, pivotally mounted bracket carried by the frame at an incline, a slide carried by said bracket, means for moving said slide lengthwise said bracket, a flat grinding wheel carried by said slide and lying in a plane parallel with the direction of movement of said slide.

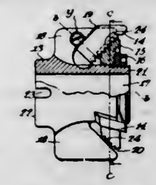
2. In a knife grinding machine, the combination with the frame and a reciprocating knife carriage, of a tiltable bracket pivotally carried by said frame, a slide carried by said bracket and longitudinally movable thereon, a grinding wheel carried by said slide, and means connecting said knife carriage and said slide adapted to actuate said slide at each operation of said carriage.

3. In a knife grinding machine, the combination with the frame and a reciprocating knife carriage, of a tiltable bracket pivotally mounted on said frame, a slide carried by said bracket, a grinding wheel mounted on said slide; and means for automatically moving said slide, comprising a feed screw carried by said bracket and engaging said slide, gears adapted to actuate said feed screw, a ratchet wheel operating said gears, a pawl and a reciprocating rod connected thereto, an extension device on said rod, a tripping device carried by the knife carriage, a cross-shaft, an arm carried thereby and secured to said rod, and means carried by said cross-shaft adapted to engage said tripping device to actuate said rod, for the purposes set forth.



4. In a knife grinding machine, the combination with the frame and the reciprocating knife carriage, of a tiltable bracket pivotally mounted on said frame, a slide carried by said bracket, a grinding wheel mounted on said slide; and means for automatically moving said wheel toward the work, comprising a feed screw carried by said bracket and engaging said slide, a tripping clamp carried by the reciprocating carriage, and mechanism interposed between said screw and said tripping clamp and adapted to be actuated by said clamp to intermittently turn the feed screw on said slide, for the purposes set forth.

1,106,561. CUTTING-TOOL. CHRISTIAN F. HEINKEL, Cleveland, Ohio. Filed Feb. 8, 1909. Serial No. 476,787. (Cl. 77—58.)

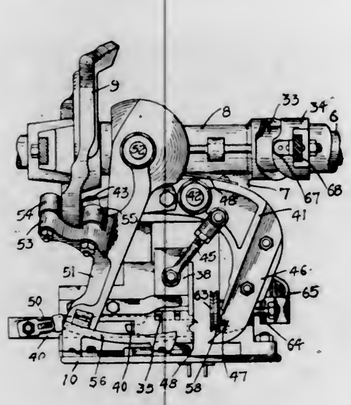


1. In a device of the character described, the combination of a body having a plurality of slots inclined to the axis of said body, a cutter mounted in each of said slots, each of said cutters having threads upon one edge, an adjusting-member carried by said body and having a conical screw-threaded surface thereon which is adapted to engage the threads upon said cutters, and means for locking said adjusting members in adjusted position; the sides of said threads being inclined with respect to the axis of said device to form wedge-shaped seats for said cutters upon said adjusting-member.

2. In a device of the character described, the combination of a body having a plurality of slots, a cutter mounted in each of said slots, the bottom of each of said slots being beveled to form a wedge-shaped seat for one edge of each of said cutters, one edge of each of said cutters being beveled to engage said beveled bottom of said slots, the edge opposite said beveled edge being provided with threads, an adjusting-member having a screw-threaded surface thereon which is adapted to engage the threads upon said cutters, and means for locking the said members in adjusted position; the sides of said threads being inclined with respect to the axis of said device to form wedge-shaped seats for the threaded edge of said cutters upon said adjusting-member.

3. In a device of the character described, the combination of a body having slots inclined to the axis of said body, a cutter mounted in each of said slots, each of said slots having a beveled bottom to form a wedge-shaped seat for one edge of each of said cutters, each of said cutters having a beveled edge to engage said beveled bottom of said slots, each of said cutters being provided with threads upon the edge opposite said beveled edge, an adjusting-member having a conical screw-threaded surface thereon which is adapted to engage said threads upon said cutters, and means for locking the said adjusting-members in adjusted position; the sides of said threads being inclined with respect to the axis of said device to form wedge-shaped seats for said cutters upon said adjusting-member.

1,106,562. BINDER-HEAD FOR HARVESTERS. HERMAN E. HEITMILLER, St. Paul, Minn., assignor to Ware Grain Binder Attachment Co., Minneapolis, Minn., a Corporation of Minnesota. Filed Feb. 23, 1911. Serial No. 610,339. (Cl. 56—82.)



1. The combination, with a binder deck, of a cord holder, means for packing the grain against the cord, a needle arranged to bring up the cord and lay it across the portion held by said holder, a ribbon-feeding device, including a rock shaft, and means for operating the same, and mechanism actuated by said rock shaft and engaging the ribbon to feed the same, said mechanism including a ratchet device, feed rollers, and a link connecting said ratchet device with said shaft, means for serving a clip from the ribbon, and means for forming a clamp around the contiguous portions of the cord.

2. The combination, with a binder deck, of a cord holder, means for packing the grain against the cord, a needle arranged to bring up the cord and lay it across the end portion held by said holder, a ribbon feeding device including an upright rock shaft and means geared to said shaft for operating the same, and coöperating rollers operatively connected with said shaft and actuated thereby and engaging the ribbon, means for severing a clip from the ribbon, and means for forming a clamp around the contiguous portions of the cord.

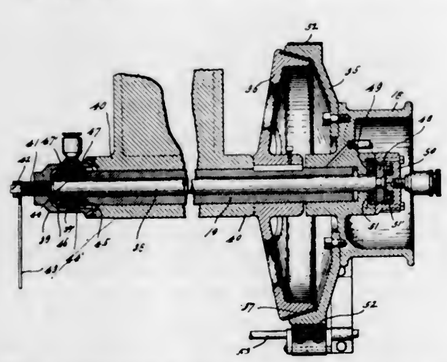
3. The combination, with a binder deck, of a cord holder, means for packing the grain against the cord, a needle arranged to bring up the cord and lay it across the end portion held by said holder, a ribbon feeding device comprising upper and lower rollers between which the ribbon is inserted, a rock shaft having a ratchet connection with said rollers for actuating the same to feed said ribbons, means geared to said rock shaft for operating the same, means for severing a clip from the ribbon, and means for forming a clamp around the contiguous portions of the cord.

4. The combination, with a binder deck, of a cord holder and means for packing the grain against the cord, a needle arranged to bring up the cord and lay it across the portion held by said holder, a rock shaft, a ribbon-feeding mechanism operatively connected with said shaft and including feed rollers, a ratchet mechanism and a link pivotally connecting said ratchet mechanism with said shaft, means for severing a clip from the ribbon, means for forming a clamp around the contiguous portions of the cord, and a cord-severing knife carried by said rock shaft.

5. In a binder head, a cord holder, means arranged to bring up the cord and lay it across the portion held by said holder, jaws between which a clamp is formed around contiguous portions of the cord, a cord severing knife operating beneath said jaws, an upright shaft whereon said knife is mounted, and a rack and pinion device for rotating said shaft and oscillating said knife.

[Claims 6 to 11 not printed in the Gazette.]

1,106,563. CLUTCH. CARL F. HETHERINGTON, Indianapolis, Ind. Filed July 26, 1912. Serial No. 711,624. (Cl. 192—8.)



1. In combination, a hollow shaft, a clutch member fixed thereon, a second clutch member coöperating with the first clutch member and loosely mounted on the shaft, a rod projecting through said hollow shaft and provided within said drum with a shoulder which coöperates with the second clutch member to move the latter axially of the shaft, and a stationary member with which said rod has a threaded engagement, said stationary member being provided with a shoulder coöperating with said shaft to take axial thrust therefrom.

2. In combination, a hollow shaft, a clutch member fixed thereon, a second clutch member coöperating with the first clutch member and loosely mounted on the shaft, a rod projecting through said hollow shaft and provided with a shoulder which coöperates with the second clutch member to move the latter axially of the shaft, ball bearings between said shoulder and said second clutch member, a stationary member with which said rod has a threaded engagement, said stationary member being provided with a shoulder coöperating with said shaft to take axial thrust therefrom, and ball bearings between said last named shoulder and said shaft.

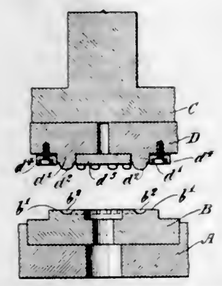
3. In combination, a hollow shaft, a clutch member fixed thereon, a second clutch member coöperating with the first clutch member and loosely mounted on the shaft, a hollow winding drum fixed to said second clutch member, a rod projecting through said hollow shaft and provided within said drum with a shoulder which coöperates with the second clutch member to move the latter axially of the shaft, and a stationary member with which said rod has a threaded engagement, said stationary member being provided with a shoulder coöperating with said shaft to take axial thrust therefrom.

4. In combination, a hollow shaft, a clutch member fixed thereon, a second clutch member coöperating with the first clutch member and loosely mounted on the shaft, a hollow winding drum fixed to said second clutch member, a rod projecting through said hollow shaft and provided within said drum with a shoulder which coöperates with the second clutch member to move the latter axially of the shaft, ball bearings between said shoulder and said second clutch member, a stationary member with which said rod has a threaded engagement, said stationary member being provided with a shoulder coöperating with said shaft to take axial thrust therefrom and ball bearings between said last named shoulder and said shaft.

5. In combination, a hollow shaft, a clutch member fixed thereon, a second clutch member coöperating with the first clutch member and loosely mounted on the shaft, a rod projecting through said hollow shaft and provided with a shoulder which coöperates with the second clutch member to move the latter axially of the shaft, ball bearings between said shoulder and said second clutch member, a stationary member having an operative connection with said rod whereby the latter may be moved endwise relatively to said stationary member, said stationary member being provided with a shoulder coöperating with said shaft to take axial thrust therefrom, and ball bearings between said last named shoulder and said shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,106,564. FORMING-DIES. ERNST GUSTAV HOFFMANN, deceased, New Rochelle, N. Y., by Alfred W. Kiddle, New York, N. Y., and Amalie Mathilde Becker, Frankfort-on-the-Main, Germany, executors. Filed Feb. 10, 1911. Serial No. 607,729. (Cl. 113—38.)



1. The combination of a lower die having circularly arranged spaced projections providing recessed portions therebetween, and an upper die having circularly arranged spaced projections and removable forming members therebetween.

2. The combination of a lower die, and an upper die having a series of spaced projections and a series of removable forming members held in place therebetween by retaining members engaging opposite sides.

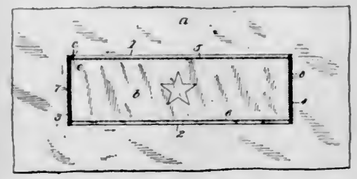
3. A pair of dies for forming ball-retaining or spacing rings, comprising a lower die, and an upper die having spaced projections carrying curved work-engaging surfaces and balls having their sides and tops removed located between the projections and held in place by inner and outer rings which extend below the center of curvature of the balls and engage that portion of the balls below said center.

4. The combination of an anvil, a plunger, dies carried thereby, and pin and socket guide members extending between the anvil and plunger, one of said dies having spaced projections forming members circularly arranged.

5. A combination of forming dies having a relative reciprocatory movement therebetween, one of which is provided with a series of recessed portions and the other of which is provided with a series of removable spaced members constituting forming projections held in place by holding plates on opposite sides of said spaced members, each of which plates engages at least a plurality of said members, the series of spaced members constituting projection-forming portions simultaneously coöperating with said series of recessed portions.

[Claim 6 not printed in the Gazette.]

1,106,565. SEAM FOR SEWED ARTICLES. CHARLES M. HORTON, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Sept. 13, 1911. Serial No. 649,148. (Cl. 112—34.)
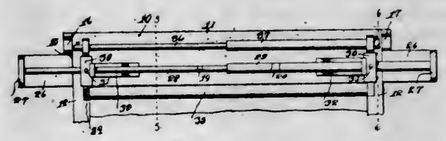


1. The combination with a body-fabric, of a superposed ply of fabric having parallel selvage edges and intermediate raw edges, and means for securing the same together comprising lines of straight-away stitches disposed along the selvage edges of the superposed ply and passing through the body-fabric and connecting lines of covering stitches wholly overlying the body-fabric and embracing said raw edges.

2. The combination with a body-fabric, of an overlying piece of fabric having parallel selvage edges and intermediate raw edges in angular relation therewith, and means for securing the same together comprising lines of straight-away stitches disposed along the selvage edges of the overlying fabric and lines of covering stitches embracing said raw edges of the overlying fabric and extending across said line of straight-away stitches.

3. The combination with a body-fabric, of an overlying piece of fabric having parallel selvage edges and intermediate raw edges in angular relation therewith, and means for securing the same together comprising lines of straight-away stitches disposed along the selvage edges of the overlying fabric and lines of covering stitches embracing said raw edges of the overlying fabric and extending across said line of straight-away stitches, all of said lines of stitches being formed of continuous stitching threads whose ends are at substantially the same point in said fabrics.

1,106,566. CURTAIN-SUPPORTER. SILAS B. HOVEY, Kansas City, Kans. Filed Feb. 15, 1913. Serial No. 748,766. (Cl. 156—23.)



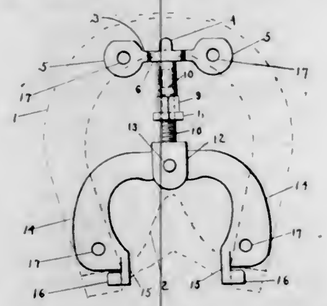
1. In a device of the class described, the combination with a pair of end plates, of two adjustable rods extending

between said end plates one of said rods being disposed in front of the other, a pair of brackets connected with and bodily slidable on both of the two rods, each bracket having an upwardly extending arm and a downwardly extending arm, a hanger rod mounted in the upwardly extending arms and a roller member mounted in the downwardly extending arms.

2. In a device of the class described, the combination with a pair of oppositely disposed end plates, of two telescoping rods connecting said end plates, one of said rods being disposed in front of the other, a pair of bracket members bodily slidable on the front telescoping rod and having rearward extensions slidingly engaging with the rearmost telescoping rod, said brackets having upwardly extending arms and downwardly extending arms, a telescoping rod mounted in the upwardly extending arms, and a roller mounted in the downwardly extending arms.

1,106,567. [WITHDRAWN.]

1,106,568. OVERSHOE. ALBERT F. KELLY, Toledo, Ohio, assignor of one-third to Paul Geodes and one-third to William Shasberger, Toledo, Ohio. Filed Apr. 29, 1912. Serial No. 693,808. (Cl. 168—30.)

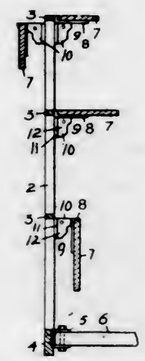


1. A calk carrier embodying a self-adjusting toe member, a pair of frog-clearing heel members movable relatively to each other and each independent of the toe member, a pivot pin directly connecting said heel members, and adjustable thrusting means engaging the pivot pin and loosely engaging rockably to abut the toe member to force the members away from each other with the toe member automatically rocking to firm engagement and thereby lock the calk carrier in position whereby there is provided a maximum of clearance between the members to preclude clogging of material in the carrier in use.

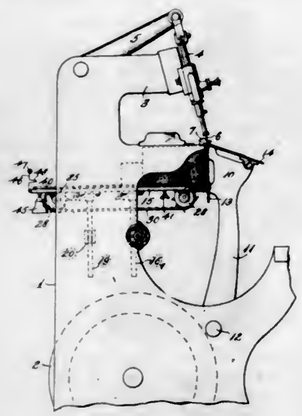
2. A calk carrier embodying a toe piece, a pair of heel pieces movable relatively to each other and each independent of the toe piece, said heel pieces each extending toward said toe piece to provide frog clearance for the carrier, and adjustable thrusting locking means for forcing the pieces away from each other to lock the pieces in assembled position, said means extending from the toe piece and including a first threaded member for thrusting heelward, and a relatively adjustable second threaded member coacting with the first threaded member and rockably seating against the toe piece to permit alining thrust therefrom in the relative rocking of the toe piece for binding engagement whereby there is provided a maximum of clearance between the pieces to preclude clogging of material in the carrier in use.

1,106,569. FOLDING SHELF. CHARLES A. KESSLER, Pittsburgh, Pa. Filed Dec. 11, 1913. Serial No. 805,908. (Cl. 211—27.)

In a folding stand, a frame, a shelf therefor, and a hinge connecting the frame and the shelf, one member of the hinge being secured to the frame and comprising a base, a vertical flange thereon extending at a right angle to the base and provided with two projections at right angles thereto, the second member of the hinge comprising a horizontal portion secured to the shelf and a vertical portion secured to the horizontal portion and provided with at least one slot to receive one of the projections, the other projection coöperating to support the second hinge member when the shelf is folded.



1,106,570. EJECTING MECHANISM. CHARLES F. KEWITZ, Lakewood, Ohio. Filed Aug. 22, 1913. Serial No. 786,086. (Cl. 112—41.)



1. In a stacking mechanism of the type wherein successive paper articles are delivered in vertical position to a horizontal receiving table and are advanced along that table by the operation of a ramming device acting upon each article as it is delivered, the combination, with such table and ramming device, of means for atatching the uppermost edge of each newly delivered article to the corresponding edge of the next preceding article, conveyer mechanism projecting above the surface of said table and arranged to bear against the lowermost edges of said articles, and means for advancing said conveyer mechanism intermittently.

2. In stitching mechanism, the combination with a needle shoe, a vertically adjustable stacking table located beneath said shoe, and a ramming device movable toward and from said table and arranged to deliver articles singly to said table and to press them against the articles already in place thereon, of means for securing each article to the succeeding article as it passes beneath said shoe, conveyer mechanism carried by said table and upon which said articles may bear, means for advancing said conveyer mechanism intermittently substantially simultaneously with the addition of succeeding articles to the end of the series, the amount of advance movement at each step being at least as great as the thickness of the articles added.

3. In ejecting mechanism of the type wherein flexible paper articles are delivered in succession to a stacking table and advanced along that table by the addition of succeeding articles to the rear end of the series, the combination, with the stacking table, of an endless chain projecting above the surface of said table and upon which said articles may bear, sprocket wheels journaled to the table and having teeth engaging said chain, the length of the teeth being greater than the thickness of the chain and the position of the wheels being such as to cause said teeth to project above the surface of the table and engage the articles directly, and means for advancing said sprocket wheels intermittently substantially simultaneously with the addition of succeeding articles to the end of the series, the amount of advance movement at each step being at least as great as the thickness of the articles added.

4. In ejecting mechanism of the type wherein paper articles are delivered in succession to a stacking table and advanced along that table by the addition of succeeding articles to the rear end of the series, the combination, with the stacking table, of conveyer mechanism projecting above the surface of said table and upon which said articles may bear, supporting members adjacent to and parallel with said conveyer mechanism and adapted to relieve the latter of a portion of the weight of said articles, and adjustable means for variably advancing said conveyer mechanism intermittently substantially simultaneously with the addition of succeeding articles to the end of the series.

5. In ejecting mechanism of the type wherein paper articles are delivered in succession to a stacking table and advanced along that table by the addition of succeeding articles to the rear end of the series, the combination, with the stacking table, of conveyer mechanism, projecting above the surface of said table and upon which said articles may bear, supporting members adjacent to and parallel with said conveyer mechanism and adapted to relieve the latter of a portion of the weight of said articles, means for adjusting said supporting members toward and from the top of said table so as to vary the proportion of weight carried thereby, and means for advancing said conveyer mechanism intermittently substantially simultaneously with the addition of succeeding articles to the end of the series, the amount of advance movement at each step being substantially proportional to the thickness of said articles.

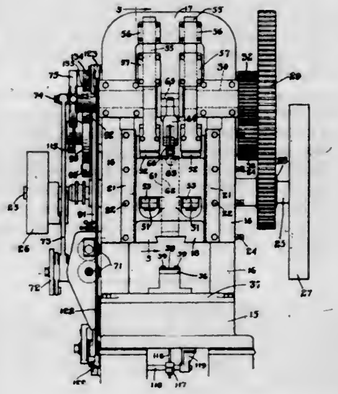
[Claims 6 to 16 not printed in the Gazette.]

1,106,571. TANDEM PRESS. ARTHUR J. LEWIS, Stratford, Conn., assignor to The Baird Machine Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 15, 1913. Serial No. 754,599. (Cl. 164—12.)

1. In a press of the character described, in combination, a plurality of tool carrying gates arranged immediately adjacent one another in a direction from front to rear of the machine, separate means for guiding each gate, means common to all the gates on each respective side for supporting said guides, and means for independently operating said gates.

2. In a press of the character described, in combination, a plurality of tool carrying gates arranged immediately adjacent one another in a direction from front to rear of the machine, means for guiding said gates, a power shaft at right angles to the common center line of the gates, and means actuated by said shaft for independently operating said gates.

3. In a press of the character described, in combination, a plurality of tool carrying gates arranged immediately adjacent one another in a direction from front to rear of the machine, uprights for supporting said gates and means for independently operating said gates.

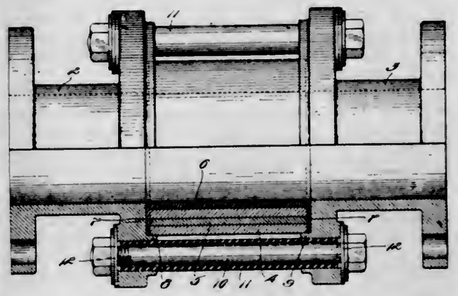


4. In a press of the character described, in combination, a frame comprising uprights, a plurality of tool carrying gates arranged immediately adjacent one another in a direction from front to rear of the machine and guided in said uprights, and a plurality of operating shafts mounted in said uprights at right angles to the common center line of said gates.

5. In a press of the character described, in combination, a plurality of tool-carrying gates arranged immediately adjacent one another, means for guiding said gates, a plurality of shafts, and means on said shafts for independently operating said gates respectively.

[Claims 6 to 34 not printed in the Gazette.]

1,106,572. INSULATING-JOINT FOR PIPE SYSTEMS. ALBERT JOHN LOEFSINGER, Providence, R. I., assignor to General Fire Extinguisher Company, Providence, R. I., a Corporation of New York. Filed Aug. 28, 1911. Serial No. 646,418. (Cl. 173—365.)



1. An insulating pipe section of the character described, comprising end sections with flanged outer ends adapted to be bolted to opposed flanges on adjacent pipe ends, a rigid cylinder made of insulating material and extending endwise between the inner ends of said end sections, insulated clamping devices connecting the end sections on the outside of the cylinder, and elastic packing held under compression between the end faces of said cylinder and the opposed inner ends of said end sections.

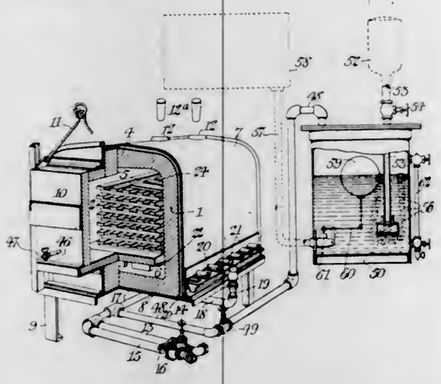
2. An insulating pipe section of the character described, comprising end sections and an intermediate rigid cylin-

der held end to end, said cylinder being made of wood and provided with an insulating water-proof lining having compressible and elastic flanged ends overlapping the ends of the cylinder.

3. An insulating pipe section of the character described, comprising end sections having attached flanges, a wooden cylinder extending endwise between said sections and having a soft rubber lining with end flanges held under compression between the ends of the cylinder and the end sections, and insulated bolts connecting the end sections on the outside of said cylinder.

4. An insulating pipe section of the character described, comprising end sections having attaching flanges and an insulating cylinder located between the same in concentric relation therewith, said cylinder being composed of wooden staves connected together and provided with a soft rubber lining having outwardly-extending flanges at its ends, bolts connecting the inner flanges of said end sections and provided with nuts, insulating tubes surrounding said bolts, and insulating washers beneath said nuts.

1,106,573. CASE-HARDENING PROCESS. ADOLPH W. MACHLET, Elizabeth, N. J. Original application filed May 25, 1906, Serial No. 318,679. Divided and this application filed Dec. 19, 1911. Serial No. 666,650. (Cl. 148—26.)



1. The process of case-hardening consisting in confining in an oven the articles to be case-hardened, producing flames in said oven to heat both the oven and the articles, extinguishing the flames and then introducing gas into the oven to case-harden the articles by means of the heat retained within the oven.

2. The process of case-hardening steel or iron articles, consisting in confining the articles in a heat retaining oven, producing flames in the oven to heat the same and the articles, until the latter reach carburizing heat, and then extinguishing the flames and causing a current of carburizing gas to pass through the oven.

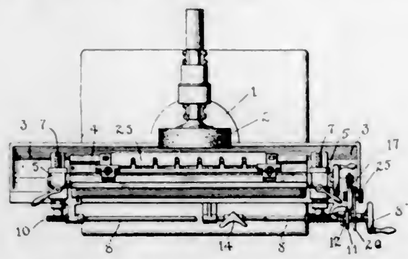
3. The process of case-hardening a steel or iron article, consisting in first heating the same to a carburizing heat by the direct play of flames thereon, and then exposing it while out of contact with flame to an atmosphere of carburizing gas, to cause the article to become cemented by means of its retained heat.

4. The process of case-hardening a steel or iron article, consisting in first heating the same to a carburizing heat and exposing it while cooling to an atmosphere of carburizing gas, to cause the article to become cemented by means of its retained heat, and causing the cooling to be delayed during the carburizing process.

5. The process of case-hardening steel or iron articles, consisting in heating them to carburizing heat, exposing them to carburizing gas while they are slowly cooling, reheating them, and again exposing them to carburizing gas while slowly cooling.

[Claims 6 to 8 not printed in the Gazette.]

1,106,574. LIMITING AND STOPPING DEVICE. BRUNO EWARD MARSHALL, Williams, Ariz., assignor of one-fourth to Frank A. Baldwin and one-fourth to Victor M. Tuthill, Grand Rapids, Mich, doing business under the firm-name Baldwin, Tuthill and Bolton. Filed Sept. 22, 1913. Serial No. 791,211. (Cl. 51—7.)



1. In combination with feeding mechanism having both automatic means and manual means for separately operating the same, means for automatically and wholly disengaging the automatic means from the feed mechanism at a predetermined point in its operation, whereby the feed mechanism may be manually operated without operating the automatic means.

2. In combination with feed mechanism having both pawl and ratchet means and manual means for separately operating the same, means for automatically disconnecting the pawl from the ratchet at a predetermined point in its operation and automatic means for disconnecting the feed mechanism and said automatic means to permit independent manual operation of the feed mechanism without affecting the automatic means.

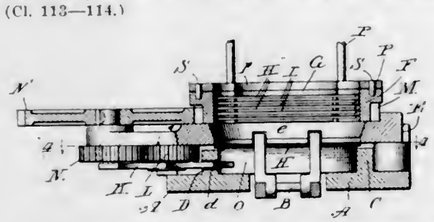
3. In combination with feeding mechanism having both pawl and ratchet mechanism and manual means for separately operating the same, a lever to disconnect the pawl from the ratchet, a star wheel rotated by the ratchet wheel, and operating the lever, and means for simultaneously disconnecting the star wheel and the ratchet when the lever disconnects the pawl, whereby the feed mechanism may be manually operated without affecting the automatic mechanism.

4. In combination with a feeding mechanism driven by a pawl and ratchet of a wheel rotated by the said ratchet, a cam rotated by the wheel and a lever moved by the cam to disengage the pawl from the ratchet.

5. In combination with feeding mechanism driven by a pawl and ratchet wheel of a stopping device, comprising a star wheel, a pin on the ratchet wheel to engage the star wheel to actuate the same, a cam in fixed relation to the star wheel, a pivoted lever actuated by the cam and a pin projecting from the pawl and engaged by the lever whereby the pawl is disengaged from the ratchet at a predetermined point.

[Claims 6 and 7 not printed in the Gazette.]

1,106,575. FEEDING MECHANISM FOR CAN PARTS. FRANCIS P. MCCOLL, Eastport, Me., assignor to American Key Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 4, 1910. Serial No. 542,049. (Cl. 113—114.)



1. In combination, a can carrier, movable cover-delivering mechanism arranged to support a stack of covers,

means associated with said mechanism for causing a cover to be delivered whenever said mechanism reaches a predetermined point in its movement, actuating means for said mechanism, and a device controlled by a can in said carrier for governing said actuating means to cause the lowermost cover to be delivered when the can reaches a point directly under the stack.

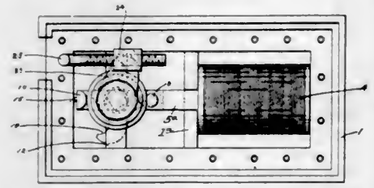
2. In combination, a can carrier, cover-delivering mechanism arranged to support a stack of covers, a chute leading from said mechanism to a point adjacent to said carrier, and a device controlled by a can in said carrier for causing said mechanism to deliver a cover to said chute when the can reaches said point.

3. In combination, a rotatable holder for supporting a stack of superposed can parts, means associated with said holder for permitting the delivery of the lowermost member of the stack whenever the holder assumes any one of a number of predetermined angular positions, a carrier for can members, and means controlled by a can member in said carrier for rotating said holder.

4. In combination, a rotatable holder for supporting a stack of can parts, said holder having a receiving chamber cruciform in cross section to permit can parts longer in one direction than the other to be stacked with corresponding axes arranged at an angle to each other, a stationary support for said holder arranged beneath the same, said support having an opening therethrough in position to register successively with the several arms of the cruciform opening in the holder as the holder is revolved.

5. In combination, a rotatable holder for supporting a stack of similar can parts each of which has one transverse dimension longer than another of its transverse dimensions, said holder having a receiving chamber shaped to permit said can parts to be stacked upon each other in various angular positions about the axis of rotation of said holder, a stationary support beneath the holder and having an opening therethrough of a size and shape to permit the lowermost can part of the stack to drop through the opening when that can part reaches a predetermined angular position during the rotation of the holder, a carrier for can members, and means controlled by a can member in said carrier for rotating said holder.
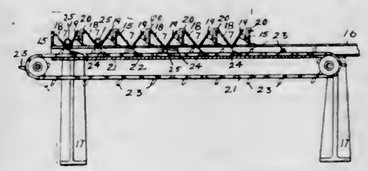
1,106,576. ELECTROMECHANICAL SWITCH. ROYAL RUEBEN MILLER, Pueblo, Colo., assignor, by direct and mesne assignments, to The Miller Electric Switch Company, a Corporation of Colorado. Filed Dec. 2, 1911. Serial No. 663,593. (Cl. 104—155.)



1. In a device of the character described having a solenoidal magnet adapted to be connected with a source of electric current, the combination of a plunger in said solenoidal magnet with spiral spring returning means included in said magnet; an arm attached to said plunger with the exterior end bifurcated forming two arms; an engaging point on the upper arm of last said two arms; a centering arm pivotally attached between the two arms of said plunger arm provided with a boss and extended guides adapted to engage a spiral spring; a V shaped element attached posteriorly to a cam piece adapted to engage operatively said engaging point on said upper arm; and the shaft attached to a cam piece for connection with a switch tongue; all substantially as set forth.

2. In an electro-mechanical switch of the character described, a locking means composed of a V shaped element on the posterior portion of a cam track piece, and a V shaped element attached to a plunger adapted to engage the said posterior V shaped element on said cam track when the said plunger is at rest and not being actuated by any electrical current and adapted to hold said cam track in a stationary position.

1,106,577. APPARATUS FOR MAKING LAPWELD-PIPES. WILLIAM MARTIN NECKERMAN, Youngstown, Ohio, assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a Corporation of Ohio. Filed Nov. 1, 1913. Serial No. 798,683. (Cl. 78—88.)



1. In a lap-welding apparatus, a furnace having fixed positions in which skelp are charged initially and remain until properly heated, a separate welding trough in line with each of said positions, and means for welding each skelp as it is caused to travel from its position in the furnace to its individual welding trough.

2. In a lap-welding apparatus, a furnace having fixed position in which skelp are charged initially and remain until properly heated, a separate welding trough in line with each of said positions, means for welding each skelp as it is caused to travel from its position in the furnace to its individual welding trough, and separate bar-pulling mechanism in line with each welding trough.

3. In a lap-welding apparatus, a furnace having fixed positions in which skelp are charged initially and remain until properly heated, a separate welding trough in line with each of said positions, and welding rolls located between the furnace and the welding troughs and having a plurality of welding passes.

4. In a lap-welding apparatus, a furnace having fixed positions in which skelp are charged initially and remain until properly heated, a separate welding trough in line with each of said positions, welding rolls located between the furnace and the welding troughs and having a plurality of welding passes, and separate bar-pulling mechanisms in line with each welding trough.

5. In a lap-welding apparatus, a furnace having fixed positions in which skelp are charged initially and remain until properly heated, a separate welding trough in line with each of said positions, and welding rolls located between the furnace and welding troughs and having a welding pass in line with each welding trough.

[Claim 6 not printed in the Gazette.]

1,106,578. PROCESS OF MAKING BARIUM HYDRATE. SPENCER B. NEWBERRY and HARVEY N. BARRETT, Baybridge, Ohio. Filed Apr. 19, 1912. Serial No. 691,959. (Cl. 23—13.)

1. The process of producing barium hydrate from barium sulfate which consists in mixing the latter with an infusible, insoluble material, finely dividing the mixture, subjecting the same to a high temperature until substantially all of the barium sulfate is converted into barium oxid, treating the calcined product with water until substantially all of the barium oxid is converted into barium hydrate and then separating the hydrate from the residue.

2. The process of producing barium hydrate from barium sulfate which consists in mixing the latter with an infusible, insoluble material, finely dividing the mixture, subjecting the same while in an agitated condition to a high temperature until substantially all of the barium sulfate is converted into barium oxid, treating the calcined product with water until substantially all of the barium oxid is converted into barium hydrate and then separating the hydrate from the residue.

3. The process of producing barium hydrate from barium sulfate which consists in mixing the latter with an infusible, insoluble material, finely dividing the mixture until approximately 90% of it will pass through a 100-mesh screen, subjecting the same to a high temperature until substantially all of the barium sulfate is converted into barium oxid, treating the calcined product with water until substantially all of the barium oxid is converted into barium hydrate and then separating the hydrate from the residue.

4. The process of producing barium hydrate from barium sulfate which consists in mixing the latter with an infusible, insoluble material, finely dividing the mixture until approximately 90% of it will pass through a 100-mesh screen, subjecting the same to a high temperature of not less than approximately 2700° Fahrenheit until substantially all of the barium sulfate is converted into barium oxid, treating the calcined product with water until substantially all of the barium oxid is converted into barium hydrate and then separating the hydrate from the residue by leaching out the barium hydrate and recovering it from the liquid.

5. The process of producing barium hydrate from barium sulfate which consists in mixing the latter with an infusible, insoluble material, finely dividing the mixture, subjecting the same while in an agitated condition to a high temperature of not less than approximately 2700° Fahrenheit or until substantially all of the barium sulfate is converted into barium oxid, treating the calcined product with water until substantially all of the barium oxid is converted into barium hydrate and then separating the hydrate from the residue by leaching out the barium hydrate and recovering it from the liquid.

[Claims 6 to 10 not printed in the Gazette.]

1,106,579. STERILIZING APPARATUS. MARK P. ORR, Indianapolis, Ind. Filed June 26, 1913. Serial No. 775,908. (Cl. 167—3.)



1. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle, a track extending through the ends of said receptacle to receive the cans, means for retaining and guiding the cans on said track consisting of vertically adjustable rods mounted in the tank and longitudinal strips connected with said rods and arranged above the cans, and means for sterilizing or cleansing the cans and causing them to travel on said track.

2. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle having an entrance and discharge opening, a steam supply medium mounted in the entrance portion of the receptacle and having nozzles for directing the steam into the side and from the bottom of said receptacle, guides for the cans consisting of vertically adjustable means arranged above the cans and laterally adjustable means arranged at the sides of the cans, and tracks extending through the receptacle and projecting outside the entrance and discharge openings to receive the cans or objects to be subjected to the steam supply medium, said cleaning or sterilizing medium by means of its projecting force against the cans causing said cans to travel upon the track.

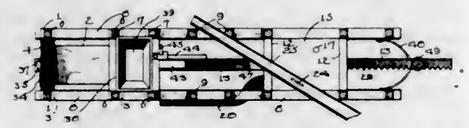
3. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle having an entrance and discharge opening, a track extending throughout the receptacle and beyond the entrance and discharge openings to receive the cans or objects, a steam injecting means located in the receptacle near the entrance opening thereof, and vertically and laterally adjustable means for guiding and retaining the cans or objects in their travel upon the track, said cleaning or sterilizing medium by means of its projecting force against the cans causing said cans to travel upon the track.

4. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle disposed at an incline and having an entrance and discharge opening, means in said tank or receptacle having adjustment to guide and adjust the cans or objects in their travel within said receptacle, and means for subjecting the cans or objects to the action of a cleansing or sterilizing medium for cleansing and causing said cans to travel upon said track.

5. A can sterilizing apparatus, consisting of a sterilizing chamber or receptacle open at both ends and arranged at an incline, a track mounted on the base of said receptacle to receive the cans, adjustable guiding tracks above the main tracks for guiding the cans in their travel upon the main track, and means for subjecting the cans to the action of a cleansing medium which cleanses the cans and by its impact causes the cans to travel upon said main track.

[Claim 6 not printed in the Gazette.]

1,106,580. HAY-PRESS. LOLLEY THOMAS PATE, Jr., Norphlet, Ark. Filed Dec. 14, 1912. Serial No. 736,791. (Cl. 100—5.)

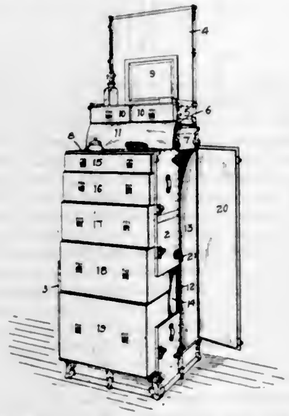


In a device of the class described the combination with a press box, a frame, a plunger rod working in said press box and supported upon said frame, a roller, an operating lever, a gear carried by said operating lever, said plunger rod provided with teeth upon one side thereof for facilitating the moving of said plunger longitudinally within said press box as said lever is swung, said roller firmly holding said plunger rod in engagement with said gear wheel, tension means engaging said plunger rod and said frame for normally drawing said plunger to a retracted position, said plunger provided with a notch upon one side thereof, and a pivoted lever carried by said frame and adapted to be swung in engagement with said notch for locking said plunger in a compressed position.

1,106,581. TRUNK. MAYME J. PEPPARD, Minneapolis, Minn. Filed July 23, 1909, Serial No. 509,196. Renewed Mar. 1, 1913. Serial No. 751,644. (Cl. 190—4.)

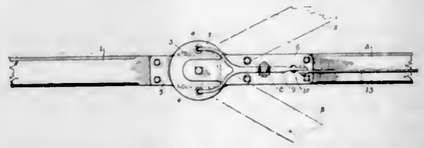
1. A chiffonnier trunk comprising side and end walls, one of said end walls forming the lower end of the trunk when it is used as a chiffonnier, a cover divided transversely into an upper and a lower section, the upper end of the trunk being divided transversely into a rigid and a movable section hinged together, the upper cover section being rigidly secured to said movable section and adapted to swing upwardly therewith and rest upon said rigid section, a partition extending lengthwise through said trunk from end to end thereof and between said rigid and movable end sections and bracing the same, the space on one side of said partition forming a wardrobe, the wall of the trunk having a door leading thereto, and a series of drawers arranged one above another in the space on the other side of said partition and exposed when said cover is raised, substantially as described.

2. A chiffonnier trunk comprising side and end walls, one of said end walls forming the bottom of the trunk when it is used as a chiffonnier, the other end of the trunk being divided transversely into a rigid and a movable section hinged together, a cover rigidly secured at one end to said movable section and adapted to swing upwardly therewith and rest upon said rigid section, a shelf arranged beneath the movable section of said end and extending from the front of the trunk to the rigid section of said end, a partition dividing the trunk vertically and extending to said rigid and movable sections, said partition being located intermediate to the front and rear of said chiffonnier and dividing the space within the trunk into vertical compartments, the compartment on one side of said partition forming a vertical wardrobe and having a suitable door and a series of drawers fitting into the compartment on the other side of said partition beneath said shelf and concealed when the trunk cover is closed.



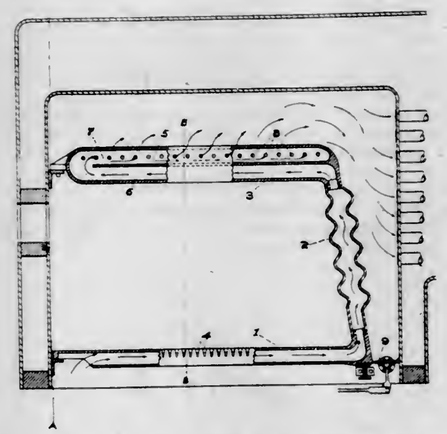
3. A chiffonnier trunk comprising side and end walls, one of said end walls forming the bottom of the trunk when used as a chiffonnier, the other end of the trunk being divided transversely into a rigid and a movable section hinged together, the body portion of the trunk having a wardrobe compartment under the rigid section of the end and provided with a series of drawers at one side thereof to lie below the hinged section of the end when closed, the wardrobe compartment being formed with an opening to the rear of the drawers in the wall at which the ends of the drawers lie and provided with a door for the opening and which forms a portion of that wall of the body, and a cover secured at one end to the movable section of the end portion and adapted to swing upwardly therewith and with said movable section to rest above the wardrobe compartment when the trunk is set upon end, substantially as described.

1,106,582. PLOW-BEAM. LOUIS RACINE, St. Gedeon de Beauce, Quebec, Canada. Filed Sept. 5, 1913. Serial No. 788,192. (Cl. 97—2.)



In combination, a front plow beam section and a rear plow beam section, circular plates of disks secured to the upper and lower faces of the rear end of the front section and both provided with a central opening, the upper plate being also provided with perforations on opposite sides of the longitudinal center of the front section, plates secured to the upper and lower faces of the front end of the rear section and each having a centrally perforated disk similar to the disks of the front section and adapted to be superposed therein, the upper disk or plate being provided with perforations on opposite sides of the longitudinal center of the rear section and adapted to be alined with the corresponding perforations of the upper disk of the front section when the two beam sections are alined, a pivot bolt passed through the central perforations of all of said disks and through the rear end of the front section, and a pivotally mounted locking lever provided with forked ends adapted to be seated in both sets of alined perforations of the two upper disks when the plow beam sections are in alinement.

1,106,583. APPARATUS FOR PROMOTING COMBUSTION IN FURNACES. EMERY C. READ, Franklin, Pa. Filed Feb. 2, 1911. Serial No. 606,100. (Cl. 110—74.)



1. An apparatus for promoting combustion in furnaces, consisting of a plurality of sectional by-pass units, each of said units being composed of the following sections,—a hollow grate section arranged for the intake of air at one end into its chamber, a vertically-disposed baffle flue section having its chamber arranged in communication with said grate chamber, and a hollow crown-bar arranged horizontally across the upper portion of the combustion chamber of a furnace with its chamber in communication with the chamber of said flue, said crown bars being arranged with intermediate spaces, there being apertures in said crown bar leading from its chamber into said spaces for the purpose of causing air passing through said several sections to mingle with the gases of combustion, and said flue sections being arranged to direct the gases of combustion upward through said spaces, for the purpose set forth.

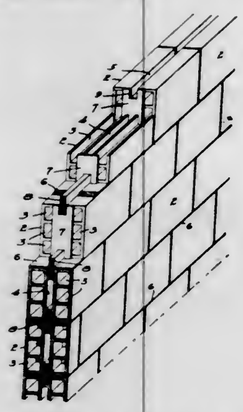
2. An apparatus for promoting combustion in furnaces consisting of the combination of a plurality of sectional units, each of said units comprising a hollow grate bar, a vertically-disposed flue section positioned at the rear of the fire-box of such furnace and a horizontally-disposed hollow crown-bar extending across the upper portion of said fire-box and having lateral orifices therein for the egress of air, said grate-bar, flue section and crown-bar being constructed and arranged for the passage of air through the same and to have its ingress in said grate-bar and its egress from said lateral orifices in said crown bar; said crown-bar section being arranged with spaces between the same through which the gases of combustion are caused to pass and to mingle with the air as it issues from said orifices, for the purpose set forth.

3. An apparatus for promoting combustion in furnaces, consisting of the combination of a plurality of sectional units, each of said units comprising a hollow grate-bar, a vertically-disposed flue-section positioned in proximity to the rear of the fire-box of the furnace, and a horizontally-disposed crown-bar extending across the upper portion of said fire-box and having orifices therein for the

egress of air, said units being constructed and arranged for the passage of air through the same, which has its ingress in said grate-bar, and its egress from said orifice in said crown-bar, the units of which corwn-bar are arranged with spaces between the same, through which the gases of combustion are caused to pass and there mingle with the air as it issues from said orifice, and means injecting fluid under pressure, at the point of ingress of said air, for the purpose specified.

4. An apparatus for promoting combustion in furnaces consisting of a plurality of horizontally-disposed hollow crown bars extending longitudinally across the furnace, and positioned in the upper part thereof, there being an intervening space upon either side of each of said bars, between the same and the bar in juxtaposition thereto, for the passage of the gases of combustion, also lateral orifices in each of said bars opening into the spaces adjacent thereto, and vertically-disposed flue-sections having interior passages communicating with the interior of said crown-bars at one end thereof and adapted to conduct air to the interior of said bars from beneath the furnace, said flue sections being positioned in proximity to the rear end of the combustion chamber of said furnace, for the purpose of forming a baffle plate to deflect the gases of combustion into the upper portion of said chamber.

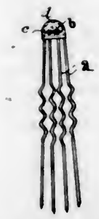
1,106,584. WALL CONSTRUCTION. HARRY G. ROBBINS, Minneapolis, Minn. Filed July 26, 1913. Serial No. 781,340. (Cl. 72—41.)



1. A wall composed of a series of blocks, each having a narrow central opening extending through the block from end to end thereof and vertically from a point near the top of the block to a point near the bottom thereof, each block having a plurality of longitudinal, independent openings extending from end to end of the block on each side of said central opening, filler plates of insulating material inserted between abutting ends of blocks in the same course and seated against the walls of said central opening and closing and concealing each end of said central openings, whereby a central dead air space is formed in each block separating the longitudinal independent openings on one side of said central opening from the corresponding longitudinal openings on the opposite side thereof, thereby insulating said wall and the joints thereof against the passage of heat and cold.

2. A wall composed of a series of blocks, each having a longitudinal independent opening extending from end to end of the block on each side of a central opening, and filler plates of insulating material inserted between the abutting ends of blocks in the same course and seated against the walls of said central opening and closing and concealing each end of said central opening to form a dead air space separting the longitudinal openings one from the other and insulating said wall and the joints thereof against the passage of heat and cold.

1,106,585. HAIR-PIN AND THE LIKE. KARL THEODOR SANDRECZKI, Hamburg, Germany. Filed Sept. 5, 1912. Serial No. 718,711. (Cl. 132—22.)



1. As a new article of manufacture, a fastening pin comprising a plurality of waved tines, spaced apart and placed so that the distance between any two tines is less than that between the tines of an ordinary hair pin, and a cap pressed in place inclosing the upper ends of said tines and extending below said upper ends to embrace sufficient of the length of said tines so as to hold them in relationship to prevent permanent lateral displacement thereof, the upper portion of said cap together with the upper ends of said tines being bent to occupy an angular position in respect of the rest of the pin, as set forth.

2. As a new article of manufacture, a fastening pin comprising two wavy hair pins, each having a looped upper end, portions of one of said loops lying in spaced relation to portions of the other loop, the tines of one hair pin being spaced apart and positioned adjacent to the tines of the other hair pin and spaced apart therefrom throughout their length, and a cap pressed in place in closing the said loops and extending therebelow to embrace sufficient of the length of said tines so as to hold them in relationship to prevent permanent lateral displacement thereof, as set forth.

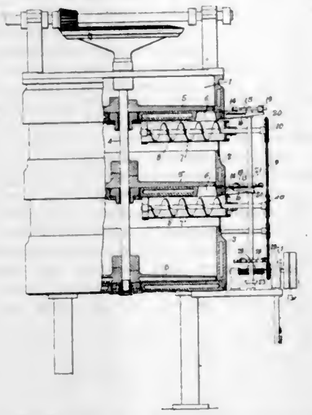
3. As a new article of manufacture, a fastening pin comprising two wavy hair pins, each having a looped upper end, the tines of the inner hair pin being positioned between the tines of the outer hair pin and spaced apart therefrom, and a cap inclosing the said loops and pressed in place and embracing sufficient of the length of the said tines so as to hold them in relationship, as set forth, the upper portion of said cap, together with the said loops, being bent to occupy an angular position in respect of the rest of the pin.

1,106,586. COOKER FOR SEEDS AND THE LIKE. GEORGE A. SAUER, Jr., and RUSSELL A. TRACE, Dayton, Ohio, assignors to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 3, 1914. Serial No. 810,311. (Cl. 87—6.)

1. The combination, with a cooker comprising an upper receptacle and a lower receptacle arranged substantially in vertical alinement, the upper receptacle having a discharge opening through which to discharge its contents into the lower receptacle, of a device arranged to receive the meal from said discharge opening and deposit the same in the lower receptacle at a point remote from said discharge opening.

2. The combination, with a cooker comprising a plurality of receptacles arranged one above the other, each receptacle, save the lowermost, having a discharge opening through which the meal may be discharged into the receptacle next below it, of a conveyer arranged beneath each of said discharge openings to receive the meal there from and to convey the same to a point near the center of the next lower receptacle.

3. The combination, with a cooker comprising an upper receptacle and a lower receptacle, the upper receptacle having a discharge opening near the outer periphery thereof through which the meal may be discharged into the lower receptacle, of a trough supported beneath said discharge opening to receive the meal therefrom and extending to a point above the central portion of the lower receptacle, and an actuating member mounted in said trough to move the meal along the same and cause it to be discharged into said lower receptacle.

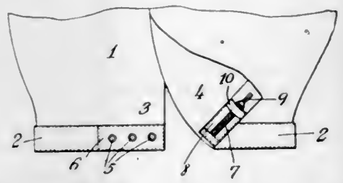


4. The combination, with a cooker comprising an upper receptacle and a lower receptacle, the upper receptacle having a discharge opening near the outer periphery thereof through which the meal may be discharged into the lower receptacle, of a screw-conveyer supported beneath said discharge opening to receive the meal therefrom and having its discharge opening arranged above the central portion of said lower receptacle.

5. The combination, with a cooker comprising an upper receptacle and a lower receptacle arranged substantially in vertical alinement, the upper receptacle having a discharge opening near the outer wall thereof, of a device to receive the material from said discharge opening and deposit the same near the center of said lower receptacle.

[Claims 6 to 17 not printed in the Gazette.]

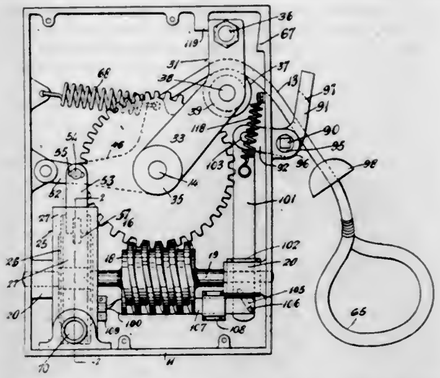
1,106,587. TROUSERS. ISAAC SCHEINMAN, New York, N. Y. Filed Nov. 15, 1912. Serial No. 731,499. (Cl. 2—122.)



In knee breeches, a knee band, fastening means for the ends thereof, a plurality of one member of the fastening means being disposed on one end of the band, a strip of strong material attached to the other end of the band, an elastic tongue attached to the strong material at a point remote from the edge of the band, a fastening member attached to the projecting end of the tongue and mating with the fastening members disposed at the other end of the band, and a bridge of strong material extending across the elastic tongue and supporting it and fixedly secured to the material of the band, between the point where the elastic tongue is secured and the proximate end of the band.

1,106,588. FIRE-ESCAPE. OSCAR SCHNITZLER, Remington, and BERNARD J. WELAGE, Norwood, Ohio. Filed May 12, 1913. Serial No. 767,208. (Cl. 227—4.)

1. In a fire escape, the combination of a drum, a cable about said drum, a fluid-motor having operative connection with said drum for rotating the same, a fluid-passage communicating with said fluid-motor, a valve in said passage, and a part actuated by said cable upon weight being applied thereto, said part having connection with said valve for operating the same.



2. In a fire escape, the combination of a drum, a cable about said drum, a reversible fluid-motor having operative connection with said drum for rotating the same in opposite directions, fluid-passages communicating with said fluid-motor for opposite rotations of said fluid-motor, a valve in each of said passages, a part actuated by said flexible escapement-suspender upon weight being applied thereto, said part having connection with one of said valves for opening the same, and connecting means between said valves for causing combined movement of said valves upon reseating of said opened valve, for the purpose described.

3. In a fire escape, the combination of a drum, a cable about said drum, a reversible fluid-motor having operative connection with said drum for rotating the same in opposite directions, fluid-passages communicating with said fluid-motor for opposite rotations of said fluid-motor, a valve in each of said passages, a part actuated by said cable upon weight being applied thereto, said part having connection with one of said valves for opening the same, connecting means between said valves for causing combined movement of said valves upon reseating of said opened valve, and releasing means for releasing said connecting means, said escapement-suspender having an actuating part thereon for said releasing means.

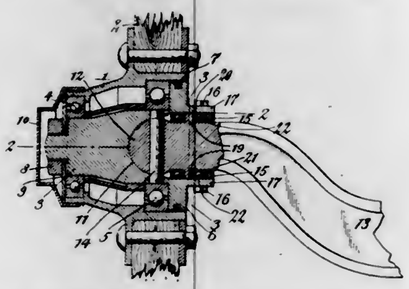
4. In a fire escape, the combination of a drum, a cable thereabout, a shaft which supports said drum, a rocker-frame pivoted about said shaft, a worm-wheel rotating with said drum, a worm meshing therewith, a fluid-motor operating said worm, and a valve for said fluid-motor, said rocker-frame having operative connection with said valve, and said rocker-frame receiving said cable thereover and rocked by the weight of a person suspended by said cable.

5. In a fire escape, the combination of a drum, a cable thereabout, a shaft which supports said drum, a rocker-frame pivoted about said shaft, a worm-wheel rotating said drum, a worm meshing therewith, a reversible fluid-motor operating said drum, valves for said fluid-motor, said rocker-frame having operative connection with one of said valves, releasable connecting means between said valves for causing combined movements of said valves, releasing means for said connecting means, and a part on said cable operating said releasing means, for the purpose described.

1,106,589. STEERING-GEAR FOR VEHICLES. HENRY SCHUMACHER, Buffalo, N. Y. Filed July 31, 1912. Serial No. 712,444. (Cl. 21—142.)

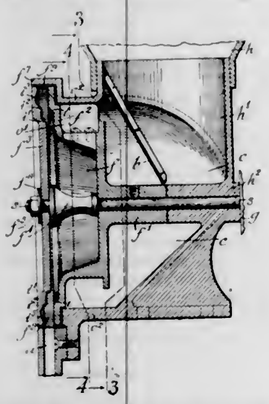
1. A steering gear for vehicles comprising an axle, an axle arm pivoted on said axle to turn horizontally, a wheel journaled on the axle arm, and a thrust bearing interposed between said axle and axle arm in rear of the pivotal connection between said axle and axle arm and

operating to resist tipping of the wheel vertically lengthwise of the axle and axle arm, comprising an abutment fixed on the rear part of the axle arm and having a curved face which is concentric with the pivotal connection between the axle and axle arm and a thrust member comprising a stud arranged on the axle, a ball race arranged on the stud, a roller engaging said curved face, and a row of balls interposed between said ball race and roller.



2. A steering gear for vehicles comprising an axle, an axle arm pivoted on said axle to turn horizontally, a wheel journaled on the axle arm, and a thrust bearing interposed between said axle and axle arm in rear of the pivotal connection between said axle and axle arm and operating to resist tipping of the wheel vertically lengthwise of the axle and axle arm, comprising horizontal transverse flanges arranged on the rear end of the axle arm above and below the axle, upper and lower abutment bars secured to the opposing inner sides of said flanges, respectively, and each provided at its opposite ends with vertical side plates each of which bears at its outer end against the adjacent end of the corresponding flange while its inner end bears against the corresponding inner end of the companion side plate of the other abutment bar, and upper and lower rollers arranged on the upper and lower sides of the axle and engaging respectively with the upper and lower abutment bars.

1,106,590. CAP-FEEDER FOR BOTTLE-CAPPING MACHINES. LOUIS STREBEL, Borgenfield, N. J. Filed June 13, 1913. Serial No. 773,402. (Cl. 113—114.)



1. A cap-feeder for bottle-capping machines, which comprises a hopper, a feed-compartment below the hopper, an inclined guard-plate in said compartment, a rotary feed-cone in the compartment provided with a paddle at its circumference and an opening adjacent to said paddle, said cone being provided with a circumferential flange, and a feed-disk in front of the flange of the feed-cone forming a channel with said flange, and a delivery-chute for the caps connected with the lower part of the feed-compartment.

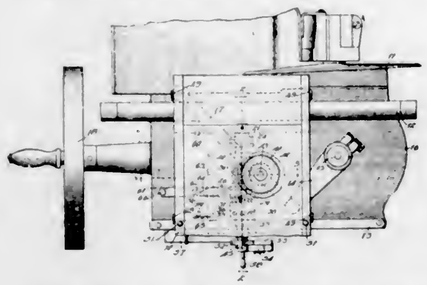
2. A cap-feeder for bottle-capping machines, which comprises a feed-hopper, a feed-compartment connected therewith, a delivery-chute at the lower end of said compartment, a rotary feed-cone in said compartment provided with an opening and a fixed paddle adjacent said opening for transmitting caps from the feed-compartment to the feed-cone, a flange at the larger end of the feed-cone, and a disk in front of said feed-cone and rotating with the same, said flange and disk forming between them an annular throat for permitting the delivery of the caps when in proper position, but preventing delivery and returning the caps into the feed-cone when in inverted position.

3. A cap-feeder, comprising a stationary feed-compartment, a rotary feed-cone having an inlet-opening therefrom, means carried by said feed-cone for picking up a limited quantity of caps from said compartment at each rotation thereof and guiding them into said cone through the inlet-opening, an outlet-opening in said feed-cone adapted to discharge caps therefrom into said compartment, said outlet-opening being spaced from the inlet-opening, and cap-selective means coöperating with said feed-cone.

4. A cap-feeder, comprising a stationary feed compartment, a rotary feed-cone having an inlet-opening therefrom, means carried by said feed-cone for picking up a limited quantity of caps from said compartment at each rotation thereof and guiding them into said cone through the inlet-opening, an outlet-opening in said feed-cone adapted to discharge caps therefrom into said compartment, said outlet-opening being spaced from the inlet-opening and located in the periphery of the cone, and cap-selective means coöperating with said feed-cone.

5. A cap-feeder, comprising a stationary feed-compartment, a rotary feed-cone having a peripheral inlet therefrom, said feed-compartment extending below said feed-cone and said inlet-opening thereof, means carried by said feed-cone for picking up a limited quantity of caps from said compartment at each rotation of the cone and guiding them therein through said inlet-opening, an outlet-opening in the periphery of said feed-cone, spaced from the inlet-opening and adapted to discharge caps at each rotation thereof into said compartment below the cone, and cap-selective means coöperating with said feed-cone.

1,106,591. SLICING-MACHINE. HENDRIK STUKART, Chicago, Ill., assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,675. (Cl. 17—24.)



1. The combination of a relatively movable article support and cutter, a feed plate connected with the support for movement with respect thereto, means for moving the plate in a feeding direction with respect to the support, and means operating to automatically return the feed plate with respect to the support when the plate has been advanced to a predetermined point with respect to the support.

2. The combination of a relatively movable article support and cutter, a feed plate connected with the support for movement with respect thereto, means for moving the feeding plate in one direction with respect to the support, and means controlled by such movement of the plate for moving the plate in another direction with respect to the support.

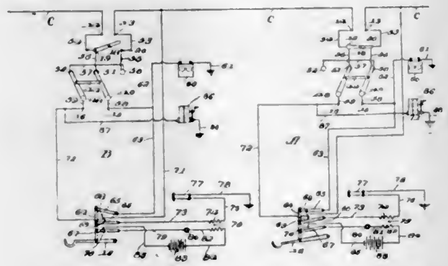
3. The combination of a relatively movable article support and cutter, a feed plate connected with the support for movement with respect thereto, means for moving the feeding plate in one direction with respect to the support, and means controlled by such relative movement of the plate and the support for automatically returning the feeding plate with respect to the support.

4. The combination of a relatively movable article support and cutter, a feed plate, movable with the support, said plate and support being capable of relative movement, means for effecting a relative movement of the support and plate to move the article in one direction, and provisions whereby a portion of the said means will effect another relative movement of the support and plate when the plate has been moved to a predetermined point with respect to the support.

5. The combination of a relatively movable meat support and cutter, a feed plate mounted for movement with respect to the support and in two different directions, and provisions embodying a controlling element for automatically effecting such movements of the plate upon the movement of the latter to a predetermined position with respect to the support.

[Claims 6 to 51 not printed in the Gazette.]

1,106,592. TELEPHONE SYSTEM. FRANK EZRA SUMMERS, Memphis, Mo. Filed June 22, 1912. Serial No. 705,296. (Cl. 179—30.)



1. In a telephone system, the combination with a plurality of telephone instruments, each including a receiver and receiver hook, a transmitter and a signaling mechanism, of a line including sections leading from one instrument to the next, and means for connecting the receiver and transmitter in circuit with one section of the line and the signaling mechanism in circuit with the opposite line section, said means including means movable manually to active position after release of the receiver hook and automatically movable to inactive position upon depression of the hook.

2. In a telephone system, the combination with a plurality of telephone instruments, each including a receiver and receiver hook, a transmitter and a signaling mechanism, of a line including sections leading from one instrument to the next, and means for selectively connecting the receiver and transmitter in circuit with either line section and the signaling mechanism in circuit with the opposite line section, said means including means manually movable into active position after release of the receiver hook and automatically movable into inactive position upon depression of the hook.

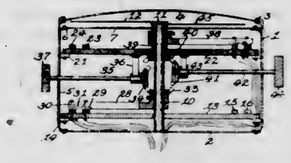
3. In a telephone system, the combination with a plurality of telephone instruments, each including a receiver, a transmitter, and a signaling mechanism, of a line including sections leading from one instrument to the next, a switch normally connecting the line sections, conductors leading from said switch to the instrument, and a pole changing switch included in said conductors.

4. A telephone system including a plurality of telephone instruments, a switch carried by each instrument, line sections connecting the switches of each instrument with the switches of adjacent instruments, conductors connecting the switch of each instrument with its instrument, and means releasable upon the depression of the receiver hook of the instrument for automatically closing said switch.

5. In a telephone system, the combination with a line divided into sections, of a telephone instrument located between adjacent sections and including a transmitter, a receiver, a receiver hook and a signaling mechanism, all normally in circuit with both sections when the receiver hook is free, and means for opening the circuit between the transmitter and receiver and one of the sections and between the signaling mechanism and the other section.

[Claims 6 to 17 not printed in the Gazette.]

1,106,593. ELECTRIC SWITCH. BRICE P. SWYERS. Pittsburgh, Pa., assignor, by direct and mesne assignments, of eight thirty-seconds to Brice P. Swyers, seven thirty-seconds to George E. Lorch, four thirty-seconds to George M. Davis, two thirty-seconds to Margaret Maul, and seven thirty-seconds to Louis Lorch, Jr., Pittsburgh, Pa., and four thirty-seconds to John H. Wagner, Mount Oliver borough, Pa. Filed Sept. 17, 1912. Serial No. 720,745. (Cl. 175—282.)



1. A switch for electric circuits comprising two pairs of contact rings, one ring of each pair being broken, a contact between the ends of each broken ring, a shaft having an arm attached thereto, a hollow shaft fitting around said first named shaft and having an arm attached thereto, each of said arms having a contact portion thereon for electrically connecting each pair of rings, and means for rotating said shafts and arms.

2. A switch for electric circuits comprising two pairs of contact rings, one ring of each pair being broken, a contact between the ends of each broken ring, a shaft having an arm attached thereto, a hollow shaft fitting around said first named shaft and having an arm attached thereto, each of said arms having a contact portion thereon for electrically connecting each pair of rings, and geared means for rotating said shafts and arms.

3. A switch for electric circuits comprising two pairs of contact rings, one ring of each pair being broken, a contact between the ends of each broken ring, a shaft having an arm attached thereto, a hollow shaft fitting around said first named shaft and having an arm attached thereto, each of said arms having a contact portion thereon for electrically connecting each pair of rings, means for rotating said shafts and arms, and means carried on each of said shafts for indicating the position of said arms.

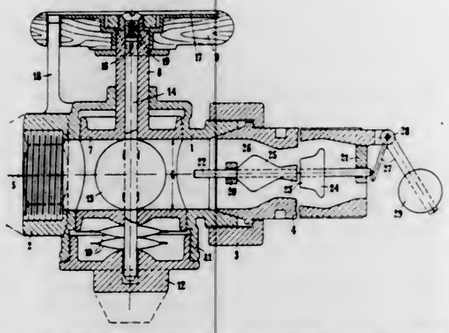
4. A switch for electric circuits comprising two pairs of contact rings, one ring of each pair being broken, a contact between the ends of each broken ring, a shaft having an arm attached thereto, a hollow shaft fitting around said first named shaft and having an arm attached thereto, each of said arms having a contact portion thereon for electrically connecting each pair of rings, geared means for rotating said shafts and arms, and means carried on each of said shafts for indicating the position of said arms.

5. A switch for electric circuits comprising two pairs of contact rings, one ring of each pair being broken, a contact between the ends of each broken ring, a shaft having an arm attached thereto, a hollow shaft fitting around said first named shaft and having an arm attached thereto, each of said arms having a contact portion thereon for

electrically connecting each pair of rings, means for rotating said shafts and arms, and a hand carried on each of said shafts for indicating the position of said arms.

[Claim 6 not printed in the Gazette.]

1,106,594. TRIPLE-REGULATION COCK FOR LOW-PRESSURE HEATING SYSTEMS. ITZKO TCHERNIAKOFSKY, Lille, France. Filed July 19, 1911. Serial No. 639,311. (Cl. 137—69.)



1. A regulating cock for low pressure steam heating systems comprising in combination with the box having a smooth passage therethrough and a connecting branch connected therewith, a spigot rotatable in said passage, a circular throttling member movable in the spigot, a spindle to rotate said member, a double conical throttling member adapted to be displaced in axial direction within said branch, substantially as described.

2. A regulating cock for low pressure steam heating systems comprising in combination with the box having a smooth passage therethrough and a connecting branch connected therewith, a spigot rotatable in said passage, a circular throttling member movable in the spigot, a spindle to rotate said member, provided with a slot in its lower end, projections upon said circular throttling member entering the slot of said spindle for connecting both parts.

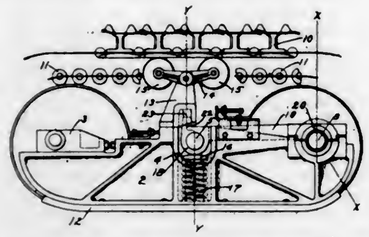
3. A regulating cock for low pressure steam heating systems comprising in combination with the box having a smooth passage therethrough and a connecting branch connected therewith, a spigot rotatable in said passage, a circular throttling member movable in the spigot at the outflow end, a double conical throttling member adapted to be displaced in axial direction within said branch at the inflow end for automatically regulating the throttling members in harmony with the changes in the pressure variations between steam and atmosphere.

4. A regulating cock for low pressure steam heating systems comprising in combination with the box having a smooth passage therethrough and a connecting branch connected therewith, a spigot rotatable in said passage, a circular throttling member movable in the spigot, a spindle to rotate said member, a double conical throttling member adapted to be displaced in axial direction with said branch, a weighted bell crank lever provided with adjustable weights for controlling the maximum pressure and influencing said throttling member, substantially as described.

1,106,595. TRACTION-MACHINE. CHARLES L. TOLLES, Eau Claire, Wis. Filed Nov. 1, 1912. Serial No. 729,116. (Cl. 21—114.)

1. The combination, with a frame and a traction belt therefor, of a yieldingly supported driving shaft, a gear thereon, a driven shaft, a gear thereon meshing with said driving shaft gear, and a yoke having a bearing at one end for said driven shaft and journaled at its other end on said driving shaft.

2. A traction machine comprising a frame, a traction belt therefor, a driving shaft, a gear thereon, a yoke in which said driving shaft is journaled, means yieldingly resisting vertical movement of said yoke, a driven shaft journaled in said yoke, and a gear mounted on said driven shaft and meshing with said driving shaft gear.



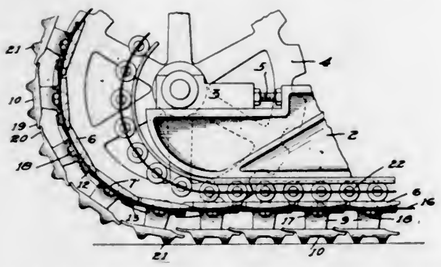
3. The combination, with a frame and a yoke, of a driven shaft journaled in one end of said yoke, a driving shaft whereon the other end of said yoke is mounted, means for yieldingly engaging said yoke above and below said driving shaft, and gears meshing with one another on said driven and driving shafts.

4. The combination, with a frame, of a sprocket wheel mounted therein, a traction belt for said wheel, a bracket mounted on said frame, an arm centrally pivoted on said bracket, anti-friction wheels mounted on the ends of said arm and engaging and supporting the upper run of said traction belt, and means for driving said sprocket wheel.

5. The combination, with a frame having a box therein, of a driving shaft fitting within said box, a yoke journaled at one end on said shaft and adapted to swing vertically thereon, plates yieldingly supported in said box beneath said yoke and contacting therewith, and yielding means provided above said yoke and resisting upward movement thereof, and a driven shaft journaled in the other end of said yoke and geared to said driving shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,106,596. TRACTION-BELT. CHARLES L. TOLLES, Eau Claire, Wis. Filed Feb. 24, 1913. Serial No. 750,400. (Cl. 21—150.)



1. A traction belt comprising a series of links, each link consisting of an inner portion having openings therein to receive the teeth of a sprocket wheel, flexible devices bridging the gaps between said links, one of said flexible devices being located on one side of said opening and the other on the other side thereof, and means for clamping said flexible devices to said links, said links having outwardly projecting portions and traction shoes thereon, said inner portions, said outwardly projecting portions and said shoes being cast in one piece.

2. A traction belt comprising a series of links, each having an inner sprocket wheel engaging portion and webs projecting outwardly therefrom, and traction shoes carried by said webs, said shoes, said webs and said inner portions being cast in one piece, and an endless flexible means connecting said links one with another upon opposite sides of the middle portions thereof.

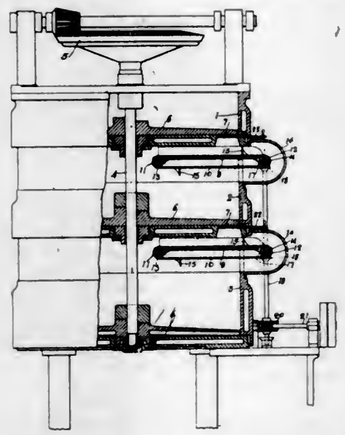
3. A traction belt comprising a series of links, each having laterally projecting wings spaced apart and a bridge wall between them, webs projecting from the inner portions of said wings, traction shoes mounted on said webs, and flexible connecting bands secured to the under surfaces of said wings.

4. A traction belt comprising a series of links, each having an inner sprocket wheel engaging portion and webs projecting outwardly therefrom and traction shoes carried by the webs, said shoes, said webs and said inner portions being cast in one piece, said inner portions of the wings having rounded out bearing faces and endless flexible devices secured to said outer bearing faces.

5. A traction belt comprising links having laterally projecting spaced wings and sprocket wheel engaging means connecting them, webs projecting from said wings, traction shoes carried by said webs, said wings, webs and shoes being cast in one piece, and spaced flexible endless devices securing the corresponding wings of adjoining links together.

[Claims 6 and 7 not printed in the Gazette.]

1,106,597. COOKER. RUSSELL A. TRACE, Dayton, Ohio, assignor to Buckeye Iron and Brass Works, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 19, 1914. Serial No. 825,790. (Cl. 87—6.)



1. The combination, with a series of kettles arranged one above the other, each of the kettles except the bottom one having a discharge opening delivering into the kettle next below it, and a conveyer mounted in each of the lower kettles to receive the material from the respective discharge openings and deliver the same at predetermined intervals to said lower kettle.

2. The combination, with an upper kettle and a lower kettle, the upper kettle having a discharge opening arranged near the outer wall thereof and leading to said lower kettle, a conveyer mounted in said lower kettle to receive the material from said discharge opening and deliver the same at predetermined intervals to a point near the center of said lower kettle.

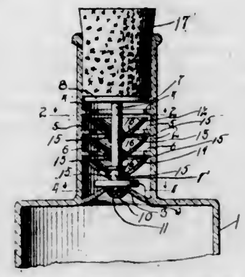
3. The combination, with an upper kettle and a lower kettle, the upper kettle having a discharge opening leading to the lower kettle, of a conveyer comprising a fixed part arranged to receive the material from said discharge opening, and a movable part arranged to engage the material on said fixed part at intervals and deliver the same to said lower kettle.

4. The combination, with an upper kettle and a lower kettle, said upper kettle having a discharge opening leading to the lower kettle, of an endless belt conveyer arranged beneath said discharge opening and comprising a fixed table to receive the material from said discharge opening and having channels, endless chains arranged to travel in said channels and one or more flights carried by said endless chains adapted to engage the material on said table and move the same to the discharge end thereof.

5. In a cooker, the combination, with upper and lower kettles, said upper kettle having a normally open discharge opening leading to the lower kettle, of a device to receive the material from said discharge opening and deliver the same at predetermined intervals to said lower kettle.

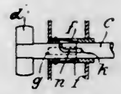
[Claim 6 not printed in the Gazette.]

1,106,598. NON-REFILLABLE BOTTLE. CHARLES A. TURNER, Mount Carmel, Ill. Filed Apr. 30, 1913. Serial No. 764,668. (Cl. 215—65.)



A bottle of the class described having a valve seat formed in its neck, a plurality of annular shoulders formed interiorly of said neck, a stem adapted for movement in the neck, a disk mounted in the neck and adapted to coact with said seat, said disk having a projection formed thereon a plurality of guards connected to the stem, a single guard carried by said projection, said guards being arranged one above the other and in spaced relation, slots formed in said guards, said guards being concavo-convex and adapted to have their edges contact with the shoulders when the bottle is inverted, and the disk disengages said seat.

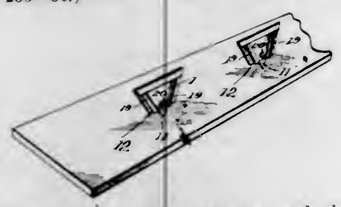
1,106,599. LOCK. KARL UMHAUER, Freiburg, Breisgau, Germany. Filed Oct. 9, 1912. Serial No. 724,862. (Cl. 70—90.)



1. In a lock the combination of a sleeve, a locking member slidable in said sleeve, said locking member being provided with a shoulder and with studs on different parts of its surface, means preventing rotation of said locking member in said sleeve, a spring attached to said sleeve and adapted to engage said shoulder for retaining said locking member and a key having a barrel adapted to slide on to said locking member and lift said spring out of engagement with said shoulder, said key barrel having slots which correspond in position with said studs and having lateral branches to receive said studs whereby said key can be coupled with said locking member by rotation of the key.

2. In combination, a cycle frame including a fork, a sleeve extending through one side of said fork, a socket at the opposite side of the fork, a wheel mounted in the fork, a locking rod adapted to be inserted through said sleeve to pass between the wheel spokes and enter said socket, said rod being provided with a shoulder and with studs on different parts of its surface, a spring attached to said sleeve and adapted to engage said shoulder, for retaining said rod in engagement with said socket, means preventing rotation of said rod in said sleeve, and a key having a barrel adapted to slide on to said locking rod in said sleeve and lift said spring out of engagement with said shoulder, said key barrel having slots which correspond in position with said studs and have lateral branches to receive said studs, whereby said key can be coupled with said rod by rotation of the key.

1,106,600. STAPLE-RETAINER. LEE M. VANCE, Davis, Cal., assignor to The Vance Company, Incorporated, Davis, Cal. Filed May 13, 1913. Serial No. 767,482. (Cl. 256—50.)



1. A staple retainer including superposed plates, the abutting faces of which are formed with grooves, the side edges of one plate being bent to embrace the side edges of the other, and the bottom edge of said other plate being bent to embrace the bottom edge of the first-mentioned plate.

2. A staple retainer including a pair of substantially trapeziform plates, each formed with a pair of grooves, the grooves of one plate alining with the grooves of the other, the side edges of one plate embracing the side edges of the other, and the bottom edge of said other plate embracing the bottom edge of the first-mentioned plate.

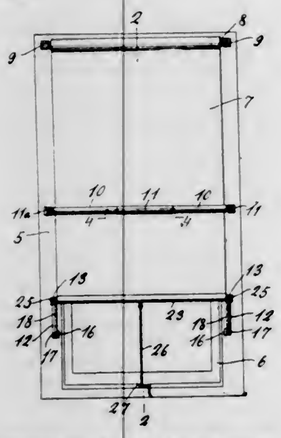
3. A staple retainer including superposed plates, the edges of each plate embracing the other plate, each of the plates being formed with a pair of grooves, the grooves of one plate alining with the grooves of the other, and a securing device passing between the plates intermediate of said grooves.

4. A staple retainer including a pair of plates, means formed integral with the plates for connecting the same, and a tongue formed integral with one of the plates, said tongue being disposed to extend within the pallet of a mold, whereby concrete may be tamped about the plates to embed them in a molded article.

5. A staple retainer including a staple receiving body member, a tongue formed on the body member and disposed to extend within the pallet of a mold, whereby concrete may be tamped about the retainer to embed the same in a molded article.

[Claims 6 to 10 not printed in the Gazette.]

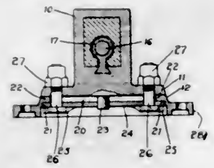
1,106,601. WINDOW-SHADE. JAMES PETER VANDENORTH, Chicago, Ill. Filed Nov. 8, 1913. Serial No. 799,925. (Cl. 156—44.)



1. The combination with a window-shade, of a transverse member mounted intermediate the top and bottom of the window, behind which member the shade is adapted to be extended, bracket arms pivoted to the window casing below the transverse member to swing in a vertical plane, said bracket arms having slotted free ends, and a cross bar mounted on the lower end of the shade and projecting from the side edges thereof, the projecting ends of the cross bar having a head which is elongated in the direction of the length of the shade, and dimensioned to pass through the slots of the bracket arms.

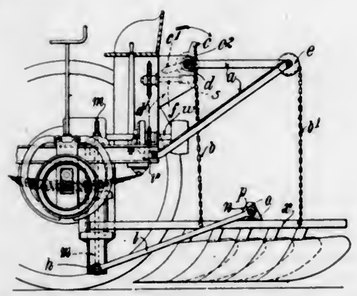
2. The combination with a window-shade, of a transverse member mounted intermediate the top and bottom of the window, behind which member the shade is adapted to be extended, base bars secured to the window casing, bracket arms below the transverse member, foldable braces having a sliding connection with the bracket arms, the aforesaid base bars having ears to which the bracket arms and the braces are pivoted, the ears to which the bracket arms are pivoted being offset relative to the ears to which the braces are pivoted, and means for connecting the lower end of the shade to the free ends of the bracket arms.

1,106,602. SWIVEL-VISE. VICTOR E. WALKER and PERCY H. D. WALKER, Meriden, Conn., assignors to The Charles Parker Company, Meriden, Conn., a Corporation of Connecticut. Filed Oct. 9, 1913. Serial No 794,275. (Cl. 81—41.)



A vise of the character described, comprising a base having an opening through it and an overhanging flange, a body having a flange resting on the base flange and a downwardly extending center pin, a locking plate under the base flange having a hole engaged by the center pin and pairs of lugs at opposite ends, bolts having angular heads retained against rotation by said lugs, said bolts passing through the locking plate, the opening in the base and the body flange, and nuts engaging said bolts and bearing on the body flange to lock the body at any required adjustment.

1,106,603. MECHANICALLY-PROPELLED PLOW. FRANCIS MARK WALLER, Wembley, England. Filed June 29, 1914. Serial No. 847,986. (Cl. 97—70.)

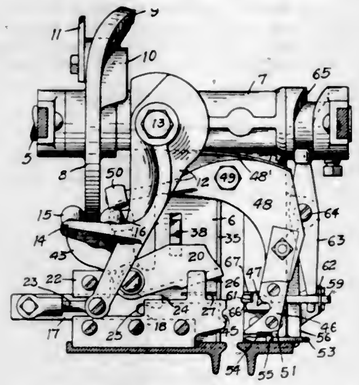


1. In mechanically propelled plows, the combination with a frame carrying a series of plows arranged in echelon, of tackle for raising and lowering said frame comprising a crank-shaft having two cranks set at an angle of 130 degrees to one another, means for rotating said crank-shaft, a connection coupling one of the cranks directly with the forward part of the frame carrying the plows, and a connection coupling the other crank with the rear part of the frame carrying the plows said connection being carried over a guide located to the rear of the crank-shaft.

2. In mechanically propelled plows the combination of a tractor; a frame carrying a series of plows arranged in echelon; a jib fixed to the tractor and adapted to carry the plow frame; links for coupling said frame to the tractor; and tackle for raising and lowering said frame comprising a crank-shaft having two cranks set at an angle of approximately 130 degrees, means for driving said crank-shaft from the tractor, a connection coupling one of the cranks of said crank-shaft directly to the forward part of the frame carrying the plows, and a connection coupling the other crank to the rear part of the frame carrying the plows said connection being carried over a guide located to the rear of the crank-shaft.

3. In mechanically propelled plows the combination of a tractor; a frame carrying a series of plows arranged in echelon; a jib fixed to the tractor from which the plow frame is suspended; a drawbar carried by the tractor; links for coupling the plow frame to said drawbar; means for varying the points of attachment of said links to said plow frame; and tackle for raising and lowering said frame comprising a crank-shaft having two cranks set at an angle of 130 degrees, gearing for driving said crank-shaft from the motor of the tractor, a connection coupling one of the cranks to the forward part of the frame carrying the plows, and a flexible connection coupling the other crank to the rear part of the frame carrying the plows said flexible connection being carried over a pulley carried by the jib at a point to the rear of the crank-shaft.

1,106,604. BINDER-HEAD. JOSEPH L. WARE, St. Paul, Minn., assignor to Ware Grain Binder Attachment Company, St. Paul, Minn., a Corporation. Filed May 2, 1912. Serial No. 694,669. (Cl. 56—82.)



1. The combination, with a binder deck, of a cord holder, means for packing the grain against the cord, a needle arranged to bring up the loose end of the cord and lay it across that portion held by said holder, a ribbon feeding device including coöperating rolls, an oscillating knife arranged to cut a clip from the ribbon, means for operating said knife, means actuated by the movement of said knife for revolving said rolls to feed the ribbon, and means for bending the clip around the contiguous portions of the cord.

2. In a binder head, a cord holder, means arranged to bring up the loose end of the cord and lay it across that portion held by said holder, a ribbon feeding device including coöperating rolls, an oscillating knife and means for operating the same, a lever having one end yieldingly held in contact with said knife, a dog carried by said lever and adapted to engage and operate said rolls, said lever oscillating with the movement of said knife to impart a rotary movement to said rolls.

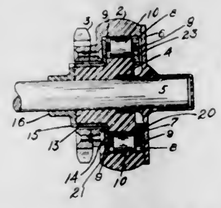
3. The combination, with a binder deck, of a cord holder, means for packing the grain against the cord, a needle arranged to bring up the cord and lay it across that portion held by said holder, a ribbon feeding device, including coöperating rolls, a clip severing knife and means for operating the same, a spring pressed lever engaging said knife to be actuated thereby, a dog carried by said lever and adapted to engage and revolve said rolls.

4. In a binder-head, a cord holder, means for bringing together the portions of the cord to be clamped, jaws between which the clamp is formed, a throat being provided contiguous to said jaws and holder in which the portions of the cord to be secured together lie, and means actuated by one of said jaws for clearing said throat preliminary to the clamping operation.

5. In a binder head, a cord holder, means for bringing together the portions of the cord to be clamped, jaws between which the clamp is formed, a throat being provided contiguous to said jaws and holder in which the portions of the cord to be secured together lie, and means actuated by the movement of one of said jaws for clearing said throat preliminary to the clamping operation.

[Claims 6 to 13 not printed in the Gazette.]

1,106,605. CLUTCH MECHANISM. FREDERICK L. WATEROUS, St. Paul, Minn.; Jane Waterous, Charles P. Waterous, and Frank J. Waterous executors of said Frederick L. Waterous, deceased. Filed Aug. 26, 1912. Serial No. 717,153. (Cl. 192—22.)



1. The combination, with a shaft and a cam secured thereon, of a loosely mounted casing encircling said cam and having an internal friction surface, a carrier encircling said cam and free to rotate thereon, said carrier having a series of radial slots therein, clamping rollers having studs fitting within said slots and slidable radially therein with respect to the surface of said cam toward and from the friction surface of said casing, said rollers being clamped between the high points of said cam and said friction surface to drive said casing, and means for holding said carrier stationary when said rollers are released from their clamping position.

2. The combination, with a driving shaft and a cam secured thereon, of a loosely mounted casing encircling said cam and having an internal friction surface, said cam having annular grooves formed therein, a carrier encircling said cam and having a rib on one side to enter one of said grooves, a plate secured to the other side of said carrier and adapted to enter the other cam groove, said carrier being free to revolve on said cam, rollers having bearings in said carrier and radially movable therein toward and from the friction surface of said casing, said rollers being moved outwardly into engagement with said friction surface by contact of the high points of said cam with said rollers, and a retarding device arranged to check the movement of said carrier when said rollers are released from engagement with said friction surface.

3. A clutch device, comprising a continuously revolving cam having friction surfaces, a casing encircling said cam and having a friction surface, a loosely mounted carrier interposed between said cam and casing, radially moving rollers mounted in said carrier and operating to lock said cam and casing together, a stationary retarding plate disposed contiguous to said carrier and spring pressed plugs mounted in said carrier and engaging said stationary plate with a yielding pressure and operating to retard the rotation of said carrier and rollers.

4. The combination, with a shaft and a cam secured thereon, of a loosely mounted casing and sprocket wheel.

a carrier loosely mounted on said cam and having a series of radial slots therein, friction rollers having bearings at each end in said slots and on both sides of said cam and held against lateral movement by the walls of said slots, said rollers being interposed between said cam and casing and being forced outwardly into engagement with said casing by the revolution of said cam.

5. The combination, with a shaft, and a cam secured thereon, of a carrier loosely encircling said cam and free to revolve thereon, a series of friction rollers mounted in said carrier and having a radial movement therein, yielding friction plugs mounted in said carrier, a stationary plate with which said plugs contact, a casing encircling said carrier and having an inner bearing surface between which and said cam said friction rollers are locked to drive said casing, and a sprocket wheel mounted on said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,106,606. PROCESS OF MAKING FIRM FOUNDATIONS IN THE GROUND FOR PILES, TUBED SHAFTS, AND THE LIKE. OTTO WILHELMI, Lucerne, Switzerland, assignor of one-half to Internationale Siegwartbalkengesellschaft, a Firm. Filed Dec. 30, 1912. Serial No. 739,402. (Cl. 72—81.)



1. A process of making firm pile foundations in the ground, consisting in making a hole in the ground, placing the explosive charge upon the bottom of this hole, filling the latter with grout, exploding the charge and forming thereby an enlarged recess into which the grout automatically descends and fills it.

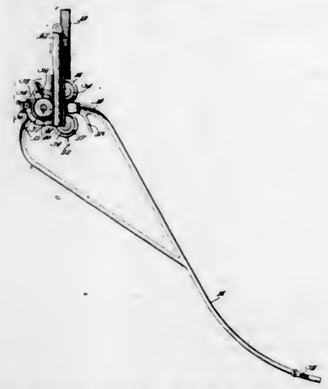
2. A process of making firm pile foundations in the ground, consisting in making a hole in the ground, lining the hole with metal tubes, placing an explosive charge upon the bottom of said hole, connecting a protected fuse with said charge, filling the hole with grout, exploding said charge and forming thereby an enlarged recess into which the grout automatically descends and fills it.

3. A process of making a firm pile foundation in the ground, consisting in making a hole in the ground, placing the explosive charge upon the bottom of this hole, filling the same with grout, restraining the charge from exploding in an upward direction, and securing the same against premature explosion during the initial filling in of the concrete, and finally exploding said charge and forming thereby an enlarged recess into which the grout automatically descends and fills it.

1,106,607. CAP-FEEDING MACHINE. GUSTAVE J. F. WOELLERT, Rockford, Ill. Filed Nov. 14, 1913. Serial No. 801,083. (Cl. 218—2.1.)

1. In a cap feeding machine of the character set forth, a feed conduit for caps, a conduit intersected thereby, and feeding means located adjacent the intersection of said conduits for engaging and positively moving caps received from said feed conduit, in the second mentioned conduit in opposite directions.

2. In a cap feeding machine of the character set forth, a conduit, a feed conduit joining same intermediate the ends thereof, and means for engaging caps received in the first mentioned conduit from said feed conduit, and imparting movement thereto to feed the caps in either direction in the former conduit.



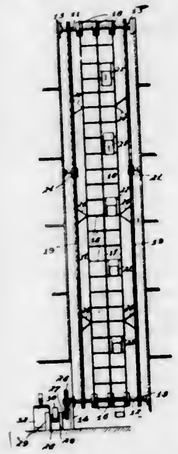
3. A cap feeding machine having a loop conduit, said conduit having a cap entrance thereto, and means for engaging and positively moving a cap received at said entrance a perceptible distance in either direction in the conduit.

4. In a cap feeding machine, a conduit having a cap inlet intermediate its ends, means movable into and out of the conduit at said inlet thereof for moving caps in the conduit in opposite directions, and means for guiding the oppositely directed caps to a common conduit.

5. In a cap feeding machine, a conduit having a cap inlet intermediate its ends, and cap feeding means for entering the conduit from opposite sides thereof for moving caps received from said inlet, in opposite directions in the conduit.

[Claims 6 to 25 not printed in the Gazette.]

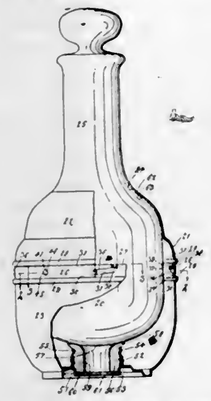
1,106,608. FIRE-ESCAPE. PETER WUKSTICH, East Pittsburgh, Pa. Filed Nov. 18, 1913. Serial No. 801,571. (Cl. 228—6.)



1. In a fire escape, the combination with suitable supports, of an upper and a lower revoluble shaft, pulleys mounted on said shafts, sprocket wheels also mounted on said shafts, parallel sprocket chains extending around said sprocket wheels, an endless ladder of mesh formation comprising longitudinal strands, and transverse strands secured to each of said longitudinal strands, by being bent around the latter at their points of juncture with the transverse strands and stays for bracing the ladder laterally, said stays having central bends to secure them to the longitudinal strands of the ladder, and having oppositely inclined ends secured to the adjacent sides of the sprocket chains to provide diagonal braces for said chains.

2. In a fire escape, the combination with an upper and a lower revoluble shaft, of spaced pulleys mounted thereon, sprocket wheels on said shafts arranged in vertically alined pairs, an endless ladder movable around said pulleys, baskets carried by said ladder, and means for connecting said chains to the sides of the ladder, and bracing the latter laterally, comprising stays secured centrally of their length to the outer longitudinal strands of the ladder at their points of juncture with the transverse strands and having divergent ends secured to the adjacent sides of said chains.

1,106,609. CASING FOR BOTTLES AND THE LIKE. GEORGE P. ALTENBERG, Cincinnati, Ohio, assignor to The Icy-Hot Bottle Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed July 22, 1912. Serial No. 710,830. (Cl. 215—3.)



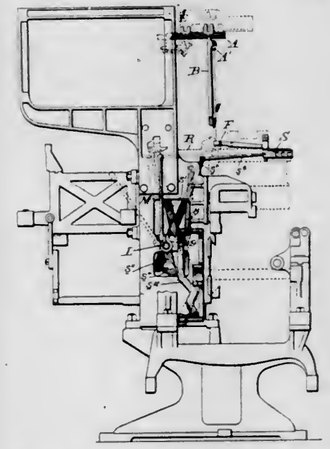
1. In combination, an inner fragile container, an outer casing having a central threaded wall in its bottom, a cushion coacting with said fragile container for cushioning the same, and a shell the wall whereof has inner threads and outer threads, said cushion being an integral body of elastic material coacting with said inner threads for adjustably positioning said cushion in said shell toward and from said fragile container, and said outer threads of said shell coacting with said threaded wall for simultaneously adjustably positioning said shell and said cushion toward and from said fragile container.

2. In combination, an inner fragile container, an outer casing having a central threaded wall in its bottom, a shell having threaded connection with said threaded wall for adjustably positioning said shell toward and from said inner fragile container, and a cushion coacting with said fragile container for cushioning the same, said cushion being an integral structure of elastic material comprising a tubular portion in said shell and an outwardly flaring upper end flaring outwardly across the upper end of the wall of said shell and arranged for coaction with the bottom of said inner fragile container for resiliently compressing said tubular portion in a direction lengthwise thereof and flexing said outwardly flaring upper end across the upper end of the wall of said shell for cushioning said fragile container.

3. In combination, an inner fragile container, an outer casing, an adjustable shell in the bottom of said casing adjustable toward and from said fragile container, said shell having an annular wall and a bottom, a cushion coacting with said container, said cushion being an integral body of elastic material comprising a tubular portion and an outwardly flaring annular upper end portion integral with each other, said tubular portion received in and extending parallel with said annular wall of the said shell and said outwardly flaring annular upper end portion arranged for being flexed from within said shell past and overhanging the upper end of the wall of said shell for cushioning said fragile container above said shell, said shell having a bottom provided with a slot therethrough communicating with the bore of said tubular portion of said cushion.

4. In combination, an inner container, an outer casing comprising an upper member and a lower member, said members having overlapping flanges, the outer one of said flanges provided with inwardly extending protuberances and the inner one of said flanges provided with inclined slots located in the longitudinal projection of said inner flange, the upper walls of said slots bent inwardly for forming bulges having recesses at their outer sides in the longitudinal projection of said inner flange, said recesses communicating with the outer ends of said inclined slots for receiving said protuberances, mating holes in said overlapping flanges, and an outwardly extending spring-pressed pin on said casing member provided with said inner flange for locking said casing members in assembled relation, and a resilient cushion between the bottoms of said container and lower member.

1,106,610. TYPOGRAPHICAL MACHINE. HENRY A. ARMSTRONG, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 12, 1913. Serial No. 778,666. (Cl. 199—7.)



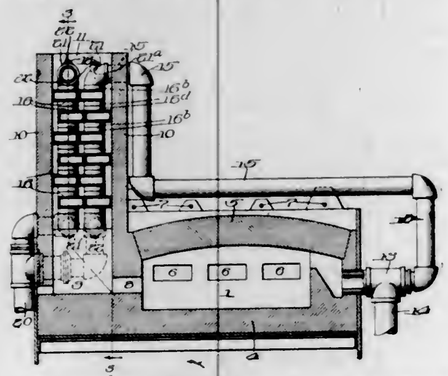
1. In a typographical machine, the combination of the line transfer device S, its operating arm s^7 the fore and aft rock shaft L upon which the arms is mounted, the spring S connected to the shaft for operating the transfer device, the cam s^{12} to control the movement of the transfer device under the influence of the spring, and the handle M mounted upon the rear end of the rock shaft to control the movement of the transfer device when not under the control of the cam.

2. In a typographical machine, the combination of the line transfer device S normally locked against action, the second elevator adapted to release it, the spring S for operating the transfer device when released by the elevator, and the handle M connected to the transfer device and located in proximity to the second elevator; whereby the movement of said device, under the influence of the spring S, may be controlled manually at the time it is released by the second elevator.

3. In a typographical machine, the combination of the line transfer device S normally locked against action and adapted to be released automatically by one of the machine parts, a spring for operating the transfer device

when released, a periodically operated cam to control the movement of said device under the influence of the spring, but adapted to move out of operative relation to said device when locked against movement, and means under the control of the operator for controlling the movement of said transfer device under the influence of the spring when not under the control of the cam.

1,106,611. PREHEATER FOR GASES. CYRIL J. ATKINSON, Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1913. Serial No. 784,075. (Cl. 62—32.)



1. A heater unit having a hollow body and necks extending in opposite directions therefrom, said necks being narrower than the body of the unit and located nearer to one side thereof than to the other.

2. A heater unit having a hollow body and necks extending in opposite directions therefrom, said necks being narrower than the body of the unit and located nearer to one side thereof than to the other, said necks being near the opposite ends of the unit.

3. A heater unit having a hollow body and necks extending in opposite directions therefrom, said necks being narrower than the body of the unit and located nearer to one side thereof than to the other, said necks being near the opposite ends of the unit, and said unit having a spacer opposite to each neck to opposite sides of the body of the unit.

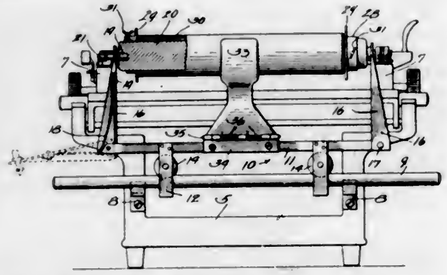
4. A heater unit having a hollow body and necks extending in opposite directions therefrom, said necks being narrower than the body of the unit and located nearer to one side thereof than to the other, said necks being near the opposite ends of the units, and said unit having a spacer opposite to each neck on opposite sides of the body of the unit, the height and external shape of the spacers being similar to the height and external shape of the necks.

5. In a structure of the class described, a unit having a top, bottom, sides and ends, a hollow boss rising from the top of the unit substantially tangential to one side thereof, a hollow boss descending from the bottom of the unit substantially tangential to the same side of the unit, said bosses communicating with the interior of the unit and being of less width than the unit and being located at the opposite ends of the unit, a spacer descending from the unit with its center in line vertically with the center of the ascending boss, and a spacer ascending from the unit with its center in line vertically with the center of the descending boss.

[Claims 6 to 14 not printed in the Gazette.]

1,106,612. TYPE-WRITER ATTACHMENT. ARTHUR D. AVERY, Los Angeles, Cal. Filed May 17, 1913. Serial No. 768,250. (Cl. 197—133.)

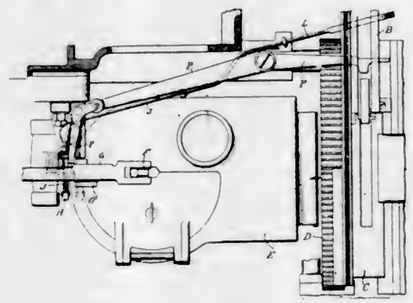
1. In a typewriter attachment in combination with a typewriting machine having a reciprocating carriage, of a rail supported adjacent thereto, a movable frame adapted to travel on said rail, a plurality of movable supports secured to said frame, trunnions on said supports, a roll having bores adapted to receive said trunnions and a spring to press said supports into engagement with said roll.



2. In a typewriter attachment in combination with a typewriter having a movable carriage, of a track mounted adjacent and in parallel relation with the path of movement of said carriage, a frame mounted on wheels supported on said track, a plurality of resiliently mounted supports mounted on said movable frame, a roll adapted to carry a roll of paper mounted on said supports, and means to connect said roll and its supports to move with the carriage of said typewriter.

3. In a typewriter attachment in combination with a typewriter having a movable carriage thereon, a track mounted adjacent to and parallel with the path of movement of said carriage, a frame provided with wheels adapted to be supported and travel on said track, pivoted supports mounted on the ends of said frame, spring actuated means to hold said supports in rigid relation to said frame, studs mounted on said supports, flanges on said studs, and slotted hooks hinged to said movable carriage with the slots thereon adapted to embrace said flanges whereby said supports and frame may be connected to said movable carriage.

1,106,613. TYPOGRAPHICAL MACHINE. WILLIAM S. BALDWIN, Worcester, Mass., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 24, 1913. Serial No. 743,913. (Cl. 199—15.)

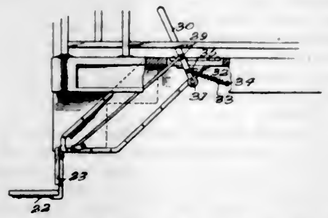


1. In a typographical machine comprising casting mechanism, the combination of metal injecting means, stop devices controlled automatically for arresting their actuation, and separate and independent stop devices under the exclusive control of the operator for arresting the actuation of said means at will.

2. In a typographical machine comprising casting mechanism, the combination of the pump lever, an automatic stop therefor, a further adjustable stop for the pump lever under the exclusive control of the operator, and manually operable connections from said stop and extending to the front of the machine in proximity to the key-board; whereby the action of the pump lever may be instantly prevented at the will of the operator while seated at the keyboard.

3. In a typographical machine comprising casting mechanism, the combination of the pump lever G, the automatic stop device P therefor, the pivoted stop-arm H under the exclusive control of the operator, the handle L arranged in proximity to the key-board, and connections therefrom to the arm H; whereby the operation of the pump lever G may be instantly prevented at the will of the operator while seated at the keyboard.

1,106,614. EXTENSION CAR-STEP. JAMES R. BARBER, Cedartown, Ga. Filed Nov. 15, 1913. Serial No. 801,220. (Cl. 105—86.)



1. The combination with main steps, of an auxiliary extensible step including a pair of hanger rods pivotally secured to the main steps, a tread, and a riser carried by the hanger rods and fixed with respect to each other, yieldable means for normally holding the auxiliary step in folded position against the main steps, and manually operable means for moving the auxiliary step from folded to unfolded position.

2. The combination with main steps, of an auxiliary extensible step including a pair of pivoted hanger rods, a riser and a tread carried by the hanger rods and mounted in fixed relation to each other, a spring pulled lever operatively connected to the auxiliary step and acting to normally hold the step in folded position against the main steps.

3. The combination with main steps, of an auxiliary extensible step including a pair of pivotally mounted hanger rods, a riser and a tread carried by the hanger rods, an arm formed on one of the hanger rods, a crank link keyed on the hanger rods, a manually operable lever, a link connecting the crank link and lever, said lever being operable for moving the step from folded to unfolded position, or from unfolded to folded position, and a spring secured to the lever and acting to normally hold the auxiliary step in folded position.

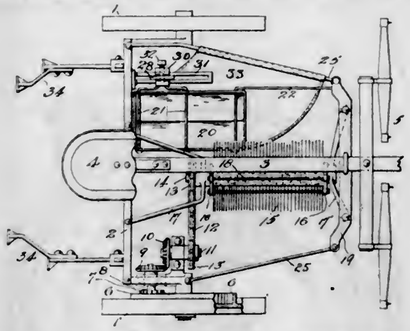
4. The combination with main steps, of an auxiliary extensible step pivotally attached to the main steps, manually operable means for folding and unfolding the auxiliary step, yieldable means acting to normally hold the auxiliary step in folded position, and a clutch plate, whereby the step operating means may be held against movement when the step is in either folded or unfolded position.

5. The combination with main steps, of an auxiliary extensible step, including a tread and a riser mounted rigidly with respect to each other but adapted for swinging movement as an entirety, and yieldable means normally holding the tread and riser in folded position against the tread and riser of the adjacent step of the main steps.

[Claim 6 not printed in the Gazette.]

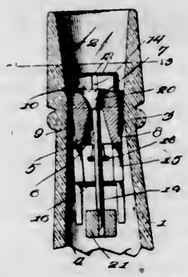
1,106,615. INSECT-DESTROYER. ABNER A. BARRON, Duck Hill, Miss. Filed Oct. 1, 1913. Serial No. 792,713. (Cl. 43—1.)

In an insect destroyer, the combination of a main frame, provided with wheels; a rotary beater supported from said frame; gearing connecting one of the wheels with the beater for rotating the same; an apron hung from the side of the frame beside the beater; and a liquid containing tank supported by the frame to the rear of the beater for receiving insects brushed by the beater to the apron,



said tank being vertically and laterally adjustable with respect to the frame; for the purposes herein shown and described.

1,106,616. NON-REFILLABLE BOTTLE. MICHAEL J. BARTOL, Dunlo, Pa. Filed Jan. 12, 1914. Serial No. 811,704. (Cl. 215—63.)



A device for the purpose set forth comprising a valve-supporting body having a central bore, a valve seated in the upper end or said bore, a cap carried by the upper end of the body and extending over the valve, spaced fingers depending from the lower end of the body, braces extending between the diametrically opposed fingers and having notches in their ends fitting around the said fingers, and a valve stem depending from the valve and extending centrally through the said braces.

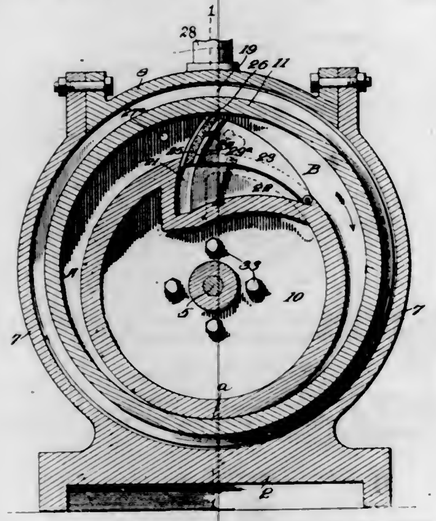
1,106,617. ROTARY ENGINE. TULLY W. BENSON, Winkelman, Ariz. Filed June 3, 1913. Serial No. 771,563. (Cl. 121—65.)

1. A rotary engine of the character described including an exterior casing, a hollow cylinder disposed within the casing and spaced therefrom and having an inlet port, a rotor mounted within the cylinder and having a radially extending piston, and operative connections between the rotor and cylinder whereby they shall travel together.

2. A rotary engine including an outer casing connected to a source of fluid pressure, a hollow cylinder rotatably mounted within the casing and having an inlet port communicating with the interior of the casing, a rotor mounted within the cylinder and operatively connected thereto to travel therewith, and a radially movable blade carried upon the rotor.

3. A rotary engine of the character described including an outer casing, a hollow cylinder rotatably mounted in the outer casing, a rotor mounted within the hollow cylinder, the rotor being eccentric to the interior face of the cylinder and touching said face at one point, and a radially movable piston head coacting with the rotor and

the cylinder, the cylinder being provided with an inlet port behind the head communicating with the interior of the casing and with an exhaust port and the cylinder and rotor being operatively connected for coincident rotation.

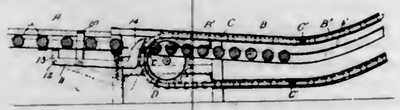


4. A rotary engine of the character described including an outer casing connected to a source of fluid pressure, a cylinder rotatably mounted within the outer casing and having an inlet port opening thereinto and an outlet port, a rotor eccentrically mounted within the cylinder and contacting therewith at one point, a radially movable blade carried upon the rotor and contacting with the inner face of the cylinder between the outlet and inlet ports, and operative connections between the rotor and cylinder whereby they shall rotate coincidently.

5. A rotary engine of the character described including a hollow cylinder rotatably mounted and having an inlet port and an outlet port, a rotor eccentrically mounted within the cylinder and touching the interior face thereof at one point, a radially movable blade mounted upon the rotor and pivotally connected to the cylinder and disposed between the inlet and the outlet ports.

[Claims 6 to 14 not printed in the Gazette.]

1,106,618. CONVEYER. MORRIS U. BERNHEIM, Louisville, Ky., assignor, by mesne assignments, to The Alvey-Ferguson Company, Oakley, Ohio, a Corporation of Ohio. Filed Mar. 2, 1908. Serial No. 418,673. (Cl. 193—1.)



1. A conveying system comprising a delivering section and a receiving section, arranged end to end, said receiving section having a bed or way, and being provided with means for controlling the movement of packages over the way or bed, said means having spaced flights which engage the packages above the bottom of the latter and travel above and below the bed or way, a rising and falling stop for controlling the delivery of packages from the delivering section to the receiving section, and means whereby said stop is automatically moved into package-stopping position under control of the package-controlling mechanism of the receiving section and is maintained in said position until a rising flight has passed beyond the position at which it will engage the bottom of the package.

2. A conveying system comprising a delivering section and a receiving section arranged end to end, said receiving section having a bed or way and being provided with endless traveling devices having transverse spaced flights which travel above and below the bed or way, a rising and falling stop for controlling movement of the packages from the delivering section to the receiving section, and an actuating means for said stop, extending into position to be operated by a flight which is rising at the receiving end of the receiving section, to cause the stop to prevent delivery of a package to a place intersecting the plane of rising movement of said flight until the flight has passed.

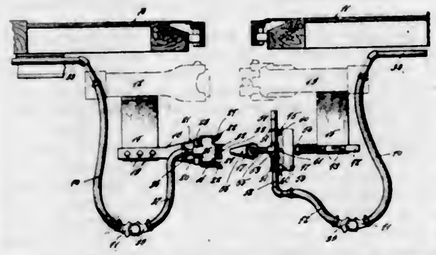
3. A conveying system comprising a delivering section and a receiving section arranged end to end, said receiving section having a bed or way and being provided with endless traveling devices having transverse spaced flights which travel above and below the bed or way, a rising and falling stop for controlling movement of the packages from the delivering section to the receiving section, and an actuating means for said stop having a portion arranged in the path of movement of a flight rising at the receiving end of the receiving section, said portion of the actuating means being substantially concentric with the plane of movement of said flight at the receiving end of the receiving section.

4. A conveying system comprising a delivering section and a receiving section arranged end to end, said receiving section having a bed or way and being provided with endless traveling devices having transverse spaced flights which travel above and below the bed or way, a rising and falling stop for controlling movement of the packages from the delivering section to the receiving section, and an actuating means for said stop comprising a lever having an approximately hook-shaped end arranged in the path of movement of a flight rising at the receiving end of the receiving section.

5. A conveying system comprising a delivering section and a receiving section arranged end to end, said receiving section having a bed or way and being provided with endless traveling devices having transverse spaced flights which travel above and below the bed or way, a rising and falling stop of approximately inverted-U shape and an actuating means therefor comprising a pair of levers each connected to a limb of the stop and having an approximately hook-shaped end arranged to be engaged by a flight rising at the receiving end of the receiving section.

[Claims 6 to 23 not printed in the Gazette.]

1,106,619. TRAIN-PIPE COUPLING. JASPER BLACKBURN, Kirkwood, Mo. Filed Feb. 1, 1913. Serial No. 745,619. (Cl. 188—13.)



1. In combination with a train pipe coupling member having laterally movable elements, each of which is provided with a train pipe terminal, a second coupling-member provided with train pipe terminals arranged to register with the pipe terminals in the first mentioned member, the terminals of each member standing substantially at right angles to the trend of the cars, and guides on each of said coupling-members.

2. In a train pipe coupling, a coupling-member having fixed opposing jaws and opposing jaws movable at angles relative to the trend of a car, each of said movable jaws being provided with a train pipe terminal, and means acting on each of said movable jaws for moving them in given directions at right angles to the trend of the car.

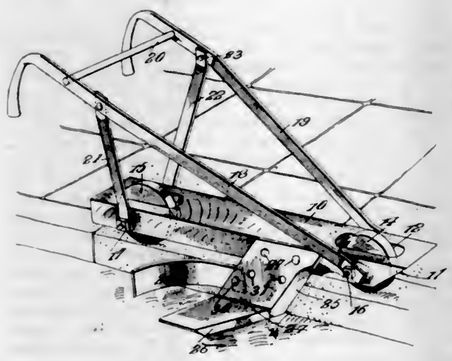
3. A train pipe coupling, comprising a coupling-member, means for securing the coupling-member to a car, opposed fixed jaws, a socket at the base of the jaws, opposed jaws movable at right angles to the trend of the car, there being train pipe terminals in each of the movable jaws, a second coupling-member comprising a frame, means for mounting said frame on a car so that it may have longitudinal as well as lateral movements relative to the car, a tapering head carried by said frame and mounted so that it may be moved vertically relative to the frame, and there being train pipe terminals in said head arranged to register with the train pipe terminals in the first mentioned coupling-member.

4. In combination with a train pipe coupling-member provided with fixed elements containing train pipe terminals, a second train pipe coupling-member having laterally yielding elements containing train pipe terminals, means on the first mentioned coupling-member for spreading the elements containing the train pipe terminals on the other coupling-member so that the train pipe terminals of the two coupling-members may be brought to registration, and means acting on said movable elements containing the train pipe terminals for forcing the train pipe terminals into fluid tight connection.

5. In combination with a train pipe coupling-member having opposed fixed jaws and opposed jaws movable in a direction at right angles to the trend of the car, there being depressions in said movable jaws and gasketed train pipe terminals located in said depressions, a second coupling-member comprising a tapering head arranged to act on said movable jaws of the first mentioned member to spread them, there being bosses at the rear end of the head arranged to fit the depressions in the movable jaws of the other coupling-member, gasketed train pipe terminals carried by said bosses, and means for supporting said head so that it may accommodate itself automatically to lateral and vertical differences in the alinement of the first mentioned coupling-member.

[Claims 6 to 8 not printed in the Gazette.]

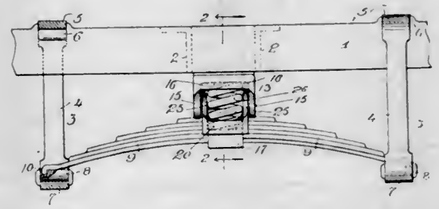
1,106,620. WALK-CLEANER. HENRY M. BODINE, Wichita, Kans. Filed Jan. 7, 1913. Serial No. 740,697. (Cl. 97—28.)



1. A walk cleaner including a wheeled beam, a cutting member secured thereto, said cutting member including a vertically disposed blade and a horizontally disposed blade, and a moldboard having its one terminal secured to the vertical blade, said moldboard being curved outwardly and rearwardly with its concave face remote from the beam and extending for the major portion of its length in the rear of the horizontal blade and directed completely across the path of movement thereof.

2. A walk cleaner including a wheeled beam, a cutting member attached to the beam intermediate the length thereof, said cutting member including a vertical cutting blade and a horizontal cutting blade, and a vertically arranged moldboard secured to the vertical cutting blade, said moldboard being curved outwardly and rearwardly, whereby it extends horizontally across the path of movement of the horizontal cutting blade and in the rear thereof, the moldboard being disposed with its concave face adjacent the cutting member.

1,106,621. CAR-TRUCK. JAMES A. BROOKS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 9, 1913. Serial No. 788,786. (Cl. 105—243.)



1. In a car truck, the combination with a truck frame, body-supporting springs supported on the truck frame, a plurality of springs supported on the body-supporting springs and ranged transversely thereof, and a bolster supported on said plural springs.

2. In a car truck, the combination with a truck frame, body-supporting springs supported on the truck frame, a plurality of spiral springs supported on the body-supporting springs and ranged transversely thereof, and a bolster supported on said latter springs.

3. In a car truck, the combination with a truck frame, body-supporting springs supported on the truck frame, a plurality of springs supported on the body-supporting springs ranged transversely thereof and disposed at each side of the vertical axis of the said body-supporting springs, and a bolster supported on said latter springs.

4. In a car truck, the combination with a truck frame, body-supporting springs supported on the truck frame, a plurality of upwardly extending spiral springs supported on the body supporting springs ranged transversely thereof and disposed at each side of the vertical axis of the said body-supporting springs, and a bolster supported on said latter springs.

5. In a car truck, the combination with the side bars of the truck frame, hangers pendant therefrom, longitudinally disposed leaf springs supported by said hangers, a plurality of springs supported on the leaf springs and ranged transversely thereof, and a bolster supported on said latter springs.

[Claims 6 to 13 not printed in the Gazette.]

1,106,622. SPIKE. GEORGE M. BROX and HOWARD S. KNIGHT, Milford, Nebr. Filed May 24, 1913. Serial No. 769,666. (Cl. 85—23.)

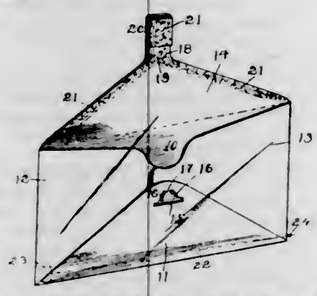
The herein described spike, consisting essentially of a shank and a head integral with the shank and having a portion that overhangs one side of the shank and is provided with an underside disposed at a right angle to the shank, the shank having a transverse bore at an intermediate point in its length and also having a vertical kerf in its said side, of even depth throughout its length, registered and communicating with the bore at one end thereof and extending from the bore to the inner side of the extended portion of the head, and the head having a vertical kerf that extends throughout the height of its overhanging portion, said kerf extending into the major

portion of the head and having its inner portion in alinement and communication with the kerf in the shank and



also having its outer side open throughout its width and height.

1,106,623. ENVELOP. JOHN W. BURGEWITZ, Muskegon, Mich. Filed Apr. 15, 1913. Serial No. 761,381. (Cl. 229—82.)



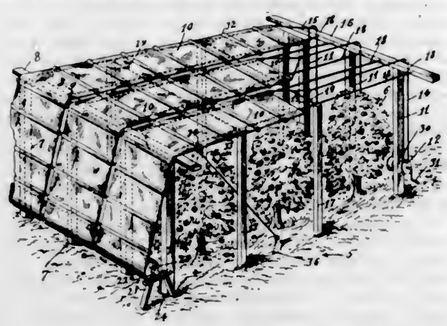
An envelop including back and end flaps, said flaps having slits in their overlapping portions and extending longitudinally of the body of the envelop and which register when the envelop is folded, and branch slits spaced apart and communicating with the longitudinally extending slits and forming tongues which are superimposed when the envelop is closed, a closure flap, a tongue extending from the closure flap and foldable intermediate the ends with the folded portion passing through the longitudinally extending registering slits and concealing and protecting the superimposed tongues.

1,106,624. PROTECTIVE COVERING FOR ORCHARDS. LEWIS T. CADWALLADER and HOWARD E. ANTHONY, Los Angeles, Cal. Filed Mar. 10, 1913. Serial No. 753,223. (Cl. 47—33.)

1. A protective covering for orchards, comprising a supporting frame work, guide wires connecting said frame, a movable curtain reinforcing battens for said curtain, a roll to support said curtain, and means to draw said curtain on said guide wires.

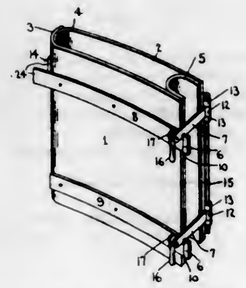
2. A protective covering for orchards, comprising a frame, guide wires supported on said frame, a movable curtain adapted to be supported on said guide wires transverse battens secured to said curtain, a curtain supporting roll supported adjacent one end of said frame, a winding drum adjacent the oppositely disposed end of said frame, and a cable connected to said curtain and adapted to be wound on said drum.

3. A protective covering for orchards, comprising a frame, guide wires supported on said frame, a movable curtain adapted to be supported on said guide wires, a roll supported adjacent one end of said frame, a winding



drum adjacent the oppositely disposed end of said frame, corrugated rollers to guide said curtain mounted on said frame, and a cable secured to said curtain and carried over said rollers to said winding drum.

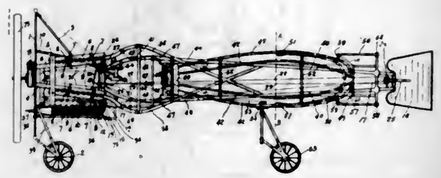
1,106,625. MOLD. FREDERICK W. CASE and WILLIAM H. BURNWORTH, Columbia City, Ind. Filed Mar. 3, 1913. Serial No. 751,801. (Cl. 25—121.)



1. A mold of the character described comprising side plates having on one edge curved laterally projecting flanges adapted to be engaged to form an interlocking connection for these ends of the plates and whereby this edge of the block formed in the mold is rounded, a spacing member comprising a substantially U-shaped plate arranged between the opposite ends of the side plates whereby a curved groove is formed in this edge of the molded block, upper and lower cleats secured to the outer sides of said side plates, the cleats of one of said plates projecting beyond one edge thereof and having therein notches adapted to form keepers, hasps hingedly connected to the adjacent ends of the cleats of the opposing plate and having therein notches adapted to be engaged with the notches in said keepers whereby this end of the mold is fastened and cam levers pivoted to the free ends of said hasps and adapted to be swung downwardly into operative engagement with the keepers whereby the hasps are held against casual disengagement from the keepers.

2. A mold of the character described comprising side plates, curved laterally projecting flanges formed on one end of the latter for interlocking engagement, a closing member interposed between the opposite ends of said plates, upper and lower cleats secured to the outer sides of said plates, the cleats on one of said plates projecting beyond one edge thereof and having therein notches, hasps hingedly carried by the contiguous ends of the cleats on the companion plate and having therein notches for engagement with those in said cleats, and cam levers pivotally mounted on the free ends of said hasps, whereby to be swung downwardly and into frictional engagement with the keepers when the hasps are in operative position to avoid accidental disengagement of the latter.

1,106,626. FLYING-MACHINE. HIPPOLYTE MARIUS CHIRON, Vancouver, British Columbia, Canada. Filed Apr. 17, 1914. Serial No. 832,580. (Cl. 244—21.)



1. A flying machine, comprising a suitably supported body structure divided into a fore part and an after part, said parts being normally in detachable connection with each other, means for instantaneously separating the said parts, and means for then retarding the descent of the separated parts whereby the same may fall gradually, all substantially as set forth.

2. In a flying machine, the combination with a body structure divided into fore and after parts, propelling mechanism therefor, and suitable supporting wings, of means for detachably connecting the said fore and after parts together, means for releasing said detachable connecting means to separate said parts, and means for then retarding the descent of the separated parts whereby same may fall gradually, all substantially as set forth.

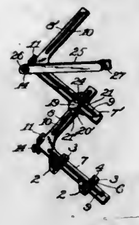
3. In a flying machine, the combination with a body structure divided into fore and after parts, propelling mechanism therefor and suitable supporting wings, of gripping members carried by the said fore part, flexible members carried by the said after part and extending therefrom into the said gripping members of the fore part, means for detachably connecting the said flexible members to the said gripping members, means for detachably connecting the main members of the after part to the fore part, lever means adapted to release both the said detachable connecting means instantaneously to separate the said parts, and means for retarding the descent of the parts after separation, all substantially as set forth.

4. In a flying machine, the combination with a body structure divided into fore and after parts, propelling mechanism therefor, and suitable supporting wings, of gripping members carried by the said fore part, flexible members carried by the said after part and extending into the gripping members of the fore part, means for detachably connecting the said flexible members to the said gripping members, means for detachably connecting the main members of the after part to the fore part, lever means adapted to release both the said detachable connecting means instantaneously to separate the said parts, a hind wheel adapted to be detachably connected to the under side of the after part, automatic means for disconnecting the said hind wheel from the after part when the fore and after parts are separated, and means for retarding the descent of the said fore part, the said after part and the said hind wheel, all substantially as set forth.

5. In a flying machine, the combination with a body structure divided into fore and after parts detachably connected together, propelling mechanism therefor, suitable supporting wings, and means for separating the said parts of a normally folded parachute carried by the said fore part, a normally folded parachute carried by the said after part, the said parachutes being adapted to open out when the parts are separated, and to retard the descent of said parts whereby same may fall gradually, all substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,106,627. CEMENT-STEP FORM. HENRY D. CORNELIUS, Indianapolis, Ind. Filed Jan. 31, 1910. Serial No. 541,048. (Cl. 25—118.)



1. A cement step form including a member comprising two approximately right-angled and longitudinally slotted limbs rigidly connected together and having an apertured ear thereon near the junction of the two limbs for securing the member to a riser forming member the ear extending transversely to the plane of the two limbs on the plane of the outer edge of one of the limbs, and means for fixedly supporting the remaining one of the limbs in approximately horizontal position to hold the ear on a vertical plane, said means extending through the slot of the limb.

2. A cement step form including a member comprising two integral approximately right-angled limbs and having a T-headed pivot at the junction of the limbs, an upright support horizontally supporting one of the limbs with the pivot extending downward, a form-plate standing against the support, and a guide having a slot receiving the pivot, the guide being supported by the top of the form-plate and also by the T-head of the pivot.

3. A cement step form including two members each comprising two limbs integrally connected at one end at approximately right angles, one limb of each member being normally supported in approximately horizontal position and supporting the remaining limb in upright position, the upright limbs of the two members having graduated markings thereon respectively, and a form plate set up against the outer edge of the two upright limbs with its top coinciding with two of the markings on the two limbs respectively.

4. A form for molding steps comprising laterally spaced series of end members, the members of the respective series being connected in stepped relation and adjustable relative to one another in the direction of their length to project at their rear end beyond the corresponding end of the member below, according to the width of the step treads, and riser forming members mounted against the aforesaid rear ends of the end members.

5. In a concrete step form, a plurality of identical interchangeable members comprising each an approximately horizontal limb having a longitudinal slot extending substantially throughout its length, and an approximately vertical limb having a longitudinal slot adjacent one end, the two limbs being integrally connected at one end, the slot in each horizontal limb being adapted to receive either a single securing bolt between its ends or two securing bolts adjacent its ends, a clamp plate engaging the slotted portions of the vertical and horizontal limbs of two of the said members respectively and holding them at approximately right angles to each other, and a bolt extending through the slots of said limb portions and through the clamp plate and securing the limbs together.

[Claims 6 to 12 not printed in the Gazette.]

1,106,628. JOURNAL-BOX AND LID. JAMES FRANK CORVIN, Chicago, Ill., assignor to McCord and Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 25, 1912. Serial No. 727,685. (Cl. 64—23.)

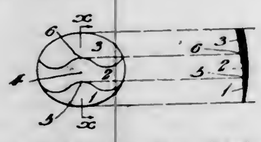
The combination with a journal box having a lid seat formed with a single marginal recess, of a lid hinged to said box and engaging said seat, the edge of said lid being beveled and confined within the outer contour of said lid

seat at all points on its sides and free edge, except at one portion where it crosses the marginal recess thereof, and



there exposing a limited portion adapted to be engaged by a special tool.

1,106,629. MULTIPLE-FOCUS LENS. ANDREW JAY CROSS, New York, N. Y. Filed Apr. 24, 1914. Serial No. 834,108. (Cl. 88—54.)



1. A multiple focus lens composed of major and minor lens members, the minor member having its principal axis located approximately at the inner edge and approximately at its central vertical meridian, and the minor member having its principal axis decentric to the principal axis of the major member.

2. A multiple focus lens composed of major and minor lens members, the minor member having its principal axis located approximately at the inner edge and approximately at its central vertical meridian, and the minor member having its principal axis vertically decentric to the principal axis of the major member.

3. A multiple focus lens having a plurality of focal powers, composed of members, the principal axis of one of said members being located approximately at the junction edge with the other member and decentric to the principal axis of said other member.

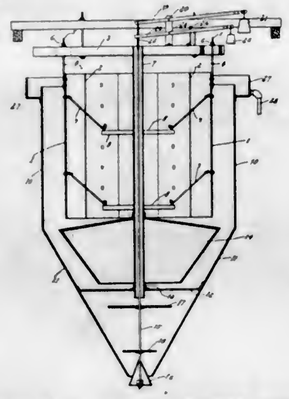
4. A lens formed with a distance vision portion, an intermediate vision portion and a close vision portion, the principal axes of two of the portions being respectively located approximately at the junction edges of the different vision portions.

5. A lens formed with a distance vision portion, an intermediate vision portion and a close vision portion, the principal axes of two of the portions being respectively located approximately at the junction edges of the different vision portions and approximately at the central vertical meridian.

[Claims 6 to 14 not printed in the Gazette.]

1,106,630. HYDRAULIC CLASSIFIER FOR SEPARATING SAND AND SLIME. WILTON E. DARROW, Sutter Creek, Cal. Filed Mar. 4, 1914. Serial No. 822,336. (Cl. 83—82.)

1. A device of the character described comprising a casing having a valve controlled lower end, a pipe projecting centrally into said casing, a spreader on said pipe having its sides spaced from the sides of said casing, a distributing receptacle disposed above such spreader and having its sides spaced from the sides of said casing, a rod projecting centrally through said pipe and connected with the valve at the lower end of said casing, a pair of spaced disks on said rod below said pipe and a weight controlled lever mechanism mounted on the upper end of said rod, as described.

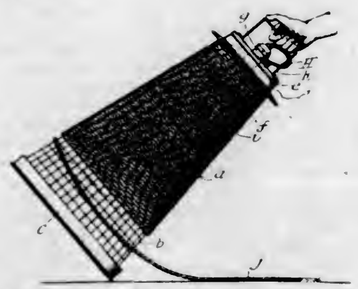


2. A device of the character described comprising the combination of a casing having a valve controlled lower end, a spreader disposed within said casing, a pipe discharging below said spreader, a distributing receptacle disposed above such spreader, such receptacle comprising segmental sides slidably joined circumferentially with respect to each other, means for raising or lowering said segmental members and means for moving said segments through their sliding connection whenever they are raised or lowered whereby the diameter of said receptacle will be lessened or increased respectively, as described.

3. A device of the character described comprising a casing having a valve controlled opening in its lower end, a spreader disposed within said casing, a pipe discharging below such spreader, a distributing receptacle disposed above said spreader, means for raising and lowering said receptacle and means for lessening or increasing the diameter of said receptacle respectively as it is raised or lowered, as described.

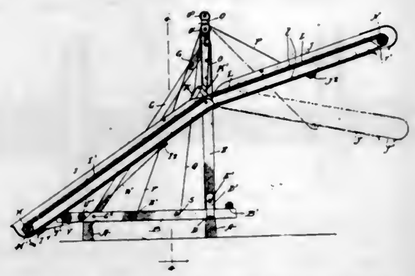
4. A device of the character described comprising a casing having a valve controlled opening in its lower end, a pipe disposed centrally into said casing, an inverted cone shaped spreader disposed on said pipe, a distributing receptacle disposed above said spreader, said receptacle comprising segmental sides slidably joined at their free edges, arms rigidly connected to said pipe, links flexibly connected with said rigid arms and with said segmental members, and means for raising or lowering said segmental members, as described.

1,106,631. INVERTED LAMP. WILLIAM J. DAVIS, Jr., Chicago, Ill. Filed Nov. 17, 1913. Serial No. 801,448. (Cl. 240—81.)



In lamps, the combination with an openwork stand, of a hood superimposed above the top of said stand, a lamp within said hood, means for movably connecting said hood with the top of said stand, and means for tilting said hood, substantially as described.

1,106,632. GRAIN-ELEVATOR. ADOLPH B. DE MOURE, Piper City, Ill. Filed Mar. 22, 1911. Serial No. 616,244. (Cl. 193—18.)



1. In an elevator of the class described, spaced uprights, plates secured to the opposite sides of each of the uprights and projecting above the upper end thereof, spaced pulleys journaled between each pair of plates, a bracket secured upon one plate of each pair, a pulley journaled in the bracket, a conveyer comprising connected sections, a winding drum, cables connected to one of the conveyer sections and trained over the last mentioned pulleys and wound about said drum, a second winding drum, and cables wound thereon and trained over corresponding ones of the first mentioned pulleys and connected to the other section of the conveyer.

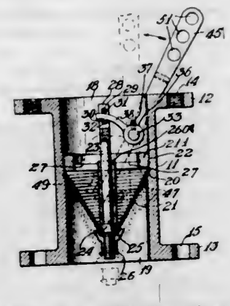
2. A conveyer comprising sections each including sides and a bottom, bars secured to the sides of each section at the meeting ends of the sections, a link pivoted to and extending between the ends of the bars at each side of the conveyer, conveyer shafts mounted at the remote ends of the sections, a partition extending between the sides of each section above the bottom thereof, and an endless conveyer apron trained over the shafts and having its lower stretch traveling over the bottom of the sections and the upper stretch over the partitions thereof.

3. In an elevator of the class described, conveyer sections relatively angularly adjustable, connection between the sections comprising bars secured to the sides of the sections, the bars of one section each having an end located near the bottom of the section and the bars upon the other section each having an end located substantially at the top of the section, links extending between the said ends of the corresponding bars, and pivotally connected to the same, and means for relatively angularly adjusting the sections, the first mentioned section being foldable to lie in inverted position upon the second mentioned section.

4. In an elevator of the class described, a base, spaced uprights upon the base and foldably mounted thereon, conveyer sections supported between the uprights and relatively angularly adjustable, connection between the adjacent ends of the sections comprising bars secured to the sides of the sections, the bars upon one section each having an end located near the bottom of the section and the bars upon the other section each having an end located substantially at the top of the section, links pivotally connected to and extending between the said ends of corresponding ones of the bars, the second-mentioned section being adapted to be supported upon said bars and the first-mentioned section being foldable upon said links to lie in inverted position upon the second-mentioned section.

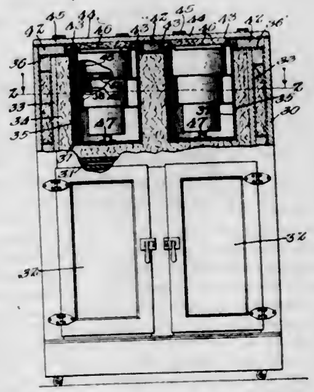
1,106,633. THROTTLE-VALVE. WILLIAM AUSTIN DENEHIE, Los Angeles, Cal., assignor of one-half to George L. Cooper, Los Angeles, Cal. Filed July 28, 1913. Serial No. 781,671. (Cl. 137—4.)

In combination with a gasolene engine supplied with liquid fuel through a carbureter, a valve comprising a body member having an opening through which said liquid fuel may be passed, a helically wound conical spring normally closing said opening, and means for extending said spring so that the said liquid fuel may be drawn through the



openings between the coils thereof and further mixed with air thereby.

1,106,634. COOKER. FOREST V. DETWILER, Chicago, Ill. Original application filed May 28, 1909, Serial No. 498,797. Divided and this application filed Jan. 26, 1910. Serial No. 540,164. (Cl. 62—23.)



1. A fireless cooker comprising an inclosing casing, a frame arranged in the casing, heat non-conducting material between the frame and the casing, a receptacle removably disposed within the frame and substantially filling the frame, said receptacle having hollow walls from between which the air has been exhausted, independent supports within the receptacle for supporting a plurality of vessels from the inner walls of the receptacle, and one above the other, and a closure for the receptacle and casing.

2. A fireless cooker comprising an inclosing casing, a frame constructed of apertured material arranged in the casing, heat non-conducting material between the frame and the casing, a receptacle removably disposed within the frame and substantially filling the frame, said receptacle having hollow walls from between which the air has been exhausted, independent supports within the receptacle for supporting a plurality of vessels of different sizes from the inner walls of the receptacle, and one above the other, and a closure for the receptacle and casing.

3. A fireless cooker comprising an inclosing casing, a frame arranged in the casing, heat non-conducting material between the frame and the casing, a receptacle removably disposed within the frame and substantially filling the frame, said receptacle having hollow walls from between which the air has been exhausted, independent supports within the receptacle for supporting a plurality of vessels from the inner walls of the receptacle, and one above the other, interlocking means on adjacent

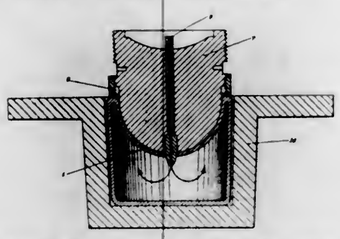
vessels for detachably securing them together for simultaneous insertion and removal, and a closure for the receptacle and casing.

4. A fireless cooker comprising a casing, a removable receptacle within the casing, heat non-conducting material between the receptacle and the casing, said receptacle being provided with a circumferential flange, a shoulder adapted to be engaged by the flange for holding the receptacle in position, said flange and shoulder being located entirely within the casing, and a closure for the casing and receptacle.

5. A fireless cooker comprising a casing, a removable receptacle within the casing, heat-non-conducting material between the receptacle and the casing, said receptacle being provided with a circumferential flange, a shoulder adapted to be engaged by the flange for holding the receptacle in position, a closure for the casing, said closure being provided with a projecting portion adapted to form a closure for the receptacle, and a filler member disposed between the flange on the receptacle and the closure and surrounding the projecting portion on the closure.

[Claims 6 to 9 not printed in the Gazette.]

1,106,635. HAT PRESSING OR BLOCKING DEVICE. BÁRBARO JEREZ DIAZ, Madrid, Spain. Filed Nov. 29, 1912. Serial No. 734,182. (Cl. 223—31.)



1. A device for pressing or blocking all kinds of hats, by means of the action of compressed air comprising in combination an india-rubber chamber, hollow and of continuous surface and of a slightly conical form, having an orifice in one of its bases for the admission of compressed air and an apparatus for the injection of said compressed air, comprising a semi-spherical metal piece traversed through its pole or center by a compressed air tube.

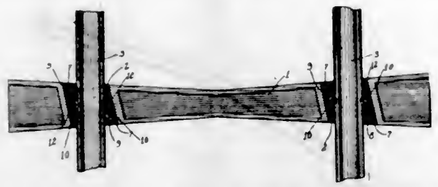
2. In a hat shaping and pressing machine the combination with a hat die of a closed rubber bag provided with an opening in its upper face, and of a ball shaped head provided with a ring for adjustment of said head with respect to said die, and of a tube extending with its lower conically shaped end through said opening into said rubber bag for supplying compressed air to the same.

3. In a hat shaping and pressing machine in combination with a hat die, a rubber bag comprising two telescopically engaging parts, the upper provided with an opening and adjustable means extending into said opening for supplying compressed air to said bag through said opening.

4. In a hat shaping and pressing machine the combination with a hat die of a closed rubber bag provided with an opening in its upper face, of means for strengthening and enlarging the outer diameter of said bag and of means for supplying compressed air to said bag through said opening.

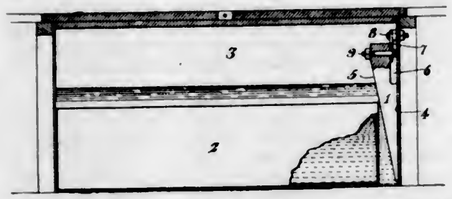
1,106,636. METALLIC RAILWAY-TIE AND RAIL-FASTENER. JAMES A. DOBBS and RICHARD KREBS, Jr., Olive, Cal. Filed Feb. 3, 1914. Serial No. 816,149. (Cl. 238—5.)

A device of the character described comprising the combination of a metallic tie provided with a horizontal slotted plate at each end, a rail disposed on each plate, the sides of said plates being disposed obliquely with respect to the center lines of said rails, an overhanging flange on each side of each plate, a pair of elongated slots in the bottom of each plate on each side of each rail, a wedge projecting into each slotted plate on each side of said rail and from opposite sides of said tie, each wedge being provided with an elongated slot and a round orifice adapted to coincide with one pair of said slots in said



plates, a bolt projecting through each of said slots and the corresponding slot and orifice in each wedge and provided with nuts, a washer disposed between the nut of one of said bolts on each side of each rail and engaging the flange of said rail and said wedge, as described.

1,106,637. ICE-CAN FASTENER FOR ICE PLANTS. WILLIAM C. DRAKE, Lyra, Tex. Filed Aug. 18, 1913. Serial No. 785,330. (Cl. 62—6.)



1. The combination with a brine tank, and an ice can, of a fastening device comprising a wedge arranged to engage the ice can for holding the same against the bottom of the brine tank, and an oscillatory arm pivotally mounted within the brine tank and carrying the wedge and arranged to swing downwardly and upwardly to engage the wedge with the tank and disengage it therefrom.

2. The combination with a brine tank, and an ice can, of a fastening device including a wedge adapted to be interposed between the ice can and a wall of the tank for holding the can firmly against the bottom of the latter, and movable means mounted within the brine tank and connected with the wedge and adapted to carry the same into and out of engagement with the ice can.

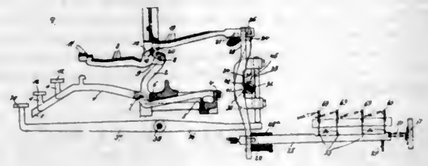
3. A fastening device for ice cans including a wedge movable upwardly and downwardly and adapted to engage an ice can at the exterior thereof for holding the can firmly in a brine tank, and an oscillatory link pivotally connected at one end to the wedge and arranged to swing upwardly and downwardly, and means for pivotally mounting the other end of the link within a brine tank.

4. The combination with a brine tank, and an ice can having a cover, said brine tank being of sufficient depth to enable the can to be entirely submerged within it, of a fastening device located at one of the walls of the tank and arranged to engage and rigidly clamp the ice can to hold the same with the cover thereon in a submerged position.

1,106,638. BAND-PERFORATING APPARATUS. HEINRICH DREWELL, Charlottenburg, Germany. Filed Sept. 23, 1913. Serial No. 791,270. (Cl. 164—114.)

1. In means for making operating bands for operating automatic type-setting machines or automatic matrix-setting and line-casting machines, the combination with a typewriter comprising a plurality of type-bars adapted to be brought into a printing position, of a plurality of punches, punch-selecting means for selecting one or more of said punches, means operatively connected to said punch-selecting means and adapted to be actuated by one

of said type-bars when coming into printing position and means for actuating said punches when selected by said punch-selecting means.



2. In means for making operating bands for operating automatic type-setting machines or automatic matrix-setting and line-casting machines, the combination of a plurality of type-bars, each adapted to be thrown into printing position, a plurality of pushing rods each adapted to be driven by one of said type-bars when coming into its printing position, punch-selecting means adapted to be actuated by said rods, a plurality of punch-driving members adapted to be selected by said punch-selecting means, and punch-operating means adapted to actuate said punch-driving members when selected by said selecting means.

3. In means for making register bands of the character described, the combination with a plurality of key-levers, a plurality of type-bars operatively connected therewith, a plurality of driving members each adapted to be driven by one of said type-bars when moving into its printing position, and punch-selecting means comprising a plurality of selecting members, of a plurality of groups of intermediate members, each of said groups being connected to one of said driving members and each of said intermediate members being adapted to actuate one of said selecting members, and means for rendering said intermediate members alternately operative and inoperative.

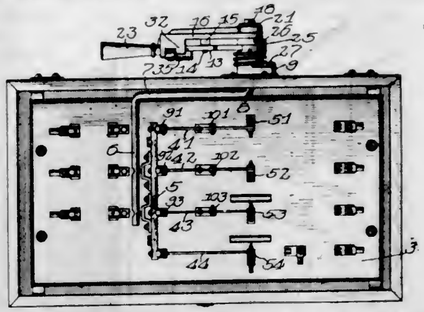
4. In means for making the operating bands of automatic composing machines, the combination of a plurality of key-levers, a plurality of type-bars, means operatively connecting said type-bars and said key-levers, a plurality of groups of intermediate members, a plurality of driving members each adapted to be driven by one of said type-bars and to actuate one of said groups of intermediate members, a plurality of punches, a plurality of punch-driving members each connected to one of said punches and adapted to actuate the same, punch-driving means adapted to drive said punch-driving members, a plurality of selecting members each adapted to be actuated by one of said intermediate members and to bring one or more of said punch-driving members into operative relation with said punch-driving means, and means for rendering the members of said groups of intermediate members alternately operative and inoperative.

5. In means for making register bands of the character described, the combination with a plurality of key-levers, a plurality of type-bars operatively connected therewith, a plurality of driving members each adapted to be driven by one of said type-bars when moving into its printing position, and punch-selecting means comprising a plurality of selecting members, of a plurality of groups of intermediate members, each of said groups being connected to one of said driving members and each of said intermediate members being adapted to actuate one of said selecting members, a shift key, and means controlled by the shift key for rendering said intermediate members alternately operative and inoperative.

[Claims 6 to 8 not printed in the Gazette.]

1,106,639. MOTOR-SWITCH. OTIS B. DUNCAN, Chicago, Ill., assignor to George Cutter Company, South Bend, Ind., a Corporation of Indiana. Filed May 6, 1912. Serial No. 695,466. (Cl. 172—179.)

1. In an electric switch the combination with the stationary contacts and a switch blade adapted to be thrown from one contact to the other, of an actuating spring for throwing the blade, a setting arm for forcing back the blade against the force of the spring, a tripping pawl and means for operating said pawl, said pawl being adapted to engage said arm when moved in one direction and to slip over without engaging said arm when moved in the opposite direction.



2. In a motor switch, the combination of a starting contact, a running contact, a switch arm movable from one to the other, and quick throw mechanism comprising a spring adapted to move the switch arm toward the running contact, a handle adapted to move the switch arm toward the starting contact, and means for quickly releasing said spring, said handle being ineffective to move said switch arm toward the running contact.

3. In a motor switch, the combination of a starting contact, a running contact, a switch arm movable from one to the other, a spring adapted to move the switch arm toward the running contact, a rotary setting arm for controlling said switch arm, a lever fulcrumed concentrically with said setting arm, a tripping pawl adapted to move said setting arm in a direction to move the switch arm toward the starting contact, said tripping pawl being non-active upon said setting arm in the opposite direction, and a trigger mounted on said lever for controlling said tripping pawl.

4. In a switch, the combination with a movable switch arm, of a setting arm adapted to operate said switch arm, a spring adapted to move said switch arm in one direction, a tripping pawl adapted to move said setting arm in the opposite direction only, a trigger pin adapted to hold said tripping pawl to its work in moving the setting arm against the force of the spring, and a lever whereon said pawl and pin are mounted, said pawl and pin both being yielding, and the pawl being adapted to slip over without engaging the setting arm, and adapted to force back to non-acting position the pin when the operating lever moves the pawl and pin in the direction opposite to the one in which the pawl is capable of engaging the setting arm.

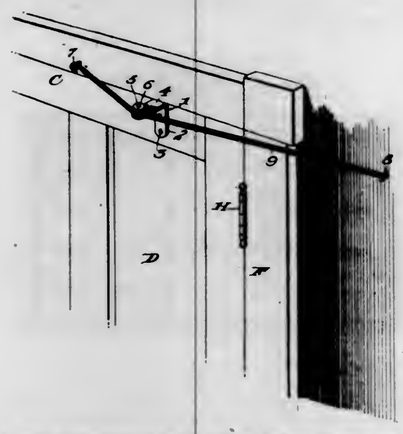
5. In a motor starting switch, the combination of a starting contact, a running contact, a pivoted switch arm adapted to swing from one to the other, a spring adapted to swing the switch arm toward the running contact, a setting arm concentric with the switch arm, an operating lever concentric with the switch arm and setting arm, a tripping pawl adapted to engage said setting arm to swing the switch arm toward the starting contact, said tripping pawl being yieldingly mounted and adapted to slip over the setting arm when moved in the opposite direction, a yieldable trigger pin adapted to engage said pawl to hold it to its work, and a trigger for retracting said pin to thereby suddenly trip said pawl.

[Claims 6 to 8 not printed in the Gazette.]

1,106,640. DOOR-CLOSER. JOSIAH ECCLESTON, Roy, Wash. Filed Feb. 2, 1914. Serial No. 816,042. (Cl. 16—9.)

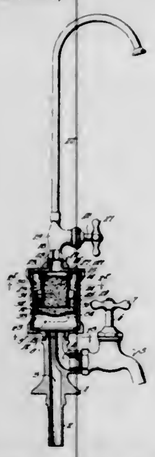
1. The combination with a door hingedly mounted in a rigid support, of a bracket secured to said door near its top, a contact element on said bracket and a flexible resilient element having its intermediate portion contact-

ing with said element, its opposite ends being secured to said support on opposite sides of the axis on which the door swings.



2. The combination with a door hingedly mounted in a rigid support, of a bracket secured to the outer side of said door near its upper hinged corner, a grooved pulley journaled on said bracket to rotate on a vertical axis, and a coil spring passing around said pulley and having its opposite ends secured to said support on opposite sides of the axis on which the door swings.

1,106,641. FILTER. CHARLES STUART FACKENTHALL, Pacific Grove, Cal. Filed July 15, 1913. Serial No. 779,221. (Cl. 210—7.)

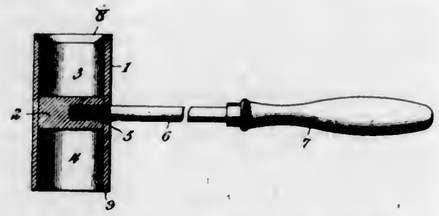


1. A filter comprising an inclosing shell having a central enlargement thereon, a body of filtering material inside said shell, a clamping nut threaded to said central enlargement on said shell so as to leave an annular space between the inner surface of said nut and a portion of the shell, and a body of filtering material carried in said clamping nut and tightly secured against the end of said shell by said nut.

2. A filtering element comprising a hollow cylinder having a threaded central enlargement, a shell adapted to fit into said cylinder and having a foraminous upper end, a body of filtering material in said shell, a clamping ring threaded to engage the said central enlargement, a foraminous member in the lower end thereof, and a second body of filtering material clamped between the end of said shell and said foraminous member, an annular dead space being formed between said coupling, said cylinder and said second body of filtering material.

3. In a filter a filtering element composed of an inclosing shell having a central enlargement thereon, filtering material in said shell, a clamping member, and a body of filtering material in said clamping member, said clamping member being so shaped and attached to said central enlargement as to form an annular recess about said shell between said central enlargement and said body of filtering material.

1,106,642. MEAT-TENDERER. LOUIS J. FARLAND, Au Sable Forks, N. Y. Filed July 10, 1913. Serial No. 778,403. (Cl. 17—27.)

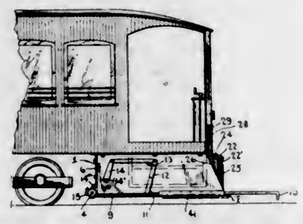


1. A meat tenderer, comprising a tubular head, air pockets provided at each end of said head, said pockets having their outer ends open and provided thereat with meat penetrating edges, the pockets being of materially greater depth than the depth of penetration of said edges, whereby the air in the pockets will be compressed when said edges are brought forcibly in contact with meat and an outwardly extending operating handle secured to the said head at an intermediate point thereof.

2. A meat tenderer, comprising a tubular head having meat penetrating edges at each end, a partition provided within the head and forming air pockets on each side of the partition having their outer ends open, the pockets being of materially greater depth than the depth of penetration of said edges, whereby the air in the pockets will be compressed when said edges are brought forcibly in contact with meat and a laterally extending operating handle secured to the head and partition.

3. A meat tenderer comprising a tubular head, a partition provided within the head, said partition forming air pockets on each side thereof, one end of the head being blunt and the other formed with a cutting edge, the pockets being of materially greater depth than the depth of penetration of said edge, whereby the air in the pockets will be compressed when said edge is brought forcibly in contact with meat and a handle connected to the head.

1,106,643. CAR-FENDER. LOUIS FINKELMAN and JOHANNES WILHELM, Philadelphia, Pa. Filed Sept. 13, 1913. Serial No. 789,589. (Cl. 105—255.)



1. A fender comprising a housing, a scoop movable into and out of same, arms pivoted to the front ends of the scoop and movable from a position across the front of the scoop to a position adjacent the outer faces of the scoop sides.

2. A fender comprising a housing, a scoop movable into and out of same, arms hinged to the scoop and occupying

a position against the sides thereof when the scoop is within the housing, said arms being movable from said position to a position across the scoop when the scoop has been projected from the housing.

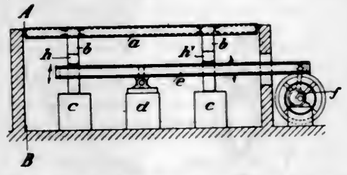
3. A fender comprising a housing, a scoop movable into and out of same, a winding shaft, a band windable thereon and connected with the scoop, a trip bar, flexible means connected therewith and windable on the shaft oppositely to said band, a ratchet wheel on said shaft and pawl means engageable therewith, said pawl having tripping connection with the trip bar.

4. A fender comprising a housing, a scoop movable into and out of same, a winding shaft, a band windable thereon and connected with the scoop, a trip bar, flexible means connected therewith and windable on the shaft oppositely to said band, a ratchet wheel on said shaft, pawl means engageable therewith, said pawl having tripping connection with the trip bar, and springs connected to the housing and scoop for projecting the latter from the housing.

5. A fender comprising a housing, a scoop movable into and out of same, a shaft, a flexible connection from said scoop and winding on said shaft, a trip member, a flexible connection from the trip member winding on said shaft oppositely to the other flexible connection, ratchet means for locking said shaft and releasable by the trip member, said scoop including a scoop frame and carriage block, hingedly connected spring means for projecting the scoop, and spring means for effecting tilting of the scoop frame relatively to the carriage block.

[Claims 6 to 8 not printed in the Gazette.]

1,106,644. SHAKING-MACHINE FOR USE IN THE MANUFACTURE OF CONCRETE OR ARTIFICIAL STONE. ALBERT FRIESECKE and CARL FRIESECKE, Berlin, Germany. Filed May 9, 1912. Serial No. 696,072. (Cl. 25—41.)



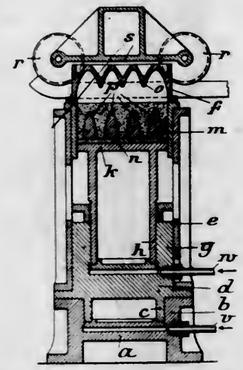
1. In a shaking machine of the character described, a plate, supporting legs therefor, said legs being spaced from one another, supports upon which said legs normally rest, a rocking beam positioned below said plate and pivotally mounted upon a horizontal axis at a point between said legs, projections on said legs adapted to be engaged by said rocking beam, whereby rocking movement of said beam will alternately raise the ends of the plate, and means for imparting a rocking movement to said beam.

2. In a shaking machine of the character described, a plate, supporting legs therefor, said legs being spaced from one another, supports upon which said legs normally rest, a rocking beam positioned below said plate and pivotally mounted upon a horizontal axis at a point between said legs, said legs being provided with projections free from connection with said beam, but adapted to be engaged thereby, whereby rocking movement of said beam will alternately raise the ends of the plate, and means for imparting a rocking movement to said beam.

1,106,645. MOLDING-MACHINE. JOHANN FÜLSCHER, Hamburg-Eimsbüttel, Germany. Filed July 17, 1913. Serial No. 779,519. (Cl. 22—27.)

1. In a molding machine, the combination of a pattern plate, a sand-retaining frame surrounding the same, steep-sided pattern members secured to the plate having recesses therebetween, a mold box disposed above the frame, means for raising the plate and projections formed on the underside of the mold box adapted to enter and compress the sand in the recesses when the plate is raised.

2. In a molding machine, the combination of a pattern plate, steep-sided pattern members secured thereon having recesses therebetween, a sand-retaining frame surrounding the plate, a mold box supported by said frame, means for raising the plate, and projections on the underside of the mold box corresponding in shape to the deeper recesses between the pattern members adapted to enter and compress the sand in the said deeper recesses when the plate is raised.



3. In a molding machine, the combination of a pattern plate, steep-sided pattern members secured thereto, a sand-retaining frame surrounding the plate, a mold box arranged above the pattern, means for simultaneously raising the plate and sand-retaining frame, additional means for raising the plate alone and projections on the underside of the mold box, corresponding in shape with the recesses in and around the pattern members adapted to enter and compress the sand in the said recesses when the pattern plate alone is raised.

4. In a molding machine, the combination of a pattern plate, a plurality of steep-sided patterns secured thereto, a sand-retaining frame surrounding the plate, a mold box arranged above the patterns, a counter-pressure member therefor, means for simultaneously raising the plate patterns and sand-retaining frame, additional means for raising the plate and patterns relatively to said frame and projections on the underside of the mold box corresponding in shape and number to the deeper recesses between the patterns adapted to enter said recesses and additionally compress the sand therein when the plate and patterns are raised relatively to the sand-retaining frame.

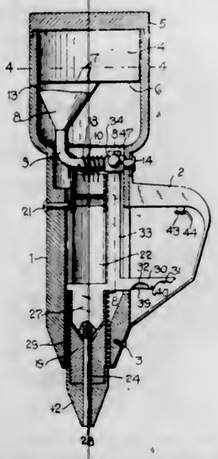
5. In a molding machine, the combination of a pattern plate, pattern members carried thereby having relatively steep sides, a sand-retaining frame surrounding the plate, a mold box disposed in alinement with the said frame and having projections on its under side corresponding substantially in shape and number with the depressions between the pattern members, and means for effecting relative movement of the pattern plate and mold box, whereby a uniform compression of the sand forming the mold is effected.

1,106,646. TACK-DRIVER. JOHN P. GARDNER, Cairo, Ill. Filed Dec. 29, 1913. Serial No. 809,348. (Cl. 1—46.)

1. A device of the class described comprising a body, a barrel in said body, a plunger mounted within said barrel, a tack compartment within said body, a tack passage communicating with said barrel, a rotatable tack guiding and releasing member, means for moving the plunger inwardly and causing rotation of the tack guiding and releasing member to cause the tack to pass along the tack passage to a position forwardly of the plunger, and means for returning the plunger to normal position.

2. A device of the class described comprising the combination of a body, a barrel in said body, a tack compartment, a rotatable tack guiding and releasing member,

said barrel being provided with a tack passage, a plunger in said barrel, means for moving the plunger inwardly, means connected to the last mentioned means for engagement with the rotatable guiding and releasing member to rotate the same upon inward movement of the plunger, and means for returning the plunger to normal position.



3. A device of the class described comprising the combination of a body, a barrel in said body, a tack compartment, a tack guide, a tack guiding and releasing member, said barrel being provided with a tack passage, a plunger in said barrel, means for moving the plunger inwardly and causing operation of the tack guiding and releasing member to allow a tack to travel along the tack passage to position forwardly of the plunger, and means for returning the plunger to normal position.

4. A device of the class described comprising the combination of a body, a barrel in said body, a plunger within said barrel, a trigger connected with said plunger, a slotted arm carried by said trigger bar, a tack guiding and releasing member, a pinion connected with said tack guiding and releasing member, means connected with the trigger bar and engaged in the slotted arm for rotating the pinion to operate the tack guiding and releasing member upon movement of the trigger bar in one direction, and means for returning the trigger bar and plunger to normal position.

5. A device of the class described comprising a tack feeding and guiding member, a tack guiding and releasing member engaged around one end of the first mentioned member, said end of the tack feeding and guiding member being longitudinally slotted with one end of the slot enlarged, said tack guiding and releasing member being arranged to guide tacks to the enlarged end of said slot and release said tacks in order, a plunger, means for drawing the plunger inwardly, means connected with the plunger for operating the tack guiding and releasing member upon inward movement of said plunger, and means for returning said plunger to normal position.

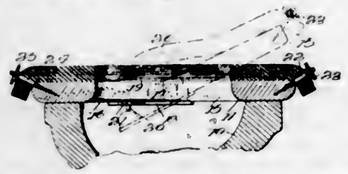
[Claim 6 not printed in the Gazette.]

1,106,647. SANITARY CLOSET-SEAT. FRANK J. GRAVES, Springfield, Mass. Filed Dec. 8, 1913. Serial No. 805,401. (Cl. 4—18.)

1. A toilet seat including hingedly connected front and rear sections, protective pads mounted on the sections, and means for securing the sections in alinement, said means stretching the pads and locking the same in place.

2. A toilet seat including arcuate wings connected at their rear ends to a hinge plate, said wings each consisting of front and rear sections hingedly connected, latches for securing the sections of each wing in extended position, and protective pads for said wings.

3. A toilet seat including arcuate wings connected at their rear ends to a hinge plate, said wings each consisting of front and rear sections hingedly connected, latches for securing the sections of each wing in extended position, protective pads for said wings, and means for detachably securing the pads to the wings.

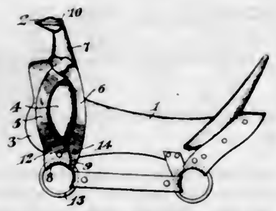


4. A toilet seat including arcuate wings connected at their rear ends to a hinge plate, said wings each consisting of front and rear sections hingedly connected, latches for securing the sections of each wing in extended position, protective pads for said wings, and means for detachably securing the pads to the wings, said means including spindles extending outwardly and upwardly from the free ends of the wing sections.

5. A toilet seat including arcuate wings connected at their rear ends to a common hinge plate, each wing comprising hingedly connected front and rear sections, spindles extending upwardly and outwardly from the free ends of the sections, and protective pads fitting over the wings and provided with perforated flaps for the passage of the spindles.

[Claims 6 to 8 not printed in the Gazette.]

1,106,648. FRONT RIGGING FOR RIDING-SADDLES. GEORGE WASHINGTON GRAVES, Plainview, Tex. Filed Aug. 22, 1913. Serial No. 786,153. (Cl. 54—46.)



1. A swell fork riding saddle having a front rigging comprising a strap with a mid-portion and two sets of two elongated strap members each, said sets extending oppositely from opposite ends of the mid-portion, and the strap members at their free ends being formed into ring engaging loops, each set of strap members being longer than the mid-portion and arranged in embracing relation to the respective swells of the swell fork.

2. A front rigging for riding saddles, comprising a single piece of leather slit longitudinally from an integral mid portion to the ends and there shaped to be formed into holding loops, the length of the integral mid portion being less than that of either of the parts formed by the slits, and said mid portion having a laterally extended lip in position to engage back of the horn of the saddle with said lip uppermost when the rigging is in place.

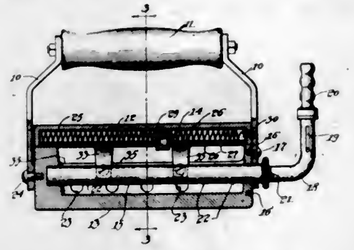
3. A swell fork riding saddle having a front rigging comprising a strap with a mid-portion and two sets of two elongated strap members each, said sets extending oppositely from opposite ends of the mid-portion, and the strap members at their free ends being formed into ring engaging loops, each set of strap members being longer than the mid-portion and arranged in embracing relation to the respective swells of the swell fork, and one of the strap members of each set being wider than the other member of the same set.

4. A front rigging for riding saddles comprising a single piece of leather slit longitudinally into two sets of strap members, the sets extending in opposite directions from an integral mid portion, and one strap member of each set being wider than the other, the slits which divide the leather into strap members being prolonged to enter the wider strap members for a distance at the integral mid portion.

5. The combination with a saddle tree having a swell fork and horn rising therefrom, of a front rigging therefor consisting of a single leather strap slit longitudinally to form an integral mid portion and separate strap extensions thereof on both sides of the mid portion, said integral mid portion being wrapped about the horn and the side extensions being carried to the front and rear respectively of the swells of the fork and at their ends returned upon themselves and secured to the fork to form ring-holding loops.

[Claims 6 and 7 not printed in the Gazette.]

1,106,649. SAD-IRON. JOSEPH GROSS, Chicago, Ill. Filed May 16, 1913. Serial No. 767,955. (Cl. 158—23.)



1. The combination of a sad-iron having two ironing surfaces, an electrical heating element embodied in the iron, and a flame heating element embodied in the iron, said iron being reversible to place either of the ironing surfaces in operative position.

2. The combiantion of a sad-iron having two ironing surfaces, an electrical heating element embodied in the iron for heating one of the ironing surfaces, and a flame heating element embodied in the iron for heating the other ironing surface, said iron being reversible to place either of the ironing surfaces in operative position.

3. The combination with a hanger, of a sad-iron pivoted therein, said sad iron having two ironing surfaces and being reversible in the hanger to place either ironing surface in operative position, and heating means of different varieties for the respective ironing surfaces.

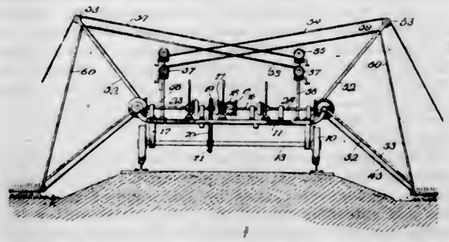
4. The combination with a hanger, of a sad-iron pivoted therein, said sad-iron having two ironing surfaces and being reversible in the hanger to place either ironing surface in operative position, an electrical heating element embodied in the iron for heating one of the ironing surfaces, and a flame heating element embodied in the iron for heating the other ironing surface.

5. The combination with a hanger, of a sad-iron pivoted therein, said sad-iron having two ironing surfaces and being reversible in the hanger to place either ironing surface in operative position, an electrical heating element embodied in the iron for heating one of the ironing surfaces, a flame heating element embodied in the iron for heating the other ironing surface, and means for locking the iron in the hanger in either of its positions.

[Claims 6 to 12 not printed in the Gazette.]

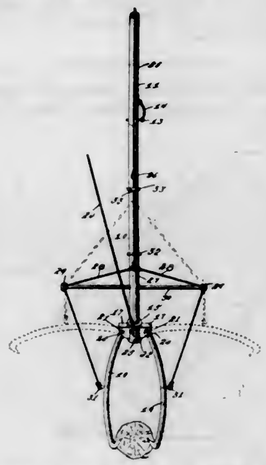
1,106,650. MOWER ATTACHMENT FOR CARS. EMIL H. HARICK, Euclid, Minn. Filed May 13, 1913. Serial No. 767,478. (Cl. 56—16.)

1. In a device of the character described, a wheeled truck, supporting frames pivoted to the sides thereof, a cutting mechanism pivoted to each of the frames, actuating means carried by the truck and connected to the cutting mechanism for operating the same, a mast swingingly attached to each side of the truck, a beam connecting the upper terminal of each mast with the outer terminal of the adjacent frame, a pulley journaled in the upper terminal of each mast, a pair of cables freely connected to the masts at the junction of the beams therewith, a cable for each cutting mechanism, said cables being freely connected to the outer terminals thereof and being directed over the pulleys of the masts, and independent winding drums for each of the said cables whereby either cutting mechanism may be independently adjusted with respect to the frame to which it is attached or whereby either frame may be adjusted independently of the cutting mechanism which it carries.



2. In a device of the character described, a wheeled platform, frames pivoted to the sides thereof, a mast pivoted adjacent the frames, beams connecting the outer terminals of the frames and the upper terminal of the adjacent mast, a pair of cables connected to the masts, independent winding drums for the cables whereby either mast may be independently adjusted with respect to the platform, a cutting mechanism pivotally connected to the outer terminal of each of said frames, a pulley journaled at the upper terminal of each of said masts, a cable connected to the outer terminal of each of the cutting mechanisms, said last-mentioned cables being directed over the pulleys of the masts, and independent winding drums mounted on the platform and receiving the last-mentioned cables whereby either cutting mechanism may be independently adjusted with respect to the frame to which it is attached.

1,106,651. DEVICE FOR RAISING LOGS. ROY HARRIS, Winchester, Idaho. Filed Sept. 10, 1913. Serial No 789,183. (Cl. 57—9.)



1. A grapple of the character described, comprising a standard, a socket at the lower end of said standard, pivot ears extending from said socket, tongs pivotally connected with said pivot ears, a guiding rod carried by said standard above said socket, lines connected with said tongs and passing through the outer ends of said

guiding rod, a guiding eye carried by said standard, a line passing through said guiding eye and having its lower end connected with said first-mentioned lines, supporting pins carried by said standard beneath said guiding eye, and a support carried by said last-mentioned line adjacent its lower end and adapted to rest upon said supporting pins whereby said tongs may be supported in a raised position.

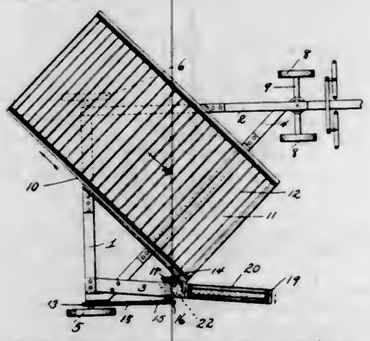
2. A grapple of the character described, comprising a standard, tongs pivotally connected with the lower end of said standard, a guiding rod carried by said standard, supporting pins carried by said standard, a line slidably connected with said standard, a support carried by said lines and adapted to rest upon said supporting pins, and lines connected with said first-mentioned line and passing through the ends of said guiding rod having their lower ends connected with said tongs whereby said tongs may be raised and held in a suspended position by the support of said first-mentioned lines resting upon said supporting pins.

3. A grapple comprising a standard, tongs pivotally connected with said standard, pins carried by said standard, a guiding eye carried by said support above said pins and extending beyond the ends of said pins, a line carried by said standard and passing through said guiding eye and having its lower ends connected with said tongs, and a support carried by said line and adapted to rest upon said pins to hold said tongs in an open position, said guiding eye extending beyond said pins whereby said support will be drawn free of said pins when said line is drawn upwardly, after said support has been engaged by said pins.

4. A grapple of the character described comprising a standard, a block at the lower end of said standard, a shoulder extending from said block provided with a threaded opening in which the lower end of said standard fits, tongs pivotally connected with the ends of said block, a guiding strip carried by said standard, lines connected with said tongs and passed through the end portions of said guiding strip, an operating line connected with the upper ends of said first-mentioned lines, and a line connected with said block whereby said standard may be raised and lowered.

5. A grapple of the character described comprising a standard, tongs pivotally connected with the lower end portion of said standard, a strip secured to said standard and having its end portions formed into eyes, an operating line, and lines connected with said operating line and passed through the eyes of said strip and connected with said tongs.

1,106,652. SHEAF-LOADER. DANIEL D. HENRY, Fordville, N. D. Filed Sept. 13, 1913. Serial No. 789,647. (Cl. 214—2.)



1. In a loader, the combination of carrying means, conveying means extending at an angle of approximately forty five degrees to the line of traverse of the carrying means; the said conveying means being also inclined upwardly and rearwardly from a point adjacent the ground at an angle of approximately thirty degrees, and an upstanding conveyer extending forwardly at an acute angle to the foremost portion of the first-named conveyer.

2. A loader having two conveyers, one conveyer arranged to travel with one end near the ground at an angle to the line of traverse, the other end of the conveyer being elevated, and the second conveyer being arranged in upstanding position at an angle of less than ninety degrees from the rear end of the foremost portion of the first-named conveyer.

3. In a loader, the combination of a wheel-supported main frame, an apron supported on said frame and inclined to the line of the traverse thereof and also inclined upwardly or rearwardly, a second upstanding apron carried by the main frame and extending forwardly from the rear end of the foremost portion of the first-named apron, and means for driving the said aprons.

1,106,653. CUFF-HOLDER. CHARLES M. HOLLINGSWORTH, Washington, D. C. Filed July 9, 1912. Serial No. 708,459. (Cl. 24—73.)



1. A holder for securing the ends of shirt sleeve cuffs, comprising a body formed of a single strand of wire, one end of which is bent back upon itself to form a spring hook for engaging and interlocking with the button hole in one of the cuff edges, and its other end bent back upon itself to form a spring hook for interlockably engaging the shank of a button in the button hole at the other edge of the cuff, the said last named spring hook being in a plane at right angles to the plane of the other hook.

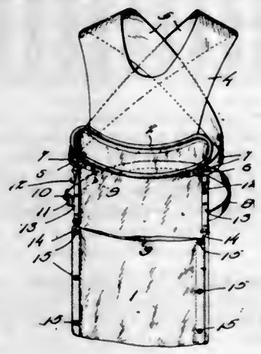
2. A holder for securing the ends of shirt sleeve cuffs, comprising a body formed of a single strand of wire, one end of which is bent back upon itself to form a spring hook for engaging and interlocking with the button hole in one of the cuff edges, and its other end bent back upon itself to form a spring hook for interlockably engaging the shank of a button in the button hole at the other edge of the cuff, the said last named spring hook being in a plane at right angles to the plane of the other hook, said strand adjacent to one of said hooks being bent to form lateral loops which are located in the same plane as the hook at the opposite end.

3. A cuff holder of spring wire, said wire having one of its ends bent to form a hook, whereby it is adapted to engage interlockably with the edges of the cuff button hole, the body portion of the holder adjacent the said hook being laterally extended to form a spring clamping member that coöperates with the hook for holding the said hook end clamped upon the edge of the button hole of the cuff, the free end of the said body portion having a hook bent back upon the body portion for slipping over and interlocking with the shank of a cuff button.

4. As a new article, a cuff holder formed of a single piece of spring wire, one end of which is bent to form a hook for slipping over and interlocking with the shank of a cuff button, the other end of said wire being bent laterally and in opposite directions to form bearing loops, the end of the wire beyond said bearing loops being bent back over the loops and at right angles thereto to form another loop, one member of the loop portion of the holder forming a clamping portion for coöperating with the said last named loop.

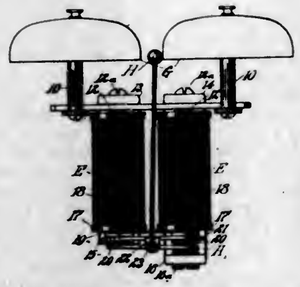
5. A holder for securing the ends of straight sleeve cuffs, the same comprising a body consisting of a single straight strand of wire said strand then having one end bent to form a resilient hook, said holder including a member projecting from the other end of said strand and in a direction normal to the plane containing said body and said first mentioned hook end, said member adapted to project through the button hole of a cuff and form a pivot on which said body may be turned in a plane parallel to the plane of the cuff, said holder including means for retaining said pivot member in place in the cuff hole.

1,106,654. FRUIT-PICKING SACK. JAMES B. HOLT, Pullman, Wash. Filed Aug. 18, 1913. Serial No. 785,192. (Cl. 150—2.)



The combination in a fruit picking sack of an arcuate hoop member, a sack of flexible material secured thereto and having an open bottom, means comprising opposite eyelets at the bottom of the sack and opposite hooks near the top of the sack for adjustably securing the bottom of the sack in an upturned position to provide a receptacle of the desired capacity, a bib secured to the sack and having broad tapering bands and a series of eyelets in the ends of the bands, opposite hooks secured to the sack adapted to engage with the eyelets in the ends of the aforesaid bands to hold the sack in place, and an adjustable back strap secured to one side of the sack to retain the sack in position against the body of the wearer at all times, and a fastening member secured to the opposite side of the sack to which the aforesaid adjustable back strap may be fastened.

1,106,655. TELEPHONE CALL-BELL OR RINGER. WILLIAM KAISLING, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Aug. 10, 1906. Serial No. 330,033. (Cl. 177—7.)



1. A biased telephone bell or ringer comprising substantially parallel electromagnets, an armature pivoted at an intermediate point between the poles of said magnets, and biasing means comprising a permanent magnet having its poles presented to the opposite ends of said armature.

2. A biased telephone bell or ringer comprising substantially parallel electromagnets having projecting cores, a yoke uniting the projecting portions of said cores, an armature pivoted at a point intermediate of its length to an intermediate point of said yoke, and a permanent magnet having its poles presented to the opposite ends of said armature so as to bias the latter.

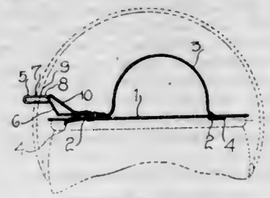
3. A biased telephone bell or ringer comprising substantially parallel electromagnets having projecting cores, a yoke uniting the projecting portions of said cores, an armature pivoted at a point intermediate of its length to an intermediate point of said yoke, and a permanent magnet having one pole lying opposite the pole-face of one of said electromagnets so as to leave a space for one end of said armature and having its other pole lying adjacent to the other end of said armature.

4. A ringer comprising a pair of magnet cores, a rocking armature having its axis between the ends of said cores and disposed to be magnetically controlled thereby, and biasing means including permanent magnet means imparting a preponderating normal attractive stress to said armature always at the same side of its axis.

5. A ringer comprising a pair of magnet cores, a vibratory armature supported at an intermediate point in its length and having two free ends extending from its support, one to the end of each of said cores, permanent magnet means imparting a preponderating normal stress always to the same free end of said armature whereby said ringer has a definite normal bias, and energizing coils for said cores for rocking said armature.

[Claim 6 not printed in the Gazette.]

1,106,656. COVER FOR KETTLES AND THE LIKE. GEORGE FRANKLIN KEARNEY, Gorham, N. Y., assignor of one-half to Charles D. Scofield, Gorham, N. Y. Filed Feb. 24, 1914. Serial No. 820,614. (Cl. 53—8.)



1. A cover for kettles and the like provided with slots, and a handle member and bail support combined, provided with lugs detachably engageable with the cover by means of said slots, and provided at one end with laterally spaced fingers forming between them a bail receiving recess, for the purpose specified.

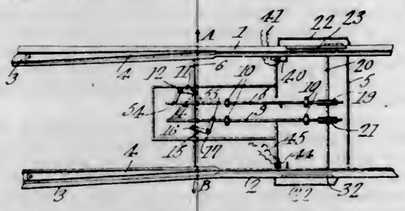
2. A cover for kettles or the like, and a bail supporting member provided with means for connection to the cover, said bail supporting member being of angular formation and adapted to project beyond the cover and formed with laterally spaced fingers producing between them a recess for the reception of a bail, the material cut to form said recess being bent backwardly and secured to the base of the bail supporting member whereby to constitute a brace.

3. A cover for kettles and the like, and a combined handle and bail supporting member detachably engageable therewith, the same including outwardly projecting laterally spaced fingers forming a recess for the reception of a bail, and a brace at the inner end of said recess connected to the base of the bail supporting member, for the purpose specified.

1,106,657. SWITCH THROW. WILLIAM A. LINES, Spokane, Wash. Filed June 7, 1913. Serial No. 772,403. (Cl. 104—24.)

1. In a device of the class described, a switch point; a wheel engaging member operatively connected with the switch point; movable means for disposing said member in wheel engaging position, and including an armature;

and an electromagnet to which the armature is responsive, the electromagnet being permanently fixed with respect to the armature.



2. In a device of the class described, a switch point; a wheel engaging member operatively connected with the switch point; a shaft supported for rotation adjacent the wheel engaging member and provided with an eccentric element adapted to engage the wheel engaging member; an armature secured eccentrically to the shaft; and an electromagnet to which the armature is responsive.

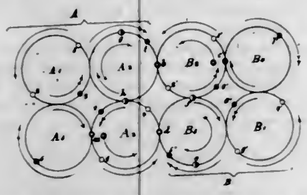
3. In a device of the class described, a switch point; a shaft supported for rotation and operatively connected with the switch point; an actuating member mounted to move with respect to the shaft; a wheel engaging member, mechanism for operatively connecting the wheel engaging member with the shaft; a cup in which said mechanism dips; and a liquid in the cup, the liquid having a lower freezing point than the freezing point of water.

4. In a device of the class described, a switch point; a rail; a shaft disposed transversely of the rail and supported for rotation; a pivotally supported wheel engaging member; pawl and ratchet mechanism operatively connecting the wheel engaging member with the shaft; an actuating member; means for operatively connecting the operating member with the shaft; a pivotally supported lever opeartively connected with the actuating member; and a connection between the lever and the switch point.

5. In a device of the class described, a switch point and a rail; a pair of actuating members movable longitudinally of the rail; a connecting element united with the switch point; levers uniting the connecting element with the actuating members; a shaft supported for rotation and disposed transversely of the rail; means for operatively connecting the shaft with the actuating members; pivotally supported wheel engaging elements; and lost motion connections between the wheel engaging elements and the shaft.

[Claim 6 not printed in the Gazette.]

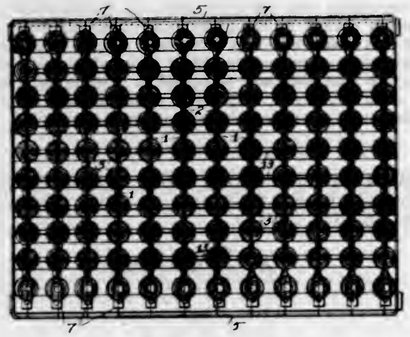
1,106,658. ROPE BELT, ROPE BAND, AND THE LIKE. ARTHUR LUCKWEIL, Mannheim-Neckarau, Germany. Filed Sept. 5, 1911. Serial No. 647,587. (Cl. 28—25.)



A braided belt consisting of a plurality of braids each made of strands independent of the strands of the other braid, said braids being united at their proximal edges by independent strands braided together and interlocking with said proximal edges.

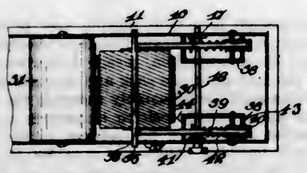
1,106,659. BED-MATTRESS. FRANK MAJOR, Mishawaka, Ind. Filed Jan. 9, 1914. Serial No. 811,212. (Cl. 5—29.)

In a bed mattress, the combination with bed side-rails and supplemental angle irons secured thereto, of a rectangular frame or top rim, rigid longitudinal stays disposed parallel with said rails and spaced apart, and formed with transversely-registering seats, transverse stays crossing the longitudinal stays at right angles thereto, and having their ends turned to bring said ends into position to flatly engage said angle irons, and to present



the upper edges of said transverse stays in position to engage said seats to firmly connect said transverse stays at their points of crossing with said longitudinal stays, and a wire mattress permanently secured to said right-angularly crossed stays, and to said frame, whereby the mattress is also permanently secured to the angle irons and the side-rails of the bed.

1,106,660. APPARATUS FOR PRINTING TAPE. ALBERT H. MARSHALL and THOMAS L. RICHARDSON, Chicago, Ill. Filed Feb. 26, 1914. Serial No. 821,263. (Cl. 211—30.)

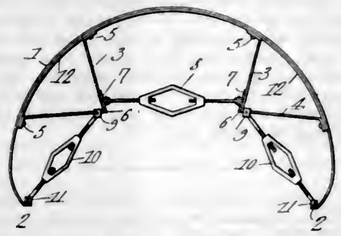


1. In a tape-printing machine, a tape roll, a shaft supporting said roll, disks on the shaft between which the roll is mounted, guide rollers in front and to the rear of the roll, a housing inclosing the roll, the front end of said housing having a tape exit slot, a pair of rollers in the housing adjacent to said slot, between which rollers the tape passes, and impression and type cylinders beneath the tape roll and to the rear thereof, between which cylinders the tape passes and thence upward over the rear guide roller and across the top of the roll between the aforesaid disks, and thence over the front guide roller and down to the pair of rollers adjacent to the exit slot.

2. In a tape-printing machine, a tape roll, a shaft supporting said roll, disks on the shaft between which the roll is mounted, guide rollers in front and to the rear of the roll, a housing inclosing the roll, the front end of said housing having a tape exit slot, a pair of rollers in the housing adjacent to said slot, between which rollers the tape passes, one of said rollers being spring-pressed toward the other, impression and type cylinders beneath the tape roll and to the rear thereof, between which cylinders the tape passes and thence upward over the rear guide roller and across the top of the roll between the aforesaid disks, and thence over the front guide roller and down to the pair of rollers adjacent to the exit slot.

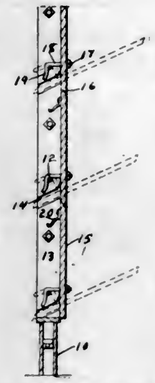
3. In a tape-printing apparatus, an impression cylinder, a type cylinder and its shaft, a bearing in which the type cylinder shaft is slidable, plungers engaging said shaft, externally threaded sleeves into which the rear ends of the plungers extend, supports into which the sleeves are screwed, abutments on the plungers, and springs coiled around the plungers between the abutments and the ends of the sleeves.

1,106,661. MOLD. FRANK P. MARTIN, Williamsburg, Kans. Filed Apr. 7, 1913. Serial No. 759,507. (Cl. 25—131.5.)



A mold comprising an arcuated plate of resilient metal, said plate substantially semi-circular in configuration, brackets secured to said plate disposed substantially central of the first and second quadrants thereof, the said brackets defining substantially equilateral triangles and rigidly secured to said plate, turn buckles extending substantially at 45 degrees to the lower sides of the brackets and pivotally connected at their ends to the adjacent vertices of the said equilateral triangular brackets and to the extremities of the arcuated plate, and a central horizontally extending turn buckle pivotally secured to the adjacent vertices of the said equilateral triangle brackets, said turn buckles controlling the arcuation of the plate in zones, the said zones overlapping and mutually governed by said turn buckles.

1,106,662. SILO-DOOR. JOHN HENRY MAYER, Humboldt, Iowa, assignor to Humboldt Cement Products Mfg. Co., Humboldt, Iowa, a Corporation of Iowa. Filed Mar. 17, 1913. Serial No. 755,030. (Cl. 20—1.4.)



1. In a device of the class described, a silo having a vertical door opening, vertical frame members in said opening provided with a plurality of pairs of opposite slots inclined from the front edge of the door outwardly and downwardly, a plurality of door sections designed to fill said door opening, each of said sections being arranged to have its lower end received in one pair of said slots so that the door is inclined upwardly and inwardly from the opening to form a chute, and means for holding the door sections in their last named positions.

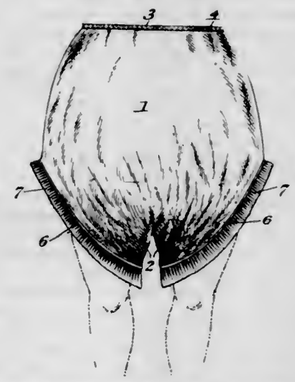
2. In a device of the class described, a silo having a vertical door opening, vertical frame members in said opening provided with a plurality of pairs of opposite slots inclined from the front edge of the door outwardly and downwardly, a plurality of door sections designed to fill said door opening, each of said sections being arranged to have its lower end received in one pair of said slots so that the door is inclined upwardly and inwardly from the opening to form a chute, and means for holding said door sections in their closed and in their last named positions.

3. In a device of the class described, a silo having a vertical door opening provided with upright frame members at its sides, said frame members being provided with a plurality of opposite pairs of slots inclined from the front of the door frame downwardly and outwardly, a horizontal rod connecting the upright members just above each of the pairs of slots, a plurality of door sections for closing said door opening, inwardly extending hook members arranged on the lower part of each door section in a horizontal line, each comprising a horizontal portion mounted in the door section and a downwardly and outwardly curved portion formed on the inner end of the horizontal portion, said hook members being designed to extend over and engage the rods when the doors are in vertical, closed position, said doors being capable of being placed in position with their lower side edges received in the pairs of slots and with said hook members engaging said rods for locking said doors in position inclined upwardly and outwardly from the door opening, substantially as described.

4. In a device of the class described, the combination of a silo having a vertical door opening therein, a frame for said door opening provided at intervals with horizontal rods and having a plurality of oppositely arranged inclined slots formed in the parallel faces thereof, to receive the side edges of a door section, a plurality of door sections arranged in said opening with their vertical edges resting against the inside surface of said door frame, and hook-shaped arms on each section near the lower edge thereof for engaging said horizontal rods to thereby hold said door sections in closed position, or in position with the door edges received in a pair of said slots.

5. In a device of the class described, the combination of a silo having a vertical door opening therein, a frame for said door opening provided at intervals with horizontal rods and having a plurality of oppositely arranged slots formed in the parallel faces thereof, a plurality of door sections provided with beveled upper and lower edges arranged in said door frame, and hook-shaped arms on each of said door sections, each comprising an outwardly extending portion rigidly secured to the lower portion of the door section, and a downwardly extending portion curved outwardly to engage the adjacent horizontal rod and draw said door section tightly against the door frame as the section is moved downwardly, said oppositely arranged slots in the door frame being so positioned that by raising the door sections a slight distance upwardly they may be swung on said horizontal rods to a substantially horizontal position, for the purposes stated.

1,106,663. LADY'S UNDERGARMENT. LAURANCE MAYER, New York, N. Y., assignor to Julius Kayser & Co., New York, N. Y., a Corporation of New York. Filed Dec. 30, 1913. Serial No. 809,486. (Cl. 2—144.)

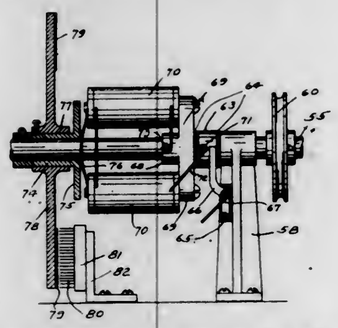


1. An undergarment comprising a bag-like body part having a permanently closed front and rear portion and

a continuous closed bottom, a substantially vertical continuous leg opening at each side near the bottom and an open top provided with means whereby the garment may be supported from the waist of the wearer.

2. An undergarment comprising a bag-like downwardly enlarging body part having a permanently closed front and rear portion and a continuous closed bottom, a substantially vertical continuous leg opening at each side of the body part extending from the bottom thereof upwardly and means whereby the garment may be supported from its upper edge.

1,106,664. SOUND-OPERATING MECHANISM. CHARLES L. METZGER, JOSEPH A. FORSTER, and WILLIAM E. KUNE, Alameda, Cal. Filed June 18, 1912. Serial No. 704,379. (Cl. 46—70.)



1. In an apparatus of the class described, a device for imitating the exhaust of a locomotive comprising a shaft, means to drive said shaft, a hub slidably and rotatably mounted on said shaft, friction producing means carried by said hub, coacting means adjacent the path of said friction producing means and adapted to engage the friction producing means when the hub is slid along the shaft and rotated, and means to simultaneously move said hub along said shaft and cause the hub to rotate with the shaft.

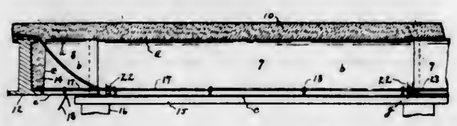
2. In an apparatus of the class described, a device for imitating the exhaust of a locomotive comprising a shaft, means for driving said shaft, a hub slidably and rotatably mounted on said shaft, lateral arms carried by said hub, said arms provided with rough outer portions constituting friction producing portions, and means adjacent the path of said friction producing portions and adapted to engage the friction producing portions when the hub is slid along the shaft and rotated, and means to simultaneously move said shaft and cause the hub to rotate with the shaft.

3. In an apparatus of the class described, a device for imitating the exhaust of a locomotive comprising a shaft, means for driving said shaft, a hub slidably and rotatably mounted on said shaft, friction producing means carried by said hub, a plurality of pin-like teeth adjacent the path of said friction producing means, said teeth adapted to engage said friction producing means when the hub is slid along the shaft and rotated, and means to simultaneously move said hub along said shaft and cause the hub to rotate with the shaft.

4. In an apparatus of the class described, a device for imitating the exhaust of a locomotive comprising a shaft, means for driving said shaft, a hub slidably and rotatably mounted upon said shaft, a plurality of laterally extending arms formed upon said hub, sand paper carried by the outer portions of said arms, a plurality of pin-like teeth positioned adjacent said arms and adapted to engage the sand paper carried by said arms when the hub is slid along the shaft and rotated, and means to simultaneously move said hub along said shaft and cause the hub to rotate with the shaft.

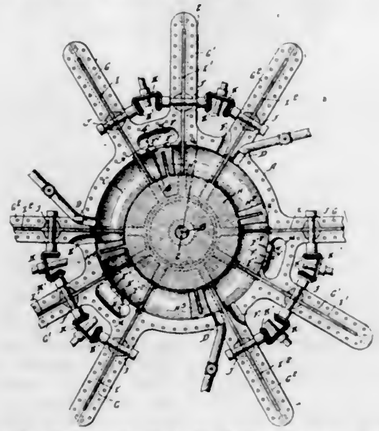
5. In an apparatus of the class described, a device for imitating the exhaust of a locomotive comprising a shaft, means for driving said shaft, a hub slidably and rotatably mounted on said shaft, friction producing means carried by said hub, co-acting means adjacent the path of said friction producing means and adapted to engage the friction producing means when the hub is slid along the shaft and rotated, means carried by said shaft for normally holding said friction producing means from engagement with said co-acting means thereby preventing the device from accidentally producing a noise, and means to simultaneously move said hub along said shaft and cause the hub to rotate with said shaft.

1,106,665. REMOVABLE MOLD FOR CONCRETE FLOORS. CHARLES LOUIS MEYER, Omaha, Nebr. Filed July 31, 1912. Serial No. 712,455. (Cl. 25—131.5.)



A mold for concrete floors comprising a body portion of inverted U shape in cross section, having horizontal outturned flanges extending longitudinally along the lower edges of its side walls, there being openings formed vertically through said flanges said openings being nearer to the side walls than to the outer edges of the flanges, whereby when a plurality of said molds are arranged side by side to construct a floor with their flanges partially overlapping each other said openings may lie outside of said overlapping portion to permit the passage of lath retaining strands through said openings.

1,106,666. ROTARY INTERNAL-COMBUSTION ENGINE. WILLIAM O. MILLER, Billings, Mont. Filed Sept. 19, 1912. Serial No. 721,254. (Cl. 123—13.)



1. The combination with an annular piston chamber having a by-pass, of a piston traveling in said chamber and forming the sole means for opening and closing said by-pass, means for closing said piston chamber slightly in advance of said by-pass as the piston approaches the point of closure, whereby a charge is compressed and forced into the by-pass by the advancing piston, means for closing the chamber on the rear side of the by-pass and piston before the latter passes the rear end of the by-pass, and means for exploding the charge after the piston has opened the rear end of the by-pass and while it covers the front end.

2. The combination with a power shaft bearing a series of pistons and a casing having an annular piston chamber concentric with the power shaft and a series of valveless by-passes each slightly longer than each piston, of means for temporarily closing said chamber slightly in advance of each by-pass as a piston approaches that by-pass, means for temporarily closing said chamber upon the rear side of the same by-pass after the piston passes that point of closure and before it passes the rear end of the same by-pass, and means for exploding the charge after said rear end is uncovered by the piston.

3. The combination with an annular piston chamber having a valveless by-pass and exhaust and inlet ports in the front and rear, respectively, of the by-pass, of a piston traveling in said chamber and adapted to close the ends of the by-pass in succession only, as it passes them, means for closing the chamber temporarily slightly in advance of the forward end of the by-pass as the piston approaches this point of closure, means for closing the chamber temporarily in the rear of the by-pass after the piston has passed this second point of closure, means for igniting the charge when the piston has opened the rear end of the bypass and obstructs the front end of the same, and means for closing the chamber slightly in advance of said exhaust port while the piston is approaching this third point of closure under the impulse of the explosion.

4. The combination with an annular piston chamber having a series of equally spaced valveless by-passes with an inlet port in the rear of each and an exhaust port in advance of each, a numerically different series of equally spaced pistons traveling in said chamber and each adapted to close the rear and forward ends of each by-pass in succession only, means for closing the chamber momentarily slightly in advance of each by-pass when any piston approaches it from the corresponding inlet port, means for closing the chamber momentarily in the rear of the same by-pass after the piston has passed this point of closure, means for igniting the charge when the piston has opened the rear end of the same by-pass and is obstructing the forward end of the same, and means for momentarily closing the chamber slightly in advance of the corresponding exhaust port while the piston is nearing the latter.

5. In apparatus of the class described, the combination with a casing having an annular piston chamber provided with a valveless by-pass from one point to another thereof, of a piston traveling in said chamber and incapable of closing both terminals of said by-pass simultaneously, and means for temporarily closing said chamber at points in front and rear of said by-pass while the piston is between said points of closure.

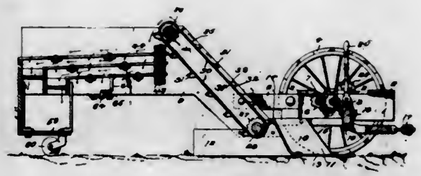
[Claims 6 to 9 not printed in the Gazette.]

1,106,667. EYELESS NEEDLE. PATRICK ROBERT MINAHAN, Fond Du Lac, Wis. Filed June 9, 1913. Serial No. 772,705. (Cl. 223—37.)



An eyeless needle comprising a pointed, forward end, a rearwardly extending threaded shank carried thereby, said shank being split longitudinally of its length for constituting a substantially tapering shank when the same is in a compressed condition, the threads upon said shank being rounded, said shank provided with a longitudinally extending groove adjacent the split portion of said shank, an internally threaded sleeve positioned upon said shank and being provided with rounded threads, said threads upon said shank adapted to grip a thread and extending within said groove of said shank for substantially one-half the depth thereof and constituting efficient means for binding a thread in engagement with said needle.

1,106,668. POTATO-HARVESTER. THOMAS S. MOORE, Shoshoni, Wyo. Filed Jan. 25, 1913. Serial No. 744,195. (Cl. 55—9.)



1. An apparatus for the purpose set forth comprising a wheeled frame, a supplemental frame arranged in rear of the wheeled frame, pivotal connections between the two frames, a scoop secured to the supplemental frame, a conveyer carried by the supplemental frame in rear of the scoop and adjacent the same, means upon the wheeled frame for actuating the conveyer, and means mounted upon the wheeled frame for adjustably supporting the scoop.

2. The combination of a wheel-supported frame, a supplemental frome pivotally connected therewith, a scoop secured to the said supplemental frame and disposed below the wheeled frame, draft devices connected with the scoop, means for raising and lowering said draft devices and the scoop, a conveyer mounted within the supplemental frame, a sprocket wheel connected with said conveyer, a pinion on the axle of the wheeled frame, a transmission shaft disposed on said frame parallel with the axle, a pinion on said shaft meshing with the pinion on the axle, a sprocket wheel loosely mounted on the transmission shaft, a chain trained around said sprocket wheel and the first-mentioned sprocket wheel, means for holding the sprocket wheel on the transmission shaft normally locked to said shaft, and means for releasing said sprocket wheel.

3. The combination of a main frame, supporting means therefor, a supplemental frame connected with the main frame in rear thereof, a scoop secured to the said supplemental frame and having rearwardly extending wings secured to the forward end of the supplemental frame and extending rearwardly beyond the same, a conveyer mounted within the supplemental frame, and means upon the main frame for actuating said conveyer.

4. The combination of a wheeled frame, a supplemental frame in rear of the wheeled frame and connected therewith, a scoop secured to the supplemental frame, a conveyer mounted in the supplemental frame, and means on the wheeled frame to operate the conveyer.

5. The combination of a wheeled frame, a supplemental frame in rear of the wheeled frame and connected therewith, a scoop secured to the supplemental frame, a conveyer mounted in the supplemental frame, means on the wheeled frame to operate the conveyer, and a separator arranged in rear of the conveyer and operatively connected therewith.

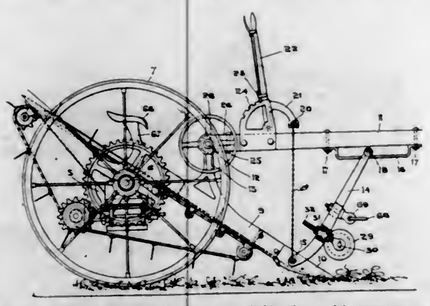
[Claims 6 and 7 not printed in the Gazette.]

1,106,669. POTATO-DIGGER. JOSEPH MOREAU, St. Germain de Grantham, Quebec, Canada. Filed July 22, 1910. Serial No. 573,361. (Cl. 55—50.)

1. A machine of the character described comprising a wheeled framework, an inclined chute, a digging member mounted at the lower end of said chute, a draft yoke pivotally connected to the digging member, and a roller adjustably mounted on said draft yoke above the digging member.

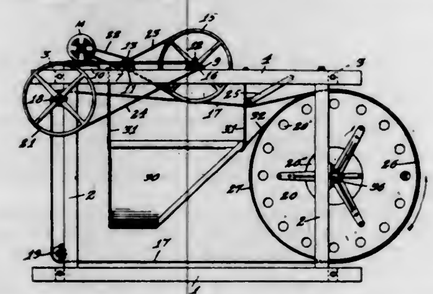
2. A machine of the character described comprising a wheeled framework, an inclined chute, a digging member carried by the chute, a tongue pivotally connected to the chute, a draft yoke pivotally mounted on the digging member, and means on said tongue for adjusting the inclination of the chute.

3. A machine of the character described comprising a wheeled framework, an inclined chute, a digging member carried by the chute, a tongue pivoted to the chute for



movement in a vertical plane, a joint in said tongue permitting one portion thereof movement in a horizontal plane, and means for adjusting the angle between the chute and tongue.

1,106,670. PRINT-DRIER. BEVERLY Y. MORRIS, Corte Madera, Cal.; Freda C. Morris, administratrix of said Beverly Y. Morris, deceased. Filed Oct. 4, 1913. Serial No. 793,361. (Cl. 34—4.)



1. A print drier comprising a drum, means to heat said drum, an endless apron passing around said drum, a pair of spaced rollers around which said apron passes, a chute between the two runs of the apron, and means to remove the prints from the drum and discharge them into said chute.

2. In a print drier, a drum, means to heat said drum, an endless apron passing around said drum, a pair of rollers around which said apron passes, a chute between the two runs of the apron, means to discharge the prints from the drum into said chute, and means to cause the prints adhering to the apron to be removed therefrom above said chute.

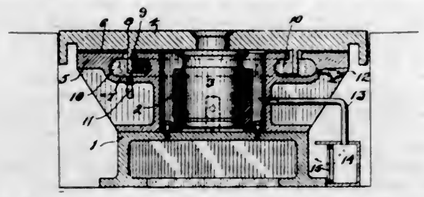
3. In a print drier, a revoluble drum, means to heat said drum, an absorbent covering for said drum, and endless apron passing around said drum, a pair of rollers over which said apron passes, a chute between the two runs of the apron, means to discharge prints from the drum into said chute, means to cause the prints adhering to the apron to fall into said chute, and a motor for driving the drum at a substantially constant speed.

4. In a print drier, a revoluble drum, means to heat said drum, an endless apron passing around the drum, rollers over which said apron passes, an inclined chute between the two runs of the apron adapted to discharge prints falling thereinto at a distance from the drum, means to discharge the prints into said chute, and a belt tightener above the apron to cause prints adhering thereto to fall into said chute.

5. In a print drier, a revoluble drum, means to heat said drum, an absorbent covering therefor, an endless absorbent apron extending around the drum, a pair of rollers spaced away from each other at substantially the diameter of the drum, and about which an endless apron passes, an inclined chute adapted to deliver prints falling thereinto at a distance from the drum, means to remove prints from the drum and deliver them to the chute, a pair of links, and a roller pivoted in said links and bearing upon the top of the drum and aprons for loosening prints therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,106,671. LIQUID SEAL FOR JOLT RAMMING-MACHINES. EDGAR H. MUMFORD, Plainfield, N. J. Filed Oct. 5, 1912. Serial No. 724,073. (Cl. 22—45.)



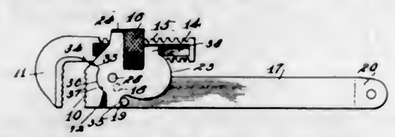
1. A plunger-operated jolt ramming machine comprising in combination a plunger member, a reciprocating member, a protective collar carried by one of said members, and a body of liquid, the collar being constructed to be immersed in the liquid and form the seal to prevent entrance of dust to the plunger surfaces.

2. A jolt ramming machine comprising in combination, a plunger, an anvil, a reciprocating part, a collar carried by the reciprocating part, and a body of liquid into which the collar depends, substantially as described.

3. A jolt ramming machine provided with a coöperating dirt repelling curtain or collar and a liquid with which said collar forms a seal to protect the moving parts of the machine.

4. A jolt ramming machine provided with a coöperating dirt repelling curtain or collar and a liquid with which said collar forms a seal to protect the moving parts of the machine, and means for cleaning said liquid and its receptacle.

1,106,672. WRENCH. HENRY MUNSON, Great Falls, Mont., and BENJAMIN HAZELTINE, Center Point, Iowa. Filed Mar. 3, 1913. Serial No. 751,840. (Cl. 81—105.)



In a pipe wrench, a handle consisting of parallel bars, spacing blocks between said bars, one of which has a plurality of edge seats, a fixed jaw carried by the forward end of the handle, and having side faces provided with upper and lower shoulders, a yoke pivotally mounted on the handle and having curved cheek-pieces fitting the curved seats of the fixed jaw, shoulders coacting with the shoulders of said fixed jaws, and a connecting web formed on its inner face with seats confronting and alining with those of said spacing block, a coil spring supported in said alined seats, said yoke also having parallel stop ears on opposite sides of the handle to engage abutments projecting from opposite sides of the handle, and parallel guide lugs, and a movable jaw adjustably mounted on the handle and held against lateral movement by said guide lugs.

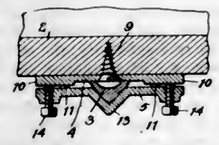
1,106,673. INSECT-CATCHER. JAMES A. NEWSOM, Yazoo City, Miss. Filed Oct. 30, 1913. Serial No. 798,274. (Cl. 43—1.)

1. The herein described insect catcher comprising a pan of heart-shaped configuration with its slot at the front, the pan having an upstanding flange around its edge and following the sides of the slot, said flange being widest at the rear, a handle rising from the rear portion of said pan, a wire bail connected at its extremities with the flange and at its center with the handle, a wire screen whose upper edge is attached to said bail and whose lower edge is attached to the flange, and a brush carried by said flange and extending across the pan at the rear of the slot therein, the whole for use substantially as described.



2. The herein described insect catcher comprising a pan of heart-shaped configuration with its slot at the front, the pan having an upstanding flange around its edge and following the sides of the slot, a handle rising from the rear portion of the pan, and a rotary brush extending across the pan at the rear of the slot therein and having its ends journaled in said flange at the sides of the pan.

1,106,674. GUIDE FOR MOLDING-FLASKS. WILLIAM PARTRIDGE, Salem, Ohio. Filed Jan. 30, 1914. Serial No. 815,492. (Cl. 22—110.)

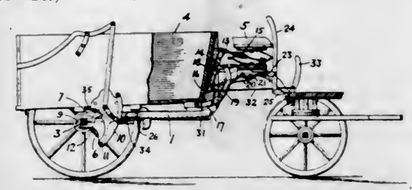


1. In a molding flask, the combination with a drag and cope, of an interlocking device comprising a guide pin secured to one of said members, a plate secured to the other member, a guide section secured to said plate and having a groove adapted to receive said pin, and means for adjusting said section laterally and obliquely with relation to the general plane of said plate, whereby said groove may be fixed at a variable distance from said plate and at various angles with relation to the general plate thereof.

2. In a molding flask, the combination with a drag and cope, of an interlocking device comprising a guide pin secured to one of said members, a plate secured to the other member, a guide section having a groove adapted to receive said pin, securing members extending loosely through said section and engaging said plate, and an adjustable spacing member between said plate and section and intermediate of said securing members, whereby said section may be adjusted laterally and obliquely with relation to said plate.

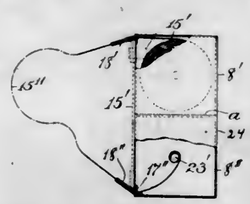
3. In a molding flask, the combination with a drag and cope, of an interlocking device comprising a guide pin secured to one of said members, a plate secured to the other member, a guide section having a groove adapted to receive said pin, screws extending loosely through holes in said section on opposite sides of said groove and engaging threaded holes in said plate, and a set screw having threaded engagement with said section intermediate of said screws and bearing at its end upon said plate.

1,106,675. DUMP-WAGON. HENRY PEZZETTI, Philadelphia, Pa., assignor to American Road Appliance Corporation, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 2, 1912. Serial No. 687,974. (Cl. 21—20.)



In a wagon, the combination of an axle and reaches, a body, arms pivoted together and having circular sliding contact one being rigid with the body and adapted to collide with the axle and operate as a stop and the other being rigid with the reaches, a latch and dumping lever for controlling dumping of the body, brake mechanism including a brake lever, and connections between said brake mechanism and body whereby the body is returned from dumping position by the brake lever.

1,106,676. MOTION-PICTURE-FILM CARTON. ALEXANDER N. PIERMAN, Newark, N. J. Filed Nov. 26, 1913. Serial No. 803,132. (Cl. 88—17.)



1. A container for motion picture films, comprising side and end walls, a slot being provided therein, a flexible light excluding conduit for the film at such slot, and said container being provided with a central bearing, whereby the container may be used for shipping with a film therein and the film in its container may be inserted directly in a motion picture camera for exposure without intermediate rewinding of the film, substantially as set forth.

2. A carton for motion picture films provided with a slot in the wall thereof, and a flat tube of flexible, light-proof material secured thereto about said slot and adapted to protect the interior of the carton from access of light thereto as the film passes through said slot, substantially as set forth.

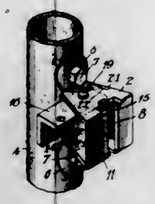
3. A carton for motion picture films having a slot formed in its wall, a central tube permanently secured therein, and a flexible, light excluding conduit connected to the carton wall about said slot, substantially as set forth.

4. In a carton for motion picture films, side walls, an end permanently secured thereto, a tube secured to said end and adapted to be received on a film peg in a motion picture camera, a cover for the opposite end of said carton, said side walls having a slot formed therein through which the film may pass, and a flexible, light tight conduit extending through and projecting from said slot and secured to the said side walls on the interior of said carton, substantially as set forth.

5. In a carton for motion picture films, side walls, said side walls being provided with a film slot, a flexible light proof conduit for said film about said slot, an end wall permanently secured to said side walls, a tube secured centrally to said end wall, and a cover for the oppsite end, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

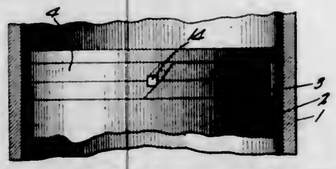
1,106,677. BEDPOST-FASTENING. EMIL POEPPEL, Chicago, Ill. Filed Apr. 7, 1913. Serial No. 759,389. (Cl. 5—55.)



1. In a bedstead, a post bracket of boxlike shape adapted for rigid attachment to a corner post and comprising a front wall formed to engage a side rail or side rail holder, a side wall turned back from said front wall and having a notch in its upper edge, and an angle bar having one flange projecting through said notch into the bracket adjacent to the top for attachment thereto and having its other flange depending and abutting against the said side wall.

2. In a device of the class described, an integral sheet metal holder, comprising a top member, an end member turned downwardly at right angles and adapted for engagement with a supporting body, a side member turned downwardly and adapted to brace the said top and end members, and a diagonal brace member continuous with the lower end of said end member, and turned inwardly and upwardly therefrom against the under side of the top member where its upper end is rigidly fastened.

1,106,678. PACKING-RING. RALPH RAGAN, Atlanta, Ga. Filed Oct. 2, 1913. Serial No. 793,030. (Cl. 121—108.)

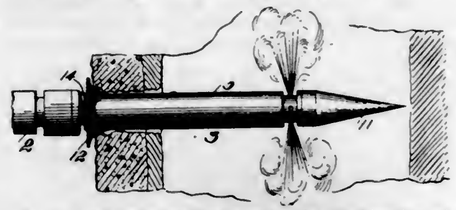


1. The combination with a piston having a circumferential recess therein, of a packing disposed in said recess and composed of three rings, one of the rings being substantially the same thickness as the two rings combined and the two rings being nested and disposed to rest upon one edge of the thicker ring, the adjacent edges of the three rings at one point being provided with notches that form an aperture, and a screw carried by the piston and insertible in the aperture of the rings to lock the rings against independent movement and the complete packing against circumferential movement, the recess and the cooperating portion of the screw being angularly shaped to lock the screw against rotation.

2. The combination with a piston having a circumferential recess, of a packing therefor seated in the recess, said packing being composed of three rings, two of the rings being nested and in combined cross sectional area being substantially the same cross sectional area as the remaining ring, the two nested rings being disposed to fit adjacent one edge of the remaining ring and be disposed in circumferential alinement therewith, all of said rings being open rings, said rings at one point of contact each being provided with a notch to provide an angular aperture, and means carried within the recess of the piston and projecting in the angular aperture to secure the rings against independent circumferential movement and lock the securing means from rotation.

1,106,679. NOZZLE FOR FIRE-EXTINGUISHERS. HARRY W. RANDALL, St. Johnsbury, Vt. Filed July 18, 1913. Serial No. 779,789. (Cl. 137—83.)

1. In a fire extinguishing nozzle, the combination of a pair of telescopically arranged tubes, one of said tubes having a plurality of openings at its forward extremity, the other of said tubes constituting a valve for said openings, a yieldable connection between the tubes, and an abutment formed upon the rear extremity of the outer tube for assisting in uncovering said openings.



2. In a fire extinguishing nozzle, the combination of a pair of telescopically arranged tubes, one of said tubes having a plurality of openings at its forward extremity, the other of said tubes constituting a valve for said opening, a yieldable connection between the tubes, an abutment formed upon the rear extremity of the outer tube, a second abutment formed upon the rear extremity of the inner tube, said second abutment constituting an abutment for the yieldable connection and for engaging the first abutment, during driving, and a penetrating head carried by the outer tube.

3. In a fire extinguishing nozzle, the combination of a pair of telescopically arranged tubes, one of said tubes having a plurality of openings at its forward extremity and a recess at its rear extremity, the other of said tubes constituting a valve for said opening, the last mentioned tube having an abutment formed on its rear extremity, an abutment formed on the extremity of the first mentioned tube adapted to be engaged by the first abutment when the openings are uncovered, and a spring held in said recess and bearing against the abutment on the inner tube, said abutments being arranged to contact and prevent injury to said spring.

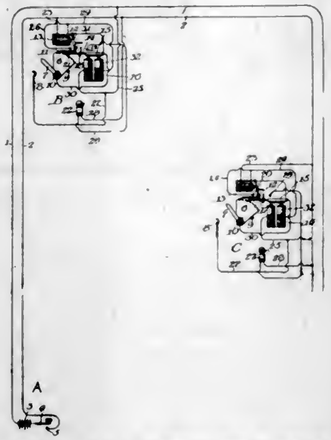
4. In a fire extinguishing nozzle, the combination of a pair of telescopically arranged tubes, one of said tubes having a plurality of openings at its forward extremity and a recess at its rear extremity, the other of said tubes constituting a valve for said opening, the last mentioned tube having an abutment formed on its rear extremity, an abutment formed on the extremity of the first mentioned tube adapted to be engaged by the first abutment when the openings are uncovered, a spring held in said recess and bearing against the abutment on the inner tube, said abutments being arranged to contact and prevent injury to said spring, and a penetrating head removably attached to the outer tube.

1,106,680. SUBSTATION SIGNAL-RECEIVING DEVICE. HARRY O. RUGH, Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company, a Corporation of Maine. Continuation of application Serial No. 603,680, filed Jan. 20, 1911. This application filed Sept. 14, 1911. Serial No. 649,357. (Cl. 177—342.)

1. A substation signal receiving device having a step-by-step element, electro magnetic means for stepping said element to a pre-determined position, slow acting electro magnetic means for holding said element in its actuated position when energized, a signal controlling device under the control of said step-by-step element and means operable upon deënergization of said slow-acting means to close the circuit through said signal controlling device.

2. A substation signal receiving device having a step-by-step element, electro magnetic means for stepping said element to a pre determined position, slow acting electro magnetic means for holding said element in its actuated position when energized, a signal controlling device under the control of said step-by-step element and means whereby said slow acting means controls the circuit through said signal controlling device.

3. A substation signal receiving device having a step-by-step element, electromagnetic means for stepping said element to a pre-determined position, slow acting electromagnetic means for holding said element in its actuated position when energized, both of said electromagnetic means being operatively disconnected from said step-by-step element when said slow actuating means is deënergized, a signal controlling device under the control of said step-by-step element and means operable upon deënergization of said slow acting means to close the circuit through said signal controlling device.

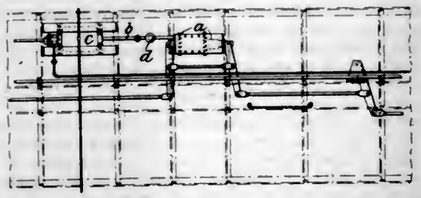


4. A substation signal receiving device having a step-by step element, electromagnetic means for stepping said element to a pre-determined position, slow acting electromagnetic means for holding said element in its actuated position when energized, both of said electromagnetic means being operatively disconnected from said step-by-step element when said slow acting means is deënergized, a signal controlling device under the control of said step-by-step element and means whereby said slow acting means controls the circuit through said signal controlling device.

5. A substation signal-receiving device having a signal circuit, a step-by-step signal circuit controlling element, electro-magnetic means to control the step-up operation of said step-by-step element to close the signal circuit at one point, electro-magnetic release-controlling means for said element including means to hold said step-by-step element and to control the final closure of said signal circuit controlled by said release-controlling means.

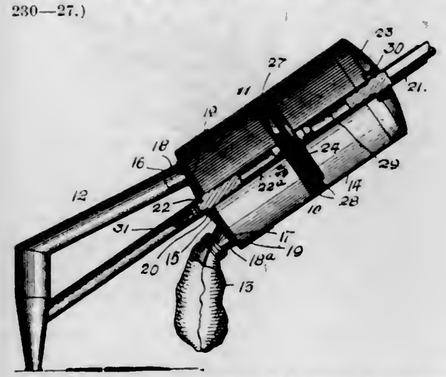
[Claims 6 to 13 not printed in the Gazette.]

1,106,681. PRESSURE-INDICATOR. WILLIAM H. SAUVAGE, New York, N. Y., assignor to Sauvage-Ward Brake Company, Inc., a Corporation of Delaware. Filed June 25, 1912. Serial No. 705,764. (Cl. 73—111.)



A pressure indicator which comprises a cylinder in communication at one end with the source of air pressure and provided on its outer periphery with a series of circumferential grooves constituting a reading scale, a piston within the cylinder subject on one side to the pressure of the air, a spiral spring in operative engagement with the other side of the piston, a plug threaded removably into the open end of the cylinder and constituting a seat for said spring whereby the spring and the piston are entirely incased, and a slidable cap in snug engagement with the outer walls of the cylinder and adapted normally to cover the reading scale, the stem of the piston extending through an aperture in the removable plug and being fastened to the cap whereby upon movement of the piston under air pressure the cap is moved correspondingly and its lower edge passes over the grooves of the reading scale to uncover the same and indicate the pressure acting against the piston, the spring serving to restore the piston and the cap to their normal positions when the piston is relieved from the pressure of the air, the edge of the cap on such return movement serving to remove all foreign substances from the reading scale.

1,106,682. SUCTION-CREATING MECHANISM FOR VACUUM CLEANING APPARATUS. JULIUS SCHIERA, Pittsburgh, Pa., assignor to Hand Vacuum Sweeper Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1912. Serial No. 691,484. (Cl. 230—27.)



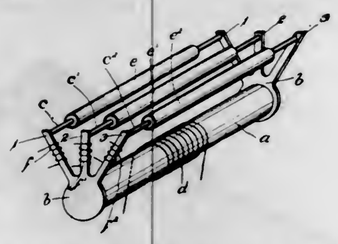
1. In vacuum cleaning apparatus, a handle, a sleeve carried by and movable longitudinally of the handle and having a piston thereon at approximately its forward end, and a cylinder of substantially fixed dimensions secured at its forward end to said handle, and having its rear end mounted on said sleeve in rear of the piston, said piston and cylinder coöperating to provide a suction-creating device upon relative reciprocation of handle and sleeve, said sleeve extending axially of and through the rear end of the cylinder and being movable relatively to such end.

2. In vacuum cleaning apparatus, a handle, a sleeve carried by and movable longitudinally of the handle and having a piston thereon approximate its forward end, and a cylinder of substantially fixed dimensions secured at its forward end to said handle and having its rear end mounted on said sleeve in rear of the piston, said piston and cylinder coöperating to provide a suction-creating device upon relative reciprocation of handle and sleeve, said sleeve extending axially of and through the rear end of the cylinder and being movable relatively to such end, said handle having a tubular portion intermediate its ends and forming a guide to retain the axial alinement of the piston.

3. In vacuum cleaning apparatus, a handle, a sleeve carried by and movable longitudinally of the handle and having a piston thereon approximate its forward end, and a cylinder of substantially fixed dimensions secured at its forward end to said handle and having its rear end mounted on said sleeve in rear of the piston, said piston and cylinder coöperating to provide a suction-creating device upon relative reciprocation of handle and sleeve, said sleeve extending axially of and through the rear end of the cylinder and being movable relatively to such end, said handle having a tubular portion intermediate its ends and forming a guide to retain the axial alinement of the piston, the length of said tubular portion being substantially equal to the length of travel of the piston.

4. In vacuum cleaning apparatus, a handle, a sleeve carried by and movable longitudinally of the handle and having a piston thereon approximate its forward end, and a cylinder of substantially fixed dimensions secured at its forward end to said handle and having its rear end mounted on said sleeve in rear of the piston, said piston and cylinder coöperating to provide a suction-creating device upon relative reciprocation of handle and sleeve, said sleeve extending axially of and through the rear end of the cylinder and being movable relatively to such end, said piston having a peripheral yielding packing including a resilient tubular member.

1,106,683. ELECTRIC WEB-DRYING MACHINE. JOHN C. SHERMAN, Brookline, Mass., assignor to Howard Parker, Berlin, N. H. Filed Apr. 29, 1911, Serial No. 624,011. Renewed Jan. 3, 1914. Serial No. 810,263. (Cl. 219—47.)



1. In a heating and drying machine a non-rotatable magnetic core, a primary winding in one part thereof connected with a source of electrical energy and a secondary coil in the form of a tubular drum rotatably mounted upon said core.

2. In a heating and drying machine a non-rotatable magnetic core divided in part into a plurality of branches, a primary coil mounted on the undivided portion of said core and connected with a source of electrical energy, and short circuited secondary coils of tubular form mounted upon said branches.

3. In a heating and drying machine a non rotatable magnetic core divided in part into a plurality of branches, a primary coil mounted on the undivided portion of said core and connected with a source of electrical energy short circuited secondary coils of tubular form rotatably mounted on said branches, and auxiliary primary coils on the branches of said core.

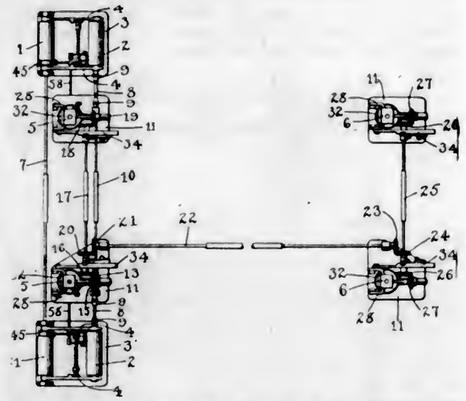
4. In a heating and drying machine a non-rotatable magnetic core divided in part into a plurality of branches, a primary coil mounted on the undivided portion of said core and connected with a source of electrical energy, a short circuited winding in the form of a tubular drum on each of said branches, and means for varying the inductive effect between said core and said short circuited secondary windings.

5. In a heating and drying machine, a non rotatable magnetic core comprising a solid primary section and a plurality of secondary sections, a primary winding on the primary section, and short circuited windings in the form of tubular drums on each secondary section.

1,106,684. HOISTING DEVICE FOR MOTOR-VEHICLES. FRANK A. SIMONDS, Grand Rapids, Mich. Filed Apr. 14, 1913. Serial No. 760,993. (Cl. 57—15.)

1. An automatic hoisting device for motor vehicles comprising, lifting members adapted to engage the motor vehicle to raise the same, and means for actuating said lifting members operated by frictional engagement with the driving wheels of the motor vehicle.

2. An automatic hoisting device for motor vehicles, comprising, lifting members adapted to engage such motor vehicle to raise and lower the same, means for actuating said lifting members operated by frictional engagement with the driving wheels of the automobile, means for stopping the operation of such operating mechanism when the motor vehicle has been raised to a certain predetermined height, and means for stopping the operation of said operating mechanism after the motor vehicle has been lowered to the floor.



3. An automatic hoisting device for motor vehicles comprising, a series of lifting units to raise and lower such motor vehicles, each unit being provided with a lifting member adapted to engage the under side of the automobile and mechanism for operating the same, power transmitting units to engage the tires of the driving wheels of the automobile, each power transmitting unit being provided with an idler roller and a driving roller, said driving rollers being adapted to rise and remain in frictional engagement with the tires of the driving wheels as the automobile is raised, and means for transmitting power from the driving rollers to the operating mechanism in the lifting units.

4. An automatic motor vehicle hoist comprising, power transmitting units adapted to be operated by the driving wheels of such motor vehicle, each power transmitting unit being provided with an idler roller and a driving roller and the driving rollers being adapted to rise and remain in frictional engagement with the tires of the driving wheels as the motor vehicle is raised, shafts to connect the corresponding idler rollers and driving rollers in the respective driving units so that they will rotate simultaneously, a series of lifting members to engage the motor vehicle to raise the same, and means for operating said lifting members actuated by the shaft to which the driving rollers are connected.

5. An automatic hoisting device for motor vehicles comprising, a series of lifting units, each of which is provided with a lifting member mounted in a pivoted frame, which is adapted to tip downward and lie close to the floor, means for raising each frame to vertical operative position, means for actuating the lifting member and power transmitting mechanism operated by frictional engagement with the driving wheels of the motor vehicle and connected by shafts and gears to the mechanism in each of the lifting units to actuate the same.

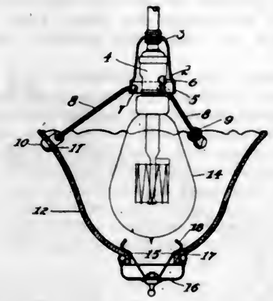
[Claims 6 to 10 not printed in the Gazette.]

1,106,685. LIGHTING-FIXTURE. ESMOND M. SMITH, Cleveland, Ohio, assignor to The Multi-Lux Illuminating Company, Cleveland, Ohio, a Corporation. Filed Feb. 21, 1914. Serial No. 820,109. (Cl. 240—111.)

1. A lighting fixture comprising a shade, a slotted member, and rods hinged to said shade having locking ends detachably engaged with said member.

2. A lighting fixture comprising an inverted shade having a rim with openings, a central member having openings, and rods and coupling members removably seated within the respective openings in the said member and shade.

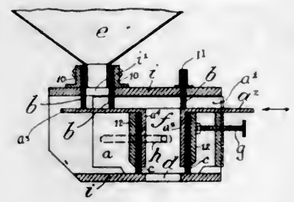
3. A lighting fixture comprising a shade having a rim provided with openings, studs seated within said openings, rods having hinged engagement with said studs and provided with ball ends, and a central member having key-openings for the ball ends of said rods.



4. A lighting fixture comprising a sleeve member having key-openings, rods having bent ends and enlargements thereat in detachable seating engagement with said openings, studs hinged to the outer ends of said rods, and a shade having openings in which said studs are free to turn.

5. A lighting fixture comprising a lamp socket support, a sleeve member having key-openings, rods having bent inner ends provided with ball extremities and the outer ends of said rods having eyes, swivel studs detachably engaged with said rod eyes, and a shade having openings to seat said studs.

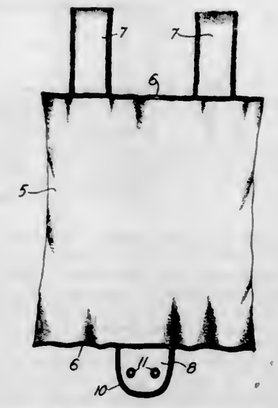
1,106,686. APPARATUS FOR SUPPLYING MEASURED QUANTITIES. DANIEL SWAROVSKI and HUGO WEIS, Wattens, near Hall, Austria-Hungary, assignors to The Firm of Glasschleiferei Wattens A. Kosmann, D. Swarovski & Co., Wattens, Tyrol, Austria-Hungary. Filed June 28, 1913. Serial No. 776,455. (Cl. 221—105.)



1. A device of the character specified, embodying therein a casing having an admission opening and a discharge opening, a carriage operable within said casing for conveying commodities from said admission opening to said discharge opening, said carriage being provided with vertical walls the lower edges of which are spaced away from the base of the casing, a flexible chute for guiding said commodities from said admission opening to said carriage, and a flexible chute extending from the lower edges of said vertical walls into contact with the base of the casing for guiding said commodities from said carriage to said discharge opening.

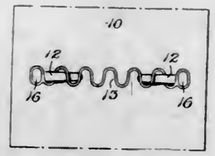
2. A device of the character specified, embodying therein a casing having an admission opening in its upper wall and a discharge opening in its lower wall out of alinement with said admission opening, a carriage reciprocable within said casing and having a chamber therein of variable capacity open at both ends, a pair of brushes extending from said admission opening into contact with the upper wall of said carriage and adapted to guide commodities into the upper end of the chamber in the carriage, and a pair of brushes depending from the lower portion of said carriage and adapted to guide commoditiese out of said chamber to said discharge opening.

1,106,687. INFANT'S BAND. JOSEPH B. THORPE, Highlandville, Mass., assignor to Brown Burrell Co., Boston, Mass., a Corporation of Massachusetts. Filed Oct. 22, 1908. Serial No. 459,018. (Cl. 2—98.)



An infant's band comprising, in combination, a cylindrical elastic body portion (5) of circularly-knit fabric having its edges bound; and knitted separate flaps (8, 8) having bound upper edges with extensive attachment to the bound lower edges of the body portion, each flap comprising a plurality of thicknesses of knitted material having a pair of eyelets (11) binding together a large number of wales of each flap thickness and binding together also the plurality of flap thicknesses whereby strains upon the eyelets are transmitted divergingly to a large number of wales of the knitted flap thicknesses and thence to the extensive bond attachment between the flap thicknesses and the cylindrical body portion.

1,106,688. DISPLAY-MOUNT. SCOTT H. TOLMAN, Boston, Mass. Filed Feb. 9, 1912. Serial No. 676,546. (Cl. 211—34.)



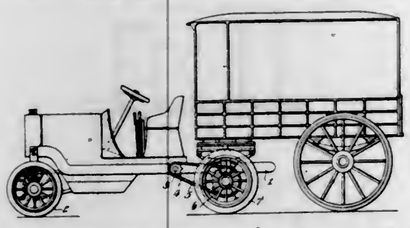
1. The combination with a filamentary structure having a plurality of bends, of a display mount therefor having oppositely disposed flexible tongues each extending over and under portions of said structure which are connected by a bent portion.

2. The combination with a filamentary structure having a plurality of bends, of a display mount therefor having flexible tongues extending substantially in alinement with each other, each of said tongues extending over and under portions of said structure which are connected by a bent portion.

3. The combination with a filamentary structure having a plurality of bends, of a display mount therefor having flexible tongues each interwoven with portions of said structure which are connected by a bent portion.

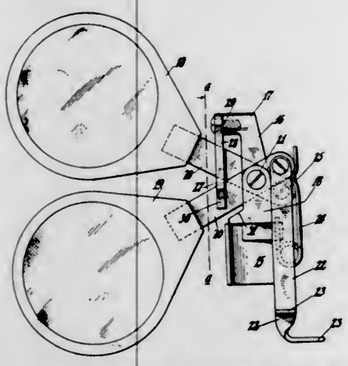
4. The combination with a filamentary structure having a plurality of bends, of a display mount therefor having flexible tongues each extending over and under portions of said structure which are connected by a bent portion, the free ends of said tongues being between said structure and the plane of the mount whereby they are protected from liability of being caught by extraneous objects.

1,106,689. INTERCHANGEABLE MOTOR-VEHICLE. JAMES H. VENNERS, Brooklyn, N. Y., assignor of one-half to W. L. Millspaugh, Brooklyn, N. Y. Filed Feb. 11, 1911. Serial No. 608,037. (Cl. 21—90.)



A motor conveyance comprising a load carrying frame and a tractor frame, two wheels supporting the rear end of the load carrying frame, two wheels supporting both the rear end of the tractor frame and the front end of the load carrying frame, the axis of said last two mentioned wheels being revoluble about a vertical axis passing substantially through the axis of the wheels and being revoluble with respect to the load carrying frame but not with respect to the tractor frame, one or more steering wheels supporting the front of the tractor frame, a motor carried by the tractor frame, means whereby the motor may be mechanically connected with one of the two wheels supporting the front of the load carrying frame and the rear of the tractor frame and disconnected from the other and vice versa, and means whereby the steering wheels may be turned at substantially right angles to the axis of said last mentioned two wheels whereby the tractor frame my be placed at substantially right angles to the load carrying frame without materially moving the load carrying frame.

1,106,690. SIGNAL-LAMP. FRED WILKIE, New York, N. Y., assignor to The Dressel Railway Lamp Works, a Corporation of New York. Filed Sept. 9, 1908. Serial No. 452,295. (Cl. 240—23.)



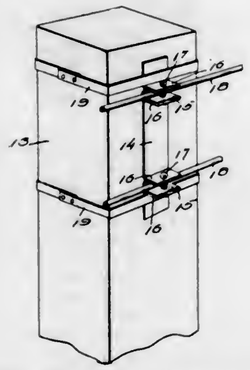
1. In a signal lamp the combination of a bracket, a vertical member thereon, signal glass holders pivotally mounted on said member, means for actuating said signal glass holders, a member pivotally mounted on said vertical member and embracing said signal glass holders intermediate of their ends for locking one of said signal glass holders in inoperative position as the other of said signal glass holders is moved into operative position, and means carried by said bracket for positively maintaining said signal glass holders to their operative and inoperative positions, substantially as specified.

2. In a signal lamp the combination of a bracket, a vertical member thereon, bearings on said bracket, signal glass holders pivotally supported upon said bearings, means for actuating said signal glass holders, a member pivotally mounted on said vertical member and embracing said signal glass holders intermediate of their ends for locking one of said signal glass holders in inoperative position as the other of said signal glass holders is moved into operative position, and means carried by said bracket for positively maintaining said signal glass holders to their operative and inoperative positions, substantially as specified.

3. In a signal lamp the combination of a bracket, a vertical member thereon, bearings on said bracket positioned on opposite sides of said member and spaced therefrom, a pin extending through said bearings and said vertical member, signal glass holders pivotally mounted upon said pin on opposite sides of said vertical member, means for actuating said signal glass holders to move them into their operative and inoperative positions, and means carried by said bracket for positively maintaining said signal glass holders to their operative and inoperative positions, substantially as specified.

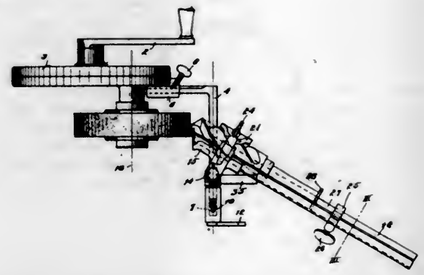
4. A signal lamp comprising a casing, a lens mounted therein, a lamp arranged in said casing behind said lens, a housing on said casing, a support secured in said casing comprising a bracket, bearings arranged upon said bracket, an arm extending upwardly from said bracket intermediate said bearings, a bearing at the upper end of said arm, signal glass holders pivotally mounted side by side intermediate said bearings and arm, links arranged in said housing and pivotally connected to said signal glass holders for actuating the same, means for limiting the movement of said signal glass holders, a split link pivotally supported at its upper end in the bearing on said arm and embracing said signal glass holders intermediate their pivoted ends and the signal glasses carried thereby, said link having its ends inclined downwardly toward each other for permitting either of said signal glass holders to enter into operative position intermediate the inclined edges thereof, and preventing the other of said signal glass holders from entering into operative position therein, and spring means engaging the ends of said arms for positively holding the same to their operative and inoperative positions, substantially as specified.

1,106,691. SECURING MEANS. THOMAS H. WILLIS, Plattsburg, Ohio. Filed Apr. 23, 1913. Serial No. 763,073. (Cl. 256—52.)



A device for detachably connecting spaced strands of wire with a post, comprising a strip bent upon itself at a plurality of points near and spaced from each end for providing double walled sockets having apertures and adapted to receive the strands of wire to hold the same upon the post in spaced relation, pins extending through the apertures of the sockets to retain the strands of wire therein, and securing means engaging the ends of the strip extending outwardly beyond the sockets to securely attach the strip to the post.

1,106,692. TWIST-DRILL-GRINDING ATTACHMENT. JOHN S. WINCRANTZ, Pittsburgh, Pa., assignor to Samuel S. Newman, Pittsburgh, Pa. Filed Jan. 23, 1914. Serial No. 813,887. (Cl. 51—7.)



1. The combination in an attachment for use with a disk grinding machine, of a support for the attachment, and a drill carrier mounted for rotation on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, the said axis of rotation being inclined upwardly with respect to the axis of rotation of the grinding wheel.

2. The combination in an attachment for use with a disk grinding machine, of a support for the attachment, and a drill carrier mounted for rotation on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, the axis of rotation of the wheel and carrier lying in substantially parallel planes but with one axis inclined with respect to the other.

3. The combination in an attachment for use with a disk grinding machine, of a support for the attachment, and a drill carrier mounted for rotation on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, the axis of rotation of the wheel and carrier lying in substantially parallel vertical planes with the axis of the wheel substantially horizontal and the axis of the carrier as it approaches the plane of rotation of the wheel inclined upwardly.

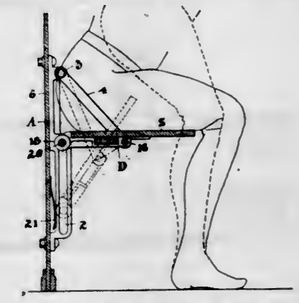
4. The combination in an attachment for use with a disk grinding machine, of a support for the attachment, a drill carrier mounted for rotation on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, and a movable stop which when in operative position limits the normal swing of the carrier.

5. The combination in an attachment for use with a disk grinding machine, of a support for the attachment, a drill carrier mounted for rotation on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, an eccentric sleeve for adjusting the drill carrier toward the wheel as the grinding progresses, an operating handle for the sleeve and means for clamping the eccentric sleeve in any desired position of adjustment.

[Claims 6 to 8 not printed in the Gazette.]

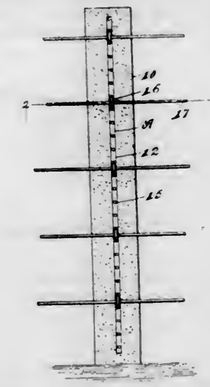
1,106,693. FOLDING SEAT. GOTTLIEB HAASE EDLER VON WRANAU, Cleveland, Ohio, assignor of one-third to James C. Workman, Cleveland, Ohio, and one-third to Louis Sebastian, Toledo, Ohio. Filed June 17, 1912. Serial No. 704,109. (Cl. 155—13.)

In self-folding seats, a pair of side arms having each a flat surface on its inside for the seat to rest upon and a recess midway in said surface and a slot at the inner end thereof having a confining lip over its top parallel with said surface, a seat having a transverse rib on its bottom occupying said recess and constructed at its



inner corners to enter said slots, and means binding the said arms tightly upon the seat across its middle.

1,106,694. COMPOSITION FENCE-POST. GLENN E. ZARING, Washington, Iowa. Filed Nov. 12, 1912. Serial No. 730,919. (Cl. 256—49.)



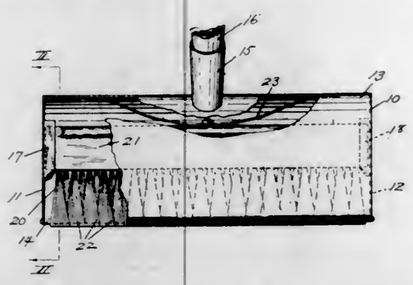
A composition fence post having a tubular staple retaining member embedded therein with its bore and longitudinal axis running parallel with the longitudinal axis of the post, said retaining member comprising major and minor portions, one side of said major portion being disposed in registration with and forming a portion of the front side of the post and provided with a plurality of equidistantly spaced openings, and the minor portion being bent at an angle to the major portion and disposed in a common plane throughout its extent and having its sides disposed in convergence.

1,106,695. NOZZLE FOR PNEUMATIC CLEANERS. JOHN F. BOYN, New York, N. Y. Filed Oct. 3, 1912. Serial No. 723,697. (Cl. 15—60.)

1. In a nozzle for pneumatic cleaners, the combination of a housing substantially arch-shaped in cross section and having closed ends, a plate fixed upon the inner surface of each of the end walls and provided with a vertical groove, a brush having its ends slidably held in said grooves, said brush having a spring secured to the back thereof, and yieldingly engaging the top of the housing, whereby the brush is yieldingly held in said grooves.

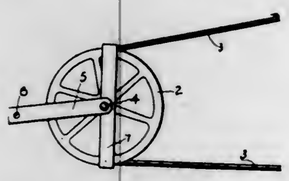
2. In a nozzle for pneumatic cleaners, the combination of a substantially arch-shaped housing having side walls and end walls and an open bottom and provided with an air outlet, each of said side walls having a vertically disposed groove on the interior surface thereof, a removable

brush disposed logitudinally within the housing, and having its ends disposed within the said grooves, whereby the brush is slidably held within the grooves, a leaf



spring provided between the brush and the top of said housing, and secured to the brush whereby a yielding pressure is extended upon the brush.

1,106,696. CLOTHES-LINE SHEAVE. FRANK BROWN, Vancouver, British Columbia, Canada, assignor to Henry Mitchell Boddy, Vancouver, British Columbia, Canada. Filed Dec. 3, 1913. Serial No. 804,450. (Cl. 57—34.)

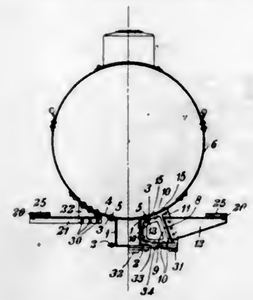


1. A clothes line sheave, comprising the combination with a grooved sheave, of a suspension loop made of a thin flat metal strip bent and drilled to receive the opposite ends of the axle rivet, the sides of said trip outside the radius of the sheave being flattened together and perforated for attachment to the external support, and a guide loop formed of the same flat thin material and bent around the thickness of the sheave at its diameter, the ends of the strip terminating approximate to the axial center of the sheave and drilled to receive the axle rivet which also secures the ends of the strip, as and for the purpose specified.

2. A clothes line sheave, comprising the combination with a grooved sheave, of a suspension loop made of a thin flat metal strip bent and drilled to receive the opposite ends of the axle rivet, the sides of said strip outside the radius of the sheave being flattened together and perforated for attachment to the external support, and a guide loop formed of the same thin flat material and bent around the thickness of the sheave at its diameter, the ends of the strip terminating approximate to the axial center of the sheave and drilled to receive the axle rivet which also secures the ends of the strip, the drilled hole for the axle rivet being towards the edge of the strip nearer to the place of suspension, as and for the purpose specified.

1,106,697. TANK-CAR. LEWIS TENNIS CANFIELD, Chicago, Ill. Filed Nov. 1, 1912. Serial No. 729,073. (Cl. 105—264.)

1. In a tank car, the combination comprising spaced flanged center sills, the flanges of which are deflected upwardly, a tank comprising a plurality of body sheets and a continuous bottom sheet co-extensive with the length of said tank, said bottom sheet being in continuous direct contact with and riveted directly to said upwardly directed flanges, a bolster connected directly to said sills and bottom sheet and a bottom cover plate uniting parts of said bolster directly to bottom flanges of the sills.



2. In a tank car, the combination comprising flanged center sills, a tank comprising a thick bottom sheet and relatively thin body sheets, said tank being secured by a rivet connection through said bottom sheet and co-extensive with the length thereof to the upper flanges of said center sills and being in direct contact therewith throughout substantially the entire length of said tank.

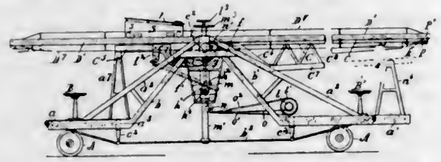
3. In a tank car, an underframe comprising only a pair of spaced center sills and bolsters comprising spaced castings provided with arcuate tops underlying portions of the center sills, and a tank in direct contact with and riveted to said sills by substantially equally spaced rivets practically throughout the length of said tank.

4. In a tank car, the combination comprising center sills and bolster castings, each casting adapted to conform to the curvature of a tank, and a tank resting in direct contact with said sills and bolster castings and riveted directly thereto, the tank being secured to the sills by substantially equally spaced rivets throughout its length.

5. In a tank car, the combination comprising an underframe consisting of longitudinal sills with tank-attaching flanges, bolsters with arcuate tops, the flanges of said sills resting upon, extending beyond and being connected to said arcuate tops, and a tank directly contacting with said flanges and also resting upon and being connected to said arcuate tops, said tank being substantially equi-distantly riveted to said sills throughout its length.

[Claims 6 to 13 not printed in the Gazette.]

1,106,698. EXTENSION-LADDER WITH RESCUE-CAR. BENJAMIN F. CARPENTER, Summit, N. J. Filed July 21, 1913. Serial No. 780,119. (Cl. 228—28.)



1. A rescue apparatus having a truck with a ladder pivoted thereon, a car movable on the ladder, means to propel and retract the car, means upon the truck for extending the ladder in any direction from a central point and elevating it to any position from a horizontal to a vertical position, and means to balance the car and ladder in any position.

2. A rescue apparatus having a truck with a turntable thereon, a ladder pivoted upon the turntable with a car and means to propel and retract it upon the ladder, means for extending the ladder in any direction from the center of the turntable, and means for elevating it upon the truck to any position from a horizontal to a vertical position whereby the car may be propelled to any point in a hemisphere above the center of the turntable, and means to balance the car and ladder in any position.

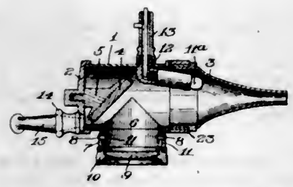
3. A rescue apparatus having a truck, a ladder pivoted thereon, with a car and means to propel and retract it upon the ladder, means for extending the ladder in any direction from a central point upon the truck, means for elevating the ladder upon the truck to any position from a horizontal to a vertical position, and means adjustable by an operator for balancing the ladder and car in any adjustment thereof.

4. A rescue apparatus having a truck with a ladder pivoted thereon, a car having rolls to rest upon the rails of the ladder and means to engage the inner sides of the rails to hold the car thereon, means to elevate the ladder at any angle, means to propel and retract the car upon the ladder, and the interior of the car provided with partitions forming compartments therein to retain objects or persons in the car when the ladder is elevated.

5. A rescue apparatus having a truck with a ladder pivoted thereon, a car having rolls to rest upon the rails of the ladder and means to engage the inner sides of the rails to hold the car thereon, means to elevate the ladder at any angle, a metallic step-bar projected from the lower end of the car, partitions within the car forming compartments to retain articles or persons in place when the ladder is elevated and serving as steps whereby an operator may pass safely over the car in ascending the ladder, and handrails upon the sides of the car to assist such operator.

[Claims 6 to 15 not printed in the Gazette.]

1,106,699. MYRINGOSCOPE. GEORGE G. CARROLL, Rochester, N. Y., assignor to Electro Surgical Instrument Company, Rochester, N. Y., a Corporation of New York. Filed July 19, 1913. Serial No. 779,951. (Cl. 128—24.)



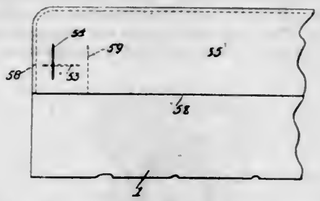
1. In a myringoscope, the combination with a hollow body portion having a speculum at one end, of a reflector arranged at the opposite end of the body portion at an angle to its longitudinal axis, and an incandescent lamp arranged within the body portion to direct light into the speculum, the body portion having an opening in one side at a right angle to its longitudinal axis to afford a view of the reflector.

2. In a myringoscope, the combination with a hollow body portion having a speculum at one end, of a reflector adjacent to the opposite end arranged at an angle to the longitudinal axis of the body portion, an incandescent lamp within the body for directing light into the speculum, the end of the body portion adjacent to the reflector having an opening therein, and a tube connected to said opening, one side of the body portion having an opening formed at right angles to its longitudinal axis to afford a view of the reflector.

1,106,700. BUTTONHOLE FOR WEARING-APPAREL. CHARLES W. T. DAVIES, New York, N. Y. Original application filed May 5, 1911, Serial No. 625,381. Divided and this application filed Feb. 21, 1913. Serial No. 749,832. (Cl. 2—79.)

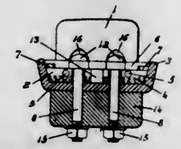
1. An article of apparel having a buttonhole and provided with an overlying ply of material fixedly secured over and covering said buttonhole, said overlying ply having a buttonhole which is positioned in intersecting relation to the first-mentioned buttonhole.

2. A cuff having a buttonhole and provided with an overlying ply of material stitched in fixed relation thereto and covering said buttonhole, said overlying ply also having a buttonhole positioned therein transversely to said first mentioned buttonhole and crossing said first mentioned buttonhole in proximity to that end thereof nearest the meeting edge of said cuff.



3. An article of apparel having a buttonhole and provided with an overlying ply of material fixedly secured over and covering said buttonhole, said overlying ply having a buttonhole which is positioned to intersect the aforesaid buttonhole terminally of one of them.

1,106,701. RUBBER TIRE. PHILLIP J. ERNENWEIN, New York, N. Y., assignor to Kelly-Springfield Tire Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 12, 1910. Serial No. 596,828. (Cl. 152—9.)



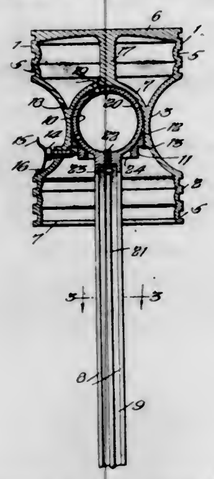
1. In a rubber tire for vehicle wheels, the combination of a rigid channel member having outwardly projecting flanges, a rubber tire formed of a series of blocks, each of said blocks having end and side projecting base portions, longitudinal and transverse holding members extending across said base portions and bearing on the top surfaces thereof, means projecting from said transverse members for securing said members to the wheel, and a central projection extending from each of said transverse members and bearing against the bottom of said channel, the end base portions of adjacent blocks being recessed to receive said central projections.

2. In a sectional rubber tire for vehicle wheels, the combination of a channel rim, a series of blocks of rubber, each block consisting of a tread portion and extending side and end base portions, securing devices consisting of longitudinal and transverse strips supported on the outer surface of said base portions, the adjacent end base portions of the respective blocks having oppositely disposed recesses, means for securing said strip to the wheel of the vehicle, and means projecting from said projecting transverse strip through said recesses and resting upon the bottom of the channel for forming a rigid support for said transverse strip.

1,106,702. PISTON-BEARING. JAMES E. ERSKINE, Louisville, Ky., assignor of one-half to Alfred Isenberg, Louisville, Ky. Filed Nov. 21, 1913. Serial No. 802,279. (Cl. 121—104.)

1. In combination, a piston having its ends cylindrical externally and provided with annular packing grooves, and being reduced intermediate its ends, said piston being hollow and having its outer end closed and its inner end open, and having a bearing at approximately its center at the reduced portion, a piston rod having a hollow ball at one end for engaging the bearing of the piston, said bearing being shaped to receive the ball at the open end of the piston and being shaped to fit the ball toward the closed end of the piston, a lock nut of annular form shaped internally

to fit the ball and threaded externally, the bearing having a threaded portion toward the open end of the piston for engagement by the nut, said nut having an annular shoulder at the end remote from the bearing, a set screw threaded through the piston at the reduced portion and engaging the shoulder, to lock the nut in place, and a spring engaging the set screw to prevent displacement thereof, the piston wall and the bearing wall having openings, and the ball having openings and being designed to hold a lubricant to lubricate the bearing and the piston through the openings, and means for supplying a lubricant to the ball.



2. In combination, a piston reduced annularly intermediate its eyes and having an internal bearing at the reduced portion, a piston rod provided with a hollow ball fitting the bearing, the piston being internally threaded at the inner end of the bearing and the said bearing being of a diameter at its inner end to permit the insertion and removal of the ball, an annular lock nut engaging the threaded portion of the piston and shaped on its inner surface to fit the ball, said ball being adapted to contain a lubricant, and the ball the bearing wall and the piston wall having openings for permitting the passage of the lubricant from the ball to the exterior thereof and to the interior and exterior of the piston, and means for locking the nut from removal, said means comprising a set screw threaded through the piston at the reduced portion and engaging the nut, a lock for preventing accidental movement of the set screw, and means for supplying a lubricant to the ball.

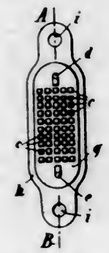
3. In combination, a piston reduced annularly intermediate its ends and having an internal bearing at the reduced portion, a piston rod provided with a hollow ball fitting the bearing, the piston being internally threaded at the inner end of the bearing and the said bearing being of a diameter at its inner end to permit the insertion and removal of the ball, an annular lock nut engaging the threaded portion of the piston and shaped on its inner surface to fit the ball, said ball being adapted to contain a lubricant, and the ball the bearing wall and the piston wall having openings for permitting the passage of the lubricant from the ball to the exterior thereof and to the interior and exterior of the piston, means for locking the nut from removal, and means for supplying lubricant to the ball.

4. In combination, a piston reduced annularly intermediate its ends and having an internal bearing at the reduced portion, a piston rod provided with a hollow ball fitting the bearing, the piston being internally threaded at the inner end of the bearing and the said bearing being of a diameter at its inner end to permit the insertion and removal of the ball, an annular lock nut engaging the threaded portion of the piston and shaped on its inner surface to fit the ball, said ball being adapted to contain a lubricant, and the ball the bearing wall and the piston wall having openings for permitting the passage of the lubricant from the ball to the exterior thereof and to the interior and exterior of the piston, and means for supplying lubricant to the ball.

5. In combination, a piston reduced annularly intermediate its ends and having an internal bearing at the reduced portion, a piston rod provided with a hollow ball fitting the bearing, means for holding the ball in the bearing, said ball being adapted to contain a lubricant and having openings for permitting the passage of the lubricant from the ball, the bearing wall having openings adapted to register with sundry of the openings of the ball to permit the passage of the lubricant to the interior of the piston, and the piston having openings at the reduced portion to permit the passage of the lubricant to the exterior thereof.

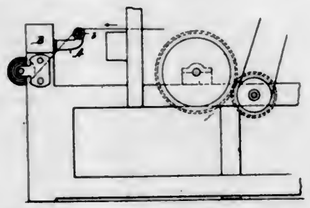
[Claims 6 and 7 not printed in the Gazette.]

1,106,703. SPARKING PLUG. OSKAR FREIBERG, Gautzsch, near Leipzig, Germany. Filed Sept. 19, 1913. Serial No. 790,633. (Cl. 123—169.)



In a sparking plug, the combination of main contacts connected with the circuit, and a large number of crosswise arranged parallel rows of auxiliary contacts of prismatic shape between the latter arranged at sparking distances from each other, substantially as and for the purpose set forth.

1,106,704. EQUALIZING DEVICE FOR SILK FABRICS. HEINRICH GOLDBERG, Crefeld, and FRITZ LUDWIGS, Crefeld-Bockum, Germany, assignors to Firm Mech. Bandfabrik Goldberg & Co., Crefeld, Germany. Filed Sept. 16, 1913. Serial No. 789,963. (Cl. 139—18.)

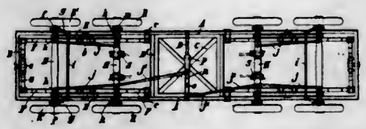


1. In a loom, an equalizing device for silk fabrics and especially for ribbons, comprising a stationary knife suitably supported in the rear of the breast beam, the fabric to be equalized being adapted to be drawn over the edge of said knife while under treatment, substantially as set forth.

2. In a loom, an equalizing device comprising a pair of semi-circular metal bars, a stationary knife supported thereby in the rear of the breast beam, the cutting edge of said knife projecting slightly above the bars, said bars being pressed together by means of slidably mounted collars and set screws, substantially as described.

3. In a loom, an equalizing device comprising a pair of semi-circular bars, an interposed stationary knife supported thereby in the rear of the breast beam, collars mounted on the bars, set screws engaging the collars, the cutting edge of the knife being provided toward both ends with indentations said indentations forming with said cutting edge rounded off corners that prevent the cutting edge from coming into contact with the lists of the fabric, substantially as described.

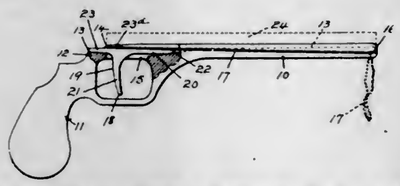
1,106,705. RUNNING-GEAR FOR AUTOMOBILE VEHICLES. CLAUDE FRANÇOIS GROS, Puteaux, France. Filed May 2, 1910. Serial No. 559,030. (Cl. 21—90.)



1. In a running gear for vehicles, the combination of a frame, a group of four wheels supporting the frame at each end, driving mechanism connected only with the two inner pairs of wheels, the end pairs being merely supporting wheels, and a single manually operable mechanism to steer all of the wheels from a common point.

2. In a running gear for vehicles, the combination of a frame, a pair of axles extending across the frame at each end of the same, wheels on said axles, a spring structure supporting the frame from each pair of axles as a unit, said spring structure comprising transverse springs pivoted to the vehicle frame, and longitudinal springs connected at one end to the vehicle frame and at the other end to the extremities of said transverse springs, said longitudinal springs adapted to support the vehicle frame over said axles, and means to drive said vehicle.

1,106,706. TOY GUN. AARON WOOD HAMAKER, New York, N. Y. Filed Nov. 12, 1912. Serial No. 730,912. (Cl. 124—14.)



1. In a toy gun having a slotted barrel, and a stock with a transverse opening therethrough, and having a vertical opening communicating with the transverse opening and the slot of the barrel, an elastic band disposed in a slot in the lower end portion of the muzzle of the barrel, and a retaining shoulder at the stock over which the said band may be stretched, said slot of the barrel having a counter-sunken portion communicating with the vertical opening in the stock, an extension at the juncture of the stock with the barrel, said extension having a slot upon the same plane as the counter-sunken portion of the slot of the barrel, and communicating with said vertical opening; the combination of a substantially T-shaped trigger, said trigger having one of its arms disposed downwardly through the vertical opening of the stock and projecting into the transverse opening, and having its forward upper arm pivoted in the counter-sunken portion of the slot of the barrel, and its rear upper arm movably disposed in the slot in the extension of the barrel so that the top surfaces of the alined upper arms will be on alinement with the base of the slot of the barrel, said third arm serving to raise and release the band from its seat as required to discharge the gun.

2. In a toy gun having a slotted barrel, and a handle with a transverse opening therethrough, and a vertical opening which communicates with the transverse opening and also communicates with the slot of the barrel, said slot being provided with a counter-sunken portion communicating with the vertical opening, an extension at the rear of the barrel and at the juncture with the handle, said extension having a slot provided therein upon the same plane as the counter-sunken portion of the slot in the barrel; the combination of a substantially T-shaped trigger having one of its upper arms pivotally secured in the counter-sunken portion of the slot, the opposing arm being on alinement with the first arm and movably disposed in the slot of said extension so that it may be swung upwardly in the arc of a circle, and the third arm extending downwardly from the first and second arm through the vertical opening into the transverse opening, whereby the second arm may be swung upwardly when the third arm is pulled, and an elastic band held to the muzzle of the barrel, a retaining shoulder at the breech of the barrel, said band being adapted to be stretched over the retaining shoulder so as to be released from said shoulder by the upward movement of the second arm of the trigger, whereby the band may be projected, said trigger having a projection upon its upper edge for contact with a projectile whereby the rear end of the projectile may be raised from contact with the barrel.

1,106,707. PROCESS OF REFINING WOOD-ALCOHOL. LEE F. HAWLEY, Boston, Mass., assignor to Arthur D. Little, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 13, 1914. Serial No. 831,582. (Cl. 195—15.)

1. In a process of refining crude wood alcohol containing acetone, the step which consists in effecting a separation of a layer rich in acetone by means of alkali, and subjecting said layer to a further refining process.

2. In a process of refining crude wood alcohol, the steps which consist in subjecting a mixture containing methyl alcohol and acetone to repeated fractional solution with aqueous alkali, under conditions to obtain an acetone-containing layer substantially free from alcohol, and an alcohol-containing layer low in acetone.

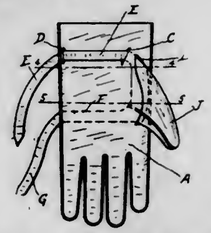
3. The method of separating acetone from mixtures thereof with methyl alcohol, which consists in stratifying the mixture by addition of alkali, and purifying the stratum richer in acetone by dissolving the residual alcohol therefrom.

4. The method of separating acetone from mixtures thereof with methyl alcohol, which consists in stratifying the mixture by addition of alkali, and purifying the stratum richer in acetone by dissolving the residual alcohol therefrom by means of an aqueous solution of alkali.

5. The method of separating acetone from mixtures thereof with methyl alcohol, which consists in stratifying the mixture by addition of alkali, and purifying the stratum richer in acetone by dissolving the residual alcohol therefrom by successive treatments with aqueous solutions of alkali.

[Claims 6 to 9 not printed in the Gazette.]

1,106,708. GLOVE. ROBERT JOSEPH HAZARD, Victoria, British Columbia, Canada. Filed July 14, 1913. Serial No. 778,895. (Cl. 2—9.)



1. In a glove, the combination with the glove body having thumb openings in the back and front thereof, of a thumb stall designed to extend either through the front or back opening, and means for retaining the base of the

stall in the opening through which it extends, as and for the purpose specified.

2. In a glove, the combination with the glove body having thumb openings in the back and front thereof, of a thumb stall designed to extend either through the front or back opening, means for retaining the base of the stall in the opening through which it extends, and means for covering the unused opening, as and for the purpose specified.

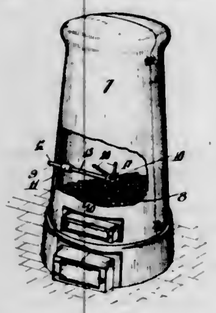
3. In a glove, the combination with the glove body having thumb openings in the back and the front thereof, of a thumb stall designed to extend either through the front or back opening a flap for covering the unused opening, and means for retaining the base of the stall in the opening, as and for the purpose specified.

4. In a glove, the combination with the glove body having thumb openings and straps openings in the back and front thereof, of a thumb stall at one side secured to the glove between such thumb openings and straps connected to the opposite side of the thumb stall and passing through the strap openings of the glove body, and means for connecting the free end of the straps outside of the body, as and for the purpose specified.

5. In a glove, the combination with the glove body having thumb openings and strap openings in the back and front thereof, of a thumb stall secured to the inside of the glove and between such thumb openings, a flap secured to the outside of the glove between such thumb openings and straps connected to the thumb stall adapted to be passed around the glove in either direction and connected at their free ends to the flap, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,106,709. SMOKE-CONSUMING DEVICE FOR HEATERS OR BOILERS. EDWARD C. HOCK, Buffalo, N. Y. Filed Oct. 1, 1913. Serial No. 792,794. (Cl. 110—52.)

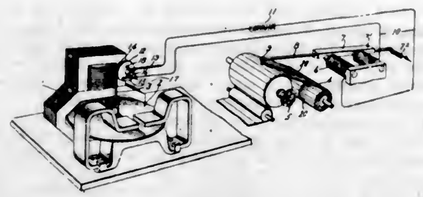


1. A smoke consuming device comprising a centrally located hollow annulus having air escape openings to direct the air to the axis of said annulus, horizontally-disposed radial tubes connected to said annulus and having air escape openings, each of said tubes being of triangular formation in cross section and arranged to provide two downwardly-diverging walls in which said last-mentioned air escape openings are located, and an air inlet tube connected to said centrally located annulus.

2. In a smoke consuming device adapted to be located in the fireplace of a heater, boiler or furnace, the combination of a distributer comprising a centrally-located hollow annulus and horizontally-disposed radial tubes extending from said annulus, said tubes and annulus having air escape openings, and an air inlet tube connected to said distributer and adapted to lead exterior air to the latter, said inlet tube having an opening in the fireplace for the admission of hot air from the same, the hot air only being adapted to commingle with the exterior air in its passage to and through said distributer and the commingled bodies of air being adapted to be heated in their course to said air escape openings.

3. In a smoke consuming device adapted to be located in the fireplace of a heater, boiler or furnace, the combination with a distributer comprising a centrally-located hollow annulus and horizontally-disposed radial tubes extending from said annulus, said tubes and annulus having air escape openings, an air inlet tube extending from the distributer and adapted to pass through the wall of the fireplace to admit exterior air thereto, and an injector connected to said air inlet tube and comprising a casing having a centrally-disposed air nozzle through which only the exterior air is passed, and an opening for the admission of hot air into the space surrounding said nozzle, the whole being arranged so that only hot air and exterior air commingle in their passage to the distributer.

1,106,710. RECORDING ELECTRIC METER. CHARLES H. INGALLS, Danvers, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 12, 1910. Serial No. 576,898. (Cl. 234—5.5.)



1. A recording electric meter comprising a rotatable meter shaft, an electric circuit, means cooperating with said shaft for effecting a change in the electrical condition of said circuit at intervals of equal quantities of metered energy, and means in operative relation with said circuit for recording the times during which said equal quantities of energy are metered.

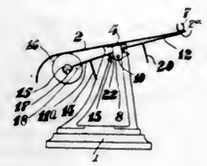
2. A recording electric meter comprising a rotatable meter shaft, an electric circuit, a contact circuit-closer adapted to be operated by said rotatable shaft at intervals of equal quantities of metered energy, a time-actuated record sheet, and means in operative relation with said electric circuit for recording said intervals on said record sheet.

3. A recording electric meter comprising a rotatable meter shaft, an electric circuit, a contact-closing device in said circuit, means in operative relation with said rotatable shaft for operating said contact-closing device at intervals of equal quantities of metered energy, an electromagnet in said electric circuit, a time-actuated record sheet, and means operated by said electro-magnet for recording said intervals on said record sheet.

4. A recording electric meter comprising a rotatable meter shaft, an electric circuit, a contact-closing device for said circuit consisting of a rotatable disk having a pin, means for rotating said disk by said meter shaft, a stationary contact-member and a movable contact-member in operative relation therewith, said movable contact-member lying in the path of said pin and adapted to be rotated in a forward direction by the pin for a portion of the contact-member's travel and by the action of gravity for the remaining portion of the contact-member's travel and to momentarily engage the stationary contact-member during said travel, a time-actuated record sheet, an electromagnet in said circuit, and means actuated by said electromagnet for recording on said record sheet the engagement of said contact-members.

1,106,711. AUTOGRAPHIC-MESSAGE REGISTER OR MEMORANDUM-TABLET. WILLIAM HENRY JACKSON, Halifax, England. Filed May 2, 1913. Serial No. 765,076. (Cl. 11—22.)

1. In a writing tablet, the combination, with a tablet provided with downwardly projecting lugs and having a slot for the paper at its rear end portion, of a pin extending between the said lugs, a frame pivoted to the said pin and projecting beyond the said slot and having a downwardly projecting finger-piece arranged at an operative distance to the rear of the said pin, and a spring mounted on the said pin and pressing the free end portion of the said frame toward the underside of the tablet to clip the paper which has been drawn through the said slot.



2. In a writing tablet, the combination, with a tablet provided with downwardly projecting lugs and having a slot for the paper at its front end portion, of a pin extending between the said lugs, a frame pivoted to the said pin and provided with bearings at its free end portion and having also a downwardly projecting finger-piece arranged at an operative distance in front of the said pin, a roll of paper journaled in the said bearings with one end portion passing upwardly through the said slot, and a spring mounted on the said pin and pressing the roll of paper against the underside of the tablet.

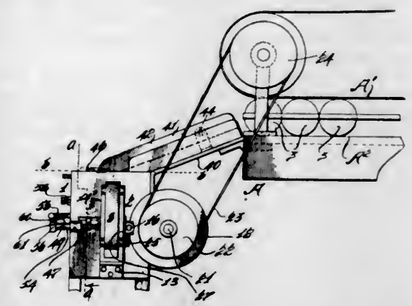
3. In a writing tablet, the combination, with a tablet having downwardly projecting lugs at the middle part of its length and having slots for the paper in the front and rear end portions respectively, of a pin extending between the said lugs, two frames pivoted to the said pin and projecting in opposite directions, each frame being provided with a downwardly projecting finger-piece arranged at an operative distance from the said pin, one frame being arranged to project beyond the rear slot, and the other frame projecting forwardly and having bearings at its free end portion, a roll of paper journaled in the said bearings with one end portion projecting upwardly through the front slot, over the tablet, downwardly through the rear slot and rearwardly between the tablet and the end portion of the front frame, and a spring mounted on the said pin and operating to press both frames toward the tablet to hold the paper from slipping.

4. In a writing tablet, the combination, with a tablet provided with downwardly projecting lugs, a cutting-edge at its rear end, a slot for the paper near its rear end, and a rib on its underside between the cutting-edge and the slot; of a pin extending between the said lugs, a frame pivoted to the said pin and projecting beyond the said slot and having a downwardly projecting finger-piece arranged at an operative distance to the rear of the said pin, and a spring mounted on the said pin and pressing the free end portion of the said frame toward the underside of the tablet to clip the paper which has been drawn through the said slot.

1,106,712. CAN-PRINTING MACHINE. LLEWELLYN JAMES, Tilsonburg, Ontario, Canada, assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 29, 1913. Serial No. 803,679. (Cl. 101—83.)

1. In a can-printing machine, a rotary shaft; carried by said shaft a bent resilient disk disposed, for the most part, in a plane inclined to, and having its bent portion disposed in a plane perpendicular to, the longitudinal axis of said shaft; a can-printing member; and means operatively connecting said disk with said member to oscillate it against and from a can.

2. In a can-printing machine, a rotary shaft; carried by said shaft a disk disposed for the most part obliquely and as to a segment thereof rectangularly to the longitudinal axis of said shaft; a can-printing member; and, operatively connecting said disk with said member, means which actuated by said obliquely disposed portions of said disk oscillate said member and are by the rectangularly disposed segment of said disk interrupted in so oscillating said member.

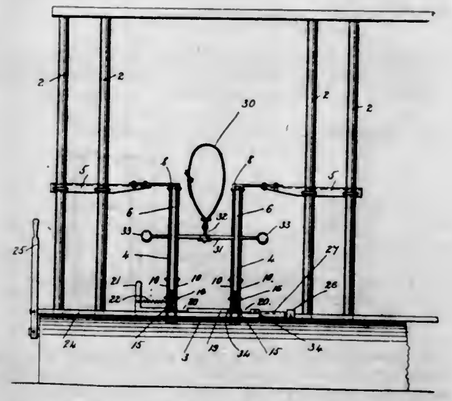


3. In a can-printing machine, a rotary shaft; carried by said shaft a disk disposed for the most part obliquely and as to a segment thereof rectangularly to the longitudinal axis of said shaft; a can-printing member; adjacent said shaft a therewith parallel longitudinally slidable rod; carried by said rod elements between which are rotatable the sides of said disk adjacent to its periphery, and means actuated by said rod to impel said can-printing member against and from a can.

4. In a can-printing machine, a rotary shaft; carried by said shaft a bent disk having a part inclined, and another part rectangular, to the longitudinal axis of said shaft; a can-printing member; and operatively connecting said disk with said member means actuated by said inclined part to oscillate said member and interrupted by said rectangular part from so oscillating it.

5. In a can-printing machine, means to hold a can having an end disposed in a predetermined position; an ink-bearing member disposed opposite said end; intermediate said end and said ink-bearing member an oscillatable arm; rotatably carried by said arm a block; carried by said block a type; a lever carried by said block; rotatably carried by a stationary part of said machine a pin having a perforation within which is slidably disposed a portion of said lever; and means to oscillate said arm whereby said type is rotated, and impelled against said ink-bearing member and reversely against said end of said can.

1,106,713. STANCHION. JULIUS N. JENSEN, Lake City, Colo. Filed Oct. 11, 1913. Serial No. 794,705. (Cl. 119—119.)



1. In a stanchion, the combination, with a pair of stationary locking-posts, of pendulum-rods suspended behind the locking-posts, stationary guides arranged at the lower ends of the pendulum-rods, spaces being formed between

the locking-posts and the pendulum-rods and guides, means for normally preventing the pendulum-rods from moving rearwardly, and a crossbar provided with means for securing it to an animal and adapted to push the pendulum-rods forwardly and to pass under them into engagement with the said spaces.

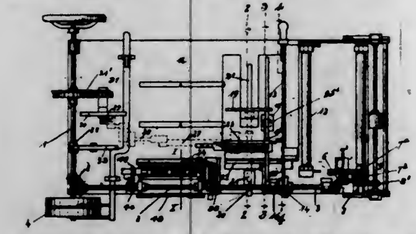
2. In a stanchion, the combination, with a pair of channel-shaped locking-posts having rearwardly projecting brackets at their upper ends, of pendulum-rods suspended from the said brackets, stationary guides arranged at the lower ends of the pendulum-rods, spaces being formed between the locking-posts and the pendulum-rods and guides, means which normally prevent the pendulum-rods from moving rearwardly and which permit their lower ends to be moved forwardly into the channels of the locking-posts, and a crossbar provided with means for securing it to an animal and adapted to push the pendulum-rods forwardly and to pass under them into engagement with the said spaces.

3. In a stanchion, the combination, with a pair of stationary locking-posts, of pendulum-rods suspended behind the locking-posts, spaces being formed between the said posts and rods, stationary guide-plates arranged at the lower ends of the pendulum-rods and having downwardly and forwardly inclined upper parts and having front edges arranged substantially in line with the front sides of the pendulum-rods, means for normally preventing the pendulum-rods from moving rearwardly, and a crossbar provided with means for securing it to an animal and adapted to push the pendulum-rods forwardly and to pass under them into engagement with the said spaces.

4. In a stanchion, the combination, with a pair of stationary locking-posts, of pendulum-rods suspended behind the locking-posts, stationary guides arranged at the lower ends of the pendulum-rods, spaces being formed between the locking-posts and the pendulum-rods and guides, latches pivoted to the guides, and a locking-bar slidable crosswise of the guides and normally preventing the latches from moving in one direction, the pendulum-rods being adapted to engage automatically with the latches in swinging forwardly to a vertical position.

5. In a stanchion, the combination, with a pair of stationary locking-posts, of pendulum-rods suspended behind the locking-posts, stationary guides arranged at the lower ends of the pendulum-rods, spaces being formed between the locking-posts and the pendulum-rods and guides, latches pivoted to the guides, a locking-bar slidable crosswise of the guides and normally preventing the latches from moving in one direction, the pendulum-rods being adapted to engage automatically with the latches in swinging forwardly to a vertical position, a releasing-bar slidable parallel to the locking-bar and provided with a stop, and a removable block arranged between the said stop and the locking-bar.

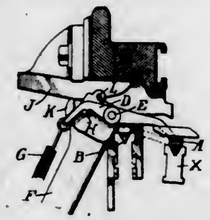
1,106,714. PAPER-TUBE-ROLLING MACHINE. WALTER KELLNER, Barmen-Wichlinghausen, Germany. Filed May 25, 1911. Serial No. 629,444. (Cl. 93—81.)



1. The combination in a paper tube machine, of a bed plate, a table over the bed plate, a guide bar on the table, means for causing a strip of paper to move forward over said table, means for applying glue to one surface of said paper as it moves forward toward the table, means for clamping the paper on the table, means for cutting off a blank from said paper while it is clamped on the table, means for shifting the blank laterally until an edge thereof comes into contact with the guide bar, a slotted forming roller, means for rotating the roller intermittently so that it stops with its slot in alinement with an edge of the guide bar and of the paper, and means for moving the blank forward with an edge thereof in said groove, said roller winding said blank thereon as it rotates, and means for applying glue to the other surface of the paper blank while being wound.

2. The combination in a paper tube machine, of means for cutting a blank from a strip of paper, means for applying glue to said strip before said blank has been cut, a roller having a groove therein, a guide bar, means for shifting the blank laterally with one edge against said guide bar, means for rotating said roller intermittently so that the groove thereof stops in alinement with said edge of the blank, means for grasping said blank and drawing said edge into said slot, whereupon the rotation of said roller winds the blank thereupon.

1,106,715. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 27, 1912. Serial No. 733,848. (Cl. 199—7.)



1. In a typographical machine, a transporter for the type or matrices movable into operative relation to another part of the machine and comprising a carrier, a supporting device proper, and an intermediate member movably connected to the carrier, and means for maintaining said member in a definite position upon the carrier so as to present the supporting device in proper relation to the machine part, in combination with additional means located in proximity to the said machine part to insure the aforesaid definite position of the intermediate member.

2. In a typographical machine comprising distributing mechanism, the combination of the distributer box, the elevator for delivering type or matrices thereto and comprising the lifting arm, the supporting device proper, and an intermediate link movably connected to the arm and occupying normally a position on the arm such that the supporting device proper will be presented in proper relation to the distributer box, and means to coöperate with said link and restore it to its proper position on the lifting arm in the event that it is displaced therefrom when the elevator is presented to the distributer box.

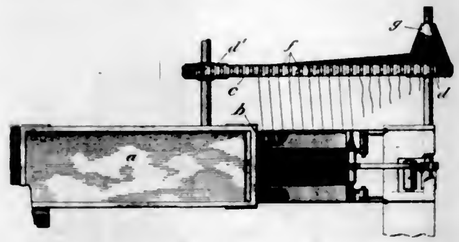
3. In a typographical machine comprising distributing mechanism, the combination of the distributer box and the guide J located in proximity thereto, with the second elevator comprising the lifting arm F, the supporting device A, and the intermediate link D movably connected to the arm and occupying normally a position thereon such that the supporting device will be presented in proper relation to the distributer box, said link being provided with a finger K to coöperate with the guide J so as to insure the proper position of the link on its lifting arm.

4. In a typographical machine, a transporter for the type or matrices movable into operative relation to another part of the machine and comprising a carrier arm, a supporting device proper, an intermediate member pivoted to said arm and movable in opposite directions thereon but occupying normally a position such that the supporting device will be presented in proper relation to the machine part, and means for limiting the extent of movement of said member in both directions, in combination with means located in proximity to said machine part to coöperate with the intermediate member in any position it may occupy within said limits to restore it to its normal position on the carrier arm.

5. In a typographical machine the second elevator comprising the lifting arm F, the matrix bar A, the supporting link D movably connected to the arm F, and the spring G to maintain the link in a definite position on the arm, in combination with further means to insure such position of the link on the arm in the event that the spring fails to do so.

[Claim 6 not printed in the Gazette.]

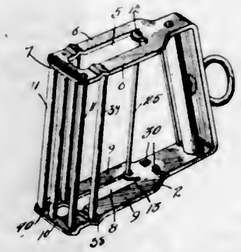
1,106,716. AUTOMATIC WEFT-BOBBIN-EXCHANGE DEVICE FOR LOOMS. ALBERT GEORG KOECHLIN, Basel, Switzerland, assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Sept. 24, 1913. Serial No. 791,545. (Cl. 139—85.)



1. In an automatic weft bobbin exchange device for looms, the combination with a bobbin magazine and a bobbin supply channel leading therefrom to the exchange point of an endless thread retaining member having spring clasps for the thread ends of the bobbins in said channel, drive means for intermittently shifting said endless member with the thread ends retained by its clasps, and an intermittently rotating drawing-off cone for drawing the thread ends out of the clasps of said endless member to clean the same.

2. In an automatic weft bobbin exchange device for looms, the combination with a bobbin magazine and a bobbin supply channel leading therefrom to the exchange point, of an endless thread retaining member having spring clasps for the thread ends of the bobbins in said channel, drive wheels for guiding and driving said endless member, automatic means for intermittently rotating said wheels to shift said member forward step by step and a drawing-off cone for drawing the thread ends out of the clasps of said endless member by winding them upon it so as to clean the clasps, said drawing-off cone being connected to one of said drive wheels so as to perform an intermittent rotating movement.

1,106,717. RAZOR-SHARPENER. JACOB A. KRESS, Canton, Ohio. Filed Nov. 9, 1912. Serial No. 730,337. (Cl. 51—16.)



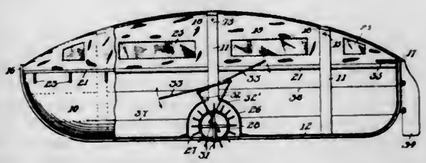
1. In a razor sharpener of the character described, in combination with a frame, a blade holder pivotally mounted in said frame and provided with an arm having at its free end an integral inverted-cup-shaped head with outer rounded edges forming a bearing surface and a blade-holder-actuating roll rotatably mounted in said frame, said roll comprising an incomplete hollow cylinder having spaced edges engaging the bearing surface of said head, said roll, when rotated alternately in opposite directions, adapted to transmit reciprocating movement to said head.

2. In a razor sharpener of the character described, in combination with a frame provided with upper and lower frame plates and a blade-holder-attaching bar extending from one of said plates to the other, a blade holder provided with arms pivotally connected to said bar, one of said arms provided with a pair of spring-holding lugs, and a spring formed from a piece of wire coiled about said bar and having two free ends engaging and extending beyond said lugs, and spaced lugs on one of said frame plates adapted to loosely engage the ends of said spring and prevent outward, side movement of said ends, said spring adapted to maintain said blade holder normally in the median, longitudinal, vertical plane of said frame.

3. In a razor sharpener a blade holder formed from a single piece of sheet metal and comprising a back and integral clamping flanges extending frontwardly from said back and converging toward their free edges, one of said flanges provided with an integral stop lug at its lower end, said lug being bent over across the lower end of the other flange, a lower integral arm extending rearwardly from the lower end of said back and provided intermediate its ends with an aperture and at its extreme end with a pair of upwardly turned, inwardly directed lugs, an integral upper arm extending rearwardly from the upper end of said back, provided intermediate its ends with an aperture and the free end of said upper arm provided with an integral inverted-cup-shaped head having outer rounded edges.

4. In a razor sharpener of the character described, a blade holder formed from a single piece of sheet metal and comprising a back and integral clamping flanges extending frontwardly from said back and converging toward their free edges, a blade stop at the lower ends of said flanges, a pair of integral arms extending rearwardly from said back, said arms provided intermediate their ends with apertures, one of said arms provided at its free end with spring engaging means and the other provided at its free end with a cup-shaped integral head providing an outwardly curved bearing surface.

1,106,718. LIFE-BOAT. FERDINAND KULHAWY, Philadelphia, Pa., assignor of one-half to Louis Michalski, Philadelphia, Pa. Filed May 4, 1914. Serial No. 836,175. (Cl. 9—4.)

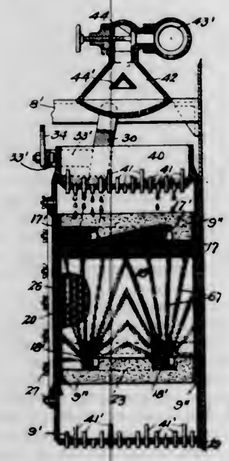


1. A device of the class described, comprising a hull, upwardly projecting posts interiorly positioned therein, a ridge strip secured upon the tops of said posts and between the bow and the stern posts of the boat, a S-shaped channel positioned upwardly opening upon the top of said ridge strip, opposite canopy sections having their opposite edges secured along the gunwales of the boat and having their inner edges adapted for reception within said channel, binding strips seated within said channel upon said canopy edges, and bracket hooks arranged along the opposite gunwales of the boat adapted for receiving the canopy when in its rolled up position.

2. A life boat provided with upwardly-projecting spaced posts positioned upon the longitudinal axis thereof and having open slots at their upper ends, a ridge strip

positioned within said slots and having its opposite ends secured to the bow and stern posts of the boat, securing pins positioned through the upper ends of said posts and extending through said strip, said strip having an upwardly opening socket co-extensive with the length thereof and substantially T-shaped in cross-section, canopy portions having their outer opposite edges secured between the gunwales and adjacent sides of the boat and with their inner adjacent edges positioned within the said socket, two binding members positioned within said socket in contact with each other and seated upon said canopy edges, and bracket hooks secured beneath the opposite gunwales and depending outwardly of the boat sides for retaining the canopy when in its rolled up condition.

1,106,719. BATTERY. SIMON LAKE, Milford, Conn. Filed Aug. 6, 1912. Serial No. 713,632. (Cl. 204—34.)



1. A battery, comprising a series of cells containing positive and negative electrodes, each cell being open at its upper and lower ends, to permit circulation of electrolyte therethrough, for the purpose specified, and means for supplying electrolyte to said cells in a multitude of drops in rain like manner over the tops of said electrodes.

2. A battery, comprising a series of cells having positive and negative electrodes held therein, each cell being open at its upper and lower ends, to permit circulation of electrolyte through said cells, a source of electrolyte supply for the cells, and means to feed the electrolyte to said cells in a shower of drops in rain-like manner over the tops of said electrodes and to cause it to escape therefrom in a similar condition.

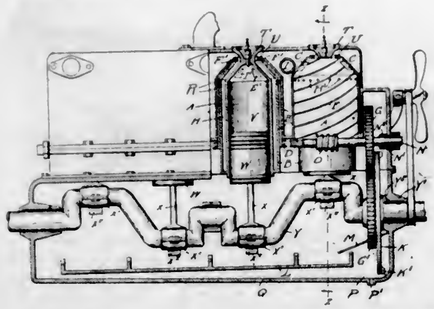
3. A battery, comprising a plurality of cells, open at their upper and lower ends to permit circulation of electrolyte through the cells, positive and negative electrodes detachably supported in each cell, a box having a perforated bottom mounted on each cell adapted to hold and feed electrolyte to the cells in a multitude of drops in rain-like manner over the tops of said electrodes, a source of electrolyte supply for said boxes, and means for governing the supply to said boxes.

4. A battery, comprising a series of cells open at their upper and lower ends, to permit circulation of electrolyte therethrough, bus-bars fixedly mounted in the sides of said cells, positive and negative electrodes supported upon said bus-bars within the cells, spacers arranged between said electrodes having vertical grooves, for the purpose specified, means to feed electrolyte to the cells, and a source of electrolyte supply for said feeding means.

5. A battery, comprising a series of cells open at their upper and lower ends, to permit circulation of electrolyte therethrough, each cell having an opening in its front wall and a door for closing said opening, positive and negative bus-bars extending respectively through the upper and lower ends of each cell adjacent to the upper and lower edges thereof, positive and negative electrodes having open slots in their upper and lower edges respectively engaging said bus-bars, perforated spacers arranged between said electrodes and having vertical grooves on each side thereof with which said perforations communicate, a box having a perforated bottom mounted on each cell for holding electrolyte and adapted to feed the electrolyte to the cells in drops, for the purpose specified, a source of supply for said boxes, and means for collecting the electrolyte after it passes through the cells and returning it to said supply source.

[Claims 6 to 9 not printed in the Gazette.]

1,106,720. INTERNAL-COMBUSTION ENGINE. CHARLES F. LEMBKE, Valparaiso, Ind. Filed Jan. 13, 1912. Serial No. 671,067. (Cl. 123—190.)



1. The combination of a ported, rotating sleeve valve having spiral oil grooves extending from end to end, oil orifices peripherally disposed in the valve, a hollow sleeve-shaped valve casing rotatably supporting and enveloping the valve except at its base, a surrounding water jacket adjacent to the walls of the valve casing, a spring ring positioned between the valve and valve casing coincidently with the aforesaid oil orifices, an annular oil channel at the end of the valve into which the spiral oil grooves open and oil-splashing mechanism, substantially as set forth.

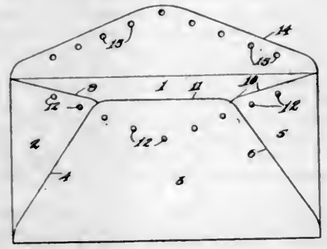
2. In an internal combustion engine, the combination of an oppositely-ported cylinder, a piston therein, a crank shaft operatively connected with the piston, a concentrically-positioned sleeve valve casing having an outer and inner shell, a sleeve valve spirally grooved from base to its annular uppermost portion, rotatably seated between the outer and inner shells of the aforesaid casing, inlet and exhaust passages coincidently disposed with the cylinder ports, a waterjacket surrounding the cylinder, inlet and exhaust passages and valve casing and separating the valve casing and cylinder, and means for splashing oil to the valve mechanism, cylinder, gearing, etc., substantially as described.

3. The combination of a frusto-conical valve casing formed of an outer and inner shell, a rotatable sleeve valve seated between the aforesaid shells of the valve casing and having spiral oil grooves extending over the incased portion of the valve to its annular uppermost portion exteriorly and interiorly, and an oil channel formed by the walls of the valve casing positioned over the apex of the valve with which the spiral oil grooves connect, means for supplying oil to the spiral oil grooves at the base of the valve, and a water jacket encircling the valve casing adjacent to both its outer and inner shell, positioned substantially as illustrated and described, whereby lubrication is improved.

4. The combination of a ported, rotating sleeve valve having spiral oil grooves extending from end to end, oil orifices peripherally disposed in the valve, a hollow sleeve-shaped valve casing rotatably supporting and enveloping the valve except at its base, a surrounding water jacket forming a complete envelop for the valve casing, a spring ring located in the outer wall of that portion of the water jacket adjacent to the cylinder coincidently with the aforesaid oil orifices, an annular oil channel at the end of the valve into which the spiral oil grooves open, and oil-splashing mechanism.

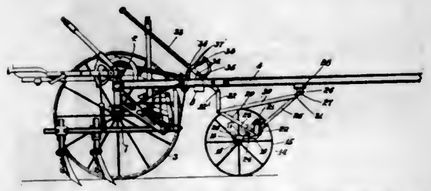
5. In an internal combustion engine, the combination of an oppositely ported cylinder, a piston therein, a crank shaft operatively connected with the piston, a concentrically positioned double-walled sleeve valve casing frusto-conical in its upper portion, a rotatable sleeve valve frusto-conical in its upper portion having complete spiral oil grooving disposed over its exterior and interior surfaces from base to its annular uppermost portion opposite inlet and exhaust passages coincidently disposed with the cylinder ports, a water jacket encircling the valve casing adjacent to both its outer and inner shells, means for splashing oil to the base of the spirally grooved valve, cylinder and gearing, located and operatively connected substantially as and for the purposes set forth in this specification.

1,106,721. SAFETY-ENVELOP. EDWARD J. LEWIS, Chico, Cal. Filed Jan. 30, 1913. Serial No. 745,248. (Cl. 229—81.)



An envelop comprising a body portion having a projection struck up therefrom and extending beyond the outer face of the body portion, and a sealing flap provided with an opening for receiving the projection of said body portion, said projection being of such size that it will not extend through said openings beyond the outer face of said sealing flap.

1,106,722. CULTIVATOR. ALEXUS C. LINDGREN, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed Mar. 3, 1913. Serial No. 751,768. (Cl. 21—104.)



1. In an agricultural machine, the combination of a wheeled frame, a draft tongue extending forwardly therefrom, a supporting device connected thereto and adapted when the machine is in operation to travel along the ground and give support to the said draft tongue, said supporting device being movable relatively to said tongue and frame to inoperative non-supporting position when the machine is out of operation, and means for controlling the movements of said supporting device.

2. In an agricultural machine, the combination of a wheeled frame, a draft tongue extending forwardly therefrom, a wheeled truck connected thereto and adapted, when the machine is in operation, to give support to the draft tongue, said truck being movable upwardly relatively to said tongue and frame to inoperative non-supporting position when the machine is out of operation, and means for controlling the movements of said truck.

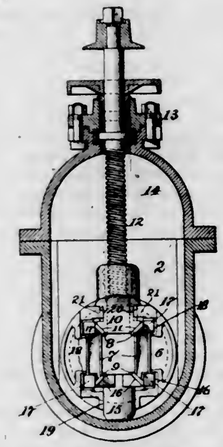
3. In an agricultural machine, the combination of a wheeled frame, a draft tongue extending forwardly therefrom, a wheeled truck connected thereto in position to give support to the tongue when the machine is in operation, said truck being freely movable about an upright axis situated in advance of the axis of its wheels, and means for moving said truck relatively to the frame and tongue to an inoperative non-supporting position, when the machine is out of operation.

4. In an agricultural machine, the combination of a wheeled frame, a draft tongue extending forwardly therefrom, a swiveling truck connected thereto and adapted to give support to the tongue when the machine is in operation, said truck being movable relatively to the frame and tongue up and down, and means for controlling the up and down movements of said truck.

5. In an agricultural machine, the combination of a wheeled frame, a draft tongue extending forwardly therefrom, a wheeled truck connected theerto and movable up and down relatively to the tongue and frame about an axis situated in advance of the axis of the truck wheels, and means for controlling the up and down movements of said truck.

[Claims 6 and 7 not printed in the Gazette.]

1,106,723. GATE-VALVE. HERBERT M. LOFTON, Chattanooga, Tenn. Filed Aug. 9, 1911. Serial No. 643,462. (Cl. 137—5.)



1. In a gate valve, the body portion having oppositely directed inlet and outlet ports and valve seats arranged in alinement, combined with two valve disks for the respective valve seats each having a plurality of cam surfaces on opposite sides of a diametrical line, independent cam devices arranged between the disks and at all times out of operative contact with the body portion and each having four contacting parts for coöperating with a corresponding number of cam surfaces on the disks whereby said disks may be positively moved at their upper and lower portions simultaneously into contact with the valve seats, cam operating means independent of the cam devices and the body portion for causing the devices to be positively moved transversely to the movement of the disks both at top and bottom, and power applying means for operating the cam operating means.

2. In a gate valve, the body portion having oppositely directed inlet and outlet ports and valve seats arranged in alinement, combined with two valve disks for the respective valve seats each having a plurality of cam surfaces above and below a diametrical line, cam devices comprising independent parts out of operative contact with the body portion and movable to and from each

other transversely to the direction of movement of the disks and having cam portions at upper and lower parts making contact with the cam surfaces of the disks above and below the diametrical line for forcing the disks apart and against their respective seats, cam operating means independent of the cam devices for causing the cam devices to be positively moved both at top and bottom transversely to the movement of the disks to make them positively operative upon the disks to the same extent both at the upper and lower parts thereof, and power applying means for actuating the cam operating means.

3. In a gate valve, the body having oppositely directed inlet and outlet ports and valve seats arranged in alinement, combined with two valve disks for the respective valve seats each having four cam surfaces, cam devices comprising a plurality of laterally movable parts each having cams on both ends and arranged between the disks and coöperating with the cam surfaces thereof for forcing the disks apart and against their respective seats equally at their upper and lower portions, cam operating means independent of the valve body for causing the cam devices to be moved to make them operative upon the disks, said means adjustably connected with the disks and also acting to hold the cam devices in position between the disks while permitting them to move laterally to and from said cam operating means, and power applying means for operating the cam operating means, the said cam devices being both movable laterally relatively to the power applying means and together with the cam operating means being simultaneously movable in opening or closing the valve and at all times in operative relation one to the other.

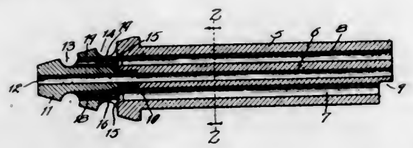
4. In a gate valve, the body having oppositely directed inlet and outlet ports and valve seats arranged in alinement, combined with two valve disks for the respective valve seats, cam devices arranged between the disks for forcing them apart and against their respective seats comprising two oppositely movable parts having at their ends wedge portions pressing upon the disks at a plurality of places about the center of the disks and also having inwardly directed inclined cam portions, cam operating means for causing the cam devices to be moved to make them operative upon the disks comprising two parts movable toward or from each other and movably connected with the disks and also having cam surfaces co-acting with the inwardly directed cam surfaces of the cam devices, one of these parts being arranged to have its movement arested by the valve body, and power applying means for operating the other parts of the cam operating means.

5. In a gate valve, the combination of a body having oppositely directed inlet and outlet ports and valve seats arranged in alinement, with two valve disks for the respective valve seats said disks each having a plurality of cam surfaces and said valve disks each provided with suspending lugs having recesses parallel to the plane of the disks, cam devices comprising independent movable parts arranged between the cam disks and having cam surfaces coöperating with the cam surfaces upon the disks said cam devices movable toward or from each other transversely to the direction of movement of the disks in opening and closing the valve, cam operating means for causing the cam devices to be moved transversely to the movement of the disks to make them operative upon the disks said means being provided with recessed portions of greater vertical width than the thickness of the lugs on the disks and provided with lugs to engage the recesses of the lugs of the disks to hold the disks to the cam operating means, and power applying means for operating the cam operating means.

[Claims 6 to 8 not printed in the Gazette.]

1,106,724. METAL-CUTTING TIP. EUGENE G. LUENING, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Apr. 4, 1913. Serial No. 758,772. (Cl. 158—13.5.)

1. In a metal cutting flame tip, a tip body having a cutting flame of gas supply duct, and an auxiliary flame gas supply duct, an end portion removably connected to said tip body, and a nipple carried by said end portion and arranged in line with said auxiliary flame gas duct, said nipple and duct respectively receiving a high pressure and a low pressure gas supply source.



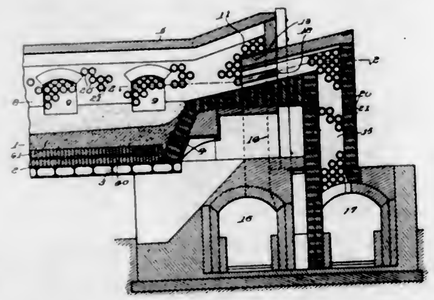
2. In a metal cutting flame tip, a tip body having a cutting flame gas supply duct and an auxiliary flame gas supply duct arranged in parallel relation to each other, a removable end portion for said tip body, said end portion having peripheral channels to receive, respectively, high and low pressure gas supplies, and a nipple carried by said end portion and arranged in line with said auxiliary flame gas duct, said nipple and duct respectively communicating with said peripheral channels.

3. In a metal cutting flame tip, a tip body having a central duct and an auxiliary duct parallel thereto, said auxiliary duct having a conically shaped mouth, and end portion for the tip body having peripheral channels respectively to receive high and low pressure gas supplies, and a nipple presented into said mouth, said nipple and mouth respectively communicating with said channels.

4. In a metal cutting flame tip, a tip body having a central duct and an auxiliary duct parallel to each other, and a removable end portion for the tip body, said end portion having a nipple with its delivery end presented toward the mouth of the auxiliary duct, said nipple and mouth respectively receiving a high and low pressure gas supply.

5. In a metal cutting flame tip, a tip body having a central duct and auxiliary ducts arranged on opposite sides thereof and in parallel relation to each other, said body having an end portion, said end portiong having nipples respectively presenting toward and into proximity to the mouths of said auxiliary ducts, said nipples and mouths respectively receiving high and low pressure gas supply.

1,106,725. FURNACE-WALL CONSTRUCTION. NORMAN E. MACCALLUM, Phoenixville, Pa. Filed May 13, 1913. Serial No. 767,305. (Cl. 75—84.)



1. A furnace comprising a plurality of metal containers, and basic material arranged in said containers.

2. A furnace comprising a wall including a plurality of iron containers, and basic material arranged in said containers.

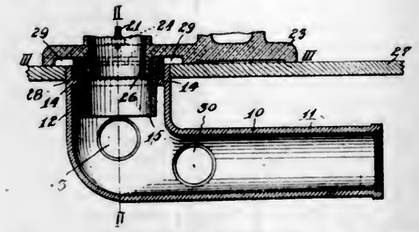
3. In an open hearth steel furnace, the combination with a hearth, of walls forming therewith a combustion chamber, one of said walls including a plurality of iron containers, and basic material arranged in said containers.

4. A furnace including a wall comprising a plurality of iron containers, and a mixture of basic and neutral materials arranged in said containers.

5. In an open hearth steel furnace, the combination with a hearth, of walls forming therewith a combustion chamber, one of said walls comprising a plurality of iron containers, and a mixture of basic and neutral materials arranged in said containers.

[Claims 6 to 24 not printed in the Gazette.]

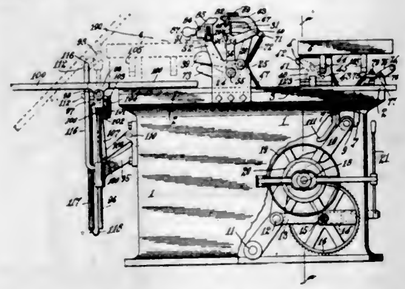
1,106,726. CLOSET CONNECTION. GEORGE M. MCCLOSKEY, New York, N. Y. Filed Aug. 6, 1913. Serial No. 783,358. (Cl. 137—94.)



1. The combination with a metal bend, of a tubular member adjustable axially with respect to said bend without turning and having an outwardly projecting flange, sealing means between the bend and adjustable member, the upper surface of said sealing means being flush with the upper surface of said floor, and an annular holding member engaging the upper surface of said sealing means and having an inwardly extending flange engaging below the flange on the adjustable member, and means for securing said holding member to a closet base.

2. The combination with a metal bend to fit in an opening in a floor, of a tubular member adjustable axially within the bend, an annular holding member rotatably connected to the tubular member, a closet having a base to rest upon the floor, means for securing the holding member to the base of the closet, and sealing means arranged below and in contact with the holding member and between the tubular member and end of the bend.

1,106,727. BOX-TOPPING MACHINE. JOHN F. O'BRIEN and GEORGE F. BOWDLE, Piqua, Ohio, assignors of one-half to Charles H. F. Schutte, Piqua, Ohio. Filed May 2, 1912. Serial No. 694,756. (Cl. 93—54.)



1. In a machine of the type specified, reciprocating means adapted to support a paper box, paper-controlling means adapted to apply the end of a web of paper to said box, paper-severing means adapted to sever said paper, said paper-controlling and severing means being actuated by said reciprocating means, and means for actuating said reciprocating means and thereby said paper-controlling and severing means.

2. In a machine of the type specified, a reciprocating form adapted to receive a paper box, paper controlling means adapted to apply the end of a web of paper to said box, paper severing means adapted to cut said web, stripping means adapted to remove the box from said form, and means for actuating said form, said paper controlling means, said paper severing means, and said stripping means.

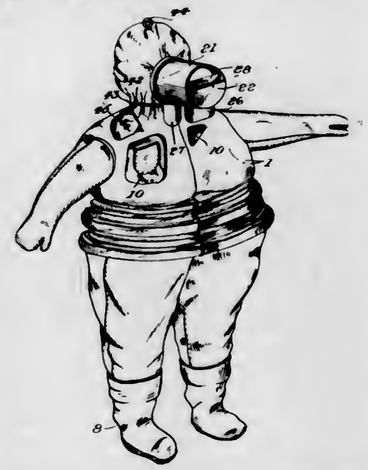
3. In a machine of the type specified, a reciprocating form adapted to receive a paper box, paper controlling means adapted to apply the end of a web of paper to said box, paper severing means adapted to cut said web, means for actuating said form, and means carried by said form and adapted to actuate said paper controlling means and said paper severing means.

4. In a machine of the type specified, a reciprocating form adapted to receive a paper box, paper controlling means adapted to apply the end of a web of paper to said box, paper severing means adapted to cut said web, means for actuating said form, means carried by said form for actuating said paper controlling means, and means carried by said form for actuating said paper severing means, one of said last named means carried by said form, being adjustably mounted.

5. In a machine of the type specified, a reciprocating form adapted to receive a paper box, paper controlling means adapted to apply the end of a web of paper to said box, said means being actuated by said form, paper severing means adapted to cut said web, said last named means being actuated by said form and movable concurrently therewith, and means for actuating said form.

[Claims 6 to 11 not printed in the Gazette.]

1,106,728. LIFE-SAVING SUIT. FREDRICK A. ROBERTS, Dickey, N. D. Filed May 13, 1913. Serial No. 767,484. (Cl. 9—20.)



1. In a life saving suit including a body portion and a neck portion, a rigid adjustable collar adapted for disposal within the neck opening and having a concave peripheral surface into which the material of the neck of the suit is adapted to be drawn.

2. In a life saving suit including a body having a neck opening and a neck portion surrounding the same, a collar comprising adjustably connected sections having a concave peripheral surface into which the neck portion is adapted to be drawn.

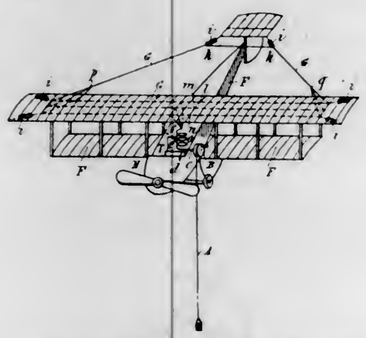
3. In life saving suit, including a body portion having a neck opening, and a neck portion surrounding the opening, a collar disposed within the neck opening and comprising hingedly connected sections, and means adjustably connecting the sections at their free ends, the said sections having concaved peripheries receiving the said neck portion.

4. In life saving apparatus, a helmet comprising a hood open at the front, a casing extending from the open front of the hood, the casing being provided with an opening, a valve movable to position to close the said opening, and a float connected with the valve and extending below the opening and arranged upon upward movement to close the valve.

5. In life saving apparatus, a helmet including a hood, a casing extending from the hood and having an opening, a tubular extension from the under side of the hood, a valve movable into and out of position to close the opening in the casing, and a float connected with the valve and located in said extension and arranged to close the valve when lifted.

[Claims 6 to 8 not printed in the Gazette.]

1,106,729. WIRELESS-TELEGRAPH INSTALLATION FOR AERIAL VESSELS. LUCIEN ROUZET, Paris, France. Filed Apr. 21, 1913. Serial No. 762,723. (Cl. 250—33.)

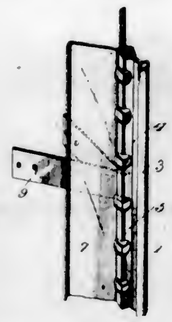


1. In a wireless telegraph installation for an aerial vessel, an electrical counterpoise insulated from the framework of the aerial vessel, a flying antenna carried by a winch on such vessel, a coupling device in connection with a source of electrical oscillations and with the counterpoise and a short connection between the winch and the coupling device, the antenna being connected at the point where with an ordinary fixed station the earth is connected and the supplementary convolutions of the coupling device that is those between the point of connection of the oscillation producing device and the counterpoise being so chosen that, with the counterpoise, they equilibrate the system in such a way as to produce a tension node at the point of departure of the flying antenna.

2. In a wireless telegraph installation for an aerial vessel, a counterpoise formed of a network of metallic wires these wires being of such length that the period of oscillation of the system is different from the proper period of oscillation of the metallic parts of the aeroplane so as to avoid induction in such parts, a winch mounted on the aeroplane and carrying a flying antenna, a coupling device mounted in connection with the source of oscillations and with the counterpoise, and a short connection between the winch and the coupling device, the antenna being connected at the point where with an ordinary fixed station the earth is connected and the supplementary convolutions of the coupling device, that is those between the point of connection of the oscillation producing device and the counterpoise being so chosen that with the counterpoise they equilibrate the system in such a way as to produce a tension node at the point of departure of the flying antenna.

3. In a wireless telegraph installation for an aerial vessel, an electrical counterpoise consisting of a network of wires insulated at all points of attachment to the framework of the aerial vessel by means of ebonite rods of sufficient length to insure such insulation, each of the rods being attached at one extremity to the framework of the vessel and the wires of the network being attached at the other extremities of such rods, a flying antenna carried by such vessel and connected at the point where with an ordinary fixed station the earth is connected, a coupling device in connection with a source of electrical oscillations and with the network forming the counterpoise and a short connection between the flying antenna and the coupling device all for the purposes set forth.

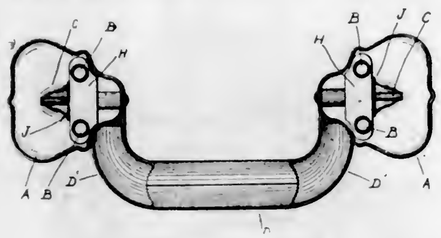
1,106,730. CORNER BEAD OR STRIP. ROBERT L. SANDERSON, Niles, Ohio, assignor to The Bostwick Steel Lath Company, Niles, Ohio, a Corporation of Ohio. Filed Sept. 2, 1913. Serial No. 787,777. (Cl. 72—121.)



1. A bead having a hollow portion along its longitudinal edge, a squared portion separated from the hollow portion by parallel meeting portions, and outwardly extending flanges projecting from said squared portion, in combination with a clip having a squared portion fitting in the squared portion of the bead.

2. A bead having a hollow portion along its longitudinal edge, a squared portion separated from the hollow portion by parallel meeting portions, said squared portion extending outwardly beyond the plane of said parallel meeting portions, in combination with a clip having a squared portion fitting in the squared portion of the bead.

1,106,731. CASKET-HANDLE. EDWARD R. SARGENT, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 4, 1912. Serial No. 729,212. (Cl. 16—103.)



1. In a casket handle, a substantially U-shaped bail, trunnions extending laterally from the respective hanger arms of the bail toward the respective ends of the handle, and socket plates in which the respective trunnions are freely socketed, each of said socket plates being constituted by a sheet metal plate having inturned edges to seat on the box wall, an integral hollow boss projecting forwardly from the socket plate, having a perforated side wall through which the corresponding trunnion extends, a reinforcing plate secured within the socket plate at the rear of the latter and bridging the space created by the hollow boss, a lug on said reinforcing plate extending into and internally reinforcing the boss and having a perforation serving as an additional bearing for the corresponding trunnion, and means to secure said reinforcing plate to the socket plate at opposite sides of the boss; substantially as described.

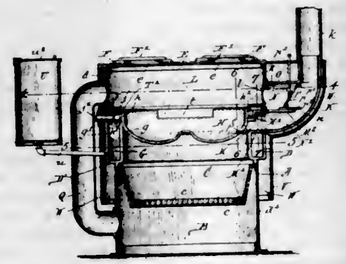
2. In a casket handle, a socket plate comprising a stamped sheet metal plate having inturned edges to bear against the box wall, a hollow boss projecting integrally from said plate in a forward direction, said boss being closed at the front, but provided with a substantially vertical side wall having a perforation to serve as a trunnion bearing, a hard metal reinforcing plate within the lines of the socket plate at the rear of the latter, said reinforcing plate extending vertically across the space created by said boss, means to secure said reinforcing plate to the socket plate above and below the boss, and a part on the reinforcing plate extending forward into the hollow boss and internally reinforcing the same, said boss-reinforcing part having a perforation or trunnion bearing in line with that of the side wall of the boss; substantially as described.

3. In a casket handle, a sheet metal semi-tubular bail having oppositely located perforations at one end portion thereof, a separate reinforcing piece of semi-tubular form nested in the hanger arm with its outer surface approximately in contact with the inner surface of the hanger arm, said reinforcing piece having perforations to register with those of the hanger arm, and a pin extending through all of said perforations and having a trunnion portion projecting laterally beyond the hanger arm at one side of the latter, said pin being permanently interlocked with the hanger arm to provide a permanent trunnion on the hanger arm, and also serving as a permanent support for said reinforcing piece; substantially as described.

4. In a casket handle, a substantially U-shaped sheet metal bail having semi-tubular end portions, pins driven through the respective end portions in opposite directions and having trunnion portions extending laterally beyond such end portions toward the respective ends of the handle, a non-cylindrical portion on the shank of each pin to prevent endwise displacement of the pin from the hanger arm, and a separate reinforcing piece permanently secured in the hanger arm by said pin; substantially as described.

5. In a casket handle, an attaching plate having an outwardly extending hollow boss, presenting a flat perforated exposed wall at one side, a hanger arm having a trunnion extending laterally therefrom at one side only, the laterally extending portion of said trunnion being engaged with the perforation of said wall, and a reinforcing member secured to said attaching plate behind the latter, and affording an additional bearing for said trunnion, said reinforcing member comprising a plate having a perforated portion extending into said hollow boss in line with but spaced from said first perforation, substantially as described.

1,106,732. INCINERATOR FOR GARBAGE, EXCREMENT, &c. ALFRED L. SCHELLHAMMER, Warren, Pa. Filed Aug. 27, 1910. Serial No. 579,286. (Cl. 110—9.)



1. An incinerator comprising a casing having a fire-pot, a kettle within said casing in operative relation to said fire-pot, a liquid receptacle in the horizontal plane of said kettle and also in operative relation to said fire-pot, said liquid receptacle being arranged to receive the overflow from said kettle, and a liquid-receiving vessel connected with said liquid receptacle.

2. An incinerator comprising a casing, a kettle within said casing, a liquid receptacle in the horizontal plane of said kettle arranged to receive the overflow from said kettle, and means to subject said kettle and receptacle to heat.

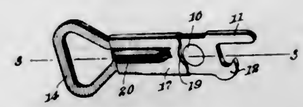
3. An incinerator comprising a casing, a kettle within said casing, a liquid receptacle surrounding said kettle and adapted to receive the overflow from said kettle, and means to subject said kettle and receptacle to heat.

4. An incinerator comprising a casing having a fire-pot, a kettle within said casing above said fire-pot and having an outstanding flange at its upper edge on one side of its center, and a liquid receptacle surrounding said kettle and having the flange of said kettle bearing against its upper edge and itself having an inwardly-directed flange on the opposite side of its center bearing against the corresponding upper edge portion of said kettle, said liquid receptacle being adapted to receive the overflow from said kettle and said kettle being pivotally mounted in said liquid receptacle.

5. An incinerator comprising a casing having a fire-pot, a kettle within said casing in operative relation to said fire-pot, and a liquid receptacle surrounding said kettle within said casing and in operative relation to said fire-pot and also in operative relation to said kettle to receive the liquid overflow therefrom.

[Claims 6 to 11 not printed in the Gazette.]

1,106,733. CIGAR-TIP CUTTER. JOSEPH J. SCHLEINKOFER, St. Louis, Mo. Filed Feb. 24, 1913. Serial No. 750,230. (Cl. 131—38.)



In a device of the class described, a body member having an aperture to receive a cigar tip adjacent one end and having an open loop at its other end, a plate slidably engaged with one side of said body member, said plate having one end formed as a cutting edge and arranged to pass over the aperture in the body, said plate also having a longitudinally extending housing pressed from its central portion, said body member having a projection extending into said housing, and an expansible spring held in said housing and engaging at its end with said projection and the end of said housing and normally holding the plate on the body member to leave the aperture uncovered.

1,106,734. SMOKE-TUBE SUPERHEATER. WILHELM SCHMIDT, Wilhelmshöhe, near Cassel, Germany. Filed May 15, 1909. Serial No. 496,219. (Cl. 121—462.)

1. In a superheater, a plurality of rows of smoke tubes, and a plurality of superheater units in each row each unit comprising a plurality of loops, all of said loops of the several units of each row being arranged in the same plane but the pairs of ends from said several units being arranged in different planes, as and for the purpose described.

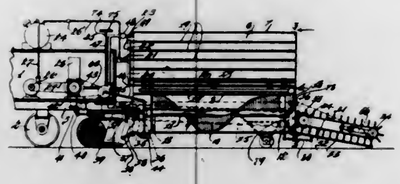
2. In a superheater, a plurality of rows of smoke tubes, and a plurality of superheater units in each row each unit comprising a plurality of loops, all of said loops of the several units of each row being arranged in the same plane while the pairs of ends from said several units are arranged in planes parallel to one another, as and for the purpose described.

3. In combination, a plurality of rows of smoke tubes, a plurality of superheater units in each row each unit comprising loops arranged in series and all the loops of each row being arranged in the same plane, headers for the saturated and superheated steam respectively, and pairs of ends between the headers and the superheater units said pairs of ends being arranged in parallel planes, as and for the purpose described.



4. In combination, a plurality of smoke tubes, arranged in rows, a plurality of superheater units in each row each unit comprising loops and the loops being arranged in series in substantially every one of the tubes of a given row all of said loops of each row being arranged in the same plane, headers for the saturated and superheated steam respectively, and pairs of ends between the headers and the superheater units said pairs of ends being arranged in parallel planes, as and for the purpose described.

1,106,735. SNOW GATHERING AND MELTING MACHINE. GEORGE SCHULER, Woodside, N. Y. Filed Dec. 7, 1912. Serial No. 735,380. (Cl. 126—343.5.)



1. A snow remover comprising a conveyer including a hollow shaft, radially disposed tubes in communication with and carried by the shaft, said tubes being arranged in helical formation and in relatively adjacent contacts, hot water generators, and means for conducting the hot water from the generators to the conveyer.

2. A snow remover comprising a receiving chamber provided with a well, a hollow conveyer within said chamber, means for generating hot water, means for conveying water from the generator to the conveyer, a pump, a pipe connecting said well and pump, and a pipe connecting said pump and generator.

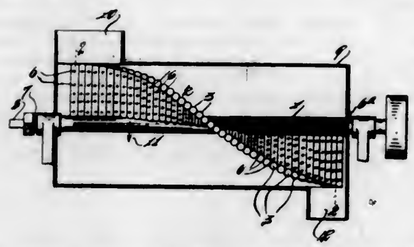
3. A snow remover comprising a receiving chamber, provided at one end thereof with a pivotal apron, means carried by the apron to receive a hose, a hollow conveyer within said chamber, hot water generators, and means for conveying water from said generators to the conveyer.

4. A snow remover comprising a conveyer composed of a plurality of perforated pipes arranged in helical formation and in contact with each other, and means for introducing hot water into said conveyer.

5. A snow remover comprising a conveyer composed of a plurality of perforated pipes arranged in helical formation and in contact with each other, a hot water generator, and means for introducing the water from said generator into said conveyer.

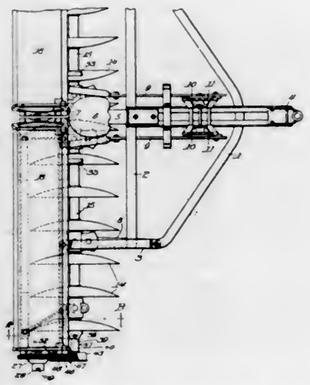
[Claims 6 to 10 not printed in the Gazette.]

1,106,736. CONVEYER. GEORGE SCHULER, Woodside, N. Y. Filed Feb. 5, 1914. Serial No. 816,665. (Cl. 193—13.)



A conveyer comprising a hollow shaft, a plurality of perforated pipes projecting radially of the shaft and in contact with each other longitudinally thereof, said pipes being disposed in helical formation longitudinally of the shaft and having their outer ends bent over.

1,106,737. COMBINED DISK HARROW AND SEEDER. DUNY A. SCHUTT, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 10, 1913. Serial No. 800,096. (Cl. 111—18.)

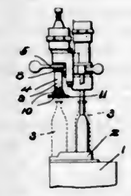


1. In a combined disk harrow and seeder, in combination, a disk gang frame, a rotatable gang axle journaled upon said frame, an extension secured to the outside end of said gang axle, a sprocket wheel secured to said extension and rotatable therewith, a seed box carried by said gang frame, a seed distributing shaft rotatably journaled at the bottom of said seed box and extending beyond the outside end wall thereof, a sleeve mounted upon the end of said shaft, having its inner end journaled in the end wall of the box, a sprocket wheel rotatably mounted upon the opposite end of said sleeve, a clutch mechanism mounted upon said sleeve adjacent said sprocket wheel, and a sprocket chain operatively connecting the two sprocket wheels.

2. A combined disk harrow and seeder comprising, in combination, a disk gang frame, a rotatable gang axle journaled upon said frame, an extension secured to the outside end of said gang axle, a sprocket wheel secured to said extension and rotatable therewith, a seed box carried by said gang frame, a seed distributing shaft journaled at the bottom of said seed box and extending beyond the outside end wall thereof, a sleeve mounted upon the extended end of said shaft and rotatable therewith, said sleeve having its inner end journaled in the end wall of the box, an angular part intermediate the ends thereof, and a cylindrical bearing part at the outside end thereof terminating in a flanged head, a sprocket wheel journaled upon said cylindrical part and provided with clutch teeth upon the inner end of its hub, and projecting ear members at the opposite end thereof, pins passing through said ear members and abutting said flanged head, a clutch member slidably mounted upon the angular part of said sleeve and adapted to engage with the clutch teeth upon the head of the adjacent sprocket wheel, a collar secured to the inner end of said sleeve, and a sprocket chain operatively connecting the two sprocket wheels.

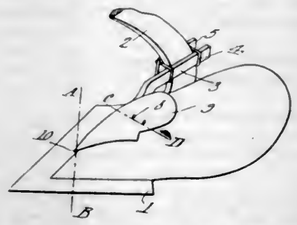
3. A combined disk harrow and seeder having, in combination, disk gang frames, rotatable gang axles journaled in said frames, axle extensions secured to the outside ends of said gang axles, sprocket wheels secured to said extensions and rotatable therewith, seed boxes carried by said gang frames, seed distributing shafts journaled in the bottom of said boxes and extending beyond the outside end walls thereof, sleeves mounted upon the extended parts of said shafts, rotatable therewith and having their ends journaled in the end walls of said boxes, sprocket wheels journaled upon the outside ends of said sleeves and secured against lateral movement thereon, said sprocket wheels provided with clutch members upon their inner sides, slidable clutch members carried by said sleeves and adapted to operatively engage with said sprocket wheels, said slidable clutch member being rotatable with said sleeves, and sprocket chains operatively connecting the sprocket wheels carried by said sleeves with those carried by said axle extensions.

1,106,738. BOTTLE-CENTERING ATTACHMENT FOR BOTTLING-MACHINES. EDGAR A. SHONTZ, Philipsburg, Pa. Filed June 10, 1913. Serial No. 772,748. (Cl. 226—9.)



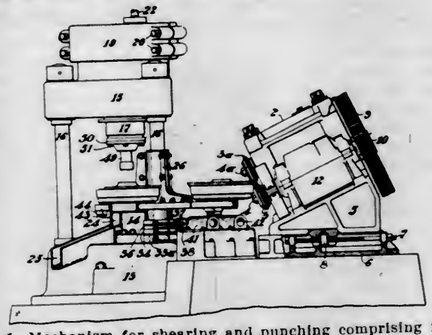
A bottle centering device of the character described, comprising a head fixed around the tube, a cylindrical housing fixed to the head and positioned around the tube, said housing provided at one end with a series of tongues, each tongue bent outwardly, and a ring of appreciably greater diameter than the diameter of the cylindrical portion of the housing, and said tongues at their free ends bent around said ring, substantially as described.

1,106,739. JOINTER ATTACHMENT FOR PLOWS. PHILIP S. SIDELL, Shreve, Ohio. Filed Nov. 21, 1912. Serial No. 732,741. (Cl. 97—6.)



The combination with a soil engaging device and a standard, of a forwardly extending arm connected to the standard, and a jointer blade mounted on the front end of the arm, said blade contacting along one edge with one side of the soil engaging device.

1,106,740. PUNCHING AND SHEARING APPARATUS. EDWIN E. SLICK, Pittsburgh, Pa. Filed June 17, 1910. Serial No. 567,522. (Cl. 29—34.)



1. Mechanism for shearing and punching comprising in combination a rotary shear, a reciprocating punch and a supporting table on which the materials being sheared and punched is positioned, said supporting table being arranged to move to bring the materials successively into range of the shear and punch, and hold the materials stationary during the shearing and the punching operations.

2. Mechanism for shearing and punching comprising in combination a rotary shear, a reciprocating punch and a supporting table on which the materials being sheared and punched is positioned, said supporting table being arranged to move to bring the materials successively into range of the shear and means coacting with the supporting table to hold said supporting table stationary during the shearing and punching operations.

3. Mechanism for shearing and punching comprising in combination a rotary shear, a reciprocating punch and a supporting table on which the materials being sheared and punched is positioned, said supporting table being arranged to move to bring the materials successively into range of the shear and punch, and a stop against which the supporting table is held during the shearing operation.

4. In mechanism for shearing and punching wheels and similar circular bodies, the combination of a rotary shear, a reciprocating punch, and a carrier for supporting the wheels during the shearing and punching operations, said carrier being arranged to move wheels mounted thereon successively into range of the shear and the punch and having means permitting rotation of the wheels mounted thereon during the shearing operations.

5. In mechanism for shearing and punching wheels and similar circular bodies, the combination of a rotary shear, reciprocating punch, and a carrier on which the wheels are mounted during the shearing and punching operations, said carrier having a plurality of wheel supports to receive and hold wheels in position thereon during the shearing and punching operations, and mechanical means for moving the carrier to bring the wheels successively into range of the shear and the punch.

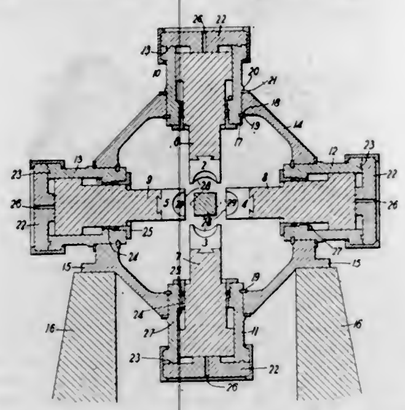
[Claims 6 to 13 not printed in the Gazette.]

1,106,741. BLANK SHEARING AND FORMING APPARATUS. EDWIN E. SLICK, Pittsburgh, Pa. Filed May 22, 1912. Serial No. 698,882. (Cl. 29—34.)

1. In a shear a pair of oppositely facing reciprocatory shear knives, a second pair of oppositely facing reciprocatory knives, and means for reciprocating the knives in each pair independently of the other, said knives reciprocating in the same plane, at least one knife in one pair having a concave cutting edge.

2. In a shear a pair of oppositely facing reciprocatory shear knives, a second pair of oppositely facing reciprocatory knives, and means for reciprocating the knives in each pair independently of the other, said knives reciprocating in the same plane, the cutting edges of at least one pair having oppositely curving concave cutting edges.

3. In a shear a pair of opposed shear knives and means for reciprocating said knives toward and away from each other, and means adjacent to the cutting edges of said shear knives whereby the severed pieces of metal are shaped concurrently with the cutting operation.

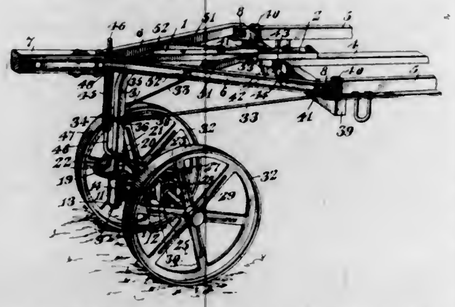


4. In a shear a pair of opposed shear knives and means for reciprocating said knives toward and away from each other, said knives having recesses therein whereby the severed metal is formed into a cylindrical blank concurrently with the cutting operation.

5. Apparatus for forming and shearing metal blanks comprising oppositely facing pairs of reciprocatory shear knives, and means for actuating the knives in pairs, said pairs of knives reciprocating in the same plane, the opposing knives in the pairs having recesses therein whereby the metal being sheared is shaped simultaneously with the cutting operations.

[Claim 6 not printed in the Gazette.]

1,106,742. CASTER-WHEEL TRUCK ATTACHMENT FOR CULTIVATORS, &c. JAMES A. SMETHERS, Beatrice, Nebr., assignor to The Beatrice Iron Works, Beatrice, Nebr. Filed Aug. 30, 1913. Serial No. 787,501. (Cl. 21—204.)



1. A truck attachment of the class described including a central bar provided with an attaching portion and having a depending stem provided with a pivot, a central axle arm provided at its front portion with a bearing to receive the pivot and extending rearwardly therefrom, a transverse caster axle carried by the rear portion of the arm and located in rear of the pivot, and side wheels mounted on the axle.

2. The combination with a relatively fixed main frame, of an axle attachment including a central bar secured to the main frame and provided with a depending stem having a pivot, an axle arm provided at its front portion with a bearing to receive the vertical pivot and extending rearwardly therefrom, a transverse caster axle carried by the rear portion of the arm, side wheels mounted on the said axle, and a tongue having rearwardly extending braces located at opposite sides of the central bar and pivotally connected to the main frame.

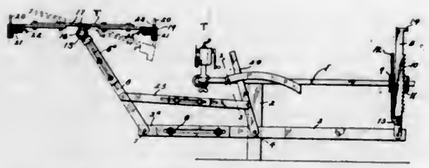
3. The combination of a main frame including side bars, a tongue having rearwardly extending braces pivotally connected to the side bars, and a truck attachment comprising a central bar or member secured to the main frame and located between the said braces and provided with a depending stem having a pivot, an axle arm provided at its front portion with a bearing to receive the said pivot and extending rearwardly therefrom, a transverse caster axle carried by the rear portion of the said arm, and wheels mounted on the axle.

4. The combination of a main frame including side bars, a tongue having rearwardly extending bruces pivotally connected to the side bars, and a truck attachment comprising a central bar or member secured to the main frame and located between the said braces and provided with a depending stem having a pivot, an axle arm provided at its front portion with a bearing to receive the said pivot and extending rearwardly therefrom, a transverse caster axle carried by the rear portion of the said arm, wheels mounted on the axle, and rearwardly converging supplemental braces extending from the side braces to the said central bar or member and pivotally connected to the same.

5. The combination of a main frame including side bars, a truck attachment comprising a central bar having a rearwardly extending horizontal portion rigidly secured to the frame, said central bar being also provided at the front with a depending stem having a pivot, a central axle arm provided at its front portion with a bearing to receive the said pivot and extending rearwardly therefrom, a transverse caster axle carried by the rear portion of the arm and side wheels mounted on the axle, a tongue located in advance of the central bar, and forwardly converging side braces located at opposite sides of the central bar and pivoted to the side bars of the main frame and rigidly connected at their front terminals to the tongue.

[Claims 6 to 19 not printed in the Gazette.]

1,106,743. TANK-BOTTOM HOLDER. WALTER O. SMITH, Spur, Tex. Filed Nov. 4, 1913. Serial No. 799,188. (Cl. 153—31.)

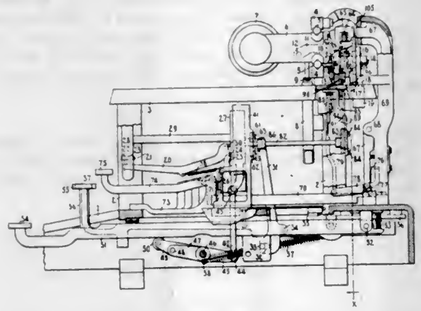


1. A holder for tank bottoms and the like including a rigid support, an edge bending tool upon the rigid support, a substantially horizontal beam pivotally mounted upon the rigid support, an upright arm pivoted upon the horizontal beam, a tank bottom holding frame revolubly mounted upon the upright beam, means for swinging the horizontal beam to raise and lower the tank bottom support, and means for swinging the upright arm to move the tank bottom support toward and away from the edge bending tool.

2. A holder for tank bottoms and the like including a rigid support, an edge bending tool upon the rigid support, a substantially horizontal beam pivotally mounted between its ends upon the rigid support, an upright swinging arm pivotally mounted upon one end of the horizontal beam, a plunger engaging the opposite end of the horizontal beam for raising and lowering the swinging arm, a tank bottom supporting frame revolubly mounted upon the upper end of the swinging arm, and means for swinging the said arm toward and away from the edge bending tool.

3. A holder for tank bottoms and the like including a rigid support, an edge bending tool upon the same, a substantially horizontal beam pivotally mounted between its ends upon the rigid support, an upright swinging arm pivotally mounted upon one end of the horizontal beam, a plunger connected to the opposite end of the swinging beam for moving the same to raise and lower the swinging arm, a tank bottom supporting frame revolubly mounted upon the upper end of the swinging arm, a lever, and a link between the lever and swinging arm for moving the swinging arm toward and away from the edge bending tool.

1,106,744. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 29, 1913. Serial No. 757,532. (Cl. 197—71.)



1. In a typewriting machine, the combination of a platen element, a coöperative printing element, said elements being relatively shiftable to effect a change of case and one of said elements being a traveling element, and automatically actuated case shifting means, said means being caused to operate by movements of said traveling element.

2. In a typewriting machine, the combination of a traveling carriage, a platen thereon, printing instrumentalities, the platen and printing instrumentalities being relatively shiftable to effect a change of case, and case shifting means automatically actuated during traveling movements of said carriage and the operation of said means being due to such traveling movements.

3. In a typewriting machine, the combination of a traveling platen, a set of key actuated type bars each provided with a plurality of types, and means automatically operative for rendering the different types on the type bars effective, said means being caused to operate by traveling movements of said platen.

4. In a typewriting machine, the combination of a traveling carriage, a platen thereon, a motor tending constantly to cause traveling movements of said carriage, a set of key actuated type bars each provided with a plurality of types, and means automatically operative during traveling movements of said carriage and rendered effective by said motor for rendering different types on the type bars effective.

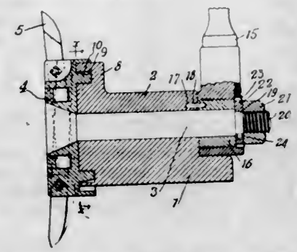
5. In a typewriting machine, the combination of a platen, type bars provided with upper and lower case types, tabulating mechanism, and case shifting means automatically operating when said tabulating mechanism is actuated.

[Claims 6 to 42 not printed in the Gazette.]

1,106,745. TOOL-HOLDER. ARCHIE H. STEVENS, Hornell, N. Y. Filed Aug. 11, 1913. Serial No. 784,080. (Cl. 29—49.)

1. In a tool holder, the combination, with a base, and a rotary tool-support mounted on said base and adapted to support a plurality of tools, of a handle, means actuated by the movement of said handle in one direction to advance said rotary support a predetermined distance, and means controlled by the movement of said handle in another direction to establish a locking engagement between said base and said handle.

2. In a tool holder, the combination, with a base, a spindle journaled in said base, and a tool support secured to said spindle, of a sleeve mounted on said spindle and held against rotation relatively thereto, a handle mounted on said sleeve, a screw-threaded connection between said handle and said sleeve to cause said handle to move toward said base when said handle is moved in one direction about the axis of said spindle, and a connection between said handle and said spindle to cause said spindle to rotate when the handle is moved in the other direction about the axis of said spindle.



3. The combination, with a base, a spindle rotatably mounted therein and capable of longitudinal movement relatively thereto, and a tool-support mounted on said spindle and having parts adapted to engage said base to lock said support against movement, of a handle operatively connected with said spindle to rotate said tool-support when said handle is moved in one direction and to impart longitudinal movement to said spindle to bring the support into locking engagement with said base when said handle is moved in another direction, a device yieldingly mounted between said tool-support and said base to lock said support against rearward movement with said spindle and to permit forward movement thereof when force is applied to said spindle.

4. The combination, with a base, a spindle rotatably mounted therein, capable of longitudinal movement relatively thereto, a tool support carried by said spindle and movable into locking engagement with said base, said base having a transverse groove in that end adjacent to said tool support, a spring-pressed dog mounted in said groove, and a locking flange carried by said tool support and extending across the end of said groove, said flange having recesses to coöperate with the end of said dog, of a handle operatively connected with said spindle, and a connection between said handle and said spindle whereby either rotary or longitudinal movement may be imparted to said spindle and said tool support by the movement of said handle.

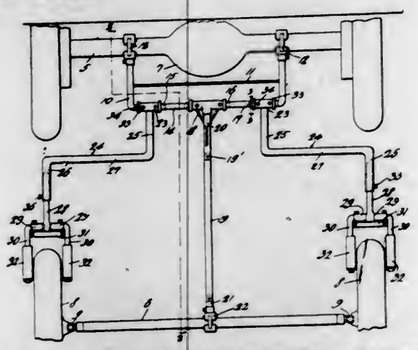
5. The combination, with a base, a spindle rotatably mounted therein and capable of longitudinal movement relatively thereto, of a tool-support secured to one end of said spindle and having surfaces adapted to be moved into and out of frictional contact with coöperating parts of said base when longitudinal movement is imparted to said spindle, a handle mounted about the axis of said spindle having a part arranged to be moved into frictional engagement with said base, a sleeve mounted on said spindle, a screw connection between said handle and said sleeve, and a feeding connection between said handle and said spindle, whereby the movement of said handle in one direction will rotate the spindle to advance the tool-support and the movement of the handle in the other direction will bring the coöperating surfaces of said parts into frictional engagement.

[Claim 6 not printed in the Gazette.]

1,106,746. AUTOMOBILE TOWING ATTACHMENT. WILLIAM H. STOCKWELL, Shreveport, La. Filed June 12, 1913. Serial No. 773,270. (Cl. 21—114.)

1. The combination with a towing vehicle, and a towed vehicle, of a structure extending between and secured to the said vehicles, and means carried by said structure en-

gaging the front wheels of the towed vehicle adapted to steer the same.



2. The combination with a towing vehicle, and a towed vehicle, of means extending therebetween for holding the vehicles in spaced relation, and means carried by the said means engaging the front wheels of the towed vehicle for a steering thereof.

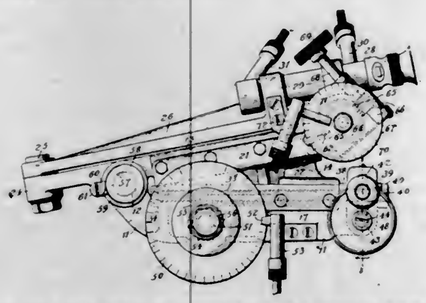
3. A towing attachment for vehicles comprising a rigid structure, means carried thereby for securing it to a towing vehicle, means carried thereby for securing it to a towed vehicle, and means carried thereby engaging the front wheels of the towed vehicle adapted to steer the same.

4. A vehicle towing attachment comprising a rigid structure, means for pivotally securing the same to the towing vehicle, means for securing the said rigid structure to the towed vehicle, means carried by the said rigid structure engaging the front wheels of the towed vehicle adapted to turn the same for a steering thereof.

5. In a device of the class described, the combination of a rigid structure, means for detachably securing the same to the rear axle of a vehicle, means for securing the opposite end thereof to the front axle of a second vehicle, and means extending therefrom engaging the front wheels of the second mentioned vehicle and adapted to swing the same to thereby maintain the said axles in parallelism.

[Claims 6 to 11 not printed in the Gazette.]

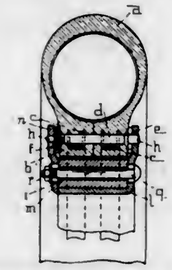
1,106,747. GUN-SIGHT. ROBERT P. STOUT and FRANK A. SULLIVAN, Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed July 31, 1912. Serial No. 712,580. (Cl. 33—48.)



1. In a gun sight, the combination of a member adapted to be secured to the gun, a second member, a horizontal pivot connecting said members together, a vertically arranged pivot carried by said second member, a third member mounted on said second member and engaging said vertically arranged pivot and having a telescope mounted thereon, means for adjusting said third member relative to the second, a pair of pivotally connected blocks having flanges engaging corresponding grooves in the first and second members whereby said members are securely held against relative movement, said blocks being movable longitudinally of said members to vary the angular relation of the members, a range dial carried by the first member, a rack carried by one of said blocks, and a pinion connected with the range dial and adapted to be actuated by said rack to rotate the dial in accordance with the movements of said blocks.

2. In a gun sight, the combination of a member adapted to be secured to the gun, a second member, a horizontal pivot connecting said members together, a telescope, means connecting said telescope to said second member, a pair of pivotally connected blocks having flanges engaging corresponding grooves in the first and second members, whereby said members are securely held against relative movement, said blocks being movable longitudinally of said members to vary the angular relation of the members, a range dial rotatably mounted on the first member, a rack carried by one of said blocks, and a pinion connected with said dial and engaged by said rack whereby the dial is rotated in accordance with the movements of said blocks.

1,106,748. PNEUMATIC TIRE. JOSEF STUNGO, Berlin, Germany, assignor of one-half to William Schneider, Charlottenburg, Germany. Filed Oct. 24, 1912. Serial No. 727,577. (Cl. 152—21.)



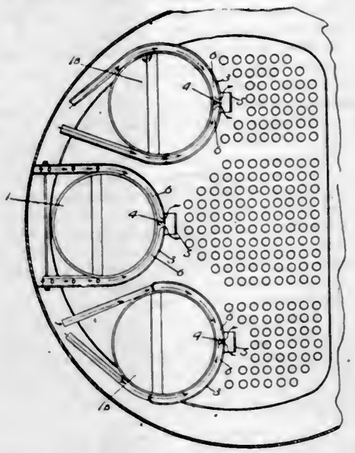
1. A pneumatic tire comprising an air tube, a flexible outer cover therefor having its edges thickened to form cheeks which extend inwardly and abut laterally against each other, a metal ring embedded in each cheek, bolts having reduced ends and passing through the rings and cheeks to hold the latter together, and removable flange plates mounted on the felly of the wheel and having holes to receive the reduced ends of the bolts.

2. A pneumatic tire comprising an air tube, a flexible outer cover therefor having its edges thickened to form cheeks which extend inwardly and abut laterally against each other, a metal ring, U-shaped in cross-section, embedded in each cheek, bolts having reduced ends and passing through the rings and cheeks to hold the latter together, and removable flange plates mounted on the felly of the wheel and having holes to receive the reduced ends of the bolts.

3. A pneumatic tire comprising an air tube, a flexible outer cover therefor having thickened edges to form cheeks which extend inwardly and abut laterally against each other, a metal ring U-shaped in cross-section embedded in each cheek, bolts having reduced ends passing through the rings and cheeks, a conical shoulder and a conical nut on each bolt to hold the cheeks together, removable flange plates mounted on the felly of the wheel and having holes into which the reduced ends of the bolts project.

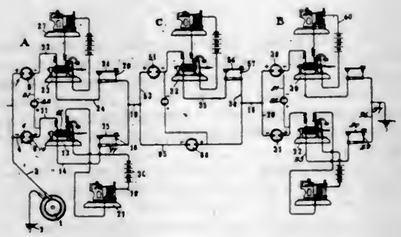
1,106,749. WATER-CIRCULATOR FOR BOILERS. JOHN TAIT, Dunedin, New Zealand. Filed Mar. 7, 1912. Serial No. 682,082. (Cl. 122—410.)

A water circulator for corrugated boiler furnaces comprising a plate straddling the furnace and having portions conformably fitting in the spaces between the corrugations in said furnace, said plate being formed with parallel upturned edges; a pair of angle-irons secured to said edges; a plate connecting said angle-irons and coöperating with the same to form an open-ended pocket, said plate being provided with an opening located at the crown of



the furnace; a baffle arranged over said opening for preventing the entry and settling of sediment in said pocket; and pipes connected to the ends of said pocket.

1,106,750. TELEGRAPH SYSTEM. BENJAMIN FRANK THOMPSON, Arlington, Md. Filed Dec. 22, 1910. Serial No. 598,694. (Cl. 178—55.)



1. In a system of the class described, in combination, a line having divided portions throughout its length, a source of alternating current supply, signaling apparatus in the various divisions of said line, rectifying apparatus in the various divisions of said line, means associated with each signaing apparatus for opening and closing the circuit at will to impress signaling impulses upon the line, a bridge directly connecting the opposed members of each pair of divided portions, and rectifying means located in said bridge and so faced as to conduct to each side current pulsations of the wrong sign which have leaked through the rectifying means of each division.

2. In a system of the class described, the combination of a single line conductor provided throughout its length with a plurality of opposed divisions, a source of alternating current, signaling instruments in the various divisions of said line, rectifying means for permitting current pulsation of one sign only to be discharged through one division and current pulsation of the opposite sign only to be discharged through the other division, a bridge directly connecting the opposed members of each pair of opposed divisions, and rectifying means located in said bridge and so faced as to conduct to each side current pulsations of the wrong sign which have leaked through the rectifying means of each division.

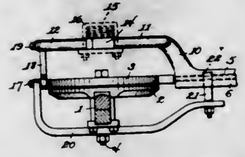
3. In a system of the class described, the combination with a line provided with a plurality of opposed divisions throughout its length, of a source of alternating current supply for said line, a plurality of signaling instruments located in each of said opposed divisions, rectifying means for supplying current pulsation of one sign through certain of said divisions and for supplying current pulsations of the opposed sign through the others of said divisions, the circuits through said divisions being normally closed, means associated with each instrument for impressing signaling impulses upon the line by opening and closing of the circuit at that point, a bridge directly connecting each pair of opposed divisions, and rectifying means located in said bridge and so faced as to conduct to each side current pulsations of the wrong sign, which have leaked through the rectifying means of each division.

4. In a system of the class described, the combination with a line, of a source of alternating current supply for said line, a plurality of signaling instruments in said line arranged to respond to current pulsations of different signs, rectifying means for allowing current pulsations of one sign to be discharged through the instruments responsive to that sign, rectifying means for allowing current pulsations to be discharged through signaling instruments responsive to the opposite sign, and means for discharging current pulsations of a sign opposed to that for which each of said rectifying means is adapted to discharge through the signaling instruments associated therewith to their proper avenues of flow.

5. In a system of the class described, in combination with a line, a source of alternating current, a plurality of signaling instruments connected with said line, rectifying means for discharging current pulsations of one sign to certain of said instruments, rectifying means for diverting current pulsations of the opposite sign to the others of said instruments, and means for diverting through their proper avenue of flow, current pulsations of the opposite sign leaking through said rectifying means.

[Claim 6 not printed in the Gazette.]

1,106,751. FRONT-AXLE COUPLING. JOHN W. TITUS, Mannington, W. Va. Filed Mar. 13, 1914. Serial No. 824,350. (Cl. 21—24.)



1. In a coupling, the combination with the front axle and reach, of a fifth-wheel comprising upper and lower rings, the lower ring rigidly mounted upon said axle and the upper ring having a central pivotal connection with said axle, a bearing member rigidly attached to the reach, a rearwardly directed stem carried by the upper ring and rotatable in said bearing member, and a spring supporting platform occupying an elevated position over said fifth-wheel and supported at one side by said bearing member, and means sustained by said upper ring disposed in supporting relation to the opposite side of said platform.

2. In a coupling, the combination with the front axle and reach, of a fifth-wheel comprising upper and lower rings, the lower ring rigidly mounted upon said axle and the upper ring having a central pivotal connection with said axle, a bearing member rigidly attached to the reach, a rearwardly directed stem carried by the upper ring and rotatable in said bearing member, a spring-supporting platform occupying an elevated position over said fifth-wheel, and supporting means for said platform whereby the weight of the latter is imposed on the upper ring of the fifth-wheel.

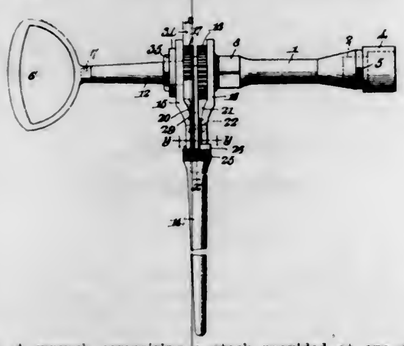
3. In a coupling, the combination with the front axle and reach, of a fifth-wheel, comprising upper and lower rings, the lower ring rigidly mounted upon said axle and the upper ring having a central pivotal connection with said axle, a bearing member rigidly attached to the reach, a rearwardly directed stem carried by the upper ring and

rotatable in said bearing member, an upwardly and forwardly inclined arm carried by said bearing member, an upright supporting member carried by said upper ring at the side opposite said arm, and a spring supporting platform sustained jointly by said arm and said supporting member.

4. In a coupling, the combination with the front axle and reach, of a fifth-wheel comprising upper and lower rings, the lower ring rigidly mounted upon said axle and the upper ring having a central pivotal connection with said axle, a bearing member rigidly attached to the reach, a rearwardly directed stem carried by the upper ring and rotatable in said bearing member, a spring-supporting platform occupying an elevated position over said fifth-wheel, said platform approximating the fifth-wheel in diameter, and supporting means for said platform located at the front and rear of the upper ring of the fifth-wheel, said means permitting vertical oscillation of said fifth-wheel with respect to said platform.

5. In a coupling, the combination with the front axle and reach, of a fifth-wheel comprising upper and lower rings, the lower ring rigidly mounted upon said axle and the upper ring having a central pivotal connection with said axle, a bearing member rigidly attached to the reach, a rearwardly directed stem carried by the upper ring and rotatable in said bearing member, a spring-supporting platform occupying an elevated position over said fifth-wheel, supporting means for said platform whereby the weight of the latter is imposed on the upper ring of the fifth-wheel, and an axle-underlying strap having pivotal connection with the upper ring at points both in front of and in the rear of said axle.

1,106,752. WRENCH. CARL A. TORNBERG, Marathon, Fla. Filed Oct. 22, 1913. Serial No. 796,580. (Cl. 81—62.)

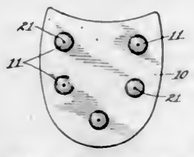


1. A wrench comprising a stock provided at one end with nut engaging means and at its opposite end with a hand grip, said stock being provided intermediate its ends with a squared portion, said stock being reduced in diameter from one end of said squared portion to said hand grip, and provided adjacent the opposite end of said squared portion with a bearing surface, a lever provided with a bifurcated end, said bifurcations provided with apertures adapted to fit upon said bearing surface and upon the reduced stock portion adjacent said squared portion respectively, a pair of ratchet wheels, each provided with a squared bore and oppositely disposed teeth, said wheels being adapted to fit upon said squared portion between the bifurcated end of said lever, a spacing member secured to said lever and extending between said ratchet wheels for holding the same in spaced relation, a pair of pawls secured upon said lever and coöperating with said ratchet wheels, selective means for operating said pawls, and means for holding said lever in position upon said stock, substantially as described.

2. A wrench comprising a stock provided at one end with means for engaging a nut and at its opposite end with a hand grip, said stock intermediate its ends being provided with a squared portion, a bearing surface on each side of said squared portion, one of said bearing portions being in diameter equal to the diagonal of the squared portion, and the other bearing surface being in diameter equal to the diameter of said squared portion, a flange on said stock beyond the larger bearing portion and said stock being threaded adjacent the smaller portion; ratchet wheels mounted upon said squared portion, a lever rotatably mounted upon said bearing portions, means connecting said ratchet wheels with said lever, and a nut for engagement with said threads, substantially as described.

3. A wrench comprising a stock provided at one end with means for engaging a nut and at its opposite end with a hand grip, said stock intermediate its ends being provided with a squared portion, a bearing surface on each side of said squared portion, one of said bearing portions being in diameter equal to the diagonal of the squared portion, and the other bearing surface being in diameter equal to the diameter of the squared portion, a flange on said stock beyond the larger bearing portion and said stock being threaded adjacent the smaller portion; ratchet wheels mounted upon said squared portion, a lever provided with bearing sockets for engagement over said large and small bearing portions respectively beyond said ratchet wheels, means connecting ratchet wheels with said lever, and a nut for engagement with said threads for retaining said lever and ratchet wheels in position upon said stock, substantially as described.

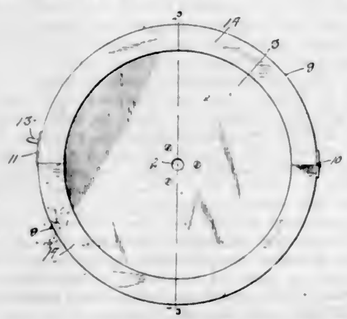
1,106,753. RUBBER HEEL. JOHN TRISCHAN, Chicago, Ill. Filed Mar. 7, 1914. Serial No. 823,249. (Cl. 36—36.)



1. In rubberheels, the combination of, split, metallic sockets arranged to engage the heads of nails driven into a heelbase, with a rubberheel cast around said sockets, said rubberheel and sockets having needle openings extending through the center of said sockets at right angles to the treading surface of said heel, for the purpose described.

2. In rubberheels, the combination of, split, metallic sockets, arranged to engage the heads of nails driven into a heelbase, with a rubberheel cast around said sockets, having a semispherical wart on its treading surface directly below each of said sockets and a needle opening extending through the center of each socket and wart, at right angles to the treading surface of the heel, for the purpose described.

1,106,754. FILM REEL AND CASING. HARRY J. TROXELL, Gettysburg, Pa. Filed Feb. 7, 1913. Serial No. 746,920. (Cl. 242—161.)



In a portable combined film reel and casing, the combination with a reel member including a hub and imperforate metallic plates secured at the ends of the hub, means for attaching a film to the reel member, a removable flanged rim formed of a plurality of connected sections fitting over and surrounding and fitting closely to the peripheral portions of the plates, said plates and flanged rim forming a complete closure for the film, and means for locking the flanged rim on the reel.

1,106,755. TIRE-HOLDER. HARRY TUTTLE, Connersville, Ind. Filed May 15, 1913. Serial No. 767,819. (Cl. 224—29.)



1. A tire-holder comprising members supported from a vehicle body, said members including stationary parts disposed in different planes and movable clamps to engage the opposite edges of a rim on which a tire is supported, each of said clamps having a portion lying against one of said stationary members and an extended portion forming a clip which terminates adjacent to the edge of the rim, whereby the clips will be disposed in staggered relation on opposite sides of said rim and at an extended or diminished distance from the stationary parts, for the purpose set forth.

2. In a tire-holder, two clips to engage rim edges, and means disposed in different planes to support said clips alternatively with their operative parts at two different distances apart, whereby to grip the opposite edges of a single rim or of two rims placed side by side.

3. In a tire-holder, two clips to engage rim-edges, stationary parts carried by the vehicle body having their corresponding faces in different planes, and means to support each of said clips, at will, on either side of one of said stationary parts, whereby the operative ends of said clips may be spaced at different distances, for the purpose set forth.

4. In combination, a semi-circular member, plates secured thereto and receiving support from the vehicle body, ears disposed in different planes upon said plates, and clips bolted to said ears to be engaged with opposite rim-edges and in staggered positions thereon, for the purpose set forth.

5. In combination, a semi-circular member, plates thereon, ears upon said plates having their corresponding faces in different planes, clips to engage rim-edges and adapted, at will, to be secured to either face of said ears, whereby their operative ends may be spaced at distances apart to grip the opposite edges of a single rim or two rims placed side by side.

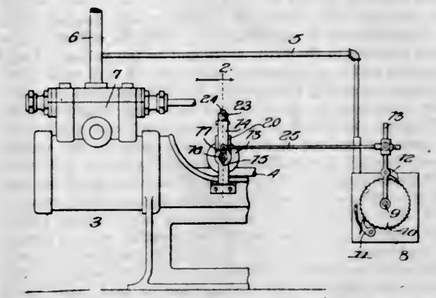
[Claim 6 not printed in the Gazette.]

1,106,756. LUBRICATOR. WILLIAM H. VANDENBERG, Chicago, Ill. Filed Mar. 5, 1914. Serial No. 822,628. (Cl. 184—27.)

1. Mechanism for operating an engine-lubricating pump by the reciprocating action of the engine-piston, comprising a wheel supported to bear against and be rocked by the reciprocating piston-rod, a crank connected with the wheel, and a rod connected with the crank for operating the pump.

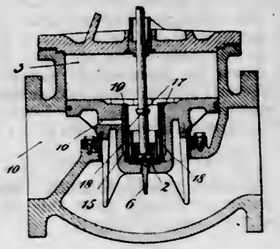
2. Mechanism for operating an engine-lubricating pump by the reciprocating action of the engine-piston, comprising a yoke, a shaft-journaled on the yoke and carrying a crank and a wheel to bear against and be rocked by the reciprocating piston-rod, and a rod connected with the crank for operating the pump.

3. Mechanism for operating an engine-lubricating pump by the reciprocating action of the engine-piston, comprising a yoke having slots in its arms, a shaft-journaled in said slots and carrying a crank and a wheel to bear against and be rocked by the reciprocating piston-rod, and a rod connected with the crank for operating the pump.



4. Mechanism for operating an engine-lubricating pump by the reciprocating action of the engine-piston, comprising a yoke having slots in its arms, a shaft journaled in said slots and carrying a crank and a wheel to bear against and be rocked by the reciprocating piston-rod, a bracket supported on the shaft, a nut adjustably supported on the yoke, a spring confined by the nut against the bracket, and a rod connected with the crank for operating the pump.

1,106,757. MAIN PRESSURE-VALVE. FRITZ WAGNER, Gross Lichterfelde, near Berlin, Germany. Filed Oct. 26, 1908. Serial No. 459,665. (Cl. 137—4.)



1. In a valve the combination of a valve casing, a main valve having a piston portion coöperating with a portion of said casing to form an equilibrium chamber, said chamber having a restricted inlet passage and an outlet passage, the latter being through said main valve, an auxiliary valve for controlling said outlet passage, and a throttling member carried by said auxiliary valve and projecting through said outlet, the throttling effect of said member varying but slightly upon comparatively large relative movements of said main valve and said member.

2. In a valve the combination of a valve casing, a main valve having a piston portion coöperating with a portion of said casing to form an equilibrium chamber, said chamber having a restricted inlet passage and an outlet passage, the latter being through said main valve, an auxiliary valve for controlling said outlet passage, and a throttling member carried by said auxiliary valve and projecting through said outlet, the throttling effect of said member varying but slightly upon comparatively large relative movements of said main valve and said member, said throttling member serving to maintain the outlet opening from said equilibrium chamber of less effective cross-sectional area than the inlet to said chamber until after the auxiliary valve has moved from its seat to a distance materially greater than the movement of said main valve against increasing compression in said equilibrium chamber.

3. In a valve the combination of a valve casing, a main valve having a piston portion coöperating with a portion of said casing to form an equilibrium chamber, said cham-

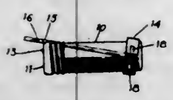
ber having a restricted inlet passage and an outlet passage, the latter being through said main valve, an auxiliary valve for controlling said outlet passage, and a throttling member carried by said auxiliary valve and projecting through said outlet, the length of said member being so proportioned to its throttling action in different positions relative to the main valve and to the volume of said chamber and to the range of movement of said main valve against increasing compression in said auxiliary chamber, that upon opening the auxiliary valve and temporarily diminishing the pressure in said chamber, said main valve in opening against increasing compression in the equilibrium chamber and increasing throttling action will move a distance less than the preliminary movement of the auxiliary valve and prevent seating of the auxiliary valve.

4. In a valve the combination of a valve casing, a main valve having a piston portion coöperating with a portion of said casing to form an equilibrium chamber, an auxiliary valve manually operable to permit the escape of fluid from said chamber and the opening of said main valve, and supplemental means for controlling the movement of said main valve, said supplemental means including a passage communicating with said chamber and a throttling member within said passage, said passage and throttling member having relative movement upon the movement of said main valve and the throttling effect of said member varying but slightly upon comparatively large relative movements of said passage and member.

5. In a valve the combination of a valve casing, a main valve having a piston portion coöperating with a portion of said casing to form an equilibrium chamber, said chamber having a restricted inlet passage and an outlet passage, the latter being through said main valve, an auxiliary valve for controlling said outlet passage, and a throttling member carried by said auxiliary valve and projecting through said outlet, the throttling effect of said member varying but slightly upon comparatively large relative movements of said main valve and said member, said main valve having an inlet passage and a third valve serving to close said passage when said auxiliary valve is in its open position.

[Claim 6 not printed in the Gazette.]

1,106,758. DENTAL FLOSS-HOLDER. BENJAMIN F. WALKER, Bridgeport, Conn. Filed July 29, 1913. Serial No. 781,761. (Cl. 132—12.)

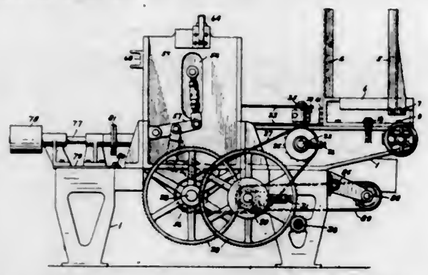


1. A holder for detal floss in use adapted for attachment to a floss container, comprising a resilient band adapted to partially inclose and slide on a container and a curved rod extending forward from the band and provided at its outer end with a locking slot for retaining an end of floss, said band being adapted to slide backward on the container when the holder is not in use.

2. The combination with a tubular floss container, of a holder for floss in use comprising a relatively narrow band slidable on the container, and a rod of substantially the same length as the container, extending forward from the band and having an end extending over the top of the container, the container serving as a handle when the floss is in use, and the holder being pushed backward on the container when not in use.

1,106,759. MACHINE FOR TONGUING AND GROOVING BOX PARTS. LEA P. WARNER, Philadelphia, Pa., assignor to Jordan Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 4, 1913. Serial No. 793,275. (Cl. 144—204.)

1. In a machine of the type described, the combination of cutters, clamps for feeding the ends of a pile of box parts to the cutters, side and end gages in proximity with the clamps and including spring fingers for truing the boards individually, feeders acting in a horizontal plane for delivering the pile to the gages, and feeders for taking the pile horizontally from the bottom of a stack and delivering it to the first mentioned feeders, and means for operating said parts.



2. In a machine of the type described the combination of cutters, a slide having the fixed and the movable elements of a spring clamp, a pair of levers having free ends spaced apart and pivotally connected with each member of the clamp, fixed stops respectively in line with the end of one of the levers for operating the clamps when the slide is up and down and for permitting it to close when the slide is passing the cutters, means for feeding a pile of boards to the clamps and for positioning the pile in respect to the operative parts of the cutters.

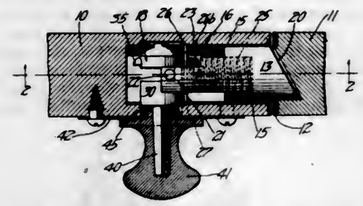
3. A machine of the type described comprising the combination of a bottom feed hopper, means for adjusting the walls thereof to compensate for warped and varying boards, feeders operating in a horizontal plane to feed a pile of boards from the hopper, feeders operating in a horizontal plane more rapidly than the first mentioned feeders to receive the pile of boards from the first mentioned feeders and carry it clear thereof while maintaining the alinement of the boards, end-guides for the boards in proximity with said feeders, a group of independent spring fingers against which the pile of boards is fed by said feeders, a gage for holding the pile of boards in respect to said fingers, means for raising and lowering the gage to permit of the passage of the boards, end guides in proximity with said fingers and gage, a reciprocating carrier for receiving the boards from the fingers and guiding and carrying them past the cutters, mechanism actuated by the travel of the carrier and adapted to open said clamp, cutters, and driving means for said parts.

4. In a machine of the type described, the combination of cutters, opposed clamps for feeding to the cutters, an end gage outside of and opposite each clamp and whereof one is movable, a group of independent movable spring fingers inside each clamp and at right angles with the first mentioned gages, means for feeding a pile of boards to the spring fingers and in respect to the end gages, and devices for operating said parts, substantially as described.

5. In a machine of the type recited, the combination of clamps, means for opening and closing the clamps, means for feeding a pile of boards between the open clamps, a pair of gages against which one end and the adjacent side of the boards are pressed to true the pile while in the open clamps, movable gages acting upon the other end and its adjacent side of the boards, and means for operating said parts, substantially as described.

1,106,760. MORTISE-CATCH. JAMES M. WEAVER, Los Angeles, Cal. Filed Nov. 22, 1913. Serial No. 802,394. (Cl. 70—42.)

1. A mortise catch, comprising a cylindrical tubular body, a cylindrical bolt therein, extensions of said bolt lying at opposite sides of the tubular body and a transverse pin extending between the extensions across the body, a spring pressing the bolt outwardly from the body, a rotatable thrower mounted in the body on an axis at right angles to the body axis and engaging said pin, the thrower being releasable from the pin and being removable from the body by movement along the thrower axis, and a knob for the thrower.



2. A mortise catch, comprising a cylindrical tubular body, a cylindrical bolt therein, extensions of said bolt lying at opposite sides of the tubular body and a transverse pin extending between the extensions across the body, a spring pressing the bolt outwardly from the body, a rotatable thrower mounted in the body on an axis at right angles to the body axis and engaging said pin, said thrower having a transverse slot and a web at the edge of the slot to engage the pin, the thrower being releasable from the pin and being removable from the body by movement along the thrower axis, and a knob for the thrower.

3. In a mortise catch, in combination, a cylindrical tubular body, a cylindrical bolt therein having a pair of extensions at its inner end at opposite sides of the body, a transverse pin connecting the two extensions, and a thrower mounted in the body on an axis transverse to the body axis and transverse to the pin, said thrower having a slot cut across its axis with a web at one side adapted to act against the pin.

4. A mortise catch, comprising a cylindrical tubular body, a cylindrical bolt therein having two inner longitudinal extensions lying at opposite sides of the tubular body, a transverse pin extending between the longitudinal extensions across the body, an abutment plate extending across the body between the bolt and its said pin, a spring between the bolt and said plate and recessed within the bolt, and a thrower engaging the pin to move the bolt by its rotation.

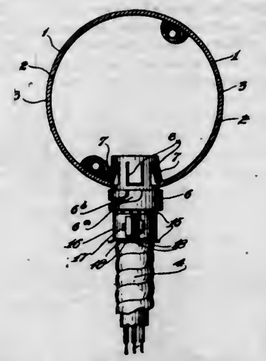
5. A mortise catch, comprising a cylindrical tubular body, a cylindrical bolt therein having two inner longitudinal extensions lying at opposite sides of the tubular body, a transverse pin connecting the ends of the extensions across the body, an abutment plate extending across the body and fitted terminally into openings through the walls thereof, said abutment plate extending between said longitudinal extensions of the bolt and between the bolt and its said transverse pin, a spring recessed within the bolt and extending between the bolt and said abutment plate, a rotatable thrower mounted in the body on an axis at right angles to the body axis and engaging said pin, said thrower having a transverse slot therein and a web at the edge of the slot to engage the pin to move the bolt by its rotation, and a lug on the thrower adapted to engage with shoulders on said longitudinal extensions to prevent excessive movement of the bolt.

[Claims 6 to 8 not printed in the Gazette.]

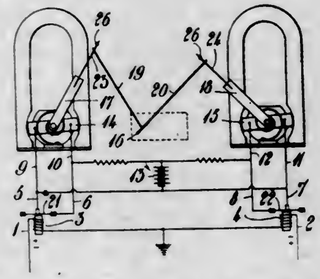
1,106,761. SELF-LOCKING JUNCTION-BOX COUPLING. ALVIN W. WEIKERT and JAMES PETTIBONE, Washington, D. C. Filed Feb. 6, 1914. Serial No. 816,994. (Cl. 247—1.)

1. A junction box coupling carrying inwardly yieldable spring arms for engaging the inner surface of a wall of the junction box, adjustable means for engaging the outer surface of said wall, and means for gripping a conduit.

2. A junction box coupling comprising a tubular body having outwardly movable spring locking members for the junction box, inwardly movable spring locking members for the conduit, a band surrounding said conduit locking members, and having the terminals thereof bent outwardly and then inwardly, a bolt extending through said terminals and provided with a nut, a plurality of outstruck lugs on said tubular body, and a collar surrounding said tubular body and having cam slots therein engaging said lugs for the purpose specified.



1,106,762. ELECTRIC WRITING-TELEGRAPH. EMIL HENRIK WIDEGREN and KLAS AUGUST WIDEGREN, Alby, Sweden. Filed Dec. 20, 1913. Serial No. 807,919. (Cl. 178—18.)



1. In electric writing telegraphs, the combination of a recording pen, oscillating electromagnetic devices, a spring attached to each of said electromagnetic devices, and means connecting the recording pen with said springs at a point thereof coinciding with a node of vibration, substantially as and for the purpose set forth.

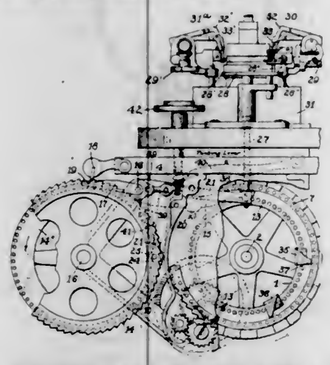
2. In electric writing telegraphs, the combination of a recording pen, oscillating electromagnetic devices, a spring attached to each of said electromagnetic devices, means connecting the recording pen with said springs at a point thereof coinciding with a node of vibration, and a weight attached adjustably to each spring, substantially as and for the purpose set forth.

1,106,763. KNITTING-MACHINE. FRANK B. WILDMAN and GEORGE L. BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed Nov. 8, 1911. Serial No. 659,262. (Cl. 66—12.)

1. In combination with a knitting head, a plurality of stripers mounted thereon to feed thread thereto, pattern means for controlling the operation of said stripers in succession to form the stripes in the fabric, and pattern means for operating one of the stripers alone in relation to the other to produce solid color, the last mentioned pattern means controlling that first mentioned, substantially as described.

2. In combination with a knitting head, a pair of stripers each having a pair of thread feeding arms with means for operating the arms of each pair alternately to

withdraw one thread and feed another thread, controlling means for operating the stripers in succession whereby when one is operated the other will also be operated in proper order, and for operating one striper without operating the other, said controlling means including a pattern member which, when started, will operate both stripers in order, and a pattern member for operating one striper alone, substantially as described.



3. In combination with a knitting head, a pair of stripers thereon each having a pair of thread guides and an actuator, which by successive actions thereof throws one thread into action and the other thread out, the actuator for one striper being arranged to travel in a path out of the plane of the path of the other actuator, a contact device on the frame having two contact surfaces, controlling means therefor for alining said frame contact device first with one actuator and then the other, whereby, when one striper is operated, the other will also be operated, and means for alining the said frame contact device with one of the striper actuators alone, substantially as described.

4. In combination with a knitting head, a pair of stripers each having a pair of thread guides with an actuator for throwing one into feeding position and withdrawing the other, said actuators being at different heights, and a contact device on the frame with means for adjusting it into the paths of the actuators, said contact device having two contact surfaces to operate each actuator twice when adjusted into line therewith, and comprising two projections extending laterally, and a pin moving with the said contact device for operating the shears on the stripers, substantially as described.

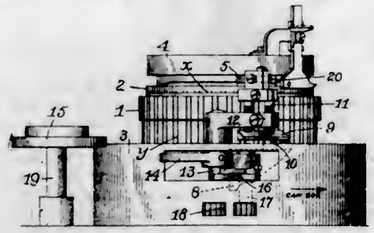
5. In combination with a knitting head, a pair of stripers thereon, each having two thread guides and an actuator to put one guide in operative position and the other one out, said actuators being at different elevations, a contact device on the frame vertically movable into line with said actuators, a pattern wheel having long and short pins, connections operated thereby for raising the contact device to different degrees, a second pattern wheel having a portion for locating the contact device in line with only one of the stripers, said second pattern wheel operating while the first pattern wheel is at rest.

[Claims 6 to 10 not printed in the Gazette.]

1,106,764. CIRCULAR-KNITTING MACHINE. FRANK B. WILDMAN and GEORGE L. BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed Mar. 7, 1913. Serial No. 752,795. (Cl. 66—22.)

1. In combination with a cylinder and dial having their needles arranged in two and two relation, a cylinder stitch cam, a dial stitch cam, said cams being adjustable substantially as unison for making a loose course, means for adjusting both of said cams when the loose course is to be made, and means for shogging the dial, substantially as described.

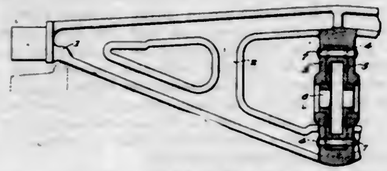
2. In combination in a knitting machine, a cylinder and dial, stitch cams therefor, means for shogging the dial to a two and two relation, means for shifting the stitch cams in unison for making loose courses in the two and two fabric, including a swinging arm and a projection thereon to contact with and to be retracted away from the dial cam as the arm swings to and from the dial, pattern controlled means for operating the shogging means and the stitch cam shifting means, and means for returning the stitch cams to normal position, substantially as described.



3. In combination with a fixed cylinder and dial, a stitch cam for the cylinder and a stitch cam for the dial, a post connected with the cylinder stitch cam having a cam plate on its upper end, a swinging arm carried by the rotary cam box of the cylinder having a portion to engage the cam plate for depressing the cylinder stitch cam, said arm having a projection to contact with and operate the dial stitch cam when said arm swings toward the axis of the head, and to be retracted away from the dial cam when the arm swings back, tappet arms for operating the swinging arm, and a pattern controlled member for operating the tappet arms, substantially as described.

4. In combination with a cylinder and dial, stitch cams for the cylinder and dial, a member having a back and forth movement toward and from the dial, a post connected with the cylinder stitch cam and operated by said member, and a pin mounted on said member and adjustable longitudinally thereon to alter the position of its end in relation to the dial stitch cam, said end contacting with the dial stitch cam to adjust the same, substantially as described.

1,106,765. CAST-METAL BRAKE-BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed May 23, 1913. Serial No. 769,457. (Cl. 188—22.)



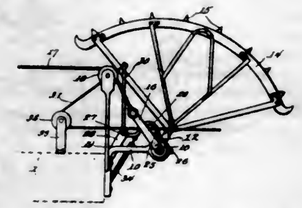
1. A cast metal brake beam having its walls thickened at or near the point of possible wheel flange grinding.

2. A cast metal brake beam comprising a compression member, a tension member, and a trunnion, the walls of the tension member being thickened at or near the junction thereof with the trunnion.

3. A brake beam strut having a box like member inserted therein, which box-like member is provided with embossed pin hole openings, the strut having walls for strengthening said bossed pin hole openings.

1,106,766. PLOW LIFTING OR ELEVATING MECHANISM. EDWARD WILLIAM WITHNELL, Jud, N. D. Filed Nov. 7, 1912. Serial No. 730,026. (Cl. 97—70.)

1. In combination with a soil treating implement, a soil treating member thereon, a rotatable shaft, means on said shaft to engage the ground to rotate said shaft, a crank arm on said shaft, and flexible means connecting said crank arm and soil treating member to raise the latter through the rotation of the shaft.



2. In combination with a soil treating implement, a soil treating member thereon, a rotatable shaft, a tractor on said shaft to engage the ground, a crank arm on said shaft, a cable connecting said crank arm and said soil treating member to raise the latter through the rotation of the shaft, and a shock absorbing spring engaged upon said implement and said member.

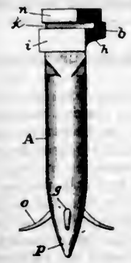
3. In combination with a soil treating implement, a soil treating member mounted thereon, a wheel-like tractor rotatably mounted on said implement, means connecting said tractor and said member to raise the member through rotation of the tractor, and means coöperating with said raising means for simultaneously holding said tractor and said implement out of engagement with the ground and for holding said tractor ont of engagement with the ground when said implement is in engagement with the ground.

4. In combination with a soil treating implement, a soil treating member mounted thereon, a shaft, a crank on said shaft, means connecting said crank and said member to operate the member through movement of the shaft, a wheel-like tractor rigidly mounted on said shaft to engage the ground, angular disposed stop means on said shaft, resiliently controlled means for engagement with said stop means to lock said shaft in position for simultaneously holding the tractor and implement out of engagement with the ground and for holding said tractor out of engagement with the ground when said implement is in engagement with the ground, and means for actuating said last mentioned means.

5. In combination with a soil treating implement, a soil treating member thereon, a shaft, means connecting said shaft and member to operate the member through movement of the shaft, a wheel-like tractor on said shaft to engage the ground, means to lock said shaft in various positions maintaining the tractor out of engagement with the ground, said means consisting of a plurality of latch-engaging members on said shaft, and a resiliently controlled latch on the implement.

[Claims 6 and 7 not printed in the Gazette.]

1,106,767. RAIL-HOLDING DEVICE. HOWARD W. YOUNG, Baltimore, Md., assignor of one-half to Edwin C. Miller, Baltimore, Md. Filed July 10, 1913. Serial No. 778,327. (Cl. 85—23.)



1. The improved rail-holding device consisting of a spike-body having a central internal bore, a hook-head at the top and projecting at one side—said hook-head having three other sides, *i*, at right angles to each other, a flat top surface higher than said three sides, and a rabbet or channel, *k*, along said three sides and an inner shank fitting within said bore and having a head whose shape is similar to the head of the spike-body said shank-head seating on the higher flat top surface of the spike body and its edges projecting over the rabbet or channel.

2. The improved rail-holding device consisting of a spike-body having a hook-head projecting at one side with a flat-top striking surface, an internal bore in said body and the flat-top surface provided with an annular space around the bore; and a shank fitting in said bore and having a head that is flat at its under side to seat in close contact with the said flat-top surface of the hook-head and leave the said annular space unoccupied.

1,106,768. FIRELESS HOVER. LOUIS H. BECKER, Seymour, Ind. Filed Jan. 2, 1913. Serial No. 739,731. (Cl. 119—33.)



1. A device of the character described including a body portion, a removable cover therefor, a sheet of soft material interposed between said cover and said body, the said cover serving as a securing means therefor, a plurality of tongues arranged to loosely depend exteriorly of the said body, tongues being formed by slitting the said material, the said tongues forming a cover for openings of the said body, a ring within said body, a plurality of uniformly spaced apart transversely extending rods carried by said ring, and a slit strip of soft material carried by each of said rods, said slit portion of the said strip adapted to depend between the said rods to a point adjacent the floor of the hover, as and for the purpose set forth.

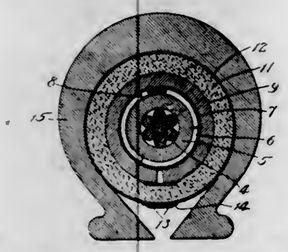
2. A device of the character described including a body portion, a removable cover therefor, soft material interposed between said cover and said body portion, a plurality of tongues arranged to loosely depend exteriorly of the said body, the said tongues being formed by slitting the said material, certain of the tongues forming a cover for openings of the said body, a ring within said body, a plurality of rods carried by said ring, and a slit strip of material carried by each rod, the said slit portion of each strip adapted to depend between the said rods to a point adjacent the floor of the hover, as and for the purpose set forth.

3. A device of the character described including a body portion having a plurality of screened openings formed therein, a removable cover having an opening formed therein, a sheet of soft material interposed between said cover and said body portion, the cover serving as a securing means therefor, a plurality of tongues arranged to loosely depend exteriorly of the said body, the said tongues being formed by slitting the said material, a door mounted for sliding movement upon the outer face of the said body portion adjacent one of the said body openings, the said door adapted to open and close communication between the interior and exterior of the said body, the said door and the other screened openings being normally covered by certain of the depending tongues, a ring within said body a plurality of uniformly spaced apart transversely extending rods carried by said ring, and a slit strip of soft material carried by each of said rods, the said slit portion of the said strip adapted to depend between the said rods to a point adjacent the floor of the hover, as and for the purpose set forth.

4. A device of the character described comprising a substantially cylindrical body portion having a plurality of screened openings formed therein, a removable cover having an opening formed therein, a sheet of soft material interposed between the said cover and said body portion, the cover serving as a securing means therefor, the said

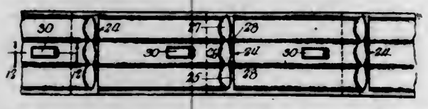
material adapted to overlap the edges of the said body portion and depend exteriorly thereof, a plurality of tongues arranged to loosely depend exteriorly of the said body, the said tongues being formed by slitting the extended portion of the material, a door mounted for sliding movement upon the outer face of the said body portion adjacent one of the said body openings, the said door adapted to open and close communication between the interior and exterior of the said body, the said door and the other of the said openings being normally closed by certain of the said tongues depending thereover, a ring carried by and within the said body portion near the top thereof, a plurality of rigidly supported brackets upon which the said ring is supported, a plurality of uniformly spaced apart transversely extending rods carried by the said ring, and a strip of soft material carried by each of the said rods, each strip being slit at intervals throughout its entire length to provide depending portions which are suspended from the said rods and extend to a point adjacent the base of the hover, as and for the purpose set forth.

1,106,769. RESILIENT TIRE-FILLING. SAMUEL M. BEERY, Indianapolis, Ind. Filed Aug. 20, 1913. Serial No. 785,623. (Cl. 152—8.)



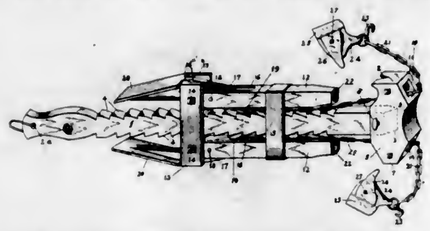
An article of manufacture adapted to be used as a filler for tires, comprising a central solid core, having an irregular cross section, a resilient casing tightly fitting the outer surface of said core, the irregularities forming air spaces therebetween, a spiral spring the convolutions of which are spaced apart to provide a second series of air spaces wound about said casing, a second resilient casing closely fitting about said spring, and a strip of light, flexible cushioning material wound about said casing, all of said parts being in relatively close contact with one another, thereby to produce a compact resilient tire filler having concentric air spaces.

1,106,770. PROCESS FOR MANUFACTURING TIE-PLATES. EDWIN H. BELL, Chicago, Ill. Filed Mar. 29, 1913. Serial No. 757,559. (Cl. 29—16.)



The process of manufacturing a tie-plate having a rail abutting shoulder on each side of the rail seat, said process consisting in rolling a billet of metal into a continuous strip constituting a succession of tie-plate blanks, each tie-plate blank having on its top surface near one end a raised rib extending transversely of the blank and providing a main rail-abutting shoulder and each tie-plate blank having on its top surface a raised lug or lugs over against and spaced from said main rail abutting shoulder, and then punching out each tie-plate blank at said lug or lugs to remove the end part or parts of said lug or lugs nearest to the main rail abutting shoulder so as to cut it or them in a plane to form a second rail abutting shoulder spaced at a predetermined distance from the main rail abutting shoulder.

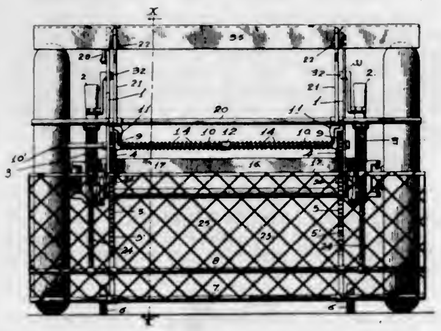
1,106,771. TOOL FOR BUILDING AND REPAIRING WIRE FENCES. ROBERT L. BINGHAM, Midland, Tex. Filed Sept. 10, 1912. Serial No. 719,509. (Cl. 30—58.)



1. In a device of the character described, the combination with an elongated bar having its opposite lateral edges provided with two racks of ratchet teeth, of a head rigidly mounted upon one extremity of said bar, a frame adapted to undergo adjustment longitudinally of the bar, a pair of dogs pivotally mounted upon said frame and respectively adapted to engage the two racks of ratchet teeth, a pair of chains each having one extremity connected to one of the dogs, said chains being respectively passed through apertures provided in said heads, and a means for engaging a wire carried at the other extremity of each chain.

2. In a device of the character described, the combination with an elongated bar, having racks of ratchet teeth provided on two of its opposite lateral edges, of a head carried at one extremity of said bar, a frame adjustable upon said bar comprising two arms parallel to the bar pivoted at corresponding extremities upon cross-pieces extending between said arms, a pair of dogs pivotally mounted upon said frame and respectively engaging the racks of ratchet teeth, a chain connected with each dog passing through said head and means for engaging a wire secured to the other extremity of each chain.

1,106,772. AUTOMATIC FENDER. LEONARD BOX, San Francisco, Cal., assignor of one-half to William F. Habekost, San Francisco, Cal. Filed June 25, 1913. Serial No. 775,803. (Cl. 105—255.)



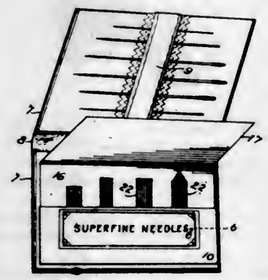
1. An automatic fender comprising vertical frame plates secured to the front of a vehicle, each plate having a vertical slot near the front edge thereof; suitable housings secured to the frame plates; members slidably mounted within the housings; a transverse bar slidably mounted within the slots, suitable connections between the bar in the slots and the members within the housings; a net secured to the said bar and the said slidable members; means for retaining the said bar at the upper ends of the slots and thereby retaining the slidable members within the housings and means for releasing it.

2. An automatic fender for vehicles comprising vertical parallel frame plates suitably secured to the front of a vehicle and having vertical slots near the front edges

thereof; forwardly inclined housings rigidly secured to the inner faces of the frame plates; slidable members, within the inclined housings, having teeth on the upper edges and transverse bars secured to the lower ends thereof; a transverse bar slidably mounted within the vertical slots of the frame plates and having a rod secured parallel thereto; a transverse shaft rotatably mounted in the frame plates and adjacent to the said transverse bar and having latches secured thereto, said latches being adapted to retain the said transverse bar in the upper ends of the said slots; a spring controlled shaft rotatably mounted in the frame plates and having gears thereon adapted to engage the teeth in the upper edges of the slidable members; a suitable net secured between the rod parallel to the transverse bar and the rods on the lower ends of the slidable members; and means for releasing the transverse bar from the driver's station of the vehicle to which the fender is attached.

3. In an automatic fender for vehicles, the combination of vertical parallel frame plates rigidly secured to the front of the vehicle and having vertical slots near the front edges thereof; forwardly inclined housings rigidly secured to the frame plate; members slidably mounted within the housings and having teeth on the upper edges and transverse rods secured to the lower ends thereof; wheels rotatably mounted near the lower ends of the slidable members; a spring controlled transverse shaft having a squared end and gears thereon adapted to engage the teeth in the upper edges of the slidable members, a transverse bar slidably mounted within the slots of the frame plates and having a rod secured parallel thereto; suitable connections between the rod secured to the transverse bar and the transverse rods on the lower ends of the slidable members; a suitable net secured between the rods on the lower ends of the slidable members and the parallel rod secured to the transverse bar; a transverse shaft rotatably mounted within the frame plates adjacent to the transverse bar and having latches adapted to retain the said bar in the upper ends of the slots within the frame plates; a transverse angle bar secured to the upper front corners of the frame plates; depending arms fulcrumed to the angle bar; suitable connections between the upper ends of the depending arms and the latches; and a transverse bar rigidly secured to the lower ends of the depending arms.

1,106,773. NEEDLE-CASE. AUGUSTUS F. BRABANT, Yonkers, N. Y. Filed Oct. 17, 1913. Serial No. 795,689. (Cl. 206—66.)



1. A needle-holding case, comprising folding covers, a needle pocket hingedly connected to one of the covers, means within the pocket for holding the needles therein in projecting relation, said pocket having a rear wall that extends behind the projecting portions of the needles, and a cover flap carried by the rear wall and arranged to fold over the projecting portions of the needles.

2. A needle-holding case, comprising folding covers, a needle pocket hingedly connected to the outer portion of one of the covers and arranged to lie flat against the inner face of the same and between said covers, means within the pocket for holding the needles therein in projecting relation, said pocket having a rear wall that extends behind the projecting portions of the needles, and a cover flap carried by the outer edge of the rear wall and arranged to fold over the projecting portions of the needles, with its free end adjacent to the front wall of the pocket.

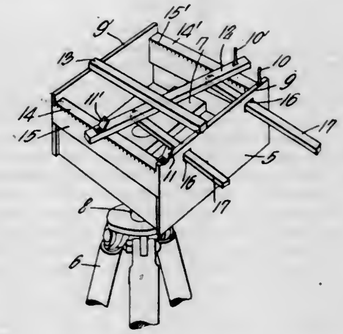
3. In a needle-holding book, a needle-holding pocket comprising a piece of sheet material doubled to form front and rear walls, the rear wall being wider than the front wall and having a forwardly folded protective flap that extends across the space between the outer edge of the rear wall and the corresponding edge of the front wall, the front wall having an attaching tab extending beyond the pocket at its lower edge.

4. In a needle-holding book, a needle-holding pocket comprising a single sheet of material that is doubled to form a front wall of double ply, an attaching flap carried by the lower edge of the outer ply, a rear wall connected to the lower edge of the inner ply and wider than the front wall, and a protecting cover flap carried by the upper edge of the rear wall.

5. In a needle-holding book, a needle-holding pocket comprising a piece of sheet material doubled to form front and rear walls, the rear wall being wider than the front wall and having a forwardly folded protective flap that extends across the space between the outer edge of the rear wall and the corresponding edge of the front wall, and a needle holding flap attached at one margin to the inner side of one of the pocket walls and comprising a loose flap disposed in the pocket.

[Claim 6 not printed in the Gazette.]

1,106,774. SURVEYING INSTRUMENT OR RANGE-FINDER. ANDREW M. BRIDGES, Bostic, N. C., assignor of one-half to George M. Chapman, Bostic, N. C. Filed Feb. 20, 1912. Serial No. 678,919. (Cl. 33—68.)

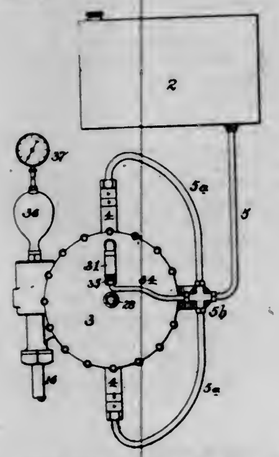


A surveying instrument embodying a rectangular frame, two opposite sides of which are raised above the others, a beam resting on the last mentioned sides, a bar secured on the raised sides intermediate the last mentioned sides and holding the beam upon the last mentioned sides, the beam being movable between the raised sides, sighting means carried by one of the said raised sides, and the beam, the second mentioned sides being graduated away from the said raised side carrying the sighting means, and a pair of adjusting rods passing loosely through the said raised side and pivoted to the bottom of the beam, the pivoted portions of the adjusting rods serving to limit the endwise movement of the beam.

1,106,775. OILING DEVICE. MARTIN E. BRIGHAM, Philadelphia, Pa. Filed Dec. 20, 1909. Serial No. 533,985. (Cl. 184—35.)

1. In an oiling device, the combination of an oil reservoir, a pressure chamber receiving oil from the reservoir, a plurality of distributing pipes leading from the pressure

chamber and respectively having ports opening into the interior of the chamber, continuously acting pumping means wholly independent of the oil reservoir for forcing the oil into the chamber under pressure, relief means for maintaining the oil within the chamber under constant pressure, a by-pass from the relief means to the pumping means whereby the oil from the relief means opposes the flow of oil from the reservoir to the chamber except in accordance with the demand for the oil for lubrication, and means common to all of the ports interposed between the said ports and the oil space in the pressure chamber for intermittently and successively controlling the flow of the oil from the chamber to the plurality of ports without affecting the maintenance of the constant pressure.



2. In an oiling device, the combination of a pressure chamber, a plurality of distributing pipes leading from the chamber and having ports opening into the interior of the chamber, double pumping devices for continuously introducing oil into the chamber for maintaining the oil within the said chamber under constant pressure, and means interposed between the ports and the oil space in the chamber consisting of a rotating disk seating against the ports to close them and having one or more apertures through it adapted to be brought into alinement successively with each of the several ports of the distributing pipes for intermittently permitting the flow of the oil under its constant pressure from the pressure chamber into the distributing pipes.

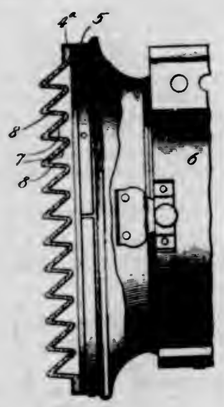
3. In an oiling device, the combination of an oil reservoir, a pressure chamber, a plurality of distributing pipes leading from the chamber and having ports opening into the interior of the chamber, continuously acting pumping means for introducing oil into the chamber in a continuous manner and for recirculating the excess of oil within the said chamber and without return to the oil reservoir whereby pressure is maintained within the said pressure chamber, a rotating disk seating against the ports to close them and having one or more apertures through it adapted to be brought into alinement successively with each of the several ports of the distributing pipes for intermittently permitting the flow of oil from the pressure chamber into the distributing pipes under pressure, and regulating means in the several distributing pipes for separately controlling the relative amounts of oil passing through the respective distributing pipes.

4. In an oiling device, the combination of an oil reservoir, a pressure chamber, a plurality of distributing pipes leading from the pressure chamber, continuously acting means for permitting an intermittent discharge of oil from the pressure chamber simultaneously into a plurality of the distributing pipes and shifting the discharge successively to different sets of pipes, independent means outside of the pressure chamber for independently controlling the speed of flow of the oil through the respective distributing pipes, a single supply pipe from the reservoir, continuously acting pumping devices for sucking the oil from the supply pipe and discharging it into the pressure chamber, a bypass from the pressure chamber into the suction side of the pumping devices and between them and the supply pipe of the reservoir for recirculating the excess of oil through the pressure chamber without returning it to the reservoir, and a pressure relief valve in said bypass to govern and maintain constant the pressure within the pressure chamber and under which the oil is fed to the distributing pipes.

5. In an oiling device, the combination of a pressure chamber, a plurality of distributing pipes leading from the chamber and having ports opening into the interior of the chamber, means for maintaining the oil within the chamber under pressure, means interposed between the ports and the oil space in the chamber consisting of a rotating disk seating against the ports to close them and having one or more apertures through it adapted to be brought into alinement successively with the several ports of the distributing pipes for intermittently permitting the flow of the oil from the pressure chamber into the distributing pipes, and means for adjusting the rotating disk to or from the ports on the inside of the case to enable the oil to be discharged from all of the distributing ports simultaneously when desired.

[Claims 6 to 14 not printed in the Gazette.]

1,106,776. LAMP. WILLIAM E. BURCKY, Chicago, Ill. Filed Apr. 1, 1914. Serial No. 828,787. (Cl. 240—106.)



1. In a glass lamp-face, a hollow ridge extending transversely across the face and having its inner and outer faces parallel with each other, said ridge having a translucent upper side inclined downwardly and forwardly.

2. In a glass lamp-face, a hollow angular ridge extending transversely across the face and having its inner and outer faces parallel with each other, said ridge having its upper side formed of translucent glass and inclined downwardly and forwardly and its lower side formed of transparent glass.

3. A glass lamp-face comprising a series of angular ridges of substantial V-shape in cross section, extending transversely across the face and having their inner and outer faces parallel with each other, said ridges having downwardly and forwardly inclined translucent upper sides and lower transparent sides.

4. A glass lamp-face comprising a series of hollow ridges of substantially the same angular cross-section on both sides, each ridge being formed of a translucent downwardly-inclined upper side and a corrugated transparent lower side.

1,106,777. RETARDER FOR PLASTER. CHARLES H. CAMPBELL, Chicago, Ill., assignor to American Glue Company, Boston, Mass., a Corporation of Massachusetts. Filed May 12, 1910. Serial No. 561,014. (Cl. 106—28.)

1. A retarder for plaster comprising lime wastage from the liming of hides which is practically free from inert insoluble animal matter.

2. A retarder for plaster comprising lime wastage from the liming of hides which wastage is free from materials having objectionable odors, and practically free from inert insoluble animal matter.

3. A retarder for plaster comprising lime wastage from the liming of hides practically free from insoluble animal matter, said material being in the form of a dry, fine powder.

4. A retarder for plaster comprising the combination of lime wastage from the liming of hides practically free from inert insoluble animal matter, and dissolved hair.

5. A retarder for plaster comprising the combination of lime wastage from the liming of hides practically free from inert insoluble animal matter, and a soluble albuminate.

[Claims 6 to 9 not printed in the Gazette.]

1,106,778. PROCESS OF MAKING A RETARDER FOR PLASTER AND THE LIKE FROM LIME WASTAGE. CHARLES H. CAMPBELL, Chicago, Ill., assignor to American Glue Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 18, 1910. Serial No. 587,647. (Cl. 106—28.)

1. A process of making a retarder from lime wastage obtained from the liming of hides, which comprises converting the insoluble animal matter in said wastage into soluble matter.

2. A process of making a retarder from lime wastage obtained from the liming of hides, which comprises converting the insoluble animal matter in said wastage into soluble matter by making the lime present in the wastage a more active agent.

3. A process of making a retarder from lime wastage obtained from the liming of hides, which comprises converting the insoluble animal matter in said wastage into soluble matter by making the lime present in the wastage a more active agent through the application of heat and moisture thereto.

4. A process of making a retarder from lime wastage obtained from the liming of hides, which comprises cooking the lime wastage in a suitable alkaline solution until the insoluble animal matter therein has been converted into soluble matter.

5. A process of making a retarder from lime wastage obtained from the liming of hides, which comprises converting the insoluble animal matter in said wastage into soluble matter and drying the resultant product.

[Claims 6 to 9 not printed in the Gazette.]

1,106,779. PROCESS OF CONVERTING HAIR. CHARLES H. CAMPBELL, Chicago, Ill., assignor to American Glue Company, Boston, Mass., a Corporation of Massachusetts. Filed May 12, 1910. Serial No. 561,015. (Cl. 71—6.)

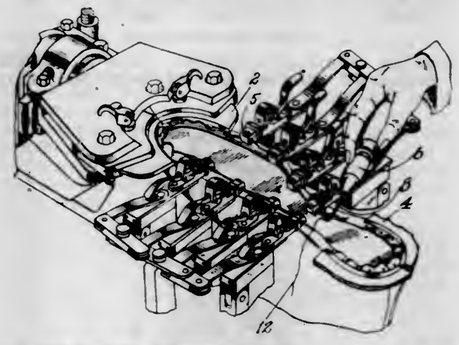
1. The process of converting hair comprising a gentle cooking of the hair by applied heat for a protracted period of time in the presence of such dilute alkaline solution as will operate to convert the hair only upon the application of heat.

2. The process of converting hair comprising a gentle cooking of the hair by applied heat for a protracted period of time in the presence of such dilute alkaline solution as will operate to convert the hair only upon the application of heat, continuing the cooking until the hair has become about all converted in the liquor and converting the remaining hair by the same alkali and the heat available for cooking remaining in the liquor upon withdrawal of the applied heat.

3. The process of converting hair comprising a gentle cooking of the hair by applied heat for a protracted period of time in the presence of such dilute alkaline solution as will operate to convert the hair only upon the application of heat, and afterward drying the converted hair by an application of heat at a relatively high temperature for a short period of time.

4. The process of converting hair comprising a gentle cooking of the hair by applied heat for a protracted period of time in the presence of such dilute alkaline solution as will operate to convert the hair only upon the application of heat, and afterward drying the converted hair in thin films by an application of high heat thereto for a short period of time.

1,106,780. MANUFACTURE OF SHOES. JAMES CAVANAGH, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 31, 1910. Serial No. 579,814. (Cl. 12—145.)



1. The method of making shoes which consists in working an upper over a last, and securing the upper to the innersole lip at intervals along the sides of the shoe from the shank forwardly and binding the upper to the lip about the toe portion of the shoe all with a continuous strand.

2. The method of making shoes which consists in working an upper over a last, stitching the upper to the lip of the innersole along one side of the shoe from the shank forwardly to the ball, then binding the upper to the lip about the toe and then stitching the upper to the lip on the second side of the shoe rearwardly to the shank.

3. The method of making shoes which consists in working an upper over a last at a plurality of points along the sides of the shoe and in a continuous line around the toe, anchoring a strand at the rear of one side, fastening the upper to the lip of the innersole by the strand adjacent to each overworking point along that side, binding the upper externally to the lip by said strand around the toe, fastening the upper by the strand adjacent to the overworking points along the second side, and anchoring the end of the strand.

4. The method of making shoes which consists in working an upper over a last, anchoring a strand at the rear of one side, securing the upper by stitches along that side to the toe, anchoring the strand, binding the upper entirely externally to the lip of the innersole around the toe, anchoring the binder, stitching the second side of the shoe, and anchoring the strand at the rear of the second side.

5. The method of making shoes which consists in working an upper over a last, passing a loop of a strand through the upper and the lip of the innersole, and anchoring the loop at intervals along one side of the shoe from the rear toward the toe, externally binding the toe portion of the upper to the lip by the strand, and then securing the upper on the second side of the shoe from the toe rearwardly at intervals in the same manner as the first side has been secured.

[Claims 6 to 14 not printed in the Gazette.]

1,106,781. DYESTUFFS AND PROCESS OF MANUFACTURING THE SAME. EDWARD S. CHAPIN, Sharon, and EMIL LESSER, Boston, Mass., assignors to American Dyewood Company, New York, N. Y., a Corporation of Pennsylvania. Filed Dec. 20, 1910. Serial No. 598,363. (Cl. 8—1.)

1. The process of making an azo dyestuff which consists in coupling a diazotized amido-sulfonic acid with an anhydro-tetramethyl-hematoxylone.

2. The process of making an azo dyestuff which consists in coupling a diazotized amido-sulfonic acid with an alpha-anhydrotetra-methyl-hematoxylone.

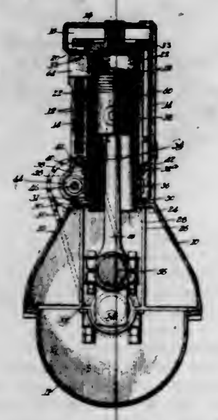
3. The process of making an azo dyestuff which consists in coupling a diazotized amido-naphthalene-sulfonic acid with an anhydro-tetra-methyl-hematoxylone.

4. The process of making an azo dyestuff which consists in coupling a diazotized amido-naphthalene-sulfonic acid with an alpha-anhydro-tetra-methyl-hematoxylone.

5. The process of making an azo dyestuff which consists in coupling diazotized alpha-naphthylamin-sulfonic acid-1.4 with an anhydro-tetra-methyl-hematoxylone.

[Claims 6 to 9 not printed in the Gazette.]

1,106,782. EXPLOSIVE-ENGINE. JAMES A. CHARTER, Chicago, Ill. Filed Nov. 15, 1913. Serial No. 801,111. (Cl. 123—80.)



1. In a device of the class described, a base, an outer cylinder on said base, an inner cylinder smaller than the outer cylinder removably insertible through the outer cylinder while it is in place on the base and into a suitable opening in the base with whose wall it has sliding engagement to allow for expansion and contraction of said inner cylinder while supporting the inner cylinder against lateral movement.

2. In a device of the class described, a base, an outer cylinder, means for detachably securing the outer cylinder to the base, an inner cylinder smaller than the outer cylinder removably insertible through the outer cylinder while it is in place on the base and into a suitable opening in the base with whose wall it has sliding engagement to allow for expansion and contraction of said inner cylinder while supporting said inner cylinder against lateral movement.

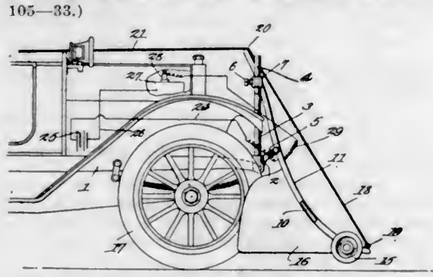
3. In a device of the class described, a base, an outer cylinder on said base, an inner cylinder smaller than the outer cylinder removably insertible through the outer cylinder while it is in place on the base and into a suitable opening in the base with whose wall it has sliding engagement to allow for expansion and contraction of said inner cylinder while supporting the inner cylinder against lateral movement, and means for detachably securing the outer ends of the two cylinders together, said securing means being so constructed as to rigidly space said cylinders apart at this point to permit the proper operation of a cylindrical valve placed in a space formed between them.

4. In a device of the class described, a base, an outer cylinder, means for detachably securing the outer cylinder to the base, an inner cylinder smaller than the outer cylinder removably insertible through the outer cylinder while it is in place on the base and into a suitable opening in the base with whose wall it has sliding engagement to allow for expansion and contraction of said inner cylinder while supporting said inner cylinder against lateral movement, and means for detachably securing the outer ends of the two cylinders together, said securing means being so constructed as to rigidly space said cylinders apart at this point to permit the proper operation of a cylindrical valve placed in a space formed between them.

5. In a device of the class described, a base, two concentric cylinders carried by the base, the inner of said cylinders carrying at its outer end a flanged head at right angles to its axis fitting over and detachably secured to the outer cylinder and having its inner end extending slidably through an opening in the base to allow for the expansion and contraction of the inner cylinder, a valve member rotatable between said cylinders when in the position named and means for rotating the valve.

[Claims 6 to 9 not printed in the Gazette.]

1,106,783. AUTO-FENDER. ODIN G. CLAY, Washington, D. C. Filed June 26, 1913. Serial No. 775,988. (Cl. 105—33.)



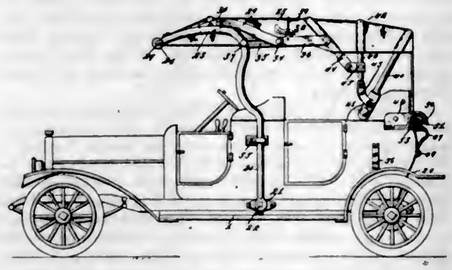
1. In a device of the class described, supports including angularly disposed primary and secondary arms; members mounted to slide for adjustment on the primary arms; means fixedly securing said members to the primary arms, and a fender pivoted to said members, the secondary arms engaging the fender to constitute a support therefor when the fender is in a normal position.

2. In a device of the class described, a vehicle frame; supports secured to the vehicle frame and provided with upwardly extended arms; a fender mounted to swing upon said arms; and other, relatively fixed arms projecting from the supports and engaged behind the fender to support the fender in a normal position.

3. In a device of the class described, a motor propelled vehicle including an electrical circuit constituting a part of the speed controlling mechanism of the vehicle; a fender carried by the vehicle, the fender including a frame and a flexible portion; a switch including cooperating members pivoted to the frame and extended across the flexible portion, said members being interposed in said circuit and coacting at their adjacent inner ends to open and to close said circuit.

1,106,784. AUTOMOBILE-TOP. ROBERT A. COE, Tupelo, Okla. Filed June 24, 1913. Serial No. 775,582. (Cl. 21—62.)

1. In a device of the class described the combination with a vehicle, of a plurality of forward arms, said arms provided with forwardly extending ends, a cover frame secured to the forwardly extending ends of said forward arms, a shaft keyed to the lower ends of said arms for swinging said arms forwardly and rearwardly, a worm wheel carried by said shaft, a worm screw engaging said worm wheel, a shaft carrying said worm screw, a beveled gear carried by said last mentioned shaft, a vertical shaft carried by said vehicle and provided with a beveled gear for engaging said last mentioned beveled gear, and means adapted to engage said vertical shaft for operating the same whereby said cover frame may be swung upon said vehicle.



2. In a device of the class described the combination with a vehicle, a plurality of forward arms, an operating shaft supporting said arms, a bow pivotally secured to the rear of said vehicle, an intermediate bow carried by said rear bow, an auxiliary bow carried by said intermediate bow, a plurality of links connecting said auxiliary bow to said forward arms, sectional arms engaging said links, a transversely extending bar connecting the outer ends of said forward arms, and sectional arms engaging said transversely extending bar, a forward bow connected to said sectional arms, and cover passing over said forward bow and secured to said transversely extending bar carried by said forward arms and also secured to the rear of said vehicle.

1,106,785. PROCESS OF MANUFACTURING IRON ALLOYS. GEORGE M. COLVOCORESSES, New York, N. Y. Filed June 12, 1913. Serial No. 773,243. (Cl. 75—1.)

1. The process of making an iron alloy which consists in first crushing a nickel-copper-iron sulfid ore to a suitable fineness; second roasting out most of the sulfur and converting the sulfids to oxids; third smelting to remove most of the non-metallic elements and to reduce the metallic oxids; and fourth refining to eliminate the remaining undesirable elements and retaining substantially all of the iron, nickel and copper in combination throughout the process.

2. The process of making an iron alloy which includes roasting a nickel, copper, iron sulfid ore to eliminate sulfur and form iron, copper and nickel oxids and then smelting the product with a suitable flux to eliminate the non-metallic elements as silicates and to reduce the oxids to a pig of iron, nickel and copper suitable for subsequent refining.

3. The process of making an iron alloy which consists in first crushing a nickel-copper-iron sulfid ore to a suitable fineness; second roasting out most of the sulfur and converting the iron, nickel and copper sulfids to oxids; and third smelting with a suitable flux to remove most of the non-metallic elements and to reduce the metallic oxids to a pig of iron, nickel and copper suitable for refining.

4. The process of making a steel alloy which includes roasting a nickel, copper, iron sulfid ore to eliminate sulfur and form iron, copper and nickel oxids and then smelting the product with a suitable flux to eliminate the non-metallic elements as silicates and to reduce the oxids to a pig of iron, nickel, copper and carbon and then subsequently refining the composite pig and forming a nickel, copper alloy steel.

5. The process of making an iron alloy which includes roasting a nickel-copper-iron sulfid ore containing from .5 to 12% nickel, from .2 to 10% copper, and from 25 to 60% iron and converting the iron, nickel and copper sulfids to oxids; and smelting with a suitable flux to remove most of the non-metallic elements and to reduce the metallic oxids to a composite pig of iron, nickel and copper suitable for refining.

1,106,786. PROCESS OF MANUFACTURING IRON ALLOYS. GEORGE M. COLVOCORESSES, New York, N. Y. Filed June 19, 1913. Serial No. 774,641. (Cl. 75—1.)

1. The process of making an iron alloy which consists in smelting a furnace slag containing iron, copper and nickel with suitable fuel and flux to form a copper nickel ferro pig, slagging off most of the non-metallic elements and reducing the metallic oxids contained in the slag and refining the resultant ferro nickel pig to remove the remaining undesirable elements and to regulate the carbon and retaining throughout the process and in combination substantially all the iron, nickel and copper that existed in the original slag.

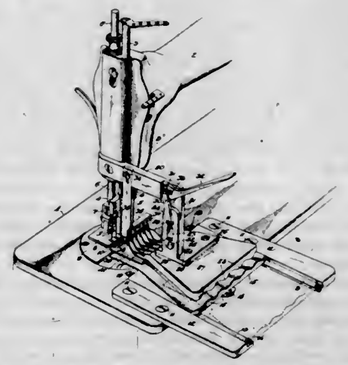
2. The process of making an iron alloy which includes smelting with suitable fluxes, a furnace slag containing iron, nickel and copper to eliminate the non-metallic elements as silicates and reduce the oxids of said metals to a composite pig of iron, nickel and copper suitable for subsequent refining.

3. The process of making an iron alloy which includes smelting with suitable flux an iron nickel copper slag containing from 20 to 50% iron, from .2 to 2% nickel and from 0.1 to 2% copper, and reducing the metallic oxids to a composite pig of iron, nickel and copper suitable for refining.

4. The process of making a steel alloy which includes simultaneously smelting the oxids of iron, nickel, copper and silica as they occur in a blast or reverberatory furnace slag all in combination with a suitable flux to eliminate the silica and other non metals if present, and to reduce the metallic oxids to a nickel, copper ferro pig and then refining the composite pig and forming a nickel-copper-alloy-teel.

5. The process of making a steel alloy which comprises smelting an iron, nickel, copper slag containing approximately from 20 to 50% of iron, from .2 to 2% of nickel and from .1 to 2% copper so as to reduce the metallic compounds to a composite pig of iron, nickel and copper and then refining the pig at a sufficiently high temperature to produce a nickel-copper-steel alloy containing approximately from .2 to 2% copper, from .4 to 4% nickel and up to 1.% carbon.

1,106,787. MULTIPLE-TUCK-FOLDING ATTACHMENT. HERBERT CORRALL, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 12, 1912. Serial No. 725,411. (Cl. 2—12.)



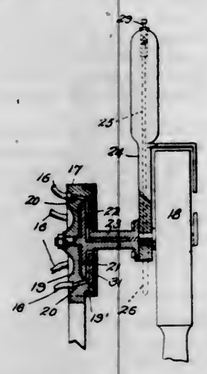
1. A tucking device comprising a primary series of laterally spaced tucking blades rigidly connected together at their bases, a secondary series of oppositely directed tucking blades interposed between and alternating with those of the primary series, and means whereby the blades of one of said series may be withdrawn in a direction lengthwise thereof from interlocking relation with the blades of the other series.

2. A tucking device comprising a primary series of laterally spaced tucking blades, a connecting member where-

by said blades are rigidly secured together, a support formed with a slideway arranged substantially parallel with longitudinally disposed operative portions of said blades and in which said member is mounted for movement lengthwise of the latter, and a secondary series of oppositely directed tucking blades interposed between and alternating with those of the primary series and relative to which the primary blades are movable.

3. A tucking device comprising a lower corrugated forming plate having converging ribs formed at their adjacent ends with progressively inclined or twisted tucking blades, a rigid support formed with a guideway disposed lengthwise of said blades and to which said plate is fitted for movement exceeding the length of said blades, an upper corrugated forming plate having converging ribs alternating with those of the lower forming plate and provided with means for shifting it into and out of intermeshing relation therewith, and a series of upper tucking blades normally disposed intermediate and alternating with the lower tucking blades and mounted independently of the latter.

1,106,788. SIGNALING APPARATUS. SLOAN DANENHOWER, Bridgeport, Conn. Filed July 3, 1912. Serial No. 707,526. (Cl. 116—22.)



1. The combination with a transmitting handle having an air passage therein, means carried by said handle for controlling flow of air through said passage, of a series of visible signals, separate means for operating said signals, and a selective valve interposed between said handle and said signal operating means, said selective valve being carried by and operatively connected with said handle.

2. The combination with a transmitting handle, of a selective valve operating in unison with said handle, a series of visible pneumatically operated opening and closing signals, an air passage in said handle having communication with said selective valve, and manually controlled means carried by said handle for admitting air to said valve for the purpose of opening the selected signal, the shifting of the position of said handle automatically exhausting air from and closing all but the selected signal.

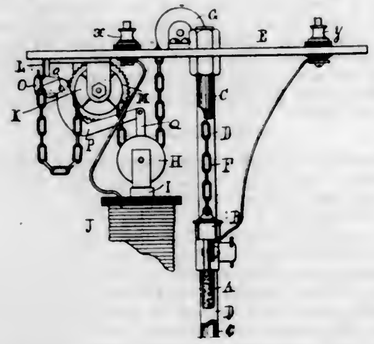
3. In combination with a transmitting handle, of a series of expansible signals, separate air controlled means for opening each signal, a selective valve operatively connected to said handle and working in unison therewith, said valve cutting all but one of said signals out of operation at a time, and an operating means carried by said handle and controlling the opening of the remaining signal, said last mentioned signal being released and automatically closed upon shifting the position of the handle.

4. A device of the kind described, comprising a plurality of expansible signals, an air cylinder for each signal, a piston working in each cylinder, each piston being connected to one of said signals, a valve casing having air passages each of which is adapted to communicate with one of said cylinders, a valve working in the casing, an air supply passage in said valve adapted to register successively with the casing passages, a handle operatively connected to said valve and having an air pwassage in communication with said valve passage, a hand controlled valve controlling passage of air through said handle, and a source of air supply in constant communication with said handle, said valve having an exhaust passage which registers with all of said passages of the valve casing except the one with which the supply passage of the said valve registers with.

5. A device of the kind described, comprising a plurality of signals, separate pneumatically operated means for operating said signals, a transmitting handle having an air passage, a manually operated valve controlling the passage of air through said handle, and a selective valve controlling the operating means of said signals, the said valve being carried by and operated in unison with said transmitting handle and adapted to receive air under pressure to be transmitted to the signal operating means through said handle, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,106,789. ARC-LAMP. HENRY E. DAVIES, West New York, N. J. Filed Apr. 12, 1910. Serial No. 555,098. (Cl. 176—96.)

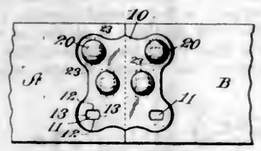


1. In an arc lamp, an electrode feed comprising an escapement mechanism, a member arranged to take up the slack in the feed chain upon the slip of a tooth by the pawl and means in connection with said take-up member for bringing said pawl into positive reengagement with the escapement wheel upon the slip of a tooth on the latter by said pawl, substantially as described.

2. In an arc lamp, an escapement electrode feed comprising a ratchet-controlled feed wheel, a flexible suspension member passing over the same to the electrode, and a magnetically controlled member acting on said suspension member intermediate said electrode and feed wheel and a connection between said magnetically controlled member and the pawl for the ratchet feed wheel whereby upon the movement of said magnetically controlled member in one direction the said pawl is brought positively into engagement with its ratchet, substantially as described.

3. In an arc lamp, an escapement electrode feed comprising a ratchet controlled feed wheel, a flexible suspension member passing over the same to the electrode, a magnetically controlled member acting on said suspension member intermediate said electrode and feed wheel, and a connection between said magnetically controlled member and the pawl for the ratchet feed wheel whereby upon the movement of said magnetically controlled member in one direction the said pawl is brought positively into engagement with its ratchet, in combination with an electro-magnetic winding, the action of which is controlled by the arc circuit, for controlling the position of said magnetically controlled member, substantially as described.

1,106,790. BELT-FASTENER. CLARA S. EATON, New York, N. Y. Filed Aug. 28, 1912. Serial No. 717,416. (Cl. 24—31.)

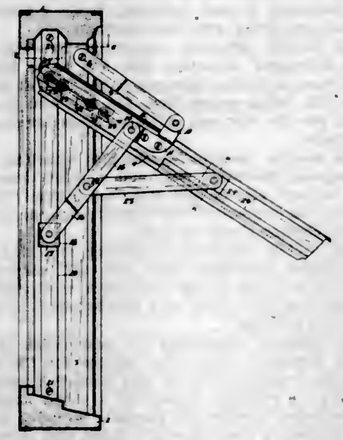


1. In a device of the class described, a plate having openings therein, with flat opposing sides and rounded opposing sides, a rivet for each opening, said rivets having bifurcated ends, flat opposing sides and opposing rounded sides to closely fit the openings in said plate.

2. In a device of the class described, a belt having meeting ends, a plate extending over said meeting ends and provided with openings therein having flat opposing sides and rounded opposing sides, the distance between the flat sides being less than the distance between the rounded sides, bifurcated rivets for each opening, said rivets having flat opposing sides and rounded opposing sides, the solid portions of the shank closely fitting said openings, said openings being so arranged that the bifurcated ends of the rivets will lie transversely upon the belt.

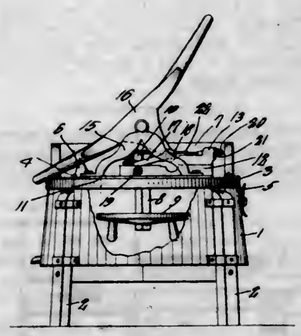
3. In a device of the class described, a plate having openings therein, provided with opposing flat sides and opposing rounded sides, the distance between the flat sides being less than the distance between the rounded sides, a rivet for each opening having bifurcated prongs, the shank of the rivet having opposing flat sides and opposing rounded sides, the ends of the prongs of the rivet being adapted to be inserted in the said openings and held against the flat sides of the same, the said flat sides of the opening and the rivet being so located that the prongs of the rivet will stand transversely of the belt the solid portions of the shank closely fitting the openings.

1,106,791. SWINGING-SASH CONNECTION. GEORG T. EKLUND, San Francisco, Cal. Filed Aug. 27, 1913. Serial No. 786,892. (Cl. 20—42.)



In combination with a window frame, a sash, a hanger bar pivotally connected at its upper end to the window frame, and at its lower end to the side of the sash, a link one end of which is pivotally connected to a side of the sash, a shoe pivotally connected to the other end of said link and having a frictional slidable engagement with a side of the window frame, the upper portion of the sash having also a frictional slidable engagement with said side of the window frame, and an auxiliary link, one end of which is pivotally connected to a mediate portion of the first-named link, and a shoe to which the other end of the last-named link is pivotally connected, said shoe having a frictional slidable engagement with said side of the sash.

1,106,792. GEARING. JOHN EMERINGER, Randolph, Nebr. Filed Oct. 21, 1912. Serial No. 727,080. (Cl. 74—50.)



1. An actuating mechanism comprising a support, a vertical shaft extending through the support, a pulley secured to the shaft, a bracket secured to the support and forming a bearing for the top of the shaft, a second bracket secured to the support, guide plates secured to the support, a reciprocating carriage operating between the brackets and having flanges on the bottom operating beneath the guide plates, a lever pivotally supported by and between the two brackets and connected to the carriage, and means connecting the carriage and pulley for operating the shaft.

2. An actuating mechanism comprising a support, a vertical shaft extending through the support, a double pulley secured to the shaft, a bracket secured to the support and forming a bearing for the top of the shaft, a second bracket secured to the support, guide plates secured to the support, a reciprocating carriage operating between the brackets and having flanges on the bottom operating beneath the guide plates, a lever pivotally supported by and between the two brackets, and connected to the carriage, and means connecting the carriage and pulley for operating the shaft, said means comprising a flexible band connected to one end of the carriage and one section of the double pulley, and a second flexible band adjustably connected to the opposite end of the carriage and to the other section of the pulley.

1,106,793. PROCESS OF PRODUCING WHITE LEAD. EDWIN EUSTON, St. Louis, Mo. Filed Sept. 10, 1913. Serial No. 789,069. (Cl. 134—75.)

1. The process of manufacturing white lead consisting, first, in forming a precipitate by carbon dioxid gas from basic lead acetate solution eventually approximately neutral chemically, second, in forming a precipitate by carbon dioxid gas from basic lead acetate solution eventually acid, and third, in mixing the two products thus obtained in proportions to form a pigment containing 11.0% to 14.5% carbon dioxid.

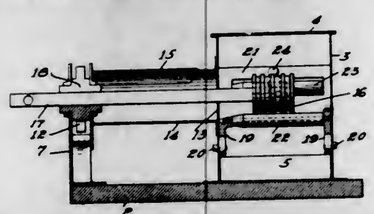
2. The process of producing white lead consisting in the admixture of a precipitate formed by carbon dioxid gas from a basic lead acetate solution eventually approximately neutral, with a precipitate formed by carbon dioxid gas from basic lead acetate solution eventually acid, in proportions to form a pigment containing 11.0% to 14.5% carbon dioxid.

1,106,794. PROCESS OF PRODUCING WHITE LEAD. EDWIN EUSTON, St. Louis, Mo. Filed Sept. 10, 1913. Serial No. 789,070. (Cl. 134—75.)

1. The process of manufacturing white lead consisting, first, in forming a precipitate by carbon dioxid gas from basic lead acetate solution maintained alkaline, second, in forming a precipitate by carbon dioxid gas from basic lead acetate solution eventually approximately neutral, and third, in mixing the two products thus obtained in proportions to form a pigment containing 11.0% to 14.5% carbon dioxid.

2. The process of producing white lead consisting in the admixture of a precipitate formed by carbon dioxid gas from a basic lead acetate solution maintained alkaline, with a precipitate formed by carbon dioxid gas from a basic lead acetate solution eventually approximately neutral, in proportions to form a pigment containing 11.0% to 14.5% carbon dioxid.

1,106,795. CLEANING-BRUSH FOR LINOTYPE-MACHINE PLUNGERS. LEO EWALD, Minneapolis, Minn. Filed June 16, 1913. Serial No. 774,072. (Cl. 199—14.)



1. A means for cleaning a linotype machine plunger comprising a casing, a brush mounted therein, means adapted to support a plunger inserted into said casing adjacent to said brush, a gear having a radial slot adapted to receive a plunger rod, and means for revolving said brush and gear.

2. A means for cleaning a linotype machine plunger comprising a casing having an opening in its wall adapted to receive a plunger inserted therein, a housing encircling said opening and adapted to inclose the plunger rod, said housing having an opening therein and a cover, a gear mounted opposite said housing and having a radial slot to receive the plunger rod, a brush mounted in said casing, and means for revolving said brush and gear.

3. A plunger cleaning device comprising a shaft, a brush thereon, a casing for said brush, a seat provided within said casing adapted to support a plunger head, one end of said shaft having a driving connection, and mechanism connecting said shaft with the rod of said plunger.

4. A plunger cleaning device comprising a casing, a brush having a driving shaft journaled therein, a seat provided within said casing adapted to support a plunger head, the rod of said plunger head and said shaft being in substantially parallel relation with one another, and a gear mechanism operatively connecting said shaft with said plunger rod.

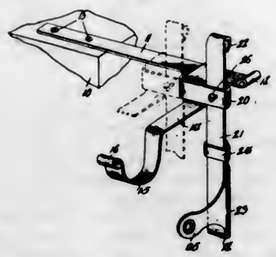
5. A plunger cleaning device comprising a shaft, a brush driven thereby, a seat provided within said casing adapted to support a plunger head, means for moving said seat toward or from said brush to increase or decrease the pressure thereof on said plunger head, and a gear mechanism operatively connecting said shaft with the plunger rod.

[Claims 6 to 9 not printed in the Gazette.]

1,106,796. COMBINATION SHADE AND CURTAIN BRACKET. ALFRED C. FARLEY, Martinsburg, W. Va. Filed Oct. 19, 1912. Serial No. 726,733. (Cl. 156—24.)

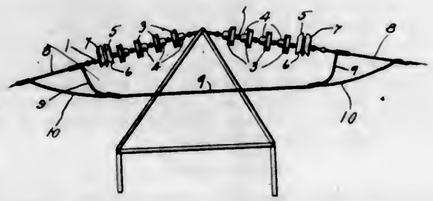
1. In a device of the character described, the combination with a support, of a supporting rod, a bracket being in movable relation with said supporting rod, means formed upon said bracket for supporting the shade supporting clip, and means slidable upon said bracket for holding the last mentioned means in place, as and for the purpose set forth and described.

2. In a device of the character described, the combination with a support, a rod carried thereby, a bracket in movable relation with said rod, a portion of said bracket being bent back upon itself for the reception of a shade supporting member, and a band slidably mounted upon



said bracket for securing said bent portion in place, as and for the purpose set forth and described.

1,106,797. ELECTRIC INSULATOR. JOHN L. FAY, St. Louis, Mo., and SYLVESTER B. WAY, Milwaukee, Wis. Filed Feb. 24, 1913. Serial No. 750,223. (Cl. 173—318.)



1. An electric insulator carrying a suspension member for supporting a conductor and provided with means for inducing circulation of air around the insulator, said means including a heat radiating member adapted for electrical connection with the conductor.

2. An electric insulator comprising attaching means and an interposed insulating disk, and metal shields insulated from each other disposed at the sides of said disk, said shields being spaced from the disk and from each other to provide inlet and outlet openings for circulating air currents.

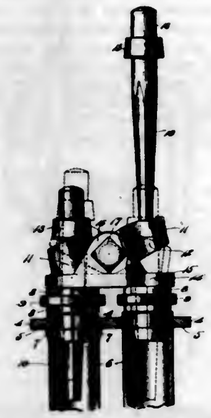
3. An electric insulator comprising attaching means, an interposed insulating disk, and metallic elements arranged on each side of said disk, and partially inclosing the same, the disposal of said metallic elements affording an outlet opening above the disk.

4. An electric insulator comprising attaching means, an interposed insulation disk, and bell shaped metal shields on each side of the disk which are spaced therefrom and from each other, said shields being cut away at their lower portions.

5. An insulator comprising the combination of an insulating member, a supporting member for the same, a suspension member carried by said insulating member for sustaining an electrical conductor, a shield attached to said suspension member and partially inclosing the insulating member, a complementary shield also partially inclosing the insulating member, said shields being insulated from each other and being formed to provide a considerable inlet opening adjacent the lower portion of the insulating member and outlet openings at the sides and above said insulating member, said openings providing passages for the circulation of air to and from said insulating member.

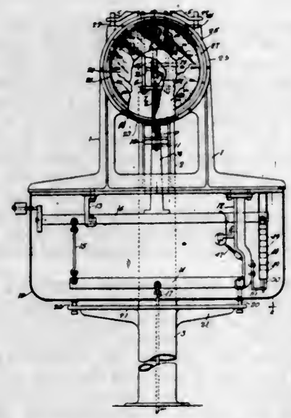
[Claims 6 to 9 not printed in the Gazette.]

1,106,798. TUBE-EXPANDER. WILLIAM J. FREY, St. Louis, Mo. Filed Nov. 10, 1913. Serial No. 800,110. (Cl. 153—80.)



In a tube expander, a tilting arm bored at each end to receive a driven expanding tool; and a base plate, having apertures registering with said bores, whereon the tilting arm is pivotally mounted.

1,106,799. SCALE. WILLIAM N. GILBERT, Springfield, Ohio. Filed Dec. 19, 1910. Serial No. 598,157. (Cl. 73—101.)



1. In a scale, the combination, with a load-supporting frame having bodily movement, means to regulate the movement of said frame in proportion to the load thereon, a beam pivotally mounted on said frame and adjustable means to control the movement of said beam, of two indicators, the combined indications of which represent the total weight of the load on the scale, one of said indicators indicating a portion of said total weight in units and the other indicator indicating the remainder of said load in fractions of said units, means controlled by the movement of said frame to actuate one of said indicators, and means controlled by the movement of said beam relatively to said frame to actuate the other of said indicators.

2. In a scale, the combination, with a movable frame, and a beam pivotally mounted on said frame, two indicators carried by said frame, means to actuate one of said indicators by the movement of said frame, and means to actuate the other of said indicators by the movement of said beam relatively to said frame.

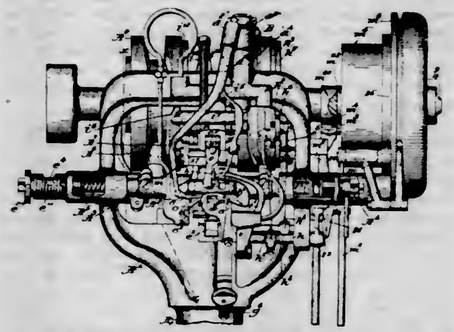
3. In a scale, the combination, with a fixed standard, a frame movably mounted on said standard, means to regulate the movement of said frame in proportion to the load thereon, a beam pivotally mounted on said frame, and a device to counterbalance said beam, of two indicators, the combined indications of which represent the total weight of the load on the scale, one of said indicators indicating a portion of said total weight of said load in units and the other indicator indicating the remainder of said load in fractions of said units, means to actuate one of said indicators by the movement of said frame, and means to actuate the other of said indicators by the movement of said beam relatively to said frame.

4. In a scale, the combination, with a vertical standard, a frame, a spring interposed between said frame and said standard to support the frame from the standard, a beam pivotally mounted on said frame, and adjustable means to control the movement of said beam, of two weight indicators, the combined indications of which represent the total load on the scale, one of said indicators indicating a portion of the load in units and the other of said indicators indicating the remainder of the load in fractions of said units, and means controlled by the movement of said frame and said beam for actuating the respective indicators.

5. In a scale, the combination, with a fixed standard, of a frame, a spring connecting said frame to said standard, a beam pivotally mounted on said frame, a lever pivotally mounted on said frame and connected to said beam, an operating member connected to said lever between its point of connection to said frame and to said beam, whereby the movement of said operating member will impart movement to said frame and to said beam relatively to said frame, and indicators adapted to be actuated by the movements of said frame and said beam, respectively.

[Claims 6 to 35 not printed in the Gazette.]

1,106,800. SEWING-MACHINE. LOUIS GODDU, Winchester, Mass., assignor, by mesne assignments, to Goddu Sewing Machine Company, a Corporation of Maine. Filed May 20, 1895. Serial No. 549,898. (Cl. 112—20.)



1. In a sewing machine, a work-support, a looper located below the work-support and adapted to engage and measure off the thread to be taken by the needle, a hooked needle located above the work-support and adapted to engage the said measured thread and draw the same into and above the material to form a loop above the same, and a thread guide located above the material close to one side of the loop of thread yet held by the said needle, said thread guide carrying a second thread, combined with a thread-catcher, and means to move it to cause said thread-catcher to enter the loop held above the material by the needle, engage at the opposite side of the said loop the thread presented by the said thread-guide, and pull it through the loop of needle thread at the upper side of the said material, substantially as described.

2. In a sewing machine, a work-support, a guide for the needle-thread, a pull-off, means to move it to act on said

thread between the needle-thread-guide and the thread supply, a looper located below said work-support, means to move the same to engage the needle-thread between the said needle thread guide and the work, means to move said looper to measure off the needle thread for a stitch, a hooked needle, means to actuate it to engage the measured thread held by the looper and draw the said thread up through the material for a stitch, a thread-guide located above the material close to said loop of needle-thread and presenting a second thread, and a thread-catcher, and means to move it, whereby said thread-catcher is made to enter said loop of needle thread, and take the second thread from the thread-guide also above the material and draw it therefrom through the loop of needle-thread yet held by the said needle above the material, and gradually give up said thread to the strain of the loop of needle-thread as then the latter is being taken up, combined with a take-up to act on and take up the loop of needle-thread, substantially as described.

3. A sewing machine comprehending the following instrumentalities, viz:—a work-support, a hooked needle to seize a needle thread below the material, and draw it above the material to form a loop therein, a thread-guide located above the material and presenting a second thread, a thread-catcher located above the material and adapted to enter the loop of needle-thread held by said needle and engage at its opposite side a second thread presented by said thread guide, means to regulate the descent, toward the material, of the thread-catcher in engagement with the said second thread, and means to impart to said thread-catcher a variable outward movement, whereby the loop of second thread is varied in length according to the thickness of the material, substantially as set forth.

4. In a sewing machine, a hooked needle, a pull-off for the needle-thread, a take-up for said thread, a brake for the needle-thread between the said pull-off and thread-supply, an independent brake for said needle-thread between said pull off and said take-up, and means to actuate said pull-off and take-up, combined with means to actuate said two brakes independently, whereby when the pull-off works to pull off thread from the thread-supply, one of the said brakes acts on the thread between the pull-off and the take-up, the other of the said brakes is removed from the thread, and when the take-up acts to take up the loop of needle thread, the brake located between the pull-off and the thread-supply acts to hold the thread, while the brake located between the pull off and the take-up is opened, one or the other of said brakes always operating to hold the needle-thread, substantially as described.

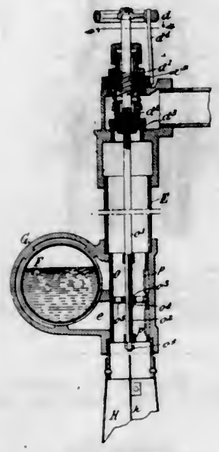
5. In a machine for stitching with two threads, a needle, means to actuate it to penetrate the material and leave in the material a loop of needle thread, a thread catcher having a prong and a heel, means to present a second thread to lock the loops of needle thread, and means to actuate said thread catcher to cause its prong to pass through the loop of needle-thread and take said second thread from the means presenting it, the heel of said loop catcher acting to keep the loop of needle thread in position during the movement of the said catcher through the loop to engage said second thread and means for drawing the loop of needle thread into the material, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,106,801. STEAM-HEATING SYSTEM. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Nov. 6, 1911. Serial No. 658,662. (Cl. 237—12.)

1. A car heating system having an automatic admission valve, a thermostat adapted to be heated by the discharge and controlling said admission valve, means for cutting off the discharge entirely or for limiting it sufficiently to permit the escape of only the water of condensation, and a damper adapted to prevent access of the heating medium to said thermostat when said means is operative to cut off or limit the discharge as stated.

2. A steam car heating system, provided with radiators, a supply pipe and a return pipe, an automatically operated valve in said supply pipe, a valve adapted to close said return pipe and having two open positions, one permitting a free discharge and the other a restricted discharge, thermostatically operated means controlled by the temperature in said return pipe and adapted to control the valve in said supply pipe, and a damper operated simultaneously with said return-pipe valve and adapted to permit access of the heating medium to said thermostat in the free-discharge position of the valve, and to prevent access thereto in the restricted-discharge position of the valve.

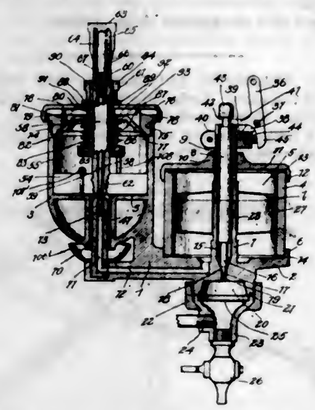


3. A steam car heating system, provided with radiators, radiating pipes, a supply pipe and a return pipe, an automatically operated valve in said supply pipe, a hand-operated valve adapted to close said return pipe and having two open positions, one permitting a free discharge and the other a restricted discharge, a thermostat in communication with said return pipe and controlled by the temperature therein, means operated by said thermostat for controlling the valve in said supply pipe, and a damper operated simultaneously with said return-pipe valve and adapted to permit access of the heating medium to said thermostat in the free-discharge position of the valve, and to prevent access thereto in the restricted-discharge position of the valve.

4. A steam car heating system comprising radiating pipes, a supply pipe, a return pipe and a drip pipe open to the atmosphere, an automatically operated valve in said supply pipe, and a valve adapted to colse said return pipe and having two open positions, one permitting a free discharge and the other a restricted discharge, a thermostat in communication with said drip pipe, and controlled by the temperature therein, means connected thereto for operating the valve in said supply pipe, and a damper operated simultaneously with said return-pipe valve and adapted to permit access of the heating medium to said thermostat in the free-discharge position of the valve and to prevent access thereto in the restricted-discharge position of the valve.

1,106,802. CARBURETER. JOHN S. GOLDBERG, Chicago, Ill., assignor to Stromberg Motor Devices Company, Chicago, Ill. Filed Mar. 8, 1907. Serial No. 361,218. (Cl. 48—155.2.)

1. In a carburetor, the combination of a cup-shaped valve chamber, an air inlet, a valve controlling the air inlet, a fuel inlet, an outlet for air and fuel, a main valve controlling the outflow of air from the cup-shaped chamber, a stem for said main valve, a spindle passing through the stem and having a tapered end engaging in the fuel inlet for gaging the outflow of fuel, and means for raising and lowering the main valve, said air valve, main valve stem and spindle having a common axis.



2. In a carbureter, the combination of a cup-shaped valve chamber, an air inlet, a check valve automatically controlling the air inlet, a nozzle extending upwardly into the valve chamber and adapted for connection with a fuel supply, an outlet for air and fuel, a main valve over the nozzle, for controlling the outflow of air from the cup-shaped chamber, a stem for the main valve extending upwardly through the center of the check valve, a spindle extending through the stem and having a tapered lower end projecting into the nozzle to control the outflow therefrom, means for raising and lowering the main valve with the spindle valve to control the outflow of air and fuel, and micrometer means for moving the spindle valve with respect to the main valve whereby to adjust the proportion of air and fuel outflow.

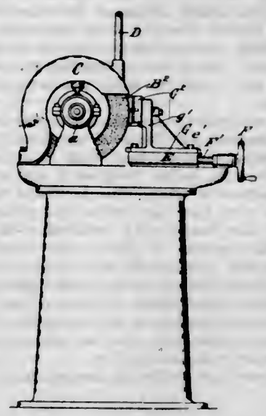
3. In a carburetor, the combination with a cup-shaped cylindrical casing, a horizontal valve seat formed within the casing, a fuel inlet nozzle extending upwardly into the casing and terminating at the valve seat, a check valve for controlling the inflow of air at the upper end of the casing, a main valve over the valve seat for controlling the outflow of air from the air valve, and mechanism associated with the main valve for causing vertical movement thereof to control the outflow of air, said valve being shaped to cause the air admitted by the check valve to be directed to flow transversely over the valve seat and inlet nozzle.

4. In a carburetor, the combination with a cup-shaped cylindrical casing, a partition at the lower end of the casing forming a horizontal valve seat within the casing, a second partition above the valve seat, said partitions dividing the interior of the casing into a valve chamber and a mixing chamber, a fuel nozzle extending upwardly and terminating at the valve seat, a check valve for controlling the flow of air into the casing, said valve and nozzle being concentric, a main valve associated with the valve seat for controlling the communication between the air chamber and the mixing chamber, and mechanism associated with the main valve for causing vertical movement thereof to adjust the communication between the air chamber and mixing chamber, said valve main being formed to direct the air admitted by the check valve transversely over the valve seat and the nozzle.

5. In a carburetor, the combination of a cylindrical cup shaped inclosing casing forming a chamber, an air inlet to said chamber, a fuel inlet to said chamber, valve mechanism for controlling the outflow of fuel and air from said chamber, detachable actuating mechanism associated with the valve mechanism for causing operation thereof, a cover for the inclosing casing, and locking means actuated by the cover, when the cover is applied, to lock the actuating mechanism in place.

[Claims 6 to 22 not printed in the Gazette.]

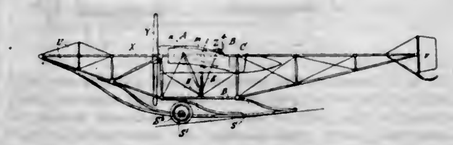
1,106,803. GRINDING-MACHINE. ROBERT H. GRANT, Detroit, Mich., assignor to Grant Automatic Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 21, 1912. Serial No. 721,666. (Cl. 51—4.)



1. In a grinding-machine, the combination of a grinding-wheel having a frusto-conical grinding surface; a work-holder having a work slide-way adjacent to and running in the general direction of an element of said surfaces; said holder being adjustable about an axis angularly related to said surface and also adjustable about an axis which lies in a plane perpendicular to the line of said first-named axis.

2. In a grinding machine, the combination of a grinding wheel provided with a peripheral grinding surface having lines of successively increasing linear velocities; a work-holder adapted to maintain contact between said lines and a work blank whereby the latter will move or tend to move in a direction transverse with respect to said lines; and means for varying the velocity of such described movement; said work-holder being adjustable toward and from said surface and in a direction at right angles with respect to the axis of the wheel.

1,106,804. AEROPLANE. BELTON T. HAMILTON, London, England. Filed Apr. 25, 1912. Serial No. 693,198. (Cl. 244—29.)



1. An aeroplane having the two sides of its plane so constructed and provided with connecting means that an excess of air pressure on one side will produce automatically a stabilizing action on the other side, comprising a hand control wheel, a control shaft detachably secured to the hand wheel, gearing between the control shaft and the connecting means, and a clutch for automatically locking the shaft to the hand wheel when the latter is rotated from its neutral position, substantially as set forth.

2. Stabilizing means for aeroplanes comprising rear stays hinged to the body of the machine, warping cords attached at one end to said stays at equal distances from the center of pressure, a chain connecting the other ends of said cords, a sprocket wheel engaged by said chain, a control shaft, means for connecting the control shaft to the sprocket wheels, a hand wheel, and means for auto-

matically locking said hand wheel to the control shaft when the hand wheel is turned from its neutral position.

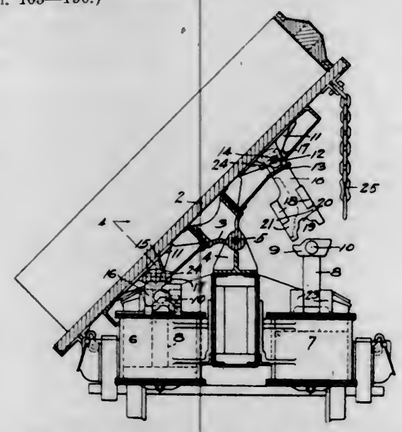
3. An aeroplane having the two sides of its plane so constructed and provided with connecting means that an excess of air pressure on one side will produce automatically a stabilizing action on the other side comprising a hand control wheel, a shaft detachably secured to the hand wheel gearing between the shaft and the connecting means, means for connecting the shaft to the hand wheel only when the latter is rotated from its neutral position.

4. In an aeroplane a cord connecting the outer ends of the plane together, a pulley over which said cord passes, a hand operated control which when at or near its mid-position allows the pulley freedom to act automatically, but when moved in either direction from the mid-position engages with and controls the said pulley.

5. In an aeroplane a cord connecting the outer ends of the plane together, a pulley over which said cord passes, a tubular carriage for said pulley, a spring acting to maintain said carriage in its normal place, a hand operated control which when at or near its mid-position allows the pulley freedom to act automatically, but when moved in either direction from the mid-position engages with and controls the said pulley.

[Claims 6 to 9 not printed in the Gazette.]

1,106,805. DUMP-CAR. KARL H. HANSEN, Pittsburgh, Pa., assignor to Orenstein-Arthur Koppel Co., Pittsburgh, Pa. Filed June 8, 1912. Serial No. 702,588. (Cl. 105—190.)



1. In a dump-car, the combination of a tilting car-body, a vertically actuated piston-rod, a pivotally mounted push-member in the path of said piston-rod, and means for maintaining said push-member at substantially right angles to the bottom of said car in the tilting position of the car-body.

2. In a dump-car, the combination of a tilting car-body, a vertically actuated piston-rod, a pivotally mounted push-member carried by said car-body in the path of said piston rod, and a stop carried by said push-member adapted to engage said car-body when said piston rod is elevated.

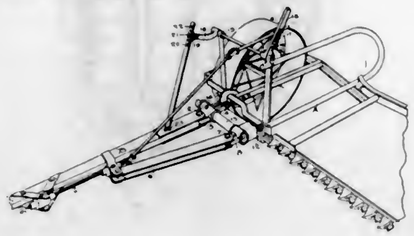
3. In a dump-car, the combination of a tilting car-body, a vertically actuated piston-rod, a push-member carried by said car-body comprising swinging arms in the path of said piston-rod, and means for deflecting said arms on the side the car is dumped.

4. In a dump-car, the combination of a tilting car-body, a vertically actuated piston-rod, a push-member carried by said car-body comprising a pair of swinging arms in the path of said piston-rod, and means in the path of said arms to deflect same.

5. In a dump-car, the combination of a tilting car-body, a vertically actuated piston-rod, a push-member carried by said car-body comprising a pair of swinging arms, and inclined planes in the path of movement of said arms to deflect same.

[Claims 6 to 9 not printed in the Gazette.]

1,106,806. STEERING APPARATUS FOR VEHICLES. PAUL HANSMANN, Long Prairie, Minn., assignor to Hansmann Manufacturing Company, Long Prairie, Minn., a Corporation of Minnesota. Filed Jan. 3, 1912. Serial No. 669,193. (Cl. 21—114.)



1. In combination with a vehicle, a draft pole having pivotal support thereon allowing vertical and horizontal swinging of the pole, an adjusting bar having pivotal support upon said vehicle at one side of said draft pole allowing it to swing in vertical and horizontal planes, means for horizontally adjusting the pivotal connection of said bar and said vehicle, and an adjusting connection between said bar and draft pole forward of the pivotal support of said bar.

2. In combination with a vehicle, a draft pole having pivotal support thereon allowing vertical and horizontal swinging of the pole, an adjusting bar having pivotal support upon said vehicle at one side of said draft pole allowing it to swing in vertical and horizontal planes, means for vertically adjusting the pivotal connection of said bar with said vehicle, and an adjusting connection between said bar and draft pole forward of the pivotal support of said bar.

3. In combination with a vehicle, a draft pole having pivotal support thereon to swing in vertical and horizontal planes, an adjusting bar having pivotal support upon said vehicle alongside said pole, said pivotal support consisting of a coupling, said bar having vertical pivotal support on said coupling and said coupling having adjustable pivotal support upon said vehicle, and an adjusting connection between said bar and pole.

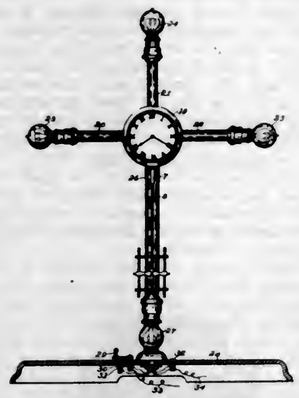
4. In combination with a vehicle, a draft pole having pivotal support thereon, a bar having vertical pivotal support upon a coupling alongside said pole, a link 10 removably and adjustably supported in said coupling, means for pivotally supporting said link pin upon said vehicle, and an adjusting connection between said bar and pole.

5. In combination with a vehicle, a draft pole pivotally supported at its inner end upon said vehicle and an adjusting bar pivotally supported on said vehicle alongside said pole, an adjustable connection between the pivotally supported ends of said pole and bar, and an adjusting connection between said pole and bar forward of said pivotal support.

[Claims 6 and 7 not printed in the Gazette.]

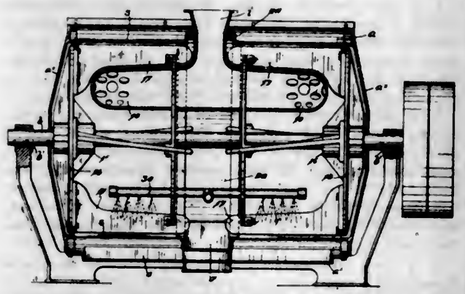
1,106,807. PENDULUM-LAMP FOR CLOCKS. CHRISTIAN R. HANSON, Waterloo, Iowa. Filed Aug. 19, 1913. Serial No. 785,506. (Cl. 240—2.)

1. In combination, a sectional pendulum comprising upper and lower separably connected sections, the upper section having its lower portion composed of insulation with insulated terminal conducting pieces secured thereon provided with oppositely-projecting conducting studs, the lower section having its upper end composed of insulation, conducting hooks detachably hung on said studs and having their stems secured through the last-mentioned insulation, an electric lamp forming the pendulum-bob, electric connections leading from the terminals of the lamp to the said conducting hooks, a source of electric current, and conductors between the said source and the terminal conducting pieces on the upper section of the pendulum.



2. In combination, a sectional pendulum comprising upper and lower separably connected sections, the upper section having its lower portion composed of insulation with insulated terminal conducting pieces having studs extending therefrom, the tubular lower section of said pendulum having its upper end plugged with insulation, hooks detachably suspended on said studs and having their stems passed through said insulation, a detachable electric lamp secured to the lower end of the second-mentioned pendulum section, electric conductors between said hooks and the terminals of said lamp, a fixed support, other electric lamps mounted detachably thereon, a source of electric current, and independent circuits from said source of electric power to the said conducting-section, and in series through said last-mentioned electric-lamps.

1,106,808. CENTRIFUGAL PULP-SCREEN. ANTON J. HAUG, Nashua, N. H., assignor to The Improved Paper Machinery Company, Nashua, N. H. Filed June 29, 1910, Serial No. 569,458. Renewed Nov. 22, 1913. Serial No. 802,365. (Cl. 92—34.)



1. In a machine of the character described, the combination with a casing and a cylindrical screen drum located therein, of an inlet extending through said casing and said screen drum intermediate the length thereof, said inlet having lateral extensions within the screen drum and spaced therefrom, outlets near the ends of said lateral extensions, separate outlets from the casing for the slivers and the screened pulp, and means located between said lateral extensions and the screen drum for delivering the stock to the screen drum for causing the slivers to move toward the sliver outlet.

2. In a machine of the character described a horizontal cylindrical casing, a shaft extending therethrough, a cylindrical screen drum located within said casing, a set of paddles supported from said shaft at each end of the machine and extending toward the center thereof, said paddles being adapted to rotate with their outer edges in close proximity to said screen drum, the paddles of one set being inclined oppositely to those of the other set and inclined rearwardly with respect to their direction of rotation toward the center of the machine, an inlet arranged intermediate the length of the machine and extending into the interior of the screen drum, and feed spouts extending from each side of said inlet within the plane of said paddles and having delivery openings near the opposite respective ends of the screen, a shower pipe located within said screen drum and arranged inside of said paddles; a sliver outlet in communication with the screen drum at its central part and a pulp outlet in communication with the interior of the casing.

3. In a machine of the character described a horizontal cylindrical casing, a shaft extending therethrough, a casing drum located within said casing and supported at its end from the end walls of said casing, collecting means arranged circumferentially of said screen drum near its center, a sliver outlet in communication with the interior of said screen in the plane of said collecting means, an inlet arranged intermediate the length of the machine and extending into the interior of said screen drum, feed spouts extending from each side of said inlet toward the ends of the machine and spaced from said screen drum; paddle blades located in and adapted to rotate through the annular spaces formed between the screen drum and said feed spouts, said blades being supported from their outer ends by said shaft, the blades at one end being inclined oppositely to those at the other end, said inclination being toward the center of the machine and rearwardly with respect to the direction of rotation of said blades, a shower pipe located within said screen drum and inside of said blades and extending lengthwise said screen drum, and a pulp outlet in communication with the interior of said casing.

4. In a machine of the character described the combination with a casing and a cylindrical screen drum located therein, of an inlet extending through said casing and said screen drum intermediate the length thereof, said inlet having lateral extensions within the screen drum and spaced therefrom, outlets near the ends of said lateral extensions, a pulp outlet from the casing, a sliver outlet communicating with the interior of the screen intermediate the ends thereof, and means located between said lateral extensions and said screen drum for delivering stock to said screen and for causing slivers to move toward the center of said screen to the sliver outlet.

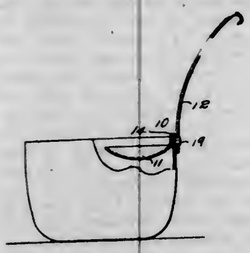
5. In a machine of the character described, the combination with a casing of a cylindrical screen drum located therein of a stock inlet extending through said casing and said screen drum intermediate the length thereof, said inlet having lateral extensions within the screen drum and spaced therefrom, outlets near the ends of said lateral extensions, separate outlets from the casing for the slivers and the screened pulp, and a plurality of paddle blades located in and adapted to rotate through the space between the said lateral extensions and the screen drum, said blades being inclined rearwardly with respect to the direction of rotation from the said stock outlets toward the sliver outlet.

[Claims 6 to 11 not printed in the Gazette.]

1,106,809. KITCHEN UTENSIL. RAYMOND J. HAVERTY and ANNIE ECKENROD, Altoona, Pa., assignors of one-third to William Thomas Haverty, Altoona, Pa. Filed Sept. 19, 1912. Serial No. 721,180. (Cl. 65—28.)

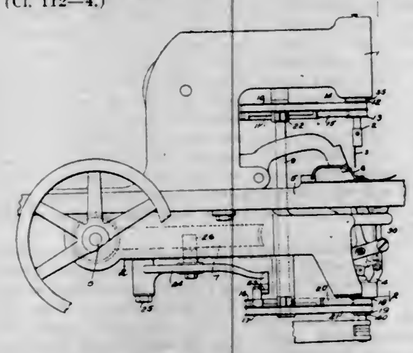
1. A device of the character described comprising a handle member having lateral reinforcing ribs and doubled upon itself at one end to form a socket, and a ladle body

having a hook adapted to enter the said socket and thereby detachably engage with the said handle member.



2. A device of the character described comprising a ladle body, a hook formed therefrom, and a handle member having laterally extending wings at one end, said end adapted to be bent upwardly and said wings adapted to be bent backwardly to engage the body of the handle member, thereby forming a socket to detachably receive the hook on the ladle body.

1,106,810. BUTTONHOLE-SEWING MACHINE. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,579. (Cl. 112—4.)



1. A buttonhole sewing machine having, in combination, rotatable stitch forming mechanism, pulleys arranged in operative relation with said mechanism, a rock shaft for imparting rotary movement to said stitch forming mechanism, sectors carried by said rock shaft, flexible substantially non-elastic connectors wrapped in opposite directions about said pulleys and about said sectors and attached respectively to said pulleys and to said sectors, and means to adjust said sectors to take up the slack in said flexible members, substantially as described.

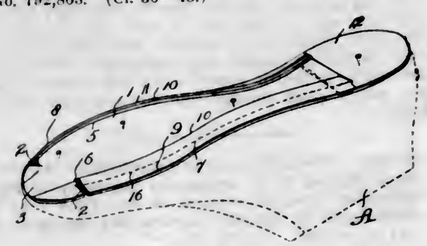
2. A buttonhole sewing machine having, in combination, rotatable stitch forming mechanism including a rotatable needle bar, a rotatable box through which said needle bar passes, a pair of pulleys carried by said box, complemental stitch forming mechanism, a block on which said complemental mechanism is supported, a pair of pulleys carried by said block, means to rotate said stitch forming mechanism comprising a rock shaft, sectors mounted on said rock shaft respectively opposite the said pulleys, flexible substantially non-elastic members wrapped in opposite directions about said pulleys and about said sectors and attached respectively to said pulleys and to said sectors, and means to adjust said sectors to take up the slack in said flexible members, substantially as described.

3. A buttonhole sewing machine, having, in combination, coöperating thread handling mechanisms located on opposite sides of the work, rotary supports for said mechanisms, automatic means for relatively moving the work and the thread handling mechanisms in a definite relation to each other to form the stitches about the margin of a buttonhole comprising a shaft, flexibly substantially non-elastic members connecting the shaft with said supports, and means for actuating the shaft to rotate said mechanisms during the formation of the buttonhole, substantially as described.

4. A buttonhole sewing machine, having, in combination, a needle and complemental stitch forming mechanism located on opposites of the work and arranged to rotate co-axially, automatic mechanism for relatively moving the work and the stitch forming mechanism in a definite relation to each other to form the stitches about the margin of a buttonhole comprising a shaft arranged substantially parallel with the axis of rotation of the needle and complemental mechanism, flexible substantially non-elastic members connecting the shaft with the neeide and the complemental mechanism, and mechanism for actuating the shaft to rotate the needle and complemental mechanism during the formation of the buttonhole, substantially as described.

5. A buttonhole sewing machine, having, in combination, coöperating stitch forming mechanisms located on opposite sides of the work, rotary supports for said mechanisms, automatic mechanism for relatively moving the work and the stitch forming mechanism in a definite relation to each other to form the stitches about the margin of a buttonhole comprising a shaft, flexible substantially non-elastic members connecting the shaft with said mechanisms, means for actuating the shaft to rotate said mechanisms during the formation of the buttonhole, and provision for taking up the slack in said members, substantially as described.

1,106,811. SHOE. WALTER J. HOAR, Portland, Me., assignor to W. J. Hoar Shoe Manufacturing Co., Portland, Me., a Corporation. Filed Oct. 1, 1913. Serial No. 792,863. (Cl. 36—43.)



1. A foot covering having, in combination, an insole having a portion of each side edge turned up to form a shoulder terminating at the toe portion of said insole, strips secured to said shoulders and forming insole extensions, and an upper secured to said shoulders, the toe portion of said insole being free from said upper.

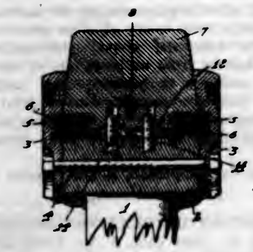
2. A foot covering having, in combination, an insole having a portion of each side edge turned up to form a shoulder terminating at the toe portion of said insole, said insole having its heel portion separate from the main body of the insole, strips secured to said shoulders and forming insole extensions, and an upper secured to said shoulder, the toe portion of said insole being free from said upper.

3. A foot covering having, in combination, an insole formed with incisions on opposite edges adjacent the toe portion; said insole having its heel portion separate from the main body of the insole, the edge portions of the insole between said heel portion and the incisions being turned up to form shoulders, strips secured to said shoulders and forming insole extensions, and an upper secured to said shoulders, the toe portion of said insole being free from said upper.

4. A foot covering having, in combination, an insole formed with incisions on opposite edges adjacent the toe portion; said insole having its heel portion separate from the main body of the insole, the edge portions of the insole between said heel portion and the incisions being turned up to form shoulders, strips secured to said shoulders and forming insole extensions, a welt secured to said shoulders; and an upper united to said insole between the shoulders and welt by said securing means, the toe portion of said insole being free from said upper.

5. A foot covering having, in combination, an insole formed with incisions on opposite edges adjacent the toe portion; said insole having its heel portion separate from the main body of the insole, the edge portions of the insole between said heel portion and the incisions being turned up to form shoulders, strips secured to said shoulders and forming insole extensions, a welt; an upper; and two rows of stitches uniting said upper to said shoulders.

1,106,812. TRUCK-TIRE. HARRY V. HOLLINGS, San Francisco, Cal., assignor of one-half to Christian T. Jacobsen, San Francisco, Cal. Filed Apr. 15, 1913. Serial No. 761,312. (Cl. 152—9.)



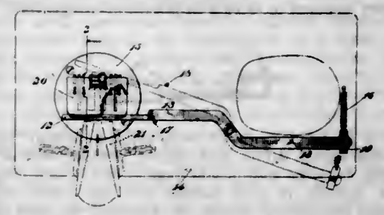
1. A resilient tire for trucks comprising a felly, grooved side flanges bolted thereto and having portions of their adjacent faces approaching each other as they recede from the felly, solid blocks in contact with said approaching faces of the flanges, said blocks having a bottom portion adapted to contact with a solid portion of the wheel rim, and two rubber rings forming resilient cushions under the solid blocks, substantially as described.

2. A resilient tire for trucks comprising a felly, grooved side flanges secured thereto, portions of the adjacent faces of said flanges inclining toward each other as the flanges recede from the felly, solid blocks in contact with said approaching faces of said flanges, said blocks having a bottom portion adapted to contact with a rigid portion of the felly, two rubber rings forming resilient cushions extending into the grooves of the side flanges and supporting the solid blocks at the edges thereof, and resilient blocks between each pair of solid blocks, substantially as described.

3. A resilient tire for trucks comprising a felly, side flanges bolted thereto, said side flanges having their adjacent faces approaching each other as they recede from the felly, a central spacing ring surrounding the felly and having its opposite faces receding from each other, two series of solid blocks in contact with the flanges and spacing rings, said blocks having a portion to contact with the solid rim of the felly, and resilient rings upon which the edges of the base of said solid blocks rest, substantially as described.

1,106,813. THREAD-DRAWING ATTACHMENT FOR SEWING-MACHINES. JOHN HOLTZMANN, Baltimore, Md.; Louise Holtzmann executrix of said John Holtzmann, deceased. Filed July 29, 1913. Serial No. 781,770. (Cl. 112—33.)

1. In a sewing machine, the combination with the work-plate, throat-plate and presser-foot, of a thin thread-drawing finger disposed above but close to the said throat-plate and normally in front of said presser-foot, and means for operating said finger whereby it may be swung forward horizontally in the general direction of the forward feed of the work, over the said throat-plate and beneath said presser-foot, when the latter is slightly lifted, for the purpose of drawing down the ends of needle threads and carrying them forward of the needles.



2. In a sewing machine, the combination with the work-plate, throat-plate and presser-foot, of a thin thread-drawing finger disposed above but close to the said throat-plate and normally in front of said presser-foot, and a lever pivoted to said work-plate and by which said finger is carreid, so that said finger may be swung forward horizontally in the general direction of the forward feed of the work over the said throat-plate and beneath said presser-foot, when the latter is slightly lifted, for the purpose of drawing down the ends of needle threads and carrying them forward of the needles.

3. In a sewing machine, the combination with the work-plate, throat-plate and presser-foot, of a thin thread-drawing finger disposed above but close to the said throat-plate and normally in front of said presser-foot, a lever pivoted to said work-plate and by which said finger is carried, so that said finger may be swung forward horizontally in the general direction of the forward feed of the work over the said throat-plate and beneath said presser-foot, when the latter is slightly lifted, for the purpose of drawing down the ends of needle threads and carrying them forward of the needles, a retracting spring for returning said lever to its normal or inoperative position, and a stop for limiting the movement of said lever under the action of said spring.

1,106,814. ATTACHMENT FOR FINGER-RINGS. BERTHOLD HOLZEL, New York, N. Y. Filed Aug. 25, 1913. Serial No. 786,559. (Cl. 63—17.)



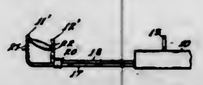
1. An attachment for finger rings comprising in combination, a spring metal band of less curvature than the ring and adapted to be positioned within the ring, a spring clip member disposed at one end of the said band, a second spring clip member disposed at the opposite end of the band from said first mentioned spring clip member and pivoted thereto, substantially as described.

2. An attachment for finger rings, comprising in combination, a spring metal band of less curvature than the ring and adapted to be positioned within the ring, a clip member disposed at one end of the said band and integral therewith, a second clip member disposed at the opposite end of the band from said first mentioned clip member and pivoted thereto, substantially as described.

1,106,815. DENTAL INSTRUMENT. WILLIAM J. HOPKINS, Chicago, Ill. Filed Apr. 16, 1914. Serial No. 832,258. (Cl. 32—10.)

1. A dental instrument comprising a tubular handle, a fixed member forming an extension of said handle, a

movable member extending along said fixed member through an opening in the end of said handle, coöperating jaws on the outer ends of said members, a thumb or finger piece rigidly secured to said movable member and extending through a longitudinal slot in said handle, and a coiled spring in said handle for forcing said movable member outward to bring said jaws into engagement.



2. A dental instrument comprising a tubular handle, a coiled spring within said handle, parallel members extending from the end of said handle, one of said members being secured to said handle and the other passing through an opening therein, an abutment for said spring on the end of said latter member located within said handle, coöperating jaws at the outer ends of said members, and a guide band for said members adjacent to said jaws.

3. A dental instrument comprising a tubular handle of sheet metal provided with a longitudinally disposed slot in one side, a narrow struck up part having its outer end upturned to form a jaw and its inner end upturned and perforated to form an end head of the handle, a second similar narrow struck up part extending through the perforation in the upturned end of the first struck up part and itself having its outer end upturned to form a jaw and its inner end upturned to form a thumb or finger piece extending through the slot in the handle, a guide band secured to one of said struck up parts and engaging the other near said jaws, and a coiled spring in said handle abutting against the adjacent upturned end of said second struck up part.

4. A dental instrument comprising a handle, a fixed jaw secured to said handle, a coöperating movable jaw slidably mounted relative to said fixed jaw, and a spring tending to move said jaws toward each other, the opposing faces of said jaws being provided with oppositely disposed notches.

1,106,816. COLOR PHOTOGRAPHY. FREDERIC EUGENE IVES, Woodcliff-on-Hudson, N. J. Filed Mar. 9, 1912. Serial No. 682,774. (Cl. 101—182.)



1. In the art of color-photography the method of making multi-color prints from a set of color-selection negatives comprising the following steps: photographically preparing dye members from at least one of said negatives, dyeing such members to produce color images therein, placing each such dye member and a print member in mutual face contact, and maintaining between said two members in the presence of moisture a substantial plate pressure applied before imbibition has substantially commenced.

2. In the art of color-photography the method of making multi-color prints from a set of color-selection negatives comprising the following steps: photographically preparing from at least one of said negatives dye members consisting of tenuous reliefs in bichromated gelatin, dyeing such members to produce color images by selective absorption therein, placing each such dye member and a print member in mutual face contact, and maintaining between said two members in the presence of moisture a substantial plate pressure applied before imbibition has substantially commenced.

3. In the art of color-photography the method of making multi-color prints from a set of color-selection negatives comprising the following steps: photographically preparing dye members from at least one of said negatives, dyeing such members to produce color images therein, placing each such dye member in mutual face contact with a print member consisting of paper coated with hardened mordanted gelatin, and maintaining between said two members in the presence of moisture a substantial plate pressure applied before imbibition has substantially commenced.

4. In the art of color-photography the method of making multi-color prints from a set of color-selection negatives comprising the following steps: photographically preparing from at least one of said negatives dye members consisting of tenuous reliefs in bichromated gelatin, dyeing such members to produce color images by selective absorption therein, placing each such dye member in mutual face contact with a print member consisting of paper coated with hardened mordanted gelatin, and maintaining between said two members in the presence of moisture a substantial plate pressure applied before imbibition has substantially commenced.

5. In the art of color-photography the method of making multi-color prints from a set of color-selection negatives comprising the following steps: photographically preparing dye members from at least one of said negatives, dyeing such members to produce color images therein, placing each such dye member and a print member in mutual face contact while both are substantially dry, and then subjecting them to sustained plate pressure and to moisture.

[Claims 6 to 21 not printed in the Gazette.]

1,106,817. PROCESS OF TREATING CAST-IRON. JOSEPH E. JOHNSON, Jr., New York, N. Y. Filed Aug. 13, 1913. Serial No. 784,492. (Cl. 75—27.)

1. The process of treating cast iron, which consists in adding oxygen and silicon to a bath of the same, while maintaining the temperature low enough to permit the retention of oxygen by the bath with a minimum elimination of carbon.

2. The process of treating cast iron, which consists in providing a bath of said iron, incorporating oxygen therein at a temperature sufficiently low to permit the retention of oxygen and a minimum elimination of carbon, providing a second bath of iron containing silicon, and mixing said baths together.

3. The process of treating cast iron, which consists in oxidizing a bath of said iron at a temperature which will cause the silicon content to be lowered without materially affecting the carbon, oxygenating said bath, and finally adding silicon thereto.

4. The process of treating cast iron, which consists in removing enough silicon from a bath of said iron to permit of the absorption of oxygen by the iron, then oxygenating said bath, and finally adding silicon thereto.

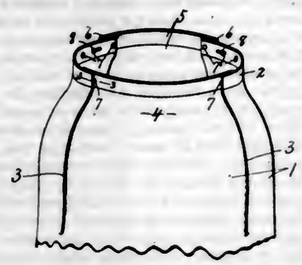
5. The process of treating cast iron, which consists in adding silicon to a bath of said iron containing oxygen, the addition of the silicon being under such conditions that oxygen will be retained by the bath.

[Claims 6 to 12 not printed in the Gazette.]

1,106,818. SKIRT. FANNIE A. KAUFLER, Weedsport, N. Y. Filed Mar. 29, 1912. Serial No. 687,194. (Cl. 2—42.)

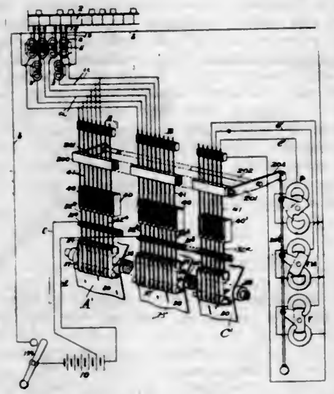
1. A skirt having a waist band and vertical slits in the front thereof at opposite sides of the center, the meeting ends of the band at both of the slits being provided with adjustable interlocking connections whereby the body of the skirt is drawn to the front during such adjustment to preserve the proper fullness at the lower front of the skirt, the back of the skirt having portions thereof at opposite sides of the center folded outwardly and laterally to form a raised panel centrally at the back, and means for varying the width of the folds, and holding them in their folded positions without varying the width of the panel.

2. A skirt having a waist band, the front portion of the skirt including the waist band having vertical slits equidistant from the center of said front, the edges of the waist band at each slit being overlapped and provided respectively with a series of eyelets and a hook for interlocking engagement with the eyelets, the back of the skirt



including the corresponding portion of the band having folds equi-distant from and at opposite sides of the center of said back to form a single raised panel, the overlapped portions of each fold in the band being provided respectively with a series of eyelets and a hook for engaging in said eyelets.

1,106,819. PLAYING APPARATUS FOR MUSICAL INSTRUMENTS. JOHN F. KELLY, Pittsfield, Mass. Filed Dec. 6, 1907. Serial No. 405,381. (Cl. 84—174.)



1. In a sheet-controlled automatic playing apparatus for musical instruments, the combination of a series of operating devices for operating the tone-producing devices of the musical instrument, a series of controlling devices positioned to be controlled by perforations in one longitudinal zone of the music-sheet for controlling the operation of said operating devices to cause the production of tones of normal loudness, and a second series of controlling devices positioned to be controlled by perforations in another longitudinal zone of the music sheet for controlling the operation of said operating devices for producing tones louder than those produced through the operation of the controlling devices of the first series and automatically operated movable devices to simultaneously vary the operation of both series of controlling devices.

2. In a sheet controlled automatic playing apparatus for musical instruments, the combination of a series of operating magnets for operating the tone-producing devices of the musical instrument, a series of controlling devices positioned to be controlled by perforations in one longitudinal zone of the music sheet to cause said operating magnets to be energized, and a second series of controlling devices positioned to be controlled by perforations in another longitudinal zone of the music sheet to cause said operating magnets to be energized, a source of electrical energy, connections therefrom to said series of controlling devices whereby the magneto-motive force of the operating magnets when energized through the operation of the controlling devices of the second series is greater than when energized through the operation of the controlling devices of the first series.

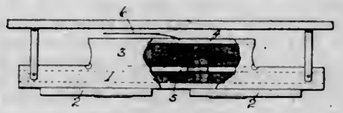
3. In a sheet controlled automatic playing apparatus for musical instruments, the combination of a series of operating magnets for operating the tone-producing devices of the musical instruments, a series of circuits for energizing said operating magnets, a series of controlling devices positioned to coöperate with perforations in one longitudinal zone of the music sheet to close said circuits, a second series of circuits for energizing said magnets, a second series of controlling devices positioned to coöperate with perforations in another longitudinal zone of the music sheet to close the circuits of said second series, and means for supplying to the circuits of the second series current of greater strength than is supplied to the circuits of the first series.

4. In a sheet controlled automatic playing apparatus for musical instruments, the combination of a series of operating magnets for operating the tone producing devices of the musical instrument, a series of circuits for energizing said operating magnets, a series of controlling devices for coöperating with the music sheet to close said circuits, a second series of circuits for energizing said operating magnets, a second series of controlling devices for coöperating with the music sheet to close the circuits of said second series, means for supplying to the circuits of the second series current of greater strength than is supplied to the circuits of the first series, a resistance device in each of said circuits, and means for varying the resistance of said resistance-devices simultaneously.

5. In a sheet-controlled automatic playing apparatus for musical instruments, the combination of a series of operating magnets, a series of circuits for energizing said magnets, a circuit-closer in each of said circuits adapted to be controlled by the music sheet, a contact member adapted to be engaged by said circuit closers, a second series of circuits for energizing said magnets, a circuit closer in each of the circuits of said second series adapted to be controlled by the music sheet, a second contact member adapted to be engaged by the circuit-closers of said second series of circuits, and means to supply the circuits of the second series with current of greater strength than is supplied to the circuits of the first series whereby one series of circuits will supply a current of higher voltage than the other.

[Claims 6 to 8 not printed in the Gazette.]

1,106,820. PLAYER-PIANO PNEUMATIC BELLOWS. JOSEPH KNAGGE, Chicago Heights, Ill., assignor to The Baldwin Company, Cincinnati, Ohio. Filed Feb. 12, 1914. Serial No. 818,193. (Cl. 84—168.)



1. In a mechanical musical instrument: a bellows having means for its expansion, thus exerting suction tension, and opposed lesser means for compression applied to the movable leaf thereof, for the purpose of modifying said suction tension.

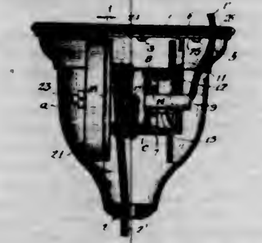
2. In a mechanical musical instrument: a bellows having interior means for its expansion, thus exerting suction tension, and opposed lesser exterior means for compression applied to the movable leaf thereof, for the purpose of modifying said suction tension.

3. In a mechanical musical instrument: a bellows having expansion springs for exerting suction tension and opposed compression springs of lesser tension for the purpose of modifying and increasing the range of variation of said suction tension.

4. In a mechanical musical instrument: a bellows having expansion springs for exerting suction tension, and opposed compression springs of lesser power of tension, applied to the movable leaf thereof, for the purpose of modifying and increasing the range of variation of said suction tension.

5. In a mechanical musical instrument, a bellows having expansion springs placed within the same for creating suction tension, and opposed compression springs of lesser tension placed in position outside the bellows and in contact with the movable wall thereof, for the purpose of modifying and increasing the range of variation of said suction tension.

1,106,821. ELECTRIC-CONDUCTOR TAKE-UP. DAVID C. LAMB, Nappanee, Ind., assignor to Lamb Bros. & Greene, Nappanee, Ind., a Corporation of Indiana. Filed Dec. 4, 1913. Serial No. 804,742. (Cl. 173—367.)



1. An electric conductor take-up having, in combination with two flexible cords each comprising a pair of insulated wires, a rotatable spool of insulating material having an apertured sleeve portion and a chamber within the same, a bracket which closes one end of said chamber and supports that end of the spool, said bracket having a body of insulating material, and electrical connections carried by said spool and said bracket, respectively; said electrical connections comprising contact springs projecting endwise within said chamber to which the bifurcated inner end of one of said cords is electrically connected, and metallic rings concentric with said spool forming crown flanges adapted to contact with the extremities of said springs respectively and electrically connected with the bifurcated inner end of the other of said cords.

2. An electric conductor take-up having, in combination with two detachable flexible cords each comprising a pair of insulated wires, a rotatable spool of insulating material having an apertured sleeve portion and a chamber within the same, a detachable bracket which normally closes one end of said chamber, and supports that end of the spool, said bracket having a body of insulating material and contact springs projecting endwise from its back to which the bifurcated inner end of one of said cords is electrically connected, and a removable spool member normally located within said chamber having a body of insulating material provided with concentric metallic rings forming crown flanges on the outer face of said member, adapted to contact with the extremities of said springs, and extended through to the back of said member, and means for electrically connecting therewith the bifurcated inner end of the other of said cords which extends outward through the aperture of said sleeve portion of the spool.

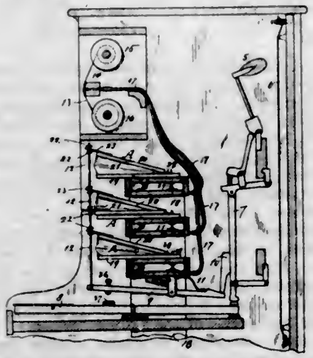
3. The combination, in an electric conductor take-up, of a rotatable spool of insulating material having an apertured sleeve portion and a chamber within the same, a detachable bracket which normally closes one end of said chamber and supports that end of the spool, said bracket having a body of insulating material and contact springs projecting endwise from its back and adapted for the attachment thereto of the respective wires of a connecting cord at said back of the bracket, a removable spool member normally located within said chamber having a body of insulating material provided with concentric metallic rings forming crown flanges on the outer face of said member adapted to contact with the extremities of said springs and extended through to the back of said member, and means for electrically connecting therewith the respective wires of another connecting cord; one of said rings being adapted for the temporary attachment thereto of means for removing and replacing said spool member.

4. The combination, in an electric conductor take-up, of a rotatable spool of insulating material having an apertured sleeve portion and a chamber within the same, a detachable bracket which normally closes one end of said chamber and supports that end of the spool, said bracket having a body of insulating material and contact springs projecting endwise from its back and adapted for the attachment thereto of the respective wires of a connecting cord at said back of the bracket, a removable spool member normally located within said chamber having a body of insulating material provided with concentric metallic rings forming crown flanges on the outer face of said member adapted to contact with the extremities of said springs and extended through to the back of said member, and means for electrically connecting therewith the respective wires of another connecting cord; one of said rings being provided with diametrically opposite holes, whereby it is adapted for the temporary attachment thereto of means for removing and replacing said spool member.

5. In combination with two detachable cords each comprising a pair of insulated wires, a cord reel and container, the former comprising a rotatable spool of insulating material having an apertured sleeve portion and a chamber within the same, a rotatable spindle having a body of insulating material fast within said spool and extending axially therethrough, a winding spring and automatic controlling means connected mechanically with said spindle, means for supporting said reel within said container, including a detachable bracket having a body of insulating material and contact springs on its back to which the respective wires of one of said cords are electrically connected, and a removable spool member normally located within said chamber having a body of insulating material provided with concentric metallic rings on its outer face adapted to contact with said springs, and extended through to the back of said member, and means for electrically connecting therewith the respective wires of the other of said cords which extends outward through the aperture of said sleeve portion of the spool.

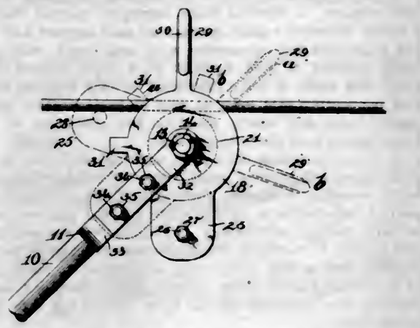
[Claim 6 not printed in the Gazette.]

1,106,822. PNEUMATIC PIANO. CLAYTON A. LAMBERT, Indian View, Ohio, assignor to The John Church Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 24, 1912. Serial No. 705,407. (Cl. 84—178.)



A pneumatic action for pneumatic pianos, comprising a collapsible element which consists of a movable flap and of a base-plate to which the flap is secured by a collapsible side, the base-plate being extended at one of its ends beyond the flap and provided with two perforations which extend through its entire thickness, one of them being located below the flap and constituting a suction port for the element, the other one being located in the extended part of the base-plate to form an air-port, a wind-chest which comprises two spaced walls one of which is perforated to form a suction-port, the perforations being equal in diameter to the air-port mentioned, this suction-port being circumferentially enlarged between inner and outer sides of the wall in which it is located to form within the thickness of said wall a valve seat, also a valve-chamber above said seat which chamber is contiguous to the outer side of the wall, there being also a duct within the thickness of this wall which extends laterally from said valve-chamber and is open on the outer side of said wall, the element being secured at its base-plate against said outer side and in a manner that the air-port in the extended part of said base-plate registers with the suction-port in the wind-chest and that the suction-port in said base-plate alines with the end of the duct below the base-plate so that this latter serves also to cover said duct, and a valve contained in the valve-chamber mentioned and movable in the space between the valve-seat therein and the under side of the extended part of the base-plate and adapted to close either the air-port in said base-plate, or the suction-port in the wind-chest, thereby controlling communication of either of these ports with the duct which leads to the element.

1,106,823. TROLLEY-GUARD. JOHN LAWTON, Irvington, N. J., assignor to The Notwal Company, Newark, N. J. Filed Apr. 10, 1912. Serial No. 689,895. (Cl. 191—78.)

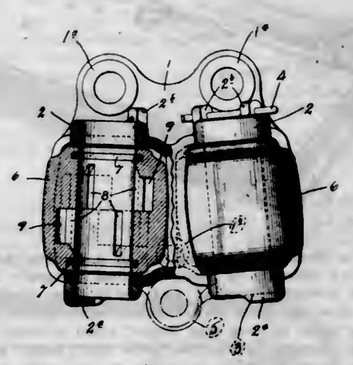


1. A trolley comprising a freely swinging guard having side plates and arms normally projecting vertically therefrom and said plates each having a weighted lower portion, a stop connecting the weighted lower portions of the side plates, the lower portions being wide so as to form guards extending above the trolley wire when the said plates are swung to cause the engagement of the stop with the trolley wire, the stop being arranged at a distance from the bottom, a trolley wheel between the side plates, and a support for the wheel and guard and constructed to permit the guard to swing freely.

2. A trolley comprising a guard consisting of side plates, the side plates having vertically projecting arms at the top and having weighted lower portions, a stop connecting the lower portions and being arranged to engage a trolley wire when the guard is swung, the weighted portions being made wide and long to extend a considerable distance to all sides of the stop, whereby when the stop engages the trolley wire, the weighted portions extend above the trolley wire and act as a guard.

1,106,824. SIDE BEARING FOR RAILWAY-CARS. ERNEST A. LE BEAU, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1912. Serial No. 689,951. (Cl. 64—64.)

1. A side bearing for railway cars comprising an axle, a support for the axle, a roller mounted on said axle and provided with two series of lubricator chambers, the chambers of one series being staggered with relation to the chambers of the other series, there being a pair of communicating openings between the inner end of each chamber with the inner ends of a pair of chambers of the opposite series, and each of said chambers having communication with the axle bore of the roller.



2. A side bearing for railway cars comprising a base, an axle supported thereby, a supporting roller loosely mounted on the axle and having a plurality of series of segmental lubricator chambers, the chambers of one series being staggered with relation to the chambers of the other series to a pair of the chambers of the other series by a pair of openings at the inner ends of said chambers and there being radially disposed longitudinally extending slots formed in the roller for establishing communication between the axle bore and said chambers.

3. A side bearing for railway cars comprising an axle, a support in which the axle is mounted, and a bearing roller mounted on said axle, said bearing roller being provided with segmental chambers relatively staggered longitudinally of the roller and communicating with one another serially so as to form a continuous irregular cavity about the axle bore of the roller, each of said chambers having communication with the axle bore by a narrow opening extending longitudinally of the roller for a distance approximately one half the bearing extent thereof and all of the narrow openings being staggered with relation to each other.

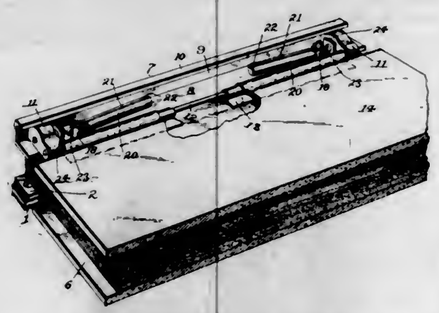
4. In a device of the class described, a base, a shaft journaled for rotation in said base, and held against lengthwise movement therein, a bearing roller loosely mounted on the shaft and provided with two series of staggered chambers adapted to contain lubricant, each chamber of each series being connected to a pair of the chambers of the opposite series by openings at the inner ends of said chambers, each chamber having communication with the axle bore of the roller by means of longitudinally disposed staggered narrow openings, and internal packing rings carried by said bearing roller near its ends.

1,106,825. LOOSE-LEAF BINDER. JOHN L. MCMILLAN, Syracuse, N. Y. Filed Nov. 9, 1910. Serial No. 591,442. (Cl. 129—13.)

1. In a binder, a binding-post comprising one or more sections adapted to be engaged with a binding plate and to extend through a clamping plate; a lever hinged to the upper end of the post; and an automatic dock to engage the lever when it is forced into its clamping position.

2. In a binder, the combination of a binding plate; a clamping plate; posts connected to the binding plate and extending through the clamping plate; a lever connected to the upper end of each post, said lever forming, when extended, a continuation of its post; and an automatic

retaining device for engaging each lever when the lever is thrown down into clamping position.



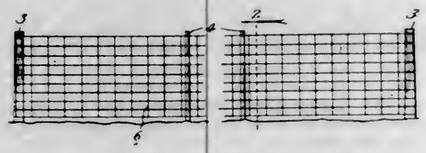
3. In a binder, the combination of a binding plate or member; a plurality of posts extending upwardly therefrom; a metallic clamping plate, said plate having in cross-section the form of a channel bar with one short side, the inner or long side thereof being provided with openings through which the posts may pass; and a clamping lever pivotally connected to the upper end of each post, said levers, when thrown down into clamping position, being housed by the clamping plate.

4. In a binder, the combination of a binding plate or member; a plurality of posts adjustable as to length extending upwardly therefrom; a metallic clamping plate, said plate having in cross-section the form of a channel-bar with one short side, the inner or long side thereof being provided with openings through which the posts may pass; and a clamping lever pivotally connected to the upper end of each post, said levers, when thrown down into clamping position, being housed by the clamping plate.

5. In a binder, the combination of a binding plate or member; a plurality of posts extending upwardly therefrom; a metallic clamping plate, said plate having in cross-section the form of a channel-bar with one short side, the inner or long side thereof being provided with openings through which the posts may pass; a clamping lever pivotally connected to the upper end of each post, said levers, when thrown down into clamping position, being housed by the clamping plate; and means carried by the clamping plate for retaining the levers in their depressed position.

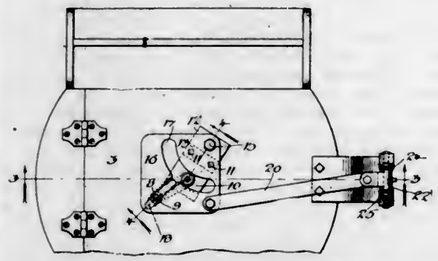
[Claims 6 to 24 not printed in the Gazette.]

1,106,826. FENCE. CHARLES LOUIS MICHOD, Chicago Heights, Ill. Filed July 17, 1913. Serial No. 779,467. (Cl. 256—1.)



A fence structure comprising rigid end-posts comparatively separated, and a plurality of resilient line-posts therebetween for supporting the fence wires, said resilient line-posts having their lower ends provided with enlarged anchoring bases below the ground level together with a portion of the resilient body thereof whereby said structure is adapted to yield intermediate its ends under lateral pressure and to return to place when such pressure is removed.

1,106,827. OPERATING DEVICE FOR WASHING-MACHINES. HANFORD C. MODLIN, Perry, Iowa, assignor to Globe Manufacturing Company, Perry, Iowa, a Corporation. Filed May 26, 1910. Serial No. 563,499. (Cl. 74—14.)



1. In an operating device for washing machines, a suitable support, a vertical shaft rotatably carried thereby, a crank on said shaft, a substantially square plate pivoted at one corner on said support and having a pin-and-slot connection with said crank, a vertically disposed lever fulcrumed to said support and a link connecting said lever to said plate at a corner whereby the operation of the lever causes said shaft to oscillate.

2. In an operating device for washing machines, a suitable support, a vertical shaft rotatably carried thereby, a crank therefor, a plate pivoted on said support and having a pin-and-slot connection with said crank, said plate being pivoted to said support at a point spaced apart from said shaft, a lever fulcrumed to said support and a link connecting said lever to said plate at a point spaced apart from said shaft, whereby the operation of said lever causes said shaft to oscillate.

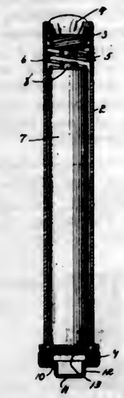
3. In an operating device for washing machines, a suitable support, a vertical shaft rotatably carried thereby, a crank therefor, a bracket secured to the top of said support, a substantially square plate pivoted at one corner to said bracket and having a pin-and-slot connection to said crank, a vertically disposed lever fulcrumed to said support and a link connecting said lever to said plate at a corner remote from to said first mentioned corner whereby the operation of the lever causes the said shaft to oscillate.

4. In an operating device for washing machines, a suitable support, a vertical bearing sleeve rotatably mounted on the top of said support, a shaft passing through said bearing sleeve and designed to rotate therewith, a substantial rectangular plate pivotally connected at one corner to the top of said support at a point spaced apart from said shaft, said plate being provided with a curved slot and a straight inclined slot meeting said curved slot at substantially right angles, a lateral arm projecting from said sleeve and provided with an upwardly projecting portion near its outer end designed to travel in said straight slot, a boss surrounding the upper end of said bearing sleeve and extending into said curved slot, a lever fulcrumed at one side of said support, and a link connecting said lever with said plate at a point spaced apart from said shaft whereby the operation of the lever causes said shaft to oscillate.

1,106,828. PORTABLE ELECTRIC LAMP. WILLIAM J. MONAGHAN, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Apr. 6, 1914. Serial No. 830,015. (Cl. 240—8.5.)

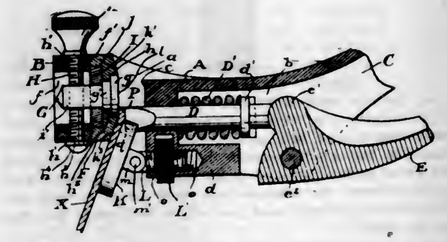
1 A portable electric lamp comprising a tubular casing adapted to contain an electric lamp at one end, a cap attached to the opposite end, said cap formed with an opening, and a metal push-button within the casing in which it is longitudinally movable, said button having a finger-piece projecting outward through the opening in said cap.

2. A portable electric lamp comprising a casing one end turned in and internally threaded, an electric lamp engaging therewith, an electric battery in said casing, a spring between the battery and casing and tending to



separate the battery from the lamp, the opposite end of the casing closed by a cap having an opening, and a push button located within the casing and projecting outward through said cap and furnishing a support for the battery.

1,106,829. SAW-SET. WILLIAM C. MORRILL, New York, N. Y. Filed May 31, 1912. Serial No. 700,749. (Cl. 76—69.)



1. In a saw set, the combination of a rotatable anvil provided with a saw-tooth seat and with a plurality of saw-blade seats inclined at variable angles to said saw-tooth seat, a positioning screw, a plunger in operative relation to the saw-tooth seat of said anvil, and an angle gage member pivoted to said screw, said member being free to adjust itself on the pivot so as to bring an exposed face thereof into parallel relation to either of the inclined saw-blade seats of the anvil.

2. In a saw set, the combination of an anvil provided with a plurality of saw-blade seats which are at different angles to a saw-tooth seat thereon, a plunger, said anvil being rotatable to bring either of its saw-blade seats into position for use, and an angle gage member pivoted adjacent to that face of the anvil having the saw-blade seats, said angle gage member having a flat face adapted, by the movement of the member on the pivot, to be brought into parallel relation to either of said saw-blade seats.

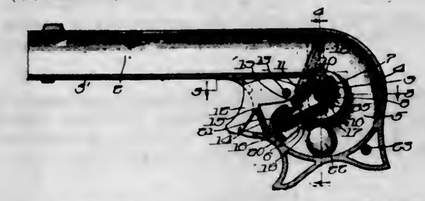
3. In a saw set, the combination of an anvil provided with a seat against which a saw tooth is adapted to be forced, said anvil having, also, a plurality of saw blade seats which are inclined at different angles to the plane of the first named seat, means for rotatably mounting the anvil, a plunger coöperating with said anvil, and means for reciprocating said anvil.

4. In a saw set, the combination with a plunger, of a rotatable anvil, said anvil being provided with a seat against which a saw tooth may be forced by the operation of the plunger and provided, also, with a plurality of inclined seats, the angles of which vary with relation to the first named seat, means for rotatably supporting the anvil whereby either of said inclined seats may be brought into operative positions relative to the plunger, and means for imparting reciprocating movement to the anvil in a direction across the face of the plunger.

5. In a saw set, the combination of a frame, a plunger, an anvil-carrying spindle supported in said frame for movement relative to the plunger, an anvil rotatably mounted on said spindle, a split spring member having frictional contact with the anvil, and means for moving the spindle and the anvil to different operative positions relative to the plunger.

[Claims 6 to 16 not printed in the Gazette.]

1,106,830. MARBLE-SHOOTER. NELS G. NELSON, Rockford, Ill., assignor of one-half to Johannes G. Anderson. Filed Oct. 25, 1913. Serial No. 797,177. (Cl. 124—12.)



1. In a marble shooter, the combination with a barrel and stock or handle, of a passage or bore having a semicircular rear portion and an ejector or hammer revolubly mounted and confined within said rear portion and occupying a cocked position in advance of its pivot whereby a missile lodged against said ejector or hammer is supported against falling out when the barrel is pointed downward in a vertical position.

2. The combination with a marble shooter having a bore terminating in the stock in the form of a return bend, of a hammer or ejector, and a spring for actuating said hammer or ejector, said spring being both bent and stretched when said ejector is cocked.

3. In a shooter of the class described, a bore having a semicircular rear portion, a hammer or ejector revolving in said portion and occupying a cocked position forwardly of its axis, and a coiled spring for actuating said hammer or ejector, said spring being bent about the axis of said ejector or hammer and also tensioned by lengthening it.

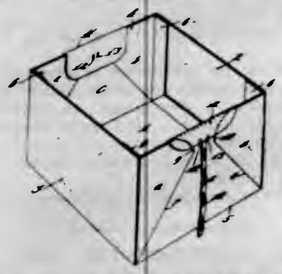
4. In a marble shooter, the combination with the barrel and stock, of gravity means for retaining a missile against displacement when the barrel is pointed downward, a hammer or ejector entirely concealed within said shooter, and cocking means for cocking said hammer within said stock, said cocking means adapted to remain stationary after said hammer or ejector has been liberated by the trigger to discharge said shooter.

1,106,831. PAPER BOX. THEODORE LANBACH NEUMANN, Dayton, Ohio, assignor to The Dayton Paper Novelty Company, Dayton, Ohio, a Corporation of Ohio. Filed Feb. 7, 1911. Serial No. 607,210. (Cl. 229—34.)

1. A collapsible box having two opposing non-scored sides, two opposing scored and slitted sides, each subdivided by two diagonal scored lines extending from the base corners toward each other terminating at points short of their intersection and continuing with diverging slitted lines to the upper edge, said slits determining the contiguity of the folds when overlapping the end divisions of a side upon the exterior surface of the intermediate division, and provide clearance for the reception of a non-scored side.

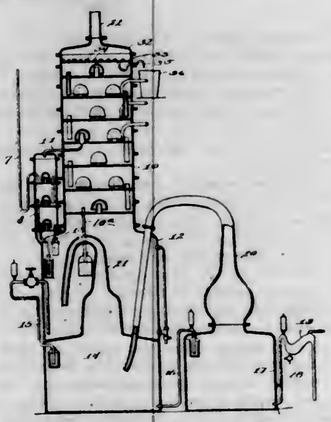
2. A collapsible box having two opposing non-scored sides, two opposing scored and slitted sides each subdivided

by two diagonal scored lines extending from the base corners toward each other terminating at points short of their intersection and continuing with diverging slitted lines to the side upper edge, said slits determining the contiguity of the folds when overlapping the end divisions



of a side upon the exterior surface of the intermediate division and provide clearance for the reception of a non-scored side, and a marginal strip for each scored side overlapping both faces thereof for maintaining the rigidity of the sides when non-folded.

1,106,832. CONTINUOUS DISTILLING APPARATUS. ANTONIO LLODRA OBRADOR, Manila, Philippine Islands. Filed Aug. 31, 1911, Serial No. 647,054. Renewed Apr. 29, 1914. Serial No. 835,333. (Cl. 195—13.)

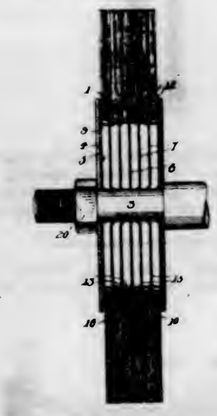


1. In a continuous distilling apparatus the combination with a main distilling column and a series of boilers connected together and ultimately passing their vapors to the main column of an auxiliary distilling column arranged adjacent the main column and in communication with the boilers to receive vapors therefrom and also in communication with the main column to pass vapors thereto, and a mash conducting pipe communicating with the auxiliary column to deliver mash thereto, the said auxiliary column passing the mash delivered thereto by the said pipe to the boilers.

2. In a continuous distilling apparatus, the combination with a main distilling column and a series of boilers connected together and ultimately passing their vapors to the main column of an auxiliary distilling column arranged adjacent the main column and communicating at its lower end with the boilers to receive vapors therefrom, the auxiliary column embodying a plurality of superposed communicating chambers through which the vapors pass and in which condensates are recovered and returned to the boiler, a connection between the uppermost of said chambers and the main column to pass vapors to the latter, and a mash conducting pipe communicating with the auxiliary column to deliver mash thereto the said auxiliary column passing the mash delivered thereto to the boilers.

3. In a distilling apparatus, a series of boilers and a distilling column through which the vapors delivered by the boilers pass, the column embodying a plurality of superposed chambers in which condensates are recovered and having at its upper end a supplemental chamber, the base of which consists of a plate having a comparatively large number of perforations and having upwardly projecting flanges, circumscribing the perforations and defining a multitude of communicating canals, and a pipe connected to the plate whereby the oils and other base matters collecting thereon may be drawn off.

1,106,833. BUFFING OR POLISHING WHEEL. WILLIAM A. PAINTER, Pittsburgh, Pa., assignor of one-half to Patrick H. Bergin, Pittsburgh, Pa. Filed Nov. 12, 1908. Serial No. 462,204. (Cl. 51—1.)



1. The combination with clamping plates, of a buffing or polishing wheel of the class described comprising a separable rim formed of ring-sections of buffing or polishing material, and a wheel center formed of flexible interlocking sheet metal plates or disks with their peripheries entered between the ring sections, said plates formed with ring-gripping means, and means for centering the rings on the disks.

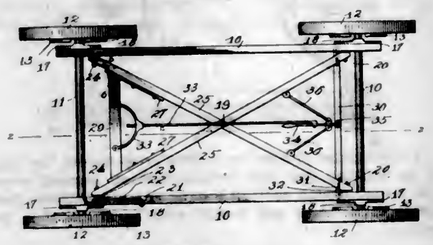
2. The combination with clamping plates, of a buffing or polishing wheel of the class described comprising a separable rim formed of ring-sections of buffing or polishing material, and a wheel center formed of sheet metal plates or disks having central cupped openings and ring-section gripping-means, and means for centering the rings on the disks.

3. A buffing or polishing wheel of the class described having its rim formed of ring-sections of buffing or polish ing material, and its center of a series of sheet metal disks comprising two outer disks provided with means for gripping the ring-sections, said disks provided with central cupped openings, intermediate interlocking disks, said intermediate disks provided with means for gripping a ring-section, and means for centering the ring-sections on the disks.

4. A buffing or polishing wheel of the class described comprising a separable rim formed of ring-sections of buffing or polishing material, and a wheel center including a series of sheet metal disks comprising two outer disks each provided with gripping means, and intermediate disks having gripping means and centering lugs.

1,106,834. VEHICLE BRAKE APPLIANCE. COLOMAN PAPAI and JOHN PETRI, Elberta, Ala. Filed Mar. 10, 1914. Serial No. 823,692. (Cl. 21—8.)

1. A device of the class described comprising vehicle axles, ground wheels at the ends of said axles, locking disks carried by the inner faces of said wheels, side bars slidably-mounted upon said axles between said wheels, clutching disks carried by said bars concentric with said axles, diagonally-arranged rods having their ends slidably-mounted adjacent the ends of said bars, a slide bar carried between the rear portions of said rods, and means for shifting said slide bar for engaging said locking disks with said clutching disks.

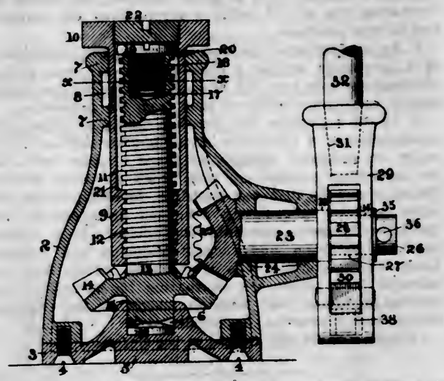


2. A device of the class described comprising vehicle axles, ground wheels at the ends of said axles, locking disks carried by the inner faces of said wheels, side bars slidably-mounted upon said axles between said wheels, clutching disks carried by said bars concentric with said axles, bolts carried by the forward ends of said bars, racks carried by the rear ends of said bars, diagonally-arranged rods positioned between said bars and having their forward ends laterally movable upon said bolts and their rear ends longitudinally slidable upon said racks, and means adapted for separating the adjacent ends of said rods for interengaging said locking disk and clutching disk.

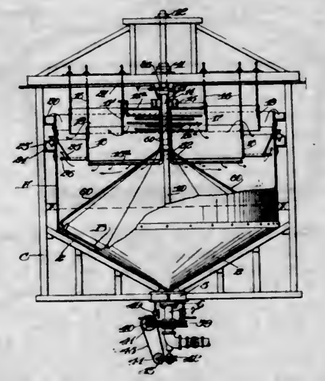
3. A device of the class described comprising vehicle axles, ground wheels at the ends of said axles, locking disks carried by the inner faces of said wheels, side bars slidably-mounted upon said axles between said wheels, clutching disks carried by said bars concentric with said axles, bolts carried by the forward ends of said bars, racks carried by the rear ends of said bars, diagonally-arranged rods positioned between said bars and having their forward ends laterally movable upon said bolts and their rear ends longitudinally slidable upon said racks, the rear ends of said rods having longitudinal slots therein, a slide bar movably engaging within said slots, a brace slidably pinned beneath the forward ends of said rods, an actuating lever pivoted to said brace, pivoted links between said lever and the adjacent portions of said rods, and an adjustable link pivoted to said lever and secured to said slide bar, substantially as described.

1,106,835. SCREW-JACK. FRANKLIN M. PATTERSON, Bayonne, N. J. Filed Sept. 14, 1909. Serial No. 517,558. (Cl. 57—44.)

In a screw jack, the combination of a body having a polygonal-shaped guide at the top, a tubular plunger outwardly flanged at its top and having its outer part polygonal-shaped in cross section to fit the guide of the body and further having its interior formed with a tubular part of large diameter opening through the top and terminating at the bottom in a shoulder and with a tubular part of relatively small diameter below the shoulder provided with screw threads, a vertical screw engaging the screw threads at the lower end of the plunger and journaled at the bottom in the body of the jack, a flange detachably secured to the top of the screw and overhanging it to engage the shoulder of the plunger when it rises to limit its upward movement, a removable plug secured in the upper end of the plunger and adapted to come into contact with the flanged part of the top of the screw to limit the downward movement of the plunger before the flange portion thereof reaches the top of the body part, and by the removal of which plug access may be had for removing the detachable flange from the top of the screw when necessary to remove the plunger, and means for rotating the screw and holding it against longitudinal movement in the body.



1,106,836. PROCESS AND APPARATUS FOR THE EXTRACTION OF PREGNANT CYANID SOLUTIONS FROM PULP. EDSON S. PETTIS, San Francisco, Cal. Filed Aug. 12, 1913. Serial No. 784,364. (Cl. 75—18.)



1. An apparatus for separating pregnant solution from solids contained therein, consisting in combination of a tank, means for introducing and distributing pulp into the top portion of the tank, means for simultaneously introducing into the tank a counter underflow of barren solution, yet allowing the solids to gravitate continuously and thicken in the solution underflow, and means for recovering the pregnant solution, mixed solution, and thickened pulp separately, substantially as described.

2. An apparatus for treating solids in solution, which consists in combination of a settling receptacle, a centrally disposed submerged vertical open ended cylinder, into which the pulp discharges, concentric cylindrical adjustable partially submerged baffles, means within the receptacle and below the baffles for introducing an upward flow of barren solution counter to the downward inflow of pregnant solution and solids in suspension, and means for recovering the settled solids separate from the pregnant and barren solutions.

3. An apparatus for treating pregnant cyanid solutions, which consists in the combination of a settling receptacle, a centrally disposed, partially submerged, vertical open ended cylinder into which the pregnant solution discharges, concentric cylindrical adjustable submerged baf-

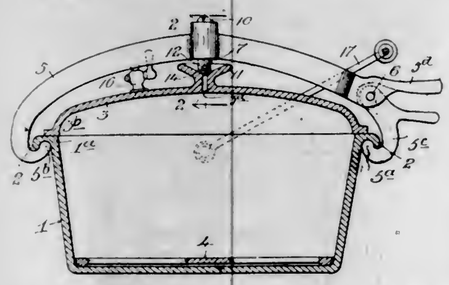
fles, means within the receptacle and below the baffles for introducing an upward flow of barren solution counter to the downward inflow of pregnant solution, and means for recovering the settled solids separate from the pregnant and barren solutions.

4. In an apparatus for treating pulps, the combination of a receptacle having a filter bottom, an open bottom chamber movable over the filter, having means for continuously removing the filtered pulp from the receptacle.

5. In an apparatus for treating cyanid solutions, the combination of a receptacle having a filter bottom, a plurality of separated radially arranged compartments under said filter bottom and into which the filter directly drains, a radially disposed, traveling, revolving screw conveyer working immediately over the filter bottom and operative to move accumulations thereon to a central point of discharge, and vacuum-producing and washing means on the opposite side of the filter bottom from the conveyer, and means for alternating the action of said vacuum-producing and washing means as the conveyer travels over successive compartments.

[Claims 6 to 25 not printed in the Gazette.]

1,106,837. COOKING UTENSIL. HERMAN G. PFAEHLER, New York, N. Y., and CHARLES J. MARKS, New Brunswick, N. J. Filed May 24, 1913. Serial No. 769,552. (Cl. 53—8.)



1. A vessel having a lid, combined with a yoke having resilient means for retaining the lid upon the vessel, and means for detachably securing the yoke to the vessel over the lid, said yoke having a movable finger piece to connect with the vessel, and having an extension above the finger piece to aid in operating the latter.

2. A kettle provided with a flange, a lid having an aperture, and a yoke to fit over the lid and having means to engage said flange, said yoke carrying a spring-acting movable member adapted to resiliently keep the lid closed, said member having a valve to normally close the aperture in the lid when the yoke is attached to the flange and over the lid.

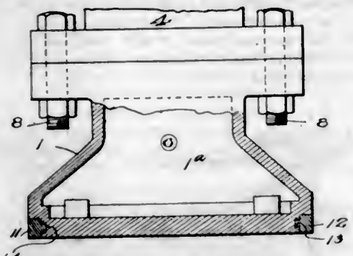
3. A kettle having a lid and provided with a flange, a yoke to fit over the lid and having means to engage said flange, said yoke having a plunger, a spring between the yoke and plunger to keep the lid closed, said plunger having a valve registering with a passage in the lid.

4. A kettle having a lid and provided with a flange, a yoke to fit over the lid and having means to engage said flange, said yoke having a slidable plunger, a spring coacting with said yoke and plunger, said plunger having a bore opening at the end of the plunger and an opening communicating with said bore, said bore registering with a passage in the lid, and a spring pressed valve in said bore normally closing said end opening of said bore.

5. A kettle having a lid and provided with a flange, combined with a yoke having hook-like end portions to engage said flange, said yoke having a bore, a plunger slidable in said bore, an extension passing through said bore and connected with said plunger, and a spring within said bore pressing against said plunger, the plunger having a valve, the lid having a passage registering with the valve.

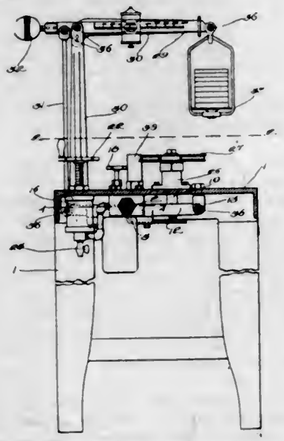
[Claims 6 to 8 not printed in the Gazette.]

1,106,838. BRICK-PRESS. CHARLES C. PFORDT, Indiana, Pa. Filed Oct. 5, 1912. Serial No. 724,080. (Cl. 25—102.)



A rectangular plunger for a brick press having the edges of its working face each formed with an angular recess and a countersunk dovetail groove, and a detachable liner fitting each recess and formed with a rib locked in the groove.

1,106,839. PRESSURE-WEIGHING MACHINE. ARTHUR P. PHILLIPS, Haverhill, Mass., assignor to Crosby Steam Gage & Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 11, 1912. Serial No. 682,926. (Cl. 73—51.)

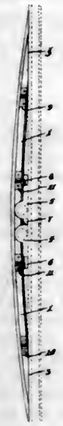


1. A pressure-weighing machine comprising, in combination, a main support; a pressure chamber mounted thereon; a reservoir chamber mounted on said support; means forming a valve controlled passage connecting said chambers; said valve; threaded plungers mounted in said chambers; wheels for operating said plungers; a lever fulcrumed on said support; a scale beam mounted on said support; a link connecting said lever with said scale beam; a cylinder mounted on gimbals disposed in said lever; a piston mounted in said cylinder; a forked shaft mounted on said support and engaging said piston; means for rotating said shaft; a pipe connecting said cylinder with said pressure chamber; and a tubular support leading into said pressure chamber.

2. A pressure-weighing machine comprising, in combination, a pressure chamber, a reservoir chamber; means forming a valve controlled passage connecting said chambers; said valve; plungers mounted in said chambers; means for operating said plungers; a tubular support leading into said pressure chamber; a movable cylinder; a pipe connecting said cylinder with said pressure chamber; a piston mounted in said cylinder and having a limited movement therein; a scale; and intermediate mechanism actuated by said cylinder and actuating said scale.

3. A pressure-weighing machine comprising, in combination, a pressure chamber; a reservoir chamber; means forming a valve controlled passage connecting said chambers; said valve; plungers mounted in said chambers; means for operating said plungers; a tubular support leading into said pressure chamber; a scale; and intermediate mechanism adapted to be actuated by fluid under pressure in said pressure chamber and to actuate said scale.

1,106,840. HOSE-PROTECTOR. JOSEPH PICHÉ, Steelton, Ontario, Canada. Filed Oct. 17, 1913. Serial No. 795,812. (Cl. 104—7.)



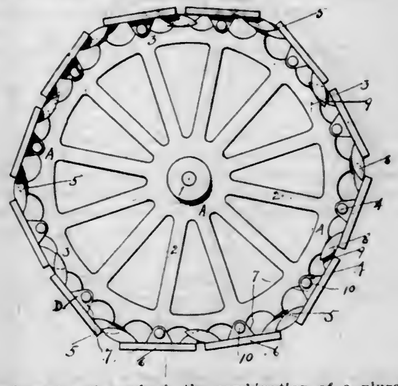
1. In a device of the class described, a pair of arched rails forming bridges under which a hose may pass and adapted to be positioned on top of the ordinary railway rails, foldable distancing rods coupling said arched rails and stay rods coupling said rails adjacent to their ends, each of said stay rods having a universal joint to an arched rail at one end and clutch means of engagement with the other arched rail at the opposite end.

2. In a device of the class described, a pair of arched rails forming hose bridges and adapted to be positioned on the ordinary railway rails, stay rods coupling said arched rails, means for hinging each of said stay rods to an arched rail at one end to permit of horizontal and vertical swinging of said rods, a T-socket carried by the other arched rail for engagement by a T-head of the other end of each of said stay rods and a sliding bolt carried by each of said T-sockets for engagement with said T-head for locking purposes.

3. In a device of the class described, a pair of arched rails adapted to be positioned in alinement with the railway rails and forming bridges under which a hose can pass, supporting blocks rigidly secured to the underside of said arched rails near their middle portions, brackets extending laterally inward of said arched rails, a pair of rods extending between each pair of said brackets and hinged together and at their ends hinged to said brackets, a second pair of brackets oppositely disposed, one on each of said arched rails and extending inwardly, a stay rod between said second pair of brackets, a hinge knuckle vertically pivoted to one end of said stay rod and horizontally pivoted to one of said second pair of brackets, clutch means for locking the other end of said stay rod to the other of said second pair of brackets and an abutment foot depending from the outer end of said hinge knuckle and adapted to abut a railway rail when said stay rod is in its locked position.

1,106,841. TRACTION-WHEEL. JAMES PORTEOUS, Fresno, Cal. Filed Mar. 17, 1914. Serial No. 825,233. (Cl. 21—150.)

1. In a traction wheel, the combination of a plurality of bumpers equidistant apart on the periphery thereof, plates having a base the approximate length of the distance between the centers of contiguous bumpers, a pivotal connection joining each of such plates to the rim of such wheel between the bumpers, and adapted to permit such plate to have a rocking motion and for either end to rest on one of such bumpers, a wing extension on each end of such plate on the upper side thereof having a curved under surface which rests on the top of the plate of the adjoining shoe, adapted to force the adjacent ends of adjoining shoes to their common bumper.



2. In a traction wheel, the combination of a plurality of bumpers equidistant apart on the periphery thereof, plates having a base the approximate length of the distance between the centers of contiguous bumpers, a pivotal connection joining each of such plates to the rim of such wheel between the bumpers, and adapted to permit such plate to have a rocking motion and for either end to rest on one of such bumpers, two parallel wing extensions on one end on the upper side of such plate spaced to permit such bumpers to pass between them and two parallel wing extensions on the other end on the upper side of such plate spaced to permit the wings on the adjacent end of the adjoining plate to pass between them, such wings having a curved under surface and adapted to slide on the top of the base of the adjacent end of the adjoining plate, and to draw such adjacent ends of the adjoining plates together to rest on a common bumper.

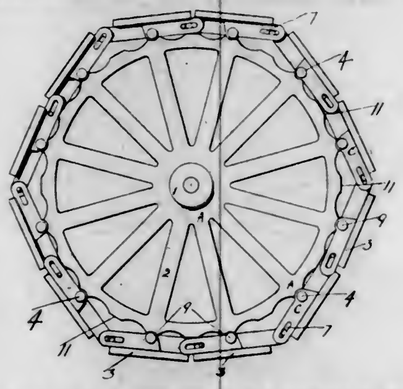
3. In a traction wheel, the combination of a plurality of bumpers on the periphery of such wheel spaced equidistant apart, plates rockingly pivoted to the rim of such wheel midway between such bumpers, wing extensions on each end of such plates having a curved under surface and adapted to ride on the adjacent end of the adjoining plate such curve being adapted to draw the adjacent ends of adjoining plates to a common bumper as such wheel rolls in either direction over such plates, all substantially as described.

1,106,842. TRACTION-WHEEL. JAMES PORTEOUS, Fresno, Cal. Filed Mar. 17, 1914. Serial No. 825,234. (Cl. 21—150.)

1. In a wheel, the combination of a plurality of bumpers equidistant apart on the periphery thereof, a plurality of plates equal to the number of such bumpers rockingly pivoted at the approximate lateral center thereof to the rim of the wheel, midway between contiguous bumpers, and arranged so the adjoining ends of contiguous bumpers can rest on a common bumper, slotted extensions on the upper side of such plates at one end thereof, slidingly pivoted to the adjoining shoe and adapted to actuate the plate adjoining the plate upon which the wheel rests, and in the direction in which such wheel is moving, to a common plane as such wheel rotates.

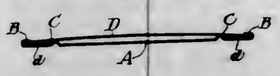
2. In a wheel the combination of a plurality of bumpers 11 on the periphery thereof equi-distant apart, a plurality of plates corresponding with the number of bump-

ers, each plate constructed with a base 3, the approximate length of the periphery of the wheel between the centers of two contiguous bumpers, on the top of said base two parallel projections with lateral slots 7 on the sides and a rear extension 6 which is slidably pivoted to the next adjoining plate, an upward extension 8 carrying pivotal bearings through which said bearings the plate is pivoted to the rim of the wheel midway between said bumpers, all substantially as described.



3. In a wheel, the combination of a plurality of bumpers equidistant apart on the periphery thereof, plates with slotted extensions on the upper side slidingly pivoted to the adjoining plates, and adapted to draw the adjacent end of the adjoining plate to a common bumper as the wheel rolls over such connected plates, whether such wheel is rotating forward or backward, all substantially as described.

1,106,843. ADJUSTABLE INDICATOR. JAMES H. RAND and JAMES H. RAND, Jr., North Tonawanda, N. Y. Filed Apr. 29, 1914. Serial No. 835,088. (Cl. 40—63.)



1. An adjustable indicator comprising a frame having flanges forming inwardly facing guide channels, and a series of indicator strips each of which is folded over upon itself at both ends, the folded portions being removably held in said guide channels and coöperating with said flanges to prevent said strips from slipping over one another.

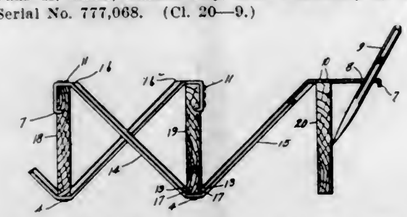
2. An adjustable indicator comprising a frame having flanges forming inwardly facing guide channels and also having a pair of lengthwise extending ribs arranged between and parallel to said guide channels, and a series of indicator strips each of which is folded back upon itself at both ends, the folded portions being held in said guide channels, and said lengthwise extending ribs coöperating with the ends of the folds of the strips to lock the strips in the frame.

1,106,844. METAL BRIDGING FOR FLOOR-JOIST. FRED H. REAM, Lincoln, Nebr. Filed Feb. 27, 1913. Serial No. 751,078. (Cl. 20—9.)



In a joist bridging, a metal bridge member consisting of a body-member having a flat-portion located intermediate its length and having an upwardly-extending limb outwardly from the opposite sides of said flat-portion, the terminal part of each of said limbs provided with an outwardly-extending lug having a plurality of holes apertured therein adapted for the entry of fastening devices, and a metal retaining-member secured on the flat portion of the body-member, said retaining-member consisting of an oblong plate formed with prongs extending upwardly from its opposite side edges and having their terminal points bent inwardly, adapted for clutching wood floor-joist to retain the body-member in place.

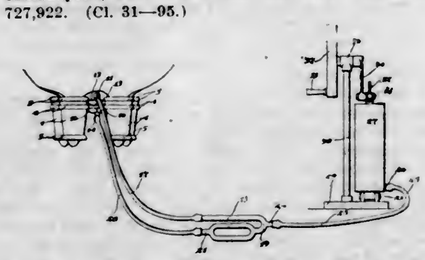
1,106,845. METAL BRIDGING FOR FLOOR-JOIST. FRED H. REAM, Kansas City, Mo. Filed July 2, 1913. Serial No. 777,068. (Cl. 20—9.)



1. In a joist bridging, a metal bridge member consisting of a strip of metal formed with an upwardly extending arm outwardly of each side of the middle of the strip, each of said arms being provided longitudinally with a triangular shaped rib having its opposite ends beveled, the lower beveled end of each rib being provided integrally with a pointed prong extending outwardly substantially at right angles to said end of the rib.

2. In a joist bridging, a metal bridge member consisting of a strip of metal formed with an upwardly extending arm outwardly of each side of the middle of the strip, each of said arms being provided longitudinally with a triangular shaped rib having its opposite ends beveled, the lower beveled end of each rib being provided integrally with a pointed prong extending outwardly substantially at right angles to said end of the rib, in combination with a pointed prong integral with each of the terminal ends of the bridge members.

1,106,846. MILKING APPARATUS. OTTO G. RIESKE, Beaver Dam, Wis., assignor to Albert J. Euchenhofner, Indianapolis, Ind. Filed Oct. 26, 1912. Serial No. 727,922. (Cl. 31—95.)



1. In a milking apparatus, the combination with a teat cup having elastic upper and lower sections, of a pulsator, independent connections between said pulsator and the two elastic elements of said teat cup, and reversely acting yieldingly seated check valves in branches of the connection to one of said elastic sections, operative to cause contractions of the elastic sections upon the nipple, at different times.

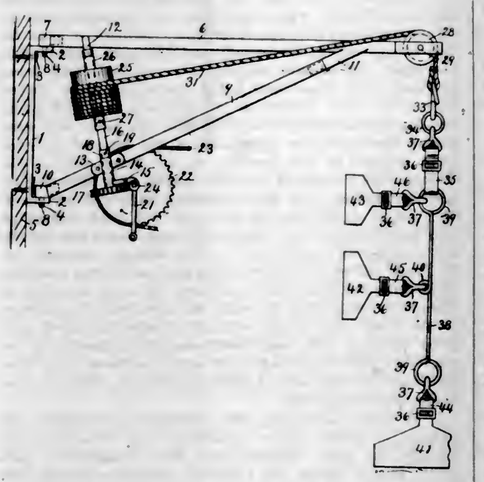
2. In a milking apparatus, the combination with a teat cup having elastic upper and lower sections, of a pulsator, independent connections between said pulsator and the two elastic elements of said teat cup and reversely acting yieldingly seated check valves in branches of the connection to one of said elastic sections, operative to cause contractions of the elastic sections upon the nipple at different times, the contraction of the upper elastic section being in advance of the contraction of the lower elastic section, substantially as described.

3. In a milking apparatus, the combination with a plurality of teat cups having elastic inner members, of a pulsator comprising a cylinder and a piston, conduits connecting said cylinder and the several teat cups, and means for reciprocating one of the elements of said pulsator, said means including a yielding element arranged to produce a predetermined maximum compression regardless of the number of teat cups which may be in action.

4. A teat cup comprising a rigid metallic outer casing having internal channels at its ends and intermediate portion, and a rubber tube within said casing, and retaining rings pressing the upper end and intermediate portion of said rubber tube into the internal channels of said casing, thereby forming upper and lower chambers between said casing and rubber tube, and the said casing having ports opening into the said upper and lower chambers.

5. A teat cup comprising an outer casing and an elastic inner tube, the said elastic inner tube having air tight connections to the upper and lower ends and intermediate portion of said casing, and the said casing having ports opening into the upper and lower chambers thus formed between said casing and said tube, the rubber tube having walls that decrease in thickness from its lower end toward its intermediate portion, and which also decrease in thickness in a direction from its intermediate toward its upper end portion, substantially as described.

1,106,847. INVALID-LIFTING DEVICE. FRANCIS S. ROOT, Springfield, Mass. Filed Apr. 13, 1912. Serial No. 690,470. (Cl. 212—61.)

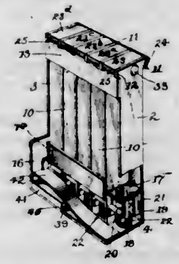


1. The combination, in an invalid-lifting device, of a supporting bracket, an arm pivotally connected with said bracket and provided at its outer terminal with a pulley, a brace rigidly attached to said arm and also pivotally connected with said bracket, bearing members carried by said arm and brace, an approximately upright shaft and drum supported by said bearing members, said shaft and drum being rotatably connected, rotatable means for said shaft, and a flexible member, for a sling passing from said drum over said pulley.

2. The combination, in an invalid-lifting device, of a supporting bracket, an arm pivotally connected with said bracket and provided with a downwardly projecting member and with a pulley, a brace rigidly attached to said arm and also pivotally connected with said bracket, an approximately upright sleeve provided with a bracket, said sleeve being rigidly attached to said brace, an approximately upright shaft supported in said sleeve and carrying a gear, a driving member for said gear, said driving member being journaled in said bracket, means to rotate said driving member, a drum supported by said projecting member and shaft and coupled to the latter, and a flexible member, for a sling passing over said pulley and having one end attached to said drum.

3. The combination, in an invalid-lifting device, of a supporting bracket having arms, a tubular arm and rigidly-attached tubular brace both provided with heads pivotally connected with said bracket arms, said tubular arm having a flattened and bent part at its outer terminal and also having a downwardly projecting member, a pulley mounted in the space thus provided, an approximately upright sleeve provided with a bracket, said sleeve being rigidly attached to said brace, an approximately upright shaft supported in said sleeve and carrying a gear, a driving member for said gear, said driving member being journaled in said bracket, means to rotate said driving member, a drum supported by said projecting member and shaft and coupled to the latter, and a flexible member, for a sling passing over said pulley and fastened to said drum.

1,106,848. VENDING-MACHINE. ALFRED W. ROOVERS, Brooklyn, N. Y. Filed July 11, 1911. Serial No. 637,874. (Cl. 211—8.)



1. In a vending apparatus, the combination of a plurality of receiving compartments adapted to hold merchandise to be vended; a closure for each compartment; a latch for each closure; a device for holding said latches closed and successively releasing the same; and means for actuating said device.

2. In a vending apparatus, the combination of a plurality of receiving compartments adapted to hold packages; a closure for each compartment; an ejector mechanism located in each compartment; a latch for each closure; and a device for holding said latches closed and successively releasing the same.

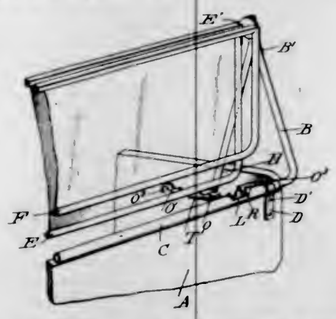
3. In a vending machine, the combination of a plurality of compartments each adapted to contain merchandise to be vended; a closure for each compartment; a latch for each closure; and a latch-holding and releasing device having a step-by-step movement and adapted at each step to release a latch.

4. In a vending machine, the combination of a plurality of compartments each adapted to contain merchandise to be vended; a closure for each compartment; a latch for each closure; a latch-holding and releasing device adapted to hold the latches in locking engagement and to successively release the latches; means for imparting a step-by-step releasing movement to said device; and means for normally preventing a retrograde movement of said device.

5. In a vending machine, the combination of a plurality of compartments each adapted to contain merchandise to be vended; a closure for each compartment; a spring latch for each compartment; and a latch-holding and releasing device having a step-by-step movement adapted to hold the latches in place and to release the same one at a time.

[Claims 6 to 11 not printed in the Gazette.]

1,106,849. VENTILATING DEVICE FOR WINDSHIELDS. GEORGE M. SCOTT, McConnelsville, Ohio. Filed Aug. 5, 1913. Serial No. 783,215. (Cl. 21—148.)



1. A ventilating device for windshields of automobiles comprising a yoke adapted to be fastened to the dashboard of a vehicle, a swinging wind shield pivotally mounted upon the yoke, a pivotal spring-pressed member mounted upon said yoke and having an upwardly curved projector end adapted to contact with and cause the shield to move as the latter is tilted, the latter being provided with a series of scallops upon its upper end, a spring adapted to hold the member yieldingly against the lower swinging edge of the shield and having a handle at one end, as set forth.

2. A ventilating device for wind shields of automobiles comprising a yoke adapted to be fastened to the dashboard of a vehicle, a swinging wind shield pivotally mounted upon the yoke, said yoke having a transversely disposed portion which is recessed, a slotted plate fastened in said recess, a pivotal member having a projector positioned within the slot of said member and adapted to engage and impart the initial swinging movement to the shield as the member is tilted, and a spring for holding the member yieldingly against the swinging edge of the shield, as set forth.

1,106,850. DEEP-WELL PUMP. JOHN L. SEBASTIAN, Salt Lake City, Utah. Filed Dec. 7, 1911, Serial No. 664,330. Renewed Jan. 14, 1914. Serial No. 812,157. (Cl. 103—84.)



1. In a deep well pump, the combination of exterior and interior cylinders, webs connecting said cylinders and dividing the space between them into chambers, a head fitting snugly within the exterior cylinder and connected to the upper end of said interior cylinder, and having apertures registering respectively with the interior cylinder and the chambers, a discharge pipe connected with the interior cylinder, a jet pipe communicating with the discharge pipe above said interior cylinder, pipes connected with said chambers for supplying compressed air thereto and exhausting therefrom, a valve casing connected to the lower end of the interior cylinder and having openings communicating with said chambers, a valve adapted to alternately close said openings, an inlet casing connected to the lower end of the exterior cylinder having a partition forming with said casing compartments respectively communicating with said chambers, said compartments having inlet openings, and non-return valves closing said openings.

2. In a deep well pump, the combination of exterior and interior cylinders, webs connecting said cylinders and dividing the space between them into chambers, a head fitting snugly within the exterior cylinder and connected to the upper end of said interior cylinder, said head being provided with upper and lower transverse webs spaced from each other to form a jet chamber, said webs having apertures, the upper end of the interior cylinder being secured in the aperture in the lower web, a discharge pipe connected to said upper web through an aperture therein, a jet pipe connected with said jet chamber through an aperture in the upper web, pipes connected with said chambers for supplying compressed air thereto and exhausting therefrom, a valve casing connected to the lower end of the interior cylinder and having openings communicating with said chambers, a valve adapted to alternately close said openings, an inlet casing connected to the lower end of the exterior cylinder having a partition forming with said inlet casing compartments respectively communicating with said chambers, said compartments having inlet openings, and non-return valves closing said openings.

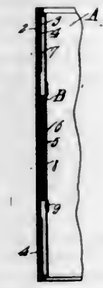
3. In a deep well pump, the combination of exterior and interior cylinders, webs connecting said cylinders and dividing the space between them into chambers, a head fitting snugly within the exterior cylinder and connected to the upper end of said interior cylinder, said head being provided with upper and lower transverse webs spaced from each other to form a jet chamber, and with parts forming tongue-and-groove joints with the webs, said webs having apertures, the upper end of the interior cylinder being secured in the aperture in the lower web, a discharge pipe connected to said upper web through an aperture therein, a jet pipe connected with said jet chamber through an aperture in the upper web, pipes connected with said chambers for supplying compressed air thereto and exhausting therefrom, a valve casing connected to the lower end of the interior cylinder and having openings communicating with said chambers, a valve adapted to alternately close said openings, an inlet casing connected to the lower end of the exterior cylinder having a partition forming with said inlet casing, compartments respectively communicating with said chambers, said compartments having inlet openings, and non-return valves closing said openings.

4. In a deep well pump, the combination of exterior and interior cylinders, webs connecting said cylinders and dividing the space between them into chambers, a head fitting snugly within the exterior cylinder and connected to the upper end of said interior cylinder, said head being provided with upper and lower transverse webs spaced from each other to form a jet chamber, said webs having apertures, the upper end of the interior cylinder being secured in the aperture in the lower web, a discharge pipe connected to said upper web through an aperture therein, a jet pipe connected with said jet chamber through an aperture in the upper web, pipes connected with said chambers for supplying compressed air thereto and exhausting therefrom, a valve casing connected to the lower end of the interior cylinder and having openings communicating with said chambers, a valve adapted to alternately close said openings, said head and casing making air tight joints with said webs, an inlet casing connected to the lower end of the exterior cylinder having a partition forming with said inlet casing compartments respectively communicating with said chambers, said partition making an air tight joint with said valve casing, said compartments having inlet openings, and non-return valves closing said openings.

5. In a deep well pump, the combination of exterior and interior cylinders, webs connecting said cylinders and dividing the space between them into chambers, a head fitting the exterior cylinder and connected to the upper end of said interior cylinder, and having apertures registering respectively with the interior cylinder and the chambers, a discharge pipe connected with the interior cylinder, a jet pipe communicating with the discharge pipe above said interior cylinder, pipes connected wth said chambers for supplying compressed air thereto and exhausting therefrom, a valve casing connected to the lower end of the interior cylinder and having openings communicating with said chambers, means for alternately closing said openings, an inlet casing rigid with the lower end of the exterior cylinder and having a partition forming with said casing compartments respectively communicating with said chambers, said compartments having inlet openings, and non-return valves closing said openings.

[Claims 6 to 8 not printed in the Gazette.]

1,106,851. SHEET-MUSIC HOLDER. VAN LE ROY SIMMONS, Cadillac, Mich. Filed May 27, 1913. Serial No. 770,233. (Cl. 129—1.)

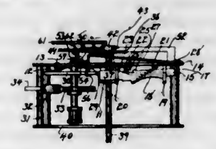


1. A binder including a back strip, cover boards mounted to swing relative to the back strip and connected thereto, a holding strip spaced from and connected to the back strip and parallel therewith, and fastening devices mounted between the back strip and holding strip and having angular bendable terminals constituting means for engaging the ends of the holding strip to secure the devices against longitudinal movement, said terminals also forming sheet engaging means, each of said fastening devices being revoluble about its longitudinal axis to disengage its angular terminals from the edges of the holding strip.

2. A binder including a back strip, cover boards mounted to swing relative to the back strip and connected thereto, a holding strip spaced from and connected to the back strip and parallel therewith, and fastening devices removably mounted between the back strip and holding strip and having angular bendable sheet engaging terminals adapted, when engaging a sheet, to be held across the ends of the holding strip, said fastening devices being revoluble about their longitudinal axes to disengage ther terminals from the ends of the holding strip, whereby the devices may be removed longitudinally from back of the strip.

1,106,852. ALARM-CLOCK. WILLIAM J. SMITH, Waterbury, Conn., assignor to Waterbury Clock Co., Waterbury, Conn., a Corporation. Filed May 11, 1914. Serial No. 837,863. (Cl. 58—17.)

1. In an alarm clock in which the sounding of the alarm is manually stopped and the alarm mechanism automatically reset, the combination with a manually operable stop, of a longitudinally and laterally movable alarm-stop slide co-acting with a member of the alarm-train for stopping the same and operated by the said stop, and an alarm let-off spring co-acting with the said slide for releasing the same.



2. In an alarm clock, in which the running of the alarm is manually stopped and the alarm mechanism automatically reset, the combination with a manually operable stop, of a longitudinally and laterally movable alarm-stop slide operated thereby and provided with two stop-shoulders and with an abutment tooth and adapted to co-act with a member of the alrm-train for stopping the same, and an alarm let-off spring co-acting with the said abutment tooth for moving the slide laterally for the successive operation of its shoulders in the movement of the slide into its alarm let-off position.

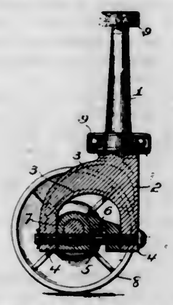
3. In an alarm clock in which the running of the alarm is manually stopped and the alarm mechanism automatically reset, the combination with a manually operable stop, of a longitudinally and laterally movable alarm-stop slide operated in one direction by the said manually operable stop, a spring for operating the slide in opposite drection and laterally, the said slide being adapted to co-act with a moving member of the alarm-train to stop the running thereof, and an alarm let-off spring provided with a finger co-acting with the slide to move the same laterally preparatory to its release to the action of its spring.

4. In an alarm clock in which the running of the alarm is manually stopped and the alarm mechanism automatically reset, the combination with a manually operable plunger, of an alarm-resetting lever operated thereby, a longitudinally and laterally movable alarm-stop slide co-acting with a member of the alarm-train to stop the same, a spring for the said slide, and an alarm let-off spring co-acting with the said slide for releasing the same once in 24 hours to the action of its spring.

5. In an alarm clock in which the running of the alarm is manually stopped and the alarm mechanism automatically reset, the combination with an alarm train, of mechanism for manually stopping the same, for automatically resetting the same once in 24 hours, and for nullifying the action of the alarm mechanism every twelve hours, of means for automatically nullifying one alarm cycle of twenty-four hours once in seven days.

[Claims 6 and 7 not printed in the Gazette.]

1,106,853. CASTER. GEORGE E. SMOUSE, Washington, D. C. Filed Nov. 11, 1913. Serial No. 800,374. Renewed July 3, 1914. Serial No. 848,944. (Cl. 16—4.)



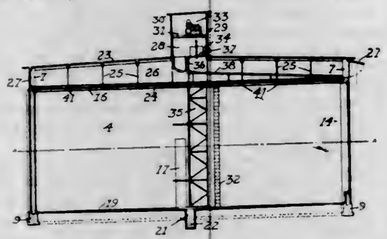
1. A caster consisting of a yoke, a spindle located adjacent one end of the latter, a bearing block mounted to turn in the yoke and wheel supporting means carried by the block in a plane above the axis of the latter.

2. A caster consisting of a yoke, a spindle rigid with the yoke and located adjacent one end of the latter, a

bearing block mounted to turn in the yoke, and wheel supporting means carried by the block in a plane above the axis of the latter.

3. A caster consisting of a yoke, a spindle rigid with the yoke, a block located intermediate the ends of the yoke, an axle carried by the block, caster wheels on said axle and a pin passing through the ends of the yoke and block and through a notch in the axle for locking the latter to the block.

1,106,854. ICE-HOUSE. CLAUDE A. P. TURNER, Minneapolis, Minn. Filed July 21, 1913. Serial No. 780,100. (Cl. 72—1.)



1. A building of the specified class, comprising concrete walls integrally united, a plurality of horizontal lower beams of the same material supported by the walls, a ceiling of like material supported by those beams, a floor of like material insulated from the ceiling and supported thereon, a plurality of horizontal concrete upper beams spaced from the lower beams, a roof formed integrally with the upper beams, and means for tying the upper and the lower beams together as chords of a truss spanning the walls.

2. A building of the specified class, comprising vertical walls, a plurality of horizontal beams of reinforced concrete, supported on the walls, a cement ceiling formed integrally with the beams, a plurality of spaced joists laid upon the ceiling, thermically insulating material between the joists, a floor upon the joists, a moisture-excluding cover on the floor, and a wearing slab of cement laid upon the cover.

3. A building of the specified class, comprising walls, a plurality of horizontal lower beams supported by the walls, a ceiling and a floor which are separated from each other by insulating chambers and are supported by the lower beams, a plurality of horizontal upper beams spaced from the lower beams, a roof upon the upper beams, and means for tying the upper and the lower beams together as chords of a truss spanning the walls.

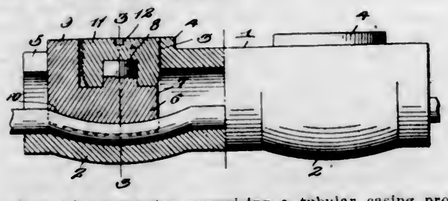
4. A building of the specified class, comprising vertical concrete walls, a plurality of horizontal lower beams terminally supported by the walls, a ceiling secured to the lower beams, a floor supported by the ceiling and insulated therefrom, a covering upon the floor, a plurality of horizontal upper beams spaced from the lower beams, and means for tying the upper to the lower beams as chords of a truss spanning the walls.

5. A building of the specified class, comprising concrete external walls, which are united with each other, a roof and ceiling which are spaced apart and tied together as chords of a truss supported by said walls, thermically insulating material over the ceiling, and means for insulating said insulating material for the exclusion of moisture.

[Claim 6 not printed in the Gazette.]

1,106,855. WIRE-CONNECTOR. GARLAND S. WILLS, Twin Buttes, Ariz. Filed Sept. 14, 1912, Serial No. 720,393. Renewed Sept. 24, 1913. Serial No. 791,650. (Cl. 173—304.)

1. A wire connector comprising a tubular casing provided with a threaded opening and a longitudinal slot extending from one end of the casing into communication with the threaded opening, a clamping member disposed within the casing for vertical movement and provided with an arm adapted to seat within the said slot, and a screw plug threaded into said opening and adapted to bear upon the clamping member.



2. A wire connector comprising a tubular casing provided with a threaded opening and a longitudinal slot extending from one end of the casing into communication with the threaded opening, a clamping member disposed within the casing for vertical movement and provided with an arm adapted to seat within said slot, said clamping member being formed with an upstanding stud, and a screw plug threaded into said opening and being provided in its lower end with a recess adapted to receive the upstanding stud on said clamping member, as and for the purpose set forth.

3. A wire connector comprising a tubular casing provided with a threaded opening, and a longitudinal slot extending from one end of the casing into communication with the threaded opening, a clamping member disposed within the casing for vertical movement and provided with an arm adapted to seat within said slot, a screw plug threaded into said opening and swivelly mounted upon said clamping member, said plug having its lower end tapered for easy insertion of the plug into the opening, the largest diameter of said plug being greater than the normal diameter of the threaded opening within the casing, substantially as and for the purpose set forth.

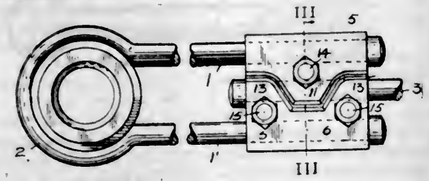
4. A wire connector comprising a tubular casing provided with a threaded opening and a longitudinal slot extending from one end of the casing into communication with the threaded opening, the inner wall of said casing being bulged outwardly at a point in vertical alinement with the threaded opening therein, a clamping member disposed within the casing for vertical movement and provided with an arm adapted to seat within said slot, a screw plug threaded into said opening and adapted to bear upon the clamping member, the lower face of said clamping member being curved to conform to the curvature of the outwardly bulged portion of the casing, substantially as and for the purpose set forth.

5. A wire connector comprising a tubular casing provided in one side with an opening and an outwardly projecting boss surrounding said opening, said boss being interiorly threaded, the walls of said casing upon opposite sides of said opening being also threaded and constituting a continuation of the threads of said boss, said latter threads extending inwardly from the side walls of the casing to a point approximately coinciding with the longitudinal axis of said casing, and a threaded plug tapered at one end, the largest diameter of said plug being greater than the normal diameter of the said opening, whereby in the insertion of the plug the casing walls are expanded and caused to bind against said plug to retain the same in position, said plug being of appreciably less length than the length of the threaded portion of the casing.

1,106,856. UNIVERSAL PULL-ROD CLAMP. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed July 30, 1913. Serial No. 782,128. (Cl. 24—135.)

1. In a clamp for three rods, one being between the other two, a clamping member adapted to engage all three rods, two clamping members each narrower than, and opposite to, the first-named member, each of the two narrower members adapted to engage the center rod and only one of the other two rods, and means for drawing the said narrower members toward the wider member.

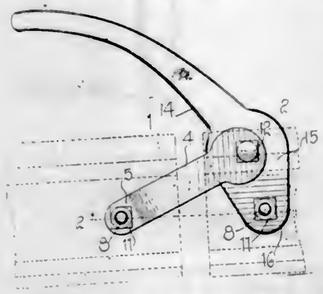
2. In a clamp for three rods, one being between the other two, a clamping member having grooves to receive all three rods, and two clamping members opposite the first clamping member, one of the two clamping members having a groove to receive one of the outer rods and the other of the two clamping members having a groove to receive the other outer rod, and each of the said two clamping members having a projection provided with a groove to receive the intermediate rod.



3. In a clamp for three rods, one being between the other two, a clamping member adapted to engage all three rods, two clamping members each narrower than, and opposite to the first-named member, each of the two narrower members adapted to engage the center rod and only one of the other two rods, and means for drawing the said narrower members toward the wider member, the under faces of the narrower members being inclined with respect to the adjacent face of the wider member to permit the tilting of the narrower members without engaging the wider member.

4. In a clamp for three rods, one being between the other two, a clamping member adapted to engage all three rods, two clamping members each narrower than, and opposite to, the first-named member, each of the two narrower members adapted to engage the center rod and only one of the other two rods, and means for drawing the said narrower members toward the wider member, the inclined outer faces of the narrower members being narrower than their inner faces.

1,106,857. TOOL. WILLIAM ALBERT, La Fayette, Ohio. Filed Mar. 7, 1914. Serial No. 823,186. (Cl. 104—16.)



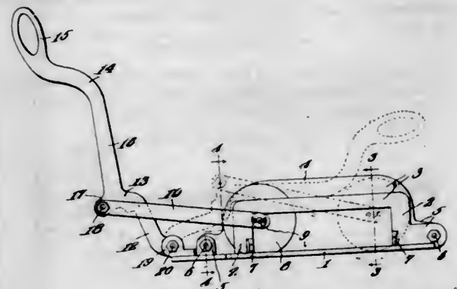
1. A device of the class described including a connecting bar, a removable engaging bolt carried by one end, a lever fulcrumed upon the other end, a removable engaging bolt carried by one end of the lever, and a handle formed on the other end of the lever, as and for the purpose set forth.

2. A device of the class described including a connecting bar having an offset at one end thereof, said bar having an opening on each end thereof, an engaging bolt removably mounted in one end, a lever pivotally mounted upon the other end, and a second removable engaging bolt carried by one end of the lever adjacent the pivot point.

3. The combination with the meeting ends of two rails, having an opening formed in each of the web portions thereof, of a connecting bar having an engaging bolt carried by one end and adapted to be arranged within one of said openings, an operating lever fulcrumed upon the other end of said bar, an engaging bolt carried by one end of said lever and adapted to be arranged within the opening of the other rail end, whereby to move said rail ends longitudinally upon the operation of said lever.

4. A device of the class described including a connecting bar having one end offset, a removable engaging bolt arranged within said offset end, an operating lever fulcrumed upon the other end of said bar, a removable engaging bolt carried by one end of said lever, and a handle member formed integral with the other end of said lever, whereby to actuate the lever, as and for the purpose set forth.

1,106,858. TOBACCO-CUTTER. JAMES E. ARRANTS, Elizabethton, Tenn. Filed Oct. 20, 1913. Serial No. 796,329. (Cl. 131—35.)



1. In a device of the character described, a base comprising two sections, the base sections having complementing arches at their adjoining edges, means adjustably connecting the sections of the base, the intermediate portions of the arches constituting guide bars, a cutter disk movable between said guide bars, an axle carried by the cutter disk and working along the lower run of the guide bars, a lever fucrumed to one end of the base, and links connecting the lever and the ends of said axle.

2. In a device of the character described, a base embodying two longitudinal sections having their adjoining edges spaced apart intermediate their ends to provide a slot, the base sections having complementing arches at their adjoining edges, and ears beyond the ends of the arches at the adjoining edges, draft bolts connecting the said ears, the intermediate portions of the arches forming guide bars, a cutter disk movable between the said guide bars and in the said slot, an axle for the cutter disk movable along the under run of the guide bars, a lever fulcrumed to one end of the base, and links connecting the lever and the ends of the said axle.

3. In a device of the character described, a base having a pair of arches, the intermediate portions of the arches constituting guide bars, a cutter disk movable between the said guide bars, one of the guard bars being raised to form a guard for the cutter disk, an axle for the cutter disk movable along the under run of the guide bars, a lever fulcrumed to the base beyond the arches and arranged to swing over the other guide bar, and links connecting the lever and the ends of the axle.

4. In a device of the character described, a base having a pair of arches, the intermediate portions of the arches forming guide bars, a cutter disk movable between the guide bars, an axle for the cutter disk movable along the under run of the guide bars, a lever fulcrumed to one end of the base beyond the arches, the lever having a primary offset to engage over the adjoining corner of one arch, and having a secondary offset adjoining its free end to provide a hand hold, the portion of the lever intermediate the offsets being seatable upon the said arch, and links connected to the ends of the said axle and to the said lever adjoining the primary offset.

5. In a device of the character described, a base embodying two longitudinal sections having their adjoining edges spaced apart intermediate their ends to provide a slot, said sections having complementing arches at their

adjoining edges, a pair of complementing ears at their adjoining edges beyond the respective ends of the arches, and a pair of complementing ears at one end, the intermediate portions of the arches constituting guide bars, one guide bar being raised to form a guard, draft bolts connecting the first mentioned ears, a fulcrum bolt engaged through the second mentioned ears, a cutter disk movable between the said guide bars and in the said slot, an axle for the cutter disk movable along the under rnn of the said guide bars, a lever having one end fulcrumed to the said fulcrum bolt between the second mentioned ears, the lever having a primary offset adjoining its fulcrum point to engage over the respective corner of one arch, and having a secondary offset adjoining its free end forming a hand hold, the portion of the lever intermediate the offsets being seatable upon the said arch adjoining the aforesaid guard, and links connecting the ends of the said axle and the lever adjoining the primary offset.

1,106,859. BOWLING-ALLEY. EDWARD L. AYERS, North Vancouver, British Columbia, Canada. Filed Apr. 15, 1913. Serial No. 761,148. (Cl. 46—66.)



1. In a bowling game, a bowling surface, a series of tiltable pins arranged at one end of the bowling surface in the path of, engageable and operable by, a playing ball, a tiltable king pin not engageable by the ball, and means, with a part operable by the ball in front of the king pin, for tilting all of the pins whereby a strike is made.

2. In a bowling game, a bowling surface, a series of pins at one end, a rocking support for the pins, said pins hinged on the rocking support, and means acting on the support to hold the pins upright.

3. In a bowling game, a bowling surface, a series of pins at one end, a rocking support for the pins, said pins hinged on the rocking support, means acting on the support to hold the pins upright, and trip means acted on by a ball to release the support and allow all the pins to fall.

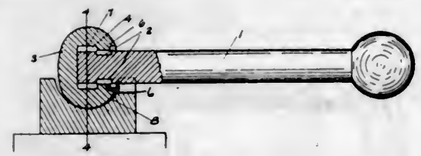
4. In a bowling game, a bowling surface, a series of pins at one end, a rocking support for the pins, said pins hinged on the rocking support, means acting on the support to hold the pins upright, and a set-up means operated from the opposite end of the bowling surface from the pins to set up the pins.

5. A bowling game comprising a foldable table structure with hingedly connected sections, a flexible, pliable bowling surface with means for stretching it across the top of the table, and a series of separately mounted tiltable pins disposed transversely across one end of the bowling surface adapted to be tilted by a ball moving along said surface.

[Claims 6 to 8 not printed in the Gazette.]

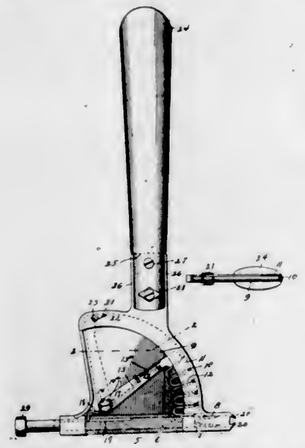
1,106,860. METHOD OR PROCESS OF FORMING HEADED RODS. ALBERT BAYTON, Erie, Pa., assignor to Reed Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Nov. 16, 1912. Serial No. 731,753. (Cl. 29—148.)

1. The method of forming headed rods which consists in taking a rod provided with a reduced part near one end, taking a malleable head provided with an opening of a size to receive the rod end, there being a variation in the wall of the head increasing the thickness of the same, placing the rod end in the opening with the reduced portion opposite the part of the wall having the variation of increased thickness, and compressing and shaping the outer surface of the head by pressure exerted simultaneously over the greater part of the surface of the head and forcing the walls of the head about the rod, the metal of the wall having the variation of increased thickness being forced into the reduced portion of the rod and thus securing the head in intimate and fixed relation with the rod.



2. The method of forming headed rods which consists in taking a rod and slotting the same forming a reduced part near one end, taking a malleable head with a greater than normal dimension in one direction and an oblong opening of a size to receive the rod end there being an inwardly projecting rib in the head corresponding to the slot in the rod, placing the rod end in the opening, compressing and shaping the head to normal form, and compressing the walls thereof about the rod thus forcing the inwardly projecting rib into the slot so as to secure the head in intimate and fixed relation with the rod.

1,106,861. COMBINED STAPLE-SETTING AND WIRE-STRETCHING TOOL. ELIAS R. BEADLE and HARVEY V. ETTER, Norfolk, Va. Filed May 19, 1913. Serial No. 768,571. (Cl. 1—49.)



1. In a device of the character described, the combination with a sleeve, of a magazine disposed at one side thereof, a follower in said magazine for forcing the contents of the magazine into said sleeve, a headed plunger disposed in said sleeve, said plunger having its forward end bifurcated to engage a staple, and a spring for actuating said follower, one end of said spring passing through said sleeve, said plunger being formed with a longitudinal groove in which said end of the spring engages.

2. In a device of the character described, the combination with a sleeve, of a plunger slidably disposed therein, a magazine comprising a web constituting a floor for said magazine, a flange parallel with said web and a connecting wall between said web and flange, a follower pivoted to said web, the free end of which has swinging movement between said web and said flange, and a spring wound about the pivot point of said follower, one end of said spring engaging said follower and the other end of said spring being fixed, the fixed end

of said spring entering said sleeve, said plunger having a longitudinal groove formed therein in which said fixed end of the spring engages.

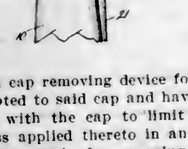
3. A device of the character described, comprising a tubular sleeve, a plunger disposed in said sleeve, a magazine lying to one side of said sleeve and comprising an arcuate side wall and a web-like bottom which extends along practically the entire length of said sleeve and side wall, and without interruption from said side wall to said sleeve, and a follower swingingly mounted upon said bottom concentrically with said side wall and movable thereover.

4. A device of the character described, comprising a tubular sleeve, a plunger disposed in said sleeve, a magazine lying to one side of said sleeve and comprising an arcuate side wall and a web-like bottom which extends along practically the entire length of said sleeve and side wall and without interruption, from one to the other, a follower swingingly mounted upon said bottom concentrically with said side wall and movable thereover, and a relatively narrow flange partially covering said magazine, the free end of said follower traveling between said flange and said web-like bottom, the remainder of the top of the magazine being open from said flange to said sleeve.

5. A device of the character described, comprising a tubular sleeve, a plunger disposed in said sleeve, a magazine lying to one side of said sleeve and comprising an arcuate side wall and a web-like bottom which extends along practically the entire length of said sleeve and said side wall and without interruption, from one to the other, a follower swingingly mounted upon said bottom concentrically with said side wall and movable thereover, and a pivoted stop member which passes through said bottom and through said flange and is movable into and out of the path of said follower to hold said follower in its retracted position.

[Claim 6 not printed in the Gazette.]

1,106,862. BOTTLE-OPENER. FERDINAND W. BEARD, Yountville, Cal. Filed Oct. 4, 1912. Serial No. 723,938. (Cl. 215—53.)



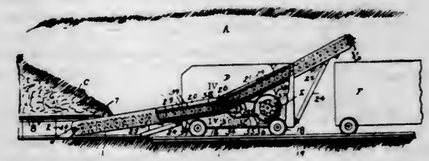
1. In a crown cap removing device for bottles, a crown cap, a lever pivoted to said cap and having a stop portion for engagement with the cap to limit movement of the lever upon stress applied thereto in an upward direction with respect to the bottle, for removing said cap, substantially as described.

2. In a crown cap removing device for bottles, a cap structure and a lever structure movably mounted on the cap structure, one of said structures having a stop limiting movement of the lever structure in an upward direction for lifting the cap off from the bottle, substantially as described.

3. In a crown cap removing device for bottles, a crown cap having a flange overhanging the mouth of the bottle, a lever pivoted to the overhanging flange and provided with a stop portion for engagement against the overhanging flange of the cap to limit movement of the lever upon stress applied thereto in an upward direction with respect to the bottle to lift the cap off from the latter, substantially as described.

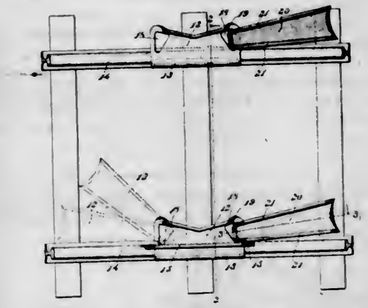
1,106,863. PROCESS FOR MOVING MATERIAL. WILLIAM COOPER, Denver, Colo. Filed Jan. 13, 1914. Serial No. 811,841. (Cl. 37—51.)

The process of tunneling or cutting, which consists in installing a temporary tunnel structure with the top thereof removable in sections; blasting the breast down onto said structure; and then removing said top sections



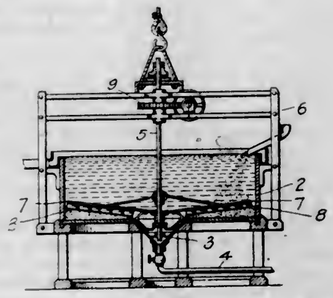
progressively toward the breast and removing from the tunnel the material thus deposited therein.

1,106,864. CAR-REPLACING DEVICE. WILLIAM F. DESSO, Somers, Conn. Filed July 16, 1913. Serial No. 779,338. (Cl. 104—162.)



A car replacing device consisting of a pair of supporting plates provided with openings and having side hooked portions for engagement with the heads of the rails of a railway track, one of said supporting plates having a longitudinal upwardly projecting guard rib or flange on its upper side and which rib or flange extends parallel to the track rail and is arranged to register with the inner side of the head of said track rail, and a pair of riser plates having hooked portions to enter said openings, the latter being of sufficient amplitude to permit the said riser plates to be swung to different lateral positions.

1,106,865. RESISTANCE-INDICATOR. JOHN VAN NOSTRAND DORR, Denver, Colo. Filed Dec. 13, 1911. Serial No. 665,538. (Cl. 73—51.)



1. The combination with a container and a rotary device adapted to move the contents thereof, of means operatively connected with said device so as to be displaced in accordance with the resistance offered to the movement of the same by a mass in said container, and an alarm connected to be sounded at a determinate point in said displacement.

2. The combination with a container and a rotary device adapted to move the contents thereof, of a driving mechanism in operative connection with said device, means associated with said mechanism to be displaced in accordance with the resistance offered by said device to the driving action of the same, and an indicator to indicate the degree of said resistance by the displacement of said means.

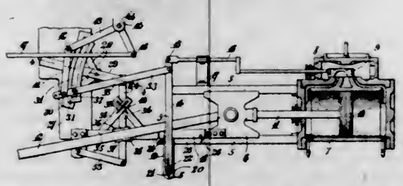
3. The combination with a container and a rotary device adapted to move the contents thereof and immovable in the direction of its axis of rotation, of a longitudinally movable driving shaft in operative connection therewith, means to yieldingly oppose the endwise movement of the said shaft, and an indicatory appliance adapted to be operated by said endwise movement.

4. The combination with a rotary device, of a worm wheel connected therewith, a worm in operative engagement with said wheel and mounted to move in the direction of its axis of rotation, means to yieldingly oppose said movement, and an indicatory appliance adapted to be operated by the endwise movement of said worm.

5. The combination with a rotary device, of a worm wheel connected therewith, a worm in operative engagement with said wheel and mounted to move in the direction of its axis of rotation, a sliding member in coöperative engagement with said worm, a spring to resiliently oppose a movement of said member, and an indicatory appliance connected to be operated by movement of the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,106,866. REVERSIBLE VALVE-GEAR. JOHN H. EARL, Somerville, Mass. Filed Sept. 27, 1912. Serial No. 722,725. (Cl. 121—98.)



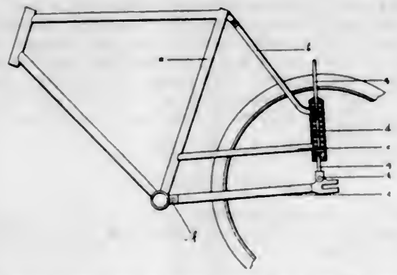
1. A valve gear comprising a combination lever adapted to be pivoted to a slide valve rod, a pair of arms adjustably connected with each other and adapted to be pivotally connected with a cross head, a slide block movably connected with one arm and pivoted to the lever, a reversing link pivoted rearwardly of the lever, a rocking arm connected with the link, a radius arm slidably connected with the link and lever respectively, an operating rod pivoted to the rocking arm, an operating guide connected for angular adjustment on the operating rod, and means slidable on the guide and adapted to be pivotally connected with a pitman when pivoted to the rod of a piston operable within a steam cylinder.

2. A valve gear comprising a combination lever adapted to be pivoted to a slide valve rod, a pair of arms adjustably connected with each other and adapted to be pivotally connected with a cross head, a slide block movably connected with one arm and pivoted to the lever, a reversing link pivoted rearwardly of the lever, a rocking arm connected with the link, a radius arm slidably connected with the link and lever respectively, an operating rod pivoted to the rocking arm, an operating guide connected for angular adjustment on the operating rod, means slidable on the guide and adapted to be pivotally connected with a pitman when pivoted to the rod of a piston operable within a steam cylinder, and means for adjusting the radius arm in the reversing link.

3. A valve gear comprising a combination lever adapted to be pivoted to a slide valve rod, a pair of arms adjustably connected with each other and adapted to be pivotally connected with a cross head, a slide block movably connected with one arm and pivoted to the lever, a reversing link pivoted rearwardly of the lever, a rocking arm connected with the link, a radius arm slidably connected with the link and lever respectively, an operating rod pivoted to the rocking arm, an operating guide connected for angular adjustment on the operating rod, means slidable on the guide and adapted to be pivotally connected with a pitman when pivoted to the rod of a piston operable within a steam cylinder, means for adjusting the radius arm in the reversing link, and means for locking the last named means in shifted positions.

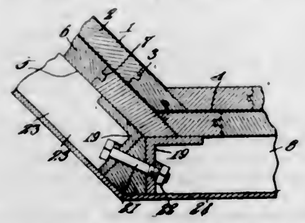
4. A valve gear comprising a combination lever adapted to be pivoted to a slide valve rod, a pair of arms adjustably connected with each other and adapted to be pivotally connected with a cross head, a slide block movably connected with one arm and pivoted to the lever, a reversing link pivoted rearwardly of the lever, a rocking arm connected with the link, a radius arm slidably connected with the link and lever respectively, an operating rod pivoted to the rocking arm, an operating guide connected for angular adjustment on the operating rod, means slidable on the guide and adapted to be pivotally connected with a pitman when pivoted to the rod of a piston operable within a steam cylinder, means for adjusting the radius arm in the reversing link, and means for sustaining the operating rod in upright position when in action.

1,106,867. SPRING DEVICE FOR CYCLES AND MOTOR-CYCLES. ROBERT FREUND, Augsburg, Germany. Filed July 12, 1912. Serial No. 709,112. (Cl. 208—94.)



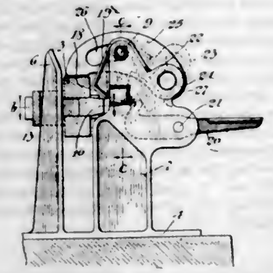
A cycle frame, spring cases, frame bars rigidly connecting the spring cases to the frame, piston members slidable in the cases, the said piston members being integral and having an arch-shaped connection between them, said pistons extending below the cases, chain braces, means for pivotally connecting the pistons to the chain braces, means for pivotally connecting the chain braces to the frame, and means for yieldingly supporting the pistons with relation to the cases.

1,106,868. SILO. MARLON C. FRISBIE, St. Louis, Mich. Filed June 4, 1913. Serial No. 771,718. (Cl. 217—4.)



In a structure of the class described, a pair of upright angle members including forwardly presented flanges defining an acute angle with each other and laterally presented flanges defining an obtuse angle with each other; a wedge shaped post secured between the forwardly presented flanges; and a wall comprising coöperating corner forming elements, one of which elements upon its outer face fits against the laterally presented flange of one angle member and is beveled along its upright edge to fit against the laterally presented flange of the other angle member to one side of the wedge, the other corner forming element fitting upon its outer face against the last specified laterally presented flange and being beveled upon its upright edge to engage with the rear face of the first specified corner forming element.

1,106,869. SWITCH-STAND. THOMAS A. GERLACH, Harvey, Ill. Filed Dec. 31, 1913. Serial No. 809,611. (Cl. 104—25.)



1. A switch stand having an operating lever, a pair of latch stands adapted to automatically receive said lever and hold the same in a limiting position, and yielding means carried by said lever to permit automatic disengagement of said lever from its associated latch stand upon the application of an extraordinary force to said lever.

2. A switch stand having an operating lever, a pair of latch stands each provided with a swinging latch adapted to automatically receive said lever and hold the same in a limiting position, and yielding means carried by said lever to permit disengagement of said lever from its associated latch stand upon the application of an extraordinary force to said lever.

3. A switch stand having an operating lever, a pair of latch stands each provided with a swinging overweighted latch adapted to automatically receive said lever and hold the same in a limiting position, and yielding means carried by said lever to permit disengagement of said lever from its associated latch stand upon the application of an extraordinary force to said lever.

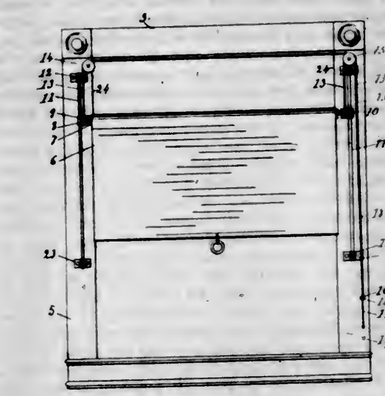
4. A switch stand having an operating lever, a pair of latch stands each provided with a swinging latch adapted to automatically receive said lever and hold the same in a limiting position, yielding means carried by said lever to permit disengagement of said lever from its associated latch stand upon the application of an extraordinary force to said lever, and a foot lever for swinging said latch out of the path of said operating lever.

5. A switch stand having an operating lever, a pair of latch stands each provided with a swinging overweighted latch adapted to automatically receive said lever and hold the same in a limiting position, yielding means carried by said lever to permit disengagement of said lever from its associated latch stand upon the application of an extraordinary force to said lever, and a foot lever for swinging said latch out of the path of said operating lever.

[Claims 6 to 25 not printed in the Gazette.]

1,106,870. WINDOW-SHADE ADJUSTER. JACOB HENRY, Chicago, Ill. Filed Nov. 19, 1913. Serial No. 801,868. (Cl. 156—27.)

In a window shade adjuster, a pair of side rails and means for holding them parallel to the window casing and at a little distance therefrom; a carrier of sheet material bent around each rail to slide thereon and extending beyond the side thereof with a return bend perforated to receive a bearing pin of the window shade in line between



the rails whereby the carrier is prevented from turning away from a bearing pin and dropping it.

1,106,871. HEATING-STOVE. GEORGE W. HOWES, Dowagiac, Mich., assignor to Estate of P. D. Beckwith, Inc., Dowagiac, Mich. Filed Feb. 19, 1914. Serial No. 819,621. (Cl. 126—75.)

1. In a heating stove, the combination of a fire chamber, a smoke delivery flue having a lateral delivery opening, a pair of spaced down draft flues having delivery connections with the lower end of said smoke delivery flue, said flues having a top wall common to all and provided with an upwardly projecting flange at its outer edge, an air circulating flue between said down draft and delivery flues and the fire chamber wall, said circulating flue being extended above said flues and having a delivery opening at its upper end and an inlet opening at its lower end, a removable outer wall section for said circulating flue resting upon said flue top wall on the outer side of its said flange, and a U-shaped water pan arranged within said air circulating flue to constitute a part of the front wall thereof, said pan being arranged on said flue top wall within said flange thereof, there being an opening in said removable wall section above said pan but below the delivery opening of the circulating flue.

2. In a heating stove, the combination of a fire chamber, a smoke delivery flue having a lateral delivery opening, a pair of spaced down draft flues having delivery connections with the lower end of said smoke delivery flue, said flues having a top wall common to all, an air

circulating flue between said down draft and delivery flues and the fire chamber wall, said circulating flue being extended above said flues and having a delivery opening at its upper end and an inlet opening at its lower end, a removable outer wall section for said circulating flue, and a water pan arranged within said air circulating flue to constitute a part of the front wall thereof, said pan being arranged on said flue top wall, there being an opening in said removable wall section above said pan but below the delivery opening of the circulating flue.

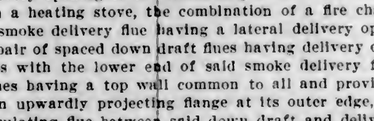
3. In a heating stove, the combination of a fire chamber, a smoke delivery flue having a lateral delivery opening, a pair of spaced down draft flues having delivery connections with the lower end of said smoke delivery flue, said flues having a top wall common to all and provided with an upwardly projecting flange at its outer edge, an air circulating flue between said down draft and delivery flues and the fire chamber wall, said circulating flue being extended above said flues and having a delivery opening at its upper end an an inlet opening at its lower end, a removable outer wall section for said circulating flue resting upon said flue top wall on the outer side of its said flange, and a U-shaped water pan arranged within said air circulating flue on said flue top wall, within said flange thereof.

4. In a heating stove, the combination of a fire chamber, a smoke delivery flue having a lateral delivery opening, a pair of spaced down draft flues having delivery connections with the lower end of said smoke delivery flue, said flues having a top wall common to all, an air circulating flue between said down draft and delivery flues and the fire chamber wall, said circulating flue being extended above said flues and having a delivery opening at its upper end and an inlet opening at its lower end, a removable outer wall section for said circulating flue, and a water pan arranged within said air circulating flue on said flue top wall.

5. In a heating stove, the combination of a fire chamber, a smoke delivery flue having a lateral delivery opening and a top adapted to receive a water pan, a pair of spaced down draft flues having delivery connections with the lower end of said smoke delivery flue, an air circulating flue between said down draft and delivery flues and the fire chamber wall, said circulating flue being extended above said flues and having a delivery opening at its upper end and an inlet opening at its lower end, a removable outer wall section for said circulating flue above said delivery flue, and a water pan arranged on said delivery flue top wall within said air circulating flue, there being an opening in said removable wall section above said pan but below the delivery opening of the circulating flue.

[Claims 6 to 8 not printed in the Gazette.]

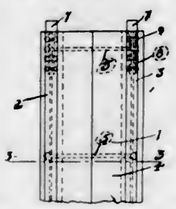
1,106,872. EXTENSION-TABLE. JAMES INGELLS, Muskegon, Mich. Filed Nov. 17, 1913. Serial No. 801,505. (Cl. 45—9.)



1. In combination with the frame, pedestal, centrally divided top, and slides of an extension table; a metal yoke arranged to be secured firmly on the pedestal, a bottom and a side bearing at each end of the yoke for the support and free movement of the slides, offsets below the slide supporting surfaces forming bearings for an actuating screw, its actuating rod, and nuts, an actuating screw and rod mounted in said yoke, said screw having a right handed thread and a left handed thread thereon, corresponding nuts mounted on the screw, cross link extension mechanism properly connected with said nuts at the center and with the respective ends of the table at the ends so that the turning of the screw will cause the ends of the table to be forced from, or drawn toward each other, two sets of slides mounted on the yoke with the central slide of each set securely attached to the yoke and the outside slides attached to the respective ends of the table.

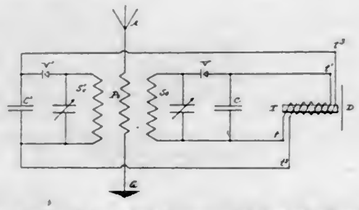
2. In combination with the pedestal, frame, centrally divided top, and slides of an extension table; a yoke supported on the pedestal and having bearings for the top of the table when closed, and offsets and bearings for the sides and bottoms of the slides, other offsets forming bearings and supports for an actuating screw and rod, a screw having right handed threads and left handed threads, mounted in said yoke, corresponding nuts mounted on said screw, cross link extension mechanism located each side of the screw and connected at the adjacent ends with the nuts, the opposite ends connected with the respective ends of the table so that the turning of the screw will cause the ends of the table to be forced apart or drawn together, a set of slides mounted in the bearings on the yoke with the central slide centrally secured to the yoke at each end thereof, and the side slides secured at one end to the corresponding end of the table, an actuating rod mounted in the yoke and connected with the screw for turning the screw, a ratchet connected with the actuating rod, and a pawl pivotally connected with the yoke for locking the table in desired positions when properly adjusted.

1,106,873. RAILROAD-CAR CONSTRUCTION. ALBIN INGSTROM, Mechanicsville, N. Y. Filed Apr. 29, 1913. Serial No. 764,471. (Cl. 105—191.)



In a side panel for vehicles the combination with spaced rail sections of vertically arranged side plates therebetween the edges of said plates adapted to contact the rail section being shaped to receive and make a tight joint therewith, alining apertures through the webs of said rail sections, and side boards and headed bolts extending through and of bars having bifurcated ends adapted to fit over the ends of the web of said rail sections and adapted to be secured thereto as and for the purpose described.

1,106,874. WIRELESS APPARATUS. PETER L. JENSEN, San Francisco, Cal., assignor to Commercial Wireless and Development Company, San Francisco, Cal., a Corporation of Arizona. Filed June 4, 1912. Serial No. 701,652. (Cl. 250—8.)



1. In a wireless receiving circuit, a means of receiving desired signals free from the disturbing effects of extraneous electro-magnetic waves, comprising a magnetic-inductive device wound with two independent energizing windings in combination with two independent circuits of which said energizing windings respectively form parts, said circuits being so constituted as to permit currents generated in either to flow independently of currents in the other, means for causing currents due to extraneous electro-magneto waves to appear in both of said circuits, means for causing the currents due to the desired signals to appear in but one of said circuits, means for independently varying the strength and direction of currents through said circuits, and means of detecting the resultant effect of said currents on said magneto-inductive device.

2. In a wireless receiving circuit for the reception of electro-magnetic waves, a means for eliminating the disturbing effect of atmospheric electricity on received signals, comprising two independent secondary oscillation circuits, means for rectifying independently oscillations in said oscillation circuits, two independent equally constituted circuits through which currents may simultaneously flow with equal facility, means for independently varying the strength and direction of currents in said equally constituted circuits, in combination with a magneto-inductive device having two independent energizing windings, said energizing windings respectively forming parts of and included in said equally constituted circuits, said magneto inductive device being provided with means for detecting the resultant effect of currents flowing through said energizing windings.

3. In a receiving circuit for the reception of electro-magnetic waves, a means for eliminating the disturbing effect of atmospheric electricity on desired signals, comprising two independent oscillation circuits, means for causing desired signals to appear in but one of said oscillation circuits, means for causing disturbing waves to appear in both of said oscillation circuits, means for rectifying independently the received waves in said oscillation circuits, means for controlling the strength and direction of said rectified waves, in combination with a magneto-inductive device having two independent energizing windings, said independent energizing windings respectively forming parts of and included in two identical circuits through which said rectified waves may respectively flow and said magneto-inductive device being provided with means for detecting the resultant effect of said rectified impulses in said energizing windings.

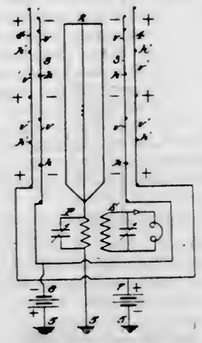
4. In a receiving circuit for the reception of electro-magnetic waves, a means for eliminating the effect of atmospheric electricity or interfering electric disturbances on desired signals, comprising two oscillation circuits, two rectifiers respectively included in two independent circuits, said circuits being respectively connected to said oscillation circuits and said independent circuits so constituted that current flowing in one of said circuits is independent of current flowing in the other of said circuits, means for controlling the strength and direction of currents in said circuits, in combination with a telephone receiver wound with two independent energizing windings, said energizing windings included in and forming parts respectively of said independent circuits.

1,106,875. WIRELESS APPARATUS. PETER L. JENSEN and EDWIN S. PRIDHAM, Napa, Cal., assignors to Commercial Wireless & Development Co., San Francisco, Cal., a Corporation of Arizona. Filed Apr. 22, 1913. Serial No. 762,778. (Cl. 250—20.)

1. In a wireless receiving station including a means for reducing the disturbing effects of atmospheric electricity, an antenna, a receiving circuit in connection with said antenna, means for detecting incoming electro-magnetic waves in combination with two separate sets of conductors, said sets of conductors being insulated from and substantially surrounding said antenna, and means for impressing locally charges of electricity respectively upon said sets of conductors.

2. In a wireless receiving station, including a means for reducing the disturbing effects of static, an antenna, a receiving circuit in connection with said antenna, means for detecting electro-magnetic waves striking said antenna in combination with two sets of conductors, said conductors being separate from and substantially surrounding said antenna, and means for impressing charges of opposite sign respectively upon said sets of conductors.

3. In a wireless receiving station, including a means of improving the reception of electro-magnetic waves, an antenna, a receiving circuit in connection with said antenna, and means for detecting electro-magnetic waves in combination with two separate sets of conductors, said conductors being separate from and substantially surrounding said antenna, and means for impressing and maintaining charges of opposite character respectively between said two sets of conductors and the ground, substantially as described.

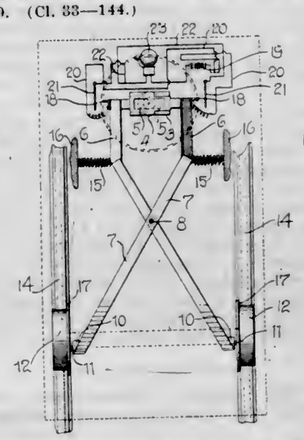


4. In a wireless receiving station, including a means for reducing the disturbing effects of static electricity, an antenna, a receiving circuit, and means for detecting electro-magnetic waves in combination with two separate concentric sets of conductors, said concentric sets of conductors being removed from said antenna and substantially surrounding the same, and means for impressing and maintaining charges of electricity of opposite sign respectively upon said concentric sets of conductors.

5. A wireless receiving station, an antenna and a receiving circuit with means for detecting electro-magnetic waves in combination with two separate concentric sets of conductors, said concentric sets of conductors substantially surrounding said antenna, the distance between said concentric sets of conductors being less than the distance between said concentric sets of conductors and said antenna, and means for impressing charges of opposite sign respectively on said concentric sets of conductors.

[Claim 6 not printed in the Gazette.]

1,106,876. SPREADING-RAIL INDICATOR. EMIL KADDATZ, Ortonville, Minn. Filed Oct. 18, 1913. Serial No. 796,039. (Cl. 33—144.)

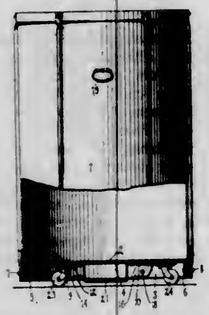


1. An indicator for track ways including a hopper having a discharge, relatively movable arms, means for main-

taining one end of each of such arms in constant engagement with the rails of the track way, and auxiliary arms carried by the other ends of the first mentioned arms and having their extremities in overlapping relation and serving to close the discharge from the hopper, such auxiliary arms being provided in their extremities with openings adapted to be brought into register with the discharge of the hopper upon movement of the first mentioned arms in one direction.

2. An indicator for track ways including a hopper having a discharge, relatively movable arms, means for maintaining one end of each of such arms in constant engagement with the rails of the track way, auxiliary arms carried by the other ends of the first mentioned arms and having their extremities in overlapping relation and serving to close the discharge from the hopper, such auxiliary members being provided with openings adapted to be brought into register with the discharge of the hopper upon movement of the first mentioned arms in one direction, electric signaling means, and means under control of the first mentioned arms for operating such signaling means.

1,106,877. ASH-CAN. CARL KAISER, New York, N. Y., assignor to Kaiser Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 30, 1911. Serial No. 617,916. (Cl. 220—115.)

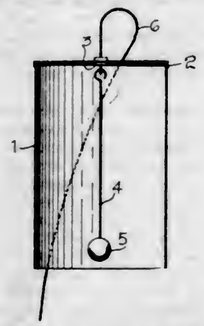


1. An ash can comprising a body, a bottom provided with a circumferential depending flange located within said body, three reinforcing straps, one extending diametrically across and adjacent to the bottom and the other two extending across and adjacent to the bottom upon opposite sides of and parallel to a diametric line at right angles to the first named strap for strengthening it, said straps having their ends turned downwardly and secured with the depending flange to the circumferential depending flange of the bottom and the can body, and casters swiveled on certain of said cross straps, said casters being partly protected by said depending flange and can body.

2. An ash can comprising a body, a bottom provided with a circumferential depending flange located within said body, three reinforcing straps, one extending diametrically across and adjacent to the bottom and the other two extending across and adjacent the bottom upon opposite sides of and parallel to a diametric line at right angles to the first named strap, said straps having their ends turned downwardly and secured with the depending flange to the circumferential depending flange of the bottom and the body, a caster swiveled near the end of the first named strap and two casters swiveled near the ends of one of the last named two straps, said casters being partly protected by the depending flange and the can body, and a centrally arranged handle secured to the first named strap.

1,106,878. TOY. ELMER J. LARSON, Mount Vernon, Wash. Filed Aug. 21, 1913. Serial No. 786,027. (Cl. 46—46.)

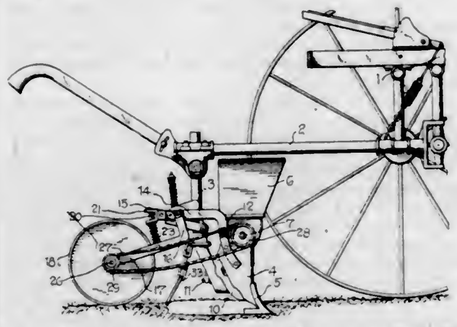
1. A device of the class described comprising a body, an anchor member secured in the body, a pendulum mounted on the anchor member, and a flexible member secured to the anchor member.



2. A device of the class described comprising a body closed at one end, an anchor member secured in the closed end of said body, a pendulum mounted upon the anchor member within the body, and a flexible member secured to the anchor member outwardly of the body.

3. A device of the class described comprising a body member, means for closing one end of the body member, an anchor member secured in said means, a flexible operating member secured to the operating member, and a pendulum mounted in said anchor member and adapted for engagement at times with the body member.

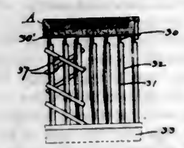
1,106,879. PLANTER. GOTTHILF LEISCHNER, Megargel, Tex. Filed Dec. 13, 1913. Serial No. 806,503. (Cl. 111—6.)



A planter attachment comprising a drill provided with a feeding means, said feeding means including a rotatable shaft projecting beyond one side of the drill, a frame projecting rearwardly from said drill, an arm projecting forwardly from the frame and terminating in a bearing through which the projecting portion of the shaft of the feeding means is directed, a bearing frame pivotally engaged with the first named frame, a presser roller mounted in the bearing frame, an expansible member interposed between the first named frame and the bearing frame, and means coacting with the presser roller for positively rotating the shaft of the feeding means.

1,106,880. FALSE WORK. DANIEL B. LUTEN, Indianapolis, Ind. Original application filed Nov. 1, 1906, Serial No. 341,605. Divided and this application filed May 24, 1912. Serial No. 699,534. (Cl. 25—131.5.)

1. A falsework centering containing compound compression members in series for supporting a load, each compression member consisting of a plurality of pieces each of which has major and minor dimensions transverse to its length, the major dimension of one piece being greater than the major dimension of another piece and being arranged transversely to that major dimension of the other piece and transversely to the series of compression members, and releasable connecting members uniting the pieces of each compression member; and sway bracing uniting the substantially parallel pieces of a plurality of said compression members.



2. A falsework centering comprising a joist supported by a compound compression member composed of a plurality of pieces each having major and minor dimensions transverse to its length, the major dimension of one piece being arranged longitudinally of and overlapping the joist and transversely to the major dimension of another piece of the compression member, and a releasable connecting member to unite the pieces of the compression member.

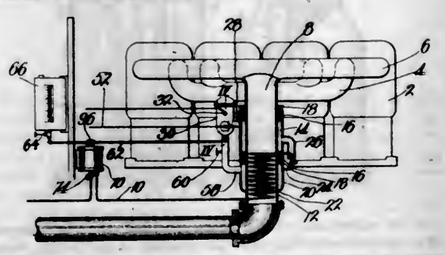
3. A falsework centering comprising a joist supported by a compound compression member composed of a plurality of detachably interconnected pieces, each having major and minor dimensions transverse to its length, the major dimension of one piece being arranged longitudinally of and overlapping the joist and transversely to the major dimension of another piece of the compression member with end bearing against the joist.

4. A falsework centering containing compound compression members for supporting a load and each composed of a plurality of pieces having major and minor dimensions transverse to their lengths, the major dimension of one piece being arranged transversely to the major dimension of another piece, and a withdrawable connection to unite the pieces of each compression member.

5. A falsework centering for a stream-crossing bridge comprising compound columns for supporting a load and each consisting of a plurality of releasably interconnected longitudinal pieces, one of said pieces being wider than another of said pieces and arranged with its wider dimension transverse to the direction of flow of the stream, and sway bracing attached to said columns and parallel to the direction of flow of the stream.

[Claims 6 to 13 not printed in the Gazette.]

1,106,881. INTERNAL-COMBUSTION ENGINE. YASUJI MARUYAMA, Kansas City, Mo. Filed May 10, 1913. Serial No. 766,848. (Cl. 123—122.)



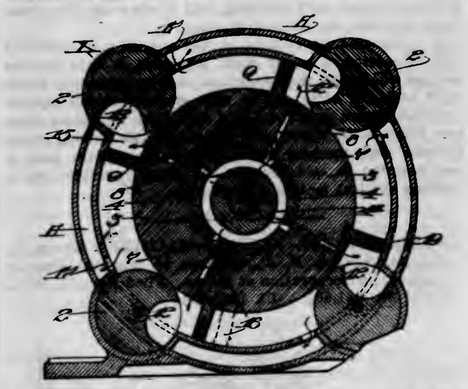
1. In an internal combustion engine, the combination of an exhaust tube, a superheating gas chamber and an air heating chamber surrounding a section of said exhaust tube, means for vaporizing liquid fuel by the heat of the exhaust gases and conducting the fuel vapor into said gas chamber, and a hot air nozzle fed by said air heating chamber and projecting into the inlet to the gas chamber for atomizing any unvaporized fuel entering said gas chamber.

2. In an internal combustion engine, the combination of an exhaust tube, a superheating gas chamber and an air heating chamber surrounding a section of said exhaust tube, means for vaporizing liquid fuel by the heat of the exhaust gases and conducting the fuel vapor into said gas chamber, and a pair of nozzles fed by said air heating chamber, said nozzles being positioned to inject hot air into the path of said fuel, as the latter is respectively entering and leaving said gas chamber.

3. In an internal combustion engine, the combination with the intake manifold and the exhaust manifold, of a liquid fuel supply, means for vaporizing said fuel by the action of the heat from the exhaust gases, a throttle valve chamber, means for conducting the fuel vapor to said chamber, means for heating air by the heat from the exhaust gases and conducting it to said chamber, and a nozzle for discharging a volatile fuel, such as gasolene, into the throttle chamber.

4. In an internal combustion engine, an intake manifold and an exhaust manifold, a gas chamber and an air chamber surrounding a section of the exhaust manifold, communicating tubular extensions connecting said chambers, a liquid fuel supply, means for vaporizing said fuel by the action of the heat from the exhaust gases and conducting the vapor into the tubular extension of the gas chamber adjacent the mouth of the extension of the air chamber, whereby any unvaporized fuel retained in said vapor will be atomized by heated air from the air chamber before entering the gas chamber, and means for conducting the mingled air and fuel vapor from the gas chamber to the intake manifold.

1,106,882. ROTARY STEAM-ENGINE. JAMES C. MATHIESEN, deceased, Oakland, Cal., by Frances E. Mathiesen, administratrix, Oakland, Cal., assignor of one-half to Cornelius Engby, San Francisco, Cal. Filed Sept. 9, 1912. Serial No. 719,475. (Cl. 121—51.)

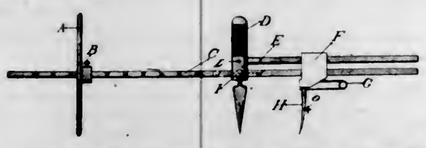


In a rotary engine of the character described, a casing composed of outer and inner shells with intermediate channels divided into sections, a port from each section communicating with the interior of the casing, valve chambers between each section of the channel, rotatable valves with radial grooves, a piston with a plurality of fixed radial vanes corresponding in number to the rotatable valves registering and passing through the valve grooves during rotation, spring pressed packing carried by each vane, a head fitting the end of the casing, and a central drum formed integral with and projecting inwardly therefrom and forming a bearing for the piston cylinder, said drum having a continuous opening therethrough for a shaft and an annular channel and an exterior communicating passage to admit steam, radial ports in the drum and corresponding ports in the piston cylinder registering intermittently and communicating with the space traversed by the vanes, so as to impel the vanes between the valves and exhaust the spent steam into the spaces between the casing shells.

1,106,883. INVOLUTING DRAWING INSTRUMENT. OSCAR E. MCCASKILL, Fort Worth, Tex. Filed Nov. 17, 1913. Serial No. 801,358. (Cl. 33—27.)

1. A drawing instrument comprising a pivot post, a screw shaft journaled in said post, means for preventing

longitudinal movement of said shaft through said post, a guide and spacing wheel rigid with said shaft, a carrier mounted on said shaft and provided with a threaded opening therethrough for said shaft, said shaft having threads engaging the threads in said carrier, a guide rigid with said post and extended through said carrier, and a pen carried by said carrier.

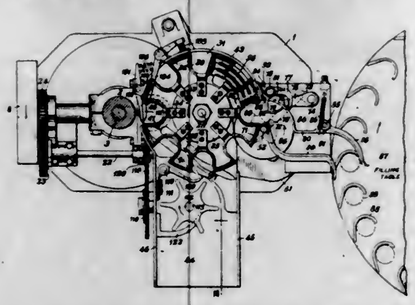


2. A drawing instrument having a pivot post, a shaft journaled in said post and having screw threads on one end, a wheel rigid with the other end of said shaft for turning said shaft, a carrier mounted on the threaded portion of said shaft and carrying a pen yieldingly mounted therein and a guide for said carrier rigid with said pivot post.

3. A drawing instrument having a pivot post, a shaft journaled in said post and provided with screw threads on one end, a wheel rigid with the other end of said shaft, said shaft having an annular groove therein, a screw in said pivot post projecting into said groove, a carrier mounted on the threaded portion of said shaft and provided with an opening through the upper part thereof, a guide for said carrier rigid with said pivot post and projecting through said opening, and a drawing pen yieldingly mounted on the said carrier.

4. A drawing instrument having a pivot post provided with a bearing, a screw shaft journaled in said bearing and provided with threads on one end, an adjusting wheel rigid with the other end of said shaft, a carrier carried on the threaded portion of said shaft and having an aperture through the upper part thereof, a guide moving freely through said aperture and rigid with said pivot post, a pen mounted in said carrier, and means provided for a yielding vertical motion of said pen.

1,106,884. BOTTLE-FEEDING MACHINE. ESECK C. MILLER, Newark, N. J., assignor to Imperial Stopper Company, a Corporation of Maine. Filed Nov. 21, 1911. Serial No. 661,455. (Cl. 193—1.)



1. The mechanism for handling bottles which comprises a rotary structure having pockets adapted for the reception of bottles, means for rotating said structure, a normally stationary member below said structure and constituting a floor over which the bottles in said pockets are moved, means for delivering bottles to said pockets, and means for adjusting said member vertically with respect to said means.

2. The mechanism for handling bottles which comprises a rotary structure having pockets adapted for the reception of bottles, means for rotating said structure, a normally stationary member below said structure and constituting a floor over which the bottles in said pockets are moved, means for delivering bottles to said pockets, means for adjusting said member vertically with respect to said bottle delivering means, and means for supporting said bottles when moving onto said member from said delivering means.

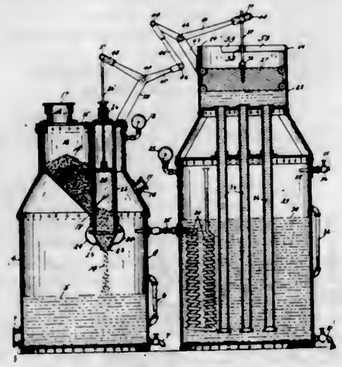
3. The mechanism for handling bottles which comprises a rotary structure having pockets adapted for the reception of bottles, means for rotating said structure, a normally stationary member below said structure and constituting a floor over which the bottles in said pockets are moved, means for delivering bottles to said pockets, means for adjusting said member vertically with respect to said bottle delivering means, and a plurality of elements movable with respect to each other for supporting said bottles whe nmoving onto said member from said delivering means.

4. The mechanism for handling bottles which comprises a rotary structure having pockets adapted for the reception of bottles, means for rotating said structure, a normally stationary member below said structure and constituting a floor over which the bottles in said pockets are moved, means for delivering bottles to said pockets, means for adjusting said member vertically with respect to said bottle delivering means, and a plurality of pivoted fingers movable with respect to each other for supporting said bottles when moving onto said member from said delivering means.

5. In a bottle capping machine, a horizontal rotary bottle carrier in combination with a table beneath the same and over which the bottles slide when moved by the carrier, said table being vertically adjustable and a section thereof which is traversed by the bottles, being adjustable to different inclinations for the purpose set forth.

[Claim 6 not printed in the Gazette.]

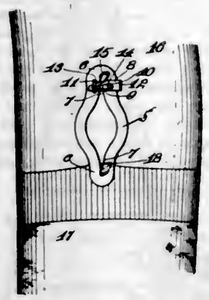
1,106,885. ACETYLENE GENERATING AND STORING APPARATUS. GUSTAVE MILLER, Los Angeles, Cal. Filed Apr. 22, 1914. Serial No. 833,819. (Cl. 48—53.4.)



1. In apparatus of the class specified, the combination of a hopper provided with an opening, a guideway, doors hinged on the guideway, yielding means for pressing the doors toward each other, a hollow valve slidably arranged in the guideway and adapted to move against the doors, said valve provided with an opening adapted to register with the first mentioned opening, a float, and operative connections between the float and the hollow valve.

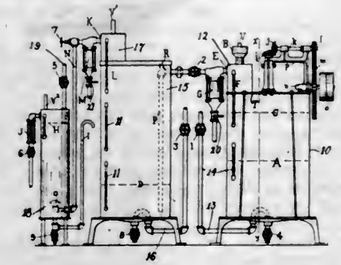
2. In apparatus of the class specified, the combination of a casing adapted to contain water in the lower part thereof and provided with a hopper in the upper part thereof, said hopper provided with an opening, a guideway, doors hinged on the guideway, yielding means for pressing the doors toward each other, a hollow valve slidably arranged in the guideway and adapted to move against the doors, said valve provided with an opening adapted to register with the first mentioned opening, a gas holder adapted to contain water in the lower part thereof, a basin mounted above the gas holder, passageways leading from the lower part of the gas holder to the lower part of the basin, a float arranged in said basin, and operative connections between the float and the hollow valve.

1,106,886. GARMENT-SUPPORTER. WILLIAM JOSEPH MOLLOY, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,280. (Cl. 24—264.)



A garment supporter comprising a member having a wedge slot, and a slidable catch carried by the member and adjustable to extend across the wedge slot, said catch having a longitudinal slot, one side of which is serrated, and a stud carried by the member, said stud extending into the slot and being engageable with the serrations.

1,106,887. MACHINE FOR REFINING USED GASOLENE OR NAPHTHA. GEORGE EMIL OLSEN, Laconia, N. H. Filed Apr. 14, 1913. Serial No. 760,977. (Cl. 210—10.)



1. An apparatus of the class described having, in combination, a tank adapted to contain water and oil, a pipe connected with said tank at the bottom thereof adapted to direct a stream of water into said tank and force the oil therein upwardly, means to determine the respective levels and conditions of said water and oil, a dome connected with said tank at the top thereof substantially smaller in diameter than said tank adapted to concentrate the oil said tank as said oil is being forced upwardly by said water, an outlet pipe connected with said dome adjacent the top thereof, and a discharge pipe leading from said outlet pipe.

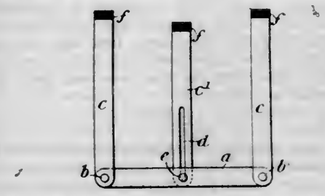
2. An apparatus of the class described having, in combination, a tank adapted to contain water and oil, a pipe connected with said tank at the bottom thereof adapted to direct water into said tank and force the oil therein upwardly, means to determine the respective levels of said water and oil, a dome connected with said tank at the top thereof and substantially smaller in diameter than said tank adapted to concentrate the oil in said tank as said oil is being forced upwardly by said water, an outlet pipe connected with said dome adjacent the top thereof, a discharge pipe leading from said outlet pipe, a portion of the casing of said discharge pipe being transparent whereby the nature of the liquid passing therethrough may be determined, and valves for said outlet and said exhaust pipes respectively.

3. An apparatus of the class described having, in combination, a tank adapted to contain water and oil, means adapted to mix the oil with said water, means to conduct water into said tank at the bottom thereof to force the oil in said tank upwardly, means to determine the respective levels of said water and oil, a dome connected with said tank at the top thereof substantially smaller in diameter than said tank adapted to concentrate the oil in said tank as said oil is being forced upwardly by said water, an outlet pipe connected with said dome adjacent the top thereof, and a discharge pipe leading from said outlet pipe, a portion of the casing of said discharge pipe being transparent whereby the nature of the liquid passing therethrough may be determined.

4. An apparatus of the class described having, in combination, a tank adapted to contain water and oil, an oil supply pipe entering said tank and terminating adjacent the bottom thereof, a valve located in said pipe, a water supply pipe for said tank adapted to admit water at the bottom of said tank to force said oil toward the top thereof, a valve for said water supply pipe, means to indicate the respective levels of the water and oil in said tank, a dome attached to said tank adjacent the top and substantially smaller in diameter than said tank adapted to concentrate said oil as the same is being forced upwardly by said water, an outlet pipe for said dome at the top thereof and an overflow for said tank connected with said dome.

5. An apparatus of the class described having, in combination, a series of tanks adapted to contain oil and water, means adapted to indicate the respective levels of said oil and water in said tanks, mechanical means adapted to mix the oil with the water in the first of said series of tanks, a concentrating dome connected to said tanks at the top thereof, an oil supply pipe for said first tank, a water supply pipe connected with said first tank at the bottom thereof adapted to force the oil in said tank into said concentrating dome, an outlet pipe extending from points adjacent the top of each of said domes to a point within and adjacent the bottom of the next successive tank, a water supply pipe connected to each of the succeeding tanks adjacent the bottom thereof adapted to force the oil in said tanks toward the tops thereof, and discharge pipes connected with each of said outlet pipes adjacent said dome, said discharge pipes having transparent casings adapted to permit inspection of the liquids passing therethrough.

1,106,888. TIRE-TOOL. ARTHUR PASS, Letchworth, England. Filed Nov. 25, 1913. Serial No. 803,076. (Cl. 157—6.)



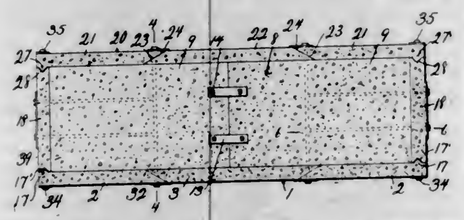
1. A tire tool, embodying therein a bar or handle, a lever arm carried near each end of said bar or handle, said lever-arms having their free operative ends substantially the same distance from said bar or handle, a third lever arm carried by said bar or handle intermediate the first mentioned lever arms, the free operative end of said third lever arm being a shorter distance from said bar or handle than the free operative ends of said first mentioned lever arms, and means on said lever arms whereby, when the latter are thrust between the tire and the rim of a wheel parallel with the plane of the latter and said tool is turned, said arms will pry the tire out of and over the wheel rim.

2. A tire tool, embodying therein a bar or handle, a lever arm pivoted near each end of said bar or handle, said

lever arms having their free operative ends substantially the same distance from said bar or handle, a pivot carried by said bar or handle intermediate said first mentioned lever arms, a third lever arm having an elongated slot engaging said pivot, said third lever arm having its free operative end a shorter distance from said bar or handle than said first mentioned lever arms, and means on said lever arms whereby, when the latter are thrust between the tire and the rim of a wheel parallel with the plane of the latter and said tool is turned, said arms will pry the tire out of and over the wheel rim.

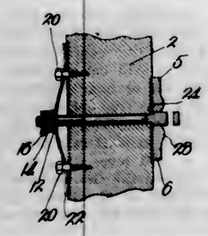
3. A tire tool, embodying therein a bar or handle, a lever arm pivoted near each end of said bar or handle, said lever arms having their free operative ends substantially the same distance from said bar or handle, a third lever arm pivotally carried by said bar or handle intermediate the first mentioned lever arms, the free operative end of said third lever arm being a shorter distance from said bar or handle than the free operative ends of said first mentioned lever arms, whereby the free operative ends of all said lever arms are adapted to simultaneously engage a tire, a supplementary lever pivoted to each of said first mentioned lever arms, said supplementary levers being adapted to bear on the wheel rim, and means on said lever arms whereby, when the latter are thrust between the tire and the rim of a wheel parallel with the plane of the latter and said tool is turned, said arms will pry the tire out of and over the wheel rim.

1,106,889. BURIAL-VAULT. LEONARD D. POWERS, Kenesaw, Nebr. Filed May 28, 1913. Serial No. 770,451. (Cl. 72—7.)



A burial vault having a bottom, sides and ends, a top formed from outer sections and an intermediate section, the outer sections having convergingly disposed reinforcing elements embedded therein, parallel arranged reinforcing elements embedded in the intermediate section and having their ends overlapping the inner ends of the converging elements, vertical rods embedded in the sides and having their upper ends engaged with the elements at their overlapping points, horizontal rods embedded in the sides and having their inner ends connected to the vertical rods, and their outer ends extended from said ends, as and for the purpose set forth.

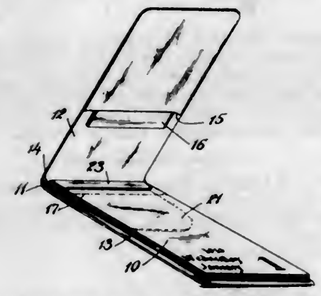
1,106,890. RETAINING DEVICE FOR DEMOUNTABLE RIMS. ROBERT B. ROBINSON, Kansas City, Mo. Filed July 26, 1913. Serial No. 781,305. (Cl. 152—21.)



1. In a device for securing demountable rims to wheels, a wedge member adapted to engage the rim and provided with a radially extending portion having a pair of spaced bosses and with a bolt-engaging recess, and a spring-actuated bolt permanently mounted on the wheel and adapted to be received in said recess, said bolt having a head adapted to removably engage said radially extending portion for moving the wedge member into clamping engagement with the rim, said bosses acting to retain said head engaged with the said radially extending portion.

2. In a device for securing demountable rims to wheels, a wedge member adapted to engage the rim and provided with a beveled radially extending portion having a pair of spaced bosses and a marginal bolt-engaging recess, and a spring-actuated bolt mounted on the wheel and provided with a head adapted, when the stem of the bolt is received in said recess, to be engaged by said beveled portion and partially withdraw the bolt against the action of its spring when the head is rotated, the continued rotation of the head causing it to be seated between said bosses with the wedge member held clamped against the rim.

1,106,891. WRITING-PAD HOLDER AND COVER. CHARLES L. ROCKWELL, Jersey City, N. J. Filed July 20, 1912. Serial No. 710,587. (Cl. 11—11.)



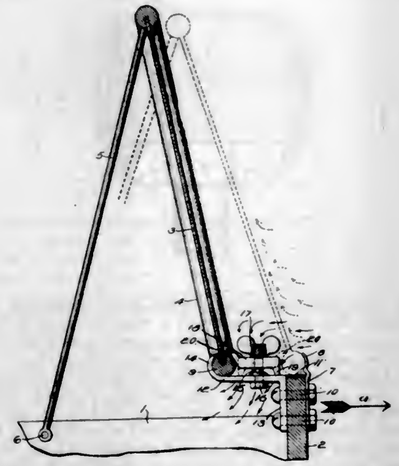
1. The combination with a cover having a pocket there in with a transverse edge, of a pad clamp having a flat tongue adapted to be slipped into said pocket and a channel having a turned-in cutting edge extending transversely of the cover; and a yielding pad of writing paper adapted to be slipped into the channel before the tongue is inserted in the cover pocket, said cutting edge and said transverse pocket edge being directly opposite each other and pressure being concentrated on the yielding pad between the two when the parts are in position.

2. The combination with a cover having a pocket therein with a transverse edge near the cover binding, of a pad clamp of sheet metal having a flat tongue adapted to be slipped into said pocket, the upper portion of said clamp being bent forward and downward to form a channel for receiving the end of a pad, and having the lower edge of said downwardly bent portion bent inwardly to form a holding and cutting edge, said cutting edge being located directly opposite the transverse edge of the aforesaid pocket to concentrate pressure on a pad along a line between said turned-in edge and the upper edge of said pocket when a yielding pad is in the clamp and the tongue of the clamp is in the pocket.

1,106,892. WIND-SHIELD-ADJUSTING DEVICE. WALTER F. ROPER, Hopedale, Mass. Filed July 25, 1913. Serial No. 781,094. (Cl. 21—148.)

1. In a device of the character described, the combination of a wind-shield mounted for adjustment to a closed or a ventilating position, means for sustaining the lower member of the wind-shield and a wedge member independent of the wind-shield for clamping the said lower member against said means for holding the wind-shield in either closed or ventilating position.

2. In a device of the character described, the combination of a wind-shield mounted for adjustment to a closed or a ventilating position, means including stops for sustaining the lower member of the wind-shield, and a wedge member independent of the wind-shield and having an inclined end portion for engaging the said lower member and holding the wind-shield against one of said stops in either closed or ventilating position.



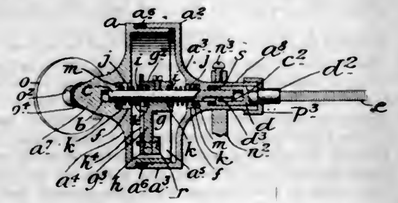
3. In a device of the character described, the combination of a wind-shield mounted for adjustment to a closed or a ventilating position, stops or seats against which the lower member of the wind-shield bears when in either of said positions, a wedge independent of the wind-shield, and means for clamping the wedge against the lower member of the wind-shield to hold said shield in either its closed or ventilating position.

4. In a device of the character described, the combination of a wind-shield mounted for adjustment to a closed or a ventilating position, stops or seats against which the lower member of the wind-shield bears when in either of said positions, a reversible wedge independent of the wind-shield, and means for clamping the wedge against the lower member of the wind-shield to hold said shield in either its closed or ventilating position.

5. A device for holding a wind-shield in closed or ventilating position, comprising stops and a reversible wedge, means for supporting the wedge between the ventilating and closed positions of the wind-shield, and means for clamping the wedge against the wind-shield in either of its two positions to hold the wind-shield either open or closed.

[Claims 6 to 9 not printed in the Gazette.]

1,106,893. VIBRATORY MASSAGE APPARATUS. JOHN SABATINO, Queens, N. Y. Filed Apr. 4, 1912. Serial No. 688,533. Renewed Dec. 15, 1913. Serial No. 806,883. (Cl. 128—16.)



1. In an apparatus of the class described, a casing composed of front and back parts rotatably and adjustably connected, a shaft mounted centrally in said casing and having longitudinal movement, a vibratory member mounted on said shaft and in eccentric relation thereto, springs mounted on the opposite end portions of said shaft and serving to center the vibratory member in said casing, and means for rotating said shaft.

2. In an apparatus of the class described, a casing, a shaft mounted therein, a vibratory member mounted on said shaft in eccentric relation thereto, said shaft having slight longitudinal movement, springs mounted on the end portions of said shaft and operating between the vibratory member and the sides of the casing, and means for rotating said shaft.

3. In an apparatus of the class described, a casing, a shaft mounted therein, a coupling connected with said shaft and in which said shaft is longitudinally movable and a flexible driving shaft connected with said coupling.

4. In an apparatus of the class described, a cylindrical casing composed of front and back parts adjustable toward and from each other, a vibratory shaft mounted in said casing and having bearings centrally of said parts and capable of longitudinal movement, a vibratory member connected with said shaft and springs mounted on the opposite end portions of said shaft and bearing on said vibratory member.

5. In an apparatus of the class described, a casing, a shaft mounted therein, a vibratory member connected with said shaft and in eccentric relation thereto, said vibratory member being in the form of a plate and provided in one side thereof with a groove, a detachable weight mounted on said plate and provided with a part movable in said groove, and said detachable weight being adjustably connected with said plate by means of longitudinal slots formed therein and screws passed therethrough and into said weight.

1,106,894. DENTAL MANDREL. ORIN C. SAMPHERE, Milwaukee, Wis. Filed Nov. 22, 1913. Serial No. 802,447. (Cl. 32—15.)

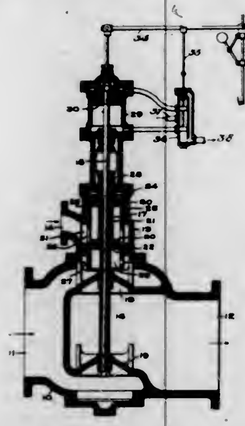


1. A dental mandrel including a driving shaft provided with a head, a pair of clutch dogs adjustably connected with the head and having their inner faces threaded, a tool engaging shank fitted to the head and provided with a screw thread adapted to be engaged by the threaded portions of said clutch dogs, and a clutch setting sleeve slidably mounted upon said head and adapted in one position to hold the dogs in screw connection with said shank.

2. A dental mandrel including a driving shaft provided with a head and a neck portion having a tool receiving extremity, a pair of clutch dogs adjustably connected with the head and having their inner faces threaded, a tool clamping shank extending through said neck portion into the head and threaded for engagement by the threaded portions of said clutch dogs, and a clutch setting sleeve slidably mounted upon said head, said tool clamping shank being headed and adapted to pass through an apertured tool to engage the same between its head and said extremity of the neck portion.

3. A dental mandrel, comprising the combination of a relatively stationary body, a driving shaft extending therethrough and provided with a slotted head, said head having a longitudinal shank receiving aperture, a screw threaded tool holding shank adapted to enter the aperture in said head, a set of clutch dogs resiliently mounted in the head slot and having their inner faces threaded to engage the threaded shank, the mountings of said clutch dogs being adapted to automatically retract them from shank engagement, and a sleeve mounted to slide upon the head and adapted to bear upon the clutch dogs and press them inwardly when the sleeve is in one position of adjustment, whereby said dogs are brought into engagement with the threaded tool holding shank.

1,106,895. VALVE MECHANISM. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Feb. 1, 1909. Serial No. 475,420. (Cl. 121—118.)



1. In combination, a prime mover which receive motive fluid from a plurality of sources at different pressures, a governor controlled valve which regulates the admission of fluid from a source at relatively low pressure to said prime mover, and means also controlled by the governor for admitting fluid from a source at higher pressure through said valve to the prime mover when the supply of low pressure steam is insufficient to drive the load.

2. In combination, a prime mover which receives motive fluid from two sources at different pressures, a governor controlled valve which regulates the admission of fluid from a source at relatively low pressure to the prime mover, and a second valve also controlled by the governor which admits fluid from a source at higher pressure through the first valve to the prime mover when the supply of low pressure fluid is insufficient to drive the load, said second valve reducing the pressure of the high pressure fluid before it enters the turbine.

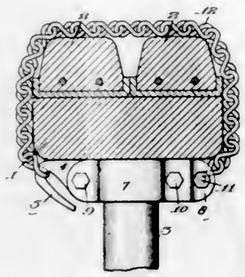
3. In combination, a prime mover which receives motive fluid from two sources at different pressures, a valve regulating the supply of fluid from a source at relatively low pressure to the prime mover, and a second valve in longitudinal alinement with the first valve which admits fluid from a source at higher pressure when the supply of low pressure fluid is insufficient to drive the load, the motive fluid from the second valve passing through the first and being delivered to the prime mover by the same conduit as the low-pressure fluid.

4. In combination, a prime mover which receives motive fluid from two sources at different pressures, a valve which regulates the admission of fluid from a source at relatively low pressure to the prime mover, a stem for the valve, a second valve actuated by said stem which admits fluid from a source at higher pressure to the prime mover when the supply of fluid at low pressure is insufficient to drive the load, and a conduit which receives the motive fluid from both valves and delivers it to the same part of the prime mover.

5. In combination, a prime mover which receives motive fluid from two sources at different pressures, a governor controlled valve which regulates the admission of fluid from a source at relatively low pressure to the prime mover, a stem for the valve, a second valve mounted on said stem which admits fluid from a source at higher pressure to the prime mover when the supply of low pressure fluid is insufficient to drive the load, the motive fluid from the second valve passing through the first, and a conduit that is common to and receives the fluid from both sources after it passes through the valves.

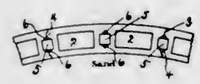
[Claims 6 to 12 not printed in the Gazette.]

1,106,896. ANTISKID DEVICE FOR TIRES. FRANK SCHNACKEL, Rochester, N. Y. Filed Mar. 7, 1912. Serial No. 682,100. (Cl. 152—14.)



An anti-skid device for vehicle tires comprising two clamping bars each formed with a recess between its ends, one of said bars having a hook at one end with its opposite end laterally deflected, the other bar having a laterally deflected portion opposed to the deflected portion of the first mentioned bar, the deflected portions having alined perforations, a bolt connecting the bars on one side of said recessed portions, another bolt connecting the bars on the other side of said recessed portions between the recessed portions and said laterally deflected portions, a link chain having one of its links passed over said hook and having a link at its other end projected in between the laterally deflected portions of the clamping bars, and a pin passed through the perforations of the laterally deflected portions and through said last mentioned link of the chain.

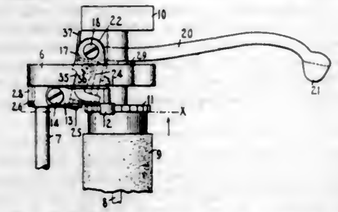
1,106,897. SILO. EDWARD M. SELLORS, Fort Worth, Tex., assignor of one-half to A. McKenna, Fort Worth, Tex. Filed Oct. 28, 1913. Serial No. 797,804. (Cl. 72—6.)



1. A silo constructed of concrete blocks laid end to end in tiers and having the meeting ends of the blocks connected by dovetailed joints, each block having a vertical groove in each end for receiving sealing devices and having a vertical opening through the center thereof for sealing devices and having relatively large vertical openings therethrough for dead air spaces, each tier of blocks breaking joints with the adjacent tiers of blocks, wooden bars and sand running through the openings between the meeting faces of the blocks and terminating in the central openings of the adjacent tiers of blocks, and a flexible mat between the horizontal faces of each two adjoining tiers.

2. Building blocks for silo walls laid end to end and in tiers, the blocks of one tier breaking the joints between the blocks of adjacent tiers, each block having a vertical central opening therethrough and each block having a vertical groove in each end thereof whereby a vertical opening is formed between each two blocks, a wooden bar running through the opening between each two meeting ends and approximately half through the blocks of the adjacent tiers, sand in the openings about the wooden bars, a flexible mat between the horizontal faces of the tiers, each block having dead air spaces vertically therethrough, and a cement sealing poured into said dead air spaces on said mat to coöperate with said mat to form a seal between the tiers.

1,106,898. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 2, 1913. Serial No. 758,348. (Cl. 197—121.)



1. In a typewriting machine, the combination of a platen, a connected line spacing wheel, a pawl carrier pivoted on a vertical axis in rear of the platen axis, a pawl pivoted on said carrier, said pawl having a horizontal axis of rotation, and a device on said carrier for regulating normally the vertical position of the engaging tooth of said pawl.

2. In a typewriting machine, the combination of a platen, a line spacing ratchet wheel connected thereto, a hand operated pawl carrier arranged under the platen axle and pivoted to swing in a path substantially parallel thereto, and a pawl on said carrier variably settable in a vertical plane to vary the effective stroke of said pawl, said pawl being adapted to coöperate with said ratchet wheel but being normally separated therefrom.

3. In a typewriting machine, the combination of a platen, a line spacing ratchet wheel connected thereto, a hand operated pawl carrier arranged under the platen axle and pivoted to swing in a path substantially parallel thereto, a pawl on said pawl carrier pivoted to swing in a vertical plane, said pawl being adapted to engage with said ratchet wheel at the under side thereof in rear of a vertical plane passing through the platen axle, and means for varying the height at which the tooth of said pawl is normally located.

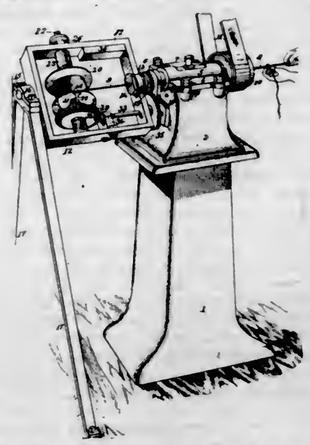
4. In a typewriting machine, the combination of a platen, a line spacing ratchet wheel connected thereto, a hand operated pawl carrier arranged under the platen axle and movable in a path substantially parallel thereto, a pawl on said pawl carrier pivoted to swing in a vertical plane, a pawl spring tending constantly to swing said pawl upward, said pawl being adapted to engage with said ratchet wheel at the under side thereof in rear of a vertical plane passing through the platen axle, and means for varying the height at which the tooth of said pawl is normally located, said means comprising a device pivoted on said pawl carrier and swingable to permit said pawl spring to raise said pawl to different heights.

5. In a typewriting machine, the combination of a platen carrier, a platen thereon, a line space ratchet wheel arranged at the right of said platen and operatively connected thereto, a pawl carrier pivoted on a vertical axis, said axis being to the right of said ratchet wheel and in rear of the platen axle, a pawl pivoted on said pawl carrier to swing in a vertical plane, said pawl being adapted to coöperate with the under side of said ratchet wheel, a spring tending constantly to swing said pawl upward, and means for regulating the normal height of the pawl tooth.

[Claims 6 to 14 not printed in the Gazette.]

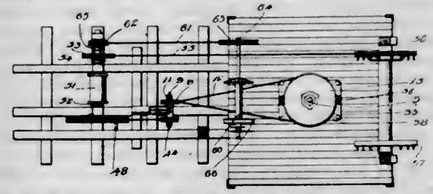
1,106,899. TWISTING-MACHINE. WILLARD G. STAPLES, Newburyport, Mass., assignor, by mesne assignments, to Federal Metallic Packing Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 15, 1909. Serial No. 483,398. (Cl. 28—21.)

1. A twisting machine, having, in combination, a frame rotatably mounted, two spindles mounted on opposite sides of said frame, one of which is fixed and the other longitudinally movable, a reel rotatably mounted between said spindles and adapted to turn thereon, a gear mounted on said fixed spindle, a friction spring secured to said gear and contacting one side of said reel, means to turn said gear and said spring when said frame is rotated and adjustable means for forcing said reel against said friction spring.



2. A twisting machine comprising a rotatable frame, a spindle fixed on one side of said frame, a friction spring mounted on said spindle, means for turning said friction spring when said frame is rotated, a sleeve fixed in the opposite side of said frame, a spindle having an enlarged portion mounted within said sleeve and longitudinally movable therein, a nut threaded into the outer end of said sleeve, a helical spring mounted on said last mentioned spindle and abutting at one end said enlarged portion of said spindle and at the other end said nut for forcing said spindle inwardly and a reel mounted on and between said fixed spindle and said movable spindle.

1,106,900. DRILLING-RIG. ROSCOE W. STEPHENS, Pasadena, Cal. Filed June 18, 1913. Serial No. 774,364. (Cl. 255—19.)



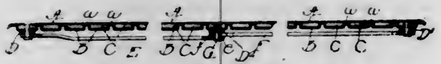
1. In a drilling rig, the combination with the derrick, of an engine provided with a shaft, a plurality of wheels on said shaft, a clutch for connecting each of said wheels to said shaft, a rotary table provided with a wheel portion, a cable connecting said wheel portion of the rotary table with one of said wheels on the engine shaft, a second shaft, a wheel on said second shaft, a cable connecting said wheel on said second shaft with the other wheel on said engine shaft, a plurality of clutches on said second shaft, wheels connected to said second shaft by said clutches, a bull wheel and a draw works for the rig, wheels connected to said bull wheel and draw works respectively and cables engaging said last named wheels and said wheels connected by clutches to the said second shaft.

2. In a drilling rig, the combination with the derrick, of an engine provided with a shaft, a wheel on said shaft, a clutch for connecting the said wheel to the shaft, a rotary table provided with a wheel portion, a cable connecting said wheel portion of the rotary table with said wheel, a second shaft provided with a plurality of clutches, wheels on said second shaft and on the engine

shaft, a clutch connecting said engine shaft and last named wheel thereon, a cable connecting said last named wheels, a sand drum on said second shaft connected to said shaft by one of said clutches, a bull wheel and a draw works for the rig and wheels connected to said bull wheel and draw works respectively, and cables engaging said last named wheels and two of the wheels on said second shaft, connected thereto by two of said clutches thereon and engaging said last named cables to operate the bull wheel and draw works from said second shaft, each of said cable-engaging wheels being provided with gripping means to forcibly grip the cable.

3. In a drilling rig, the combination with the derrick, of an engine provided with a shaft, a wheel on said shaft, a clutch for connecting said wheel to the shaft, a second shaft provided with a wheel, a cable connecting said wheels, a sand drum on said second shaft, a clutch connecting said sand drum to said second shaft, a bull wheel and a draw works for the rig, each provided with a driving wheel, cables engaging with said wheels of the bull wheel and draw works, wheels on said second shaft engaging said last named cables to drive the bull wheel and draw works from said second shaft, and clutches on said second shaft for connecting said shaft to said wheels for driving the bull wheel and draw works, each of said cable-engaging wheels being provided with gripping means to forcibly grip the cable to the wheel.

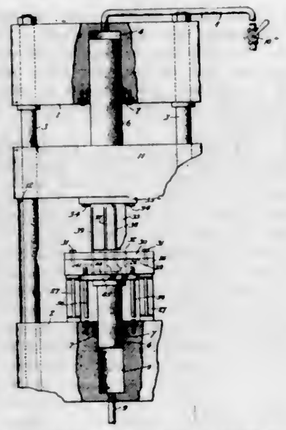
1,106,901. LAP-BOARD. JAMES STONE, Chicago, Ill. Filed Feb. 1, 1911. Serial No. 605,860. (Cl. 45—46.)



1. A lap-board comprising an upper and a lower layer of flexible fabric, the upper layer being adapted to lie in a plane when the board is distended to provide a smooth, flat top surface therefor, and the lower layer being united to the upper layer along transversely extending parallel lines to form a series of parallel, transversely extending pockets; the part of the lower layer forming each pocket being wider than the corresponding part of the upper layer, stiffening strips inserted in said pockets and forming with the fabric a series of flexibly connected, longitudinally extending stiffened members, metal strips, located one at each end of the board, said metal strips being secured to the under sides of the end sections or stiffened members thereof, and two pairs of distending bars, one pair at each end of the board; the bars of each pair being pivotally connected each at one end with one end of the associated metal strip; said bars being no greater in length than the width of the board and approximately one-half of the length of the same; the bars of each pair, when in non-operative position, overlapping each other and extending transversely of the board, and, when distended, extending lengthwise of the board with their free ends overlapping each other, and means for detachably connecting with each other the free ends of said bars, embracing studs on one of the intermediate sections or stiffened members.

2. A lap-board comprising an upper and a lower layer of flexible fabric, the upper layer being adapted to lie in a plane when the board is distended to provide a smooth, flat top surface therefor, and the lower layer being united to the upper layer along transversely extending parallel lines to form a series of parallel, transversely extending pockets; the part of the lower layer forming each pocket being wider than the corresponding part of the upper layer, stiffening strips inserted in said pockets and forming with the fabric a series of flexibly connected, longitudinally extending stiffened members, metal strips, located one at each end of the board, said metal strips being secured to the under sides of the end sections or stiffened members thereof, an intermediate metal strip secured to the under side of one of the intermediate sections or stiffened members of the board, and two pairs of distending bars, one pair at each end of the board; the bars of each pair being pivotally connected at one end with one end of the associated metal strip; said bars being no greater in length than the width of the board and approximately one-half of the length of the same; the bars of each pair, when in non-operative position, overlapping each other and extending transversely of the board, and, when distended, extending lengthwise of the board with their free ends overlapping each other; the ends of said intermediate bar and the free ends of the distending bars being provided with interlocking, detachable connecting devices.

1,106,902. DIE-PRESS FOR FORMING RAILWAY-CAR JOURNAL-BOXES. GEORGE THOMPSON, Chicago, Ill. Filed Aug. 9, 1913. Serial No. 784,002. (Cl. 113—38.)



1. In a die press for forming journal boxes and the like, the combination of a female die member having a seat about the opening therein for receiving a flat blank and provided with a part extending over said seat for engaging the edge portions of the blank, a supporting die movable through said female die, a coöperating male die, means for initially moving said male die through said female die to form the lower portion of the journal box against said supporting die and for thereafter moving said male and said supporting dies together to complete the formation of the walls of the box and means for holding said supporting die stationary during the initial movement of said male die, substantially as described.

2. In a die press for forming journal boxes and the like, the combination of a female die member having a seat about the opening therein for receiving a flat blank and provided with a part extending over said seat for engaging the edge portions of the blank, a supporting die movable through said female die, a coöperating male die, and means for initially moving said male die through said female die to form the lower portions of the journal box and for thereafter shifting said movable dies together with the lower portion of the box gripped between them to complete the formation of the box and means for holding said supporting die stationary during the initial movement of said male die, substantially as described.

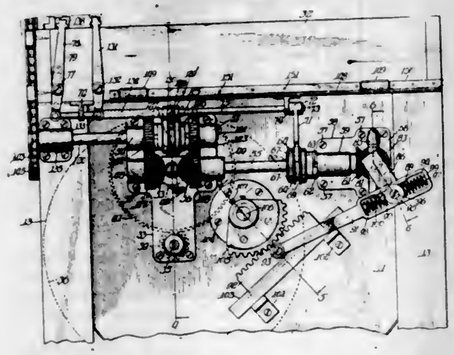
3. In a die press for forming journal boxes, the combination of a female die having an opening extending therethrough and provided with a transverse slot about said opening for receiving and engaging the edge portions of a flat blank, a supporting die movable through said opening, a coöperating male die, means for initially moving the latter through said opening to form the lower portion of the journal box against said supporting die, and for then shifting said movable dies together with the bottom of the box held between them to complete the formation of the box walls and pressure means for holding said supporting die stationary during the initial movement of said male die, substantially as described.

4. In a die press for forming journal boxes and the like, the combination of a female die member having a seat for receiving a flat blank and provided with a part extending over said seat for engaging the edge portions of the blank, the opening through said part being slightly smaller than said die opening, a supporting die movable through said die opening, a coöperating male die, means for initially moving said male die through said female die and against said supporting die to form the lower portion of the journal box and for then shifting said movable dies together with the bottom of the box gripped between them to complete the formation of the side and end walls of the box and pressure means for holding said supporting die against movement during the initial movement of said male die, substantially as described.

5. In a die press for forming journal boxes, the combination of a female die member having a substantially rectangular opening extending therethrough and conforming to the horizontal sectional outline of the journal box, a supporting die conforming to the lower surface of the box, a coöperating male die conforming to the interior of the box and arranged, during the initial part of its movement, to form the lower portion of the journal box against said supporting die, and upon its continued movement, to advance said supporting die and complete the formation of the side and end walls against the working faces of said female die, means for shifting said male die and means for yieldingly holding said supporting die against movement during the initial movement of said male die, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,106,903. POWER-TRANSMITTING DEVICE. EMORY UPTON, Benton Harbor, Mich., and LOUIS C. UPTON, La Grange, Ill., assignors to Upton Machine Co., a Corporation of Michigan. Filed Jan. 17, 1911. Serial No. 603,058. (Cl. 74—59.)

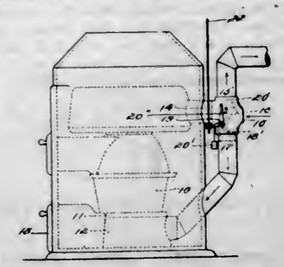


1. In a device of the character described, a constantly rotatable power shaft, a beveled gear thereon, a train of gears on each side of the said beveled gear, each train carrying a coöperating beveled gear engaging the first mentioned beveled gear on opposite sides of its axis, a device to be rotated, a power-transmitting means adapted for connection to either of said trains of gears, and a clutch between said trains of gears for connecting either of said trains to the said power-transmitting means.

2. In a device of the character described, a stationary structure, power transmission mechanism secured to a vertical wall of said structure, an overhanging projecting wall from said vertical wall, and an apron hinged to the outer edge of said projecting wall to partially house said transmission mechanism.

1,106,904. DRAFT-REGULATOR. ARTHUR W. WALKER, Malden, Mass. Filed Oct. 18, 1912. Serial No. 726,417. (Cl. 126—293.)

1. A draft regulator for furnaces comprising the combination of a duct for draft of air to the under side of the grate; a duct from the upper side of the grate to the chimney flue, these ducts passing adjacent to each other; and a unitary damper comprising a movable direct continuation of the wall of each duct, located where the ducts are adjacent to each other, regulating both and preventing interchange of gases between them.



2. A draft regulator for furnaces comprising the combination of separate ducts for indraft of air and outdraft of products of combustion, passing in proximity to each other, and an L-shaped regulating damper having a vane projecting into each duct.

3. A draft regulator for furnaces comprising the combination, with a duct for draft of air to the grate, a duct from the grate to the chimney and an air inlet adapted to be connected to each duct, of a damper having interconnected vanes, one regulating the duct to the grate, another the duct to the chimney, and a third the air inlet, the whole arranged and adapted to open the passage from grate to the chimney progressively as the air draft to the grate opens, closing the air inlet connection to the chimney duct progressively during the first part of the motion and closing the air inlet during the latter part of the motion.

4. A draft regulator for furnaces comprising a box, containing passages through which air goes in to the grate and the products of combustion go out to the chimney, combined with a damper pivoted within the box at the corner between the said two passages, separating the said two passages so as to prevent interflow of gases and regulating them simultaneously and similarly.

5. A draft regulator for furnaces comprising a box having an outlet downward for draft of air to the grate; an inlet on one side receiving discharge from the furnace; an inlet on the opposite side receiving air; and an outlet upward to the chimney; combined with a damper pivoted between the first mentioned outlet and first mentioned inlet, comprising one vane apportioning the chimney connection between the inlets while the said vane is in an upper portion of its swing, closing the connection of chimney to air inlet while in a lower portion of its swing, and another vane gradually opening the outlet to the grate as the first mentioned vane swings downward.

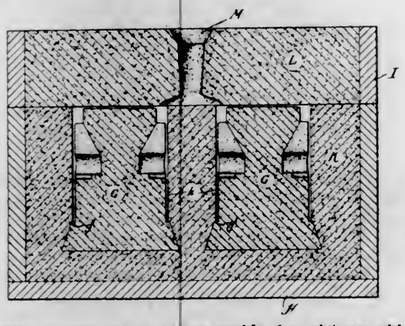
[Claims 6 to 9 not printed in the Gazette.]

1,106,905. PROCESS OF PRODUCING PISTONS. ALBERT WEBER, Cleveland, Ohio, assignor to The Ferro Machine and Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 20, 1913. Serial No. 802,043. (Cl. 22—197.)

1. The process of producing molds for pistons which consists in placing an annular pattern in a flask section; filling the said flask section with sand to a point below the open upper end of the pattern; then ramming; then inserting in the pattern a core fitting accurately the inner wall of said pattern, the core having an outwardly flaring end in the flask section above the open end of the pattern; then filling and ramming the flask section; applying a bottom board to the upper end of the flask section; inverting the flask section and removing the pattern board and the attached pattern; and applying to the upper end of the flask section the second flask section with its mold section therein.

2. The process of producing molds for pistons which comprises placing an annular pattern in the bottom of an

inverted flask section; filling the said flask section with sand to a point below the open end of the pattern; then ramming; then inserting in the pattern a core fitting accurately the inner cylindrical wall of the pattern, the core having an outwardly flaring end in the flask section above the open end of the pattern; then filling and ramming the flask section; applying a bottom board to the upper end of the flask section, inverting the flask section and removing the pattern board and the attached pattern; and applying to the upper end of the flask section the second flask section with its mold section therein.



3. The process of producing molds for pistons which comprises applying to one end of a flask section a pattern plate with a hollow cylindrical pattern thereon; arranging the flask section, pattern and plate so that the open end of the pattern projects upwardly within the flask section; applying to the pattern a core which fits accurately the inner wall thereof and which is provided with an extension above the open end of the pattern; ramming the flask section with sand; inverting the flask section; removing the pattern; and applying a second flask section with its mold section to the upper end of the first mentioned flask section.

4. The process of producing molds for cast pistons which comprises introducing into a flask section an annular pattern having its open end presented upwardly; placing within the pattern a core fitting snugly the inner surface of the pattern, the core having a locking extension above the open upper end of the pattern; and filling and ramming the flask section; removing the pattern.

5. The process of producing molds for cast pistons which comprises introducing into the bottom of a flask section an annular pattern having its open end presented upwardly; filling the flask section with sand to a point below the upper end of the pattern; ramming the sand; placing within the pattern a core fitting snugly the inner surface of the pattern, the core having an upwardly and outwardly flaring extension above the open upper end of the pattern; filling and ramming the flask section; inverting the flask section and removing the pattern; and applying to the top of the flask section a second flask section having its mold section therein.

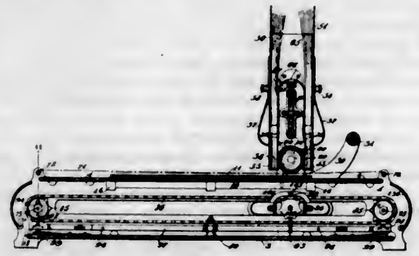
[Claims 6 to 8 not printed in the Gazette.]

1,106,906. PRINTING-MACHINE. BRENNAN B. WEST, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 29, 1908. Serial No. 440,786. (Cl. 101—11.)

1. In a printing machine, the combination, with the printing couple having a stationary type bed, of a movable inking ribbon, and means for delivering the printed sheet by the movement of the ribbon.

2. The combination of a printing couple having a traveling roller impression platen and a stationary type carrying member which print by rolling contact, an inking ribbon extending between the two, and means for moving the ribbon after the impression to deliver the printed sheet.

3. The combination of a printing couple having a roller impression platen and a type carrying member which print by rolling contact, an inking ribbon extending between the two, and means for moving the ribbon after a printing impression a distance substantially as great as the length of the printed sheet to deliver such sheet.

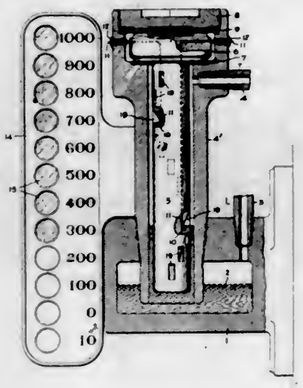


4. The combination of a flat type bed and a roller impression platen adapted to travel back and forth over the same, an inking ribbon lying between them, and means for moving the ribbon to deliver the printed sheet.

5. The combination of a printing couple, a spring barrel, a combined inking and delivery fabric controlled by the spring barrel, and means for controlling the spring barrel to effect the delivery of the printed sheet.

[Claims 6 to 79 not printed in the Gazette.]

1,106,907. ELECTRIC CONTACT-MAKER FOR FLOW-METERS. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 2, 1914. Serial No. 809,855. (Cl. 177—351.)



1. In a measuring instrument, a casing, a body of mercury therein, means communicating with said casing which defines a vertical passage in which the mercury rises and falls, said means having a series of vertically spaced pockets containing mercury arranged therein, and electrical conductors leading to said pockets.

2. In a measuring instrument, a casing, a body of mercury therein, means communicating with said casing which defines a vertical passage in which the mercury rises and falls, said means having arranged therein a series of vertically spaced pockets containing mercury, the pockets being set in from the surface of said means and separated therefrom by a short surface, and electrical conductors leading to said pockets.

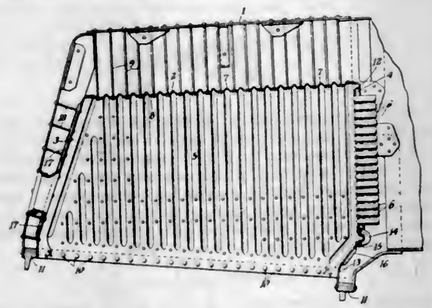
3. In a measuring instrument, a casing, a body of mercury therein, a tube communicating with said casing in which said mercury rises and falls, a contact carrying member arranged within said tube having pockets containing mercury formed therein, and electrical conductors terminating in said pockets.

4. In a measuring instrument, a casing, a body of mercury therein, a tube communicating with said casing in which said mercury rises and falls, a contact carrying member supported in said tube having recesses formed therein with pockets containing mercury in the bases of said recesses, said pockets being spaced from the outer surfaces of the support and connected thereto by short surfaces, and electrical conductors terminating in said pockets.

5. In a flow meter, a casing, a body of mercury therein, a tube having an enlarged head communicating with said casing and forming the trailing leg thereof in which the mercury rises and falls, a contact carrying member having a flanged end inserted in said tube with the flanged end resting in said enlarged head, means for clamping the flanged end therein, a series of vertically arranged pockets containing mercury in the contact carrying member, and circuit wires leading to said pockets.

[Claim 6 not printed in the Gazette.]

1,106,908. BOILER. WILLIAM H. WOOD, Media, Pa. Filed Oct. 18, 1913. Serial No. 795,862. (Cl. 122—58.)



1. In a steam boiler, a tube sheet having a series of apertures for the tubes and provided with a corrugation substantially encircling the apertured area, and means for reinforcing said tube sheet along said corrugation.

2. In a steam boiler, a tube sheet having a series of apertures for the tubes and provided with a corrugation substantially encircling said apertured area and also having a plurality of corrugations below said encircling corrugation, and means for reinforcing said tube sheet along said encircling corrugation.

3. In a steam boiler, a tube sheet having a series of apertures for the tubes and provided with a corrugation encircling the apertured area, and a plurality of reinforcing brackets secured to said tube sheet and disposed at suitable intervals along said corrugation.

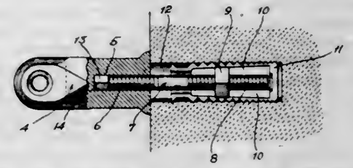
4. In a steam boiler, a tube sheet having a series of apertures for the tubes and provided with a corrugation substantially encircling said apertured area, and a plurality of reinforcing brackets straddling said corrugation and secured to said tube sheet.

5. In a steam boiler, a fire box comprising a tube sheet and a throat sheet, and provided with a corrugation having a portion located at the junction of said tube sheet with said throat sheet and substantially encircling the tube area, said throat sheet having a plurality of substantially vertically arranged corrugations, and a plurality of brackets straddling said encircling corrugation and secured at one end to said tube sheet, and at the other end to said throat sheet.

[Claim 6 not printed in the Gazette.]

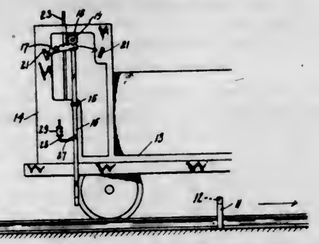
1,106,909. ANCHORED WALL-FIXTURE. LOTHAR R. ZIFFERER, Chicago, Ill., assignor to U. S. Expansion Bolt Company, New York, N. Y., a Corporation of New York. Filed Sept. 12, 1911. Serial No. 648,899. (Cl. 85—2.4.)

In a device of the class described, the combination of an anchor member, a wall fixture formed with a threaded socket in the body thereof, and a separable threaded stem for securing said fixture to said member having one end threaded to engage within said fixture socket, and the other end threaded to engage with said anchor member, the end of said stem engaging with the fixture having threads thereon of a size and pitch corresponding with



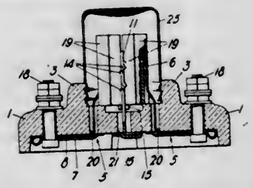
the threads within the fixture socket, and the end engaging with the anchor member having threads thereon of a size or pitch slightly different from the threads within the anchor member, whereby friction is created binding the stem more tightly within the anchor member than within the fixture socket, substantially as described.

1,106,910. AUTOMATIC STOP FOR RAILWAYS. ARNOLD ZUKOR, New York, N. Y. Filed Mar. 10, 1914. Serial No. 823,703. (Cl. 246—59.)



In an automatic railway stop, the combination with a two-armed lever pivoted to the side of a locomotive provided upon its upper end with a gear segment, its lower end being adapted to coöperate with a signal bar disposed upon the side of the track, of a starting lever controlling the admission of steam into the locomotive, a spindle rotatably mounted upon the locomotive, a pinion carried by said spindle in mesh with said gear segment, a toothed rack adapted to bear against said starting lever, a second pinion upon said spindle meshing with said rack, whereby when said two-armed lever is shifted by said signaling bar said starting lever is set to closing position, and when said starting lever is moved to opening position said two-armed lever is returned to its normal position.

1,106,911. PROTECTOR. JOSEPH ZWILLING, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 8, 1914. Serial No. 837,201. (Cl. 175—30.)



1. In a protective apparatus, a plurality of springs or contact plates, a base upon which said springs or contacts are mounted with a portion thereof upon each side of said base, a moistureproof insulating compound applied to the portion of said springs or plates upon one side of said base, and means for preventing said compound spreading

over the portion of said springs or plates upon the opposite sides of said base.

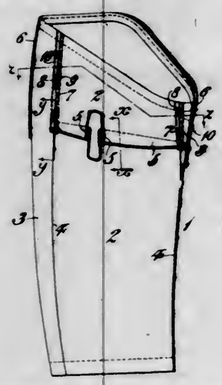
2. In a protective apparatus, a base having openings therethrough and recessed in one face thereof, contact springs or plates extending through said openings, and means on said contact springs or plates fitting snugly into said recess and covering said openings.

3. In a protective apparatus, a supporting base provided with openings therethrough and recesses upon one face, and supporting springs or plates for said protective apparatus extending through said openings, said supporting springs or plates being provided with a bent-over portion adapted to fit into said recesses and cover said openings.

4. In a protective apparatus, a supporting base provided with openings therethrough and recesses upon one face, and supporting springs or plates for said protective apparatus extending through said openings, said supporting springs or plates being provided with a bent-over portion, said bent-over portion having its edge formed into a lip or flange which is adapted to fit into said recesses and cover said openings.

5. In a protective apparatus, a supporting base provided with openings therethrough and recesses upon one face, and supporting springs or plates for said protective apparatus extending through said openings, said supporting springs or plates being provided with a bent-over portion, said bent-over portion having a greater width than the body-portion of said supporting springs or plates, and having the part adjacent to the edge of said bent-over portion formed into a lip or flange adapted to fit into said recesses and cover said openings.

1,106,912. LINING FOR SLEEVES. WILLIAM ABRAHAMS, Philadelphia, Pa. Filed Mar. 3, 1914. Serial No. 822,119. (Cl. 2—61.)



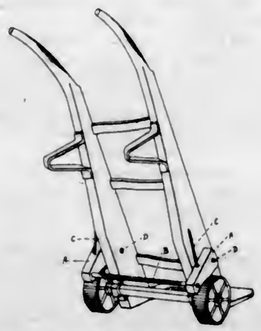
1. A lining for a sleeve provided in the length thereof with a transversely extending plait, said plait being held in form by securing means at its terminal portions only, leaving the portion intermediate its terminals free to expand.

2. A lining for a sleeve provided in the length thereof with a transversely extending plait, said plait being held in form by securing means at its terminal portions only, leaving the portion intermediate its terminals free to expand, and a stay piece secured to the lining over said terminals.

3. A lining for a sleeve comprising a plurality of sections connected by longitudinal seams, one of said sections being provided in the length thereof with a transversely-extending plait, the same having its terminals connected firmly with the adjacent portions of the lining, a stay over said terminals, and a plurality of means adapted to secure said stay to said terminals respectively at the longitudinally-extending seams in the lengths of said lining.

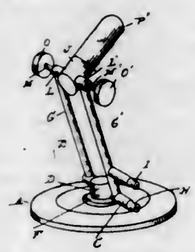
4. A lining for a sleeve provided in the length thereof with a transversely extending plait, said plait being held in form by securing means at its terminal portions only, leaving the portion intermediate its terminals free to expand, and a stay piece secured to the lining over said terminals, said stay having an extension from said plait to the top of the lining and secured throughout its length to the lining.

1,106,913. BRAKE FOR HAND-TRUCKS. CHARLES E. BADGER and FRED G. HALLADAY, Appleton, Wis. Filed Mar. 10, 1913. Serial No. 753,207. (Cl. 21—65.)



The combination with a two-wheeled truck, of a pair of hardwood shoes, attached by bolts to the side frame of the truck, the shoes connected by a rod, passing through the outer end of each shoe, which may be "up-set" or riveted at each end to hold it in position; with a spiral spring connecting each brake shoe with the side frame of the truck, the whole constructed and arranged substantially as and for the purpose herein set forth.

1,106,914. BLOWPIPE. ARTHUR W. A. BARTLETT and ROBERT M. KERR, Detroit, Mich., assignor to Detroit Dental Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 16, 1912. Serial No. 684,196. (Cl. 158—109.)



1. In a blow pipe, the combination with a base, of a tubular frame, a burner carried by said tubular frame, a cross bar on said frame, and a post forming a bearing for said cross bar adjustably engaging said base and constituting a clamp for holding said tubular frame in different positions of angular adjustment.

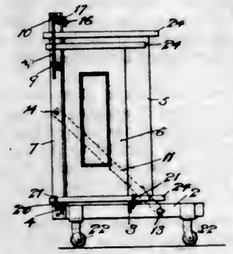
2. In a blow pipe, the combination with a base, of a tubular frame comprising spaced air and gas conduits, a cross bar, a post carried by said base to which said cross bar is pivotally connected, a burner carried by said tubular frame, said cross bar constituting an extension of one of said conduits, and said post being adjustable in relation to the base to constitute a clamp for holding said tubular frame in different positions of angular adjustment.

3. In a blow pipe, the combination with a base, of a frame comprising parallel air and gas tubes, flexible conduit engaging nipples upon said tubes, said frame having a cross portion pivotally connecting the frame with said base, a burner between said tubes at the upper end thereof, hollow members connecting said burner with said tubes, and controlling valves within said hollow members having their operating stems in axial alinement therewith.

4. In a blow pipe, the combination with a frame comprising spaced air and gas conduits, of a burner at the upper end of said frame arranged between the conduits, hollow angle-shaped members carried by said conduits having bearing faces, coöperating bearing faces on the burner, and valves within said hollow members having their operating stems in axial alinement therewith, said burner being held in its position of adjustment by the friction of said hollow members, which are constructed to be resiliently pressed against the bearing surfaces on the burner by the spaced conduits.

5. In a blow pipe, the combination with a frame comprising spaced air and gas conduits, of a burner at the upper end of said frame arranged between the conduits, hollow members connecting said burner with said conduits, and controlling valves within said hollow members.

1,106,915. ARTICLE-HOLDER FOR LIQUID-COATING DEVICES. REME A. BEAUSEJOUR, New York, N. Y., assignor to Standard Varnish Works, New York, N. Y., a Corporation of New York. Filed Mar. 29, 1912. Serial No. 687,141. (Cl. 91—60.)



1. An article holder of the character described comprising a framework having a pair of top members, a pair of bottom members, and devices arranged to slidably fit in said top and bottom members for holding the articles in position in the holder.

2. An article holder of the character described comprising a framework having a pair of top members, a pair of bottom members, a single set of devices arranged to slidably fit in the pair of top members, and two sets of devices arranged to slidably fit in the pair of bottom members, the said devices being adapted to hold the articles in position in the holder.

3. An article holder of the character described comprising a framework having a pair of top members in one plane, a pair of bottom members in another plane, and devices arranged to slidably fit in said members for holding the articles in position in the holder.

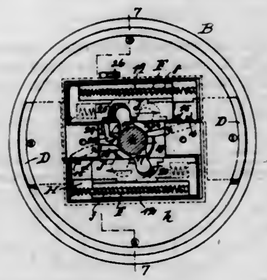
4. An article holder of the character described comprising a framework having a pair of adjustable top members, a pair of bottom members and devices arranged to slidably engage said members for holding the articles in position in the holder.

5. An article holder of the character described comprising a framework having top and bottom members, pins arranged to slidably engage the top members and staples arranged to slidably engage the bottom members, the said pins and staples serving to hold the articles in position in the holder.

[Claims 6 and 7 not printed in the Gazette.]

1,106,916. LOCK. EDGAR M. BENHAM, Norwood, Ohio, assignor to American Bankers Safety Co., a Corporation of Delaware. Filed Aug. 25, 1913. Serial No. 786,356. (Cl. 109—3.)

1. In a locking-device of the kind here in view, the combination of a door, a member for locking it, a set of combination-tumblers and an actuating spindle for them, all carried by the door, a spring adapted to move the locking-member into locking position, another spring adapted to move it out of this position, a spring-carrier adapted to act against one end of each of the springs to compress them, means to move the spring-carrier for this purpose and means to releasably hold it in this position, a spring-actuated pawl to releasably hold the door-locking member against the action of one of the springs, means provided on the spindle and adapted upon manipulation of the same to actuate the pawl so as to release the locking-member to permit it to move into locking position, and operatively connected mechanism whereby upon tumbler-adjusting operation of the spindle the means before mentioned and which hold the spring carrier, are actuated to release this latter and permit it to be shifted by the other spring for moving the locking-member into unlocking position.



2. In a locking-device of the kind here in view, the combination of a door provided with a lock-casing, a set of combination-tumblers, and an actuating spindle provided for them and carried by the door, a door-locking member movably fitted to the door and provided with a shank which extends into the lock-casing, a spring-carrier fitted into this latter and arranged so as to be capable of moving with the shank of the locking-member and also independent thereof, two springs, one confined between the spring-carrier and the locking-member and the other confined between the spring-carrier and opposite parts of the lock-casing, an arm in engagement with the spring carrier supported for actuation in the lock-casing to move the spring-carrier to compress both springs, means to releasably hold it in this spring-compressing position, a spring-actuated pawl to hold the locking-member against the action of one of these springs while being compressed, a projection provided on the inner end of the spindle and adapted upon manipulation of this latter to actuate the pawl so as to release the locking-member and permit it to move in one direction and independent of the spring-carrier, and operatively connected mechanism whereby upon tumbler-adjusting operation of the spindle, means before mentioned and which hold the spring carrier, are operated to release this latter and permit it and the locking-member to move together in the other direction.

3. In a locking-device of the kind here in view, the combination of a circular door provided with locking-members positioned diametrically opposite each other, springs adapted to move these members into locking position, after rendered active by compression, manually operated devices to compress these springs for this purpose, spring-actuated pawls to restrain the locking-members against the action of the springs after compressed, a lock-spindle, and a projection on this latter adapted, upon manipulation of the spindle, to actuate the pawls so as to release the locking members.

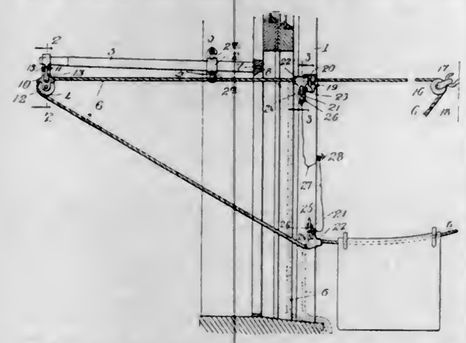
4. In a locking-device of the kind here in view, the combination of a circular door, door-locking members movably mounted thereon in diametrically opposite positions, springs adapted after being compressed to move these members into locking position, additional springs adapted after being compressed to move them into unlocking position, means to compress these springs, means provided for each of these springs to control the action of the same,

a combination-lock comprising a lock spindle, and intervenient mechanism whereby, upon manipulation of said lock spindle, either of the spring controlling means may be actuated to effect movement of the locking-members to move respectively either into locking or unlocking positions.

5. In a locking-device of the kind here in view, the combination of a door provided with a combination-lock comprising a lock-spindle, a door-locking member movably fitted to the door, a spring adapted to actuate it after compressed, means to compress this spring to render it active, devices to control the spring so as to maintain it in this condition preparatory for action, a slide-bar adapted to be actuated by means of the combination-lock and intervenient means whereby, upon manipulation of the lock-spindle, the slide-bar is operated to actuate the spring-controlling devices to effect this release.

[Claim 6 not printed in the Gazette.]

1,106,917. CLOTHES-LINE HOLDER. SAMUEL BERZAK, New York, N. Y., and SAMUEL AROTZER, Newark, N. J. Filed June 3, 1913. Serial No. 771,472. (Cl. 68—12.)



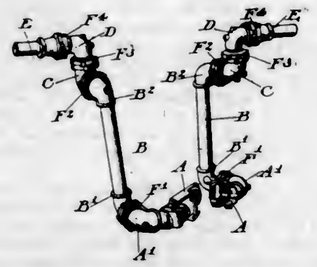
1. A clothes line holder including an arm, means for supporting the same within a room adjacent to a window casing, a pulley carried by the arm, a pulley frame secured to the window casing, a pulley journaled within said frame, and adapted to support the upper run of the line, adapted to be detachably secured upon the upper run of the line to engage said frame, means adapted to be detachably secured upon the lower run of the line, and means on the casing below said frame to detachably support the second named means to support the line set at the casing.

2. The combination of pulleys to support a clothes line, and a clamp having an open side adapted to be detachably secured upon and carried by the line while its ends are secured together, said clamp being on the line in position to be stopped by the support for one of said pulleys.

3. A clothes line holder including an arm, means for supporting the same on the window casing, a pulley frame secured adjacent said casing, a pulley journaled on said frame, a pulley to support the inner portion of a line on said arm, a clamp adapted to be detachably mounted upon the upper run of said line a stop at the outer portion of the window casing to retain the line in set position, a second clamp having means to detachably support it on the line, and means on the casing below said frame to detachably support said second clamp, whereby the line is supported set at the casing with its lower run depressed.

4. A clothes line holder including an arm, means for supporting the same adjacent a window casing, a pulley secured adjacent said casing, to support the line, means to attach the inner portion of the line to said arm, to movably support the line, and means adapted to be detachably mounted upon said line to be stopped by the line supporting means upon the window casing to support the line in set position.

1,106,918. FLEXIBLE METALLIC TRAIN-PIPE CONNECTION. LAMBERT J. BORDO, Philadelphia, Pa. Filed Sept. 22, 1910. Serial No. 583,168. (Cl. 137—34.)



1. An interchangeable jointed train pipe connection comprising a pipe section adapted to be directly connected to the train pipe, an elbow pipe jointed at one end to said section, a second elbow pipe to one end of which the second end of the first mentioned elbow pipe is jointed, a swinging pipe section jointed at its upper end to the second end of said second elbow pipe and a snap coupling jointed to the lower end of the swinging pipe section, the axis of the joint connecting the two elbows being transverse to the axes of the joints at the opposite ends of the elbows, and the axis of the joint between said pipe connection and first mentioned elbow pipe being parallel to the train pipe.

2. An interchangeable train pipe connection comprising a bent pipe section E adapted to have one end secured to the usual valve at the end of the train pipe and the other end extending parallel to the axis of the train pipe, an elbow having one end jointed to the end of the first mentioned section and its other end depending downward, a second elbow having one end extending upward and jointed to the downwardly extending end of the first elbow, a swinging pipe section laterally jointed at its upper end to the second end of the second elbow and a snap coupling part laterally jointed to the lower end of the swinging pipe connection.

3. An interchangeable train pipe connection comprising a bent pipe section E adapted to have one end secured to the usual valve at the end of the train pipe and the other end extending parallel to the axis of the train pipe, an elbow having one end jointed to the end of the first mentioned section and its other end depending downward, a second elbow having one end extending upward and jointed to the downwardly extending end of the first elbow, a swinging pipe section laterally jointed at its upper end to the second end of the second elbow and a snap coupling part laterally jointed to the lower end of the swinging pipe connection, the snap coupling part and said second elbow being located at opposite sides of said swinging pipe section.

1,106,919. PRODUCING AMMONIUM SULFATE. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Baden. Filed Apr. 19, 1913. Serial No. 762,376. (Cl. 23—21.)

1. In the production of ammonium sulfate from ammonium bisulfite, causing the precipitation of ammonium sulfate from a solution thereof by the addition of ammonia and sulfurous acid.

2. In the production of ammonium sulfate from ammonium bisulfite, adding ammonia, sulfurous acid and ammonium sulfite to a solution of ammonium sulfate, thus causing a precipitation of the ammonium sulfate.

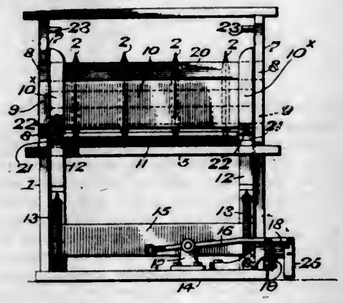
3. The process of producing ammonium sulfate in the solid form by suitably heating a solution of ammonium bisulfite and then adding ammonia and sulfurous acid to the solution of the ammonium sulfate thus obtained.

4. The process of producing ammonium sulfate in the solid form by suitably heating a solution containing ammonium bisulfite and ammonium sulfite, and then adding ammonia and sulfurous acid to the solution of ammonium sulfate thus obtained.

5. The process of producing ammonium sulfate in the solid form by suitably heating a solution of ammonium bisulfite and then adding ammonia and sulfurous acid to the solution of ammonium sulfate thus obtained, then separating the solid ammonium sulfate from the liquid portion and subjecting the separated liquid portion to suitable heating for the production of further ammonium sulfate.

[Claims 6 to 8 not printed in the Gazette.]

1,106,920. SAFETY-GUARD FOR MACHINES. WILLIAM D. BROCK, Oxford, Pa. Filed Nov. 8, 1913. Serial No. 799,852. (Cl. 164—107.)



1. A guard for a machine of the character stated composed of a normally spring-depressed vertically movable plate, the same being mounted on the frame of the machine in front of the working member thereof, and over the feed table thereof, and means for raising and lowering said guard.

2. A machine of the character stated provided with a feed table, a normally spring-depressed vertically movable plate forming a guard for the working member of the machine in front of said member and over said table, means for moving said guard plate in opposite directions, and means on the frame of the machine for guiding said plate.

3. A guard for a machine of the character stated composed of a normally spring-depressed vertically movable plate, the same being mounted on the frame of the machine in front of the working member thereof and over the feed table thereof, and a transversely-extending roller on the lower portion of said plate, the same being adapted to follow the motion of said plate from and to said table.

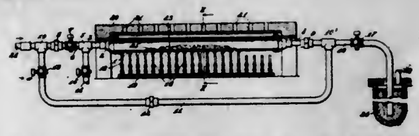
4. A guard for a machine of the character stated, composed of a vertically movable plate, means on the frame of the machine fixed with relation to the plate for guiding said plate in its motions, a spring connected with said plate and frame for normally lowering said plate and holding it in its operative position, and a treadle connected with said plate for raising the same.

5. A guard for a machine of the character stated, composed of a movable plate, the same being mounted on the frame of said machine over the feed table and in front of the working member thereof, a device adapted to raise said plate, and means coöperating with said device for preventing operation of said device in the normal condition thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,106,921. METHOD OF OBTAINING ARGON AND RARE ATMOSPHERIC GASES. JOHN E. BUCHER, Coventry, R. I., assignor to Nitrogen Products Company, Providence, R. I., a Corporation of Rhode Island. Original application filed July 24, 1912, Serial No. 711,211. Divided and this application filed Dec. 15, 1913. Serial No. 806,717. (Cl. 23—10.)

1. A process for obtaining argon and rare atmospheric gases from the atmosphere which comprises treating air to substantially remove the oxygen content thereof and to leave substantially pure nitrogen mixed with argon, passing a current of this gaseous mixture through a heated reactive mass in which is present a finely divided catalytic material intimately associated with carbon and free alkali metal, to combine substantially all of the free nitrogen with said carbon and alkali metal, and collecting the gaseous residues of the reaction.



2. A process of obtaining argon and rare atmospheric gases which comprises subjecting atmospheric nitrogen which is substantially free from uncombined oxygen but which is still mixed with argon, to contact with an extended surface of a heated catalytic material which is intimately associated with carbon and there effecting a reaction in which participate the said carbon, nitrogen and an element capable of acting as the base of a stable cyanogen compound, to form said compound through the intermediacy of said catalytic material, and collecting the gaseous residues of said reaction.

3. A process of obtaining argon which comprises subjecting atmospheric nitrogen which is substantially free from uncombined oxygen but which is still mixed with argon, to contact with an extended surface of a heated catalytic material which is intimately associated with carbon and there effecting a reaction in which participate the said carbon, nitrogen and an initially free element capable of acting as the base of a stable cyanogen compound, to form said compound through the intermediacy of said catalytic material, and collecting the gaseous residues of said reaction.

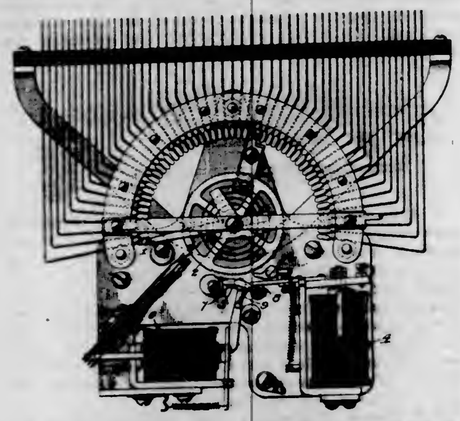
4. A process of obtaining argon and rare atmospheric gases which comprises subjecting atmospheric nitrogen which is substantially free from uncombined oxygen but which is still mixed with argon, to contact with an extended surface of a heated catalytic material which is intimately associated with carbon and there effecting a reaction, at a temperature above 500° C. and below 1150° C., in which participate the said carbon, nitrogen and an element capable of acting as the base of a stable cyanogen compound, to form said compound through the intermediacy of said catalytic material, and collecting the gaseous residues of said reaction.

1,106,922. SELECTOR. ALBERT M. BULLARD, New York, N. Y., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1907. Serial No. 371,596. (Cl. 179—27.5.)

1. The combination with a ratchet, of a retaining pawl for said ratchet, a retaining magnet, an armature for said magnet adapted when attracted to hold said retaining pawl in engagement with said ratchet, a stepping magnet, an armature therefor, a stepping pawl pivoted to said armature, means controlled by the armature of the retaining magnet for maintaining said stepping pawl out of engagement with said ratchet whenever the retaining magnet is in its normal position, and a spring adapted when said armature of the retaining magnet is attracted to move said stepping pawl into engagement with said ratchet, whereby the ratchet may be advanced at a high speed upon the operation of said stepping magnet.

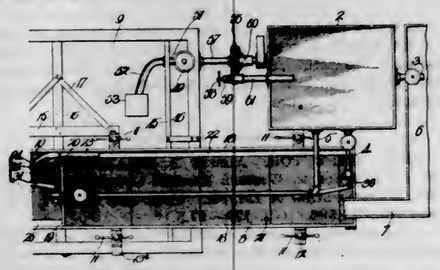
2. In a step-by-step device, the combination with a ratchet of a stepping magnet for advancing said ratchet, and retractive means for returning said ratchet to normal, an armature for said stepping magnet, a pawl carried by said armature and adapted to engage said ratchet to advance the same, a retaining magnet, an armature therefor and a retaining pawl carried by said armature adapted when the magnet is actuated to prevent the return of said ratchet under the influence of said retractive means, and means carried by the armature of said retaining magnet

for lifting the stepping pawl out of engagement with said ratchet when the retaining magnet is deënergized and for maintaining said stepping pawl out of engagement with said ratchet until said retaining magnet is again energized.



3. In combination with a ratchet, retractive means for moving said ratchet in one direction, a pawl, an operating magnet therefor for moving said rachet in the other direction, a pawl and operating magnet therefor for maintaining said ratchet in any of its off-normal positions during the stepping movement of the first named pawl, the armature of said retaining magnet serving when retracted to lift both said pawls out of engagement with said ratchet and to maintain them so until said retaining magnet is again energized.

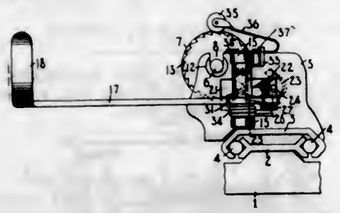
1,106,923. ORE-CONCENTRATING MACHINE. GEORGE W. BURNHART, Ward, Colo., and ALBERT KRIEG, Kansas City, Mo. Filed May 8, 1911. Serial No. 625,884. (Cl. 83—89.)



1. In an ore concentrating apparatus, a tilted table having transverse diagonal grooves and a channel along one side, a wall across the lower end of said table provided with an opening at the lower end of said channel, means for delivering ore on to the upper end of said table at the side opposite the channel, and a nozzle for discharging a stream of water across the upper surface of the table adjacent the channel in approximately the direction of said end opening.

2. In an ore concentrating apparatus, a slightly tilted table having transverse diagonal grooves and a channel along one side, a wall across the lower end of said table provided with an opening at the lower end of said channel, a second tilted table having its receiving end beneath the lower end of the first table, and the rest of said second table extended away from and in the same general direction as the first table, said second table being grooved and channeled reversely to the first table, means for delivering ore on to the upper end of the first table at the side opposite its channel, and means for directing a rapid stream of water across the side of said first table adjacent its channel and through its end opening on to the second table.

1,106,924. TYPE-WRITING MACHINE. HERBERT A. CARHART, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed July 30, 1913. Serial No. 781,934. (Cl. 197—114.)



1. The combination of a platen, a line spacing ratchet wheel having peripheral teeth, a line space lever pivoted on a vertical axis that lies across and beyond the end of said platen, said lever having an arm thereon extending inward near the under part of said ratchet wheel and formed with an abrupt end, a line spacing pawl pivoted against said abrupt end on a horizontal pivot and adapted when the lever is operated to engage one of the lower teeth of said ratchet wheel and push said tooth forward, and a regulating device pivoted to said line space lever and arranged when set in one position to hold said pawl in one position and when set in another position to hold said pawl in another position where it is adapted to engage another tooth of the ratchet wheel.

2. The combination of a platen, a line spacing ratchet wheel having peripheral teeth, a line space lever pivoted on a vertical axis that lies across and beyond the end of said platen, said lever having an arm thereon extending inward near the under part of said ratchet wheel and formed with an abrupt end, a line spacing pawl pivoted against said abrupt end on a horizontal pivot and adapted when the lever is operated to engage one of the lower teeth of said ratchet wheel and push said tooth forward, a spring acting on said pawl to throw its free end up toward the ratchet wheel, and an adjustable stop carried by said line space lever to limit the motion of said pawl under the impulse of said spring and thereby to predetermine which one of a plurality of ratchet wheel teeth shall be engaged by said pawl.

3. The combination of a platen, a line spacing ratchet wheel, a line space lever pivoted on a vertical axis that lies across and beyond the end of said platen, said lever having an arm thereon extending inward near the under part of said ratchet wheel and formed with an abrupt end, a line spacing pawl pivoted against said abrupt end and adapted when the lever is operated to engage one of the lower teeth of said ratchet wheel and push said tooth forward, a spring acting on said pawl to throw its free end up toward the ratchet wheel, and an adjustable stop carried by said line space lever to limit the motion of said pawl under the impulse of said spring and thereby to predetermine which one of a plurality of ratchet wheel teeth shall be engaged by said pawl, said stop consisting of a piece of flat sheet metal adapted to be turned in a hole wider than the thickness of said metal whereby said stop holds the pawl in a lower position when the stop is set edgewise than when it is set flatwise.

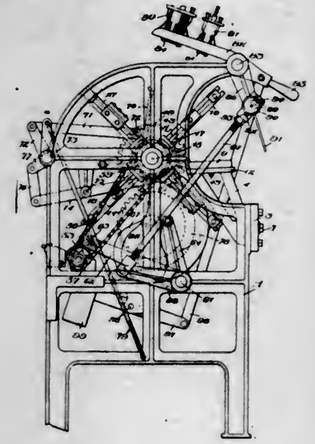
4. The combination of a platen, a platen frame comprising end pieces in which said platen is journaled, a line space lever pivoted on a vertical axis on the outside of one of said end pieces and having an arm thereon projecting through an opening in said end piece, and said arm having a flat face perpendicular to the radius of said arm, a line space pawl pivoted on said arm against said flat face, and a line space wheel adapted to be engaged by said pawl.

5. The combination with a platen and its line space wheel, of an angular line space lever consisting of a piece

of sheet metal cut out in angular form and having its forward end bent into a finger piece or handle and having its shorter arm bent up at right angles to a radius of said arm; and a line space pawl pivoted on said bent up end.

[Claims 6 to 8 not printed in the Gazette.]

1,106,925. LABELING-MACHINE. LEWIS D. CASTOR, Binghamton, and ANDREW KIEFER, Rochester, N. Y., assignors of one-third to said Kiefer and two-thirds to Eisler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 20, 1912. Serial No. 692,026. (Cl. 216—13.)



1. In a labeling machine, the combination with a label holder, of a label pick-up mounted to travel in an endless path and supporting the label in a plane transverse to its path of travel, and a work support for holding the work in the path of travel of the pickup, said pick-up carrying a label to the work support.

2. In a labeling machine, the combination with a work support and a label holder, of a pick-up rotatable in a complete circle to carry a label from the label holder to the work support, the engaging faces of said pick-up being radial to the turning axis and the work support being arranged so that the pick-up passes transversely of the work to apply labels to such work.

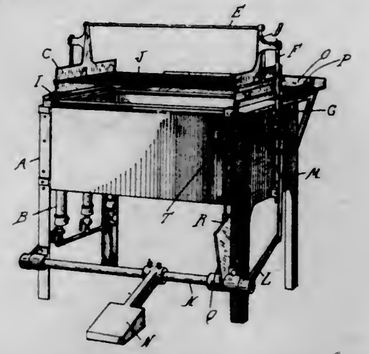
3. In a labeling machine, the combination with a pick-up mounted to turn about an axis, the engaging faces of said pick-up being radial to the turning axis, of a pasting mechanism arranged to coöperate with the pick-up at one point in the travel of the latter, a movably mounted label holder arranged to coöperate with a pick-up at another point in the travel of the latter, and a work support to which the pick-up moves to carry a label from a label holder, the work support being arranged so that the pick-up passes transversely of the work.

4. In a label holder, the combination with a work support, of a rotary carrier embodying two arms arranged to travel on opposite sides of an article on the work support, pick-up devices arranged on said arms, the engaging faces of said pick-up being radial to the turning axis and the work support being arranged so that the pick-ups pass transversely of the work, and a movably mounted label holder for feeding labels to the pick-ups.

5. In a labeling machine, the combination with a work support, of a rotary carrier having a plurality of pairs of arms, the members of each pair being arranged to travel on opposite sides of an article on the work support, pick-up devices arranged at the sides of said arms to hold a label in a plane substantially parallel with the plane of said arms, a movably mounted label holder for coöperating with the pick-up devices when such devices reach a certain point in their travel, and a pasting mechanism for coöperating with the pick-up devices when said devices reach another point in their travel.

[Claims 6 to 34 not printed in the Gazette.]

1,106,926. FRYING-MACHINE. ALEXANDER W. COPLAND, Detroit, Mich. Filed Apr. 21, 1910. Serial No. 556,823. (Cl. 53—7.)



1. The combination with a tank, of a frame vertically adjustable into and out from said tank, a screen extending horizontally across said frame, a dough supporting tray detachably engaging guides beneath said screen, means for raising and lowering said frame, and means for temporarily arresting said frame after a partial lowering thereof permitting the further lowering of the tray.

2. The combination with a tank, of a supporting tray depressible into said tank, a superimposed screen, means for temporarily arresting the depression of said tray, and means for moving said arresting means to an inoperative position to permit of further depression of said tray.

3. The combination with a tank, of a supporting tray depressible into said tank, a superimposed screen, means for depressing said tray into the tank, means for temporarily arresting the depression of said tray, and means for moving said arresting means to an inoperative position to permit of further depression of the tray.

4. The combination with a tank, of a frame vertically adjustable into and out of said tank, a dough supporting tray detachably engaging said frame, a superimposed screen, means for temporarily arresting the depression of said tray permitting the further depression thereof.

5. The combination with a tank, of a supporting tray depressible into said tank, means for temporarily locking said tray at a predetermined point in the path of its depression, and means for disengaging said locking means to permit of further depression of the tray.

1,106,927. NURSING DEVICE. WILLIAM MORE DECKER, Buffalo, N. Y. Filed June 11, 1913. Serial No. 772,937. (Cl. 215—117.)

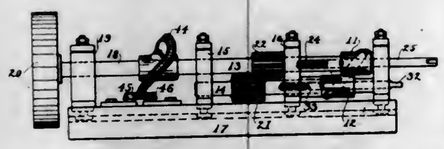


1. A nursing device comprising a food cell having a mouth, an outwardly-extending annular flange about the edge of the mouth, an annular shoulder within the mouth of the cell, a flexible nursing nipple seated on said shoulder, and an annular flexible and elastic flange on the base of said nipple adapted to embrace the flange on the edge of the cell.

2. A nursing device, comprising a food cell having a mouth, an outwardly extending annular flange about the

edge of the mouth, an annular shoulder within the mouth of the cell, a flexible nursing nipple seated on said shoulder, and an annular flexible and elastic flange on the base of the nipple and a thickened ring upon the edge of said flange adapted to embrace the flange on the edge of the cell.

1,106,928. ROLLS FOR TWIST-DRILLS. SIMON DENK, Brooklyn, N. Y. Filed Nov. 29, 1912. Serial No. 733,991. (Cl. 80—24.)



1. In a device for rolling twist drills, a pair of rolls mounted on parallel axes, each roll having a helical groove which grooves extend in the same circumferential direction, each roll having a rib located in the groove and at one side thereof contiguous to the roll face, means for rotating the rolls in unison in opposite directions, and means for effecting a relative endwise movement of the two rolls during rotation that is equivalent to double the pitch of said groove on one of the rolls, whereby the grooves will register at the adjacent portions of the rolls during the rotation of the rolls, and the ribs will engage opposite portions of the drill rod to flute the rod.

2. In a device for rolling twist drills, a pair of rolls mounted on parallel axes, each roll having a helical groove which grooves extend in the same circumferential direction, each roll having a rib located in the groove and at one side thereof contiguous to the roll face, means for rotating the rolls in unison in opposite directions, and means for effecting a relative endwise movement of the two rolls during rotation that is equivalent to double the pitch of said groove on one side of the rolls, whereby the grooves will register at the adjacent portions of the rolls during the rotation of the rolls, and the ribs will engage opposite portions of the drill rod to flute the rod, the rolls having their periphery on each side of the grooves conical and in engagement during rotation of the rolls in engagement with the drill rod.

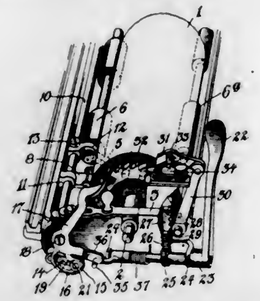
3. In a device for rolling twist drills, a pair of rolls mounted on parallel axes, each roll having a helical groove which grooves extend in the same circumferential direction, each roll having a rib located in the groove and at one side thereof contiguous to the roll face, means for rotating the rolls in unison in opposite directions, and means for effecting a relative endwise movement of the two rolls during rotation that is equivalent to double the pitch of said groove on one of the rolls, whereby the grooves will register at the adjacent portions of the rolls during the rotation of the rolls, and the ribs will engage opposite portions of the drill rod to flute the rod, the rolls having registering open portions for free admission of the drill rod, and the rolls having their peripheries on each side of the said grooves conical and in engagement during rotation of the rolls in engagement with the drill rod.

4. In a device for rolling twist drills, a pair of rolls mounted on parallel axes, each roll having a helical groove which grooves extend in the same circumferential direction, each roll having a rib located in the groove and at one side thereof contiguous to the roll face, means for rotating the rolls in unison in opposite directions, and means for effecting a relative endwise movement of the two rolls during rotation that is equivalent to double the pitch of said groove on one side of the rolls, whereby the grooves will register at the adjacent portions of the rolls during the rotation of the rolls, and the ribs will engage opposite portions of the drill rod to flute the rod, the grooves in the rolls recessed on one edge to form a rib on the drill.

5. In a device for rolling twist drills, a pair of rolls mounted on parallel axes, each roll having a helical groove which grooves extend in the same circumferential direction, each roll having a rib located in the groove and at one side thereof contiguous to the roll face, means for rotating the rolls in unison in opposite directions, and means for effecting a relative endwise movement of the two rolls during rotation that is equivalent to double the pitch of said groove on one of the rolls, whereby the grooves will register at the adjacent portions of the rolls during the rotation of the rolls, and the ribs will engage opposite portions of the drill rod to flute the rod, the rolls having their periphery on each side of the grooves in engagement during rotation of the rolls in engagement with the drill rod, the grooves in rolls being recessed at one edge adjacent the periphery to form a rib on the drill.

[Claims 6 to 9 not printed in the Gazette.]

1,106,929. TYPE-WRITING MACHINE. ADOLPHUS S. DENNIS, Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 10, 1913. Serial No. 766,671. (Cl. 197—114.)



1. In a typewriting machine, the combination with a rotary platen, of a pressure roll frame, pressure rolls thereon bearing against the platen, a rock shaft, connections between said rock shaft and frame for operating the latter, a lever having a cam to rock said shaft in the movement of said lever in one direction to thereby release the pressure rolls from the platen, means on said cam to hold said lever in the position to which moved, a line-space lever, and means operated thereby to return said first-named lever.

2. In a typewriting machine, the combination with a rotary platen, of a pressure roll frame, a rock shaft, arms thereon in position to operate said frame, a releasing lever, a cam thereon, a rock arm on said rock shaft actuated by said cam, said rock arm and releasing lever being locked by the cam, a line-space lever, and means operated thereby to release said releasing lever.

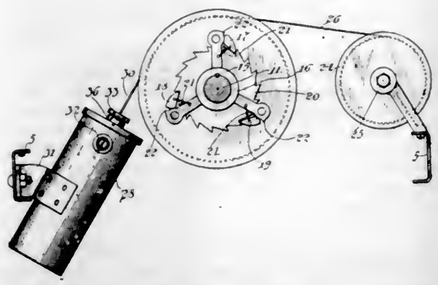
3. In a typewriting machine, the combination with a rotary platen, of a pressure roll frame, a rock shaft, means thereon for operating said frame, an arm on said rock shaft, a releasing lever having a cam to rock said arm and thereby operate said frame and hold the latter and the releasing lever in released position, a line-space lever, and means operated thereby to release said releasing lever.

4. In a typewriting machine, the combination with a platen frame having a rotary platen, of a line-space wheel connected thereto, a rack plate, pinions meshing with racks on said plate, a line-space lever connected to one of said pinions, and a pawl mounted on the platen frame operatively connected to the other pinion for actuating the line-space wheel with the direct manually impelled movement of said lever.

5. In a typewriting machine, the combination with a rotary platen, of a line-space wheel connected thereto, a rack plate, pinions in mesh with racks on said plate, said pinions being in planes perpendicular to each other, a line-space lever connected to one of said pinions, a swinging arm connected to the other pinion, and a line-space pawl carried by said arm.

[Claims 6 to 10 not printed in the Gazette.]

1,106,930. FLEXIBLE PISTON-ROD AND CYLINDER THEREFOR. JOHN DESMOND, Wilmette, Ill., assignor to William S. Potwin, Chicago, Ill. Filed Nov. 11, 1912. Serial No. 730,581. (Cl. 121—45.)



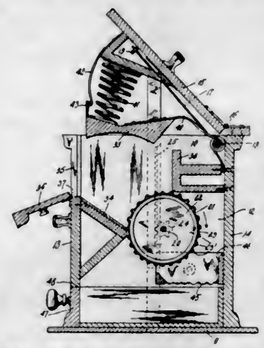
1. In a device of the character described the combination, of a flexible ribbon adapted to have its end connected to some part to be moved, a piston permanently secured to one free end of said ribbon, a cylinder for said piston, and a head for said cylinder, said cylinder having near said head an opening for admission of fluid under pressure, whereby the admission of fluid under pressure between said head and piston draws the ribbon within the cylinder, and a packing means for said ribbon carried by said head, whereby the latter is rendered air-tight.

2. In a device of the character described the combination of a flexible ribbon constituting a means adapted to be wound around a wheel to be rotated, a piston permanently connected to one end of said ribbon, a cylinder within which said piston is adapted to work, a head for said piston, a packing gland carried by said head through which the ribbon works to render said head air-tight, and means associated with said cylinder for admission of fluid under pressure between said piston and air-tight head, whereby there is provided a piston rod adapted to lie in a straight line while within the cylinder and adapted to lie in a curve for coaction with said wheel when drawn without the cylinder.

3. In a device of the character described the combination of a cylinder, a head for said cylinder inclosing the same to provide therein an air-tight piston-receiving space, a piston in said cylinder, a flexible piston rod permanently secured to said piston, and a packing gland carried by said head adapted and arranged to receive said flexible piston rod, whereby admission of fluid under pressure between said air tight head and movable piston moves the piston rod inwardly, said piston adapted and arranged to be returned to normal position by extraneous means associated with the other end of said ribbon, the ribbon therefore lying always in a straight line while within the cylinder but adapted and arranged to conform to the periphery of an extraneous device to be moved thereby.

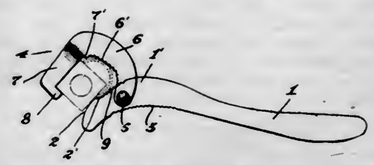
1,106,931. CHEESE-GRINDING MILL. LUIGI DONISI, New York, N. Y. Filed July 2, 1913. Serial No. 777,004. (Cl. 146—9.)

In a grinding mill, the combination with a casing having a cover hinged thereto, of a shaft rotatably and shiftably mounted therein, a grating cylinder fastened to said shaft, a concave pivotally attached to the casing and being connected to and movable with said cover, pinions upon said shaft, and racks shiftably arranged in said casing bearing against said cover, said pinions being normally out of mesh with said racks and adapted upon the



shifting of said shaft to mesh with said racks and to raise the latter upon the rotation of said shaft.

1,106,932. WRENCH. ROY DRUMMOND, Seattle, Wash. Filed Mar. 9, 1914. Serial No. 823,546. (Cl. 81—98.)



1. A wrench comprising a shank element formed with a fixed jaw having a curved smooth jaw face and a serrated jaw face leading from the smooth jaw face, and a movable jaw adapted for coöperation with the faces of the fixed jaw and having a smooth flat jaw face formed with opposing shoulders to receive a flat surface and a curved serrated jaw face.

2. A wrench comprising a shank element formed with a fixed jaw having a curved smooth jaw face and a serrated jaw face leading from the smooth jaw face and lying within the plane of curvature of the latter face to provide a shoulder between the faces, and a movable jaw adapted for coöperation with the faces of the fixed jaw and having a flat jaw face formed with opposing shoulders to receive a flat surface and a curved jaw face to oppose the serrated face of the fixed jaw.

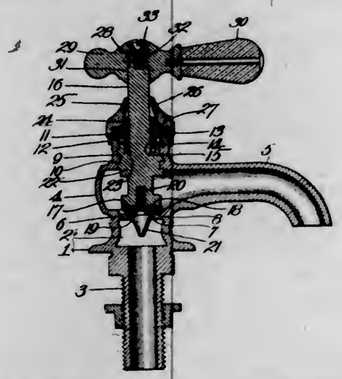
3. A wrench comprising a shank element formed with a fixed jaw having a smooth face and a serrated face on one side and a curved serrated face on the other side of the fixed jaw, and a jaw pivoted to the fixed jaw and formed with a flat face to coöperate with the smooth face of the fixed jaw and a curved face to coöperate with the adjacent serrated face of said fixed jaw, said pivoted jaw being adapted to swing to oppose the curved serrated face of the fixed jaw whereby either jaw face of the pivoted jaw is adapted for coöperation with the last named face of the fixed jaw.

4. A wrench comprising a shank element formed with a fixed jaw having a curved jaw face, and a movable jaw pivoted to the shank element and provided with a curved jaw face and a flat jaw face leading from the latter, said pivoted jaw also being formed with a shoulder extending outwardly from the flat jaw face at the inner end thereof to be intermediate the jaw faces.

1,106,933. COMPRESSION-FAUCET. JOHN P. FARLEY, Kansas City, Mo. Filed Oct. 25, 1912. Serial No. 727,692. (Cl. 137—4.)

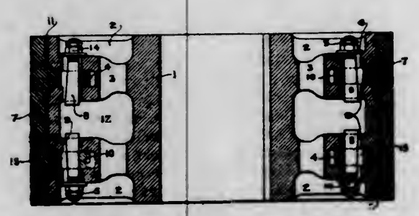
A faucet having an internally and externally threaded tubular extension provided with an interior step portion

adjacent its outer edge, a valve stem having an enlarged portion threaded through said extension, said enlarged portion having an annular recess opening in the direction of the axis of the stem, a cap engaging the external threads of said extension and fitting around the stem and forming with said stem an annular recess wedge-shaped in cross



section, a packing ring fitting in the first-named annular recess and having a shoulder engaged by said cap and seated in said step portion of the extension, and an auxiliary packing ring abutting against said first ring and adapted, as said cap is screwed in place, to be wedged by said first ring into the recess in said cap.

1,106,934. GIB AND KEY. CHARLES A. FISCHER, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Aug. 15, 1910. Serial No. 577,202. (Cl. 74—8.)

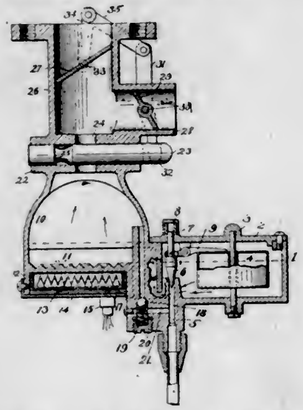


The combination of two parts, one of the parts having a recess and the second part projecting into said recess, partly registrable openings formed in the parts across the recess, a gib block inserted in said openings, said gib block spanning said recess and having a projection extending into the said recess and fitting against the walls thereof, a wedge inserted in said openings, and means for advancing said wedge into contact with said second part and with said gib block to force said gib block against said recessed part.

1,106,935. VAPORIZER AND CARBURETER. PHELPS M. FREER, Detroit, Mich. Filed Sept. 17, 1913. Serial No. 790,163. (Cl. 48—103.)

1. In a vaporizer and carbureter, the combination with a float chamber and a vaporizing chamber, said chambers communicating with each other, a heating element associated with the vaporizing chamber, means controlling the exit of the vaporized fuel from the vaporizing chamber, and means for admitting air to mix with said vaporized fuel.

2. In a vaporizer and carbureter, the combination with a float chamber and a vaporizing chamber, said chambers communicating with each other, a heating element associated with the vaporizing chamber, and means whereby the said vaporizing chamber may be vented when the pressure therein exceeds a predetermined limit.



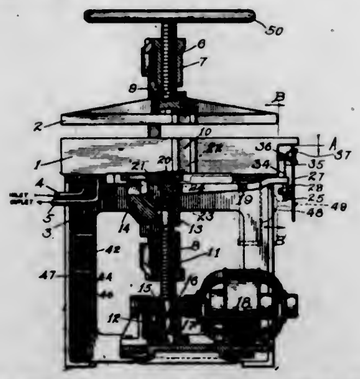
3. In a vaporizer and carbureter, the combination with a float chamber, a vaporizing chamber communicating therewith, a heating element associated with said vaporizing chamber, a valve controlling the passage of the vaporized fuel from said vaporizing chamber, an air intake, a valve for regulating the admission of air, a throttle valve, and means connecting all of said valves whereby they are dependently operated.

4. In a vaporizer and carbureter, the combination with a float chamber, a vaporizing chamber communicating therewith, a valve controlling the passage of vaporized fuel from said vaporizing chamber, an air inlet a valve controlling said air inlet, and means operatively connecting the said valves whereby they are dependently operated.

5. In a vaporizer and carbureter, the combination with a casing containing a chamber to which fluid fuel is supplied, a vaporizing chamber adjacent the fuel chamber and adapted to communicate therewith, a heating element adapted to be supported adjacent a wall of the said vaporizing chamber, a valve controlling the passage of vaporized fuel from said vaporizing chamber, and an air inlet whereby the vaporized fuel and air may be mixed.

[Claims 6 to 10 not printed in the Gazette.]

1,106,936. ELECTRICALLY-OPERATED STEREOTYPE-MATRIX-DRYING MACHINE. ROBERT J. GIBBON, New York, N. Y., assignor to The Ostrander Seymour Company, a Corporation of Illinois. Filed Mar. 30, 1914. Serial No. 828,337. (Cl. 100—67.)



1. A press, comprising a pair of clamping members, mechanism adapted to shift said members to press material between them, a motor operating said mechanism, and means actuated by the changes in pressure of said members on the material for starting and stopping said motor.

2. A device of the class described, comprising a pair of members one of which is movable relative to the other, said members being adapted to be used for compressing material between them, mechanism adapted to shift said one member, a lever interposed between a part of said mechanism and one of said members, being fulcrumed on one and bearing upon the other and normally exerting pressure on said mechanism, and means actuated by said lever and adapted to control the operation of said mechanism for maintaining the pressure of said members on the material.

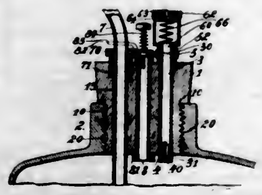
3. A device of the class described, comprising a pair of members one of which is movable relative to the other, said members being adapted to be used for compressing material between them, mechanism adapted to shift said one member, a lever interposed between a part of said mechanism and the other said member, being fulcrumed on said other member and bearing said part of said mechanism and normally exerting pressure on said mechanism, and means actuated by said lever and adapted to control the operation of said mechanism for maintaining the pressure of said members on the material.

4. A device of the class described, comprising a pair of members one of which is movable relative to the other, said members being adapted to be used for compressing material between them, mechanism adapted to shift said one member, a lever having one end thereof located between the other said member and a part of said mechanism, rollers interposed between said lever and said other member and said part, said rollers being offset with respect to each other so that one serves as a fulcrum for said lever and the other takes the thrust and normally exerting pressure on said mechanism, and means actuated by said lever and adapted to control the operation of said mechanism for maintaining the pressure of said members on the material.

5. A device of the class described, comprising a pair of members one of which is movable relative to the other, said members being adapted to be used for compressing material between them, mechanism adapted to shift said one member, a lever interposed between a part of said mechanism and the other said member, being fulcrumed on said other member and bearing said part of said mechanism and normally exerting pressure on said mechanism, an electric motor included in said operating mechanism, and an electric switch operatively connected to said lever and adapted to be actuated thereby for controlling the operation of said motor so as to maintain the pressure of said members on the material.

[Claims 6 to 11 not printed in the Gazette.]

1,106,937. AUTOMATIC REACTING SIPHON AIR-PUMP AND STOPPER. ABBOT PORTER GOFF, St. Joseph, Mo. Filed Dec. 19, 1912. Serial No. 737,638. (Cl. 215—100.)



1. A stopper for liquid containers, comprising a body shaped to snugly fit in the mouth of the container, said body having three passages, a siphon tube attached to one of the passages, an air pump attached to another of the said passages, a vent tube that extends through the remaining passage, a valve that normally closes the upper end of the said vent tube and is finger pressed to its open position, a detent for holding the said finger pressed valve at its open position, a supplemental air passage in the vent tube, a float valve located in the said vent tube adapted when it is caused to rise by the rising liquid in the container, to close the said supplemental air passage and thereby the vent tube, said finger pressed valve and the float valve having co-engaging extensions whereby the finger pressed valve is forced down the float valve is moved to its open position.

2. A means for filling and exhausting liquids from a container, said means including a stopper shaped to fit air tight into the mouth of said container, said stopper having three passages, a siphon tube projecting through one of said passages, a gland and packing around said siphon tube to prevent leakage through the stopper passage in which the siphon tube is mounted, one of said passages serving as an air passage, a tube mounted in said air passage and projecting beyond the ends of the same, a check valve mounted in the lower end of said last named tube, an air pump connected to the upper end of said last named tube, the third of said passages serving as a vent, and a vent tube mounted in said third passage and projecting beyond the ends of the same, nut members on the ends of said vent tube to engage said stopper and thereby prevent leakage around the tube, and a finger operatable valve mounted in the upper end of said vent tube, together with means continuously tending to hold said last named valve closed, all being arranged substantially as shown and for the purposes described.

1,106,938. STAPLE BLANK OR STRIP. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed May 21, 1913. Serial No. 769,102. (Cl. 85—49.)



1. A staple blank or strip provided with a plurality of integrally connected staples and having a longitudinally corrugated web or back, substantially as described.

2. A staple blank or strip comprising a plurality of staples integrally connected together by a web or back having a downward corrugation in the direction of the legs of the staples, substantially as described.

3. A staple blank or strip comprising a plurality of staples integrally connected together by a web or back located in the axial center thereof and grooved or corrugated in the direction of the length of the legs, substantially as described.

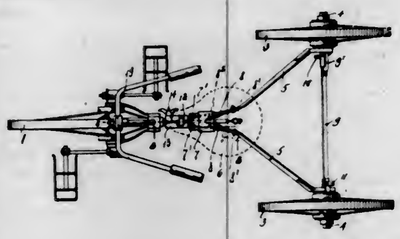
4. A staple blank or strip comprising a plurality of staples integrally connected together by a web or back of concave form, substantially as described.

1,106,939. COLLAPSIBLE VELOCIPEDE. FREDERICK GUTMANN, New York, N. Y. Filed Sept. 13, 1912. Serial No. 720,129. (Cl. 208—105.)

1. In a tricycle, a frame, comprising a rigid central part, a rear part, composed of flexible members, the upper ends of which are pivotally connected to the central part to turn laterally, and a foldable rigid member between the lower ends of said first named members.

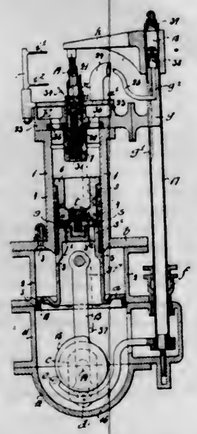
2. In a tricycle, the combination with the rear wheels, of a frame comprising a rigid central part, a rear part, composed of two independently movable spring actuated flexible members, each member carrying a rear wheel, a pivoted connection between each member and said central part and a rigid foldable member between the lower ends of said first named members, said foldable member being adapted when in operative position to stretch the said wheels apart and when lifted to permit the latter to approach each other.

3. In a tricycle, the combination with the rear wheels, of a frame comprising laterally movable flexible members each carrying a rear wheel, a tiltable rigid member between these members to hold the same apart, and means for locking the said members in contracted position.



4. In a tricycle frame, a front part, an intermediate part and flexible rear members, a pivotal connection between said front part and said intermediate part permitting said front part to swing downwardly and rearwardly, pivotal connections between said rear parts and said intermediate part permitting said rear parts to swing laterally, and means between said rear parts to hold the same, a part in operative position and to permit their folding when in inoperative position.

1,106,940. INTERNAL-COMBUSTION ENGINE. HUGO HADWIGER, Vienna, Austria-Hungary. Filed Jan. 21, 1902, Serial No. 90,722. Renewed Oct. 25, 1906. Serial No. 340,596. (Cl. 123—23.)



1. In an internal-combustion engine, the combination, with a cylinder and a piston reciprocating therein, of a stationary heat-insulating plunger on the head of the cylinder, a cup-shaped heat-insulating lining in said piston, means for introducing a combustible fuel through the plunger into the space between the same and the piston-lining, means for forcing compressed air into the cylinder and through and around the heat-insulating parts for cooling the same, and means for permitting the exhausting of the heated products of combustion into the atmosphere.

2. In an internal-combustion engine, the combination of a cylinder, a stationary heat-insulating plunger on the cylinder-head, a piston reciprocated in the cylinder, a cup-shaped heat-insulating lining in said piston, said plunger and piston-lining being provided with air-passages through and around the same, means for supplying a combustible fuel through the plunger into the space between it and the piston-lining, means for introducing compressed air into the cylinder and through and around the heat-insulating members for cooling the same, and means for exhausting the heated products of combustion into the atmosphere.

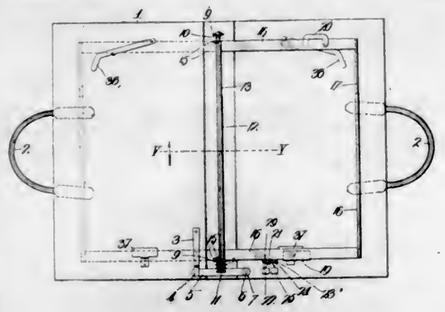
3. In an internal-combustion engine, the combination, with a cylinder and a piston reciprocated therein, of a closed casing below the cylinder and piston, a heat-insulating plunger on the cylinder-head, a cup-shaped heat-insulating lining on said piston, air-passages in the plunger and piston-lining, means for supplying a combustible fuel through the plunger into the space between the same and the piston-lining, means for compressing air in the space below the cylinder and piston, means for supplying compressed air into the cylinder and to and around said heat-insulating parts for cooling the same, and means for permitting the exhaust of the heated products of combustion into the atmosphere.

4. In an internal-combustion engine, the combination, with a cylinder and a piston reciprocated therein, of a stationary heat-insulating plunger on the cylinder-head, a cup-shaped heat-insulating lining on the piston, means for supplying a combustible fuel, an air-pump for forcing said fuel through the plunger into the combustion-space between the heat-insulating plunger and piston-lining, means for compressing air, means for conducting the compressed air through and around the heat-insulating members into the cylinder for cooling and protecting the same, and means for exhausting the heated products of combustion into the atmosphere.

5. In an internal combustion-engine, the combination, with a cylinder and a piston reciprocated therein, of a cup-shaped heat-insulating lining applied to said piston at the inner face thereof, a stationary heat-insulating plunger mounted on the cylinder-head and adapted to fit into said cup-shaped member, said plunger having an interior valved bore, a fuel-feeding device connected with the bore of the plunger, an air-pump for feeding the fuel through the valve-bore into the space between the plunger and piston-lining, means for compressing air, and means for forcing the compressed air into the cylinder and to and around the heat-insulating members for cooling the same.

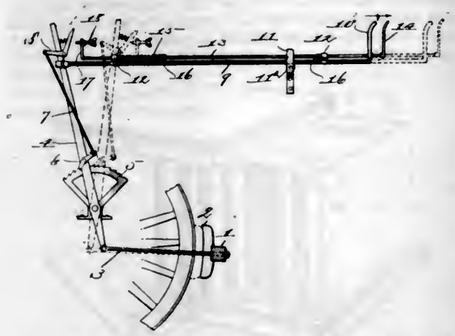
[Claims 6 to 12 not printed in the Gazette.]

1,106,941. COMBINED PORTFOLIO AND SHEET-MUSIC TURNER. JOHN A. HENEBERGH, Kansas City, Kans. Filed Jan. 11, 1911. Serial No. 602,088. (Cl. 84—135.)



In a leaf-turning device, a supporting frame, spring-actuated leaf-turners mounted thereon, a pivot bolt carried by said frame, spring-actuated dogs of varying lengths mounted on said bolt, the shortest of said dogs being provided with stop means contacting with the frame for limiting its pivotal movement under the action of its spring and also with stop means for limiting the pivotal movement of the next longer dog of the series under the action of its spring, said dogs being adapted to retain and successively release said leaf-turners from their initial position.

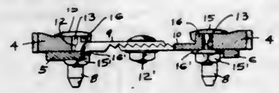
1,106,942. ATTACHMENT FOR WAGON-BRAKES. JOHN PAUL HISE, Hightown, Va., assignor to The Hise Wagon Brake Company, Marlinton, W. Va., a Corporation of West Virginia. Filed Aug. 6, 1913. Serial No. 783,345. (Cl. 21—10.)



1. The combination with a brake lever, a ratchet, and a pawl carried by the lever and engaging the ratchet, of a pull rod pivotally connected at its rear end to the lever having its front end portion bent to form a handle, a fixed guide for said pull rod, and a pawl tripping rod passing loosely through the handle portion of the pull-rod, having its forward end portion bent to form a handle parallel to and in advance of the handle portion of the pull rod.

2. In a device of the kind described comprising a brake lever, a ratchet, a pawl carried by the lever and engaging said ratchet, a bell crank carried by the lever, a rod connecting said bell crank and the pawl, a pull rod connected to said lever and having an upturned end portion, sleeves carried by the pull rod, a second rod working loosely in said sleeves and through said upturned end portion and having its front end also turned upwardly, the rear end portion of the second mentioned rod being also bent upwardly an adjustable screw carried by the rear upturned end portion and adapted to engage the bell crank, and a spring adapted to normally hold the upturned front end of the second mentioned rod in advance of and spaced from the upturned end portion of the pull rod.

1,106,943. HORSESHOE-CREEPER. FRANK F. JACOBS and MINNIE S. JACOBS, Indianapolis, Ind. Filed Oct. 18, 1913. Serial No. 796,025. (Cl. 168—30.)

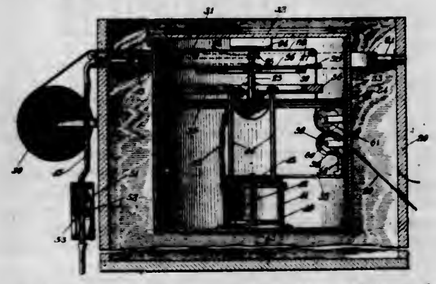


1. In a horseshoe creeper, the combination of a pair of tread plates contacting the bottoms of opposite members of the shoe, a tongue integral with each tread-plate extending inwardly therefrom and lapping each other, a bolt securing the lapped tongues together, other bolts one for each tongue passing through the tongue close to the shoe and having a head the outer side of which contacts with the top of the shoe, a nut on the lower threaded end of the bolt extending under both tongue and shoe, said tongues being offset from the tread-pieces to bring their lower faces even with the bottom of the shoe, said tread-pieces being cut away at their junction with the tongues above said nut.

2. In a horseshoe creeper the combination of a pair of tread plates contacting the bottom of opposite members of the shoe, tongues integral with each tread plate extending inwardly therefrom and lapping each other, a bolt securing the lapped tongues together, other bolts, one for each tongue passing through the tongue close to the shoe said other bolts having heads the outer sides of which contact with the adjacent top of the shoe, a nut on the lower threaded ends of said last bolts extending under both tongue and shoe and a flange integral with the tongue extending up to support the heads on the other sides of the bolts from their respective adjacent shoe portions said flanges having inner flat sides and said bolt heads being bent down against said flat sides.

3. In a horseshoe creeper the combination of a pair of tread plates contacting the bottom of opposite members of the shoe, a tongue integral with each tread plate extending inwardly therefrom and lapping each other, a bolt securing the lapped tongues together, a bolt for each tongue passing through the tongue close to the shoe, each of said last bolts having heads the outer sides of which contact with the top of the shoe member adjacent thereto, a nut on the lower threaded end of each of said last bolts extending under both tongue and shoe, said tongues being offset from the tread plates to bring their lower faces in the plane with the bottom of the shoe, said tread pieces being cut away at their junction with the tongues above said nuts, a flange for each tongue integral with the respective tongues and extending up to support the bolt heads on the other sides of their bolts from their supporting shoe members, said flanges having inner flat sides and said bolt heads being bent down against said flat sides.

1,106,944. RECORDING DEVICE. CARL L. JAEGER, Mahwah, N. J. Filed Sept. 24, 1912. Serial No. 722,060. (Cl. 234—26.)



1. A recording device, comprising: a movable member, and means to support the same; printing means controlled by said movable member; a record sheet, and means to advance the same with respect to the movable member; suitable platens; and means to effect an additional relative movement between the said record sheet and the said printing means in a direction to bring the same and said platens together to print a record and to disengage the movable member from its support during the printing period.

2. A recording device, comprising: a movable member, and means to support the same; printing means carried by said movable member; a record sheet, and means to advance the same with respect to said movable member; suitable means to effect an additional relative movement between the said record sheet and the said printing means in a direction to bring the same and said platens together to print a record and to disengage the movable member from its support during the printing period.

3. A recording compass, comprising: a magnetic needle, and means to support the same; printing means carried by said compass needle; a record sheet, and means to advance the same with respect to said compass needle; suitable platens; means to effect a relative movement between the said record sheet and the said printing means carried by the compass needle in a direction to bring the same and said platens together to print a record and to disengage said needle from its support during the printing period.

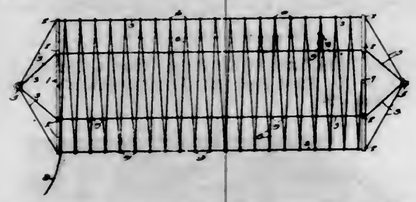
4. A recording compass, comprising: a magnetic needle, and means to support the same; a printing annulus carried by said compass needle, and suitable projections thereon to designate the corresponding points of the compass; a record sheet, and means to advance the same with respect to said printing annulus; means to effect a relative move-

ment between the said record sheet and the said printing annulus carried by the compass needle in a direction to bring the same and said platens together to print a record and to disengage said needle from its support during the printing period.

5. A recording device, comprising: a movable member, and means to support the same; printing means controlled by said movable member; a record sheet, and means to advance the same with respect to the movable member; suitable platens; means to effect an additional relative movement between the said record sheet and the said printing means in a direction to bring the same and said platens together to print a record and to disengage the movable member from its support during the printing period; and additional printing means set by the relative movement between the record sheet and the said former printing means.

[Claims 6 and 7 not printed in the Gazette.]

1,106,945. ANTENNA FOR WIRELESS TELEGRAPHY. NICHOLAS J. JEFFRIES, Atlantic City, N. J. Filed May 8, 1913. Serial No. 766,290. (Cl. 250—33.)



1. A portable collapsible antenna comprising end members, spiral antenna wire compressible between said end members, and supporting means connected to said antenna wire and slidably associated with said end members.

2. A portable collapsible antenna for wireless telegraphy comprising end members movable toward and from each other, antenna wire spirally arranged between said end members, and means for supporting said antenna connected to said wire and loosely slidably associated with said end members.

3. A portable collapsible antenna for wireless telegraphy comprising relatively movable end members, wire disposed between said end members, and means for supporting said antenna movable through the end members and attached to said wire and provided at the free ends with insulators.

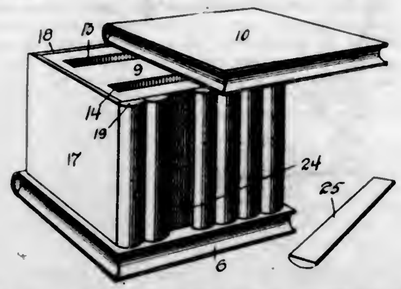
4. An antenna for wireless telegraphy comprising end supports, flexible means for supporting said antenna passed loosely therethrough, wire wound around and connected to said means, and insulators connected to the ends of said means.

5. An antenna for wireless telegraphy comprising end supports movable toward and from each other, flexible members passed loosely through said supports and adapted for the attachment of the antenna, and wire wound around said flexible members and attached thereto, said wire and flexible members being designed to be forced together between the end supports.

1,106,946. RECEPTACLE. FERENCZ JOACHIM, Pullman, Ill. Filed Feb. 3, 1914. Serial No. 816,245. (Cl. 46—41.)

1. A receptacle comprising a body portion including front and rear walls, end walls and a top and bottom, said top hinged to the rear wall, a lock carried by the front wall and adapted to engage in said top for locking it in closed position, said front wall having a key-hole opening associated with said lock, said bottom including a shiftable outer section, and a lock concealing member normally maintained in position to conceal said key-hole opening by said top and said shiftable section.

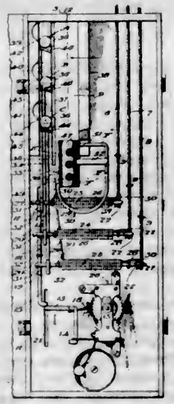
2. A receptacle comprising a body portion including front and rear walls, end walls and a top and bottom, said top hinged to the rear wall, a lock carried by the front wall and adapted to engage in said top for locking it in closed position, said front wall having a key-hole opening associated with said lock, said bottom including a shiftable outer section, a lock concealing member normally maintained in position to conceal said key-hole opening by said top and said shiftable section, and means forming a part of said bottom and connected to said section for maintaining the said section in normal position thereby retaining said member in position to conceal said opening.



3. A receptacle comprising a body portion including front, rear and end walls and a bottom and a hinged top, means for locking said top in closed position, said bottom including a shiftable section arranged exteriorly of said front, rear and end walls and corresponding in contour to said top, and means for concealing said lock, said means positioned against said front wall and maintained in position to conceal the lock by said top and said section when the latter is in normal position, said section capable of being shifted to permit of the removal of said means whereby access can be had to said lock.

4. A receptacle comprising a body portion including front, rear and end walls and a bottom and a hinged top, means for locking said top in closed position, said bottom including a shiftable section arranged exteriorly of said front, rear and end walls and corresponding in contour to said top, means for concealing said lock, said means positioned against said front wall and maintained in position to conceal the lock by said top and said section when the latter is in normal position, said section capable of being shifted to permit of the removal of said means whereby access can be had to said lock, and said bottom further including means connected to said section for maintaining the latter in normal position.

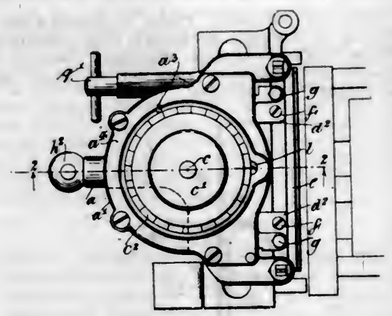
1,106,947. COMBINED BURGLAR AND FIRE ALARM. JOHN N. KOLOEN, Silverton, Oreg. Filed Apr. 22, 1914. Serial No. 833,684. (Cl. 116—11.)



1. In an alarm, the combination with a plurality of spring-actuated devices and tension cords connected thereto which, on severance, release the said spring-actuated devices individually, of a receptacle, a plurality of indicator balls adapted, when released, to fall into the receptacle, retaining means for the respective balls which are respectively operated by the spring-actuated devices, and a lock adapted to retain the balls in the receptacle.

2. An indicator for fire and burglar alarms comprising a plurality of balls, a receptacle adapted to catch and hold said balls in the order in which they are released, independent retaining means for said balls, said means being operable by the mechanisms of the fire or burglar alarm, and a lock for retaining the balls in the receptacle after they enter said receptacle.

1,106,948. DEVICE FOR TRIMMING LINOTYPE-SLUGS. JOSEPH KOMANCSEK, Astoria, N. Y. Filed Dec. 22, 1913. Serial No. 808,091. (Cl. 199—13.)



1. In an attachment of a linotype machine for trimming slugs, the combination of a fixed knife, a frame, a knife slide mounted movably therein, a fixed plate, a rotatable drum mounted operatively between said plate and the slide and a series of gage plugs carried loosely in said drum and movable respectively to an operative position between the plate and the slide to constitute an abutment therebetween and limit the movement of the slide in one direction.

2. In an attachment of a linotype machine for trimming slugs, the combination of a fixed knife, a frame, a knife slide mounted movably therein, a fixed plate, a rotatable drum mounted operatively between said plate and the slide, a series of gage plugs carried loosely in said drum and movable respectively to an operative position between the plate and the slide to constitute an abutment therebetween and an eccentric in operative engagement with the slide to move the same positively into engagement with the gage plugs.

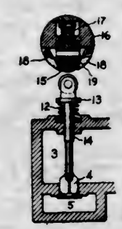
3. In an attachment of a linotype machine for trimming slugs, a fixed knife, a movable knife, a series of gage plugs to permit the adjustment thereof and a rotatable drum in which the plugs are carried loosely and threaded pins to secure said plugs within the drum, each plug being provided with a milled recess intermediate its ends within which the threaded pin rests to permit axial movement of the plug.

4. In an attachment of a linotype machine for trimming slugs, the combination of a fixed knife, a frame, a knife slide mounted adjustably therein, an eccentric in direct engagement with said slide to move the same positively, a shaft journaled in the frame, a drum affixed to said shaft, a circular series of gage plugs mounted loosely within the drum, a housing for said drum, a top plate for the housing provided with an index and an independent dial mounted on said shaft and adapted to coöperate with said index to indicate the position of said slide.

5. In an attachment of a linotype machine for trimming slugs, the combination of a fixed knife, a frame, a knife slide mounted movably therein and bearing directly along one edge against the frame, means to adjust the knife slide, a gib disposed operatively between the frame and the other edge and means disposed in juxtaposition to the adjusting means for the knife slide for setting up the gib to draw the face of the knife slide against the proximate face of the frame and thereby lock the slide in the frame.

[Claims 6 to 8 not printed in the Gazette.]

1,106,949. PUMP-REGULATOR. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 21, 1913. Serial No. 768,945. (Cl. 103—85.)



1. The combination with a pump having a suction chamber and a pump chamber, of a self-closing suction valve controlling the flow of liquid between said chambers, a rotating element, and a radially movable device having a cam surface carried by said element, said cam surface acting directly on the spindle of said valve to hold it open during a definite portion of the forcing stroke of said pump depending on the speed of the rotating elements.

2. The combination with a pump having a suction chamber and a pump chamber, of a self-closing valve controlling the flow of liquid between said chambers, a rotating shaft, a carrier on said shaft, a cam member radially movable in said carrier and adapted to make contact with the spindle of said valve to vary the time of closing the valve, and a spring to withdraw said member.

3. The combination with a pump having a suction chamber and a pump chamber, of a self-closing suction valve controlling the flow of liquid between said chambers, a rotating shaft, a carrier on said shaft, a cam member radially movable in said carrier and adapted to make contact with the spindle of said valve at abnormal speeds, and pivoted leaves on each side of said member which coöperate therewith to form continuations of the cam surface thereof.

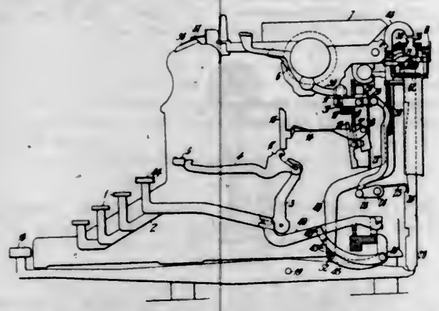
4. In a pump, the combination of a cylinder, a plunger therefor, self-closing suction and discharge valves for the cylinder, a stem for the suction valve, a shaft which actuates the plunger, a holder mounted on the shaft, a member carried by the holder and in position to act on the valve stem to vary the time of closing of the valve, said member moving away from the axis of the shaft in response to changes in centrifugal force, and a spring for opposing the outward movement of the weight.

1,106,950. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 27, 1912. Serial No. 722,582. (Cl. 197—179.)

1. In a typewriting machine, the combination with a rack bar, of a series of stops vertically slidable to effective and ineffective positions on said bar, an arm vertically slidable to slide said stops, means for guiding said arm, a rock shaft for drawing said arm, and a key arranged to swing said rock shaft.

2. In a typewriting machine, the combination with a rack and stops thereon, of a stop setting key, a rock arm operated thereby, and a vertically slidable stop setting member moved by said rock arm and having a U-shaped extension overhanging the stops and moved downwardly when the key is depressed to set a stop.

3. In a typewriting machine, the combination with a rack and stops thereon, of a stop setting key at the keyboard, a rock shaft adjacent the base of the machine swung by said key, a rock arm on said shaft, a stop setting member extending from said rock arm to a point over said stops, and a guide adjacent said rack in which said setting member is vertically slidable downwardly to project the stops downwardly from the rack.

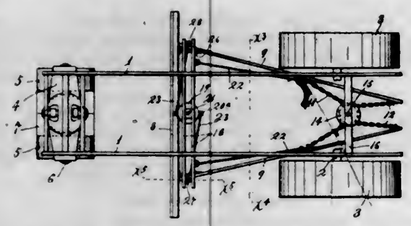


4. In a typewriting machine, the combination with a traveling carriage, of stops on said carriage, stops on the main frame of said machine, a casing for each set of stops set so that said casings pass close to each other, the stops being normally within said casings and supported at the surface thereof, a key for projecting said stops to arrest said carriage, and a restoring cam for returning the projected stops on the carriage, said key operable to advance said cam between the casings, said cam formed to return any stops in its path during said advance.

5. In a typewriting machine, the combination of a carriage, a set of vertically slidable stops carried thereby, an operating member movable vertically to selectively operate said stops, a machine frame, stops carried thereby, and means to selectively operate said last named stops into position to coöperate with the first named stops.

[Claims 6 to 15 not printed in the Gazette.]

1,106,951. COMBINED ROAD GRADER AND ROLLER. JOSEPH F. LANGER, Miles City, Mont. Filed Nov. 4, 1912. Serial No. 729,257. (Cl. 37—7.)

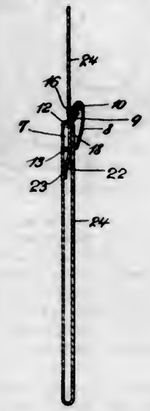


1. In a grader, the combination with a truck, of a scraper blade, an oscillatory member carried by the said truck, oblique rods pivotally connected at their inner ends to said oscillatory member on opposite sides of its axis, and connected at their outer ends to said scraper blade, thereby holding said scraper blade against endwise movements transversely of the machine, and means holding said scraper blade in different horizontal angular adjustments.

2. In a grader, the combination with a truck, of a scraper blade, an oscillatory member carried by the said truck, oblique rods pivotally connected at their inner ends to said oscillatory member on opposite sides of its axis, and connected at their outer ends to said scraper blade, thereby holding said scraper blade against endwise movements transversely of the machine, and means holding said scraper blade in different horizontal angular adjustments, a device for vertically adjusting said scraper blade, and devices for imparting horizontal oscillatory on angular adjustments thereto.

3. In a grader, the combination with a truck and a beam mounted on the framework thereof for horizontal oscillatory movements, of a scraper blade below said beam, thrust bars connected to said scraper blade on opposite sides of its center, a pivoted member connected to the central portion of said oscillatory beam, oblique rods connected at their inner ends to said pivoted member and connected at their outer ends to the front end portions of said thrust bars, vertically adjustable screw connections between the ends of said beam and said scraper blade, rods connecting said thrust bars to said oscillatory beam, and means for simultaneously forcing one of said thrust bars forward and the other rearward.

1,106,952. BUCKLE. FRANK L. LANGHAMMER and CHARLES G. JOHNSON, Bridgeport, Conn., assignors to Warner Brothers Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 30, 1913. Serial No. 781,926. (Cl. 24—194.)



1. In a buckle or the like, the combination of a frame having a lower transverse member upper transverse members and two longitudinal members, pivots provided by said upper transverse members, a lever pivotally mounted thereon, said lever being provided with a cam intermediate said pivots, and a clamp freely slidable along said two longitudinal members of the frame, said clamp having a portion adapted to be engaged by said cam whereby to force said clamp toward said lower transverse member of the frame.

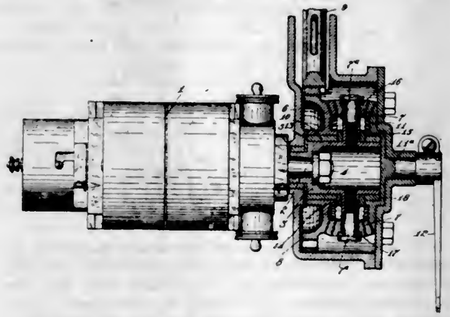
2. In a buckle or the like, the combination of a frame having a lower transverse member, upper transverse members and two longitudinal members, oppositely disposed pivots provided by said upper transverse members, a lever pivotally mounted on said pivots, said lever being provided with a cam extending between said oppositely disposed pivots, and a sliding clamp adapted to slide along said two longitudinal members of the frame, said clamp having a relatively broad upper surface coöperating with said cam whereby the closing of the lever causes said cam to hold said sliding clamp in closed position.

3. In a buckle or the like, the combination of a frame having a lower transverse member, upper transverse members and two substantially parallel longitudinal members, oppositely disposed pivots provided by said upper transverse members, said pivots lying substantially in the plane of said frame, a lever pivotally mounted on said pivots, said lever being provided with a cam extending between said oppositely disposed pivots, and a sliding clamp adapted to slide along said two longitudinal members of the frame, said clamp having an upper angular portion in the path of said cam and coöperating therewith to hold said clamp in closed position when said lever is in closed position.

4. In a buckle or the like, the combination of a frame having a transverse member, upper transverse members and two longitudinal members, oppositely disposed pivots provided by said upper transverse members, a lever pivoted on said pivots, said lever being provided with a cam intermediate said pivots, and a clamp freely slidable along said longitudinal members and coöperating with said cam whereby upon moving said lever downwardly said clamp is forced toward said lower transverse member, the cam surface of said cam comprising a reëntrant portion adjacent the end of said cam surface whereby said sliding clamp is held in closed position when said lever is moved to closed position.

5. In a buckle, the combination of a frame having a lower transverse member, upper transverse members, and two longitudinal members, oppositely disposed pivots provided by said upper transverse members, a sliding clamp carried by said two longitudinal members, and a lever comprising a lever arm and oppositely disposed extensions projecting from said lever arm, said extensions being bent to form ears embracing said pivots, said lever further being provided with an extension intermediate said oppositely disposed extensions and bent at an angle to said lever arm to form a cam surface coöperating with said sliding clamp, said intermediate extension being farther bent at an angle to the face of said cam surface and back toward the underside of the lever arm to form a locking surface for said sliding clamp.

1,106,953. SPARK-CONTROLLING DEVICE FOR MAGNETO IGNITION. HOWARD H. LANNING, Topeka, Kans., assignor of one-half to Henry W. Jacobs, Topeka, Kans. Filed Apr. 5, 1911. Serial No. 619,094. (Cl. 123—149.)



1. A spark controlling device for magneto ignition, comprising, in combination with a driving gear, a train of gears, a portion of said gears being connected with the armature and arranged to rotate about axes extending at right angles to the armature and also to move through a circle or orbit, a normally stationary gear meshing with the gears connected with the armature, and means for operating said normally stationary gear whereby movement is imparted to the portion of gears connected with the armature independent of that imparted thereto by the remaining portion of said train of gears.

2. A spark controlling device for magneto ignition, comprising a set of independently movable gears, means connected with the armature and adapted to be controlled by said gears, one of said gears acting as the power imparting gear, while the other gear is normally stationary and adapted to impart independent movement to said means and control the relation of the armature to the crankshaft of the engine without affecting the number of lines of force of the magnetic field cut by the armature and means for operating said normally stationary gear.

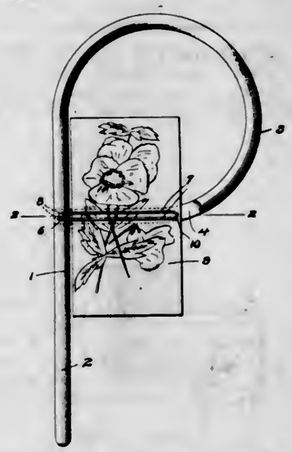
3. A spark controlling device for magnetic ignition, comprising, in combination with the armature of a magneto having a stationary field, a pair of independent, oppositely disposed gears, means operatively connected with the armature and arranged between the pair of gears, and means connected with one of said gears, which gear is normally stationary, whereby the latter may be moved in either direction independently of the movement of the opposite gear and thereby impart movement to the means independent of the movement given thereto by the oppositely disposed gear and thereby control the movement of cutting the magnetic lines of force by the armature.

4. In combination with the armature of a magneto having a stationary field, a spark controlling device comprising means extending at right angles to the armature and operatively connected therewith, said means being adapted to rotate about an axis and also to describe a circle whose center is coincident with the axis of the armature, mechanism arranged in operative relation with said means whereby the latter is rotated and moved about the circle, and normally stationary means engaging with said first mentioned means whereby the latter may be controlled in the movement through the circle and thereby control the moment of cutting the magnetic lines of force by the armature.

5. In combination with the armature of a magneto, a spark controlling device comprising a series of members whereby the armature is rotated, the intermediate portion of said series of members being arranged to rotate on independent axes and to describe an orbit, while another portion of said series is normally stationary and so related to the other portion of said series of members that it will cause a relative reduction in speed between the driving member of the series of members and the armature, while movement of said stationary portion of series of members will induce differential motion and cause the moment of sparking to be either advanced or retarded, and means for controlling the normally stationary portion of said series of members.

[Claims 6 and 7 not printed in the Gazette.]

1,106,954. CARD-HOLDER. FRANKLIN A. LAWSON, Trout Run, Pa. Filed May 31, 1913. Serial No. 770,862. (Cl. 40—146.)

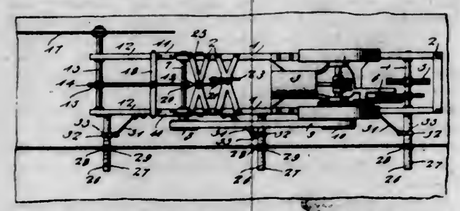


1. A device of the character described, comprising a rod having one end bent in the arc of a circle and secured to a straight portion of the rod intermediate the ends of the latter, a clamp secured to the straight portion of the rod and bearing against the bent portion of the rod and adapted to hold a card thereagainst, substantially as described.

2. A device of the character described comprising a rod having one end bent in the arc of a circle and secured to a straight portion of the rod intermediate the ends of the latter, said curved end of the rod recessed adjacent

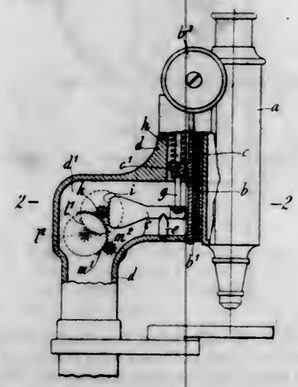
its point of juncture with the handle portion of the rod, a spring wire clamp secured at one end between the curved end of the rod and the handle portion of the rod, said clamp bearing against the recessed portion of the rod and adapted to hold a card in said recessed portion between the planes of the outer surfaces of the rod, substantially as described.

1,106,955. ICE-CUTTING MACHINE. STANLEY O. MARAK, Swisher, Iowa. Filed Oct. 31, 1912. Serial No. 728,899. (Cl. 62—8.)



In an ice cutting machine the combination with a sled, a motor thereon, a saw mounted on one side of the sled, connections between the motor and saw, and means for raising and lowering the latter; of combined gage and guiding devices consisting of bars having upturned inner ends detachably secured on the other side of the sled and having their upper surfaces marked with graduations, said devices projecting at right angles from the last mentioned side of the sled and spaced along said side from end to end, collars adjustably mounted upon said bars, combined gage and guide plates depending rigidly from said collars, set screws carried by the collars and adapted to be brought into binding contact with the bars for holding the plates rigidly, other collars fixedly mounted upon the bars and brace rods leading from the last named collars to the sled, the lower surface of each of said collars being adapted to slide upon the ice, whereby the bars are held out of contact with the upper surface of the ice for the purpose set forth.

1,106,956. DEVICE FOR THE FINE ADJUSTMENT OF MICROSCOPES. FRANZ MEYER, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed May 7, 1914. Serial No. 836,959. (Cl. 88—39.)



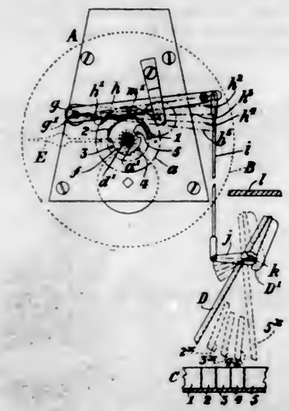
In a microscope a tube, a tube-carrier and a stand, means for a coarse adjustment and means for a fine adjustment between the said tube and the said stand, the latter means comprising a lever fulcrumed within the said stand, a toothed segment on the said lever, having its center in the fulcrum of the said lever, multiple toothed wheel gearing journaled in the said stand and meshing with the said segment, means for actuating the said gearing and spring controlled connecting means between the lever and the tube-carrier, adapted to transmit the movements of the lever to the tube-carrier.

1,106,957. SHOE-DRESSING AND METHOD OF MAKING THE SAME. TAICHIRO MIYATA and SENZO KUWAYAMA, New York, N. Y. Filed Dec. 10, 1913. Serial No. 805,831. (Cl. 134—10.)

1. A shoe dressing consisting of approximately twenty parts by weight of hydrated gum tragacanth, four parts of soapstone, four parts of clay, eight parts of chalk and sufficient water to bring the whole to a creamy consistency.

2. The herein described process of making a shoe dressing which consists in boiling one part of gum tragacanth in forty parts of water for approximately three hours, then intimately mixing together four parts of soapstone, four parts of clay, eight parts of chalk and eight parts of water and mixing the two compounds together.

1,106,958. TIME-CHECKING MACHINE. THOMAS MONTGOMERY, Greenock, Scotland, assignor of one-half to James McNeil, Greenock, Scotland. Filed Apr. 11, 1913. Serial No. 760,381. (Cl. 234—42.)



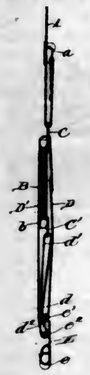
1. In a time checking machine in which checks are deflected into a plurality of receptacles, means for operating the deflector, comprising, in combination with the hour and minute spindles of a clockwork mechanism, a pivoted arm means connecting said arm and the deflector, a wheel secured to the hour spindle of the clockwork mechanism and having holes therein, a pin adapted to be inserted in one of said holes and to move said arm, at a predetermined time to set the deflector to deliver the checks, as they are inserted in the machine, into one of th receptacles, a stepped cam on the minute spindle of the clockwork mechanism, a second arm fast to the first arm, and a projection on said second arm adapted to engage the periphery of said cam and by engaging step after step thereof, to allow the pivoted arm to move the deflector at intervals to deliver the checks into other of the receptacles.

2. In a time checking machine in which checks are deflected into a plurality of receptacles, means for operating the deflector, comprising, in combination with the hour and minute spindles of a clockwork mechanism, a pivoted arm, means connecting said arm and the deflector, a wheel secured to the hour spindle of the clockwork mechanism and having holes therein, pins adapted to be inserted in said holes and to move said arm, at predetermined times, to set the reflector to deliver the checks, as they are inserted in the machine, into one of the receptacles, a cam secured on the minute spindle and having a plurality of steps formed thereon, the last step being in a recess below the first step, a second and spring arm fast to the first arm, a beveled projection on said second arm adapted to engage the periphery of the cam and, by engaging step after step thereof, to allow the pivoted arm to move the deflector at intervals to deliver the checks into other of the receptacles.

3. In a time checking machine in which checks are deflected into a plurality of receptacles, means for operating the deflector, comprising, in combination with the hour and minute spindles of a clockwork mechanism, a pivoted arm, an arm on the deflector, a link connecting said arms, a wheel secured on the hour spindle of the clockwork mechanism and having a plurality of holes therein, pins adapted to be inserted in said holes and each adapted to move said pivoted arm so as to set the deflector to deliver the checks, as they are inserted in the machine, into one of the receptacles, a stepped cam secured on the minute spindle of the clockwork mechanism, a second arm fast to the first arm, a projection on said second arm adapted to engage the periphery of the cam and, by engaging step after step thereof, to allow the pivoted arm to move the deflector at intervals so as to deliver the checks into other of the receptacles.

4. In a time checking machine in which checks are deflected into a plurality of receptacles, means for operating the deflector, comprising, in combination with the hour and minute spindles of a clockwork mechanism, a pivoted arm, a projection on said arm, means connecting said arm and the deflector, a wheel secured to the hour spindle of the clockwork mechanism and having holes therein, pins adapted to be inserted in said holes and each adapted to engage the projection on said pivoted arm and move same so as to set the deflector to deliver the checks, as they are inserted in the machine, into one of the receptacles, a stepped cam on the minute spindle of the clockwork mechanism, a second arm fast to the first arm, a projection on said second arm adapted to engage the periphery of said cam and, by engaging step after step thereof, to allow the pivoted arm to move the deflector at intervals to deliver the checks into other of the receptacles.

1,106,959. ELASTIC STRAP. CARL MÜLLER and OSCAR PILZ, Boston, Mass. Filed Aug. 28, 1913. Serial No. 787,201. (Cl. 241—21.)



1. A composite elastic strap comprising an endless loop of flexible material, a resilient element within said loop secured to or adjacent one end of said loop, the opposite end of the loop being folded within itself, and connected to the other end of said elastic element forming thereby two depending bights, and a fitting carrying two pulleys each of which engages one of said bights.

2. A composite elastic strap comprising an elongated endless loop of flexible material fixed at one of its extremities, a resilient element including a slotted plate on each end within said loop and secured by one of said slotted plates to or adjacent the fixed extremity of said loop, the opposite end of said loop being folded within itself and passed through the slot in the other plate forming thereby two depending bights, and a fitting carrying two pulleys each of which engages one of said bights.

3. A composite elastic strap comprising a length of flexible material folded into an elongated endless loop fixed at one of its extremities, a thin resilient element having a slotted plate at each end within and covered by said loop of flexible material and secured by one of its plates to or adjacent the fixed extremity of said loop, the opposite end of the loop being folded within itself and passed freely through the slot in the other plate, the portions of the loop depending from said latter plate forming two free bights, a fitting, and two pulleys carried by said fitting each of which engages one of said bights.

4. A composite elastic strap comprising a thin resilient element having a slotted plate at each end, a strip of inelastic flexible material passing through the slot in the upper of said plates and extending downwardly on one side of said resilient element beyond the lower plate, then folded upward to pass through the slot in the lower plate of the resilient element, then downwardly again and upwardly over the opposite side of said resilient element to the beginning, the two ends of the strip being connected together, the depending folds of the loop forming two free bights, and a fitting carrying two pulleys each of which engages one of said bights.

5. A composite elastic strap, comprising an elastic element, a flexible strip in the form of an endless loop connected to one end of said elastic element and extending in front of and behind the same and close thereto forming a covering for said element, said looped strip projecting beyond said element and there folded within itself and connected to the other end of the elastic element thereby forming two depending bights, and a fitting provided with two pulleys each engaging one of said bights.

1,106,960. ELECTRIC GLOW-LAMP. WALTHER NERNST, Göttingen, Germany, assignor to Nernst Lamp Company, a Corporation of Pennsylvania. Original application filed Mar. 29, 1898, Serial No. 675,603. Divided and this application filed Sept. 10, 1908. Serial No. 452,485. (Cl. 176—131.)

1. A conductor for electric lamps, consisting of an intimate mixture of yttria and tungstic acid.

2. A light giving body for electric glow lamps which is non-conductive at atmospheric temperatures and is conductive at high temperatures, consisting of an intimate mixture containing yttria and a small percentage of tungsten acid.

3. A light giving body for electric glow lamps which is non-conductive at atmospheric temperatures and is conductive at high temperatures, consisting of an intimate mixture of the oxid of yttrium and the oxid of tungsten, the former greatly preponderating in quantity.

4. A glower for incandescent electric lamps, which is non-conductive at atmospheric temperatures and conductive at high temperatures, consisting of an intimate mixture of yttria and a relatively small proportion of tungstic acid formed into the desired shape and thoroughly baked.

1,106,961. ELECTRIC GLOW-LAMP. WALTHER NERNST, Göttingen, Germany, assignor to Nernst Lamp Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Mar. 29, 1898, Serial No. 675,603. Divided and application filed Dec. 19, 1906. Serial No. 348,567. Divided and this application filed Apr. 24, 1913. Serial No. 763,184. (Cl. 176—131.)

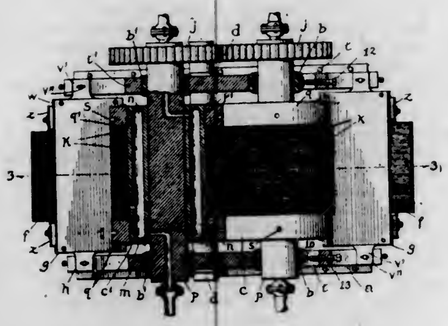
1. A homogeneous conductor for electric lamps containing intimately mixed calcium and tungsten in the form of compounds.

2. A light giving body for electric lamps, comprising intimately mixed tungsten, calcium and oxygen.

3. A radiant body comprising intimately mixed calcium and a metal and oxygen.

4. An illuminant for electric lighting comprising intimately mixed the oxids of calcium and tungsten.

1,106,962. MECHANISM FOR REDUCING GRAIN TO FILAMENTOUS FORM. THOMAS C. NIXON, Chicago, Ill. Filed Apr. 23, 1910. Serial No. 557,296. (Cl. 83—12.)



1. In a reducing machine, a cutting roll composed of a series of thin cutter disks, each having plane sides terminating in parallel cutting edges, between each two cutter disks a removable disk of equal thickness to the cutter disk and of smaller diameter, a threaded shaft upon which the disks are secured, means of clearance between each disk and the next, and compression collars of substantially the same diameter as the disk at each end of the series and serving to brace the disks at their peripheral portions.

2. A composite cutting roll, comprising a series of removable thin cutter disks each having plane sides terminating in parallel cutting edges, smaller alternating removable disks of substantially equal thickness to the cutter disks and serving as the bottoms of the fine circumferential channels, compression collars of the same diameter as the disk at each end of the series, and a threaded shaft on which the disks and collars are located.

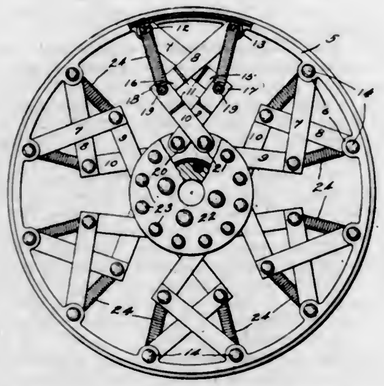
3. In a reducing machine, a threaded shaft, thereon a series of removable thin cutter disks each having plane sides terminating in parallel cutting edges, alternating smaller removable disks of equal thickness to said cutter disks and compression collars of substantially equal diameter to the disks at the ends of the series, an adjustable shaft parallel to said shaft, thereon a similar series of similar removable cutter disks having cutting engagement with the cutter disks of the first named series, similar smaller alternating disks, and similar compression collars and independent means at each end of the series for moving the cutter disks of one series toward the edges of the smaller disks of the other series.

4. In a reducing machine, a circumferentially channeled roll having a series of thin plane cutter disks each terminating in a rectangular cutting edge, alternating smaller disks of substantially equal thickness to said cutter disks, compression collars of substantially the same diameter as the disks at each end of the series, and a series of removable discharging blades adapted to enter the channels of the roll.

5. In a reducing machine, a circumferentially channeled roll and parallel thereto an adjustable head, a series of removable discharging blades adapted to enter the channels of the rolls, alternating removable elongated strips adapted to hold said blades in parallel relation and to engage the edges of the cutter disks, and a parallel-sided parallel-motion clamp, engaging the series of discharging blades and strips, attached to said head.

[Claims 6 and 7 not printed in the Gazette.]

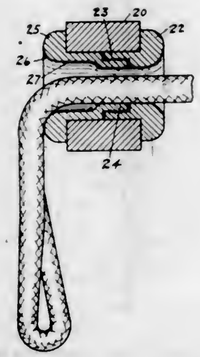
1,106,963. VEHICLE-WHEEL. LUCIUS R. NUTTING, Seattle, Wash. Filed Sept. 20, 1913. Serial No. 790,933. (Cl. 152—28.)



1. A spring wheel comprising a rim having inwardly-extending lugs, a hub, and spoke units each consisting of a pair of crossed struts pivotally secured to said hub at their inner ends, and a second pair of crossed struts pivotally secured at their inner ends to the outer ends of the hub struts, and at their outer ends to said lugs, and springs connecting the struts to the wheel rim, each of said struts being formed from a single strip of metal bent upon itself to provide parallel side bars having a double thickness of metal at their inner ends, and a transverse brace connecting said side bars.

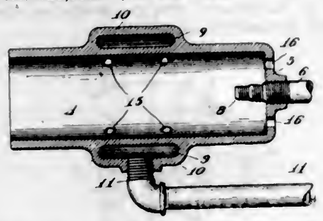
2. In a spring wheel, the combination with a hub, a rim, and spring members, of struts each formed from a U-shaped strip of metal, the sides of which are bent outward and then into parallel relation to provide side bars, the connecting portions of the U-shaped strips constituting transverse braces for the struts.

1,106,964. SIGNAL-CORD BUSHING. MARTIN A. PAHLER, New York, N. Y. Filed July 7, 1913. Serial No. 777,756. (Cl. 248—30.)



In an article of the class described, in combination, two tubular bushings each adapted to be inserted in a common rigid annulus from opposite sides thereof and having a flanged member integrally united therewith adapted to engage with one side of said annulus, said bushings being also rabbeted at their inner ends and having interlocking means on the overlapping faces of the rabbet joint.

1,106,965. BLOWPIPE. HARVEY D. PALMER and BURTON C. SANDERSON, Topeka, Kans. Filed Sept. 14, 1912. Serial No. 720,385. (Cl. 158—73.)



1. A blow-pipe, comprising a cylindrical member provided with a discharge end and with an air and oil receiving end, means whereby the oil will be directed in a longitudinal stream within said member, an oil receiving chamber arranged at a point intermediate of the ends of said member and forward of said means so as to receive the heat radiated from said member, and means whereby the oil from said chamber is discharged into the path of the longitudinally directed stream within the cylindrical member.

2. A blow-pipe, comprising an elongated member having an open end while the other end is provided with air inlets, means connected with the last mentioned end of said member and with an oil supply, said means terminating in a nozzle located parallel with the axis of the elongated member whereby the oil will be directed in a stream longitudinally within said member, and an oil receiving chamber arranged circumferentially about the walls of the member at a point forward of the nozzle and rearward of the open or discharge end of said member, said chamber being provided with radially arranged openings whereby the oil from said chamber is directed into the path of the longitudinally directed stream of oil within the member.

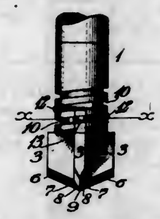
3. A blow-pipe, comprising an elongated open ended member, a heating chamber arranged about said member at a point intermediate of the ends of the member, a ramified supply pipe having connection with one end of said member and with said chamber, the end of said supply pipe connected with the end of the elongated member having its discharge end arranged parallel with the axis of said elongated member so as to produce a longitudinally directed stream within the member from end to end, and means whereby the heated contents in said heating chamber will be discharged into the path of the longitudinal stream within said member and made to impinge thereon.

4. A blow-pipe, comprising an elongated member open at one end, the opposite end being provided with air inlets and having connection with a liquid fuel supply, means whereby the fuel will be directed in a longitudinal stream through said member, and a liquid fuel-receiving chamber arranged about said member at a point intermediate of the ends thereof and forward of a point of discharge of said means so as to receive the radiated heat, said chamber being provided with oppositely disposed ports whereby the fuel will be discharged from said chamber into said member in streams or jets adapted to impinge against each other and against the longitudinally disposed stream in said member.

1,106,966. DRILL. CARL PAULI, Roselle Park, N. J., assignor to N. Harper Steward, Philadelphia, Pa. Filed Nov. 28, 1913. Serial No. 803,393. (Cl. 255—63.)

1. In a drill, a head having on the end thereof longitudinally-extending recesses in diametrically opposite directions, a plurality of bits adapted to be fitted together crossing each other and having their shanks adapted to occupy said recesses, the sides of said shanks and corresponding portion of the side of said head having registering screw threads thereon, a collar of the form of a screw coil adapted to engage simultaneously said threads of the shanks and head.

2. In a drill, a head having on the end thereof longitudinally-extending recesses in diametrically opposite directions, a plurality of bits adapted to be fitted together crossing each other and having their shanks adapted to occupy said recesses, the sides of said shanks and corresponding portion of the side of said head having registering screw threads thereon, a collar of the form of a screw coil adapted to engage simultaneously said threads of the shanks and head, said collar having an inturned shoulder which is adapted to be seated frictionally in the portion of the convolution of the screw thread with which it is contiguous.



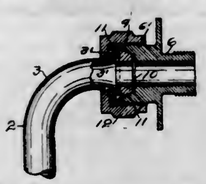
3. In a drill, a head, a bit, and a collar, said bit having its shank adapted to occupy said head, the sides of said bit and head having corresponding screw threads thereon, said collar being of the form of a screw coil which is adapted to occupy simultaneously the threads of said head and shanks.

4. In a drill, bits adapted to be fitted to each other cross-wise, one of said bits having thereon about the center of its cutting edge outward projecting fillets, said fillets having cutting edges adapted to form continuities of the cutting edge of the other bit.

5. In a drill, bits formed with slots adapting said bits to be fitted to each other cross-wise, fillets on the sides of one of said bits about the center of the cutting edge thereof, said fillets having cutting edges adapted to form continuities of the cutting edge of the other bit.

[Claims 6 to 8 not printed in the Gazette.]

1,106,967. PIPE-COUPLING. WALTER H. PERKINS, Watertown, N. Y., assignor to J. B. Wise, Inc., Watertown, N. Y., a Corporation of New York. Filed July 19, 1913. Serial No. 779,928. (Cl. 137—28.)



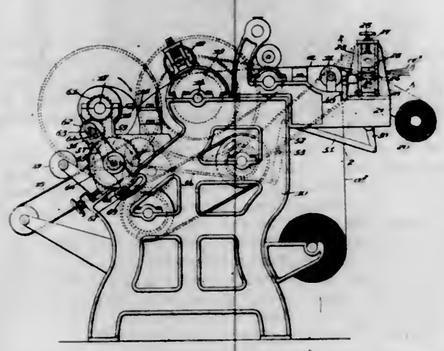
1. In a pipe joint, a rigid coupling having a funnel-shaped socket, a cone-shaped compressible bushing disposed in said socket, a supply pipe having a bell mouth engaging and embedded in the end of said bushing for sealing the joint between said pipe and said coupling, and a gland-nut engaging the bell of the supply pipe and also said coupling for drawing and holding said parts together.

2. A pipe coupling, comprising a member having a funnel-shaped socket and screw-threads surrounding said socket, a second member having a flaring mouth facing the larger end of said socket, a soft metallic packing comprising a cone-shaped ring inserted in said socket ahead of said flaring mouth, and a gland-nut for drawing and holding said members together, and for embedding the mouth of said second member in said ring.

3. In a water supply connection, a faucet, a coupling connected at one end to the faucet, the opposite end of said coupling having a funnel-shaped seat, a supply-pipe having a flaring mouth facing the said seat, and a conical bushing disposed in said seat, between the flaring mouth of said pipe and said coupling, said bushing adapted to be forced and molded into said seat having an annular groove to receive and to envelop the mouth of said pipe for sealing the joint.

4. In a bath fixture, a coupling for supporting a faucet, the said coupling piercing the bath tub and forming a conductor for water to the said faucet, said coupling having a socket facing away from the faucet, a supply-pipe carrying water to the said coupling, said pipe having a flaring mouth disposed in the socket in said coupling, and a bushing interposed between the mouth of said pipe and the wall of said socket, said bushing consisting of a material capable of being pressed and molded to conform to the said socket said bushing having an annular groove to receive the mouth of the supply pipe for holding said mouth concentric to said socket.

1,106,968. CUTTING AND COUNTING MACHINE. WILLIAM H. PHILLIPS, Nashua, N. H., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H., a Corporation of Massachusetts. Filed Jan. 8, 1914. Serial No. 810,999. (Cl. 164—68.)



1. In a cutting-machine of the character described, sheet-counting mechanism comprising means for inserting markers at predetermined intervals relatively to the material being cut, whereby a pile of sheets may be formed with interlaid markers.

2. In a cutting-machine of the character described, sheet-counting mechanism comprising means for inserting markers at predetermined intervals relatively to the material being cut, whereby a pile of sheets may be formed with interlaid markers, means being provided whereby the intervals between the markers may be varied.

3. The combination with a cutting-machine of means for inserting markers at predetermined intervals relatively to the material being cut, whereby a pile of sheets may be formed with interlaid markers.

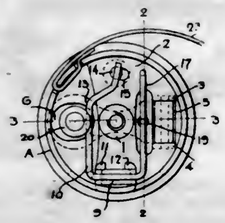
4. The combination with a cutting-machine of means for inserting markers at predetermined intervals relatively to the material being cut, whereby a pile of sheets may be formed with interlaid markers, the said means comprising an intermittently operated strip feeder and cutter.

5. The combination with a cutting-machine adapted to simultaneously operate on a plurality of webs, of a marker-strip feeder located in position to insert markers between two of said webs.

[Claims 6 to 12 not printed in the Gazette.]

1,106,969. TAPE-REEL. GEORGE F. PUTNAM, Goodrich, Mich., assignor, by mesne assignments, to The Lufkin Rule Co., Saginaw, Mich., a Corporation of Michigan. Filed Dec. 29, 1912. Serial No. 738,600. (Cl. 33—138.)

1. A tape reel, having in combination, a cylinder upon which the tape winds and having an end wall provided with a hole, a crank arm for revolving the same pivoted thereto and provided with a handle, the said handle adapted to protrude through the said hole in the end wall of the cylinder when the crank arm lies against the end wall, a spring mounted in said cylinder and having an arm adapted to engage with the head of the handle to yieldingly hold the handle in the cylinder in closed position and a slidable stud on one end of the cylinder and attached to the spring wire for moving the spring wire out of engagement with the handle to release the crank arm, substantially as described.



2. A tape reel, having in combination, a cylinder upon which the tape winds and having an end wall provided with a hole, a crank arm for revolving the same pivoted to the cylinder and provided with a handle, the said handle adapted to protrude through the said hole in the end wall of the cylinder when the crank arm lies against the end wall, a unitary spring having one spring arm engaging with the handle to hold the handle in the cylinder and another arm pressing against a portion of the crank arm for thrusting the handle out when the spring arm that holds the handle in the cylinder is released, substantially as described.

3. A tape reel, having in combination, a cylinder upon which the tape winds and having an end wall provided with a hole, a crank arm pivoted thereto for revolving the cylinder and provided with a handle, the said handle adapted to protrude through the said hole in the end wall of the cylinder when the crank arm lies against the end wall, a spring held in said cylinder and provided with a latch arm that engages with the handle to hold the handle in the cylinder and a thrust arm that engages with a portion of the crank arm to thrust the crank arm out when the latch arm releases the handle, substantially as described.

1,106,970. COMPOUNDS OF LEUCO VAT DYES WITH ARALKYL COMPOUNDS AND PROCESS OF MAKING SAME. KARL REINKING and ARMAND JULIUS STIEGELMANN, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Sept. 28, 1910. Serial No. 584,299. (Cl. 8—1.)

1. The process of producing new compounds by combining an aralkyl residue with a leuco compound of a vat coloring matter.

2. The process of producing a new compound by combining an aralkyl residue with a leuco compound of a vat coloring matter in the presence of fibrous material.

3. The process of producing new compounds on fiber by applying to the fiber a vat coloring matter and a suitable aralkyl compound and causing the vat coloring matter to be reduced to its leuco compound and to combine with the aralkyl compound substantially as hereinbefore described.

4. The process of producing a new compound by combining a benzyl residue with a leuco compound of a vat coloring matter.

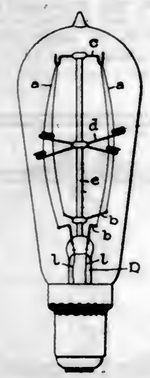
5. The process of producing a new compound by combining an aralkyl residue with a leuco compound of an indigo coloring matter.

[Claims 6 to 20 not printed in the Gazette.]

1,106,971. FILAMENT-MOUNTING. HERMANN C. G. REHLANDER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 13, 1910. Serial No. 581,828. (Cl. 176—39.)

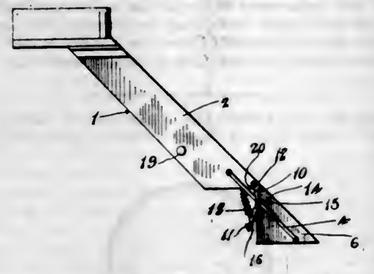
1. An anchor for filaments having a fork-shaped engaging portion, the opening of the fork being in the longitudinal direction of the anchor.

2. An anchor member for filaments having a fork-like engaging portion resembling in shape the letter S and



consisting of a portion of said member twice bent back upon itself so as to bring the opening of the fork in the longitudinal direction of the anchor.

1,106,972. AUXILIARY STEP FOR RAILWAY-COACHES. BERNARD F. ROBERTS, Sabetha, Kans. Filed Apr. 21, 1914. Serial No. 833,549. (Cl. 105—86.)

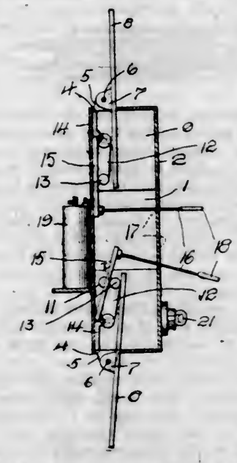


The combination with the approaching flight of stairs of a railway coach, of an auxiliary step swingably suspended from the lowermost end of said flight of steps and controllable in its downward and outward swinging movement by gravitation, means for holding said swingable step rigidly in a suspended position in alinement with the flight of steps, a supporting catch bar connected to said auxiliary step by holding it in folded or suspended position and means connected to said catch bar for automatically operating the same.

1,106,973. SIGNALING DEVICE. EDMUND ROGERS, Glenville, Conn. Filed Jan. 21, 1914. Serial No. 813,580. (Cl. 246—25.)

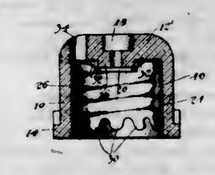
1. In a signaling device, the combination with a suitable source of electric energy and a bell in circuit therewith, of a casing, incandescent lamps carried by said casing and adapted to be placed in circuit with said source of electric energy, contact arms carried by the top and bottom of said casing and extending therein, switch arms adapted to be shifted by said contact arms to complete circuits through said bell, said lamps and said source of electric energy, and means including hinged plates for restoring said switch arms and contact arms to their normal position.

2. In a signaling device the combination with a suitable source of electric energy, and audible and visible signals adapted to be placed in circuit therewith, of a casing having a hinged door, pivoted contact arms carried by the top and bottom of said casing and extending therein, sets of switch arms within said casing and adapted to be moved by said contact arms for completing a circuit through said source of electric energy and said signals, hinged plates



arranged within said casing for restoring said switch arms to their normal position, and rods carried by said plates and extending through the hinged door of said casing to facilitate manually shifting said plates.

1,106,974. LAMP-SOCKET. GEORGE FREDERICK RUSH, Chicago, Ill. Filed June 13, 1913. Serial No. 773,442. (Cl. 173—358.)



1. A lamp socket device including a hollow base member having a recess therein, a tubular shell of less diameter than the recess in the base inserted in said recess said shell having on one portion outwardly pointed teeth whose outer ends lie in a curve of normally greater diameter than the interior of the base so that when the shell is inserted in the base, the teeth frictionally press against the wall of the base to hold the shell therein.

2. A lamp socket device including a hollow base member of insulating material having a recess therein, a tubular metallic shell of less diameter than the recess in the base, and of suitable length to be inserted wholly inside the base, having on one end outwardly pointed teeth whose outer ends lie in a curve of normally greater diameter than the interior of the base so that when the shell is inserted in the base, the teeth frictionally press against the wall of the base to hold the shell therein.

3. In a device of the class described, a cup shaped base member of insulating material having a cylindrical opening therein, a central lug projecting from the interior of the base of the cup, and a cylindrical metallic shell inserted in said opening in the base, said shell being of a diameter intermediate between the base and lug and formed with inwardly turned teeth at one end adjacent to the lug and outwardly turned teeth at the opposite end extending toward the base, the diameter of the opening inclosed by the points of the inwardly turned teeth being normally less than the diameter of the lug and the diameter of the curve on which points of the outwardly turned teeth lie, being normally greater than the diameter of the opening in the base, whereby the respective sets of teeth frictionally engage the lug and the base respectively and thus hold the shell in place upon the base.

1,106,975. ELECTRIC HEATER FOR FANS. AUGUST SCHAEFFER, Frankfort-on-the-Main, Germany. Filed Apr. 8, 1912. Serial No. 689,126. (Cl. 219—39.)

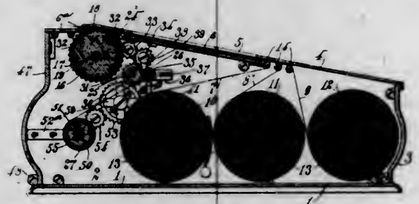


1. The combination with a fan of a motor for driving the same, a fan casing having three electric contacts therein, two of said contacts being connected to a source of electricity and the third contact connected to one terminal of the motor, and a plurality of removable heater elements adapted to be used interchangeably, each one having three contacts corresponding to those in the casing, and each of said elements being provided with a heater wire having its opposite ends connected to two of the heater contacts, substantially as and for the purpose described.

2. The combination with a fan, of a motor for driving the same, a fan-casing having three electric contacts arranged in its outlet, two of said contacts being connected with a source of electricity and the third contact connected to one terminal of the motor, and a removable heater element having three contacts corresponding with those in the outlet of the casing, said element being provided with a heater wire having its opposite ends connected to two of the heater contacts, and a resistance element carried by the heater element and having its opposite ends connected respectively to the third heater contact and to the heater wire.

3. The combination with a fan, of a motor for driving the same, a fan casing having three electric contacts therein, two of said contacts being connected to a source of electricity and the third contact connected to one terminal of the motor, and a plurality of removable heater elements adapted to be used interchangeably, each one having three contacts corresponding to those in the casing, and each of said elements being provided with a heater wire connected to two of the heater contacts, and a resistance element carried by the heater element and adapted to reduce a current of higher voltage to the normal terminal voltage of the motor.

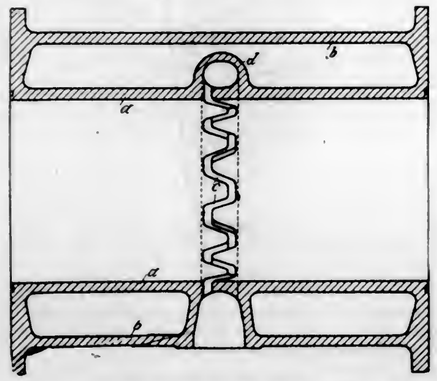
1,106,976. AUTOGRAPHIC REGISTER. THEODORE F. SCHIRMER, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 29, 1912. Serial No. 728,504. (Cl. 11—36.)



In an autographic register, a frame having an opening in the top thereof and an end door, means for supporting paper rolls therein the webs of which are exposed beneath said opening, a main feed roller engaging the webs of two of said paper rolls, means for actuating said main feed roller, a pair of auxiliary feed rollers engaging the web of another of said paper rolls, means for actuating said auxiliary feed rollers from the main feed roller, means for separating said last named feed rollers comprising levers engaging the ends of one of said rollers, a rock shaft engaging said levers, a horizontal bar slidably mounted in operative relation with said rock shaft and said door, whereby said auxiliary roll-separating means is controlled by said door.

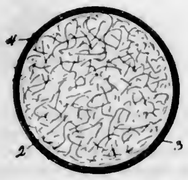
1,106,977. CYLINDER. KARL SCHWARZ, Nuremberg, Germany, assignor to Maschinenfabrik Augsburg-Nürnberg, A.-G., Nuremberg, Germany. Filed Mar. 18, 1913. Serial No. 755,071. (Cl. 123—61.)

1. A cylinder for double-acting two-cycle internal combustion engines comprising an interior wall having an annular escape slit interrupting said wall through its entire periphery, an uninterrupted exterior wall, connecting flanges at the end of said walls, and an annular bulge connecting the interior wall portions where they are separated from each other by the escape slit, said bulge forming thus a yielding element.



2. A cylinder for double-acting two-cycle internal combustion engines comprising an interior wall having an annular escape slit of serpentine shape interrupting said wall through its entire periphery, an uninterrupted exterior wall, connecting flanges at the end of said walls, and an annular bulge connecting the interior wall portions where they are separated from each other by the escape slit, said bulge forming thus a yielding element.

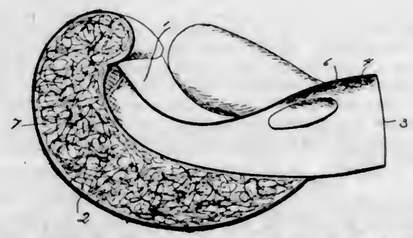
1,106,978. PLAYING-BALL. BENJAMIN F. SHIBE, Bala, Pa. Filed Apr. 19, 1912. Serial No. 691,875. (Cl. 46—4.)



1. A playing ball comprising a structure of partially compressed resilient material having substantially the characteristics of kapok incased in a flexible cover.

2. A playing ball comprising a spherical structure of partially compressed resilient fibrous material having substantially the characteristics of kapok incased in a flexible cover.

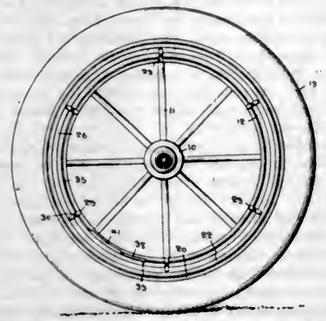
1,106,979. BOXING-GLOVE. BENJAMIN F. SHIBE, Bala, Pa. Filed June 21, 1912. Serial No. 704,978. (Cl. 2—196.)



1. A boxing glove comprising a palm portion and a back portion, and a cushion of kapok within same.

2. A boxing glove comprising a palm portion and a back portion, and a cushion of partially compressed resilient kapok secured upon said back portion.

1,106,980. DEMOUNTABLE RIM. STANLEY E. SIGGELKOW, McFarland, Wis. Filed June 14, 1913. Serial No. 773,703. (Cl. 152—21.)



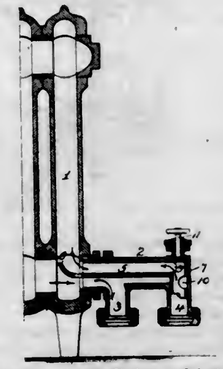
1. The combination with a wheel provided with a felly and a metal rim thereon, of a demountable rim carrying a pneumatic tire and adepted to be fitted laterally upon the periphery of the metal rim, a stop rigidly secured on one side of the metal rim, means for securing the demountable rim on the metal rim comprising latches pivoted to the side of the felly having their inner ends bent outwardly and backwardly, a contractible clamp ring mountable in said bends to hold the latches in operative position, said bends having friction rollers journaled therein and said contractible ring being adapted to inclose and bear upon said friction rollers and comprising an open ring, a lever pivoted to one end thereof, and a link connecting the other end of the open ring with the lever at a distance from its pivot.

2. The combination of a wheel having a felly, a metal rim mounted thereon having an out-turned edge, said edge being provided with an out-turned square flange, a cylindrical surface having a large diameter, a cylindrical surface having a comparatively smaller diameter, a frusto-conical surface uniting the two said cylindrical surfaces, lugs on said smaller diameter cylindrical surface, a demountable rim fixed on said metal rim having a rib seated on said large diameter surface and against said out-turned flange, a rib seated on said smaller diameter surface with recesses therein, a seat in the aforementioned lugs, an inturned flange from said last mentioned rib seated against said metal rim and said felly, and having a beveled surface and central latches pivoted to the side of the said felly, said latches having a slightly flanged portion at one end to seat against said beveled surface and back turned portions at the other end, a roller mounted in said back turned portions, and a contractible ring likewise seated therein and having a contractible locking device operatively connected thereto, said ring locking said latches in operative position and said latches locking said demountable rim.

3. A wheel comprising in combination a felly, a metal rim mounted upon said felly having a cylindrical surface with lugs projecting therefrom, a frusto-conical surface leading to a second cylindrical surface, the said second cylindrical surface having a projecting flange therefrom, a demountable rim mounted upon said metal rim having a rib depending therefrom, said demountable rim passing up and over said frusto-conical surface and connecting the said second mentioned flange having a second depending rib therefrom seated against said lugs and having an inturned flange thereto limiting the inward movement of said demountable rim, a pivoted latch seated against said inturned flange to limit the outward movement thereof, a contractible ring mounted upon said latch to retain it in operative position, a lever attached to one end of said ring and having a lug in the end thereof, and a link pivoted to the upper end of said ring and to the approximately center portion of said lever.

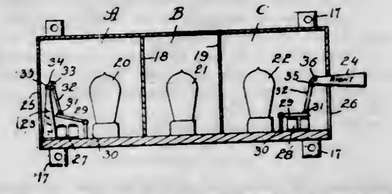
4. A wheel including a felly, a fixed rim, a demountable rim laterally removable therefrom, relatively fixed means carried by the fixed rim and engageable with the demountable rim for holding the demountable rim against lateral displacement in one direction, movable means carried by the felly for holding the demountable rim against lateral displacement in the other direction, said movable means including a plurality of pivoted latch members mounted on the felly and engaging, when in locked position, the demountable rim, hook members formed on the inner terminals of said latch members and means for holding the pivoted latch members in locking engagement with the demountable rim, said last mentioned means including a collapsible locking ring adapted to seat in the said hook members for holding the latches against swinging movement.

1,106,981. RADIATOR CONNECTION. CHARLES H. SPECKMAN, Philadelphia, Pa. Filed June 18, 1910. Serial No. 567,724. (Cl. 237—19.)



A valve connection for radiators of hot water heating systems, said valve connection comprising a horizontal chest with horizontal partition therein dividing it into upper and lower chambers, an inner vertical branch communicating with the lower chamber only and an outer vertical branch communicating with both the upper and lower chambers, and a hollow plug valve fitted to said outer vertical branch and having oppositely disposed ports whereby, when the valve is adjusted in one position, said branch will be in communication with the upper chamber but will be cut off from the lower chamber and, when the valve is in the opposite position, said branch will be cut off from the upper chamber and in communication with the lower chamber.

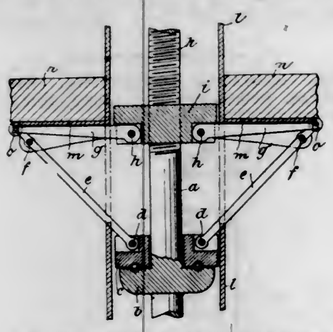
1,106,982. AUTOMATIC AUTOMOBILE REAR SIGNAL. JOHN WM. STACHNICK, Baltimore, Md. Filed June 12, 1913. Serial No. 773,303. (Cl. 177—337.)



In a device of the character described, the combination with an automobile and the steering column thereof of a rectangular housing mounted upon said automobile and having longitudinal slots formed in its end walls, a plurality of electric lamps mounted within said housing, a pair of semaphore arms pivotally mounted within said

housing and adapted to operate through the slots therein, an electromagnet mounted within said housing adjacent each of the semaphore arms, a vertical standard mounted within said housing adjacent each of the magnets, an armature pivotally mounted upon each of said standards above said magnets and a link connecting each of said pivoted armatures with the semaphore arms and means for operating said semaphore arms and the electric lamps mounted upon said steering column.

1,106,983. APPARATUS FOR RAISING SUNKEN SHIPS. SIGMUND STEINER, Borysław, Austria-Hungary, assignor of one-half to Wolf Krohn, Borysław, Austria-Hungary. Filed Nov. 7, 1913. Serial No. 799,732. (Cl. 114—51.)



1. In a gripping device for a hoisting apparatus, the combination with a rod, of relatively movable members mounted thereon, a plurality of pairs of gripping members, the members of each pair bearing pivotally against said relatively movable members at their outer ends and being pivotally connected at their inner ends by a pin passing through both members.

2. In a gripping device for a hoisting apparatus, the combination with a rod, of relatively movable members mounted thereon, means carried by said rod to cause relative movement between said relatively movable members upon rotation of said rod, pivotally jointed gripping members bearing pivotally against said relatively movable members, and adapted to be moved outwardly into gripping position upon rotation of said rod.

3. In a hoisting apparatus, the combination with a tube of a gripping device adapted to be lowered therein, comprising a rod, relatively movable disks on said rod, and jointed rods pivoted to said disks, carrying cutting means adapted to cut through said tube and move outwardly when said disks are moved toward each other.

4. In a hoisting apparatus, the combination with a tube of a gripping device adapted to be lowered therein, comprising a rod, relatively movable disks on said rod, adapted to move relatively upon rotation of said rod, and jointed rods bearing pivotally against said disks adapted to be moved outwardly without rotating when said disks are moved toward each other.

5. In a hoisting apparatus, the combination with a tube of a gripping device adapted to be lowered therein, comprising a rod, relatively movable disks on said rod, and jointed rods pivoted to said disks, carrying cutting means adapted to cut through said tube, move outwardly and carry sections of said tube therewith, when said disks are moved toward each other.

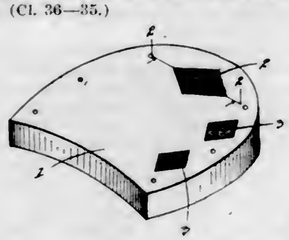
[Claim 6 not printed in the Gazette.]

1,106,984. PROCESS OF EXTRACTING POTASSIUM COMPOUNDS FROM SILICIOUS MINERALS. THOMAS B. STILLMAN, Hoboken, N. J. Filed Mar. 29, 1913. Serial No. 757,575. (Cl. 23—22.)

1. The process of decomposing potash-bearing silicious minerals comprising the following steps: (1) grinding the mineral, mixing it with a sufficient quantity of carbonate of potash, to convert all of the silica contained therein into potassium silicate, and fusing the mixture at a high temperature; (2) grinding the fused compound and then subjecting it to the action of a sufficient quantity of cold water to dissolve all of the aluminate of potash and of the oxid of potash; (3) drawing off the solution, adding thereto an alkali to make the solution safely alkaline and then enough of an ammonium salt to precipitate all alumina of the aluminate of potash as hydrated aluminum oxid, and then separating the liquor from the precipitated hydrated aluminum oxid; (4) charging the liquor with a sufficient quantity of carbonic acid to convert the oxid of potassium, held therein in solution, into carbonate of potash, and then evaporating the water; (5) recovering the potash from the in cold water insoluble residue; substantially as herein set forth.

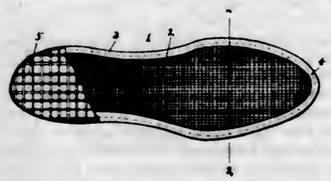
2. The process of decomposing potash-bearing silicious minerals comprising the following steps: (1) grinding the mineral, mixing it with a sufficient quantity of carbonate of potash, to convert all of the silica contained therein into potassium silicate, and fusing the mixture at a high temperature; (2) grinding the fused compound and then subjecting it to the action of a sufficient quantity of cold water to dissolve all of the aluminate of potash and of the oxid of potash; (3) drawing off the solution, adding just enough ammonia to make it safely alkaline, then adding thereto enough of an ammonium salt to precipitate all alumina of aluminate of potash as hydrated aluminum oxid and then separating the liquor from the precipitated hydrated aluminum oxid; (4) charging the liquor with a sufficient quantity of carbonic acid to convert the oxid of potassium, held therein in solution, into carbonate of potash, and then evaporating the water; (5) recovering the potash from the in cold water insoluble residue; substantially as herein set forth.

1,106,985. COMPOUND CUSHION-HEEL. JOHN J. STRITZEL, Elma, Iowa. Filed Apr. 27, 1914. Serial No. 834,778. (Cl. 36—35.)



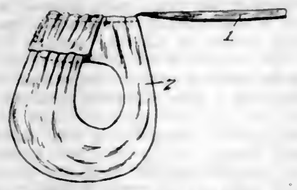
A cushion shoe heel comprising a rubber body portion and a plurality of inserted plugs molded in the rubber, said plugs consisting of granulated cork, alkali, glue, mineral wool, and a fibrous material mixed and molded into form and incorporated in the rubber heel at the time of molding the same.

1,106,986. INSOLE. WILLY STÜCKI, Biel, Switzerland, assignor to Küng, Sigg & Cie., Biel, Switzerland, a Firm. Filed Mar. 6, 1913. Serial No. 752,319. (Cl. 36—44.)



An insole comprising a body portion consisting of but two layers having different physical characteristics, one of said layers being composed of a metal fabric substantially non-corrodible by perspiration, and the other thereof, of coarse meshed fibrous material.

1,106,987. COMBINATION SUSPENSORY AND PROTECTOR. AUGUST J. SUNDEN, Washington, D. C. Filed Mar. 20, 1913. Serial No. 755,760. (Cl. 128—38.)

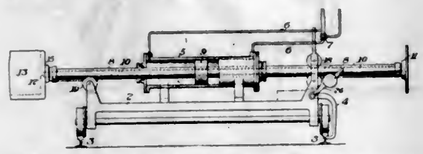


1. In a combination suspensory and protector, two sheets of suitable material having a cut away portion and secured together around the edge of said cut away portion, and a tape inserted between said sheets around said cut away portion for securing the same to the wearer substantially as and for the purpose set forth.

2. In a combined suspensory and protector, two sheets of suitable material secured one upon the other and having an approximately V-shaped cut away portion at one end, and a tape extending around said V-shaped cut away portion adapted to be secured around the scrotum of the wearer, one of said sheets adapted to be folded beneath the scrotum and the other sheet to extend back between the body and apparel of the wearer as and for the purpose set forth.

3. In a combination suspensory and protector, two sheets of suitable material having an approximately V-shaped cut away portion at one end and said sheets being secured together one upon the other around said cut away portions, and a tape extending around said opening between said sheets, one of said sheets being adapted to be folded under the scrotum and having one end secured by said tape and the other sheet adapted to extend rearwardly between the body and apparel of the wearer substantially as described.

1,106,988. CHARGING APPARATUS FOR OPEN-HEARTH FURNACES AND THE LIKE. JOHN ALBERT SWINDELL, Pittsburgh, Pa. Filed July 10, 1913. Serial No. 778,308. (Cl. 214—23.)



1. Furnace charging apparatus comprising a movable car or buggy, a power cylinder mounted thereon, a non-rotatable hollow sleeve or tube extending through said cylinder and carrying a piston within the cylinder, and a rod or shaft extending through the sleeve or tube and rotatable therein, said rod or shaft having means at its forward end for engaging and turning a charging box, substantially as described.

2. Furnace charging apparatus comprising a car or buggy, a double-acting power cylinder mounted thereon, a hollow sleeve or tube extending longitudinally through the cylinder and carrying a piston therein, a rod or shaft rotatably mounted within and extending through said sleeve or tube, and a box-engaging member secured to the forward end of said shaft and having a rotating bearing on the forward end portion of the sleeve or tube; substantially as described.

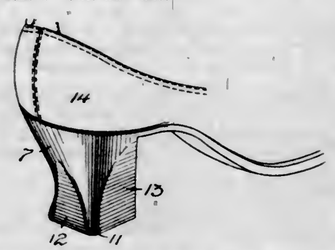
3. Furnace charging apparatus comprising a movable car or buggy, a power cylinder mounted thereon, a hollow sleeve or tube extending through said cylinder and carrying a piston within the cylinder, and a rod or shaft extending through the sleeve or tube and rotatable therein, said rod or shaft having means at its forward end for engaging a charging box, together with means whereby the angle of the tube or sleeve and the rod or shaft may be changed, substantially as described.

4. Furnace charging apparatus comprising a car or buggy, a frame member pivoted thereon, means for effecting a vertical adjustment of the frame member, a power cylinder mounted on the frame member, a sleeve or tube extending through said cylinder and carrying a piston therein, a rod or shaft extending through the sleeve or tube and rotatable therein, and means on said rod or shaft for engaging a charging box, substantially as described.

5. Furnace charging apparatus, comprising a hollow longitudinally reciprocable non-rotatable sleeve, motive means for reciprocating said sleeve, a rod extending through said sleeve and rotatable therein, and means on the rod for engaging a charging box, substantially as described.

[Claim 6 not printed in the Gazette.]

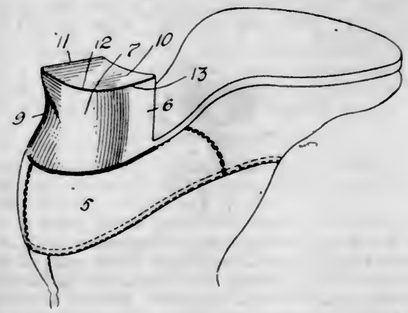
1,106,989. HEEL FOR FOOT-GEAR. STEPHEN SZEKFU, Ellensburg, Wash., assignor of one-half to Victor E. Munz, Ellensburg, Wash. Filed Feb. 3, 1914. Serial No. 816,275. (Cl. 36—34.)



1. A heel for footgear including a body portion having the tread thereof formed with straight side edges and a rear edge squared for a portion of its length, and the remaining portions of the rear edge being slightly rounded and terminating in the rear ends of the side edges.

2. A heel for footgear including a body portion having the tread thereof formed with straight side edges and a rear edge squared for a portion of its length, and the remaining portions of the rear edge being slightly rounded and terminating in the rear ends of the side edges, the rear portion of said body being flattened in a horizontal direction and extending downwardly and forwardly at an inclination.

1,106,990. HEEL FOR FOOT-GEAR. STEPHEN SZEKFU, Ellensburg, Wash., assignor of one-half to Victor E. Munz, Ellensburg, Wash. Filed Feb. 3, 1914. Serial No. 816,276. (Cl. 26—34.)

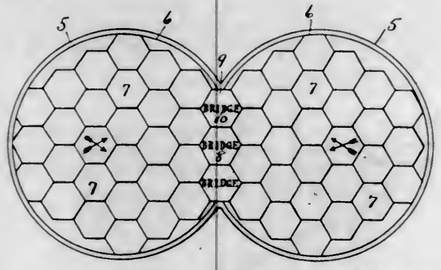


1. A heel for footgear comprising a body portion having a straight outer side, a rounded inner side and a rounded rear.

2. A heel for footgear comprising a body portion having a straight outer side, a rounded inner side and a rounded rear, the point of mergence between the outetr side and the rear forming a sharp corner.

3. A heel for footgear comprising a body portion provided with a tread, the outer edge of said tread being straight, and the rear edge and other side edged rounded, the point of mergence between the rear edge and outer side edge providing a sharp corner.

1,106,991. GAME. HERVEY DEXTER THATCHER, Potsdam, N. Y. Filed Oct. 13, 1913. Serial No. 794,920. (Cl. 46—64.)



1. In a game, a game board, including opposed fields, each field including a plurality of playing sections, and a bridge portion disposed between the fields and including a plurality of playing sections connecting the sections of said fields.

2. A game board divided into two fields, each field including a plurality of connected sections and a restricted number of other sections interposed between the sections of the respective fields.

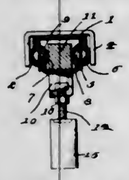
3. In a game, a game board formed with opposed overlapping circles, a plurality of connected playing sections formed in each circle, and a restricted number of playing sections disposed at the junction of the two circles and connected with the playing sections of both circles.

4. In a game, a game board formed with opposed playing fields, each field being substantially circular in outline, a plurality of playing sections formed in each field, and a restricted number of other sections, interposed between the sections of the respective fields.

5. In a game, a game board including opposed playing fields, each field being substantially circular in outline, a plurality of polygonal shaped playing sections formed in each field, and adjacent one another, and a restricted number of playing sections disposed intermediate the fields and connecting the sections thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,106,992. DOOR-HANGER. PAUL W. THOMAS, Brooklyn, N. Y.. Filed Mar. 10, 1914. Serial No. 823,820. (Cl. 16—91.)



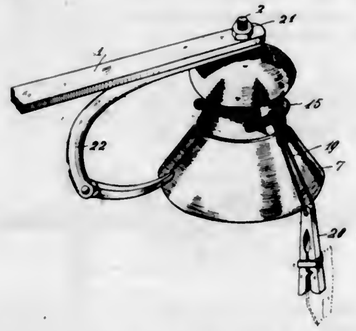
1. A door hanger comprising a strip which is approximately U-shaped in transverse section and which is provided at its sides with ball races, U-shaped clips mounted upon the strip and having their side portions in contact with the side portions of the strip, plates located adjacent the inner surfaces of the side portions of the strip and provided with openings, balls located in the openings and received in the said ball races, a yoke member located between the plates and provided at its sides with ball races which receive the inner portions of the balls, blocks carried by the yoke member and a door connected with the blocks.

2. A door hanger comprising a strip provided with longitudinally disposed ball races, a yoke member located between the side portions of the strip and having longitudinally disposed ball races, balls received in the said races, plates having openings which receive the balls U-shaped blocks carried by the yoke member, filler blocks connected with the ends of the U-shaped blocks and bearing against the inner surfaces of the side portions of the yoke member and a door connected with the U-shaped blocks.

3. A door hanger comprising a strip provided with longitudinally disposed ball races, a yoke member located between the sides of the said strip and provided with longitudinally disposed ball races, bearing balls located in the said races, plates having openings which receive the balls U-shaped blocks carried by the yoke member and provided with slots, said blocks having at the ends of the slots upstanding lugs, headed studs received in the slots and having their heads bearing against the lugs and a door carried by the studs.

4. In combination with a door hanger, a yoke member, U-shaped blocks carried by the yoke member and provided with slots, said blocks having at the ends of their slots upstanding lugs, headed studs received in the slots, and the heads of the studs bearing against the lugs, nuts screw threaded upon the intermediate portions of the studs and adapted to bear against the under sides of the blocks, a door carried by the studs a strip receiving the yoke member, balls interposed between the strips and yoke member and plates having openings which receive the balls.

1,106,993. CLOTHES-DRIER. JOHN UHL, New York, N. Y. Filed Mar. 7, 1914. Serial No. 823,196. (Cl. 68—12.)



1. In a device of the class described in combination, a rotatable mounted bell, a support for said bell, an arm mounted adjacent said bell, and a finger pivoted to said arm, said arm and finger being so arranged as to normally prevent the rope from dropping off said bell.

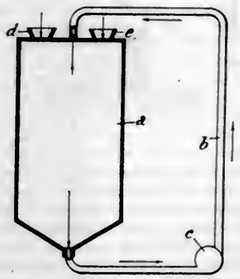
2. In a device of the class described in combination, a support, a bolt depending therefrom, a disk or plate carried by the head of said bolt and having a groove therein, balls mounted in said groove, and an inverted bell-like member provided with a partition having a groove fitted over said ball, said bell-like member being extended upwardly and around said bolt.

3. In a device of the class described in combination, a support, a bolt depending therefrom, a disk or plate carried by the head of said bolt and having a groove therein, balls mounted in said groove, and an inverted bell-like member provided with a partition having a groove fitted over said balls, said bell-like member being extended upwardly and around said bolt and having an external groove intermediate the level of said partition and the top thereof for receiving a rope.

4. In a device of the class described in combination, a support, a bolt depending from said support, a bell-like member rotatably mounted on said bolt, a nut carried by said bolt above said member, a rain shield carried by said bolt above said nut, a second nut above said shield, an arm secured intermediate said last mentioned nut and said support, and a nut above said support for holding the previously mentioned members in position

---

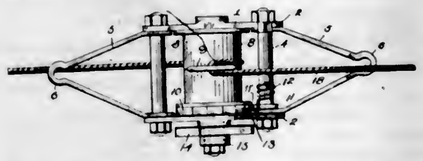
1,106,994. PROCESS FOR BLEACHING LIGNOCELLULOSE AND PECTOCELLULOSE. ANTOINE REGNOUF DE VAINS, Paris, France. Filed Aug. 18, 1913. Serial No. 785,344. (Cl. 8—2.)



1. A process for treating ligno-cellulose preparatory to bleaching for removing the ketones therefrom, which consists in subjecting the ligno-cellulose to the action of chlorin in solution for the purpose of forming a ketonic chlorid, and leaching to remove the ketonic chlorid.

2. A process for treating ligno-cellulose preparatory to bleaching for removing the ketones therefrom, which consists in subjecting the ligno-cellulose to the action of chlorin in solution for the purpose of forming a ketonic chlorid, leaching to remove the ketonic chlorid, and treating with alkaline water to assist the dissolution of the ketonic chlorid.

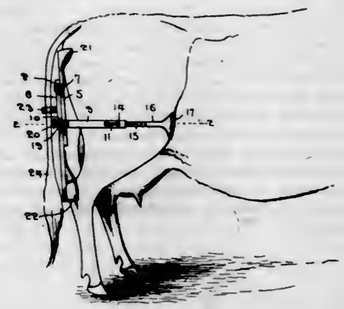
1,106,995. PAWL-AND-RATCHET MECHANISM. HAMILTON T. VERNER, Charlotte, N. C., and CORBIN C. RANSON, Richmond, Va. Filed Dec. 13, 1912. Serial No. 736,595. (Cl. 74—16.)



1. In a device of the kind described, a frame, a rotary element revolubly mounted therein, a ratchet fast on the axle of the rotary element, a pawl pivotally mounted upon the frame in coöperation with said ratchet, a second ratchet on said axle, a lever on said axle, a pawl pivotally mounted on the lever for engagement with the last-named ratchet, a spring supported upon said frame and having an upturned medial projection, a lateral extension on the first-named pawl for coöperation with said projection and a spring coöperating with the first-named pawl to lock the first-named ratchet to prevent retrograde movement of the rotary element.

2. In a device of the kind described, a frame, yokes secured to opposite extremities of said frame with their outer ends forming eyes, a squared axle journaled in said side frame, a rotary element on said axle, a spring secured to said frame, a ratchet fast on said rotary element, a pawl pivotally mounted on the frame and coöperating with said spring, a second ratchet fast on said axle, a lever on the outer end of said axle, a pivotally mounted gravity pawl on said lever for coöperation with the last-named ratchet and coöperating means on said frame and the first-named pawl for holding the latter in its inoperative position.

1,106,996. MEANS FOR THE PREVENTION OF KICKING BY MILKING-COWS. EDWIN WAGNER, Molalla, Oreg. Filed Oct. 4, 1913. Serial No. 793,341. (Cl. 119—127.)



1. A device of the character described comprising vertically adjustable uprights carrying cups to fit upon the rump and hock joint, and a cup adapted to fit upon the stifle joint adjustably secured upon the uprights, and means for adjusting the last named cup toward or from the uprights.

2. A device of the character described comprising vertically adjustable uprights, one carrying a cup to fit upon the rump and the other a cup to fit upon the hock joint of the animal, a sleeve through which said adjustable uprights pass, and which is adjustable thereon, a cup to fit the stifle joint, and an adjustable support for the last named cup attached to the sleeve.

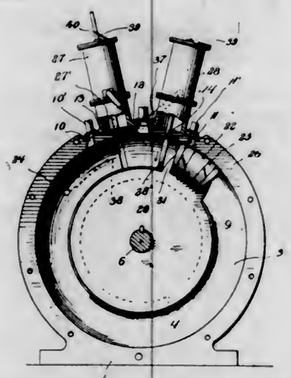
3. A device of the character described comprising a pair of vertically adjustable uprights, one carrying at its upper end a cup to fit the rump and the other at its lower end a cup to fit the hock joint of the animal, a horizontal tube, a vertical sleeve carried by said tube and adjustably secured over said adjustable uprights, a bar slidable in the horizontal tube, a cup at the forward end of the rod adapted to fit the stifle joint of the animal, means for adjusting the rod in the tube, and means for securing it in any adjustment.

4. The combination with a vertical rod carrying at one end a sleeve, a second vertical rod slidable on the first in said sleeve, a set screw for securing the slidable rod in position, a cup on one of the slidable rods to fit the rump, and a similar construction on the opposite end of the other rod to fit the hock joint, a horizontal tube, a sleeve carried by the tube adjustably receiving said vertical rods, a bar slidable in the horizontal tube and provided with notches, a cup secured to the forward end of the bar adapted to fit the stifle joint of the animal, a spring secured to the horizontal tube, a tooth carried by said spring passing through the opening in the tube and engaging in the notches of the bar and a flexible connection within the inner end of the bar passing out at the rear end of the tube and provided with a handle.

1,106,997. ROTARY STEAM-ENGINE. BERTRAM O. WALKER, Portland, Oreg. Filed Nov. 30, 1912. Serial No. 734,356. (Cl. 121—70.)

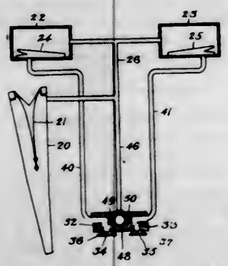
1. A rotary steam engine comprising a casing provided with a steam channel having a steam inlet, an exhaust outlet and a discharge port at one side of the inlet, a rotary piston operating in the casing, a cylinder provided with inlet ports at its ends and an intermediate exhaust port, one of said inlet ports being in communication with said discharge port, a steam supply pipe communicating with the steam inlet of the casing and the other inlet port of the cylinder, a piston in said cylinder, a gate connected with the piston and movable across the steam channel between the steam inlet and exhaust outlet, and means for controlling the supply of steam through the supply pipe.

2. A rotary steam engine comprising a casing provided with a steam channel having an exhaust outlet and steam inlets on opposite sides thereof, and also having discharge ports in its opposite sides and on opposite sides of the steam inlets, a rotary piston operating in the casing and controlling the discharge ports, a pair of cylinders each provided with inlet ports at its ends and an intermediate exhaust port, the lower inlet port of one cylinder communicating with the discharge port at one side of the casing and the lower inlet port of the other cylinder communicating with the discharge port at the opposite side of the cylinder, pistons in said cylinders, gates connected with the pistons and movable across the steam channel between the discharge outlet and the respective steam inlets, a main steam supply pipe having a controlling valve, valved branches leading therefrom to the other inlet ports of the cylinders, and means for periodically opening said controlling valve.



3. A rotary steam engine comprising a casing having a steam channel provided with inlet and exhaust ports and a discharge port, a piston operating in said cylinder and controlling said discharge port, a gate movable across the steam passage between the inlet and exhaust ports, a cylinder and piston for operating the gate and adapted to receive steam from said discharge port to retract the gate, and steam supplying connections for supplying steam at prescribed intervals to the casing through the inlet port and to the cylinder to project the gate.

1,106,998. CONTROL FOR SELF-PLAYING MUSICAL INSTRUMENTS. WILLIAM A. WATSON, Malden, Mass., assignor to National Piano Company, Boston, Mass., a Corporation of Maine. Filed Sept. 20, 1912. Serial No. 721,405. (Cl. 84—160.)



1. Two chambers having a movable operating wall dividing them, an air-supply conduit for one of them, pneumatic means for drawing air from the other, a manually movable controller, a valve structure mounted on said controller, said valve structure having a port for admitting air from the atmosphere and a manually operative self-closing valve said air-supply conduit communicating with said port to receive air therefrom, means forming a restricted air passage, the same communicating with said air supply conduit and being mounted on said controller, and a conduit forming communication between said restricted passage and said pneumatic means whereby the tension on said movable wall is balanced when said valve is closed, said conduits having flexible portions whereby said controller is free to move.

2. Two chambers having a movable operating wall dividing them, an air-supply conduit for one of them, pneumatic means for drawing air from the other, a manually movable controller, a member detachably secured to said controller, said detachable member having a port for admitting air from the atmosphere and a restricted passage communicating with said port, a manually operative self-closing valve mounted on said detachable member for controlling the admission of air to said port, said air-supply conduit being connected to said port, and a second conduit forming communication between said restricted passage and said pneumatic means, said conduits having flexible portions whereby said controller is free to move.

3. A pneumatic device comprising two chambers having a movable operating wall dividing them, means for causing air tension, a conduit connecting one of said chambers and said tension means, a bleed passage connecting the other chamber with said tension means, the capacity of said conduit being greater than that of said bleed passage, said other chamber having an air inlet of greater capacity than said bleed passage, and a valve controlling said inlet.

4. A pneumatic device comprising two chambers having a movable operating wall dividing them, means for causing air tension, a manually operable valve member, a support for said valve member, said support having an air port controlled by said valve member, a feed conduit connecting said port and one of said chambers, a conduit connecting the other one of said chambers and said air tension means, said support having a bleed passage communicating with said port between said valve member and feed conduit, and a conduit connecting said bleed passage and air tension means.

5. In a musical instrument, a plurality of independent controllers having movable touch members which are adjacent each other in different horizontal planes, and a carrier therefor movable in a direction different from the operative direction of movement of the touch members.

[Claims 6 to 8 not printed in the Gazette.]

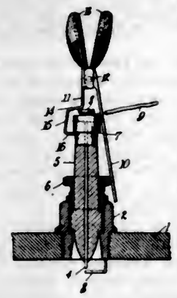
1,106,999. SULFURIC-ACID MANUFACTURE. UTLEY WEDGE, Ardmore, Pa. Filed Oct. 2, 1912. Serial No. 723,526. Renewed June 25, 1914. Serial No. 847,332. (Cl. 23—1.)

1. The within described improvement in sulfuric acid manufacture, said improvement consisting in testing the exit gases passing from the chambers to the Gay-Lussac tower or towers to determine the percentage of sulfur dioxid contained therein, and regulating the operation of the chambers to maintain in said exit gases the percentage of sulfur dioxid which will insure the best recovery of niter in said Gay-Lussac tower or towers.

2. The within described improvement in sulfuric acid manufacture, said improvement consisting in testing for sulfur dioxid percentage the gases entering the chambers and those passing therefrom to the Gay-Lussac tower or towers, and regulating the operation of the chambers to maintain a predetermined percentage of sulfur dioxid in the exit gases.

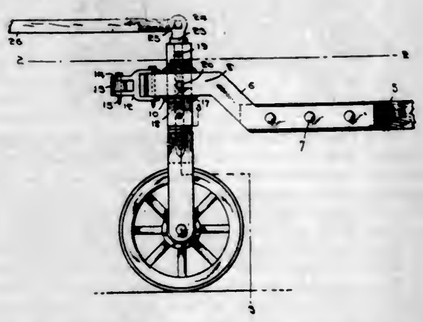
1,107,000. SHORT-CIRCUITING ATTACHMENT FOR GAS-ENGINE IGNITERS. CLINTON MILES WEEKS and HARRY NORTON JACKSON, Babylon, N. Y. Filed Dec. 1, 1911. Serial No. 663,254. (Cl. 175—183.)

1. A short-circuiting attachment for internal combustion engines comprising a pair of jaws pivoted at spaced distances from their extremities, said jaws being formed of sections bent at obtuse angles, the extremities of the jaws forming handles, one of the jaws at the opposite side of the pivot being continuously rectilinear and longer than the other jaw and the portion of the other jaw at the same side of the pivot being bent outwardly to provide a substantially hook-shaped portion as and for the purpose described.



2. A short-circuiting attachment of the class described embodying a pair of pivoted jaws, said jaws having extensions at one side of the pivot and normally spaced apart, grasping portions of insulating material mounted on said extensions, one jaw being straight and longer than the other jaw to engage and bridge the gap between the outer end of the insulated electrode of an igniter and the body thereof and the other jaw being bent outwardly to provide a shoulder to engage the outer end of an igniter, and having its remaining portion bent downwardly and inwardly, said inwardly bent portion having a terminal notch to conform to the insulating sleeve of the igniter beneath the cap of the latter, and means normally holding the jaws in contact and the grasping portions separated.

1,107,001. TONGUE-TRUCK. LINNIE J. WELSH, Plainville, Ill. Filed Oct. 16, 1913. Serial No. 795,534. (Cl. 21—204.)



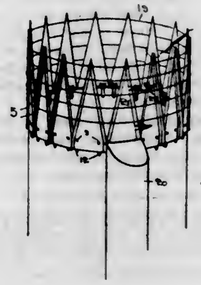
1. A tongue truck comprising an adjusting post, a tongue clamp, said post provided with recesses therein, set screws in said clamp adapted to be seated in said recesses for adjusting said clamp on said post, a double tree, means for supporting said double tree on said clamp, means spaced from said double tree supporting means adapted to coact therewith for guiding said clamp in its adjustments on said post, a guide wheel, a yoke in which said guide wheel is pivoted, a king pin rotatable in said post and secured in said yoke, and a tongue secured to said pin.

2. A tongue truck comprising a tongue clamp having spaced guide blocks therein, a vertically adjustable post mounted in said tongue clamp, and between said guide blocks, having a plurality of recesses therein, and a vertical centrally disposed orifice therethrough, a king bolt mounted in said orifice, a yoke member attached to the lower end of said king bolt and having a guide wheel mounted therein, a clevis connected to said tongue clamp, and a tongue connected to said king bolt.

3. A tongue truck comprising an adjustably mounted post, a king bolt running through said post, a horizontally rotatable yoke connected to said king bolt, and mounting a guide wheel therein, and an antifrictional device mounted on said king bolt and positioned between said yoke and said post.

4. A tongue truck comprising a tongue clamp, having spaced guide blocks therein, and bolt holes therethrough, a vertically adjustable post mounted in said tongue clamp between said guide block and having a plurality of recesses therein to register with said bolt holes, and having a vertical bore through the post, bolts running through the bolt holes of said tongue clamp and seated in said recesses to adjustably mount said post, a king bolt inserted in said bore of said post, and having a tongue attached thereto, a yoke connected to the lower end of said king bolt, and mounting a guide wheel therein, a plurality of disks having grooves therein, forming race-ways, and anti-frictional devices playing in said race-ways to reduce friction upon the rotation of said king bolt and yoke.

1,107,002. SILO-ROOF. ELMER E. WELLS, Goltry, Okla. Filed Sept. 2, 1913. Serial No. 787,729. (Cl. 20—1.4.)



1. A self-supporting conical roof for silos, comprising segmental sections hinged at their larger end to the side wall of said silo, angle irons secured adjacent the edges of said sections and being provided with perforations, bolts passed through the perforations of two of said sections for bolting the same together when closing the roof, and said two sections forming a support for the remainder of said sections until said remaining sections are bolted together through said perforations.

2. A self-supporting conical roof for silos adapted to open from the apex thereof comprising triangular sections having their larger ends secured to the side wall of the silo, angle irons secured to the longitudinal edges of said sections and being provided with spaced perforations therein, means passed through said perforations for securing said sections together when in closed position, a plurality of hoops adapted to be received within said perforations for holding said sections in an upward open position.

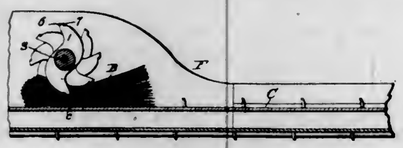
3. A self-supporting conical roof for silos adapted to open from the apex of said cone comprising a plurality of triangular sections hinged to the side wall of the silo, means for holding said section in open position, means for holding said section in closed position, hinge members carried by one of said sections and adapted to be secured to the longitudinal edge of an adjacent section when said sections are in closed position whereby said adjacent section may be opened upon said first mentioned sections.

4. A conical roof for silos comprising sections forming a frustro-cone, sections pivoted to the upper edge of said first mentioned sections and adapted to extend in parallelism from said first mentioned sections to form the apex of said cone, and said last mentioned sections being adapted to be extended upwardly to provide an opening for the silo and means for retaining said last mentioned sections in an upward position to prevent the loss of ensilage when the silo is filled.

1,107,003. MANUFACTURE OF ELASTIC PLASTIC MASSES. THEODOR SETH WENNAGEL, Hamburg, Germany. Filed June 3, 1912. Serial No. 701,314. (Cl. 106—22.)

The process of manufacturing a solid, elastic substance, which comprises reacting on a hydroxy derivative of an aromatic body with a soap in quantity more than one-fifth of the equimolecular quantity of said body, with sufficient heat to cause reaction and reacting on the resulting product with an aldehyde also in the presence of heat sufficient to produce a condensation product, and continuing the heating until the product thickens.

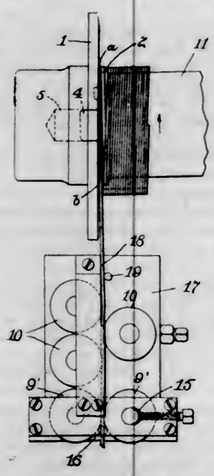
1,107,004. BAND-KNIFE. JOHN M. WHITCOMB, Redwood Falls, Minn. Filed Jan. 8, 1914. Serial No. 811,055. (Cl. 130—1.)



1. A device of the character described comprising a flat plate having its edges cut substantially on ogee curves and integral cutting blades projecting from the opposite ends of said plate and of less width than said ends, said curved edges forming oppositely disposed compressing cams and the cutting edges of said blades facing said cams and being spaced therefrom.

2. A band cutter knife comprising a flat plate having a dull curved cam compressing edge terminating at one end in a cutting edge which is spaced from and disposed at an angle to said compressing edge.

1,107,005. APPARATUS FOR MAKING PISTON PACKING-RINGS. CHARLES WHITE, Baltimore, Md. Filed May 26, 1913. Serial No. 769,970. Renewed June 30, 1914. Serial No. 848,306. (Cl. 53—64.5.)



1. In apparatus of the class described, two gripping members having their opposing lateral faces lying and rotating in planes inclined to each other to grip the wire at one point between them and release it at another point in the circuit of the members and a forming member between the said gripping faces about which the wire is bent when carried by said gripping members, substantially as described.

2. In apparatus of the class described, two gripping members having their opposing lateral faces lying and rotating in planes inclined to each other to grip the wire at one point between them and release it at another point in the circuit of the members and a forming member between the said gripping faces about which the wire is bent when carried by said gripping members, said forming member rotating with the gripping members, substantially as described.

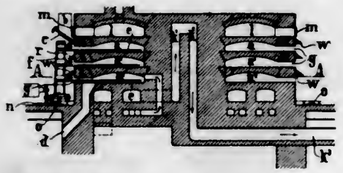
3. In combination the two rotary disks arranged with the axis of one inclined to the axis of the other, whereby the opposing lateral faces of the disks will be near each other at one point to grip the flat wire between them and more widely separated at another point to release the wire and a forming portion between the members and of smaller diameter than the gripping surfaces, about which the wire is carried and bent by the said gripping disks, substantially as described.

4. In combination a rotary member, a second rotary member arranged with its lateral face opposite that of the first member, said members rotating on axes inclined in relation to each other, whereby their lateral faces will rotate in planes inclined to each other to grip a wire between them at one point and release it at another point, one of said members having a journal entering a bearing in the other member and a forming member between the two gripping members, substantially as described.

5. In combination the two disks set with their opposing lateral faces in planes inclined to each other to grip a wire at one point between the said opposing lateral faces and to release the same at another point, a former between the disks and a driving connection extending from one disk to the other, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,006. ROASTING-FURNACE. ALBERT ZAVELBERG, Hohenlohehütte, Germany. Filed May 14, 1914. Serial No. 838,529. (Cl. 75—143.)



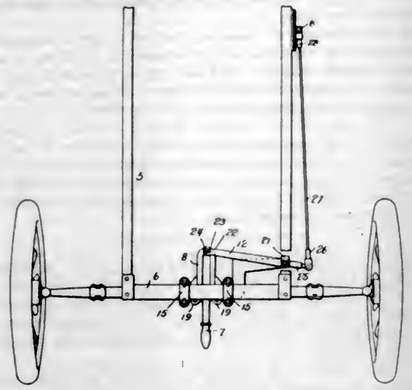
1. In a roasting furnace the combination with a track encircling said furnace, of a plurality of horizontal slots formed in the side of said furnace, a truck and its complemental tower mounted on said track, rakes provided with slot closures mounted on said tower and adapted to enter said slots, said rakes operated through medium of said traveling truck and tower, and means coacting with said frame to support said roof, substantially as described.

2. In a roasting furnace the combination of a track adjacent one wall thereof, a truck and its complemental tower, mounted on said track, roof projections for said furnace, means carried by said tower adapted to support said roof, longitudinal slots disposed within said wall adjacent said roof and rakes secured to said tower provided with movable closures for said slots, substantially as described.

3. In combination with a roasting furnace, longitudinal slots therein, rakes adapted to enter said furnace through said slots, independent traveling supporting members serving to carry said rakes, roof projections for said furnace, said members adapted to carry roof supports adapted to engage said projections, slot closures carried by said rakes, substantially as described.

1,107,007. SAFETY CRANKING DEVICE FOR AUTOMOBILES. ALEXANDER J. ZLOTORZYNSKI, Shamokin, Pa. Filed Mar. 31, 1913. Serial No. 757,886. (Cl. 123—179.)

1. In combination with an automobile having a spring, a lever, and a crank, a bracket, a block disposed below the bracket, and having a guideway, the bracket and the block being secured relatively to the spring, a lever fulcrumed to the bracket, a U-shaped member disposed in the guideway and adapted to embrace the crank, one of the arms of the lever being connected with the U-shaped member, and a rod connecting the second lever with the first lever, for operating the former.



2. In combination with an automobile having a spring, a lever and a crank, a block having a guideway disposed adjacent the spring, a bracket disposed against the block, straps for holding the block and the bracket in position, a lever fulcrumed to the bracket, a U-shaped member disposed in the guideway, and adapted to embrace the crank, one of the arms of the lever being connected with the central portion of the U-shaped member, and a rod connecting the second lever with the first lever for operating the former.

3. In combination with an automobile having a lever and a crank, a bracket having an offset portion and an arm extending obliquely from the offset portion, a block having a guideway, means for holding the bracket and the block relatively to the automobile, a U-shaped member slidably mounted in the guideway of the block, a lever fulcrumed to the arm of the bracket and having one terminal connected with the U-shaped member, and a rod secured at one terminal to one of the levers, and at the other terminal to the other lever.

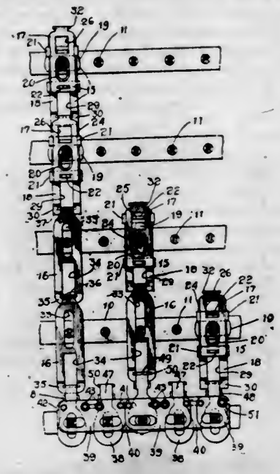
1,107,008. MULTI-INDORSEMENT MECHANISM. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 9, 1913. Serial No. 766,525. (Cl. 235—54.)

1. In a multi-indorsement strip for voting machines, a locking unit comprising a plurality of relatively sliding sections and a locking dog coöperating with said sections and permanently connected therewith.

2. In a voting machine, a multi-indorsement strip composed of locking units and connecting units, said units being interchangeable in position and being provided with means for detachable connection with one another, and said locking units each comprising a plurality of relatively sliding sections and a locking dog coöperating with said sections and permanently connected therewith.

3. In a multi-indorsement strip for voting machines, a locking unit comprising a pair of permanently connected, relatively sliding sections and a locking dog, said sections and dog being provided with coöperating means for permanently retaining said dog between said sections.

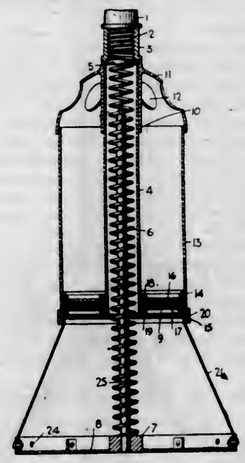
4. In a voting machine, the combination with voting members having shafts, of a multi-indorsement strip including one or more locking units each comprising a pair of permanently connected, relatively sliding sections having openings and a locking dog between said sections and having a hub received in one of said openings, said hub having a transverse opening adapted to receive and fit the corresponding voting member shaft.



5. In a voting machine, the combination with voting members arranged in a column and having shafts, of a multi-indorsement strip composed of locking units and connecting units, said units being interchangeable in position and being provided with means for detachable connection with one another, and said locking units each comprising a pair of permanently connected, relatively sliding sections having openings and a locking dog between said sections and having a hub received in one of said openings, said hub having a transverse opening adapted to receive and fit the corresponding voting member shaft.

[Claims 6 to 28 not printed in the Gazette.]

1,107,009. CLOTHES-POUNDER. HENRY L. ALBISSER and JOSEPH SIMON, Rahway, N. J. Filed Feb. 12, 1913. Serial No. 747,914. (Cl. 68—5.)



1. In a vacuum washer of the class described, a body, a wire mesh covering the ends of said body and having the edges overlapping part of the body, a ring fitting over said overlapping edges for clamping the wire mesh in place, means extending through said ring and part of said body for clamping the ring to said body, a piston ar-

ranged in said body, and means for reciprocating said piston.

2. In a vacuum washer of the class described, a body, a hood secured to said body, means arranged at the bottom of said hood for preventing the entrance of clothes into said hood, a piston arranged in said body, a hollow operating piston rod for said piston, said piston rod being formed with an abutment, a spring arranged in said piston rod for raising the same, and means arranged in the spring for guiding the spring.

3. In a vacuum washer of the class described, a body, a hood secured to said body, a spider secured to said hood, a piston arranged in said body, a hollow piston rod for operating said piston, a handle bar operating said piston rod, a spring having one end projecting into said piston rod and engaging said handle, and the opposite end pressing against said spider, and a guiding pin connected with said spider and extending into said hollow piston rod, said guiding pin being arranged interiorly of said spring.

1,107,010. CORD-FASTENER. ISAAC A. ALLEN, Jr., and CHARLES W. SPONSEL, Hartford, Conn., assignors to The Allen-Sponsel Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 21, 1914. Serial No. 833,371. (Cl. 16—16.)



1. A cord-fastener comprising a bowed body portion having a clamping portion connected therewith for swinging movement, the clamping portion having an inturned flange spaced from the other end of said body portion, the body portion and the clamping portion having holes for the passage of the cord.

2. A cord-fastener comprising a bowed body portion having a swinging clamping portion at one end, the free end of the clamping portion having an inturned flange separated from the other end of the body portion to provide a space for the passage of the cord, said space being narrower at one part than at the remainder and the body portion and clamping portion having holes for the passage of the cord.

3. A cord-fastener comprising a bowed body portion and a swinging clamping portion at one end thereof, the free end of the clamping portion having an inturned toothed flange and the body portion and clamping portion having holes for the passage of the cord.

4. A cord-fastener comprising a bowed body portion having a swinging clamping portion at one end, the free end of the clamping portion being spaced from the other end of the body portion to provide a space for the passage of cord and the space being narrower at one part than the remainder, the body portion and the clamping portion having holes for the passage of the cord.

5. A cord-fastener comprising a bowed body portion having a clamping portion at one end, the free end of the clamping portion being separated from the other end of the body portion to provide a cord receiving space, the inner portion of said other end being deflected toward the free end of the clamping portion and the body portion and the clamping portion having holes for the passage of the cord.

[Claims 6 and 7 not printed in the Gazette.]

1,107,011. METHOD OF BONDING FUSED CRYSTALLINE ALUMINA. THOMAS B. ALLEN, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Mar. 11, 1913. Serial No. 753,648. (Cl. 106—42.)

1. The method of bonding molded articles consisting essentially of alumina, which consists in molding a mixture of alumina and a glycerin solution of an acid, the acid radical of which is capable of uniting with alumina, and heating the article to a temperature where such reaction will take place.

2. The method of bonding molded articles consisting essentially of alumina, which consists in molding a mixture of alumina and a glycerin solution of an acid, the acid radical of which is capable of uniting with alumina, and heating the article to a temperature of at least 1300 degrees C. or above.

3. The method of bonding molded articles consisting essentially of alumina, which consists in molding a mixture of alumina, boric acid and glycerin, and firing the articles to a temperature sufficient to cause the boric acid to combine with alumina and bond the article.

4. The method of bonding molded articles consisting essentially of alumina grains, which consists in mixing the grains with a binder capable of forming an aluminum compound with the grains at a temperature below the softening heat of alumina, and then heating the mixture to said reaction temperature.

1,107,012. REFRACTORY ARTICLE AND METHOD OF MANUFACTURING THE SAME. THOMAS B. ALLEN, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Nov. 13, 1913. Serial No. 800,769. (Cl. 106—9.)

1. The method of making refractory articles, which consists in bonding crystalline alumina with amorphous alumina.

2. The method of making refractory articles, which consists in mixing crystalline alumina with aluminum hydroxid, shaping the mixture, and then heating to a temperature sufficient to set the amorphous alumina.

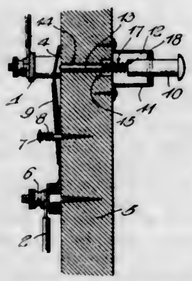
3. The method of making refractory articles, which consists in mixing crystalline alumina with aluminum hydroxid, shaping the mixture, and then heating to a relatively high temperature.

4. The method of making refractory articles, which consists in mixing crystalline alumina with aluminum hydroxid, shaping the mixture, and then heating to a temperature of at least 1200° C.

5. The method of making refractory articles, which consists in bonding crystalline alumina with amorphous alumina and glyceroboric acid.

[Claims 6 to 8 not printed in the Gazette.]

1,107,013. CIRCUIT-CLOSER. ANDREW G. ANDERSON, Clay Center, Nebr. Filed Oct. 30, 1913. Serial No. 798,382. (Cl. 177—10.)

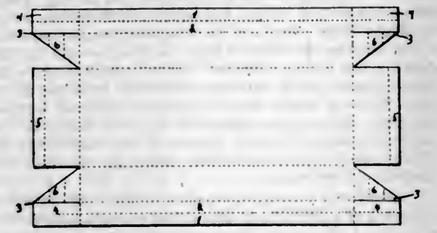


1. The herein described duplex push button comprising a base, a bar overlying the base and forming one terminal, a plurality of tongues lying on said base with their free ends beneath said bar, binding posts constituting the other terminals and securing the other ends of said tongues to said base, headed pins rising from the latter, the tongues having holes loosely embracing the pins, coil springs surrounding the pins beneath their heads, leaf springs overlying the tongues and standing against the other ends of said coil springs, and knobs whose shanks are slidably mounted through said base adjacent the free ends of said tongues.

2. The herein described duplex push button comprising a base, a bar overlying the base and forming one terminal, a plurality of tongues lying on said base with their free ends beneath said bar, binding posts constituting the other terminals and securing the other ends of said tongues to said base, headed pins rising from the latter, the tongues having holes loosely embracing the pins, coil springs surrounding the pins beneath their heads, leaf springs overlying the tongues and standing against the other ends of said coil springs, knobs whose shanks have reduced portions passing through said base and standing over the free ends of the tongues, a guard having holes loosely receiving the shanks beneath the knobs, and pins through said shanks underlying the guard, for the purpose set forth.

3. In a push button, the combination with a base pierced with a hole enlarged at its outer end, a bar underlying the base and forming one terminal, a spring tongue also underlying the base and having one end overlying and out of contact with the bar, and a binding post securing the other end of the tongue to the base and constituting the other terminal; of a guard overlying the base and pierced with a hole, and a knob whose shank projects loosely through said hole and is shouldered and reduced, the reduced portion projecting through the hole in the base and standing over the free end of the tongue, and coiled expansive springs surrounding said reduced portion beneath the shoulder on the stem and within the enlarged upper end of the hole in said base.

1,107,014. TOTE-BOX. WILLIAM G. AVERY, Painesville, Ohio. Filed Mar. 9, 1912. Serial No. 682,699. (Cl. 220—113.)

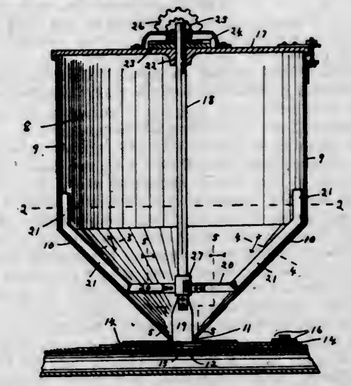


1. A tote box of the class described composed of a single sheet of metal having clefts at the corners thereof, tongues formed by said clefts, the metal being bent upward to form the walls of the box, said tongues bent backward against the wall to which the tongue is attached so that approximately one third of said tongue rests against the wall, the remaining portion of said tongue being again bent so as to overlap the contiguous wall of said box, all substantially as and for the purpose set forth.

2. A tote box of the class described composed of a single sheet of metal being provided with tongues at each corner thereof, the metal being bent upward to form the walls of the box, the tongues being bent backward against themselves and overlapping the one wall of the box, a hem turned down on the upper edge of said wall of the box and tongue thus bent, the tongues being again bent to overlap the contiguous wall of the box and means for holding said tongue in the folded position.

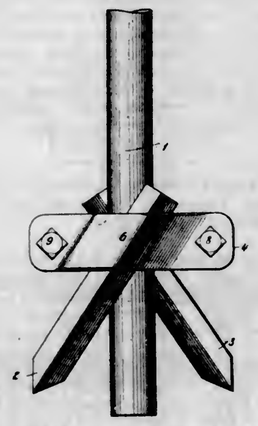
1,107,015. DUST-SPRAYING MACHINE. HENRY D. BABCOCK, Leonardsville, FRANK C. WELLS, Holland Patent, and JAY W. BROWN, River Forks, N. Y., assignors to Charles H. Childs & Company, Utica, N. Y., a Corporation. Filed Jan. 12, 1912. Serial No. 670,855. (Cl. 43—14.)

1. The combination in a dust spraying machine of a powder receptacle, an air pipe below said receptacle, an outlet connecting said receptacle and the air pipe, a perpendicular shaft centrally located and revolubly mounted in said receptacle, arms projecting horizontally from said shaft to the walls of the receptacle and extending upwardly along the contour thereof, the horizontal portions of said arms being downwardly inclined toward their rear edges and adapted to yieldingly feed the powder downwardly toward the opening and the upwardly extending portions of said arms having their forward surface rearwardly inclined as they leave the side walls and adapted to urge the powder toward the center of the receptacle and means for rotating said shaft.



2. The combination in a dust spraying machine of a powder receptacle, a removable cover for said receptacle, an air pipe below said receptacle, an outlet connecting said receptacle and air pipe, a perpendicular shaft journaled only in said cover and extending downwardly in said receptacle, arms projecting horizontally from said shaft to the walls of the receptacle and extending upwardly along the contour thereof, the horizontal portion of said arms being downwardly inclined toward their rear edges and adapted to yieldingly feed the powder downwardly toward the opening and the upwardly extending portions of said arms having their inner edges inclined rearwardly and adapted to urge the powder toward the center of the receptacle and means for rotating said shaft.

1,107,016. POST-ANCHOR. PERCY TRIPP BAILEY, Middletown, R. I. Filed Oct. 23, 1913. Serial No. 796,921. (Cl. 189—30.5.)



1. In a post anchor of the character described, a pair of clamping members extending transversely of the post, formed with socket portions for receiving and pressing anchoring arms against said post and means arranged at each end of the clamping members for drawing the clamping members toward each other.
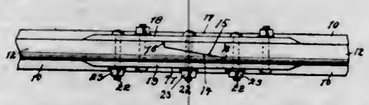
2. In a post anchor of the character described, the combination with a round post, of a pair of clamping bars extending transversely of the post, each of said clamping bars being formed with a pressed-out portion having a groove extending at an angle to the post for receiving an anchoring arm, and means for clamping said clamping bars and the anchoring arm carried thereby against said post.

3. In a post anchor of the character described, a pair of clamping bars of identical construction, each of said bars being formed with a flat portion at the ends and a substantially A-shaped pressed-out portion centrally, said A-shaped pressed-out portion having the apex extending at an angle to the general direction of the clamping bar, said A-shaped pressed-out portion being designed to receive an anchoring arm, and means engaging the end of said clamping bars for holding the clamping bars in position and pressing said anchoring arm against a post.

4. In an anchoring post of the character described, the combination with a pair of anchoring arms, of a pair of clamping bars for clamping said anchoring arms against a post, and means for holding said clamping bars in position, said clamping bars being each formed with a pressed-out portion extending at an angle to the general direction of the bars for accommodating one of said anchoring arms, and a flat portion formed with an aperture for accommodating said retaining means for the clamping bars.

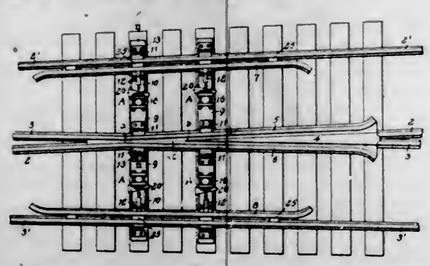
5. In a post anchor of the character described, the combination with a round post, of a pair of anchoring arms formed of angle bars, a pair of clamping bars for holding said anchoring arms in position, and a bolt at each end of the clamping bars for clamping and holding the clamping bars in place, each of said clamping bars comprising a single piece of material having flattened ends with apertures formed therein larger than the bolts arranged therein, and with a pressed-out portion conforming to the shape of said anchoring arms, said pressed-out portion being arranged at an angle to the general direction of the clamping bars.

1,107,017. RAIL-JOINT. ELVIS L. BARNES, Hobart, Okla. Filed July 25, 1913. Serial No. 781,221. (Cl. 239—8.)



Railway rails having the head and web portions extending in advance of the flanges and with lateral seats upon the upper faces of the flanges, a base member bearing beneath the extended portions of the webs, clamp members extending from the base and bearing upon opposite sides of the extended portions of the webs and bearing upon said flange seats, and fastening devices extending through said rail members and the portions of the rails between them.

1,107,018. RAILWAY-TRACK CONSTRUCTION. MILTON BARTLEY, Pittsburgh, Pa. Filed May 20, 1914. Serial No. 839,744. (Cl. 104—5.)



1. The combination with a railway frog, an opposite track rail, and a protecting guard rail therefor; of bracing abutments directly engaging the web of the frog and guard rail respectively, and an intervening bracing mechanism composed of a pair of tandem plates having adjacent flange portions, bolts connecting said portions provided with adjusting nuts, the outer portions of said plates extending underneath the rail structure and each provided with a bracing abutment fixedly secured to its upper surface and engaging the rail structure, one of said plates having an adjustable abutment and a wedge bearing directly against the plate flange, substantially as set forth.

2. Rail bracing mechanism comprising a plurality of supporting plates in tandem arrangement adapted to be laid upon the upper surface of a tie and each having an inner connecting flange, said plates extending by their outer portions underneath the rails and provided with rail bracing abutments, one of said abutments being longitudinally adjustable upon one of said plates, and an adjustable wedge for holding said abutment fixedly in position bearing directly against the end of the abutment and the plate flange respectively, substantially as set forth.

3. In an apparatus of the class described, the combination of two longitudinally arranged supporting plates adapted to be laid upon a railroad tie, each having an inner flange, bolts adjustably securing said flanges together, a rail bracing abutment fixedly secured to one of said plates, a rail bracing abutment adjustably secured to the other of said plates extending inwardly adjacent to its inner flange and a wedge device adjustably inserted between the inner end of said abutment and the flange of the plate and bearing directly against it, substantially as set forth.

4. In an apparatus of the class described, the combination of two longitudinally arranged supporting plates adapted to be laid upon a railroad tie, each having an inner flange, bolts adjustably securing said flanges together, a rail bracing abutment fixedly secured to one of said plates, a rail bracing abutment adjustably secured to the other of said plates extending inwardly adjacent to its inner flange a wedge device adjustably inserted between the inner end of said abutment and the flange of the plate and bearing directly against it and means for adjusting and fixedly holding said wedge in position, substantially as set forth.

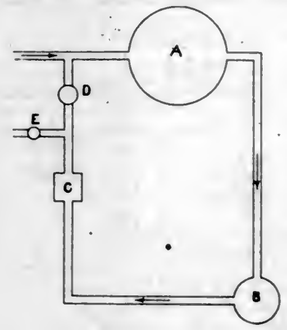
5. Guard rail bracing mechanism of the class described consisting of a pair of rail supporting plates adapted to be laid upon a tie having inner adjacent connecting flanges and adjusting securing bolts extending therethrough, one of said plates having at its outer end an outwardly pressing rail bracing abutment, the other of said plates having at its outer end an inwardly extending pressing bracing abutment, and an inner outwardly bracing abutment adjustably secured to the plate, and means interposing resistance therefor bearing directly against the connecting flange of the plate, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,107,019. PROCESS OF PREPARING ACETALDEHYDE. ERICH BAUM and MARTIN MUGDAN, Nuremberg, Germany, assignors to Consortium für elektrochemische Industrie G. M. B. H., Nuremberg, Germany. Filed July 25, 1913. Serial No. 781,209. (Cl. 23—24.)

1. The process for the preparation of acetaldehyde which comprises causing an excess of acetylene to interact with a solution of a mercury salt, transporting from the sphere of reaction part of the acetaldehyde so formed in said excess of acetylene, separating said transported acetaldehyde from said excess of acetylene and causing said acetylene thus freed from acetaldehyde to interact again with a solution of a mercury salt.

2. The process for the preparation of acetaldehyde which comprises passing an excess of acetylene through a solution of a mercury salt, transporting from the sphere of reaction part of the acetaldehyde so formed in said excess of acetylene, separating said transported acetaldehyde from said excess of acetylene and again passing said acetylene thus freed from acetaldehyde through a solution of a mercury salt.



3. The process for the manufacture of acetaldehyde which comprises circulating an excess of acetylene through a closed reaction system in which said excess of acetylene interacts with a solution of mercury salt forming acetaldehyde in one region of said reaction system and in which part of the acetaldehyde thus formed is separated from said excess of acetylene in another region of said reaction system.

4. The process for the preparation of acetaldehyde which comprises causing an excess of acetylene to interact with a hot acid solution of a mercury salt, transporting from the sphere of reaction part of the acetaldehyde so formed in said excess of acetylene, separating said transported acetaldehyde from said excess of acetylene and causing said acetylene thus freed from acetaldehyde to interact again with a hot acid solution of a mercury salt.

5. The process for the manufacture of acetaldehyde which comprises circulating an excess of acetylene through a closed reaction system in which said excess of acetylene interacts with a hot acid solution of mercury salt forming acetaldehyde in one region of said reaction system and in which part of the acetaldehyde thus formed is separated from said excess of acetylene in another region of said reaction system.

[Claims 6 and 7 not printed in the Gazette.]

1,107,020. EMULSION PRODUCTS AND PROCESS FOR PRODUCING THEM. LUDWIG BEHEND, Amöneburg-on-the-Rhine, Germany, assignor to Dr. Kurt Albert Chemische Fabrik, Amöneburg-on-the-Rhine, Germany, a Firm. Filed Feb. 26, 1912. Serial No. 680,045. (Cl. 134—1.)

1. A process for producing emulsion products from substances practically insoluble in water which consists in emulsifying a high percentage of the insoluble substances by gradually adding portions of said insoluble substances and small quantities of water to concentrated waste sulfite liquor while agitating the mass.

2. A process for producing emulsion products from substances insoluble in water whhich consists in emulsifying said substances with a small percentage of concentrated waste sulfite liquor, said insoluble substances and small quantities of a watery solution of such substances which generally tend to destroy emulsions being gradually added to said waste sulfite liquor.

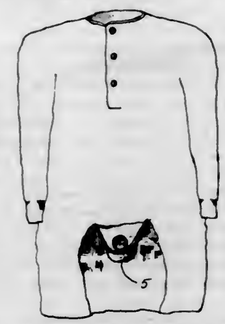
3. A process for producing emulsion products from substances practically insoluble in water which consists in emulsifying a high percentage of said insoluble substances by means of a small percentage of concentrated waste sulfite liquor by gradually adding portions of said insoluble substances and small quantities of water to said waste sulfite liquor while agitating the mass and adding a watery solution of a substance which tends to destroy emulsions.

4. A process for producing emulsion-products from substances practically insoluble in water, consisting in emulsifying such substances with a small percentage of concentrated waste sulfite liquor and a watery salt solution, and afterward adding an oxid composition of the metal contained in said salt.

5. A process for producing emulsion-products from substances practically insoluble in water, consisting in emulsifying such substances with a small percentage of concentrated waste sulfite liquor and a watery salt solution and then adding the oxid of the metal contained in said salt together with filling materials.

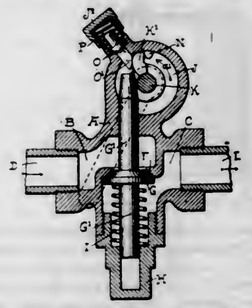
[Claims 6 and 7 not printed in the Gazette.]

1,107,021. SHIRT. HENRY C. BERRYMAN, Brooklyn, N. Y. Filed Nov. 15, 1911. Serial No. 660,491. (Cl. 128—38.)



In combination with a shirt, a pouch having an opening, an edge portion of the pouch being attached with the shirt at the inner side thereof, the pouch also having a free edge portion which lies between the inner side of the shirt and that portion of the pouch which is provided with the opening the portions of the pouch being so proportioned that the said opening normally lies opposite the inner side of the shirt and between the free and attached edge portions of the pouch.

1,107,022. VALVE. SAMUEL BLOCK, New York, N. Y. Filed Jan. 6, 1913. Serial No. 740,453. (Cl. 137—4.)



1. A valve, comprising a valve body having an inlet, an outlet and a valve seat intermediate the said inlet and the said outlet, a spring-pressed valve adapted to be seated on the said seat, actuating means for engaging the said valve to move the same off its seat, and an automatic reciprocating locking device normally extending into the path of the actuating means, said locking device being adapted to be first moved out of the path of the actuating means by the latter and then to engage the said means to lock it against return movement to hold the valve open.

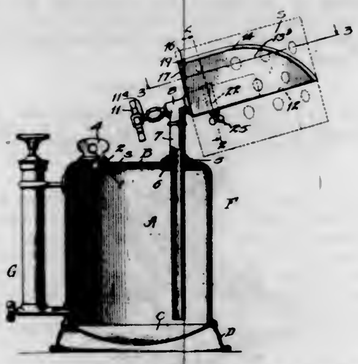
2. A valve, comprising a valve body having an inlet, an outlet and a valve seat intermediate the said inlet and the said outlet, a spring-pressed valve adapted to be seated on the said seat and provided with a valve stem, a rock shaft provided with a tooth adapted to engage the said valve stem to move the valve into open position, and a locking

device mounted on the said valve body and adapted to engage the said tooth to lock the latter and the rock shaft against return movement after the valve has been opened by the same.

3. A valve, comprising a valve body having an inlet, an outlet and a valve seat intermediate the said inlet and the said outlet, a spring-pressed valve adapted to be seated on the said seat and provided with a valve stem, a rock shaft provided with a tooth adapted to engage the said valve stem to open the latter against the tension of its spring, an arm on the said rock shaft for rocking the latter, and a spring-pressed bolt mounted to slide in the said valve body and normally projecting into the path of the said tooth, the said shaft on being rocked causing the tooth to open the valve and to retract the said bolt to allow the latter to pass behind the tooth and to hold the tooth and valve against return movement.

4. A valve, comprising a valve body having an inlet, an outlet and a valve intermediate the said inlet and the said outlet, a spring-pressed valve adapted to be seated on the said seat and provided with a valve stem, a rock shaft provided with a tooth adapted to engage the said valve stem to open the latter against the tension of its spring, an arm on the said rock shaft for rocking the latter, a stop on the said valve body for the said tooth to normally rest against, and a spring-pressed bolt mounted to slide on the said valve body intermediate the end of the valve stem and the said stop, the said bolt having a beveled inner end adapted to be engaged by the said tooth to retract the bolt and to allow the latter to pass behind the tooth and to hold the tooth and valve against return movement.

1,107,023. APPLIANCE FOR HAND-TORCHES. JOHN A. BOWYER, Sycamore, Ill., assignor to The Turner Brass Works, Sycamore, Ill., a Corporation of Illinois. Filed Oct. 20, 1913. Serial No. 796,281. (Cl. 126—236.)

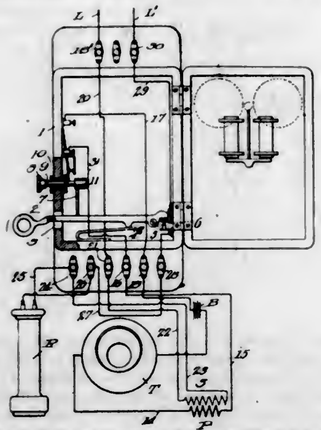


1. An appliance for a hand torch having a fuel tank and a burner tube extending outwardly and upwardly therefrom; a heating receptacle comprising a floor, roof and sides, the burner of said torch extending within said receptacle and adjustably fixed to the said floor thereof whereby the angularity of said receptacle may be varied.

2. An appliance for a hand torch having a fuel tank and a burner tube extending outwardly and upwardly therefrom; a heating receptacle comprising a floor, roof, and sides, an internally bored bracket fixed to said floor, fastening means on said bracket exteriorly of said receptacle, said burner tube being adapted to enter the bore of said bracket and to be maintained in position within said receptacle by said fastening means.

3. An appliance for a hand torch having a fuel tank and a burner tube extending outwardly and upwardly therefrom; a heating receptacle comprising a floor, roof, and sides, said roof sloping forwardly to said bottom, the burner of said torch extending into said receptacle along the floor thereof and fixed in position adjustably, whereby the angularity of said receptacle with respect to said fuel tank may be varied

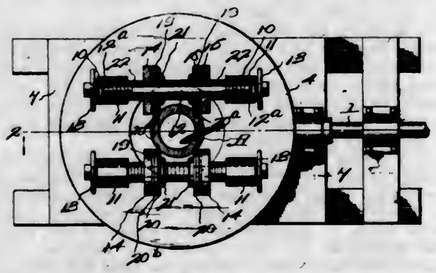
1,107,024. TELEPHONE. LAURIN S. BOYCE, Rockwell City, Iowa, and OLIVER E. BOYCE, Glencoe, Minn. Filed May 6, 1913. Serial No. 765,884. (Cl. 179—81.)



1. In a telephone, a receiver, a transmitter, a battery in circuit with said transmitter, a pair of normally open contacts in said battery circuit, a push button having a stem provided with a collar arranged to engage one of said spring contacts to force it into engagement with the other, said stem having an enlargement, a switch hook, a pair of contacts arranged to be closed by said switch hook whenever the receiver is removed, an arm carried by said switch hook and arranged to engage the enlarged portion of the stem of the push button, the inward movement of the push button serving to close the spring contacts and to permit the arm to enter behind the enlargement thereby locking the button in position.

2. In a telephone, a receiver, a transmitter, a battery in circuit with said transmitter, a pair of normally open contacts in said battery circuit, a push button having a stem provided with a collar arranged to engage one of said spring contacts to force it into engagement with the other, said stem having an enlargement, a spring-pressed switch hook provided with an extended rear end, a pair of contacts arranged to be closed by said extension whenever the receiver is removed, an arm carried by said switch hook and arranged to engage the enlarged portion of the stem of the push button, the inward movement of the push button serving to close the spring contacts and to permit the arm to enter behind the enlargement, thereby locking the button in position.

1,107,025. TUBE-GRIPPING APPARATUS FOR BORING WELLS. HARRY C. BREWSTER, Shreveport, La. Filed Sept. 30, 1913. Serial No. 792,684. (Cl. 255—23.)



1. In an apparatus of the character described, the combination with a mandrel of a solid backing ring slidably mounted thereon, and a gripping ring also mounted on said mandrel and connected to said backing ring, substantially as described.

2. In an apparatus of the character described, the combination with a mandrel of a solid backing ring slidably mounted thereon, a detachable gripping ring provided with beveled cutting edges also mounted on said mandrel, and means for securing said gripping ring to said backing ring, substantially as described.

3. In an apparatus of the character described, the combination with a mandrel of a solid backing ring slidably mounted thereon, and a reversible gripping ring also mounted on said mandrel and connected to said backing ring, substantially as described.

4. In an apparatus of the character described, the combination with a mandrel of a solid backing ring slidably mounted thereon, a detachable reversible backing ring provided with beveled cutting edges also mounted on said mandrel, and means for securing said gripping ring to said backing ring, substantially as described.

5. In an apparatus of the character described, the combination with a mandrel of a solid backing ring slidably mounted thereon and provided with a central boss and engaging pins, and a gripping ring also mounted on said mandrel and adapted to slip over said central boss and to engage said lugs on said backing ring, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,107,026. SNAP-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed May 1, 1914. Serial No. 835,656. (Cl. 70—99.)



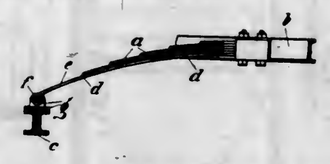
1. In a snap seal of the type hereinbefore specified, in combination with a resiliently flexible shackle both ends of which are provided with fastening members and inlet guards, and a center piece adapted to interlock therewith—a bulb-shaped seal part, inclosing said center piece, having a bulb piece slotted to form a centrally enlarged inlet hole in its top fitted to said shackle ends and inlet guards, and provided with stiffening corrugations radial to the central enlargement of said inlet hole.

2. In a snap seal of the type hereinbefore specified, the combination with a resiliently flexible shackle both ends of which are provided with catch shoulders, and a bulb-shaped seal part having an inlet hole in its top fitted to said shackle ends, of a double center piece inclosed within said seal part and constructed with inner and outer oblique edges adapted to interlock with the respective shoulders of each shackle end, and guard portions behind said outer oblique edges respectively adapted to insure interlocking said shoulders therewith.

3. In a snap seal of the type hereinbefore specified, the combination with a resiliently flexible shackle both ends of which are provided with catch shoulders, and a bulb-shaped seal part having an inlet hole in its top fitted to said shackle ends, of a double center piece inclosed within said seal part and constructed with inner and outer oblique edges adapted to interlock with the respective shoulders of each shackle end, and guard portions behind said outer oblique edges respectively extending downward to the bottom of the center piece and alined with each other; said guard portions being adapted to insure interlocking said shackle shoulders with the appropriate edges of the center piece, and to prevent interference between the shackle ends at the fastening operation.

4. An improved snap seal having, in combination, a resiliently flexible shackle both ends of which are provided with catch shoulders and catch holes, a bulb shaped seal part having an inlet hole in its top fitted to said shackle ends, and a resilient center piece inclosed within said seal part and having a guide portion at its top which protrudes centrally through said inlet hole, recessed portions including bottom bends in oppositely deflected pairs adapted to interlock with said shoulders of the respective shackle ends, and wings forming the sides of the center piece and provided with spring catches adapted to interlock with said catch holes of the respective shackle ends, said guide portion being twisted with reference to said wings to resist tampering with said catches, substantially as hereinbefore specified.

1,107,027. SPRING FOR VEHICLE SUSPENSION. ETTORE BUGATTI, Molsheim, Germany. Filed Aug. 26, 1913. Serial No. 786,809. (Cl. 21—50.)



1. A leaf spring for vehicle suspension, comprising in combination, a carrier leaf slitted along the longitudinal center line for the greater part of its length, and a series of superimposed, overlapping non-slitted spring laminæ.

2. A leaf spring for vehicle suspension, comprising a carrier member having a longitudinal slit down the center line extending the greater part of its length, whereby two parallel independently operable spring halves are obtained with a common base end, securing means at the free ends of said spring halves, and a series of superposed, overlapping non-slitted spring laminæ, all starting at the base end of said carrier member and of the same width thereof.

3. A leaf spring for vehicle suspension, comprising a carrier member having a longitudinal slit down the center line extending the greater part of its length, leaving a common base end of the combined width of the thus obtained spring halves, co-axial integral bolt eyes at the free ends of said spring halves, and a series of superposed non-slitted spring laminæ of increasing length, the longest one thereof, which contacts with the said carrier member, terminating inwardly from the free extremities of said spring halves at a distance sufficient to allow of the spring halves operating more or less independently of one another.

1,107,028. MACHINE FOR COOLING FINISHED OR UNFINISHED COCOA-POWDER. MAX OSCAR BUSCH, Newark, N. J. Filed May 1, 1913. Serial No. 764,778. (Cl. 34—38.)

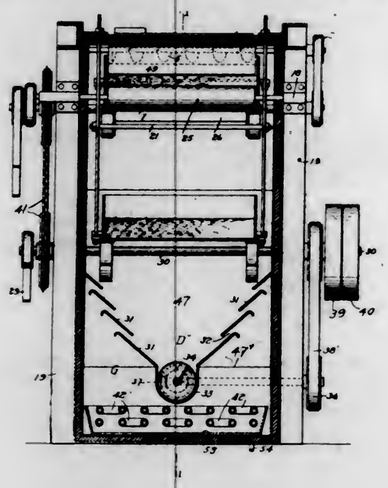
1. A cocoa powder cooling machine comprising a casing, means from which cocoa powder falls as a cloud, means for directing cool air laterally into the cloud at the bottom thereof, and means for causing an updraft of the cool air through the cloud with a force less than the gravitational force acting on the powder.

2. A machine of the class described comprising a casing, means within the casing for distributing cocoa powder, a hopper in the bottom of the casing to receive the powder in settling, said casing having downwardly discharging longitudinal air passages, and means for directing cooling air into the passages and producing an upward current of air through the falling cocoa powder.

3. A machine of the class described comprising a casing, means within the casing for producing a falling cloud of cocoa powder, a hopper in the bottom of the casing having downwardly discharging longitudinal air passages, means for directing cooling air into the passages and producing an upward current of air through the falling cocoa powder, and means in the bottom of the hopper for removing cooled powder therefrom.

4. A machine of the class described comprising a casing, means within the casing for producing a falling cloud of cocoa powder, a hopper in the bottom of the casing hav-

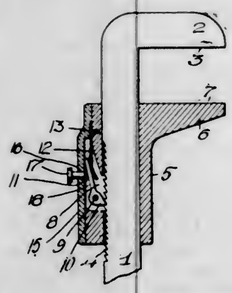
ing downwardly discharging longitudinal air passages, air cooling means under the hopper, and means in the casing for forcing air through the cooling means to the said passages and thence upwardly through the falling powder.



5. A machine of the class described comprising a casing, a V-shaped chamber therein having its sides formed of plates disposed one above another and separated to form air inlet ports, means in the upper part of the casing from which cocoa powder falls into the said chamber, and means for causing cooling air to pass into the said chamber through the said ports and thence upwardly through the falling cocoa powder.

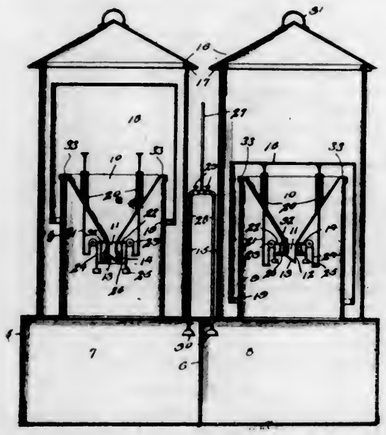
[Claim 6 not printed in the Gazette.]

1,107,029. WRENCH. THOMAS CALDWELL, Pittsburgh, Pa. Filed Aug. 5, 1913. Serial No. 783,176. (Cl. 81—159.)



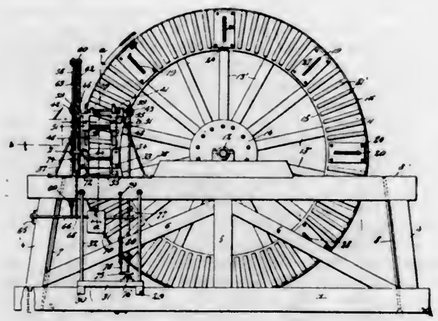
A wrench comprising a shank having a fixed jaw and a toothed rear edge, a jaw body slidably mounted on the shank and having its rear side stepped and arranged with an opening, a pawl pivotally mounted in the opening of the jaw body for engaging the teeth of the shank and having an arm, an inset plate formed on the rear side of the jaw body and having a pocket, a flat compression spring extending into said pocket and secured to the jaw body and extending in said openings to engage said arm for maintaining the pawl in engagement with said teeth, a push pin mounted in said plate and having a head at its inner and outer plate and the inner head being capable of engaging said arm for shifting the pawl against the action of the spring and a screw passing through said plate for securing the same to the jaw body.

1,107,030. ACETYLENE-GAS GENERATOR. CHARLES H. CANFIELD, Paola, Kans. Filed July 23, 1913. Serial No. 780,762. (Cl. 48—55.)



An acetylene gas generator comprising a water reservoir, a column rising from the reservoir and opening into the same, a hopper-shaped carbid holder at the top of the column and having perforations concentric to its larger end, a perforated discharge neck at the smaller end of the holder, a cut-off valve sleeve slidably fitted on the neck for closing the perforation therein, guide pulleys mounted at diametrically opposite sides of the neck, opposed guides rising from the side of the holder through the larger end thereof, push rods slidable in the guides, chains trained over the pulleys and connected with the rods and sleeves respectively, weights connected with the sleeve to simultaneously lower the sleeve and raise the rod, a gasometer telescoped over the column and adapted to depress the rods for movement of the sleeve to uncover the perforation in the neck of the holder, and an inclosure for the gasometer and column.

1,107,031. EXCELSIOR-MACHINE. OSCAR CHAFFEY, Alliance, Cal. Filed Feb. 7, 1913. Serial No. 746,906. (Cl. 144—188.)



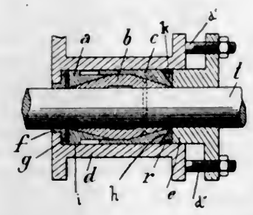
1. In an excelsior machine, in combination with a rotary cutter having a working face on one side, a carriage opposite the working face including a frame, a pair of feed rolls mounted for rotation in said frame and each having a rotary gear element, a longitudinally movable

actuating element having rack devices spaced and faced in opposite directions and arranged out of line with each other and each engaging one side of one of the rotary gear elements, said gear elements being engaged by said rack devices one on the opposite side from the other, a weight, means including a cushioning device connecting the weight to said longitudinally movable element to cause the said longitudinally movable element to move in one direction and impart feeding rotation to the rolls and means to elevate the weight and means to move said longitudinally movable element in the reverse direction to impart retrograde rotation to the feed rolls.

2. In an excelsior machine, in combination with a rotary cutter having a working face on one side, a carriage opposite the working face and including a frame, a pair of feed rolls mounted for rotation in said frame and each having a rotary gear element, a longitudinally movable actuating element having rack devices spaced and faced in opposite directions and arranged out of line with each other and each engaging one side of one of the rotary gear elements, said gear elements being engaged by said rack devices one on the opposite side from the other, a rock shaft having a pair of arms, means, including a cushioning spring, connecting one of said arms to said longitudinally movable element, and a weight adjustably mounted on the other arm, to move the said longitudinally movable element in one direction and impart feeding rotation to the rolls and means to turn the rock shaft in the required direction to elevate the weight and move said longitudinally movable element in the reverse direction to impart retrograde rotation to the feed rolls.

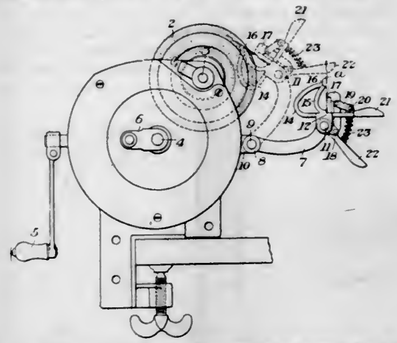
3. In an excelsior machine, a frame, a pair of spaced feed rollers mounted for revolution in said frame, one of said rollers being also mounted for movement toward and from the other and each of said rollers having a gear wheel, a longitudinally movable actuating element, rack elements carried by said longitudinally movable element and respectively engaging opposite sides of said roller gears, to rotate the latter in reverse directions simultaneously, a weight connected to said longitudinally movable element to move the latter in one direction, and means to move said longitudinally movable element in the reverse direction.

1,107,032. PACKING. PAUL CHAPPEAU, Saintes, France. Filed Mar. 14, 1913. Serial No. 754,272. (Cl. 137—115.)



A rod packing comprising an inner packing ring having inclined portions thereon, a flattened portion on said packing ring, a compression ring engaging one of said inclined portions, flange upon said compression ring, a malleable metal washer backing said compression ring, a neck member backing said malleable washer, a second compression ring adapted to engage the other said inclined portion and said flattened portion, said second named compression ring overlapping said first named compression ring and completing a recess between the stuffing box and said second compression ring, a conoidal metal washer in said recess having a malleable metal periphery, means for causing a longitudinal movement of said second named compression ring whereby to compress said malleable washers to prevent leaks around the bearing.

1,107,033. SICKLE-BAR-HOLDING ATTACHMENT FOR GRINDING-MACHINES. BENNETT F. CLARK, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed May 12, 1913. Serial No. 766,960. (Cl. 51—8.)



1. A sickle or cutter bar holding attachment for grinding machines, comprising a support for the bar, said support having a plurality of clamping members, spring means for holding said members in clamping engagement with the bar, and a single releasing device for said members; substantially as described.

2. A cutter or sickle bar holding attachment for grinding machines, comprising a bracket pivoted to swing toward and away from the grinding wheel, and also mounted for movement in a direction substantially parallel to the axis of the wheel, and a work holder pivotally mounted on said bracket and also capable of movement longitudinally thereof in addition to its longitudinal movement with the bracket; substantially as described.

3. A cutter or sickle bar holding attachment for grinding machines, comprising a bracket pivoted to swing toward and away from the grinding wheel, and also mounted for movement in a direction substantially parallel to the axis of the wheel, and a work holder pivotally mounted on said bracket and also capable of movement longitudinally thereof in addition to its longitudinal movement with the bracket, said holder having a plurality of clamping devices for the bar; substantially as described.

4. A cutter or sickle bar holding attachment for grinding machines, comprising a bracket pivoted to swing toward and away from the grinding wheel, and also mounted for movement in a direction substantially parallel to the axis of the wheel, and a work holder pivotally mounted on said bracket and also capable of movement longitudinally thereof, said holder having a plurality of clamping devices for the bar, spring means for holding said clamping devices in clamping engagement with the bar, and a single releasing means for the clamping devices; substantially as described.

5. A sickle or cutter bar holding attachment for grinding machines having a holding device pivotally mounted to move toward and away from the grinding surface of the wheel, and also slidably mounted to move in a direction parallel to said axis, said device comprising a plurality of dogs fixed on a common shaft, springs for holding the dogs in clamping position, and a single grip or handle device connected to said shaft and providing means for releasing the dogs; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,107,034. RAILWAY SIGNAL-FUSEE. ROBERT M. CLARK, Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 5, 1914. Serial No. 836,545. (Cl. 102—24.)

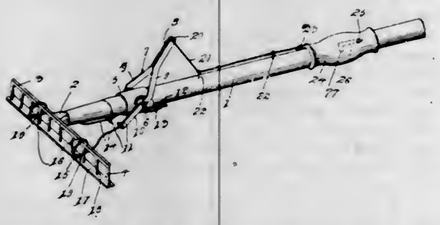
1. A railway signal fusee, comprising a paper tube having one end doubled inward to form an inner wall, and a plug having at its inner end a flange fitting the interior

of the paper tube and abutting against the inturned wall, the plug having a body-portion extending within and fitting against the inner wall, and a spike carried by the plug and projecting beyond the tube, for the purpose described.



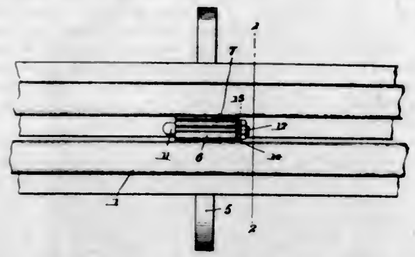
2. A railway signal fusee comprising a paper tube having one end doubled inward to form a relatively elongated double wall, and a plug having an elongated portion embraced by and tightly fitting the said doubled wall, the inner end of the plug having a projecting flange fitting within the tube and abutting against the end of the wall and the outer end of the plug carrying a projecting spike, and a signaling compound within the tube and abutting against the end of the plug, all combined for the purpose described.

1,107,035. RAKE-CLEANER. THOMAS HENRY CLOKE and LESLIE JOHN SHEARER, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,781. (Cl. 55—146.)



In combination with a rake, a sleeve secured to the handle of the rake adjacent its lower extremity, lugs extending outwardly from said sleeve, at diametrically opposite points, a lever pivotally mounted on the lugs, an extension at the rear extremity of the sleeve, said extension partly overlying the rake handle, a bifurcated spring, the arms of said spring being coiled around the lugs and extending parallel with the arms of the lever, a U-shaped member formed integral with the springs, said U-shaped member being adapted to lie beneath the extension on the sleeve, a stripping bar slidably mounted with relation to the rake teeth, extensions formed integrally with the spring and connected to the stripping bar and adapted to exert downward pressure thereagainst to normally hold the stripping bar at the ends of the rake teeth, a sleeve slidably mounted with relation to the rake handle, and a flexible connection secured to the sleeve and the lever and adapted to be operated when the sleeve is moved.

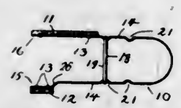
1,107,036. GUARD-RAIL CONNECTOR. CLINTON T. COATES, St. Louis, Mo., assignor of one-half to George G. Heller, East St. Louis, Ill. Filed May 5, 1914. Serial No. 836,533. (Cl. 239—18.)



1. In a guard rail connector of the class described, the combination with a guard rail and a track rail, of a yoke-shaped clamping member surrounding the bases of said rails and engaged with the outside of the webs thereof, filler blocks arranged between the rails and having tapered channels therein, a tapered key fitting in said channels, and a nut threaded on the key for drawing the same between the blocks whereby they will be spread against the inside of the rails.

2. In a guard rail connector of the class described, the combination with a guard rail and a track rail, of a yoke-shaped clamping member surrounding the bases of said rails and engaged with the outside of the webs thereof, filler blocks arranged between the rails and having tapered channels therein, a tapered key fitting in said channels, a nut threaded on the key for drawing the same between the blocks whereby they will be spread against the inside of the rails, and means carried by one of the filler blocks for engaging the clamping member for maintaining a constant relation between the filler blocks and the clamping member.

1,107,037. SHOE-STRETCHER. ROBERT B. CODLING, Bristol, Conn. Filed May 7, 1913. Serial No. 766,074. (Cl. 12—128.)

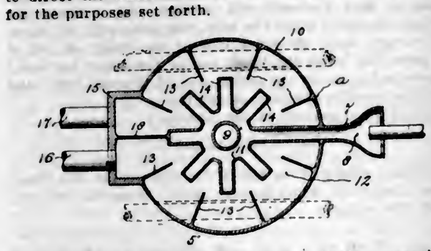


In a shoe stretcher comprising a spring member having opposed arms, a relatively wide and elongated bearing portion at the free end of one of the said arms and serving as a distributing member, and a relatively small bearing portion at the free end of the other of the said arms and serving as a localizing member, and the said spring member being formed of flat spring material of uniform width from end to end, and bent into U shape, the outer faces of the free ends of the said spring material being roughened suitably to serve as the said distributing member and localizing member, and the portion of the said spring material serving as the said localizing member being offset relatively to the body portion thereof so as to limit the said localizing member in the longitudinal direction of the said spring material.

1,107,038. COMBINED GAS-BURNER AND WATER-HEATER. MAURICE HERBERT COHEN, Brooklyn, N. Y. Filed Nov. 12, 1913. Serial No. 800,594. (Cl. 126—54.)

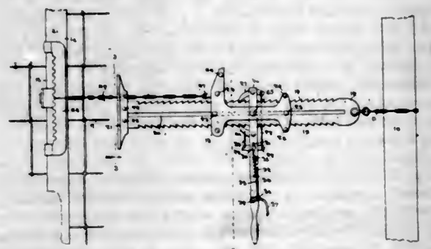
1. In a device of the class described, a burner and a water-heating chamber formed integral therewith, the top portion thereof having concentric corrugations of different heights substantially as described.

2. In a device of the class described, a burner having radial arms, a water-heating chamber surrounding the burner and formed integral therewith, and deflectors positioned on the inner peripheral wall of the chamber so as to direct the water into between the arms of the burner for the purposes set forth.



3. A combined gas burner and water heater, comprising an outer casing adapted for connection to an inlet pipe and an outlet pipe and forming the outer wall of a water chamber, a burner proper disposed centrally of the casing and provided with radial arms forming the inner wall of the water chamber, said water chamber being interiorly divided into communicating compartments, and said outer casing formed with radially disposed baffles arranged in staggered relation with the arms of the burner and co-operating with the said arms for the purpose set forth.

1,107,039. WIRE-STRETCHER. JOHN W. COLEMAN and ALEXANDER GORDEN, Spot, Tenn. Filed May 10, 1913. Serial No. 766,739. (Cl. 39—58.)



1. In a device of the character described, a main body toothed on its opposite edges and provided with a central longitudinal slot, a slide mounted on the body comprising plates on the sides thereof connected by bolts passing through said plates and the slot of the body, a pawl lever pivotally mounted on one of said connecting bolts, pawls pivotally mounted on said pawl lever on opposite sides of the body, means for holding said pawls yieldingly in contact with the series of teeth on the opposite sides of the body, said means comprising a cross bar longitudinally and pivotally movable with respect to the pawl lever, links connecting said pawls separately with said cross bar, and means for normally holding said cross bar toward the body.

2. In a device of the character described, a main body toothed on its opposite edges and provided with a central longitudinal slot, a slide mounted on the body comprising plates on the sides thereof connected by bolts passing through said plates and the slot of the body, a pawl lever pivotally mounted on one of said connecting bolts, pawls pivotally mounted on said pawl lever on opposite sides of the body, means for holding said pawls yieldingly in contact with the series of teeth on the opposite sides of the body, said means comprising a cross bar longitudinally and pivotally movable with respect to the pawl lever, a link connecting one end of said cross bar with one of the pawls in advance of its pivot, a second link connecting the opposite end of the cross bar with the other pawl, and a spring operating to yieldingly press the cross bar toward the body.

3. In a device of the character described, a main body toothed on its opposite edges, connected plates slidably mounted on the body to form a slide, a slotted pawl lever pivotally mounted on said slide, pawls pivoted on said lever on opposite sides of the body and adapted to contact with the respective series of teeth on the opposite sides of the body, a handle bar pivoted near one end of said pawl lever, a rod pivoted at one end to said handle bar, a pin on the opposite end of said rod, extending through the slot in said pawl lever, a cross bar pivotally mounted on said pin, said pin being movable longitudinally of said pawl lever, links separately connecting said cross bar with said pawls, and means to yieldingly press the cross bar toward the body.

1,107,040. REVOLVER FLASH-LIGHT. JAMES B. CONDE, Philadelphia, Pa. Filed Mar. 13, 1914. Serial No. 824,540. (Cl. 240—8.4.)



1. In a device of the class described, the combination with a firearm, of a flash-light attachment comprising a tubular metallic casing adapted to be mounted upon the barrel of the firearm, a barrel-engaging clip formed upon the said casing, a metallic lamp socket formed in the forward end of the casing in electrical connection therewith, a lamp bulb mounted within the said socket, a battery cell adapted to be positioned within the casing with one of its contacts in engagement with the medial contact of the lamp base, means for insulating the said cell from the casing wall, the said casing being provided with a lateral opening in alinement with the other contact of the cell, a depending side plate having its upper edge connected with the said casing a metallic actuating lever pivotally mounted upon the said side plate in electrical connection with the casing, a lateral projection formed upon one end of the said lever for radial movement within the casing opening, the said end of the lever being adapted to be moved inwardly to bring the said projection into operative engagement with the last-named contact of the cell, and means provided upon the side plate by which the said lever may be operated.

2. In a device of the class described, the combination with a firearm, of a flash-light attachment comprising a tubular metallic casing adapted to be mounted upon the barrel of the firearm, a barrel-engaging clip formed upon the said casing, a metallic lamp socket formed in the forward end of the casing in electrical connection therewith, a lamp bulb mounted within the said socket, a battery cell adapted to be positioned within the casing with one of its contacts in engagement with the medial contact of the lamp base, means for insulating the said cell from the casing wall, the said casing being provided with a lateral opening in alinement with the other contact of the cell, a depending side plate having its upper edge connected with the said casing, a metallic actuating lever pivotally mounted upon the said side plate in electrical connection with the casing, a lateral projection formed upon one end of the said lever for radial movement within the casing opening, the said end of the lever being adapted to be moved inwardly to bring the said projection into operative engagement with the last-named contact of the cell, yieldable means for normally maintaining the said lever in its inoperative position with its projection out of engagement with the said cell contact, and means provided upon the side plate by which the lever may be moved into its operative position.

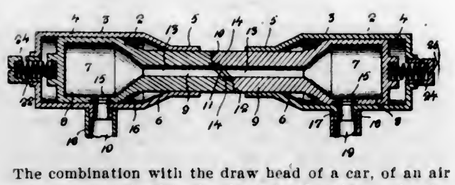
3. In a device of the class described, the combination with a firearm, of a flash-light attachment comprising a tubular metallic casing adapted to be mounted upon the barrel of the firearm, a barrel-engaging clip formed upon the said casing, a metallic lamp socket formed in the forward end of the casing in electrical connection therewith, a lamp bulb mounted within the said socket, a battery cell adapted to be positioned within the casing with one of its contacts in engagement with the medial contact of the lamp base, means for insulating the said cell from the casing wall, the said casing being provided with a lateral opening in alinement with the other contact of the cell, a depending side plate having its upper edge connected with the said casing, a metallic actuating lever pivotally mounted upon the said side plate in electrical connection with the casing, a lateral projection formed upon one end of the said lever for radial movement within the casing opening, the said end of the lever being adapted to be moved inwardly to bring the said projection into operative engagement with the last-named contact of the cell, yieldable means for normally maintaining the said lever in its inoperative position with its projection out of engagement with the said cell contact, means provided upon the side plate by which the lever may be moved into its operative position, and a limiting member provided upon the front end of the casing for engagement with the adjacent end of the actuating lever when in its normal position.

4. In a device of the class described, the combination with a firearm, of a flash-light attachment comprising a tubular metallic casing adapted to be mounted upon the barrel of the firearm, a barrel-engaging clip formed upon the said casing, a metallic lamp socket formed in the forward end of the casing in electrical connection therewith, a lamp bulb mounted within the said socket, a battery cell adapted to be positioned within the casing with one of its contacts in engagement with the medial contact of the lamp base, means for insulating the said cell from the casing wall, the said casing being provided with a lateral opening in alinement with the other contact of the cell, a depending side plate having its upper edge connected with the said casing, a metallic actuating lever pivotally mounted upon the said side plate in electrical connection with the casing, a lateral projection formed upon one end of the said lever for radial movement within the casing opening, the said end of the lever being adapted to be moved inwardly to bring the said projection into operative engagement with the last-named contact of the cell, yieldable means for normally maintaining the said lever in its inoperative position with its projection out of engagement with the said cell contact, means provided upon the side plate by which the lever may be moved into its operative position, and a limiting member provided upon the front end of the casing for engagement with the adjacent end of the actuating lever when in its normal position, the said limiting member being connected with the casing in advance of the lever end and being inclined rearwardly to form a shield for the latter.

5. In a device of the class described, the combination with a firearm, of a flash-light attachment comprising a tubular metallic casing adapted to be mounted upon the barrel of the firearm, a barrel-engaging clip formed upon the said casing, a metallic lamp socket formed in the forward end of the casing in electrical connection therewith, a lamp bulb mounted within the said socket, a battery cell adapted to be positioned within the casing with one of its contacts in engagement with the medial contact of the lamp base, means for insulating the said cell from the casing wall, the said casing being provided with a lateral opening in alinement with the other contact of the cell, a depending side plate having its upper edge connected with the said casing, a metallic actuating lever pivotally mounted upon the said side plate in electrical connection with the casing, a lateral projection formed upon one end of the said lever for radial movement within the casing opening, the said end of the lever being adapted to be moved inwardly to bring the said projection into operative engagement with the last-named contact of the cell, yieldable means for normally maintaining the said lever in its inoperative position with its projection out of engagement with the said cell contact, and a finger bar pivotally mounted upon the said side plate with its upper end engaged with the inner face of the rearmost end of the actuating lever, the lower end of the finger bar being disposed adjacent to the lower edge of the side plate and being flattened to provide a finger piece.

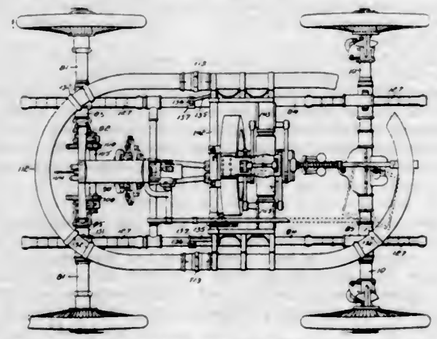
[Claim 6 not printed in the Gazette.]

1,107,041. COUPLING DEVICE. BENJAMIN H. COOK, Anderson, Ind. Filed Oct. 25, 1913. Serial No. 797,291. (Cl. 188—13.)



The combination with the draw head of a car, of an air coupler connected with the draw head, said coupler including a rectangular chamber having a reduced tubular extension, a valve, said valve including a hollow rectangular body which is arranged within the rectangular chamber of the coupler, the valve having a cross sectionally rounded stem which is also arranged within the chamber and which projects through the tubular extension of the chamber, the said stem having a port which communicates with the hollow body of the valve, the stem having its outer face centrally formed with an angular wall, which terminates in a shoulder disposed inwardly of its end, a compressible gasket arranged upon the angular wall and surrounding the port of the valve stem, a gasket between the stem and body of the valve, the body of the valve having a port, a coupler having an air inlet port arranged to register with the port of the valve, the chamber of the coupler having a threaded opening disposed opposite its tubular extension, a threaded socket member normally closing the opening, a spring within the socket and bearing against the inner face of the valve, and the said spring adapted to normally slide the valve to bring its port out of register with the port of the coupling and to force its gasket into contact with the wall of the coupler between the rectangular body and tubular extension thereof.

1,107,042. MOTOR-VEHICLE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and this application filed Aug. 8, 1912. Serial No. 714,097. (Cl. 21—90.)



1. In a motor vehicle, the combination of a running gear, a body frame, springs arranged between said running gear and body frame, a rock shaft mounted in bearings on and extending transversely of the body frame, arms loosely mounted on said shaft, links connecting said arms with the running gear, and means for limiting the movement of said arms about the rock shaft in one direction.

2. In a motor vehicle, the combination of a running gear, a body frame, springs arranged between said frame and running gear, a rock shaft mounted on said body frame, and links connecting the running gear with arms on said rock shaft, said arms being connected to said shaft to normally move therewith but adapted to move independently of said shaft when subjected to unusual strain.

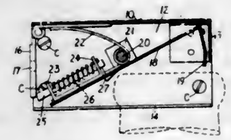
3. In a motor vehicle, the combination of a running gear, a body frame, springs arranged between said frame and running gear, a rock shaft mounted on the body frame, arms loosely mounted on said shaft, stops for limiting the movement of said arms on the rock shaft in one direction, springs for holding the arms against said stops, and links connecting said arms and the running gear.

4. In a motor vehicle, the combination of a running gear, a body frame, springs arranged between said frame and running gear, a rock shaft mounted on the body frame, arms loosely mounted on said shaft, stops for limiting the movement of said arms in one direction, springs for normally holding said arms against the stops, connections between said arms and the running gear, and means for adjusting the tension of the springs.

5. In a motor vehicle, the combination of a running gear, a body frame, springs supporting the body frame, a rock shaft mounted on the body frame, arms loosely mounted on said shaft, stops for limiting the movement of said arms on the shaft in one direction, collars loosely mounted on the shaft, springs connected to said collars and said arms for normally holding the arms against said stops, and means for locking the collars to the shaft in any adjusted position, whereby the tension of the springs can be varied.

[Claims 6 to 17 not printed in the Gazette.]

1,107,043. HOLDER AND AUTOMATIC LOCK FOR MILK-BOTTLES. ROBERT GRAHAM COYNER, Chicago, Ill., assignor to Positive Supply Company, Davenport, Iowa. Filed Oct. 17, 1913. Serial No. 795,777. (Cl. 232—42.)



1. A holder and automatic lock for milk bottles comprising a top plate, downwardly appended side portions on said plate, inwardly extending flanges from said side portions forming a run-way for the neck of the bottle, a locking plate pivoted between said side portions, a downwardly appended flange at one end of said locking plate and suitable means for automatically locking said plate in a predetermined position at its opposite end.

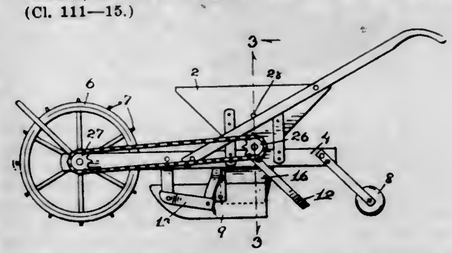
2. A holder and automatic lock for milk bottles comprising an open bottomed box-shaped holding device, inwardly disposed flanges forming integral parts of the sides of said box, a centrally pivoted lock plate appended within said box, a downwardly disposed flange on one end of said plate, a spring actuated lock-plunger secured to the opposite end of said plate, a lock leaf hinged to the end of said box opposite to the end containing the said downwardly disposed flange of the lock plate, an aperture provided in said lock leaf adapted to receive the said plunger and a spring adapted to downwardly depress the end of said lock plate.

3. A holder and automatic lock for milk bottles comprising a box-shaped receptacle integrally formed, flanges forming the bottom of said receptacle adapted to constitute a run-way for the bottle neck, a pivoted lock plate operating within said receptacle, a downwardly disposed flange on one end of said plate and suitable locking means at the other end thereof, substantially as specified.

4. A holder and automatic lock for milk bottles comprising a top plate and integral side plates, inturned flanges on the lower edges of said side plates suitably placed to receive the bottle neck between said flanges, a pivoted spring actuated lock plate operating between said side plates, a downwardly disposed flange on one end of said lock plate, a downwardly appended lock leaf hinged to said top plate and a spring actuated locking plunger attached to the end of the said lock plate adjacent to the said lock leaf and adapted to operate in an aperture provided in said leaf, substantially as specified.

5. A holder and automatic lock for milk bottles comprising a holder formed with a top portion and side portions, inwardly disposed flanges on said side portions, an inclosing portion secured to said side portions and to said top portion at one end thereof, a spring actuated plate operating within the holder formed by said side and top portions, a downwardly disposed flange on one end of said plate, a locking device on the opposite end of said plate and a downwardly appended locking leaf attached to said top portion, substantially as specified.

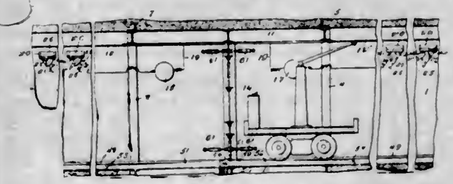
1,107,044. COTTON-PLANTER. GEORGE A. DE KAY, Camden, S. C. Filed Aug. 13, 1913. Serial No. 784,542. (Cl. 111—15.)



1. A cotton planter having lateral hopper chambers, a hopper floor having a concave bottom, and discharge openings for said chambers, a transfer roller having open-end longitudinal recesses adjacent to said concave bottom, adjustable limiting slide walls for such recesses, an adjustable seed gate, a stirrer shaft in said hopper above and geared to the transfer roller stirring arms of said shaft extending into said discharge openings, and means for operating the transfer roller.

2. In a cotton planter, a hopper having lateral chambers, a hopper floor having a concave bottom and discharge openings, a transfer roller having open-end longitudinal recesses circumferentially curved, and adjacent to said concave bottom, seed-operating pins in said recesses, and longitudinally adjustable slide walls engaging said recesses, a stirrer shaft above said roller in the hopper, arms of said shaft adapted to pass near said pins in said recesses, and gearing for operating said shaft and said roller.

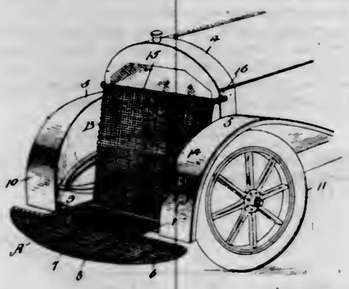
1,107,045. MINE-DOOR. JAMES F. DILLON, Dante, Va., assignor of three-fourths to C. F. Kilgore and one-fourth to Alonzo Blevins, Coeburn, Va. Filed Feb. 6, 1914. Serial No. 816,977. (Cl. 39—43.)



In a device of the character described, the combination with a railway track and an electric trolley wire, of a

plurality of pivoted doors arranged transverse of the track, a latch in said track for normally holding the doors in closed position and adapted to be released by the approach of a vehicle running on the track in either direction, a plurality of constantly energized magnets in circuit with said electric trolley wire for holding said doors in open position by magnetic attraction, a plurality of spring switches arranged in spaced positions along the track on either side of the doors for deënergizing the magnets to release the doors from open positions, and means for returning the doors to closed position, substantially as described.

1,107,046. FENDER. EARL LOUIS DROZ, Colville, Wash. Filed Dec. 13, 1913. Serial No. 806,620. (Cl. 105—252.)



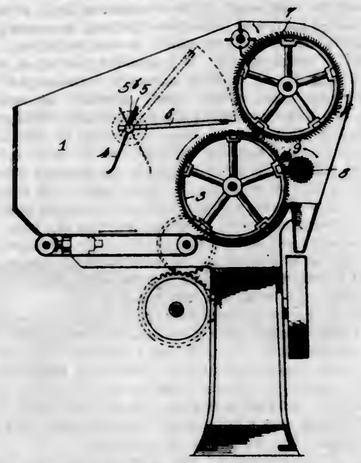
1. In an automobile fender, the combination with the front mud guards of the machine, of a fender supporting tie rod connecting the forward extremities of said mud guards and supported thereby, and a fender embodying a main section pivotally mounted with respect to the machine frame and adapted to rest on said supporting rod and fold backwardly toward the radiator, and a flexible fender apron attached along its bottom edge to said main section and supported along its top edge in fixed relation to the machine frame.

2. In an automobile fender, the combination with the front mud guards of the machine, of a fender supporting tie rod connecting the forward extremities of said mud guards and supported thereby, and a fender embodying a main section pivotally mounted with respect to the machine frame and adapted to rest on said supporting rod and fold backwardly toward the radiator, and a flexible fender apron attached along its bottom edge to said main section and supported along its top edge in fixed relation to the machine frame, the forward portion of the main fender section being laterally expanded to extend in front of the mud guards when lowered and across said mud guards when folded.

3. In an automobile fender, the combination with the front mud guards of the machine, of a fender supporting tie rod connecting the forward extremities of said mud guards and supported thereby, and a fender embodying a main section pivotally mounted with respect to the machine frame and adapted to rest on said supporting rod and fold backwardly toward the radiator, a cross bar forming part of said main section and located so as to sweep clear of the starting crank as said main section is raised and lowered, and a flexible fender apron having its bottom edge attached to said cross bar and its top edge supported in fixed relation to the machine frame.

1,107,047. PROCESS OF CARDING TOBACCO. NAPOLEON DU BRUL, Cincinnati, Ohio, and ALBERT DU BRUL, Fort Thomas, Ky., assignors to The Miller Du Brul and Peters Mfg. Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 21, 1912. Serial No. 738,086. (Cl. 131—5.)

The process of forming a tobacco filler for cigarettes which consists in fluffing the tobacco in bulk, feeding the fluffed tobacco to a feeder, tamping the fluffed tobacco on said feeder to a uniform density, dressing the tamped tobacco, and finally stripping the tamped tobacco from the feeder.



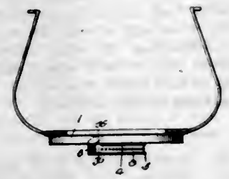
1,107,048. PAPER-BOX BLANK. JAMES DUNN, Bridgeport, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 20, 1912. Serial No. 737,811. (Cl. 229—16.)



1. A blank for a paper box formed of a tray and a separable envelop inclosing said tray, comprising a substantially L-shaped portion including a main body portion for the envelop disposed at the angle of the L-shaped portion, a side body portion for the envelop, the opposite main body portion for the envelop and the opposite side body portion for the envelop being arranged along the foot of the L, the stem of said substantially L-shaped portion being formed by flap portions for respectively covering one end of the envelop, one main body portion of the envelop and the opposite end of the envelop, substantially the entire remaining rectangular portion of the blank being scored and cut to form after separation from said L-shaped portion the sides and bottom of said tray.

2. A blank for a paper box formed of a tray and a separable envelop inclosing said tray, comprising a substantially L-shaped portion including a main body portion for the envelop disposed at the angle of the L-shaped portions, a side body portion for the envelop, the opposite main body portion for the envelop and the opposite side body portion for the envelop being arranged integrally *in seriatim* along the foot of the L, the stem of said substantially L-shaped portion being formed by flap portions for respectively covering one end of the envelop, one main body portion of the envelop and the opposite end of the envelop, the remaining substantially rectangular integral portion of the blank being arranged to be cut from said envelop portion along the two inner edges of the L-shaped portions, said substantially rectangular portion including the bottom portion for the tray, two side portions for the tray, two end portions for the tray, and reinforcing portions integral with said two side portions of the tray respectively, and flaps respectively secured to said end portions of the tray adapted when folded to inclose certain of said end reinforcing portions of the tray.

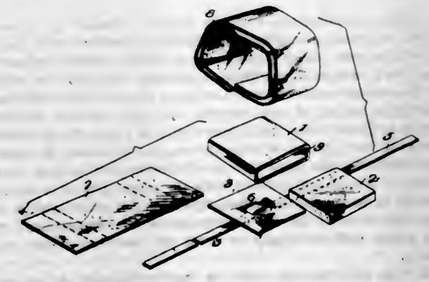
1,107,049. LANTERN-LIGHTER. CHARLES DUSTIN, Avoca, N. Y. Filed Aug. 14, 1913. Serial No. 784,749. (Cl. 67—12.)



1. In a lantern and in combination with the base having an opening near its outer edge, a match scratcher located below the base and to one side of the opening therein and comprising a rear roughened wall, upper and lower parallel flanges at the longitudinal edges of the rear wall and a guide arm at one end of the rear wall and passing through the opening of the base thence over the top thereof to direct the lighted match to the wick tube.

2. In a lantern and in combination with the base having an opening near its outer edge, a match scratcher located below the base and to one side of the opening therein and comprising a rear roughened wall, upper and lower parallel flanges at the longitudinal edges of the rear wall, a stop at one end of the rear wall and a guide arm in line with the stop and extending through the opening of the lantern base and over the top thereof to direct the lighted match to the wick, the upper flange terminating short of the stop and guide arm so as not to obstruct the passage of the lighted match through the opening of the lantern base.

1,107,050. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 4, 1912. Serial No. 688,572. (Cl. 246—20.)



1. A railway signal torpedo, comprising a paper explosive containing case, a paper strap carrying plate at the under side of the case, and two strips of cloth wrapped and cemented around the case and plate at right angles to each other.

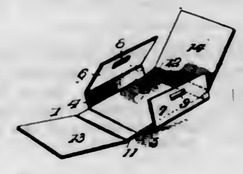
2. A railway signal torpedo comprising a substantially rectangular open ended tubular explosive containing case having strips of cloth wrapped and cemented therearound at right angles to each other, one of the strips of cloth closing the open ends of the case.

3. A railway signal torpedo, comprising a paper tubular open ended explosive containing case, a strap carrying paper plate at the under side of the case, and two strips of cloth wrapped and cemented around the case and the plate at right angles to each other, one of said strips closing the open ends of the tube, the two strips locking the plate to the case.

4. A railway signal torpedo, comprising a paper explosive container, an attaching strap below the case and strips of cloth wrapped and cemented around the case at right angles to each other.

5. A railway signal torpedo, comprising an explosive containing case, a strap carrying plate at the under side of the case, and two strips of cloth wrapped and cemented around the case and plate at right angles to each other.

1,107,051. FIBER-CASE RAILWAY-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 17, 1913. Serial No. 790,255. (Cl. 246—20.)



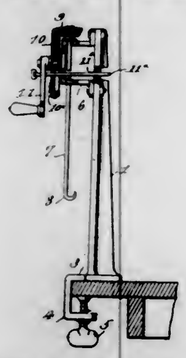
1. A railway torpedo comprising a blank having a body portion, flaps secured thereto and adapted to fold over the explosive compound, a rail attaching strap passing through the side flaps and end flaps folded over the first mentioned flaps and the rail attaching strap.

2. A railway torpedo comprising a blank formed with a body portion upon which the explosive compound is placed in tablet form, flaps secured to two opposite sides and adapted to form the edges of the case and having flaps extending inwardly over the explosive compound and having their ends abutting and having openings therein, a rail attaching strap threaded through said openings, flaps carried by the two remaining sides of the body portion, one having a flap equal in area to that of the body portion and extending over the two abutting flaps and over the strap, and a flap carried by the other flap of the body portion, said flap extending over the last mentioned flap and cemented thereto.

3. A railway torpedo comprising a blank having a body-portion, flaps secured to two opposite sides of the body-portion and adapted to have their inner ends abut at the center of the torpedo and having slots adjacent their inner ends, a rail attaching strap passing through the slots and end flaps folded over the first mentioned flaps and rail-attaching strap and of a size equal to that of the body of the torpedo.

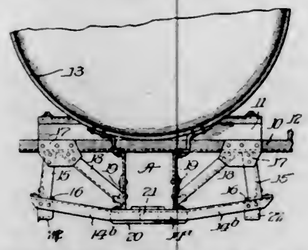
4. A railway torpedo, comprising a blank having a body-portion, flaps secured to the opposite sides thereof and adapted to fold over the explosive compound and having their inner ends abutting at the center of the body-portion, a rail-attaching strap passing through the flaps and end flaps folded over the first mentioned flaps and the rail-attaching strap, and of an area equal to that of the body-portion.

1,107,052. HAIR BRAIDING OR WEAVING APPARATUS. PAUL EIBERLE, Baltimore, Md. Filed Dec. 17, 1912. Serial No. 737,267. (Cl. 132—24.)



In a hair braiding or weaving apparatus, a supporting standard having a locking opening therein, a vertically disposed winder stem journaled upon the standard, said stem being provided with a hooked lower end, a gear upon said stem, a drive gear journaled on the standard and meshing with the aforesaid gear, said drive gear having a plurality of openings therein, means for operating the drive gear, and a locking element adapted to be passed through one of the openings in the drive gear and the said locking opening to lock the gear against rotation.

1,107,053. UNDERBODY FOR TANK-CARS. JOHN FRANKLIN EWELL, Chicago, Ill., assignor to Barrett Manufacturing Company, Chicago, Ill., a Corporation of West Virginia. Original application filed Feb. 13, 1914, Serial No. 818,509. Divided and this application filed Apr. 13, 1914. Serial No. 831,464. (Cl. 105—264.)



1. An underbody comprising a longitudinal girder, a transverse channel bar fixed to the upper face thereof, adjacent each end of said girder, a tank saddle lodged in said channel, a transverse channel bar fixed to the lower face of said girder underneath said upper channel, connecting members for the ends of said lower channel and said upper channel, and a bolster block in said lower channel.

2. An underbody comprising a longitudinal girder, a transverse channel bar fixed to the upper face thereof, adjacent each end of said girder, a tank saddle lodged in said channel, a transverse channel bar fixed to the lower face of said girder underneath said upper channel, connecting members for the ends of said lower channel and said upper channel, there being diagonal members extending from said upper channel to the webs of said girder adjacent the lower flanges thereof, and a bolster block fixed in said lower channel.

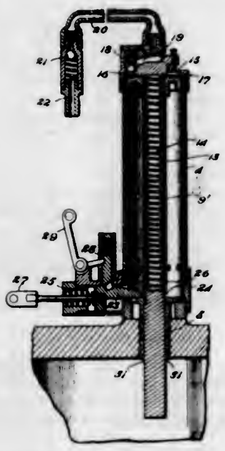
3. An underbody comprising a longitudinal box girder, a horizontal transverse channel bar fixed to the upper face thereof, adjacent each end of said girder, a tank saddle lodged in said channel bar, a transverse channel bar fixed to the lower face of said girder underneath of and of shorter length than said upper channel, members connecting the ends of said lower channel with said upper channel intermediate the ends thereof, runways connecting the outer ends of said upper channels, and a bolster block fixed in said lower channel.

4. An underbody comprising a longitudinal box girder, a horizontal transverse channel bar fixed to the upper face thereof, adjacent each end of said girder, a tank saddle lodged in said channel bar, a transverse channel bar fixed to the lower face of said girder underneath of and of shorter length than said upper channel, members connecting the ends of said lower channel with said upper channel intermediate the ends thereof, there being diagonal members extending from said upper channel, contiguous to said connecting members, to the webs of said girder adjacent the lower flanges thereof, runways connecting the outer ends of said channels, and a bolster block fixed in said lower channel.

5. An underbody comprising a longitudinal box girder, a horizontal transverse channel bar fixed to the upper face thereof, adjacent each end of said girder, a tank saddle lodged in said channel bar, a transverse channel bar fixed to the lower face of said girder underneath of and of shorter length than said upper channel, the ends of said lower channel being bent upwardly, connecting members extending normally from said channel at its ends to said upper channel intermediate the ends thereof, runways connecting the outer ends of said upper channels, and a bolster block fixed in said lower channel.

[Claim 6 not printed in the Gazette.]

1,107,054. PUMP ATTACHMENT FOR MOTOR-VEHICLE ENGINES. FREDERICK G. FOLNERTH, Cleveland, Ohio. Filed Nov. 28, 1910. Serial No. 594,526. (Cl. 230—27.)



1. The combination with an engine cylinder, of an air pump comprising a cylinder, which is provided with suitable inlet and outlet ports, and a piston, means supporting the pump and providing a passage through the head of the engine cylinder for the stem of the pump piston, said stem being of such length that the section thereof which projects below the upper limit of the path of movement of the piston within the engine cylinder is equal in length to the full stroke of the engine piston, and resilient means coöperating with the pump piston to maintain it in its lowest position, whereby the pump piston is operated directly by the engine piston to compress air in the pump and yieldingly to draw air into the pump cylinder.

2. The combination with an engine cylinder, of an air pump comprising a cylinder and a piston, said cylinder having suitable inlet and outlet ports and supplemental relief ports, means supporting the pump and providing a passage through the head of the engine cylinder for the stem of the pump piston, said stem being of such length that it is adapted to be actuated by the engine piston throughout the stroke of the latter to compress air in the pump, and resilient means coöperating with the pump piston to actuate it to draw air into the pump cylinder.

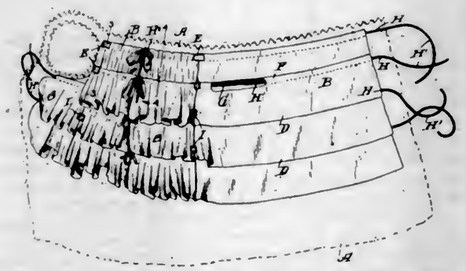
3. The combination with an engine cylinder, of an air-pump having its cylinder, which is provided with suitable inlet and outlet ports, supported by means providing a passage through the head of the cylinder of the engine and its piston provided with an elongated stem that extends through said passage into position to be directly actuated by the piston in the engine cylinder, and means for maintaining the stem of the pump-piston in contact with the piston of the engine whereby the pump-piston is positively moved by the engine piston throughout the entire outward stroke of the latter.

4. The combination with a motor vehicle engine, of an air-pump having its cylinder, which is provided with inlet and outlet ports, detachably connected with the head of the cylinder of the engine by means providing a passage through said head and having its piston provided with an elongated stem that extends through said passage into position to be directly actuated by the piston in the engine cylinder, and a spring acting to force the stem of the pump-piston into contact with the piston of the engine so that the compression stroke of the pump-piston may be of the same length as the stroke of the engine piston.

5. The herein-described attachment for motor vehicle engines comprising an air-pump having a cylinder provided with suitable inlet and outlet ports and adapted to be attached to the head of the cylinder of a motor vehicle engine by means providing a passage through such head, the piston of said pump having an elongated stem that projects beyond the cylinder and is adapted to extend through the aforesaid passage in the head of the engine cylinder to which the pump is attached into contact with the piston therein at any point in the stroke of the latter, and means for maintaining contact between the stem of the pump-piston and the piston in the engine cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,107,055. DRESS-FORM. LINUS TERRY FURNAS, Lima, Ohio. Filed June 6, 1913. Serial No. 772,075. (Cl. 2—87.)



1. A dress form provided with a flounce having a guide, a loop string within the said guide and doubled up to form a loop, the ends of the loop string being secured to one end of the flounce, and a draw-string extending within the said hem and doubled up, the draw-string passing through the loop of the loop string and having one end secured to the other end of the flounce, the other and free end of the draw-string extending beyond the last-mentioned end of the flounce.

2. A dress form, comprising a foundation, a flounce secured at one upper corner to the said foundation and overlying the same, the flounce being provided with a longitudinally-extending hem reaching from one end of the flounce to the other end, a loop string extending within one portion of the hem and doubled up to form a loop, the ends of the loop string being fixed in the corresponding end of the hem, and a draw string extending in the other portion of the hem and doubled up, the draw string passing through the loop of the loop string and having one end secured to the other end of the hem, the loose end of the draw-string extending through the end of the hem to the outside thereof.

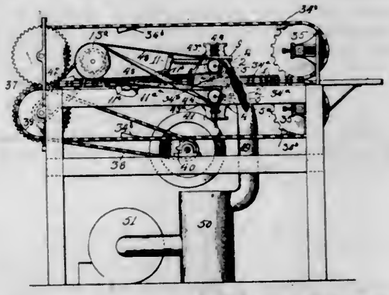
3. A dress form provided with a flounce having a hem, a loop string within the said hem and doubled up to form a loop, the ends of the loop string being secured to one end of the hem, and the length of the loop string corresponding to the length of the ruffle when shirred, and a draw-string extending within the said hem and doubled up, the draw string passing through the loop of the loop string and having one end secured to the other end of the hem, the loose end of the draw-string extending through the end of the hem to the outside thereof.

4. A dress form, comprising a foundation, flounces secured at one upper corner to the said foundation and overlying the same, each flounce being provided with a longitudinally-extending hem reaching from one end of the flounce to the other end, a loop string extending in one portion of the hem and doubled up to form a loop, the ends of the loop string being fixed in the corresponding end of the hem, the length of the doubled-up loop string determining the length of the shirred ruffle, and a draw-string extending in the other portion of the hem and doubled up, the draw-string passing through the loop of the loop string and having one end secured to the other end of the hem, the loose end of the draw-string extending through the end of the hem to the outside thereof the said flounces being arranged in pairs on the said foundation, and the flounces of each pair having the free ends of their drawstrings extending toward one another to permit them to be tied to one another when the flounces are shirred.

5. A dress form comprising a foundation, flounces attached to the foundation, and shirring and limiting means on each flounce for shirring the same, comprising coöperating members for limiting the shirring to form a ruffle of the length of one of said members.

[Claim 6 not printed in the Gazette.]

1,107,056. TOBACCO-STEMMING MACHINE. LOUIS HENRY GERDING, Baltimore, Md., assignor, by mesne assignments, to The Tobacco Stemming Machine Company. Filed Nov. 14, 1910. Serial No. 592,392. (Cl. 131—57.)



1. In combination in a tobacco stemming machine, stripping members, means for giving said stripping members, a slow rotary movement, means for drawing the stems between the stripping members and in a direction opposite to the slow surface travel of the stripping members where they engage the leaf and stem and means for accelerating the rotary movement of the stripping elements, the slow rotation constantly clearing the blade and the accelerated movement completing the clearing of the blade from the stripping means, substantially as described.

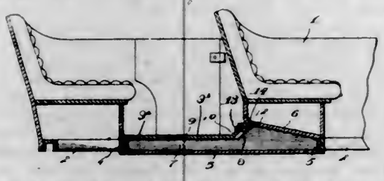
2. In combination stripper rolls, means for presenting the tobacco leaves to the rolls and for drawing the stems between the rolls, a slip-drive for the stripper rolls for rotating them in opposition to the travel of the leaves, and

a positive drive for giving accelerated rotary movement to the stripping rolls, substantially as described.

3. In combination stripper rolls, means for presenting the tobacco leaves to the rolls and for drawing the stems between the rolls, a slip-drive for the stripper rolls for rotating them in opposition to the travel of the leaves, and a positive drive for giving accelerated rotary movement to the stripping rolls, and means for automatically and periodically rendering the positive drive operative, substantially as described.

4. In combination a pair of stripper rolls, carrier means for the leaves to present them to the stripper rolls and to draw the stems between them, and driving means giving the rolls a slow continuous rotary movement and a quick rotary movement in opposition to the traveling movement of the leaves, and means for timing the said movements relative to each other.

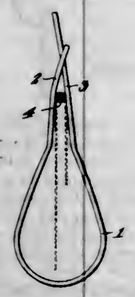
1,107,057. AUTOMOBILE. WILLIAM E. GILMORE, Holmesville, Ohio. Filed Sept. 11, 1912. Serial No. 719,853. (Cl. 21—7.)



1. An automobile body having front and rear seats, a frame arranged between the plumb boards of the front and the rear seats, a bottom connected with the frame, a cover for the frame providing the floor for the automobile between the seats, said cover comprising a pair of hinged sections, and a lock for one of the sections.

2. In combination, a vehicle body including front and rear seats, a frame arranged between the plumb boards of the seats, a bottom for the frame, the side members of the frame below the front seat being inclined from the plumb board upwardly toward the rear of said front seat, a cover for the said inclined portions of the frame, the upwardly inclined edges terminating in downwardly and rearwardly inclined edges which intersect the upper horizontal edges of the said side members, a cover for the frame, said cover providing the floor of the vehicle between the seats, said cover comprising a pair of hinged sections, one of said sections having an inclined lip which is adapted to rest upon the downwardly inclined edges of the side members of the frame, and a latch arranged upon the lip for locking one of the sections of the cover to the vehicle.

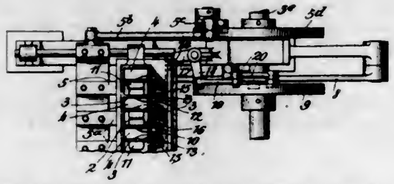
1,107,058. CLOTHES-PIN. WILLIAM HENRY GRIFFIN, New Boston, Tex. Filed Dec. 22, 1913. Serial No. 808,245. (Cl. 24—139.)



1. A wire clothes pin embodying relatively wide twin oval loops adapted to loosely surround a clothes line, said loops being arranged side by side, each of the loops having one end rounded and having its arms converging to the other end, the ends of the arms of each loop being arranged close together, a narrow loop extending from and connecting the ends of one pair of arms of the said loops, the narrow loop being arranged in a plane at an angle to the planes of the oval loops and being arranged at an obtuse angle to the said pair of arms from which it extends, and terminal portions extended from the ends of the other pair of arms of the oval loops between the arms of the narrow loop, the said terminal portions being arranged at an obtuse angle to the last mentioned pair of arms of the oval loops, the narrow loop and terminal portions constituting nipping jaws, and the said terminal portions coöperating with the bight of the narrow loop to limit the separation of the nipping jaws.

2. A wire clothes pin embodying relatively wide twin oval loops adapted to loosely surround a clothes line, said loops being arranged side by side, each of the loops having one end rounded and having its arms converging to the other end, the ends of the arms of each loop being arranged close together, a narrow loop extending from and connecting the ends of one pair of arms of the said loops, the narrow loop being arranged in a plane at an angle to the planes of the oval loops and being arranged at an obtuse angle to the said pair of arms from which it extends, and terminal portions extended from the ends of the other pair of arms of the oval loops between the arms of the narrow loop, the said terminal portions being arranged at an obtuse angle to the last mentioned pair of arms of the oval loops, the narrow loop and terminal portions constituting nipping jaws, the said terminal portions being intertwisted and having an eye engaging the bight of the narrow loop.

1,107,059. APPARATUS FOR MEASURING OFF MATCHES FOR MACHINES FOR PACKING MATCHES IN BOXES. HENRY ALFRED GSELL, Paris, France. Filed Dec. 5, 1913. Serial No. 804,889. (Cl. 144—61.)

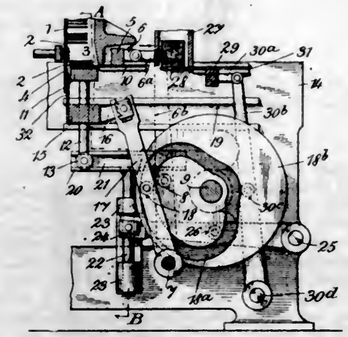


1. In an apparatus for measuring off matches for machines for filling matches into match boxes, a match magazine divided by vertical partition walls into several filling compartments, a vertically movable plunger for supporting the measured off matches and measuring off knives arranged in pairs near the lower end of said filling compartments, the whole of the blades of adjacent knives of neighboring filling compartments being arranged in different horizontal planes and means for rotating each of said knives on a pin fixed to the frame of the apparatus.

2. In an apparatus for measuring off matches for machines for filling matches into match boxes, a match magazine divided by vertical partition walls into several filling compartments, a vertically movable plunger for supporting the measured off matches and measuring off knives arranged in pairs near the lower end of said filling compartments, the blades of adjacent knives of neighboring filling compartments being arranged in different horizontal planes so that the knives to be opened can be moved one over the other, each knife being further provided with a sleeve like rear end, radial pins on said sleeve like parts, stationary vertical bolts passing through said sleeves, horizontally arranged rails engaging said pins and means for moving to and fro said rails.

3. In an apparatus for measuring off matches for machines for filling matches into match boxes, a match magazine divided by vertical partition walls into several filling compartments, a vertically movable plunger for supporting the measured off matches and measuring off knives arranged in pairs near the lower end of said filling compartments, the blades of adjacent knives of neighboring filling compartments being arranged in different horizontal planes, each knife being provided with a sleeve like rear end, stationary vertical pivots passing through said sleeve like parts, a toothed segment on each of said sleeves, the toothed segments of each knife pair engaging one another, a radial pin on each second of said sleeves, a horizontal rail engaging all said pins and means for moving said rail to and fro in a horizontal plane.

1,107,060. MATCH-MAKING MACHINE. HENRY ALFRED GSELL, Paris, France. Filed Dec. 8, 1913. Serial No. 805,310. (Cl. 144—61.)



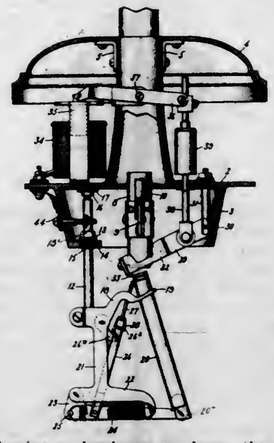
1. In a device for removing the finished matches from a match-making machine, an ejection trough arranged adjacent the discharging end of the match making machine, an intermittently moved collecting member arranged beneath the ejection trough, a filling trough arranged at a certain distance from the ejection trough and a conveying member moved in a vertical plane in a substantial rectangular cycle and conveying the matches received from the collecting member to the filling trough.

2. In a device for removing the finished matches from a match-making machine, a trough for receiving the matches from the carrier bars of the match-making machine, a horizontally movable collecting slide normally closing the ejection trough at the bottom, a stationary filling trough arranged at a certain distance from the ejection trough and at substantially the same level as the latter, a single conveying slide moving in a vertical plane in a rectangular cycle and introducing the matches received from said collecting slide and kept permanently in a horizontal position in the filling trough, and reciprocating means arranged immediately below said filling trough.

3. In a device for removing the finished matches from a match-making machine an ejection trough, a horizontally movable collecting slide normally closing the ejection trough at the bottom, a filling trough arranged at a certain distance from the ejection trough, a single conveying slide moving in a closed cycle and conveying the matches received from the collecting slide to the filling trough, a slide opening and closing periodically the filling trough in order to allow the matches to be introduced from the conveying slide from below and means for moving said opening and closing slide and the conveying slide during the return movement of the latter with the same speed and in the same direction until the filling trough is completely closed at the bottom by said slide.

4. In a device for removing the finished matches from a match-making machine an ejection trough, a horizontally movable collecting slide normally closing the ejection trough at the bottom, a filling trough arranged at a certain distance from the ejection trough, the lower part of the back wall of this trough being movable, a rigid plate secured to the under side of the front wall of the filling trough, a single conveying slide moving in a closed cycle and conveying the matches received from the collecting slide to the filling trough and means opening and closing periodically the filling trough in order to allow the matches to be introduced from the conveying slide from below.

1,107,061. ARC-LAMP. CROMWELL A. B. HALVORSON, Jr., Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 21, 1910. Serial No. 573,015. (Cl. 176—64.)



1. In a flaming or luminous arc lamp, the combination with electrodes the arcing faces of which are out of contact and substantially stationary, one above the other, an electro-magnet, a lever movable thereby and carrying at one end a ring loosely embracing one of the electrodes and adapted in operation to remove arc deposits therefrom, said ring being provided with a conducting finger which in one position of the lever engages one of the electrodes and in the other position is adjacent to the other electrode.

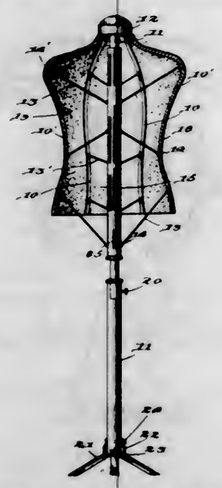
2. In an arc lamp, an upper non-consuming electrode, a lower consuming electrode upon which a non-conducting layer is liable to form during the operation of the lamp, a lever free to move in one direction by gravity and provided at its free end with a pin adapted to forcibly engage and break the non-conducting layer at the arcing end of the consuming electrode when the lever moves under the action of gravity, an electromagnet for moving the lever against gravity and thereby starting an arc between the pin and the lower electrode, said lever being proportioned and arranged to bring the conducting pin in arc-transferring proximity to the upper electrode when the lever is moved by the magnet.

1,107,062. UMBRELLA BUST-FORM. MANES I. HAMBURGER, Baltimore, Md. Filed Mar. 19, 1913. Serial No. 755,406. (Cl. 223—18.)

1. A collapsible form comprising a central vertically extending support, a plurality of vertically extending bendable ribs connected at one end to said support, a sliding member on said support having a plurality of axially extending slots varying in length in its exterior walls, and a plurality of struts of varying lengths extending freely between said ribs and said sliding member each connected at one end slidably in one of said slots and at the other end pivotally to one of said ribs.

2. A collapsible form comprising a central vertically extending support, a plurality of vertically extending bendable ribs connected at one end to said support, a sliding member on said support, and a plurality of struts of varying lengths extending freely between said ribs and said sliding member and connected at one end slidably in slots of varying lengths and at the other end pivotally.

3. A collapsible form comprising a central vertically extending support, a plurality of vertically extending bendable ribs hinged at the top to said support, a sliding member on the support said sliding member having a plurality of axially extending slots in its exterior walls, and a plurality of struts of varying lengths extending freely between said ribs and said sliding member and connected at one end slidably in said slots and at the other end pivotally to said ribs, the ends of said slots forming abutments for the inner ends of said struts.



4. A collapsible form comprising a central vertically extending support, a plurality of vertically extending bendable ribs hinged at the top to said support, a sliding member on the support and a plurality of struts of varying lengths extending freely between said ribs and said sliding member and connected at one end pivotally with said ribs and at the other end slidably to said sliding member on the support.

5. A collapsible form comprising a central vertically extending support, a plurality of vertically extending bendable ribs hinged at the top to said support, a sliding member on the support and a plurality of struts of varying lengths extending freely between said ribs and said sliding member and connected at one end to said ribs and at the other end to said sliding member, at one end pivotally and at the other end slidably.

[Claims 6 to 15 not printed in the Gazette.]

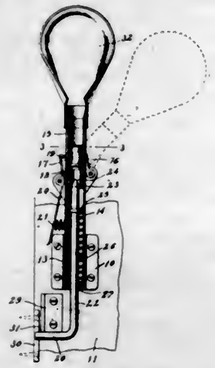
1,107,063. RAILROAD-TIE. LEWIS A. HAMILTON, Elko, Nev. Filed Dec. 6, 1913. Serial No. 805,080. (Cl. 238—4.)



1. A tie comprising a shell formed from soft steel alloyed with copper and having a filler of compressed saw-dust.

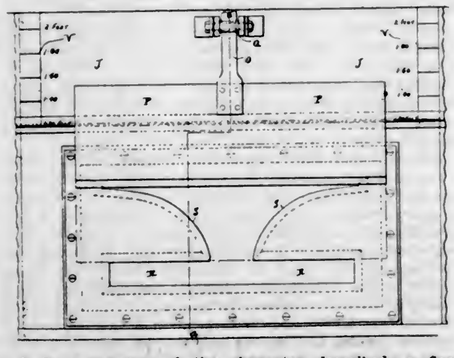
2. A tie including a shell of soft resilient metal, a filler for the shell, said filler comprising saw-dust treated with a preservative of creosote and tar and compressed within the shell, and means provided by the tie for retaining the rails upon the tie, said means comprising plates having integrally formed angular lips which engage the outer base flanges of the rails, and bolts passing through the plates to within the tie and having their heads engaging with the inner base flanges of the rail.

1,107,064. BURGLAR-ALARM. SANFORD HARRIS, Monrovia, Cal. Filed Dec. 20, 1912. Serial No. 737,885. (Cl. 116—42.)



A burglar alarm comprising a bracket adapted for attachment to a window casing, a vertically disposed cylinder carried by the bracket and having its upper end provided with a firing chamber the said firing chamber having upper terminals of its inner wall flaring upwardly and in the direction of the upper terminal of the firing chamber, a shield located at the upper end of the firing chamber and comprising a socket member adapted to receive the upper end of the firing chamber and upwardly flaring side walls extending from the socket member and having the inner surfaces flush with the flaring inner walls of the firing chamber, the said side walls of the shield having their upper ends connected by a curved top, the said shield having its front face opened and having its rear wall extending upwardly from the socket and curved outwardly and gradually merging into the said curved top, and providing a baffle at its point of juncture with the top, whereby the wadding of the cartridge may be deflected through the open face of the shield.

1,107,065. CONSTANT-DISCHARGE GAGE. JAMES ALBERT GRAYSON HARRISSON, Canterbury, England. Filed Nov. 26, 1913. Serial No. 803,248. (Cl. 61—46.)

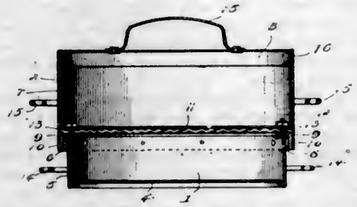


1. In apparatus of the character described, a float chamber, a discharge orifice below the water level in said chamber, said orifice comprising a lower and constant area part and an upper part of upwardly increasing width, a shutter controlling the area of said orifice and a float controlling the position of said shutter, the parts being proportioned and combined to insure a constant discharge from the orifice irrespective of the head of water in the float chamber.

2. In apparatus of the character described, a float chamber, a discharge orifice constantly below the water level in said chamber, said orifice comprising a lower portion and an upper portion communicating therewith, the capacity of both portions combined under the head of the water at its lowest level in said chamber being substantially equal to the capacity of the lower portion alone under the head of the water at its highest level in said chamber, for the purpose described.

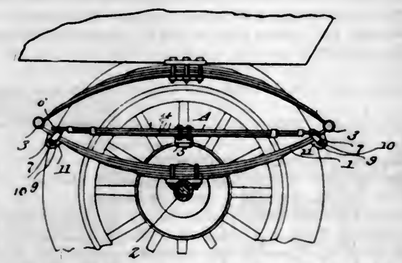
3. In apparatus of the character described, a float chamber, a discharge orifice constantly below the water level in said chamber, said orifice comprising a lower portion and an upper portion communicating therewith, the capacity of both portions combined under the head of the water at its lowest level in said chamber being substantially equal to the capacity of the lower portion alone under the head of the water at its highest level in said chamber, in combination with a shutter controlling the exposed area of said orifice and a float automatically controlling the position of said shutter, for the purpose described.

1,107,066. RECEPTACLE. GEORGE CHRISTIAN HEIM, Newark, N. J. Filed May 28, 1912. Serial No. 700,247. (Cl. 220—92.)



A receptacle including upper and lower members, said upper member being of a greater diameter than said lower member and having its bottom edge embracing and spaced from the exterior surface of the upper edge of said latter mentioned member, a ring secured to and embracing the exterior surface of said lower member and disposed flush with the top edge thereof, and arranged within the space between the meeting ends of said members, another ring located wholly within the upper member and disposed flush with its bottom edge and flush with the bottom edge of the first mentioned ring, said last named ring being bent angularly at its medial portion to present vertical and horizontal engaging portions, said vertical portion frictionally engaging with the exterior annular surface of the first mentioned ring, while the horizontal portion extends inwardly and frictionally engages with the top edge of the said first mentioned ring and the top edge of the lower member and terminating inwardly of the lower member, whereby establishing a sealed joint between said members.

1,107,067. AUXILIARY SPRING. PETER F. HELLERSTEDT, Chattanooga, Tenn. Filed Mar. 17, 1914. Serial No. 825,309. (Cl. 21—105.)

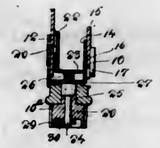


1. An auxiliary spring for the purpose set forth provided with rollers at the extremities thereof, and end yokes adapted to embrace the terminal portions of a vehicle spring, said yokes being pivotally attached to said auxiliary spring.

2. An auxiliary spring for the purpose set forth provided with rollers at the extremities thereof, end yokes adapted to embrace the terminal portions of a vehicle spring, and cushioning means carried by said yokes.

3. An auxiliary spring for the purpose set forth provided with rollers at the extremities thereof, end yokes adapted to embrace the terminal portions of a vehicle spring, and an abutment block attached to said auxiliary spring.

1,107,068. AUTOMOBILE-CLOCK. EDMUND HEROLD, Brooklyn, N. Y. Filed Aug. 5, 1913. Serial No. 783,153. (Cl. 58—46.)

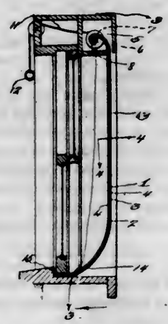


1. In combination, a frame, a movement arranged within the frame and having a stem, gearing connecting such stem with the winding and setting mechanism, each of such mechanisms engaging with the stem when the same is turned in one direction and slipping when the stem is turned in the opposite direction so that only one of such mechanisms may be actuated at a time, and an operating ring fitted to the supporting frame and in engagement with the stem of the movement and adapted when turned in one direction to operate the setting mechanism and when turned in the opposite direction to operate the winding mechanism.

2. In a time mechanism, the combination of concentric stems one of such stems being mounted to have a rotary movement only imparted thereto and the other stem being mounted to have both a rotary and longitudinal movement imparted thereto; gearing connecting the respective stems with the winding and setting mechanisms, and a ratchet mechanism between the two stems arranged to operate automatically to cause both to turn in one direction and to move the other longitudinally and throw the same out of action upon rotating the stem in the opposite direction.

3. In a time mechanism, the combination of a rotating stem, a second stem mounted concentric with the first mentioned stem and adapted to receive both a rotary and a longitudinal movement, gearing connecting the respective stems with the winding and setting mechanism, ratchet teeth upon the outer end of the first mentioned stem and a pin carried by the second stem and adapted to engage the said ratchet teeth, whereby both stems rotate in one direction, and only one receives a rotary movement in the opposite direction.

1,107,069. OUTSIDE ROLLING WINDOW-SHUTTER. DANIEL HIGGINS, New London, Conn. Filed Aug. 18, 1913. Serial 785,416. (Cl. 156—16.)



In combination with a window frame including upper and lower sashes, of an exterior sliding shutter including

a roller therefor, said frame having guides for the shutter curved in toward the lower sash and terminating thereunder, the lower portion of said shutter having a laterally extending flange and arranged vertically between the lower portion of the sash and the frame when the shutter is down to lock the same.

1,107,070. ICE-SHAVER. CHARLES A. HORN, Chickasha, Okla. Filed July 2, 1913. Serial No. 776,968. Renewed June 22, 1914. Serial No. 846,502. (Cl. 83—62.)



1. An ice shaver comprising a box having an open end and top, a transverse slot in the bottom near the closed end, a blade adjustable on the said closed end and projecting through the slot, said blade and end wall having registering vertical slots, a cover hinged to the said closed end and closing the box, an arm rigid with the cover, a plate arranged transversely of the box, an arm rigid therewith and extending through the registering slots the outer ends of the arms being pivotally connected, lugs on the arms, and a spring connecting the arms, and normally acting to retain the cover in open position, and the plate at the open end of the box.

2. An ice shaver comprising a box having an open top and end, the bottom having a transverse slot near the closed end, a blade adjustable on said closed end and projecting through the slot, a plunger movable longitudinally of the box toward and from the open end, a cover hinged to the closed end for closing the box, arms pivotally connected at one end and rigidly connected by the other end with the cover and the plunger respectively, for moving the plunger toward the open end of the box when the cover is opened, and a spring normally retaining the cover in open position.

3. An ice shaver comprising a box having an open top and end, the bottom having a transverse slot near the closed end, a blade adjustable on said closed end and projecting through the slot, a plunger movable longitudinally of the box toward and from the open end, a cover hinged to the closed end for closing the box, a connection between the cover and the plunger for moving said plunger toward the open end of the box when the cover is opened, and a spring for normally retaining the cover in open position.

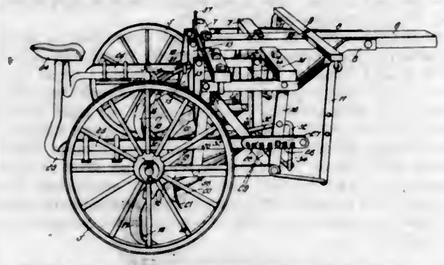
4. An ice shaver comprising a box having an open top and end, the bottom having a transverse slot near the closed end, a blade adjustable on said closed end and projecting through the slot, a plunger movable longitudinally of the box, a cover hinged to the box for closing the same, a connection between the cover and the plunger for moving said plunger toward the open end of the box when the cover is opened, and a spring for normally retaining the cover in open position.

5. An ice shaver comprising a box having an open end, means in connection with the box for shaving the ice, a plunger for ejecting the shaved ice movable longitudinally of the box, a cover for the box, a connection between the cover and the plunger for moving said plunger toward the open end of the box when the cover is opened, and a spring movably retaining the cover open.

[Claims 6 and 7 not printed in the Gazette.]

1,107,071. CULTIVATOR. JOHN A. HORNBECK, Hinsdale, Ill. Filed Apr. 12, 1913. Serial No. 760,770. (Cl. 97—35.)

1. A cultivator comprising wheels, a framework, a plurality of laterally and vertically shiftable plows supported by the framework, and a single pair of foot levers each connected with all of the laterally shiftable plows for controlling the adjustment of said plows both vertically and laterally.



2. In a cultivator comprising wheels, a framework carrying a seat and a plurality of plows, said framework constituting a lever having the wheels for a fulcrum, with the seat on one lever arm and the plows on the other arm, some of said plows being shiftable laterally and some of the plows being fixed relatively to the framework, and stirrups whereby the operator may control the vertical adjustment of all of the plows and the lateral adjustment of some of the plows.

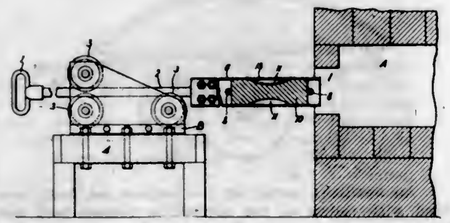
3. In a cultivator comprising wheels, a bar forming axles for said wheels and bent back to form a seat support, a pair of parallel side bars bolted to said bent bar and extending forward from the axles, a plurality of plows supported by the forward ends of said side bars, said side bars and bent bar constituting a lever with the wheels as a fulcrum, with the seat on one lever arm and the plows on the other.

4. In a cultivator comprising wheels, a bar forming axles for said wheels and bent back to form a seat support, a pair of parallel side bars bolted to said bent bar and extending forward from the axles, a plurality of plows supported by the forward ends of said side bars, said side bars and bent bar constituting a lever with the wheels as a fulcrum, with the seat on one lever arm and the plows on the other, and means for adjusting the plows relative to the side bars.

5. In a cultivator comprising wheels, a bar forming axles for said wheels and bent back to form a seat support, a pair of parallel side bars bolted to said bent bar and extending forward from the axles, a plurality of plows supported by the forward end of said side bars, said side bars and bent bar constituting a lever with the wheels as a fulcrum, with the seat on one lever arm and the plows on the other, and means for adjusting the plows relative to the side bars, said last-mentioned means comprising pins riding in slots in said side bars and notched plates carried by the side bars for retaining the pins at the desired positions in said slots.

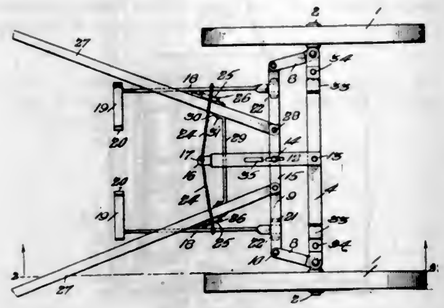
[Claims 6 to 17 not printed in the Gazette.]

1,107,072. PROCESS OF MANUFACTURING AND TEMPERING GLASS ARTICLES. LEON J. HOUZE, Point Marion, Pa. Filed Oct. 2, 1912. Serial No. 723,586. (Cl. 49—79.)



The process of manufacturing convex lights of glass, consisting in placing a glass blank upon a mold, introducing said mold and blank into a heating furnace to thereby cause the blank to soften and assume the shape of the mold, removing said mold and the formed light of glass from the furnace, placing a tray formed of heat retaining material over said mold and inverting the mold to cause the formed article to be discharged from the mold upon said tray, and annealing the formed light of glass while on said tray by retarding the escape of its contained heat.

1,107,073. STEERING APPARATUS. SEVERT JACOBSON and FRANK E. ANDERSON, Lynch, Nebr. Filed July 24, 1913. Serial No. 780,927. (Cl. 21—191.)

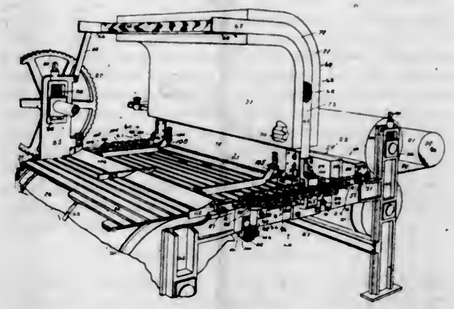


1. In combination, an axle, a spindle at each end of the axle, a pivotal connection between each spindle and the axle for permitting the spindle to swing on a vertical axis, a wheel on each spindle, each spindle having a rigid arm extending forwardly and inwardly, a bar connecting the arms and pivoted at each end to the adjacent arm, a tongue pivoted to the axle at the center thereof and extending forwardly beyond the bar, a pivotal connection between the tongue and the bar, a lever hinged at its inner end to the under face of the bar near each end thereof, each lever having a foot plate at its forward end, a flexible connection between each lever and the forward end of the tongue, and shafts attached to the bar on each side of the tongue and extending forwardly and outwardly, each shaft having a roller over which the adjacent chain passes.

2. In combination, an axle, a spindle at each end of the axle, a pivotal connection between each spindle and the axle for permitting the spindle to swing on a vertical axis, a wheel on each spindle, each spindle having a rigid arm extending forwardly and inwardly, a bar connecting the arms and pivoted at each end to the adjacent arm, shafts connected with the bar and extending forwardly therefrom, a rigid connection between the shafts, a tongue pivoted to the axle at the center thereof and extending forwardly between the shafts beyond the bar, a pivotal connection between the tongue and the bar, a lever hinged at its inner end to the under face of the bar near each end thereof, each lever having a foot plate at its forward end, and a flexible connection between each lever and the forward end of the tongue and passing over the adjacent shaft.

3. In a vehicle of the character specified and comprising an axle, a spindle pivoted to each end of the axle on a vertical axis, a wheel on each spindle, an arm extending rigidly forward from each spindle, and a bar connecting the arms and pivoted thereto, a tongue pivoted to the axle and to the bar at the center of the axle and the bar and extended forwardly of the bar, a lever pivoted at one end to the bar near each end thereof, each lever having a foot plate at its forward end, a connection between each lever and the front end of the tongue, and a support on the frame over which each of the said connections pass.

1,107,074. APPARATUS FOR CONSTRUCTING SHEETS OF MATERIAL FOR BUILDING OR OTHER PURPOSES. WILLIAM M. JANPOLE, Los Angeles, Cal. Filed May 28, 1912. Serial No. 700,181. (Cl. 154—1.)



1. In apparatus of the class specified, the combination of a frame, a table thereon, means for progressign a sheet of supporting material along said table, means for distributing adhesive substance upon said material, a container for laths, a hinged bottom plate on the container, means for adjusting the inclination of the bottom plate mechanism at the sides of said frame for removing the laths in succession from said bottom plate, and means to prevent displacement of the laths when they are moved by the said mechanism, substantially as described.

2. In apparatus of the class specified, the combination of a table, means for progressing a sheet of supporting material along said table, means for depositing adhesive substance upon said material, a container for laths, a hinged bottom plate on the container means for adjusting the inclination of the bottom plate spring-pressed rollers arranged adjacent to the bottom plate, mechanism at the sides of the table for removing the laths in succession from the container, and means adapted to guide the laths from said mechanism onto said adhesive substance.

3. In apparatus of the class specified, the combination of a frame, a table thereon, means for progressing a sheet of material along said table, means for depositing adhesive substance upon the sheet of material a container for laths, guide rails on the frame, and mechanism for removing the laths in succession from the container and depositing them on the adhesive substance, said mechanism including vertical shafts on each side of the frame, sprocket wheels on the shafts, and endless chains mounted on the sprocket wheels and provided with links having fingers thereon and recesses into which the rails are adapted to fit to cause the links to travel on the rails.

4. In apparatus of the class specified, in combination, a container for laths, mechanism for removing the laths in succession from the bottom of said container, including endless chains provided with links having fingers with notches therein, and plates on the container adapted to fit in the notches as the links move adjacent to the bottom of the container, substantially as described.

5. In apparatus of the class specified, the combination of a table provided with grooves therein, means for progressing a sheet of material along the table, including rollers having grooves therein and endless bands provided with projections thereon and adapted to travel in the grooves, means for distributing adhesive substance on the material, a container for laths, mechanism for removing the laths in succession from the bottom of the container, an apron on the container adjacent to the bottom adapted to prevent displacement of the laths, and means adapted to guide the laths from the mechanism to the adhesive substance on the material, substantially as described.

[Claim 6 not printed in the Gazette.]

1,107,075. DISPLAY DEVICE. JULIUS J. KARGES, Maywood, Mo. Filed Jan. 26, 1914. Serial No. 814,292. (Cl. 211—24.)



1. In a display device, two members, one of which is tubular and in which the other is longitudinally slidable, the inner member having an annular groove, and a transversely divided resilient ring mounted in said groove and held compressed by the tubular member.

2. In a display device, two members, one a tubular member in which the other is longitudinally slidable, the tubular member having a stop in its inner periphery, and a transversely divided resilient ring encircling the inner member and held from longitudinal movement thereon and adapted to have its movement in the outer member limited by said stop, the outer member holding said ring normally compressed.

3. In a display device, two members, one a tubular member in which the other is longitudinally slidable, the tubular member having an annular groove on its inner periphery, said groove being abrupt at one side and inclined at the other side, and a transversely divided resilient ring encircling the inner member and held from longitudinal movement thereon and held compressed by the tubular member and being adapted, when moved into register with said annular groove to expand therein so as to lock the inner member against longitudinal movement in one direction.

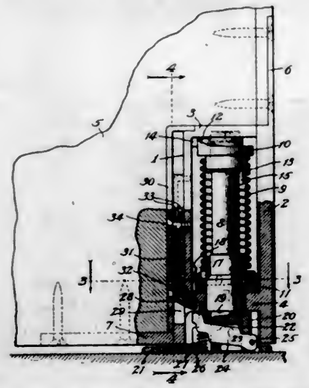
4. In a display device, two members, one tubular and the other longitudinally slidable therein, the tubular member having an inner annular groove inclined at one side and abrupt at the other, the inner member having an annular peripheral groove, and a transversely divided resilient ring mounted in the groove in the inner member and held compressed by the outer member, and adapted, when moved into register with the groove in the outer member, to enter said groove so as to lock the inner member against longitudinal movement in one direction.

5. In a display device, two members, one of which is tubular and in which the other is longitudinally slidable, the inner member having a peripheral hole, and a transversely divided resilient ring encircling the inner member and having a portion extending into said hole, so as to hold it from displacement on said inner member, the ring being held compressed by said outer member.

[Claim 6 not printed in the Gazette.]

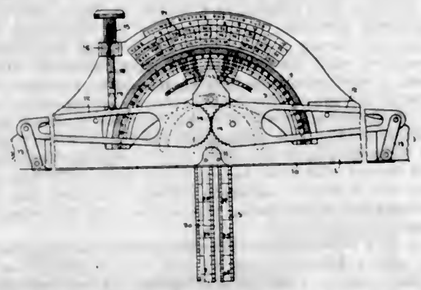
1,107,076. SPRING-HINGE. WILLIAM J. KEENE, Chicago, Ill., assignor to Chicago Spring Butt Company, Chicago, Ill., a Corporation. Filed Aug. 16, 1912. Serial No. 715,349. (Cl. 16—25.)

1. A double acting spring hinge comprising a casing adapted to be set within a mortised corner of the door, a vertical spindle journaled in said casing, a right and left acting spring yieldingly connecting said spindle to said casing, a floor plate having a socket wherein the lower end of said spindle is journaled, a pivoted detent mounted in said socket plate below the lower end of said spinde, said spindle having transverse relatively deep and shallow seats in its lower end face arranged to be engaged by said detent to hold the door in open and closed positions, respectively, a shiftable trip mounted in said casing and arranged to disengage said detent from said relatively deep seat, and a spring for automatically engaging said detent with said seats, substantially as described.



2. A double acting spring hinge comprising a casing adapted to be set within the mortised corner of the door, a vertical spindle journaled in said casing, a right and left acting spring yieldingly connecting said spindle to said casing, a floor plate having a socket wherein the lower end of said spindle is journaled, a pivoted detent mounted within the socket of said plate and extending across the lower end of said spindle, said spindle having a groove extending across its lower end face arranged to be engaged by said detent, a shiftable trip mounted in said casing, and arranged to engage the end of said detent and shift the same out of said groove, and a spring for pressing said detent upwardly against the lower face of said spindle, substantially as described.

1,107,077. COMBINATION-SQUARE. CHARLES A. KENWORTHY, Tenino, Wash. Filed May 10, 1913. Serial No. 766,673. (Cl. 33—177.)



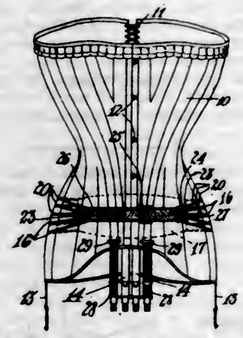
1. A square comprising a body, a straight blade pivotally adjustable about a pivot at the center of said body, a flexible blade centrally fixed to said body, pivoted arms connected to said flexible blade, and means for rotating said arms on their pivots whereby said flexible blade is curved.

2. A square comprising a body, a straight blade pivotally adjustable about a pivot at the center of said body, a flexible blade centrally fixed to said body, movable, oppositely extending arms pivoted on said body, links connecting the outer ends of said arms with the ends of said flexible blade, and means for moving one of said arms whereby the opposite arm is moved and the flexible blade is curved.

3. A square comprising a body, a straight blade pivotally adjustable about a pivot at the center of said body, a flexible blade centrally secured to said body, oppositely extending arms pivoted on said body and formed with intermeshing segmental gears, links connecting the outer ends of said arms with the ends of said flexible blade, and means for moving one of said arms whereby the opposite arm is simultaneously moved and the flexible blade is curved.

4. A square comprising a body, a straight blade pivoted thereto, a flexible blade centrally secured to said body, simultaneously movable arms pivoted on said body and connected to said flexible blade, and an adjustable shank connected to one of said arms.

1,107,078. 'BANDAG...-CORSET. PAULA KLEIN, New York, N. Y. Filed Sept. 6, 1913. Serial No. 788,401. (Cl. 2—73.)



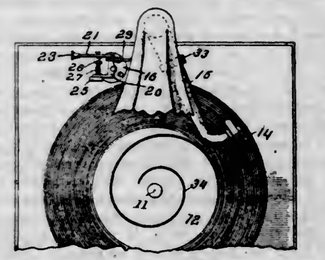
1. The combination with corset sections; of a substantially oval and reinforced supporting section at the inner side thereof, adjustable connections carried by the ends of said supporting sections, extended through the corset sections and connected at the front, and depending supporters carried by said supporting section, said corset sections having horizontally alined openings through which said supporters extend.

2. The combination with corset sections having a plurality of spaced openings at the side portions; of an abdominal supporting section provided with flexible reinforcing members designed to conform to the body, tapes connected to the extremities of said supporting sections and passing through the openings, and inelastic and adjustable connections between the free extremities of the tapes exteriorly of the corset, the sections having openings near their joining front edges and elastic supporting members connected to the lower edge of the abdominal supporting section and movably engaged through said openings against limited downward displacement.

3. The combination with corset sections proper having connecting means at the front and back; of a substantially lenticular reinforced supporting section loosely mounted at the inner side thereof and adapted for adjustment independent of the corset sections in front of the abdomen, adjustable connections carried by the ends of said supporting section, said connections being extended through the corset sections proper and toward each other at the front and connected, and depending supporters carried by said supporting section and engaged with the corset sections to hold the supporting section against upward movement and simultaneously hold the lower portions of the corset sections and supporting section in supporting position.

4. The combination with corset sections having flexible lower portions and reinforcements in the sides thereof converging upwardly and provided with vertical rows of eyelets mounted therein; of a supporting section adapted for adjustment independent of the corset sections and having flexible reinforcing stays permitting the supporting section to conform to the body, said supporting section also having convexly arcuate top and bototm edges and upwardly converging straight side edges, a plurality of inelastic tapes attached to said supporting section at spaced points of the sides of the latter and extending through the eyelets in spaced parallel relation, said tapes being carried straight toward the front edges of the sections, inelastic sections connected to the tapes, adjustable buckle connections between the inelastic sections whereby pull exerted thereon will tend to straighten the supporting section between the eyelets through which the tapes extend and cause the same to be tightened against the body, and means at the central portion of the supporting section to simultaneously hold the lower portions of the corset sections and the supporting section inward in supporting position and limit the upward and downward displacement of said supporting section.

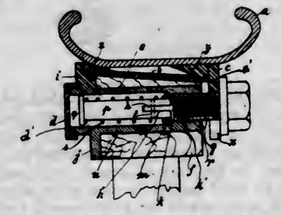
1,107,079. AUTOMATIC STOP FOR TALKING-MACHINES. JULIUS KOHN, Bridgeport, Conn. Filed Dec. 29, 1913. Serial No. 809,244. (Cl. 74—46.)



1. In brake mechanism for talking machines, the combination with a rotating member and a traveling member, of a pivotally-mounted lever having a setting arm at one end and a brake arm at its other end, a swiveled support, a rod extending through said support and through said brake-arm, a brake on one end of said rod, a spring surrounding the rod, a spring-controlled latch having a hook at one end adapted to engage said lever, and beveled at its opposite end, and a finger carried by said traveling member adapted to contact with the beveled end of said latch to release the latter from said lever.

2. In brake mechanism for talking machines, the combination with a rotating member and a traveling member, of a pivotally-mounted lever provided at one end with a setting arm, and at its opposite end with a brake arm, a spring-pressed rod extending through said brake arm, a spring on said rod, a brake on one end of said rod, a spring-pressed latch having a hook at one end to engage said lever, and beveled at its opposite end, and a finger carried by said traveling member adapted to contact with the beveled end of said latch to release the latch from said lever.

1,107,080. REMOVABLE-RIM ATTACHMENT FOR VEHICLE-WHEELS. MAX KÜLLER, Berlin-Lichterfelde, Germany. Filed Dec. 5, 1913. Serial No. 804,908. (Cl. 152—21.)



1. In combination, a felly, sleeves in the felly, each of said sleeves having a part internally threaded, a headed

threaded bolt for each sleeve, a rod hinged to the bolt, the bolt and rod operating in the sleeve, a rim formed with open slots to receive the bolt, the head of the bolt engaging the rim to lock same on the felly and the hinge permitting of the bolt being turned out of said slot to remove the rim, and a flange coöperating with the head of the rod for preventing the withdrawal of the latter from the sleeve when the bolt is turned on the hinge.

2. In combination, a felly, a rim on the felly, said rim having open notches, a sleeve in the felly adjacent each notch, each of said sleeves having a threaded inner portion and a shoulder, a headed threaded bolt passing through the notch and engaging the threads in the sleeve, a rod hinged to the bolt and confined in the sleeve, and a spring in the sleeve which normally tends to draw the rod and bolt into said sleeve.

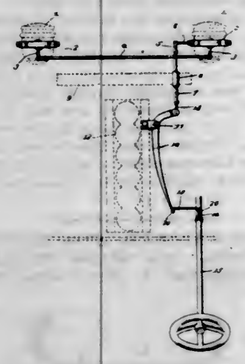
3. In combination, a felly, a sleeve in the felly, said sleeve having an inner threaded portion and a shoulder, a headed threaded bolt engaging the threaded portion of the sleeve, a rod hinged to the bolt, said rod having a head, a coil spring interposed between the shoulder and the head of the rod to normally draw the rod and bolt in the sleeve, and a rim having a slotted flange with which the head of the bolt engages.

4. In combination, a felly provided with a sleeve which is partially internally threaded, a headed bolt engaging the threaded portion of the sleeve, a rod hinged on the bolt and inclosed in the sleeve, a spring for normally tending to draw the bolt and rod in the sleeve, and means to prevent the rod being withdrawn from the opening.

5. In combination, a felly, a series of sleeves in the felly, each sleeve having a portion of the interior threaded and an inner shoulder, a headed threaded bolt engaging the threaded portion of the sleeve, a rod hinged to the bolt and inclosed in the sleeve, said rod having a head which with the shoulder in the sleeve prevents said sleeve being withdrawn from said rod, whereby when the bolt is unscrewed from the sleeve, it may be turned out of alinement with the rod to attach or detach a rim.

[Claim 6 not printed in the Gazette.]

1,107,081. MOTOR-VEHICLE HEADLIGHT. BENJAMIN D. LAKE and NATHANIAL G. MARKS, Springfield, Ky., assignors of one-fourth to John G. Harris and one-fourth to James C. Stone, Springfield, Ky. Filed Aug. 12, 1913. Serial No. 784,358. (Cl. 240—62.)



1. In a device of the character described, in combination, a support, brackets carried by said support, two lamps rotatable in said brackets, means whereby said lamps may swing in unison, an arm extending outwardly at right angles to the axis of one of said lamps, a rod reciprocating at right angles to and being pivotally connected to said arm, means for guiding said reciprocating arm, a bell crank having one arm pivotally connected to the free end of said reciprocating rod, a stud carried by said support upon which said bell crank is fulcrumed at its inner end, a steering post, an outwardly extending crank carried by said steering post, a connecting rod between said bell crank lever and said last mentioned crank, and a knuckle joint connecting said connecting arm to said lever and crank.

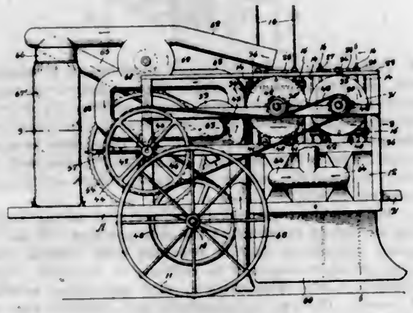
2. In a device of the character described in combination a frame, a fixed guide mounted thereon, a rod reciprocating in said guide, a pair of lamps carried by said frame, said lamps arranged to swing in unison, means whereby said rod may actuate one of said lamps, a bell crank lever fulcrumed upon said frame, said lever being pivotally connected at one end to said reciprocating rod, a steering post, a connecting rod, angular offsets formed at the opposite ends of said connecting rod, a ball and socket connection interposed between said steering post and one of said offsets, and a ball and socket joint interposed between the free end of said lever and the free end of said connecting rod.

1,107,082. SOLDERING ALLOY. GEORGE D. LONG and EUGENE W. RAPP, Granite City, Ill. Filed May 15, 1914. Serial No. 838,858. (Cl. 75—1.)

1. An alloy containing aluminum, zinc, tin, bismuth, copper, antimony and mercury.

2. An alloy containing aluminum 400 parts, zinc 400 parts, tin 760 parts, bismuth 8 parts, copper 8 parts, antimony 28 parts, mercury not over 2 parts.

1,107,083. COTTON-HARVESTER. DANIEL B. LOVEJOY, Purmela, Tex. Filed Feb. 28, 1913. Serial No. 751,354. (Cl. 56—118.)



1. In a cotton harvester, a reciprocatory picker spindle having curved cotton engaging teeth, means for rotating the spindle alternately in opposite directions synchronously with its reciprocatory movement in opposite directions, and rotary brush means operating constantly in one direction to detach the cotton from the spindles.

2. In a cotton harvester, a casing, picker spindles supported for vertical reciprocation and having their lower portions provided with curved teeth, means for alternately projecting the spindles through the bottom of the casing and retracting said spindles within the casing, rotary brushes within the casing supported contiguous to the toothed portions of the spindles when the latter are retracted, a duct connected with the casing, and means for establishing a partial vacuum in said duct.

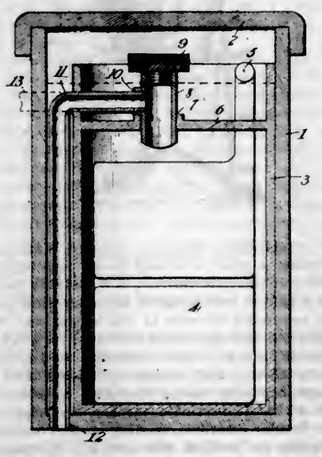
3. In a cotton harvester, a casing, guide rods extending upwardly therefrom, a carrier supported for reciprocation on said guide rods, spindles supported by the carrier and having portions extending downwardly within the casing and provided with toothed lower ends which may be projected through the bottom of the casing, said carrier being provided with grooves at the ends thereof, shafts supported for rotation, members on said shafts having anti-friction rollers operating in the grooves, and means for rotating the spindles in opposite directions as the carrier is being reciprocated in opposite directions; in combination with rotary brushes supported within the casing adjacent and in parallel relation to the spindles, and means for constantly rotating said brushes in one direction.

4. In a cotton harvester, a casing, guide rods extending upwardly therefrom, a carrier supported for reciprocation on the guide rods, means for reciprocating the carrier, picker spindles supported for rotation on the carrier and having portions extending downwardly within the casing and provided with toothed lower ends adapted to be projected through the bottom of the casing, said spindles being also provided with portions extending upwardly from the carrier and having longitudinal grooves, a top plate through which the upper ends of the spindles are guided, pinions supported on the spindles above the top plate and having keys engaging the longitudinal grooves, means for preventing vertical displacement of the pinions with respect to the top plate, a reciprocatory rack engaging the pinions, and means for reciprocating the rack; in combination with rotary brushes supported within the casing adjacent and in parallel relation to the spindles, and means for constantly rotating said brushes in one direction.

5. In a cotton harvester, a wheel supported frame, a casing mounted thereon and having downwardly extending shields, a top plate supported above and spaced from the casing, a carrier guided for vertical reciprocation between the casing and the top plate, pinions supported on the top plate, picker spindles supported by the carrier and guided through the pinions for rotation therewith, a reciprocatory rack engaging the pinions, and means for reciprocating the rack; said picker spindles being provided with portions extending downwardly within the casing and having their lower ends provided with curved teeth and adapted to project through the bottom of the casing; in combination with rotary brushes supported within the casing adjacent and in parallel relation to the spindles, and means for constantly rotating said brushes in one direction.

[Claims 6 to 9 not printed in the Gazette.]

1,107,084. VENT AND OVERFLOW FOR BATTERIES. CHARLES THOMAS MASON, Sumter, S. C. Filed Aug. 21, 1913. Serial No. 785,910. (Cl. 204—53.)



1. In combination, a secondary cell having a closed top through which its terminals project, a vertically extending filling conduit communicating with said cell through the top thereof and having an opening in its top, and a vent and overflow conduit communicating with the cell through said filling conduit and extending laterally therefrom outside of the cell.

2. In combination, a secondary cell having a closed top through which terminals project, an upstanding filling tube communicating therewith through the top, and a permanently open vent and overflow conduit connected with said filling conduit intermediate its ends exteriorly of said cell and extending laterally over the top to the side and thence downwardly to the bottom thereof.

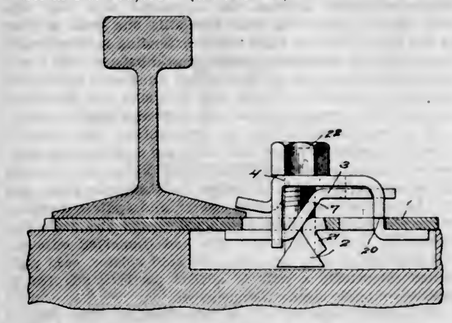
3. In combination, a secondary cell having a closed top through which its terminals project, a filling conduit communicating with said cell through the top thereof, a permanently open vent and overflow conduit communicating with the cell through said filling conduit and extending laterally therefrom outside of the cell, and a cap normally sealing the top of said filling conduit.

4. In combination, a secondary cell having a closed top through which its terminals project, a filling tube communicating with said cell through the top thereof and having a valve seat formed at its bottom, a float valve coöperating with said seat, and a gas escape aperture extending between the interior of the cell and the filling tube located intermediate the valve and the top of the cell.

5. In combination, a secondary cell having a closed top through which its terminals project, a filling conduit communicating with said cell through the top thereof, a casing for the cell, and a combined vent and overflow conduit connected with said filling conduit, extending laterally therefrom to the side of the cell and then downwardly between the side of the cell and the casing thereof and discharging through the bottom of the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,107,085. RAIL FASTENING AND GAGE. CHARLES K. MCDERMOTT, Charleston, W. Va. Filed Dec. 9, 1913. Serial No. 805,593. (Cl. 238—4.)

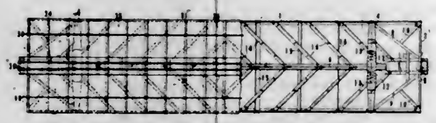


1. A rail fastening and gage including interacting members, one having an inclined portion, and tongues at its ends, the other interacting member having right angled end portions adapted to receive said tongues, one of said right angled end portions having an inclined tongue, said inclined tongue and an end tongue of the other interacting member being adapted to engage the tie-plate and the base or foot of the rail and a cam or wedge action member insertible through said interacting members and having engagement with an inclined portion of an interacting member, said cam-action member having means adapted to exert pressure upon said interacting members.

2. A rail fastening and gage including interacting members, one having an inclined portion, and tongues at its ends, the other interacting member having right angled end-portions adapted to receive said tongues, one of said right angled end portions having an inclined tongue, said inclined tongue and an end tongue of the other interacting member being adapted to engage the tie-plate and the base or foot of the rail, and a cam or wedge action member insertible through said interacting members and hav-

ing engagement with an inclined portion of an interacting member, said cam-action member having means adapted to exert pressure upon said interacting members, said tie-plate having a downwardly inclined extension adapted to engage said cam or wedge action member.

1,107,086. CAR CONSTRUCTION. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., assignor to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed Jan. 17, 1907. Serial No. 352,725. (Cl. 105—15.)



1. In car construction, in combination, side sills, a member stretched between and connected therewith, means connecting said side sills one with another at the end of the car, rigid means extending longitudinally from said last mentioned means to said cross member, and a pair of members connected with said first mentioned means and inclined outwardly toward and connected with said side sills.

2. In car construction, in combination, side sills, a member stretched between and connected therewith, means connecting said side sills one with another at the end of the car, rigid means extending longitudinally from said last mentioned means to said cross member, and a pair of members connected with said first mentioned means and inclined outwardly toward said side sills and connected adjacent the junction of said side sills and said cross member.

3. In car construction, in combination, side sills, a bolster stretched between and connected with said side sills, means connecting said side sills one with another at the end of the car, rigid means extending longitudinally from said last mentioned means to said bolster, and a pair of members connected with said first mentioned means and extending outwardly toward said side sills and connected adjacent the junction of said side sills and said bolster.

4. In car construction, in combination, side sills, a bolster stretched between and connected with said side sills, means connecting said side sills one with another at the end of the car, rigid means extending longitudinally from said last mentioned means to said bolster, and a pair of members connected with said first mentioned means and extending outwardly toward said side sills and connected adjacent the junction of said side sills and said bolster, said rigid means comprising a pair of spaced portions adapted to receive coupling means therebetween.

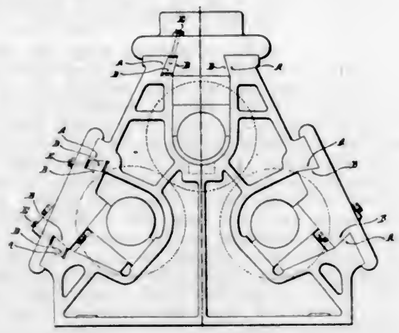
5. In car construction, in combination, side sills, a member stretched between and connected with said side sills, means connecting said side sills one with another at the end of the car, rigid means extending longitudinally from said last mentioned means to said cross member and comprising a pair of spaced portions adapted to receive coupling means therebetween, a pair of members connected with said first mentioned means and inclined outwardly toward said side sills and connected adjacent the junction of said side sills and said cross member, and means connecting said inclined members one with another and spanning the spaced portions of said rigid means.

[Claims 6 to 64 not printed in the Gazette.]

1,107,087. THREE-ROLLER SUGAR-CANE AND LIKE MILL. CHARLES MCNEIL, Govan, Glasgow, Scotland. Filed Apr. 6, 1914. Serial No. 829,990. (Cl. 100—47.)

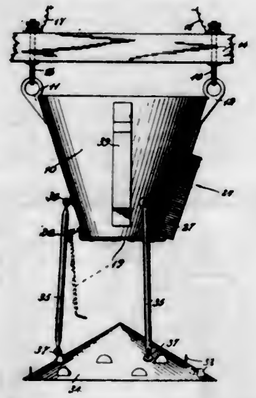
1. In sugar-cane or like mills, housings having roll gaps comprising at their outer ends inclined faces parallel with the rolls and outwardly inclined toward one another, caps for the gaps, inward projections on the caps and correspondingly inclined faces on the projections.

2. In sugar-cane or like mills, housings having roll gaps comprising at their outer ends inclined faces parallel with the rolls and outwardly inclined toward one another, caps for the gaps, inward projections on the caps, correspondingly inclined faces on the projections and means for securing the parts in position.



3. In sugar-cane or like mills, housings having roll gaps comprising at their outer ends inclined faces parallel with the rolls and outwardly inclined toward one another, caps for the gaps, inward projections on the caps, correspondingly inclined faces on the projections, the width of the projections being less than the least width of the gaps, and wedge blocks between the gap and cap faces for securing the parts in position.

1,107,088. FEED-HOPPER. HENRY B. MEIER, Port Chester, N. Y. Filed Nov. 18, 1913. Serial No. 801,642. (Cl. 119—56.)

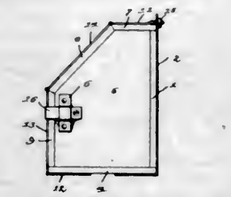


1. The combination with an elevated stationary support including a pair of spaced hooks constituting binding posts for an electric current, of a metallic feed hopper including a pair of ears adapted to engage said hooks, one ear being connected directly to the hopper and the other being connected through insulation, said feed hopper having a movable bottom, means carried by the hopper to lock the bottom closed, and means to release said locking means, said releasing means including an electromagnet in circuit with said insulated ear and the hopper.

2. The herein described feeding device comprising a hopper having an inclined side wall and including a pivoted bottom adapted to swing open by gravity and forming, when in normally closed position, an obtuse angle with said side walls, and latch mechanism for the bottom, said latch mechanism including a catch pivoted at its upper end and lying substantially parallel to said side wall, means acting upon said catch tending to throw its lower end away from the wall for interlocking coöperation with a latch carried by the bottom, an actuator in the nature of a lever of the third class pivoted at its upper end and lying substantially parallel to the side wall and terminating at its lower free end in a finger turned toward the side wall and coöperating with said catch, and means acting upon the actuator to cause it to release the catch from the latch.

3. In a feeding device, the combination of a hopper having an inclined side wall and having a bottom adapted to open by gravity and forming, when in normally closed position, an obtuse angle with said side wall, said bottom also having a loop latch extending parallel to the side wall, a casing secured to the hopper wall and having an open lower end into which said loop latch extends, a catch pivoted at its upper end within the casing and coöperating with said latch, an actuator pivoted at its upper end within the upper end of the casing and having at its lower end a finger directed toward the hopper wall and coöperating with said catch, an intermediate part of the actuator being adapted to abut against the inner surface of the outer wall of the casing whereby the outward movement of the actuator and catch is limited, means to act upon the actuator to cause it to release the catch from the latch, and a fixed stud having loose guiding engagement with the middle portion of the actuator, substantially as set forth.

1,107,089. CRATE. THOMAS H. MENCHION, Fall River, Mass. Filed Sept. 26, 1913. Serial No. 792,037. (Cl. 217—12.)



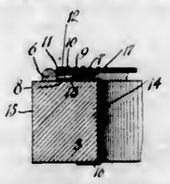
1. A crate comprising a back member, angle irons secured thereto and extending beneath the lower edge thereof, a bottom engaged between the angle irons and the lower edge of the back, end members hinged to the back, top and front members adapted to engage the front and top edges of the end members and means engaged with the angle irons for holding the bottom, front and top members in place.

2. A crate comprising a back member, angle irons secured thereto and extending beneath the lower edge thereof, a bottom engaged between the angle irons and the lower edge of the back, end members hinged to the back, top and front members adapted to engage the front and top edges of the end members, means engaged with the angle irons for holding the bottom, front and top members in place, and means engaged over said last-named means for preventing movement of the end members relative to the end edges of the bottom, front and top pieces.

1,107,090. SEAT. HENRY FREDERICK MEYER, New York, N. Y. Filed Sept. 10, 1912. Serial No. 719,508. (Cl. 155—4.)

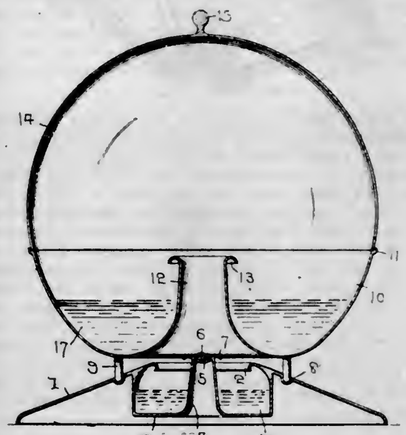
1. In a seat, a member U-shaped in cross section disposed with one of its sides above the other and with its ends at its outer side, a slat disposed between the sides of the member, a seat member having an edge extending over the upper side of the first mentioned member and between the inner sides of the first mentioned member and the upper and inner ends of the slat, and means for securing the first mentioned member to a seat frame.

2. In a seat, a member U-shaped in cross section disposed with one of its sides above the other and with its ends at its outer side, the member at its upper and outer ends having a rim, a slat disposed between the sides of the member, a seat member having an edge extending over the upper side of the first mentioned member around the rim and between the inner sides of the first member and the upper and lower surfaces of the slat and means securing the first mentioned member to a seat frame.



3. In a seat, a member U-shaped in cross section having an opening and disposed with one of its sides above the other, and with its ends at its outer side, a seat member, means for securing the seat member to the first mentioned member, a rim disposed in the first mentioned member, and straps secured to the rim and extending through the opening and downward for engagement with the seat frame.

1,107,091. FLY-TRAP. EDWARD MIELKE, Rocklyn, Wash. Filed Mar. 23, 1912. Serial No. 685,727. (Cl. 43—22.)

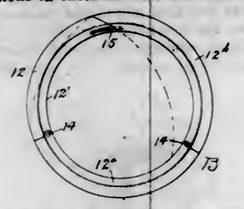


The improved fly trap herein described, the same consisting of a base having upwardly inclined upper face with central opening with inwardly and downwardly turned edge, a liquid containing receptacle depending from the upper portion of said base and having upwardly directed hollow support, a bait tray mounted upon said support, a central substantially semi-spherical liquid containing member mounted upon said base and having a central upwardly extending hollow member with its upper edge curved downwardly, the lower edge of the said semi-spherical member terminating in close proximity to the upper face of said base, and a cover to said semi-spherical member.

1,107,092. SECTIONAL WHEEL-RIM. BERT W. MILLER, Artesian, S. D. Filed Sept. 27, 1912. Serial No. 722,655. (Cl. 152—7.)

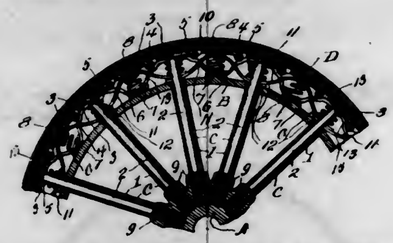
A demountable rim comprising an intermediate section, a pair of sections pivotally connected to the ends thereof, the whole constituting a complete rim, the non-pivoted ends of two adjacent sections being formed at an angle to the radius of the rim, the end of one of said sections being provided with a recess, a bolt located in a recess in the end of the adjacent section, a spring adapted to force said bolt into the recess of the other section, the pivoted sections being movable inward one over the other and ex-

pansible within a tire, said bolt serving to automatically lock the sections in extended annular form, said bolt being



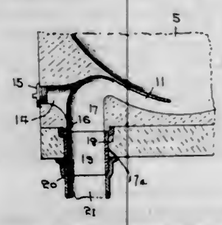
concealed within its section and disposed diametrically opposite the intermediate section.

1,107,093. VEHICLE-WHEEL. WILLIAM MINNICK, Barberton, Ohio. Filed Dec. 2, 1913. Serial No. 804,297. **(Cl. 152—80.)**



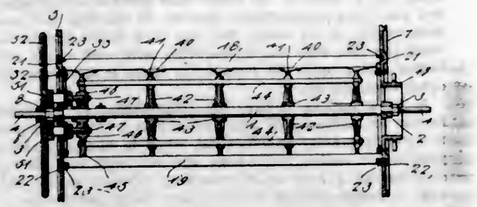
A vehicle wheel composing a hub, a fixed inner rim, spokes interposed between said hub and rim and each embodying a tubular section fastened at its inner end to the hub and at its outer end to the fixed rim through which it passes, an outer spoke section slidable in said tubular section, an outer tire supporting rim embodying sections having a hinged connection with each other and supported by the outer ends of said spokes, expansion springs encircling said spokes between the inner and outer rims, springs contained within the inner ends of the tubular spoke sections and acting to support the outer spoke sections, coiled expansion springs interposed between the inner and outer rims and located at intervals between said spokes, and bowed springs interposed between the rim and felly sections and arranged in two sets, the springs of one set crossing those of the other set at points between the spokes.

1,107,094. WATER-CLOSET. WILLIAM R. MITCHELL, Detroit, Mich. Filed June 27, 1913. Serial No. 776,039. (Cl. 137—94.)



In combination, a base having an outlet opening enlarged at its upper end, top and bottom flanges on said base, a bowl having an outlet opening, flanges at the bottom of said bowl resting upon the top flanges of the base, an annular flange surrounding the bowl opening, a soft metal sleeve having a flared end to be retained in the enlarged end of said base opening by said annular flange, said soft metal sleeve adapted to extend beyond the base for attachment to a soil pipe and means to secure the adjacent flanges of the bowl and base.

1,107,095. BEAM DYEING-MACHINE. FRANK M. MORTON, Phoenix, Ala., assignor of one-third to William H. Dismuke and one-third to Henry L. Woodruff, Columbus, Ga. Filed Sept. 24, 1912. Serial No. 722,104. (Cl. 8—18.)



1. In a collapsible beam of the character set forth, the combination with the heads, a series of fixed slats rigidly connecting them, a second series of slats movably mounted between said heads, a shaft, and means for distending the movable slats including an element movable longitudinally upon the shaft; of a plurality of screws rotatably mounted through one of the heads with their shanks engaging threaded openings in said element, and means for turning said screws in unison.

2. A beam of the character set forth comprising a drum made up of heads and slats fixedly connecting them, a cage made up of a series of slats interposed between the fixed slats and movably mounted in said heads, and means for distending the movable slats at will.

3. A beam of the character set forth comprising a drum made up of heads and slats fixedly connecting them, a cage made up of a series of slats interposed between the fixed slats and movably mounted in said heads, and means for expanding said cage by distending its slats so that the circumference of the cage will be greater than that of the drum, or for contracting said cage by collapsing its slats so that the circumference of the cage will be smaller than that of the drum.

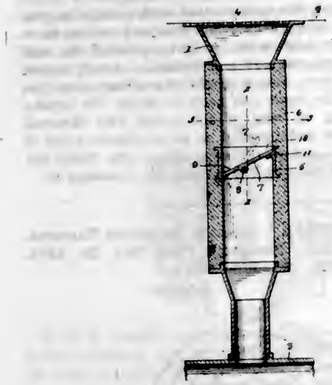
4. A beam of the character described comprising two heads whereof each has an internal annular channel with teeth projecting radially inward from its outer wall, a ring made in sections having lapping meeting ends, and their outer edges toothed to engage the teeth within said channel and their inner edges notched at intervals, a ring-shaped bracket secured to the inner face of the head and having notches opposite those in said ring-sections, and slats extending from one head to the other and having their extremities movably mounted in said notches.

5. A beam of the character described comprising two heads whereof each has an internal annular channel with teeth projecting radially inward from its outer wall, a ring made in sections having lapping meeting ends and their outer edges toothed to engage the teeth within said channel and their inner edges notched at intervals, a ring secured to the inner face of said head and having its body bent inward into a foot underlying said ring sections and thence radially outward into a toe extending across the inner edge of said sections, said foot and toe having notches registering with those in said sections, and slats whose extremities are movably mounted in said notches.

[Claims 6 to 19 not printed in the Gazette.]

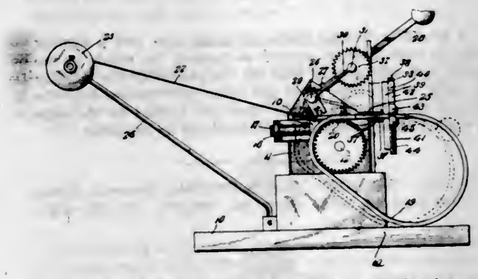
1,107,096. CATCH-BASIN FOR SEWERS. MARTIN MULLOY, Sr., Nashville, Tenn. Filed Oct. 29, 1913. Serial No. 798,072. (Cl. 182—14.)

A catch basin comprising a concrete body of rectangular form in cross section and having inlet and exhaust ends, a metallic frame piece disposed within the body between its inlet and exhaust ends, said frame piece comprising a rectangular shell embedded in the body and having outwardly projecting flanges at its upper and lower ends also embedded in the body, said shell being further provided at one side with an inclined stop and with apertured portions projecting at diametrically opposite sides and also embedded in the concrete, a pin terminally fitted in said apertured portions and extending across the frame, and a valve plate pivotally supported



by said pin and having a weighted portion adapted to engage said inclined atop, said valve being normally arranged to close in an inclined position.

1,107,097. GARMENT-TAPING MACHINE. EVERETT H. NEWCOMB, Ephrata, Pa. Filed Mar. 5, 1912. Serial No. 681,704. (Cl. 223—38.)



1. In a taping machine, the combination with a base, of an ovoidal needle mounted thereon and adapted to contain a tape, a guiding mechanism for guiding an edging and the garment thereof on to the said needle, a feeding mechanism mounted on the base for advancing the said edging and said garment on to the said needle and for removing the same therefrom, means for releasably retaining the said feeding mechanism in feeding position, and a bodkin mounted on the said needle and adapted to be engaged by the said edging to arrange the edging on the said needle.

2. In a taping machine, the combination with a base, of a taping needle movably supported thereon, a feeding mechanism on the base, and means for simultaneously moving the taping needle into taping position and moving the feeding mechanism out of feeding position.

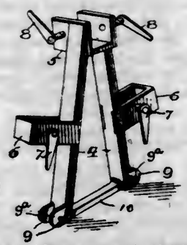
3. In a taping machine, the combination with a base, of a plurality of feed rollers supported on the base, and a taping needle having an end thereof movable into or out of position between the said feed rollers.

4. In a taping machine, the combination with a base, of a plurality of feed rollers supported on the base, a taping needle having an end thereof movable into or out of position between the said feed rollers, and means for moving one of the feed rollers into engagement with the other feed roller upon removing the said taping needle from position between the feed rollers.

5. In a taping machine, the combination with a base, of a plurality of feed rollers supported on the base, a taping needle having an end thereof lying between the said feed rollers, and means for simultaneously removing the taping needle from between the feed rollers upon moving one of the feed rollers into engagement with the other.

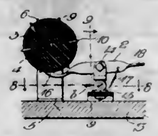
[Claims 6 to 9 not printed in the Gazette.]

1,107,098. SCAFFOLDING-SUPPORT. FRANK OPELT, Muscatine, Iowa. Filed Dec. 6, 1913. Serial No. 805,056. (Cl. 20—83.)



An integral scaffolding support comprising uprights, a combined tension and compression member connecting said uprights at their lower ends and extending therebetween, a substantially U-shaped timber support connecting the upper ends of said uprights and depending therebetween, clamp screws carried by said timber support outwardly, timber collars extending from said uprights intermediate their ends, clamp screws carried by said collars, and an outwardly extending pair of lugs at the bottom of each upright in alinement with the said collars, and clamp screws carried by said pair of lugs, as described.

1,107,099. ROTARY ELECTRIC SWITCH. MARION K. OWNBEY, Shawnee, Okla. Filed Apr. 7, 1913, Serial No. 759,489. Renewed Feb. 5, 1914. Serial No. 816,811. (Cl. 177—348.)



1. In a switch of the character described, a rotary member comprising a cylinder of non-conducting material, a metallic shell inclosing said cylinder, a brush having a continuous electrical connection with said shell and forming one terminal of the main wire of an electrical circuit, a series of circuit breaking studs carried by said cylinder and insulated from said shell, branch circuit wires having one terminal thereof connected with said main circuit wire, and the other terminals normally in electrical contact with the shell on said cylinder and adapted to be intermittently disconnected therefrom by said studs.

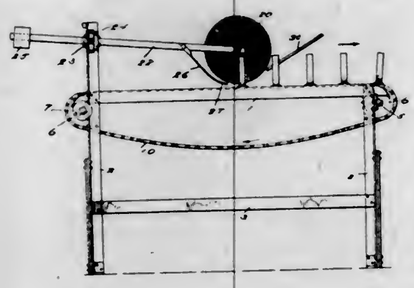
2. In a switch of the character described, a rotary member comprising a cylinder of non-conducting material, a metallic shell inclosing said cylinder and having therein series of apertures, an annular contact flange on said shell at one end of the cylinder, a contact brush having a continuous engagement with said flange and forming one terminal of the main wire of an electric circuit, a series of circuit breaking studs arranged in said cylinder and projecting through the apertures in said shell whereby said studs are insulated from or out of electrical connection with said shell, branch circuit wires having one terminal connected with said main circuit and having their other terminals normally in electrical contact with the shell on said cylinder and adapted to be intermittently disconnected from said shell by said studs.

3. In a switch of the character described a rotary member comprising a revolubly mounted cylinder of non-conducting material, a shell inclosing said cylinder, a brush having a continuous electrical contact with said shell and forming one terminal of the main wire of an electric lamp circuit, series of circuit breaking studs carried by said

cylinder and insulated from said shell, a series of binding posts, a series of branch current conducting wires having one end connected with the main wire and lamps of the circuit and their opposite ends with said binding posts, contact levers pivoted on said binding posts and forming the terminals of said branch wires, and springs to yieldingly hold one end of said levers normally in electrical contact with said cylinder and in line with the studs thereon whereby the engagement of the studs with said levers will intermittently break the circuits of the lamps.

4. In a switch of the character described, a rotary member forming one terminal of an electric circuit, circuit breaking projections carried by and insulated from said member, a series of binding posts, branch current conducting wires connected with said posts and with said electric circuit, a series of contact levers pivoted on said binding posts and forming the terminals of said branch wires, said levers comprising bars having one end turned to present a flat surface to said rotary member, said turned end having its extremity beveled to form a broadened contact surface, springs connected with said levers whereby the extremities thereof are held in yielding engagement with the surface of said rotary member, and means whereby said rotary member is revolved to bring the circuit breaking projections thereon into successive engagement with the extremities of said levers thereby intermittently disconnecting the latter from said rotary member.

1,107,100. FISH-SLIMER. GUSTAVUS LAFAYETTE PALMER, Tacoma, Wash. Filed May 28, 1914. Serial No. 841,647. (Cl. 17—10.)



1. In a fish slimer, the combination with a rotary brush having stiff bristles, and means for moving the carcass under said brush; of a jet directed against the brush and carcass, and serving to rotate the former and cleanse the latter.

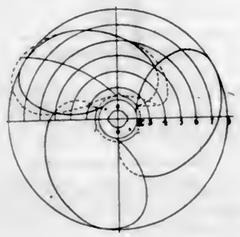
2. In a fish slimer, the combination with a rotary brush having stiff bristles, and means for forcibly moving the carcass under said brush; of a pipe directing a liquid jet obliquely downward and forward against the bristles of said brush and the carcass beneath it and serving to rotate the former and cleanse the latter.

3. In a fish slimer, the combination with a rotary brush standing on edge and having wire bristles, a table, and fish carrying mechanism consisting of parallel chains moving over said table alongside the brush and having oppositely disposed Y-shaped members for gripping the carcass; of a pipe standing in rear of the brush and directed obliquely downward and forward so as to deliver a jet of liquid tangentially against the rear side of the brush for rotating it and obliquely on the carcass for cleansing it.

4. In a fish slimer, the combination with a table having a standard at its forward end, fish carrying means moving rearward over said table, a lever pivoted in said standard and having its rear end forked, a rotary brush journaled in the fork, a finger depending from the lever and having its lower end bent in under the brush, and a counterweight on the forward end of the lever; of means for supplying a jet of liquid tangentially to the rear side of the brush, for the purpose set forth.

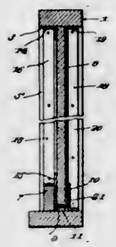
5. In a fish slimer, the combination with a table having a standard at its forward end, fish carrying means moving rearward over said table, a lever pivoted in said standard and having its rear end forked, a rotary brush journaled in the fork, and a finger depending from the lever and having its lower end bent in under the brush; of a pipe standing in rear of the brush and directed obliquely downward and forward so as to deliver a jet of liquid tangentially against the rear side of the brush for rotating it and obliquely on the carcass for cleansing it.

1,107,101. PROPELLER. CHARLES ALGERNON PARSONS, Newcastle-upon-Tyne, England. Filed July 25, 1913. Serial No. 781,202. (Cl. 170—159.)



A propeller having blades of large area and a leading edge to each blade so shaped as regards the whole or the outer part only thereof that the component of the velocity of entry of the edge or of the outer part thereof into the surrounding medium in the direction normal to the edge is approximately constant, substantially as described.

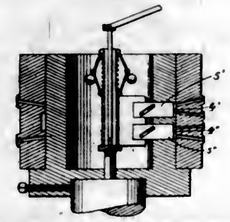
1,107,102. WINDOW. JOHN B. PEARSON, Tazewell, Tenn. Filed Sept. 16, 1913. Serial No. 790,090. (Cl. 20—52.)



In combination with a window frame, a sash mounted for sliding movement therein and having a channel bar at its bottom, an apron bar on the sill of the window frame, bearing against the inner side of the channel bar and extending thereabove, and stops in the frame and bearing against opposite sides of the sash, the inner stop having a lower member secured on said apron bar and bearing directly against the inner side of the sash.

1,107,103. CARBURETER. HUGH D. PEASLEE, Fresno, Cal. Filed June 28, 1913. Serial No. 776,317. (Cl. 123—138.)

1. In a carbureter, outer and inner concentric cylindrical members, the outer member being stationary and the inner member being mounted to turn within the outer member, the inner member being formed with a fuel pocket in its external face, and the outer member being formed with fuel supply and overflow passages with which said pocket is adapted to register and also formed with pressure inlet and fuel outlet passages with which said pocket is adapted to register subsequently to the registration first mentioned, and governor mechanism contained within said inner member for automatically varying the fuel holding capacity of said pocket.



2. In a carbureter, outer and inner concentric cylindrical members, the outer member being stationary and the inner member being mounted to turn within the outer member, the inner member being formed with a fuel pocket in its external face, and the outer member being formed with fuel supply and overflow passages with which said pocket is adapted to register and also formed with pressure inlet and fuel outlet passages with which said pocket is adapted to register subsequently to the registration first mentioned, means for varying the fuel holding capacity of said fuel pocket, embodying a slide forming a wall of said pocket, and governor mechanism contained within said inner member and operatively connected with said slide for shifting the latter in said pocket.

1,107,104. FENCE-WIRE SPLICING. LOUIS N. PFEIFFER, Kenton, Ohio. Original application filed May 1, 1913, Serial No. 764,784. Divided and this application filed July 19, 1913. Serial No. 779,900. (Cl. 24—115.)



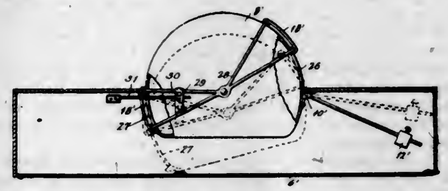
1. A splicing of the class described comprising the ends of wires formed with bights of the same size and one overlapping the other, said bights extending in the same direction and parallel with each other, a ring placed over the bights, and a headed pin inserted through the ends of the bights projecting through the ring and engaging both bights, the head of the pin engaging the said ring.

2. A wire splice comprising the ends of the wires to be spliced, bights formed on the wires inwardly from the extremities and the bights being of the same size and arranged in overlying relation, said bights extending in the same direction and disposed parallel, a ring applied to the bights, and a pin engaging the ring and passing through the portions of the bights projecting through the ring.

1,107,105. ANIMAL-TRAP. CHARLES PHILLIPS, Crocker, Mo. Filed July 9, 1913. Serial No. 778,067. (Cl. 43—26.)

1. In an animal trap, a casing having an opening in the top thereof; a drum engaging said opening; means pivotally securing the lateral surface of the drum to the casing adjacent the opening; means in said casing associated with the drum for balancing the same on the said pivotal means, said drum having lateral openings therein; a cover for one of said openings; means associated with said cover and drum adapted to close said opening when said drum is disturbed from its balance; and a wall in said casing having an opening therein adapted to register with an opening of the drum when the same is in unbalanced position.

2. In an animal trap, a bait compartment pivotally mounted adjacent the lateral surface thereof; means for maintaining the bait compartment in balance, said bait compartment having an inlet; and a cage compartment having an inlet adapted to register with the inlet of the bait compartment when the said bait compartment is in unbalanced position.

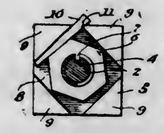


3. In an animal trap, a casing having an opening in the top thereof; a balanced bait compartment pivotally mounted adjacent one end of said opening in said casing, said bait compartment having an animal inlet normally above said casing; and a cage compartment in said casing adapted to register with said inlet of the bait compartment when said bait compartment is displaced from its normal position.

4. In an animal trap, a casing having a cage compartment and an opening at the top thereof; a bait compartment engaging said opening; means for pivotally connecting the bait compartment to the casing in said opening; means for balancing said bait compartment in the opening on the pivotal means, said bait compartment having a pair of openings; and balanced means associated with said bait compartment for closing or opening said openings, said cage compartment in said casing having an opening adapted to register with one of the openings in said bait compartment when said bait compartment is in unbalanced position.

5. In an animal trap, a casing having a cage compartment with an opening at the top thereof; a bait compartment engaging said opening; means for pivotally connecting the bait compartment to the casing in said opening adjacent the lateral surface of said bait compartment; means for balancing said bait compartment in the opening, said bait compartment having a pair of openings; and balanced means associated with said bait compartment controlling said openings and operated by the displacement of said bait compartment on its pivot, said balanced means, when said drum is in normal position, uncovers one opening and closes the other opening, while when said bait compartment is in displaced position the normally uncovered opening becomes closed and the normally covered opening becomes uncovered, said cage compartment in said casing having an opening adapted to register with the uncovered opening in said bait compartment when the same is in displaced position.

1,107,106. NUT-LOCK. LEWIS VICTOR PINES, Millersburg, Pa. Filed Dec. 16, 1913. Serial No. 807,129. (Cl. 151—5.)



1. In combination, a bolt having its shank provided with a groove, a locking plate provided with an opening and a tongue projecting within the opening and engaging with the groove in the bolt, a nut for the bolt, said nut having its inner face provided with a depression which communicates with its sides, a wedge-shaped key adapted to be driven longitudinally through the opening formed by the depression upon one of the sides of the nut to engage with one of the sides of the locking plate to sus-

tain the locking plate upon the nut and its tongue in engagement with the groove of the bolt.

2. In a nut lock, a bolt having a groove, a nut upon the bolt, said nut having one of its faces formed with a square depression providing the said face with corners which do not contact, a lock plate having a bolt opening, a tongue extending within the opening and arranged within the groove of the bolt when the lock plate is passed over the bolt and disposed within the depressed portion of the nut, a wedge-shaped key adapted to be inserted between two of the corners of the nut and arranged in contacting relation with one of the said corners and with one of the sides of the locking plates, said key having a notch adjacent one of its ends for engaging with the edge of the corner of the nut adjacent that contacted by the said wedge key.

3. In combination, a bolt having a longitudinal groove, a nut for the bolt, said nut having one of its faces formed with a squared recess to provide the said face with corners and spaces between the corners, the inner walls of the corners being beveled, a locking plate having its peripheral edges formed with V-shaped channels and having a central opening whereby the same is passed over the bolt and received within the recess in the nut, the locking plate having a tongue projecting within the opening and arranged within the groove of the bolt, a malleable key which is substantially rectangular in cross section and having one of its corners arranged within one of the V-shaped channels in one of the edges of the locking plate and its opposite corner engaged within the inclined wall provided in one of the corners of the nut, and the said key having one of its ends extending through one of the spaces between the corners of the nut and brought into engagement with one of the faces of said nut.

1,107,107. COMPOUNDS FOR TANNING SKINS AND PROCESS OF MAKING THEM. LEOPOLD POLLAK, Aussig, Austria-Hungary, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 26, 1914. Serial No. 847,503. (Cl. 149—5.)

1. The new compounds derived from a monohydroxy phenol, sulfuric acid and a carbohydrate, which new compounds are amorphous, contain sulfur, are soluble in water, yielding solutions which give deep colorations with ferric ammonium sulfate solution, precipitate glue solution, tan skins, and even in a solution of normal acidity and of 20° Bé. tan skins without destroying them.

2. The new compound derived from phenol, sulfuric acid and grape sugar, which compound is amorphous, contains sulfur, is soluble in water yielding solutions which give deep colorations with ferric ammonium sulfate solution, precipitate glue solution, tan skins, and even at a concentration of 20° Bé. tan skins without destroying them, and which solutions, on being shaken with ammonium acetate and a little alum solution, give rise to a flocculent precipitate.

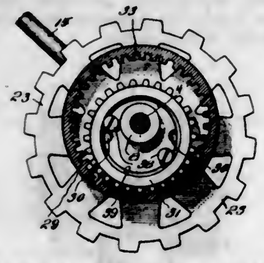
3. The process of producing new compounds suitable for tanning by condensing together a mono-hydroxy phenol, sulfuric acid and a carbohydrate.

4. The process of producing a new compound suitable for tanning by condensing together phenol, sulfuric acid and grape sugar.

5. The process of producing a new compound suitable for tanning by condensing together five parts of phenol, five parts of 98% sulfuric acid and one part of grape sugar.

1,107,108. DRIVING-GEARING. WLADYSLAW PONIATOWSKI, Camden, N. J. Filed Jan. 31, 1914. Serial No. 815,797. (Cl. 74—7.)

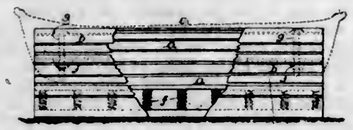
1. Driving gearing for foot-propelled vehicles, comprising in combination, a machine frame, a crank hanger, a crank shaft, a crank shaft bearing extending through said crank hanger and having an eccentric bearing portion, a crank fast on one end of said crank shaft, a flange on said crank shaft, a driving sprocket wheel journaled on the eccentric portion of said bearing, a spur gear concentric with and bearing a fixed relation to said sprocket wheel, an internal gear mounted on and concentric with said crank shaft and meshing with said spur gear, and interlocking means on said internal gear and flange on the crank shaft.



2. Driving gearing for foot-propelled vehicles, comprising in combination, a machine frame, a crank hanger, a crank shaft, a crank shaft bearing extending through said crank hanger and having an eccentric bearing portion, a crank fast on one end of said crank shaft, a flange on said crank shaft, a driving sprocket wheel journaled on the eccentric portion of said bearing, a spur gear concentric with and bearing a fixed relation to said sprocket wheel, an internal gear mounted on and concentric with said crank shaft and meshing with said spur gear, interlocking means on said internal gear and flange on the crank shaft, said bearing being adjustable around its axis, and means for preventing said bearing from turning after it has been so adjusted.

3. Driving gearing for foot-propelled vehicles, comprising in combination, a machine frame, a crank hanger, a crank shaft, a crank shaft bearing extending through said crank hanger, a crank fast on one end of said crank shaft, a flange on said crank shaft, a driving sprocket wheel journaled eccentrically on said bearing, a spur gear concentric with and bearing a fixed relation to said sprocket wheel, an internal gear mounted on and concentric with said crank shaft and meshing with said spur gear, a spur on said flange, and a shoulder on said internal gear with which said spur engages.

1,107,109. SAFETY-CRADLE FOR DROPPING LIFE-BOATS. THOMAS ANDREW POWERS, JAMES RICHARD HARVEY, and JAMES WILLIAM CROWLEY, Subiaco, Western Australia, Australia. Filed June 2, 1913. Serial No. 771,287. (Cl. 9—22.)



1. A safety launching cradle for life-boats comprising inner and outer boat-shaped shells, the former of which is adapted to contain the life-boat and is yieldingly supported.

2. A safety launching cradle for life-boats, comprising an outer shell, an inner shell adapted to contain the life-boat and arranged within the outer shell for movement relatively thereto in a vertical direction, and means for cushioning said inner shell during such movement.

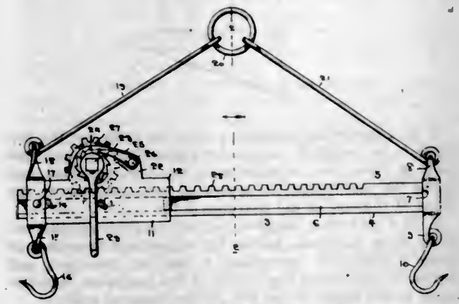
3. A safety launching cradle for life-boats, comprising an outer shell, an inner shell adapted to contain the life-boat and arranged within the outer shell for movement relatively thereto in a vertical direction, and means for guiding said inner shell during such movement.

4. A safety launching cradle for life-boats, comprising an outer shell, an inner shell adapted to contain the life-boat and arranged within the outer shell for movement relatively thereto in a vertical direction, and means for cushioning and guiding said inner shell during such movement.

5. A safety launching cradle for life-boats, comprising an outer shell, an inner shell adapted to contain the life-boat and arranged within the outer shell for movement relatively thereto in a vertical direction, and means for cushioning said inner shell during such movement, both of said shells being constructed of bars or slats arranged in spaced relation, to permit the entrance of water between the spaces when the cradle is lowered into the water.

[Claims 6 to 9 not printed in the Gazette.]

1,107,110. ADJUSTABLE HANGER. OTTO PRIEM, Carpenter, Iowa. Filed Dec. 15, 1913. Serial No. 806,885. (Cl. 17—30.)



1. A device of the character described comprising a main beam, a bracket rigidly secured to one end thereof, a slide on the beam, rack teeth on the upper face of the beam, a pinion carried by the slide engaging said teeth, means for turning the pinion in one direction, ratchet and pawl mechanism for preventing the turning the pinion in the other direction, a bracket secured upon the outer end of the slide, hooks suspended from the lower ends of the brackets, links connected with the upper ends of the brackets, and a suspending ring connected with the upper end of the links.

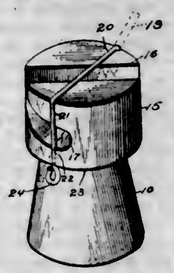
2. A device of the character described comprising an I-beam having rack teeth along its upper edge and grooves in each side, a slide comprising a base and upright wings embracing the slide, lugs on the wings of the slide engaging in the grooves of the beam, bearing flanges carried by the wings of the slide, a shaft journaled in said flanges, a ratchet and pulley mechanism for controlling the rotation of the shaft in one direction, a pinion on the shaft engaging the rack teeth of the beam, a bracket secured to one end of the beam carrying a suspending hook, a bracket secured to the opposite end of the slide and carrying another suspending hook, links loosely connected with the upper end of the brackets and a suspending ring loosely attached to the upper end of the links.

1,107,111. INSULATOR. BENJIMAN S. PURKEY, Tacoma, Wash. Filed Oct. 1, 1912. Serial No. 723,424. (Cl. 173—316.)

1. An insulator whose body has a shoulder around it and whose upper end is transversely slotted for the line wire, the body having grooves at points out of register with the ends of the slot; and a spring clip lying across said slot and having arms lying in said grooves and their lower ends inturned under said shoulder.

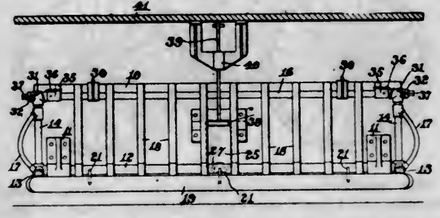
2. An insulator having an enlarged head provided with a line-wire passage whose mouth is a slot extending diametrically across the top of the head, the ends of the slot curving downwardly in opposite directions and terminating in a diametric channel; a clip having arms crossing the curved ends of the passage between the extremities of said mouth and channel; and means for holding the arms below said head.

3. An insulator having an enlarged head provided with a line-wire passage whose mouth is a slot extending diametrically across the top of the head, the ends of the slot curving downwardly in opposite directions and terminating in a diametric channel; and a spring wire clip



lying across said mouth and having arms extending downward across the curved ends of the passage beyond the extremities of said mouth and channel, and inturned loops at the lower ends of the arms sprung inward under said head.

1,107,112. WHEEL-GUARD FOR STREET-CARS. GEORGE H. PUTNAM, Boston, Mass. Filed Nov. 16, 1912. Serial No. 731,889. (Cl. 105—130.)



1. In a wheel guard for cars the combination of a fender pivoted beneath the car in advance of the wheels and consisting of an upward frame and a forward frame extending from a pivot member; a stop lug on said pivot member; a bell crank lever, one arm of which normally engages said stop lug and retains said forward frame in raised position; and means operable from the car platform for actuating the other arm of said lever and thereby releasing said fender and permitting it to move into its lowered position.

2. In a wheel guard for cars, the combination of a fender pivoted beneath the car in advance of the wheels and consisting of an upward frame and a forward frame extending from a pivot member; a stop lug on said pivot member; a bell crank lever one arm of which normally engages said stop lug and retains said forward frame in raised position; means operable from the car platform for actuating the other arm of said lever and thereby releasing said fender and permitting it to move into its lowered position; and slidable means carried by said forward frame adapted, when meeting an obstruction, to disengage said lever from said lug.

3. In a wheel guard for cars, the combination of a fender pivoted beneath the car in advance of the wheels and consisting of an upward frame and a forward frame extending from a pivot member; a stop lug on said pivot member; a bell crank lever one arm of which normally engages said stop lug and retains said forward frame in raised position; means operable from the car platform for actuating the other arm of said lever and thereby releasing said fender and permitting it to move into its lowered position; and means for automatically locking said fender in lowered position when released.

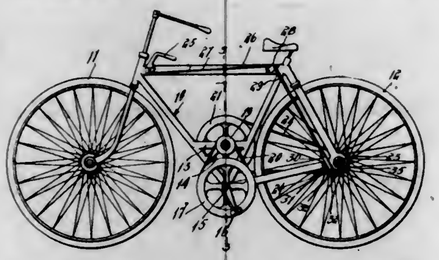
4. In a wheel guard for cars, the combination of a fender pivoted beneath the car in advance of the wheels and consisting of an upward frame and a forward frame

extending from a pivot member; a stop lug on said pivot member; a bell crank lever one arm of which normally engages said stop lug and retains said forward frame in raised position; means operable from the car platform for actuating the other arm of said lever and thereby releasing said fender and permitting it to move into its lowered position; slidable means carried by said forward frame and adapted when struck by an object to disengage said lever from said lug; and means for automatically locking said fender in lowered position when released.

5. In a wheel guard for cars, the combination of a fender pivoted beneath the car in advance of the wheels and consisting of an upward frame and a forward frame extending from a pivot member; a stop lug on said pivot member; a spring pressed lever normally engaging said lug and retaining said forward frame in raised position; a spring pressed buffer in front of said forward frame; and means actuated by the rearward movement thereof for releasing said lever from engagement with said lug.

[Claims 6 and 7 not printed in the Gazette.]

1,107,113. BICYCLE-BRAKE. FREDRICK D. REID, Laurel, Miss. Filed Mar. 15, 1913. Serial No. 754,481. (Cl. 208—13.)



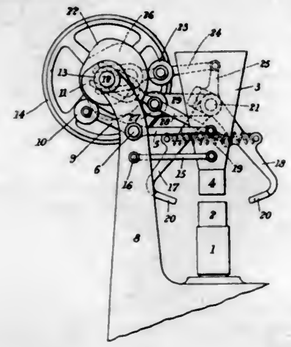
The combination with a bicycle frame having a front steering wheel and a rear drive wheel and means for driving said wheels; of a brake mechanism for the wheel, said mechanism embodying a disk fixed to the rear wheel, a portion of the frame having a flattened portion producing a shoulder, a rod having a bifurcated portion slidable on said flattened portion adjacent the rear portion of the frame, a shoe pivoted to one leg portion of said bifurcation and having a concaved face engaging the disk, a triangular plate pivoted on the horizontal portion of the frame and pivotally connected to said rod, a lever pivoted to said horizontal portion of the frame and having a gripping portion disposed in substantial horizontal position and a rod connecting said lever and the triangular plate.

1,107,114. PACKETING-MACHINE FOR FILLING OR DELIVERING GRANULAR OR OTHER MATERIALS INTO BAGS OR THE LIKE. WILLIAM ROSE, Gainsborough, England. Filed Feb. 4, 1914. Serial No. 816,626. (Cl. 100—57.)

1. In a packeting machine, a charging guide for the material to be packeted, means for supporting beneath the same a receptacle comprising a readily deformed bag-like container and means engaging only the exterior of said bag-like container and serving to position the same accurately beneath the charging guide.

2. In a packeting machine, a charging guide for the material to be packeted, means for supporting beneath the same a receptacle comprising a relatively rigid casing and within the same a readily deformed bag-like container the upper portion of which projects beyond said casing, and means engaging only the exterior of said bag-like container at a point above its casing and serving to position the same accurately beneath the charging guide.

3. In a packeting machine, a charging guide for the material to be packeted, means for moving the same down into charging position and lifting the same after charging, in combination with a support for a receptacle to be charged and means moving independently of the said charging guide or said support for positioning the receptacle beneath said guide.

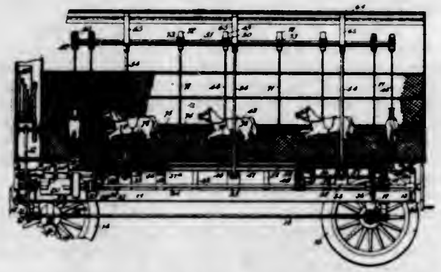


4. In a packeting machine, a charging guide for the material to be packeted, means for supporting beneath said guide a receptacle comprising a bag-like container, and means for conforming the mouth of said container to the shape of the end of the charging guide.

5. In a packeting machine, a charging guide for the material to be packeted, means for supporting beneath said guide a receptacle comprising a bag-like container, and means for deforming the mouth of the container to correspond to the shape of the end of the charging guide.

[Claims 6 to 8 not printed in the Gazette.]

1,107,115. CAROUSEL. PATRICK RYAN, New York, N. Y., assignor of one-fourth to James H. McGann, one-fourth to Samuel Brand, and one-fourth to Thomas F. Duffy, New York, N. Y. Filed May 6, 1914. Serial No. 836,649. (Cl. 46—27.)



1. In a carousel, a platform, front and rear posts supported at the lower ends below the platform, the said platform having an endless slot and an overhead endless track supported on said posts, a series of traveling hangers on the said track, seats suspended by the hangers, and actuating means for the hangers, said actuating means comprising sprocket wheels on the said posts below the platform, means for driving one of the said sprockets, and a sprocket chain on said sprocket wheels, the sprocket chain having connection with the said suspended seats.

2. In a carousel, a platform having an endless slot, front and rear posts supported at their lower ends below the platform and extending upwardly above the platform, an endless track supported on said posts, a roof, means carried by the posts and supporting the roof, a series of hangers mounted to travel on the said track, depending spindles on said hangers, seats on the spindles, and means for actuating the spindles, said means comprising sprocket wheels on the posts below the platform, means for driving one of said sprocket wheels, and a sprocket chain on said wheels, said chain having connection with the said spindles.

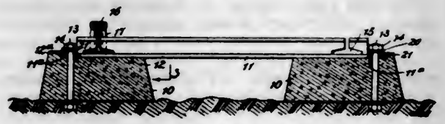
3. In a carousel, a platform, a series of posts extending above and below the said platform, lateral arms on the posts at the upper ends, an overhead endless track on the said arms at the outer ends of the latter, uprights on the arms between the tracks and the posts, a roof supported by said uprights, a series of seats, means suspending said seats from the endless track, and means for actuating the suspension means.

4. In a carousel, a platform, front and rear posts extending above and below the platform, an endless track, means adjustably securing the track to the posts to permit adjustment of one post relatively to the other, a series of hangers mounted to travel on said track, spindles depending from said track, seats on said spindles, the platform having an endless slot through which said spindles enter below the platform, a sprocket chain extending around said sprocket wheel, and means for adjustably supporting the lower end of one of said posts and the sprocket wheel carried thereby.

5. In a carousel, a platform, front and rear posts extending above and below the platform, an endless track, means adjustably securing the track to the posts to permit adjustment of one post relatively to the other, a series of hangers mounted to travel on said track, spindles depending from said track, seats on said spindles, the platform having an endless slot through which said spindles enter below the platform, a sprocket chain extending around said sprocket wheel, and means for adjustably supporting the lower end of one of said posts and the sprocket wheel carried thereby, the endless slot at one end of the platform being of increased width.

[Claims 6 to 8 not printed in the Gazette.]

1,107,116. RAILWAY-TIE. CHARLES SCHAFFER, Florence, Ariz., assignor of one-third to John W. Brown and one-third to Patrick Gorham, Florence, Ariz. Filed June 9, 1914. Serial No. 844,003. (Cl. 238—6.)



1. In a railway, end blocks, ties in the form of I-beams extending between said blocks, the blocks having depressed seats in the top terminating short of the outer ends of the blocks and receiving the ends of the ties, the base flanges of the ties being continued beyond the web and head of the ties, depressed rail seats on the blocks crossing the seats for the ties, and bolts passing through the projecting ends of the base flanges of the ties and into the said blocks, the said ties adjacent to the ends thereof having openings for the passage of the base flanges and the webs of the rails.

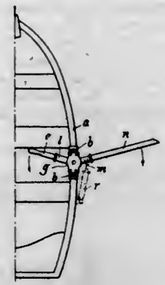
2. In a railway, blocks to support ties at the ends thereof and having depressed seats thereon, ties adapted to said seats, the ties being in the form of I-beams, the base flanges of said ties projecting at the ends beyond the webs of the ties, the said blocks having rail seat crossing the tie seats and the ties having openings therethrough of inverted T-shape to accommodate the base flanges and the webs of the rails, and bolts engaging the blocks and the projecting ends of the base flanges of the ties.

3. In a railway, blocks to support ties at the ends, ties having base flanges and webs and formed with openings of inverted L-shape above the base flanges to receive the flanges and webs of rails, the ends of the base flanges of the ties projecting beyond the webs, straps connecting adjacent ties at the said projecting ends of the base flanges, and bolts uniting the said blocks, the straps, and the said projecting ends of the ties.

4. In a railway, end blocks to support ties, ties in the form of I-beams having support at their ends on the said blocks, said ties having openings of inverted T-shape to receive the flanges and the webs of rails, rails extending through said openings, fish plates at the joints of the rails, there being ties bearing against the fish plates at opposite ends thereof, straps connecting the said ties outside of the rails, and means for securing the straps and the ties to the blocks.

5. In a railway, end blocks having depressed seats therein at the top, ties in the form of I-beams, the base plates of which are accommodated in said seats, the outer ends of the base flanges extending beyond the webs and tops of the ties, inverted T-shaped openings in the ties inward from the ends to accommodate the webs and flanges of the rails, the blocks having depressed rail seats above the tie seats and on a level with the base flanges of the ties, straps extending between the said projecting ends of adjacent ties, and bolts securing the said straps and the projecting ends of the ties to the blocks.

1,107,117. BOAT AND OAR THEREFOR. JOSEF SCHULZ, Budapest, Austria-Hungary. Filed Sept. 27, 1913. Serial No. 792,116. (Cl. 9—25.)



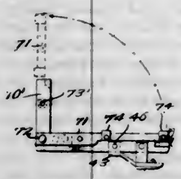
1. In the hereindescribed device for boats, the combination with two bearings in the form of a support mounted on the side wall of the boat, of a horizontally disposed disk having oppositely arranged projections in the shape of shafts which are journaled in said bearings, a casing and cover mounted between the bearings and on the shafts, a bolt connecting the cover and bearing, a conical wheel carried by the said bolt both above and below the disk, the said wheels having integral extensions in the form of split sleeves of which one serves to receive the oar and the other a handle, and intermediate gearing to transmit motion from the wheel and sleeve bearing the said handle to the wheel and sleeve carrying the oar, substantially as specified and shown.

2. In the hereindescribed device for boats, the combination with two bearings in the form of a support mounted on the side wall of the boat, of a horizontally disposed disk having oppositely arranged projections in the shape of shafts which are journaled in said bearings, a casing and cover mounted between the bearings and on the shafts, a bolt connecting the cover and bearing, a conical wheel carried by the said bolt both above and below the disk, the said wheels having integral extensions in the form of split sleeves of which one serves to receive the oar and the other a handle, intermediate gearing to transmit motion from the wheel and sleeve bearing the said handle to the wheel and sleeve carrying the oar, and an air pump mounted at the side of the boat and means to connect the piston rod of said pump with the oar, all as described and shown.

1,107,118. WAGON. DANIEL T. SEALE, Florala, Ala. Filed Apr. 17, 1912. Serial No. 691,283. (Cl. 21—54.)

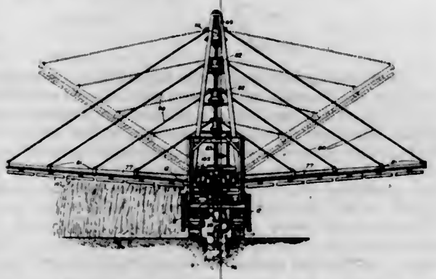
1. The combination with a wagon bolster having a pair of bars formed with medial separated portions and contracted ends, standards permanently fixed to the con-

tracted ends of the bars and rising vertically therefrom, stanchions pivoted to the standards and adapted to swing into parallel relation with said bars on the lowering thereof and also to swing into parallel relation to the standards when raised, and cross straps mounted upon the stanchions and engageable with the bars for limiting the swinging movement of the stanchions in one direction and also to serve as bearings therefor when lowered in parallel relation to the bars.



2. The combination with a wagon bolster having a pair of bars formed with medial separated portions and contracted ends, standards permanently fixed to the contracted ends of the bars and rising vertically therefrom, stanchions pivoted to the standards and adapted to swing into parallel relation with said bars on the lowering thereof and also to swing into parallel relation to the standards when raised, cross straps mounted upon the stanchions and engageable with the bars for limiting the swinging movement of the stanchions in one direction and also to serve as bearings therefor when lowered in parallel relation to the bars, and means detachably engageable with the stanchions and the standards for holding the same in parallel relation thereto after the stanchions have been raised.

1,107,119. TRAVELING IRRIGATOR. JOHN COOPER SEARLE, Lalamilo, Hawaii. Filed Aug. 7, 1913. Serial No. 783,605. (Cl. 137—66.)



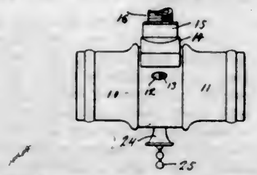
1. In an irrigating device, the combination of a main frame, means to support and propel the same, a tower, means to support and elevate the tower along the main frame, a plurality of laterally extending distributing arms supported by the tower, means to elevate the outer ends of the arms, said elevating means including a plurality of drum sections of different diameters carried by the tower and guys extending from said sections to different parts of said arms, and means to draw water from the ditch and deliver it to and through said distributing arms.

2. In a traveling irrigator, the combination of a main frame, means to support and propel the same along a ditch, a pump carried by the main frame, a shoe adapted to travel in the ditch, said shoe having a perforated top, flexible connections between the shoe and the pump, said pump having a vertical discharge pipe, a vertical delivery pipe telescopically connected to said discharge pipe and having at its upper end a horizontal longitudinally extending T-head, a pair of laterally extending distributing arms swiveled on the same axis to the opposite ends of said head, and means to swing said arms vertically around the axis of said swivels.

3. In an irrigating machine, the combination of a traveling frame, power devices carried by said frame, a pump operated by said power devices, a head 59 communicating with said pump, a shoe 56 adapted to trail beneath said frame, said shoe having a plurality of compartments, and a series of flexible connections leading from the several compartments of the shoe into said head.

4. In an irrigating machine of the kind set forth, the combination of a traction device, a pump carried by said device, means to operate the pump, a telescopic pipe leading upwardly from said pump, a horizontal T-head provided at the upper end of said telescopic pipe and having its alined terminals disposed longitudinally of the traction device, a pair of hollow arms having elbows swiveled to the front and rear ends of said T-head so as to receive water from the telescopic pipe, said arms being adjustable in spaced parallel vertical planes around the longitudinal axis of said head, and a pressure dome associated with said T-head.

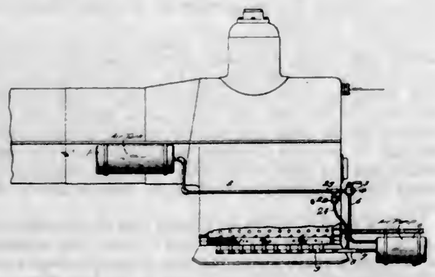
1,107,120. PLURAL SOCKET. FRANK E. SEELEY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 21, 1912. Serial No. 732,712. (Cl. 173—337.)



1. A twin socket having a pair of insulating buttons spaced apart, lamp terminals on the outer faces of said buttons and a pull switch mounted between the opposed faces of said buttons, in combination with an inclosing casing comprising independent shells respectively sleeved over said insulating buttons and the lamp terminals thereon, latching means for engaging the adjacent ends of said shells together, a bell mouth outlet through said casing for a flexible pull member for operating the switch and a threaded nipple projecting from said casing for securing the fitting to a fixture, substantially as described.

2. A twin socket having an insulating body element, oppositely faced lamp sockets arranged in substantial alinement on said insulating body, a pull switch carried by said insulating body and electrically interposed between said lamp sockets, in combination with an inclosing casing comprising independent shells sleeved over said body and sockets, latching means for engaging the adjacent ends of said shells together, an outlet through the casing for a flexible pull member for operating the switch and an outwardly projecting threaded element for securing the fitting to a fixture.

1,107,121. AIR-FEEDING AND AIR-OPERATED GRATE. ALBERT E. SHULTZ, Pinners, Va. Filed Apr. 23, 1914. Serial No. 834,032. (Cl. 110—74.)



1. A grate for fire boxes comprising a plurality of hollow perforated bars mounted for rotation, a hollow leg depending from each of said bars, a hollow rocking rod connected to each of said hollow legs, means for supplying air under pressure to the hollow rocking rod, and means for reciprocating said hollow rocking rod.

2. A grate for boilers comprising a plurality of hollow perforated grate bars rotatatably mounted, a hollow rocking rod operatively connected to each of the grate bars, the interior of the rocking rod being in communication with the interior of each of the hollow grate bars, means for supplying air under pressure to the rocking rod, and means for reciprocating the rocking rod.

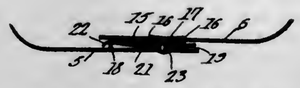
3. A grate for fire boxes comprising a plurality of rotatably mounted hollow perforated grate bars, hollow legs depending one from each of said grate bars, the lower end of each of said legs being rounded, a hollow rocking rod provided with recesses therein adapted to receive the rounded ends of the legs, means for holding the rounded ends of said legs against the corresponding recesses in the rocking rod, means for supplying air to the interior of the rocking rod, and means for reciprocating said rocking rod.

4. In a grate construction, a hollow perforated grate bar mounted for rotation, a hollow leg depending therefrom, a tube extending from the leg and having the ends thereof rounded and perforated, a hollow rocking rod provided with perforated recesses adapted to receive the rounded end of the tube, means passing through the tube engaging the leg through the ports of the tube and recess and through the rocking rod adapted to bind the rounded end of the tube to the hollow rocking rod, means for reciprocating the rocking rod, and means for applying air under pressure to the rocking rod.

5. In combination, hollow perforated rotatably mounted grate bars, a hollow rocking rod operatively connected to the grate bars and having the interior thereof in communication with the interior of the hollow grate bars, an air operated means for reciprocating the rocking rod, means for supplying air under pressure to the rocking rod, a three-way valve controlling the pasage of air to the air operated reciprocating means, one of the ports of said valve being connected to said reciprocating means, the other port being operatively connected to the means for supplying air to the hollow rocking rod, and a valve controlling the passage of air to the hollow rocking rod.

[Claims 6 and 7 not printed in the Gazette.]

1.107,122. SNAP-FASTENER. JOHN G. SMITH, Wahoo, Nebr. Filed July 26, 1913. Serial No. 781,419. (Cl. 24—68.)

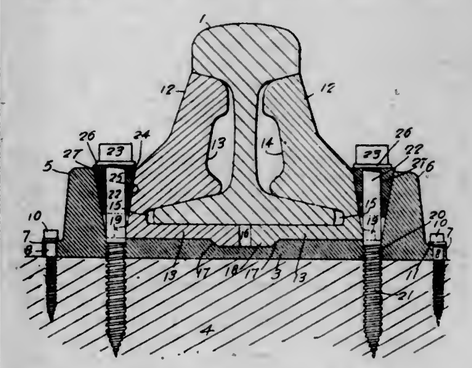


1. The combination with overlapping layers, of a snap fastener comprising an inner and an outer member, said inner member including a base plate, means for securing the same to and remote from the edge of the inner layer, the free end of said base plate provided with an outturned slotted end, the outer member including a curved plate, means for securing one end thereof to and adjacent the edge of the outer layer, the free end of said curved plate provided with an outwardly extending tongue adapted to fit within and engage the outturned slotted end of the said base plate, the fastened end of said curved plate provided with a restricted slot extending therethrough, the base plate of the inner member provided with a transversely curved outwardly extending lip and a restricted neck portion, said lip adapted to fit within and adapted to interlock with the restricted slot of the curved plate of the outer member.

2. The combination with inner and outer layers of overlapping material, of a snap fastener comprising inner and outer members, the said inner member including a base plate, rearwardly struck clips adapted to pierce the inner layer and secure the said base plate thereto, the said clips disposed at the end of the said base plate remote from the edge of the inner layer, the free end of said base plate provided wth an outturned slotted end, the fastened end of said base plate provided with a transversely curved outwardly extending lip with a restricted neck portion, the outer member including a curved plate, means extending therethrough adapted to secure the same to the outer layer adjacent the edge thereof, the free end of said curved plate provided with a curved tongue adapted to fit within and engage the outturned slotted end of the base plate, the fastened end of said curved plate provided with a restricted slot extending therethrough and adapted to receive the curved lip therein and to interlock therewith.

3. A snap fastener comprising an inner member including a base plate, means for securing the same to a layer of material, one end of said base plate provided with an outturned slotted end, the other end provided with a transversely curved outwardly extending lip, and an outer member including a curved plate provided with an outwardly extending tongue adapted to fit within and engage the outturned slotted end of the aforementioned base plate and the remote end thereof provided with a restricted slot adapted to receive the transversely curved outwardly extending lip of the inner member, and means for securing the said outer member to a layer of material.

1,107,123. SPLICE-BAR. WALTER J. SMITH, Bessemer, Ala. Filed Sept. 29, 1913. Serial No. 792,341. (Cl. 239—6.)



1. In combination with the meeting ends of the rails, of a seat for the said ends, said seat having longitudinally extending ribs near its side edges, said ribs being beveled on their inner faces, said seat having a longitudinally extending groove provided with inclined side walls between the ribs, and having means whereby it may be secured to the ties, fish plates each consisting of a portion engaging beneath the rail base and resting on the upper face of the seat and having a rib on its under face at its inner edge fitting the groove of the seat, and a portion fitting against the web of the rail, said portions being integral, and each fish plate having a longitudinally extending groove or recess at the junction of the portions for receiving the adjacent side edge of the rail base, and of greater width than the width of the said edge, each fish plate having at its outer face an inclined surface arranged opposite the inclined face of the adjacent rib, wedges extending longitudinally of the rails between the ribs of the seat and the inclined surfaces of the fish plates, said wedges and the seat having registering openings, and screw bolts passing through the said openings and engaging the ties, each fish plate having an outwardly extending rib below the inclined surface, each rib being notched to receive a screw bolt.

2. In combination with the meeting ends of the rails, of a seat for the said ends, said seat having longitudinally extending ribs near its side edges, each rib being inclined on its inner face, fish plates each having a longitudinally extending groove for receiving the adjacent side edge of the base flange of the rail and of greater depth than the said side edge, each fish plate having an inclined face adja-

cent to the inner face of the adjacent rib of the seat, and inclining in the opposite direction, wedges arranged between the said faces of the fish plates and the ribs, and means for pressing the wedges downwardly, said means comprising screw bolts, the wedges and the seat having registering openings for receiving the bolts, said bolts engaging the ties, each fish plate having a rib extending laterally at the lower side of the inclined surfaces and extending toward the adjacent rib of the seat, each rib being notched to permit the passage of the screw bolts, said seat and fish plates having interlocking means for preventing lateral movement of the fish plates with respect to the seat, said means comprising a groove on the upper face of the seat at approximately the center thereof, and ribs on the fish plates engaging the groove.

3. In combination with the meeting ends of the rails, of a seat for the said ends, said seat having longitudinally extending ribs near its side edges, each rib being inclined on its inner face, fish plates each having a longitudinally extending groove for receiving the adjacent side edge of the base flange of the rail and of greater depth than the said side edge, each fish plate having an inclined face adjacent to the face of the adjacent rib of the seat, and inclining in the opposite direction, wedges arranged between the said faces of the fish plates and the ribs, and means for pressing the wedges downwardly, said means comprising screw bolts, the wedges and the seat having registering openings for receiving the bolts, said bolts engaging the ties, each fish plate having a rib extending laterally at the lower side of the inclined surface and extending toward the adjacent rib of the seat, each rib being notched to permit the passage of the screw bolts, said seat and fish plates having interlocking means for preventing lateral movement of the fish plates with respect to the seat.

4. In combination with the meeting ends of the rails, of a seat for the said ends, said seat having longitudinally extending ribs near its side edges, each rib being inclined on its inner face, fish plates each having a longitudinally extending groove for receiving the adjacent side edge of the base flange of the rail and of greater depth than the said side edge, each fish plate having an inclined face adjacent to the face of the adjacent rib of the seat, and inclining in the opposite direction, wedges arranged between the said faces of the fish plates and the ribs, and means for pressing the wedges downwardly, said means comprising screw bolts, the wedges and the seat having registering openings for receiving the bolts, said bolts engaging the ties, each fish plate having a rib extending laterally at the lower side of the inclined surface and extending toward the adjacent rib of the seat, each rib being notched to permit the passage of the screw bolts.

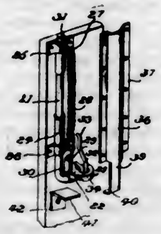
5. In combination with the meeting ends of the rails, of a seat for the said ends, said seat having longitudinally extending ribs near its side edges, each rib being inclined on its inner face, fish plates each having a longitudinally extending groove for receiving the adjacent side edge of the base flange of the rail and of greater depth than the said side edge, each fish plate having an inclined face adjacent to the inner face of the adjacent rib of the seat, and inclining in the opposite direction, wedges arranged between the said faces of the fish plates and the ribs, and means for pressing the wedges downwardly.

[Claims 6 to 8 not printed in the Gazette.]

1,107,124. DOOR-HOLDER. HENRY P. SPAIN, Drakestown, Ga. Filed Nov. 11, 1913. Serial No. 800,289. (Cl. 16—6.)

1. The combination with a door, of a holding mechanism including a retaining plate mounted above the door and having a semi-circular series of apertures, a locking rod slidably mounted on the door and engageable in the apertures for normally holding the door in adjusted position, a spring for urging the rod upwardly into engagement with the retaining plate, said rod having its lower terminal extending at right angles to its major portion, an eyelet formed terminally of the extension, and a keeper member carried by the door and adapted to be engaged by the eyelet of the extension whereby the rod may be held in inoperative position against the tension of the spring.

2. The combination with a door, of a holding device



including a retaining plate having a plurality of spaced apertures, a locking rod slidably mounted on the door and engageable in the apertures for holding the door in adjusted position, a tube secured to the door and receiving the rod for guiding it in its sliding movement, a housing for the tube, a spring arranged in the housing and operatively connected to the rod, said spring acting to urge the rod upwardly into engagement with the retaining plate, a right angular extension formed on the lower terminal of the rod, an eyelet formed terminally of the extension, and a rigid keeper member mounted on the door and adapted to be engaged by the eyelet whereby the rod may be held in inoperative position of disengagement with the retaining plate against the tension of the spring.

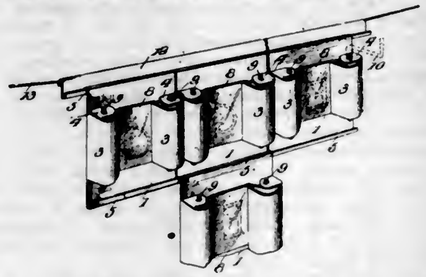
3. The combination with a door, of a holding device including a retaining plate having a series of spaced apertures, a slidably mounted locking rod carried by the door, a spring for normally holding the rod in engagement with the retaining plate, a right angular extension formed on the lower terminal of the rod, an eyelet formed terminally of the extension, a keeper member adapted to be engaged by the eyelet for holding the upper terminal of the rod spaced from the retaining plate against the tension of the spring, a housing inclosing the rod and the spring, and an extension formed on the lower terminal of the housing for covering the extreme lower terminal of the rod.

4. The combination with a door, of a holding device including a retaining plate having a plurality of spaced apertures, a locking rod slidably mounted on the door and engageable in the apertures, a channel-shaped housing carried by the door and incasing the major portion of the rod, yieldable means arranged in the housing and operatively connected to the rod for normally holding the rod in engagement with the retaining plate, a reduced extension formed on the lower terminal of the housing, a right angular extension formed on the lower terminal of the rod, said extension being engageable with the lower terminal of the housing for limiting the upward movement of the rod, and a keeper member mounted on the door and engageable by the extension of the rod, whereby the rod may be held in inoperative position against the tension of the spring.

1,107,125. DISPLAY-SIGN. FREEMAN V. WALKER, Bluffton, S. C. Filed Jan. 9, 1914. Serial No. 811,192. (Cl. 40—86.)

1. A display sign consisting of a plate having a central opening, wings carried by said plate having their free ends abutting against or in close proximity to the rear face of the plate, a tape or ribbon having letters or symbols extending across said opening and between the plate and the ends of said wings, and means for winding and unwinding said tape, the free ends of said wings serving as brakes for the tape.

2. A display sign consisting of a plate having a central opening, opposite wings extending from said plate and bent backwardly thereon with their free ends in contact with or in proximity to the rear side of the plate, apertured ears struck from said plate at the inner ends of said wings and bent at right angles to the plate, a tape or ribbon having letters or symbols and engaged by the ends of said wings, and shafts upon which said tape is wound, said shafts being supported by said ears.



3. A display sign consisting of a plate having a central opening and bent along its edge to form a suspending hook, lateral wings struck from said plate and bent back thereon at its rear, ears also struck from said plate at the inner ends of said wings and bent at right-angles to the plate in line with the spaces formed by said wings, shafts in said spaces supported by said ears, and a tape wound on said shafts.

1,107,126. GARMENT-SUPPORTER. GEORGE H. WILSON, Louisville, Ky. Filed June 20, 1913. Serial No. 774,906. (Cl. 24—243.)



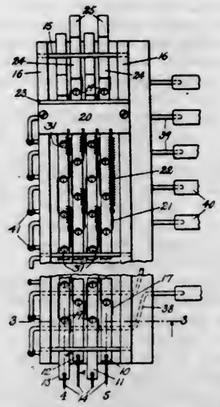
A garment supporter embodying a sheet metal plate having a transverse slot formed in its upper portion and opening through one of its side edges to receive the edge of the garment, the portion of the plate above said slot being folded forwardly and downwardly longitudinally upon itself and having its top rounded to permit said plate to be turned upon said top as a fulcrum from inoperative to operative position, the free edge of said folded portion being provided with a series of teeth which are adapted to engage said garment edge and which project below said slot.

1,107,127. ELECTRIC ACTION FOR ORGANS. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Dec. 30, 1907. Serial No. 408,501. (Cl. 84—95.)

1. The combination, in electric actions for organs, of an electric circuit having a pair of contacts one of which is flexible, a note-sounding device arranged in the circuit, key operated means for bending the flexible contact against the other contact, and means for moving one of the said contacts out of contacting relation to its associated contact.

2. The combination, in electric actions for organs, of an electric circuit provided with a pair of contacts, one of which is flexible, a note-sounding device arranged in the circuit, key-operated means for bending the flexible contact against the other contact, and means for moving the said other contact out of the range of the normal contact closing movement of the flexible contact.

3. The combination, in electric actions for organs, of a plurality of note sounding devices arranged in branch electric circuits, a pair of contacts in each branch for the respective note sounding devices, including a flexible contact, means for selectively closing a branch circuit through its pair of contacts by bending the said flexible contact, and means for moving one of the members of each pair of contacts out of contacting relation to its associated contact.

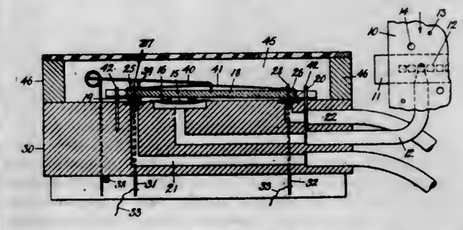


4. The combination, in electric actions for organs, of a plurality of note sounding devices arranged in branch electric circuits, a pair of contacts in each branch for the respective note sounding devices, each branch being provided with a pair of contacts, including a flexible contact, means for selectively closing a branch circuit by bending the flexible contact of that branch, and means for moving the other contact of that branch out of contacting relation to its associated flexible contact.

5. The combination, in electric actions for organs, of a plurality of series of note-sounding devices arranged in branch electric circuits, a flexible contact in the branch circuit of each of the note sounding devices, a series conductor having contacting surfaces disposed in proximity to said flexible contacts for that series, key operated means for selectively bending the flexible contacts of the respective branches against their coacting contact surfaces of the series conductor, and means for moving the said conductor to carry its contact surfaces out of the range of the said bending movement of its associated flexible contacts.

[Claims 6 to 32 not printed in the Gazette.]

1,107,128. ORGAN-ACTION. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Dec. 30, 1907. Serial No. 408,502. (Cl. 84—240.)



1. Valve mechanism for musical instruments, including a plurality of integrally connected valves, single actuating means for operating both of said valves through direct contact with their said connection, and means for controlling said operation, whereby initial movement of the connection operates one of said valves and the continuing movement of the connection in the same direction operates another of said valves.

2. Valve mechanism for musical instruments, including a plurality of integrally connected valves, single actuat-

ing means for operating said valves through direct contact with their said connection, and means for yieldingly opposing said actuating means to hold one valve still while the other valve is being moved.

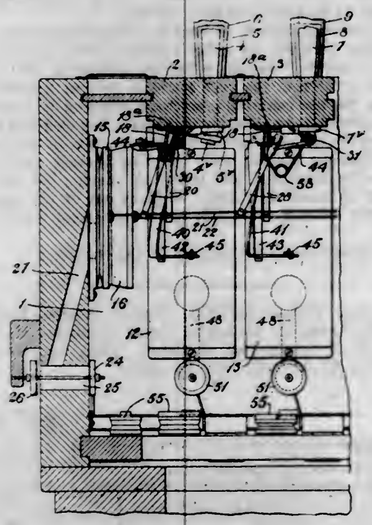
3. Valve mechanism for musical instruments, including a plurality of integrally connected valves, a single motor for actuating the said valves through their connection, and means for controlling the operating action by indirect and yielding opposition whereby the said valves are operated in predetermined sequence by successive movements of the motor in one direction.

4. Valve mechanism for musical instruments, including in combination a plurality of valves, an integral connection between the valves, a single-acting pneumatic motor directly engaging with the said connection for moving the valves, and a yielding resistance for opposing the operating movement, the opposing force of the motor and the said resistance being applied at different points in the length of the connection, whereby one of said valves is moved in advance of the other valve.

5. Valve mechanism for musical instruments, including a plurality of valves, an integral connection between the valves, a single pneumatic motor acting directly upon the connection to operate the plurality of valves by successive movements in the same direction, and means for applying resistance to the movement of the connection at one side of the point of action of the motor.

[Claims 6 to 37 not printed in the Gazette.]

1,107,129. KEY AND STOP ACTION FOR ORGANS. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Aug. 3, 1911. Serial No. 642,194. (Cl. 84—59.)



1. A valve for organ actions, a lever mounted for swinging movement relative to the valve, a combined fulcrum and locking abutment movable from a fulcrum-relation to the lever, into a locking position relative to the valve, whereby the said fulcrum abutment serves in one position as a fulcrum for the lever to move the valve, and in the other position serves as a lock for the valve.

2. A valve for organ actions, a lever mounted for swinging movement relative to the valve, a fulcrum abutment, and radius links sustaining the fulcrum abutment for swinging movement into and out of fulcrum relation to the lever.

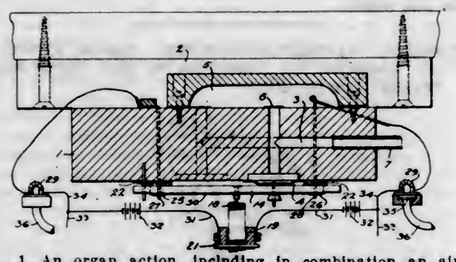
3. A valve for organ actions, a valve lever mounted for swinging movement upon and with the valve, a fulcrum abutment, radius links disposed along the fulcrum abutment and supported to swing on a common center of oscillation, suspending the said abutment for swinging movement into and out of fulcrum relation to the valve levers.

4. A valve for organ actions, a valve lever mounted for swinging movement upon and with the valve, a combined fulcrum and locking abutment, and pivotally suspended radius links for sustaining the fulcrum abutment for swinging movement from a fulcrum position relative to the valve lever, to a locking position relative to the valve.

5. A valve for organ actions, a lever mounted for swinging movement upon and with the valve, a fulcrum abutment mounted for swinging movement into and out of a fulcrum relation to the lever, and a spring connected between the abutment and a point beyond the center of the swinging movement, whereby the spring is carried by the abutment across the said center of swinging movement and holds the abutment yieldingly at either end of its swinging movement.

[Claims 6 to 16 not printed in the Gazette.]

1,107,130. ORGAN-ACTION. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Aug. 3, 1911. Serial No. 642,195. (Cl. 84—240.)



1. An organ action, including in combination an air chamber, a lever disposed outside of the air chamber and provided with means for controlling a plurality of note-sounding connections, a pneumatic motor communicating with the air chamber, and connected with the lever, and means for controlling the lever by admitting pneumatic impulses of different strength to the air chamber side of the motor.

2. An organ action, including in combination a lever accessibly disposed in atmospheric pressure, a plurality of note sounding connections controlled by the lever, a pneumatic motor connected with the lever and exposed to different pressures on its opposite sides, means for admitting pneumatic impulses of different strength to one side of the motor, and resilient means also accessibly disposed in the atmosphere and coöperating with the said pneumatic impulses to move the lever.

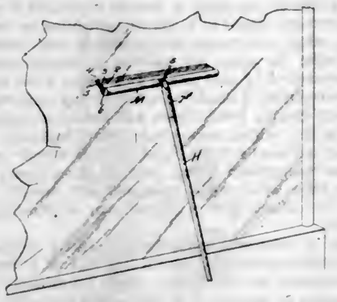
3. An organ action, including in combination a lever provided with a plurality of note sounding connections accessibly disposed in atmospheric pressure, a tracker duct, a pneumatic motor connected with the lever and exposed on one side to atmospheric pressure, and on the other side to varying pneumatic pressures through the tracker duct, and means for controlling the duct to impart to the motor pneumatic impulses of differing strength.

4. An organ action, including in combination a lever accessibly disposed in atmospheric pressure, a plurality of note-sounding connections for the lever, a tracker duct, a pneumatic motor connected with the lever and exposed on one side to atmospheric pressure, and on the other side to varying pressures controlled through the tracker duct, and resilient means for partially balancing the said atmospheric pressure on one side of the motor.

5. An organ action, including in combination a lever accessibly disposed in atmospheric pressure, a plurality of note-sounding connections for the lever, a tracker duct, a pneumatic motor connected with the lever and exposed on one side to atmospheric pressure and on the other side to varying pressures controlled through the tracker duct, resilient means for partially balancing the said atmospheric pressure on one side of the motor, and means for controlling the tracker duct to communicate pneumatic impulses of varying strength to the motor.

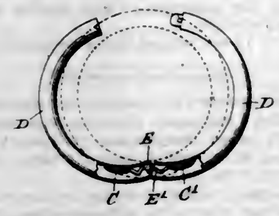
[Claims 6 to 29 not printed in the Gazette.]

1,107,131. SQUEEGEE. MICHAEL BANDRINGA, Chicago, Ill. Filed Apr. 13, 1914. Serial No. 831,658. (Cl. 15—59.)



A squeegee comprising a handle, a head having a rabbet, an active edge composed of strips of flexible material of different widths, their rear edges standing flush within the said rabbet and their front edges disposed in stepped relation to each other, the lowermost strip being the widest, a metallic strip underlying these flexible strips near their rear edges, and fastening devices passing up through the metallic strip and the flexible strips into said head.

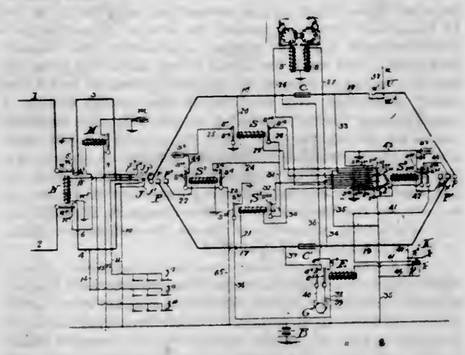
1,107,132. JOINT FOR BRACELETS. CHARLES BILLINGTON and RALPH F. GIBBS, Attleboro, Mass., assignors to The O. M. Draper Co., North Attleboro, Mass., a Corporation of Rhode Island. Filed May 27, 1913. Serial No. 770,102. (Cl. 63—7.)



1. In a bracelet hinge, duplicate body portions each provided with a curved interlocking portion, one of said interlocking portions being provided with a longitudinal slot and a groove adjacent said slot, a rib on the other portion adapted to enter said groove, an ear on said portion located within said slot, and laterally disposed ears on the first mentioned interlocking portion adapted to be bent to hold the two portions in engagement.

2. In a bracelet hinge, an attaching member, a curved member extending therefrom, said member being provided with a longitudinal slot and a groove, laterally extending ears carried by said member and adapted to be bent into clamping position, a complemental attaching member, a curved member extending therefrom and slidably engaged between the aforesaid curved member and the ears, an ear on said last mentioned member adapted to enter the slot, and a longitudinal rib on said curved member adapted to enter the groove.

1,107,133. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Mar. 27, 1905. Serial No. 252,305. (Cl. 179—26.)



1. In a telephone exchange system, a subscriber's line, a substation connected to said line, a talking set at the substation, an impulse transmitter also at the substation comprising a pair of make and break wheels and contacts governed thereby, said wheels adapted to be set so as to make and break said contacts a determinate number of times, a magnet and a retaining device controlled thereby for holding the first wheel when set, a retaining device for the second wheel controlled by the movement of the first wheel, a line signal connected to the line normally and adapted to be operated when the wheels are set without operating the said magnet at the substation, a connective circuit adapted to be brought into connection with said line, a receiving device associated with said circuit and adapted to be affected by impulses from the substation, and means becoming operative in making connection with the line to change the course of current through the line circuit so as to energize the retaining magnet at the substation, substantially as described.

2. In a telephone exchange system, a subscriber's line, a substation connected to said line, a talking set at the substation, an impulse transmitter also at the substation comprising a pair of make and break wheels and contacts governed thereby, said wheels adapted to be set so as to make and break said contacts a determinate number of times, a magnet and a retaining device controlled thereby for holding the first wheel when set, a retaining device for the second wheel controlled by the movement of the first wheel, a line signal connected to the line normally and adapted to be operated when the wheels are set without operating the said magnet at the substation, a connective circuit adapted to be brought into connection with said line, a receiving device associated with said circuit and adapted to be affected by impulses from the substation, and means becoming operative in making connection with the line to change the direction of current through the line circuit so as to energize the retaining magnet at the substation, substantially as described.

3. In a telephone exchange system, a subscriber's line, a substation connected to said line, a talking set at the substation, an impulse transmitter also at the substation comprising a pair of make and break wheels and contacts governed thereby, said wheels adapted to be set so as to make and break said contacts a determinate number of times, a magnet and a retaining device controlled thereby for holding the first wheel when set, a retaining device for the second wheel controlled by the movement of the first wheel, a line signal connected to the line normally and adapted to be operated when the wheels are set without operating the said magnet at the substation, a connective circuit adapted to be brought into connection with said line, a receiving device associated with said circuit and adapted to be affected by impulses from the substation, and means becoming operative in making connection with

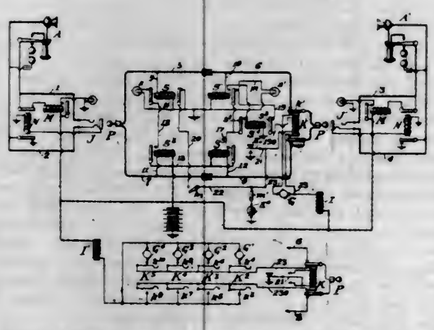
the line to reverse the current through the line circuit so as to energize the retaining magnet at the substation, substantially as described.

4. In a telephone exchange system, a subscriber's line, a substation and a central station connected to said line, an impulse transmitter at the substation adapted to be set to make and break or ground the circuit according to a predetermined code, a magnet controlling the impulse transmitter and when the latter is set, connected from one side of the line to ground, a connective terminal and a line signal associated with the line at the central station, a main battery thereat grounded on one side and normally connected across the line with its ground on the same side as the substation controlling magnet, a central station circuit adapted to be brought into connection with the line, and means thereby becoming operative to revise the battery on the line, so as to direct current through the said controlling magnet and release the substation signal device, substantially as described.

5. In a telephone exchange system, a subscriber's line, a substation and a central station connected to said line, an impulse transmitter at the substation adapted to be set to make and break or ground the circuit according to a predetermined code, a magnet controlling the impulse transmitter and when the latter is set, connected from one side of the line to ground, a spring jack and a line signal magnet associated with the line at the central station, a main battery grounded on one side and normally connected across the line with its ground on the same side as the substation controlling magnet, a cut-off relay connected to the jack and adapted when energized to cut off the line signal magnet and reverse the battery connections, a plug and cord circuit adapted to coöperate with the line jack, a signal receiving device associated with the cord to respond to the substation transmitter, and means to energize the cut-off relay when the plug is inserted in the jack, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,107,134. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Mar. 27, 1905. Serial No. 252,307. (Cl. 179—73.)



1. In a telephone exchange system, a calling and a called subscriber's line, with an operator's cord-circuit to interconnect them; a ringing generator and means to connect it to the called line only, magnetic means for actuating said connecting means adapted to be controlled by the calling subscriber, and other means independent thereof for disabling the connecting means, controlled by the called subscriber, substantially as described.

2. In a telephone exchange system, a calling and a called line, and a cord-circuit for interconnecting them comprising an answering and a calling plug and cord conductors inductively divided; a supervisory relay connected with the answering end of the cord to be controlled by the calling subscriber, a second supervisory relay connected with the calling end of the cord and controllable by the called subscriber, a ringing relay associated with the calling plug and a suitable source of sources of current adapted to be connected thereby, means controlled by the answering supervisory relay as determined by the calling subscriber, for actuating the ringing relay, and means controlled by the calling supervisory relay as determined by the called subscriber for permitting or preventing the actuating of said ringing relay, substantially as described.

3. In a telephone exchange system, subscriber's lines, a common battery for supplying current thereto and a connective circuit comprising the following instrumentalities: an answering and a calling plug, cord conductors connecting the same and inductively divided, a pair of supervisory relays connected respectively with the answering and the calling end of the cord, a ringing relay and a generator, a supervisory signal in a circuit controlled by each supervisory relay, and means for rendering said circuits operative when the plugs are inserted, a ringing relay circuit also controlled by said means and closed when the calling plug is inserted, a disabling relay having contacts controlling said ringing relay circuit and itself controlled by contacts in the calling supervisory relay, together with controlling contacts for the ringing relay circuit in the answering supervisory relay, and means whereby the disabling relay after being energized will remain energized until the calling plug is withdrawn, substantially as described.

4. In a telephone exchange system, a calling and a called subscriber's line, with a link circuit having switching terminals to interconnect them; a ringing generator and means to connect it to the called line only, magnetic means for actuating said connecting means, adapted to be controlled by the calling subscriber, and other means independent thereof for disabling the connecting means, controlled by the called subscriber, substantially as described.

5. In a telephone exchange system, a calling and a called line, and a link circuit for interconnecting them comprising an answering and a calling switch terminal and connecting conductors inductively divided; a supervisory relay connected with the answering end of the link to be controlled by the calling subscriber, a second supervisory relay connected with the calling end of the link and controllable by the called subscriber, a link relay associated with the calling terminal and a suitable source or sources of current adapted to be connected thereby, means controlled by the answering supervisory relay as determined by the calling subscriber, for actuating the ringing relay, and means controlled by the calling supervisory relay as determined by the called subscriber for permitting or preventing the actuation of said ringing relay, substantially as described.

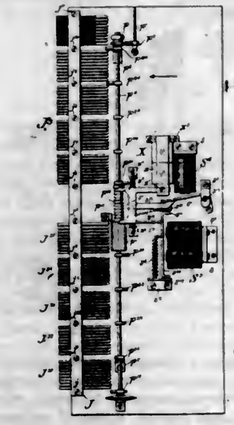
[Claims 6 to 12 not printed in the Gazette.]

1,107,135. TELEPHONE-EXCHANGE SYSTEM AND APPARATUS. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed July 11, 1905. Serial No. 269,157. (Cl. 179—27.)

1. In a telephone exchange system, a plurality of lines, central office link circuits for interconnecting them, automatic line switches for said link circuits, and controlling means therefor, each switch comprising line contacts arranged in a straight row, a common contact, a spindle mounted to turn upon an axis parallel to said row and capable of a longitudinal movement, and a plurality of arms or studs on said spindle arranged helically around the same, and adapted to successively connect said line-contacts with said common contact at each longitudinal movement of said spindle, substantially as described.

2. In a telephone exchange system, a plurality of lines, central office link circuits for interconnecting them, automatic line switches for said link circuits, and controlling means therefor, each switch comprising a straight row of line contacts and a spindle carrying a plurality of angularly placed arms or studs, means to rotate the spindle so as to bring any desired arm into alinement with a contact in the row and means to move the spindle longitudinally and thereby bring the stud into operative connection with successive contacts, substantially as described.

3. In a telephone exchange system, a plurality of lines, central office link circuits for interconnecting them, automatic line switches for said link circuits, and controlling means therefor, each switch comprising a plurality of line contacts composed of subordinate groups or divisions, a spindle in juxtaposition to said contacts, a plurality of selective arms or studs on said spindle arranged in a helical line around the same, one stud for each division of contacts, means to rotate the spindle so as to bring any desired stud into alinement with its division or group of contacts, and means to move the spindle longitudinally to bring the studs into operative connection with the successive contacts, substantially as described.



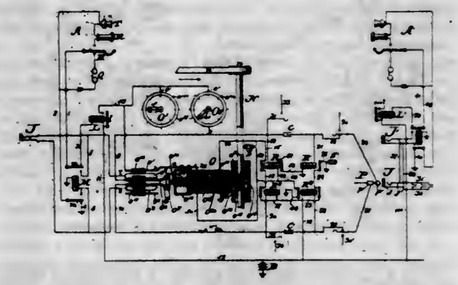
4. In a telephone exchange system, a plurality of lines, central office link circuits for interconnecting them, automatic line switches for said link circuits, and controlling means therefor, each switch comprising a plurality of line contacts composed of subordinate groups or divisions, a spindle in juxtaposition to said contacts, a plurality of selective arms or studs on said spindle arranged in a helical line around the same, one stud for each division of contacts and means to rotate the spindle so as to bring any desired stud into alinement with its division or group of contacts, together with means to move the spindle endwise so as to bring the selected stud into operative connection with any desired contact in its subdivision or group, substantially as described.

5. In a telephone exchange system, a plurality of lines, central office link circuits for interconnecting them, automatic line switches for said link circuits, and controlling means therefor, each switch comprising a row of line contacts and a member common thereto having individual contacts corresponding to and in juxtaposition with the several line contacts, a spindle capable of longitudinal movement and carrying a selective arm or stud, and means to move said spindle longitudinally so as to cross or interconnect any desired unit line contact with the common member through its corresponding contact, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,107,136. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Aug. 5, 1905. Serial No. 272,907. (Cl. 179—27.)

1. In a telephone exchange system, a plurality of subscribers' lines, a cord circuit having its answering end terminating in an automatic selector switch and its calling end terminating in a plug, answering terminals for two or more of the subscribers' lines in said selector switch but normally disconnected from the cord circuit terminals thereof, and a spring jack or jacks for each subscriber's line, together with means associated with the said terminals of the selector switch adapted to be brought under the control of a calling line to thereupon initially effect connection of said line terminals to the cord circuit terminals.



2. In a telephone system, a plurality of subscribers' lines, a cord circuit having its answering end terminating in an automatic selector switch and its calling end terminating in a plug, answering terminals for two or more of the subscribers' lines in said selector switch, and a springjack or jacks for each subscriber's line, together with means associated with the selector switch adapted to be brought under control of a calling line in the act of calling to thereupon initially effect connection of said line through the said switch with the cord circuit, and a signal becoming operative upon the completion of said connection, and remaining operative throughout the continuance of said connection, substantially as described.

3. In a telephone exchange system, a plurality of subscribers' lines and a cord circuit for interconnecting them terminating at its calling end in a plug and at its answering end in an automatic selector switch comprising the following instrumentalities: a constantly rotating shaft carrying an arm, a series of contacts each connected to a subscriber's line, an associated common contact for the cord adapted to be brought into connection with any line contact by said arm, a calling contact in said switch for each line and associated with its line contact, and means associated with the arm and shaft coöperating with the calling contacts to stop the arm and connect the terminals of a calling line to the cord terminal or terminals, substantially as described.

4. In a selector switch for cord circuits a constantly rotating shaft, a sleeve detachably connected to rotate therewith, a tubular arm on said sleeve and carrying a solenoid winding, a movable core within the tube having its end controlling the engagement of the sleeve and shaft, and contacts in the switch coöperating with the tubular arm, substantially as described.

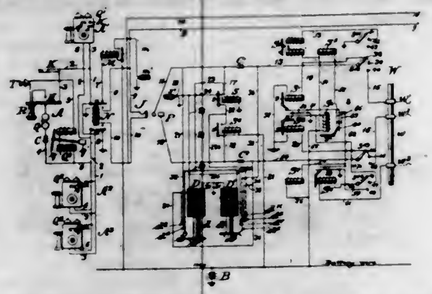
5. In a selector switch a constantly rotating shaft, a tubular arm carrying a solenoid upon it and a reciprocating core therefor within it, a clutch between the arm and shaft at one end of the core and a plug at the other end, and a series of contacts coöperating with said plug, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

1,107,137. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Aug. 31, 1905. Serial No. 276,634. (Cl. 179—27.)

1. In a telephone exchange system, a subscriber's line circuit, means at the subscriber's station to make and break the circuit, a source of current supply therefor, a central office equipment comprising a plurality of automatic switches through which connections may be obtained with other subscriber's lines, said switches having distinctive actuating and control circuits, and means common to all the switches of a given connection directly operated by the subscriber in merely making and breaking the metallic line circuit, without grounding to distribute proper current impulses between the several switch con-

trol circuits of said connection and to operate one or more of said switches, substantially as described.



2. In a telephone exchange system, a subscriber's metallic circuit and means controlled at the sub-station to make and break the circuit, a central office equipment comprising automatic switches requiring impulses over more than one circuit for their operation and having distinctive actuating and control circuits, a source of current supply, and a pair of relays connected to the subscriber's line, common to all the switches of a given connection and arranged so that one will respond to line closures and the other to line breaks together with connections to the automatic switch control circuits of said connection controlled by said relays, substantially as described.

3. In a telephone exchange system, a subscriber's line and means at the subscriber's station to make and break the circuit, a central office equipment comprising a relay responsive to the subscriber's line control, and a series of automatic switches having a plurality of controlling circuits separately energized for their operation, and a pair of distributing relays each having a definite time constant, controlled by the subscriber's relay and jointly controlling the several automatic switch circuits, substantially as described.

4. In a telephone exchange system, polystation lines, means for selectively signaling thereover comprising a ringing circuit, a slow controlling relay therefor, selective ringing means, and a quick-acting selecting device therefor, the relay responding to all impulses, to disconnect or disable the ringing circuit until the desired selection is made, substantially as described.

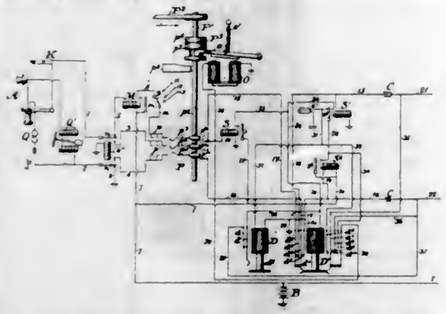
5. In a telephone exchange system, polystation lines, means for selectively signaling thereover comprising a master relay controlling the application of signaling current to the line, and a selective apparatus actuated to connect the proper ringing circuit ready for application to the line, together with means for simultaneously operating the master relay and the selective apparatus, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,107,138. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Sept. 18, 1905. Serial No. 279,031. (Cl. 179—18.)

1. In a telephone exchange system, subscribers' lines each having means to make and break the metallic circuit, a central current supply, an automatic connective apparatus comprising a selecting and calling set of switches and a primary selector switch, answering line terminals in the latter with a switch member engaging the same and means to drive it, a relay associated with each line, a magnet controlled thereby and controlling the primary selector switch when the same engages the line terminals, stopping the switch thereon, controlling magnets for the selective switches, and translating relays placed under the line-control by the primary selector, to control the said switch magnets, substantially as described.

2. In a telephone exchange system, a plurality of subscribers' metallic circuits each provided with sub-station talking and signal-receiving apparatus and means to make and break the circuit in accordance with a code, and central office connective apparatus comprising the following instrumentalities: a line relay M and a cut-off relay for each line, a primary selector switch P and means to drive the same, line terminals p, p', therein, a controlling magnet therefor, a trunk circuit 15—16, 21—22, and selector switch-circuits connected to said trunk with controlling magnets V, V', R, R', etc., connected thereto, and relays S', D, D', the first responding to all makes and breaks in the metallic circuit, the second to breaks only, and the third to makes only, together with connections for the switch-magnets controlled by said relays in response to the makes and breaks in the subscriber's line, substantially as described.



3. In a telephone exchange system, subscribers' lines, a primary selector switch comprising a normally continuously rotating spindle carrying terminal wipers, contacts for the lines in said switch, a set of automatic selective switching apparatus a trunk line constituting a talking circuit from said primary selector switch to said automatic selective switching apparatus, and means to operate the primary selector switch to stop the rotation of said parts and to effect a connection of the contacts of a calling line with said trunk and the selective switching apparatus, substantially as described.

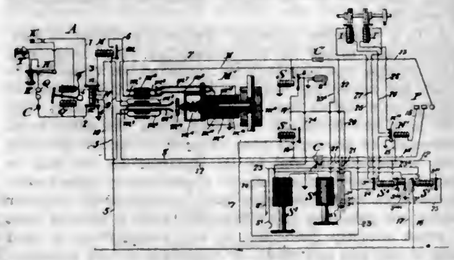
4. In a telephone exchange system, subscribers' lines, a primary selector switch having normally rotating parts, contacts of the lines in said switch, a set of connective automatic switches, a trunk line from the primary selector switch to the connective switches, and means directly controlled by a calling line to cause said normally rotating parts of said primary selector switch to connect the contacts of the calling line for purposes of conversation through itself with the trunk and connective switches, and thence to the line wanted, substantially as described.

5. In a telephone exchange system, subscribers' lines, an automatic connective switch, and primary selector switches, each primary selector adapted to be connected to the automatic connective switch, auxiliary switches arranged in percentage order and associated therewith through which a calling subscriber may connect himself with any other line, line terminals multipled into the primary selector switches, line controlled actuating means individual to each line to cause the said primary selector switches to make connection with the contacts of a calling line, and means intermediate the primary selector and the adjoining automatic connective switch arranged to permit the subscriber to operate the connective and auxiliary switches, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,107,139. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Nov. 11, 1905. Serial No. 286,887. (Cl. 179—27.)

1. In a telephone exchange system, a plurality of subscribers' lines, a sending device or signal transmitter at each subscriber's station, an automatic switch for making connection with a calling subscriber's line, another automatic switch for making connection with a wanted subscriber's line, and manual connective apparatus between said switches to bring the connecting switches under control of the calling subscriber, substantially as described.



2. In a telephone exchange system, the combination of subscribers' lines, automatic answering switches and automatic connecting switches, manual connective apparatus between the switches, and means whereby a subscriber may control the switches, substantially as described.

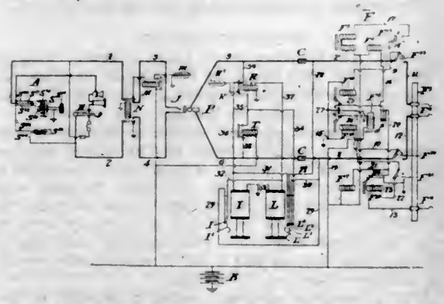
3. In a telephone exchange system, a plurality of subscribers' lines, and connective circuits therefor each composed of three parts or lengths, one of which is automatic and controlled by the calling subscriber, the second manually controlled by an operator and the third jointly controlled by both, substantially as described.

4. In a telephone exchange system, the combination with automatic answering and connecting devices adapted to be controlled by a calling subscriber, of manual means for effecting initial selection of the group containing the wanted line, substantially as described.

5. In a telephone exchange system, subscribers' lines, a signal sending device at each subscriber's station, a primary selector switch, contacts of the lines in said switch, a trunk line to a set of connective automatic switches, which are adapted to respond to the action of the subscribers' sending devices, and manual means to connect the primary selector and the contacts of a calling line with the trunk and the connective switches, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,107,140. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Nov. 21, 1905. Serial No. 288,368. (Cl. 179—27.)



1. In a telephone system, a substation containing a telephone having the usual substation ringer and an electric lamp, a line circuit extending from the substation, and a central station receiving the same, a connective link normally disconnected from the line circuit and a source of current supply at the central station, and means to bring the connective circuit into association with the line circuit in response to a call therefrom, and thereupon to supply current from the central station source to both the telephone and the electric lamp at the substation, whereby the subscriber is apprised of the establishment of the central station connection.

2. In a telephone system, a subscriber's station, a line circuit, a telephone including the usual substation ringer and additionally an electric illuminating device connected to the line circuit at the substation, central office connective means, normally disconnected from the line but adapted to be brought into connection therewith in response to a call therefrom, and means at the central office to simultaneously supply working current for both the substation telephone and the illuminating device when said connection has been established, whereby the subscriber is apprised of the establishment of the connection.

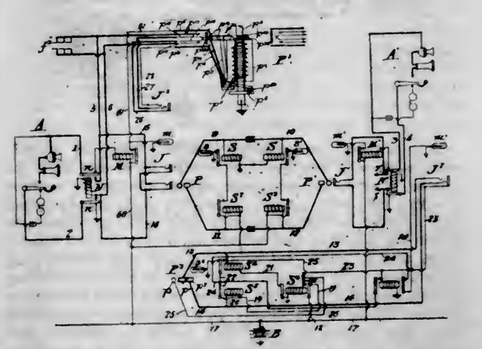
3. In a telephone system, a plurality of substations each containing a telephone equipment including the usual substation ringer and additionally an associated illuminating device, a plurality of line circuits extending from the substations, a central office receiving the same and containing a common source of current supply and normally disconnected connective means for the lines, and means to associate the connective means with the line circuits when calling, and to simultaneously supply current from the central office source through a calling line to the telephone and illuminating device at the substation thereof.

4. In a telephone system, a plurality of substations each containing a telephone, a sending device and an electric illuminating device for the latter, line circuits extending from the substations, a central office receiving said line circuits, a common source of current supply at the central office, means at the central office for interconnecting the lines, normally dissociated therefrom, and means to associate the connective means with any of the lines when calling, and thereby supply current over the line circuit to the telephone, the sending device, and the illuminating device, whereby the calling subscriber is enabled to work his sender with certainty both as to the impulses transmitted and the connective apparatus to be affected thereby.

5. In a telephone system a central office having connective means, a plurality of subscribers' lines extending therefrom, a telephone set including a substation ringer and an electric light simultaneously connected therewith at each subscriber's station, a common source of current at the central office, and means whereby said source may furnish current to both telephone set and to the electric light at each substation over the telephone talking circuit, when a calling line is connected with the central office connective means, whereby the subscriber is apprised of the connection.

[Claims 6 to 17 not printed in the Gazette.]

1,107,141. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Nov. 21, 1905. Serial No. 288,369. (Cl. 179—27.)



1. In a telephone exchange system, subscribers' lines, a main switchboard having subscribers' calling and answer-

ing terminals, an auxiliary switchboard having trunk terminals and subscribers' calling terminals only, connective trunks between said main switchboard and said auxiliary switchboard, automatic means at the main switchboard for trunking calls to the auxiliary switchboard and means at the latter board for answering the calls and making the connections desired.

2. In a telephone exchange system a main switchboard and an auxiliary switchboard, means for receiving and answering calls and making connections on the main switchboard, a trunk line having automatic switching means controlled at the main switchboard and adapted when active to pick up the calling subscribers' lines, said trunk line also having a connection terminal on the auxiliary board, whereby any call thus picked up may be answered, and means on the auxiliary board for completing the connections desired.

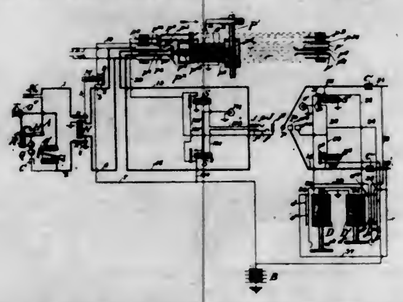
3. In a telephone exchange system a main switchboard and an auxiliary board, answering and connecting apparatus at the main switchboard for all the lines, trunk lines between the main board and the auxiliary board, each trunk line having a primary selector switch containing subscribers' line terminals in multiple with those on the main board, and each trunk also having an answering terminal on the auxiliary board, whereby calls may be answered and connections completed thereat.

4. In a telephone exchange system a plurality of subscribers' lines, a main switchboard equipped with manual connecting apparatus, and auxiliary automatic connecting means adapted to be set upon the occurrence of an overload on the main switchboard, to respond to calls over the subscribers' lines, and thereupon to select and effect initial connection of said lines apart from the main switchboard.

5. In a telephone exchange system, a main switchboard having manual answering and connecting terminals, an auxiliary switchboard having automatically actuated switching means for answering calls over the same subscribers' lines, connecting means associated therewith, operators' controlling means therefor, and automatic releasing means for the connecting means.

[Claims 6 to 11 not printed in the Gazette.]

1,107,142. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Dec. 23, 1905. Serial No. 293,148. (Cl. 179—27.)



1. In a telephone exchange system a plurality of subscribers' lines, a number of answering jacks less than the number of lines, an automatic switch adapted to connect a calling line with an idle answering jack, an answering plug adapted to coöperate with said jack, an automatic switch for selecting and connecting with a wanted line, a trunk directly connected to and terminating in said plug at one end and similarly connected to and terminating in said automatic switch at the other, said automatic selector switch being fixedly and permanently connected with said answering plug, and means to actuate said switch to select a wanted line, substantially as described.

2. In a telephone exchange system a plurality of subscribers' lines, a number of answering jacks less than the number of lines, an automatic switch adapted to connect a calling line with an idle answering jack, a cord-circuit terminating at one end in an answering plug, and at the other end in an automatic selector switch, and means to actuate said switch to select a wanted line, said means being controlled by the calling subscribers, substantially as described.

3. In a telephone exchange system a plurality of line-circuits, and means for interconnecting them comprising the following instrumentalities: primary switching mechanism for answering calls, an answering jack connected thereby to a calling line, a calling signal associated with said jack and becoming energized when the same is so connected, an answering plug adapted to connect the jack with a cord-circuit and by its insertion in the jack to restore or retire the call signal, a supervisory signal associated with said answering plug, an automatic selector switch for selecting and connecting with a wanted line, a trunk directly connected to and terminating in said plug at one end and similarly connected to and terminating in said automatic switch at the other, and means to actuate said selector switch, substantially as described.

4. In a telephone exchange system, a plurality of line-circuits, and means for interconnecting them comprising the following instrumentalities: primary switching mechanism for answering calls, an answering jack connected thereby to a calling line, a call signal associated with said jack and becoming energized when the same is so connected, an answering plug adapted to connect the jack with a cord-circuit and by its insertion in the jack to restore or retire the call signal, a supervisory signal associated with said answering plug, an automatic selector switch for selecting and connecting with a wanted line, a trunk directly connected to and terminating in said plug at one end and similarly connected to and terminating in said automatic switch at the other, means to actuate the selector switch and means for restoring or releasing the same, substantially as described.

5. In a telephone exchange system a plurality of line-circuits, and means for interconnecting them comprising the following instrumentalities: primary switching mechanism for answering calls, an answering jack connected thereby to a calling line, a call signal associated with said jack and becoming energized when the same is so connected, an answering plug adapted to connect the jack with a cord-circuit and by its insertion in the jack to restore or retire the call signal, a supervisory signal associated with said answering plug, an automatic selector switch adapted to connect the cord-circuits with a wanted line, means at the subscribers' station for actuating the selector switch, and means controlled by the subscriber for releasing or restoring the same, substantially as described.

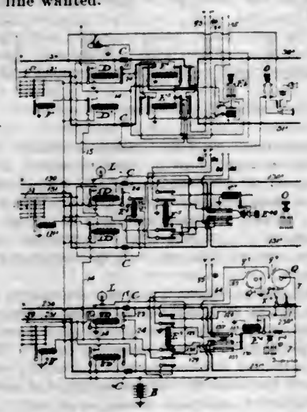
[Claims 6 to 15 not printed in the Gazette.]

1,107,143. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Mar. 15, 1906. Serial No. 306,292. (Cl. 179—27.)

1. In a telephone exchange system a plurality of subscribers' lines, a central station and automatic switches therein less than the number of lines, means actuated in response to a call over a line to connect the same with an automatic switching circuit, and means controlled by an operator to actuate the switch or switches so as to effect the desired connection, and consisting of a bank of selecting push buttons and a set of continuously revolving associated commutator devices.

2. In a telephone exchange system a plurality of subscribers' lines with a central office for the same and automatic switching devices in said central office less in number than the number of lines, means automatically actuated in response to a subscriber's call to connect his line with idle automatic switching devices, and means controlled by an operator for thereafter actuating said switches to connect the calling line as desired, and consisting of a bank of selecting push buttons and a set of continuously revolving associated commutator devices.

3. In a telephone exchange system a plurality of subscribers' lines, a central office therefor, automatic switching devices at said central office less in number than the number of lines, an automatic primary selector adapted to connect a calling line with idle switching apparatus, in response to the subscriber's call, a signal adapted to be displayed by the line so calling, and means whereby an operator may effect connection with the calling line to obtain the number wanted, and further means comprising constantly driven signal-impulse commutators and a bank of impulse selecting push buttons whereby the operator may set the automatic switching apparatus with which the calling line is connected so as to select and connect with the line wanted.



4. In a telephone exchange system, a central office equipment comprising incoming line-terminals, a number of automatic switch sets less in number than the number of lines, automatic primary selectors for connecting calling lines to idle switch sets, a multiple signal impulse transmitter, and operators' keys for selectively connecting said transmitter to the switches.

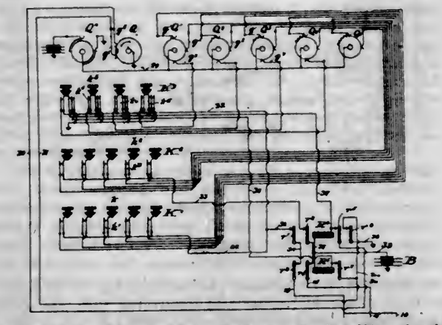
5. In a telephone exchange system a plurality of subscribers' lines, a number of automatic switching devices less than the number of lines, automatic primary selectors responding to calls and acting to connect the calling lines with idle switches, relays for the selectors and switches controlled by the calling subscriber, a common multiple signal transmitter, and operators' keys for connecting the same selectively, together with automatic means to break said connection when the switches have been actuated.

[Claims 6 to 21 not printed in the Gazette.]

1,107,144. TELEPHONE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Mar. 30, 1906. Serial No. 309,010. (Cl. 179—27.)

1. In a telephone exchange system a plurality of subscribers' lines having answering terminals and multiple or connective terminals, signal devices associated with the answering terminals, automatic connector switches containing multiple terminals, an operator's connective circuit adapted to connect the answering terminal of a calling line with a connector switch containing the multiple-terminals of the line wanted, and locking keys associated with the connective circuit adapted to be set by the operator for the number of the line wanted, and a multiple selection-impulse generator associated with said keys and operating through said keys to furnish selective impulses for selecting and connecting with a desired line.

2. In a telephone exchange system a plurality of subscribers' lines, answering and multiple or connective-terminals for each line, automatic switches containing the multiple or connective-terminals, means controlled by an operator to connect a calling line with a given connector switch, a multiple signal sender, locking keys for selecting desired combinations of signals from said signal sender, and further means controlled by the operator to connect said keys and signal sender to the connector switch to operate said switch selectively, together with means whereby the subscriber may signal the operator when the conversation is finished.



3. In a telephone exchange system a plurality of subscribers' lines, an answering switchboard and one or more automatic switches auxiliary thereto, answering terminals for the lines, located on the switchboard, multiple or connecting terminals for the lines located in the automatic switch-banks, automatic switch-terminals located on the switchboard, means whereby the operator may connect the same with the answering terminal of a calling line when required, a multiple power-driven signal transmitting device, a plurality of sets of impulse selecting locking buttons whereby the operator by locking one button from each bank may so modify the signal transmitting device in toto as to cause a plurality of signals to be sent successively as required for the selection of a predetermined desired line, and means controlled by the operator to apply the same to an automatic switch in order to complete a connection manually initiated.

4. In a telephone exchange system a plurality of subscribers' lines, an operator's manual connective apparatus with auxiliary automatic switching apparatus, means whereby connection with a calling subscriber is manually effected, the number wanted communicated to the operator, and a series of rows of locking keys adapted to be set to the desired line and station number and controlled by the operator to prepare said number for the auxiliary switches, together with automatic means comprising a plurality of independently and differently characterized electrical control circuits for controlling a switch in accordance with the number set, and means associated with the switches to automatically signal a called line when selected.

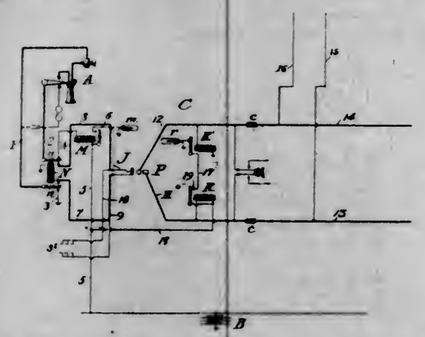
5. In a telephone exchange system, a plurality of line circuits, means manually controlled by an operator for initiating a connection in answer to a call, a controlling device, consisting of a continuously revolving commutator device and a plurality of rows of locking number keys adapted to be set in accordance with the number wanted, and automatic means brought into operation by said controlling device and actuated in accordance with the number set to complete the connection.

[Claims 6 to 49 not printed in the Gazette.]

1,107,145. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed June 22, 1906. Serial No. 322,860. (Cl. 179—27.)

1. In a telephone system, the combination of subscribers' lines, an answering jack and a calling signal for each of said lines, automatic connector switches in which multiples of said lines appear, trunks from switching plugs to said automatic switches the plug ends of said trunks being adapted to connect with said answering jacks, and a

constantly-driven signal-sending device with locking signal-selecting keys for controlling the movements of said automatic switch to connect its trunk to the terminals of a desired line.



2. In a telephone system, the combination of subscribers' lines, a calling signal and answering jack for each of said lines, automatic connector switches in which multiples of said lines appear, trunks from answering plugs to said automatic switches, and a constantly-driven signal-sending device with a set of locking signal-selecting keys associated with each of said trunks for controlling the movements of said automatic switch to connect its trunk to the terminals of a desired line.

3. In a telephone system, the combination of subscribers' lines, a jack and signal for each of said lines, automatic connector switches in which multiples of said lines appear, trunks to said automatic switches, a switch plug for each trunk for connecting the trunk to a calling line, and a constantly driven signal-sending device with a bank of locking signal-selecting keys per trunk for controlling the movements of said automatic switch throughout a plurality of successive directory digits to connect its trunk to the terminals of a desired line.

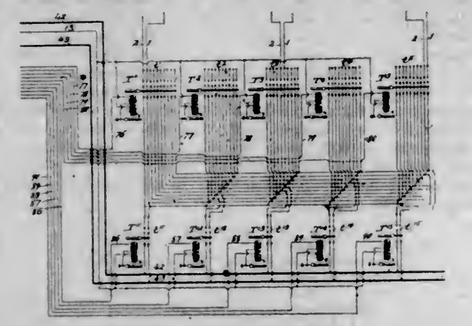
4. In a telephone system, the combination of subscribers' lines, a calling jack and signal for each of said lines, automatic connector switches in which multiples of said lines appear, trunks to said automatic switches, manual means for connecting a calling line to one of said automatic switches, and a constantly driven signal-sending device with a bank of locking signal-selecting keys, associated with each of said trunks for controlling the movements of the automatic switch of the trunk throughout a plurality of successive directory digits to connect the trunk with a desired line.

5. In a telephone system, the combination of subscribers' line, a jack and signal for each of said lines, automatic connector switches in which multiples of said lines appear, trunks to said automatic switches, plug ends on said trunks to connect with said answering jacks, and a constantly driven signal-sending device with locking selecting number keys for controlling the movements of said automatic switch to connect its trunk to the terminals of a desired line.

[Claims 6 to 16 not printed in the Gazette.]

1,107,146. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed July 14, 1906. Serial No. 326,251. (Cl. 179—27.)

1. In a telephone exchange system, a central office, a plurality of subscribers' lines to be interconnected, and central office switching means for interconnecting them, comprising a trunk, means to connect calling lines with the trunk, a plurality of relays intermediate the trunk and the lines and containing each terminal contacts of a plurality of lines, and control means for said relays comprising an operator's key set arranged to selectively control the circuits of the relays, whereby called lines may be connected with the trunk at the will of the operator.



2. In a telephone exchange system, a central office, a plurality of line circuits to be interconnected, and central office means for interconnecting the same comprising a plurality of relays containing line contacts and an associated trunk circuit together with means at the central office common to all of said relays and trunk and controlled by the central office operator for energizing the relays selectively.

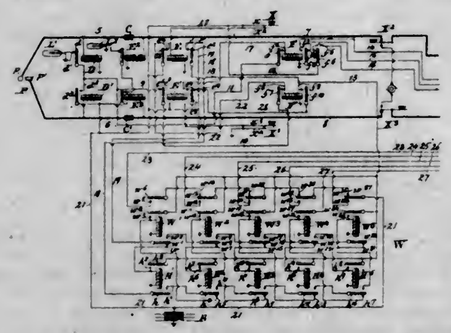
3. In a telephone exchange system, a plurality of line circuits, and means to interconnect the same comprising a trunk circuit and a plurality of relays each having contacts of a plurality of lines connected to said line circuits, and switching devices having identifying contacts connected with the lines directly controlling the relays.

4. In a telephone exchange system, a plurality of line circuits, a plurality of relays for interconnecting the said circuits for conversational purposes, and unitary switches with traveling contacts controlling commonly a plurality of circuits separate from the talking circuits and from subscriber's apparatus for directing and actuating the relays.

5. In a telephone exchange system, a plurality of line circuits, and connective means therefor comprising relays exclusively for the talking circuits and unitary switches with traveling contacts controlling commonly to a plurality of the relays, the said switches being separate from and independent of talking circuits and subscriber's apparatus.

[Claims 6 to 16 not printed in the Gazette.]

1,107,147. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed July 14, 1906. Serial No. 326,252. (Cl. 179—27.)



1. In a telephone exchange system, a plurality of lines and means to selectively connect therewith comprising a series of relays arranged in numerical order corresponding to the digits to be selected and adapted to be energized successively by current impulses, the energization of each succeeding relay being dependent upon the energization of those preceding it.

2. In a telephone exchange system, means for selecting wanted lines comprising a series of relays brought into association with a calling line for that purpose, local controlling circuits for said relays less in number than the number of relays, and means for sending current impulses over said controlling circuits to energize the selective relays in step by step succession.

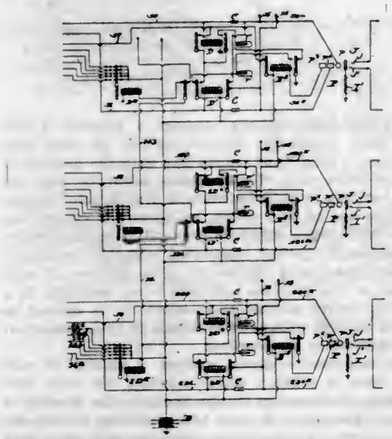
3. In a telephone exchange system, a plurality of talking circuits, and means for selectively interconnecting the same composed of contact devices and controlling means thereof comprising a series of relays adapted to be operated step by step in succession, the circuit of each succeeding relay being partly controlled by those preceding it, whereby the number wanted is reached by building up the controlling circuit.

4. In a telephone exchange system, connecting means and selective controlling means therefor consisting of a double set of interlocking relays, a double controlling circuit, and means to apply current impulses to the two sides of the circuit alternately, whereby the relays may be operated step by step in sequence and may thereby be caused to select any desired circuit.

5. In a telephone exchange system, a plurality of line circuits to be interconnected, means associated with said lines for indicating a call, manually operated connective means for answering a call and extending the line calling to the switching apparatus, a group or groups of relays constituting said switching apparatus, and means for controlling the same, itself controlled over a portion of the talking circuit.

[Claims 6 to 18 not printed in the Gazette.]

1,107,148. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Aug. 1, 1906. Serial No. 328,723. (Cl. 179—27.)



1. In a telephone exchange system, a plurality of line circuits to be interconnected, a plurality of terminal plugs less in number than the number of lines, and groups of relays associated with the respective plugs, each group common to a plurality of lines and containing terminal contacts thereof for connecting any line when calling to an idle terminal plug, together with automatic switching apparatus containing multiple terminals of the lines, and jacks forming terminals for the switch circuits, adapted to receive the plugs, whereby calls made over the lines will automatically distribute themselves upon the plugs, and the plug circuits may be trunked to automatic switches for the purpose of completing the connections desired.

2. In a telephone exchange system, a plurality of line circuits, a plurality of terminal plugs, groups of relays common to said lines, one group associated with each plug, for automatically connecting a calling line to an idle plug, a signal associated with each plug and becoming active when a calling line is connected thereto, and automatic switches coöperating with said plugs to complete the connections desired.

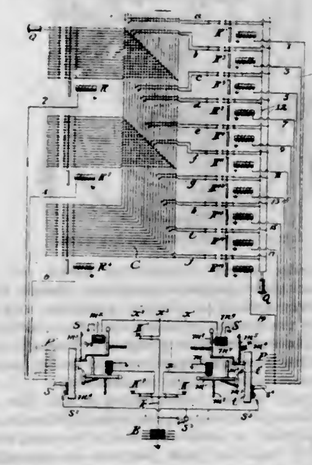
3. In a telephone exchange system, a plurality of lines to be interconnected, and connective apparatus therefor comprising the following instrumentalities; terminal plugs, primary selector switching relays in decimally arranged groups containing line terminals, one group associated with each plug, for connecting the calling lines with idle plugs, automatic switches and jack terminals therefor, together with manually operated controlling apparatus for the switches.

4. In a telephone exchange system, a plurality of lines to be interconnected, and connective apparatus therefor comprising the following instrumentalities; terminal plugs, primary selector switching relays in decimally arranged groups containing line terminals, one group associated with each plug, for connecting the calling lines with idle plugs, automatic switches and jack terminals therefor, together with manually operated controlling apparatus for the switches associated with the plugs and adapted to be connected to the switches through the plugs and jacks.

5. In a telephone exchange system, a plurality of line circuits to be interconnected, a plurality of single cord terminals less in number than the number of lines, jacks coöperating with the single cord terminals for completing connections desired, and relays interposed between the cord terminals and the lines in decimal relation with each other and containing multiples of the lines, whereby a calling line may be connected to an idle cord terminal.

[Claims 6 to 15 not printed in the Gazette.]

1,107,149. SELECTIVE APPARATUS FOR SYSTEMS OF COMMUNICATION. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Oct. 11, 1906. Serial No. 338,465. (Cl. 179—18.)



1. An electrical system for selection comprising a plurality of circuits and contact terminals therefor, a number of stationary connective devices less than the number of terminals, means having traveling contacts electromagnetically driven step by step for effecting combinations of said connective devices and thereby completing the circuits and means for releasing the aforesaid means.

2. An electrical system for selection and interconnection of line circuits comprising a plurality of line circuits and contact terminals therefor, a number of connecting

relays less than the number of terminals, step by step selective means for effecting combinations of said relays and thereby interconnecting the circuits, and means for restoring the aforesaid means to normal.

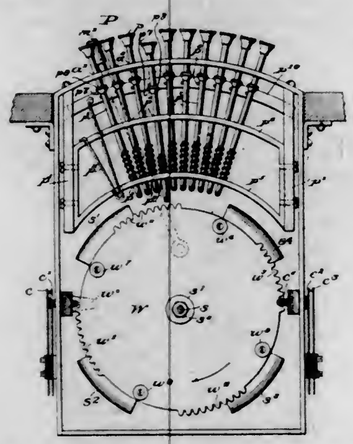
3. An electrical system for selection and interconnection of line circuits comprising a plurality of line circuits and contact terminals therefor, a number of connecting relays less than the number of terminals and step by step selective switches variably driven for effecting combinations of said relays to thereby interconnect the circuits.

4. An electrical system of selection and interconnection of line circuits comprising a plurality of line circuits and contact terminals therefor, a number of connecting relays less than the number of terminals, step by step selective switches for effecting combinations of said relays, and thereby interconnecting said circuits and means for restoring said switches.

5. An electrical system for selection and interconnection of line circuits comprising a plurality of line circuits and contact terminals therefor, a number of connecting relays less than the number of terminals, step by step selective switches less than the number of relays for effecting combinations of said relays and thereby interconnecting the circuits and means for restoring said switches.

[Claims 6 to 17 not printed in the Gazette.]

1,107,150. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Nov. 26, 1906. Serial No. 345,167. (Cl. 179—90.)



1. An impulse signal transmitting device for use in telephone exchange systems comprising means for producing uniform groups of current impulses, and means for modifying the groups becoming operative during transmission, said means comprising separate contact units arranged in digital groups corresponding to the groups of current impulses, substantially as described.

2. An impulse signal transmitting device for use in telephone exchange systems comprising a number wheel adapted to produce a uniform series of current changes, a plurality of rows of push buttons corresponding to variable digits of the number to be transmitted, interlocking means for the push buttons in each row and means operated with the number wheel as determined by the buttons to modify the current changes in accordance with the number to be transmitted, substantially as described.

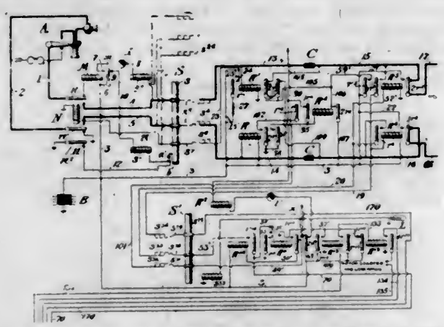
3. A signal transmitter for use in telephone exchange systems, switching apparatus comprising uniformly proportioned means for producing uniform groups of control impulses, and means for modifying the groups becoming operative during transmission, said means comprising separate contact units arranged in digital groups corresponding to the groups of current impulses, substantially as described.

4. An impulse transmitter to be used in telephone exchange systems comprising means to produce uniform groups of impulses, and a plurality of banks of signal selecting keys each comprising a plurality of keys and arranged to short-circuit said impulse producing means during various portions of the operation thereof according to the key of the bank pressed whereby various portions of each group of impulses may be made effective to control the switches.

5. An impulse transmitter to be used in telephone exchange systems comprising means to produce successively a plurality of uniform groups of signal impulses, and a corresponding plurality of banks of digitally arranged signal selecting keys, arranged to successively disable said impulse producing means during the production of a portion of the corresponding group of impulses whereby the groups of impulses are variously modified during transmission.

[Claims 6 to 10 not printed in the Gazette.]

1,107,151. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Apr. 24, 1907. Serial No. 370,051. (Cl. 179—27.)



1. In a telephone exchange system, a number of subscribers' lines, a primary selector switch for each subscriber's line, a number of trunks less than the number of subscribers' lines, each of said trunks having at one end multiple contacts in said switches, a first selector switch at the other end of each trunk, an operator's circuit and apparatus including a telephone set and a sending device, and an automatic switch associated with the operator's circuit and containing terminals of a number of said trunks, all of the switches specified being normally in a zero or inoperative position and adapted to be started up to test and connect with bank terminals in their numerical order, substantially as described.

2. In a telephone exchange system, a number of subscribers' lines, a primary selector switch for each subscriber's line, a number of trunks less than the number of subscribers' lines, each of said trunks having at one end multiple contacts in said primary selector switches, a first selector switch at the other end of each of said trunks, an operator's circuit and apparatus including a telephone set and a sending device, an automatic switch associated with the operator's circuit and containing terminals of a number of said trunks, and restoring means for said switches, substantially as described.

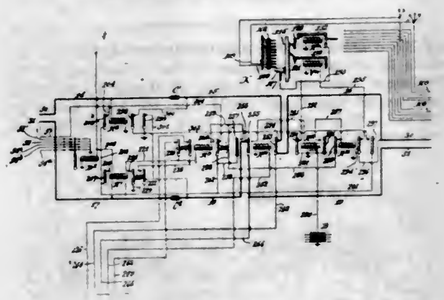
3. In a telephone exchange system, a number of subscribers' lines, a primary selector switch for each subscriber's line, a number of trunks less than the number of subscribers' lines, each of said trunks having at one end multiple contacts in said primary selector switches, a first selector switch at the other end of each trunk, an operator's circuit and apparatus including a telephone set and a sending device, an automatic switch associated with the operator's circuit and containing terminals of a number of said trunks, driving means for the primary selector switches started by the calling subscribers, and driving means for the operators' switches controlled by the primary selector trunks, substantially as described.

4. In a telephone exchange system, a number of subscribers' lines, a primary selector switch for each subscriber's line, a number of trunks less than the number of subscribers' lines, each of said trunks having at one end multiple contacts in said primary selector switches, a first selector switch at the other end of each trunk, an operator's circuit and apparatus including a telephone set and a sending device, an automatic switch associated with the operator's circuit and containing terminals of a number of said trunks, driving means and release or restoring means for said primary selector switches, said driving and release or restoring means being controlled by the calling subscribers and driving means for the operators' switches controlled in the use of the primary selector trunks, substantially as described.

5. In a telephone exchange system, a number of subscribers' lines, a primary selector switch for each subscriber's line, a number of trunks less than the number of subscribers' lines, each of said trunks having at one end multiple contacts in said primary selector switches, a first selector switch at the other end of each of said trunks, an operator's circuit and apparatus including a telephone set and a sending device, an automatic switch associated with the operator's circuit and containing terminals of a number of said trunks, driving means and release or restoring means for the said primary selector switches, said driving means and said release or restoring means being controlled by the calling subscribers, driving means and release or restoring means for the operators' or secondary switches, said driving means and release or restoring means for the operators' switches being controlled in the use of the primary selector trunks, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,107,152. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Dec. 26, 1907. Serial No. 408,039. (Cl. 179—27.)



1. In a telephone exchange system, subscribers' lines, connective links therefor, automatic connective apparatus comprising switches for selecting successive groups of links and relays associated with said links for determining the extension of the connection through an idle link in a selected group with means controlled by an operator for initially actuating the automatic connective apparatus.

2. In a telephone exchange system, subscribers' lines, connective links therefor less in number than the number of lines, automatic connective apparatus comprising switches for selecting successive groups of links and relays responsive to the action of said switches for selecting and extending the connection through an idle link in a selected group, with means controlled by an operator for initially energizing said automatic connective apparatus.

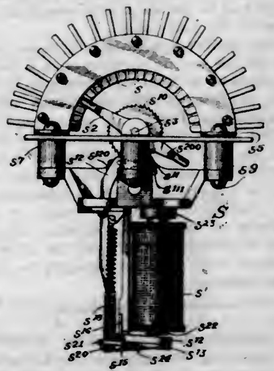
3. In a telephone exchange system, subscribers' lines, connective trunks therefor less in number than the number of lines, automatic connective apparatus comprising connecting relays and govering step-by-step switches therefor arranged to be operated by current impulses for selecting trunk groups and means controlled by an operator for transmitting a predetermined number of impulses to said automatic connective apparatus to effect the desired connection.

4. In a telephone exchange system, subscribers' lines, connective trunks therefor less in number than the number of lines, automatic connective apparatus comprising connecting relays and governing step-by-step switches therefor arranged to be actuated by current impulses, impulse sending apparatus and means controlled by an operator for energizing said switches through current impulses from said sending apparatus whereby desired trunks are selected and the connection with the wanted subscriber effected.

5. In a telephone exchange system, subscribers' lines, connective trunks therefor less in number than the number of lines, primary automatic means for selectively connecting the calling subscriber with an idle first trunk, means associated with the selected trunk for selecting a group of second trunks to advance the connection, additional means associated with the second trunks but controlled by the preceding group selective means for connecting with the first selected trunk and means controlled by an operator for initially actuating the trunk selecting means.

[Claims 6 to 17 not printed in the Gazette.]

1,107,153. ELECTRIC SWITCH. EDWARD E. CLEMENT, Washington, D. C. Original applications filed July 15, 1907, Serial No. 383,875, and Apr. 18, 1910, Serial No. 556,213. Divided and this application filed June 29, 1910. Serial No. 569,606. (Cl. 179—27.5.)



1. An electric switch comprising a frame, a bank of contacts in the arc of a circle with interposed insulation mounted in said frame, wipers pivoted on the frame so as to sweep over the contacts, a ratchet wheel connected with the wipers, and an electromagnetic unit for driving the ratchet comprising an iron core end-supported on the frame with its axis extending toward the axis of the wipers, a winding on the core, a fixed bearing near the free end of the core, an iron armature adapted to rock on said bearing and extending into proximity to said free end of the core as a pole piece, a relatively light lever struck from sheet material connected at one end to said armature and extending along the magnet substantially parallel to the core into proximity to the wiper ratchet, and a pawl pivoted in the end of the lever and engaging the ratchet, said lever and armature together constituting a bell crank and the lever being formed up with a hollow rib in its body extending beyond and around its junction with the armature so as to stiffen the structure and prevent springing or flexing in the plane of its motion.

2. An electric switch comprising a frame, a bank of contacts in the arc of a circle with interposed insulation mounted in said frame, wipers pivoted on the frame so as to sweep over the contacts, a ratchet wheel connected with the wipers, and an electromagnetic unit for driving the ratchet comprising an iron core supported on the frame from one end and having its other end projecting laterally therefrom, a winding on the core, a fixed bearing near the free end of the core, an iron armature adapted to rock on said bearing and extending into proximity to said free end of the core as a pole piece, a lever formed of light non-magnetic material connected at one end to said armature and extending along the magnet substantially parallel to the core into proximity to the wiper ratchet, and a pawl pivoted in the end of the lever and engaging said ratchet, said lever and armature together constituting a bell crank, and the lever being provided with stiffening means at its juncture with the armature to prevent springing or flexing in the plane of its motion.

3. An electric switch comprising bank contacts, a cooperating wiper and means for driving the same, together with a control magnet unit therefor composed of the following instrumentalities: a pair of parallel cores s^{22} carrying windings s' and united by a yoke s^{23}, a frame or return bar extending parallel to the magnet cores and carrying a knife edge extending transversely to and overlying the free ends of the cores, an iron armature engaging said knife edge and extending across the core-ends, a lever of light non-magnetic material formed in bell crank shape with a stiffening rib around its angle, its short member being secured to the iron armature and its long member extending parallel to the cores into operative proximity to the wiper actuating means, and a pair of symmetrically disposed coiled springs each secured at one end to the yoke end of the magnet structure and at the other end to a projection on the armature outside of the point of attachment of the lever, both of said springs being normally under tension and acting to withdraw the armature from the pole pieces and to maintain said armature in constant engagement with the knife edge.

4. An electric switch comprising an open bank of contacts formed in the arc of a circle, and a double wiper arm having contacts at both ends adapted to be rotated in continuous engagement with said bank contacts, but with only one end engaging at the same time.

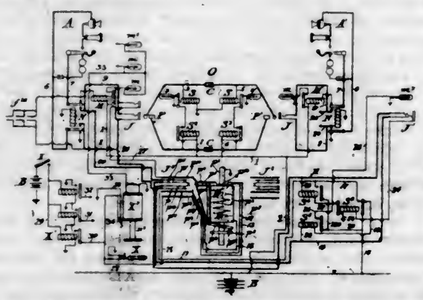
5. An electric switch comprising a bank of contacts arranged in the arc of a circle, a spindle, and a plurality of connected wiper arms mounted on said spindle and spaced apart thereon at angular distances representing the same fraction of a circle as the angular length of the arc of contacts, whereby in rotating the spindle, continuous engagement may be maintained between the wiper arms and the bank contacts, only one arm engaging the contacts at the same time however.

1,107,154. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Nov. 23, 1905, Serial No. 288,776. Renewed Dec. 31, 1910. Serial No. 600,278. (Cl. 179—27.)

1. In a telephone exchange system a main switch board, a plurality of subscribers' lines connected thereto, operators' connective devices on the main board, an auxiliary switch board and trunk connections therefrom with terminal automatic selective answering switches, multiple connections from the subscribers' lines to the banks of said switches, and means associated with the subscribers' lines to determine the activity or non-activity of said automatic switches, and thereby to determine the answering of the calls on the main or auxiliary board.

2. In a telephone exchange system a main switchboard, an auxiliary switchboard, means for normally receiving and answering calls on the main switchboard, automatic means for receiving and transferring calls by connecting the calling lines to the auxiliary switchboard, and means controlled in the operation of the main switchboard apparatus to determine such transfer of calls to the auxiliary board.

3. In a telephone system a main switchboard having answering positions and subscribers' lines apportioned to each, a primary selector switch associated with each position and containing terminals of the lines thereat, a trunk line from each primary selector switch to an auxiliary switchboard, with answering terminals thereon, and means to determine the activity of the primary selector switches in accordance with the condition of the lead on the main switchboard.

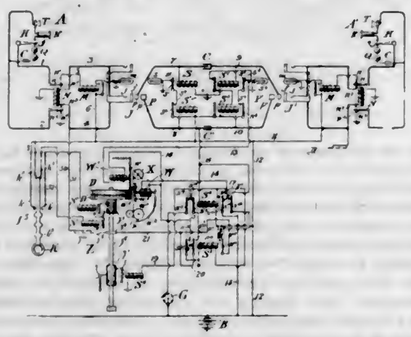


4. In a telephone system a main switchboard having answering positions and subscribers' lines apportioned to each, a primary selector switch associated with each position and containing terminals of the lines thereat, a trunk line from each primary selector switch to an auxiliary switchboard, with answering terminals thereon, and means actuated by a predetermined increase in the load on any position of the main switchboard to render the corresponding primary selector switch or switches active.

5. In a telephone system a main switchboard having answering positions and subscribers' lines apportioned to each, a primary selector switch associated with each position and containing terminals of the lines thereat, a trunk line from each primary selector switch to an auxiliary switchboard, with answering terminals thereon, and means controlled by the subscribers in calling to render the primary selector switches active when a predetermined number of calls remain unanswered on the main switchboard.

[Claims 6 to 13 not printed in the Gazette.]

1,107,155. TELEPHONE REGISTERING SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y., a Corporation of New York. Filed Apr. 15, 1905, Serial No. 255,832. Renewed Dec. 31, 1910. Serial No. 600,279. (Cl. 179—9.)



1. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line connected, means to record the call on the register charged to the line selected, and means to indicate if the call was answered, substantially as described.

2. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line connected, means to record the call on the register charged to the line selected, and means to indicate the operator or connective device through whom or which the connection was effected, together with setting means for said indicating means individual to each operator, substantially as described.

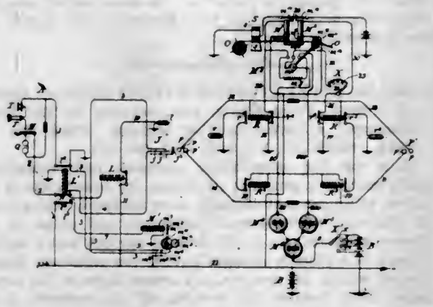
3. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means controlled through said wiper to actuate the switch and register in making a connection, to select the line connected, means to record the call on the register charged to the line selected, and means normally dissociating the switch wiper from said actuating means, so that the latter may be left indifferently upon any contact when idle, substantially as described.

4. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means controlled through the wiper to actuate the switch and register in making a connection, to select the line connected, means to record the call on the register charged to the line selected, and a dissociated relay acting when the circuits are idle to cut off the switch wiper from said actuating means, and when a connection is effected to associate the same, substantially as described.

5. A telephone registering system comprising an automatic selector switch containing line-identifying terminals and a wiper coöperating therewith, a register associated with the switch, means to actuate the switch and register in making a connection, to select the line calling, means to record the call when said line is selected, and means brought under the control of the subscriber called to charge the call to the line calling when the connection is completed and the call is answered, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,107,156. TELEPHONE REGISTERING SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y., a Corporation of New York. Filed Feb. 23, 1905, Serial No. 247,020. Renewed Apr. 17, 1912. Serial No. 691,560. (Cl. 179—9.)



1. In a telephone system, subscribers' lines and operator's connective circuits with a registering device associated with each connective circuit and comprising as its principal feature a motor, a register device driven by said motor, and means jointly controlled by a calling and the called subscriber for running and separately for stopping said motor, substantially as described.

2. In a telephone exchange registering system, a subscriber's line, a spring jack, a line signal and a cut-off therefor, a cord circuit with terminal plugs and supervisory relays, a register normally disconnected from the line, a number wheel associated with the line and adapted when operated to run a predetermined time only, controlling means for the register controlled by the supervisory relays, and means whereby said number wheel may be given control of a supervisory relay for a limited period in the operation of the cut-off, substantially as described.

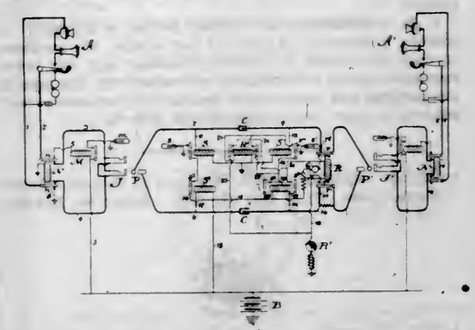
3. In a telephone system, subscribers' lines and connective circuits therefor, means to supply current to the subscribers' transmitters on said lines during conversation, and a motor register adapted to respond to said current flow and thereby to record the duration of connection.

4. In a telephone exchange system, subscribers' lines, a central office registering device, a motor for driving the same, and means controlled by current in the subscribers' lines for determining the actuation of said motor.

5. In a telephone exchange registering system, means controlled by subscribers for registering completed connections and the elapsed time thereof, together with means controlled from the exchange to determine the time rate or speed of registration, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,107,157. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to Frederick C. Stevens, Attica, N. Y. Filed Sept. 13, 1905, Serial No. 278,246. Renewed Mar. 19, 1913. Serial No. 755,520. (Cl. 179—58.)



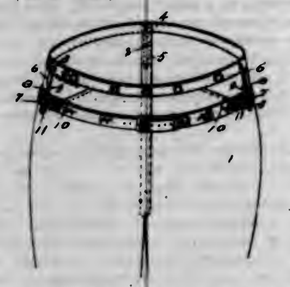
1. In a telephone exchange system, subscribers' stations having ringers, a central station, and line circuits interconnecting the same, connecting apparatus for the lines and a ringing generator at the central station, a relay and circuit connections therefor becoming partially operative when connection is effected with a line, a periodic circuit closer acting to render the circuit and relay completely operative at intervals to put the ringing generator current to line, and a relatively low resistance shunt about the relay closed when the subscriber answers.

2. In a telephone exchange system, the combination with subscribers' lines and signals, of central office connecting apparatus, a source of signaling current, switching means to connect said source to a subscriber's line, means for intermittently actuating the switching means, and means controlled by the subscriber to place a relatively low resistance shunt about the switching means, thereby disabling said switching means during the continuance of the connection.

3. In a telephone exchange system, the combination with subscribers' lines and signals, of the central office connective apparatus, a source of signaling current, switching means to connect said source to a subscribers' line, a commutator controlling said switching means at

intervals, and means controlled by the subscriber to close his line so as to form a relatively low resistance shunt about the switching means to disable the same between intervals.

1,107,158. BELT-STRAP FOR OVERALLS. FRANK E. DAY, Tacoma, Wash. Filed Mar. 16, 1914. Serial No. 825,118. (Cl. 2—143.)



1. An overall having a plurality of pairs of belt straps, the members of each pair being in vertical alinement.

2. An overall having pockets formed therein, and a plurality of pairs of belt straps, the members of each pair being in vertical alinement, the lower members of each pair being in substantial alinement with the tops of the pockets.

3. In combination, an overall having pockets therein, a plurality of pairs of belt straps, the members of each pair being in vertical alinement and a belt laced through the straps and adapted to close the openings in the pockets.

4. In combination, an overall having a plurality of pockets, a plurality of pairs of belt straps, the members of each pair being in vertical alinement and the lower members of each pair being in alinement with the tops of the pockets, and a belt laced through the belt straps and adapted to close the openings in the pockets.

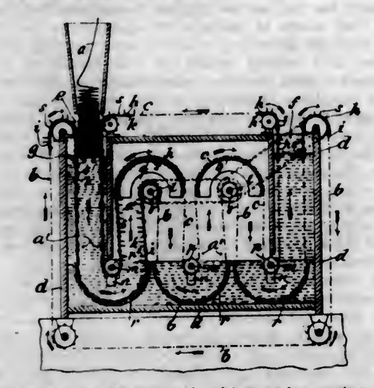
1,107,159. FENCE-CLAMP. WILLIAM L. DILLON, Council Bluffs, Iowa. Filed Oct. 27, 1909. Serial No. 524,900. (Cl. 39—53.)



A fence clamp comprising a pair of elongated members, one of said members being provided with slots leading in from the longitudinal edge thereof, plates mounted on the side of the slotted member and having opposite side portions which extend along the opposite edge of the slots, said plates having end portions which are disposed against the edge of the said slotted member at the opposite sides of the slots, bolts passing transversely through the end portions of said plates which are at the edge of the member and also passing transversely through the said member at the opposite sides of the slots, and clamping bolts adapted to enter the slots and the spaces between the opposite side portions of the plates and engageable with the member other than the said slotted member.

1,107,160. APPARATUS FOR BLEACHING AND SCOURING FIBROUS MATERIALS. JOHN MACADAM, Chester, Pa., assignor to The Eddystone Manufacturing Company, Eddystone, Pa., a Corporation of Pennsylvania. Filed Feb. 16, 1914. Serial No. 819,100. (Cl. 8—19.)

1. In an apparatus for bleaching and scouring fibrous materials, a liquor tank, rotary members mounted near the bottom and the top in the said tank, guides concentric with and curving under the lower and over the upper members, two endless belts located in parallelism with each other and having a space between them for the material to be treated and passing alternately down and around the said rotary members and over the upper faces of all guides, and means for drawing the said belts with the material between them jointly through the said liquor tank, for the purpose specified.



2. In an apparatus for bleaching and scouring fibrous materials, a liquor tank, rotary members and guides mounted near the bottom and the top in the said tank, two endless belts located over each other with a space between them for the material to be treated and passing alternately down and up around the said rotary members and guides, and plates pivoted to the inner sides of the said endless belts to grip and carry the material between them, for the purpose specified.

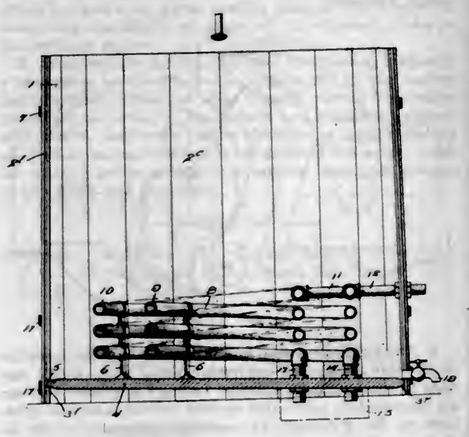
3. In an apparatus for bleaching and scouring fibrous materials, a liquor tank, rotary members and guides mounted near the bottom and the top in the said tank, and two endless belts located over each other with a space between them for the material to be treated and passing alternately down and up around the said rotary members and guides, the said endless belts consisting each of rollers and of a driving chain at each side thereof to the links of which the ends of the said rollers are pivoted, for the purpose specified.

4. In an apparatus for bleaching and scouring fibrous materials, a liquor tank, rotary members and guides mounted near the bottom and the top in the said tank, two endless belts located over each other with a space between them for the material to be treated and passing alternately down and up around the said rotary members and guides and means for rendering the upper rotary members adjustable in relation to the respective belt guides, for the purpose specified.

1,107,161. APPARATUS FOR MAKING CATSUP. GEORGE R. FIELDS, Terre Haute, Ind., assignor to The Fields Company, a Corporation of Indiana. Filed Feb. 10, 1914. Serial No. 817,860. (Cl. 99—2.)

1. A vat for evaporating vegetable pulp comprising walls made of a plurality of staves, the lower ends of the staves being grooved on their inner surfaces, said grooves in adjacent staves being contiguous, the plane of the groove being oblique to the axis of the vat and a bottom formed of a planate member having the periphery thereof located within the grooves, and means adjacent the lowest point of the bottom for drawing off the contents of the vat.

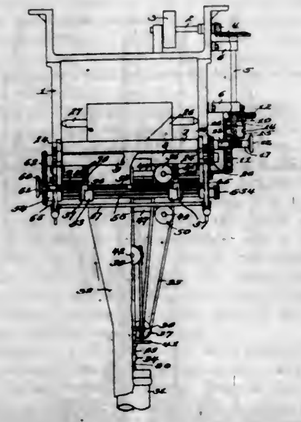
2. A vat for evaporating vegetable pulp comprising a plurality of staves adapted to lie adjacent each other to form a closed wall, the lower inner ends of each of said staves being provided with a groove, the grooves of adjacent staves being contiguous, the plane of the grooves being oblique to the vertical axis of said closed wall, a single bottom member conforming to the said wall having the periphery thereof located within the grooves, and means located adjacent the lowest portion of the bottom adapted to pass the contents of the vat.



3. A vat for evaporating vegetable pulp, comprising a wall provided upon the inner lower sides thereof with a groove, the plane of said groove being oblique with respect to a horizontal plane and a planate member forming the bottom and having the periphery thereof received by the groove, and means for passing the contents of the vat, said means located adjacent the lowest portion of the bottom.

4. In an apparatus for cooking vegetable stock, the natural coloring matter of which rises to the surface of the stock when the latter boils, a wooden tank, a heating element located within the tank and adjacent the bottom thereof, and means to spray a liquid into the tank when the vegetable pulp is boiling.

1,107,162. FABRIC-DRYING APPARATUS. JOSEPH A. FIASCHING, Utica, N. Y. Filed June 18, 1913. Serial No. 774,460. (Cl. 26—16.)



1. In an apparatus of the character specified, the combination, with a loader; of a frame; a receiving roller and a feeder mounted therein; a spreader intermediate said loader and said feeder and removably coupled to the former, said spreader projecting into said frame; mechanism mounted in said frame for coöperation with the projecting portion of said spreader, to hold the latter against removal, said mechanism including a movable part; and mechanism associated with the first-named mechanism to lock said movable part in operative position.

2. In an apparatus of the character specified, the combination, with a loader; of a frame; a receiving roller and a feeder mounted therein; a spreader intermediate said loader and said feeder and removably coupled to the former, said spreader projecting into said frame; mechanism mounted in said frame for coöperation with the projecting portion of said spreader, to hold the latter against removal, said mechanism including a movable part; and mechanism releasably associated with said movable part for locking and unlocking the same in and from operative position.

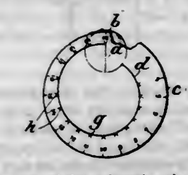
3. In an apparatus of the character specified, the combination, with a fabric spreader; of a combined pressing and clamping mechanism coöperative therewith embodying a stationary part, and a complemental part movable toward and from the same; and means for shifting the movable part into and out of position for coöperation with the stationary part.

4. In an apparatus of the character specified, the combination, with a fabric spreader; of a combined pressing and clamping mechanism coöperative therewith embodying a stationary part, and a complemental movable part having a cam surface; and a controlling device having a member arranged to engage said cam surface, to force said movable part toward said stationary part.

5. In an apparatus of the character specified, the combination, with a fabric spreader; of a combined pressing and clamping mechanism coöperative therewith embodying a stationary part, and a complemental part movable toward and from the same; and a controlling device for engagement with said movable part, to force that part toward said stationary part and lock it in place with respect thereto.

[Claims 6 to 21 not printed in the Gazette.]

1,107,163. TELESCOPE GUN-SIGHT. OSCAR GRAUHEDING, Dusseldorf, Germany. Filed Aug. 8, 1912. Serial No. 714,112. (Cl. 33—50.)



1. A telescope gun sight wherein the sighting point is determined by the intersection of a vertical line with a curved line, comprising a fixed plate and an adjustable plate, the vertical line being on one plate and the curved line on the other, said latter plate being provided with target markings, each marking consisting of two spaced-apart points, the distance between such points varying for each marking, and corresponding to a constant width of target for all ranges.

2. A telescope gun sight wherein the sighting point is determined by the intersection of a vertical line with a curved line, comprising a fixed plate and an adjustable plate, the vertical line being on one plate and the curved line on the other, said latter plate being provided with V-shaped target markings, the distance between the ends of the limbs of the markings varying for each marking, and corresponding to a constant width of target for all ranges.

1,107,164. PRODUCING FAST DYEINGS ON THE FIBER. RICHARD HERZ, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, a Corporation of New York. Filed Feb. 21, 1913. Serial No. 749,845. (Cl. 8—1.)

1. The process for producing fast dyeings on the fiber which consists in developing diazotizable coloring matters on the fiber by coupling the diazotized coloring matters

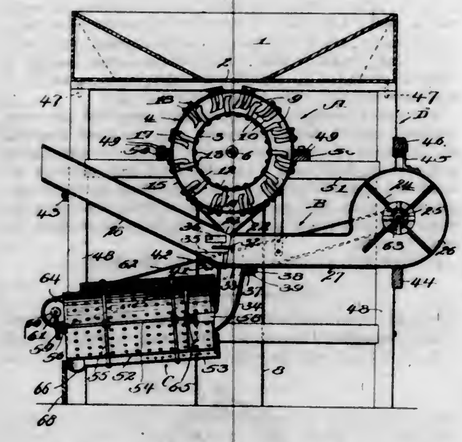
with amino-derivatives of a carbazole compound, substantially as described.

2. The process for producing fast dyeings on the fiber which consists in developing diazotizable coloring matters on the fiber by coupling the diazotized coloring matters with amino-derivatives of (N) substituted carbazole compounds, substantially as described.

3. The process for producing fast dyeings on the fiber which consists in developing diazotizable coloring matters on the fiber by coupling the diozatized coloring matters with tetraamino derivatives of a carbazole compound, substantially as described.

4. The process for producing fast dyeings on the fiber which consists in developing diazotizable coloring matters on the fiber by coupling the diazotized coloring matters with tetraamino derivatives of (N) substituted carbazole compounds, substantially as described.

1,107,165. BEAN-HULLER. CHARLES A. HOOKS, Oxford, Fla. Filed Aug. 7, 1912. Serial No. 713,922. (Cl. 130—30.)

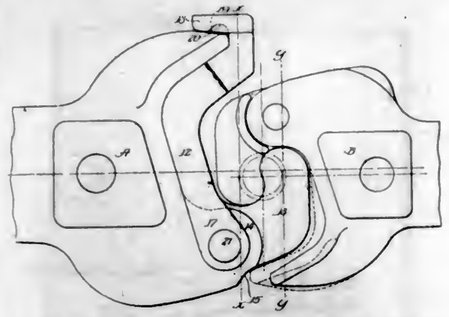


1. In a hulling machine, the combination of a separator having a neck which consists of a pair of separable sections arranged in longitudinal alinement and provided at their junction with inlet and outlet openings for the material undergoing treatment, each section having a transversely-arranged member provided upon its bottom wall; and a discharge chute located directly beneath said outlet opening and having its upper edges detachably connected with said members.

2. In a hulling machine, the combination of a separator having a neck which is formed intermediate the ends thereof with inlet and outlet openings for the material undergoing treatment and is provided on its bottom wall at one side of the outlet opening with a transverse rib and at the other side with a transverse bar; and a discharge chute located directly beneath said outlet opening and having one of its upper longitudinal edges provided with a flange detachably fastened to said rib, and its other upper longitudinal edge provided with lateral lugs detachably engaged with said bar.

3. In a hulling machine, the combination of a separator having a neck which consists of a pair of separable sections arranged in longitudinal alinement and provided at their junction with inlet and outlet openings for the material undergoing treatment, one section being provided upon its bottom wall at one side of the outlet opening with a transverse rib, and the other section being provided upon its bottom wall with a transverse bar; and a discharge chute located directly beneath said outlet opening and having one of its upper longitudinal edges provided with a flange detachably fastened to said rim, and its other upper longitudinal edge provided with lateral lugs detachably engaged with said bar.

1,107,166. CONTOUR CAR-COUPLING. ROBERT E. L. JANNEY, Chicago, Ill. Filed Nov. 16, 1911, Serial No. 660,712. Renewed Jan. 5, 1914. Serial No. 810,511. (Cl. 213—65.)

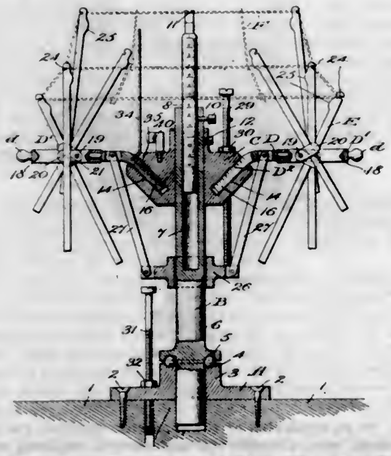


1. The herein described means for enabling the operation of two car couplers of different contour lines, which consists in applying to the coupler having the greater contour, an intermediate removable member corresponding in thickness to the difference in contours, substantially as described.

2. The herein described means for enabling the operation of two car couplers of different contour lines, which consists in applying to the coupler having the greater contour an intermediate removable member corresponding in thickness to the difference in contours, and a temporary knuckle having a hub portion fitting said enlarged coupler and an engaging portion corresponding to the contour of the smaller coupler, substantially as described.

3. A coupler of increased dimensions having means whereby it may be engaged by a coupler of less dimensions, said means including a filling member and a temporary knuckle, said knuckle being pivoted forward of the transverse base line when arranged to mate with a coupler of its own dimensions and back of the transverse base line when arranged to mate with a coupler of smaller dimensions.

1,107,167. HAT-FRAME MACHINE. DANIEL JOSEPH, New York, N. Y. Filed Feb. 28, 1913. Serial No. 751,355. (Cl. 223—21.)



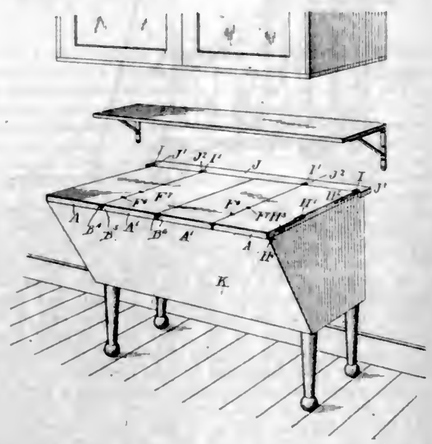
1. In a machine for forming wire hat frames, a frame, plates pivoted in the frame, and provided at their sides with openings, fingers adjustably mounted in said openings and means carried by the frame for locking the plates and fingers in adjusted positions with relation to each other.

2. In a machine for forming wire hat frames, a frame, plates pivoted in the frame and provided at their sides and

beyond their pivots with openings, fingers adjustably mounted in said openings, and having surfaces lying in the same planes as those in which the side surfaces of the plates lie, and a set screw passing through the side of the frame and engageable with one of the terminal plates of the series of plates.

3. In a machine for forming wire hat frames, a spindle, a head piece mounted upon the spindle and having sockets inclined down from the edge thereof toward the center thereof, arms fitting in the sockets and supporting adjustable fingers, said arms having openings, a detachable rod adapted to be inserted in the openings of the arms, a collar slidably mounted upon the spindle, and rods pivoted to the collar and the arms.

1,107,168. WASHBOARD. LOESER KALINA, New York, N. Y. Filed July 25, 1913. Serial No. 781,168. (Cl. 68—29.)



1. In combination, two washboards hinged together at adjacent side rails to permit of folding the washboards one upon the other or opening the washboards to extend in the same plane, each washboard having a rubbing surface, the said washboards in the folded position having their backs opposite each other and having their rubbing surfaces outside for use of either rubbing surface.

2. In combination, two washboards each having a rubbing surface, a hinge connecting the inner side rails of the washboards with each other to allow of folding the washboards one onto the other with the rubbing surfaces exposed, the pintle of the said hinge being slidable in the direction of the length of the washboards and the said pintle being adapted to extend beyond the lower ends of the washboards to form a washboard leg, and a locking device for locking the outer side rails of the washboards together at the time the washboards are folded, the said locking device having a member slidable in one of the outer side rails to extend beyond the lower ends of the washboards to form another washboard leg.

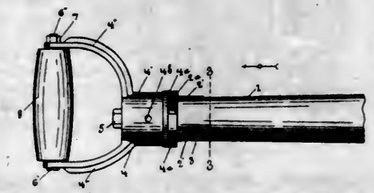
3. In combination, two washboards each having a rubbing surface, a hinge connecting the inner side rails of the said washboards with each other, the hinge having leaves attached to the said inner side rails, and a pintle formed of a return bent rod, the side members of which pivotally engage the said leaves.

4. In combination, two washboards each having a rubbing surface, a hinge connecting the inner side rails of the said washboards with each other, the hinge having leaves attached to the said inner side rails, and a pintle formed of a return bent rod, the side members of which pivotally engage the said leaves, the said return bent pintle rod being slidable on the said leaves, and one of the bent ends of the pintle being outside of the lower ends of the inner side rails of the washboards.

5. In combination two washboards each having a rubbing surface, a hinge connecting the inner side rails of the said washboards with each other, the hinge having leaves attached to the said inner side rails, and a pintle formed of a return bent rod, the side members of which pivotally engage the said leaves, the said leaves having spaced cut-out portions for engagement by the inner bent end of the pintle rod when the latter is in extended or folded position.

[Claims 6 and 7 not printed in the Gazette.]

1,107,169. OAR. EDWARD J. KEENS, Worcester, Mass. Filed Nov. 22, 1913. Serial No. 802,399. (Cl. 9—24.)



1. The combination with the handle end of an oar, of a handle or grip made separate therefrom, and having a sleeve thereon, fitting loosely over and rotatably mounted on a cap on the handle end of the oar, and having a yoke shaped end extending out from said sleeve, and a barrel, forming the handle portion, supported in said yoke shaped end, to allow of the rotary movement of said oar, independent of said handle or grip, in the operation of rowing.

2. The combination with the handle end of an oar, of a handle or grip, made separate therefrom, and having a sleeve thereon, fitting loosely over and rotatably mounted on a cap on the handle end of the oar, and having a yoke shaped end extending out from said sleeve, and a barrel, forming the handle portion, supported in said yoke shaped end, to allow of the rotary movement of said oar independent of said handle or grip in the operation of rowing, and means for limiting the rotary movement.

3. The combination with the handle end of an oar, of a handle or grip rotatably mounted thereon and adapted to extend in a vertical plane in the operation of rowing, and means for limiting its rotary movement.

4. The combination with the handle end of an oar, of a handle or grip of yoke shape, rotatably mounted thereon, and adapted to extend in a vertical plane in the operation of rowing, and means for limiting its rotary movement.

1,107,170. FOLDABLE OR EXTENSIBLE CAR-STEP. HIRAM D. KIRKLEY, Paragould, Ark., assignor of one-half to G. O. Light, Paragould, Ark. Filed Feb. 9, 1914. Serial No. 817,613. (Cl. 105—86.)

1. In combination with the platform steps of a car, a pivot rod mounted in bearings on the sides of said steps adjacent the lower tread thereof, an extensible step comprising tread and rise boards, leaf springs hingedly connecting said tread and rise boards, a leaf of each leaf spring being embedded in the rise board and having its upper end terminating in a roll to receive said pivot rod, upwardly and rearwardly curved spring arms connected to the tread board, and means of connection between said arms and the door of the vestibule of the platform for extending or folding said hingedly connected tread and rise boards.

2. In combination with the platform steps of a vestibule car, a pivot rod mounted in bearings of the sides of said steps adjacent the lower tread thereof, an extensible step comprising tread and rise boards, leaf springs hingedly connecting said tread and rise boards, a leaf of each leaf spring being embedded in the rise board and having its upper end terminating in a roll to receive said pivot rod, upwardly and rearwardly curved spring arms connected to the tread board, a rock shaft having arms connected

to the spring arms, and means of connection between said rock shaft and the door of the vestibule for rocking the shaft.



3. In combination with the platform steps of a vestibule car, a pivot rod mounted in bearings of the sides of said steps adjacent the lower tread thereof, an extensible step comprising tread and rise boards, leaf springs hingedly connecting said tread and rise boards, a leaf of each leaf spring being embedded in the rise board and having its upper end terminating in a roll to receive said pivot rod, upwardly and rearwardly curved spring arms connected to the tread board, a rock shaft having arms connected to the spring arms, one end of said rock shaft having a flat portion, an arm secured upon said flat portion, and an operating lever having link connections with the arm of said flat portion for rocking the said shaft, and means for holding the lever in adjusted positions to hold the tread and rise boards folded or extended, the pivotal connections between the spring arms and the arms of the rock shaft and the pivot between the link and the arm of the flat portion being in offset arrangement to said rock shaft to assist in holding said boards folded, the said spring arms being placed under tension when folding said tread and rise boards, and means of connection between the operating lever and the vestibule door for actuating said operating lever as the door is opened, thereby extending the tread and rise boards.

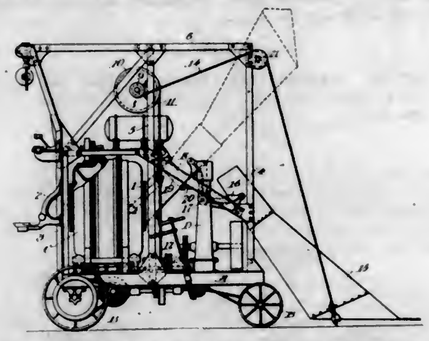
4. In combination with the platform steps of a vestibule car, said platform steps having extensible collapsible steps including an operating lever therefor, said operating lever being fulcrumed to the side of the platform steps, a locking mechanism for the operating lever, and connections between the door of the vestibule and the locking mechanism for unlocking the same upon partial movement of the door, which upon further movement actuates the operating lever, which in turn actuates the extensible step.

5. In combination with the platform steps of a vestibule car, said platform steps having extensible collapsible steps including an operating lever therefor, said operating lever being fulcrumed to the side of the platform steps, a locking mechanism for the operating lever, and connections between the door of the vestibule and the locking mechanism for unlocking the same upon partial movement of the door, which upon further movement actuates the operating lever, which in turn actuates the extensible step, said connections including means adapted to be actuated manually for temporarily disengaging said connections, whereby the door may be opened independently.

[Claims 6 to 10 not printed in the Gazette.]

1,107,171. CHARGING DEVICE FOR CONCRETE-MIXERS. PHILIP A. KOEHRING, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis. Filed Sept. 9, 1913. Serial No. 788,918. (Cl. 214—3.)

1. In means of the class described, the combination of a support, a framework erected thereon and comprising a plurality of spaced uprights, bars connecting said uprights at their upper ends, inclined connecting and brace bars intermediate certain of said uprights of the framework, a charging bucket comprising an outer receiving portion and an inner delivery portion, pivot arms secured to the bucket at the delivery portion thereof and supported by said inclined brace bars, hoisting means including cables connected with the receiving portion of the bucket and movable to raise said receiving portion into a discharging position in which it enters the space between the upper horizontal bars of the framework, and sheaves on the framework over which said cables pass.



2. In means of the class described, the combination of a supporting truck, a framework thereon consisting of spaced sides, each side composed of a plurality of uprights, upper horizontal bars connecting the upper ends of the uprights of each side of the framework, cross bars connecting said horizontal bars at one end and intermediate the ends of the framework, the other end of the framework being open at its upper end, inclined, brace bars connecting certain uprights of each side of the framework, a pivot shaft supported by said inclined brace bars, charging means including a bucket comprising a receiving portion and a discharging portion, pivot arms projecting from the discharging portion of said bucket intermediate its ends and connected with the pivot shaft aforesaid, sheaves on the upper portion of the framework at one end of the same, and hoisting means including cables passing over said sheaves and connected with the receiving portion of said bucket to raise the latter into a position in which said receiving portion enters the space between the sides of the framework at the open end of the latter.

1,107,172. PROCESS FOR REFINING SUGAR. JOHN G. KREMERS, Milwaukee, Wis. Filed July 30, 1913. Serial No. 781,940. (Cl. 127—7.)

1. The process of treating impure sugar solutions which comprises defecating such a solution by means of lime, carbonating until the solution is substantially neutral to an indicator of the phenolphthalein type, and then treating the carbonated solution with an acid capable of forming a stable neutral salt with potash.

2. The process of treating impure sugar solutions which comprises defecating such a solution by means of lime, carbonating until the solution is substantially neutral to an indicator of the phenolphthalein type, and then treating the carbonated solution with sulfurous acid.

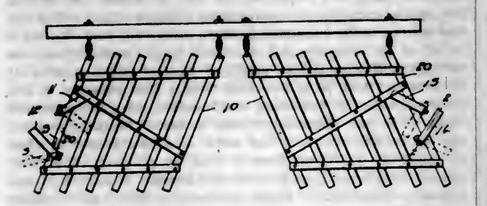
3. The process of treating impure sugar solutions which comprises defecating such a solution by means of lime, carbonating until the solution is substantially neutral to an indicator of the phenolphthalein type, and then treating the carbonated solution with sulfurous acid in quantity at least sufficient to render the solution substantially neutral toward an indicator of the litmus type.

4. The process of treating impure sugar solutions which comprises defecating such a solution with lime, carbonating to a point at which the solution is approximately neutral to phenolphthalein, and treating with sulfur dioxid until the solution is substantially non-alkaline to litmus.

5. The process of treating impure sugar solutions which comprises defecating such a solution with lime, carbonating to a point at which the solution is approximately neutral to phenolphthalein, and treating with sulfur dioxid until the solution is somewhat acid to litmus.

[Claims 6 to 10 not printed in the Gazette.]

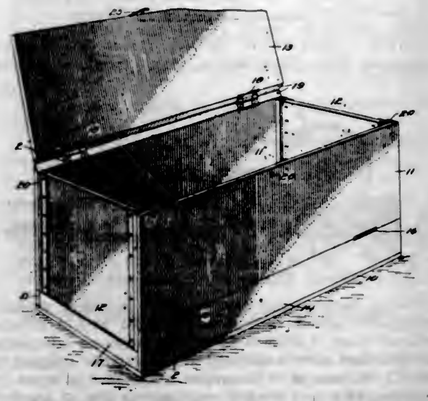
1,107,173. WEEDER FOR HARROWS. BENJAMIN T. LANE, Baird, Wash. Filed July 22, 1913. Serial No. 780,534. (Cl. 55—60.)



1. A weed cutting attachment for harrows including a knife having a shank provided with a series of orifices, a U-bolt adapted to encircle a bar of the harrow and having the legs passed through said orifices, nuts on said legs, an abutment plate on one leg of said U-bolt adapted to bear against one face of said bar, a wedge slidably mounted on the other leg of said U-bolt, means for moving said wedge longitudinally through said U-bolt whereby to wedge said beam securely against said abutment plate, and a reversible wedge having openings receiving the legs of said U-bolt, said reversible wedge being disposed between the inner face of said shank and said abutment plate and said channeled wedge.

2. A weed cutter including a knife having a right-angularly disposed shank provided with a series of openings, a U-bolt having the legs passed through said openings, nuts on said U-bolt, an abutment plate on one leg of said U-bolt, a channeled wedge bearing with its inclined edge upon the inner face of the opposite leg of the U-bolt, an eye bolt engaging the last named leg of said U-bolt and bearing within the channel of said wedge, a lip on said wedge receiving the threaded end of said eye bolt, nuts on said eye bolt bearing against opposite sides of said lip, and a wedge having openings receiving the legs of said U-bolt and disposed between the inner face of said shank and said abutment plate, and said channeled wedge.

1,107,174. KNOCKDOWN BOX. LOUIS D. MERRILL, Clarksburg, W. Va. Filed Apr. 22, 1913. Serial No. 762,859. (Cl. 217—15.)

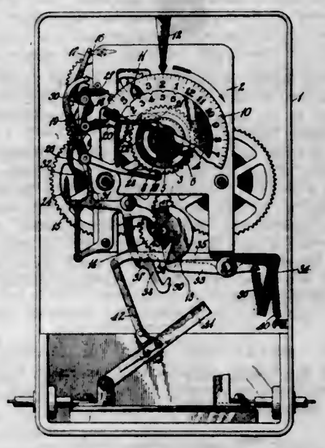


A knock-down box comprising a bottom, permanent strips fixed to the longer edges of the bottom, side sections swingingly connected to the permanent strips, end sections, channeled strips fixed to the side sections at the ends thereof and each having an inturned inner locking flange and an outer flange, L-shaped strips fixed to the outer faces of the end sections and engageable in the channeled strips to interlock with the inner flanges thereof, the outer flanges of the channeled strips being extended over the L-shaped strips to form abutments therefor, and a lid hinged to one of said side sections.

1,107,175. METHOD OF TREATING DISTILLERY-WASH. GEORGES MEUNIER, Raab, Austria-Hungary, assignor to August Lederer and Emil Lederer, Vienna, Austria-Hungary. Filed May 17, 1911. Serial No. 627,850. (Cl. 87—4.)

The herein described method of extracting glycerin from distilled washes in a cold state which consists in mixing with the wash an absorbent composed of acid-carbonized lignocellulose; drying the mixture; washing the said mixture with a mixture of alcohol and benzene, to extract the glycerin in a cold state, and precipitating the glycerin in a cold state.

1,107,176. TIMING MECHANISM. HERMAN C. NICHOLAUS, Detroit, Mich., assignor of one-half to Frank H. Rateick and one-half to William J. Looman, Detroit, Mich. Filed Sept. 7, 1912. Serial No. 719,173. (Cl. 161—27.)



1. A timing mechanism comprising a master clock train having a detent plate and a dial plate in adjustable angular relation driven by the hour arbor of the train, switch throwing means, a clock train for operating the switch throwing means, and means operated alternately by the detent and dial plates for momentarily releasing the operating train.

2. A timing mechanism comprising a master clock train, a detent plate and a dial plate angularly adjustable on the hour arbor of a train, switch throwing means, a clock train for operating the switch throwing means, and a member adapted to engage and arrest the clock train and moved alternately by the detent and dial plate out of engagement with the train.

3. A timing mechanism comprising a master clock train, a detent plate and a dial plate angularly adjustable on the hour arbor of the train, oscillatory means for opening and closing a switch, a clock train adapted to oscillate the opening and closing means, and means normally engaging and arresting the train that is operated alternately by the detent and dial plate to momentarily release the operating train.

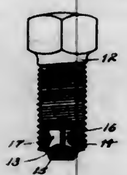
4. A timing mechanism comprising a master clock train, a detent plate secured on the hour arbor thereof,

a dial plate secured on the arbor in adjustably angular relation with the detent plate, oscillatory means adapted to alternately close and open a switch, means for oscillating the opening and closing mechanism, a clock train for operating such means, and means adapted to normally engage and hold the train inactive and operated alternately by the detent and dial plates to momentarily release the driving operating train.

5. A timing mechanism comprising a master clock train having a detent plate and a dial plate mounted in adjustable angular relation on the hour arbor of the train, means for alternately closing and opening a switch, a clock train for operating the opening and closing means, and means for normally holding the driving train inert adapted to be momentarily released alternately from engagement therewith by the detent and dial plates.

[Claims 6 to 8 not printed in the Gazette.]

1,107,177. SET-SCREW. RALPH E. NOBLE, Chicago, Ill., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Filed Dec. 8, 1911. Serial No. 664,560. (Cl. 85—42.)

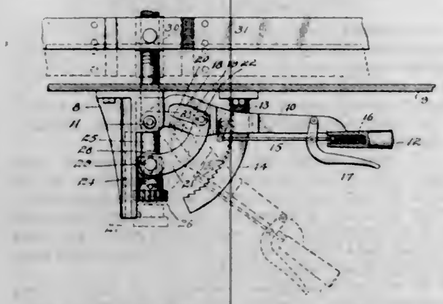


1. A set screw comprising a threaded body portion formed of iron or soft steel and having a head at one end and a hole in the opposite end, and a hardened steel point fitting tightly within said hole.

2. A set screw having a soft steel threaded body portion with a head at one end and shaped at the opposite end for receiving a point or engaging member, and a hardened engaging member tightly secured to said opposite end.

3. The combination with the barrel portion of a set screw having a hole in the end thereof, of an engaging point or member of extremely hard steel having a shank fitting in said hole, and having a shoulder fitting against the end of the barrel.

1,107,178. BRAKE FOR CARS OR LOCOMOTIVES. RALPH E. NOBLE, Chicago, Ill., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Filed June 23, 1913. Serial No. 775,311. (Cl. 188—24.)



1. The combination with a rod for operating brake levers, of a toggle arm having one end pivotally connected therewith, a second toggle arm pivoted adjacent to said rod and having a handle at its free end and being provided with a slot adjacent to its pivoted end, the outer side of said slot being curved, and the inner side being substantially straight, and means at the other end of the first-named toggle arm for engagement with said slot, said slot and engaging means being arranged so that when the handle is moved to set the brakes, the engaging means will remain at the outer end of the slot during a predetermined movement of the handle, and will then move inwardly toward the inner end of the slot; and when the handle is moved to release the brakes, the engaging means will engage with the straight side of the slot, and will move out to the outer end of the slot during the first movement of the handle.

2. In a device of the character set forth, the combination with a power transmitting rod, of means for moving the rod longitudinally, comprising a toggle arm having one end pivotally in engagement with said rod, and having a roller at its opposite end, a second toggle arm having one end pivoted adjacent to said rod and having a handle at its free end and being provided with a slot adjacent to the pivoted end for receiving said roller, the arrangement being such that when the handle is moved in one direction, the roller will move to the outer end of the slot so that a relatively rapid movement will be given to the first-named toggle arm, and when the handle is moved in the opposite direction to apply power, the roller will remain at the outer end of the slot for a portion of the movement and will then roll to the inner end of the slot for the remaining portion of the movement.

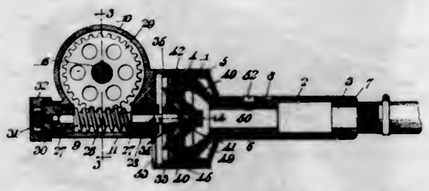
3. The combination with a rod for transmitting power to brakes or the like, of a lever having one end pivoted adjacent to the rod and having a slot therein, one side thereof curved, and the other side substantially straight, and arranged at an acute angle to the lever adjacent to its pivoted end, a roller in said slot, an arm connected with said roller and having its opposite end pivotally engaged with said rod, and means for guiding said roller in its longitudinal movement.

4. In a brake apparatus for a locomotive or the like, the combination of a bracket, a lever pivoted to said bracket and having a slot adjacent to its pivoted end, means for holding said lever in adjusted position, a roller in said slot, a rod for operating brake levers, arms pivotally engaged with said roller and said rod, guide rollers on said rod engaging with the bracket, the arrangement being such that when the lever is moved the rod will be moved longitudinally by means of the arms with a variable motion.

5. The combination with the frame of a car or locomotive, a bracket, a forked lever pivoted to said bracket and having a handle at its free end, a screw passing through said bracket between the forked ends of the lever, a collar on said screw, arms pivotally connected between said collar and said lever, means for guiding said screw in its longitudinal movement, a handle at the outer end of said screw, a nut at the inner end of said screw, an equalizing bar connected with said nut, and means connecting between said bar and the brake shoes for operating the shoes.

[Claims 6 and 7 not printed in the Gazette.]

1,107,179. PNEUMATIC TOOL. OSCAR W. NORBERG, Alamosa, Colo. Filed Mar. 6, 1914. Serial No. 822,794. (Cl. 121—57.)



1. In a device of the class described, a casing, a piston within said casing, said piston provided with a circular series of vanes, a head in said casing adjacent said piston and provided with angularly disposed ports adapted to direct a current of fluid against said vanes, a valve cooperating with said head to regulate the flow of the fluid to said piston, a rotary hand grip on said casing, and means connecting said hand grip with said valve, and a spindle in connection with said piston, substantially as described.

2. In a device of the class described, a casing provided with a reduced neck, a rotatable hand grip on said neck, a rotary piston in said casing, said piston provided adjacent its periphery with a circular series of angularly disposed vanes, a tool spindle in connection with said piston, a head adjacent said piston provided with oppositely disposed angularly inclined ports, communicating with said vanes, a valve for opening and closing said ports, said valve controlled by a stem fitting within said reduced neck and in connection with said rotatable hand grip, and means for admitting air to said reduced neck, substantially as described.

3. In a device of the class described, a casing comprising a cylinder with a reduced neck, a hand grip mounted for rotation upon said reduced neck, a rotary piston within said cylinder provided with a circular series of angularly disposed vanes, a worm in connection with said piston and a gear in mesh with said worm for rotating the spindle, a head adjacent said piston provided with a plurality of angularly disposed ports for directing the current of fluid against said vanes, a valve for opening and closing said ports, a valve stem with a reduced portion to fit within said neck, and a connection between said valve stem and said hand grip, substantially as described.

4. In a device of the class described, a casing comprising a cylinder having a reduced neck, a hand grip mounted for rotation upon said neck, a rotary piston within said cylinder provided with a circular series of pockets, a spindle adapted to be rotated by said piston, a head adjacent said piston provided with a plurality of ports adapted to direct a current of fluid angularly into said pocket, a valve for opening and closing said ports, a valve stem with a reduced portion to fit within said neck, and a connection between said valve stem and said hand grip, substantially as described.

5. In a device of the class described, a casing comprising a cylinder having a reduced neck adapted to be connected to a source of compressed fluid, a hand grip mounted for rotation upon said neck, a rotary piston within said cylinder provided with a circular series of pockets, a spindle adapted to be rotated by said piston, a head adjacent said piston and provided with angularly disposed ports adapted to direct a stream of fluid angularly into said pockets, a ring mounted for rotation upon said head and provided with openings for registration with said ports, a valve stem connected at one end to said ring and reduced at the opposite end to fit within the reduced neck of said casing, and a connection between said valve stem and said hand grip, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,107,180. ALLOY OF VANADIUM AND PRECIOUS METALS. FELIX FREIHERR VON OEFELE, New York, N. Y., assignor of one-half to Heinrich Schweitzer, New York, N. Y. Filed Oct. 11, 1911. Serial No. 654,005. (Cl. 75—1.)

1. As a new article an alloy of gold with a vanadium alloy.

2. As a new article an alloy of gold-vanadium with other metals.

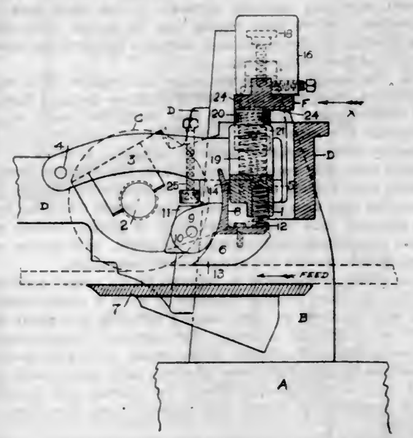
3. As a new article an alloy of a gold combination with a vanadium alloy.

1,107,181. VANADIUM-GOLD ALLOY. FELIX VON OEFELE, New York, N. Y., assignor of one-half to Heinrich Schweitzer, New York, N. Y. Original application filed Oct. 11, 1911, Serial No. 654,005. Divided and this application filed Oct. 22, 1912. Serial No. 727,169. (Cl. 75—1.)

As a new article an alloy of vanadium with gold.

1,107,182. CHIP-BREAKER FOR WOOD-PLANING MACHINES. HIRAM A. PERKINS, Rochester, N. Y. Filed Sept. 13, 1912. Serial No. 720,181. (Cl. 144—243.)

1. In a wood planer, a cutter head, a chip breaker before the cut, a first bar above the chip breaker, a spring between said bar and the chip breaker, an independent resistance bar above said first bar, the resistance bar being limited in its downward movement but free to yield upward, and elastic means between said first bar and the resistance bar, as set forth.

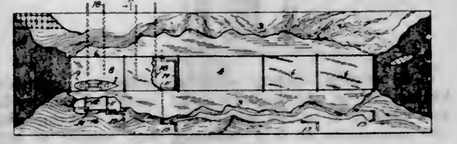


2. In a wood planer a cutter head, a chip-breaker, a yielding resistance bar, a yielding medium between the chipbreaker and the resistance bar, adjusting screws on said resistance bar to limit its downward movement but permitting it to rise when required, adjustable stops on the chipbreaker arms, operating substantially in the manner described.

3. In a wood planing machine, a cutter head, a chipbreaker comprising a pressure shoe or shoes, a shoe supporting bar, pivoted arms attached to such bar and a yielding resistance bar over the shoe supporting bar, with yielding means interposed between the shoe supporting bar and the resistance bar for the purposes set forth.

4. A chipbreaker for a wood planing machine comprising a pivoted self-adjusting preasure shoe, an intermediate supporting bar, a yielding resistance bar above the latter, and elastic connections interposed between each of the above members, substantially as set forth.

1,107,183. TOY. HENRY E. POEHLMAN, San Francisco, Cal., assignor of one-half to John W. Fricke, San Francisco, Cal. Filed Apr. 26, 1913. Serial No. 763,748. (Cl. 46—37.)



1. An amusement device comprising a casing having a top portion representative of a geographical structure, a canal formed in the structure, gates movable across the canal to form locks in the same whereby movable vessels may move from position to position, and a waterless mechanism for elevating the vessels in the lock sections of the canal from one level to another.

2. An amusement device representative of a canal, comprising a body portion having a topographic representative portion, a canal with lock chambers bisecting said topographic portion, means for closing communication in different portions of the canal and forming locks, and devices for moving vessels while passing through the canal from one level to another.

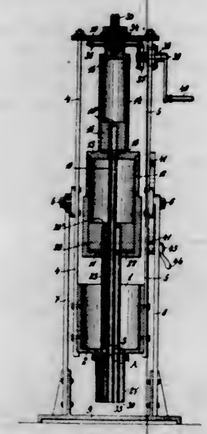
3. The combination with miniature vessels, of a representative canal structure having surfaces forming harbors or bays, a canal connecting said harbors or bays, means dividing the canal into lock sections and movable for opening communication between adjacent sections of the canal, vertically movable members in the canal lock sections onto which said vessels may be moved, and means for raising and lowering said surfaces to carry the vessels from one level to another.

4. The combination with miniature vessels, of a representative canal structure having surfaces forming harbors or bays, a canal connecting said harbors or bays, means dividing the canal into lock sections and movable for opening communication between adjacent sections of the canal, vertically movable members in the canal locks onto which said vessels may be moved, means for raising and lowering said members to carry the vessels from one level to another, said means consisting of shafts having portions supporting said movable members, and means connecting said shafts for simultaneous operation.

5. A toy comprising a representative canal structure having surfaces forming harbors or bays, a canal connecting said harbors or bays, means dividing the canal into lock sections and movable for opening communication between adjacent sections of the canal, vertically movable members in the canal lock sections onto which said vessels may be moved, and means for raising and lowering said members to carry the vessels from one level to another.

[Claims 6 and 7 not printed in the Gazette.]

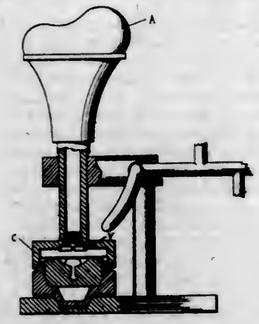
1,107,184. SAUSAGE-STUFFING MACHINE. VÁCLAV PŘIBÁŠ, Prague, Austria-Hungary. Filed Mar. 11, 1912. Serial No. 683,079. (Cl. 20—15.)



1. A sausage stuffing machine, comprising cylinders having pistons, independent outlet tubes for said cylinders adapted to engage said pistons, means effecting relative movements of said cylinders with respect to said outlet tubes to actuate said pistons and effect discharge of material through said tubes, and the die chambers having a common point of discharge communicating with said outlet tubes.

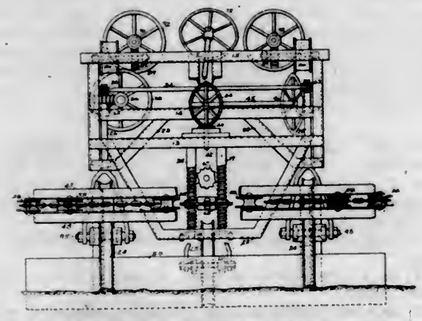
2. A sausage stuffing machine comprising a cylinder provided with an axial opening, an outlet tube extending from said opening, a second tube concentrically mounted rigidly within the first tube and extending through the cylinder, said second tube having its wall in spaced relation to the wall of the first tube, a second cylinder mounted to telescope within the first cylinder having an opening through which the second tube passes, a piston in the second cylinder so connected to the second tube that it will be advanced in said second cylinder as the second cylinder telescopes within the first cylinder, said piston having an opening communicating with the second tube, and means to move the second cylinder whereby when said second cylinder is advanced to telescope within the first cylinder said piston will be advanced in said second cylinder and material contained in the cylinders will be expressed through the respective outlet pipes, said second cylinder acting as a piston within the first cylinder.

1,107,185. PRESSURE APPARATUS FOR DENTAL CASTINGS. HEINRICH SCHWEITZER, New York, N. Y. Filed Dec. 30, 1912. Serial No. 739,266. (Cl. 22—69.)



A casting apparatus adapted to be operated with gaseous pressure medium having a flask and a cover provided with a central perforation, the lower end of said perforation being of conical shape, and a plug being conical shaped in its lower end; said plug fastened on said cover in such manner that an annular slot is left between cover and plug for the purpose of discharging the pressure medium in diverging direction substantially as described and shown.

1,107,186. ROAD-MACHINE. MARION MARCELLUS SICKLER, Pala, Cal. Filed Feb. 8, 1912. Serial No. 676,438. (Cl. 21—114.)



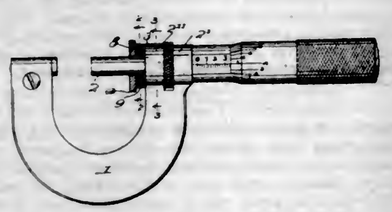
1. A road machine comprising a wheel mounted carrying frame, a flexible draft member having connection with the frame, said draft member having a hitching attachment, a shaft carrying a drum about which the flexible member is extended, a second shaft mounted adjacent said drum shaft, clutch members connecting said shafts, a controlling shaft, worm gears connecting the said controlling shaft and the said second shaft, and means for controlling the engagement and disengagement of the said clutch members.

2. A road machine comprising a wheel mounted carrying frame, an endless belt flexible draft member disposed in guided relation within the frame, friction relieving devices mounted on said frame to guide said flexible draft member, a hitching device attached to said flexible member, means for shifting the said flexible member to vary the position of the draft attachment and including a drum shaft, a controlling shaft, worm gears connecting the said drum and controlling shafts, and a clutch between the drum shaft and the said worm gears, and connections for controlling the engagement and disengagement of said clutch including a member splined upon the controlling shaft and to which a controlling hand wheel is attached.

3. A road machine comprising a wheel mounted carrying frame, a flexible draft member having connection with the frame, said draft member having a hitching attachment, and means for shifting the said flexible member including members adapted to lock the flexible member in adjusted position and other members which are disengageable in order to release the flexible member.

4. A road machine comprising a wheel mounted carrying frame, a flexible draft member having connection with the frame, said draft member having a hitching attachment, a drum shaft having a drum about which the said flexible member is wrapped, an intermediate shaft alined with the said drum shaft, clutch members connecting the said shafts, and one of which is movable whereby to engage and disengage the other, a spring normally holding the clutch members in engagement, a controlling shaft having a worm at one end, a worm wheel secured upon the intermediate shaft and with which the worm is engaged, an intermediately pivoted lever having connection at one end with the movable clutch member, whereby to disengage the same, a tubular member splined on the controlling shaft and engaging the opposite end of said clutch lever, and a hand wheel carried by the said tubular member whereby to effect sliding movement of the tubular member and rotation of the controlling shaft for the purpose described.

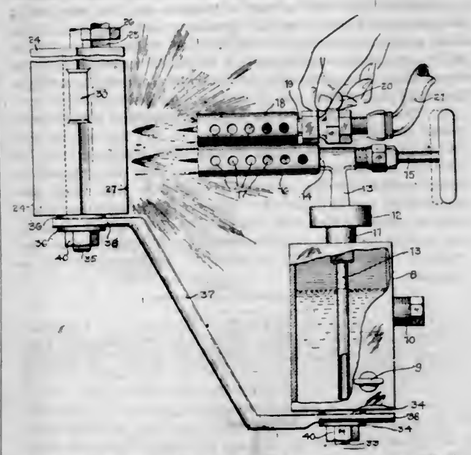
1,107,187. MICROMETER-CALIPER. FRANK SPALDING, Providence, R. I., assignor to Brown & Sharpe Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Nov. 4, 1912. Serial No. 729,286. (Cl. 33—167.)



1. In combination with a micrometer having a yoke and a rounded portion at one end of the yoke, a guard composed of a sleeve of cylindrical outline having a cut-out part on its periphery which extends from a point in spaced relation to one end of the sleeve through the opposite end thereof, said cut-out portion forming side walls the edges of which are for direct engagement with the opposite sides of the yoke at the base of the rounded portion thereof, the first named end of the sleeve having a perforated wall, and a packing ring on the interior of the sleeve abutting the end wall, the micrometer spindle being received in the packing ring and the perforation of the end wall, and the packing ring abutting the inner side of the yoke.

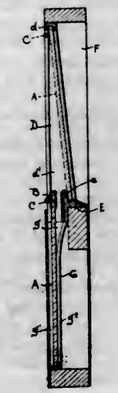
2. In combination with the spindle and the spindle head and the arm of a micrometer calipers, a guard composed of a sleeve having an end wall, an annular knurled head on the end of the sleeve adjacent said end wall and projecting beyond the sleeve periphery, said end wall of the sleeve being perforated to receive the spindle, the periphery of the sleeve having a cut-out part which receives the arm of the calipers, and a packing ring abutting the end wall of the sleeve and also the inner face of one end of the arm, the free end edge of the sleeve being disposed in close proximity to said spindle head.

1,107,188. HEATING-TOOL. GEORGE E. VOGT, Tallmadge, Ohio. Filed Mar. 26, 1912. Serial No. 686,284. (Cl. 158—11.)



A device of the class described comprising a receptacle, a sleeve extending from said receptacle, a drip cup at the upper end of said sleeve, an outlet pipe extending through said sleeve and into said receptacle, a commingling tube carried by the outer end of said pipe, means for controlling the passage of fuel thereto, a second commingling tube formed integral with said first mentioned commingling tube and carried thereby upon the upper face thereof, means for supplying fuel thereto, means for controlling the passage of fuel therethrough, said commingling tubes adapted to burn simultaneously for producing a powerful heat, said second mentioned commingling tube adapted to burn natural gas, and said first mentioned commingling tube adapted to burn a liquid fuel.

1,107,189. WINDOW FOR VEHICLES. JOHN T. ALLMAND, Detroit, Mich., assignor to Fisher Closed Body Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 9, 1911. Serial No. 653,739. (Cl. 20—52.1.)

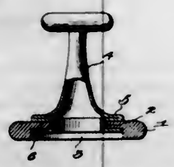


1. The combination with a frame provided with a drop-recess or a window-well and a fence at the top of the well for holding the slab when it has been lifted out of the well, of rubber ways at the sides of the drop-recess or window-well and a slab of glass having free edges, the said slab of glass being guided into the window-well by rubber ways that cushion it and retard its descent, substantially as described.

2. The combination with a frame provided with a drop-recess or window-well and a fence for holding the slab after it has been lifted out of the well, of rubber ways at the sides of the drop-recess or window-well for cushioning the glass and retarding its descent, a slab of glass having free edges and ways on the sides of the window frames above the well constructed of yieldable material adapted to cushion the glass and act as a weather stop, substantially as described.

3. The combination with a frame provided with a drop-recess or window-well and a fence at the top of the well for holding the slab when it has been lifted out of the well or rubber ways at the sides of the drop recess or window-well, having comparatively thin and deep side strips that are capable of "clinging" to the glass and a slab of glass having free edges, the said slab of glass being guided into the window-well by the rubber ways that cushion it and retard its descent, substantially as described.

1,107,190. COLLAR-BUTTON. EDWARD L. ANDERSON, Attleboro, Mass., assignor to R. and G. Company, Attleboro, Mass. Filed Feb. 24, 1914. Serial No. 820,738. (Cl. 24—101.)



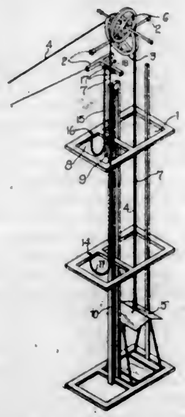
1. In a collar button, a tubular post having a doubled over part disposed in spaced relation to the end of its base portion to provide an abutment, the post being extended beyond the doubled over part, and a pearl back having a central aperture through which said post extension is projected, and also having a countersunk portion into which the end of the extension is outwardly swaged so as to cause the swaged portion to be disposed between the inner and outer faces of the back and to have its periphery covered by the bounding wall which said countersunk portion provides.

2. In a collar button, a tubular post having an abutment and an extension which projects beyond the abutment, and a back which has a central aperture through which said extension projects and also having a countersunk part into which the free end portion of the extension is outwardly swaged so that the outer face of the back extends beyond said swaged portion and the latter has its periphery covered by the bounding wall which said countersunk portion provides.

1,107,191. BALANCING MEANS FOR HOISTING APPARATUS. LETSON BALLIET, Tonopah, Nev. Filed Jan. 14, 1914. Serial No. 812,077. (Cl. 187—94.)

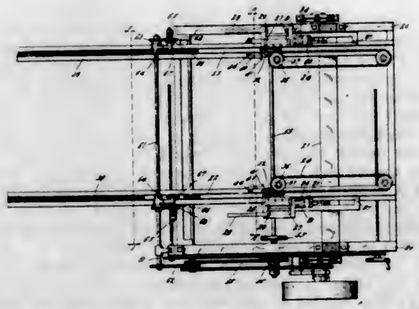
1. In a device of the character described, the combination with a cage and means for hoisting the same; of a counter-weight operatively connected with the cage and adapted to travel in directions reversely to the directions of travel of the cage, a plurality of hingedly connected members, one end member being connected with the counter-weight, while the opposite end member is secured at a point intermediate the path of travel of the counter-weight, and means for holding such members normally inactive relative to the counter-weight.

2. In a device of the character described, the combination with a cage and means for hoisting the same; of a counter-weight operatively connected with the cage and adapted to travel in directions reverse to the directions of travel of the cage, a plurality of hingedly connected members, one end member being connected with the counter-weight, while the opposite end member is secured at a point intermediate the path of travel of the counter-weight, auxiliary weight members hingedly connected one with the other, one end member of such auxiliary members being secured at a point intermediate the extent of travel of the counter-weight, a member adjacent the opposite end being adapted to be operatively engaged with the counter-weight, and means for holding such auxiliary members normally inoperative relative to the counter-weight.



3. In a device of the character described, the combination with a cage and means for hoisting the same; of a counter-weight operatively connected with the cage and adapted to travel in directions reverse to the directions of travel of the cage, a plurality of hingedly connected members, one end member being connected with the counter-weight, while the opposite end member is secured at a point intermediate the path of travel of the counter-weight, auxiliary weight members hingedly connected one with the other, one end member of such auxiliary members being secured at a point intermediate the extent of travel of the counter-weight, a member adjacent the opposite end being adapted to be operatively engaged with the counter-weight, and means coacting with certain of the auxiliary members for holding such auxiliary members normally inoperative relative to the counter-weight.

1,107,192. WIRE-BOUND-BOX MACHINE. JOHN HAYS BIRCH and JOHN HENRY BIRCH, Crawfordsville, Ind., assignors to Greenstreet Folding Box Machine Company, Crawsfordsville, Ind., a Corporation of Arizona. Filed June 20, 1910. Serial No. 568,037. (Cl. 1—14.)



1. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, and a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, a preliminary cleat-feeder delivering to said spacer, an interrupter arranged to intermittently interrupt the cleats in the preliminary cleat-feeder to permit spacing of the cleat-spacer, and means controlled by the cleat-spacer for intermittently withdrawing the interrupter.

not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder.

2. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, and a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being automatically movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and automatically withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder.

3. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat spacer being movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, a preliminary cleat-feeder delivering to said spacer, an interrupter arranged to intermittently interrupt the cleats in the preliminary cleat-feeder to permit spacing of the cleat-spacer, and means controlled by the cleat-spacer for intermittently withdrawing the interrupter.

4. In a box blank machine, the combination of a cleat-guide, cleat-feeding means for positively feeding simultaneously a plurality of cleats along said guide, stapling mechanism arranged to operate upon such cleats while under the control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being automatically movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and automatically withdrawable from between said cleats after the second cleat has passed under the control of the cleat-feeder, a preliminary cleat-feeder delivering to said spacer, an interrupter arranged to intermittently interrupt the cleats in the preliminary cleat-feeder to permit placing of the cleat-spacer, and means controlled by the cleat-spacer for intermittently withdrawing the interrupter.

5. In a box blank machine, the combination of a cleat guide, a cleat-feeder for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under the control of the cleat-feeder, a cleat spacer arranged at the entrance of the cleat-feeder, said cleat-spacer movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after said second cleat has passed under the control of the cleat-feeder, a sheet gage arranged adjacent the line of travel of the spaced cleats and projectable into the space between adjacent spaced cleats, and means for withdrawing said sheet gage and returning the same to initial position.

[Claims 6 to 21 not printed in the Gazette.]

1,107,193. PROCESS OF AND ARTICLES FOR PRODUCING MOVING PICTURES. JOHN RANDOLPH BRAY, New York, N. Y. Filed Jan. 9, 1914. Serial No. 811,165. (Cl. 88—19.5.)

1. The process of producing moving pictures which includes the producing on separate sheets of translucent material a series of pictures, showing the same movable object in successive positions, and photographing said pictures in succession on a kinematograph film, the proper position for the object in each picture being secured by superposing the sheet upon which the object is to be shown upon the sheet showing the object in the last successive position and with guide marks in registry, whereby the object shown on the second-mentioned sheet is visible through the first-mentioned sheet.

2. The process of producing moving pictures which includes the printing on a series of separate sheets the same background or grouping of stationary objects, different successive groups of sheets having different portions of said background or grouping omitted, and completing the picture on each of said sheets by producing in the blank space a representation of a movable object and the background adjacent thereto, by superposing each sheet upon the preceding one and tracing in the portions of the background not concealed by said moving object.



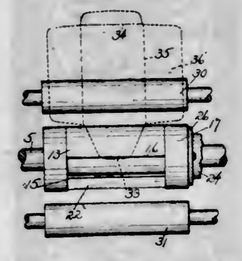
3. The process of making moving pictures which includes the printing of a guide line or guide mark on a plurality of separate sheets of transparent material, drawing on one of said sheets a movable object, superposing a second sheet thereon with the guide lines or marks in registry with those of the first sheet and drawing on said second sheet the same object as appears on the first sheet but in a slightly altered position.

4. The process of producing moving pictures which includes the producing on separate sheets of translucent material a series of pictures showing the same movable object in successive positions, the proper position for the object in each picture being secured by superposing the sheet upon which the object is to be shown, upon the sheet showing the object in the last successive position, and photographing said pictures in succession on a kinematograph film.

5. The process of producing moving pictures which includes the printing of a background showing stationary objects on a large number of separate translucent sheets, the producing of the representation of a movable object on one of said sheets, superposing on said last mentioned sheet a second sheet with the background in registry with the background on the first mentioned sheet and producing on said second sheet the representation of the same movable object but in a slightly different position and repeating the last two steps to secure a series of sheets, all showing the same movable object and in different positions on successive sheets.

[Claims 6 to 13 not printed in the Gazette.]

1,107,194. FEEDING AND CREASING DEVICE. HENRY B. COOLEY, New Britain, Conn., assignor to The American Paper Goods Company, Kensington, Conn., a Corporation of New Jersey. Filed June 18, 1913. Serial No. 774,340. (Cl. 93—58.)



1. A pair of creasing rolls, one of said rolls having a groove and the other including a shaft, a feed roll secured to the shaft and having a cut away portion forming an advance edge to grasp a sheet, creasing bar rolls secured to the shaft at opposite ends of the feed roll, and a creasing bar secured to the creasing bar rolls and extending

across the cut away portion in the feed roll and having a rib to mate with the groove in the opposite roll.

2. A pair of creasing rolls, one of which has a groove and the other of which includes a shaft with creasing bar rolls secured thereon, a feed roll mounted between the creasing bar rolls and movable independently thereof for adjustment purposes and cut away on one side for a portion of the distance around its periphery, and a creasing bar secured to said creasing bar rolls and extending across said cut away portion of the feed roll and having a rib arranged to mesh with said groove.

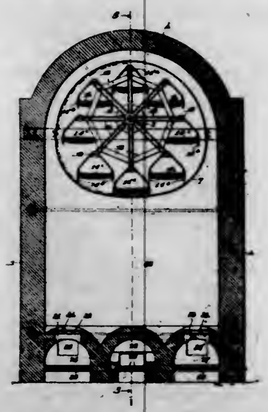
3. A pair of creasing rolls, one having a groove and the other including a shaft with a feed roll mounted thereon and having a portion cut away on one side lengthwise thereof, means for adjustably positioning the feed roll in a circumferential direction on the shaft, a pair of creasing bar rolls mounted on the shaft at each end of the feed roll, means for adjustably positioning the creasing bar rolls independently of the feed roll, and a creasing bar secured to the creasing bar rolls and extending across the cut away portion of said feed roll.

4. A pair of creasing rolls, one of which includes a shaft and a roll having a groove extending lengthwise thereof, means for adjustably positioning said roll and securing it to the shaft, a second roll including a shaft, a feed roll mounted on the shaft and having a cut away portion, creasing bar rolls mounted on the shaft, means for adjustably positioning the creasing bar rolls and securing them to the shaft, a creasing bar secured to the creasing bar rolls and having a rib to mate with the groove in the opposite roll, intermeshing members between the grooved roll and the creasing bar rolls to compel simultaneous movement for adjustment purposes, and means for driving said rolls.

5. A pair of creasing rolls one of which includes a shaft and a roll mounted thereon and having a creasing groove, means for adjustably positioning said roll for securing it to its shaft, a second shaft, intermeshing gears secured to said shafts, a feed roll mounted on the second shaft, means for adjustably positioning the feed roll and for securing it to its shaft, a pair of creasing bar rolls mounted on the shaft at opposite ends of the feed roll, means for adjustably positioning the creasing bar rolls and for securing them to their shafts, a creasing bar secured to said creasing bar rolls, and intermeshing gears secured to the creasing bar roll and to the mating grooved roll.

[Claim 6 not printed in the Gazette.]

1,107,195. BAKING-OVEN. WILLIAM S. CORBY and JAMES L. PARSONS, Jr., Washington, D. C. Filed Oct. 12, 1912. Serial No. 725,514. (Cl. 107—59.)



1. The combination of the furnace, the imperforate heavy heat-insulating outer walls inclosing a vertically elongated hot gas space which is permanently closed against any external communication except near the bottom with the furnace, a baking container positioned within the upper part of the said hot gas space at a considerable distance from the bottom thereof and provided throughout with thin permanently gas-tight walls through which heat is readily transmitted to the interior from the said hot gas space, and means whereby material to be baked can be inserted into the container.

2. The combination of the furnace, the imperforate heavy heat-insulating outer walls inclosing a vertically elongated hot gas space which is permanently closed against any external communication except near the bottom with the furnace, a baking container positioned entirely within the upper part of the said hot gas space at a considerable distance from the bottom thereof and having throughout thin permanently gas-tight walls all of which are separated from the said insulating walls and through which heat is readily transmitted at all points from the said hot gas space to the interior of the container, and means whereby material to be baked can be inserted into the said container.

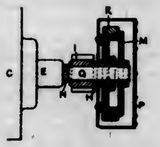
3. The combination of the furnace, the imperforate heavy heat-insulating outer walls inclosing a vertically elongated hot gas space which is permanently closed against any external communication except near the bottom with the furnace, a baking container positioned within the upper part of the said hot gas space at a considerable distance from the bottom thereof and provided with thin permanently gas-tight walls through which heat is readily transmitted from the said hot gas space to the interior of the container, and a relatively small air-tight duct extending through one of the heat-insulating walls to the said container near the bottom thereof, whereby material to be baked can be inserted into the container without substantial loss of heated gases or vapors therefrom.

4. The combination of the furnace, the imperforate heavy heat-insulating outer walls inclosing a vertically elongated hot gas space which is permanently closed against any external communication except near the bottom with the furnace, a baking container positioned entirely within the upper part of the said hot gas space at a considerable distance from the bottom thereof and provided throughout with thin permanently gas-tight walls all of which are separated from the said insulating walls and from the said hot gas space to the interior of the container, and a relatively small air-tight duct extending through one of the heat-insulating walls to the said container near the bottom thereof, whereby material to be baked can be inserted into the container without substantial loss of heated gases or vapors therefrom.

5. The combination of the furnace, the imperforate heavy heat-insulating outer walls inclosing a vertically elongated hot gas space which is permanently closed against any external communication except near the bottom with the furnace, a baking container positioned within the upper part of the said hot gas space at a considerable distance from the bottom thereof and provided with thin permanently gas-tight walls through which heat is readily transmitted to the interior from the said hot gas space, a rotary pan-supporting reel in the said container, and means whereby material to be baked can be inserted into the container to be carried by pans of the said reel.

[Claims 6 to 17 not printed in the Gazette.]

1,107,196. DRIVE MECHANISM. HUGO GROB, Fürstenwalde, Germany. Filed Oct. 7, 1912. Serial No. 724,269. (Cl. 105—238.)



1. A drive mechanism for a dynamo comprising a bearing, a dynamo shaft journaled in said bearing and provided with a floating extension, a friction clutch adjacent the outer end of said extension, means between said clutch and said bearing adapted to be rotated by power from an external source, and means comprising said clutch adapted to drive said shaft from said first means.

2. A drive mechanism comprising a shaft with a floating extension, a collar on said extension, coacting clutch members connecting respectively with said collar and said extension, means adapted to cause the coaction of said clutch members, a second shaft, and means for transmitting power between said second shaft and said collar.

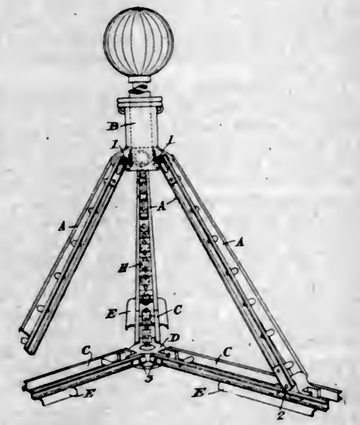
3. A drive mechanism comprising a shaft with a floating extension, a collar on said extension, a clutch adapted to cause the engagement of said collar and said extension, a second shaft, and means for transmitting power between said second shaft and said collar.

4. A drive mechanism comprising a shaft with a floating extension, a collar on said extension, a clutch adapted to maintain a yielding engagement between said collar and said extension, a second shaft, and means for transmitting power between said second shaft and said collar.

5. A drive mechanism comprising a shaft with a floating extension, a collar on said extension, coacting clutch members connected respectively with said collar and said extension, means adapted to cause the coaction of said clutch members, a second shaft, and means for transmitting power between said second shaft and the portion of the collar farthest from the outer end of said extension.

[Claims 6 to 16 not printed in the Gazette.]

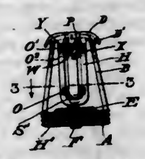
1,107,197. BEACON FOR COMPARATIVELY SHALLOW WATER, (INSTEAD OF BUOYS.) JOHN JAMES IRVING, Liverpool, England. Filed June 9, 1914. Serial No. 844,060. (Cl. 189—11.)



1. A support for beacons and the like, comprising a socket member, a center base plate, radial channel irons having downwardly extending flanges pivoted at their inner ends to the center base plate, and upwardly extending angle irons pivoted at their lower ends to the base plates intermediate the ends of the latter, and at their upper ends pivoted to the socket member, and means for collapsing it.

2. A support for beacons and the like, comprising a socket member, a center base plate, radial channel irons having downwardly extending flanges pivoted at their inner ends to the center base plate, and upwardly extending angle irons pivoted at their lower ends to the base plates adjacent the outer ends of the latter, and at their upper ends pivoted to the socket member, a ring in the socket member, and a chain connecting the center base piece with the ring, with means in the socket for preventing the falling of the ring.

1,107,198. AUTOMATIC SPRINKLER-HEAD. EUGENE MCLEAN LONG, New York, N. Y. Filed May 8, 1914. Serial No. 837,229. (Cl. 169—5.)



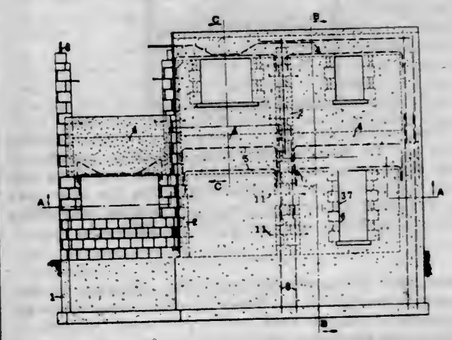
A sprinkler head comprising an apertured disk designed to be fastened to a water main system and provided with upwardly projecting supporting arms which are bent laterally and grooved upon their under faces, a spreader upon said arms, a closure for the aperture of the disk, an adjusting screw carried by the closure, a U-shaped member having an indenture formed in the lower portion thereof adapted to engage the point of said adjusting screw, the ends provided with grooves, plates held together by a fusible metal, the shank portion of one plate terminating at one end in laterally projecting portions which are curved and adapted to engage the opposite arms of said U-shaped member, shoulders near the opposite end of the plate which are inclined and adapted to fulcrum upon the inclined grooves upon the ends of the U-shaped member, one end of the shouldered plate provided with projecting lugs and adapted to engage the grooves in the laterally projecting portions of said supporting arms.

1,107,199. PROCESS FOR CLARIFYING AND STERILIZING WATER. CORNELIUS MASSATSCH, Berlin-Tempelhof, Germany, assignor to Permutit-Aktiengesellschaft, Berlin, Germany. Filed Feb. 6, 1914. Serial No. 817,010. (Cl. 210—1.)

1. The process of clarifying and sterilizing water, which consists in adding to the water to be purified a permanganate and a manganous oxid salt in such quantities that clear brown colloidal solutions of oxids of manganese are obtained and then immediately filtering these solutions at high speed through filters consisting of fine sand, substantially as described.

2. The process of clarifying and sterilizing water which comprises producing a brown colloidal solution of intermediate manganese oxids in such water and filtering the treated water at a high speed through a sand filter prior to precipitation or substantial reduction occurring in such colloidal solution.

1,107,200. CONCRETE WALL CONSTRUCTION. GORDON S. MUMFORD, Garden City, N. Y. Filed June 13, 1913. Serial No. 773,390. (Cl. 72—16.)



1. The herein described construction of concrete walls which consists of a series of columns of hollow, bonded, masonry blocks with a partial number of compartments filled with mortar and reinforcing iron rods, such columns being integral with and completely incased by a

concrete hollow wall, and having a series of offsets in the plane of the wall, formed by progressively diminishing the column section in connection with a centrally insulated reinforced concrete girder member, extending between such columns and resting upon the offsets and being made substantially integral with the columns by means of iron rods projecting downward into the offset compartment spaces which are filled with mortar, in connection with a hollow concrete wall extending vertically from the upper and lower limits of the reinforced concrete girder member, all bounded by the same surface planes and forming a monolithic wall construction.

2. The herein described construction of concrete walls which consists of a series of columns of progressively diminishing cross-section forming offset portions, and transverse girders connecting said columns and resting upon said offset portions, said transverse girders being of double-wall construction having hollow connecting means positioned therebetween.

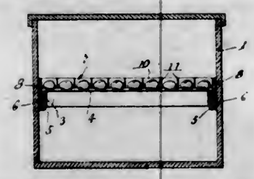
3. The herein described construction of concrete walls which consists of a series of columns of progressively diminishing cross-section forming offset portions, and transverse girders connecting said columns and resting upon said offset portions, said transverse girders being of double-wall construction having hollow concrete tile with vertically disposed openings positioned therebetween and reinforcing tie-means extending from column to column.

4. The herein described construction of concrete walls which consists of a series of columns of progressively diminishing cross-section forming offset portions, and transverse girders connecting said columns and resting upon said offset portions, said transverse girders being of double-wall construction having hollow concrete tile with vertically disposed openings positioned therebetween and reinforcing tie-means extending from column to column and having downwardly bent ends embedded in the offset portions of said vertical columns.

5. The herein described construction of concrete walls which consists of a series of columns of progressively diminishing cross-section forming offset portions, and transverse girders connecting said columns and resting upon said offset portions, said transverse girders comprising a double-wall construction resting on the offset portions of said vertical columns, the double-wall portion being connected by transversely disposed tie-means.

[Claims 6 to 14 not printed in the Gazette.]

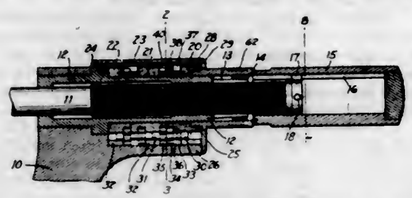
1,107,201. EGG-TURNING DEVICE FOR INCUBATORS. ALFRED H. NIELSEN, Minneapolis, Minn. Filed Feb. 20, 1914. Serial No. 819,869. (Cl. 119—44.)



The combination with a casing having tray-supporting rails and an egg-supporting tray removably mounted on said rails, of an egg-turning rack having depending side bars that rest upon said rails, supporting the other bars of said rack above said tray, and capable of shifting movements within said casing, to roll the eggs.

1,107,202. MICROMETER-CALIPER. EDWARD S. SAVAGE, Rochester, N. Y. Filed May 19, 1913. Serial No. 768,566. (Cl. 33—166.)

1. A micrometer-caliper having, in combination, a fixed sleeve; a micrometer-screw threaded therein; a barrel inclosing the end of the screw; connections, between the barrel and the screw, adapted to retain them against relative rotation, but to permit relative longitudinal movement; connections, between the inner end of the barrel and the sleeve, adapted to permit rotation of the barrel but retain it against longitudinal movement; and means for indicating the longitudinal movement of the screw in accordance with the corresponding rotative movement of the barrel.



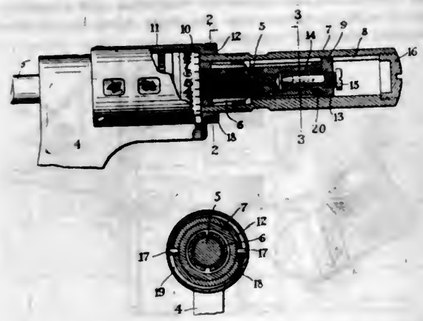
2. A micrometer-caliper having, in combination, a fixed sleeve; a micrometer-screw threaded therein; a barrel inclosing the end of the screw; connections, between the barrel and the screw, adapted to retain them against relative rotation, but to permit relative longitudinal movement; connections, between the inner end of the barrel and the sleeve, adapted to permit rotation of the barrel but retain it against longitudinal movement; and means for indicating the longitudinal movement of the screw in accordance with the corresponding rotative movement of the barrel, said means comprising graduated rings surrounding the sleeve, and actuating-connections between the rings and the barrel.

3. In micrometer caliper, the combination, with a micrometer-screw, indicating-means actuated by the screw and comprising indicator-rings surrounding the screw, and a yoke having a portion extending alongside the indicator-rings and provided with a recess opening toward the rings and extending to the extremity of the yoke, of a series of gear-members interconnecting the rings and provided with integral oppositely extending journals, and bearing-blocks coöperating with said journals, the gear-members and bearing-blocks being loosely mounted in said recess in the yoke and being removable and replaceable by endwise movement therein.

4. A micrometer-caliper having, in combination, a micrometer-screw; a fixed sleeve within which the screw is threaded, the sleeve having an externally-threaded cleft end; an adjusting-ring screwed upon said end of the sleeve and adapted to be rotated by the engagement therewith of a suitable instrument; a barrel inclosing the end of the screw and manually rotatable to adjust the same, the barrel having an opening adjacent the adjusting-ring to permit access thereto; connections between the barrel and the screw adapted to permit relative longitudinal movement but to cause the screw to rotate with the barrel; connections, between the sleeve and the barrel, adapted to permit the barrel to rotate but to prevent longitudinal movement thereof; means, actuated by rotation of the barrel, for indicating the longitudinal movement of the screw, and means mounted on the barrel and normally closing said opening therein, but movable to uncover the opening to permit access to the adjusting-ring.

5. A micrometer-caliper having, in combination, a sleeve; a yoke fixed to the sleeve and having a part extending alongside the sleeve and provided with a longitudinal recess having an open end directed outwardly from the yoke; a micrometer-screw threaded in the sleeve; graduated indicator-rings surrounding the sleeve; a casing inclosing the rings and provided with sight-openings and with a lateral opening to receive the extending part of the yoke and a portion closing the end of said recess therein; gear-members operatively connecting the rings and inclosed in said recess and retained therein by the casing; a barrel inclosing the end of the screw and rotatably mounted in the end of the casing, the barrel being provided with means engaging the casing to prevent longitudinal movement of the barrel and with means operatively connecting it with the indicator mechanism; means for securing the casing in place on the yoke; and connections, between the barrel and the screw, adapted to permit relative longitudinal movement but to cause the screw to be rotated by the barrel.

1,107,203. MICROMETER-CALIPER. EDWARD S. SAVAGE, Rochester, N. Y. Filed Dec. 20, 1913. Serial No. 807,959. (Cl. 33—164.)



1. In a micrometer-caliper, the combination of a micrometer-screw, a manually-rotatable barrel, means for preventing longitudinal movement of the barrel, and longitudinal sliding connections between the barrel and the screw to cause the screw to rotate with the barrel, said connections comprising members relatively rotatable to permit relative adjustment of the barrel and the screw, and means normally retaining said members against such relative rotation.

2. In a micrometer-caliper, the combination of a micrometer-screw, a manually-rotatable barrel provided with a longitudinal key-way, means for preventing longitudinal movement of the barrel, a key coöperating with said key-way and rotatable relatively to the screw, and means normally fixing the key to the screw against such relative rotation, said means being adapted to be loosened to permit such relative rotation for the purpose of adjustment.

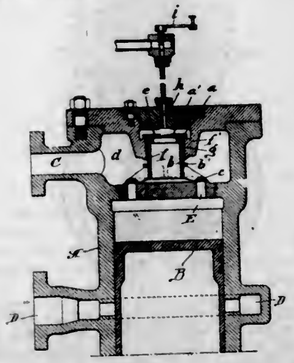
3. In a micrometer-caliper, the combination of a micrometer-screw, a manually-rotatable barrel provided with a longitudinal key-way and with a removable end-closure, a key coöperating with said key-way and rotatably connected with the micrometer-screw, and means, including a binding-screw, for fixing the key normally against rotation with respect to the micrometer-screw, said binding-screw being accessible through the end of the barrel when said end-closure is removed.

4. In a micrometer-caliper, the combination, with a fixed part and a part rotatable with the micrometer-screw, of a locking-device, for locking said parts together comprising a clamping-member non-rotatably connected with said fixed part but movable radially into clamping-engagement with said rotatable part, and a rotatable annular member having an inclined surface coöperating with the clamping-member and adapted to force it inwardly upon a partial rotation of the annular member.

5. In a micrometer-caliper, the combination, with a part rotatable with the micrometer-screw, and a fixed annular member surrounding said part and provided with radial perforations, of members mounted slidingly in said perforations and adapted to engage the outer surface of said rotatable part, and a rotatable annular member surrounding the fixed annular member and having a recess, in its inner surface, coöperating with the outer ends of the sliding-members, and provided with inclined surfaces adapted to force the sliding members inwardly into locking engagement with the rotatable part upon a partial rotation of the rotatable annular member.

1,107,204. AUTOMATIC ENGINE-GOVERNOR. WILHELM SCHMIDT, Cassel-Wilhelmshöhe, Germany, assignor to Schmidt'sche Heissdampf Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed Feb. 25, 1914. Serial No. 820,835. (Cl. 136—10.)

1. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder and an inlet opening from said inlet chamber into said cylinder, of controlling means for said inlet opening comprising a main valve, means for leading steam from the inlet chamber to both sides of said main valve, and means for shutting off the steam flow through said last named means when the main valve is closed.



2. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder and an inlet opening from said inlet chamber into said cylinder, of controlling means for said inlet opening comprising a main valve, a passage for leading steam from the inlet chamber to both sides of said main valve, and an auxiliary valve for shutting off the steam flow through said passage when the main valve is closed.

3. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder and an inlet opening from said inlet chamber into said cylinder, of controlling means for said inlet opening comprising a main valve having a relief piston, a passage between the inlet chamber and the outer side of the relief piston, and an auxiliary valve controlled by said relief piston for shutting off the steam flow through said passage when the main valve is closed.

4. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder and an inlet opening from said inlet chamber into said cylinder, of a main valve for said inlet opening comprising a relief piston part of which lies outside the inlet chamber, a passage leading from said inlet chamber to said outlying portion of the relief valve, and means controlled by the relief valve for closing said passage when the main valve is closed.

5. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder and an inlet opening from said inlet chamber into said cylinder, of a main valve for said inlet opening comprising a relief piston, a relief space into which the relief piston extends which space is normally at lower pressure than the inlet chamber, a passage connecting the inlet chamber and the relief space, and a valve attached to said relief piston for closing said passage when the main valve is closed.

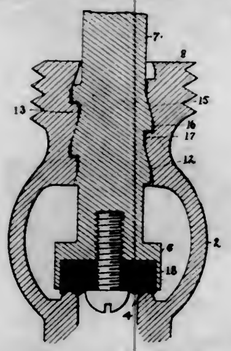
[Claim 6 not printed in the Gazette.]

1,107,205. COMPRESSION FAUCET OR COCK. FRED SCHULDER, Cleveland, Ohio, assignor to Joseph H. Glauber, Cleveland, Ohio. Filed Feb. 5, 1913. Serial No. 746,298. (Cl. 137—4.)

1. In a quick opening and closing faucet, a body and a valve controlling stem for said body having screw-threads of different diameters formed with wedging surfaces of acute taper longitudinally thereof to lock the valve down in a set position, the said threads being of the quick type and adapted to open and close the valve on a short turn.

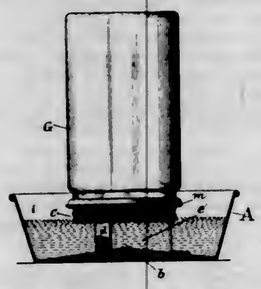
2. A faucet or cock having a valve to control the passage of water therethrough, a valve stem having quick-acting threads provided with longitudinally-extended

wedge shape outer portions to lock the valve when seated, and a yielding seat for said valve adapted to co-act with said wedge-portions to produce different wedging effects.



3. A faucet body having a valve seat, a valve having a stem and a handle, and said body and stem having co-related screw threads formed with wedging surfaces at an acute angle relatively to the axis of the stem and sloping inwardly toward the handle end of said stem, whereby an enhanced locking effect may be obtained between the sloping wedging surfaces when the valve is seated.

1,107,206. FEED AND WATER FOUNTAIN FOR POULTRY. EDWARD H. SCHWARTZBUAG, Milwaukee, Wis., assignor to National Enameling and Stamping Company, Baltimore, Md., a Corporation of New Jersey. Filed Mar. 3, 1913. Serial No. 751,673. (Cl. 119—52.)

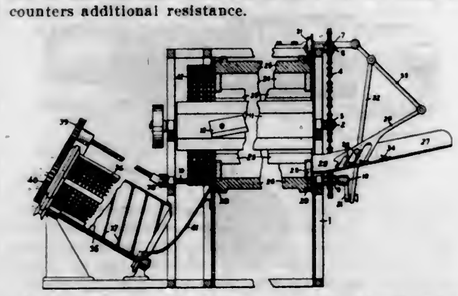


A feed and water fountain for poultry consisting of a pan open at the top; a threaded ring collar open at the top and bottom and at the bottom said collar having feet that are formed integrally with and depend from the lower edge of the collar; a disk in the collar at the upper ends of the integrally formed feet said disk having an opening therein, and a jar having a threaded engagement with the collar.

1,107,207. GREEN-PEA, BEAN, AND COW-PEA HULLER. ROBERT P. SCOTT, Cadiz, Ohio. Filed Sept. 30, 1913. Serial No. 792,578. (Cl. 130—30.)

1. In a machine for hulling peas, beans and the like by impact, the combination of an outer separating drum provided internally with lifters, an inner concentric shaft carrying a sprocket, said shaft being provided with an inner drum carrying beaters separated by longitudinal clearances from the lifters, friction travelers frictionally engaging and carrying the outer drum, sprockets secured to said travelers for driving them, a fourth sprocket above said inner shaft, a single driving chain running over the inner shaft sprocket, under said traveler sprockets, and over the fourth sprocket, thus causing the two concentric mechanisms to revolve in the same direction.

2. In a machine for hulling peas and the like, the combination of an outer separating drum, travelers engaging said drum, a chain engaging and driving said travelers, and means for automatically increasing the pressure of one of said travelers upon the drum when the drum encounters additional resistance.



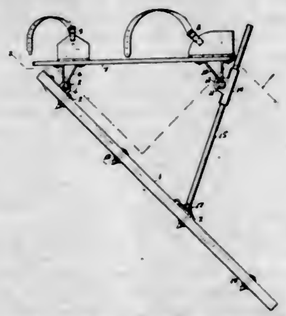
3. In a machine for hulling peas and the like, a separating drum adapted to receive the vines, means for supporting and driving said drum and a single driving chain conveying power to said means and automatically increasing the pressure between said means and said drum when the drum encounters additional resistance.

4. In a machine for hulling peas and the like, an outer separating drum, channel irons forming the ends of said drum and elevating ribs anchored in said channel irons.

5. In a machine for hulling peas and the like, an outer drum, rings consisting of channel shaped iron forming the ends of said drum, a pair of travelers engaging each of said rings, a third traveler for each ring engaging the same at a point between the other two and means whereby said third traveler automatically adjusts itself to the change in the load upon one or both of the end rings of the drum.

[Claims 6 to 11 not printed in the Gazette.]

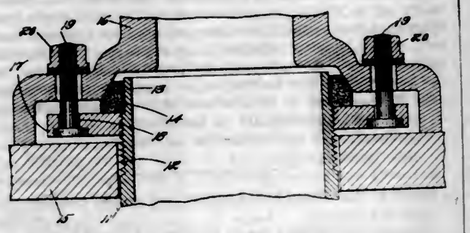
1,107,208. SHOE FOR ROOF-WALKING. GEORGE F. STYCHE, San Francisco, Cal. Filed May 20, 1914. Serial No. 839,747. (Cl. 36—63.)



In combination with a base, a shoe the toe end of which is pivotally supported upon said base, a U-shaped support arranged to support the heel part of the shoe, the central member of which support is pivotally supported on said base, split sleeves around the side members of said support, each having extensions from opposite sides thereof, a tube between the inner extensions of the two sleeves, a bolt through said pairs of extensions and tube, and a nut on said bolt.

1,107,209. FLOOR CONNECTION. HERBERT W. THORNDIKE, Boston, Mass., assignor to F. W. Webb Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed June 26, 1911. Serial No. 635,419. (Cl. 137—94.)

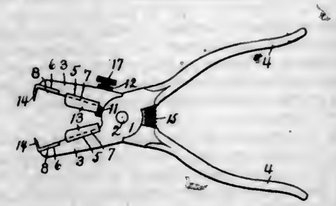
1. A floor connection comprising a fixture having a recess at its bottom, a drain pipe extending upwardly into the recess of said fixture, a collar having a water tight joint with said drain pipe, a gasket between the said fixture, the said collar and the upper end of the said drain pipe, and means to draw the fixture down onto the said gasket to compress the same into the space between the fixture, the collar and the upper end of the drain pipe.



2. In a floor connection, the combination with a fixture having a recess at its bottom, of an upwardly extending drain pipe screw threaded near its upper end, a collar screw-threaded to fit the screw-threaded part of said pipe and thereby adjustable vertically thereon, a gasket between the said fixture, the said collar and the said drain pipe, and bolts connecting said fixture and said collar and serving to compress the gasket between the fixture, the collar and the upper end of the drain pipe.

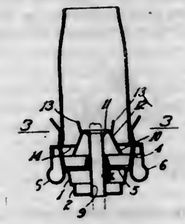
3. In a floor connection, the combination with a fixture recessed at its bottom, of a drain pipe extending upwardly into the recess in said fixture, a gasket making a tight joint between the fixture and the drain pipe, the parts being constructed and arranged to provide an annular space above said gasket and below said fixture, the latter overhanging the end of the drain pipe and having an aperture smaller than the bore of the drain pipe, and said fixture being provided with a hole to admit water to the said annular space above the gasket.

1,107,210. PLIERS. HARRY A. ADAMS, East Hartford, Conn., assignor to Alfred C. Fairbanks, trustee, Springfield, Mass. Filed Dec. 23, 1910. Serial No. 599,020. (Cl. 81—9.5.)



The combination, in a pair of pliers, of crossed and pivotally connected combined jaws and handles, said jaws having recesses in their inner faces, which recesses in each inner jaw face are spaced from each other to afford end abutments for plates set therein, plates provided with side-cutting blades and plates provided with end-cutting notched blades set in said recesses and abutting with their ends the ends of the recessed parts of said jaws, removable means to atach said plates to said jaws and with the abutting ends of said recesses to secure said blades in said recesses, a spring inserted between said handles back of the pivotal connection to open said jaws and retain them normally in their open condition, an adjusting screw tapped into and through one of said jaws and arranged to check the movement of the jaws by contacting with the other jaw when the jaws are moved toward each other, and a screw-lock on said adjusting screw above the jaw which carries said screw, such screw-lock comprising a nut and a handle.

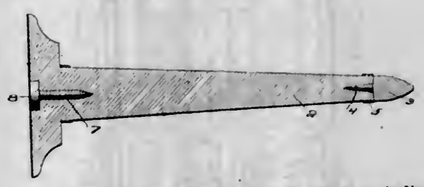
1,107,211. LAMP-BURNER. CHARLES C. BRIAND, Revere, Mass., assignor to Peter Gray & Sons, Inc., a Corporation of Massachusetts. Filed May 14, 1913. Serial No. 767,588. (Cl. 67—53.)



1. In a lamp burner, a body part; means for securing a chimney thereto; a wick tube secured in the body part; a truncated cone secured to the upper end of the wick tube in manner to form a cup-shaped depression surrounding the end of the wick tube; oppositely disposed flame spreaders secured to the upper edges of the truncated cone, said cone having two oppositely disposed air holes formed in it below and outside the flame spreaders so as to create a suction of air outside the flame-spreaders.

2. In a lamp burner, a body part formed to have a chimney secured to it; a ring secured to the top of the body part having a plurality of guiding holes formed in it; a plurality of flat chimney retaining springs secured to the said ring, said springs being bent in the form of a loop to extend downwardly, inwardly and then upwardly so as to extend through and be guided by the holes in said ring as specified.

1,107,212. STETHOSCOPE FOR AUTOMOBILES. ADOLFO DE CLAIBMONT, Toledo, Ohio. Filed Apr. 15, 1913. Serial No. 761,393. (Cl. 181—24.)



1. A stethoscope of the character described including a rod of fibrous material, a disk of fibrous material forming one end of said rod, a metallic tip forming the opposite terminal of said rod and a metallic member inserted within the face of the disk, said rod forming a sound conducting medium between the metallic tip and the metallic member in the disk.

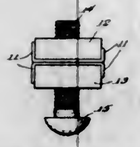
2. A stethoscope of the character described, including a woden rod having a pointed metallic tip, the base of said rod being formed to provide a disk relatively large in diameter, said disk forming a sounding board, said disk being rigid and rigidly connected to the rod.

3. A stethoscope of the character described, including a wooden rod, one end of which is tapered, the other end being formed to provide a wooden disk having a relatively large diameter, a metallic disk and integral pin inserted in the wooden disk, the face of the metallic disk lying flush with the face of the wooden disk, and a metallic tip forming the terminal end of the wooden rod and having a portion inserted into said wooden rod.

1,107,213. NUT-LOCK. WILLIAM I. HEINBACH, Phoenixville, Pa. Filed Nov. 7, 1912. Serial No. 730,043. (Cl. 151—15.)

1. A nut lock comprising a bolt, a nut threaded upon said bolt, a locking device placed upon said bolt and fitting against said nut, said locking device being formed from a strip of material doubled intermediate its length to form

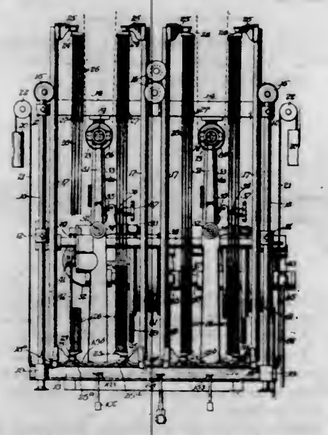
inner and outer leaves having side wings, a lug carried by the free end portion of one of said leaves and extending into an opening formed in the other of said leaves to prevent independent movement of said leaves, and the second nut threaded upon said bolt and engaging the outer leaf, said side wings being bent to engage the opposite side faces of said nuts to prevent rotation of said nuts upon said bolt.



2. A locking device comprising a strip of material having its end portions provided with side wings extending from opposite edges of said strip, said strip being bent intermediate its length to form a pair of leaves provided with bolt-receiving openings, one of said leaves being provided with a lug and the other of said leaves being provided with a socket for receiving said lug.

3. In a nut lock, a locking strip provided with nut engaging means and being bent upon itself to form leaves, one leaf being provided with a cut out and the second leaf being provided with a lug fitting into the cut out of the first mentioned leaf to prevent relative movement of the leaves of the locking strip when bent to assume a locking position.

1,107,214. SATIN-FINISH MACHINE. JOHN F. GAIL, Kenosha, Wis. Filed May 2, 1913. Serial No. 765,069. (Cl. 51—4.)



1. In a machine of the character described, the combination of an abradant-carrier composed of a bundle of loosely associated contacting fibers, a work holder arranged to hold a work piece in contacting relation with the carrier, and means to produce relative contacting movement between the holder and carrier longitudinally of the fiber of the latter, substantially as described.

2. In a machine of the character described, the combination of an abradant-carrier composed of a bundle of loosely associated contacting fibers, a rotatable work holder arranged to hold a work piece in contacting relation with the carrier, and means to produce relative contacting movement between the holder and carrier longitudinally of the fiber and of the latter, substantially as described.

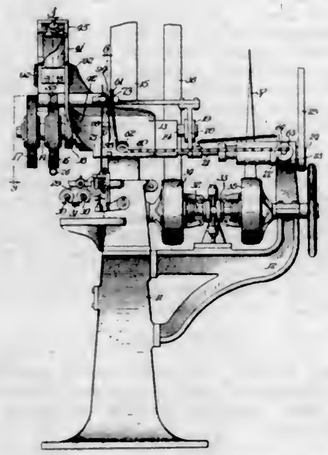
3. In a machine of the character described, the combination of an abradant-carrier composed of a bundle of loosely associated contacting fibers, a rotatable work holder arranged to hold a work piece in contacting relation with the carrier, and means to reciprocate the carrier longitudinally in contact with the work piece, substantially as described.

4. In a machine of the character described, the combination of an abradant-carrier composed of a bundle of loosely associated contacting fibers charged with an abradant, a rotatable work holder arranged to hold a work piece substantially half buried in the bundle of fibers, and means to reciprocate the fibrous carrier longitudinally in contact with the work piece, substantially as described.

5. In a machine of the character described, the combination of an abradant-carrier composed of a bundle of independent contacting fibers charged with an abradant and held under yielding tension, a rotatable work holder arranged to hold a work piece substantially half buried in the bundle of fibers, and means to impart a reciprocating relative movement to the holder and carrier longitudinally of the latter, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,107,215. AUTOMATIC ABRADANT-FEED FOR BUFFING-MACHINES. JOHN F. GAIL and CLARENCE H. FREDERICK, Kenosha, Wis. Filed June 21, 1913. Serial No. 774,948. (Cl. 51—4.)



1. The combination with a buffing wheel, of automatic means to apply an abradant thereto at intervals having a predetermined relation to the speed of the wheel, and means to render the abradant applying means inoperative after a predetermined number of applications, substantially as described.

2. The combination with a pair of buffing wheels, a work holder, and means to shift the work holder from one wheel to the other, of automatic means to apply an abradant to one of the wheels at predetermined intervals while the work is in contact therewith, and means to automatically throw the abradant applying means out of operation during the time said wheel is running idly and the work is in contact with the other wheel, substantially as described.

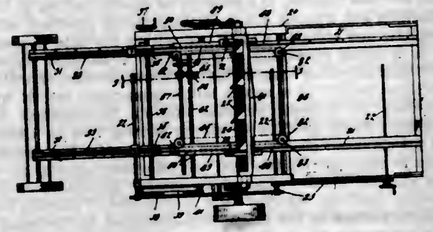
3. The combination with a pair of buffing wheels, a work holder, and means to shift the work holder from one wheel to the other, of a reciprocatory abradant carrier mounted in operative relation to one of the wheels, means operating automatically to actuate the carrier to apply abradant to its wheel at intervals during a portion of the time that the work is applied thereto, and means to automatically throw the carrier out of operation before the work is shifted from said wheel to the other wheel, substantially as described.

4. The combination with a pair of cutting and coloring wheels, a work holder, and means to shift the work holder from the cutting wheel to the coloring wheel, of an abradant carrier mounted in operative relation to the cutting wheel, means operating automatically to actuate the carrier to apply abradant to the cutting wheel at intervals having fixed relation to the speed of the wheel during a portion of the time that the work is in contact with said wheel, and means to automatically throw the carrier out of operation before the shifting of the work to the coloring wheel and to maintain the same out of operation during the time that the cutting wheel is running idly, substantially as described.

5. The combination with a pair of cutting and coloring wheels, a work holder, and means to shift the work holder from the cutting wheel to the coloring wheel, of an abradant carrier mounted in operative relation to the cutting wheel, means operating automatically to actuate the carrier to apply abradant to the cutting wheel at intervals having fixed relation to the speed of the wheel during a portion of the time that the work is in contact with said wheel, and means controlled by the shifting mechanism to automatically throw the carrier out of operation before the shifting of the work to the coloring wheel and to maintain the same out of operation during the time that the cutting wheel is running idly, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,107,216. WIRE-BOUND-BOX MACHINE. ARTHUR M. HOOD, Indianapolis, Ind., assignor to The Greenstreet Folding Box Machine Company, Crawfordsville, Ind., a Corporation of Arizona. Filed June 20, 1910, Serial No. 567,881. Renewed Oct. 27, 1913. Serial No. 797,652. (Cl. 1—14.)



1. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, and a yielding preliminary cleat-feeder delivering to said spacer.

2. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-apacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being automatically movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and automatically withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, and a yielding preliminary cleat-feeder delivering to said spacer.

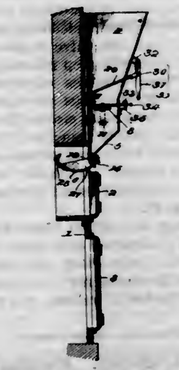
3. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, a yielding preliminary cleat-feeder delivering to said spacer, an interrupter arranged to intermittently interrupt the cleats in the preliminary cleat-feeder to permit placing of the cleat-spacer, and means for intermittently withdrawing the interrupter.

4. In a box blank machine, the combination of a cleat guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being automatically movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and automatically withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, a yielding preliminary cleat-feeder delivering to said spacer, an interrupter arranged to intermittently interrupt the cleats in the preliminary cleat-feeder to permit placing of the cleat-spacer, and means for intermittently withdrawing the interrupter.

5. In a box blank machine, the combination of a cleat tently withdrawing the interrupter.
guide, cleat-feeding means for positively feeding simultaneously a plurality of spaced cleats along said guide, stapling mechanism arranged to operate upon such cleats while under control of the cleat-feeder, a cleat-spacer arranged at the entrance end of the cleat-feeder, said cleat-spacer being movable into coöperative relation between a cleat under the control of the cleat-feeder and a cleat not yet under the control of the cleat-feeder, and withdrawable from between said cleats after the second cleat has passed under control of the cleat-feeder, and a preliminary cleat-feeder delivering to said spacer.

[Claims 6 to 8 not printed in the Gazette.]

1,107,217. AUTOMATIC STOKER. EDWARD A. JONES, Scranton, and JOHN E. JONES, Throop, Pa. Filed Apr. 4, 1913. Serial No. 758,914. (Cl. 110—113.)



1. An automatic stoker comprising a fuel feeding mechanism, a pan adapted to receive fuel from said feeding mechanism, spreader members at the inner corners of the pan and projecting beyond the inner edge thereof, and means for forcing from the pan the fuel deposited thereon.

2. An automatic stoker comprising a shallow pan having a smooth concave surface, spreader members secured to and projecting beyond the inner corners of said pan and conforming to the curvature thereof, the corners of the spreader members more remote from the corners of the pan being turned over toward the pan, means for depositing fuel upon the pan, and means for delivering a discharging blast against the fuel deposited on the pan.

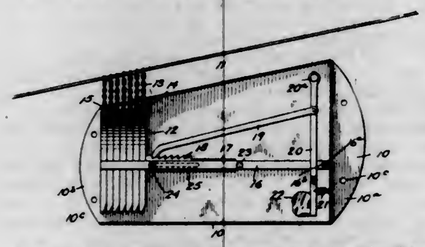
3. An automatic stoker comprising a feed regulator having a vibratory member, a rock shaft connected with said member, a pan disposed below the feed regulator, a hollow shaft carrying said pan, means for supplying a blast through said hollow shaft onto the pan, and means for simultaneously rocking the said shafts.

4. An automatic stoker comprising a feed regulator having a vibratory member, a shaft connected with said member and provided with a crank arm at one end, a second shaft below said first-mentioned shaft having a crank arm at one end, a link connecting said crank arms, a pan carried by the second shaft, and means connected with the second shaft for rocking both said shafts.

5. An automatic stoker comprising a hopper, means below the hopper for delivering fuel to a fire, a vibratory plate within the hopper, means for actuating said vibratory plate, a slotted plate within the hopper above said vibratory plate, and a yieldable connection between said slotted plate and the hopper.

[Claims 6 and 7 not printed in the Gazette.]

1,107,218. ANIMAL-TRAP. CASSIUS M. C. KIRK, South Fort George, British Columbia, Canada. Filed Jan. 6, 1914. Serial No. 810,642. (Cl. 43—24.)



1. In an animal trap, a resilient clasp to grip the animal, a support on which the clasp is slidable, a retainer for the clasp to maintain it in open position, a pusher device to release the clasp from the retainer, a feed means to actuate the pusher device, and a bait holder operatively connected with the feed means.

2. In an animal trap, a plurality of resilient clasps to grip the animal, a retainer to maintain the clasp in the open position, a step-by-step releasing means for the clasps, a bait holder, and operative connections between the bait holder and the step-by-step releasing means.

3. In an animal trap, a series of resilient gripping clasps, a rod from which the clasps are suspended and on which they may slide, a retaining means to hold the clasps open, a reciprocating pusher movable to release the clasps in succession from the retaining means, said pusher having ratchet teeth, a pawl engageable with successive ratchet teeth, and a spring-pressed pivoted bait holder connected with said pawl.

4. In an animal trap, a resilient clasp adapted to grip the animal, the clasp presenting side arms having mating ratchet teeth, means for supporting the clasp, a movable bait holder, a retaining means for the clasp, and means operated by the bait holder to release the clasp from the retaining means.

1,107,219. APPAREL-CORSET. WALDEMAR KOPS, New York, N. Y., assignor to Kops Bros., New York, N. Y., a Firm. Filed Feb. 10, 1914. Serial No. 817,734. (Cl. 2—73.)

1. A corset consisting of a plurality of suitably shaped sections extending from the top edge to the bottom edge of the corset, certain of which sections consist of a woven fabric having lateral unyielding or inelastic portions and an intermediate integrally woven yielding or elastic portion, each of the said sections being connected to its adjoining section by its lateral unyielding or inelastic portion, whereby the intermedite yielding or elastic portion of the fabric is not injured by the means employed for connecting the sections together.

2. A corset consisting of a plurality of suitably shaped sections extending from the top edge to the lower edge of the corset, certain of which sections consists of a woven fabric having lateral inelastic or unyielding portions, and an intermediate integrally woven yielding or elastic portion, and strips running longitudinally of the corset and to which the edges of the inelastic or unyielding portions of adjoining section are connected, so that in securing the sections together the yielding or elastic portion of the fabric is not injured.



3. A corset consisting of a plurality of suitably shaped sections extending from the top edge to the lower edge of the corset, each of which sections consists of a woven fabric having lateral inelastic or unyielding portions and an intermediate integrally woven yielding or elastic portion, strips running longitudinally of the corset and to which the edges of the inelastic or unyielding portions of adjoining sections are connected, so that in securing the sections together the yielding or elastic portion of the fabric is not injured, the said strips being provided with pockets, and suitable stays fitted within the said pockets.

4. A corset consisting of a plurality of suitably shaped sections extending longitudinally thereof, certain of which sections consist of a woven fabric comprising lateral unyielding or inelastic portions and an intermediate integrally woven yielding or elastic portion and in which, in pre-arranged positions, there are spaces for the circulation of air, each of the said sections being connected to its adjacent section through its lateral unyielding or inelastic portion, whereby the intermediate yielding or elastic portion of the fabric is not injured by the means for connecting the sections together.

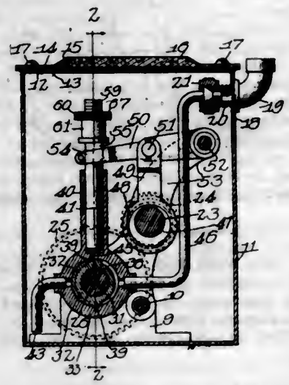
5. A corset consisting of a plurality of suitably shaped sections extending from the top edge to the bottom edge of the corset, certain of which sections consist of a woven fabric having lateral unyielding or inelastic portions and an intermediate integrally woven yielding or elastic portion, in which, in pre-arranged positions, there are spaces for the circulation of air, each of the said sections being connected to its adjoining section by its lateral unyielding or inelastic portion, whereby the intermediate yielding or elastic portion of the fabric is not injured by the means employed for connecting the sections together.

[Claim 6 not printed in the Gazette.]

1,107,220. FORCE-FEED LUBRICATOR. JOHN F. MCCANNA, Chicago, Ill., assignor to Imperial Brass Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 26, 1912. Serial No. 716,980. (Cl. 184—35.)

1. A force feed lubricator comprising in combination a single piston pump, separate passages leading from the reservoir to the pump and two separate passages leading from the pump to lubricating pipes through which the oil is conducted to its destination and a rotary valve providing separate passages each of which during the rotation of the valve alternately connect the pump with the reservoir and with a lubricating pipe, all of said mechanism being entirely confined within the reservoir.

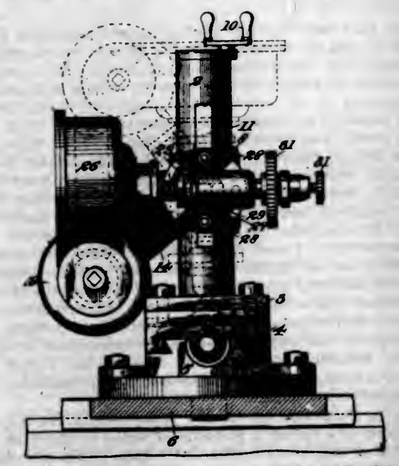
2. A force feed lubricator comprising in combination a single piston pump, separate passages leading from the reservoir to the pump and two separate passages leading from the pump to lubricating pipes through which the oil is conducted to its destination, a rotary valve providing separate passages each of which during the rotation of the valve alternately connect the pump with the reservoir and with the lubricating pipe all of said mechanism being entirely confined within the reservoir said reservoir being provided in its top with a glass window forming a portion of the walls thereof.



3. A force feed lubricator comprising in combination a single piston pump, two separate supply and a plurality of discharge pipes therefor, a rotating valve interposed between said pump and passages provided with peripheral grooves separately connecting therewith two passages in the pump, one of which is common to each of the valve grooves whereby oil is supplied to and discharged from the pump through one passage therein during the rotation of the valve.

4. A force feed lubricator comprising in combination a reservoir, a power shaft, a single piston pump and eccentric on said shaft connected with the piston, means on the piston for adjusting the stroke thereof, a rotary valve provided with separate grooves forming a plurality of oil passages connecting the contents of the reservoir with the pump and discharge passages conducting the oil onward to its destination.

1,107,221. PORTABLE UNIVERSAL MILLING-MACHINE. GEORGE E. MILLER, Oakland, and EDWIN B. CANTRELL, San Francisco, Cal. Filed Jan. 21, 1913. Serial No. 743,284. (Cl. 90—12.)



1. A portable, universal milling machine comprising a post or column having a longitudinally extending slot, a slide adjustable upon and along said column, a motor supported upon one side of the slide, a transmitting gearing and its case, a drive connection between said motor and the transmitting gear supported on the slide, and a member extending through the slot in the column and having rigid connection with the motor and with said case, whereby these parts will move in unison in an arc about the axis of said member.

2. A portable, universal milling machine comprising a post or column having a longitudinally and diametrically extending slot, a slide adjustable upon and along said column, a motor supported upon one side of the slide, a transmitting gearing and its case, a drive connection between said motor and the transmitting gear supported on the slide, and a member extending through the slot in the column and having rigid connection with the motor and with said case, whereby these parts will move in unison in an arc about the axis of said member.

3. A portable tool comprising a post or column having a longitudinal slot extending therethrough, a slide adjustable upon and along said column, a motor turnably supported on one side of the slide, a transmitting gear and a driven shaft supported on the opposite side of the slide, a driving connection between said motor and the transmitting gear, and a connection between said motor and the transmitting gear passing through said slot, whereby the motor and said gear will move uniformly in an arc about the axis of said connection.

4. A portable, universally adjustable tool comprising a post or column, a slide adjustably fitting said column, means for moving the slide along and holding the same in adjusted position thereon, a motor turnably supported on one side of the slide, a transmission gearing turnably supported upon the opposite side of the slide, said post having a longitudinal slot extending therethrough, a driving connection between the motor and the transmission gearing, and a pivotal connection extending through said slot and rigidly secured to the motor and to the transmission gearing and turnably mounted in the slide so as to move uniformly therewith along the column and whereby the relative position of the motor and the transmission gearing is maintained uniform when the parts are adjusted in an arc with relation to the slide.

5. In a portable milling machine the combination with an adjustable support, of a post or column removably attachable to said support, a slide mounted on said post, a means for adjusting and holding the same in a given position thereon, said slide having a journal projecting transversely from one side, a face plate with its plane parallel to the axis of the post on the opposite side, said post having a longitudinal slot extending transversely therethrough, a shaft turnably supported in the slide and extending through the slot in the post, a member turnably adjustable upon the face plate and rigidly connected with the contiguous end of the shaft, a transmitting mechanism mounted upon said member, a bracket rigidly connected to the opposite end of the turnable shaft and having a portion turnably fitting upon the journal projecting from the contiguous end of the slide, a motor mounted upon said bracket, a driving connection between said motor and the transmitting mechanism, said motor and said mechanism moving uniformly and rigidly in an arc about the axis of the turnable shaft, and a cutter shaft driven by said transmitting mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,107,222. PROCESS OF PREPARING FILAMENTS, FILMS, AND MASSES FROM CELLULOSE ACETATE. HARRY S. MORK, Boston, Mass., assignor to Chemical Products Company, Boston, Mass., a Corporation of Maine. Filed Mar. 27, 1914. Serial No. 827,750. (Cl. 18—54.)

1. That improvement in the art of preparing filaments, films and masses of cellulose acetate which consists in dissolving cellulose acetate in a solvent composed largely of acetylene tetrachlorid and then coagulating the same by a mixture of an aliphatic hydrocarbon and acetylene tetrachlorid, the boiling point of the hydrocarbon being higher than the boiling point of acetylene tetrachlorid.

2. That improvement in the art of preparing filaments, films and masses of cellulose acetate which consists in dis-

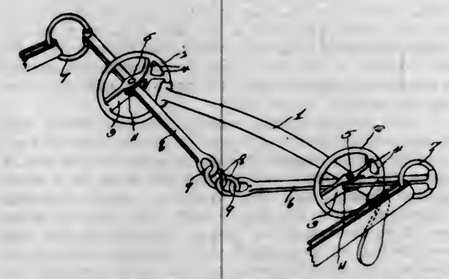
solving cellulose acetate in a solvent composed largely of acetylene tetrachlorid and then coagulating the same by a mixture of a petroleum hydrocarbon and acetylene tetrachlorid, the boiling point of the petroleum hydrocarbon being higher than the boiling point of acetylene tetrachlorid.

3. That improvement in the art of preparing filamenta, films and masses of cellulose acetate which consists in dissolving cellulose acetate in a solvent composed largely of acetylene tetrachlorid and then coagulating the same by a mixture of aliphatic hydrocarbons with acetylene tetrachlorid, the average boiling point of the aliphatic hydrocarbons being higher than the boiling point of acetylene tetrachlorid.

4. That improvement in the art of preparing filaments, films and masses of cellulose acetate which consists in dissolving cellulose acetate in a solvent composed largely of acetylene tetrachlorid and then coagulating the same by a mixture of petroleum hydrocarbons with acetylene tetrachlorid, the average boiling point of the petroleum hydrocarbons being higher than the boiling point of acetylene tetrachlorid.

5. That improvement in the art of preparing filaments, films and masses of cellulose acetate which consists in dissolving cellulose acetate in a solvent composed largely of acetylene tetrachlorid and then coagulating the same by a mixture of a kerosene and acetylene tetrachlorid.

1,107,223. BRIDLE-BIT. HENRY W. MULLINS, New Decatur, Ala. Filed Feb. 25, 1914. Serial No. 821,016. (Cl. 54—7.)

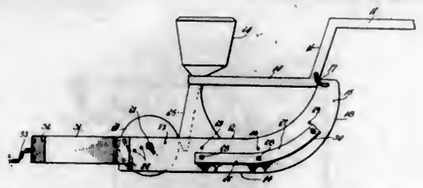


In combination, a pair of bit rings disposed opposite one another, a bit bar integrally and rigidly connecting said rings, said rings in plan view of the bit being at right angles to the bit bar, each of said rings having a centrally arranged bar extending across the diameter thereof and provided with centrally disposed slots, said centrally disposed bars in an end view of the bit being disposed substantially on a 45 degree angle, a pair of levers, each pivoted in the slot of each centrally arranged bar and having a rein ring at its outer end, and link connections connecting the adjacent end portions of said levers, which end portions engage under substantially the center portion of the lower jaw of the animal.

1,107,224. PLANTER. CHARLES S. PERRINS, Flint, Ark. Filed June 21, 1913. Serial No. 775,041. (Cl. 111—11.)

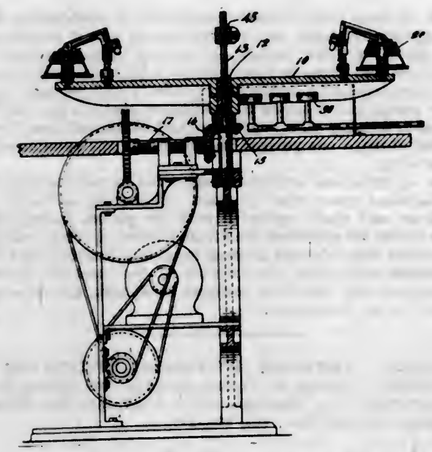
1. In a planter, a forked shoe, angle iron flanges of arcuate outline secured to the outer sides of the branches of said shoe, and forming flanges for deflecting the earth outwardly from said shoe, a packer wheel journaled between the branches of said shoe in rear of said flanges, a seed hopper carried by said shoe, and coverers carried by the rear edges of said shoe branches.

2. The combination with a furrow opener, of a seed dropper for depositing the seed on the hard soil in the bottom of the furrow, a guard device for holding the loose earth formed by the cutting of the furrow from falling into the latter, pressing mechanism for embedding the seed in the above-mentioned hard soil of the furrow bottom, and covering devices for filling the furrow with the loose soil



after the seed has been embedded by the pressing mechanism.

1,107,225. MACHINE FOR FORMING PAPER RECEPTACLES. HERBERT F. PROVANDIE, Melrose, Mass., assignor to American Water Supply Company of New England, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1913. Serial No. 787,430. (Cl. 93—36.)



1. In a machine for forming paper receptacles, a turret, a plurality of forms arranged on said turret, pressure devices for coöperation with the forms, angle members movably connected with the pressure devices and pivotally supported on the turret, a trip-member to which the angle members are successively presented in the rotation of the turret, and a downwardly inclined yielding finger carried by and projecting beyond each angle member to ride beneath and be engaged by said trip member, whereby to operate each angle member on its pivotal connection in the movement of such angle member past the trip member.

2. In a machine for forming paper receptacles, the combination of a turret, a plurality of forms arranged on said turret on which the bodies and bottom-pieces are placed, inverted cups shaped to fit the forms which are arranged above the forms, pivoted supporting-arms to which said cups are loosely connected, projections and springs on said supporting-arms for engagement with the cups, respectively at opposite sides of the center, and holding-springs connected with said supporting-arms, substantially as described.

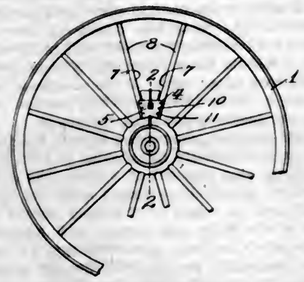
3. In a machine for forming paper receptacles, the combination of a turret, a plurality of forms arranged on said turret on which the bodies and bottom-pieces are placed, pressure-devices for engagement with the bottom-pieces on the forms, movable supporting-means for said pressure-devices, holding-means connected with said supporting-means and automatic means to lift said supporting-means to cause the pressure-devices to disengage the bottom-pieces, said automatic means operating in succession against and with said holding means, substantially as described.

4. In a machine for forming paper receptacles, the combination of a turret, a plurality of forms arranged on said turret on which the bodies and bottom-pieces are placed, pressure-devices, coextensive with the bottom-pieces and shaped to fit the forms which are arranged above the forms, supporting-means for said pressure-devices which are movable to permit movement of the pressure-devices toward and from the forms, and holding-means connected with said supporting-means for holding the pressure-devices in engagement with the receptacles on the forms, and heating-means for the paper receptacles, into the zone of which they are successively brought, substantially as described.

5. A machine for forming paper receptacles including a form to receive the body of the receptacle, a pressure element shaped to fit the body and adapted to overlie and press upon the bottom piece of the receptacle, a fixed element and a yielding element coöperating with the pressure element during its engagement with the bottom piece.

[Claim 6 not printed in the Gazette.]

1,107,226. LUBRICATOR. EDWARD REGLIN, Cochrane, Wis. Filed May 1, 1914. Serial No. 835,747. (Cl. 64—26.)

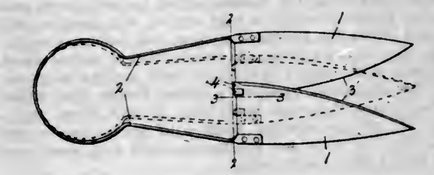


1. In combination, a box-like structure comprising vertical sides, and a pair of inclined sides fitting between and in contact with the adjacent faces of a pair of spokes of a wheel, said inclined sides having flanges secured to the vertical sides, said spokes fitting between said flanges, one of the vertical sides and its adjacent flanges being secured to said spokes, a lubricant container having a feeding tube in the box-like structure, means on the interior of the box-like structure for supporting and holding said feeding tube of said container, and a closure or cover for the box-like structure.

2. In combination, a box-like structure comprising vertical sides, and a pair of inclined sides fitting between and in contact with the adjacent faces of a pair of spokes of a wheel, a lubricant container having a feeding tube in the box-like structure, said inclined sides having flanges secured to the vertical sides, said spokes fitting between said flanges, one of the vertical sides and its adjacent flanges being secured to said spokes, a transverse plate secured on the interior of the inclined sides and provided with an aperture to receive and hold said feeding tube of said container, said vertical sides having catches, a cover or closure of a contour and shape to correspondingly fit within the box-like structure, and an arched wire secured to the cover terminating in spring latches on two of the sides of the cover to engage said catches.

3. In combination, a lubricant container having a feeding tube terminating adjacent the spindle of an axle, a box-like structure corresponding in shape to the space between two spokes of a wheel and fitting therein, and in which said lubricant feeding tube is removably supported, means for detachably securing the box-like structure to the spokes, a cover corresponding in shape to the box-like structure to telescope the upper end of the same, and latching means for the cover.

1,107,227. GRASS-SHEARS. PATRICK F. RYAN, Syracuse, N. Y. Filed Apr. 11, 1913. Serial No. 760,427. (Cl. 30—1.)

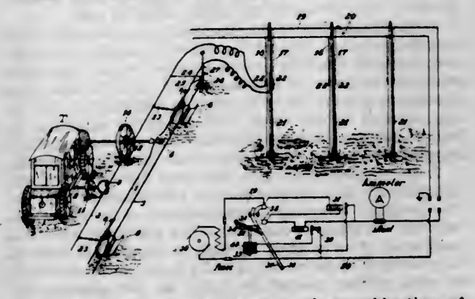


1. A grass shears comprising a spring handle and a pair of blades secured thereto and having their rear ends provided with integral tongues, the tongue of each blade being bent around the heel and upon the outer surface of the other blade in sliding engagement therewith.

2. A grass shears comprising a pair of shearing blades having the rear ends of their cutting edges lapping one upon the other and the rear ends of the overlapping portions provided with integral tongues, the tongue of each blade being bent around the heel and upon the outer face of the other blade in sliding engagement therewith, said tongues being arranged side by side one in the path of the other to limit the opening movement of the blades.

3. A grass shears comprising a U-shaped spring, shearing blades secured to the ends of the spring and having the heels of their overlapping shearing edges provided with tongues, the tongue of the upper blades being bent around and under the heel of the lower blade and located between the shearing edge and outer edge of said lower blade while the tongue of the lower blade is bent around and over the heel of the upper blade and is located between the shearing edge and outer edge of said upper blade, the tongue of each blade being in sliding engagement with the heel of the other blade.

1,107,228. AGRICULTURAL TROLLEY SYSTEM. EUGENE W. SANDERSON, New York, N. Y. Filed June 9, 1913. Serial No. 772,563. (Cl. 191—2.)



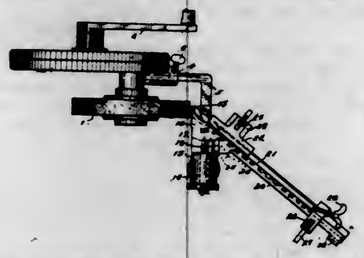
1. In an electric trolley system, the combination of sliding shoes each consisting of two curved and bent iron sheets for resting upon the ground and fastened together, a cable connecting said shoes together, feeders, chains connecting one of said feeders at intervals to each of said shoes, a tractor electrically connected to said feeders, V-shaped supports on top of the shoes for holding one of said feeders, a trolley wheel for running against one of said feeders, a pair of trolley wheels grasping the other feeder for pulling the feeders and shoes laterally as the tractor travels along.

2. In an electric trolley system, the combination of sliding shoes, a cable connecting them mechanically together, a feeder, flexible connectors on said shoes and attached to said feeder, V-shaped supports on each shoe, a second feeder extending from shoe to shoe and lying in said V-shaped supports, a trolley wheel for running along the under side of said second feeder for collecting current, and other trolley wheels running along and grasping the first feeder.

3. In a trolley system, the combination of feeders extending across a field, a tractor for running back and forth along the feeders, sliding shoes supporting one feeder, chains connecting the second feeder to said shoes, and trolley wheels attached to said tractor, and grasping said second feeder for pulling the shoes and feeders laterally.

4. In a trolley system, the combination of sliding shoes, a feeder wire carried thefeby, a cable mechanically connecting said shoes together, a second feeder wire, chains connecting said second feeder wire to said shoes, and a pair of trolleys running along said second feeder and grasping the same for pulling laterally said shoes and the first named feeder wire.

1,107,229. DRILL-GRINDING ATTACHMENT. MICHAEL WAGNER, Pittsburgh, Pa., assignor, by mesne assignments, to Samuel S. Newman, Pittsburgh, Pa. Filed Feb. 15, 1913. Serial No. 748,536. (Cl. 51—7.)



1. In combination in an attachment for use with a disk grinding wheel, a support for the attachment, a drill carrier provided with a supporting axis extending transversely to the plane of rotation of the grinding wheel, a member in which the said axis is journaled and which is mounted upon the said support for movement with respect thereto, and positive means for adjusting the said member to move the drill carrier and drill toward the axis of rotation of the wheel as the grinding progresses and intermediate the oscillations of the carrier upon its axis.

2. In combination in an attachment for use with a disk grinding wheel, a support for the attachment, a drill carrier mounted rotatably on the support on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, and means for adjusting the axis of rotation of the drill carrier with respect to the said support and toward the wheel as the grinding progresses.

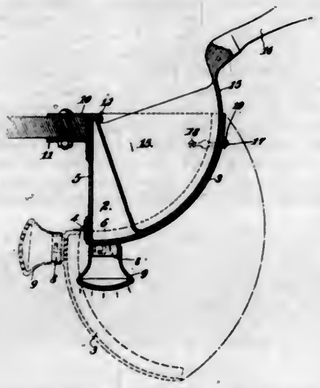
3. In combination in an attachment for use with a disk grinding wheel, a support for the attachment, a drill carrier mounted rotatably on the support on an axis transverse to the plane of rotation of the grindindg wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, and an eccentric for adjusting th drill carrier toward the wheel as the grinding progresses.

4. In combination in an attachment for use with a disk grinding wheel, a support for the attachment, a drill carrier mounted rotatably on the support on an axis transverse to the plane of rotation of the grinding wheel and positioned so as to bring the drill in engagement with the edge surface of the wheel, and means whereby the axis of rotation of the drill carrier may be adjusted toward and from the edge surface of the wheel to change the radius of swing of the end of drill and provide for the grinding of drills of different sizes.

5. In combination in a drill carrier for a grinding machine, a trough for supporting the drill, provided at its rear lower portion with a loop, means for clamping the drill in the trough, a positioning bar for the rear end of the drill extending slidably through the said loop and lying beneath the trough and a removable loop fitting around the trough and bar and provided with a holding screw engaging the said bar.

[Claims 6 to 11 not printed in the Gazette.]

1,107,230. FRUIT-SQUEEZER. OTTO WEIS, Vancouver, British Columbia, Canada. Filed May 1, 1914. Serial No. 835,721. (Cl. 100—41.)

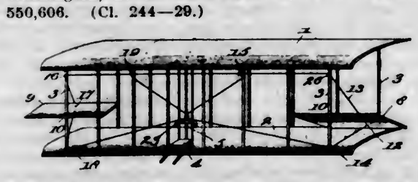


1. A fruit squeezer, comprising a fruit holding receptacle having perforations in its bottom and the front wall of which is hinged adjacent to the bottom to the back and the edges of it flanged outside the sides, said perforations in the bottom of the receptacle delivering into an outlet pipe, means for retaining the front wall in the closed position, and a handle lever removably pivoted between the sides at the back upper corner of the receptacle said handle lever having a downwardly projecting portion conforming closely to the inside of the fruit receptacle.

2. A fruit squeezer, comprising a fruit holding receptacle which is substantially rectangular in plan and in side view is shaped as a segment of a circle, the curved outer wall of which receptacle is hinged along its bottom edge to the back and the edges of it flanged inward outside of the edges of the sides said curved wall having perforations adjacent to the hinge delivering into an outlet pipe, a strainer removably socketed on the end of tuis outlet pipe, means for retaining the curved front wall in the closed position, means for securing the receptacle to a table or the like, and a handle lever hinged to the back upper corner of the receptacle and having a segmental projection closely conforming to the dimensions of the fruit holding receptacle.

3. A fruit squeezer, comprising a fruit holding receptacle the front wall of which is hinged adjacent to the bottom and its edges flanged inward over those of the sides, means for holding this front wall in the closed position, said container having perforations in the bottom delivering into an outlet pipe, a strainer removably socketed outside the pipe, and a handle lever pivoted on a removable pin adjacent to the upper back corner of the container said handle lever having a portion projecting from its under side into the container which downwardly projected portion conforms closely to the form and dimensions of the container.

1,107,231. FLYING-MACHINE. ALBERT FRANCIS ZAHM, Washington, D. C. Filed Mar. 21, 1910. Serial No. 550,606. (Cl. 244—29.)



1. In a flying machine, the combination of a plurality of lateral ailerons; and means for moving the same to different angles relatively to each other, comprising means permitting the ailerons to automatically so adjust themselves under the varying impact of the air as to receive equal pressures, substantially as described.

2. In a flying machine, the combination of a plurality of pivoted lateral ailerons; and flexible means under the control of the operator for moving said ailerons to different angles to each other, comprising means permitting said ailerons to automatically assume such positions under varying impacts of the air that they will receive equal pressures, substantially as described.

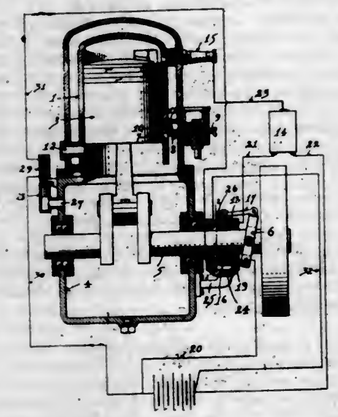
3. In a flying machine, the combination of a plurality of pivoted lateral ailerons; and flexible means adapted to be moved by the operator for adjusting said ailerons to different angles to each other, comprising means permitting said ailerons under the varying impacts of the air to freely assume such positions that they will receive equal pressures, substantially as described.

4. In a flying machine, the combination of a plurality of ailerons; and means by which said ailerons may be so moved as to exert during flight a torque about the longitudinal axis of the machine, comprising automatic means by which said ailerons are prevented from exerting a torque about the vertical axis of said machine, substantially as described.

5. In a flying machine, the combination of a plurality of lateral ailerons; supports on which the same are pivoted; a movable yoke or lever under the control of the operator; and flexible connections between said yoke and said ailerons by which the latter may be moved by the operator to any desired angle to each other and by the wind to such an angle as will cause said ailerons to receive equal pressures, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,107,232. INTERNAL-COMBUSTION ENGINE. CHARLES C. NICHOLS and WILLIAM H. WRIGHT, Buffalo, N. Y., assignors to Nichols & Wright Motor Co., Buffalo, N. Y., a Corporation of New York. Filed Feb. 6, 1914. Serial No. 816,949. (Cl. 123—73.)



1. In an internal combustion engine, in combination with a governor, a yoke mounted over the crank-shaft, a ring on said shaft within said yoke connected to said governor to be moved axially thereby, electrical contacts on said yoke insulated therefrom and capable of making electrical connection with said ring, a source of electric energy, a spark-coil and wires connecting the same with said contacts, a second pair of contacts on said yoke capable of being electrically connected by said ring, and a valve for preventing air charge when said ring is out of electrical connection with said first-mentioned pair of contacts.

2. In an internal combustion engine, in combination with a governor, means for regulating the fuel-charging of the engine comprising an opening from atmosphere into the crank-chamber, a valve in said opening, a solenoid governing said valve, a circuit and source of electric energy for said solenoid, and an electric switch operated by said governor for opening and closing said circuit.

3. In an internal combustion engine, in combination with a governor, a yoke mounted over the crank-shaft, a ring on said shaft within said yoke connected to said governor to be moved axially thereby, electrical contacts on said yoke insulated therefrom and capable of being electrically connected by said ring, a source of electric energy, a spark-coil and wires connecting the same with said contacts, whereby the spark-coil circuit is closed through said ring excepting when said governor moves said ring out of contact; a second pair of contacts on said yoke insulated therefrom, wires connecting said contacts with said battery, an opening to atmosphere from the crank-chamber of the engine, a valve in said opening, a solenoid for opening said valve, said solenoid being in circuit with said last-mentioned contacts, whereby, when said ring breaks electrical connection for said spark-coil, it closes the circuit of said solenoid to open said valve.

4. In a two-cycle internal combustion engine, in combination with a governor and means actuated by said governor for controlling the spark-coil circuit, means for preventing the normal charging of the cylinder with fuel by letting off the crank-chamber pressure upon the explosion stroke comprising an opening in said crank-chamber, a valve in said opening and means for actuating said valve controlled by said governor.

5. In a two-cycle internal combustion engine, in combination with a governor, means for preventing the normal charging of the cylinder with fuel comprising an opening in the crank-chamber to atmosphere, a valve in said opening, an electromagnetic device for operating said valve, and an electric switch opened and closed by the action of said governor for controlling said electromagnetic device, whereby pressure in said crank-chamber is removed at the charging period when said governor is acting to retard the speed of the engine.

1,107,233. RESISTANCE ELEMENT. CHESTER N. MOORE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1914. Serial No. 837,873. (Cl. 219—63.)

1. The process of making resistance elements which consists in locating a resistance conductor centrally within a closed metallic tube filled with granular insulating material subjecting the tube to successive swaging operations to reduce the diameter of the tube and conductor and compact the insulating material, then heating the tube to a high temperature to thoroughly anneal the same and the inclosed conductor, again swaging the tube, and continuing these operations until the tube and inclosed core are elongated and reduced to a relatively small diameter and the insulating material compressed to a high degree.

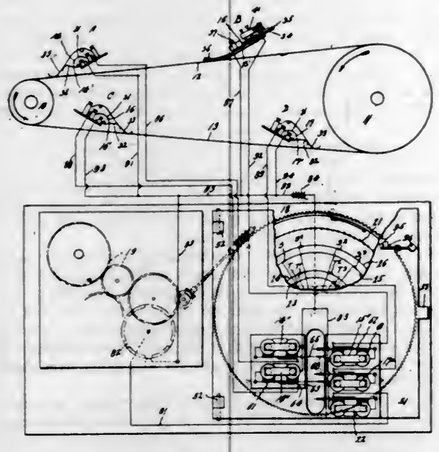
2. The process of making resistance elements which consists in locating a resistance conductor centrally within a closed metallic tube filled with comminuted insulating material, subjecting the tube to successive swaging operations to reduce the diameter of the tube and conductor, and to compact the insulating material until the resistance core has attained a diameter suitable for a terminal, and then completing the reduction by rolling or drawing.

3. A compound or sheath wire comprising an inner core of resistance metal, an outer metallic sheath concentric with the core, and a layer of insulating material of minimum thickness between the sheath and the core composed of a granular material compressed to a density such that it has maximum heat conductivity and the wire is practically homogeneous throughout and may be worked like a metal.

1,107,234. HORSE-POWER INDICATOR AND RECORDER. LAWRENCE N. MORSCHER, Lawrence, Kans., assignor to himself and Irving Hill, a Copartnership. Filed Feb. 3, 1913, Serial No. 745,791. Renewed Dec. 19,1913. Serial No. 807,775. (Cl. 234—16.)

1. In an apparatus for the determination of delivered power, the combination of a vibratory member attached to

a load and under linear transportation and stress due to the application of force, and a recording member for recording the speed of travel of lateral vibrations in said vibratory member in the direction of, and in the direction opposite to, the direction of its linear transportation.



2. In an apparatus for the determination of delivered power, the combination with a driving pulley, a driven pulley and an endless transmission belt connecting the same, of means for determining the speed of travel of lateral vibrations in the tight and slack sides of said belt in the direction of, and in the direction opposite to, the linear movement of said belt between said pulleys.

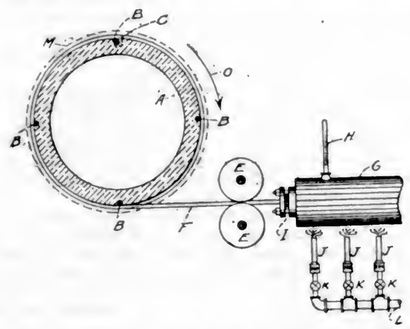
3. In an apparatus for the determination of delivered power, the combination of a vibratory member attached to a load and under linear transportation and stress due to the application of force, a motor, a record sheet driven thereby, a time-recording member for producing a time record on said sheet, other recording means associated with said sheet, and elements associated with said vibratory member and with said recording means, said elements being affected by lateral vibrations of the vibratory member induced by external blows upon the vibratory member, whereby the speed of travel of lateral vibrations in the vibratory member in the direction of, and in the direction opposite to, the direction of its linear transportation will be recorded upon said record sheet.

4. In an apparatus for the determination of delivered power, the combination of a vibratory member attached to a load and under linear transportation and stress due to the application of force, a motor, a record sheet driven thereby, a time record on said sheet, recording means associated with said sheet, and elements associated with said vibratory member and with said recording means, said elements being affected by lateral vibrations of the vibratory member induced by external blows upon the vibratory member whereby the speed of travel of lateral vibrations in the vibratory member in the direction of, and in the direction opposite to, the direction of its linear transportation will be recorded upon said record sheet.

5. In an apparatus of the class described, a terminal member comprising a movable body having a portion formed to rest upon and be supported by a linearly-traveling power-transmission member, said main body being movable at an angle to the direction of movement of the power transmitting member, a pair of electrical contact points carried by said main body and one movable relative to the other, a weight mounted upon said main body and movable relative thereto in the direction of movement of the main body, and a connection between said movable weight and the movable terminal, for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,107,235. PROCESS OF MANUFACTURING REINFORCED-CONCRETE PRESSURE-PIPES. GEORGE RAE, Portland, Oreg. Filed Jan. 6, 1910. Serial No. 536,778. (Cl. 72—59.)

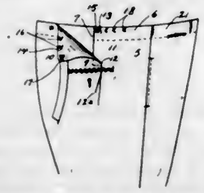


1. An improved process of manufacturing reinforced concrete pressure pipe and similar composite structures consisting in the application of the steel or tension resisting material to a hardened shell or core of concrete or similar material in the form of a continuous helix in a state of tension of such degree as will induce a determinate beneficial relation of stresses in the component parts of the structure, for the purposes set forth.

2. An improved process for manufacturing reinforced concrete pressure pipe and similar structures consisting in the application of tension material as a helix inclosing a core or shell of hardened concrete, said helix of tension material being applied at such a temperature that on cooling the induced compressive stress in the core will be of such degree that when the designed internal pressure is applied, there will be a designed increased tensile stress in said helix, coincident with a designed decreased compressive stress in said core or shell of concrete.

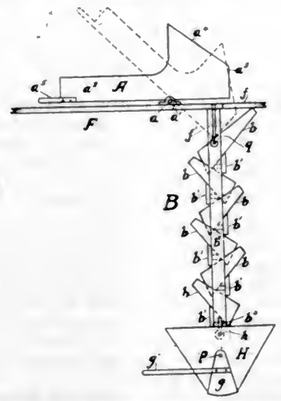
3. As an article of manufacture, a reinforced concrete pressure pipe composed of a core or shell of concrete or similar material normally in a state of induced peripheral compression, produced by an incasing helix of tension material normally in a state of initial tension, the relations of cross sectional areas and initial stresses being such that when the pipe is subjected to the designed internal pressure, the tension in the tension material is thereby increased to a designed amount coincidently with a designed decreased compressive stress in the concrete core or shell.

1,107,236. TROUSERS. EDWARD C. RETHORN, Buffalo, N. Y., assignor to Herman Wile & Co., a Corporation of New York. Filed Oct. 24, 1912. Serial No. 727,556. (Cl. 2—143.)



A pair of trousers comprising, a waist portion, a front and rear flap at each side of the rear center of said waist portion, each pair of said flaps being formed from a single piece of material, a triangular piece of material being removed at a point below each pair of flaps and below the waist line and the two edges of the cut portion being secured together, the circumference of the trousers at the upper part of the triangular cut being comparatively less than the circumference at the lower end of the triangular cut and comparatively less than the circumference of the material at the upper edge of the trousers, suitable fastening means spaced apart and secured to each of said front and rear flaps, so that they may be lockingly engaged, belt parts, each having one of its ends secured to said rear flaps, and tunnels provided on the front of said waist band through which said belt parts pass, whereby the circumference of the waist band may be adjustably altered as desired.

1,107,237. METHOD OF AND DEVICE FOR MIXING CONCRETE. THOMAS L. SMITH, Milwaukee, Wis. Filed July 17, 1909. Serial No. 508,211. (Cl. 83—73.)



1. The method of mixing concrete which consists in assembling a batch of the ingredients in the proper proportion with the ingredients spread in successive super imposed layers of equal length and width, pouring the material in a continuous stream endwise of these layers and repeatedly and alternately crowding the materials together and allowing them to spread laterally of the stream while they alternately expand and crowd together vertically, respectively, under the force of gravity.

2. A gravity concrete mixer comprising a series of spouts each inclined to the vertical and each having a relatively wide and shallow receiving portion which tapers to a relatively narrow and deep discharge opening, the spouts being arranged one above another with the receiving portion of each in position to receive the discharge from the spout next above it.

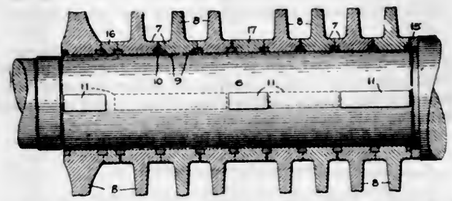
3. A gravity concrete mixer comprising a series of spouts each inclined to the vertical and each having a relatively wide and shallow receiving portion which tapers to a relatively narrow and deep discharge opening, the spouts being arranged one above another with the receiving portion of each in position to receive the discharge from the spout next above it, succeeding spouts being oppositely inclined to each other.

4. A gravity concrete mixer comprising a series of spouts each inclined to the vertical and each having a relatively wide and shallow receiving portion which tapers to a relatively narrow and deep discharge opening, the spouts being arranged one above another with the receiving portion of each in position to receive the discharge from the spout next above it, and a charging hopper adapted and arranged to be tilted to feed material to the receiving portion of the uppermost spout.

5. A gravity concrete mixer comprising a series of spouts each inclined to the vertical and each having a relatively wide and shallow receiving portion which tapers to a relatively narrow and deep discharge opening, the spots being arranged one above another with the receiving portion of each in position to receive the discharge from the spout next above it, succeeding spouts being oppositely inclined to each other, and a charging hopper adapted and arranged to be tilted to feed material to the receiving portion of the uppermost spout.

[Claim 6 not printed in the Gazette.]

1,107,238. ROTOR FOR ELASTIC-FLUID TURBINES. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 27, 1914. Serial No. 847,714. (Cl. 121—58.)



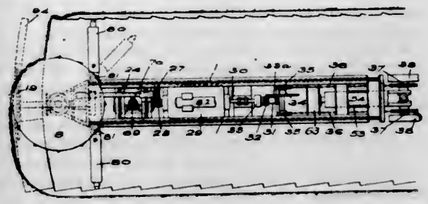
1. The combination in an elastic fluid turbine, of a rotor comprising a shaft, wheels mounted thereon, and spacing members arranged between two or more of the wheels, said members being circumferentially spaced apart with the members on one side of each wheel staggered with relation to those on the other.

2. The combination in an elastic fluid turbine, of a rotor comprising a shaft, and wheels mounted thereon which are provided on their hubs with projections for spacing apart adjacent hubs, said projections being spaced circumferentially and those on opposite sides of any wheel being staggered relative to each other.

3. In a machine wherein the rotor may be subjected to temperatures causing unequal expansion, the combination of a shaft, spaced rings on the shaft, running wheels having their hubs provided with recesses which fit to said rings, and spacing members arranged between the wheels, said members being circumferentially spaced apart with the members on one side of each wheel staggered with relation to those on the other.

4. The combination in an elastic fluid turbine, of a rotor comprising a shaft, spaced rings on the shaft, and running wheels having their hubs provided with recesses which fit to said rings, two or more of said hubs being provided with integral spaced projections which serve to space apart adjacent hubs, the projections on one side of any hub being out of axial alinement with those on the other side.

1,107,239. MINING-MACHINE. HARRY A. KUHN and WALTER W. MACFARREN, Pittsburgh, Pa.; said Macfarren assignor to said Kuhn. Filed Nov. 30, 1908. Serial No. 465,299. (Cl. 125—14.)



1. In a mining machine, a circular saw mounted in a horizontal shaft, said shaft being movable forward and sidewise, teeth on one side of the saw to cut when the saw is fed forward in a direction parallel to the shaft, teeth on the edge of the saw to cut when the saw is fed sidewise at right angles to the shaft, means for driving said saw, means for feeding it forward and means for feeding it sidewise.

2. In a mining machine, a circular saw mounted on a horizontal shaft, said shaft being movable forward and sidewise, teeth on one side and the edge of the saw, teeth on the shaft adapted to cut clearance therefor, means for driving the shaft, means for feeding it forward, and means for feeding it sidewise.

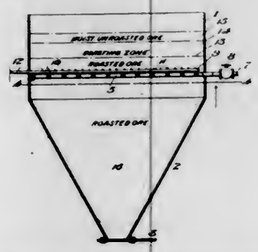
3. In a mining machine, a vertically arranged saw, teeth on one side and the edge of said saw, means for advancing the saw bodily into the coal, and means for moving the saw laterally therein.

4. In a mining machine, two vertical shafts one above the other, a saw on each of said shafts, a horizontal shaft in the same plane as the said first two shafts, a saw on said horizontal shaft, means for advancing the above elements into the coal in a direction parallel to the horizontal shaft and means for moving the same laterally therein.

5. In a mining machine, a frame pivoted at its rear end, a vertical saw and two horizontal saws mounted on the front end of said frame, means for advancing said saws into the coal, means for driving said saws, and means for swinging said frame about said pivot.

[Claims 6 to 12 not printed in the Gazette.]

1,107,240. PROCESS OF TREATING ORES. NIELS C. CHRISTENSEN, Jr., and THEODORE P. HOLT, Salt Lake City, Utah; said Christensen assignor to George H. Dern, Salt Lake City, Utah. Filed Aug. 3, 1911. Serial No. 642,088. (Cl. 75—17.)



1. A process of treating ore, consisting in preliminarily finely dividing the ore and bringing finely divided fuel into intimate mixture therewith, igniting the fuel carried by a charge of the preliminarily prepared ore and roasting the charge by internal combustion thereof at a temperature and in a manner such as will not fuse or sinter the ore, and afterward extracting the useful metals from the roasted ore by lixiviation with a suitable solvent.

2. A process of treating ore, consisting in preliminarily finely dividing the ore and bringing finely divided fuel into intimate mixture therewith, igniting the fuel carried by a charge of the preliminarily prepared ore and, by an air blast, roasting the ignited charge by internal combustion thereof at a temperature insufficient to fuse or sinter the ore, and thereafter extracting the useful metals from the roasted ore by lixiviation with a suitable solvent.

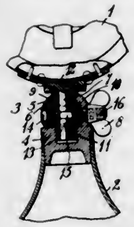
3. A process of treating ore, consisting in preliminarily finely dividing the ore and bringing finely diveded fuel into intimate mixture therewith, igniting the fuel carried by a charge of the preliminarily prepared ore, and by an air blast regulated at will, roasting the ignited charge by internal combustion thereof at a temperature insufficient to fuse or sinter the ore, and thereafter extracting the useful metals from the roasted ore by lixiviation with a suitable solvent.

4. A process of treating ore, consisting in preliminarily finely dividing the ore and bringing finely divided fuel into intimate mixture therewith, the fuel being in the proportion of from two to six per cent. of the ore, igniting the fuel carried by a charge of the preliminarily prepared ore and roasting the charge by internal combustion thereof, and thereafter extracting the useful metals from the roasted ore by lixiviation with a suitable solvent.

5. A process of treating ore, consisting in preliminarily finely dividing the ore and bringing finely divided fuel into intimate mixture therewith and adding chemicals to the mixture of fuel and ore according to the results desired from the subsequent treatment of the ore, igniting the fuel carried by a charge of the preliminarily prepared ore and roasting the charge by internal combustion thereof, and thereafter extracting the useful metals from the roasted ore by lixiviation with a suitable solvent.

[Claims 6 to 9 not printed in the Gazette.]

1,107,241. ADJUSTABLE JOINT. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania: Filed Dec. 21, 1910. Serial No. 598,517. (Cl. 248—30.)



1. The combination with a member having a plurality of substantially parallel arms, a second member pivotally mounted between said arms and having a cylindrical recess therein substantially normal to its pivotal support, and a stem rotatably set in said recess, of means for clamping said parts together and means for preventing longitudinal movement of said stem.

2. The combination with a member having upwardly projecting side portions, a second disk-like member having a central opening therein disposed between said portions, and a third member rotatably mounted in the opening of said second member, of a relatively large pin projecting through said side portions and constituting a pivotal support for said disk-like member and having a transverse opening therein to receive said third member, and means for clamping said parts together.

3. The combination with a supporting member having parallel arms, a pin projecting therethrough and having a transverse opening of relatively small diameter therein, a second member pivotally mounted on said pin in intimate contact with said arms and having a recess to register with the transverse opening in said pin, and a stem rotatably disposed in said recess and projecting through said transverse opening in said pin, of clamping means associated with one end of said pin for locking the parts firmly together, and means associated with the opposite end thereof for preventing longitudinal movement of said stem.

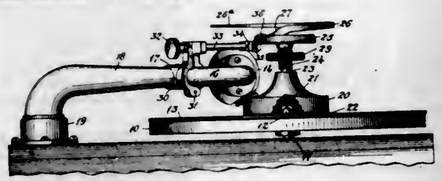
4. The combination with a U-shaped member, a pin extending through the side portions thereof and having a transverse opening therethrough, a second member pivotally mounted on said pin intermediate the side portions of said U-shaped member, said second member being provided with a recess disposed normally to said pin, and registering with the transverse opening in said pin, and a cylindrical stem rotatably disposed in said recess and projecting through said transverse opening, of a single means for clamping all said parts together.

5. The combination with a U-shaped member having parallelly disposed side portions, a disk member located between said side portions and having a cylindrical recess therein, a pin extending through said side portions upon which said disk member is pivotally mounted, said pin having a transverse opening of relatively small diameter to register with the recess in said disk member, and a stem rotatably disposed in said recess and projecting through the transverse opening in said pin, of clamping means associated with said pin for locking the various parts in position.

[Claims 6 to 8 not printed in the Gazette.]

1,107,242. REPEATING MECHANISM FOR TALKING-MACHINES. LAWRENCE ABRAHAM, New York, N. Y. Filed Mar. 28, 1914. Serial No. 827,936. (Cl. 181—3.)

1. In a repeating mechanism for talking machines the combination of a rotatable table adapted to carry a record, a movable reproducing needle, a support adapted to rest upon the record carried by said table, a cam carried by said support and adjustable thereon to vary the distance from the record table and means connected with said needle and adapted to coöperate with said cam whereby said needle is lifted from an operative position and moved back toward its starting point.



2. In a repeating mechanism for talking machines the combination of a rotatable record table, a movable reproducer needle, a cam connected to move with said table and a pawl connected with said needle and movable relatively to said needle in a direction parallel with the path in which said needle travels, said pawl coöperating with said cam to move said needle from an operative position and return it toward its starting position.

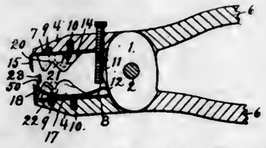
3. In a repeating mechanism for talking machines the combination of a rotatable record table, a pivotally mounted reproducer needle, a cam connected to move with said table, a pawl adapted to coöperate with said cam to raise said needle from an operative position and return it toward its starting point, said pawl being slidable relatively to said needle whereby the latter is capable of an independent movement in the direction of its travel and means for causing said pawl and needle to move in unison.

4. In a repeating mechanism for talking machines the combination of a rotatable record table, a pivotally mounted reproducer needle, a cam connected to move with said table, a support connected with said needle, and a pawl on said support adapted to coöperate with said cam to raise said needle from an operative position and return it toward its starting point, said pawl being slidable relatively to said support whereby said needle is capable of an independent movement in the direction of its travel.

5. In a repeating mechanism for talking machines the combination of a rotatable record table, a pivotally mounted reproducer needle, an annular track connected with said table to move therewith, a spiral cam connected with said track, a support detachably connected with said needle, a pawl slidably mounted on said support and adapted to engage said track and to be slidably moved thereby and guided into operative engagement with said spiral cam, and means for limiting the sliding movement of said pawl.

[Claims 6 to 8 not printed in the Gazette.]

1,107,243. PLIERS. HARRY A. ADAMS, East Hartford, Conn., assignor to Alfred C. Fairbanks, trustee, Springfield, Mass. Filed Dec. 15, 1910. Serial No. 597,426. (Cl. 81—9.5.)



1. The combination, with plier jaws provided with suitable cutters, the latter including a transverse end blade carried by one of such jaws, of an adjusting screw tapped into and through the other of such jaws, and a member mounted on said first-mentioned jaw and having a resilient part which extends into the path of the inner end of said screw.

2. The combination, with plier jaws provided with transverse end blades, of transverse means to assist in positioning a wire and its insulation between said blades, and means to support such positioning means between said jaws and adjacent to such blades.

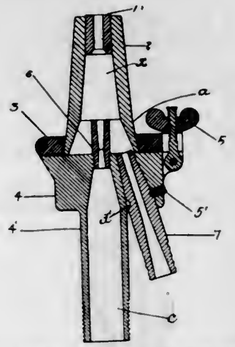
3. The combination, with plier jaws provided with transverse end blades, of transverse yielding means to assist in positioning a wire and its insulation between said blades, and means to support such positioning means between said jaws and adjacent to such blades, such positioning means being adapted to yield under force incident to the cutting operation.

4. The combination, with plier jaws provided with longitudinal side and transverse end blades, of an adjusting screw tapped into and through one of such jaws, and a resilient member mounted on the other of such jaws in operative relation at one terminal to said screw, and being extended upwardly at the other terminal, inside of and adjacent to the transverse end blade carried by the jaw to which said resilient member is attached, to form an abutment for the material acted on by said end blades.

5. The combination, in pliers, of a jaw, a fixed scraper member secured to such jaw, a movable scraper member mounted on said jaw beside said fixed member, a hub movable relative to said jaw, and an engaging member carried by said hub in operative relation to said movable scraper member, said scraper members having complementary wire-receiving recesses in their outer terminals.

[Claims 6 to 9 not printed in the Gazette.]

1,107,244. SAND-BLAST NOZZLE. ALBERT CARTER, New York, N. Y., assignor, by direct and mesne assignments, to Carter Metals Cleaning Company, a Corporation of Delaware. Filed July 20, 1911. Serial No. 639,506. (Cl. 230—13.)



1. In a sand-blast nozzle the combination comprising a casing consisting of two sections pivotally secured together, one of said sections being provided with a longitudinal air-supply conduit, said air supply conduit having a high-velocity turbine outlet jet, the bore of which consists of two truncated cones united at their smallest ends, an axially extending tip secured at the innermost end of said conduit and an oblique conduit removably secured to said section and eccentrically disposed with respect to said longitudinal conduit, and the other of said sections being provided with a reservoir, said reservoir having an outlet opening provided with a removable tip oppositely disposed with respect to, and in alinement with the longitudinal axis of that portion of said air-supply conduit immediately adjacent said tip, and means for optionally securing said sections together.

2. In a sand-blast nozzle the combination comprising a casing provided with an air supply conduit, said air-supply conduit having a high-velocity turbine outlet jet, the bore of which consists of two truncated cones united at their smallest end, and a reservoir provided in said casing in communication with said conduit through said outlet jet, said reservoir being provided with a supplemental sand supply conduit and a mixture outlet.

3. In a sand-blast nozzle the combination comprising an air-conduit, provided with an outlet consisting of a high-velocity turbine jet having a converging bore immediately adjacent to a diverging bore whereby the passage

of fluid therethrough is accelerated and friction of fluid passing therethrough is minimized.

4. In a sand-blast nozzle the combination comprising a casing consisting of two sections removably secured together, one of said sections being provided with an air-supply conduit, and the other of said sections being provided with a reservoir, means consisting of a high-velocity turbine jet of minimum cross sectional area at a point intermediate its ends and of maximum cross sectional area at its respective ends, for supplying air from said conduit to said reservoir, and means for permitting of the escape of a mixture of air and sand from said reservoir, and separate means for admitting sand to said reservoir.

5. A sand-blast nozzle, having a casing consisting of two abutting sections pivotally secured together, one of said sections being provided with a central longitudinal air-supply conduit, a high velocity turbine jet secured to the innermost end of said conduit and extending in axial alinement therewith, and an oblique conduit removably secured to said section, adjacent said longitudinal air-conduit, locking means out of alinement with said sleeve and extending at an angle to the axis thereof, independently movable with respect to said sleeve and said section, the other of said sections being provided with a reservoir, said reservoir having an outlet opening provided with a removable tip oppositely disposed with respect to, and in alinement with, the longitudinal axis of that portion of said air-supply conduit adjacent the tip on its inner end, and locking means independently movable with respect to both of said sections for securing the same together.

REISSUES.

13,787. CORN-HUSKER. GUSTAVE L. MILLER, Geneseo, Ill., assignor to The Boss Manufacturing Company, Kewanee, Ill., a Corporation of Illinois. Filed Dec. 11, 1913. Serial No. 806,130. Original No. 1,068,261, dated July 22, 1913, Serial No. 760,937. (Cl. 130—4.)



1. A corn husker, comprising a support of flexible material, a plate of rigid material secured to the outer face of the support intermediate the ends thereof and near the upper edge of the said support, said plate being curved longitudinally to fit the palm of the hand and the base of the thumb and having a notch or recess at the base of the thumb for fitting the said base, said support having means for securing the same to the hand of the wearer, an angle plate consisting of two portions at approximately a right angle to each other connected loosely with the plate, said angle plate having one of its portions approximately perpendicular to the face of the plate and having the free edge of the other portion serrated and a single tooth connected to the plate at approximately the center of the angle plate and extending in the opposite direction to the serrated edge.

2. A corn husker, comprising a support of flexible material adapted to inclose that portion of the hand adjacent to the wrist, a plate of rigid material secured to the outer face of the support intermediate the ends thereof, means in connection with the support for securing the same to the hand of the wearer, and means on the plate for grasping the husk and ear, said means comprising a plate having its free edge serrated and having a tooth at approximately the center and extending in the opposite direction from the serrations, and means for securing the said plate to the first-named plate in approximately parallel and spaced relation and with the length thereof extending approximately parallel with the length of the thumb of the user, said plate being capable of limited movement with respect to the first-named plate.

3. In a corn husker, a plate of rigid material shaped to fit the palm of the hand and the base of the thumb, means for connecting the said plate to the hand of the user, said plate having a rounded recess at the corner adjacent to the base of the thumb for fitting the said base of the thumb, and a grasping plate connected with the first named plate in spaced relation, said grasping plate having its length diagonal to the first-named plate and having its inner edge serrated and its opposite edge provided with a hook.

4. In a corn husker, a rigid plate, a flexible support for connecting the plate to the hand of the wearer, and a grasping plate connected with the first-named plate in spaced relation and having one edge serrated and having the opposite edge provided with a hook.

5. In a corn husker, a plate, means for connecting the plate to the hand of the user, and a grasping plate offset laterally from the face of the first-named plate, said grasping plate having a series of teeth at one side thereof and a hook at the other side.

6. In a corn husker, a palm plate, means for connecting the plate to the hand of the user, and an elongated grasping plate offset laterally from the face of the first mentioned plate, said grasping plate having at the free edge of the offset part thereof a series of teeth, the palm plate projecting forwardly beyond said free edge and the space between the palm plate and the inner surface of the offset part of the grasping plate being unobstructed.

7. In a corn husker, a palm plate, means for connecting the palm plate to the hand of the user, said palm plate having on its face an elongated grasping member projecting diagonally across the plate with an edge spaced from the face of the palm plate and said spaced edge having a series of teeth, and a supporting part for the grasping plate extending in a direction opposite to that of the teeth and secured to the palm plate.

8. In a corn husker, a palm plate, means for connecting the plate to the hand of the user, a grasping plate offset laterally from the face of the first named plate and spaced from the edges of the same, said grasping plate having a series of teeth at one side thereof, and a hook on the palm plate adjacent said grasping plate, extending in an opposite direction intermediate the ends of the grasping plate.

9. In a corn husker, a rigid plate, supporting means for connecting the plate to the hand of the user, a grasping plate connected with the first named plate in spaced relation and having one edge serrated, and a hook disposed in a direction opposite to the serrated edge of said grasping plate, and means for securing said hook to the palm plate adjacent to the grasping plate.

10. In a corn husker, a rigid plate, supporting means for connecting the plate to the hand of the user, a grasping plate connected with the first named plate in spaced relation and having one edge serrated, and a hook adjacent said grasping plate having an offset foot connected to the palm plate, and means engaging said offset foot for connecting the grasping plate to the palm plate.

11. In a corn husker, the combination of a palm plate, means for connecting the plate to the hand of the user, a grasping plate positioned on the palm plate and extending at an angle to the forward edge thereof, said grasping plate being substantially L-shaped in cross section, thereby providing an upright wall and a forwardly extending wall having in its free edge a series of teeth, and a hook extending in a direction opposite to the teeth of the grasping plate and arranged intermediate the ends of the latter.

DESIGNS.

46,241. TOY FIGURE. ESTELLE ALLISON, San Francisco, Cal. Filed May 25, 1914. Serial No. 840,947. Term of patent 7 years.



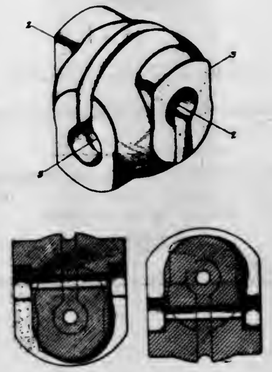
The ornamental design for a toy figure, substantially as shown and described.

46,242. BURIAL-CASKET HANDLE. CHARLES BLESCH, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 1, 1914. Serial No. 835,765. Term of patent 14 years.



The ornamental design for a burial-casket handle, substantially as shown.

46,243. INSULATOR. CLIFTON L. BUNDY, Philadelphia, Pa. Filed June 3, 1914. Serial No. 842,787. Term of patent 14 years.



The ornamental design for an insulator as shown and described.

46,244. RAIN-COAT. NOËL M. BUSH, Montclair, N. J. Filed June 1, 1914. Serial No. 842,321. Term of patent 7 years.



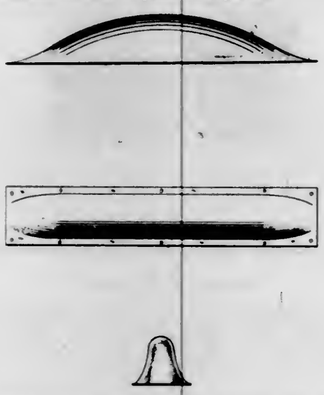
The ornamental design for a rain coat, as shown.

46,245. SCALE-DIAL. GEORGE E. CHATILLON, New York, N. Y. Filed May 29, 1914. Serial No. 841,924. Term of patent 14 years.



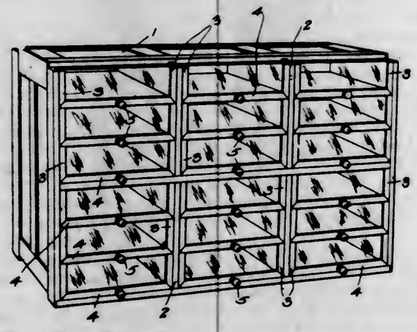
The ornamental design for a scale dial, substantially as shown and described.

46,246. HOUSING FOR HAY-RACK WHEELS. LOUIS R. COTY, Helena, Mont. Filed May 27, 1914. Serial No. 841,386. Term of patent 14 years.



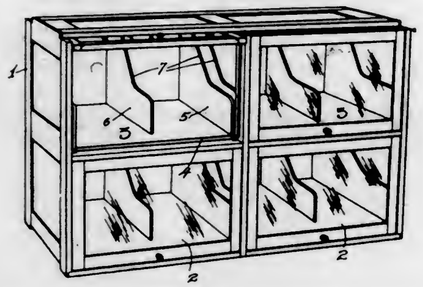
The ornamental design for a housing for hay rack wheels, as shown.

46,247. DRAWER-SECTION. CHARLES C. CURTISS, Grand Rapids, Mich. Filed Apr. 27, 1914. Serial No. 834,870. Term of patent 14 years.



The ornamental design for a drawer section substantially as shown and described.

46,248. SECTIONAL STORE FURNITURE. CHARLES C. CURTISS, Grand Rapids, Mich. Filed Apr. 27, 1914. Serial No. 834,871. Term of patent 14 years.



The ornamental design for sectional store furniture substantially as shown and described.

46,249. LOVING-CUP. HEIN DE VRIES, Hood, Cal. Filed Mar. 23, 1914. Serial No. 826,827. Term of patent 7 years.



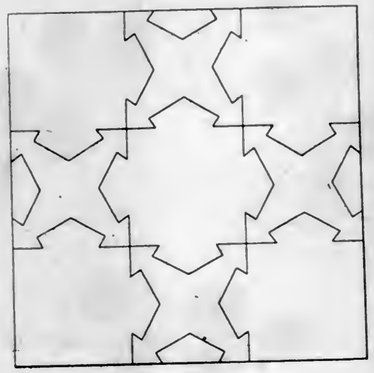
The ornamental design for a loving cup, as shown.

46,250. PARASOL. EDWARD J. DOTY, Baltimore, Md., assignor to Siegel, Rothschild & Co., a Firm composed of David Siegel, Benjamin Rothschild, and Daniel A. Weinberg, Baltimore, Md. Filed Mar. 4, 1914. Serial No. 822,515. Term of patent 3½ years.



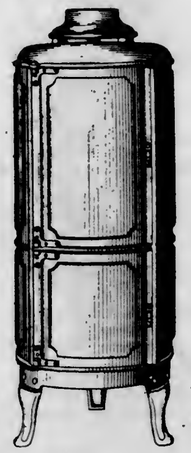
The ornamental design for a parasol, as shown.

46,251. TILE FLOORING. JOHN HASBROUCK, New York, N. Y. Filed June 3, 1914. Serial No. 842,777. Term of patent 7 years.



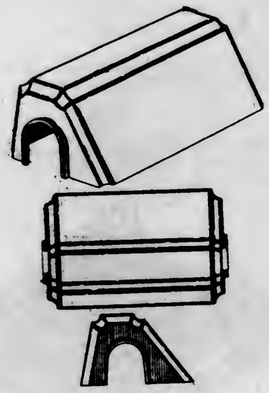
The ornamental design for tile flooring, as shown.

46,252. WATER-HEATER BODY. HERBERT S. HUMPHREY, Kalamazoo, Mich., assignor to Ruud Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 4, 1914. Serial No. 843,099. Term of patent 14 years.



The ornamental design for a water heater body, substantially as shown.

46,253. LIGHT-SHADE. NICHOLAS KOPP and ROBERT EDWARD EWING, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 30, 1914. Serial No. 835,535. Term of patent 3½ years.



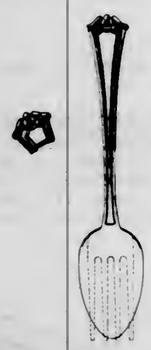
The ornamental design for a light shade as shown.

46,254. MEDAL. CHARLES KUNZE, Los Angeles, Cal. Filed May 26, 1914. Serial No. 841,164. Term of patent 3½ years.



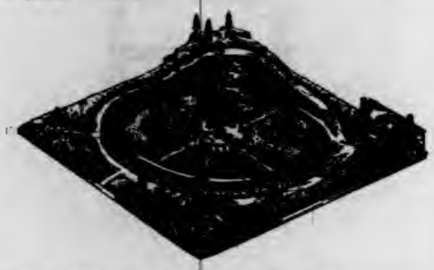
The ornamental design for a medal as shown.

46,255. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. THOMAS B. LASHAR, Bridgeport, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of New Jersey. Filed Mar. 4, 1914. Serial No. 822,521. Term of patent 7 years.



The ornamental design for a handle for spoons, forks or similar articles, substantially as shown.

46,256. TOY. EUGENE ANSELME LAHIERE, Washington, D. C. Filed Jan. 23, 1914. Serial No. 814,012. Term of patent 7 years.



The ornamental design for a toy, as shown.

46,257. CORNER-POST FOR METAL BEDSTEADS. WILLIAM LIES, Brooklyn, N. Y., assignor to Greenpoint Metallic Bed Company, Brooklyn, N. Y., a Firm composed of David Frank and William Lies, Brooklyn, N. Y., and John Trounstine, New York, N. Y. Filed June 4, 1914. Serial No. 843,105. Term of patent 3½ years.



The ornamental design for a corner post for metal bedsteads, as shown.

46,258. ARTICLE OF MANUFACTURE. JOHN E. MARSDEN, Sedgwick, Pa. Filed Apr. 7, 1914. Serial No. 830,300. Term of patent 7 years.



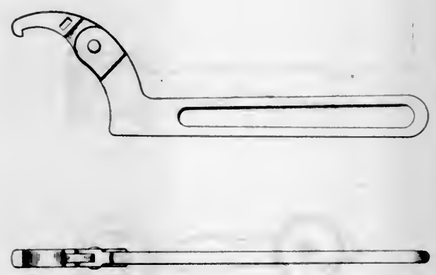
The ornamental design for an article of manufacture, as shown.

46,259. ARTICLE OF MANUFACTURE. JOHN E. MARSDEN, Sedgwick, Pa. Filed Apr. 7, 1914. Serial No. 830,301. Term of patent 7 years.



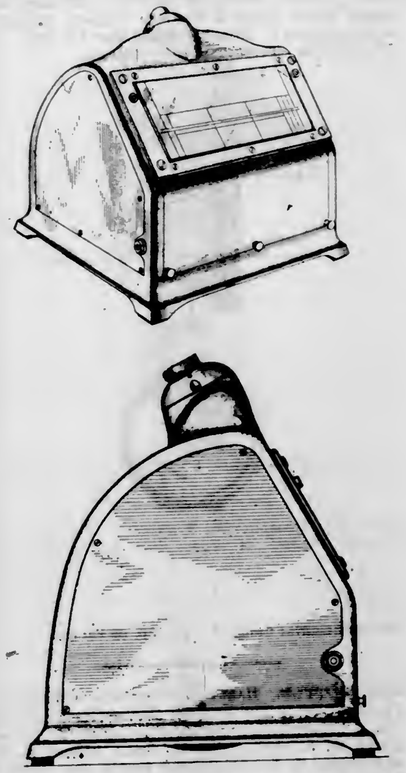
The ornamental design for an article of manufacture, as shown.

46,260. SPANNER-WRENCH. CLIFFORD A. MARTIN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed June 4, 1914. Serial No. 843,103. Term of patent 7 years.



The ornamental design for a spanner wrench, as shown.

46,261. CALCULATING-MACHINE CASING. CARL A. MEILICKE, Chicago, Ill. Filed Feb. 19, 1914. Serial No. 819,846. Term of patent 14 years.



The ornamental design for a calculating machine casing, as shown.

46,262. SURGICAL BASIN. CHRISTIAN W. MEINECKE, Jersey City, N. J., assignor to Meinecke & Company, New York, N. Y., a Corporation of New Jersey. Filed May 27, 1914. Serial No. 841,390. Term of patent 7 years.



The ornamental design for a surgical basin, as shown.

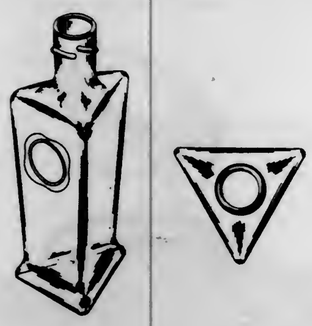
46,263. [WITHDRAWN.]

46,264. LAMP. ROGER M. NEWBOLD, Chicago, Ill., assignor to The Adams & Westlake Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1913. Serial No. 768,349. Term of patent 14 years.



The ornamental design for a lamp, as shown.

46,265. BOTTLE. HARRY E. POTTEIGER, Sinking Spring, Pa., assignor to The Burgner Manufacturing and Sales Co., a Copartnership composed of Harry E. Potteiger, Harry W. Burgner, Jacob K. Gring, Samuel S. Edris, and George R. Specht, Sinking Spring, Pa. Filed Apr. 16, 1914. Serial No. 832,392. Term of patent 14 years.



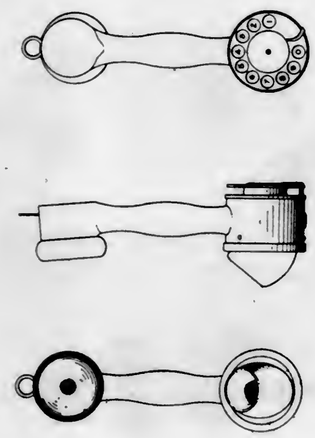
The ornamental design for a bottle as shown.

46,266. SHOE-BUTTONER. FRANCIS J. REYNOLDS and DANIEL LENAHAN, Watertown, N. Y. Filed Apr. 7, 1914. Serial No. 830,310. Term of patent 7 years.



The ornamental design for a shoe buttoner, as shown.

46,267. CASING FOR HAND-TELEPHONES. MICHAEL SETTER, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 5, 1913. Serial No. 772,008. Term of patent 14 years.



The ornamental design for a casing for a hand telephone, as shown.

46,268. BENCH-VISE ANVIL. CARL E. SHIELDS, Rock Island, Ill. Filed June 4, 1913. Serial No. 771,773. Term of patent 7 years.



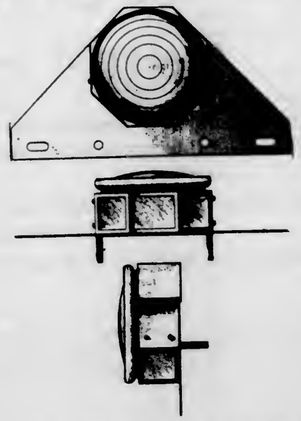
The ornamental design for a bench vise anvil, as shown.

46,269. KEY-WRENCH, BOTTLE-CAP OPENER, AND KEY-RING. WILL T. STEWART, Opelousas, La. Filed Aug. 21, 1913. Serial No. 786,042. Term of patent 7 years.



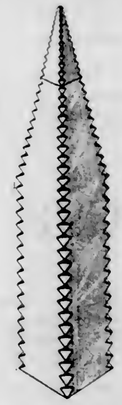
The ornamental design for a key wrench, bottle cap opener and key ring, as shown.

46,270. TAIL-LAMP. RICHARD H. WELLES, Kenosha, Wis., assignor to Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed June 5, 1914. Serial No. 843,312. Term of patent 7 years.



The ornamental design for a tail lamp as shown and described.

46,271. BOTTLE. DANIEL E. WILLIAMSON, Dyersburg, Tenn. Filed May 3, 1913. Serial No. 765,384. Term of patent 7 years.



The ornamental design for a bottle, as shown.

TRADE-MARKS

PUBLISHED AUGUST 11, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 44,278. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUPERIOR PEANUT COMPANY, Cleveland, Ohio. Filed Aug. 21, 1909.



CLEVELAND

No exclusive right in the words "'Good Enuf For Me,' Cleveland," being claimed.

Particular description of goods.—Salted Peanuts.

Claims use since its adoption in August, 1909.

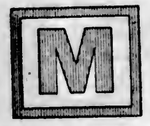
Ser. No. 49,706. (CLASS 39. CLOTHING.) VES-TONG MANUFACTURING CO., Wenona, Ill. Filed May 13, 1910.

VESTONG

Particular description of goods.—Hunting Coats and Vests.

Claims use since Mar. 15, 1910.

Ser. No. 56,201. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARSH & MARSH, Omaha, Nebr. Filed May 5, 1911.



The letter and square being printed in red.

Particular description of goods.—Butter and Eggs.

Claims use since January, 1909.

Ser. No. 58,143. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. LESINSKY COMPANY, El Paso, Tex. Filed Aug. 11, 1911.

THELCO

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Fish, and Canned Oysters and Shrimps.

Claims use since on or about Sept. 1, 1908.

Ser. No. 61,788. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES A. WINTER, Rahway, N. J. Filed Feb. 28, 1912.

SUDS

Particular description of goods.—A Detergent Preparation—Namely, a Laundry Powder Adapted to be Used with Soap for the Washing of Clothes.

Claims use since Feb. 1, 1912.

Ser. No. 63,762. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER ET CIE., Paris, France. Filed May 24, 1912.



Particular description of goods.—Perfumery, Toilet Waters, and Face-Tints.

Claims use since Aug. 12, 1907.

Ser. No. 64,600. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY VON GLAHN & SON, Brooklyn, N. Y. Filed July 6, 1912.

VEE GEE

Particular description of goods.—Canned Vegetables, Canned Fruits, and Canned Fish.
Claims use since Jan. 2, 1912.

Ser. No. 65,884. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DI-LAX MANUFACTURING CO., Savannah, Tenn. Filed Sept. 20, 1912.

RESULTS TALK



Particular description of goods.—Laxative and Digestive Remedies in Liquid and Tablet Form.
Claims use since July 20, 1912.

Ser. No. 67,236. (CLASS 48. MALT EXTRACTS AND LIQUORS.) BURKHARDT BREWING COMPANY, Boston, Mass. Filed Dec. 5, 1912.

PENNANT

Particular description of goods.—Ale.
Claims use since October, 1912.

Ser. No. 68,664. (CLASS 12. CONSTRUCTION MATERIALS.) THE TOLTEC MEXICAN OIL CO., New York, N. Y. Filed Feb. 21, 1913.

TOLTEC

Particular description of goods.—Asphalt and Hard Plastic or Liquid Asphalt Residuum Products.
Claims use since June, 1912.

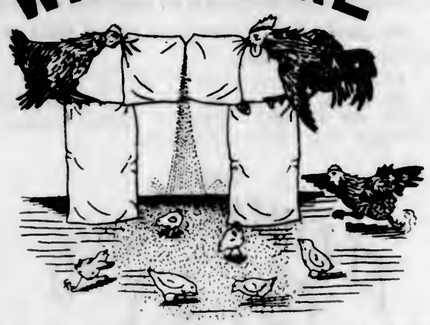
Ser. No. 68,906. (CLASS 2. RECEPTACLES.) THE UNITED STATES TOBACCO COMPANY, Richmond, Va. Filed Mar. 7, 1913.

POCKETPROOF

Particular description of goods.—Pockets or Containers Adapted to Hold Tobacco or other Material.
Claims use since Aug. 31, 1912.

Ser. No. 69,198. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. M. COX CO., Boston, Mass. Filed Mar. 20, 1913.

WIRTHMORE



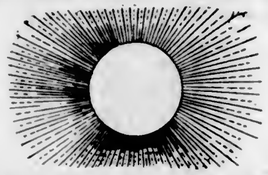
Particular description of goods.—Poultry Feeds—Namely, Scratch Feed, Mash Feed, Chick Feed, and Growing Feed.
Claims use since November, 1912.

Ser. No. 69,451. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) F. A. BÖHM, Untersachsenberg, Germany. Filed Mar. 31, 1913.



No claim being made to the words "Trade-Mark" and "Gesetzlich Geschutzt."
Particular description of goods.—Mouth-Organs, Accordions, and Concertinas.
Claims use since the year 1884.

Ser. No. 70,935. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed June 7, 1913.



Particular description of goods.—Medicated Stock Food.
Claims use since Apr. 26, 1901.

Ser. No. 71,344. (CLASS 39. CLOTHING.) SHAPIRO BROS., New York, N. Y. Filed June 24, 1913.

American Beauty

Particular description of goods.—Ladies', Misses', Juniors', and Children's Dresses.
Claims use since May 26, 1913.

Ser. No. 71,345. (CLASS 39. CLOTHING.) SHAPIRO BROS., New York, N. Y. Filed June 24, 1913.

American Beauty

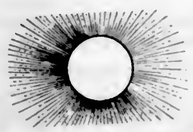
Particular description of goods.—Waists and Blouses.
Claims use since May 26, 1913.

Ser. No. 71,495. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed July 3, 1913.

CLOVER CLOTH

The word "Cloth" being disclaimed.
Particular description of goods.—Cotton Piece Goods.
Claims use since Sept. 22, 1905.

Ser. No. 71,555. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed July 7, 1913.



Particular description of goods.—Shaving-Lotions, Glove-Cleaner.
Claims use since Apr. 26, 1901.

Ser. No. 72,042. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRUITLAND ORCHARDS, INC., Staunton, Va. Filed July 30, 1913.

FRUITLAND'S FINEST

No claim being made to the words "Fruitland's Finest."
Particular description of goods.—Fresh Apples and Peaches.
Claims use since July 1, 1913.

Ser. No. 72,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. C. TRUAX & COMPANY, Toledo, Ohio. Filed Aug. 9, 1913.

UN-GRO-CO

Particular description of goods.—Almond-Paste; Ammonia; Baking-Powder; Baking-Soda; Ball-Blue; Borax; Camphor; Chlorid of Lime; Cream Tartar; Dextrin; Extract Witch-Hazel; Food-Colors; Glycerin; Grape-Sugar; Gum-Camphor; Horse and Cattle Powders; Indigo Blue; Insect-Powder; Iodin Tincture; Jamaica Ginger; Laudanum; Laundry Bluing; Chlorid of Lime; Liniment; Liquid Blue; Lye; Moth-Balls; Sweet Spirit Niter; Paris Green; Peroxid of Hydrogen; Potash; Condition-Powders; Sal-Soda; Salt; Saltpeter; Sea-Salt; Spirits Camphor; Spirits Niter; Starch for Laundry Purposes; Syrup of Figs; Syrup Ipecac; Syrup Squills; Talcum Powder; Witch-Hazel; Essence Wintergreen; Laundry Wax and Beeswax, Tooth-Powder, and Porous Plasters.
Claims use since June 1, 1913.

Ser. No. 72,681. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) IMPROVED SANITARY FIXTURE COMPANY, Los Angeles, Cal. Filed Sept. 4, 1913.

THE BOUDOIR

Consists of the words "The Boudoir."
Particular description of goods.—Bath-Tubs and Washstands, Bowls, Closets, Pipes, and Fittings.
Claims use since June 5, 1912.

Ser. No. 73,592. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GT. VAN WAVEREN & KRUIJFF, Philadelphia, Pa. Filed Oct. 24, 1913.



Which is a fanciful picture of a young girl.
Particular description of goods.—Seeds, Bulbs, Plants, and Roots, Branches, Slips, and Like Parts Thereof.
Claims use since Apr. 18, 1911.

Ser. No. 73,805. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed Nov. 4, 1913.

„PANORAMA"

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since May 29, 1908.

Ser. No. 73,950. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MOLLEN, THOMPSON & JAMES COMPANY, Cleveland, Ohio. Filed Nov. 13, 1913.

MAYFIELD

COB STYLE

An exclusive right in the word "Mayfield" is disclaimed.

Particular description of goods.—Canned Corn.
Claims use since October, 1912.

Ser. No. 74,150. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRI BELIGNÉ, Langres, France. Filed Nov. 24, 1913.

HB 520

Particular description of goods.—Scissors, Shears, Razors, Kitchen-Knives, Steel Table-Knives, Pocket-Knives, Penknives, Grafting-Knives, Gardening-Saws, and Pruning-Shears.
Claims use since Feb. 7, 1884.

Ser. No. 74,232. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH HENRY FRIED, Montgomery, Ala. Filed Nov. 28, 1913.

MILK WHITE

Particular description of goods.—Metal-Polish.
Claims use since June 1, 1913.

Ser. No. 74,404. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) T. V. MOREAU COMPANY, Minneapolis, Minn. Filed Dec. 5, 1913.

OPTONIK

Particular description of goods.—An Eye-Water.
Claims use since May 1, 1914.

Ser. No. 75,041. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER ET CIE., Paris, France. Filed Jan. 8, 1914.

ELEKTRA

Particular description of goods.—Perfumery and Face and Lip Tints, Preparations for Retaining Luster of the Eyebrows and Eyelashes, Sachet-Powder, Face-Powder, and Nail-Polish.
Claims use since Apr. 20, 1901.

Ser. No. 75,319. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIÉTÉ ANONYME DE LA DISTILLERIE DE LA LIQUEUR DE MANDARINE DE BOUGIE, Algiers, Algeria. Filed Jan. 20, 1914.



The words "Veritable Liqueur," "de A. Bernard & R. Benejam" are disclaimed, together with the representation of the bottle.

Particular description of goods.—Cordials.
Claims use since Mar. 7, 1912.

Ser. No. 75,654. (CLASS 39. CLOTHING.) PHIL HEROLD COMPANY, San Jose, Cal. Filed Feb. 3, 1914.

Feather-Tread

Particular description of goods.—Leather Shoes.
Claims use since Sept. 1, 1913.

Ser. No. 75,724. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) J. BALLUTEAUD, Blanzac-Cognac, France. Filed Feb. 6, 1914.



Particular description of goods.—Brandy.
Claims use since Sept. 7, 1908.

Ser. No. 75,732. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) L. PRENZLAU'S FABRIKWERKE, Hamburg, Germany. Filed Feb. 6, 1914.

CORIN

Particular description of goods.—Tanning Greases and Oils.
Claims use since Aug. 21, 1896.

Ser. No. 75,892. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAPER SHELL PECAN GROWERS ASSOCIATION, Chicago, Ill. Filed Feb. 13, 1914.



No claim is herein made for the pictorial representation of a pecan or to the word "Brand."

Particular description of goods.—Pecan-Nuts.
Claims use since Jan. 1, 1914.

Ser. No. 76,019. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TAZIYOMON TANAKA, Chicago, Ill. Filed Feb. 18, 1914.



Particular description of goods.—Baking-Powders.
Claims use since Jan. 24, 1914.

Ser. No. 76,076. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nuremberg, Germany. Filed Feb. 21, 1914.

Primary

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, Ink-Pencils, Screw-Pencils, Rubber Pencils, Rubber Erasers, and Penholders.
Claims use since Oct. 23, 1913.

Ser. No. 76,077. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nuremberg, Germany. Filed Feb. 21, 1914.

First Step

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, Ink-Pencils, Screw-Pencils, Rubber Pencils, Rubber Erasers, and Penholders.
Claims use since Oct. 23, 1913.

Ser. No. 76,237. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FITZPATRICK BROS., Chicago, Ill. Filed Feb. 28, 1914.

DURTGO

Particular description of goods.—A Washing Compound and Washing Detergent for Laundry Purposes.
Claims use since Feb. 12, 1914.

Ser. No. 76,261. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GRACE LILLIAN WILDE, East Quogue, N. Y. Filed Feb. 28, 1914.



The background, except for the white border and crossbars, is black, except the top and bottom triangles, which are red. The words "Pole-Star" are also red. No claim is made to the words "Wilde's Washing Fluid" or the words "Trade Mark."

Particular description of goods.—Washing Fluid.
Claims use since Jan. 1, 1914.

Ser. No. 76,361. (CLASS 39. CLOTHING.) HECHT & Co., Washington, D. C. Filed Mar. 5, 1914.

Marie Antoinette

Particular description of goods.—Shoes Made of Leather, Rubber, Canvas, or other Textile Material and Shoes Made of Any Combination of the Aforesaid Materials, and More Particularly Ladies' Shoes.
Claims use since about two years.

Ser. No. 76,471. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEXINGTON FLOURING MILLS, Lexington, Mo. Filed Mar. 9, 1914.

SAMBO



Particular description of goods.—Wheat-Flour.
Claims use since Feb. 26, 1914.

Ser. No. 76,490. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CYKLON MASCHINENFABRIK M. B. H., Berlin, Germany. Filed Mar. 10, 1914.

Cyklonette

Consists in the word "Cyklonette."

Particular description of goods.—Aeroplanes and Their Parts, Motor-Boats (other Than Electric) and Their Parts, Automobile Vehicles and Their Parts, Bicycles and Their Parts.

Claims use since Nov. 7, 1913.

Ser. No. 76,705. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. G. PICKMAN & BROS. INC., New York, N. Y. Filed Mar. 16, 1914.



Particular description of goods.—Liquid Chocolate Preparations.

Claims use since October, 1913.

Ser. No. 76,872. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PENRITH-AKERS MFG. CO., Minneapolis, Minn. Filed Mar. 23, 1914.

ALFALFENE

Particular description of goods.—A Soft Drink.

Claims use since the 15th day of August, 1913.

Ser. No. 76,883. (CLASS 10. FERTILIZERS.) UNITED OIL MILLS, Hope, Ark. Filed Mar. 23, 1914.



Particular description of goods.—Cotton-Seed Meal and Cotton-Seed-Meal Fertilizers.

Claims use since Oct. 20, 1913.

Ser. No. 76,992. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) ARTHUR HOUGH, Choisy, Quebec, Canada. Filed Mar. 27, 1914.

GLYCERONE

Particular description of goods.—Nitrating Liquids.

Claims use since about Aug. 10, 1912.

Ser. No. 77,004. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPITALNIK & BUSHEL, New York, N. Y. Filed Mar. 27, 1914.

SILVER BOY

Particular description of goods.—Salad-Oil Made from Cotton-Seed, Tomato Catsup, White Vinegar, and Cider Vinegar.

Claims use since Mar. 1, 1913.

Ser. No. 77,052. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) COBURN, JASEN AND KLINE, San Francisco, Cal. Filed Mar. 30, 1914.

Alta

Particular description of goods.—Shock-Absorbers.

Claims use since about Feb. 10, 1914.

Ser. No. 77,057. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINCENT J. GORLY, St. Louis, Mo. Filed Mar. 30, 1914.

HAVAJOY

Particular description of goods.—Candied Popcorn.

Claims use since June, 1911.

Ser. No. 77,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FRUIT PUDDINE CO., Baltimore Md. Filed Apr. 1, 1914. Under ten-year proviso.

ROSE

Particular description of goods.—A Farinaceous Compound with Fruit Flavorings.

Claims use since the 2d day of July in the year 1888.

Ser. No. 77,175. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GLOBE SOAP COMPANY, Cincinnati, Ohio. Filed Apr. 3, 1914.



Particular description of goods.—A Cleansing, Scouring, and Polishing Compound.

Claims use since Mar. 13, 1914.

Ser. No. 77,230. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRANDLE & SMITH CO., Philadelphia, Pa. Filed Apr. 6, 1914.

MELLOMINTS

No claim being made to the exclusive use of the word "Mints."

Particular description of goods.—Candy.

Claims use since before July 20, 1907.

Ser. No. 77,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LIMLE & COMPANY, Geneseo, Ill. Filed Apr. 6, 1914.

TUTHSUM

Particular description of goods.—Bread, Cookies, Cakes, Pies, Rolls, Biscuits, and Buns.

Claims use since Feb. 23, 1914.

Ser. No. 77,326. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WORCESTER BAKING CO., Worcester, Mass. Filed Apr. 8, 1914.

"BIG BOY" BREAD

The word "Bread" being disclaimed.

Particular description of goods.—Wheat-Bread.

Claims use since Feb. 28, 1914.

Ser. No. 77,367. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) JOE E. WRIGHT, Junction City, Ky. Filed Apr. 9, 1914. Under ten-year proviso.



Particular description of goods.—Jacks and Jennets, Mules, Saddle-Bred Stallions and Mares, and Shetland Ponies.

Claims use since October, 1889.

Ser. No. 77,397. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio. Filed Apr. 10, 1914.



Particular description of goods.—Evaporated Milk, Sometimes Called Condensed Milk.

Claims use since March, 1914.

Ser. No. 77,398. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio. Filed Apr. 10, 1914.

EVERYBODYS

Particular description of goods.—Evaporated Milk, Sometimes Called Condensed Milk.

Claims use since March, 1914.

Ser. No. 77,399. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio. Filed Apr. 10, 1914.

SEVENDAY

Particular description of goods.—Evaporated Milk, Sometimes Called Condensed Milk.

Claims use since March, 1914.

Ser. No. 77,400. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN WILDI EVAPORATED MILK CO., Columbus, Ohio. Filed Apr. 10, 1914.

SOME DAY

Particular description of goods.—Evaporated Milk, Sometimes Called Condensed Milk.

Claims use since March, 1914.

Ser. No. 77,414. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM C. GAGNON, Huron, S. D. Filed Apr. 11, 1914.

Gagnon's Nutty Tango Bar

The words "Nutty" and "Bar" and "Gagnon" not being claimed.
Particular description of goods.—Candy.
Claims use since Dec. 20, 1913.

Ser. No. 77,505. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY J. DENGES, Baltimore, Md. Filed Apr. 16, 1914.

N. J. Denges

The signature being a facsimile of the applicant.
Particular description of goods.—Ointments to be Applied Externally for Human Medical Use.
Claims use since Mar. 22, 1914.

Ser. No. 77,538. (CLASS 39. CLOTHING.) FRANK MELVILLE, Jr., New York, N. Y. Filed Apr. 17, 1914.



Particular description of goods.—Leather Shoes.
Claims use since December, 1911.

Ser. No. 77,539. (CLASS 39. CLOTHING.) FRANK MELVILLE, Jr., New York, N. Y. Filed Apr. 17, 1914.

RIVAL

Particular description of goods.—Leather Shoes.
Claims use since the 1st day of May, 1902.

Ser. No. 77,555. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn. Filed Apr. 18, 1914.

SUN RISE

Particular description of goods.—Horse-Nails.
Claims use since Jan. 26, 1914.

Ser. No. 77,565. (CLASS 39. CLOTHING.) OUTING SHOE CO., Boston, Mass. Filed Apr. 18, 1914.



Particular description of goods.—Warm Lined Slippers and Shoes for Indoor Use, Made Principally of Felt.
Claims use since Apr. 5, 1914.

Ser. No. 77,581. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) DAPRATO STATUARY COMPANY, Chicago, Ill. Filed Apr. 20, 1914.



Particular description of goods.—Statuary and Images.
Claims use since Mar. 24, 1914.

Ser. No. 77,593. (CLASS 17. TOBACCO PRODUCTS.) M. MARSH & SON, INC., Wheeling, W. Va. Filed Apr. 20, 1914.



Consisting of a narrow blue band of substantially uniform width throughout located adjacent to the middle portion of the stogie, but slightly nearer to the head than to the butt thereof, and bearing the words "Marsh Wheeling," no claim being made to said words.
Particular description of goods.—Stogies.
Claims use since Apr. 14, 1914.

Ser. No. 77,648. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FARRELL & CO., Omaha, Nebr. Filed Apr. 22, 1914.

WEDDING BREAKFAST

Particular description of goods.—Table-Syrups, Sorghum, and Maple-Syrup Molasses.
Claims use since January, 1900.

Ser. No. 77,667. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED STATES MEDICINE CO., Montclair, N. J., and New York, N. Y. Filed Apr. 22, 1914. Under ten-year proviso.



Particular description of goods.—Laxatives, Vermifuge, and for Preparations for the Treatment of Catarrh, Coughs, Colds, Headache, Neuralgia, Constipation, General Debility, Malaria, Bunions, Corns, and Diseases of the Bowels, Kidneys, Liver, Lungs, and Nerves.
Claims use since the year 1885.

Ser. No. 77,720. (CLASS 37. PAPER AND STATIONERY.) CLANTON & WEBB COMPANY, Atlanta, Ga. Filed Apr. 24, 1914.

SANATOS

Particular description of goods.—Blackboard-Crayons and Blackboard-Erasers.
Claims use since Nov. 3, 1906.

Ser. No. 77,721. (CLASS 37. PAPER AND STATIONERY.) WILLIAM F. DURYEA, New York, N. Y. Filed Apr. 24, 1914.

DE CO

Particular description of goods.—Fountain-Pens.
Claims use since Mar. 31, 1913.

Ser. No. 77,724. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GIBFORD-WEIFFENBACH COMPANY, Adrian, Mich. Filed Apr. 24, 1914.



Particular description of goods.—Razor-Strops.
Claims use since Jan. 26, 1914.

Ser. No. 77,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALLEN & SMITH COMPANY, INC., Richmond, Va. Filed Apr. 27, 1914.



The picture being fanciful.
Particular description of goods.—Candy, Salted Peanuts, Peanut-Butter.
Claims use since Jan. 20, 1908.

Ser. No. 77,795. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914.

KING

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1900.

Ser. No. 77,810. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE REYNOLDS CORPORATION, Bristol, Tenn. Filed Apr. 27, 1914.

THE LUSTRE BOX

Particular description of goods.—A Polish for Glass and Metals.
Claims use since Mar. 28, 1914.

Ser. No. 77,840. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 28, 1914.

DANDIBAKE

Particular description of goods.—Wheat-Flour.
Claims use since Apr. 13, 1912.

Ser. No. 77,842. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 28, 1914.

MYTY FYNE

The trade-mark consists of a shield bearing an upper portion colored blue and a lower portion colored red, within which are the words "Myty Fyne."
Particular description of goods.—Wheat-Flour.
Claims use since Apr. 10, 1913.

Ser. No. 77,844. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 28, 1914.

RED FEATHER

Particular description of goods.—Wheat-Flour.
Claims use since January, 1906.

Ser. No. 77,867. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PHOENIX OIL CO., Cleveland, Ohio. Filed Apr. 29, 1914.



The trade-mark is displayed with the outer portion in green and the inner portion in red and a blank space in the lower portion.
Particular description of goods.—Soaps.
Claims use since about February, 1906.

Ser. No. 77,891. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 20, 1914.



The mark consists of the picture of a small girl within a red oval frame, and a scroll upon which appear the words "Flower of the Family."
Particular description of goods.—Wheat-Flour.
Claims use since Oct. 23, 1909.

Ser. No. 77,959. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) OZENE COMPANY, INC., New York, N. Y. Filed May 2, 1914.

Clozene

Particular description of goods.—Washing Compounds.
Claims use since Apr. 20, 1914.

Ser. No. 77,963. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed May 2, 1914.

ON-TIME



Particular description of goods.—Wheat-Flour.
Claims use since Feb. 23, 1914.

Ser. No. 77,978. (CLASS 17. TOBACCO PRODUCTS.) JOHN H. JOHNSON, Boston, Mass. Filed May 4, 1914.

Johnsonstg

The writing appearing on said drawing is a facsimile of the genuine autograph handwriting of John H. Johnson, the applicant.
Particular description of goods.—Cigars.
Claims use since Feb. 1, 1902.

Ser. No. 78,046. (CLASS 10. FERTILIZERS.) THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va. Filed May 7, 1914.

ALBION

Particular description of goods.—Fertilizers.
Claims use since 1910.

Ser. No. 78,126. (CLASS 37. PAPER AND STATIONERY.) HAMPDEN GLAZED PAPER AND CARD COMPANY, Holyoke, Mass. Filed May 8, 1914.

SUNBURST

Particular description of goods.—Writing and Printing and Cover Paper.
Claims use since July 13, 1910.

Ser. No. 78,178. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE ERNEST WIGHTMAN, Portland, Oreg. Filed May 9, 1914.



Particular description of goods.—A Fabric-Cleaner.
Claims use since Mar. 30, 1914.

Ser. No. 78,246. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD L. KASTLER, Racine, Wis. Filed May 13, 1914.

Daddy's Square Meal

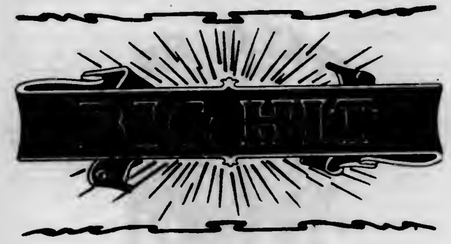
Particular description of goods.—Corn in the Form of Cereal Foods.
Claims use since Apr. 25, 1914.

Ser. No. 78,251. (CLASS 37. PAPER AND STATIONERY.) PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y. Filed May 13, 1914.



Which comprises a picture of Christopher Columbus and the name "Columbo." No claim is made herein to the sole use of the words "Toilet" and "1000 Sheets" as upon the drawing.
Particular description of goods.—Toilet-Papers.
Claims use since about Aug. 26, 1897.

Ser. No. 78,253. (CLASS 37. PAPER AND STATIONERY.) PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y. Filed May 13, 1914.



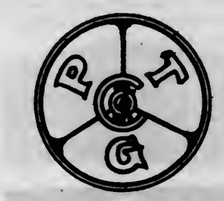
Particular description of goods.—Toilet-Papers.
Claims use since about May 7, 1905.

Ser. No. 78,254. (CLASS 37. PAPER AND STATIONERY.) PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y. Filed May 13, 1914.



No claim being made to the sole use of the words "Series" and "Extra Quality" appearing upon the drawing.
Particular description of goods.—Toilet-Papers.
Claims use since about Mar. 25, 1898.

Ser. No. 78,308. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KINGAN & CO. (LIMITED), Belfast, Ireland; Indianapolis, Ind., and Baltimore, Md. Filed May 15, 1914.



Particular description of goods.—Lard.
Claims use since September, 1912.

Ser. No. 78,376. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALABAMA-GEORGIA SYRUP CO., Montgomery, Ala. Filed May 19, 1914.

Alaflaga

Particular description of goods.—Table-Syrup.
Claims use since May 5, 1914.

Ser. No. 78,408. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM WALLACE, Jr., Helena, Mont., and Washington, D. C. Filed May 19, 1914.



My trade-mark consists of the arbitrary word-symbol "Buffalo Brand" above a full-figure side view of a bull buffalo and beneath the figure the words "The Best Grown," no claim being made to the words "The Best Grown" or the word "Brand."

Particular description of goods.—Designated Citrus Fruits—Namely, Grape-Fruit, Tangerines, and Oranges.

Claims use in the packing of grape-fruit, tangerines, and oranges since Dec. 1, 1913.

Ser. No. 78,423. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH L. NAFZIGER, Kansas City, Mo. Filed May 20, 1914.

Butter-Cream
BREAD

It is not intended to have the word "Bread" as shown in the drawing form a part of the trade-mark.

Particular description of goods.—Bread.

Claims use since June 1, 1911.

Ser. No. 78,430. (CLASS 39. CLOTHING.) J. H. WAY & SONS CO., Philadelphia, Pa. Filed May 20, 1914.



Particular description of goods.—Knit Reefers, Knit Jackets, Knit Coats, Knit Sweaters, Knit Jerseys, Knit Bathing-Suits, Knit Mufflers, Knit Caps, Knit Mittens, Knit Leggings, Knit Sacks, Knit Undershirts, Knit Bands, Knit Skirts, and Knit Booties.

Claims use since Apr. 27, 1914.

Ser. No. 78,472. (CLASS 47. WINES.) GRIBSON, OLDHAM & CO. LIMITED, London, England. Filed May 22, 1914.



Particular description of goods.—Wines.

Claims use since January, 1890.

Ser. No. 78,490. (CLASS 17. TOBACCO PRODUCTS.) THEODOSE CHRISTOFIDY, New York, N. Y. Filed May 23, 1914.

TELLALL

Particular description of goods.—Cigarettes.

Claims use since Jan. 1, 1914.

Ser. No. 78,517. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DONEGAL MOTOR RUG CO., New York, N. Y. Filed May 25, 1914.



Particular description of goods.—Rugs Made of All-Wool Fabric.

Claims use since Mar. 15, 1914.

Ser. No. 78,525. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KELIM FARMERS' MILL AND ELEVATOR COMPANY, Loveland, Colo. Filed May 25, 1914.



Particular description of goods.—Wheat-Flour.

Claims use since Mar. 15, 1914.

Ser. No. 78,583. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE LAMSON COMPANY, Boston, Mass. Filed May 27, 1914. Under ten-year proviso.

LAMSON

Particular description of goods.—Conveying and Transmission Apparatus.

Claims use since before Feb. 20, 1895.

Ser. No. 78,618. (CLASS 32. BARBERS' FURNITURE AND UPHOLSTERY.) KOKEN BARBERS' SUPPLY CO., St. Louis, Mo. Filed May 28, 1914.



No claim being made to the words "Trade Mark," the word "Koken" being written in the handwriting of George W. Sutherland, and no claim being made to the exclusive use of words "St. Louis" and "The World Our Field."

Particular description of goods.—Barber-Chairs, Mirror-Cases, Combination Back-Mirror and Settees, Mirrors, Dressing-Cases, Work-Stands, Brackets, Mug-Cases, Display-Cases, Desks, Cashier-Stands, Portable Lockers, Shoe-Shining Stands, Settees, Chairs, Facial-Massage Chairs, Footstools, Hair-Dressing Chairs, Hat and Coat Racks, Costumers, and Cash-Register Stands.

Claims use since September, 1913.

Ser. No. 78,620. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES M. MUNYON, Philadelphia, Pa. Filed May 28, 1914.

TU-BO-LAX

Particular description of goods.—An Enema to Relieve Constipation.

Claims use since about May 1, 1914.

Ser. No. 78,633. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed May 28, 1914.

Epiotar

Particular description of goods.—Lenses for Scientific Use, Prisms, Reflectors for Scientific Use, Microscopes, Projecting Apparatus, Kinematographs, Cystoscopes, Endoscopes, Ophthalmoscopes, Spectacles, Spectacle-Glasses, Spectacle-Lens Systems, Objective-Lens Systems, Telescopes, Field-Glasses, Opera-Glasses, Telemeters, Periscopes, Photographic Objectives, Photographic Cameras, Photographic Shutters, Photographic Dark Slides, Stands for Cameras and other Optical Instruments, Eyeglasses, Magnifying-Glasses, Reading-Glasses, Stereoscopes, Stereocomparators, Theodolites, Sextants, Refractometers, Optometers, Photometers, Levels, Leveling Instruments, and Parts of the Said Apparatus and Instruments.

Claims use since December, 1913.

Ser. No. 78,634. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed May 28, 1914.

Diotar

Particular description of goods.—Lenses for Scientific Use, Prisms, Reflectors for Scientific Use, Microscopes, Projecting Apparatus, Kinematographs, Cystoscopes, Endoscopes, Ophthalmoscopes, Spectacles, Spectacle-Glasses, Spectacle-Lens Systems, Objective-Lens Systems, Telescopes, Field-Glasses, Opera-Glasses, Telemeters, Periscopes, Photographic Objectives, Photographic Cameras, Photographic Shutters, Photographic Dark Slides, Stands for Cameras and other Optical Instruments, Eyeglasses, Magnifying-Glasses, Reading-Glasses, Stereoscopes, Stereocomparators, Theodolites, Sextants, Refractometers, Optometers, Photometers, Levels, Leveling Instruments, and Parts of the Said Apparatus and Instruments.

Claims use since December, 1913.

Ser. No. 78,644. (CLASS 12. CONSTRUCTION MATERIALS.) CLIP-BAR MANUFACTURING COMPANY, Philadelphia, Pa. Filed May 29, 1914.

Y

Particular description of goods.—Concrete Sockets and Inserts.

Claims use since May 25, 1914.

Ser. No. 78,651. (CLASS 47. WINES.) DIEDERICH MATTHIAS FEUERHEERD, JUNIOR & COMPANHIA, Oporto, Portugal. Filed May 29, 1914. Under ten-year proviso.



The facsimile signature shown in the mark is in the handwriting of the senior partner, Hermann Lorenz Feuerheerd.

Particular description of goods.—Port-Wine.

Claims use since January, 1867.

Ser. No. 78,670. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed June 1, 1914.

JUNO

Particular description of goods.—Dolls.

Claims use since about Feb. 1, 1904.

Ser. No. 78,746. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HOCKENSMITH WHEEL & MINE CAR COMPANY, Penn Station, Pa. Filed June 2, 1914.

EUREKA

Which consists of the word "Eureka."
Particular description of goods.—Car-Wheels.
Claims use since about Nov. 1, 1901.

Ser. No. 78,748. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) JOE A. KINCHELOE, Milan, Tenn. Filed June 2, 1914.

DOES NOT SALIVATE — LEMOLAC — DOES NOT SICKEN
TONES UP THE LIVER — DOES NOT WEAKEN

The words "Does Not Salivate, Does Not Sicken, Tones Up The Liver, Does Not Weaken" are not claimed as part of the trade-mark.
Particular description of goods.—A Liver-Regulator.
Claims use since May 24, 1914.

Ser. No. 78,754. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed June 2, 1914.

MARION

Particular description of goods.—Fertilizers.
Claims use since 1911.

Ser. No. 78,755. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SHEBOYGAN EVAPORATED MILK CO., Sheboygan and Jefferson, Wis. Filed June 2, 1914.

SUNSET

Particular description of goods.—Evaporated Milk.
Claims use since October, 1910.

Ser. No. 78,824. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GEORGE BORGFELDT & CO., New York, N. Y. Filed June 5, 1914.



Particular description of goods.—Common Pins, Glass-Headed Pins, Base-Metal Lace-Pins, Sewing-Needles, Hooks and Eyes, Knitting-Needles, Crochet-Hooks, Thimbles, Tapes, Corset-Laces, Pearl Buttons, Bone Buttons, Agate Buttons, Glass Buttons, Horn Buttons, Base-Metal Buttons, Beads of Glass, Agate, Bone, Alabaster, Imitation Pearl, Coral, Base Metal, Amber, and Celluloid, Collar-Buttons of Base Metal, Bone, Pearl, Glass, Agate, Cuff-Buttons of Base Metal, Bone, Pearl, Glass, Agate, Kid Curlers, and Fans for Personal Use.
Claims use since May 28, 1914.

Ser. No. 78,831. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE ELMENDORF, Elmira, N. Y. Filed June 5, 1914.



The word "Elmendorf" being the facsimile signature of the proprietor's last name.
Particular description of goods.—Chewing-Gum.
Claims use since Apr. 1, 1914.

Ser. No. 78,858. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CUSTER MILLING COMPANY, Custer, Okla. Filed June 6, 1914.



No claim being made to the word "Best," the portrait being that of General Custer (deceased) on horseback.
Particular description of goods.—Wheat-Flour.
Claims use since March, 1907.

Ser. No. 78,874. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MASKEY'S, INC., San Francisco, Cal. Filed June 6, 1914. Under ten-year proviso.



Maskey's

Particular description of goods.—Candy.
Claims use since December, 1886.

Ser. No. 78,877. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALLACE R. MONTAGUE, La Crosse, Wis. Filed June 6, 1914.

TRY ME

Particular description of goods.—Candy.
Claims use since Mar. 1, 1914.

Ser. No. 78,880. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NORMA COMPANY OF AMERICA, New York, N. Y. Filed June 6, 1914.

Norma

Particular description of goods.—Ball-Bearings and Roller-Bearings and Their Parts.
Claims use since Mar. 17, 1904.

Ser. No. 78,882. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHOENIX FLOUR MILL, Evansville, Ind. Filed June 6, 1914.

RED ROSE

Particular description of goods.—Self-Rising Flour.
Claims use since Jan. 23, 1913.

Ser. No. 78,900. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUY W. WILLIAMS, St. Louis, Mo. Filed June 6, 1914.

"Indigesto"

Particular description of goods.—A Remedy for Indigestion, Sour Stomach, Gastritis, and Heartburn, in Capsule or Powdered Form.
Claims use since Apr. 20, 1914.

Ser. No. 78,902. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CRESCENT MILL & ELEVATOR CO., Denver, Colo. Filed June 6, 1914.



The picture being fanciful.
Particular description of goods.—Wheat-Flour.
Claims use since February, 1914.

Ser. No. 78,926. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HANSON & VAN WINKLE COMPANY, Newark, N. J. Filed June 9, 1914.



No claim is made to the words "Nickel Salts" shown in the drawing.
Particular description of goods.—Nickel Salts.
Claims use since May 16, 1914.

Ser. No. 78,957. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OAKGLEN APPLE GROWERS' ASSOCIATION, Oakglen, Cal. Filed June 10, 1914.

SNOW-LINE

Particular description of goods.—Fresh Apples.
Claims use since Apr. 1, 1914.

Ser. No. 79,003. (CLASS 37. PAPER AND STATIONERY.) KANSAS CITY PAPER HOUSE, Kansas City, Mo. Filed June 11, 1914.



No claim is made to the word "Bond" contained therein.
Particular description of goods.—Writing-Paper and Envelops.
Claims use since on or about Jan. 1, 1914.

Ser. No. 79,012. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHEPPARD-STRASSHEIM CO., Chicago, Ill. Filed June 11, 1914.



Particular description of goods.—Tea.
Claims use since Jan. 1, 1914.

Ser. No. 79,053. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. M. COX CO., Boston, Mass. Filed June 13, 1914.

WIRTHMORE

Particular description of goods.—Poultry and Stock Feeds—Namely, Wheat Feed, Stock Feed, and Balanced Ration.
Claims use since November, 1912.

Ser. No. 79,054. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) COWLES-MACDOWELL PNEUMOBILE CO., Chicago, Ill. Filed June 13, 1914.

PNEUMOBILE

Particular description of goods.—Vehicles Equipped with Pneumatic Springs Supporting the Body on the Running-Gear.
Claims use since Apr. 25, 1914.

Ser. No. 79,077. (CLASS 12. CONSTRUCTION MATERIALS.) DAVID E. KENNEDY, INC., New York, N. Y. Filed June 13, 1914.

KENWOOD

Particular description of goods.—Non-Metallic Flooring.
Claims use since June 1, 1914.

Ser. No. 79,098. (CLASS 2. RECEPTACLES.) CEMENT CASKET MFG. CO., Battle Creek, Mich. Filed June 15, 1914.

IMPERISHD

Particular description of goods.—Composition or Artificial-Stone Burial-Caskets and Burial-Vaults.
Claims use since Sept. 1, 1913.

Ser. No. 79,101. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CATLIN & CO., New York, N. Y. Filed June 15, 1914.

RESOLUTE

Comprising the word "Resolute."
Particular description of goods.—Cotton Piece Goods.
Claims use since Apr. 27, 1914.

Ser. No. 79,104. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HANS HEIDNER, Tacoma, Wash. Filed June 15, 1914.

Everybodys FAVORITE

Particular description of goods.—Hair-Brushes, Tooth-Brushes, Nail-Brushes, and Eyebrow-Brushes.
Claims use since 1910.

Ser. No. 79,117. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. S. MERRELL DRUG CO., St. Louis, Mo. Filed June 15, 1914.

COLAC

Particular description of goods.—A Preparation for Making Hot Drinks, Which Consists of a Compound of Cocoa, Milk, and Sugar in Powdered Form.
Claims use since May 26, 1914.

Ser. No. 79,118. (CLASS 6. CHEMICALS, MEDICINES, ANR PHARMACEUTICAL PREPARATIONS.) MELBA MANUFACTURING COMPANY, Chicago, Ill. Filed June 15, 1914.

LOV'ME

Particular description of goods.—Perfumes, Toilet Powders and Creams.
Claims use since the month of March, 1913.

Ser. No. 79,120. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE OHIO BRANDY DISTILLING COMPANY, Cleveland, Ohio. Filed June 15, 1914.



Particular description of goods.—Juniper Brandy.
Claims use since May 1, 1902.

Ser. No. 79,169. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CRESCENT DENTAL MFG. CO., Chicago, Ill. Filed June 17, 1914.



Particular description of goods.—The Following Articles Used in Dentistry: Burs, Broach-Handles, Burnishers, Cleavers, Crown and Bridge Instruments, Crown-Removers, Chisels, Excavators, Files, Gutta-Percha Points, Lancets, Pluggers, Root-Facers, Root-Reamers, Syringes, Stopping, Scalers, Trimmers, Wax, Inlay-Holders, Casting-Machines, and Tooth-Polishing Brushes.
Claims use since on or about Aug. 1, 1903.

Ser. No. 79,250. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAVANGER PRESERVING CO. A/S., Stavanger, Norway. Filed June 20, 1914.

SILDINES

Particular description of goods.—Preserved Fish.
Claims use since the month of December, 1910.

Ser. No. 79,252. (CLASS 10. FERTILIZERS.) AMERICAN CYANAMID COMPANY, Nashville, Tenn.; Niagara Falls, Ontario, Canada; Buffalo and New York, N. Y., and Atlanta, Ga. Filed June 22, 1914.

AMMO-PHOS

Particular description of goods.—A Certain Fertilizer Material Containing Nitrogen and Phosphoric Acid as Its Constituent Fertilizing Elements.
Claims use since Mar. 30, 1914.

Ser. No. 79,268. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE NONOTUCK SILK COMPANY, Northampton, Mass. Filed June 22, 1914.

CARMEN

Particular description of goods.—Ribbons.
Claims use since about Apr. 5, 1902.

Ser. No. 79,273. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RICHMOND RADIATOR COMPANY, New York, N. Y. Filed June 22, 1914.

Ariel Vacuum

No claim being made to the word "Vacuum."
Particular description of goods.—Vacuum-Cleaners.
Claims use since Apr. 2, 1914.

Ser. No. 79,274. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RICHMOND RADIATOR COMPANY, New York, N. Y. Filed June 22, 1914.

Renovak *your home*

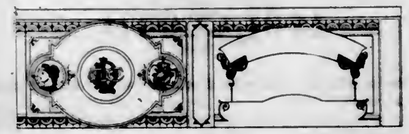
Particular description of goods.—Vacuum-Cleaners.
Claims use since Feb. 18, 1914.

Ser. No. 79,275. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RICHMOND RADIATOR COMPANY, New York, N. Y. Filed June 22, 1914.

Renovak Vacuum

No claim being made to the word "Vacuum."
Particular description of goods.—Vacuum-Cleaners.
Claims use since May 27, 1914.

Ser. No. 79,291. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNBARS, LOPEZ & DUKATE CO., New Orleans, La. Filed June 23, 1914.



Particular description of goods.—Canned Shrimp.
Claims use since 1878.

Ser. No. 79,294. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACOB HORN, New York, N. Y. Filed June 23, 1914.

Betsy Ross

Particular description of goods.—Chocolates and Candies.
Claims use since June 15, 1914.

Ser. No. 79,300. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) JOHN MARSTON, LIMITED, Wolverhampton, England. Filed June 23, 1914.

SUNBEAM

Particular description of goods.—Cycles, Motor-Cycles, and Side Cars for Use with Motor-Cycles.
Claims use since November, 1887.

Ser. No. 79,307. (CLASS 39. CLOTHING.) GEO. D. WITT SHOE CO., Lynchburg, Va. Filed June 23, 1914.

LAD *and* LASSIE

Particular description of goods.—Leather Boots and Shoes.
Claims use since June 1, 1905.

Ser. No. 79,309. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

1101 CLOTH

The applicant expressly disclaims any exclusive right to the word "Cloth."
Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 23d day of November, 1912.

Ser. No. 79,310. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

1301 CLOTH

The applicant expressly disclaims any exclusive right to the word "Cloth."
Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 4th day of November, 1911.

Ser. No. 79,311. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

1501 CLOTH

The applicant expressly disclaims any exclusive right to the word "Cloth."
Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 4th day of November, 1911.

Ser. No. 79,312. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 24, 1914.

1701 CLOTH

The applicant expressly disclaims any exclusive right to the word "Cloth."
Particular description of goods.—Cotton Piece and Cotton Dress Goods.
Claims use since the 11th day of November, 1911.

Ser. No. 79,324. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE DENTISTS' SUPPLY COMPANY, New York, N. Y. Filed June 24, 1914.

SOLILA

Particular description of goods.—Artificial Teeth.
Claims use since Sept. 1, 1911.

Ser. No. 79,326. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FELT EMBROIDERY FORM COMPANY, Marengo, Ill. Filed June 24, 1914.

FELT FORMS

No claim being made to the words "Felt Forms."
Particular description of goods.—Initials and Embroidery Designs.
Claims use since May, 1914.

Ser. No. 79,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. AINSA & SONS, INC., El Paso, Tex. Filed June 25, 1914.

AGUILA DE GUERRA

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 20, 1914.

Ser. No. 79,363. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILLER-CUMMINGS COMPANY, INC., New York, N. Y. Filed June 25, 1914.



Particular description of goods.—Cantaloups.
Claims use since October, 1909.

Ser. No. 79,371. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PEERLESS BISCUIT COMPANY, Pittsburgh, Pa. Filed June 25, 1914.



Particular description of goods.—Sugar Wafers, Cakes, Crackers, and Fancy Biscuits.
Claims use since on or about the 1st day of June, 1912.

Ser. No. 79,375. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STERN & SAALBERG COMPANY, New York, N. Y. Filed June 25, 1914.

TOOTSIE

The word "Tootsie."
Particular description of goods.—Chewing-Gum.
Claims use since June 17, 1914.

Ser. No. 79,392. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH & HEMENWAY CO., INC., New York, N. Y. Filed June 26, 1914.

GIANT

Particular description of goods.—Pliers.
Claims use since on or about May 1, 1914.

Ser. No. 79,399. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR & COMPANY, Chicago, Ill. Filed June 27, 1914.

Red Seal

Particular description of goods.—Sardines.
Claims use since Jan. 1, 1914.

Ser. No. 79,413. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) B. BLUMENTHAL & CO., New York, N. Y. Filed June 27, 1914.

RADIUM POLISHED

No claim, however, being made to the word "Polished."
Particular description of goods.—Buttons.
Claims use since June 19, 1914.

Ser. No. 79,433. (CLASS 39. CLOTHING.) J. F. LENIGAN CO., New York, N. Y. Filed June 29, 1914.

DANSANT

Particular description of goods.—Coats, Trousers, Fancy and Dress Waistcoats, and Overcoats.
Claims use since about Apr. 1, 1914.

Ser. No. 79,466. (CLASS 39. CLOTHING.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed June 30, 1914.

NEVA

Particular description of goods.—Women's, Children's, and Infants' Coats, Cloaks, Wraps, and Capes.
Claims use since about Jan. 1, 1911.

Ser. No. 79,467. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY VICTOR STOLLWERCK, New York, N. Y. Filed June 30, 1914.

PROMTO LIQUID SWEETENED-MILK COCOA

I distinctly disclaim any intention to register as a trade-mark anything on the accompanying drawing except the word "Promto," as shown on said drawing, and I therefore ask that everything on the accompanying drawing be disregarded for the purpose of registration except the said word "Promto."
Particular description of goods.—Liquid Cocoa, Chocolate, Pudding-Powders, Jelly-Powders, and Whipped Cream.
Claims use since May 1, 1914.

Ser. No. 79,470. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORN PRODUCTS REFINING CO., New York, N. Y. Filed July 1, 1914.

Karo

Particular description of goods.—Starch for Laundry and Manufacturing Purposes.
Claims use since May 12, 1914.

Ser. No. 79,482. (CLASS 48. MALT EXTRACTS AND LIQUORS.) DIASTATIC MALT EXTRACT CO., Chicago, Ill. Filed July 1, 1914.

DIA-M-EX

Particular description of goods.—Malt Extract.
Claims use since about the 26th day of June, 1914.

Ser. No. 79,486. (CLASS 39. CLOTHING.) GOODMAN, COHEN & CO., New York, N. Y. Filed July 1, 1914.

Ansona

Particular description of goods.—Men's Work and Negligée Shirts.
Claims use since June 1, 1914.

Ser. No. 79,487. (CLASS 39. CLOTHING.) GOODMAN, COHEN & CO., New York, N. Y. Filed July 1, 1914.

THE Aster

Particular description of goods.—Men's Work and Negligée Shirts.
Claims use since June 1, 1914.

Ser. No. 79,494. (CLASS 47. WINES.) MARIANI AND COMPANY, New York, N. Y., and Paris, France. Filed July 1, 1914. Under ten-year proviso.

MARIANI

Particular description of goods.—A Wine Appetizer.
Claims use since 1874.

Ser. No. 79,496. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAE ALICE MEIER, St. Louis, Mo. Filed July 1, 1914.

JIFFY

Particular description of goods.—Salad-Dressings.
Claims use since June 8, 1914.

Ser. No. 79,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REUSSOW & TROY, Mohawk, N. Y. Filed July 1, 1914.

HONEY-MAID

Particular description of goods.—Bread.
Claims use since Apr. 13, 1914.

Ser. No. 79,509. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BRISTOL-MYERS COMPANY, New York, N. Y. Filed July 2, 1914.

ZIRATOL

Particular description of goods.—Antiseptics, Disinfectants, and Deodorants.
Claims use since June 10, 1914.

Ser. No. 79,518. (CLASS 39. CLOTHING.) JORDAN MARSH COMPANY, Boston, Mass. Filed July 2, 1914.

Avona

Particular description of goods.—Corsets.
Claims use since May 5, 1914.

Ser. No. 79,528. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DUNLOP MILLING CO., Clarksville, Tenn. Filed July 3, 1914.



SHURIZE

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Dec. 1, 1913.

Ser. No. 79,577. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARIE A. LEIBLINGER, Cleveland, Ohio. Filed July 6, 1914.

NONAT

Particular description of goods.—Salve.
Claims use since May 1, 1914.

Ser. No. 79,586. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK STEARNS & Co., Detroit, Mich. Filed July 6, 1914.

ETERNO

Particular description of goods.—Perfumes, Face-Powders, and Toilet Waters.
Claims use since June 29, 1914.

Ser. No. 79,593. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BAER & SNYDER, Philadelphia, Pa. Filed July 6, 1914.

Ru-Pom

Particular description of goods.—Unguents.
Claims use since on or about June 1, 1914.

Ser. No. 79,597. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTONIO CARTABILLOTTA, Swissvale, Pa. Filed July 7, 1914.

ENERIO

Particular description of goods.—Stomach, Liver, and Bowel Medicine.
Claims use since July 1, 1914.

Ser. No. 79,598. (CLASS 2. RECEPTACLES.) DE LAVAL DAIRY SUPPLY COMPANY, Jersey City, N. J., and San Francisco, Cal. Filed July 7, 1914.

IDEAL GREEN FEED SILOS

No claim is made for the words "Green Feed Silos."
Particular description of goods.—Silos.
Claims use since Nov. 17, 1913.

Ser. No. 79,610. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SALBENOL CO., Philadelphia, Pa. Filed July 7, 1914.

SALBENOL

Which consists of the word "Salbenol."
Particular description of goods.—An Analgesic.
Claims use since about Aug. 1, 1913.

Ser. No. 79,620. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE WETTERER BREWING COMPANY, Cincinnati, Ohio. Filed July 7, 1914.

QUEEN CITY

Particular description of goods.—Beer.
Claims use since June 18, 1914.

Ser. No. 79,637. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELI LILLY AND COMPANY, Indianapolis, Ind. Filed July 8, 1914.

NEOTHESIN

Particular description of goods.—Local Anesthetics.
Claims use since June 29, 1914.

Ser. No. 79,639. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE LUEDERS & Co., New York, N. Y. Filed July 8, 1914.

PERUAL

Particular description of goods.—Perfumery.
Claims use since Sept. 1, 1909.

Ser. No. 79,659. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DU BELLE GRAPE JUICE CO., Irondequoit, N. Y. Filed July 9, 1914. Under ten-year proviso.



Particular description of goods.—Grape-Juice.
Claims use since Sept. 1, 1894.

Ser. No. 79,661. (CLASS 39. CLOTHING.) JAMES WILLIAM CANNON, Concord, N. C., and New York, N. Y. Filed July 9, 1914.



Particular description of goods.—Hosiery.
Claims use since Jan. 1, 1914.

Ser. No. 79,680. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SHERWIN-WILLIAMS COMPANY, Cleveland, Ohio. Filed July 9, 1914.

Tuber-Tonic

Particular description of goods.—Insecticides and Fungicides.
Claims use since Mar. 10, 1914.

Ser. No. 79,681. (CLASS 37. PAPER AND STATIONERY.) E. W. SCARBOROUGH Co., New York, N. Y. Filed July 9, 1914.

BOROUGH

Particular description of goods.—Writing and Printing Paper.
Claims use since Dec. 10, 1910.

Ser. No. 79,682. (CLASS 37. PAPER AND STATIONERY.) E. W. SCARBOROUGH Co., New York, N. Y. Filed July 9, 1914. Under ten-year proviso.

MONROE LEDGER

Particular description of goods.—Writing and Printing Paper.
Claims use since June, 1889.

Ser. No. 79,683. (CLASS 2. RECEPTACLES.) NEWTON L. SCHLOSS, New York, N. Y., assignor to Ovanite Company, New York, N. Y., a Corporation of New York. Filed July 9, 1914.

·OVANITE·

Particular description of goods.—Cases for Toilet Articles.
Claims use since about June 1, 1914.

Ser. No. 79,696. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ORINOKA PHARMACAL COMPANY, INC., New York, N. Y. Filed July 10, 1914.



Particular description of goods.—Hair-Tonics and Hair-Dyes.
Claims use since June 15, 1914.

Ser. No. 79,701. (CLASS 39. CLOTHING.) ALEXANDER BENNIE & Co., Nashville, Tenn. Filed July 10, 1914.

TURKEY-GOBBLER

Comprising the words "Turkey Gobbler."
Particular description of goods.—Overalls.
Claims use since Mar. 1, 1914.

Ser. No. 79,714. (CLASS 39. CLOTHING.) MARYLAND RUBBER COMPANY, Baltimore, Md. Filed July 10, 1914.



Particular description of goods.—Rubber Coats.
Claims use since the year 1890.

Ser. No. 79,726. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WIZARD PRODUCTS COMPANY, Chicago, Ill. Filed July 10, 1914.

WIZARD

Particular description of goods.—Ironing-Wax.
Claims use since June 1, 1914.

Ser. No. 79,759. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE KOLYNOS CO., New Haven, Conn. Filed July 13, 1914.

KOLYNOS

Particular description of goods.—Antiseptic Solution and Germicidal Disinfectant.
Claims use since Nov. 20, 1909.

Ser. No. 79,760. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo. Filed July 13, 1914.

De Luxe

Particular description of goods.—Hair-Tonic.
Claims use since on or about the 24th day of January, 1904.

Ser. No. 79,777. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. KOHNSTAMM & CO., New York, N. Y. Filed July 14, 1914.

Relozone

Comprising the word "Relozone."
Particular description of goods.—A Bleaching, Water-Softening, Purifying, and Disinfecting Preparation.
Claims use since about the 1st of January, 1914.

Ser. No. 79,793. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAUNCEY F. YORK, Detroit, Mich. Filed July 14, 1914.

LO-PY

Particular description of goods.—A Preparation for the Treatment of the Skin.
Claims use since about June 15, 1914.

Ser. No. 79,809. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. HELLER & CO., Chicago, Ill. Filed July 15, 1914.

Bluettes

Particular description of goods.—Bluing.
Claims use since May 3, 1914.

Ser. No. 79,845. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE WETTERER BREWING COMPANY, Cincinnati, Ohio. Filed July 16, 1914.

Particular description of goods.—Beer.
Claims use since May 4, 1901.

Ser. No. 79,863. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) INTERNATIONAL BUCKLE COMPANY, New Britain, Conn. Filed July 16, 1914.

IBC

Particular description of goods.—Buckles, Rings, Loops, D's, Terrets, Hooks, Snap-Hooks, Bits, Spurs, Cockeyes, Toggles, Trace-Carriers, Drawer-Pulls, Squares, Loop-Plates.
Claims use since April, 1914.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 11, 1914.

98,913. REMEDY FOR ANEMIC CONDITIONS. ACHILLE SCLAVO, Siena, Italy.
Filed March 9, 1914. Serial No. 76,482. PUBLISHED JUNE 2, 1914.

98,914. BITUMINOUS PAINTS USED TO PROTECT VARIOUS ARTICLES AGAINST RUST AND CORROSION. CHARLES M. ALLAIRE, New York, N. Y.
Filed March 26, 1914. Serial No. 76,953. PUBLISHED JUNE 9, 1914.

98,915. LIQUID NITROCELLULOSE COMPOUND USED FOR COATING THE SKIN SIMILARLY TO A VARNISH OR PAINT. AMBROID COMPANY, New York, N. Y.
Filed April 14, 1914. Serial No. 77,469. PUBLISHED JUNE 2, 1914.

98,916. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. AMERICAN DISTILLED WATER COMPANY, New York, N. Y.
Filed May 11, 1914. Serial No. 78,184. PUBLISHED JUNE 9, 1914.

98,917. MEDICINES FOR TREATMENT OF CONSTIPATION, HEPATIC TORPOR, AND BILIOUSNESS. THE ANDERSON-BROWN COMPANY, Buffalo, N. Y.
Filed February 19, 1913. Serial No. 68,609. PUBLISHED JUNE 2, 1914.

98,918. WATERPROOF COATS. CHARLES A. ANNIS, Stoneham, Mass.
Filed December 9, 1913. Serial No. 74,499. PUBLISHED JUNE 2, 1914.

98,919. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,045. PUBLISHED JUNE 9, 1914.

98,920. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,050. PUBLISHED JUNE 9, 1914.

98,921. SUBSTITUTE FOR COFFEE. C. F. BLANKE TEA & COFFEE COMPANY, St. Louis, Mo.
Filed April 29, 1913. Serial No. 70,110. PUBLISHED JUNE 2, 1914.

98,922. POWER-TRANSMISSION CHAINS. BROWN BROTHERS, LIMITED, London, England.
Filed February 10, 1914. Serial No. 75,814. PUBLISHED JUNE 9, 1914.

98,923. LEATHER SHOES. BROWN SHOE COMPANY, INC., St. Louis, Mo.
Filed October 15, 1913. Serial No. 73,368. PUBLISHED JUNE 2, 1914.

98,924. MEN'S OUTER SHIRTS. CARSON, PIRIE, SCOTT & Co., Chicago, Ill.
Filed March 5, 1914. Serial No. 76,344. PUBLISHED JUNE 2, 1914.

98,925. KINEMATOGRAPHIC FILMS. CLEMENTE LEVI, Rome, Italy.
Filed March 31, 1914. Serial No. 77,107. PUBLISHED JUNE 9, 1914.

98,926. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,059. PUBLISHED JUNE 9, 1914.

98,927. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,060. PUBLISHED JUNE 9, 1914.

98,928. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,061. PUBLISHED JUNE 9, 1914.

98,929. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,063. PUBLISHED JUNE 9, 1914.

98,930. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,064. PUBLISHED JUNE 9, 1914.

98,931. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,065. PUBLISHED JUNE 9, 1914.

98,932. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,066. PUBLISHED JUNE 9, 1914.

98,933. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,067. PUBLISHED JUNE 9, 1914.

98,934. FERTILIZERS. COLUMBIA GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,068. PUBLISHED JUNE 9, 1914.

98,935. MEDICINAL TONIC. H. T. DEWEY & SONS CO., New York, N. Y.
Filed March 19, 1914. Serial No. 76,766. PUBLISHED JUNE 9, 1914.

98,936. NON-INTOXICATING CARBONATED TONIC BEVERAGES. EDWARD DIEHL, Nashville, Tenn.
Filed December 15, 1913. Serial No. 74,609. PUBLISHED MAY 12, 1914.

98,937. NON-INTOXICATING CARBONATED TONIC BEVERAGES. EDWARD DIEHL, Nashville, Tenn.
Filed December 15, 1913. Serial No. 74,610. PUBLISHED MAY 19, 1914.

98,938. HOSIERY. DURHAM HOSIERY MILLS, Durham, N. C.
Filed April 11, 1914. Serial No. 77,411. PUBLISHED JUNE 2, 1914.

98,939. WRITING AND DRAWING PENCILS OF ALL KINDS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 31, 1914. Serial No. 77,096. PUBLISHED MAY 19, 1914.

98,940. FOUNTAIN-PENS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 31, 1914. Serial No. 77,097. PUBLISHED JUNE 2, 1914.

98,941. WRITING AND DRAWING PENCILS OF ALL KINDS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 31, 1914. Serial No. 77,098. PUBLISHED MAY 19, 1914.

98,942. WRITING AND DRAWING PENCILS OF ALL KINDS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 31, 1914. Serial No. 77,099. PUBLISHED JUNE 2, 1914.

98,943. VARNISHES, DRY, PASTE, AND READY-MIXED PAINTS FOR ALL PURPOSES, AND COLORS GROUND IN OIL. EVANSVILLE PAINT & VARNISH CO., Evansville, Ind.
Filed February 18, 1914. Serial No. 75,984. PUBLISHED JUNE 9, 1914.

98,944. CERTAIN NAMED HARDWARE AND PLUMBING SUPPLIES. FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany.
Filed November 1, 1913. Serial No. 73,734. PUBLISHED MARCH 31, 1914.

98,945. HEADACHE-POWDER. RAY J. FRITZ, Philadelphia, Pa.
Filed December 19, 1913. Serial No. 74,687. PUBLISHED JUNE 2, 1914.

98,946. INSECTICIDE-POWDER. JOSEPH ROMEO LOUIS GAUVREAU, Montreal, Quebec, Canada, and Woonsocket, R. I., assignor to L. F. Robert, Montreal, Quebec, Canada.
Filed June 7, 1913. Serial No. 70,955. PUBLISHED JUNE 2, 1914.

98,947. PAINT SPECIALTIES—NAMELY, ENAMELS, STAINS, AND CARRIAGE-COLORS. GERSTENDORFER BROS., New York, N. Y.
Filed March 28, 1914. Serial No. 77,020. PUBLISHED JUNE 9, 1914.

98,948. HAIR-TONIC. MINNIE GEVESHAUSEN, Arbuckle, Cal.
Filed August 6, 1913. Serial No. 72,185. PUBLISHED JUNE 2, 1914.

98,949. LEAD-PENCILS, COLORED PENCILS, LEAD-PENCIL AND PEN HOLDERS, SLATE-PENCILS AND CRAYONS, AND MECHANICAL LEAD-PENCILS. JOHANNES GRASSER, Nuremberg, Germany.
Filed April 21, 1914. Serial No. 77,622. PUBLISHED JUNE 2, 1914.

98,950. CERTAIN NAMED STEAM-FITTING SUPPLIES. THE GRISCOM-RUSSELL COMPANY, New York, N. Y.
Filed April 12, 1913. Serial No. 69,738. PUBLISHED APRIL 28, 1914.

98,951. REMEDY FOR SEASICKNESS. RICHARD D. HAMILTON, La Grande, Oreg.
Filed April 3, 1914. Serial No. 77,181. PUBLISHED JUNE 2, 1914.

98,952. TONIC FOR CLEANSING AND PURIFYING THE SYSTEM. JAMES M. HELTSLEY, Drakesboro, Ky.
Filed March 11, 1914. Serial No. 76,550. PUBLISHED JUNE 2, 1914.

98,953. TOOTH-PASTE. HERSON CHEMICAL COMPANY, Gary, Ind.
Filed April 27, 1914. Serial No. 77,778. PUBLISHED JUNE 2, 1914.

98,954. SKIN-LOTION. FERD. T. HOPKINS & SON, New York, N. Y.
Filed December 8, 1913. Serial No. 74,447. PUBLISHED JUNE 9, 1914.

98,955. KNIT AND WOVEN UNDERWEAR. INDERA MILLS, Winston-Salem, N. C.
Filed April 17, 1914. Serial No. 77,533. PUBLISHED JUNE 2, 1914.

98,956. APRONS, ROMPERS, WRAPPERS, SHIRTS, AND PAJAMAS. LANCASTER MILLS, Clinton, Mass.
Filed December 11, 1913. Serial No. 74,518. PUBLISHED JUNE 2, 1914.

98,957. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. THOMAS H. MCNAMEE, Watsonville, Cal.
Filed October 28, 1913. Serial No. 73,646. PUBLISHED JUNE 2, 1914.

98,958. CERTAIN NAMED TOOLS, PARTS THEREOF, CUTLERY, AND MACHINERY. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed January 19, 1912. Serial No. 60,927. PUBLISHED JUNE 9, 1914.

98,959. LEATHER AND RUBBER BOOTS AND SHOES. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed January 19, 1912. Serial No. 60,931. PUBLISHED JUNE 2, 1914.

98,960. CERTAIN NAMED FLAT, TABLE, HOLLOW, AND TOILET WARE MADE OF OR PLATED WITH PRECIOUS METALS. THE MOUNT VERNON COMPANY—SILVERSMITHS, INC., Mount Vernon, N. Y.
Filed March 24, 1914. Serial No. 76,904. PUBLISHED JUNE 2, 1914.

98,961. HAARLEM OIL, BEING A MEDICINAL OIL. NAAMLOOZE VENNOOTSCHAP MAATSCHAPPIJ TOT VOORTZETTING DER ZAKEN GEDREVEN ONDER DEN NAAM KLAAS TILLY, Haarlem, Netherlands.
Filed April 15, 1914. Serial No. 77,493. PUBLISHED JUNE 2, 1914.

98,962. STOCK FEED CONSISTING OF CERTAIN PRODUCTS. NATIONAL STARCH CO., New York, N. Y.
Filed November 21, 1913. Serial No. 74,118. PUBLISHED JUNE 2, 1914.

98,963. COFFEE. J. R. NEWBERRY CO., Los Angeles, Cal.
Filed March 11, 1914. Serial No. 76,558. PUBLISHED JUNE 2, 1914.

98,964. CERTAIN ANTISEPTIC LIQUID. NORTH AMERICAN PHARMACAL CO., INC., New York, N. Y.
Filed April 1, 1914. Serial No. 77,133. PUBLISHED JUNE 9, 1914.

98,965. SYRINGES FOR USE WITH FIRE-EXTINGUISHING COMPOUNDS. PYRENE MANUFACTURING CO., New York, N. Y.
Filed April 3, 1914. Serial No. 77,187. PUBLISHED JUNE 9, 1914.

98,966. SALVE. PYROGRAPHY ART COMPANY, Dixon, Ill.
Filed February 26, 1914. Serial No. 76,303. PUBLISHED JUNE 9, 1914.

98,967. FURNITURE-POLISHING OIL. RADIO COMPANY, Brooklyn, N. Y.
Filed March 28, 1914. Serial No. 77,029. PUBLISHED JUNE 9, 1914.

98,968. BOOTS AND SHOES OF LEATHER. THE RILEY SHOE MANUFACTURING COMPANY, Columbus, Ohio.
Filed May 1, 1914. Serial No. 77,935. PUBLISHED JUNE 2, 1914.

98,969. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,686. PUBLISHED JUNE 9, 1914.

98,970. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,687. PUBLISHED JUNE 9, 1914.

98,971. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,688. PUBLISHED JUNE 9, 1914.

98,972. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,690. PUBLISHED JUNE 9, 1914.

98,973. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,691. PUBLISHED JUNE 9, 1914.

98,974. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,694. PUBLISHED JUNE 9, 1914.

98,975. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,695. PUBLISHED JUNE 9, 1914.

98,976. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,696. PUBLISHED JUNE 9, 1914.

98,977. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,697. PUBLISHED JUNE 9, 1914.

98,978. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,700. PUBLISHED JUNE 9, 1914.

98,979. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,701. PUBLISHED JUNE 9, 1914.

98,980. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,705. PUBLISHED JUNE 9, 1914.

98,981. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,707. PUBLISHED JUNE 9, 1914.

98,982. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,708. PUBLISHED JUNE 9, 1914.

98,983. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,099. PUBLISHED JUNE 9, 1914.

98,984. CERTAIN PREPARATION FOR HEAD-SHAMPOO. SEELYE-MYERS CO., Cleveland, Ohio.
Filed March 25, 1914. Serial No. 76,949. PUBLISHED JUNE 9, 1914.

98,985. LIQUID AND POWDER MEDICINE FOR PYORRHEA ALVEOLARIS AND DISEASES OF THE GUMS. NOA SPEARS, San Antonio, Tex.
Filed March 30, 1912. Serial No. 62,535. PUBLISHED JUNE 2, 1914.

98,986. ILLUMINATING-OILS. STANDARD OIL CO. OF NEW YORK, New York, N. Y.
Filed January 19, 1914. Serial No. 75,299. PUBLISHED JUNE 9, 1914.

98,987. STRAIGHT, BLENDED, COMPOUNDED, AND IMITATION WHISKIES. STONE HILL WINE COMPANY, Hermann, Mo.
Filed October 31, 1912. Serial No. 66,647. PUBLISHED APRIL 22, 1913.

98,988. DOUCHE-POWDERS. BURTON P. THOM, New York, N. Y.
Filed April 6, 1914. Serial No. 77,257. PUBLISHED JUNE 2, 1914.

98,989. CERTAIN NAMED CASES, BOXES, BAGS, TILLS, AND COVERS. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,758. PUBLISHED JUNE 2, 1914.

98,990. POULTRY REMEDIES FOR CERTAIN NAMED DISEASES. WONDER MANUFACTURING CO., Sumner, Iowa.
Filed March 6, 1914. Serial No. 76,419. PUBLISHED JUNE 2, 1914.

98,991. WATERPROOF VARNISH. C. A. WOOLSEY PAINT & COLOR CO., Jersey City, N. J.
Filed March 28, 1914. Serial No. 77,038. PUBLISHED JUNE 9, 1914.

98,992. VERMIFUGE. WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y.
Filed March 25, 1914. Serial No. 76,951. PUBLISHED JUNE 2, 1914.

98,993. FOUNDRY-RIDDLES. THE AMERICAN IMPLEMENT COMPANY, Waterbury, Conn.
Filed April 24, 1914. Serial No. 77,716. PUBLISHED JUNE 9, 1914.

98,994. OINTMENT AND PREPARATION FOR TREATMENT OF CERTAIN NAMED AILMENTS. WILLIAM C. ARNOLD, Kansas City, Mo.
Filed December 26, 1913. Serial No. 74,832. PUBLISHED JUNE 9, 1914.

98,995. LEATHER BOOTS AND SHOES. BARTELS & THELEN COMPANY, Chelsea, Mass.
Filed May 11, 1914. Serial No. 78,190. PUBLISHED JUNE 9, 1914.

98,996. SALVE. ARTHUR JAMES BATES, Bridgeport, Conn.
Filed April 14, 1914. Serial No. 77,471. PUBLISHED JUNE 9, 1914.

98,997. STAINS, VARNISHES, AND COMBINED STAIN AND VARNISH. BERRY BROTHERS, Detroit, Mich.
Filed February 25, 1913. Serial No. 68,714. PUBLISHED JUNE 9, 1914.

98,998. BLOUSES, ROMPERS, SHIRT-WAISTS, AND CHILDREN'S FROCKS. K. & E. BLOUSE MAKERS, Cleveland, Ohio.
Filed April 23, 1914. Serial No. 77,682. PUBLISHED JUNE 9, 1914.

98,999. CLEATS FOR ELECTRIC WIRING. ELISHA W. BUFFINTON, Fall River, Mass.
Filed April 29, 1914. Serial No. 77,855. PUBLISHED JUNE 9, 1914.

99,000. EMULSIFIABLE COAL-TAR-CREOSOTE COMPOUND. SAMUEL CABOT, INCORPORATED, Boston, Mass.
Filed April 27, 1914. Serial No. 77,769. PUBLISHED JUNE 9, 1914.

99,001. ELECTRICALLY-OPERATED VACUUM-CLEANERS. THE CLEVELAND SUCTION CLEANER CO., Cleveland, Ohio.
Filed May 1, 1914. Serial No. 77,910. PUBLISHED JUNE 9, 1914.

99,002. MEDICATED LOZENGES FOR THE TREATMENT OF THROAT AND BRONCHIAL AFFECTIONS. DAGGETT & MILLER COMPANY, Providence, R. I.
Filed May 4, 1914. Serial No. 77,971. PUBLISHED JUNE 9, 1914.

99,003. PUMPS. THE DEMING COMPANY, Salem, Ohio.
Filed April 11, 1914. Serial No. 77,410. PUBLISHED JUNE 9, 1914.

99,004. DRESS, NEGLIGÉE, AND WORK SHIRTS. DOYLE-KIDD DRY GOODS CO., Little Rock, Ark.
Filed February 27, 1914. Serial No. 76,207. PUBLISHED JUNE 9, 1914.

99,005. METALLIC STRIPS FOR USE IN THERMOSTATS AND LIKE PURPOSES. DRIVER-HARRIS WIRE CO., Harrison, N. J.
Filed April 6, 1914. Serial No. 77,234. PUBLISHED JUNE 9, 1914.

99,006. BLOOD-TONICS. C. W. ENTZMINGER, Sanford, Fla.
Filed August 20, 1912. Serial No. 65,345. PUBLISHED JUNE 9, 1914.

99,007. MANGANESE-STEEL CASTINGS. THE FROG SWITCH & MANUFACTURING COMPANY, Carlisle, Pa.
Filed April 20, 1914. Serial No. 77,587. PUBLISHED JUNE 9, 1914.

99,008. NEGLIGÉE AND SPORTING SHIRTS. JACOB GERHARDT & CO., New York, N. Y.
Filed May 6, 1914. Serial No. 78,041. PUBLISHED JUNE 9, 1914.

99,009. CERTAIN NAMED WOVEN AND KNITTED UNDERWEAR. NATHAN HATCH, Albany and Cohoes, N. Y.
Filed May 14, 1914. Serial No. 78,277. PUBLISHED JUNE 9, 1914.

99,010. INSECTICIDES AND FUNGICIDES. HEMINGWAY'S LONDON PURPLE COMPANY, LTD., London, England, and New York, N. Y.
Filed March 21, 1913. Serial No. 69,228. PUBLISHED JUNE 9, 1914.

99,011. ECZEMA AND SKIN REMEDY. LOUISA HENNENHOEFER, St. Louis, Mo.
Filed May 14, 1914. Serial No. 78,276. PUBLISHED JUNE 9, 1914.

99,012. SIZED AND STIFFENED CLOTH. THE HOLLISTON MILLS, Norwood, Mass.
Filed May 6, 1914. Serial No. 78,019. PUBLISHED JUNE 9, 1914.

99,013. PUMPS AND WELL-HEADS. INTERNATIONAL STEAM PUMP COMPANY, Jersey City, N. J.
Filed April 8, 1914. Serial No. 77,314. PUBLISHED JUNE 9, 1914.

99,014. MOTION-PICTURE FILMS. LIFE-PHOTO FILM CORPORATION, New York, N. Y.
Filed April 9, 1914. Serial No. 77,348. PUBLISHED JUNE 9, 1914.

99,015. WATER-STILLS. ADOLF P. LINK, Brooklyn, N. Y.
Filed April 22, 1914. Serial No. 77,653. PUBLISHED JUNE 9, 1914.

99,016. RAIN-COATS AND OVERCOATS. THE LONDON WATERPROOF CO., New York, N. Y.
Filed May 9, 1914. Serial No. 78,170. PUBLISHED JUNE 9, 1914.

99,017. MEN'S CLOTHING—NAMELY, MEN'S COATS, VESTS, TROUSERS, AND OVERCOATS. THE OLD WOOLEN MILLS CO., Chicago, Ill.
Filed January 12, 1914. Serial No. 75,132. PUBLISHED JUNE 9, 1914.

99,018. ELECTRICAL VACUUM CLEANING-MACHINES AND PARTS THEREOF. THE PREMIER VACUUM CLEANER COMPANY, Cleveland, Ohio.
Filed February 14, 1914. Serial No. 75,902. PUBLISHED JUNE 9, 1914.

99,019. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. ROGERS PEET COMPANY, New York, N. Y.
Filed April 4, 1914. Serial No. 77,217. PUBLISHED JUNE 9, 1914.

99,020. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 8, 1914. Serial No. 78,141. PUBLISHED JUNE 9, 1914.

99,021. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 8, 1914. Serial No. 78,142. PUBLISHED JUNE 9, 1914.

99,022. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 13, 1914. Serial No. 78,264. PUBLISHED JUNE 9, 1914.

99,023. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, AND CAPES. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 14, 1914. Serial No. 78,288. PUBLISHED JUNE 9, 1914.

99,024. MEDICINAL PREPARATION FOR THE TREATMENT OF DIABETES. SANIN-GESELLSCHAFT M. B. H. FABRIK CHEM. PHARMAC. PRAEPARATE, Koetzschenbroda, Dresden, Germany.
Filed April 18, 1914. Serial No. 77,572. PUBLISHED JUNE 9, 1914.

99,025. MEDICINAL PREPARATION USED IN THE TREATMENT OF CERTAIN NAMED DISEASES. SANIN-GESELLSCHAFT M. B. H. FABRIK CHEM. PHARMAC. PRAEPARATE, Koetzschenbroda, Dresden, Germany.
Filed April 18, 1914. Serial No. 77,573. PUBLISHED JUNE 9, 1914.

99,026. REFLECTOSCOPE. SHOMESCOPE MANUFACTURING CO., Kansas City, Mo.
Filed April 14, 1914. Serial No. 77,481. PUBLISHED JUNE 9, 1914.

99,027. SAWS AND MACHINE-KNIVES. SIMONDS MANUFACTURING COMPANY, Fitchburg, Mass.
Filed April 17, 1914. Serial No. 77,550. PUBLISHED JUNE 9, 1914.

99,028. MEN'S AND WOMEN'S HOSE. THIEME BROS. CO., Fort Wayne, Ind.
Filed May 15, 1914. Serial No. 78,318. PUBLISHED JUNE 9, 1914.

99,029. HAIR-PINS AND HAIR-ORNAMENTS. THE VISCOLOID COMPANY, Leominster, Mass.
Filed April 20, 1914. Serial No. 77,603. PUBLISHED JUNE 9, 1914.

99,030. TONIC LAXATIVE PREPARATION. JAMES T. WELLINGTON, Norwood, Mass.
Filed April 13, 1914. Serial No. 77,466. PUBLISHED JUNE 9, 1914.

99,031. TONIC LAXATIVE PREPARATION. JAMES T. WELLINGTON, Norwood, Mass.
Filed April 20, 1914. Serial No. 77,604. PUBLISHED JUNE 9, 1914.

99,032. DRESS, NEGLIGÉE, WORK, AND UNDER SHIRTS, DRAWERS, AND ONE-PIECE PAJAMAS. WILSON BROTHERS, Chicago, Ill.
Filed February 19, 1914. Serial No. 76,043. PUBLISHED JUNE 9, 1914.

99,033. CERTAIN NAMED CLOTHING FOR MEN AND BOYS. JULIAN ADLER, Baltimore, Md.
Filed April 14, 1914. Serial No. 77,468. PUBLISHED JUNE 9, 1914.

99,034. FISH—NAMELY, CANNED SARDINES, SALMON, AND TUNA. ARMOUR & COMPANY, Chicago, Ill.
Filed March 26, 1914. Serial No. 76,956. PUBLISHED MAY 19, 1914.

99,035. ALIMENTARY PASTE PRODUCTS. S. BARTOLOTTA & CO., New Orleans, La.
Filed March 20, 1914. Serial No. 76,789. PUBLISHED JUNE 9, 1914.

99,036. SELF-RISING WHEAT-FLOUR. THE BIRKETT MILLS, Penn Yan, N. Y.
Filed March 23, 1914. Serial No. 76,838. PUBLISHED JUNE 9, 1914.

99,037. EVAPORATED MILK. CRARY PURE FOOD COMPANY, Waukesha, Wis.
Filed March 14, 1914. Serial No. 76,634. PUBLISHED JUNE 9, 1914.

99,038. CERTAIN NAMED FOODS. CROSS, ABBOTT CO., White River Junction, Vt.
Filed March 14, 1914. Serial No. 76,632. PUBLISHED JUNE 9, 1914.

99,039. CULTURES OF NODULE BACTERIA. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed April 22, 1914. Serial No. 77,647. PUBLISHED JUNE 9, 1914.

99,040. CANNED FRUITS, TOMATO CATSUP, CANNED VEGETABLES, AND CANNED SALMON. DIEHM-FANSLER GROCER CO., East St. Louis, Ill.
Filed March 14, 1914. Serial No. 76,639. PUBLISHED JUNE 9, 1914.

99,041. TOILET-COMBS, PINCUSHIONS, AND BUTTON-HOOKS. J. C. DOWD & CO., New York, N. Y.
Filed July 15, 1913. Serial No. 71,708. PUBLISHED OCTOBER 21, 1913.

99,042. DESICCATED MILK. THE DRY MILK COMPANY, New York, N. Y.
Filed March 23, 1914. Serial No. 76,845. PUBLISHED JUNE 9, 1914.

99,043. CANDY. J. EINZIG & CO., New York, N. Y.
Filed February 8, 1912. Serial No. 61,374. PUBLISHED JUNE 9, 1914.

99,044. EGGS AND DRESSED POULTRY AND BUTTER. FEAR-CAMPBELL COMPANY, Frankfort, Ind.
Filed January 22, 1914. Serial No. 75,356. PUBLISHED JUNE 9, 1914.

99,045. NON-INTOXICATING CARBONATED TONIC BEVERAGES AND SYRUPS FOR MAKING THE SAME. FRIEDLAND BROS. BOTTLING WORKS, Phillipsburg, N. J.
Filed May 7, 1914. Serial No. 78,072. PUBLISHED JUNE 2, 1914.

99,046. CANNED BLUEBERRIES. E. M. FRYE & CO., Harrington, Me.
Filed March 14, 1914. Serial No. 76,642. PUBLISHED JUNE 9, 1914.

99,047. NON-INTOXICATING CARBONATED TONIC BEVERAGES. KELLEY PLUMMER HAM, Lynn, Mass.
Filed May 2, 1914. Serial No. 77,961. PUBLISHED JUNE 9, 1914.

99,048. SUGAR. WM. HENDERSON, New Orleans, La.
Filed February 21, 1914. Serial No. 76,079. PUBLISHED JUNE 9, 1914.

99,049. EDGE-INK, LEATHER-INKS, AND WRITING-INKS. THE R. M. HOLLINGSHEAD CO., Camden, N. J.
Filed April 25, 1914. Serial No. 77,749. PUBLISHED JUNE 9, 1914.

99,050. STEEL PENS. GEORGE WADSWORTH HUGHES, Birmingham, England.
Filed March 6, 1914. Serial No. 76,403. PUBLISHED JUNE 9, 1914.

99,051. LARD. THE HULL & DILLON PKG. CO., Pittsburg, Kans.
Filed April 4, 1910. Serial No. 48,828. PUBLISHED MARCH 25, 1913.

99,052. KNIT AND WOVEN UNDERWEAR. INDERA MILLS, Winston-Salem, N. C.
Filed April 17, 1914. Serial No. 77,534. PUBLISHED JUNE 9, 1914.

99,053. COAL-CUTTERS, ROCK-DRILLS, HAMMER-DRILLS, AND PARTS THEREOF. INTERNATIONAL CHANNELLING MACHINES LIMITED, Sheffield, England.
Filed August 2, 1913. Serial No. 72,137. PUBLISHED JUNE 9, 1914.

99,054. WATCHES AND CLOCKS. ERICH KIENZLE, New York, N. Y.
Filed April 7, 1914. Serial No. 77,288. PUBLISHED JUNE 9, 1914.

99,055. CUFF-BUTTONS, SHIRT-STUDS, VEST-BUTTONS, AND CUFF-LINKS. KREMENTZ & CO., Newark, N. J.
Filed November 11, 1912. Serial No. 66,796. PUBLISHED JANUARY 28, 1913.

99,056. CANDIES. F. X. KUCHLER & SON, Brooklyn, N. Y.
Filed March 14, 1914. Serial No. 76,648. PUBLISHED JUNE 9, 1914.

99,057. BUTTER, BUTTER COMPOUNDS, AND BUTTER SUBSTITUTES. Y. LOPEZ & COMPANY, New York, N. Y.
Filed December 26, 1913. Serial No. 74,846. PUBLISHED APRIL 21, 1914.

99,058. CANNED FRUITS, CANNED VEGETABLES, AND CANNED OYSTERS. MCCREADY & WEBSTER, Baltimore, Md.
Filed March 21, 1914. Serial No. 76,819. PUBLISHED JUNE 9, 1914.

99,059. FRESH FRUITS. MOSIER FRUIT GROWERS ASSOCIATION, Mosier, Oreg.
Filed March 18, 1914 Serial No. 76,748. PUBLISHED JUNE 9, 1914.

99,060. PRESERVATIVE OF RUBBER PRODUCTS. JAMES M. MUNYON, Jr., New York, N. Y.
Filed August 6, 1913. Serial No. 72,191. PUBLISHED JUNE 9, 1914.

99,061. WRITING-PAPER. PEYTON PAPER COMPANY, Duluth, Minn.
Filed February 5, 1914. Serial No. 75,713. PUBLISHED JUNE 9, 1914.

99,062. WRITING-TABLETS. PEYTON PAPER COMPANY, Duluth, Minn.
Filed February 5, 1914. Serial No. 75,714. PUBLISHED JUNE 9, 1914.

99,063. CANNED FISH. PREMIER PACKING CO., San Diego, Cal.
Filed March 21, 1914. Serial No. 76,822. PUBLISHED JUNE 9, 1914.

99,064. PIANOS. ISAAC S. PURCELL, Oak Park and Chicago, Ill.
Filed November 17, 1913. Serial No. 74,039. PUBLISHED JUNE 9, 1914.

99,065. CHEESE. HANS ROETHLISBERGER, San Francisco, Cal.
Filed March 14, 1914. Serial No. 76,657. PUBLISHED JUNE 9, 1914.

99,066. VACUUM-CLEANERS. THE ROTOR VACUUM CLEANER COMPANY, INC., New York, N. Y.
Filed November 4, 1913. Serial No. 73,795. PUBLISHED JUNE 9, 1914.

99,067. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,704. PUBLISHED JUNE 9, 1914.

99,068. TOILET-PAPER. STANDARD PAPER COMPANY, Indianapolis, Ind.
Filed May 1, 1914. Serial No. 77,936. PUBLISHED JUNE 9, 1914.

99,069. TYPE-WRITER RIBBONS AND CARBON-PAPER. THE STENOGRAPHY & REPORTING COMPANY, Trenton, N. J.
Filed May 16, 1914. Serial No. 78,339. PUBLISHED JUNE 9, 1914.

99,070. PREPARED FOODS FOR INFANTS AND INVALIDS. DR. THEINHARDT'S NÄHRMITTEL-GESELLSCHAFT G. M. B. H., Stuttgart-Cannstatt, Germany.
Filed March 14, 1911. Serial No. 55,069. PUBLISHED JUNE 9, 1914.

99,071. COTTON AND LINEN PIECE GOODS. TRIPPE, BARKER & CO., New York, N. Y.
Filed April 20, 1914. Serial No. 77,602. PUBLISHED JUNE 9, 1914.

99,072. WHEAT-FLOUR. JOSEPH W. VANCE, Pierce City, Mo.
Filed March 16, 1914. Serial No. 76,710. PUBLISHED JUNE 9, 1914.

LABELS

REGISTERED AUGUST 11, 1914.

17,894.—*Title:* "AUNT JEMIMA'S BUCKWHEAT FLOUR." (For Flour.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed July 2, 1914.

17,895.—*Title:* "FANCY PRINT BUTTER." (For Butter.) WILLIAM GORDON, Philadelphia, Pa., and Atlantic City, N. J. Filed March 18, 1914.

17,896.—*Title:* "MELCO." (For Confections.) HARRIS, WOODSON CO., INC., Lynchburg, Va. Filed June 2, 1914.

17,897.—*Title:* "MONA LISA'S SMILE CHOCOLATES." (For Chocolates.) PARK & TILFORD, New York, N. Y. Filed January 19, 1914.

17,898.—*Title:* "TANGO CHOCOLATES." (For Chocolates.) PARK & TILFORD, New York, N. Y. Filed March 5, 1914.

17,899.—*Title:* "WEBER'S OINTMENT." (For Ointment.) ANGELIKA WEBER, Pittsburgh, Pa. Filed June 5, 1914.

PRINTS

REGISTERED AUGUST 11, 1914.

3,692.—*Title:* "TIGHT AS A JUG." (For Silos.) WALTER S. DICKEY, Kansas City, Mo. Filed July 6, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Eighth Circuit.

ROSSMANN *v.* GARNIER.

Decided January 27, 1914.

211 FED. REP., 401.

1. COURTS—JURISDICTION OF UNITED STATES COURTS—CASES ARISING UNDER TRADE-MARK LAWS.

The Federal courts have jurisdiction of all matters arising under the trade-mark statute, even though both parties be citizens of the same State.

2. COMMERCE — STATUTORY PROVISIONS — VALIDITY — "TRADE-MARK."

Congress had power under the Constitution of the United States (art. 1, sec. 8, cl. 3, authorizing it to regulate foreign and interstate commerce and commerce with the Indian tribes) to enact the trade-mark laws (act March 3, 1881, c. 138; 21 Stat., 502; U. S. Comp. St., 1901, p. 3401; act August 5, 1882, c. 398; 22 Stat., 298; U. S. Comp. St., 1901, p. 3404, and act February 20, 1905, c. 592; 33 Stat., 724; U. S. Comp. St. Supp., 1911, p. 1459) especially as a "trade-mark" is a distinctive mark of authenticity through which the products of particular manufacturers or the vendible commodities of particular merchants may be distinguished from those of others.

3. TRADE-MARKS AND TRADE-NAMES—STATUTORY PROVISIONS—VALIDITY.

The provision of Trade-Mark Act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461,) that nothing therein shall prevent the registration of any mark used by the applicant or his predecessor or by those from whom title to the mark is derived in interstate or foreign commerce or commerce with Indian tribes which was in actual or exclusive use as a trade-mark of the applicant or his predecessor for ten years next preceding the passage of that act is not unconstitutional.

4. SAME—MARKS SUBJECT TO OWNERSHIP—DESCRIPTIVE WORDS.

Such provision of act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461,) is not limited to technical trade-marks, and a word used exclusively for ten years may be registered under that provision even though it is a descriptive word.

5. SAME—INFRINGEMENT—WHAT CONSTITUTES.

A trade-mark consisting of the word "Abricotine" in connection with the initials "P. G." on a tahret or shield and the facsimile of a signature was infringed by using the word "Abricotine" in connection with similar goods.

6. SAME—ACTIONS—NOTICE AS CONDITION PRECEDENT.

Under the express provisions of Trade-Mark Act February 20, 1905, (c. 592, sec. 28; 33 Stat., 730; U. S. Comp. St. Supp., 1911, p. 1470,) where the registrant neither gave notice of the registration by affixing a notice to that effect to the articles sold under such trade-mark nor notified defendant of the infringement damages were not recoverable for the infringement.

7. EVIDENCE—JUDICIAL NOTICE—FOREIGN LANGUAGE.

In a suit for infringing a trade-mark judicial notice would not be taken that the word "Abricotine" is a word in general use in the French language in connection with French commerce and descriptive of apricot cordial, since, while the court is bound to take judicial notice of the ordinary meaning of words in our own language, it has judicially neither memory nor understanding of the French language, and judicial notice as to uses and customs is confined to our own country.

8. TRADE-MARKS AND TRADE-NAMES—ACTIONS—SUFFICIENCY OF EVIDENCE.

Under Trade-Mark Act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461, authorizing the registration of any mark in actual and exclusive use as a trade-mark by the applicant or his predecessor in title for ten years next preceding the passage thereof, and sec. 16, making the registration of a trade-mark *prima facie* evidence of ownership,) the *prima facie* case made by the registration of a trade-mark containing as a part thereof the word "Abricotine," in connection with cordials, was not overcome by the presence of the word "Abricotine," as applied to liqueurs, in a French encyclopedia bearing a date subsequent to the date of the beginning of the ten-year period and more than twenty years after the original registration of complainant's French trade-mark, it not appearing that it was not complainant's product that placed the term in the encyclopedia.

9. SAME—EFFECT OF FOREIGN REGISTRATION.

Under article 6 of the convention of March 20, 1883, (25 Stat., 1376,) for the protection of industrial property, providing that every trade-mark regularly deposited in the country of origin shall be admitted to deposit and so protected in all other countries of the Union thereby constituted, the owner of a trade-mark registered in France was entitled to protection in this country, whether or not such mark would have been allowed under the laws of this country.

APPEAL from the District Court of the United States for the Eastern District of Missouri; David P. Dyer, Judge.

Mr. James A. Carr (*Mr. Albert C. Davis* on the brief) for the appellant.

Mr. James L. Hopkins (*Mr. A. Parker Smith* on the brief) for the appellee.

Before HOOK and SMITH, Circuit Judges, and VAN VALKENBURGH, District Judge.

SMITH, *Cir. J.:*

This suit was brought by the appellee, Caroline Henriette Garnier, to enjoin the appellant, Tekla

Rossmann, from infringing a registered trade-mark, to restrain her from unfair trade, and for an accounting, and resulted in a decree as prayed.

November 1, 1910, Caroline Henriette Garnier registered in the Patent Office as a trade-mark for cordials the following:

PG

ABRICOTINE

P. Garnier

She alleged in her statement that she was a citizen of France residing at Enghien-les-Bains, France, and the trade-mark had been used in her business and that of her predecessor, Andre Georges Garnier, since on or about the 1st day of August, 1872. She alleged in her declaration that said trade-mark had been registered in France and that the same had been in actual use as a trade-mark of the appellant and her predecessor from whom title was derived for ten years next preceding the passage of the act of February 20, 1905, and to the best of her knowledge and belief such use had been exclusive. In her bill of complaint Mrs. Garnier says that defendant Tekla Rossmann is engaged in selling a cordial under the name "Abricotine" upon which the complainant claims a trade-mark in commerce betweeu the several States.

The appellant first denies that the court had any jurisdiction of this suit except under the trade-mark law because it is not shown that the complainant is a citizen of France.

In the view taken by the court it is sufficient to say that all the matters which will be passed upon arise under the trade-mark law, and it is therefore unnecessary to consider this question.

(1) The Federal court has jurisdiction of all matters arising under the trade-mark statute even though both parties be citizens of the same State. (*Elgin National Watch Co.* v. *Illinois Watch Case Co.*, 179 U. S., 665; 21 Sup. Ct., 270; 45 L. Ed., 365.)

(2) The defendant claims the entire trade-mark law of 1905 (33 Stats., 724) is unconstitutional, and inferentially the same contention is made as to the act of 1881 (21 Stats., 502) and of 1882, (22 Stats., 298.)

The first trade-mark legislation passed by Congress was in 1870 (c. 230 of the Laws of the Forty-First Congress) and is found in 16 Stats., 198. That was entitled "An act to revise, consolidate, and amend the statutes relating to patents and copyrights."

Sections 77 to 84 of this act referred exclusively to trade-marks. There was nothing in the act to refute the presumption quite apparent from its title that it was enacted by Congress in the supposed exercise of its powers under the eighth clause of the eighth section of the first article of the Constitution.

SEC. 8. The Congress shall have power: • • • To promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

In 1876 (19 Stats., 141) Congress passed an act to punish the counterfeiting of trade-mark goods and the selling or dealing in such goods. This act was for the further security or protection of trade-mark holders under the act of 1870.

In the *Trade-Mark Cases* (100 U. S., 82; 25 L. Ed., 550) the Supreme Court held that no power to pass trade-mark legislation was conferred by the provision of the Constitution quoted and that, as the laws of 1870 and 1876 made no distinction between trade-marks used in intrastate commerce and those used in foreign commerce, interstate commerce, and commerce with the Indian tribes, both of said acts were necessarily void. This decision was rendered in October, 1879, and it was in conformity with what was supposed to have been laid down by the Supreme Court in those cases that all the subsequent legislation upon the subject has been enacted. It is probably true that the constitutionality of the more recent legislation has never been expressly passed upon by the Supreme Court of the United States, but that legislation has now stood for more than thirty years. It has been enforced by the United States Supreme Court and all the other courts of the United States, and we see no reason to suppose the law is not sustainable under clause 3 of section 8 of article 1 of the Constitution:

The Congress shall have power: • • • To regulate commerce with foreign nations, and among the several States, and with the Indian tribes.

In the *Trade-Mark cases, supra*, the Supreme Court said:

Whether the trade-mark bears such a relation to commerce in general terms as to bring it within congressional control, when used or applied to the classes of commerce which fall within that control, is one which, in the present case, we propose to leave undecided.

And again:

In what we have here said we wish to be understood as leaving untouched the whole question of the treaty-making power over trade-marks, and of the duty of Congress to pass any laws necessary to carry treaties into effect.

In *Elgin National Watch Co.* v. *Illinois Watch Case Co.* (179 U. S., 665, 673; 21 Sup. Ct., 270, 273; 45 L. Ed., 365) the Supreme Court said:

The term (trade-mark) has been in use from a very early date, and, generally speaking, means a distinctive mark of authenticity, through which the products of particular manufacturers or the vendible commodities of particular merchants may be distinguished from those of others.

Surely if this be a correct definition of a trade-mark regulations for the registering and protection of them in connection with commerce, interstate or foreign, or with the Indian tribes, is legitimate legislation in connection with the regulation of such commerce. Surely if such marks are distinctive badges of authenticity it is as much a part of the regulation of interstate commerce to regulate them

as are the branding features under the pure food law.

This court cannot therefore hold that such legislation is unconstitutional *en bloc*.

(3, 4) The act of 1905 contains the following provision:

That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act. (33 Stats., 726, sec. 5.)

It is contended that at least this so-called ten-year clause is unconstitutional. It was held otherwise in *Thaddeus Davids Co.* v. *Davids et al.*, (178 Fed., 801; 102 C. C. A., 249;) *Id.*, (C. C., 190 Fed., 285;) *Id.*, (192 Fed., 915; 114 C. C. A., 355;) *Coca-Cola Co.* v. *Deacon Brown Bottling Co. et al.*, (D. C., 200 Fed., 105;) *Coca-Cola Co.* v. *Nashville Syrup Co.*, (D. C., 200 Fed., 153, 157;) *Hughes et al.* v. *Alfred H. Smith Co.*, (D. C., 205 Fed., 302;) *in re Cahn, Belt & Co.*, (27 App. D. C., 173.)

The last case presents a question of construction but not one of constitutionality.

It is apparent that a technical trade-mark is entitled to registration without reference to the ten-year clause, and, if none but technical trade-marks are entitled to be registered under it, then it might as well have been omitted.

It will be observed that section 5 provides that any mark, not trade-mark, which was in actual and exclusive use as a trade-mark for ten years before the passage of the act, may be registered. This contemplates that any mark which was not a technical trade-mark, but which had been actually and exclusively used by the applicant or his predecessor for the required time could be registered as a trade-mark. This being true, there was no reason why the complainant could not register the word "Abricotine" under the ten-year clause, even assuming it was a descriptive word, if she and her predecessors had used it exclusively for the ten-year period as a trade-mark. Section 16 of the act of 1905 provides that the registration of a trade-mark under the provisions of this act shall be *prima facie* evidence of ownership. The application having been made under the ten-year clause, and there being no evidence tending to negative the *prima facie* case made under section 16, the court finds that complainant owned the trade-mark under the ten-year clause, and this entirely aside from the question as to whether "Abricotine" was the proper subject of a trade-mark aside from the ten-year clause.

(5) It is insisted that the trade-mark registered was the tabret or shield and the initials which appeared thereon and the facsimile of the signature of "P. Garnier" or else was of the entire inscription, and that defendant had the right to use the word "Abricotine" taken from said trade-mark.

This seems to have been fully answered in *Saxlehner* v. *Eisner & Mendelson Co.*, (179 U. S., 19; 21 Sup. Ct., 7; 45 L. Ed., 60,) where it is said:

It is not necessary to constitute an infringement that every word of a trade-mark should be appropriated. It is sufficient that enough be taken to deceive the public in the purchase of a protected article. • • • The reports are full of cases where bills have been sustained for the infringement of one of several words of a trade-mark.

In that case it was held that a trade-mark upon bitter waters of "Hunyadi Janos" was infringed by the use of the words "Hunyadi Matyas" on similar waters.

The defendant contends there is no evidence that she has sold the cordial in question except locally in Missouri. She ignores the fact that she filed the following in the trial court:

And for answer to the interrogatory numbered 1 contained in said bill of complaint this defendant says that she has never sold or caused to be sold any cordials or liquor or goods of similar descriptive properties under the trade-mark Abricotine; but that she has sold such goods bearing a label having the word Abricotine thereon as a descriptive word in association with other matter as hereinbefore stated and that such goods have been sold in commerce between the several States of the United States since the 1st day of November, 1910.

The appellee seems to place some reliance on the fact that she claims to be a citizen of France and, as we understand it, claims certain rights under the trade-mark convention proclaimed July 6, 1869; but owing to doubt as to the sufficiency of the evidence to show her citizenship to France, to the absence of proof of compliance with the terms of that convention, and doubts as to the effect upon such convention of the provisions of the act of 1905, we leave all questions as to whether she has any rights under said convention undisposed of.

(6) The court below not only granted an injunction as prayed, but granted an accounting.

Section 28 of the act of 1905 (33 Stats., 730) is as follows:

SEC. 28. That it shall be the duty of the registrant to give notice to the public that a trade-mark is registered, either by affixing thereon the words "Registered in U. S. Patent Office," or abbreviated thus, "Reg. U. S. Pat. Off.," or when, from the character or size of the trade-mark, or from its manner of attachment to the article to which it is appropriated, this cannot be done, then by affixing a label containing a like notice to the package or receptacle wherein the article or articles are inclosed; and in any suit for infringement by a party failing so to give notice of registration no damages shall be recovered, except on proof that the defendant was duly notified of infringement, and continued the same after such notice.

It does not appear that in the use of the trade-mark the appellee ever complied with the requirement that she give notice to the public by affixing thereto the words "Registered in U. S. Patent Office," or "Reg. U. S. Pat. Off.," nor on a separate label, nor is there any evidence that any notice was ever given appellee of the infringement.

It follows that no damages can be recovered and no use would be subserved by an accounting.

The writer fully concurs in the separate opinion of VAN VALKENBURGH, District Judge.

The decree of the district court is therefore affirmed as to all but the awarding of an accounting, but the case is remanded, with directions to the court to set aside so much of the decree as grants such an accounting.

VAN VALKENBURGH, *Dis. J.*, (concurring:)

Counsel for appellant in their brief raise the following points:

1. The certificates of trade-mark are invalid and inoperative as evidence in this cause: (*a*) Because the Trade-Mark Act of February 20, 1905, is unconstitutional and inoperative; (*b*) because said act

limits infringements to such as occur in interstate commerce.

2. Said certificates of registration do not purport to protect the use of the word "Abricotine," but only the signature and initials on the shield.

3. Use in interstate commerce was not shown, and the jurisdiction therefore failed.

4. The word "Abricotine" is descriptive and incapable of adoption as a trade-mark.

5. The court erred in awarding an accounting of profits.

It is doubtful whether the assignments of error are broader than this; but, if so, such as are not included within the points relied on in the brief may be treated as abandoned. In the argument, beginning on page 5 of appellant's brief, the contentions are still further limited. It is evident that appellant elected to stand upon, first, unconstitutionality of the ten-year clause; second, failure of proof as to use in interstate commerce; third, the failure of the certificates to protect the word "Abricotine" apart from the signature, initials, and shield; fourth, the award of accounting.

We hold the act of 1905 to be constitutional. The mark was regularly registered under that act; this makes a *prima facie* case of ownership in appellee. Under that act the declarant is not limited to marks which are confessedly the subject of technical trade-mark; but terms not otherwise admissible as such are protected, provided the ten-year exclusive use of the mark is shown. This showing was made in the prescribed manner to the Patent Office. It was accepted, and the certificate issued; this makes a *prima facie* case of ownership which it was incumbent upon appellant to overcome by satisfactory proof. Appellant has elected to stand upon the legal propositions urged. She made no attack by evidence upon the validity of certificate or mark.

When we uphold the act of 1905, many of the vexatious questions presented are removed. In the record it is conceded that the infringement occurred in interstate commerce. Registration under the act of 1905 established in appellee the ownership of a trade-mark, which stands for construction as any technical statutory mark. In *Saxlehner* v. *Eisner & Mendelson Co.* (179 U. S., 19–33; 21 Sup. Ct., 7; 45 L. Ed., 60) it was established that it is not necessary to constitute an infringement that every word of a trade-mark should be appropriated. It is sufficient that enough be taken to deceive the public in the purchase of a protected article. As this record stands, it would appear that the word "Abricotine" was an essential and vital part of the mark. This disposes of all the contentions of appellant except that respecting the accounting, and this point we have resolved in her favor.

(7, 8) I say this disposes of all the contentions of appellant, unless we may still consider whether the word "Abricotine" is a word in general use and merely descriptive of apricot cordial. As I have said before, I do not think we can do so upon this record in the face of a valid registration under a valid act of Congress which gives to this mark the same legal effect as any other recognized technical mark. Some substantial showing, of which we can take cognizance, would be necessary to that end. Appellant should abide by the theory upon which she has elected to submit her case. There is in the record nothing which places before the court the part which the word "Abricotine" plays in the French language, nor the relation between that name and the cordial in French commerce; nor do we take judicial notice of such facts whatever they may be. As to uses and customs, we are confined to our own country. (Michie's Encyc. U. S. Sup. Ct. Rep., vol. 7, p. 676; *Dainese* v. *Hale*, 91 U. S., 13; 23 L. Ed., 190.) The court is, of course, bound to take judicial notice of the ordinary meaning of all words in our own tongue (Michie, vol. 7, p. 680); and upon such a question dictionaries are admitted, not as evidence, but only as aids to the memory and understanding of the court. (*Nix* v. *Hedden*, 149 U. S., 304–307; 13 Sup. Ct., 881; 37 L. Ed., 745.) We have, judicially, neither memory nor understanding of the French language, and appellant has not seen fit to enlighten us by the record. We do take judicial notice of well-known facts in history such as political questions which go to form current history; well-known facts in legal history; certain recognized facts in economic history. But the question of use of a trade-mark, or trade-name, in foreign commerce is not history in this sense. Except in a very limited way and in matters of confessed notoriety, or involving universal experience, we do not permit presumed knowledge of such matters to control our decision in patent and trade-mark cases in our own country. Proof of use and the time and extent thereof are required; much less should we assume such knowledge affecting a foreign jurisdiction and a foreign language. The mere presence of the word "Abricotine" as applied to liqueurs in a French encyclopedia bearing a date subsequent to the beginning of the ten-year period, and more than twenty years later than the alleged original registration of complainant's French trade-mark, cannot be received as establishing a prior general use that would defeat complainant's claim. For aught that appears Garnier's product may have placed the term in the encyclopedia. As I have said, a *prima facie* case was made. The burden then shifted to defendant. She has elected to stand upon this meager record; and we are asked to try this case mainly by the French dictionary, in the absence of important and, perhaps, controlling concrete facts. Such a process is too abstract and incomplete for the determination of valuable property rights. (*C., B. & Q. R. Co.* v. *United States*, 211 Fed., 12; decided at the September term of this court.)

(9) In the view I take, then, I do not think we may here determine, as an independent proposition, whether the word "Abricotine" could be indulged as a technical trade-mark, nor whether appellee has enjoyed the exclusive use of that mark for the statutory period as she alleges. I freely concede, from the able and learned argument of the dissenting opinion, that those questions are debatable. I express no opinion respecting them, and do not think the court can do so in this case. This may be said,

however, that if the appellee could and did obtain French trade-marks, as she swears she did in her affidavit for registration, then under article 6 of the treaty for the protection of industrial property of March 20, 1883, (25 Stat., 1376,) to which both France and the United States were parties, she would be entitled to protection in this country, whether or not we would have allowed such a mark as an original proposition under our laws. However, as is pointed out in the majority opinion, it is doubtful whether her citizenship is sufficiently proved to enable her to avail herself of the benefits of this convention. I mention it to show that the probable equities are not all on one side in any view of the case. For the reasons stated, I am constrained to concur in Judge SMITH'S opinion.

HOOK, *Cir. J.*, (dissenting:)

This is a case of technical, statutory trade-mark, not of unfair competition. The trade labels of defendant are so unlike complainant's no one could be deceived. The sole resemblance is in the use of the word "Abricotine" as the name of the cordial or liqueur which both sell. In no other way is it claimed defendant trespasses. Complainant relies on two registrations of a trade-mark in the Patent Office, one November 6, 1906, the other November 1, 1910. The latter trade-mark is shown in the foregoing opinion to consist of a shield outline inclosing the initials "P. G.," the word "Abricotine," and the name "P. Garnier" in script. The former is precisely like it, except that it contains in addition the words, "Liqueur extraite du Fruit l'Abricot," facsimiles and descriptions of certain medals and the address, Enghien-les-Bains. Complainant evidently sought by each registration to avail herself of the provision of the act of February 20, 1905:

> That nothing herein shall prevent the registration of any mark * * * which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act. (33 Stat., 725, sec. 5.)

The first application for registration lacked averment of the ten years' actual and exclusive use and was probably deemed insufficient under the above provision, so in the second the actual use for the ten years was stated, and it was averred that to the best of the applicant's knowledge and belief the use was exclusive. Recitals in the application show that each related to the same trade designations previously used, yet they were different in that, as already observed, some features of the first were omitted from the second. This difference is not important in itself, but is referred to merely to give point to a suggestion to be made presently.

The statute limits our inquiry to the ten years preceding its passage. During that period "Abricotine" was in the French language the common name of the liqueur having the flavor of the apricot which was used in its manufacture. Abricot has for centuries been the French name of the fruit we call apricot, and the word "Abricotine" came in the well-known way of the growth and development of languages—the addition of the suffix "in" or "ine" to root words—just as quinine, glycerin, glycerine, acontine, and a host of others. The beaten path was followed in naming the antiseptic listerine after Sir Joseph Lister, though an arbitrary term was probably coined, since Lister was not the root name of an element in the product. The period of exclusive use required by the statute and claimed by complainant is from February 20, 1895, to February 20, 1905. I have said that during this period "Abricotine" was the well-known, established, specific name of the article which both parties sell. Complainant did not coin it; it was in the vocabulary and she gave it no new meaning or application. In volume 22, *La Grande Encyclopedie*, published in Paris, May 22, 1895–June 30, 1896, under the title "Liqueur" is given a recipe for making the liqueur Kümmel, following which, it is said:

> On peut fabriquer ainsi une foule de liqueurs, anisette, abricotine, menthe, raspail, marasquin, etc.

A person can make in this way a large number of liqueurs, anisette, abricotine and so on. This appeared right at the beginning of complainant's alleged ten-year period of exclusive use. It is assumed in the opinion of the court that "Abricotine" may be a descriptive term. But more than that, it was from the commencement the specific, substantive name of the commodity. Complainant did not even adapt an old word to a new use; she took a current verbal coin of France, just as we of this country would call a hoe a hoe or a spade a spade, and asks a monopoly of it in this country. But, it is said, we have no judicial knowledge of the French language and there was no sworn testimony on the subject. Of course, broadly speaking, a court will not assume judicial knowledge of a foreign language; but the information needed here is far short of that. All agree that a court may resort to dictionaries in its own language to inform its understanding, and that embraces many things of which it was wholly ignorant before. This conceded right extends to phrases taken from foreign tongues, as, for example, "*en bloc*," which appears in one of the foregoing opinions. We use Latin quite freely, and if ignorant or dull of memory we inform ourselves or refresh our understanding like the pupils in the schools. If a foreign dictionary were translated into English, or if some English lexicographer gave the foreign synonyms of the names of articles of trade and commerce (abricot appears as the French for apricot in our unabridged lexicons), doubtless we could consult the publications without testimony as to their accuracy. The real test whether a court may inform itself of the meaning of a word, phrase, or sentence in another language without sworn witnesses should be whether there are ready, convenient means commonly employed in the other walks of life, and whether the information so gained would be indisputably beyond controversy. Those conditions existing, it would seem quite vain to require proof under oath. If complainant had been engaged in putting up tinned meats in Germany instead of liqueurs in France and had applied her arbitrary trade symbol to "Kalbfleisch," could it reasonably

be said that a court could not learn the English meaning except through sworn witnesses? A large part of our population, including school children, would know it at once, and most of the others could quickly and accurately inform themselves.

There are two aspects in which this case may be viewed: first, that complainant registered the name "Abricotine" as her trade-mark; second, that she registered an assemblage of marks, names, etc., in which "Abricotine" appeared as the commodity to which the marks were applied. In the foregoing opinion the first is assumed, I think, inadvertently. The trade-mark claimed by the last registration is shown in the opinion to consist of the three things already mentioned and the name "Abricotine." In the statement and verified declaration for the registration the combination is referred to as a whole; the particular name "Abricotine" is not mentioned at all. But if the claim be confined to the word alone, complainant must fail because as a fact there was no exclusive use for the ten-year period. It would be an effort to secure a monopoly of the common name by which an article is known in trade and commerce. It is inconceivable that Congress contemplated such a thing. Though liqueurs are a small and not widely known group of commodities, yet necessarily the same principles apply as to others; and it could as well be said that complainant might appropriate for her sole use such descriptive words and settled names as "pure lard," "corn meal," and "sweet potatoes." There would be no escape from this conclusion. If the name by which an article of nature or manufacture goes has become so established and common that it is set forth in a dictionary or national encyclopedia, can it be said that a private individual thereafter enjoyed the exclusive use of it? Such an appropriation, susceptible of perpetuation by renewal of registration, would be so contrary to public policy that Congress manifestly did not intend it. The registration gives but a *prima facie* private right which yields to the public right when judicially known.

I think it evident that complainant never registered "Abricotine" as a trade-mark except as it was a part of an assemblage or the common name of the article to which the real trade-mark was applied. There was no proof of the exclusive use of the name for the ten years except the qualified averment in the declaration for registration and that related to the assemblage as an entirety. Upon this aspect my brothers say a trade-mark should be regarded as a whole and may be infringed by the use of part. *Saxlehner* v. *Eisner* (179 U. S., 19; 21 Sup. Ct., 7; 45 L. Ed., 60) is cited for the rule that—

it is not necessary to constitute an infringement that every word of a trade-mark should be appropriated.

But there is a qualification of this rule, one phase of which is expressly recognized in that case. The case related to Saxlehner's trade-mark "Hunyadi Janos" applied to the bitter waters of a well in Hungary. Defendant asserted the right to use the word "Hunyadi" alone, but the Court denied it. It said the trade-name selected was "neither descriptive nor geographical but purely arbitrary and fanciful." Defendant also urged that, after Saxlehner adopted the name, the word "Hunyadi" had become a generic term descriptive of the waters of a large number of wells in that region. As to this the Court said, (179 U. S., p. 33; 21 Sup. Ct., 12; 45 L. Ed., 60:)

Of course, if it had become such with the assent and acquiescence of Saxlehner, he could not thereafter assert his right to its exclusive use, but, as he apparently made every effort to stop its use, it ought not be charged up against his claim that the word had become generic.

Therefore a word may be lost from a trade-mark if it becomes a generic or descriptive name with the owner's acquiescence. It is equally true that if a word is the recognized and established name of an article, and hence not by itself susceptible to appropriation as a trade-mark, it cannot be appropriated by joining with it separable arbitrary symbols and other designations. There can be no doubt of the application of this rule to a case under the ten-year clause of the act of 1905, where the word sought to be appropriated has been so established as the name of the article that in the very nature of things the claimant could not have had its exclusive use. Otherwise the circumstance that no one else had happened to use the entire combination of separable designations could be employed to protect each part separately. The ordinary names of commodities in daily use and words and expressions descriptive of their qualities and properties could be privately monopolized if they happened to have been exclusively used with particular arbitrary symbols and proper names for the ten years preceding February 20, 1905; and quite likely there are many such cases in this country. If complainant's first registration had been effective under the ten-year clause, then by such a construction no other person could lawfully describe his apricot cordial as "Liqueur extraite du Fruit l'Abricot," nor have expressed on his labels the English equivalent of that description. The consequences of such a doctrine would be quite extraordinary. The complainant's just rights would be conserved by treating the trade-mark as consisting of the shield, the contained initials, and the name "P. Garnier," and as applying to the liqueur Abricotine. As so construed, the affidavit for registration might be true, and other persons, defendant for instance, would be free to call their product by its right name, provided they did not use complainant's marks or symbols.

Changes in Classification.

(ORDER NO. 2,144)—CONTINUED FROM THE OFFICIAL GAZETTE OF AUGUST 4, 1914.

In class 237, Heat Distributing Systems, (Division XIX,) change the title of the class to read:

CLASS 237.—HEATING SYSTEMS,

abolish the existing subclasses, and establish in lieu thereof the following subclasses and definitions:

CLASS 237.—HEATING SYSTEMS. (XIX.)

Subclasses.

50. Air—
51. Fireplace,
55. Flue heated,
53. Furnace,

Air—
52. Stove,
54. Upper-room drum.
80. **Anti-freezing devices.**

CLASS 237.—HEATING SYSTEMS. (XIX.)—Continued.

Subclasses.

2. **Automatic control—**
3. Brooder and incubator—
4. Water,
5. Car—
6. Steam,
7. Combined radiator and boiler,
11. Compressed air,
12. Processes,
9. Steam—
10. Gas displaced,
8. Water.
14. **Brooder and incubator—**
15. Water.
28. **Car—**
32. Fluid fuel—
33. Radiator,
44. Heat accumulator,
43. Heated floor,
45. Incased radiator,
40. Steam—
41. Car boiler—
42. Train steam,
29. Stove—
30. Air casing,
31. Depending,
34. Water—
35. Car boiler—
36. Fluid fuel,
37. Train steam—
38. Injected,
39. Train-steam.
16. **Combined radiator and boiler—**
17. Fluid fuel,
18. Solid fuel.
19. **Combined with water heater.**
20. **Fire engine.**
69. **Heated floor.**
70. **Heat radiators—**
78. Air moistener,
76. Ceramic,
77. Foot warmer,
79. Shields,
73. Steam—
74. Circuit,
75. Heat accumulator,
71. Water, steam—
72. Injected.
1. **Miscellaneous.**
13. **Plants.**
81. **Processes.**
67. **Steam—**
68. Air discharge.
22. **Train—**
24. Air—
25. Radiator,
23. Smoke,
27. Steam,
26. Water.
21. **Vehicle.**
46. **Ventilating—**
48. Furnace,
49. Inclosed radiator,
47. Stove.
56. **Water—**
59. Circulation—
61. Auxiliary boiler,
62. Boiler loop,
60. Geyser boiler,
63. Pump—
64. Steam displacing,
66. Expansion tanks,
57. Fluid fuel,
65. Pressure regulator,
58. Steam.

Establish in Division XXXII—

CLASS 257.—HEAT EXCHANGE,

with the following subclasses and definitions:

CLASS 257.—HEAT EXCHANGE. (XXXII.)

Subclasses.

73. **Agitators and conveyers—**
Horizontal jacketed cylinder—
86. Rotary conveyer,
102. Horizontal rotary,
101. Horizontal rotary-conveyer,
87. Horizontal rotary-cylinder—
95. External exchange—
96. Scraper—
98. Bottom feed,
99. Floated product,
97. Plural liquid,
94. External trickler,
Internal exchange—
100. Scraper,
92. Internal tube—
93. Closed cylinder,
88. Jacketed—
89. Closed cylinder—
90. Internal tube,
91. Internal tube,
74. Operated by exchange fluid,
116. Plate—
Superposed—
118. Vertical rotary agitator,
119. Vertical rotary-tube agitator,
117. Vertical rotary agitator,

Agitators and conveyers—
75. Shakers,
76. Tank—
82. Horizontal rotary agitator,
81. Horizontal rotary internal-tank,
Internal tube—
85. Horizontal rotary agitator,
Jacketed—
84. Horizontal rotary agitator,
83. Horizontal rotary-tube agitator,
77. Liquid circuit,
78. Tube agitator—
79. Horizontal rotary—
80. Exposed to atmosphere,
120. Vertical rotary,
112. Vertical rotary conveying agitator,
Vertical rotary drum—
111. Annular liquid film,
110. Conveying scraper,
Vertical rotary plate—
115. Liquid film,
Vertical rotary scraper—
113. Floated product,
114. Trickler,
103. Vertical tank—
105. Internal annular tank,

CLASS 257.—HEAT EXCHANGE. (XXXII.)—Continued.

Subclasses.

Agitators and conveyers—
Vertical tank—
Internal tube—
106. Vertical rotary agitator,
Jacketed—
Internal tube—
109. Vertical rotary-agitator.
108. Vertical rotary-agitator.
107. Vertical rotary-tube agitator.
104. Vertical rotary-tube agitator.
214. **Air pump.**
2. **Automatic control—**
3. Combined heating and cooling—
4. Liquid—
5. Regenerative.
14. **Barrel—**
15. Internal tube.
12. **Body—**
13. Coffin type.
17. **Chamber—**
18. Air-pump circuit,
21. Casing,
23. Conveyer,
22. Internal tube,
19. Liquid pump circuit,
20. Radiator type.
24. **Condensers—**
27. Convertible jet or surface,
25. Motor vehicle,
51. Processes,
46. Radiator type—
49. Loop tube,
50. Spur tube,
47. Varied surface—
48. Condensate varied,
26. Ship,
28. Surface—
36. Air—
39. Air pump,
37. Water injected to air,
38. Water injected to steam,
41. Air injected to steam,
32. Condensate cooler,
31. Feed heater type,
43. Horizontal water tube—
44. Pump system,
35. Liquid trickler,
42. Plural outlet,
34. Receptacle closure,
29. Separator,
45. Spur tube,
30. Still,
33. Varied surface,
40. Water injected to steam.
262. **Conduits.**
261. **Cylinders.**
52. **Gas and liquid contact—**
60. Agitator, evaporative—
61. Closed chamber,
62. Gas injected—
63. Agitator,
64. Closed chamber,
72. Liquid circuit,
65. Liquid injected—
70. Gas pump,
68. Horizontal air tube,
67. Horizontal exchange tube,
71. Liquid circuit,
66. Preliminary exchanger
69. Vertical air tube.

Gas and liquid contact—
53. Trickler—
59. Agitator,
58. Closed chamber,
54. Exchange tube—
55. Liquid circuit,
56. Vertical air tube—
57. Air pump.
6. **Heating and cooling—**
9. Air,
8. Building,
7. Car,
10. Liquid—
11. Regenerative.
164. **Heating drum type—**
166. Air conduit—
167. Vertical drum—
168. Down and up gas flow·
169. Symmetrical—
170. Annular tube,
171. Transverse air tube,
165. Chimney by-pass,
172. Vertical drum—
173. Symmetrical—
174. Tube type—
175. Top and bottom header,
176. Zigzag,
177. Tube type.
263. **Heat transmitters.**
233. **Horizontal casing—**
235. Internal tube—
237. Annular,
236. Horizontal,
239. Loop,
238. Spur,
240. Zigzag,
234. Zigzag.
215. **Liquid circuit.**
1. **Miscellaneous.**
16. **Muffler type.**
248. **One confined fluid—**
250. Annular shell,
249. Annular tube,
258. Disk,
259. Fan,
260. Hollow fan,
256. Plate—
257. Table,
254. Spur tube,
251. Vertical tube—
252. Zigzag—
253. Flow control,
255. Zigzag.
241. **Plural confined fluids—**
244. Air pump,
246. Annular tube—
247. Zigzag,
242. Liquid—
243. Annular film,
245. Plate conduit.
124. **Radiator type—**
133. Baseboard,
135. Bottom air-box,
162. Flexible connection,
159. Flow control,
155. Grid,
158. Horizontal plate,
152. Horizontal sectional,
136. Incased—
138. Air moistener,
137. Air pump,
150. Integral fin,
160. Joints and ties—
161. Sectional type,
144. Loop tube—
145. Vertical,

CLASS 257.—HEAT EXCHANGE. (XXXII.)—Continued.

Subclasses.

Radiator type—
125. Motor vehicle—
126. Air pump,
132. Casings and shields,
128. Horizontal air tube,
129. Vertical water tube—
130. Flat,
127. Water pump,
131. Zigzag water tube,
156. Rack,
139. Sheet metal—
140. Vertical sectional,
157. Shelf,
153. Single-plane sectional,
146. Spur tube—
147. Vertical,
163. Supports,
154. Top and bottom header,
134. Varied surface,
141. Vertical air tube—
142. Annular—
143. Sheet metal,
151. Vertical sectional,
148. Zigzag—
149. Vertical plane,
121. **Subterranean—**
122. Liquid—
123. Filter.
191. **Tank—**
194. Annular,
195. Annular internal tank,
213. Float,
192. Indirect exchange,
196. Internal pressure chamber—
197. Annular shell,
198. Internal tube—
202. Air pump,
201. Annular,
207. Bottom connection,
200. Movably attached,
199. Removable,

Tank—
205. Internal tube—
203. Vertical coil,
204. Vertical liquid tube—
206. Liquid pump circuit,
193. Vertical zigzag,
208. Inverted bottle type,
211. Jacketed—
212. Circular section,
209. Cylindrical,
210. Internal annular shell,
178. Internal tube.
186. **Trickler—**
188. Casing,
189. Horizontal plate,
190. Tank—
179. Interior,
180. Two-fluid flow—
181. Casing—
182. Pressure,
183. Horizontal plate,
184. Zigzag tube—
185. Casing,
187. Plural tube,
216. Vertical plate.
232. **Vertical casing—**
217. Annular film,
218. Filter,
220. Internal flat plate,
230. Internal tube—
224. Horizontal zigzag,
225. Vertical—
226. Annular,
227. One internal header—
229. Return tube,
221. Two internal headers,
222. Vertical coil,
231. Vertical loop,
223. Vertical return,
219. Vertical spur,
Vertical zigzag,
Internal vertical-tube drum.

THOMAS EWING,
Commissioner.

Adverse Decisions in Interference.

PATENT No. 1,055,743.

On June 29, 1914, a decision was rendered that George W. Hammers was not the first inventor of the subject-matter covered by claims 1, 2, and 3 of his Patent No. 1,055,743, subject, "Plowshare," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 28, 1914.

Joseph Shattuck, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Pepsinaid Company, Lexington, Ky., for registration of a trade-mark and trade-mark registered November 24, 1896, No. 29,195, to Joseph Shattuck, Nashua, N. H., and a notice of such declaration sent by registered mail to said Joseph Shattuck at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph Shattuck, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 16, 1914.

The Criterion Publication Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Home Pattern Company, 615 West Forty-third street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered March 25, 1902, No. 37,983, to The Criterion Publication Co., of 156 Fifth avenue, New York, N. Y., and a notice of such declaration sent by registered mail to The Criterion Publication Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Criterion Publication Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 205—No. 3. TUESDAY, AUGUST 18, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 18, 1914	669
DISCLAIMER	669
ADVERSE DECISIONS IN INTERFERENCE	669
DELIVERY OF PATENT	669
APPLICATIONS UNDER EXAMINATION	670
PATENTS GRANTED	671
REISSUES	978
DESIGNS	979
TRADE-MARKS—REGISTRATION APPLIED FOR	987
TRADE-MARK REGISTRATIONS GRANTED	1015
TRADE-MARK REGISTRATIONS RENEWED	1018
LABELS	1019
PRINTS	1020
COMMISSIONER'S DECISIONS—	
Steel and Steel v. Myers	1021
ADJUDICATED PATENTS	1022
INTERFERENCE NOTICES	1022

ISSUE OF AUGUST 18, 1914.

Patents	869—No. 1,107,245 to No. 1,108,113,	inclusive.
Designs	34—No. 46,272 to No. 46,305,	inclusive.
Trade-Marks	115—No. 99,073 to No. 99,187,	inclusive.
Labels	34—No. 17,900 to No. 17,933,	inclusive.
Prints	22—No. 3,693 to No. 3,714,	inclusive.
Reissues	2—No. 13,788 to No. 13,789,	inclusive.
Total	1076	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	1	North Carolina	1	9
Arizona	2	.....	North Dakota	3	.....
Arkansas	4	.....	Ohio	63	8
California	47	2	Oklahoma	5	.....
Colorado	10	.....	Oregon	9	.....
Connecticut	27	4	Pennsylvania	71	13
Delaware	.....	.....	Rhode Island	2	5
Florida	5	1	South Carolina	3	1
Georgia	6	.....	South Dakota	3	.....
Idaho	.....	.....	Tennessee	7	.....
Illinois	105	21	Texas	11	3
Indiana	16	.....	Utah	6	.....
Iowa	21	2	Vermont	5	2
Kansas	6	1	Virginia	6	5
Kentucky	2	.....	Washington	9	.....
Louisiana	7	.....	West Virginia	2	.....
Maine	4	2	Wisconsin	14	3
Maryland	7	5	Wyoming	1	.....
Massachusetts	49	9			
Michigan	33	6	Alaska, District of	.....	.....
Minnesota	11	1	Canal Zone	1	.....
Mississippi	3	.....	District of Columbia	6	1
Missouri	22	3	Hawaii Territory	.....	.....
Montana	2	2	Philippine Islands	1	.....
Nebraska	10	1	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	4	.....	U. S. Navy	.....	.....
New Jersey	40	10			
New Mexico	.....	.....	Total to residents of the United States	791	163
New York	113	42			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	4	.....	Netherlands	.....	.....
Belgium	2	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	1	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	12	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	2	.....
Costa Rica	.....	.....	Scotland	4	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	1	.....	Spain	.....	.....
Egypt	.....	1	Sweden	1	.....
England	27	2	Switzerland	5	.....
France	13	2	Transvaal, South Africa	.....	.....
Germany	35	3	Victoria	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to residents of foreign countries	112	8
Japan	1	.....			
Mexico	.....	.....			

Disclaimer.

954,691.—*Joseph E. Pflueger*, Akron, Ohio. ARTIFICIAL BAIT. Patent dated April 12, 1910. Disclaimer filed August 6, 1914, by the assignee, *The Enterprise Manufacturing Company.*

Enters this disclaimer—

"To claim 1, which is in the following words:

"1. An artificial bait comprising a body having a transverse opening therethrough, a line-attaching rod extending into the body from one end thereof and extending transversely through the opening in said body, and a hook-attaching link-member extending longitudinally through the opening in the body and formed of a wire doubled upon itself to form elongated end loops with the ends of the wire terminating substantially midway the length of the link-member and curved in opposite directions to form partial eyes placed in registration to form a loop centrally of the link through which loop the line-attaching rod extends"

Adverse Decisions in Interference.

PATENT No. 1,024,671.

On July 18, 1914, a decision was rendered that T. A. C. Both was not the first inventor of the subject-matter covered by claims 3, 8, 10, and 11 of his Patent No. 1,024,671, subject, "Socket-shell," and no appeal having been taken within the time allowed such decision has become final.

Delivery of Patent.

RULE 169. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 15, 1914.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 21	June 19	544
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	June 20	628
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 27	Aug. 6	83
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	June 2	July 27	666
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 29	June 19	443
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 11	July 10	575
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 15	June 15	600
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	July 7	1270
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	May 29	617
235	10. Carriages and Wagons	Mar. 20	June 20	971
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 27	July 22	268
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 23	June 15	1120
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 30	July 6	435
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 1	July 16	452
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 17	July 1	979
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	May 20	733
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	May 15	July 18	207
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 3	July 6	234
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	July 9	321

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 11	June 17	401
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 16	June 30	451
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	June 18	238
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 10	June 10	494
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 20	July 6	617
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 7	July 11	220
106	26. Electricity, Generation; Motive Power.	Oct. 4	June 1	956
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 17	June 10	483
65	28. Internal-Combustion Engines	Apr. 16	June 23	615
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	June 15	June 26	464
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 4	July 15	369
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 15	June 19	432
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 10	June 18	697
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 18	368
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 1	June 15	352
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 17	July 15	520
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 15	June 16	782
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 21	June 20	722
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Mar. 3	July 2	746
321	39. Water Distribution	Apr. 13	June 17	541
290	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	July 22	1092
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 24	July 8	444
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 14	June 26	428
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 8	July 9	289

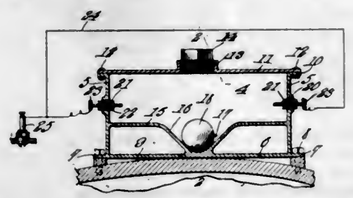
Oldest new case, Oct. 4; oldest amended, May 20.
Total number of applications awaiting action 23,867

16[1]	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 28	July 1	933
	Designs	July 16	July 24	249
	Labels and Prints	July 17	July 20	128

PATENTS

GRANTED AUGUST 18, 1914.

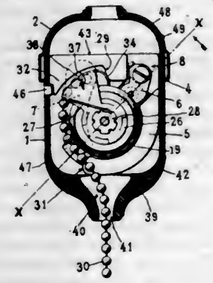
1,107,245. AUTOMATIC IGNITION-GROUNDER FOR MOTOR-CYCLES. WALTER EDWARD BARD, Clarksville, Tenn. Filed Nov. 21, 1913. Serial No. 802,284. (Cl. 21—90.)



1. The combination with the electric circuit of an internal combustion engine of a tiltable vehicle, of means electrically connected to the insulated portion of the spark plug and to the grounded portion thereof adapted to shunt said spark plug during abnormal tilted positions of the vehicle.

2. A receptacle provided with a normally extending substantially horizontal partition, said partition provided with a central well with inclined side walls, a mobile element disposed within said well, insulated contacts carried by the receptacle and adapted to be brought into electric connection therewith by said mobile element, the said well preventing the escapement of said mobile element therefrom during slightly abnormal conditions, and the horizontal portions of said partition preventing the return of said mobile element to said well until normal and horizontal positions are attained.

1,107,246. ELECTRIC SWITCH. FREDERIC BARR, New York, N. Y. Filed Aug. 2, 1912. Serial No. 712,855. (Cl. 175—289.)



1. In an electric socket switch, the combination of a cylindrical shell, a one-piece semi-cylindrical insulating block fitting within said shell, switch contacts mounted on the face of said block, a circuit terminal mounted on the face of said block, a circuit terminal mounted in the rear of said block, means for positioning the switch block in said shell and an operating chain passing through the lower end of said shell.

2. In a pendant socket pull switch, a shell having an opening in the bottom, an insulating chain guide seated in the bottom of said shell and having a projecting neck, an insulating block seated on said chain guide in said shell, pull switch mechanism carried by said block and an operating chain passing through said insulating chain guide.

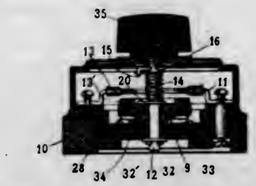
3. In a pendant socket pull switch, a shell having an opening in the bottom, an insulating chain guide seated in the bottom of said shell and having a neck projecting through the opening therein, an insulating block interlocking with said chain guide and suitable pull switch mechanism carried by said block and having an operating member passing through said chain guide.

4. In a pendant socket pull switch, a porcelain block having a transverse opening, a spindle passing through said opening and secured to said block, two segmental switch contacts secured to said block on opposite sides of said spindle, a rotatable switch member on said spindle and two circuit terminals, one of said circuit terminals being mounted in a recess on the face of said block and overlapping the base of one of said switch contacts and the other circuit terminal being arranged in a recess in the rear of said block and electrically connected with the other switch contact.

5. In a pendant socket pull switch, a porcelain block having a transverse opening, a spindle passing through said opening and secured to said block, two segmental switch contacts secured to said block on opposite sides of said spindle, a rotatable switch member on said spindle and two circuit terminals, one of said circuit terminals being mounted in a recess on the face of said block and overlapping the base of one of said switch contacts and the other circuit terminal being arranged in a recess in the rear of said block and electrically connected with the other switch contact, said block having a flange integral therewith and over-standing the switch contacts.

[Claims 6 to 15 not printed in the Gazette.]

1,107,247. ELECTRIC SWITCH. FREDERIC BARR, New York, N. Y. Filed Mar. 11, 1913. Serial No. 753,568. (Cl. 175—290.)



1. In a rotary snap switch, the combination of a base, switch terminals on the base, a spindle rotatably mounted on the base, a cam fixed on the spindle, a stop finger engaged by the cam and operated thereby, a catch plate secured to the base and provided with lugs upstanding from the surface of the plate and arranged in pairs with the lugs of each pair spaced apart to receive between them the stop finger when said finger is projected by the cam, a support rotatably mounted on the spindle, a dependent lug carried by said support having a bearing against the stop finger in the direction of rotation of the spindle, a switch contact carried by the support arranged for co-operation with the switch terminals on the base, and a connection between the spindle and support exerting tension to turn the spindle rearwardly in respect to the sup-

port to thereby normally project the stop finger outward between a pair of the upstanding lugs on the catch plate, whereby when the spindle is turned forwardly the spring will be placed under greater tension and the stop finger will be withdrawn inwardly from between the catch lugs.

2. In a rotary snap switch, the combination of a base, a catch plate secured in the base provided with spaced oppositely disposed lugs cut inward from the edge of the plate and bent upwardly above the plane of the plate to bring the cut edges thereof into position to form front and back stops for a detent finger projected therebetween and with the said front stops extending farther inward toward the center of the plate than the back stops, a spindle journaled at the center of the catch plate, a cam fixed on the lower end of the spindle, a detent finger engaged by said cam and operated thereby, a support rotatably engaged on the spindle and having a bearing against the detent finger in the direction of rotation of the spindle, a switch contact carried by the support, and a spring connection between the spindle and support exerting tension to turn the spindle rearwardly to thereby cause the cam to project the detent finger outwardly in between a pair of the lugs on the catch plate, whereby when the said spindle is rotated forwardly the spring will be placed under greater tension and the detent finger will be withdrawn inwardly from engagement with the forward one of the upstanding lugs between which it was engaged.

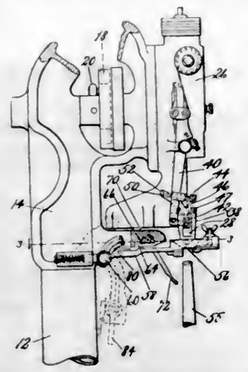
3. In a rotary snap switch, a base, switch terminals carried thereby, a spindle rotatably mounted on the base, a catch plate secured to the base provided with upstanding lugs arranged in pairs with the lugs of each pair spaced to form front and back stops for a stop finger projected therebetween and with the front stop lugs disposed nearer the center of the catch plate than the back stop lugs, a cam fixed on the spindle, a stop finger operated by said cam, a support rotatably engaged on the spindle and having a bearing against the stop finger in the direction of rotation of the spindle, a switch contact carried by said support for engagement with the switch terminals on the base, and a spring connection between the spindle and support exerting tension to rotate the spindle to cause the cam to normally project the stop finger outwardly between the stop lugs on the catch plate.

4. In a rotary snap switch, a base provided with seats, switch terminals carried by the base, a catch plate provided with projecting anchor lugs to engage the seats on the base and with spaced lugs struck up from said plate at opposite sides of each of the said anchor lugs, a spindle journaled on the base, a cam fixed on the spindle, a stop finger operated by said cam, a support rotatably engaged on the spindle, and having a bearing against the stop finger in the direction of rotation of the spindle, a switch contact carried by the support and a spring connection between the spindle and support exerting tension to rotate the spindle to normally project the stop finger outward between the spaced lugs on the catch plate.

5. In a rotary snap switch, a base, a detent plate on the base provided with pairs of lugs upstanding from the surface of the same, the lugs of each pair being spaced apart to provide front and back stops and with the front stops disposed nearer the center of the plate than the back stops, a spindle journaled at the center of the detent plate, a cam on said spindle, a detent provided with a body portion encircling the cam and with a finger extending laterally from the said body portion and adapted to be projected outwardly in between a pair of the front and back stops, a switch blade support rotatably mounted on the spindle, a spring connected between the spindle and the support and exerting tension to rotate the spindle backwardly in respect to the support and a dependent lug on the support bearing against the rearward side of the projecting finger whereby said finger will limit the forward rotative movement of the support, said dependent lug being disposed on the support in position to be engaged by the body portion of the detent whereby by thus limiting outward movement of the detent, to limit backward rotation of the spindle in respect to the support.

[Claims 6 to 9 not printed in the Gazette.]

1,107,248. MACHINE FOR INSERTING FASTENINGS. ARTHUR BATES and THOMAS BRIGGS, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 22, 1907. Serial No. 353,509. (Cl. 1—18.)



1. In a machine for inserting fastenings having heads with flat under-surfaces, the combination with a nail raceway, of means arranged to be brought intermittently into engagement with the head or heads of one or more nails at the delivery end of said raceway in such manner that pressure is brought to bear upon the head of the nail to be delivered in substantially the line of its shank to cause the head to be completely seated upon the raceway and the shank to extend along a line substantially perpendicular to the head supporting upper surface of the raceway, and means for actuating said nail seating means.

2. In a machine for inserting fastenings having heads with flat under-surfaces the combination with a nail raceway and a nail throat having a driver passage, the portion of said raceway adjacent to the throat lying substantially at right angles to said driver passage, of means arranged to be brought intermittently into engagement with the head or heads of one or more nails in said raceway in such manner that pressure is brought to bear upon the head of the nail to be delivered in substantially the line of its shank to seat the head of the nail flatly upon the raceway and to bring the shank into parallelism with said driver passage, and means for actuating said nail seating means.

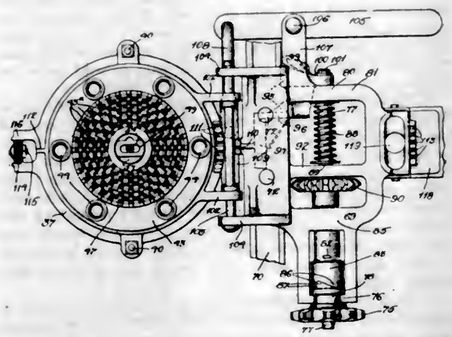
3. In a machine for inserting fastenings having heads with flat under-surfaces, the combination with a nail raceway and nail separating means, of means controlled by the separating means to insure the proper positioning for the action of the separating means of the nails in the raceway constructed and arranged to engage the head or heads of one or more nails at the delivery end of the raceway in such manner that pressure is brought to bear upon the head of the nail to be delivered in substantially the line of its shank whereby the head of the nail is seated flatly upon the raceway and the shank of the nail is caused to extend along a line perpendicular to the head supporting upper surface of the raceway.

4. In a machine for inserting fastenings, the combination with a nail raceway and nail separating means, of means controlled by the separating means to insure the proper positioning, for the action of the separating means, of the nails in the raceway, and means for varying the controlling action of the separating means.

5. In a machine for inserting fastenings, the combination with a nail raceway and nail separating means, of means to insure the proper positioning, for the action of the separating means, of the nails in the race-way, comprising a member movable into engagement with the endmost nail in the raceway, and adjustable means carried by the separating means for controlling the movement of said member.

[Claims 6 to 14 not printed in the Gazette.]

1,107,249. PLANTER. DAVID ABSALEM BIEBINGER, Moline, Ill., assignor to La Crosse Plow Company, La Crosse, Wis., a Corporation of Wisconsin. Filed Feb. 15, 1911. Serial No. 608,848. (Cl. 111—6.)



1. In a planter, the combination of a supporting-frame, ground-wheels, seed-dropping mechanism, a plurality of gears of different diameters adjustable with and for operating said dropping-mechanism, mechanism for driving said gears from one of the ground-wheels, and means for adjustably sustaining the dropping mechanism and said gears, so that either of said gears may be shifted into operative relation with said driving-mechanism, to vary the speed of the dropping mechanism.

2. In a planter, the combination of a supporting-frame, ground-wheels, seed-dropping mechanism, a plate having a plurality of gears of different diameters thereon, for operating said dropping-mechanism, mechanism for driving said gears from one of the ground-wheels, and means for adjustably sustaining the dropping-mechanism and said plate, so that either of said gears may be shifted into operative relation with said driving mechanism, to vary the speed of the dropping-mechanism.

3. In a planter, the combination of a supporting-frame, ground-wheels, seed-dropping mechanism comprising a rotatable seed-plate, a plurality of gears of different diameters rotatable with said plate, mechanism for driving said gears from one of the ground-wheels, and means for adjustably sustaining the seed-plate and said gears, so that either of said gears may be shifted into operative relation with said driving-mechanism, to drive the seed-plate at different speeds.

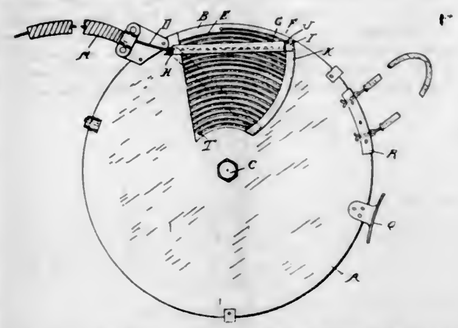
4. In a planter, the combination of a supporting-frame, ground-wheels, seed-dropping mechanism comprising a rotatable seed-plate, a plate having a plurality of gears of different diameters on one of its faces, operatively connected to said seed-plate, mechanism for driving said gear-plate from one of the ground-wheels, and means for adjustably sustaining said seed-plate and gear-plate, so that either of said gears may be shifted into operative relation with said driving-mechanism, to drive the seed-plate at different speeds.

5. In a planter, the combination of a supporting-frame, seed-dropping mechanism, a plurality of gears of different diameters, operatively connected to said dropping-mechanism, mechanism for driving said gears from one of the ground-wheels, comprising a pinion, and means for adjustably sustaining said gears so that their axes may be shifted to or from said pinion and so that either of said gears may be shifted into engagement with said pinion, to vary the speed of the dropping-mechanism.

[Claims 6 to 49 not printed in the Gazette.]

1,107,250. CONDUIT-WIRING DEVICE. NEAL J. BIGHAM, Detroit, Mich. Filed Apr. 26, 1912. Serial No. 693,433. (Cl. 247—23.)

1. In a device for threading conduits, the combination with a frame of a disk journaled on the frame having a spiral groove forming a guide for the threading wire, an auxiliary guide pivoted to the frame, and means for causing said auxiliary guide to follow the threading wire during the rotation of the reel.



2. A fish wire machine, comprising a supporting frame, a disk revolubly mounted thereon and having a spirally-arranged groove in one of its flat faces adapted to receive the fish wire, and a carriage movable transversely of said groove and provided with a guide to receive said fish wire.

3. A conduit fish wire machine, comprising a frame including a circular, stationary disk, a revolving disk centrally mounted on said stationary disk and having a spirally-arranged groove in one of its flat faces, said stationary disk having a radial opening therein, and a carriage movable over said opening and transversely of said groove, and provided with a guide to receive the end of the fish wire in said groove.

4. A machine of the class described, comprising a revolving disk having a groove in one of its flat faces extending spirally from the center toward the periphery of the disk, a wire having one end secured to said disk near the axis thereof and fitting within said groove, the walls of said groove preventing bending or buckling of the wire, a guide adapted to receive the outer end of the wire, and means for preventing the coils of the wire from being accidentally discharged from said groove.

5. A machine of the class described, comprising a disk having a flat surface and a groove formed therein extending spirally from a point near the axis of said disk to the periphery thereof, the convolutions of said groove being concentric, a wire fitting within said groove and having its inner end secured to said disk, and a guide movable to points of varying distances from the axis of the disk adapted to receive the outer end of said wire.

[Claims 6 to 10 not printed in the Gazette.]

1,107,251. CALENDAR. HAROLD R. BIRDSELL, Toledo, Ohio. Filed Apr. 9, 1914. Serial No. 830,743. (Cl. 40—119.)

1. The combination with relatively shiftable card-like members each having an opening therein, of means projected through the openings of the members and having vertically spaced member suspending portions, and a guide portion connecting the outer end of one suspending portion to the inner end of the other.

2. The combination with a plurality of card-like members having openings therein, of an upstanding part extending through the openings in said members and having vertically spaced ledges forming supports for said members when in raised or lowered positions and having guide portions connecting the inner end of one to the outer end of the other of said ledges.

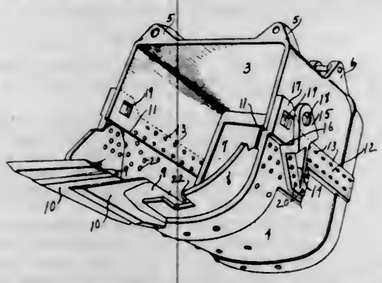
3. In combination, a holder part, a member suspending and guiding means carried by said part and having vertically spaced member suspending parts and a portion connecting the inner end of one to the outer end of the other of said suspending parts, and a set of relatively shiftable members carried by said means and shiftable in upright position from one to the other of said ledges.

4. In combination, a body part, a vertically disposed card guiding and suspending member carried by said part, said member having vertically spaced card suspending ledges and a guide portion connecting the inner end of one to the outer end of the other of said ledges and having one ledge in yielding contact at its inner end with said body part, and a set of relatively shiftable elements engaged by said member and shiftable in upright position from one to the other of the suspending ledges thereof.



5. In combination, a body part, a spring metal member carried by said part and having its opposite ends connected to said part with its upper end in removable connection therewith, said member being provided adjacent to its upper end with an outwardly looped portion, the lower leg of which portion forms a supporting ledge and has yielding contact at its inner end with said body part, thence extending downward and outward from the body part and having a reëntrant ledge adjacent to its lower end, and a set of cards each having an opening through which the member is projected, said cards being shiftable in upright position from one ledge to the other and held in suspended position by either ledge.

1,107,252. TWO-PART DIPPER FOR EXCAVATING-MACHINES. EDWARD S. BLACK, Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Feb. 17, 1912. Serial No. 678,199. (Cl. 37—16.)



1. In a dipper for excavating and similar machines, a dipper body comprising front and rear portions formed from cast metal and secured together along joints located in the sides thereof to thereby form a two-part dipper body, and each of which portions comprises approximately one-half of said body; two lifting ears located one upon each side of the body and secured to the front portion only thereof; two lugs formed integrally with the front portion of the body and against which said ears abut; and means for securing said several parts together.

2. In a dipper for excavating and similar machines, a dipper body comprising front and rear portions secured together along joints located in the sides thereof to thereby form a two-part dipper body, and each of which portions comprises approximately one-half of said body; two lifting ears located one upon each side of the body and secured to the front portion only thereof; two lugs upon the front portion of the body and against which said ears abut; and means for securing said several parts together.

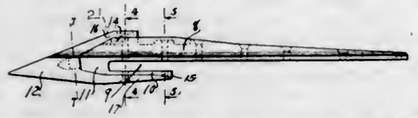
3. In a dipper for excavating and similar machines, a dipper body comprising front and rear portions secured together along joints located in the sides thereof to thereby form a two-part dipper body, and each of which portions comprises approximately one-half of said body; two lifting ears located one upon each side of the body and secured to the front portion only thereof; projecting elements formed integrally with the front portion of the body and against which said ears abut, whereby movement of said ears is prevented, and means for securing said several parts together.

4. In a dipper for excavating and similar machines, a dipper body comprising front and rear portions formed from cast metal and secured together along joints located in the sides thereof to thereby form a two-part dipper body, and each of which portions comprises approximately one-half of said body; two lifting ears located one upon each side of the body and entirely upon the front portion thereof; fastening means for securing said ears in place; means independent of said fastening means located upon the front portion of said body for preventing movement of said ears; and means for securing the front and rear portions of said body together.

5. In a dipper for excavating and similar machines, a dipper body comprising front and rear portions secured together along joints located in the sides thereof to thereby form a two-part dipper body, and each of which portions comprises approximately one-half of said body; two lifting ears located one upon each side of the body and secured to one only of the portions thereof; two lugs upon that portion of the body to which said ears are secured, and against which said ears abut; and means for securing said several parts together.

[Claims 6 to 9 not printed in the Gazette.]

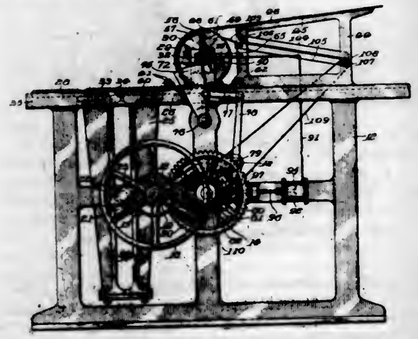
1,107,253. DIPPER-TOOTH. EDWARD S. BLACK, Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Nov. 12, 1913. Serial No. 800,453. (Cl. 37—16.)



A dipper tooth comprising a supporting shank having a free outer end provided with oppositely disposed faces and an outwardly extending lug with a circular cross-section, said shank being further provided with a centrally disposed recess in one of its faces and with a pair of lugs extending laterally from the other of its faces and spaced apart, and a point detachably engaging said supporting shank and provided with a pair of oppositely disposed arms for engaging said faces of said shank, said point being also provided with a recess of circular cross section for receiving said outwardly-extending lug of said shank, one of said arms carried by said point having a lug for fitting into said centrally disposed recess in said shank, the other arm of said point having a pair of oppositely disposed recesses for receiving said pair of lugs carried by said shank.

1,107,254. PRINTING-PRESS. CHARLES T. BLACKFORD, Philadelphia, Pa. Filed June 24, 1910. Serial No. 568,659. (Cl. 101—115.)

1. A press having a cylinder, a single means to separately impress separate sheets in different regions on the same side of each sheet during each cycle of the press mechanism, and means movable concentrically relative to said cylinder operative to engage the ends of the respective sheets to hold said sheets.



2. Sheet printing mechanism comprising a movable impression member, a printing surface carrying member, means on said impression member for holding a sheet thereon while it is being impressed, and means for shifting the sheet relatively to said printing surface carrying member after the first impression on the sheet so that a second impression may be taken from the same printing surface upon the sheet at a different point before the sheet is discharged from said impression member.

3. Sheet printing mechanism comprising a movable impression member, a printing-surface carrying member, means on said impression member for holding a sheet thereon while it is being impressed, and means for shifting the sheet relatively to said impression member after the first impression on the sheet so that a second impression may be taken from the same printing surface upon the sheet at a different point before the sheet is discharged from said impression member.

4. Sheet printing mechanism comprising a rotatable impression member, a printing-surface carrying member, means on said impression member for holding a sheet thereon while it is being impressed, and means for shifting the sheet circumferentially of said impression member after the first impression thereon so that successive impressions may be taken from the printing surface on the sheet at different points before the sheet is discharged from said impression member.

5. Sheet printing mechanism comprising a rotatable impression member, a printing surface carrying member, means connected with said impression member for holding a sheet thereon while it is being impressed, and means for shifting said holding means and sheet circumferentially of said impression member so that successive impressions may be produced on the sheet at different points in its length, the successive impressions being taken during successive rotations of the cylinder.

[Claims 6 to 50 not printed in the Gazette.]

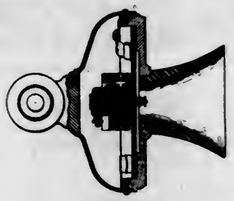
1,107,255. TELEPHONE-TRANSMITTER. LYNDE BRADLEY and HARRY L. BRADLEY, Muskegon, Mich., assignors to Allen-Bradley Company, a Corporation of Wisconsin. Filed Dec. 26, 1908, Serial No. 469,395. Renewed Jan. 19, 1914. Serial No. 813,113. (Cl. 179—122.)

1. As a transmitter resistor, two graphite plates surfaced with amorphous carbon and comminuted material therebetween.

2. As a transmitter resistor, two graphite plates surfaced with amorphous carbon and graphite granules therebetween, said granules also being surfaced with amorphous carbon.

3. In a transmitter resistor, a plate of carbonaceous material of high conductivity surfaced with a coating of conducting amorphous carbon, substantially as described.

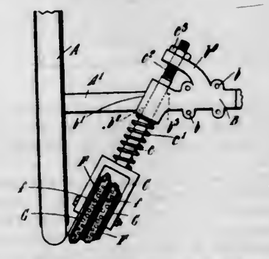
4. A variable resistor comprising two oppositely placed plates of low resistance carbon surfaced with comparatively high resistance amorphous carbon.



5. In a telephone transmitter, a compressible variable resistor containing a comminuted material, each element of which comprises a graphite body having a surface of carbonized coal tar.

[Claims 6 and 7 not printed in the Gazette.]

1,107,256. APPARATUS FOR PREVENTING SIDE SLIP OF MOTOR ROAD-VEHICLES. EDWARD JOHN BUCKINGHAM, Brixton Oval, London, England. Filed Apr. 30, 1913. Serial No. 764,493. (Cl. 21—90.)



1. In a device for the prevention of side-slip of vehicles, an anti-skidding wheel comprising a plurality of solid metal disks having beveled edges, each provided with a thick solid tire tapered to the bevel of the disks, a plurality of leather sheaths completely inclosing the said disks and cut radially from center to circumference to form a series of opening flaps, a pair of binding plates on opposite sides of the disks, a set of bolts passing completely through the disks and binding plates and locking the disks together with the sheaths gripped between the adjacent disks and between the disks and binding plates, and a non-slipping outer band secured upon each of the said sheaths.

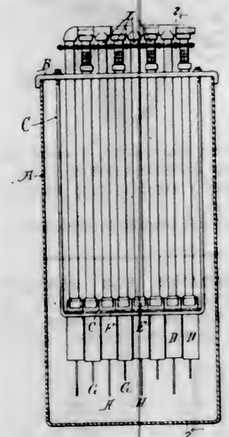
2. In a device for the prevention of side-slip of vehicles, an anti-skidding wheel comprising a plurality of metal disks, each provided with a thick tire, an inclosing leather sheath, a strengthening band inside the periphery of the sheath, a non-slipping outer band stitched to the said sheath and strengthening band, and means for securing the disks and associated parts together to form a wheel having a plurality of threads.

3. In a device for the prevention of side-slip of vehicles, a spring pressed anti-skidding wheel, a sloping wheel carrier, a bracket on the vehicle supporting the carrier in a sliding manner, and rollers within the said bracket adapted to bear on opposite sides of the said wheel carrier and to meet any leverage on the carrier due to the action of the ground.

1,107,257. ELECTROLYTIC CELL. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Oct. 29, 1912. Serial No. 728,386. (Cl. 204—5.)

1. In an electrolytic cell, a vessel to contain the electrolyte, a top or cover therefor, a support carried by the top or cover and depending into said vessel, an inverted bell having a lug at the side thereof, said lug resting upon said support, whereby said bell is suspended from

said support and is immersed in the electrolyte contained therein to a depth sufficient for the hydrostatic head or pressure of the electrolyte to prevent intermingling of the evolved gases, an electrode plate positioned within said inverted bell, and a gas delivery pipe communicating with said bell.



2. In an electrolytic cell, a vessel to contain the electrolyte, a supporting member depending into said vessel, inverted bells each having a lug at the side thereof, said lugs resting on said supporting member whereby said bells are suspended from said member and are immersed in the electrolyte to a depth sufficient for the hydrostatic head or pressure of the electrolyte to prevent intermingling of the evolved gases, an electrode plate positioned within each bell and a gas delivery pipe communicating with each bell.

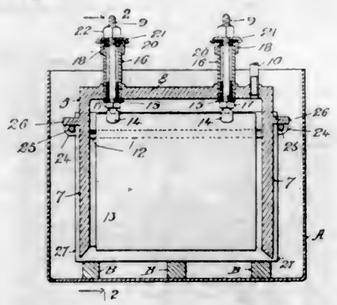
3. In an electrolytic cell, a vessel to contain the electrolyte, a support depending into said vessel, inverted bells suspended from said support, electrode plates arranged within said bells and extending into the electrolyte a depth sufficient to utilize the hydrostatic head or pressure of the electrolyte to prevent intermingling of the evolved gases, circuit terminal rods or poles connected to said plates and pipe connections communicating with said bells, the open mouths of the inverted bells being beveled.

4. In an electrolytic cell, a vessel to contain the electrolyte, an inverted bell suspended in said vessel and immersed in the electrolyte contained therein to a depth sufficient to utilize the hydrostatic head or pressure of the electrolyte to prevent the intermingling of the evolved gases, an electrode plate arranged within the inverted bell, and a gas delivery pipe communicating with said bell.

1,107,258. ELECTROLYTIC CELL. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Nov. 6, 1912. Serial No. 729,751. (Cl. 204—5.)

1. In an electrolytic cell, the combination with cell elements in the form of inverted bells, assembled together in flat-wise relation against each other, said cell elements having extended portions or fingers at their ends, and a porous diaphragm interposed between adjacent cell elements and clamped and held in place between the end portions or fingers of the cell elements.

2. In an electrolytic cell, cell elements in the form of inverted bells, placed flat-wise against each other, the depending side walls of said elements being beveled, said elements having end portions or fingers extending beyond the side walls thereof, an electrode plate supported within each bell and extending beyond the edges of the side walls thereof, and porous diaphragms interposed between adjacent elements and held and clamped at their ends between said end fingers.

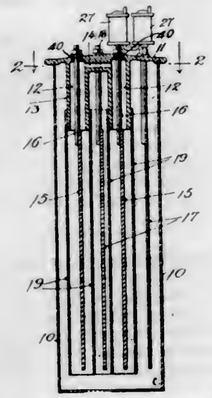


3. In an electrolytic cell, cell members in the form of inverted bells, assembled and held together one against another in flat-wise relation, the outermost element having an extended side portion extending below the side walls of the intermediate elements.

4. In an electrolytic cell, a series of inverted bell shaped members, each having an electrode plate supported therein, the outermost of said members having ears and the intermediate members having supporting lugs at the ends thereof, and rods engaging said ears to clamp the assembled bells together, said clamping rods forming supports upon which the lugs of the intermediate members rest.

5. In an electrolytic cell, a cell element in the form of an inverted bell, an electrode plate extending into said bell, said bell having openings through the base thereof, terminal rods passing through said openings and secured to the upper edge of the electrode plate, an insulating sleeve insulating said rods, a pipe section inclosing each rod and carrying a nut for clamping said insulating sleeve in place, an insulating washer insulating said rod, a nut for clamping the same in place, and a delivery pipe connection also extending through said base portion.

1,107,259. ELECTROLYTIC CELL. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Nov. 6, 1912. Serial No. 729,752. (Cl. 204—5.)



1. In an electrolytic cell, a tank, a top or cover for closing the same, said top or cover having integral wall portions depending from the bottom surface thereof into the tank and forming separated chambers, means extending through said top or cover and into said chambers, electrode plates respectively supported by said means, coöperating electrode plates arranged in the tank, means also extending through said top or cover for supporting said coöperating electrode plates, a porous diaphragm separating said electrode plates and gas delivery connections communicating respectively with said chambers and tank.

2. In an electrolytic cell, a tank, a cover therefor having walls depending from the bottom surface thereof forming a plurality of separated chambers, means to form a communication between said chambers, electrode plates suspended from within said chambers, coöperating electrode plates suspended within said tank, porous diaphragms separating said plates and gas delivery connections communicating respectively with said chambers and tank.

3. In an electrolytic cell, a tank having a top or cover, integral walls formed with said top or cover and forming separated chambers, said chambers depending from the bottoms of the top or cover into the tank and communicating with each other, supporting rods passing through said top or cover, electrode plates respectively arranged in juxtaposition to each other in said chambers and in said tank and supported by said rods porous diaphragms separating said plates and gas delivery connections communicating respectively with said chambers and tank.

4. In an electrolytic cell, a tank, a cover therefor, said cover having integral walls depending from the bottom surface thereof and forming a plurality of separated chambers, said walls dipping into the electrolyte within the tank, a passage formed in the cover to open communication between said chambers, electrode plates, means extending through the cover and into said chambers for supporting said plates, coöperating electrode plates, meaus also extending through the cover for suspending said cooperating electrode plates in the tank, porous diaphragms separating said plates and gas delivery connections communicating respectively with said chambers and said tank.

1,107,260. HYDROAERONAUTICAL APPARATUS. CHARLES DENNISTON BURNEY, Kilmeston, Alresford, England. Filed Feb. 17, 1913. Serial No. 748,939. (Cl. 114—66.5.)



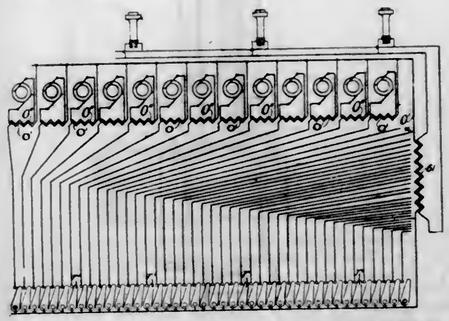
1. In a hydro-aeronautical machine, the herein described means for maintaining stability of the apparatus, particularly during periods intermediate between its hydrovolant and aerovolant conditions, such means comprising hydropeds which project outwardly and downwardly on either side of the machine and are furnished with water stabilizing planes mounted to vibrate about inclined axes, substantially as set forth.

2. In a hydro-aeronautical machine furnished with hydropeds carrying stabilizing planes for use in water and with aerial stabilizing appliances, the combination with the said water stabilizing planes and aerial stabilizing appliances of interconnections adapted for operating both simultaneously and in sympathy, substantially as set forth.

3. For use in a hydro-aeronautical machine, a control lever formed as a lateral extension from a transverse shaft and carrying at its upper extremity a hand-wheel the transverse shaft being moreover provided with two double-arm levers; in combination with an aerial elevator connected to the double-arm levers, an elevator for use in water connected to the same levers, aerial lateral stabilizing appliances connected to the hand-wheel, and stabilizing planes for use in water connected to the same wheel.

4. For use in a hydro-aeronautical machine, the combination, with a two-arm foot-bar pivoted centrally, of an aerial directional rudder mounted upon the tail of the machine and a direction rudder for use in water mounted toward the lower extremity of a dependent hydroped, both the said rudders being connected to each of the arms of the foot-bar, whereby continuity in directional control is obtained while passing from the hydrovolant to the aerovolant condition and vice versa.

1,107,261. MUSIC-GENERATING AND MUSIC-DISTRIBUTING APPARATUS. THADDEUS CAHILL, Washington, D. C., assignor to Ellis Spear, E. Hilton Jackson, George F. Cahill, Arthur T. Cahill, and Thaddeus Cahill, trustees. Original application filed Aug. 10, 1895, Serial No. 558,939. Divided and this application filed Feb. 10, 1902, Serial No. 93,433. Renewed Jan. 10, 1914. Serial No. 811,497. (Cl. 84—81.)



1. In combination, in an electrical music-generating system, a series of alternators having vibration-frequencies corresponding to consecutive notes of a musical scale.

2. In combination, in an electrical music-generating system, a series of alternators having vibration-frequencies corresponding to consecutive notes of the chromatic scale.

3. In combination, in an electrical music-generating system, a series of alternators having vibration-frequencies corresponding to consecutive notes of a musical scale, through one or more octaves.

4. In combination, in an electrical music-generating system, a series of alternators having vibration-frequencies corresponding to consecutive notes of the chromatic scale, through one or more octaves.

5. In combination, in an electrical music-generating system, (*a*) a plurality of alternators having vibration-frequencies corresponding to musical notes of different pitches; and (*b*) driving mechanism for said alternators, whereby different alternators are driven with different angular velocities.

[Claims 6 to 142 not printed in the Gazette.]

1,107,262. CALENDAR-HANGER. WILLIAM A. CALLANAN, Denver, Colo. Filed June 21, 1913. Serial No. 775,000. (Cl. 40—145.1.)

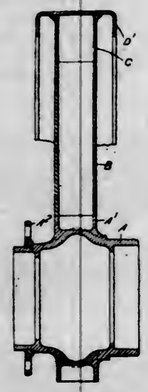


1. The combination with a hollow shield; of means for attaching said shield to an article to be supported, a flexible member extending from said shield, and a pin extending at right angles from the free end of said flexible member, said pin being normally held within said shield in said right angular position.

2. The combination with a hollow shield; of means for attaching said shield to an article to be supported, a strip

of flexible metal extending from said shield and rebent to have its free end opposite the hollow of the shield, the bend of said strip forming a substantially tubular portion, and a pin extending at right angles from said free end and normally held in said shield.

1,107,263. METAL WHEEL. THOMAS CLARKSON and WILLIAM JOHN MORISON, Chelmsford, England, assignors to The National Steam Car Company Limited, London, England. Filed Jan. 25, 1913. Serial No. 744,228. (Cl. 21—69.)



1. In a metal wheel for vehicles, the combination of a forged hub having tubular radial bosses thereon, tubular steel spokes butt-welded to the outer ends of the bosses with the inner and outer walls of each spoke coinciding with the corresponding walls of the boss, curved lateral flanges at the outer ends of the spokes, and a rim secured to said flanges.

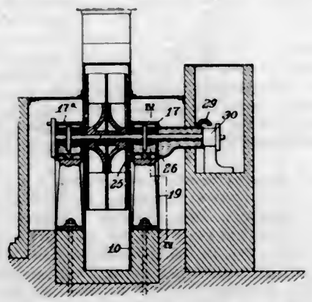
2. In a metal wheel for vehicles, the combination of a forged hub having tubular radial bosses thereon, tubular steel spokes butt-welded to the outer ends of the bosses with the inner and outer walls of each spoke coinciding with the corresponding walls of the boss, and provided at their outer ends with curved lateral flanges, and a rim which is shrunk on to said curved flanges.

3. In a metal wheel for vehicles, the combination of a forged hub having tubular radial bosses thereon, tubular drawn spokes butt-welded to the outer ends of the bosses and forming direct, smooth, continuations of the outer and inner surfaces of the bosses, tubular flanged members butt-welded to and forming extensions of said spokes, and a rim secured to the flanges of the last said members.

1,107,264. MINE-VENTILATING APPARATUS. WILLIAM CLIFFORD, Jeannette, Pa., assignor to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 4, 1912, Serial No. 669,329. Renewed Jan. 8, 1914. Serial No. 811,098. (Cl. 230—11.)

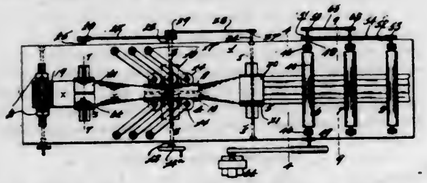
1. In a mine ventilating fan, the combination with a rotary fan, a housing including an inlet passageway for the said fan, and an operating shaft for the said fan extending through the inlet passageway; of a pair of pillow-blocks affording bearings for the said shaft and provided with water chambers adjacent to the said shaft, a fluid containing chamber surrounding the said shaft within the passageway and communicating with a pillow-block water chamber, and a supply conduit leading to one of the said chambers, substantially as described.

2. In a pillow block for a mine-ventilating fan-shaft, the combination of water and oil chambers surrounding the shaft bearing portion of the said block, the said oil chamber being in communication with and affording a supply of oil to the said shaft, the said water chamber affording a cooling medium for the shaft bearing and for oil within the said oil-chamber, and a water supply conduit



connected to the said water chamber, substantially as described.

1,107,265. PAPER-PLAITING MACHINE. PHILIP F. COHEN, New York, N. Y. Filed Sept. 6, 1913. Serial No. 788,383. (Cl. 93—84.)



1. In plaiting mechanism, a fixed, arched, forming device, having grooves in its sides, in line with the travel of the material to be acted on, in combination with a device provided with an arched guideway for receiving such material and directing it to said forming device in arched form adapted to fit thereon, means for forcing the material into said grooves as its travels over said forming device, means for feeding said material, and devices for flattening out the latter after the action of said forming device and forcing means for the purpose set forth.

2. In plaiting mechanism, a fixed, arched, forming device consisting of two formers adjustable toward and from each other, each of said formers having grooves in its outer side in line with the travel of the material to be acted on, a framing device provided with an arched guideway for receiving said material and directing it to said former in arched form adapted to fit thereon, means for forcing the material into said grooves, means for feeding the material and means for flattening the material, including the plaits formed by the said forcing devices and grooves.

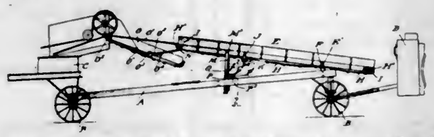
3. In plaiting mechanism, a fixed, arched, forming device, consisting of two formers adjustable toward and from each other, each of said formers having grooves in its outer side in line with the travel of the material, in combination with spring pressed rollers arranged to force the material into said grooves, feeding devices for the material, means for guiding it to the former and arching it to fit thereon and means for flattening out the material after it is operated on by the said rollers and grooved formers, the said rollers being arranged out of line with each other transversely of the former for the purpose set forth.

4. In combination with feed rollers for the material acted on, a fixed device adapted to give said material a fixed transversely arched form as it passes through the same, a fixed arched forming device fitting such material and provided with grooves in its sides in line with the travel of the material, a series of spring-pressed rollers for forcing the material into said grooves and rollers for flattening the material after it has been acted on by the said forming device.

5. A plaiting device, consisting of a forming device provided with recesses in the sides theroef, means to force the material to be plaited into said recesses, means to feed the material, a take-up for said material adjacent to said feeding means, and a cutting device located intermediate the feeding device and take-up.

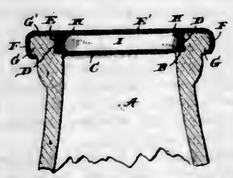
[Claims 6 to 13 not printed in the Gazette.]

1,107,266. FEEDING ATTACHMENT FOR THRESHING-MACHINES. CASPER M. CONRARDY, Willowdale, Kans. Filed Oct. 4, 1913. Serial No. 793,469. (Cl. 193—18.)



In combination with a truck and conveyer trough pivotally mounted thereon, bars pivotally mounted to the walls of the trough and having notches in corresponding edges thereof, a loosely mounted bar supported by the truck and engaged by said notches, a shaft upon the truck, cables fastened to the lower ends of said bars and adapted to wind upon said shaft, affording means for raising and lowering the bars, as set forth.

1,107,267. PAPER CAP FOR MILK-BOTTLES. GEORGE H. DAVIS, Portland, Me. Filed June 14, 1913. Serial No. 773,644. (Cl. 215—14.)



1. A device of the character described comprising a paper cap for milk bottles consisting of two members, one of cup shape adapted to fit within the mouth of a bottle, and the other adapted to bridge the open space in the cup and having a depending portion fitting within the cup and leaving the central portion of the bridging member free relative to the cup member.

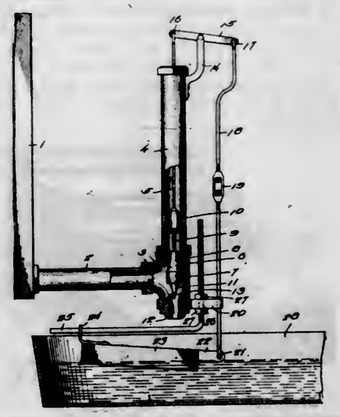
2. A device of the character described comprising a paper cap for milk bottles consisting of two members, one of cup shape adapted to fit within the mouth of a bottle, and the other adapted to bridge the open space in the cup and having a depending portion fitting within the cup acting to force the walls of the cup into sealing engagement with the bottle.

3. An article of the character described comprising a paper cap for milk bottles consisting of two members secured together, one of said members being of cup formation to provide an interior space between the two members, and said cup being adapted to be forced into sealing engagement with a bottle mouth, and the two members having interfitting edge portions.

4. An article of the character described comprising a paper cap for milk bottles consisting of two members secured together, one of said members being of cup formation to provide an interior space between the two members, and said cup being adapted to be forced into sealing engagement with a bottle mouth, and the two members having interfitting edge portions separably engaging each other.

1,107,268. AUTOMATIC WATER-FEED FOR POULTRY. HARRY L. DAVIS, Saratoga Springs, N. Y. Filed Aug. 27, 1913. Serial No. 786,891. (Cl. 137—68.)

1. In apparatus of the character described, the combination with a holding receptacle, of an upstanding valve casing connected therewith, a tubular valve seat connected with the lower end of the valve casing and exteriorly beveled to provide a knife edge, a conical valve arranged above the knife edge and adapted to be moved downwardly into the same, a rod pivotally connected with the conical valve and adapted to swing relative to the knife edge, and float controlled means connected with the rod.



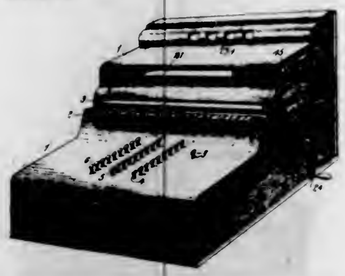
2. The combination with a water holding receptacle, of a laterally extending pipe connected therewith, an upstanding valve casing connected with the discharge end of the pipe and provided near its lower end with a valve seat, a valve movably mounted within the upstanding valve casing to engage and disengage the valve seat, a lever pivotally connected with the upper end of the upstanding valve casing to swing in a substantially vertical plane, a rod connecting the lever and valve, an approximately L-shaped supporting rod connected with the lower end of the valve casing with its lower arm extending beneath the laterally extending pipe, a float pivotally connected with the free end of the lower arm of the L-shaped supporting rod, a rod connecting the opposite end of the float and the pivoted lever, and a receptacle arranged below the float.

3. In apparatus of the character described, the combination with an upstanding holding receptacle, of a pipe connected with the lower portion thereof, a T-coupling connected with the pipe, a valve seat connected with the lower end of the T-coupling, a vertical pipe connected with the upper end of the T-coupling, a valve movably mounted within the T-coupling, a lever pivotally connected with the upper end of the vertical pipe to swing in a substantially vertical plane, a rod connecting the lever and valve, an L-shaped supporting rod vertically adjustably connected with the T-coupling with its horizontal arm extending beneath the T-coupling, a float having one end pivotally connected with the horizontal arm of the supporting rod, and a rod pivotally connected with the opposite end of the float and the vertically swinging lever.

1,107,269. COMPUTING-MACHINE. ISAAC S. DEMENT, East Orange, N. J., assignor to American Mechanical Cashier Company, New York, N. Y., a Corporation of New Jersey. Filed May 1, 1903, Serial No. 155,150. Renewed Sept. 5, 1912. Serial No. 718,712. (Cl. 133—2.)

1. In a computing machine the combination of number indicating means, means for giving the results of the computations, and connecting means between the number indicating means and the result giving means, said connecting means including a plurality of members, one member for each numerical place of the machine, each member of the connecting means composed of a series of movable parts extending through its own and all higher numerical places in the machine.

2. In a computing machine the combination of number indicating means, means for giving the results of the computations, and connecting means between the number indicating means and the result giving means, said connecting means including a plurality of members, one member for each numerical place of the machine, each member of the connecting means composed of a series of movable parts, the member corresponding to the lowest numerical place, in which a significant figure of the number indicating means is indicated being operative to present on the result giving means in each higher numerical place the value of such higher place less one of its units and in its own numerical place the value of that place less the number of its units represented by the significant figure indicated.



3. In a computing machine, the combhbination of number indicating means having a plurality of members on which numbers may be indicated, means for giving the results of the computations, and connecting means between the number indicating means and the result giving means, said connecting means including a member corresponding to each of the lower numerical places of the machine, each member being rendered operative by the significant figures of one member of the number indicating means in the corresponding place when no signficant figure of a lower place has been indicated.

4. In a computing machine, the combination of number indicating means on which numbers may be indicated, means for giving the results of the computations, and connecting means between the number indicating means and the result giving means, said connecting means including a member corresponding to each of the lower numerical places of the machine, said connecting members being normally rendered inoperative and only the one of them which corresponds to the lowest numerical place in which a significant figure is indicated during any operation of the machine being rendered operative to give the results of the computations.

5. In a computing machine, the combination of number indicating means having a plurality of members on which numbers may be indicated, means for giving the results of the computations, and connecting means between the number indicating means and the result giving means, said connecting means including a member for each of the lower numerical places of the machine, said members being normally rendered inoperative and only the one of them corresponding to the lowest numerical place in which a significant figure of one member of the number indicating means has been indicated being rendered operative to present on the result giving means the results of the computations, the operating member being limited in its operation by the numbers indicated on another member of the number indicating means.

[Claims 6 to 97 not printed in the Gazette.]

1,107,270. VENDING-MACHINE. HENRY D. DESHLER, Belvidere, N. J. Filed May 14, 1913. Serial No. 767,729. (Cl. 194—2.)

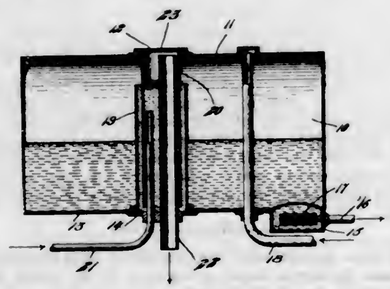
1. The combination in a vending machine, of a vending mechanism and coin controlled mechanism for releasing the vending mechanism, the latter mechanism including a coin receiving and actuated wheel, a coin chute leading thereto, a lock for the wheel, and means carried by the lock and disposed in the chute to be engaged by a coin to release the lock and wheel and consequently the vending mechanism, the coin further engaging the wheel and assisting by its weight in the rotation thereof to insure the complete operation of the vending mechanism.



2. The combination in a vending machine, of a vending mechanism and a coin controlled mechanism for releasing the vending mechanism, said latter mechanism including a coin chute, a wheel operably connected to the vending mechanism and having a plurality of coin recesses in the periphery thereof, a lock for the wheel, and means carried by the lock and projecting into the coin chute, whereby when said latter means is engaged by a coin, the lock is released and the coin delivered into one of the recesses of the wheel to assist in the rotation thereof and the operation of the vending mechanism.

3. The combination in a vending machine, of a vending mechanism and a coin controlled mechanism for releasing the vending mechanism, the latter mechanism including a coin chute, a wheel connected to the vending mechanism and having a plurality of coin receptacles in the periphery thereof, said wheel having a portion of its periphery projected within the coin chute, a pivoted locking bar having its free end disposed to engage the wheel to lock the same, and means carried by said bar and projecting into the coin chute, whereby when engaged by a coin, the locking bar is released and the coin is delivered in one of the receptacles of the wheel to assist in the rotation thereof and the actuation of the vending mechanism.

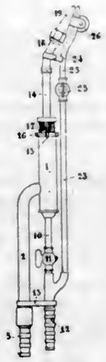
1,107,271. OIL-SEPARATOR. ABNER DOBLE, Waltham, Mass. Filed Oct. 23, 1913. Serial No. 796,027. (Cl. 210—5.)



1. In an oil separator, the combination of a main reservoir having top and bottom walls, removable plugs in said walls, an outer tube open at its upper end and having its lower end secured to the plug in the bottom wall, an inner tube having an open lower end arranged within the outer tube and its upper end secured to the plug in the top wall, and an overflow pipe secured in the plug in the bottom wall and extending within the inner tube to a point above the upper end of the outer tube.

2. In an oil separator, the combination of a main reservoir having top and bottom walls, removable plugs in said walls, an outer tube open at its upper end and having its lower end secured to the plug in the bottom wall, an inner tube having an open lower end arranged within the outer tube and its upper end secured to the plug in the top wall, an overflow pipe secured in the plug in the bottom wall and extending within the inner tube to a point above the upper end of the outer tube, and the plug in the top wall being provided with an opening whereby the interior of the inner tube communicates with the external atmosphere.

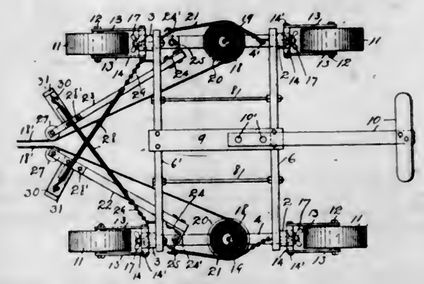
1,107,272. BLOWPIPE. PAUL DUMESNIL, Paris, France. Filed July 11, 1907. Serial No. 383,303. (Cl. 158—13.5.)



1. A blow pipe comprising a main body, a conduit lateral to the main body and communicating therewith to conduct acetylene gas into the main body, two conical members in said body disposed one within the other, the outer member communicating with the interior of the body whereby acetylene gas is supplied to the outer member, an inlet pipe communicating with the inner member whereby oxygen gas is supplied to the inner member, said inner member communicating with the outer member to supply oxygen to mix with the acetylene gas in the outer member, said conical members and body formed with engaging screw threads whereby the space between the members may be varied and the amount of acetylene gas regulated, means for locking the conical members against rotation, a nozzle and a mixing pipe communicating with the outer conical member and nozzle to mix the gases and convey the combustible mixture to the nozzle, substantially as described and for the purpose set forth.

2. A blow pipe comprising a main body, a conduit lateral to the main body and communicating therewith to conduct acetylene gas into the main body, two conical members in said body disposed one within the other, the outer member communicating with the interior of the body whereby acetylene gas is supplied to the outer member, an inlet pipe communicating with the inner member whereby oxygen gas is supplied to the inner member, said inner member communicating with the outer member to supply oxygen to mix with the acetylene gas in the outer member, said conical members and body formed with engaging screw thread whereby the space between the members may be varied and the amount of acetylene gas regulated, means for locking the conical members against rotation, a nozzle and a mixing pipe communicating with the outer conical member and nozzle to mix the gases and convey the combustible mixture to the nozzle, in combination with an auxiliary removable pipe branched on the main oxygen pipe, a cock on said auxiliary pipe and means near the nozzle for supporting and guiding the apparatus, the said auxiliary pipe being intended to supply a supplementary jet of oxygen at the same pressure as that in the main pipe and to direct the said jet upon the heated part of the work piece, substantially as described and for the purpose set forth.

1,107,273. MACHINE FOR WRAPPING CELERY. MALCOLM W. EARL, Watertown, N. Y., assignor of three-fourths to Persis J. Earl, Sheridan E. Earl, and Ernest J. Earl, Watertown, N. Y. Filed Oct. 27, 1913. Serial No. 797,396. (Cl. 47—15.)



1. In a machine for wrapping celery, the combination of a frame comprising spaced horizontal members, vertical members depending from the ends thereof, shoes connecting the lower ends of the vertical members, wheels secured to the frame, spindles carried by the shoes adapted to receive rolls of flexible material, guards pivotally mounted on said shoes rearwardly of the spindles, said guards comprising vertically arranged wings adapted to straddle and compress the rows of celery, and springs for drawing the free ends of said guards toward each other.

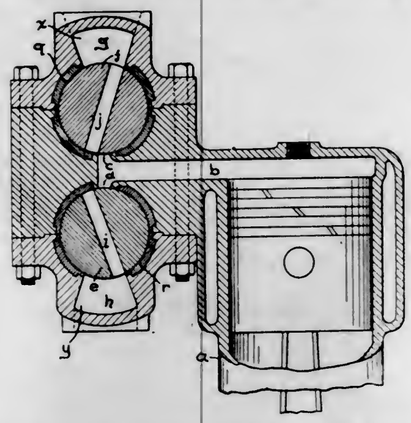
2. In a machine for wrapping celery, the combination of a frame comprising spaced horizontal members, vertical members depending from the ends thereof, shoes connecting the lower ends of the vertical members, wheels secured to the frame, spindles carried by the shoes adapted to receive rolls of flexible material, guards pivotally mounted on said shoes rearwardly of the spindles, said guards comprising vertically arranged wings adapted to straddle the rows of celery, rollers carried by the free ends of said wings adapted to gather and compress the plants, and means for increasing and decreasing the pressure of said rollers against the opposite sides of the row.

1,107,274. INTERNAL-COMBUSTION ENGINE. CHARLES L. ELLIOTT, Detroit, Mich. Filed Jan. 24, 1913. Serial No. 743,894. (Cl. 123—80.)

1. In an engine, the combination of a cylinder provided with a single passage leading therefrom, two cylindrical valves having diametrical slots therethrough, an intake passage adjacent to one of said valves and an exhaust passage adjacent to the other of said valves, said slots being adapted to form communications between said passage and the adjacent intake and exhaust passage respectively, said valves being arranged opposite each other and upon opposite sides of the passage from the cylinder.

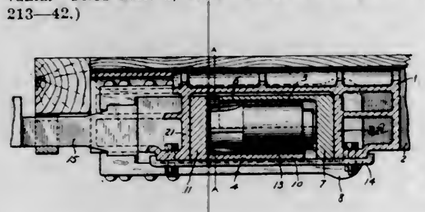
2. In an engine, the combination of a cylinder provided with a passage leading therefrom and with two cylindrical openings and having a port communicating between each of said cylindrical openings and said passage, and a sec-

ond port through the wall of each of said openings covering a greater arc of cross section of said wall than the corresponding first named port, a cylindrical valve in each of said openings having a slot therethrough the ends



of said slot being arranged to register with said ports, so that their outer ends shall be fully open when the inner ends are open at all, substantially as and for the purpose described.

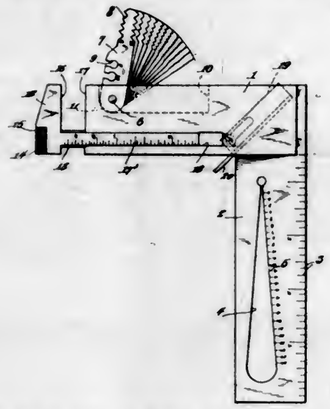
1,107,275. TWIN DRAFT-GEAR. CLYDE C. FARMER, Chicago, Ill., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1912. Serial No. 680,864. (Cl. 213—42.)



In a draft gear mechanism, the combination with a draw-bar, of draft gear units mounted side-by-side and follower plates for said draft gear units, one provided with a flat horizontal member constituting the sole support for the draft gear units and having vertical side walls forming a channel with the horizontal member and a transverse end member for engaging the draft gear units at one end and the other follower plate having an upper horizontal member covering the draft gear units, vertical side walls adapted to engage the side walls of the first follower plate, and a transverse plate at one end for engaging the opposite ends of the draft gear units.

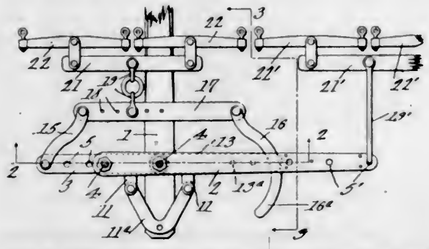
1,107,276. COMBINATION-TOOL. HORACE P. FARRINGTON, Brooklyn, N. Y. Filed Mar. 1, 1913. Serial No. 751,606. (Cl. 33—163.)

A tool including a body portion having a longitudinal groove formed in one face thereof, a rule strip fitting said groove, said strip being adjustable longitudinally relatively to the said body, a head portion integral with the said strip, the latter serving as a means preventing movement of the head laterally independently of the body, an exteriorly threaded shank operating within a threaded bore therefor extending longitudinally of the body and in parallel spaced relation to said groove, said shank extending through an opening therefor within the said head, and a knob formed upon the shank, said knob operating within



a recess of the head to adjust the head and rule relatively to the body, as and for the purpose set forth.

1,107,277. DRAFT-EQUALIZER. NATHAN W. FINCH, Plano, Ill. Filed Dec. 17, 1913. Serial No. 807,294. (Cl. 21—76.)



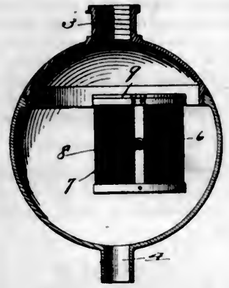
1. In a draft equalizer, a bracket attachable to an object and having offset ends, an equalizing lever fulcrumed to one offset end thereof, a supplemental lever fulcrumed to the other offset end of the bracket and having one arm operatively engaged to one arm of the equalizing lever, draft means attached to one arm of the equalizing lever, and draft means attached to one arm of the equalizing lever and one arm of the supplemental lever.

2. In a draft equalizer, a saddle adapted to be secured upon an object, having its ends offset, an equalizing lever fulcrumed upon one of said offset ends of the saddle bar, a supplemental lever fulcrumed upon the other offset end of the saddle bar and having one arm engaged to the adjoining arm of the equalizing lever, draft means connected to the said arm of the equalizing lever, and second draft means connected to the other arm of the equalizing lever and the other arm of the supplemental lever.

3. In a draft equalizer, an equalizing lever, a supplemental lever having one arm operatively connected to one arm of the equalizing lever, a floating bar, links connecting the floating bar and certain arms of the said levers, draft means connected to the floating bar, and draft means connected to one arm of the equalizing lever.

4. In a draft equalizer, an equalizing lever, a supplemental lever having one arm operatively connected to one arm of the equalizing lever, a floating bar, links connecting the floating bar and the other arms of the said levers, and draft means adjustably connected to the said floating bar and the first mentioned arm of the equalizing lever.

1,107,278. ROTATABLE SOAP-HOLDER. PYRMA E. FISCHER, New York, N. Y. Filed July 8, 1913. Serial No. 777,878. (Cl. 45—28.)



1. A casing having a water inlet and a discharge outlet upon opposite sides, a shaft off-set with respect to said inlet and discharge openings, and a soap container rotatably mounted upon said shaft.

2. A device of the kind described comprising a casing adapted to receive water from a spigot and having a discharge opening in vertical alinement with said spigot, a shaft off-set with respect to the point of admission of the water, and a soap retainer loosely mounted upon said shaft and extending into the path of discharge of water from the spigot into the casing.

3. A device of the kind described comprising a sectional casing having a detachable top portion, means carried by the top portion for securing the casing to a spigot, a discharge nozzle carried by the other portion, a shaft arranged horizontally and to one side of the center of the casing and a reticulated soap container loosely hung upon the shaft, as and for the purpose set forth.

1,107,279. ROAD-PLANER. WILLIAM S. FOSTER, Dallas, Wis. Filed Nov. 6, 1913. Serial No. 799,431. (Cl. 37—42.)

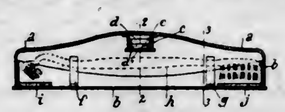


1. A road planer, comprising, in combination, a plurality of long parallel runners held evenly spaced apart having forward depending groove cutters and lower thin edges adapted to follow in the grooves produced by said cutters and prevent lateral movement of said runners and an earth working tool carried between said runners for trimming and finishing the surface of a road substantially in a plane.

2. A road planer, comprising, in combination, a plurality of long parallel runners held evenly spaced apart having forward depending cutters adapted to groove the surface of a road and lower thin edges adapted to follow in the grooves produced by said cutters and prevent lateral movement of said runners, a harrow element carried between said runners near the forward end of the device and a tool carried between said runners following said harrow element for trimming and scraping the surface of the road and finishing it substantially in a plane.

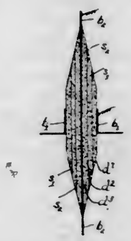
3. A road planer, comprising, in combination, a plurality of long parallel runners held spaced apart having forward depending cutters adapted to groove the surface of the road, said runners being adapted to follow in the grooves made by said cutters, an earth working device carried between said runners for trimming and finishing the surface of the road substantially in a plane and shoes detachably secured over the forward ends of said runners adapted to carry the forward ends of said runners with said cutters out of contact with the ground.

1,107,280. ANTISEPTIC CASE FOR TOOTH-BRUSHES. JOSEPH FERDINAND FOUYER, Marseille, France. Filed Nov. 5, 1913. Serial No. 799,358. (Cl. 132—11.)



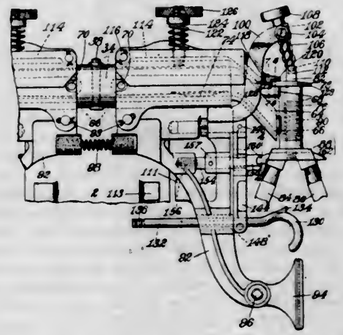
An antiseptic case for a tooth brush, comprising a body portion having a bottom, ends and sides, spring clamps on said body to hold a brush, a cover on said body in contact, when closed, with said ends and sides, a tubular antiseptic container secured on the interior of said cover and antiseptic pads on the body portion adapted to underlie the brush bristles.

1,107,281. INSULATOR. ROBERT FRIESE, Charlottenburg, Germany, assignor to Siemens-Schuckert-Werke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Jan. 7, 1911. Serial No. 601,435. (Cl. 173—318.)



As a new article of manufacture, an insulator having the action of a condenser, comprising a plurality of layers of a solid dielectric of varying lateral extension, alternating with a plurality of layers of a plastic material of small electric conductivity adapted to solidify between said dielectric layers.

1,107,282. BURNISHING-MACHINE. FREDERICK M FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 29, 1909. Serial No. 530,421. (Cl. 12—78.)



1. A machine of the class described having a machine frame, an edge setting tool arranged near the head of said frame and means for operating said tool, said means comprising mechanism located in the base of said frame for generating rapid to and fro movements, and mechanism including an upright rod arranged to reciprocate in substantially a straight line for transmitting said movements to said tool.

2. A machine of the class described comprising in combination a machine frame, a rock shaft arranged at the head of said frame, a burnishing tool operated from said rock shaft, mechanism located in the base of the frame for producing rapid to-and-fro movements, means including a reciprocating rod for transmitting motion from said mechanism to said rock shaft and means for preventing the lateral vibration of said rod.

3. A machine of the class described comprising in combination a machine frame, a burnishing tool, means including a reciprocating rod for imparting rapid to-and-fro movements to said tool, a clamp secured to said rod near its middle, and a looped spring having one end extending through an aperture in the machine frame and secured to said clamp and the other end secured to the side of the frame opposite the rod, the looped portions of the spring being arranged to bear against the frame, whereby lateral vibration of the rod is prevented.

4. A machine of the class described comprising, in combination, a machine frame, a rock shaft supported thereby near the head of said frame, a burnishing tool connected with said rock shaft to be driven thereby, a drive shaft in the base of the frame, a toggle mechanism operated by said drive shaft and driving connections between said mechanism and said rock shaft, said connections including a reciprocating rod and a joint at each end of said rod arranged to permit slight lateral movements of the rod relatively to the parts connected thereto.

5. A machine of the class described comprising in combination a rotary shaft, a crank pin secured to said shaft, a block rotatable on said pin, a toggle lever having a slideway in which said block is received, a toggle link pivotally connected to said lever, a rock shaft operatively connected with said toggle mechanism and a burnishing tool operated from said rock shaft.

[Claims 6 to 48 not printed in the Gazette.]

1,107,283. CADDY-BAG. JOHN GAMBLE, Philadelphia, Pa., assignor to George A. Reach, Philadelphia, Pa. Filed Nov. 5, 1913. Serial No. 799,324. (Cl. 224—45.)

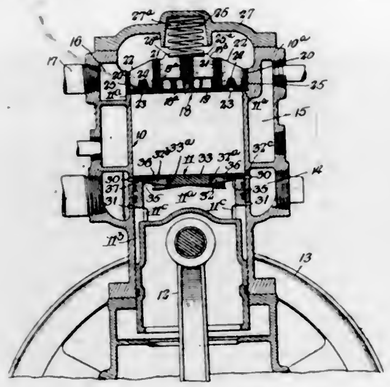


1. The combination with a tubular bag of flexible material, of a flexible bottom stitched therein, a rigid disk fitting therein adjacent the lower end, and a flanged metal plate embracing the outer end of the bag and clamping the lower part of the bag on the periphery of the interior rigid disk, substantially as described.

2. The combination with a tubular bag of flexible material, of a flexible bottom stitched therein having out-turned edges, an interior disk-shaped rigid floor fitting therein, a metal plate embracing the outer end of the bag having an annular groove adjacent its periphery in which the out-turned edges of the bag are seated, and an annular up-turned flange surrounding said plate cramping the lower end of the bag on the periphery of the interior rigid floor, substantially as described.

3. The combination with a tubular bag of flexible material, of a flexible bottom stitched therein having out-turned edges, an interior disk-shaped rigid floor fitting therein having an annular groove on the periphery thereof, a metal plate embracing the outer end of the bag having an annular groove adjacent its periphery in which the out-turned edges of the bag are seated, means for securing said plate to the interior rigid floor, an upturned annular flange surrounding said plate and integral therewith and having an annular reinforcing bead intermediate its base and edge, and inturned upper edges adapted to impinge the lower end of the bag and press into the groove on the interior floor, substantially as described.

1,107,284. VALVE STRUCTURE FOR AIR-COMPRESSORS AND THE LIKE. JOHN WILLIS GARDNER, Quincy, Ill. Filed June 2, 1910. Serial No. 564,556. (Cl. 230—34.)

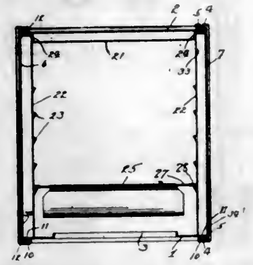


1. A valve structure, comprising a ported seat, a stop spaced above said seat, a free, floating, unguided valve ring made of thin, flexible sheet metal and of dimensions such as to require but little lift, said valve ring being adapted to move between said seat and said stop to open and close the passage through said seat and being so located as to permit discharge at both its inside and outside edges.

2. In an air compressor, in combination with the cylinder and a discharge chamber located without said cylinder, a wall interposed between said cylinder and discharge member, said wall being provided near its marginal edge with annular separated slots forming ports, a floating movable valve ring consisting of a thin flat annulus of flexible elastic metal adapted to seat on said wall above said slots and to extend radially beyond the inner and outer edges thereof so as to cover the same, an annular stop member rigidly supported from without said wall and movable valve ring in line with said annular slots, said stop limiting the upward movement of said ring yet allowing a rotary and limited lateral shifting movement of the same, said stop having each lateral edge thereof spaced inwardly from the lateral edges of said movable valve ring in any position of the same, whereby the fluid passing through said annular slots, passes around each lateral edge of the valve ring member and each lateral edge of the annular stop member, thus exposing the lateral edges of said valve ring member to the pressure of the fluid in the discharge member so that said valve will readily close on its seat.

3. In an air compressor, in combination with a cylinder, a wall closing the end of said cylinder comprising a flat disk provided with a centrally disposed, externally screw-threaded boss on its outer face, concentric, radially separated, rigidly connected rings bearing against the outer face of said disk, the inner ring being provided with screw-threads to receive said boss, said disk being provided with a plurality of annularly arranged ports intermediate said rings, a flat valve ring of thin, elastic metal adapted to close said ports, a stop ring rigidly supported between said concentric rings a short distance from the surface of said disk, said stop ring having a face adapted to be engaged by said flat ring and limit the movement thereof, said face being narrower than said valve ring, and said disk being provided with narrowly separated supports for said valve ring.

1,107,285. OVEN. FREDRICK A. GERCICH and JOSEPH VAUGHN, Oakland, Cal. Filed Aug. 20, 1913. Serial No. 785,763. (Cl. 126—275.)



1. A knockdown oven of the character described comprising a plurality of walls forming the top, bottom and sides thereof, sliding double seams connecting the horizontal edges of said walls, sliding seamed angle plates connecting the vertical edges and means for locking said angles on said vertical edges, a removable interlining comprising a recessed upper wall, side and back walls adapted to be positioned in said recess being thereby secured against lateral movement at the top, a removable deflector securing the side walls against lateral movement at the bottom, the said side walls in turn securing the back wall against lateral movement.

2. A knockdown oven of the character described comprising a plurality of walls having sliding seams at their edges, a removable inner lining for the oven and a deflector arranged at the bottom thereof, said deflector comprising a plurality of metallic layers with heat insulating material therebetween, and serving to lock the inner lining in adjusted position.

3. An oven of the character described comprising a plurality of walls having sliding seams at their edges, means for locking said seams, a removable inner lining for the oven and a deflector arranged at the bottom thereof and positioned above the entrance of the heated gases, said deflector comprising a plurality of V-shaped metallic plates with heat insulating material and air space therebetween and mounted upon a supporting frame, said frame serving to lock the inner lining in adjusted position.

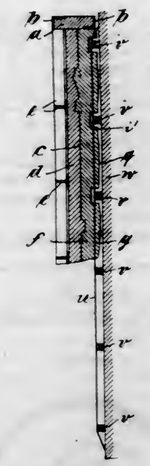
1,107,286. METHOD OF MAKING PLATES FOR WALL-COVERINGS AND SIMILAR PURPOSES. EMIL GERSABECK, Potsdam, Germany. Filed Oct. 21, 1913. Serial No. 796,398. (Cl. 25—154.)

1. Method of forming an article of the character described, which consists in applying to a matrix, a first comparatively slowly setting plastic mass, and applying to the back of said first plastic mass, a second comparatively quickly setting plastic mass.

2. Method of forming an article of the character described, which consists in applying to a matrix, a first comparatively slowly setting plastic mass containing sugar, and applying to the back of said first plastic mass, a second comparatively quickly setting plastic mass.

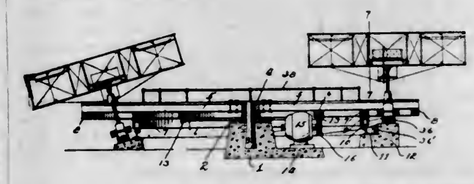
3. Method of forming a wall covering which consists in spanning a wire screen over the wall, charging a mold containing a matrix, with a first comparatively slowly setting plastic mass, and with a second comparatively quickly setting plastic mass, forming a protuberance on said last named mass and pressing said protuberance into the wire screen.

4. Method of forming a wall covering which consists in applying to the wall spacing members, and a supporting member in front of the spacing members, charging a mold containing a matrix with a first comparatively



slowly setting plastic mass and with a second comparatively quickly setting plastic mass, forming a grooved protuberance on said last named mass, and pressing said protuberance into engagement with said spacing members and supporting member.

1,107,287. AMUSEMENT DEVICE. FREDERICK J. GIBSON, Oakland, Cal. Filed Apr. 29, 1914. Serial No. 835,176. (Cl. 46—27.)



1. In an amusement device of the character described comprising a circular revoluble platform, a plate pivotally mounted in said platform tangential to the direction of rotation, tubular sleeves adjacent each end of said plate, rods slidably mounted in said sleeves, a bearing plate connecting the lower ends of said rods, a wheel pivotally mounted in said bearing plate and a grooved track adapted to receive said wheel.

2. In an amusement device of the character described comprising a circular platform, means for imparting rotation thereto, a plurality of plates pivotally mounted in said platform tangential to the direction of rotation, a plurality of rods slidably mounted in each of said plates perpendicular to the surface thereof, an aeroplane shaped carriage oscillatively mounted on the upper ends of said rods, ailerons mounted on said carriages and means adjacent the occupant's seat for controlling said ailerons.

3. In an amusement device of the character described comprising a circular platform, means for imparting rotation thereto, a plurality of plates pivotally mounted in said platform, rods slidably mounted in said plates perpendicular to the surface thereof, bearings on the upper end of said rods, a shaft oscillatively mounted in said bearings, a carriage rigidly attached to said shaft and spring means for maintaining said carriages in a normally horizontal position.

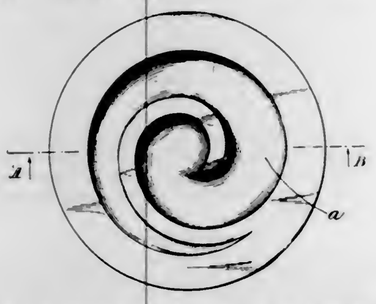
4. An amusement device of the character described comprising a circular revoluble platform, a plurality of

frames mounted thereon, carriages pivotally mounted on said frames, spring means for holding said carriages in a horizontal position and planes controlled from the seat of the carriage for imparting a lateral swaying movement to said carriages.

5. In an amusement device of the character described comprising an aeroplane shaped carriage, rods having said carriage pivotally mounted on the upper end thereof, a revoluble platform, plates pivotally mounted therein, said rods slidably mounted in said plates, a bearing plate attached to the lower end of said rods below said platform, a wheel pivotally mounted in said bearing plate, a track adapted to receive said wheel, vertical raises in said track for imparting a vertical movement to said carriages, and lateral curves in said track for imparting a lateral movement to said carriage supporting frame about said pivots of said plate.

[Claims 6 and 7 not printed in the Gazette.]

1,107,288. NUT-CRACKING DEVICE. MANLY M. GILLAM, Flushing, N. Y. Filed Feb. 27, 1914. Serial No. 821,537. (Cl. 146—3.)



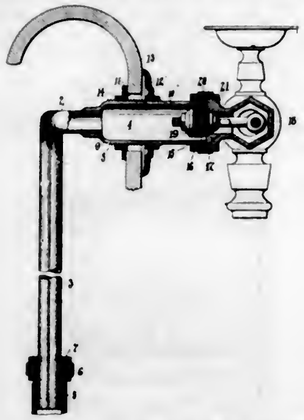
1. A nut cracking device consisting of a metal form having in one face a depression, channel or groove graduated or tapered both in width and in depth in a common direction, substantially as and for the purposes described.

2. In a nut cracking device a metal form having in its face a curved depression, channel or groove graduated or tapered in the direction of its least depth and with the base saddle shaped in part, the other portion of the base being parallel to the said face to provide adequate support when the device is used on a plane surface.

1,107,289. COUPLING-PIPE FOR BATH-TUBS, BASINS, AND LIKE VESSELS. JOSEPH H. GLAUBER, Cleveland, Ohio. Filed Aug. 17, 1908. Serial No. 448,771. (Cl. 4—24.)

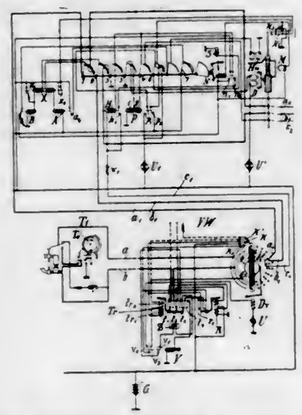
1. A new article of manufacture for connecting a service pipe with the faucet of a lavatory receptacle, consisting of an integral coupling member of less diameter throughout its length than the aperture in the wall of the receptacle, whereby the coupling member may be installed by inserting it through the aperture from either side of the wall of the receptacle, and comprising a shank portion threaded where it passes through the aperture and a leg portion adapted for attachment to the service pipe, the coupling member being reduced in diameter beyond the ends of the said threaded portion, threaded clamping members adapted to be slipped over the opposite ends of the coupling member and into engagement with the said threaded portion of the shank to clamp the coupling member to the wall of the receptacle, and means associated with the shank portion to attach a faucet thereto.

2. A new article of manufacture for connecting a service pipe with the faucet of a lavatory receptacle, consisting of an integral coupling member of less diameter throughout its length than the aperture in the wall of the receptacle and comprising a shank portion to extend through the aperture and an angularly disposed leg portion adapted for attachment to the service pipe, and independently removable clamping members associated



with the coupling member to engage the opposite sides of the wall of the receptacle.

1,107,290. APPARATUS FOR METERING CONVERSATIONS IN AUTOMATIC TELEPHONE SYSTEMS. GEORG GRABE, Nikolassee, near Berlin, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed June 24, 1911. Serial No. 635,202. (Cl. 179—9.)

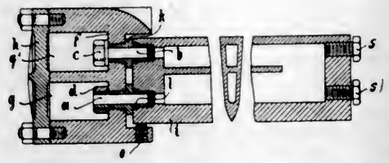


1. In an automatic telephone exchange comprising switches for interconnecting a calling line with a called line, the combination of a meter associated with the calling line, a quick acting relay and a slow acting relay energized during the conversation and deënergized at the end of the conversation, a meter circuit in dependence from the called subscriber's station and adapted to be closed momentarily at the end of the conversation when both of said relays are deënergized.

2. In an automatic telephone system comprising automatic switches for connecting a calling line with a called line, the combination of a pre-selector for connecting the calling line with an idle automatic switch, a meter in the pre-selector and connected to the calling line, a cut-off relay in the pre-selector and energized during the conversation, a retarding relay in the pre-selector and energized during the conversation, and a circuit for the meter closed by way of a working contact of the retarding relay and a rest contact of the cut-off relay.

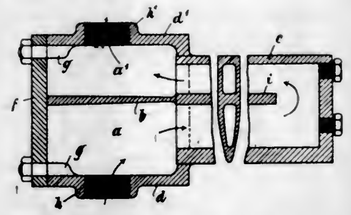
3. In an automatic telephone system comprising a pre-selector, one or more selectors and a connector for connecting a calling line with a called line, the combination of a meter in the pre-selector and connected to the calling line, a cut-off relay in the pre-selector and energized during the conversation by a circuit closed by way of the first selector, means in the first selector for causing the said relay to release its armature, a retarding relay in the pre-selector and energized during the conversation, and a circuit for the meter closed by way of a working contact of the retarding relay and a rest contact of the cut-off relay.

1,107,291. WATER-COOLED FIRE-BAR. ROBERT GRABOWSKY, Hanover, Germany. Filed Sept. 4, 1912. Serial No. 718,457. (Cl. 122—374.)



In combination, a fire-bar having a passage formed therein through which a cooling liquid is adapted to flow, said bar being provided at one of its ends with inlet and outlet openings communicating with said passage, a water chamber said chamber being provided with a flange extending under said fire-bar and a support adjustably mounted on said flange and engaging said fire-bar, and hollow connecting members between said chamber and said passage, said members extending in the direction of the length of said fire-bar.

1,107,292. FURNACE-GRATE. ROBERT GRABOWSKY, Hanover, Germany. Filed Apr. 22, 1913. Serial No. 762,759. (Cl. 122—374.)

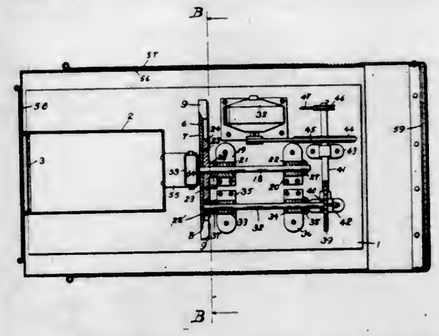


A grate bar applicable to grates using liquid cooling, the said bar consisting of a single sheet of material folded over and welded together to form a V-shaped hollow bar, the sheet having projections thereon which co-act in the finished bar to form a longitudinal partition therein.

1,107,293. ADVERTISING DISPLAY DEVICE. HYMAN GRAD, SYDNEY HERBERT KLEEBERG, and WILLIAM HARRIS, Newark, N. J. Filed Jan. 30, 1913. Serial No. 745,061. (Cl. 88—27.)

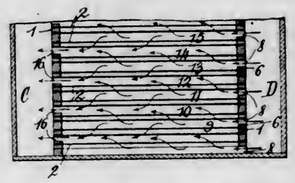
1. The combination with a projecting lantern and means for introducing a slide into the path of projection, of an endless film variously colored for different portions of its length and having oppositely traveling portions of itself in the path of light between the lantern and said slide-introducing means, and means for operating said film.

2. The combination with a projecting lantern and means for introducing a slide into the path of projection, of rollers on opposite sides of said path of projection, an endless film variously colored for different portions of its length passing around said rollers and returning from each one to the other across the path of projection in substantially parallel planes, and means for driving one of said rollers.



3. The combination of a projecting lantern, a bracket extending forwardly from the top of said lantern and having a downwardly extending arm, a lens holder carried by said arm, means for introducing a slide between said lantern and lens holder, a roller supported on said bracket above the path of light, a film variously colored for different portions of its length extending over said roller with portions of itself depending between said lantern and downwardly extending arm of the bracket across the path of light, means below the path of light for guiding said film, and means for causing said color film to travel.

1,107,294. DRYING APPARATUS. CURT GRAU, Niederuzwil, Switzerland. Filed Sept. 23, 1912. Serial No. 721,951. (Cl. 34—17.)



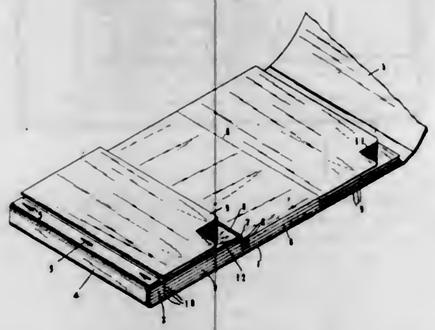
1. In a drying apparatus, an air tight housing, receptacles therein for the goods to be dried, each comprising a frame, a sieve like member stretched across the frames, two closing ledges secured to opposite sides of the frames and closely in contact with the walls of the housing, each frame being open at one end and so arranged one upon another, that their open ends are at different ends of the housing and each frame being directly supported by the ledges of the frame immediately underneath.

2. In a drying apparatus, an air-tight housing, a plurality of receptacles therein, each consisting of frames of rectangular form, a sieve like member stretched across each frame, three closing ledges secured to the sides of each frame, two of these ledges on opposite sides of the frame being closely in contact with the walls of the housing, each frame being further provided with a fourth ledge of less height than the three first mentioned ledges and said frames being so arranged one upon another, that the fourth ledges of two succeeding frames form an air passage with the bottom of the frame immediately above on opposite sides of the pile.

3. In a drying apparatus, an air-tight housing, a plurality of receptacles for the material to be dried, each consisting of a frame of rectangular form, a sieve like member stretched across each frame, closing ledges secured to the frame, two of said ledges on opposite sides of the frame being closely in contact with the walls of the housing, each frame being open at one end, said frames being so arranged one upon another that on each side of

the pile of frames at least two open sides are always succeeded by an equal number of closed sides, and each of said frames being directly supported by the ledges of the frame immediately underneath.

1,107,295. SALES-BOOK. WALTER GREIG, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Canada. Filed Jan. 9, 1912. Serial No. 670,134. (Cl. 11—23.)



1. In a manifolding salesbook, in combination, a plurality of normally extended flat sheets bound together along one edge, each sheet being divided by weakening lines into three leaves, one of said leaves being carbonized and adapted to be folded over to co-act with another leaf, separate manifolding means between said second leaf and the third leaf when folded into operative position, whereby the transaction may be recorded in triplicate, and a cover bound with said leaves adapted to inclose the sheets.

2. In a manifolding salesbook, in combination, a plurality of normally extended flat sheets bound together at one end forming a stub, each sheet being divided into three leaves, the end leaf being carbonized on its under surface, the remaining leaves being plain, said leaves being adapted to be folded into zigzag form as used, and a separate carbon sheet bound with the sheets at the stub adapted to lie between the two lower leaves when folded into operative position whereby a record is recorded in triplicate on the three leaves.

3. In a manifolding salesbook, in combination, a plurality of normally extended flat sheets bound together at one end forming a stub, each sheet being divided into three leaves, the end leaf being carbonized on its under surface, the remaining leaves being plain, a separate carbon sheet bound with the sheets at the stub adapted to lie between the two lower leaves when folded into operative position whereby a record is recorded in triplicate on the leaf nearest the stub, and means bound at one end by staples with said sheets adapted to form a top and bottom cover for said device.

4 4. In a manifolding book, in combination, a plurality of normally extended flat sheets bound together at one end, each sheet being divided into a plurality of parts or leaves separated by weakening lines, the larger number of parts of said sheets being uncarbonized on either side, and a carbon sheet bound with the sheets forming the book adapted to coact with one of the leaves when the leaves constituting the sheet are folded in superimposed relation.

5. In a manifolding book, in combination, a plurality of normally extended flat sheets bound together at one end, each sheet being divided into leaves, the leaf at the free end of each sheet being carbonized on one side and adapted when the leaves are folded in superimposed relation to coact with another leaf, and a carbon sheet bound with said first mentioned sheets extending over one of the leaves whereby a plurality of carbon copies are made on the sheet in use on the recording of each transaction.

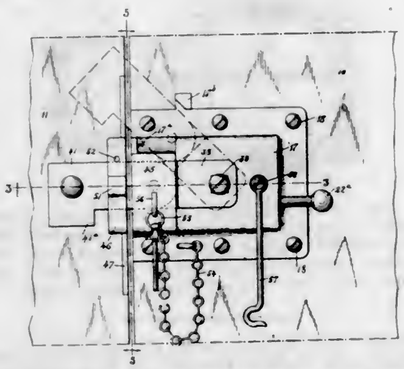
[Claim 6 not printed in the Gazette.]

1,107,296. HEDDLE. JULIUS GROB, Horgen, Switzerland. Filed Mar. 5, 1913. Serial No. 752,008. (Cl. 139—14.)



The herein-described sheet-metal heddle having longitudinally extending side-by-side portions at each end thereof bent in opposite directions from a common plane and thus forming a loop to receive a cross-rod of a harness shaft, said portions having their relatively inner edges both substantially in a plane perpendicular to the first-named plane and each loop-including part of the heddle being twisted into angular relation to the plane of the thread-eye-including portion of the heddle, substantially as described.

1,107,297. LOCK. JULIUS GROSSMANN, Westchester, N. Y. Filed May 20, 1913. Serial No. 768,718. (Cl. 70—14.)



1. A lock comprising a slidable latch, a bolt capable of being swung to and from an operative position, means operatively connecting said latch with said bolt, and key actuated mechanism connected with said means and arranged to operate the same whereby said latch is slidably moved and said bolt is simultaneously swung to an inoperative position.

2. A lock comprising a slidable latch, a rotatable member, a bolt secured upon said member and movable thereby in the arc of a circle, means connecting said rotatable member with said latch, and key actuated mechanism connected with said member and arranged to actuate same whereby said latch and bolt are concurrently moved to an inoperative position.

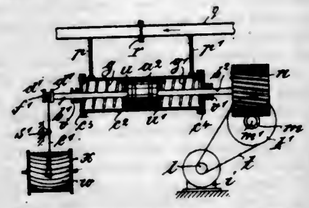
3. A lock comprising a casing, a member rotatably mounted therein, a spring-pressed latch slidably mounted in said casing, means for connecting said latch with said member, a bolt section secured upon said member, a second bolt section pivotally secured to said first named bolt section and movable relatively thereto in one direction only, and key actuated mechanism connected with said member and arranged to actuate same whereby said latch is retracted and said bolt-sections are concurrently moved as a unit to an inoperative position.

4. A lock comprising a casing, a member rotatably mounted therein, a spring-pressed latch slidably mounted in said casing, means for connecting said latch with said member, a bolt section secured upon said member, a second bolt section pivotally secured to said first named bolt section and movable relatively thereto in one direction only, a bracket on said casing extending over said bolt sections adjacent to the pivot thereof when the bolt is in its operative position and key actuated mechanism connected with said member and arranged to actuate same whereby said latch is retracted and said bolt-sections are concurrently moved as a unit to an inoperative position.

5. A lock comprising a casing, a rotatable member mounted therein, a bolt carried by said member and movable thereby in the arc of a circle, said bolt consisting of two pivotally connected sections, one of which is movable relatively to the other in one direction, coöperating means on said section for preventing relative movement thereof in the opposite direction and key-actuated mechanism connected with said member and arranged to actuate same whereby said bolt is moved as a unit to an inoperative position.

[Claims 6 to 11 not printed in the Gazette.]

1,107,298. MANOMETER. FRITZ HAAS, Quedlinburg, Germany. Filed May 14, 1913. Serial No. 767,670. (Cl. 73—111.)



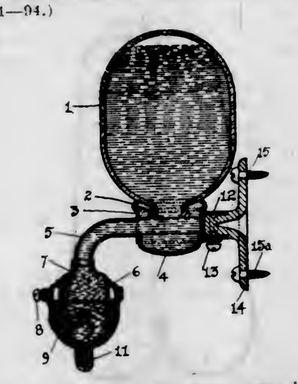
1. In a device of the character described, a pressure gage comprising a cylinder to which the pressure fluid is supplied, a piston movable in said cylinder, a pressure recorder actuated by said piston, and power-driven mechanism for imparting rotary motion to said piston about its axis, said mechanism being capable of translation in accordance with the reciprocations of said piston within the cylinder.

2. In a device of the character described, a pressure gage comprising a cylinder to which the pressure fluid is supplied, a piston movable in said cylinder, a pressure recorder actuated by said piston, and power-driven mechanism for imparting an angular motion to said piston about its axis, said mechanism being capable of translation in accordance with the reciprocations of said piston within the cylinder.

3. In a device of the character described, a pressure gage comprising a cylinder, a piston therein, means for supplying the pressure fluid to said cylinder on both sides of said piston, and means for imparting a rotary motion to said piston about its axis, said means moving in conformity with the movement of said piston.

4. In a device of the character described, a pressure gage comprising a cylinder, a piston therein, means for supplying the pressure fluid to said cylinder on both sides of said piston, and means for imparting an angular motion to said piston about its axis, said means moving in conformity with the movement of said piston.

1,107,299. LIQUID-DISPENSER. JOSEPH B. HALL, Chicago, Ill., assignor to Edward R. Williams, Sharpsburg, Pa. Filed Feb. 25, 1909. Serial No. 480,020. (Cl. 221—94.)



1. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice, a cup surrounding said neck and having a well into which liquid is discharged from said orifice, a holder for said cup provided with an annular supporting shoulder, and means on said cup engaging said shoulder for normally preventing removal of the cup from the holder.

2. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice, a cup surrounding said neck and having a well into which liquid is discharged from said orifice, a holder for said cup provided with an annular supporting shoulder, means on said cup engaging said shoulder for normally preventing removal of the cup from the holder, and interengaging parts on said holder and cup for guiding the latter during its movement.

3. A liquid dispensing apparatus, comprising a receptacle having a bottom neck formed with a discharge orifice, a holder rigidly secured to said receptacle and depending below the end of said neck, and a cup supported at the lower end of said holder and surrounding said neck and arranged to form a liquid seal therewith, said cup being movable with relation to said holder and said neck and arranged when moved to cause the discharge of liquid from said receptacle.

4. A liquid dispensing apparatus, comprising a receptacle having a bottom neck formed with a discharge orifice, a holder rigidly and detachably secured to said receptacle and depending below the end of said neck and a cup surrounding said neck and arranged to form a liquid seal therewith and loosely carried by said holder, said cup being movable with reference to said holder and neck and arranged when raised to cause the discharge of liquid from said receptacle.

5. A liquid dispensing apparatus, comprising a receptacle having a bottom neck provided with a discharge orifice, an annular holder secured to said receptacle and depending below the end of said neck and provided with a supporting shoulder, and a cup within said holder and resting loosely on said supporting shoulder, said cup surrounding said neck and arranged to form a liquid seal therewith and being movable with relation to said holder and neck to cause the discharge of liquid from said receptacle.

[Claim 6 not printed in the Gazette.]

1,107,300. TROUSERS APPLIANCE. MARTIN V. HAMMACK, Kansas City, Mo. Filed May 14, 1913. Serial No. 767,616. (Cl. 223—19.)

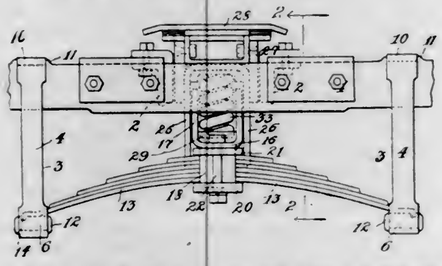
A trousers appliance consisting of a supporting member, two pairs of curved arms having their inner ends bent inward and pivoted in said member at its upper and lower ends with their pivots one above the other to allow proper movements of said curved arms, trousers

engaging devices connecting the outer ends of said pairs of curved arms, and a pair of plates slidingly mounted on the member and formed each with recesses to receive



and move the pivoted inner ends of the arms for adjusting said arms laterally and retaining the arms in proper position in the trousers leg.

1,107,301. CAR-TRUCK. ARTHUR F. H. HEAD, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1913. Serial No. 791,278. (Cl. 105—239.)



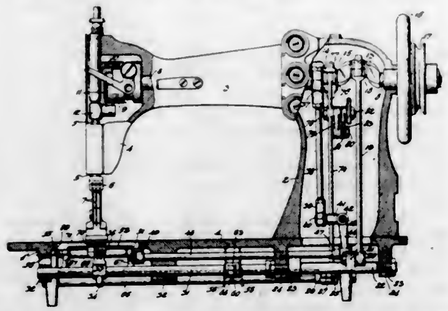
1. In a car truck, the combination with the side bars of the truck frame, longitudinally disposed semi-elliptic springs movably hung from the side bars, a spring plank transversely connecting the leaf springs, the said connection and suspension enabling the springs and plank to swing bodily transversely of the truck, springs on the spring plank, a bolster on said springs, and transoms connecting the said bars between which the said bolster lies.

2. In a car truck, the combination with the side bars of the truck frame, leaf springs movably supported on the side bars, a spring plank connecting the said leaf springs, upwardly extending spiral springs on the spring plank, a bolster on said spiral springs, and transoms extending between the said bars and between which the said bolster lies.

3. In a car truck, the combination with the side bars of the truck frame, longitudinally disposed leaf springs, swing hangers supporting the leaf springs from the side bars transoms connecting the side bars, a spring plank secured to the leaf springs, springs on the spring plank within and adjacent the side bars, a bolster located between the transoms and having its ends extending adjacent the side bars and resting on the said latter springs.

4. In a car truck, the combination with the side bars of the truck frame, longitudinally disposed leaf springs supported on the side bars, a spring plank comprising a U-shaped channel bar, transoms extending between the said bars, a bolster comprising an inverted channel beam embracing the spring plank, spring seats within the channels of the spring plank and bolster and springs extending between said spring seats.

1,107,302. CHAIN-STITCH SEWING-MACHINE. MARTIN HEMLEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 14, 1912. Serial No. 731,307. (Cl. 112—5.)



1. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm formed with a hollow standard, a main-shaft journaled in the bracket-arm and carrying a looper-actuating member and a spreader-actuating eccentric, and a reciprocating needle operatively connected with the main-shaft independently of said actuating member and eccentric, of a looper rock-shaft mounted beneath the bed-plate parallel with the main-shaft, an operative connection between said rock-shaft and looper-actuating member including an element extending through the bracket-arm standard, a thread-carrying looper mounted on said rock-shaft, an endwise reciprocating spreader-bar disposed parallel with said rock-shaft, an operative connection between the spreader-bar and said eccentric including an element also extending through the bracket-arm standard, and a spreader mounted upon said spreader-bar and adapted to distend loops of looper-thread for passage of the needle.

2. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm, a main-shaft journaled in the bracket-arm, a reciprocating needle operatively connected with the main-shaft, and feeding mechanism, of a looper rock-shaft mounted beneath the bed-plate substantially within a plane embracing said needle, a thread-carrying looper mounted thereon with its point directed oppositely to the direction of feed, a reciprocating spreader-bar, a spreader mounted upon said spreader-bar and adapted to distend loops of looper-thread for passage of the needle, an operative connection between the main-shaft and the spreader-bar, and an operative connection between the main-shaft and the looper-shaft including means for imparting to the latter to-and-fro movements with intermediate dwells of greater duration in the extreme advance position of the looper while coacting with the spreader than in the extreme retracted position thereof.

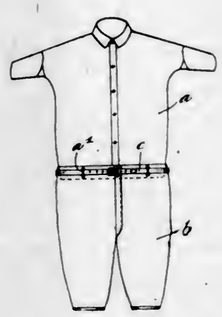
3. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm, a main-shaft journaled in the bracket-arm and carrying a loper-actuating member and a spreader-actuating eccentric, and a reciprocating needle operatively connected with the main-shaft, of a looper rock-shaft mounted beneath the bed-plate and operatively connected with said actuating member of the main-shaft, a thread-carrying looper mounted on said rock-shaft, an endwise reciprocating spreader-bar disposed parallel with said rock-shaft, a bellcrank mounted upon a fixed fulcrum transverse to said spreader-bar and having an arm connected with the latter, a pitman-rod having at one end a strap embracing said actuating eccentric and having its other end connected with another arm of said bellcrank, and a spreader mounted upon said spreader-bar and adapted to distend loops of looper-thread for passage of the needle.

4. In a sewing machine, the combination with a rotary main-shaft provided with a looper-actuating crank and a spreader-actuating eccentric, and a reciprocating needle operatively connected with said shaft, of a looper rock-shaft provided with a crank-arm, a thread-carrying looper mounted thereon and coöperating with the needle, a plural-armed rocker disposed parallel with said rock-shaft and having a crank-arm thereon upon the side adjacent the latter, a link connecting said crank-arms and having a range of movement permanently on the same side of said rocker, a pitman connection between said crank of the rotary shaft and another arm of said rocker, a spreader coöperating with said looper, and an operative connection between said spreader and the spreader-actuating eccentric of the main shaft.

5. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm, a main-shaft journaled in the bracket-arm, and a reciprocating needle operatively connected with the main-shaft, of a looper rock-shaft mounted beneath the bed-plate parallel with the main-shaft, a thread-carrying looper mounted thereon, a reciprocating spreader-bar mounted intermediate the looper rock-shaft and the bed-plate, a spreader mounted upon the spreader-bar and coöperating with said looper, an operative connection between the main-shaft and the spreader-bar disposed wholly upon the side of the spreader-bar nearest the main-shaft, and an operative connection between the main-shaft and the looper rock-shaft comprising a dwell-producing toggle device arranged beneath the bed-plate and having a range of movement permanently below the spreader-bar actuating means.

[Claim 6 not printed in the Gazette.]

1,107,303. ATHLETIC GARMENT. MARK M. HENDERSON, Norwalk, Conn. Filed Oct. 25, 1913. Serial No. 797,180. (Cl. 2—143.)



1. An athletic suit composed of upper and lower garments, wherein one garment carries loops and the other garment has slots to receive said loops, a belt threading said loops to connect said garments, and means preventing the shirt from riding upwardly between the points of connection.

2. An athletic suit composed of shirt and trousers, wherein the shirt carries loops around its waist line, the trousers have slots to receive said loops, which latter are adapted to be retained in said slots by an encircling belt, and reinforce stiffening pieces are provided on said shirt for said loops, said stiffening pieces serving to restrain the adjacent shirt material from upward movement.

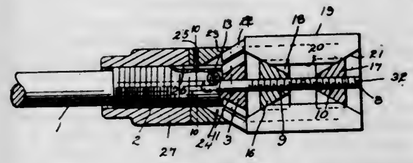
3. An athletic suit composed of shirt and trousers, wherein the shirt is without tails and carries loops around its waist line, the trousers have slots to receive said loops, which latter are adapted to be retained in said slots by an encircling belt, and reinforce stiffening pieces are provided on said shirt for said loops, said stiffening pieces serving to restrain said shirt from withdrawal between retaining points.

4. An athletic suit composed of shirt and trousers, wherein the shirt carries loops around its waist line, a rear loop being in a lower plane than the others, for blousing purposes, and the trousers have slots to receive said loops, which latter are adapted to be retained in said slots by an encircling belt.

5. An athletic suit composed of shirt and trousers, wherein the shirt carries loops around its waist line and the trousers have slots to receive said loops, which latter are adapted to be retained in said slots by an encircling belt, some of the loops being spaced farther apart than the slots to receive them, to provide an excess of shirt material for blousing purposes.

[Claims 6 and 7 not printed in the Gazette.]

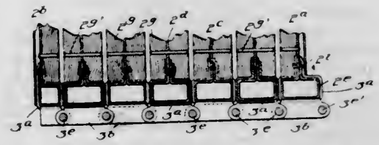
1,107,304. REAMER. JOHN F. HERMAN, Bridgeport, Conn. Filed Sept. 17, 1913. Serial No. 790,229. (Cl. 77—75.5.)



1. In a reamer of the character described the combination with a shank, of a hollow cylindrical body formed on one end thereof, the body being provided with longitudinal slots, a threaded spindle journaled in the outer end of the shank and extending axially through the body, a pair of barrels mounted upon the spindle in threaded engagement therewith, said barrels being formed with oppositely inclined recesses, a plurality of cutters working through the slots formed in the body and seating within the recesses formed in the barrels; and means for limiting the outward movement of the cutters in response to the pressure exerted by the barrels.

2. In a reamer the combination of a shank having a frusto-conical head formed on one end thereof, a hollow shell formed upon the outer end of the head, said shell and head being formed with slots, a spindle journaled in the outer end of the shank and extending axially through the shell, a pair of barrels carried upon the spindle in threaded engagement therewith, said barrels being formed with oppositely inclined recesses, a plurality of cutters extending through the slots in the shell and seating within the recesses, the inner edges of the cutters being inclined to conform to the inclination of the recesses, arms formed upon the inner ends of the cutters for reception within the slots formed in the head; and a stop ring mounted upon the shank and formed with a chamber into which said arms project.

1,107,305. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Oct. 13, 1911. Serial No. 654,500. (Cl. 129—34.)



1. In an apparatus of the class described, the combination of a set of holders each provided with a hinge bar,

and connections between said hinge bars permitting the holders to swing from one position to another, each connection comprising a plate bent around the hinge bar of an adjacent holder, bearing plates formed with openings and depending from the opposite ends of said plates, and a pintle arranged to extend through said openings and the openings in the bearing plates carried by the plate of the adjoining hinge bar.

2. The combination of a set of holders, connections pivotally connecting adjoining holders to each other and permitting them to swing from one position to another, each connection including a pair of spaced depending bearing plates each formed with openings through its opposite ends and arranged to register with the openings of the other bearing plate of the same connection and with openings in the bearing plates of connections on the adjoining holders, and a pintle extending through the alined openings of the bearing plates.

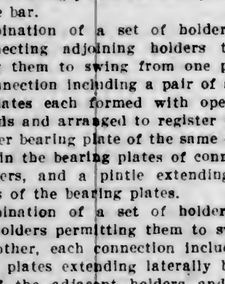
3. The combination of a set of holders, connections between said holders permitting them to swing from one position to another, each connection including a pair of spaced bearing plates extending laterally beyond the opposite sides of the adjacent holders and formed with alined openings through their opposite ends and arranged to register with the openings in the bearing plates of the adjoining connections, and pintles extending through the alined openings of the bearing plates.

4. The combination of a set of holders, connections between said holders permitting them to swing from one position to another, each connection including a pair of spaced bearing plates formed with alined openings through their opposite ends and arranged to register with the openings in the bearing plates of the adjoining connections, and pintles extending through the alined openings of the bearing plates, each alternate holder being provided with one connection and each of the remaining holders being provided with two connections arranged on opposite sides of the connection carried by the alternate holders.

5. Pivotal connections for the hinge bars of the holders in a filing appliance, each connection having walls fitting around one of the hinge bars and bearing plates depending from the opposite ends of the connection, the bearing plates being provided with openings adapted to aline with the openings of an adjoining connection and to receive a pintle therethrough.

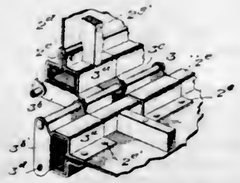
[Claims 6 to 9 not printed in the Gazette.]

1,107,306. PAPER-HOLDER. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Oct. 26, 1911. Serial No. 656,897. (Cl. 24—66.)



A device for holding papers on a frame formed from a section of wire including a pair of laterally extending coils, a pair of intervening legs, and horizontal bars interposed between the lower ends of the legs and the coils located in the plane of the upper side of the coils and at a spaced interval from the face of the frame, with means for connecting the outer ends of the coils to the frame.

1,107,307. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Original application filed Oct. 13, 1911, Serial No. 654,500. Divided and this application filed Dec. 3, 1912. Serial No. 734,679. (Cl. 129—34.)



1. The combination of a series of holders each having a hinge bar, and connections for pivotally connecting the hinge bars together, each connection comprising a supporting device having bottom and side walls arranged to fit snugly the walls of the adjacent hinge bar, a plate interposed between the bottom wall of the supporting device and the adjacent hinge bar and provided with integral bearing members depending from its opposite ends, the said bearing members being formed with openings to receive a pintle, and means for securing the said supporting device to the adjacent hinged bar.

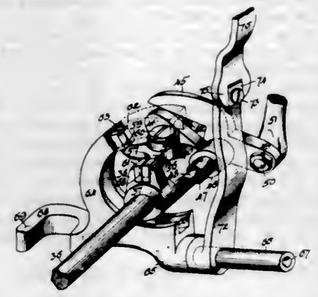
2. The combination of a series of holders, each having a hinge bar, and connections for pivotally connecting the hinge bars together, each connection comprising a supporting device, having bottom and side walls arranged to fit snugly the walls of the adjacent hinge bar, a plate interposed between the bottom wall of the supporting device and the adjacent hinge bar and provided with integral bearing members depending from its opposite ends, the said bearing members being arranged to engage the opposite end edges of the supporting device to prevent movement in a longitudinal direction and formed with openings to receive a pintle, and means for securing the said supporting device to the hinge bar.

3. The combination of a series of holders, and connections for pivotally connecting the holders together, each connection comprising a supporting device adapted to be fixed to an adjacent holder and having a bottom wall, a plate interposed between the bottom wall of the supporting device and the adjacent holder and provided with integral bearing members depending from its opposite ends, the said bearing members being arranged to engage the opposite end edges of the supporting device to prevent movement in a longitudinal direction and formed with openings to receive a pintle, and means for securing the said supporting device to the holder.

4. The combination of a series of holders, each having a hinge bar, connections including pintles for pivotally connecting the hinge bars together, each connection comprising a supporting device having bottom and side walls arranged to fit around the walls of the adjacent hinge bar, a plate interposed between the bottom wall of the supporting device and the adjacent hinge bar and bearing members formed with openings to receive the pintles, depending from its opposite ends, the said plate being of a width to fit between the side walls of said device and of a length to cause the bearing members to engage the opposite end edges of said device, whereby the said plate is held rigidly in position against the adjacent hinge bar, and means for securing each supporting device to an adjacent hinge bar.

1,107,308. LOOP-TAKER MECHANISM FOR SEWING-MACHINES. CHARLES M. HORTON, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 9, 1909. Serial No. 521,815. (Cl. 112—4.)

1. In a sewing machine, the combination with the loop-taker, of actuating means therefor, controlling means interposed between said loop-taker and its actuating means and adapted to cause the loop-taker to move at one speed between loop-seizing and cast-off positions in one stitch-forming cycle and at a different speed in the next succeeding stitch-forming cycle while maintaining a substantially uniform cast-off position for all stitch-forming cycles, and a take-up coöperating with said loop-taker at the common cast-off position in consecutive stitch-form cycles, whereby the release and drawing up of all thread-loops seized and distended by the loop-taker will be effected under the same conditions.



2. In a sewing machine, the combination with a loop-taker, of uniformly acting means for imparting thereto to-and-fro operative movements, and means for varying the length of traverse of said loop-taker toward and from a substantially fixed limit.

3. In a sewing machine, the combination with a reciprocating and laterally movable needle, a loop-taker, and needle-reciprocating and loop-taker actuating means adapted to effect the coöperation of the loop-taker with the needle in the same stage of the latter's reciprocatory movements in each stich-forming operation, of means controlled in its degree of action by the lateral position of the needle and adapted to automatically vary the length of traverse of the loop-taker between loop-seizing position and a cast-off position which is substantially fixed.

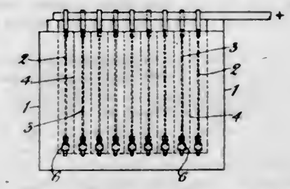
4. In a sewing machine, the combination with a reciprocating and laterally movable needle, a loop-taker confined to movement in a fixed plane, a take-up, and needle-reciprocating and take-up actuating means, of actuating means for imparting to the loop-taker loop-seizing movements, a connection between said loop-taker and its actuating means whereby the loop-taker is caused to assume a substantially uniform cast-off position as the take-up begins to perform each thread-drawing action, and means adapted to control the loop-seizing movements of the loop-taker to maintain a substantially uniform loop-seizing position of the loop-taker relatively to the needle correspondingly with the latter's lateral positions in consecutive stitch-forming operations.

5. In a sewing machine, the combination with a needle, means for imparting thereto reciprocating movements, and means for imparting to said needle lateral jogging movements, of a reciprocatory loop-taker, a shaft for communicating operative movements thereto, a driving element loosely mounted on said shaft, actuating means for imparting uniform operative movements to said driving element, a connection between said driving element and said shaft, and controlling means acting upon said connection synchronously with the needle-jogging means for varying the position of said driving element upon and relatively to said shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,107,309. PROCESS FOR THE ELECTROLYSIS AND TREATMENT OF SULFATE LIQUORS. EDWIN JAMES HUNT, Oldbury, and WILLIAM THOMAS GIDDEN, Warley, England, assignors to Chance & Hunt, Limited, Oldbury, England. Filed Mar. 21, 1914. Serial No. 826,196. (Cl. 204—18.)

1. In a process for the electrolysis of a zinc sulfate solution containing free sulfuric acid by the aid of a lead anode so conducting the process that free particles of undissolved lead compounds derived from the anode cannot pass to the cathode while the electrolyte at both anode and cathode remains the same.

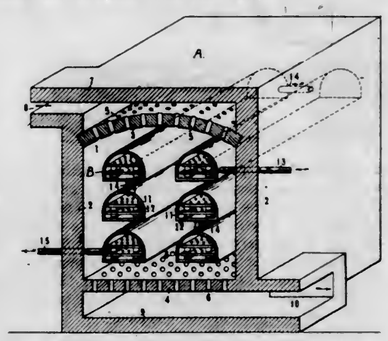


2. In a process for the electrolysis of a zinc sulfate solution containing free sulfuric acid the combination with a vertical lead anode of means adapted to prevent solid free particles of undissolved lead compounds derived from the anode from passing to the cathode while allowing the free passage of the electrolyte.

3. In a process for the electrolysis of a zinc sulfate solution containing free sulfuric acid by the aid of a lead anode so conducting the process that free particles of undissolved lead compounds derived from the anode cannot pass to the cathode while the electrolyte at both anode and cathode remains the same and utilizing the peroxid of lead so obtained to fit zinc sulfate liquors for electrolysis.

4. In a process for the electrolysis of a zinc sulfate solution containing free sulfuric acid the combination with a vertical lead anode of means adapted to prevent solid free particles of undissolved lead compounds derived from the anode from passing to the cathode while allowing the free passage of the electrolyte and utilizing the peroxid of lead so obtained to fit zinc sulfate liquors for electrolysis.

1,107,310. METALLURGICAL PROCESS. WOOLSEY MCA. JOHNSON, Hartford, Conn. Filed Sept. 20, 1909. Serial No. 518,530. (Cl. 75—17.)



1. A process of the nature disclosed for treating ores containing among other metallic constituents silver and large amounts of arsenic, consisting in subjecting the comminuted ore in a closed vessel to the action of moist chlorin gas at an elevated temperature, collecting the evolved vapors of arsenic chlorid and thus obtaining a residue free from arsenic, and then treating said residue to effect a separation of its valuable constituents.

2. A process of the nature disclosed for treating ores containing among other metallic constituents silver, nickel and arsenic, consisting in subjecting the comminuted ore to the action of moist chlorin gas at an elevated temperature, withdrawing the evolved arsenic chlorid from said vessel until the arsenic has been substantially removed from the residue, then leaching said residue, treating the insoluble matter to separate the silver therefrom, and treating the solution to separate the nickel therefrom.

3. A process of the nature disclosed for treating ores containing among other metallic constituents nickel, co-

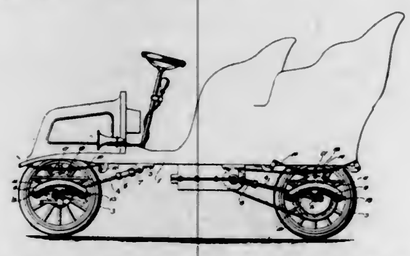
balt and arsenic, consisting in subjecting said ores in comminuted form to the action of moist chlorin gas for a period sufficient to convert substantially all the arsenic to arsenic chlorid, separating the vapors of arsenic chlorid from the residue, and then treating said residue to effect an isolation of the nickel and the cobalt contained therein.

4. A process of the nature disclosed for treating ores containing silver, nickel, cobalt and arsenic, consisting in subjecting the comminuted ore to the action of moist chlorin gas for a time sufficient to convert substantially all of the arsenic to arsenic chlorid, separating the gaseous arsenic chlorid from the residue, leaching said refuse to bring the nickel and cobalt compounds into solution, treating said solution to separate the nickel from the cobalt, and treating the insoluble silver-containing residue to separate the silver therefrom.

5. A process of the nature disclosed for treating ores containing among other metallic constituents nickel and considerable amounts of arsenic, consisting in subjecting the comminuted ore in a closed vessel to the action of moist chlorin gas at an elevated temperature, withdrawing the evolved vapors of arsenic chlorid and thus obtaining a residue free from arsenic, then leaching said residue to obtain a solution containing a compound of nickel, and then treating said solution to obtain metallic nickel therefrom.

[Claims 6 to 16 not printed in the Gazette.]

1,107,311. VEHICLE. THEODORE A. KLENKE, New York, N. Y., assignor, by direct and mesne assignments, to Klenke Cushion Axle Company, a Corporation of New York. Filed Aug. 28, 1907. Serial No. 390,451. (Cl. 21—50.)



1. In a vehicle the combination of an axle, a bed, a pneumatic cushion interposed between the axle and the bed and supports for the pneumatic cushion, one connected with the bed and the other with the axle, one of said supports having a convexly curved portion, and the pneumatic cushion having a curved portion conforming to the convexly curved part of such support, and the other of such supports being a flat plate adapted to bear against the convexly curved part of the cushion.

2. In a vehicle the combination of an axle, a bed, an upwardly curved supporting plate connected with the axle, a flat plate connected with the bed, and a pneumatic cushion supported between said plates and being curved to conform to the upwardly curved lower supporting-plate.

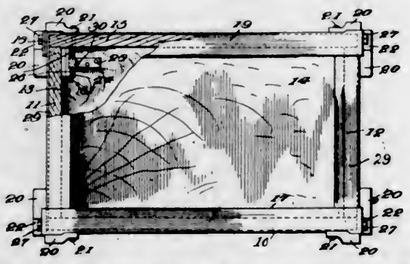
3. In a vehicle the combination of an axle, a bed, two supports for a pneumatic cushion, one support connected with the bed and the other with the axle, and one of said supports being curved throughout its length and being provided with rolled over or cup-shaped ends, and a pneumatic cushion interposed between the said supports curved throughout its length to conform to the curve of the curved support, and rounded at its ends to conform to the rolled-over or cup-shaped ends of the support.

4. In a vehicle the combination of an axle, a bed, two supports for a pneumatic cushion, one support connected with the bed and the other with the axle, and one of said supports being curved throughout its length and being provided with rolled over or cup-shaped ends, and a pneumatic cushion interposed between the said supports curved throughout its length to conform to the curve of the curved support, and rounded at its ends to conform to the rolled-over or cup-shaped ends of the support, and being shorter than the support, whereby when unusual pressure is brought by the supports upon the pneumatic cushion the latter will lengthen and the rounded ends will make contact with the cup-shaped ends of the curved support, but at other times the rounded ends will not make such contact.

5. In a vehicle the combination of an axle, a bed, two supports for a pneumatic cushion, one support connected with the bed and the other with the axle, and one of said supports being curved throughout its length and being provided with rolled over or cup-shaped ends, and a pneumatic cushion interposed between the said supports curved throughout its length to conform to the curve of the curved support, and rounded at its ends to conform to the rolled-over or cup-shaped ends of the support, and being shorter than the support, whereby when unusual pressure is brought by the supports upon the pneumatic cushion the latter will lengthen and the rounded ends will make contact with the cup-shaped ends of the curved support, but at other times the rounded ends will not make such contact, and the other of said supports consisting of a flat plate.

[Claims 6 to 22 not printed in the Gazette.]

1,107,312. KNOCKDOWN CRATE. ORLANDO KLING, Denver, Colo. Filed Nov. 13, 1912. Serial No. 731,074. (Cl. 217—12.)



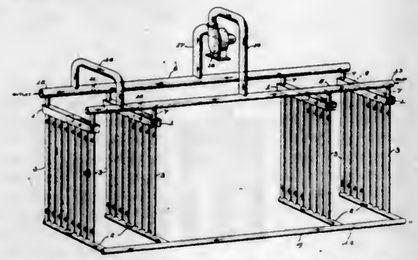
1. In a knock-down crate, a body including bottom side and end members and a top member, L bars bearing upon the confronting edges of said body members and overlapping at their terminals, fastening devices each including a base attached to one of the end members and with a lug extending through the same, fastening devices attached to the side members, a set of guard members bearing upon said top and bottom members and engaging over the L bars at their overlapping terminals, a second set of guard members engaging said end members, means for connecting the fastening members of said ends to the fastening members of said sides, and means for fastening the first-mentioned guard members to said L bars and the lugs and operating to reinforce and protect the L bars and the body members.

2. In a knock down crate, a body including bottom side and end members and a top member bearing upon the body members, L bars bearing upon the confronting edges of said body members and overlapping at their terminals, guard members bearing upon said top and bottom members and engaging over the L bars at their overlapping corners, means for fastening said guard members to said body members and to said L bars and operating to reinforce and protect the same, fastening devices each including a base and a tongue attached respectively to the end and side members, each base having a lug extending through the body member to which it is attached and engaged by the adjacent L bar, fastening means connecting each of said tongues to one of the bases, and fastening means operating respectively through the L bars and into the base lugs.

3. In a knock down crate, a body including bottom side and end members and a top member bearing upon the body members, L bars bearing upon the confronting edges of said body members and overlapping at their terminals, fastening devices each including a base and a tongue attached respectively to the end and side members, each base having a lug extending through the body member to which it is attached and engaged by the adjacent L bar, a pin connecting each of said tongues to one of the bases, and fastening means operating respectively through the L bars and into the base lugs.

4. In a knock down crate, a body including side and end members and a top member, bars bearing over the confronting edges of said body members, guard members bearing upon said side and end members and engaging over the bars, fastening devices including bases having coacting tongues and attached respectively to the end and side members, the bases which are attached to the end members being provided respectively with lugs which extend through the adjacent end member and are engaged by the adjacent bar, fastening means connecting said tongues, and fastening means operating respectively through the guards and bars of the end members and into the lugs.

1,107,313. WATER-HEATER. GEORGE H. KLUMPH and JAMES E. HOUSTON, Chicago, Ill. Filed July 31, 1913. Serial No. 782,207. (Cl. 122—421.)



1. A water-heater comprising water-containing means having an inlet and an outlet, and means connected to said water-containing means at points between the inlet and the outlet for drawing water from a portion of said water-containing means and returning said water to another portion of said water-containing means.

2. A water-heater comprising water-containing means consisting of an inlet division, an outlet division, and an intermediate division, and means connected to said intermediate division for drawing water from said intermediate division and returning it to said intermediate division.

3. A water-heater comprising a plurality of sections, each consisting of a top box, a bottom box, and pipes connecting said boxes, said sections being compactly grouped side by side, a transverse partition within said top boxes, water inlet means, and means for moving the water from the space at one side of said partition to the space at the other side of said partition and back again.

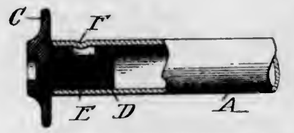
4. A water-heater comprising a plurality of sections, each consisting of a top box, a bottom box, and pipes connecting said boxes, said sections being compactly grouped side by side, a transverse partition within said top boxes, water inlet means, water-conducting means extending from points at one side of said partition to points at the other side of said partition; and means for moving water through said water-conducting means.

5. A water-heater comprising a top box, a bottom box, and pipes connecting said boxes; a transverse partition within said top box; water inlet means; water-conducting means extending from a point at one side of said partition to a point at the other side of said partition; and means for moving water through said water-conducting means.

[Claims 6 to 9 not printed in the Gazette.]

1,107,314. SPOOL FOR MUSIC-ROLLS. JACOB C. KOHLER, Newark, N. J., assignor to Aristo Company, a Corporation of New Jersey. Filed Apr. 14, 1913. Serial No. 760,898. (Cl. 242—69.)

1. A spool for music rolls, comprising a hollow cylindrical body portion, and an end flange having a hub projecting within said portion, a mortise formed in said hub, and a depression in the body portion forming a tenon engaging said mortise to limit both the longitudinal and angular relative movement of said body portion and flange.

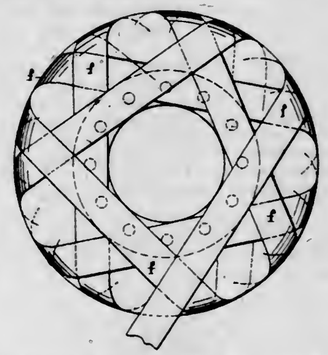


2. A spool for music rolls, comprising a hollow cylindrical body portion, and an end flange having a hub projecting within said body portion, a mortise formed in said hub, and a depression in the body portion forming a tenon engaging said mortise, said tenon being of less width axially of the spool than the width of the mortise, whereby said flange is held from rotation and removal relative to said body portion but is free to move a limited distance axially thereof.

3. A spool for music rolls, comprising a hollow cylindrical body portion, and an end flange having a projecting hub, with a series of mortises formed therein, the material of the body portion being depressed into said mortises to secure the flange to said body portion and to limit the relative longitudinal and angular movements of said parts.

4. A spool for music rolls, comprising a hollow cylindrical body portion and an end flange having a projecting hub fitting therein, mortises formed in said hub, the material of the body portion being depressed inwardly to form tenons to engage said mortises, said tenons being of less width axially of the spool than the width of said mortises, whereby said flange is held from rotation relative to said body portion but is free to move a limited distance only lengthwise thereof.

1,107,315. FLEXIBLE JOINT FOR COUPLING TWO TRANSMISSION-SHAFTS. ARTHUR CONSTANTIN KREBS, Paris, France, assignor to Société Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France. Filed Aug. 14, 1912. Serial No. 714,973. (Cl. 64—13.)



1. In a device of the kind described, a driving disk, a driven disk, a ring member of larger diameter than the disks and a plurality of ligaments passing over said ring member and connecting said disks.

2. In a device of the kind described, a driving disk, a driven disk, a ring member of larger diameter than the disks and arranged in a plane parallel to the normal planes of the disks, and a plurality of ligaments passing over said ring member and connecting said disks.

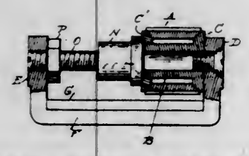
3. In a device of the kind described, a driving disk, a driven disk, a ring member of larger diameter than the disks arranged in a plane parallel to the normal planes of the disks, and a plurality of ligaments passing over said ring member connecting the said disks and arranged tangentially to them.

4. In a device of the kind described, a driving disk, a driven disk, a ring member, a plurality of ligaments carrying said ring member and arranged tangentially to said disks, two clamping rings and means for securing the ligaments between each of the disks and a clamping ring.

5. In a device of the kind described, a driving disk, a driven disk, a ring member of larger diameter than the disks, a plurality of ligaments connecting the two disks and arranged tangentially thereto and passing over the ring member, two clamping rings and means for securing the ligaments between each of the disks and a clamping ring.

[Claims 6 and 7 not printed in the Gazette.]

1,107,316. THERMOSTAT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 2, 1909. Serial No. 531,102. (Cl. 177—128.)



1. A thermostat, comprising a movable member, a friction lock for said member, and means operating upon a variation in temperature for releasing said lock.

2. A thermostat, comprising an automatically-movable member, a friction lock for holding said member, and means operated upon a change in temperature for releasing said lock.

3. A thermostat comprising an automatically-movable member, a friction shoe bearing upon said member, and an expansible member normally holding said shoe in locking engagement with said movable member adapted to release the same at a predetermined temperature variation.

4. A thermostat comprising a rotary member, friction shoes engaging opposite sides of said member, an expansible member normally clamping said shoes but adapted to release the same upon rise in temperature to a predetermined point, and an automatically-movable member normally held from movement by engagement with said rotary member.

5. A thermostat comprising an automatically-operating member, a rotary ratchet member, a pawl on said automatically operating member engaging said ratchet member, a friction shoe for holding said ratchet member from rotation, and an expansible member normally clamping said shoe and adapted to release the same upon rise in temperature to a predetermined point.

[Claims 6 to 8 not printed in the Gazette.]

1,107,317. SHADE AND CURTAIN BRACKET. CARL H. KOEKER, Dayton, Ohio. Filed Apr. 1, 1914. Serial No. 828,762. (Cl. 156—24.)



1. A window bracket comprising a plate, a plurality of roller blind sockets formed in said plate in offset relation both vertically and horizontally in relation one with the other, a plurality of drapery rod sockets each comprising a flange of material formed from the material of the plate extended into a position substantially perpendicular to the plane thereof, and a tongue of the plate material projecting into the opening formed by the removal of the flange material in a plane common with the plate, said plate having an opening therein for the reception of a curtain pole, and a terminal spur on said bracket to support an inclosing casing.

2. A window bracket comprising a plate, a socket therein formed from the material of the plate by extending a rim of the material substantially perpendicular to the plane of the plate and a tongue of the material located in the plane of the plate and projecting into the opening formed by the removal of the material forming the rim.

3. A window bracket comprising a plate, a socket therein formed by perforating the plate to form a tongue of material extending in the plane of the plate and bending the material adjacent to the tongue to a position substantially perpendicular to the plane of the plate.

4. A bracket of the character described having a recess therein to receive a curtain or drapery rod and a stop extending into alinement with the recess to limit the end movement of the rod therein.

5. A bracket for the purpose specified, including a plate adapted to be attached to a supporting structure, a socket projecting beyond the plane of the plate, adapted to receive a curtain or drapery rod, and a stop projecting into alinement with the socket to limit the end movement of the rod.

[Claim 6 not printed in the Gazette.]

1,107,318. ELECTRICAL PLUG-CONNECTOR. FRANK KUHN, Detroit, Mich. Filed Oct. 5, 1912. Serial No. 724,170. (Cl. 173—332.)



1. An electrical plug connector comprising an insulator formed of a plurality of recessed sections placed end to end, electrical contacts and connections within said sections, and an armor incasing said sections and holding the same in fixed relation.

2. An electrical plug connector comprising an insulator formed of a plurality of end to end adjoining sections, having recesses therein with entrance orifices at the inner ends of said sections, electrical contacts and connections within said recesses, and an armor inclosing said sections and holding the same in fixed relation.

3. An electrical plug connector comprising a plurality of end to end adjoining sections, having recesses therein with entrance orifices at the inner ends of said sections, an electrical contact in one of said recesses, a conductor connected to said contact, having a retaining knot in the recess of the adjoining section, and an armor for holding said sections in fixed relation.

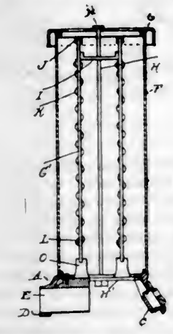
4. An electrical plug connector comprising a recessed insulator, an electrical contact in said recess, and an armor for incasing said insulator, struck up from a sheet metal blank, having an end portion and opposite side portions with longitudinally-extending, meeting edges.

5. An electrical plug connector comprising a recessed insulator, a contact therein, a conductor connected to said contact and passing outward through one end of said insulator, and an armor struck up from a sheet metal blank, having an end portion apertured for the passage of said conductor, and complementary side portions fashioned to embrace said insulator, with longitudinally-extending, meeting edges.

[Claims 6 to 9 not printed in the Gazette.]

1,107,319. ELECTRICALLY-HEATED RADIATOR. FRANK KUHN, Detroit, Mich. Filed Mar. 25, 1913. Serial No. 756,698. (Cl. 219—34.)

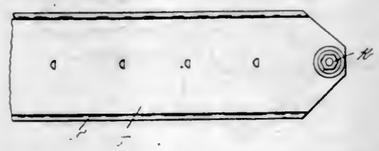
1. An electrical heat radiator, comprising a hollow sheet metal jacket, a centrally apertured base plate for supporting said jacket having integral legs, a switch supporting portion and a connector terminal box supporting portion, a unit comprising parallelly-arranged boards of insulating material spaced from each other, cross ties for connecting and bracing said boards, resistor coils threaded into engagement with perforations in said boards, a metallic base on which said boards are mounted adapted to be detachably secured to the base of said jacket, a switch mounted on said unit base, and connections between said switch and resistor coils.



2. An electrical heat radiator, comprising a hollow sheet metal jacket, a base plate for supporting said jacket, a heating unit comprising parallelly-arranged boards of insulating material spaced from each other, cross-ties for connecting and bracing said boards, a metal base mounted upon said base plate, insulator blocks supporting the boards mounted at opposite ends of said metal base, notched upwardly-extending lugs intermediate said blocks engaging said insulator boards, and resistor coils mounted upon said boards.

3. An electrical heat radiator, comprising a hollow sheet metal jacket, a base member for supporting said jacket, said member being centrally apertured, a heating unit insertible through said aperture, comprising a plurality of comparatively narrow flat parallelly-arranged insulator boards secured in spaced relation to each other, a base plate on which said boards are mounted, and means for detachably securing said base plate to the base member.

1,107,320. ELECTRICAL HEATING UNIT. FRANK KUHN, Detroit, Mich. Filed Sept. 8, 1913. Serial No. 788,711. (Cl. 219—63.)



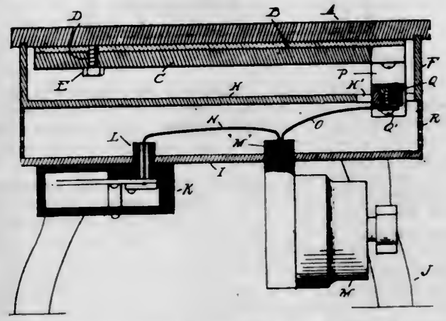
1. In an electrical heating unit, the combination of opposite armor plates, an insulated unit clamped therebetween, and a stay between said plates formed by a tongue struck out from one of the plates extending through said insulating unit and passing through a slit in the opposite plate and clenched.

2. An electrical heating unit, comprising an armor plate having rectangularly-bent upward and outward flanges at its opposite edges, an insulated resistor extending between said flanges and in contact with said plate, and a second armor plate provided with similar flanges telescopically engaging said first plate and having its outwardly-extending flanges seamed together.

3. An electrical heating unit, comprising an armor plate having upwardly and outwardly bent flanges at the opposite edges thereof, an insulated resistor arranged between said flanges in contact with said plate, a second armor plate having similar flanges telescopically engaging the first plate, said outward flanges being seamed together, and a tongue struck up from one of said plates passing through a slit in the opposite plate and clenched.

4. An electrical heating unit, comprising a flat armor plate having rectangularly-bent flanges at its opposite edges terminating in rectangularly-bent outwardly-extending portions, an insulated flat resistor element extending between the first-mentioned flanges and lying adjacent to said plate, and a second armor plate having flanges similar to those of the first plate and telescopically engaging the latter, the outwardly-extending flanges of the two plates being seamed together to exert a clamping tension upon the said plates and the interposed insulated resistor.

1,107,321. ELECTRICALLY-HEATED HOT-PLATE. FRANK KUHN, Detroit, Mich. Filed Sept. 8, 1913. Serial No. 788,715. (Cl. 219—37.)



1. An electric heater, comprising a hot plate, an electrical heating element clamped to the underside of said plate, an insulator block secured to said hot plate and depending therefrom, terminal connections for the resistor mounted on said insulator block, a hollow member having an annular outer wall forming a seat for said hot plate and a bottom cut away at one point for the passage of said insulator block, supporting lugs depending from said hollow member, a stand comprising legs and a top plate on which latter the lugs of said hollow member are supported, terminal contacts and a controlling switch mounted on said stand beneath the same, and electrical connections between said terminal contacts and switch and between the latter and the terminals on said insulator block, being detachably secured to the latter.

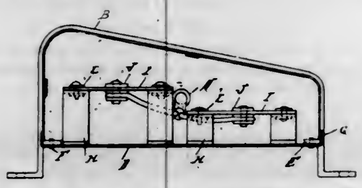
2. An electric heater, comprising a hot plate, an electrical heating unit clamped to the underside of said plate, a stand for supporting said plate, having terminal connections mounted thereon, a hollow cast member interposed between said hot plate and stand, comprising an annular wall, a bottom and depending lugs, said lugs being supported on said stand, and a perforated annular casing surrounding said lugs inclosing the space between said hollow member and stand.

3. An electric heater, comprising a hot plate, an electrical heating unit clamped to the underside thereof, a stand having a top plate and depending legs, electrical connections mounted upon said stand, and a hollow member interposed between said stand and said hot plate formed of cast metal having an annular wall forming a seat for the hot plate, a bottom plate and depending lugs, the latter registering with the legs of said stand and being secured thereto.

4. An electric heater, comprising a hot plate, an electrical heating unit clamped to the underside of said plate, a stand comprising a top plate and depending legs, electrical terminal connections mounted on said stand on the underside thereof and provided with upwardly-extending insulators passing through apertures in said top plate, a hollow member interposed between said stand and hot plate comprising an annular wall forming a seat for the hot plate, a bottom and depending lugs, an insulator block on said hot plate depending therefrom and passing through an aperture in the bottom of said hollow member, terminal connections for the heating unit mounted on

said insulator block, naked conductors for connecting said terminal connections on said block with the terminals mounted on said stand, and a perforated shield surrounding the space between said stand and hollow member in which said naked conductors are located and permitting the free circulation of air.

1,107,322. ELECTRICAL HEATER. FRANK KUHN, Detroit, Mich. Filed Dec. 27, 1913. Serial No. 808,955. (Cl. 219—34.)



1. An electric heater, comprising end members, a perforated casing engaging said members, a bottom plate detachably secured to said end members, and a heating unit mounted on said bottom plate and supported thereby within said perforated casing.

2. An electric heater, comprising flanged end members, a perforated casing engaging said end members adjacent to the flanges thereof, a base plate extending between said end members having side flanges overlapping the lower edges of said perforated casing and abutting against the flanges of said end members, means for detachably securing said bottom plate to said end members, and an electric heating unit mounted on said bottom plate and supported above the same in the space within said perforated casing.

3. An electric heater, comprising end members, a perforated casing extending between said end members, a detachable bottom plate, supporting brackets secured to and extending above said bottom plate, and an electric heating unit clamped upon said supporting brackets and attachable and detachable with said bottom plate from said casing and end members.

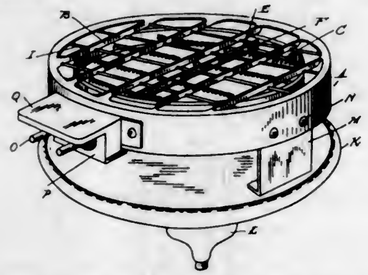
4. An electric heater, comprising end members having marginal flanges, bottom lugs and depending feet, a perforated casing extending between said end members and fitting within said marginal flange, a bottom plate detachably secured to said bottom lugs, and provided with side flanges overlapping the lower edges of said perforated casing and abutting against the marginal flanges of said end members, and an electric heating unit mounted on said bottom plate above the same and within the space inclosed by said perforated casing.

5. An electric heater, comprising end members provided with marginal flanges, depending feet and bottom lugs, the top flanges being inclined, a perforated casing extending between said end members, fitting within said marginal flanges and having a corresponding inclined top, a bottom plate detachably secured to said bottom lugs, and a plurality of electric heating units mounted upon said bottom plate in stepped relation to each other and located within the space inclosed by said perforated casing.

1,107,323. ELECTRIC HEATER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed Feb. 6, 1914. Serial No. 816,876. (Cl. 219—19.)

1. An electrical heater comprising an annular casing, a ring within said casing formed of a strip of insulating material having metallic-bound edges and a series of central apertures, a resistor threaded through said apertures and extending across said ring, and means for supporting the inner ring from the outer ring.

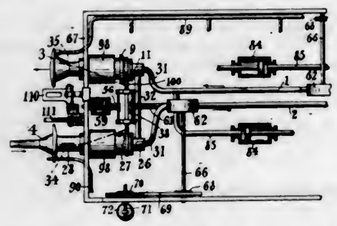
2. An electrical heater, comprising an annular sheet metal casing having integral cross-bars twisted to expose their edges in the open area, transversely-extending rods engaging notched bearings in said cross bars and having a clench engagement therewith, a ring formed of insulator material supported within said outer ring and beneath the cross bars thereof, and a resistor threaded through apertures in said insulator ring and extending thereacross.



3. An electrical heater, comprising a sheet metal cupped casing cut away to form a series of cross-bars connecting the outer ring, said cross bars being twisted to expose the edge only in the open area, a series of cross bars engaging notched bearings in the integral cross-bars and having a clench engagement therewith, an inner ring formed of a strip of insulator material having metallic-bound edges and a series of central apertures, a resistor threaded through said apertures and extending across the ring, a bracket secured to the outer ring and connected to the metallic portion of the inner ring to support the same, and a series of cross-bars extending across the inner ring beneath said resistor.

4. An electrical heater, comprising a cupped sheet metal casing cut away to form spaced cross-bars twisted to expose their edges only in the open area, a series of rods extending transversely to said cross bars and having a clench engagement with notched bearings therein, an inner ring formed of insulator material, a naked resistor extending across said inner ring and supported thereon, terminal contacts, and a bracket secured to said outer ring to which said terminal contacts are secured, said bracket being provided with a guard plate extending over the contacts.

1,107,324. AUTOMATIC RAILWAY-COUPLING. ADOLF LANZDORF, Vienna, Austria-Hungary. Filed Apr. 15, 1911. Serial No. 621,287. (Cl. 213—58.)



1. An automatic railway coupling comprising in combination with coupling means and operating mechanism connecting the train line circuits with said coupling means so as to operate the same, two conduits extending the whole length of the vehicle, pipes connecting said two conduits with each other toward both ends of said vehicle, a distributing member interposed in each of said conduits and located on each vehicle, a relief valve in each of said conduits, means for automatically operating said relief valve when the vehicle upon which it is carried is uncoupled, cylindrical slide valves connected with the ends of both of said conduits, said cylindrical slide valves being adapted when the vehicles are coupled up to interrupt communication between the two conduits through said valves and to establish a through connection between all the conduits on all of the vehicles.

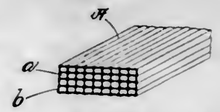
2. An automatic railway coupling comprising in combination with coupling means and operating mechanism connecting the train line circuits with said coupling means so as to operate the same, a source of compressed fluid, two conduits extending the entire length of the vehicle and connected with said source of fluid, a coupling device, means for operating said device, connections from said conduits to said operating means, pipes connecting said two conduits with each other toward the ends of said vehicle, a distributing member interposed in each of said conduits upon each vehicle, means for automatically operating said relief valve when the vehicle upon which it is carried is uncoupled, cylindrical slide valves connected with the ends of the said conduits, said cylindrical slide valves being adapted when the vehicles are coupled to interrupt communication between the two conduits and to establish a through connection between the conduits on all the vehicles, and springs for reëstablishing communication between the conduits on each side of the train when the vehicles are uncoupled.

3. An automatic railway coupling comprising in combination with coupling means and operating mechanism connecting the train line circuits with said coupling means so as to operate the same, two conduits extending the whole length of the vehicle, pipes connecting said two conduits with each other toward both ends of said vehicle, a distributing member interposed in each of said conduits and located on each vehicle, a relief valve in each of said conduits, means for automatically operating said relief valve when the vehicle upon which it is carried is uncoupled, cylindrical slide valves connected with the ends of both of said conduits, said slide valve on one conduit at one end of the vehicle being formed into a tapering portion, a member having a flared opening adapted to receive one of such conically tapering portions, said member being connected with the said slide valve on the same conduit at the other end of the vehicle, a packing ring located in said member, and a spring engaging each of said cylindrical slide valves and adapted to reëstablish communication between said two conduits through said slide valves on the uncoupling of the vehicle.

4. An automatic railway coupling comprising in combination with coupling means and operating mechanism connecting the train line circuits with said coupling means so as to operate the same, two conduits extending the whole length of the vehicle, pipes connecting said two conduits with each other toward both ends of said vehicle, a distributing member interposed in each of said conduits and located on each vehicle, a relief valve in each of said conduits, means for automatically operating said relief valve when the vehicle upon which it is carried is uncoupled, cylindrical slide valves connected with the ends of both of said conduits, said slide valve on one conduit at one end of the vehicle being formed into a tapering portion, a member having a flared opening adapted to receive one of such conically tapering portions, said member being connected with the said slide valve on the same conduit at the other end of the vehicle, a packing ring located in said member, a spring engaging each of said cylindrical slide valves and adapted to reëstablish communication between said two conduits through said slide valve on the uncoupling of the vehicle, a casing surrounding each of said cylindrical slide valves, a buffer member formed at the extremity of said casing, hooked levers for connecting the meeting buffers of two vehicles together, a cylinder, a piston working therein, piston rods, a movable shoe upon each of said piston rods, a spring surrounding each of said shoes, and connections from said shoes to the said hooked levers, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,107,325. CANDY AND PROCESS OF MAKING THE SAME. WILLIAM B. LASKEY, Marblehead, Mass. Filed Apr. 25, 1913. Serial No. 763,581. (Cl. 127—4.)



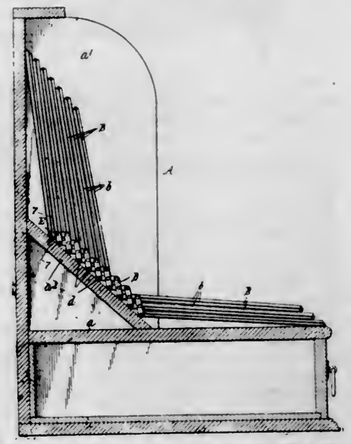
1. As a new article of manufacture, a piece of candy having uninterrupted parallel passages extending from one edge to the other of the piece of candy, said passages being arranged to form a predetermined pattern.

2. As a new article of manufacture, a piece of candy having uninterrupted parallel passages extending from one edge to the other of the piece, said passages being polygonal in cross section and arranged in predetermined pattern with their adjacent sides parallel.

3. As a new article of manufacture a piece of candy composed of a shell surrounding a plurality of uninterrupted parallel passages extending from one edge of the piece to the other, said passages containing filling material.

4. The process of making porous candy which consists in forcing candy through a die provided with hole-forming members to form a strand of candy having relatively large passages extending lengthwise thereof, and then stretching the candy to reduce the cross-sectional area thereof.

1,107,326. ACCOUNT FILE OR REGISTER. LEON E. LEONARD, Buffalo, N. Y., assignor, by mesne assignments, to The Superior Register Company, Canisteo, N. Y., a Corporation. Filed June 1, 1909. Serial No. 499,409. (Cl. 45—2.)

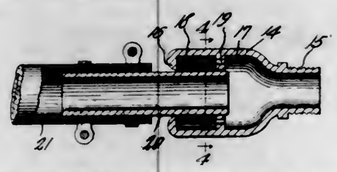


1. The combination of a series of swinging file leaves provided with means for retaining papers thereon, lazy-tongs arranged at the opposite side edges of the leaves, and

pivots which connect the leaves to the lazy-tongs and form the hinges for the swinging leaves and one set of connecting pivots for the lazy-tong bars, substantially as set forth.

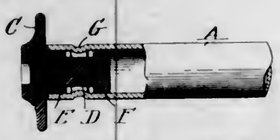
2. The combination of a series of file leaves provided with means for retaining papers thereon, and lazy-tongs arranged at the opposite side edges of the leaves, said leaves having rods at one end thereof which project beyond the side edges of the leaves and form pivots for connecting the leaves to the lazy-tongs and for connecting the lazy-tong bars to each other, substantially as set forth.

1,107,327. PIPE-COUPLING. FITZ JAMES LEWIS, Empire, Canal Zone. Filed Oct. 21, 1913. Serial No. 796,480. (Cl. 137—28.)



A pipe coupling and union comprising a casing, said casing provided with an inwardly extending flange at the end thereof, and with an inwardly extending apertured rim spaced a distance from said flange, a gasket extending between the said flange and rim and of relatively smaller internal diameter than the internal diameter of the rim or flange, said gasket adapted to receive a pipe therethrough and to snugly engage the same, said casing being provided with longitudinally extending spacing ribs extending between the said flange and rim holding the gasket in spaced relation with respect to the casing and the pipe in spaced relation and out of contact with the flange and rim, said rim aperture communicating with the space intermediate the outer periphery of the gasket and the inner surface of the casing, said pipe adapted to supply pressure behind the gasket and to one edge thereof, forcing the gasket into rigid contact with the pipe and the said flange.

1,107,328. SPOOL FOR MUSIC-ROLLS. ELLIS LINDER, Belleville, N. J., assignor to Aristo Company, a Corporation of New Jersey. Filed Apr. 14, 1913. Serial No. 760,897. (Cl. 242—69.)

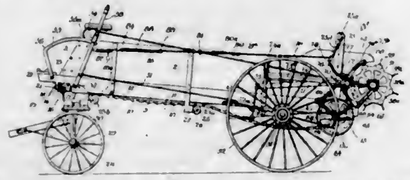


1. A spool for music rolls, comprising a hollow cylindrical body portion, and an end flange having a hub projecting within said body portion and reduced in cross section at a point between its ends, said body portion having a depression formed therein engaging said reduced portion to limit endwise movements of said flange relative to said body portion.

2. A spool for music rolls, comprising a hollow cylindrical body portion, and a flange having a projecting hub with an annular groove formed therein, said hub projecting within the body portion and the body portion having an annular depression engaging the annular groove of said hub.

3. A spool for music rolls, comprising a hollow cylindrical body portion; and an end flange having a projecting hub, an annular groove formed in said hub, the body portion having an annular depression fitting into said groove, the depression being less in width than said groove, whereby the end flange is held in place relatively to the body portion so as to be free to move lengthwise with respect thereto, and also be capable of rotation independently of the body portion.

1,107,329. MANURE-SPREADER. ALEXUS C. LINDGREN and GUNDER G. MANDT, Moline, Ill., assignors to Moline Plow Company, a Corporation of Illinois. Filed Dec. 20, 1909, Serial No. 533,992. Renewed July 8, 1914. Serial No. 849,834. (Cl. 111—40.)



1. In a manure-spreader, an endless one-way traveling load-carrying apron, mechanism for effecting its travel to discharge its load, including a wheel-driven shaft, a rocking-member operatively connecting therewith, and a longitudinally shiftable device supporting said member, clutch-mechanism adapted to derive actuation from said wheel-driven shaft, a beater-cylinder disposed adjacent the point of discharge of the load, mechanism for operating said beater-cylinder and, through said clutch-mechanism, connecting with and deriving movement from, said shaft, and a control-device connecting with said rocking-device and clutch-mechanism and shiftable to a plurality of operative positions, first to initiate rotation of said beater-cylinder, and, then, successively, to initiate travel of said apron, and to accelerate such travel.

2. In a manure-spreader, an endless one-way traveling load-carrying apron, mechanism for effecting its travel, including a wheel-driven shaft, a rocking member operatively connecting therewith, and a longitudinally-shiftable device supporting said member, clutch-mechanism adapted to derive actuation from said shaft, a beater-cylinder disposed at the point of load-discharge, wheel-driven mechanism for rotating said beater-cylinder, and, through said clutch-mechanism, connecting with and deriving movement from, said shaft, and a control-device connecting through said shiftable device and clutch mechanism with the apron-driving mechanism and beater-driving mechanism, and operating to successively actuate said beater and apron-driving mechanisms.

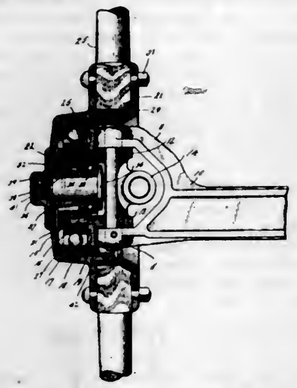
3. In a manure spreader, a one-way traveling load-carrying apron, a beater-cylinder disposed adjacent the point of discharge of the load, a shiftable rake-member arranged in juxtaposition to the spreader-cylinder, mechanism for driving said apron including a driving-shaft and a vertically-oscillating member pivoted intermediate of its ends, means disposed adjacent the fulcrum of said oscillating member and adapted to control the position of said rake-member, a speed-changing gear connecting with said oscillating member, a longitudinally shiftable supporting device, and a single control device operatively connecting with said driving-mechanism and speed-changing gear and operative successively to actuate said apron-drive and to vary the speed thereof.

4. In a manure-spreader, a load-carrying apron, intermittently-operating mechanism including a shiftable fulcrum-element and an oscillating-member operatively mounted thereon for driving said apron toward discharging position, ground-wheel driven means connecting with said mechanism for actuating it, a rotating beater-cylinder disposed in the path of travel of said apron, beater-driving mechanism actuated independently of said apron-driving mechanism, and a control-device shiftable to successively actuate said beater and apron-driving mechanisms and to vary the speed of said apron-driving mechanism whereby a predetermined quantity of material may be delivered to said beater within a given time or area of travel of the spreader.

5. In a manure-spreader, an endless one-way traveling load-carrying apron, apron-driving mechanism for effecting travel of said apron including a driving-shaft, speed-changing mechanism including a shiftable fulcrum-element, and an oscillating-member pivoted on said fulcrum-member, a rake-member arranged adjacent the point of the discharge of the load, one part of said oscillating member being adapted to engage and hold said rake-member in position, and a control-member connecting with said mechanisms and shiftable, first, to actuate said apron-driving mechanism and, then, said speed-changing mechanism.

[Claims 6 to 27 not printed in the Gazette.]

1,107,330. WHEEL HUB AND SPINDLE FOR AUTOMOBILES. THOMAS J. LINDSAY, Indianapolis, Ind., assignor to Lindsay Auto Parts Company, a Corporation of Indiana. Filed May 27, 1912. Serial No. 700,031. (Cl. 21—142.)



1. The combination of an axle, a substantially vertical knuckle pivot, a knuckle pivoted on said pivot and having a tubular outer end, a single bearing arranged upon said tubular outer end to receive a radially applied load, a wheel having a hollow hub sleeved over and wholly supported radially by said single bearing, said wheel hub embracing the knuckle pivot so that said pivot is within the wheel plane, an axial-thrust bearing interposed between the knuckle and the wheel hub, said two bearings sustaining the wheel and its support in operative relation, and the axial-thrust bearing being within said tubular outer end and smaller in external diameter than said tubular outer end is in internal diameter so that it can be withdrawn therethrough, and means for normally preventing said axial-thrust bearing from being so withdrawn.

2. The combination of an axle, a substantially vertical knuckle pivot, a knuckle pivoted on said pivot and having a tubular outer end, a single bearing arranged upon said tubular outer end to receive a radially applied load, a wheel having a hollow hub sleeved over and wholly supported radially by said single bearing, an axial-thrust bearing interposed between the knuckle and the wheel hub, said two bearings sustaining the wheel and its support in operative relation, and the axial-thrust bearing being within said tubular outer end and smaller in external diameter than said tubular outer end is in internal diameter so that it can be withdrawn therethrough, and means for normally preventing said axial-thrust bearing from being so withdrawn.

3. The combination of an axle, a substantially vertical knuckle pivot, a knuckle pivoted on said pivot and having a tubular outer end, a bearing arranged upon said tubular outer end to receive a radially applied load, a wheel having a hollow hub sleeved over and supported by said bearing, said wheel hub embracing the knuckle pivot so that said pivot is within the wheel plane, a nut threaded into the interior of the tubular outer end of the knuckle, a pin carried by the wheel hub and axially adjustable therein, an axial-thrust bearing interposed between said nut and pin, and means for clamping the pin and wheel hub together, said means comprising a nut threaded upon the said pin and engaging the wheel hub.

4. The combination of an axle, a substantially vertical knuckle pivot, a knuckle pivoted on said pivot and having a tubular outer end, a bearing arranged upon said tubular outer end to receive a radially applied load, a wheel having a hollow hub sleeved over and supported by said bearing, said wheel hub embracing the knuckle pivot so that said pivot is within the wheel plane, a nut threaded into the interior of the tubular outer end of the knuckle, a pin carried by the wheel hub, and an axial-thrust bearing interposed between said nut and pin.

5. The combination of an axle, a substantially vertical knuckle pivot, a knuckle pivoted on said pivot and having a tubular outer end, a bearing arranged upon said tubular outer end to receive a radially applied load, a wheel having a hollow hub sleeved over and supported by said bearing, said wheel hub embracing the knuckle pivot so that said pivot is within the wheel plane, a nut threaded into the interior of the tubular outer end of the knuckle, a pin carried by the wheel hub and axially adjustable therein, an axial-thrust bearing interposed between said nut and pin, and means for clamping the pin and wheel hub together.

[Claims 6 to 14 not printed in the Gazette.]

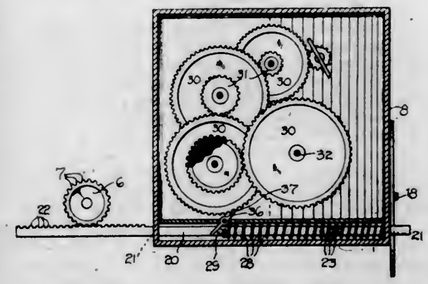
1,107,331. ADJUSTING DEVICE FOR MODEL DRESS-FORMS. MICHAEL LUERY, Chicago, Ill., assignor to Model Form Company, Chicago, Ill., a Corporation of Illinois. Filed July 26, 1913. Serial No. 781,315. (Cl. 223—18.)



1. A device of the character described comprising a dress form having a hollow sectional-neck with top portions lying in the same plane, a plurality of centrally positioned radially disposed flat clamping plates, a setting element for each plate adapted to rest against the said top portions, connecting portions for said central plates and said setting elements whereby said central plates are brought contiguously into different horizontal planes, means for fastening said plates and neck portion, and a clamping device for said plates.

2. A device of the character described comprising a dress form having an adjustable sectional neck, a flat sheet metal adjustable clamping plate extending inwardly from each section of the neck, said plates overlapping, a clamping device for holding said plates and neck adjusted, and an upwardly projecting holding device (4) struck up out of the metal of the flat part of each of said plates to be grasped by the operator for moving said plates and neck for adjustment.

1,107,332. AUTOMATIC TIME-STOP. LOFTON V. MADDOX, Coldwater, Tenn. Filed Mar. 31, 1913. Serial No. 757,943. (Cl. 74—46.)



1. The combination with an engine having a governor shaft and a fuel cut off screw, of stopping mechanism com-

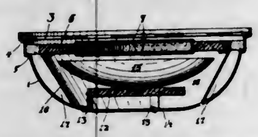
prising a frame having a plurality of intermeshing gear wheels rotatably mounted therein, one of said gear wheels being operatively connected to said governor shaft, a bar slidably mounted in said frame and operatively connected with said cut off screw, a lever pivotally mounted on said frame and engaging said slide bar, and means connected with another of said gear wheels to release said lever from engagement with said slide bar upon predetermined rotation of the last mentioned gear wheel, as and for the purpose described.

2. The combination with an engine having a governor shaft and a fuel cut off screw, of stopping mechanism comprising a frame having a plurality of intermeshing gear wheels rotatably mounted therein, one of said gear wheels being operatively connected to said governor shaft, a bar slidably mounted in said frame, one end of said bar being operatively connected to said cut off screw, a hand secured to another of said rotatable wheels, a bell crank lever pivotally mounted upon said frame, one arm of said bell crank lever being engaged with said slide bar to prevent movement thereof, and the other arm of said bell crank lever being disposed in the path of movement of said hand, whereby said lever will be released from engagement with said bar upon predetermined rotation of the last mentioned gear wheel, as and for the purpose described.

3. The combination with an engine having a governor shaft and a spark producing battery, of stopping mechanism comprising a frame having a plurality of intermeshing gear wheels rotatably mounted therein, one of said gear wheels being operatively connected to said governor shaft, a bar slidably mounted in said frame, means for holding said slide bar stationary with relation to said frame, means operatively connected to another of said gear wheels for releasing said means for holding said slide bar, said slide bar being adapted to cut off the supply of fuel to the engine, and means operatively connected to said slide bar to break the circuit of said battery, as and for the purpose described.

4. The combination with an engine having a governor shaft, and a fuel cut-off screw, of a stopping mechanism comprising a plurality of intermeshing gear wheels, one of said gear wheels being operatively connected to said governor shaft, a rack-bar operatively connected with said cut-off screw, means for normally holding said rack-bar stationary, means co-acting with one of said wheels for releasing said bar from the first said means, and means for moving the rack-bar immediately after being released.

1,107,333. ELECTRIC HEATER. GEORGE H. MANSFIELD and CHARLES W. WILD, Canton, Ohio. Filed Apr. 22, 1914. Serial No. 833,629. (Cl. 219—37.)



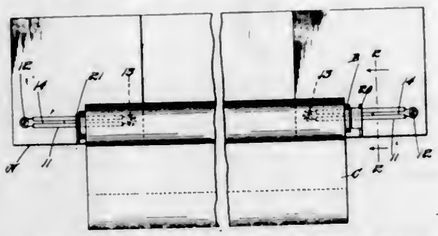
1. In an electric heater, a casing provided with an air intake opening, the top portion thereof provided with flanges spaced from each other and its bottom provided with an air intake opening, a heating plate adapted to be supported by one of the inward extending flanges, an insulating plate located below the heating plate and provided with resistance elements arranged to form a continuous circuit, an air deflector located below the insulating plate and the resistance elements, said deflector plate spaced from the heating elements and a heat resistance plate located between the air deflector and the intake opening.

2. In an electric heater, a casing provided with an air intake opening, the top portion thereof provided with flanges spaced from each other and its bottom provided with an air intake opening, a heating plate adapted to be supported by one of the inward extending flanges, an insulating plate located below the heating plate and provided with resistance elements arranged to form a continuous circuit, an air deflector located below the insulating plate and the resistance elements, said deflector plate spaced from the heating elements and a heat resistance plate located between the air deflector and the intake opening, and an apron connected to and carried by the insulating plate, said apron located around the deflector and heat resisting plate.

3. In an electric heater, the combination of a casing, said casing provided with an air intake opening, an insulating plate, resistance elements carried by said insulating plate, an air deflector located below the insulating plate and resistance elements, said deflector plate spaced from said insulating plate and an apron located below the insulating plate, a heat resisting plate located below the deflector and spaced from the air intake opening.

4. In an electric heater a casing provided with an air intake opening, a heat resisting plate spaced from the air intake opening in the casing, an insulating plate adapted to be supported by the casing, said insulating plate having connected thereto a heating element and a reflector plate located intermediate the insulating plate and heat resisting plate.

1,107,334. CURTAIN-FIXTURE. WILLIAM MARTIN, Salem, Mass., assignor of one-fourth to Charles Wineapple, one-fourth to Max Lemkin, and one-fourth to Morris Wineapple, Salem, Mass. Filed July 5, 1912. Serial No. 707,788. Renewed Jan. 23, 1914. Serial No. 813,976. (Cl. 156—24.)



1. The improved curtain fixture consisting of a slide, a bracket pivoted on said slide and capable of longitudinal movement relative thereto, said bracket being provided with a leg to contact with the window frame and firmly position it.

2. The improved curtain fixture comprising a cylindrical slide, and a bracket having a corresponding shaped portion engaging said slide, said bracket having a leg engaging the window frame.

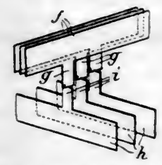
3. The improved curtain fixture comprising a cylindrical slide, a bracket having a corespondingly shaped portion engaging said slide, and a leg on the said bracket engaging the window frame, whereby said bracket is movable longitudinally of the said slide and is capable of movement about said slide as an axis to bring said leg out of contact with the window frame to permit longitudinal movement of the bracket on the slide.

4. The improved curtain fixture consisting of a tubular slotted slide, a bracket having a cylindrical member located within said tubular slide and provided therebelow with a leg adapted to rest against the window frame and retain the said bracket in longitudinal position thereon.

5. The improved curtain fixture comprising a tubular slotted slide and a bracket having a cylindrical member located within the bore of said slide, said bracket having a leg in contact with the frame of the window.

1,107,335. PILLOW-LACE-MAKING MACHINE. AUGUST MATITSCH, Nottingham, England, assignor to The Firm of M. Faber & Co., Vienna, Austria-Hungary. Filed Dec. 21, 1912. Serial No. 737,987. (Cl. 66—6.)

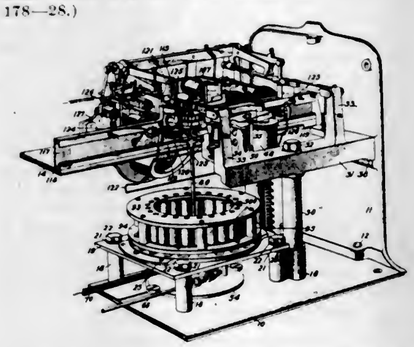
1. In a pollow-lace machine having pickers and coöperating lifting bars arranged for simultaneously making a plurality of connected strips of pillow lace, each having a border, a middle portion and a selvage, the selvage of one strip being adjacent the border of the next adjacent strip, substitute pickers and substitute lifting bars substantially equal in number to those required for the production of said adjacent selvage and border for producing an intermediate connecting design and thereby produce a strip of lace of multiple width.



2. In a pillow-lace machine having combs, pickers, and coöperating lifting bars arranged for simultaneously making a plurality of connected strips of pillow-lace, each having a border, a middle portion and a selvage, the selvage of one strip being adjacent the border of the next adjacent strip, substitute pickers and coöperating substitute lifting bars equal in number to those forming said adjacent selvage and border, said substitute pickers replacing the adjacent border and selvage forming pickers in the same comb slots and coöperating with the substitute lifting bars to form a connecting pattern having the same number of stitches as are required to produce said adjacent selvage and border, thereby producing a strip of lace of multiple width.

3. In a pillow-lace machine having pickers and coöperating lifting bars arranged for simultaneously making a plurality of connected strips of lace, each strip having two outer portions constituting respectively a border and a selvage, there being an outer portion of one strip adjacent the outer portion of the next strip, substitute pickers and substitute lifting bars substantially equal in number to those required for the production of said adjacent portions for producing an intermediate connecting design to produce a strip of lace of multiple width.

1,107,336. PRINTING-TELEGRAPH. FRANK R. McBEATY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 31, 1912. Serial No. 700,767. (Cl. 178—28.)



1. In a printing telegraph, the combination of a selecting circuit, a plurality of type magnets therein, a receiving device including a relay, for selecting any one of the type magnets, a locking circuit for holding the selecting circuit in position, and contacts in said locking circuit controlled by the relay after the cessation of its energizing current.

2. In a printing telegraph, the combination of a main line, a receiving device therein responsive to current impulses, and including a relay, a local circuit having a type magnet therein and closed by the receiving device, a locking circuit for the local circuit, and contacts in said locking circuit controlled by the relay after the cessation of an impulse from the main line whereby the local circuit may return to normal condition.

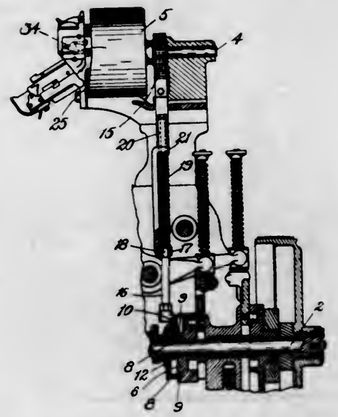
3. In a printing mechanism, the combination with a controlling circuit containing polarized relays and a neutral relay, each responsive to current impulses, of a local selecting circuit having a plurality of branches therein, a type magnet in each of said branches selectively operated by a combination of impulses in the controlling circuit, a second local circuit closed by the armature of the selected type magnet, a presspad actuating electromagnet controlled by the closure of said last named circuit to print the character selected by the type magnet, a locking circuit for the local selecting circuit, and contacts included therein controlled by said neutral relay for returning the selecting circuit to normal condition.

4. In a printing telegraph, the combination of a controlling circuit responsive to current impulses from a distant station, including a neutral relay, a selecting circuit having a series of branches, a type magnet in each of said branches each responsive to a combination of impulses received by the controlling circuit, a printing magnet in said selecting circuit and operated thereby, a locking circuit for said selecting circuit, and contacts in said locking circuit controlled by the neutral relay whereby the selecting circuit may return to normal condition only after the cessation of a combination of impulses.

5. The combination of a rotary shaft, a type wheel having two rows of type and movable longitudinally of the shaft to bring either row of type into printing position, a shifting magnet for moving said type wheel in a direction along the axis of said shaft, an energizing circuit for the shift magnet, a selecting circuit for the shift magnet including a relay, and a locking circuit for the relay included in the energizing circuit for the shift magnet whereby the shift magnet is held energized after the return of the selecting circuit to normal.

[Claims 6 to 24 not printed in the Gazette.]

1,107,337. TACK-SUPPLYING MECHANISM. RONALD F. McFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 23, 1903, Serial No. 149,966. Divided and this application filed May 15, 1912. Serial No. 697,466. (Cl. 1—6.)



1. A tack supplying mechanism having, in combination, a cylindrical drum hopper mounted to oscillate about its own axis, a chute extending into the hopper and to which tacks are raised and delivered by the rotation of the hopper, a high speed intermittently actuated driving shaft, and connections from the shaft to the hopper directly transmitting movement yieldingly both forwardly and backwardly to the hopper and allowing the oscillatory

movement of the hopper to be completed after the driving shaft has come to rest.

2. A tack supplying mechanism having, in combination, an oscillatory hopper, a chute to which tacks are supplied by the hopper, a high speed driving shaft which is actuated in two steps with automatically produced dwells between the steps, and connections from the shaft to the hopper transmitting movement yieldingly both forwardly and backwardly to the hopper and comprising an eccentric on the shaft, a rack bar connected with the hopper, a connecting rod extending through a portion of the rack bar at two points, a spring on the rod between said points, and flanged collars abutting on the rod and on the bar to drive the latter through the spring in either direction, substantially as described.

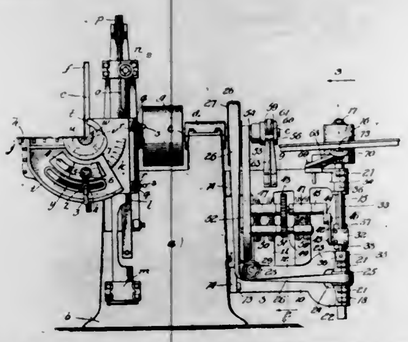
3. A tack supplying mechanism having, in combination, a cylindrical drum hopper mounted to oscillate about its own axis, a chute extending into the hopper and to which tacks are raised and delivered by the rotation of the hopper, a high speed intermittently actuated driving shaft, connections from the shaft to the hopper directly transmitting movement yieldingly both forwardly and backwardly to the hopper, and mountings for the hopper all arranged to permit the hopper to turn in one direction or the other after the actuation of the cam shaft has terminated.

4. A tack supplying mechanism having, in combination, an oscillatory hopper, a chute to which tacks are supplied by the hopper, means for intermittently turning the hopper, a clearer for dislodging tacks intermittently from a portion of the chute, a reciprocatory pawl carrier arranged to be actuated by the hopper, pawls on the carrier arranged to advance the clearer a portion of an operative stroke during the forward reciprocation of the carrier and to complete the stroke on the return of the carrier.

5. A tack supplying mechanism having in combination, an oscillatory hopper, a chute to which tacks are supplied by the hopper, means for intermittently turning the hopper, a clearer for dislodging tacks intermittently from a portion of the chute, and operating means from the hopper to the clearer arranged to cause the clearer to dwell during its stroke with opportunity to settle down back of a tack, for the purpose described.

[Claims 6 to 24 not printed in the Gazette.]

1,107,338. GRINDING OR DRUM-SANDING MACHINE. JOHN MILLER, Jr., Beloit, Wis., assignor to Charles H. Besly and Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1913. Serial No. 749,385. (Cl. 51—5.)



1. In a grinding machine, the combination of a rotary grinding tool having a cylindrical peripheral surface of abrasive material, an endwise movable, rotative spindle in concentric relation to and rotatable with said tool, a frame provided with stationary bearings in which said spindle rotates and has endwise movement, means for rotating the spindle embracing a rotative member, surrounding said spindle; there being parts on the frame arranged on each side of said rotative member and acting to hold the same from endwise movement with the spindle, and means for reciprocating said spindle longitudinally during the rotation thereof.

2. In a machine of the class described, the combination of a frame, a longitudinally movable, rotary spindle, fixed bearings on the frame for said spindle, a rotary grinding member secured in fixed concentric relation to and movable with the spindle, means for rotating the spindle and thereby the grinding member supported by the spindle, a crank shaft arranged transversely to said spindle and having a crank arm, a non-rotative bearing block mounted on said spindle, a guide member secured to said frame and arranged parallel to said spindle, said bearing block having sliding engagement with said guide member, means holding the spindle from endwise movement relatively to the bearing block, means affording operative connection between said crank arm and said bearing block, and means for rotating the crank shaft, to reciprocate the spindle during the rotation of the latter.

3. In a grinding machine, the combination of a rotary grinding member, an upright spindle in concentric relation to and rotatable with said rotary grinding member, a supporting frame provided with stationary bearings in which said spindle has rotative and endwise sliding movement, means for rotating said spindle, embracing a rotative driving member engaging the spindle; there being parts on the frame arranged on opposite sides of said rotative member and acting to hold the same from endwise movement with said spindle, a crank shaft rotatably mounted in said frame, and means for operatively connecting the crank shaft with said upright shaft, embracing a non-rotative bearing block movable endwise with said spindle.

4. In a grinding machine, the combination of a rotary grinding member having a peripheral portion formed of abrasive material, a stationary frame, an upright, endwise movable, rotative spindle mounted in the frame in concentric relation to and connected with said rotary grinding member, a main operating shaft, means for operatively connecting said spindle with the main operating shaft, a non-rotative bearing block mounted on the frame and moving endwise with said spindle, a crank shaft, a link having one end pivotally connected with the bearing block and having its opposite end pivotally connected with the crank shaft, and means operatively connecting the crank shaft with said main driving shaft.

5. In a machine of the class described, the combination of a frame, a longitudinally movable, rotary spindle, stationary bearings on the frame for said spindle, a rotary grinding member secured in fixed concentric relation to and movable with the spindle and having a peripheral portion formed of abrasive material, a crank shaft extending at right angles with respect to the spindle and having a crank arm adjacent to the spindle, a non-rotative bearing block mounted on the frame and having endwise movement with said spindle, a link having one end operatively connected with said bearing block, and having its opposite end pivotally connected with said crank, a counter-shaft rotatably mounted in parallel relation to the crank shaft, gear mechanism operatively connecting the crank shaft with said counter-shaft, a main driving shaft, means for operatively connecting said driving shaft with the spindle for rotating the latter, and means for operatively connecting the counter-shaft with the main driving shaft and disconnecting it therefrom.

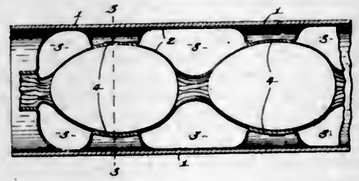
[Claims 6 to 8 not printed in the Gazette.]

1,107,339. PACKAGE FOR USE IN SENDING FRAGILE ARTICLES. IRA A. MILLIHON, New York, N. Y., assignor, by mesne assignments, to Hammock Egg Carrier Company, a Corporation of West Virginia. Filed May 26, 1913. Serial No. 769,858. (Cl. 217—28.)

1. A package for the shipment of eggs comprising a container and a wrapper inclosed thereby and inclining a plurality of spaced apart inflatable compartments.

2. A package for the shipment of eggs comprising a substantially rigid container and a wrapper removably held therein and comprising a plurality of spaced apart transversely extending inflatable compartments.

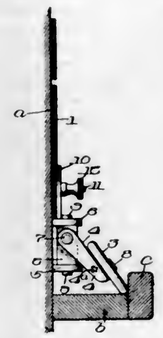
3. A package for the shipment of eggs comprising a tubular container and a wrapper removable therefrom and insertible therein through one end of the same said wrapper comprising a plurality of spaced apart double walled portions designed to be distended and other single walled portions arranged at one side of and extending parallel with the double walled portion.



4. In a package for the shipment of eggs, a substantially rigid container and a wrapper removably retained therein, said wrapper initially being substantially flat and comprising a plurality of spaced apart inflatable compartments and end and interposed substantially solid portions and means for inflating said compartments whereby the outer walls thereof will be pressed against the inner wall of the container and the inner walls of said compartment will coöperate with the eggs for preventing the movement thereof axially of the container.

5. A package for the shipment of eggs comprising a container and a wrapper held therein and removable therefrom, said wrapper comprising a plurality of spaced apart inflatable compartments, and substantially solid portions interposed between the compartments, and means for inflating the compartments, substantially as and for the purpose described.

1,107,340. TRAVELING RULE. ALEXANDER W. MOSELEY, Evanston, Ill. Filed May 29, 1913. Serial No. 770,598. (Cl. 33—108.)



1. A traveling ruler for black boards, said ruler comprising an upstanding straight edge, a truck body adapted to travel along the vertical surface of the black board, an arm pivoted to said truck body and a roller mounted upon said arm.

2. A traveling ruler for black boards, said ruler comprising an upstanding straight edge and a truck at the lower end thereof for supporting it, said truck having a body, rollers mounted on said body and adapted to roll upon the vertical surface of the black board, arms pivoted to said body and rollers mounted on said arms.

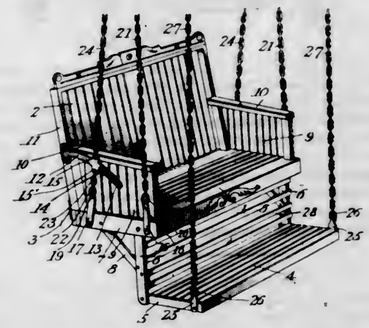
3. In combination, a straight edge, a truck body whereon said straight edge is carried, anti-friction rollers enabling said truck body to roll upon a vertical surface, arms pivoted to said truck body and free to swing upon their pivots and rollers mounted at the free ends of said arms.

4. A traveling ruler for black boards comprising a truck body, a straight edge mounted on said truck body, anti-friction rollers enabling said truck body to travel upon the vertical surface of a black board, guide rollers and studs for said guide rollers connected to said truck body and movable relatively thereto, the axis of the guide rollers being normally inclined to the axes of the anti-friction rollers.

5. A traveling ruler for black boards comprising a truck body, a straight edge mounted on said truck body, at least three anti-friction rollers mounted upon said truck body and adapted to travel upon the vertical surface of the board for holding the truck body in vertical position, movable arms connected to and extending from said truck body, and a guide roller mounted upon each of said arms, the axes of the guide rollers being normally inclined to the axes of the anti-friction rollers.

[Claims 6 to 9 not printed in the Gazette.]

1,107,341. SWING. RICHARD J. OLDFIELD, Phoebus, Va. Filed Aug. 21, 1913. Serial No. 785,860. (Cl. 155—35.)



1. A swing comprising a seat provided with rigid sides, a back-rest hinged thereto and provided with laterally projecting lever arms that overlap the sides of the seat, said lever arms being provided with longitudinal slots adjacent their free ends, suspending chains connected to intermediate portions of the lever arms, chains connecting intermediate portions of the lever arms with the rear of the seat, front suspending chains for the seat, and clamping means carried by the sides of the seat and projecting through the slots in the lever arms.

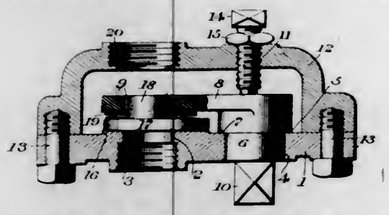
2. A swing comprising a seat, a back-rest hinged thereto, laterally projecting lever arms rigidly fastened to the back-rest and overlapping the sides of the seat, suspending cables for the front of the seat, suspending cables connected to intermediate portions of the lever arms, cables connecting intermediate portions of the lever arms to the seat, and means carried by the sides of the seat for clamping the lever arms thereto.

3. A swing comprising a seat, a back-rest hinged thereto, laterally projecting lever arms carried by the back-rest and overlapping the sides of the seat, said arms having upper and lower oppositely disposed laterally projecting intermediate ears and having longitudinal slots in their free end portions, suspending cables for the front of the seat suspending cables engaging the upper ears of the lever arms, cables connecting the lower ears of the lever arms with the seat, and clamping means carried by the sides of the seat and projecting through the slots in the lever arms.

1,107,342. VALVE. FRANKLIN M. PATTERSON, Philadelphia, Pa. Filed Jan. 2, 1907. Serial No. 350,478. (Cl. 137—5.)

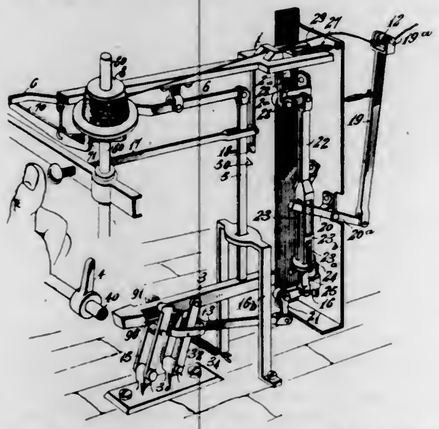
In a device of the character stated, a valve casing having inlet and outlet ports in alinement and the outlet port having a flat guiding valve seat surface at right angles to the alinement of the ports and the valve casing also having a stem opening to one side of said inlet and outlet ports and of a maximum diameter at its inner end, said casing being provided with a flat annular bearing surface bounding the inner end of the said stem opening and ex-

tending at right angles to the length of said opening, combined with a valve device for controlling the outlet port consisting of a valve piece having an extended flat surface and laterally movable over the guiding valve seat surface of the outlet port, a valve operating device for operating the valve piece comprising a laterally movable swinging arm having its free end connected with the valve piece for moving it parallel to and permitting free movement of it to and from the guiding valve seat surface of the outlet port, and an operating stem for moving the



arm extending through the stem opening and rotatable therein, said stem having on its inner end an annular flat bearing surface forming a tight joint with the inner flat annular bearing surface of the valve casing bounding the inner end of the stem opening, and means arranged within the casing and supported thereby in substantial alinement with the axis of the stem for pressing the annular bearing surface of said stem in constant contact with the inner flat annular bearing surface of the valve casing bounding the stem opening.

1,107,343. AUTOMATIC STOP MECHANISM. JOSEPH PEDERY, Trenton, N. J., assignor of one-fourth to Albert E. Schoeller, Trenton, N. J. Filed Aug. 11, 1913. Serial No. 784,150. (Cl. 205—16.)



1. In a stop mechanism for wire drawing machines, the combination with a driving shaft, a driven shaft, a wire takeup member loosely mounted on the said driven shaft, coöperating clutch connections on the shaft and takeup member and a drawing die, of means controlled by the breaking or tangling of the wire for shifting the clutch connections whereby to release the takeup member, the said means including a tripper device constantly movable with the driving shaft, said clutch shifting means including a tiltable lever, a rocker lever coöperatively connected with the said tiltable lever and having one end held adjacent to the path of movement of the tripper device, and means connected with the said clutch shifting means and with the wire strand being drawn, adapted for forcing the rocker lever into position to be engaged by the tripper on the driving shaft when the wire strand becomes tangled or broken.

2. In a stop mechanism, a continuously rotating driving shaft, a spindle geared to turn with the said shaft and a takeup bobbin mounted on said spindle, a clutch for operatively releasing said bobbin from said spindle, a rocker arm for raising said clutch, a crank driven by said shaft, a pivotally and reciprocally mounted beam adapted to be projected into the path of said crank, means continuously tending to hold said beam out of the path of said crank, a connection between said clutch operating rocker arm and said beam for rocking said arm when said beam is projected into the path of movement of said crank and tilted thereby, and a mechanism for reciprocating said beam, a movable drawing die, and a connection including a system of levers between said die and said beam for projecting said beam into the path of said crank when the wire breaks between the die and the reel, and means opposing the tension of the wire for continuously tending to move said die in one direction.

3. In a stop mechanism, a continuously rotating driving shaft, a spindle geared to turn with said shaft and a takeup bobbin mounted on said spindle, a clutch for operatively releasing said bobbin from said spindle, a rocker arm for raising said clutch, a crank driven by said shaft, a pivotally and reciprocally mounted beam adapted to be projected into the path of said crank, means continuously tending to hold said beam out of the path of said crank, a connection between said clutch operating rocker arm and said beam for rocking said arm when said beam is projected into the path of movement of said crank and tilted thereby, and a mechanism for reciprocating said beam, a movable drawing die, and a connection including a system of levers between said die and said beam for projecting said beam into the path of said crank when the wire breaks between the die and the reel, means opposing the tension of the wire for continuously tending to move said die in one direction, and a latch device coöperative with said rocker arm for holding said clutch "out" and a finger engageable means for releasing said latch at the will of the operator.

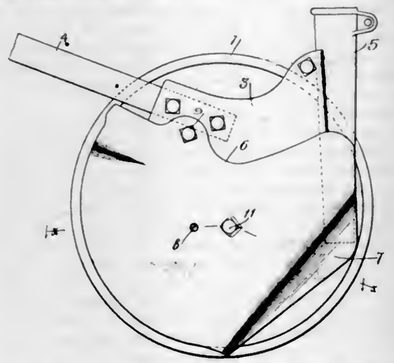
4. In a stop mechanism, a continuously rotating driving shaft, a spindle geared to turn with said shaft and a takeup bobbin mounted on said spindle, a clutch for operatively releasing said bobbin from said spindle, a rocker arm for raising said clutch, a crank driven by said shaft, a pivotally and reciprocally mounted beam adapted to be projected into the path of said crank, means continuously tending to hold said beam out of the path of said crank, a connection between said clutch operating rocker arm and said beam for rocking said arm when said beam is projected into the path of movement of said crank and tilted thereby, a movable drawing die, a connection including a system of levers between said die and said beam for projecting said beam into the path of said crank when the wire breaks between the die and the reel, means opposing the tension of the wire for continuously tending to move said die in one direction, said beam projecting mechanism including a link bar operatively connected with said beam, a guide frame, a plunger operating in said guide frame, a power transmitting connection between said plunger and said link bar, a second plunger operating in said frame, and a resilient connection between said second plunger and said first plunger, and an operative connection between said second plunger and said drawing die whereby when said drawing die is released, said second plunger will be depressed and thereby operate said first mentioned plunger to project the beam into the path of said crank.

5. In a stop mechanism, a continuously rotating driving shaft, a spindle geared to turn with said shaft and a takeup bobbin mounted on said spindle, a clutch for operatively releasing said bobbin from said spindle, a rocker arm for raising said clutch, a crank driven by said shaft, a pivotally and reciprocally mounted beam adapted to be projected into the path of said crank, means continuously tending to hold said beam out of the path of said crank, a connection between said clutch operating rocker arm and said beam for rocking said arm when said beam is projected into the path of movement of the said crank and tilted thereby, and a mechanism for reciprocating said beam, a

movable drawing die, and a connection including a system of levers between said die and said beam for projecting said beam into the path of said crank when the wire breaks between the die and the reel, means opposing the tension of the wire for continuously tending to move said die in one direction, a latch device coöperative with said rocker arm for holding said clutch "out", a finger engageable means for releasing said latch at the will of the operator, said beam projecting mechanism including a link bar operatively connected with said beam, a guide frame, a plunger operating in said guide frame, a power transmitting connection between said plunger and said link bar, a second plunger operating in said frame, and a resilient connection between said second plunger and said first plunger, an operative connection between said plunger and said drawing die whereby when said drawing die is released, said second plunger will be depressed and thereby operate said first mentioned plunger to project the beam into the path of said crank.

[Claims 6 and 7 not printed in the Gazette.]

1,107,344. SEED-DRILL. CHARLES H. PELTON, Springfield, Ohio, assignor to The Thomas Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed July 12, 1912. Serial No. 708,938. (Cl. 111—11.)



1. In a seed drill, the combination, with a supporting member, and concavo-convex disk rotatably mounted on said member, of a share carried by said supporting member on the convex side of said disk, said share extending from a point near the forward edge of said disk to a point near the rear edge thereof and having its forward edge conformed substantially to the shape of the forward edge of said disk, said share diverging from the disk from the front edge of said share to the rear edge thereof to provide a space between the rear edge of said share and the disk, a seed tube supported near the rear edge of said disk and extending into said space.

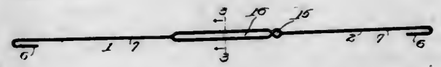
2. In a seed drill, the combination, with a supporting member, and a concavo-convex disk rotatably mounted on said member, of a share carried by said member on the convex side of said disk and having its forward edge conformed substantially to the shape of the forward edge of said disk, said share extending from a point near the forward edge of said disk to a point near the rear edge thereof and diverging rearwardly from the disk, the lower rear portion of said share being flared outwardly along a line extending upwardly and rearwardly.

3. In a seed drill, the combination, with a supporting member, and a disk rotatably mounted on said member, of a share carried by said member and having its forward edge conformed substantially to the shape of the forward edge of said disk, said share diverging from the disk from the front edge of said share to the rear edge thereof and providing a wide space between the rear edge of said disk and said share, a seed tube extending into said space, and means to adjust the forward edge of said share relatively to said disk.

4. In a seed drill, the combination with a supporting member, and a disk rotatably mounted on said member, of a share coöperating with the disk to form a furrow opener, means connecting the share and member, other means connecting the share and member for adjusting the forward edge of the share relative to the forward edge of the disk, and means for limiting the adjustment of said share.

5. In a seed drill, the combination with a supporting member, and a disk rotatably mounted on said member, of a share coöperating with the disk to form a furrow opener, means connecting the share and member, other means connecting the share and member for adjusting the forward edge of the share relative to the forward edge of the disk, and an adjustable stop for limiting the adjustment of said share.

1,107,345. HEDDLE. JOSEPH PICKARD, Philadelphia, Pa. Filed Dec. 23, 1909. Serial No. 534,566. (Cl. 139—14.)



1. A heddle comprising two elongated members having crimped, overlapping inner portions joined by two spaced butt joints, one end of each of said portions being joined to the side of the other of said portions to form one of said joints.

2. A heddle, comprising two elongated members having crimped portions joined by two spaced butt joints and an intermediate lap joint to form two adjoining eyes.

3. A heddle, comprising two elongated members having crimped portions joined by two spaced butt joints and an intermediate lap joint to form two adjoining eyes, said crimped portions being arranged in the same plane.

4. A heddle, comprising two elongated members having crimped portions arranged to form two spaced butt joints, and an intermediate lap joint, forming two eyes, said crimped portions being arranged in the same plane, and said crimped portions being secured together at said joints by adhesive means.

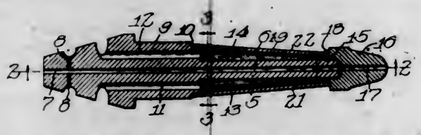
5. A heddle, comprising two wires having overlapping inner portions substantially uniform in cross section throughout their lengths, the inner portion of one wire terminating in a comparatively short substantially semicircular crimp, and said inner portion having an elongated crimp adjacent said short crimp, and the inner portion of the other wire terminating in an elongated crimp substantially similar and equal to said first mentioned elongated crimp, and said other wire having a comparatively short substantially semicircular crimp adjacent said second mentioned elongated crimp and substantially equal to said first mentioned semicircular crimp, the said short crimp and elongated crimp of one wire being substantially opposite to the short crimp and the elongated crimp respectively of the other wire, the inner end of each of said wires being arranged to form a butt joint with the side of the other wire, and said wires being arranged to form a lap joint between said short crimps and said elongated crimps, and adhesive means at said joints forming the sole means of connection between said wires and combining with said crimps to form a substantially circular eye and an elongated eye, the center of said circular eye, the longitudinal axis of the said elongated eye, and the longitudinal axes of the portions of said wires leading outwardly from said overlapping portions being substantially in the same straight line, and the said eyes being arranged substantially in the same plane.

[Claims 6 and 7 not printed in the Gazette.]

1,107,346. WELDING-TIP. PAUL PLEISS, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Mar. 24, 1913. Serial No. 756,335. (Cl. 158—109.)

1. In a welding tip, a body portion having a shoulder, a jacket surrounding a portion of the body part, and a re-

movable point for clamping said jacket endwise against said shoulder.



2. In a welding tip, a body portion having a shoulder, the opposite sides of said body being cut away to form separated spaces, a jacket surrounding said cut away part to form said spaces into a separated chamber, and means adjustable on the body portion for clamping said jacket endwise against said shoulder.

3. In a welding tip, a shouldered body portion having a threaded extremity, a removable point applied thereto, a jacket surrounding a portion of the body portion and forming therewith separated chambers, inlet and outlet ducts communicating respectively with said chambers, said chambers also communicating with each other, said point serving to clamp the jacket endwise against the shoulder on the body portion.

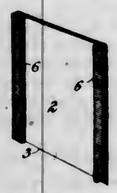
4. In a welding tip, a shouldered body portion having a reduced extremity, a removable point embracing a portion only of said reduced extremity, a jacket inclosing said body part and forming therewith separated chambers on opposite sides thereof, said point serving to clamp the jacket in place, and inlet and outlet ducts respectively communicating with said chambers.

1,107,347. SANITARY DRINKING-CUP. JAMES POWERS, Newark, N. J. Filed Apr. 4, 1912. Serial No. 688,488. (Cl. 229—1.)



A sanitary drinking cup comprising a substantially rectangular sheet of suitable material charged with a water repellant substance capable of cohesion at atmospheric temperature when two surfaces are pressed together, said changed sheet being folded upon itself intermediately and the side portions of such folded sheet being also each folded and refolded upon itself in the same direction toward the center line of the cup with the first fold inclosed by the second fold and with the charging material of the meeting surfaces of the folds cohering.

1,107,348. METHOD OF MANUFACTURING SANITARY DRINKING-CUPS. JAMES POWERS, New York, N. Y. Original application filed Apr. 4, 1912, Serial No. 688,488. Divided and this application filed Oct. 11, 1913. Serial No. 794,708. (Cl. 93—36.)



1. The method of producing sanitary drinking cups which consists in first folding a blank in the form of a sheet intermediately upon itself, and then beginning at the outer edge of the intermediately folded blank folding each side toward the center line thereof a plurality of times to imprison the first fold in the second fold and thus close the sides of the cup against the escape of liquid placed therein.

2. The method of producing sanitary drinking cups which consists in folding a blank charged with material capable of cohesion under pressure at atmospheric temperature intermediately upon itself, and then beginning at the opposite outer side edges of the folded blank folding the sides toward the center line of the blank and exerting sufficient pressure upon the side folds to cause cohesion of the material of the blank at such folds at atmospheric pressure.

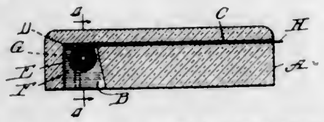
3. The method of producing sanitary drinking cups which consists in folding an elongated rectangular blank of paper intermediate of its length, then beginning at the opposite outer edges of the folded blank folding said edges toward the center line thereof and again folding the folded side edges toward the center line of the folded blank in the same direction as before to thereby imprison the first fold between the second side fold and the body of the cup.

4. The method of making sanitary drinking cups from elongated blanks charged with material capable of cohesion under sufficient pressure at atmospheric temperature, which consists in first folding the blank intermediately of its length to bring the two portions of the folded blank together and compressing the marginal portions of the sides of the folded blank together, then folding over the side portions toward the center line of the folded blank and compressing said side folds, and then folding over the folded side portions of the blank toward the center line and compressing such doubly folded portions together, the pressure being sufficient to cause cohesion of the charging material of the contiguous surfaces at atmospheric temperatures.

5. The method of making sanitary drinking cups from elongated blanks of suitable material which consists in first folding the blank intermediately of its length to bring the two portions of the folded blank together and compressing the marginal portions of the sides of the folded blank together, then folding over the side portions toward the center line of the folded blank and compressing said side folds, and then again folding over the side portions of the blank toward the center line and compressing such doubly folded portions together and against the body of the cup to be engaged thereby, the material of the cup being indented each time it is subjected to pressure.

[Claims 6 and 7 not printed in the Gazette.]

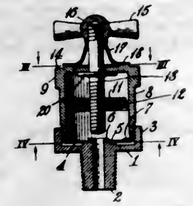
1,107,349. COMBINED PAPER-WEIGHT AND CALENDAR-SUPPORT. CHARLES E. PRESTON, Lake City, Iowa. Filed June 23, 1913. Serial No. 775,374. (Cl. 40—116.)



In a device of the class described, a glass body, a recess at the lower side at one end of said body, a slot beginning at the upper end of said recess and extending therefrom parallel to the upper side of the glass body and opening out at the other end of said glass body, a supporting slot in each end of said recess, a roll having a pin at each of its ends positioned in said recess, each of said pins being adapted to rest in one of said supporting slots, and a band wound around said roll, the free end of which passes out through said slot so that any written matter contained thereon can be read through the upper side of the glass body, said band being adapted to be pulled out of said slot and there torn off if desired.

1,107,350. GREASE-CUP. ALEXIS R. PRIBIL, Detroit, Mich., assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed Sept. 10, 1912. Serial No. 719,521. (Cl. 184—38.)

1. In a grease cup, the combination of a base having an annular part, an inverted cup-shaped cap having its open end turning within the annular part, and a locking member arranged within the annular part and fixed to the base and having a portion thereof spaced apart from, and yielding relatively to, the opposing surface of the base, and detachably engaging the wall of the open end of the cap for holding the cap from turning relatively to said annular part, substantially as and for the purpose set forth.



2. In a grease cup, the combination of a base having an annular internally threaded part, an inverted cup-shaped cap having its open end externally threaded and screwing within the annular part, and a locking member arranged within the annular part and fixed to the base and having a portion thereof spaced apart from, and yielding relatively to, the opposing surface of the base, and detachably engaging the walls of the open end of the cap for holding the cap from turning relatively to said annular part, substantially as and for the purpose specified.

3. In a grease cup, the combination of a base having an annular part and a seat arranged within the annular part and spaced apart therefrom, an inverted cup-shaped cap having its open end turning within the annular part, and a locking member mounted on the seat and having a portion thereof projecting beyond the seat toward the annular part and spaced apart from, and yielding relatively to, the opposing surface of the base, the extremity of said yielding portion detachably engaging the wall of the open end of the cap for holding the cap from turning relatively to said annular part, substantially as and for the purpose set forth.

4. In a grease cup, the combination of a base having an annular internally threaded part and a seat arranged within the annular part substantially concentric therewith and spaced apart therefrom, an inverted cup-shaped cap having its open end externally threaded and screwing within the annular part, and a locking member mounted on the seat and having an arm projecting beyond the seat toward the annular part and spaced apart from, and yielding relatively to, the opposing surface of the base, the extremity of the arm being provided with means detachably engaging the wall of the open end of the cap for holding the cap from turning relatively to said annular part, substantially as and for the purpose described.

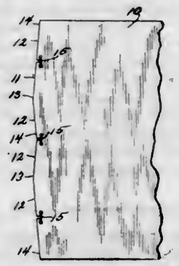
5. In a grease cup, the combination of a base having an annular part and a seat arranged within the annular part and spaced apart therefrom, an inverted cup-shaped cap having its open end turning within the annular part, and a locking member having its central portion mounted on the seat and having arms projecting in different directions beyond the seat toward the annular part and spaced apart from, and yielding relatively to, the opposing surface of the base, the extremities of the arms being provided with means detachably engaging the wall of the open end of the cap for holding the cap from turning relatively to said annular part, substantially as and for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

1,107,351. BOOK-LEAF. JAMES M. PROUDFIT, Chicago, Ill. Filed June 19, 1905. Serial No. 266,041. (Cl. 129—18.)

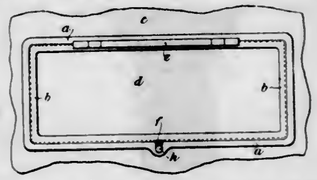
1. A leaf having its binding edge provided with a plurality of securing apertures and said edge trimmed to have the edge of the leaf between the securing apertures extend beyond the edge of the leaf at the apertures.

2. A book leaf having its binding edge provided with securing apertures and said binding edge cut on converging lines so as to have one or more points remote from said



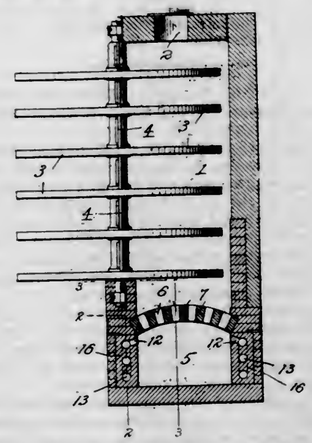
securing apertures extending beyond the remaining portion of said edge.

1,107,352. MOVABLE GLASS PANEL FOR GLASS WIND-SCREENS. FREDERICK WILLIAM PUGH, London, England. Filed Feb. 9, 1911. Serial No. 607,632. Renewed June 2, 1914. Serial No. 842,542. (Cl. 21—148.)



A glass wind screen having an opening faced with a metal frame, a glass panel to close said opening and having its edge faced with a metal frame which fits within the first named frame, each of the frames being made in two parts which comprise a flanged distance piece and a flange part secured by screws to the distance piece, a hinge joint between the frames whereby the panel may be swung to disclose the opening, and a catch fitted in the distance piece of the first named frame to engage over the last named frame when the panel is swung to its closed position, the onter frame having its face on the side of the hinge joint formed with a rabbet and the inner frame having its corresponding face formed with a flange to engage in said rabbet.

1,107,353. APPARATUS FOR HEATING OVENS. WIRT S. QUIGLEY, Rockaway Park, N. Y. Filed Oct. 31, 1912. Serial No. 728,911. (Cl. 34—18.)



The combination with an oven of a furnace having its outlet for gases of combustion connected to said oven,

said furnace having a combustion chamber, means for supplying a combustible mixture of air and fuel under pressure to said combustion chamber, a mixing chamber interposed between the combustion chamber and the furnace outlet, the walls of which combustion and mixing chambers have passageways therein discharging into the mixing chamber at points outside of the zone of combustion in the furnace, and means for forcing air through said passageways and outlets, whereby the products of the complete combustion going on in the combustion chamber are diluted with a predetermined quantity of partly preheated air, and the mixture delivered directly to the oven.

1,107,354. ROTARY SCRATCH-BRUSH. ALBERT L. RADLEIN and GUSTAF SELANDER, Chicago, Ill. Filed Aug. 25, 1913. Serial No. 786,390. (Cl. 201—8.)



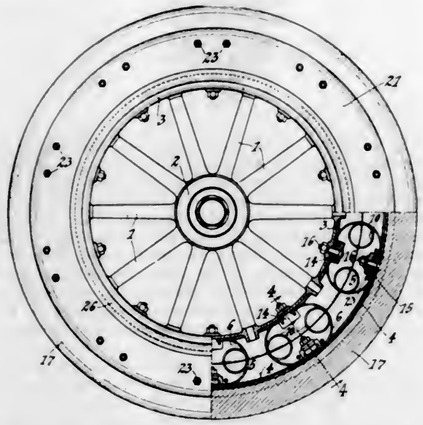
1. In a rotary scratch brush, the combination of a hub formed with reduced ends and intermediate abutments, a pair of collars fitting loosely on said reduced ends and provided with circular series of cylindrical recesses extending from the inner faces of the collars to near the outer faces of the same, means for securing said collars fixedly to the hub, means for preventing independent turning movement of the collars with relation to the hub, and a series of tuft-carrying rods engaging the recesses of the collars, substantially as set forth.

2. In a rotary scratch brush, the combination of a hub formed with screw-threaded ends and intermediate abutments, a pair of collars fitting loosely over said screw-threaded ends and provided with circular series of cylindrical recesses extending from the inner faces of the collars to near the outer faces of the same, individual nuts for securing said collars against the intermediate abutments, means for preventing independent turning movement of the collars with relation to the hub, and a series of tuft-carrying rods engaging the recesses of the collars, substantially as set forth.

1,107,355. SPRING-WHEEL. ERNST RAMMELSBERG, Dortmund, Germany. Filed Sept. 25, 1913. Serial No. 791,696. (Cl. 152—37.)

1. A spring-wheel of the class described consisting of an inner wheel, a tire-rim, a tire mounted on said tire-rim, coiled flexion-springs interposed between said inner wheel and said tire-rim the coils of which are formed by plane spirals forming integral tongues of a flexion-spring blank whereon they are arranged comb-fashion in rows and abutting with their inner ends in staggered relation to let the tongues of one row pass through the interstices of the other row while being coiled reversely to each other around a common axis, clamping-means for securing the free ends of said spirals detachably to said inner wheel and to said tire-rim respectively, and guard-rings keeping the tubular wheel-space containing said flexion-springs closed against the ingress of foreign matter.

2. A spring-wheel of the class described consisting of an inner wheel, a tire-rim encircling said inner wheel, an elastic tire mounted on said tire-rim, coiled flexion-springs interposed between said inner wheel and said tire-rim and composed of plane spirals of uniform cross-sectional area throughout, clamping-means for detachably securing the free ends of said coiled flexion-springs to said inner wheel and to said tire-rim respectively, guard-rings slidingly arranged upon the lateral faces of the felly of said inner wheel and detachably secured to said tire-rim, packing-rings arranged at the inner edge of said guard-rings, and resilient rings secured to said guard-rings and adapted to keep said packing-rings in contact with the lateral faces of said wheel-felly to prevent foreign matter from entering the tubular space wherein said coiled flexion-springs are arranged.



3. A spring wheel of the class described, comprising an inner wheel, a tire rim, a plurality of coiled springs interposed therebetween, each of said springs being provided with a plurality of tongues, and with a plurality of slots, arranged opposite to the tongues and traversed thereby, and means for securing said springs to the inner wheel and to the tire rim.

1,107,356. COATING COMPOSITION. LUDWIG H. REUTER, Berkeley, Cal. Filed Apr. 6, 1908. Serial No. 425,442. (Cl. 134—44.)

1. A coating composition comprising oxid of magnesium, sulfate of magnesium, and an amount of chlorid of magnesium less than 6% of the amount of sulfate and sufficient water to bring it to a consistency suitable for spreading by a brush.

2. A composition of matter of the class described comprising from 60 to 70 parts by weight of calcined magnesite, from 20 to 30 parts by weight of anhydrous sulfate of magnesium, a small amount of chlorid of magnesium, and water.

3. A composition of matter of the class described comprising from 60 to 70 parts by weight of calcined magnesite, and from 20 to 30 parts by weight of anhydrous sulfate of magnesium, containing from 1 to 5% of dry chlorid of magnesium.

4. A coating composition, capable of combining with old magnesite cement to form a perfect bond and increase the durability thereof comprising water, oxid of magnesium, carbonate of magnesium, sulfate of magnesium, and the anhydrous chlorid of an alkaline earth for producing in the presence of water, chlorid of magnesium *in statu nascendi*, the amount of oxid being from two to three and one half times as much by weight as the combined amounts of sulfate and chlorid.

5. A coating composition comprising oxid of magnesium, sulfate of magnesium, the amount of oxid being from two to three and one-half times as much as the sulfate, and an amount of chlorid of magnesium less than six per cent. of the amount of sulfate.

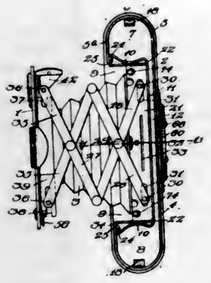
[Claim 6 not printed in the Gazette.]

1,107,357. SURGICAL BANDAGE OR SPLINT. LUDWIG H. REUTER, Berkeley, Cal. Filed Apr. 18, 1908. Serial No. 427,913. (Cl. 106—29.)

1. A composition of matter for surgical bandages comprising a dry mixture of sulfate of magnesium, chlorid of magnesium, and from 65% to 70% by weight of oxid of magnesium.

2. A composition of matter for surgical bandages or splints comprising a dry mixture of about 25% of plaster of Paris, less than 10% anhydrous sulfate of magnesium, a small percentage of chlorid of magnesium, and about 65% of calcined magnesite.

1,107,358. PHOTOGRAPHIC CAMERA. JOHN A. ROBERTSON and ROBERT KROEDEL, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 8, 1912. Serial No. 682,393. (Cl. 95—32.)



1. In a camera, the combination with a body having a back, and spool chambers at opposite ends thereof, the outer walls of which are constituted by the body, of a detachable and replaceable inner frame coöperating with the body and having portions forming the inner walls of the respective chambers.

2. In a camera, the combination with a body having a back, and spool chambers at opposite ends thereof the outer walls of which are constituted by the body, of a detachable and replaceable inner frame slidably coöperating with the body to be detached therefrom in a direction longitudinally of the spool chambers and having portions constituting the inner walls of the respective chambers.

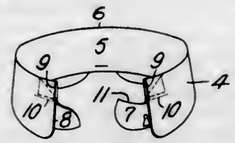
3. In a camera, the combination with a body having spool chambers at opposite ends thereof, of a frame cooperating with the body and having portions forming walls of the respective chambers and interlocking flanged portions at the terminating edges of the frame and body, respectively, slidably coöperating with each other to permit the detachment and replacement of the frame in a direction longitudinally of the film chamber.

4. In a camera, the combination with a body having spool chambers at its ends, the front, back and outer walls of which are formed by the body, of a detachable and replaceable substantially U-shaped frame coöperating with the body and comprising end portions, respectively, forming the inner wall of each chamber and an intermediate portion constituting a film guide extending between the chambers.

5. In a camera, the combination with a body embodying a back plate having forwardly and inwardly turned end portions, of a detachable and replaceable frame, coöperating with the body and comprising forwardly turned end portions slidably coöperating with the end portions of the back plate to form spool chambers jointly therewith and an intermediate portion spaced from the back plate to form a restricted film passage and exposure chamber extending between the spool chambers, said frame being detachable from the body in a direction longitudinally of the spool chambers.

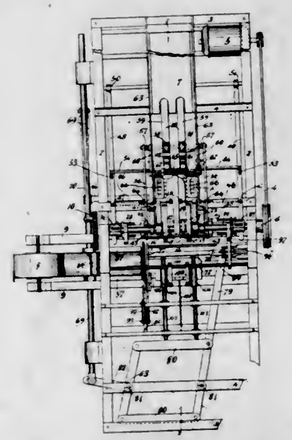
[Claims 6 to 20 not printed in the Gazette.]

1,107,359. COLLAR. RICHARD MONTGOMERY RODDEN, Montreal, Quebec, Canada. Filed Dec. 22, 1911. Serial No. 667,263. (Cl. 2—69.)



A collar with inner and outer folded flaps, the inner flap having outwardly projecting tongues the top edges of which are arranged in approximate line with the central portion of the outer flap, one of said tongues being curved upwardly and terminating in a pointed end and having a key hole slot fastening which is arranged approximately near the lower edge thereof, the outer tongue being curved downwardly and also terminating in a pointed end and having an ordinary fastening, the upper corners of the two flaps being stitched together by a plurality of rows of stitches arranged in rectangular form to provide abutments which are adapted to contact with a necktie to prevent upward movement of the same, and said abutments also permitting of holding the tongues in proper position.

1,107,360. WRAPPING-MACHINE. ARTHUR J. ROEDEL, Cincinnati, Ohio. Filed Dec. 12, 1913. Serial No. 806,156. (Cl. 93—5.)



1. In a machine of the character specified, a pair of rollers in close proximity to each other, with means for rotating the same in the same direction, means for delivering separate pieces of material one at a time to said rollers, a unitary means for loosely holding and advancing for feeding while so held a sheet of wrapping paper to be engaged by the rollers and the material to be rotated, and means for feeding a continuous strip of paper to said sheet feeding means and for cutting the same into sheets.

2. In a machine of the character specified, a pair of rollers in close proximity to each other, with means for rotating the same in the same direction, means for delivering separate pieces of material one at a time to said rollers, a unitary means for loosely holding and advancing for feeding while so held a sheet of wrapping paper to be engaged by the rollers and the material to be rotated, and means for feeding a continuous strip of paper to said sheet feeding means and for cutting the same into sheets, and means for holding the paper at the ends from rotating during the rotation of the material.

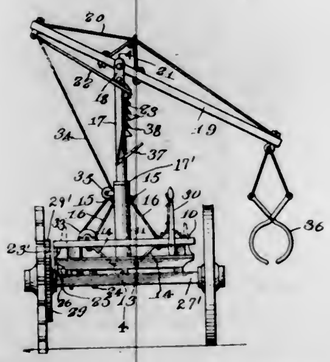
3. In a machine of the character specified, a pair of rollers in close proximity to each other, with means for rotating the same in the same direction, means for delivering separate pieces of material one at a time to said rollers, means for feeding a sheet of wrapping paper to be engaged by the rollers and the material to be rotated, and means for feeding a continuous strip of paper to said sheet feeding means and for cutting the same into sheets, a source of supply of material to said feeding means and agitators operating in said source of supply to provide a continuous supply of material to the feeding means.

4. In a machine of the character specified, a pair of rollers in close proximity to each other, with means for rotating the same in the same direction, means for delivering separate pieces of material one at a time to said rollers, means for feeding a sheet of wrapping paper to be engaged by the rollers and the material to be rotated, and means for feeding a continuous strip of paper to said sheet feeding means and for cutting the same into sheets, a source of supply of material to said feeding means, and a plurality of co-acting agitators operating in said source of supply to provide a continuous supply of material to the feeding means.

5. In a machine of the character specified, a pair of rollers in close proximity to each other, with means for rotating the same in the same direction, means for delivering separate pieces of material one at a time to said rollers, means for feeding a sheet of wrapping paper to be engaged by the rollers and the material to be rotated, means for feeding a continuous strip of paper to said sheet feeding means and for cutting the same into sheets, means for holding the paper at the ends from rotating during the rotation of the material, a source of supply of material to said feeding means and agitators operating in said source of supply to provide a continuous supply of material to the feeding means.

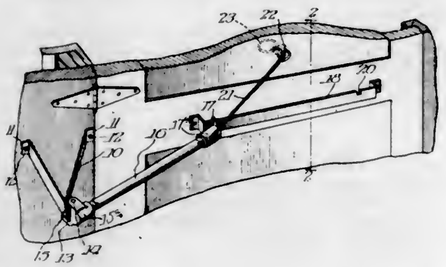
[Claims 6 to 22 not printed in the Gazette.]

1,107,361. FODDER-LOADER. RUSSELL R. ROWAN, Verdi, Kans. Filed Nov. 19, 1912. Serial No. 732,341. (Cl. 212—37.)



A lifting and conveying device comprising a support, a vertical tubular member carried by the support, a second tubular member telescopically arranged in the first tubular member, a flange carried by the second tubular member and resting on the upper end of the first tubular member, a rocking crane arm pivotally mounted on the upper end of the second tubular member, a plurality of ratchet teeth arranged in a vertical line on the upper portion of the second tubular member, a yoke member pivotally carried by one end of the arm and straddling the said tubular member, the transverse portion of the yoke engaging with the ratchet teeth, a lever pivotally carried by the tubular member, and a link connected to the lever and to the transverse portion of the yoke.

1,107,362. DOOR-SECURING MEANS. CHARLES M. RUMBAUGH, Elkhart, Iowa. Original application filed Mar. 24, 1913, Serial No. 756,300. Divided and this application filed Mar. 11, 1914. Serial No. 823,889. (Cl. 16—6.)



1. A door fastening device comprising a bracket secured to and projecting from a door casing, an arm pivotally secured at one end to the bracket, a guide way mounted upon a door adapted to swing within the door-way, the opposite end of said arm being provided with an angular portion having an opening for receiving the said guide way, said arm coöperating with said guide way whereby the arm will be held in a locked position, and means extending through the door for raising the end of the arm with respect to the guide way for releasing the arm.

2. A door fastening comprising a triangular bracket adapted to be secured to the door casing, an arm pivotally secured at one end to the apex of said bracket, a guide way permanently mounted upon one side of a door adapted to swing within the door-way and provided with open recesses intermediate its ends, the oposite end of said arm being slidably mounted upon said guide way and having a portion adapted to enter the recess to lock the arm to the guide way, and means extending through the door and coöperating with the said arm whereby the latter may be released from the opposite side of the door.

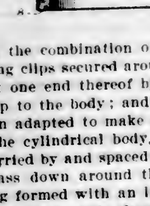
3. A device of the character described, embodying a bracket secured to and projecting from the casing of an opening, an arm pivotally connected with the bracket, a guide way mounted upon a closure adapted to swing within the opening and provided with open recesses intermediate its ends, the opposite end of said arm having a sliding connection with the guide way, a portion of said end adapted to enter the recesses by gravity for locking the arm against movement with respect to the guide way at predetermined points in the movement of the arm, and means operable from the other side of the closure for raising the arm out of the recesses for releasing the arm.

4. A device of the character described embodying a bracket secured to and projecting from the casing of an opening, an arm pivotally connected with the bracket, a guide way mounted upon a closure adapted to swing within the opening and provided with open recesses intermediate its ends, the opposite end of said arm having a portion encompassing and having a sliding connection with the guide way, a portion of the arm adapted to enter the recesses for locking the arm against movement with respect to the guide way at predetermined points in the movement of the arm, and means operable from the other side of the closure for raising the arm to release the same, the said means embodying an actuating device connected with the arm and extending through the closure.

5. A device of the character described embodying a bracket secured to and projecting from the casing of an opening, an arm pivotally connected with the bracket, a guide way mounted upon a closure adapted to swing within the opening and provided with open recesses, the opposite end of said arm having a portion embracing and having a sliding connection with the guide way, a portion of the arm adapted to enter the recesses for locking the arm against movement with respect to the guide way at predetermined points in the movement of the arm, and means operable from the other side of the closure for raising the arm to release it, the said means embodying a flexible member connected with the arm and extending through the closure whereby the arm may be raised from either side of the closure.

[Claim 6 not printed in the Gazette.]

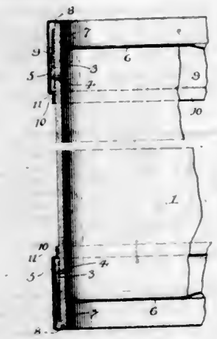
1,107,363. WASTE-PIPE PLUG. ALFRED G. SCHMIDT, Baltimore, Md. Filed Mar. 24, 1913. Serial No. 756,276. (Cl. 4—35.)



1. The combination of a discharge-pipe having two cross-pieces on the inside thereof at right angles to each other and each having an aperture therethrough, and a plug adapted to seat in the upper end of said discharge-pipe and having a stem on its lower surface projecting through said apertures and having a shoulder thereon adapted to rest on the upper one of said cross-pieces.

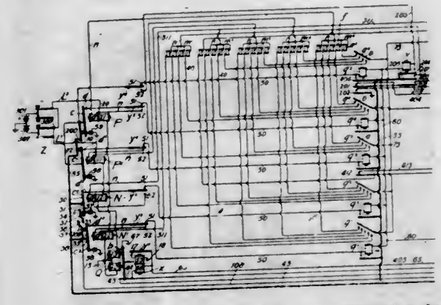
2. The combination of a discharge-pipe having two cross-pieces on the inside thereof, each having a square aperture therethrough in line with each other, the sides of one aperture being at a different angle to those of the other aperture, and a plug adapted to seat in the upper end of said discharge-pipe and having a square stem on its lower surface rounded, or cut away, between the ends to form shoulders adapted to impinge against the upper and lower cross-pieces.

1,107,364. SHIPPING-BARREL. FRANK C. SCHMITZ, Flatbush, N. Y. Filed July 6, 1910. Serial No. 570,654. (Cl. 229—47.)



In a barrel, the combination of a body; a plurality of V-shaped spring clips secured around the outer face of the body, adjacent one end thereof by the attachment of one arm of the clip to the body; and a head having a central stopper section adapted to make a close fit with the interior face of the cylindrical body, said head likewise having a skirt carried by and spaced away from the head and adapted to pass down around the outside of the barrel, the skirt being formed with an inwardly-projecting shoulder adjacent its lower end adapted to interlock with the free arms of the clips when the head is forced home.

1,107,365. PRINTING-TELEGRAPH. CHARLES E. SCRIBNER, Jericho, Vt., and FRANK R. MCBERTY, New Rochelle, N. Y., assignors to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 6, 1911. Serial No. 612,618. (Cl. 178—28.)



1. In a printing telegraph, the combination of a local selecting circuit having a plurality of branches, a type magnet in each said branch, switches for completing a circuit at each terminal of any type magnet branch, and electromagnetic self-locking means for actuating said switches responsive to two direct current impulses and an intervening interval of no current.

2. In a printing telegraph system, the combination of a plurality of conducting branches, a type magnet in each said branch, an electromagnetic switch for closing contact on one side of a type magnet and locking said contact, an electromagnetic switch for completing said circuit on the other side of said type magnet and locking said contact, and means for controlling said switches by two direct current controlling impulses separated by an interval of no current.

3. In a printing telegraph system, the combination of a plurality of conducting branches, a type magnet in each said branch, an electromagnetic switch for closing contact on one side of a type magnet and locking itself, an electromagnet switch for completing said circuit on the other side of said type magnet and locking itself, means for controlling said switches by two direct current controlling impulses separated by an interval of no current, and means for automatically unlocking said switches and returning said contacts to normal condition.

4. In a printing telegraph, the combination of a plurality of type magnets; a local selecting circuit branch for each said magnet; and means for completing a circuit through any one branch, said means including two line wires, polarized electromagnetic switches in each line, a neutral electromagnetic switch common to both lines, and means for locking either polarized magnet in its energized position.

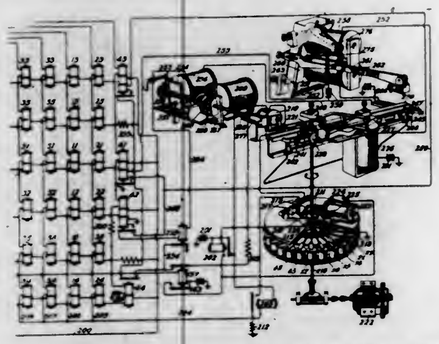
5. In a printing telegraph, the combination at a receiving station of a plurality of type magnets, a local circuit branch for each magnet, and means for closing any branch in response to two direct current impulses and an interval of no current, said means including polarized magnets responsive to said impulses to cause the closure of said local circuit branch at one point and a neutral relay responsive to said interval of no current to cause the closure of said branch at a second point.

[Claims 6 to 19 not printed in the Gazette.]

1,107,366. TELEGRAPH-RECEIVER. CHARLES E. SCRIBNER, Jericho, Vt., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 28, 1911. Serial No. 662,844. (Cl. 178—28.)

1. In a selecting mechanism the combination of a plurality of selecting branches, a plurality of marginal selectable magnetically operated devices therein each having a plurality of fixed windings, and means for causing the operation of any device by energizing two windings thereof.

2. In a selecting mechanism the combination of a plurality of selecting branches, a plurality of selectable magnetically operated devices therein, each device having a plurality of fixed cumulative windings, and means for causing the operation of any device.



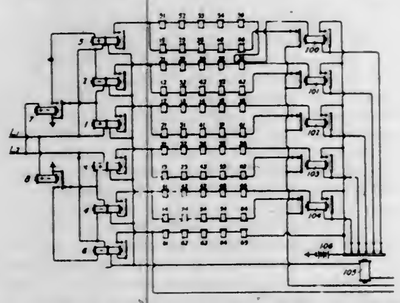
3. A plurality of magnetically operated devices each having a plurality of fixed actuating windings, means for connecting corresponding windings in series in groups, and means for causing the energization of a plurality of groups of windings whereby an electromagnetically operated device is actuated.

4. In a selecting mechanism the combination of a plurality of marginal selective magnetically operated devices, each having a plurality of cumulative windings, said windings being arranged in groups, and means for completing a circuit through a plurality of groups of windings in series to energize a plurality of windings of one device to cause the operation thereof.

5. In a printing telegraph the combination with a movable character carrier, of a selecting circuit composed of a series of branches including a character-determining branch and a printing magnet branch, a character selecting magnet having two windings in series in said character-determining branch, a printing controller magnet in said printing magnet branch, means for closing one branch through the windings of a character selecting magnet to position the character carrier, and means for operating the printing magnet branch.

[Claims 6 to 22 not printed in the Gazette.]

1,107,367. TELEGRAPH-RECEIVER. CHARLES E. SCRIBNER, Jericho, Vt., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 28, 1911. Serial No. 662,845. (Cl. 178—33.)



1. In a printing telegraph receiver, the combination of a plurality of type magnets having two windings and arranged in groups, one winding of each group of magnets being in a different loop of a selecting circuit, means comprising a plurality of relays for selectively energizing one loop of a group of type magnets in response to an impulse received from a distant station, a unit relay in the selecting circuit closing on its energization a locking circuit for itself, a second impulse received from a distant station operatively selecting one of the remaining line relays to close the second loop and initiate the printing operation.

2. In a printing telegraph receiver, the combination with a plurality of type magnets having two windings, one winding of each group of type magnets being arranged in different loops of a selecting circuit, line controlled self-locking mechanism for successively closing break points in the selecting circuit in response to a combination of impulses received from a distant station to select a predetermined type magnet and initiate the printing thereof.

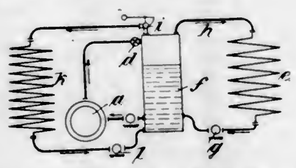
3. In a printing telegraph receiver, the combination of a plurality of polar line relays, of a plurality of groups of type magnets selectively energized by a combination of impulses received by the polar line relays from a distant station, a locking circuit for each of the polar relays, each included in the selecting circuit of a group of type magnets, and operating to lock the selected line relays in operative condition, means operated by a selected type magnet to initiate the printing operation, and means operated at the termination of the printing operation to break the locking circuit through the selected line relays, whereby the line relays are returned to normal condition.

4. In a printing telegraph receiver, the combination with a plurality of type magnets, selecting circuits therefor, each selecting circuit comprising a plurality of loops, each loop passing through a different winding of the type magnets, and including a unit relay, a line circuit, polarized relays therein successively operated to close different points in the selecting circuits, said selecting circuit for each group of type magnets including a locking winding for said relays, a printing means, and means operating on the completion of the printing cycle to break the locking circuit of the energized line relays and the selecting circuit, whereby all parts of the device are returned to normal position.

5. In a printing telegraph receiver, the combination in a line circuit, of a plurality of polarized line relays therein divided into two groups, one group being connected to each main line conductor, each relay being responsive to a characteristic impulse received from a distant station, and means for locking the selected line relays in operative position.

[Claims 6 to 10 not printed in the Gazette.]

1,107,368. UTILIZATION OF THE WASTE HEAT OF COMBUSTION-MOTORS FOR HEATING PURPOSES. CARL SEMMLER, Wiesbaden, Germany. Filed Feb. 4, 1914. Serial No. 816,500. (Cl. 237—15.)



1. Apparatus for utilizing the waste heat of a combustion motor having a cooling jacket, comprising heat-utilizing means, a closed circuit including said cooling jacket and heat-utilizing means and adapted to contain a heat-carrying medium, means for circulating said medium within said circuit, and pressure-reducing means provided in said circuit between the jacket and heat-utilizing means, the pressure-reducing means maintaining a pressure of the medium in advance of said last named means and within the heat-utilizing means that is less than that maintained back of said pressure-reducing means and within the jacket.

2. Apparatus for utilizing the waste heat of a combustion motor having a cooling jacket, comprising heat-utilizing means, a closed circuit including said cooling jacket and heat-utilizing means and adapted to contain a heat-carrying medium, pressure-reducing means provided in said circuit between the jacket and heat-utilizing means, and means provided in said circuit in advance of the heat-utilizing means for circulating said medium within said circuit, the jacket, pressure-reducing means, heat-utilizing means and medium-circulating means being thus consecutively passed by the medium during each cycle thereof, whereby the pressure of said medium maintained within the heat-utilizing means is less than that maintained within the jacket.

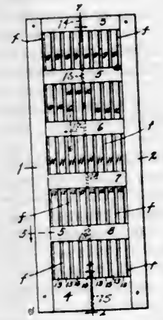
3. Apparatus for utilizing the waste heat of a combustion motor having a cooling jacket, comprising heat-utilizing means, a closed circuit including said cooling jacket and heat-utilizing means and adapted to contain a heat-carrying medium, pressure-reducing means provided in said circuit between the jacket and heat-utilizing means, and a pump provided in said circuit between the heat-utilizing means and the jacket for circulating the medium within said circuit, the jacket, pressure-reducing means, heat-utilizing means and pump being thus consecutively passed by the medium during each cycle thereof.

4. Apparatus for utilizing the waste heat of a combustion motor having a cooling jacket, comprising an accumulator, a closed circuit including said jacket and accumulator and adapted to contain a heat-carrying medium, means for circulating said medium within said circuit, and a throttle valve provided in said circuit between the jacket and accumulator, said valve maintaining such a pressure within the circuit portion located back of said valve and including the jacket as to prevent vaporization of said medium therein.

5. Apparatus for utilizing the waste heat of a combustion motor having a cooling jacket, comprising an accumulator having a water space and a steam space, heat-utilizing means, a closed circuit comprising consecutively the jacket, the steam space of the accumulator, the heat utilizing means, and the water-space of the accumulator, a pressure-reducing device provided in said circuit between the jacket and steam space of the accumulator, a first pump provided in the circuit between the heat-utilizing means and the water space of the accumultaor, and a second pump provided in the circuit between said last named space and the jacket.

[Claims 6 and 7 not printed in the Gazette.]

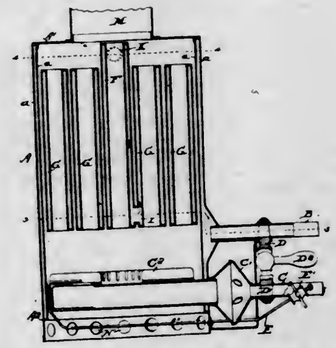
1,107,369. VENTILATED DOOR. FRANK M. SHELTON, Richmond, Ind., assignor of one-half to Harry E. Pinnick, Richmond, Ind. Filed Nov. 26, 1913. Serial No. 803,325. (Cl. 20—35.)



1. A ventilated door comprising a body composed of stiles and rails forming a frame, a plurality of spaced-apart bars connecting the rails, there being air passages formed through the rails and connecting with all of the spaces between the bars, and veneering covering each side of the body of the door.

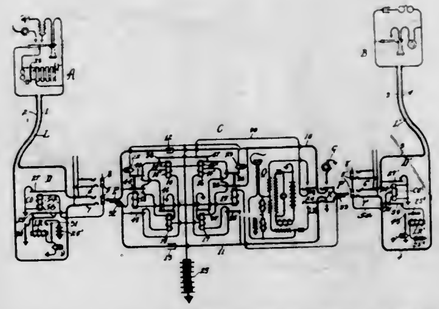
2. A ventilated door comprising a body composed of stiles and rails, intermediate rails connecting the stiles, a plurality of spaced-apart bars connecting the rails, there being air-channels in and extending longitudinally of the rails, and connecting with the spaces between the bars there also being an air aperture through each of the rails and at right-angles to and intersecting said and veneering covering each side of the door and contacting with all of the rails, stiles, and bars.

1,107,370. GAS INSTANTANEOUS WATER-HEATER. JAMES SHEPHEARD, Detroit, Mich., assignor of one-half to John J. Ellis, Detroit, Mich. Filed Dec. 20, 1912. Serial No. 737,825. (Cl. 122—174.)



In an appliance of the character described, a chamber, a water inlet to convey water to said chamber, a plurality of vertically disposed double walled tubes having a relatively narrow water space between said walls and connected together alternately at the top and bottom thereof for the passage of water through the tubes, means for conveying water from said chamber to one of said tubes for circulation of the water through all of the tubes, whereby the water is caused to circulate the length of each tube before passing to the next tube, a discharge outlet for the delivery of water from the tubes, and means in the chamber to heat the water.

1,107,371. TELEPHONE SYSTEM. CHARLES A. SIMPSON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1911. Serial No. 653,108. Renewed Oct. 2, 1912. Serial No. 723,589. (Cl. 179—58.)



1. A universal cord circuit comprising a pair of talking conductors, terminating in answering and calling plugs, a pair of supervisory relays for each end of the cord circuit, and a switching relay for each end of the cord circuit for connecting either one of its associated supervisory relays in bridge of the talking strands.

2. A universal cord circuit comprising a pair of talking conductors, terminating in answering and calling plugs, a pair of supervisory relays for each end of the cord circuit,

and a switching relay for each end of the cord circuit and connected to a third conductor of the associated plug, for connecting either one of its associated supervisory relays in bridge of the talking strands.

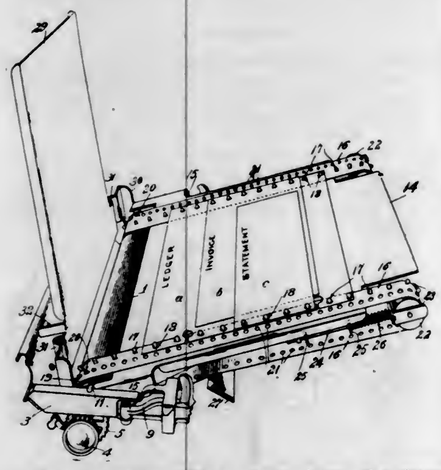
3. A universal cord circuit comprising a pair of talking conductors terminating in answering and calling plugs, a switching relay for each end of the cord circuit connected to a third contact of its associated plug, a supervisory relay for each end of the cord circuit having a winding connected in bridge of the talking conductors through normal contacts of the associated switching relay, and a second supervisory relay for each end of the cord circuit having a winding connected in bridge of the talking conductors through alternate contacts of the associated switching relay.

4. A universal cord circuit comprising a pair of talking conductors, terminating in answering and calling plugs, a pair of supervisory relays for each end of the cord circuit, a switching relay for each end of the cord circuit, and connected to a third conductor of the associated plug, for connecting either one of its associated supervisory relays in bridge of the talking strands, and a supervisory signal for each end of the cord circuit controllable by either one of its associated pair of relays.

5. A telephone system comprising common and local-battery telephone lines, a cord circuit for connection therewith, a pair of supervisory relays for the answering end of said cord circuit, a switching relay for said cord circuit for connecting either one of said relays in bridge of the talking strands of the cord circuit, and means whereby said switching relay is or is not operated according to the character of the calling line when connection is made therewith, to operatively associate one of the supervisory relays with the talking strands of the cord circuit.

[Claims 6 to 19 not printed in the Gazette.]

1,107,372. TYPE-WRITING MACHINE. JESSE A. B. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 4, 1913. Serial No. 799,053. (Cl. 197—126.)



1. The combination with a rotary platen, of a frame pivotally mounted for swinging about the platen axis, and normally extending upwardly and rearwardly from the platen, but movable about said axis to a position to bring its rear side uppermost to serve as a collating table, endless carriers on said frame, and means whereby work-sheets may be connected to said carriers to be fed thereby to the platen.

2. The combination with a rotary platen, of a frame mounted to swing about the platen axis, an endless carrier supported on said frame and extending around the platen, means on said carrier by which a work-sheet may be attached thereto, and means for causing it to be fed thereby to and around the platen.

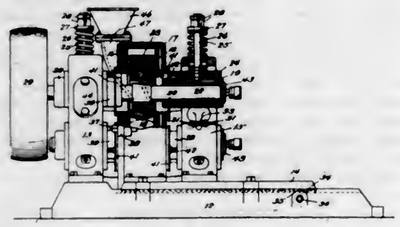
3. The combination of a rotary platen and a swinging work-sheet support extending upwardly and rearwardly from the platen and movable to a forwardly inclined position to receive work-sheets on the rear or upper face thereof, and means to feed the work-sheets from said support to printing position on the platen.

4. The combination of a rotary platen and a swinging work-sheet support extending upwardly and rearwardly from the platen and movable to a forwardly inclined position to receive work-sheets on the rear or upper face thereof, an endless carrier on said support and running around the platen, and means whereby a work-sheet may be connected with said carrier to be fed to and around the platen.

5. The combination with a rotary device, of endless carriers extending around the rotary device, means to positively drive said carriers from the rotary device, a support for said carriers, independent rollers on said support around which the carriers extend, means to apply tension to said rollers and thereby tension the carriers, and means to support work-sheets on the carriers; said support with said carriers being movable to position to permit the collation of work-sheets upon the rear side of said support.

[Claims 6 to 42 not printed in the Gazette.]

1,107,373. CRUSHING-MILL. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed July 19, 1911. Serial No. 639,456. (Cl. 83—9.)



1. In a crushing mill, the combination with one or more crushing rolls, a shaft for each of said rolls, and a crushing ring supported and driven by said roll or rolls, of a two-part casing inclosing the said crushing elements and one part of which is movably mounted relative to the other part so that the said casing may be opened when access to the chamber of the mill is desired, a traveling bed carrying the movable part of said casing, a stand on said bed supporting one end of said shaft or shafts, and a base on which said traveling bed slides and which is provided with a stand supporting the other end of said shaft or shafts.

2. A crushing mill comprising one or more yieldingly-mounted crushing rolls, a crushing ring supported by said roll or rolls, means for driving said roll or rolls and thereby rotating said ring, a two-part casing inclosing said crushing elements and comprising fixed and movable parts, a sliding bed on which one part of said casing is supported, a base on which said sliding bed is movable, and means for operating said sliding bed when said casing is to be opened or closed.

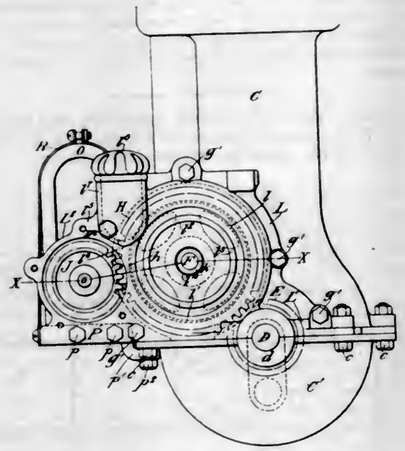
3. A ring-roll crushing mill comprising one or more yieldingly-mounted crushing rolls, a crushing ring supported by said roll or rolls, a two-part casing inclosing said crushing elements, yieldingly-mounted bearings on opposite sides of said casing and from which said roll or rolls are supported, and a traveling bed with which one part of said casing is connected so that said casing may be opened and closed by moving said traveling bed.

4. In a ring-roll crushing mill, the combination with a plurality of crushing rolls, all of which are yieldingly mounted, and a crushing ring supported and driven by said rolls, of a driving shaft, stands supporting said shaft, pulling springs arranged on the outside of said stands and acting on the uppermost of said rolls, and pushing springs housed within the said stands and acting on the others of said rolls.

5. In a ring roll crushing mill, the combination with a plurality of yieldingly-mounted crushing rolls and a crushing ring supported and driven thereby, of bearings from which the uppermost of said rolls is supported, springs for pulling said bearings upward, bearings from which the other rolls are supported, push-rods acting on said last-named bearings and pushing springs acting on said rods.

[Claims 6 to 16 not printed in the Gazette.]

1,107,374. ATTACHMENT FOR INSTALLING MAGNETOS ON GAS-ENGINES. WALTER G. SWIFT, Providence, R. I., assignor of one-half to George F. Bohl, Cranston, R. I. Filed Oct. 27, 1913. Serial No. 797,482. (Cl. 123—198.)



1. In an attachment for installing magnetos on gas-engines of the "Ford" type, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face and adapted to be mounted on the cam-shaft with the said overhanging rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a gear-housing section formed with an interior, annular recess arranged to receive the overhanging rim of the timing-gear and adapted to be bolted to the engine casting to inclose both gears, and a stud-shaft extending rearwardly from the magneto-gear through the gear-housing section to adapt it to be connected with the magneto.

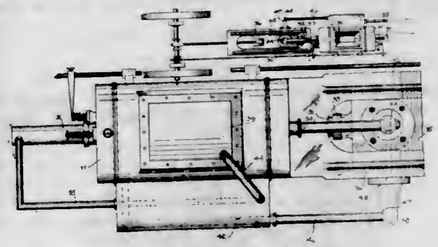
2. In an attachment for gas-engines of the "Ford" type adapted to connect a magneto to be driven therefrom, the combination with the main engine casting and the cam-shaft mounted in bearings therein, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face and adapted to be mounted on the end of the cam-shaft with its rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a stud-shaft for connecting the magneto to its drive-gear, and a gear-housing section fitted to the front of the engine casting and adapted to inclose both gears, said housing-section formed with an annular channel adapted to receive the overhanging rim of the timing-gear and a recessed front wall set in from the gear-inclosing portion to allow the replacement of the commutator on the cam-shaft in its original position without disturbing the relation of its parts.

3. In an attachment for installing magnetos on gas-engines of the "Ford" type, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face, and adapted to be mounted on the cam-shaft with the said overhanging rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a gear-housing section formed with an interior, annular recess arranged to receive the projecting rim of the timing-gear and adapted to be bolted to the engine casting to inclose both gears, a table bolted to the gear-housing section and extending rearwardly therefrom, a magneto mounted on said table, and means to connect the magneto to be operated from the drive-gear.

4. In a magneto driving-connection for "Ford" engines, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having a tooth-face of substantially twice the width of the original gear which it replaces and adapted to be mounted on the projecting end of the cam-shaft with its overhanging rim extending beyond the front face of the engine casting, a magneto-drive-gear arranged in position outwardly from the front face of the engine casting to adapt it to mesh with the overhanging portion of the timing-gear, a stud-shaft driven from said magneto-gear, and a gear-housing section formed with a bearing for the stud-shaft and adapted to be bolted to the engine casting to inclose both gears.

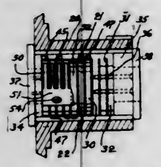
5. In an attachment for gas-engines of the "Ford" type, the combination with a timing-gear formed with an overhanging rim having an extended tooth-face, of a gear-housing section adapted to be bolted to the front face of the engine casting and formed with a cap for the crank-shaft bearing, an annular, interior recess adapted to receive the overhanging rim of the timing-gear, an exteriorly-recessed wall for receiving the commutator, an extension formed with a bearing for the magneto drive-shaft and a flanged inclosure for the magneto drive-gear, and a plate fitted to the outside of the housing to cover the drive-gear.

1,107,375. GASOLENE-ENGINE. WILLIAM R. THACKER, Council Bluffs, and CHARLES G. CLARK, Logan, Iowa. Filed Oct. 26, 1912. Serial No. 727,944. (Cl. 123—176.)



In an engine of the class described, a cylinder, a hollow piston movable therein, a hollow piston rod in port communication with said hollow piston, and extending through said cylinder at each end, a cross head connected to said piston rod and having a passage in communication with the interior of said rod, a pump including a pair of cylinders, a tube connected to the hollow piston rod exterior the first-mentioned cylinder, and having an end lying in one of the pump cylinders and reciprocable therein, a hollow arm projecting from said cross head and in communication with the opening therein, a tube connected with said hollow arm and reciprocable in the second pump cylinder, means affording communication between the two pump cylinders, and valves controlling the flow of fluid through said tubes.

1,107,376. LOCK MECHANISM AND KEY THEREFOR. KNUT G. THIMAN, New York, N. Y. Filed Dec. 21, 1910. Serial No. 598,555. (Cl. 70—46.)



1. In a device of the character described, the combination with a casing provided with locking grooves, of a self-contained rotary barrel in said casing, said barrel being composed of laminæ held rigidly against one another, and tumblers slidably guided solely by the laminæ thereof adapted to engage with said grooves.

2. In a device of the character described, the combination with a casing provided with locking grooves, of a rotary barrel therein composed of separate sections with recesses therebetween, tie-rods passing through said sections to hold them together, and tumblers for engagement with said grooves mounted slidably in said recesses.

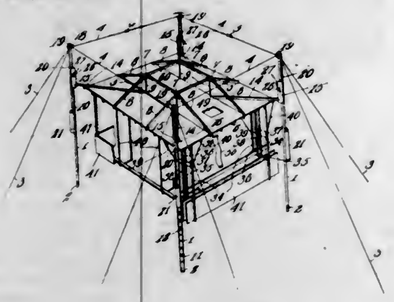
3. In a device of the character described, the combination with a casing provided with locking grooves, of a rotary barrel therein composed of separate sections with recesses therebetween, heads constituting journal portions for the barrel, rods tying said heads and sections together, and tumblers for engagement with said grooves mounted slidably in said recesses.

4. In a device of the character described, the combination with a casing provided with locking grooves, of a rotary laminated barrel built up of alternating washers and pairs of laterally spaced segments with tie rods passing through the washers and segments, and tumblers for engagement with said grooves held slidably in recesses formed between the opposite inner edges of said segments and the faces of the washers.

5. In a device of the character described, the combination with a casing provided with diametrically opposed locking grooves, of a rotary barrel therein, a series of integrally formed tumblers transversely movable in said barrel, a predetermined number of said tumblers being inverted for engagement with one groove and the remainder being converted for engagement with the other groove, and springs for urging all of said tumblers in the same direction so as to hold said inverted tumblers in engagement with their groove and said converted tumblers away from their groove.

[Claims 6 to 22 not printed in the Gazette.]

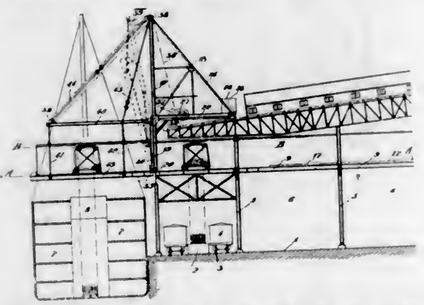
1,107,377. MONOLITHIC CONSTRUCTOR. GEORGE E. THOMPSON, McCook, Nebr. Filed July 7, 1911. Serial No. 637,289. (Cl. 25—131.)



1. In a device of the class described, a platform; inner wall forming members connected with the platform; outer wall forming members; a single set of elements constituting at once a means for pivotally connecting each outer wall-forming member with the platform and a means for affording a step by step adjustment between the inner and outer wall-forming members; collapsible means connecting the outer wall-forming members with the platform to prevent pivotal movement of the outer wall-forming member and means connecting the outer wall forming members with the platform step by step adjustment with respect to the inner wall-forming members; means for holding all of said members spaced; and means for raising and lowering the platform.

2. In a device of the class described, a series of posts independent of the finished product, and located beyond the periphery of the finished product; a centrally unbroken mixing platform having its periphery slidably connected with the posts, the posts constituting the sole guides for directing the vertical movement of the platform; means upon the posts for supporting the platform; a mold for forming a continuous wall, depending from the platform; and a chute opening through the platform and adapted to discharge into the mold and beyond the inner face of the mold, thus to permit the forming of the bottom of the finished product, the posts being removable independently of the finished product and the centrally unbroken construction of the mixing platform serving to protect the bottom of the finished product during the construction thereof.

1,107,378. APPARATUS FOR FREIGHT TRANSFERENCE. GEORGE E. TITCOMB, New Rochelle, N. Y. Filed Apr. 2, 1912. Serial No. 687,991. (Cl. 214—4.)



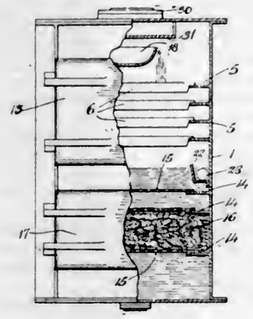
1. The combination with a building, of one or more storage floors, an operating floor, hatchways on said operating floor leading to said storage floors, traveling trucks adapted to move loads on said operating floor and through said hatchways from and onto said storage floors, a power device on each of said trucks, and means adapted to supply electric energy to said power devices in any location on said operating floor.

2. The combination with one or more storage floors, of an operating floor located parallel to said storage floors, a series of hatchways on said operating floor and leading to said storage floors, trucks freely traveling on said operating floor and adapted to move loads through said hatchways from and onto any part of said storage floors, a power device on each of said trucks, and a series of stationary electrical conductors capable of supplying current to said power devices in any location on said operating floors.

3. The combination with a building, of one or more storage floors, an operating floor, railroad tracks and storage compartments on said storage floor, hatchways on said operating floor giving access to said railroad tracks and storage compartments, traveling trucks adapted to freely move loads on said operating floor and through said hatchways from and onto said railroad tracks and storage compartments, a power device on each of said trucks, and means adapted to supply electric energy to said power devices in any location on said operating floor.

4. The combination with a building, of one or more storage floors, an operating floor, hatchways on said operating floor leading to said storage floors, a traveling tower movable along said building, an overhanging boom on said tower, trucks adapted to travel on said operating floor and said boom and to move loads thereon and through said hatchways from and onto said storage floors, a power device on each of said trucks, and means adapted to supply electric energy to said power devices in any location on said operating floor and said boom.

1,107,379. FEED-WATER HEATER. EDWARD THOMAS TURNER, Dayton, Ohio. Filed Sept. 12, 1913. Serial No. 780,430. (Cl. 62—31.)



1. In a feed water heater, a series of trays for spreading out the water into thin sheets, each tray comprising a long shallow receptacle, with segmentally curved longitudinal sides, and baffle plates located within the tray parallel and adjacent to the sides to cause the water in overflowing to follow the curve of the sides on the outside.

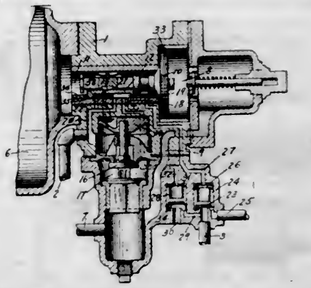
2. In a feed water heater, a series of trays for spreading out the water into thin sheets arranged in horizontal rows, each tray comprising a long shallow receptacle, with segmentally curved longitudinal sides and baffle plates located within the tray parallel and adjacent to the sides to cause the water in overflowing to follow the curve of the sides on the outside, and with the ends projecting beyond the sides to serve as stops for insuring a longitudinal opening between the trays of each row.

3. In a feed water heater, in combination with a casing to form a chamber for the passage of steam, shelves along the inside of the casing to form supports, a series of shallow trays adapted to be arranged transverse the casing in horizontal rows and supported on said shelves, means on the trays to space each one in a row from the adjacent ones with a wide door for the casing of a size sufficient to permit the ready insertion and withdrawal of the trays.

4. In a feed water heater, in combination with a casing to form a chamber for the passage of steam, shelves along the inside of the casing to form supports, a series of shallow trays adapted to be arranged transverse the casing in horizontal rows and supported on said shelves, with a wide door for the casing of a size sufficient to permit the ready insertion and withdrawal of the trays, each tray comprising a long shallow receptacle with segmentally curved longitudinal sides and baffle plates located within the tray parallel and adjacent to the sides to cause the water in overflowing to follow the curve of the sides on the outside, and with the ends projecting beyond the sides to serve as stops for insuring a longitudinal opening between the trays of each row.

1,107,380. TRIPLE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 7, 1912. Serial No. 730,027. (Cl. 188—15.)

1. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and triple valve device, of an additional brake cylinder, and a piston valve normally subject on one side to auxiliary reservoir pressure and on the opposite side to the pressure in the additional brake cylinder and the auxiliary reservoir and operated by venting fluid from one side upon movement of the triple valve device to emergency application position for supplying fluid from the auxiliary reservoir to the additional brake cylinder.



2. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and triple valve device, of an additional brake cylinder and a piston valve normally subject on one side to atmospheric pressure and on the opposite side to the pressure in said additional brake cylinder for controlling the release of fluid from said additional brake cylinder, said triple valve device having a port communicating directly with said piston valve for supplying fluid to one side of said piston valve upon movement of the triple valve device to emergency application position to maintain the exhaust from the additional brake cylinder closed.

3. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and triple valve device, of an additional brake cylinder, valve means operating in an emergency application of the brakes for supplying fluid from the auxiliary reservoir to the additional brake cylinder, and valve means for controlling the release of fluid from said additional brake cylinder.

4. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and triple valve device, of an additional brake cylinder, a piston valve operated by auxiliary reservoir pressure upon an emergency appplication of the brakes for supplying fluid from the auxiliary reservoir to the additional brake cylinder, and a piston valve operated by the pressure in said additional brake cylinder for controlling the release of fluid therefrom.

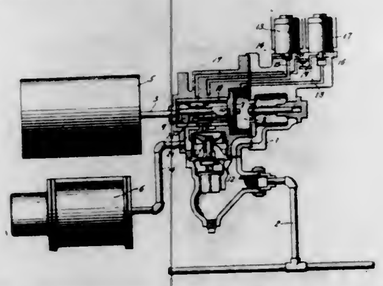
5. In a fluid pressure brake, the combination with a train pipe, brake cylinder, auxiliary reservoir, and triple valve device, of an additional brake cylinder, a piston valve operated by auxiliary reservoir pressure upon an emergency application of the brakes for supplying fluid from the auxiliary reservoir to the additional brake cylinder, and a piston valve operated by the pressure in said additional brake cylinder when the triple valve device is in release position for opening an exhaust port to said additional brake cylinder.

1,107,381. ELECTROPNEUMATIC BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1913. Serial No. 802,916. (Cl. 188—4.)

1. In a fluid pressure brake, the combination with a brake pipe and an equalizing valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of electrically controlled means for venting fluid from the brake pipe having a vent port adapted to be gradually restricted by the movement of the equalizing valve device to gradually open the usual service port.

2. In a fluid pressure brake, the combination with a brake pipe and an equalizing valve device comprising valve means for controlling a brake cylinder service port and

a piston operated upon a reduction in brake pipe pressure for actuating said valve means, of an electrically controlled valve device adapted to vent fluid from the brake pipe through a passage controlled by said piston to effect a service reduction in brake pipe pressure, the port opening of said passage to the brake pipe being gradually reduced in area as the brake cylinder service port opening is gradually increased in area.

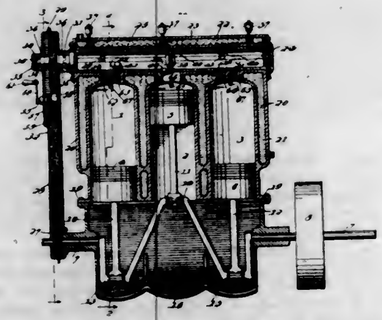


3. In a fluid pressure brake, the combination with a brake pipe and an equalizing valve device operated upon a reduction in brake pipe pressure for effecting an application of the brakes, of electrically controlled means for venting fluid from the brake pipe to effect a service reduction in brake pipe pressure and having a vent port opening into the piston chamber of the equalizing piston and adapted to be controlled by the piston ring of said piston.

4. In a fluid pressure brake, the combination with a brake pipe and an equalizing valve device having a piston operating upon a gradual reduction in brake pipe pressure to make a partial traverse and effect a service application of the brakes, of electrically controlled means for venting fluid from the brake pipe through a port controlled by said piston, said port being adapted to be closed upon a further traverse beyond service position.

5. The combination with a triple valve device and a brake pipe communicating with the piston chamber thereof, of an electric service valve device for controlling a brake pipe vent port opening into said piston chamber at a point intermediate the extreme positions of the triple valve piston.

1,107,382. INTERNAL-COMBUSTION ENGINE. FREDERICK COLLIER TYGARD, Pittsburgh, Pa. Filed Aug. 2, 1910, Serial No. 575,169. Renewed Dec. 20, 1913. Serial No. 808,046. (Cl. 123—36.)



1. In an internal combustion engine of the reciprocatory type, the combination with a cylinder, of means of compressing therein an excessive explosive charge and rotary means for dividing said charge into predetermined parts, one for immediate use in said cylinder and the other separately segregated, for a successive operation.

2. In an internal combustion engine of the reciprocatory type, the combination with a cylinder, of means of compressing therein an excessive explosive charge and rotary means for dividing said charge into predetermined parts, one part for immediate use and the other separately segregated for a separate successive operation in the same cylinder.

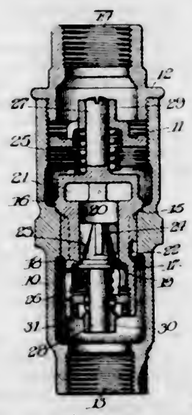
3. In an internal combustion engine of the reciprocatory type, the combination with a cylinder, of means of compressing therein an excessive explosive charge and rotary means for dividing said charge into predetermined parts, one part for immediate use and the other separately segregated for a successive operation in a cylinder.

4. In an internal combustion engine of the reciprocatory type, the combination with a cylinder, of means of compressing therein an excessive explosive charge and means for dividing said charge into predetermined parts, one part for immediate use and the other separately segregated for a successive operation in a cylinder, and means for the transfer and retransfer of said segregated portion back to a cylinder.

5. In an internal combustion engine of the reciprocatory type, the combination with a cylinder of means of compressing therein an excessive explosive charge, means for dividing said charge into predetermined parts, one part for immediate use and the other separately segregated, for a successive operation in a cylinder, means for the transfer and retransfer of said segregated portion back to a cylinder for its ignition, and suitable means to ignite, expand and exhaust said portion.

[Claims 6 to 26 not printed in the Gazette.]

1,107,383. PRESSURE-REGULATOR. SIVERT UDSTAD, Aurora, Ill. Filed Sept. 12, 1913. Serial No. 789,454. (Cl. 136—9.)



1. In a pressure regulator, in combination, an axially movable valve having an inwardly extended tubular stem, the bore of the stem being continued through the valve, a second valve sliding in the bore of the stem intermediate its ends and controlling the opening therethrough, a spider running in the bore of the said stem beyond the second mentioned valve from the first mentioned valve and having threaded engagement with the wall of the said stem and a spring reacting between the spider and the second mentioned valve.

2. In a pressure regulator, in combination, a tubular casing having a valve seat intermediate its ends, a valve coöperating with the said seat and having a tubular stem, the bore of the stem being extended through the valve, a second valve sliding in the bore of the said stem and controlling the opening therethrough, the two valves acting in opposite directions, a pair of guiding and pressure regulating plates one having threaded engagement with the wall of the case in front of the first mentioned valve and the other having threaded engagement with the stem of the first mentioned valve in front of the second mentioned valve and a spring reacting between each of the said guiding and pressure regulating plates and the corresponding valve.

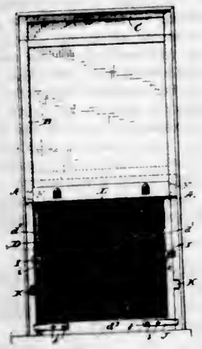
3. In a pressure regulator, in combination, a chambered casing having a valve seat intermediate its ends, an opening in its wall directly above the valve seat, and a pair of axially alined oppositely facing sockets for the connection of fluid pipes, one at each side of the valve seat, the line of said sockets being offset from the line of the valve seat and opening, a removable cap covering the said opening, and a pair of oppositely acting valves, one coöperating with the said valve seat and having an opening therethrough and the other controlling the opening in the said valve which is provided with an opening, both of said valves being removable through the said opening in the wall of the case upon removal of the said cap.

1,107,384. NON-REFILLABLE BOTTLE. JOSEPH L. VAN RENSSELAER, New York, N. Y. Filed Mar. 6, 1913. Serial No. 752,375. (Cl. 215—67.)



The combination with a bottle neck having an annular shoulder formed therein, and vertical grooves formed in the bore of the neck and leading part way to said shoulder, of a hollow shell open at one end, and a valve for closing said open end under certain conditions, the shell provided with outwardly projecting lugs adapted to fit and move vertically in the vertical grooves of the bore of the bottle-neck, the outer edges of the lugs tapering, and wedges inserted between the outer edges of the lugs and the inner walls of the grooves.

1,107,385. WINDOW-SCREEN. PEWELL VINCENT, Portland, Me. Filed Jan. 17, 1914. Serial No. 812,813. (Cl. 156—14.)



1. The combination with a window casing, of guide plates thereon having open portions, and a screen associated with said guide plates, the screen having fingers on one face thereof constructed and arranged to be inserted through said open portions and to embrace the said guide plates between the same and the adjacent face of the screen frame.

2. The combination with a window casing, of guides thereon having open portions, and a screen associated with said guides having guide fingers on one surface thereof adapted to be inserted through said open portions to embrace the guides between the same and the adjacent faces of the screen frame, the guide fingers being turned at the upper edges thereof in a direction away from the guides.

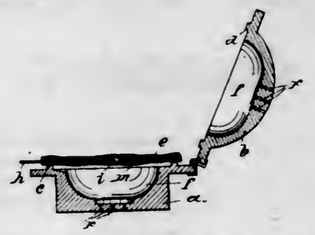
3. The combination with a window casing, of guides thereon having open portions, and a screen associated with said guides having guide fingers on one surface thereof adapted to be inserted through said open portions to embrace the guides between the same and the adjacent faces of the screen frame, the guide fingers being turned at the upper and lower edges thereof in a direction away from the guides.

4. The combination with a window casing, of guides thereon having open portions, and a screen associated with said guides having guide fingers on one surface thereof adapted to be inserted through said open portions to embrace the guides between the same and the adjacent faces of the screen frame, the upper edges of the open portions of the guides being turned in a direction away from the guide fingers.

5. The combination with a window casing, of guides thereon having open portions, and a screen associated with said guides having guide fingers on one surface thereof adapted to be inserted through said open portions to embrace the guides between the same and the adjacent faces of the screen frame, the upper and lower edges of the open portions of the guides being turned in a direction away from the guide fingers.

[Claims 6 to 16 not printed in the Gazette.]

1,107,386. METHOD OF PRODUCING HOLLOW QUARTZ BODIES. AUGUST VOELKER, Beuel, near Bonn, Germany. Filed Aug. 13, 1909. Serial No. 512,693. (Cl. 49—78.1.)



1. The herein described method of producing a hollow quartz body, which consists in withdrawing from a furnace a tubular semi-liquid quartz body, freeing its exterior from the loosely adhering arenaceous quartz, placing it with its end on the edge of a lower mold part, introducing into its cavity by means of a burnable tool a foreign body capable of being wholly or partially gasified by the extreme heat of the quartz, closing its cavity at both ends by squeezing the latter between the edges of the lower and of an upper mold part, and retaining the mold parts closed while the developed gases blow the quartz body and press it against the inside of the mold, the various operations being performed rapidly so as to prevent the quartz from prematurely congealing.

2. The herein described method of producing a hollow quartz body, which consists in withdrawing from a furnace a tubular semi-liquid quartz body, freeing its exterior from the loosely adhering arenaceous quartz, placing it with its ends on the edge of a lower mold part, introducing into its cavity by means of a burnable tool a foreign body capable of being wholly or partially gasified by the extreme heat of the quartz, closing its cavity at both ends by squeezing the latter and cutting off the ends of said tubular body between the edges of the lower and an upper mold part, and retaining the mold parts closed while the developed gases blow the quartz body and press it against the inside of the mold, the various operations

being performed rapidly so as to prevent the quartz from prematurely congealing.

3. The herein described method of producing a hollow quartz body, which consists in withdrawing from a furnace a tubular semi-liquid quartz body, freeing it from the loosely adhering arenaceous quartz, placing it with its ends on the edge of a lower mold part, introducing into its cavity by means of a burnable tool a foreign body capable of being wholly or partially gasified by the extreme heat of the quartz, closing its cavity at both ends by squeezing the latter between the edges of the lower and an upper mold part, and retaining the mold parts closed while the developed gases blow the quartz body and press it against the inside of the mold, the various operations described so far being performed rapidly so as to prevent the quartz from prematurely congealing, and removing from the cooled hollow body any protrusions formed between the two edges of the mold.

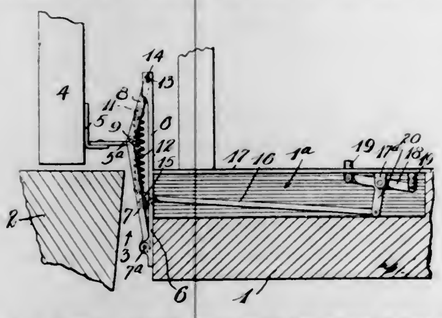
4. The herein described method of producing a hollow quartz body, which consists in withdrawing from a furnace a tubular semi-liquid quartz body, freeing its exterior from the loosely adhering quartz, placing it with its ends on the edge of a lower mold part, introducing into its cavity by means of a burnable tool a foreign body capable of being wholly or partially gasified by the extreme heat of the quartz, closing its cavity at both ends by squeezing the latter between the edges of the lower and an upper mold part, retaining the mold parts closed while the developed gases blow the quartz body and press it against the inside of the mold, the various operations described so far being performed rapidly so as to prevent the quartz from prematurely congealing, and dividing the cooled hollow body into two parts in a line corresponding to the line of division between the two parts of the closed mold.

1,107,387. METHOD OF PRODUCING TRANSPARENT QUARTZ. AUGUST VOELKER, Beuel, near Bonn, Germany. Filed Feb. 18, 1911. Serial No. 609,466. (Cl. 49—78.1.)



A process of making a transparent quartz body from a tubular nucleus of non-transparent, arenaceous quartz in a state of fusion, consisting in rolling said nucleus in a granular powder of rock crystal and in fusing the product by externally heating the same.

1,107,388. HOLDING AND RELEASING DEVICE FOR DOORS. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 10, 1913. Serial No. 800,043. (Cl. 187—67.)



1. A holding and releasing device for sliding doors of elevator shafts comprising in combination with a manually operated sliding door having a projecting abutment, an elevator car, a stop member carried by the elevator car, and means under the control of the elevator operator for projecting said member into the path of closing movement of said door abutment when in door opened position, and for retracting said member from such position to permit the door to be closed, said stop member when projected being arranged to yield toward retracted position and means normally tending to hold said member in its respective projected and retracted positions.

2. A holding and releasing device for sliding doors of elevator shafts comprising in combination with a manually operated sliding door having an abutment thereon projecting out into the elevator shaft beyond the edge of the door sill, said door normally tending to slide toward closed position, an elevator car, a stop member carried by the elevator car at its sill edge and movable relative thereto, means under the control of the elevator operator whereby said stop member may be projected from the edge of the car to a position adjacent and in the path of closing movement of said abutment to hold the door in open position, and whereby said stop member may be retracted from such position to permit said door to close, said stop member, when projected, being arranged to yield toward retracted position on contact with the elevator well and means normally tending to hold said member in its respective projected and retracted positions.

3. A holding and releasing device for sliding doors of elevator shafts comprising, in combination with a sliding door having a projecting abutment, an elevator car, a toggle carried by the elevator car at its sill edge, means under the control of the elevator operator whereby said toggle may be flexed to project in part in the path of door closing movement of said door abutment when the door is opened, said toggle when thus projected being arranged to yield toward retracted position upon contact with the side of the elevator shaft and means normally tending to hold said toggle in its respective flexed and straightened positions.

4. A holding and releasing device for sliding doors of elevator shafts comprising, in combination with a sliding door having a projecting abutment, an elevator car, a toggle carried by the elevator car at its sill edge, means under the control of the elevator operator whereby said toggle may be flexed to project in part in the path of door closing movement of said door abutment when the door is opened, and whereby said toggle may be straightened and retracted from such position, and means whereby said toggle is yieldingly held in projected position.

5. A holding and releasing device for sliding doors of elevator shafts, comprising in combination with a manually operable sliding door having an abutment thereon projecting out into the elevator shaft beyond the edge of the door sill, said door normally tending to slide toward closed position, an elevator car, a stop member carried by the elevator car at its sill edge and movable relative thereto, foot controllable means carried by the car and operatively connected with said stop member whereby said member may be projected from the edge of the car to a position adjacent and in the path of closing movement of said door abutment to hold the door in open position, and whereby said member may be retracted from such position to permit said door to close, said stop member when projected, being arranged to yield toward retracted position on contact with the elevator shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,107,389. DENTIFRICE. LEE O. WALLER, Philadelphia, Pa., assignor to Kal-Pheno Chemical Company, Smyrna, Del., a Corporation of Delaware. Filed Feb. 18, 1913. Serial No. 749,108. (Cl. 167—9.)

1. A composition for a dentifrice containing phenolated chlorate of potash and a reaction product of menthol and thymol with formaldehyde.

2. A composition for a dentifrice containing a soluble salt rich in oxygen, readily soluble in and readily decomposed by the weak acid solutions of the oral cavity, and a reaction product of menthol and thymol with formaldehyde.

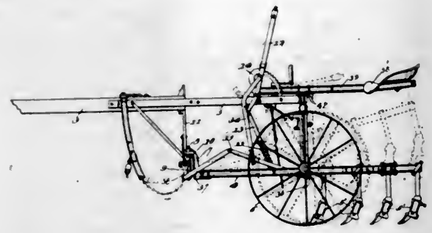
3. A composition for a dentifrice containing phenolated chlorate of potash, a reaction product of menthol and thymol with formaldehyde and an abrasive.

4. A composition for a dentifrice containing phenolated chlorate of potash, a reaction product of menthol and thymol with formaldehyde, magnesium carbonate, germicidal and stimulating oils, soap and calcium carbonate.

5. A composition for a dentifrice containing phenolated chlorate of potash, a reaction product of menthol and thymol with formaldehyde, magnesium carbonate, germicidal and stimulating oils, soap, calcium carbonate and a vehicle.

[Claim 6 not printed in the Gazette.]

1,107,390. CULTIVATOR. FREDERICK C. WARNE, Mansfield, Ohio, assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of Ohio. Filed Nov. 15, 1911. Serial No. 660,463. (Cl. 97—35.)

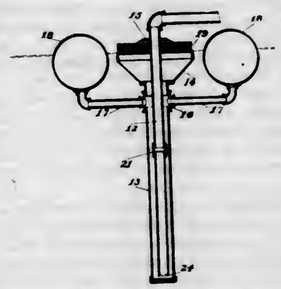


1. In combination with a frame having a ground wheel carrying yoke pivotally connected thereto, and a shovel beam in pivotal connection with said frame, a toggle connected at one end to the yoke, means to connect the opposite end of the toggle to the frame, a link pivoted at one end to the toggle, a lever pivoted intermediate its end to the frame, said link having its upper end angularly disposed and pivoted to said lever above the pivotal point of the latter, and a yielding link between the lower end of the lever and said beam which link is pivoted to the lower end of the lever and is connected to said beam whereby upon movement of the lever in one direction the beam will be lowered and the yoke moved forwardly.

2. In combination with a frame having a ground wheel carrying yoke pivotally connected thereto, and a shovel beam in pivotal connection with said frame, a toggle connected at one end to the yoke, means to connect the opposite end of the toggle to the frame, a lever pivoted intermediate its ends to the frame, a connection between the toggle and the lever connected to the lever at a point above the pivotal point of the lever to move the yoke backwardly and forwardly, and a yielding device between the lower end of the lever and said beam which device is connected to the lower end of the lever and to said beam whereby to raise and lower said beam through said device when the lever is given movement.

1,107,391. TANK-SKIMMER. WALTER J. WELCH, Chicago, Ill., assignor of one-half to Wallace E. Belcher, Chicago, Ill. Filed June 6, 1912. Serial No. 701,988. (Cl. 210—5.)

A tank skimmer for separating floating oil from water in a tank, comprising a pipe closed at its lower end, a cross coupling attached to the upper end thereof, arms projecting laterally from said coupling, a float secured to the outer end of each arm, a funnel shaped receptacle attached to the upper end of said coupling, a discharge siphon having the short leg thereof projecting downwardly through said funnel shaped receptacle and said coupling into said pipe, a screen carried by the upper end of said receptacle, and guide members mounted on said funnel shaped receptacle and slidingly engaged with the leg of said siphon whereby the floats and the apparatus carried thereby are guided in their up and down movements on said siphon leg, said floats being positioned to maintain the upper



edge of said funnel shaped receptacle substantially on a level with the upper surface of the water in the tank.

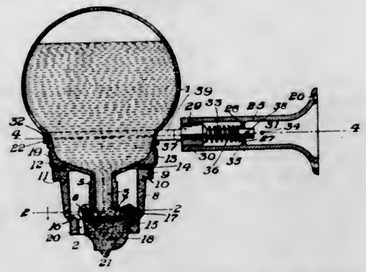
1,107,392. MOLD OF TYPOGRAPHICAL LINE-CASTING MACHINES. MATTHEW HENRY WHITTAKER, Manchester, and CHARLES HOLLIWELL, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Original application filed Sept. 27, 1913, Serial No. 792,078. Divided and this application filed Mar. 9, 1914. Serial No. 823,324. (Cl. 199—13.)

1. A slotted mold comprising side and end walls, one of the end walls being formed in its front face with an elongated recess extending longitudinally of the mold and communicating with the mold slot, the length of said mold slot being less than the measure of the slug produced by the mold.

2. A slotted mold comprising a body portion, a cap portion and an intermediate liner constituting one of the end walls of the mold slot, the said intermediate liner being formed in its front face with an elongated recess extending longitudinally of the mold and communicating with the mold slot.

3. A mold liner formed in its front face with an elongated longitudinally extending recess for the purpose described.

1,107,393. LIQUID-DISPENSING APPARATUS. EDWARD R. WILLIAMS, Sharpsburg, Pa. Filed Apr. 17, 1912. Serial No. 691,297. (Cl. 221—94.)



1. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice, a holder secured to said receptacle, a cup of less diameter than said holder and movably mounted therein and surrounding said neck, and means on said cup for spacing it from said holder to permit the discharge of liquid from said cup through the space between the cup and the holder.

2. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice and provided with an annular flat surface, a holder having an nular flange fitting said surface, a screw threaded collar secured to said receptacle and engaging said flange for securing the holder to the receptacle, and a cup movably supported in said holder and surrounding said neck.

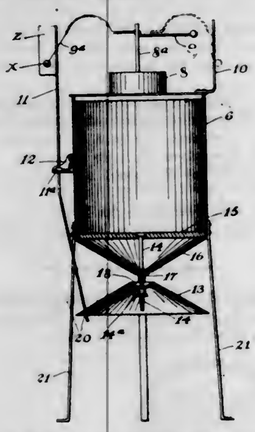
3. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice, a holder adjustably secured thereto, a cup provided with spaced ribs and projections supported in said holder, said holder being formed for engagement by said projections and ribs to support said cup with its body spaced from said holder.

4. A liquid dispensing apparatus, comprising a receptacle having a neck formed with a discharge orifice, a cup surrounding said neck and into which the same dips, a holder surrounding said cup and arranged to support the same, and a stop adjustable on said neck toward and from said cup and arranged to be contacted by said cup for limiting movement thereof toward said receptacle.

5. A liquid dispensing apparatus, comprising a receptacle having a threaded neck formed with a discharge orifice, a threaded stop adjustable on said neck, a cup surrounding said neck and arranged to permit the formation of a liquid seal for said orifice, and a holder for supporting said cup, said cup having an inclined upper surface arranged to engage said stop and limit the movement of said cup toward said receptacle and also centralize the same with reference to said discharge orifice.

[Claim 6 not printed in the Gazette.]

1,107,394. AUTOMATIC POULTRY-FEEDER. DE FOREST WOOD, Kipton, Ohio. Filed Feb. 13, 1914. Serial No. 818,525. (Cl. 119—56.)



1. In an automatic feeding device, the combination of a feed distributing member, a motor, means for loosely supporting said member, and means operated by the motor for intermittently vibrating said member.

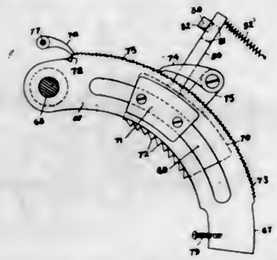
2. In an automatic feeding device, the combination of a feed distributing member, a motor, a hail and string escapement for said motor, and means intermittently operated by said bail for actuating said distributing member.

3. In an automatic feeding device, the combination of a hopper having an outlet at the bottom, a feed distributer under said outlet, a suspending rod for said distributer, extending through said outlet, a vibrating rod connected to said distributer to vibrate the same and the suspending rod, and means to intermittently vibrate said vibrating rod.

4. In an automatic feeding device, the combination of a hopper having an outlet at the bottom, a feed distributer under said outlet, a suspending rod for said distributer, extending through said outlet, a vibrating rod connected to said distributer to vibrate the same and the suspending rod, means to intermittently vibrate said vibrating rod, said means comprising a motor and a resolving "ball and string" escapement therefor, the ball being arranged to operate the rod at each revolution thereof.

5. In an automatic feeding device, the combination of a vibrating feed-distributing member, a motor, a revoluble "ball and string" escapement for said motor, a rod connected to said member, and a plate attached to said rod and projecting into position to be struck by the ball during the revolution thereof, to vibrate said rod and member.

1,107,395. SAFETY-GUARD FOR POWER-PRESSES. JAMES WRIGHT, Hamilton, Ontario, Canada, assignor of three-eighths to William Simpson Stacey, Hamilton, Ontario, Canada. Original application filed July 20, 1912, Serial No. 710,640½. Divided and this application filed June 30, 1913. Serial No. 776,721. (Cl. 74—46.)



1. In a device of the character described, the combination with a press restraining brake mechanism comprising a gravity actuated toothed member, of an oscillatory shaft, and means carried by said shaft for normally holding said gravity actuated member in an elevated position.

2. In a device of the character described, the combination with a press restraining brake mechanism comprising a gravity actuated toothed member, of an oscillatory shaft, means carried by said shaft for normally holding said gravity actuated member in an elevated position, and a pawl carried by a fixed portion of the press frame for holding said toothed member in operative position.

3. In a device of the character described, the combination with a press restraining brake mechanism comprising an arcuate slotted member, a toothed block slidably mounted therein, an oscillatory shaft, and a member carried by said oscillatory shaft for holding said arcuate member in an elevated position.

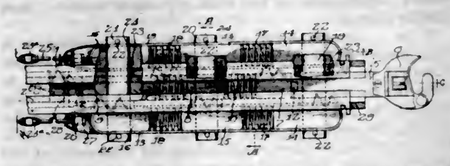
4. In a device of the character described, the combination with a press restraining brake mechanism comprising an arcuate slotted member, a toothed block slidably mounted therein, an oscillatory shaft, a member carried by said oscillatory shaft for holding said arcuate member in an elevated position, ratchet teeth formed upon said arcuate member, and a pawl carried by said toothed block and engaging said ratchet teeth.

5. In a press restraining mechanism, the combination with an arcuate member having its convex edge toothed and having an arcuate slot formed therein, of a toothed block having a mounting in said arcuate slot and having its teeth projected beyond the concave face of said arcuate member and a pawl carried by said block and engaging the toothed convex face of the arcuate member.

[Claims 6 to 8 not printed in the Gazette.]

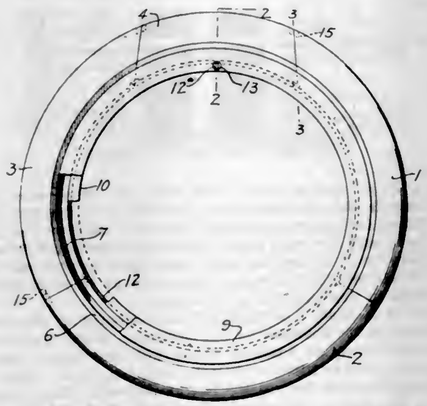
1,107,396. DRAFT-GEAR. VALENTY WROCLAWSKI and MICHAEL KOLASINSKI, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 655,065. (Cl. 213—42.)

1. A draft gear comprising a pair of members spaced apart, a hollow slide supported at the outside of each of said members, a plurality of blocks slidably mounted between said members and in said slides, said blocks being arranged in substantially transversely alined sets and spaced apart longitudinally, resilient means interposed between the blocks in each longitudinal row, a drawbar, keys connecting some of the blocks in transverse rows and slidably supporting said blocks and slides on said members, said slides and members being slotted to receive said keys, said slots being arranged so as to permit the compression of all of said resilient means when said drawbar is pushed inwardly, and to permit the compression of one set of said springs when said drawbar is pulled outwardly.



2. A draft gear comprising a pair of members spaced apart, a hollow slide supported at the outside of each of said members, a plurality of blocks slidably mounted between said members and in said slides, said blocks being arranged in substantially transversely alined sets and spaced apart longitudinally, resilient means interposed between the blocks in each longitudinal row, a drawbar, keys connecting some of the blocks in transverse rows and slidably supporting said blocks and slides on said members, said members being slotted to permit the forward key to be relatively moved therein in both directions, and the rearward and middle keys to be relatively moved therein only in relatively opposite directions, and said slides being slotted to permit said forward and rearward keys to be relatively moved therein only in relatively opposite directions, and permit said middle key to be relatively moved therein in both directions for the purpose specified.

1,107,397. COLLAPSIBLE CORE. JOHN YEMIKER, Akron, Ohio. Filed Apr. 19, 1913. Serial No. 762,442. (Cl. 18—45.)



1. A collapsible core including a plurality of separable segmental sections adapted to abut one against the other to form the circular body of the core, said sections being together provided with an inwardly extending annular bead, said bead being formed in one side with an annular recess, a rigid annulus abutting against the recessed side of the bead and formed with a laterally projecting annular flange fitting in said recess, an expansible split ring mounted within the circle of the bead and engaging the same, and means for expanding said ring.

2. A collapsible core including a plurality of segmental sections arranged in abutting relation to each other whereby to produce a circular structure, said sections being together formed with an inwardly projecting annular bead, said bead being formed in one side with an annular recess, a rigid and unbroken annulus engaging one side face of the bead and formed with a laterally projecting annular flange fitting in said recess, an expansible split ring fitting within the circle of said bead, and means for expanding said ring against the bead, the annulus projecting inwardly over and contacting with one side face of said ring.

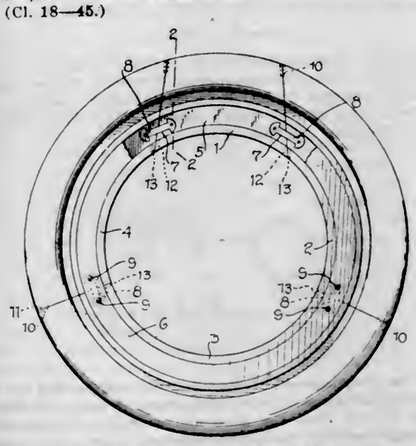
3. A collapsible core, including a plurality of separable segmental sections arranged in abutting relation to each other to produce a circular structure, said sections being together provided with an inwardly projecting annular bead, said bead being formed in one side with outer and inner annular grooves, an annulus engaging the recessed side of the bead and formed with a laterally projecting annular flange fitting within the outer groove, an expanding ring formed with an outwardly projecting flange fitting within the inner groove, and means for expanding said ring.

4. A collapsible core including a plurality of separable segmental sections arranged in abutting relation to each other, whereby to produce a circular structure, said sections being together formed with an inwardly projecting annular bead, said bead being formed in one side with an annular recess, a rigid and unbroken annulus engaging one side face of the bead and formed with a laterally projecting annular flange fitting in said recess, an expansible ring fitting within the circle of said bead, and means for expanding said ring against the bead, the bead being formed with a groove and the ring with an outwardly projecting flange fitting within said groove.

5. A collapsible core including a plurality of separable segmental sections arranged in abutting relation to each other, said sections being formed with an inwardly projecting annular bead, the bead being formed in one side with outer and inner annular recesses, an annulus engaging the recessed side of the bead and formed with a laterally projecting annular flange fitting within the outer recess, an expansible split ring mounted within the circle of the bead and engaging the same and formed with an outwardly projecting annular flange fitting within the inner recess, the annulus overlapping the flanged side of the split ring and formed in registry with the ends of said ring, with an opening, and a wedge member adapted to be inserted through said opening in between the ends of the ring to expand the latter.

[Claim 6 not printed in the Gazette.]

1,107,398. COLLAPSIBLE CORE. JOHN YEMIKER, Akron, Ohio. Filed Aug. 27, 1913. Serial No. 786,989. (Cl. 18—45.)



1. A collapsible core for manufacturing pneumatic tires comprising a plurality of separable segmental sections adapted to abut against each other to produce a circular

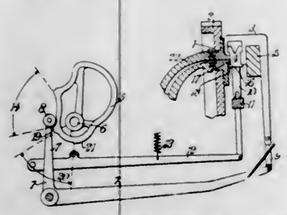
body and provided at their inner edges with flanges, said flanges being provided with longitudinal channels in one face to form an annular channel when the sections are assembled, said flanges being also provided with tapered openings extending transversely from the annular channel at the ends of the sections, tapering wedge members adapted to be driven into the openings to draw the sections together, a ring adapted to be placed in the annular channel, and means for securing the ring to the tapering wedge members.

2. A collapsible core of the character described, comprising a plurality of separable segmental sections adapted to abut against each other to produce a circular body and provided at their inner edges with flanges, said flanges being provided in one face with longitudinal channels to form an annular channel when the sections are assembled and the flanges being also provided with tapered openings extending transversely from the annular channel at the ends of the sections and said openings being enlarged at their ends, tapering I-shaped wedge members adapted to be driven into the openings to draw the sections together, a ring receivable in the annular channel, and means for securing the ring to the tapering wedge members.

3. A collapsible core for pneumatic tires comprising a plurality of separable abutting sections producing a circular body, each section being provided at its edge with an enlarged flange connected with the main portion thereof by a neck portion and provided in one face with a longitudinal channel, whereby an annular channel will be provided when the sections are assembled, the adjoining ends of said flanges being provided with corresponding and communicating tapered openings in the ends of the longitudinal channels, the inner ends of the openings being larger than the remainder of said openings, tapered I-shaped wedge members adapted to be driven into the registering openings with the heads thereof lying in the enlarged inner ends of said openings to draw the sections together, a ring adapted to be forced into the annular channel and against the inner faces of the tapered I-shaped wedge members, and means for securing the ring to the tapered I-shaped wedge members.

4. A collapsible core of the character described comprising a plurality of segmental sections designed for abutting relation with each other whereby to form a circular body portion, said sections being formed with inwardly directed flanges producing an annular flange in the assembled relation of the sections, said flange being formed at the joint between the sections with transversely extending openings, wedge members receivable in said openings and adapted to overlap the joint, and a ring applicable to one side face of said annular flange and adapted to be secured to said wedge members for the purpose specified.

1,107,399. TYPOGRAPHICAL LINE-CASTING MACHINE. CHRISTIAN AUGUSTUS ALBRECHT, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 7, 1912. Serial No. 676,120. (Cl. 199—7.)



1. In a typographical machine, the combination of a mold, justifying mechanism, an elevator to carry the matrices to and from the mold and capable of a further movement to aline them with reference thereto, and a cam for imparting the aforesaid movements to the elevator, the said cam being formed to effect a slight relaxation of the alining action during justification.

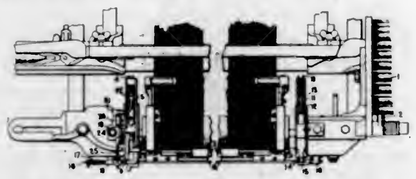
2. In a typographical machine, the combination of a mold justifying mechanism acting in two successive stages, an elevator to carry the matrices to and from the mold and capable of a further movement to aline them with reference thereto, and a cam for imparting the aforesaid movements to the elevator, the said cam being formed with two projecting portions to effect the alinement of the matrices in two successive stages, one following each of the justifying stages, and with an intermediate depression to permit a relaxation of the alining pressure between such alining stages.

3. In a typographical machine, the combination of a mold justifying mechanism acting in two successive stages, a matrix carrier to present the matrices thereto and to aline the matrices in two successive stages, one following each of the justifying stages, and a cam for moving the carrier, the said cam being formed on its periphery with two projecting portions which effect the alinement of the matrices in the aforesaid stages and with an intermediate depression to permit a relaxation of the alining pressure between such alining stages.

4. In a typographical machine, the combination of a mold, a line of matrices to coöperate with the mold, mechanism for justifying the line in two successive stages, and means for alining the matrices against the mold between the two justifying stages, the said means being constructed to permit a slight relaxation of the alining action during said stages.

5. In a typographical machine, the combination of a mold, a line of matrices to coöperate with the mold, mechanism for justifying the line in two successive stages, and means for alining the matrices against the mold after each justifying stage, the said means being constructed to permit a slight relaxation of the alining action during said stages.

1,107,400. FILLING-REPLENISHING LOOM. OSCAR BERNIER, Fall River, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Sept. 23, 1913. Serial No. 791,428. (Cl. 139—85.)



1. In a loom, a main filling fork adapted to effect a change in the operation of the loom upon the detection of a filling failure, an auxiliary filling fork and means operable by said auxiliary filling fork upon detection of filling failure by it to position said main filling fork in operative relation to a moving actuator so as to effect said change in the operation of the loom.

2. In a loom, a main filling fork adapted to effect a change in the operation of the loom upon detection of the filling failure, an auxiliary filling fork and means operable by said auxiliary fork upon said detection of filling failure by it to depress the tail of said main filling fork into the path of the moving actuator to effect said change in the operation of the loom.

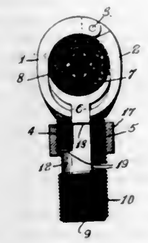
3. In a loom, a main filling fork, means adapted to be operated by said main filling fork to effect a replenishment of the filling upon detection of the filling failure, an auxiliary filling fork, and means operable by said auxiliary fork upon detection of absence of filling by it to depress the tail of said main filling fork into the path of a vibrator to effect a replenishment of the filling.

4. In a loom, in combination, main and auxiliary filling forks each having slides on which said forks are mounted, a vibrator and its hook for each fork, filling replenishing mechanism directly controlled as to its operation by the main fork upon detection of filling absence thereby, means operative through the detecting action of the auxiliary fork to position the tail of the main fork in the path of its hook, whereby filling replenishment will be effected.

5. In a loom, in combination, main and auxiliary filling forks each having slides on which said forks are mounted, a vibrator and its hook for each fork, filling replenishing mechanism directly controlled as to its operation by the main fork upon detection of filling absence thereby, means operative through the detecting action of the auxiliary fork to position and positively lock the tail of the main filling fork in the path of its hook during the forward vibration thereof, whereby filling replenishment will be effected.

[Claims 6 to 11 not printed in the Gazette.]

1,107,401. ELECTRICAL COUPLING. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 25, 1910. Serial No. 573,692. (Cl. 173—273.)

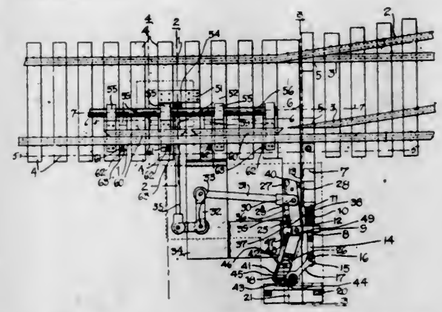


1. In an electrical coupling, a band member comprising two sections pivotally connected to each other at corresponding ends and provided at their opposite ends with externally threaded projections having opposing flat faces, a main member having at one end an engaging surface for coöperating with the inner faces of said sections to clamp a conductor and having at its opposite end a threaded portion, the main member having opposite sides of its intermediate portion formed with longitudinal recesses for receiving said projections, the recesses having flat bottom faces for engaging the opposite flat faces of said projections, and a nut for engaging the externally threaded projections and the threaded portion of the main member, substantially as and for the purpose described.

2. In an electrical coupling, a band member comprising two sections pivotally connected to each other at corresponding ends and provided at their opposite ends with externally threaded projections having opposing flat faces, a main member having at one end engaging surfaces for coöperating with the inner faces of said sections to clamp a conductor, and having at its opposite end a threaded portion, the main member also having opposite sides of its intermediate portion formed flat for receiving the threaded projections with their flat faces engaged with the flat sides of said intermediate portion and their threaded peripheries coincident with the threaded periphery of said main member, and a nut turning on the threaded portion of the main member and onto said projections, substantially as and for the purpose specified.

3. In an electrical coupling, a band member comprising two sections, movably connected to each other at corresponding ends and provided at their opposite ends with opposing externally threaded projections having flat inner faces, a main member having at one end a head having a part for coöperating with the band member to clamp a conductor and having at its opposite end a threaded portion, the main member also having the opposing sides of its intermediate portion formed with longitudinal recesses for receiving the externally threaded projections, and said head being provided with shoulders extending laterally beyond said projections and the shank, the recesses having flat bottoms for engaging the flat inner faces of said projections, the head and the shoulders thereof also having flat faces located in the plane of the flat bottoms of said recesses for engaging the inner faces of said projections, and a nut for engaging the externally threaded projections, and threaded portion of the main member and bearing against said shoulders, substantially as and for the purpose specified.

1,107,402. RAILWAY-SWITCH. ANDREW S. BRANDOCK, Pueblo, Colo. Filed Aug. 25, 1913. Serial No. 786,540. (Cl. 104—77.)



1. The combination with main rails and sliding rails of a track, of a slide bar, switch points secured to the slide bar, a turn post, operative connections between the turn post and the slide bar, a rock arm, means carried by the rock arm for engagement with the turn post to prevent rotation of the latter when the rock arm is in normal position, and means carried by the rock arm for engagement with the slide bar, to retain said slide bar in extended position when the rock arm is in its reverse position.

2. A device of the class described comprising a slide bar, switch points supported upon the slide bar, means for resiliently retaining the slide bar in normal position, a switch stand including a turn post, connections between the turn post and the slide bar, whereby the slide bar is moved in the proper direction to open the switch upon rotation of the turn post in one direction, means for locking the turn post against rotation in said direction, means adapted for engagement with the slide bar to lock the switch in open position, and means for throwing the turn post locking means from inoperative position and the slide bar engaging means in operative position.

3. A device of the class described comprising a slide bar, a rock arm, a latch lug carried by the slide bar, switch points connected with the slide bar, latch members carried by the rock arm, means for operating the rock arm in one direction to cause one of the latch members to be engaged by the latch lug of the slide bar, means for resiliently retaining the last mentioned means in inoperative position, and means for returning the slide bar to normal position.

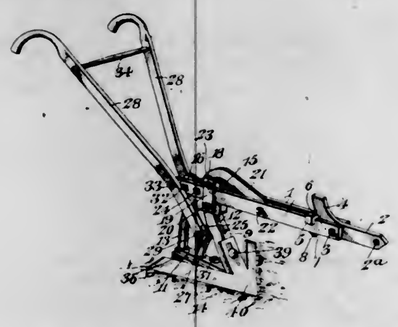
4. A device of the class described comprising a slide bar, switch points supported upon the slide bar, means for resiliently retaining the slide bar in normal position, a switch stand including a turn post, connections between the turn post and the slide bar, whereby the slide bar will be moved in the proper direction to open the switch upon rotation of the turn post in one direction, means for locking the turn post against rotation in said direction, means adapted for engagement with the slide bar to lock the switch in open position, means for throwing the turn post locking means in inoperative position and the slide bar engaging means in operative position, means for automatically returning the turn post locking means and the slide bar engaging means to their normal positions, and means for returning the slide bar to normal position to close the switch.

5. A device of the class described comprising a rotatable member, latch mechanism normally engaged with said rotatable member to prevent rotation thereof, switch points, connections between said rotatable member and

said switch points, latch mechanism operating rails forwardly of the switch points and adapted to be operated by the wheels of a train approaching said switch points to disengage the latch mechanism from the rotatable member and allow the latter to be rotated to throw the switch points in one direction, and means for returning the switch points to normal position upon disengagement of the wheels with the latch mechanism operating rails.

[Claims 6 and 7 not printed in the Gazette.]

1,107,403. PLOW. JOHN MARION BRASINGTON, Bennettsville, S. C. Filed June 19, 1913. Serial No. 774,688. (Cl. 97—26.)



1. A plow comprising a standard, and a beam including spaced rear bars secured to the standard, a front bar pivoted at a point intermediate of its ends between the front portion of the spaced rear bars and having its rear portions extended upwardly and rearwardly, and means adjustable along the spaced bars and receiving and supporting the rear portion of the front pivoted bar.

2. A plow comprising a standard, and a beam including spaced rear bars rigidly connected with the standard, a front bar pivoted at a point intermediate of its ends between the front portions of the rear bars and having its rear portion curved upwardly and rearwardly, an adjustable clamp connecting the spaced bars and arranged to receive and support the curved rear portion of the front pivoted bar.

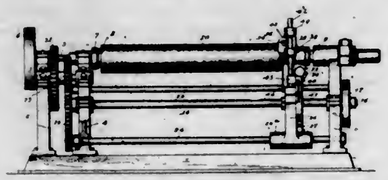
3. A plow comprising a standard, and a beam including spaced rear bars rigidly connected to the standard, a front bar pivoted at a point intermediate of its ends between the front portions of the spaced rear bars, and a clamp adjustably supporting the rear portion of the pivoted bar, said clamp being composed of an approximately U-shaped yoke seated upon the upper edges of the rear bars and engaging the same at the outer faces thereof, and a fastening device extending beneath the spaced bars and connected with the yoke and provided with means for engaging the spaced bars at the lower edges thereof.

4. A plow comprising a standard having a top bar and provided with front and rear vertical flanges, a beam including bars seated upon the top bar of the standard and spaced by the flanges thereof, and means for securing the beam to the standard.

5. A plow including a standard having a top bar and provided with front and rear vertical flanges, the front flange being provided at the top with a recess, a beam including spaced bars seated upon the top bar of the standard and receiving the flanges thereof between them, side plates arranged at opposite sides of the standard and the beam and extended above the latter, and upper and lower transverse fastening devices, the lower transverse fastening device piercing the side plates and the standard and upper transverse fastening device piercing the plates above the beam and arranged in the recess of the said flange.

[Claims 6 to 10 not printed in the Gazette.]

1,107,404. MACHINE FOR CUTTING RUBBER GASKETS. FRANK BRELLE, Sr., and FRANK BRELLE, Jr., Ferndale, Cal. Filed June 21, 1913. Serial No. 775,110. (Cl. 164—38.)



1. In a machine for the purpose described, means for holding and continuously rotating a rubber tube, a cutter, means for intermittently feeding the cutter lengthwise of the rubber tube, and means for continuously moving the cutter into and away from the rubber tube, the movement into the ruber tube being timed to occur during the periods of rest of feed of the cutter lengthwise of the tube.

2. In a machine for the purpose described, a holder for a rubber tube, means for rotating said holder, a feed screw, reduced motion driving means between the driving means for the rubber tube and the feed screw, said means including a mutilated gear for imparting intermittent motion to the feed screw, a tool carriage having means for connecting it to the feed screw, a tool holder on the tool carriage, means for imparting a rotatable movement to the tool holder in reverse directions, and a tool adapted to the tool holder and provided with a cutting blade of a length and shape to enter the rubber tube in a curved path to sever rings therefrom curved in the direction of the longitudinal axis of the tube.

3. In a machine for the purpose described, a rotatable holder for a rubber tube, a feed screw, and driving means for imparting rotative movement to the rubber tube holder and the feed screw, said driving means including a mutilated gear having a portion of its periphery smooth, and a pinion having teeth on its periphery separated by smooth portions on diametrically opposite sides, the teeth and smooth portions of the pinion being related to the teeth and smooth portion of the gear to cause a further rotative movement of the pinion for each complete rotation of the gear.

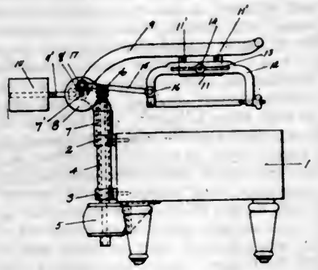
4. In a machine for the purpose described, a tool carriage, supporting and feeding means therefor, a reciprocable rod carried by the tool carriage, an eccentric pitman carried by the tool carriage and connected to the rod, an eccentric also carried by the carriage in engagement with the eccentric pitman, means for imparting rotative movement to the eccentric, and a tool carrier connected to the rod to receive movements in opposite directions therefrom.

5. In a machine for the purpose described, a tool carriage, supporting and feeding means therefor, a receprocable rod carried by the tool carriage, an eccentric pitman carried by the tool carriage and connected to the rod, an eccentric also carried by the carriage in engagement with the eccentric pitman, means for imparting rotative movement to the eccentric, and a tool carrier connected to the rod to receive movements in opposite directions therefrom, the tool carrier being in the form of a rock shaft and provided with a pinion and the reciprocable rod being provided with a rack meshing with the pinion.

[Claim 6 not printed in the Gazette.]

1,107,405. POWER MEAT-SAW. CHARLES E. BROOKS, Redlands, Cal. Filed Feb. 17, 1913. Serial No. 751,172. (Cl. 143—68.)

1. In a device of the character described, the combination with a meat cutting block and a motor secured to said block having a vertical shaft journaled in suitable bearings on the side of said block, of a bracket pivoted on the upper end of said shaft, a curved arm pivoted in said bracket, a meat saw slidably mounted on said arm, a counterweight secured to said bracket, and means on said vertical shaft and on said bracket for imparting reciprocating motion to said saw as and for the purpose specified.



2. In a device of the character described, the combination with a meat cutting block and a motor secured to said block having a vertical shaft journaled in suitable bearings on the side of said block, of a bracket pivoted on the upper end of said shaft, a curved arm pivoted on said bracket, a meat saw slidably mounted on said arm, a counterweight extending backwardly from and secured to said bracket, a worm gear revolubly mounted in said bracket whose axis is coincident with that of said arm, a worm on the upper end of said shaft adapted to mesh with said worm gear, a meat saw slidably mounted on said arm, and means for operably connecting said saw with said worm gear for causing it to slide in its bearings, for the purpose specified.

3. In a device of the character described, the combination with a meat block and a motor secured to said block having a vertical shaft suitably journaled in bearings secured to the side of said block, of a bracket pivoted on the upper end of said shaft, a shaft journaled in said bracket at right angles to said motor shaft, a worm on the upper end of said motor shaft, a worm gear on said other shaft adapted to mesh with said worm, an arm pivoted on said worm gear shaft, a meat saw slidably mounted on the forward end of said arm, and a connecting rod pivoted to said saw and eccentrically to said worm gear for causing said saw to slide in its bearings, for the purpose specified.

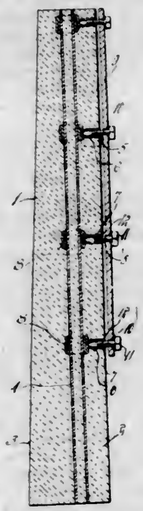
4. In a power meat saw, the combination with a reciprocating saw, of a swivel bracket pivoted on the drive shaft of the machine and having a shaft journaled therein at right angles to said drive shaft and a supporting arm for the saw pivoted thereon for lifting said saw from or swinging it around clear of a meat cutting block, and means operably connecting said saw with said drive shaft, for the purpose specified.

5. In a power meat saw adapted to be swung around clear of or lifted clear from a meat cutting block, the combination of a vertical, motor shaft journaled in bearings secured to the side of said block, a swivel bracket pivoted on the upper end of said shaft and having a forwardly projecting saw supporting arm pivoted thereon at right angles to said motor shaft, a reciprocating saw operably mounted on said arm, a counterweight secured to the back of said bracket for holding the saw clear of said block when in its raised position above the block, and means for operably connecting said saw with said motor shaft, for the purpose specified.

1,107,406. FENCE-POST. DALLAS R. BURNS, Gwynneville, Ind. Filed Apr. 3, 1914. Serial No. 829,291. (Cl. 256—51.)

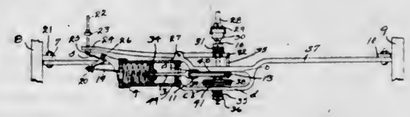
1. In a device of the class described, an upwardly tapered cement post, a hollow metal reinforcing member arranged longitudinally within said post, clamps encircling said reinforcing member and having internally threaded shanks extending through said post, a binding member, means to secure said binding member to the post comprising thumb screws arranged to be inserted in the threaded shanks of the clamping members.

2. In a device of the class described, a reinforcing member, clamps secured to said member, said clamps comprising pipes flattened at one end and bent about said first named member and an internally threaded shank.



3. In a device of the class described, a fence post having a longitudinal hole therein and radial holes extending from said hole and through one face of the post, a reinforcing core, clamps attached to said core and extending through the radial holes, said clamps comprising a pipe, one end of which is flattened and the other end of which is internally threaded.

1,107,407. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CLINTON C. BUTLER, Waterloo, Iowa. Filed Aug. 29, 1912. Serial No. 717,750. (Cl. 123—179.)



1. A starting device for an internal-combustion engine, comprising in combination with the crank-shaft of the engine, a clutch-member secured thereon, an auxiliary shaft alined with said crank-shaft and having a mating clutch-member for the other clutch-member, said auxiliary shaft being both rotatably and slidably mounted, a gear-wheel and a ratchet-wheel rigidly connected and rotatably mounted on said auxiliary shaft, a disk mounted on said shaft adjacent to said ratchet-wheel and splined thereto to permit longitudinal movement only of said shaft relative thereto, pawls pivoted on said disk and operatively engaging teeth on said ratchet-wheel, an eccentrically-pivoted curved rack having teeth intermeshing with the teeth on the gear-wheel, a power-spring operatively connected with said rack, means for compressing said spring and detachably holding it when compressed, means for releasing and discharging said spring to move said rack to actuate both the auxiliary and crank-shaft together, and connected means therewith for previously moving said auxiliary shaft to engage its clutch-member with the clutch-member of said crank-shaft.

2. A starting device for an internal-combustion engine, comprising in combination with the crank-shaft of the

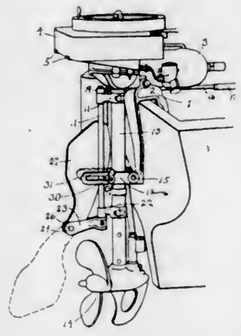
engine, a clutch-member secured thereon, an auxiliary shaft alined with said crank-shaft and having a mating clutch-member for the other clutch-member, said auxiliary shaft being both rotatably and slidably mounted, a gear-wheel and a ratchet-wheel rigidly connected and rotatably mounted on said auxiliary shaft, a disk mounted on said shaft adjacent to said ratchet-wheel and splined thereto to permit only longitudinal movement of the shaft relative thereto, pawls pivoted on said disk and operatively engaging teeth on said ratchet-wheel, an eccentrically-pivoted curved rack having teeth intermeshing with the teeth on the gear-wheel, a power-spring operatively connected with said rack, means for compressing said spring, holding it detachably locked while under compression, and then releasing and discharging it when desired, and means for engaging said auxiliary shaft detachably with said crank-shaft just anterior to the discharge of the spring.

3. A starting device for an internal combustion engine, comprising in combination with the crank-shaft of the engine, a clutch-member secured thereon, an auxiliary shaft alined with said crank-shaft and having a mating clutch-member for the other clutch-member, said auxiliary shaft being both rotatably and slidably mounted, yieldable resilient means connected to said auxiliary shaft and adapted to normally hold its clutch-member out of engagement with the clutch-member on the crank-shaft, a gear-wheel and a ratchet-wheel rigidly connected and rotatably mounted on said auxiliary shaft, a disk mounted on said auxiliary shaft abutting upon said ratchet-wheel and provided with movable pawls engaged with the teeth of the ratchet-wheel, a rack having teeth intermeshing with the teeth of said gear-wheel, a power-spring, a plunger-head engaging one end of said spring, a rod pivotally connected between said head and said rack, a plunger-rod connected to said head and extending in an opposite direction to the first-mentioned rod, means adapted to pull said plunger-rod to place said spring under tension, a lever having a stop adapted to detachably engage said rack and hold it when said spring is under tension, and means connected to said plunger-rod actuating-means adapted to detachably engage and shift the stop-carrying lever to automatically detach said stop from the rack before the discharge of the spring.

4. A starting device for an internal combustion engine, comprising in combination with the crank-shaft of the engine, a clutch-member secured thereon, an auxiliary shaft alined with said crank-shaft and having a mating clutch-member for the other clutch-member, said auxiliary shaft being both rotatably and slidably mounted, yieldable resilient means connected to said auxiliary shaft and adapted to normally hold its clutch-member out of engagement with the clutch-member on the crank-shaft, a gear-wheel and a ratchet-wheel rigidly connected and rotatably mounted on said auxiliary shaft, a disk mounted on said auxiliary shaft abutting upon said ratchet-wheel and having movable pawls movably engaged with the teeth of the ratchet-wheel, a rack having teeth intermeshing with the teeth of said gear-wheel, a power-spring, a plunger-head engaging one end of said spring, a rod pivotally connected between said head and said rack, a plunger-rod connected to said head and extending oppositely from the other rod, a pivoted bell-crank lever one arm of which is slidably connected with said plunger-rod to pull same in one direction only and slide thereover in the other direction, a hand-lever, a link pivotally connected between said hand-lever and the other arm of said bell-crank lever, a medially pivoted lever having one end slidably engaged with said link, engaging-means on said link adapted to force said last mentioned lever-end in one direction, a yieldable resilient connection between the other end of the medially pivoted lever and said auxiliary shaft, a stop connected to the last-mentioned lever end and adapted to be moved to engage said rack and hold it in one position detachably when the said power-spring is under compression, and means for holding said hand-lever in a desired position, detachably.

5. A starting device for an internal combustion engine, comprising in combination with the crank-shaft of the engine, a clutch-member secured thereon, an auxiliary shaft alined with said crank-shaft, a mating clutch-member on the auxiliary shaft adapted to be engaged with the other clutch-member, said auxiliary shaft being both rotatably and slidably mounted, yieldable resilient means bearing upon said auxiliary shaft and adapted to normally shift it out of engagement with said crank-shaft, a gear-wheel and a ratchet-wheel rigidly connected and rotatably mounted on said auxiliary shaft, a disk mounted on said auxiliary shaft abutting upon said ratchet-wheel, splined to said shaft to permit the latter to slide therethrough, and having pawls mounted thereon adapted to movably engage teeth of said ratchet-wheel, a curved internally-toothed rack in mesh with said gear-wheel, a fixed support, said rack being pivoted thereto, means for shifting said rack in one direction to rotate said gear-wheel, ratchet-wheel and said shafts when connected, and means for shifting said auxiliary shaft to engage said crank-shaft operatively immediately before the shifting movement of said rack.

1,107,408. FOLDABLE RUDDER. AUGUSTE ARTHUR CAILLE, Detroit, Mich. Filed Dec. 6, 1913. Serial No. 805,011. (Cl. 115—18.)



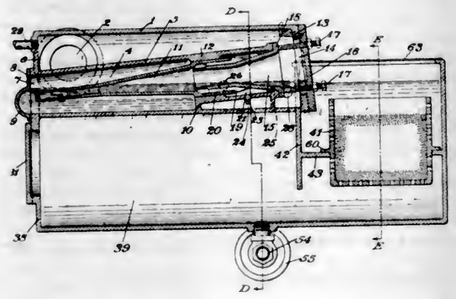
1. In combination, a support, a motor shaft casing carried thereby, brackets secured on the casing and having alined bearings, a rudder shaft mounted to turn in the bearings, means to turn the rudder shaft, a rudder bracket secured to the rudder shaft to turn therewith, the bracket comprising a split outer end, and a shoulder, a rudder pivotally mounted in the split outer end and also provided with a shoulder, the two shoulders being adapted to contact with each other to limit the movement of the blade in one direction.

2. In combination, a support, a motor and a fuel chamber carried thereby, lugs projecting from the fuel chamber, a bracket secured to the casing and having a bearing formed therein, a rudder shaft mounted to turn in the bearing, a rudder bracket secured to the rudder shaft, a foldable rudder connected to the bracket, said rudder bracket and said lugs being adapted to constitute a support for the motor when the rudder is in folded position.

3. In combination, a support, a motor shaft casing carried thereby, a bracket mounted on the support and having a bearing therein, a rudder shaft mounted in the bearing, means to turn the rudder shaft, a rudder bracket secured to the rudder shaft to turn therewith and having a shoulder, a rudder blade pivotally mounted on said rudder bracket, and also provided with a shoulder, the two shoulders being adapted to contact with each other to limit the movement of the rudder in one direction.

4. In combination, a support, a motor shaft casing carried thereby, a bracket mounted on the support and having a bearing therein, a rudder shaft mounted in the bearing, means to turn the rudder shaft, a rudder bracket secured to the rudder shaft to turn therewith, a rudder pivotally mounted on said rudder bracket, and means on the rudder co-acting with means on the rudder bracket for limiting the movement of the rudder in one direction.

1,107,409. FEED-WATER HEATER. WILLIAM PHILLIPS CAINE, Birmingham, Ala., assignor of one-half to Paschal G. Shook and John F. Fletcher, doing business as Co-partners under the firm-name of Shook & Fletcher, Birmingham, Ala. Filed Feb. 3, 1913. Serial No. 745,951. (Cl. 62—31.)



1. In a feed water heater operating on the injector principle, a steam injector, means to supply water to be heated and steam to said injector, a hot water chamber into which said injector discharges, means to water seal the discharge end of said injector, there being an overflow port in said chamber for drawing off the surplus hot water from said chamber, and a settling tank to receive the hot water discharged from said injector, substantially as described.

2. In a feed water heater, a steam injector, means to supply steam to said injector, a water supply chamber which delivers water to mix with the steam in said injector, means to separate the condensed water and oil from said steam before it enters said injector, means to separate the condensed water from the oil and permit the excess water to flow with the steam into the injector, and a hot water chamber into which said injector discharges and in which the water level is maintained above the discharge end of said injector to water seal it, substantially as described.

3. In combination, a feed water heater comprising means to bring steam into direct contact with water to be heated, a tank to receive the hot water resulting from the mingled water and steam in the heater, and means to automatically cause a return circulation of water from said tank to the heater under predetermined conditions, substantially as described.

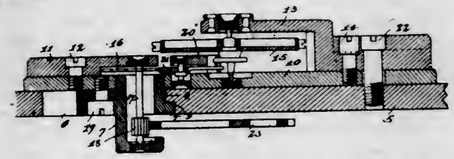
4. The combination with a feed water heater comprising an injector, means to deliver steam and cold water for mixture therein, and means to water seal the discharge end of said injector, of a settling tank to receive the hot water discharged from the heater, a return circulation pipe, which connects said tank with the water supply means for the injector, and automatically operating means which opens said pipe and permits a circulation of water from tank to heater, substantially as described.

5. In a feed water heater, an injector, means to deliver water to be heated and steam to said injector for mixture therein, a hot water chamber into which said injector discharges, said chamber having a water outlet port and a vent to the atmosphere, and means to maintain a water level in said chamber which seals the discharge end of said injector.

[Claims 6 to 19 not printed in the Gazette.]

1,107,410. ESCAPEMENT MECHANISM FOR TIME-PIECES. FRED H. CORTHELL, Chicago, Ill., assignor to Edward R. Hillis, Chicago, Ill. Filed Nov. 15, 1913. Serial No. 801,103. (Cl. 58—104.)

1. The combination with the escapement driving wheel, of a clock-plate having a slot, and a bodily removable escapement mechanism including a potance extending through said slot and carrying the escape pinion, and a laterally projecting locking shoulder on the side of said potance toward said driving wheel engaging beneath a portion of said clock-plate.



2. The combination with the escapement driving wheel, of a clock-plate having a slot countersunk on its side toward the driving wheel, and a bodily removable escapement mechanism including a potance extending through said slot and carrying the escape pinion, and a locking shoulder on said potance engaging the countersunk side of said slot.

3. The combination with the escapement driving wheel, of a clock-plate having a slot, a bodily removable escapement mechanism having a potance extending through said slot and carrying the escape pinion, a laterally projecting locking shoulder on the side of said potance toward said driving wheel engaging beneath a portion of said clock-plate, and a safety stopping device coöperating with said driving wheel, said safety stopping device being moved to and held in release position by said potance and spring-actuated into locking engagement with the driving wheel.

4. The combination with the escapement driving wheel, of a clock-plate having a slot countersunk on its side toward the driving wheel, a bodily removable escapement mechanism including a potance extending through said slot and carrying the escape pinion, a locking shoulder on said potance engaging the countersunk side of said slot, and a safety stopping device coöperating with said driving wheel, said safety stopping device being moved to and held in released position by said potance, and spring-actuated into locking engagement with the driving wheel.

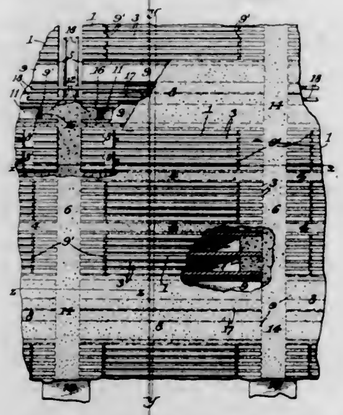
5. The combination with the escapement driving wheel, of a clock-plate having a slot countersunk on its side toward the driving wheel, a bodily removable escapement mechanism including a potance extending through said slot and carying the escape pinion, a locking shoulder on said potance engaging the countersunk side of said slot, and a safety stopping device comprising a pivoted lever carrying a dog adapted to engage the teeth of the driving wheel and a spring normally urging said lever into locking position, said lever engaging the potance and normally held by the latter in release position against the action of said spring.

1,107,411. BUILDING CONSTRUCTION. LEWIS KETCHUM DAVIS, New York, N. Y. Filed Oct. 14, 1911. Serial No. 654,644. (Cl. 72—66.)

1. A building construction, comprising a plurality of hollow bricks having longitudinal passages and assembled in parallel series and relatively arranged with their ends spaced apart, beams constituted by a hardening plastic extending across the series of blocks transversely of the end area thereof in the space between the same and extending into the ends of said passages at the end area of the blocks, beams constituted by a hardening plastic extending longitudinally of the blocks with relation to the side area thereof in the space between the same and crossing said first-mentioned beams, and hollow members extending longitudinally of said blocks at the base of said crossing beams and relatively arranged with their ends spaced apart and having longitudinal passages, said first-mentioned beams between the ends of the blocks extending also into the ends of said passages in said base members of said crossing beams, whereby the beams extending between the ends of said blocks interlock with the passages of both the main block members and the base members of said crossing beams.

2. A building construction, comprising hollow blocks having longitudinal passages and relatively arranged with their ends spaced apart, beams constituted by a hardening

plastic extending transversely of the ends of the blocks in the space between the same and extending into said passages in the blocks, and beams constituted by a hardening plastic and extending with relation to the sides of the blocks and crossing said first-mentioned beams, said crossing beams having supporting members constituted by supplementary blocks having longitudinal passages into which the plastic of said first-mentioned beams extend and said supplementary blocks being provided with lateral ribs or extensions projecting beneath the plastic of the beam.



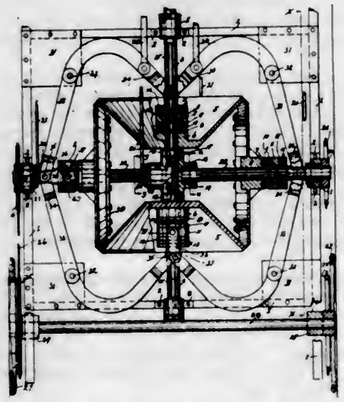
3. A building construction, comprising hollow blocks having longitudinal passages and relatively arranged with their ends spaced apart, beams constituted by a hardening plastic extending transversely of the ends of the blocks in the space between the same and extending into said passages in the blocks, and beams constituted by a hardening plastic and extending with relation to the sides of the blocks and crossing said first-mentioned beams, said crossing beams having supporting members constituted by supplementary blocks smaller than said main blocks and arranged respectively at the sides of the base portion of the beams, said supplementary blocks being respectively provided with lateral co-acting ribs or extensions projecting to for a substantially closed bottom beneath the plastic of the beam and said supplementary blocks having longitudinal passages into which the plastic of said first-mentioned beams extends, whereby said crossing beams are approximately T-shape in cross-section.

4. A building construction, comprising a plurality of hollow blocks having longitudinal passages and assembled in parallel series and relatively arranged with their ends spaced apart, beams constituted by a hardening plastic extending across the series of blocks transversely of the end area thereof in the space between the same and extending into the ends of said passages at the end area of the blocks, beams constituted by a hardening plastic extending longitudinally of the blocks with relation to the side area thereof in the space between the same and crossing said first-mentioned beams, hollow members extending longitudinally of said blocks at the base of said crossing beams and relatively arranged with their ends spaced apart and having longitudinal passages, said first-mentioned beams between the ends of the blocks extending also into the ends of said passages in said base members of said crossing beams, whereby the beams extending between the ends of said blocks interlock with the passages of both the main block members and the base members of said crossing beams, and means within the passages of both the main block members and the base members of said crossing beams for limiting the entrance of the beam plastic therein.

5. A building construction, comprising a plurality of hollow blocks having upper and lower longitudinal passages and assembled in parallel series and relatively arranged with their ends spaced apart, beams constituted by a hardening plastic extending across the series of blocks transversely of the end area thereof in the space between the same and extending into the ends of said upper and lower passages at the end area of the blocks, said beam plastic extending inward a greater distance in the upper passages than in the lower passages, beams constituted by a hardening plastic extending longitudinally of the blocks with relation to the side area thereof in the space between the same and crossing said first-mentioned beams, and hollow members having longitudinal passages and extending longitudinally of said blocks, said hollow members being lower than said main blocks and arranged respectively at opposite sides of the base of said crossing beams and with their ends spaced apart, said first-mentioned beams between the ends of the blocks extending also into the ends of said passages in said base members of said crossing beams, whereby the beams extending between the ends of said blocks interlock with the passages of both the main block members and the base members of said crossing beams and the beams at both the ends and sides of the blocks are substantially T-shape in cross-section.

[Claims 6 to 13 not printed in the Gazette.]

1,107,412. POWER-TRANSMISSION MEANS. LEWIS W. DAVIS, Seattle, Wash. Filed Sept. 29, 1913. Serial No. 792,501. (Cl. 74—26.)



1. In a device for transmitting variable speeds, the combination of a supporting frame, a propeller shaft mounted thereon, a pair of jack shafts disposed at right angles to said propeller shaft, means for revolubly mounting one end of each of said jack shafts upon said propeller shaft and for mounting its opposite end upon the said supporting frame, said means including pairs of eccentrically bored bushings which normally hold the said jack shafts in different horizontal planes, a pair of friction cones feather keyed upon the propeller shaft and a friction disk similarly mounted upon each jack shaft, means for simultaneously rotating all of said bushings whereby one of said jack shafts is moved rearwardly and the other forwardly with respect to the said supporting frame, and means for simultaneously moving the said cones and the said friction disks with respect to each other.

2. In a device for transmitting variable speeds, the combination of a supporting frame and a propeller shaft mounted thereon, a pair of jack shafts disposed at right angles to said propeller shaft, means for revolubly mounting one end of each of said jack shafts upon said propeller shaft and for mounting its opposite end upon the said supporting frame, said means including eccentrically bored bushings which normally hold the said jack shafts out of alinement with each other, a pair of friction cones feather keyed upon the said propeller shaft and a friction disk similarly mounted upon each of said jack shafts, means for simultaneously rotating all of the said bushings whereby one of said jack shafts is moved in one direction and the other of said shafts in the opposite direction, and means for simultaneously moving the said cones and friction disks along their respective shafts, said means including levers arranged in oppositely disposed pairs and link connections between the same and the said cones and disks.

3. The combination with an automobile frame and a propeller shaft of a fourway bearing loosely mounted upon the said shaft, a pair of eccentrically bored bushings revolubly mounted therein and which are at right angles to the propeller shaft, a bearing at each side of the frame and a bushing in each of said bearings to normally match its mate which is on that side of the fourway bearing, a pair of jack shafts mounted within the said bushings and at each side of the propeller shaft, friction cones slidably but non-rotatably mounted upon the propeller shaft, a friction disk similarly mounted upon each of said jack shafts, means for simultaneously moving the said cones and disks along their respective shafts, and means for turning all of the said bushings simultaneously in their bearings whereby one of said jack shafts is moved in one direction and the other of said shafts moved in the opposite direction.

1,107,413. MILKING-PAIL. ALEXANDER F. DEMORY, Hagerstown, Md. Filed Oct. 2, 1913. Serial No. 793,034. (Cl. 31—70.)

1. A hand milking device embodying a pail having a cover, the cover having an opening, a flexible gasket secured within the said opening, a sleeve fitting within the gasket, a milk tube slidable through the sleeve, and having a teat cup at its upper end, and a coiled wire spring surrounding the sleeve and the upper portion of the said tube and terminally seated thereagainst to yieldably raise the tube.

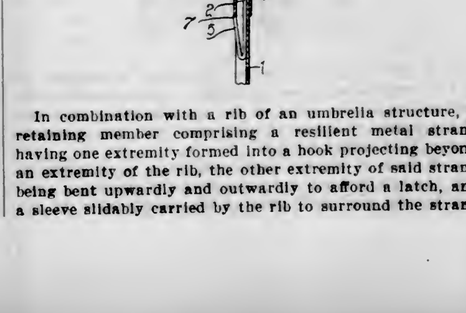
2. A hand milking device embodying a pail having a cover, the cover having an opening, a flexible gasket secured within the said opening, a sleeve fitting within the gasket and having a flange seated thereon, a milk tube slidable through the sleeve, and having a flange adjoining its upper end, a teat cup slipped over the upper end of the said tube and seated on the last mentioned flange, and a coiled spring surrounding the sleeve and the upper portion of the said tube and terminally seated against the said flanges.

3. In a milking device, a frame, a vertically adjustable pail carrier supported thereby, a pail removably supported upon the said carrier, a cover for the pail, and a spring raised milk tube passing loosely through the cover and having a teat cup at its upper end.

4. In a milking device, a frame, a U-shaped pail carrier disposed therein and having resilient arms, the frame having portions to receive the said arms, certain of said portions having lugs and the carrier arms having apertures engageable over the said lugs, a pail seated upon the carrier within the frame, the arms of the carrier having yieldable pail engaging means, a cover for the pail, and a spring raised milk tube passing loosely through the cover and having a teat cup at its upper end.

5. In a milking device, a frame embodying hoops and legs attached thereto, the hoops having diametrically opposite outwardly projecting offsets, the upper offsets having inwardly projecting lugs, a U-shaped carrier having its arms fitting within the said offsets, the arms of the carrier having an outward tension and having apertures engageable over the said lugs, a pail seated upon the intermediate portion of the carrier, bowed leaf springs secured to the inner sides of the carrier arms and frictionally engaging the pail, a cover for the pail, and spring raised milk tubes passing loosely through the cover and having teat cups at their upper ends.

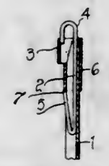
1,107,414. DIVER'S AIR-PUMP. JEAN F. DERAY, Sunnyvale, Cal., assignor to himself, Charles E. Lebrecht, and Arthur P. Freeman, Sunnyvale, Cal., trustees. Filed June 16, 1913. Serial No. 773,951. (Cl. 230—27.)



1. In a pump for divers, the combination of a plurality of cylinders, plungers therein, a common crank shaft from which said plungers are operated in succession to compress the air, individual release valves for releasing the air under pressure, individual exhaust valves for drawing the air into the cylinders, a pressure cylinder to which the air is conducted by said release valves, the inlet valve of one of said cylinders communicating with the atmosphere, and an exhaust cylinder from which the air passes to the other inlet valves.

2. In a pump for divers, the combination of a cylinder, a plunger therein, means for reciprocating said plunger, a release valve for releasing the air under pressure, an exhaust valve for drawing air into the cylinder, a pressure cylinder to which the air is conducted by said release valve, suitable cleansing fluid contained in said pressure cylinder above the air inlet opening, an exhaust cylinder from which the air passes to said inlet valve, and pure and vitiated air pipes connected respectively to the pressure and exhaust cylinders.

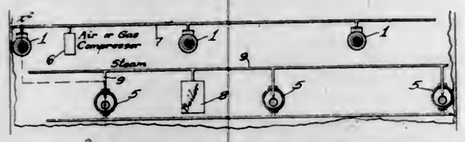
1,107,415. UMBRELLA. EDWARD R. DROHAN, Lynn, Mass. Filed Apr. 1, 1914. Serial No. 828,838. (Cl. 135—29.)



In combination with a rib of an umbrella structure, a retaining member comprising a resilient metal strand having one extremity formed into a hook projecting beyond an extremity of the rib, the other extremity of said strand being bent upwardly and outwardly to afford a latch, and a sleeve slidably carried by the rib to surround the strand

and close the hook extremity to complete a loop, said sleeve carrying a shoulder to engage the latch to maintain the same against movement away from the hook.

1,107,416. METHOD OF RESTORING AND INCREASING THE PRODUCTION OF OIL AND GAS WELLS. IRWIN L. DUNN, Long Beach, Cal. Filed Mar. 18, 1912. Serial No. 684,633. (Cl. 166—21.)



1. A process of removing the clogging constituents of hydrocarbons from a clogged well, which consists in first inducing a relatively high pressure outside of and against the clogging area, subsequently liquefying the clogging constituents at a pressure not exceeding that outside of the clogged area, and pumping the liquefied clogging constituents from the well when they are driven thereinto by the outside pressure.

2. A process of removing the clogging constituents of hydrocarbons from a clogged well, which consists in first inducing a relatively high pressure outside of and against the clogging area, subsequently pumping a hot fluid inside the well at a pressure not exceeding that of the pressure outside of the clogged area and continuing the application of the hot fluid until the clogging constituents are liquefied, and pumping the liquefied clogging constituents from the well as fast as they are driven thereinto by the outside pressure.

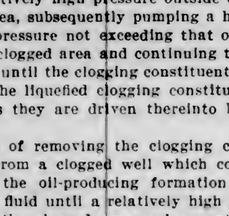
3. A process of removing the clogging constituents of hydrocarbons from a clogged well which consists in first pumping into the oil-producing formation adjacent the well a gaseous fluid until a relatively high pressure is induced against the clogged area, subsequently pumping a hot gaseous fluid into the well at a pressure not exceeding that outside the clogged area, and continuing the application of such heated fluid until the clogging constituents are liquefied and driven into the well by the preponderating pressure outside thereof, and pumping such liquefied constituents from the well while in the liquefied state.

4. A process of removing the clogging constituents of hydrocarbons from a clogged well, consisting in forcing a solvent toward and through the clogging material from a point outside the well.

5. A process of removing the clogging constituents of hydrocarbons from a clogged well, consisting in supplying a light hydrocarbon to the rock surrounding the well and applying gaseous pressure thereto to drive the hydrocarbon through the clogging material into the well.

[Claims 5 and 7 not printed in the Gazette.]

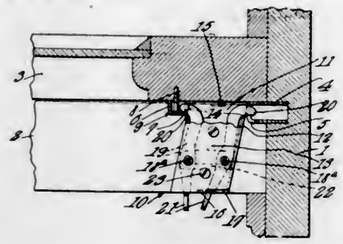
1,107,417. CARD GAME. JOHN J. FORD, Ottumwa, Iowa. Filed Mar. 29, 1913. Serial No. 757,629. (Cl. 46—25.)



1. A deck of playing cards comprising a plurality of sets of cards, a head card for each set displaying a word, and the remaining cards of the set displaying each one of the letters of the head card word with the exception of the initial letter thereof.

2. A deck of playing cards comprising a plurality of sets of cards, a head card for each set displaying a word and bearing the significance of the initial letter of the word, the remaining cards each bearing the significance of one of the remaining letters of the word and pips carried by the card to indicate the letter which it signifies.

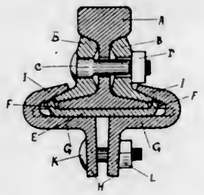
1,107,418. SASH-LOCK. WILLIAM F. GIBBARD, Fruitvale, Cal. Filed Jan. 28, 1914. Serial No. 815,016. (Cl. 16—52.)



1. In a lock, a case, having lateral openings at one end, and openings in its other end adjoining the sides, and a pair of levers pivoted intermediate their ends within the case intermediate the ends of the case, the levers having angular fingers at one end projectable through the first mentioned openings, and finger pieces projecting through the last mentioned openings.

2. In a lock, a case including a bottom having sides, and a top removably seated upon the sides, the bottom of the case having upstanding pintles intermediate its ends and adjoining the sides, a pair of levers fulcrumed intermediate their ends upon the pintles, having angular fingers at one end projectable through the sides of the case, and having finger pieces at their other ends projecting beyond the respective end of the case, and a bowed leaf spring having its terminals seated upon the levers and arranged to be pressed downwardly by the top of the case.

1,107,419. RAIL-JOINT. HORATIO G. GILLMOR, Bath, Me. Filed Aug. 21, 1906. Serial No. 331,527. (Cl. 239—6.)



1. A rail joint, including, in combination with the rails and fish bars, a base plate and a clamp bar constructed with a base engaging with the base plate, an arm integral with said base at an angle thereto engaging with surfaces of a fish bar above the bases of the rails and a longitudinal stiffening web integral with and projecting from the base of said clamp bar, substantially as described.

2. A rail joint, including, in combination with the rails, a fish bar, a base plate, and a clamp, constructed with a longitudinal stiffening flange and two jaws to bear upon the base plate beneath and the fish bar above the bases of the rails, substantially as described.

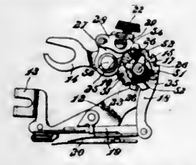
3. A rail joint, comprising the rails, fish bars, a clamp constructed with a longitudinal stiffening web and two jaws to bear upon the base plate underneath and a fish bar above the bases of the rails, substantially as described.

4. A rail joint, including, in combination with the rails and fish bars, a base plate, a clamp constructed with a longitudinal stiffening flange and two jaws constructed to bear upon the base plate underneath and a fish bar above the bases of the rails and means for securing said clamp in position.

5. A rail joint comprising the rails, fish bars, a base plate, clamps, at opposite sides of the rails, constructed with longitudinal stiffening webs or flanges and two jaws adapted to bear upon the base plate underneath and a fish bar above the bases of the rails, and means for securing said clamps in position, for substantially the purposes set forth.

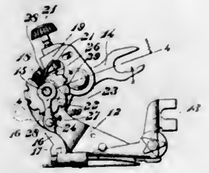
[Claims 6 to 11 not printed in the Gazette.]

1,107,420. SEWING-MACHINE RUFFLER. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Aug. 4, 1913. Serial No. 782,893. (Cl. 112—16.)



In a sewing machine ruffler, the combination with a ruffling blade, of an operating lever, a pawl carried by said lever, a pendulous lever connected with said ruffling blade and provided at its top with a shoulder to be engaged, at times, by said pawl, an intermittently-rotating ratchet-wheel actuated by said pawl and provided with groups of shallow notches which will prevent said pawl from engaging said shoulder and with single deep notches between said groups of shallow notches, and which deep notches will permit said pawl to engage said shoulder to operate asid ruffling blade, and an adjustable arm or stop mounted to rotate with said ratchet-wheel and adapted to be moved into a position, when desired, to fill or obstruct the inner part of one of said deep notches and thus change its working depth and make it practically a shallow notch, and thereby vary the frequency of movement of the ruffling blade operated through said pawl and pendulous lever.

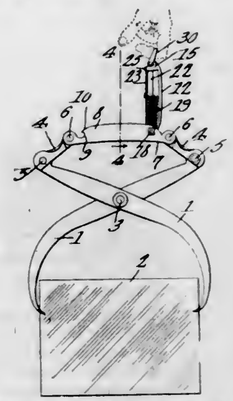
1,107,421. SEWING-MACHINE RUFFLER. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Aug. 8, 1913. Serial No. 783,760. (Cl. 112—16.)



1. In a sewing machine ruffler, the combination with a ruffling blade and means, comprising a spring-pressed pawl and pendulous lever, for operating said ruffling blade from the needle-bar of a sewing machine, of a removably mounted ratchet wheel for controlling the action of said pawl on said lever; whereby interchangeable ratchet wheels having different peripheral notches may be readily placed in operative position for varying the character of the work, and a combined latch and friction spring pivoted to the ruffler frame outside of said ratchet-wheel so that it may be swung aside when a ratchet wheel is to be mounted in place or removed and by which interchangeable ratchet wheels may be removably retained in operative position and are held against backward movements by said pawl.

2. In a sewing machine ruffler, the combination with the frame thereof, of an operating lever provided with a spring-pressed pawl, a secondary or pendulous lever having a shoulder to be engaged by said pawl, a ruffling blade operatively connected with said pendulous lever, a pin or stud fixed to said frame and on which said levers are pivoted, said pin or stud having a tenon or shoulder projecting through said frame, a ratchet wheel removably mounted on said tenon or shoulder, and a combined pivoted latch and friction spring for retaining said ratchet wheel in place.

1,107,422. WEIGHING ATTACHMENT FOR ICE-TONGS. DOUGLAS HENDERSON, Dallas, Tex. Filed Sept. 11, 1913. Serial No. 789,367. (Cl. 73—46.)



1. In a device of the class described, a handle comprising a relatively fixed member and a movable member pivoted to the fixed member and coöperating with the fixed member to form an intermediate grip portion in the handle; a weighing device carried by the movable member and housed within the handle when the movable member is closed upon the relatively fixed member; and a pair of tongs connected with the relatively fixed member upon opposite sides of said grip portion.

2. In a device of the class described, a handle for tongs, comprising a relatively fixed member and a movable member pivoted thereto; a weighing device carried by the movable member and including a weight indicating element, the weight indicating element and the relatively fixed member having interlocking parts coacting to hold the movable member closed upon the relatively fixed member; and a spring connected with the weight indicating element and constituting at times, a counterpoise and a means for holding said interlocking parts in engagement.

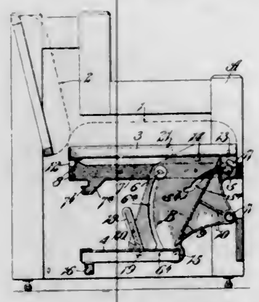
3. In a device of the class described, a handle for tongs, comprising a relatively fixed member and a movable member; a weighing device carried by the movable member and housed in the handle when the movable member is closed upon the relatively fixed member, the weighing device including a weight indicating element and a counterpoise spring connected therewith; and a single pivot element connecting the relatively fixed member with the movable member and operatively with the spring.

4. In a device of the class described, a handle for tongs, comprising a trough-shaped, relatively fixed member having a projection at one end and provided with a beveled edge located adjacent the projection, and a relatively movable closure member for the fixed member, the members being pivotally connected; a dial carried by the closure; a bar mounted to slide adjacent the dial and having means for registering on the dial, the bar including a transverse head adapted to travel the beveled edge of the relatively fixed member and to lock behind the projection; and a spring uniting the bar with one member of the handle, the spring constituting a counterpoise and a means for holding the head engaged with the projection.

1,107,423. FOLDING DAVENPORT. GUILFORD W. HENRY, St. Louis, Mo. Filed Sept. 9, 1913. Serial No. 788,783. (Cl. 5—51.)

1. In a folding davenport or similar article, end frames, a pair of movable side plates carried by and movably

mounted on said end frame, a reversible seat frame pivotally connected to said side plates, a bottom frame pivotally connected to said plates in such a manner that it lies underneath the seat frame when the davenport is closed, means connected to said frames for supporting a mattress, and means whereby the seat-frame engages and positively moves said side plates into operative position when said seat-frame is turned over, said side plates in turn moving the bottom frame into operative position.



2. In a folding davenport or similar article, end frames, a reversible seat section, movable side plates on said end frames that carry said seat section and which are so arranged that the seat section will engage and positively move them forwardly when said seat section is turned over, a section of a mattress-supporting means connected to said movable side plates in such a manner that it is moved into and out of operative position by said plates, and a woven wire fabric or other suitable mattress-supporting structure connected to said plates and to said sections.

3. In a folding davenport or similar article, end frames, a pair of movable side plates varried by and movably mounted on said end frames, a reversible seat section pivotally connected to said side plates and adapted to be turned over, means whereby the act of turning over said seat section causes same to engage and bodily shift said side plates upwardly and forwardly, a mattress-supporting section joined to said side plates in such a manner that it is moved automatically into and out of operative position by said plates, and coöperating means on said side plates and end frames for securely locking said plates when the davenport is open.

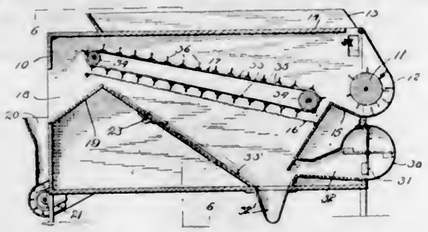
4. In a folding davenport or similar article, end frames, movable members carried by said end frames, a reversible seat section pivotally connected to said members and adapted to be turned over, means whereby the act of turning over said seat section causes same to engage and bodily shift said members upwardly and forwardly, a mattress-supporting section joined to said members in such a manner that it is moved automatically into and out of operative position by said members, independent means on said end frames for supporting one edge of said mattress-supporting section when the davenport is open, and foldable legs on said seat section.

5. In a folding davenport or similar article, end frames, movable plates provided with slots that receive laterally projecting devices on the end frames, a reversible seat section pivotally connected to said plates, a section of a mattress-supporting means pivotally connected to said plates and arranged below the seat section when the davenport is closed, and stops or abutments on said plates that are adapted to be engaged by said seat section so as to bodily shift said plates when the seat section is being moved into and out of operative position.

[Claims 6 to 16 not printed in the Gazette.]

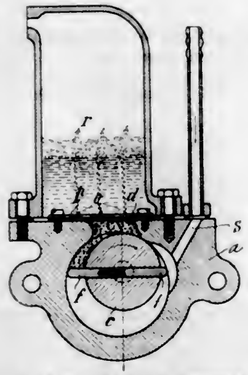
1,107,424. PEA-HULLER. URIAS T. HIGHT, Candor, N. C. Filed Aug. 30, 1912. Serial No. 717,880. (Cl. 130—30.)

In a pea huller and thresher, the combination with a hulling mechanism including a housing, an upwardly and rearwardly inclined conveyer within the housing, a screen below the conveyer, said screen terminating adjacent the rear end of the housing, the rear end of the housing having an opening adjacent the end of the said screen, of a downwardly and outwardly inclined guard wall extending from a point forwardly of and below the rear end of the said screen to the lower side of said opening, a guard wall downwardly and forwardly inclined from the inner end of the last mentioned guard wall, the said walls at their point of connection being spaced from the screen in-



wardly of the said end of the screen, and a blast fan having a nozzle disposed to direct the blast of air against the lower portion of the downwardly and forwardly inclined guard wall, the discharge end of the conveyer being so disposed with relation to the last mentioned guard wall that said conveyer will discharge the partially threshed material beyond the upper ends of the guard walls and across the current of air which issues from the upper end of the space between the screen and the downwardly and forwardly inclined wall.

1,107,425. VALVELESS PUMP FOR CONVEYING GASES. WALTER HOHAGEN, Charlottenburg, Germany, assignor to Siemens-Schuckert Werke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Mar. 26, 1912. Serial No. 686,291. (Cl. 230—30.)



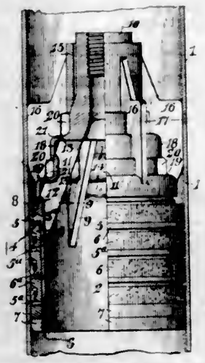
1. In a pump of the character described, the combination of a casing having a fluid suction port and a delivery port terminating in a plurality of small orifices, means in the casing for driving successive volumes of fluid through the said orifices, said means being adapted to continuously decrease the volume of the space between it and said orifices, and means for submerging said orifices in a liquid, said volume decreasing driving means being adapted to drive a mixture of liquid and said fluid through said orifices in the form of jets.

2. In a pump of the character described, the combination with a casing having a suction port and a delivery port, means in the casing for sucking a gas through the suction port and driving it through the delivery port, while continuously decreasing the volume of the space below said delivery port, and a chamber for containing a liquid at a predetermined level above and in communication with the delivery port, of a perforated plate arranged between the said chamber and the delivery port, said suction and driving means being adapted to expel a mixture of liquid and gas in the form of jets through said perforated plate.

3. In a pump of the character described, the combination with a casing provided with an inlet port and a delivery port terminating in a plurality of relatively small orifices, means for submerging said orifices in a liquid, and pumping means within said casing adapted to be packed by the liquid by which said orifices are submerged, said pumping means being adapted to continuously decrease the volume of the space between it and said orifices to drive a mixture of said liquid and gas from said casing in the form of jets issuing from said orifices whereby bubbles of said gas are prevented from vitiating the fluid packing of said pumping means.

4. In a pump of the character described, the combination with a casing having a suction port and a delivery port, a fluid chamber into which said delivery port discharges, means within said casing for pumping a gas in at the suction port and out at the delivery port, said means including a sliding member which is adapted to be packed by fluid from said fluid chamber, and a perforated plate interposed between said delivery port and fluid chamber, said pumping means being adapted to expel a mixture of gas and fluid from said casing in the form of jets issuing from the perforations in said plate, said gas being thereby prevented from collecting in bubbles within the casing where it vitiates the packing effects of said fluid.

1,107,426. VALVE FOR DEEP-WELL PUMPS. ROBERT E. L. HOLMES, Beaver Falls, Pa., assignor to Keystone Driller Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed June 19, 1913. Serial No. 774,676. (Cl. 103—63.)



1. A pump piston provided with a conical valve seat having spaced annular ports separated by an annular band concave on the outer face, said seat having the outer face concave above the uppermost port, and a conical valve provided with spaced annular bands corresponding to and adapted to close the annular ports of the valve seat, said valve being provided with an annular port between the bands and another annular port above the upper band.

2. A pump piston provided with a nipple for the reception of a pump rod, and an annular port between the nipple and the body of the piston with the portion of the nipple adjacent to the port exteriorly concaved, and a conical valve having an interiorly concave band adapted to close the port through the valve seat and provided with a port above the band.

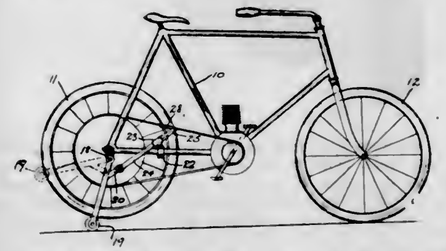
3. A pump piston having a substantially cylindrical body portion, converging ribs rising therefrom and merging at the upper end into a nipple for the reception of the pump rod, the nipple and the other end of the pump piston, together with the ribs, constituting a conical annularly ported valve seat and having an annular concavity above and adjacent to the upper ends of the ribs, and a conical valve having an integral portion for closing the ported part of the valve seat and in turn provided with an annular port above the integral portion in operative relation to the exterior concavity above the ribs.

4. A pump piston having a substantially cylindrical body portion, converging ribs rising therefrom and merging at the upper end into a nipple for the reception of the pump rod, the nipple and the other end of the pump piston, together with the ribs, constituting a conical annularly ported valve seat and having an annular concavity above and adjacent to the upper ends of the ribs, and a conical valve having an integral portion for closing the ported part of the valve seat and in turn provided with an annular port above the integral portion in operative relation to the exterior concavity above the ribs, the integral portion of the valve being interiorly concave.

5. A pump piston comprising a body portion with a conical valve seat, a structure rising therefrom and terminating at the upper end in a nipple for the reception of a pump rod, the valve seat structure being provided midway of its height with an integral outwardly concave annular band defining ports both above and below it, and the nipple above the upper port being formed with an exterior annular concavity, and a conical valve adapted to the conical valve seat, said valve having spaced annular interiorly concave bands defining an annular port between them and provided with an annular port above the upper band matching the annular concavity on the exterior portion of the nipple.

[Claims 6 to 11 not printed in the Gazette.]

1,107,427. BICYCLE-SUPPORT. RICHARD B. KASDORFF, Cleveland, Ohio. Filed Oct. 3, 1913. Serial No. 793,170. (Cl. 208—75.)



1. In a device of the character described, the combination with a bicycle of a U-shaped frame having the side members spaced a sufficient distance apart to receive a wheel therebetween, means for pivotally securing each side member to the frame of the bicycle, a rigid arm secured to one of the side members of the U-shaped frame, a sleeve supported on the frame of the bicycle, a rod slidably supported in said sleeve and having its lower end pivotally secured to said rigid arm, and a latch carried by said rod and adapted to engage with said sleeve, for the purpose set forth.

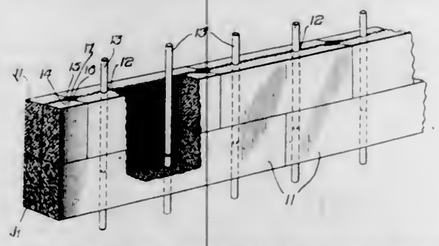
2. In a device of the character described, the combination with a bicycle of a U-shaped frame having the side members spaced a sufficient distance apart to receive a wheel therebetween, means for pivotally securing each side member to the frame of the bicycle, a rigid arm secured to one of the side members of the U-shaped frame, a sleeve pivotally supported from the frame of the bicycle, a rod slidably supported in said sleeve and having its lower end pivotally secured to said rigid arm, a latch carried by said rod and adapted to engage with the upper or lower end of said sleeve according to the position of said U-shaped frame and a toe-piece carried by said latch for the purpose set forth.

3. In a device of the character described, the combination with a bicycle of a U-shaped frame having the side members thereof spaced a sufficient distance apart to receive a wheel therebetween, means for pivotally securing

each side member to the frame of the bicycle, a rigid arm secured to one of the side members of the U-shaped frame, a bracket secured to the frame of the bicycle, a sleeve pivotally supported on said bracket, a rod slidably supported in said sleeve and having its lower end pivotally secured to said rigid arm and having its upper end provided with a slot, a latch pivotally mounted at the end of said rod in said slot, a spring arranged beneath said latch for normally holding the free end of said latch above the surface of said rod and a toe-piece secured to said latch.

4. In a device of the character described, the combination with a bicycle of a U-shaped frame having the side members thereof spaced a sufficient distance apart to receive a wheel therebetween, means for pivotally securing each side member to the frame of the bicycle, wheels mounted on the lower end of said U-shaped frame, a rigid arm arranged on one of the side members of the U-shaped frame, a bracket secured to the frame of the bicycle, a sleeve pivotally supported on said bracket, a rod slidably supported in said sleeve and having its lower end pivotally secured to said rigid arm and having its upper end provided with a slot, a latch pivotally mounted at the end of said rod in said slot, a spring arranged beneath said latch for normally holding the free end of said latch above the surface of said rod and a toe-piece secured to said latch.

1,107,428. BUILDING-BLOCK. ELBRIDGE T. LIKES, Des Moines, Iowa. Filed Feb. 24, 1913. Serial No. 750,116. (Cl. 72—30.)

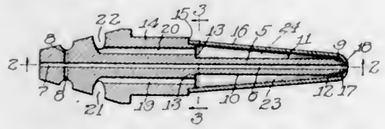


A concrete block wall comprising a plurality of building blocks, each block being provided with an open groove in opposite edges thereof and said grooves having open ends, reinforcing material embedded in each block, the ends of the material projecting into the grooves and the extremities of said material projecting beyond the respective edges of the block, and into the groove in the edge of the next adjacent block and overlapping in said grooves, the coöperating grooves of adjacent blocks completely housing the projecting reinforcing material and forming a receptacle for bonding material, the adjacent ends of the blocks abutting and the faces of the blocks being substantially flush to form a substantially uninterrupted flat surface, each of the blocks being provided with one or more openings extending through the edges of the block and arranged substantially parallel with the said grooves, and additional reinforcing elements arranged in said openings and projecting beyond the edges of the block and into the respective openings in the next adjacent block.

1,107,429. WELDING-TIP. EUGENE G. LUENING, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Mar. 24, 1913. Serial No. 756,314. (Cl. 158—109.)

1. In a welding tip, a tip body having a longitudinal central passage therethrough for the flame gases, and auxiliary longitudinal passages respectively arranged on opposite sides of the central passage, for a cooling medium, and a jacket surrounding a portion of the tip body and coöperating with said body portion to form separate chambers with which said auxiliary passages respectively communicate, said chambers communicating with each other at the tip end of said body portion.

2. In a welding tip, a body having a longitudinal passage therethrough, said tip being reduced in thickness on opposite sides thereof, and a jacket for said body forming separated chambers on the reduced sides of said body, said chambers communicating with each other at one end, and inlet and outlet openings respectively communicating with said chambers at their other ends.

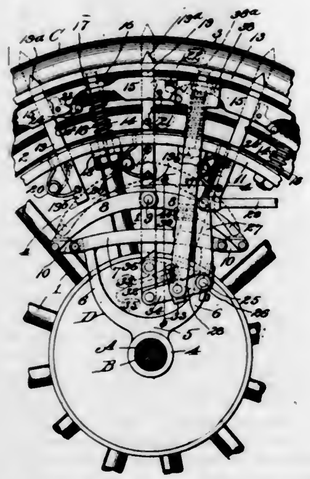


3. In a welding tip, a body having a gas passage longitudinally therethrough, and reduced at the end thereof, said body having the opposite sides thereof cut away, and a jacket for said body, said jacket inclosing the reduced end and cut away side portions of the body to form separated chambers and an annular passage communicating therebetween, said body having inlet and outlet openings for a cooling medium respectively communicating with said chambers.

4. In a welding tip, a body having an enlarged part formed with inlet and outlet ducts, opposite sides of said body being cut away, the end of said body being reduced in diameter, and a jacket fitting over the reduced end and cut away side portions of the tip, to form separated intercommunicating chambers, said ducts respectively communicating with said chambers.

5. In a welding tip a body having an enlarged part with inlet and outlet ducts formed therein, said enlarged part reduced to form a peripheral shoulder, the opposite sides of the body being cut away from said shoulder to the end of the body, and a jacket circular in cross section fitting over the cut away side portions of the body and secured to said shoulder, the body being reduced at its extremity to form an annular channel.

1,107,430. ANTISKIDDING DEVICE FOR AUTOMOBILES AND THE LIKE. PHILIP MAAG, near Webster Groves, Mo. Filed Mar. 26, 1914. Serial No. 827,372. (Cl. 21—210.)



1. In an anti-skidding device, the combination with a fixed member, of a rotatable wheel, a radial series of spurs slidably mounted on said wheel, resilient members for yieldingly holding said spurs in normal retracted position, spur-projecting means carried by said fixed member, said means including a pair of arcuate links pivotally connected together and to said fixed member and normally out of operative engagement with all said spurs, and means for actuating said spur-projecting means to successively, on the rotation of said wheel, engage with said spurs to project the same outwardly against the tension of said spur-holding members; substantially as described.

2. In an anti-skidding device, the combination with a fixed member, of a rotatable wheel, a radial series of spurs slidably mounted on said wheel, resilient members for yieldingly holding said spurs in normal retracted position, a pair of pivotally-connected links on said fixed member, and means for actuating said links to successively, on the rotation of said wheel, engage with said spurs to project the same outwardly against the pull of said spur-holding members, said actuating means comprising an operating-lever, a bell-crank-lever pivotally mounted on said fixed member and having pivotal connection with said operating-lever, a pivoted lever-arm adapted to be pivotally moved on the pivotal movement of said bell-crank-lever, and a link pivotally connected to said lever-arm and said pair of links; substantially as described.

3. In an anti-skidding device, the combination with a fixed member, of a rotatable wheel, a radial series of spurs slidably mounted on said wheel, resilient members for yieldingly holding said spurs in normal rectracted position, spur-projecting means carried by said fixed member, an annular series of yielding members carried by said wheel, said yielding members being yieldable radially inwardly relatively to said fixed member, means for actuating said spur-projecting means to successively, on the rotation of said wheel, engage with said spurs to project the same outwardly against the tension of said spur-holding members, and means adapted to releasably lock said spurs to said yielding members when in projected position; substantially as described.

4. In an anti-skidding device, the combination with a fixed member, of a rotatable wheel, an annular series of yielding members carried by said wheel, said yielding members being yieldable radially inwardly relatively to said fixed member, spurs mounted on said wheel and normally slidable relatively to said yielding members, resilient members for yieldingly holding said spurs in normal retracted position, spur-projecting means carried by said fixed member, means for actuating said spur-projecting means to successively, on the rotation of said wheel, engage with said spurs to project the same outwardly against the tension of said spur-holding members, and means adapted to releasably lock said spurs to said yielding members when in projected position; substantially as described.

5. In an anti-skidding device, the combination with a fixed member, of a rotatable wheel, an annular series of yielding members carried by said wheel, said yielding members being yieldable radially inwardly relatively to said fixed member, a radial series of notched spurs mounted on said wheel and normally slidable relatively to said yielding members, resilient members for yieldingly holding said spurs in normal retracted position, spur-projecting means carried by said fixed member, means for actuating said spur-projecting means to successively, on the rotation of said wheel, engage with said spurs to project the same outwardly against the tension of said spur-holding members, and pivoted dogs carried by said yielding members and adapted to engage with said spurs to releasably lock the same to said yielding members when in projected position; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,107,431. MANUFACTURE OF BUILDING MATERIAL. ANDREW MALINOVSZKY, Chicago, Ill., assignor to Harry H. Randolph, Chicago, Ill. Filed Dec. 6, 1911. Serial No. 664,186. (Cl. 106—45.)

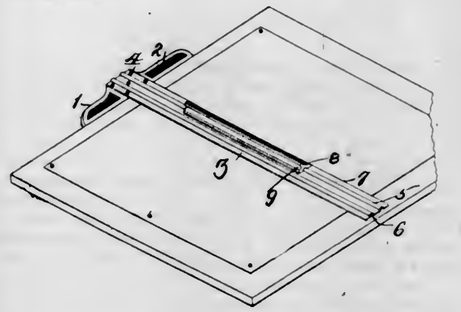
1. The process of making building material, consisting in mixing silicious sand, granite rock and calcium oxid, the major portion of the mass being sand, wetting the mixture to a molding consistency, molding said mixture, subjecting the same to the action of steam, and then saturating the mixture with a solution of sodium silicate and a retarder, substantially as described.

2. The process of making building material, consisting in mixing silicious sand, granite rock, calcium oxid, and fire clay, wetting the mixture to a molding consistency, molding said mixiure into the desired articles, subjecting said articles to the action of high pressure steam, and then saturating said articles with a solution of sodium silicate and sodium chlorid, substantially as described.

3. The process of making building material, consisting in mixing silicious sand, granite rock, calcium oxid, fibrous mineral material, and fire clay, wetting the mixture to a molding consistency, molding said mixture into the desired articles, subjecting said articles to the action of high pressure steam, and then saturating said articles with a solution of sodium silicate and sodium chlorid, substantially as described.

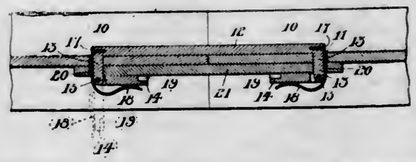
4. The process of making building material, consisting in mixing silicious sand, 50 to 75%, granite rock, 10 to 30%, and calcium oxid, 6 to 15%, wetting the mixture to a molding consistency, molding said mixture, subjecting the same to the action of steam, and then saturating the mixture with a solution of sodium silicate and a retarder, substantially as described.

1,107,432. DRAWING IMPLEMENT. NELSON A. MANTZ, Akron, Ohio. Filed Mar. 18, 1914. Serial No. 825,516. (Cl. 33—75.)



The combination with a drawing implement such for instance as a T-square, embodying a blade formed of a strip of light sheet metal having a working edge, and provided with an integral upwardly-projecting rib on its upper face formed by bending up the metal of the blade, said rib extending longitudinally thereof and parallel with said working edge, and a scale mounted on the upper face of said blade and provided with a longitudinally-extending groove adapted to freely receive said rib, the relative position of the rib on the blade and the groove in the scale being such that when the scale is positioned on the blade the indicia-bearing edge of the scale will be flush with the working edge of the blade, said scale being freely and bodily removable vertically from engagement with said blade.

1,107,433. BOLTLESS RAIL-JOINT. JOHN MARCZI, La Belle, Pa. Filed May 27, 1914. Serial No. 841,274. (Cl. 239—9.)



1. In a rail joint, a pair of rails having their meeting ends contacting and provided with openings in the webs

equidistantly spaced from the joint, a fish plate provided with angular arms extending through said opening, a plate provided with openings registering with the openings in the rail web disposed at the opposite sides of the rails, the fish plate extension extending therethrough and spring-pressed locking plates carried by said extensions and adapted in locking position to engage the outer face of the locking plate.

2. In a fish plate for rail joints, a body portion, right angular extensions carried by said body portion, locking plates hinged to the extensions, and leaf springs carried by the extensions and having their free ends engaging the locking plates to cause the same to move inwardly.

3. In a rail joint, a pair of meeting rails, an opening provided in the web of each rail, a plate mounted at one side of the webs and provided with openings registering with the web openings, a locking fish plate disposed at the opposite side of the rail webs, angular extensions carried by the locking fish plate and extending through the registering openings, a locking plate hinged to each of the angular extensions, and a spring carried by each of the angular extensions and engaging the locking plates to cause the same to lie in contact with the plate.

1,107,434. BAR FOR REINFORCED CONCRETE CONSTRUCTION. HAROLD G. MEADOWS, Buffalo, N. Y., assignor to Joseph G. Dudley, Buffalo, N. Y. Filed Dec. 19, 1910. Serial No. 598,091. (Cl. 72—111.)



1. A bar for reinforced concrete having two series of substantially V-shaped ribs substantially diametrically opposite each other, the apexes of the longitudinally adjacent V's, projecting in opposite directions longitudinally of the bar and the ribs at said apexes being wholly separated a considerable distance from each other.

2. A bar for reinforced concrete having two series of similar V-shaped ribs arranged substantially opposite each other, the apexes of the longitudinally adjacent V's in each series extending alternately in opposite directions longitudinally of the bar and the ribs at said apexes being wholly separated a considerable distance from each other.

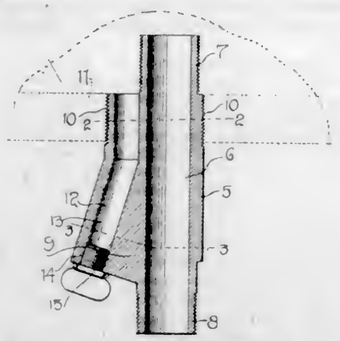
3. A bar for reinforced concrete, angular in cross-section and having two series of ribs on each face, occurring alternately, those of one series being inclined in opposite direction to those of the other series, longitudinally in respect to the axis of the bar, the corresponding ribs extending in opposite directions on adjacent faces, meeting at the edges, angles or corners of the bars, and being wholly separated at this point a considerable distance from the meeting points of the next adjacent pair of ribs.

4. A bar for reinforced concrete, having a plurality of ribs forming bands extending around it and inclined alternately in opposite directions relatively to the longitudinal axis thereof, forming a series of V-shaped projections, the apexes of the V's of adjacent bands extending longitudinally of the bar and in opposite directions and the ribs of each band being wholly separated a considerable distance from each other.

5. A bar for reinforced concrete, having a plurality of ribs extending around it in the nature of zigzag bands, each band composed of a series of straight ribs meeting, and changing directions at the corner of the bar, said bands being a considerable distance apart at their nearest points, and each having the apexes of the V's, formed at the corners of the bar by the meeting of the ribs, point in opposite direction, longitudinally of the bar, to that of the V at the corresponding corner in the next adjacent band.

[Claims 6 and 7 not printed in the Gazette.]

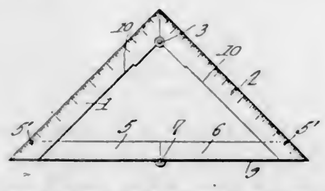
1,107,435. SPIGOT. FREDERICK W. MENNICKHEIM, Jr., Sussex, N. J., assignor of one-half to Michael J. Walsh, Sussex, N. J. Filed Mar. 21, 1914. Serial No. 826,326. (Cl. 137—21.)



1. A spigot comprising a tubular body, the opposite ends of said body being reduced and exteriorly threaded, said body having an enlarged portion formed on one side thereof between said reduced portions, said enlarged portion having a bore extending therethrough, means for closing said bore, and means for mounting the spigot in a suitable support, as and for the purpose described.

2. A device of the character described comprising a body having a bore extending longitudinally therethrough, said body being enlarged on one side thereof, the enlarged side of said body having a bore extending therethrough, means for closing the last mentioned bore, the body and the enlarged portion thereof at the inner end of the body being annular in cross-section and threaded, said body having a reduced longitudinal extension at its inner end.

1,107,436. MEASURING-TOOL. WILLIAM G. MEYERS, Mitchell, S. D. Filed Dec. 18, 1913. Serial No. 807,515. (Cl. 33—98.)



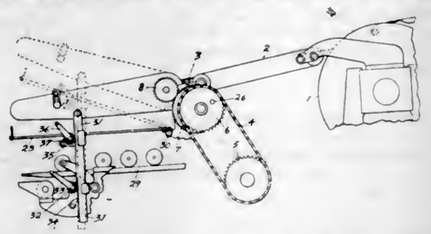
1. A device of the class described including opposed measuring members hingedly connected at one end, and having their faces lying in the same planes, interposed members hingedly connected together at one end and hingedly connected at their other ends to the first named members, said interposed members having faces movable in the said planes being adapted to fold together and, when folded, to nest within the first named members.

2. A device of the class described including opposed measuring members hingedly connected at one end, interposed members hingedly connected together at one end and hingedly connected at their other ends to the first named members, said interposed members being adapted to fold together and, when folded, to nest within the first named members, portions of said interposed members being disposed in the same planes with the corresponding faces of the first named members and all of the members of the device having their faces movable in said planes to either extended or folded positions.

3. A device of the class described including opposed measuring members hingedly connected at one end, interposed members hingedly connected together at one end and hingedly connected at their other ends to the first named members, said interposed members being adapted to

fold together and, when folded, to nest within the first named members, there being longitudinal ribs upon the interposed members and having their outer faces in the same planes with the corresponding faces of the first named members, said first named members being cut away longitudinally to receive the ribs when the device is folded.

1,107,437. SHEET-DELIVERY MECHANISM. ROBERT MIEHLE, Plymouth, Ind., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed May 19, 1913. Serial No. 768,604. (Cl. 101—31.)



1. A sheet carrier including a sheet supporting belt element; means for causing the sheet supporting surface of the belt element to move in one level there to receive the sheet to be supported and in a lower level there to discharge the sheet, said means including a carrier for transferring said sheet supporting surface of the belt element from the upper to the lower level; and means for lifting the carrier upon the initiation of the transfer then to prevent the carried sheet from being unduly subject to the buoying action of the air.

2. A sheet carrier including a sheet supporting belt element; means for causing the sheet supporting surface of the belt element to move in one level there to receive the sheet to be supported and in a lower level there to discharge the sheet, said means including an endless carrier engaging said sheet supporting surface of the belt element and operating to initiate the transfer of the same from the upper to the lower level when the belt engaging portion of the carrier turns from the upper to the lower portion of its path; and means for lifting the carrier where it engages the sheet supporting surface of the belt element upon the initiation of the transfer then to prevent the carried sheet from being unduly subject to the buoying action of the air.

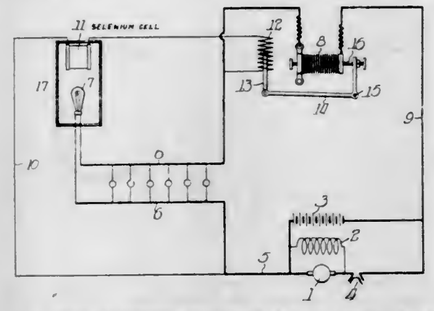
3. A sheet carrier including a sheet supporting belt element; means for causing the sheet supporting surface of the belt element to move in one level there to receive the sheet to be supported and in a lower level there to discharge the sheet, said means including an endless carrier and a bight forming element supported by the carrier and engaging said sheet supporting surface of the belt element and operating to initiate the transfer of the same from the upper to the lower level when the bight forming element turns from the upper to the lower portion of its path; and means for lifting the carrier as the bight forming element moves from the upper to the lower portion of its path to prevent the carried sheet from being unduly subject to the buoying action of the air.

4. A sheet carrier including a sheet supporting belt element; means for causing the sheet supporting surface of the belt element to move in one level there to receive the sheet to be supported and in a lower level there to discharge the sheet, said means including a bight forming element engaging said sheet supporting surface of said belt element, and means for causing said bight forming element to move in upper and lower adjacent portions of a path; and means for obstructing the descent of the bight forming element as it leaves its upper path portion then to prevent the carried sheet from being unduly subject to the buoying action of the air.

5. A sheet carrier including a sheet supporting belt element; means for causing the sheet supporting surface of the belt element to move in one level there to receive the sheet to be supported and in a lower level there to discharge the sheet, said means including a carrier for transferring said sheet supporting surface of the belt element from the upper to the lower level; means for lifting the carrier upon the initiation of the transfer then to prevent the carried sheet from being unduly subject to the buoying action of the air; and means for lowering the carrier after the discharge of the carried sheet has been initiated.

[Claims 6 to 14 not printed in the Gazette.]

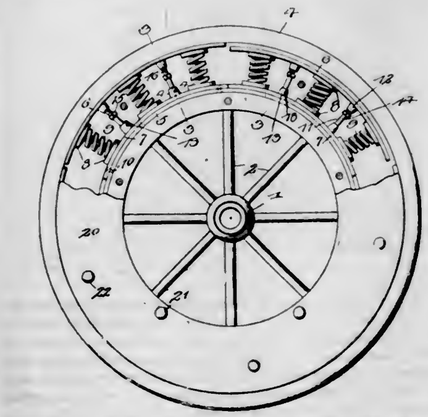
1,107,438. SELENIUM-CELL REGULATOR, MORRIS MOSKOWITZ, New York, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee. Filed June 18, 1910. Serial No. 567,612. (Cl. 171—229.)



1. A lighting system comprising a main circuit, a variable resistance for controlling said circuit, a branch circuit and an electrically controlled means in said branch circuit for controlling said variable resistance, a controlling lamp in the main circuit, and a light responsive resistance element under control of said lamp arranged to vary the strength of said electrically controlled means, thereby controlling the main circuit.

2. A system of electrical regulation, comprising a main circuit, a variable resistance device therein, electro-magnetically operated controlling means therefor, a lamp in the main circuit, and a light responsive resistance controlled by the intensity of illumination thereof arranged in series with said electro-magnetically controlled means, whereby upon slight variations in the intensity of said light the strength of said controlling means will be varied, and thereby the resistance of the main circuit influenced.

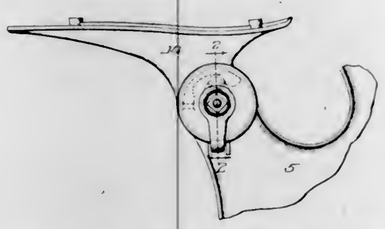
1,107,439. SPRING-WHEEL. JOHN W. NIPPERT, New Brighton, Pa. Filed Oct. 28, 1912. Serial No. 728,230. (Cl. 152—8.)



A device of the class described, comprising the combination of an inner rim, a sectional outer rim, a tread

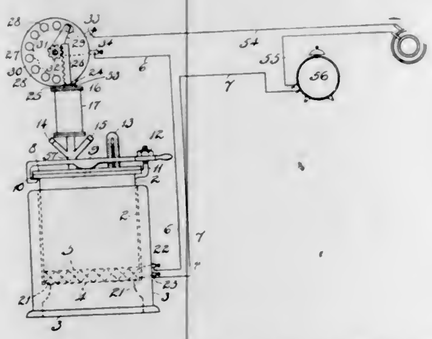
member engaged upon the sectional outer rim, cushioning members between said inner and outer rims, outwardly directed flared smooth sockets carried on the inner rim, inwardly directed threaded sockets carried on the sections of the outer rim, said smooth and threaded sockets being positioned opposite one another and adapted to receive a removable assembling tool, and a securing pin removably engaged transversely through one side of each smooth socket to lock the tool in position.

1,107,440. SEAT-HINGE. CHARLES O. OLSON, Chicago, Ill., assignor to The A. H. Andrews Co., Chicago, Ill., a Corporation of Illinois. Filed July 2, 1913. Serial No. 776,978. (Cl. 155—34.)



In a seat hinge, the combination of a stationary supporting member provided on its inner face with a centrally disposed laterally projecting boss provided on its upper periphery with a concave spring-supporting and retaining socket, a movable member pivotally secured to said stationary member concentrically of said boss, said movable member being provided on its inner face with an arcuate rib outside of and opposed to the socket in said central boss, the inner face of said rib at its ends being inclined to provide cam surfaces approaching said boss, and a spring comprising a ring having a diagonally disposed cut positioned in said spring-receiving socket in position to be engaged by the cam surfaces on said arcuate rib as the movable member approaches the limit of its movement in each direction.

1,107,441. VULCANIZER. MAURITHZ W. OLSON, Galesburg, Ill. Filed Mar. 17, 1913. Serial No. 754,813. (Cl. 219—38.)

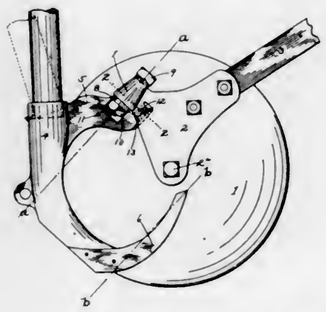


1. In a vulcanizer, a hermetically sealed water-container, a source of electric supply from which it may be heated, a removable top for said container, means for locking it thereon, a cylinder in communication with said container, a piston operated by the fluid generated in said container and adapted to open and close communication between it and said cylinder, and a rheostat governed by said piston.

2. In a vulcanizer, a hermetically sealed water container, a flask therein, a source of electric supply from which the contents of said container may be heated, means for controlling the amount of current, and a piston for actuating the last recited element, the movement of said piston in one direction being controlled by the fluid generated in said container.

3. The combination in a vulcanizer, of a hermetically sealed water container, a removable steam-tight cover therefor, a hermetically sealed flask adapted to contain rubber to be vulcanized, disposed in the fluid contained in said water container, a source of electric supply from which said water and thereby the contents of said flask may be heated, an element movable by the fluid generated in said container, and means for controlling the amount of current.

1,107,442. DISK FURROW-OPENER. FRANK R. PACKHAM, Springfield, Ohio, assignor to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 11, 1912. Serial No. 725,201. (Cl. 111—11.)



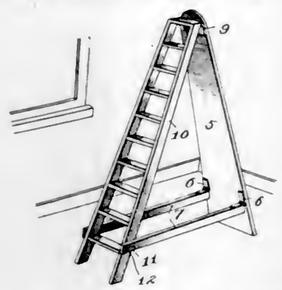
1. In a disk furrow opener, a support, a disk mounted on said support, a boot projecting downwardly having a toe, a scraper projecting from the toe of said boot, the said boot, toe piece and scraper lying in a vertical plane such that the scraper will normally contact against the disk, a swiveled connection between the boot and the support located at a point above the scraper for permitting a lateral adjustment of said boot and scraper consisting of a spindle on one of said parts and a socket to receive said spindle on the other part, together with means for positively drawing said boot and said support together to fasten same, while maintaining the lateral adjustment of said boot and scraper to said disk, substantially as specified.

2. In a disk furrow opener, a two-part support, a shield or scraper mounted on one of said parts and a concavo-convex disk on the other of said parts, a spindle on one of said parts and a socket on the other of said parts to receive said spindle, together with means for holding said spindle in said socket, and an adjustable stop on one of said parts adapted to engage the other of said parts to prevent rotation of said spindle in said socket.

1,107,443. COMBINED STEP-LADDER AND IRONING-BOARD. JOE A. PASTALENIEC, New Kensington, Pa. Filed Dec. 11, 1913. Serial No. 806,098. (Cl. 228—32.)

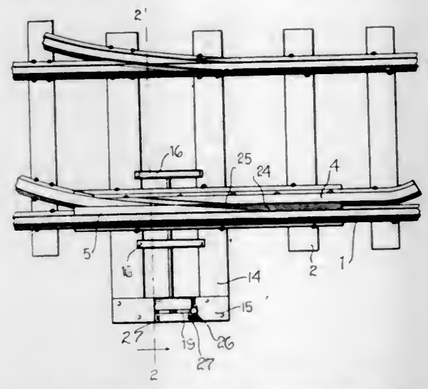
A combined ladder and ironing-board comprising a board, a ladder having its upper end hinged to the underside of the board near one end of the latter, and having alined pins projecting from the outer sides of its side bars, near the lower ends thereof, a pair of independent disconnected parallel braces hinged to the underside of the board adjacent to the opposite end thereof, and notched on their lower edges near their free ends to engage said pins, the hinges of said braces permitting the flat surfaces of the hinged ends of the braces to abut the under surface of the board, when said braces are in vertical position, and also

permitting said braces to be swung into parallel relation with the under surface of the board, and said board being



adapted to fold upon and conceal said ladder when the board is in position for ironing.

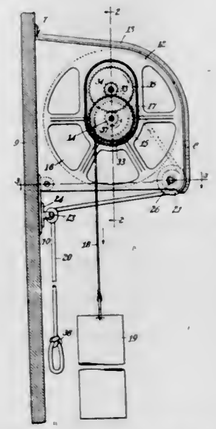
1,107,444. RAILWAY-SWITCH POINT. ALBERT L. PIPES, Sapulpa, Okla. Filed Oct. 18, 1913. Serial No. 796,008. (Cl. 104—12.)



1. In a railway switch, the combination with a main rail, a guard rail arranged in spaced relation thereto, and a supporting plate for said guard and main rails, said plate being provided with slots at predetermined points therein; of a switch point consisting of a pair of longitudinal bars arranged one upon the other between said main and guard rails, the contacting faces of said bars being provided with notches having opposite walls beveled coincident to one another, said upper bar being capable of vertical movement and the lower bar being capable of longitudinal movement between said rails, projections formed on the lower face of said lower bar extending through the slots of said base plate, one face of each of said projections being beveled, U-shaped keepers carried on the upper bar and encircling said lower bar, said keepers being adapted to be engaged by the beveled faces of the projection when said lower bar is moved longitudinally in one direction, and means to actuate said lower bar whereby to raise and lower the upper bar with respect to said rails.

2. In a railway switch, the combination with a main rail, a guard rail arranged in spaced relation thereto, and a base plate for said rails having a plurality of slots therein arranged at predetermined points in the same; of a switch point composed of a pair of longitudinal bars arranged one upon the other between said main and guard rails, the contacting faces of said bars having notches and having opposite walls of said notches beveled coincident to one another, said upper bar being adapted for vertical movement and said lower bar being adapted for longitudinal movement between said rails, means in connection with the upper bar to guide the same in its vertical movement and prevent longitudinal movement of the same, projections formed on the lower face of said lower bar and extending through certain of the slots of said base plate, U-shaped keepers carried on the upper bar and encircling portions of the lower bar at the point of the last mentioned slots in the base plate, said projections being adapted to contact with said keepers as the lower bar is moved longitudinally in one direction, a depending tongue carried on the lower bar and projecting through another of the slots of said base plate, and means in connection with said last mentioned tongue for actuating said lower bar, whereby to raise and lower said upper bar with respect to the rails.

1,107,445. AUTOMATIC CLOTHES-LINE REEL. EDWARD W. POWERS, Waltham, Mass. Filed June 19, 1911. Serial No. 633,949. (Cl. 242—101.)



A reel having in combination a casing, a drum rotatably mounted in said casing, a cord attached to said drum, a stationary guide for said cord, a guide roll interposed between said guide and drum, over which said cord extends, a stationary curved rod with its concave face toward said drum on which said guide roll is rotatably and slidably mounted, one of the walls of said casing adjacent to said guide roll and rod having an inner face substantially parallel with said rod and constituting a guard whereby said cord is held upon said guide roll.

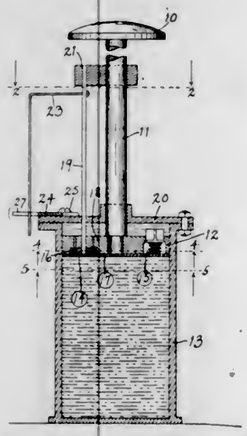
1,107,446. DASH-POT FOR GLASS-BLOWING MACHINES. JOHN RAU, Indianapolis, Ind. Filed Oct. 6, 1911. Serial No. 653,192. (Cl. 74—69.)

1. In a glass blowing machine, a dash pot construction including a rod, a piston on said rod with a port therethrough, a fluid containing cylinder for said piston, a valve in said piston to control said port, and means controlled by the movement of the piston for gradually opening said valve whereby the lowering movement of the piston will be accelerated during its progress.

2. In a glass blowing machine, a dash pot construction including a rod, a piston on said rod with a port therethrough, a fluid containing cylinder for said piston for controlling the port in said piston, a valve stem extending upwardly beyond the cylinder and connected with said rod, and means for gradually oscillating said valve stem as the piston descends.

3. In a glass blowing machine, a dash pot construction including a rod, a piston on said rod with a port therethrough, a fluid containing cylinder for said piston, a rotary valve for controlling the port in the piston, a valve stem extending upwardly beyond the cylinder and rotatably mounted in connection with said rod, a bent-arm se-

cured to said valve stem with a downward portion inclined from a vertical line, and a guide connected with said cylinder through which the lower part of said bent arm moves, whereby as the valve stem moves downwardly said guide will oscillate said arm and valve stem for opening the valve.



4. In a glass blowing machine, a dash pot construction including a rod, a piston on said rod with a port therethrough, a fluid containing cylinder for said piston, a rotary valve for controlling the port in the piston, a valve stem extending upwardly beyond the cylinder and rotatably mounted in connection with said rod, a bent arm secured to said valve stem with a downward portion inclined from a vertical line, a guide connected with said cylinder through which the lower part of said bent arm moves, whereby as the valve stem moves downwardly said guide will oscillate said arm and valve stem for opening the valve, and means for adjusting said guide concentrically with the cylinder.

5. In a glass blowing machine, a dash pot construction including a rod, a piston on said rod with a port therethrough, a fluid containing cylinder for said piston, a rotary valve for controlling the port in the piston, a valve stem extending upwardly beyond the cylinder and rotatably mounted in connection with said rod, a bent arm secured to said valve stem with a downward portion inclined from a vertical line, a guide connected with said cylinder through which the lower part of said bent arm moves, whereby as the valve stem moves downwardly said guide will oscillate said arm and valve stem for opening the valve, and means for preventing lateral movement of the upper end of said valve stem.

[Claims 6 to 10 not printed in the Gazette.]

1,107,447. SANITARY NAPKIN. GEORGE RINKE, Detroit, Mich. Filed May 10, 1913. Serial No. 766,815. (Cl. 128—5.)



1. A sanitary napkin comprising a tubular body portion, flaps connected to the opposite ends of the body portion and supporting tabs attached to the same side and to opposite ends of the body portion.

2. A sanitary napkin comprising a knitted or crocheted tubular body portion, flaps of the same material and texture as the body portion associated with the opposite ends thereof one to the top and the other to the bottom of the body portion when flat, and tabs connected to the opposite ends of the same longitudinal half of the body portion.

3. As an article of manufacture, a knitted or crocheted sanitary napkin comprising a tubular and openended body portion, flaps which extend from the opposite sides and ends of the body portion which flaps are adapted to be housed one above the other within the body portion and supporting tabs connected to the opposite ends of the same longitudinal half of the body portion.

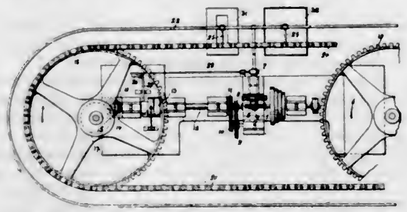
4. A sanitary napkin comprising a tubular body portion and pads in the form of flat flaps made by crocheting the parts from "candle-wick" yarn using a ribbed stitch the ribs alternating on the same side with depressions and extending longitudinally, and end tabs attached to the body portion one of the tabs being secured to the body portion at the point of juncture of one of the flaps with said body portion.

1,107,448. MOTOR-CAR AXLE. CHARLES F. ROBINSON, San Francisco, Cal. Filed Apr. 17, 1912. Serial No. 691,537. (Cl. 105—4.)



The herein described method of repairing worn axles which consists in cutting down an intermediate worn portion of the axle to form a reduced portion of a definite length, fitting about the cut down portion of the axle one or more filling segments, each of a length equal to the length of the reduced portion, the segments when fitted about the reduced portion completely ensheathing the same, permanently uniting the said segments to the surface of the reduced portion and to each other, and finally truing down the segments flush with the unworm surface of the axle.

1,107,449. APPARATUS FOR AUTOMATICALLY CHARGING HARDENING AND THE LIKE FURNACES. ROBERT RÖNTGEN, Remscheid, Germany. Filed Mar. 24, 1913. Serial No. 756,449. (Cl. 148—34.)



1. An automatic apparatus for carrying articles to be hardened successively to the heating furnace and the chilling bath, comprising a running rail or track, devices for carrying the articles and adapted to run on said track, a portion of the track located above the furnace and bath and arranged to be located out of and lifted into alinement with the stationary part of the track, a means carrying said movable portion of the track, and a means for operating said carrying means in order to lower and lift said movable track portion at and for a given time, to introduce the articles carried by the carrying means, successively into the furnace and the bath.

2. An automatic apparatus for carrying articles to be hardened successively to the heating furnace and the chilling bath, comprising a running rail or track, devices for carrying the articles, and adapted to run on said track, a portion of the track located being above the furnace and bath and arranged to be lowered out of and lifted into alinement with the stationary part of the track, a lever carrying the movable track portion, and a means for turning said lever on its pivot, in order to lower and lift said movable track portion at and for a given time to introduce the articles carried by the carrying means, successively into the furnace and the bath.

3. An automatic apparatus for carrying articles to be hardened successively to the heating furnace and the chilling bath, comprising a running rail or track, devices for carrying the articles and adapted to run on said track, a portion of the track being located above the furnace and bath and arranged to be lowered out of and lifted into alinement with the stationary part of the track, a lever carrying the movable track portion, a means for operating said lever, and an endless chain with drivers for periodically actuating the devices carrying the articles, to run on the track.

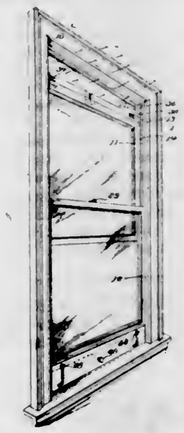
4. An automatic apparatus for carrying articles to be hardened successively to the heating furnace and the chilling bath, comprising a running rail or track, devices for carrying the articles and adapted to run on said track, a portion of the track being located above the furnace and bath and arranged to be lowered out of and lifted into alinement with the stationary part of the track, a lever carrying the movable track portion, a means for operating said lever, an endless chain with drivers for periodically actuating the devices carrying the articles and a clutch for rendering the drivers operative and inoperative at given lengths of time by throwing said clutch in and out.

5. An automatic apparatus for carrying articles to be hardened successively to the heating furnace and the chilling bath, comprising a running rail or track, devices for carrying the articles and adapted to run on said track, a portion of the track being located above the furnace and bath and arranged to be lowered out of and lifted into alinement with the stationary part of the track, a lever carrying the movable track portion, a means for operating said lever, an endless chain with drivers for periodically actuating the devices carrying the articles, a clutch to operate the drivers, a means for operating the said clutch, a cam plate to operate the said lever, and a shaft on which both the clutch operating means and the cam plate are mounted for synchronic actuation.

1,107,450. WINDOW. CLEMENT T. SALVESEN, Chicago, Ill. Filed Dec. 8, 1913. Serial No. 805,445. (Cl. 98—31.)

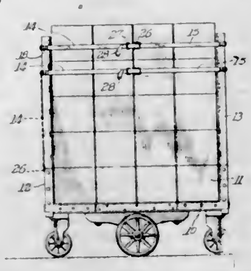
1. A window including a casing, vertical guides mounted therein, shoulders formed adjacent the upper terminals of the guides, a sash slidable in the casing, and a pair of ventilating bars pivotally mounted on the upper bar of the sash, the free terminals of the ventilating bars being engageable with the shoulders of the guide members whereby the sash may be lowered to provide a ventilating space between the upper sash bar and the upper end of the casing and may be held against further downward movement through the casing.

2. A window including a casing having vertical guide members provided adjacent their upper terminals with shoulders, a sash slidable in the casing, and a pair of swingingly mounted ventilating bars attached to the upper sash bar of the sash, said ventilating bars being movable to a position whereby the sash may be moved freely through the casing, being also movable to a position in which their free terminals engage the shoulders whereby the sash may be lowered to provide a ventilating space between the sash bars and the upper end of the casing and held against further downward movement through the casing.



3. A window including a casing having vertical guide members, a sash slidable between the guides, shoulders formed adjacent the upper terminals of certain of the guides, a pair of ventilating bars pivotally attached at their inner adjacent terminals to the approximate center of the upper sash bar of the sash, said ventilating bars being adapted to be longitudinally alined whereby they extend in the plane of the lower sash bar for permitting the sash to be freely moved through the casing, said sash bars being also adapted to be swung to engage their free terminals with said shoulders whereby the sash may be lowered to provide a ventilating space between the upper sash bar and the upper end of the casing, and then held against further downward movement through the casing.

1,107,451. STRAP-HOLDER. HENRY L. SCHROEDER, Chicago, Ill. Filed Apr. 3, 1914. Serial No. 829,180. (Cl. 21—65.)



1. The combination of a support, a hinged retainer swiveled to the support by one of its webs for oscillation in an approximately vertical plane, and a strap fastened by one end to the free web of the retainer.

2. The combination of a support, a strap, a stud protruding from the support approximately horizontally, and a strap holder comprising two webs hinged together, one of which is apertured for loose engagement with the stud and the other web of which carries the strap.

3. The combination of a support having two approximately vertical faces meeting to form a corner, an approximately horizontal stud protruding from one of said faces, a strap adapted to exert pull upon the support in a

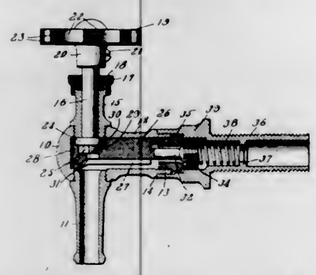
direction approximately horizontal and in the plane of the other face of the support, and a hinge to one web of which an end of the strap is fastened, and the other web of which is loosely engaged by the stud.

4. The combination of a support having two approximately vertical faces meeting to form a corner, an approximately horizontal stud protruding from one of said faces, a strap adapted to exert pull upon the support in a direction approximately horizontal and in the plane of the other face of the support, and a hinge to one web of which an end of the strap is fastened, and the other web of which is loosely engaged by the stud, the webs of the hinge joining in an approximately vertical line adjacent the corner of the surfaces.

5. The combination with a truck having end uprights, of a hinge, a stud horizontally positioned in one upright protruding from one outer face thereof and upon which one web of the hinge is swiveled, a strap secured by one of its ends to the other web of the hinge, and means for fastening the strap to another end upright of the truck.

[Claims 6 and 7 not printed in the Gazette.]

1,107,452. COCK OR FAUCET. ANTON C. SCHUERMANN, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed Sept. 13, 1913. Serial No. 789,648. (Cl. 137—4.)

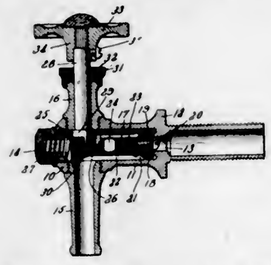


1. A self-closing cock comprising a casing having a valve seat at its inner end and an outlet nozzle at its forward end, a closely fitting movable block in the casing having a valve at its inner end and a longitudinal passage therein adapted to establish communication between the valve seat and the nozzle, a spring in the casing bearing against said block to normally seat said valve, and an operating stem rotatably mounted in the casing having a cam upon its inner end, said block having a transverse slot in one side adapted to receive said cam whereby the rotation of said cam moves said block to unseat said valve.

2. A self-closing cock comprising a casing having a valve seat and an outlet nozzle therein, a closely fitting movable block in the casing having a valve and a longitudinal passage in one side adapted to establish communication between said valve seat and said nozzle, a spring in said casing engaging said block whereby to normally seat said valve, and a stem mounted to turn in the casing and having a cam upon its inner end, said block having a recess in one side receiving said cam, said recess providing a shoulder in said block and a stop opposite to said shoulder, said cam being adapted to be turned within the recess whereby to bring one end fo the cam against said shoulder and unseat said valve, the opposite end of said cam being adapted for engagement against said stop whereby to limit the rotation of said cam.

3. A self-closing cock comprising a casing having a valve seat at its inner end and a depending nozzle at its outer end, a closely fitting movable block in the casing having a valve at its inner end and provided with a longitudinal passage in its underside adapted to establish communication between said valve seat and said nozzle, a spring engaging said block to normally seat the valve, and a stem mounted in the top of the casing having a disk upon its lower end to retain the stem from displacement from the casing, said stem also having a cam depending from said disk provided with a straight side lying substantially in parallelism with the diameter of the disk and having at its opposite side a pair of diverging faces of equal length extending inwardly to the ends of the cam, said block having a recess in its upper side for the reception of said disk and transverse slot in the bottom of said recess for the reception of said cam whereby the turning of the stem engages one end of said cam against the inner wall of said slot, the upper wall of said slot comprising a pair of diverging faces of equal length extending outwardly and laterally to the ends of the wall for engagement with the diverging faces of said cam when turned whereby to limit the rotation of the cam.

1,107,453. SELF-CLOSING COCK OR FAUCET. ANTON C. SCHUERMANN, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed Sept. 13, 1913. Serial No. 789,649. (Cl. 137—4.)

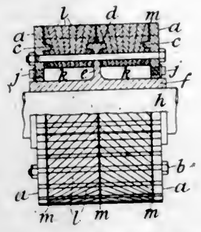


1. In a self closing cock, an elongated casing having a valve seat at its inner end and a spout at its outer end, a valve member slidable in the casing, a valve on the inner end of said valve member, a spring in the outer end of said casing bearing against the valve member to normally seat the valve, the forward end of said valve member having a transverse recess across its upper side with parallel walls, the forward one of which constitutes an abutment, and an operating stem projecting down into the casing and having a cam on its lower end engaging in the recess, said cam having a flat outer face normally engaging said abutment wall and having oppositely inclined faces at its inner side, either of which is adapted to engage the inner wall of said recess upon the turning of the cam whereby to limit the rotation of the cam.

2. In a self closing cock, an elongated casing having a valve seat at its inner end and a depending spout at its outer end, a valve member in said casing bearing against the walls thereof whereby to guide the valve member and prevent vibration of the same, a valve on the inner end of the valve member, a spring in the outer end of the said casing engaging said member whereby to normally seat said valve, said valve member having longitudinal grooves in the upper and lower sides thereof and a central opening intercommunicating the grooves adapted to permit the unrestricted flow of fluid through the casing to the depending spout upon the opening of the valve, the forward end of said valve member having a transverse recess across its upper side with parallel walls the forward one of which constitutes an abutment, and an operating stem projecting down into said casing and having a cam on its lower end engaging in the recess, said cam having a flat outer face normally engaging said abutment wall and having oppositely inclined faces at its inner side either of which is adapted to engage the inner wall of said recess upon the turning of the cam whereby to limit the rotation of the cam.

1,107,454. GEARING. GEORGE EDGAR SEYMOUR, Newcastle-upon-Tyne, England. Filed Oct. 21, 1912. Serial No. 726,941. (Cl. 74—28.)

1. A gear comprising an annular tooth supporting member, and teeth formed of helicoidally disposed laminæ spaced outwardly from said member to form the outer wall of a chamber for the reception of lubricant, the meeting faces of said laminæ extending from said chamber to the working face of said teeth whereby the lubricant is forced between said meeting faces to the working faces of the teeth by centrifugal action, means for pressing said laminæ adjustably toward one another, and means for positively transferring the drive between the laminæ and the tooth supporting member.



2. A gear comprising an annular tooth supporting member, helicoidally disposed metallic laminæ forming teeth spaced outwardly from said member to form the outer wall of a chamber for the reception of lubricant, clamping elements mounted on said supporting member outside the laminæ to form the end walls of said chamber, said clamping elements having an opening permitting introduction of the lubricant, a closure for such opening, and adjustable tie members traversing said laminæ and clamping elements.

3. A gear comprising an annular tooth supporting member having a central flanged web thereon, metallic laminæ forming teeth spaced radially outward from said member to form the outer wall of a chamber for the reception of lubricant, said central web dividing said chamber into two separate chambers, clamping rings engaging the supporting members at opposite ends of the laminæ and forming the outer end walls of said chambers, each of said rings having an opening for the introduction of the lubricant into the chambers, a plug in each opening, and bolts traversing said laminæ, central flange and clamping rings, and nuts for adjusting the clamping pressure of said bolts.

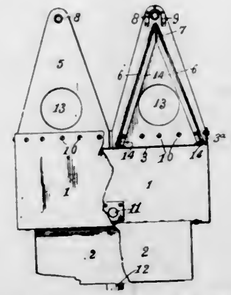
4. A gear comprising an annular tooth supporting member, and teeth formed of helicoidally disposed laminæ spaced outwardly from said member to form the outer wall of a chamber for the reception of lubricant, the meeting faces of said laminæ extending from said chamber to the working face of said teeth whereby the lubricant is forced between said meeting faces to the working faces of the teeth by centrifugal action, means for pressing said laminæ adjustably toward one another, and means for positively transferring the drive between the laminæ and the tooth supporting member, said teeth being provided with saw cuts therethrough extending around the periphery of the gear.

5. A gear comprising a boss or rim, teeth formed of helicoidally disposed metallic laminæ spaced outwardly from said boss or rim to afford a chamber for reception of lubricant, said teeth having saw cuts thereacross extending around the periphery of the gear, clamping elements mounted on said boss or rim outside the laminæ, and having a closable orifice for introduction of lubricant to said chamber, and tie members traversing said laminæ and clamping members.

1,107,455. COOLING-TANK. CLAUDE SINTZ, Detroit, Mich. Filed Aug. 14, 1912. Serial No. 715,063. (Cl. 62—31.)

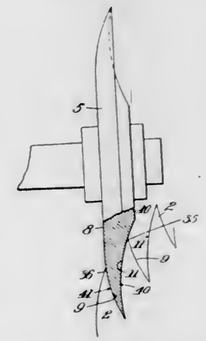
1. A cooler, comprising heads having openings, downwardly diverging inclined screens joined at the top and attached to the heads, a pipe above the apex of the screens having horizontal perforations equal in area at opposite sides, and a hood extending opposite the openings in the pipe and spaced apart therefrom to divert the fluid downward upon the screens.

2. A cooler, comprising a fluid receiving tank, heads spaced apart above the tank and having openings to permit the passage of air, downwardly diverging screens joined at the top and extending between the heads, a pipe supported at its respective ends by the heads and extending above and parallel with the apex of the screens and



having horizontal openings on opposite sides, and a hood supported at its respective ends by the heads and embracing the pipe to divert the flow of water therefrom to the screens.

1,107,456. GIN-SAW-DRESSING MACHINE. JOHN R. SMITH, McDonough, Ga. Filed Oct. 30, 1913. Serial No. 798,308. (Cl. 76—45.)



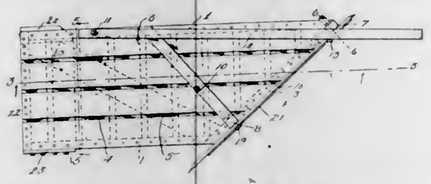
1. In a gin saw dressing machine, the combination of an operating shaft adapted to move to and from a gin saw having teeth of a hawk bill shape; and a disk file mounted on said shaft provided with a rear surface having the same curvature as the forward edges of said teeth, and a front surface having the same curvature as the rear edges of said teeth, substantially as described.

2. A disk shaped file for cutting out the throats of gin saw teeth of hawk bill shape provided with a rear convex cutting surface of the same curvature as the forward edges of said teeth and with a front concave cutting surface of the same curvature as the rear convex edges of said teeth, substantially as described.

1,107,457. GRADING-MACHINE. LINSEY F. SMITH, Rockford, Ala. Filed Dec. 13, 1912. Serial No. 736,569. (Cl. 37—5.)

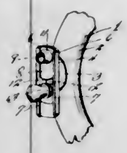
In a grading machine a main frame comprising longitudinal side bars, a front cross bar secured to the forward ends thereof and arranged at an oblique angle to the forward movement of the machine, a rear cross bar and a series of intermediate cross bars connecting said side bars, a platform arranged on said frame upwardly projecting suitably braced standards secured to said front cross bar and platform, a scraping blade pivotally secured at one end of said standards, means to adjustably secure the opposite end of the blade to the other standard whereby the blade is

held at the desired angle, a ground engaging plate secured to the lower edge of the blade, a ground engaging plate secured to one of the side bars of the frame at its rear end, whereby together with the weight of the operator the machine is held down in operative position, anti-slipping



plates secured to the side bars of the frame, and a draft bar secured at its inner end to the frame and platform and projecting forwardly and upwardly therefrom said forward end of the bar having an adjustable connection with one of said blade supporting standards.

1,107,458. SPIT-VALVE FOR CORNETS. FRANK A. SNYDER, Pittsburgh, Pa. Filed Feb. 16, 1914. Serial No. 819,020. (Cl. 84—8.)



1. In combination with a wind musical instrument having a water exit opening, a plate having guides secured to the instrument and provided with an opening registering with the opening of the instrument, a slide valve plate mounted in said guide and provided with a thimbled opening adapted to be thrown in and out of registration with the first opening, said valve plate having a thumb piece at its end opposite the thimbled opening, and means projecting from the guides between the thimble of the opening and the thumb piece, to limit the valve plate in its movement in either direction.

2. In combination with a musical wind instrument having a water exit opening and provided with diametrically opposite elongated guides, a pair of lugs extending from the guides toward one another and arranged diametrically opposite each other, a slide valve plate mounted in the guides provided with an opening at one end and an adjoining thimble, and with a thumb piece at the other end, the thimble adapted to contact with the lugs to limit said valve plate when moved in one direction to cause said openings to register, whereas the thumb piece contacts with said lugs to limit the valve plate when moved in the opposite direction with the openings out of registration.

1,107,459. RAILWAY-TIE. SAUL S. SNYDER, Columbus, Ohio. Filed Feb. 26, 1914. Serial No. 821,200. (Cl. 238—5.)



1. An integral hollow metallic railway tie having a U-shaped elevated intermediate body portion merging into angular ends having flat depressed rail seats and vertical sides and pockets below said seats, and an integral ledge overhanging each seat as described.

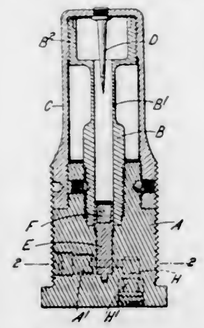
2. An integral hollow metallic railway tie having an elevated body portion merging into ends each with a flat depressed rail seat and an integral ledge overhanging the seat, a pocket below and adjacent each seat to receive a rail locking member, and a lip overhanging the pocket to engage the locking member.

1,107,460. WHEELED SCRAPER. JOHN EDGAR STEELE, Terra Bella, Cal. Filed June 26, 1913. Serial No. 776,003. (Cl. 37—7.)



The herein described scraper comprising a wheeled frame including cross bars, a scoop disposed obliquely across and beneath said frame, a standard having a curved rear portion secured behind the rear end of the scoop and a horizontal upper portion secured to one of said cross bars, and a second standard having a curved forward portion secured behind the forward end of the scoop and a horizontal upper portion extending from its curved portion rearwardly and passing over one of said frame bars and secured to it and to another frame bar.

1,107,461. FUSE FOR PROJECTILES. HARRY BLAND STRANGE, Blackheath, England, assignor to Thos. Firth and Sons, Limited, Sheffield, England. Filed Nov. 11, 1913. Serial No. 800,356. (Cl. 102—39.)



1. In a fuse for a projectile the combination with a fuse body, of a member adapted to travel forward therein on impact of the projectile with its objective and a sliding retaining bolt contained in a conduit or passage in the body and normally engaging with the movable member, said conduit or passage being so disposed relatively to the axis of the fuse that the retaining bolt is acted upon by centrifugal force but is prevented from moving under that force before the projectile leaves the muzzle of the gun owing to the action of the rotary acceleration of the projectile.

2. In a fuse for a projectile the combination of a member adapted to travel forward within the fuse on impact of the projectile with its objective and a sliding retaining bolt so disposed relatively to the axis of the fuse and to the member, that under the action of centrifugal force the bolt tends to move and release the member but is prevented from doing so before the projectile leaves the muzzle of the gun, owing to the action of the rotary acceleration of the projectile.

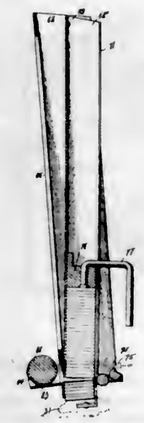
3. In a fuse for a projectile the combination of a member adapted to travel forward within the fuse on impact of the projectile with its objective, a bolt normally engaging with the member to retain it in its inoperative position but capable of moving under the action of centrifugal force to release the member and a retaining bolt so disposed relatively to the centrifugal bolt and to the axis of the fuse, that the rotary acceleration of the projectile, as it passes through the bore of the gun, tends to keep the retaining bolt in such a position that the centrifugal bolt cannot move.

4. In a fuse for a projectile the combination with a fuse body, of a pellet movable therein, a centrifugal bolt adapted to engage with the pellet and contained in a radial conduit or passage in the fuse body and a retaining bolt also contained in a passage in the fuse body, such passage being so disposed in relation to the axis of the fuse, that the rotary acceleration of the projectile, before it leaves the muzzle of the gun, keeps the retaining bolt in such a position as to prevent the centrifugal bolt disengaging the pellet.

5. In a fuse for a projectile the combination of a fuse body, a pellet movable therein, a centrifugal bolt adapted to engage with the pellet, a retaining bolt acted upon by centrifugal force but prevented from moving under that force before the projectile leaves the muzzle of the gun owing to the rotary acceleration of the projectile, a second retaining member or locking bolt and means operated by the pressure of the gases of discharge for moving the locking bolt.

[Claims 6 to 11 not printed in the Gazette.]

1,107,462. VENDING-MACHINE. JOHN L. TAYLOR, Chicago, Ill., assignor to Harry D. Yerxa, Chicago, Ill. Filed Feb. 28, 1914. Serial No. 821,793. (Cl. 211—8.)



1. A vending machine, comprising a casing having a stationary and a swinging magazine therein, a delivery wheel having serrations upon the circumference thereof and upon which the articles in the magazines are adapted to rest, means for operating the delivery wheel locking means for preventing but one article to be delivered at a time, and means for automatically actuating the swinging magazine to delivery position, as set forth.

2. A vending machine, comprising a casing having a stationary and a swinging magazine therein, a delivery wheel having serrations upon the circumference thereof and upon which the articles in the magazines are adapted to rest means for operating the delivery wheel, locking means for preventing but one article to be delivered at a time, means for automatically actuating the swinging magazine to delivery position, rollers upon which the pile of articles in the swinging magazine rest and forming means for moving the magazine to delivery position, as set forth.

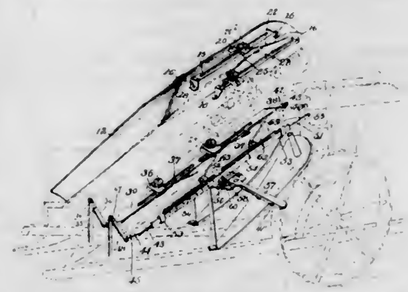
3. A vending machine, comprising a casing having a stationary and a swinging magazine therein, a delivery wheel having serrations upon the circumference thereof and upon which the articles in the magazines are adapted to rest means for operating the delivery wheel, reversely arranged ratchet disks upon said delivery wheel and spaced apart from each other, a suitably journaled rock shaft with a weighted end, means carried by said shaft and actuated by the teeth of said ratchet disk and co-operating therewith for preventing more than one article being delivered at a time, and means for automatically throwing the swinging magazine into delivery position after the articles in the stationary magazine have been delivered, as set forth.

4. A vending machine, comprising a casing having a stationary and a swinging magazine therein, a delivery wheel having serrations upon the circumference thereof and upon which the articles in the magazines are adapted to rest means for operating the delivery wheel, two ratchet disks positioned parallel to and spaced apart from each other upon the delivery wheel, the teeth of the two disks being reversely and alternately arranged, a suitably journaled rock shaft having an angled portion with a weight thereon, a pin carried by said shaft, each end of which is adapted to engage and be actuated by the inclined ratchet teeth upon one disk, causing the shaft to rock and raising said weighted end, while the other end of the pin is projected in the path of a tooth upon the other ratchet disk to prevent further movement of the delivery wheel until the shaft returns to its normal position, as set forth.

5. A vending machine, comprising a casing having a stationary and a swinging magazine therein, a delivery wheel having serrations upon the circumference thereof and upon which the articles in the magazines are adapted to rest means for operating the delivery wheel, two ratchet disks positioned parallel to and spaced apart from each other upon the delivery wheel, the teeth of the two disks being reversely and alternately arranged, a suitably journaled rock shaft having an angled portion with a weight thereon, a pin carried by said shaft, each end of which is adapted to engage and be actuated by the inclined ratchet teeth upon one disk, causing the shaft to rock and raising said weighted end, while the other end of the pin is projected in the path of a tooth upon the other ratchet disk to prevent further movement of the delivery wheel until the shaft returns to its normal position, and means for centering the delivery wheel, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,107,463. CORN-BINDER. CHARLES E. TOWNSEND, Lebanon, Nebr. Filed Sept. 17, 1912. Serial No. 720,815. (Cl. 56—119.)



1. A corn binder including superposed supporting members arranged in pairs, the lower pair of members carrying stalk conveying means, said members being spaced to form a stalk passage therebetween, and stalk supports arranged on said members, said supports being capable of adjustment longitudinally of the supports and an adjustment whereby the angle at which they are disposed with respect to the supports may be changed.

2. A corn binder including chain supports, stalk directing members arranged above said chain supports, said stalk directing members and said chain supports being spaced to form a stalk passage therebetween, and resilient

stalk engaging means disposed in staggered relation and disposed upon the chain supports and the stalk directing members, said members being capable of longitudinal and angular adjustment.

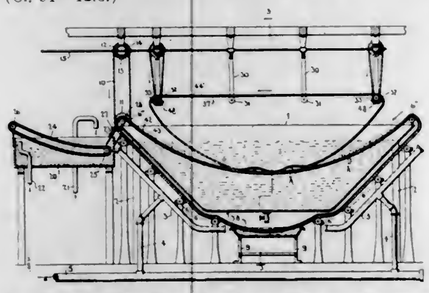
3. A corn binder including chain supports, stalk directing members arranged above said chain supports, said stalk directing members and said chain supports being spaced to form a stalk passage therebetween, bars supported at an angle with respect to the stalk directing members, said bars being disposed at right angles to the stalks in their line of travel, the bars being slotted, blocks arranged on said bars, bolts passing through each of said blocks, a sleeve arranged on each of said bolts, a stalk supporting member consisting of a resilient strand, one terminal of which projects in the path of the stalks which are fed between the stalk directing members, said stalk supporting member being coiled about said sleeve adjacent its other terminal, said terminal being disposed to extend within an aperture formed in the block, and a nut arranged on said bolt and disposed to maintain said stalk supporting member against movement transversely of the bars.

4. A corn binder including chain supports, bars supported for vertical adjustment on the under face of said chain supports, said chain supports being spaced to form a stalk passage therebetween, resilient stalk engaging members supported by said bars, guides carried by one of said bars, a plate supported by said bar, a lever pivotally supported by said plate, one terminal of said lever being formed with teeth, an apertured bar slidably supported within said guides, said apertured bar being formed with teeth which are disposed to be engaged by the teeth of said lever, and a connection between said sliding bar and the stalk supporting member whereby angular adjustment of the stalk supporting member may be secured by imparting longitudinal movement to the sliding bar.

5. A corn binder including chain supports, bars supported on the under faces of said chain supports, said chain supports being spaced to form a stalk passage, resilient stalk engaging members pivotally supported by said bars, guides suported by one of the bars, an apertured bar slidably supported within said guides, means for moving said bar longitudinally of the bar which supports the same, the terminals of the resilient stalk engaging member which is carried by said supporting bar extending within one of the apertures formed in said sliding bar, the movement of said sliding bar with respect to its supporting bar causing a movement of said stalk engaging member about its pivot to project said member into the path of the stalks.

[Claim 6 not printed in the Gazette.]

1,107,464. GALVANIZING-MACHINE. MILES W. TROUT, Youngwood, Pa. Filed Jan. 9, 1913. Serial No. 741,049. (Cl. 91—12.6.)



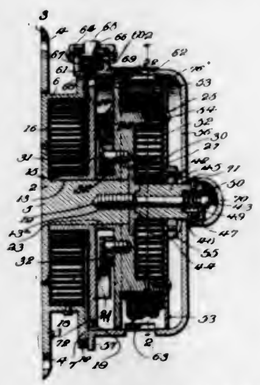
1. An endless apron for galvanizing machines comprising two endless chains whose links stand opposite each other and cross rods pivotally connecting the links of the chains, and a transverse plate secured upon the outer side of each pair of oppositely disposed links and having its ends outturned and its forward edge overlapping the rearward edge of the plate in advance.

2. In a galvanizing machine, the combination with a main tank and an endless apron made up of endless metallic chains whose links are pivotally connected with each other, and plates overlying said links and having their ends upturned, the front edge of each plate overlapping the rear edge of the next, and means for moving said apron through the tank.

3. In a galvanizing machine, the combination with a main tank and an endless apron made up of endless metallic chains whose links are pivotally connected with each other, and plates overlying said links and having their ends upturned in a plane at right angles to the body of the plates, the free edge of each plate overlapping the rear edge of the next, and means for moving said apron through the fluid in the tank.

4. In a galvanizing machine, the combination of a tank, an endless carrier apron positioned with its upper stretch sagging and passing through said tank, a turning apron mounted to position its lower stretch within said tank and in contact with the upper stretch of said first mentioned apron, and means for moving the coöperating reaches of said aprons in opposite directions and at different speeds.

1,107,465. TROLLEY-RETRIEVER. PAUL N. VAN EPP, Medina, Ohio, assignor of one-third to Lake E. Owen, Catawba Island, Ohio. Filed Jan. 25, 1913. Serial No. 744,265. (Cl. 191—93.)



1. In a trolley retriever, the combination with a trolley rope drum, a casing inclosing the drum, a spring continuously acting to rotate the drum in a rope winding direction, and means projecting out of said casing and manually rotatable for adjustably tensioning said spring, of a power spring, an arbor therefor, means manually shiftable into engagement with the arbor and in this position holding the arbor from rotation, means urging said holding means out of its engagement with the arbor, and operative when the arbor moves in a rope unwinding direction, and centrifugally actuated means for operatively connecting the power spring arbor to the drum upon a rapid movement of the drum in an unwinding direction whereby to release said holding means and permit the power spring to rotate the arbor and drum in a rope winding direction.

2. In a trolley retriever, a casing, a stationary hub or spindle disposed within the casing, a drum mounted upon the hub, a spring arbor mounted in alinement with the hub and rotatable around the axial center of the hub and projecting out of the casing for manual rotation, means for holding said spring arbor in any rotatably adjusted positoin, and a spring surrounding the arbor and connected at one end to the drum and at the other to said arbor.

3. In a trolley retriever, an outer casing, a stationary hub or spindle, a drum mounted thereon, a spring arbor disposed in alinement with the hub and detachably connected thereto, said arbor projecting at one end through the casing and being thereby adapted for manual rotation, the inner end of the said arbor being formed with teeth, the outer end of the hub carrying coacting teeth, said teeth preventing a rotation of the arbor in one direction but permitting of a rotation of the arbor in the other direction, and a spring attached at its outer end to the drum and at its inner end to the spring arbor.

4. In a trolley retriever, an outer casing, a stationary hub, a rope drum mounted thereon, a spring arbor disposed in alinement with the hub and one end of said arbor projecting out through the casing and being formed with a head whereby it may be manually rotated, coacting ratchet devices upon the confronting faces of the hub and arbor preventing a rotation of the arbor in one direction relative to the hub but permitting said rotation in the opposite direction, resilient means forcing the arbor inward toward the hub to hold the ratchet devices in engagement but permitting the arbor to be shifted outward away from the hub, and a spring disposed between the arbor and said drum and engaging the drum and arbor.

5. In a trolley retriever, an outer casing, a stationary hub or spindle, a rope winding drum mounted thereon, a tubular spring arbor disposed in alinement with the hub and projecting at one end through the casing and being thereby adapted for manual rotation, the confronting faces of the hub and arbor having interengaging teeth, a detachable pin passing through the tubular arbor and engaging with the hub and forming a bearing for the arbor, a spring mounted on said pin and forcing the arbor toward the hub, and a coil spring attached at its inner end to the arbor and at its outer end to said drum.

[Claims 6 to 13 not printed in the Gazette.]

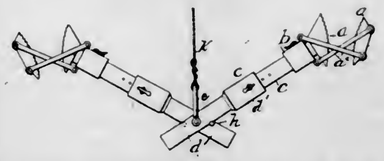
1,107,466. SHAKER FOR GRATES. ARTHUR W. WALKER, Malden, Mass. Filed Oct. 31, 1912. Serial No. 728,768. (Cl. 126—181.)

1. The combination in a furnace of rotary grate bars adapted to support material when rotated to any one of a plurality of equi-distant angular positions and to discharge the material when in intermediate positions, equal gears connecting said bars, a supplementary gear of less diameter arranged to drive the other gears, a shaft projecting outside the furnace, on which the supplementary gear is mounted, and a handle on the outer end of said shaft, said gears being so proportioned that the handle occupies a certain definite angular position when the grate bars occupy any one of their supporting positions.

2. The combination, in a furnace, of an ash-pit, rotary grate bars over it, and gearing connecting the forward ends of said grate bars, with a dome comprising an upward extension of the forward part of the ash-pit to above the level of said grate bars and containing said gearing and ends of the grate bars; a supplementary gear also in said dome, located above the level of said gearing and meshing therewith; a door in the front wall for said ash-pit and dome, rising above the level of said grate bars; a shaft projecting from said supplementary gear forward through said wall above the door, and a rotary handle thereon; said grate bars being shaped to support material when positioned with certain sides upmost and to discharge it when tipped; and the said supplementary gear providing an always recurrent relation between the positions of said bar sides and a specific position of the handle, whereby a specific position of the handle above the door always corresponds with said supporting position of the rotary bars below the door.

3. The combination, in a furnace, of an ash-pit, rotary grate bars over it and gearing connecting them, with a dome comprising an upward extension of the forward part of the ash-pit to above the level of said grate bars; a door in the front wall for said ash-pit; a shaft in said dome, projecting forward through said wall above the door; a rotary handle thereon externally; and supplementary gearing connecting the shaft with one of the grate bars; said grate bars being shaped to support material when positioned with any one of a plurality of sides upmost and to discharge it when tipped; and the said supplementary gearing having a ratio of transmission different from the first-mentioned gearing and yet providing an always recurrent relation between the positions of said bar sides and a particular angular position of the handle, whereby some one of said supporting positions of the rotary bars always corresponds with said particular position of the handle.

1,107,467. GAMBREL. WILLIAM J. WALSH, Creston, Iowa. Filed Nov. 3, 1913. Serial No. 799,042. (Cl. 17—30.)



1. A device for the purpose set forth consisting of a pair of pivotally connected arms each having a stem adjustably connected therewith and provided at its outer end with a fixed jaw, and a co-acting movable jaw with means secured thereto and movable on said stem for operating it.

2. A device for the purpose set forth, consisting of a pair of pivotally connected arms each having a stem adjustably connected therewith and provided with a fixed jaw; a coacting movable jaw having operating means movable on said stem and means pivotally connected with the inner end of said arms, for suspending the same, said inner ends having pins forming stops for the purpose set forth.

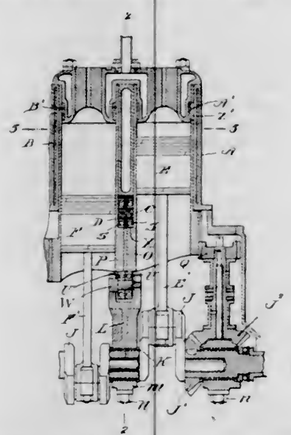
1,107,468. INTERNAL-COMBUSTION ENGINE. RAYMOND WARE, Boston, Mass. Filed Jan. 24, 1913. Serial No. 744,054. (Cl. 123—190.)

1. An internal combustion engine comprising a cylinder having an inlet and an exhaust; a sleeve valve within the cylinder and having a port; a gear connected to said sleeve and having a cam surface; a guide to engage said cam surface; a piston within, and guided by, the sleeve; and means to rotate said sleeve completely about its axis, said guide giving to said gear and sleeve longitudinal motion during the rotation, and the longitudinal and rotary movements jointly contributing to bring said port in and out of registry with said inlet and exhaust.

2. An internal combustion engine comprising a cylinder; a sleeve within the cylinder and having a gear near one end and having two continuous annular cam surfaces, one at each end of the gear; a driving gear to engage said sleeve gear; two guides, one to engage one cam surface and the other to engage the other cam surface to give the sleeve reciprocating longitudinal movement during the rotation.

3. A device of the character described comprising a cylinder; a sleeve valve in said cylinder and having a gear portion and two annular cam surfaces; a piston in said sleeve; two roller guides, one located in engagement with one cam surface to give the valve longitudinal movement in one direction and the other located in engagement with the other cam surface to give longitudinal movement to the valve in the other direction; and a gear

to engage said gear portion to give the sleeve valve continuous uniform rotary motion completely about its axis, said gear remaining in engagement with said gear portion throughout the longitudinal reciprocation of the sleeve.

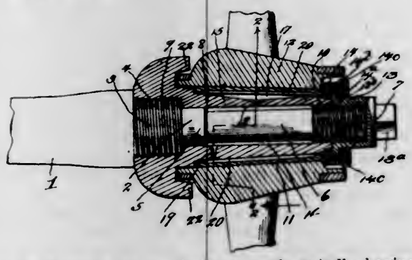


4. A device of the character described comprising a cylinder having an inlet and an exhaust; a sleeve valve having one port only to coöperate with said inlet and exhaust and having two annular cam surfaces; two roller guides, one located in engagement with one cam surface to give the valve longitudinal movement in one direction and the other located in engagement with the other cam surface to give longitudinal movement to the valve in the other direction; and a gear to engage said gear portion to give the sleeve valve continuous, uniform rotary motion completely around its axis, said gear remaining in engagement with said gear portion throughout the longitudinal reciprocation of the sleeve.

5. A device of the character described comprising a plurality of cylinders; a plurality of sleeve valves in said cylinders and each valve having a gear portion, the gear portions of adjacent valves being in mesh; a gear to mesh with the gear portion of one of said valves and thereby cause rotation of all of them; and means to give longitudinal reciprocating movement to said valves during their rotation.

[Claims 6 to 27 not printed in the Gazette.]

1,107,469. LUBRICATOR FOR SPINDLE-SKEINS. JOHN M. WHITWORTH, Korn, Okla. Filed Jan. 31, 1914. Serial No. 815,642. (Cl. 64—27.)

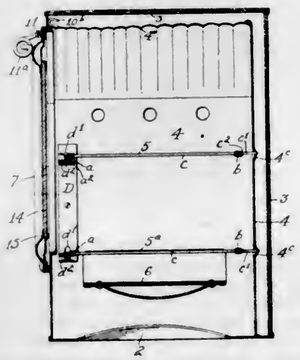


1. In a device as set forth, an axle spindle having a channel, a skein secured on the spindle and surrounding the channel which constitutes a lubricant chamber, the upper circumference of the skein having a pocket and provided with an opening leading from the pocket to the lubricant chamber, the lower circumferential wall of the skein having an opening leading from the lubricant chamber to the inner circumference of a wheel hub, said skein having upon one of its cylindrical sides a series of axially arranged grooves adapted to assist in returning the lubricant to the pocket.

2. In a device as set forth, an axle spindle having a channel, a skein secured on the spindle and surrounding the channel which constitutes a lubricant chamber, the upper circumference of the skein having a pocket and provided with an opening leading from the pocket to the lubricant chamber, the lower circumferential wall of the skein having an opening leading from the lubricant chamber to the inner circumference of a wheel hub, said skein having upon one of its cylindrical sides a series of axially arranged grooves adapted to assist in returning the lubricant to the pocket, and axially arranged grooves upon the inner circumference of the wheel hub bushing to coöperate with the first grooves to assist in returning the lubricant to the pocket.

3. In a device as set forth, an axle spindle having a channel, a skein secured on the spindle and surrounding the channel which constitutes a lubricant chamber, the upper circumference of the skein having a pocket and provided with an opening leading from the pocket to the lubricant chamber, the lower circumferential wall of the skein having an opening leading from the lubricant chamber to the inner circumference of a wheel hub, said skein having upon one of its cylindrical sides a series of axially arranged grooves adapted to assist in returning the lubricant to the pocket, and axially arranged grooves upon the inner circumference of the wheel hub bushing to coöperate with the first grooves to assist in returning the lubricant to the pocket.

1,107,470. OVEN. WILLIAM H. WILDER and FRED E. WHITE, Gardner, Mass., assignors to Central Oil & Gas Stove Company, a Corporation of Maine. Filed Feb. 7, 1912. Serial No. 676,100. (Cl. 126—275.)



1. An oven having recesses in the back wall thereof, and a shelf comprising longitudinal cross bars at front and back and transverse rods connecting said cross bars, part of said rods being projected beyond the rear cross bar to enter said recesses.

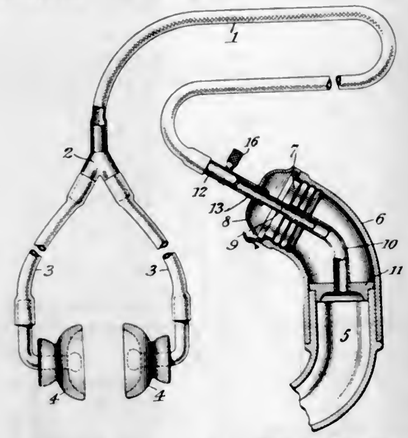
2. An oven having recesses in its back wall and lugs provided with vertical recesses on its sides near the front and a shelf having at the rear projections to enter said recesses and at each front corner a vertically depending flange to enter the recesses in the lugs.

3. An oven having recesses in its back wall and lugs provided with vertical recesses on its sides near the front, and a shelf comprising front and rear cross bars connected by transverse rods, part of said rods being projected beyond the rear cross bar to enter said recesses and said front cross bar having a depending flange to enter the recesses of said lugs.

4. An oven having means carried by the back wall for supporting a shelf, sheet metal strips secured to the inner wall of the oven near the front, said strips having inward bends provided with vertical slots, and a shelf having its rear end supported by the back wall of the oven and having at the front a bar with a vertical flange having its ends seated in said vertical slots.

5. An oven having recesses in its back wall and lugs on its sides near the front provided with vertical recesses and a shelf comprising transverse rods and front and rear cross bars comprising strips of sheet metal folded upon itself with the rods clamped between the folded portions, part of the rods being projected beyond the rear cross bar to enter said recesses, said front bar having a depending flange with its ends seated in the recesses in the lugs.

1,107,471. COUPLING FOR LISTENING-TUBES. HULBERT A. YERKES, Hackensack, N. J., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Oct. 3, 1913. Serial No. 793,205. (Cl. 181—3.)



1. A coupling for listening-tubes for talking-machines, comprising a screw-threaded cap adapted to be screwed into or out of the socket in the sound-conveyer of the talking-machine, a tubular member rigidly secured to said cap and passing therethrough to communicate at its outer end with the listening tube, a tubular elbow-member telescoping freely with the inner end of the last-named member, and a rubber cup fitted snugly upon the other end of said elbow-member and adapted to fit snugly within the throat of the sound-conduit.

2. A coupling for listening-tubes for talking-machines, comprising an obturator adapted to fit snugly within the throat of the sound-conduit of the talking-machine, a cap adapted to be detachably secured over the outlet of said sound-conduit, and a tubular passage connecting said obturator and cap and providing a reduced passage therethrough for communicating with the listening-tube.

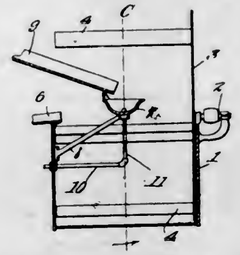
3. The combination of a talking-machine having the usual tone-arm swinging from a stationary support and with a comparatively large throat at the pivoted end thereof, an obturator fitted snugly yet removably within said throat, and a reduced passageway extending through said obturator and adapted to receive a listening-tube of smaller diameter than the throat of said tone-arm.

4. The combination of a talking-machine having the usual tone-arm swinging from a stationary support and with a comparatively large throat at the pivoted end thereof, an obturator fitted snugly yet removably within said throat, a reduced passageway extending through said obturator, and means carried at the outer end of said sound-conduit for centering said passageway.

5. A coupling for listening-tubes for talking-machines, comprising an obturator adapted to fit snugly within the throat of the sound-conduit of said machine, a tubular member carried by and passing through said obturator, a cap adapted to be secured detachably over the outlet of said conduit, a tubular member secured to and passing through said cap and telescoping freely with the first-named tubular member, a third tubular member carrying a sound-modifier and secured to the second-named tubular member, and a flexible listening-tube secured to the last-named member.

[Claim 6 not printed in the Gazette.]

1,107,472. SEPARATOR. JOHN M. ALLEN, Anaconda, Mont. Filed Dec. 15, 1913. Serial No. 806,849. (Cl. 83—81.)



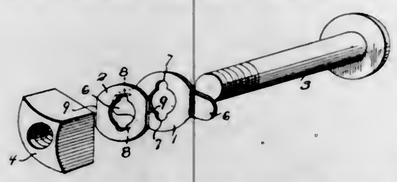
1. A separator including a receptacle, a receiver supported therein, means for directing a fluid upwardly within the receiver, means for directing material by gravity onto the surface of the fluid contained in the receiver, said receptacle constituting means for receiving material floating on the water in the receiver and heavier material held in suspension by the ascending current, a sluice below the level of the receiver for receiving the overflow from the receptacle and the floating material in the receptacle, a disk mounted for rotation in one end of the receptacle, combined scrapers and buckets movable with the disk to points below the sluice for directing upwardly from the receptacle the heavy material discharged thereinto from the receiver, and a chute extending from the receptacle for receiving such material from the buckets or scrapers, each of said buckets or scrapers being substantially V-shaped and extending lengthwise of the receptacle.

2. In a separator, the combination with a receptacle substantially semi-cylindrical, a receiver supported in the upper portion of the receptacle, means for directing water upwardly within the receiver, of means for directing material by gravity onto the surface of the water in the receiver, said receptacle constituting means for receiving the overflow from the receiver and the light material floating on the surface of the water in the receiver and the heavier material held in suspension by the ascending water current, a sluice below the receiver for receiving the overflow from the receptacle and the lighter material floating in the receptacle, a disk mounted for rotation in one end portion of the receptacle, and combined scrapers and buckets extending from one face of the disk and longitudinally of the receptacle and movable below the sluice for engaging the heavy material discharged into the receptacle, each bucket being substantially V-shaped and inverted while in active position, and a chute for receiving material from the buckets or scrapers.

1,107,473. NUT-LOCK. ELIAS B. ANDERSON, Rock Falls, Ill. Filed Mar. 21, 1911. Serial No. 615,894. (Cl. 151—53.)

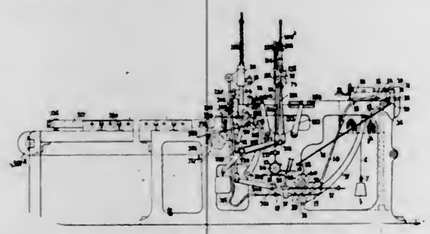
A nut lock comprising an annular washer formed of pliable material and provided at its outer periphery and at diametrically opposite sides with nut engaging tongues, the washer being formed at diametrically opposite points in its inner periphery with notches located midway between the tongues whereby the portions of the washer at the opposite sides of a median line passing longitudinally through the tongues are of the same configuration and dimensions, and an annular washer formed of non-pliable

material and having at diametrically opposite sides parallel straight peripheral edge portions to coöperate with the tongues upon the first mentioned washer, the last mentioned washer at diametrically opposite points upon its inner periphery and midway the said parallel portions, being struck up to form pointed entering spurs located outwardly of the circle described by the inner periphery of



the washer and adapted to enter the notches in the inner periphery of the first mentioned washer when the two washers are assembled, the spurs being of a length greater than the thickness of the first mentioned washer and portions of the last mentioned washer at the opposite sides of a plane passing through the median long dimension of the spurs being of the same configuration and dimensions.

1,107,474. BISCUIT-WRAPPING MACHINE. GEORGE SAMUEL BAKER, London, England. Filed Oct. 28, 1912. Serial No. 728,206. (Cl. 93—2.)



1. In a wrapping machine, the combination of a pair of reciprocating cross heads operating upon a stack of articles and a wrapper therefor, a resiliently mounted plate mounted on one of said cross-heads and adapted to press upon the upper edges of a stack of articles, holders adapted to grip the ends of the articles also carried by said cross-head, double rack and pinion mechanism carried by said cross-head adapted to move said holders to and from the articles, and means carried by the other of said cross-heads for producing the top end folds of the wrapper.

2. In a wrapping machine, the combination of two pivoted devices adapted to produce the upper folds of a wrapper inclosing the articles, one of said devices comprising two relatively movable spring pressed jaws, and the other comprising a spring pressed plate, means for reciprocating said devices toward and away from each other, means for rocking said devices about their pivots, and means for closing and opening the jaws of said first-mentioned device.

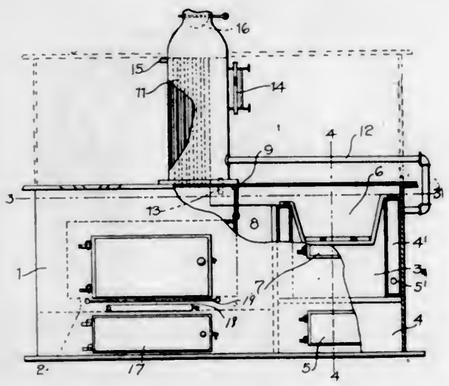
3. In a wrapping machine, the combination with a reciprocating cross-head, of spring actuated fingers carried thereby adapted to press the upper folds of a wrapper inclosing the articles, means operated by the movements of said cross-head for retaining said fingers in inoperative positions, and for releasing said fingers from said retaining means.

4. In a wrapping machine, the combination with a sliding member adapted to receive a stack of articles and a wrapper therefor, of means for forming the back end folds of said wrapper, comprising a horizontally reciprocating frame, adjustable resiliently mounted members carried by said frame and adapted to engage the rear end portions of the wrapper while the articles and wrapper are stationary, and stationary resiliently mounted plates between which the articles and wrapper are fed horizontally by movement of said sliding member, said plates acting on the forward ends of the wrapper to produce the front end folds thereof.

5. In a wrapping machine, the combination of means for holding a stack of articles and a wrapper therefor, with horizontally reciprocatable and rocking members adapted to produce top folds of said wrapper, vertically reciprocatable members adapted to produce upper end folds of said wrapper, a horizontally reciprocating member adapted to produce rear end folds of said wrapper, resilient pressing members, means for moving the articles and wrapper horizontally between said latter members to produce forward end folds of said wrapper, a receptacle disposed below said folding means, and having resilient members adapted to engage the ends of the wrapper, and means for moving the articles and wrapper vertically between said resilient members to produce the lower end folds of said wrapper.

[Claims 6 to 13 not printed in the Gazette.]

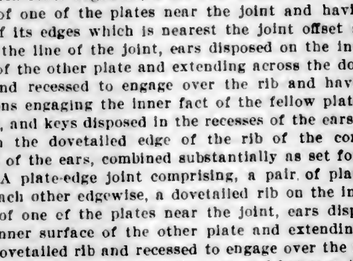
1,107,475. COMBINED COOKING AND HEATING APPARATUS. THOMAS W. BAKER and FREDERICK P. HEPDING, Chrome, N. J. Filed Apr. 12, 1913. Serial No. 760,709. (Cl. 126—1.)



A combined heating and cooking apparatus of the class described comprising a casing including front and rear and end walls and top and bottom walls, a vertical wall extending from the front to the rear wall and from the bottom wall to a point in spaced relation to the top and forming a fire box with the adjacent end wall of the casing, an oven chamber extending from the front to the rear wall and having its walls spaced from the top and bottom walls and from the partition and the other end walls, a damper pivoted at the upper corner of the oven chamber adjacent the fire box and extending from the front to the rear wall and adapted to close either the space between the adjacent portion of the oven chamber and the top of the casing or to close the space between the adjacent portion of the oven chamber and the fire box, a boiler mounted directly on the top of the casing and above the oven chamber, an air passage through said boiler communicating with the space between the oven chamber and the top of the casing adjacent the damper, said air passage forming outlet means for the products of combustion in the fire box, and a damper carried by the boiler for controlling the passage therethrough.

1,107,476. FLEXIBLE TABLE FOR CURVING GLASS. GEORGES BAROT, Chauny, France. Filed Jan. 5, 1914. Serial No. 810,381. (Cl. 49—67.)

A flexible table for curving glass, comprising a plurality of links struck from sheet metal and provided with transverse openings, tubes having bearings in said openings and extending across the mold, spring pins securing together said links and a wire binder passed over the ends



of said tubes and through openings in the mold, to retain said tubes in operative position on the mold.

1,107,477. PLATE-EDGE JOINT. CARL BARTELS, Hamilton, Ohio, assignor to The Mosler Safe Company, New York, N. Y. Filed May 16, 1914. Serial No. 839,161. (Cl. 109—1.)

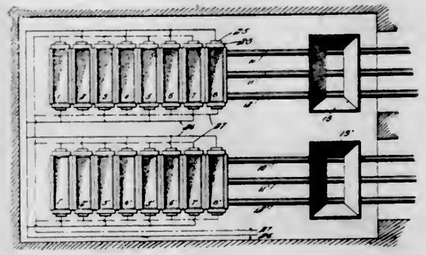
1. A plate-edge joint comprising, a pair of plates joining each other edgewise, a dovetailed rib on the inner surface of one of the plates near the joint, ears disposed on the inner surface of the other plate and extending across the dovetailed rib and recessed to engage over the rib, and keys disposed in the recesses of the ears and between the dovetailed edge of the rib of the contiguous walls of the ears, combined substantially as set forth.

2. A plate-edge joint comprising, a pair of plates joining each other edgewise, a dovetailed rib on the inner surface of one of the plates near the joint and having that one of its edges which is nearest the joint offset sidewise from the line of the joint, ears disposed on the inner surface of the other plate and extending across the dovetailed rib and recessed to engage over the rib and having projections engaging the inner fact of the fellow plate at the offset, and keys disposed in the recesses of the ears and between the dovetailed edge of the rib of the contiguous walls of the ears, combined substantially as set forth.

3. A plate-edge joint comprising, a pair of plates joining each other edgewise, a dovetailed rib on the inner surface of one of the plates near the joint, ears disposed on the inner surface of the other plate and extending across the dovetailed rib and recessed to engage over the rib, keys disposed in the recesses of the ears and between the dovetailed edge of the rib of the contiguous walls of the ears, and a rib upon that one of the plates bearing the ears and forming prolongations of the heels of the ears, combined substantially as set forth.

4. A plate-edge joint comprising, a pair of plates joining each other edgewise, a dovetailed rib integrally formed on the inner surface of one of the plates near the joint and having that one of its edges which is nearest the joint offset sidewise from the line of the joint, ears integrally formed on the inner surface of the other plate and extending across the dovetailed rib and recessed to engage over the rib and having projections engaging the inner face of the fellow plate at the offset, keys disposed in the recesses of the ears and between the dovetailed edge of the rib of the contiguous walls of the ears, and a rib integrally formed with that one of the plates which bears the ears and forming prolongations of the heels of the ears and having projections engaging the inner face of the fellow plate at the offset, combined substantially as set forth.

1,107,478. ELECTRIC FURNACE AND METHOD OF OPERATING THE SAME. ROBERT A. BAYARD, Niagara Falls, N. Y. Filed May 27, 1913. Serial No. 770,262. (Cl. 204—64.)



1. In combination, an electric furnace comprising a part adapted to hold the material treated and having a temporary wall, and means whereby the said part may be moved to charge and discharge material.

2. In an electric furnace, the combination of electrodes, means supporting the electrodes and permanently located at the operating position, and a container for the material to be treated movable to and from said operating position, said electrodes and the supporting means therefor fitting the ends of said container when the latter is in operating position.

3. In an electric furnace, the combination with a part of a furnace comprising a bottom and side walls, of other walls associated with said part of the furnace when the same is in operation, means whereby said part may be moved to receive and discharge material, and temporary walls adapted to be substituted for said other walls when the furnace is in transit receiving and discharging material.

4. In an electric furnace, the combination of a member constructed to hold the material which is treated and having an opening in the wall thereof, a separable part fitting the opening in the wall and carrying an electrode and a part adapted to be substituted for the separable part to close the opening.

5. In an electric furnace, the combination of a body comprising a bottom and side walls, end walls for the body and separable therefrom, electrodes mounted in said end walls, and false ends adapted to be substituted for said separable ends carrying the electrodes.

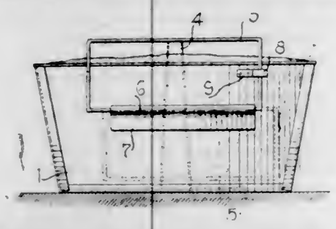
[Claims 6 to 23 not printed in the Gazette.]

1,107,479. CAKE-TIN. JOSEPHINE A. BENSON, Valley City, N. D. Filed Dec. 13, 1913. Serial No. 806,539. (Cl. 53—6.)

1. The combination with a pan having a core projecting upwardly from the bottom thereof, the upper end of said core extending above the upper edge of said pan, of rotatable handles carried by said pan and adapted when in one position to project above the same in substantially the same plane as the upper end of the core.

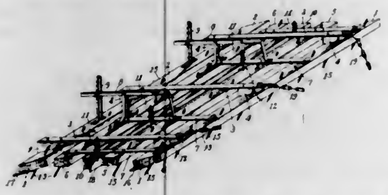
2. The combination with a pan having a core projecting upwardly from the bottom thereof, the upper end of said core extending above the upper edge of said pan, of rotat-

able handles carried by the pan and adapted when in their uppermost positions to project above the same in sub-



stantially the same plane as the upper end of the core, and means for locking the handles in their uppermost positions.

1,107,480. COMBINED HARROW AND CLOD-CRUSHER. JACOB F. BOES, Bay City, Mich. Filed Sept. 20, 1913. Serial No. 790,906. (Cl. 55—23.)



1. A combined harrow and clod crusher, comprising front and rear beams arranged parallel and spaced apart, bars connecting the beams, beams intermediate the front and rear beams, bars pivoted to the front beam and attached to the intermediate beams, inclined drag teeth inserted in the bars, plates attached to the front and rear beams and extending rearwardly and downwardly therefrom, and means for vertically adjusting the intermediate beams.

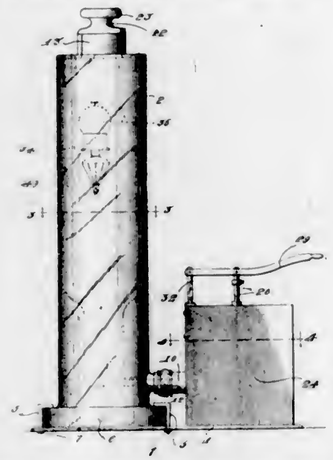
2. A combined harrow and clod crusher, comprising front and rear beams spaced apart, bars connecting said beams and attached thereto, wedge blocks between the bars and beams, plates attached to the beams and extending rearwardly and downwardly therefrom, intermediate beams parallel with the front and rear beams and spaced apart, bars pivoted to the front beam and attached to the intermediate beams, means for vertically adjusting said intermediate beams, drag teeth in the beams and rearwardly inclined at the lower end, and a middle beam having a scraper plate attached thereto.

3. A combined harrow and clod crusher, comprising front and rear beams spaced apart and transversely inclined downward and rearward, plates attached to the under side of said beams, bars connecting said beams, two intermediate beams parallel with the front and rear beams and spaced apart, bars pivoted to the front beam and rigidly attached to said intermediate beams, means for vertically adjusting the said intermediate beams, a middle beam yieldably connected to the pivoted bars and adapted to swing downward and rearward, and a scraper plate attached to the middle beam.

1,107,481. HYDROBALLOON. HUGH EDWARD BOGGS, Centerville, Iowa. Filed Dec. 17, 1912. Serial No. 737,329. (Cl. 46—37.)

1. A novelty of the class described comprising a water-filled receptacle, a bulb coöperating therewith and adapted to be compressed for increasing the pressure of the water within said water-filled receptacle, a balloon positioned within said receptacle and being caused to rise and fall therein as the pressure is increased and decreased upon the water within said receptacle, a submerged body in the receptacle, and coöperating means carried by the float and body for causing the float to engage and lift the body.

2. A novelty of the class described comprising a water-filled receptacle, a balloon positioned therein, a bulb co-operating therewith, means for compressing said bulb whereby the pressure will be increased upon the water within said receptacle whereby said balloon will be caused to descend within said receptacle and will be caused to rise within said receptacle when the pressure is relieved therefrom, a submerged body in the receptacle, and co-operating means carried by the balloon, and body for causing the balloon to engage and lift the body.



3. A novelty of the class described comprising a water-filled receptacle, a balloon positioned therein, means for increasing the pressure upon the water within said receptacle, a detachable parachute carried within said receptacle, and said balloon adapted to descend within said receptacle and engage said parachute when the pressure is increased within said receptacle and ascend within said receptacle with said parachute when the pressure has been relieved from said receptacle.

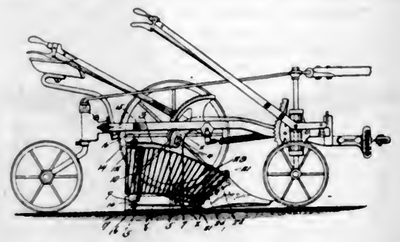
4. A device of the class described comprising a water-filled receptacle, a balloon positioned therein, a parachute carried thereby, means for increasing and decreasing the pressure within said receptacle whereby said balloon will be caused to rise and fall therein, a magnet carried by said balloon and adapted to attract said parachute as said balloon falls to the bottom of said receptacle, and means carried by said balloon for automatically releasing said parachute from said balloon when the same reaches the top of said receptacle.

5. A device of the class described comprising a water-filled receptacle, a balloon positioned therein, a parachute, means for increasing and decreasing the pressure of the water contained within said receptacle whereby said balloon will be caused to rise and fall therein, a magnet carried by said balloon and adapted to attract said parachute as the same comes in engagement therewith whereby said parachute will be raised with said balloon, a collar carried by said balloon, and a plunger adapted to engage the top of said receptacle and carried by said collar for automatically releasing said parachute from said balloon.

[Claims 6 to 14 not printed in the Gazette.]

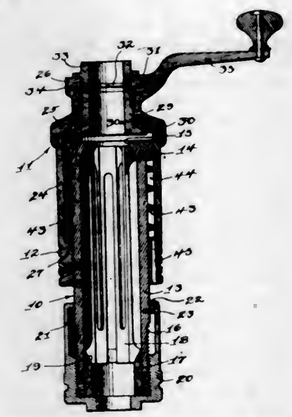
1,107,482. PLOW. CURTIS E. BOGLE, Union, Iowa. Filed Aug. 18, 1913. Serial No. 785,340. (Cl. 97—23.)

In combination with a plow beam having a plow, of a bracket secured to the plow beam above and in the rear of the plow, a second bracket secured to the lower end of the plow beam comprising a pair of branching arms, one extending parallel and alined with the first bracket, while the other extends outwardly and forwardly and connects to the mold board of the plow, a roller journaled in bearings of the branching arm connected to the mold board and of the land side, a second roller having bearing members adjustably mounted in the other branching arms and the first bracket, and a revolving mold board passing



about said rollers, and means whereby one or the other of said bearing members of the second roller may be adjusted toward and from the plow beam.

1,107,483. TENON-CUTTER. MARTIN BOHLIG, St. Paul, Minn. Filed June 10, 1912. Serial No. 702,736. (Cl. 145—115.)



1. In a tenon cutting tool, the combination of a shank, a sleeve slidable on said shank, a cutting blade revolubly supported on said sleeve, a grip within the shank for securing and centering an article to be tenoned, and a spring housed within the sleeve and adapted to automatically move said sleeve on said shank.

2. In a tenon cutting tool, the combination of a shank, a head consisting of a sleeve and cap therefor, said head being slidable on said shank, a cutting blade revolubly mounted on said head, a grip within the shank for securing and centering an article to be tenoned, a spring incased between the head and shank and adapted to move the former upon the latter, and means for discontinuing the movement of said head at various points with respect to said shank whereby tenons of different lengths may be formed.

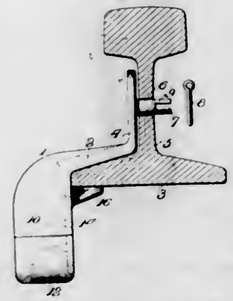
3. In a tenon cutting tool the combination of a shank, a head slidable on said shank, a cutting blade revolubly mounted on said head, a grip within the shank for securing and centering an article to be tenoned, a spring for moving said head on said shank, a collar on the shank formed with longitudinal openings of different lengths, a pin in said head adapted to register with said openings and limit the movement of said head.

4. In a tenon cutting tool, the combination of a shank, a head slidable on said shank, a cutting blade revoluble upon said head, a grip within the shank for securing and centering an article to be tenoned, a spring adapted to move the head upon the shank and means for positively and automatically discontinuing the movement of said head at various predetermined points with respect to said shank whereby tenons of different lengths may be accurately formed and the shoulders thereof finished.

5. In a tenon cutter, the combination of a shank, a grip within the shank for securing and centering an article to be tenoned, a head slidable and revoluble on said shank, a cutting blade revolubly mounted on said head and means to stop the longitudinal movement of the head at various positions, said positions being predetermined by lateral adjustment of said head.

[Claims 6 to 11 not printed in the Gazette.]

1,107,484. RAIL-ANCHOR. THOMAS B. BOWMAN, Chicago, Ill. Filed June 3, 1914. Serial No. 842,742. (Cl. 238—4.)



1. As an improved article of manufacture, a rail anchor comprising a single piece of material arranged to contact with the base of a rail and having one member projecting upwardly therefrom to co-act with the web of the rail, said member having an integral securing device, and the bottom of the anchor having a shoe or lug projecting downwardly therefrom to bear against the side of a tie and prevent "creeping", substantially as described.

2. As an improved article of manufacture, a rail anchor comprising a single piece of material arranged to contact with the base of a rail and having one member projecting upwardly therefrom to co-act with the web of the rail, said member having an integral securing device, and the bottom of the anchor having a shoe or lug projecting downwardly therefrom to bear against the side of a tie and prevent "creeping", said shoe or lug being formed to contact with the tie at some distance below the base of the rail, substantially as described.

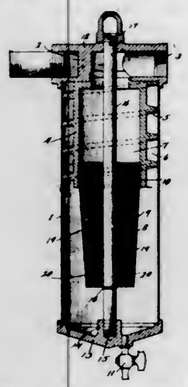
3. As an improved article of manufacture, a rail anchor comprising a single piece of material arranged to contact with the base of a rail and having one member projecting upwardly therefrom to co-act with the web of the rail, said member having an integral securing device with a split end, and the bottom of the anchor having a shoe or lug projecting downwardly therefrom to bear against the side of a tie and prevent "creeping", substantially as described.

4. As an article of manufacture, a rail anchor comprising a single piece of material arranged to contact with the base of a rail and having one member projecting upwardly therefrom to co-act with the web of the rail, said member having an integral securing device adapted to pass through said web and a cam shaped upper end arranged to engage with the under surface of the head of the rail, and the bottom of the anchor having a shoe or lug projecting downwardly therefrom to bear against the side of the tie to prevent creeping, substantially as described.

5. As an improved article of manufacture, a rail anchor comprising a single piece of material arranged to contact with the base of a rail and having one member projecting upwardly therefrom to co-act with the web of the rail, said member having an integral securing device adapted to pass through said web and a cam shaped upper end arranged to engage with the under surface of the head of the rail, the part contacting with the base of the rail

having a curved surface, and the bottom of the anchor having a shoe or lug projecting downwardly therefrom to bear against the side of the tie to prevent creeping, substantially as described.

1,107,485. SEPARATOR. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Sept. 1, 1909. Serial No. 515,567. (Cl. 210—16.)



1. In a separator, the combination of a chamber provided with means for introducing a mixture thereinto with a whirling movement, of a discharge passage arranged along the axis of said chamber, and a frusto-conical filter screen encircling the opening into and depending from the walls of the discharge passage.

2. In a separator, the combination with a separator chamber provided with an inlet channel extending around its inner wall and a discharge channel extending along the axis of said chamber inside of the inlet channel, of a filter sheet about and depending from the opening of said discharge channel in the form of an inverted conical frustum.

3. In a separator, the combination with a cylindrical separator vessel provided with a cylindrical partition wall extending a portion of the length of said vessel, said partition being adapted to provide an inlet channel extending around the inner wall of the vessel and a discharge passage extending along the axis of said vessel, of a filter screen depending from the end of said partition converging toward the end of the screen and providing a screening surface in excess of the area of the discharge passage.

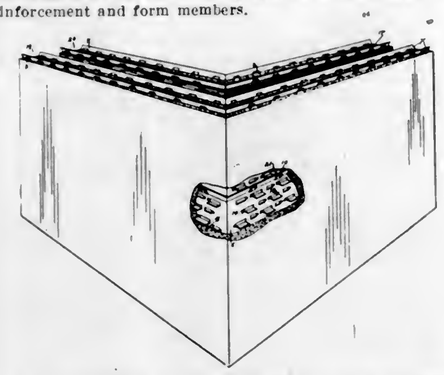
4. In a separator, the combination with a cylindrical vessel mounted upon a vertical axis and provided with a cylindrical partition wall at the upper end thereof, said partition wall being adapted to provide an inlet channel extending around the inner wall of the vessel, and a discharge passage extending upwardly through said vessel, of a filter screen depending from said partition to provide an enlarged screening surface for the end of the discharge passage.

5. In a separator, a cylindrical vessel provided with an inner cylindrical partition wall at one end, and a plurality of filter screens depending from the end of said partition concentrically with the axis of said vessel, said vessel being provided with a discharge passage formed with said cylindrical partition and said filter screens providing a screening shield for the discharge passage.

[Claims 6 to 10 not printed in the Gazette.]

1,107,486. REINFORCED CONCRETE CONSTRUCTION. JOSEPH W. BRAGSTAD, Sioux City, Iowa. Filed Oct. 21, 1913. Serial No. 796,476. (Cl. 72—48.)

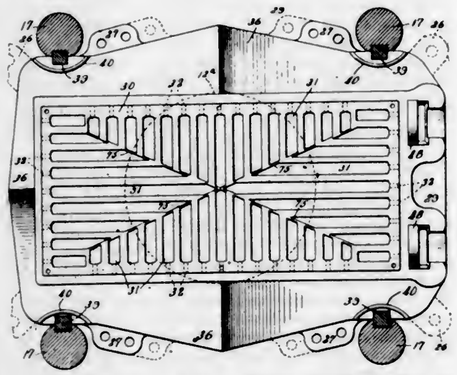
1. In reinforced concrete construction, outer and inner reinforcement and form members, each comprising separate plates assembled one above the other and each having upper portions provided with slots and formed at an angle to the plate; lower portions formed at an angle to the plate and oppositely to the upper angled portions; tenons sheared from the lower portions and positioned to be received by the slots of the adjacent plate; and cross-members interconnecting said outer and inner reinforcement and form members.



2. In reinforced concrete construction, outer and inner reinforcement and form members, each comprising separate integral plates assembled one above the other and provided with apertures and each plate having upper portions provided with slots and formed at an angle to the plate; lower portions formed at an angle to the plate and oppositely to the upper angled portions; tenons sheared from the lower portions and positioned to be received by the slots of the adjacent plate; elongated intermediate portions punched from the plate and bent toward the opposite plate, said elongated portions having free ends reduced and adapted to be engaged within the apertures of the opposite plate.

3. In reinforced concrete construction, outer and inner reinforcement and form members, each comprising separate sheet-metal plates assembled in a vertical plane, edge to edge, and each plate having elongated portions punched from and bent laterally toward the opposite plate, said plates being provided with apertures intermediate the elongated members and adapted to receive the free ends of the elongated portions of the opposite plates, said free ends being reduced to afford shoulders to engage the inner faces of and prevent the plates from displacement toward each other; and means for interlocking the edges of each plate with those immediately adjacent.

1,107,487. OIL-PRESS. NIMROD W. L. BROWN, Marietta, Ga. Filed Jan. 7, 1913. Serial No. 740,639. (Cl. 100—54.)



1. A press box having an outwardly extending web portion, the greatest width of which is at the axis of the box.

2. A press box having an outwardly extending web portion, the greatest thickness of which is at the axis of the box.

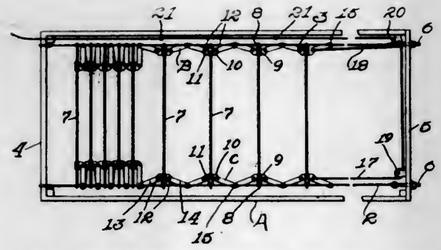
3. A press box having an outwardly extending web portion, the greatest width and thickness of which web is at the axis of the box.

4. A press box having an outwardly extending web portion, said web being of increased width at the major and minor axes of the box.

5. A press box having an outwardly extending web portion, said web being of increased thickness at the major and minor axes of the box.

[Claims 6 to 36 not printed in the Gazette.]

1,107,488. CLOTHES-HANGER. CIRIL BUJGER, St. Paul, Minn. Filed May 4, 1914. Serial No. 836,139. (Cl. 68—34.)



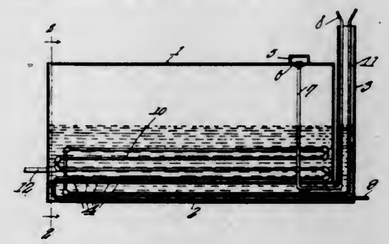
1. A clothes hanger, comprising, in combination, a frame, a pair of substantially parallel lines spaced apart and supported in said frame, a plurality of transverse supports slidably mounted by their ends upon said lines and a pair of coupling elements on which said transverse supports are freely mounted, having links hinged to fold on said lines, whereby said transverse supports are coupled together in series and movable into extended or collapsed condition in said frame by engaging and moving one end of said series.

2. A clothes hanger, comprising, in combination, a frame, a pair of lines spaced apart and mounted in said frame, a plurality of transverse supports having their ends looped around and slidably mounted on said lines, guides movable longitudinally of said transverse supports, auxiliary guides longitudinally movable of said lines between each adjacent pair of supports and links hinged to said guides on said transverse supports and said guides on said lines, whereby said transverse supports are movably connected together and adapted to be extended in series into outermost position or collapsed in series into folded condition.

3. A clothes hanger, comprising, in combination, a frame, a pair of lines spaced apart in parallel position longitudinally in said frame, means for tightening said lines, a plurality of transverse supports mounted upon said lines having their ends looped around said lines, whereby said supports are movable freely longitudinally of said frame, guides mounted upon the ends of said supports and movable longitudinally thereon, auxiliary guides movable along said lines, links hinged to the guides on said supports and to the guides on said lines, whereby a hinged extensible coupling is provided between said supports and said lines.

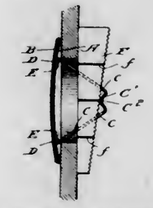
1,107,489. CARBURETER. EVERETT E. BUNN and ELMER O. ROBINSON, Harrisonville, Mo. Filed Aug. 11, 1913. Serial No. 784,168. (Cl. 48—166.)

1. A carbureter, including a main tank, an auxiliary tank adjacent the bottom thereof, the main tank being provided with a plurality of perforations through the bottom and in communication with the auxiliary tank, an air admitting flue in communication with one end of the auxiliary tank, a fuel supplying conduit in communication with the main tank, a carbureted air conveying conduit in communication with the upper portion of the main tank and extending through the air admitting flue, and a heating coil disposed within the main tank, one of the terminals thereof entering the auxiliary tank while the other terminal thereof is disposed within the air flue.



2. A carbureter, including a horizontally disposed cylindrical main tank, an auxiliary tank adjacent the bottom thereof and provided with an upstanding air admitting flue, the upper end of which extends above the main tank, the bottom of the main tank adjacent the auxiliary tank being provided with perforations to form a communicating means between the auxiliary and main tanks, a U-shaped conduit having one terminal terminating within the main tank above the fuel level thereof and the opposite terminal extending through and exteriorly of the air admitting flue, and constituting the carbureter air outlet conduit, and a heating coil disposed within the main tank and having one terminal extending through the auxiliary tank while the other terminal extends through the air flue.

1,107,490. FAUCET-HOLE COVER. DANIEL G. BUTTS, New Orleans, La. Filed Oct. 22, 1913. Serial No. 796,704. (Cl. 4—35.)



1. A closure for openings in lavatory walls embodying a head portion having a cupped peripheral edge adapted to fit against the front face of the wall around the opening and having a rearwardly projecting stem formed by converging members secured at their divergent ends directly to the rear side of the head for centering the head over the opening with means whereby the stem is held against withdrawal by the rear side of the lavatory wall.

2. A closure for openings in lavatory walls embodying a head portion having a cupped peripheral edge adapted to fit against the front face of the wall around the opening and having rearwardly extending converging stem members to center the head over the opening and each provided with a transverse slot and a key adapted to pass through said slots and bridge the opening on the rear face of the wall for retaining the cover in place.

3. A closure for openings in lavatory walls embodying a head having a cupped peripheral edge adapted to fit against the front face of the wall around the opening and having a shank with converging sides and key openings in said sides, and a wedge-shaped key for securing the shank from the rear face of the wall.

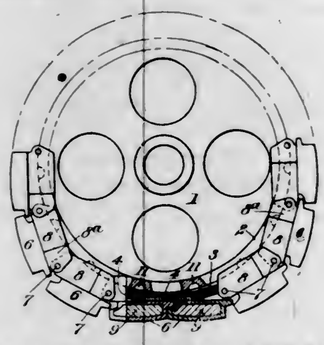
4. A closure for openings in lavatory walls embodying a head portion having a cupped peripheral edge adapted to fit against the front face of the wall around the opening, a slotted stem projecting from the rear of the head and a centrally arranged forwardly extending projection, and a wedge key for coöperation with said projection to retain the stem and head from the rear face of the wall.

1,107,491. PRODUCTION OF DISK SOUND-RECORDS. FRANK L. CAPPS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Oct. 28, 1912. Serial No. 728,100. (Cl. 18—5.3.)



In a device for pressing disk sound-records, the combination of a die, a pin protruding therefrom and with a sleeve carried removably thereon to constitute a centering-member, a plate passing freely but snugly over the two-part centering-member aforesaid to rest against said die, said sleeve adapted to come in direct contact with the record-material and to be clamped by the pressed record and adapted to be removed from said pin by the removal of the pressed record.

1,107,492. PLATFORM-WHEEL. JOHN H. CARR, Alhambra, Cal. Filed May 12, 1913. Serial No. 767,005. (Cl. 21—150.)



1. In a structure of the character described the combination with a rotary member, of an endless shoe member loosely surrounding the same, and comprising shoes hinged end to end, a separate endless flexible band interposed between the rotary member and the shoe member, and rigid plates fastened to the outer surface of said band and adapted to engage the shoe member.

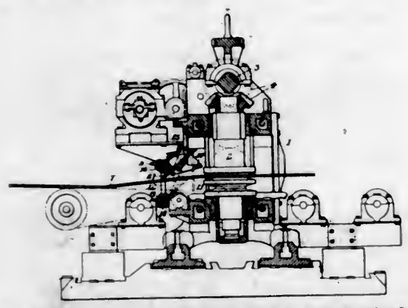
2. In a structure of the character described the combination with a rotary member, of an endless shoe member loosely surrounding the same, and comprising shoes hinged end to end, an endless flexible band interposed between the rotary member and the shoe member, rigid plates fastened to the outer surface of said band and adapted to engage the shoe member, and intermeshing means on said plates and shoes whereby they are detachably interlocked.

3. In a structure of the character described the combination with a rotary member, of an endless shoe member loosely surrounding the same, and comprising shoes hinged end to end, and having recesses in their inner faces, an endless band interposed between the rotary member and the shoe member, and rigid plates riveted to the outer surface of said band, the heads of the rivets protruding on the outer faces of said plates and adapted to engage the recesses in the shoes.

1,107,493. EDGING-MILL. VICTOR CHARTENER, Pittsburgh, Pa. Filed June 27, 1913. Serial No. 776,085. (Cl. 29—81.)

1. In a mill for treating hot metal, means for buckling the metal by edgewise pressure while hot, and means for causing water to forcibly impinge on the metal while still hot and after the scale has been loosened.

2. In a mill for treating hot metal, a pair of rolls arranged and constructed to buckle the hot metal by pressure between its edges, and means for causing water to forcibly impinge on the metal while it is still hot and after it has been so buckled.



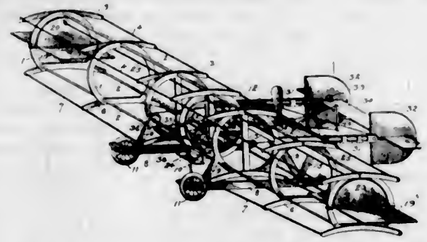
3. In a mill for treating hot metal, a pair of edging rolls, a sprinkler member arranged transversely of the direction of travel of the metal in the rolls, the said member having two holes longitudinally thereof, there being in said member communication between said holes, means for connecting one hole with a source of water supply, and adjustable means for varying the length of the communication between the said holes, the said member having facing the said member an outlet for water passing from te said communication.

4. In a mill for treating hot metal, a pair of rolls, a sprinkler member arranged transversely of the direction of travel of the metal in the rolls, the said member having two communicating holes longitudinally thereof and an open slot facing the said metal and extending to one of the holes and in parallel relation thereto, a plunger valve slidable in the last named hole to vary the length of the communication between the holes, and means for supplying water to the other one of the said holes.

5. In a mill for treating hot metal, a pair of rolls, means at the rear of the rolls for causing water to forcibly impinge on the metal between the said means and the roll-pass, and means controlled by the metal for starting and stopping the flow of the water.

[Claim 6 not printed in the Gazette.]

1,107,494. AEROPLANE. JOHN Q. CHASE, Dayton, Ohio. Filed Nov. 11, 1910. Serial No. 591,761. (Cl. 244—14.)



1. In an aeroplane, the combination with guiding and propelling mechanism, of a main frame comprising a plurality of substatially annular frame members vertically disposed side by side in substantially axial alinement but spaced apart, tie rods connecting the annular members and maintaining them in their spaced relation supporting plane ribs arranged substantially tangentially in relation to the annular frame members at the top and bottom thereof, and suporting planes carried on said ribs.

2. In an aeroplane, the combination with guiding and propelling mechanism of a rigid main frame comprising a plurality of annular vertically disposed frame members, transverse tie rods connecting the frame members, a series of supporting plane ribs arranged in horizontal alinement at the top of the frame, two series of supporting plane ribs at the bottom of the frame each successive rib in a direction outward from the center being located at height above the preceding or inward rib, and supporting planes carried on the ribs.

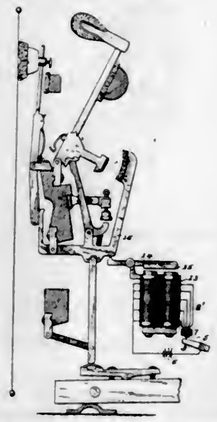
3. In an aeroplane, the combination with guiding and propelling mechanism of a main frame comprising a plurality of substantially annular frame members, and tie rods connecting the frame members, the said frame members comprising two concentric portions of different diameters located in a common plane and intermediate space blocks connecting the concentric portions, and a supporting plane carried on the frame.

4. In a flying machine, a main frame, supporting means, propelling mechanism, hinged guiding rudders adapted to oscillate in a horizontal plane, and having slots therein, an elevating rudder projecting through the slots of the guiding rudders and connected thereto whereby it will move in unison with said rudder and means for oscillating the guiding rudders an elevating plane on a horibontal axis independent of their lateral adjustment.

5. In a flying machine, a frame, a supporting means, propelling mechanism, guiding rudders, and an elevating plane, control means therefor comprising a revolubie shaft, a journal stud carried by said shaft and perpendicular to the axis thereof, a pulley mounted on said shaft and rotating therewith, a second pulley mounted on said journal stud, an operating lever connected with the second pulley, cable connections leading from the guiding devices to one of said pulleys, and from the elevating plane to the other of the pulleys.

[Claim 6 not printed in the Gazette.]

1,107,495. ELECTRICALLY-OPERATED MUSICAL INSTRUMENT. CLYDE COLEMAN, Chicago, Ill., assignor, by mesne assignments, to George B. French, Boston, Mass., and Frank L. Hall, New York N. Y. Filed Aug. 22, 1898. Serial No. 689,237. (Cl. 84—228.)



1. An automatic musical instrument comprising a transmitter of power, and means for producing a single note independently of the individual means for producing any other note including the following parts, viz.: a group of three or more separate power-controlling devices each connected directly to said power transmitter, and means for causing each of said power controlling devices to separately transmit power or causing them to jointly transmit power in various combinations thereof to cause actuation of the note-producing means.

2. An automatic musical instrument comprising a transmitter of power, and means for producing a single note independently of the individual means for producing any other note including the following parts, viz.: a group of three or more separate and differential power-controlling devices each connected directly to said power transmitter, and means for causing each of said power controlling devices to separately transmit power or causing them to jointly transmit power in various combinations thereof to cause actuation of the note-producing means.

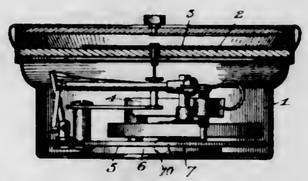
3. An electrically actuated automatic musical instrument comprising means for producing a single note independently of the individual means for producing any other note including the following parts, viz.: a group of conductive power controlling devices arranged in parallel and means for leading electric current through said conductive devices separately or jointly.

4. An electrically actuated automatic musical instrument comprising means for producing a single note independently of the individual means for producing any other note including the following parts, viz.: a group of differential and conductive power controlling devices arranged in parallel and means for leading electric current through said conductive devices separately or jointly.

5. An electrically actuated automatic musical instrument comprising means for producing a single note independently of the individual means for producing any other note including the following parts, viz.: a group of resistances arranged in parallel and means for leading electric current through said resistances separately or jointly.

[Claims 6 to 8 not printed in the Gazette.]

1,107,496. BAROMETER. FRANCIS E. COLLINSON, Walthamstow, London, England, assignor of one-half to Taylor Instrument Companies, Rochester, N. Y., a Corporation of New York. Filed Oct. 16, 1911. Serial No. 654,835. (Cl. 73—4.)



1. In a barometer, the combination with a circular indicating scale, of a rotary indicator coöperating with said scale, atmospherically controlled mechanism for effecting movement of the indicator, said mechanism and said indicator being rotatable relatively to the indicating scale and independently of the action of the atmosphere upon the atmospherically controlled mechanism.

2. In a barometer, the combination with a casing and a circular indicating scale carried thereby, of a support rotatably mounted within the casing, atmospherically controlled mechanism mounted on said support, and a rotary indicator adapted to be removed by said mechanism and arranged for coöperation with the indicating scale.

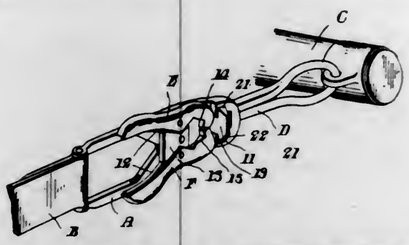
3. In a barometer, the combination with a casing and a circular indicating scale carried thereby, of a base plate rotatably mounted in the casing and coöperating with a stationary indication on the casing to correct the reading for different altitudes, atmospherically controlled mechanism mounted on said base plate, and a rotary indicator adapted to be moved by said mechanism and arranged for coöperation with the indicating scale.

4. In a barometer, the combination with a casing and an indicating scale carried thereby, of a base plate rotatably mounted in the casing, atmospherically controlled mechanism mounted on said base plate, an indicator adapted to be moved by said mechanism and arranged for coöperation with the indicating scale, and an altitude indicating dial carried by the base plate and adapted to coöperate with an indicator on the casing.

1,107,497. CONNECTING DEVICE. MARCUS RAY COWELL, Prince Albert, Saskatchewan, Canada. Filed Mar. 6, 1912. Serial No. 682,052. (Cl. 54—53.)

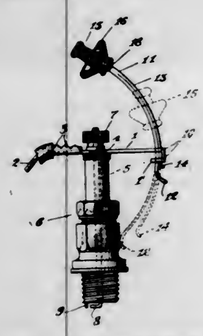
1. In a connecting device, a supporting member and a locking member, the supporting member having an open-

ing, said opening comprising a constricted portion and an enlarged portion, the locking member having a lug, said lug comprising a neck portion and an enlarged head portion, a pair of dogs adjacent the opening, said lug being adapted to engage in the opening and one side of the lug adapted to engage the ends of the respective dogs and open the dogs, and means for holding the dogs normally closed.



2. In a connecting device, a supporting member and a locking member, the supporting member having an opening, said opening comprising an enlarged portion and a constricted portion, the locking member comprising a lug having a neck portion and an enlarged head portion, a pair of dogs adjacent the opening, the ends of the dogs being beveled, said lug being adapted to engage in the opening and one side of the lug adapted to engage the beveled ends of the respective dogs and open the dogs, and means for holding the ends of the dogs normally closed.

1,107,498. SPARK-PLUG TESTER AND TERMINAL. HARRY DALITZ, Seattle, Wash. Filed Apr. 14, 1913. Serial No. 760,970. (Cl. 175—183.)



1. A device of the character described comprising a terminal member consisting of a plate adapted to be mounted on a spark plug and having an extension projecting beyond the latter, said extension having a seat formed therein, and a conducting member slidably engaged in the seat of the terminal member and being of curved formation whereby on sliding the conducting member the contacting portion thereof will move inwardly to engage the plug.

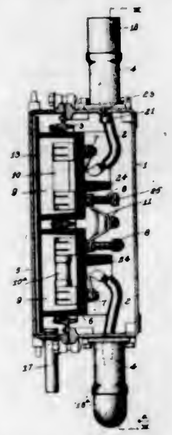
2. A device of the character described comprising a terminal member consisting of a plate having an extension formed with a seat, a conducting member slidably engaged in the seat of said terminal member for short circuiting the spark plug, and a resilient element integral with said conducting member for holding the same in its adjusted position.

3. A device of the character described comprising a terminal member consisting of a plate having an extension formed with a seat, a conducting member slidably engaged in the seat of said terminal member for short circuiting the spark plug, and a resilient element carried by said conducting member for holding the same in its adjusted position.

4. A device of the character described comprising a terminal member having one end portion turned back and provided therein together with said end portion with alining apertures, and a conducting member for short circuiting the spark plug, said conducting member being slidably engaged in the apertures of the terminal member and curved inwardly to engage the spark plug on sliding said conducting member.

5. A device of the character described comprising a terminal member having one end portion turned back and provided therein together with said end portion with alining apertures, a conducting member for short circuiting the spark plug, said conducting member being slidably engaged in the apertures of the terminal member and curved inwardly to engage the spark plug on sliding said conducting member, and a resilient element carried by said conducting member and engaging in the apertures of the terminal member for holding the conducting member in adjusted positions.

1,107,499. JUNCTION-BOX. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 27, 1910, Serial No. 579,334. Renewed Dec. 17, 1912. Serial No. 737,309. (Cl. 247—11.)



1. In a junction box the combination of a casing with a removable lid, a partition seating itself beneath said lid and when the parts are in place dividing the space within the casing into separate chambers, a plurality of cups formed of insulating material contained in said partition and open-mouthed toward said lid, and current-carrying members within said cups, substantially as described.

2. In a junction box the combination of a casing, a partition mounted therein and dividing the space within said casing into a plurality of chambers, said partition consisting of a spider and a plurality of plates of insulating material carrying pairs of binding posts mounted in said spider and severally removable therefrom, substantially as described.

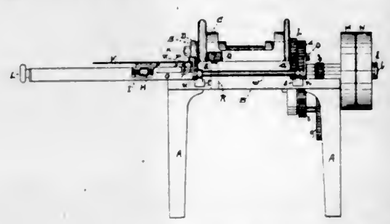
3. In a junction-box for electrical conductors containing an explosive fuse and provided with an orifice in its wall, a disruptable closure for said orifice, the said orifice provided with a water-seal consisting of an open depending tubular extension, substantially as described.

4. In a junction-box for electrical conductors, the combination of a casing, a partition dividing the space within the casing into separate chambers, a body of insulating material within the chamber on one side of said partition, an air chamber in communication with the insulating-material-filled space, an explosive fuse within the chamber on the opposite side of said partition, the wall of the portion of said junction box casing inclosing said fuse-containing chamber being provided with an orifice, a disruptable closure for said orifice, said orifice provided with a tube extending into said air chamber, substantially as described.

5. As an article of manufacture, a junction box having a lid and provided with an orifice in its wall, a body of insulation filling a portion only of said box opposite said lid, an electrical conductor passing fluid-tight through said orifice and through said body of insulation and into the unfilled portion of said box, and a closed supplemental casing inclosing the outer end of said conductor and secured externally to said junction box wall.

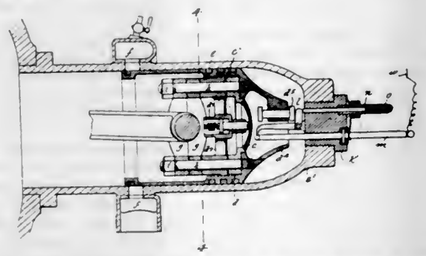
[Claims 6 to 8 not printed in the Gazette.]

1,107,500. MACHINE FOR RIBBING THE TEETH OF SAWS. CHARLES H. DOUGLAS, Springfield, Mass., assignor to Douglas Saw & Machinery Co., Boston, Mass. Filed Oct. 6, 1913. Serial No. 793,592. (Cl. 76—59.)



In a machine for making ribs on the teeth of tempered steel saws, the combination with a main frame, of two shafts mounted thereon, upon each of which there is secured a round die head, on the peripheries of which are secured on opposite sides of each head, two dies which are made on a curve corresponding with the curve of the heads, and made with offsets on reverse sides, mechanism to cause the dies on the opposite heads to revolve in conjunction with each other at the proper distance apart to receive between them the tooth of a saw and force a rib out on its side, and mechanism to move the next tooth forward to be acted upon by the reverse dies on the opposite sides of the two heads, and thereby to force a rib out on the opposite side of the following saw tooth, substantially as herein specified.

1,107,501. INTERNAL-COMBUSTION ENGINE. CHARLES E. DURYEA, Reading, Pa. Filed Apr. 28, 1910. Serial No. 558,235. (Cl. 123—73.)



1. In a high speed gas engine, a piston having a head and an integral nozzle above said head and a valve mounting within the piston and removable from beneath the head, said valve mounting being independent of the nozzle.

2. In a high speed gas engine, a piston having an integral nozzle, a head, and a valve mounting and valve beneath the head, said mounting being independent of the nozzle and mounted within the head and removable in a direction away from the nozzle.

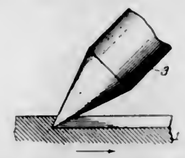
3. In a high speed gas engine, a piston having an integral nozzle, a valve head of greater diameter than the nozzle, a valve mounting and a valve located beneath the head and removable by movement in a direction away from the nozzle.

4. In a high speed gas engine, a piston having an integral nozzle above its head, the head being of greater diameter than the nozzle outlet, a valve mounting, a valve and means detachably supporting said valve and valve mounting beneath the head and permitting of removal hereof in a direction away from the nozzle.

5. In a high speed gas engine, a piston embodying a shell, a nozzle rigid with the shell, a head detachable from the shell and a valve and valve mounting removable from the shell in a direction away from the nozzle, said valve being located beneath the head and removable by movement in a direction away from the nozzle.

[Claims 6 and 7 not printed in the Gazette.]

1,107,502. SOUND-RECORD. VICTOR H. EMERSON, New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 18, 1911. Serial No. 628,029. (Cl. 181—17.)



1. A sound-record of the zigzag type consisting of a tablet of friable material having a record-groove formed therein by crushing out and removing the material to produce a groove of constant effective width.

2. A sound-record consisting of a tablet of friable material having a record-groove of substantially uniform depth and of constant effective width and formed by crushing out and removing the material from said tablet.

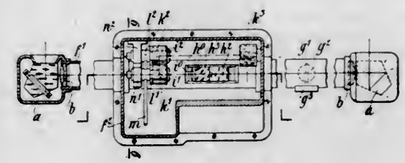
3. A sound-record consisting of a tablet of friable material having a record-groove of substantially uniform depth and of constant effective width, the undulations of which are formed directly in accordance with the vibrations from a source of sound.

4. A sound-record consisting of a tablet of friable material having a record-groove formed therein by crushing out and removing the material.

5. A sound-record consisting of a tablet having a substantially V-shaped record-groove of uniform depth and constant effective width, the undulations of which are formed directly in accordance with the vibrations from a source of sound, said record-groove being characterized by having its bottom consisting of a sharply defined zigzag line corresponding to sound-waves.

[Claims 6 to 12 not printed in the Gazette.]

1,107,503. TELEMETER. OTTO EPPENSTEIN and FRIEDRICH ECKARDT, Jena, Germany, assignors to The Firm of Carl Zeiss, Jena, Germany. Filed Apr. 24, 1913. Serial No. 763,375. (Cl. 88—2.9.)



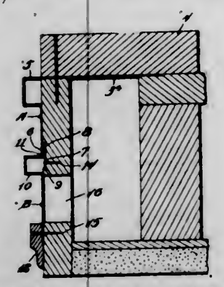
1. Horizontal telemeter comprising an ocular system, two objective reflecting systems, means for rotating the said objective reflecting systems jointly about an axis parallel to the base-line, the axis of emergence of the said ocular system being adapted to maintain a fixed direction during such rotation, two objective systems disposed be-

hind the said objective reflecting systems, an intermediate reflecting system and a compensating reflecting system, these two latter systems being also disposed behind the said objective reflecting systems, a measuring device and means for coupling the said objective reflecting systems and the said compensating system, these means being adapted to transmit half the rotation of the objective reflecting systems to the compensating system.

2. Horizontal telemeter comprising an ocular system, two objective reflecting systems, means for rotating the said objective reflecting systems jointly about an axis parallel to the base-line, the axis of emergence of the said ocular system being adapted to maintain a fixed direction during such rotation, two objective systems disposed behind the said objective reflecting systems, an intermediate reflecting system disposed behind the said objective reflecting systems and adapted to rotate about an axis parallel to the base-line through the same angle and in the same sense as the latter systems, a compensating reflecting system disposed behind the said intermediate system and adapted to rotate about an axis parallel to the base-line and in the same sense as the said other reflecting systems, a measuring device and means for coupling the said objective reflecting systems and the said compensating system, these means being adapted to transmit half the rotation of the objective reflecting systems to the compensating system.

3. Horizontal telemeter comprising an ocular system, two objective reflecting systems, means for rotating the said objective reflecting systems jointly about an axis parallel to the base-line, the axis of emergence of the said ocular system being adapted to maintain a fixed direction during such rotation, a measuring device, two objective systems disposed behind the said objective reflecting systems, an intermediate reflecting system disposed behind the said objective reflecting systems and adapted to rotate about an axis parallel to the base-line through the same angle and in the same sense as the latter systems and to let the axial ray emerge in the direction of the base-line and at some distance from the axis of rotation of the objective reflecting system, a compensating reflecting system disposed behind the said intermediate system and adapted to rotate about the axial ray emerging from the said compensating system in the same sense as the said other reflecting systems, the axis of rotation of the said compensating system having the same distance from that of the said objective reflecting systems as the axial ray emerging from the said intermediate system, the said compensating system consisting of two system-parts disposed one behind the other and adapted each to deflect the axial ray through 90° in one and the same plane, a guiding member, on which the front system-part is guided in the direction of the axial ray passing from it to the rear system-part, connecting means between the said front system-part and the said intermediate system, adapted to render the former rotatable about the axial ray emerging from the latter.

1,107,504. WINDOW-FRAME. MARTIN EVENSON, Hudson, Wis. Filed Dec. 14, 1912. Serial No. 736,745. (Cl. 189—73.)

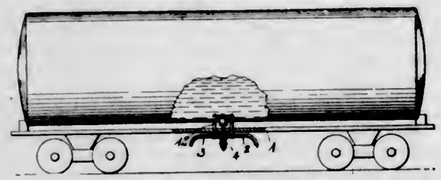


1. In a window casing, a wooden jamb and lining strips for the same comprising a strip bent to form an outer stop and a groove forming part of a slip seam, and an inner strip bent to form a parting stop and having adjacent to said stop a tongue engaging the groove and forming part of the slip seam, said inner strip having also a flat portion extending inwardly from the stop and overlying the jamb; in combination with a molding constituting an inner stop, overlying the flat portion of the strip that overlies the jamb and secured adjustably with respect to the parting stop.

2. In a window frame, a pair of jambs, a cap, and metallic linings for said jambs and cap, said linings comprising outer strips having outer stops, inner strips having parting stops and slip seams connecting the inner and the outer strips and enabling the distance between the outer stops and the parting stops to be varied; in combination with inner stops secured independently in adjustable relation with respect to the parting stops.

3. A window frame comprising a sill, jambs and a cap, in combination with metallic linings for said jambs and cap comprising outer strips having flaps lying adjacent to the outer faces of the jambs and the cap, said strips being provided with outer stops, inner strips having parting stops, slip seams formed by contiguous parts of the inner and the outer strips, and inner stops overlying the inner strips, said inner stops being secured adjustably with respect to the parting stops by nails passing through the inner strips and the inner stops and engaging the jambs and the cap.

1,107,505. LOAD BRAKE APPARATUS. ALBERT J. EWALD, Los Angeles, Cal. Filed Dec. 27, 1912. Serial No. 738,944. (Cl. 188—11.)



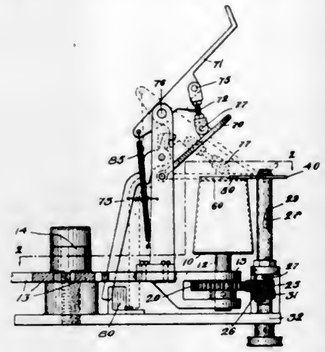
1. In a load brake apparatus, the combination with a train pipe, a pipe adapted to lead to an auxiliary reservoir, a valve between said pipes, a load depressing element adapted to be disposed within a car, a stem secured to said element and adapted to extend through the bottom of the car, yieldable means for holding said element normally in raised position, a yoke secured to said stem, and a stem on said valve connected with said yoke.

2. In a load brake apparatus, the combination with a train pipe, a pipe adapted to lead to an auxiliary reservoir, a suitably supported valve casing connecting said pipes, a partition in said casing separating said pipes and having an opening therein, an upwardly closing valve for said opening, a stem on said valve extending through said casing, a load depressible element, a stem secured to said element, a yoke connecting said stem with said valve stem, and means for returning said element to normal position when the load is lightened.

3. In a load brake apparatus the combination with a train pipe, a pipe adapted to lead to an auxiliary reservoir, a valve between said pipes, a load controlled element adapted to be disposed within a car, a stem secured to said element and adapted to extend through the bottom of the car, means for holding said element normally in raised position, and a stem on said valve connected with the stem of said element.

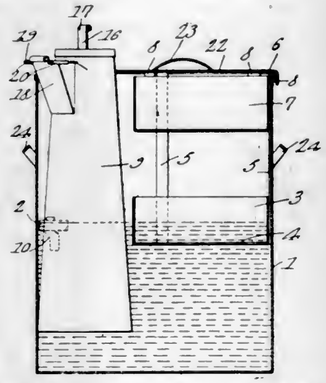
1,107,506. APPARATUS FOR FORMING PAPER CUPS. LUKE W. FARMER, Somerville, Mass. Filed Aug. 23, 1912. Serial No. 716,584. (Cl. 93—55.)

In an apparatus for forming paper cups, the combination with a rotatable form on which a bottom-piece and cup-body are placed, a carrier for said form, a gear operatively actuating said form, a pinion, a movable support for said pinion affording movement thereof into and out of engagement with said gear, another pinion connected with the aforesaid pinion, a driving gear for said last named pinion about which said pinion is movable planetarily, an oscillatory rod bearing said movable support,



and a dangling tool attached to said rod and movable to engage the bottom of the cup-body when said rod is turned, whereby to turn the bottom of the cup-body inward as the form is rotated.

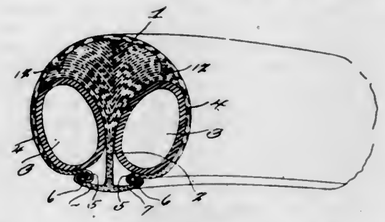
1,107,507. WATER-HEATER. MARSHALL V. FITZWATER, Stephens, Ark. Filed Oct. 7, 1913. Serial No. 793,935. (Cl. 126—367.)



In apparatus of the class described, a tank, a bracket secured thereto at one side thereof and above the tank bottom, a casing insertible into the tank and having its lower portion extending below the water level, an upwardly extending tongue on the casing and insertible therewith into the tank to a point below the bracket, said tongue being movable upwardly into engagement with the bracket, means pivotally connected to the casing and movable into engagement with the upper edge of the tank to limit the downward movement of the casing in the tank and hold the tongue against withdrawal from the bracket, an air conducting flue upon the casing, said flue communicating with the lower portion of the interior of the casing, means for controlling the flow of air through the flue, a fuel feed extension upon the side of the upper portion of the casing, and a closure for said extension.

1,107,508. RESILIENT VEHICLE-TIRE. LEE P. FLOCK, Fyffe, Ala. Filed Mar. 27, 1914. Serial No. 827,645. (Cl. 152—22.)

A vehicle tire comprising a substantially V-shaped core, merging or tapering into a centrally arranged supporting piece terminating in laterally extending portions, a pair of pneumatic tubes, one upon each side of the centrally arranged supporting piece, and over which each side of the core overlies, thereby protecting the tubes, and a cov-



ering of fabric surrounding the core and the tube and connected to laterally extending portions of the central piece.

1,107,509. LIQUID-PACKAGE. GEORGE A. FOSTER, Chicago, Ill. Filed Sept. 3, 1912. Serial No. 718,198. (Cl. 206—44.)



1. A new article of manufacture, comprising a receptacle having a removable closure, an envelop therefor open at one side to expose the receptacle to view, one wall of the envelop engaging the removable closure to prevent looseness, displacement and and unauthorized removal of the closure, and means for sealing the receptacle in the envelop, said seal being of less size than the receptacle to permit inspection thereof through the open side of the envelop.

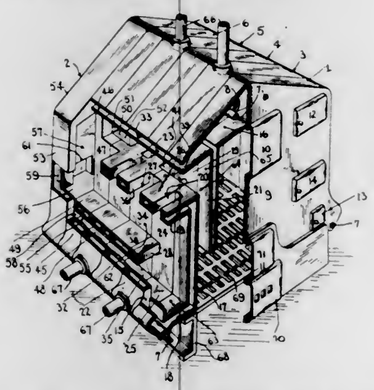
2. A new article of manufacture comprising a glass bottle having a glass stopper, a box containing the bottle and having an open side through which the bottle may be viewed, the length of the box being such as to prevent removal of the stopper without removing the bottle from the box, and yieldable means forcing the bottle toward one end of the box and permitting yielding of the bottle within the box under the influence of a blow struck on the stopper end of the box, and means for sealing the bottle in the box, said seal being of less size than the box to permit inspection of the bottle in the box.

3. A new article of manufacture, comprising a receptacle having a removable closure, an envelop therefor open at one side to expose the receptacle to view, the length of the envelop being such as to prevent removal of the closure without removing the receptacle from the envelop, and means for sealing the receptacle in the envelop, said seal being of less size than the receptacle to permit inspection thereof through the open side of the envelop.

1,107,510. SECTIONAL BOILER. GUSTAVE F. FUCHS, Belleville, Ill. Filed Feb. 2, 1914. Serial No. 816,117. (Cl. 122—225.)

1. A boiler comprising front and rear end sections and a series of hollow intermediate sections each of which

comprises outer, intermediate and inner hollow water legs, said inner and intermediate water legs forming the sides of the magazines and fire box of the boiler, water chambers connecting the inner and upper ends of the water legs of said sections, hollow connections arranged between said water legs to form longitudinal draft and smoke and gas conducting flues, a combustion chamber, a smoke chamber, said chambers communicating with the rear ends of said flues, a hollow wall arranged in the section at the rear end of the magazine, said wall forming between itself and the wall of the adjoining section, a passage which communicates at its lower end with the fire box of the boiler and at its upper end with the combustion chamber.



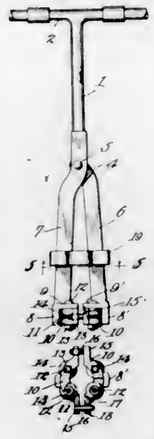
2. A boiler comprising hollow front and rear end sections and a series of hollow intermediate sections each of which comprise outer intermediate and inner hollow water legs, said inner and intermediate water legs forming the sides of the magazine and fire-box of the boiler, water chambers connecting the upper ends of the inner and outer water legs of said sections, hollow connections arranged between said water legs to form longitudinal draft and smoke and gas conducting flues, a front wall arranged on the outer side of said front end section to form the front of the boiler, a hollow wall arranged on said rear end section to form the rear end of the boiler, a hollow wall connecting the inner legs of the intermediate section adjoining the rear section, said wall and the end wall of the rear section forming a combustion chamber in the upper portion of said rear section, and a smoke chamber in the lower portion thereof, said chambers communicating with the rear ends of said flues, a hollow wall arranged in the section at the rear end of the magazine, said wall forming between itself and the wall of the adjoining section a passage which communicates at its lower end with the fire-box of the boiler and at its upper end with said combustion chamber, and clean out doors arranged in line with the ends of said flues.

1,107,511. PIPE-CUTTING APPLIANCE. WILLIAM H. GALLAGHER, Baltimore, and LEWIS E. GRIMES, Boring, Md. Filed Apr. 17, 1914. Serial No. 832,642. (Cl. 164—28.)

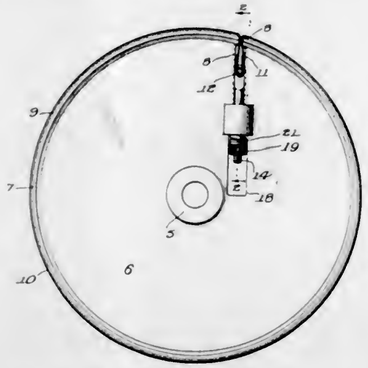
1. A device of the character described, including an operating shank, two jaws carried thereby, an arcuate cutter carrying frame, and coöperable means carried by each of the cutter carrying frames and the jaws, whereby a cutter carrying frame is connected to each jaw.

2. A device of the character described, including an operating shank, two jaws carried thereby, the terminal of each jaw being provided with two apertured arms, and an arcuate cutter carrying frame connected to the apertured arms of each jaw.

3. A device of the character described, including an operating shank, two jaws carried thereby, the terminal of each jaw being provided with two apertured arms, an arcuate cutter carrying frame connected to the apertured arms of each jaw, and means for gripping the jaws and holding them toward each other.



1,107,512. GRINDING OR POLISHING WHEEL. FREDERICK N. GARDNER and FREDERIC E. GARDNER, Beloit, Wis., assignors of one-third to Louis Waldo Thompson, Beloit, Wis.; Alice M. Gardner executrix of said Frederick N. Gardner, deceased. Filed Mar. 27, 1913. Serial No. 757,128. (Cl. 51—1.)

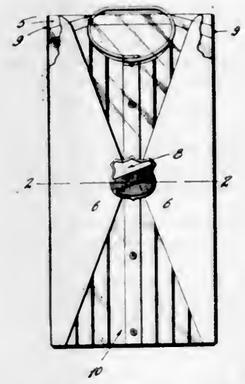


1. The combination of a grinding wheel having a slot extending inwardly from its periphery, a grinding band fitting upon said periphery and having a portion extending into said slot, a bolt operatively connected to said portion, and a coiled spring tending to draw said bolt inwardly to maintain said grinding band tight upon the wheel, said bolt being screw-threaded whereby adjustment may be made to vary the tension of said spring.

2. The combination of a grinding wheel having a slot extending inwardly from its periphery, a grinding band fitting upon said periphery and having a loop extending into said slot, a cross pin in said loop, a bolt engaging said cross pin and extending through a part on said wheel, a nut threaded on said bolt, and a coiled compression spring surrounding said bolt and positioned between said part and said nut.

3. The combination of a grinding wheel having a slot extending inwardly from its periphery, a hollow boss on the wheel at the inner end of said slot, said wheel having a slot extending inwardly from said boss, a band fitting upon the periphery of said wheel and having a loop extending into the first-mentioned slot, a cross pin lying in said loop, a bolt having an eye through which said cross pin extends, said bolt extending through said hollow boss and into the second-mentioned slot, a nut threaded on the end of said bolt in the latter slot, and a coiled compression spring extending into said hollow boss and bearing at one end against the boss and at the other end against said nut.

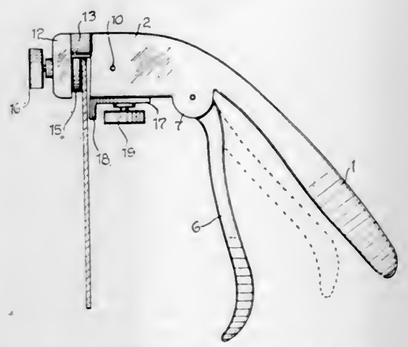
1,107,513. LAUNDRIED-SHIRT PROTECTOR. NATHAN J. GOODMAN, St. Louis, Mo. Filed Feb. 1, 1913. Serial No. 745,728. (Cl. 229—87.)



1. A laundried shirt protector, comprising a backing having opposite marginal flaps, a seal uniting said flaps, and a transparent sheet secured to said seal and having its margins free from said backing and flaps.

2. A laundried shirt protector, comprising a backing having marginal side flaps, identical in size and shape, the greatest width of each of which is less than half the width of the backing, a transparent sheet detached from said backing and flaps, and a seal for uniting said flaps at their widest portions and holding in place said transparent sheet.

1,107,514. SAW-SET. GEORGE W. GORE and LOUIS E. GORE, Mena, Ark. Filed Feb. 21, 1913, Serial No. 749,965. Renewed Jan. 21, 1914. Serial No. 813,549. (Cl. 76—69.)



1. A saw set comprising a handle having a head formed on one end, a plunger mounted for reciprocation within the head, said plunger being provided with an open side and a slotted side, a spring within said plunger, a stop pin positioned through the open and slotted sides of the plunger and through the spring, said pin being carried by the head, means for forcing the plunger outwardly against the tension of the spring, an anvil spaced from the plunger and adapted for coöperation therewith, means connected with the head for supporting the anvil, means for adjusting the anvil, and means for clamping the tool upon a saw.

2. A saw set comprising a handle having a head formed on one end, a plunger mounted for reciprocation within the head, said plunger being provided with an open side and a slotted side, a spring within said plunger, a stop pin positioned between the open and slotted sides of the plunger at one end of the spring, said pin having its ends rigidly secured in the head, means for forcing the plunger outwardly against the tension of the spring, means spaced from the plunger and adapted for coöperation therewith to set the teeth of a saw, means connected with the head for supporting the last mentioned means, and means for clamping the tool upon a saw.

3. A saw set comprising a handle having a head formed on one end, a plunger mounted for reciprocation within the head and having an open side and a slotted side, a stop pin positioned through the open and slotted sides of the plunger, means for resiliently retaining the plunger in its rearward position, means for forcing the plunger forwardly, an anvil spaced from the plunger and adapted for coöperation therewith, means connected with the head for supporting the anvil, means for adjusting the anvil, means for guiding the plunger, and means for clamping the tool upon a saw.

1,107,515. DETACHABLE FLUSH-RIM FIXTURE. PHILIP HAAS, Dayton, Ohio. Filed Dec. 2, 1912. Serial No. 734,429. (Cl. 4—18.)



1. The combination with a bowl having an inturned recessed flange of a detachable flush nozzle comprising an arcuate transverse conduit of greater length than the recess in the inturned flange the ends of which project beneath the inturned flange at opposite sides of the recess, the medial portion of which projects above the rim of the bowl due to the curvature of the arcuate conduit, and a supply conduit having communication with the transverse conduit above the rim of the bowl and projecting at a right angle thereto, the transverse conduit being perforated throughout its lower side and having terminal perforations therein.

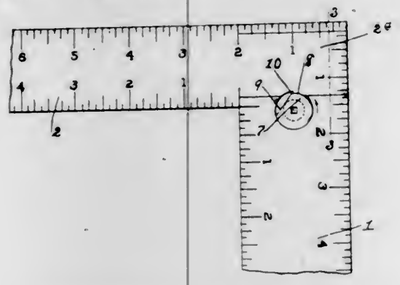
2. The combination with a bowl having an inturned recessed flange of a detachable flush nozzle comprising an arcuate conduit of greater length than the width of the recess, the ends of which extend beneath the inturned flange at each side of the recess, such projecting ends being offset to form shoulders in which the extremities of the flange engage, a plurality of perforations in said conduit, and a supply conduit leading thereto.

3. The combination with a bowl having an inturned recessed flange of a detachable flush nozzle comprising a perforated conduit bent into an arcute form horizontally to conform with the curvature of the bowl and arched vertically sufficient to project the medial portion of the conduit above the rim of the bowl when the extremities of the conduit are engaged beneath the extremities of the inturned flange, a horizontally disposed supply conduit communicating with the first mentioned conduit above the rim of the bowl on which the supply conduit rests, shouldered extremities for the first mentioned conduit in which the extremities of the flange engage, and laterally disposed fingers carried by the first mentioned nozzle engaging the under side of the flange.

4. As an article of manufacture, the herein described flush nozzle comprising the conduit 4 curved both horizontally and vertically and having the perforations 11 and 12 therein, the shoulders 7 formed in the extremities of the

conduit 4, the laterally extending fingers 8 projecting from said shouldered extremities and the horizontally disposed supply conduit 5 communicating with the medial portion of the conduit 4.

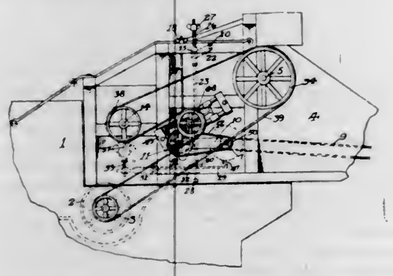
1,107,516. SEPARABLE SQUARE. HENRY E. HARRIS, South Shaftsbury, Vt., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt., a Corporation of Vermont. Filed Sept. 6, 1911. Serial No. 647,910. (Cl. 33—114.)



1. In a separable-square, and in combination, a body-member and a tongue-member, one of said members being provided with a transverse undercut open slideway and with an opening having an edge-wall perpendicular to the plane of the square, and the other member having a tang with chamfered edges adapted to enter and fit said slideway, said tang having a cam-seat perpendicular to the plane of the square extending inward beyond one of its chamfered edges, and a cam rotatively mounted within said opening having edges perpendicular to the plane of the square and adapted by rotative movement to be wedged bodily between said seat and the perpendicular wall of said opening on a line substantially perpendicular to said slideway.

2. In a separable-square, and in combination, a body-member and a tongue-member, one of said members being provided with a transverse slideway and the other member having a tang adapted to enter and fit said slideway, one of said members having a cam-seat and a shoulder at the end of said seat; and a cam rotatively mounted upon the other member and having a cam-surface adapted to engage said seat when moved in a direction opposite that in which the cam-bearing member is moved to withdraw said tang on said slideway, said cam being prevented by said shoulder from engaging said seat when rotated in the reverse direction.

1,107,517. SELF-FEEDER FOR THRESHING-MACHINES. MARTIN L. HEINEKE, Springfield, Ill. Filed Apr. 14, 1913. Serial No. 761,131. (Cl. 130—1.)



1. A feeder comprising in combination, a cutter device, means feeding the material thereto, means actuated by the material prior to engagement thereof by said cutter device, an arm and a lever coacting with said arm both mounted on a common pivot, a throw-out device for said feeding means adapted for actuation by said arm or therethrough by said lever, a lost motion connection between said arm and said material actuating means, and a governor connection between said lever and said cutter device, substantially as described.

2. A feeder comprising in combination, a cutter, a retarder in fixed relation with respect to said cutter, a gate disposed in advance of the cutter with respect to the direction of travel of the material, means for feeding the material to said cutter, and mechanism controlled by said gate for arresting said feeding means upon an overfeed to said cutter, substantially as described.

3. A feeder comprising in combination, a cutter device, means feeding the material thereto, a slotted straw gate, an arm and a lever coacting with said arm both mounted on a common pivot, a throw-out device for said feeding means adapted for actuation by said arm or therethrough by said lever, said lever and said arm normally held out of throw-out position by a spring member, a disk limiting the upward travel of said arm and said lever, a lost motion connection between said arm and said material actuation means, and a governor connection between said lever and said cutter device, substantially as described.

4. A feeder comprising in combination, a cutter device, means feeding the material thereto, a slotted straw gate mounted on a rock shaft and adapted for actuation on one side thereof by the fed material, an arm adapted for actuation by said straw gate, a throw-out device for said feeding means adapted for actuation through said arm by said slotted straw gate, means whereby said straw gate may be actuated beyond a throwout position, an arm and a lever coacting with said arm both mounted on a common pivot, a throw-out device for said feeding means adapted for actuation by said arm or therethrough by said lever, a lost motion connection between said arm and said material actuating means, and a governor connection between said lever and said cutter device, substantially as described.

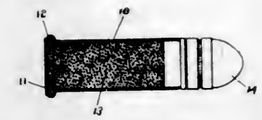
1,107,518. INCANDESCENT MANTLE. ABRAHAM HERSKOVITZ, Chicago, Ill. Filed Dec. 27, 1909. Serial No. 535,140. (Cl. 67—98.)



1. An incandescent mantle, made of fabric, having a tubular body portion and a closed end or terminal of dome-shaped, the warp threads being parallel with the axis of the tubular body portion and crossed and caught at the terminal or dome-shaped portion by the stitches of a continuous seam, which is less in length than the diameter of the tubular portion, when distended cylindrically, and which seam lies in a diametrical plane of said tubular portion, when distended cylindrically, and extends equal distances from the axis of the dome-shaped portion.

2. An incandescent mantle, made of fabric, and having a distended tubular body portion and a distended dome-shaped end or terminal closing it at one end, said dome-shaped terminal having three seams arranged in the form of the letter H, all of which seams are less in length than the diameter of the distended tubular body portion, that seam which connects the other two at their mid-length to form the letter H being arranged in a diametrical plane of the tubular body portion and extending continuously in opposite directions from the axis thereof, each of the warp threads being caught and crossed at right angles by the seam which it intersects.

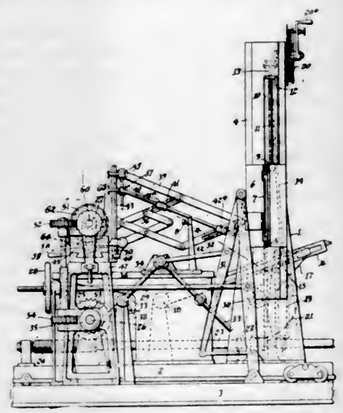
1,107,519. RIM-FIRE CARTRIDGE. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 18, 1914. Serial No. 845,776. (Cl. 102—12.)



1. A rim fire cartridge comprising a shell made of brass and having in its head a circular recess, and a non-mercuric priming compound in said recess.

2. A rim fire cartridge comprising a bullet, powder, a shell made from brass and having a head provided with a circular recess and a non-mercuric priming compound in said recess.

1,107,520. MACHINE FOR BUILDING UP DESIGNS ON CYLINDRICAL PRINTING-SURFACES. LODEWYK JAN RUTGER HOLST, Lansdowne, Pa., assignor to Williams, Brown and Earle, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 25, 1913. Serial No. 750,481. (Cl. 88—24.)



1. In a machine for building up designs on a cylindrical surface, the combination of an image-plate, a sensitized roller, means for projecting the image contained on said plate upon said sensitized roller, means to cause rotary movement of said roller in unison with rectilinear movement of said image-plate and means for the independent return movement of said image-plate.

2. In a machine for building up designs on a cylindrical surface, the combination of an image-plate, a sensitized roller, means for ascertaining the length of even fractions of the circumference of said roller and means for projecting upon said roller the image contained on said image-plate either in reduced, equal or enlarged size, to correspond with the lengths of said even fractions.

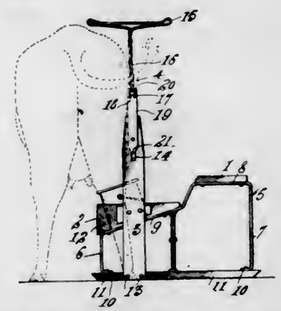
3. In a machine for building up designs on a cylindrical surface, the combination of an image-plate, a sensitized roller, automatic focusing means to project the image contained on said plate upon said sensitized roller, means to cause rotary movement of said roller in unison with rectilinear movement of said image-plate and means for the independent return movement of said image-plate.

4. In a machine for building up designs on a cylindrical surface, the combination of an image-plate, a sensitized roller, means for ascertaining the length of even fractions of the circumference of said roller and automatic focusing means for projecting the image contained on said image-plate upon the even fractions of the circumference of said roller.

5. In a machine for building up designs on a cylindrical surface, the combination of an image-plate, a sensitized roller, means for projecting the image contained on said plate upon said sensitized roller, means to cause rotary movement of said roller in unison with rectilinear movement of said image-plate and means for the independent transverse movement of said roller.

[Claims 6 to 8 not printed in the Gazette.]

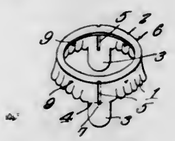
1,107,521. MILKING-STOOL. ALEXANDER J. HOOD, Muscoda, Wis. Filed Dec. 11, 1913. Serial No. 805,997. (Cl. 119—105.)



1. A milking stool including a supporting structure and a T-headed tail guard adjustably and removably carried thereby.

2. The combination with a supporting structure, an upright longitudinally slotted member secured to said structure, a standard adjustably mounted in the slot of said member and provided with means for securing it in adjusted position, said standard having openings in its upper end, a T-shaped tail guard secured in the openings of said standard and composed of a single piece of stiff wire bent to form a loop-shaped head of the T and twisted to form a shank, the free ends of the wire extending through the openings in the standard, and means for rigidly securing said shank to said standard.

1,107,522. BOTTLE-CAP. WILLIAM H. INMAN, Keokuk, Iowa. Filed Sept. 5, 1911. Serial No. 647,586. (Cl. 215—10.)

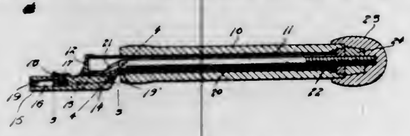


A crown cap, the flange of which has a reflexed tongue bent from its edge upon the flange and the adjoining portion of the body of the cap to provide a double ply of metal at such point, the portion of said cap overlaid by the tongue being slotted transversely adjacent the tongue and such slot extending from a point beyond the junction of the flange and body into the body of the tongue, whereby the slot is concealed by the tongue and the body and flange are reinforced by the tongue.

1,107,523. ADJUSTABLE GOUGE. ALDEN B. JACKSON, Fort Wayne, Ind. Filed Mar. 5, 1914. Serial No. 822,709. (Cl. 145—24.)

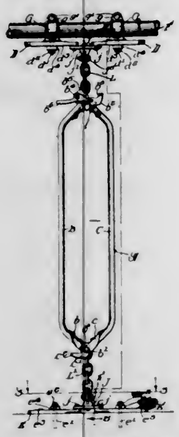
In a tool holder, the combination of a tubular handle, a tool holder pivoted on the forward end of said handle, a rotatable head mounted on the rear end of the handle, a rod disposed in the bore of the handle and having threaded engagement with said head whereby the rotation of the latter will move the rod longitudinally, and connections

between the forward end of the rod and the tool holder whereby the longitudinal movement of the rod will vary



the angularity of the tool holder with respect to the handle.

1,107,524. CATTLE-STANCHION. WILLIAM F. JACOBS, Ottawa, Ill., assignor to J. E. Porter Company, Ottawa, Ill., a Corporation of Illinois. Filed July 12, 1912. Serial No. 708,950. (Cl. 119—149.)

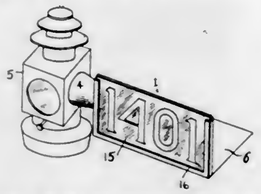


1. In a device of the character described, in combination with a cattle-stanchion, a support for said stanchion, a pair of plates adapted to be secured to said support, means for adjustably securing each plate to said support, a link member extending between and pivotally connected at its ends with the adjacent ends of said plates, said link member spacing and maintaining apart the adjacent ends of said plates, and means providing connection of said stanchion with said link member independent of the means connecting the link member with the ends of said plates.

2. In a device of the character described, in combination with a cattle-stanchion, a support for said stanchion, a pair of attaching members, each provided with a longitudinally arranged slot, fastening members, one for each attaching member, secured to said support, a bolt extending through the slot in each attaching member and adapted for adjustably securing each member to its respective fastening member, a link member extending between and connected at its ends with the adjacent ends of said attaching members, said link member spacing and maintaining apart the ends of the attaching members with which said link member is connected, and means providing connection of said stanchion with said link member independent of the means connecting the link member with the ends of the attaching members.

1,107,525. NUMBER-DISPLAYING DEVICE. GEORGE A. JENNER, San Antonio, Tex. Filed Jan. 27, 1913. Serial No. 744,526. (Cl. 40—131.)

1. In a number displaying device, a pair of rectangular reflectors with their rear edges standing substantially in contact on a horizontal line and their bodies diverging from each other forward of said line, and an outer triangular reflector whose rear edges are substantially in contact with the outer ends of the other reflectors and whose front edge stands flush with their front edges, its body standing in a plane oblique to said line; combined with a metallic casing inclosing and supporting said reflectors and having means for admitting light at that end opposite the outer reflector, and a light-pervious number plate carried by said casing and standing normally across the front edges of all reflectors.



2. A number displaying device comprising a casing triangular in cross section and having an opening at its inner end adapted to admit light from a lamp, an upright light-pervious number plate covering its front, rear walls converging toward each other from the upper and lower edges of the front, an outer end wall whose body inclines outward from said front toward the rear at an angle to the axis of said casing and whose rear edges unite with the outer ends of said rear walls, and reflectors on the inner faces of the end and rear walls, for the purpose set forth.

3. In a number displaying device, the combination with a metallic casing substantially triangular in cross section and having an open front and converging rear walls, a reflector adjacent the inner face of its outer end wall, and a socket opening through its inner end wall and adapted to admit light from a lamp; of a light-pervious number plate over the open front of said casing, and reflectors secured to the inner faces of said rear walls and extending from the outer end wall to a point near to but spaced from the inner end of the casing, for the purpose set forth.

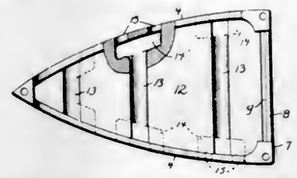
4. In a number displaying device, the combination with a casing of substantially triangular cross section having a closed outer end and an opening through its inner end adapted to admit light from a lamp, and a light-pervious number plate covering the open front of the casing; of clips projecting from adjacent the front edges of the converging rear walls of said casing, loops projecting from the angle between these walls, an angular strip having slots passing over said loops and stop lugs at its inner end, keys through said loops removably holding the strip in place, and mirror plates each secured at its rear edge by said strip and at its front edge by a pair of said clips and with its inner end resting against one of said stop lugs and spaced a slight distance from the inner end of the casing.

5. In a number displaying device, the combination with a casing of substantially triangular cross section having a closed outer end and an opening through its inner end adapted to admit light from a lamp, and a light-pervious number plate covering the open front of the casing; of clips projecting from adjacent the front edges of the converging rear walls of said casing, loops projecting from the angle between these walls, an angular strip having slots passing over said loops, keys through said loops removably holding the strip in place, and mirror plates each secured at its rear edge by said strip and at its front edge by a pair of said clips.

1,107,526. GAS-HEATED IRON. ROBERT JOYCE, Philadelphia, Pa. Filed Jan. 21, 1914. Serial No. 813,556. (Cl. 158—23.1.)

1. In a device of the character described, a hollow body having exhaust vents in the walls thereof, a plurality of transverse channels in the base communicating with ports in the side walls, and a gas-burner having branches corresponding to said channels carried in said iron body.

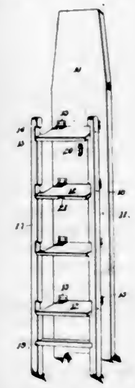
2. In a device of the character described, a hollow body having vents in the walls thereof, a plurality of air-conducting channels in the base, ports in the side walls, said ports being offset from the ends of said channels, a bore connecting said channels with said ports, and a gas-burner having branches registering with said channels carried in said iron body.



3. In a device of the character described, a hollow body having exhaust vents in its walls, a plurality of transverse air-conducting channels in the base communicating with ports in the walls, a gas-burner carried in the hollow body comprising a gas-supply pipe and lateral branches carried over the air channels, having orifices on each side of the channels adapted to discharge on the base of the iron body.

4. In a device of the character described, a hollow body having exhaust vents in its walls, a plurality of transverse air-conducting channels in the base, ports in the side walls, said ports being offset from the ends of said channels, a bore connecting said channels with said ports, a gas-burner carried in said hollow body comprising a plate secured in the rear wall of the hollow body, a longitudinal gas-supply pipe carried thereon, lateral branches registering with said channels having radially arranged burner orifices therein, and a cover and handle for said iron body, substantially as described.

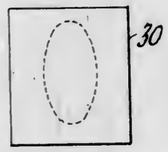
1,107,527. COMBINED IRONING-BOARD AND LADDER. EDWARD JURKOWSKI, New York, N. Y. Filed Apr. 27, 1914. Serial No. 834,707. (Cl. 228—32.)



1. A device of the class described comprising a board, a plurality of spaced apart steps hinged to the rear face thereof in parallelism, side rails provided with opposite alining notches having lower inclined faces, side extensions upon said steps pivoted to said side rails within the notches thereof and adapted for engaging said faces when the ladder is in its open position, and a latch retaining means for said ladder slidably-mounted upon the inner face of said board.

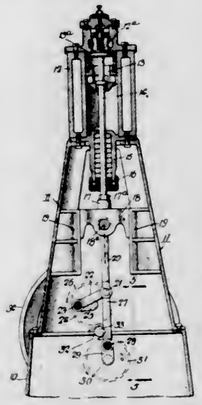
2. A device of the class described comprising an ironing board, a plurality of steps hingedly secured in spaced relation upon the rear face thereof, side extensions adjacent the front edge of each of said steps, side rails provided with inward notches having inclined lower faces and with step extensions trunnioned within said notches between said rails, the said step extensions adapted for engaging said notch faces when the ladder is unfolded, one of said steps provided with a notch on its under face at the front edge thereof, a slidable latch upon the inner face of said board adapted for seating within said step notch when the ladder is in its closed position.

1,107,528. METHOD OF HANDLING GLASS. JOHN E. KARTEINA, Springdale, Pa. Filed Mar. 31, 1913. Serial No. 757,899. (Cl. 49—77.)



The method of making large sheets of plate glass, consisting in melting down the glass in a furnace of large capacity and thereby forming a large mass of molten glass of uniform characteristics, introducing into said furnace a heated earthenware pot of large capacity and scooping up a solid mass of the molten glass thereinto by submerging one edge of the pot with a scooping motion beneath the surface of the glass, withdrawing the pot from the furnace and introducing the same into a tempering furnace and allowing the pot to remain in said furnace until the glass becomes homogeneous and of even working temperature throughout, transferring the filled pot to a table, and pouring a portion of the glass upon the table.

1,107,529. MECHANICAL MOVEMENT. JOHN C. KITTON, Chicago, Ill. Filed May 20, 1912. Serial No. 698,380. (Cl. 74—14.)



1. A mechanical movement comprising a reciprocating member, two cranks rotative about separate and parallel axes, one of which axes is located in alinement with the path of movement of the reciprocating member and the other laterally offset from said path, a driving connection between said cranks effecting rotative motion thereof in the same direction, two links, each of which is engaged at one end with one of said cranks and is pivotally united at its opposite end with the corresponding end of the other link, and means affording driving connection between said reciprocating member and the pivotally united ends of said links, the said cranks being disposed in such relation to each other that in two points of their annular paths each crank pin will have movement in a direction generally at right angles to the direction of movement of the other crank pin.

2. A mechanical movement comprising a reciprocating member, two cranks, a driving connection between said cranks effecting rotation thereof in the same direction, two links, each of which is engaged at one end with one of said cranks and is pivotally united at its opposite end with the corresponding end of the other link, and a pitman pivotally connected with the reciprocating member and with the pivotally united ends of said links.

3. A mechanical movement comprising a reciprocating member, two rotary cranks turning about separte axes, one of which is located in line with the path of motion of the reciprocating member and the other laterally offset from said path, two links each pivotally connected with a crank, a connecting rod operatively connected with the opposite end of said links and with the reciprocating member, two shafts upon which said cranks are mounted, a toothed gear wheel upon each of said shafts, and an intermediate gear wheel rotatably mounted between and in toothed engagement with both of said gear wheels.

4. A mechanical movement comprising a reciprocating member, two rotary cranks turning about separate axes, one of which is located in line with the path of motion of the reciprocating member and the other laterally offset from said path, two links each pivotally connected with a crank, a connecting rod operatively connected with the opposite ends of said links and with the reciprocating member, two shafts upon which said cranks are mounted, a toothed gear wheel upon each of said shafts, an intermediate gear wheel located between and in toothed engagement with both of said gear wheels, and a rotary shaft upon and in fixed relation to which said intermediate gear wheel is mounted.

5. A mechanical movement comprising a reciprocating member, two rotative cranks, one of which is located at a greater distance from the reciprocating member than the other, means affording driving connection between said cranks affording rotative movement thereof in the same direction, two links each having one end pivotally connected with one of said cranks, and a pitman pivotally connected with said reciprocating member and with both of said links, said pitman and the link connected with the crank which is at the greater distance from the reciprocating member constituting a toggle by which the reciprocating member is given motion through a distance greater than the throw of said last named crank.

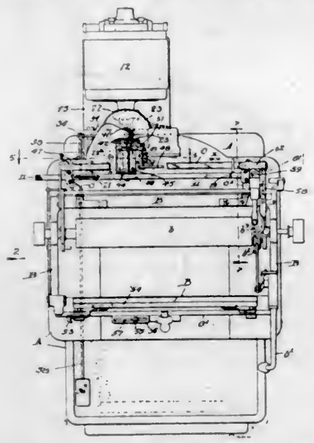
[Claims 6 to 10 not printed in the Gazette.]

1,107,530. CARRIAGE-RETURN MECHANISM. GEORGE W. KNOLL, Chicago, Ill., assignor, by direct and mesne assignments, to John Thomas Underwood, Brooklyn, N. Y. Filed Nov. 23, 1911, Serial No. 662,009. Renewed July 25, 1912. Serial No. 711,577. (Cl. 197—65.)

1. In combination, a typwriter frame, a carriage slidably mounted thereon, a rack bar operatively connected to said carriage, a toothed wheel meshing with said rack bar, a continuously running motor, a pair of friction disks, one of which is directly driven by said motor, a shaft operatively connected to said toothed wheel, friction clutch mechanism between said shaft and the other friction disk, and a carriage return key lever operatively connected with the clutch mechanism.

2. Carriage return mechanism comprising a rack bar arranged to be secured to a typewriter carriage, a toothed wheel meshing with said rack bar, a shaft operatively connected with said toothed wheel, a motor driven disk loosely mounted upon said shaft, clutch mechanism for clutching together said disk and shaft, and a carriage return key lever operatively connected with said clutch mechanism.

3. Carriage return mechanism comprising a rack bar arranged to be secured to a typewriter carriage, a toothed wheel meshing with said rack bar, a vertically extending rotary shaft, power transmitting connections between said shaft and toothed wheel, a motor driven disk on said shaft, clutch mechanism for coupling said shaft to said disk, a clutch lever connected to one member of said clutch mechanism, a carriage return key lever, and a link connecting said clutch lever with said carriage return key lever.

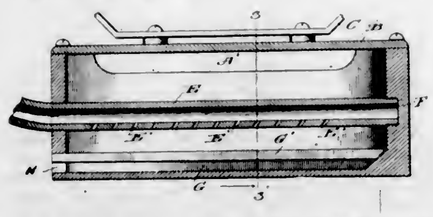


4. Carriage return mechanism comprising a rotary shaft, power transmitting mechanism arranged to translate the rotary motion of said shaft into a rectilinear movement of a typewriter carriage, a friction disk on said shaft, a motor driven disk frictionally engaging and driving said first-named disk, a clutch to transmit the motion of said disks to the said shaft, said clutch comprising a collar on said shaft and rotatively connected therewith and a clutch cone on said first-mentioned disk, a carriage return key lever, and operative connections between said lever and clutch collar for engaging the latter with the clutch cone.

5. Carriage return mechanism comprising a motor driven shaft, clutch mechanism, a carriage return key lever to operate the clutch mechanism for operatively coupling said shaft with its prime mover, power transmitting mechanism for translating the rotary motion of said shaft into a rectilinear movement of a typewriter carriage, a trip member secured to and moving with said carriage, and clutch releasing mechanism having an element lying in the path of said trip member and arranged to be actuated thereby to unclutch the clutch mechanism.

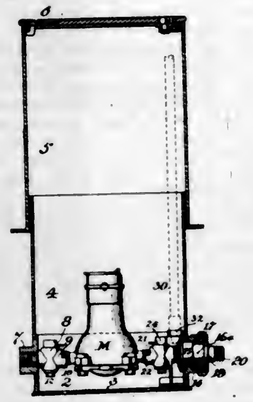
[Claims 6 to 19 not printed in the Gazette.]

1,107,531. GAS-HEATED SAD-IRON. HARRY A. KOENIG, Philadelphia, Pa. Filed Feb. 19, 1913. Serial No. 749,444. (Cl. 158—23.1.)



In a sad iron, the combination with a body the rear end thereof having an air inlet opening and a burner tube opening, the bottom of said body having a longitudinal air chamber therein communicating at its rear end with the air inlet opening, and communicating with the interior of the bottom through the medium of the longitudinal opening, and a burner tube passing through the rear end of body and positioned above the longitudinal air chamber in the bottom and means for connecting the forward end of said tube to the forward end of the iron and simultaneously closing the end of said tube as set forth.

1,107,532. METER-BOX. HERBERT M. LOFTON, Chattanooga, Tenn. Filed Apr. 5, 1911, Serial No. 619,000. Renewed Mar. 4, 1914. Serial No. 822,476. (Cl 73—167.)



1. In a meter box, the combination of a box structure having a water passage and socket for the meter said passage being provided with a valve, an adjustable coupling portion providing a second passage for water and furnished with a socket portion for the meter and also having a stop-cock movable with the coupling portion, and means for adjusting the coupling portion together with its stop-cock and socket longitudinally.

2. In a meter box, the combination of a box structure having a water passage and socket for the meter said passage being provided with a valve, an adjustable coupling portion providing a second passage for water and furnished with a socket portion for the meter and also having a stop-cock movable with the coupling portion, and means for adjusting the coupling portion together with its stop-cock and socket longitudinally consisting of a rotatable bushing journaled in the meter box with provision for rotation without longitudinal movement.

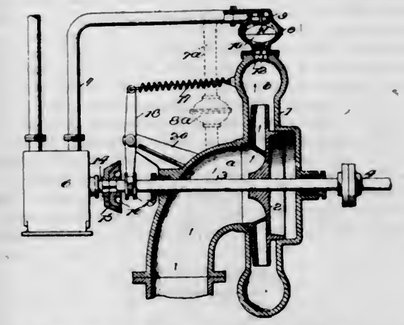
3. A meter box structure having an outlet provided with a meter supporting socket and stop cock, combined with an inlet having a coupling portion relatively movable to or from the outlet and provided with a meter supporting socket and a stop-cock adjacent to said socket, said stop cock movable with the coupling portion.

4. In a meter box structure, a casing having a port provided with a fixed socket piece for receiving one port of the meter, and also having a tubular bearing adjustable socket portion for receiving the other port of the meter and provided with a screw threaded coupling portion through which water flows, and a rotatable bushing journaled in the tubular bearing of the casing and held against longitudinal movement said bushing surrounding the said coupling part and engaging its screw thread whereby the rotation of the bushing will adjust the coupling part longitudinally for the purpose of clamping the meter between the two socket portions.

5. In a meter box structure, a casing, a port in said casing provided with a fixed socket piece for receiving one port of the meter, an adjustable socket portion for receiving the other port of the meter and provided with a screw threaded coupling portion through which water flows, and a rotatable bushing journaled in the casing and held against longitudinal movement said bushing surrounding the said coupling part and engaging its screw thread and provided with a beveled gear, whereby the rotation of the bushing will adjust the coupling part longitudinally for the purpose of clamping the meter between the two socket portions, and a key having a beveled pinion upon its end for rotating the beveled gear and detachably journaled in the meter box casing.

[Claims 6 to 10 not printd in the Gazette.]

1,107,533. PRIMING CENTRIFUGAL PUMPS. FRIEDRICH LORENZ, Teltow, Germany, assignor to Thomas P. Kingsford and Virginia K. Higgins, Oswego, N. Y. Filed June 14, 1913. Serial No. 773,657. (Cl. 103—43.)



1. A priming system for centrifugal pumps and the like, comprising a normally-inactive suction device, means for automatically establishing suction connection between said device and the interior of the pump when the pump has lost its water and for automatically cutting off said suction connection when the pump is in pumping action, and mechanism for automatically starting the suction operation of said device when the pump loses its water and for permitting said device to become inactive when the pump is in pumping operation.

2. A centrifugal pump provided with mechanism fer automatically establishing priming suction within the pump when the pressure within the pump drops below that required for pumping action, and for discontinuing said suction within the pump when pumping pressure is established within the pump.

3. A centrifugal pump provided with means for establishing priming suction within the pump, said means being automatically controlled by the pump pressure.

4. A centrifugal pump provided with a pump-priming-suction device in suction communication with the interior of the pump controlled by a float-valve, and means independent of said float valve for automatically controlling the operation of said device to start the operation thereof when the pump loses its water and to stop the operation thereof when the pump is primed.

5. A centrifugal pump provided with mean for maintaining priming suction within the pump, said means provided with driving mechanism controlled by the presence and absence of pumping pressure within the pump.

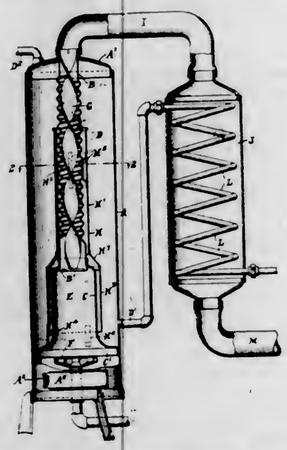
[Claims 6 to 20 not printed in the Gazette.]

1,107,534. WATER-HEATER. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Nov. 23, 1912. Serial No 733,033. (Cl. 122—16.)

1. In a water heater of the kind specified, the combination of a tubular part enlarged at its lower end and serving as a combustion chamber and flue, a tubular shell surrounding the first mentioned part and connected to the ends of the latter to form a water chamber, and a tubular member located within said water space and comprising a large-diameter portion surrounding the enlarged lower end of said tubular part and a portion of smaller diameter surrounding the upper portion of said part, said member being spaced away from the lower end wall of the water space a distance sufficient to permit a free flow of water into the annular circulating passage between said tubular part and said tubular member and being spaced away from the upper end of said space a distance somewhat greater than the first mentioned distance whereby a hot pocket is formed in said space above the upper end of said tubular member.

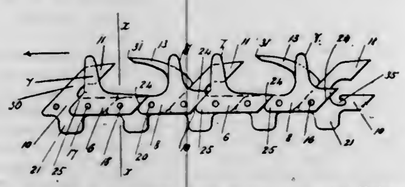
2. In a water heater of the kind specified, the combination of a tubular part enlarged at its lower end and having a smaller upper corrugated portion, said part serving as a

combustion chamber and flue, a tubular shell surrounding the first mentioned member and connected to the ends of the latter to form a water chamber, a tubular member located within said water space and comprising a large diameter portion surrounding the enlarged lower end of said tubular part and a portion of smaller diameter surrounding the upper portion of said part, said member being spaced away from the lower end wall of the water space a distance sufficient to permit a free flow of water into the annular circulating passage between said tubular part and said tubular member and being spaced away from the upper end of said space a distance somewhat greater than the first mentioned distance whereby a hot pocket is formed in said space above the upper end of said tubular member, and a spiral retarder disposed in the smaller upper portion of said tubular part and having fewer turns per unit of length than there are corrugations in a corresponding length of the corrugated portion of said tubular part.



3. In combination, a corrugated tube and means for augmenting the transfer of heat between said tube and a fluid flowing through the latter, comprising an element axially disposed in said tube and adapted to give the fluid passing through said tube a tendency to follow a spiral path comprising a smaller number of turns than there are corrugations in said tube.

1,107,535. CHAIN SAW. HORACE EMMERSON MARTIN, Athens, Ga. Filed Jan. 28, 1913. Serial No. 744,753. (Cl. 143—135.)



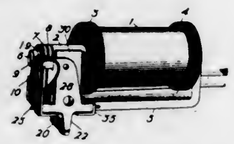
1. In a chain saw, the combination, with side links provided with cutting teeth arranged in pairs, of center links pivoted to the side links and provided with gage teeth and with drag teeth, one gage tooth being arranged to project rearwardly from one center link into the longitudinal space between two pairs of cutting teeth, and one drag tooth being arranged to project forwardly from the next following center link into the said space between the same two pairs of teeth.

2. In a chain saw, the combination, with side links provided with cutting teeth arranged opposite to each other in pairs, said pairs of teeth having wide and narrow spaces alternately between them, of two series of center links arranged in line with each other, one series of center links being provided with drag teeth arranged in the wide spaces between the cutting teeth, and the other series of center links being provided with gage teeth which project into the said wide spaces to a point adjacent to and in front of the cutting edges of the drag teeth.

3. In a chain saw, the combination, with side links provided with cutting teeth, of two series of center links arranged in line with each other and pivoted to the side links, one series of center links being provided with gage teeth having rearwardly inclined shanks, and the other series of center links being provided with drag teeth having rearwardly inclined lower surfaces which overlap and rest on the inclined shanks of the gage teeth when the chain saw is straight.

4. In a chain saw, the combination, with side links provided with cutting teeth, of center links pivoted to the side links, certain of the center links being provided with gage teeth, and others of the center teeth being provided with drag teeth having lower surfaces which overlap and rest on the lower portions of the gage teeth when the chain saw is straight.

1,107,536. RELAY. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 26, 1910. Serial No. 546,136. (Cl. 175—325.)



1. In a relay, a helix, a member extending through said helix, a plurality of contact plates and an armature-support each surrounding said member and being mounted side by side thereon, and an armature movable upon said armature-support.

2. In a relay, a helix, a supporting member of magnetic material extending through said helix, a bracket mounted upon said supporting member, an armature mounted upon said bracket and moving in a direction transverse to the axis of said helix and coöperating therewith, and contacts mounted upon said support and controlled by said armature in its movement.

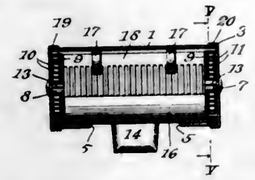
3. In a relay, the combination with a helix, of a core projecting beyond the forward end thereof and provided with an exial opening, a pin secured in said opening and supporting a plurality of contact plates insulated from each other and from said core, and an armature having an arm adapted to rock between said plates.

4. In a relay, the combination with a helix, of a core projecting beyond the forward end thereof and having an axial opening, of a cylindrical pin secured in said opening and adapted to insulatively engage a pair of contact plates, each of said plates having a lug bent at right angles to the plane of said plates and lying in different vertical planes on one side of the said core, and an armature mounted alongside said core extension and having an arm adapted to rock between said lugs.

5. In a relay, the combination with a helix, of a cylindrical core extending beyond the forward end thereof, of a cylindrical pin of non-magnetic material fitted in an opening in the forward end of said core, a yoke of magnetic material secured to the rear of said core and extending longitudinally of said core, a pair of non-magnetic plates fitting over but insulated from said pin and having extensions passing longitudinally to the rear of the relay, a non-magnetic armature mounting secured to said yoke at its forward end and to said pin, and armature fulcrumed to said mounting and lying in a plane parallel with the core axis, said armature having a laterally extending arm adapted to engage said insulated plates.

[Claim 6 not printed in the Gazette.]

1,107,537. COMB. CHARLES A. MCCANN, New York, N. Y. Filed June 8, 1912. Serial No. 702,387. (Cl. 119—87.)



1. In a comb, a barrel having a longitudinal slot therein, a comb-piece mounted adjacent to said slot, a shield for closing said slot pivotally mounted within said barrel and substantially concentric therewith.

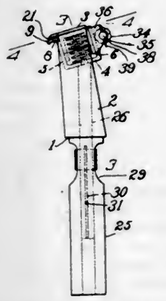
2. In a comb, a barrel having a longitudinal slot therein, a comb-piece mounted adjacent to said slot, a shield for closing said slot pivotally mounted on said barrel and substantially concentric therewith, and yieldable means for urging said shield to rotate about its axis and close said slot.

3. In a comb, a barrel having a longitudinal slot therein, a comb-piece having teeth curved to the curvature of said barrel mounted adjacent to said slot, a shield for closing said slot pivotally mounted upon said barrel and substantially concentric therewith, and yieldable means for urging said shield to close said slot.

4. In a comb, a barrel having a longitudinal slot therein, a comb-piece having teeth curved to the curvature of said barrel detachably mounted adjacent to said slot, a shield for closing said slot pivotally mounted upon said barrel and substantially concentric therewith, and yieldable means for urging said shield to close said slot.

5. In a comb, a barrel having a longitudinal slot therein a comb-piece having its teeth curved to the curvature of said barrel, means for detachably securing said comb-piece to the barrel; a shield for closing said slot mounted upon said barrel and substantially concentric therewith, yieldable means for urging said shield to close said slot, a handle on said shield, and a second handle on said barrel.

1,107,538. SAFETY-RAZOR. THOMAS E. MCDERMOTT, Somerville, Mass. Filed Sept. 18, 1909. Serial No. 518,707. (Cl. 30—12.)



1. In a safety-razor, a blade-bed for holding a blade, a blade-bed holder, upwardly extending walls upon the said blade-bed holder, depending walls upon the said blade-bed coöperating with the said upwardly extending walls of the blade-bed holder, means interpositioned between the said blade-bed and blade-bed holder to render the blade-bed and blade constantly resilient, means for preventing the blade from vibrating or springing out of position longitudinally, and means for graduating the resiliency of the said blade-bed and blade.

2. In a safety-razor, a frame, a blade-bed holder within the said frame, means coöperating with the said frame to render the said blade-bed holder movable therein, a blade-bed for holding a blade mounted in the said blade-bed holder and adapted to move therein, and means interpositioned between the said blade-bed and blade-bed holder to render the blade-bed and blade constantly resilient.

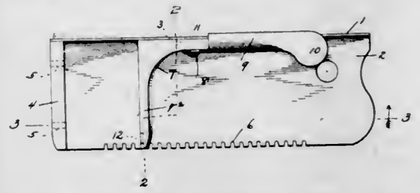
3. In a safety-razor, a frame, a blade-bed holder within the said frame, means coöperating with the said frame to render the said blade-bed holder movable therein, a blade-bed for holding a blade mounted in the said blade-bed holder and adapted to move therein, means interpositioned between the said blade-bed and blade-bed holder to render the blade-bed and blade constantly resilient, and means for holding the said blade-bed in position in the said blade-bed holder.

4. In a safety-razor, a frame, a blade-plate joining the ends of the said frame, a blade-bed holder within the said frame provided with longitudinal walls, means coöperating with the said frame to render the said blade-bed holder movable therein, a blade-bed for holding a blade mounted in the said blade-bed holder and adapted to move therein and provided with longitudinal and end walls, resilient means interpositioned between the said blade-bed and blade-bed holder, the said longitudinal walls of the said blade-bed being provided with openings, and studs attached to and connecting the walls of the blade-bed holder and passing through the said openings in the longitudinal walls of the blade-bed.

5. In a safety-razor, a frame, a blade-plate joining the ends of the said frame, a blade-bed holder within the said frame, means coöperating with the said frame to render the said blade-bed holder movable therein, a blade-bed mounted in the said blade-bed holder and adapted to move therein, resilient means interpositioned between the said blade-bed and blade-bed holder, means for holding the said blade-bed in position in the said blade-bed holder, a recessed portion in the upper surface of the said blade-bed adapted to receive and hold a blade, and a raised portion on the lower surface of the said blade-plate adapted to press upon the blade and to coöperate with the said recessed portion in holding the blade firmly in position in the blade-bed.

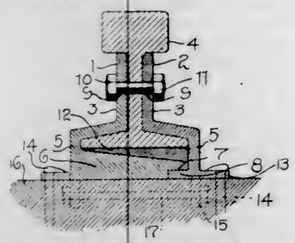
[Claims 6 to 14 not printed in the Gazette.]

1,107,539. COMPOSING-STICK. BERNARD MCGINTY, Doylestown, Pa. Filed Apr. 17, 1913. Serial No. 761,776. (Cl. 101—26.)



In a composing stick, the combination with a body having a side wall and an end wall and also having a longitudinal series of transverse apertures in the side wall and a longitudinal series of notches in its edge remote from said side wall, said notches being open at their outer ends, of a knee adjustable on the body and having a longitudinally disposed portion to rest against the side wall of the body and provided with a pin adapted to take into any one of the apertures in said side wall and also having a transverse portion provided with a lug arranged to slip edgewise into any one of the longitudinal series of notches in the body, and a frictional clamp for detachably holding the knee against said side wall of the body and for detachably retaining the pin and lug of the knee against casual displacement from an aperture and a notch respectively of the body; said clamp being pivoted to the longitudinally disposed portion of the knee and having a channel portion to straddle and frictionally-engage said knee portion and the side wall of the body and also having a finger piece.

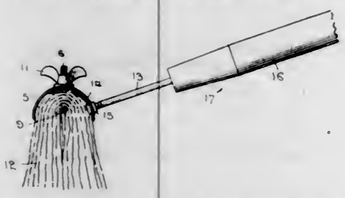
1,107,540. RAIL-JOINT CHAIR. WILLIAM J. MCKENZIE, Nederland, Colo. Filed Jan. 7, 1914. Serial No. 810,803. (Cl. 239—6.)



1. A device of the class described comprising a rail joint chair member having an upstanding portion and a base portion provided with an inclined upper face, a wedge member positioned upon said inclined upper face, a second rail joint chair member having an upstanding portion and a base portion, the upstanding portions of the rail joint chair members being adapted for engagement with the opposite faces of the web portions of meeting rail ends, the upstanding portion of the second member being also adapted to bear against one edge of said wedge member, and means for securing the upstanding portions of said members against the meeting rail ends.

2. A device of the class described comprising a rail joint chair member having an upstanding portion and a base portion provided with an inclined upper face, said base portion being provided with a channel along its inner lower longitudinal edge, a second rail joint chair member having an upstanding portion and a base portion, said base portion being adapted for engagement in said channel in the base portion of the first member, the upstanding portions of the rail joint chair members being adapted for engagement with opposite faces of the web portions of meeting rail ends, a wedge member positioned upon the inclined upper face of the base portion of the first member, and means for securing the upstanding portions of the rail joint chair members against the meeting rail ends.

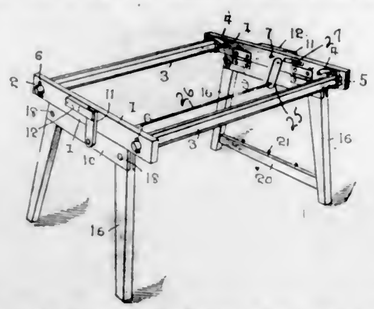
1,107,541. BROOM. KEMP MODLIN, Clio, S. C. Filed Sept. 2, 1913. Serial No. 787,767. (Cl. 15—56.)



A broom comprising a head, a securing rod pivotally connected with one end of said head and adapted to clamp broom material against said head, a handle, a fork secured therein and having its prongs diverging and secured to said head, nuts threaded on the ends of said prongs for securing the same to said head, means for clamping said material against said nuts.

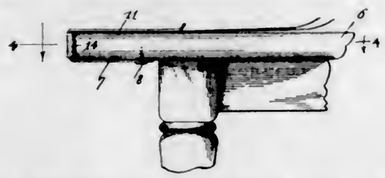
1,107,542. QUILTING-FRAME. OCRAN B. MORGAN, Liverpool, W. Va. Filed Oct. 6, 1911. Serial No. 653,181. (Cl. 45—24.)

In combination, a pair of winding shafts, end bars having spaced bearings for the ends of said shafts, cross bars, hinges connecting the inner sides of cross bars to the inner sides of the end bars, legs having their upper ends connected to the end portions of the cross bars and adapted to support said cross bars, end bars and shafts when in vertical positions, arms having their upper ends pivoted to the inner sides of the end bars medially of their ends and adapted to drop by gravity against the inner sides of the cross bars to hold said legs in vertical supporting positions, a rod connecting the lower ends of the arms and adapted to prevent an inward movement of lower ends of the arms, whereby accidental collapsing of



the legs is avoided, stops secured to the outer sides of the end bars, and latches pivoted to the cross bars and adapted to engage the stops to lock the legs against movement.

1,107,543. DESK-CLAMP. SIMON NORTON, Los Angeles, Cal., assignor to Samuel T. Norton, Los Angeles, Cal. Filed July 7, 1913. Serial No. 777,737. (Cl. 24—25.9.)



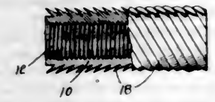
1. A desk clamp, comprising a pair of co-acting spaced members having overlapping flanges formed thereon, spring fingers on the flange of one of said members slidably engaging the flange on the other member to permit adjustment of the members in relation to each other, and a plurality of spring fingers interposed between the overlapped flanges opposing the before-mentioned spring fingers.

2. A desk clamp, comprising a pair of spaced plates having overlapping flanges formed thereon in slidable contact with each other, spring fingers on the end of the flange on one of said plates turned around the ends of the flange on the other plate to frictionally engage the latter and clamp the plates in adjustable relation to each other, and upturned spring fingers on the outermost flange interposed between the flanges opposing the end spring fingers and coöperating therewith to clamp the inner flange.

3. A desk clamp, comprising a pair of separable members of sheet metal having right angled extensions thereon, one of said extensions being apertured and having fingers on its outer edges folded upon itself to form clamps slidably engaging the extension on the other member, and fingers on the apertured extension bearing against the other extension and forming a support for sheet material rearward of the apertured extension.

4. A desk clamp, comprising a pair of spaced plates having overlapping flanges formed thereon in slidable contact with each other, spring fingers on the ends of the flange on one of said plates turned around the ends of the flange on the other plate to frictionally engage the latter and clamp the plates in adjustable relation to each other, and upturned spring fingers on the outermost flange interposed between the flanges opposing the end spring fingers and coöperating therewith to clamp the inner flange, said upturned spring fingers serving as a support for a sheet material rearward of the outer flange, said outer flange being formed with an opening to expose the sheet material.

1,107,544. WALL-SOCKET. JOHN EDWARD OGDEN, Brooklyn, N. Y. Filed Aug. 14, 1913. Serial No. 784,668. (Cl. 72—105.)



1. A wall socket comprising a hollow shell having overlapping compressible holding fins projecting from its outer surface whereby when the socket is introduced into a recess having hard walls compression of the fins serves to anchor the socket.

2. A wall socket comprising a hollow shell having parallel overlapping compressible holding fins projecting from its outer surface whereby when the socket is introduced into a recess having hard walls compression of the fins serves to anchor the socket.

3. A wall socket comprising a hollow shell having parallel overlapping transversely tapered compressible holding fins projecting from its outer surface, and means within said shell for receiving the threads of a bolt whereby when the socket is introduced into a recess having hard walls compression of the fins serves to anchor the socket.

4. A wall socket comprising a hollow shell having longitudinally extending compressible holding fins projecting at an angle to its radii from its outer surface whereby when the socket is introduced into a recess having hard walls compression of the fins serves to anchor the socket.

5. A wall socket comprising a hollow internally threaded shell having longitudinally extending overlapping compressible holding fins projecting from its outer surface whereby when the socket is introduced into a recess having hard walls compression of the fins serves to anchor the socket.

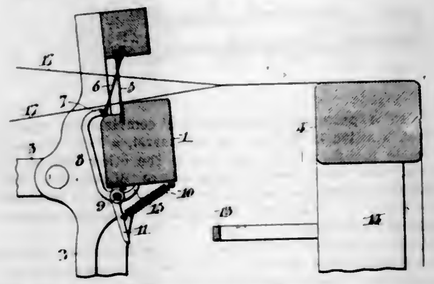
[Claims 6 to 8 not printed in the Gazette.]

1,107,545. COMPOSITION OF MATTER FOR WATERPROOFING POROUS SURFACES. WILLIAM L. O'KELLY, Long Beach, Cal. Filed Jan. 3, 1914. Serial No. 810,167. (Cl. 134—50.)

1. A composition of matter for waterproofing consisting of a mixture of uncoagulated milk, rock salt, alum, and formaldehyde in about the following proportions: one gallon milk; two ounces rock salt; one ounce alum; one and one-fourth ounces of formaldehyde.

2. A composition of matter consisting of a mixture of sweet milk, a preservative sufficient in quantity to keep the milk from souring, and approximately one ounce of alum and two ounces of salt to each gallon of milk.

1,107,546. LOOSE REED-MOTION FOR LOOMS. FREDERICK OTT, Conshohocken, Pa. Filed Sept. 29, 1913. Serial No. 792,307. (Cl. 139—77.)



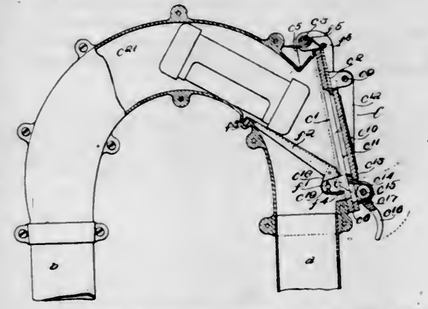
1. A loose reed comprising a fixed set of blades, a movable set of blades loosely pivoted in advance of the fixed set and extending through the said fixed set at an angle thereto, a spring retracting the movable set, and an actuating device engaging the free edge of the movable set to move it forwardly and bring its blades to the crossed beating up position with respect to the fixed blades.

2. A loose reed motion comprising a fixed set of blades, a movable set of spring-retracted blades extending through the fixed set at an angle thereto, an actuating device connected to the free edge of the movable set of blades, and a fixed abutment in the forward path of the said actuating device, whereby the two sets of reeds are brought into proper beating-up relation.

3. The combination in a loom, with the lay, of a set of fixed reed blades on the lay, an intermediate movable set of reed blades loosely pivoted to the lay and extending downwardly and rearwardly through the fixed set, a lever pivoted between its ends to the lay and to the upper end of which the loose reed section is pivoted, a spring throwing the upper end of the lever rearwardly, and a fixed abutment in the forward path of a portion of said lever to throw the loose reed section into beating-up position.

4. The combination in a loom, with the lay, the breast beam and an abutment between the beam and lay, of a reed carried by the lay and formed of a fixed set of blades, a loose set of blades pivoted at their upper ends in advance of the fixed set and extending rearwardly between the fixed set, a lever pivoted between its ends to the lower side of the lay and pivotally connected at its upper end to the lower free edge of the movable set, a stop extending from the lever to engage the lower edge of the lay, and a spring throwing the upper end of the lever forwardly, the lower end of the lever being adapted to engage said abutment as the lay moves toward the breast beam.

1,107,547. PNEUMATIC-DESPATCH-TUBE APPARATUS. ALBERT W. PEARSALL, Lowell, Mass., assignor to Lamson Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 12, 1909. Serial No. 488,301. (Cl. 243—19.)



1. In a pneumatic despatch system, means for guiding carriers along a determined path through said system, a terminal along said path and provided with an orifice through which carriers are delivered and into which carriers are inserted for transmission, a valve normally closing said orifice and adapted to be opened by the impact of a discharging carrier, means, movable into two positions to either allow carriers to continue along said path past said terminal or to divert the carrier from said path against said valve, and means to actuate said last mentioned means.

2. In a vacuo despatch system, a terminal provided with a single orifice through which carriers are delivered and into which carriers are inserted for transmission, a valve normally closing said orifice, and a switch carried by said valve for diverting the carriers from the terminal.

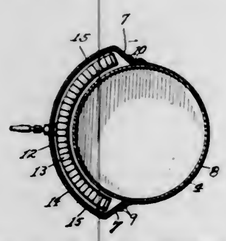
3. In a vacuo despatch system, a terminal provided with a single orifice through which carriers are delivered and into which carriers are inserted for transmission, a valve normally closing said orifice, a switch carried by said valve for diverting the carriers from the terminal, and means for removing said switch out of its normal position upon the opening of the valve for inserting carriers for transmission.

4. In a vacuo despatch system, a terminal provided with a single orifice through which carriers are delivered and into which carriers are inserted for transmission, a valve normally closing said orifice, and means for relieving the carrier from the inflow of air in the act of delivery from said terminal.

5. In a vacuo despatch system, a terminal provided with a single orifice through which carriers are delivered and into which carriers are inserted for transmission, a valve normally closing said orifice, and a switch normally across the transmission tube and carried by said valve for diverting the carriers from the terminal.

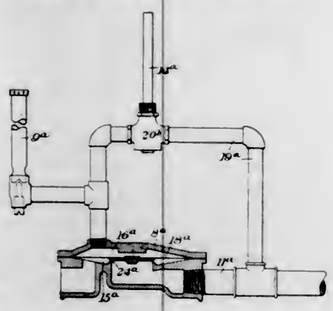
[Claims 6 to 12 not printed in the Gazette.]

1,107,548. WATER-HEATER. CLAUDE L. POST, Chicago, Ill. Filed Aug. 2, 1913. Serial No. 782,599. (Cl. 126—350.)



In combination, a tank; a wall having its main portion spaced from said tank and its longitudinal edge portions close to said tank, said wall extending around said tank but partially; a source of heat supply at the lower edge of said wall between the latter and said tank; a heat reflecting lining on the inner side of said wall and having its longitudinal edges extending under and providing tight joints between said longitudinal edges and said tank; and bands extending around said tank between the edges of said wall and binding the latter tightly against said tank, substantially as described.

1,107,549. GAS-CONTROLLING MECHANISM. GEORGE ANSLEY ROBERTSHAW, Pittsburgh, Pa., assignor to Frederick W. Robertshaw, Pittsburgh, Pa. Filed Nov. 9, 1912. Serial No. 730,401. (Cl. 126—351.)



1. In the combination, a main burner, a pilot burner, a main gas valve opening under the pressure of gas from a supply main on one side and closing by a built-up pressure of gas at its other side, a conduit leading to said other side of the main valve and independent of said valve, a supplemental valve which controls the said conduit and the building up of the closing gas pressure on said other side of the main valve, a thermostat which controls the supplemental valve to admit or cut off the gas supply to said other side of the main valve, and a supply connection for the pilot burner having a portion which leads outwardly to the pilot burner from said other side of the main valve, substantially as described.

2. In the combination, a main burner, a pilot burner, a main gas valve opening under the pressure of gas from a supply main on one side and closing by a built-up pressure of gas at its other side, a conduit leading to said other side of the main valve and independent of said valve, a supplemental valve which controls the said conduit and the building up of the closing gas pressure on said other side of the main valve, a thermostat which controls the supplemental valve to admit or cut off the gas supply to said other side of the main valve, and a supply connection for the pilot light, said supply connection leading from said conduit at a point between the supplemental valve and the said other side of the main valve, substantially as described.

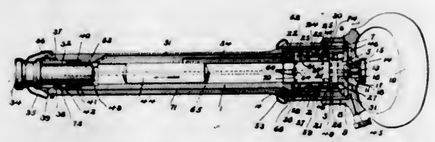
3. In combination a main gas burner and a pilot burner arranged to light each other, valve mechanism controlling the gas supply to the said burners including a main valve opening under the full pressure of gas from the main on one side thereof and closing by pressure of gas on the other side, and including also a supplemental valve controlling the said closing gas pressure, said supplemental valve controlling also the supply of gas to the pilot burner and cutting off said supply to extinguish the pilot light after the main burner has been lighted, and supplying gas to the pilot light just before the main burner is extinguished, and a thermostat controlling the said supplemental valve; substantially as described.

4. In combination a main and a pilot burner, a main gas valve, opening under the pressure of gas from the main on one side and closing by pressure of gas on its other side, a supplemental valve controlling the building up of the closing gas pressure on said other side of the main valve, and a thermostat controlling the supplemental valve to admit said closing gas pressure or to cut it off, and a connection to supply the pilot light also controlled by said supplemental valve; substantially as described.

5. A heating system comprising a main burner and a pilot burner, each of said burners being arranged to be lighted by the other, a gas supply passage for the main burner, a diaphragm chamber through which said gas supply passage leads, a diaphragm in said chamber, a valve carried by the diaphragm, for controlling said passage, a gas supply passage for the pilot burner, said passage also leading to the opposite side of the diaphragm, and a thermostatic valve located in the last named passage and controlling both the gas supply to the pilot burner and to the opposite side of the diaphragm; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,107,550. PNEUMATIC HAMMER. GEORGE LAWSON ROBERTSON, Philadelphia, Pa. Filed Apr. 15, 1914. Serial No. 832,020. (Cl. 121—20.)



1. In a pneumatic hammer, the combination with a barrel, a valve in one end of the barrel, a longitudinally movable tool-supporting bushing in the other end of the barrel, and said bushing adapted to direct live fluid against the valve to shut off the inlet of fluid to the hammer when the bushing is in its outer position, substantially as described.

2. In a pneumatic hammer, the combination with a barrel, a valve in one end of the barrel, a longitudinally movable tool-supporting bushing in the other end of the barrel, and said bushing adapted to direct live fluid against the valve to shut off the inlet of fluid to the hammer when the bushing is in its outer position, and a spring normally pressing said bushing outwardly, substantially as described.

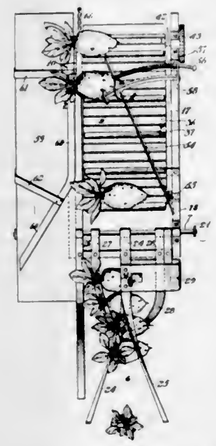
3. In a pneumatic hammer, the combination with a barrel, a valve in one end of the barrel, a longitudinally movable tool-supporting bushing in the other end of the barrel, and said bushing adapted to direct live fluid against the valve to shut off the inlet of fluid to the hammer when the bushing is in its outer position, said bushing having an annular shoulder against which live fluid is directed during the outward position of the bushing, substantially as described.

4. In a pneumatic hammer, the combination with a barrel, a valve in one end of the barrel, a longitudinally movable tool-supporting bushing in the other end of the barrel, and said bushing adapted to direct live fluid against the valve to shut off the inlet of fluid to the hammer when the bushing is in its outer position, a spring normally pressing said bushing outwardly, said bushing having an annular shoulder against which live fluid is directed during the outward position of the bushing, substantially as described.

5. In a pneumatic hammer, the combination with a barrel, a valve in one end of the barrel, a longitudinally movable tool-supporting bushing in the other end of the barrel, and said bushing adapted to direct live fluid against the valve to shut off the inlet of fluid to the hammer when the bushing is in its outer position, said bushing having an annular shoulder against which live fluid is directed during the outward position of the bushing, said fluid pressure against the bushing cut off by the inward movement of the bushing, substantially as described.

[Claims 6 to 33 not printed in the Gazette.]

1,107,551. BEET-HARVESTER. KURAKICHI SATO, Los Angeles, Cal. Filed Nov. 26, 1913. Serial No. 803,347. (Cl. 55—107.)



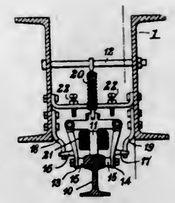
1. In a beet harvester, the combination of a conveyer, a knife, a guide placed in fixed relation to said knife, and means for sliding the beets across the conveyer against said guide.

2. In a beet harvester, a conveyer, means for sliding said beets across said conveyer, and a guide for limiting the amount of such sliding movement.

3. In a beet harvester having a conveyer which carries beets to a topping knife, an adjusting device comprising an inclined hinged bar adapted to slide the beets across said conveyer, a spring for providing an elastic tension on said bar, and a guide for guiding the beets in proper relation to the topping knife.

4. A beet harvester comprising digging means, a conveyer receiving beets from said digging means, a topping knife rotating at one side of the conveyer, means for sliding the beets across the conveyer into the path of said knife, and a guide for limiting the amount of such sliding movement.

1,107,552. BRAKING SYSTEM. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 8, 1910. Serial No. 586,086. (Cl. 188—38.)



1. A rail brake comprising a magnetizable member adapted to frictionally engage the top of the rail and having lateral projections, contact shoes pivotally suspended from the lateral projections and adapted to make frictional engagement with the sides of the rail and a winding for actuating the brake members.

2. An electrically operated rail brake comprising a main member adapted to make frictional engagement with the top of the rail and auxiliary members adapted to make frictional engagement with the sides of the rail.

3. The combination with a supporting frame, of a brake member adapted to engage the top of a rail, springs for supporting said member, brake members pivotally suspended from said spring-supported member and adapted to engage the sides of a rail, a winding for actuating said brake members, and means for preventing longitudinal movement of the brake members with reference to the supporting frame.

4. The combination with a supporting frame, of pivotally connected brake members, a winding for causing said members to engage the top and sides of a rail, and springs for suspending said members from the supporting frame.

5. The combination with a supporting frame, of pivotally connected brake members adapted to engage the top and sides of a rail, supporting springs for said members, an actuating winding, and means for preventing independent longitudinal movement of said members.

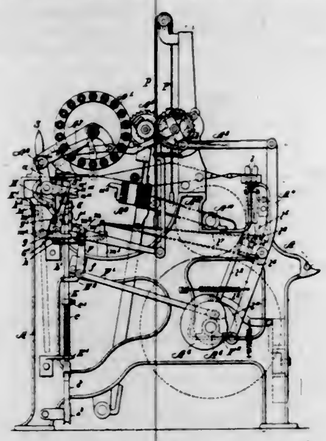
1,107,553. LOOM. HARRY WITTER SMITH, North Grafton, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed May 10, 1905. Serial No. 259,690. (Cl. 139—85.)

1. In an automatic loom, drop or shifting shuttle boxes at one end of the lay, having shuttles containing filling of different kinds or colors, a single shuttle box at the other end of the lay, weft replenishing mechanism, to supply different kinds or colors of filling, adjacent to the single box, and operatively connected with the drop box mechanism, and filling detector mechanism, to feel through the side of the shuttle at the single box end, and upon the substantial exhaustion of filling in the active shuttle put into operation the weft replenishing mechanism.

2. In an automatic loom having shuttles with slotted sides, containing filling carriers of different kinds or colors, drop or shifting shuttle boxes at one end of the lay, a single shuttle box at the other end of the lay, weft replenishing mechanism, to supply different kinds or colors of filling, adjacent to the single box, and operatively connected with the drop box mechanism, a feeler, to feel and detect the condition of the filling in the active shuttle, and mounted on a stationary part of the loom at the single box end of the loom.

3. In an automatic loom having shuttles with slotted sides, containing filling carriers of different kinds or colors, drop or shifting shuttle boxes at one end of the lay, a single shuttle box at the other end of the lay, weft

replenishing mechanism adjacent to the single box, and operatively connected with the drop box mechanism, a mechanical feeler also adjacent to the single box, and mounted on a stationary part of the loom, to feel and detect the condition of the filling in the active shuttle.

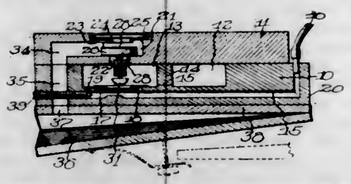


4. In a loom, the following instrumentalities, a lay, drop or shifting shuttle boxes, weft replenishing mechanism to supply different kinds or colors of filling, and operatively connected with the drop box mechanism, said weft replenishing mechanism put into operation by a feeler, and said feeler, to feel the condition of the filling, and detect only on the nonreplenishing pick of the loom.

5. In a loom, the following instrumentalities, a lay, drop or shifting shuttle boxes, weft replenishing mechanism, to supply different kinds or colors of filling, and operatively connected with the drop box mechanism, said weft replenishing mechanism put into operation by a feeler, and said feeler, to detect the near exhaustion of the kind or color of filling in any of the shuttles, at the forward movement of the lay, except at the beat when the weft is to be replenished.

[Claims 6 to 12 not printed in the Gazette.]

1,107,554. PNEUMATIC ACTION. ADOLF A. STEINHILBER, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Aug. 10, 1911. Serial No. 643,290. (Cl. 84—128.)



1. A wind-chest comprising two members secured together, one of said members having a wind-chest proper formed therein and opening through one face thereof and also a chamber communicating with the chest and opening through the same face, the other member forming a closure for the chamber and having itself a chamber opening through the face which is adjacent the other member, the last said chamber having a direct communication with the first recited chamber, a valve in one of the said chambers for controlling the communicating passage, the last said chamber having communication with atmospheric air and also with the power pneumatic, a diaphragm in the first said chamber for actuating the valve, a tracker board duct leading to one side of the diaphragm and through the walls of the first said chamber, a bleed hole duct connecting the other side of the diaphragm with the tracker board duct, and an adjustable valve accessible from the outside of said wind chest for varying the size of the said bleed hole duct.

2. A wind-chest comprising two members secured together, one of said members having a wind-chest proper formed therein and opening through one face thereof and also a chamber communicating with the chest and opening through the same face, the other member forming a closure for the chamber and having itself a chamber opening through the face which is adjacent the other member, the last said chamber having a direct communication with the first recited chamber, a valve in one of the said chambers for controlling the communicating passage, a valve stem for the valve, a flexible connection between the valve and stem at one end of said stem, a guide for the stem, the last said chamber having communication with atmospheric air and also with the power pneumatic, a diaphragm in the first said chamber independent of but adapted to engage the other end of said stem for actuating the valve, and a tracker board duct leading to one side of the diaphragm and through the walls of the first said member.

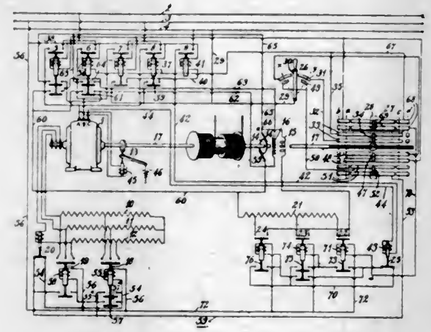
3. In a device of the class described, the combination of a wind chest, a chamber within the walls of the chest having communication with the wind chest, a second chamber within the walls of the chest, there being a direct communicating passage between the two chambers, the second said chamber having an opening communicating with atmospheric air, a valve in the second said chamber for controlling said opening, and also the passage between the chambers, a valve stem for the valve, a flexible connection between the valve and one end of said stem, the wall of the first said chamber between the two chambers having a groove extending across the said communicating passage, a guide for the valve stem seated in the groove, the second said chamber also having communication with the power pneumatic, an independent diaphragm in the first said chamber adapted for separable engagement with the other end of said stem for actuating the valve, a tracker board duct leading to one side of the diaphragm, and a bleed hole duct forming a communicating passage between the tracker board duct and the first said chamber, and a valve operable from the front of the wind chest for regulating said bleed hole duct.

4. In a device of the class described, the combination of two members secured together, one of said members being recessed to form two adjacent chambers opening through one face thereof, and separated from each other by a partition wall, said wall being recessed through the same face of the member to form a communicating passage between the chambers, one of said chambers constituting a suction chamber, said member being also provided with a tracker board duct extending under the chambers and having communication with the other of said chambers, a diaphragm within the last said chamber and extending across the tracker board duct communication, the other of said members being recessed to form a valve chamber opening through opposite faces and with one of the openings communicating with the diaphragm chamber, a valve in the valve chamber for controlling both of the openings of said chamber, a valve stem projecting in to the diaphragm chamber to be acted upon by the diaphragm, said valve stem being independent of said diaphragm, both of said members being provided with a communicating passage within their walls leading from the valve chamber and through the face of the first said member opposite to the face through which the diaphragm suction chambers open, a portion of the second said member extending across and forming a closure for the said suction chamber, and a guide for the valve stem.

5. In a device of the class described, the combination of two members secured together, one of said members being recessed to form two adjacent chambers opening through one face thereof, and separated from each other by a partition wall, said wall being recessed through the same face of the member to form a communicating passage between the chambers, one of said chambers constituting a suction chamber, said member being also provided with a tracker board duct extending under the chambers and having communication with the other of said chambers, a diaphragm within the last said chamber and extending across the tracker board duct communication, the other of said members being recessed to form a valve chamber opening through opposite faces and with one of the openings of said chamber, a valve in the valve chamber for controlling both of the openings of said chamber, a valve stem projecting in to the diaphragm chamber to be acted upon by the diaphragm, both of said members being provided with a communicating passage within their walls leading from the valve chamber and through the face of the first said member opposite to the face through which the diaphragm and suction chambers open, a portion of the second said member extending across and forming a closure for the said suction chamber, the face of the second said member extending across the diaphragm chamber being grooved across the opening between the valve and diaphragm chambers, and a guide for the valve stem seated in said groove.

[Claims 6 to 8 not printed in the Gazette.]

1,107,555. CONTROL SYSTEM FOR ELECTRIC MOTORS. CLARENCE G. TARKINGTON, Chicago, Ill., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 9, 1911. Serial No. 626,130. (Cl. 172—152.)



1. A control system comprising a driven member, an alternating current driving motor connected thereto, a direct current generator operatively connected to the motor and automatic means for establishing a load circuit for the generator, gradually decreasing the resistance of said circuit and interrupting the supply of energy to the alternating current motor at a predetermined limit in the movement of the driven member.

2. A control system comprising an alternating current motor, a generator and a limit switch operatively connected thereto, and automatic means that is set in operation by the limit switch for successively establishing a load circuit for the generator and interrupting the motor circuit at predetermined limits of motor operation.

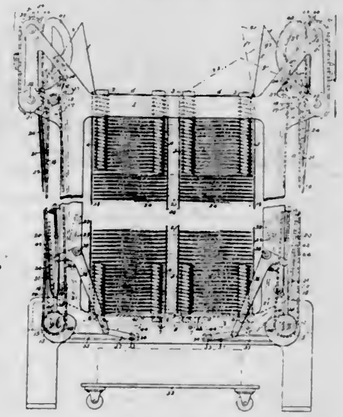
3. A control system comprising a driven member, a motor operatively connected thereto, a generator, means for establishing a generator load circuit and controlling the generator load, and means dependent upon the current traversing the motor circuit for automatically delaying the increase in the generator load.

4. In a hoist controller, the combination with an alternating current driving motor, a generator operatively connected thereto and a limit switch for establishing the generator circuit, of automatic means dependent upon the current traversing the primary circuit of the motor for reducing the resistance in the generator circuit.

5. In a control system, the combination with a driven member, an alternating current electric motor, a direct current generator and a limit switch, the driven member, the generator and the moving element of the limit switch being operatively connected to the motor, of means dependent upon the limit switch for completing a load circuit of the generator, and means dependent upon the current traversing the motor circuit for governing the generator load.

[Claims 6 to 9 not printed in the Gazette.]

1,107,556. SLIP-SHEET MACHINE FOR PRINTING-PRESSES. FREDERICK M. TURCK, New York, N. Y. Filed Nov. 12, 1913. Serial No. 800,529. (Cl. 34—11.)



1. An endless flexible slip-sheet web foldable transversely in a zigzag manner and comprising a series of hingedly connected sheet-supporting sections and cover sections, each thereof consisting of a plurality of flexible sheet members connected together by spaced lines of adhesive extending transversely of said web.

2. An endless flexible slip-sheet web foldable transversely in a zigzag manner and comprising a series of hingedly connected sheet-supporting sections and cover sections, each thereof consisting of a central flexible sheet member and flexible-sheet facing members disposed on opposite sides of said central member and secured thereto by spaced lines of adhesive extending transversely of said web.

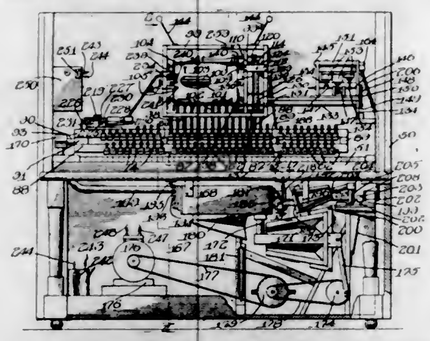
3. An endless flexible slip-sheet web foldable transversely in a zigzag manner and comprising a series of hingedly connected sheet-supporting sections and cover sections, each thereof consisting of a central member of paper having its fiber-grain extending transversely of said web, and paper facing members disposed on opposite sides of said central member and having its fiber-grain extending longitudinally of said web and connected to said central member by spaced lines of adhesive extending transversely of said web.

4. An endless flexible slip-sheet web foldable transversely in a zigzag manner and comprising a series of sheet-supporting sections and cover sections, each thereof consisting of a central member formed of paper having its fiber-grain extending transversely of said web, fabric hinge sections connecting said series of central members, and paper facing members disposed on opposite sides of said central members and having its fiber-grain extending longitudinally of said web and connected to said central members by spaced lines of adhesive extending transversely of said web.

5. An endless flexible slip-sheet web foldable transversely in a zigzag manner and comprising a series of hingedly connected sheet-supporting sections and cover sections, and eyelets formed in each of said sections.

[Claims 6 to 12 not printed in the Gazette.]

1,107,557. PLAYING ATTACHMENT FOR MUSICAL INSTRUMENTS. EUGENE T. TURNEY, Chicago, Ill., assignor to The Turney Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 23, 1906. Serial No. 331,740. (Cl. 84—178.)



1. In a device of the class described, the combination of a tracker board provided with a series of air ducts, a series of independent pneumatic actions, each including a valve device and constituting a complete detachable unit, connections leading from the air ducts in the tracker board to the respective pneumatics, means for independently supporting each of said actions, and a piano action having a disconnected operative relation to said pneumatic actions.

2. In a device of the class described, the combination of a tracker board provided with a series of air ducts, a series of independent pneumatic actions, each including a valve device and constituting a complete detachable unit, connections leading from the air ducts in the tracker board to the respective pneumatics, a support, means for independently removably securing each of said actions to the support, and a piano action having a disconnected operative relation to said pneumatic actions.

3. In a device of the class described, the combination of a tracker board provided with a series of air passages, means forming a duct or channel, a series of independent pneumatic actions supported by said means and having communication with the duct or channel, connections between the air passages in the tracker board and the respective actions, each action including a valve device and constituting a complete unit detachable from said supporting means, and a piano action having a disconnected operative relation with said units.

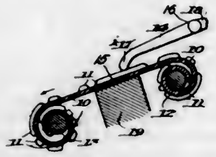
4. In a device of the class described, the combination of a tracker board provided with a series of air passages, a series of pneumatic actions, each including a valve device inseparable therefrom and constituting therewith an independent detachable unit detachably connected with said action, a connection between the air passages in the tracker board and the respective actions, and a connection between all of said actions.

5. In a device of the class described, the combination of a tracker-board having a series of air passages, an air duct or channel, a series of independent pneumatic actions, means for removably securing said actions to the duct or channel, connections between said duct or channel and the pneumatics, said connections also serving as supports for the pneumatics, and connections between the air passages in the tracker-board and the respective actions.

[Claims 6 to 27 not printed in the Gazette.]

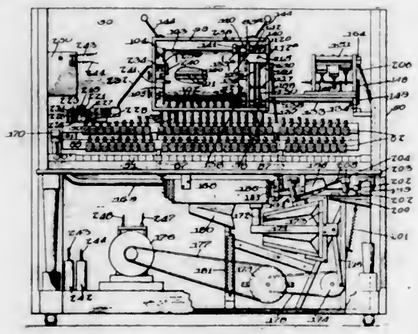
1,107,558. MUSIC SHEET OR RECORD FOR PLAYING ATTACHMENTS FOR MUSICAL INSTRUMENTS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Aug. 26, 1907. Serial No. 390,100. (Cl. 84—163.)

1. A music record comprising a continuous elongated sheet of flexible material of uniform thickness and width capable of being freely wound upon and unwound from a spool or drum, and a plurality of separate pieces of material of varying length secured directly to one face of said sheet and forming projections rising above said face for controlling sound producing instrumentalities.



2. A music record comprising an imperforate elongated sheet of flexible material of uniform width and thickness capable of being freely wound and unwound from a spool or drum, and having a plurality of projections of varying length arranged in rows longitudinally of the sheet and rising above one face of said sheet for controlling sound producing instrumentalities.

1,107,559. WINDING AND REWINDING MECHANISM FOR MUSIC SHEETS OR RECORDS. EUGENE T. TURNEY, Rock Island, Ill., assignor to The Turney Company, Chicago, Ill., a Corporation of Illinois. Original application filed Aug. 23, 1906, Serial No. 331,740. Divided and this application filed Sept. 23, 1907. Serial No. 394,020. (Cl. 84—166.)



1. In a device of the class described, the combination of a tracker-board having a series of air passages therethrough, a plurality of individual primary pneumatics, connections between the air passages in the tracker-board and the respective primary pneumatics, an exhaust mechanism for operating the primary pneumatics, a record strip adapted to pass over the air passages in the tracker-board for controlling the primary pneumatics, means for feeding the record, a motor for operating the feeding means and the exhaust mechanism, means operatively related to the record for controlling the motor, means for rewinding the record, means for shifting the rewinding mechanism into operation, and means operatively related to the last said means and controlled by the record for preventing the operation of said shifting means while the record is being fed.

2. In a device of the class described, the combination of a tracker-board having a series of air passages therethrough, a plurality of individual primary pneumatics, connections between the air passages in the tracker-board and the respective primary pneumatics, an exhaust mechanism, for operating the primary pneumatics, a record strip adapted to pass over the air passages in the tracker-board for controlling the primary pneumatics, means for feeding the record, a motor for operating the feeding means and the exhaust mechanism, means operatively related to the record for controlling the motor, means for rewinding the record, means for throwing the feeding mechanism out of operation and the rewinding mechanism into operation and means operatively related to the last said means and controlled by the record for preventing the operation of the last said means during the feeding of the record.

3. In a device of the class described, the combination of a tracker board having a series of air passages therethrough, a plurality of individual primary pneumatics, connections between the air passages in the tracker board and the respective primary pneumatics, an exhaust mechanism for operating the primary pneumatics, a record strip adapted to pass over the air passages in the trackerboard for controlling the primary pneumatics, means for feeding the record, a motor for operating the feeding means and the exhaust mechanism, means controlled by the record and adapted to be set for controlling the motor, means for rewinding the record, means adapted to be tripped by the record for throwing the feeding mechanism out of operation and the rewinding mechanism into operation and without interrupting the motor, and means for locking said mechanisms in their adjusted positions.

4. In a device of the class described, the combination of a tracker-board having a series of air passages therethrough, a plurality of individual primary pneumatics, connections between the air passages and the respective primary pneumatics, an exhaust mechanism for operating the primary pneumatics, a record strip adapted to pass over the openings in the tracker-board for controlling the pneumatics, a motor, a flexible shaft driven by the motor for feeding the record, means operatively related to the shaft for rewinding the record, positive means tending normally to bend the shaft to throw the feeding mechanism out of operation and for throwing the rewinding mechanism into operation, means operatively related to the said bending means and controlled directly by the record for controlling the former, and a motor for operating the first said motor and the exhaust mechanism.

5. In a device of the class described, the combination of a tracker-board having a series of air passages therethrough, a plurality of individual primary pneumatics, connections between the air passages and the respective primary pneumatics, an exhaust mechanism for operating the primary pneumatics, a record strip adapted to pass over the openings in the tracker-board for controlling the pneumatics, a motor, a flexible shaft driven by the motor for feeding the record, means operatively related to the shaft for rewinding the record, positive means tending normally to bend the shaft to throw the feeding mechanism out of operation and for throwing the rewinding mechanism into operation, means controlled directly by the record for controlling the said bending means, a motor for operating the first said motor and the exhaust mechanism, and means operatively related to the record for controlling the last said motor.

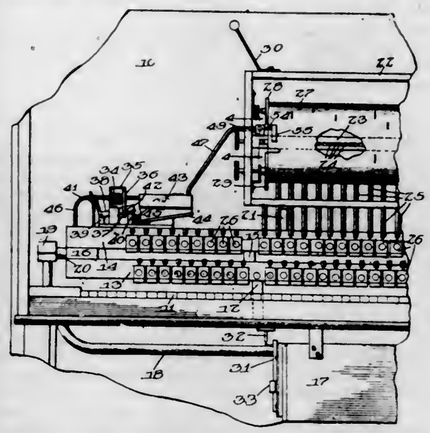
[Claims 6 to 36 not printed in the Gazette.]

1,107,560. MUSIC SHEET OR RECORD. EUGENE T. TURNEY, Rock Island, Ill., assignor to The Turney Company, Chicago, Ill., a Corporation of Illinois. Original application filed Aug. 23, 1906, Serial No. 331,740. Divided and this application filed Sept. 23, 1907. Serial No. 394,021. (Cl. 84—166.)

1. The combination of a record, operating mechanism for the record including a valve, a circuit in which the operating mechanism is included, and means on the record for positively operating the valve to break the circuit through the said operating mechanism.

2. The combination of a record, operating mechanism for the record including a valve, a circuit in which the operating mechanism is included, and a projection on the record for positively operating the valve to break the circuit through the said operating mechanism.

3. The combination of a record, the body portion of which is provided with means for controlling note sounding instrumentalities, operating mechanism for the record including a valve, a circuit in which the operating mechanism is included and means on the record independent of the note sounding means for positively operating the valve to break the circuit through the said operating mechanism.

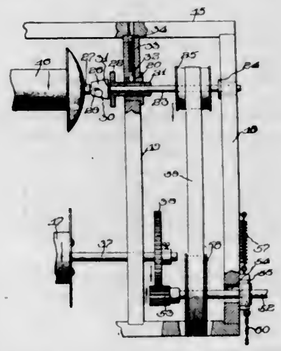


4. The combination of a record, operating mechanism for the record including a valve, yielding means for normally seating the valve, a circuit within which the operating mechanism is included, and means on the record for unseating the valve against the tension of the yielding means for breaking the circuit through the operating mechanism.

5. The combination of a record, operating mechanism for the record including a valve, yielding means for normally seating the valve, a circuit within which the operating mechanism is included, and a projection on the record adjacent the edge thereof for unseating the valve against the tension of the yielding means for breaking the circuit through the operating mechanism.

[Claim 6 not printed in the Gazette.]

1,107,561. WINDING AND REWINDING MECHANISM FOR MUSIC SHEETS OR RECORDS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Sept. 23, 1908. Serial No. 454,377. (Cl. 84—166.)



1. A device of the class described, including a suction chest, pneumatic actions having communication therewith, record feeding mechanism, a pneumatic motor for operating said mechanism, exhaust mechanism common to the said actions and the motor, a governor in the connection between the motor and the exhaust mechanism, said motor also having a direct connection with the exhaust mechanism, pneumatically actuated means having communication with the suction chest whereby the said means

will be actuated by variations of pressure in said chest for closing this said direct connection, and means for shifting the feeding mechanism for rewinding, and mechanism for causing said pneumatically actuated means to operate in unison with the last said means for controlling the direct connection between the motor and the exhaust mechanism for causing the suction to act directly upon the motor.

2. A device of the character described including a suction chest pneumatic actions communicating therewith, record feeding mechanism, a pneumatic motor for operating said mechanism, exhaust mechanism common to the said actions and the motor, a governor in the connection between the motor and the exhaust mechanism, said motor also having a direct connection with the exhaust mechanism, pneumatically controlled means having communication with said chest whereby said means will be actuated by variations of pressure in the said chest for normally closing the said connection and for establishing a direct connection between the motor and the exhaust mechanism for causing the suction to act directly upon the motor, means for shifting the feeding mechanism for re-winding, and means for preventing the action of the exhaust mechanism upon the pneumatic actions when the re-winding mechanism is shifted.

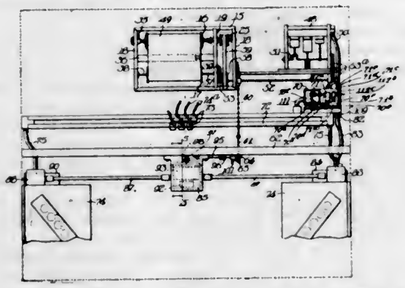
3. A device of the class described, including a suction chest, pneumatic actions in communication with the chest, record feeding mechanism, a pneumatic motor for operating said mechanism, exhaust mechanism common to said actions and the motor, a governor in the connection between the motor and the exhaust mechanism, said motor also having a direct connection with the exhaust mechanism, means for closing the said direct connection, means for shifting the feeding mechanism, the said closing means being adapted to be opened to establish a direct connection between the motor and the exhaust mechanism for causing the suction to act directly upon the motor, pneumatically actuated means in communication with the suction chest whereby said means will be actuated by variations of pressure in said chest for controlling the last recited means and means operatively related to the said shifting means and operating in unison therewith for preventing the action of the exhaust mechanism upon the pneumatic actions.

4. A device of the class described, including a wind trunk, pneumatic actions communicating therewith, record feeding mechanism, a pneumatic motor for operating said mechanism, exhaust mechanism common to the said actions and the motor, a governor in the connection between the motor and the exhaust mechanism, said motor also having a direct connection with the exhaust mechanism, means for closing the said direct connection, means for shifting the feeding mechanism, the said closing means being adapted to be opened to establish a direct connection between the motor and the exhaust mechanism for causing the suction to act directly upon the motor, pneumatically actuated means having communication with said wind trunk whereby the last said means may be actuated by variations of pressure in said trunk for automatically controlling the said closing means, means for preventing the action of the exhaust mechanism upon the pneumatic actions, said means including a valve, and means operatively related to the said shifting means for controlling the valve.

5. A device of the character described, including a tracker board, a record holding and a record receiving spool located respectively on opposite sides of the tracker board, means for feeding the record across the board including a shaft having operative connection with said record receiving spool, a pulley fixed on the shaft for rotation therewith, a pulley operatively related to the record holding spool, a belt passing over the pulleys, said belt being loose and adapted to slip upon the pulleys when the record receiving spool is rotated, to permit the record to be pulled from said spool and fed upon the said receiving spool, and means for disconnecting the shaft from said receiving spool and tightening the belt to drive the other spool.

[Claims 6 to 8 not printed in the Gazette.]

1,107,562. WINDING AND REWINDING MECHANISM FOR MUSIC SHEETS OR RECORDS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Original application filed Sept. 23, 1908, Serial No. 454,377. Divided and this application filed May 7, 1909. Serial No. 494,639. (Cl. 84—166.)



1. A device of the character described including pneumatic actions, a pneumatic record operating motor, adapted to be exhausted to operate the same, exhaust mechanism common to the actions and the motor for exhausting both of said elements, and including a connection between the motor and the exhaust mechanism, means located in said connection and through which the air from the motor is exhausted for controlling the motor, cut-off means in the connection from the pneumatics to exhaust mechanism for cutting off the suction on the pneumatics, and means automatically responsive to said cut-off means for causing the suction to act directly upon the motor to prevent the action through the said controlling means, the last said means including a direct passage from the motor to the exhaust mechanism and a valve for controlling said passage.

2. A device of the character described including pneumatic actions, a pneumatic record operating motor, adapted to be exhausted to operate the same, exhaust mechanism common to the actions and the motor for exhausting both of said elements, and including a connection between the motor and the exhaust mechanism, means inserted in said connection and through which the air from the motor is exhausted for controlling the motor, means for causing the suction to act directly upon the motor to prevent the action through the said controlling means, the last said means including a direct passage from the motor to the exhaust mechanism, a valve for controlling the passage, a cut-off valve for preventing the exhaust mechanism from acting on said pneumatic actions, and a pneumatically controlled valve responsive to the operation of said cut-off valve for actuating said controlling valve.

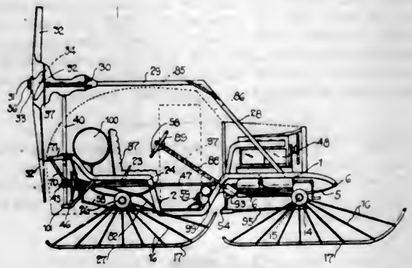
3. A device of the character described including pneumatic actions, a pneumatic record operating motor, means whereby the motor may be exhausted to operate the same, exhaust mechanism common to the actions and the motor for exhausting both of said elements, and including independent connections, means located in one of said connections, and through which the air from the motor is exhausted for controlling the motor, a cut-off valve located in the other connection for controlling the suction to the pneumatics, means for causing the suction to act directly upon the motor to relieve the action through the said controlling means, the last said means including a direct passage from the motor to the exhaust mechanism, a valve for controlling the said direct passage, an operating pneumatic for seating the valve to close the direct passage to cause the suction to act through the said controlling means and for permitting the valve to open to cause the suction to act through the said direct passage, and means for rendering said operating pneumatic responsive to said cut-off valve.

4. A device of the character described including pneumatic actions, a pneumatic record operating motor, adapted to be exhausted to operate the same, exhaust mechanism common to the actions and the motor for exhausting both of said elements, and including a connection between the motor and the exhaust mechanism, means located in the connection and through which the air from the motor is exhausted for controlling the motor, a cut-off valve for controlling said pneumatic actions, means for causing the suction to act directly upon the motor to relieve the action through the said controlling means, the last said means including a direct passage from the motor to the exhaust mechanism, a valve for controlling said passage, a collapsible pneumatic, means operatively related to the valve and adapted to be engaged by the pneumatic for seating the valve to close the said passage, and means for causing said collapsible pneumatic to respond automatically and unseat said valve when the cut-off valve is operated.

5. A device of the character described including pneumatic actions, a pneumatic record operating motor, adapted to be exhausted to operate the same, exhaust mechanism common to the actions and the motor for exhausting both of said elements, and including a connection between the motor and the exhaust mechanism, means located in said connection and through which the air from the motor is exhausted to control the motor, valve mechanism for preventing the action of the exhaust mechanism upon said pneumatic actions, and means responsive to the operation of said valve mechanism for preventing the suction through said controlling means and causing it to act directly upon said motor.

[Claim 6 not printed in the Gazette.]

1,107,563. MOTOR-DRIVEN VEHICLE. LOUIS F. E. VONDRACHEK, Valley City, N. D. Filed Dec. 6, 1913. Serial No. 805,126. (Cl. 21—47.)

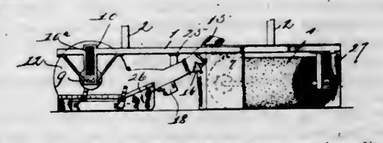


1. A device of the character described comprising a body, runners on which such body is supported, a frame projecting upwardly and rearwardly from the front end of the body, a horizontally disposed elongated member secured to the upper extremity of the frame and projecting rearwardly of the body, propelling means operatively supported by the free extremity of the elongated member, and means for operating such propelling means.

2. A device of the character described comprising a body, runners on which such body is supported, a frame projecting upwardly and rearwardly from the front end of such body, a bearing carried by the free extremity of the frame, a horizontally disposed shaft rotatably supported in such bearing, a propeller fixed to such shaft and disposed rearwardly of the body, a vertical shaft mounted in such bearing and the frame, and means for imparting axial movement to the vertical shaft.

1,107,564. VACUUM STREET-SWEEPER. EDWARD K. WARD, Davenport, Iowa. Filed Feb. 4, 1910. Serial No. 542,009. (Cl. 15—17.)

1. In a street sweeper brushes arranged at an angle to each other having their adjacent ends spaced apart, a casing arranged to the rear of said brushes and in alinement with the space between them, a brush in said casing, a suction pipe in communication with said casing, an upwardly opening spring pressed valve controlling the passage to said suction pipe, and means for rotating said brushes.

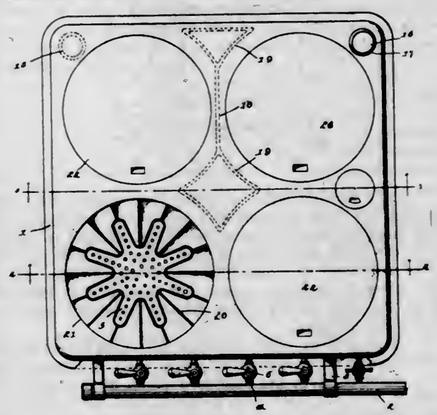


2. In a street sweeper, means for throwing dirt in a windrow, a brush adapted to travel in said windrow, a casing partially inclosing said brush, said casing terminating in a suction pipe section, a suction pipe connected to said section, a flap valve regulating admission of air to said pipe section, plates hinged in said casing, a fabric connecting the sides of said plates, said plates and said fabric forming a contracted mouth, and being arranged in advance of said flap valve, as and for the purpose set forth.

3. A device of the kind described comprising two rotatable brushes arranged at an angle to the line of travel and to each other having their inner ends spaced apart, a casing arranged directly in the rear of the inner ends of said brushes and being downwardly open, a brush arranged in said casing, a suction pipe attached to said casing, and a spring pressed valve arranged in said casing and controlling passage of sweepings between said casing and said pipe.

4. In a device of the kind described a casing, a suction pipe connected thereto, means for closing said pipe upon loss of a vacuum therein, a vertically movable hinged trough arranged within said casing, and a brush arranged within the casing adapted to deliver sweepings to said trough, said trough serving as a receptacle to hold said sweepings during closure of the suction pipe.

1,107,565. WATER-HEATER FOR GAS-RANGES. RICHARD G. WHITEHEAD, Trenton, N. J. Filed Sept. 24, 1913. Serial No. 791,621. (Cl. 126—53.)



1. A stove top embodying a top wall, a bottom wall, an intermediate wall parallel to and located between the top and bottom walls, all of said walls being formed with vertically alined holes occurring above the stove burners, marginal webs connecting the bottom and intermediate walls around said holes and around the outer edges or rim of the stove top forming a water heating jacket having an inlet and an outlet, a marginal web connecting the outer edges of the top and intermediate walls and forming a heat distributing chamber, and lids for said holes.

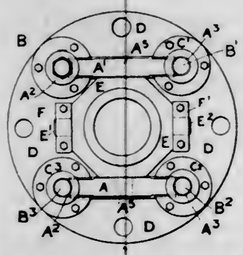
2. A stove top embodying a top wall, a bottom wall, an intermediate wall parallel to and located between the top and bottom walls, all of said walls being formed with vertically alined holes occurring above the stove burners,

marginal webs connecting the bottom and intermediate walls around said holes and around the outer edges or rim of the stove top forming a water heating jacket having an inlet and an outlet, a marginal web connecting the outer edges of the top and intermediate walls and forming a heat distributing chamber, lids for said holes, and lid-supporting grate bars on the upper face of said intermediate wall.

3. A stove top embodying a top wall, a bottom wall, an intermediate wall parallel to and located between the top and bottom walls, all of said walls being formed with vertically alined holes occurring above the stove burners, marginal webs connecting the bottom and intermediate walls around said holes and around the outer edges or rim of the stove top forming a water heating jacket having an inlet and an outlet, a marginal web connecting the outer edges of the top and intermediate walls and forming a heat distributing chamber, lids for said holes, and a water deflecting and circulating web uniting the bottom and intermediate walls.

4. A stove top embodying a top wall, a bottom wall, an intermediate wall parallel to and located between the top and bottom walls, all of said walls being formed with vertically alined holes occurring above the stove burners, marginal webs connecting the bottom and intermediate walls around said holes and around the outer edges or rim of the stove top forming a water heating jacket having an inlet and an outlet, a marginal web connecting the outer edges of the top and intermediate walls and forming a heat distributing chamber, lids for said holes, and a water deflecting and circulating web uniting the bottom and intermediate walls and having portions thereof concentric to the stove holes.

1,107,566. LATHE-DOG. CECIL DANIEL ANDREW, Manchester, England. Filed June 30, 1913. Serial No. 776,502. (Cl. 82—40.)



1. In a turning lathe, a device for engaging with and driving the work comprising a face plate, a frame pivotally mounted upon the face plate, dogs adapted to engage with the work, and means whereby the said dogs may receive movement in a direction transversely of the axis of the pivotally mounted frame and normally to the face plate the said means being movably mounted upon the said pivoted frame.

2. In a turning lathe, a device for engaging with and rotating the work comprising a face plate, a frame pivotally mounted upon the said face plate, dogs adapted to engage with the work and mounted upon the face plate, and means pivoted upon the pivoted frame so as to rock about an axis transversely of the axis of the frame and to move the dogs in directions that lie normally to the face plate.

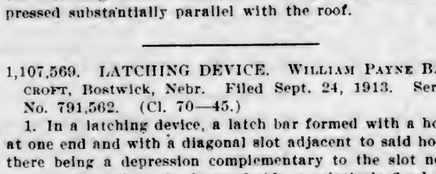
3. In a turning lathe, a device for engaging with and rotating the work comprising a face plate, a rocking member mounted upon the face plate, dogs adapted to engage with the work and mounted upon the face plate, and dog-actuating members mounted upon the frame and adapted to rock about axes situated transversely of the axis about which the frame rocks.

4. In a turning lathe, a work-engaging device comprising dogs arranged in pairs, guides for the said dogs, a face plate supporting the said guides, a rocking frame mounted upon the face plate, and beams the opposite ends of each of which act upon each pair of dogs, each of the said beams being adapted to rock about an axis situated transversely of the axis of the rocking frame.

5. In a turning lathe, a work-engaging device comprising a number of dogs, rocking means for actuating the said dogs, and a rocking support for the dog-actuating means the axis of the said support being arranged transversely of the axis of the dog-actuating means.

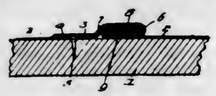
[Claims 6 to 8 not printed in the Gazette.]

1,107,567. SPRING. JOSEPH H. ATHONS, Los Angeles, Cal., assignor to Cambria Spring Company, Los Angeles, Cal., a Corporation of California. Filed Feb. 26, 1912. Serial No. 679,819. (Cl. 21—13.)



In a vehicle spring construction, the combination of a flanged axle having a seat provided with apertures and a socket, an elliptical leaf spring having positioning indentations, an elongated saddle to receive the outer bowed member of said springs and the positioning indentation thereon, said saddle operating to extend the crystallizing area of the spring leaves, a lock on the underside of said saddle adapted to extend into the socket on the axle to position the spring, apertured extensions on each side of said saddle adjacent its ends and extending beyond the sides of the springs, threaded clips adapted to embrace said springs and extend through the apertures in said saddle, nuts on said clips to permanently bind the saddle and springs together, and separate clips encompassing the spring leaves and engaged with the axle through the apertures therein, said last named clips extending on opposite sides of the saddle out of engagement therewith.

1,107,568. ROOFING. ALFRED P. BAMBERGER and WINTFIELD SCOTT GUISTWHITE, New Cumberland, Pa., assignors of one-third to Benjamin F. Garver, New Cumberland, Pa. Filed Nov. 6, 1913. Serial No. 799,496. (Cl. 108—22.)

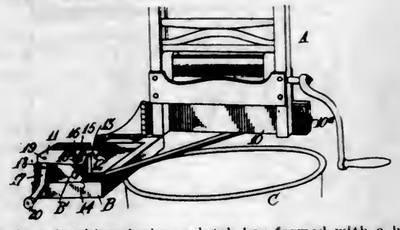


In a roof, a fastening member having a portion parallel with the roof and secured directly to the upper face thereof, said member having its free edge bent upon itself to form a hook, a covering strip and an adjacent covering strip, the first-named strip and the fastener being turned up to form shoulders against which the edge of the adjacent covering strip abuts and the edge of the adjacent sheet bent over and the fastener and the first-named sheet having interlocking portions, the interlocked portions of the fastening member and said covering strips being compressed substantially parallel with the roof.

1,107,569. LATCHING DEVICE. WILLIAM PAYNE BANCROFT, Bostwick, Nebr. Filed Sept. 24, 1913. Serial No. 791,562. (Cl. 70—45.)

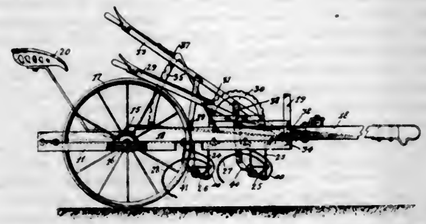
1. In a latching device, a latch bar formed with a hook at one end and with a diagonal slot adjacent to said hook, there being a depression complementary to the slot near one end thereof, at the forward side, a relatively fixed pin extending into said slot, and a lever pivotally connected with the latch bar at the end opposite the hook, the lever and latch bar being movable to positions with the pivotal connection of the said bar approximately dead centered with the fulcrum.

2. In a latching device, a latch bar, a lever pivotally connected with the bar near one end and fulcrumed on a relatively fixed support, the said bar having a hook formation at the end opposite the lever for latching engagement with the article to be latched, and permanent supporting and guiding means for the latch bar between the hook formation thereon and the lever, said means comprising a diagonal slot in the said bar, additional to the hook formation, and a relatively fixed pin extending into the said slot and affording support for the bar when the bar is not in latching engagement.



3. In a latching device, a latch bar formed with a hook at one end presenting a depression, the inner wall of said depression being disposed diagonally to the hook, the latch bar furthermore having a diagonal slot approximately parallel with the said diagonal wall, a relatively fixed pin extending into said slot, and a lever pivotally connected with the latch bar at the end opposite the hook.

1,107,570. CULTIVATOR. ANDREW J. BARNHART, Azusa, Cal. Filed Aug. 25, 1913. Serial No. 786,401. (Cl. 97—34.)



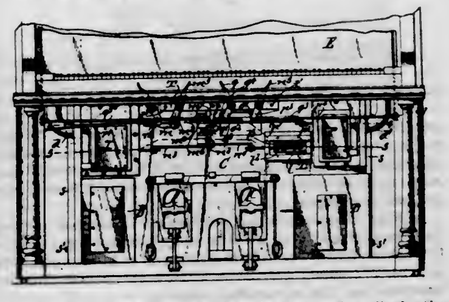
1. In a cultivator having a frame and a wheeled support therefor, stirrups depending from said frame, transversely disposed cultivator tooth carrying bars, means for adjusting said bars in said stirrups in relation to the frame, and means to rock said bars in their varied adjusted positions in said stirrups to vary the angular relation of cultivator teeth thereon to the ground.

2. A cultivator, comprising a wheeled support, a tongue secured thereto, a frame pivotally mounted on said wheeled support, means to guide said frame in relation to said tongue, means to raise and lower said frame, transversely disposed cultivator teeth bars, cultivator teeth mounted on said bars and extending beyond the sides of said frame, means to adjustably support said bars in relation to said pivoted frame, means to rock said bars in said supports, and hoods adapted to be secured to said cultivator bars to protect the limbs of trees under which it is desired to pass said hooded bars.

3. A cultivator, comprising a wheeled support, an axle therefor, a tongue pivotally secured to said axle, a floating frame pivotally mounted on said axle, a yoke adapted to embrace said tongue secured to said floating frame, means secured to said tongue to raise and lower said frame, a plurality of dependent stirrups secured to said frame adjacent said tongue, transversely disposed bars tiltingly mounted in said stirrups, cultivator teeth secured to said bars, levers secured to said bars, a lever secured to said floating frame, means to lock said lever in definite relation, and connections between said levers on said bars and said pivoted lever, whereby the inclination of the cultivator teeth may be regulated by tilting said cultivator teeth bars.

4. A wheeled cultivator, comprising a plurality of wheels adapted to support an axle, a tongue pivotally secured to said axle, a floating frame inclosing said tongue and said wheels pivotally secured to said axle, means to guide said tongue in relation to said frame, means to raise and lower said floating frame, a plurality of stirrups secured to the dependent portion of said frame, transversely disposed cultivator teeth bars tiltingly mounted in said stirrups, means to adjust the relation of said bars in said stirrups, cultivator teeth secured to said cultivator teeth bars, means to tilt said bars secured to the said floating frame, and means secured to said bars externally of said floating frame to protect the limbs of trees under which it is desired to operate said cultivator.

1,107,571. AUTOMATIC MUSICAL INSTRUMENT. WILLIAM F. BAYER, Buffalo, N. Y. Filed Jan. 30, 1911. Serial No. 605,438. (Cl. 84—168.)



1. In an instrument of the character described, the combination of an inclosing case having an overhanging part, a main bellows-structure removably arranged in the case below said overhanging part, an accessory coöperating with said bellows, a valve controlling said accessory, an operating shaft for said valve composed of a rear section carried by said bellows-structure and a front section supported on the underside of said overhanging part in alinement with said rear section, and means for separably connecting said shaft-sections.

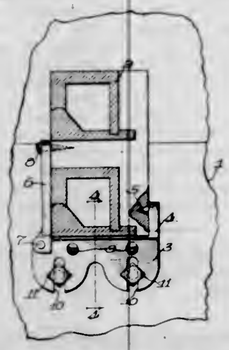
2. In an instrument of the character described, the combination of an inclosing case having an overhanging part, a main bellows-structure removably arranged in the case below said overhanging part, a plurality of accessories coöperating with the bellows-structure, valves controlling said accessories, a supporting frame secured to and projecting forwardly from the bellows-structure adjacent to said overhanging part, and a plurality of actuating shafts for said valves, each composed of a rear section journaled in said frame and a front section separably connected with the rear section and journaled on the underside of said overhanging part.

3. In an instrument of the character described, the combination of an inclosing case having a key-table, a main bellows-structure removably arranged therein below said table, a plurality of accessories coöperating with the bellows-structure, valves controlling said accessories, a supporting frame secured to the front of the bellows-structure adjacent to the underside of the key-table, a plurality of actuating shafts for said valves, each comprising separable front and rear sections, the rear sections of the several shafts being carried by said frame and their front sections by the key-table, and coupling means for the sections of said shafts.

1,107,572. PLAYING ATTACHMENT FOR AUTOMATIC MUSICAL INSTRUMENTS. ROBERT J. BENNETT, Moline, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed May 3, 1910. Serial No. 559,179. (Cl. 84—178.)

1. In a device for the purpose described, the combination of a bracket and support therefor, a wind chest resting upon the bracket, a post rising from the bracket and carrying a centering point engaging the wind chest, and

an arm hinged to the bracket and detachably secured to the wind chest.



2. In a device for the purpose described, the combination of a bracket and support therefor, a wind chest resting upon the bracket, a stop rising from the bracket and carrying a centering element engaging the wind chest, an arm hinged to the bracket and coöperating with the stop for holding the chest in position, said arm being movable with respect to the bracket and in directions toward and away from the stop and means for securing the said arm against movement.

3. The combination of a support, a bracket secured thereto, a wind trunk resting upon said bracket, a member upstanding from said bracket, and a hinged clamping member for clamping the wind chest between said clamping member and the upstanding member.

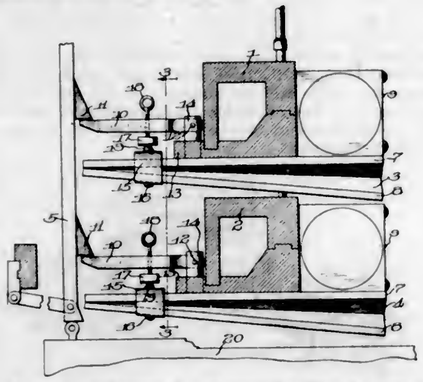
4. The combination of a support, a bracket adjustably mounted thereon, a wind trunk resting upon said bracket, a member upstanding from said bracket and having a centering pin engaging the side of the wind trunk, and a clamping member pivoted on said bracket and adapted to clamp the wind trunk against said up-standing member and said centering pin.

5. The combination of a support, a bracket adjustably mounted thereon, a wind trunk resting upon said bracket, a member upstanding from said bracket and having a centering pin engaging the side of the wind trunk, a clamping member pivoted on said bracket and adapted to clamp the wind trunk against said upstanding member and said centering pin, and means for fastening said pivoted clamping member to said wind trunk.

1,107,573. AUTOMATIC PNEUMATIC MUSICAL INSTRUMENT. ROBERT J. BENNETT, Moline, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed May 3, 1910. Serial No. 559,181. (Cl. 84—178.)

1. In an apparatus for the purpose described, the combination of a power pneumatic comprising an upper fixed member a device to be actuated and a lower movable member, a pivoted lever supported at one end independently of and above said movable member, said lever being separate from and independent of said device, the other end of the lever having separable engagement with a portion of the device to be actuated for imparting movement to the said device, a bearing member carried by the movable member and an adjustable bearing carried by said lever intermediate its ends and engaging said bearing member.

2. In an apparatus for the purpose described, the combination with the keys of the instrument and the elements of the instrument action to be actuated by said keys, of a wind chest arranged across the keys over the same, a power pneumatic supported between the wind chest and the keys, a lever supported independently of the movable member of the power pneumatic, above the power pneumatic at the back of the wind chest in position to engage the said action of the instrument, and means for imparting oscillation to said lever from the movable member of the power pneumatic.



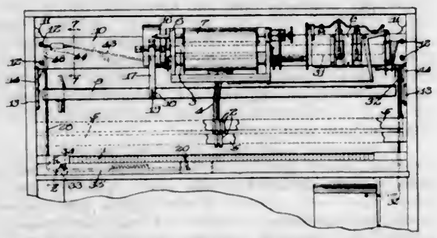
3. In an apparatus for the purpose described, the combination of a power pneumatic having a hinged movable member, a lever supported independently of said movable member, and means giving said movable member a laterally extended bearing against said lever, said bearing being situated at a point between the pivotal points of said movable member and lever.

4. In an apparatus for the purpose described, the combination of a power pneumatic embodying a hinged movable member, a pivoted lever supported independently of said movable member and having a bearing, and a second bearing carried by said member at a point intermediate the pivotal point of said lever and member and engaging said first bearing, one of said bearings being laterally extended beyond the other.

5. In an apparatus for the purpose described, the combination of a power pneumatic embodying a movable hinged member, a lever supported independently of said movable member in a substantially horizontal position, a bearing carried by said lever at a point below the level of its center of oscillation, and a second bearing carried by said movable member and engaging said first bearing at a point between the centers of oscillation of said lever and hinged member, one of said bearings being extended laterally beyond the other.

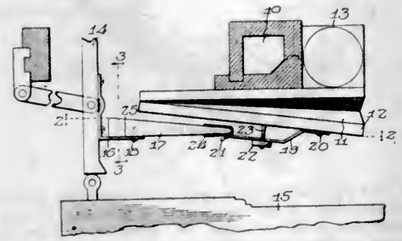
[Claims 6 to 12 not printed in the Gazette.]

1,107,574. PNEUMATIC PLAYING ATTACHMENT FOR MUSICAL INSTRUMENTS. ROBERT J. BENNETT, Moline, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed May 3, 1910. Serial No. 559,183. (Cl. 84—160.)



In an apparatus for the purpose described, the combination of a musical instrument having a case, said musical instrument embodying a hammer rest rail, a playing attachment for the musical instrument embodying a power pneumatic operatively connected with the hammer rest rail for controlling the same, a supporting board for said playing attachment and power pneumatic, a permanent support in the case for said supporting board, a valve seat having a port supported on the case independently of the supporting board, a valve for controlling said port, manually operated means for controlling said valve at will, a connection between said permanent support and said port terminating in a port in the face of the permanent support, said board having a port in its face for registration with the port in the support, a primary or controlling pneumatic for said power pneumatic mounted on said board, and a passage connecting the last said port with said primary pneumatic.

1,107,575. AUTOMATIC PNEUMATIC MUSICAL INSTRUMENT. ROBERT J. BENNETT, Moline, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Original application filed May 3, 1910, Serial No. 559,181. Divided and this application filed Sept. 11, 1911. Serial No. 648,663. (Cl. 84—233.)



1. In an apparatus for the purpose described, the combination of a power pneumatic embodying a pivoted movable member, a device to be actuated separate from the pneumatic, and inter-engaging means carried respectively by the said device and the movable member, whereby the device may be actuated by the pneumatic, one of the said means being elastic, one of the said means being adjustable laterally with respect to the other to adapt it to the particular relative position in which said pneumatic and said movable member happen to be placed, and means for securing the adjustable one of the said members in its adjusted position.

2. In an apparatus for the purpose described, the combination of a power pneumatic embodying a pivoted movable element, a device to be actuated, separate from the pneumatic, and inter-engaging means carried respectively by the said device, and a movable element whereby the device may be actuated by the pneumatic, one of said means being elastic, and the other of said means being a rigid member adjustable laterally with respect to said elastic means, the point of engagement of said rigid member with the elastic means being enlarged laterally to allow for its adjustment without disturbing its effective relation to said elastic means.

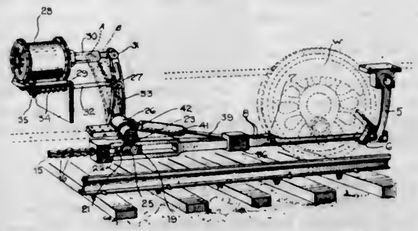
3. In apparatus of the class described, the combination of a piano action member adapted to be actuated, a pneumatic having a movable member, a rigid arm outstanding from said member to be actuated and arranged to be adjustable in a horizontal plane, and a resilient arm secured at one end to the movable member of said pneumatic and having its other end in separable engagement with the free end of said rigid arm.

4. In apparatus of the class described, the combination of a piano action member adapted to be actuated, a pneumatic having a movable member, a rigid arm outstanding from said member to be actuated and arranged to be adjustable in a horizontal plane, a resilient arm secured at one end to the movable member of said pneumatic and having its other end in separable engagement with the free end of said rigid arm, the engaging end of the resilient member being broadened to adapt it to the adjustability of the rigid arm.

5. The combination of a pneumatic having a movable member, a resilient arm secured at one end thereto and having its other end broadened, a piano action having a member to be operated in a vertical direction, and a horizontally adjustable arm outstanding from said member to be actuated and having its free end in engagement with the broadened end of said resilient arm.

[Claims 6 and 7 not printed in the Gazette.]

1,107,576. AUTOMATIC ADJUSTING DEVICE FOR BRAKES. CHARLES ALBERT BOOTH, Brunswick, Md., assignor of seven-sixteenths to John W. Cavey, Baltimore, Md. Filed July 23, 1913. Serial No. 780,760. (Cl. 188—50.)



1. The combination with a brake cylinder piston and a brake bar, of means connecting said bar and piston to apply the brakes when the cylinder pressure is applied, said means including a rock shaft, a block slidably mounted upon the brake bar and connected to said-rock shaft, a rack bar connected to said block, pawls mounted upon the brake bar and engaging the teeth of said rack bar to lock the same to the brake bar for movement therewith in one direction, and means movable with said brake bar in the minimum stroke of the brake cylinder piston and adapted to limit the movement of said bar when the brakes are released whereby said rack bar is moved with respect to the brake bar in the rocking movement of said shaft upon an excessive movement of the brake cylinder piston beyond that required in the minimum movement of the brake bar.

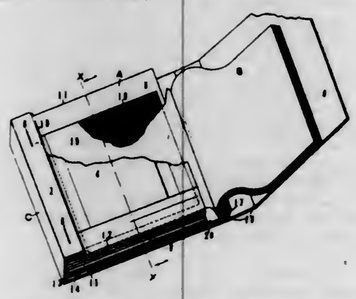
2. The combination with a brake cylinder piston and a brake bar, of means connecting said bar and piston to apply the brakes when the cylinder pressure is applied, said means including a rock shaft, a rack bar connected to said rock shaft, pawls carried by the brake bar and engaging the teeth of said rack bar, whereby said brake bar is moved in the rocking movement of the shaft in one direction to apply the brakes, and means movable with said brake bar in the minimum stroke of the brake cylinder piston, said brake bar being movable with respect to said latter means upon an excessive piston stroke, said means including an element mounted to travel a distance equivalent to the minimum stroke of the piston whereby in the reverse movement of the brake bar when the brakes are released, said bar is held against movement and the rack bar moved with respect thereto in the rocking movement of said shaft.

3. The combination with a brake cylinder piston, and a brake bar, of means connecting said bar and piston comprising a rock shaft connected to and actuated by the piston, a rack bar connected to said rock shaft, pawls carried by the brake bar to engage the teeth of said rack bar whereby said brake bar is moved in the rocking movement of the shaft in one direction to apply the brake, a member mounted upon the brake bar and movable therewith, a rod pivotally connected to said member, a cylinder, said rod being movable in the cylinder and having a stroke equivalent to the minimum stroke of the piston necessary to apply the brakes, said brake bar being movable with respect to the member thereon upon excessive movement of the piston, and means for locking said member upon the brake bar whereby, when the brakes are released, said member and brake bar are held against movement while the rack bar is moved with respect to the brake bar in the reverse rocking movement of the shaft.

4. The combination with a brake cylinder and brake bar, of means connecting said bar and piston to apply the

brakes when the cylinder pressure is applied, said means comprising a rock shaft connected to the piston, a yoke upon one end of the brake bar, a rack bar movable in said yoke, an arm connected to the rock shaft and to said rack bar to actuate the latter, pawls mounted in the yoke engaging the teeth of the rack bar, said rack bar being provided with teeth upon its upper edge oppositely disposed with relation to the teeth of said rack bar, a U-shaped plate arranged upon the brake bar, a bar connecting the parallel portions of said plate, pawls mounted in said bar and engaging the teeth of the brake bar, a rod connected to said plate, a cylinder in which said rod is movably disposed, the movement of said rod in the cylinder being equivalent to the minimum stroke of the piston necessary to apply the brakes whereby said U-shaped plate is held against movement upon an excessive stroke of the piston when the brakes are applied, and the reverse movement of said bar is limited to the minimum piston stroke when the brakes are released, thereby permitting of the movement of the rack bar with respect to the brake bar in the rocking movement of the shaft.

1,107,577. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed May 14, 1912. Serial No. 697,104. (Cl. 11—23.)



1. A manifolding pad, comprising a plurality of sets of original and duplicate leaves bound together along one of the side edges, the leaves of each set being connected along one end edge only.

2. A manifolding pad, comprising a plurality of sets of original and duplicate leaves bound together along one of the side edges, and manifolding means connected with said leaves, the leaves of each set of leaves being connected along one end edge only.

3. A manifolding pad, comprising a sheet folded back and forth upon itself to form a plurality of sets of original and duplicate leaves, the leaves of each set being connected along one end edge and having their opposite end edges free, and binding means for the pad along one side edge.

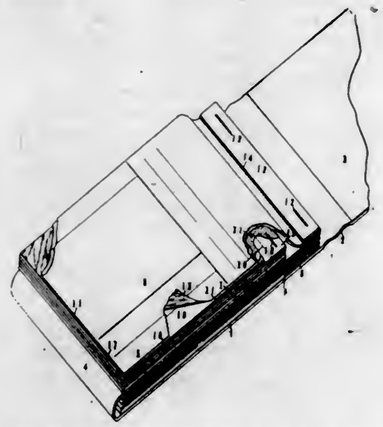
4. A manifolding pad, comprising a sheet folded back and forth upon itself to form a plurality of sets of original and duplicate leaves, a fold at one end of each set being cut, whereby each set is connected at its opposite end only, and a carbon sheet bound with the leaves of said pad.

5. A manifolding pad, comprising a plurality of sets of original and duplicate leaves bound together along one side edge, said sets of leaves being separated from the stub by lines of perforations and each original leaf being connected with its respective duplicate leaf at one end edge only.

[Claims 6 to 14 not printed in the Gazette.]

1,107,578. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Canada. Filed July 3, 1912. Serial No. 707,422. (Cl. 11—23.)

1. In a manifolding salesbook, in combination, a holder, a back, a pad comprising a plurality of original and duplicate leaves mounted upon one of said parts, a second pad of triplicate leaves mounted upon the other and operatively associated with said first-mentioned pad and manifolding means associated with each of said pads whereby triplicate copies may be made when the parts are in operative position.



2. In a manifolding sales book of the character described, in combination, a pad comprising a plurality of sets of original and duplicate leaves, the leaves of each set being connected at both ends, and a triplicate pad connected with said first-mentioned pad to rest beneath the top set of original and duplicate leaves.

3. In a manifolding sales book of the character described, in combination, a pad comprising a plurality of sets of original and duplicate leaves, the leaves of each set being connected at both ends, a triplicate pad connected with said first-mentioned pad to rest beneath the top set of original and duplicate leaves, and manifolding means contacting with both sides of the duplicate leaf.

4. In a manifolding sales book of the character described, in combination, a pad comprising a plurality of sets of original and duplicate leaves, the leaves of each set being connected at both ends, a triplicate pad connected with said first-mentioned pad to rest beneath the top set of original and duplicate leaves, a manifolding medium applied directly to the back of the original leaf, and a carbon sheet connected with the triplicate pad.

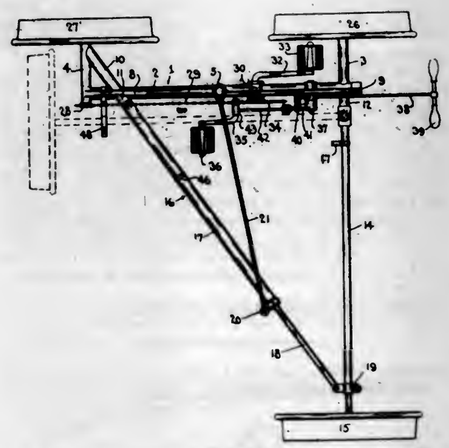
5. In a manifolding sales book of the character described, in combination, a pad comprising a plurality of sets of original and duplicate leaves, the leaves of each set being connected at both ends, a triplicate pad connected with said first-mentioned pad to rest beneath the top set of original and duplicate leaves, manifolding means applied directly to the back of the original leaf, and manifolding means beneath the duplicate leaf.

[Claims 6 to 9 not printed in the Gazette.]

1,107,579. RAILWAY-VELOCIPEDE. FRANK BRADY, Denver, Colo. Filed June 16, 1913. Serial No. 774,030. (Cl. 105—247.)

1. In a railway velocipede, a main frame, axle bearing tubes formed thereon, a seat post arranged on said frame, a side wheel supporting bar connected to said main frame, a side wheel brace connected at its inner end to said main frame and comprising a series of telescopically engaged sections, the outer section having a detachable connection at its outer end with said side wheel supporting bar, a seat post brace pivotally connected to said side wheel brace and having a detachable connection with the seat post whereby when said brace is detached from the seat post the sections of said side wheel brace may be telescoped and folded to an inoperative position, means to hold said parts in their folded position, and hand and foot power propelling mechanisms.

2. In a velocipede of the character descrsibed, a main supporting frame, axle bearing tubes formed thereon, front and rear axles journaled in said tubes, main supporting wheels mounted on said axles, a side wheel supporting bar connected to said main frame, a side supporting wheel revolubly mounted on said bar, a side wheel brace connected with said main frame and with said side wheel supporting bar, a pedal crank shaft revolubly mounted in said main frame, a pedal arranged on one end of said shaft, a sprocket gear fixed on the opposite end thereof, a sprocket pinion on the axle of the rear supporting wheel, a chain to connect said pinion with said gear, a pedal crank eccentrically mounted on said sprocket wheel, a pivotally mounted hand lever, a pivotally mounted supplemental propelling lever, a link to connect said supplemental lever with the pedal crank on said sprocket gear, and means to detachably connect said supplemental lever with said hand lever.

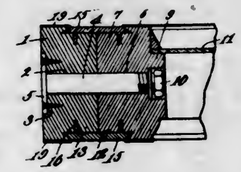


3. A railway velocipede comprising a main frame, front and rear axle tubes arranged thereon, front and rear axles mounted in said tubes, front and rear supporting wheels mounted on said axles, a seat post tube arranged in said frame, a side wheel supporting bar comprising a series of telescopically engaged sections, clamps to hold said sections in a projected and in a retracted position, a side wheel axle mounted in the outer section of said bar, a side supporting wheel mounted on said side wheel axle, a side wheel brace comprising a series of telescopically engaged sections, said bar having a pivotal connection at its inner end with said main frame, and at its outer end with said side wheel supporting bar, a seat post brace connected to said seat post and to said side wheel brace, a foot power propelling mechanism, an independent hand power propelling mechanism, and means to connect said hand and foot power propelling mechanism whereby they may be propelled in unison.

4. A double railway velocipede comprising main frames, front and rear laterally projecting axle bearing tubes arranged on the ends of said frames, front and rear tubular axles mounted in said axle bearing tubes, said rear axles having their inner ends projecting beyond the inner sides of said main frames, independent foot and hand power propelling mechanisms arranged on said main frames, means to connect said hand and foot power mechanisms whereby they may be used in unison, means to detachably connect the forward ends of said frames, means to detachably connect the rear ends of said frames, and braces detachably connected to said frames.

1,107,580. WINDOW-SASH. FOLKE E. BRANDT, Bemidji, Minn. Filed Apr. 11, 1913. Serial No. 760,505. (Cl. 20—49.)

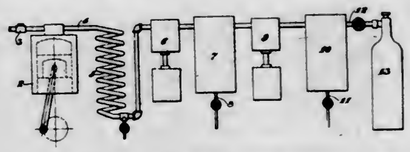
1. The combination with a window sash including side strips and a frame movably mounted therebetween, there being longitudinally extending grooves in opposed faces of the sash, each groove extending partly into a stile and partly into a side strip, of a longitudinally movable key seated in each groove for holding the sash against movement relative to the side strips, and a head at the upper end of each key, the heads of opposed keys being adapted to lap and to lie flush with the upper edge of the frame and strip in which the keys are mounted.



2. The combination with a window sash including side strips and a frame movably mounted therebetween, there being longitudinally extending grooves in opposed faces of the sash, each groove extending partly into a stile and partly into a side strip, of a longitudinally movable key seated in each groove for holding the sash against movement relative to the side strips, a head at the upper end of each key, the heads of opposed keys being adapted to lap and to lie flush with the upper edge of the frame and strip in which the keys are mounted, and longitudinally extending flanges upon each key, there being longitudinal depressions in the frame and side strips respectively for the reception of the flanges whereby said frame and side strips are held against spreading apart.

3. In a window sash the combination with a side strip and a frame movably connected thereto, there being a longitudinal groove in each side of the sash, each groove extending partly into the side strip and partly into the frame, of a dove-tailed key extending throughout the length of the frame and removably seated in the groove, and a head extending at right angles from one end of the key, there being a recess in the sash at the upper end of the groove for the reception of the head, said head, when seated in the recess, being flush with the upper edge of the sash.

1,107,581. PROCESS OF MAKING CARBON MONOXID, HYDROGEN, AND NITROGEN. ROY H. BROWNLEE and ROY H. UHLINGER, Pittsburgh, Pa., assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Apr. 12, 1913. Serial No. 760,673. (Cl. 48—198.)

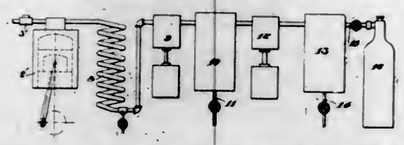


1. The process of making carbon monoxid, hydrogen and nitrogen consisting in mixing a carbonaceous substance with an amount of air sufficient to support incomplete combustion of the mixture to produce a maximum amount of carbon monoxid and hydrogen but insufficient to support combustion sufficiently complete to produce the normal amount of carbon dioxid and water, exploding the mixture in a suitable chamber, and then separately separating the carbon monoxid, hydrogen, and nitrogen from the other products of combustion, substantially as set forth.

2. The process of making carbon dioxid, carbon monoxid, hydrogen and nitrogen consisting in mixing a carbonaceous substance with an amount of air sufficient to support incomplete combustion of the mixture to produce a maximum amount of carbon monoxid and hydrogen but insufficient to support combustion sufficiently complete to produce the normal amount of carbon dioxid and water,

exploding the mixture in a suitable chamber, and then separately separating the carbon dioxid, carbon monoxid and nitrogen, and hydrogen, substantially as set forth.

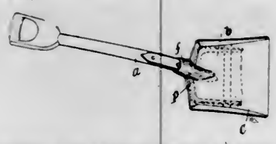
1,107,582. PROCESS OF MAKING CARBON MONOXID AND HYDROGEN. ROY H. BROWNLEE and ROY H. UHLINGER, Pittsburgh, Pa., assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Apr. 12, 1913. Serial No. 760,674. (Cl. 48—198.)



1. The process of making carbon monoxid and hydrogen consisting in mixing a carbonaceous substance with an amount of oxygen sufficient to support incomplete combustion of the mixture to produce a maximum amount of carbon monoxid and hydrogen but insufficient to support combustion sufficiently complete to produce the normal amount of carbon dioxid and water, exploding the mixture in a suitable chamber; and then separately separating the carbon monoxid and hydrogen from the other products of combustion, substantially as set forth.

2. The process of making carbon dioxid carbon monoxid and hydrogen consisting in mixing a carbonaceous substance with an amount of oxygen sufficient to support incomplete combustion of the mixture to produce a maximum amount of carbon monoxid and hydrogen but insufficient to support combustion sufficiently complete to produce the normal amount of carbon dioxid and water, exploding the mixture in a suitable chamber, and then separately separating the carbon dioxid, carbon monoxid, and hydrogen, substantially as set forth.

1,107,583. SHOVEL. SAMUEL E. BURCHELL, Paterson, N. J., assignor of one-half to Joseph A. Komer, Paterson, N. J. Filed Mar. 28, 1914. Serial No. 827,804. (Cl. 55—26.)



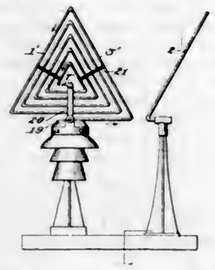
1. A shovel blade having on the back thereof a socket closed at the back and adapted to receive the lower end of a suitable handle member said blade having at its upper end a split collar and means to bind the collar rigidly around the handle member, substantially as described.

2. A shovel blade having on the back thereof a socket closed at the back and adapted to receive the lower end of a suitable handle member said blade having at its upper end a split collar and means to bind the collar rigidly around the handle member, the upper portion of said blade immediately below and alined with the collar having a channel at the back thereof adapted to snugly receive said handle, substantially as described.

3. The combination of a shovel blade and an arched piece secured to the back of said blade and forming therewith a socket to receive the lower end of a suitable handle member, said blade having at its upper end a split collar and means to bind the collar rigidly around the handle member, substantially as described.

1,107,584. LIGHTNING-ARRESTER. ALFRED W. BURKE, Wilkinsburg, Pa. Filed Mar. 11, 1912. Serial No. 682,883. (Cl. 175—214.)

1. A lightning arrester, comprising a loop in series with the line, said loop constituting a choke-coil and one of its sides constituting an arc-horn, and a grounded arc-horn in proximity to the line arc-horn.



2. A lightning arrester, comprising a spiral in series with the line, said spiral constituting a choke-coil and one of its sides constituting an arc-horn, and a grounded arc-horn in proximity to the line arc-horn.

3. A lightning arrester, comprising a triangular flat loop in series with the line, said loop constituting a choke-coil and one of its inclined sides constituting an arc-horn, and a grounded arc-horn in proximity to the line arc-horn.

4. A lightning arrester, comprising a triangular spiral in series with the line, said spiral constituting a choke-coil and one of its inclined sides constituting an arc-horn, and a grounded arc-horn in proximity to the line arc-horn.

5. A lightning arrester, comprising a triangular spiral in series with the line, said spiral constituting a choke-coil and one of its inclined sides constituting an arc-horn, and a grounded triangular spiral arc-horn in proximity to the line arc-horn.

[Claims 6 to 9 not printed in the Gazette.]

1,107,585. SIGN. JAMES F. BURNAM, Huntsville, Ala. Filed Nov. 5, 1913. Serial No. 799,340. (Cl. 40—128.)



1. A sign of the character described, comprising a flexible sheet having suitable subject matter thereon, longitudinally extending reinforcing rods connected with portions of the flexible sheet and adapted to be arranged near each other when the flexible sheet is folded, a support penetrating attaching means adapted to engage with corresponding ends of the reinforcing rods when they are arranged near each other and to extend approximately parallel with relation thereto, and means connecting the attaching means with one of the reinforcing rods.

2. A sign of the character described, comprising a flexible sheet having suitable subject matter thereon, reinforcing rods connected with portions of the flexible sheet and adapted to be arranged near each other when the flexible sheet is folded, a support penetrating element adapted to have detachable connection with corresponding ends of the reinforcing rods when they are arranged near each other and extending approximately parallel with relation thereto in advance of the same, and a flexible element connecting the support penetrating element with one of the reinforcing rods.

3. A sign of the character described, comprising a flexible sheet adapted to receive suitable subject matter thereon, reinforcing rods connecting with opposite edges of the flexible sheet and provided at corresponding ends with recesses, attaching means including a body portion carrying a pointed element adapted to penetrate a support and teeth to be inserted within the recesses of the rods, respectively and a flexible element connecting the attaching means with one reinforcing rod.

4. A sign of the character described, comprising a flexible sheet having suitable subject matter thereon, a reinforcing rod connected with the sheet to suspend the same when it unfolds, a tapered element, means for temporarily securing the tapered element upon one end of the reinforcing rod in advance of the same in approximately parallel relation thereto, and a flexible element connected with the tapered element and with the reinforcing rod between the ends of the reinforcing rod.

5. A sign of the character described, comprising a flexible sheet adapted to receive suitable subject matter thereon, reinforcing rods attached to the opposite edges of the flexible sheet, attaching means adapted to be detachably connected with the corresponding ends of the reinforcing rods when the sheet is folded, a flexible element connected with the attaching means and with one reinforcing rod between the ends thereof, and a detachable clamp surrounding the rods when the flexible sheet is folded for preventing improper unfolding of the flexible sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,107,586. SPRING-ACTUATED GUN. JAMES F. BURNAM, Huntsville, Ala. Filed Mar. 10, 1914. Serial No. 823,783. (Cl. 124—12.)



1. In a gun of the character described, a stock, a barrel connected with the stock, a lever pivotally connected with the barrel, an element mounted to reciprocate within the barrel, and an elastic member connecting the lever with the reciprocatory element.

2. In a gun of the character described, a stock, a barrel rigidly secured thereto, a lever pivotally connected with the barrel, an element mounted to reciprocate within the barrel, a retractile coil spring connecting the pivoted lever and the reciprocatory element, and means to temporarily hold the lever in one position.

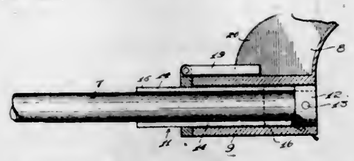
3. In a gun of the character described, a stock, a barrel secured thereto and provided with a longitudinally extending slot, a plunger mounted to reciprocate within the barrel and provided with an element extending through and beyond the slot, a lever arranged exteriorly of the barrel and pivotally connected therewith, a retractile coil spring connecting one end of the lever and the extension of the plunger, means to temporarily lock the lever in one position, and trigger operated means to temporarily hold the plunger in its cocked position.

4. In a gun of the character described, a stock provided with a fore-arm, a barrel mounted upon the fore-arm and secured thereto and provided with a longitudinal slot, a plunger mounted to reciprocate within the barrel and provided with an extension operating within the slot, a pair of levers arranged upon opposite sides of the barrel and pivotally connected therewith, retractile coil springs connected with the outer ends of the levers and with the extension of the plunger, a fore-arm extension connected with the inner ends of the levers and adapted to be moved into engagement with the barrel adjacent the fore-arm, means to temporarily lock the fore-arm extension with the fore-arm, and means to temporarily hold the plunger against movement in one direction.

5. In a gun of the character described, a barrel having its inner and outer ends open, a stock carrying the barrel, a reciprocatory plunger mounted within the barrel and adapted to be removed therefrom through the inner end thereof, a longitudinally elastic retractile element connected near its inner end with the plunger, means to move the plunger toward the inner end of the barrel, trigger operated means to temporarily lock the plunger in the inner cocked position, and separate means associated with the barrel and having a part thereof connected with the elastic element and movable toward the outer end of the barrel, to place the elastic element under tension.

[Claims 6 to 10 not printed in the Gazette.]

1,107,587. BED-BOTTOM. SHELDON C. CHATHAM, Philadelphia, Pa. Filed July 9, 1913. Serial No. 778,094. (Cl. 5—69.)



1. In apparatus of the character described, the combination with a side rod, of a corner bracket having an opening formed therethrough for receiving the end portion of the side rod to be movable longitudinally thereof, a spring mattress attached to the corner bracket, screw-threaded splines connected with the side rod and operating through openings formed in the corner bracket to positively prevent the same from turning with relation to the side rod but allowing the same to move longitudinally thereof, an operating nut having screw-threaded engagement with the screw-threaded splines, and means to turn the operating nut.

2. In apparatus of the character described, the combination with a side rod, of a corner bracket having an opening formed therethrough for receiving the end portion of the side rod to be movable longitudinally thereof, a spring mattress attached to the corner bracket, splines extending longitudinally of the side rod and attached to the end portion thereof and operating within longitudinal slots formed through the corner bracket to prevent the corner bracket from turning with relation to the side rod, and means having screw-threaded engagement with the splines to effect the longitudinal movement of the corner bracket in one direction.

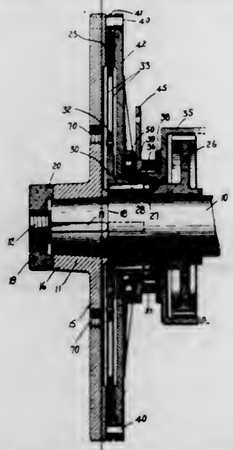
3. In apparatus of the character described, the combination with a side rod, of a tubular element mounted thereon to move longitudinally thereof, a screw-threaded spline attached to the tubular rod and operating within a longitudinal slot formed through the tubular element to positively prevent the same from turning with relation to the side rod and allowing the tubular element to move longitudinally thereof, and an operating nut having screw-threaded engagement with the screw-threaded spline and engaging the tubular element, for effecting the longitudinal movement thereof.

4. In apparatus of the character described, the combination with a side rod, of a corner bracket having an opening formed therethrough for receiving one end of the side rod to be movable longitudinally thereof, a spring mattress attached to the corner bracket, a ring disposed within the opening of the corner bracket and rigidly mounted upon the end portion of the side rod and carrying longitudinally extending screw-threaded splines, an operating nut having screw-threaded engagement with the screw-threaded splines for effecting the longitudinal movement of the corner bracket in one direction, and means to turn the operating nut.

1,107,588. CLUTCH. WALTER CHRISTIE, Highwood Park, N. J. Filed Dec. 5, 1913. Serial No. 804,806. (Cl. 192—7.)

1. A clutch comprising a wheel adapted to be affixed to a driving shaft, a driven gear wheel having a hollow cy-

lindrical hub projection adjacent to the wheel and rotatably mounted on the driving shaft, a clutch member having a resilient disk adjacent to the wheel, operatively connected to the gear wheel and slidable on said hollow cylindrical hub projection, a rigid disk operatively connected to the wheel and axially movable relatively thereto and means for forcing the rigid disk toward the wheel to clamp the resilient clutch disk between the two.

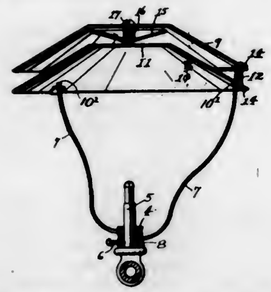


2. A clutch comprising a wheel adapted to be affixed to a driving shaft and having an annular contact surface near its periphery, a driven gear wheel having a hollow cylindrical hub projection adjacent to the wheel and rotatably mounted on the driving shaft, a clutch member having a resilient disk adjacent to the annular contact surface of the wheel, operatively connected to the gear wheel and slidable on said hollow cylindrical hub projection, a rigid disk operatively connected to the wheel and axially movable relatively thereto and circumferentially movable means for forcing the rigid disk toward the wheel to clamp the resilient clutch disk between the two.

3. A clutch comprising a driven shaft having a tapered end portion and a screw-threaded projection, a relatively massive wheel affixed to the tapered portion of the shaft having a plurality of laterally extending pins near its periphery parallel to the axis of the shaft, a driven gear wheel having a hollow cylindrical hub projection adjacent to the wheel and rotatably mounted on the shaft, a stationary casing for the gear wheel having a sleeve projection concentric with the hub of the gear wheel, a clutch member operatively connected to the gear wheel hub rotatably and axially movable within the casing sleeve, a radial flange and a resilient clutch disk secured thereto adjacent the contact surface of the clutch wheel, a rigid disk concentric with the shaft and slidably mounted on the laterally extending pins of the wheel beyond the resilient clutch disk, an annular cam secured to the stationary gear casing, a coöperating rotatably movable cam on the sleeve projection of the casing and a thrust bearing interposed between the rotatively movable cam and the rigid clutch disk whereby a rotative movement of the cam forces the ratchet clutch disk between the contact surface of the wheel and clamps the resilient clutch disk between them.

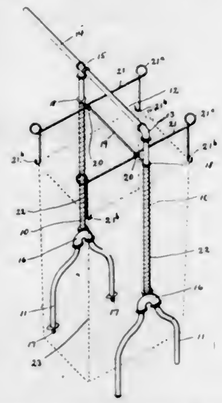
1,107,589. GAS-HEATER. WERNER E. CLARIN, Chicago, Ill., assignor of one-half to Axel Nelson, Chicago, Ill. Filed Apr. 9, 1913. Serial No. 759,951. (Cl. 126—249.)

1. A device of the kind described comprising a gas burner engaging sleeve having a peripheral flange at each end thereof; a ring having a space between its ends on said sleeve; a screw between the ends of said ring and threaded into said sleeve; and reflector supporting arms, each having an end portion encircling said sleeve, substantially as described.



2. A device of the kind described comprising an upper reflector; a lower reflector having perforations near its edges; ties between said reflectors, having shoulders engaging the latter and ends extending through and bent over said reflectors spacing them apart; supporting arms extending through the perforation in said lower reflector and having their ends engaging the under side of said upper reflector, substantially as described.

1,107,590. PORTABLE BAG-HOLDER. JOHN CUPPLES, Bayonne, N. J. Filed Apr. 2, 1914. Serial No. 829,010. (Cl. 83—26.)



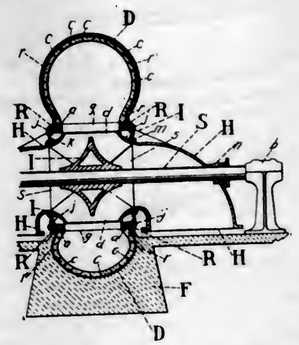
1. A bag holder comprising vertical standards spaced apart from each other, a top bar connecting the standards and projecting well beyond one of them to form a bag support, and a skeleton bag holding frame resiliently supported to slide on the standards, said frame having laterally extending arms arranged in pairs spaced apart from each other, and formed at their outer ends into coils having depending bag engaging hooks connected therewith.

2. A bag holder comprising supporting standards spaced apart from each other, a top bar connecting the standards and projecting beyond one of them forming a bag support, and a resilient bag holding frame mounted to slide on the standards, said frame having on opposite sides depending hooks spaced apart from each other, thereby leaving the bag holding frame open at the sides to provide access to a bag supported on the hooks.

3. A bag holder comprising supporting standards spaced apart from each other and suitably connected together to form a frame, and a skeleton bag-holding frame resiliently supported to slide on the standards, said frame comprising a cross-bar having eyes at the ends to slide on the standards, and extending arms connected with the cross-bars and projecting from opposite sides thereof in pairs, each arm having a coil formed at its outer end and a depending bag engaging hook connected with the coil.

4. A bag holder comprising supporting standards spaced apart from each other and suitably connected together, and a bag holding frame resiliently supported to slide on the standards, said frame having laterally extending arms spaced apart from each other, and terminating at their outer ends in coils having bag engaging hooks connected therewith.

1,107,591. PUMP CONSTRUCTION. HENRY DE HUFF, Cynwyd, Pa., assignor to D'Olier Centrifugal Pump and Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 17, 1913. Serial No. 768,354. (Cl. 103—43.)



1. The combination with a centrifugal pump casing of concrete or the like, of an annular metallic member attached to said casing and forming the inner boundary of said casing at the impeller bore thereof.

2. An involute pump casing of concrete or the like, and reinforcing members in the concrete of said casing and conforming to the involute shape of said casing.

3. An involute pump casing of concrete or the like, reinforcing members in the concrete of said casing and conforming to the involute shape of said casing, and reinforcing members in the concrete of said casing extending transversely thereof.

4. A centrifugal pump casing of concrete or the like, said casing having a bore, and metallic members attached to the concrete of said casing at its edges next to said bore.

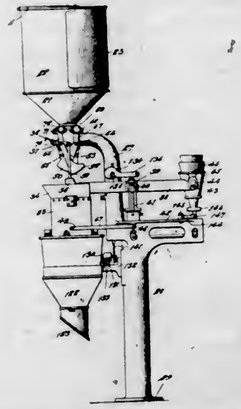
5. A centrifugal pump casing of concrete or the like, said casing having a bore, metallic members attached to the concrete of said casing at its edges next to said bore, and reinforcing members in said concrete attached to said metallic members and extending transversely of said casing.

[Claims 6 to 17 not printed in the Gazette.]

1,107,592. WEIGHING-MACHINE. HAYWOOD GUION DEWEY, Newark, N. J. Filed Apr. 18, 1910. Serial No. 556,128. (Cl. 73—174.)

1. The combination with feeding means, of a casing forming a throat for said feeding means and constructed to direct the material therethrough in two streams, oscillatory valves pivotally held to the casing and adapted to move toward or from each other, a bucket, means for suspending the bucket, means for positively operating certain of the valves as the bucket is elevated and to cause said valves to close when lowered, a valve for one of the streams movable to an open position by the movement of one of the first-mentioned valves and closed by an independent movement, and means whereby the said latter valve may be held open a certain distance and then automatically moved to a closed position.

2. The combination with feeding means, of a casing forming a throat for said feeding means and constructed to direct the material therethrough in two streams, oscillatory valves pivotally held to the casing and adapted to move toward or from each other, a bucket, means for suspending the bucket, means for positively operating the valves as the bucket is elevated and to cause said valves to close when lowered, a third valve for one of the streams movable to an open position by the movement of one of the first-mentioned valves and closed by an independent movement, means whereby the said latter valve may be held open a certain distance and then moved to a closed position, and means for discharging each weighed draft from the bucket.



3. The combination with means for feeding material in two streams, oscillatory valves adapted to move toward or from each other, a bucket, means for suspending the bucket, means for positively operating the valves to open the same, a valve for one of the streams, and means whereby the said latter valve may be held open a certain predetermined distance after the first-mentioned valves close and then moved to a closed position.

4. The combination with feeding means, of a casing constructed to direct the material therethrough in two streams, oscillatory valves pivotally held to the casing and adapted to move toward or from each other, a bucket, means for suspending the bucket, means for positively operating the valves to open the same as the bucket is elevated and to cause said valves to close when lowered, a third oscillatory valve for one of the streams, and means whereby the said latter valve may be held open a certain predetermined distance and then automatically moved to a closed position, and means for automatically discharging the weighed drafts from the bucket.

5. The combination with feeding means, of means for weighing the material, a plurality of valves having arms intersecting and pivotally held so as to move toward or from each other, a third pivoted valve movable to an open position with one of the other valves and to a closed position independent thereof, and means whereby the valves may be opened and closed.

[Claims 6 to 98 not printed in the Gazette.]

1,107,593. BULLET FOR KINEMA-TARGETS. THOMAS MACREADY DOWN, London, England. Filed Apr. 6, 1914. Serial No. 829,827. (Cl. 102—26.)



1. A bullet for indicating hits on a kinematograph target screen, charged with a composition emitting a flash

of light on impact of said bullet and leaving a deposit of the normal light color of said kinematograph target screen.

2. A bullet for indicating hits on a kinematograph target screen, charged with a composition emitting a flash of light on impact of said bullet and leaving a white deposit.

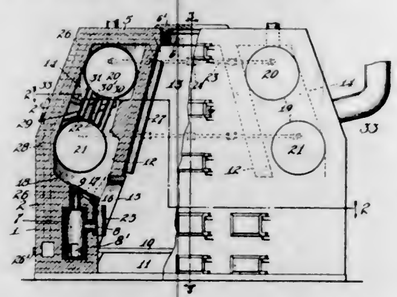
3. A bullet for indicating hits on a kinematograph target screen, charged with a composition containing powdered aluminium and a small proportion of an oxidizing agent.

4. A bullet for indicating hits on a kinematograph target screen, charged with a composition containing powdered aluminium and a small proportion of nitrate of baryta.

5. A hollow nosed bullet for indicating hits on a kinematograph target screen, charged in said hollow nose with a composition emitting a flash of light on impact of said bullet and leaving a deposit of the normal light color of said kinematograph target screen.

[Claims 6 to 13 not printed in the Gazette.]

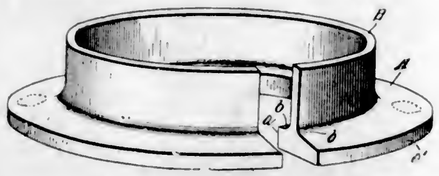
1,107,594. FURNACE. FRANCIS J. DOYLE, Chicago, Ill. Filed Aug. 15, 1908, Serial No. 448,708. Renewed Jan. 14, 1914. Serial No. 812,155. (Cl. 110—31.)



1. In a furnace, the combination of inner walls forming a compartment, a grate near the bottom of said compartment for supporting fuel to be burned, outer walls forming with the inner walls compartments for receiving boilers to be heated, there being ports through the inner walls at the bases thereof and leading from adjacent said grate into said boiler compartments, the space between said inner walls above said ports constituting a fuel magazine for keeping the grate supplied with fuel, said magazine section being entirely inclosed whereby the gases generated therein upon heating of the fuel can escape only downwardly and through said ports and into the boiler compartments, air conduits terminating adjacent said ports to supply air to the gases flowing through said ports whereby said gases are burned in said boiler compartments, and other air conduits supplying air to said boiler compartments above said ports, the inlet ends of said air conduits being below the level of said grate, said conduits extending through the outer walls of the furnace whereby the air flowing therethrough is heated before being delivered.

2. In a boiler furnace, the combination of inner walls forming a vertical compartment, a grate near the lower end of said compartment for supporting fuel to be burned, the upper part of said compartment forming a fuel magazine for keeping the grate supplied with fuel, outer walls coöperating with said inner walls to form boiler compartments for receiving boilers to be heated, said inner walls adjacent said grate having outlet openings for products of combustion and for gases distilled from the coal heated in said fuel magazine, air conduits for receiving air supply from below the level of the grate and delivering air at said outlets to mingle with the products of combustion and the gases flowing through said outlets into the boiler compartments, air conduits supplying air at various levels to said boiler compartments, and air conduits extending through the fuel magazine and adapted to distribute air into said magazine and to the gases as they flow from the lower end of said magazine into the outlets.

1,107,595. CLAMPING-RING FOR PIPE-COUPLINGS. SOLOMON R. DRESSER, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed June 6, 1907. Serial No. 377,636. (Cl. 137—28.)

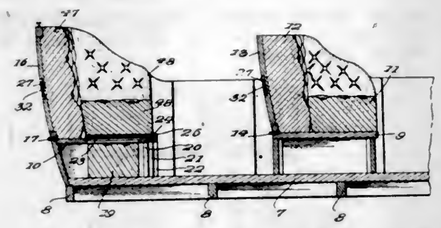


1. The herein described clamping ring for a rubber packed pipe coupling, formed of wrought metal, and comprising an annular plate member disposed perpendicularly to the axis of the ring, and an integral annular flange member projecting from one face of the plate member, and located between the inner and outer edges thereof, said plate member extending a greater distance on the outside of the flange member than on the inside thereof, and being provided with a plurality of bolt holes, the inner face of the flange member being substantially perpendicular to the plane of the plate member, said ring being formed integrally and being welded at one place and having the grain of the metal extending around the ring.

2. The herein described clamping ring for a rubber packed pipe coupling, formed of wrought metal, and comprising an annular plate member disposed perpendicularly to the axis of the ring, and an integral annular flange member projecting from one face of the plate member, and located between the inner and outer edges thereof, said plate member having the portion on the inner side of the flange member of greater thickness than the portion on the outer side thereof, the portion of the plate member exterior to the flange member being both thinner than and wider than the portion within the circle of said flange member and being provided with a plurality of bolt holes between its outer edge and the flange member, sufficient metal being provided in said exterior portion to prevent the weakening thereof by the formation of the bolt holes therein, the inner face of the flange member and the adjacent face of the interior portion of the plate member forming a packing recess, the said ring being formed of an integral piece of metal having its ends welded, and the grain of the metal extending around the ring, and said flange member being of greater thickness adjacent to the plate member than it is adjacent to its outer edge.

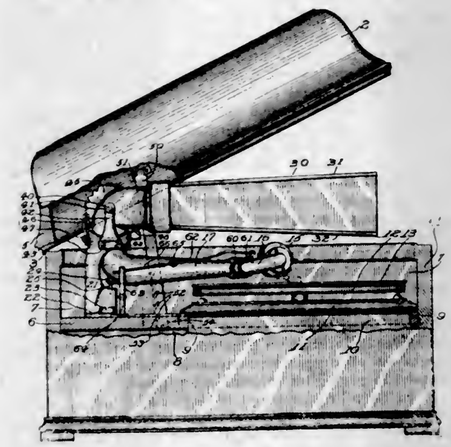
3. The herein described process of making a wrought metal clamping ring for pipe couplings which consists in forming a bar of wrought metal having a flat plate portion and a flange portion extending substantially perpendicularly from one face thereof, between its inner and outer edges the exterior portion of the plate member being of sufficiently greater width than the interior portion to provide for the formation of bolt holes therein without unduly weakening the plate member, and said flange portion being of substantially uniform thickness to a line near the plate member and being thickened where it joins the plate member, bending said bar in the plane of the plate member into ring form and welding the ends together to form a ring having an annular plate member and an annular flange member, the metal of the plate member within the circle of the flange member being upset and thickened to form the bottom of a packing recess, and the exterior portions of the plate member being thinned, and providing the exterior portions of the plate member with bolt holes.

1,107,596. VEHICLE-BED. THOMAS R. EDMONDSON, Tucson, Ariz., assignor of one-half to Edward G. Sporleder, Tucson, Ariz. Filed Aug. 23, 1913. Serial No. 786,285. (Cl. 21—43.)



In a vehicle body, in combination, front and locking means co-acting with the corners of each back and the sides of the seats to hold the backs in normal position, removable cushions associated with the back and seat portion of each, and means telescoping with one of said seats adapted to co-act with the back of the front seat to completely fill the space between the front and rear seats thereby permitting some of said removable cushions to be laid thereon to provide a smooth even bed.

1,107,597. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed July 10, 1909. Serial No. 506,865. (Cl. 181—3.)



1. The combination with a record support, of sound reproducing mechanism arranged to coöperate with said support, a jointed amplifier having independently movable sections comprising a movable delivery end mounted above said support, communicating with said reproducing mechanism, and a cabinet wholly inclosing said amplifier and having a cover movable independently of said delivery end.

2. In a talking machine, the combination with a record support, of sound reproducing means arranged to coöperate therewith, a jointed sectional amplifier having a major portion arranged above said support to swing upon a fixed axis, and a casing inclosing said amplifier and having a cover movable independently of said major portion upon an axis parallel with the axis of oscillation of said major portion.

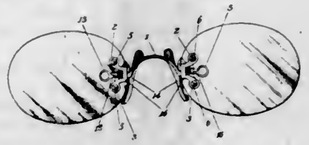
3. In a talking machine, the combination with a sound box arm arranged to oscillate in a substantially horizontal plane, of a sound box carried by said arm and movable with respect thereto, and means connected to said sound box whereby a movement of said box with respect to said arm reacts to effect a movement of said arm in its horizontal plane.

4. In a talking machine, the combination with a swinging sound box arm, of a sound box carried thereby and invertible with respect thereto, and means actuated by the inversion of said sound box to swing said sound box arm into inoperative position.

5. The combination with a movable support, of a sound box movably carried thereby and means actuated by a movement of said sound box with respect to said support for moving said support into an inoperative position.

[Claims 6 to 13 not printed in the Gazette.]

1,107,598. EYEGLASSES AND MOUNTING. WARD IRVING FANCHER, Glen Cove, N. Y. Filed Apr. 15, 1912. Serial No. 690,710. (Cl. 88—50.)



1. Eye-glasses consisting of the combination of lenses, a bridge and nose engaging levers, said lenses having notches in the edges nearest said bridge, and said levers being mounted in said notches.

2. Eye-glasses consisting of the combination of lenses, a bridge and nose engaging levers, said lenses having notches in the edges nearest said bridge, and the fulcrums of said levers being mounted in said notches.

3. Eye-glasses consisting of the combination of lenses and a bridge, said bridge having upper and lower ears secured to each end thereof, a pin passing through each of said pairs of ears, nose engaging levers mounted upon said pins and between said ears, and lenses having notches in which said ears are received.

4. Eye-glasses consisting of the combination of lenses and a bridge, said bridge having upper and lower pairs of ears secured to each end thereof, pins passing through each of said pairs of ears and the corresponding lens, upper and lower horizontal ears secured to each end of said bridge and projecting into a notch in the edge of the corresponding lens, pins mounted in said ears, and nose engaging levers mounted on said pins.

5. Eye-glasses consisting of the combination of lenses and a bridge, said bridge having upper and lower pairs of ears secured to each end thereof, pins passing through each of said pairs of ears and the corresponding lens and nose-engaging levers mounted between said ears and within the peripheries of said lenses.

[Claims 6 to 8 not printed in the Gazette.]

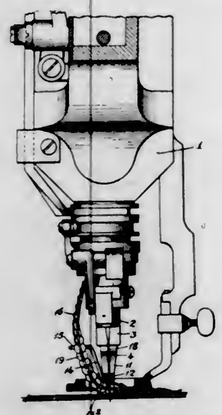
1,107,599. SEWING-MACHINE. JOHN FINK, New York, N. Y. Filed Feb. 12, 1914. Serial No. 818,183. (Cl. 112—7.)

1. In a machine of the type specified, a device whereby a strip of spangles may be stitched to fabric comprising a needle guide and means for guiding the strip of spangles on to the fabric with the length of the strip parallel with and the plane of the strip perpendicular to said fabric and into and at one side of the needle guide so that the needle will pass through the cord holding the spangles together but will clear the spangles.

2. In a machine of the type specified, a device whereby a strip of spangles may be stitched to fabric comprising a block adapted to be attached to the head of the machine and slotted from below to a depth substantially equal to the diameter of the spangles, means for guiding the strip into said slot, and means for guiding the needle within said slot so as to pass through the cord holding the spangles together but so as to clear the spangles.

3. In a machine of the type specified, a device whereby a strip of spangles may be stitched to fabric comprising a

combined needle guide and strip guide adapted to be attached to the head of the machine the strip guide including a slot for holding the strip of spangles on edge against the fabric with the spangles at one side of the needle guide, in combination with means for introducing the strip into said slot.

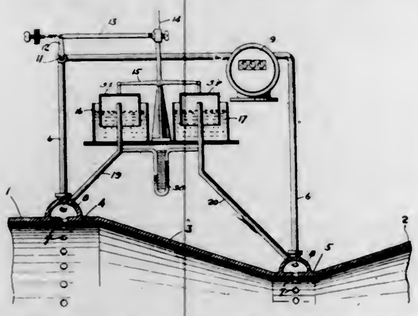


4. In a machine of the type specified, a device whereby a strip of spangles may be stitched to fabric comprising a block provided with a guide for the needle and a slot opening from below for holding the strip on edge against the fabric the needle guide opening into the top of the slot and away from the side thereof against which lie the spangles proper.

5. In a machine of the type specified, a device whereby spangles arranged in strip form may be stitched to fabric, comprising a block having a slot opening from below, means for guiding a pair of strips with their connecting words adjacent into said slot and an elongated needle guide transverse to said slot and opening into the top thereof.

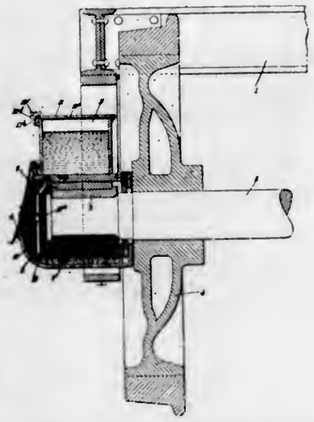
[Claims 6 and 7 not printed in the Gazette.]

1,107,600. REGISTERING-METER FOR GAS AND THE LIKE. WALTER H. FULWEILER, Moylan, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1911. Serial No. 601,092. (Cl. 73—68.)



A proportional meter comprising a valveless measuring device adapted to operate by drop in pressure between two points of different pressures, a by-pass connected between said points of different pressures and of capacity proportionate to the measuring device, a registering meter interpose in the by-pass, an impedance member interposed in the by-pass in series with the registering meter, and means responsive to difference in pressure across said points and adapted to automatically adjust said impedance member to maintain the proportional capacity of the by-pass, substantially as described.

1,107,601. OILING SYSTEM. HENRY DAWSON FURNISS, New York, N. Y. Filed May 14, 1913. Serial No. 767,527. (Cl. 64—24.)



1. In an oiling system the combination of a body of absorbent material, a perforated support therefor, and means for maintaining a constant level of oil therein comprising an oil supply pipe adapted to supply oil below the support and having a lateral opening to maintain the level of the oil above the support.

2. In an oiling system the combination of a body of absorbent material, a perforated support therefor, and means for maintaining a constant level of oil therein comprising an oil supply pipe adapted to supply oil through the support and having a lateral opening to maintain the level of the oil above the support.

3. In an oiling system the combination of a body of absorbent material, a perforated support therefor, and means for maintaining a constant level of oil therein comprising an oil supply pipe connected to the support and adapted to supply oil below the support.

4. In an oiling system the combination of a body of absorbent material, a perforated support therefor, and means for maintaining a constant level of oil therein comprising an oil supply pipe connected to the support and adapted to supply oil through the support.

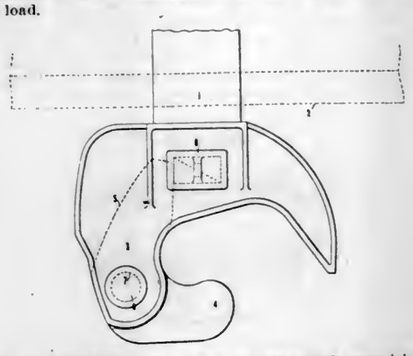
5. In an oiling system the combination of an oil box containing a body of absorbent, a perforated plate supporting the same, an oil supply pipe arranged to feed oil below the perforated plate and having a lateral opening above the perforated plate, an oil supply chamber connected to the pipe having an air tight cover and a stop cock located in the pipe.

1,107,602. CAR-COUPLING. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed July 17, 1911. Serial No. 638,797. (Cl. 213—65.)

1. In an apparatus of the character described, a knuckle having a pivotal axis, said axis being so located as to dispose material on opposite sides thereof such that the resistances of the material to failure under the load are proportional to the stresses set up in the cross sections by the load.

2. In an apparatus of the character described, draft means adapted to be secured to a car, and comprising a pivoted coupling jaw, the pivotal axis being so located that the stress in the material on each side of the axis bears the same ratio to the stress under which the material would fail on that side.

3. An apparatus of the character described comprising, in combination, a shank, and a knuckle pivoted thereto, the pivotal axis of the knuckle being so located as to dispose material on opposite sides thereof such that the resistances of the material to failure under the load are proportional to the stresses set up in the cross section by the load.

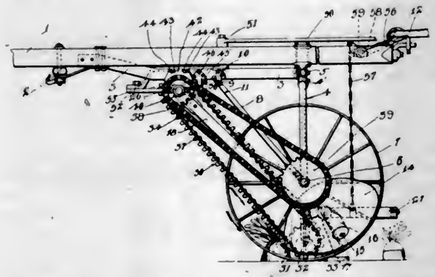


4. An apparatus of the character descsribed comprising, in combination, a shank, and a knuckle pivoted thereto, the pivotal axis of the knuckle being so located as to dispose material on opposite sides thereof, such that the stress in each cross section through the pivotal axis bears the same ratio to the stress under which the material would fail at that cross section.

5. In an apparatus of the character described, the combination, a shank, a knuckle having an opening to receive a knuckle pin, a knuckle pin pivotally connecting the shank to the knuckle and passing through said opening, said opening being located at such point in the cross section of the knuckle as to provide cross sectional areas on opposite sides of the opening such that the resistances of the material to failure under the load are proportional to the stresses set up in the cross sections by the load.

[Claim 6 not printed in the Gazette.]

1,107,603. BEET-TOPPER. WILLIAM R. GARDNER, Los Angeles, Cal., assignor, by direct and mesne assignments, to American Beet Topper Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 13, 1912. Serial No. 731,211. (Cl. 55—107.)

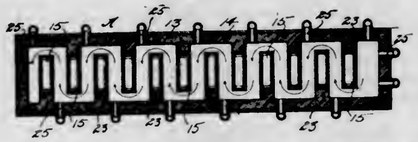


1. In a beet topper, the combination of a frame, wheels carrying said frame, a horizontal shaft mounted on said frame, driving means connecting said wheels to said shaft to rotate the shaft, a cutter frame hung from said shaft, wheels on said shaft and on said cutter frame, an endless belt mounted on said wheels and extending obliquely downward and rearward from the wheels on the shaft, to ride on the beet tops, and cutter means carried by said frame, adjacent the lower end of said belt, for cutting the beet tops.

2. In a beet topper, the combination of a frame, wheels carrying said frame, a horizontal shaft journaled on said frame, sprocket wheels on said shaft and on said carrying wheels respectively, a sprocket chain connecting said sprocket wheels to drive said shaft from said carrying wheels, a cutter frame hung on said shaft and swinging vertically thereon, a wheel carried by said shaft and rotating therewith, a wheel carried by said cutter frame at the lower end thereof, an endless belt mounted on said two last named wheels and extending obliquely downward and rearward from said shaft and adapted to ride on the beet tops, and cutter means carried by said frame adjacent to the lower end of said belt.

3. In a beet topper, the combination of a frame, wheels carrying said frame, a horizontal shaft journaled on said frame, sprocket wheels on said shaft and on said carrying wheels respectively, a sprocket chain connecting said sprocket wheels to drive said shaft from said carrying wheels, a cutter frame hung on said shaft and swinging vertically thereon, a wheel carried by said shaft and rotating therewith, a wheel carried by said cutter frame at the lower end thereof, an endless belt mounted on said two last named wheels and extending obliquely downward and rearward from said shaft and adapted to ride on the beet tops, cutter means carried by said frame adjacent to the lower end of said belt, said cutter frame being slidable longitudinally on said horizontal shaft, and manually controlled means on the first named frame for moving the said cutter frame endwise on said shaft.

1,107,604. ORE-ROASTING FURNACE. GEORGE P. GIBSON, Braddock, Pa. Filed June 27, 1913. Serial No. 776,133. (Cl. 75—137.)



1. An ore treating furnace including a furnace body having a series of alined openings in the top thereof, and also provided with interior vertically disposed baffle walls projecting alternately from opposite inner sides, crucibles removably fitted in said openings and resting upon the floor of the furnace body, said crucibles also arranged to have one side flushly engage one of the baffle walls and the other side spaced from the inner wall of the furnace to produce a circuitous channel through the furnace.

2. An ore treating furnace including a furnace body having a series of alined openings in the top thereof, and also provided with interior vertically disposed baffle walls projecting alternately from opposite inner sides, crucibles removably fitted in said openings and resting upon the floor of the furnace body, said crucibles also arranged to have one side flushly engage one of the baffle walls and the opposite side spaced from the inner wall of the furnace to produce a circuitous channel therethrough, and burners located upon opposite sides of the furnace and at one end, each of said side burners arranged adjacent a baffle wall and disposed upon the side thereof nearest the end burners.

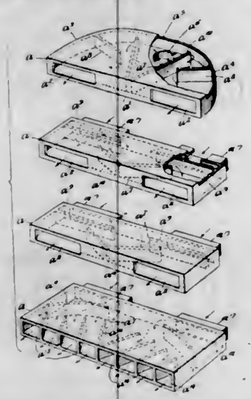
3. An ore treating furnace including a furnace body having a series of alined openings in the top thereof, and also provided with baffle walls projecting alternately from opposite inner sides, crucibles removably fitted in said oepnings and resting upon the floor of the furnace body, said crucibles also arranged to have one side flushly engage one of the baffle walls to produce a circuitous channel through the furnace, alternately disposed burners located upon the opposite sides of the furnace and arranged to discharge in opposite directions upon opposite sides of said crucibles, and other burners located at one end of the furnace and discharging longitudinally into the interior thereof.

4. An ore treating furnace including a furnace body provided with a series of alined openings in the top thereof, crucibles fitted within the alined openings and resting on the bottom of the furnace, each of the crucibles being provided with a nipple, means for directing heat against

the exterior of the crucibles, an air supply pipe connected to the nipples of the crucibles, an individual air pipe connected to the nipple of each crucible and extending downwardly toward the bottom thereof, a cover for each of the crucibles, and means connected with each crucible for carrying the fumes therefrom.

5. An ore treating furnace including a furnace body having a series of top openings, removable crucibles fitted within said openings, means for heating the interior of the body, and an air circulating system including pipes extending into the crucibles, a valved air supplying trunk pipe in communication with said air-pipes, and valved by-pass pipes in communication with the trunk pipe and each having a cut-off valve and a feed opening for introducing material therein.

1,107,605. ADJUSTABLE HEAT AND FUEL ECONOMIZER. MANLY M. GILLAM, Flushing, N. Y. Filed Feb. 20, 1914. Serial No. 819,012. (Cl. 126—15.)



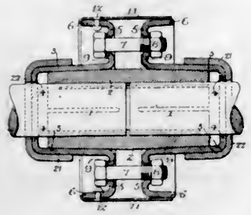
1. In a heat and fuel economizer, the combination substantially as described, of an intake section and additional sections, one of which is a discharge section, each of the sections having internal obstructions and the intake, the discharge and the intermediate sections differing each from the other and the intermediate section being adapted to be combined with other intermediate sections of like form or with the intake and discharge sections alone, whereby the capacity of the economizer may be varied at will, substantially as set forth.

2. In an adjustable heat and fuel economizer, the combination, substantially as described, of an intake section having internal obstructions, a discharge section having internal obstructions and an intermediate section having internal obstructions, differing each from the other, the intermediate section being adapted to be combined with other intermediate sections of like form or with the intake and discharge sections alone, whereby the capacity of the economizer may be varied at will, for retarding variable draft conditions, and all of the sections constituting the unit device alining in uniform relationship in their operative position, for the purposes set forth.

1,107,606. SHAFT-COUPLING. HOWARD T. HALLOWELL, Philadelphia, Pa. Filed Mar. 16, 1909. Serial No. 483,805. (Cl. 64—13.)

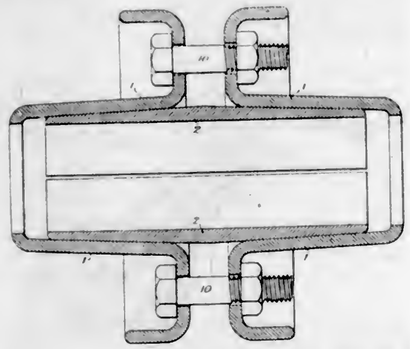
1. In a shaft coupling, the combination with a compressible sleeve receiving shaft ends to be coupled, of a pair of pressed-metal members having tapering hubs embracing the ends of said sleeve and outwardly extending walls at right angles to the axis of said hubs forming bolt receiving portions parallel with each other, said hubs having inwardly extending flanges adjacent the ends of the sleeve, said walls terminating outwardly with flanges or rims forming stiffening elements disposed substantially at right angles thereto, and means for connecting said walls.

2. In a shaft coupling, the combination with a compressible sleeve or bushing receiving shaft ends to be coupled and having tapering external walls, of a plurality of separate pressed sheet-metal clamping elements fitted thereon, each of said elements having a web or disk portion lying at right angles to the axis of the shaft, a tapering hub portion integral with said web and having a rounded contour at the junction of said parts, a flanged rim at the outer annular edge of said web, and a stiffening flange at the end of the hub portion, and means for confining said clamping elements together and in engagement with said compressible sleeve or bushing.



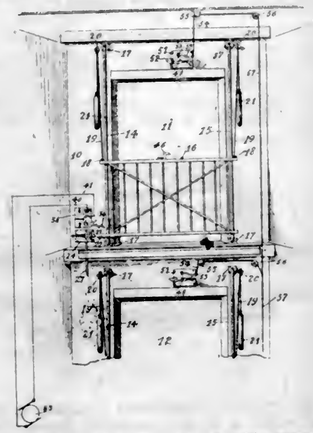
3. In a shaft coupling, the combination with a compressible sleeve or bushing receiving shaft ends to be coupled, said bushing having tapered ends, of a plurality of separate pressed sheet metal clamping elements fitted thereon, said elements having web or disk portions lying at right angles to the axis of the shaft, tapering hub portions integral with said webs and having a rounded contour at the junction of said parts, annular flanged rims carried by said webs, and stiffening flanges at the smaller ends of the hub portions, the web or disk portions of said clamping elements having reinforcing and strengthening means, and means for confining said clamping elements together with their hubs in engagement with said compressible sleeve or bushing.

1,107,607. PROCESS OF MAKING SHAFT-COUPLING SLEEVES. HOWARD T. HALLOWELL, Philadelphia, Pa. Filed June 5, 1909. Serial No. 500,299. (Cl. 29—148.)



The process of making split sleeves or bushings for shaft couplings, which comprises rolling a strip or bar of metal having one portion thicker than another with one plane surface and a surface sloping from a central median line whereby the central portion of the strip or bar is thicker than the edges thereof with inclined or sloping plane surfaces between the portions of different thicknesses, simultaneously finishing both surfaces of said strip or bar in the rolling operation, cutting said strip or bar into blanks, and then curving such blanks to form tubular members internally cylindrical with walls parallel to the longitudinal axis of the same.

1,107,608. SAFETY-GATE FOR ELEVATORS. JOHN F. HANTKE, Los Angeles, Cal. Filed Aug. 6, 1913. Serial No. 783,324. (Cl. 187—31.)



1. The combination of a vertically slidable gate adapted to open and close an opening leading into an elevator shaft, weights for balancing the gate of slightly less weight than the gate, means operated by the gate for controlling the motive power of an elevator in the shaft by which the elevator can be operated only when the gate is caused to close, and means by which the gate can be closed from a remote point independent of the elevator to permit the operation of the elevator.

2. The combination of an elevator shaft having a plurality of door openings therein, vertically slidable gates normally closing said openings, counter-weights of slightly less weight than the gates connected thereto, means controlled by the gates, whereby the elevator in the shaft can be operated only when all the gates are caused to close, and means by which any open gate may be closed from any of the elevator shaft openings independent of the position of the elevator to permit the operation of the elevator.

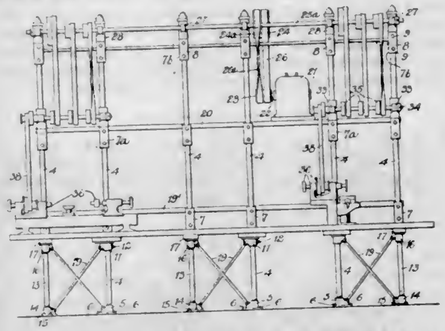
3. The combination with an elevator shaft having a series of door openings arranged on superposed floor levels, a normally closed vertically slidable gate extending across each of the shaft openings, a counter-weight for each gate of slightly less weight than the gate, means for supporting each gate in an elevated or open position, means whereby the opening of the gate will prevent the operation of an elevator in the shaft, and means for operating the gate-supporting means from any of the elevator shaft openings, whereby any open gate will be released and caused to gravitate to its closed position.

4. The combination with an elevator shaft having a series of door openings arranged on superposed floor levels, a normally closed vertically slidable gate extending across each of the shaft openings, a counter-weight for each gate of slightly less weight than the gate, means for supporting each gate in an elevated or open position, means whereby the opening of the gate will prevent the operation of an elevator in the shaft, means for operating the gate-supporting means from any of the elevator shaft openings, whereby any open gate will be released and caused to gravitate to its closed position, and means for locking the gate in its closed position.

1,107,609. MACHINE-BENCH. FRANKLIN HARDINGE, Chicago, Ill., assignor to Hardinge Brothers, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1913. Serial No. 782,552. (Cl. 29—1.)

1. In a machine bench, a series of high uprights, a series of low uprights, table tops between said high uprights and the low uprights, and bracing means between the high uprights.

2. In a machine bench, two central series of high uprights, a series of low uprights parallel to said series of high uprights arranged on each side of said high uprights, a table top between each series of low uprights and the corresponding series of high uprights, and bracing means between said high uprights.



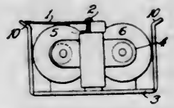
3. In a machine bench, two central series of high uprights, a series of low uprights parallel to said series of high uprights arranged on each side of said high uprights, a table top between each series of low uprights and the corresponding series of high uprights, and a plurality of vertically adjustable braces between said high uprights.

4. In a machine bench, two central series of high uprights, a series of low uprights parallel to said series of high uprights arranged on each side of said high uprights, a table top between each series of low uprights and the corresponding series of high uprights, and a plurality of braces between said high uprights, each brace comprising a pair of sleeves rigidly set upon the respective uprights and a connecting web.

5. In a machine bench, two central series of high uprights, a series of low uprights parallel to said series of high uprights arranged on each side of said high uprights, a table top between each series of low uprights and the corresponding series of high uprights, diagonal tie rods between said uprights under the table tops, and bracing means between said high uprights.

[Claims 6 to 8 not printed in the Gazette.]

1,107,610. ANNUNCIATOR-DROP. WILLIAM WEIR HENRY, Wollaston, Mass., assignor to S. H. Couch Co., Inc., Atlantic, Mass. Filed Oct. 24, 1912. Serial No. 727,511. (Cl. 177—329.)



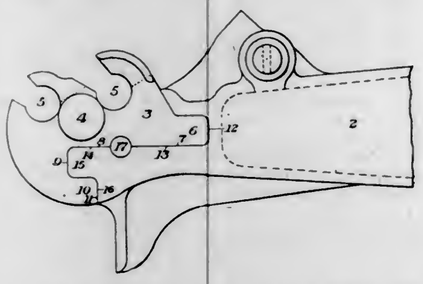
1. An annunciator drop comprising a frame, an electromagnet mounted on said frame, and an indicator movably mounted in connection with said frame and adapted to be thrown from a position of rest by said magnet; in combination with a rigid stop adapted to receive the impact of the moving indicator, said stop being so shaped as to permit a slight continued advance of said indicator beyond its initial point of impact, and so positioned as to automatically compel the indicator to return to said initial point of impact as its final throw position.

2. An annunciator drop comprising a frame, an electromagnet mounted on said frame, and an indicator movably mounted in connection with said frame and adapted to be thrown from a position of rest by said magnet; in combination with a stop adapted to receive the impact of said indicator as a glancing blow, and so positioned as to automatically compel said indicator to ultimately come to rest at its position of initial impact.

3. An indicator adapted to be thrown from a position of rest, means for causing such throw, and a stop adapted to receive the impact of said indicator as a glancing blow, said stop being so positioned as to ultimately bring said indicator to rest at the position of initial impact.

4. An indicator adapted to be thrown from a position of rest, means for causing such throw, and a rigid stop adapted to receive the impact of the moving indicator, said stop being so shaped as to permit a slight advance of said indicator beyond its first point of impact, and so positioned as to compel said indicator to automatically return to said first point of impact as its final thrown position.

1,107,611. LEVER-SOCKET FOR LIFTING-JACKS. ISAIAH E. HINDMAN, Crafton, Pa., assignor to The Duff Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 14, 1912. Serial No. 715,043. (Cl. 74—33.)



1. A lever socket for jacks, comprising a socket member and a head member, the socket member having a seat, there being a recess in the socket member above said seat, the head member having a seating face engaging the seat on the socket member, said head member extending across the entire face of the socket member, the head member having a tongue within the recess above the seat on the socket member, and a pin engaging both of said members for securing them in position with relation to each other, substantially as described.

2. A lever socket for jacks, comprising a socket member and a head member, each of said members having a tongue and groove, the tongue on the head member engaging the groove in the socket member, while the tongue on the socket member engages the groove in the head member, and a pin engaging both of said members for securing them to each other; substantially as described.

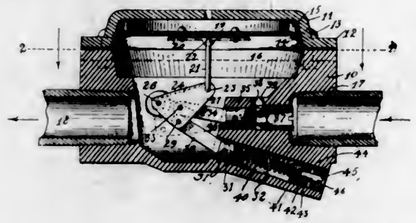
3. A lever socket for jacks, comprising two members, each member having a longitudinally extending tongue and a longitudinally extending recess, the longitudinally extending tongue of one member fitting the longitudinally extending recess in the other member, there being a semi-circular transverse recess in each of said members, and a securing device within said recesses for holding the two members from movement in a longitudinal direction; substantially as described.

4. A jack lever, comprising a socket member and a head member, said socket member having a rearwardly extending groove and a forwardly extending tongue, the head member having a rearwardly extending tongue and a forwardly extending groove, the tongue on the head member being arranged to be seated in the groove in the socket member while the tongue on the socket member engages the groove in the head member, the head member having a plurality of pawl seats extending across the entire face thereof, each of said members having semi-circular recesses in register with each other, and a securing pin within said recesses for retaining the two members in position with relation to each other; substantially as described.

5. A lever socket for jacks, comprising a socket member and a head member, each of said members having a tongue and a groove, the tongue of one member being seated in the groove of the other member, and a locking device engaging both members; substantially as described.

[Claim 6 not printed in the Gazette.]

1,107,612. GAS-REGULATOR. ARTHUR J. HODGE, Pasadena, Cal., assignor to Reliance Gas Regulator & Machine Company, Pasadena, Cal., a Corporation of California. Filed May 9, 1913. Serial No. 766,491. (Cl. 50—26.)



1. A gas regulator, comprising a casing having a gas inlet and outlet, a flexible diaphragm mounted therein, a sliding valve member controlling said inlet, a pivotally mounted operating lever, a spring tension mechanism mounted in said casing, said mechanism adapted to actuate said diaphragm with equable compression and to control the movement of said sliding valve, and a plurality of links pivotally connected to said operating lever, the free ends of said links being connected to the sliding valve, diaphragm and spring tension mechanism respectively.

2. A gas regulator, comprising a casing, a diaphragm mounted therein, a sliding inlet valve mounted in said casing, a resiliently actuated slide member mounted in a bore formed in said casing, a pivotally mounted lever in said casing, a plurality of connecting links pivotally connected to said lever, the free ends of each of said link being pivoted to said sliding inlet valve, slide member, and diaphragm respectively, and resilient means to actuate said slide member in opposition to said diaphragm to control the inlet valve.

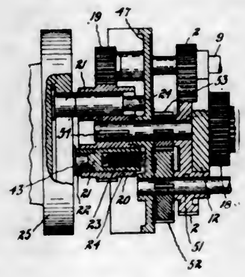
3. A gas regulator, comprising a casing having a diaphragm mounted therein, a pivoted lever mounted adjacent to said diaphragm, a link connecting said lever and diaphragm, an inlet valve, a link connecting said valve and lever, and spring actuated means interposed adjacent said pivot connection for the valve and intermediate the pivots for the pivoted lever and diaphragm, whereby an equable tension is applied to said diaphragm.

4. A gas regulator, comprising a casing having inlet and outle apertures, a diaphragm mounted therein, a pivotally mounted lever, a link connecting said diaphragm and lever, having a pivotal connection at the point of greatest leverage on said lever, a valve controlling said inlet, a link connecting said valve and lever having a pivotal connection with the lever intermediate of the greatest leverage of said lever, a spring actuated slide, and a link connecting said slide and lever having a pivotal connection with said lever adapted to increase the leverage of the action as the spring tension is reduced.

1,107,613. VARIABLE-SPEED MECHANISM. LOUIS HUFFMAN, Toronto, Ontario, Canada. Filed Aug. 31, 1912. Serial No. 718,050. (Cl. 74—34.)

1. In variable speed mechanism the combination of a constant speed shaft; a rotary driven member loose on the said shaft; a spindle geared to the driven member; a bearing member for the spindle secured to the constant speed shaft; a rotatable speed varying member secured to said spindle; a rotatable member adapted to intermittently rotate said speed varying member; and means for actuating said rotatable member at a pre-determined speed relative to the constant speed shaft.

2. In variable speed mechanism the combination of a constant speed shaft; a rotary driven member loose on the said shaft; a spindle geared to the driven member; a bearing member for the spindle secured to the constant speed shaft; a rotatable speed varying member secured to said spindle; a rotatable member adapted to intermittently rotate said speed varying member; means for actuating said rotatable member at a pre-determined speed relative to the constant speed shaft; means for varying the ratio of the gearing between the aforesaid spindle and the driven part; and means for varying the ratio of the gearing between the rotatable member actuating the speed varying member and the driving shaft.



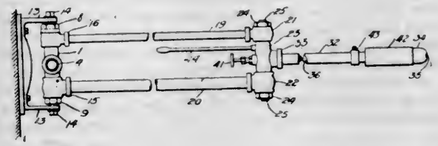
3. In variable speed mechanism the combination of a constant speed shaft; a rotary driven member; speed varying mechanism forming a driving connection between the said shaft and the driven member whereby the driven member may be driven at the same speed as the shaft, said mechanism including a gear train; means geared to the said shaft adapted to intermittently actuate the speed varying mechanism to produce periods of speed variation equal in duration to the alternating periods of constant speed; means for changing the gearing between the shaft and driven member to vary the arc through which the rotary driven member is driven at the varied speed; and means for changing the gearing between the constant speed shaft and the means for actuating the speed varying mechanism to vary the frequency of the periods of speed variation.

4. In variable speed mechanism the combination of a constant speed shaft; a rotary driven member; a bearing member secured to said shaft; a rotary speed varying member journaled in said bearing member; gearing between said speed-varying member and the driven member; rotary actuating mechanism for the speed-varying member geared to the constant speed shaft and adapted to intermittently actuate the speed varying mechanism to produce periods of speed variation equal in duration to the alternating periods of constant speed; means for changing the gearing between the shaft and driven member to vary the arc through which the rotary driven member is driven at the varied speed; and means for changing the gearing between the constant speed shaft and the means for actuating the speed varying mechanism to vary the frequency of the periods of speed variation.

5. In variable speed mechanism the combination of a constant speed shaft; a rotary driven member; a bearing member secured to said shaft; a rotary speed varying member journaled in said bearing member; gearing between said speed-varying member and the driven member; a plurality of pins slidable in the speed-varying member parallel to its axis; a cam disk journaled concentric with the constant speed shaft and geared thereto, said cam disk carrying a cam adapted to engage said pins to intermittently rotate the speed-varying member, said cam having its surface concentric with the shaft for an angle of 180°; and means for bringing said pins *seriatim* into and out of the path of the cam.

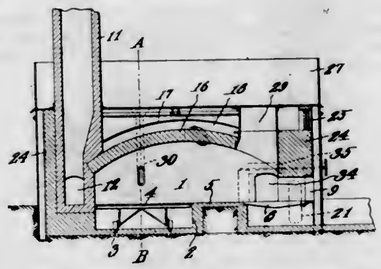
[Claims 6 to 9 not printed in the Gazette.]

1,107,614. OIL-BURNER. THOMPSON P. JARVIS, San Francisco, Cal. Filed Feb. 9, 1914. Serial No. 817,522. (Cl. 158—76.)



A burner of the class described, the same comprising a hollow swivel union tapered toward its opposite ends, a bracket supporting said union at its opposite ends, hollow castings fitted over the tapered ends of said union, said union formed on its interior with separate chambers, an air feed pipe and an oil feed pipe each communicating with one of said chambers and through which the air and oil are forced under pressure, a communication between each of said castings and one of said chambers, a pair of air and oil pipes secured to said castings, a pair of hollow castings carried by the other ends of said pipes, a hollow swivel union tapered toward its opposite ends and over which said castings are fitted, said union formed on its interior with separate chambers, each communicating with one of said castings, an air discharge pipe carried by said union and extending therefrom in a plane at right angles to the axis of rotation of said union, said pipe communicating at its inner end with the chamber connected to said air supply pipe, a burner carried at the outer end of said pipe, an oil discharge pipe of a diameter smaller than said air discharge pipe and mounted within the same and extending longitudinally thereof, said pipe at its inner end communicating with the chamber connected to said oil supply pipe and communicating at its outer end with said burner, and a valve for controlling the communication between the chamber connected to said oil supply pipe and said oil discharge pipe.

1,107,615. CREMATORY. EDWARD M. JONES, Macon, Ga. Filed Dec. 30, 1913. Serial No. 809,552. (Cl. 110—12.)



1. A crematory including an incinerating chamber, a platform along one side of the chamber and having an air inlet opening at each end, a grate extending into the platform at a point between its ends for supporting ignited material, an outlet flue at the opposite side of the incinerating chamber, and means for directing air over the incinerating chamber to preheat it and thence through the openings at the ends of the platform and into the incinerating chamber, said air inlets at the ends of the platform being arranged to direct the inflowing air in a direction transverse to the direction of the flow of the gases through the incinerating chamber.

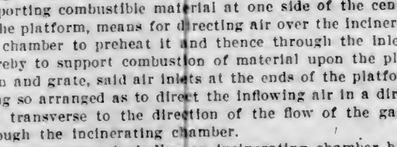
2. A crematory including an incinerating chamber having a platform extending along one side thereof, outlet

flues at the other side of the incinerating chamber, there being air inlets at the ends of the platform, a grate for supporting combustible material at one side of the center of the platform, means for directing air over the incinerating chamber to preheat it and thence through the inlets, thereby to support combustion of material upon the platform and grate, said air inlets at the ends of the platform being so arranged as to direct the inflowing air in a direction transverse to the direction of the flow of the gases through the incinerating chamber.

3. A crematory including an incinerating chamber having a platform along one side, a runway or depression between the platform and the other side, and an outlet flue in that side of the chamber adjacent the runway, a grate extending into the middle portion of the platform from one side of the incinerating chamber, there being air inlets at the ends of the platform, means for directing fresh air over the top of the incinerating chamber to preheat the air and thence to the inlets at the ends of the platform to support combustion within the incinerating chamber, and means for directing the material to be incinerated into the incinerating chamber at a point in the path of the preheated air issuing from the inlet and the gases arising from the grate, said gases and preheated air being adapted to flow to one or both of the outlet flues, said inlets at the ends of the platform being so arranged as to direct the inflowing air in a direction transverse to the direction of the flow of the gases through the incinerating chamber.

4. A crematory including an incinerating chamber having a runway within one side portion thereof, outlet flues in said side portion, a platform along the other side of the chamber, there being air inlets at the ends of the platform, a grate extending into the platform adjacent the center of one side, an air chamber above the incinerating chamber and having a fresh air inlet, means for directing fresh air along a tortuous path within said chamber and to the inlets at the ends of the platform, thereby to preheat the air, and means for directing material to be incinerated, into the chamber at a point in the path of the air currents issuing from the inlets and the gases arising from the grate, said air currents and gases being adapted to flow to one or both of the flues in the side of the incinerating chamber, said air inlets at the ends of the platform being so arranged as to direct the inflowing air in a direction transverse to the direction of flow of the gases through the incinerating chamber.

1,107,616. CLOSURE FOR SHOES. JOHANN JÜRGENS, Brooklyn, N. Y., assignor of one-half to Wolfgang von Bibra, Jersey City, N. J. Filed June 5, 1913. Serial No. 771,785. (Cl. 24—207.)



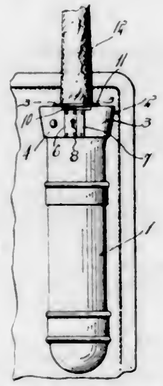
1. A closing device for shoes consisting of a flexible bar with an outer downward end flange at each front portion of the upper of the shoe, a central elastic strip, two yoke shaped members each clamping one side end of said elastic strip, a downward extension formed integral with each yoke having an inward horizontal portion and a short upward end flange, means for permitting of pushing the yokes together and pulling them apart along said flexible bars of the shoe, and means at the top end of the device adapted to be closed and released.

2. A closing device for shoes consisting of a flexible bar at each open front portion of the upper of the shoe, a plurality of individual lace members, each composed of a central rubber strip, two yoke shaped members each clamping one side end of the rubber strip and having a downward extension, an inward horizontal portion, and a short upward end flange, formed integral therewith, a spherical member with openings secured to each side portion of each yoke, and a flexible cord at each side passing through said openings, means permitting of pushing the yokes together and pulling them apart along said flexible bars of the shoe, and means at the top end of the device adapted to be closed and released.

3. A closing device for shoes consisting of a flexible bar with an outer downward end flange at each open front portion of the upper of the shoe, a plurality of individual lace members composed each of a central rubber strip, two yokes clamping each one side end of said rubber strip and forming below angular guides located on the downward flanges of the flexible bars and adapted to slide up and down thereon, a spherical member at each side portion of each yoke provided with a pair of angularly arranged openings passing therethrough, and a cord at each side secured with the lower end to the bottom end of the upper passing through said openings of all the spherical members and tied at the top lace member.

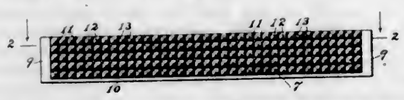
4. In a shoe of the type described, a plurality of individual lace members composed each of a central rubber strip, two yokes clamping each one side end of said rubber strip, and a downward extension formed integral with each yoke having an inward horizontal portion and a short upward end flange.

1,107,617. WHIP-LOCK. STANLEY C. KEARNEY, Wilkes-Barre, Pa. Filed Jan. 5, 1914. Serial No. 810,443. (Cl. 21—130.)



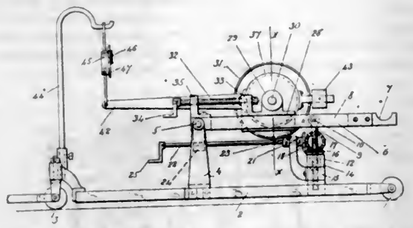
The combination with a whip socket, of a whip engageable therein, a sleeve carried by the whip and having an annular groove therein, a sectional band, one of said sections being fixed to the socket and the other being free to swing toward or away from the socket, said sections having webs formed integral with their upper edges for engaging said groove when the free ends of the sections are interlocked and means for positively locking the sections together.

1,107,618. STORAGE-BATTERY PLATE. MARTIN KROKAYETZ, Cleveland, Ohio. Filed Apr. 6, 1914. Serial No. 829,842. (Cl. 204—29.)



A battery plate having a plurality of trough shaped holders therein, active material within each holder, the exterior of the sides of the holder having numerous long grooves and pyramidal projections between the grooves, and perforations at the intersections of the grooves, and active material on the exterior of said sides.

1,107,619. TESTING-MACHINE. HERMAN E. KUHNER, Oxford, Md.; Rose L. Kuhner executrix of said Herman E. Kuhner, deceased. Filed July 15, 1913. Serial No. 779,194. (Cl. 73—51.)



1. In a testing machine, the combination, with a supporting frame, of arms pivoted to the frame and adapted to support a motor car, lifting mechanism for raising and lowering the said arms, slides on the said arms, a shaft carried by the said slides, driving pulleys on the said shaft, means for pressing the driving pulleys against the driving wheels of the motor car, and brake mechanism for controlling the speed of the said driving pulleys.

2. In a testing machine, the combination, with a wheeled truck, of arms pivoted at one end to the truck and having recessed bearings on the upper sides of their free end portions for engaging with a motor car, lifting mechanism for raising and lowering the said arms, slides on the said arms, a shaft carried by the said slides, driving pulleys on the said shaft, means for pressing the driving pulleys against the driving wheels of the motor car, and brake mechanism for controlling the speed of the said driving pulleys.

3. In a testing machine, the combination, with a supporting frame, of arms having their rear ends pivoted to the frame and provided at their front end portions with bearings for supporting a motor car, lifting screws pivoted to the middle parts of the said arms, nuts journaled in the frame and engaging with the lifting screws, driving mechanism for revolving the nuts simultaneously to raise and lower the arms, slides on the said arms, a shaft carried by the said slides, driving pulleys on the said shaft, means for pressing the driving pulleys against the driving wheels of the motor car, and brake mechanism for controlling the speed of the said driving pulleys.

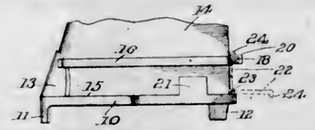
4. In a testing machine, the combination, with a supporting frame, of arms pivoted to the frame and adapted to support a motor car, lifting mechanism for raising and lowering the said arms, slides on the said arms, a shaft carried by the said slides, driving pulleys on the said shaft, screwthreaded brackets secured to the said arms, revoluble adjusting screws working in the said brackets and arranged parallel to the said arms and in operative connection with the slides, and brake mechanism for controlling the speed of the said driving pulleys.

5. In a testing machine, the combination, with a supporting frame, of arms pivoted to the frame and adapted to support a motor car, lifting mechanism for raising and lowering the said arms, slides on the said arms, a shaft carried by the said slides, driving pulleys on the said shaft, means for pressing the driving pulleys against the driving wheels of the motor car, a brake casing mounted loosely on the said shaft and provided with a screwthreaded hub, a friction brake arranged in the casing, pins slidable in the casing and adapted to apply the brake, a hand-wheel screwed on the said hub and bearing against the said pins, a brake lever secured to the said casing, and a testing-scale supported from the said frame and connected to the brake lever.

[Claims 6 and 7 not printed in the Gazette.]

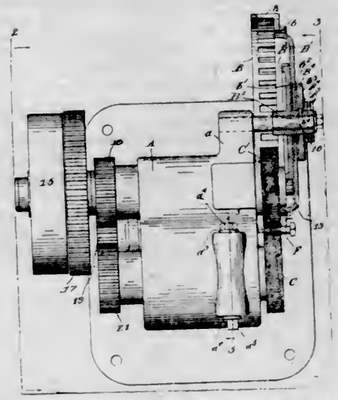
1,107,620. HORSESHOE. JOSEPH KUNDIS, Youngstown, Ohio. Filed Apr. 16, 1914. Serial No. 832,336. (Cl. 168—20.)

1. In combination with a horseshoe, a forwardly-positioned inclined plate and upwardly projecting marginal side plates mounted thereon and adapted for the reception of a horse's hoof therebetween and upon the shoe, end plates hinged to the rear ends of the heel portions of the shoe and being of substantially the same width as the shoe, projecting marginal angular flanges upon the tops of said end plates, resilient straps secured to and oppositely projecting from said front plate and adapted for surrounding the hoof when positioned upon the shoe, angular rear arms upon said straps adapted for engagement beneath said rear plate flanges when said rear plates are in closed position upon the hoof, pierced rearwardly-projecting lugs at the adjacent inner ends of said rear arms, and a locking bolt removably positioned through the perforations of said lugs.



2. A device of the class described, comprising a calked shoe, an inwardly-inclined front plate arcuate in cross-section mounted upon the hoof-engaging face of said shoe, marginal projecting angularly-positioned side plates mounted upon said hoof-engaging shoe face, plates of substantially the same width as said shoe and hinged to the upper rear edge of the heel portions of the shoe, outwardly-projecting marginal flanges upon the upper edges of said rear plates, resilient oppositely-extending straps secured to said front plate and adapted for encircling a hoof positioned upon said shoe and extending beneath said rear plate flanges, and a locking bolt adjustably secured between the projecting rear ends of said straps.

1,107,621. BOLT-THREADING MACHINE. ABRAHAM B. LANDIS, Enfield, Pa. Filed Jan. 17, 1911. Serial No. 603,125. Renewed Jan. 24, 1914. Serial No. 814,237. (Cl. 80—6.)

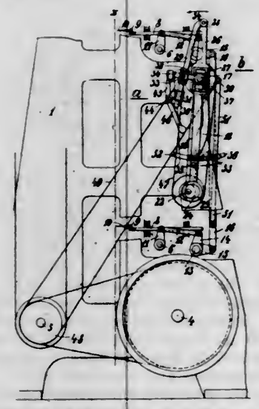


1. A bolt threading machine comprising a base, rotary thread forming dies mounted on shafts in said base and arranged to coöperate, a rotary work-carrying magazine arranged to carry the work between said dies, gearing for driving said dies also geared to drive said magazine, said magazine being connected to said gear by a frictional connection, substantially as set forth.

2. A bolt threading machine comprising a base, rotary thread forming dies arranged to coöperate, a rotary work-carrying magazine arranged to carry the work between said dies, gearing for driving said dies from a single shaft, said gearing also connected to drive said work-carrying magazine, the connection between said gearing and said magazine being formed to permit a slipping between the parts, substantially as set forth.

3. A bolt threading machine comprising rotary thread forming dies arranged to cooperate, a rotary work-carrying magazine mounted to feed the work between said dies, means for driving said dies constantly and at a uniform speed, means for driving said work-carrying magazine variably, and means for adjusting the dies toward or from each other, substantially as set forth.

1,107,622. BORING APPARATUS FOR EMBROIDERING-MACHINES. FRIEDRICH WILHELM LÄSSIG, Chemnitz, Germany. Filed Sept. 10, 1910. Serial No. 581,501. (Cl. 112—7.)



1. In a boring apparatus for embroidering machines, the combination with the boring points, of a shaft connected with the boring points, a rod mounted to rock and to slide about said shaft, a rod hinged to said rocking rod, and means connecting said hinged rod to the shaft to reciprocate the boring points, substantially as described.

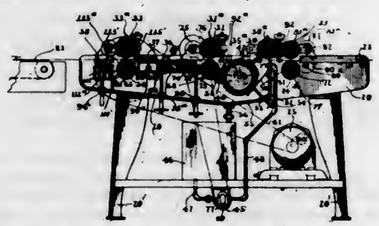
2. In a boring apparatus for embroidering machines, the combination with the boring points, of a shaft connected with the boring points, an eccentric-rod slidable and rotatable about said shaft, a rod hinged to said eccentric-rod and a lever connected to said shaft and having a sliding and rocking connection with said hinged rod whereby movement is transmitted from the eccentric rod to the shaft, substantially as described.

3. In a boring apparatus for embroidering machines, the combination with the boring points, of a shaft connected with the boring points, an eccentric-rod slidable and rotatable about said shaft, a rod hinged to said eccentric-rod, a rocking guide in which the lower end of the hinged-rod is slidable, and a lever connected to the shaft and having a sliding and rocking connection with the hinged-rod for the transmission of movement from the eccentric-rod to the shaft, substantially as described.

4. In a boring apparatus for embroidering machines, the combination with the boring-points of a shaft connected with the boring points, a swinging frame carrying a belt pulley and eccentric, drive-pulleys, one of which is connected with the belt-pulley of the swinging-frame, an eccentric-rod connected with the eccentric of the swinging frame, a rod hinged to the eccentric-rod, a lever connecting said hinged rod and the abovementioned shaft, and means coacting with the drive-pulleys and eccentric rod to uncluteh the drive-pulleys, and stop the shaft at a predetermined movement of the eccentric-rod, substantially as described.

1,107,623. WOOD-TREATING MACHINE. CLIFTON F. LEATHERBEE, Newton, Mass., assignor to Painting Machine Company, Kittery, Me., a Corporation of Maine. Filed Apr. 4, 1910. Serial No. 553,330. (Cl. 34—12.)

1. In combination with a machine for treating material having means for moving material therethrough, a conveyer positioned relatively to the treating machine for receiving the treated material as it comes from the machine and arranged for lateral discharge, a drying apparatus having means for receiving and sustaining said material as it comes from the conveyer, means for driving said moving means and conveyer in unison, means for removing the treated material from said conveyer to said drying apparatus, and means for actuating said removing means and said drying apparatus simultaneously.



2. In combination with a machine for treating moving material, means positioned for receiving the treated material as it comes in one direction from said machine and arranged for discharging such material in another direction to a drying apparatus, and a drying apparatus having primary means for receiving the treated material as it is discharged from said receiving means, secondary means for receiving the material as it passes from said primary means, and means for imparting motion to said drying apparatus in synchronism with said receiving and discharging means.

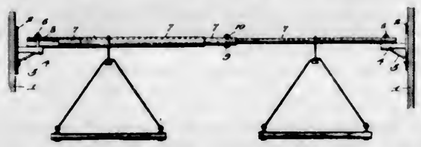
3. In combination with a machine for treating moving material and delivering it treated side down, a drying apparatus having means for receiving and sustaining the treated material as it is discharged from the machine in such position, and thereafter delivering it treated side up, mechanism for driving said machine and apparatus in unison, and means for imparting motion to said driving mechanism.

4. A drying apparatus having a series of fingers for receiving treated material, conveying the same, and reversing the position thereof, a second series of fingers for receiving the material as it passes from said first mentioned fingers and sustaining and delivering it in such reversed position, driving mechanism for said apparatus, and means for imparting motion to said driving mechanism adapted to be actuated through a limited portion of the movement of said drying mechanism.

5. In combination with a machine for treating material having means for moving material therethrough and delivering it substantially horizontally, a substantially vertical drying apparatus for receiving the treated material, means for driving said moving means and drying apparatus in unison or said moving means alone, means for removing the treated material substantially horizontally from said machine to said drying apparatus, and means for controlling the actuation of said driving means whereby a step by step movement is given said drying apparatus without varying the movement of said moving means.

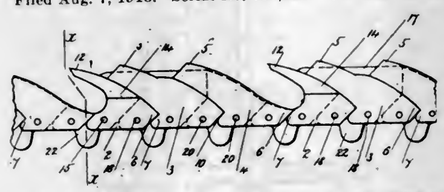
[Claim 6 not printed in the Gazette.]

1,107,624. COLLAPSIBLE GARMENT-HANGER SUPPORT. ALICE LYELL MANN, New York, N. Y. Filed Mar. 15, 1913. Serial No. 754,479. (Cl. 45—37.)



The combination with outstanding brackets having straight upwardly projecting posts on their ends of uniform diameter and threaded at their extremities, and means for securing said brackets in position, of a garment hanger support composed of a series of straight tubular telescopic sections of equal length, each section being of uniform diameter interiorly and exteriorly for its entire length to permit extension of said support at either end, and provided adjacent its ends with diametrically opposed perforations equally spaced from said ends and of a size to easily fit over said posts, so that when the support is fully collapsed the perforations in the several sections will register and may be attached to said bracket posts, and when extended to any desired distance in either direction the perforations in the ends of the extreme sections may be engaged on said bracket posts, a nut on the threaded end of each post to retain the hanger support thereon, and a fastening bolt to enter said registering perforations and hold the support collapsed, or when extended to be placed in the perforations in one or the other end of the intermediate section and the inner end of an extreme section to lock said sections against movement.

1,107,625. CHAIN SAW. HORACE E. MARTIN, Athens, Ga. Filed Aug. 7, 1913. Serial No. 783,688. (Cl. 143—135.)



1. In a chain saw, the combination, with side links arranged in pairs in sets of three, each two adjacent pairs of side links being provided with cutting teeth, and the remaining pair being connecting links; of three series of center links arranged in line with each other and pivoted to the side links, one series of center links being provided with drag teeth, the second series having gage teeth, and the third series being connecting links.

2. In a chain saw, the combination with side links arranged in pairs in sets of three, two adjacent pairs of the side links being provided with forwardly and upwardly curved cutting teeth which project longitudinally beyond the ends of the links to which they pertain, and the remaining pair being connecting links; of three series of center links arranged in line with each other and pivoted to the side links, one series of center links being provided with drag teeth, the second series having gage teeth, and the third series being connecting links.

3. In a chain saw, the combination, with side links certain of which are provided with forwardly projecting cutting teeth arranged opposite ea each other in pairs, of center links pivoted to the side links, certain of the center links being provided with drag teeth having laterally projecting portions for the projecting front end portions of the cutting teeth to overlap and rest on.

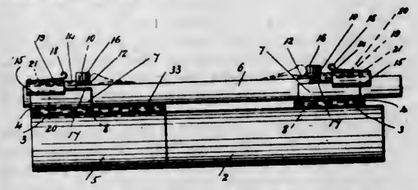
4. In a chain saw, the combination, with side links certain of which are provided with cutting teeth, of center links pivoted to the side links, certain of the center links being provided with drag teeth having laterally projecting side portions which rest on the connecting side links between the toothed side links.

5. In a chain saw, the combination, with side links provided with cutting teeth arranged opposite to each other in pairs, of center links pivoted to the side links, certain of the center links being provided with gage teeth which extend longitudinally between the cutting portions of two adjacent pairs of cutting teeth.

[Claims 6 to 8 not printed in the Gazette.]

1,107,626. RAZOR-SHARPENER. JOHN H. MILKS, Grays River, Wash. Filed May 12, 1914. Serial No. 837,994. (Cl. 51—16.)

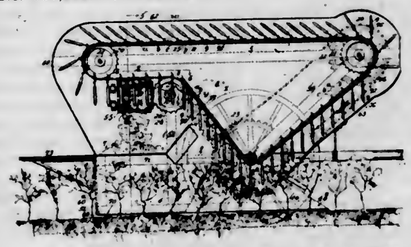
1. In a razor sharpener, the combination, with a hone, of a bearing plate, for the back of the razor, secured to the hone and having a beveled end, and a gage provided with a diagonal gage plate corresponding with the beveled end of the bearing plate, said gage being adjustable on the bearing plate longitudinally of the hone and provided with means for securing it in place.



2. In a razor sharpener, the combination, with a hone, of a bearing plate, for the back of the razor, said plate projecting above the surface of the hone and having a beveled end, means for clamping the bearing plate to the hone, a gage provided with a diagonal gage plate corresponding with the beveled end of the bearing plate and having dovetailed flanges which are slidable on the bearing plate, and means for securing the gage to the bearing plate.

3. In a razor sharpener, the combination, with a handle, and a plate secured thereto and provided with converging side flanges; of a hone, a contractible clamp engaging with the hone and having base flanges which engage with the said side flanges, said clamp having a bearing plate, for the back of the razor, which projects above the hone and which has a beveled end, and a gage provided with a diagonal gage plate corresponding with the beveled end of the bearing plate, said gage being slidable on the bearing plate longitudinally of the hone and provided with means for securing it in place.

1,107,627. COTTON-PICKING MACHINE. GEORGE C. PHILLIPS, Bogalusa, La. Filed May 13, 1913. Serial No. 767,275. (Cl. 56—6.)



1. In a cotton picker, a wheeled vehicle, an endless conveyer mounted thereon, means for directing the conveyer downwardly and rearwardly at the entrance end of the machine, means for guiding the conveyer upwardly and rearwardly toward the exit end of the machine, rigid picker fingers carried by the said conveyer and means for holding the said picker fingers in position with regard to the work and for relatively holding the fingers the more widely spaced apart as they travel downwardly into the cotton plant and the more closely spaced apart as they move upwardly and out of the plant.

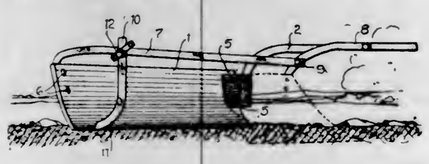
2. In a cotton picking machine, a wheeled frame having a longitudinal passage for receiving the plant rows, picking mechanism mounted upon the frame, the said mechanism comprising an endless conveyer, rigid picker members flexibly joined to the conveyer, the said members including picker faces, the said conveyer being set into operation as the wheeled frame is moved for moving the pickers down into the longitudinal passage against the plants, and other means for instantly closing the distance spaces between the pickers from their normal distance as they start upward from their lowest position among the plants.

3. In a cotton picking machine, a wheeled frame having a longitudinal passage for receiving the plant rows, picking mechanism mounted upon the frame, the said mecha-

nism comprising an endless conveyer, rigid picker members flexibly joined to the conveyer, the said members including picker faces, the said conveyer being set into operation as the wheeled frame is moved for moving the pickers down into the longitudinal passage against the plants, other means for closing the distance spaces between the pickers from their normal distance as they move out of the plants and further means for restoring the pickers to their normally spaced relation after they have passed up out of the plants, and other means for cleaning the said pickers after they have resumed their normal spaced relation.

4. In a cotton picker, a wheeled vehicle, an endless conveyer mounted on the vehicle, rigid pickers flexibly joined to the conveyer, and including a body having card-cloth faces, the teeth of which are upwardly inclined relatively to the body, means on the frame for concentrating the plants in the path of movement of the pickers, means for rigidly holding the pickers with respect to the conveyer as they pass through their picking path of movement, and brushes that project at right angles to the path of movement of the pickers and engage the said faces for removing the cotton therefrom.

1,107,628. ATTACHMENT FOR PLOWS. NEWTON A. RODEN, Jonesboro, La. Filed Feb. 12, 1913. Serial No. 748,028. (Cl. 37—7.)



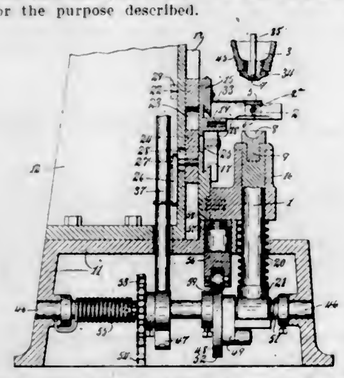
The combination with the end beams of an implement, of a transversely curved blade having an arcuate slot near one end and a bolt opening above said slot, an angle iron having one arm secured to one end of the blade by bolts engaged through said bolt opening and through the arcuate slot, the remaining arm of the angle iron being secured to one of the beams of the implement, the height of the remaining end of the blade being adapted to be adjusted by swinging the blade upon the bolt engaged through the bolt opening, thereby changing the position of the other bolt in the arcuate slot, a connecting beam having one end secured to the remaining outer beam of the implement while the opposite end of said connecting beam is curved downwardly and secured to the rear face of the blade adjacent the second end thereof, and means for gaging the height of the last mentioned end of the blade.

1,107,629. BUTTON-MAKING MACHINE. EDGAR SHANTZ, Rochester, N. Y. Filed Jan. 4, 1907. Serial No. 350,722. (Cl. 22—58.)

1. In a button-making machine, a support for a button-head, a mold for forming a shank on the button-head, a reservoir for supplying molten material to the mold, said parts being disposed in vertical alinement and with the mold interposed between the reservoir and support, and operating means for said parts, substantially as and for the purpose described.

2. In a button-making machine, the combination of three elements, a support for a button-head formed with a recess for receiving the shank of the button, a mold for forming the shank on the button-head, the mold having inlet and exit orifices, and a reservoir for supplying molten material to the mold, the reservoir having an exit port, the inlet and exit orifices of the mold serving to register, respectively, with the exit port of the reservoir and the recess of the button-head, and being normally out of registration therewith, and means for moving two of said elements relatively to the other element for effecting the registration of said orifices with said exit-port and said recess, substantially as and for the purpose set forth.

3. In a button-making machine, the combination of three elements, a support for a button-head formed with a recess for receiving the shank of the button, the support having means for holding the button with its recess presented upwardly, a mold for forming a shank on the button-head, the mold being disposed above the support and having inlet and exit orifices, respectively, in its upper and lower sides, a reservoir for supplying molten material to the mold, the reservoir being located above the mold and having an exit port, the inlet and exit orifices of the mold serving to register, respectively, with the exit port of the reservoir and the recess of the button-head, and being normally out of registration therewith, and means for moving the support for the button-head and the mold to bring the inlet and exit orifices of the mold into registration with said exit port and said recess, substantially as and for the purpose described.



4. In a button-making machine, a support for a button-head having means for frictionally holding the button-head, a mold for forming a shank on the button-head, one of the foregoing elements being movable relatively to the other into position to permit the formation of the shank on the button-head, and out of said position for removing the button-head with the shank attached from the support, a reservoir for supplying molten material to the mold, and a stripper for removing the shank with the button-head attached from the mold, substantially as and for the purpose described.

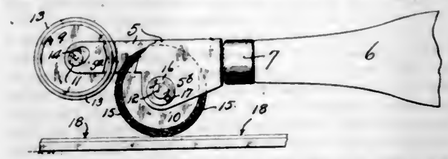
5. In a button-making machine, a support for a button-head formed with a recess for receiving the shank of the button, the support having a socket for holding the button-head with its recess presented outwardly, a mold for forming the shank on the button-head, the mold having an exit orifice serving to register with the recess of the button-head and being normally out of registration therewith, one of the foregoing elements being movable relatively to the other for bringing the recess of the button-head and the exit orifice into registration to permit the formation of the shank on the button-head, and out of its position assumed when said recess and said exit port are in registration, for removing the button-head with the shank attached from the support, a reservoir for supplying the molten material to the mold, and a stripper for removing the shank with the button-head attached from the mold, substantially as and for the purpose specified.

[Claims 6 to 43 not printed in the Gazette.]

1,107,630. MAIL-MARKER. OLIVER H. SMITH, Washington, D. C. Filed Feb. 27, 1914. Serial No. 821,359. (Cl. 101—62.)

1. A reversible mail marker comprising a supporting frame having obliquely disposed slots, a printing roller having its axle mounted for free movement in the obliquely disposed slots, and an inking roller supported in a laterally offset position with relation to the printing roller, whereby the device when inverted for reinking purposes will direct the printing roller to a position out of contact with the inking roller.

2. A reversible mail marker comprising a supporting frame having obliquely disposed slots and laterally offset portions, a printing roller having its axle mounted for free movement in the obliquely disposed slots, and a rotatable inking roller having its axle journaled in the laterally offset portions of the frame to thereby dispose the



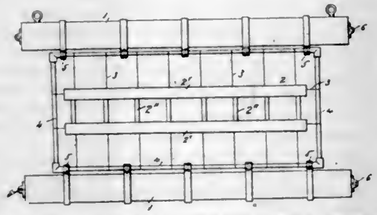
printing roller in a fixed location at one side of the plane of the printing roller, said printing roller being adapted to nutomatically move into and out of contact with the inking roller when the latter is uppermost, and to remain out of contact with the inking roller when the latter is lowermost for reinking purposes.

1,107,631. SECURING DEVICE FOR DENTAL BRUSH-MANDRELS. PETER N. SOUZON, Philadelphia, Pa. Filed May 7, 1913. Serial No. 766,073. (Cl. 74—8.)



The combination of a rotary driven member having an internal bore with a projection extending inwardly within said bore, and a rotary cylindrical driving member adapted to be mounted within said bore, said driving member having at one end thereof a peripheral recess having a flattened bottom portion 7 and outwardly converging walls 6 with an opening 5 therebetween at their outermost ends, said driving member having a shoulder 2 and a tapered portion 3 in proximity thereto, said driven member being adapted to rest against said tapered portion and shoulder upon actuation by said driving member.

1,107,632. LIFE-SAVING APPLIANCE FOR USE AT SEA. LOUIS TARULO, London, England. Filed Feb. 17, 1914. Serial No. 819,244. (Cl. 9—11.)



1. A raft comprising a rectangular frame, floats pivotally connected to the sides of the frame and arranged outside of it, a seat arranged inside the said frame and free to pass vertically through it, and flexible connections which suspend the seat from the side and end portions of the frame.

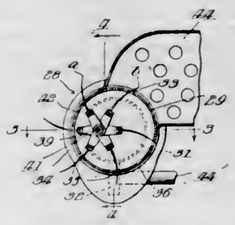
2. A raft comprising a rectangular frame, floats pivotally connected to the sides of the frame and arranged outside of it, a seat formed of a plurality of narrow boards arranged parallel to each other and having crosspieces secured at intervals between them, said seat being arranged inside the said frame and free to pass vertically through it, and flexible connections which suspend the said seat from the frame.

3. A raft comprising a rectangular frame, floats pivotally connected to the sides of the frame and arranged outside of it, a seat suspended inside the frame, and ladders formed of flexible side portions and rigid rungs and suspended from the outer side portions of the said floats.

4. In deck-seat rafts the combination of a rigid frame fitted with floats adapted to open outward, reversible seating devices carried by said rigid frame, and reversible trapeze or ladder-like devices provided with vertical ropes and adjustable loops for securely holding the people seated on the trapeze or ladder-like devices.

5. Raft-structures, in which as in the case of the deck-seat rafts the greater part of the bodies of the people to be saved must for the purpose of buoyancy and stability be immersed in the water, the combination of a rigid frame provided with floats adapted to open outward, reversible seating devices carried by said fraime between the floats, and reversible trapeze or ladder-like devices fitted with vertical ropes and adjustable loops for securely holding people seated on the trapeze or ladder-like devices.

1,107,633. COTTON-PICKER. STEPHEN S. THOMAS, Gulfport, Miss. Filed Dec. 5, 1910. Serial No. 595,678. (Cl. 56—117.)



1. In a cotton picker, the combination of a drum, a fixed casing supporting said drum, a shaft mounted in said casing and extending through said drum, a portion of said shaft being offset, a series of brackets each provided with depending portions adapted to be mounted on the offset portion of said shaft, said depending portions of each bracket being spaced apart an equidistance, said depending portions being arranged side by side along the termini of the offset portion of the shaft, and a series of alined picker teeth secured to each bracket, said drum having holes through which said teeth project, substantially as described.

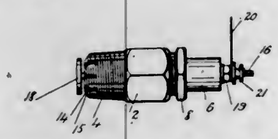
2. In a cotton picker, the combination of a drum, a fixed casing supporting said drum, a shaft mounted in said casing and extending through said drum, a portion of said shaft being offset, a series of brackets each provided with depending portions adapted to be mounted on the offset portion of said shaft, said depending portions of each bracket being spaced apart an equidistance, said depending portions being arranged side by side along the termini of the offset portion of the shaft, a bar secured to each bracket, each of said bars being of equi-length, a series of alined picker teeth secured to each bar, and said drum having holes through which said teeth project, substantially as described.

3. In a cotton picker, the combination of a drum, mechanism operatively connected for rotating said drum, a fixed casing supporting said drum, a shaft fixedly mounted in the walls of said casing and extending through and lying in the interior of said drum, the center of said shaft being off-center from the center of rotation of said drum, a series of members mounted upon said shaft to have independent rotation about said shaft, a bar secured to each member, a series of alined picker teeth rigidly secured to each bar, and said drum being provided with holes through which said teeth project, substantially as described.

4. In a cotton picker, the combination of a drum, mechanism operatively connected for rotating said drum, a fixed casing supporting said drum, a shaft fixedly mount-

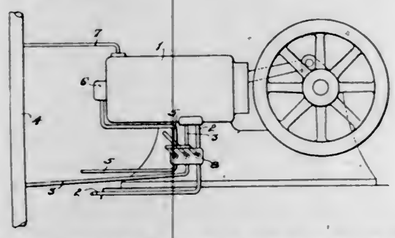
ed in the walls of said casing and extending through and lying in the interior of said drum, the center of said shaft being off-center from the center of rotation of said drum, a series of sets of picker teeth, each set comprising a plurality of teeth arranged longitudinally of the shaft, a member supporting each set of teeth, said member being rotatable on said shaft, the member supporting any one set of teeth being independently rotatable about said shaft with respect to the members supporting the remaining sets of teeth, and said drum being provided with holes through which said teeth project, substantially as described.

1,107,634. SPARK-PLUG. HIRAM S. THOMASSON, Portland, Iowa. Filed Oct. 2, 1912. Serial No. 723,599. (Cl. 123—169.)



In a spark plug, the combination, with a plug body having a gas chamber in its inner end portion, and a series of slots in its inner end which form electrode projections, of a core of insulating material secured in the plug body with its outer end portion projecting therefrom, said core having a central hole and having a recess in its inner end portion, a screwthreaded rod which projects through the said core and gas chamber, adjusting nuts screwed on the said rod and securing it in the core, one of the nuts being arranged in the said recess, and a perforated electrode disk secured on the inner end of the said rod and overlapping the said electrode projections and the gas chamber.

1,107,635. VALVES FOR WATER-JACKETED EXPLOSION-ENGINES. MICHAEL WAGNER, Pittsburgh, Pa., assignor of one-fourth to Samuel Silberstein, Pittsburgh, Pa. Filed June 6, 1913. Serial No. 772,066. (Cl. 123—170.)

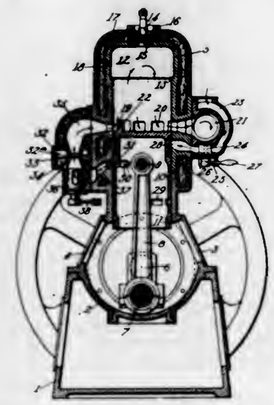


1. The combination with an explosion motor having a fuel supply inlet, and a water jacket provided with a water inlet and a drainage outlet, of valve mechanism having passages forming part of the said fuel inlet, water inlet and drainage outlet respectively, and controlling means for the said passages having a common actuating member so that all said controlling means are actuated during the movement of the actuating member, the said controlling means being positioned so that the drainage passage in the said valve mechanism is open when the fuel and water inlet passages in the valve mechanism are closed and so that the said drainage passage is closed when the said fuel inlet and water inlet passages are open.

2. The combination with an explosion motor having a fuel supply inlet, and a water jacket provided with a water inlet and a drainage outlet, of valve mechanism having passages forming part of the said fuel inlet, water inlet and drainage outlet respectively, controlling means for the said passages having a common actuating means so that said controlling means are actuated simultaneously, and throttling means carried by a part of said controlling means for adjusting the flow past such controlling means when in full open position, the said controlling means being so positioned that the drainage passage in the said valve mechanism is open when the fuel and water inlet passages in the valve mechanism are closed and so that the said drainage passage is closed when the said fuel inlet and water inlet passages are open.

3. The combination with an explosion motor having a fuel supply inlet and a water jecket provided with a water inlet and a drainage outlet, of rotary plug valves in the said inlets and outlet, connections whereby the valves are rotated together, and a rotatably adjustable throttling plug in one of the rotary valves for controlling the flow of fluid through its passage, the valves being so arranged that when the valve in the drainage outlet is in open position the other two valves are in closed position, and when the valve in the drainage outlet is closed, the other two valves are in open position.

1,107,636. HYDROCARBON-ENGINE. HENRY O. WESTENDARP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1910. Serial No. 553,937. (Cl. 123—73.)



1. In a two cycle engine, the combination of a piston and a cylinder having admission and exhaust ports both of which are covered and uncovered by the piston, a main shaft driven by the piston, a carbureter, a chamber in which air is compressed by the piston, inlet means for admitting air from the atmosphere to said chamber, an outlet port in the cylinder for the air from the chamber, conduit means for connecting the port to the carbureter and the carbureter to the admission port aforesaid, a port in the piston which communicates with said outlet port when the piston is at substantially the end of its outward stroke, said piston at other times closing said outlet port so as to prevent the suction of the pump from affecting the carbureter, a valve for throttling the passage of air from the chamber into the carbureter, and a means for controlling the valve.

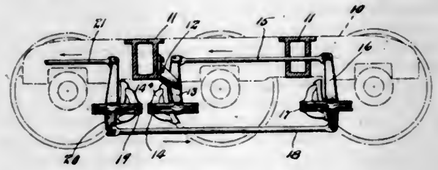
2. In a two-cycle engine, the combination of a piston and a cylinder, a main shaft connected to and moved by the piston, a closed crank chamber communicating with the cylinder into which air is drawn and compressed by the piston, inlet and outlet ports in the cylinder for the air that are controlled by the piston, admission and exhaust ports that are also controlled by the piston, a carbureter connected with the air outlet port and the admission port, the piston covering the outlet port so that the suction produced by the movement of the piston away from the crank chamber does not affect the carbureter, a throttle valve located in the connection between the crank chamber and the carbureter, and means for actuating the throttle valve.

3. In a two-cycle engine, the combination of a piston and a cylinder, a main shaft connected to and moved by the piston, admission and exhaust ports in the sides of the cylinder intermediate its ends that are controlled by the piston, a closed crank chamber into which air is drawn and compressed by the piston, inlet and outlet ports in the cylinder for the air that are controlled by the piston, the inlet port being arranged adjacent the exhaust port, a conduit for the exhaust products of combustion that is attached to the side of the cylinder, said conduit being in open communication with the exhaust port and provided with a passage which receives air at one end, leads it along the wall of the conduit to be heated thereby and delivers it to the inlet port, a controllable inlet for admitting cold air to said passage at a point intermediate its ends, a carbureter adjacent the cylinder into which fuel is drawn by the action of the air flowing through it, conduits connecting the carbureter with the air outlet port and the port admitting the explosive mixture to the cylinder, and a throttle valve in one of said conduits for regulating the flow of air from the crank chamber into the carbureter.

4. In a two-cycle engine, the combination of a piston and a cylinder, a carbureter, a chamber in which air is compressed by the piston to furnish a supply of compressed air to the carbureter, a combined cut-off and throttle valve located between the chamber and the carbureter for cutting off the supply of air at some point in the movement of the piston, admission and exhaust ports in the cylinder which are controlled by the piston, the admission port being connected to the carbureter, a port admitting air to the chamber which is also controlled by the piston, a main shaft driven by the piston, a cam driven by the shaft for opening and closing said valve once during each revolution of the shaft, a speed governor driven by the shaft, and means actuated by the governor for changing the position of the cam to vary the period that said valve is open during each revolution of the shaft.

5. In a multi-cylinder two-cycle engine, the combination of a plurality of pistons and cylinders, a main shaft connected to and moved by the pistons, pump chambers in which air is compressed by the pistons, a conduit connected to the outlets of all of the chambers, a carbureter connected to the conduit, a valve located between the conduit and the carbureter for controlling the supply of air thereto, fuel admission ports for the cylinders, a conduit connected to the ports, supply piping connecting the carbureter with the conduit at points intermediate the cylinders so that the resistance to flow of the gases to each of the cylinders is substantially the same, exhaust conduit means for the cylinders, and means for admitting air to the pump chambers.

1,107,637. SIX-WHEEL-CAR-TRUCK BRAKE. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,445. (Cl. 188—24.)

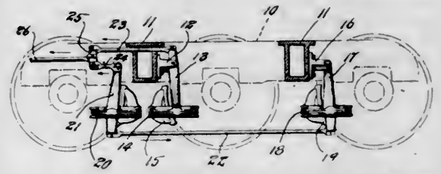


1. In a brake for six wheel trucks, a lever having a pivot point between its extremities, a brake beam pivotally connected to one of the extremities of said lever, a compression member pivotally connected at one end to the other extremity of said lever, a second lever which is pivotally connected at one extremity to the other end of said compression member, a second brake beam pivotally connected to the second lever between the extremities thereof, a compression member pivotally connected at one ex trmity to the other extremity of said second lever, a third lever to which is pivotally connected at one extremity the other end of said last mentioned compression member, a third brake beam pivotally connected to the third lever between its extremities, and means connected to said third lever for actuating the same and the parts coöperating therewith.

2. In a brake for six wheel trucks, a dead lever fulcrumed between its extremities to a convenient part of the truck, a brake beam pivotally connected to one extremity of said dead lever, a compression member pivotally connected at one end to the other extremity of said dead lever, a floating lever to which is pivotally connected at one extremity the other end of said compression member, a second brake beam pivotally connected to said floating lever between the extremities thereof, a compression member pivotally connected at one end to the other extremity of said floating lever, a live lever to which is pivotally connected at one extremity the other end of said compression member, a third brake beam pivotally connected to said live lever between the extremities thereof, and means for actuating the other extremity of said live lever from the brake mechanism of the car body.

3. The combination with a six wheel truck and its inside hung brake beams, of a lever pivotally connected to the center beam, which lever is pivotally mounted on a fixed part of the truck, floating levers pivotally connected to the outside beams, a compression member connecting corresponding extremities of the floating levers, a compression member connecting the first mentioned lever with one of the floating levers, and means connected to the other one of the floating levers for actuating the same and the parts coöperating therewith.

1,107,638. SIX-WHEEL-CAR-TRUCK BRAKE. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,446. (Cl. 188—24.)



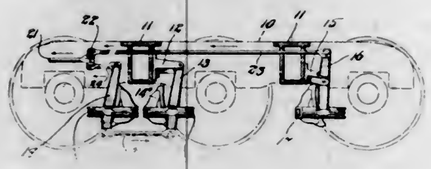
1. In a brake for six wheel trucks, a lever having a pivot point between its extremities, a brake beam pivotally connected to one of the extremities of said lever, a second lever which is pivotally connected at one extremity, a second brake beam pivotally connected to the second lever between the extremities thereof, a third lever, a third brake beam pivotally connected to the third lever between its extremities, a compression member pivotally connected to the second and third levers, tension members connected to the first and third levers, an equalizing lever pivotally connected to said tension members, and means connected to said equalizing lever for actuating the same and the parts coöperating therewith.

2. In a brake for six wheel trucks, a dead lever fulcrumed between its extremities to a convenient part of the truck, a brake beam pivotally connected to one extremity of said dead lever, a second dead lever pivotally connected at one of its extremities to a convenient part of the truck, a brake beam pivotally connected to said second lever between its extremities, a compression member, one end of which is pivotally connected to one of the extremities of the second dead lever, a floating lever to one extremity of which the compression member is pivotally connected, a brake beam pivotally connected to said floating lever between its extremities, a tension member pivotally connected to the first mentioned dead lever, a tension member pivotally connected to the floating lever, an equalizing lever connecting said tension mem-

bers, and means connected to said equalizing lever for actuating the same and the parts coöperating therewith.

3. The combination with a six wheel truck and its inside hung brake beams, of a dead lever pivotally connected to the center beam, which lever is pivotally mounted on a fixed part of the truck, a second dead lever pivotally connected to a second one of the brake beams and to a fixed part of the truck, a floating lever pivotally connected to the third brake beam, a compression member pivotally connected to the second dead lever and to the floating dead lever, a tension member connected to the first dead lever, a tension member pivotally connected to the floating lever, and means for imparting simultaneous and corresponding movement to the tension members whereby all the levers are simultaneously actuated.

1,107,639. SIX-WHEEL-CAR-TRUCK BRAKE. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 21, 1914. Serial No. 833,447. (Cl. 188—24.)

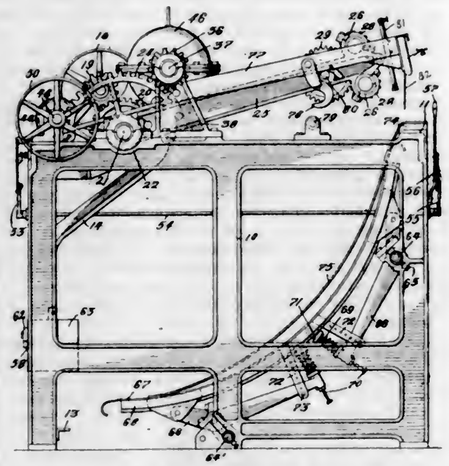


1. In a brake for six wheel trucks, a lever fulcrumed at one of its extremities to a convenient part of the truck, a brake beam pivotally connected to said lever at a point between its extremities, a second lever fulcrumed at a point between its extremities to a convenient part of the truck, a brake beam pivotally connected to one of the extremities of said second lever, a floating lever, a brake beam pivotally connected to said floating lever at a point between its extremities, a compression member connecting one of the extremities of said floating lever with the corresponding extremity of the first mentioned lever, tension members pivotally connected to corresponding extremities of the second lever and the floating lever, an equalizing lever connecting said tension members, and means for actuating said equalizing lever and the parts corresponding therewith.

2. In a brake for six wheel trucks, a dead lever fulcrumed at one of its extremities to a convenient part of the truck, a brake beam pivotally connected to said lever between its extremities, a compression member pivotally connected at one end to the other extremity of said lever, a second dead lever fulcrumed at a point between its extremities to a convenient part of the truck, a brake beam pivotally connected to said second lever at one of its extremities, a tension member pivotally connected to the other extremity of said second dead lever, a floating lever to one extremity of which the compression member is connected, a brake beam pivotally connected to said floating lever at a point between its extremities, a second tension rod pivotally connected to said floating lever, an equalizing lever connecting the corresponding ends of the tension members, and means for imparting simultaneous and corresponding movement to the tension members.

3. The combination with a six wheel truck and its inside hung brake beams, of a lever pivotally connected to the center beam, which lever is fulcrumed to a fixed part of the truck, a second lever fulcrumed at a point between its extremities to a convenient part of the truck frame, which second lever is pivotally connected to one of the brake beams, a floating lever pivotally connected to the third brake beam, a compression member connecting corresponding extremities of the floating lever and first mentioned lever, and means connecting the corresponding extremities of the floating lever and second lever for imparting simultaneous and corresponding movement thereto.

1,107,640. MACHINE FOR WORKING HIDES AND LEATHER. HENRY ALEFS, Milwaukee, Wis. Filed July 28, 1911. Serial No. 641,010. (Cl. 149—16.)



1. A machine for hide and leather working, comprising a swinging frame, a cylinder carried by the swinging frame, means for supporting work in the path of the cylinder, sleeves on the swinging frame forming pivotal connections therefor, a suitably driven shaft passing through the sleeves and having a driving connection with the cylinder, a segmental gear secured to the swinging frame and extending beyond the shaft, a suitably driven pinion meshing with the segmental gear for swinging the frame, and a weight suspended from the segmental gear beyond the shaft for counterbalancing the swinging frame.

2. A machine for hide and leather working comprising a swinging frame, a cylinder carried by the swinging frame, means for supportng work in the path of the cylinder, sleeves on the swinging frame, a suitably driven shaft passing through the sleeves, means for swinging the frame, a beveled gear on the shaft, a shaft carried by the swinging frame, a beveled pinion thereon meshing with the beveled gear, a pinion on the cylinder, and a gear wheel carried by the swinging frame and meshing with the pinion on the cylinder and geared to the shaft which is carried by the swinging frame.

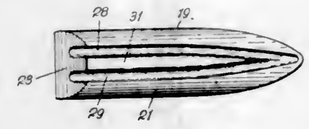
3. A machine for hide and leather working, comprising a swinging frame, a cylinder carried by the swinging frame, means for supporting work in the path of the cylinder, a shaft supporting the swinging frame, a shaft carried by the swinging frame, a pinion on the cylinder and a gear wheel carried by the swinging frame and meshing with the pinion on the cylinder and geared to the shaft which is carried by the swinging frame, two gears mounted on the shaft supporting the swinging frame, one loosely mounted thereon, and power driven means connected with each of said two gears, one for swinging the frame and the other for driving the cylinder carried by the frame.

4. In a hide working machine the combination with a main frame, a swinging frame mounted therein, a hide working cylinder mounted in the swinging frame parallel with the axis on which it swings, means for swinging said frame and means for rotating said cylinder, of a concave support approximately concentric with the axis about which the cylinder swings, levers fulcrumed to the main frame and pivoted to said support, and springs acting on said levers and tending to move the support toward the path of said cylinder.

5. In a hide working machine the combination with a main frame, a swinging frame mounted therein, a hide working cylinder mounted in the swinging frame parallel with the axis on which it swings, means for swinging said frame and means for rotating said cylinder, of a concave support approximately concentric with the axis, levers pivotally connecting said support with the main frame, springs acting on said levers and tending to move said support toward the path of said cylinder, and means for separately adjusting the tension of the said springs.

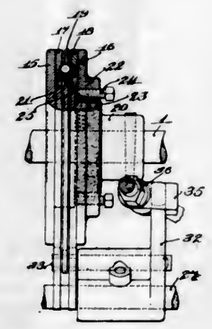
[Claims 6 to 12 not printed in the Gazette.]

1,107,641. FOUNTAIN-PEN. ANGELO BADINI, New York, N. Y. Filed Jan. 24, 1912. Serial No. 673,187. (Cl. 120—50.)



In a fountain pen, a feed bar having an oblong body formed with a tapering lower end and a beveled upper end, said feed bar having two divergent grooves beginning at a common point at the tapered end of the bar and extending divergently to the opposite end of the bar, whereby two channels are provided for the flow of ink so that if one channel becomes stopped the ink may flow through the other.

1,107,642. BRAKE MECHANISM. AUGUSTUS A. BALL, Jr., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 14, 1908. Serial No. 462,666. (Cl. 74—13.)



1. A brake mechanism, having, in combination, a rotary member provided with oppositely facing friction surfaces, stationary brake members provided with coöperating friction surfaces, a non-rotating actuating member engaging two stationary brake members through surfaces formed to force the stationary and rotary members together upon relative movement in one direction, and to relieve the pressure between the friction members upon relative movement in the opposite direction, and means for rocking the actuating member about the axis of the rotary member, substantially as described.

2. A brake mechanism, having, in combination, a rotary member provided with oppositely facing friction surfaces, stationary brake members provided with friction surfaces coöperating with the friction surfaces on the rotary member, and with opposed surfaces for engaging an actuating member, a non-rotating actuating member arranged between said opposed surfaces, and means for rocking the actuating member about the axis of the rotary member to force the opposed surfaces apart and the friction surfaces of the rotary and stationary members together, substantially as described.

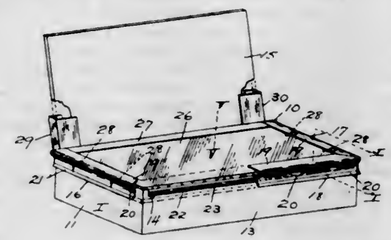
3. A brake mechanism, having, in combination, friction disks connected to rotate with the part to be braked, stationary friction disks, a non-rotating spreading device between two stationary disks, and means for rocking the spreading device about the axis of the friction disks to force the rotary and non-rotary disks together or to relieve the pressure between said disks, substantially as described.

4. A brake mechanism, having, in combination, two friction disks connected to rotate with the part to be braked, two stationary friction disks between the rotary disks, a non-rotating spreader disk, coöperating wedging surfaces being provided between the spreader disk and stationary disk, and means for rocking the spreader disk about the axis of the rotary disks, substantially as described.

5. A brake mechanism, having, in combination, two friction disks connected to rotate with the part to be braked, two stationary friction disks between the rotary disks, wedging surfaces on the opposed surfaces of the stationary disks, a non-rotating disk mounted between the stationary disks and provided with openings registering with the wedging surfaces, balls in said openings engaging the wedging surfaces, and means for rocking the ball carrying disk, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,643. REMOVABLE DISPLAY-LID. PHILIP A. BECKER, New York, N. Y. Filed Aug. 1, 1913. Serial No. 782,498. (Cl. 217—58.)



1. In a display lid for a box provided with a hinged lid and a recess in the upper edge of the front wall and the rear wall of the box, the combination of a rectangular frame having three closed sides and an open rear side, the closed sides of said frame comprising a plate adapted to rest upon the top of the box, with an integral substantially S-shaped flange depending from said plate, and the upper recess thereof serving as a groove for reception of a transparent plate, and the lower curved portion of said flange serving as a guide whereby the frame may be freely directed downwardly over the edge of the box, and the rear or fourth side of said frame comprising a plate substantially the same as the top plate of the closed sides, said frame having two upwardly directed channeled members adapted to detachably and slidingly engage the side edges of the lid of the box, whereby the display lid may be swung to an open or closed position on the box when the box is swung accordingly.

2. In a display lid for a box provided with a hinged lid and a recess in its upper edge of the front wall and the rear wall, the combination of a rectangular frame adapted to rest upon the top edge of the walls of the box, said frame comprising a flat plate and having upon its front side and on its two end sides a depending flange substantially S-shaped in cross section the upper curved part thereof serving as a groove for supporting the transparent plate within the frame, and the lower curved part thereof serving as a guide for the frame when directed

downwardly over the top edge of the box, with a filler adapted to close the recess in the upper edge of the front wall of the box, and a plurality of prongs adapted for clamping the transparent plate whereby it may be secured within the frame and means for removably securing the display lid to the lid of the box whereby the display lid may be swung to an open or closed position as the lid of the box is moved accordingly.

3. In a display lid for a box, having a recess in the top edge of one of its walls and provided with a hinged lid; the combination of a frame adapted to retain a transparent plate, and rest upon the top of the box so as to close the same, said frame comprising a rectangular frame, and having a flat plate adapted to rest upon the top of the edges of the transparent plate, a depending flange on each of the two end sides of said frame adapted to engage the ends of the transparent plate, each of said flanges having a plurality of prongs adapted to be bent upwardly and inwardly so as to clamp and retain the ends of the transparent plate in position within the said frame, and a depending flange substantially S-shaped in cross section, integrally formed upon the front side of the frame, the upper curved part serving as a groove for retaining the front edge of the transparent plate, and the lower grooved part serving as a guide for directing the frame over the edge of the box when it is applied thereto, with a filler adapted to fill the recess in the top edge of the front wall of the box, said filler being provided upon the inner surface of said S-shaped flange, and means for removably securing the frame to the lid of the box whereby the display lid may be swung to an open or closed position when the lid is moved accordingly.

4. In a display lid for a box having a recess in the upper edge of the front wall thereof, the combination of a frame adapted to retain therein a transparent plate, said frame having a flat top plate extending on the four sides of the transparent plate, two end flanges depending downwardly from the ends of the frame, and adapted to retain a transparent plate, and an integrally formed depending flange on the front of the frame, said front flange being substantially S-shaped in cross section, the upper and inverse curve of the flange serving as a groove for retaining the front edge of the transparent plate, and the lower and obversely curved portion of the flange serving as a guide whereby the said flange is directed over the edge of the box when moved downwardly thereon, with a filler adapted to fill the recess in the upper edge of the front wall of the box, substantially as shown and described.

5. In a display lid for a box provided with a hinged lid and a recess in the upper edge of its front wall, said display lid having a rectangular frame formed with three closed sides and an open rear side, the closed sides of said frame comprising a plate adapted to rest upon the top of the box, with an integral substantially S-shaped flange depending therefrom, the upper recess thereof serving as a groove for reception of a transparent plate, and the lower curved portion of said flange serving as a guide whereby the frame may be freely directed downwardly over the edge of the box, and said frame having two upwardly extending channeled members adapted to detachably and slidingly engage the side edges of the lid of the box, whereby the display lid may be swung to an open or closed position on the box when the box is swung accordingly, in combination with a filler on the inner surface of the S-shaped flange, and serving to close the recess in the upper edge of the front wall of the box when the display lid is closed upon the box, whereby dust or the like may be prevented from entering the box through said recess of the front wall thereof.

[Claim 6 not printed in the Gazette.]

1,107,644. FOUNTAIN-PEN HOLDER. GEORGE CAPPS BEIDLER, Newton, Kans. Filed May 27, 1913. Serial No. 770,284. (Cl. 24—11.)

A fountain pen-holder comprising a supporting strip having at its upper end a fixed dished cap piece, and at its lower end a fixed cylindrical socket member, a spring pressed follower plate confined within said socket and adapted to force a pen into holding engagement with the



dished cap piece, and a garment attaching device carried by said strip.

1,107,645. CIRCUIT-CLOSER. BERNHARD BENEDICT, New York, N. Y., assignor to Beacon Miniature Electric Company, New York, N. Y. Filed Sept. 30, 1913. Serial No. 792,571. (Cl. 175—282.)

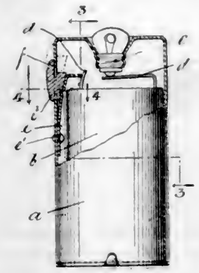


1. In a circuit closer, a casing having a circumferential aperture, a conductor strip in said casing the free end of which is resilient and formed to a part bulging outwardly through said aperture and a second conductor consisting of a slidable resilient member outside of said casing and having a part bulging inwardly, the two bulging parts being adapted to constantly project into one another's path and to close the circuit when the sliding member is moved into circuit closing position.

2. In a circuit closer, a casing having a circumferential aperture, a box fastened to the exterior of said casing over said aperture, a conductor consisting of a flat slide movably guided in said box and a spring plate carried by said slide and having a part bulging toward said casing, and a second conductor consisting of a strip having a bulging part projecting through said aperture into the said box, said two spring parts being adapted to constantly project into one another's path and to come into contact with one another when the slide is moved into circuit closing position.

3. In a circuit closer, a casing having a circumferential aperture, a box fastened to the exterior of said casing over said aperture, a conductor consisting of a flat slide movably guided in said box and a spring plate carried by said slide and having a part bulging toward said casing, a second conductor consisting of a strip having a bulging part projecting through said aperture into the said box, said two spring parts being adapted to constantly project into one another's path and to come into contact with one another when the slide is moved into circuit closing position and an automatically operating locking means for said slide.

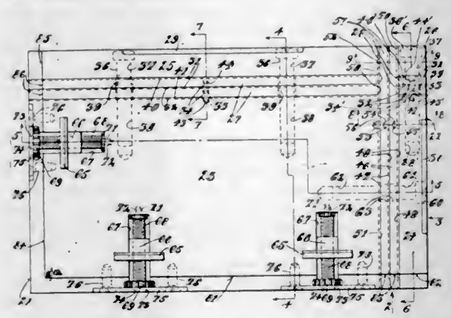
1,107,646. ELECTRIC SWITCH. BERNHARD BENEDICT, New York, N. Y., assignor to Beacon Miniature Electric Company, New York, N. Y. Filed Sept. 30, 1913. Serial No. 792,572. (Cl. 175—282.)



1. An electric circuit closer or switch, comprising a flat slide having a wedge-shaped extension, a spring leaf against which said wedge acts to force the latter into circuit closing position and means between said wedge and leaf to lock the former in circuit closing position.

2. An electric circuit closer or switch, comprising a flat slide having a grooved wedge-shaped extension, and a spring leaf having a projecting rib and against which the said wedge acts to force it into circuit closing position, said rib serving to engage the grooved portion of said wedge to lock the latter in circuit closing position.

1,107,647. PRINTER'S BLOCK. FREDERICK H. BEROLD, Wyoming, Ohio. Filed Dec. 11, 1911. Serial No. 665,065. (Cl. 101—177.)



1. A printer's block made up of a plurality of main block sections, each of which comprises a primary block and a supplemental block of substantially the shape of a parallelogram, and insert strips between said primary and supplemental blocks, the supplemental blocks of both sections being of substantially the same width, and the insert strips being of less width, means in each of said main block sections for clamping the said component parts thereof together, and means for positioning said main block sections at greater or less distance apart, and for positively clamping them together.

2. A printer's block comprising a plurality of substantially rectangular main extensible sections each comprising means for adjustably extending the same in a given direction, and means extending integrally across said last-named means in each of said main extensible sections for adjustably separating said main extensible sections.

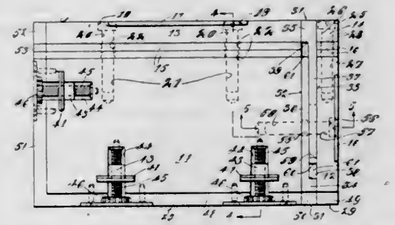
3. A printer's block comprising a plurality of main block-sections each of which comprises a pair of plate-supporting blocks, each of said blocks being of substantially the shape of a parallelogram, means for adjusting the distance between said blocks and means for clamping said blocks together, and means for adjusting the distance between said clamped main block-sections and clamping said clamped main block-sections together.

4. In combination in a printer's block comprising a plurality of main block-sections each comprising a plurality of block-parts, an insert-strip or strips, and means for securing said insert-strip or strips between said block-parts, an insert-strip or strips between said plurality of main block-sections and extending integrally across said first-named insert-strip or strips in each of said main block-sections, and means for securing said main block-sections together with said second-named insert-strip or strips between them.

5. A printer's block comprising a plurality of main block-sections, each of said main block-sections comprising a pair of plate supporting blocks, means for adjusting the distance between said plate supporting blocks in a given direction, and means for clamping said plate supporting blocks together; insert strips for adjusting the distance between said main block sections in a direction substantially at right angles to said first named direction, and clamping means crossing all of said strips and having connection with each of said main block sections, and serving to hold said parts together.

[Claims 6 and 7 not printed in the Gazette.]

1,107,648. PRINTER'S BLOCK. FREDERICK H. BEROLD, Wyoming, Ohio. Filed Nov. 28, 1913. Serial No. 803,563. (Cl. 101—177.)



1. A four cornered printer's block comprising a plate-supporting block at each corner of said printer's block, and insert-strips received in crossing relation at substantially right angles to each other between said plate-supporting blocks for adjusting diagonally opposite ones of said plate-supporting blocks toward and from each other in directions both of the length and of the width of said printer's block, said insert-strips extending in one direction being extensible and each of which comprises insert-strip members, each of said members having an outer end and an inwardly extending shank, said shanks located side by side, the width of each of said outer ends being equal to the collective width of a pair of the shanks of said members.

2. A printer's block comprising a pair of main composite sections, each section being made up of primary and supplemental blocks with insert-strips between them, and an extensible insert-strip located between said main composite sections, said extensions insert-strip comprising a pair of members each having an outer end and an inwardly extending shank, each of said outer ends being of a width equal to the width of said collective shanks, and arranged for lengthwise adjustment between said sections.

3. In combination, a printer's block comprising a plurality of main block-sections each of which comprises a primary block, a supplemental block and an insert-strip or strips between them and means for clamping said blocks and insert-strips of each of said block-sections together, an extensible insert-strip extending crosswise of said first-named insert-strip or strips between said main block-sec-

tions, said extensible insert-strip comprising outer ends and inwardly extending shanks, said respective outer ends and said collective shanks being of substantially equal width, and said main block-sections and one of said outer ends provided with rabbets, said rabbets located in line with each other.

4. In combination, a printer's block comprising a plurality of main block-sections each of which comprises a primary block, a supplemental block, and an insert-strip or strips between them, and means for clamping said blocks and insert-strip or strips of each of said block-sections together, an extensible insert-strip extending crosswise of said first-named insert-strips between said main block-sections, said extensible insert-strip comprising a pair of members, said main block-sections and the outer end of one of said extensible insert-strip members provided with rabbets, said rabbets located in line with each other, a screw for clamping said main block-sections and extensible insert-strip members together, said extensible insert-strip member provided with said rabbeted outer end having a recess the walls whereof impinge said screw for locating the rabbet on said insert-strip member in line with said rabbets on said main block-sections, the other of said insert-strip members being provided with an opening permitting lengthwise adjustment thereof with relation to its mating insert-strip member.

5. In combination, a pair of main block-sections, each of which comprises a primary block, a supplemental block and an insert-strip or strips, said main block-sections each provided with a rabbet, an extensible insert-strip comprising a pair of members each of which is provided with an inwardly extending shank, a screw for clamping said extensible insert-strip members and said main block-sections together, the outer edge of one of said members provided with a rabbet at its upper edge, said last-named member provided with a bottomless slot whose side walls are arranged to be positioned by said screw for locating said last-named rabbet in line with said first-named rabbets, and the shank of the other of said members provided with a bottomless opening received over said screw for lengthwise adjustment of said last-named member.

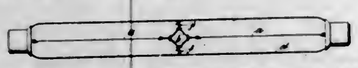
1,107,649. ILLUMINATING DEVICE. ALFRED WILLIAM BEUTTELL, New York, N. Y. Filed Apr. 17, 1908. Serial No. 427,667. (Cl. 240—6.)



1. The combination with an object to be illuminated, of an elongated reflector of substantially parabolic form in cross section, one side of said reflector being located close to one edge of the surface to be illuminated and the principal axis of the reflector intersecting that portion of the surface to be illuminated which is remote from the reflector, and an incandescent lamp filament section in alinement with the focal axis of the reflector.

2. The combination of an object or surface to be illuminated and means for illuminating the same, which means is provided with an elongated reflector of substantially parabolic form in cross section, one side of said reflector being located close to one edge of the surface to be illuminated and the principal axis of the reflector intersecting that portion of the surface to be illuminated which is remote from the reflector.

1,107,650. INCANDESCENT LAMP. ALFRED WILLIAM BEUTTELL, New York, N. Y. Filed Apr. 21, 1909. Serial No. 491,386. (Cl. 176—29.)



1. An incandescent lamp having a filament, said filament having sections extending in opposite directions from the support and provided with a support for the filament, said support being anchored to the walls of the lamp-tube and including a tension-producing member.

2. An incandescent lamp having a filament comprising alined sections and provided with a support for the filament intermediate its ends, said support being flexibly anchored to the walls of the lamp-tube and including a tension-producing member.

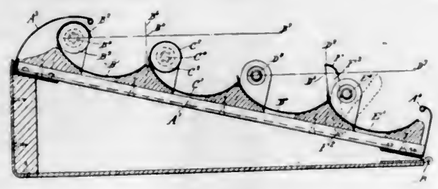
3. An incandescent lamp having a filament with alined sections and provided with a movable support for the filament intermediate its ends.

4. An incandescent lamp having a filament comprising oppositely extending sections and provided with a spring interposed intermediate the sections, and means to anchor said spring to the lamp-tube.

5. In an incandescent lamp, the combination with a casing, and a plurality of spaced filament sections arranged end to end therein, of resilient means interposed between adjacent spaced filament sections and comprising members that engage the casing in order to maintain the filament sections substantially central therein.

[Claims 6 to 19 not printed in the Gazette.]

1,107,651. STAGE-LIGHTING DEVICE. ALFRED WILLIAM BEUTTELL, London, and JOHN ALEXANDER MANNERS-SMITH, Haslemere, England. Filed Mar. 1, 1913. Serial No. 751,490. (Cl. 240—3.)



1. Appliances for lighting the stages of theaters and the like in which there are comprised in combination two or more lines of lamps, lamp holders and reflectors, the reflectors being elliptical in cross section, the lamps each being arranged along one of the focal axes of its reflector and said lamps and reflectors being arranged so that the highest part of each line of lamps, lamp holders and reflectors is just below the plane through the two focal axes of the elliptical reflectors of the line next above and behind.

2. An electric lighting appliance for lighting the stages of theaters and the like, comprising one or more lines of lamps, lamp holders and reflectors, each reflector being of elliptical shape in cross section and also having a semi-cylindrical portion which contains the lamp, the filament of which lies along or approximately along the axis of the semi-cylinder and one of the focal axes of the elliptical reflector, which axes are coincident.

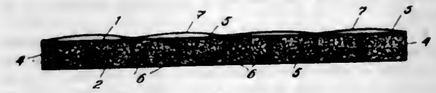
3. An appliance for lighting the stages of theaters and the like in which one or more lines of lamps, lamp holders and reflectors are employed in which each reflector is elliptical in cross section with its lamp arranged along one of its focal axes and in which at least a part of said lines of lamps, lamp holders and reflectors is provided with means arranged and devised so as to be capable of being readily moved so as to occupy a position at or near the other focal axis of the elliptical reflectors whereby said means can effect or act upon the rays reflected from said reflectors.

4. Appliances for lighting comprising in combination parallel lamps and a longitudinally extending reflector for each lamp, the reflectors being elliptical in cross section and the lamps each being located substantially along one of the focal axes of its reflector, the reflector and lamp being arranged so that a line passing through the focal axes of one of the reflectors will pass by the succeeding lamp and reflector therefor at the side remote from the elliptical reflecting surface of the latter.

5. A lighting appliance comprising a bank of longitudinally extending reflectors, each of which comprises in its cross section a substantially elliptical reflecting portion and a reflecting portion which is a part of a circle, the lighting appliance also being provided with sources of light supply which are located at the foci of the elliptical reflectors.

[Claims 6 to 12 not printed in the Gazette.]

1,107,652. LIFE-RAFT. OLIVER M. BURTON, Chicago, Ill. Filed Apr. 2, 1914. Serial No. 828,977. (Cl. 9—11.)

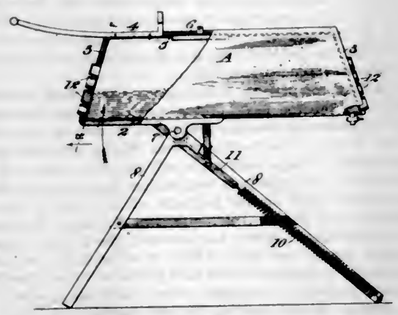


1. A life raft consisting of a flexible casing having a continuous top and a continuous bottom, and side and end walls, division webs secured to the top and bottom of said casing and to the vertical walls thereof and forming a plurality of independent compartments within the casing, said compartments being of uniform size and extending throughout the casing, and a filling of buoyant material in each of said compartments, said filling being of substantially uniform density in the compartments, whereby the raft will be of uniform buoyancy and density throughout.

2. A life raft consisting of a flexible casing having a continuous top and a continuous bottom, and side and end walls, division webs secured to the top and bottom of said casing and to the vertical walls thereof and forming a plurality of independent compartments within the casing, a filling of buoyant material in each of said compartments, said filling being of substantially uniform density in the compartments, holding straps and means securing said holding straps to the casing, said means connecting the holding straps to the division webs.

3. A life raft comprising a flexible casing having a continuous top and a continuous bottom and side and end walls and a plurality of continuous division webs extending throughout said casing and secured to the bottom and top of the casing and forming a multiplicity of small independent compartments of uniform size and a filling of light soft buoyant material packed in each compartment to a uniform density, whereby said raft will be of uniform density and uniform buoyancy throughout.

1,107,653. WASHING-MACHINE. ROBERT E. CAMPBELL, Berkeley, Cal. Filed June 11, 1913. Serial No. 773,003. (Cl. 68—21.)

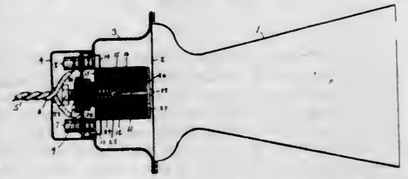


1. A clothes washing machine comprising a supporting frame, a washing tank pivoted at one side of its center and adjacent to the bottom to rock longitudinally on said frame, spring mechanism to maintain the tank in a horizontal position, and a series of cups with their mouths in the planes of the ends of the tank and opening to the interior thereof against which the contents of the tank are impelled on the rocking of the tank.

2. An improved washing machine consisting of a rectangular rockable tank of greater length than breadth having inwardly inclined end portions, a series of suction cups formed in said end portions and opening to the interior of the tank against which the clothing and liquid in the tank are impelled when the tank is rocked for the purpose of forcing the liquid through the clothing and cooperating with the inclined ends for momentarily retaining the clothing against the ends of the tank as they move upward to allow the liquid in the tank to move from end to end thereof in advance of the clothing.

3. In a washing machine, a clothes receiving tank tiltable about a pivot at its lower portion and with end walls and a flat bottom, said walls being provided with a series of inwardly opening, staggered pockets into which clothes will be impinged and held by suction alternately during tilting of the tank.

1,107,654. HORN. CLARENCE CARSON, Detroit, Mich. Filed May 12, 1913. Serial No. 766,935. (Cl. 177—7.)



1. In a horn, the combination of a bell, a case having a base flange, a diaphragm between the bell and the flange of the case, a cylindrical body of non-conducting and non-magnetic material mounted in said case, a spool of wires embedded therein, a series of substantially U-shaped magnetic wires within said body having their legs within and without the spool to form two circular poles in the face of the body adjacent the diaphragm, a stem slidable in said body at right angles to the diaphragm, an armature on the stem between the body and diaphragm, a spring within the body to force the stem against the diaphragm and wires to conduct current to said spool.

2. In a horn, the combination of a case, a bell and a diaphragm between them, a cylindrical electro-magnet mounted in the case with its axis at right angles to the diaphragm and having two circular poles at the end adjacent the diaphragm, an armature for the magnet and a guide therefor, means for forcing the armature into contact with the diaphragm, and electric wires connecting directly with a source of alternating current and with the winding of said electro-magnet.

3. In a horn, the combination of a diaphragm, an electro-magnet having an annular spool, and poles in one end adjacent to and parallel to said diaphragm, an armature for the magnet between the poles and diaphragm, a guide for the armature, means to force the armature against the diaphragm, and uninterrupted means to conduct an alternating current to the spool of the magnet.

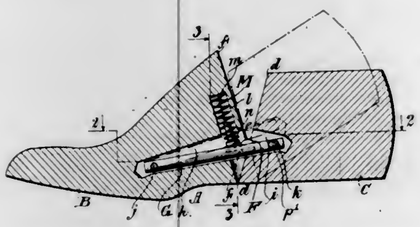
4. In a horn, the combination of a case, a diaphragm, an electro-magnet having its two poles in one end adjacent the diaphragm and a spool between said poles, an armature for the magnet between the poles and diaphragm, a spring to force the armature against the diaphragm, said case, diaphragm, magnet poles, spool, armature and spring all being concentric with each other, and a pair of wires extending through an opening in said case and connecting to said spool.

5. In a horn, the combination of a bell, a case to support the bell, a diaphragm between the bell and case, a cylindrical body of non-conducting and non-magnetic material mounted in said case, a spool of wires embedded therein, a series of substantially U shaped magnetic members embedded in said body with their legs within and without the spool to form two circular poles in the face of the body adjacent the diaphragm, a stem slidable in

the body, an armature on the stem between the body and diaphragm, and a spring to force the stem against the diaphragm.

[Claim 6 not printed in the Gazette.]

1,107,655. LAST. GEORGE CLAUSING, Portsmouth, Ohio, assignor to The Vulcan Box Toe Process Co., Portsmouth, Ohio, a Corporation of Ohio. Filed Feb. 12, 1914. Serial No. 818,353. (Cl. 12—136.)

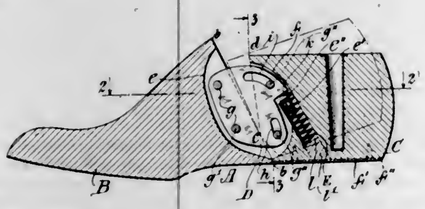


1. A last having a toe part, a heel part, a connecting link between said parts and a compression spring engaging said link, said last having the heel part and toe part provided between them with bearing members which permit the heel part to swing from extended position to broken position relative to the toe part, said connecting link being pivotally connected at one end to the toe part and at the other end to the heel part, said compression spring being located in the toe part and engaging the upper portion of the link so as to continuously press said link downwardly.

2. A last having a toe part, a heel part, a link pivotally connected to each of said parts, and a compression spring located above said link for forcing the latter toward lower position, the last being provided with transversely extending main bearing pins and the link being arranged so that a line passing through the pivotal connections of the link to the last parts is located below the axis of the main bearing pins when the last parts are in extended or unbroken position but so that said line is located above the axis of the main bearing pins when the last parts are in broken or shortened position.

3. A last comprising heel and toe parts having provided between them transversely extending main bearing pins, a link pivotally connected at its forward end to the toe part and at its rear end to the heel part, and a substantially vertically extending spring means located in the toe part and normally pressing downwardly against the link to maintain the heel and toe parts in extended position.

1,107,656. LAST. GEORGE CLAUSING, Portsmouth, Ohio, assignor to The Vulcan Box Toe Process Co., Portsmouth, Ohio, a Corporation of Ohio. Filed Feb. 12, 1914. Serial No. 818,354. (Cl. 12—136.)



1. A last having a heel part and a toe part which are separated by a transversely extending saw cut that extends from the top to the bottom of the last, said parts having longitudinally and vertically extending saw cuts and being connected together by a vertically and longitudinally extending plate that is located in the longitudinally and vertically extending saw cuts in said parts, said plate being rigidly secured to the toe part by transversely extending rivets or pins and being provided with a rearwardly extending nose and a pair of pin-receiving slots, the heel part being provided with a spring means which engages the nose on the plate for forcing said toe and heel parts toward unbroken or extended position, the heel part also being provided with rivets or pins that extend through said slots in the plate, which pins are arranged so that when the last parts are in extended position the pins are located in the lower portion of the slots.

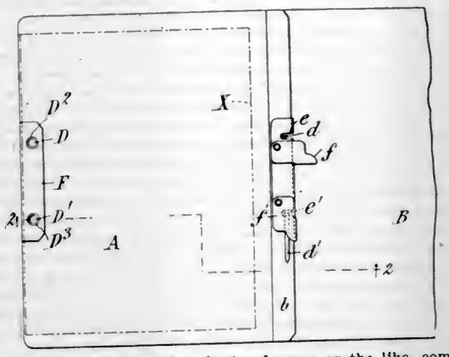
2. A last having a heel part, a toe part and a connecting plate between them, the heel and toe parts being separated by a transversely extending saw cut that extends from the top to the bottom of the last and each part being provided with a slot for receiving the connecting plate, one of said parts also being cut away so that there is a wedge shaped opening in the upper portion of the last whereby the heel part can be moved upwardly and forwardly relative to the toe part, said plate being rigidly secured to one of said parts by rivets and to the other of said parts by rivets which enter slots that are provided in said plate, one of said parts having therein a compression spring that engages a nose or projection which is also provided on said plate whereby the heel part and toe part will be normally maintained in an extended position relative to each other, the slots and pins passing therethrough being constructed and arranged so that the lower forward portion of the heel part will engage and abut against the lower rear portion of the toe part and in such manner that the lower surface of the heel part and of the toe part will be in effect continuations of each other due to the rivets in the slots striking the plate.

3. A last having a heel part and a toe part connected together by a longitudinally and vertically extending plate that is rigidly secured to said toe part by horizontally extending rivets or pins, said plate having slots and a projection, the heel part having upper and lower pins or rivets that pass through said slots and a spring which presses upwardly against said projection to maintain the heel part in extended position relative to the toe part, the slots being arranged in such manner that the upper rivet or pin will both rise and approach the toe part as the heel part is moved upwardly from unbroken or extended position to broken or shortened position.

4. A last having a toe part and a heel part each provided with a vertically and longitudinally extending saw cut, the heel part also having rivets or pins, a connecting plate located in said cuts, said plate being rigidly secured to the toe part, being provided with slots through which pass rivets or pins that are comprised in the heel part and also with a rearwardly extending projection or nose which is engaged by a compression spring means which is provided in the heel part for maintaining the heel and toe parts in extended position.

5. A last comprising a toe part, a heel part movable relative to the toe part, and a vertically and longitudinally extending connecting plate that is slotted to receive pins or rivets in the heel part and that is provided with a projection or nose, said plate being rigidly connected to the toe part, the heel part comprising rivets or pins that pass through said slotted portions of the plate, thus securing the heel part to the toe part in a manner to permit relative movement between said parts, the heel part comprising a metal heel plate which is secured to the lower portion of the heel part, said heel part also being provided with an upwardly extending bored opening, a compression spring means located in said opening, a plug in said opening against which one end of the spring means rests, the other end of the spring means being engaged with the nose or projection on the vertically and longitudinally extending plate, the heel plate being arranged so that it covers the plugged opening and also serves as a resting member for the plug.

1,107,657. LETTER-FILE OR THE LIKE. WILLIAM A. COOKE, Jr., New York, N. Y. Filed Mar. 17, 1908. Serial No. 421,676. (Cl. 129—7.)



1. A binder of file for sheets of paper or the like, comprising fastening means for the sheets, a cover, apertures in said cover spaced apart a distance equal to the distance between said fastening means, and a strip of flexible material, attached to said cover and having apertures therein spaced apart a distance corresponding to that of the apertures in the cover, adapted to be bent over a sheet of paper and clasp the same with the apertures therein registering with those in the cover, said cover being substantially flat and unobstructed and forming a supporting surface for receiving a sheet to be punched and filed, said apertures and cover being constructed to permit the edge of the sheet to lie over said apertures while its body is supported on said cover.

2. A binder or file for sheets of paper or the like, comprising fastening means for the sheets, a cover, apertures in said cover spaced apart a distance equal to the distance between said fastening means, and a strip of flexible material, attached to said cover, having apertures therein spaced apart a distance corresponding to that of the aperture in the cover, and of a width such that when bent to clasp a sheet of paper it will limit the distance said sheet lies over said aperture to approximately the distance between said fastening means and the back of the binder, the apertures therein registering with those in the cover, said cover being substantially flat and unobstructed and forming a supporting surface for receiving a sheet to be punched and filed, said apertures and cover being constructed to permit the edge of the sheet to lie over said apertures while its body is supported on said cover.

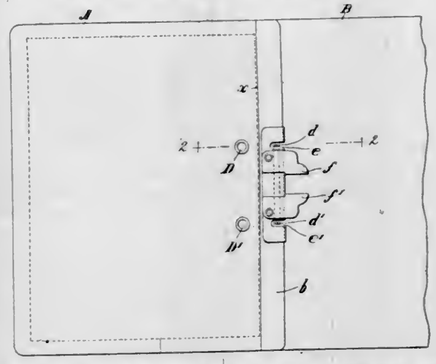
3. A binder or file for sheets of paper or the like, comprising fastening means for the sheets, a cover of fibrous material, apertures in said cover spaced apart a distance equal to the distance between said fastening means, and eyelets in said apertures of a size to admit the partial insertion of the point of a pencil therein, said cover being substantially flat and unobstructed and forming a supporting surface for receiving a sheet to be punched and filed, said apertures and cover being constructed to permit the edge of the sheet to lie over said apertures while its body is supported on said cover.

4. A binder or file for sheets of paper or the like, comprising fastening means for the sheets, a cover, apertures in the left-hand side of said cover spaced apart a distance equal to the distance between said fastening means, and a strip of flexible material, attached also to the left-hand side of said cover and having apertures therein spaced apart a distance corresponding to that of the apertures in the cover, adapted to be bent over and clasp a sheet of paper with the apertures therein registering with those in the cover, said cover being substantially flat and unobstructed and forming a supporting surface for receiving a sheet to be punched and filed, said apertures and cover being constructed to permit the edge of the sheet to lie over said apertures while its body is supported on said cover.

5. A binder or file for sheets of paper or the like, comprising fastening means, apertures in said binder spaced apart a distance equal to the distance between said fastening means, and a strip of flexible material having apertures therein spaced apart a distance equal to the apertures in said binder, adapted to be bent to clasp a sheet of paper over the apertures in said binder, whereby the sheet of paper may be held while having holes punched therein.

[Claims 6 to 12 not printed in the Gazette.]

1,107,658. BINDER. WILLIAM A. COOKE, Jr., New York, N. Y., assignor to Charles S. Cooke, Brooklyn, N. Y. Original application filed Mar. 17, 1908, Serial No. 421,676. Divided and this application filed Mar. 8, 1911. Serial No. 613,024. (Cl. 129—7.)



1. A binder or file for sheets of paper or the like, comprising a hinged cover, means for fastening sheets in said cover, and means for perforating said sheets to be engaged by said fastening-means comprising apertures in the cover adjacent its inner edge, said perforating apertures in the cover being independent of said fastening-means, and said cover being adapted to support sheets thereon while being perforated.

2. A binder or file for sheets of paper or the like, comprising a hinged cover, means for fastening sheets in said cover, and means for perforating said sheets to be engaged by said fastening-means comprising apertures in the cover adjacent its inner edge, said perforating apertures in the cover being independent of said fastening-means, and spaced from the inner edge of said cover a distance not greater than that of the fastening-means from the rear of the binder.

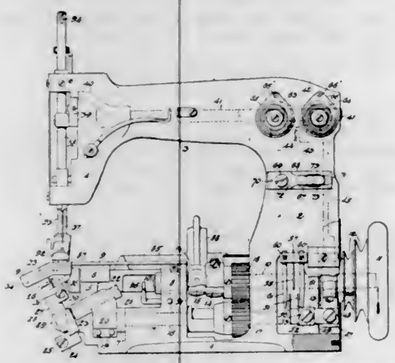
3. A binder or file for sheets of paper or the like, comprising a hinged cover, means for fastening sheets in said cover, and means for perforating said sheets to be engaged by said fastening-means comprising apertures in the cover adjacent its inner edge, said perforating apertures in the cover being independent of said fastening-means, and spaced from the inner edge of said cover a distance equal to that of the fastening-means from the rear of the binder.

4. A binder or file for sheets of paper or the like, comprising flaps having openings therein, filing means passing through the openings in said flaps, a cover, and apertures in said cover spaced apart a distance equal to the distance between the openings in said flaps, and spaced from the inner edge of said cover the same distance as the openings in said flaps from the said inner edge of said cover.

5. A binder or file for sheets of paper or the like, comprising flaps having openings therein, filing means passing through said openings, a cover, and apertures in said cover adjacent its inner edge, spaced apart a distance equal to the distance between the openings in said flaps and spaced apart from the inner edge of said cover the same distance as the openings in said flaps from the said inner edge of said cover.

[Claims 6 to 8 not printed in the Gazette.]

1,107,659. CHAIN-STITCH SEWING-MACHINE. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 8, 1913. Serial No. 805,220. (Cl. 112—5.)



1. In a sewing machine, the combination with the frame comprising a base and a bracket-arm rising therefrom and a work-plate sustained above the base, of a main-shaft journaled in said frame below the work-plate and provided with a balance-wheel disposed above the lower face of said base, a reciprocating needle operatively connected with said main-shaft, feeding mechanism also operatively connected with said main-shaft, a looper-actuating shaft mounted in said frame between the main-shaft and the lower face of said base, a driving connection between said shafts, an inclined crank upon the forward extremity of said looper-actuating shaft, a looper coöperating with said needle and adapted for oscillation and endwise movement upon an axis in substantially intersecting relation with that of said actuating shaft, and an operative connection between said looper and crank including a pin fitted to said crank and adapted for turning and endwise movement relatively thereto.

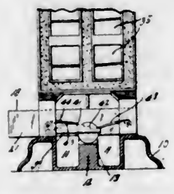
2. In a sewing machine, the combination with the frame comprising a base and a bracket-arm rising therefrom and a work-plate sustained above the base, of a reciprocating needle, an actuating shaft journaled in said frame below the work-plate and provided at its forward extremity with an inclined tubular crank having its axis in substantially intersecting relation with that of said shaft, a looper coöperating with said needle and adapted for oscillation and endwise movement upon an axis in substantially intersecting relation with that of said actuating shaft, and an operative connection between said looper and crank including a pin fitted revolubly within the bore of said tubular crank.

3. In a sewing machine, the combination with the frame comprising a base and a bracket-arm rising therefrom and a work-plate sustained above the base, of a main-shaft journaled in said frame below the work-plate and provided with a balance-wheel disposed wholly above the lower face of said base, a reciprocating needle, a looper-actuating shaft mounted in said frame between the main-shaft and the lower face of said base, a driving connection between said shafts, an inclined tubular crank mounted upon the forward extremity of said looper-actuating shaft, a looper coöperating with said needle and adapted to rock upon an axis in substantially intersecting relation with that of said actuating shaft, and an operative connection between said looper and crank including a pin revolubly and slidingly fitted within the bore of said tubular crank.

4. In a looper mechanism, the combination with an actuating shaft provided with an inclined tubular crank having its axis in substantially intersecting relation with that of said shaft, of a looper-carrier mounted for oscillatory and endwise movement upon an axis transverse to that of said shaft, and a rocking member formed with angularly arranged pivotal elements of which one extends across the end of and in opposite directions from the other, one of said elements being slidingly and revolubly fitted within said tubular crank and the other similarly fitted to a part of the looper-carrier for transmitting to the latter operative movements from said crank.

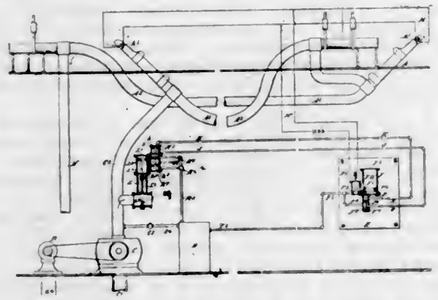
5. In a sewing machine, the combination with the frame comprising a base and a bracket-arm rising therefrom and a work-plate sustained above the base, of a main-shaft journaled in said frame below the work-plate and provided with a balance-wheel disposed wholly above the lower face of said base, a reciprocating needle, feed-actuating and needle-actuating elements carried by said main-shaft, feeding mechanism operatively connected with the feed-actuating elements, means including a connecting-rod formed with a strap embracing the needle-actuating element for imparting operative movements to the needle, an endwise and sidewise movable thread-carrying looper, a looper-actuating shaft mounted in said frame beneath the main-shaft with which it is operatively connected, a crank and sliding-pin connection between said looper-actuating shaft and the looper and looper-thread take-up and nipping devices each including an operative element mounted upon said connecting-rod.

1,107,660. VENDING-MACHINE. FRANK P. DUNN, Anderson, Ind. Filed Sept. 11, 1913. Serial No. 789,281. (Cl. 194—58.)



In a dispensing apparatus a shiftable delivery member having a coin slot, a double ended ratchet adjacent said coin slot, a coin support arranged to support a coin with its center beyond the ratchet, and a pair of oppositely arranged pawls arranged to co-act with the opposite portions of the ratchet in the path of movement of the coin whereby a coin lying within the coin slot and resting upon the coin support will, when driven laterally by the shiftable member, have its periphery driven beneath the active pawl to shift the same out of the path of movement of the adjacent ratchet.

1,107,661. PNEUMATIC-DESPATCH-TUBE APPARATUS. MERTON L. EMERSON, Braintree, Mass., assignor to American Pneumatic Service Company, Boston, Mass., a Corporation of Delaware. Filed Dec. 6, 1911. Serial No. 664,147. (Cl. 243—14.)



1. In a pneumatic despatch tube apparatus, a substantially constantly-operating blower or pump for compressing air and normally communicating with the atmosphere, a conduit, means for switching said blower or pump into operative communication with said conduit, and co-acting means, independent of the travel of the carrier, for automatically switching said blower or pump from operative communication with said conduit to the atmosphere.

2. In a pneumatic despatch tube apparatus, a substantially constantly-operating blower or pump for compressing air and normally communicating with the atmosphere, a conduit, means for switching said blower or pump into operative communication with said conduit, means for automatically switching said blower or pump from operative communication with said conduit to the atmosphere, and means for timing the period of communication of said blower or pump with said conduit.

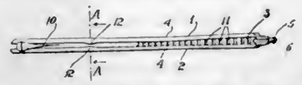
3. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a substantially constantly-operating blower or pump for compressing air, means normally connecting the said blower or pump with the atmosphere, means for switching a portion at least of said atmospheric connection into operative communication with said transmission tube to establish a current of compressed air through said tube for transmitting carriers, and means co-acting with said last mentioned means and independent of the travel of the carrier for automatically switching back said current of air to the atmosphere.

4. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a substantially constantly-operating blower or pump for compressed air, means normally connecting said blower or pump with the atmosphere, means for switching a portion at least of said connecting means into communication with said transmission tube to establish a current of air through said tube for transmitting carriers, and means for automatically throwing said blower into communication with the atmosphere after a predetermined interval.

5. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a substantially constantly-operating blower or pump for compressed air, a conduit or connection between said blower or pump and said transmission tube provided with an outlet to the atmosphere, means normally permitting the flow of air from said blower through said outlet, and compressed air actuated means, substantially independent of the flow of air through said conduit, for closing said outlet during a predetermined interval of time to establish a current of compressed air through said transmission tube for driving carriers therethrough.

[Claims 6 to 14 not printed in the Gazette.]

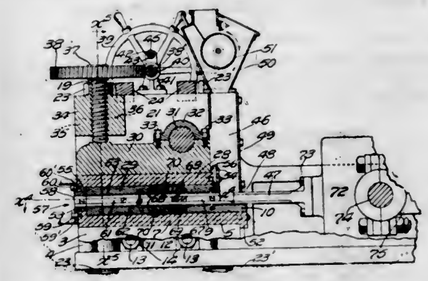
1,107,662. RAZOR. CHARLES F. ERN, Jr., New York, N. Y. Filed Aug. 23, 1912. Serial No. 716,588. (Cl. 30—12.)



In a razor, in combination, a blade and a handle therefor comprising side portions, each side portion being provided with an inwardly extending locking member flush with the front edge of said side portion for locking the blade in its closed position, said locking members being positioned at the portion of the handle which receives the shank of the blade whereby as the razor is closed said members will engage the shank of the blade before the blade enters the handle and thereby guide the blade to enter the handle centrally with respect to the sides thereof, each of said locking members being relatively immovable with respect to its associated side portion.

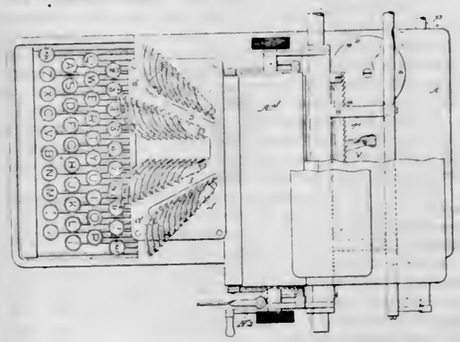
1,107,663. BRIQUET-MOLD. EMIL FERNHOLTZ, Los Angeles, Cal., assignor to The National Briquetting and Clay Working Machinery Company, Phoenix, Ariz., a Corporation of Arizona. Filed Sept. 14, 1909. Serial No. 517,724. (Cl. 25—17.)

In combination, top and bottom mold holders; top, bottom and side mold sections, there being ducts in the top and bottom mold sections; and liners for said sections respectively, there being perforations in the top and bottom liners to register with said ducts, and there being



transverse channels between the mold holders and the top and bottom mold sections to communicate with said ducts.

1,107,664. TYPE-WRITING MACHINE. HARVEY L. FISHER, Woodstock, Ill., assignor, by direct and mesne assignments, to Fisher Manufacturing Company, Chicago, Ill. Filed Apr. 6, 1897. Serial No. 631,037. (Cl. 197—26.)



1. In a writing machine, the combination, with the platen, of four groups of curved type bars graduated in length and each fixed to an axle, the axles of each group being journaled to a triangular-shaped frame, said type bars being arranged at such angles relative to each other as to allow them to pass each other on their descent to the platen and bring their type to a common printing point on the platen, and their normal positions being out of the line of sight from the operator to the writing line.

2. In a typewriting machine a triangular-shaped frame having a series of cone-shaped bearings for supporting type bars in front of a cylindrical platen, arranged and combined with a platen in the manner set forth.

3. A triangular-shaped frame having reëntering angles in one of its edges, a series of straight parallel bearings extending through from said reëntering angles, said bearings being enlarged at their extremities, cone-shaped washers fitted in said bearings, and axles fitted in said bearings and washers as shown and described for the purposes stated.

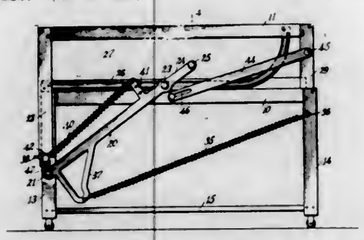
4. In a type writing machine four groups of upwardly inclined triangular-shaped frames each having parallel bearings, axles extended through said bearings, type bars fixed to the ends of said axles, means for connecting the type bars with the key levers, and a cylindrical platen in a plane above and in rear of said groups of triangular-shaped frames, all arranged and combined as shown and described for the purposes stated.

5. In a typewriting machine, the combination with a platen of a right angled triangle shaped bearing frame lo-

cated in front of the platen, and having a series of parallel cone-shaped bearings for type bars, and type bars journaled in said bearings, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,665. COUCH-BED. OTTO GASAU and OTTO MARKLEIN, New York, N. Y. Filed Mar. 7, 1910. Serial No. 547,657. (Cl. 5—46.)



1. A bed comprising sections, of which one is movable from a position alongside the other to a position above the other, a shifting lever fulcrumed on the relatively fixed section and pivotally connected with the movable section, and springs, one end of each of which connects with said lever, the opposite ends of the springs being connected respectively with the fixed and the movable sections.

2. A bed comprising sections, of which one is movable from a position alongside the other to a position above the other, members forming a link connection between the respective sections, and springs connected with said members and extending therefrom to a connection with the fixed bed section and the movable bed section respectively.

3. In a bed, comprising a fixed and a relatively movable section, means for linking one section to the other, and a spring extending from said connecting means to a connection with the movable section.

4. In a bed, comprising a fixed and a relatively movable section, means for linking one section to the other, and a spring extending from said connecting means to a connection with the legs of the movable section.

5. In a bed comprising a fixed and a relatively movable section, means establishing a link connection between the said sections at the ends, and springs extending from said means to outwardly projecting members on the front legs of the movable section.

[Claims 6 and 7 not printed in the Gazette.]

1,107,666. INSULATED RAIL-JOINT. LAWRENCE GRIFFITH, Yonkers, N. Y. Filed Mar. 20, 1913. Serial No. 755,601. (Cl. 239—5.)



1. An insulated rail joint comprising a pair of splice-bars, insulating material between the splice-bars and the rails, a pair of tie plates one for each rail end and in direct electrical contact therewith, a metal filler piece for each rail end and arranged between the rail and the upper surface of the splice-bar, said filler pieces being arranged on opposite sides of the rail, means for securing one end of each splice-bar to a tie, said securing means being out of contact with the adjoining tie plate.

2. An insulated rail joint comprising a pair of splice-bars, rail ends, insulating material between said rail ends and the splice-bars, one of said rails being completely insulated from one splice-bar and the other rail being completely insulated from the other splice-bar, a metal filler piece interposed between each rail end and a splice-bar, said filler pieces being on opposite sides of the rails and at opposite ends of the joint, a tie plate under each rail and in direct electrical contact therewith, means for securing the completely insulated splice-bar to a tie, said means being out of contact with the adjoining tie plate.

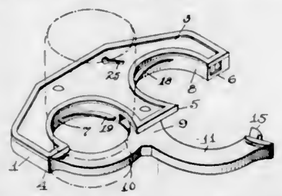
3. An insulated rail joint comprising the meeting ends of two rails, a pair of splice-bars, a tie plate under each rail in direct electrical contact therewith, a shoulder on each tie plate engaging the longitudinal edge of the rail base, insulating material between the splice-bars and the rails, one of said splice-bars being completely insulated from one rail, the other splice-bar being completely insulated from the other rail, metal filler pieces being arranged between each rail and one splice-bar, said filler pieces corresponding in thickness to the insulation on the opposite side of the rail, means for securing the completely insulated end of each splice-bar to a tie, said means being out of contact with the adjoining tie plate, and means for securing the adjacent end of the opposite splice-bar to a tie, said means engaging the tie plate and forcing the shoulder therein against the rail base.

4. An insulated rail joint comprising the meeting ends of two rails, a pair of splice-bars, a tie plate under each rail, a shoulder on each tie plate engaging the longitudinal edge of the rail base, an insulating sheet between the splice-bars and the rails, each of said insulating sheets being formed with a vertical web portion, an upwardly and outwardly extending part and a lower downwardly and outwardly extending part, the web and the upwardly and outwardly extending part of each sheet being cut away at one end, the downwardly and outwardly extending part being substantially equal in length to the splice-bars, a metal filler piece approximately of the same thickness as the insulating sheet fitting in and taking the place of the cut-out part of the insulating sheet, said filler piece being formed with a downwardly extending web having bolt holes therein, and means for securing the splice-bars to the ties.

5. An insulating and filler member for insulated rail joints comprising an insulated sheet formed with a vertical web portion, an upwardly and outwardly extending part and a lower downwardly and outwardly extending part, the web portion and the upwardly and outwardly extending part being cut away for approximately one-half of the length of the sheet, the lower downwardly and outwardly extending portion extending the full length of the said sheet, and a metal filler piece of approximately the same thickness as the insulation fitting in and taking the place of the cut-out part of said insulating sheet, said filler piece being formed with an upwardly and outwardly extending part and a vertical web portion, said web portion being apertured for the passage of the joint bolts.

[Claims 6 to 10 not printed in the Gazette.]

1,107,667. SANITARY LOCKING BOTTLE-HOLDER. FRANK C. GRIMM, Cleveland, Ohio. Filed Feb. 7, 1914. Serial No. 817,122. (Cl. 232—41.)



1. In a locking retainer for bottles and the like, the combination of an open bracket, a retaining member shiftably attached to said bracket, said member being formed to coöperate with said bracket, in two different positions of said member, to retain a bottle therebetween in either of such two positions, and means adapted to lock said member in either position.

2. In a locking retainer for bottles and the like, the combination of an open bracket, a retaining member shiftably attached to said bracket, said member being formed to coöperate with said bracket, in two different positions of said member, to retain a bottle therebetween in either of such two positions; and means automatically operable upon movement of said member into either of such two positions, said means being adapted to lock said member against movement.

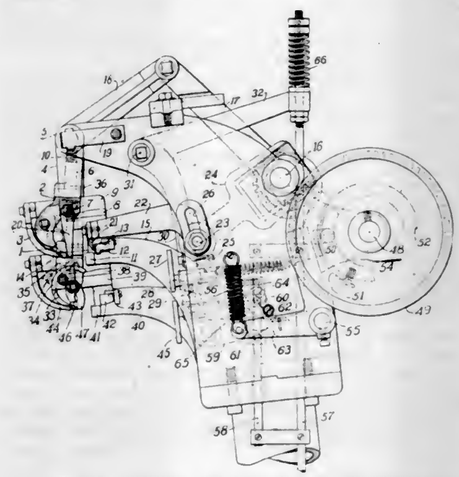
3. In a locking retainer for bottles and the like, the combination of an open bracket, a retaining member shiftably attached to said bracket, said member being formed to coöperate with said bracket, in two different positions of said member, to retain a bottle therebetween in either of such two positions; and two independent locking members, each of said members being automatically operable, upon movement of said retaining member into one of such two positions, to lock said retaining member against movement.

4. In a locking retainer for bottles and the like, the combination of an open bracket, a retaining member shiftably attached to said bracket, said member being formed to coöperate with said bracket, in two different positions of said member, to retain a bottle therebetween in either of such two positions; and two independent resilient locking members, each of said members being automatically operable, upon movement of said retaining member into one of such two positions, to lock said retaining member against movement.

5. In a locking retainer for bottles and the like, the combination of an open bracket, a retaining member having two arms, said member being pivotally attached, intermediate its ends, to said bracket, each arm of said member being formed to coöperate with one part of said bracket, in two different positions of said member, to retain a bottle therebetween in either of such two positions, and means adapted to lock said member in either position.

[Claims 6 to 17 not printed in the Gazette.]

1,107,668. EDGE-TRIMMING MACHINE. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 16, 1907. Serial No. 362,632. (Cl. 12—85.)



1. An edge trimming machine, having, in combination, a gage to engage the breast of the heel of a shoe, a clamp to engage the shoe and press the breast of the heel against the gage, a reciprocating edge trimming knife arranged to cut along the edge of the shoe sole and means to actuate the knife and clamp.

2. An edge trimming machine, having, in combination, gaging devices to determine the position of a shoe comprising a gage to engage the breast of the heel, a gage to engage the edge of the heel, a gage to enter the crease between the sole and upper at the heel of the shoe, and a gage to engage the edge of the shank portion of the sole, and an edge trimming cutter arranged to cut along the edge of the sole adjacent the breast of the heel.

3. An edge trimming machine, having, in combination, an edge trimming cutter arranged to trim the edge of a shoe sole adjacent the breast of the heel, and gaging devices for the shoe including a gage to engage the edge of the shank portion of the sole at the rear of the edge trimming cutter.

4. An edge trimming machine having, in combination, gaging means to determine the position of a shoe, a reciprocating edge trimming knife arranged to cut along the edge of the sole adjacent the breast of the heel and means for supporting the knife having provision to permit a lateral movement of the knife during the cutting operation.

5. An edge trimming machine, having, in combination, gaging means to determine the position of the sole edge and heel breast of a shoe, a knife arranged to cut into the edge of the sole in line with the breast of the heel and means for adjusting the angle of cut of said knife with relation to the edge of the sole.

[Claims 6 to 18 not printed in the Gazette.]

1,107,669. STITCHED BUTTONHOLE. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 31, 1914. Serial No. 815,621. (Cl. 112—34.)



1. A stitched buttonhole comprising the material in which the buttonhole is formed, and an over-seam about the edge of the buttonhole having the end of the thread leading to the initial stitch located between the face of the material and the stitches of the overseam.

2. A stitched buttonhole comprising the material in which the buttonhole is formed, and an over-seam about the edge of the buttonhole formed of upper and under threads and having the upper thread which leads to the initial stitch covered by the initial stitches of the seam.

1,107,670. ELECTROMETRIC APPLIANCE. WILLIAM JANDUS, Cleveland, Ohio. Filed Apr. 16, 1906. Serial No. 311,853. (Cl. 171—308.)

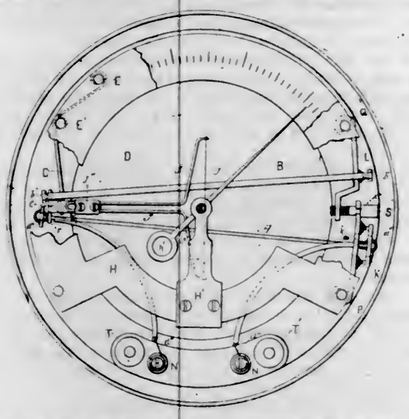
1. In electro-metric appliances, an independent, bodily-removable hot-wire element comprising supports, and a continuous conductor wound about said supports and having its respective ends fixed thereto.

2. In electro-metric appliances, an independent, bodily-removable hot-wire element comprising two supports each provided with grooves extending transversely of its axis throughout its length, and a continuous conductor wound about said supports and lying in the grooves therein, the respective ends of said conductor being fixed to said supports.

3. In electro-metric appliances, a detachable hot-wire element comprising a plurality of wires; two supports provided with grooves in which said wires are wound, opposing wires being disposed in close approach; insulating sheaths adapted to inclose the respective supports; and metal housings for said sheaths.

4. In electro-metric appliances, a hot-wire element comprising a plurality of wires; two supports provided with grooves in which said wires are wound; insulating sheaths adapted to inclose the respective suports; metal housings for said sheaths; and frames adapted to lock said sheaths and housings together.

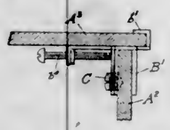
5. In electro-metric appliances, a hot-wire element comprising a plurality of wires; and supports, upon which the



latter are serially wound, each comprising two insulating sheaths adapted to receive and inclose the wires, and a metal housing adapted to lock said sheaths together.

[Claims 6 to 26 not printed in the Gazette.]

1,107,671. PLATE-GLASS STRUCTURE. HENRY FRANCIS KEIL, New York, N. Y. Filed June 20, 1913. Serial No. 774,936. (Cl. 211—25.)



In a device of the class described, a corner member having a central body portion and a channel formed by parallel depending flanges to receive the side abutting plates, projections located in the inner part of the member and indentations formed in the side plates to register therewith to hold the plates from lateral movement, in combination with another corner member the top of which covers the top plate and the lower part whereof is flush with the top face of the first member, and adjustable means located at the interior corner of the show case to engage both of the said members whereby, by the operation thereof alone, the projections may be forced with an outward pressure against the indentations in the side plates and the top plate may be held to the side plates with an inward pressure, the pressure being distributed along the faces of all of the plates in lieu of being localized.

1,107,672. TIRE FOR AUTOMOBILES. CLIFFORD F. KERNEN, Cincinnati, Ohio. Filed Feb. 19, 1914. Serial No. 819,836. (Cl. 152—14.)



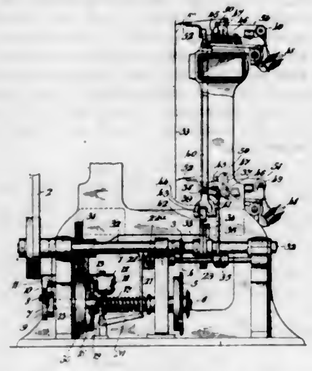
1. The described device consisting of a tire having a fabric of wire cables formed by interlooping strands from said cables embedded therein.

2. The described device consisting of a tire having a fabric of wire cables formed by interlooping strands from said cables embedded therein, said strands all protruding from the under portions of said cables.

3. The described device consisting of a tire having a fabric of wire cables formed by interlooping strands from said cables embedded therein, said strands all protruding from the under portions of said cables, said cables partially protruding from the surface of said tire.

4. The described device consisting of a tire having a fabric of wire cables formed by interlooping strands from said cables embedded therein, said strands all protruding from the under portions of said cables, said cables partially protruding from the surface of said tire, said cables being formed sinuous.

1,107,673. MECHANICAL MOVEMENT. VICTOR KOBLER, Rorschach, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Apr. 1, 1913. Serial No. 758,106. (Cl. 74—14.)



1. In a jacquard embroidery machine, in combination, a main driving shaft, a driving shaft for the machine, and a third shaft, and means for rocking the latter from the main shaft, means for coupling the first two said shafts comprising a clutch the one member of which is axially slidable and in the one end position effects coupling of the main driving shaft with the machine driving shaft, and in the other end position effects coupling of the machine driving shaft with the said third shaft.

2. In a jacquard embroidery machine, in combination, a continuously rotating clutch member, a coöperating clutch member, a member having a reciprocatory motion, and means to effect disengagement of the coöperating clutch member from the continuously rotating clutch member and engagement thereof with the reciprocating member.

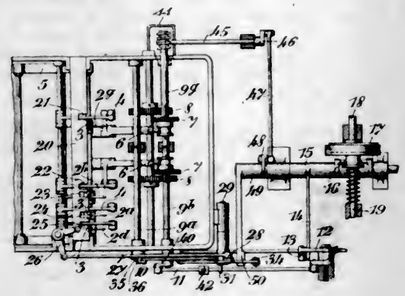
3. In a jacquard embroidery machine, in combination, a continuously rotating shaft, a clutch member mounted thereon, a coöperating clutch member loosely mounted on the shaft, a member having a reciprocatory motion, and means to effect disengagement of the second clutch member from the first clutch member and engagement thereof with the reciprocating member.

4. In a jacquard embroidery machine, in combination, a continuously rotating shaft, a clutch member mounted thereon, a coöperating clutch member loosely mounted on the shaft, a member having a reciprocatory motion, means to effect disengagement of the second clutch member from the first clutch member and engagement thereof with the reciprocating member, and a machine driving shaft operatively connected with the second clutch member.

5. In a jacquard embroidery machine, in combination, a continuously rotating shaft, a clutch member mounted thereon, a coöperating clutch member loosely mounted on the shaft, a member having a reciprocatory motion, means to effect disengagement of the second clutch member from the first clutch member and engagement thereof with the reciprocating member, and operative means between said shaft and the reciprocating member for reciprocating the latter.

[Claim 6 not printed in the Gazette.]

1,107,674. EMBROIDERY-MACHINE JACQUARD APPARATUS. VICTOR KOBLER, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed May 6, 1913. Serial No. 765,971. (Cl. 112—7.)



1. In a jacquard embroidery machine, in combination, a plurality of independent devices for effecting different operations supplemental to the principal operations, a jacquard apparatus, several means the operation of which is initiated by the jacquard apparatus for severally controlling the operation of said devices, and means for preventing the operation of certain of said devices while other of said devices are free to operate.

2. In a jacquard embroidery machine, in combination, a plurality of devices for effecting operations supplemental to the principal operations, a jacquard apparatus, several means the operation of which is initiated by the jacquard apparatus for severally controlling said devices, and other means acting to prevent the operation of certain of said several means while other of said several means are free to operate.

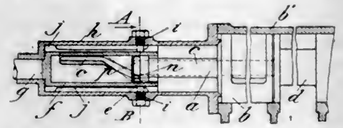
3. In a jacquard embroidery machine, in combination, a plurality of devices for effecting operations supplemental to the principal operations, a jacquard apparatus, several means the operation of which is initiated by the jacquard apparatus for severally controlling said devices, and other means actuated with the operation of one of said devices to prevent the operation of other of said devices.

4. In a jacquard embroidery machine, in combination, a plurality of devices for effecting operation supplemental to the principal operations, a jacquard apparatus, several means the operation of which is initiated by the jacquard apparatus for severally controlling said devices, and other means actuated by the movement of one of said several means to prevent the operation of other of said several means.

5. In a jacquard embroidery machine, in combination, a plurality of devices for effecting operations supplemental to the principal operations, a jacquard apparatus, several means the operation of which is initiated by the jacquard apparatus for severally controlling said devices, and a slidable notched bar shifted with the operation of one of said means to prevent the operation of other of said means.

[Claim 6 not printed in the Gazette.]

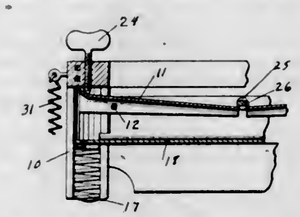
1,107,675. VALVE MECHANISM FOR HYDRAULIC TRANSMISSION. HUGO LENTZ, Berlin-Grunewald, Germany. Filed Nov. 25, 1910. Serial No. 594,192. (Cl. 138—3.)



1. The combination, with a plurality of valves, of concentric rods movable relatively one to another attached thereto, and a guided sleeve surrounding the ends of said rods and having a plurality of guide-ways, each rod having a member engaging in one of the guide-ways.

2. The combination of a hollow revoluble valve-rod having a valve attached to one end thereof, a second valve-rod revoluble in the former valve-rod, a valve attached to one end of the second valve-rod, a guided sleeve provided with two angular guide-ways surrounding the other ends of said valve-rods, the former valve-rod carrying a pin projecting into one of said guide-ways and a pin on the second valve-rod projecting into the other guide-way, substantially as shown.

1,107,676. CLOTHES-WRINGER. GEORGE W. LEWIS, Grinnell, Iowa, assignor to Grinnell Washing Machine Company, Grinnell, Iowa, a Corporation. Filed Sept. 19, 1912. Serial No. 721,308. (Cl. 68—32.)



1. In a device of the class described, a frame including upright end members, a pair of shafts, wringer rolls mounted thereon, said shafts being mounted on said end members, a vertically movable member slidably mounted on said end members, tension devices for pressing one of said rolls against the other, arms pivoted near the outer ends of said vertically movable member, designed to swing from horizontal to substantially vertical position, said arms being designed to be in line with and spaced from each other when in their lower position and in said position to hold said vertically movable member in position, and means for locking said pivoted arms in their horizontal position, said means comprising a rod pivoted in said vertically movable member, having opposite flat sides so that in one position of its movement the ends of said pivoted arms may swing past it, while in another position they can not, a handle on said rod and means for exerting yielding pressure for raising said upper wringer roll.

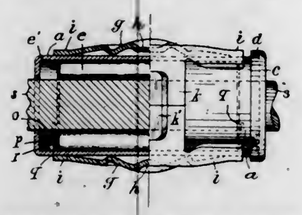
2. In a device of the class described, a frame including upright end members, a pair of shafts, wringer rolls mounted thereon, said shafts being mounted on said end members, a vertically movable member slidably mounted on said end members, tension devices for pressing one of said rolls against the other, arms pivoted near the outer ends of said vertically movable member, designed to swing from horizontal to substantially vertical position, said arms being designed to be in line with and spaced from each other when in their lower position and in said position to hold said vertically movable member in position, and instantly releasable means for locking both of said pivoted members in their horizontal position.

1,107,677. PRESSED-STEEL HANGER-BOX. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Feb. 19, 1914. Serial No. 819,674. (Cl. 64—14.)

1. A pressed sheet-metal hanger-box having a shell consisting of a cylindrical undivided drawn steel tube, pressed sheet-metal saddles secured upon its opposite sides and shaped to form opposite parallel hanger-guides, and a set of rolls fitted to revolve upon the inner wall of such shell.

2. A pressed sheet-metal hanger-box having a roll-supporting shell consisting of a cylindrical undivided drawn tube with pressed sheet-metal saddles fitted to its upper and lower sides and formed with parallel hanger-guides at opposite sides, such guides contacting with the shell at its

opposite sides and attached thereto by suitable means, and a set of rolls fitted to turn upon the inner wall of such shell.

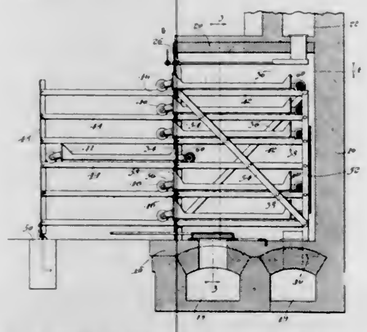


3. A pressed sheet-metal hanger-box having a roll-supporting shell, consisting of a cylindrical undivided drawn steel tube with pressed sheet-metal saddles fitted to its upper and lower sides and each provided with a central seat having a socket to receive an adjusting-screw, integral braces projected from such seats toward the opposite ends of the shell, and integral side wings projected from such seats and forming parallel guides at opposite sides of the shell, such saddles being secured to the shell by suitable means.

4. A pressed steel hanger-box having a roll-supporting shell consisting of a cylindrical undivided drawn steel tube with a collar bent inwardly at one end and having a pressed steel cap fitted elastically upon the opposite end, sheet-metal sockets for spring oil-wipers secured within the ends of the shell by spot-welds, spring wiper-blocks fitted movably to such sockets, and sheet-metal saddles fitted to the upper and lower sides of the shell and secured thereto by spot-welds so as to form no break in the bearing-surface for the rolls.

5. A pressed steel hanger-box, having a roll-supporting shell consisting of a cylindrical undivided drawn steel tube provided with a saddle formed in one piece of sheet-metal with parallel hanger-guides at opposite sides and such guides contacting with the shell at opposite sides and secured thereto by suitable means.

1,107,678. DRAWER-TYPE CORE-OVEN. ARCHIBALD M. LOUDON, Elmira, N. Y., assignor to Whiting Foundry Equipment Company, Harvey, Ill., a Corporation of Illinois. Filed Jan. 17, 1913. Serial No. 742,618. (Cl. 34—40.)



1. In a device of the class described, the combination with an oven receptacle having an opening through which a drawer may be inserted and withdrawn, a drawer for said opening, track members along the insides of the oven adapted to support the side edges of said drawer, and a track extending from the center of the oven on which the front portion of the drawer is supported in all its positions, said last mentioned track being the only device in front of the oven receptacle for supporting the drawer as it is withdrawn, for the purposes set forth.

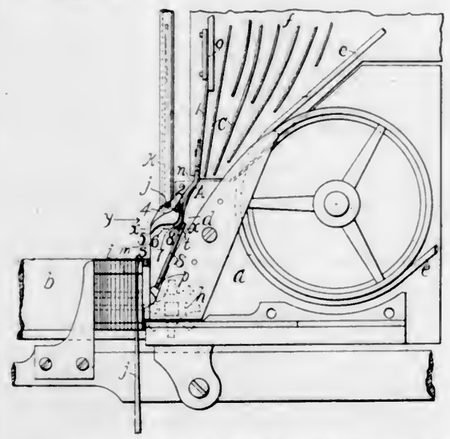
2. In a device of the class described, in combination with an oven receptacle having a plurality of openings one above the other within which drawers may be inserted and withdrawn, a plurality of drawers one for each such opening, a supporting track for each drawer on each side of the inside of the oven for supporting the sides of the drawers in all positions of their movement and a corresponding number of parallel tracks one above the other, one for each drawer extending from the center in front of the oven, adapted to support the respective fronts of the drawers in all positions, said last mentioned tracks being the only devices in front of the oven receptacle for supporting each of the drawers as it is withdrawn, for the purposes set forth.

3. In a device of the class described, in combination with an oven receptacle having an opening through which a drawer may be inserted and withdrawn, rollers near the inner rear corners of the drawer, track members within the oven receptacle on which said rollers travel, a roller at approximately the center of the front of the drawer, and a track extending from the center of the oven on which said roller travels, for the purposes set forth.

4. In a device of the class described, in combination with an oven receptacle having a plurality of openings within which drawers may be inserted and withdrawn, a plurality of such drawers, one for each such opening, a plurality of tracks, one above the other within the receptacle for supporting the sides of the drawers in all positions of their movement, and a corresponding number of parallel tracks, one for each drawer, extending from the center of the front of the oven adapted to support the respective fronts of the drawers in all positions.

5. In a device of the class described, in combination with an oven receptacle having openings for independently movable drawers, a drawer for each such opening, rollers upon the sides and near the rear ends of said drawers, parallel tracks within the oven and along the sides thereof, one for each such roller, a roller located at the center of the front of each drawer extending outside the oven, and a track for each such roller suitably supported to extend in front of the oven, for the purposes set forth.

1,107,679. CHUTE-SPRING. EVERETT M. LOW, Brooklyn, N. Y. Filed Feb. 20, 1911. Serial No. 609,821. (Cl. 199—7.)



1. In a type bar machine having a magazine plate and a matrix chute, a chute spring arranged in juxtaposition to the matrix chute, embodying a throat plate for engaging the matrices as they pass through the throat, forwardly extending prongs arranged to prevent the matrices from jumping upwardly out of the line forming position, means for engaging the magazine plate of the machine to retain the prong member in position, and means for adjusting the relative positions of said throat plate and said prongs whereby the position of the throat plate may be adjusted relatively to the throat and said prongs may be retained in the desired position relative to the line composing devices.

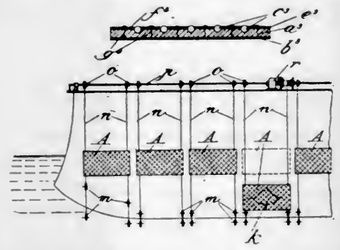
2. A chute spring adapted to be secured in juxtaposition to the matrix chute of a type bar making machine embodying a throat plate for engaging the matrices as they pass through the throat, forwardly extending prongs arranged to prevent the matrices from jumping upwardly from the line forming position, the lower end of said throat plate extending down below the under side of said prongs whereby the tops of the matrices will move from contact with the throat plate to a vertical position without interference by said prongs.

3. A chute spring adapted to be secured in juxtaposition to the matrix chute of a type bar making machine, embodying a throat plate for engaging the matrices as they pass through the throat, forwardly extending prongs arranged to prevent the matrices from jumping upwardly from the line forming position, a stop pin for coöperating with a portion of the magazine plate of said machine to limit the movement of said throat plate toward the matrix chute, and means for adjusting the position of the said stop pin on said spring whereby the said prongs may be arranged at different heights relative to the stop pin.

4. A device of the character described in a type bar making machine, comprising a depending chute spring having a throat plate S, arranged near the throat of said machine and adapted to engage the matrices passing therethrough, a member secured near the lower end of said chute spring and having laterally extending prongs adapted to prevent the matrices from jumping out of the line forming position, said throat plate extending below the said prongs, and adjustable means for holding the said throat plate and said prong member in separated relation for the purpose set forth.

5. A chute spring adapted to be secured in juxtaposition to the matrix chute of a type bar making machine, comprising a chute spring having a throat plate arranged to contact with the matrices as they pass through the assembling throat of the machine, said throat plate having a forwardly curved lower end, and a member having forwardly extending prongs arranged to prevent the matrices from jumping upwardly from the line forming position, the said curved lower end of the throat plate extending below the under side of said prongs whereby the tops of the matrices will move from contact with the throat plate to a vertical position without interference by said prongs.

1,107,680. ARRANGEMENT FOR CLOSING LEAKS IN SHIPS. DORA LUCKA, Vienna, Austria-Hungary. Filed Oct. 23, 1913. Serial No. 796,865. (Cl. 114—229.)



1. In a breach mat for vessels, the combination of a sheet of material comprising asphalt; and a wire netting embedded therein.

2. In a breach mat for vessels, the combination of a sheet of asphalt containing material; and a wire netting embedded in one face thereof.

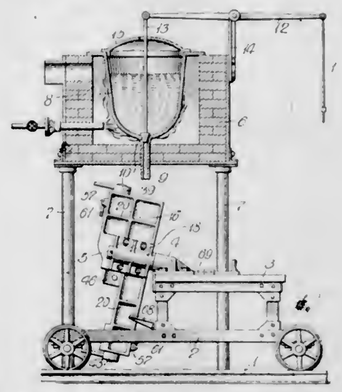
3. A breach mat for vessels comprising a thick layer of flexible material; a plurality of balls embedded in the inner face thereof; and a cover placed on said inner face and having holes through which the balls project, whereby the balls are held in place.

4. A breach mat for vessels, comprising a thick layer of flexible material; a plurality of balls embedded in the inner face thereof; a netting pressed in the outer face thereof; and a cover placed on said inner face and having holes through which the balls project, whereby the balls are held in place.

5. A breach mat for vessels, comprising a thick layer of flexible material; a plurality of balls embedded in the inner face thereof; a netting pressed in the outer face thereof; a cover placed on said inner face and having holes through which the balls project, whereby the balls are held in place; and another layer of flexible material over said cover.

[Claims 6 and 7 not printed in the Gazette.]

1,107,681. MOLD FOR TRAPS. JOHN B. LUKOMSKI and ANTHONY LUKOMSKI, Detroit, Mich. Filed May 2, 1914. Serial No. 835,814. (Cl. 22—57.)



1. In a trap molding apparatus, the combination with a melting pot, of a truck adapted to be shifted beneath said pot, and an angularly disposed mold pivotally supported by said truck and adapted to receive molten metal from said pot.

2. In a trap molding apparatus, the combination with a melting pot, of a truck adapted to be shifted beneath said pot, an angularly disposed mold pivotally supported by said truck and adapted to receive molten metal from said pot, and means in connection with said truck for maintaining said mold in a vertical position beneath said pot.

3. In a trap molding apparatus, the combination with a melting pot, of a truck adapted to be shifted beneath said pot, an angularly disposed mold pivotally supported by said truck and adapted to receive molten metal from said pot, means in connection with said truck for maintaining said mold in a vertical position beneath said pot, and means in connection with said truck adapted to temporarily hold said mold in a horizontal position.

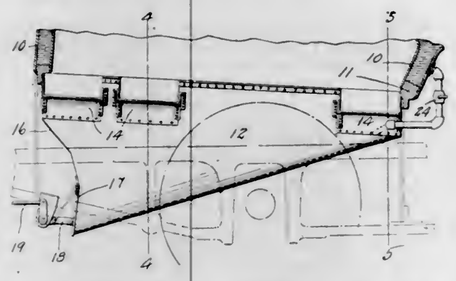
4. In a trap molding apparatus, the combination with a melting pot, of a truck adapted to be shifted beneath said pot, an angularly disposed two-part mold having one part thereof pivotally supported by said truck, and means in connection with said truck for maintaining said mold in a vertical position beneath said pot.

5. In a molding apparatus, the combination with a movable table, of a two-part mold having a part thereof pivotally supported at an inclination by said table and adapted to be swung to a horizontal plane transversely of said table, and means at a side of said table and adapted to be shifted under an end of said mold for maintaining said mold in an adjusted position.

1,107,682. LOCOMOTIVE ASH-PAN. THOMAS P. MADDEN, St. Louis, Mo. Filed Feb. 10, 1913. Serial No. 747,460. (Cl. 110—171.)

1. The combination with a locomotive fire box, of an ash pan arranged beneath said fire box, the main body

portion of which ash pan is constructed from a single piece of material in the form of an elongated chute, which is curved in cross section, and the bottom of which pan is inclined lengthwise, there being air inlet openings formed in the upper edges of said ash pan, a transversely disposed water supply pipe at the upper wide end of the pan, and a series of jet nozzles projecting from said pipe downwardly onto the inclined bottom of the pan, the lower ends of which jet nozzles are cut off at an angle so that the water issuing from said jet nozzles is delivered directly downwardly at an angle onto the surface of the bottom of said pan.



2 The combined with a locomotive fire box, of an ash pan arranged beneath said fire box, the main body portion of which ash pan is constructed from a single piece of material in the form of a chute which gradually becomes narrower and deeper toward one ond there being air inlet openings formed in the upper portions of the side walls of said ash pan, a fixed wall closing the upper portion of the narrower deep end of the pan, a door arranged beneath said fixed wall for normally closing the lower portion of the narrow deep end of the pan, and means for delivering water on the wide and shallow end of said pan.

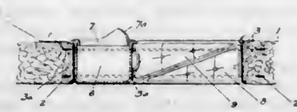
3. The combination with a locomotive fire box, of an ash pan arranged beneath said fire box, the main body portion of which ash pan is constructed from a single piece of material in the form of a chute which gradually becomes narrower and deeper toward one end there being air inlet openings formed in the upper portions of the side walls of said ash pan, a fixed wall closing the upper portion of the narrower deep end of the pan, a door arranged beneath said fixed wall for normally closing the lower portion of the narrower deep end of the pan, a transversely disposed water supply pipe arranged in the wide shallow end of the pan, and a series of jet tubes projecting from said water pipe downwardly onto the bottom of said ash pan.

4. The combination with a locomotive fire box, of an ash pan arranged beneath said fire box, the main body portion of which pan comprises a single piece of material, the central portion of which is in the form of a chute, which gradually becomes narrower and deeper toward one end, the side walls between the central portion and the sides of the fire box being curved upwardly and outwardly, portions of the upper edges of said side walls being cut away to form air inlet openings and housings fixed to the sides of the pan around said openings.

5. The combination with a lomocotive fire box, of an ash pan arranged beneath said fire box, the main body portion of which pan comprises a single piece of material, the central portion of which is in the form of a chute, which gradually becomes narrower and deeper toward one end, the side walls between the central portion and the sides of the fire box being curved upwardly and outwardly there being air inlet openings formed in the upper portions of said side walls, housings fixed to the sides of the pan around said air inlet openings, a transversely disposed water supply pipe arranged at the wide shallow end of the ash pan, a series of jet tubes projecting from said water supply pipe downwardly onto the curved inclined bottom of the pan, and a wall closing the narrow deep end of the pan, a portion of which wall is movable to permit the escape of ashes and water from the pan.

[Claim 6 not printed in the Gazette.]

1,107,683. REVERSIBLE SANITARY MATTRESS FOR INVALIDS. ISABEL EDGAR MALARKEY, Portland, Oreg. Filed Jan. 24, 1914. Serial No. 814,171. (Cl. 5—13.)



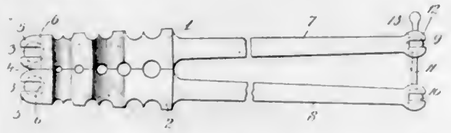
1. A mattress having an opening through the same, a sheet secured over the mattress and having a pocket substantially conforming to the dimensions of said opening, a set of filler members located in said pocket, said filler members including a pair of removable wedge blocks resting one on the other and a member of cylindrical form.

2. A mattress having an opening through the same, a sheet secured over the mattress and having a pocket substatially conforming to the dimensions of said opening, a set of filler members located in said pocket, said filler members including removable blocks resting one on the other, and a member of cylindrical form.

3. A mattress having an opening through the, same, a sheet secured over the mattress and having a pocket substantially conforming to the dimensions of said opening, a set of filler members located in said pocket, said filler members including removable blocks made of resilient material and resting one on the other, and a member of cylindrical form.

4. A mattress having an opening through the same, a sheet secured over the mattress and having a pocket substantially conforming to the dimensions of said opening, a set of filler members located in said pocket, said filler members including removable wedge blocks made of resilient material and resting one on the other, and a member of cylindrical form.

1,107,684. WIRE-CLAMP. LIVINGSTON MALLORY, New York, N. Y. Filed July 30, 1913. Serial No. 782,072. (Cl. 140—121.)



1. A wire clamp such as described, comprising two jaw members having a double universal joint connection permitting any one of three or more faces of the one member to be brought opposite any one of a plurality of faces of the other member.

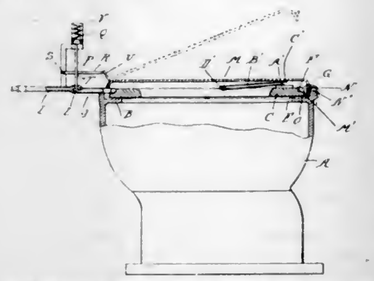
2. A wire clamp such as described, comprising two jaw members having a double universal joint connection peremitting any one of three or more faces of the one member to be brought opposite any one of a plurality of faces of the other member, and means for clamping said members together in any of the various possible relative working positions of such members.

3. A wire clamp such as described, comprising two jaw members provided with ball sockets, and a connector for said members comprising balls fitting within such sockets and means connecting said balls.

4. A wire clamp such as described, comprising universally jointed jaw members, and means for clamping such jaw members together comprising balls adapted to fit within ball sockets in said members, and means connecting such balls, one of such ball sockets adapted to permit the corresponding ball to be moved into and out of that socket.

5. A wire clamp such as described, comprising two jaw members each provided with a ball socket formed by projecting lugs, and means for connecting such jaw members comprising a connecting member having balls to fit within said sockets and a neck connecting such balls, there being between the lugs of the jaw members spaces for the reception of such neck.

1,107,685. SANITARY CLOSET. HILLIARD N. A. MCLEAN, Detroit, Mich. Filed Dec. 8, 1913. Serial No. 805,398. (Cl. 4—18.)



1. In a sanitary closet, the combination with the bowl and its seat, of means for washing the upper face of the seat, and a cover for the seat, said cover when closed inclosing the washing means.

2. In a sanitary closet, the combination with the bowl and its seat, of means for washing the upper face of the seat, and a cover for said seat inclosing the latter and the washing means and forming a tight joint with the bowl.

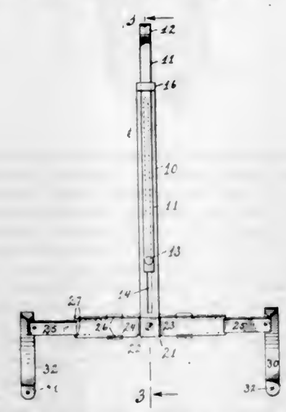
3. In a sanitary closet, the combination with the bowl having an annular flange, of a seat supported by the flange, means for spraying liquid over the upper face of the seat, and a cover inclosing said means and the seat and forming a tight joint with said flange.

4. In a sanitary closet, the combination with the bowl and its movable seat, of means carried by the seat for spraying liquid over the upper face thereof

5. In a sanitary closet, the combination with the bowl and its movable seat, of an annular spray pipe carried by the seat.

[Claims 6 to 15 not printed in the Gazette.]

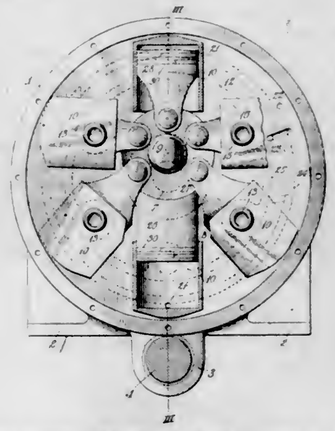
1,107,686. HANGER FOR PICTURE-FRAMES. WILLIAM MEHRMANN, Brooklyn, N. Y. Filed Sept. 27, 1913. Serial No. 792,236. (Cl. 40—145.6.)



1. A hanger for picture frames or the like, comprising a vertical member, a horizontal member secured to the vertical member, said horizontal member provided on its ends with rearwardly curved downwardly extending elastic members adapted to be secured to a picture frame.

2. A hanger for picture frames or the like, consisting of an adjustable vertical support, a horizontal member secured to said vertical support, supplemental members adjustably supported on the horizontal member, the outer end of each supplemental member terminating in a downwardly extending bow at right angles to the body portion said supplemental member to form a bracket and a flange at the end of each bracket, thereby affording securing means whereby the bracket is secured to the picture.

1,107,687. ENGINE-STARTER. WILLIAM A. MERRALLS, Detroit, Mich. Filed Sept. 9, 1912. Serial No. 719,356. (Cl. 230—37.)



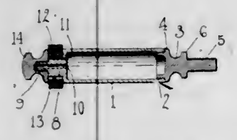
1. In an engine starter, a casing, a crank shaft journaled therein, cylinders oscillatory in the casing provided each with a port adapted to open alternately into an inlet and an exhaust passage of the casing, pistons in the cylinders operatively connected to the crank shaft, a pinion rotatable and reciprocable on the crank shaft, means adapted to lock the pinion with the shaft and to release the pinion from turning with the shaft when the pinion rotates faster than the shaft, a rotatable member, a gear on the latter adapted to mesh with the pinion, and means adapted to throw the pinion into mesh with the gear and into engagement with the shaft.

2. In a starter for an explosive engine, a casing having an inlet and an exhaust passage, valves each controlling a passage, a crank shaft journaled in the casing, cylinders oscillatory in the casing around the crank shaft each with a port adapted to open into the passage alternately, pistons reciprocatory in the cylinders operatively connected to the crank shaft to rotate the latter and oscillate the cylinders, a rotatable member, means for operatively connecting the member and crank shaft adapted to automatically disconnect the shaft and member when the speed of the latter exceeds the speed of the former, and means for operating the inlet and exhaust valves adapted to close one and open the other when the member is disconnected from the crank shaft.

1,107,688. ATTACHMENT FOR CLEANING-RODS. CARL P. MICKELSON, Mason, Mich. Filed June 20, 1914. Serial No. 846,251. (Cl. 42—91.)

1. A device of the type described comprising a tubular reservoir, a coupling member carried by one end thereof, a boss carried by the opposite end of said reservoir, a swab encircling said boss, a cap detachably supported by said boss and engaging said swab, and a spring interposed between said boss and said swab and adapted to expand said swab.

2. The combination with a cleaning rod, of a coupling member attached thereto, a tubular reservoir carried by said member, a ported boss forming part of the outer end of said reservoir, an expansible swab surrounding said boss and adapted to receive the contents of said reservoir, and means supported by said boss for controlling the supply to said swab.



3. The combination with a cleaning rod, of a tubular reservoir adapted to contain a lubricant, a ported boss carried by the outer end of said reservoir, an expansible swab surrounding said boss against the end of said reservoir, a cap screwed upon a portion of said boss and adapted to control the supply of lubricant to said swab, and means at the inner end of said reservoir to facilitate coupling said reservoir to said rod.

4. The combination with a cleaning rod, of a tubular reservoir, a coupling member closing one end of said reservoir and adapted to connect said reservoir to said rod, a ported boss closing the opposite end of said reservoir, a swab encircling said boss against the end of said reservoir, a cap detachably supported by a portion of said boss and adapted to retain said swab in position, and means interposed between said boss and said swab for normally retaining said swab expanded.

1,107,689. SEGMENTAL BLOCK. HENRY E. MILLER, Linden Heights, Ohio. Filed Apr. 4, 1914. Serial No. 829,567. (Cl. 72—38.)

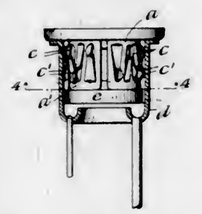


A segmental block comprising a body portion, longitudinally extending tongues along opposite edges of said body, said tongues being both spaced from said body to form a groove between each tongue and said body, one of said tongues projecting radially inward from the outside portion of the block and the other projecting radially outward from the inside portion of the block, the side of said body portion adjacent the inwardly projecting tongues being provided with a longitudinally extending groove, and a laterally projecting longitudinally extending tongue along the outside face of said radially outwardly extending tongue.

1,107,690. SPRING FOR SPRING-BEARINGS. THEODORE H. MILLER, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Oct. 1, 1910. Serial No. 584,785. (Cl. 64—48.)

1. A spring for a spring bearing, comprising a metal sheet, two sets of spring fingers projecting from said sheet in opposite directions, the line of contact of one set of fingers being in one horizontal plane, and the line of contact of the other set of fingers being in another horizontal plane, and both sets of fingers extending throughout the zone between said planes.

2. A spring for a spring bearing, comprising a metal sheet, spring fingers projecting from said sheet, said fingers being attached to the sheet at one side of the center of the sheet and extending beyond and having their points of contact on the opposite side of the center of said sheet.



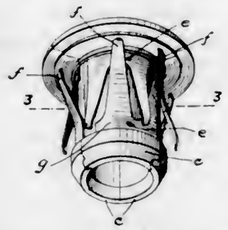
3. A spring for a spring bearing comprising a metal sheet, sets of spring fingers projecting from said sheet, each set of spring fingers being attached to the sheet at one side of the center of the sheet, and the sets with respect to each other on opposite sides of the center, each set of fingers extending and having their points of contact beyond the center of the sheet and on opposite sides of the center with respect to each other.

4. A spring for a spring bearing, consisting of spring fingers, each having a supporting connection at one end only, and extending alternately upward and downward from points of connection respectively below and above a horizontal plane intersecting all the fingers, the points of contact of the upwardly extending fingers being above the points of contact of the downwardly extending fingers.

5. A spring for a spring bearing, comprising a metal sheet and having a solid portion at the top and a solid portion at the bottom extending the length of the spring, spring fingers between said solid portions, said spring fingers extending alternately from the upper solid portion toward the lower solid portion and from the lower solid portion toward the upper solid portion, the contacts of each set of fingers being beyond the center of the bearing and in alinement, and the contacts of the two sets with respect to each other being on opposite sides of the center of the street.

[Claims 6 to 8 not printed in the Gazette.]

1,107,691. SPRING-BEARING. THEODORE H. MILLER, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed June 29, 1911. Serial No. 635,992. (Cl. 64—48.)



1. A spring bearing comprising a surrounding casing, an inner bearing having two sets of similarly arranged pins projecting out from its periphery respectively near its upper and lower ends, and two separate sets of interchangeable fingers, each set of fingers composed of a plurality of separate groups of fingers and each group of fingers being composed of a plurality of fingers united together at one end and provided at that end with an orifice adapted to engage one of said pins, the opposite free end portions of the fingers adapted to engage the casing.

2. A spring bearing comprising an inner bearing and an outer bearing one of which has at its upper end a downwardly extending undercut groove and a plurality of pins projecting from the periphery below the groove and at its lower end a similar upwardly extending undercut groove and a similar arrangement of pins above the last named groove, and two separate sets of spring fingers, each set composed of independent interchangeable groups of spring fingers having orifices near one end, one set of which fingers extends within the upper groove and registers through its orifices with the upper pins and contacts with the lower part of the other bearing, while the other set extends within the lower grooves and registers through its orifices with the lower pins and contacts with the upper part of the other bearing.

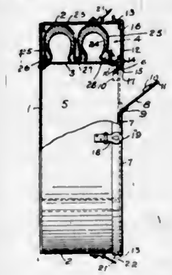
3. A spring bearing comprising an inner bearing, an outer bearing, one of said bearings having similar upper and lower spring engaging means, two sets of springs each of which sets is composed of a plurality of separate spring finger units each of which is composed of a plurality of fingers united at one end and adapted at that end for independently detachable engagement with any of said spring engaging means, one set of spring finger units being engaged with the upper spring engaging means while the other set is engaged with the lower spring engaging means, the unsecured free end portions of the units of each set engaging the other bearing at approximately the level of the secured ends of the units of the other set.

4. A spring bearing comprising a bearing formed in sections each of which is provided with upper and lower spring engaging means, two sets of springs each of which sets is composed of a plurality of separate spring finger units, each of which is composed of a plurality of fingers united together at one end, each of said units conforming at its finger-uniting end to one of the bearing sections and engaging one of the spring engaging means thereof and at its opposite free end portions being spaced from such bearing sections approximately opposite the other spring engaging means thereof.

5. A spring bearing comprising a bearing in sections, spring fingers in groups, the connecting metal of said fingers in each group conforming to the length of a section of the bearing, each section of the bearing having top and bottom an under cut groove adapted to the connecting metal.

[Claims 6 to 12 not printed in the Gazette.]

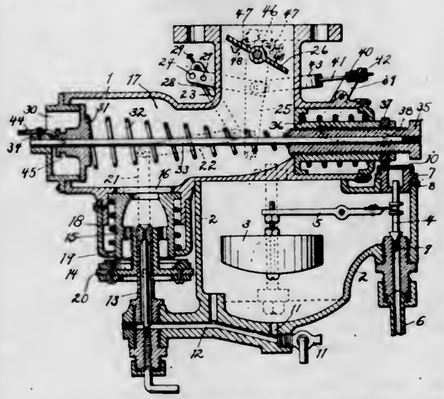
1,107,692. TIRE-TRUNK. DENMAN D. MINEHART, Los Angeles, Cal., assignor of one-half to Emil L. Kornfeld, Los Angeles, Cal. Filed Oct. 24, 1912. Serial No. 727,607. (Cl. 190—20.)



1. A kit for automobiles consisting of a structure including in combination an annular tire chamber or receptacle formed by suitably spaced concentric walls with a wall joining their edges at the rear side of the kit, a central receptacle within the inner of said circular walls also closed at its rear side by a wall, an annular flange provided around the inner periphery of said inner circular wall at its front, a centrally open ring-like cover for the annular tire receptacle alone, said ring-like cover provided with concentric flanges to engage said circular walls, a front wall closing a segmental part of the front side of said central receptacle and supported on one part of said annular flange, and a door hinged to said front wall and adapted to close the remaining segmental part of the circular front side of said central receptacle, the free end of said door in closed position being adapted to rest on the part of said annular flange not utilized by the front wall, each of said covers being operative to open and close its receptacle independently of the other while the other is closed.

2. In a tire trunk the combination of a casing having an inner circular compartment and an outer annular compartment adapted to receive two tires, and means within said annular compartment for securing said tires in place and out of contact with one another, said means comprising loops fastened in said annular compartment substantially in the middle of its inner faces, and straps fastened at one end to the rear of the annular compartment and adapted to be passed over one tire, then through one of said loops and then over the second tire and fastened again at the front end of said annular compartment, and means for closing said compartment.

1,107,693. CARBURETER. LOUIS G. MOLINA, Chicago, Ill., assignor of one-half to Elias L. Windom, Chicago, Ill. Filed Dec. 9, 1912. Serial No. 735,800. (Cl. 48—155.2.)



1. A carbureter comprising a casing and suitable means for supplying fuel thereto, there being an air inlet opening in said casing and a throttle valve controlling the passage of gases therefrom; a spring held sleeve surrounding said opening; a head adjustably mounted on said sleeve and coöperating with the outer end thereof; a fuel nozzle extending through said head and into said sleeve; and an operative connection between said sleeve and said bottle valve, substantially as described.

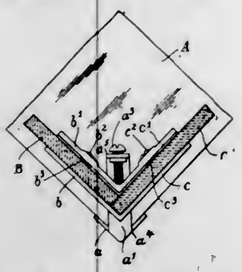
2. A carbureter comprising a casing, there being an air inlet opening in said casing and a throttle valve controlling the passage of gases therefrom; a spring held sleeve surrounding said opening; a head adjustably mounted on said sleeve and coöperating with the outer end thereof; a fuel supply nozzle extending loosely through said head; and an operative connection between said sleeve and said throttle valve, substantially as described.

3. A carbureter comprising a casing, there being an air inlet opening in said casing and a throttle valve controlling the passage of gases therefrom; a stationary sleeve communicating at its upper end with said air opening; a spring pressed sleeve slidably mounted in said stationary sleeve; a stem having a fuel nozzle at its top and extending into said spring pressed sleeve; a head slidably mounted on said stem, adjustably connected with said spring pressed sleeve and adapted to coöperate with the lower end of said stationary sleeve to control the admission of air to said opening; and an operative connection between said head and said throttle valve, substantially as described.

4. A carbureter comprising a casing, there being an air inlet opening in said casing and a throttle valve controlling the passage of gases therefrom; a sleeve communicating at its upper end with said air opening and slidably mounted in said casing; a stem having a fuel nozzle at its upper end extending into said sleeve; a head slid-

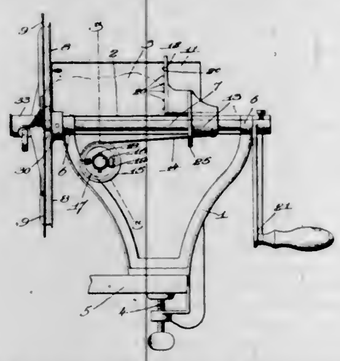
ably mounted on said stem, connected with said sleeve and coöperating with the portion of said casing around said air opening to regulate the passage of air to the latter; and an operative connection between said head and said throttle valve, substantially as described.

1,107,694. SHOW-CASE CORNER. DE WITT C. MORRIS, New York, N. Y., assignor to Francis Keil & Son, New York, N. Y. Filed Aug. 24, 1911. Serial No. 645,883. (Cl. 211—25.)



In a device of the class described, a corner member having a central body portion and a channel formed by parallel depending flanges to receive the side abutting plates, interiorly located cushioned devices to lie between the inner flanges and the side plates, in combination with another corner member the top of which covers the top plate and the lower part thereof is flush with the top face of the first member, and adjustable means located at the interior corner of the show case to engage both of the said members whereby, by one operation alone thereof, the cushioning devices may be forced with an outward pressure against the side plates, and the top plate may be held to the side plates with an inward pressure, the three plates being thereby securely fastened together without unduly straining the same, the pressure being distributed along the edges of the plates in lieu of being localized.

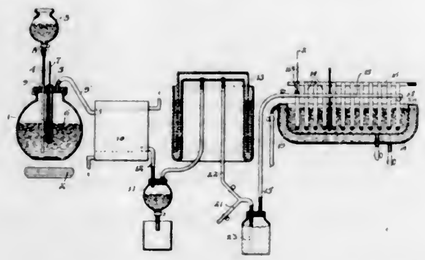
1,107,695. FRUIT AND VEGETABLE SLICER. FRED G. MOWER, Antrim, N. H., assignor to Goodell Company, Antrim, N. H., a Corporation of New Hampshire. Filed May 4, 1911. Serial No. 624,906. (Cl. 146—11.)



1. In a fruit and vegetable slicer, the combination with a frame having a table to support the article to be sliced, of a shaft journaled in the frame and extending longitudinally of the table, a rotary slicer sustained by the shaft at the end of the table, and a spring-pressed follower slidably mounted on the shaft and also adapted to turn thereabout, said frame having a notch, a finger on the follower adapted to enter said notch when the follower is turned about the shaft away from the table, said notch being situated to lock the follower in its retracted position.

2. In a fruit and vegetable slicer, the combination with a frame having a table to support the article to be sliced and provided with a flange depending from the table, of a shaft journaled in the frame adjacent to said flange, a rotary slicer sustained by the shaft at the end of the table, a spring-pressed follower slidably mounted on the shaft and also adapted to turn thereabout, said flange having a notch and a finger rigid with the follower and adapted to enter said notch when the follower is turned about its shaft away from the table, said notch being situated to lock the follower in its retracted position.

1,107,696. PROCESS OF MANUFACTURING ETHANE. SAMUEL P. MULLIKEN, Newburyport, Mass., and HUGH K. MOORE, Berlin, N. H.; said Mulliken assignor to said Moore. Filed Dec. 8, 1910. Serial No. 596,270. (Cl. 23—24.)



1. The herein described method of changing an endothermic compound to an exothermic compound, which consists in subjecting the endothermic compound in the presence of a reducing agent to catalytic action and simultaneously refrigerating the product to abstract the heat liberated by the reaction.

2. The herein described method of producing an exothermic gas from an endothermic gas, which consists in reducing the endothermic gas in the presence of a catalyzer and simultaneously refrigerating the product to abstract heat liberated by the reaction.

3. The herein described process of producing an exothermic hydrocarbon gas from an endothermic hydrocarbon gas, which consists in reducing the endothermic gas by hydrogen in the presence of a catalyzer, and simultaneously refrigerating the catalyzer and the products.

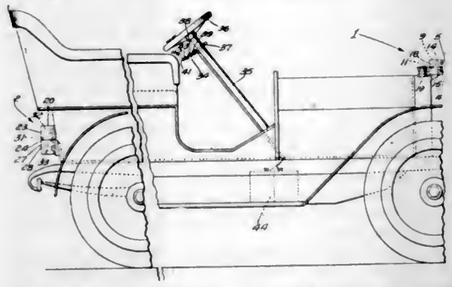
4. The herein described process which consists in reducing an unsaturated hydrocarbon gas by hydrogen in the presence of a catalyzer, regulating the flow of gases to provide the proper amounts required for the reaction, and simultaneously refrigerating the catalyzer and the product.

5. The herein described process of making ethane, which consists in reducing ethylene by hydrocarbon in the presence of a catalyzer, and refrigerating the catalyzer to abstract heat liberated by the reaction.

[Claims 6 and 7 not printed in the Gazette.]

1,107,697. SIGNAL SYSTEM. EARNEST EARL MULLVAIN, Los Angeles, Cal. Filed Aug. 27, 1912. Serial No. 717,379. (Cl. 240—7.)

1. In combination, a conveyance, signaling means located near the forward end of the conveyance, said signaling means being visible from in front of said conveyance; second signaling means located near the rear of the conveyance, said second signaling means being visible from behind said conveyance; a casing having opaque sides for the forward signaling means, electric lights for illuminating the first and second said signaling means, the electric lights for the first said signaling means being located within said opaque casing, pilot lights in series circuit with the electric lights for the second said signaling means, said pilot lights also being located within said opaque casing, and said opaque casing having apertures adjacent the inclosed electric lights and said pilot lights, said apertures opening toward the rear of the conveyance.



2. In combination a conveyance, signaling means located near the rear end of the conveyance, said signaling means being visible from behind said conveyance, electric lights for illuminating the signaling means, a pilot light in series circuit with the electric light of each signaling means to indicate to the driver that the proper signal is displayed, a casing having opaque sides located near the forward end of the conveyance, said pilot lights being located in said casing, and apertures in said casing adjacent the inclosed pilot lights, said apertures opening toward the rear of the conveyance.

3. In combination, a conveyance, signaling means located near the forward end of the conveyance, said signaling means being visible from in front of said conveyance, second signaling means located near the rear of the conveyance, said second signaling means being visible from behind said conveyance; a casing for the forward signaling means, electric lights for illuminating the first and second said signaling means, the electric lights for the first said signaling means being located within said casing, and pilot lights in series circuit with the electric lights for the second said signaling means, said pilot lights also being located within said casing and being visible from behind said casing.

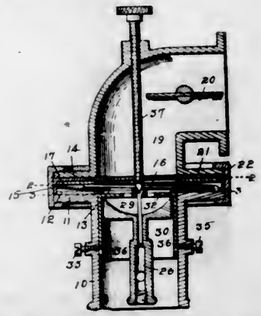
4. In combination, a conveyance, signaling means located near the forward end of the conveyance, said signaling means being visible from in front of said conveyance; second signaling means located near the rear of the conveyance, said second signaling means being visible from behind said conveyance, a casing having opaque sides for the forward signaling means, electric lights for illuminating the first and second said signaling means, the electric lights for the first said signaling means being located within said casing, the electric lights for the first said signaling means being in series circuit with the electric lights for the second said signaling means, and said opaque casing having apertures adjacent the inclosed electric lights, said apertures opening toward the rear of the conveyance.

1,107,698. CARBURETER. RAYMOND P. NORTON, Marshalltown, Iowa. Filed July 19, 1913. Serial No. 780,407. (Cl. 48—155.1.)

1. In a device of the class described, a shell, a mixing chamber above said shell, an iris valve at the lower end of said mixing chamber, a fuel feed nozzle adjacent to said valve having at its upper end an elongated slot, adjustable plates beneath said valve and extending over the outer ends of said slot.

2. In a device of the class described, a carbureter shell, an iris valve therein, a fuel feed nozzle adjacent to said valve having in its upper surface an elongated slot, plates below said valve extending over the outer ends of said slot, and means for vertically adjusting said plates.

3. In a device of the class described, a carbureter shell, an iris valve therein, a fuel feed nozzle adjacent to said valve having in its upper surface an elongated slot, a cylinder in said shell below said valve provided with opposite inwardly extending plates above said slot not extending to the center thereof, and means for vertically adjusting said cylinder.

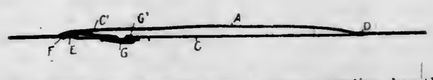


4. In a device of the class described, a carbureter shell, an iris valve therein, a fuel feed nozzle adjacent to said valve having in its upper surface an elongated slot, a cylinder in said shell below said valve provided with opposite inwardly extending plates above said slot not extending to the center thereof, said cylinder being provided with yielding means for holding it at its lower position of movement and means for moving said cylinder upward.

5. In a device of the class described, a carbureter shell, a fuel feed nozzle therein having at its upper end an elongated slot, a fuel intake tube communicating with said slot, adjustable plates above the outer ends of said slot.

[Claims 6 to 9 not printed in the Gazette.]

1,107,699. ADJUSTMENT DEVICE. DOMINICK O'DONNELL, New York, N. Y. Filed May 2, 1913. Serial No. 765,018. (Cl. 24—198.)

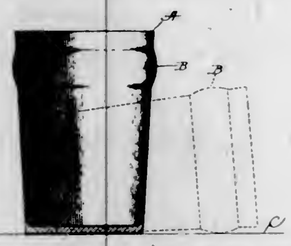


In combination, a waistband, a tape extending lengthwise of the said waistband and secured at one end to the waistband, the other end of the tape having a doubled-up portion forming a loop, an eye attached to the waistband a distance from the fixed end of the tape, the said distance being less than the length of the tape, and a slide made of a single piece of metal fashioned to form a rectangular frame provided with two spaced cross bars intermediate the end bars of the frame and spaced therefrom to form end openings with the said end bars, the said cross bars being spaced apart to form a middle opening between the same and one of the cross bars forming an attaching bar for the terminal of the doubled-up portion of the tape, the latter passing through the said end openings and overlying the said cross bars at the front thereof, the said attaching cross bar being toward the fixed end of the tape, the doubled-up portion of the tape passing through the middle opening from the back of the slide and extending over the front of the said attaching cross bar between said bar and the tape and through the end opening adjacent thereto, the terminal of the doubled-up portion being secured to the back of the said cross bar.

1,107,700. DRINKING-GLASS. HUGO PICK, Chicago, Ill. Filed Jan. 6, 1913. Serial No. 740,446. (Cl. 65—13.)

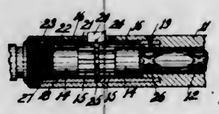
As an article of manufacture, a drinking glass having a suitable wall projecting upwardly from a base portion and terminating in an integral fragile rim of the same general contour and constituting a continuation of said wall, the wall being formed with a shallow bulge arranged below the rim to leave the usual mouth-engaging portion, but contiguous thereto, and projecting beyond the normal plane of the wall, the bulge being of relatively narrow width

and being curved outwardly to present concavo-convex portions terminating in opposite directions vertically in gradual, reverse curvatures, merging into adjoining portions of the wall above and below the bulge to present uninterrupted smooth exterior and interior surfaces de-



void of sharp lines or angles, and said bulge being arranged with reference to the mouth of the glass to insure separation of its fragile rim from similar rims of other glasses when grasped in group, to preserve said rim against fracture, substantially as described.

1,107,701. SPIRAL TOOL-DRIVER. GROVER PLEIN, Racine, Wis. Filed Jan. 24, 1910. Serial No. 539,635. (Cl. 145—54.)



1. A screw driver, comprising a tubular handle forming a screw driver casing, a spindle mounted to slide in and out of the casing, a bit carried by the spindle, a pair of nuts having right and left thread engagements with the spindle, dogs for rendering one or the other of the nuts effective to produce the turning of the spindle by preventing the turning of the nut in one direction, and a locking means independent of the dogs adapted in any position of the spindle to engage both nuts and prevent their turning in either direction, whereby the movements of the spindle may be prevented.

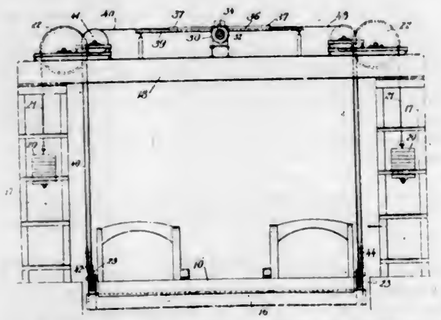
2. A screw driver, comprising a tubular handle forming a screw driver casing, a spindle mounted in the casing to move in and out thereof, a pair of ratchet toothed nuts contained within the casing and having respectively right and let thread engagements with the spindle, spring actuated dogs forming ratchet engagements with the ratchet teeth of the nuts for locking either of the nuts against turning in one direction and permitting it to turn in the other direction, the turning direction of one nut when under ratchet engagement being opposite from the turning direction of the other nut when under ratchet engagement, and a stop independent of the dogs mounted in the casing and adapted in any position of the spindle to be moved into engagement with the ratchet teeth of both nuts for preventing their turning in either direction and thereby locking the spindle against movement.

3. A screw driver, comprising a tubular handle forming a screw driver casing, a spindle mounted in the casing to move in and out thereof, a pair of ratchet toothed nuts contained within the casing and having respectively right and left thread engagements with the spindle, spring actuated dogs forming ratchet engagements with the ratchet teeth of the nuts for locking them against turning on the movement of the spindle into the casing, a spring retracted stop within the casing independent of the dogs and adapted in any position of the spindle to engage the ratchet teeth of both nuts for preventing their turning, said casing being provided with a slot, and a slide mounted to move in the slot and adapted to engage the stop for forcing it into engagement with the ratchet teeth of the nuts.

4. A screw driver, comprising a tubular handle forming a screw driver casing, a sleeve fitting in the casing, a spindle mounted in the casing to move in and out thereof and surrounded by the sleeve, a pair of ratchet toothed nuts contained within the sleeve and having respectively right and left thread engagements with the spindle, dogs having trunnion bearings on the sleeve and working through a slot thereof to engage the teeth of the nuts to form ratchets therewith, a spring slide movable in a slot of the casing and bearing on the dogs for holding one or the other thereof in engagement with the ratchet teeth, a spring stop independent of the dogs having cross pieces at its ends seated on the sleeve and working through a slot thereof to engage the ratchet teeth of both nuts in any position of the spindle, and a slide working in a slot of the casing and engaging the stop to force it into locking engagement with the ratchet teeth of the nuts.

5. A screw driver, comprising a tubular handle forming a screw driver casing, a sleeve fitting within the casing, a spindle mounted in the casing to move in and out thereof and surrounded by the sleeve, a pair of ratchet toothed nuts contained within the casing and having respectively right and left thread engagements with the spindle, said casing having a cut-away portion at its end, a plate to fit in said cut-away portion of the casing, said sleeve being provided with slots, dogs having trunnion bearings at the ends of one slot of the sleeve and working through said slot to engage the ratchet teeth of the nuts, there being a notched slot formed partly in the casing and partly in the plate, a spring slide movable in said notched slot and bearing on the dogs to force one or the other thereof into engagement with the ratchet teeth of the nuts, lugs on the slide engaging notches of the notched slot, a spring stop independent of the dogs having cross pieces at its ends seated on the sleeve at the ends of another slot thereof and working through said slot to engage the ratchet teeth of both nuts in any position of the spindle, there being an undercut slot formed partly in the casing and partly in the plate, and a slide grooved to fit in said undercut slot and engaging the stop to force it into engagement with the ratchet teeth of the nuts.

1,107,702. FERRY-LANDING APPARATUS. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y., a Corporation of New York. Filed July 20, 1912. Serial No. 710,591. (Cl. 14—71.)



1. Hoisting apparatus for a ferry landing having a vertically movable element, a transverse horizontal supporting member above said element, a pair of horizontally disposed parallel screws thereon, means for preventing rotation of the screws, nuts on said screws, motor driven gearing for simultaneously rotating said nuts to thereby cause said screws to move longitudinally in opposite directions, flexible hoisting connections interposed between unlike ends of said screws and the movable element of the landing, and direction sheaves over which said flexible connections run.

2. In a hoist for a ferry landing, a vertically movable element, a transverse horizontal supporting member above said element, a pair of horizontally disposed parallel screws thereon, means for preventing rotation of the screws, nuts on said screws, a motor, gearing between said motor and nuts whereby the nuts may be rotated simultaneously to thereby cause said screws to move longitudinally in opposite directions, flexible hoisting connections interposed between unlike ends of said screws and the movable element of the landing, and direction sheaves on said supporting member over which said flexible connections run.

3. In a hoist for a ferry landing, a vertically movable element, a transverse horizontal supporting member above said element, a pair of horizontally disposed parallel screws thereon, guide members affixed to the screws arranged to prevent their rotating but to allow them to move longitudinally, nuts on said screws in alinement with each other, the peripheries of said nuts forming worm wheels, a motor, worms driven thereby in mesh with said worm wheels arranged to rotate said nuts simultaneously to thereby cause the screws to move longitudinally in opposite directions, flexible hoisting connections interposed between unlike ends of said screws and the movable element, and direction sheaves upon said supporting member over which said flexible connections run.

4. In a ferry landing, the combination with a bridge having a horizontal hinge-like support at its shore end, a transverse horizontal supporting member above the free end of said bridge, a motor on said supporting member, right and left-hand worms driven thereby, worm wheels in mesh therewith, said worm wheels being internally-threaded, a pair of horizontal screws adjacent each other on which said worm wheels are mounted, hoisting connections between unlike ends of said screws and the free end of said bridge, and direction sheaves over which said connections run.

5. Hoisting apparatus for a ferry landing bridge having a horizontal hinge-like support at its shore end, comprising a transverse horizontal supporting member above the free end of the bridge, a pair of horizontally disposed parallel screws thereon, guide members affixed to said screws arranged to prevent their rotating but to allow them to move longitudinally, nuts on the screws in alinement with each other, the peripheries of said nuts being constructed to form worm wheels, a motor, worms driven thereby in mesh with said worm wheels whereby the nuts may be rotated simultaneously to thereby cause the screws to move longitudinally in opposite directions, flexible hoisting connections secured to the free end of the bridge, direction sheaves on said supporting member over which said connections run, and means for manually controlling the motor.

1,107,703. COMPOSITION OF MATTER AND PROCESS OF PRODUCING THE SAME. LAWRENCE VINCENT REDMAN, Lawrence, Kans., assignor, by mesne assignments, to Amberoid Chemical Products Company, Chicago, Ill., a Corporation of West Virginia. Filed Feb. 17, 1911. Serial No. 609,168. (Cl. 106—22.)

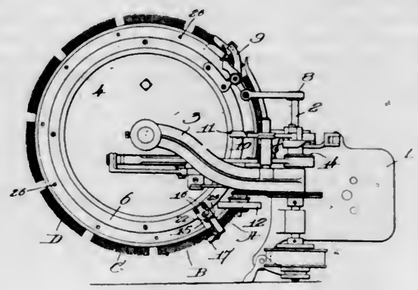
1. The process of producing a phenolic condensation product, which consists in compounding a phenolic body, hexamethylenetetramin and in initial-product solvent which acts also as a controlling agent, and subjecting the same, after compounding, to the action of heat and driving off ammonia.

2. The process of producing a phenolic condensation product, which consists in compounding a phenolic body, hexamethylenetetramin and an initial-product solvent which acts also as a controlling agent, said hexamethylenetetramin and said phenolic body being used in the proportions of one reacting weight of hexamethylenetetramin to more than five molecular weights of said phenolic body, subjecting the same, after compounding, to the action of heat at comparatively moderate temperature for predetermined period of time, and afterward subjecting the initial product to a higher temperature under pressure for a predetermined period of time.

3. The process of producting a phenolic condensation product which consists in dissolving carbolic acid in a comparatively small quantity of glycerin, mixing therewith hexamethylenetetramin, the materials being employed in the proportions of more than five molecular weights of carbolic acid to one of hexamethylenetetramin, adding to the mixture an initial-product solvent which acts also as a controlling agent, and subjecting the mixture to the action of heat for a period of time.

4. The process of producing a phenolic condensation product, which consists in compounding a phenolic body, hexamethylenetetramin and an initial-product solvent which acts also as a controlling agent, these substances being compounded substantially in the absence of water, and subjecting the mixture in such condition to the action of heat and thereby driving off ammonia.

1,107,704. MACHINE FOR SEWING LOOPED FABRICS. WILLIAM RIECK and EDISON E. RANDALL, Kankakee, Ill., assignors to Paramount Knitting Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1910. Serial No. 568,445. (Cl. 112—19.)



1. A machine for sewing looped fabrics comprising a ring support, a ring rotarily mounted thereon, groups of impaling pins arranged in an endless series on said ring with fixed spaces between said groups, a cutter lever carrying a cutting knife and pivoted to said support to allow the cutter to swing downwardly into said spaces, a spring to depress the cutter lever, a bar connected to said cutter lever to hold the same elevated when the end of the bar rests upon the surface of the ring, depressions in the ring coördinated with the spaces, and means for intermittently rotating the ring whereby when the middle of each space comes opposite the cutter knife the bar will drop into the corresponding depression allowing the actuation of the cutter to sever the thread extending across the space.

2. A machine for sewing looped fabrics comprising a ring support, a ring rotarily mounted thereon, groups of impaling pins projecting radially of said ring and arranged with wide spaces between said groups, cutting mechanism comprising a fixed member mounted on the ring support and projecting beneath the impaling pins and a movable member mounted on the support and projecting over the impaling pins, means for intermittently rotating the ring to bring the spaces successively opposite the cutting mechanism, and means for thereupon actuating the movable member of the cutting mechanism to sheer the thread extending across the space.

3. A machine for sewing looped fabrics comprising a ring support, cutting mechanism mounted thereon, a ring rotarily mounted thereon, impaling pins arranged on said ring, means automatically actuated independent of the sewing mechanism upon the presentation of a space between successive stockings opposite said cutting mechanism to actuate the cutting mechanism to sever the thread extending across the space.

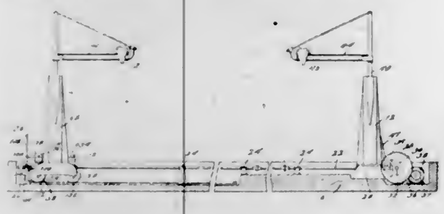
1,107,705. WEEDING DEVICE. JAMES B. RUDDY, Medina, Wash. Filed Sept. 3, 1913. Serial No. 787,863. (Cl. 55—65.)



1. In an article of the class described, the combination with a handle and shank, of a pair of toes integral with the said shank and which are turned at an angle with respect thereto and a combined fulcrum and limit stop and foot receiving means upon the said shank and at the approximate apex of the angle formed by the said toes and the said shank.

2. In an article of the class described, the combination with a handle portion and a shank, of a pair of toes cast integrally with the said shank and at such an angle with respect to the said handle as to permit the upper end of the handle to be in the approximate horizontal plane of the operator's hands when the said toes are thrust vertically into the earth, and the cross bar upon the said shank and at about the junction of the said toes with the said shank.

1,107,706. SCREW-JACK LOCOMOTIVE-HOIST. FRED A. RUNDLE, Harvey, Ill., assignor to Whiting Foundry Equipment Company, Harvey, Ill., a Corporation of Illinois. Filed Dec. 11, 1911. Serial No. 665,082. (Cl. 104—64.)



1. In a device of the class described, a truck, mechanism for lifting a locomotive, carried by the truck, mechanism adapted to move the truck transversely to the direction of lifting, a source of power always rotating about one fixed axle capable of being used for either of said mechanisms, and means under the control of the operator adapted to selectively connect said power to either the lifting mechanisms or the truck moving mechanisms.

2. In a device of the class described, a truck, mechanism for lifting a locomotive, carried by the truck, mechanism adapted to move the truck transversely to the direction of lifting, a source of power always rotatable about one fixed axis capable of being used for either of said mechanisms, means under the control of the operator adapted to selectively connect said source of power to either the lifting mechanism or the truck mechanism, and means preventing the simultaneous operation of both said mechanisms.

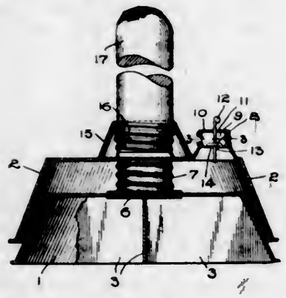
3. In a screw jack locomotive hoist, a truck adapted to move in one direction, lifting mechanism carried by said truck adapted to engage and lift a locomotive at right angles to the first movement, a source of power, a lever mounted on the truck adapted to be moved by an operator, and two clutches controlled by the lever, one connecting the source of power to the truck moving mechanism, the other connecting it to the lifting mechanism, the whole so arranged that the operator may by moving the lever throw in either clutch, the other remaining disconnected, for the purposes set forth.

4. In a screw jack locomotive hoist, a power driven shaft, a truck adapted to travel along said shaft, a detachable clutch mechanism adapted to connect said shaft to said truck to move it along a track provided for the purpose, a locomotive lifting mechanism carried by said truck, a detachable clutch connecting said shaft to said lifting mechanism to operate the same, and a controlling device carried by the truck adapted to, at the will of the operator, selectively throw either one of said clutches into operation while causing the other clutch to remain disconnected, for the purposes set forth.

5. In combination with a railroad track, lifting devices spaced apart along the track, a common driving mechanism adapted to operate said lifting devices and means operable by said common driving mechanism adapted to propel one of said lifting mechanisms toward the other.

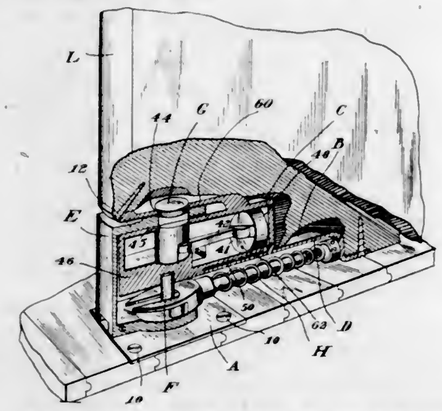
[Claims 6 to 11 not printed in the Gazette.]

1,107,707. CLOTHES-POUNDER. PHILIPP A. RUPPELT, Steamboat Rock, Iowa. Filed Sept. 23, 1913. Serial No. 791,263. (Cl. 68—5.)



A clothes pounder comprising a lower cup, an upper cup inclosing the upper portion of the lower cup and spaced from the top thereof, webs extending longitudinally of the lower cup and spacing the walls of the cups apart, said lower cup having a plurality of openings in its top and said upper cup having a single valved opening in its top, substantially as described.

1,107,708. SPRING-HINGE. CHARLES EDWARD SANTO, London, Ontario, Canada. Filed Feb. 20, 1914. Serial No. 820,013. (Cl. 16—88.)



1. A door check and closer comprising a casing mounted on the door, a check and spring return mechanism carried by the casing, a floor plate, a check pin supported from the floor plate, and operatively connected to the check, means extending from the floor plate to the spring return mechanism whereby the latter is operated.

2. A door check and closer comprising a casing mounted on the door, a check and spring return mechanism carried by the casing, a floor plate, means on the floor plate for operating the check and spring return mechanism, said means comprising a supporting member having a check pin at its upper end and means connecting with the spring return mechanism at its lower end.

3. In a door check and closer, a casing adapted to be secured to the door, a flange formed on the top of said casing and extending parallel thereto and forming a pocket, alined openings in the flange and the top of said casing, a check within said casing, a check pin operatively connected to said check and extending through said alined openings, a floor plate, a hinge pin on said floor plate adapted to pivotally engage said casing, a supporting member mounted on said floor plate and extending upwardly therefrom, a plate extending at right angles therefrom adapted to enter the pocket between said flange and top of the casing and engage said check pin as and for the purpose specified.

4. A door check and closer comprising a casing secured to the door, a check carried thereby, a spring plunger mounted on said casing, a floor plate having a hinge pin engaging said casing, a supporting member connected to the floor plate and extending to the top of the casing, a check pin connected to the supporting member extending downwardly into the casing and connected to said check and means carried by the supporting member for operating said spring plunger.

5. A door check and closer comprising a floor plate having a hinge pin secured thereto, a supporting member comprising a bottom member mounted on said floor plate, a vertical member, and a top member extending from the said vertical member and substantially parallel to the bottom member, a casing, a check therein consisting of a cylinder, a piston operating in the said cylinder, said casing being pivotally mounted on said hinge pin and adapted to rotate in a horizontal plane.

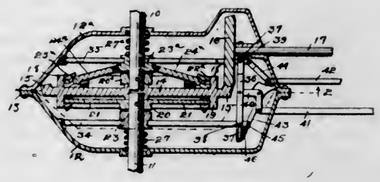
[Claims 6 to 9 not printed in the Gazette.]

1,107,709. COLLAR-FASTENER. ALBERT SCHEIBLE, Chicago, Ill. Filed June 10, 1912. Serial No. 702,880. (Cl. 24—101.)



A collar fastener formed from a single piece of sheet metal or the like and comprising a back wider than the button hole of the neck band of a shirt, and adapted to be disposed within the neck band, a shank joined at one end to the said back and extending at a slight upward incline therefrom, and adapted to pass through the substantially alined button-holes in the neck band and collar, said shank terminating at its other end in a downwardly-extending tongue, the juncture of said tongue and shank effecting a sharp acute angled bend, the lower end portion of said tongue converging toward the plane of said back, the upward incline of the shank adapted to cause the collar to slide toward the neck band upon downward motion of the collar relatively to the latter and to cause the collar to slide away from the neck band upon upward motion of the collar with relation thereto, the incline of said shank co-acting with the converging tongue and adapted to cause the tongue to bear against the button-holed portion of the collar at some distance below the button-hole thereof to resist sliding of the collar away from the neck band before the button-holed portion of the collar reaches the juncture of the tongue and shank.

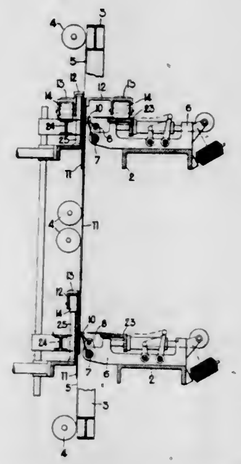
1,107,710. CLUTCH. HANS SCHLICHT, Walnut, Iowa. Filed Mar. 17, 1913. Serial No. 755,023. (Cl. 21—90.)



1. In a device of the class described, a support, shaft members mounted thereon in alinement with each other, a wheel loosely mounted on the adjacent ends of said shaft members, means for operating said wheel, oppositely extending annular flanges on said wheel, friction shoes carried by each of said shaft members and designed to coact with the respective flanges thereon, means for throwing the friction shoes into or out of engagement with either of said flanges, and means for throwing said frictional shoe simultaneously out of engagement with said flanges.

2. In a device of the class described, a shaft, a wheel thereon, said wheel being provided with an annular flange, friction shoes carried by said shaft, means for moving said friction shoes into or out of engagement with said flange, each of said shoes comprising a body designed to engage and coact with said flange, said body being provided with a longitudinal slot, a shoe member within said slot pivotally mounted at one end of said shoe, and yielding means for holding the free end of said shoe member at the outward limit of its movement.

1,107,711. THREAD-CUTTING MECHANISM FOR EMBROIDERING-MACHINES. MORRIS SCHOENFELD, Rorschach, Switzerland. Filed Feb. 18, 1913. Serial No. 749,162. (Cl. 112—7.)



1. In embroidering machines, the combination of a fabric frame, means for producing several horizontal rows of embroidery patterns upon the material of said fabric frame, a cutting implement extending down over all said embroidery rows and having cutting parts at the height of each of the embroidery rows of the fabric, and means for allowing relative movement between said cutting implement and the fabric frame across all the embroidery rows so as to cause said implement to simultaneously cut the connecting threads in all said embroidery rows, substantially as described.

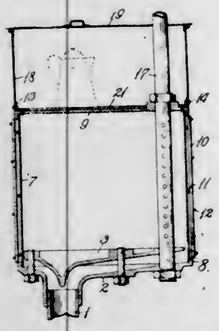
2. In embroidering machines, the combination of a fabric frame, means for producing several horizontal rows of embroidery patterns upon the material of said fabric frame, a roller guided cutting implement arranged to simultaneously reach all said embroidery rows and having cutting parts at the heights of each of said embroidery rows of the fabric, means on the machine frame for guiding said cutting implement, extending from one side of the machine to the other, and means for allowing the cutting implement to be moved across the fabric frame from one side to the other, so as to cause it to simultaneously cut the connecting threads in all said embroidery rows, substantially as described.

3. In embroidering machines, the combination of a fabric frame, means for producing several rows of embroidery patterns upon the material of said fabric frame, movable carriers in front and in back of the fabric frame, said carriers being provided with dependent blades arranged to reach the different embroidery rows of the fabric, guide parts for said carriers and means for allowing them to be moved past the fabric frame so as to cause their blades to cut the connecting threads in all said embroidery rows by a single traveling movement of the carriers, substantially as described.

4. In embroidering machines, the combination of a fabric frame, means for producing several rows of embroidery patterns upon the material of said fabric frame, roller guided carriers in front and in back of the fabric frame, said carriers being provided with dependent blades arranged to reach the different embroidery rows of the fabric, guide parts for said carriers and means for allowing them to be moved past the fabric frame so as to cause their blades to cut the connecting threads in all said embroidery rows by a single traveling movement of the carriers, substantially as described.

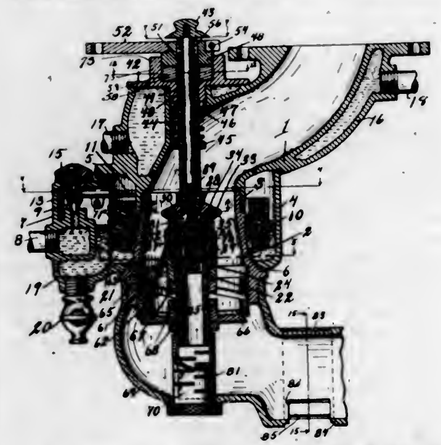
5. In embroidering machines, the combination of a fabric frame, means for producing several horizontal rows of embroidery patterns upon the material of said fabric frame, a cutting implement arranged to simultaneously reach all said embroidery rows and having cutting parts at the height of each of said embroidery rows, means for holding said cutting implement in a position of rest at one side of the machine and means for allowing it to be moved out of its position of rest across the fabric frame from one side to the other so as to cause it to simultaneously cut the connecting threads in all said embroidery rows, substantially as described.

1,107,712. STOVE. WILLIAM E. SCRIPPS, Detroit, Mich. Filed Feb. 17, 1913. Serial No. 748,838. (Cl. 126—20.)



The combination with a muffler drum having an exhaust pipe protruding therefrom adjacent a side wall of said drum, of an oven upon said drum around said exhaust pipe and having a large compartment therein at an end opposite said pipe, a cover on said oven around said exhaust pipe, and a detachable slide carried by said cover and engaging said exhaust pipe to permit of said cover being removed.

1,107,713. CARBURETER. WILLIAM SHAKESPEARE, Jr., and WILLIAM SCHMID, Kalamazoo, Mich., assignors to William Shakespeare, Jr., Company, Kalamazoo, Mich. Filed Mar. 28, 1912. Serial No. 686,834. (Cl. 48—155.1.)



1. In a carbureter, the combination with the body, of a carbureting chamber member; a mixing chamber in said body into which said carbureting chamber delivers; an inlet member having an air inlet passage and a fuel inlet passage therein and provided with a nipple at its upper end having a tapered fuel nozzle projecting into said carbureting chamber and a plurality of air discharge passages grouped about said fuel nozzle, the bottom of the carbureting chamber member coacting with the fuel nozzle and constituting an air valve, said carbureting chamber member being provided with a sleeve rotatably engaging said nipple; a rotatably mounted tubular actuating member for said carbureting chamber member; a needle valve arranged longitudinally through said actuating member and threaded for adjustment therein to coact with said fuel nozzle; a cam on said inlet member; a coacting cam on said carbureting chamber member whereby rotative movement of said actuating member moves the carbureting chamber member longitudinally; a cylindrical throttle valve having upwardly propecting arms thereon and helically disposed slots therein; supporting members engaging said slots; and pairs of lugs carried by said carbureting chamber member slidably engaging said arms.

2. In a carbureter, the combination with the body, of a carbureting chamber member; a mixing chamber in said body into which said carbureting chamber delivers; an inlet member having an air inlet passage and a fuel inlet passage therein and provided with a nipple at its upper end having a tapered fuel nozzle projecting into said carbureting chamber and a plurality of air discharge passages grouped about said fuel nozzle, the bottom of the carbureting chamber coacting with the fuel nozzle and constituting an air valve, said carbureting chamber member being provided with a sleeve rotatably engaging said nipple; a rotatably mounted tubular actuating member for said carbureting chamber member; a needle valve arranged longitudinally through said actuating member and threaded for adjustment therein to coact with said fuel nozzle; a cam on said inlet member; and a coacting cam on said carbureting chamber member whereby rotative movement of said actuating member moves the carbureting chamber member longitudinally.

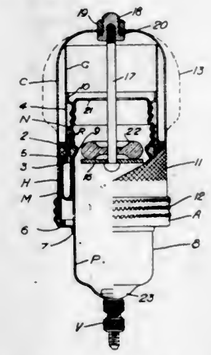
3. In a carbureter, the combination with the body, of a carbureting chamber member; a mixing chamber in said body into which said carbureting chamber delivers; an inlet member having an air inlet passage and a fuel inlet passage therein having a tapered fuel nozzle projecting into said carbureting chamber, the bottom of the carbureting chamber member coacting with the fuel nozzle and constituting an air valve, said carbureting chamber member being mounted on said inlet member; a rotatably mounted actuating member for said carbureting chamber member; a needle valve carried by said carbureting chamber member and threaded for adjustment therein to coact with said fuel nozzle; a cam on said inlet member; a coacting cam on said carbureting chamber member; a cylindrical throttle valve having upwardly projecting arms thereon and helically disposed slots therein; supporting members engaging said slots; and pairs of lugs carried by said carbureting chamber member slidably engaging said arms.

4. In a carbureter, the combination with the body, of a carbureting chamber member; a mixing chamber in said body into which said carbureting chamber delivers; an inlet member having an air inlet passage and a fuel inlet passage therein having a tapered fuel nozzle projecting into said carbureting chamber, the bottom of the carbureting chamber member coacting with the fuel nozzle and constituting an air valve, said carbureting chamber member being rotatably mounted on said inlet member; a rotatably mounted actuating member for said carbureting chamber member; a needle valve carried by said carbureting chamber member and threaded for adjustment therein to coact with said fuel nozzle; a cam on said inlet member; and a coacting cam on said corbureting chamber member whereby rotative movement of said actuating member moves the carbureting chamber member longitudinally.

5. In a carbureter, the combination with the body, of a carbureting chamber member; an inlet member having an air inlet passage and a fuel inlet passage delivering to the carbureting chamber; fuel and air inlet valves carried by said carbureting chamber member and actuated by the longitudinal movement of said carbureting chamber member; a rotatively mounted actuating member for said carbureting chamber member; a cam on said inlet member; a coacting cam on said carbureting chamber member; a cylindrical throttle valve having helical slots therein; supporting members engaging said slots; upwardly projecting arms on said throttle; and lugs on said carbureting chamber member engaging said arms.

[Claims 6 to 31 not printed in the Gazette.]

1,107,714. PNEUMATIC SPRING. ARCHIBALD SHARP, London, England. Filed Mar. 14, 1914. Serial No. 824,838. (Cl. 21—50.)

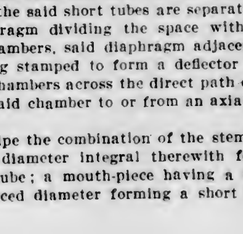


1. A pneumatic spring comprising in combination, a cylinder C and plunger P, each closed at one end, a tubular flanged liner G, a mitten M, a mitten holder H, a cap A screwed to the open end of the cylinder, a ring R, a nut N screwed on the plunger, and a valve V coaxial with the cylinder or plunger, the plunger being adapted to slide on the liner G and cap A.

2. A pneumatic spring comprising in combination a cylinder C and plunger P, each closed at one end, a tubular flanged liner G, a mitten M, a mitten holder H, a cap A screwed to the open end of the cylinder, a ring R, a nut N screwed on the plunger, a valve V coaxial with the plunger, and an internal stop made of a rod 17 and washer 16 fastened to the cylinder, a washer 21 fastened to the plunger, and a rubber buffer 22.

3. A pneumatic spring comprising in combination, a cylinder made of an outer part C_1 of a large diameter and an inner part C_2 of less diameter, a mitten M, a mitten holder H fitting easily inside the said part C_2, a liner G with a flange fitting easily inside the said cap C_2, a cap A, a plunger P, ring R, nut N, and valve V.

1,107,715. BRUSH. ELIEL L. SHARPNECK, Winthrop, Mass. Filed June 9, 1914. Serial No. 843,981. (Cl. 15—29.)

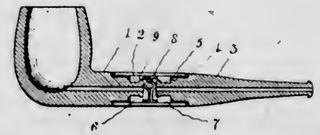


1. A brush comprising a body having a chamber having a perforated wall furnished with bristles, and a suction bulb mounted on said brush body and having a self closing valve opening from said chamber into said bulb and a self closing outlet valve.

2. A brush comprising a body having a chamber having a perforated wall having bristles, a grip member secured to said brush body and having a valve carrier, a self closing valve mounted on said carrier and opening outwardly from said chamber, and a rubber suction bulb secured to said grip member and receiving said valve, said bulb having an outwardly opening self closing valve.

3. A brush comprising a hollow body having a perforated wall furnished with bristles at one side and an opening embraced by a screw threaded collar at another side, a bushing secured in said collar and having an inturned lip and an outwardly spreading grip member, a valve carrier secured in said lip and having a tubular open post, a self closing outlet valve on said post, and a rubber bulb having an extension secured between said lip and said bushing and furnished with an outwardly opening self closing valve.

1,107,716. TOBACCO-PIPE. ELIAS E. SLAGHT, Toronto, Ontario, Canada. Filed Jan. 21, 1913. Serial No. 743,374. (Cl. 131—12.)



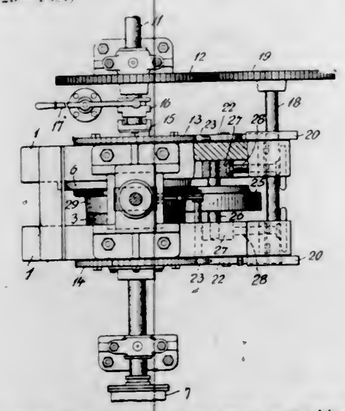
1. In a pipe the combination of the stem having an end of reduced diameter integral therewith forming a short projecting tube; a mouth-piece having a similar integral end of reduced diameter forming a short tube; a ferrule connecting the stem and mouth-piece so proportioned that the ends of the said short tubes are separated and an apertured diaphragm dividing the space within said ferrule into two chambers, said diaphragm adjacent the aperture therein being stamped to form a deflector projecting into one of the chambers across the direct path of smoke traveling across said chamber to or from an axial passage of the pipe.

2. In a pipe the combination of the stem having an end of reduced diameter integral therewith forming a short projecting tube; a mouth-piece having a similar integral end of reduced diameter forming a short tube; a ferrule

connecting the stem and mouth-piece so proportioned that the ends of the said short tubes are separated; and an apertured diaphragm dividing the space within said ferrule into two chambers, said diaphragm being formed of two disks pressed into place and having an integral deflector formed thereon between the bore of the stem and the aperture in the diaphragm adapted to prevent smoke passing directly from one to the other, substantially as shown and described

---

1,107,717. WHEEL-FORGING MILL. JOHN SLATTERY, Chrome, N. J. Filed Jan. 20, 1909. Serial No. 473,267. (Cl. 29—168.)



1. A wheel forging mill comprising in combination, in a single structure, means for rotatably supporting a blank comprising a two-part mandrel having its members relatively interlocked, said members constituting press dies adapted to compress the wheel blank axially, pressure means for forcing said dies together, means for hammering the periphery of the blank while in place on said mandrel and means for rolling the blank while in place on said mandrel.

2. A wheel forging mill comprising in combination, in a single structure, a frame, rotatable press dies mounted in bearings in said frame, pressure means for moving one of said dies axially to compress the wheel blank and means for hammering the periphery of a blank held by said dies.

3. A wheel forging mill comprising in combination, in a single structure, a frame, rotatable press dies mounted in bearings in said frame, pressure means for moving one of said dies axially to compress the wheel blank, means for hammering the periphery of a blank held by said dies, and means for rolling the blank.

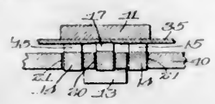
4. A wheel forging mill comprising in combination, in a single structure, a frame, pressure dies rotatably mounted therein, one of said dies movable axially, pressure means for moving such axially movable die to press a blank between said dies, and means for hammering a blank held by said dies, said dies having interlocking portions strengthening them to resist the hammering.

5. A wheel forging mill comprising in combination means for rotatably supporting a blank, means for hammering the periphery of the blank, and step by step mechanism for rotating the blank, arranged to rotate the blank during the intervals between blows, and to permit said blank to remain stationary during the striking of the blows.

[Claims 6 to 14 not printed in the Gazette.]

1,107,718. SEWING-MACHINE FEEDING MECHANISM. ALBERT D. SMITH, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed Dec. 7, 1909. Serial No. 531,848. (Cl. 112—8.)

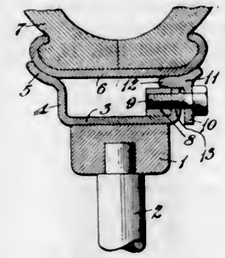
1. In a device of the character described, the combination of a feed bar having a roughened surface for engaging the material to feed the latter, a portion of the roughened surface projecting beyond the plane of the remaining portion of the surface, and a single presser foot coöperating with the feed bar, said presser-foot having a flat face extending entirely across the width of and coöperating with the said roughened surface of the presser-foot, said flat face being adapted to rest upon the material.



2. In a device of the character described, the combination of a feed bar provided with spaced arms rigidly secured thereto, each of said arms being provided on its upper face with gripping teeth, the extremities of the gripping teeth on one of the arms lying in a plane higher than the plane of the extremities of the gripping teeth on another of the arms, and a presser foot having a flat face, said presser foot coöperating with the teeth on the said arms and adapted to force the material into engagement with the highest teeth only, when thin material is being operated upon and to force the material into engagement with all of the teeth when coarse material is being operated upon.

3. The combination of a work feed bar provided with a roughened surface for engaging only a face of the material and a presser foot coöperating with the feed bar and having a surface adapted to engage and rest upon a face of the material, the portion of said work feed bar surface intermediate its edges being raised slightly above the remaining portion of the surface, and the entire portion of the said surface of the presser-foot being disposed in the same plane.

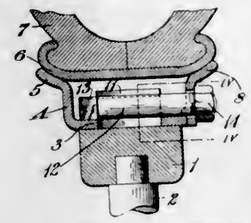
1,107,719. WHEEL-RIM CONSTRUCTION. HARRY M. SNYDER, Detroit, Mich., assignor to Detroit Demountable Rim Co., Detroit, Mich., a Corporation of Michigan. Filed Sept. 18, 1911. Serial No. 649,856. (Cl. 152—21.)



A wheel rim construction comprising a band having a rim seat flange on one margin thereof, a stiffening flange and projections from its face near the other margin, rim shoes adapted to rest on the stiffening flange of the other margin of the band, a demountable rim adapted to be seated on the flange and shoes and to be retained by the latter when they are drawn between the stiffening flange and the rim, and means engaging the projecting portions adapted to draw the shoes between the stiffening flange and the rim for securing the latter in operative position.

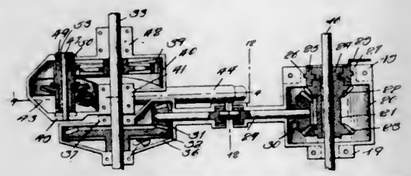
1,107,720. WHEEL-RIM CONSTRUCTION. HARRY M. SNYDER, Detroit, Mich., assignor to Detroit Demountable Rim Co., Detroit, Mich., a Corporation of Michigan. Filed Sept. 18, 1911. Serial No. 649,857. (Cl. 152—21.)

1. A wheel rim construction comprising a felly, a band shrunk around the felly, projections struck up from the outer face of the band, a rim seat flange on one side of the band, a rim holding ring opposite to the flange with which it co-acts, a demountable rim adapted to be secured on the flange by the ring, and means between the projections of the band for drawing the ring into operative relation to the flange of the rim.



2. A wheel rim construction comprising a band, a rim seat flange on one margin thereof, pairs of oppositely disposed projections struck up from the face of the band, bolts secured to the band between the pairs of projections, a ring adapted to seat on the band opposite the flange, and a demountable rim adapted to be supported on the flange and ring, the bolts operating to draw the ring into operative relation to the flange and rim.

1,107,721. GEARING. FRED STACK, Gardner, Colo. Filed Nov. 25, 1912. Serial No. 733,520. (Cl. 74—7.)



1. The combination with a traction axle, of a downwardly inclined power transmission shaft, and interfitting gears having a ratchet and dog connection with each other and forming an operative connection between the axle and the upper end of said power transmission shaft permitting of rotation of said shaft by said axle in but one direction.

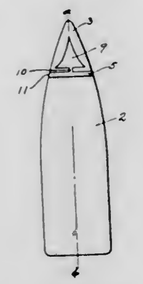
2. The combination with a driven axle, of a downwardly inclined power transmission shaft, a counter-shaft, a gear on said axle, interfitting gears on said countershaft having a ratchet and dog connection with each other and one of said gears meshing with said axle gear and forming an operative connection between the axle and the upper end of said power transmission shaft permitting of rotation of said shaft by said axle in but one direction.

3. The combination with a traction axle, of a power transmission shaft, a counter stub shaft extending parallel with said axle, a gear on said axle, interfitting gears on said counter shaft having a ratchet and dog connection with each other, said axle gear meshing with one of said interfitting gears, a gear on said power transmission shaft adapted to mesh with the other of said gears, and means for shifting said counter shaft longitudinally of said axle whereby to bodily shift said intermeshing gears toward and away from said transmission shaft gear whereby to throw said transmission shaft into and out of gear with the first named shaft.

4. The combination with a traction axle, of spaced bearings on one side of said axle, a counter shaft extending parallel with said axle and having one end revolubly and slidably fitted in one of said bearings, a collar revolubly receiving the opposite end of said shaft and having a screw thread connection with the other of said bearings, an operating lever for rotating said collar whereby to shift said shaft longitudinally of said axle, an operative connection between said shaft and said axle, a power transmission shaft, and a gear connection between said transmission shaft and said counter shaft, said gear connection being adapted to be thrown into operative and released position by shifting movement of said countershaft longitudinally of said axle.

5. The combination with a revoluble traction axle, or a counter shaft extending parallel with said axle, a gear on said axle, a gear on said shaft adapted to be slid longitudinally across and continuously meshing with said axle gear, and having a hub extension, a bevel gear mounted to idle on said hub extension, a ratchet and dog connection between said shaft gear and said bevel gear permitting of rotation of said bevel gear by said shaft gear in but one direction, a power transmission shaft, a bevel gear on said power transmission shaft, and means for shifting said counter shaft longitudinally of said axle whereby to carry the first named bevel gear into and out of mesh with the last named bevel gear.

1,107,722. MUSHROOM-BULLET. HENRY W. STARKWEATHER, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Sept. 8, 1913. Serial No. 788,623. (Cl. 102—28.)



1. A mushroom bullet comprising a soft metal core, a jacket-body and a jacket-tip applied thereto, the jacket-tip being superficially engaged with the pointed end of the core which is exuded into it to form one or more locks, and the tip being formed with one or more slits to facilitate its spreading at the time of mushrooming.

2. A mushroom bullet comprising a soft metal core, a jacket-body and a jacket-tip, the said body and tip being shorter than the longitudinal axis of the core to leave a circumferential contour band of the core exposed between the adjacent edges of the body and tip which are not set inward but located in line with each other, the tip being formed with one or more openings into which portions of the core are exuded to form one or more locks for retaining the tip in superficial engagement with the core, whereby the weakening of the core is avoided.

3. A mushroom bullet having a soft metal core, a jacket-body and a jacket-tip, the latter being formed with a plurality of longitudinally arranged arrow-shaped openings, and having its open end split, the said openings having portions of the lead exuded into them to form locks for retaining the tip in superficial engagement with the core.

4. A mushroom bullet comprising a soft metal core, a jacket-body and a jacket-tip, the body and tip being enough shorter than the longitudinal axis of the bullet to form an accommodation space between the edges of the jacket and tip to receive a contour band of metal exuded from the core and the tip being engaged with the core at a point on its surface in front of the said contour band, whereby its open inner edge is not set inward into the core but left in line with the edge of the jacket-body.

5. A mushroom bullet comprising a soft metal core and a two-part circumferentially divided jacket consisting of a jacket body and a jacket tip, the jacket-body being swaged upon the core, and the jacket-tip being engaged with the point of the core for its normal retention thereupon at a point upon its surface in front of the circumferential division between the body and tip, which is not set inward at its inner edge and embedded in the core, but superficially applied to the point thereof, whereby the weakening of the core is avoided.

1,107,723. BUNG-CLOSURE. GEORGE STIEFEL, Chicago, Ill. Filed June 12, 1913. Serial No. 773,183. (Cl. 217—99.)

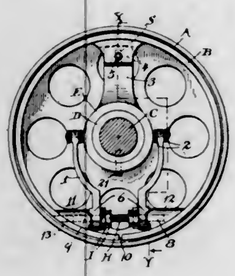


1. A bung-closure comprising a casing, a bottom member received therewithin, a boss upon said bottom member, said casing and said boss being provided with registering apertures, a ring adapted to be secured within said boss, a packing adapted to be retained between the ring and the boss, a rotatable valve disposed between the top of said casing and said boss, said valve being normally in engagement with said packing, and means to rotate the valve.

2. A bung-closure comprising a casing, a bottom member received therewithin, a boss upon said bottom member, said casing and said boss being provided with registering apertures, a ring adapted to be secured within said boss, a packing adapted to be retained between the ring and the boss, those surfaces of the boss and of the ring which engage said packing being smooth at the point of engagement, a rotatable valve disposed between the top of said casing and said boss, said valve being normally in engagement with said packing, and means to rotate the valve.

3. A bung-closure comprising a casing having an aperture therethrough, a shouldered seat within said aperture, a bottom member received within the casing and having a packing member in connection therewith, a rotatable valve engaging said packing member and located between said bottom member and said seat, an arm, a boss thereupon, said boss being received within said seat, and means to rotate the arm, thereby to rotate the valve.

1,107,724. CLUTCH. GEORGE STINEBRING, Wooster, Ohio. Filed July 22, 1912. Serial No. 711,009. (Cl. 192—13.)



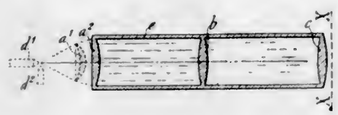
1. In a clutch, the combination with a shaft, a hollow loose pulley mounted thereon, a hub secured to said shaft within said pulley independently thereof, an arm extending from said hub in a radial direction within said pulley, an expansible split ring encircling said hub within said pulley, and means for adjustably connecting said ring to said hub arm at a point opposite the split of said ring, of a pair of abutments within said ring adjacent to said split, cam faces on said abutments respectively, set opposite each other thereon, and a longitudinal bore through said abutments, a threaded bolt rotatable upon its opposite ends in the bore of said abutments respectively, a pair of lever arms having cam faced enlargements pivotally mounted opposite each other on said threaded bolt adjacent said abutments respectively, each cam face terminating with a flat portion and adapted to register with a like cam face of its adjacent abutment, a pair of lock nuts on said threaded bolt operable between said enlargements, and means for actuating said pair of lever arms on opposite sides of said hub simultaneously, substantially as set forth.

2. In a clutch, the combination with a shaft, a loose pulley thereon, a hub secured to said shaft within the rim of said pulley independently thereof, a split ring encircling said hub within said pulley rim, and means for adjustably connecting said ring to said hub, of a pair of opposite abutments on said split rim having cam faces respectively, a blot threaded intermediately its ends and rotatively mounted in and between said abutments, a pair of lever arms having cam faced enlargements respectively pivotally mounted on said bolt to coöperate with the cams on said abutments, and means for actuating said lever arms on opposite sides of said hub, substantially as set forth.

3. In a clutch, the combination with a shaft, a loose pulley mounted thereon, a hub extended within the rim of said pulley and secured to said shaft independently of said pulley, a radial arm projecting from said hub within said pulley rim, a split ring encircling said hub within said pulley rim, an arm projecting inwardly from said ring opposite the split thereof, means for adjustably connecting said radial arms longitudinally, a pair of opposite abutments within said ring adjacent to said split having cam faces respectively, terminating with a flat surface, a bolt threaded intermediately its ends and rotatively mounted in and between said abutments, a pair of lever arms pivoted on said bolt between said abutments having cam faces to coöperate therewith a pair of lock nuts operable on said bolt between said levers to adjustably secure the cam faces thereon against the cam faces of said opposite abutments, respectively, and means, including a sleeve movable on said shaft, to actuate said cam levers on opposite sides thereof, simultaneously, substantially as set forth.

4. In a clutch of the class described, comprising a split ring adjustably mounted on a hub within a loose pulley rim, the combination with a pair of opposite abutments on said split ring, having cam faces, of a bolt threaded intermediate its ends rotatably mounted in and between said abutments, a pair of levers having cam faces adjacent said abutments respectively to coöperate with the cam faces thereon, said levers pivotally mounted on said bolt between said abutments, and means for actuating said levers on opposite sides of said hub simultaneously, substantially as set forth, and for the purpose specified.

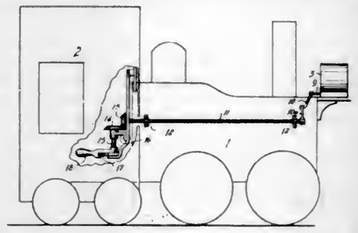
1,107,725. COOLING-CHAMBER FOR PROJECTION PURPOSES. RUDOLF STRAUBEL, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed May 22, 1914. Serial No. 840,362. (Cl. 88—24.)



A cooling chamber for projection purposes, consisting of a glass vessel adapted to contain a liquid, two parts of which vessel, intended for the passage of the rays of light, are fused to the said vessel, at least one such part being formed by a lens.

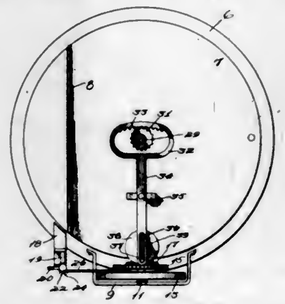
1,107,726. MECHANISM FOR ROTATING A LOCOMOTIVE-HEADLIGHT. WILLIAM E. TETER and CHARLES B. GRAY, Dallas, Tex. Filed May 5, 1913. Serial No. 765,701. (Cl. 240—61.)

In a headlight adjusting mechanism, the combination with a stationary headlight and a reflector rotatably mounted within the headlight, of a lever projecting rigidly from said reflector, an elongated rock-shaft, an arm fast upon the forward end of said rock-shaft projecting toward the lever, the lever and arm being normally in planes at right angles to each other, an angularly disposed link pivotally attaching the ends of the lever and said arm, and



means engaging the rear end of the rock-shaft for actuating the same.

1,107,727. GEARING FOR WASHING-MACHINES. LEROY THOMAS, Mombaccus, N. Y. Filed June 3, 1913. Serial No. 771,467. (Cl. 74—50.)



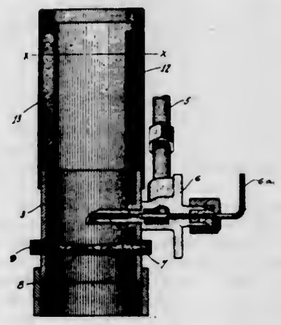
1. In apparatus of the character described, the combination with a relatively stationary support, of a movable support pivotally connected therewith, an oscillatory lever pivotally connected between its ends with the movable support and having its outer end disposed adjacent one edge of the movable support and provided with a longitudinal slot and its inner end provided with gear teeth, a gear mounted upon the movable support adjacent the gear teeth to engage the same, a bevel gear mounted upon the movable support adjacent the said edge thereof and provided with a crank pin operating within the longitudinal slot, a bevel gear mounted upon the relatively stationary support and normally engaging the first named bevel gear and disengaging the same when the movable support is swung in one direction, and means to rotate the second named bevel gear.

2. In apparatus of the character described, the combination with a relatively stationary support, of a movable support pivoted to the relatively stationary support and adapted to be swung in a substantially vertical plane with relation thereto, a bevel gear rotatably mounted upon the movable support near the free edge thereof, a second bevel gear rotatably mounted upon the upper end of the relatively stationary support and detachably engaging the first named bevel gear, gearing mounted upon the movable support and driven by the first named bevel gear, and means to rotate the second named bevel gear.

3. In apparatus of the character described, the combination with a relatively stationary support, of a second support pivoted thereto and adapted to be moved to approximately horizontal and vertical positions, a bevel gear rotatably mounted upon the second support near the free edge thereof, a second bevel gear rotatably mounted upon the upper portion of the relatively stationary support and detachably engaging the first named bevel gear, an oscillatory lever pivotally mounted between its ends upon the second named support and provided at its outer end with a longitudinal slot, a pin carried by the first named bevel gear and operating within the longitudinal slot, gearing mounted upon the second named support and driven by the oscillatory lever, and means to rotate the second named bevel gear, including a fly wheel.

4. In apparatus of the character described, the combination with a relatively stationary support, of a second support pivoted thereto, a bevel gear rotatably mounted upon the second support near one edge thereof and provided with a crank pin, an oscillatory lever pivoted between its ends to the pivoted support and provided at its outer end with an elongated slot to receive the crank pin, gearing connected with the inner end of the oscillatory lever to be driven thereby, a fly wheel rotatably mounted upon the side of the relatively stationary support and extending below the same, a pinion rigidly connected with the fly wheel for rotation therewith, a second pinion rotatably mounted upon the side of the relatively stationary support and engaging the first named pinion, a second bevel gear rigidly connected with the second named pinion for rotation therewith and detachably engaging the first named bevel gear, and means to rotate the second named pinion.

1,107,728. COOLING ATTACHMENT FOR EXPLOSIVE-MOTORS. WILLIAM F. THOMPSON and JOHN LOONEY, Biggs, Cal. Filed July 7, 1913. Serial No. 777,656. (Cl. 123—25.)



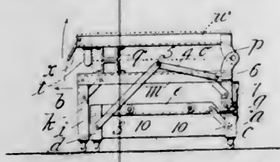
1. A device of the character described comprising the combination with an explosive motor having an air intake pipe, of a water supply, a pipe leading from said water supply, a valve on the end of such pipe, such valve having a discharge outlet projecting into said air intake pipe, a receptacle disposed within and across said air intake pipe, such receptacle having an open side disposed toward the inlet end of said intake pipe, said discharge outlet on said valve discharging into said open side of said receptacle, the ends of said receptacle being open and projecting outside of said air intake pipe, as described.

2. A device of the character described comprising the combination with an explosive motor having a carbureter and an exhaust pipe, of an air intake pipe leading from said exhaust pipe and communicating with said carbureter, a screen covered opening in said air intake pipe, a sleeve mounted on said air intake pipe and adapted to form a closure for said opening, a water supply pipe having a valve provided with a discharge nozzle projecting into said air intake pipe between said opening therein and said carbureter, a receptacle within said air intake pipe into which said discharge nozzle empties, said receptacle having open ends projecting outside of said air intake pipe, as described.

1,107,729. CONVERTIBLE COUCH. FRANCIS M. TINKHAM, Springfield, Mass. Filed Feb. 17, 1911. Serial No. 609,156. (Cl. 5—46.)

1. A convertible couch bed having in combination, with a lower supporting frame, an intermediate and an upper bed frame section, said sections being pivotally connected to each other and adapted to be folded into the same or parallel horizontal planes, in order to provide a substan-

tially continuous surface, when the structure is used as a bed, and a supporting surface, when the same is used as a couch, means to move said sections together, while in a foldable position, on the said lower supporting frame, when opening and closing the structure, one of the side edges of the upper bed frame section being supported on a bracket of the lower supporting frame, when used as a bed, and the side edge of the intermediate section being supported on the floor, the inner edges of the upper and intermediate sections being pivotally connected together and supported on the lower frame, substantially as described.



2. A convertible bed or couch comprising, a lower supporting frame, an intermediate bed frame section and an upper bed frame section, said intermediate section being connected to the lower supporting frame to slide thereon by means of a trackway on said supporting frame, and a short leg portion, on said intermediate section which is provided with a roller at its lower end to engage the trackway, the opposite side of said intermediate section being adapted to engage the floor, and the upper bed-frame section being adapted to rest on the edge of the lower supporting frame when in an open position, and means for spacing the intermediate and upper sections from each other when closed.

3. In a couch bed, the combination with a lower supporting frame, a rock shaft mounted therein and located near one side thereof, an intermediate bed-frame section, link connections between the opposite ends of the rock-shaft and the intermediate section, one side of said intermediate section being adapted to engage the floor and the other side a trackway on the lower supporting frame, when opening and closing the structure, an upper bed-frame section pivotally connected to said intermediate section, means for spacing the intermediate and upper sections from each other when closed, and means to permit the frames to lie in the same horizontal plane when open.

4. In a convertible couch, the combination with a lower supporting frame, a trackway thereon, an intermediate bed-frame section, an upper bed frame section, said sections being hinged together and adapted to engage the trackway at the hinged side when in a folded position, one of said sections engaging the floor, whereby the hinged sections may be drawn away from the supporting frame before the hinged sections are opened, substantially as described.

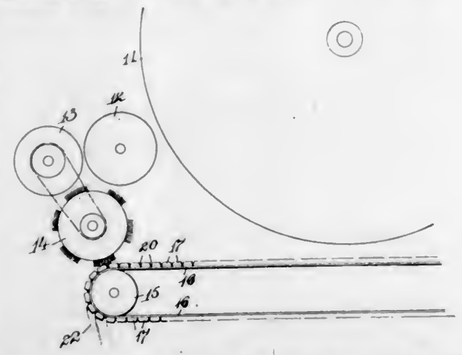
5. In a structure of the kind described, a lower supporting frame, an upper and an intermediate bed frame section mounted thereon and pivoted to each other, to be opened to form a bed or closed to form a couch or divan, means secured to each of the bed frame sections to space the same from each other, when closed, to form a storage compartment, said means comprising projections at the outer edges of the bed frame sections.

[Claims 6 to 11 not printed in the Gazette.]

1,107,730. APRON FOR FIBER-TREATING MACHINES. GEORGE J. TORRANCE, Harrison, N. J. Filed Apr. 11, 1914. Serial No. 831,277. (Cl. 193—8.)

1. A conveyer for fiber treating machines comprising an apron having its outer face provided with pockets, and gathering strips at separated points on the apron so that several pockets are between adjoining strips, said strips being constructed to retain loose, fluffy fiber, the face of the apron being smooth to permit the easy passage of said fiber over the pockets.

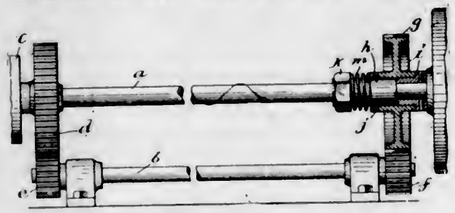
2. A conveyer for fiber treating machines comprising an apron having its outer face provided with transverse pockets, and strips at separated points between said pockets so that several pockets are between adjoining strips, said strips being of a material to retain loose, fluffy fiber passing along the face of the apron.



3. A conveyer for fiber treating machines comprising an apron, said apron having parallel strips arranged side by side, the abutting faces of the strips being cut-away to form pockets between the strips, and top layers or strips of material to retain loose, fluffy fiber arranged on separated apron strips in order to present several pockets between adjoining strips.

4. A conveyer for fiber treating machines comprising a belt having on its outer face a series of slats arranged side by side, the slats having their adjacent edges beveled, the slats being arranged with their bottom edges in contact, whereby the beveled edges form pockets, strips of material on separated slats, said strips being constructed to retain light, fluffy fiber passing over the belt, the slats between the covered slats being smooth to permit the easy passage over said slats of said loose fiber.

1,107,731. MEANS FOR ELIMINATING VIBRATIONS IN ROTARY SHAFTS. LARS H. VOLD, Westville, N. J., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 22, 1913. Serial No. 802,374. (Cl. 74—7.)



1. Means for preventing vibrations in a rotary member actuating driven mechanism, comprising in combination with said member and means tending to rotate it with a constant velocity, a second rotary member constrained to travel at a constant velocity, and a frictional connection between the two members whereby any tendency of the first member to deviate from its normal velocity will be opposed by the friction between the two members and thereby tend to cause the velocity of the first member to be constant.

2. Means for preventing vibrations in a rotary member connected with driven mechanism, comprising in combination with said member and a prime mover tending to rotate it with a constant velocity, a second rotary member constrained to travel at a constant velocity and at the same normal angular velocity as the first member, the second member being arranged concentrically to the first member and in frictional driving relation therewith and adapted to oppose any tendency of the first member to vary its velocity from that of the prime mover and thereby

acting to prevent or eliminate vibrations in the first member and the mechanism connected therewith.

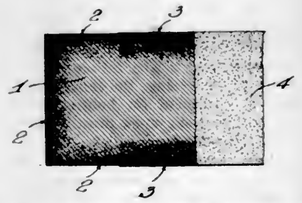
3. Means for preventing vibrations in a rotary shaft comprising in combination with the shaft and means tending to rotate it with a constant velocity, a rotary member constrained to travel at a constant velocity, means connecting the rotary member with the shaft and having a frictional driving relation therewith and operative to oppose any tendency of the shaft to deviate from its normal velocity, thereby tending to prevent or eliminate vibrations therein.

4. Means for preventing vibration in a rotary element connected with driven mechanism, comprising in combination with a prime mover rotating at a constant velocity, two rotary elements one of which is the element first named and both of which are connected with the prime mover and adapted to be driven thereby at the same normal angular velocity, one of said rotary elements being a shaft on which the other rotary element is loosely sleeved, and members on the shaft non-rotatable relatively thereto and having surfaces in frictional engagement with the sleeved element, thereby tending to prevent variation from the normal in velocity of the first named rotary element.

5. Means for preventing vibration in a rotary element connected with driven mechanism, comprising in combination with a prime mover rotating at a constant velocity, two rotary elements one of which is the element first named and both of which are connected with the prime mover and adapted to be driven thereby at the same normal angular velocity, one of said rotary elements being a shaft on which the other rotary element is loosely sleeved, a member non-rotatable relatively to the shaft and frictionally engaging one side of the sleeved rotary element, and a second member non-rotatable, but axially adjustable, relatively to the shaft, and frictionally engaging the other side of the rotary element.

[Claims 6 to 10 not printed in the Gazette.]

1,107,732. PROTECTING-SHEET. EDWIN C. WALLACE, East Auburn, Cal. Filed May 3, 1911. Serial No. 624,867. (Cl. 91—68.)



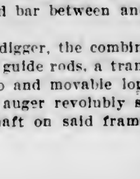
1. The herein described process of waterproofing a non-waterproof porous body, which consists in first impregnating the pores thereof with a waterproof liquid adapted to readily enter said pores by capillary action, and subsequently applying a viscous waterproofing substance normally incapable of entering said pores and soluble in said liquid, to said body, in the presence of said liquid for the purpose of causing the viscous substance to dissolve in said liquid and enter the pores of the body by the process of diffusion.

2. The herein described process of waterproofing a non-waterproof porous body, which consists in first and separately applying to the said body a waterproofing liquid adapted to readily enter the pores of the body by capillary action, and subsequently and separately applying to said body a fluid waterproofing substance incapable alone of entering said pores and soluble in said liquid, in the presence of said liquid for the purpose of causing the waterproofing fluid to dissolve in the waterproofing liquid already contained within the pores of the body, by the process of diffusion.

3. The herein described process of waterproofing a non-waterproof porous concrete body, which consists in first applying to the porous concrete body a light waterproofing oil adapted to readily enter said pores by capillary action, and subsequently applying to the porous body thus treated a heavy viscous waterproofing oil, which is soluble in the light oil and normally incapable of entering the pores of the body but entering said pores in the presence of the light oil by the process of diffusion.

4. The herein described process of waterproofing a non-waterproof porous body, which consists in first impregnating the pores of the body with a light waterproofing liquid adapted to enter the pores by capillary action, and subsequently applying without pressure a heavy waterproofing fluid to the porous body to contact with the outer portion of the light liquid impregnating the pores of the body, to be led thereby by the process of diffusion into said pores.

1,107,733. PLOW-BEAM. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Original application filed May 27, 1912, Serial No. 700,042. Divided and this application filed Apr. 19, 1913. Serial No. 762,385. (Cl. 97—69.)



1. The combination of a frame, a plurality of plow beams connected to the frame and capable of lateral swinging movement, a link connection interposed between each of two adjacent beams, and a yieldable connection between each of two adjacent links.

2. The combination of a frame, a plurality of plow beams connected to the frame and capable of lateral swinging movements, a link interposed between each of two adjacent beams, and a yieldable connection for each beam connecting the beam and two adjacent links.

3. The combination of a frame, a plurality of movable plow beams connected to the frame, a link interposed between each of two adjacent beams, and a spring-bolt for each beam connecting the beam and the links adjacent to the beam.

4. The combination of a frame, a plurality of movable plow beams connected to the frame, means connecting the plow beams holding the beams parallel, and a yieldable connection between each beam and said means, allowing each beam independent movement.

5. The combination of a frame, a plurality of plow beams pivotally connected to the frame and capable of a transverse swinging movement, a link interposed between and pivotally connected to each of two adjacent beams holding the beams parallel, and a yieldable connection between each beam and said links, allowing each beam independent movement.

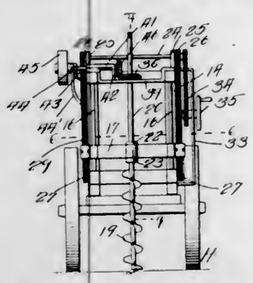
[Claims 6 to 10 not printed in the Gazette.]

1,107,734. POST-HOLE DIGGER. HERMAN E. WENDORF, Lakemills, Wis. Filed May 2, 1913. Serial No. 765,149. (Cl. 255—22.)

1. In a post hole digger, the combination with a frame, of a pair of parallel guide rods thereon, a slide bar secured to and movable between said guide rods, feed chains on opposite sides of said frame connected to the ends of said bar and operating to actuate said bar, and an auger revolubly fitted in said bar between and parallel with said guide rods.

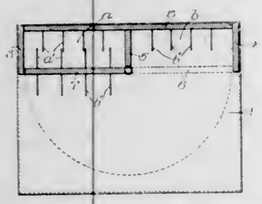
2. In a post hole digger, the combination with a frame, of a pair of parallel guide rods, a transverse slide bar terminally connected to and movable longitudinally between said guide rods, an auger revolubly secured to said slide bar, a transverse shaft on said frame, sprockets on said

shaft near the ends thereof, other sprockets on said frame in alinement with said shaft sprockets, sprocket chains trained over corresponding sprockets and connected to ad-



jacent ends of said slide bar, means for rotating said auger, and means for rotating said shaft whereby to actuate said slide bar and raise or lower said auger.

1,107,735. DUPLEX CASHIER'S DESK. ELMER F. WIEBOLDT, Chicago, Ill. Filed May 3, 1913. Serial No. 765,245. (Cl. 45—94.)



1. A cashier's desk provided with a cabinet having two compartments, a door hinged to the cabinet and adapted to close one compartment and expose the other when closed in one position and to expose the first and close the second compartment when closed in another position, a pair of drawers and a locking device capable of occupying two positions and adapted when in one position to lock one drawer and release the other and when in another position to release the first and lock the second drawer, said locking device being operated by said door.

2. A cashier's desk provided with a cabinet having two compartments, a swinging door hinged to the cabinet in position to close one or the other of said compartments, two parallel drawers, a locking rod rigidly secured to said door and adapted to engage one or the other of said drawers depending upon the position of the door.

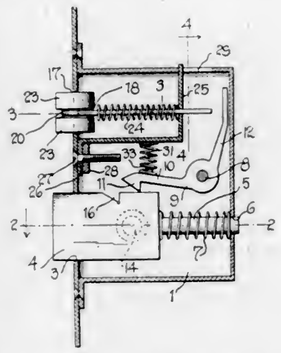
3. A cashier's desk consisting of a top and a suitable support therefor, said desk being provided with a cabinet mounted upon the top of the desk and divided into two compartments, a swinging door hinged upon a vertical axis to the cabinet in position to close one or the other of said compartments, two drawers located beneath the top of the desk and a locking rod rigidly secured to the door and passing down to the drawers and having an arm adapted to engage one or the other of said drawers depending upon the position of the arm and of the door by which the arm and locking rod are operated.

4. A cashier's desk consisting of a top and a suitable support therefor, said desk having an open front cabinet, a vertically arranged partition dividing the cabinet into two compartments, a swinging door hinged at the front of said partition and adapted to close one or the other of said compartments, drawers slidingly mounted in said desk, stops on said drawers and a locking rod having an arm adapted to swing into the path of one or the other of said stops for locking the respective drawers, said locking rod being rigidly secured to and operated by said door.

5. A duplex cashier's desk consisting of a top and a suitable support therefor, said desk having an open front cabinet mounted upon the top of the desk, a vertically arranged partition dividing the cabinet into two substantially equal compartments, a swinging door hinged at the front of said partition and adapted to close one or the other of said compartments, drawers slidingly mounted in the desk beneath the top thereof, stops on said drawers, a locking rod fastened to and rotatable with the door, said rod being located between said drawers and a horizontal locking arm rigid with said rod and adapted to engage the stop upon one or the other of said drawers.

[Claims 6 and 7 not printed in the Gazette.]

1,107,736. DOOR-LOCK. FRANK W. WILKINSON and FERDINAND ZIGANEK, West Toledo, Ohio. Filed Apr. 18, 1914. Serial No. 832,820. (Cl. 70—64.)



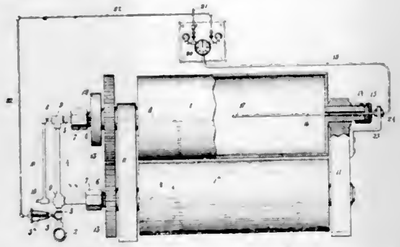
1. A door lock comprising a casing, a spring pressed latch slidably mounted in the casing, automatic means for holding the latch in inoperative position against the tension of its spring, automatic releasing mechanism slidably mounted in the casing, said releasing mechanism consisting of a shaft comprising two sections, each of the sections being provided with a semi-circular extension, a roller having a reduced intermediate portion engaged between the semi-circular extension of the sections of the shaft, means for holding said sections of the shaft together to secure the roller therebetween, and means for normally forcing said shaft outwardly of the casing, the inner end of said shaft being disposed in alinement for holding the latch in inoperative position, whereby upon inward movement of the roller the latch is released.

2. A door lock comprising a casing, a spring pressed latch slidably mounted in the casing, automatic means for holding the latch in inoperative position against the tension of its spring, a bracket mounted in the casing, automatic releasing mechanism slidably mounted in the casing, said releasing mechanism including a roller having a reduced portion intermediate of its ends, a shaft comprising two sections each of which having a substantially semi-circular extension for engagement around the reduced portion of the roller, said sections being formed with shoulders inwardly of the semi-circular extensions, a spring mounted on the sections to hold the same together, the inner end of the sections being slidably disposed through the bracket, the spring bearing at one end against the bracket and at its other end against said shoulders to normally force the roller outwardly of the casing, the inner end of the shaft being disposed in alinement with the means for holding the latch in inoperative position whereby upon inward movement of the roller the latch is released.

3. A door lock comprising a casing, a spring pressed latch slidably mounted in the casing, automatic means for holding the latch in inoperative position against the tension of its spring, an angular bracket slidably mounted in the casing, automatic releasing mechanism slidably mounted in the casing, said releasing mechanism consisting of a roller having an inwardly extending shaft connected thereto, the inner end of said shaft being slidably disposed

through one end of said bracket, a spring mounted on said shaft for engagement against the inner end of the bracket to normally force the roller outwardly of the casing, means for adjusting said bracket to regulate the tension of said spring, the inner end of said shaft being disposed in alinement with the means for holding the latch in inoperative position, whereby upon inward movement of the roller the latch is released.

1,107,737. THERMOSTATIC REGULATION FOR HEATED ROLLERS. GEORGE S. WITHAM, Sr., Hudson Falls, and ALFRED ROESCH, New York, N. Y., assignors to Charles J. Tagliabue Manufacturing Co., Brooklyn, N. Y., a Corporation of New York. Filed Jan. 15, 1913. Serial No. 742,119. (Cl. 34—4.)



1. In a device for the purpose specified a revoluble calendar roller, means for heating the same with a fluid, a sensitive thermostatic member adapted to be affected by the temperature of the heating fluid in said roller, and means controlled by said sensitive member for controlling the flow of heating fluid to said roller whereby the roller is maintained at a uniform temperature.

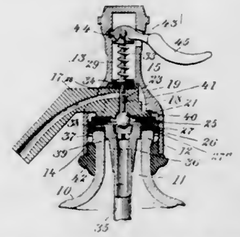
2. In a device for the purpose specified a revoluble calendar roller, means for heating said roller with a fluid, a sensitive thermostatic member adapted to be affected by the temperature of the heating fluid in said roller, means for supporting said sensitive member in position to be affected by the temperature of the heating fluid in said roller, and means controlled by said sensitive member for controlling the flow of heating fluid to said roller whereby the roller is maintained at a uniform temperature.

3. In a device for the purpose specified, a revoluble calendar roller, bearing blocks therefor, means for heating said roller with a fluid, a sensitive thermostatic member adapted to be affected by the temperature of the heating fluid in said roller, means secured to one of said bearing blocks for supporting said sensitive member in position to be affected by the temperature of the heating fluid in said roller and adapted to prevent rotation thereof with the roller, and means controlled by said sensitive member for controlling the flow of heating fluid to said roller, whereby the roller is maintained at a uniform temperature.

4. In a device for the purpose specified a revoluble calendar roller provided with tubular bearing trunnions, bearing blocks therefor, steam pipe connections through the tubular trunnion at one end of the roller for admitting steam for heating said roller, a sensitive thermostatic member located within the roller and adapted to be affected by the temperature of the steam in said roller, said member having a tubular extension passing through the tubular trunnion at the other end of said roller, means for supporting said sensitive member within the roller and means connected with and controlled by said sensitive member for controlling the flow of steam to said roller whereby the roller is maintained at a uniform temperature.

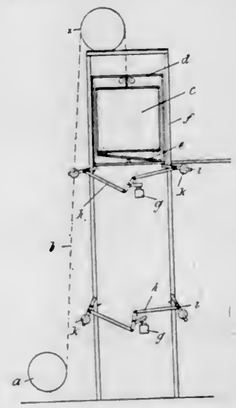
5. In a device for the purpose specified a revoluble calendar roller provided with tubular bearing trunnions, bearing blocks therefor, steam pipe connections through the tubular trunnion at the end of the roller for admitting steam for heating said roller, a sensitive thermostatic member located within the roller and adapted to be affected by the temperature of the steam in said roller, said member having a tubular extension passing through the tubular trunnion at the other end of said roller, a packing head forming a steam tight joint between the end of the tubular trunnion and the stem of said sensitive member, said joint being adapted to permit rotation of said roller, means secured to one of said bearing blocks for supporting said sensitive element within the roller and adapted to prevent rotation thereof with the roller, and means controlled by said sensitive member for controlling the flow of steam to said roller whereby the roller is maintained at a uniform temperature.

1,107,738. SIPHON-HEAD. JOHN BAACH, Jr., New York, N. Y., assignor to Wittemann Brothers, New York, N. Y., a Corporation of New York. Filed Nov. 18, 1910. Serial No. 592,960. (Cl. 215—115.)



A siphon-head comprising a casing having an internally threaded lower end, a recessed portion above said threaded end, and an opening in its side, means for securing said casing to a bottle, a separable nozzle extending through the opening in said casing, a head having an opening extending therethrough communicating with said nozzle and a valve seat at the lower end of said opening, a valve disposed below said valve seat having a stem extending upwardly into the opening in said head, a flange extending laterally from the base of said head, a packing disposed below said head, an annular screw-threaded member secured within the threaded lower end of said casing and engaging said packing for securing said flange at the end of said nozzle in position within the recessed portion of said casing, a tube, means for supporting said tube and inclosing said valve, a stem arranged within said casing above said head and engaging the stem on said valve therein, and means engaging said valve stem for actuating said valve, substantially as specified.

1,107,739. LIFT. JACOB BAAS, Darmstadt, Germany. Filed Mar. 12, 1912. Serial No. 683,260. (Cl. 214—12.)



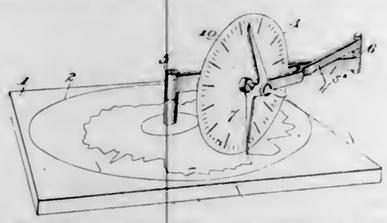
1. In a lift, an inner cage, a hoisting rope connected with the inner cage passing over a guide sheave at the top

of the well and connected with a hoisting drum, and an outer cage provided with an inclined bottom to permit the inner cage to be moved out of the outer cage and onto the adjacent floor.

2. In a lift, an inner cage, a hoisting rope connected with the inner cage passing over a guide sheave at the top of the well and connected with a hoisting drum, an outer cage having an inclined bottom carrying the inner cage and an electromagnetically controlled supporting device for the outer cage.

3. In an elevator mechanism, an inner cage, a hoisting cable engaging an overhead guide sheave connected therewith, an outer cage in which said inner cage is supported for independent movement, and means for supporting the outer cage at a desired floor to permit the inner cage to be moved out of said outer cage and onto said floor.

1,107,740. RADII-AVERAGING INSTRUMENT. ERVIN G. BAILEY, Newton Highlands, Mass. Filed Dec. 18, 1913. Serial No. 807,554. (Cl. 33—122.)



1. A radii averaging instrument comprising a support having means for definitely positioning a circular chart thereon; an arm pivoted on an axis substantially perpendicular to the surface of said support; a tracing pointer connected with said arm; an integrating wheel rotatably pivoted to said arm on an axis substantially parallel to the radius of the chart which passes through the point of contact between said chart and said wheel, means whereby the axis on which the arm is pivoted is maintained equidistant from the axis of the chart and the integrating wheel equidistant from the axis of the arm.

2. A radii averaging instrument for circular chart records, comprising a support for a chart; an arm pivoted at one end about an axis substantially perpendicular to said support and at a fixed distance from the center of the chart; a tracing pointer fastened to said arm; and an integrating wheel rotatably pivoted to said arm, the axis of said wheel being substantially parallel to the radius of the chart passing through the point of contact with said wheel.

3. A radii averaging instrument for circular chart records, comprising a support for a chart; means for holding the center of the chart in a definite position on said support; a link pivoted at one end about the axis of the chart; an arm pivoted to the other end of said link; a tracing pointer fastened to the outer end of said arm; and an integrating wheel rotatably pivoted to the outer end of said arm, the axis of said wheel being substantially parallel to the radius of the chart passing through the point of contact with said wheel.

1,107,741. UNIT-CARGO VESSEL. FREDERICK A. BALLIN and EDWARD H. DODGE, Portland, Oreg. Filed Sept. 28, 1912. Serial No. 722,996. (Cl. 114—0.5.)



1. In a vessel provided with an opening hull portion at one end for floating in loaded barges, an upper deck, a load-carrying deck below the upper deck, longitudinal bulkheads inclosing a central submerging compartment above and below the load carrying deck, extending lengthwise of the vessel, the space below the load carrying deck being so divided as to provide reserve buoyancy compartments at the sides of the vessel, supplementary submerging compartments located between such reserve buoyancy compartments and the central submerging compartment, said reserve buoyancy compartments so proportioned that their combined displacement equals the weight of the vessel, said submerging compartments so proportioned that when flooded they will sink the vessel to its loading draft, and when emptied their combined displacement in supplement to that of said reserve buoyancy-compartments will place the vessel, with full load, in the condition of its normal draft, and means for flooding said submerging compartments.

2. In a vessel provided with an opening hull portion at one end for floating in loaded barges, an upper deck, a load carrying deck below the upper deck, and submerging compartments including a compartment running longitudinally centrally over the load-carrying deck, reserve buoyancy compartments so proportioned that their combined displacement equals the weight of the vessel, said submerging compartments so proportioned that when flooded they will sink the vessel to its loading draft, and when emptied their combined displacement in supplement to that of said reserve buoyancy-compartments will place the vessel, with full load, in the condition of its normal draft, and means for flooding said submerging compartments.

3. In a vessel provided with an opening hull portion at one end for floating in loaded barges, an upper deck, a load-carrying deck below the upper deck, and a submerging compartment, the space below the load carrying deck being so divided as to provide reserve buoyancy compartments at the sides of the vessel, said reserve buoyancy compartments so proportioned that their combined displacement equals the weight of the vessel, said submerging compartments so proportioned that when flooded they will sink the vessel to its loading draft, and when emptied their combined displacement in supplement to that of said reserve buoyancy-compartments will place the vessel, with full load, in the condition of its normal draft, and means for flooding said submerging compartments.

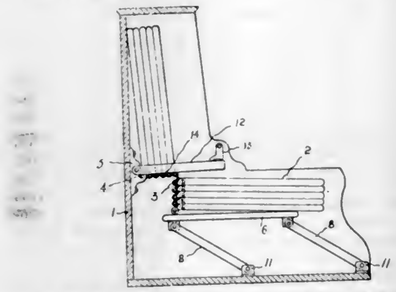
4. In a vessel provided with an opening hull portion at one end for floating in loaded barges, an upper deck, a load carrying deck below the upper deck, and submerging compartments including a compartment running longitudinally centrally over the load-carrying deck, reserve buoyancy compartments so proportioned that their combined displacement equals the weight of the vessel, said submerging compartments so proportioned that when flooded they will sink the vessel to its loading draft, and when emptied their combined displacement in supplement to that of said reserve buoyancy-compartments will place the vessel, with full load, in the condition of its normal draft, and means for flooding said submerging compartments.

5. In a vessel provided with an opening hull portion at one end for floating in loaded barges, an upper deck, a load-carrying deck below the upper deck, longitudinal bulkheads inclosing a central submerging compartment above and below the load carrying deck, extending lengthwise of the vessel, said bulkheads arranged to provide cargo spaces between said central submerging compartment and the sides of the vessel on the load-carrying deck, longitudinal bulkheads dividing the space below the load carrying deck, exterior of said central submerging compartments, into reserve buoyancy compartments at the sides of the vessel, supplementary submerging compartments located between such reserve buoyancy compartments and the central submerging compartment, said reserve buoyancy compartments so proportioned that their combined displacement equals the weight of the vessel, said submerging compartments so proportioned that when flooded they will sink the vessel to its loading draft, and when emptied their combined displacement in supplement

to that of said reserve buoyancy, compartments will place the vessel, with full load, in the condition of its normal draft, and means for flooding said submerging compartments.

[Claims 6 to 12 not printed in the Gazette.]

1,107,742. ACCOUNT-FILE. WILSON BARR, Jr., Hamilton, Ontario, Canada. Filed Oct. 23, 1912. Serial No. 727,439. (Cl. 45—2.)



1. In an account file the combination of a casing; a plurality of bill-holder leaves hinged together so that they may be turned to substantially vertical or horizontal positions; a pivotal connection between the rear leaf and the casing; a resiliently supported vertically movable table on which the leaves are supported; and a guide bar at each side of the casing, parts on said leaves being adapted to engage beneath said guide bars.

2. In an account file the combination of a casing; a plurality of bill-holder leaves hinged together so that they may be turned to substantially vertical or horizontal positions; a pivotal connection between the rear leaf and the casing; a resiliently supported vertically movable table on which the leaves are supported; a guide bar at each side of the casing; and pins projecting from the hinges of the leaves adapted to engage beneath said guide bars.

3. In an account file the combination of a casing; a plurality of bill-holder leaves hinger together so that they may be turned to substantially vertical or horizontal positions; a pivotal connection between the rear leaf and the casing; a resiliently supported vertically movable table on which the leaves are supported; a guide bar pivoted at each side of the casing; latches for locking said guide bars down in position, parts on said leaves being adapted to engage beneath said guide bars.

4. In an account file the combination of a casing; a plurality of bill-holder leaves hinged together so that they may be turned to substantially vertical or horizontal positions; pivots on the rear leaf; open bearings for said pivots on the casing; a guide bar at each side of the casing pivoted so as to be movable to open or close said bearings; a resiliently supported vertically movable table on which the leaves are supported; and pins projecting from the hinges of the leaves adapted to engage beneath said guide bars.

5. In an account file the combination of a casing; a plurality of bill-holder leaves hinged together so that they may be turned to substantially vertical or horizontal positions; a pivotal connection between the rear leaf and the casing; a substantially horizontal table on which said leaves are supported; links acting between said table and the casing whereby the table is movable vertically while remaining substantially horizontal; and springs tending to lift said table.

[Claim 6 not printed in the Gazette.]

1,107,743. TRANSPORTATION-TICKET. FRANK BATT, North Tonawanda, N. Y. Filed Nov. 1, 1912. Serial No. 729,024. (Cl. 11—15.)

1. A transportation ticket comprising a plurality of ticket sections bearing like identifying data, the ticket being folded on a roll fold on lines between said sections and each section having a single designated cancellation punch point, the ticket bearing data requiring it to be punched through all sections simultaneously and the place of punching being determined by the designated punch point on the section only to be detached.



2. A transportation ticket comprising a plurality of sections folded on a roll fold on lines between the sections and bearing like identifying data, each section being provided with a single designated punch point, all of the sections except the first having a secondary punch point related to the designated punch point of each section except the last.

3. A transportation ticket having a plurality of sections folded on a roll fold on lines between the sections, the sections bearing like identifying data being adapted to be taken up successively, each section having a single designated cancellation punch point along its lower marginal portion adapted to be punched simultaneously with the remaining sections of the ticket while folded.

4. A transportation ticket having a plurality of sections folded on a roll fold on lines between said sections and bearing like identifying data, each section having a single designated primary punch point and each section except the first having a secondary punch point related to the primary punch point on each of the preceding sections of the ticket when folded and being adapted to be punched simultaneously with its related primary punch points while the complete ticket or unused portion of the ticket is folded, the primary punch point on the last section of the ticket being adapted to be punched separately.

5. A transportation ticket comprising a plurality of sections bearing like identifying data, said ticket being folded on a roll fold on lines between said sections and said sections bearing data requiring their being taken up successively and requiring the first section of the complete ticket or the first section of the remaining unused portion of the ticket to be punched for cancellation simultaneously with the remaining section or sections of the ticket when folded.

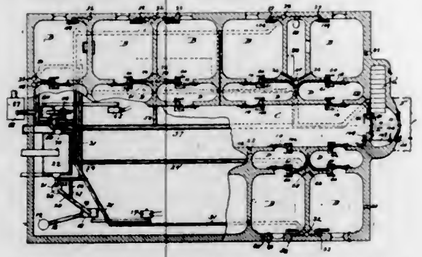
[Claims 6 to 12 not printed in the Gazette.]

1,107,744. APPARATUS FOR THERAPEUTIC TREATMENT OF AIR OF A SICK-ROOM. FRANK BATTER, St. Johns, Oreg. Filed July 7, 1908. Serial No. 442,429. (Cl. 98—27.)

1. The combination of an inclosed structure, a pipe or flue leading from the ouside thereof to the inside, means for causing the passage of air through such pipe or flue into the structure, a washer to which the air is led, a drier, and means for causing a portion of the air to pass through the drier to a particular room in the structure and for delivering another portion of the air directly from the washer to such room.

2. The combination of an inclosed structure, a pipe or flue leading from the outside thereof to the inside, means

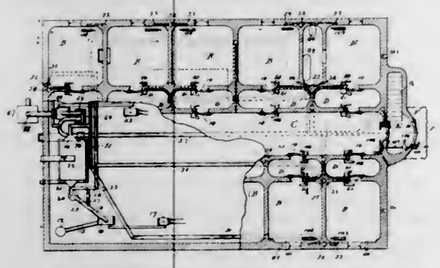
for causing the passage of air through such pipe or flue into the structure, a washer to which the air is led, a drier, means for causing a portion of the air to pass through the drier to a particular room in the structure and for delivering another portion of the air directly from the washer to such room, and means for withdrawing the aeriform contents of such room.



3. The combination of an inclosed structure, a pipe or flue leading from the outside thereof to the inside, means for causing the passage of air through such pipe or flue into the structure, a washer to which the air is led, a drier, means for causing a portion of the air to pass through the drier to a particular room in the structure and for delivering another portion of the air directly from the washer to such room, and means for withdrawing the aeriform contents of such room and disinfecting the same.

4. The combination of an inclosed structure, a pipe or flue leading from the outside thereof to the inside, means for causing the passage of air through such pipe or flue into the structure, a washer to which the air is led, a drier, means for causing a portion of the air to pass through the drier to a particular room in the structure and for delivering another portion of the air directly from the washer to such room, and means for charging the air with a medicinal agent on its way to the room.

1,107,745. PROCESS OF THERAPEUTIC TREATMENT OF AIR IN A SICK-ROOM. FRANK BATTER, St. Johns, Oreg. Filed July 7, 1908. Serial No. 442,430. (Cl. 98—43.)



The method of controlling the atmosphere for producing beneficial effects upon human beings in an isolated room which consists in supplying air from out doors, passing the air through a washer, drying a portion of the washed air, delivering the dried portion to the room, and delivering air directly from the washer to the room.

1,107,746. AIR-TIGHT RECEPTACLE. PERRY S. BAUER, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Sept. 21, 1911. Serial No. 650,611. (Cl. 229—45.)

1. An air tight receptacle comprising a body, a cover therefor, said body and cover having a pair of adjacent walls parallel each with the other, and a strip of flexible material folded upon itself between said cover and body to form a seal for the receptacle.

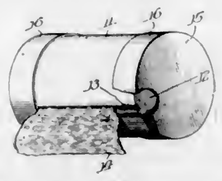
2. An air-tight receptacle, comprising a body, a cover therefor, a strip of material folded upon itself and interposed between the free edges of the cover and the corresponding free edges of the body and glued both to the body and the cover, and a cord positioned in the fold of said strip with one end protruding outside the receptacle whereby said strip may be torn along its fold to unseal the receptacle.



3. An air-tight receptacle, comprising a body, a cover, a plurality of strips of folded material, each strip being connected with the cover and the body adjacent the free edges, and a cord arranged in the folds of said strips around the perimeter of the receptacle with one end protruding outside the receptacle to be gripped and pulled thereby tearing said strips along their folds to unseal the receptacle.

4. An air-tight receptacle comprising a body, a cover therefor having a flap adapted to be disposed within the body of the receptacle when the cover is closed, a strip of material folded upon itself and interposed between the said flap and the body of the receptacle and glued to said body and flap to seal the receptacle, and a cord positioned in a fold of the said strip with one end protruding outside the receptacle whereby the said strip may be torn along its fold to unseal the receptacle.

1,107,747. SURGICAL-BANDAGE CONTAINER. PERRY S. BAUER, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Mar. 8, 1913. Serial No. 752,970. (Cl. 206—52.)



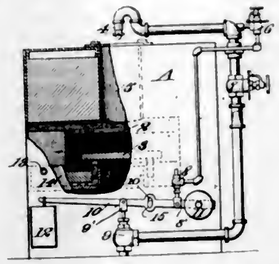
1. A surgical bandage container comprising a cylindrical casing adapted to contain a roll of surgical bandages or the like provided with a longitudinally disposed slot through which the bandage may be unwound from the roll, the ends of said slot being curved to prevent the end of the roll projecting through said slot from being drawn into the container.

2. A surgical bandage container comprising a cylindrical casing adapted to contain a roll of surgical bandages or the like and provided with a longitudinally disposed slot through which the bandage may be unwound from the roll, said slot being curved to prevent the end of the roll projecting therethrough from being drawn into the container.

3. A surgical bandage container comprising a cylindrical casing adapted to contain a roll of surgical bandages or the like and caps fitted over the ends of said casing to close the same, a longitudinally extending slot being formed through the casing and a portion of the caps through which the bandages may be withdrawn from the roll, said slot being curved to prevent an edge of the bandage extending therethrough from being drawn into the container.

4. A roll of surgical bandage, and a container for the same, said container comprising a casing closed at its ends and provided with a longitudinally extending slot, the ends of said slot being disposed inwardly of the ends of said roll.

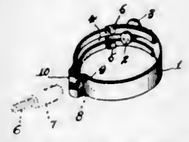
1,107,748. AUTOMATIC CUT-OFF MECHANISM FOR OIL-BURNERS. JULIUS H. BECKER, San Francisco, Cal., assignor to American Heat & Power Co., San Francisco, Cal., a Corporation of California. Filed Mar. 28, 1913. Serial No. 757,281. (Cl. 158—36.)



1. The combination with a furnace, of an oil burner having a fuel supply pipe and a water supply pipe connected therewith, a catch basin formed in the furnace chamber for collecting any unconsumed oil or water delivered through the burner, a lever pivotally mounted with relation to the furnace and the oil and water supply pipes, valves on said pipes, links on the lever on opposite sides of the pivot point connected with the valves, an adjustable weight on one end of the lever adapted to normally hold the lever in the depressed position when the valves will remain open, a collecting chamber on the opposite end of the lever, and means connected with the furnace catch basin for conveying the collected overflow oil or water to the collecting chamber to counterbalance the weight and rock the lever into the opposite position to close the valves.

2. The combination with a furnace having a catch basin formed in the furnace chamber of an oil burner having a fuel supply pipe and a water supply pipe connected therewith, valves on the respective pipes to control the flow of water and oil through same, a slotted lever, a pivot pin projecting through the slot, links connecting the valves with the lever on opposite sides of the slot and pivot pin, an adjustable weight on one end of the lever adapted to normally hold the lever in the depressed position when the valves will remain open, a collecting chamber on the opposite end of the lever, and means connected with the furnace catch basin for conveying the collected overflow oil or water to the collecting chamber to counterbalance the weight and rock the lever into the opposite position to close the valves.

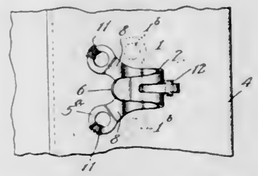
1,107,749. BED ATTACHMENT. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Co., Chicago, Ill., a Corporation. Filed Nov. 15, 1912. Serial No. 731,504. (Cl. 5—33.)



1. In a support of the class described, the combination with two spaced posts, of an elongated resilient element extending between said posts; a band embracing each of said posts, each of said bands being split, the ends of each of said bands being overlapped; a screw passing through said overlapping ends; a nut threaded on said screw for releasably clamping said ends together, one of said ends of each of said bands being bifurcated; a convex loop formed in each of said bands, each of said loops having a laterally opening slot larger at its rearward end than at its forward end; attaching members at the ends of said resilient member having outwardly extending tongues; and heads at the outer ends of said tongues adapted to pass snugly through said slots sidewise, said heads being of a form such that the same cannot pass through said slots when said members are turned to different positions, substantially as described.

2. In a support of the class described, the combination with two spaced posts, of an elongated resilient element extending between said posts; a band embracing each of said posts, each of said bands being split, the ends of each of said bands being overlapped; a screw passing through said overlapping ends and a nut threaded on said screw for releasably clamping said ends together, one of said ends of each of said bands being bifurcated, the other of said ends having ears embracing the longitudinal edges of said bifurcated end; a convex loop formed in each of said bands, each of said loops having a laterally opening slot larger at its rearward end than at its forward end; attaching members at the ends of said resilient member having outwardly extending tongues; and heads at the outer ends of said tongues adapted to pass snugly through said slots sidewise, said heads being of a form such that the same cannot pass through said slots when said members are turned to different positions, substantially as described.

1,107,750. HOOK AND EYE. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 5, 1913. Serial No. 788,197. (Cl. 24—226.)



1. The combination with an eye, of a sheet-metal hook comprising a shank provided with a pair of transverse corrugations and equipped with attaching means, and a tongue underlying the shank and having a transverse corrugation disposed opposite the recess between said pair of corrugations.

2. The combination of an eye comprising a sheet-metal member equipped at its ends with attaching means, said member being concavo-convex in cross section, and a sheet-metal hook comprising a shank provided with a pair of transverse corrugations and equipped with attaching means, and a tongue underlying the shank and having a transverse corrugation disposed opposite the recess between said pair of corrugations.

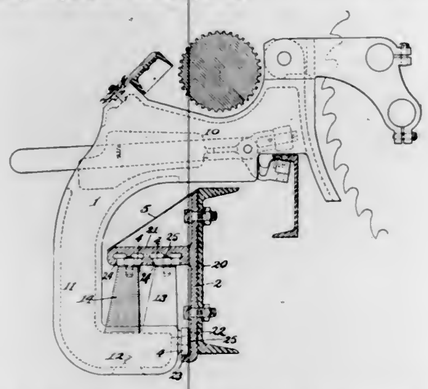
1,107,751. EDGER-GUIDE. AUGUST BOYER, Everett, Wash., assignor to Sumner Iron Works, Everett, Wash., a Corporation of Washington. Filed Dec. 22, 1913. Serial No. 808,065. (Cl. 143—37.)

1. A guide frame for saw shifter mechanisms having connected vertical and horizontal webs with the apex of the angle between them toward the saws, the vertical web having one set of guiding surfaces and the horizontal web having two sets of guiding surfaces, said guiding surfaces being parallel to the plane of one or the other web and being at that side of the webs which face inward of the angle between them.

2. A guide frame for saw shifter mechanisms having a vertical web and a horizontal web placed with the apex of the angle formed thereby toward the saws, the lower edge of the vertical web having a rib projecting into the angle included between the webs and provided with an upwardly facing guide surface, and the lower surface of the horizontal web having two grooves therein facing downward, the side surfaces of said grooves forming parallel guiding surfaces.

3. A guide frame for saw shifter mechanisms having connected vertical and horizontal webs placed with the apex of the angle between them toward the saws, the inner

side of the vertical web having two guiding surfaces toward its lower edge and lying, respectively, in a vertical and in a horizontal plane, the under surface of the horizontal web having two guiding channels therein, each of said channels having a central guiding surface lying in a horizontal plane and opposite edge guiding surfaces lying in parallel vertical planes.

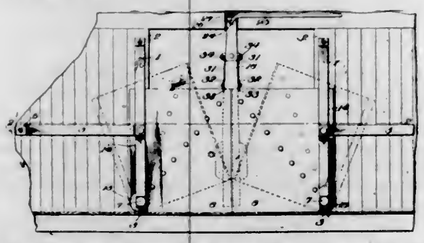


4. In an edger guide, in combination, a transversely extending beam having a horizontal web and a vertical web placed with the angle between said webs away from the saws, three guideways carried by the inner faces of said webs, a shifter frame having three guides separated to coincide with the apices of a triangle and engaging each its respective guideway of said beam.

5. In an edger guide, in combination, a transversely extending beam having a horizontal and a vertical web, the horizontal web having two channels in its under side having parallel sides and the vertical web having a guideway along its lower edge at the side facing toward the channel-containing surface of the horizontal web, a shifter frame having an upper section extending over the top of said beam, a section extending downward past the horizontal web and a section extending under said horizontal web, and arms extending oppositely from said last section and carrying wheels entering each its respective channel in the horizontal web, and a wheel journaled on the frame and engaging the guideway of the vertical web.

[Claims 6 to 8 not printed in the Gazette.]

1,107,752. GRAIN-CAR DOOR. WILLIAM BRODHAGE, St. Louis, Mo. Filed Mar. 13, 1913. Serial No. 754,113. (Cl. 20—29.)



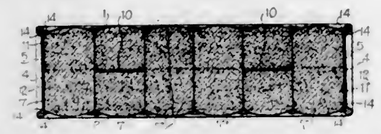
1. The combination with a car body having a door opening therein, of a hanger bar secured to the car body above the said opening and extending from a point centrally over the opening to a point beyond the side thereof, a post slidably and pivotally fitted upon said bar and adapted to extend vertically across the door opening, means for supporting said post above and at one side of the opening, and door members pivotally mounted at the sides of the opening and adapted to extend over the same and bear against the said post.

2. The combination with a car body having a door opening therein, of a keeper at the lower side of the said opening, and a post movably hung upon the car body above the said opening and provided at its lower end with means for engaging under said keeper.

3. The combination with a car body having a door opening therein, of a post movably hung upon the body above the door opening and provided with a retaining device at its lower end, door members pivoted at the sides of the door opening and adapted to extend over the same, lateral enlargements on the sides of said post above the lower end thereof against which the door members will rest when partly opened, a support upon the car body above and at one side of the door opening, and means on one of the said lateral enlargements to engage said support.

4. The combination with a car body having a door opening therein, of a keeper on the car body at the lower side of the door opening, a post hung upon the car body above the door opening, a sheathing on said post having its lower end extended under and doubled on itself beneath the lower end of the post to form a hook adapted to engage under said keeper, and door members pivotally mounted at the sides of the door opening and adapted to extend across the same and rest against said post.

1,107,753. MATTRESS. SAMUEL BRONSTIEN, St. Paul, Minn. Filed Feb. 9, 1914. Serial No. 817,623. (Cl. 5—13.)



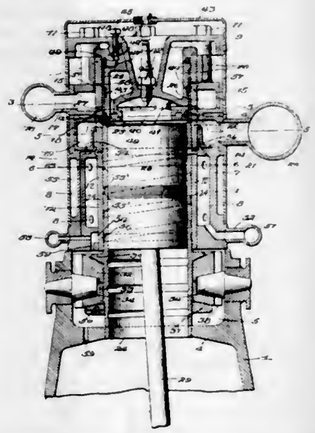
A mattress comprising an outer casing, a flexible frame insertible within said casing, the walls whereof contacting with the side walls of the outer casing, a filler within the frame, reinforcing strips connecting opposite walls of the flexible frame and disposed through the filling, longitudinal stitching connecting the marginal portions of the top and bottom, ends and sides of the casing with the marginal portions of the flexible frame, transversely disposed spaced rows of stitching connecting the walls of the flexible frame and the sides and ends of the casing, said casing having the top and bottom thereof initially of greater dimensions in both directions than the area inclosed by the flexible frame.

1,107,754. INTERNAL-COMBUSTION ENGINE. WARNER HILL CAMP, Atlanta, Ga. Filed Aug. 31, 1912. Serial No. 718,129. (Cl. 123—188.)

1. In an internal combustion engine, the combination of a cylinder having a combustion chamber, said cylinder being provided with intake and exhaust ports and having a vacuum chamber formed therein, a piston operative in the cylinder, and a valve sleeve capable of reciprocation in the cylinder to control the intake and exhaust ports thereof, such sleeve having a portion subject to the action of vacuum in the vacuum chamber to cause reciprocation of the sleeve in one direction and also a portion subject to the compression in the combustion chamber to cause reciprocation of the sleeve in a reverse direction.

2. In an internal combustion engine, the combination of a cylinder having a combustion chamber, said cylinder being provided with intake and exhaust ports and having a vacuum chamber formed therein, a piston operative in the cylinder, and a reciprocable valve sleeve controlling said ports, such sleeve having a portion thereof subject to the action of vacuum in the vacuum chamber to cause reciprocation of the sleeve in a direction to open the intake port and having a portion subject to the pressure of explosion in the combustion chamber to cause reciprocation of the sleeve in a reverse direction to open the exhaust port.

3. In an internal combustion engine, the combination of a cylinder having a combustion chamber, said cylinder being provided with intake and exhaust ports and having a vacuum chamber formed therein, a piston operative in the cylinder, and a reciprocatory valve sleeve in the cylinder for controlling the intake and exhaust ports, such sleeve having a portion thereof subject to the action of vacuum in the vacuum chamber to cause reciprocation of the sleeve in a direction to open the intake port and another portion subject successively to the compression and explosion pressures in the combustion chamber to reciprocate the sleeve in a reverse direction to close the intake port and subsequently open the exhaust port.



4. In a gas engine of the type described, the combination of a cylinder casing, a valve sleeve reciprocatably mounted therein, a cam ring rotatably mounted upon said valve sleeve, and means in operative connection with said cam ring for controlling the proper reciprocation of said sleeve, said valve sleeve being also capable of a slight rotary movement through the operation of the last mentioned means.

5. In an internal combustion engine of the four cycle type, the combination of a cylinder casing, of a valve sleeve rotatably and reciprocatably mounted therein, a cam ring rotatably mounted upon said valve sleeve, rollers adjustably mounted within said casing and operative within a groove formed within said cam ring, and means for rotating positively, the cam ring for insuring proper rotation and reciprocation of the valve sleeve.

[Claims 6 to 10 not printed in the Gazette.]

1,107,755. PROCESS OF PRODUCING COMPOSITE BARS. FERDINAND E. CANDA, New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J., a Corporation of New Jersey. Filed Feb. 18, 1907. Serial No. 357,853. (Cl. 22—207.)



1. The process of producing composite bars which consists in placing hard metal bars in a spaced arrangement in a mold, pouring softer metal around said bars, rolling the resulting ingot to approximate final dimensions while preserving symmetrical form, and finally rolling at a lower temperature into ribbed form, with certain of said harder metal bars opposite the positions for said ribs, and thereby drawing such harder metal bars into the ribs so formed.

2. The process of producing composite ribbed bars which consists in placing hard metal bars in a spaced arrangement in a mold, pouring soft metal around said bars, rolling the resulting ingot at a comparatively high temperature and thereby producing symmetrical reduction of the joined metals, and subsequently completing the reduction at a lower temperature, the bar being rolled with certain of said included hard metal bars opposite rib-forming grooves of such rolls, and by the rib-forming action of such grooved rolls drawing such hard metal bars up into the ribs thus formed.

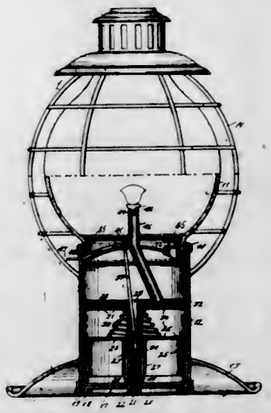
3. The process of producing composite ribbed bars which consists in placing hard metal bars in a spaced arrangement in a mold, certain of said bars which are to be included in the ribs when formed, being of elongated section and being placed with their edges toward the side of the mold, pouring soft metal around said bars, and rolling the resulting ingot in a plurality of passes, the last pass being between grooved rib-forming rolls, with the edgewise included hard metal bars opposite the positions for the ribs, whereby such hard metal bars are drawn up into the ribs so formed.

4. The process of producing composite ribbed bars which consists in placing hard metal bars in a spaced arrangement in a mold, certain of said bars which are to be included in the ribs when formed, being of elongated section and being placed with their edges toward the side of the mold, pouring soft metal around said bars, and rolling the resulting ingot in a plurality of passes on the sides nearest such edgewise turned bars, and on the sides at right angles thereto, the final pass being between grooved rib-forming rolls, with the edgewise included hard metal bars opposite the positions for the ribs, whereby such hard metal bars are drawn up into the ribs so formed.

5. The herein described process of producing composite jail bars and the like, which consists in placing in a suitable mold in spaced arrangement a series of cores of hard metal, said cores relatively arranged in the outline of a closed figure inclosing a central space, pouring molten softer metal into said mold and about said bars and within the space inclosed thereby, and finally working down the ingot so formed.

[Claim 6 not printed in the Gazette.]

1,107,756. ACETYLENE-GENERATOR. WILLIAM J. CASKEY, Des Moines, Iowa. Filed July 1, 1912. Serial No. 707,113. (Cl. 48—29.)

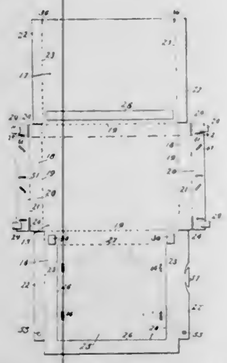


1. A cylindrical casing, having a water tank in the upper end thereof and open at its lower end, a detachable cover for the lower end, a carbid capsule detachably secured to said cover and designed to extend upwardly within the lower end of said casing, a perforated cap telescopically mounted within said capsule and having an opening in its center, an upwardly extending tube in the center of said capsule provided with longitudinal slots in the lower portion of its sides, a downwardly extending tube on the center of said cap telescopically mounted upon said upwardly extending tube, a tube in communication with and extending downwardly from the center of the

bottom of said tank, the lower end of which is designed to enter the upwardly extending tube from the carbid capsule, a detachable block in the lower end of said downwardly extending tube provided with an opening and a valve seat, a valve stem designed to coact with said valve seat extending upwardly through said water tank, a lever for actuating said valve stem, and means on said block for holding the valve stem in alinement, a gas conveying tube extending through said water tank, a filter adjacent to the bottom of said water tank, a perforated partition adjacent to said filter and loosely mounted upon the downwardly extending tube in the bottom of said water tank, and yielding means for holding said partition against the said filter.

2. In an acetylene gas generator, a cylindrical casing, a water tank in the upper end thereof, a gas conveying tube extending upwardly from said tank, a downwardly extending tube in communication with, and from the bottom of, said tank, a detachable block in the bottom of said tube, an opening having a valve seat in said block, an upwardly inclined valve stem designed to coact with said valve seat and extending through the top of said water tank, a lever for actuating said valve stem, and means secured to said block for holding the lower end of said valve stem in alinement with said valve seat.

1,107,757. TOY THEATER. CHRISTINA CATREVAS, Brooklyn, N. Y. Filed Apr. 9, 1914. Serial No. 830,632. (Cl. 46—37.)



1. A toy theater comprising a base, a back and a front hinged to the base, short sides also hinged to the base, floor strips hinged to said sides to be folded over at right angles thereto, corner strips hinged to the edges of the front and back and adapted to fold at right angles thereto and to interlock with the sides and folded over floor strips, a floor adapted to lie in between said floor strips, and stays for holding up the front and back substantially as set forth.

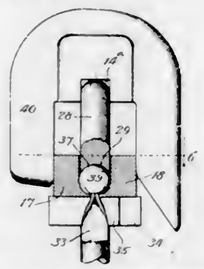
2. A blank, for a folding toy theater, consisting of a base portion, back and front portions joined to the base portion along incised or weakened lines, short side portions joined in like manner to the base portion, floor strips also joined in like manner to the side portions, and a floor portion cut free on three sides from the middle of said front portion and joined thereto on the fourth side along an incised or weakened line, substantially as shown and described.

3. A folding toy theater having its base, back, front, short sides and floor cut in one piece from a sheet of cardboard, the main portion of the floor being cut free on three sides from the middle of said front and the side strips of the floor being folded in from the tops of the short sides, and supports and stays for holding the several parts in place when folded into theater form.

4. A folding toy theater having its base, back, front, short sides and floor in one piece cut from a sheet of cardboard, the main portion of the floor being cut free on three sides from the middle of said front and the side strips of the floor being folded in from the tops of the short sides, a proscenium arch secured to the front at the opening made by cutting the floor therefrom, a footlight strip secured across the front below the opening of the arch, stage scenery removably mounted in said side strips, and supports and stays for holding the several parts of the theater in place when folded into threater form and for holding the upper ends of the pieces of scenery in place, substantially as shown and described.

5. A toy theater comprising a base, a back, a front and sides, corner strips hinged to the front and back and adapted to fold at right angles to them, stays engaging said corner strips for holding up the front and back, and a rolling curtain the upper stick of which is journaled in the corner strips of the said front.

1,107,758. MECHANISM FOR SECURING BALLS TO TAPE OR THE LIKE. JAMES CHRISTY, Chicago, Ill. Filed Mar. 20, 1913. Serial No. 755,637. (Cl. 153—1.5.)



1. In a machine of the character set forth, the combination of a base, a female die member thereon, a member of inverted U-shape reciprocally supported at one arm thereof in said base with its opposite end carrying a male die, means tending to hold said U-shaped member in raised condition, and a rock-lever fulcrumed on said base with one end above said U-shaped member, and into the path of movement of which said U-shaped member extends, for the purpose set forth.

2. In a machine of the character set forth, the combination of a female die-member, a surface beneath said die-member and extending part way across the recess therein and against which the tape is positioned to extend into said die-member, and a male die-member coöperating with said female die-member, said surface extending lengthwise of the path of movement of said male die-member.

3. In a machine of the character set forth, the combination of a female die-member formed of relatively-movable sections, a surface beneath said die-member and extending part way across the recess formed between the sections of said die-member and against which the tape is positioned between the sections of said die-member, a male die-member, and means for actuating said male die-member, said surface extending lengthwise of the path of movement of said male die-member.

4. In a machine of the character set forth, the combination of a female die-member formed of relatively movable sections, a surface beneath said die-member and extending part way across the recess formed between the sections of said die-member and against which the tape is positioned between the sections of said die-member, a male die-member, and means for actuating said male die-member, said surface extending lengthwise of the path of movement of said male die-member.

5. In a machine of the character set forth, the combination of a female die-member, and a male die-member adapted to enter said female die-member, the end of said female die-member opposite to that entered by the male die-member, containing an opening of less width than the recess in said female die-member, for the purpose set forth.

[Claims 6 to 32 not printed in the Gazette.]

1,107,759. PROCESS OF TANNING LEATHER. JAMES C. CLEARY, Chicago, Ill., assignor to Michael W. Borders, Chicago, Ill. Filed Oct. 30, 1911. Serial No. 657,644. (Cl. 149—4.)

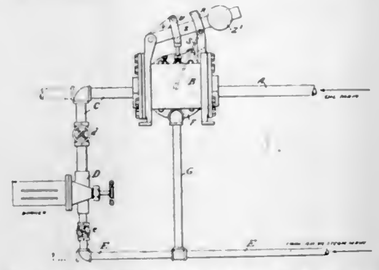
1. The process of tanning hides which consists in first preparting the hides in any usual manner, and in then soaking them in a bath consisting of liquor such as is produced by the destructive distillation of "Ouachita" cretaceous lignite and a usual tanning extract or agent, substantially as described.

2. The process of tanning hides which consists in first preparing the hides in any usual manner, and in then soaking them in a bath consisting of liquor such as is produced by the destructive distillation of "Ouachita" cretaceous lignite and a usual tanning extract or agent in substantially the proportions of forty (40) gallons of "Ouachita" distillate to eleven (11) pounds of extract, substantially as described.

3. The process of tanning hides which consists in first preparing the hides in any usual manner, and in then soaking them in a bath consisting of liquor such as is produced by the destructive distillation of "Ouachita" cretaceous lignite and a usual tanning extract or agent, the extract being added gradually as the tanning process progresses, substantially as described.

4. The process of tanning hides which consists in first picking the hides in the usual manner, then soaking them in a bath consisting of liquor such as is produced by the destructive distillation of Ouachita cretaceous lignite to which a tanning extract is added in about the proportion of forty gallons of such distillate to one pound of extract, and then adding to such bath about three pounds of extract at the beginning of the second week, three pounds at the beginning of the third week, and four pounds at the beginning of the fourth week, the soaking continuing until about the end of the fourth week.

1,107,760. AUTOMATIC STOP-VALVE. LOVELL W. COOPER, Schenectady, N. Y. Filed Feb. 20, 1914. Serial No. 819,939. (Cl. 158—36.)



1. An automatic stop-valve comprising a valve casing; a swinging gate therein controlling one of the openings in said casing; mechanical means located outside of the valve casing for opening said gate; and mechanical means within the valve casing for holding the gate open while the pressure is substantially the same on each side of the gate, but releasing the gate and causing it to automatically close when the pressure on the outgoing side is reduced.

2. In an automatic stop valve; the combination of a valve casing; a gate adapted to close the exit of said casing; a plunger; means for connecting said gate with said plunger; means mounted externally of said valve casing for raising the plunger; means for holding said raising means when the gate is open; a diaphragm; and means operated by said diaphragm for releasing said holding means and causing the plunger to descend, engage the gate and force the same in a closed position.

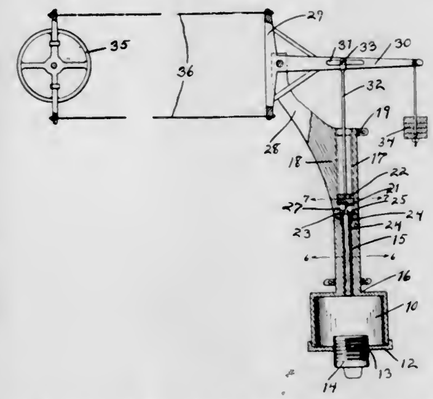
3. A device for automatically controlling the fluid used for fuel, comprising a valve casing; a gate therefor; mechanical means external of the said casing for opening the gate; means just within the valve casing for holding the gate open while the pressure is the same on each side of the gate; a steam or air pipe; and means external of the valve casing for putting in motion the means for mechanically closing the gate when a break occurs in the air or steam pipe.

4. A device for stopping the flow of fuel fluid when a break occurs in the main, comprising a valve casing connected to the main; a gate for controlling the passage of fluid through the valve casing; mechanical means external of said valve casing for raising the gate; mechanical means within the casing for holding the gate in its raised position while the pressure on the gate is substantially the same on each side thereof; a steam or air pipe; and means connected with the steam or air pipe for bringing in contact with the gate the mechanical means for closing the same when a break occurs in the steam or air pipe.

5. A device for stopping the flow of fuel fluid when a break occurs either in the fluid main or in the air main, comprising a valve casing in the fluid main; an air or steam main; a burner in which the air or steam is mixed with the fluid; a gate in the valve casing; a weighted lever for closing the gate; a stop for holding the lever; a spring in the casing holding the gate open while the pressure remains the same on each side thereof; a diaphragm; means for conducting to the diaphragm air or steam from the air or steam main; and means connected with said diaphragm for withdrawing said stop and permitting said weighted lever to fall, thereby closing said gate when a break occurs in the air or steam main, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,761. TEMPERATURE-REGULATOR. ROYAL A. CREW, Portland, Oreg. Filed June 23, 1913. Serial No. 775,371. (Cl. 236—6.)

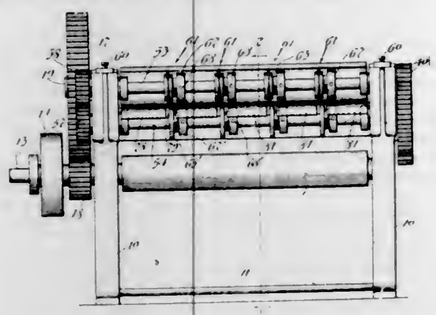


In a device of the character described, a liquid receptacle, an adjusting plug threaded therein, a barrel opening into the receptacle, guides forming continuations of the barrel, a supporting arm formed integrally with one of the guides, a cross bar pivoted intermediate its ends to said supporting arm, a lever extending at right angles from the intermediate point of the cross bar, said lever being provided with a longitudinal slot, a plunger movable within the barrel, a cross head, a connecting rod secured at one end to the cross head and at the other end to said lever, the point of connection with the lever being movable along the slot, and weights to draw the lever downwardly as the liquid contracts.

1,107,762. SHEET SPLITTING AND CUTTING MACHINE. HARRY A. CUMFER, Chicago, Ill., assignor to Guyton & Cumfer Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1913. Serial No. 803,468. (Cl. 164—68.)

1. In a machine of the character described, a rotary disk knife divided into a plurality of segments; a struc-

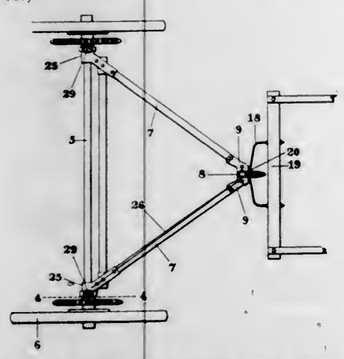
ture for carrying said segments, and means for securing said segments to said structure in proper alinement.



2. In a machine of the character described, a rotatable shaft; a rotary knife divided into a plurality of segments for attachment thereto; a structure for carrying said segments; means for securing said segments to said structure in proper alinement, and means for adjustably securing said structure to said shaft.

3. In a machine of the character described, a rotatable shaft, a rotatable knife divided into a plurality of segments for attachment thereto; a structure for carrying said segments consisting of a slotted sleeve having a tapered end; means for securing said segments to the other end of said sleeve, and a nut threaded on said sleeve and having a tapered coacting portion for contracting said sleeve to secure it to said shaft.

1,107,763. COUPLING FOR HAY-LOADERS. JOSEPH DAIN, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed June 21, 1913. Serial No. 775,012. (Cl. 21—75.)



1. The combination with a vehicle, and a pair of draft-bars connected therewith and converging toward their forward ends, of means at the inner ends of said bars for engaging the axle of the vehicle, friction devices bearing upon said axle-engaging means and adapted to hold said draft-bars in operative position, and a coupling member attached to the forward ends of said draft-bars.

2. The combination with a vehicle, and a draft device connected therewith, of means carried by said draft device for engaging the axle of the vehicle, a friction device bearing upon said axle-engaging means and adapted to hold said draft device in operative position, and a coupling member attached to the forward part of said draft device.

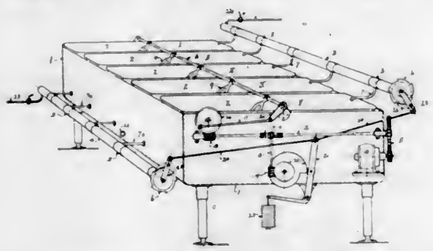
3. The combination with a vehicle and a draft-device connected therewith, of means carried by said draft-device for engaging the axle of the vehicle, a two-part friction device bearing upon said axle-engaging means and adapted to hold said draft-device in operative position, said friction device having two oppositely-located end portions spaced a distance apart, a spring for forcing said two ends toward each other to hold the two parts of the friction device in engagement with said axle-engaging means, and a coupling member attached to the forward part of said draft device.

4. The combination with a vehicle and a draft-device connected therewith, of means carried by said draft-device for engaging the axle of the vehicle, a two-part friction device bearing upon said axle-engaging means and adapted to hold said draft-device in operative position, said friction device having two oppositely-located ends spaced a distance apart, a bolt passing through said ends, a spring held on said bolt and bearing against one of said ends to yieldingly hold the two parts of the friction device in engagement with said axle-engaging means, and a coupling member attached to the forward part of said draft-device.

5. The combination with a vehicle, and a draft device connected therewith, of means carried by said draft device for engaging the axle of the vehicle, a supporting standard for the vehicle frame, a friction device at the lower end of said standard and bearing upon the said axle-engaging means to hold said draft device in operative position, and a coupling member attached to the forward end of said draft device.

[Claims 6 to 10 not printed in the Gazette.].

1,107,764. SERIES OF HOLDING-VATS. WILLIAM J. DAVIS, Chicago, Ill. Filed Nov. 4, 1911. Serial No. 658,602. (Cl. 210—20.)



1. In an apparatus of the character described, a tank with a number of separate holding vats therein, an inlet pipe with sides perforated with an opening adjacent to each of said holding vats, sleeves embracing said inlet pipe over each of said openings therein, an opening in each sleeve leading into one of said holding vats, the openings in said inlet pipe being so located that each partial revolution thereof in said sleeves causes one of said openings to coincide with an opening in one of said sleeves, an outlet pipe of same construction as said inlet pipe, sleeves embracing said outlet pipe over each opening therein, an opening in each of said sleeves, each connected with an opening in the bottom of the adjacent holding vat, and mechanism for causing a simultaneous partial revolution of said inlet and said outlet pipes in said sleeves at fixed periods, said inlet and outlet pipes being so adjusted with reference to the positions of the openings in each pipe, that the simultaneous partial revolution of said pipes closes an outlet and opens an inlet of the same holding vat.

2. In an apparatus of the character described, a number of holding vats, an inlet valve and an outlet valve connected with the inlet and the outlet of each of said holding vats, an inlet pipe to conduct liquid to be treated to all of said inlet valves, an outlet pipe to conduct liquid treated from all of said valves, an inlet stuffing box in which one end of the said inlet pipe may revolve, an outlet stuffing box in which one end of said outlet pipe may revolve, sleeves embracing the inlet and the outlet pipes opposite to each holding vat, ratchet wheels affixed to one end of each of said inlet and outlet pipes, and means coöperating with said ratchet wheels to cause a simultaneous partial revolution of both said ratchet wheels at stated periods.

3. In an apparatus of the character described, a number of separate holding vats, an inlet pipe and an outlet pipe adjacent to the ends of said holding vats, openings in each of said pipes opposite to the end of each holding vat, a removable cap upon one end of both of said pipes, an inlet stuffing box with a removable cap, upon one end of the inlet pipe, an outlet stuffing box, with a removable cap upon one end of the outlet pipe, sleeves embracing each of said pipes covering each opening therein, an opening in each sleeve connected with the adjacent holding vat, the openings in each of said pipes being so located that when an opening therein coincides with an opening in the sleeve, all other openings in such pipe are closed by the sleeves, ratchet wheels affixed to one end of each of said pipes, and means by which a simultaneous partial revolution of both said ratchet wheels is affected, so that coincidence of openings in the pipes with openings in sleeves occur successively at each partial revolution of said pipes, said pipes being so adjusted that the valve opening into a vat is opened and the valve at the outlet of the same vat, is closed simultaneously.

4. In an apparatus of the character described, the combination with a number of holding vats, an inlet pipe closed at one end and having an inlet stuffing box at the other, openings in said pipe adjacent to each of said holding vats, a sleeve covering each of such openings in said pipe with an opening in such sleeve connected with the adjacent holding vat, an outlet pipe closed at one end and having an outlet stuffing box at the other end, openings in said pipe adjacent to each holding vat, a sleeve covering each of such openings in said pipe with an opening in such sleeve connected with the adjacent holding vat, ratchet wheels affixed to an end of each of said pipes, and mechanism which simultaneously at stated periods partially revolves both pipes in the sleeves and stuffing boxes, the openings in each pipe being so located that by each partial revolution thereof, only one opening therein coincides with an opening in a sleeves.

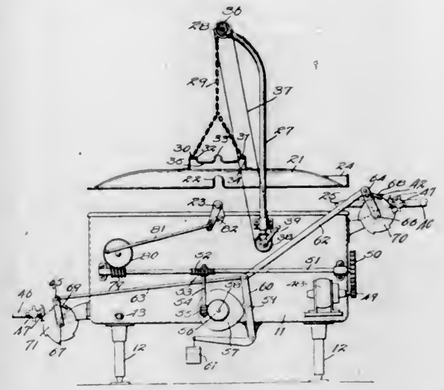
5. In an apparatus of the character described, the combination with a multiplicity of separate holding vats, of an inlet pipe with a removable cap at one of its ends, its sides being perforated with openings, each of said openings leading to one of said holding vats, an inlet stuffing box embracing one end of said pipe, sleeves embracing said pipe and covering each opening therein, an opening in each sleeve corresponding to the opening in said pipe and connected with one of said holding vats, an outlet pipe with removable cap at one of its ends, its sides being perforated with openings, each of said openings leading from one of said holding vats, an outlet stuffing box embracing one end of said pipe, sleeves embracing said outlet pipe and covering each opening therein, an opening in each outlet sleeve corresponding to the opening in said outlet pipe and connected with an opening at or near the bottom of one of said holding vats, and a mechanism for causing periodical partial revolutions of both the inlet and the outlet pipes, simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

1,107,765. PASTEURIZING APPARATUS. WILLIAM J. DAVIS, Chicago, Ill. Filed Aug. 22, 1912. Serial No. 716,374. (Cl. 210—20.)

1. In a device of the class described, the combination with a single tank containing a heating fluid, of a plurality of holding vats mounted therein, having their flat vertical sides adjacent each other and the walls of the tank, a corresponding plurality of valves controlling the admission and discharge of the treated fluid to and from each of said vats, and automatic mechanism for operating the supply and discharge valves of the various vats *seriatim*, so that one vat will be emptying while another is filling, and so that the fluid will remain in each vat a certain period of time.

2. In a device of the class described, the combination with a plurality of holding vats, of a corresponding plurality of valves controlling the admission and discharge of the treated fluid to and from each of said vats, automatic mechanism for operating the supply and discharge valves of the various vats, so that one vat will be emptying while another is filling, and so that the fluid will remain in each vat a certain period of time after the completion of the filling and before the beginning of the emptying, a corresponding plurality of stirring members, one extending to each vat, and a single operating mechanism for the stirring members, acting through them constantly to stir gently the fluid in the vats.



3. In a device of the class described, the combination with a plurality of vats, of a rock shaft carrying a plurality of stirrers, one for each vat, a plurality of cocks controlling admission of the liquid to be treated to the vats and its discharge therefrom, and automatic mechanism for rocking said shaft and operating said valves, so that one vat will be emptying while another is filling, and so that the fluid will remain in each vat a certain period of time.

4. In a device of the class described, the combination with a plurality of vats, of a rock shaft carrying a plurality of stirrers, one for each vat, a plurality of cocks controlling admission of the liquid to be treated to the vats and its discharge therefrom, a pair of shafts controlling the movement of the cocks, and automatic mechanism for rocking said rock shafts and operating the other shaft at intervals, so that one vat will be emptying while another is filling, and so that the fluid will remain in each vat a certain period of time.

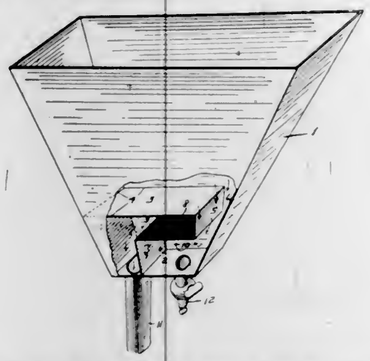
5. In a device of the class described, the combination with a plurality of vats, of a rock shaft carrying a plurality of stirrers, one for each vat, a rotary shaft, means for rotating said shaft, a worm on said shaft, a worm wheel meshing therewith, an eccentric pin thereon, an arm on the rock shaft, and a link connecting said pin and arm.

[Claims 6 to 11 not printed in the Gazette.]

1,107,766. GASOLENE-STRAINER. EDGAR F. DAWS, Sioux City, Iowa. Filed May 5, 1913. Serial No. 765,587. (Cl. 210—16.)

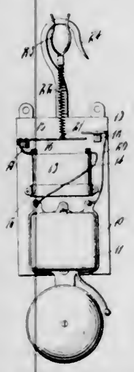
An article of the class described comprising a vessel having walls flaring outwardly from the bottom; an impervious member horizontally disposed within the vessel and having edges secured to the walls thereof and a portion bent downwardly to afford a passage from the top to the bottom of the vessel; an upright impervious member secured to the bottom and opposite walls, said upright member being positioned intermediate the walls to which it is not secured and having its upper edge substantially the same distance from said horizontal member as the edge of the downwardly bent portion of the latter member; a straining member extending between and secured to the free edges of the impervious members and opposite walls

of the vessel; and an outlet spout depending from the bottom and communicating with the interior of the vessel



on the side of the vertical member opposite from the straining member.

1,107,767. BURGLAR-ALARM. ARCHIE P. DICK, Jr., Clarksville, Tex. Filed May 28, 1913. Serial No. 770,549. (Cl. 177—314.)

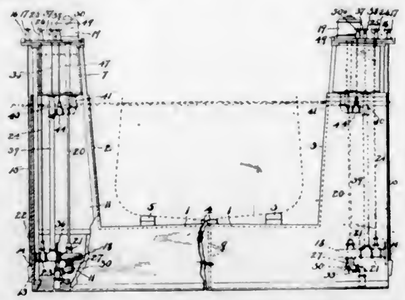


A portable burglar alarm comprising a base having a battery and bell mounted thereon, a pair of contacts mounted on the base and electrically connected with the battery and bell, one of the contacts being resilient and longer than the other contact, a suspending means for engagement over the shank of a door knob, a clip for embracing the shank, and a coil spring connected to the clip and to the longer contact for flexing the contact upwardly into engagement with the other contact upon partial rotation of the knob in either direction.

1,107,768. FLOATING DRY-DOCK. WILLIAM THOMAS DONNELLY, Brooklyn, N. Y. Filed Oct. 9, 1912. Serial No. 724,888. (Cl. 114—45.)

1. A floating dry dock constructed substantially of wood, having ballast compartments which under all conditions are located at a point entirely above the line of its extreme draft, means forming a communication between said compartments, adapting liquid ballast to be supplied thereto and withdrawn therefrom, and pumping means for forcing said liquid ballast into said compartments, substantially as described.

2. A floating dry dock constructed substantially of wood, having lower ballast compartments, ballast compartments which under all conditions are located on each side at a point entirely above the line of extreme draft and the lower ballast compartments and means adapting liquid ballast to be supplied from the lower to the upper compartments and withdrawn therefrom, substantially as described.



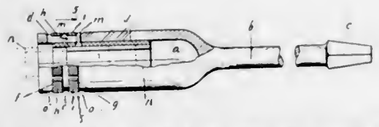
3. A floating dry dock constructed substantially of wood, having lower ballast compartments, upper ballast compartments which under all conditions are located at a point entirely above its extreme draft and the lower ballast compartments and means adapting liquid ballast to be supplied thereto and withdrawn therefrom and adapting liquid ballast to pass back and forth from the lower to the upper compartments, substantially as described.

4. A floating dry dock constructed substantially of wood, having compartments which under all conditions are located at the top on each side at a point entirely above the line of its extreme draft, means adapting liquid ballast to be supplied to said compartments and the lower portion of the interior of the dock and pass back and forth between said compartments and the lower portion of the interior of the dock and means adapting liquid ballast to be withdrawn from said compartments and the lower portion of the interior of the dock independently, substantially as described.

5. A floating dry dock constructed substantially of wood, having compartments in the lower portion of its interior, compartments which under all conditions are located at the top at a point entirely above its extreme draft, means adapting liquid ballast to be supplied to said compartments and means adapting liquid ballast to be withdrawn from said compartments located at the top above the extreme draft of the dock and the compartments in the lower portion of the interior of the dock independently, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,769. ADJUSTABLE SOCKET-WRENCH BIT. VIRGIL D. EARL and FRANK E. MANGOLD, Portland, Oreg. Filed Mar. 19, 1913. Serial No. 755,566. (Cl. 81—121.)

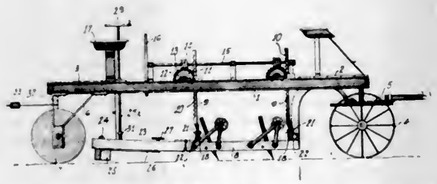


1. A device of the character described comprising a main socket head, a plurality of auxiliary socket heads telescoping in the main socket head, each of said auxiliary socket heads being provided with an outwardly projecting lock pin; the main socket head having diametric longitudinal slots for accommodating the movement of said lock pins, the outermost auxiliary socket head having a registering slot for accommodating the movement of the lock pin of the inner auxiliary socket head; peripheral grooves formed on the main socket head over its said slot; split lock rings rotatably seated in such peripheral grooves, said rings being longitudinally spaced from each other and from the extremities of said slots; and the slots being adapted to permit the projection as well as the inward movement of either auxiliary socket head.

2. A device of the character described comprising a main socket head, a plurality of auxiliary socket heads telescoping in the main socket head, each of said auxiliary socket heads being provided with an outwardly projecting lock pin; the main socket head having diametric longitudinal slots for accommodating the movement of said lock pins, the outermost auxiliary socket head having a registering slot for accommodating the movement of the lock pin of the inner auxiliary socket head; peripheral grooves formed on the main socket head over its said slot; split lock rings rotatably seated in such peripheral grooves, said rings being longitudinally spaced from each other and from the extremities of said slots; and the slots being adapted to permit the projection as well as the inward movement of either auxiliary socket head, but not permitting the removal of the auxiliary socket heads.

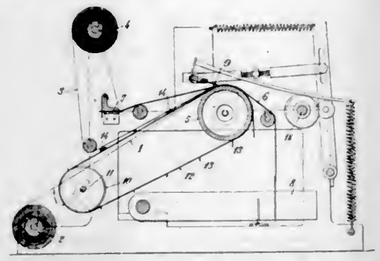
3. A device of the character described comprising a main socket head, a plurality of auxiliary socket heads of unequal length telescoping in the main socket head, each of said auxiliary socket heads being provided with an outwardly projecting lock pin; the main socket head having diametric longitudinal slots for accommodating the movement of said lock pins, the outermost auxiliary socket head having a registering slot for accommodating the movement of the lock pin of the inner auxiliary socket head; peripheral grooves formed on the main socket head over its said slot; split lock rings rotatably seated in such peripheral grooves, said rings being longitudinally spaced from each other and from the extremities of said slots; and the slots being adapted to permit the projection as well as the inward movement of either auxiliary socket head, but not permitting the removal of the auxiliary socket heads.

1,107,770. ROAD-DRESSER. HARVEY L. EGGLESTON, Tulare, Cal. Filed June 23, 1913. Serial No. 775,212. (Cl. 37—7.)



The combination with a wheel mounted frame having a scarifier and a roller mounted thereon in spaced relation, of a leveling frame disposed between said scarifier and said roller and hinged to said scarifier, a bearing swivelly mounted on said wheel mounted frame, a vertical rod screw mounted through said bearing and connected with said leveling frame, and an operating wheel on said rod, as described.

1,107,771. PLAITING-MACHINE FOR PRODUCING TEXTILE FABRICS RESEMBLING VELVET. EUGÈNE LOUIS EZBELENT, Paris, France. Filed Apr. 29, 1914. Serial No. 835,210. (Cl. 26—2.)



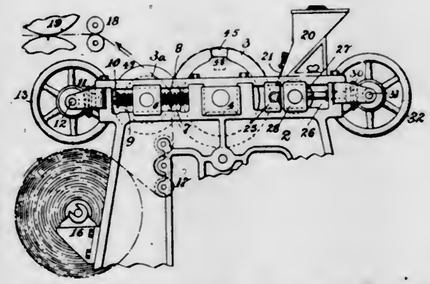
1. In a plaiting machine, in combination: a heated roller, means for guiding fabric and a sheet of paper around said roller, plaiting means coöperating with said roller and means for inserting thin strips between the fabric and the paper, substantially as described and for the purpose set forth.

2. In a plaiting machine, in combination, a heated roller, means for guiding fabric and a sheet of paper around said roller, plaiting means coöperating with said roller, endless transporting belts on both sides of the fabric and paper, means for displacing said belts at a slower speed than the fabric and paper, a portion of these belts being substantially on a line drawn from the line of contact of the fabric and paper and located inside the angle formed by the latter, and means on said endless transporting belts for holding thin strips of material, substantially as described and for the purpose set forth

3. In a plaiting machine, in combination: a heated roller, means for guiding fabric and a sheet of paper around said roller, plaiting means coöperating with said roller, endless transporting belts on both sides of the fabric and paper, means for displacing said belts at a variable speed slower than the fabric and paper, a portion of these belts being substantially on a line drawn from the line of contact of the fabric and paper and located inside the angle formed by the latter, and means on said endless transporting belts for holding thin strips of material, substantially as described and for the purpose set forth.

4. In a plaiting machine, in combination: a heated roller, means for guiding fabric and a sheet of paper around said roller, plaiting means coöperating with said roller, endless transporting belts on both sides of the fabric and paper, guide rollers so arranged that a portion of the endless belts extends at the rear of the machine, means for displacing said belts at a slower speed than the fabric and paper, a portion of these belts being substantially on a line drawn from the line of contact of the fabric and paper and located inside the angle formed by the latter, and means on said endless transporting belts for holding thin strips of material, substantially as described and for the purpose set forth.

1,107,772. PRINTING-PRESS. CHARLES R. FOGWELL, Philadelphia, Pa., assignor to Mary D. Taylor, Philadelphia, Pa. Filed Nov. 25, 1910, Serial No. 594,057. Renewed Dec. 22, 1913. Serial No. 808,273. (Cl. 101—104.)



1. In a plate printing press, the combination of the plate cylinder having thereon an engraved or etched plate, means for rotating the plate cylinder, with means for applying ink to the surface of the said engraved or etched plate, a roller of small diameter and highly polished surface and of exceedingly hard material rolling in close contact with the surface of the engraved or etched plate at a point in rear of the application of the ink thereto and constituting the sole means required for removing the ink from the unengraved portions of the plate, and means for positively rotating the said roller of small diameter at the same surface speed as the etched plate on the plate cylinder, whereby said roller performs a dual function of pressing the ink into the engraved or etched portions and removing the ink from the smooth or unengraved or uneteched portions.

2. In a plate printing press, the combination of a rotating plate cylinder having thereon an engraved or etched plate, with means for applying ink to the surface of the said engraved or etched plate, a roller of small diameter and highly polished surface and of exceedingly hard material, rolling in close contact with the surface of the engraved or etched plate at a point in rear of the application of the ink thereto and constituting the sole means required for removing the ink from the unengraved portions of the plate, and means for positively rotating the said roller of small diameter at the same surface speed as the etched plate on the plate cylinder, whereby said roller performs a dual function of pressing the ink into the engraved or etched portions and removing the ink from the smooth or unengraved or unetched portions, and means for varying the pressure applied to the said cleaning roller.

3. In a plate printing press, the combination of a plate cylinder having thereon an engraved or etched plate with an impression roller for printing from the plate, means for delivering ink to the plate on the plate cylinder, a pressing and cleaning roller of relatively small diameter compared to the diameter of the plate roller and formed of exceedingly hard material with a smooth surface for simultaneously pressing the ink into the recessed or engraved portions of the plate and also for removing the ink from the unengraved portions of the plate, and a supporting roller of relatively large diameter as compared to the pressing and cleaning roller for forcing the said roller toward the plate cylinder and in close contact with the plate thereon.

4. In a plate printing press, the combination of a plate cylinder having thereon an engraved or etched plate, with an impression roller for printing from the plate, means for delivering ink to the plate on the plate cylinder, a pressing and cleaning roller of relatively small diameter compared to the diameter of the plate roller and formed of exceedingly hard material with a smooth surface for pressing the ink into the recessed or engraved portions of the plate and also for removing the ink from the unengraved portions of the plate, a supporting roller of relatively large diameter as compared to the pressing and cleaning roller for forcing the pressing and cleaning roller toward the plate cylinder and in close contact with the plate thereon, and positive means for rotating the pressing roller and plate roller in opposite directions, and means to adjust the supporting roller to regulate the pressure of the pressing roller upon the plate on the plate cylinder.

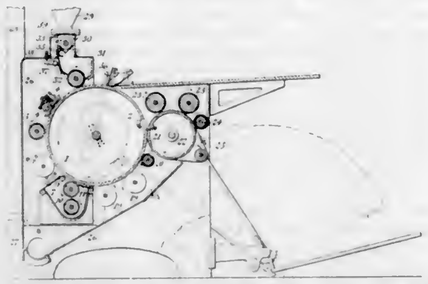
5. In a plate printing press, the combination of a plate cylinder having thereon an engraved or etched plate, with an impression roller for printing from the plate, means for delivering ink to the plate roller, a pressing and cleaning roller of relatively small diameter compared to the diameter of the plate roller and formed of exceedingly hard material with a smooth surface for pressing the ink into the recessed or engraved portions of the plate and also for removing the ink from the unengraved portions of the plate, a supporting roller of relatively large diameter as compared to the pressing and cleaning roller for forcing the pressing and cleaning roller toward the plate cylinder and in close contact with the plate thereon, positive means for rotating the pressing and cleaning roller and plate cylinder in opposite directions, and means to adjust the supporting roller to regulate the pressure of the pressing and cleaning roller upon the plate on the plate cylinder, and gears between the pressing and cleaning roller and the plate cylinder to cause the former to rotate at substantially the same surface speed as the latter.

[Claims 6 to 16 not printed in the Gazette.]

1,107,773. BRONZING-MACHINE. ALBERT J. FORD, New York, N. Y., assignor to The Fuchs & Lang Manufacturing Company, a Corporation of New York. Filed Dec. 6, 1911. Serial No. 664,170. (Cl. 91—59.)

1. A bronzing machine comprising a sheet carrier, means for applying bronze powder to the sheet, and means for applying a drying powder to the sheet after the bronze powder has been applied and while the sheet is in the bronzing machine.

2. A bronzing machine comprising a sheet carrier, means for applying bronze powder to the sheet, means for dusting the bronzed surface, and means for immediately thereafter applying a drying powder to the dusted surface while the sheet is in the bronzing machine.



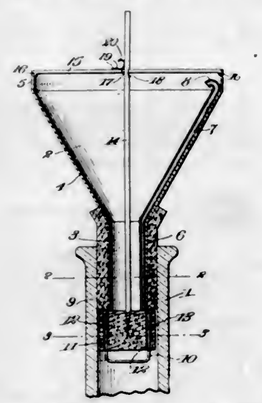
3. In a bronzing machine, the combination, with a sheet carrier, bronze applying means and a chamber containing the same, of means in the chamber for applying a drying powder to the sheet, a bronze receptacle, an exhaust device adapted to withdraw air and dust from the chamber and deliver the bronze thus withdrawn to the bronze receptacle, and means for delivering bronze from the bronze receptacle to the bronze applying means.

4. In a bronzing machine, in combination with a bronze receptacle and with a sheet carrier, means for evenly distributing the bronze in the receptacle, means for feeding bronze from the receptacle to the sheet carrier comprising intermittently operated bronze-applying means adjacent to the sheet carrier, and an intermittent feed device operative to feed bronze at intervals from the receptacle to the bronze-applying means.

5. In a bronzing machine, in combination with a bronze receptacle and with a sheet carrier, a rotative screw disposed in the receptacle transversely of the machine for evenly distributing the bronze in the receptacle, means for feeding bronze from the receptacle to the sheet carrier comprising bronze-applying means adjacent to the sheet carrier, and an intermittent feed device operative to feed bronze at intervals from the receptacle to the bronze-applying means.

[Claims 6 to 9 not printed in the Gazette.]

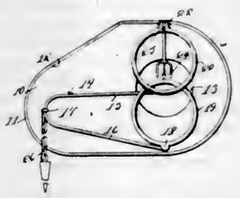
1,107,774. FUNNEL. JOHN H. FREDERICK, Casper, Wyo. Filed Nov. 7, 1912. Serial No. 730,077. (Cl. 226—33.)



1. A funnel including a spout, a substantially U-shaped wire having its ends fastened to the said spout, a float slidable on said wire, the connecting portions of the wire acting as a support for the said float, a rod secured to the said float and extending upwardly therefrom, the said rod having a notch formed therein near the top thereof, a cross bar having an opening through which said rod extends, and means carried by said bar adapted to engage the said rod to maintain the said rod against an edge of the bar at said opening and to force the rod into position with said notch in engagement with the said bar, as and for the purpose set forth.

2. A funnel including a spout, a sleeve arranged to embrace the said spout, a substantially U-shaped wire having its ends fastened to the said spout at the lower end thereof, a float slidable on said wire, the connecting portion of the said wire acting as a support for the said float, a rod extending vertically from the said float, the said rod having a notch formed therein near the top thereof, a cross bar carried by the said funnel having an opening formed therein intermediate its ends through which the said rod extends, a spring carried by the said bar adapted to engage the said rod to maintain the latter in engagement with the said bar to force the said rod until the notch engages the said bar, and a tubular member disposed within the said funnel extending from the top to the bottom thereof to form an air passageway, as and for the purpose set forth.

1,107,775. ANIMAL-TRAP. MORGAN P. FUGATE, Dewey, Okla. Filed Aug. 19, 1912. Serial No. 715,884. (Cl. 43—27.)

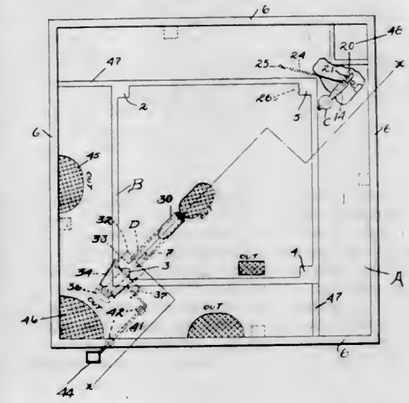


A trap including a supporting member having a circular opening therethrough, a V-shaped leaf spring secured at the bight on one face of said support, a pair of rings of like diameter with each other and with said opening, one ring being secured to the end of a corresponding leg of said spring, and comprising a pair of spaced annuli receiving therebetween the other ring, the remaining leg of said spring being secured to the lower bifurcation of the last mentioned annulus and being arranged on the same side of the last mentioned annulus as the first leg of the spring on the first annulus whereby said legs lie close together when the trap is set, and both rings being adapted to register one with the other and with said opening upon placing of said spring under tension, a forwardly directed bifurcated lug carried by the upper ring, and a right-angular bait receiving trigger pivoted at the rear end in said lug and having a projection disposed below and in rear of its pivot forming a catch to engage with and hold the lower ring in cocked position with respect to the upper ring and said opening.

1,107,776. GAME APPARATUS. ALFRED J. GADBOIS, Duluth, and FRANK W. GADBOIS, St. Paul, Minn. Filed Nov. 13, 1913. Serial No. 800,735. (Cl. 46—59.)

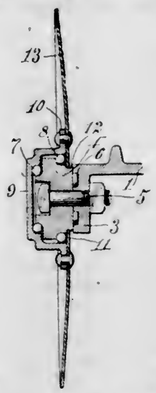
1. Game apparatus adapted for playing base ball, comprising, in combination, a game board, a batting device mounted on said board having a revoluble shaft projecting upwardly therethrough, and means for turning said shaft, a bat, and teams of players adapted for coöperation with said batting device and bat, each of said players consisting of a body having an opening in its lower end to receive the upper end of said shaft and an opening in its side to receive the small end of said bat and hold said bat extending laterally from said body, whereby said players are adapted to take their positions in turn on said batting device and made to hold said bat in turn to strike at a ball.

2. Game apparatus adapted for playing base ball, comprising, in combination, a game board, a batting device mounted upon said board having a revoluble shaft extending upwardly through said board, and means for turning said shaft, and a player body having an opening in its side to receive the small end of a bat and detachably hold said bat projecting from the side of said body, said shaft and the lower end of said player body being separably coupled to detachably support said player body on said shaft.



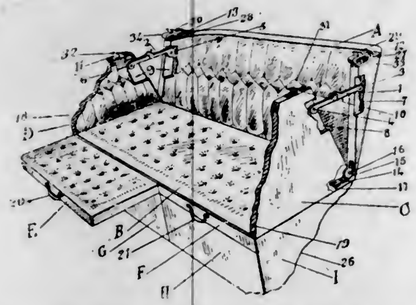
3. In a base ball game apparatus, a player body having an opening in its lower end adapted for the reception of a revoluble shaft, and an opening in its upper end adapted for the insertion of a base ball bat to hold said bat in laterally extending position.

1,107,777. ANTIFRICTION-BEARING FOR FURROW-OPENERS. STEPHEN H. GARST, Moline, Ill., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill., a Corporation of Illinois. Filed Jan. 16, 1914. Serial No. 812,589. (Cl. 64—36.)



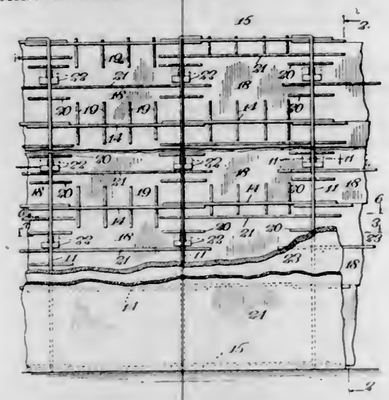
In an anti-friction bearing for furrow openers, the combination with a supporting member, of a bearing member united to said supporting member and having inwardly and outwardly lying peripheral grooves provided with balls, and an annular shoulder extending inwardly from the outermost series of balls, a cap inclosing said bearing and having an outwardly disposed marginal flange, and a disk secured to said marginal flange and engaging the annular shoulder of the bearing member, the portion of said disk extending to said shoulder forming the inner closure for the outermost series of balls, substantially as specified.

1,107,778. VEHICLE-SEAT. MARIA A. GAUGH, Newport, Ky. Filed Mar. 22, 1913. Serial No. 756,089. (Cl. 21—43.)



In a vehicle seat, a rearwardly adjustable back, having its lower edge hingedly attached to the rear portion of the bottom of said seat, and having its upper portion secured to the upper portion of the sides of said seat by jointed rods of iron, adapted to fold the one portion thereof upon another portion thereof, in combination with a fastener one portion thereof being adapted to slidingly engage another portion thereof and secure the upper portion of said back to the upper portion of the sides of said seat whenever said back is brought into an upright position.

1,107,779. FIREPROOF WALL. THEODORUS HUBERTUS GERAERDTS, New York, N. Y. Filed Sept. 20, 1912. Serial No. 721,396. (Cl. 72—30.)



1. In a building wall, in combination, building blocks, vertical studs, stiffening plates extending between the studs and supported thereby and arranged to support the building blocks, each plate being provided along each lateral edge outside of its respective building block with a plurality of dowel-receiving and mortar-receiving openings, and dowels extending through said dowel-receiving openings and bridging the joints of the adjacent building blocks.

2. In a building wall, a plurality of vertical studs provided with a series of perforations along each edge, horizontal stiffening plates extending between the studs and having their ends secured thereto and provided with a series of perforations along each edge, building blocks disposed in the respective spaces between the adjacent studs and stiffening plates, horizontal block-retaining dowels extending through certain of the perforations in the studs and bridging the joints of the adjacent building blocks, and vertical block-retaining dowels extending through certain of the perforations in the stiffening plates and bridging the joints of the adjacent building blocks.

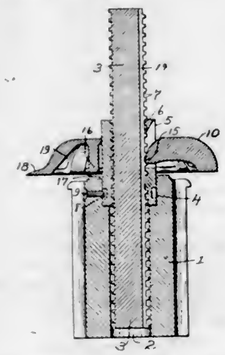
3. In a building wall, a plurality of vertical studs provided with a series of perforations along each edge, horizontal stiffening plates extending between the studs and having their ends secured thereto and provided with a series of perforations along each edge, building blocks disposed in the respective spaces between the adjacent studs and stiffening plates, horizontal block-retaining dowels extending through certain of the perforations in the studs and bridging the joints of the adjacent building blocks, horizontal bracing members extending between adjacent studs along the sides of the building blocks and through others of the perforations in the studs, and vertical block-retaining dowels extending through certain of the perforations in the stiffening plates and bridging the joints of the adjacent building blocks.

4. In a building wall, a plurality of vertical studs provided with a series of perforations in each edge, tiers of superposed building blocks disposed between the adjacent studs, and a plurality of block-retaining yokes extending through certain of the perforations in the studs and hooked over the studs and engaging the blocks and holding them against lateral movement relative to the studs.

5. In a building wall, a plurality of vertical studs provided with a series of perforations along each edge, tiers of superposed building blocks disposed between the adjacent studs, horizontal block-retaining dowels extending through certain of the perforations in the studs and bridging the joints of the adjacent building blocks, horizontal bracing members extending between adjacent studs and through others of the perforations in the studs, and a plurality of block-retaining yokes extending through others of the perforations in the studs and hooking over the studs and engaging the blocks and holding them against lateral movement relative to the studs.

[Claim 6 not printed in the Gazette.]

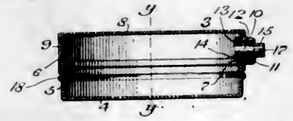
1,107,780. REVOLUBLE OFFICE-CHAIR. JULIUS M. GERMANSON, Milwaukee, Wis. Filed May 8, 1912. Serial No. 695,835. (Cl. 155—41.)



1. In a device of the described class, the combination with a chair hub, a seat supporting screw, provided with a vertical channel, a nut having threaded bearings on said screw, a collar pivotally supported from two opposite sides of said nut, a lug formed on one side of said collar, adapted to engage in said vertical channel, whereby said screw, nut and collar are normally locked together, and means caused by the tilting of said collar for locking said nut to said hub, and simultaneously releasing the locking mechanism between said screw and nut, whereby said screw may be revolved without revolving said nut and the seat adjusted to a higher or lower plane.

2. In a device of the described class, the combination of a chair hub provided with a smooth vertical bore for the reception of a seat supporting screw, a seat supporting screw provided with a vertical channel, a seat supported upon the upper end of said screw, a nut having screw threaded bearings on said screw revolubly supported from said nut, a tilting collar provided with a central aperture inclosing said nut and screw, a pair of lugs by which said collar is pivotally supported from the sides of said nut, a lug on the collar adapted to engage said vertical channel and normally lock said collar, nut and screw together, said collar being provided with an additional lug adapted, as said collar is tilted, to engage a vertical projection formed on said hub as the opposite lug of said collar is withdrawn from the vertical channel of said screw, whereby said collar and nut are prevented from turning with said screw, and said screw is adapted to be turned upwardly or downwardly in said hub, and the seat of the chair adjusted at different elevations.

1,107,781. LID-RAISING DEVICE. JOHN CORYDON GIBBS, Philadelphia, Pa. Filed Dec. 29, 1913. Serial No. 809,194. (Cl. 220—6.)



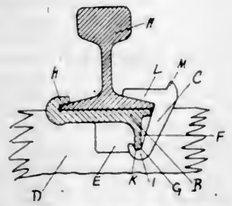
1. As an improved article of manufacture, a box cover having a hollow inwardly open boss, packing filling said boss, a stem rotatably mounted in said boss and packing, and a cam on said stem, the inner wall of said cam abutting said packing whereby said packing is retained by said cam within the boss.

2. A box body, a cover for said body having a flange, a hollow boss projecting from said flange, a stem rotatably mounted in said hollow boss, a cam mounted on the inner end of said stem, and projecting beyond the inner wall of said flange to engage the upper edge of the flange of said box body, and packing in said hollow boss, said cam serving to hold said packing in said boss.

3. A box body, a cover for said body having a flange, a hollow boss projecting from said flange, a stem rotatably mounted in said hollow boss, a cam mounted on the inner end of said stem, and projecting beyond the inner wall of said flange to engage the upper edge of the flange of said box body, and packing in said hollow boss, said cam serving to hold said packing in said boss, in combination with a finger-piece secured in the outer end of said rotatable stem, for manually rotating the latter.

4. In a box lid raising device, the combination of a cover flange having a pocket therein, packing material located in said pocket, a stem passing through the outer wall of said pocket and said packing, and having a cam on the inner end thereof, said cam projecting beyond the plane of the inner face of the box cover lid to contact therewith, and serving as the sole means for retaining said packing in position, a finger-piece on the outer portion of said stem, said finger-piece being secured in a slot in the outer portion of said stem.

1,107,782. RAIL-ANCHOR. HORATIO G. GILLMOR, Portsmouth, Va. Filed May 12, 1913. Serial No. 767,129. (Cl. 238—4.)



1. A clamp constructed with an upwardly and inwardly overturned portion at one end forming a jaw adapted to engage with a rail flange and at the other end thereof a downwardly projecting portion constructed so to engage with a vertical pressure producing part as to permit rotational movement of said vertical pressure producing part in relation to said clamp.

2. A rail gripping part constructed with a rail base flange engaging portion at one end, a transversely extending portion provided with a depending tie engaging portion and, at the other end a downwardly projecting portion provided with a recessed seat adapted to pivotal engagement with a vertical pressure producing part.

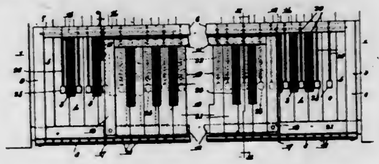
3. A vertical pressure producing part for rail anchors constructed so to engage a rail bottom engaging part below the rail that rotational movements of said pressure producing part about an axis below the rail will force surfaces of said pressure producing part into engagement with the upper surface of the base flange of the rail and thereby produce pressure of the bottom engaging part upon the bottom of the rail, substantially as described.

4. A part for anti-creepers constructed with an arm adapted to engage a rail above the base thereof and a hook adapted so to engage a rail bottom engaging element below the rail as to permit angular movements of said part about axes at right angles the one to the other.

5. An anticreeper for rails comprising a rail gripping element and a part engaging the upper surface of the rail base at the side of the rail opposite to said gripping element and so pivoted to said gripping element as to be rotatable about a longitudinal axis below the rail and between the edges thereof for effecting the gripping action of said element.

[Claims 6 to 20 not printed in the Gazette.]

1,107,783. TRANSPOSING ATTACHMENT FOR PIANOFORTES. LOUIS ALLAN GOSS, Cambridge, England. Filed June 8, 1911. Serial No. 631,928. (Cl. 84—41.)



1. In a transposing device for pianos, a horizontal support, a frame, an auxiliary keyboard on said frame, hinge members pivotally connected to said frame and slidably mounted upon said support whereby said frame may be adjusted relative to said support, and means for securing said frame in adjusted position, substantially as described.

2. In a transposing device for pianos, a horizontal support, a frame, an auxiliary keyboard on said frame, hinge members pivoted at their medial portions to said frame, means provided at one end of said members for slidably engaging said support, the opposite end of each of said members being provided with an arcuate slot, and screws secured to said frame and projecting through said slots whereby said frame may be held in its adjusted positions, substantially as described.

3. In a device of the class described, a main frame adapted to rest upon the case of a piano adjacent the key board thereof, a plurality of springs fixed to extend from said frame longitudinally of and above the white keys of said key board, each of said springs being provided with a pad adapted to rest upon said white keys and having its upper face in the same plane with the upper faces of the black keys of the piano key board; in combination with an auxiliary frame, means for adjustably supporting said auxiliary frame within said main frame, an auxiliary key board on said auxiliary frame comprising a plurality of depressible keys, spring members connecting said depressible keys with said auxiliary frame, the keys of said auxiliary key board coöperating with the black keys of the piano key board and with said pads, and coöperating

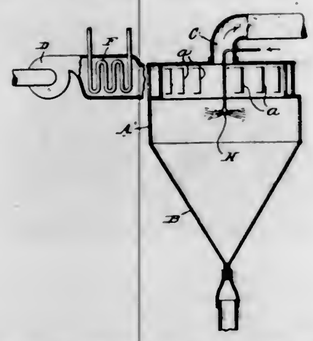
means on said frames for locking said auxiliary frame in adjusted positions, substantially as described.

4. In combination with a piano key board having keys of different heights, a main frame adapted to rest upon the case of a piano, a spring-mounted leveling pad arranged above each of the lowermost keys of said piano keyboard with its lower face resting upon its respective key and its upper face being in the same plane with the upper faces of the higher keys; an auxiliary frame, means for adjustably supporting said auxiliary frame within said main frame, an auxiliary keyboard on said auxiliary frame comprising a plurality of depressible keys, spring members connecting said depressible keys with said auxiliary frame, the keys of said auxiliary keyboard coöperating with the higher keys of said piano keyboard and said leveling pads, and coöperating means upon said frames for locking said auxiliary frame and keyboard in adjusted positions, substantially as described.

5. In a transposing device, a horizontal support adapted to be positioned above the keyboard of a piano, a frame, an auxiliary keyboard upon said frame, hinge members secured at one end to said frame and in sliding engagement at their opposite ends with said support, and coöperating means upon said hinge members and said frame whereby the latter may be adjusted vertically, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,784. PROCESS OF DESICCATING. CHESTER EARL GRAY, Eureka, Cal., assignor of one-half to Aage Jensen, Oakland, Cal. Filed Nov. 10, 1913. Serial No. 800,188. (Cl. 99—5.)



1. The method of desiccating substances which consists in forming a cyclonic air current in which the air moves centripetally and in introducing the substance to be treated in finely divided form, centrally of the cyclonic current and causing the particles thereof to travel centrifugally through the air current while partaking of its rotary movement.

2. The method of desiccating fluid substances which consists in forming a cyclonic air current in which the air moves centripetally, introducing the fluid substance in atomized form centrally of the cyclonic current and causing the particles thereof to travel centrifugally through the air current while partaking of its rotary movement.

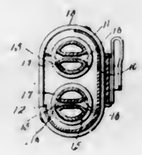
3. The method of desiccating fluid substances which consists in forming a cyclonic current of heated air in which the air moves centripetally, introducing the substance in atomized form centrally of the cyclonic current and causing the particles thereof to travel centrifugally through the air current whereby such particles are subjected to the action of air of gradually decreasing humidity and increasing temperature.

4. The method of treating substances in finely divided form, which consists in forming a cyclonic current of an elastic fluid treating medium in which the medium moves centripetally and in introducing the substance to be treated in finely divided form centrally of the cyclonic current and in causing the particles thereof to travel centrifugally through the medium to the periphery of the cyclonic current.

5. The method of treating substances in finely divided form to reduce the percentage of free moisture contained therein, which consists in forming a cyclonic current of an elastic fluid treating medium in which the medium moves centripetally and in introducing the substance to be treated in finely divided form centrally of the cyclonic current and in causing the particles thereof to travel centrifugally through the medium to the periphery of the cyclonic current.

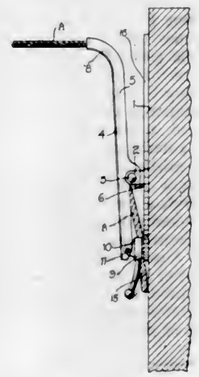
[Claim 6 not printed in the Gazette.]

1,107,785. COPY-HOLDER. WILLIAMSON T. HACKER, Columbus, Ind. Filed Nov. 4, 1910. Serial No. 590,758. (Cl. 120—31.)



In a copy holder a pair of spaced rollers arranged one above the other and each provided with a longitudinal slot therethrough and a casing wherein said rollers are journaled, said casing terminating above said upper roller and in front of said lower roller.

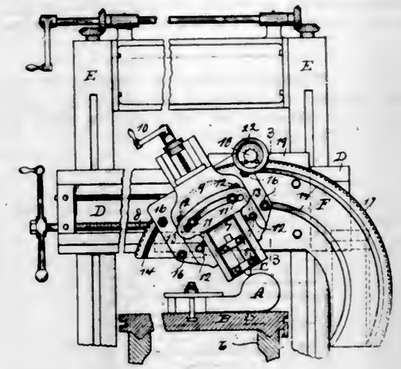
1,107,786. CLOTHES-LINE HOLDER. SAMUEL M. HARRISON and WILLIAM E. SMITH, Chester, W. Va., assignors of one-third to Francis R. Harrison, East Liverpool, Ohio. Filed July 26, 1913. Serial No. 781,405. (Cl. 24—133.)



1. A clothes line holder including a pivotally mounted clamp having a longitudinal groove formed in its inner face and said clamp being further provided at one end with a transversely extending slot which traverses said longitudinal groove, said slot extending from the front to the rear of said clamp, as and for the purpose set forth.

2. A clothes line holder comprising a supporting plate having a pair of outwardly extending apertured ears intermediate of its ends, a shaft connecting said ears, a lever pivotally connected intermediate of its ends to said shaft, and a clamp pivotally connected to said lever at one end thereof, the inner face of said clamp having a longitudinal groove formed therein, said clamp having a transversely extending slot formed in one end thereof, said slot traversing said longitudinal groove, as and for the purpose described.

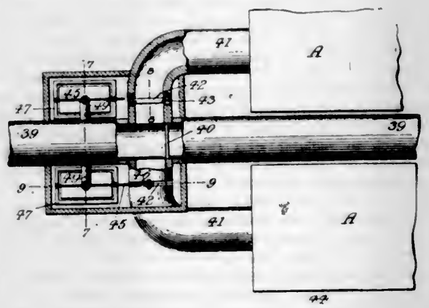
1,107,787. PLANER. ALFRED P. HAUSTETTER, Norwood, Ohio, assignor to The Victor Safe & Lock Co., Norwood, Ohio, a Corporation of Ohio. Filed Sept. 5, 1913. Serial No. 788,327. (Cl. 90—31.)



1. A machine-tool of the planer-type, comprising a reciprocatory work-support, a rail, a saddle adjustably fitted thereto, a guide-plate superposed upon the front side of the saddle and rigidly attached thereto, it extending also beyond said saddle on each side where at its rear side it is fitted into sliding engagement with the rail, concentric ways provided on the face-side of said guide-plate, a carrier-plate movably fitted to the ways of the guide-plate, means to move the carrier-plate on the guide-plate so as to follow the ways thereon, and means to hold a tool provided on the carrier-plate.

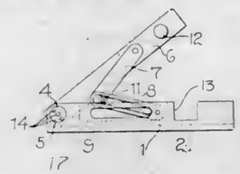
2. A machine tool of the planer-type, comprising a reciprocatory work-support, a rail, a saddle adjustably fitted thereto, a guide-plate having concentric grooves in its front-side superposed upon the front side of the saddle and rigidly connected thereto, a carrier-plate having lugs on its rear-side which are movably fitted into the grooves mentioned, means to hold these lugs in these grooves, a planer-head provided with adjustable tool-holding means secured to the carrier-plate, and mechanism to move the carrier-plate with the planer-head on the guide-plate so as to cause the carrier-plate to follow the grooves therein.

1,107,788. CONTROLLING APPARATUS FOR SEWAGE-DISPOSAL PLANTS. AUGUST HELLMUTH and SEBASTIAN MAULBECK, West Hoboken, N. J. Filed Sept. 24, 1913. Serial No. 791,502. (Cl. 137—78.)



A device of the character described, comprising a sewer, a sludge trough, a branch intermediate sewer and trough, a weir within the sewer at a point beyond the branch, a gate controlling said branch, a perforated pocket operatively connected to the gate, and means for discharging the sewage from the sewer into said pocket.

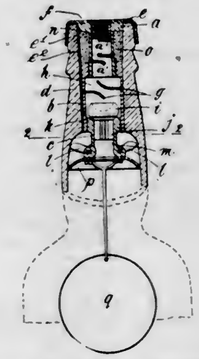
1,107,789. GAGE. FRIEDRICH AUGUST HOLLANDT and JOHN W. SMITH, Ilion, N. Y. Filed Oct. 30, 1912. Serial No. 728,604. (Cl. 33—117.)



1. In a folding device of the character described, the combination of a body having a recess formed on one side thereof, an extension formed upon one side of said body, a bar pivotally secured to the end of the body and arranged in parallel relation therewith when not in use, adjustable brace members pivotally secured to said bar and body for adjusting the bar to various positions, said brace members being disposed within said recess when the device is folded, said body being provided with a transverse recess adjacent one end thereof, a pin formed adjacent the outer end of the bar and extending at right angles thereto and extending within said transverse recess when the device is folded.

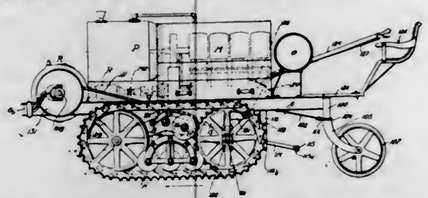
2. In a folding device of the character described, the combination with a body having an elongated recess formed in one side thereof, an extension formed integral with said body and disposed at right angles thereto, a bar pivotally secured to one end of the body and arranged in parallel relation therewith when not in use and adapted to rest upon said extension, said body having an elongated recess therein, brace members pivotally secured to said body and bar and disposed within said recess when said device is folded, one of said brace members being provided with an elongated slot, a set screw carried by the other of said brace members and disposed within said slot, said body being provided with a transverse recess adjacent one end thereof, a pin formed adjacent the outer end of the bar and extending at right angles thereto and disposed within said transverse recess when the pivoted bar is not in use.

1,107,790. NON-REFILLABLE BOTTLE. THOMAS HOWARD HOLROYD, Southfields, England. Filed Dec. 21, 1912. Serial No. 738,028. (Cl. 215—67.)



The combination with a bottle provided with a neck having an interior shoulder; of a valve structure adapted to be inserted in said neck with its lower end projecting below said shoulder, lugs projecting from the lower end of the valve structure and provided with slots extending outwardly from said lower ends, dogs provided with pins engaged in said slots whereby said dogs have a pivotal and sliding connection with the valve structure, and means carried by the valve structure to force said dogs outwardly.

1,107,791. TRACTION-ENGINE. ORLEY C. HOUGHTON, Chicago, Ill., assignor to Bullock Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1913. Serial No. 798,473. (Cl. 21—114.)



1. In a traction engine a main frame having a power plant and transmission means thereon, a traction truck oscillatably mounted at each side of said frame, the point of oscillation of said trucks being slightly in front of the center of said trucks, the slight preponderance of weight of said trucks being in the rear thereof, an endless traction belt in each of said trucks, means connected with said endless traction belts constructed to vary the speed of movement of each belt independently of, and conjointly with the other of said belts, and means located on said frame to simultaneously elevate one of the free ends of both of said trucks, said latter means including a single, long, rearwardly-extending arm, a shaft to which said arm is affixed at its forward end, a crank-arm at each end of said shaft, and links connecting said crank arms to the traction trucks at the rear ends thereof, whereby when said trucks are raised at their rear ends, the machine is constructed to turn at the forward ends of said trucks.

2. In a traction engine a main frame having a power plant and transmission means thereon, a traction truck flexibly mounted at each side of said frame, manually operated means located on said frame to simultaneously elevate one of the free ends of both of said trucks, said means comprising a transverse shaft mounted under said main frame and having at each end a crank arm fixed thereto, a link depending from each of said crank arms connecting with one end of each of said trucks, said links being slotted, there being in said links means constructed to positively engage one of the free ends of said trucks to prevent vertical movement of said trucks, said means being removable to liberate said free ends, a long operating lever with latch devices, and a quadrant on said frame having means engaging said latch devices.

3. In a traction engine, a main frame having a power plant and transmission means thereon and a transverse dead axle under the same extending beyond the sides of said frame, traction trucks oscillatably mounted on the opposite ends of said axle, manually operated means located on said frame to simultaneously elevate one of the free ends of both of said trucks, said means comprising a transverse shaft mounted under said main frame and having at each end a crank arm fixed thereto, a slotted link depending from each of said crank arms connecting with one end of each of said trucks, a long operating lever with latch devices, a quadrant on said frame having means engaging said latch devices, and means for releasing said slotted links from positive engagement with said truck ends.

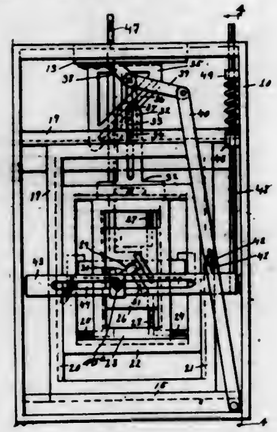
1,107,792. NUT-LOCK. JAMES D. HOUSTON, Nebraska City, Nebr. Filed Mar. 23, 1914. Serial No. 826,469. (Cl. 151—35.)



1. A locking washer provided about its outer periphery with struck-out tongues folded down upon the inner side of the washer forming anchor projections.

2. In combination with a threaded bolt, a locking device therefor, comprising a washer mounted on the threaded end of said bolt and provided with struck-out peripheral anchor tongues folded upon the inner side of the washer and forming inclined perpheral notches, and a nut provided on its under side with notched inclines terminating in toothed offset portions in engagement with said washer.

1,107,793. COMBINATION-LOCK. SELDEN P. HOVEY, Los Angeles, Cal., assignor of one-half to James C. Spann, Los Angeles, Cal. Filed June 11, 1913. Serial No. 773,012. (Cl. 70—18.)



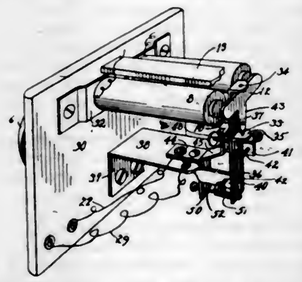
1. In a combination lock the combination of a casing; a series of rectangular frames slidably mounted, one within the other, in said casing; a locking block having an opening therethrough mounted in the inner one of said frames and adjustable therein; a locking bolt slidably mounted in said casing at right angles to the locking block, said bolt being adapted to have one end projected through a slot in the side of the casing when the lock is operative, and the other end projected through the opening in the block when the lock is inoperative; means to bring the opening in the locking block into register with the end of the locking bolt; and means to project the end of said locking bolt through the opening in said block to release the lock.

2. A combination locking comprising a casing having a slot in one side thereof; a nest of rectangular frames slidably mounted in said casing transversely thereof, said frames being slidable at right angles to each other; a locking block having an opening therethrough adjustably mounted in the inner one of said frames; a locking bolt slidably mounted in the casing at a right angle to the locking block adapted to project through the opening in the side of the casing when in an operative position and through the opening in the locking block when in an inoperative position; means to cause the opening in the locking block to register with the end of the locking bolt; and means to cause the end of said bolt to project through the said opening in the block to release the lock.

3. In a lock a casing having a detachable cover and a slot in one side; two blocks having tracks in the opposed faces thereof mounted in the casing transversely thereof one above the other; an outer rectangular frame having grooves in the sides thereof mounted to slide horizontally between said tracks; an inner rectangular frame mounted to slide vertically in said last frame; an adjusting frame mounted in said inner frame; a locking block having an opening extending centrally therethrough adjustably mounted in said adjusting frame; a locking bar adapted to cover the opening in the locking block mounted pivotally on the locking block; a locking bolt slidably mounted in the casing at a right angle to the locking block and being adapted to have the outer end projected through the opening in the side of the case when locked and the inner end project through the opening in the locking block when unlocked; means to cause the locking bar to uncover the opening in the block; means to cause said frames to bring the opening in the locking block into register with the inner end of the locking bolt; and means to slide said locking bolt to lock or unlock the lock when desired.

4. A lock for securing the starting lever of an automobile comprising a casing having a slot in one side thereof and two slots in one end thereof; a nest of rectangular frames slidably mounted in said casing transversely thereof, said frames being slidable at right angles to each other; a locking block having an opening therethrough adjustably mounted in the inner one of said frames; a locking bolt slidably mounted in the casing at a right angle to the locking block, said bolt having a U-shaped end adapted to project through the opening in the side of the casing and engage a starting lever to prevent movement of the same when the lock is locked and being adapted to have the other end projected through the opening in the locking block to release the said lever when the lock is unlocked; means to cause the opening in the locking block to register with the end of the locking bolt; and means to cause said bolt to project through said opening; an indicator plate secured to the body of the automobile; and connections between said means and the indicator plate whereby the lock may be operated from the seat of the car.

1,107,794. AUXILIARY SIGNAL DEVICE. REX IRELAND, Edison, Ohio. Filed Mar. 28, 1913. Serial No. 757,299. (Cl. 177—335.)



1. The combination of a bell having a magnet, a vibrating armature, a movable carrier on which the armature is movably mounted whereby the armature may move on the carrier independently thereof to ring the bell when the magnet is energized, and an auxiliarly signal on an independent circuit having contacts closed by the movement of the carrier and held closed by the attraction of the magnet when energized.

2. The combination of a bell having a magnet and an armature adapted to be attracted and vibrated by alternating current through the magnet, an auxiliary direct-current bell, and a movable carrier actuated by the attraction of said armature, and operating a switch for closing a circuit to the latter bell.

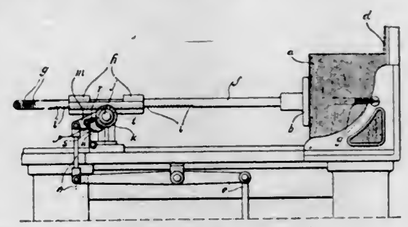
3. The combination of an electro-magnet, a movable armature therefor, a bell, means whereby the movement of the armature rings said bell, a movable carried on which said armature is movably mounted, a second electrically-operated signal, and a circuit therefor adapted to be opened or closed by the movement of said carrier.

4. The combination of an electro-magnet, a movable armature therefor, a gong, a clapper carried by the armature, a movable carried on which said armature is so pivoted that said clapper may vibrate independently of the movement of the armature, a circuit, and a switch adapted to open and close said circuit, one member of which switch is carried by the movable carrier.

5. The combination of an electro-magnet, a pivoted armature therefor, a bell, means whereby the movement of the armature rings said bell, a pivoted carrier on which said armature is pivotally mounted, allowing the movement of the armature independently of the movement of the carrier, a second signal, and a circuit therefor adapted to be opened and closed by the movement of the carrier.

[Claims 6 to 10 not printed in the Gazette.]

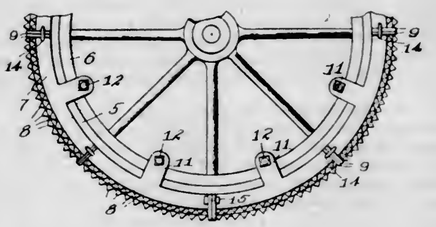
1,107,795. PAPER-FEEDING APPARATUS. EMIL JAGENBERG, Dusseldorf, Germany. Filed July 30, 1913. Serial No. 781,907. (Cl. 101—39.)



1. A paper feeding apparatus comprising a fixed magazine, adapted to contain a stack of vertically disposed sheets, a vertically movable slide having a projection adapted to engage the upper edge of the foremost sheet, a spring-influenced ram adapted to engage the face of the rearmost sheet, and means for retracting the ram during the descent of the slide.

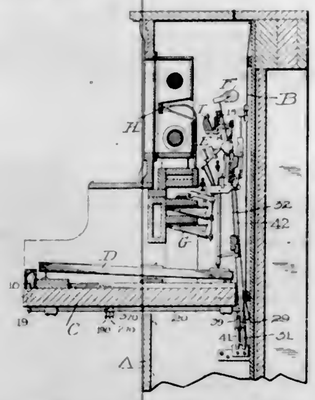
2. A paper feeding apparatus for vertically disposed paper sheets, comprising a vertically reciprocable slide adapted to engage the foremost sheet, a spring-influenced ram adapted to engage the rearmost sheet, a rack carrying the ram, a pinion engaging the rack, a ratchet wheel operatively connected to the pinion, a driven lever, and a pawl operatively connected to said lever and adapted to engage the ratchet wheel.

1,107,796. ANTISKID DEVICE. EUGENE JENÖI and STEVE KRUCHIÓ, Uniontown, Pa., assignors of twenty-five one-hundredths to Gregor R. Szlics and of twenty-five one-hundredths to Anthony Kruchio, Uniontown, Pa. Filed Feb. 14, 1914. Serial No. 818,667. (Cl. 152—16.)



A tire armor comprising a plurality of segmental sections of equal length, fitting together end-to-end to cover the entire periphery of the tire, and having projections on their outer faces, each of said sections being curved both longitudinally and transversely, and provided at each end with an outwardly projecting flange, the flanges of one plate abutting those of adjacent plates, and each formed with an elongated slot, the slots of abutting flanges registering, rings extending through said slots to flexibly connect the flanges, and each section having a pair of inwardly extending arms embracing the wheel felly on opposite sides at a point midway between the flanges on the section, and cross-bolts extending transversely of the inner face of the felly, connecting said arms.

1,107,797. EXPRESSION-CONTROLLING DEVICE FOR MECHANICALLY AND MANUALLY OPERATED PLAYER-PIANOS. OSCAR JOHNSON, New York, N. Y., assignor to Auto Pneumatic Action Company, a Corporation of New York. Filed Oct. 11, 1911. Serial No. 654,148. (Cl. 84—160.)



1. In a piano, a movable hammer rail made in a plurality of sections, means for normally holding the same in forward position, a plurality of vertically sliding plungers constituting push-buttons arranged adjacently in the key-bed, mechanical connections therefrom to the hammer rail whereby each section can be retracted independently of the other sections by manipulation of the corresponding push-button, and a single means for simultaneously retracting and locking all of said sections and for depressing and locking all of said buttons.

2. In a piano, a movable hammer rail made in a plurality of sections, means for normally holding the same in forward position, a plurality of vertically sliding plungers projecting upwardly through the key-bed, a corresponding number of rock shafts each having an arm at one end thereof contacting with one of said buttons, a crank at the other end connected to retract one of said rail sections, and a single means to simultaneously turn all of said shafts to retract said sections, and to thereafter lock said shafts against reverse movement.

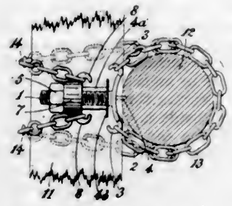
3. In a piano, a movable hammer rail made in sections, means for normally holding the same in forward position, manually operated means for retracting the same, and means for locking the sections in retracted position comprising slotted yokes, a shaft having a crank arm engaging said slotted yokes, and an operating handle on the shaft.

4. In a piano, a movable hammer rail made in sections, means for normally holding the same in forward position, manually operated means for retracting the same, means for locking the sections in retracted position comprising slotted yokes, a shaft having a crank arm engaging said slotted yokes, an operating handle on the shaft, an offset portion on said shaft, and a leaf spring engaging therewith.

1,107,798. SCAFFOLD-TIE. DANIEL PALMER JONES, London, England, assignor to The Patent Rapid Scaffold Tie Company Limited, London, England. Filed Apr. 19, 1913. Serial No. 762,355. (Cl. 20—88.)

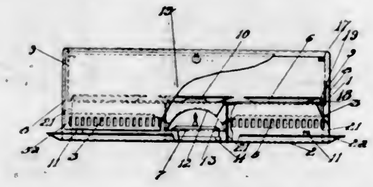
1. In a scaffold tie, a screw rod, a chain carrier integral therewith, an adjustable chain carrier on said rod, a chain for securing the integral chain carrier to one scaffold member, and a second chain for clamping a second scaffold member to the first, said chain carrier being adapted to maintain the second chain in its clamping position.

2. In a scaffold tie, a screw rod, means for securing said rod to a scaffold member, a chain carrier on said rod, a chain on said carrier for clamping a second scaffold member to the first, and a projecting device comprising a ring upon said rod, and a plate carried by said ring at



right angles thereto and extending to protect the second scaffold member from said chain carrier.

1,107,799. TRAY. JOHN JONES, Portland, Oreg. Filed Dec. 4, 1913. Serial No. 804,626. (Cl. 126—265.)



1. A waiter's tray comprising a base, having a rim which is shaped to form a hand hold, a body portion open at its front side rising from a point within said rim, a horizontal floor slidably secured at an intermediate point in the body portion, means for securing said floor in varying positions, a door for closing said open side, and a heating chamber formed at an intermediate point in said body portion.

2. In combination, a waiter's tray comprising a base, having a rim which is shaped to form a hand hold, a body portion open at one side, rising therefrom, a heating chamber having open ends formed centrally across the body portion, a horizontal floor slidably secured at an intermediate point in said body above the heating chamber, means limiting the forward movement thereof, a door for closing said open side, a seat formed centrally in the floor of the heating compartment, and means for distributing the heated air rising in said compartment.

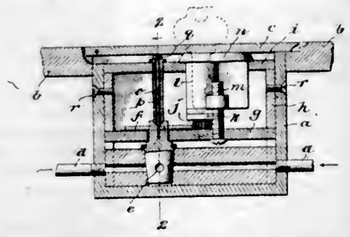
3. In combination a waiter's tray comprising a base, having a rim which is shaped to form a hand hold, a plurality of risers secured upon said base within the rim thereof, a body portion containing compartments formed upon said risers, a heating chamber formed centrally across the body portion, a horizontal floor slidably secured at an intermediate point above the heating chamber, and means for distributing the heated air rising therein.

4. A waiter's tray comprising a base, having a rim which is shaped to form a hand hold, a body portion having a fixed horizontal floor, supported thereon, the end walls of the body portion and the fixed floor forming an air space, and a heating chamber beneath said floor communicating with said air space.

1,107,800. LOCK-CONTROLLED VALVE. ALBERT W. JOYNES, Norfolk, Va. Filed Feb. 12, 1914. Serial No. 818,211. (Cl. 137—7.)

1. In combination, a casing open at its upper end, a fluid-supply conduit passing through the lower end of the casing, a frame slidable into and out of the upper side of the casing, a valve plug carried by said frame and adapted to control the passage of fluid through said conduit, a key lock affixed to said frame, and means connected therewith for rotating the plug, and means connected to the plug for locking said frame in said casing, when the plug is closed.

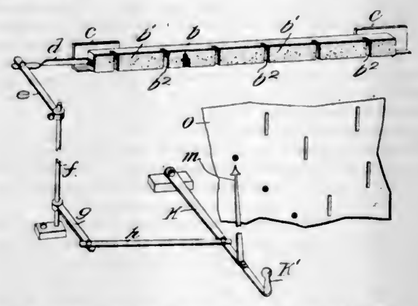
2. In combination, a casing open at its upper side and having a fluid conduit passing through its lower part, a frame slidable into and out of the casing through the upper side of the casing, a plug carried by said frame, a key lock and means connected therewith for rotating the plug, and a screw tapped down through the frame bearing upon the upper end of the plug to insure a tight fit of the plug.



3. In combination, a casing open at its upper side and having a fluid conduit passing through its lower part, a frame slidable into and out of the casing through the upper side of the casing, a plug carried by said frame, a key lock and means connected therewith for rotating the plug, a screw tapped down through the frame bearing upon the upper end of the plug to insure a tight fit of the plug, and an indicating rod affixed to the plug and extending up through said screw to a point adjacent to the key slot of the lock.

4. In combination, a casing open at its upper side, a fluid supply conduit passing through the lower end of the casing, a valve plug rotatively mounted in said conduit, a frame in the casing, a gear wheel affixed to the stem of the valve plug, a key lock embodying a key cylinder and having a key opening, and being mounted in said frame, a pinion affixed to the key cylinder and meshing with the aforesaid gear wheel, and an indicating rod affixed to the valve plug and extending up through said frame and provided with an indicating finger adapted to indicate whether the cock is open or closed, said indicating finger being located adjacent to the key opening.

1,107,801. ACCENTING ATTACHMENT FOR MUSIC-PLAYING DEVICES. WILLIAM J. KEELEY, New York, N. Y. Filed Mar. 30, 1910. Serial No. 552,407. (Cl. 84—160.)



1. A music playing device having a movable bar provided with means for receiving the blows from the hammer shanks as they move toward the strings to lessen the power of the blows imparted to the strings, the bar being provided with a slot for receiving a hammer shank, whereby one of the strings may be struck with full force.

2. A music playing device having a movable bar provided with means to lessen the power of the blows imparted to the strings representing an octave, the bar being provided with a slot for receiving a hammer shank for sounding the melody note, whereby the melody note of that octave may be sounded with full force while the accompanying and foundation tones are subdued by said bar.

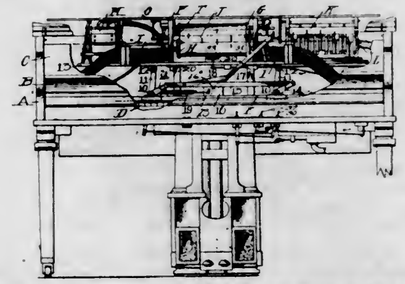
3. A music playing device having hammers, and adjusting means for engaging a plurality of hammer-shanks as they move toward the strings and subduing the accompanying and foundation tones, and having means fixed relatively to said adjusting means for preventing a melody note from being subdued.

4. In a music playing device, the combination with hammers and strings, of a bar having a soft surface in position to be engaged by the hammers as they approach the strings for subduing certain tones of a section, the hammer engaging surface of said bar extending throughout the length occupied by all the hammers but one of a section, whereby one hammer can strike with full force the string for producing the melody note.

5. In a music playing device, the combination of the hammers, a sliding bar movable between the hammers and strings in position to engage the shanks of the hammers and lessen the blows delivered by them, said bar having slots to permit certain of the hammer shanks to deliver a blow of full force.

[Claims 6 to 10 not printed in the Gazette.]

1,107,802. GRAND PLAYER-PIANO. WILLIAM J. KEELEY, New York, N. Y., assignor to Auto Pneumatic Action Company, a Corporation of New York. Filed Nov. 1, 1912, Serial No. 728,990. Renewed June 19, 1914. Serial No. 846,214. (Cl. 84—161.)



1. In a grand player piano, the combination of the piano casing including a front board, a tracker and sheet supporting mechanism arranged so that when in operative position the tracker will stand above the piano casing, means for lowering the same vertically into inoperative position within the piano casing, and a handle for operating said means, said handle projecting behind and above the front board and being at all times unobstructive but readily accessible.

2. In a grand player piano, the combination of the piano casing, a support or bed therein, a plate vertically movable upon said support, a tracker and a sheet supporting mechanism carried by said plate, and means for raising and lowering the said plate, comprising pivoted arms engaging the bottom of said plate, and connections for rocking said swinging arms.

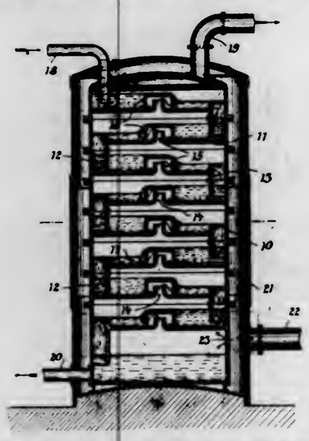
3. In a grand player piano, the combination of the piano casing, a support or bed therein, a plate vertically movable upon said support, a tracker and a sheet supporting mechanism carried by said plate, and means for raising and lowering said plate, comprising pivoted arms having rollers engaging the bottom of said plate, and connections for rocking said arms.

4. In a grand player piano, the combination of the piano casing, a support or bed therein, a plate vertically movable upon said support, a tracker and a sheet supporting mechanism carried by said plate, and means for raising and lowering said plate, comprising shafts journaled on said support, arms secured to said shafts carrying rollers engaging the bottom of the plate, arms mounted on said shaft and connected together by a link, and an operating handle connected to said link.

5. In a grand player piano, the combination of the piano casing, a support or bed therein, a plate vertically movable upon said support, a tracker and sheet supporting mechanism carried by said plate, and means for raising and lowering said plate, comprising shafts journaled on said support, arms secured to said shafts carrying rollers engaging the bottom of the plate, arms mounted on said shaft and connected together by a link, an operating handle connected to said link, and a stop arranged so that when the swinging arms are operated to lift the plate they will move slightly over their centers and lock to hold the plate firmly in its raised position.

[Claims 6 and 7 not printed in the Gazette.]

1,107,803. PROCESS OF SEPARATING THE HYDROCARBONS CONTAINED IN NATURAL GAS. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill., a Corporation. Filed July 8, 1913. Serial No. 777,830. (Cl. 196—25.)



1. Process of separating hydrocarbons contained in the natural gas which consists in driving said gas under pressure into a wrought iron jacket, and conveying the gas from said jacket into a cast iron bell washer inclosed by the jacket and containing a hydrocarbon-dissolving oil, whereby the bell washer is subjected to like exterior and interior pressure.

2. Apparatus of the character described comprising a cast iron bell washer, a wrought iron casing surrounding said washer to form an intervening jacket, means for admitting a gas under pressure into said jacket, and means for admitting said gas from the jacket into the bell washer, whereby the gas pressure is taken up by the wrought iron casing while the cast iron bell washer is relieved by being subjected to like exterior and interior pressure.

1,107,804. BUNG-EXTRACTOR. WILLIAM G. C. KRAUSE and GEORGE H. THOMAS, Waterbury, Conn.; said Thomas assignor to said Krause. Filed Apr. 1, 1911. Serial No. 618,289. (Cl. 217—112.)

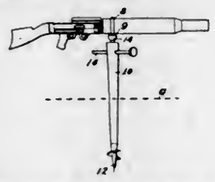


1. In a device of the character described, the combination with a handle having an aperture therethrough adjacent one of its ends, said aperture tapering from bottom to top, of a spike having its upper portion tapered and being adapted to fit in said aperture said spike being notched adjacent its lower extremity and screw threaded at its upper extremity and adapted to receive a nut thereon and a detachable nose carried at the end of said handle and adjacent the said aperture.

2. In a device of the character described the combination with a handle having an aperture therethrough adjacent one of its ends, said aperture tapering from bottom to top and having a perpendicular groove in one of its sides, of a spike having its upper portion tapered and being adapted to fit in said aperture, said upper portion of said spike carrying a rib adapted to fit into said groove, said spike being notched adjacent its lower extremity and screw threaded at its upper extremity and adapted to receive a nut thereon and a detachable nose carried at the end of said handle and adjacent said aperture.

3. In a device of the character described the combination with a handle having an enlarged portion adjacent one of its ends, an aperture through said enlarged portion, said aperture tapering from bottom to top, of a spike having its upper portion tapered and adapted to fit in said aperture and being screw threaded at its upper end and adapted to receive a nut thereon and being notched adjacent its lower end and a detachable nose carried by the end of said handle adjacent said aperture.

1,107,805. STAKE-MOUNT FOR FIREARMS. ISAAC N. LEWIS, Fort Hamilton, N. Y. Filed Jan. 15, 1913. Serial No. 742,236. (Cl. 42—94.)



1. A mount for firearms consisting of a stake adapted to be secured in the ground and having a transverse hole near its upper end and an axial bore, both for the insertion of a hand lever and having on its upper end a device for receiving a gun and affording thereto movement for changes in direction and elevation.

2. A mount for firearms consisting of a conoidal tube spun over a wooden core and provided with a cup at its upper end for the purpose specified.

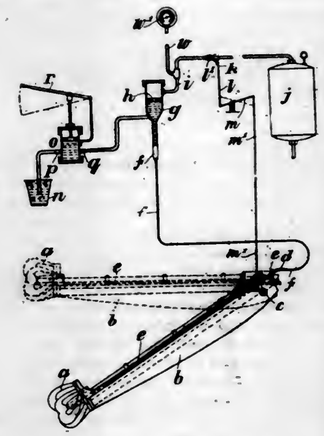
3. A mount for firearms consisting of a conoidal tube having a suitable core and provided with a cup at its upper end and having an internally screw-threaded neck below said cup, the core having an axial bore, in combination with a hand lever adapted to be inserted in the hollow axis of said mount and provided with a bulbous projection at its upper end fitted to said cup and screw-threaded to engage the thread in said neck.

4. A mount for firearms consisting of a stake provided with means for inserting it firmly in the ground and provided also with an axial bore to receive a hand lever, in combination with a hand lever insertible in said bore and provided with a gun support at its outer end.

5. A mount for firearms consisting of a stake provided with means for inserting it firmly in the ground and provided also with an axial bore screw-threaded for a section thereof, in combination with a hand lever adapted for insertion in said bore and having a screw-threaded portion for engaging with the screw-threaded section of the bore and provided at its outer end with a hinged fork adapted to receive and support a gun.

1,107,806. LUBRICATOR FOR SUBMERGED BEARINGS. FRED LOBNITZ, Crookston, Scotland. Filed Nov. 30, 1912. Serial No. 734,249. (Cl. 184—39.)

1. Means for lubricating the bearing of a rotating body working under water, comprising, a device for holding lubricant, means for conducting lubricant from the device to the bearing, a piston in the device and acting on the lubricant, means for supplying pressure fluid to the device and means for automatically controlling the supply of pressure fluid to the device according to the position of the rotating body under the water.



2. Means for lubricating the bearing of a rotating body working under water, comprising, a device for holding lubricant, means for conducting lubricant from the device to the bearing, a piston in the device and acting on the lubricant, means for supplying pressure fluid to the device and means for regulating the supply of pressure fluid according to the depth of the rotating body under the water.

3. Means for lubricating the bearing of a rotating body working under water, comprising, a device for holding lubricant, means for conducting lubricant from the device to the bearing, a piston in the device and acting on the lubricant, a pressure fluid source, and means for varying the supply of pressure fluid from said source to the device according to the position of the rotating body in the water.

4. Means for lubricating the bearing of a rotating body working under water, comprising, a device for holding lubricant, means for conducting lubricant from the device to the bearing, and means for causing the lubricant to be supplied to the bearing under increased or diminished pressure according to the position of the rotating body under the water.

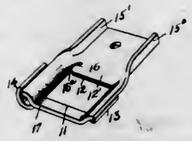
5. Means for lubricating the bearing of a rotating body working under water, comprising, a device for holding lubricant, means for conducting lubricant from the device to the bearing, and means for causing the lubricant to be supplied automatically to the bearing under increased or diminished pressure according to the position of the rotating body under the water.

1,107,807. PROCESS OF MANUFACTURING BAG OR PACKING PAPER. GEORG LOEBBECKE, Gehlendorf, near Berlin, Germany. Filed May 21, 1907. Serial No. 374,976. (Cl. 92—39.)

1. The process of manufacturing bag or packing paper, consisting in first craping or goffering the paper during its formation on the paper machine while in a moist condition, restraining the craped or goffered paper against elongation between traveling surfaces and exposing the craped or goffered paper, during the drying operation, to pressure for compressing the crapes or gofferings and producing an additional felting thereof.

2. The process of manufacturing bag or packing paper, consisting in first craping or goffering the paper during its formation on the paper machine while in a moist condition and subsequently, while still in a moist condition, guiding and restraining the craped or goffered paper against elongation between traveling surfaces, thereby maintaining the crapes or gofferings and exposing the craped or goffered paper while under restraint between the traveling surfaces to pressure for compressing the crapes or gofferings and producing an additional felting thereof.

1,107,808. CHAIN-LINK. SYLVANUS D. LOCKE, Bridgeport, Conn., assignor to Locke Steel Belt Company, Bridgeport, Conn., a Corporation of New York. Filed May 12, 1908, Serial No. 432,496. Renewed Oct. 2, 1913. Serial No. 793,068. (Cl. 74—43.)



1. A drive chain link formed from a blank of sheet metal and having side bars, a relatively small end bar and a relatively large end bar or end hook, said hook being struck from metal of the strip between said side bars, and fillets in the corners between the inner edges of said side bars and said end hook.

2. A drive chain link formed from a blank of sheet metal and having side bars, a relatively small end bar and a relatively large end bar or end hook, said hook being struck from metal of the blank between said side bars, and transverse scores leading from the ends of the inner edges of the side bars at their corners with the metal forming said end hook, respectively.

3. A drive chain link formed from a blank of sheet metal and having side bars, a relatively small end bar and a relatively large end bar or end hook, said hook being struck from metal of the strip between said side bars, and transverse scores in the metal of said end hook extending from the ends of the inner edges of said side bars.

4. A drive chain link formed from a blank of sheet metal and having side bars, a relatively small end bar and a relatively large end bar or end hook, said hook being struck from metal of the blank between said side bars, and the fibers of the metal of the blank transversely severed between the inner edges of said side bars and said end hooks.

5. A drive chain link formed from a blank of sheet metal scored longitudinally to form side bars, and having a sprocket bar with a hook struck from metal between said longitudinal lines of score, and transverse scores leading from the ends of said longitudinal lines of score.

[Claims 6 to 14 not printed in the Gazette.]

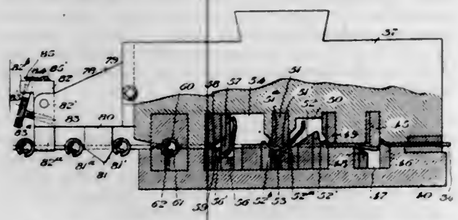
1,107,809. CHAIN-MAKING MACHINE. SYLVANUS D. LOCKE, Bridgeport, Conn., assignor to Locke Steel Belt Company, Brideport, Conn., a Corporation of New York. Filed June 4, 1908, Serial No. 436,711. Renewed Jan. 17, 1914. Serial No. 812,828. (Cl. 59—6.)

1. In a machine of the class described, the combination with means for transforming a strip of metal into a series of connected chain links, of devices arranged adjacent to said strip transforming means for successively correcting the pitch of each link as it is completely formed.

2. In a machine of the class described, the combination with means for transforming a strip of metal into a series of connected chain links, of devices for simultaneously correcting the pitch of formed links during the formation of other links.

3. In a machine of the class described, the combination with means for transforming a strip of metal into a series of connected chain links, of devices for correcting the

pitch of the links immediately after their formation and before they leave the machine.

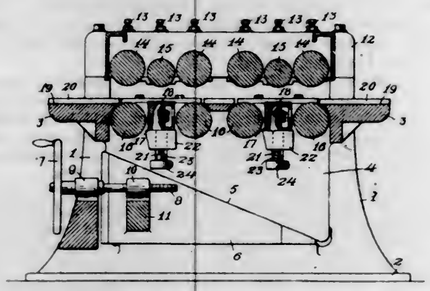


4. In a machine of the class described, the combination with a stationary die and a movable die adapted to transform a strip of metal into a series of connected links, of a device movable with said movable die for correcting the pitch of the formed links.

5. In a machine of the class described, the combination with a stationary die and a movable die adapted to transform a strip of metal into a series of connected links, and a holder for said movable die, of a device carried by said holder for the movable die for correcting the pitch of the formed links.

[Claims 6 to 24 not printed in the Gazette.]

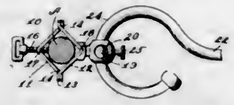
1,107,810. SCRAPING-MACHINE. BYRON S. LOVELAND, Winchendon, Mass., assignor to Baxter D. Whitney and William M. Whitney, as Firm of Baxter D. Whitney & Son, Winchendon, Mass. Filed Mar. 24, 1909. Serial No. 485,537. (Cl. 144—120.)



In a machine of the class described, the combination with a fixed framework having vertical ways, of a work supporting table, supports for said table movable in said vertical ways, means for simultaneously adjusting said supports, a pair of longitudinally removable knife bars movable with said supports, blocks beneath the ends of said knife bars, shelves projecting from said supports beneath said blocks, adjusting screws carried by said blocks and resting on said shelves for the adjustment of said knife bars independently of each other with respect to said supports, a series of individually adjustable feed and pressure rolls carried by the framework above each knife bar, a series of individually adjustable feed rolls carried by said supports adjacent each knife bar, and means projecting from one of said supports for supporting said knife bars upon withdrawal of the same from the machine.

1,107,811. ELECTRIC-LIGHT BRACKET. CLARENCE W. LUCAS, Decatur, Ill., assignor to Faries Manufacturing Co., Decatur, Ill., a Corporation of Illinois. Filed Mar. 2, 1914. Serial No. 822,044. (Cl. 248—3.)

1. An electric light fixture comprising a two-part bracket, said parts having hooked-shape terminal ends that coöperatively interlock around an article of furniture to which said bracket is adapted to be removably attached, a clamping screw threaded in one of said parts for fixing said bracket in place, and a head on the other part through which are formed two intersecting perforations at right angles to each other, and a bent arm having an electric light on one end adapted to engage by its other end with either of said perforations and be moved freely therein for adjustment, the weight of the overhanging arm serving to maintain the same in its position of adjustment.

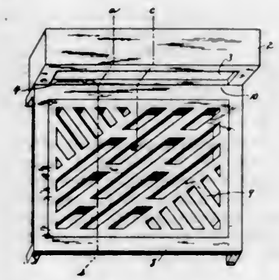


2. An electric light fixture comprising a bracket formed of two interengaging members having slotted ends that interlock with each other, a clamping screw threaded through one of said members for supporting the bracket upon a piece of furniture, and a head projecting from the other member having two perforations formed therein at right angles to each other.

3. An electric light fixture comprising a bracket formed of two interengaging members, each of said members having a notch cut into one edge of each of its ends, the notches of one member being on the side opposite those of the other member and adapted to interlock to hold said members together, means on one member for fastening the interlocking members of the bracket to an article of furniture, and means on the other member for adjustably attaching an electric light thereto.

4. A bracket for supporting an electric light fixture to an article of furniture comprising two separable members, each of said members having a notch near each of its ends extending in from one edge thereof, the notches in the respective members being on opposite sides to permit the ends of the members to engage and interlock about a portion of an article of furniture, a clamping screw threaded in one member for securing the bracket to an article of furniture, and a head with cruciform perforations projecting from the other member, either of said perforations adapted to receive an electric light fixture.

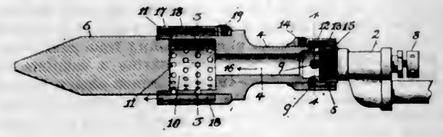
1,107,812. SEWER-INLET. JAMES H. MACDONALD, New Haven, Conn. Filed Oct. 20, 1913. Serial No. 796,340. (Cl. 4—24.)



A sewer inlet comprising a curb member and a frame, the curb member formed in its outer face with a shelf interrupted at intervals at which points downwardly projecting fingers are formed, the adjacent edge of the frame adapted to rest upon said shelf and formed with downwardly extending lugs in line with said fingers, and means extending through the lugs, and fingers for holding the parts together.

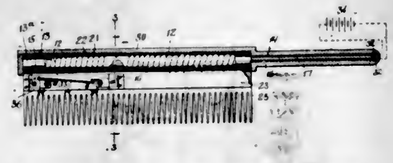
1,107,813. SELF-HEATING SOLDERING-IRON. ROY W. MARVELL, Baltimore, Md., assignor, by mesne assignments, to Lyon, Conklin & Company, a Corporation of Delaware. Filed Oct. 12, 1912. Serial No. 725,402. (Cl. 158—27.)

In a soldering iron, the combination of an air-and-gas mixing tube, 4; a cylindrical combustion chamber attached to said mixing tube and the wall of said chamber provided with exit-holes; a solder copper whose exterior diameter is the same as that of said wall; and a straight tubular sleeve, 17, attached only around the end of said



mixing tube and being longer than said combustion chamber and completely surrounding the latter throughout its length and forming an annular space which is closed at the mixing-tube end and open at the other end.

1,107,814. ELECTRIC DRYING APPARATUS. WILLIAM KENNEDY MASON, Cambridge, Mass., assignor to John W. Burnett, Cambridge, Mass. Filed Apr. 28, 1914. Serial No. 834,942. (Cl. 219—2.)



1. A drier of the character stated, comprising an electrical heating unit, including a heating circuit, a tubular heat-conducting holder inclosing said unit and having a laterally projecting extension to conduct heat therefrom, a thermostatic circuit controller carried by said extension and adapted to automatically regulate the temperature thereof, and a comb-shaped heat-conducting applicator having a back in contact with said extension to conduct heat therefrom, said back being in close proximity to the circuit controller.

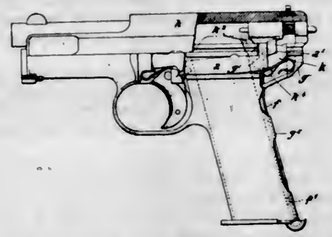
2. A drier of the character stated, comprising an electrical heating unit, including a heating circuit, a heat-conducting holder connected with said unit to conduct heat therefrom, said holder being provided with a heat-conducting extension formed as a coupling member, a thermostatic circuit controller carried by said extension and adapted to automatically regulate the temperature thereof, and a comb-shaped heat-conducting applicator having a complemental coupling member formed to detachably engage said extension and held thereby in close proximity to said circuit controller.

3. A drier of the character stated, comprising an electrical heating unit including a resistance coil and an insulating core therein, a tubular heat-conducting holder inclosing said coil and having a lining of insulating and heat-diffusing compressible material, adapted to prevent rattling of the coil and core in the holder, and a laterally projecting extension to conduct heat from the holder, a thermostatic circuit controller carried by said extension and adapted to automatically regulate the temperature thereof, and a comb-shaped heat-conducting applicator having a back in contact with said extension to conduct heat therefrom, said back being in close proximity to the circuit controller.

1,107,815. AUTOMATIC FIREARM. PAUL MAUSER, Oberndorf-on-the-Neckar, Germany. Filed Aug. 30, 1913. Serial No. 787,515. (Cl. 42—3.)

1. In a firearm, the combination of a breech block, a firing mechanism, a detachable magazine, and means adapted to lock the breech block in the open position and also the firing mechanism when the magazine is removed.

2. In a firearm, the combination of a breech block, a firing mechanism, a detachable magazine, and means adapted to act as an ejector when the magazine is in the frame and also adapted to lock the breech block in the open position and also the firing mechanism when the magazine is removed.



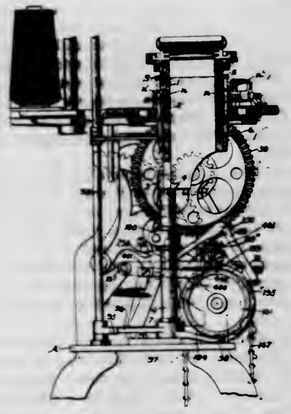
3. In a firearm, the combination of a breech block, a firing mechanism, a detachable magazine, a pivoted two-armed lever, one arm of said lever being adapted to act as an ejector when the magazine is in the frame, and the other arm being adapted to lock the breech block in the open position when the magazine is removed, and a lug on said lever adapted to lock the firing mechanism when the magazine is removed.

4. In a firearm, the combination of a breech block, a firing mechanism, a detachable magazine, and a member adapted to lock the breech block in the open position and also the firing mechanism when the magazine is removed, and means for bringing said locking member into locking engagement with said breech block and with said firing mechanism.

5. In a firearm, the combination of a breech block, a firing mechanism, a detachable magazine, and a member adapted to lock the breech block in the open position and also the firing mechanism when the magazine is removed, and means for bringing said locking member into locking engagement with said block and with said firing mechanism, said means being adapted to be counteracted by said magazine to hold said locking member out of locking engagement with said breech block and with said firing mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,107,816. KNITTING-MACHINE. GEORGE D. MAYO, Laconia, N. H. Filed Feb. 17, 1908. Serial No. 416,171. (Cl. 66—24.)



1. In a knitting machine adapted for circular and reciprocatory work, circular and reciprocatory knitting means, speed reducing means operative during circular knitting in advance of said reciprocatory knitting means, and means to lengthen the stitch during circular knitting simultaneously with the reduction in speed and in advance

of the reciprocatory knitting to an extent to compensate for the reduced stitch length incident to speed reduction.

2. In a knitting machine of the class referred to the needle cylinder, supporting post therefor, a lever to lift said post and cylinder, one or more cams to act upon said lever, and auxiliary means on said lever to coöperate with said cams and to advance the action of said lever in lifting said cylinder.

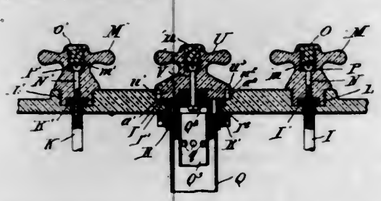
3. The needle and skeleton cylinders, the rod 4, the coacting lever 196 and cams coöperating therewith to operate it, the auxiliary arm 400 operatively connected to lever 196 and its roller stud 401, combined and operating as described.

4. In a knitting machine adapted for circular and reciprocatory work, circular and reciprocatory knitting means, speed reducing means effective during circular and reciprocatory knitting, and means to lengthen the stitches to different lengths preceding and also for reciprocatory knitting to compensate for decreased stitch length incident to speed reduction.

5. In a knitting machine adapted for circular and reciprocatory work, means to operate the parts for circular knitting, means to operate the parts for reciprocatory knitting at less than the maximum speed for circular knitting, means to reduce the speed of the parts for one or more courses just prior to reciprocatory knitting, means to lengthen the stitches during and for reciprocatory knitting and coöperating connections to lengthen the stitches during and for the reduction in speed just prior to reciprocatory knitting, said connections being adjustable independently of said means to lengthen the stitches during reciprocatory knitting.

[Claims 6 to 8 not printed in the Gazette.]

1,107,817. LAVATORY OR SINK. JOHN W. MCAULIFFE, New York, N. Y. Filed July 21, 1910. Serial No. 573,016. (Cl. 4—24.)



1. In combination, a lavatory or sink, a valve stem projecting through a portion of the same, the lavatory or sink having an enlarged recess about the end of the stem, a handle of vitreous material resting in said recess and having a socket therein for receiving the end of the stem, the socket and stem being shaped to prevent relative rotary movement, a fastening device extending through the handle into the stem, and a vitreous plug in the handle above said fastening means.

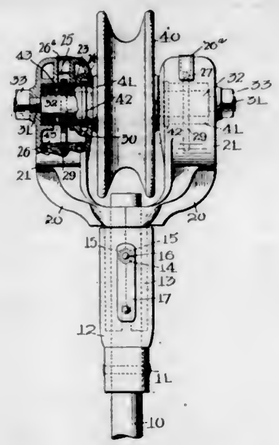
2. In combination, a lavatory or sink having a slab extending laterally from the bowl thereof, said slab having a countersunk opening therein, a valve stem projecting through said opening and having a head lying within the enlarged portion of said opening, and a valve handle of viterous material resting within the enlarged part of said opening and having a socket for receiving said head, said socket and said head being shaped to prevent relative rotary movement.

3. In combination, a lavatory or sink having a slab extending laterally from the bowl thereof, said slab having a countersunk opening therein, a valve stem projecting through said opening and having a head lying within the enlarged portion of said opening, and a valve handle of vitreous material resting within the enlarged part of said opening and having a socket for receiving said head, said socket and said head being shaped to prevent relative rotary movement, a screw passing through said handle into said head, and a viterous plug in said handle above said screw.

4. In combination, a lavatory or sink having a bowl and a slab extending laterally at the top of the bowl, said slab having a countersunk opening therethrough, a sleeve extending through said opening and having a lateral flange or shoulder lying within the enlarged part of said opening, a nut on said sleeve for clamping the slab between the same and said flange or shoulder, a waste pipe screwed into said sleeve, a branch pipe extending from said waste pipe beneath the bowl, said bowl having a countersunk opening therethrough above the said branch pipe, a flanged sleeve extending through the latter opening and screwed into said branch pipe, and a nut on said sleeve for clamping the bottom wall of the bowl between it and the flange on the sleeve.

5. In combination, a tubular valve stem, a cap upon one end of the stem, a valve handle of vitreous material having a socket to receive a portion of the cap, the socket and the said portion of the cap being shaped to prevent relative rotary movement, a fastening device extending through the handle into the cap, and a plug of vitreous material within the handle above the fastening device.

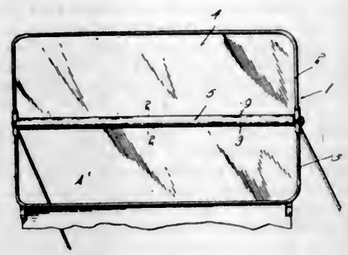
1,107,818. TROLLEY-HARP. EUGENE J. MCCARTY, Clinton, Mass., assignor to Thomas J. McNamara, Clinton, Mass. Filed Oct. 9, 1911. Serial No. 653,574. (Cl. 64—26.)



As an article of manufacture, a frame having opposite members, said members being provided with opposite inwardly opening cylindrical sockets and each of said sockets being provided with a central inwardly projecting cylindrical bearing member extending from the base of each socket substantially to the mouth thereof and spaced from its inner walls, and having a chamber for lubricant under said bearing member and a channel extending upwardly therefrom around the bearing member to the top of the member for the admission of a lubricant, an oil ring in said channel and chamber, and a shaft fitting said cylindrical sockets and having end sockets fitting said bearing members.

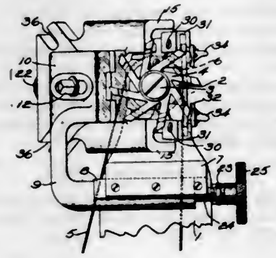
1,107,819. WEATHER-STRIP FOR WIND-SHIELDS OF AUTOMOBILES. ALLEN L. MCCORMICK, Louisville, Ky. Filed Dec. 8, 1913. Serial No. 805,395. (Cl. 21—148.)

In combination with a wind shield comprising upper and lower sections, glass panes carried by the sections and having their opposing edges spaced apart, of a strip formed from rubber and comprising a web for occupying the space between the opposing edges of the panes, the inner edge of said web terminating in a rib for engaging the inner surfaces of the panes, said web having its outer edge terminating in oppositely directed flanges, said flanges being



curved inwardly and having their edges engaging the outer surfaces of the panes, as and for the purpose set forth.

1,107,820. TOP-LIFT SCALLOPER OR CONCAVER. GEORGE T. MCLEOD, Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 27, 1909, Serial No. 524,951. Renewed May 9, 1913. Serial No. 766,656. (Cl. 12—47.)



1. In a machine for scalloping or concaving the breast edge of a toplift, the combination of a rotary cutter, a work slide, a heel supporting plate movable with the work slide, heel breast stops for positioning a heel on the heel supporting plate, and means for causing coincident separating movement of the breast stops and longitudinal movement of the work slide.

2. In a machine for scalloping or concaving the breast edge of a toplift, the combination of a rotary cutter, a work slide, a heel supporting plate carried by the work slide with its heel supporting surface in a plane at an angle to the plane of sliding movement of the work slide, means permitting longitudinal sliding movement of the work slide as the heel of a shoe is forced along the heel supporting plate, and means to engage the heel breast to stop movement of the heel along the heel supporting plate when the heel is in position to be cut.

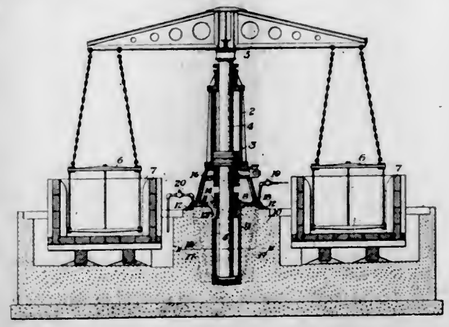
3. In a machine for scalloping or concaving the breast edge of a toplift, the combination of a cutter, a work slide movable longitudinally in positioning a heel to be cut, a heel supporting plate movable with said work slide, heel breast stops for engaging the breast of a heel to be cut when the heel is in cutting position, and means acting normally to maintain said heel breast stops in close relation and to permit separation thereof and longitudinal movement of the work slide as the heel is moved to working position.

4. In a machine for scalloping or concaving the breast edge of a toplift, the combination of a cutter, a heel plate engaging the heel during the cutting operation, breast gages to engage the breast of the heel to position it, and means for causing relative movement of the cutter and heel plate and permitting separation of said gages as the heel is moved into cutting position.

5. A machine of the character described, comprising in combination, a rotary cutter, a work slide, heel breast gages normally separated a distance less than the width of the heel breast to be treated, and means actuated by movement of the breast gages for moving the work slide.

[Claims 6 to 37 not printed in the Gazette.]

1,107,821. MOTIVE MEANS FOR PICKLING AND WASHING APPARATUS. GEORGE MESTA, Pittsburgh, Pa. Filed Sept. 11, 1913. Serial No. 789,401. (Cl. 138—13.)



1. In apparatus of the character described, the combination with a main cylinder, a piston rod working therethrough, and a base forming a support for the cylinder, said base having an elongated bearing for the piston rod below the main cylinder, a supplemental cylinder into which the piston rod extends below said bearing, and means whereby an elastic compressible fluid under pressure may be supplied to said supplemental cylinder, substantially as described.

2. In apparatus of the character described, the combination of a main cylinder, a piston rod working therethrough, a base member having an elongated bearing for the piston rod below the main cylinder, a supplemental cylinder forming a part of said base member and into which the piston rod extends below said bearing, and means whereby an elastic compressible fluid under pressure may be introduced into the supplemental cylinder, substantially as described.

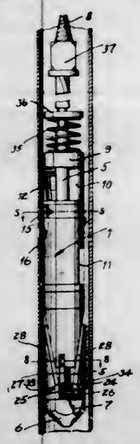
3. In apparatus of the character described, the combination with a vertical main cylinder having a piston therein, a piston rod working through said cylinder and formed with a downward extension, a foundation, and a base member embedded in the foundation and having a bearing for the lower extension of the piston rod, said base member also having a closed cylinder into which the piston rod extends, substantially as described.

4. In apparatus of the character described, the combination with a main cylinder, a piston therein, a piston rod working through said cylinder and having a downward extension, a foundation, a base member seated in said foundation and having strengthening ribs, said base member carrying a bearing for the lower extension of the piston rod and also a cylinder within which said extension is inclosed, and a conduit extending through one of the strengthening ribs and communicating with the lower portion of the last named cylinder, substantially as described.

5. In apparatus of the character described, the combination with a main cylinder, a piston therein, a piston rod working through said cylinder and having a downward extension, a foundation, a base member seated in said foundation and having strengthening ribs, said base member carrying a bearing for the lower extension of the piston rod and also a cylinder within which said extension is inclosed, and conduits extending through two of said ribs, one of said conduits having a relief valve, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,822. CASING-CUTTER. MAX J. MILZ, Taft, Cal. Filed Jan. 22, 1914. Serial No. 813,734. (Cl. 81—195.)



1. A casing cutter comprising upper and lower sections, a rod passable through the sections, cutting disks supported by the upper section, means carried by the rod for partially rotating the upper section first in one direction and then in the other direction, and means for holding the lower section stationary in the casing.

2. A casing cutter comprising upper and lower sections, a rod passable through the sections, a collar carried by the rod, fingers depending from the collar, said fingers having inclined grooves formed therein, blocks pivotally supported by the upper section, cutting disks carried by the blocks, said blocks having ribs for slidably engaging said grooves, grooves formed in the upper section for slidably receiving the fingers, said blocks being adapted to move outwardly gradually as the fingers move downwardly in said grooves, and means for alternately rotating the upper section back and forth.

3. A casing cutter comprising upper and lower sections, a rod passable through the sections, a head formed upon the lower end of the rod, a projection carried by the lower section, wedge plates slidably connected to the lower section, a block slidably mounted upon said head for engaging the projection, said block being adapted to engage the casing and adapted for movement downwardly and laterally to disengage the projection to release the lower section which when moving downwardly will move the plates outwardly to lock the lower section to the casing, and means carried by the rod for alternately rotating the upper section back and forth during the reciprocation of said rod in the upper and lower section.

1,107,823. DETACHABLE LENS-MOUNT FOR EYE-GLASSES. BRUNO MOLDENHAUER, Berlin, Germany. Filed Aug. 20, 1913. Serial No. 785,612. (Cl. 88—47.)



1. In a pince-nez, the combination of a lens having a fastening hole therethrough, a lens mount provided with legs adapted to straddle said lens, each of said legs terminating in a hook portion, a pin adapted to be passed through said hole and be engaged by said hook portions, and a curved spring attached to said lens mount and adapted to be placed under tension by the lens rim to maintain said pin and hooked portions in assembled condition.

2. In a pince-nez, the combination of a pair of lenses each having a fastening hole therethrough, a lens mount for each lens provided with legs adapted to straddle the lens, each of said legs terminating in a hook portion, a pin for each lens hole adapted to be engaged by the respective hook portions, a curved spring attached to each lens mount and adapted to be placed under tension by the lens rim to maintain said pins and hook portions in assembled condition, a nose grip attached to each lens mount and a bow connecting said nose grips.

3. In a pince-nez, the combination of a pair of lenses each having a fastening hole therethrough, a detachable lens mount for each lens provided with legs adapted to straddle the lens, each of said legs terminating in a hook portion, a detachable pin for each lens hole adapted to be engaged by the respective hook portions, a curved spring attached to each lens mount and adapted to be placed under tension by the lens rim to maintain said pins and hook portions in assembled condition, a detachable nose grip attached to each lens mount, and a detachable bow connecting said nose grips.

4. In a pince-nez, the combination of a pair of lenses, each having a fastening hole therethrough, a detachable lens mount for each lens provided with legs, each of said legs terminating in a hook portion, a pin for each lens hole to connect said lens with said lens mount through said hook portions, a lug on each lens mount, an elastic bow having U-shaped ends adapted to be coupled with said lugs and detachable nose-grips also adapted to be coupled with said lens mounts as well as with said bow.

5. In a pince-nez, the combination, with an elastic bow having U-shaped legs, of detachable lens mounts having bores adapted to receive one leg of the respective U, and recesses adapted to receive the other leg of the same; and detachable nose grips having corresponding bores and recesses and adapted to be secured in place by them together with said lens mounts, substantially as described.

[Claim 6 not printed in the Gazette.]

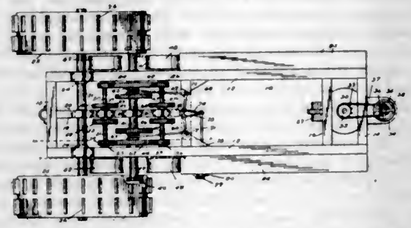
1,107,824. CLOTHES POUNDER AND WASHER. WILLIAM GEORGE MOORE, Cleveland, Ohio. Filed Feb. 24, 1913. Serial No. 750,121. (Cl. 68—5.)



1. In a clothes washer the combination of a body, forming a chamber open at top and bottom; a flange around the top opening; a flexible imperforate diaphragm clamped to said flange and entirely closing the top opening; means for extending said diaphragm into the chamber; means for automatically extending said diaphragm out of the chamber; and a stationary open-work member within said chamber, whereby the clothes to be washed are held down.

2. In a clothes washer the combination of a body, forming a chamber open at top and bottom; a flange around the top opening; a flexible imperforate diaphragm clamped to said flange and entirely closing the top opening; a plunger attached to said diaphragm for extending it into the chamber; means for automatically extending said diaphragm out of the chamber; means for guiding said plunger axially; and a stationary transverse open-work member within said chamber, whereby the clothes to be washed are held down.

1,107,825. PROPELLING MECHANISM FOR TRACTORS. CHARLES E. MORRIS, Lane, Kans. Filed Apr. 11, 1912. Serial No. 689,966. (Cl. 74—58.)



1. In power transmitting mechanism the combination with alined power transmitting rotary shafts, of duplex speed changing sliding gear wheels varying in size and splined on the respective alined shafts, connecting devices connecting the said duplex gear wheels with each other, and speed changing gear wheels with which the sliding gear wheels on the alined power transmitting shafts are adapted to mesh and bell crank levers co-acting with the said duplex sliding gear wheels to move said wheels on the respective alined power transmitting shafts simultaneously, and a single lever operably connected with the said bell crank levers.

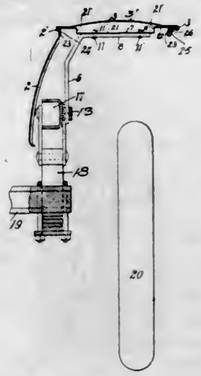
2. In a mechanism for transmitting power to tractors, alined power transmitting rotary shafts and duplex speed changing sliding gear wheels on the respective shafts varying in size and splined on said shafts, collars connecting the duplex sliding gear wheels on the respective alined shafts with each other, and speed changing gear wheels with which the said duplex gear wheels on the alined power transmitting shafts are adapted to mesh, and bell crank levers for controlling the movements of the combined duplex sliding gear wheels having forked connections therewith, and a single lever operably connected with said bell crank levers.

3. In duplex speed changing and propelling mechanism main alined power transmitting rotary shafts and duplex speed changing sliding gear wheels splined on the respective shafts, connecting devices connecting said duplex gear wheels on the respective alined shafts with each other, auxiliary alined shafts parallel with said main alined power transmitting shafts and arranged in position forwardly and rearwardly respectively of said alined power transmitting shafts, gear wheels on said auxiliary alined shafts varying in size, with which the said combined duplex sliding gear wheels are adapted to mesh, bell crank levers having forked portions connected with the collars on the combined duplex sliding gear wheels, links pivotally connected with the said bell crank levers and an operating lever with which the free ends of said links are pivotally connected.

1,107,826. AUTOMOBILE MUD-GUARD. WILLIAM H. MULLINS, Salem, Ohio. Filed Mar. 9, 1911. Serial No. 613,366. (Cl. 21—23.)

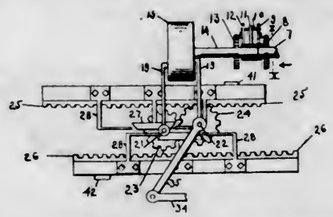
1. In an automobile mud guard, the combination with a supporting bracket rod attached to the chassis, of a mud guard having a side wall and a horizontal cover portion, a gusset plate having an upper supporting portion beneath said cover portion and permanently fastened to said side wall and to the outer edge of said cover portion and having a depending portion spaced from said cover portion and separately removable screws holding said gusset plate to said bracket rod rendered accessible between said cover portion and said depending portion by said spacing.

2. In automobile mud guards, the combination with a supporting bracket rod attached to the chassis, and having a horizontally disposed arm, of a mud guard comprising an upwardly extending side portion, and a top cover portion rigid therewith and provided with a depending exterior flange, and a connecting and strut member spaced from said cover portion having end flanges permanently fastened to said depending flange and side portion of said wall.



3. In automobile mud guards, the combination with a supporting bracket rod attached to the chassis and having an upwardly extending portion and a horizontally extending arm, of a mud guard comprising an upwardly extending portion at the inner side of said rod, a cover portion rigid therewith above the horizontally disposed arm, an exterior depending flange rigid with said cover portion, and a connecting member having depending end flanges attached to said flange and said upwardly extending portion, respectively, and a depending mid portion, and removable fastening means between the same and said arm.

1,107,827. MOTOR-VEHICLE GEAR-SHIFTER. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Nov. 29, 1913. Serial No. 803,668. (Cl. 74—58.)



1. Mechanism for establishing a plurality of driving relations embodying a pair of actuators provided with intermeshing teeth, shifting members having a plurality of shift positions, means for effecting driving connection between an actuator and a member, and driving means for an actuator.

2. Mechanism for establishing a plurality of driving relations embodying a pair of intermeshing actuators, driving means for one of said actuators, a pair of shift members, and means for connecting either actuator with either member.

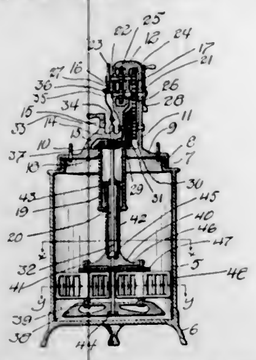
3. Mechanism for establishing a plurality of driving relations embodying a driving actuator, a follower actuator, shifting members having a plurality of shift positions, and means for connecting either actuator with said shifting members.

4. Mechanism for establishing a plurality of driving relations embodying a driving actuator, a follower actuator, shifting members to be engaged by either actuator, and a selector for the actuator and member to be connected.

5. Mechanism for establishing a plurality of driving relations embodying toothed actuators and shifting members, said actuators intermeshing and movable to additionally intermesh with said shifting members.

[Claims 6 to 12 not printed in the Gazette.]

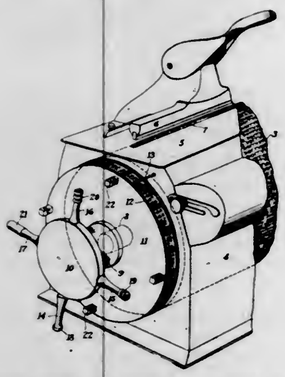
1,107,828. CHURN. EDMOND NADROWSKI, Newark, N. J. Filed May 6, 1914. Serial No. 836,765. (Cl. 31—9.)



1. A churn comprising a receptacle, a revoluble main dasher within said receptacle, a dasher operating shaft extending into said receptacle and suspending and revolving said dasher, a plurality of auxiliary dashers supported upon said main dasher, and means operated from said shaft for revolving said auxiliary dashers simultaneously with and in a direction opposite to the direction of revolution of said main dasher.

2. A churn comprising a receptacle, a main dasher, means for revolving and suspending said main dasher within said receptacle, a plurality of auxiliary dashers of O-G curvature supported upon said main dasher and in the form of gratings, and means driven from the operating means for the main dasher for revolving said auxiliary dashers simultaneously with the operation of the main dasher and in a direction opposite to the direction of movement of the main dasher, and means for reciprocating the main dasher operating means and said dashers simultaneously with the operation of these latter.

1,107,829. PRINTING-MACHINE. EDMUND OCUMPAUGH, 2d, Rochester, N. Y. Filed Apr. 3, 1914. Serial No. 829,314. (Cl. 101—160.)



1. A setting-device, for printing-machines and the like, comprising a manually-rotatable member provided with an annular graduated scale, and with a series of projections located at one side of the scale and spaced to correspond with main divisions of the scale.

2. A setting-device, for printing-machines and the like, comprising a manually-rotatable member provided with an annular graduated scale, and with a series of projections spaced to correspond with main divisions of the scale, said projections being located at one side of the scale and bearing sensible characteristics by which they may be distinguished from each other and identified with the corresponding scale-numbers.

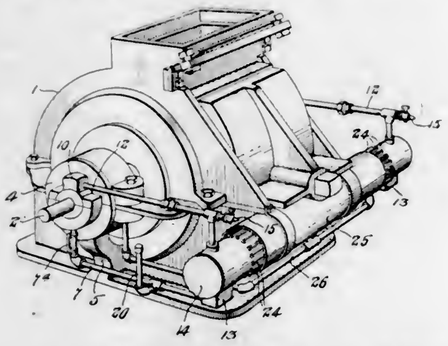
3. A setting-device, for printing-machines and the like, comprising a manually-rotatable member provided with an annular graduated scale, and with a series of radial projections, at one side of the scale, constituting hand-holds by which the scale may be turned and spaced to correspond to main divisions of the scale.

4. A setting device, for printing-machines and the like, comprising a manually-rotatable member provided with an annular graduated scale, and with a series of radial projections, at one side of the scale, constituting hand-holds by which the scale may be turned and spaced to correspond to main divisions of the scale, said projections bearing sensible characteristics by which they may be distinguished from each other and identified with the corresponding scale-numbers.

5. A setting-device, for printing-machines and the like, comprising a manually-rotatable member provided with an annular graduated scale, and with a series of radial projections, at one side of the scale, spaced to correspond to main divisions of the scale, said projections constituting hand-holds by which the scale may be turned and being differently formed to afford sensible indications of their position with relation to the scale.

[Claims 6 and 7 not printed in the Gazette.]

1,107,830. LUBRICATING SYSTEM FOR ROTARY MILLS. FERRIS OGDEN, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 2, 1914. Serial No. 815,979. (Cl. 184—6.)



1. In a rotary mill having a shaft, a lubricating system comprising the combination of a journal box provided with an oil well and a distributing chamber, a tank for the reception of lubricant, a supply pipe leading from the lower portion of said tank to said oil well, a circulating pipe leading from said distributing chamber to the upper portion of said tank, a pump actuated from said shaft and operable to convey lubricant from said oil well to said circulating chamber and circulate it through said pipe and said tank, and means for causing a circulation of air about said tank upon the actuation of said shaft.

2. In a pulverizer the combination of a rotary shaft, a journal box providing bearings therefor and provided with an oil chamber and a circulating chamber, a tank, a supply pipe leading from the lower portion of said tank to said oil well, a circulating pipe leading from said distributing chamber to the upper portion of said tank, purifying means located in the tank, a pump actuated by said shaft and adapted to convey lubricant from said oil well to said distributing chamber whereby to cause a circulation of lubricant through said tank in said pipes, and means for abstracting heat from said tank, said means including an air circulating member operated by said shaft.

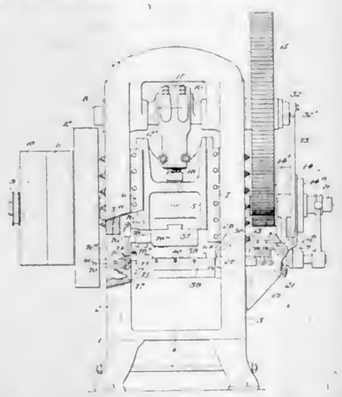
3. In a device of the class described, the combination with a rotary shaft, of a journal box provided with an oil well and a distributing chamber, said journal box providing a bearing for said shaft, an oil tank, a pipe for supplying oil to said oil well from said tank, a circulating pipe for conveying oil from said distributing chamber to said tank, a circulating device operating to convey oil from said oil well to said distributing chamber, means providing access for oil from said distributing chamber to said bearings, and means for purifying oil conveyed to said tank by said circulating pipe.

4. A lubricating system comprising the combination of a journal box providing a bearing for a shaft and being provided with an oil well and a distributing chamber, means for providing access for oil from said distributing chamber to the bearing, a tank, pipes connecting said oil well and said distributing chamber with said tank, means for causing the circulation of oil through said pipes and said tank, air circulating pipes arranged to cause a circulation of air about said tank, and means for causing a circulation of air through said pipes.

5. In a device having an operating shaft, a lubricating system comprising the combination of a journal box providing a bearing for the shaft, said journal box being provided with oil chambers, said journal box affording access for oil from said chambers to the bearing, an oil tank, a closed system of pipes connecting said tank with said chambers, and means operable by said shaft for causing a circulation of oil through said pipes and of air about said tank.

[Claims 6 to 8 not printed in the Gazette.]

1,107,831. APPARATUS FOR MAKING CHAIN. HERMAN OSSWALD, Brooklyn, N. Y., assignor, by mesne assignments, to Locke Steel Chain Company, Great River, N. Y., a Corporation of New York. Filed May 12, 1908. Serial No. 432,502. (Cl. 59—6.)



1. In a machine for making a drive chain link from a blank of sheet metal, said link having side bars, a relatively small end bar and a relatively large end bar or end hook, the combination of a pair of relatively movable cooperating die blocks, each block provided with a plurality of relatively immovable link forming and shaping elements arranged to act progressively upon the blank.

2. In a machine for making and connecting drive chain links from a strip of metal, each link having side bars, a relatively small end bar and a relatively large end bar or end hook, the combination of a pair of relatively movable coöperating die blocks, each block provided with a plurality of relatively immovable link forming, shaping and connecting elements arranged to act progressively upon the strip.

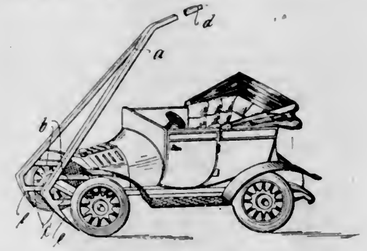
3. In a machine for making and connecting drive chain links from a strip of metal, each link having side bars, a relatively small end bar and a relatively large end bar or end hook, the combination of a pair of relatively movable coöperating die blocks, each block provided with a plurality of relatively immovable link forming, shaping and connecting elements arranged to act progressively upon the strip, the operative portions of said elements being arranged in uniform spaced relationship to each other, whereby unevenness in the work of the press and all interference between the dies and the metal strip in the progress of the strip between said die blocks are avoided.

4. In a machine for making and connecting drive chain links from a strip of metal, each link having side bars, a relatively small end bar and a relatively large end bar or end hook, the combination of a pair of relatively movable coöperating die blocks, each block provided with a plurality of relatively immovable link forming, shaping and connecting elements arranged to act progressively upon the strip, the operative portions of said elements for forming said hook being shaped and disposed to displace upwardly the metal of said strip to form said hook.

5. In a machine for making a drive chain link from a blank of sheet metal, said link having side bars, a relatively small end bar and a relatively large end bar or hook, the combination with a plurality of coöperating dies, each die consisting of link forming and shaping elements arranged to act progressively upon the blank, of scoring knives arranged adjacent to said elements to score the metal of the blank while said blank lies flat from end to end and before said blank is operated upon by any of said link forming and shaping elements, whereby the central portion of the link blank which is to be bent to form said large end bar or end hook is left flat at the ends of the lines of score and bulging and stretching of the metal at these points is avoided.

[Claims 6 to 16 not printed in the Gazette.]

1,107,832. MOTOR-CAR PROTECTION DEVICE. ALEXANDER PALIS, Spandau, Germany. Filed Nov. 13, 1913. Serial No. 800,806. (Cl. 21—90.)



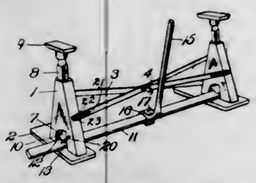
1. In combination with a road vehicle, a guard comprising a rod having a bifurcated end, the furcations thereof being secured to the forward portion of the vehicle, the opposite end of the guard extending upwardly and rearwardly and terminating at a point directly above the vehicle as shown and described.

2. In combination with a road vehicle, a guard comprising a rod having a bifurcated end, the furcations thereof being secured to the forward portion of the vehicle and in front of the front wheels thereof, a portion of each furcation extending downwardly and rearwardly to form wheel guards, and the opposite end of the rod extending upwardly and rearwardly and terminating at a point directly above the motor vehicle.

1,107,833. JACK FOR AUTOMOBILES. CHARLES WILSON PARKER, Kansas City, Mo. Filed Aug. 8, 1913. Serial No. 783,706. (Cl. 57—97.)

1. A jack comprising a stand having a chambered lower end provided with side openings, a bar extended through said openings, and a standard adapted for travel in the

stand and having oppositely inclined planes on its end adapted for operative contact by the bar, for the purpose set forth.



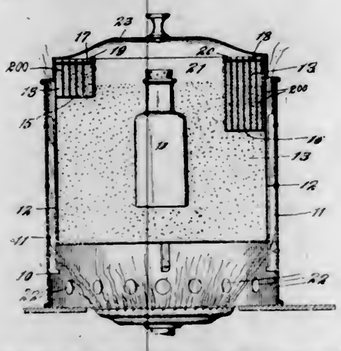
2. A jack comprising spaced stands each having a supporting base and a transverse opening at its lower end, means for spacing said stands, a bar sented on said bases and adapted for adjustment within the openings in said stands, standards slidably mounted in said stands and having inclined lower ends bearing on said bar, and means for rocking the bar to raise and lower said standards.

3. In a jack, a stand comprising a chambered part having a raised shelf spaced from one edge of the chambered part to form a downset seat, a standard slidably mounted in the standard, and a bar normally supported on said shelf and adapted for pivotal movement to lift the standard and for movement into and from the seat, substantially as set forth.

4. In a jack, a stand comprising a chambered part having side ports and a downset seat, a standard slidably mounted in the stand and having oppositely inclined faces at its lower end forming a bearing point, a bar normally supported on the shelf, and means for rocking said bar into contact with one of the inclined faces of the standard to lift the standard and for locking engagement with the other inclined face and with said seat substantially as set forth.

5. In a jack, a stand comprising a chambered part having lateral ports, and a shelf backset from the front of the ports to form a seat, a bar supported on said shelf and adapted for pivotal movement to set in said seat, and a standard having a head at its lower end provided with oppositely inclined faces adapted for lifting and locking contact with said bar, respectively.

1,107,834. STERILIZING APPARATUS FOR SURGICAL INSTRUMENTS. THOMAS L. PERRIN, Brooklyn, N. Y. Filed Mar. 11, 1913. Serial No. 753,586. (Cl. 167—3.)



1. An apparatus for sterilizing dental instruments, comprising an outer shell, a receptacle within the shell and spaced therefrom, comparatively shallow pans within the receptacle, perforated covers for the pans, and a powdered heat retaining substance within the receptacle and pans, into which the large instruments and the small slender instruments may respectively be inserted.

2. An apparatus for sterilizing dental instruments, comprising a receptacle, a shallow pan within the receptacle attached to the upstanding wall thereof, a removable perforated cover for the pan having a portion thereof engaging the wall of the pan and a powdered heat retaining substance within the receptacle and pan into which instruments of various sizes may be inserted and held for sterilization.

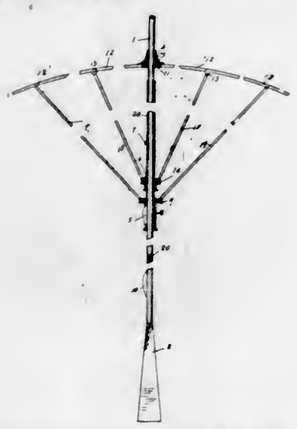
3. A sterilizing apparatus for dental instruments, comprising an outer shell having plurality of perforations adjacent the bottom thereof, an inner receptacle held in spaced relation to the shell, a pan held within the receptacle adjacent the top thereof into which the smaller instruments may be inserted, the heat from the heater at the bottom of the receptacle traveling up through the space between the receptacle and the shell and past the pan, and a powdered heat retaining space within the receptacle and pan.

4. A sterilizing apparatus for dental instruments, comprising an outer shell, an inner receptacle held in spaced relation to the shell, small pans adajcent to the top of the receptacle, a partition dividing the body of the receptacle into two compartments and a heat retaining powdered substance within the compartments and pans into which the various tools may be inserted and held for sterilization.

5. A sterilizing apparaatus for dental instruments, comprising an outer shell, an inner receptacle held in spaced relation to the shell, small pans of varying depths adjacent to the top of the receptacle, racks over said pans into which small instruments may be inserted, a partition dividing the body of the receptacle into two compartments and a heat retaining powdered substance within the compartments and pans into which the various tools may be inserted and held for sterilization.

[Claim 6 not printed in the Gazette.]

1,107,835. FOLDING UMBRELLA. JAMES PETERSON, Price, Utah, assignor to John J. Olson, trustee, Salt Lake City, Utah. Filed May 15, 1912. Serial No. 697,584. (Cl. 135—25.)



1. A folding umbrella consisting of a rod; two alined radially extended lugs thereon; a cover having the central portion fastened to said rod; a notch free of said cover and longitudinally movable on said rod between said cover and the upper onde of said lugs; hinged ribs having one end of each pivoted to said notch and free of said cover and the upper one of said lugs; hinged ribs having and adapted to engage said notch when the umbrella is being raised, and provided with an open longitudinal slot within which said lugs are guided; a runner fastened on the lower end of said sleeve; another runner slidable on said sleeve and limited in said movement by said first mentioned runner and the lower of said radial lugs; a set of stretchers pivoted between said first mentioned runner and the outer section of said ribs; and another set of stretchers pivoted to said last mentioned runner and to the hinge in said ribs without the longitudinal plane of the ribs.

2. A folding umbrella consisting of a rod having the usual spring catches therein to hold said umbrella when raised and lowered; two radially extended lugs on said rod, the upper one at practically one-quarter of the length of the rod from the upper end and the other near the upper spring catch; a cover with the central portion held securely on said rod by two cover sleeves; a notch adapted to slide on said rod free of said cover; hinged ribs pivoted thereto and with the portions from the hinge outward secured to said cover; a cylindrical sleeve slidable on said rod and provided with a longitudinal slot and a catch opening therein, and adapted to contact with said notch when said umbrella is being extended; a runner on said last mentioned sleeve; stretchers pivoted to said runner and to the outer section of said ribs; another runner slidably carried on said cylindrical sleeve and limited in its upward movement thereon by the lower one of said lugs; and a set of stretchers pivotally engaging said runner and the hinge in said ribs.

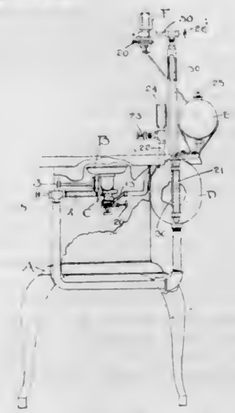
3. A folding umbrella consisting of a rod; two radially extended lugs and two spring catches fastened in said rod in longitudinal alinement with each other; a cover having its central portion secured on said rod; a notch slidably carried on said rod and limited in its movements thereon by the fastening means of said cover and the upper one of said lugs; severed and hingedly connected ribs pivoted to said notch at the inner ends; a hinge in each of said ribs without the plane thereof; a cylindrically shaped sleeve slidable on said rod and provided with a longitudinal slot therein and adapted to engage said notch to slide the same on said rod in an upward direction; a runner secured on the lower end of said sleeve and provided with an opening through both said sleeve and runner to engage one of said spring catches when adjacent thereto; stretchers pivoted to said runner and to the outer end portion of said ribs; another runner slidable on said sleeve and limited in its upward movement thereon by the lower one of said lugs; and a set of stretchers pivoted to said runner and to the hinge in said ribs.

4. A folding umbrella consisting of a rod; an extending lug thereon; a cover having the central portion fastened to said rod; a notch free of said cover and longitudinally movable on said rod between said cover and said lug; hinged ribs having one end of each pivoted to said notch and free of said cover from the hinge inward; a sleeve slidable on said rod and adapted to engage said notch when the umbrella is being raised; a runner fastened on the lower end of said sleeve; another runner slidable on said sleeve and limited in its movement in one direction by the said lug; a set of stretchers pivoted to said first mentioned runner and to the outer section of said ribs; and another set of stretchers pivoted to said last mentioned runner and to the hinge in said ribs.

5. A folding umbrella consisting of a rod; an extending lug thereon; a cover having the central portion fastened to said rod; a notch free of said cover and longitudinally movable on said rod between said cover and said lug; hinged ribs having one end of each pivoted to said notch and free of said cover from the hinge inward; a sleeve slidable on said rod and adapted to engage said notch when the umbrella is being raised and provided with an open longitudinal slot to pass said lug and to be guided thereby; a runner fastened on the lower portion of said sleeve; another runner slidable on said sleeve and limited in its movement in one direction by said first mentioned runner and in the other direction by said lug; a set of stretchers pivoted to said first mentioned runner and to the outer section of said ribs; and another set of stretchers pivoted between said last mentioned runner and the hinge in said ribs.

1,107,836. GENERATING APPARATUS. SIMEON F. PIERCE, St. Paul, Minn. Filed July 14, 1913. Serial No. 778,971. (Cl. 158—53.)

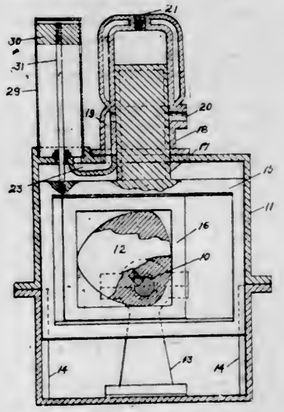
1. A liquid hydro-carbon generating system of the class described comprising a generator and burner, a filling tank, a supply tank, conduits connecting said tanks through the generating chamber whereby to establish communication between said supply tank and filling tank through said generator, and means for forcing the contents of one of said tanks to the other of stand tanks through said generator.



2. A liquid hydro-carbon generating system of the class described comprising a generator and burner, a filling tank, a supply tank, conduits connecting said tanks through the generating chamber whereby to establish communication between said supply tank and filling tank through said generator, and means permitting air to be compressed within said supply tank upon contained liquid hydro-cargon to force the contained supply through said generator to said filling tank.

3. A liquid hydro-carbon generating apparatus of the class described, comprising a generator and burner, a supply tank and a source of supply, means for establishing communication between the source of supply and supply tank through said generator, means for independently closing communication between said generator and said source of supply and said generator and supply tank, and means for forcing the contents of the supply tank through said generator to the source of supply.

1,107,837. RECIPROCATING ENGINE. WILLIAM A. PITT, New York, N. Y. Filed Apr. 8, 1910. Serial No. 554,238. (Cl. 121—45.)

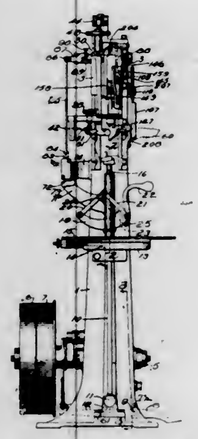


1. The combination with an engine having a reciprocating piston therein, of a rotatable shaft and means connect-

ing the piston and the shaft for causing the reciprocation of the former to rotate the latter, said means comprising an equilateral triangular cam secured against rotation on said shaft, a yoke exterior to said cam, a second yoke exterior to said first-mentioned yoke, and means connecting said second yoke with said piston, whereby the reciprocation of the piston will continuously rotate the shaft while the piston will dwell in its reciprocating movement near the end of both its inward and outward strokes.

2. The combination with an engine having a reciprocating piston therein, of a rotatable shaft and means connecting the piston and the shaft for causing the reciprocation of the former to rotate the latter, said means comprising an equilateral triangular cam secured against rotation on said shaft, a yoke exterior to said cam, a second yoke exterior to said first-mentioned yoke, the said first-mentioned yoke being adapted to reciprocate transversely in the said second yoke, and means connecting said second yoke with said piston, whereby the reciprocation of the piston will continuously rotate the shaft while the piston will dwell in its reciprocating movement near the end of its inward stroke.

1,107,838. HEEL-BREASTING MACHINE. THOMAS G. PLANT, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 11, 1909. Serial No. 501,449. (Cl. 12—47.)



1. In a heel breasting machine, the combination of breasting means, a breasting stop movable into contact with the shoe, and a sliding wedge movable under a part connected to the breasting stop to support the breasting stop while the stop arrests the operation of the breasting means.

2. In a heel breasting machine, the combination of breasting means, a breasting stop, a member movable into the path of movement of a part connected to the breasting stop to positively support the breasting stop while the stop arrests the operation of the breasting means, and a lock for holding the said member in arresting position.

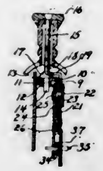
3. In a heel breasting machine, the combination of heel breasting means, a breasting stop movable toward and from the work and provided with a shouldered portion, and means coacting with said shouldered portion and sustained by the machine frame for positively supporting the breasting stop independent of the shoe during the action of the breasting means.

4. In a heel breasting machine, the combination of heel breasting means, a breasting stop, means for positively supporting the breasting stop independent of the shoe during the action of the breasting means, and means for holding the supporting means in arresting position.

5. In a heel breasting machine, breasting means, a breasting stop to engage the work, a slide movable into position to positively support the stop independent of the work while the stop arrests the action of the breasting means, and means for moving the slide.

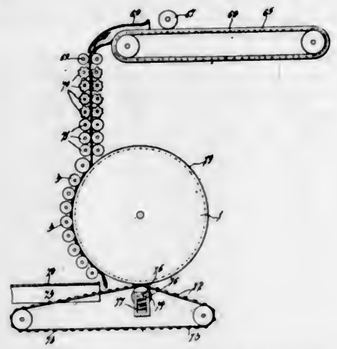
[Claims 6 to 62 not printed in the Gazette.]

1,107,839. STEM-WINDING AND STEM-SETTING WATCH. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed May 25, 1914. Serial No. 840,839. (Cl. 58—67.)



In a stem-winding and stem-setting watch, the combination with the front and rear movement-plates thereof, of a bridge interposed between the said plates near the upper edges of the same and formed with an open assembling-slot, and a winding-and-setting pinion provided with a hub and a retaining-flange adapted to be laterally applied to and removed from the bridge as a unitary part, through the open slot thereof.

1,107,840. APPARATUS FOR OBTAINING FIBERS, GUMS, AND JUICES FROM FIBROUS PLANTS. FRANK VICTOR RAYMOND, Invercargill, WYNFORD ORMSBY BEERE, Wellington, and JAMES ERNEST ROUGH, Foxton, New Zealand. Filed Sept. 11, 1912. Serial No. 719,851. (Cl. 13—21.)



1. Apparatus of the kind described, comprising a plain drum, a spur wheel fixed to the spindle of the said drum, a series of spaced plain rollers pressed against the periphery of the said drum, pinions fixed to the spindles of the rollers and gearing with said spur wheel so that fibrous blades will be carried through the machine between the drum and the rollers, and pipes located between the rollers of said series, each of said pipes being adapted to deliver a separate spray to two of said rollers substantially as set forth.

2. Apparatus of the kind described, comprising a plain drum, a plurality of conduits for receiving and conducting away the expressed juices and gums therefrom, and a series of plain rollers pressed against the periphery of said drum, the leading roller having least pressure, the next roller having increased pressure, and thereafter varying pressures being applied to the said rollers, as set forth.

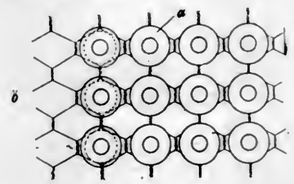
3. In apparatus as described, the combination of a drum, a plurality of contacting rollers, superposed conduits fixed to the frame of the machine and extending under the rim upon each side of the drum, the said conduits terminating successively in front of the leading and the following rollers, and receptacles into which the conduits respectively discharge, as set forth.

4. In a device of the type described, a drum, a plurality of rollers contacting the drum, scraping appliances between said rollers and means integral with said scraping devices for delivering a spray of water to said rollers.

5. In apparatus as described, the combination of a drum, a plurality of contacting rollers, a forked water spray, part of which plays upon one roller to remove fiber adhering thereto, and the other part of which plays upon another roller in the direction tending to assist the travel of the fiber through the machine, and conduits for conducting away the expressed juices and gums, as set forth.

[Claim 6 not printed in the Gazette.]

1,107,841. FOUNDATION ON WHICH PLASTER MAY BE LAID. OTTO RECHNITZ, Cottbus, Germany. Filed Feb. 20, 1911. Serial No. 609,621. (Cl. 72—116.)



1. The herein described process of producing flexible lathing for plaster which consists in taking bodies of clay, cement or the like, shaping same and forming a circumferential recess therein, bringing said bodies to a finished, rigid condition, constructing a wire netting with meshes adapted to readily receive said bodies, inserting said finished and rigid bodies into some of the meshes of said netting, and changing the shape of said meshes by exerting a tension on said netting and thereby causing the meshes thereof to become contracted in one direction and the netting to enter said grooves and grip said bodies.

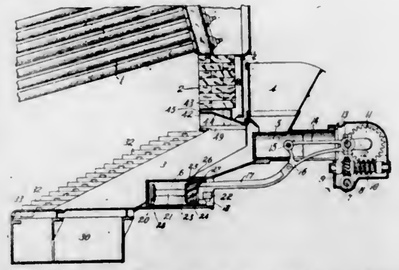
2. The herein described process of producing flexible lathing for plaster which consists in taking bodies of clay, cement or the like, shaping same and forming a circumferential groove therein, bringing said bodies to a completely finished condition, constructing a wire netting, inserting said completely finished bodies into the meshes thereof and subsequently changing the shape of said meshes so that the wires forming the netting will enter the grooves of said bodies and grip the latter.

3. The herein described process of producing flexible lathing for plaster which consists in taking bodies of clay, cement or the like, shaping same and forming a circumferential groove therein, bringing said bodies to a completely finished condition, constructing a wire netting having meshes adapted to be closed, inserting therein the said completely finished bodies before said meshes are closed and thereafter closing said meshes whereby the wires forming the netting will enter the grooves of said bodies and grip the latter.

1,107,842. MECHANICAL STOKER. ROBERT S. RILEY, Providence, R. I. Filed Feb. 8, 1908. Serial No. 414,900. (Cl. 110—44.)

1. A mechanical stoker having a passageway for directing fuel to the fire-space, upper and lower pushers to force the fuel into and through such passage-way, air-admitting means at each side of the passage-way, means for rotating the lower pusher prior to or during its retracting movement, and a cap bridging the passage-way having provisions for forcing air over the mass of fuel therein, above the top thereof.

2. A mechanical stoker having a passage or channel to direct fuel rearwardly from a supply outside of the furnace to the fire-space or zone of burning fuel, pushing means for forcing the fuel through such passage or channel, air conduits formed on each side of the passage having longitudinal openings parallel with the mouth of the passage; channeled twyer plates in continuous series covering the openings of the air conduits, and having hooks by which they are interlocked with one another and prevented from being lifted at their inner ends by the weight of the superimposed twyers.



3. A mechanical stoker having a passage or channel to lead fuel rearwardly from a supply outside of the furnace to the fire-space or zone of burning fuel, pushing means for forcing the fuel through such passage or channel, air conduits provided on each side of the passage having longitudinal openings parallel with the mouth of the passage; channeled twyer plates in continuous series covering the openings of the air conduits, each plate having a socket in one of its surfaces and a hook projecting from its opposite surface entering the socket of, and interlocking with, the next adjacent plate.

4. A mechanical stoker having a passage or channel to lead fuel rearwardly from a supply outside of the furnace to the fire-space or zone of burning fuel, pushing means for forcing the fuel through such passage or channel, air conduits provided on each side of the passage having longitudinal inclined openings; channeled twyer plates in continuous series covering the openings of the air conduits, each having a portion projecting into, and held by the walls of, the conduit, having also a socket in its upper side, and having a hook on the end most remote from the conduit entering and locking in the socket of the adjacent plate, whereby the outer ends of the plates are prevented from separating.

5. In a stoker having fuel passages and an intermediate air conduit, twyer plates or blocks closing the outlet from such conduit; said twyer blocks being superposed one upon another, the under block having a socket in its upper face and the adjacent upper block having a hook projecting from its under side entering and locking in the socket of the under block, the upper block being also provided with channels in its under surface leading from the outlet of the conduit to discharge orifices in its sides.

[Claims 6 to 22 not printed in the Gazette.]

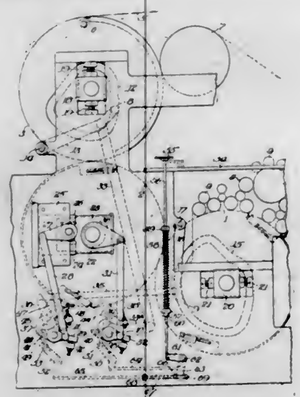
1,107,843. TRIP MECHANISM FOR PRINTING-PRESSES. CHARLES J. ROBERTSON, Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1914. Serial No. 827,039. (Cl. 101—100.)

1. In tripping mechanism for printing presses, the combination of a form cylinder, an impression cylinder, an interposed offset cylinder, and means for tripping the offset cylinder from the compainon cylinders in timed sequence to intermit the normal printing operation, substantially as described.

2. In tripping mechanism for printing presses, the combination of a form cylinder, an impression cylinder, an interposed offset cylinder, the form cylinder and impression cylinder having fixed axes of rotation, and the offset cylinder shiftable toward and from the companion cylinders, and means for tripping the offset cylinder from the companion cylinders in timed sequence to intermit the normal printing operation, substantially as described.

3. In tripping mechanism for printing presses, the combination of a form cylinder and an impression cylinder having fixed axes of rotation, an offset cylinder shiftable toward and from each of the companion cylinders along

a line normal to a line joining its axis with the axis of the other of said companion cylinders, and means for so shifting the offset cylinder as to trip its operative relation to the companion cylinders in timed sequence, substantially as described.

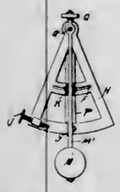


4. In tripping mechanism for printing presses, the combination of a form cylinder and an impression cylinder having fixed axes of rotation, an offset cylinder shiftable toward and from each of the companion cylinders along a line normal to a line joining its axis with the axis of the other of said companion cylinders, and means for so shifting the offset cylinder as to trip its operative relation to the impression cylinder and to the form cylinder in timed sequence and in the order named, substantially as described.

5. In tripping mechanism for printing presses, the combination of a form cylinder, an impression cylinder, an interposed offset cylinder, the form cylinder and impression cylinder having fixed axes of rotation, and the offset cylinder shiftable toward and from the companion cylinders, and means for tripping the offset cylinder from the companion cylinders in timed sequence, said tripping means comprising a pair of eccentrics each arranged to shift the axis of the offset cylinder in one direction, a pair of normally inactive work shafts, gearing operatively connecting each of said eccentrics with one of the rock shafts, a set of rock-shaft-driving mechanism actuated in timed relation to the rotation of each of the form and impression cylinders, and means under the control of the operator to couple each set of driving mechanism to its rock shaft, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

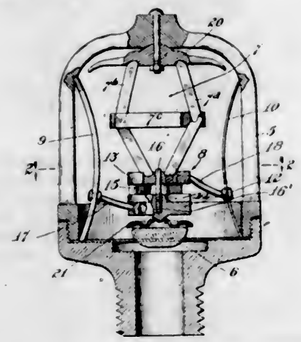
1,107,844. MARINE GOVERNOR. SANTO RUMOLINO, Genoa, Italy. Filed Apr. 1, 1912. Serial No. 687,823. (Cl. 121—113.)



1. In a marine governor, the combination of a throttle valve, an electric circuit including an electrically operated device for controlling said valve, a switch operated by a pendulum for closing said circuit, a second switch operated by a ball governor on the engine for closing said circuit and an electro-magnet adapted to close a shunt circuit in order to prevent the circuit operating the throttle valve when once closed from being opened again by the operation of either of said pendulum or governor controlling devices.

2. In a controlling apparatus for marine engines, the combination with the throttle valve of an electric motor provided with connections for opening and closing said valve, a circuit including a source of electricity, a switch in said circuit, a pendulum for operating said switch, a second switch in said circuit, a governor for operating said switch, an electro-magnet, circuits arranged so that when either of said switches are closed, current will be supplied to said magnet and to the motor, a second electro-magnet, circuits and contacts operated by said first named magnet for closing a circuit through said second magnet, a shunt circuit which is closed by said second magnet from the source of electricity to the motor and a switch operated by said valve controlling mechanism for opening the circuit to the motor when the valve is closed and for short circuiting the armature of the motor.

1,107,845. SPRINKLER-HEAD. FRANK V. SACKETT, La Grange, Ill. Filed Sept. 12, 1912. Serial No. 719,910. (Cl. 169—5.)



1. An automatic sprinkler head providing a valve, mechanical means differently responsive to sudden variations in temperature but similarly responsive to gradual variations, and means normally maintaining said valve in closed position operable to release said valve by the differential action of said temperature responsive means.

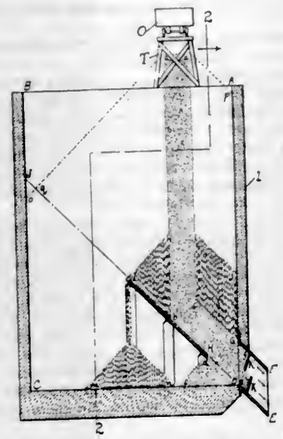
2. In a sprinkler head, a valve, means normally holding said valve in closed position comprising a plurality of parts relatively movable to effect a release of the valve, and a plurality of parts differently responsive to variations in temperature, said parts respectively connected with the relatively movable release parts to move said release parts to releasing position through differential action of the thermo-responsive parts.

3. In a sprinkler head, the combination of a frame, a valve and a plurality of parts between said frame and valve telescopically movable when in one position and normally standing in distended position, said parts being relatively movable toward said position, and differentially acting thermo-responsive devices, connected to said parts to move them to telescoping position under the influence of sudden rise in temperature.

4. In a sprinkler head, the combination of a valve, means normally holding said valve in closed position operable to release the valve at a predetermined temperature, and means automatically operable to release said valve in response to sudden rise in temperature.

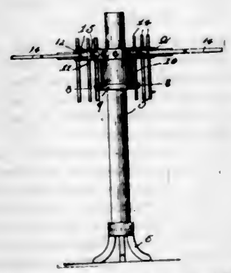
5. In a device of the character described, the combination of a frame having an opening, a valve for said opening, a rotatable structure interposed between said frame and valve including a pair of relatively rotatable disks arranged to condense their joint axial length when in one position of relative rotation, and differently acting thermo-responsive springs connected with said disks to rotate them in like direction but at different rates under rapid rise in temperature.

1,107,846. BIN. WILBUR E. SANDERS, Sonora, Cal., assignor of one-half to Annette J. Chamberlain, Berkeley, Cal. Filed Aug. 11, 1913. Serial No. 784,148. (Cl. 20—1.2.)



In combination with a flat-bottomed bin having a bottom discharge opening and chargeable from a point above said opening, a shelf positioned in the bin above the bottom thereof and spaced from said bottom and from the discharge opening, and operating to direct the material charged into the bin, toward said discharge opening.

1,107,847. CLOTHES-DRIER. PHILIP I. SAUNDERS, Ashland, Va. Filed Sept. 19, 1911. Serial No. 650,189. (Cl. 68—34.)



In a clothes drier, the combination of a standard, a sleeve provided with a flange upon its lower ends, adjustably secured upon said standard, a rotatable cylinder surrounding said sleeve and bearing upon the flange thereof; said cylinder having a circular flange upon its upper end provided with vertical openings, tubes provided with bayonet slots projecting radially from said circular flange and arms provided with pins to engage the bayonet slot in said tubes to prevent displacement of said arms substantially as set forth.

1,107,848. APPARATUS FOR TEARING OR CUTTING OFF PIECES FROM ROLLED-UP PAPER. FREDERIK SCHADE, Skive, Denmark. Filed Oct. 10, 1912. Serial No. 725,067. (Cl. 211—32.)

1. An apparatus for tearing or cutting off pieces from rolled-up paper, in which the tearing or cutting off is effected by means of a knife, wherein the knife is fixed between the two arms of two double-armed levers placed on the same side of the common axis of rotation of the levers, the other two arms being connected by a rod or rods, or the like, which form simultaneously with the cutting operation one or more corrugations or slack portions in the paper in such a manner that the paper, which is held by suitable roller-brakes, after the cutting off has taken place and the knife has returned to its original position, is straightened out and thereby moves forward in such a manner that it may be easily caught hold of in order to carry out the next severing operation.



2. A paper-cutting apparatus, comprising two levers spaced apart and having a common axis, a knife supported by said levers at one side of the axis, braking means preventing linear return movement of the paper behind the knife, paper-bending devices spaced apart along the path of the paper fed to the knife, and a paper-bending device on the lever, movable during the movement of the lever to cutting position, into operative relation with said first-named paper-bending devices to form a self-straightening bight in the paper, and movable, during movement of the knife out of cutting position, away from said first-named paper-bending devices to release said bight.

3. A paper-cutting apparatus, comprising two levers spaced apart and having a common axis, a knife supported by said levers at one side of the axis, braking means preventing linear return movement of the paper behind the knife, paper-bending devices spaced apart along the path of the paper fed to the knife, and a paper-bending device on the lever, movable during the movement of the lever to cutting position, into operative relation with said first-named paper-bending devices to form a self-straightening bight in the paper, and movable, during movement of the knife out of cutting position, away from said first-named paper-bending devices to release said bight, said first-named paper-bending devices comprising a plurality of fixed transverse rods, and said second paper-bending device comprising a transverse member secured at its ends to the levers and having at its upper surface grooves for receiving said rods.

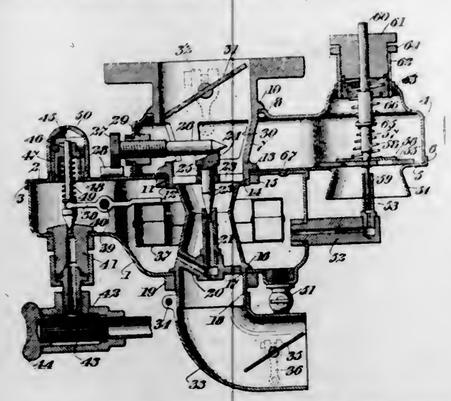
4. A paper-cutting apparatus, comprising two levers spaced apart and having a common axis, a knife supported by said levers at one side of the axis, braking means preventing linear return movement of the paper behind the knife, paper-bending devices spaced apart along the path of the paper fed to the knife, and a paper-bending device on the lever, movable during the movement of the lever to cutting position, into operative relation with said first-named paper-bending devices to form a bight in the paper, and movable, during movement of the knife out of cutting position, away from said first-named paper-bending devices to release said bight; and means carried by said levers for straightening the bight during said last-named movement.

5. A paper-cutting apparatus, comprising two levers spaced apart and having a common axis, a knife supported by said levers at one side of the axis, braking means preventing linear return movement of the paper behind the knife, paper-bending devices spaced apart along the path of the paper fed to the knife, a paper-bending device on the lever, movable during the movement of the lever to cutting position, into operative relation with said first-named paper-bending devices to form a self-straightening bight in the paper, and movable, during movement of the knife out of cutting position, away from said first-named paper-bending devices to release said bight, and means for guiding two superposed webs of paper to said braking means.

1,107,849. CARBURETER. CHARLES T. SCHOEN, Media, Pa. Filed Jan. 13, 1914. Serial No. 811,833. (Cl. 48—155.2.)

1. In a carbureter, the combination of a float chamber and a mixing chamber, each composed of a body portion

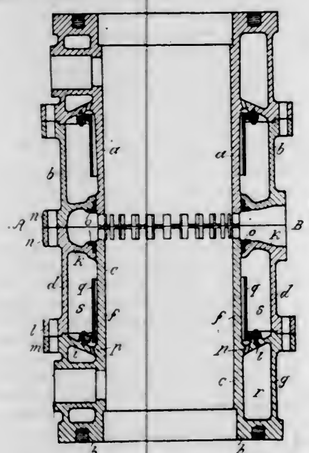
and a cover, the said body portions and covers provided with alined openings, a Venturi tube fitted in said openings and provided with flanges overlapping said openings, and nuts applied to the Venturi tube beneath the body portion of the float chamber and the two covers.



2. In a carbureter, the combination of a float chamber and a mixing chamber, each composed of a body portion and a cover, the said body portions and covers provided with alined openings, a Venturi tube fitted in said openings and provided with flanges overlapping said openings and screwthreaded portions next to the openings in the covers and the opening in the body portion of the float chamber, and nuts applied to such screwthreaded portions beneath the covers and the said body portion.

3. In a carbureter, a float chamber, and a superposed mixing chamber, each chamber having a body portion and a flanged cover portion of pressed metal, the mixing chamber cover having a flanged air inlet, combined with a Venturi tube extending through said chambers and connecting their body portions and covers in coöperative relation.

1,107,850. CYLINDER. KARL SCHWARZ, Nuremberg, Germany, assignor to Maschinenfabrik Augsburg-Nürnberg A. G., Nuremberg, Germany. Filed Mar. 18, 1913. Serial No. 755,070. (Cl. 123—61.)

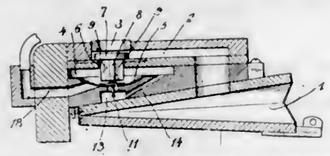


1. A cylinder for double acting two-cycle internal combustion engines composed essentially of four parts, the cylinder being divided in a plane passing through the exhaust channel and perpendicular to the cylinder axis, each of the castings at either side of the division line consisting of one half of the interior cylinder wall, a portion of an outer part forming a water jacket adjoining the cylinder end, and connecting flanges for joining the jacket and the cylinder wall to the corresponding parts of the other casting.

2. A cylinder for double acting two-cycle internal combustion engines composed essentially of four parts, the cylinder being divided in a plane passing through the exhaust channel and perpendicular to the cylinder axis, each of the castings at either side of the division line consisting of one half of the interior cylinder wall, a portion of an outer part forming a water jacket adjoining the jacket and the cylinder wall to the corresponding parts of the other casing, and stuffing boxes for tightening the adjoining parts near the division line.

3. A cylinder for double acting two-cycle internal combustion engines composed essentially of four parts, the cylinder being divided in a plane passing through the exhaust channel and perpendicular to the cylinder axis, each of the castings at either side of the division line consisting of one half of the interior cylinder wall, a portion of an outer part forming a water jacket adjoining the cylinder end, connecting flanges for joining the jacket and cylinder wall to the other casting, stuffing boxes for tightening the adjoining parts near the division line, and conduits for the cooling water within the space of the water jacket.

1,107,851. BLEED-HOLE-REGULATING DEVICE. JOSEPH SCHWERTNER, New York, N. Y., assignor to Heerwagen Company, a Corporation of New York. Filed Apr. 1, 1913. Serial No. 758,110. (Cl. 84—178.)



1. In a device of the class described, a pneumatically operating membrane or diaphragm, a bleed hole therefor, and means to substantially close the bleed hole when the membrane is at either of its extreme positions and to materially open the bleed hole when the membrane is intermediate its extreme positions.

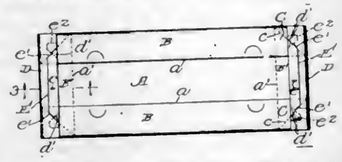
2. In a device of the class described, a pneumatic action having a bleed hole, and means for increasing the effective cross-section of the bleed hole when the action is operated pneumatically, and substantially closing the bleed hole when the action is at rest in both of its rest positions.

3. In a device of the class described, a pneumatic action having a bleed hole and a spindle operating in the bleed hole and controlled by the pneumatic action, said spindle being cut away at the part operating in the bleed hole to increase the effective cross section of the bleed hole when the action operates, the spindle above and below the cut-away portion acting to substantially close the bleed hole when the action is at rest in both of its rest positions.

4. In a device of the class described, a pneumatically operating membrane, a bleed hole through which the air on one side of said membrane may be exhausted, and a spindle connected to said membrane and operated thereby and within the bleed hole, said spindle being cut away at the part operating in the bleed hole to increase the effective cross section of the bleed hole when the action operates, the spindle above and below the cut away portion acting to substantially close the bleed hole when the action is at rest in both of its rest positions.

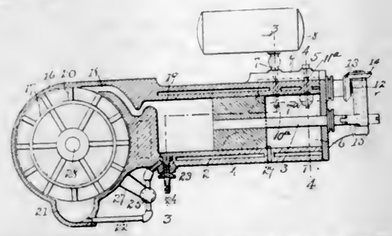
1,107,852. FOLDING BOX. CHARLES H. SEEGMILLER, Chicago, Ill., assignor of one-half to Fred J. Dennis, Chicago, Ill. Filed May 22, 1911. Serial No. 628,771. (Cl. 229—31.)

A collapsed box, comprising a base, a pair of side walls and a pair of end walls flexibly connected to the base, one set of walls lying flat on the base with folding corner-sections at their ends, flaps flexibly secured to the other set of walls and having their edges notched near their ends inside the folds of the corner sections, and a flexible retaining strip secured near its center to the upper face of each flap along the edge thereof and having notches near its ends engaging the notches of the associated flap, the



notches being of such depth that the edges of the associated strips and flaps are flush, said strips being of sufficient length that their ends project beyond the notches and lie between the infolded corner-sections and the associated end-wall and hold the ends of the flaps against rising from their associated end-wall when the parts are erected in box-like form.

1,107,853. ENGINE. EDWARD L. SEERY, Waterbury, Conn. Filed Mar. 10, 1905. Serial No. 249,438. (Cl. 123—19.)



1. In an engine, a pair of cylinders, pistons located in said cylinders, means connecting the pistons to cause them to work in opposition to each other, means for alternately admitting gas to said cylinders on one side of the pistons, means for igniting the gas alternately in said cylinders, a rocking lever, a valve secured to each end of said lever to admit fluid alternately to the cylinders, each valve controlling the flow of fluid to the cylinder, and a motor appurtenant to each cylinder and driven by the fluid in its passage from the cylinder.

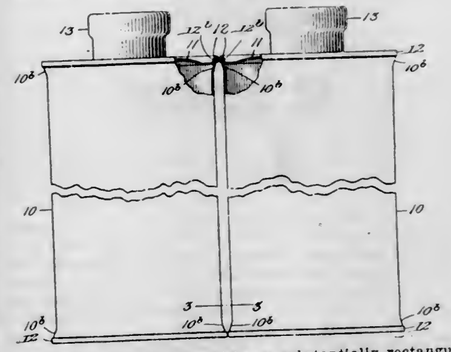
2. In an engine, a pair of cylinders, pistons located in said cylinders and working in opposition to each other, means for alternately admitting gas to said cylinders on one side of the pistons, means for alternately admitting fluid to the opposite sides of said pistons, a rocking lever pivotally connected at each end to a piston whereby each is actuated in one direction solely by the other, means for igniting the gas alternately in said cylinders, and a motor appurtenant to each cylinder and driven by the fluid in its passage from the cylinder.

3. In an engine, a pair of cylinders, a turbine appurtenant to each of the cylinders, a reservoir to receive liquid discharged from the turbine, means for forcing liquid from the reservoir into one end of the cylinder, a valve for controlling the flow of liquid into each of the cylinders, means connecting said valves to cause them to work in opposition to each other, a gas valve chamber, a passage for gas into said gas valve chamber, a gas valve for alternately admitting gas into that end of each cylinder opposite that into which the liquid is admitted, pistons located in said cylinders, a lever connected with the pistons, connections between the lever and gas valves for operating the latter, and means for igniting the gas alternately in said cylinders.

4. In an engine, a pair of cylinders, pistons located in said cylinders, means connecting the pistons to cause them to work in opposition to each other, means for admitting gas to the cylinders, means for admitting air to the explosion side of said cylinders, valves for controlling the admission of said air and gas, connections between said valves and said pistons whereby the former are operated to alternately admit gas to the cylinders, means for admitting liquid to the opposite ends of each of said cylinders, means for alternately exploding the gas in said cylinders, and mechanism to be actuated by the liquid forced from the cylinders.

5. In an engine, a pair of cylinders, pistons located in said cylinders and working in opposition to each other, connections between the pistons, means for admitting gas to said cylinders, means for exploding said gas alternately in said cylinders, means for admitting fluid to each cylinder, a motor located appurtenant to each cylinder to receive fluid as it is emitted therefrom, a passage extending from each motor to each cylinder, a valve controlling each of said passages, and a rocking lever attached at opposite ends to said valves, said valves opening inward.

1,107,854. SHEET-METAL CAN. ISAAC E. SEXTON, West Medford, Mass. Filed Dec. 4, 1913. Serial No. 804,631. (Cl. 220—92.)



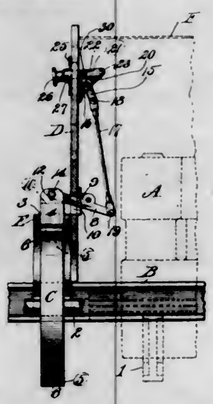
A sheet metal can comprising a substantially rectangular body having sides connected by curved corner bends, the major portions of which are of relatively short radius, the major portions of the body-sides being substantially flat and connected by the said short radius corner-bend portions, while the end portions of the body sides are flared outwardly between the corner bends, whereby the radius of the end portions of the corner bends is increased, and heads having marginal flanges seamed to the ends of the body, said flanges having straight portions connected by curved corner bends of relatively long radius conforming to the radius of the end portions of the body corner bends, the outwardly flared portions of the body sides and the head flange portions engaged therewith forming projecting guards at opposite ends of the can, whereby contact between the flat side portions of adjacent cans is prevented, the short radius of the major portions of the corner bends stiffening the corners of the body and minimizing the outward bulging of the flat side portions.

1,107,855. MOTOR-LOCKING MECHANISM. WALTER J. SHERRY, St. Louis, Mo. Filed Nov. 4, 1912. Serial No. 729,368. (Cl. 21—90.)

1. In a motor vehicle, the combination with an engine having a main shaft and a member provided with keeper devices thereon, a bridge rigidly supported by the frame of the vehicle above said member, a lock bolt operating through an opening in said bridge, an arm supported above said bolt and being connected to said bolt, operating connections for raising and lowering said arm and a lock device for locking said connections, substantially as specified.

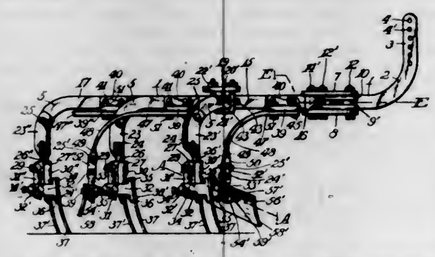
2. In a motor vehicle, the combination with an engine having a rearwardly extending shaft and a fly-wheel fast

thereon arranged to revolve below the vehicle body, a lock bolt supported above said fly-wheel, keeper devices arranged in the periphery of said fly-wheel and adapted to coöperate with said lock bolt, an arm supported by the dashboard of the vehicle having pin and slot connection with said lock bolt, a bell crank lever supported above said arm, a link connecting one arm of the bell crank lever to said arm, and a plunger extending through the dashboard of the vehicle, and accessible from the driver's seat thereof, for operating said bell crank lever and thereby raising and lowering said lock bolt through the connections effectively to lock and unlock the said fly-wheel, substantially as specified.



3. In a motor vehicle, the combination with an engine having a main shaft, a member carried by said main shaft provided with keeper devices, a lock bolt supported above said main shaft, a rigid frame secured to the chassis of the vehicle adapted to coöperate with said bolt and said member to rigidly lock the shaft, an arm connected to said bolt, a lever for operating said arm, a handle connected to said lever and a lock mechanism for said handle, substantially as specified.

1,107,856. CULTIVATOR. LEROY W. SIMMONS, Broad Ripple, Ind. Filed Jan. 24, 1913. Serial No. 743,936. (Cl. 97—10.)



1. A cultivator including a beam having a cylindrical bar thereon, a yoke adjustably secured to the bar to be shifted rotatively and having a cylindrical stem, and a cultivator implement having a head that is adjustably secured to be shifted rotatively on the stem.

2. A cultivator including a beam having a cylindrical bar thereon, a yoke adjustably secured to the bar to be shifted rotatively, the yoke having two cylindrical stems, and two cultivator implements having heads adjustably secured respectively to the two stems to be shifted rotatively thereon.

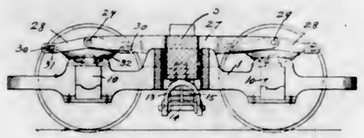
3. A cultivator including a cylindrical carrying bar having a jaw normally carrying the bar vertically, a yoke having a bore therein receiving the bar and having also a downward extending cylindrical stem, a head having a bore therein receiving the stem, a set-screw connected to the yoke and engaging the bar, a set-screw connected to the head and engaging the stem, and an implement fixedly secured to the stem and extending downwardly therefrom at an inclination to the stem.

4. A cultivator including a yoke having two cylindrical stems, all formed integrally, the stems extending in parallel arrangement, the yoke having also a bore therein on a plane extending between the stems, a carrying bar rotatively adjustable in the bore and having a supporting jaw thereon, a set-screw mounted in the yoke and engaging the bar, and two cultivator implements having heads adjustably secured respectively to the two stems.

5. A cultivator including a cylindrical carrying bar having a jaw normally carrying the bar vertically, a yoke having a bore therein receiving the bar and having also two integral downward extending cylindrical stems thereon, a device adjustably securing the yoke to the bar, two heads having bores receiving the two stems respectively and provided each with a device adjustably securing the head to the stem, and two cultivator implements fixedly secured to the two heads respectively.

[Claims 6 and 7 not printed in the Gazette.]

1,107,857. EQUALIZING CAR-TRUCK. CLARENCE E. SMITH, St. Louis, Mo., assignor to Double Body Bolster Co., St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 16, 1912, Serial No. 725,969. Renewed July 30, 1913. Serial No. 782,138. (Cl. 105—243.)



1. In a car truck, in combination with a truck frame rigidly mounted with respect to the axles, a pair of equalizing bars located, respectively, at opposite sides of the truck frame and supported at opposite ends thereon by springs, and a spring-plank supported at its ends from said equalizing bars.

2. In a car truck, in combination with a truck frame rigidly mounted with respect to the axles, a pair of equalizing bars located, respectively, at opposite sides of the truck frame and supported at opposite ends thereon by springs, and a spring-plank pivotally supported at its ends from said equalizing bars.

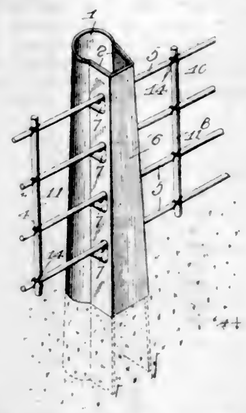
3. In a car truck, in combination with a truck frame rigidly mounted with respect to the axles, a pair of equalizing bars located, respectively, at opposite sides of the truck frame and supported at opposite ends thereon by springs, and a spring-plank pivotally supported at its ends from said equalizing bars centrally of the latter.

4. In a car truck, a truck frame provided at opposite sides with guide-pockets, a pair of equalizing bars located, respectively, at opposite sides of the truck frame and having central guide-blocks, respectively working in said pockets, a spring-plank extending from side to side of the truck frame, and hangers pivotally mounted in said guide-blocks and connected at their lower ends, respectively, to opposite ends of said spring-plank.

5. In a car truck, a truck frame provided at opposite sides with central guide-pockets, a pair of equalizing bars located, respectively, at opposite sides of the truck frame and provided with central guide-blocks, respectively working in said guide-pockets, a pair of spring-supported bars mounted on each side of the truck frame and pivotally connected intermediate their ends to opposite ends of the said equalizing bars, a hanger pivotally supported from each of said guide-blocks, and a spring-plank extending from side to side of the truck and pivotally connected at its ends to said hangers.

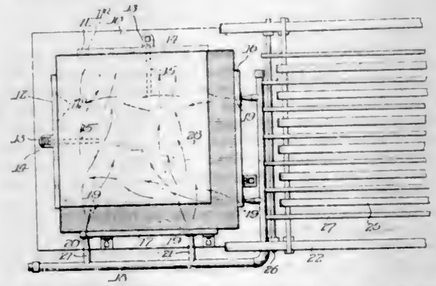
[Claims 6 to 16 not printed in the Gazette.]

1,107,858. FENCE-POST. THOMAS W. SMITH, Delphos, Ohio. Filed Oct. 4, 1913. Serial No. 793,426. (Cl. 256—52.)



A fence post comprising a body, provided with flanges, said flanges provided with substantially U-shaped notches, one end of said U-shaped notches communicating with the outer edge of said flanges and the other end of said U-shaped notches terminating short of the outer edge of said flanges thereby producing an inwardly extending tongue, a locking plate substantially U-shaped in cross section provided with a plurality of angle notches, thereby producing a plurality of depending lips, knob portions formed upon the inner edges of said lips and registering with said angle notches at the angle portion thereof, said angle notches fitting over said U-shaped notches and adapted to hold a wire strand of a fence in the upper end of said angle notches and under said inwardly projecting tongue formed upon said flanges of said body.

1,107,859. JOGGER FOR PRINTING-PRESSES. BURT D. STEVENS, Riverside, Ill., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 1, 1911. Serial No. 657,975. (Cl. 101—34.)



1. In a printing press, the combination of delivery means, a receiving table having a pair of adjustable guide members substantially at right-angles to each other, and a pair of side members parallel to said guide members, each of said side members having a delivery slot therein, and means for delivering air through said slots, whereby the sheets of paper successively coming from said delivery means will be directed into contact with said guide members, substantially as described.

2. In a printing press, the combination of delivery means, paper receiving means, a guide member on said receiving means, means for directing an air jet toward said guide member, and means for vertically reciprocating said jet directing means as said delivery means is operated, whereby the sheets of paper coming successively from said delivery means will be brought into contact with said guide member, substantially as described.

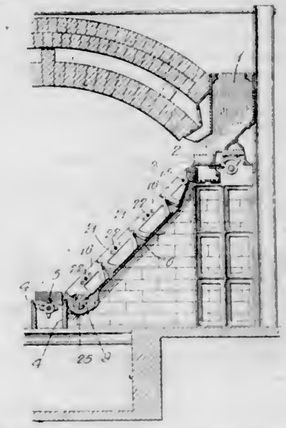
3. In a printing press, the combination of delivery means, a receiving table, a pair of guide members on said receiving table mounted substantially at right-angles with each other, means for directing an air jet toward each of said guide members, and means for vertically reciprocating said jet-directing means as said delivery means is operated, whereby the sheets of paper coming successively from said delivery means will be directed into contact with said guide members, substantially as described.

4. In a printing press, the combination of delivery means, a receiving table having a guide member thereon, a side member parallel to said guide member, said side member having a delivery slot therein, and means for delivering air through said slot in a substantially horizontal direction toward the guide member and transverse to the direction of travel of the sheet, whereby the sheets of paper successively coming from said delivery means will be directed laterally into contact with said guide member, substantially as described.

5. In a printing press, the combination of delivery means, a receiving table having thereon an apertured guide member, a side member arranged substantially parallel to the guide member and to the direction of travel of the delivered sheets and having therein delivery slots directed toward the apertured guide member and transverse to the direction of travel of the sheets, and means for delivering air currents through said slots toward and through the apertures of the guide member, whereby to carry the sheets of paper laterally into contact with the guide member, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,860. GRATE-BAR. BURT C. STEWART, Detroit, Mich., assignor to Murphy Iron Works, Detroit, Mich., a Corporation of Michigan. Filed Jan. 16, 1914. Serial No. 812,563. (Cl. 110—38.)



1. A grate comprising spaced stationary bars, and articulated bar sections pivotally supported by said stationary bars between said stationary bars and adapted to have movement imparted thereto at one end of one of said sections.

2. A grate comprising stationary spaced bars, bar sections, pivot pins carried by each bar section and extending from said stationary bars to pivotally support said bar sections between said stationary bars, and means for imparting an undulatory movement to said bar sections throughout the length of said stationary bars.

3. A furnace grate comprising alternately arranged inclined, stationary and movable grate bars, each movable
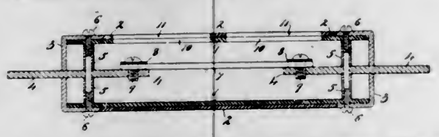
bar having a plurality of pivotally supported articulated sections, and means at one end of said bars for imparting an undulatory movement to said movable bars throughout their length.

4. A furnace grate comprising alternately arranged, inclined, stationary and movable bars, each movable bar having articulated sections, means for pivotally supporting the sections of each movable bar whereby their movement between said stationary bars is regulated, and means at the lower ends of said movable bars for imparting an undulatory movement to said bars throughout their length.

5. A furnace grate comprising alternately arranged inclined, stationary and movable bars, guide bosses carried by the sides of said stationary bars, each movable bar having a plurality of pivoted articulated sections bearing against said bosses, and a rocker bar imparting an undulatory movement to all of said movable bars.

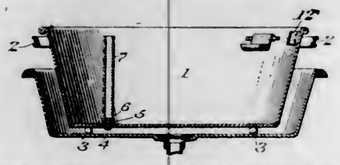
[Claims 6 to 9 not printed in the Gazette.]

1,107,861. REFILLABLE FUSE. CHARLES N. STOUT, Hamilton, Ontario, Canada, assignor of one-half to George Morris, Hamilton, Canada. Filed Jan. 19, 1914. Serial No. 813,608. (Cl. 175—273.)



In combination in a refillable fuse, an inner tube of insulating material having longitudinally alining slots provided with enlarged end portions, an outer similarly slotted cartridge of shorter length fitting and rotatable on said inner cartridge, cylindrical cup-shaped pieces fitting on the end of the inner tube, the inner ends of which bear against the ends of the outer tube, a diametrically arranged blade fitted through each said cup-shaped piece and disposed in a plane axially longitudinally of the cartridges, internally threaded projections on the inner ends of said blades axially in line and at right angles diametrically across the inner tube adjacent its ends, means for rigidly clamping said threaded projections to the inner tube and end pieces, a fusible element and screws for securing said fusible element to the inner ends of the aforesaid blades, the heads of said screws underlying the enlarged end portions of the slots.

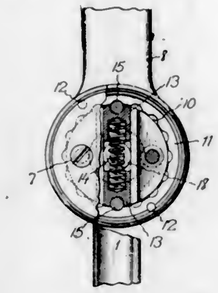
1,107,862. PORTABLE WASHTUB. ELLEN M. JOHNSON STUBBS, Philadelphia, Pa. Filed Aug. 22, 1913. Serial No. 786,068. (Cl. 4—35.)



A portable wash tub comprising a body with supporting feet, a hollow nipple in the bottom of said body having a perforation in its side, and a securing flange seated on said bottom, a nozzle depending from said nipple for detachable connection with a discharge conveying tube, and a vertically disposed overflow stopper having its lower portion movably fitted on said nipple and its bottom end adapted to close against said flange.

1,107,863. WIND-SHIELD JOINT. NELSON STURDEVANT, Detroit, Mich. Filed May 29, 1913. Serial No. 770,587. (Cl. 21—148.)

1. A pivot joint comprising a member having a hub with recesses in the inner periphery thereof, a member having a bearing plate on which the hub is journaled, a cap secured to the plate and adapted to hold the hub thereon, a pair of oppositely disposed yieldingly projected keepers movable in the cap in the plane of rotation of the hub adapted to engage the hub recesses, and a locking member in the cap movable transversely of the keepers and having a rotatable head for holding them separated and interlocked positively with the hub, the head of said member receding into said cap to provide clearance for said keepers.



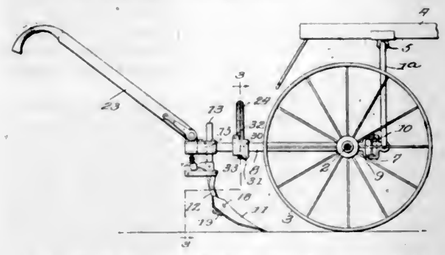
2. A pivot joint comprising a member having a hub with a series of recesses in the inner periphery thereof, a member having a bearing plate, a cap non-rotatably secured to the plate, the hub being journaled on the cap and plate, a pair of oppositely disposed keepers movable in a transverse guideway in the cap adapted to enter the recesses in the hub, a spring between said keepers and a locking member in the cap adapted to be forced between the proximate ends of the keepers in proximity to said spring when the latter have entered recesses in the hub and to hold them in such position.

3. A pivot joint comprising a member having a hub, a bushing secured in the hub with recesses in the inner periphery thereof, a member having a bearing plate on which the hub is rotatable, a cap non-rotatably secured to the plate and adapted to co-act with the latter as a bearing for the hub, oppositely disposed keepers in sliding engagement with the cap adapted to enter the bushing recesses, a compression spring arranged between said keepers and having end convolutions engaging said keepers, and a locking member in the cap adapted to be forced between the proximate ends of the keepers at one side of said spring when the latter have entered opposite recesses for securing them therein.

4. A pivot joint comprising a member having a hub with longitudinally fluted inner periphery, a bearing plate having a rabbeted margin on which the hub is rotatable, a cap non-rotatably secured to the plate and having a rabbeted margin and adapted to hold the hub thereon, a pair of oppositely disposed keepers movable in a transverse guideway in the cap, a friction roll journaled in the end of each keeper and adapted to enter the flutes of the hub, a spring arranged between said keepers and a locking member in the cap adapted to be forced between the proximate ends of the keepers at one side of said spring when the rolls have entered opposite recesses in the hub and to lock the keepers in such position.

5. A pivot joint comprising a member having a hub, a member having a plate on which the hub is journaled, a cap non-rotatably secured on the plate for retaining the hub thereon provided with a transverse guideway, a bushing non-rotatably secured to the hub between the plate and cap and provided with a fluted interior periphery, a pair of keepers sliding in the guideway, a spring member yieldingly projecting the keepers, a friction roll journaled in the outer end of each keeper and adapted to enter the flutes of the bushing, and a stud in screw-threaded engagement with the cap having an inner head adapted to lie between the keepers at one side of said spring when the rolls of the latter are in opposite recesses and the stud is screwed home in the cap.

1,107,864. CULTIVATOR ATTACHMENT. WILBUR REEDER STURGISS, Conway, Ark., assignor of one-half to Ralph D. White, Conway, Ark. Filed Mar. 7, 1914. Serial No. 823,168. (Cl. 97—34.)



1. A device of the character specified, comprising in combination with a wheel supported cultivator frame, of beams pivoted to the frame at their front ends to swing laterally on vertical axes, a handle connected to the rear of each beam, a standard adjustably connected with each beam, a blade supported by each standard at the lower end thereof, resilient means engaging the beams for pressing them toward each other, said blades being adapted to abut at their inner edges, and each blade inclining rearwardly and outwardly when so abutted to form a plow for moving the soil in both directions, and adapted to be separated by means of the handles.

2. A device of the character specified, comprising a wheel supported frame, beams pivoted to the frame at their front ends and mounted to swing laterally toward and from each other, normally active means for pressing the rear ends of the beams together, a blade supported below each beam and adjustable with respect to the beam, said blades being adapted to abut at their inner edges when the beams are pressed together to form a turning plow for throwing the soil in both directions from the abutting edges of the blade.

3. In a device of the character specified, cultivating blades adapted to abut at their inner edges to form a turning plow for throwing the soil in opposite directions from the abutting edges of the blades, means for supporting the blades for movement toward and from each other, and resilient means normally acting to move the blades apart, said last named means comprising a coil spring, and a support for each blade, the spring being arched and having its ends connected with the adjacent supports.

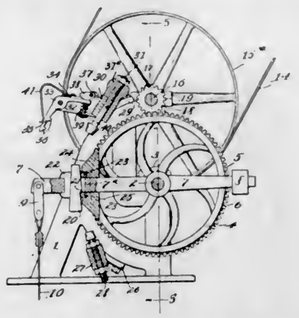
1,107,865. PROCESS FOR WELDING COPPER. HEISHICHI SUZUKI, Shibaku, Tokyo, Japan. Filed Aug. 2, 1913. Serial No. 782,558. (Cl. 78—92.)

1. A process for welding copper which consists in heating the specimens previously polished on their welding surfaces in a closed vessel heated exteriorly, the specimens being laid on a layer of charcoal, and in quickly hammering the specimens after withdrawal from the vessel at a suitable temperature.

2. A process for welding copper which consists in polishing the welding surfaces, coating the same with a welding compound and then placing the specimens on a layer of charcoal within a closed vessel heated from the exterior; the specimens being withdrawn at a welding heat and hammered.

1,107,866. LIFT FOR DROP-HAMMERS AND THE LIKE. SWAN SWEDENBORG, Cleveland, Ohio, assignor to The Phoenix Foundry and Machine Company, Ashtabula, Ohio, a Corporation of Ohio. Filed Oct. 16, 1913. Serial No. 795,460. (Cl. 78—29.)

1. A device of the character set forth comprising, in combination, a member which is arranged to be continually moved in one direction, a member capable of vibration, and means whereby the second member is secured to the first mentioned member at substantially the limit of its movement in the direction opposite that of the movement of the first member and released therefrom at substantially the limit of its movement in the other direction.



2. A device of the character set forth comprising, in combination, a member which is arranged to be continually moved in one direction, a member capable of vibration, means whereby the second member is secured to the first mentioned member at substantially the limit of its movement in the direction opposite that of the movement of the first member and released therefrom at substantially the limit of its movement in the other direction, and a device for retaining said second member in released position.

3. A device of the character set forth comprising, in combination, a member which is arranged to be continually moved in one direction, a member capable of vibration, means whereby the second member is secured to the first mentioned member at substantially the limit of its movement in the direction opposite that of the movement of the first member and released therefrom at substantially the limit of its movement in the other direction, a device for retaining said second member in released position, and mechanism for actuating said device.

4. A device of the character set forth comprising, in combination, a member which is arranged to be continually rotated in one direction, a member which is pivoted at the axis of the rotating member, means for securing the pivoted member to the rotating member whereby the rotating member may rock the pivoted member in one direction, means whereby said pivoted member is rocked in the opposite direction, and a pair of devices, one of which renders the securing means effective when the pivoted member reaches substantially the limit of its movement in one direction, and the other of which renders said means ineffective when the pivoted member reaches substantially the limit of its movement in the opposite direction.

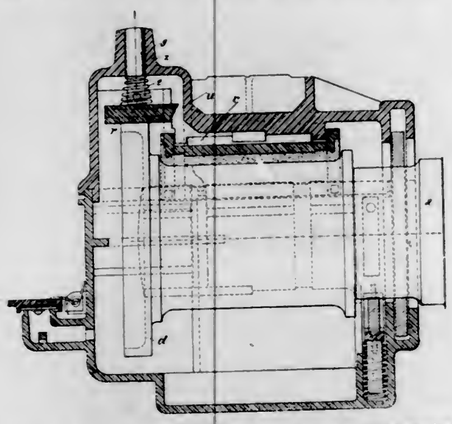
5. A lift for drop hammers comprising, in combination, a pivoted member which has connection with the hammer head, a member which is arranged to be continually rotated on an axis coincident with the pivot of the first mentioned member, means for connecting the pivoted member to the rotating member whereby the pivoted member will be moved to lift the hammer head, and a device for rendering ineffective the connecting means when the hammer head has been raised a predetermined distance.

[Claims 6 to 19 not printed in the Gazette.]

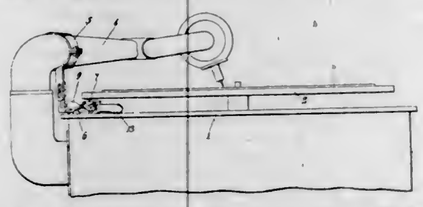
1,107,867. AXLE-BOX. IWAN SZOT-CZETEN, Warsaw, Russia. Filed Feb. 25, 1910. Serial No. 546,029. (Cl. 64—10.)

1. The combination with an axle box having an opening therein, an axle having one end extending into the box, of a wear indicating apparatus comprising a base portion, a pin having one end secured to the base and the opposite end thereof extending through the opening in the box so that the upper edge of the pin will aline with the outer surface of the box, and means for supporting the indicating apparatus whereby the sinking of the axle box with respect to the axle, due to wear will cause the upper end of the pin to extend above the outer surface of the box.

2. The combination with an axle box having an opening therein, an axle having one end extending into the box, of a wear indicating apparatus comprising a base portion adapted to rest on a portion of the axle, a pin having one end thereof secured to the base, a coiled spring surrounding the pin, one end of the spring adapted to engage the under side of the box and the opposite end of the spring adapted to engage the base, whereby the base is held into engagement with the axle.



1,107,868. AUTOMATIC BRAKE MECHANISM. ANGELO M. TOZZI, Bayonne, N. J., assignor to Condon-Autostop Company, a Corporation of New York. Filed Feb. 14, 1913, Serial No. 748,331. Renewed Jan. 17, 1914. Serial No. 812,857. (Cl. 74—46.)



1. In a brake mechanism, the combination, with two independently moving members, of a brake carried by and moving with one of said moving members, means actuated by gravity tending normally to set the brake against the other of said moving members, and means restraining the gravity actuated means during the continued movement of the first of said moving members and releasing the same upon the stopping of such movement.

2. In a brake mechanism, the combination, with a traveling arm and moving and stationary surfaces, of a brake carried by and moving with the traveling arm and normally held out of contact with the moving surface, means actuated by gravity to set the brake against the moving surface, and means including a friction-block resting upon the stationary surface to hold the gravity actuated means inoperative so long as the traveling arm continues to move and to release the same when the traveling arm comes to a stop.

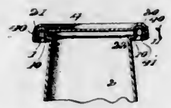
3. In a brake mechanism, the combination, with a traveling arm and moving and stationary surfaces, of a brake carried by and moving with the traveling arm and normally held out of contact with the moving surface, means actuated by gravity to set the brake against the moving surface, means including a friction-block resting upon the stationary surface to hold the gravity actuated means inoperative until the traveling arm reaches the limit of its forward movement and then to release the same, and means to restore the gravity actuated means to inoperative position when the traveling arm reaches the limit of its backward movement.

4. A brake mechanism comprising, in combination, a traveling arm, a brake member carried by the traveling arm, a weighted lever also carried by the traveling arm and normally operative to set the brake, and a friction-block adapted in coöperation with an arm of the weighted lever to hold said lever inoperative during the forward movement of the traveling arm.

5. A brake mechanism comprising, in combination, a traveling arm, a brake member carried by said arm, a weighted lever also carried by said arm and normally operative to set the brake, and two friction-blocks adapted one in coöperation with an arm of the weighted lever to hold said lever in inoperative position during the forward movement of the traveling arm and the other to raise said lever to inoperative position on the backward movement of said arm.

[Claims 6 to 8 not printed in the Gazette.]

1,107,869. PAPER-MATERIAL RECEPTACLE AND THE LIKE. WILBUR L. WRIGHT, Washington, D. C. Filed Mar. 15, 1911. Serial No. 614,719. (Cl. 229—3.)



1. A neck ring for paper material bottles, having an annular upwardly-bulged body portion forming an annular surface around the central opening of the ring to receive the paper material of the bottle to form the inner surface of the bottle neck, and having a top surface to receive said material to form the top edge of the bottle mouth, and at its outer circumferential portion terminating in an outwardly and upwardly extending securing flange.

2. A neck ring for paper material bottles, having an upwardly-bulged paper-material-backing annular body portion at its lower inner edge having a depressed paper-material-backing annular flange in the central opening of the ring, and at its lower outer portion terminating in an outwardly and upwardly extending securing flange.

3. A paper material bottle having a neck ring formed with an inner annular sealing-seat-forming flange, said ring covered at its inner and top surfaces by the paper wall of the bottle and at its exterior provided with compressed means tightly gripping the paper thereto and holding the same drawn over said top surface.

4. A receptacle having its neck and mouth formed by a paper wall, and a neck ring backing said wall, said ring having a depressed inner annular seat-forming shoulder and an upturned flange forming an annular socket receiving the depending edge of said wall and compressed to grip said edge, said wall extending upwardly beside said ring and drawn over the annular top surface thereof and depending therefrom to said socket.

5. A receptacle having its neck and mouth formed by a paper material wall, and a stiff neck ring backing said wall and having an upturned flange forming an annular socket receiving the depending edge of said wall and compressed to grip said edge, said wall extending upwardly beside said ring and drawn over the annular top surface thereof and depending therefrom to said socket.

[Claims 6 to 11 not printed in the Gazette.]

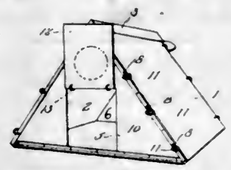
1,107,870. PAPER BOTTLE AND THE LIKE. WILBUR L. WRIGHT, Washington, D. C. Filed July 17, 1913. Serial No. 779,477. (Cl. 229—3.)

1. A paper wall receptacle having its mouth portion formed by a neck ring having an internal closure-seat-forming shoulder, said ring having a closure-retaining cylindrical portion above said shoulder and flaring upwardly and outwardly above said cylindrical portion and from thence extending outwardly, downwardly and inwardly to form the top edge of the bottle mouth and a projecting exterior rim around said mouth, said ring fitting down within the paper wall of the receptacle, the upper end of said paper wall bodily flaring and curling outwardly within said projecting exterior rim, the lower exterior edge of the ring projecting inwardly below said curled portion of said wall to lock the ring on the wall.



2. A bottle having a paper material wall, and a neck ring extending down therein and forming the bottle mouth, said ring forming a sealing-disk shoulder and flaring upwardly above said shoulder and curving upwardly, outwardly and downwardly to form said mouth with a curved top edge and a projecting exterior rim, the upper end of said wall belling and curling outwardly and downwardly within said curved top and rim of said ring to support said ring against collapse of said wall under capping and filling machine pressure on the ring and its shoulder, the exterior annular edge of said ring extending inwardly below said curled end of said wall to lock the ring thereon.

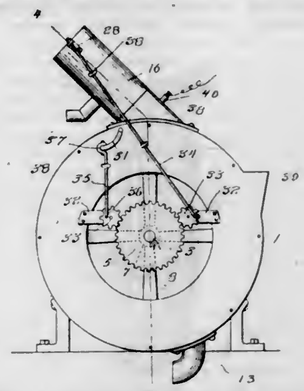
1,107,871. COLLAPSIBLE HOUSING DEVICE. HOMER R. ALKIRE and DAVID O. MABIN, Mount Sterling, Ohio. Filed Oct. 21, 1913. Serial No. 796,501. (Cl. 119—19.)



1. In a collapsible structure of the class described, the combination of side members, a ridge piece of triangular form to which said side members are hingedly connected, said ridge piece limiting extension of the side members, eyes projecting from the ridge piece connecting the side members to said ridge piece, end members each connected at one edge to opposite ends of said side members, interlocking members adapted to removably connect the free edges of the end member to the opposite side member, and means on the edges of said side members preventing movement of the end members outwardly.

2. In a collapsible structure of the class described, the combination of side members, a ridge piece of triangular form to which said side members are hingedly connected, angle irons secured to the ends of the side members for making said side members rigid, said angle irons having slots therein, end members each connected at one edge to opposite ends of said side members, eyes formed on the free edges of said side members and adapted to pass through the slots in the angle irons of the side members, and split rings interlocking the eyes in the slots aforesaid, the angle irons of the side members limiting outward movement of said end members.

1,107,872. ROTARY EXPLOSIVE-ENGINE. ELAM I. ANDERSON, Chicago, Ill. Filed Aug. 26, 1913. Serial No. 786,775. (Cl. 123—15.)



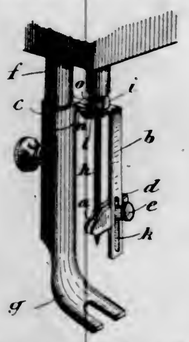
1. A device of the character described comprising a casing, said casing forming an annular chamber, a cylinder operatively connected with said casing, said cylinder being divided into compression and explosion chambers, a valve adapted to form a closure between said chambers, said valve being automatically operated by the compression of the gases in the compression chamber, means to admit gases to the compression chamber, a spark plug in the explosion chamber to cause the gases to explode, a flap valve interposed between the explosion chamber and the annular chamber, said flap valve being rigidly secured to the casing, a lever secured to the end of the flap valve, a rotor rotatably mounted on a shaft, a gear wheel secured to the end of said rotor shaft and adapted to revolve therewith, spur gears adapted to mesh with said gear wheel, a rod eccentrically mounted on one of said spur gears and being connected at its upper extremity to the lever, a piston slidably mounted in the compression chamber of the cylinder, a rod connected to the other of said spur gears, said rod being eccentrically mounted thereon, a bracket secured to the upper extremity of the cylinder, a rocker arm pivotally mounted in said bracket, one end of said rocker arm being connected to the piston and the other end of said rocker arm being connected to the rod, whereby when the wheel is rotated the rod will slide and cause the piston to reciprocate in the cylinder, thereby compressing gases and forcing said gases into the explosion chamber.

2. In combination with a rotary internal combustion engine comprising a casing forming an annular chamber, a rotor operatively mounted in said casing, and a compressing cylinder mounted on said casing, a gear wheel secured to the rotor and rotatable therewith, spur gears operatively mounted with relation to the gear wheel, a flap valve adapted to close the opening between the compression chamber and the annular chamber, a rod eccentrically mounted on one of the gear wheels and adapted to actuate the flap valve, a piston slidable in the compressing cylinder, and a rod eccentrically mounted on the other of the spur gear wheels, and operatively connected with the piston, whereby the same is actuated.

1,107,873. NEEDLE-THREADING DEVICE FOR SEWING-MACHINES. ABRAHAM ANZELEWITZ, Antwerp, Belgium. Filed June 13, 1913. Serial No. 773,459. (Cl. 112—18.)

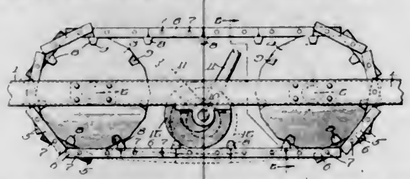
1. A hook-device for threading needles in sewing machines comprising in combination with the presser-foot bar and needle bar of the machine, a hook, a bent support for said hook rotatably mounted upon said presser-foot bar the upper horizontal portion of said support being provided with a beveled front edge adapted to raise the needle bar when said support is shifted under the latter for holding it in the proper position.

2. A hook device for threading needles in sewing machines comprising in combination with the pressure foot bar and needle bar of the machine, a hook, a block to which said hook is fastened, a socket provided with internal vertical angular equidistant grooves rotatably



mounted upon said presser-foot bar and a bent arm depending from said socket and having an extensible horizontal portion with a beveled edge adapted to engage and raise the needle-bar and a vertical portion on which said block can be adjustably fixed in position.

1,107,874. VEHICLE. JOHN F. APPLEBY, Chicago, Ill., assignor, by mesne assignments, to Bullock Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 6, 1911. Serial No. 658,711. (Cl. 21—114.)



1. A vehicle including an endless track passing about wheels of the vehicle and which track is formed of a plurality of rows of links disposed lengthwise of the track and side by side, each link in each row being pivotally connected at its ends with the adjacent ends of adjacent links in a companion row, some of the links being provided with lugs upon the tread side of the track in position to engage adjacent ends of companion links laterally disposed with respect to the links carrying the lugs whereby the extent to which the track may be flexed inwardly is limited.

2. A vehicle including an endless track passing about wheels of the vehicle and which track is formed of a plurality of rows of links disposed lengthwise of the track and side by side, each link in each row being pivotally connected at its ends with the adjacent ends of adjacent links in a companion row, some of the links being provided with lugs in position to engage adjacent ends of companion links laterally disposed with respect to the links carrying the lugs to limit the extent to which the track may be flexed inwardly.

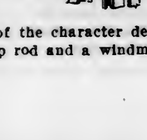
3. A vehicle including an endless track passing about wheels of the vehicle and which track is formed of a plurality of rows of links disposed lengthwise of the track and side by side, each link in each row being pivotally connected at its ends with the adjacent ends of adjacent links in a companion row, some of the links being provided with lugs upon the tread side of the track in position to engage adjacent links laterally disposed with respect to the links carrying the lugs to limit the extent to which the track may be flexed inwardly.

4. A vehicle including an endless track passing about wheels of the vehicle and which track is formed of a plurality of rows of links disposed lengthwise of the track and side by side, each link in each row being pivotally connected at its ends with the adjacent ends of adjacent links in a companion row, some of the links being provided with lugs upon the tread side of the track in position to engage adjacent ends of companion links laterally disposed with respect to the links carrying the lugs whereby the extent to which the track may be flexed inwardly is limited, said lugs constituting teeth which are received within recesses provided in the vehicle wheels as these wheels roll upon the track.

5. A vehicle including an endless track passing about wheels of the vehicle and which track is formed of a plurality of rows of links disposed lengthwise of the track and side by side, each link in each row being pivotally connected at its ends with the adjacent ends of adjacent links in a companion row, some of the links being provided with lugs upon the tread side of the track in position to engage adjacent links laterally disposed with respect to the links carrying the lugs to limit the extent to which the track may be flexed inwardly, said lugs constituting teeth which are received within recesses provided in the vehicle wheels as these wheels roll upon the track.

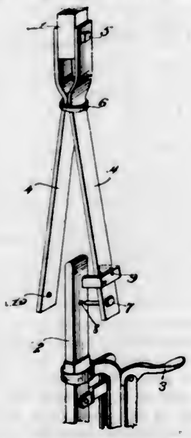
[Claims 6 and 7 not printed in the Gazette.]

1,107,875. ILLUMINATING SIGN-LETTER. MORRIS W. ASKIN, Edgewater, Colo. Filed Aug. 1, 1913. Serial No. 782,516. (Cl. 40—130.)



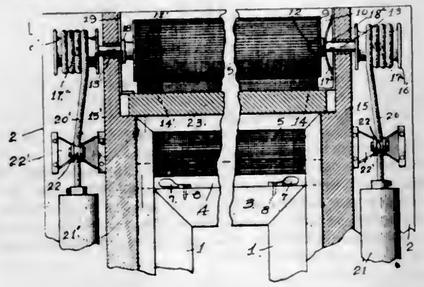
An electric sign letter having a plurality of sections of circular cross section, each section constituting one section of the letter and formed along the entire length of the front side with a narrow longitudinal slot, a plurality of concavo-convex reflecting plates secured longitudinally within each section and extending from the edges of the slot therein to the rear side of the section, said plates reinforcing the section and forming between them a channel, the channels of the different sections communicating to outline a letter, and a plurality of lights arranged entirely within said channels.

1,107,876. PUMP-ROD COUPLING. FRANK S. BALLARD and GEORGE WM. BALLARD, Duff, Nebr. Filed Feb. 26, 1912. Serial No. 679,967. (Cl. 74—17.)



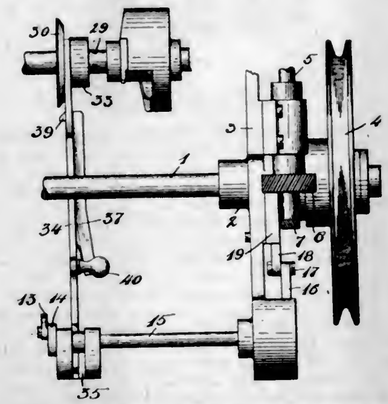
In a coupling of the character described, the combination, with a pump rod and a windmill rod, of a coupling comprising two resilient bars, the upper ends of which are bent into substantially U-shape to form a pivotal socket to receive the end of the windmill rod, said bars having their other ends normally divergent, and one of said bars having a U-shaped guide to engage the sides of the other bar when the coupling is closed, a sliding ring surrounding said bars for holding them in connected position, and a pin for connecting said bars to the pump rod.

1,107,877. SCREEN ATTACHMENT FOR WINDOW-SASHES. RAYMOND H. BANNING, San Francisco, Cal. Filed Mar. 9, 1912. Serial No. 682,743. (Cl. 156—39.)



In an attachment for the described purpose, the combination with a screen roller, end sockets secured to the ends thereof and provided with squared receiving portions formed therein, journals provided on their inner ends with squared portions adapted to be inserted in said receiving portion for mounting the roller, one of said journals being held endwise under spring pressure and with the squared portion thereof seated within one of said squared receiving portions, and the other of said journals provided with a shoulder to prevent the longitudinal movement thereof, and the squared portion of said journal being received within the other of said squared receiving portions, a reel for a sash weight cord detachably connected to the outer end of each journal, and a screen secured to the screen roller.

1,107,878. MANUAL START AND STOP MOTION. CHARLES S. BATDORF, Brooklyn, N. Y. Filed Dec. 11, 1909. Serial No. 532,542. (Cl. 74—46.)



1. In a machine the combination with a power shaft adapted to operate any desired mechanism of a second shaft, a clutch interposed between said shafts, a latch wheel on said second shaft, a latch connected with said clutch constructed and arranged to be moved into engagement with said latch wheel and having means to simultaneously throw said clutch into operative position, said latch wheel having means to maintain such operative position during a predetermined period of operation of the machine.

2. In a machine the combination with a power shaft adapted to operate any desired mechanism of a second shaft, a clutch interposed between said shafts, a latch wheel on said second shaft, and a manually operable latch connected with said clutch constructed and arranged to be moved into engagement with said latch wheel and having means to simultaneously throw said clutch into engagement, such engagement and means on said latch wheel to maintain such engagement during a complete rotation of said latch wheel.

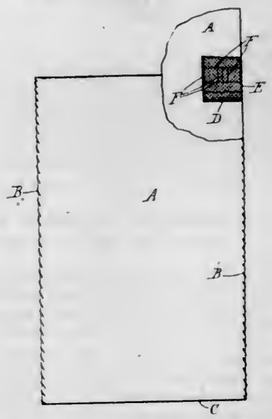
3. In a machine the combination with a power shaft adapted to operate any desired mechanism of a second shaft, a clutch interposed between said shafts, a latch wheel on said second shaft, a latch interposed between said clutch and said latch wheel, constructed and arranged to be moved into engagement with said latch wheel and having means to simultaneously move said clutch into operative position, said latch wheel having means to maintain said latch in engagement therewith during a complete revolution of said wheel and means to automatically disengage said latch therefrom at the completion of said revolution.

4. In a machine the combination with a power shaft adapted to operate any desired mechanism of a second shaft, a clutch interposed between said shafts, a latch wheel on said second shaft having an annular ledge and a rib adjacent said ledge, a latch connected with said clutch and constructed and arranged to be moved into engagement with said ledge and having means to simultaneously move such clutch into operative position said latch wheel having means to maintain such operative position until said latch is disengaged by said rib.

5. In a machine the combination with a power shaft adapted to operate any desired mechanism a clutch interposed between said shaft and mechanism, means for automatically throwing said clutch into and out of operation intermittently, and means for manually throwing said clutch into operation during a predetermined period of operation of the machine.

[Claims 6 to 8 not printed in the Gazette.]

1,107,879. VALVE-BAG. ADELMER MARCUS BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Oct. 15, 1912. Serial No. 725,805. (Cl. 150—9.)



1. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its

end secured to the edges of the opening and its side secured to the inside of the bag end.

2. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and a part of its side walls secured to the inside of the bag end.

3. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and approximately half of its side walls secured to the inside of the bag end.

4. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and approximately half of its side walls secured to the inside of the bag end by a series of seams.

5. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and its side parallel with the end and inside of the bag.

[Claim 6 not printed in the Gazette.]

1,107,880. COMPOSITION FOR AGGLUTINATING DUST. HERMANN BELGER, Cullercoates, England. Filed Apr. 8, 1913. Serial No. 759,699. (Cl. 134—1.)

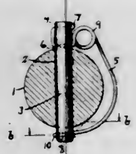
1. A composition for agglutinating dust, including calcium chlorid, glue and water.

2. A composition or solution for agglutinating dust, including from 15% to 35% of calcium chlorid, 5% to 10% of glue and 75% to 50% of water.

3. A composition or solution for agglutinating dust, including from 15% to 35% of calcium chlorid, 5% to 10% of glue, about 5% of salt and 75% to 50% of water.

4. A composition for agglutinating dust, said composition including calcium chlorid, magnesium chlorid, glue and water.

1,107,881. COTTER-PIN. AKSEL H. BERNTSEN and PEDER P. KILSTOFTE, Waupun, Wis. Filed May 22, 1911. Serial No. 628,866. (Cl. 74—8.)

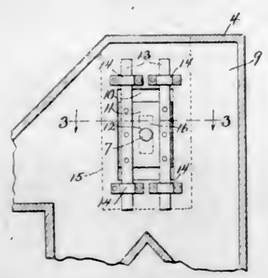


A cotter pin composed of a pin provided with an aperture in one end thereof and a latch member secured to the other end thereof, the said latch member being provided with a spring coil 9 and having its free end bent back upon itself to form a hook to pass into the aperture in the pin from the opposite side of the pin from the spring coil 9.

1,107,882. ELEVATOR-HEAD. GRABILL J. BICKHART, Hilbert, Wis. Filed Sept. 30, 1912. Serial No. 723,270. (Cl. 193—4.)

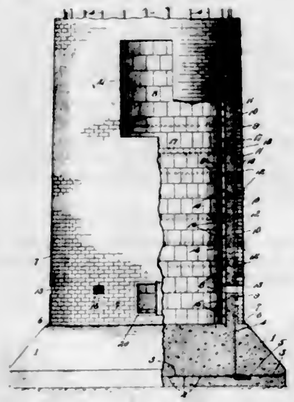
1. In a device of the class described, an elevator head provided with a vertical wall pierced by a shaft and provided with a vertically elongated opening through which the shaft extends, a suitable board fitted into said opening to have vertical play therein and provided with a perforation through which the shaft fits snugly, suitable straps mounted rigidly on said board with their ends extending beyond the ends of the board and suitable guides on the wall of the elevator head for the ends of said straps to slide in.

2. In a device of the class described, an elevator head provided with a vertical wall pierced by a shaft and provided with a vertically elongated opening, a board fitted into said opening lying in the same vertical plane with the wall of the elevator head arranged to have vertical play therein and provided with a central perforation through which the shaft fits snugly, suitable straps rigidly



mounted on said board having their ends extending beyond the ends of the board, suitable guides on the wall of the elevator head to guide the straps and board in their movements, vertically and means for constantly closing the opening through the wall of the elevator head above and below said movable board.

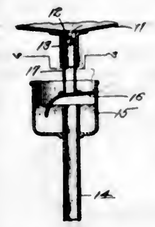
1,107,883. CHIMNEY. JOHN V. BOLAND, St. Louis, Mo. Filed Sept. 29, 1913. Serial No. 792,403. (Cl. 72—93.)



1. A chimney comprising a concrete base, an annular series of reinforcing rods having their lower ends embedded in said base, and a concrete wall in monolithic connection with said base and embedding said rods, in combination with a fire brick lining supported on said base, an outer brick wall portion encircling said concrete wall, headers arranged at intervals in said outer brick wall portion and having their inner ends embedded in said concrete wall, and rods encircling said annular series of rods between said headers, substantially as described.

2. A chimney comprising a concrete base, an annular series of vertical rods having their lower ends embedded in said base, a concrete wall embedding said rods, a lining composed of hollow brick and headers arranged at intervals and extending into said concrete wall, passages through said headers communicating with the openings in said hollow brick, a brick outer wall surface against said concrete wall, headers at intervals in said outer wall surface extending into said concrete wall, and reinforcing rods encircling said annular series of rods between said headers, substantially as described.

1,107,884. TRAP FOR REFRIGERATOR DRAIN-PIPES. THOMAS P. BOLGER, Gloucester, Mass. Filed May 20, 1912. Serial No. 698,525. (Cl. 182—12.)



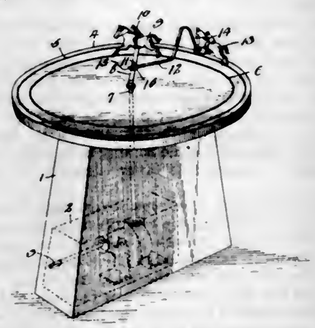
1. In a refrigerator a drip pan formed with an outlet, a removable drip pipe adapted to be supported under the outlet of the drip pan and in communication therewith, spring means for holding the drip pipe securely in operative position with respect to the said outlet, and a trap carried by the drip pipe.

2. In a refrigerator, a drip pan formed with an outlet, a drip pipe, a trap at the upper end of the drip pipe, and a spring member carried by the trap and adapted to engage the outlet of the drip pan to support the trap and drip pipe.

3. In a refrigerator, a drip pan formed with an outlet, a removable drip pipe, a trap at the upper end of the drip pipe, a looped spring member projecting from the trap and adapted to frictionally engage the outlet of the drip pan to support the trap and drip pipe in position.

4. In a refrigerator, a drip pan formed with an outlet nipple, a drip pipe, a cup carried by the upper end of the drip pipe and through the bottom of which the drip pipe projects, a plate arranged in the cup with the free edge thereof projecting downwardly below the upper end of the drip pipe so as to form a trap, and a looped spring member projecting from the plate and adapted to be inserted in the outlet nipple of the drip pan so as to frictionally engage the same and retain the trap and drip pipe in position.

1,107,885. TOY. ALEXANDER M. BOLLINGER, Leechburg, Pa.; A. Leroy Hill administrator of said Bollinger, deceased. Filed Jan. 27, 1914. Serial No. 814,795. (Cl. 46—56.)

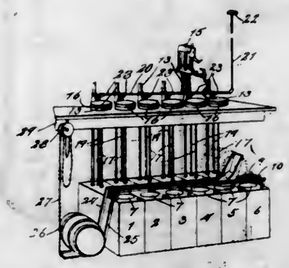


1. A top comprising a revolving arm, a figure supported by said arm, an arm pivoted to the first arm and normally arranged at an angle thereto, the said second arm having a length whereby the free end thereof extends to a point beyond the free end of the first arm, and a figure carried by the second arm.

2. A toy comprising an arm mounted for revolution, a figure carried by said arm, a second arm pivotally connected to the first-named arm and also having a figure, and means to limit the angular movement of the second arm with respect to the first named arm.

3. A toy comprising a plurality of figure carrying arms mounted for revolution around a common center and also connected together for independent angular movement.

1,107,886. TANK-FILLING APPARATUS. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed May 31, 1910. Serial No. 564,102. (Cl. 226—9.)



1. A tank filling apparatus comprising a plurality of tanks having alined fill openings, a barrel track extending across said tanks over the fill openings, and an elevating cradle pivotally mounted at one end of the track and comprising portions inclined to each other at an angle greater than a right angle so that the outermost portion will lie substantially flat on the floor to receive barrels.

2. A tank filling apparatus comprising a plurality of tanks having alined fill openings, a barrel track extending across said tanks over said openings, a cradle consisting of track members pivotally connected to the rails of the barrel track and joined at the outer end, the said track members being bent so that a portion of the cradle will lie flat on floor to receive a barrel, and means to elevate the outer end of the cradle so that the other portion thereof will be level with the barrel track.

3. In a tank filling apparatus, the combination with a tank provided with a fill pan connected to said tank, a barrel-track mounted on said tank, and means for holding the barrel against movement along the track, said means comprising a shield having a plate to intercept oil discharged from the bunghole of a barrel while it is being turned to bring the bunghole directly over said fill pan.

4. In a tank filling apparatus, the combination with a tank provided with a fill pan, of a barrel track extending across the tank, and a barrel dash discharging into said fill pan, said dash being provided with abutments adjacent the track for engaging and holding the barrel against movement along the track while it is being turned.

5. In a tank filling apparatus, the combination with a plurality of tanks, each provided with a fill pan discharging thereinto, a barrel track mounted over said tanks, and a barrel dash and abutment carried by said track and movable into a position above the fill pan leading to any of said tanks.

[Claim 6 not printed in the Gazette.]

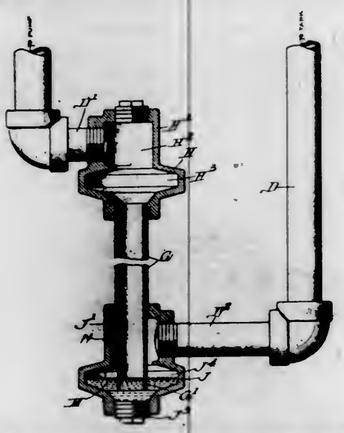
1,107,887. CONTROLLING DEVICE FOR PUMPING SYSTEMS. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Filed Sept. 16, 1912. Serial No. 720,469. (Cl. 103—66.)

1. The combination of a pump, a tank, a pipe connection from said pump to the tank, and a mercury valve interposed between the pump and the tank.

2. The combination of a pump and a tank disposed at different levels, a pipe connection therebetween, and a mercury valve interposed between the pump and the tank.

3. In a liquid pumping system, the combination of a pump, a tank, a pipe connection from said pump to the

tank, and a mercury valve interposed between the pump and the tank.

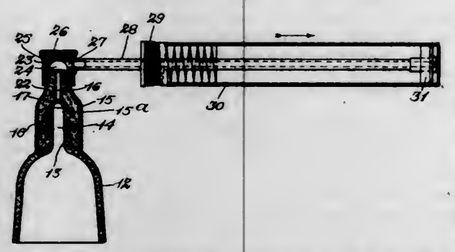


4. In a liquid pumping system, the combination of a pump and a tank disposed at different levels, a pipe connection from the pump to the tank, and a mercury valve in said pipe connection.

5. In a liquid pumping system, the combination of a pump, a tank, a pipe connection from said pump to the tank, and a mercury valve disposed between the pump and the tank, said valve having an upper and a lower chamber which communicate with each other through a single pipe.

[Claims 6 to 9 not printed in the Gazette.]

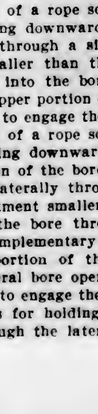
1,107,888. THERAPEUTICAL VACUUM APPARATUS. CHARLES E. BUCK, Boston, Mass. Filed Nov. 11, 1913. Serial No. 800,297. (Cl. 128—9.)



1. A vacuum apparatus comprising a cup having a shank provided with an air passage and a coupling member, a valve to permit air to pass from the cup and to prevent air from passing into the cup, and an air pump having at its intake end a coupling member to coöperate with the coupling member of the cup, the coupling member carried by the pump facing at substantially a right angle with said pump whereby operation of the latter will not tend to detach the cup from its location of utility.

2. A vacuum apparatus comprising a cup having a rigid shank tapered at its outer end to form a male coupling member, the shank being provided with an air passage extending through said member and enlarged between its ends to form a valve chamber, a valve in said chamber adapted to permit air to pass from the cup and to prevent air from passing into the cup, and an air pump having at its intake end a compressible elastic female coupling member adapted to frictionally and detachably engage the said male coupling member and form an air tight joint therewith, the coupling member carried by the pump facing at substantially a right angle with said pump whereby operation of the latter will not tend to detach the cup from its location of utility.

1,107,889. WIRE-LINE ROPE-SOCKET. JOSEPH BURNS, Okmulgee, Okla. Filed Jan. 30, 1914. Serial No. 815,419. (Cl. 255—26.)



1. The combination of a rope socket body formed with an axial bore open through its upper end with the upper portion of the bore tapering upwardly, a tubular abutment tapered complementary with the tapered portion of the bore, and a cable-holding head entered in the socket bore and adapted to engage the lower extremity of the abutment.

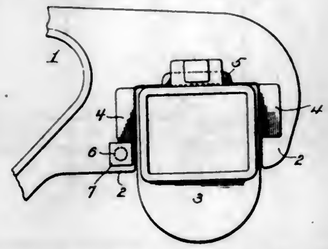
2. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end, the bore being open laterally through one side of the body, a tubular abutment smaller than the lateral opening and adapted to pass therethrough into the body bore, the abutment and the upper portion of the bore being shaped to prevent upward removal of the abutment, and a cable-holding head adapted to engage the lower extremity of the abutment.

3. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end with the upper portion of the bore tapering upwardly, the bore being open through one side of the body, a tubular upwardly tapering abutment smaller than the lateral opening and adapted to be entered in the body bore through the latter and pass upwardly into and fit the tapered portion of the bore, and a cable-holding head within the bore and adapted to engage the lower extremity of the abutment.

4. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end, the bore being open through a side face of the body, a tubular abutment smaller than the lateral opening and entered therethrough into the bore, means for confining the abutment in the upper portion of the bore, and a cable-holding head adapted to engage the lower end of the bore.

5. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end with the upper portion of the bore tapered upwardly and with the bore open laterally through a side face of the latter, a tubular abutment smaller than the lateral opening and entered in the bore through said opening, the abutment tapered complementary with and fitting with the tapered upper portion of the bore, a swivel head smaller than the lateral bore opening and entered therethrough and adapted to engage the lower extremity of the abutment, and means for holding the head against outward movement through the lateral opening.

1,107,890. CAR-TRUCK SIDE FRAME AND JOURNAL-BOX. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Oct. 15, 1913, Serial No. 795,300. Renewed July 9, 1914. Serial No. 850,052. (Cl. 105—243.)

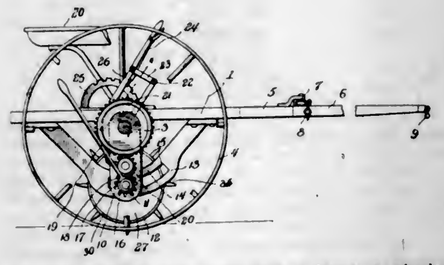


1. The combination of a truck frame having pedestal jaws, a journal box having a pair of flanges at each side, each pair adapted to receive a jaw of the frame between them, and a bolt passing through one jaw of the frame in the plane of the flanges embracing said jaw, the said bolt being carried by one of said parts and adapted, in an emergency, to engage the other part, so as to permit of a rocking movement between the boxes and the frame but prevent a separation of said parts.

2. The combination of a truck frame having pedestal jaws, a journal box having a pair of flanges at each side, each pair adapted to receive a jaw of the frame between them, and also provided with a pair of top flanges to engage the frame intermediate the jaw, and a bolt passing through one jaw of the frame in the plane of the flange embracing said jaw, the said bolt being carried by one of said parts and adapted, in an emergency, to engage the other part, so as to permit of a rocking movement between the box and the frame, but prevent a separation of said parts.

3. The combination of a truck frame having pedestal jaws, a journal box having side flanges to overreach said jaws, and a bolt secured to one jaw below the flanges and in a position to engage said flanges in case of derailment and prevent a separation of the truck frame and journal box.

1,107,891. SOIL-PULVERIZER. JAMES MONROE BRILES, Alice, Tex. Filed Feb. 7, 1913. Serial No. 746,895. (Cl. 55—85.)

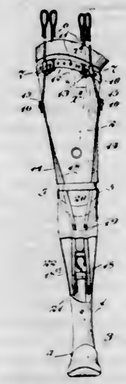


A pulverizing machine comprising a frame, a wheeled axle journaled in the frame, the said axle being provided with a gear, bracket members depending from the frame and each comprising upwardly flared arms attached to the underside of the frame and a curved portion connecting the lower ends of the arms and extending beneath the axle, the said connecting curved portion of each of the brackets having an arcuate slot therein, one end of the slot terminating at the juncture of the curved portion with one of the flaring arms, and the opposite end of the slot being extended to the other of the bracket arms, members swingingly mounted on the axle and depending therefrom, one of the members being provided with a gear adapted to engage the gear on the axle, a pulverizing drum disposed below the frame and having an axle extending through the slots in the connecting curved portion in the bracket, the said axle of the pulverizing drum having a gear loosely mounted thereon and engaging the gear on the swinging member, boxes mounted on the axle of the pulverizing drum and slidable in the slots in the brackets, said boxes being adapted when the drum is in one position to engage the end wall of the first mentioned end of the arcuate slots and when in another position to engage the walls of the second mentioned end of the slots, and means slidable on the axle of the drum and adapted to engage the gear on the said axle whereby to impart rotary motion to the drum.

1,107,892. PRESERVING COMPOUND. IZIDOR BRANDEIS, Ujvidek, Austria-Hungary, assignor to Simon Rosenbaum, Ujvidek, Austria-Hungary. Filed July 24, 1913. Serial No. 780,974. (Cl. 99—1.)

A preserving compound consisting of a mixture of 45–50 parts by weight of pure white powdered alum, 30–35 parts by weight of powdered mustard seeds, and 15–25 parts by weight of salicylic acid.

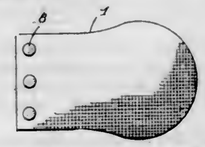
1,107,893. ARTIFICIAL LEG. FERDINAND BUCHSTEIN, Minneapolis, Minn. Filed Aug. 16, 1912. Serial No. 715,367. (Cl. 3—3.)



1. In an artificial leg, the combination with upper and lower leg sections connected by a knee joint, of independent circumferentially adjustable cord guides on the upper portion of said upper leg section, and shoulder strap cords extended through said guides and connected to said lower leg section.

2. In an artificial leg, the combination with upper and lower leg sections connected by a knee joint, of an anchoring strap extended around the upper portion of said upper leg section and attached thereto, cord guides adjustably mounted on said anchoring strap, and shoulder strap cords extended through said guides and connected to said lower leg section.

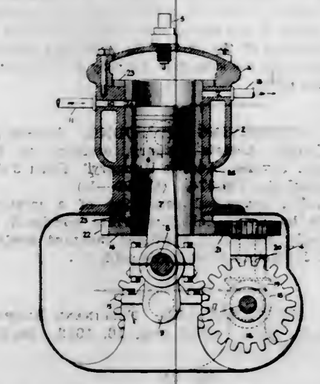
1,107,894. HEEL-CUSHION. BENHAM CAIN, Chicago, Ill. Filed Aug. 10, 1911, Serial No. 643,381. Renewed Jan. 21, 1914. Serial No. 813,548. (Cl. 36—37.)



A resilient heel cushion consisting of four resilient plates fixedly held to one another at one end thereof, the free ends

of the outer plates pointing in diverging directions and the free ends of the inner plates pointing in converging directions.

1,107,895. INTERNAL-COMBUSTION ENGINE. GEORGE D. CASSON and FRANK D. BLAKELY, Winnipeg, Manitoba, Canada. Filed Nov. 8, 1912. Serial No. 730,169. (Cl. 123—80.)



1. In an internal combustion engine, a cylinder, a rotary tubular valve projecting through the cylinder and having flanges at its ends for holding it in the cylinder, the upper flange of the valve resting upon the end of the cylinder, and a cap-like head secured to and resting upon the upper end of the cylinder outside of the upper flange of the valve, said cap forming with the cylinder a chamber of greater diameter than that of the cylinder.

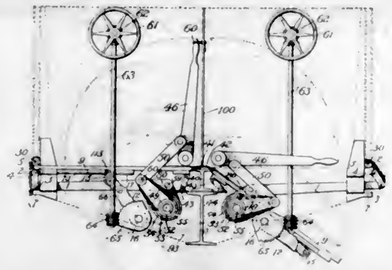
2. In an internal combustion engine, a cylinder having a flange at its lower end, an open ended rotary tubular valve projecting through the cylinder and having flanges at its ends, the flange at the upper end of the valve resting upon the end of the cylinder, a cap-like head secured to and resting upon the end of the cylinder outside of the flange of the valve and forming with the cylinder a chamber into which opens the upper end of the tubular valve, and a crank case secured to the cylinder between its flange and the flange of the valve.

3. In an internal combustion engine, a cylinder having inlet and exhaust ports at opposite sides and in different horizontal planes, a cap-like head on the cylinder and forming with the cylinder a chamber, an igniter carried by the head and projecting into the said chamber, an open ended tubular rotary valve in the cylinder and having flanges at its ends for holding it in the cylinder, said valve having ports located in different horizontal planes and spaced apart circumferentially of the valve, a piston in the valve, a crank shaft operatively connected with the piston and gearing for operating the valve from the crank shaft.

4. In an internal combustion engine, the combination of a hollow tubular valve member having an annular space in its wall to receive a cooling agent, and passages at its upper and lower ends leading to and from said space, an engine having a chamber receiving said valve member and having ports registering with said passages to permit the cooling agent to flow to and from said space in the valve member, and a piston reciprocating in said valve.

1,107,896. DUMP-CAR AND DOOR-OPERATING MECHANISM. WILLIAM A. CASWELL, Chicago, Ill., assignor to National Dump Car Company, a Corporation of Maine. Filed Jan. 14, 1907. Serial No. 352,195. (Cl. 105—14.)

1. In a car provided with a plurality of doors at each side of the longitudinal axis thereof, means comprising telescoping shafts extending to and operable from the end of the car for opening any one of the doors independently of all the others.



2. In a car provided with a plurality of doors at each side of the center thereof, means extending to and operable from the end of the car for closing the doors in combination with means extending to and operable from the end of the car for opening any one of the doors independently of all the others.

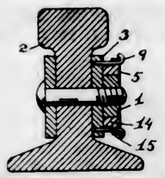
3. In a car provided with a plurality of doors at each side of the longitudinal axis thereof, means comprising telescoping shafts extending to and operable from the end of the car for opening any one or more of the doors independently of all the others.

4. In a car provided with a plurality of doors at each side of the center thereof, means extending to and operable from the end of the car for closing the doors in combination with means extending to and operable from the end of the car for opening any one or more of the doors independently of all the others.

5. In a car provided with a plurality of doors at each side of the longitudinal axis thereof, means comprising telescoping shafts extending to and operable from the end of the car for locking and unlocking any one of said doors independently of all the others.

[Claims 6 to 35 not printed in the Gazette.]

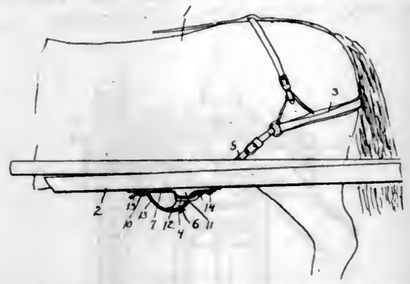
1,107,897. NUT-LOCK. EVERITT CATHEY, New Edinburg, Ark. Filed Oct. 23, 1913. Serial No. 796,908. (Cl. 151—54.)



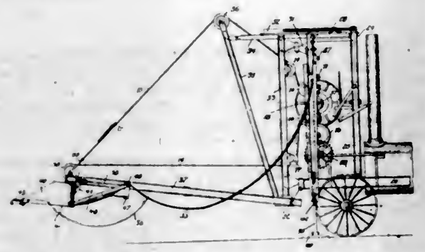
In a nut-lock, a locking plate having a circular front flange and a concentric cylindrical portion of less diameter, projecting in rear, said plate being provided with a central angular opening for the nut extending through said cylindrical portion, and said flange having a series of small holes circumferentially arranged around and adjacent to said cylindrical portion, a base plate having a bolt hole, and locking pins engaging the base plate, exposed along the cylindrical portions of the locking plate and passing through holes of said flange.

1,107,898. SAFETY HOLDBACK-IRON. FRANK W. CHICKERING, Hardwick, Vt., assignor of one-half to John J. Gallagher, Hardwick, Vt. Filed Apr. 11, 1914. Serial No. 831,168. (Cl. 21—27.)

A device of the character described comprising a base plate provided with a slot near one end, metal between the slot and the lateral edges of the base plate being bowed upwardly, a hook member secured to the base plate near the end opposite the slot, and a bowed leaf spring secured to the base plate near the hook member and overlying the same, the free end of said spring lying in direct alinement with the slot and thereby being prevented from being accidentally displaced.



1,107,899. EXCAVATOR. LEROY P. CLUTTER, Deer Lick, Pa. Filed June 17, 1911. Serial No. 633,666. (Cl. 37—16.)



1. In excavating apparatus, a frame pivoted on a vertical axis, a bucket support pivoted thereto on a horizontal axis and having its outer side faces formed to provide a runway longitudinally of the support, an excavating bucket having rollers mounted in said runways, said rollers being located in rear of and spaced from said bucket.

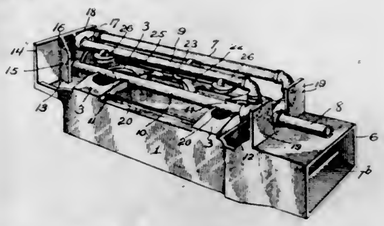
2. In excavating apparatus, a frame pivoted on a vertical axis, a bucket support pivoted thereto on a horizontal axis and having its outer side faces formed to provide a runway longitudinally of the support, an excavating bucket having rollers mounted in said runway, said rollers being arranged in pairs spaced apart in the direction of length of the runway and positioned in rear of the bucket.

3. In excavating apparatus, a frame pivoted on a vertical axis, a bucket support pivoted thereto on a horizontal axis and having its outer side faces formed to provide a runway longitudinally of the support, an excavating bucket having rollers mounted in said runway, said rollers being arranged in pairs spaced apart in the direction of length of the runway, and means for adjusting the distance between the pairs of rollers, said adjustment controlling the relationship of the lines corresponding to the direction of length of the bucket and of the support.

4. In excavating apparatus, a frame pivoted on a vertical axis, a bucket support pivoted thereto on a horizontal axis and having its outer side faces formed to provide a runway longitudinally of the support, an excavating bucket having arms connected respectively to the top and bottom of the rear of the bucket, the lower arms extending rearwardly at an angle to place the rear ends at a point in rear of and spaced from the other arms, each of said arms carrying a roller, and adjustable connections between said arms.

5. In an excavating apparatus, an excavating bucket having a bottom pivoted adjacent the front of the bucket and being provided with forwardly extending fingers, a catch device at the rear of the bucket and adapted to normally hold the bottom in place, and an operating pole rope connected to said catch device and adapted to release the bottom at will, said rope being also loosely connected to the bottom for the purpose of swinging the latter to its normal position after being opened.

1,107,900. FUEL-OIL BURNER. WILLIAM R. COCHRAN, Jr., Toledo, Ohio. Filed Nov. 5, 1913. Serial No. 799,344. (Cl. 158—64.)



1. The combination of a hollow frame closed at one end and open at the other end and provided with a plurality of air openings and with a partition forming flues, one flue leading to one air opening and the other flue to the other air opening, means integral with the top of the frame for supporting a gas generating and burning structure, and a gas generating and burning structure detachably mounted on said frame.

2. The combination of a hollow frame open at one end and provided with an air exit in its top, and with flanges at opposite sides of said opening, one of said flanges having parallel ribs between which the free end of the burner pipe rests, and one of said ribs constructed to support the fuel pipe, the other flange having a slot for the passage of one of said pipes, and a gas generating and burning structure composed of a plurality of pipes one of which is the burner pipe, the said gas generating and burning structure being detachably supported on said frame with its burner orifice over the air opening in the frame.

3. The combination of a hollow frame closed at one end and open at the other, and provided in its top with an air exit, and on its top with means for detachably supporting a burner pipe, a gas generating and burning structure composed of a plurality of pipes one of which is the burner pipe and another the fuel pipe, the said structure being detachably supported as a unit on said frame, and a flame spreader detachably and adjustably supported against the underside of said fuel pipe and in a plane above said burner pipe.

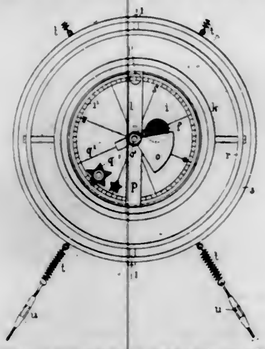
4. The combination with a hollow frame provided with a plurality of air exit openings in its top, a post fixed to the top of said frame and provided with a concaved seat, and a gas generating and burning structure comprising a liquid fuel pipe and a burner pipe and a plurality of connected flame spreaders, the connection between said spreaders resting on said concave seat and holding the spreaders against the fuel pipe and over the burner openings in the burner pipe.

5. The combination of a gas generating and burning structure composed of a plurality of pipes one of which is a burner pipe and another a fuel pipe, a plurality of integral connected flame spreaders, and means independent of said pipes and also of said spreaders and their connection, and engaging the latter intermediate the spreaders for adjustably holding said connected spreaders adjacent the fuel pipe and over the burner orifices in the burner pipe.

1,107,901. COMPASS WITH ANGULAR-SHIFTING MAGNIFYING DEVICE. GASTON EMILE COLOMBEL, Paris, France. Filed June 29, 1912. Serial No. 706,579. (Cl. 33—222.)

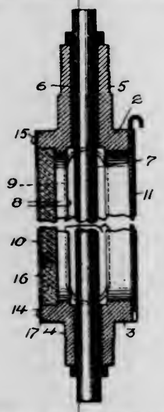
1. A compass comprising a casing, a magnetic needle, a rose integral with the magnetic needle, an indicator, and an amplifying device between the rose and the indicator.

2. A compass comprising a magnetic needle, a rose integral with the magnetic needle, an indicator, an amplifying device between the rose and the indicator, a casing in which the different parts of the compass are supported, a glass covering said casing, a pivotal support on said glass, and a screen pivoted on the same support.



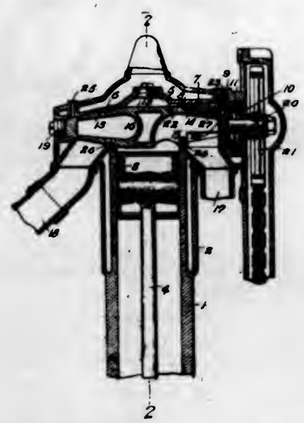
3. A compass comprising a magnetic needle, a rose integral with the magnetic needle, an indicator, an amplifying device between the rose and the indicator, a casing in which the different parts of the compass are supported, a glass covering said casing, a pivotal support on said glass, a screen pivoted on the said support, a star marked at the north end of the north-south line of the rose, and a star marked on the glass at the same distance from the axis of the compass as the star of the rose, said glass being susceptible of rotating in its mounting.

1,107,902. SAFETY DEVICE FOR WATER-GAGES. PATRICK J. CONNORS, Greenville, Pa., assignor of one-half to George Kitch, Greenville, Pa. Filed Feb. 10, 1913. Serial No. 747,410. (Cl. 73—54.)



A safety device for water gages comprising a housing adapted to inclose a water gage including an upper and a lower end and a series of side walls integral with said ends, said ends and side-walls formed with openings, a hollow tubular extension integral with each of said ends and communicating with the opening of the latter and through which extends the gage glass, shiftable means connected to one of the sides of said housing for closing the opening therein, transparent plates mounted in the other sides of said housing for closing the openings therein, said plates substantially flushed with the outer faces of those sides of the housing in which they are mounted, and flat retaining plates secured to the housing for maintaining the transparent plates in position.

1,107,903. VALVE FOR MOTORS. EVERETT JAQUETTE COOK, Detroit, Mich., assignor of fifty-one one-hundredths to Robert M. Corl, Toledo, Ohio. Filed Apr. 24, 1911. Serial No. 623,091. (Cl. 123—190.)



1. An internal combustion engine rotary valve provided with an axially extending inlet port and extending therefrom an axially extending exhaust port, said valve being tapered, and housing means for said valve embodying opposing tapering seats and means for adjusting one of said seats toward and from the valve.

2. The combination with an engine cylinder of a cylindrical valve member extending across said cylinder having tapering ends extending beyond the inner walls of said cylinder and provided with passages communicating with said cylinder, tapering valve sockets in the walls of said cylinder in which the tapering ends of said valve member fit and adjustable means for removing one of said sockets to permit the insertion of the valve member.

3. In a device of the class described the combination with an engine cylinder having outwardly tapering valve sockets in its wall in line on opposite sides, of rotary valve plugs fitting said sockets and having passages communicating with the interior of said cylinder, the said plugs being connected whereby the pressure within the cylinder on one will tend to balance that upon the other, and spring pressed means for relatively adjusting one of said plugs and its socket to automatically maintain a tight joint.

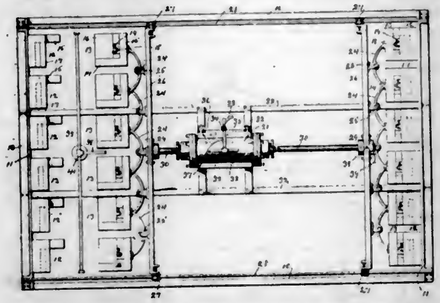
4. In a device of the class described the combination with an engine cylinder having oppositely disposed outwardly tapering valve sockets in its side wall, of a symmetrical valve member extending across said cylinder and exposed on opposite sides to the pressure therein, the said member having tapering ends constituting valve plugs fitting said sockets and having similar passageways to the interior of said cylinder, and spring pressed means for relatively adjusting one of said plugs and its socket to automatically maintain a tight joint.

5. An internal combustion engine rotary valve provided with an inlet port and an exhaust port, said valve being smaller near its outer end, there being a port connecting passage in said valve providing pressure balanced faces, and housing means for said valve embodying a tapering seat, said housing having an explosion chamber exposed passage in communication with the valve passage.

[Claim 6 not printed in the Gazette.]

1,107,904. APPARATUS FOR CASTING METALS. ALVIN M. CRAIG, New Haven, Conn. Filed Dec. 8, 1913. Serial No. 805,224. (Cl. 22—67.)

1. An apparatus for the purpose described, comprising a separable mold having overlapping parts at the sides and ends arranged to provide for compression and expansion in all directions, and means actuated by an elastic pressure for forcing the mold sections together.



2. In a structure such as described, a two part mold shaped to form a closed chamber between the parts, one section of the mold having a top overlapping the sides of the opposed section, and the second section of the mold having the bottom overlapping the under sides of the first section, whereby the two sections can be moved freely together.

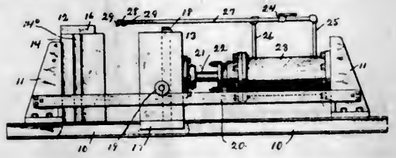
3. In an apparatus of the kind described, a two part mold comprising opposed sections, the first section forming two sides of the mold and having a fixed top overlapping the sides of the second section, and the second section forming two sides of the mold and having a fixed bottom overlapping the sides of the first section, whereby the sections can be moved freely together and can expand in all directions.

4. An apparatus for the purpose described, comprising a fixed mold section, a reciprocating mold section arranged opposite its fixed section, the said sections being arranged to overlap at the top, bottom, and sides, and a piston and cylinder for actuating one of the mold sections.

5. In an apparatus such as described, the combination of opposed mold sections movable back and forth in relation to each other overlapping at the sides and ends and arranged when closed to expand in different directions, a guided support for one of the sections, and a piston and cylinder for actuating one of the mold sections.

[Claims 6 to 14 not printed in the Gazette.]

1,107,905. ART OF CASTING METALS. ALVIN M. CRAIG, New Haven, Conn. Filed Dec. 8, 1913. Serial No. 805,225. (Cl. 22—207.)



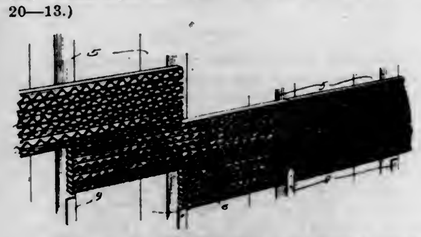
1. The herein described method of casting metals which consists in pouring the metal into a mold which is laterally and longitudinally expansible and applying a heavy but elastic pressure to the mold and metal while the metal is still liquid and before it has had time to set.

2. The herein described method of casting metals, which consists in bringing the mold parts together, pouring the metal into the mold, and holding the mold parts together by a heavy but elastic pressure acting on all parts of the mold, thereby condensing the molten metal as soon as it is poured.

3. The herein described method of casting metals, which consists in pouring the melted metal into a compressible and expansible mold, forcing the mold sections upon the metal by an air pressure, and cooling the mold sections when the mold is opened by a blast of compressed air

4. The herein described method of casting metals, which consists in pouring the melted metal in a compressible and expansible mold, maintaining the metal in the mold in compressed condition by air in an air engine, and directing the exhaust of the engine upon the mold sections when the mold is opened for the purpose of cooling said mold sections.

1,107,906. LATH. GEORGE P. CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Apr. 28, 1913. Serial No. 764,219. (Cl. 20—13.)

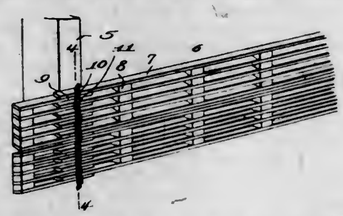


1. A lath of the class specified comprising a plurality of longitudinally disposed corrugated members having exposed side edges with flat strips interposed between the said members and also having their side edges exposed, the corrugated members all extending in one direction and the flat strips arranged parallel to each other and forming securing as well as reinforcing means for the corrugations of the said members.

2. A lath of the class specified comprising a plurality of longitudinally disposed corrugated strips and interposed flat members to which the said corrugated members are secured, the flat strips operating to reinforce the corrugations, the secured corrugated members and flat strips being coated with water-proofing material.

3. A lath device of the class specified comprising a plurality of longitudinally disposed corrugated strips arranged in parallel relation and having flat strips secured to the upper and lower portions of the corrugations of the said members, the flat strips between the corrugations being secured to each other and serving to reinforce and strengthen the lath as a whole.

1,107,907. VENEER LATH. GEORGE P. CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed May 7, 1913, Serial No. 766,220. Renewed Feb. 16, 1914. Serial No. 819,071. (Cl. 20—13.)



1. A lath consisting of a plurality of thin strips having their flat sides arranged in parallel relation and held in fixed spaced association to provide exposed edges with openings therebetween to form key ways for a plaster covering.

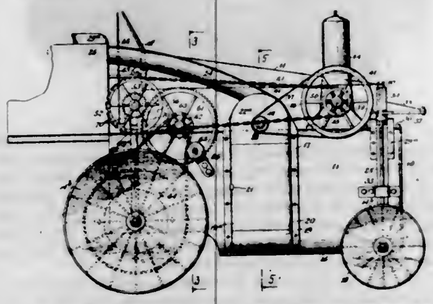
2. A lath consisting of a series of thin strips and spacing devices between the same, the strips having their flat sides arranged in superposed relation and their edges exposed for the reception of a plaster covering, the strips being disposed at an angle to a horizontal plane.

3. The combination of laths consisting of thin strips arranged with their flat sides in superposed relation and provided with means for holding them fixed distances apart, the opposite extremities of the strips of adjacent

laths being telescoped with relation to each other and adjustable, and means for securing the laths in applied position.

4. The combination with a wall or other support, of a series of laths each comprising a plurality of thin strips having their flat sides in superposed relation and their edges exposed for the application thereto of a plaster covering, the strips being provided with devices to hold them in fixed spaced relation, the strips being at an angle to a horizontal plane and the adjacent laths having their strips at reverse angles, and means for securing the laths to the wall or other support.

1,107,908. COTTON-PICKER. MATTHEW GILBRETH CUNNINGHAM, Corsicana, Tex. Filed Mar. 4, 1914. Serial No. 822,310. (Cl. 56—117.)



1. In a cotton picker, a box-like body of inverted U-shape open at front and back and presenting an elongated bottom opening contracted at the front portion, running wheels mounted on the depending sides of the body, a motor mounted on the top of said body, suction means, and driving connections between the motor and suction means, a portion of the sides of the body between the ends of the latter having double walls forming broad suction boxes at opposite sides extending substantially from the bottom to the top of the sides, the suction boxes being in communication with the suction means, the inner wall of each suction box having numerous inlet openings for the entrance of cotton at various points over the area of the said box, the outer wall of the suction boxes having doors.

2. In a cotton picker, a body of inverted U-shape, an inverted U-shaped yoke on the body, said yoke comprising a top cross bar and depending side arms, the said cross bar being pivotally mounted at its center on the body for vertical rocking movement, vertical rods ranging along said arms, bearings on the yoke at each side for the said rods, running wheels on the lower ends of the rods, and means for turning said rods.

3. In a cotton picker, a body of inverted U-shape having cotton-picking means, steering wheels at the front of the body, vertically disposed rockable rods mounting said wheels, a U-shaped yoke pivotally mounted at its center on the body to rock in a vertical plane and having bearings for said rods, laterally projecting guide brackets on the body forming guides for the yoke and rods, additional brackets on the top of the body between which the top bar of the yoke is positioned, and means for rocking the rods.

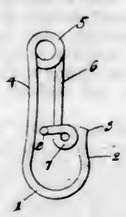
1,107,909. MILK-BOTTLE COVER. JOHN W. CURRAN, Cincinnati, Ohio. Filed Aug. 1, 1913. Serial No. 782,537. (Cl. 215—14.)

A cover of the class described comprising a strip of material having segmental end portions and folded transversely between the same to form an upwardly projecting flange and bent outwardly at the base of the flange to provide hinge joints and to extend the said segmental portions in opposite directions, and a connecting disk secured to the lower face of the segmental portions and having a diametrically arranged crease coinciding with the outward bends of the said strip to form a central hinge to permit the said segmental portions to be arranged at an angle to each other in introducing the cover into and in removing it



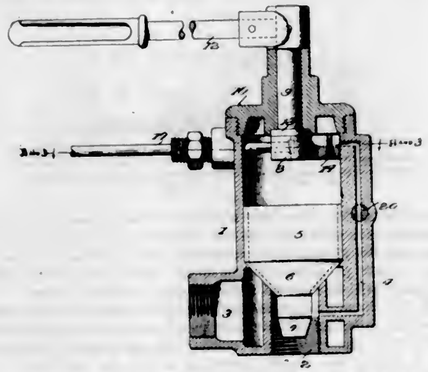
from the neck of a receptacle, said upwardly projecting flange being extended entirely across the cover and having its end edges arranged to frictionally engage the opposite walls of the mouth of the receptacle for assisting in retaining the cover in place.

1,107,910. TAG-HOOK. WILLIAM L. DALY, Schenectady, N. Y. Filed June 1, 1912, Serial No. 700,961. Renewed Feb. 4, 1914. Serial No. 816,529. (Cl. 40—26.)



As an article of manufacture, a tag hook made of a single length of wire and comprising an upturned hook proper having the bill thereof deflected outwardly to form a convex inner face, a shank extending upwardly from the back of the hook, a spring coil at the top of the shank, a guard extending from said coil downwardly between the shank and bill, a complete coil at the lower extremity of the guard resting against the convex face of the bill, a backwardly extending supplemental guard extending transversely of the space between the shank and first named guard, and a laterally projecting thumb piece at the extremity of said supplemental guard.

1,107,911. FLUSHING DEVICE. CHARLES W. DARROW, Glenwood Springs, Colo. Filed Apr. 16, 1913. Serial No. 761,638. (Cl. 137—93.)



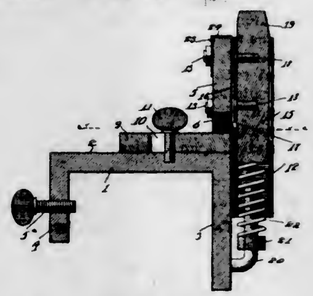
1. A flushing device comprising a casing having an inlet, an outlet, a pressure chamber, and a by-pass connecting said pressure chamber with the inlet side of the casing, a main valve fitted in said chamber and designed to cut off communication between the inlet and outlet, said valve having a centrally extended lug which is designed to fit in said inlet to restrict the outflow when the valve is opened, said pressure chamber having a relief outlet on the same plane as, but away from the entrance of, said by-pass into said pressure chamber, a disk-like rotary valve having port controlling faces in parallelism with the axis of said valve for normally closing the outlet of the pressure chamber and opening communication between the latter and said by-pass, and an operating handle for rotating said valve to uncover said latter outlet and close communication with said by-pass.

2. A flushing device comprising a casing having an inlet, an outlet, a pressure chamber, and a by-pass connecting said pressure chamber with the inlet side of the casing, a main valve fitted in said chamber, and designed to cut off communication between the inlet and outlet, said pressure chamber having a relief outlet, a rotary valve having a spring arm for closing said by-pass, and also having a radial portion for closing the outlet from the pressure chamber, which outlet is at right angles to the pressure chamber, and an operating handle for moving said control valve.

3. A flushing device comprising a casing having an inlet, an outlet, a pressure chamber, and a by-pass connecting said pressure chamber with the inlet side of the casing, said pressure chamber having an outlet, a main valve of cylindrical formation capable of moving longitudinally in said pressure chamber and having a reduced portion, said valve being capable of turning on its axis, a control valve in the form of a sector having two port-controlling faces, one face controlling said by-pass, and the other the outlet from the pressure chamber.

4. In a flushing device having a pressure chamber, a port leading into said pressure chamber, and an outlet pipe leading from the pressure chamber at right angles thereto, a valve in the form of a sector having a spring arm, the end of which is designed to extend over said by-pass, said valve also having a radial face for closing said outlet pipe.

1,107,912. COAL-PICK SHARPENER. EPHRAIM J. DAVIES, Hiawatha, Utah. Filed Dec. 13, 1913. Serial No. 806,555. (Cl. 164—94.)



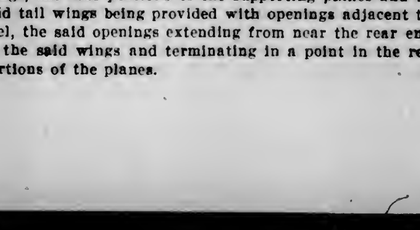
1. A pick tipping machine comprising a base having an arm provided with an opening, a chopping block for insertion in the lower portion of the opening and to bear on the base, a guide casing on the rear side of the said arm, a knife block movable vertically in said guide casing, a tipping knife on said block and movable vertically across the rear side of said opening and a cushioning spring for said knife block.

2. A pick tipping machine comprising a base having an arm provided with an opening, a chopping block for insertion in the lower portion of the opening and to bear on the base, a guide casing on the rear side of the said arm, a knife block movable vertically in said guide casing, a tipping knife on said block and movable vertically across the rear side of said opening and a cushioning spring for said knife block, and means to adjust said cushioning spring.

3. A pick tipping machine comprising a base having an arm provided with an opening, a chopping block for insertion in the lower portion of the opening and to bear on the base, a guide casing on the rear side of the said arm, a knife block movable vertically in said guide casing, a tipping knife on said block and movable vertically across the rear side of said opening and a cushioning spring for said knife block, the said arm of the base being provided at its center with a buffer plate.

4. The herein described pick point tipping machine comprising a saddle base to be fitted on an anvil and having means for securing the saddle to an anvil, an arm rising from said saddle base and having an opening in its lower portion and also provided with guide arms secured on the upper surface of the saddle base and arranged on opposite sides of said opening, a chopping block on said saddle base, between the said arms and with its inner end in the lower portion of said opening, a vertically arranged guide element on the rear side of said arm, a knife block in said guide element and having a knife blade to move across the rear side of the said opening and down to said chopping block, and a cushioning spring for said knife block.

1,107,913. AEROPLANE. JOHN M. DAVIS, McGraw, N. Y., assignor of one-half to Daniel Kernan, Cortland, N. Y. Filed Nov. 26, 1912. Serial No. 733,601. (Cl. 244—14.)



1. An aeroplane having supporting planes, a keel, and tail wings extending outwardly in opposite directions from the upper edge of the keel, the said tail wings having their outer sides parallel throughout their length and having openings adjacent the keel, the said openings extending from near the rear ends of the tail wings and terminating in a point in the rear portions of the supporting planes.

2. An aeroplane having supporting planes extending upwardly and outwardly in opposite directions, and having their outer ends or tips slanting inwardly and forwardly, a head forming a forward continuation of the said supporting planes, the outer edges of the head also slanting inwardly and forwardly, the base of the head being less in width than the front edges of the planes, a keel, and tail wings extending rearwardly from the supporting planes, the tail wings extending from the sides of the keel and having their outer edges parallel throughout their length and having openings along the inner sides.

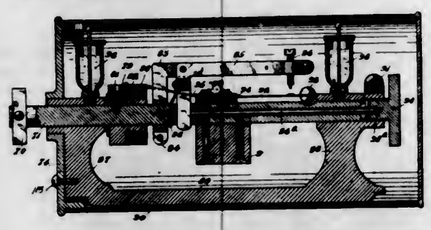
3. An aeroplane having supporting planes arranged at a dihedral angle, a triangular-shaped head forming a forward continuation of the said supporting planes, tail wings forming a rearward continuation of the said supporting planes, a well-shaped body depending from the forward portion of the supporting planes, a keel extending from the back of said body to the rear ends of the said tail wings, and a forward keel extending forwardly from said body to the apex of said head, the rear portions of the supporting planes and the said tail wings being provided with openings adjacent the keel.

4. An aeroplane having supporting planes arranged at a dihedral angle, a triangular-shaped head forming a forward continuation of the said supporting planes, tail wings forming a rearward continuation of the said supporting planes, and having their outer edges parallel throughout their length, a well-shaped body depending from the forward portion of the supporting planes, and a keel extending from the said body to the rear ends of the said tail wings, the rear portions of the supporting planes and the said tail wings being provided with openings adjacent the keel, the said openings extending from near the rear ends of the said wings and terminating in a point in the rear portions of the planes.

5. An aeroplane having supporting planes arranged at a dihedral angle, a triangular-shaped head forming a forward continuation of the said supporting planes and having its forward portions arched on both sides, tail wings forming a rearward continuation of the said supporting planes, a well-shaped body depending from the forward portion of the supporting planes, and a keel extending from the said body to the rear ends of the said tail wings, the latter being provided with openings adjacent the keel.

[Claims 6 to 9 not printed in the Gazette.]

1,107,914. APPARATUS FOR GOVERNING THE SPEED OF MOTORS. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1903. Serial No. 177,527. (Cl. 171—222.)



1. The combination with an electric motor, of a centrifugal governor adapted to be attached to the shaft thereof, a pair of switch points on said governor adapted to come into vibrating contact when the governor has reached a pre-determined speed of rotation, a flexible member having a weighted free end and a fixed end and a rigid member, one of said contacts being carried at an intermediate point upon said flexible member, and the other being carried upon said rigid member, a resistance permanently connected in series with the field of the motor, and conductors leading from said points to the terminals of said resistance, substantially as described.

2. The combination with an electric motor, of an external resistance permanently connected in series with the field of the motor, a centrifugal speed governor carried upon the shaft of the motor armature, a rigid contact, and a resilient member carried by said governor having a weighted free end and a fixed end, a contact carried at an intermediate point between said weighted and fixed ends upon said resilient member, said contacts being adapted to rapidly close and open a circuit in shunt to said resistance when the speed of the armature is between certain limits, the duration of each connection between said contacts increasing as the speed of the armature increases, one of said contacts being adjustable, whereby any desired uniform speed of the armature may be maintained, substantially as described.

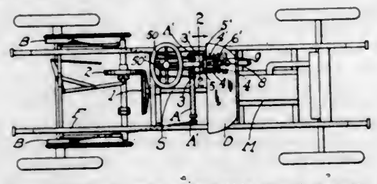
3. In a governor for electric machines, the combination with a motor having a resistance in a circuit of the machine, of a rigid contact, a resilient member having a fixed end and a weighted free end, a contact carried by said resilient member between said fixed end and said free end adapted to make connection with the rigid contact in its vibration, said contacts shunting said resistance, the duration of connection between said contacts depending upon the speed of the machine, whereby a resultant resistance is produced and the speed of the machine is controlled, substantially as described.

4. In a governor for electric machines, the combination with a motor having a resistance in series with the field thereof, of a vibratile contact in a shunt circuit about said resistance and automatically operated to open and close said shunt circuit a plurality of times for each revolution of the motor, the period of closure varying by steady increments and decrements as the speed of the motor changes.

5. In a governor, the combination with a rotating shaft, of a rigid contact carried by the shaft, a flexible member also carried by the shaft and having a weighted free end, a contact carried at a point between the weighted free end and the secured end of said flexible member, said contact being adapted to rapidly vibrate and intermittently engage with the rigid contact in the vibration of the flexible member and speed controlling means affected by said contacts, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,107,915. AUTOMATIC CLUTCH-RELEASE. JOHN H. DE BUHR, St. Louis, Mo. Filed Dec. 8, 1913. Serial No. 805,333. (Cl. 21—90.)

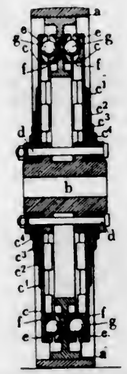


1. In combination with a suitable running gear, a motor, a brake mechanism for controlling the running gear terminating at one end in a ratchet, a clutch interposed between the motor and running gear, suitable clutch operating mechanism terminating at one end in a ratchet, and a suitable lever interposed between the brake-ratchet and the clutch ratchet, for controlling the latter upon operation of the brake-ratchet.

2. In combination with a suitable running-gear, a motor, a clutch interposed between the motor and running gear, suitable clutch-operating mechanism, brake mechanism for controlling the running gear, the clutch-operating mechanism and brake mechanism each terminating at one end in a suitable ratchet, a lever coöperating with the ratchets to release the clutch-ratchet upon throwing the brake-ratchet.

3. In combination with a suitable running gear, a motor, a clutch interposed between the motor and running gear, suitable clutch-operating mechanism, brake-actuating mechanism for the running gear, the clutch-mechanism and brake-mechanism each terminating at one end in a suitable ratchet, provided with a shoulder or ledge for a portion of its length, a suitable lever provided with guide lugs at each end thereof, coöperating with the ratchets, said guide lugs engaging said shoulders to cause the clutch-ratchet to be released upon application of the brake.

1,107,916. ELASTIC WHEEL. LUC LEON BASILE DENIS, Paris, France. Filed Jan. 29, 1908. Serial No. 413,179. (Cl. 152—28.)



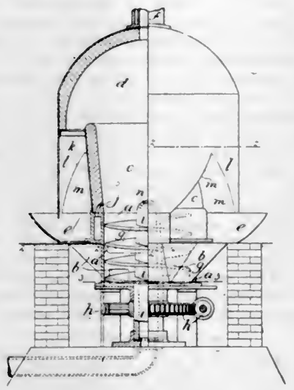
1. An elastic wheel, comprising a rigid rim provided on its internal face with a medial web having recesses in its faces adjacent to the rim, a hub, two elastic side members, secured to the hub and extending on opposite sides of the web of the rim, each side member being provided in its internal face adjacent to the periphery, with recesses opposite the recesses of the said web, and balls in the recesses of the side members and web, the recesses being of greatest depth at the center and presenting inclined surfaces upon which the balls may roll.

2. An elastic wheel, comprising a rigid rim provided on its internal face with a medial web having recesses in its faces adjacent to the rim, a hub, two spring supported disks rigidly secured in the hub and extending on opposite sides of the web, each disk being provided on its internal face adjacent to the periphery thereof with recesses opposite the recesses of the web, and balls in the recesses of the disks and web, the recesses being of greatest depth at the center and presenting inclined surfaces upon which the balls may roll.

3. An elastic wheel, comprising a rim provided with an internal medial web having recesses in its opposing faces adjacent the rim, spring side members secured to the hub and formed of a plurality of plates of different diameters and overlapping one another, the plate of greatest diameter of each side member being provided on its internal face adjacent the periphery with recesses opposite the recesses of the web, and balls in the recesses of the side members and web, the recesses being of greatest depth at the center and presenting inclined surfaces upon which the balls may roll.

4. An elastic wheel comprising two concentric members one including a rigid rim and presenting two series of recesses, rigid in respect to said rim, and disposed closely adjacent thereto and facing in opposite directions, the other of said members including a hub, and spaced elastic side members secured thereto, and provided adjacent to said rim with separate sets of oppositely facing recesses, each of said last mentioned recesses being opposed to a corresponding one of said first mentioned recesses, and a ball in each pair of opposed recesses, said balls being of greater diameter than the depth of said recesses and each recess being of greatest depth at the center, and presenting inclined surfaces upon which the balls may roll.

1,107,917. SUCTION GAS-PRODUCER. MILLARD FILLMORE DERRICK, Montreal, Quebec, Canada. Filed June 12, 1913. Serial No. 773,309. (Cl. 48—86.)



1. The combination in a gas producer of a vertical feed casing; means for delivering fuel thereto; a vertical conveying screw in said casing; a generating chamber vertically above the feed casing and forming a continuation thereof; a gas collecting dome above said generating chamber and extending down around the sides thereof; a series of water seals placed to receive material discharged over the top of the combustion chamber; and deflecting plates between each two adjacent water seals.

2. The combination in a gas producer of a vertical feed casing; means for conducting material thereto; a generating chamber vertically above the feed casing; a hollow spindle in said casing connected to a source of air under pressure and having outlets for delivering air to said chamber; a conveying screw on said spindle within the casing; a gas collecting dome; and water seals placed to receive ashes delivered from said generating chamber.

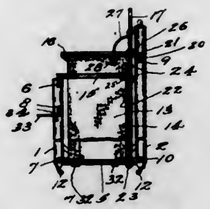
3. The combination in a gas producer of a vertical feed casing; means for delivering fuel to the lower end thereof; a vertical conveying screw in said casing; a generating chamber vertically above the feed casing and forming a continuation thereof; an annular conduit surrounding the casing adjacent its point of connection with the generating chamber and connected to a source of air under pressure, there being outlets from said conduit into the lower part of said chamber; a gas collecting dome over the generating chamber and extending down around the sides thereof; with water seals placed to receive material discharged over the top edge of the generating chamber.

4. In a gas producer the combination comprising the feed funnel *a*, the combustion chamber *c* having air supplying passages, the ram *g*, a conduit for supplying air to the combustion chamber having orifices *n*, hoppers *b*, and a series of water seals *e* all constructed and arranged substantially as and for the purposes herein set forth.

5. The combination in a gas producer of a vertically extending feed casing; means for introducing fuel to the bottom of said casing; a generating chamber forming a continuation of the feed casing; a gas collecting dome mounted over the generating chamber and extending down around the same; water seals placed to receive material discharged over the top edge of the generating chamber; a conveying screw mounted in the feed casing and having its blades of greater pitch at its upper end than at its lower end; with means for rotating said screw on a vertical axis.

[Claim 6 not printed in the Gazette.]

1,107,918. COMBINED CHAIR AND CRADLE. ELIZABETH M. M. DIMMERLING, Braddock, Pa. Filed Jan. 23, 1914. Serial No. 813,882. (Cl. 155—6.)

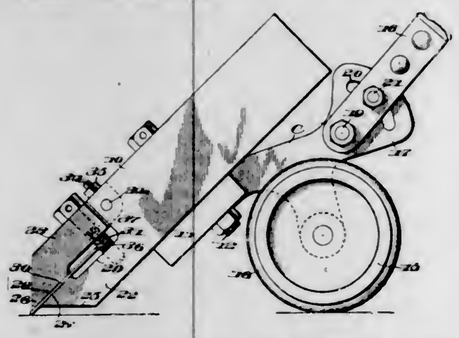


1. The combination in an article of furniture of a basket having a base board, an end board movable over the base board and adapted as a seat, a second end board having a stationary portion and a hinged portion movable relatively thereto to give access to the seat, and supporting post therefor.

2. The combination in an article of furniture having supporting posts, of a basket having a base board, an end board movable relative to the base board and means on said base board for guiding the end board, means coacting with two of said posts for supporting the end board in its adjusted position, and a second end board having a stationary portion, and a movable portion hinged to said base board, to give access to the adjusted end board.

3. The combination in an article of furniture having supporting posts, of a basket having a base board and guide rods thereon, a movable end board guided by said rods to adjusted position, pins in the base board coacting with a pair of said posts for supporting the end board in its adjusted position, and a second end board having a stationary portion, and a movable portion hinged to said base board, to give access to the adjusted end board.

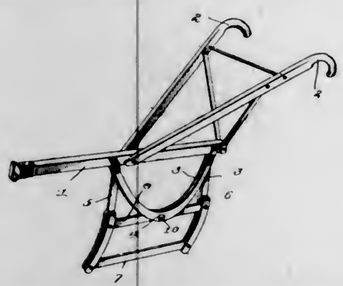
1,107,919. FLOOR-SCRAPER. DAVID P. T. DOUGLASS, Jackson, Tenn. Filed Mar. 28, 1913. Serial No. 757,399. (Cl. 145—47.)



1. In a floor scraper, a body member having an integral stationary jaw and lugs adjacent thereto, a pivot member extending through the lugs, a movable jaw inset between the lugs and mounted on the pivot member, and clamping means for securing the movable jaw with respect to the stationary jaw; the movable jaw being provided with an elongated slot for the passage of the pivot member and with set screws engaging said pivot member; and springs interposed between the jaws to force them apart.

2. In a device of the class described, a body member having a stationary jaw provided with lugs, a pintle fixed in said lugs, a movable jaw inset between the lugs and having an elongated aperture movably engaging the pintle, set screws engaging the pintle through the movable jaw, and bolts whereby the movable jaw is secured in fixed relation to the stationary jaw.

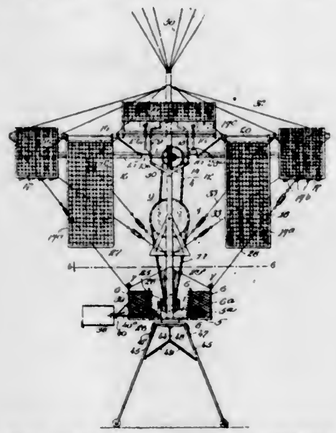
1,107,920. PLOW-STOCK. CRAWFORD L. EASTERLING, Plant City, Fla. Filed Feb. 27, 1914. Serial No. 821,539. (Cl. 97—26.)



1. A plow stock comprising a beam, approximately U-shaped members attached to the opposite sides of the beam and provided at their intermediate portions with openings, standards pivotally mounted at the forward and rear ends of the said U-shaped members, a bar connecting the lower portions of the standards together, a bar connecting the intermediate portions of the standards together and lying between the intermediate portions of the U-shaped members, and provided with a series of openings and a securing device passing transversely through the U-shaped members and the last mentioned bar.

2. A plow stock comprising a beam, approximately U-shaped members secured to the opposite sides of the beam and provided at points between the ends with openings, standards pivotally secured to the U-shaped members at the forward and rear ends thereof, bars connecting the lower portions of the standards together, one of the bars lying between the U-shaped members and being provided with a series of openings, and a key bolt passing transversely through the members and the bar which is located between the members and a securing device passing through the bolt.

1,107,921. FLYING-MACHINE. MORONI DANIEL FERRIN, Salt Lake City, Utah. Filed Nov. 29, 1912. Serial No. 734,075. (Cl. 244—20.)



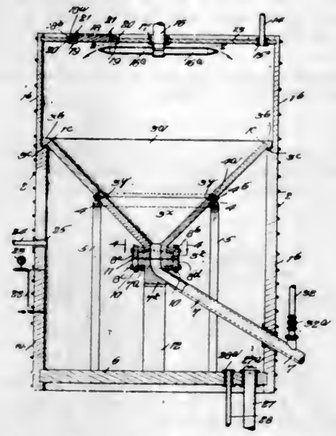
1. A flying machine of the character described comprising a main frame, spaced uprights rigidly connected to, and rising from said main frame, a superstructure consisting of spaced upright members pivotally connected adjacent their lower ends to the upper ends of the said main frame uprights, and a horizontal member rigidly connected to the upright members intermediate the ends of the latter, a central shaft mounted parallel with and above the horizontal member, operating wings having their inner ends movably connected to the said shaft and arranged to swing in vertical planes, crank shafts mounted below and at opposite sides of the horizontal member and having connection with the said operating wings, braces connected to the vertical and horizontal members of the superstructure for supporting the said shafts, connections between the ends of the superstructure and the main frame for tilting the former with respect to the latter, a motor mounted in the main frame, and driving connections between the motor and the crank shafts including transmission gears concentric with the pivotal connection between the main frame and the superstructure, all for the purpose described.

2. A flying machine of the character described comprising a main frame, a superstructure carried by the main frame consisting of vertical and horizontal supporting members, and a plurality of braces, a shaft mounted horizontally in the superstructure, operating wings carried by the shaft and arranged to swing in vertical planes, means for actuating the said wings, means for tilting the superstructure with respect to the main frame, a landing frame with which the main frame has swivel connection and a rudder mounted on the main frame in order that the latter and the superstructure may be normally maintained in position facing the wind.

1,107,922. AGITATOR AND FILTER FOR TREATING ORES. JOHN D. FIELDS, Maxville, Mont. Filed Sept. 13, 1913. Serial No. 789,639. (Cl. 75—86.)

1. In a device for treating ores, a tank having an annular shoulder on its interior, a filter having a flange arranged to rest on said shoulder, means for rendering the joint between the filter and the shoulder air-tight, a pipe communicating with the filter at its bottom, said pipe extending exteriorly of said tank, a pump communicating with said pipe, a distributer disposed above said filter and means connecting said pump with said distributer.

2. In a device for treating ores, a cylindrical tank having an annular shoulder on its interior walls, the bottom and the top of the tank being closed, a cone-shaped porous filter having a flange arranged to rest on said annular shoulder, means for rendering the joint between the filter and the tank air-tight, a pipe communicating with the bottom of said cope-shaped filter, said pipe extending through the sides of the tank, means for joining said pipe to said filter, an air pump communicating with the space below said filter, a distributing device disposed above said filter, a pump communicating at one end with the pipe leading from said filter and having communication with said distributer at the other end.



3. In a device for treating ores, a tank, a filter disposed within said tank, and arranged to bear on the walls thereof, means for rendering the joint between the filter and the walls air-tight, said filter being composed of sections, and means for locking said sections together and for supporting them in their locked position, said means comprising an annular ring having flanges arranged to engage flanges on the filter and means for supporting said annular ring.

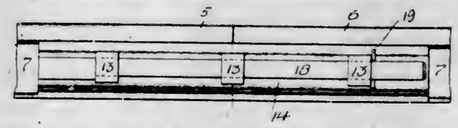
4. In a device for treating ores, a closed cylindrical tank, a central post or pillar carried by the bottom of the tank, an inclined pipe having a flange arranged to rest on said central partition, said pipe extending through the wall of the cylindrical tank, a cone-shaped filter section having a flange at its bottom arranged to register with the flange of said pipe, a gasket disposed between the flanges of the filter section, and the pipe, means for clamping said flanges together, said filter having a central opening arranged to register with the pipe.

5. In a device for treating ores, a closed cylindrical tank, a central post or pillar carried by the bottom of the tank, an inclined pipe having a flange arranged to rest on said central partition, said pipe extending through the wall of the cylindrical tank, a cone-shaped filter section having a flange at its bottom arranged to register with the flange of said pipe, a gasket disposed between the flanges of the filter section and the pipe, means for clamping said flanges together, said filter having a central opening arranged to register with the pipe, a second filter section forming a continuation of said first named section, the outer edges of said second named section engaging the walls of the tank and forming an air-tight joint therewith, and means for effecting an air-tight joint between the first named filter section and the second named filter section.

[Claim 6 not printed in the Gazette.]

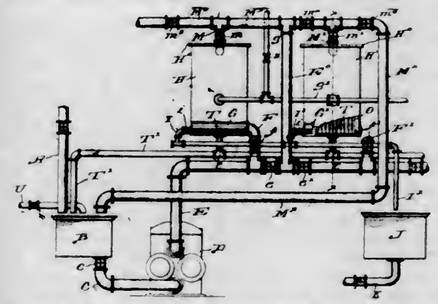
1,107,923. RAIL-JOINT. WENZL RICHARD FISCHER, Bellevue, Pa. Filed Sept. 19, 1913. Serial No. 790,765. (Cl. 239—11.)

In a rail joint, the combination with a pair of rails, comprising base, web and tread portions, having their ends opposing each other and with the web at the opposing ends cut away, said cut away portions registering to provide an opening, an inner fish plate positioned against one side of said rails and having its face portion bent over to over-lap the base of the rails and having its upper portion formed with integral lateral tongues extending through and projecting from said opening, each of said tongues being formed adjacent to the outer ends with a rectangular opening, the outer walls each being



beveled, an outer fish plate formed with an opening adapted for the reception of said tongue and adapted for engagement with the outer sides of said rails and having its base portion bent over to over-lap the face of said rails, and a wedge extending through the openings of said tongues and engaging the outer fish plate for connecting the said fish plates together, and a pin extending through the wedge and abutting against the outer fish plate for retaining the wedge in position.

1,107,924. CONTINUOUSLY-OPERATING FILTER. JAMES H. FLEETWOOD, New Orleans, La. Filed Mar. 24, 1914. Serial No. 826,976. (Cl. 210—16.)



1. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a filter casing connected to said delivery pipe, a plurality of filter bags mounted in said casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, and a return pipe from said filter casing to said supply reservoir, whereby a continuous circulation of the fluid may be maintained over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, substantially as described.

2. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a filter casing connected to said delivery pipe, a plurality of filter bags mounted in said casing and spaced apart for each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, a return pipe from said filter casing to said supply reservoir, whereby a continuous circulation of the fluid may be maintained over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, a steam pipe for supplying steam into said filter casing, means for supplying water to said supply reservoir, means for cutting off said apparatus from said receiving reservoir when desired, and a drain pipe from said filter casing, substantially as described.

3. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, and a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, substantially as described.

4. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, and a by-pass from said return pipe for carrying off the unfiltered fluid, substantially as described.

5. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of said circulating fluid to pass through the walls of said bags into the receiving reservoir, a steam pipe for supplying steam into said filter casings, means for supplying water to said supply reservoir, means for cutting off said apparatus from said receiving reservoir when desired, and a drain pipe from said filter casings, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,925. APPARATUS FOR PREPARING TANNING LIQUORS. JOSEPH FORSTER, Warrington, England. Filed Apr. 29, 1911. Serial No. 624,023. (Cl. 167—4.)

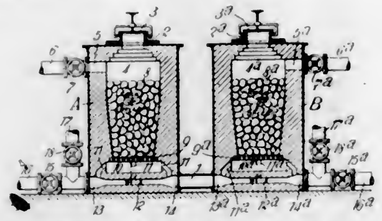


1. Apparatus for leaching tanning material, consisting of a series of adjoining pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each of said pits and the next pit having a lower liquid level, and a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, each of said cages being hinged along the division line between said pit and the next pit having a higher liquid level and arranged to directly transfer its material to the like cage in the next higher pit and to directly receive material from the like cage of the next lower pit, substantially as described.

2. Apparatus for leaching tanning material, consisting of a series of adjoining pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each pit and the next pit having a lower liquid level, and a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, the perforations in each cage being bell mouthed, substantially as hereinbefore described.

3. Apparatus for leaching tanning material, consisting of a series of pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each pit and the next pit having a lower liquid level, a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, and means for agitating such cage, substantially as set forth.

1,107,926. PROCESS OF PRODUCING HYDROGEN. ALBERT RUDOLPH FRANK, Halensee, near Berlin, Germany. Filed Mar. 14, 1913. Serial No. 754,190. (Cl. 48—198.)



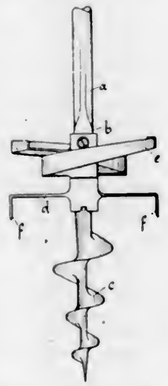
1. A process of producing hydrogen, which consists in subjecting a gas with a high percentage of methane to a temperature of at least 1200 degrees centigrade.

2. A process of producing hydrogen, which consists in purifying a gas containing a high percentage of methane, and subjecting the said gas after such purification to a temperature of at least 1200 degrees centigrade.

3. A process of producing hydrogen, which consists in subjecting rock gas to a temperature of at least 1200 degrees centigrade.

4. A process of producing hydrogen, which consists in purifying rock gas and subjecting the same to a temperature of at least 1200 degrees centigrade.

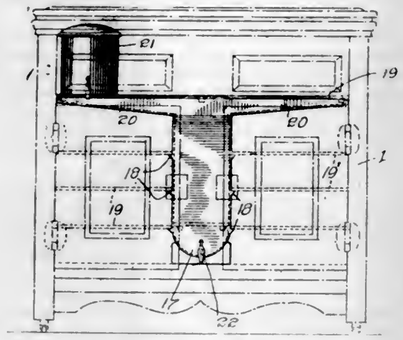
1,107,927. GROUND-AUGER. HEINRICH FUCHS, Friedrichsfelde, near Berlin, Germany. Filed Jan. 6, 1914. Serial No. 810,555. (Cl. 255—70.)



1. In a ground auger, the combination, with a serpent drill (c), a screw thread shaped bore disk (e) above the serpent drill, and a bar (a) having the disk attached to it, of a knife-like cutting tool located upon said bar between said drill and said disk, the diameter of said tool being somewhat longer than that of the said disk, for the purpose as described.

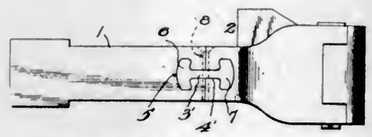
2. In a ground auger comprising a serpent drill, an upwardly extending bar of the same; and a screw thread shaped bore disk shoved upon said bar, the combination, with said drill, bar, and disk, of a knife-like cutting tool adapted to be used in connection with said disk; this latter, as well as said cutting tool being exchangeable, substantially and for the purpose as described.

1,107,928. REFRIGERATOR. GIZA GÁDONYI, Cleveland, Ohio. Filed Oct. 11, 1912. Serial No. 725,207. (Cl. 62—10.)



The combination with a refrigerator having a compartment provided with shelves, a vertically extending drip pan substantially rectangular in plan, having a rounded bottom and further having an outlet in close proximity to said bottom, transverse ribs formed on said pan and adapted to support said shelves, a rectangular drain tray including a pair of side walls each consisting of a rectangular central portion and a pair of end portions each gradually increasing in width from its outer end toward said intermediate portion and having the inner terminus therein of less width than the width of said intermediate portion, said tray further including a pair of oppositely disposed upwardly inclined bottom sections, each of said sections of a length less than half the length of a side wall, each of said bottom sections having its outer end rounded, said rounded ends secured between the ends of said side walls and constituting end walls of said tray, each of said sections having its inner end terminating in a depending portion flush with the lower edge of said intermediate portions, said depending portions and said intermediate portions extending into the top of said pan, said bottom sections resting upon the top edges of the side walls of said pan.

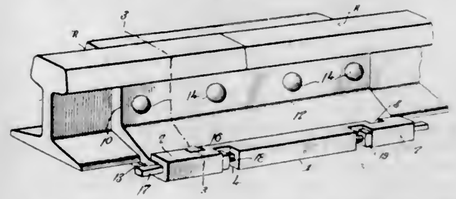
1,107,929. CAR-COUPLING. MYERS A. GARRETT, Chicago, Ill. Filed Feb. 24, 1913. Serial No. 750,225. (Cl. 213—42.)



1. The combination in a car coupler with a head section and a shank section having locking recesses in their adjoining ends, of a separate key adapted to fit in said recesses and hold the sections together, and means for preventing displacement of the key; the ends of the said sections abutting in frictional contact whereby in buffing strains will be transmitted directly from one section to the other.

2. A separable car coupler comprising sections each formed with a slot and an enlarged recess in their adjoining ends, a key formed with an integral web and pair of heads to fit said slots and recesses, and a locking pin passed through openings in the coupler and key to prevent displacement of the key.

1,107,930. RAIL-JOINT. HOMER E. GIDDINGS, Pitt Meadows, British Columbia, Canada. Filed Nov. 26, 1912, Serial No. 733,718. Renewed Jan. 24, 1914. Serial No. 814,239. (Cl. 239—3.)



1. The combination with rail ends, of a rail joint comprising a bed plate, a cushion member upon the bed plate and upon which the hail ends rest, the said plate having its longitudinal edges formed with inturned flanges, removable side members for the joint, said side members having their lower longitudinal edges provided with feet which are adapted to be arranged beneath the flanges of the bed plate, means for securing the side members of the joint to the webs of the rails, means for securing the base plate to the ties of the road bed, wedge members arranged beneath the flanges of the bed plate and adapted to abut against the feet of the side members of the joint, and adjustable securing means for the wedge members.

2. The combination with rail ends, of a joint comprising a base plate having its longitudinal edges upset and provided with inturned flanges, a cushion mat upon the base plate and upon which the rail ends rest, the outer longitudinal edges of the base plate being notched, fish plates having their lower longitudinal edges provided with feet and adapted to be received beneath the flanges of the base plate, means for securing the fish plates to the webs of the rails, spikes for retaining the fish plates and base plate upon the ties for the rails, wedge members adapted to be arranged between the flanges and the upper face of the base plate and to engage with the longitudinal edges of the feet of the fish plates, said wedges having threaded stems which extend to within the notched portions of the base plate, and nuts arranged within the said said notched portions and engaging with the threaded stems.

3. The combination with rail ends, of a joint comprising a base plate upon which the rail ends rest, outer and inner angular side members for the plate and adapted to engage with the opposite sides of the rails, the outer side member being provided with an enlarged reinforcing portion which includes a crest, the said crest adapted to engage with the outer faces of the rail ends and to lie in a plane with the top of the rails, securing elements for the side members and the rails, means embodying spikes for connecting the side members of the joint with the base and to the ties for the rails, and wedging elements for forcing the lower portions of the side members against the edges of the base flanges of the rails.

4. The combination with rail ends, of a rail joint comprising a base plate upon which the rail ends rest, the said plate being formed upon its longitudinal edges with inturned flanges, inner and outer angular side members for the joint, and having their longitudinal edges resting within the flanges of the base plate, the outer angular member having an enlarged outer face which is extended to provide a crest that engages the outer faces of the heads of the rails and lies in a plane with the treads of the rails, the said outer section being centrally formed

3. Apparatus for filtering saccharine juice, compriaing a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, and a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, substantially as described.

4. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of the said circulating fluid to pass through the walls of said bags into the receiving reservoir, and a by-pass from said return pipe for carrying off the unfiltered fluid, substantially as described.

5. Apparatus for filtering saccharine juice, comprising a supply reservoir for the fluid to be filtered, a pump connected to said reservoir and provided with a delivery pipe, a series of filter casings connected at one end to said delivery pipe, a plurality of filter bags mounted in each casing and spaced apart from each other, a receiving reservoir for the filtered fluid, connections between said receiving reservoir and the interior of said bags, a return pipe connecting the other end of said filter casings to said supply reservoir, whereby a continuous circulation of the fluid may be maintained through said filter casings *seriatim* and over and past the outside of said bags, while permitting the filtered portion of said circulating fluid to pass through the walls of said bags into the receiving reservoir, a steam pipe for supplying steam into said filter casings, means for supplying water to said supply reservoir, means for cutting off said apparatus from said receiving reservoir when desired, and a drain pipe from said filter casings, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,107,925. APPARATUS FOR PREPARING TANNING LIQUORS. JOSEPH FORSTER, Warrington, England. Filed Apr. 29, 1911. Serial No. 624,023. (Cl. 167—4.)

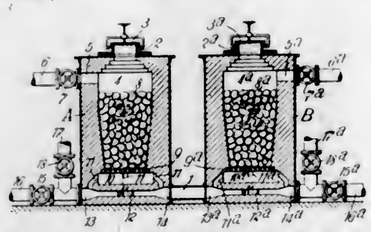


1. Apparatus for leaching tanning material, consisting of a series of adjoining pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each of said pits and the next pit having a lower liquid level, and a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, each of said cages being hinged along the division line between said pit and the next pit having a higher liquid level and arranged to directly transfer its material to the like cage in the next higher pit and to directly receive material from the like cage of the next lower pit, substantially as described.

2. Apparatus for leaching tanning material, consisting of a series of adjoining pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each pit and the next pit having a lower liquid level, and a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, the perforations in each cage being bell mouthed, substantially as hereinbefore described.

3. Apparatus for leaching tanning material, consisting of a series of pits disposed and arranged with successively lower liquid levels one way through the series, a source of leaching liquid supply to the pit having the highest liquid level, an overflow pipe between each pit and the next pit having a lower liquid level, a hinged perforated cage in each pit to hold and retain the tanning material during leaching in that pit, and means for agitating such cage, substantially as set forth.

1,107,926. PROCESS OF PRODUCING HYDROGEN. ALBERT RUDOLPH FRANK, Halensee, near Berlin, Germany. Filed Mar. 14, 1913. Serial No. 754,190. (Cl. 48—198.)



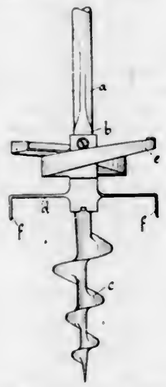
1. A process of producing hydrogen, which consists in subjecting a gas with a high percentage of methane to a temperature of at least 1200 degrees centigrade.

2. A process of producing hydrogen, which consists in purifying a gas containing a high percentage of methane, and subjecting the said gas after such purification to a temperature of at least 1200 degrees centigrade.

3. A process of producing hydrogen, which consists in subjecting rock gas to a temperature of at least 1200 degrees centigrade.

4. A process of producing hydrogen, which consists in purifying rock gas and subjecting the same to a temperature of at least 1200 degrees centigrade.

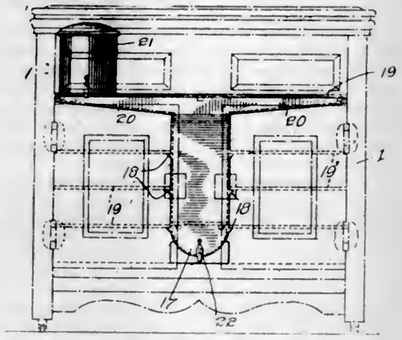
1,107,927. GROUND-AUGER. HEINRICH FUCHS, Friedrichsfelde, near Berlin, Germany. Filed Jan. 6, 1914. Serial No. 810,555. (Cl. 255—70.)



1. In a ground auger, the combination, with a serpent drill (c), a screw thread shaped bore disk (e) above the serpent drill, and a bar (a) having the disk attached to it, of a knife-like cutting tool located upon said bar between said drill and said disk, the diameter of said tool being somewhat longer than that of the said disk, for the purpose as described.

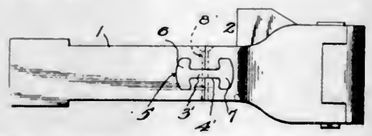
2. In a ground auger comprising a serpent drill, an upwardly extending bar of the same; and a screw thread shaped bore disk shoved upon said bar, the combination, with said drill, bar, and disk, of a knife-like cutting tool adapted to be used in connection with said disk; this latter, as well as said cutting tool being exchangeable, substantially and for the purpose as described.

1,107,928. REFRIGERATOR. GIZA GÁRDONYI, Cleveland, Ohio. Filed Oct. 11, 1912. Serial No. 725,207. (Cl. 62—10.)



The combination with a refrigerator having a compartment provided with shelves, a vertically extending drip pan substantially rectangular in plan, having a rounded bottom and further having an outlet in close proximity to said bottom, transverse ribs formed on said pan and adapted to support said shelves, a rectangular drain tray including a pair of side walls each consisting of a rectangular central portion and a pair of end portions each gradually increasing in width from its outer end toward said intermediate portion and having the inner terminus therein of less width than the width of said intermediate portion, said tray further including a pair of oppositely disposed upwardly inclined bottom sections, each of said sections of a length less than half the length of a side wall, each of said bottom sections having its outer end rounded, said rounded ends secured between the ends of said side walls and constituting end walls of said tray, each of said sections having its inner end terminating in a depending portion flush with the lower edge of said intermediate portions, said depending portions and said intermediate portions extending into the top of said pan, said bottom sections resting upon the top edges of the side walls of said pan.

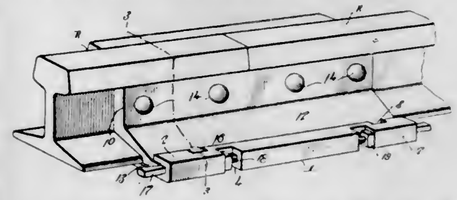
1,107,929. CAR-COUPLING. MYERS A. GARRETT, Chicago, Ill. Filed Feb. 24, 1913. Serial No. 750,225. (Cl. 213—42.)



1. The combination in a car coupler with a head section and a shank section having locking recesses in their adjoining ends, of a separate key adapted to fit in said recesses and hold the sections together, and means for preventing displacement of the key; the ends of the said sections abutting in frictional contact whereby in buffing strains will be transmitted directly from one section to the other.

2. A separable car coupler comprising sections each formed with a slot and an enlarged recess in their adjoining ends, a key formed with an integral web and pair of heads to fit said slots and recesses, and a locking pin passed through openings in the coupler and key to prevent displacement of the key.

1,107,930. RAIL-JOINT. HOMER E. GIDDINGS, Pitt Meadows, British Columbia, Canada. Filed Nov. 26, 1912, Serial No. 733,718. Renewed Jan. 24, 1914. Serial No. 814,239. (Cl. 239—3.)



1. The combination with rail ends, of a rail joint comprising a bed plate, a cushion member upon the bed plate and upon which the rail ends rest, the said plate having its longitudinal edges formed with inturned flanges, removable side members for the joint, said side members having their lower longitudinal edges provided with feet which are adapted to be arranged beneath the flanges of the bed plate, means for securing the side members of the joint to the webs of the rails, means for securing the base plate to the ties of the road bed, wedge members arranged beneath the flanges of the bed plate and adapted to abut against the feet of the side members of the joint, and adjustable securing means for the wedge members.

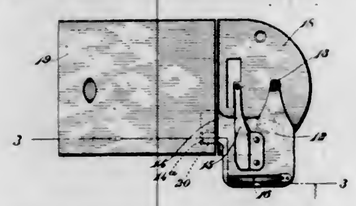
2. The combination with rail ends, of a joint comprising a base plate having its longitudinal edges upset and provided with inturned flanges, a cushion mat upon the base plate and upon which the rail ends rest, the outer longitudinal edges of the base plate being notched, fish plates having their lower longitudinal edges provided with feet and adapted to be received beneath the flanges of the base plate, means for securing the fish plates to the webs of the rails, spikes for retaining the fish plates and base plate upon the ties for the rails, wedge members adapted to be arranged between the flanges and the upper face of the base plate and to engage with the longitudinal edges of the feet of the fish plates, said wedges having threaded stems which extend to within the notched portions of the base plate, and nuts arranged within the said said notched portions and engaging with the threaded stems.

3. The combination with rail ends, of a joint comprising a base plate upon which the rail ends rest, outer and inner angular side members for the plate and adapted to engage with the opposite sides of the rails, the outer side member being provided with an enlarged reinforcing portion which includes a crest, the said crest adapted to engage with the outer faces of the rail ends and to lie in a plane with the top of the rails, securing elements for the side members and the rails, means embodying spikes for connecting the side members of the joint with the base and to the ties for the rails, and wedging elements for forcing the lower portions of the side members against the edges of the base flanges of the rails.

4. The combination with rail ends, of a rail joint comprising a base plate upon which the rail ends rest, the said plate being formed upon its longitudinal edges with inturned flanges, inner and outer angular side members for the joint, and having their longitudinal edges resting within the flanges of the base plate, the outer angular member having an enlarged outer face which is extended to provide a crest that engages the outer faces of the heads of the rails and lies in a plane with the treads of the rails, the said outer section being centrally formed

with a rail section against which the rail ends abut, means for connecting the joint sections with the webs of the rails, means embodying spikes for securing the side members upon the base plate and upon the ties for the rails, and wedge members for forcing the side members of the joint tightly against the edges of the base flanges of the rails.

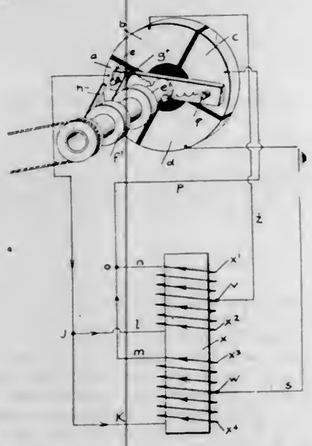
1,107,931. SEWING-MACHINE-ATTACHMENT HOLDER. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed Aug. 22, 1913. Serial No. 786,154. (Cl. 112—35.)



1. An attachment holder for sewing machines consisting of a bed or body plate provided at one edge with a downturned outwardly extending finger adapted to loosely enter a hole in the throat-plate of a sewing machine, and also provided, at a point removed from said downturned outwardly extending finger, with a downturned portion adapted to be engaged by a shuttle slide of the machine to maintain the holdler in working position.

2. An attachment holder for sewing machines consisting of a bed or body plate provided at one edge with a downturned outwardly extending finger adapted to loosely enter a hole in the throat-plate of a sewing machine, and also provided, at a point removed from said downturned outwardly extending finger, with a downturned portion adapted to be engaged by a shuttle slide of the machine to maintain the holder in working position, said downturned portion being formed in two parts one of which is adapted to engage a recess in the lower face of the shuttle slide.

1,107,932. MEANS FOR PREVENTING SPARKING IN ELECTRICAL DEVICES. LEO GRUBMAN, New York, N. Y. Filed Apr. 16, 1912. Serial No. 691,187. (Cl. 172—126.)



1. The combination of a core of magnetic material with a number of windings thereon, together with means for changing the direction of flow of the current through some of the windings, the said means being also adapted to reverse the flow of the current through all of the windings.

2. In combination with a source of supply, an electromagnet comprising a number of windings connected in multiple with the said source of supply, each of the windings so connected in mulutipple consisting of a plurality of individual windings, and means for changing the direction of flow of the current through one of the windings in each of the said groups, the said means being also adapted to reverse the current through all of the windings.

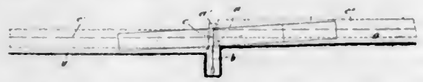
3. The combination with a source of supply, of an electromagnet embodying a plurality of windings, the said windings, during operation of the electromagnet, being divided into two groups together, with means for changing the direction of flow of the current through one of the windings in each group, the said means being also adapted to reverse the direction of the current through both groups.

4. In combination with a source of supply, an electromagnet comprising a plurality of windings, means between the said source of supply and the windings, whereby the direction of current through all of the windings may be the same, the said means being adapted to change the direction of the flow through some of the windings, the said means being further adapted to reverse the direction of flow through all of the windings.

5. In combination with a source of supply, means for producing a magnetic field comprising a plurality of windings, with a mass of magnetic material adjacent the windings, and means in circuit with the said source of supply and connected to the said windings, whereby the direction of flow of the current through all of the windings may be such as to provide a field of maximum strength, the said means being adapted to weaken the said field by reversing the direction of flow through some of the windings, further operation of the said means strengthening the field, the polarities being reversed.

[Claim 6 not printed in the Gazette.]

1,107,933. LOCK CONSTRUCTION FOR WATERWAYS. GEORG GUTTENBRUNNER, Vienna, Austria-Hungary. Filed Aug. 27, 1913. Serial No. 786,966. (Cl. 61—21.)



1. In a lock construction the combination with the upper trough and the lower trough of shutters adapted to be applied tightly against each other and to form a lock gate, the edges of said shutters being adapted to be applied tightly against the sides and bottom of a vessel passing through the lock, and means for causing the said shutters to close again astern of the passing vessel so that during the passage of the vessel through the lock-gate no water can flow from the upper trough into the lower one, substantially as described.

2. In a lock construction the combination with the upper and lower troughs of a lock chamber, lock gates separating the lock chamber from the upper and lower troughs and formed by shutters the edges of which are adapted to be applied against the sides and bottom of a vessel passing through the gate, means for causing the said shutters to close astern of the passing vessel, so that a part of the water entering the lock chamber from the upper trough is raised above the level of the upper trough, and spare cells (*d*) arranged at a correspondingly high level and adapted to receive the said part of water raised, substantially as described.

3. In a lock construction the combination with the lock-chamber of lock gates formed by shutters adapted to be applied against the sides and bottom of a passing vessel, spare cells (*d*) of the well known type arranged on both sides of the lock chamber immediately above each other, flaps (K) adapted to establish and suppress a communication between the said lock-chamber and the said cells, the uppermost cells being positioned so much higher than the level of the upper trough as, owing to the displacement of water by the vessel passing through the lock-gate, the level of water is raised in the said lock-chamber, substantially as and for the purpose set forth.

4. In a lock construction the combination with the upper and lower troughs of a lock gate formed by shutters adapted to be applied against the bottom and sides of a passing vessel and to close astern of the latter, guides for the said shutters, flexible tubes filled with a greasy substance and mounted in said guides and adapted to be applied tightly against the said shutters, and metal sleeves provided with slots and adapted to receive the said flexible tubes, substantially as and for the purpose set forth.

5. In a lock construction the combination with the upper and lower troughs and the lock chamber of lock gates separating said lock chambers from the said upper and lower trough and formed by shutters adapted to be applied against the bottom and sides of a passing vessel and to close astern of the latter, guides for the said shutters, flexible tubes filled with a greasy material and mounted in the said guides and adapted to be applied tightly against the said shutters and means provided with slots and adapted to receive the said flexible tubes, substantially as and for the purpose set forth.

1,107,934. PULLEY AND LOCK FOR CABLES. ARTHUR J. HAGAN, New York, N. Y. Filed July 24, 1913. Serial No. 780,920. (Cl. 57—34.)



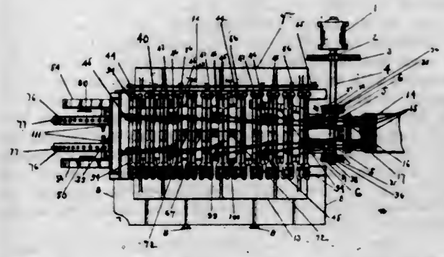
1. In a device of the character described, a housing, a pulley mounted in said housing near one end thereof, a link pivotally connected to the opposite end of said housing, said link extending from its pivotal connection to a point near said pulley, a pivotally mounted pawl adapted to engage a cable mounted on said pulley, spring means for pressing said pawl toward said pulley, and means extending from the end of said link which is arranged near said pulley for engaging said pawl, and thereby raising the same when said link is moved in one direction.

2. In a device of the character described, a housing, a pulley mounted in said housing designed to receive a cable, a pawl structure pivotally mounted on said housing and designed to move pivotally against said cable, a pivotally mounted supporting link arranged on said housing and means connected with said supporting link engaging said pawl for moving said pawl out of engagement with said cable when the cable is brought under tension.

3. In a device of the character described, a housing, a pulley mounted in said housing designed to receive a cable, a pivotally mounted pawl arranged on said housing adapted to engage said cable and lock the same against said pulley, said housing being formed with a slot adjacent said pawl, a pivotally mounted link connected with said housing for supporting the same, and a pin extending from said link through said slot and engaging said pawl for moving the same into and out of engagement with said cable.

4. In a device of the character described, a housing formed with a pair of slots therein, a pulley pivotally mounted in said housing designed to receive a cable, a pawl pivotally mounted adjacent said slot and arranged to engage and lock said cable against said pulley, means acting on said pawl for causing the same to engage said cable, a link pivotally mounted on one end of said housing, said link overlapping the slots in said housing, a pin passing through said link, said slots and said pawl, and means acting on said link for causing the same to support said housing and to move said pawl out of engagement with said cable.

1,107,935. GLASSWARE RE-FORMING MECHANISM. HENRY F. HAGEMEYER, Rockford, Ill., assignor to The Mechanical Process Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 14, 1912. Serial No. 725,624. (Cl. 49—7.)



1. Forming means for an article of ware including a long narrow burner capable of producing a thin sheet of flame, a holder for the ware and mechanism effecting relative movement of the ware longitudinally of the burner in a plane approximately at right angles to the plane of the flame.

2. Forming means for an article of ware including a long narrow burner capable of producing a thin sheet of flame, a holder for the ware, means for rotating the ware, and driving mechanism effecting relative movement of the ware longitudinally of the burner in a plane approximately at right angles to the plane of the flame.

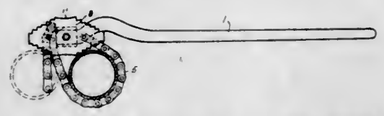
3. Forming means for an article of ware including a long narrow burner capable of producing a thin sheet of flame, an endless conveyer for carrying a succession of articles of ware adjacent said burner, and driving mechanism for the conveyer effecting movement of the ware longitudinally of the burner and approximately at right angles to the plane of the flame.

4. Forming means for an article of ware including a long narrow burner capable of producing a thin sheet of flame, ware holder means coacting with the ware at spaced points between which points the burner may act, and driving mechanism effecting a drawing away of the portions of the ware from each other on opposite sides of the burner and effecting relative movement of the ware longitudinally of the burner and approximately at right angles to the plane of the flame.

5. Forming means for an article of ware including a long narrow burner capable of producing a thin sheet of flame to act upon the ware, a ware holder engaging the ware on opposite sides of the flame, said burner effecting a weakened intermediate portion in said ware, driving mechanism to effect an extension of the ware at the heated weakened portion and effecting relative movement of the ware longitudinally of the burner and approximately at right angles to the plane of the flame, and means for positioning the ware as to the burner for continued action of the flame on the ware after the extension of the ware.

[Claims 6 to 29 not printed in the Gazette.]

1,107,936. WRENCH. SAMUEL N. HALL, Houston, Tex. Filed Aug. 23, 1913. Serial No. 786,282. (Cl. 81—70.)



1. A pipe wrench comprising a handle provided intermediate of its ends with a curved portion forming a recess, a pair of elongated interchangeable jaw plates clamped to the opposite sides of the handle, and each provided in its opposite longitudinal sides with two sets of oppositely acting teeth, arranged so that one set opera-

tively engages the pipe when the handle is turned in one direction, and the other set operatively engages the pipe when the movement of the handle is reversed, together with a grip chain anchored to the end of the handle adjacent to the jaw plate.

2. A pipe wrench comprising a handle provided intermediate of its ends with a curved portion forming a recess, a pair of elongated interchangeable jaw plates clamped to opposite sides of the handle, engaging means carried by each jaw plate and extending lengthwise thereof and engaging with said head and locking the jaw plates rigidly against turning relative to the handle, each jaw plate being provided on its opposite longitudinal sides with two sets of oppositely acting teeth arranged so that one set operatively engages the pipe when the handle is turned in one direction and the other set operatively engages the pipe when the movement of the handle is reversed, together with a grip chain anchored to the end of the handle adjacent to the jaw plates.

3. A pipe wrench comprising a handle provided intermediate of its ends with a curved portion forming a recess, a pair of elongated interchangeable jaw plates clamped to opposite sides of the head, engaging means carried by each jaw plate and extending lengthwise thereof and engaging with said head and locking the jaw plates rigidly against turning relatively to the handle, each jaw plate being provided on its opposite longitudinal sides with two sets of oppositely acting teeth arranged so that one set operatively engages the pipe when the handle is turned in one direction and the other set operatively engages the pipe when the movement of the handle is reversed, a grip chain, one end of which is anchored to the handle between the head and the free end of the handle and means carried by the head for detachably engaging the grip chain.

4. In a pipe wrench, a handle having at one end means for detachably engaging a grip chain, a pair of elongated interchangeable jaw plates clamped to the opposite sides of the handle, and each provided on its opposite longitudinal sides with two sets of oppositely acting teeth, arranged so that one set operatively engages the pipe when the handle is turned in one direction, and the other set operatively engages the pipe when the movement of the handle is reversed, together with a grip chain anchored to the end of the handle adjacent to the jaw plates, a section of said handle adjacent to the jaw plates being raised out of alinement with said plates to permit said chain to pass between the pipe and said raised section.

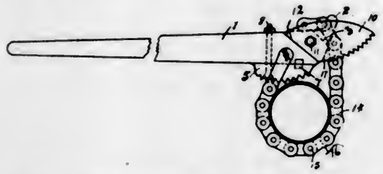
5. A device of the character described including a handle, means carried by one end for detachably engaging a grip chain, a curved section adjacent to said engaging means affording on its working side, a recess, a pair of double ended, tapering, reversible interchangeable jaw plates, handle engaging means on one face of each jaw-plate, said jaw-plates being so secured to the handle as to bring one edge of their tapering inner ends alongside of the said recess, and a chain substantially in the longitudinal median plane of the handle, said chain being anchored at one end to the handle, intermediate of said chain engaging means, and recess, and adjustably attached at its other end to said last mentioned means, and, in use, playing partly within the space afforded by the recess.

[Claims 6 to 8 not printed in the Gazette.]

1,107,937. PIPE-WRENCH. SAMUEL N. HALL, Houston, Tex. Filed Sept. 15, 1913. Serial No. 789,885. (Cl. 81—70.)

1. A wrench having a pair of jaws forwardly projecting from the end of the handle, rigidly connected to the sides thereof and having their operating faces toothed, a jaw corresponding substantially in width and alined with the space between said jaws secured to the handle at the rear thereof, a link embracing the rearmost jaw, a chain connected thereto, and means at the end of the handle to engage the chain when coöperating with either of the jaw members, as set forth.

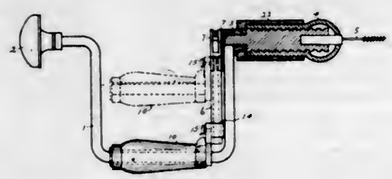
2. A wrench having a pair of jaws forwardly projecting from the end of the handle, rigidly connected to the sides thereof and having their operating faces toothed, a jaw coresponding substantially in width and alined with the space between said jaws and secured to the handle at the rear of the jaws, a chain attached to said handle adjacent said jaw, and means at the end of the handle to engage the chain when coöperating with either of the jaw members, as set forth.



3. A pipe wrench comprising a handle having a solid gripping member adjacent its operating end, a pair of spaced jaws having their operating faces toothed forming a gripping surface of greater width than that of said gripping member and adapted to be secured to the operating end of said handle, a link embracing said gripping member, a chain connected thereto, and means at the end of the handle for engaging the chain when coöperating with either of the jaw members, as set forth.

4. A pipe wrench comprising a handle having a solid removable gripping member adjacent its operating end, a pair of spaced jaws forming a gripping surface of greater width than that of said gripping member and adapted to be secured to the operating end of said handle, a link spanning said gripping member, a chain secured to said link, and means at the end of the handle for securing the chain between said spaced jaws when coöperating with either of said members, as set forth.

1,107,938. BIT-BRACE. SAMUEL N. HALL, Houston, Tex. Filed Nov. 17, 1913. Serial No. 801,559. (Cl. 145—66.)



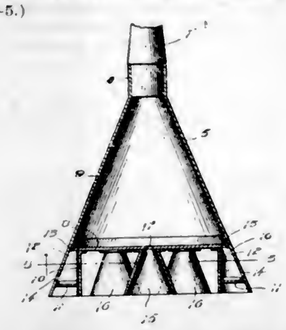
1. The combination with a bit stock having a chuck whose inner end projects beyond its bearing in the stock, of a member secured to the projecting end of said chuck, and radially adjustable means carried by said member for rotating said chuck independently of said stock.

2. The combination, with a bit stock having a chuck, of a member, having an independent operative connection with said chuck, and means carried by and adapted for reversal upon said member, said member being so formed that it affords different degrees of leverage by such reversal, for rotating said chuck independently of said stock.

3. The combination, with a bit stock having a chuck, the inner end of which projects beyond its bearing in the stock, of a member secured to the projecting end of said chuck, and radially adjustable means carried by said member for rotating said chuck independently of said stock and reversible thereon to further vary the leverage.

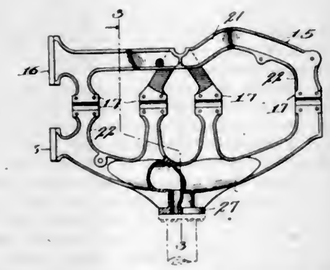
4. The combination with a bit stock having a chuck, of an arm having an operative connection with said chuck, a sleeve adjustably carried by said arm, said sleeve having a longitudinal groove within which the stock is adapted to seat, and a handle comprising hinged sections adapted to encompass said sleeve and stock for rotating said chuck.

1,107,939. CLOTHES-POUNDER. WYATT S. HALLIDAY, Cairo, Ill. Filed Jan. 10, 1913. Serial No. 741,278. (Cl. 68—5.)



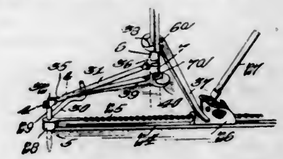
A clothes pounder comprising a conical-shaped body having a partition near its larger end, a plurality of cone-shaped cups fixed to the outer face of the partition and having their free ends in the plane with the larger end of the body, a plurality of substantially half-cone-shaped cups fixed to the inner surface of the body and extending outwardly from the partition to terminate flush with the larger end of said body, the said last-named cups being arranged concentrically with relation to the first-named cups, the said partition being provided with perforations establishing communication between the body and said cups, the said body being provided with perforations opening into the half-cone-shaped cups, and closure members arranged within the half-cone-shaped cups.

1,107,940. FRAME FOR TILE-MAKING MACHINES. FLOYD S. HARTWELL and LEONARD C. SEARS, Onawa, Iowa, assignors to Monarch Manufacturing Corporation, Onawa, Iowa, a Corporation of Iowa. Filed May 20, 1912. Serial No. 698,577. (Cl. 64—10.)



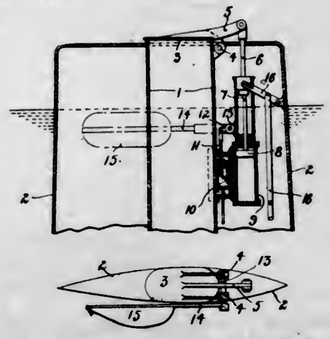
As a machine element, a skeleton generally rectangular supporting frame integral throughout its extent and having all the parts thereof disposed in the same vertical plane, the frame including upper and lower longitudinal bars and a plurality of vertical bars connecting said upper and lower bars, the vertical bars having as integral parts thereof alining open bearing members for a horizontal shaft, which bearing members face toward one side of the machine, the frame also having at its forward end as integral parts thereof forwardly facing open bearing members for a vertical shaft, the upper bar being formed to provide a frame for a gear wheel and having approximately centrally located open bearing members for the shaft of said gear wheel and the lower bar having on its underside an approximately centrally located horizontal attachment flange, the spaces between certain of said vertical bars serving to accommodate certain gear elements which are mounted on said horizontal shaft, including a gear element which drives said gear wheel.

1,107,941. BRACE FOR DRILLING MECHANISMS. JOSEPH MILLER HATFIELD, Robinson, Ill. Filed Feb. 24, 1913. Serial No. 750,227. (Cl. 255—35.)



A brace for drilling mechanism comprising a tubular arm having a head secured to one end thereof, a second head adjustably secured to the opposite end of the arm, said second head being disposed at an angle to said arm and having a reduced portion fitting into said arm, and a pin extending through the arm and through the reduced portion, said second head having a recess cut in the under edge thereof for receiving a pin.

1,107,942. SUBMARINE OR SUBMERSIBLE BOAT. MARLEY FOTHERINGHAM HAY and FERDINAND GUHRAUER, Dumbarton, Scotland. Filed Feb. 20, 1914. Serial No. 819,986. (Cl. 114—16.)



1. In a submarine or submersible boat, means for maintaining the boat at a given stage of submergence consisting of a plane structure so placed and at such a height above the boat's main structure that it acts automatically as a hydro-plane when the boat is submerged to a depth to bring it into contact with the water, a trunk, and means for automatically controlling the mouth of the trunk in accordance with the local rise and fall of the surface level.

2. In a submarine or submersible boat, means for maintaining the boat at a given stage of submergence consisting of a plane, a framing to which the plane is pivoted, this framing being pivoted at its rear end on the boat's structure, a motive fluid cylinder and piston, links connecting the piston rod thereof to the frame, sliders on the side members of the frame, fingers on the sliders holding the plane in position, levers on a pivot shaft, links connecting the sliders with these levers, worm gearing operating the levers to retract the fingers and so release the plane, a trunk, and means for automatically controlling the mouth of the trunk.

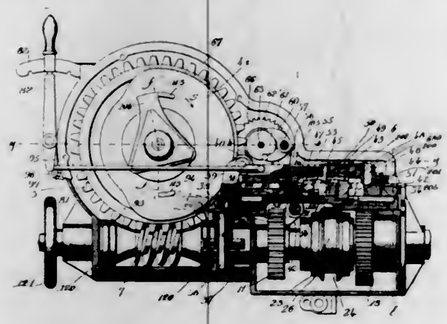
3. In a submarine or submersible boat, means for maintaining the boat at a given stage of submergence consisting of a plane, a framing to which the plane is pivoted, this framing being pivoted at its rear end on the boat's structure, a motive fluid cylinder and piston, links connecting the piston rod thereof to the frame, sliders on the side members of the frame, fingers on the sliders holding the plane in position, levers on a pivot shaft, links connecting the sliders with these levers, worm gearing operating the levers to retract the fingers and so release the plane, a trunk, means for automatically controlling the mouth of the trunk, and means for maintaining trim and constant weight irrespective of the consumption of oil fuel.

4. In a submarine or submersible boat, means for maintaining the boat at a given stage of submergence, a trunk, means for automatically controlling the mouth of the trunk, means for maintaining trim and constant weight irrespective of the consumption of oil fuel, and means for controlling the speed of the engine in accordance with the control of the mouth of the trunk.

5. In a submarine or submersible boat, means for maintaining the boat at a given stage of submergence consisting of a plane, a framing to which the plane is pivoted, this framing being pivoted at its rear end on the boat's structure, a motive fluid cylinder and piston, links connecting the piston rod thereof to the frame, sliders on the side members of the frame, fingers on the sliders holding the plane in position, levers on a pivot shaft, links connecting the sliders with these levers, worm gearing operating the levers to retract the fingers and so release the plane, a trunk, means for automatically controlling the mouth of the trunk, means for maintaining trim and constant weight irrespective of the consumption of oil fuel, and means for controlling the speed of the engine in accordance with the control of the mouth of the trunk.

[Claims 6 to 9 not printed in the Gazette.]

1,107,943. REVERSING MECHANISM. WILLIAM A. E. HENRICI, Boston, Mass., assignor, by mesne assignments, to Liberty Trust Company, Boston, Mass., a Corporation of Massachusetts, trustee. Filed Jan. 28, 1907. Serial No. 354,356. (Cl. 74—50.)



1. In a reversing mechanism, a rotary driving member, a rotary driven member, said driving and driven members rotating about different axes, reversing mechanism between said members, said reversing mechanism including non-axially-alined friction clutches, a controller for the reversing mechanism and automatic means for operating the controller.

2. In a reversing mechanism, a rotary driving member, a rotary driven member, said driving and driven members rotating about different axes, reversing mechanism between said members, said reversing mechanism including non-axially alined friction clutches, a controller for the reversing mechanism, and an adjustable time mechanism governing the time of operation of the controller.

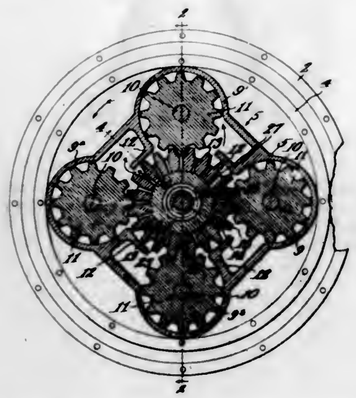
3. In a device of the class described, a driving member, a driven member actuated thereby, and reversing means between said members to reverse the direction of movement of the driven member, said reversing means being actuated partly by the driving member and partly by the driven member.

4. In a device of the class described, a driving member, a driven member actuated thereby, reversing means between said members to reverse the direction of movement of the driven member, said reversing means being actuated partly by the driving member and partly by the driven member, and a controller controlling the time of operation of said reversing mechanism.

5. In a device of the class described, a driving member, a driven member actuated thereby, reversing means between said members to reverse the direction of movement of the driven member, said reversing means being actuated partly by the driving member and partly by the driven member, and a time-governed controller controlling the time of operation of said reversing mechanism.

[Claims 6 to 39 not printed in the Gazette.]

1,107,944. LIQUID-CLUTCH. RUDOLPH F. HERFOLSHEIMER, Chicago, Ill. Filed Feb. 4, 1914. Serial No. 816,562. (Cl. 192—18.)



1. A liquid clutch, including a casing constituting the driving member, a driven member, a gear mounted in the casing and fast to the driven member, a plurality of freely rotatable gears carried by the casing, said gears meshing with the first gear, and means carried by the first gear for regulating the circulation of the liquid within the casing and about the gears.

2. A liquid clutch, including a casing constituting the driving member, a driven member, a gear mounted in the casing and fast to the driven member, a plurality of freely rotatable gears carried by the casing, said gears meshing with the first gear, and manually operated means carried by the first gear for regulating the circulation of the liquid within the casing and about the gears.

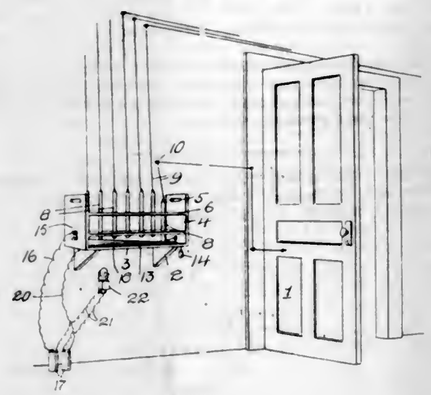
3. A liquid clutch, including a casing constituting the driving member, a driven member, a gear mounted in the casing and fast to the driven member, a plurality of freely rotatable gears carried by the casing, said gears meshing with the first gear, said first gear being hollow and having a plurality of ports therethrough, whereby the liquid within the casing and about the plurality of gears has free access or circulation through the first gear, and means mounted in the hollow portion of the first gear for controlling the ports thereof and the circulation of the liquid and whereby the driven member is operated by the driving member.

4. A liquid clutch, including a casing constituting the driving member, a driven member, a gear mounted in the casing and fast to the driven member, a plurality of freely rotatable gears carried by the casing, said gears meshing with the first gear, said first gear being hollow and having a plurality of ports therethrough, whereby the liquid within the casing and about the plurality of gears has free access of circulation through the first circulation through the first gear, and a plunger valve mounted for reciprocation within the hollow portion of the first gear for controlling the ports and the circulation of the liquid.

5. A liquid clutch, including a casing constituting the driving member, a driven member, a gear mounted in the casing and fast to the driven member, a plurality of freely rotatable gears carried by the casing, said gears meshing with the first gear, said first gear being hollow and having a plurality of ports therethrough, whereby the liquid within the casing and about the plurality of gears has free access of circulation through the first gear, a plurality of longitudinally disposed liquid receptacles carried by the casing one to each of the plurality of gears, said receptacles being disposed to direct the liquid to the periphery and against the outer wall of the casing as the driving member is rotated, and manually operable means slidably mounted within the hollow portion of the first gear for controlling the ports and the circulation of the liquid throughout the casing.

[Claim 6 not printed in the Gazette.]

1,107,945. FIRE AND BURGLAR ALARM. HERMAN HESSE, Easton, Pa. Filed Apr. 18, 1914. Serial No. 832,973. (Cl. 177—314.)

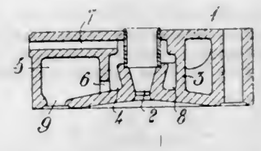


1. In an alarm, the combination with doors, an audible signal, and a suitable source of electrical energy in circuit with said audible signal, of a carrier, weights movably supported in said carrier and connected to said doors and adapted to be maintained in an elevated position by said doors being closed, a contact plate carried by said carrier and in circuit with said source of electrical energy, and a taut wire supported by said carrier and in circuit with said source of electrical energy and adapted to be shifted by said weights into engagement with said contact plate to complete an electric circuit through said source of electrical energy and said audible signal.

2. In an alarm, the combination with doors, a suitable source of electrical energy, and an electric bell in circuit with said source of electrical energy, of a carrier in proximity to said doors, weights movably supported by said carrier and connected to said doors and adapted to be maintained in an elevated position by said doors being closed, a contact plate supported by said carrier and in circuit with said source of electrical energy and said bell, and a taut wire in connection with said carrier beneath said weights and in circuit with said source of electrical energy for maintaining a normally open circuit adapted to be closed by one of said weights shifting said wire into engagement with said contact plate.

3. In an alarm, the combination with doors, a suitable source of electrical energy, and an electric bell in circuit with said source of electrical energy, of a carrier in proximity to said doors, weights movably supported by said carrier and connected to said doors and adapted to be maintained in an elevated position by said doors being closed, a contact plate supported by said carrier and in circuit with said source of electrical energy and said bell, a taut wire in connection with said carrier beneath said weights and in circuit with said source of electrical energy for maintaining a normally open circuit adapted to be closed by one of said weights shifting said wire into engagement with said contact plate, and means at one end of said carrier for controlling the electrical circuit through said source of electrical energy and said bell.

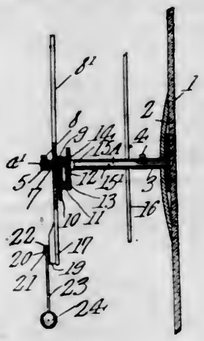
1,107,946. CYLINDER-HEAD FOR INTERNAL-COMBUSTION ENGINES. KNUT JONAS ELIAS HESSELMAN, Stockholm, Sweden. Filed Feb. 24, 1913. Serial No. 750,351. (Cl. 123—173.)



1. A cylinder head for internal combustion engines having an aperture extending through the head and open at the inner side of the head and adapted to take up a fuel nozzle and also having an intermediate wall surrounding and spaced from the wall of said aperture and dividing the interior of the head into inner and outer water-receiving chambers, means for letting water into and out of the outer chamber, means for letting water into the inner chamber at one end thereof, and means for letting water out of the said chamber at the other end thereof.

2. A cylinder head for internal combustion engines having an aperture extending through the head and open at the inner side of the head and adapted to take up a fuel-nozzle and also having an intermediate wall surrounding and spaced from the wall of said aperture and dividing the interior of the head into inner and outer water-receiving chambers, spaced radial walls, of less length than the inner chamber, arranged in said chamber and extending between the wall of the aperture and said spaced wall, means for letting water into and out of the outer chamber, means for letting water into the inner chamber at one end thereof, and means for letting water out of the said chamber at the other end thereof.

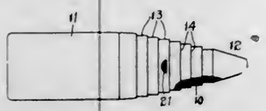
1,107,947. CLOCK. HARRISON W. HICKS, Alexandria, Ind., assignor to The Huntington Specialty Company, Huntington, Ind., a Corporation of Indiana. Filed June 16, 1911, Serial No. 633,631. Renewed Nov. 28, 1913. Serial No. 803,600. (Cl. 58—45.)



The herein described mysterious clock, having a dial, a concaved disk carried by the dial, a sleeve disposed concentrically of the disk, a rod having a plurality of varying diametered portions detachably connected and supported by said sleeve, an hour hand, an hour hand sleeve arbor carried upon one portion of said rod and carrying the hour hand, a bracket depending from the intermediate portion of the rod, a minute hand, a sleeve carrying the minute hand rotatably mounted upon the end portion of the rod, a gear carried by said latter sleeve, a shaft journaled in the bracket, two gears one upon each end of said shaft, and upon each side of the bracket, one of said gears being in mesh with the gear of the minute hand sleeve, and a gear upon the hour hand sleeve and in mesh at all times with the other gear of the shaft, and a watch movement

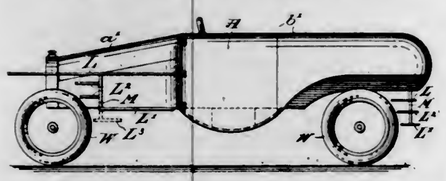
having a weight attached to its hour hand arbor, disposed in the non-pointing end of the minute hand to cause the rotation of the minute hand and the actuation of the hour hand.

1,107,948. MUSHROOM-BULLET. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn, a Corporation of Connecticut. Filed Feb. 24, 1914. Serial No. 820,624. (Cl. 102—28.)



A full jacketed mushroom bullet comprising a core, a body cover and a tip cover, the tapering portion of the core and the tip cover having formed therein a plurality of annular depressions which divide the tapering portion of the bullet into cylindrical sections of progressive diameter, each terminating in a shoulder, the tip cover being stretched and weakened so that upon impact the sections of the tip cover are caused to telescope and the forward end of the bullet to mushroom.

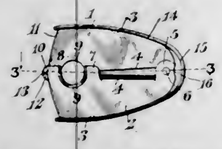
1,107,949. MUD-GUARD FOR MOTOR-VEHICLES. WILLIAM HEAP HOLLAND, Alderley Edge, England. Filed Dec. 19, 1913. Serial No. 807,670. (Cl. 21—23.)



1. A mudguard for a motor car body comprising a plurality of flat plates which, when combined with the car, will be about horizontally disposed one above another and will have approximately horizontal spaces between them for the passage of wind, substantially as hereinbefore described.

2. The combination with a motor car, of a mud-guard composed of a plurality of superposed flat plates about horizontally disposed and having between them approximately horizontal spaces for the passage of wind, substantially as hereinbefore described.

1,107,950. WATCH-CHARM. JOSEPH JOHN HOLSEN, Manitowoc, Wis. Filed Aug. 22, 1913. Serial No. 786,144. (Cl. 7—1.)

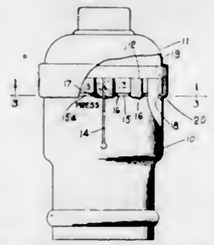


1. A device for the purpose described, comprising two flat plates pivoted together at one end and at the other end having lips in overlapping relation and there formed with stop members, one of which is in embracing relation to the other plate to retain said plates in contact at said end, the adjacent margins of the plates being formed with coacting shearing edges.

2. A device for the purpose described, comprising two flat plates pivoted together at one end and at the other end formed with stop members limiting the movement of the plates one away from the other about their pivot connection, and one stop member embracing the other plate to retain the plates in contact at said end, the adjacent margins of the plates being formed with coacting shearing edges, and a U-shaped spring embracing the outer margins of the plates and tending constantly to hold the plates with the stop members in engagement, said spring having its bowed or yoke end spaced from the pivoted ends of the plates.

3. A device for the purpose described, comprising two flat plates pivoted together at one end and at the other end having lips each in overlapping relation to the other plate, said plates being also formed with stop members limiting the movements of the plates one away from the other about their pivot connection to always retain the lips in overlapping relation to the respective other plates, and one stop member embracing the other plate to retain the plates in contact at said end, the adjacent margins of the plates being formed with coacting shearing edges, and said plates being joined by a spring member tending constantly to hold the plates with the stop members in engagement, said spring member being of U-shape with the legs fast to the outer margins of the plates and having the yoke portion extending about the pivoted ends of the plates in spaced relation thereto.

1,107,951. INCANDESCENT-LAMP SOCKET. HARVEY HUBBELL, Bridgeport, Conn. Filed May 31, 1912. Serial No. 700,627. (Cl. 173—362.)



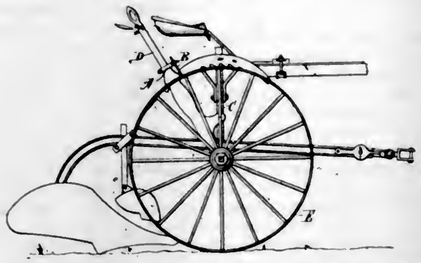
1. An incandescent lamp socket comprising a shell provided with alternate depressions and ribs, one of said depressions having a vertical slot through it and said ribs having transverse slots with stops at one end, and the transverse slot on one side of the vertical slot having a locking stop at the opposite end, and a cap having inwardly extending projections adapted to pass into the depressions and to be turned into the transverse slots.

2. An incandescent lamp socket comprising a shell having a series of equal alternate longitudinal depressions and ribs, one of said depressions having a vertical slot through it and a cap having projections corresponding with the depressions on the shell, and adapted to enter therein, the ribs on the shell being provided with transverse slots adapted to receive the projections upon rotation of the cap, each of said slots having a stop at one end to prevent rotation in that direction and one of said slots having a locking stop at the other end thereof to prevent rotation in the opposite direction, said locking stop being adapted to release the projection when the shell is pressed inward contiguous to the vertical slot.

3. An incandescent lamp socket comprising a shell provided with alternate depressions and ribs, one of said depressions having a vertical slot through it and said ribs having transverse slots with stops at their left ends, and the transverse slot at the left of the vertical slot having a locking stop at its right end, and a cap having inwardly extending projections adapted to pass into the depressions and to be turned into the transverse slots.

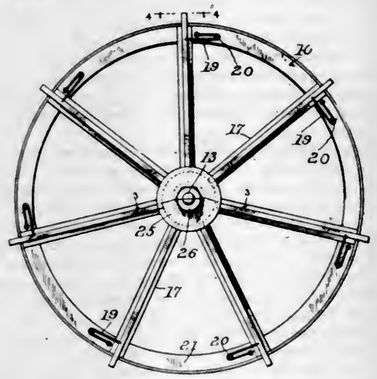
4. An incandescent lamp socket comprising a shell provided with alternate depressions and ribs, said depressions terminating in shoulders and said ribs being provided with transverse slots having stops at their left ends, and one of said slots having a locking stop at its right end, and a cap having inwardly extending projections which enter the depressions and engage the shoulders and are then turned into the transverse slots.

1,107,952. SCRAPER ATTACHMENT FOR WHEEL-PLOWS. GEORGE H. HUFF, Syracuse, N. Y. Filed Nov. 21, 1911. Serial No. 661,498. (Cl. 21—23.)



In combination with a wheel, a member projecting above and alongside of said wheel, an angle-iron strap having one face secured to said member, a diagonal strap, an anguiar offset formed upon said diagonal strap and secured to the free end of the secured part of said angle-iron strap, a second angular offset formed upon said diagonal strap arranged parallel with the opposite face of said first-named strap, an L-shaped member consisting of an arm twisted angularly relatively to another arm, one arm of said member, being disposed between and at right angles to the second-named face of said angle-iron strap and said adjacent offset, a bolt passing through said offset, arm and said strap, and a clamping nut on said bolt.

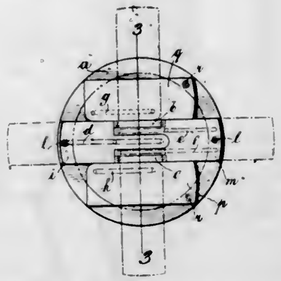
1,107,953. NON-SKIDDING ATTACHMENT FOR WHEELS. BOLESLAW JABLONSKI, Natrona, Pa., assignor of one-half to Wladyslaw Rostowski, Natrona, Pa. Filed Mar. 17, 1914. Serial No. 825,297. (Cl. 21—209.)



1. In combination with a traction wheel having longitudinally grooved spokes, of calk bars slidably mounted in the grooves of said spokes and having inner tapered ends lying adjacent to the wheel hub, normally retracted springs carried by the wheel and having their free ends arranged to engage notches in said bars, a tapered collar slidably mounted upon the wheel hub and adapted to engage the tapered ends of said bars to project the outer ends of the bars, said bars being laterally guided throughout their length, and having a positive endwise movement.

2. A device of the class described in combination with a wheel having its spokes provided with longitudinal dovetail grooves, calk bars having dove-tail tongues slidably positioned within said grooves and having oblique inner ends, springs carried by the wheel rim and engaging notches in said bars and adapted for normally retracting the latter, a wedge collar axially slidable upon the outer end of the hub of said wheel engaging the oblique inner ends of said bars and seated in contact with the bases of the wheel spokes with the bars in the projected positions, and locking means for said collar comprising a washer and nut on the outer threaded end of the axle.

1,107,954. EXTENSIBLE TABLE. NICHOLAS JACOVATOS, New York, N. Y. Filed Nov. 21, 1913. Serial No. 802,213. (Cl. 45—75.)

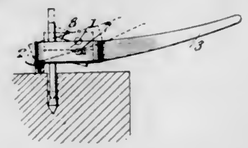


1. An extensible table comprising a top having a multiple of parallel grooves in its bottom portion, two wooden blocks secured thereto in parallel lines to said grooves, a bottom plate secured to said wooden blocks, and a multiple of separate attachments between said plates having tongues with guide pins thereon and sliding in the grooves, said attachments being adapted to be arranged at right angles to each other.

2. An extensible table comprising a circular top having a multiple of parallel grooves in its bottom portion, two wooden blocks secured thereto in parallel lines to the grooves, a somewhat smaller circular bottom plate secured to the wooden blocks, two oppositely arranged attachments having tongues with guide pins sliding in the inner grooves, and two oppositely arranged attachments at right angles to the first with guide pins and one rounded corner each sliding in the outer grooves and adapted to be drawn out side by side with the first attachments or at right angles thereto.

3. An extensible table comprising a circular top having five parallel grooves in its bottom portion, two blocks secured to the center bottom portion of the top in parallel lines to said grooves, an attachment with central tongue and guide pins sliding in the central one of said grooves, an attachment with two tongues and guide pins sliding in the two middle grooves along the blocks and the central tongue of the first attachment, and two attachments with one pin each sliding each in an outer groove and having a rounded corner near the pin, so arranged that the four drawn out attachments may radially extend from the top, and a bottom plate smaller than the top secured to the blocks.

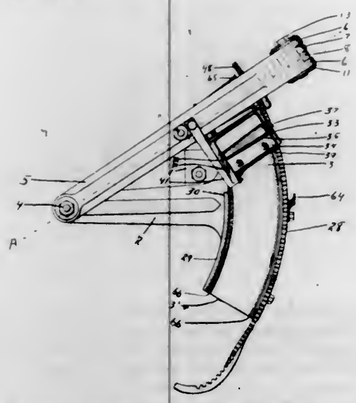
1,107,955. ROD-EXTRACTOR. FRANK S. JAMES, Grass Valley, Cal. Filed Sept. 19, 1913. Serial No. 790,807. (Cl. 57—98.)



A rod extractor comprising a frame having a fulcrum block at one end thereof and a handle at the opposite end, a gripping block within said frame and capable of swinging movement therein and formed with an elongated slot and an irregular opening communicating with the slot at one end, a jaw within the slot in said gripping block and

capable of swinging movement therein and having one end toothed and disposed adjacent to said irregular opening, and a pivot pin passed through said fulcrum block and jaw and holding the parts pivotally connected.

1,107,956. MACHINE FOR THE MANUFACTURE OF PAPER RECEPTACLES. DAVID J. JENNINGS, Cleveland, Ohio. Filed Jan. 24, 1914. Serial No. 814,180. (Cl. 93—79.)



1. A machine of the type set forth comprising a base, an arm pivotally mounted to said base, a bearing mounted to said arm, a mandrel revolubly mounted upon said bearing, a die plate upon which said mandrel travels, means located within said mandrel for grasping and holding one end of a sheet of paper, said mandrel adapted to be advanced and revolved over said die plate so as to form a tubular casing of a receptacle.

2. A machine of the type set forth comprising a base, an arm pivotally mounted to said base, a bearing mounted to said arm, a mandrel revolubly mounted upon said bearing, a die plate upon which said mandrel travels, means located within said mandrel for grasping and holding one end of a sheet of paper, said mandrel adapted to be advanced and revolved over said die plate to form a tubular member of the paper, means located and operating in advance of said mandrel for pasting said paper, all substantially as and for the purpose set forth.

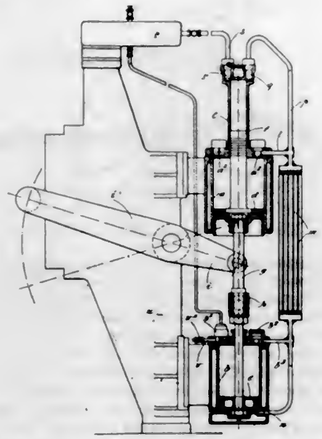
3. A machine of the type set forth comprising a base, an arm mounted to said base, a bearing mounted to said arm, a mandrel revolubly mounted to said bearing, means located within said mandrel for grasping and securing a sheet of paper thereto, a die upon which said mandrel rolls said paper, said mandrel adapted to be advanced and revolved over said die and means for contracting said mandrel for releasing said rolled paper from said mandrel, all substantially as and for the purpose set forth.

4. A machine of the type set forth comprising a base, an arm pivotally mounted to said base, a mandrel revolubly mounted on said arm, means located within said mandrel for gripping and securing one end of a sheet of paper thereto, a die plate upon which is rolled said mandrel and said paper, means located in said die plate and said mandrel for embossing beads on said paper, means for pasting said paper so as to hold the paper in the shape into which it is formed in combination with means for automatically contracting said mandrel so as to release said paper therefrom.

5. A machine of the type set forth comprising a base, an arm pivotally attached to said base, a mandrel rotatably mounted on a bearing, said bearing pivotally attached to a concentric pivot in said arm, sections of said mandrel being dove-tailed together and having lateral movement with each other, all substantially as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,107,957. APPARATUS FOR COMPRESSING AIR AND OTHER ELASTIC FLUIDS. EDWIN W. JONES, Ipswich, England. Filed Feb. 3, 1913. Serial No. 745,978. (Cl. 230—32.)



1. In an apparatus of the class described, the combination of a single-acting low-pressure cylinder and a single-acting high-pressure cylinder with an intermediate compression cylinder closed at both ends, one end being in constant communication with the outlet valve of the low pressure cylinder and with the inlet valve of the high pressure cylinder through an intercooler so that the intercooler forms part of the compression space at the intermediate compression stage, the end of the intermediate cylinder opposite to the constantly open end of the same having an inlet controlled by a suction valve and an outlet controlled by a discharge valve toward the conduit connecting the constantly open end of the intermediate cylinder with the low pressure cylinder, so that while one end of the intermediate cylinder receives air from the low-pressure cylinder, the opposite end may act as an auxiliary low-pressure cylinder, substantially as described.

2. In an apparatus of the class described, an intermediate compression cylinder closed at both ends, one end being in constant communication with the outlet valve of the low pressure cylinder and with the inlet valve of the high pressure cylinder through an intercooler so that the intercooler forms part of the compression space at the intermediate compression stage, the end of the intermediate cylinder opposite to the constantly open end of the same having an inlet controlled by a suction valve and an outlet controlled by a discharge valve toward the conduit connecting the constantly open end of the intermediate cylinder with the low pressure cylinder, so that while one end of the intermediate cylinder receives air from the low-pressure cylinder the opposite end may act as an auxiliary low-pressure cylinder, and a device for temporarily rendering the auxiliary low-pressure cylinder ineffective, substantially as described.

3. In an apparatus of the class described, the combination of a single-acting low-pressure cylinder and a single-acting high-pressure cylinder with an intermediate compression cylinder closed at both ends, one end being in constant communication with the outlet valve of the low pressure cylinder and with the inlet valve of the high pressure cylinder through an intercooler so that the intercooler forms part of the compression space at the intermediate compression stage, the end of the intermediate cylinder opposite to the constantly open end of the same having a suction valve and a discharge valve communicating with the conduit connecting the constantly open end of the intermediate cylinder with the low pressure cylinder, so that while one end of the intermediate cylinder receives air from the low pressure cylinder the opposite end may act as an auxiliary low pressure cylinder, a receiver for the air discharged from the high pressure cylinder, and a device adapted to control the position of one of the valves of the intermediate cylinder according to the pressure in the said receiver substantially as described.

4. In an apparatus of the class described, the combination of a single-acting low-pressure cylinder and a single-acting high-pressure cylinder with a compression cylinder in constant communication at one end through an intercooler with the outlet valve of the immediately preceding compression cylinder and with the inlet valve of the immediately succeeding compression cylinder, so that the said intercooler forms part of the compression space whose volume, including that of the said intercooler, is less than that of the immediately preceeding compression cylinder, substantially as described.

5. In an apparatus of the class described, an intermediate compression cylinder in constant communication with the outlet valve of the low-pressure cylinder and with the inlet valve of the high pressure cylinder through an intercooler, so that the intercooler alternately serves to conduct air from the low-pressure to the intermediate cylinder, and from the intermediate cylinder to the high-pressure cylinder, this intercooler forming part of the compression space of the intermediate compression stage, substantially as described.

[Claim 6 not printed in the Gazette.]

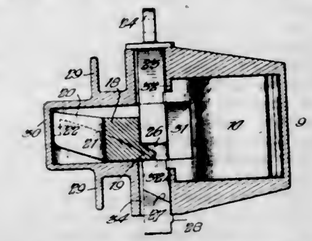
1,107,958. POCKET-BOOK PROTECTOR. THEODORE O. JORGENSEN, East Chicago, Ind. Filed July 31, 1913. Serial No. 782,336. (Cl. 150—47.)

1. A pocket book protector, consisting of a plate adapted to be secured to a pocket book, said plate being slotted adjacent its upper terminal, a struck-out portion forming a spring tongue disposed adjacent said slot, a lever pivotally mounted upon said plate and engaging said spring tongue, said lever bent back upon itself adjacent its outer terminal and forming a locking tongue, and said plate having a transverse opening centrally of its ends adapted to coöperate with said locking tongue.

2. A pocket book protector, consisting of a rectangular plate adapted to be secured to a pocket book, a struck-out portion forming a spring tongue adjacent one end of said plate, a lever pivotally mounted on said plate and engaging said spring tongue, said lever bent back upon itself adjacent its outer terminal and forming a locking tongue, said locking tongue being disposed in an angular plane relative to the longitudinal axis of the plate, said plate having a transverse opening therein intermediate its ends, and said locking tongue adapted to extend within the opening when in locked position.

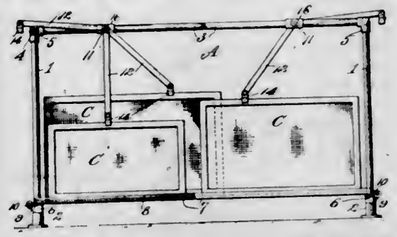
1,107,959. CAR-COUPLING. CARL H. KADIE, Strasburg, Va., assignor to Stark Car Coupler Corporation, Strasburg, Va., a Corporation of Virginia. Filed Aug. 18, 1913. Serial No. 785,235. (Cl. 213—10.)

In a car coupling, the combination of a draw head, a knuckle journaled to swing with respect to said draw head and having a tail provided with a cam portion extending inwardly and with a lug projecting outwardly, the upper surface of which lug is below the upper surface of the tail and inclined downwardly away from the tail, a locking pin mounted through the draw head to move vertically and having a shoulder engageable beneath the cam tail portion and another shoulder to rest upon the said lug when the knuckle is closed, and said locking pin having a limited lateral movement and a lug adjacent its lower end for engagement beneath the lower outer surface of the draw head, due to the coöperation



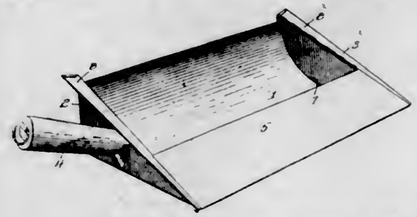
of the last mentioned pin shoulder and the inclined surface of the tail lug before strain is thrown on the knuckle and to pressure of the knuckle after strain is applied thereto.

1,107,960. RACK FOR PRINTING-CHASES AND THE LIKE. EDWARD F. W. KAISER, St. Louis, Mo. Filed Mar. 21, 1914. Serial No. 826,270. (Cl. 101—52.)



In a rack of the kind stated, the combination with a plurality of standards and longitudinally-extending connecting members therebetween, of a transverse bar fixed at its ends on said connecting-members, a plurality of chase-engaging arms loosely pivoted at one end on said bar, and a second transverse bar also fixed at its ends on said connecting-members, said second transverse bar being spaced from said first transverse bar and providing a fixed support for the free ends of said arms when the same are swung into inoperative position; substantially as described.

1,107,961. DUST-PAN. KATHERINE C. KANE, Oldtown, Me. Filed June 14, 1913. Serial No. 773,670. (Cl. 65—20.)

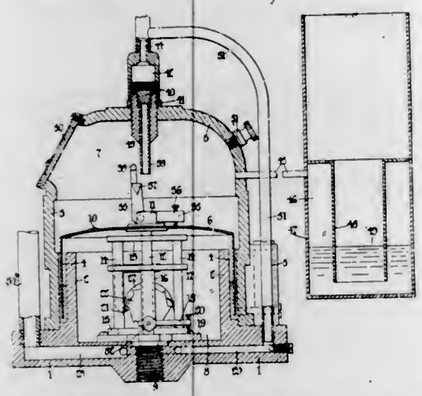


1. As an improved article of manufacture, a dust pan comprising side walls, a bottom arranged between the sides and having its upper edge formed to provide an inclined guard plate, and having a front horizontal flat portion defining a pocket by the intervening space therebetween and said guard plate, said bottom being curved from a point approximately midway of its length to provide an upwardly curved portion terminating below the upper edges of the sides and adapted to direct the material into said pocket when swept on the pan.

2. As an improved article of manufacture, a dust pan including triangular shaped sides having their lower edges bent for the major portion of their length to provide inwardly disposed attaching flanges, a bottom having a front flat horizontal portion secured to said attaching flanges and a rear portion curved from a point adjacent the rear end of said flanges and terminating below the upper edge of said sides, and a guard plate extended rearwardly from the forward edge of said bottom and terminating below the upper edge thereof.

3. As an improved article of manufacture, a dust pan comprising side walls of triangular formation having their upper edges formed to provide outwardly disposed flanges, a bottom having a front horizontal flat portion extended to provide an upwardly curved rear portion terminating below the upper edges of said sides, and said flanges being extended at an angle rearwardly of the said sides whereby the latter and said angularly disposed portions of the flanges support the pan inverted at a proper inclination so that the curved portion of the bottom serves to direct the material into a suitable receptacle when discharged.

1,107,962. GAS LIGHTING AND EXTINGUISHING APPARATUS. ARTHUR GEORGE KENT-JOHNSTON, Balham, London, England. Filed Feb. 10, 1914. Serial No. 817,813. (Cl. 67—18.)



1. Gas lighting and extinguishing apparatus comprising in combination a casing, a pressure-sensitive member dividing the space therein into two compartments, to one of which gas is admitted and passes therefrom through a small orifice into the other compartment, main and by-pass burners, valve means operated by said pressure member to control the supply of gas to the burners, a relief valve preventing excessive gas compression in the compartment remote from the gas inlet during initial movement of the pressure member, and means by which the gas passing through said relief valve is utilized to prevent failure of the apparatus through one of the burners being accidentally extinguished before its corresponding by-pass has been ignited, and through a by-pass being extinguished before its corresponding main burner has been ignited.

2. Gas lighting and extinguishing apparatus comprising in combination main and by-pass burners, a casing, a pressure-sensitive member dividing the space therein into two compartments, gas inlet means to one of said compartments and a communicating orifice admitting said gas into the other compartment, valve means operated by said pressure member to control the supply of gas to the burners, a capacity chamber in communication with the compartment on the side of the pressure member remote from the gas inlet mains, a relief valve preventing excessive gas compression in the latter compartment during initial movement of the pressure member, and means by which the gas passing through said relief valve is utilized to prevent failure of the apparatus through one of the burners being accidentally extinguished before its corresponding by-pass has been ignited, and conversely.

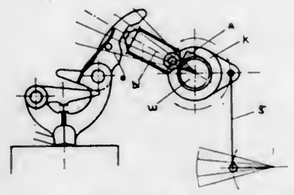
3. Gas lighting and extinguishing apparatus comprising in combination main and by-pass burners, a casing, a pressure-sensitive member dividing the space therein into two compartments, inlet means admitting gas to one of said compartments and a small orifice allowing said gas to pass gradually into the other compartment, valve means operated by said pressure member to control the supply of gas to the burners, a gravity closed valve adapted to relieve the pressure of the gas in the compartment remote from the inlet means during movement of the pressure member, a one-way connection between said pressure member and the gravity valve, and a conduit by which the gas passing through the relief valve is conducted to the by-pass burners during the initial movement of the pressure-sensitive member.

4. Gas lighting and extinguishing apparatus comprising in combination a main burner and a by-pass burner, a casing divided into two compartments by a liquid sealed bell, inlet means admitting gas to the compartment within said bell; a small orifice in the bell permitting the gas to pass gradually into the compartment exterior to the bell, valve means connected to said bell to control the supply of gas to the main and to the by-pass burner, a gravity closed valve adapted to permit escape of gas from the compartment on the exterior of the bell, a one-way connection carried by said bell and engaging with said valve during the initial movement of the bell, and a conduit by which the gas passing through said valve is conducted to the by-pass burner whereby, on the supply of gas being changed over from one burner to the other, failure of the device is prevented through one of the burners being accidentally extinguished before the other is ignited.

5. Gas lighting and extinguishing apparatus comprising in combination a main burner and a by-pass burner, a casing, a liquid sealed bell dividing the space therein into two compartments, inlet means admitting gas to the compartment within the bell, and an orifice in the bell through which the gas is permitted to pass gradually into the compartment exterior to the bell, a capacity chamber in communication with the latter compartment within the casing, a disk valve controlling the supply of gas to both burners, and means by which said valve is operated during the upward movement of the bell, a relief valve opened by the bell during upward movement thereof to prevent excessive gas compression in the compartment exterior to the bell, and a conduit by which the escaping gas is conducted to a by-pass burner in order thereby to provide a flame which shall prevent failure of the apparatus through one burner being accidentally extinguished before the other is ignited when the supply of gas is being changed over from one burner to the other.

[Claims 6 to 8 not printed in the Gazette.]

1,107,963. DEVICE FOR PRODUCING ALTERATIONS IN THE MOVEMENTS OF VALVES. PAOLO KIND, Turin, Italy. Filed Dec. 30, 1911. Serial No. 668,687. (Cl. 121—97.)



1. In a device of the character described, the combination with a distributing valve, a distributing shaft provided with a cam, a pivoted member provided with a contact surface, and means for acting on said valve from the contact member, of a supporting member, and a reciprocating member having guided movement in said supporting member and moved by said cam, the said reciprocating member being arranged between the contact surface of said pivoted member and the circumference of said cam, the said supporting member being adjustable around said shaft to cause the reciprocating member to engage a different portion of the said contact surface.

2. In a device of the character described, the combination with a distributing valve, of a pivoted member adapted to act on said valve and having a contact surface, an intermediate reciprocating member engaging said contact surface, a distributing shaft provided with a cam for moving said reciprocating member, a fixed support surrounding the distributing shaft, and a supporting member having a guideway for the reciprocating member, the said supporting member being mounted to turn on said fixed support to cause the reciprocating member to engage different portions of the said contact surface, thereby causing a difference in movement of the said pivoted member and a corresponding alternation in the action of said valve.

3. In a device of the character described, the combination with a valve, of a shaft provided with a cam, a supporting member mounted to turn around the shaft, a member mounted to reciprocate in said supporting member, a pivoted contact member having a contact surface, a spring bearing on said contact member to hold the same with the contact surface in engagement with the end of the reciprocating member, means for moving the supporting member around the said shaft to cause the reciprocating member to engage different portions of the said contact surface, an arm on the said contact member, and means for actuating the said valve from the said arm.

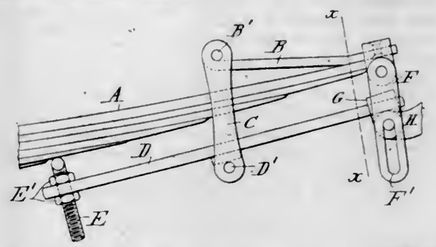
4. In a device of the character described, the combination with a distributing valve, a pivoted member engaging the stem of the valve to be controlled, a pivoted contact member having a contact surface formed with a cavity or depression and projecting portions at the ends of the cavity, the said contact member having an arm adapted to engage the first mentioned pivoted member to move the valve to open the same, and a distributing shaft provided with a cam, of a supporting member having a housing projecting therefrom, a reciprocating member adapted to reciprocate in said housing and acted upon by the said cam, and a spring for holding the said contact member with its contact surface in engagement with the end of the reciprocating member, the said supporting member being adjustable around the distributing shaft, to cause the reciprocating member to engage different portions of the said contact surface.

5. In a device of the character described, the combination with a valve, of means for actuating the valve including a pivotally mounted member formed with a power-engaging arm, a reciprocating member designed to engage said power-engaging arm for moving the same, a pivotally mounted housing carrying said reciprocating member, means for adjusting the position of said housing whereby said reciprocating member is caused to engage said power-engaging arm at different points, and a cam for moving said reciprocating member, said cam moving said reciprocating member an equal distance at each movement thereof and causing different movements of said cam according to the point at which the reciprocating member engages said power-engaging arm.

1,107,964. SHOCK-ABSORBING SPRING FOR VEHICLES. JOHN B. KING, London, England. Filed Nov. 15, 1913. Serial No. 801,177. (Cl. 21—105.)

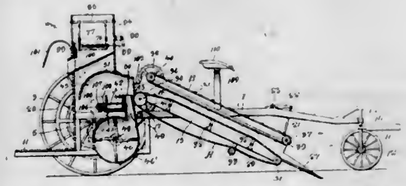
1. A shock-absorbing device, comprising the combination with a main axle spring of leaf spring type, of a supplemental leaf spring arranged above the main spring and fixed to one end thereof, a plate spring arranged below the main spring linked intermediate its length to the supplemental spring and having one end thereof connected by a shackle to a suitable part of the frame of the vehicle, and its other end engaging against the main spring, and a pair of slotted links connecting the main spring to the shackle pin of the plate spring, substantially as set forth.

2. A shock-absorbing device, comprising the combination with a main axle spring of leaf type, of a supplemental leaf spring arranged above the main spring and fixed to one end thereof, a plate spring arranged below the main spring, linked intermediate its length to the supplemental spring, and having one end thereof connected by a shackle to a suitable part of the frame of the vehicle and its free end engaging against the main spring, adjusting means on the free end of the plate spring operable to set the same nearer to or farther from the main spring, and a pair of slotted links connecting the main spring and the shackle pin of the plate spring, substantially as set forth.



3. A shock-absorbing device comprising the combination with an axle leaf spring, of a supplementary spring located above said leaf spring, a thicker plate spring located beneath said leaf spring, attachment means fixing one end of the supplementary spring to the end of the leaf spring, attachment means connecting one end of the plate spring to a suitable part of the frame of the vehicle such as a scroll iron, a pair of slotted links connecting the end of the leaf spring to the latter having a pin which engages through the slot in each link on the scroll iron, a pair of link plates pivoted to the free end of the supplementary spring and to the plate spring, and an adjustable set screw on the free end of the plate-spring, as set forth.

1,107,965. POTATO-HARVESTER. CHARLES KLINGHAMMER, La Grande, Oreg. Filed Nov. 13, 1912. Serial No. 731,122. (Cl. 55—138.)



1. In a potato harvester, a wheel supported frame, a longitudinal conveyer carried thereby, and a digger associated with said conveyer, means for driving the conveyer, and means for discharging a blast of air in an upward direction against material discharged over the rear end of the conveyer.

2. In a potato harvester, a wheel supported frame, a longitudinal conveyer carried thereby, digging means associated with the conveyer at the forward end thereof, a fan casing having an upwardly extending spout positioned adjacent to the discharge end of the conveyer, and a driven fan in the casing serving to discharge a current of air upwardly against material discharged over the rear end of the conveyer.

3. In a potato harvester, a wheel supported frame, a longitudinal conveyer carried thereby, digging means associated with the conveyer at the forward end thereof, a fan casing having an upwardly extending spout positioned adjacent to the discharge end of the conveyer, a driven fan in the casing serving to discharge a current of air upwardly against material discharged over the rear end of the conveyer, and a screen obstructing the fan spout.

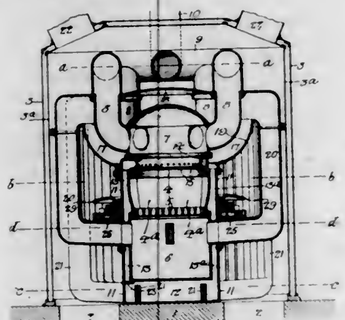
4. In a potato harvester, a wheel supported frame, a longitudinal conveyer carried thereby, digging means associated therewith, a fan casing supported in rear of the

conveyer and having an upwardly extending spout provided with a screen over which material discharged over the conveyer is crowded, a driven fan in the casing, and an arcuate deflector supported above the fan spout to receive relatively light material affected by the air blast coming through the spout and to deflect the same downwardly between the wheels of the machine into the furrow from which the potatoes are excavated.

5. In a potato harvester, a wheel supported frame, a longitudinal conveyer carried thereby and having digging means associated therewith, a fan casing supported in rear of the conveyer and having an upwardly extending spout terminating adjacent to the discharge end of the conveyer, a laterally driven conveyer positioned adjacent to the rear side of the spout, a driven fan in the fan casing, and an arcuate deflector positioned above the discharge spout of the fan casing to intercept light material and to discharge such light material downwardly in rear of the lateral conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,107,966. HEATER. WLADYSLAW P. KLOBUKOWSKI, Warsaw, Russia. Filed July 7, 1910. Serial No. 570,801. (Cl. 126—102.)



1. The combination in a heater, of a casing having a fire-pot, an ash-pit, and an air-box; sets of conduits in the casing, certain of the conduits of one set having both ends connected to the air-box, and the conduits of another set having one end connected to said air-box and the other end connected to the ash-pit; and means for supplying air to and receiving it from the space surrounding said sets of conduits.

2. The combination in a heater, of a casing having a fire-pot, an ash-pit, and an air-box; sets of conduits in the casing, certain of the conduits of one set having both ends connected to the air-box and the conduits of another of said sets having one end connected to said air-box and the other end connected to the ash-pit, the conduits of a third set surounding the fire-pot and having openings thereinto above the fuel level thereof and being connected to said air-box; and means for supplying air to and receiving it from the space around said sets of conduits.

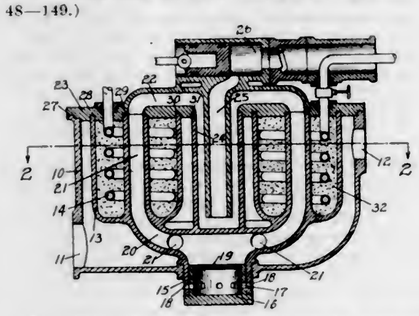
3. The combination in a heater of a casing having a fire-pot, an ash-pit and a combustion chamber above the fire-pot; a second casing inside the first casing inclosing the ash-pit and fire-pot, said second casing having vertical partitions forming a set of conduits surrounding the fire-pot; a box under the ash-pit connected with the lower portions of said set of conduits and adapted to connect with a source of air supply; other conduits connecting the upper portion of said set of conduits with said box; and means for supplying air to and receiving it from said casing.

4. The combination in a heater of a casing; an ash pit, a fire pot, and a combustion chamber therein; a second casing inside of the first casing inclosing the ash pit and fire pot and provided with vertical partitions forming a set of conduits adjacent the fire pot; a box under the ash pit connected with said set of conduits and in communication with a source of air supply; two sets of conduits respectively connecting the upper portions of said first set of conduits with said box and with the ash pit; with conduits for supplying air to and receiving it from said casing.

5. The combination in a heater of a casing; a fire pot therein having a set of vertical conduits adjacent its outside surface, of which certain open into the fire pot; a box connected to all of said conduits and in communication with a source of air supply; and conduits connecting the upper portions of others of said set of conduits with said box; with conduits for supplying air to and receiving it from said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,107,967. HEATER FOR INTERNAL-COMBUSTION ENGINES. FRANK J. C. F. KNAAK, Saratoga Springs, N. Y. Filed June 11, 1913. Serial No. 773,060. (Cl. 48—149.)



1. A heater for heating fuel oil for internal combustion engines comprising an outer shell, an annular receptacle within the shell, a coiled pipe within the annular receptacle for conveying oil and means for conducting the hot gases past the exterior and interior surfaces of the annulus.

2. A heater for oil and air used in internal combustion engines comprising an outer shell for the passage of the exhaust gases therethrough, a receptacle within the shell having a coiled pipe therein for conducting oil to be heated, said receptacle having also an aperture, and conduits arranged therein for the passage of air and means for conducting the hot gases past the exterior and interior surfaces of the receptacle.

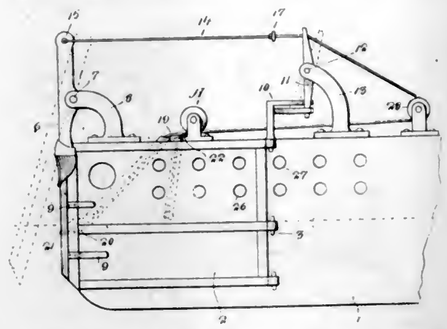
3. A heater for oil and air used in internal combustion engines comprising an outer shell for the passage of the exhaust gases thgrethrough, a receptacle within the shell having a coiled pipe therein for conducting oil to be heated, said receptacle having also an aperture, conduits arranged therein for the passage of air, means for regulating the amount of air admitted and means for conducting the hot gases past the exterior and interior surfaces of the receptacle.

4. A heater for oil and air used in internal combustion engines comprising an outer shell for the passage of the exhaust gases therethrough, a receptacle within the shell having a coiled pipe therein for conducting oil to be heated, said receptacle having also an aperture, conduits arranged therein for the passage of air, means for regulating and filtering the air admitted to be heated and means for conducting the hot gases past the exterior and interior surfaces of the receptacle.

5. An oil and air heater for internal combustion engines comprising an outer shell adapted for the passage of the exhaust gases therethrough, an annular receptacle within the shell, a coil of pipe within the receptacle through which the oil to be heated is conducted, a plurality of branched conduits within the receptacle for heating air, and means for admitting air to said conduits.

[Claims 6 to 14 not printed in the Gazette.]

1,107,968. BRAKE FOR MARINE VESSELS. EMIL E. KOLTSKO, Waterbury, Conn. Filed Mar. 4, 1914. Serial No. 822,421. (Cl. 114—145.)



1. The combination with a marine vessel, of break mechanism comprising a pair of wings pivotally mounted at their rear edges to turn on substantially vertical axes, the forward edges of said wings lying on opposite sides of the front stem of the vessel and being adapted to swing outwardly away from said stem, a substantially vertical keeper bar pivotally supported intermediate its ends and adapted in one position to embrace the leading edges of said wings when folded inwardly, and windlass and chain mechanism connected with said keeper bar for moving said bar to wing-engaging and disengaging position.

2. The combination with a marine vessel, of brake mechanism comprising a pair of wings pivotally mounted at their rear edges to turn on substantially vertical axes, the forward edges of said wings lying on opposite sides of the front stem of the vessel and being adapted to swing outwardly away from said stem, a substantially vertical keeper bar pivotally supported intermediate its ends and adapted in one position to embrace the leading edges of said wings when folded inwardly, and windlass and chain mechanism connected with said keeper bar both above and below the pivot thereof, for moving said bar to wing-engaging and disengaging position.

3. The combination with a marine vessel, of brake mechanism comprising a pair of wings pivotally mounted at their rear edges to turn on substantially vertical axes, the forward edges of said wings lying on opposite sides of the front stem of the vessel and being adapted to swing outwardly away from said stem, a substantially vertical keeper bar pivotally supported intermediate its ends and adapted in one position to embrace the leading edges of said wings when folded inwardly, windlass and chain mechanism connected with said keeper bar for moving said bar to wing-engaging and disengaging position, and sets of wing-holding fingers on said bar.

4. The combination with a marine vessel, of brake mechanism comprising a pair of wings pivotally mounted at their rear edges to turn on substantially vertical axes, the forward edges of said wings lying on opposite sides of the front stem of the vessel and being adapted to swing outwardly away from said stem, a substantially vertical keeper bar pivotally supported intermediate its ends and adapted in one position to embrace the leading edges of said wings when folded inwardly, and windless and chain mechanism connected with said keeper bar for moving said bar to wing engaging and disengaging position, arms extending inwardly from said wings, and a trip lever acting upon said arms to start the wings outwardly and acted upon by said windlass and chain mechanism.

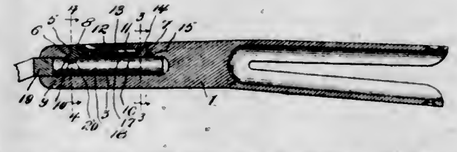
5. The combination with a marine vessel, of brake mechanism comprising a pair of wings pivotally mounted at their rear edges to turn on substantially vertical axes, the forward edges of said wings lying on opposite sides of the front stem of the vessel and being adapted to swing outwardly away from said stem, a substantially vertical keeper bar pivotally supported intermediate its ends and adapted in one position to embrace the leading edges of said wings when folded inwardly, windlass and chain mechanism connected with said keeper bar for moving said bar to wing-engaging and disengaging position, bridles on the inner faces of said wings, and windlass and chain mechanism connected with said bridles.

1,107,969. SAP-DIRECTING SPOUT. CHARLES L. KRAGER, Daisy, Tenn., assigner to Herty Turpentine Co., Jacksonville, Fla., a Corporation of Florida. Filed Sept. 1, 1911. Serial No. 647,269. (Cl. 47—40.)



A sap collecting apron or spout, composed of two similar shaped metallic members, the main body of each of which is substantially a truncated triangular plate, the rear edge of which is the tree engaging edge, the short edge of each plate being curved at one corner and concaved transversely while the other corner is formed at an obtuse angle to the rear edge, there being provided a rim upon the forward edge extending from a point near the apex to a point adjacent the curved edge, said plates when assembled having their concaved portions loosely overlapped to form a sap directing spout between the ends of the rims, and to permit the plates to be spread fan-like to accommodate various diametered trees, and each rim also constituting a gripping means whereby the member may be forcibly inserted in or withdrawn from a cut in a tree.

1,107,970. ADJUSTABLE FORK-SOCKET. JOSEPH C. KRIHA, Ravenna, Nebr. Filed Mar. 10, 1914. Serial No. 823,757. (Cl. 55—2.)



1. A handle socket formed with a recess, a fork having a projection to seat in said recess and a movable locking element coöperating with the socket to lock said projection thereto, said element comprising forward and rear locking members adapted for coöperation with the socket, and means for moving one of said members with relation to the other to release the element.

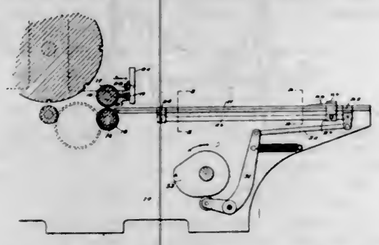
2. A handle socket formed with a recess, a fork having a projection to seat in said recess, and a movable locking element coöperating with the socket to lock said projection thereto, said element comprising a plate having forward locking member to coöperate with the socket, an additional locking projection to coöperate with the fork, a rear locking projection to coöperate with the socket, and means for moving said latter projection.

3. A handle socket formed with a recess, a fork having a projection to seat in said recess, a movable locking element coöperating with the socket to lock said projection thereto, said element comprising a plate having forward locking member to coöperate with the socket, an additional locking projection to coöperate with the fork, a rear locking projection, to coöperate with the socket, means for moving said latter projection, and a spring for normally holding said latter projection in locking position.

4. A handle socket formed with a recess, a fork having a projection to seat in said recess, a movable locking ele-

ment coöperating with the socket to lock said projection thereto, said element comprising a plate having a forward locking member to coöperate with the socket, an additional locking projection to coöperate with the fork, a rear locking projection to coöperate with the socket, means for moving said latter projection, said socket being formed with receiving recess in which the element is adapted to be inserted, the respective end walls of the recess being formed with locking shoulders to coöperate with said locking projections.

1,107,971. FEEDING MECHANISM FOR PRINTING-PRESSES. SAMUEL M. LANGSTON, Camden, N. J. Filed June 29, 1911. Serial No. 636,094. (Cl. 101—39.)



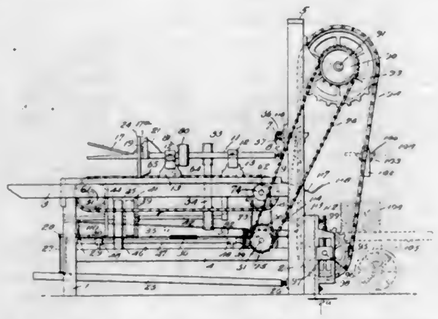
1. A feeding mechanism including a support for a column of blanks, a slide mounted for movement over said support and beneath said column, said slide having an upwardly projecting shoulder for engagement with the edge of the bottom blank for removing the latter from beneath the column, a rod beneath said support and spaced therefrom substantially parallel thereto, spaced guides secured to said rod and having sliding engagement with said support, adjustable connections between said slide and said rod and means connected to one end of said rod for reciprocating the latter and said slide.

2. A printing press having a printing roller, a support for a column of blanks to be printed, said support having a slot extending lengthwise thereof, a slide for engagement with the upper surface of said support and continually in engagement with the bottom blank of the column, said slide having an upwardly projecting shoulder for engagement with the edge of the bottom blank for removing the latter from beneath the column upon the reciprocation of the slide, spaced guides movable along said slot, a rod connecting said guides and spaced from said support, means for securing said slide to said rod and permitting of the adjustment of the former along the latter and means for reciprocating said rod.

3. A printing press having a printing roller, a support for a column of blanks to be printed, said support having a slot extending lengthwise thereof, a slide for engagement with the upper surface of said support and continually in engagement with the bottom blank of the column, said slide having an upwardly projecting shoulder for engagement with the edge of the bottom blank for removing the latter from beneath the column upon the reciprocation of the slide, guides movable along said slot, a rod connecting said guides, means for securing said slide to said rod and permitting of the adjustment of the former along the latter and means for reciprocating said rod, said means including a rock lever, a cam for rocking the said lever and link connections between said lever and said rod.

4. A feeding mechanism including a support for a column of blanks, a slide mounted for movement over said support and beneath said column, said slide having a shoulder for engagement with the edge of the bottom blank for removing the latter from beneath the column, a rod beneath said support and spaced therefrom substantially parallel thereto, spaced guides for said rod, adjustable connections between said slide and said rod and means connected to one end of said rod for reciprocating the latter and said slide.

1,107,972. CAKE-CLOTH REMOVER AND TRUCK-LOADER. WALTER JACK LOWRY, Waco, Tex. Filed June 3, 1913. Serial No. 771,487. (Cl. 100—52.)



1. A device of the character specified, comprising a table, shafts journaled transversely of the table in parallel relation, a pair of sprocket wheels secured to each shaft, endless chains supported by the registering wheels of the shafts, the upper runs of the chains moving above the table, said table having a movable section between the upper runs of the chains at the front of the table, a tube supported above the table longitudinally thereof between the chains, said tube tapering at its front end and being open at the upper side, a tongue mounted for swinging movement in the tube at the open portion for clamping the edge of a sheet of press cloth between the tongue and the inner surface of the tube, a longitudinally movable rod within the tube for moving the tongue toward and from the tube, means for rotating the tube, the tube being normally disconnected from the said rotating means, and a common means for lifting the movable section of the table toward the tube, for connecting the tube with the rotating means and for moving the rod longitudinally in a direction to close the tongue.

2. In a device of the character specified, a pair of endless chains arranged parallel with each other and mounted for longitudinal movement, a table arranged below the level of the upper runs of the chains, said table having a movable section at the commencement of the upper runs and between the same a tube arranged longitudinally of the chains and above the same and mounted for rotating movement, means in connection with the tube for clamping one end of the press cloth on an oil cake, means for rotating the tube to strip the cloth from the cake, and a common means for lifting the movable section of the table toward the tube, for operating the clamping means, and for connecting the tube with its rotating means.

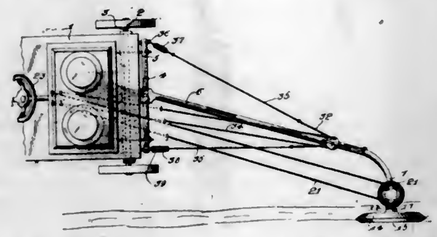
3. In a device of the character specified, an endless carrier for moving the cake, a movable support for the cake at the forward end of the carrier, a tube mounted to rotate above the endless carrier, means at the front end of the tube and above the support for clamping one end of the press cloth, means normally disconnected from the tube for rotating the tube to strip the cloth from the cake, and a common means for lifting the support, for operating the clamping means, and for connecting the tube with its rotating means.

4. In a device of the character specified, a tube mounted for rotation and having means at one end for clamping one end of the press cloth of an oil cake, means normally disconnected from the tube for rotating the same, a movable support for the oil cake below the clamping means, and a common means for lifting the support toward the tube, for operating the clamping means and for connecting the tube with its rotating means.

5. In a device of the character specified, a tube mounted for rotating and having means at one end for clamping one end of the press cloth of an oil cake to the tube, means normally disengaged from the tube for rotating the same, means for lifting the oil cake toward the tube, and a common means for operating the clamping means, for connecting the tube with its rotating means, and for operating the lifting means.

[Claims 6 to 14 not printed in the Gazette.]

1,107,973. AUTOMATIC STEERING-GEAR. JOHN PETER LUNDGREN, Minot, N. D. Filed Feb. 18, 1913. Serial No. 749,193. (Cl. 97—81.)



1. In combination with a vehicle provided with a shaft and turning gear, a support projecting from the turning gear, a steering wheel carried by the support, means whereby the steering movements of said wheel are communicated to said shaft, and means whereby said movements are communicated from the shaft to the support.

2. In combination with a vehicle provided with a steering device and turning gear, a support carried by the turning gear, a steering wheel carried by the support, cable connections between said wheel and the steering device and cable connections between the steering device and the support.

3. In combination with a vehicle provided with a shaft and turning gear, a support carried by and projecting from said turning gear, a steering wheel carried by the support, means whereby the steering movements of the wheel rotates the shaft, and means operated by the rotary movements of the shaft for causing the support to swing the turning gear.

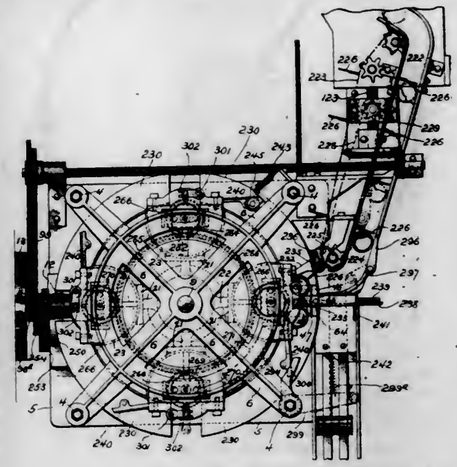
4. In combination with a vehicle provided with a steering device and turning gear, a bar carried by the gear, a support fastened to the bar, a steering wheel carried by the support, tension connections between the outer portions of the support and the bar, cable connections between the steering wheel and steering device, and cable connections between the support and the steering device.

5. In a device of the class described the combination with a vehicle provided with a steering axle, of a steering rod provided with a laterally extending end, a disk supporting shaft journaled in said end, said disk supporting shaft provided with a laterally extending end, a disk mounted thereon, a pulley carried by the upper end of said disk supporting shaft, a steering cable passing thereover and secured thereto, an auxiliary pulley secured to said steering rod, a steering chain passing around said pulley and capable of being swung, means for connecting said steering chain to the steering axle of a vehicle and a second cable coöperating with said pulley and coöperating with said first mentioned steering cable for turning said pulley as said pulley carried by said steering disk is turned whereby said vehicle may be steered.

[Claims 6 and 7 not printed in the Gazette.]

1,107,974. CAN-SEALING APPARATUS. ADOLPH K. MALMQUIST, South Bellingham, Wash., assignor to Perfect Vacuum Can Company, Chicago, Ill., a Corporation. Original application filed Apr. 2, 1913, Serial No. 758,474. Divided and this application filed Oct. 11, 1913. Serial No. 794,690. (Cl. 113—24.)

1. In can sealing apparatus, the combination with a traveling sealing chamber and means for exhausting the same, of a can carrier constituting a closure for the sealing chamber, vertically movable lugs mounted in said carrier and adapted to engage a can therein, springs resisting upward movement of said lugs, spring-pressed lugs in the sealing chamber to engage the bottom flange of the can, seaming means within the sealing chamber, and means for raising the capped upper end of the can to the seaming means.



2. In a can sealing apparatus, the combination with a sealing chamber, and seaming means therein, of a can carrier constituting a closure for said chamber, a vertically movable can platform in said carrier, a vertically movable plunger, means for coupling said plunger and platform, means for operating the plunger to raise the can to the seaming means, and a can coöperating with said plunger to lower the platform and the can thereon.

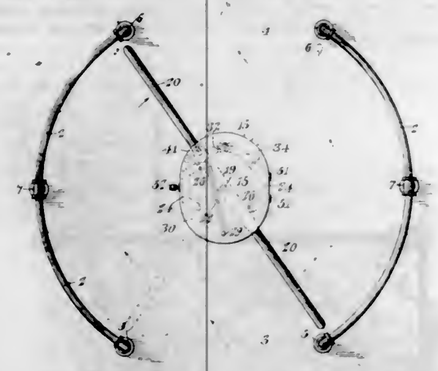
3. In a sealing apparatus, the combination with a traveling frame provided with a sealing chamber, a can carrier constituting a closure for said chamber, can sealing means within said chamber, and a platform section adjacent to and movable with said sealing chamber, of means for conveying a can to said platform section, a yielding arm projecting over said platform section, means for moving the sealing chamber whereby a can will be received by the carrier, and means for moving the carrier into the sealing chamber and closing the latter.

4. In a can sealing apparatus, the combination with a traveling frame provided with a sealing chamber, a movable can carrier constituting a closure for said chamber, can sealing means within said chamber, and platform sections adjacent to and movable with said sealing chamber, of an arm projecting over said can carrier when the latter is open, a yielding arm projecting over one of said platform sections to cause a can to enter said carrier, a deflecting cam on the other platform section to divert a sealed can leaving the can carrier, means for closing the can carrier, a slide and means for causing said slide to follow the can carrier when the latter closes and cooperate with said deflecting cam to insure the discharge of the sealed can.

5. In a can sealing apparatus, the combination with a revoluble frame provided with a sealing chamber, having an opening in one side, a horizontally movable can carrier constituting a closure for said opening, and can sealing means within said chamber, of means for moving the can carrier horizontally to open and close said chamber during the travel of said chamber, means for removing a can laterally from said carrier when the same opens, means for inserting a can into the carrier during the travel of the same, and means for discharging a sealed can from the machine during the travel of the revoluble frame.

[Claims 6 to 12 not printed in the Gazette.]

1,107,975. TURNSTILE. SAM R. MARKS, Jacksonville, Fla. Filed Mar. 31, 1913. Serial No. 757,992. (Cl. 39—99.)



1. A turnstile of the class described including an inclosure provided with opposite entrance and exit openings, a central standard, an intermediately pivoted horizontal oscillatory turnstile bar or member mounted at the top of the standard and operating within the inclosure and having its terminal portions arranged to swing back and forth across the exit and entrance openings to form alternate opposite passages through the inclosure, said bar being operable by persons passing through the said passages, and registering mechanism also supported by the standard and arranged at a point between the limits of the movement of the turnstile bar or member in position to be operated by the same in each movement thereof.

2. A turnstile of the class described including an inclosure provided with opposite entrance and exit openings, an intermediate pivoted horizontal oscillatory turnstile bar or member operating within the inclosure and having its terminal portions arranged to swing back and forth across the exit and entrance openings to form alternate opposite passages through the inclosure, a contractile spring secured at one end in the median plane of the entrance and exit openings and at one side of the pivot of the oscillatory bar and extending to the opposite side of the pivot of the same and connected to the oscillatory bar or member, said spring being arranged to actuate the oscillatory bar or member during a portion of the movement thereof.

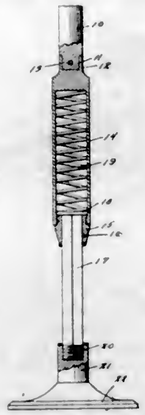
3. A turnstile of the class described including an inclosure having entrance and exit openings, a horizontal turnstile bar or member pivoted centrally of the inclosure and having its arms arranged to swing to opposite sides of the entrance and exit openings to form opposite passages alternately through the inclosure, a spring fixed at one end and connected at its other end to the said bar or member and arranged to be carried to opposite sides of the pivot and adapted to complete the oscillatory movement of the said bar or member, registering mechanism arranged in the path of the oscillatory bar or member, and means carried by the oscillatory bar or member for actuating the registering mechanism in each of the movements of the said bar or member.

4. A turnstile of the class described including a pivotally mounted horizontal oscillatory turnstile bar or member, spaced stops arranged to limit the swing of the oscillatory member, a spring connected with the oscillatory member and arranged to be carried to opposite sides of the center for actuating the said bar or member during a portion of the movement thereof, and registering mechanism located in the path of and actuated by the bar or member.

5. A turnstile of the class described comprising a pivoted oscillatory turnstile bar or member, registering mechanism located at a point between the limits of movement of the turnstile bar or member and having a rotary member, and actuating means carried by the oscillatory bar or member and including reversely swinging pawls or dogs arranged to engage the upper and lower portions of the rotary member of the registering mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,107,976. TAMP. JOHN FRANCIS MCCOY, New Orleans, La. Filed Apr. 2, 1912. Serial No. 688,116. (Cl. 25—1.)



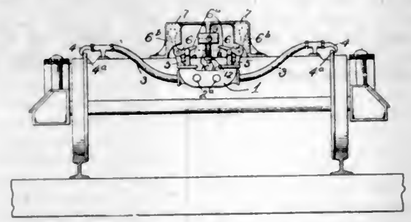
A hand tamping implement consisting of a cylindrical sleeve having a reduced socket in one terminal, a handle secured in said socket, said sleeve being open at its other end and provided with internal screw threads, a collar having a reduced threaded portion engaging the threads of said sleeve and provided with a rectangular opening therein, a rectangular plunger mounted in said collar opening and having an annular head thereon operating within the cylindrical sleeve, a tamping plate secured to the outer end of the plunger and removable therefrom and a coiled spring interposed between the annular head of the plunger and the opposite terminal of the sleeve.

1,107,977. TOILET ARTICLE. DAISY ORR MILLER, Washington, D. C., assignor of one-half to Marie Haseltine, Washington, D. C. Filed Nov. 12, 1912. Serial No. 731,005. (Cl. 132—28.)



A toilet article, comprising a tab of soft fiber impregnated with a toilet powder, the fibers of said tab forming a webbing intimately commingling with the mass of said powder and adhering thereto, whereby the powder is retained in said tab against falling therefrom by its own weight.

1,107,978. WHEEL-FLANGE LUBRICATOR. JAMES H. MINER, Lumberton, Miss. Filed July 25, 1913. Serial No. 781,204. (Cl. 184—3.)



1. A wheel flange lubricator comprising an oil feed, with a valve therein, a valve stem on said valve, a device adapted to be moved vertically by the jar or vibration due to the passage of the wheel on the track, and a rocking lever having a part for contact with the valve stem and a part adapted to be projected into the path of said vertically movable device, substantially as described.

2. A wheel flange lubricator comprising a passage for liquid oil, a valve in said passage, a valve stem on said valve, a pivotally supported bell crank lever having a vertical weighted arm and a transversely extending arm adapted to bear on the valve stem, a vertically moving spring supported weight, said bell crank lever having a part adapted to be projected in the path of said weight when rounding a curve.

3. A wheel flange lubricator comprising a pair of conduits, valves in said conduits having projecting valve stems, a pair of bell crank levers having vertically disposed weighted arms, and inwardly extending arms having portions adapted for engagement with said valve stems, and a vertically movable spring supported weight adapted normally to pass between said inwardly extending arms, one or the other of said arms being brought into the path of movement of said weight when rounding a curve.

4. A wheel flange lubricator comprising a pair of oil conduits, valves in said conduits, valve stems projecting outward from said valves, pivoted bell crank levers having substantially vertical arms carrying weights, means for limiting the rocking movement of said weighted arms, said bell cranks having arms extending toward each other and adapted, on the inward movement of the weights, to contact with the valve stems, a guide rod located intermediate of said inwardly extending arms, a weight movable vertically on said guide rod, a spring supporting said weight, and means for adjusting said spring, said weight being normally clear of said inwardly extending arms but adapted to contact with one or the other of the same on rounding a curve, substantially as described.

1,107,979. PLASTER. ALONZO H. MITCHELL, Phoenix, Ariz. Filed Sept. 9, 1913. Serial No. 788,938. (Cl. 106—43.)

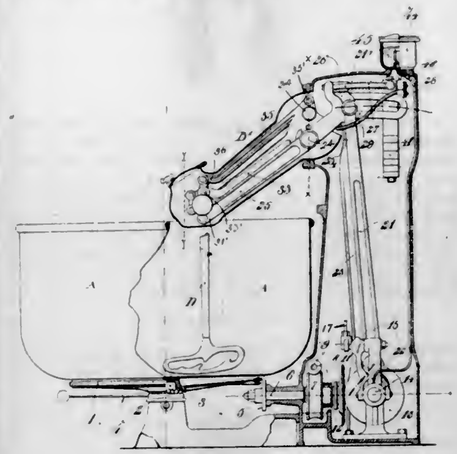
1. The herein described plastic composition comprising an intimate admixture, in equal proportions, of kerosene and linseed oil, combined with the cement and sand in suitable proportions to form a plaster.

2. The herein described plastic composition comprising an intimate admixture of kerosene and linseed oil, each one one-half part; cement, one part, and sand, two parts.

1,107,980. MECHANICAL KNEADING APPARATUS. ROBERT MONNIER, Paris, France. Filed Jan. 11, 1913. Serial No. 741,535. (Cl. 107—30.)

1. Mechanical kneading apparatus comprising a trough, a box-form standard adjacent said trough, a hollow arm pivotally mounted on said standard, a kneading member pivotally mounted near the outer end of said arm and working in the said trough, and means inclosed within the standard for imparting motion to said arm and kneading member.

2. Mechanical kneading apparatus comprising a trough, a box form standard adjacent said trough, a hollow arm pivotally mounted on said standard, a kneading member pivotally mounted near the outer end of said arm and working in the said trough, means inclosed within the said standard for swinging the arm vertically, and means inclosed within the said arm for imparting lateral rocking motion to the kneading member.



3. Mechanical kneading apparatus comprising a trough, an arm movable vertically over said trough, a pair of kneading members pivotally mounted on said arm, means for imparting up and down motion to said arm, and means for imparting lateral motion in opposite directions to said kneading members.

4. Mechanical kneading apparatus comprising a kneading member, an arm, means for pivotally supporting said arm, means for swinging said arm vertically about said support, a structure mounted at the outer end of said arm and forming a pivotal support for the kneading member, a rocking lever pivotally supported in said structure, means for rocking said lever and connecting means between said lever and said kneading member for transmitting rocking motion to said member.

5. Mechanical kneading apparatus comprising a kneading member, an arm, means for pivotally supporting said arm, a structure mounted at the outer end of said arm and forming a pivotal support for the kneading member, a rocking lever pivotally supported in said structure, a reciprocating member connected with said arm so as to swing it vertically about its pivotal support, a second reciprocating member, connections between said second reciprocating member and said rocking lever, and a single rotary member imparting motion to said two reciprocating members.

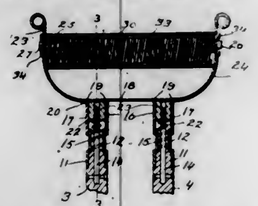
[Claims 6 to 9 not printed in the Gazette.]

1,107,981. CRUTCH. DELPLAIN B. MONROE, Endicott, N. Y. Filed Feb. 27, 1914. Serial No. 821,474. (Cl. 3—4.)

1. In a crutch, a crutch leg having a substantially U-shaped support mounted upon its upper end, and a coil spring suspended between the legs of said U-shaped support and forming an arm rest for yieldable conformity to the movement of the arm of a person.

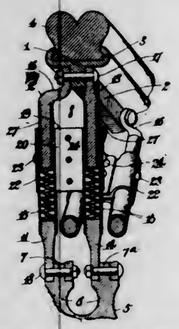
2. In a crutch, a crutch leg being split to form arms, sleeves mounted upon the upper terminal ends of said arms, a substantially U-shaped support, sleeves depending from the vertex of said U-shaped member and slidably mounted upon said first named sleeves, coil springs mounted within said sleeves for resiliently supporting said U-shaped support, and a yieldable arm rest suspended between the

legs of said U-shaped support for yieldable conformity to the movement of the arm of a person.



3. In a crutch, a crutch leg being split to form arms, sleeves mounted upon the upper terminal ends of said arms, a substantially U-shaped support, sleeves depending from the head of said U-shaped support and slidably mounted upon said first named sleeves, coil springs disposed within said sleeves for resiliently supporting said U-shaped support, a coil spring suspended between the legs of said U-shaped support and forming a yieldable arm rest for conformity to the movement of the arm of a person, and a cover about said coil spring.

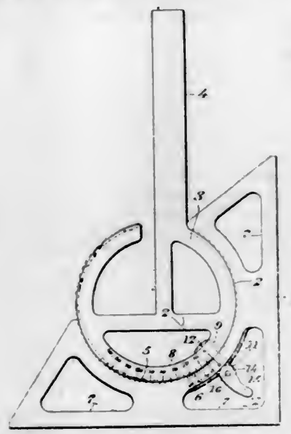
1,107,982. VEHICLE-WHEEL. ARCH MOON, Fallon, Nev. Filed June 18, 1913. Serial No. 774,427. (Cl. 152—47.)



In a vehicle wheel, a hub, a felly, a plurality of groups of spokes interposed between the felly and the hub and each arranged in a tangent to the latter, the spokes of one group being extended at an opposite angle to the spokes of the other group, each of the spokes comprising pairs of parallel arranged inner and outer sections, tubes carried by the inner sections and slidably receiving the outer sections, yieldable means between the inner and outer sections and inclosed by the tubes, and devices interposed between the tubes and having portions embracing the same and secured thereto and comprising substantially identical plates having overlapping ends secured together between the tubes and having portions arranged with longitudinal edges bearing against the tubes.

1,107,983. PROTRACTOR. EVERETT D. MORETON, Erie, Pa. Filed Apr. 18, 1914. Serial No. 832,788. (Cl. 33—93.)

1. In a protractor of the class described, the combination of a flat body having a circular recess therein opening through one of its edges, a movable blade equal in thickness to the body and having a circular head rotatably mounted within the circular recess, the blade head being provided with a recess and with an arcuate slot communicating with the said recess and opening through the outer periphery of the head, the said body being provided with a second recess adjacent to the circular recess and with an opening leading radially from the circular recess into the second recess, the said opening being adapted to register with the slot of the blade head, a locking member extending through the said slot and opening and having a head disposed within the recess of the blade head, the outer end of the locking member being extended into the second recess, and a cam lever pivotally mounted upon the outer end of the locking member and having a cam face for engagement with the inner edge of the said second recess.



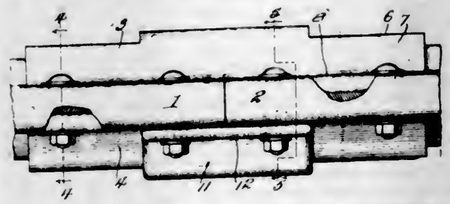
2. In a protractor of the class described, the combination of a flat body having a circular recess therein opening through one of its edges, a movable blade equal in thickness to the body and having a circular head rotatably mounted within the circular recess, the blade head being provided with a recess and with an arcuate slot communicating with the said recess and opening through the outer periphery of the head, the said body being provided with a second recess adjacent to the circular recess and with an opening leading radially from the circular recess into the second recess, the said opening being adapted to register with the slot of the blade head, a locking member extending through the said slot and opening and having a head disposed within the recess of the blade head, the outer end of the locking member being extended into the second recess, and a cam lever pivotally mounted upon the outer end of the locking member and having a cam face for engagement with the inner edge of the said second recess, the outer faces of the locking member head and the cam lever being flush with the corresponding faces of the body and movable blade head.

3. In a protractor of the class described, the combination of a flat body having a circular recess therein opening through one of its edges, a movable blade equal in thickness to the body and having a circular head rotatably mounted within the circular recess, the blade head being provided with a recess and with an arcuate slot communicating with the said recess and opening through the outer periphery of the head, the said body being provided with a second recess adjacent to the circular recess and with an opening leading radially from the circular recess into the second recess, the said opening being adapted to register with the slot of the blade head, a locking member extending through the said slot and opening and having a head disposed within the recess of the blade head, the outer end of the locking member being extended into the second recess, and a cam lever provided at one of its ends with bifurcated portions embracing the outer end of the locking member and pivotally connected thereto, the said end portions of the lever being provided with cam faces for engagement with the inner edge of the second recess.

4. In a protractor of the class described, the combination of a flat body having a circular recess therein opening through one of its edges, a movable blade equal in thickness to the body and having a circular head rotatably

mounted within the circular recess, the blade head being provided with a recess and with an arcuate slot communicating with the said recess and opening through the outer periphery of the head, the said body being provided with a second recess adjacent to the circular recess and with an opening leading radially from the circular recess into the second recess, the said opening being adapted to register with the slot of the blade head, a locking member extending through the said slot and opening and having a head disposed within the recess of the blade head, the outer end of the locking member being extended into the second recess, and a cam lever provided at one of its ends with bifurcated portions embracing the outer end of the locking member and pivotally connected thereto, the said end portions of the lever being provided with cam faces for engagement with the inner edge of the second recess, the inner edge of the second recess being oppositely beveled adjacent to the said opening and the cam faces of the lever being correspondingly beveled for engagement therewith.

1,107,984. RAIL-CHAIR. ROBERT C. MORROW, Thetford Mines, Quebec, Canada. Filed Mar. 27, 1912. Serial No. 686,709. (Cl. 239—3.)

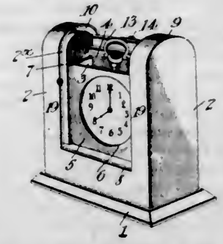


In a rail joint, the combination with the meeting ends of two rails, of a chair, said chair comprising two members each including a base upon which the rails rest, each having an inturned angular flange which overlies the base flange of the rails and a vertical plate which engages the webs and one of the underfaces of the heads of the rails, one of the said members having its side centrally formed with an outwardly projecting reinforcement which has its upper portion extending above the edge of the plate to provide a crest for said section of the chair, the base plates of both of said sections being centrally formed with transverse depending enlargements, one of which being formed with the aforementioned reinforcement of one of the said sections, the said enlargement terminating flush with the inner longitudinal edge of the base of the section and being recessed inwardly and horizontally below the said section, the recess terminating in a vertically disposed longitudinally extending channel, the reinforcing enlargement of the second chair section projecting beyond the outer longitudinal edge of the said section and having its inner edge upon the base of the said section formed with an outwardly extending longitudinally disposed hook which is adapted to be received within the substantially L-shaped recess provided by the first section, and means for securing the sections to the rails.

1,107,985. DISPLAY-BOX. SAMUEL MOSKOWITZ, New York, N. Y. Filed Feb. 24, 1914. Serial No. 820,579. (Cl. 211—24.)

1. A display box comprising a base, a vertically extending upright secured to each end of the base provided with an upper rounded end, a front, top and rear wall formed of a single piece secured to said uprights, and open at its front and top, and a vertically extended receptacle secured to the inner face of the uprights between the front and rear wall of the box.

2. A display box comprising a base, a vertically projecting upright secured to each end of the base provided with an upper rounded end and an inwardly projecting portion, a front, top and rear wall formed of a single piece and secured to said uprights, and open at its front and top, and a vertically projecting portion of said uprights between the said front and rear wall.



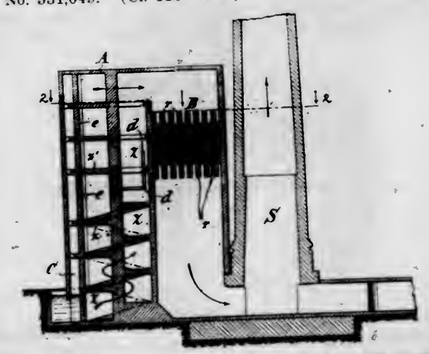
3. A display box comprising a base, a vertically projecting upright secured to each end of the base provided with an upper rounded end and an inwardly projecting portion, a front, top and rear wall secured to said uprights, and open at its front and top, a vertically extended receptacle secured to the inner face of said inwardly projecting portions, and an opening through the top wall of the receptacle whereby an article may be placed in or removed from the receptacle through the top of the box.

4. A display box comprising a base, a vertically projecting upright secured to each end of the base provided with an upper rounded end and an inwardly projecting portion, a front, top and rear wall formed of a single piece secured to said uprights, and open at its front and top, a vertically extended receptacle located between said walls and secured to the inner surface of said inwardly projecting portion, said receptacle having a display opening in the front portion, and an opening through the top whereby an article may be placed in or removed from the receptacle through the open top portion of the box.

5. A display box comprising a base, a vertically projecting upright secured to each end of the base, said uprights having upper rounded ends and inwardly projecting portions, a front, top and rear wall secured to said uprights, and open at its front and top, a vertically extended receptacle located within said walls and secured to the inner surface of said inwardly projecting portions, a guideway formed between said walls and the outer edges of the inwardly projecting portions, and a pliable slidable cover adapted to be moved around in said guideway in order to close or open the front and top of the box.

[Claim 6 not printed in the Gazette.]

1,107,986. APPARATUS FOR PURIFYING GASES. ARNO MÜLLER, Leipzig-Schleussig, and CHARLEY BOMHARD, Berlin, Germany. Filed Dec. 2, 1909. Serial No. 531,049. (Cl. 110—183.)



1. In apparatus for purifying waste gases, the combination with a moistening chamber, of means therein for

causing a current of gas to travel an upward spiral path in passing through said chamber, an upwardly extending collection chamber at the side of said moistening chamber and communicating therewith through a slot extending transversely to the path of the gas, and a pipe connecting the upper portion of said collection chamber with said moistening chamber for returning gas which may enter the collection chamber through said slot.

2. In apparatus for purifying waste gases, the combination with a moistening chamber, of means therein for causing a current of gas to travel in a helically ascending path in passing through said chamber, an upwardly extending collection chamber at the side of said moistening chamber and communicating therewith through a slot extending transversely to the path of the gas, and a pipe connecting the upper portion of said collection chamber with said moistening chamber for returning gas which may enter the collection chamber through said slot, the delivery end of said pipe being so arranged with relation to the direction of movement of the helically ascending current of gas as to cause the latter to create a suction in said pipe.

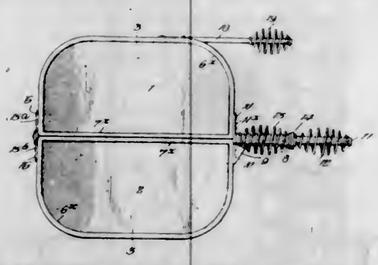
3. In apparatus for purifying waste gases, the combination with a moistening chamber of means therein for causing a current of gas to travel in a helically ascending path in passing through said chamber, means for supplying a moistening liquid to said chamber and a collection chamber at the side of said moistening chamber and communicating therewith through a restricted opening extending transversely to the path of the gas together with means at the upper portion of said chamber for returning gas which may enter the collection chamber through said slot.

4. In apparatus for purifying waste gases, the combination with a moistening chamber of means therein for causing a current of gas to travel in a helically ascending path in passing through said chamber, a collection chamber at the side of said moistening chamber and communicating therewith through a restricted opening extending transversely to the path of the gas, a spraying nozzle arranged to deliver its spray for assisting the helical movement of the gas and a drying chamber having its upper portion connected to the delivery end of said moistening chamber and provided with an outlet below said connection.

5. In apparatus for purifying waste gases, the combination with a moistening chamber of means therein for causing a current of gas to travel upwardly in a spiral path in passing through said chamber, a collection chamber beside said moistening chamber and communicating therewith through a slot extending transversely to the path of the gas, and means at the upper portion of said collection chamber for returning gas which may enter the collection chamber through said slot.

[Claims 6 to 8 not printed in the Gazette.]

1,107,987. GRIDDLE. THOMAS J. NASH, Lincoln, Nebr. Filed Aug. 13, 1913. Serial No. 784,517. (Cl. 53—10.)



1. In a griddle, a pair of similar griddle sections hinged together, a handle member for each of said sections, the axis of one of said handle members being in alinement with the top of the griddle and the other of said handle members surrounding a portion of and forming a bearing for the first mentioned handle member.

2. In a griddle, a pair of similar griddle sections hinged together, a handle member for each of said sections, the axis of one of said handle members being in alinement with the top of the griddle and the other of said handle members surrounding a portion of and forming a bearing for the first mentioned handle member, and both of said handle members constituting a hinge for the griddle sections.

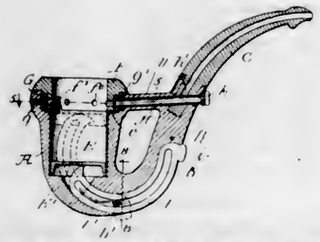
3. In a griddle, a pair of similar griddle sections hinged together, a handle member for each of said sections, the axis of one of said handle members being in alinement with the top of the griddle and the other of said handle members surrounding a portion of and forming a bearing for the first mentioned handle member, both of said handle members constituting a hinge for the griddle sections, and a hinge at the opposite end of said griddle sections, the center of the last named hinge being in alinement with the axis of the first named handle member.

4. In a griddle, the combination with a plurality of similar griddle sections, of an inner handle member secured to one of said sections at one end thereof, the axis of said handle member being in alinement with the top of the griddle sections, an outer tubular handle member secured to the other section, said tubular handle surrounding and forming a bearing for the first mentioned handle member, said tubular member being shorter than said inner handle member, and a hinge at the opposite end of said griddle sections, the center of said hinge being in alinement with the axis of said inner handle member.

5. In a griddle, a pair of similar griddle sections, each of said griddle sections having a downwardly extending peripheral flange and being provided with a peripheral bead, an inner cylindrical handle member having a laterally and downwardly bent flange, means for securing said flange to one of said griddle sections, an outer tubular handle member surrounding a portion of said inner handle member and constituting a bearing for the latter, said outer handle member having a downwardly and laterally bent flange, means for securing said last named flange to the other of said griddle sections, the axes of said handle members being in alinement with the top of said griddle sections, and a hinge at the opposite end of said griddle sections, the center of said hinge being coincident with the axis of said handle member.

[Claim 6 not printed in the Gazette.]

1,107,988. TOBACCO-PIPE. MAURICE NEUMAN, Chicago, Ill. Filed Sept. 23, 1913. Serial No. 791,320. (Cl. 131—12.)



1. A tobacco pipe comprising a bowl, a curved main stem extending upwardly from the lower end of the bowl, a mouthpiece connected to the stem, a supplemental stem connecting the upper portions of the bowl and main stem and having a smoke passage communicating at one end with the bowl and at its opposite end with the mouthpiece, a rotatable tobacco receptacle within the bowl, a ring seated on the upper end of the bowl and connected to the receptacle, a vertically adjustable base within the receptacle, and a member slidably mounted in the main stem for adjusting the said base.

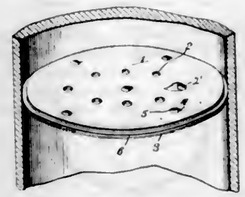
2. A tobacco pipe comprising a bowl, a curved main stem extending upwardly from the lower end of the bowl, a mouthpiece having its lower end extended into the upper end of the main stem, a supplemental stem connecting the upper ends of the main stem and bowl, said main stem and said mouthpiece having transverse alined openings, and a smoke tube extending through the supplemental stem and communicating at one end with the bowl and having its opposite end extending through the transverse openings of the main stem and mouthpiece, and provided with a wall opening communicating with the mouthpiece.

3. A tobacco pipe comprising a bowl, a smoke stem communicating with the upper portion of the bowl, a mouthpiece communicating with the stem, a rotatable tobacco receptacle within the bowl and having a vertically adjustable base, a ring seated on the bowl and connected to the tobacco receptacle for rotating the latter, and means for adjusting the base.

4. A tobacco pipe comprising a bowl a smoke stem communicating with the upper portion of the bowl, a mouthpiece communicating with the stem, a rotatable tobacco receptacle within the bowl and having a plurality of points of communication with the smoke stem controlled by rotation of the receptacle, the bowl having a vertically adjustable base, and means for adjusting the base.

5. A tobacco pipe comprising a bowl, a curved main stem extending upwardly from the lower end of the bowl and having a groove the lower end of which extends centrally into the base of the bore of the bowl, a mouthpiece connected to the upper end of the stem, a supplemental stem connecting the upper portions of the bowl and the main stem and having a smoke passage communicating with the upper portion of the bore of the bowl and the lower end of the mouthpiece, the bore of the bowl having an upper enlarged portion forming an intermediate annular shoulder, a tubular tobacco receptacle rotatable within the bowl bore and having an upper outwardly projecting flange seated on the said shoulder, a split clamping collar seated on the outer edge of the receptacle flange and secured to the bowl, a rotating ring seated on the upper end of the bowl and having a depending reduced portion secured to the inner edge of the receptacle flange, said reduced ring portion also having a circular series of openings each of which may be positioned to register with the smoke passage, a base plate vertically adjustable within the tobacco receptacle, and an arm slidably mounted in the main stem groove and having an inner cam-shaped end beneath the base plate and an exterior projecting knob or handle upon its outer end, all for the purpose described.

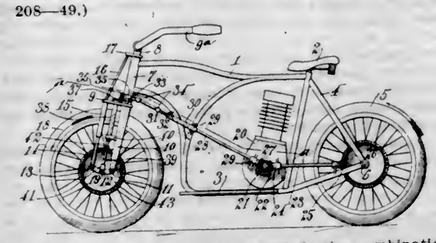
1,107,989. CHEESE-FOLLOWER. NORMAN OESTREICH, Plymouth, Wis., assignor of one-half to Anton Schulte, Plymouth, Wis. Filed Feb. 17, 1914. Serial No. 819,291. (Cl. 31—21.)



1. A follower comprising an annular plate, an annular flange secured to the plate and having an edge portion spaced from the edge of the plate, a resilient split ring located in the space between the plate and the flange and having an edge portion which normally lies beyond the edges of the plate and flange, said plate being provided at its intermediate portion with apertures.

2. A follower comprising an annular plate, an annular flange secured to the plate and having an edge portion spaced from the edge of the plate, a resilient split ring located in the space between the flange and the plate and having an edge portion which normally lies beyond the edges of the plate and flange, said plate being provided at its intermediate portion with apertures, and rivets passing transversely through the plate and having heads which lie beyond one side of the plate.

1,107,990. MOTOR-CYCLE. GEORGE PAMER, Dayton, Ohio. Filed Sept. 24, 1913. Serial No. 791,520. (Cl. 208—49.)

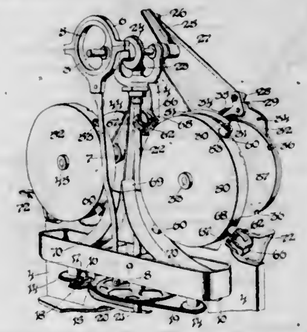


1. In a device of the type specified, the combination with a frame, a front fork pivotally attached to said frame, and front and rear wheels mounted in said front fork and frame, of a gear mounted on said front wheel, a drive shaft on the frame, and telescopic and universal joint driving connections between the drive shaft and the gear on the front wheel.

2. In a device of the type specified, the combination with a frame, a front fork pivotally attached to said frame, and front and rear wheels mounted on said front fork and frame, of gears mounted on said front wheel, a drive shaft on said frame, shafts geared to said gears and journaled on said front fork, and universal and telescopic connections geared to the drive shaft and to said first named shafts whereby said front wheel is driven from the drive shaft without interfering with a free turning of said fork.

3. In a device of the type specified, the combination with the front fork, of levers mounted on said fork, cushion members mounted on said fork and connected to said levers, an axle connected with said levers, and a wheel mounted on said axle, of a telescopic shaft journaled on said fork, geared connections between said shaft and wheel, means for driving said shaft, and end bearings mounted on said levers adjacent to said axle and forming a bearing for the lower end of said telescopic shaft whereby said wheel may be driven from said shaft and be permitted to move relatively to said fork under the influence of said cushion members.

1,107,991. MACHINE FOR EXTRACTING THE JUICE AND PULP FROM LEMONS AND THE LIKE. RICHARD THOMAS PARK, Albert Park, Melbourne, Victoria, Australia. Filed Apr. 21, 1914. Serial No. 833,406. (Cl. 100—50.)



1. An improved machine for extracting the juice and pulp from lemons and the like, consisting in a pulp and juice receptacle, of extractors within said receptacle,

means for rotating said extractors, a knife, a series of lemon cups carrying the fruit, means for moving the fruit in said cups against said knife, said means delivering the cut fruit in the cups to the extractors, and means for ejecting the peel of the fruit from said cups after treatment by the extractors.

2. An improved machine for extracting the juice and pulp from lemons and the like, consisting in a pulp and juice receptacle, extractors mounted therein, means for rotating said extractors, means for raising and lowering the receptacle, a knife above said receptacle, segmental pathways passing from the knife above the extractors, carriers disposed at each side of the knife, spring controlled lemon cups carried by the carriers, and means for operating the carriers.

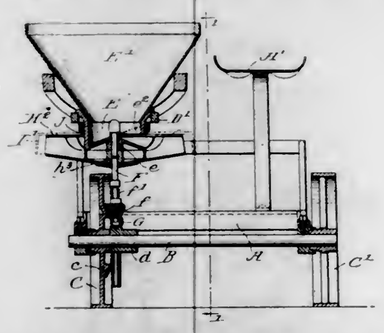
3. An improved machine for extracting the juice and pulp from lemons and the like, consisting in two carriers intermittently moving toward each other, lemon cups carried by each carrier, means for centralizing the fruit between a cup of each carrier, means for cutting each lemon into two pieces, means for extracting the juice and pulp from each piece, means for collecting the juice passing from the fruit during and after cutting, the collecting means passing from the cutting to the extracting means, means for preventing damage to the peel during extraction of the juice and pulp owing to variations in the thickness of said peel, and means for ejecting the peel from the lemon cups.

4. An improved machine for extracting the juice and pulp from lemons and the like, consisting in two plunger carriers, spring controlled plungers carried by said carriers, means for reciprocating the plungers of one of said carriers, a lemon cup carried by each plunger of each carrier, means for imparting an intermittent motion to the carriers, a knife disposed between the carriers, segmental pathways passing from said knife, a pulp and juice receptacle below the pathways and the carriers, rotary extractors mounted in the receptacle, means for rotating the extractors and means for elevating and lowering the receptacle and extractors therein to and from the pathways.

5. In an improved machine for extracting the juice and pulp from lemons and the like, two lemon cups one of which carries a lemon, means for accommodating different sizes of lemons in the cups, means for moving said cups toward each other, means for centralizing the lemon between the two cups, means for cutting the lemon into two pieces one of which is retained by each cup, and means entering into each piece of the lemon to extract the juice and pulp therefrom.

[Claims 6 to 18 not printed in the Gazette.]

1,107,992. BROADCASTING MECHANISM. JOHN E. PARRISH, Richmond, Va. Filed Jan. 26, 1914. Serial No. 814,438. (Cl. 111—38.)



1. In a device of the character described, the combination of a broadcasting member, a supporting bracket having a portion extending horizontally above the broadcasting member and in the form of a ring, and a feed hopper having its base extending downwardly through the ring and provided with a slotted opening in its side wall to deliver material upon the broadcasting member, and also provided with a grooved upper edge loosely seated upon the said ring of the bracket whereby the hopper and its base may be freely rotated in order to control the direction in which the material is thrown.

2. In a device of the character described, the combination of a broadcasting member, a feed hopper having its base provided with a slotted feed aperture opening laterally above the broadcasting member, a feed controlling band surrounding the hopper base and movable vertically thereon to partially and wholly cover the said feed aperture, an intermediately pivoted lever having a yoke at one end and a handle at its opposite end, the arms of which yoke engage the said feed band at diametrically opposite points for raising and lowering the latter and means engaging the handle end of the lever to hold the sme and the feed band in adjusted position.

3. In a device of the character described, the combination of a feed hopper, a broadcasting member disposed horizontally below the feed hopper to receive material therefrom and having a circular strip around its outer edge and spaced above the base thereof, and a feed controlling hood consisting of a circular strip which may be secured to the said strip of the broadcasting member and also to the base thereof, said hood having a surrounding flange provided with a plurality of transverse slits forming free tongues which may be adjusted to the desired angle.

4. In a device of the character described, the combination of a feed hopper, a broadcasting member disposed horizontally below the feed hopper, and a feed controlling hood consisting of a body strip having a flange extending around its outer edge and provided with a plurality of transverse slits forming free tongues therebetween which may be bent to the desired angles, said hood being adapted to be secured to the upper and lower outer edges of the broadcasting member so as to project its flange respectively in downward and upward extending positions, all for the purpose described.

5. In a device of the character described, the combination of a centrifugal broadcasting member, means for rotating said member, a feed hopper mounted above the broadcasting member and having its base provided with a slotted opening through the wall thereof and extending therearound for a distance somewhat over half the circumference thereof, said wall having a series of vertical apertures along said feed opening, supplemental pieces adapted for disposition within said feed opening and also having vertical apertures to aline with the said wall apertures, and locking pins for engagement through the alined apertures to secure the said supplemental pieces in position.

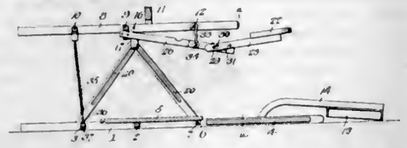
[Claim 6 not printed in the Gazette.]

1,107,993. HORSE-COLLAR. HENRY DOSS PATE, Abbott, Tex. Filed July 8, 1913. Serial No. 777,898. (Cl. 54—18.)



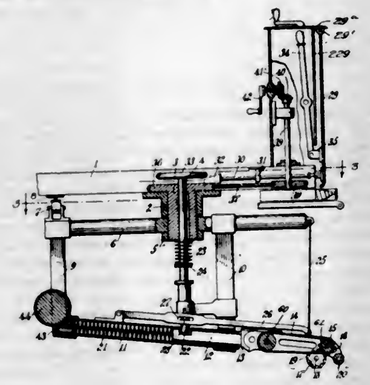
A device of the class described comprising a pair of plates adapted to be movably connected together and curved to conform to the shoulders and neck of the animal, oppositely curved flanges formed at the marginal edges of the plate and extending outwardly, a pair of pneumatic casings connected together at one end and having rim engaging ribs at their marginal edges adapted to entend over the plate and removably engage the curved flanges of the plates, curved reinforcing plates embedded in said ribs, and independent pneumatic tubes arranged in each casing between the same and the inside of the associated plate.

1,107,994. HIGH CHAIR. ROY E. PATRICK, Clayton, N. Y. Filed Mar. 26, 1913. Serial No. 756,925. (Cl. 155—44.)



A structure of the class described comprising a base frame, a rocking frame, pairs of brace arms pivotally connected to the base frame and provided with longitudinal slots, said brace arms converging in one direction, being arranged in overlapping position, and extending toward the rocking frame, rearwardly extending arms secured to the rocking frame, thumb screws pivotally connecting said arms to the brace arms and adjustable in the slots of the latter thus permitting the rocking frame to be folded against or spaced from the base frame and pivotally supported, a jump seat connected to, movable with the rocking frame and extending beyond one end of the rocking frame, and a spring connecting the opposite end portions of the base and rocking frames together.

1,107,995. AUTOMATIC FENDER. BERNARD PÉDUCASSE, Lyon, France. Filed Dec. 13, 1909. Serial No. 532,792. (Cl. 105—255.)



1. In a structure such as described, and in combination with a vehicle, a fender, mounting means therefor, the fender and means being rotatably carried by the vehicle, means for retaining the fender in one position in the said mounting means, mens for releasing said fender and means for projecting the said fender when the retaining means is released, the means for projecting the fender being operable in whatever direction the fender may be extended relatively to the vehicle.

2. In a structure such as described, and in combination with a vehicle, a fender and mounting means therefor carried by the vehicle, a movable dashboard, means for retaining the fender in one position in the said mounting means, and devices engaging the dashboard and the fender structure whereby the fender may be projected relatively to the said mounting means.

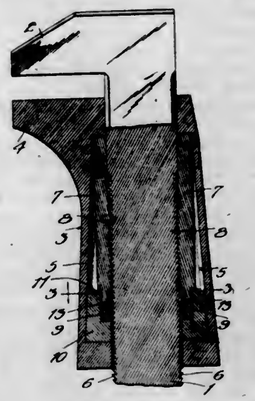
3. In a structure such as described, and in combination with a vehicle, a fender, mounting means therefor, the fender and the said means being rotatably carried by the vehicle, means whereby the fender may be retained in one position in the mounting means, means whereby the fender may be projected relatively to the mounting means, a guide track on the said vehicle, a roller carried by the mounting means and adapted to engage the track, and means for rotating the said fender and mounting means relatively to the vehicle.

4. In a structure such as described, and in combination with a vehicle, a fender, mounting means therefor, mechanism for locking the fender in a certain position in the mounting means, a movable dashboard, and mechanism between the dashboard and the locking means, whereby the fender may be projected relatively to the said mounting means.

5. In a structure such as described, and in combination with a vehicle, a fender, mounting means therefor, the fender being movable in the mounting means, mechanism for locking the fender against movement, a movable dashboard for releasing the said locking means, and a lever for manually controlling the said movable dashboard.

[Claims 6 to 14 not printed in the Gazette.]

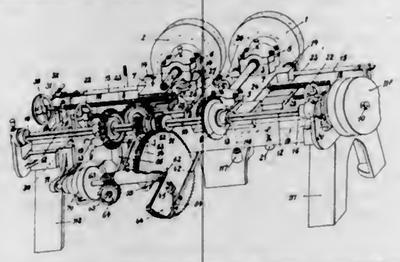
1,107,996. WRENCH. ALFRED PEKKALA, Hibbing, Minn. Filed Apr. 20, 1914. Serial No. 833,253. (Cl. 81—138.)



1. A wrench of the class described comprising a shank having a jaw at one end and provided with ratchet teeth on the side edges thereof, a housing slidably mounted on said shank and also provided with a jaw at one end cooperating with the first mentioned jaw, said housing providing channel ways between portions of the shank and portions of the side edges of said housing, locking bars mounted for oscillation in the aforesaid channel ways of said housing and adapted for engagement with the teeth on said shank, the inner ends of said locking bars being reduced in thickness, and a nut mounted for rotation in said housing and projecting therebeyond, the outer peripheral edge of said nut being provided with a pair of cam slots receiving the reduced inner ends of said locking bars therein, whereby to oscillate said locking bars as the nut is partially rotated in the housing.

2. A wrench of the class described comprising a shank having a jaw at one end and provided with ratchet teeth on the side edges thereof, a housing slidably mounted on said shank and also provided with a jaw at one end cooperating with the first mentioned jaw, said housing flaring outwardly toward its inner end and provided with channel-ways between the portions of the shank and side edges of said housing which also flare outwardly toward the inner ends thereof, locking bars mounted for oscillation in said flaring channel-ways, the inner ends of said locking bars being reduced in thickness and a nut mounted for rotation in said housing and projecting beyond the side edges thereof, the outer peripheral edge of said nut being provided with a pair of cam slots to receive the reduced inner ends of said locking bars therein, whereby to oscillate said bars as the nut is partially rotated in the housing.

1,107,997. MACHINE FOR GRINDING ROUGH-FORGED BLADES OF KNIVES AND OTHER CUTTING INSTRUMENTS. PIERRE PEROGNAT, Thiers, France. Filed Apr. 10, 1913. Serial No. 760,262. (Cl. 51—7.)



1. A machine of the class described, comprising a frame and two grindstones mounted on sliding carriages 7 traveling on the framing of the machine, and adjustable as to position by means of an arrangement of screws 16, 23 and handwheels 22, 30, the said grindstones being driven independently by two bevel wheels 8, 9 of which one, 9, is movable along the main shaft 10 of the machine, for the purpose of adjusting the distance between the grindstones and the position of each grindstone and of controlling their movements independently of each other and also independently of all the other movable parts of the machine.

2. The mechanism for producing the horizontal alternating movement of the slide 36 carrying the blade-clamping devices, comprising a toothed wheel 44 engaging with a pinion 51 that is normally loose on the main shaft 10 of the machine, but is capable of being engaged with a sleeve 52 rotating with the shaft and slidable along the same, said sleeve being engaged with a toothed sector 53 whose positions of engagement and disengagement are controlled by an engaging lever 59 through the medium of a fork 56, 57.

3. In a machine of the class described, a mechanism for limiting the ascending movement of the slide carrying the blade clamping device, comprising an engaging lever 91 on the axle of which there are mounted a small lug 87 bearing upon a rubber block, and a rod 93 bearing for a length corresponding to the height of the blade to be ground, against another rod 94 that is movable vertically with the slide, the arrangement being such that when the two rods 93, 94 are no longer one in front of the other, the lower rod 93 is pushed forward by the compressed rubber block, with the result that the pinion driving the rack that raises the slide is disengaged from its shaft, and the slide and the parts depending thereon are caused to fall

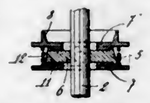
4. In a machine of the class described, a blade-clamping device, comprising a double table-plate 97, 98, the part 98 of which carries a guiding strip 101 of suitable profile against the two opposite faces of which two blades to be ground at one and the same time are pressed by means of clamps 106 of variable slope and by a central pressure cone 109.

5. A machine of the class described comprising a pair of abrading members, means for rotating said abrading members, reciprocating carriages for supporting said abrading members, means for adjusting said carriages forwardly from each other in order to cause said abrading members to approach and recede from each other, a sliding member for supporting an article to be abraded, and means for moving said sliding member transversely to its sliding movement.

[Claims 6 and 7 not printed in the Gazette.]

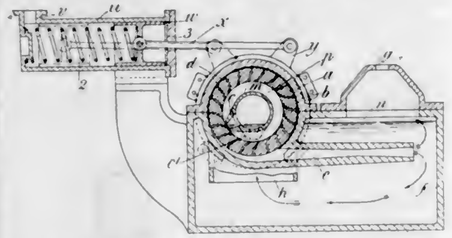
1,107,998. YIELDING BEARING. JULIEN PERSOONS and ALPHONSE PERSOONS, Childonck, near Louvain, Belgium. Original application filed Feb. 21, 1912, Serial No. 679,127. Divided and this application filed Mar. 10, 1913. Serial No. 753,149. (Cl. 64—48.)

1. The combination with the shaft of a centrifugal cream separator of pins arranged radially around said shaft, a cup-member in which said pins are guided horizontally and wires wrapped about said cup-member, the plane containing said wires forming an angle with the end-surfaces of said pins coöperating with said wires.



2. The combination with the shaft of a centrifugal cream separator of pins arranged radially around said shaft, a cup-member in which said pins are guided horizontally, wires wrapped about said cup-member and pressing the pins against the shaft, and end-surfaces formed on the pins and coöperating with said wires whereby the number of wires pressing the pins against the shaft is increased with the extent of the movement of the pins in the cup member.

1,107,999. ROTARY ELASTIC-FLUID PUMP. JOSEPH PETERMÖLLER, Cathcart, Glasgow, Scotland. Filed July 7, 1913. Serial No. 777,718. (Cl. 230—14.)



1. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for controlling the position of the directing nozzles in action at any time.

2. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles situated within said wheel and adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles situated outside said wheel, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for controlling the position of the directing nozzles in action at any time.

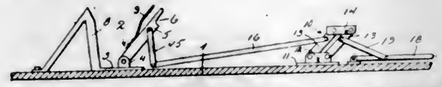
3. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for adjusting the angular position of said directing nozzles.

4. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles situated within said wheel and adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles situated outside said wheel, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for adjusting the angular position of said directing nozzles.

5. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the interior of said wheel, a hollow member situated within said wheel, directing nozzles carried by said hollow member and adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said hollow member and through it to said directing nozzles, discharge nozzles, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for moving the said hollow member in a manner to adjust the angular position of said directing nozzles.

[Claims 6 to 13 not printed in the Gazette.]

1,108,000. JACK FOR RAISING AUTOMOBILES AND OTHER VEHICLES. WILLIAM G. PEUGH, Aberdeen, Miss. Filed Apr. 15, 1913. Serial No. 761,330. (Cl. 57—15.)



1. A jack comprising a pair of inclined levers pivoted upon a base and adapted to be engaged by one axle of a vehicle, stops mounted on said base and adapted to be resiliently engaged by said levers, other levers spaced from and in alinement with said first named levers, short links connected with said first named levers, long links connected with said short links and with said last named levers, the points of connection of said sets of links being adapted to rest upon the base for supporting said first named levers at their proper inclination when in their initial position and to actuate said last named levers when said first named levers have been swung upward beyond the vertical, and a manually operated lever connected with said last named levers for returning them to their initial position after the jack has been actuated.

2. A jack comprising a pair of inclined levers pivoted upon a base and provided with recesses adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, springs secured on said levers and adapted to contact with said stops, two pairs of levers pivoted upon the base in alinement with and spaced from said first named levers, shoes pivotally connecting the upper ends of said pairs of levers and disposed parallel with the base, links connected with said first named levers, and links connected with said pairs of levers and with said first named links, said first named links being adapted to rest upon the base when the jack is in its initial position for maintaining said inclined levers at the proper inclination and bring said pairs of levers to a vertical position as said first named levers pass from a vertical position to a forwardly inclined position.

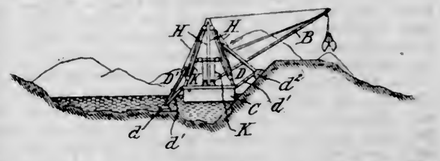
3. A jack comprising a pair of inclined levers pivoted upon a base and adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, springs secured on said levers and adapted to contact with said stops; two pairs of levers pivoted upon the base and spaced from said first named levers and in alinement therewith, shoes pivotally connecting the upper ends of each of said pairs of levers, and links connecting said first named levers with said pairs of levers and adapted to raise said pairs of levers to a vertical position when said first named levers are moved beyond a vertical position.

4. A jack comprising a pair of inclined levers pivoted upon a base and provided with recesses adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, two pairs of levers pivoted upon the base in alinement with and spaced from said first named levers, shoes pivotally connecting the upper ends of said pairs of levers, short links connected with said first named levers, long links connected with said pairs of levers and with said short links, an upright lever spaced from one of said pairs of levers, and a link connecting said upright lever with the adjacent pair of levers.

5. A jack comprising a base, two levers pivoted and separately mounted on said base, two pairs of levers pivotally mounted on said base, the levers of the respective pairs of levers connected by a shoe, said pairs of levers spaced apart and in alinement with said first named levers, means connecting said first named levers with said pairs of levers whereby said last named levers become actuated when said first named levers have been brought to a position beyond the vertical, and means for bringing said first named levers to a position beyond the vertical.

[Claims 6 to 14 not printed in the Gazette.]

1,108,001. DIGGING AND DREDGING MACHINERY. WILLIAM J. QUIMBY, New York, N. Y., assignor to The Hayward Company, New York, N. Y., a Corporation of New York. Filed June 2, 1910. Serial No. 564,704. (Cl. 37—18.)



1. In a retaining mechanism for dredges, and the like, the combination with an upwardly extending guide, of a swinging spud, means for pivotally and slidably connecting the inner end portion of said spud to said guide whereby the spud may be raised or lowered relative to the guide and it is adapted to be pivotally shifted in an inward or outward direction relative thereto, a spud foot loosely connected to the outer portion of said spud, a hoisting cable, and a pulling down cable, said cables being attached to the spud adjacent to the pivotal and slidable connection between the spud and the guide.

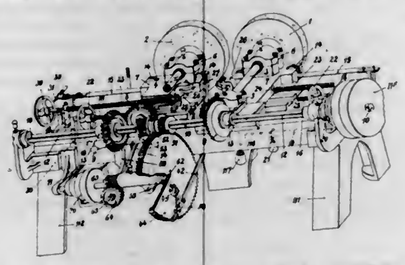
2. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud, said spud carrying at one end a spud-foot, the other end of said spud having a sliding and swinging connection with the frame, of a hoisting cable, a pulling down cable, said cables being connected with the spud adjacent to the slidable and swinging connection between the spud and the frame, and means for exerting tension separately on the cables whereby the spud may be raised or pulled downwardly.

3. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud, said spud carrying at one end a spud-foot, the other end of said spud having a sliding and swinging connection with the frame, of a hoisting tackle, a pulling down tackle, said tackles being connected with the spud adjacent to the sliding engagement between the spud and the frame, and means for separately operating the tackles, whereby the spud and foot may be pulled down to a substantially vertical position or said parts may be raised and swung outwardly to a desired elevated position.

4. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud provided at one end with a spud-foot, of a guide rail fixed to the frame, means for slidably connecting the other end of the spud to said rail, said connecting means embracing the rail for restraining the spud from movement in a direction outwardly from the frame, a hoisting cable, and a pulling down cable, said cables being connected with the spud adjacent to the sliding connection between the spud and the rail.

5. In a retaining mechanism for dredges, and the like, the combination with a frame, of a single headed guide-rail fixed to the frame, a spud, a guide device for slidably connecting one end of said spud to the guide-rail, a hoist-

1,107,997. MACHINE FOR GRINDING ROUGH-FORGED BLADES OF KNIVES AND OTHER CUTTING INSTRUMENTS. PIERRE PEROGNAT, Thiers, France. Filed Apr. 10, 1913. Serial No. 760,262. (Cl. 51—7.)



1. A machine of the class described, comprising a frame and two grindstones mounted on sliding carriages 7 traveling on the framing of the machine, and adjustable as to position by means of an arrangement of screws 16, 23 and handwheels 22, 30, the said grindstones being driven independently by two bevel wheels 8, 9 of which one, 9, is movable along the main shaft 10 of the machine, for the purpose of adjusting the distance between the grindstones and the position of each grindstone and of controlling their movements independently of each other and also independently of all the other movable parts of the machine.

2. The mechanism for producing the horizontal alternating movement of the slide 36 carrying the blade-clamping devices, comprising a toothed wheel 44 engaging with a pinion 51 that is normally loose on the main shaft 10 of the machine, but is capable of being engaged with a sleeve 52 rotating with the shaft and slidable along the same, said sleeve being engaged with a toothed sector 53 whose positions of engagement and disengagement are controlled by an engaging lever 59 through the medium of a fork 56, 57.

3. In a machine of the class described, a mechanism for limiting the ascending movement of the slide carrying the blade clamping device, comprising an engaging lever 91 on the axle of which there are mounted a small lug 87 bearing upon a rubber block, and a rod 93 bearing for a length corresponding to the height of the blade to be ground, against another rod 94 that is movable vertically with the slide, the arrangement being such that when the two rods 93, 94 are no longer one in front of the other, the lower rod 93 is pushed forward by the compressed rubber block, with the result that the pinion driving the rack that raises the slide is disengaged from its shaft, and the slide and the parts depending thereon are caused to fall

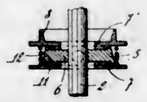
4. In a machine of the class described, a blade-clamping device, comprising a double table-plate 97, 98, the part 98 of which carries a guiding strip 101 of suitable profile against the two opposite faces of which two blades to be ground at one and the same time are pressed by means of clamps 106 of variable slope and by a central pressure cone 109.

5. A machine of the class described comprising a pair of abrading members, means for rotating said abrading members, reciprocating carriages for supporting said abrading members, means for adjusting said carriages forwardly from each other in order to cause said abrading members to approach and recede from each other, a sliding member for supporting an article to be abraded, and means for moving said sliding member transversely to its sliding movement.

[Claims 6 and 7 not printed in the Gazette.]

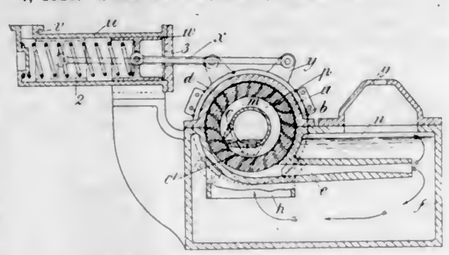
1,107,998. YIELDING BEARING. JULIEN PERSOONS and ALPHONSE PERSOONS, Childonck, near Louvain, Belgium. Original application filed Feb. 21, 1912, Serial No. 679,127. Divided and this application filed Mar. 10, 1913. Serial No. 753,149. (Cl. 64—48.)

1. The combination with the shaft of a centrifugal cream separator of pins arranged radially around said shaft, a cup-member in which said pins are guided horizontally and wires wrapped about said cup-member, the plane containing said wires forming an angle with the end-surfaces of said pins coöperating with said wires.



2. The combination with the shaft of a centrifugal cream separator of pins arranged radially around said shaft, a cup-member in which said pins are guided horizontally, wires wrapped about said cup-member and pressing the pins against the shaft, and end-surfaces formed on the pins and coöperating with said wires whereby the number of wires pressing the pins against the shaft is increased with the extent of the movement of the pins in the cup member.

1,107,999. ROTARY ELASTIC-FLUID PUMP. JOSEPH PETERMÖLLER, Cathcart, Glasgow, Scotland. Filed July 7, 1913. Serial No. 777,718. (Cl. 230—14.)



1. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for controlling the position of the directing nozzles in action at any time.

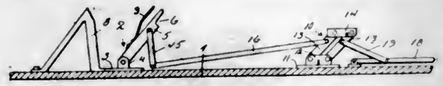
2. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles situated within said wheel and adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles situated outside said wheel, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for controlling the position of the directing nozzles in action at any time.

3. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles adapted to direct the auxiliary liquid into the buckets of said wheel, means for suppiying the auxiliary liquid to said directing nozzles, discharge nozzles, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for adjusting the angular position of said directing nozzles.

4. A rotary elastic fluid pump employing auxiliary liquid and comprising, in combination, a turbine wheel adapted to be rotated, means for admitting elastic fluid to the buckets of said wheel, directing nozzles situated within said wheel and adapted to direct the auxiliary liquid into the buckets of said wheel, means for supplying the auxiliary liquid to said directing nozzles, discharge nozzles situated outside said wheel, the said turbine wheel being adapted to deliver the elastic fluid and the auxiliary liquid into said discharge nozzles, and means for moving the said hollow member in a manner to adjust the angular position of said directing nozzles.

[Claims 6 to 13 not printed in the Gazette.]

1,108,000. JACK FOR RAISING AUTOMOBILES AND OTHER VEHICLES. WILLIAM G. PEUGH, Aberdeen, Miss. Filed Apr. 15, 1913. Serial No. 761,330. (Cl. 57—15.)



1. A jack comprising a pair of inclined levers pivoted upon a base and adapted to be engaged by one axle of a vehicle, stops mounted on said base and adapted to be resiliently engaged by said levers, other levers spaced from and in alinement with said first named levers, short links connected with said first named levers, long links connected with said short links and with said last named levers, the points of connection of said sets of links being adapted to rest upon the base for supporting said first named levers at their proper inclination when in their initial position and to actuate said last named levers when said first named levers have been swung upward beyond the vertical, and a manually operated lever connected with said last named levers for returning them to their initial position after the jack has been actuated.

2. A jack comprising a pair of inclined levers pivoted upon a base and provided with recesses adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, springs secured on said levers and adapted to contact with said stops, two pairs of levers pivoted upon the base in alinement with and spaced from said first named levers, shoes pivotally connecting the upper ends of said pairs of levers and disposed parallel with the base, links connected with said first named levers, and links connected with said pairs of levers and with said first named links, said first named links being adapted to rest upon the base when the jack is in its initial position for maintaining said inclined levers at the proper inclination and bring said pairs of levers to a vertical position as said first named levers pass from a vertical position to a forwardly inclined position.

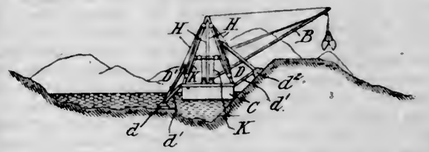
3. A jack comprising a pair of inclined levers pivoted upon a base and adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, springs secured on said levers and adapted to contact with said stops; two pairs of levers pivoted upon the base and spaced from said first named levers and in alinement therewith, shoes pivotally connecting the upper ends of each of said pairs of levers, and links connecting said first named levers with said pairs of levers and adapted to raise said pairs of levers to a vertical position when said first named levers are moved beyond a vertical position.

4. A jack comprising a pair of inclined levers pivoted upon a base and provided with recesses adapted to be engaged by one axle of a vehicle, stops adjacent said levers and adapted to be engaged thereby, two pairs of levers pivoted upon the base in alinement with and spaced from said first named levers, shoes pivotally connecting the upper ends of said pairs of levers, short links connected with said first named levers, long links connected with said pairs of levers and with said short links, an upright lever spaced from one of said pairs of levers, and a link connecting said upright lever with the adjacent pair of levers.

5. A jack comprising a base, two levers pivoted and separately mounted on said base, two pairs of levers pivotally mounted on said base, the levers of the respective pairs of levers connected by a shoe, said pairs of levers spaced apart and in alinement with said first named levers, means connecting said first named levers with said pairs of levers whereby said last named levers become actuated when said first named levers have been brought to a position beyond the vertical, and means for bringing said first named levers to a position beyond the vertical.

[Claims 6 to 14 not printed in the Gazette.]

1,108,001. DIGGING AND DREDGING MACHINERY. WILLIAM J. QUIMBY, New York, N. Y., assignor to The Hayward Company, New York, N. Y., a Corporation of New York. Filed June 2, 1910. Serial No. 564,704. (Cl. 37—18.)



1. In a retaining mechanism for dredges, and the like, the combination with an upwardly extending guide, of a swinging spud, means for pivotally and slidably connecting the inner end portion of said spud to said guide whereby the spud may be raised or lowered relative to the guide and it is adapted to be pivotally shifted in an inward or outward direction relative thereto, a spud foot loosely connected to the outer portion of said spud, a hoisting cable, and a pulling down cable, said cables being attached to the spud adjacent to the pivotal and slidable connection between the spud and the guide.

2. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud, said spud carrying at one end a spud-foot, the other end of said spud having a sliding and swinging connection with the frame, of a hoisting cable, a pulling down cable, said cables being connected with the spud adjacent to the slidable and swinging connection between the spud and the frame, and means for exerting tension separately on the cables whereby the spud may be raised or pulled downwardly.

3. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud, said spud carrying at one end a spud-foot, the other end of said spud having a sliding and swinging connection with the frame, of a hoisting tackle, a pulling down tackle, said tackles being connected with the spud adjacent to the sliding engagement between the spud and the frame, and means for separately operating the tackles, whereby the spud and foot may be pulled down to a substantially vertical position or said parts may be raised and swung outwardly to a desired elevated position.

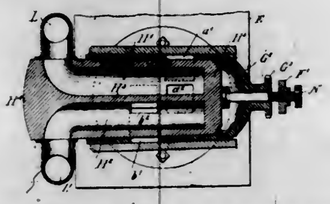
4. In a retaining mechanism for dredges, and the like, the combination with a frame, and a spud provided at one end with a spud-foot, of a guide rail fixed to the frame, means for slidably connecting the other end of the spud to said rail, said connecting means embracing the rail for restraining the spud from movement in a direction outwardly from the frame, a hoisting cable, and a pulling down cable, said cables being connected with the spud adjacent to the sliding connection between the spud and the rail.

5. In a retaining mechanism for dredges, and the like, the combination with a frame, of a single headed guide-rail fixed to the frame, a spud, a guide device for slidably connecting one end of said spud to the guide-rail, a hoist-

ing cable, a pulling down cable, said cables being connected to the spud at that end thereof to which the guide device is connected, and a spud foot pivoted to the other end of said spud.

[Claims 6 to 17 not printed in the Gazette.]

1,108,002. ROTARY VALVE. RICHARD BRUCE RANSOM, Sutherland, Fla. Filed Oct. 18, 1913. Serial No. 795,880. (Cl. 136—7.)



1. A rotary engine valve, comprising a valve casing provided with a cylinder admission port and a cylinder exhaust port, the ports leading to the cylinder of the engine, a hollow valve fitted to rotate in the said casing, and a non-rotatable shell fitting into the said hollow valve, the said shell having a lengthwise extending partition dividing the shell into a supply chamber and an exhaust chamber, the said chambers having ports opposite the said admission and exhaust ports and the said valve having ports adapted to connect the said admission and exhaust ports with the corresponding ports in the said shell.

2. A rotary engine valve, comprising a valve casing provided with a cylinder admission port and a cylinder exhaust port, the ports leading to the cylinder of the engine, a hollow valve fitted to rotate in the said casing, and a non-rotatable shell fitting into the said hollow valve and provided with a lengthwise extending partition dividing the said shell into a supply chamber and an exhaust chamber, the said supply chamber having a port opposite the said admission port and the said exhaust chamber having a port opposite the said exhaust port, and the said valve having ports of which one is adapted to connect the said admission chamber port with the said cylinder admission port and the other valve port is adapted to connect the said cylinder exhaust port with the said exhaust chamber port.

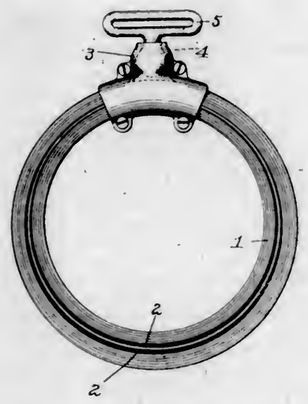
3. A rotary engine valve, comprising a valve casing provided with a cylinder admission port and a cylinder exhaust port, the ports leading to the cylinder of the engine, a hollow valve fitted to rotate in the said casing, a non-rotatable shell fitting into the said hollow valve and provided with a supply chamber and an exhaust chamber, the said supply chamber having a port opposite the said admission port and the said exhaust chamber having a port opposite the said exhaust port, and the said valve having ports of which one is adapted to connect the said admission chamber port with the said cylinder admission port, and the other valve port is adapted to connect the said cylinder exhaust port with the said exhaust chamber port, the said shell projecting at one end beyond the said casing and the said valve, and pipes attached to the said projecting shell end and connected with the said chambers.

4. A rotary engine valve, comprising a valve casing provided with a cylinder admission port and a cylinder exhaust port, the ports leading to the cylinder of the engine, a hollow valve fitted to rotate in the said casing, and a non-rotatable shell fitting into the said hollow valve, the said shell having ports opposite the said admission and exhaust ports and the said valve having ports adapted to connect the said admission and exhaust ports with the corresponding ports in the said shell, the said valve having exteriorly and interiorly tapering faces and the said faces having a conical bore, into which fits the exterior face of the said valve and the said shell having an exterior tapering face fitting onto the interior tapering face of the said valve.

5. A rotary engine valve, comprising a valve casing provided with a cylinder admission port and a cylinder exhaust port, the ports leading to the cylinder of the engine, a hollow valve fitted to rotate in the said casing, a non-rotatable shell fitting into the said hollow valve, the said shell having ports opposite the said admission and exhaust ports and the said valve having ports adapted to connect the said admission and exhaust ports with the corresponding ports in the said shell, the said valve having exteriorly and interiorly tapering faces and the said casing having a conical bore into which fits the exterior face of the said valve and the said shell having an exterior tapering face fitting onto the interior tapering face of the said valve, and means for adjusting the said shell relative to the said valve and the latter relative to the said casing.

[Claim 6 not printed in the Gazette.]

1,108,003. GYMNASIUM-RING. MILTON B. REACH, Chicopee, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co., a Corporation of Massachusetts. Filed Oct. 3, 1913. Serial No. 793,195. (Cl. 46—69.)



1. A gymnasium ring comprising an independent strip wound around itself to form a laminated section and means for forming a greater thickness at one point than at another.

2. A gymnasium ring comprising an independent strip wound upon itself with one or more inserts of limited extent held between the laminations to increase the cross section diameter of the ring at the location of the insert.

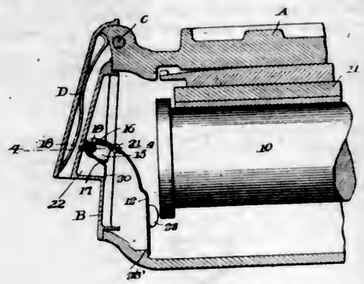
3. A gymnasium ring comprising two independent strips wound upon themselves, one forming the inner and the other the outer part of the ring, and an insert of limited extent between said parts.

4. A gymnasium ring comprising more than one section each composed of overlapping laminations and an insert between one or more sections producing a greater thickness at one point than another.

5. In combination with the wooden gymnasium ring, a suspending device of metal composed of two sections each having a curved portion semi-circular in cross section to fit the ring, and each having a socket portion and a loop or clip having an enlargement held within the socket, substantially as described.

1,108,004. WASTE-GUARD FOR JOURNAL-BOXES. CHARLES W. RENNER, Altoona, Pa. Filed Feb. 11, 1914. Serial No. 818,098. (Cl. 64—22.)

The combination with a journal box having a lid, of a waste guard mounted upon the lid, means within the journal box for guiding the waste guard during the opening and closing of the lid, tension means operative upon the waste guard to hold the same relative to the guiding



means, and a hub formed on the waste guard and serving as a fulcrum for the tension means.

1,108,005. CIGAR-CONTAINER. RAMON REY, Tampa, Fla. Filed Jan. 22, 1914. Serial No. 813,714. (Cl. 229—56.)



1. In a multi-cellular cylindrical package the combination of a pair of outer walls provided with weakened lines adapting the same to assume a circular form; a round shaped hinging and closing member integral with and joining said walls; a plurality of open ended cells substantially triangular in cross section, each having one side secured to said walls; and individual means integral with said walls for permanently closing one end of said cells, whereby said cells may be opened out into a flat form, or folded up into a cylindrical package, substantially as described.

2. In a multi-cellular cylindrical package the combination of a pair of outer walls having transparent portions and provided with weakened lines adapting the same to assume a circular form; a round shaped hinging and closing member integral with and joining said walls; a plurality of open ended cells substantially triangular in cross section, each having one side secured to said walls; individual means integral with said walls for permanently closing one end of said cells; and additional means for securing said individual means to said walls, whereby said cells may be opened out into a flat form, or folded up into a cylindrical package, substantially as described.

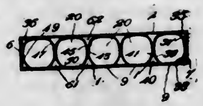
3. In a container the combination of a set of cells triangular in cross section provided with an individual closure for one end of each cell; a second set of cells triangular in cross section provided with an individual closure for each cell in said second set; and combined closing and hinging means circular in shape connecting said first and second set of cells, adapted to close the other ends of all the cells in both sets, and to permit the two sets of cells to open out and fold up, substantially as described.

4. In a container comprising two sets of cells, substantially triangular in cross section, the combination of a blank provided with two members forming the outer walls of both sets of cells and having a member circular in shape adapted to close the ends of all the cells, as well as to act as a hinge for said sets of cells; and an additional blank forming the other walls of said cells associated with said two members of said first named blank, substantially as described.

5. A blank for forming the outer walls of a plurality of cells comprising two members, each having a plurality of spaced members for forming the outer walls of a plurality of cells, said spaced members being separated by additional spaced members to receive the folded portions of another blank forming the other walls of said cells; and a combined hinging and closing member circular in shape joining said two blank members, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,006. PAPER CIGAR-CASE. RAMON REY, Tampa, Fla. Filed Feb. 3, 1914. Serial No. 816,260. (Cl. 229—56.)



1. In a cigar container the combination of outer containing walls; a combined hinging and closing member integrally joined to said walls; an additional closing member integrally joined to one of said walls; side inclosing flaps also integral with said last mentioned wall; and a plurality of cells open to each end and at their sides throughout their lengths connected with said other wall; one open end of each cell adapted to be opened and closed by said hinging member, substantially as described.

2. In a cigar container the combination of outer containing walls provided with transparent openings; a combined hinging and closing member provided with individual cell closing means integrally joined to said walls; an additional closing member integrally joined to one of said walls; side inclosing flaps also integral with said last mentioned wall; and a plurality of cells open at their sides throughout their length associated with said other wall, substantially as described.

3. In a cigar container the combination of a blank comprising two members, one of which is provided with a wall having transparent openings; side flaps integral with said member; individual cell closing flaps integral with said member; a combined hinging and closing member integral with both members of said blank and provided with end extensions; and a plurality of open ended cells adapted to be closed at one end by said cell closing flaps and at their other end by said hinging member; said cells upon at their sides throughout their length, and said transparent openings registering with said open sides, substantially as described.

4. In a cigar container the combination of an outer wall; a substantially round open sided and open ended cell having flexible walls secured to said first named wall; a closure for one end of said cell; a flap like cover for the open side of said cell; and a combined hinging and closing means for the other end of said cell joining said wall and cover, substantially as described.

5. A cigar container comprising a substantially round open sided and open ended cell having flexible walls adapted to be separated to admit cigars of different sizes; a closure for one end of said cell; a flap like closure for the open side of said cell; and a combined hinge and closure for the other end of said cell integral with said flap, substantially as described.

1,108,007. MANUFACTURE OF INDUSTRIAL OBJECTS FROM VOLCANIC AND OTHER FUSIBLE ROCK. FRANÇOIS RIBBE, Mauriac, France. Filed July 13, 1911. Serial No. 638,315. (Cl. 106—42.)

1. The method hereinbefore described for the manufacture of objects made of molten stone which consists in melting basalt, in casting the objects from the melted mass thus formed, in placing such objects, before their temperature has fallen below 500° centigrade, in a reheating oven at a temperature of about 800° centigrade, in maintaining the said objects at the last named tempera-

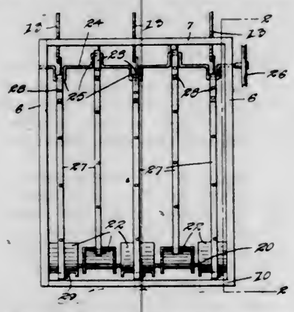
ture until such objects are completely devitrified and in cooling the said objects very slowly.

2. The method hereinbefore described for the manufacture of objects made of molten stone which consists in melting basalt, in subjecting the mass thus melted to the action of a body capable of producing bubbles, in casting the objects from the said mass thus rendered porous, in placing the objects thus melted, before their temperature has fallen below 500° centigrade, in a reheating oven at a temperature of about 800° centigrade, in maintaining the said objects at the last named temperature until such objects are completely devitrified and in cooling the said objects very slowly.

3. The hereinbefore described method for the manufacture of objects made of molten stone which consists in melting basalt, in subjecting the mass of molten basalt to the contact of carbon for the purpose of giving off gases therein which renders such mass porous, in casting the objects from the said mass thus rendered porous, in placing the objects thus cast, before their temperature has fallen below 500° centigrade, in a reheating oven at a temperature of about 800° centigrade, in maintaining the said objects at the last named temperature until such objects are completely devitrified and in cooling the said objects very slowly.

4. The hereinbefore described method for the manufacture of objects made of molten stone which consists in melting basalt on a hearth of carbonaceous material for the purpose of giving off gases therein which renders such mass porous, in casting objects from the mass thus rendered porous, in placing the objects thus cast, before their temperature has fallen below 500° centigrade in a reheating oven at a temperature of about 800° centigrade, in maintaining the said objects at the last named temperature until such objects are completely devitrified and in cooling the said objects very slowly.

1,108,008. STORE-WINDOW DISPLAY-MACHINE. JOHN WILLIAM SCHAEFER, Beardstown, Ill. Filed Nov. 14, 1913. Serial No. 801,049. (Cl. 211—14.)

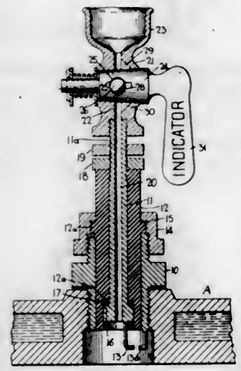


1. In a window display machine, a skeleton framework, a horizontal rod arranged at the top of said frame, an oscillating arm supported on said rod, an oscillating platform arranged at the bottom of the frame under said rod, a crank shaft, a bar dependent from the crank of said shaft and pivotally connected to one end of the platform, and a link connecting said bar to the oscillating rod.

2. In a window display device, a skeleton frame, a horizontal rod arranged at the top of said frame, a plurality of oscillating arms mounted on said rod, a plurality of oscillating platforms arranged below said arms, a crank shaft, a plurality of bars dependent from the crank shaft and pivotally connected at their lower ends to the oscillating platform, and a plurality of links connecting the oscillating arms with said bars.

3. In a window display device, a skeleton frame, a plurality of oscillating T-shaped members arranged at the top of said frame, a plurality of oscillating platforms positioned within said frame below the oscillating arms, a crank shaft having a plurality of cranks, a rod hooked at its upper end into engagement with each of said cranks, means pivotally connecting the lower terminals of the rods with the rear ends of said platforms, links connecting the rear terminals of the T-shaped members with the rods, means whereby the crank shaft may be rotated to oscillate said arms and platforms, and swings connected to the central arms of the T-shaped members.

1,108,009. COMBINED SPARK-PLUG, PRIMER, AND INDICATOR. AUGUST PHILIP SEISS, Omaha, Nebr., and GEORGE WILLIAM ROHRIG, Council Bluffs, Iowa. Filed Mar. 25, 1913. Serial No. 756,649. (Cl. 123—169.)



1. A spark plug having an axial through-bore, a priming cup communicating with said bore, a valve mounted to turn on an axis transecting the bore and formed with a transverse passage that is adapted to be brought into or out of register with the said bore and with the priming cup, and an outwardly-opening auxiliary valve commanding the passage in the main valve, the main valve being movable, to a closed position, to an open position with the auxiliary valve on its seat, or to a position with the auxiliary valve below its inverted seat to permit the auxiliary valve to rise toward its seat under the influence of fluid pressure in the spark plug, a by-pass to permit products of combustion to be ejected around the auxiliary valve in the second mentioned position of the main valve, and a by-pass to conduct a priming charge through the main valve and past the seated auxiliary valve in the third mentioned position of the main valve.

2. A spark plug having a bore, a priming cup in communication with said bore, a main valve having a passage and adapted to be turned to establish or cut off communication between the spark plug and priming cup, and an auxiliary valve in the passage of the main valve, there being a by-pass which, when the main valve is turned in one position, will pass fluid around the auxiliary valve from the priming cup to the spark plug.

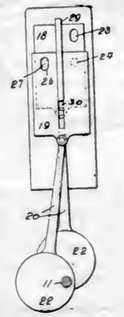
3. A spark plug having a bore, a main valve having a passage and adapted to be turned to close or to open the said bore, and an auxiliary valve movable with the main valve and commanding the passage therethrough and responsive to fluid pressure in the spark plug, there being a by-pass, and the auxiliary valve movable, in one position of the main valve, to permit outflow by way of the by-pass.

4. A spark plug having a bore, a main valve having a passage adapted to be turned to close or open the said bore, and an auxiliary valve movable with the main valve and commanding the passage thereof, and responsive to fluid pressure in the spark plug, there being a by-pass, and the auxiliary valve being movable, in one position of the main valve, to permit inflow by way of the by-pass.

5. A spark plug, having a bore, a priming cup, and a valve means movable in one direction by gravity for cutting off communication from the priming cup to the spark plug, but movable in the opposite direction, in response to fluid pressure in the spark plug, to permit escape of products from the spark plug through the priming cup.

[Claims 6 to 9 not printed in the Gazette.]

1,108,010. INTERNAL-COMBUSTION ENGINE. EDWIN H. SHATTUCK, Granby, Conn. Filed Oct. 18, 1912. Serial No. 726,421. (Cl. 123—188.)



1. In an internal combustion engine, a sliding valve in the form of a plate having an opening therethrough near one side of the same, the said valve being provided with a central longitudinal slot opening at one edge of the valve.

2. In an internal combustion engine, a sliding valve consisting of a flat plate having parallel lateral edges, said valve having an opening therethrough near one of the said edges, and a slot extending centrally inward from its outer edge.

3. In an internal combustion engine, the combination of a cylinder having passages leading into the same arranged side by side, a valve casing covering the outer ends of said passages, intake and exhaust pipes leading from said casing, a pair of superposed valves in the form of plates having parallel edges contained in said casing, said valves having openings near opposite lateral edges, and means for reciprocating said valves to establish communication between the inside of the cylinder and supply and exhaust pipes in proper order.

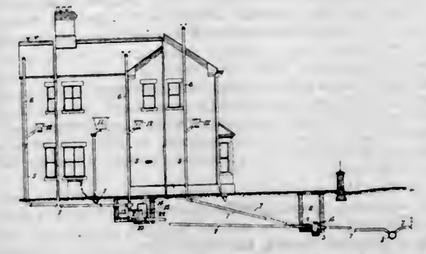
4. In an internal combustion engine, the combination of a cylinder having a pair of passages leading therefrom arranged side by side, a valve casing covering the outer ends of said passages, supply and exhaust pipes communicating with said casing, a pair of valves in the form of flat plates having parallel edges in said casing, each of said valves having openings therethrough near its inner end and adjacent opposite lateral edges, and means for reciprocating said valves to open said passages to the inlet and exhaust pipes in proper order.

5. In an internal combustion engine, the combination of a cylinder having a pair of passages leading through its wall arranged side by side, a valve casing covering the outer ends of said passages, intake and exhaust pipes leading to said casing, a pair of superposed valves in the form of flat plates in said casing, said valves having parallel edges and having openings therethrough adjacent their inner ends and near opposite lateral edges thereof, and means for reciprocating said valves, said valves being designed to overlap each other at the inner end of the engine stroke, and each serving as an extension of the other valve to prevent the passage leading from the cylinder into the valve casing controlled by the other valve from being opened, except at the right instant.

[Claims 6 to 8 not printed in the Gazette.]

1,108,011. SEWERAGE SYSTEM. ISAAC SHONE, Westminster, London, England. Filed Apr. 20, 1911. Serial No. 622,289. (Cl. 4—21.)

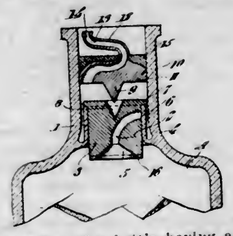
1. In a sewerage system, a siphon collector apparatus, drains on the building side of the collector apparatus, drains on the sewer side of the collector apparatus, an air pipe connecting the drains on one side of the collector apparatus with the drains on the other side of the said collector apparatus, and an automatic valve in the air pipe, whereby when the sewerage is siphoned through the collector apparatus a partial vacuum is created in the air pipe and opens the automatic valve and air introduced into the building drain will be drawn into and through the sewer drains, and subsequently said valve automatically closes to prevent air in the drains on the sewerable side of the collector apparatus passing into the drains on the building side of said collector apparatus.



2. In a sewerage system, a sewer, a hydraulic collector ejector apparatus of the rapid discharge type, drains connected to the building side of the apparatus, drains connected to the sewer side of the apparatus, and an air pipe communicating with the building side of the apparatus and the drains on the sewer side of said apparatus, a valve in said pipe, whereby the rapid discharge of the contents of the apparatus creates minus pressure in the drains on the sewer side of the apparatus and opens the valve and admits atmospheric air from the house drains to said sewer drains to accelerate the flow of the sewage and to clean and flush the drains with fresh air, and means for automatically closing the valve when pressure in the pipe is normal.

3. In a sewerage system, a sewer, a hydraulic collector ejector apparatus, an intercepter, drains connecting the ejector apparatus and intercepter, a drain connecting the intercepter and the sewer, means for creating a minus pressure in the drain, connecting the ejector apparatus and the intercepter to facilitate the flow of sewage, means for automatically introducing atmospheric air into the last mentioned drain, a pipe connected with the intercepter and the drain between the latter and the sewer, a valve in said pipe, and means for automatically closing said valve, whereby when sewerage passes through the drain from the intercepter, a supply of air will be drawn through the pipe, and the valve will be subsequently closed and prevent foul air from the sewerage passing to the intercepter.

1,108,012. NON-REFILLABLE BOTTLE. JUDGE N. SHOWS and CLYDE B. TUCKER, Ponchatoula, La. Filed Sept. 6, 1911, Serial No. 647,858. Renewed Jan. 10, 1914. Serial No. 811,494. (Cl. 215—69.)



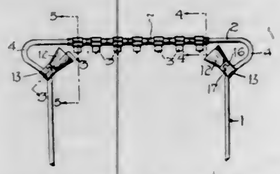
1. The combination of a bottle having a tubular member formed in the neck thereof and suitably spaced apart therefrom, a movable plug or stopper arranged within the tubular member and provided with a channel in the base

thereof and opening onto the side, a second stopper mounted above the first-mentioned stopper and rigidly secured to the bottle and spaced therefrom, said second stopper comprising a body portion, a curved extension connected to the body portion and forming a continuation of a curved channel extending through the body portion, and means disposed intermediate said stoppers for holding the movable stopper spaced from the second stopper when the bottle is inverted.

2. The combination of a bottle having a tubular member formed in the neck thereof and extending a short distance into the neck and coaxial with the said neck, a movable stopper comprising a body portion adapted to extend into the tubular member and having a curved duct or channel extending from the bottom onto the side thereof, and a head portion designed to rest upon the tubular extension when the body is upright, a second stopper mounted above the first-mentioned stopper and spaced therefrom and having a goose neck passage therethrough, and means associated with the proximate surface of said stoppers and designed to hold the movable stopper spaced from the stationary stopper when the bottle is inverted.

3. The combination of a bottle having a tubular member extending upwardly between the neck thereof, a movable stopper adapted to slide in the neck portion and having a channel therein, the head portion of said stopper being formed with a socket, a second stopper mounted above the first-mentioned stopper and comprising a body portion cemented in the neck of the bottle, and a curved tubular member communicating with a passage in the body portion, said body portion having a projection adapted when the bottle is inverted to seat within the socket of the movable stopper to hold the movable stopper spaced from the stationary stopper.

1,108,013. HARROW. JOHN R. SNYDER, Dallas Center, Iowa. Filed Sept. 18, 1913. Serial No. 790,508. (Cl. 55—3.)



1. A harrow comprising a frame, a plurality of teeth carried upon said frame, and a pair of conical rollers pivotally carried by said frame adjacent to said teeth.

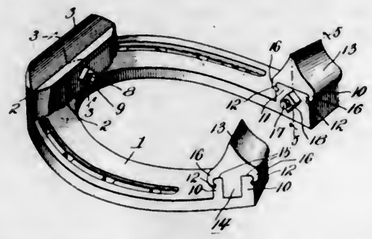
2. A harrow comprising a frame, a plurality of teeth mounted upon said frame, said frame curved adjacent its forward terminal, a U shaped clamping plate mounted upon each of the curved portions of said frame, a hinge plate secured to said U shaped clamping plate and a pair of conical rollers pivotally secured to said hinge plate.

3. A harrow comprising a frame, said frame of a U shape and provided at its bight portion with curved portions, a plurality of teeth mounted upon the bight portion of said U shaped frame, a clamping plate loosely mounted upon the curved portion of said frame, a hinge plate mounted within each of said clamping plates, a pair of conical rollers, a tongue carried upon the smaller terminals of each of said rollers, means for removably securing said tongue to said rollers and said tongue pivotally secured to said hinge plate.

4. A harrow comprising a U-shaped frame, a plurality of teeth mounted upon the central portion of said frame and conical rollers pivotally carried by said frame adjacent the ends of the central portion thereof.

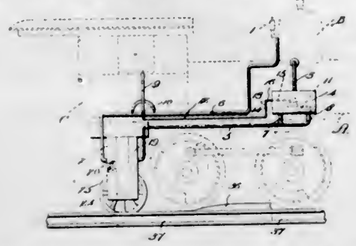
1,108,014. HORSESHOE. HENRY F. SOTTONG, Ponca, Okla. Filed Oct. 28, 1913. Serial No. 797,835. (Cl. 168—35.)

A horse shoe having at its forward portions spaced flanges provided with parallel inner surfaces, the said shoe being provided with a transversely disposed groove which lies between the inner surfaces of the flanges, a calk having a shank portion adapted to fit between the flanges, the head portion of the said shank fitting in the said groove, the said calk having shoulders which bear



against the edges of the flanges and the said calk, being further provided with shoulders which bear against the ends of the rear flange and which extends from the rear edge engaging shoulder to the under side of the shoe and a securing device passing transversely through the flanges and the shank of the calk.

1,108,015. AUTOMATIC SIGNALING APPARATUS FOR LOCOMOTIVES. JOSEPH STANLEY, Huntington, Ind. Filed Dec. 6, 1913. Serial No. 805,067. (Cl. 246—14.)

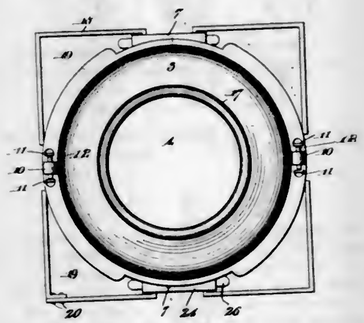


1. The combination with a railway locomotive having a steam whistle, of means for automatically sounding the whistle comprising a steam pipe connected to the whistle; a supporting frame mounted on the locomotive; blocks slidably mounted in said frame; a rod mounted on said blocks and having an opening adapted to register with said steam pipe and form a through passage therewith; springs engaging with said frame and normally holding the rod in position to obstruct said passage; a wheel carried by said blocks; and a raised track section adapted to engage with said wheel to move the rod and bring said rod opening into register with the steam pipe whereby to sound the whistle, substantially as described.

2. The combination with a railway locomotive having a steam whistle, of means for automatically sounding the whistle comprising a steam pipe connected to the whistle; a supporting frame mounted on the locomotive and constructed with guideways; blocks slidably mounted in said guideways; a cross-head mounted to be lifted by said blocks; a rod carried by said cross-head and having an opening adapted to register with said steam pipe and forming a through passage therewith when the rod is raised; a valve carried by said rod adapted to close the passage through said pipe when the rod is in normal position; resilient means engaging with said cross-head for holding the valve rod in normal position; a wheel carried by said blocks; and a raised track section adapted to engage with said wheel to move the rod and bring said rod opening into register with the steam pipe whereby to sound the whistle, substantially as described.

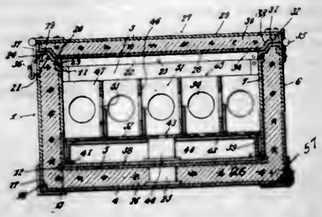
3. The combination with a railway locomotive having a steam whistle, of means for automatically sounding the whistle comprising steam pipes connected to the whistle; a supporting frame mounted on the locomotive and constructed with guideways; blocks slidably mounted in said guideways; a cross-head mounted on said slidable blocks; a rod carried by said cross-head; a sectional block mounted in the frame and having a chamber through which said rod passes, said steam pipes communicating with said chambers; a valve carried by said rod adapted to obstruct the steam pipe passage into said chamber when the rod is in normal position, said rod having an opening therethrough adapted to provide communication between the pipes when the rod is in raised position; springs seating against said sectional block and the cross-head and normally holding said valve in position to close the steam passage; a wheel carried by said blocks; and a raised track section adapted to engage with said wheel to move the rod and bring said rod opening into register with the steam pipes whereby to sound the whistle, substantially as described.

1,108,016. CARRIER FOR RECEPTACLES. LEONARD R. STEEL, Cleveland, Ohio. Filed Nov. 11, 1910. Serial No. 591,804. (Cl. 220—92.)



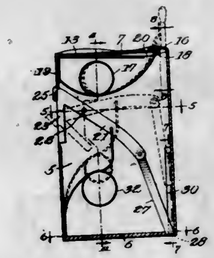
A member having an opening, a curved portion formed on the member and overlying the opening, lugs stamped from the member and lying beyond the ends of said curved portion, a member underlying the first member, a bolt passing through the opening and through the second member and having a right angularly extending head overlying the first member and mounted beneath the curved portion thereof and between said lugs, and a nut adjustable on the bolt and against the second member to hold the latter engaged against the first member.

1,108,017. BOTTLE-RECEPTACLE. LEONARD R. STEEL, Cleveland, Ohio. Filed Mar. 4, 1911. Serial No. 612,210. Renewed Aug. 12, 1913. Serial No. 784,437. (Cl. 62—14.)



A casing, a refrigerant container mounted in the bottom thereof, a foraminous member extending across and supported by said container and removable therefrom and closing the top thereof, a crate comprising interfitting partitions arranged relatively to define separate cells above the plane of the refrigerant container and supported by said foraminous member and having its companion partitions slotted vertically, the slots of one partition receiving portions of an adjacent partition, and bracing portions stamped from all of the slots and extending vertically of the partition, the braces of one partition being disposed at the sides of adjacent partitions, the said partitions having passages therein whereby lateral communication is established between the respective cells, the foraminous support establishing vertical communication between the refrigerant container and the cells, the top of the crate being disposed in spaced relation to the top of the casing whereby to form an intervening cold air circulating space therebetween.

1,108,018. MATCH-BOX. STEPHEN STIGLICH, Laurium, and JOSEPH W. SCHNELLER, Calumet, Mich. Filed Dec. 20, 1913. Serial No. 807,886. (Cl. 206—27.)



1. A match box having side walls, a top provided with a slot and bottom and a rear wall, a small and a large door forming the front closure of the box, a spring for normally holding the small door in closed position, a keeper for normally holding the large door in closed position, a partition extending centrally between the top and bottom walls for dividing the box into compartments and provided with a slot, one of said compartments being adapted to receive a plurality of matches, a lever pivoted within the other compartment, and having one end formed with an arm for normally closing the slot in the top of the box, a thumb catch at one end of said arm for operating the lever, a follower positioned within the match compartment, a link connected to said lever and follower, said link being connected to said follower by a reduced portion extending through the slot in said partition, and a spring adapted to normally hold said follower in position to engage one of said matches for forcing the same against the small door and through the opening normally closed thereby, as said lever is operated.

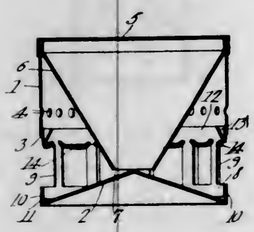
2. A match box having a pair of doors concentrically hinged and adapted to close one end of the box, a spring for normally holding one of said doors in closed position, said spring connected at one end to said door and at the other to the box, a lever pivoted within the box, a follower positioned within the box, a link connecting said lever and follower, said follower being offset transversely of the link, said box being adapted to receive a plurality of matches, a spring for normally holding said follower in position to engage one of the matches, a thumb catch formed on said lever and extending through an opening in one wall of the box and an arm disposed at an angle to the lever adapted to normally close said opening.

3. A match box having a longitudinally disposed partition forming a match and a mechanism compartment and provided with a slot, a hinged door for closing one end of the match compartment, a spring secured at one end to the door and at the other end to the box for normally holding the door in closed position, said match compartment adapted to receive a plurality of matches, a

follower positioned in one end of the box in position to engage one of the matches, means within the mechanism compartment for moving the follower against the match, whereby to force the same against the door and through the door opening, said follower disposed transversely of the match compartment, and connecting means between the follower and mechanism extending through the slot in said partition.

4. In a container having a longitudinally disposed partition therein forming compartments within the container, one on each side of the partition, one of which compartments is adapted to receive matches, the combination of a normally closed door for the match compartment said door spanning the partition and forming a partial closure for the adjacent ends of both compartments, tension means disposed in the other compartment and connected to the door for normally holding the same in closed position, said partition provided with a slot therein, a follower projecting through the slot and disposed transversely of the match compartment, in normal position to engage one of the matches and project the same against the door, and means contained within the other compartment for operating the follower.

1,108,019. CHICKEN-FEEDER. MARY E. STRICKLER, Meadville, Mo. Filed May 19, 1913. Serial No. 768,645. (Cl. 119—52.)



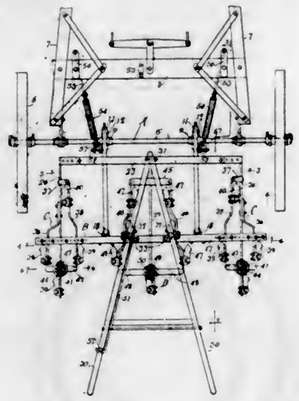
1. In a device of the character described, a member having a plurality of openings therein, and a disinfectant channel disposed directly over the openings, one wall of the channel having apertures above the side edges of the openings, and a wick threaded through the said apertures into and out of the channel and having its exposed portions sagging between the side edges of the said openings and below the upper ends thereof.

2. In a device of the character described, a cylindrical case, an adjustable annular member disposed snugly therein and having a circumferential series of openings, the case having openings complementing the aforesaid openings, a ring secured within the annular member above the openings therein and forming a disinfectant channel with the upper edge portion of the annular member, the said ring having apertures above the side edges of the openings in the annular member, and a wick threaded through the said apertures into and out of the channel and having its exposed portions sagging between the side edges of the openings in the said annular member and below the upper ends of the said openings.

1,108,020. CULTIVATOR. STARLEY S. SWANSON, Bellevue, Ohio, assignor to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed Jan. 2, 1913. Serial No. 739,638. (Cl. 97—35.)

1. The combination, with an axle, and ground wheels therefor, of a laterally movable frame comprising two transverse members arranged one in front of the other, a plurality of individual shovel gangs, each connected with the rear member of said frame and each having a forwardly extending drag bar connected to the front member of said frame, and a plurality of links pivotally connected with said frame and with said axle.

2. The combination, with an axle, and ground wheels therefor, of a laterally movable frame comprising two transverse members arranged one in front of the other, a plurality of individual shovel gangs, each connected with the rear member of said frame and each having a forwardly extending drag bar connected to the front member of said frame, a plurality of links pivotally connected with said frame and with said axle, and a handle connected at its forward end to one of said drag bars and connected at a point between its ends with said frame.



3. The combination, with an axle, and ground wheels supporting said axle, of a plurality of individual shovel gangs, a frame comprising a rear member extending above said gangs and transversely thereto, means for rigidly connecting the individual gangs with said transverse member near their rear ends, and a second transverse member arranged near the forward ends of said gangs and rigidly connected therewith, and links pivotally connected at their opposite ends with the axle and the rear member of said frame, respectively.

4. The combination, with an axle, and ground wheels supporting said axle, of a plurality of individual shovel gangs, a frame comprising a rear member extending above said gangs and transversely thereto, means for rigidly connecting the individual gangs with said transverse member near their rear ends, and a second transverse member arranged near the forward ends of said gangs and rigidly connected therewith, and a plurality of links pivotally connected at their rear ends on vertical axes to the rear member of said frame and pivotally connected at their forward ends on both vertical and horizontal axes with said axle.

5. The combination, with an axle, ground wheels supporting the same, a plurality of individual gangs, each gang comprising a plurality of shovel carrying bars, means for adjusting said bars laterally relatively one to the other, a frame, means for adjustably connecting each gang to said frame to permit of the lateral adjustment of said gangs relatively one to the other, and links connecting said frame with said axle.

1,108,021. GASKETING-TAPE. WILLIAM FRANK TAYLOR, Charleston, S. C., assignor to General Asbestos & Rubber Company, Charleston, S. C. Filed Feb. 28, 1914. Serial No. 821,798. (Cl. 154—45.5.)

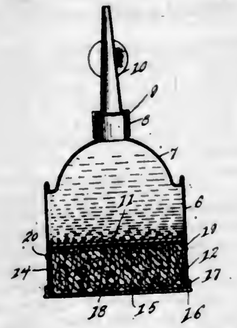
1. A flat gasketing tape comprising a flat elongated envelop of woven asbestos and a flat core of woven asbestos inclosed within said flat envelop and movable longitudinally of the same.

2. A flat gasketing tape comprising a strip of woven asbestos folded upon itself and stitched along the meeting



edges forming a flat elongated envelop, and a flat woven asbestos core inclosed by said envelop and movable longitudinally of the same.

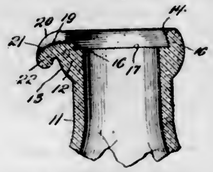
1,108,022. OIL-CAN. JOSEPH W. TEAGUE, Salt Lake City, Utah. Filed Apr. 12, 1913. Serial No. 760,785. (Cl. 221—33.)



In combination with an oil can comprising a cylindrical body portion, a cover and a spout, a bottom spaced from the lower extremity of the cylindrical body portion, a rib formed adjacent the bottom and intermediate the lower extremity of the cylindrical body portion, a surface oiling member comprising a cylindrical body portion and a bottom, an extension formed on the edge of the bottom, a flange secured to the extension, said flange being spaced from the side wall to form a receptacle to receive overflowing oil, an absorbent material secured within the surface oiling member, said absorbent material being adapted to retain oil when the device is in operation.

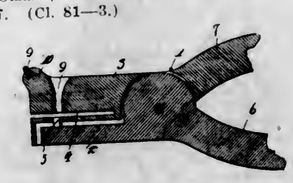
1,108,023. MILK-BOTTLE. CHARLES H. TEXTER, Philadelphia, Pa. Filed Dec. 16, 1913. Serial No. 807,098. (Cl. 215—77.)

As a new article of manufacture, a milk bottle comprising a bottle body having an integral neck, a head formed at the upper end of the neck and enlarged to provide an outer convex face and an inner convex face, with the said outer and inner convex faces terminating at their juncture in a rounded edge, the said inner convex face being formed to provide an inner inclined face forming a horizontal seat in the head, with the said seat adapted to receive a cap, and a pouring spout formed with the head and projecting from the outer convex face, with the said pouring spout terminating in an abruptly depending lip



having a knob at its extremity, said pouring spout being further formed to extend entirely across the said head and having its bottom at the inner end straight and at the outer end curved downwardly.

1,108,024. SHEET-BUCKLING TOOL. VALDEMAR THESTRUP, Omaha, Nebr. Filed Apr. 4, 1914. Serial No. 829,547. (Cl. 81—3.)



1. A sheet buckling tool provided with a dove-tailed recess, and an impinging member comprising a rubber body inserted within said recess, and projecting partially therefrom for engagement with a ticket.

2. A sheet buckling tool provided with an offset formed with a transverse, dove-tailed recess, and a rubber impinging member comprising a triangular block fitted in said recess and projecting partially beyond said offset portion for engagement with a ticket.

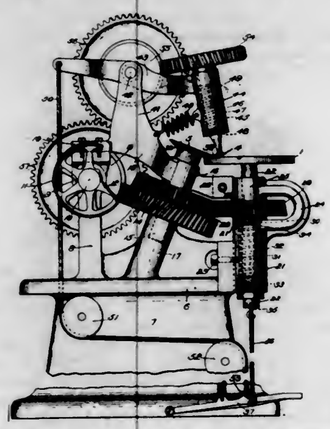
1,108,025. SNAKE-PULLER. FREDERICK A. THIES, New York, N. Y. Filed July 26, 1913. Serial No. 781,393. (Cl. 247—23.)



1. In a snake puller of the class described, a sleeve, a shaft extending through said sleeve, a knob on one end of said shaft coacting with said sleeve for pressing a snake against said sleeve, and a supporting base on the opposite end of said shaft, said supporting base being formed with an edge bearing, whereby said sleeve is caused to tilt for being more easily threaded over said snake.

2. In a snake puller of the class described, a sleeve formed with a conical-shaped opening and with rounded exterior edges, a shaft extending through said sleeve formed with a knob at one end having its walls designed to extend substantially parallel with the walls of said conical-shaped opening so as to press a snake against the walls of said sleeve, and a base member connected with said shaft formed with means for receiving an operating member and with an A-shaped bearing on which said sleeve rests whereby said sleeve may freely tilt so as to receive the end of a snake.

1,108,026. INSOLE-FINISHING MACHINE. ANDREW THOMA, Cambridge, Mass., assignor to Clifton Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 1, 1907. Serial No. 365,801. (Cl. 12—20.)



1. In a machine for finishing insoles, the combination of an insole support, devices having curvilinear, bead like pressure surfaces acting angularly relative to the insole to engage portions of the reinforcing fabric overlying the channels at the base of the lip and the feather or margin of said insole, means for causing said devices continuously to press said reinforcing fabric into said channels, and means for separating said devices to permit the lip of the insole to be positioned between them.

2. In a machine for finishing insoles, the combination of a rotary table for supporting an insole, a pair of wheels adapted to engage the reinforcing fabric at the opposite sides of the base of the lip of said insole, and means connected with the work table and also with said wheels for positively rotating the same to cause them to feed the insole clamped between them and to press said fabric continuously against said base.

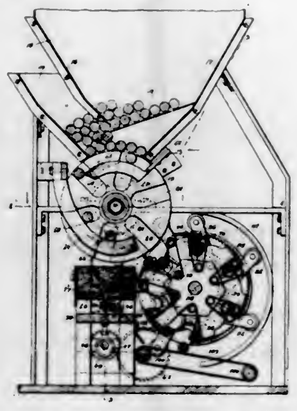
3. In a machine for finishing insoles, the combination of means to support an insole; a plurality of devices to press the insole upon its supporting means, the same having narrow bead-engaging pressure surfaces constructed and arranged to engage the reinforcing material at the base of the bead and the feather of the insole while leaving the bead otherwise free; and means for causing said surfaces to press continuously against the reinforcing material.

4. In a machine for finishing insoles, the combination of means for supporting an insole and means coöperating therewith and comprising a plurality of positively actuated devices arranged at an angle relative thereto and to one another having pressing surfaces spaced apart to receive the reinforced lip of the insole between them to apply continuous pressure to the reinforcing fabric at the base of said lip.

5. In a machine for finishing insoles, the combination of a rotary support, a pair of relatively yielding pressure devices arranged at an angle therewith having pressure surfaces disposed to engage narrow, longitudinal sections of the reinforcing material overlying the channels at the base of the lip of said insole for transmitting continuous pressure thereto, and means relatively to maintain said support and said pressure devices continuously pressed toward one another in pressing engagement with the fabric in said channels.

[Claims 6 to 18 not printed in the Gazette.]

1,108,027. CANDY-WRAPPING MACHINE. ERNEST C. THORSCHMIDT, New York, N. Y. Filed Dec. 7, 1910. Serial No. 595,990. (Cl. 93—5.)



1. A machine for wrapping candy sticks, comprising a receiving hopper; a rotary extracting mechanism having elongated pockets; a rolling mechanism arranged adjacent said extracting mechanism to receive the candy sticks from the said pockets; an air suction device connected with said extracting mechanism adjacent said pockets for extracting successively the sheets of wrapping paper to interpose the same in the path of said candy sticks when delivered from said pockets; a magazine for wrapping paper disposed in line with said pockets; an elevating mechanism for said magazine embodying a vertical feed adapted to compensate for the exhaustion of the paper by successive sheets, and further embodying a reciprocating mechanism for retracting, raising and lowering the said feed paper and magazine supporting same.

2. A machine for wrapping candy sticks, comprising a receiving hopper; a rotary extracting drum having elongated pockets; a plurality of supporting rails adjacent the delivery end of said hopper and below the periphery of said drum to support the candy sticks at approximately the level of the periphery of said drum during the passage of the same past the delivery opening of said hopper; means for maintaining the candy sticks at near the inner end of said pockets after the same have passed the delivery opening of said hopper and prior to arriving at the delivery station for said pockets; and an air suction device connected with said drum adjacent said pockets for extracting successively the sheets of wrapping paper to interpose the same in the path of said candy sticks when delivered from said pockets.

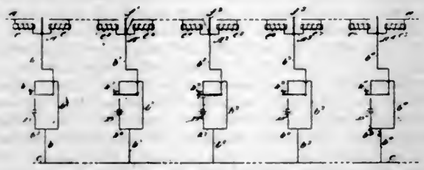
3. A machine for wrapping candy sticks, comprising a receiving hopper; a rotary extracting drum having elongated pockets; a plurality of supporting rails adjacent the delivery end of said hopper and below the periphery of said drum to support the candy sticks at approximately the level of the periphery of the drum during the passage of the same past the delivery opening of said hopper; a second series of supporting rails disposed parallel to said first mentioned rails and adapted to receive the candy sticks therefrom and to guide the same within said pockets to near the center of said drum, said second mentioned rails being shortened to remove the support from said candy sticks while the said pockets are inverted; and an air suction device connected with said drum adjacent said pockets for extracting successively the sheets of wrapping paper to interpose the same in the path of said candy sticks when delivered from said pockets.

4. A machine for wrapping candy sticks, comprising a receiving hopper; a rotary extracting drum having elongated pockets; a plurality of supporting rails adjacent the delivery end of said hopper and below the periphery of said drum to support the candy sticks at approximately the level of the periphery of said drum during the passage of the same past the delivery opening of said hopper; means for maintaining the candy sticks at near the inner end of said pockets after the same have passed the delivery opening of said hopper and prior to arriving at the delivery station for said pockets; an air suction device connected with said drum adjacent said pockets for extracting successively the sheets of wrapping paper to interpose the same in the path of said candy sticks when delivered from said pockets; a rolling mechanism embodying a plurality of directly connected rotary drums disposed in surrounding relation to said candy sticks and paper; and means for rotating said drums.

5. A machine for wrapping candy sticks, comprising a receiving hopper; a rotary extracting drum having elongated pockets; a plurality of supporting rails adjacent the delivery opening of said hopper and below the periphery of said drum to support the candy sticks at approximately the level of the periphery of said drum during the passage of the same past the delivery opening of said hopper; means for maintaining the candy sticks at near the inner end of said pockets after the same have passed the delivery opening of said hopper and prior to arriving at the delivery station for said pockets; an air suction device connected with said drum adjacent said pockets for extracting successively the sheets of wrapping paper to interpose the same in the path of said candy sticks when delivered from said pockets; a rolling mechanism embodying a plurality of directly connected rotary drums disposed in surrounding relation to said candy sticks and paper; means for rotating said drums; and means disposed adjacent said rotary drums to engage in holding relation said paper during the rotation of said candy stick and paper.

[Claims 6 to 31 not printed in the Gazette.]

1,108,028. SYSTEM OF ELECTRICAL SELECTION. NELSON L. TOLVSTAD, Groton, S. D. Continuation of application Serial No. 339,743, filed Oct. 20, 1906. This application filed Aug. 16, 1907. Serial No. 388,914. (Cl. 177—340.)



1. An electrical selective system, comprising a main circuit having between its two branches a plurality of cross shunt connections and having at the intersection of each shunt with one branch a symmetrical resistance device consisting of coils having their opposite end connected respectively to the contiguous parts of the same branch of the main circuit and having each cross shunt connection, between the two branches of the main circuit, connected to the windings of the resistance coils at a point between their opposite ends, and means for successively extending the main circuit past the several shunts.

2. An electrical selective system, comprising a main circuit having between its two branches a series of cross shunt connections and having at the intersection of each shunt with one of its branches a symmetrical resistance device consisting of coils having their opposite ends connected respectively to the contiguous parts of the same branch of the main line, and having the series of cross shunt connections each connected at one end to the coils at points between their opposite ends and a series of cut-out devices between the other ends of the cross shunts and the other branch of the main line, whereby each cross shunt is successively opened by successive impulses along the main line until the circuit of the desired cross shunt is reached.

3. An electrical selective system, comprising two main line branches and a return branch, a series of cross shunt connections between each main line branch and the return branch, a series of resistance devices located at the intersection of each main line branch and cross shunt, each resistance device consisting of two coils, the opposite ends of which are connected to the contiguous parts of the main line branches and the cross shunts being each connected to the resistance devices between their two coils, a double acting and oppositely acting cut-out device between the several cross shunts and return branch, said double acting cut-out device opening the cross shunt on one side of the main return branch and closing the corresponding cross shunt on the other side, and a circuit closer for each main branch for effecting selection and restoring the parts to the position of rest.

4. An electrical selective system, comprising two main line branches and an intermediate return branch, a series of cross shunt connections between each main line branch and the intermediate return branch, a series of resistance devices located at the intersection of each main line branch and cross shunt, each resistance device consisting of two coils having their opposite end connected to the contiguous parts of the main line branches and the cross shunts being each connected to the resistance devices between their two coils, a cut-out device between the several cross shunts and return branch for each main line branch, the cut-out device for one main line shunt acting reversely to the cut-out device for the other main line shunt, one being arranged to restore the other, and a separate circuit closer for each main line branch.

5. An electrical selective system, comprising a main circuit having between its two branches a cross shunt connection and having at the intersection of the shunt with one branch, symmetrical resistance device consisting of two coils having their opposite ends connected respectively to the contiguous parts of the same branch of the main circuits and having one end of the cross shunt connection connected to the resistance device between its two coils and a double acting cut-out for the other end of the shunt arranged to both open the cross shunt and cut-out the coils of the resistance device from the main line.

[Claims 6 to 17 not printed in the Gazette.]

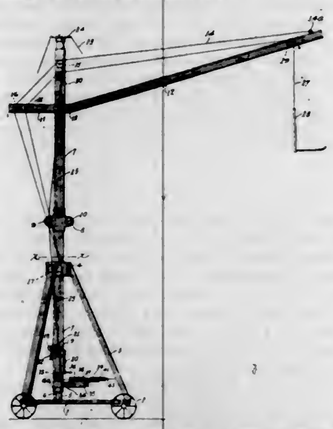
1,108,029. HAY-LOADING DERRICK. WILLIAM L. TULL, Gridley, Cal. Filed May 5, 1913. Serial No. 765,508. (Cl. 212—53.)

1. In a derrick, the combination with a pivoted mast, of an arm projecting outwardly from the lower end of said mast, a sleeve slidable over said arm and capable of being fixed rigidly thereto, a pulley in the outer end of said sleeve, an arm pivotally mounted at the outer end of said sleeve and having a pulley in its outer end, said arm being adjustably connected with said sleeve, as described.

2. In a derrick, the combination with a pivoted mast, of an arm projecting outwardly from the lower end of said mast, a sleeve slidable over said arm and capable of being fixed rigidly thereto, an arm pivotally mounted at the outer end of said sleeve and provided with a pulley in its outer end, a clamp slidable on said arm, another clamp slidably mounted with respect to said sleeve, and a pair of arms, each of said arms being pivotally connected with one of said clamps and with each other, as described.

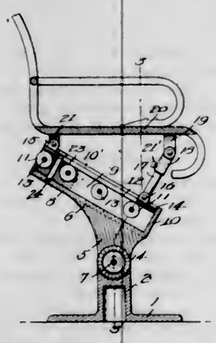
3. In a derrick, the combination with a pivoted mast, of a member projecting outwardly from the lower end of said mast, another member turnable on said last named member and provided with a pulley in its outer end, an arm pivotally mounted at the outer end of said turnable member and provided with a pulley in its outer end, and means connecting said arm with said turnable member

whereby the angle between said arm and said turnable member may be varied, as described.



4. In a derrick, the combination with a pivoted mast, of an arm projecting outwardly from the lower end of said mast, a sleeve slidable on said arm and capable of being fixed thereto, a member turnably mounted on said sleeve and provided with a pulley in its outer end, an arm pivotally mounted at the outer end of said turnable member and provided with a pulley at its outer end, a clamp slidably mounted on said arm, a similar clamp slidably mounted on said turnable member, a pair of arms, each of said pair of arms being pivotally connected with one of said clamps and with each other, as described.

1,108,030. CHAIR. WILLIAM W. TURNER, Washington, D. C. Filed Apr. 11, 1912. Serial No. 689,988. (Cl. 155—22.)



In a chair, a base, an inclined receptacle connected to the base, rollers mounted in the receptacle, a cover member freely slidably mounted on the rollers, means to limit the movement of the cover member in either direction, a seat secured to the cover member, and means to adjust the free edge of the seat with relation to said cover member.

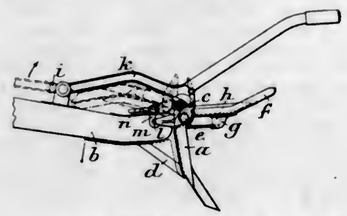
1,108,031. CURB-BOX. CLARENCE E. TYLER, Passaic, N. J., and ELMER D. EVERY, Walton, N. Y., assignors to S. E. T. Valve & Hydrant Company, New York, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 15, 1912. Serial No. 677,858. (Cl. 137—13.)

A curb box comprising a stand pipe having an enlarged portion, a valve in the enlarged portion, said valve having a stem extending above the plane of the upper portion of the enlarged portion, opposed flanges secured to the inner wall of the stand pipe above the plane of the top of the stem, and spaced from each other, said flanges forming a



stop for a wrench dropped into the stand pipe, and a wrench having projections adapted to pass through the spaces referred to.

1,108,032. MOUNTING GUN-CARRIAGE SPADES. KARL VÖLLER, Dusseldorf, Germany. Filed Aug. 2, 1913. Serial No. 782,667. (Cl. 89—42.)



1. A wheeled gun carriage having a spade capable of being moved into and out of operative position, and a pressure plate hinged to said spade and movable therewith.

2. In combination with the trail of a wheeled gun carriage, a spade capable of being moved into and out of operative position, a pressure plate hinged to said spade and movable therewith, and a locking member on said pressure plate designed to engage the eye of said trail to hold said spade and plate in operative position.

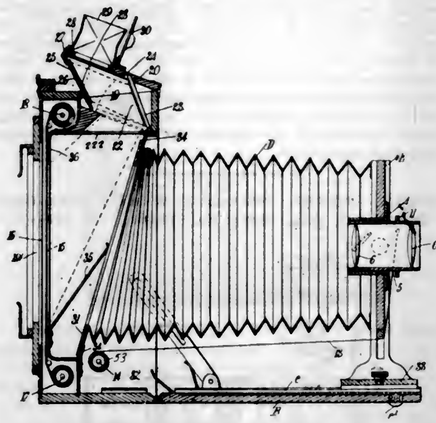
3. In combination with the trail of a wheeled gun carriage, a spade capable of being moved into and out of operative position, a pressure plate hinged to said spade and movable therewith, a catch for holding said spade in operative position, and means on said trail for holding said pressure plate and spade in an inoperative position.

4. In combination with the trail of a wheeled gun carriage, a spade capable of being moved into and out of operative position, a pressure plate hinged to said spade and movable therewith, a movable element for holding said spade and pressure plate out of operation, and a hand spike for controlling said element.

1,108,033. PHOTOGRAPHIC CAMERA. ANTHONY VORIS, New York, N. Y. Filed Dec. 9, 1911. Serial No. 664,696. (Cl. 95—42.)

1. In a camera, a casing provided with a visual opening therein, a focusing screen in the rear of said casing, and a mirror for reflecting an image from said screen, through said opening and means closing said opening at the moment of taking the picture.

2. In a camera, a casing having an opening in the top thereof, a door having an opening therethrough, said door adapted to close the opening in said casing, a mirror having its upper edge hinged to the outer free edge of said door and projecting into the opening in said casing and facing said opening in the door, a second mirror facing said first-mentioned mirror and pivoted within said casing and having its upper end in engagement with the under side of said door when the latter is in raised position, and an image screen, said screen and mirror arranged relative to each other, whereby the mirrors reflect the image from said screen through the opening in said door.



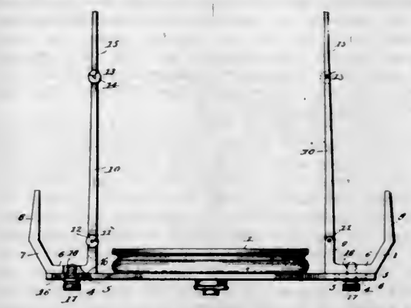
3. In a camera, a casing having an image screen in the rear thereof, and adapted to carry a sensitive surface in rear of said screen, said screen mounted on spring rollers, a pawl holding one of said spring rollers in position, a lens, means for operating said lens to focus the image on said screen, and means adapted to move said lens toward said sensitive plate a distance equal to the distance between the screen and plate, and connection between said means and said holding pawl, whereby the actuation of said means to move said lens, will automatically release said pawl from said spring roller, for causing said roller to withdraw the screen from its position in front of said sensitive plate, for causing the focusing of the image on said sensitive plate.

4. In a camera, a casing having an opening in the top thereof, a focusing screen in the rear of said casing, and having means adapted to position a sensitive plate in the rear of said screen, a lens, means for manipulating said lens to focus the image on said screen, a mirror adapted to reflect the image from said screen and to close the opening in said casing, and a unitary means attached to the lens, for causing the focusing of the image on the sensitive plate, said first-mentioned means attached to the mirror to close the opening in said casing, and said unitary means actuating said screen to remove the same from the cone of light, for causing the focusing of the image on the sensitive plate.

5. In a camera, a casing having an opening in the top thereof, a pair of spring rollers mounted at the top and bottom and to the rear of said casing, a screen mounted on said rollers, a pawl-and-ratchet connection connected with one of said rollers, to hold said screen in a predetermined position, a pivoted mirror adapted in one position, to close said opening, and in another position, to reflect the image from said screen, a lever pivoted to said screen and connected to said pawl-and-ratchet connection, a lens, means for moving said lens, a lever connected to said means, said lever terminating in a button, and a reach rod connecting said last-mentioned lever with the lever actuating the mirror, whereby pressing on said button will move said lens, and at the same time, will actuate said mirror, to close said opening, and will actuate said pawl-and-ratchet connection for causing the spring rollers to roll said screen out of the optical axis of said lens.

[Claims 6 to 8 not printed in the Gazette.]

1,108,034. SURVEYING INSTRUMENT. JOHN WAINWRIGHT, Benezette, Pa. Filed Apr. 29, 1913. Serial No. 764,366. (Cl. 33—72.)



1. In a surveying instrument, a compass plate and compass mounted thereon, the compass plate being provided with slots transverse to the length of the plate, and sights mounted to be moved lengthwise of the slots.

2. In a surveying instrument, a compass plate and compass mounted thereon, said plate having slots therein transverse to the length of the plate, and sights mounted on the plate and movable along the slots, and also reversible with respect to the length of the plate, the plate and sights having co-acting parts for holding the sights in adjusted positions.

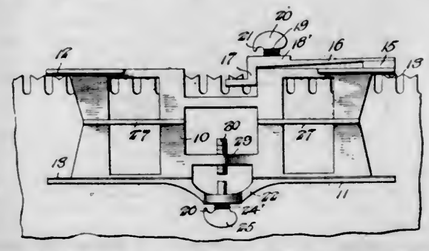
3. In a surveying instrument, a compass plate and compass mounted thereon, the compass plate having elongated slots disposed transversely to the north and south line of the compass and each provided with a series of perforations on each side of the slot, and a sight member for each slot having a projection adapted to any one of the perforations, and means extending through the slot for clamping the sight to the plate in any one of a number of adjusted positions.

4. In a surveying instrument, a compass plate and compass thereon, and a sight member having sight arms at opposite ends thereof, one arm being normally upright and in fixed relation to the sight member and the other arm being hinged to the sight member.

5. In a surveying instrument, a compass plate and compass thereon, and a sight member having sight arms at opposite ends thereof, one arm being normally upright and in fixed relation to the sight member and the other arm being hinged to the sight member, the second arm having an extension hinged thereto.

[Claims 6 to 12 not printed in the Gazette.]

1,108,035. SAW-GAGE. HENRY W. WALLACE, Monroe, Oreg. Filed July 2, 1913. Serial No. 777,058. (Cl. 33—202.)



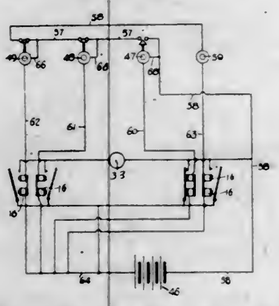
1. A gage comprising a frame having lateral reversely extending flanges at opposite longitudinal edges thereof, the said flanges being cut away at medial alining points thereof, a bridge piece spanning the cut away portion in one flange and having a dial face medially thereof provided with graduated marks, an adjusting screw threaded through the dial face and having a pointer coöperating

with the graduating marks, a resilient arm fixed to the other flange, a substantially L-shaped bifurcated foot formed on the free end of the arm and working in a cut away portion in the said flange, a raised dial face formed on the said arm, an adjusting screw threaded through the last-named dial face and working against the flange adjacent thereto, said last-named dial face being provided with graduating marks, and a pointer formed on the last-named adjustable screw and coöperative with the last-named graduating marks.

2. A gage comprising a frame having lateral reversely extending flanges at opposite longitudinal edges thereof, the said flanges being cut away at medial alining points thereof, a bridge piece spanning the cut away portion in one flange and having a dial face medially thereof provided with graduated marks, an adjusting screw threaded through the dial face and having a pointer coöperating with the graduating marks, a resilient arm fixed to the other flange, a substantially L-shaped bifurcated foot formed on the free end of the arm and working in the cut away portion in the said flange, a raised dial face formed on the said arm, an adjusting screw threaded through the last-named dial face and working against the flange adjacent thereto, said last-named dial face being provided with graduating marks, a pointer formed on the last-named adjustable screw and coöperative with the last-named graduating marks, and ribs projecting outwardly from opposite sides of the frame medially thereof.

3. A gage comprising a frame having lateral reversely extending flanges at opposite longitudinal edges thereof, the said flanges being cut away at medial alining points thereof, a bridge piece spanning the cut away portion in one flange and having a dial face medially thereof provided with graduated marks, an adjusting screw threaded through the dial face and having a pointer coöperating with the graduating marks, a resilient arm fixed to the other flange, a substantially L-shaped bifurcated foot formed on the free end of the arm and working in the cut away portion in the said flange, a raised dial face formed on the said arm, an adjusting screw threaded through the last-named dial face and working against the flange adjacent thereto, said last-named dial face being provided with graduating marks, a pointer formed on the last-named adjustable screw and coöperative with the last-named graduating marks, ribs projecting outwardly from opposite sides of the frame medially thereof, a web formed in the frame spaced from the bridge piece, and an adjusting screw threaded in said web and adapted to fasten a file to the frame.

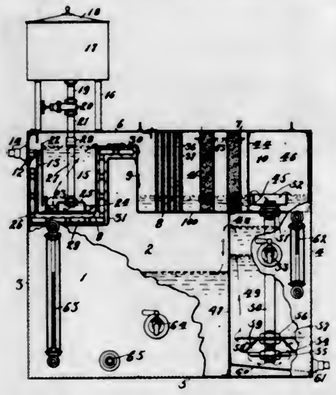
1,108,036. REAR SIGNAL FOR VEHICLES. MICHAEL F. WALSH, New York, N. Y. Filed Nov. 21, 1912. Serial No. 732,711. (Cl. 177—337.)



1. A signal, having a plurality of targets pivotally mounted and adapted for movement to a common view-point; a plurality of electro-mechanical devices for moving said targets to said view-point; a plurality of electric circuits, each incorporating one of said devices; an electric source supplying all of said circuits; a plurality of manually-operable switches, each being arranged to complete one of said circuits; a common element for said circuits intermediate all of said switches and said electric source; and a plurality of make-and-break members mounted on said common element between said switches and electric source, said make-and-break members embodying separated terminal members and means for connecting the same, said means being each operatively connected with one of said switches.

2. A signal as characterized, embodying a plurality of targets movable to a common view-point, each of said targets having a direction symbol impressed thereon, said symbols being arranged in series, said series corresponding progressively to the order of importance of said symbols; a plurality of electro-mechanical apparatuses for moving said targets adjacent said view-point, said apparatuses incorporating each a manually-operated circuit-closing member; and means connected with each of said circuit-closing members for opening the operating circuits controlling the targets having symbols of relatively less importance.

1,108,037. FILTER. WILLIAM F. WARDEN, Akron, Ohio. Filed Jan. 5, 1914. Serial No. 810,364. (Cl. 210—10.)

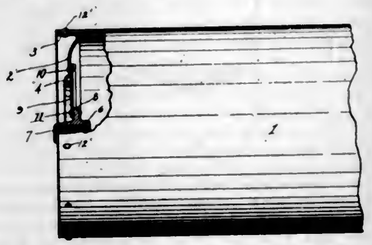


1. An oil filter embodying a receptacle, a vertical baffle or dam extending upwardly from the lower wall thereof and terminating below the top of said receptacle, a portion of said receptacle at one side of said baffle constituting an oil heating and a sedimentation tank for the reception of dirty oil, a plurality of spaced upwardly-extending independently-removable filtering media mounted in the other portion of said receptacle, means to heat said sedimentation tank and said baffle to thereby render the oil free flowing and capable of passing in a heated condition over the upper face of said baffle in a thin film from said sedimentation tank to said filtering tank.

2. An oil filter embodying a receptacle, a vertical baffle or dam extending upwardly from the lower wall thereof and terminating below the top of said receptacle, a portion of said receptacle at one side of said baffle constituting an oil heating and a sedimentation tank for the reception of dirty oil, a plurality of spaced seats in the other portion of said receptacle, a plurality of upwardly-extending, independently-removable filtering media mounted in said seats, means to heat said sedimentation tank and said baffle to thereby render the oil free flowing and capable of passing in a heated condition over the upper face of said baffle in a thin film from said sedimentation tank to said filtering tank.

3. An oil filter embodying a horizontal receptacle divided by a vertical baffle or dam extending upwardly from the lower wall of the receptacle and terminating below the top thereof, a portion of said receptacle at one side of said baffle containing water to constitute a bath and sedimentation tank for the reception of dirty oil, said portion provided with a water overflow below the top of the baffle, a plurality of spaced upwardly-extending, independently-removable filtering media mounted in the other portion of said receptacle, means to heat said sedimentation tank and said baffle to render the oil free flowing and capable of passing in a thin film and in a washed and heated condition over the upper face of said baffle from the sedimentation tank to said filtering tank.

1,108,038. HEAD FOR LAND-ROLLER DRUMS. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Oct. 31, 1913. Serial No. 798,402. (Cl. 55—6.)



1. In a pressed steel head for land rollers comprising a disk with an open central portion having a bead formed thereon adjacent to and surrounding said open central portion and a flange extending outwardly from the periphery of said disk, a hub, means to connect said hub to said disk and support it in a central position with reference to the opening in said disk as described and set forth.

2. A head for a land roller drum made of pressed steel comprising a disk having a peripheral flange formed integral therewith to provide means for fastening it to the drum and also provided with a central opening and a bead formed on said disk adjacent to said opening, a hub and means to maintain and support said hub in a central position with reference to said disk as described and set forth.

3. A head for the drum of land rollers comprising a disk made of pressed steel and formed with an outer peripheral flange and an inner peripheral bead, a hub, and means to support said hub centrally of said disk as described and set forth.

4. A head for the drum of a land roller comprising a disk provided with a central opening substantially half the diameter of the disk, and an outer peripheral flange, a hub, radial bars to support said hub in said opening, and means to strengthen the disk on the margin surrounding said opening as described and set forth.

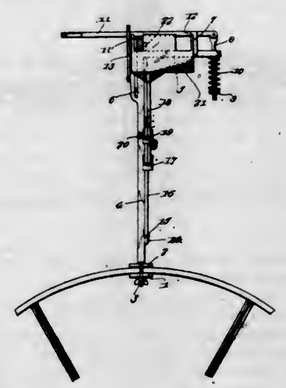
1,108,039. SICKLE-BAR HOLDER. JOHN WATKINS, Dykes, Mo. Filed Sept. 23, 1913. Serial No. 791,355. (Cl. 29—89.)

1. A holder comprising a standard, means for securing the standard to an object, an anvil mounted upon the standard, a lever pivotally connected with the anvil and adapted to hold an object on the anvil and a work support connected with the standard and adapted to be disposed at an acute angle with relation to the long dimension of the same.

2. A holder comprising a standard, means for securing the standard to an object, an anvil mounted upon the standard, a lever pivoted upon the anvil and adapted to hold an object on the anvil and a work support pivotally connected to the standard and being longitudinally extensible.

3. A holder comprising a standard, means for securing the standard to an object, an anvil mounted upon the standard, a lever pivoted to the anvil and adapted to hold an object on the anvil and a hook pivoted upon the standard and engageable with the free end portion of said lever.

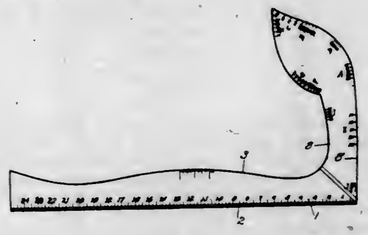
4. A holder comprising a standard, means for securing the standard to an object, an anvil carried by the standard, a spring pressed pin movably mounted in the anvil, a lever pivoted to said pin and adapted to swing over the anvil and adapted to hold an object on the same.



5. A holder comprising a standard, means for securing the standard to an object, an anvil mounted upon the standard and having spaced lugs, a lever pivotally connected with the anvil and having shoulders engageable with said lugs said lever adapted to hold an object on the anvil.

[Claims 6 and 7 not printed in the Gazette.]

1,108,040. DRESSMAKER'S RULE. EDWARD C. WATTERS, Kansas City, Mo. Filed Apr. 24, 1913. Serial No. 763,234. (Cl. 33—11.)



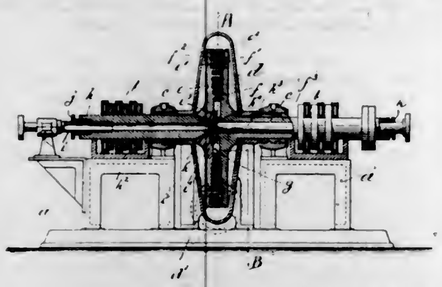
In a dressmaker's rule, a member comprising a head having a convex inner edge and a concavo-convex outer edge, the concaved portion of the outer edge being adjacent the outer end of the head, and both the inner and outer edges being provided with groups of characters whereby cardinal points of a sleeve pattern may be determined by like characters in different groups.

1,108,041. TURBINE. ALBERT WEBER, Hoboken, N. J. Filed Apr. 16, 1914. Serial No. 832,147. (Cl. 121—60.)

1. An elastic fluid turbine comprising two rotary members having interlocking annular rows of blades or vanes, a hollow shaft communicating with the space between said members and on which one of said members is fixed and the other rotatably mounted, a delivery pipe projecting into the open end of said shaft and a stuffing box in said open end.

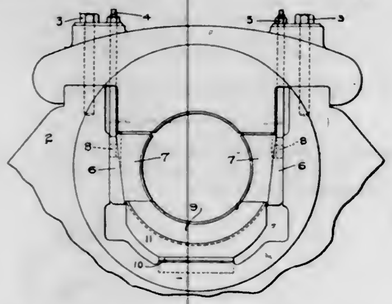
2. An elastic fluid turbine comprising two rotary members having interlocking annular rows of blades or vanes, one member having a centrally extended sleeve, a central hollow shaft communicating with the space between said two members and on which said member is rotatably

mounted with its sleeve and the other member is fixed, a stuffing box closing the free end of said sleeve, a delivery



pipe communicating with said hollow shaft and a stuffing box in the open end of said shaft.

1,108,042. SHAFT-BEARING. FREDERICK LEWIS WEBSTER, Seattle, Wash., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 30, 1910. Serial No. 600,118. (Cl. 64—54.)



1. In a shaft bearing, a shell having a convex cylindrical bearing surface the axis of which extends transverse to the shaft and having a second cylindrical bearing surface spaced from the shaft and generated about an axis which extends longitudinally of the shaft, and a frame coacting with said first-mentioned cylindrical surface.

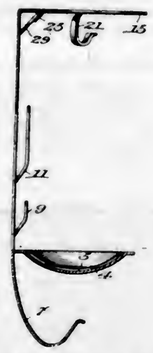
2. In a shaft bearing, a shell having a convex cylindrical bearing surface the axis of which extends at right angles to the shaft and having a second cylindrical bearing surface spaced from the shaft and generated about an axis which extends longitudinally of the shaft, and a frame coacting with said first-mentioned cylindrical surface.

3. In a shaft bearing, a shell having a cylindrical bearing surface the axis of which lies above and extends transverse to the shaft axis and having a second cylindrical bearing surface spaced from the shaft and generated about an axis which extends longitudinally of the shaft, and a frame coacting with said first-mentioned cylindrical surface.

4. In a shaft bearing, a shell having a pair of cylindrical bearing surfaces the axis of one of which extends longitudinally of the shaft and the axis of the other of which extends transverse to the shaft, both of said surfaces being spaced from the shaft, and a frame coacting with one of said cylindrical surfaces.

5. In a shaft bearing, a plurality of shells coacting with each other along a cylindrical surface generated about an axis extending longitudinally of the shaft, one of said shells having a second cylindrical surface with an axis transverse to the shaft axis, and a frame coacting with said second surface.

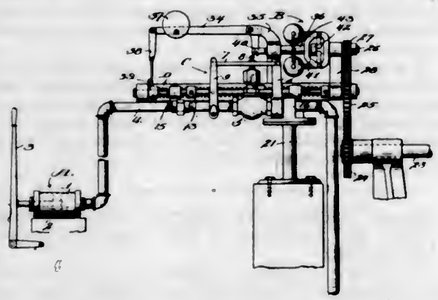
1,108,043. TOILET-BRACKET. HERMANN WEDER, Sr., and CHARLES H. WOLFF, Philadelphia, Pa. Filed Mar. 21, 1913. Serial No. 756,003. (Cl. 248—20.)



1. The toilet-bracket comprising a sheet-metal member having a portion at one end formed with a depression and bent at right angles to the body portion to form a soap-dish with a portion of the body above the dish cut and bent into hook-form beneath the dish, and the opposite end of the member bent at right angles to the body portion to form a shelf, and a part of the body next to the shelf being slitted and bent to form prongs engaging the lips of the shelf to brace the bracket at the angle union of the shelf and body portion, substantially as described.

2. The toilet-bracket comprising a sheet-metal member having one end bent at right angles to the body portion to form a shelf, said shelf having a central opening and its peripheral edge notched and portions of the shelf slitted and bent to form depending hooks beneath the shelf, substantially as described.

1,108,044. CONTROLLING APPARATUS FOR HOISTING-ENGINES. CLARENCE R. WELCH, Scranton, Pa. Filed May 1, 1912. Serial No. 694,564. (Cl. 74—46.)



1. In an engine controlling apparatus, the combination of a trip; a movable element permanently connected with said trip for operating the same; primary and secondary actuating means carried by said element; and a member arranged to engage either said primary or said secondary actuating means under predetermined conditions, to move said element.

2. In an engine controlling apparatus, the combination of a trip; a movable operating element therefor; normally inoperative primary actuating means and normally operative secondary actuating means carried by said element; means for moving said element in one direction, to bring said primary actuating means into operative position; and a member arranged to engage either said primary or said secondary means under predetermined conditions, to move said element endwise.

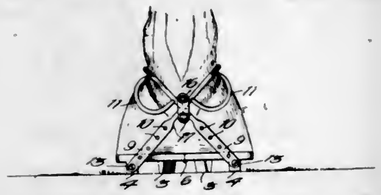
3. In an engine controlling apparatus, the combination of a trip; a movable operating element therefor; normally inoperative primary actuating means and normally operative secondary actuating means carried by said element; means for rocking said element about its longitudinal axis, to bring said primary actuating means into operative position; and a member arranged to engage either said primary or said secondary means under predetermined conditions, to move said element endwise.

4. In an engine controlling apparatus, the combination of a trip; a movable operating element therefor; normally inoperative primary actuating means and normally operative secondary actuating means carried by said element; governor-controlled means for rocking said element to bring said primary actuating member into operative position; and a member arranged to engage either said primary or said secondary actuating means under predetermined conditions, to move said element.

5. In an engine controlling apparatus, the combination of a trip; an endwise-shiftable element connected therewith; a traveling member movable with relation to said element; a collar carried by said element and provided with a nose adapted for movement into and out of position in the path of said member, said member being adapted to engage said nose when the latter occupies the first-named position; means for rocking said element, to bring said nose into such position; and means for operating said member.

[Claims 6 to 11 not printed in the Gazette.]

1,108,045. HORSE-PROTECTOR. BARDENES P. WELLAND, Bricelyn, Minn. Filed Apr. 7, 1914. Serial No. 830,150. (Cl. 168—4.)



1. A device of the character specified, comprising a sectional shoe, the sections being similar and being pivotally connected at the toe, and each section having a toe calk near the connection and a heel calk at the opposite end, a pair of substantially U-shaped protecting rods, each rod having its ends flattened and provided with openings, a screw bolt passing through one of the openings at one end, each heel calk having an opening for receiving the adjacent screw bolt, the other end of each U-shaped rod being connected with the hoof at the front thereof and near the front end of the opposite section of the shoe, said rods crossing each other at the rear of the hoof, means for clamping the rods together at their crossing, and a substantially U-shaped extension connected with each of the said rods at approximately the center thereof, said extensions extending downwardly away from each other at the rear of the fetlock.

2. A device of the character specified, comprising a sectional shoe, the sections being similar and being pivotally connected at the toe, and each section having a toe calk near the connection and a heel calk at the opposite end, a pair of substantially U-shaped protecting rods, each rod having its ends flattened and provided with openings, a screw bolt passing through one of the openings at one end, each heel calk having an opening for receiving the adjacent screw bolt, the other end of each, U-shaped rod being connected with the hoof at the front thereof and near the front end of the opposite section of the shoe, said rods crossing each other at the rear of the hoof.

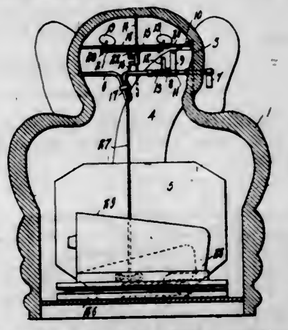
3. A device of the character specified, comprising a shoe consisting of sections hinged together at the toe, each section having toe and heel calks, and a pair of substantially U-shaped protecting rods, each of the rods embracing one side of the hoof and having one end pivoted to the heel calk of the opposite section of the shoe and having the other end connected to the hoof near the toe, said rods crossing at the rear of the hoof, a clamping device for clamping the rods together at the crossing, and an extension on each rod, the extensions extending downwardly and outwardly for protecting the rear of the foot above the hoof.

4. A device of the character specified, comprising a shoe consisting of sections hinged together at the toe, each section having toe and heel calks, and a pair of substantially U-shaped protecting rods, each of the rods embracing one side of the hoof and having one end pivoted to the heel calk of the opposite section of the shoe and having the other end connected to the hoof near the toe, said rods crossing at the rear of the hoof.

5. A device of the character specified, comprising a pair of substantially U-shaped rods or bars, each rod or bar being adapted to embrace one side of the hoof, and having means for permitting one end to be connected to the hoof near the toe, a shoe consisting of sections hinged together at the toe, a pivotal connection between the other end of each rod and the opposite section of the shoe at the heel, the rods crossing at the rear of the hoof, and each having an extension extending downwardly and outwardly, and means for clamping the rods together at their crossing.

[Claims 6 and 7 not printed in the Gazette.]

1,108,046. TOY BANK. CLAIRE WHITNEY, San Francisco, Cal., assignor of one-half to Emily J. Shively, San Francisco, Cal. Filed Dec. 11, 1913. Serial No. 805,923. (Cl. 46—36.)



1. A toy bank comprising a casing, movable eyes and tongue provided in said casing, a sound producing device also located in said casing, an opening in said casing through which a coin is adapted to be inserted, a coin chute, means provided in said casing and extending into said coin chute for holding a coin in a predetermined position in said chute, means connecting said coin holding means with the eyes, tongue and sound producing device, and means for releasing said coin holding means whereby said eyes, tongue and sound producing device are operated.

2. A toy bank comprising a casing in the form of a head and body of a figure, movable eyes and tongue provided in said casing, a sound producing device also located in said casing, an opening in said casing, a coin chute communicating with said opening, locking means provided on said shaft and extending into said chute adapted to secure a coin in said chute in a predetermined position, means connecting said shaft with the eyes, tongue and sound producing device, and means for rocking said shaft to release said coin and operate said eyes, tongue and sound producing device.

3. A toy bank comprising a casing, movable eyes and tongue, and a sound producing device mounted in said casing, an opening provided in said casing, a coin re-

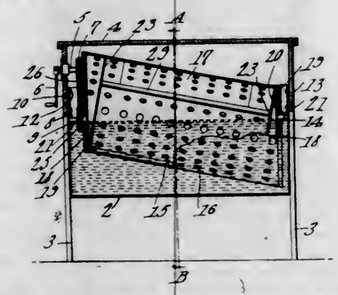
ceptacle, a coin chute communicating with said opening and extending to said receptacle, a rock shaft pivotally mounted in said casing, a bell crank lever keyed to said shaft and having one of its arms extending into said coin chute, connecting means between said shaft and said eyes, tongue and sound producing device, and means for rocking said shaft to withdraw the arm of the bell crank lever which extends into said coin chute and operates said eyes, tongue and sound producing device.

4. A toy bank comprising a casing, movable eyes and tongue and a sound producing device mounted in said casing, an opening in said casing, a coin receptacle, a coin chute communicating with said opening and extending to said coin receptacle, a door closing said opening, a rock shaft pivotally mounted in said casing, a bell crank lever keyed to said shaft, a link connecting said door to one arm of said bell crank lever, the free end of said bell crank lever extending into said coin chute, connecting means between the eyes, tongue, sound producing device and said rock shaft, and a lever provided upon said shaft on the exterior of the casing for rocking said shaft, to withdraw the arm of the bell crank which extends into said coin chute, and also to operate the eyes, tongue and sound producing device.

5. A toy bank comprising a casing, movable eyes and tongue and a sound producing device provided in said casing, an opening provided in said casing, a coin receptacle, a coin chute communicating with said opening and extending to said coin receptacle, a plate extending across said opening, a rock shaft pivotally mounted in said casing, a bell crank lever keyed to said shaft and having one of its ends extending into said coin chute, a link connecting the plate which extends across said opening to the other end of said bell crank lever, connecting means between the eyes, tongue, sound producing device and said rock shaft, and means for rocking said shaft to withdraw the end of the bell crank lever which extends into said coin chute and for operating said eyes, tongue and sound producing device.

[Claims 6 to 10 not printed in the Gazette.]

1,108,047. WASHING-MACHINE. WILLIE D. WHITNEY, Holley, N. Y. Filed Nov. 13, 1913. Serial No. 800,835. (Cl. 68—18.)



1. A washing machine including a casing, a perforated cylindrical container mounted for rotation within the casing, the axis of rotation of the container being disposed at an acute angle to the longitudinal axis of said container, perforated partitions within the container and constituting fabric abutments.

2. A washing machine including a casing, a perforated cylindrical container mounted for rotation within the casing, the axis of rotation of the container being disposed at an acute angle to the longitudinal axis of said container, perforated partitions within the container and constituting fabric abutments, and a cleat upon the inner surface of the container and between the partitions.

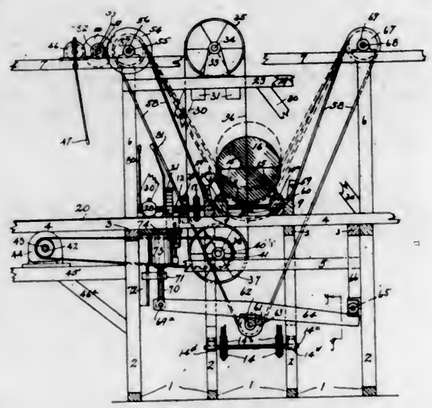
3. A washing machine including a casing, a cylindrical container mounted for rotation therein, said container having heads, and a trunnion adjustable diametrically across each head.

4. A washing machine including a casing, a cylindrical container mounted for rotation therein, said container having heads, a trunnion adjustable diametrically across each head, and shafts connected by universal joints to the respective trunnions, said shafts and trunnions cooperating to support the container within the casing.

5. In a washing machine, the combination with a casing, of a container mounted for rotation therein, a trunnion connected to each end of the container and adjustable diametrically thereacross, shafts journaled within the casing, and universal connections between the shafts and the respective trunnions.

[Claim 6 not printed in the Gazette.]

1,108,048. LOG-MANIPULATING MECHANISM. CHARLES W. WILLETTE, Seattle, Wash. Filed Sept. 23, 1912. Serial No. 721,847. (Cl. 143—102.)

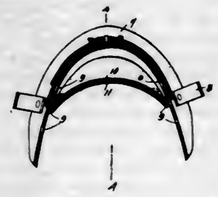


1. The combination with the track frame of a saw mill having parallel conveying chains at each side of the plane of the saw, of a supplemental frame having a track and conveying chains extending along in the plane of the same parts of the main frame of the saw mill, but spaced apart therefrom, flexible members normally looped beneath the path of the log, but out of contact therewith, whereby free movement of the log is permitted independently of its conveying chains, and means for holding the loop in that position, levers upon said supplemental frame, and to which said flexible members are connected, means for depressing one of the ends of said levers whereby said flexible members are actuated to lift the log, and means for drawing said flexible members in the direction of their lengths to turn the log.

2. In a log manipulating device, the combination of a frame, a track therealong, parallel log conveying chains upon the said track, flexible members normally looped beneath the plane of said track and partially surrounding the same, means for elevating either of said flexible members independently of the other so as to embrace and lift the ends of the log different distances and means for drawing the said flexible members in the direction of their lengths to turn the log.

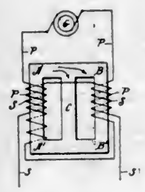
3. In a log manipulating device, the combination of a frame and means for conveying a log therealong, flexible members normally passed beneath the path of the log and partially surrounding the same, but in spaced relation to the track, whereby free movement of the latter is permitted, means for stopping and starting said conveying means, means for elevating the said members independently of each other and to different heights so as to embrace and lift the ends of the log clear of its conveying means, and means for drawing said flexible members in the direction of their lengths to turn the log.

1,108,049. HORSE-COLLAR PAD. DAVID L. WILLIAMS, Ord, Nebr., assignor to Williams-Gregg Manufacturing Company, Ord, Nebr. Filed Aug. 5, 1913. Serial No. 783,034. (Cl. 54—67.)



In combination with a closed horse collar, a pad comprising a member fitting into the top of the collar, straps secured to said member adjacent the ends thereof for removably securing the said member to the collar, said member having rounded sides arranged to engage the collar whereby the said member is prevented from lateral displacement, an adjustable pad member, straps carried by said adjustable pad member, said first mentioned member having a series of openings adjacent each end and adapted to be removably engaged by said straps carried by said adjustable pad member, whereby the adjustable pad member is supported by said first mentioned member and can be adjusted by said last mentioned straps relatively to said member, substantially as and for the purpose set forth.

1,108,050. COMPOUND TRANSFORMER. WYNANT JAMES WILLIAMS, Albany, N. Y. Filed Dec. 21, 1909. Serial No. 534,377. (Cl. 171—119.)

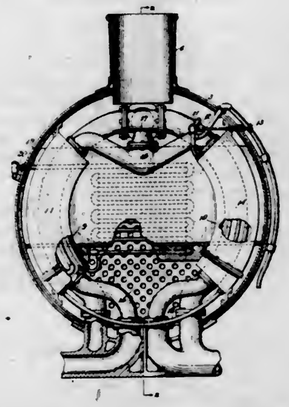


1. In a transformer the combination of a core provided with a plurality of legs, one of said legs having a reduced area in cross-section for the purpose of increasing the density of a flux traversing it, primary and secondary windings encircling said legs, the ratio of the primary turns to the secondary turns upon one leg being different from the ratio of primary turns to the secondary turns upon another of said legs.

2. A transformer comprising a core provided with a plurality of legs, more than two in number, so proportioned and connected that a magnetic flux induced in one leg can divide and pass through other legs unequally, thus rendering dense the flux in one leg and rendering attenuated the flux in another leg, a primary winding and a secondary winding mounted upon said leg in which said flux is dense, and a primary winding and a secondary winding upon said leg in which said flux is attenuated, the ratio of the primary turns to the secondary turns upon one of said last-mentioned legs being different from the ratio of the primary turns to the secondary turns upon the other of said last-mentioned legs.

3. A transformer comprising a core having a plurality of legs, more than two in number, a primary winding and a secondary winding mounted upon one of said legs, a primary winding and a secondary winding mounted upon another of said legs, the ratio of the primary turns to the secondary turns upon one leg being different from the ratio of the primary turns to the secondary turns upon another leg, and an additional leg so disposed that a portion of the magnetic flux induced in one of said legs may leak through said additional leg in order to render unequal the density of the magnetic flux in the two legs first mentioned.

1,108,051. PREHEATER. GEORGE HENERY WILSON, Spokane, Wash. Filed Apr. 7, 1914. Serial No. 830,149. (Cl. 122—425.)



1. In combination with a boiler having a smoke box, a preheater comprising a baffle plate in the box adapted to deflect the hot gases, and feed-water coils intermediate the baffle plate and the boiler.

2. In combination with a boiler having a smoke box, a preheater comprising a baffle plate in the box adapted to deflect the hot gases, and feed-water coils carried by the plate between the boiler and said plate.

3. In combination with a boiler having a smoke box, a preheater comprising a baffle plate in the box adapted to deflect the hot gases from the boiler, feed-water coils carried by the baffle plate between the boiler and said plate, and exhaust, steam-heated coils in said box connected to said first-mentioned coils, the feed water being adapted to be first heated by said exhaust steam and then by the hot gases.

4. In combination with a boiler having a smoke box, a preheater comprising a baffle plate in the box having a substantially horizontal extension, said baffle plate being positioned adjacent the end of the boiler, feed-water coils carried by the baffle-plate between the boiler and the plate and by said extension on the under side thereof, steam-heated coils in said box connected to the coils carried by the baffle plate and its extension, the feed-water passing through said coils being adapted to be first heated by said exhaust steam and then by the hot gases.

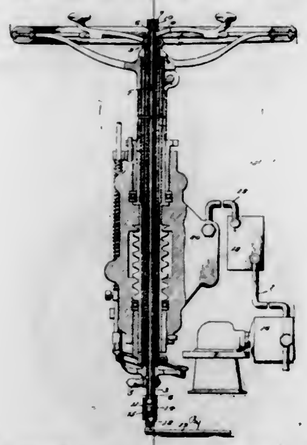
1,108,052. SIGNAL DEVICE FOR AUTOMOBILES. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed July 8, 1913. Serial No. 777,945. (Cl. 177—10.)

1. The combination with a steering column of an automobile, of a signal and a circuit closure passing through the steering column for closing the circuit below the lower end of the column for operating said signal.

2. The combination with a steering column of an automobile, of a signal adjacent thereto, a rod passing through the steering column, a push button rigidly carried by the upper end of the rod, means carried by the lower end of the rod below the steering column for closing the circuit to the electric signal.

3. The combination with a steering column of an automobile, of an electrically operated signal having one pole thereof grounded to the machine, a rod passing through the steering column and adapted to close the

circuit below the lower end of the steering column between the grounded wire and the other wire of the signal.

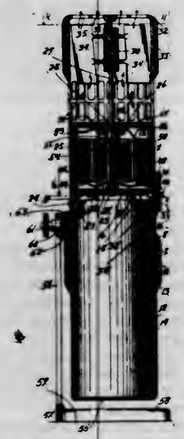


4. The combination of a steering column of an automobile, of an electrically operated signal, a rod passing through the steering column, a push button secured to the rod above the steering column, a spring surrounding the rod and normally holding the button in an upward position and means carried by the lower end of the rod below the lower end of the steering column for closing the circuit to the electrically operated signal.

5. The combination with a steering column of an automobile, of a throttle operating tube passing through the steering column, an electrically operated signal, a rod passing through the throttle operating tube, an insulated bushing carried by the lower end of the throttle operating tube below the steering column and into which the rod passes, and an electrical contact within the bushing and connected to one pole of the electrically operated signal and the other pole grounded to the machine, whereby the circuit is closed through the rod.

[Claims 6 to 12 not printed in the Gazette.]

1,108,053. PORTABLE ELECTRIC FAN. THOMAS R. WIWI and JAMES W. FASSETT, Denver, Colo. Filed July 28, 1913. Serial No. 781,503. (Cl. 230—1.)



1. The combination of a casing having a fan at one extremity thereof, a motor whose armature shaft is connected with the fan to rotate the latter, a battery arranged adjacent and connected in coöperative relation with the motor, the motor and fan being within the body member of the casing, a detachable casing member connected with the body member and inclosing a portion of the battery, and suitable means for guiding the battery when inserted in the casing, to cause the poles of the battery to engage contacts connected in operative relation with the motor to cause the current to pass therethrough in a uniform direction, and suitable means exposed on the casing for making and breaking the circuit at will, substantially as described.

2. A portable electric fan, comprising a casing of substantially uniform size throughout its length, a fan, a battery and a motor located within the casing and connected in coöperative relation, the fan being arranged in one extremity of the casing which is provided with openings for the exit of air, the casing between the motor and the fan being provided with air inlet apertures, while the casing between the battery and the motor is also equipped with perforations for the admission of air to cool the motor, the parts being connected to rotate the fan in a direction to expel the air.

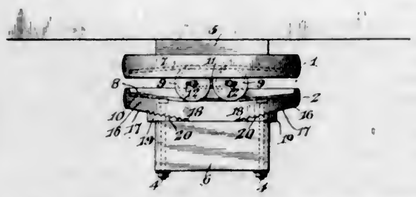
3. A portable fan, comprising a casing of substantially uniform size, throughout its length, the bottom of the casing being closed and made flat to form a rest for the device, a fan element, a motor and a battery located within the casing and connected in operative relation therewith, the casing having apertures formed in its side walls and in one end for the inlet and exhaust of the air and the cooling of the motor.

4. A portable leectric fan, comprising a casing, a fan member, a motor and a battery connected in coöperative relation and arranged within the casing, the latter being provided between the motor and fan with air inlet apertures for the purpose set forth.

5. A portable electric fan, comprising a casing, a fan member, a motor and a battery connected in coöperative relation and arranged within the casing, the latter being provided between the battery and motor with apertures for the admission of air to cool the motor.

[Claims 6 and 7 not printed in the Gazette.]

1,108,054. SIDE BEARING. ABNER K. WOLFE, Atchison, Kans., assignor of one-half to Clement Davis, Rulo, Nebr. Filed Feb. 12, 1913. Serial No. 748,008. (Cl. 64—64.)



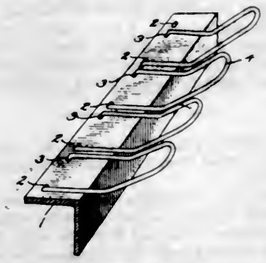
1. The combination with body and truck bolsters, of a side bearing including an upper bearing plate secured to the body bolster, a lower bearing plate having tapered or wedge-shaped end portions presenting lower inclined faces, the intermediate portion of the lower bearing plate having a horizontal lower face to fit against and rest upon the truck bolster, an antifriction device interposed between the upper and lower bearing plates, and adjustable wedges arranged upon the truck bolster beneath the end portions of the lower bearing plate and presenting upper inclined faces to the latter and supporting the same, said wedges being movable with respect to the lower bearing plate and adapted to raise and lower the same without affecting the relative arrangement of the said bearing plates.

2. The combination with body and truck bolsters, of a side bearing including an upper bearing plate secured to the body bolster, a lower bearing plate having tapered or wedge-shaped end portions presenting lower inclined faces, the intermediate portion of the lower bearing plate having a horizontal lower face to fit against the truck bolster, an antifriction device interposed between the upper and lower bearing plates, and adjustable wedges arranged upon the truck bolster beneath the end portion of the lower bearing plate and presenting upper inclined faces to the same, said wedges supporting the end portions of the lower bearing plate and movable on the truck bolster and adapted to raise and lower the lower bearing plates without affecting the relative arrangement of the said bearing plates, and fastening devices piercing the end portions of the lower bearing plate and the wedges and securing the former to the truck bolster and the wedges in their adjustment.

3. The combination with body and truck bolsters, of a side bearing including upper and lower bearing plates, the upper bearing plate being secured to the body bolster and the lower bearing plate having tapered end portions presenting lower inclined faces, an antifriction device interposed between the upper and lower bearing plates, wedges arranged on the truck bolster and located beneath the end portions of the lower bearing plate and presenting inclined faces to the same and adjustable with respect to the lower bearing plate and adapted to raise and lower the same without affecting the relative arrangement of the said bearing plates, said wedges being also provided with longitudinal slots extending inwardly from the ends of the wedges, and fastening devices piercing the end portions of the lower bearing plate and extending through the slots of the adjustable wedges to secure the former to the truck bolster and retain the wedges in their adjustment.

4. The combination with body and truck bolsters, of a side bearing including upper and lower bearing plates, the upper bearing plate being secured to the body bolster and the lower bearing plate having tapered end portions presenting lower inclined transverse faces and provided with transverse corrugations, the intermediate portion of the lower bearing plate having a smooth horizontal lower face to rest upon the truck bolster, an antifriction device interposed between the upper and lower bearing plates, wedges arranged upon the truck bolster and located beneath the end portion of the lower bearing plate and presenting inclined upper faces having corrugations to interlock with the corrugations of the lower bearing plate, said wedges being adjustable and adapted to raise and lower the bearing plate without affecting the relative arrangement of the said bearing plates, and fastening devices piercing the end portions of the lower bearing plate and the wedges and securing the former to the truck bolster and retaining the wedges in their adjustment.

1,108,055. POULTRY COOLING AND DISPLAY RACK. SAMUEL C. WOLFE and JOHN E. WOLFE, Angola, Ind. Filed Dec. 16, 1912. Serial No. 737,109. (Cl. 211—14.)



In a poultry rack, the combination of a bar having a horizontal web, a series of spring fingers sustained by said bar, each finger comprising a loop of spring material having a portion of the loop resting on the upper face of the horizontal web and a portion bent to extend outwardly and upwardly on an incline from the outer edge of the horizontal web, the said horizontal web being formed

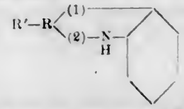
with a pair of slots for each loop and the shanks of the loop being extended through the slots and bent to a position having a purchase on the horizontal web, and a sliding engagement therewith, the several fingers being disposed sufficiently adjacent each other for enabling any two adjacent fingers to coöperate in supporting a weight interposed between the two.

1,108,056. MANUFACTURE OF VAT DYESTUFFS. EDWARD WRAY, Biebrich-on-the-Rhine, Germany, assignor to The Firm of Kalle and Company, Aktiengesellschaft, Biebrich-on-the-Rhine, Germany. Filed Oct. 29, 1913. Serial No. 798,105. (Cl. 8—1.)

1. Process for producing vat dyestuffs which consists in treating phenoöxynaphthocarbazoles derived from β-naphthylamin with the reactive isatin-α-derivatives.

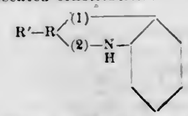
2. Process for producing vat dye-stuffs which consists in treating 2.1-pheno-5-oxynaphthocarbazole with 5-chloroisatin-2-p-chloranilid.

3. As new products the vat dye-stuffs obtainable by condensation of phenoöxynaphthocarbazoles derived from β-naphthylamin with the reactive isatin-α-derivatives, having the following graphically represented constitution:



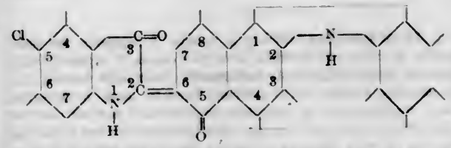
where R is the radical of an oxynaphthalene and R′ an isatin radical in ortho position to the oxy group being blue to violet-black dye-stuffs insoluble in the usual solvents and being reduced on treatment with reducing agents to leuco compounds, from which the dye-stuffs are regenerated by oxidizing agents.

4. As new products the vat dyestuffs obtainable by condensation of phenoöxynaphthocarbazoles derived from β-naphthylamin with the reactive isatin α-derivatives, said dyestuffs containing halogen and having the following graphically represented constitution:



where R is the radical of an oxynaphthalene and R′ the isatin radical in ortho position to the oxy group, being blue to violet-black dyestuffs insoluble in the usual solvents and being reduced in treatment with reducing agents to leuco compounds, from which the dyestuffs are regenerated by oxidizing agents.

5. As a new product the vat dye-stuff of the following formula:



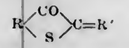
being in dry state a powder insoluble in the usual solvents, soluble in sulfuric acid with a grayish-blue color, being reduced on treatment with reducing agents to a goldish-yellow vat, from which the textile fiber is dyed violet shades.

1,108,057. MANUFACTURE OF VAT DYESTUFFS. EDWARD WRAY, Biebrich-on-the-Rhine, Germany, assignor to The Firm of Kalle and Company, Aktiengesellschaft, Biebrich-on-the-Rhine, Germany. Filed Oct. 29, 1913. Serial No. 798,106. (Cl. 8—1.)

1. Process for producing vat dyestuffs which consists in condensing the 2-derivatives of the 2.3-diketodihydro-1-thionaphthene with pheno-oxy-naphtho-carbazole.

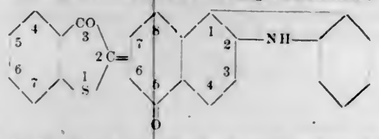
2. Process for producing vat dyestuffs which consists in condensing 2-dibromo-3-ketodihydro-1-thionaphthene with 2.1-pheno-5-oxy-naphtho-carbazole.

3. As new products the indigoid coloring matters obtainable by condensing the 2-derivatives of the 2.3-diketo-dihydro-1-thionaphthenes with pheno-oxy-naphtho-carbazoles, having the following graphically represented constitution:



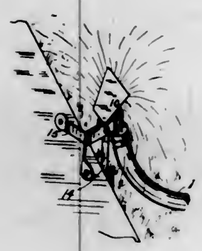
where R is the aromatic nucleus of the thionaphthene and R' the radical of the pheno-oxy-naphtho carbazole, forming in dry state red-violet powders, insoluble in water, scarcely soluble in alcohol, soluble in hot nitrobenzene and quinolin, also soluble in sulfuric acid with a green color, being reduced on treatment with alkali and hydrosulfite to a yellow vat from which cotton is dyed very fast red-violet shades.

4. As a new product the indigoid coloring matter from 2-dibromo-3-ketodihydro-1-thionaphthene and 2.1-pheno-5-oxy-naphtho-carbazole of the following constitution:



being in dry state a bronze-like red-violet powder, soluble in sulfuric acid with a green color and yielding on treatment with alkaline reducing agents a yellow vat from which cotton is dyed very fast reddish-violet shades becoming slightly redder on soaping.

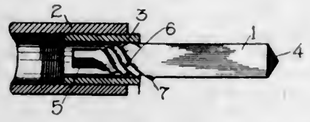
1,108,058. MULTIPLE SPRAYING DEVICE. ALBERT E. YERKES, Los Angeles, Cal. Filed July 12, 1912. Serial No. 709,093. (Cl. 137—57.)



1. In a spraying device, a nozzle, a support for said nozzle, a movable member mounted on said support, said member being adjustable separately from said nozzle and at various angles with relation thereto, and a spraying plate consisting of a spraying portion and a base portion extending at an acute angle with relation to the spraying portion of said plate, and means to fasten said base portion of said plate to said movable member in a pivotal manner to permit either side of the angular spraying portion of the plate to be presented to the stream.

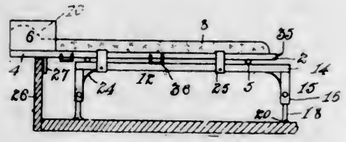
2. The combination, with the nozzle, nozzle support, and vertically adjustable spraying plate secured to said nozzle support, of a pointed leg having a pivotal, friction-tight connection with said nozzle support, said leg being adapted for adjustment to point rearwardly of the nozzle to support said nozzle in a substantially vertical position, and said spraying plate being adapted to direct the spray to fall on the side of the nozzle opposite to said leg when the nozzle is thus adjusted, the side of the sprayed area nearest the nozzle being terminated by a well defined line passing through the spraying device.

1,108,059. STUB-PULLER. LEON L. ZIHLER, Buffalo, N. Y. Filed Mar. 4, 1914. Serial No. 822,503. (Cl. 81—71.)



A device of the character described comprising a stock, said stock being preferably rectangular in cross section, a reduced rectangular end formed on the stock, a tapering twisted portion formed intermediate the reduced end and the stock, shoulders formed by the twisted portion, said shoulders being adapted to bite into the soft metal of a nipple to remove the same from a pipe fitting.

1,108,060. OPEN-AIR-SLEEPING BED. ELVA CORNELIUS ANDREWS, Vermilion, S. D. Filed Nov. 7, 1911. Serial No. 659,073. (Cl. 5—4.)



1. A bed having a reduced section at one end, said reduced section projecting longitudinally from the body of the bed, forming shoulders, and a wind shield secured to the three sides of said reduced section.

2. In an improvement of the kind described, the combination of a fixed support, a member carried thereby and mounted to be movable longitudinally thereon, and means whereby said member can be moved to project at one end beyond the support and out through an opening in the wall of the room or apartment containing the same, said member having a projection from its bottom to engage the lower edge of the opening and limit such movement.

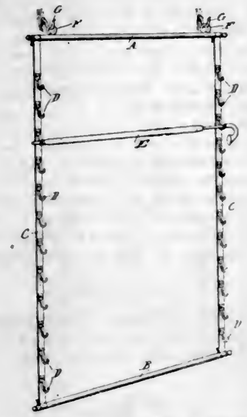
3. In an improvement of the kind described, the combination of a fixed support, a frame mounted thereon for longitudinal movement, guides or retainers secured to the support and engaging the sides of the frame to hold the frame against lateral displacement, a wind shield carried by one end of said frame, a stop projecting from the bottom of said frame adjacent said end, and handles carried by the frame to facilitate the adjustment of the same.

4. In an improvement of the kind described, the combination of a fixed supporting frame mounted thereon for longitudinal movement, means for holding the frame against lateral displacement, a wind shield carried by one end of said frame, a stop projecting from the bottom of the frame to limit its longitudinal movement, and a handle carried by the frame to facilitate the adjustment thereof.

1,108,061. DISPLAY-RACK. OSCAR M. ARNOLD, New York, N. Y. Filed Dec. 11, 1913. Serial No. 805,961. (Cl. 211—17.)

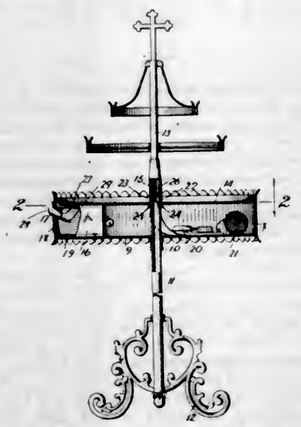
1. A display rack, comprising top and bottom cross bars having annular grooves adjacent their ends, eyes attached to the upper cross bar near the ends thereof and adapted to be engaged with fixed supports to suspend the rack from the supports, side bars terminating in clasping hooks removably engaging the ends of the said cross bars within the annular grooves to hold the side bars spaced apart, and supporting brackets attached to the said side bars and arranged in pairs, the brackets in a pair being arranged opposite each other on the said side bars to support an umbrella, cane, or like article of merchandise in a horizontal position.

2. A display rack, comprising top and bottom cross bars having annular grooves adjacent the ends, side bars of band metal and terminating at their ends in integral rearwardly-extending clasping portions engaging the said annular grooves of the cross bars to hold the side bars spaced apart and parallel and having flared extremities, and supporting brackets attached to the said side bars and projecting forwardly from the front of the side bars, the said brackets being arranged in pairs and the brackets of a pair being located opposite each other and in register one with the other to support an umbrella, cane or other article of merchandise in a horizontal position.



3. A display rack, comprising top and bottom cross bars having annular grooves adjacent the ends thereof, side bars having clasps at their upper and lower ends snugly embracing the ends of the cross bars to connect the latter and the side bars, and disposed within grooves whereby to hold the side bars spaced apart, and article supporting brackets attached to the said side bars.

1,108,062. VOTIVE-OFFERING STAND. GUSTAVE B. BOHNE. West Hoboken, N. J. Filed Nov. 6, 1913. Serial No. 799,525. (Cl. 177—314.)

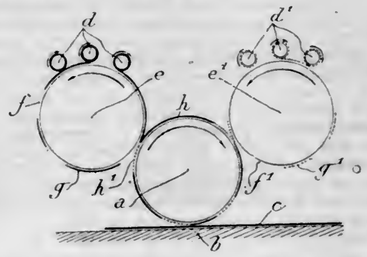


1. A votive-offering stand, comprising a chambered receptacle; a cash-box mounted within said receptacle and having a receiving opening extending to the outside of said receptacle; a cover for said receptacle; a candelabrum disposed above said cover to hold the same in service relation; and an electric alarm having an operating circuit embodying circuit-closing contacts normally separated when in service, by said candelabrum, adapted to close when said candelabrum is lifted to release said cover.

2. A votive-offering stand, comprising a chambered receptacle; a cash-box mounted within said receptacle and having a receiving opening extending to the outside of said receptacle; a cover for said receptacle; a candelabrum disposed above said cover to hold the same in service relation; and an electric alarm, embodying an electric source, an electro-mechanically-operated audible device, and spring electric contacts disposed to be separated by said candelabrum when in service relation.

3. A votive-offering stand, comprising a chambered receptacle; a cash-box mounted within said receptacle and having a receiving opening extending to the outside of said receptacle; a cover for said receptacle; a candelabrum disposed above said cover to hold the same in service relation; an electric alarm, embodying an electric source, an electro-mechanically-operated audible device, and spring electric contacts disposed to be separated by said candelabrum when in service relation; and an insulating pin mounted upon said candelabrum to separate said contacts when said candelabrum is in service position.

1,108,063. PROCESS OF COLOR-PRINTING. PIERRE BONNIER, Paris, France. Filed July 5, 1911. Serial No. 636,901. (Cl. 101—182.)



The process of color printing consisting in removably disposing auxiliary cylinders between the main cylinder and inking rollers of a printing press and directly printing by the main cylinder all the composition to be printed on the auxiliary cylinders, dismounting and removing the auxiliary cylinders and removing parts of the composition printed thereon from the main cylinder that are not to be printed with any particular color of ink that may be used with the auxiliary cylinders, and then remounting the auxiliary cylinders between the main cylinder and inking rollers to carry the ink from the said rollers to the main cylinder in accordance with the remaining printing portions of said auxiliary cylinders.

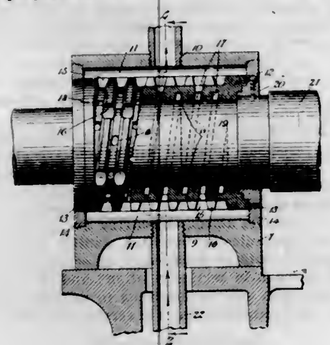
1,108,064. BEARING. ALFRED BONOM, Paterson, N. J. Filed Nov. 14, 1913. Serial No. 800,938. (Cl. 64—28.)

1. In a bearing, a journal box; a bearing seat in said box having circular, independent grooves on the exterior surface thereof inclined to the axis of the bearing, said bearing seat having means establishing communication between the grooves and the inner bearing surface of the seat, said means being so formed as to cover with oil every point of the journal engaging the bearing surface of said seat; and means for forcing oil through said box about said bearing seat.

2. In a bearing, a journal box; a bearing seat in said box having circular, independent grooves on the inner and outer surface thereof inclined to the axis of the bearing, said seat having means establishing communication between the grooves; and means for forcing oil into said grooves.

3. In a bearing, a journal box; a circular bearing seat fitting snugly into said box and having circular, independent grooves on the exterior surface inclined to the axis of the seat, said seat having means establishing com-

munication between said grooves in the box and means establishing communication between the groove and the bearing surface of the seat; and means for forcing oil into said box through said grooves substantially as and for the purpose set forth.

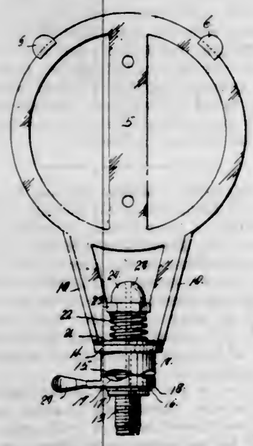


4. In a bearing, a journal box; a circular bearing fitting snugly into said box and having circular, independent grooves on the exterior and interior surface inclined to the axis of the bearing, said bearing seat having longitudinal grooves on the exterior surface thereof connecting the exterior grooves and means connecting the exterior and interior grooves; and means associated with the box for supplying oil under pressure to said grooves.

5. In a bearing, a journal box; a bearing seat in said box and having interior and exterior grooves, each corresponding exterior groove having a correspondig inner groove, said seat having means establishing communication between corresponding grooves and longitudinal grooves on the exterior surface connecting the exterior grooves; and means associated with the box for feeding oil under pressure to said grooves of the seat.

[Claims 6 to 9 not printed in the Gazette.]

1,108,065. GAGE HOLDER AND CONNECTION. HARRY A. CAMPBELL, Denver, Colo. Filed Jan. 13, 1913. Serial No. 741,750. (Cl. 248—20.)



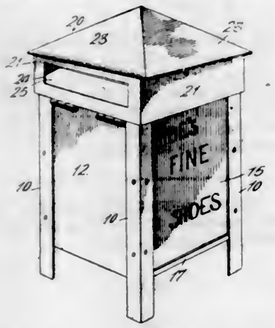
1. The combination with a gage holder comprising a frame having forwardly extending fingers adapted to engage the rim of a gage and an oppositely located ball headed pipe spring pressed toward said fingers, of a gage, and a pipe connection extending outwardly from one side of said gage, said pipe connection having a socket in its outer extremity adapted to being engaged by the ball headed pipe.

2. In combination, a gage, an outwardly extended pipe connection thereupon, a gage holder, a pipe longitudinally slidable therein, the adjacent extremities of said pipe connection and pipe being adapted to engage and form a tight joint, resilient means acting upon said pipe to maintain said joint, means upon the gage holder opposite the pipe for engaging said gage and means for retracting said pipe against the action of the resilient means.

3. In combination, a gage holder, a pipe mounted thereon to be capable of slight longitudinal reciprocation, a gage having an outwardly extending screw-threaded pipe provided with a socket at its outer extremity to receive the adjacent end of said reciprocable pipe, and resilient means acting on said reciprocable pipe to hold it in engagement with said socket, the socket extremity of the pipe connected with the gage, being adjustable to regulate the tension of said resilient means.

4. In combination, a gage holder, a pipe mounted thereupon to be capable of slight longitudinal reciprocation, a gage having a connection adapted to register with said pipe in one position, resilient means for maintaining the pipe in the latter position, a cam mounted upon said pipe, a cam mounted upon said gage holder in a position to be engaged by the first named cam and means whereby said first named cam may be adjusted longitudinally of the pipe.

1,108,066. ADVERTISING WASTE-PAPER BOX. EUGENE B. COOKE and CHAUNCEY O. LEWIS, New Philadelphia, Ohio. Filed Mar. 5, 1914. Serial No. 822,662. (Cl. 220—15.)



1. In an advertising waste paper box the combination of a skeleton frame comprising a bottom, angular upright strips secured to said bottom, a top band connected to said strips and having an inturned flange at its upper edge, guides at the opposite edges of said strips, removable advertising slides engaging said guides and forming the side walls of the box each having an inturned lip at its upper end for engaging the flanged upper end of said top band to limit the downward movement of said slide, and a hinged closure for said box.

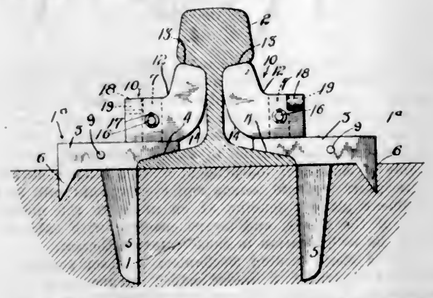
2. In an advertising waste paper box the combination of a skeleton frame comprising a bottom, angular upright strips secured to said bottom, a top band connected to said strips and having an inturned flange at its upper edge, guides at the opposite edges of said strips, removable advertising slides engaging said guides and forming the side walls of the box each having an inturned lip at its upper end for engaging the flanged upper end of said top band to limit the downward movement of said slide, the lower edge of said slide having a guide strip on its outer face terminating at its opposite ends at points spaced from the side edges of said slide.

3. In an advertising waste paper box the combination of a skeleton frame comprising a bottom, angular upright strips secured to said bottom, a top band connected to said strips and having an inturned flange at its upper edge,

guides at the opposite edges of said strips, removable advertising slides engaging said guides and forming the side walls of the box, each having an inturned lip at its upper end for engaging the flanged upper end of said top band to limit the downward movement of said slide, the lower edge of said slide having an upturned flange on its outer face with its ends cut away adjacent the side edges of said slide, and a closure for said box.

4. A waste paper box having a top hinged to the upper end thereof and shaped to fit over said upper end, a stop on the inner face of said top to limit its closing movement, said top having an opening in one side wall, a plate in said top secured to the lower edge of said opening and extending upwardly and inwardly, and a member overhanging said opening.

1,108,067. RAILROAD-SPIKE. JOE DANCULOVICH, Ely, Minn. Filed May 1, 1914. Serial No. 835,665. (Cl. 85—29.)



1. A spike comprising a base having means for securing the same to a railway tie, and a locking member pivotally mounted on the top of said base, and adapted to engage the under surface of the head of the rail.

2. A spike comprising a base having a shank for engaging the tie, a pin provided upon the top of said base, and a locking member pivotally mounted on said pin, and adapted to engage the under surface of the head of the rail.

3. A spike comprising a base having a shank for engaging the tie, shorter shanks for also engaging the tie, and a locking member pivotally mounted on the top of said base, and adapted to engage the under surface of the head of the rail.

4. A spike comprising a base having a shank for engaging the tie, a pin provided upon the upper surface of said base, and a locking block mounted upon said pin, said block having a high side and a low side, the locking block being adapted to be placed on said pin with its low side toward the rail and then turned to bring the high side into engagement with the head and web of the rail.

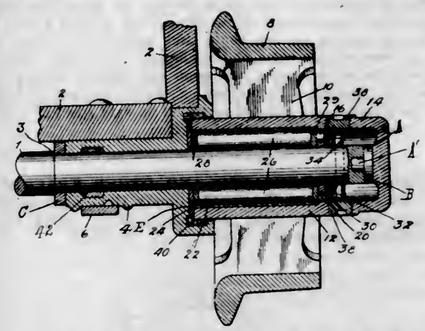
5. A spike comprising a base having a shank for engaging the tie, a locking block pivotally mounted on said base, and projections provided on the side of said base, whereby the withdrawal of said spike may be facilitated.

[Claims 6 and 7 not printed in the Gazette.]

1,108,068. CAR-WHEEL BEARING. WILLIAM F. DANIEL, Bristol, Tenn. Filed Aug. 29, 1913. Serial No. 787,313. (Cl. 105—67.)

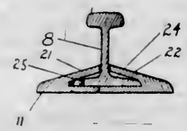
1. In a wheel, the combination with a hub, a lubricating chamber integral with the hub and surrounding the end of the axle, a partition separating said chamber from the hub, a plurality of washers cast in said chamber and surrounding the axle, and means for retaining said washers on the axle.

2. In a wheel, the combination with a hub having a bore containing roller bearings, of a lubricating chamber integral with the hub and surrounding the end of the axle, a perforated partition separating said chamber from the hub, two washers cast in said chamber and surrounding the axle, and a pin in the axle outside of the washers for retaining said washers in place.



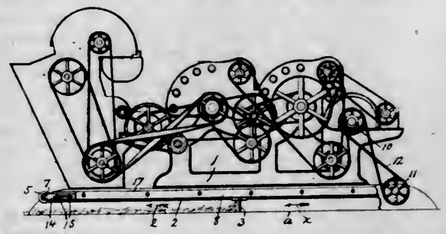
3. In a wheel, the combination with a hub, of a chamber integral with the hub and surrounding the end of the axle, a partition separating said chamber from the hub, two washers cast in said chamber and surrounding the axle, a pin in the axle outside of said washers, diametrically arranged openings in said chamber opposite said pin, and plugs closing said openings.

1,108,069. RAIL-CHAIR. KLEMENS DOMBELEK, New Castle, Pa. Filed Nov. 12, 1913. Serial No. 800,618. (Cl. 239—6.)



A rail chair formed of a pair of sections having a body portion and inwardly extending members forming a pocket for the reception of the base flange of a rail, the said sections at the bottom portions being provided with a longitudinally extending tongue and a pocket, the latter being adapted for the reception of the tongue of the other section, the tongue of one section being of greater width than the tongue of other section, said bottoms abutting and with the abutting edges thereof extending at an inclination, one of said sections being formed with a pair of spaced rounded lugs disposed below its respective inwardly extending member and being adapted to project into the base flanges of a pair of rails so that the same are connected together by said section.

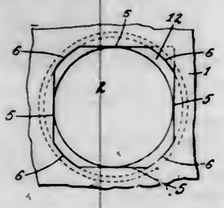
1,108,070. WASTE-COLLECTOR FOR CARDING-MACHINES. ROBERT N. FRANCE, Oswego, N. Y., assignor of one-half to Elliot B. Mott, Oswego, N. Y. Filed July 27, 1911. Serial No. 640,789. (Cl. 19—7.)



The combination with the supporting frame of a carding machine, of a channel-shaped guide supported centrally below said frame, and extending longitudinally

throughout the length of the frame, the sides of said channel projecting upward to form parallel longitudinal ribs, an endless driven chain having its leads disposed respectively above and below the bottom of said guide, a bracket secured to the chain and being of a width to move between the sides of the channel to prevent lateral movement of the chain, and upon the channel bottom to free the channel of accumulations, and a scraper secured to the bracket and adapted to travel on said ribs and thus to support the chain against sagging.

1,108,071. MUSIC-PLAYER AND OTHER TRACKER-BAR. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Apr. 21, 1913. Serial No. 762,510. (Cl. 84—163.)



1. A tracker-bar having apertures in the face thereof, each said aperture having an even number of sides to its outline, said sides being at equal angles one to another, half of said sides being of convex curvature, and the alternate sides of straight lines.

2. A music-player tracker-bar having apertures in the face thereof with rectangular main outlines to each aperture, said sides being of equal angles one to another and convexity rounded outlines at the joining of the said main lines of each said aperture.

3. A music-player tracker-bar having apertures in the face thereof with straight line main outlines to each aperture and convexly rounded outlines at the joining of the said main lines of each said aperture.

4. A music-player tracker-bar having apertures in the face thereof, each said aperture being of a substantially square outline having convexly rounded corners.

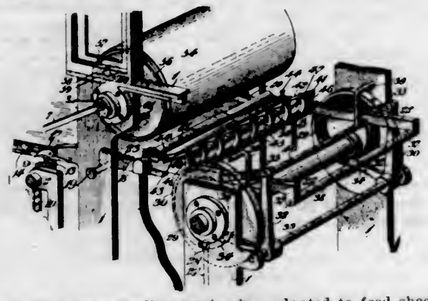
5. A music-player tracker-bar having apertures in the face thereof with rectangular main outlines to each aperture and convexly rounded outlines at the joining of the said main lines of each said aperture, and a circular duct extended rearwardly from said aperture, the circumference of said duct being co-central with the rounded outlines of its corresponding aperture.

[Claims 6 to 20 not printed in the Gazette.]

1,108,072. SHEET-FEEDING MECHANISM FOR PRINTING-PRESSES. HARRY B. GREEN, Woodbury, N. J., assignor to The Speed Press Co., Camden, N. J., a Corporation of New Jersey. Filed Aug. 4, 1911. Serial No. 642,343. (Cl. 101—41.)

1. In a sheet feeding mechanism adapted to feed sheets to a cylinder roll, a sheet support, a suction roll, devices on which said roll is mounted for feeding the separated sheets, and serving to support the sheet during substantially the entire passage thereof from the sheet support to the cylinder roll, said devices being incapable of movement independent of said suction roll, means for reciprocating said devices and thereby the suction roll, means independent of the suction roll for maintaining the top sheet of the support at a uniform height irrespective of the number of sheets on said support, and means for rotating said suction roll during its reciprocating movement.

2. In a sheet feeding mechanism adapted to feed sheets to a cylinder roll, a sheet support, a suction roll, a wedge-shaped tongue mounted in rear of said suction roll and connected therewith and beneath which and the latter a sheet is fed, the inclined face of said tongue extending from the suction roll to substantially the face of the cylinder roll, devices for creating a suction in said roll, and means for reciprocating said tongue and thereby said roll in a rectilinear plane extending at an angle to the normal plane of the sheets and said tongue being incapable of movement independent of said suction roll.



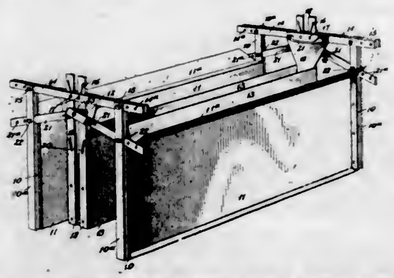
3. In a sheet feeding mechanism adapted to feed sheets to a cylinder roll, a sheet support, means for elevating the same step by step, a wedge-shaped tongue serving to support the sheet during substantially the entire passage thereof from the sheet support to the cylinder, a suction roll connected and moving in unison therewith, and incapable of movement independent of said tongue, devices for reciprocating said tongue and thereby said roll, in a rectilinear plane extending at an angle to the normal plane of the sheets, and means coacting with said roll during its reciprocation to cause rotation thereof.

4. In a sheet feeding mechanism, a sheet support, a reciprocable frame, a wedge-shaped tongue carried by said frame, a suction roll mounted in said frame in proximity to said tongue, a pinion carried by one end of said roll, a wedge-shaped support with which the other end of said roll engages, a rack having its teeth extending in a plane at an angle to the plane of the sheets and with which said pinion engages, means for creating a suction in said roll, and devices for reciprocating said frame to feed the separated sheet of paper from said support.

5. In a sheet feeding mechanism, a sheet support, a reciprocable frame, a wedge-shaped tongue carried by said frame, a suction roll mounted in said frame in proximity to said tongue, a pinion carried by said roll, a rack having its teeth extending in a plane at an angle to the plane of the sheets and with which said pinion engages, means for creating a suction in said roll, devices for reciprocating said frame to feed the separated sheet of paper from said support, and means for elevating said support to maintain the top sheet of the pile at a uniform height.

[Claims 6 to 16 not printed in the Gazette.]

1,108,073. MOLD FOR WALLS. CHARLES HENRY HARRIS, Kenosha, Wis. Filed Jan. 23, 1914. Serial No. 813,878. (Cl. 25—131.)

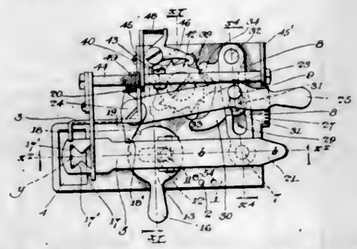


1. A mold, comprising frame elements, sides suspended from the said frame elements and mounted for movement toward and from each other, a core formed of side sections movable toward and from each other, said sections having guided vertical movement on the frame members, and links pivotally connected with the core sections and with the suspeneded sides.

2. A mold, comprising frame elements, sides pivotally hung on said frame elements, a core formed of gravitationally collapsible side sections having guided movement on the frame elements, and links pivotally connected with the core sections and with the pivoted sides.

3. A mold, comprising frame elements, sides pivotally mounted on said frame elements, a core formed of side sections vertically slidable on the frame elements, members in fixed relation to the frame elements, connections between said fixed members and the core sections, said connections consisting of oppositely inclined slots and pins in said slots, and toggle links pivotally connected with the pivoted side sections and pivotally connected with the core sections.

1,108,074. BUTTON-SEWING ATTACHMENT. HALL H. HOLDAWAY, Salt Lake City, Utah, assignor to Franklin Spencer, Jr., Los Angeles, Cal. Filed Apr. 21, 1913, Serial No. 762,725. Renewed July 6, 1914. Serial No. 849,244. (Cl. 112—32.)



1. A button sewing device comprising a base, a work holder provided with means for clamping the button to the fabric, an operating device mounted on said base and connected to said work holder to reciprocate the same, and a controlling device provided with guide means, and means on the work holder coöperating with said guide means to move the work holder laterally with respect to the line of reciprocation to give a diagonal movement to the work, said controlling device being pivotally mounted on said base so as to be angularly movable thereon independently of the motion of said work holder, and being provided with a handle for adjusting the same to vary the angular position of said guide means, and means for holding said controlling device in various adjusted positions.

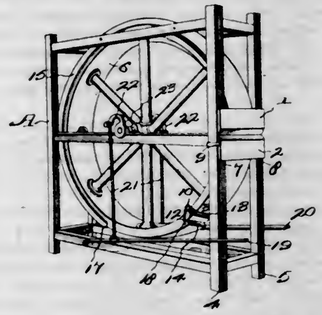
2. A button sewing device comprising a base, a work holder provided with means for clamping the button to the fabric, an operating device mounted on said base and connected to said work holder to reciprocate the same, and a controlling device provided with guide means, and means on the work holder coöperating with said guide means to move the work holder laterally with respect to the line of reciprocation to give a diagonal movement to the work, said controlling device being pivotally mounted on said base so as to be angularly movable thereon independently of the motion of said work holder, and being provided with a handle for adjusting the same to set said guide means in alinement with the line of reciprocation, so as to eliminate the lateral motion, or to set said guide means angularly to one side or the other of said alined position to produce lateral movement in one or the other direction so as to provide for crosswise diagonal movements of the work.

3. A button sewing device comprising a base, a work holder provided with means for clamping the button to the fabric, an operating device mounted on said base and connected to said work holder to reciprocate the same, and a controlling device provided with guide means, means on the work holder coöperating with said guide means to move the work holder laterally with respect to the line of reciprocation to give a diagonal movement to the work, said controlling device being pivotally mounted on said base so as to be angularly movable thereon independently of the motion of said work holder, and being provided with a handle for adjusting the same to set said guide means in alinement with the line of reciprocation, so as to eliminate the lateral motion, or to set said guide means angularly to one side or the other of said alined position to produce lateral movement in one or the other direction so as to provide for crosswise diagonal movements of the work, and means for locking the controlling device in any of said positions.

4. In a button sewing device, a base plate having a circular hole, a disk rotatably fitting in said hole and provided with a slot extending diametrically thereof, and with a handle for moving the same to different angular positions, means engaging with said disk for holding the same in different angular positions, a work holder slidably mounted on said disk and having a pin engaging in said slot to guide the work holder, and means for reciprocating the work holder.

5. In a button sewing device, a base plate having a circular hole, a disk rotatably fitting in said hole and provided with diametrically extending guide means, a work holder slidably mounted on said disk and provided with means engaging said guide means to control the direction of motion of said work holder according to the angular position of said disk, said disk having notches in its periphery and being provided with a handle for adjusting it to different angular positions, and a spring dog on said base plate engaging said notches in the disk to hold the disk in adjusted position.

1,108,075. APPARATUS FOR EXTRACTING THE FIBER FROM THE STALK OF THE ABACA-PLANT. ADRIAN DE ICSIAR, Ligao, Philippine Islands. Filed Dec. 8, 1913. Serial No. 805,440. (Cl. 13—18.)



1. In a machine of the character described the combination of a supporting frame; a wheel journaled on the frame; stripping means mounted on the frame; a clamp carried by said wheel; and annular members mounted on the frame concentric with said wheel coöperable with said clamp to hold the latter in closed position for securing the strip, and to automatically release said strip upon the rotation of the wheel, substantially as described.

2. In a machine of the character described the combination of a supporting frame; a wheel journaled on the frame; stripping means mounted on the frame; a clamp carried by said wheel and having a projecting member; and a cam bar mounted on the frame adapted to engage with said projecting member to close the clamp against the strip upon the rotation of the wheel, and to automatically release said clamp to free the strip at the end of the rotation, substantially as described.

3. In a machine of the character described the combination of a supporting frame; a wheel journaled on the frame; stripping means mounted on the frame; a clamp carried by said wheel and having a pair of projecting arms; a pair of cam bars mounted on the frame adapted

to engage with said projecting members to close the clamp against the strip upon the rotation of the wheel, and to automatically release said clamp to free the strip at the end of the rotation, substantially as described.

4. In a machine of the character described the combination of a supporting frame; a wheel journaled on the frame; stripping means mounted on the frame; a clamp carried by said wheel comprising a pair of arms pivotally mounted on the wheel and having projecting portions, a bar secured to said arms, and rollers mounted on said arm projecting portions; and a pair of cam tracks mounted on the frame to either side of said wheel, said cam tracks adapted to engage with said arm rollers and close the clamp against the strip upon the rotation of the wheel and to automatically release said clamp to free the strip at the end of the rotation, substantially as described.

1,108,076. COLLAPSIBLE FRAME FOR FLOATING STRUCTURES. JOSEF KEILER, Munich, Germany. Filed May 20, 1914. Serial No. 839,710. (Cl. 9—2.)



1. A collapsible frame for floating bodies, comprising a plurality of beams, and a plurality of normally transverse rings hingedly secured to said beams at two diametrically opposite points and adapted, when the said frame is collapsed, to lie in substantially one and the same plane.

2. A collapsible frame for floating bodies, comprising a plurality of beams, a plurality of rings hingedly secured to said beams at two diametrically opposite points, and adapted, when the said frame is collapsed, to lie in substantially one and the same plane, and means for supporting said frame when in the non-collapsed position.

3. A collapsible frame for floating bodies comprising a plurality of beams connected together by means of rings, certain of said beams being connected to said rings by means of hinges which are arranged in the lateral direction.

4. A collapsible frame for floating bodies comprising top and bottom beams, side beams, and a plurality of rings pivotally mounted on said side beams and connected to said top and bottom beams by means of hinges, substantially as described.

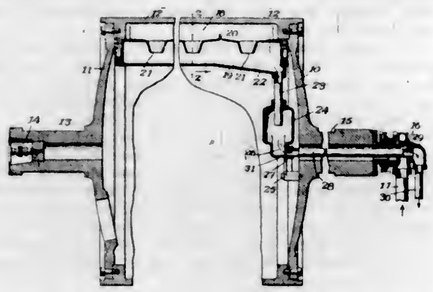
5. A collapsible frame for floating bodies comprising top and bottom beams provided with grooves at their front ends, side beams projecting beyond said top and bottom beams, bars connected to the projecting point of said side beams and sliding in said grooves in the top and bottom beams, and rings pivotally mounted on said side beams and connected by means of hinges to the top and bottom beams.

[Claim 6 not printed in the Gazette.]

1,108,077. DRYING-CYLINDER. GEORGE D. KILBERRY, Worcester, Mass., assignor to Rice, Barton & Fales Machine & Iron Co., Worcester, Mass., a Corporation of Massachusetts. Filed July 12, 1913. Serial No. 778,756. (Cl. 34—4.)

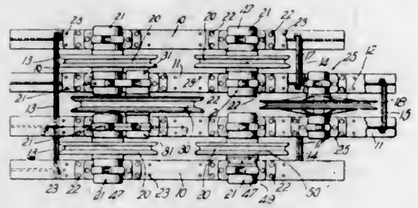
1. In a drying cylinder having an axial drainage outlet an integral water collecting member comprising a flange portion, a water collecting chamber, and a plurality of nozzles extending from said flange portion a substantial distance into said collecting chamber and forming traps to prevent back flow of the collected water, said collecting member being eccentrically mounted upon the inner circumferential surface of the cylinder and having a raidal connection from one end thereof to said axial drainage outlet.

2. A drying cylinder having in combination a rotating drum, a scoop, a collecting chamber, a trap chamber connected to said collecting chamber, an axial drainage pipe connected to said trap chamber, and means to prevent back flow of the collected water from each member to the



member immediately preceding it in the path of flow of the water.

1,108,078. CROWN-BLOCK. RICHARD E. KLINE, Los Angeles, Cal. Filed Jan. 10, 1913. Serial No. 741,160. (Cl. 57—129.)



A crown block, comprising in combination, four horizontal parallel spaced beams, two casing line sheaves in each of the spaces adjacent the outermost beams arranged one near each end of said beams, bearing blocks for said sheaves on the beams on each side of the said spaces, said bearing blocks being adjustable longitudinally on the beams, a sand line sheave at one end of the space between the two inner beams, bearing blocks for said sheave on the two inner beams, said bearing blocks being independent of the first mentioned bearing blocks, a drilling line sheave between the two inner beams near their other ends and near the casing line sheaves at that end, and bearing blocks for the drilling line sheave on the two inner beams, said blocks connected with the adjacent bearing blocks for the casing line sheaves, so that when the said adjacent casing line sheaves and drilling line sheave are adjusted longitudinally of the beams they maintain fixed relation to each other.

1,108,079. BRUSH. JOHN MORRISON, Jr., Glens Falls, N. Y. Filed Oct. 25, 1913. Serial No. 797,196. (Cl. 15—26.)



1. In a brush of the class described, a back formed with an upper and a lower section, a plate arranged between said sections, and bristles connected with said plate projecting through the lower section.

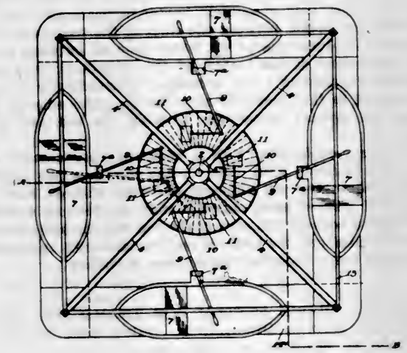
2. A brush, comprising a semi-globular cork back said back being adapted to adhere to the hand in operation, bristles extending from the flat portion of said back, and means for holding said bristles in place said means including a stiffening member.

3. A brush, comprising a cork back rounded at the edges which merge into the flat under portion thereof, bristles arranged in said back, means for holding said bristles in place, and a reinforcing member for preventing said bristles from pulling through the cork back.

4. A brush, comprising a semi-globular cork back, said back being formed into an upper and lower part, said lower part being flat and having rounded edges merging into said upper part, a stiffening plate arranged between said upper and lower parts, bristles extending from said lower part and through said plate, and means for holding said bristles in place, and in engagement with said plate.

5. A brush comprising a back formed of a buoyant material, said material having as one of its characteristics the function of adhering to the hand when the hand is brought into engagement therewith, bristles extending into said back, and means for holding said bristles in said back, said means including a comparatively stiff plate, whereby the bristles cannot tear said back.

1,108,080. ROUNDABOUT FOR PLAYGROUNDS. DAVID L. NEWCOMB, San Diego, Cal., assignor of one-half to John Lawrence, San Diego, Cal. Filed Oct. 23, 1913. Serial No. 796,838. (Cl. 46—27.)



1. A round-about comprising a rotatable frame, carriages suspended therefrom, a trough of sand, and levers provided with feet adapted to engage with said sand, whereby said frame is rotated manually.

2. A round-about for play-grounds comprising a rotatable frame, carriages suspended therefrom, an annular trough of sand, and levers provided with feed adapted to engage with said sand, whereby said frame is rotated manually by a rowing motion.

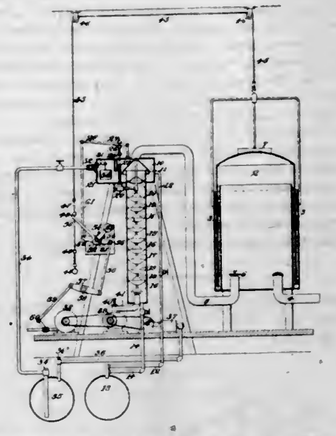
3. A round-about comprising a base consisting of a bearing and an annular sand trough surrounding the same, a frame revolubly mounted in said bearing, a plurality of boats suspended from said frame, sand in said annular trough, and means pivotally mounted on one edge of each of said boats engaging with the sand in said trough, whereby said frame is revolved by a rowing motion.

4. A round-about comprising a base consisting of a bearing and an annular sand trough surrounding the same, a frame revolubly mounted in said bearing, a plurality of boats suspended from said frame, sand in said annular trough, means pivotally mounted on one edge of each of said boats engaging with the sand in said trough, whereby a rowing motion is produced and said frame revolved, and a plurality of notches in the bottom of said trough adapted to facilitate the engagement of said means.

5. In a round-about for play-grounds, the combination of an annular box of sand, a plurality of boats mounted so as to revolve around said box, and means mounted on each of said boats adapted to engage with said sand and when operated manually from said boats revolve the same.

[Claim 6 not printed in the Gazette.]

1,108,081. CARBURETING APPARATUS. FRED S. OLIVER, San Francisco, Cal. Filed Nov. 12, 1913. Serial No. 800,519. (Cl. 48—168.)



1. An apparatus for generating a combustible mixture from a liquid source, comprising a substantially vertical carbureter chamber, a perforated feed pipe mounted in the chamber, upwardly inclined deflectors in the chamber, means for forcing a column of air upwardly through the chamber, a feed chamber mounted upon the upper end of the carbureter chamber, a valve for regulating the volume of oil passing from said feed chamber to the feed pipe in the carbureter chamber, and means for automatically maintaining a predetermined level of the liquid in said feed chamber.

2. An apparatus for generating a combustible mixture from a liquid source, comprising a substantially vertical carbureter chamber, a perforated feed pipe mounted in the chamber, upwardly inclined deflectors in the chamber, means for forcing a column of air upwardly through the chamber, a feed chamber mounted upon the upper end of the carbureter chamber, a valve for regulating the volume of oil passing from said feed chamber to the feed pipe in the carbureter, means for automatically maintaining a predetermined level of the liquid in said feed chamber, and a cowl mounted above the carbureter chamber having its lower edge in close juxtaposition to the level of the liquid in said feed chamber, whereby the heavier particles of moisture in the air column from the carbureter chamber will be thrown down before issuing from the feed chamber.

3. An apparatus for generating a combustible mixture from a liquid source, comprising a substantially vertical carbureter chamber, a perforated feed pipe mounted in the chamber, upwardly inclined deflectors in the chamber, means for forcing a column of air upwardly through the chamber, a feed chamber mounted upon the upper end of the carbureter chamber, a valve for regulating the volume of oil passing from said feed chamber to the feed pipe in the carbureter, means for automatically maintaining a predetermined level of the liquid in said feed chamber, a cowl mounted above the carbureter chamber having its lower edge in close juxtaposition to the level of the liquid in said feed chamber, whereby the heavier particles of moisture in the air column from the carbureter chamber will be thrown down before issuing from the feed chamber, and an operating valve for controlling the flow of the liquid from the feed chamber to the regulator valve.

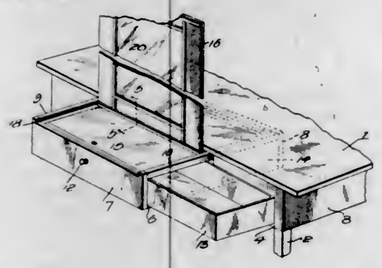
4. An apparatus for generating a combustible mixture from a liquid source, comprising a substantially vertical

carbureter chamber, a perforated feed pipe mounted in the chamber, upwardly inclined deflectors in the chamber, means for forcing a column of air upwardly through the chamber, a feed chamber mounted upon the upper end of the carbureter chamber, a valve for regulating the volume of oil passing from said feed chamber to the feed pipe in the carbureter, means for automatically maintaining a predetermined level of the liquid in said feed chamber, a cowl mounted above the carbureter chamber having its lower edge in close juxtaposition to the level of the liquid in said feed chamber, whereby the heavier particles of moisture in the air column from the carbureter chamber will be thrown down before issuing from the feed chamber, an operating valve for controlling the flow of the liquid from the feed chamber to the regulator valve, and an automatically operating valve for maintaining a constant level of said fluid in the said chamber.

5. In combination, with a carbureter chamber, a feed pipe extending through the chamber, a series of baffles connected to the pipe, said pipe having a series of discharge openings, one for each baffle, means to feed oil to the upper end of the pipe and means to supply air to the lower end of the chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,108,082. TABLE-DRAWER. LEWIS W. PENNOCK, Los Angeles, Cal. Filed Feb. 3, 1914. Serial No. 816,160. (Cl. 45—70.)

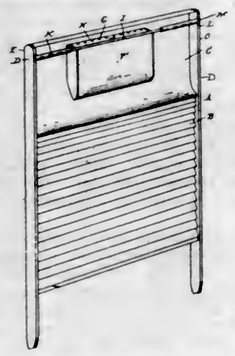


1. A table drawer construction comprising a main drawer adapted to slide both ways from under a table top, sub-drawers mounted in the main drawer and adapted to slide both ways out of the main drawer on a line transversely of the sliding line of the main drawer, a sliding shelf mounted in the main drawer above the sub-drawers and a second slide mounted in the main drawer above the first slide and adapted to pull out and serve as a writing desk and adapted to swing upwardly to a vertical position there being a mirror on the front when in its vertical position.

2. A table drawer construction comprising a main drawer adapted to slide both ways from under a table top; sub-drawers mounted in the main drawer and adapted to slide both ways out of the main drawer on a line transversely of the sliding line of the main drawer; a sliding shelf mounted in the main drawer above the sub-drawers and adapted to cover one sub-drawer at a time; and a second slide mounted in the main drawer above the first slide and adapted to pull out and serve as a writing desk.

1,108,083. SOAP-CONTAINER. HERBERT F. PRESCOTT, Detroit, Mich. Filed May 31, 1913. Serial No. 771,020. (Cl. 68—29.)

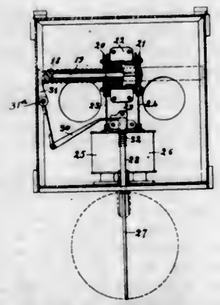
1. The combination with a wash-board including the working face and the spaced sides having portions extending above the working face, and a guard extending from the working face rearwardly, forming a space between said guard and the plane of the front edges of said sides, of a comparatively narrow receptacle for liquid soap arranged within said space and having the front face thereof substantially within the plane of the outer edges of the sides, said receptacle having a perforated top, and a pivotal connection between the sides of the receptacle permitting the inverting of the latter upon an outward rocking movement of the bottom of the receptacle.



2. The combination with a wash board including the working face and the spaced sides having portions extending from the working face rearwardly, forming a space between said guard and the plane of the front edges of said sides, of a comparatively narrow receptacle for liquid soap arranged within said space and having the front face thereof substantially within the plane of the outer edges of the sides, said receptacle having a perforated top, a pivotal connection between the sides of the receptacle permitting the inverting of the latter upon an outward rocking movement of the bottom of the receptacle, said connection comprising a rod extending longitudinally of and connected to the receptacle adjacent the outer edge of the top, and pivotal connections between the rod and said sides.

3. The combination with a comparatively narrow receptacle provided with a perforated top, of a rod rigidly connected to the top adjacent one edge thereof, tubular members sleeved upon opposite ends of the rod, springs interposed between the ends of the rod and the bases of the tubular members, the latter being provided with apertured, flattened outer ends, for the purpose described.

1,108,084. BLOCK SYSTEM FOR TRAMWAYS. DINO DAVIDE SAMAIA, Milan, Italy. Filed Sept. 29, 1911. Serial No. 651,950. (Cl. 246—36.)

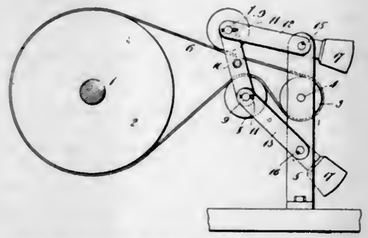


1. The combination with a block system for tramways of a signaling device comprising two magnets, cores operated by said magnets, wheels adapted to be rotated by said cores, a screwed shaft having a key way and passing through said wheels, one of said wheels having a screw thread corresponding to the screw on the shaft, a key in the other wheel engaging with the key way of the shaft, a semaphore, means connecting the semaphore to the screwed shaft, and means for energizing the magnets.

2. The combination with a block system for tramways of a signaling device comprising two magnets, cores operated by said magnets, wheels adapted to be rotated by said cores, a screwed shaft having a key way and passing through said wheels, one of said wheels having a screw thread corresponding to the screw on the shaft, a key in the other wheel engaging with the key way of the shaft, a semaphore, means connecting the semaphore to the screwed shaft, and means for energizing the magnets, said means comprising two interrupters of which one closes the circuit for one magnet and the other closes the circuit for the other magnet when operated by a car moving onto or off the single track.

3. The combination in a block system for tramways of a screwed shaft having a key way, two wheels mounted on said shaft, one of said wheels having an internal screw thread corresponding to the thread of the shaft, a key in the other wheel corresponding to the key way in the screwed shaft, pins on said wheels, magnets, cores, said cores engaging with said pins, a rotary shaft, a semaphore mounted on said shaft, means adapted to retain the rotary shaft in the normal position, and means connecting the rotary shaft to the screwed shaft.

1,108,085. BELT-TIGHTENER. JAMES H. SEWALL, Keene, N. H. Filed Apr. 5, 1912. Serial No. 688,578. (Cl. 64—5.)



1. The combination with a pair of main pulleys and a belt connecting said pulleys, of mechanism automatically controlled by the difference in the tension in respective opposite running portions of the belt between said main pulleys for taking up variable slack in said belt, said mechanism comprising a pair of auxiliary pulleys engaging said opposite running portions of the belt, and means connecting and movably supporting said auxiliary pulleys to turn about separate axes of which at least one axis lies outside a plane passing through the axes of said main pulleys, whereby both auxiliary pulleys may be moved by said difference in tension in the same general direction transverse said opposite running portions of the belt and with a simulutaneous relative change of position longitudinal said running portions of the belt.

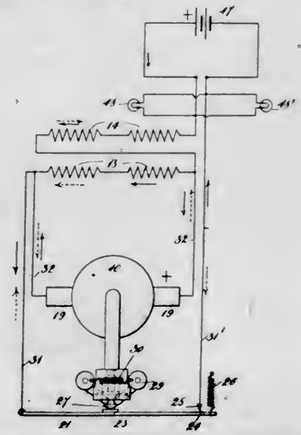
2. The combination with a pair of main pulleys and a belt connecting said pulleys, of mechanism automatically controlled by the difference in the tension in respective opposite running portions of the belt between said main pulleys for taking up variable slack in said belt, said mechanism comprising a pair of auxiliary pulleys normally forming angles of flexure in said opposite running portions of the belt, means connecting and movably supporting said auxiliary pulleys to turn about separate axes of which at least one axis lies outside the plane passing through the axes of said main pulleys, whereby both auxiliary pulleys may be moved by said difference in tension in the same general direction transverse said opposite running portions of the belt and with a simultaneous relative change of position longitudinal said running portions of the belt.

3. The combination with a pair of main pulleys and a belt connecting said pulleys, of mechanism automatically controlled by the difference in tension in the respective opposite running portions of the belt for taking up variable slack in said belt, said mechanism comprising a pair of auxiliary pulleys engaging the opposite running portions of the belt, and means connecting and movably supporting said auxiliary pulleys to turn about separate axes lying respectively without and on opposite sides of a plane passing through the axes of said main pulleys, whereby both auxiliary pulleys may be moved by said difference in tension in the same general direction transverse said opposite running portions of the belt and in opposite directions longitudinal said running portions of the belt.

4. The combination with a pair of main pulleys and a belt connecting said pulleys, of mechanism automatically controlled by the difference in tension in the respective opposite running portions of the belt for taking up variable slack in said belt, said mechanism comprising a pair of auxiliary pulleys normally forming angles of flexure in said respective opposite running portions of the belt, means connecting and movably supporting said auxiliary pulleys to turn about separate axes lying respectively without and on opposite sides of a plane passing through the axes of said main pulleys, whereby both auxiliary pulleys may be moved by said difference in tension, both in the same general direction transverse said opposite running portions of the belt and in opposite directions longitudinal of said opposite running portions of the belt.

5. The combination with a pair of main pulleys and a belt connecting said pulleys, of mechanism automatically controlled by the difference in tension in the respective opposite running portions of the belt for taking up variable slack in said belt, said mechanism comprising a pair of auxiliary pulleys engaging respectively opposite running portions of the belt, and means connecting and movably supporting said auxiliary pulleys to turn about separate axes lying respectively without and on opposite sides of a plane passing through the axes of said main pulleys whereby both auxiliary pulleys may be moved by said difference in tension in the same general direction transverse said opposite running portions of the belt and in opposite direction longitudinal of said opposite ruuning portions of the belt, the said means comprising links connecting said auxiliary pulleys to move in unison, and arms supporting said auxiliary pulleys respectively, said arms being pivotally mounted and normally oppositely inclined with respect to said plane.

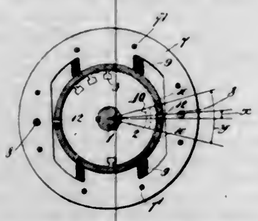
1,108,086. DYNAMO. EGMONT MAX TORMIN, Newton Center, Mass., assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Filed Mar. 3, 1911. Serial No. 612,140. (Cl. 171—313.)



A direct current dynamo electric machine having a field magnet provided with a laminated core so constructed and proportioned with respect to the field coil that at the maximum speed of rotation of the residual magnetism of said core will be insufficient to cause said machine to "pick up," an armature, and a source of electrical energy electrically connected with the armature and field mag-

net, the voltage impressed by the armature at maximum speed on said field magnet due to the residual magnetism of the field core being less than the voltage impressed upon said field magnet by said source of electrical energy.

1,108,087. DYNAMO. EGMONT MAX TORMIN, Newton, Center, Mass., assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Filed Jan. 27, 1912. Serial No. 673,724. (Cl. 171—223.)



1. In a direct current dynamo electric machine, a field magnet and pole pieces secured thereto, the pole pieces being separated by narrow gaps of which the peripheral length is very short compared to the circumference of said pole pieces and said gaps being inclined to the axis of the machine.

2. In a variable-speed dynamo electric machine, the combination with a field magnet having pole-pieces and means for directing a portion of the magnetic flux developed by said field-magnet into the commutation zone, of brushes having the minimum cross-sectional area required to carry the current output and an armature having such a relatively large number of coils that a comparatively large number thereof will be simultaneously short-circuited by said brushes, the angle subtended by the peripheral length of the gaps between said pole-pieces being equal to or smaller than the angle of commutation.

3. In a variable-speed dynamo electric machine, comprising means whereby the current output for rotational speeds of the armature beyond a given critical speed is either constant or decreases with such speed of rotation, the combination with brushes having the minimum cross-sectional area required to carry the current output and an armature having such a relatively large number of coils that a comparatively large number thereof will be simultaneously short-circuited by said brushes, of a field-magnet having pole-pieces, the angle subtended by the peripheral length of the gaps between said pole-pieces being equal to or smaller than the angle of commutation.

1,108,088. CENTRIFUGAL SWITCH. EGMONT MAX TORMIN, Newton Center, Mass., assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Original application filed Jan. 27, 1912, Serial No. 673,724. Divided and this application filed July 31, 1912. Serial No. 712,504. (Cl. 175—310.)



1. In a dynamo electric machine, a cut-out comprising a collector hub mounted on the axle of the machine, a collector ring comprising a plurality of segments secured to said hub, centrifugally-operated contact members arranged to make contact with the interior of said collector ring when the machine attains a predetermined speed, but normally out of contact therewith, and brushes constantly maintained in electrical contact with the exterior of said ring.

2. In a dynamo electric machine, a cut-out comprising a collector hub mounted on the axle of the machine, a collector ring comprising a plurality of segments secured to said hub, spring-retracted centrifugally-operated contact members arranged to make contact with the interior of said collector ring when the machine attains a predetermined speed, but normally out of contact therewith, and brushes constantly maintained in electrical contact with the exterior of said ring.

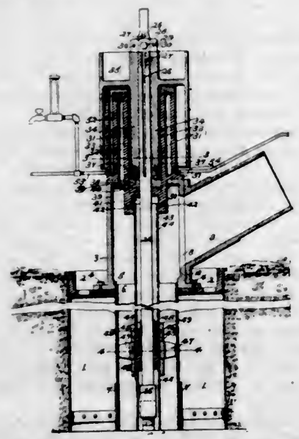
3. In a dynamo electric machine, a cut-out comprising a collector hub mounted on the axle of the machine, a collector ring comprising three segments secured to the hub, two centrifugally-operated contact members arranged to make contact respectively with two of said segments and means for electrically connecting said contact members with the third segment.

4. In a dynamo electric machine, a cut-out comprising a collector hub mounted on the axle of the machine, a collector ring comprising a plurality of segments secured to said hub, centrifugally-operated contact members arranged to make contact with the interior of said collector ring when the machine attains a predetermined speed, but normally out of contact therewith, a circular plate-spring normally tending to retract said contact-members, and brushes constantly maintained in electrical contact with the exterior of said ring.

5. In a dynamo electric machine, a cut-out comprising a collector hub mounted on the axle of the machine, a collector ring comprising a plurality of segments secured to said hub, centrifugally-operated contact members arranged to make contact with the interior of said collector ring, a circular plate-spring normally tending to retract said contact members, and a second circular plate-spring inclosing the first spring and having its extremities only in contact therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,108,089. CENTRIFUGAL PUMPING MECHANISM. MARVIN B. VAN NESS, Welsh, La. Filed Feb. 16, 1912. Serial No. 677,894. (Cl. 103—43.)



1. The combination with the pump casing, the impeller therein, a shaft bearing carried by the pump casing, a line shaft passing through said bearing and carrying said impeller, a pump head, means for forming a water conduit for suspending said pump casing from said pump head, a head bearing member through which said line shaft projects, said head bearing member being mounted on said pump head, a set of line shaft bearings between said head bearing member and said pump casing member, and means connecting all of said bearing members together, and having provisions in virtue of which as said head bearing member is turned on said pump head, all of said bearing members will be put under tension and drawn into alinement, and a driving pulley on said line shaft.

2. In a pumping mechanism, the combination with the pump casing, the impeller mounted therein and the pump casing line shaft bearing, of a pump head and a pipe connecting said pump head with said pump casing for suspending the same and forming a water conduit, a head bearing member mounted on said pump head, a line shaft passing through said bearing members and carrying said impeller, an intermediate shaft bearing between said pump casing bearing and said head bearing member, a pipe embracing said line shaft and rigidly connected to said pump casing bearing and to said intermediate bearing, a second pipe connected to said intermediate bearing and to said head bearing, the connection between said head bearing and said pipe being such that as said head bearing is turned, said pipes that embrace said line shaft and said intermediate bearing, will be put under tension to bring all of said bearings into alinement, substantially as shown and described.

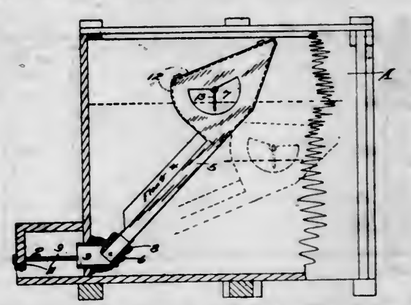
3. In a pump of the character described, a pump casing, an impeller operating therein, a line shaft bearing carried by said casing, a pump head, means for rigidly suspending said pump casing from said pump head, to maintain said pump casing immovable with relation to said pump head, a head bearing member mounted on said pump head, a line shaft passing through said head bearing member and through said pump casing bearing member and carrying said impeller, means for driving said line shaft, an intermediate line shaft bearing between said head bearing and said pump casing bearing, a pipe rigidly connected at one end with said intermediate bearing and rigidly connected at its other end with said pump casing bearing, another pipe rigidly connected with said intermediate bearing, and means coöperatively connecting said other pipe with said head bearing, in virtue of which when said head bearing is turned on said pump head, tension will be applied to said pipes and said intermediate bearing to aline said intermediate bearing with said head bearing and with said pump casing bearing, substantially as shown and for the purposes described.

4. In a pump of the character described, a pump casing, an impeller operating therein, a line shaft bearing carried by said casing, a pump head, means for rigidly suspending said pump casing from said pump head to maintain said pump casing immovable with relation to said pump head, a head bearing member mounted on said pump head, a line shaft passing through said head bearing member and through said pump casing bearing member and carrying said impeller, means for driving said line shaft, an intermediate line shaft bearing between said head bearing and said pump casing bearing, a pipe rigidly connected at one end with said intermediate bearing and rigidly connected at its other end with said pump casing bearing, another pipe rigidly connected with said intermediate bearing, and means coöperatively connecting said other pipe with said head bearing, in virtue of which when said head bearing is turned on said pump head, tension will be applied to said pipes and said intermediate bearing to aline said intermediate bearing with said head bearing and with said pump casing bearing, said head bearing member having a bearing pocket, said shaft driving means including a pulley having a bearing hub mounted in said pocket, and thrust bearings interposed between said hub and said head bearing member to sustain the thrust of said line shaft and its carried parts.

5. In a pump of the character described, a pump casing, an impeller operating therein, a line shaft bearing carried by said casing, a pump head, means for rigidly suspending said pump casing from said pump head to maintain said pump casing immovable with relation to said pump head, a head bearing member mounted on said pump head, a line shaft passing through said head bearing member and through said pump casing bearing member and carrying said impeller, means for driving said line shaft, an intermediate line shaft bearing between said head bearing and said pump casing bearing, a pipe rigidly connected at one end with said intermediate bearing and rigidly connected at its other end with said pump casing bearing, another pipe rigidly connected with said intermediate bearing, and means coöperatively connecting said other pipe with said head bearing, in virtue of which when said head bearing is turned on said pump head, tension will be applied to said pipes and said intermediate bearing to aline said intermediate bearing with said head bearing and with said pump casing bearing, said head bearing member having a bearing pocket, said shaft driving means including a pulley having a bearing hub mounted in said pocket and thrust bearings interposed between said hub and said head bearing member to sustain the thrust of said line shaft and its carried parts, said line shaft having a key groove, and said pulley having a key for entering said groove, said line shaft having a threaded portion, and a nut threaded on said threaded portion to engage said pulley for adjusting said line shaft to adjust said impeller, said nut having a plurality of faces provided with tapped apertures, and a set screw adapted to pass through said apertures and project into said key groove to hold said nut from turning.

[Claims 6 to 18 not printed in the Gazette.]

1,108,090. CONSTANT-DISCHARGE IRRIGATION-MODULE. JEROME E. BARIEAU, Colfax, Cal. Filed Sept. 17, 1913. Serial No. 790,376. (Cl. 137—21.)



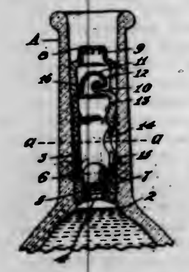
1. In combination with a liquid container having an external discharge and having an opening in a wall thereof, which opening connects the discharge and container interior, a flanged coupler which projects through said opening and into the discharge, a bolt passed through the flange of the coupler through said container wall and through the discharge to draw the flange against said wall, and a float having a stem which is flexibly connected to said coupler.

2. In combination with a liquid container having a discharge, a float therein, a flexible connection between said float and discharge, said float having an inlet opening formed in one of the side walls of the head thereof and between the ends of said head, which opening is of semi-circular shape at its lower portion, and a weight box secured to the opposite side wall of the head of the float adapted to weight the float so that the surface of the water in the container forms a chord which extends across said opening in spaced relation to the top of the opening.

1,108,091. NON-REFILLABLE BOTTLE. MAX BERGER and RUDOLPH WEISBACH, San Francisco, Cal.; said Weisbach assignor to said Berger. Filed Sept. 2, 1913. Serial No. 787,576. (Cl. 215—65.)

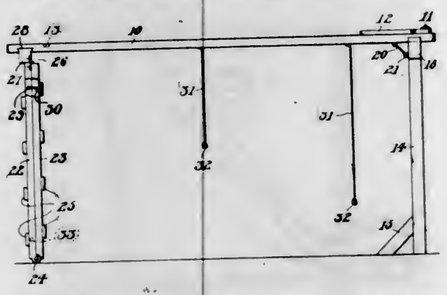
In a non-refillable bottle, a tube insertible in the neck of a bottle having a valve seat on its interior surrounding an inlet opening at its lower end and formed with a closed upper end having discharge perforations therein, a

resilient ring on said valve seat, a partition in the tube adjacent to the outer end, an inverted U-shaped passage in said partition, one branch of the passage opening below the partition and the other branch opening above the partition, a loose ball in the tube normally resting



on the resilient ring on the valve seat and of a diameter slightly less than the inside diameter of the tube, an inward projection in the tube below the partition to limit movement of the ball, and a pocket in the inside wall of the tube to receive the ball when the tube is disposed horizontally.

1,108,092. COMBINED IRONING-TABLE AND STEP-LADDER. STEPHAN S. BRONARSKY, Chicago, Ill. Filed June 1, 1914. Serial No. 842,283. (Cl. 228—32.)

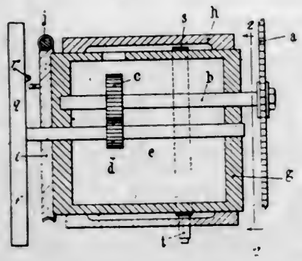


1. In a device of the class described, an ironing-board, a socket formed in the under face of one end thereof, a leg for supporting the socketed end of the board, a head block carried by said leg, a projection carried by said block and adapted to be received within the socket, said block carrying end projections adapted to engage the sides of the board to prevent lateral movement thereof, and a hook carried by the board and adapted to engage the head block to hold the same in fixed relative position to said board.

2. In a device of the class described, an ironing-board, a ladder section hinged to one end thereof, said ladder section comprising a pair of foldable sections, and means carried by the board engaging the ladder section to limit the same in their opening movement.

1,108,093. PORTABLE CIRCULAR SAW FOR WORKING METALS. ARMAND ACHILLE DELEPLANQUE, Paris, France. Filed June 30, 1914. Serial No. 848,218. (Cl. 29—69.)

1. A circular saw for sawing metal, comprising a casing, a rotary hollow member mounted in the casing, a driving shaft centrally mounted in the hollow member and having one end projecting beyond the said member and provided with a driving wheel on said end, said shaft being provided with a gear wheel within the said member, a saw shaft eccentrically mounted in the hollow member and having the end carrying the saw projecting beyond the end of the hollow member opposite that from which the driving shaft projects, said shaft being provided with a gear wheel within said member and meshing with the gear wheel of the driving shaft, and means for operating the said hollow member.



2. A circular saw for sawing metal, comprising a support, a rotary member mounted in the support, a driving shaft centrally mounted in the rotary member, a saw axis eccentrically mounted in the said member and geared with the driving shaft, a worm wheel carried by the rotary member, a worm meshing with the worm wheel and carrying a ratchet, a bell crank lever carrying a pawl engaging the ratchet wheel, and means connected with the driving shaft, for operating the bell crank lever.

3. A circular saw for sawing metal, comprising a support, a rotary member mounted in the support, a driving shaft centrally mounted in the rotary member, a saw axis eccentrically mounted in the said member and geared with the driving shaft, means for operating the rotary member, and a strap brake passing around the rotary member.

1,108,094. FILTER FOR PNEUMATIC CARPET-CLEANERS. LEONARD L. FERGUSON, Chicago, Ill., assignor to John W. Duntley, Chicago, Ill. Filed June 8, 1914. Serial No. 843,751. (Cl. 83—47.)

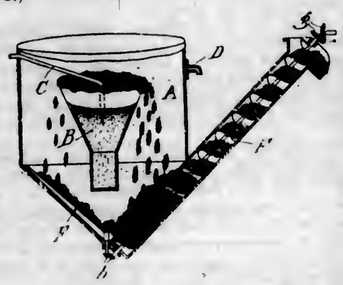


1. In a device of the class described, the combination of a sheet metal frame having a circular opening therein, the edges of said opening being bent backwardly upon themselves and then inwardly to form an annular recess and then bent downwardly and inwardly to form a seat, a filtering device in said seat, and retaining means for said filtering device removably supported in said annular recess.

2. In a device of the class described, the combination of a sheet metal frame having a circular opening, the edge of said opening being bent backwardly upon itself and then inwardly to provide an annular recess and then downwardly and inwardly to provide a seat, the backwardly bent portion of said edge being slotted, a filtering device in said seat, and an annular sheet metal locking device having tongues adapted to pass through said slots and into said recess for the purpose of retaining the filtering device in said frame.

3. In a device of the class described, the combination of a sheet metal frame having a circular opening, the edge of said opening being bent backwardly upon itself and then inwardly to provide an annular recess and then downwardly and inwardly to provide a seat, the backwardly bent portion of said edge being slotted, a filtering device in said seat, and an annular sheet metal locking device having tongues adapted to pass through said slots and into said recess for the purpose of retaining the filtering device in said frame, said filtering device comprising a supporting ring and fabric mounted thereon.

1,108,095. APPARATUS FOR SEPARATING SOLID MATTER, MORE PARTICULARLY CELLULAR MATTER, FROM LIQUIDS. BRUNO HOFER, Munich, Germany. Filed Apr. 22, 1914. Serial No. 833,609. (Cl. 210—5.)



1. In apparatus for separating solids from liquids, the combination with a container having its upper end open and its lower portion substantially funnel-shaped, of a casing in said container, said casing comprising a lower cylindrical portion closed at one end and an upper frusto-conical portion open at both ends and in communication with said cylindrical portion, means for discharging liquids and solids admixed to said casing at a point intermediate its ends, and means for conveying solids out of the funnel-shaped portion of said container.

2. In apparatus for separating solids from liquids, the combination with a container, of a casing in said container gradually increasing in diameter toward its upper end and having said upper end provided with a lip, means for feeding liquids and solids admixed to the interior of said casing at a point intermediate its ends whereby the solids will rise in the casing and flow over said lip, and a conveyer in communication with the interior of said container and adapted to receive the solid matter passing over the lip of the casing.

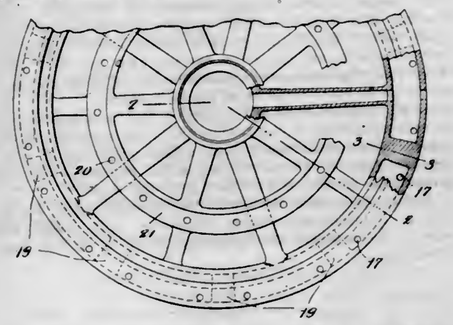
3. In apparatus for separating solids from liquids, the combination with a container, of a casing in said container gradually increasing in diameter toward its upper end and having said upper end provided with a lip, means for feeding liquids and solids admixed to the interior of said casing at a point intermediate its ends whereby the solids will rise in the casing and flow over said lip, a conveyer in communication with the interior of said container and adapted to receive the solid matter passing over the lip of the casing, a scraper operable on the floor of said container, and means whereby said scraper is driven in synchronism with said conveyer.

1,108,096. METHOD OF MAKING WHEELS, AND RESULTING WHEEL. WILLIAM C. JOHNSON, Braintree, and JOHN W. JOHNSON, Boston, Mass., assignors to Johnson Steel Wheels Corporation, Boston, Mass., a Corporation of Maine. Filed Jan. 2, 1913. Serial No. 739,639. (Cl. 22—200.)

1. The method of making wheels which consists in casting at a single operation the complete contour of a wheel having two oppositely inclined sets of spokes, the spokes of the two sets joining the rim in substantially spaced apart relation and joining the hub spaced farther apart, and permitting the casting to cool with a self equalization and taking up of shrinkage stresses whereby cracking of spokes on cooling is avoided.

2. The method of making wheels which consists in casting at a single operation the complete contour of a wheel having two oppositely inclined sets of spokes and a hollow arched rim, the spokes of the two sets joining the inner web of said rim in substantially spaced apart relation in the direction of the wheel axis, and permitting the casting to cool gradually with a self equalization and taking up of shrinkage stresses whereby cracking of spokes on cooling is avoided.

3. The method of making wheels which consists in casting at a single operation the complete contour of a wheel having two oppositely inclined sets of hollow spokes in alternating relation about the wheel, the spokes of the two sets joining the rim in substantially spaced apart relation in the direction of the wheel axis and joining the hub spaced farther apart, and permitting the gradual cooling of the casting in a manner to permit equalization and taking-up of shrinkage stresses whereby cracking of spokes on cooling is avoided.

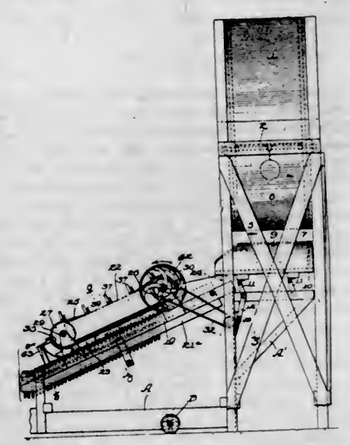


4. An integral cast wheel having two oppositely inclined sets of spokes joining the rim in substantially spaced apart separated planes at each side of the wheel center and joining the hub in planes farther apart, whereby shrinkage stresses are dissipated.

5. An integral cast wheel having two sets of spokes with the spokes of one set staggered with respect to those of the other set, the two sets joining the rim in substantially spaced apart separated planes, and joining the hub at a farther distance apart, whereby shrinkage stresses are equalized and dissipated.

[Claims 6 to 11 not printed in the Gazette.]

1,108,097. BOBBIN-HANDLING APPARATUS. BURT A. PETERSON, Rockford, Ill., assignor to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed Apr. 1, 1912. Serial No. 687,892. (Cl. 118—13.)



1. In bobbin-handling apparatus, in combination, a longitudinally-slotted structure along which bobbins may move; and means operating in a direction opposite to the direction of movement of the bobbins for alining the bobbins with a slot in said structure.

2. In bobbin-handling apparatus, in combination, a longitudinally-slotted structure along which bobbins may move; endless chain means arranged to move along and above said structure in a direction opposite to that taken by the bobbins; and fingers carried by said endless chain means arranged to move among the bobbins and aline them with the slots.

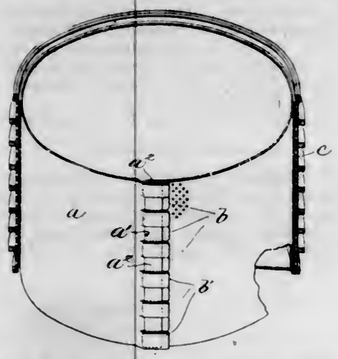
3. In bobbin-handling apparatus, in combination, a longitudinally-slotted structure along which bobbins may move; two endless parallel chains supported for movement along said structure; cross-bars connecting said chains; and fingers on the cross-bars arranged, in the movement of the chains, to pass among bobbins lying on said structure, and aline the bobbins with the slots, said fingers moving among the bobbins in the direction opposite to the direction of movement of the bobbins.

4. In bobbin-handling apparatus, in combination, a downwardly-inclined longitudinally-slotted structure down which bobbins may move; and means operating in a direction opposite to the direction of movement of the bobbins for alining the bobbins with the slots.

5. In bobbin-handling apparatus, in combination, an inclined longitudinally-slotted structure; and means for raking the bobbins into alinement with a slot in said structure.

[Claims 6 to 17 not printed in the Gazette.]

1,108,098. BASKET FOR CENTRIFUGAL MACHINES. EUGENE ROBERTS and ANGUS H. GIBSON, Lehi, Utah, assignors to Sugar Centrifugal Discharger Company, Salt Lake City, Utah, a Corporation of Utah. Filed Feb. 13, 1913. Serial No. 748,114. (Cl. 127—3.)



1. A screen for a centrifugal basket comprising a foraminous sheet, one of whose ends is provided with a series of elongated perforations adjacent to and substantially parallel with the edge of said end, the other end being slit transversely to its edge inwardly to form a series of tongues, a portion of which are disposed to pass through the said elongated perforations to form an interlocking engagement between the two ends to prevent lateral separation of the ends, substantially as described.

2. A screen for a centrifugal basket comprising a foraminous sheet of flexible material, one of whose ends is folded back exteriorly and provided with a series of interrupted elongated perforations at the line of said fold, the other end of said sheet being slotted inwardly from its edge to form a series of circumferentially extending tongues some of which are disposed to aline with and pass through said perforations when the two ends are brought together, the remaining tongues being passed outside of the opposite end whereby the two ends are interlocked against lateral separation while allowing circumferential expansion, substantially as described.

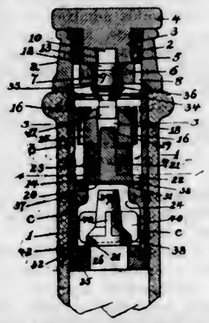
3. A basket for a centrifugal machine embracing a frame, a removable peripheral wall or screen whose ends are overlapped, one of said ends being provided with a series of vertical elongated perforations adjacent to its edge, the other end being slotted in the direction of the circumference for a short distance to form a series of contiguous tongues, each alternate tongue being passed through a corresponding perforation in the opposite end whereby the two ends are interlocked against lateral separation, substantially as described.

4. A screen for a centrifugal basket comprising a foraminous sheet bent into approximately circular contour with its free ends held against lateral separation by a series of overlapped interwoven tongues and strap members while permitting circumferential play of the tongues in relation to the strap members, substantially as described.

5. A screen for a centrifugal basket embracing a foraminous sheet bent into approximately circular form, the ends of said sheet being provided respectively with a series of projecting tongues and a corresponding series of receiving slots by which the ends may be overlapped and interwoven to prevent their lateral separation while permitting play of the tongues in the slots in a circumferential direction, substantially as described.

[Claim 6 not printed in the Gazette.]

1,108,099. NON-REFILLABLE BOTTLE. JOHN L. SELLAR, Baltimore, Md., assignor of two-thirds to Henry Castelberg, Baltimore, Md. Filed June 10, 1913. Serial No. 772,800. (Cl. 215—69.)



1. The combination of a bottle-neck; a tubular shell fitted within said bottle-neck and forming the walls of a chamber whose bottom is provided with a port opening; a disk-valve seating over said port opening, and said valve having an upward-projecting stem and also provided with a cylindric buoyant body fitting around the said stem but leaving its upper end projecting above said body; and a weight inclosed in said chamber and movable longitudinally independent of said body and valve but rotatably connected therewith by said stem projection.

2. The combination of a bottle-neck; a tubular shell fitted within said neck and projecting above; a baffle diaphragm within the tubular shell; a valve and port below said diaphragm for permitting the outflow of liquid but preventing its inflow; a removable cap that closes the discharge mouth and which is free to be turned or rotated while in its closed position, and means connecting the cap and said valve, whereby upon turning the cap the valve may be loosened.

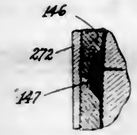
3. The combination of a bottle-neck; a tubular shell projecting above the bottle-neck and having a discharge mouth; a diaphragm fixed within the shell below said mouth and said diaphragm forming at its upper side a space within the top part of the shell and said diaphragm having openings; a removable cap closing the discharge mouth said cap being entirely removed when pouring liquid from the bottle; a valve-seat below the said diaphragm and having a port for the outflow of liquid; a valve normally on the seat and which opens and closes said port when a tilting movement of the bottle occurs; and means communicating from the said top space above the diaphragm to the said valve below for loosening the valve should the latter become stuck to its seat.

4. The combination of a bottle-neck having at its top a mouth; a valve and port structure within the said neck—said valve being free to open and close by the tilting action of the bottle; a rotatable spindle mounted in the bottle-neck; means connecting the spindle with the valve; and a cap closing the mouth of the bottle-neck and said cap being connected with the rotatable spindle, whereby the valve may be loosened by turning the cap.

5. The combination of a bottle-neck; a spindle in the neck; a cap which closes the mouth of the neck, connects with spindle and has a rotary movement; a valve and port structure inclosed in the neck—said valve provided with an upwardly-projecting stem; and means movable longitudinally in the bottle-neck and which forms a loose coupling between the said spindle and the stem of the valve.

[Claim 6 not printed in the Gazette.]

1,108,100. HEEL-LASTING MECHANISM. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 16, 1909, Serial No. 522,987. Renewed July 7, 1914. Serial No. 849,564. (Cl. 12—14.1.)



1. In a heel lasting mechanism, a heel embracing band provided in its rear inner face with a recess or depression of less depth than the thickness of the band arranged to receive the usual heel end tack of an assembled shoe.

2. A lasting machine, having, in combination, a heel embracing band having that portion of its rear inner face which is liable to be engaged with and roughened by the usual heel end tack of an assembled shoe depressed to a depth less than the thickness of the band so that said roughened surface will not mar the shoe upper when the shoe is embraced by the band.

3. In a heel lasting mechanism, a heel embracing band formed with a depression in the rear portion of its inner face, and a filling piece of material less impressionable than the band adapted to be fitted into said depression.

4. In a heel lasting mechanism, a heel embracing band having in the inner face of its rear portion a depression or recess of less depth than the thickness of the band and a removable filling piece applied in said depression to take the wear from the heel end tacks of the shoes being operated upon.

5. In a heel lasting mechanism, a heel embracing band formed with a depression in the rear portion of its inner face, and a filling piece removably secured in said depression, said filling piece being formed of relatively hard material adapted to force an insufficiently driven heel end tack farther into the shoe when the band is caused to embrace the shoe.

[Claims 6 to 15 not printed in the Gazette.]

1,108,101. HEEL-BAND. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 17, 1912. Serial No. 709,971. (Cl. 12—141.)



1. A heel embracing band having a vertical straight outer face and an inner face on its wings or side portions which is continuous or uninterrupted throughout the height of the band and is contoured substantially to the vertical cross sectional shape of the foot in the region of the heel breast.

2. A heel embracing band having side portions or wings formed on their inner faces to engage the shoe first near their lower edges when the band is closed, as and for the purpose described.

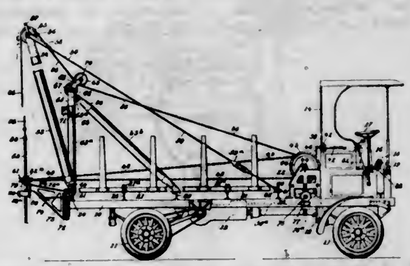
3. A band adapted to open and close about the heel end of a shoe and having wings which have relatively thin upper portions and lower portions which are thicker and are chambered substantially as described to render them resilient.

4. A heel band made of resilient material and having in its walls chambers arranged to render the portions of the band adjacent thereto more yielding than other portions of the band.

5. A heel band made of resilient material and having, extending upwardly from the lower edge of each side portion or wing, a chamber rendering the lower portions of the wings relatively more yielding than other parts of the band.

[Claims 6 to 11 not printed in the Gazette.]

1,108,102. AUTOMOBILE POST-HOLE DIGGER. FRANK MUELLER, Allentown, Pa., assignor to International Motor Company, Wilmington, Del., a Corporation of Delaware. Filed Mar. 1, 1913. Serial No. 751,433. (Cl. 255—19.)



1. The combination with a motor vehicle and the driving mechanism thereof, of an auger, means for supporting said auger, means for operating said auger, and means for simultaneously rendering said driving mechanism inoperative as to the vehicle and operatively connecting said driving mechanism with said auger operating means, substantially as specified.

2. The combination with a motor vehicle and the driving mechanism thereof, of a shaft, a transmission mechanism intermediate said driving mechanism and said shaft, an auger carried by said shaft, a bearing for supporting said shaft, a pulley on said shaft, a driving pulley, a belt connecting said first-named pulley with said driving pulley, and means for simultaneously rendering said driving mechanism inoperative as to said vehicle, and operatively connecting said driving pulley with said driving mechanism to operate said auger, substantially as specified.

3. The combination with a motor vehicle and the driving mechanism, of a shaft, a transmission mechanism intermediate said driving mechanism and said shaft, an auger carried by said shaft, a bearing for vertically supporting said shaft, a pulley on said shaft, a driving pulley, a belt connecting said first-named pulley with said driving pulley, means for raising said shaft and auger to remove the material loosened by said auger, and means for simultaneously rendering said driving mechanism inoperative as to said vehicle and operatively connecting the same with said auger shaft and said means for raising said auger shaft, substantially as specified.

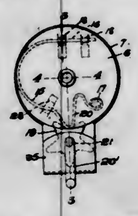
4. The combination with a motor vehicle and the driving mechanism thereof, of a shaft, an auger carried by said shaft, a bearing at the end of said vehicle for vertically supporting said shaft, a pulley on said shaft, a trans-

mission mechanism, a driving pulley, and a winding drum supported intermediate said first-named shaft and said driving mechanism, a flexible member connecting said driving pulley with the pulley on said first-named shaft, a support on the vehicle, a cable having one end secured to said first-named shaft and its other end passed over said support and secured to said winding drum, and means for rendering said driving mechanism inoperative as to said vehicle, and operatively connecting the same with said driving pulley or with said driving drum, substantially as specified.

5. The combination with a motor vehicle and the driving mechanism thereof, of a shaft, an auger carried by said shaft, a bearing at the end of said vehicle for vertically supoprting said shaft, a pulley on said shaft, means for feeding said shaft to advance said auger, a shaft supported intermediate said first-named shaft and said driving mechanism, a driving pulley and a winding drum mounted upon said shaft, a flexible member connecting said driving pulley with the pulley on said first-named shaft, a support on the vehicle, a cable having one end secured to said first-named shaft, and its other end passed over said support and secured to said winding drum, and means for connecting, at will, the driving mechanism of the vehicle with said driving pulley and said winding drum, substantially as specified.

[Claims 6 to 12 not printed in the Gazette.]

1,108,103. BELL. HENRY MAYTROTT, Bridgeport, Conn., assignor to The Hawthorne Manufacturing Company, Inc., Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 27, 1912. Serial No. 693,583. (Cl. 116—33.)

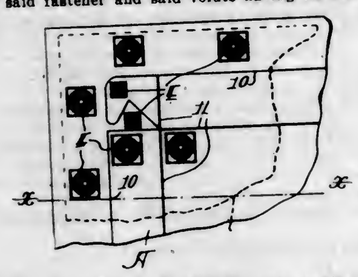


1. A device of the class described having, in combination, a bell, a bell-support provided with a laterally extending tongue 25 bent upon itself to form perforated walls forming between them a pocket 24, a star-wheel located in said pocket, a shaft 22 at one side of the bell extending through one of said walls and secured to said star-wheel, and means comprising the member 15 and having the projection 20 actuated by said star-wheel for striking said bell.

2. A device of the class described having, in combination, a bell, a bell support provided with a laterally extending tongue having its terminal portion bent inwardly toward said bell to form a space having opposed parallel walls one of which is provided with a perforation, a star-wheel disposed between said walls, a bell striker comprising a resilient member actuated by said star-wheel, and a crank secured to said star-wheel and passing through said perforation at one side of said bell at right angles to said tongue.

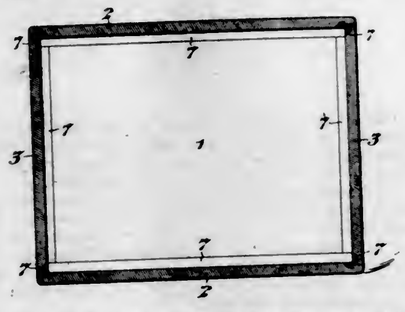
1,108,104. EJECTOR. JOHN G. NASINEC, St. Paul, Minn., (now by judicial change of name John George Nasin.) Filed Feb. 10, 1913. Serial No. 747,282. (Cl. 164—33.)

An ejector for blanking machines, consisting of a base plate having a fastener on its upper surfaces and being formed with projecting members upon its lower surface adapted to engage the surface of a support to prevent said plate moving laterally, a spring volute mounted upon and winding outwardly above the surface of said plate to forcibly engage the blank and lift it after the form carrying and blank supporting members have moved apart, the convolutions of said volute being reduced in diameter toward its outer end whereby they are adapted when the volute is depressed to approximate a single plane and the base portion of said volute being secured to said plate below said fastener and said volute having its outer end



formed in substantially a plane at right angles to the axis of said volute and adapted to form a broad bearing surface.

1,108,105. VAULT. WALTER REES, Philadelphia, Pa., assignor to William H. Hollar, Philadelphia, Pa. Filed Mar. 9, 1909. Serial No. 482,309. (Cl. 109—1.)



1. In a vault, the combination with adjoining metallic wall slabs extending at right angles to each other and each having a recess adjacent to the other slab; the opposite surfaces of said recesses being parallel with each other and with the junction of said slabs; of a locking bar having projections extending transversely to said bar and parallel with each other inserted in said recesses and interlocking said slabs; said bar being removable in a direction transverse with respect to the planes of said slabs; and attaching means detachably retaining said bar in operative position.

2. In a vault, the combination with adjoining metallic wall slabs extending at right angles to each other and each having a recess adjacent to the other slabs; the opposite surfaces of said recesses being parallel with each other and with the junction of said slabs; of a locking bar having projections extending transversely to said bar and parallel with each other inserted in said recesses and interlocking said slabs; said bar being removable in a direction transverse with respect to the planes of said slabs.

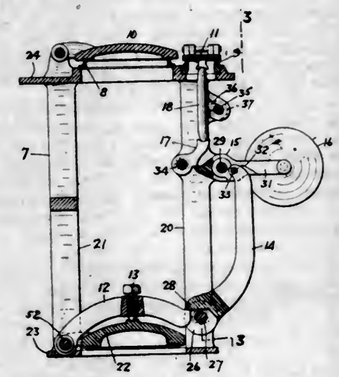
3. In a vault, the combination with metallic wall slabs, each having an undercut recess adjacent to the other slab; the opposite surfaces of said recesses being parallel with each other; of a locking bar having projections extending transversely to said bar and parallel with each other inserted in said recesses and interlocking said slabs; said bar being removable in a direction transverse with respect to the planes of said slabs.

4. In a vault, the combination with adjoining metal slabs having undercut recesses in their adjacent edges extending transversely with respect to the planes of said slabs; of a locking bar, wholly within and concealed by the outer surface of said vault, having projections respectively inserted in the recesses in said slabs, transversely to the planes of said slabs, and interlocking said slabs; all of the interlocking surfaces transverse to said slabs being parallel with each other; whereby said bar may be removed in a direction transverse with respect to the planes of said slabs.

5. In a vault, the combination with adjoining metal slabs having recesses in their adjacent edges extending transversely with respect to the planes of said slabs; of a locking bar, wholly within and concealed by the outer surface of said vault, having projections respectively inserted in the recesses in said slabs, transversely to the planes of said slabs, and interlocking said slabs; all of the interlocking surfaces transverse to said slabs being parallel with each other; whereby said bar may be removed in a direction transverse with respect to the planes of said slabs.

[Claims 6 to 9 not printed in the Gazette.]

1,108,106. DRY PIPE-VALVE FOR FIRE-EXTINGUISHING SYSTEMS. ARTHUR C. ROWLEY, Philadelphia, Pa., assignor to Associated Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Delaware. Filed Apr. 26, 1913. Serial No. 763,744. (Cl. 169—23.)



1. A dry pipe valve comprising the combination of an air chamber section adapted for connection to the sprinkler system, a lower chamber section adapted for connection to the water supply and to the first mentioned section, an interior removable frame having a flange clamped between said sections and provided with air and releasing seats, air releasing and water clappers and a clamp provided with an adjusting screw all pivoted to the frame, and suitable mechanism interposed between the releasing clapper and the clamp and connected with the frame, substantially as described.

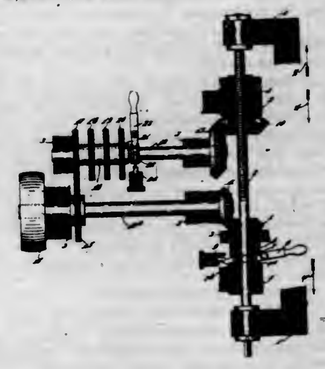
2. In a dry pipe valve the combination of a removable frame having a flange, a water clapper clamp and its adjusting screw pivoted to the frame, a releasing clapper pivotally connected with the frame, and a hook and weighted operating lever and tumbler and strut interposed between the releasing clapper and clamp and respectively connected with the frame and collectively constituting operating mechanism, and a housing consisting of two detachably connected parts between which the flange is clamped, substantially as described.

3. In a dry pipe valve the combination of a two-part casing, a removable frame provided at its ends with flanges whereof one is seated in one part of the casing and the other is clamped between the two-parts of the casing, and operating mechanism including water and release clappers and their interconnecting mechanism carried by the frame, said frame and its connected parts insertable and removable through the opening in one of the parts that is opened and closed by the other of the parts.

4. In a dry pipe valve the combination of a casing consisting of two parts detachably connected together, a frame that can pass through the opening in one of the parts that is covered by the other of the parts so as to be mounted in the casing, and a part of said frame clamped between the two parts, and release and water clappers and their complementary mechanism carried by the frame and inclosed in the casing.

5. In a dry pipe valve the combination of a two-part casing, a removable frame comprising a side piece consisting of bars and a bowed side piece and end flanges, a clamp and water clapper pivoted to the frame and adapted to pass through the bowed part thereof, a release clapper, and mechanism carried between the arms of the side of the frame and interposed between the clapper and clamp and said frame adapted to be inserted through one of said two parts and to have a part of it engaged or clamped between said two parts, substantially as described.

1,108,107. FEED MECHANISM FOR MACHINE-TOOLS. ADOLPH L. DE LEEUW, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 31, 1910. Serial No. 589,913. (Cl. 90—21.)



1. A feed-change mechanism of the nature disclosed combining a rotatable member; a second rotatable member movable independently of the other; a speed-change means comprising a concentric series of differently toothed gears of equal diameters locked together and coöperating gearing adapted to be selectively meshed therewith by a relative axial shift; a positive motion-transmission connecting said members whereby they may be caused to rotate differently at a predetermined speed ratio, said transmission including said speed change means, whereby the speed of rotation of one member relative to the other may be positively varied step-by-step in progression by relatively small speed increments; an element differentially and mutually actuated by said members; and a traveling support deriving propulsion from said element.

2. A feed-change mechanism of the nature disclosed combining a rotatable member; a second rotatable member movable independently of the other; a speed change means comprising at least four gears of equal diameters locked concentrically together and differing in number of teeth in regular progression and a coöperating gear shiftable in axial parallelism with said four gears and adapted to be selectively meshed therewith; a positive motion-transmission connecting said members whereby they may be caused to rotate differentially at a predetermined speed ratio, said transmission including said speed change means, whereby the speed of rotation of one member relative to the other may be positively varied step-by-step in progression by relatively small speed increments; an element differentially and mutually actuated by said members; and a traveling support deriving propulsion from said element.

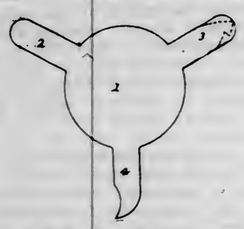
3. A feed-change mechanism of the nature disclosed combining a rotatable member; a second rotatable member movable independently of the other; a speed change means comprising a concentric plurality of gears of equal diameters locked together and having their teeth increasing in number in an arithmetical series, and coöperating gearing adapted to be selectively meshed therewith by a relative axial shift; a positive motion-transmission connecting said members whereby they may be caused to rotate differentially at a predetermined speed ratio, said transmission including said speed change means, whereby the speed of rotation of one member relative to the other may be positively varied step-by-step in progression by relatively small speed increments; an element differentially and mutually actuated by said members; and a traveling support deriving propulsion from said element.

4. A feed-change mechanism of the nature disclosed combining a rotatable member; a second rotatable member movable independently of the other; a positive motion-transmission connecting said members whereby they may be caused to rotate differentially at a predetermined speed ratio; a selective change means arranged in said transmission and comprising several differently toothed gears of equal diameters, and coöperating gearing adapted to be intermeshed therewith, whereby the speed of rotation of one member relative to the other may be positively varied step-by-step in progression by relatively small speed increments; an element differentially and mutually actuated by said members; and a traveling support deriving propulsion from said element.

5. A feed-change mechanism of the nature disclosed combining a traveling support; a power driven member, a nut and a screw for transmitting motion from said member to said support; a positive motion-transmission extending from said member to said nut; a second positive motion-transmission extending from said member to said screw; and a series of gears having different numbers of teeth and equal diameters selectively available in one of said transmissions to vary the transmitting ratio thereof by predetermined small speed increments.

(Claims 6 to 21 not printed in the Gazette.)

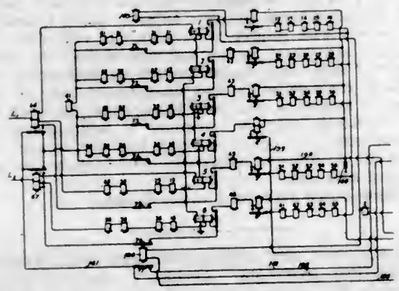
1,108,108. COVER. HARRY E. GIFFORD, Boston, Mass., assignor to Dorsey Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed May 12, 1913. Serial No. 767,149. (Cl. 215—14.)



A sheet-metal blank stamped to provide a circular central body portion adapted to be directly mounted upon the exterior of the mouth of a bottle to close the same and carrying three equi-distantly spaced resilient clamping fingers integral therewith and depending therefrom to receive and hug the neck of the bottle, one integral finger having its free end pointed to be forced into the cap of the bottle to remove the same.

1,108,109. TELEGRAPH SYSTEM. ARTHUR H. ADAMS, Sparkill, N. Y., and AMOS F. DIXON, Newark, N. J., assignors to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Feb. 16, 1912. Serial No. 677,978. (Cl. 178—34.)

1. In a printing telegraph the combination with a rotatable type shaft carrying a type-wheel having two rows of characters thereon, either row of which may be presented for printing therefrom, of electromagnetic means for presenting either row of type to printing position and locking the same in such position, an operating circuit for said electromagnetic means, and means for closing said operating circuit comprising a selecting circuit having two branches and selected by a combination of two impulses.



2. In a printing telegraph the combination with a rotatable type shaft carrying a type-wheel having two rows of characters thereon and movable longitudinally of the shaft, of electromagnetic means for moving said type-wheel longitudinally of the shaft and locking the same in operated position, an operating circuit for said electromagnetic means, and means for closing said operating circuit comprising a selecting circuit having two branches and selected by a combination of two impulses.

3. In a printing telegraph the combination of a rotatable type-wheel having two rows of characters thereon, one of the rows being the one from which the printing is ordinarily done, means for moving the type-wheel longitudinally of its axis to bring the other row of characters into printing position and locking the same in operated position, a selecting circuit for selectively energizing the operating means comprising a plurality of branch circuits and selected by a combination of two impulses, one of the branch circuits being selected and locked by the first impulse of the combination, a relay in the other branch of the selecting circuit selected and operated by the second impulse of the combination of impulses, a clearing-out relay having an operating circuit closed at the armature of the relay in the second branch and operating at the cessation of the second impulse to return the selecting circuit to normal condition.

4. In a printing telegraph the combination with a carriage movable forward step-by-step, of means to return said carriage to normal position from any part of its stroke, comprising a relay, a selecting circuit for said relay energized by a combination of impulses, a circuit closed by the energization of impulses, a circuit closed by the energization of said relay, said circuit including a reset magnet, and releasing means operated by the armature of said reset magnet to allow said carriage to return to normal.

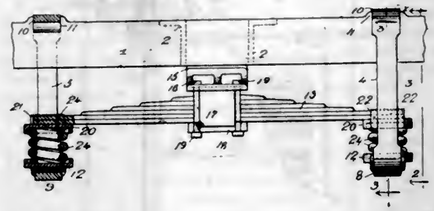
5. In a printing telegraph the combination of a movable paper carriage, means for moving said carriage forward step-by-step as each character is printed, a motor for returning said carriage to normal position, electro-magnetic means for starting said motor, an energizing circuit for said electro-magnetic means, and means for closing said energizing circuit selectively operated by a combination of two impulses.

[Claims 6 to 13 not printed in the Gazette.]

1,108,110. CAR-TRUCK. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1913. Serial No. 791,293. (Cl. 105—239.)

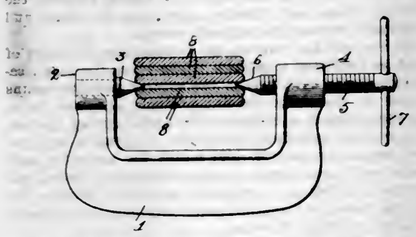
1. In a car truck, the combination with the side bars, the hangers movably supported on the side bars and comprising paired bars, a spring seat on the bottom of each of said bars, a spring seated on said spring seat, a spring cap on said spring and guided by said bars, longitudinally disposed leaf springs supported on said spring caps, and a cross bolster supported on said leaf springs.

2. The combination with a car truck, of the hangers comprising paired bars movably supported from the side bars of said truck, spring seats at the bottom of said hangers, upwardly extending spiral springs on said seats between the said bars, spring caps on said spiral springs guided by said arms, longitudinally disposed springs extending between said bars and resting on said spring caps, and a cross bolster connecting the leaf springs.



3. In a car truck, the combination with the truck side bars of the hangers comprising paired bars, the upper portions of which are splayed outwardly, the lower portions of which are parallel, spring seats at the bottom of said hangers, springs on said spring seats, spring caps on said springs guided by said parallel bars, longitudinally disposed leaf springs extending into the hangers and having their ends resting upon said spring caps, and a cross bolster secured to said leaf springs.

1,108,111. SPREADER FOR THE LEAVES OF SPRINGS. CECIL F. ADAMSON, East Palestine, Ohio. Filed Apr. 24, 1912. Serial No. 692,917. (Cl. 81—3.)



A leaf spreader for spreading leaf springs, comprising a yoke, a conical wedge on one arm of the yoke, and a stem threaded into the other arm of the yoke, said stem being provided with a conical wedge and being adapted when turned to advance toward the first mentioned point.

1,108,112. GRAPE-SCISSORS. ARTEMAS LORD DAWSON, Westfield, N. Y. Filed May 18, 1911. Serial No. 628,104. (Cl. 30—24.)

1. A pair of scissors including pivoted handles provided with blades and having opposite arms, the arm of each handle being extended to the opposite side of the median line of the scissors, a tension spring connected with the arms and adapted to exert a pull on the same to open the scissors, and means for holding the scissors closed.

2. A pair of scissors including pivoted handles provided with blades and having opposite arms, the arm of each handle being extended to the opposite side of the median line of the scissors, a coiled tension spring interposed between and connected with the terminals of the arms and arranged to exert a pull on the same to open the scissors, and means for holding the scissors closed.

3. A pair of scissors including pivoted handles provided with blades and having outwardly curved or bowed portions arranged adjacent to the inner ends of the blades, said handles being also provided at the said curved portions with curved arms, the arm of each handle being extended to the opposite side of the median line of the scissors, and the terminals of the arms being located at approximately diametrically opposite points, a coiled tension spring interposed between and connected to the terminals of the said arms and arranged to exert a pull on the same to open the scissors, and means for holding the scissors closed.

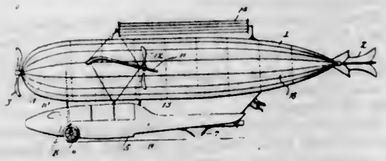


4. A pair of scissors including pivoted handles having blades provided with arms extending to points at opposite sides of the median line of the scissors, one of the arms being pivotally mounted on its handle, a spring interposed between the arms and connected with the same, the pivotal movement of the spring permitting a free opening of the blades and relieving the spring of tension when the blades are opened beyond their cutting range, and means for holding the scissors closed.

5. A pair of scissors including pivoted handles provided with blades and having outwardly extending portions adjacent to the blades to form an opening or space, an arm arranged at the top of the space and rigid with one of the handles and extending from the same to the opposite side of the median line of the scissors, a pivoted arm mounted on the other handle and located below the said arm and having its terminal portion arranged at the opposite side of the median line from the terminal of the rigid arm, a tension spring connecting the terminals of the arms and arranged to exert a pull on the same to open the scissors, and means for holding the scissors closed.

[Claims 6 to 13 not printed in the Gazette.]

1,108,113. AIRSHIP. WALTER V. KAMP, New York, N. Y. Filed Apr. 7, 1914. Serial No. 830,264. (Cl. 244—6.)



1. In an air ship a body gas bags located in the body, strips wound around the gas bags and spaced from each other and spacing the bags from the body and means for forcing air through the space between the gas bags and the body.

2. In an air ship a body, gas bags located therein, strips spirally wound about the gas bags and spacing the bags from the body and means for forcing air through the space between the gas bags and the body.

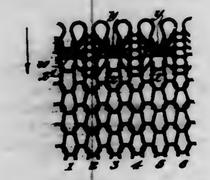
3. In an air ship a body, gas bags located in the body, strips spirally wound about the gas bags in one direction, other strips spirally wound about the gas bags in the opposite direction the strips of the two sets of strips being spaced from each other and the said strips spacing the gas bags from the body and means for forcing air through the space between the gas bags and the body.

4. In an air ship a body, gas bags located in the body, strips spirally wound about the gas bags and spacing the bags from the body, said body having at its forward end an opening, a propeller mounted in front of said opening, means for rotating the propeller whereby the said propeller may force air through the said opening and through the space between the gas bags and the body.

5. In an air ship a body, gas bags located in the body, strips spirally wound about the gas bags in one direction, strips spirally wound about the gas bags in an opposite direction, the members of the two sets of strips being spaced from each other whereby passageways are provided between the gas bags and the body, said body having at its forward end an opening, a propeller journaled for rotation in advance of said opening, means for rotating the propeller whereby the said propeller forces air back through the said opening and through the spaces between the gas bags and the body and through the spaces between the said strips.

REISSUES.

13,788. WELTED KNITTED WEB AND METHOD OF MAKING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 27, 1914. Serial No. 841,394. Original application filed Mar. 28, 1910, Serial No. 552,002. Divided and application filed July 10, 1912, Serial No. 708,937. Original No. 1,096,566, dated May 12, 1914. (Cl. 66—4.)



1. A plain fabric stocking having a welt or end finish at the top edge of the stocking composed of clusters of stitches drawn in the same direction as the fabric of the body thereof, separated by wales containing normal stitches.

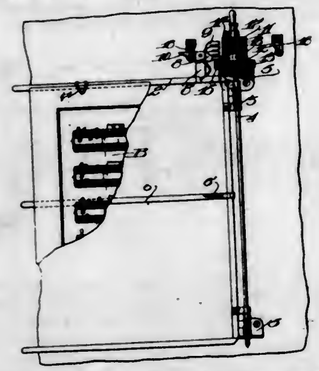
2. A plain fabric stocking having a welt or end finish at the top edge of the stocking composed of a plurality of courses of stitches in certain wales only, intervening with wales in which there are a less number of stitches drawn to the same face of the fabric, but including the yarn of the first mentioned stitches.

3. A welt structure or end finish for the beginning edge of knit fabric comprising successive courses of stitches knit in the same direction in certain wales only separated by intervening wales comprising a single stitch knit in the same direction including all of the yarns of said courses of stitches.

4. The art of knitting plain fabric stockings or other tubular articles having welts at the edge or end first knit, which consists in first knitting a course of plain fabric, in then knitting in successive courses, in certain or alternate wales only, a plurality of stitches drawn in the same direction as the stitches of the body of the web, without knitting at the intervening wales and in then knitting a course through the last loops of said plurality of stitches and the last loops of said intervening wales, and thereafter knitting plain fabric in continuation of said course.

5. The art of knitting welts for an end finish at the top of circularly knit stockings which consists in withholding the knitting operation upon the loops in certain wales only, in then continuing the operation upon intervening wales to produce projecting clusters of stitches and in then knitting upon the withheld wales to gather together the intervening runs of yarn between said clusters of stitches, and in then knitting plain fabric for a further portion of the stocking.

13,789. MUSIC-LEAF TURNER. ROBERT A. GIBSON, Berkeley, and JOHN B. SARTOLOU, Emeryville, Cal., assignors to Universal Display Advertising Company, Oakland, Cal., a Corporation of California. Filed Apr. 23, 1912. Serial No. 692,752. Original No. 979,942, dated Dec. 27, 1910, Serial No. 570,484. (Cl. 84—17.)



1. In a music leaf turner, the combination of a series of leaf holders, a suitable support for the same, selective means carried by the holders and disposed in successive levels, a rotating part having a vertical movement to position it successively with respect to said selective means, and means for operating said rotating part in either direction, said operating means including a rotatable drum inclosing the rotating part, said drum being slotted and said part having an actuating dog extending through the slot of the drum and thereby connecting the drum and rotating part so that they turn in unison.

2. In a music leaf turner, the combination of series of pivoted leaf holders, a suitable support for the same, selective means on each holder, the several selective means arranged in successive levels, a single actuator, with means for giving it a combined horizontal rotary motion, and a vertical reciprocating motion to operate said selective means successively, and means for operating said actuator, said last named means including a pedal and connections including a reversible pawl and gearing between the pedal and said actuator whereby the actuator is operated in either direction.

3. In a music leaf turner, the combination of a series of music leaf holders, a suitable support for the same, a vertically slotted drum, means for revolving the drum, a stationary screw, a single vertically traveling actuator on the screw and connected with the drum, means on the several leaf holders arranged at successive levels in the path of said actuator, and means for revolving the drum in either direction.

4. In a music leaf turner, the combination of a series of music leaf holders, a suitable support for the same, a vertically slotted drum, a fixed vertical screw, a single vertically traveling actuator on the screw and connected with the drum, means on the several leaf holders arranged at successive levels in the path of said actuator, and means for turning the holders in either direction corresponding with the rotation of the drum.

5. In a music leaf turner, the combination of a plurality of swinging leaf-carrying frames, a spindle supporting said frames, a vertically slotted drum revoluble around said spindle, an arm extending through and guided by said drum, and means carried by the slot in the frames adapted to be engaged by said arm and automatically disengaged therefrom, whereby the leaves of music are turned.

6. In a music leaf turner, the combination of a plurality of swinging leaf-carrying frames, a spindle supporting said frames, a vertically slotted drum revoluble around said spindle, an arm extending through and guided by said drum, and means carried by the slot in the frames adapted to be engaged by said arm and automatically disengaged therefrom, whereby the leaves of music are turned in either direction.

7. In a leaf-turning device, the combination of a spindle, frames pivoted thereon, pivotally mounted stops on the frames, a vertically slotted drum turnable on the spindle, a dog turnable about the spindle having a part extending through the slot of the drum and adapted to successively engage the stops, and means whereby the stops are automatically released to allow the dog to pass.

8. The combination in a music leaf turner, of a number of leaf holding frames, a support about which they may swing back and forth, a vertically slotted drum turnable on the support, and carrying a dog having a part extending through the slot of the drum and engageable successively with the frames, and means whereby the drum may be intermittently turned, in either direction.

9. In a music leaf turner, the combination of a series of pivoted leaf holders, a suitable support for the same, selective means of the holders arranged in different horizontal planes, a vertically slotted drum mounted rotatably about a vertical axis, vertically traveling actuator within the drum having a part extending through the slot thereof and engageable with the selective means successively, and means for operating the drum in either direction.

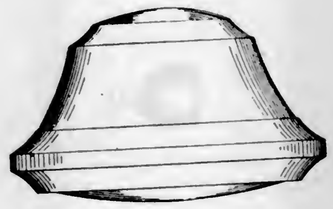
10. In a music leaf turner, the combination of a series of pivoted leaf holders, a suitable support for the same, selective means for the holders arranged in different horizontal planes, a slotted drum mounted rotatably about a vertical axis, vertically traveling actuator within the drum having a part engageable with the selective means successively, said drum having a gear, a master gear meshing with said gear on the drum, a worm shaft carrying the master gear, a reciprocating member having a traveling nut engaging the worm on said shaft to turn the master gear, and means for operating said reciprocating member step by step in either direction.

11. An apparatus of the class specified comprising devices for swingingly supporting a plurality of display cards, and means for swinging said devices including an actuator supported for rotary and axial movements and strike lugs each connected with a respective device, said strike lugs being spaced to be successively engaged by said actuator during its axial movement.

12. An apparatus of the class specified comprising devices supporting a plurality of display cards for movement, means for moving said devices successively in relatively opposite directions comprising an actuator supported for rotary and axial movements, and strike lugs each connected with a respective device, said strike lugs being spaced to be successively engaged by said actuator during its axial movement.

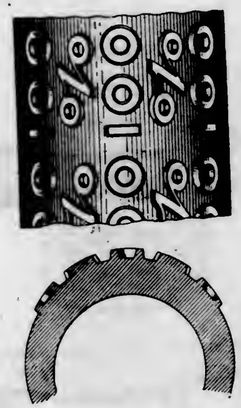
DESIGNS.

46,272. LAMP. WILLIAM F. ANKLAM, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a Corporation of Michigan. Filed June 11, 1914. Serial No. 844,592. Term of patent 14 years.



The ornamental design for a lamp, substantially as shown.

46,273. TIRE-CASING. JAMES H. CHRISTIAN, Detroit, Mich. Filed June 29, 1914. Serial No. 848,090. Term of patent 14 years.



The ornamental design for a tire casing, as shown.

46,274. FABRIC FOR CAR-CURTAINS. CHARLES J. CRONK, Clifton Park, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Aug. 22, 1913. Serial No. 786,166. Term of patent 14 years.



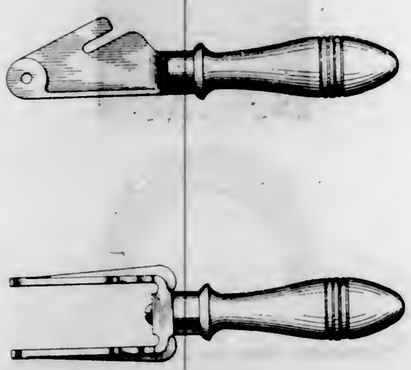
The ornamental design for a fabric for car curtains, as shown.

46,275. FABRIC FOR CAR-CURTAINS. CHARLES J. CRONK, Clifton Park, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Aug. 22, 1913. Serial No. 786,167. Term of patent 14 years.



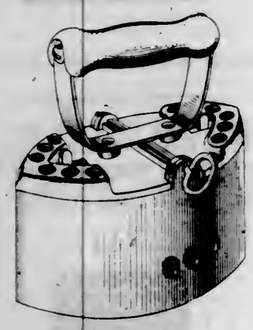
The ornamental design for a fabric for car curtains, as shown.

46,276. FRAMEWORK OR HEAD OF A PRINTING-WHEEL HAND-STAMP. CHARLES W. EVERSON, Orange, N. J. Filed Dec. 20, 1913. Serial No. 808,045. Term of patent 7 years.



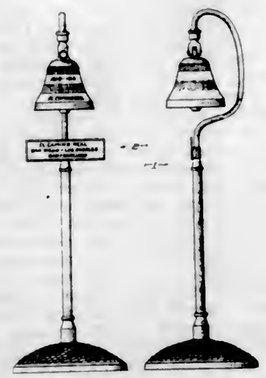
The ornamental design for the frame work or head of a printing wheel hand stamp, as shown.

46,277. SELF-HEATING SAD-IRON. GEORGE FINN, Newark, N. J. Filed May 29, 1914. Serial No. 841,926. Term of patent 14 years.



The ornamental design for a self-heating sad iron, as shown.

46,278. BELL-GUIDE-POST SOUVENIR. ARMITAGE S. C. FORBES and HARRYE R. P. FORBES, South Pasadena, Cal. Filed Apr. 22, 1914. Serial No. 833,815. Term of patent 14 years.



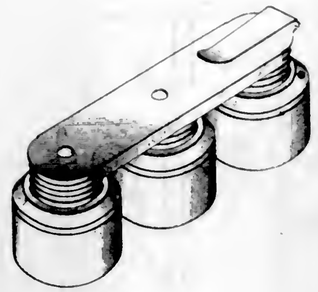
The ornamental design for bell guide post souvenir as shown.

46,279. ELECTRIC HAND-LAMP. JOHN H. GOEHST, Chicago, Ill., assignor to Federal Sign System (Electric), Chicago, Ill., a Corporation of New York. Filed June 15, 1914. Serial No. 845,314. Term of patent 14 years.



The ornamental design for an electric hand lamp as shown.

46,280. MULTIPLE CARBID-CONTAINER. AUGIE L. HANSEN, Chicago, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 10, 1914. Serial No. 831,057. Term of patent 7 years.



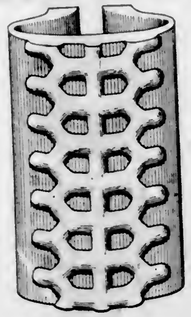
The ornamental design for a multiple carbid container, as shown.

46,281. SPOON, FORK, OR SIMILAR ARTICLE. HENRIK HILLBOM, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed June 3, 1914. Serial No. 842,784. Term of patent 7 years.



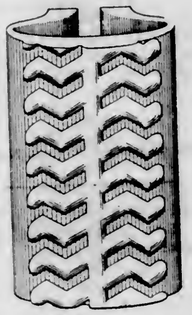
The ornamental design for a spoon, fork or similar article, as shown.

46,282. VEHICLE WHEEL-TIRE. MARTIN D. KUHLKE, Akron, Ohio. Filed June 1, 1914. Serial No. 842,313 Term of patent 7 years.



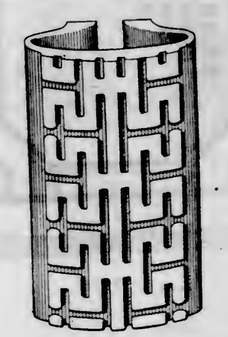
The ornamental design for a vehicle wheel tire, substantially as shown.

46,283. VEHICLE WHEEL-TIRE. MARTIN D. KUHLKE, Akron, Ohio. Filed June 1, 1914. Serial No. 842,314. Term of patent 7 years.



The ornamental design for a vehicle wheel tire, substantially as shown.

46,284. VEHICLE WHEEL-TIRE. MARTIN D. KUHLKE, Akron, Ohio. Filed June 1, 1914. Serial No. 842,315. Term of patent 7 years.



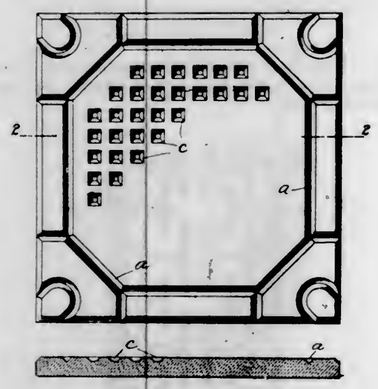
The ornamental design for a vehicle wheel tire, substantially as shown.

46,285. GLASS BOTTLE. THOMAS MACKENZIE, Glasgow, Scotland, assignor to Dailuaine Talisker Distilleries Limited, Glasgow, Scotland. Filed June 15, 1914. Serial No. 845,313. Term of patent 14 years.



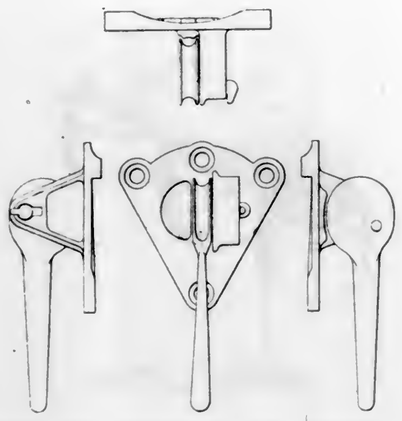
The ornamental design for a glass bottle as shown.

46,286. TILE OR PAVING BLOCK. CHARLES S. MANGENE, Boston, Mass. Filed Feb. 18, 1914. Serial No. 819,584. Term of patent 7 years.



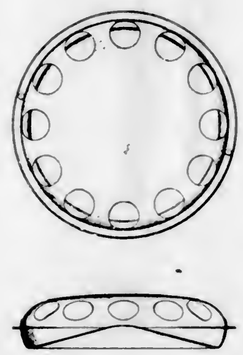
The ornamental design for a tile or paving block as shown and described.

46,287. ROPE-CLAMP. RAYMOND E. MCKEE, Chicago, Ill. Filed Apr. 30, 1914. Serial No. 835,540. Term of patent 3½ years.



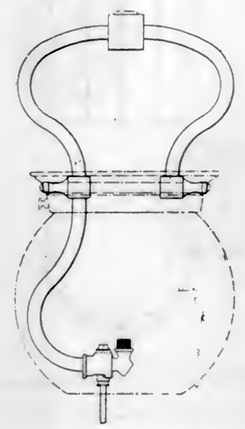
The ornamental design for a rope clamp, as shown.

46,288. FEEDER. AARON B. MOE, Chicago, Ill., assignor to Otis & Moe Manufacturing Company, a Corporation of Illinois. Filed Apr. 30, 1914. Serial No. 835,538. Term of patent 7 years.



The ornamental design for a feeder as shown.

46,289. LIGHTING-FIXTURE. IRA MUMMA, Dayton, Ohio, assignor to The St. Clair Manufacturing Company, Dayton, Ohio, a Corporation of Ohio. Filed Nov. 1, 1913. Serial No. 798,781. Term of patent 14 years.



The ornamental design for a lighting fixture, as shown.

46,290. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,003. Term of patent 14 years.



The ornamental design for a glass shade or reflector having a circular plan which consists in providing the same with a lower cylindrical skirt portion having protuberances upon the inner and outer surfaces thereof, substantially as shown.

46,291. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,023. Term of patent 14 years.



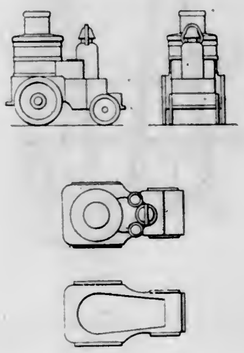
The ornamental design for a shade, reflector or similar article, substantially as shown and described.

46,292. BADGE OR SIMILAR ARTICLE. ROMAN WALDEMAR RITTERS, Los Angeles, Cal. Filed Sept. 27, 1913. Serial No. 792,215. Term of patent 3½ years.



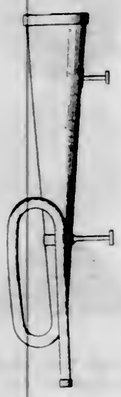
The ornamental design for a badge or similar article as shown.

46,293. TOY CANDY-BOX. EDWARD J. ROWLAND, Indiana, Pa., assignor to Diamond Glass Co., Indiana, Pa., a Corporation of Pennsylvania. Filed July 8, 1913. Serial No. 777,966. Term of patent 3½ years.



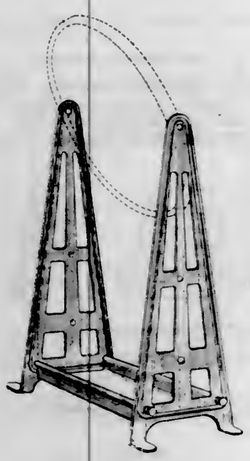
The ornamental design for a toy candy box as shown.

46,294. AUTOMOBILE-HORN. ERNEST RUBBS, Brooklyn, N. Y. Filed June 10, 1912. Serial No. 702,888. Term of patent 7 years.



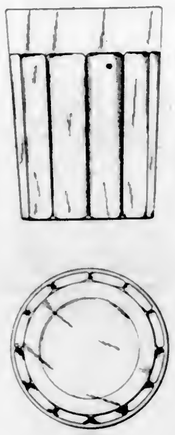
The ornamental design for an automobile horn as shown and described.

46,295. MIRROR-SUPPORT. JOSEPH SALOMON and HARRY SHAW, Chicago, Ill. Filed May 22, 1914. Serial No. 840,388. Term of patent 7 years.



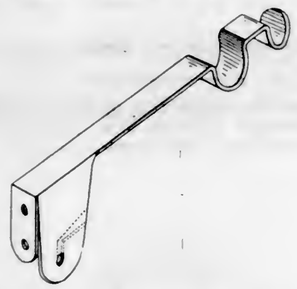
The ornamental design for a mirror support, as shown.

46,296. TUMBLER. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Hersey & Co., Newark, Ohio. Filed Aug. 6, 1913. Serial No. 783,417. Term of patent 14 years.



The ornamental design for a tumbler, as shown and described.

46,297. COMBINATION WINDOW-SHADE FASTENER AND CURTAIN-POLE BRACKET. AUDUS N. SMITH, Morristown, Tenn. Filed May 28, 1914. Serial No. 841,663. Term of patent 7 years.



The ornamental design for a combination window shade fastener and curtain pole bracket, as shown.

46,298. BOTTLE-OPENER. JOHN L. SOMMER, Newark, N. J., assignor to J. L. Sommer Manufacturing Co., a Corporation of New Jersey. Filed June 25, 1914. Serial No. 847,317. Term of patent 14 years.



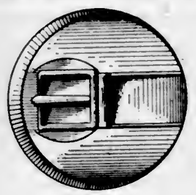
The ornamental design for a bottle opener, as shown.

46,299. MEDAL. RALPH C. THOMPSON, Attleboro, Mass. Filed Apr. 24, 1914. Serial No. 834,212. Term of patent 3½ years.



The ornamental design for a medal, as shown.

46,300. BUTTON. JOHN NATZI WHITEHOUSE, Newark, N. J. Filed Apr. 21, 1914. Serial No. 833,565. Term of patent 3½ years.





The ornamental design for a button, as shown.

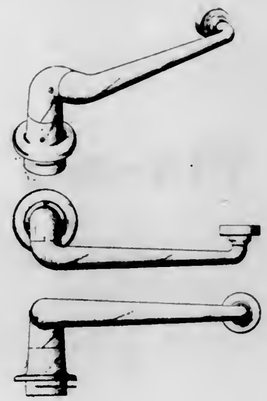
46,301. BUTTON. JOHN NATZI WHITEHOUSE, Newark, N. J. Filed June 22, 1914. Serial No. 846,690. Term of patent 3½ years.





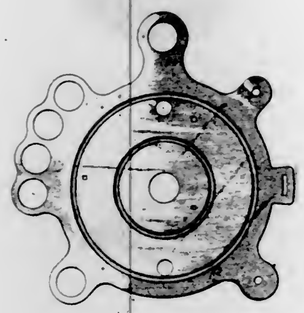
The ornamental design for a button, as shown.

46,302. TONE-ARM FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Aug. 30, 1913. Serial No. 787,554. Term of patent 14 years.



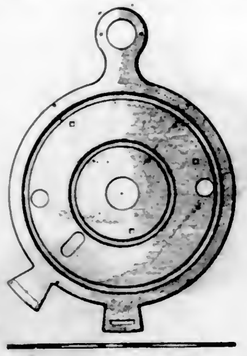
The ornamental design for a tone arm for talking machines, as shown.

46,303. MOTOR-BOARD FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Oct. 6, 1913. Serial No. 793,767. Term of patent 14 years.



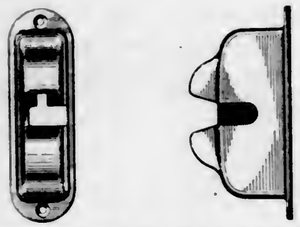
The ornamental design for a motor-board for talking-machines, as shown.

46,304. MOTOR-BOARD FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Oct. 6, 1913. Serial No. 793,768. Term of patent 14 years.



The ornamental design for a motor-board for talking-machines, as shown.

46,305. LATCH-CASING. LEONARD A. YOUNG, Detroit, Mich. Filed June 12, 1914. Serial No. 844,829. Term of patent 14 years.



The ornamental design for a latch casing, as shown.

TRADE-MARKS

PUBLISHED AUGUST 18, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 33,498. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BRIDGEPORT WOOD FINISHING COMPANY, New Milford, Conn. Filed Mar. 20, 1908.



The word "Bridgeport" is disclaimed.

Particular description of goods.—Prepared Paints, Stains, Varnishes, Wood-Fillers, and Wood-Finishing Fluids.

Claims use since Mar. 5, 1908.

Ser. No. 60,886. (CLASS 12. CONSTRUCTION MATERIALS.) WARREN BROTHERS COMPANY, Boston, Mass. Filed Jan. 18, 1912.



Particular description of goods.—Bituminous Cement.

Claims use since Jan. 1, 1910.

Ser. No. 63,764. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed May 24, 1912.



Particular description of goods.—Perfumery and Face-Tints.

Claims use by the applicant since July 30, 1898, and in the business of our predecessors since the 21st day of January, 1891.

Ser. No. 63,794. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE SHEPARD MANUFACTURING COMPANY, Melrose, Mass. Filed May 25, 1912.

LUC-KEY

Particular description of goods.—Key-Chains.

Claims use since Mar. 15, 1912.

Ser. No. 64,325. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JAMES KELLEY, Winsted, Conn. Filed June 22, 1912.

TRUPOINT

Consisting of the word "Trupoint."

Particular description of goods.—Pins of the Type Usually Designated as Toilet-Pins.

Claims use since June 1, 1912.

Ser. No. 64,590. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HARRY R. MITCHELL, Seattle, Wash. Filed July 5, 1912.

-MMCo-

Particular description of goods.—Bench-Hooks, Bench-Clamps, Wrenches.
Claims use since June 15, 1912.

Ser. No. 65,186. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN B. A. KERN & SONS, Milwaukee, Wis. Filed Aug. 10, 1912. Under ten-year proviso.

SUCCESS

Usually printed, painted, or stenciled, as indicated, in red and blue.
Particular description of goods.—Wheat-Flour.
Claims use since the summer of 1873.

Ser. No. 65,581. (CLASS 39. CLOTHING.) LONG-HARGROVE MFG. CO., Tyler, Tex. Filed Sept. 4, 1912.

MOGUL BRAND

No claim being made to the exclusive use of the word "Brand."
Particular description of goods.—Men's and Boys' Overalls, Jumpers, Coats, Work-Shirts, and Woolen and Cotton Trousers.
Claims use since Jan. 1, 1911.

Ser. No. 66,031. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SANITARY FOOD PRODUCTS CO., New York, N. Y. Filed Sept. 28, 1912.

U-Say

Our trade-mark consists of "U-Say."
Particular description of goods.—Dried Citron, Dried Lemon-Peel, Dried Orange-Peel, Dried Pea-Beans, Dried Marrow-Beans, Dried Lima Beans, Dried Kidney-Beans, Dried Lentils, Dried Medium Beans, Dried Green Peas, Dried Green Split Peas, Dried Yellow Split Peas, Dried-Bean Flour, Dried-Pea Flour, and Dried-Lentil Flour, Canned Asparagus, Canned Lima Beans, Canned String-Beans, Canned Baked Beans, Canned Corn, Canned Peas, Canned Spinach, Canned Squash, Canned Succotash, Canned Tomatoes, Canned Apples, Canned Apricots, Canned Blueberries, Canned Blackberries, Canned Cherries, Canned Gooseberries, Canned Peaches, Canned Pears, Canned Plums, Canned Pineapple, Canned Raspberries, and Canned Strawberries.
Claims use since Aug. 15, 1912.

Ser. No. 66,125. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEAVER VALLEY MILLING COMPANY, Des Moines, Iowa. Filed Oct. 3, 1912.

CERTAINTY

Particular description of goods.—Wheat-Flour and Cornmeal.
Claims use since June 12, 1912.

Ser. No. 67,171. (CLASS 39. CLOTHING.) FITZGERALD, PHELPS & FARGO SHOE CO., Milwaukee, Wis. Filed Nov. 29, 1912.

FOR PARTICULAR FOLK

FITZGERALD PHELPS & FARGO SHOE CO. FPF MILWAUKEE

No claim is made for the words "Fitzgerald Phelps & Fargo Shoe Co. Milwaukee."
Particular description of goods.—Leather Boots and Shoes.
Claims use since September, 1912.

Ser. No. 67,558. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE DEMING COMPANY, Salem, Ohio. Filed Dec. 23, 1912.

AEROSPRA

Particular description of goods.—Spraying Apparatus for Trees, Plants, and Bushes.
Claims use since Jan. 1, 1911.

Ser. No. 68,011. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE HOUSE OF CHILDHOOD (INC.), New York, N. Y. Filed Jan. 20, 1913.



Particular description of goods.—Geometrical Insets, Metal and Wooden Counters, Color-Spools.
Claims use since June 1, 1912.

Ser. No. 68,143. (CLASS 39. CLOTHING.) WM. B. KOHLMAN, New Orleans, La. Filed Jan. 27, 1913.

C.C.C.

Particular description of goods.—Hosiery.
Claims use since Jan. 1, 1911.

Ser. No. 68,426. (CLASS 27. HOROLOGICAL INSTRUMENTS.) DIDISHEIM, GOLDSCHMIDT FILS ET CIE., FABRIQUE JUVENIA, La Chaux-de-Fonds, Switzerland. Filed Feb. 10, 1913.

JUVENIA

The trade-mark consists of the single word "Juvenia."
Particular description of goods.—Watches, Clocks, Watchcases, Watchsprings, Watch-Bells, Watch-Hammers, Watchworks, Watch-Hands, Watch-Keys, Watch-Dials.
Claims use since Aug. 23, 1906.

Ser. No. 69,069. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WERNER-SERVICE MFG. CO., Jersey City, N. J. Filed Mar. 15, 1913.



Particular description of goods.—Detergent Compound for Cleaning and Renovating Varnished Surfaces.
Claims use since December, 1911.

Ser. No. 69,387. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN CARBONETER COMPANY, Chicago, Ill. Filed Mar. 28, 1913.

Carboneter.

Particular description of goods.—A Compound for Removing Carbon.
Claims use since July 1, 1909.

Ser. No. 69,513. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE NORMA COMPANY OF AMERICA, New York, N. Y. Filed Apr. 1, 1913.

NORMA

Particular description of goods.—Balls and Rollers of Steel or other Metals.
Claims use since June 13, 1911, and in the business of its predecessors since Mar. 17, 1904.

Ser. No. 70,070. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) SAVAGE ARMS COMPANY, Frankfort, N. Y. Filed Apr. 25, 1913.



Disclaiming the word "Quality," the portrait being fanciful.
Particular description of goods.—Rifles, Pistols, and Cartridges.
Claims use since Jan. 1, 1906.

Ser. No. 70,582. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) FEDERAL-HUBER CO., Chicago, Ill. Filed May 23, 1913.

JETECTOR

Particular description of goods.—Water-Closets, Lavatories.
Claims use since Aug. 19, 1905.

Ser. No. 70,591. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STANDARD SCALE & SUPPLY COMPANY, Pittsburgh, Pa. Filed May 28, 1913. Under ten-year proviso.



Particular description of goods.—Scales, Weighing Machinery, Weights, and Parts Thereof.
Claims use since the year 1892.

Ser. No. 71,067. (CLASS 46. FOODS AND INGREDIENTS THEREOF.) B. A. HANCOCK, Atlanta, Ga. Filed June 12, 1913.

Dixie

Particular description of goods.—Vinegar, Sauer-Kraut, Pickles, Mustard, Jellies, and Preserves.
Claims use since 1906.

Ser. No. 71,118. (CLASS 39. CLOTHING.) BURNHAM-MUNGER-ROOT DRY GOODS CO., Kansas City, Mo. Filed June 16, 1913.

S
SHURT
M

No claim being made to the word "Shurt."
Particular description of goods.—Shirts.
Claims use since June 3, 1913.

Ser. No. 71,189. (CLASS 39. CLOTHING.) AMERICAN RUBBER COMPANY, Boston, Mass. Filed June 19, 1913.



The word "Brand" is disclaimed as a part of this trade-mark. The words "American Rubber Co." are disclaimed.
Particular description of goods.—Rubber Boots and Shoes.
Claims use since 1889.

Ser. No. 71,385. (CLASS 12. CONSTRUCTION MATERIALS.) MACANDREWS & FORBES COMPANY, Camden, N. J., and New York, N. Y. Filed June 26, 1913.



Particular description of goods.—Pulp-Board.
Claims use since Jan. 1, 1913.

Ser. No. 71,434. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HERBERT C. BIGHAM, Peoria, Ill. Filed June 30, 1913.



Particular description of goods.—A Paint for Waterproofing Canvas Duck.
Claims use since January, 1908.

Ser. No. 71,556. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CO-OPERATIVE DRUG MANUFACTURING COMPANY, now, by change of name, American Drug Mfg. Co., Jackson, Tenn. Filed July 7, 1913.



Particular description of goods.—Liquid Clothes-Cleaner.
Claims use since Apr. 26, 1901.

Ser. No. 71,565. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GLÜHSTRUMPFFABRIK BASEL, Basel, Switzerland. Filed July 7, 1913.



Particular description of goods.—A Gas-Mantle with Attachments.
Claims use since January, 1912.

Ser. No. 71,855. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) EISENBERGER KLEBSAND-WERKE, G. M. B. H., Eisenberg, Germany. Filed July 19, 1913.



Particular description of goods.—Loam, Molding-Sand, and Molding-Clay.
Claims use since July 1, 1908.

Ser. No. 71,945. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE GOTTLIEB BAUERNSCHMIDT STRAUS BREWING COMPANY, Baltimore, Md. Filed July 24, 1913.



Particular description of goods.—Lager-Beer.
Claims use since Feb. 22, 1913.

Ser. No. 72,081. (CLASS 39. CLOTHING.) A. E. NETTLETON COMPANY, Syracuse, N. Y. Filed July 31, 1913.



Particular description of goods.—Leather, Canvas, and Cloth Shoes.
Claims use since March, 1911.

Ser. No. 72,973. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HELIOS MANUFACTURING COMPANY, Philadelphia, Pa. Filed Sept. 20, 1913.

HELIOS

Particular description of goods.—Secondary Batteries and Arc-Lamps.
Claims use on secondary batteries as early as 1900 and on arc-lamps as early as 1892.

Ser. No. 73,138. (CLASS 43. THREAD AND YARN.) PH. VRAU & CIE., Lille, France. Filed Sept. 30, 1913. Under ten-year proviso.



Particular description of goods.—Threads and Yarns of Linen, Silk, Cotton, Wool, Jute, and Ramie.
Claims use since the year 1859.

Ser. No. 73,180. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhouse, Germany. Filed Oct. 2, 1913.



Particular description of goods.—Braids and Passementerie.
Claims use since June 15, 1891.

Ser. No. 73,181. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhouse, Germany. Filed Oct. 2, 1913.



Particular description of goods.—Braids and Passementerie.
Claims use since Jan. 2, 1897.

Ser. No. 73,285. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE YALE & TOWNE MANUFACTURING CO., Stamford, Conn., and New York, N. Y. Filed Oct. 8, 1913. Under ten-year proviso.

YALE

Particular description of goods.—Automatic Bolt-Operating Machines, Pulley-Blocks, and Hoists.
Claims use since 1881.

Ser. No. 74,092. (CLASS 17. TOBACCO PRODUCTS.) P. CANNIZZARO & CO., New York, N. Y. Filed Nov. 20, 1913.



The portrait shown is not that of any living person.
Particular description of goods.—Cigars, Cigarettes, and Manufactured Tobacco.
Claims use since Oct. 26, 1913.

Ser. No. 74,392. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PEEK, FREAN AND COMPANY, LIMITED, London, England. Filed Dec. 5, 1913.

PRAIRIE FLOWER

No claim is made to the use of the word "Prairie."
Particular description of goods.—Biscuits.
Claims use since July 17, 1913.

Ser. No. 74,604. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WEBB & COMPANY, Newtownards, Ireland. Filed Dec. 13, 1913. Under ten-year proviso.



Particular description of goods.—Linen, Table-Linen, Bed-Linen, Linen Handkerchiefs, Linen Curtains, Linen Towels, Linen Laces, and Linen Piece Goods.
Claims use since September, 1886

Ser. No. 74,617. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NATIONAL MILLING & CHEMICAL CO., Philadelphia, Pa. Filed Dec. 15, 1913.



No claim being made to the words "Washing Powder Cleans Like Magic."
Particular description of goods.—Washing-Powder.
Claims use since June 1, 1913.

Ser. No. 74,978. (CLASS 12. CONSTRUCTION MATERIALS.) PIERCE HARDWARE COMPANY, Taunton, Mass. Filed Jan. 5, 1914.

EEL-SKIN



Particular description of goods.—Roofing-Felt and Roofing-Paper.
Claims use since Dec. 1, 1911.

Ser. No. 75,195. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GUILLAUME HOFFMANN, Brussels, Belgium. Filed Jan. 15, 1914.

"OMNIUM"

Comprising the word "Omnium."
Particular description of goods.—Surgical Bandages.
Claims use since the 25th day of March, 1911.

Ser. No. 75,232. (CLASS 2. RECEPTACLES.) THE LEADER EVAPORATOR COMPANY, Burlington, Vt. Filed Jan. 16, 1914.

MONITOR

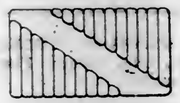
Particular description of goods.—Gathering-Tanks.
Claims use since May, 1896.

Ser. No. 75,265. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LORENZO DOW PERRY, Buffalo, N. Y., assignor to Park Manufacturing Company, Incorporated, Buffalo, N. Y., a Corporation of New York. Filed Jan. 17, 1914.



No claim being made for the words "Cath-Heart-Tics Sweet Pleasant."
Particular description of goods.—Medicinal Tablets to be Used as a Mild Cathartic.
Claims use since Jan. 1, 1914.

Ser. No. 75,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Boston, Mass. Filed Jan. 28, 1914.



Particular description of goods.—Biscuit.
Claims use since Jan. 7, 1914.

Ser. No. 75,550. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GIANT TIRE & RUBBER COMPANY, Omaha, Nebr. Filed Jan. 30, 1914.

NATIONAL

Particular description of goods.—Rubber Inner and Outer Tubes for Pneumatic Tires.
Claims use since Dec. 15, 1913.

Ser. No. 75,564. (CLASS 12. CONSTRUCTION MATERIALS.) "DALMATIA" PORTLAND CEMENT WORKS COMPANY LTD., Trieste, Austria-Hungary. Filed Jan. 31, 1914.



Particular description of goods.—Cement.
Claims use since May 5, 1913.

Ser. No. 75,634. (CLASS 38. PRINTS AND PUBLICATIONS.) T. AND C. PUBLISHING CORPORATION, New York, N. Y. Filed Feb. 2, 1914.

MOVING PICTURE PUBLICITY
A Monthly Periodical for Twentieth Century Advertisers

The words "A Monthly Periodical for Twentieth Century Advertisers" not being a part of the trade-mark.
Particular description of goods.—A Monthly Publication.
Claims use since Dec. 1, 1913.

Ser. No. 75,680. (CLASS 12. CONSTRUCTION MATERIALS.) LOCOMOTIVE ARCH BRICK COMPANY, Chicago, Ill. Filed Feb. 4, 1914.

ECONOMY

Particular description of goods.—Bricks and Tiles for Furnace-Arches.
Claims use since July 1, 1913.

Ser. No. 75,734. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) L. PRENLAU'S FABRIKWERKE, Hamburg, Germany. Filed Feb. 6, 1914.

Gretol

Particular description of goods.—Tanning Greases and Oils.
Claims use since Mar. 23, 1899.

Ser. No. 75,822. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOKEN BARBERS' SUPPLY CO., St. Louis, Mo. Filed Feb. 10, 1914.



No claim being made to the exclusive right to the words "Trade Mark" and "The World Our Field," the word "Koken" being written in the handwriting of George W. Sutherland, and no claim being made to the exclusive use of the words "St. Louis."
Particular description of goods.—Mustache-Wax, Pomades, Camphor-Ice, Camphor-Cream, Massage-Cream, Cold-Cream, Talcum Powder, Magnesia, Shampoo-Paste, Shampoo Liquor, Cologne, Face-Lotion, Toilet Water, Hair-Tonic, Bay-Rum, Perfume, Hair-Dye, and Hair-Restorer.
Claims use since September, 1913.

Ser. No. 75,889. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MORRIS METALLIC PACKING COMPANY, Philadelphia, Pa. Filed Feb. 13, 1914.



Particular description of goods.—Metallic Rod-Packings.
Claims use since Dec. 3, 1913.

Ser. No. 75,975. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE H. C. WHITMER COMPANY, Columbus, Ind. Filed Feb. 17, 1914.



The flagpole, halyard, and flag shown in the accompanying drawing are red.
Particular description of goods.—A Remedy for Coughs, Colds, Croup, Asthma, Bronchitis, Consumption, Whooping-Cough, Lung Affections, Rheumatism, Neuralgia, Headache, Earache, Toothache, Fresh Cuts, Wounds, Sores, Burns, Sprains, Bruises, Frost-Bites, Sore Shoulder, Galls, Greased Heel, Sweeny, Barb-Wire Cuts, Dysentery, Diarrhea, Cholera Morbus, Flux, Constipation, Biliousness, Corns, Sore Throat, Colic, Blood, Liver, Kidneys, and Stomach, Fever, Ague, Indigestion, Bladder, and Dyspepsia.
Claims use since September, 1908.

Ser. No. 76,123. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. ALLEN SMITH & COMPANY, Knoxville, Tenn. Filed Feb. 24, 1914.

CAPTOR

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Sept. 17, 1912.

Ser. No. 76,315. (CLASS 5. ADHESIVES.) DENNISON MANUFACTURING COMPANY, Boston, Mass. Filed Mar. 4, 1914.

THE TAG MAKERS

Particular description of goods.—Mucilage, Glue, Sealing-Wax, and Adhesive Paste.
Claims use since January, 1906.

Ser. No. 76,495. (CLASS 38. PRINTS AND PUBLICATIONS.) FARMERS NATIONAL LIFE INSURANCE COMPANY OF AMERICA, East Chicago, Ind., and Chicago, Ill. Filed Mar. 10, 1914.



No claim being made to the exclusive use of the words "Farmers National Life Insurance Company of America, Protection for Men and Women as Lasting as the Pyramids."

Particular description of goods.—Publications.
Claims use from or before Aug. 15, 1913.

Ser. No. 76,600. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE CLEVELAND METAL PRODUCTS COMPANY, Cleveland, Ohio. Filed Mar. 13, 1914.



The surface shading shown in the drawing does not represent any color.

Particular description of goods.—Tables and Stands.
Claims use since Jan. 1, 1914.

Ser. No. 76,633. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CANADIAN FARM PRODUCE COMPANY LIMITED, Montreal, Canada. Filed Mar. 14, 1914.

LAURENTIA

Particular description of goods.—Milk, Cream, Butter, and Cheese.
Claims use since Nov. 1, 1908.

Ser. No. 76,658. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SALVO & BERDON CANDY CO., Natchez, Miss. Filed Mar. 14, 1914. Under ten-year proviso.



Particular description of goods.—Candy.
Claims use since July 9, 1891.

Ser. No. 76,660. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE SUNBEAM MOTOR CAR COMPANY, LIMITED, Wolverhampton, England. Filed Mar. 14, 1914.

SUNBEAM

Particular description of goods.—Motor-Cars.
Claims use since on or about the 25th day of June, 1900.

Ser. No. 76,691. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Mar. 16, 1914.

KING PHILIP

Particular description of goods.—Fertilizers.
Claims use since 1882.

Ser. No. 76,758. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN WILSON, (GILDERSOME) LTD., Gildersome, England. Filed Mar. 18, 1914.

Kashmera

Particular description of goods.—Cloths and Stuffs of Wool, Worsted, or Hair.
Claims use since May 2, 1904.

Ser. No. 76,780. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SINCOF COMPANY, South Westville, N. J. Filed Mar. 19, 1914.



Particular description of goods.—A Substitute for Coffee.
Claims use since Jan. 1, 1914.

Ser. No. 76,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALLMADE BAKERIES, INC., Detroit, Mich. Filed Mar. 21, 1914.

OVENGOLD

Particular description of goods.—Cake Mixtures.
Claims use since Feb. 1, 1914.

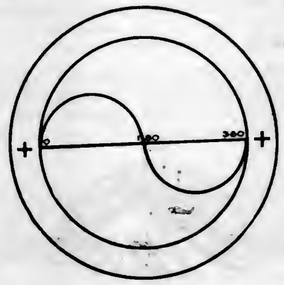
Ser. No. 76,814. (CLASS 33. GLASSWARE.) ROBERT D. GRAY, Ridgewood, N. J. Filed Mar. 21, 1914.



The exclusive use of the words "Trade Mark" not being claimed.

Particular description of goods.—Reflectors.
Claims use since Feb. 28, 1914.

Ser. No. 76,848. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MARSHALL P. FOX, Chicago, Ill. Filed Mar. 23, 1914.



Particular description of goods.—Electrical Rectifiers.
Claims use since Jan. 15, 1914.

Ser. No. 76,887. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM WALKER & SONS LIMITED, Bolton, England. Filed Mar. 21, 1914.

DRI-PED

Particular description of goods.—Leather and Skins.
Claims use since the 19th day of June, 1912.

Ser. No. 76,888. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM WALKER & SONS LIMITED, Bolton, England. Filed Mar. 21, 1914.

DREADNOUGHT

Particular description of goods.—Leather and Skins.
Claims use since the 20th day of July, 1908.

Ser. No. 76,950. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. K. UNDERWOOD, Oskaloosa, Iowa. Filed Mar. 25, 1914.

ICE MELLO

Particular description of goods.—A Frozen Confection Made of Sweet Cream and Marshmallow.
Claims use since July 1, 1913.

Ser. No. 77,011. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE WESTERN ELATERITE ROOFING COMPANY, Denver, Colo. Filed Mar. 27, 1914. Under ten-year proviso.

ELATERITE

Particular description of goods.—Dry, Paste, and Ready-Mixed Paints.
Claims use since June, 1894.

Ser. No. 77,343. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN FELDWISCH, St. Louis, Mo. Filed Apr. 9, 1914.



Particular description of goods.—Salt.
Claims use since Oct. 25, 1910.

Ser. No. 77,407. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COCHRANE CO., Brooklyn, N. Y. Filed Apr. 11, 1914.



Particular description of goods.—A Preparation for Destroying Insects.
Claims use since Mar. 15, 1914.

Ser. No. 77,439. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LEWIS S. EVANS, Pittsburgh, Pa. Filed Apr. 13, 1914.

NULIFE

Particular description of goods.—Belt-Dressings.
Claims use since Mar. 1, 1914.

Ser. No. 77,472. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLOYD E. CRYDER, Minneapolis, Minn. Filed Apr. 14, 1914.

Laurentia

Particular description of goods.—Homogenized Milk and Cream.
Claims use since Oct. 1, 1913.

Ser. No. 77,551. (CLASS 38. PRINTS AND PUBLICATIONS.) UNITED HOME BUILDERS COMPANY, Salt Lake City, Utah. Filed Apr. 17, 1914.

"WELLBILT"

The word "Homes" *per se* being hereby disclaimed.
Particular description of goods.—Books of Plans for Houses and Bungalows.
Claims use since Apr. 1, 1913.

Ser. No. 77,582. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUBUQUE BISCUIT COMPANY, Dubuque, Iowa. Filed Apr. 20, 1914.

WHITE HOUSE



The trade-mark consists of the words "White House," as shown in the accompanying drawing, which forms a part hereof and which shows a facsimile thereof.
Particular description of goods.—Crackers, Biscuits, Cookies, and Cakes.
Claims use since about the 1st of September, 1913.

Ser. No. 77,614. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WILLIAM R. BURKHARD CO., St. Paul, Minn. Filed Apr. 21, 1914.



Particular description of goods.—Fishing-Tackle, Trap and Field Sporting Apparatus, Striking-Bags and Gymnasium Apparatus, Lawn-Tennis Balls, Nets, and Rackets, Base-Balls, Bats, Base-Ball Gloves and Mitts, Foot-Balls, Basket-Balls, Skates, Hockey-Sticks, Pucks, Skees, Snow-Shoes, Toboggans, Sleds, and Swimming-Belts.
Claims use since March, 1897.

Ser. No. 77,635. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) RUSSIAN-FRENCH INDIA RUBBER, GUTTAPERCHA AND TELEGRAPH WORKS, "PROWODNIK RIGA," Riga, Russia. Filed Apr. 21, 1914.

COLUMB

Particular description of goods.—Solid Rubber and Pneumatic Tires for Carriages, Automobiles, Bicycles, and Vehicles of All Kinds, All of Said Tires Being Composed Wholly or in Part of Rubber.
Claims use since 1905.

Ser. No. 77,765. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CONSOLIDATED DRUG CO. INC., Washington, D. C. Filed Apr. 27, 1914.

Arch

Particular description of goods.—Alterative and Blood-Tonic, Chill and Fever Tonic, Cough Remedy, Worm-Syrup, Preparation for the Treatment of Diseases of the Kidneys and Bladder, Laxative Cold-Tablets, Liver-Pills, and Dyspepsia-Tablets.
Claims use since December, 1913.

Ser. No. 77,767. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CONSOLIDATED DRUG CO., INC., Washington, D. C. Filed Apr. 27, 1914.

Arch

Particular description of goods.—Tooth-Wash and Antiseptic Solution, Eye Remedy.
Claims use since December, 1913.

Ser. No. 77,770. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CONTINENTAL MOTOR MFG. CO., Detroit and Muskegon, Mich. Filed Apr. 27, 1914.

CONTINENTAL MOTORS
Power of a Nation
AMERICA'S STANDARD

No claim is made to the words "Continental Motors" and to the words "America's Standard" appearing in the space between the rings. The words "Continental Motors" and "America's Standard" are no part of this trade-mark.
Particular description of goods.—Gas-Engines.
Claims use since Mar. 18, 1914.

Ser. No. 77,790. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914. Under ten-year proviso.

SAGINAW GLOBE

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1892.

Ser. No. 77,791. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914. Under ten-year proviso.

RED ★ STAR

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1892.

Ser. No. 77,792. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914. Under ten-year proviso.

TOWN TALK

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1892.

Ser. No. 77,793. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914. Under ten-year proviso.

THE BANNER GLOBE

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1894.

Ser. No. 77,801. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914.

"CRYSTAL"

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1900.

Ser. No. 77,803. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Filed Apr. 27, 1914.

ROYAL BLUE

Particular description of goods.—Washboards.
Claims use since Feb. 1, 1902.

Ser. No. 77,843. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 28, 1914.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 22, 1911.

Ser. No. 77,845. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio. Filed Apr. 28, 1914.



No claim being made herein to the words "White Bar Soap."

Particular description of goods.—Soap for Laundry Purposes.

Claims use since prior to 1893.

Ser. No. 77,856. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES N. CARRIGAN, Washington, D. C. Filed Apr. 29, 1914.

COMBOS

Particular description of goods.—A Preparation for the Treatment of Cancers.

Claims use since Apr. 28, 1914.

Ser. No. 77,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANK W. SHERMAN, Memphis, Tenn. Filed Apr. 30, 1914.



Particular description of goods.—Candied Popcorn in Cakes.

Claims use since Mar. 15, 1914.

Ser. No. 77,931. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) H. MUELLER MANUFACTURING CO., Decatur, Ill. Filed May 1, 1914.

NEVERLOSE

Particular description of goods.—Washers Other Than Metal for Couplings.

Claims use since Jan. 1, 1911.

Ser. No. 77,933. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. C. PAULSEN & SON, Baton Rouge, La. Filed May 1, 1914.

FEND TALC

Particular description of goods.—A Toilet Powder.

Claims use since Apr. 14, 1914.

Ser. No. 77,947. (CLASS 39. CLOTHING.) B. BIRNBAUM & SON, LIMITED, London, England. Filed May 2, 1914.

REINBO

Particular description of goods.—Rain-Coats.

Claims use since July 11, 1893.

Ser. No. 78,058. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CONVENT CO., Morristown, N. J. Filed May 7, 1914.

Drosack

Particular description of goods.—A Remedy for Coughs and All Affections of the Throat.

Claims use since Mar. 25, 1913.

Ser. No. 78,120. (CLASS 39. CLOTHING.) GAYLORD A. BARCLEY, Newark, N. J. Filed May 8, 1914.

KŪVA STA

Particular description of goods.—Clothing and Articles of Merchandise Accessory Thereto—viz., Corsets, Corset-Waists, Corset-Covers, Brassières, Bust-Confiners, Hosiery.

Claims use since Feb. 24, 1914.

Ser. No. 78,306. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. W. & A. P. HOWARD & CO., LTD., Corry, Pa. Filed May 15, 1914.

KORRYKROME

Particular description of goods.—Sole-Leather.

Claims use since Oct. 1, 1910.

Ser. No. 78,330. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LEVOR & IGSTAEDTER, New York, N. Y. Filed May 16, 1914.

SAMANGUS

Particular description of goods.—Malines, Chiffons, Silk, Linen, Cotton, Nets, Organdies, Batiste, Voiles, Crapes, Muslins, Dotted Swisses, Lawns, Nainsooks, and Cambrics Used in the Manufacture of Ladies' Garments in Piece Form.

Claims use since July 1, 1912.

Ser. No. 78,345. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) C. CONRADTY, Nuremberg, Germany. Filed May 18, 1914.



No claim being made to the words "Bogenlicht-Kohle" or "C. Conradty, Nürnberg."

Particular description of goods.—Electrical and Galvanic Carbons.

Claims use since September, 1913.

Ser. No. 78,355. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. KURZMANS SONS, New York, N. Y. Filed May 18, 1914.

Peau de Faille

Particular description of goods.—Silk Piece Goods.

Claims use since the 3d day of May, 1914.

Ser. No. 78,374. (CLASS 5. ADHESIVES.) CHAS. S. TANNER COMPANY, Providence, R. I. Filed May 18, 1914. Under ten-year proviso.

GOLDEN APEX

Particular description of goods.—Gums.

Claims use since January, 1894.

Ser. No. 78,381. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE BROCKETT-GORHAM COMPANY, Marion, Ohio. Filed May 19, 1914.

"BRO-GOR"

Particular description of goods.—Truck-Chains.

Claims use since about July, 1909.

Ser. No. 78,383. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DAVIS & FRENCH, Portland, Oreg. Filed May 19, 1914.

D&F

Particular description of goods.—Metal-Polish.

Claims use since Feb. 1, 1914.

Ser. No. 78,409. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ANCHOR COAL COMPANY, Charleston, W. Va. Filed May 19, 1914.

ANCHOR COAL

The word "Coal" being disclaimed.

Particular description of goods.—Block Coal.

Claims use since Jan. 1, 1912.

Ser. No. 78,431. (CLASS 2. RECEPTACLES.) YORK-BRADFORD CO., San Francisco, Cal. Filed May 20, 1914.

Dansant

Particular description of goods.—Paper Boxes.

Claims use since Mar. 6, 1914.

Ser. No. 78,432. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH BRUCATO, New York, N. Y. Filed May 21, 1914.



Particular description of goods.—Lemons and Oranges.

Claims use since about 1894.

Ser. No. 78,433. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH BRUCATO, New York, N. Y. Filed May 21, 1914.



Particular description of goods.—Lemons and Oranges.

Claims use since about 1894.

Ser. No. 78,450. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed May 21, 1914.

EXCELLENZA

Particular description of goods.—Fertilizers.

Claims use since 1912.

Ser. No. 78,458. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) RELIANCE BUGGY CO., St. Louis, Mo. Filed May 21, 1914.

RELIANCE

The trade-mark consists of the word "Reliance" illustrated in the accompanying drawing.

Particular description of goods.—Carriages and Buggies.

Claims use since Oct. 17, 1913.

Ser. No. 78,478. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LA MANNA, AZEMA & FARNAN, New York, N. Y. Filed May 22, 1914.

CARAVEL

Particular description of goods.—Canned Sardines and Olive-Oil.

Claims use since Apr. 28, 1914.

Ser. No. 78,522. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUMAN HAIR GOODS INDUSTRY, New York, N. Y. Filed May 25, 1914.



Particular description of goods.—Human Hair.
Claims use since Apr. 23, 1914.

Ser. No. 78,532. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) POLACK TYRE & RUBBER CO., New York, N. Y. Filed May 25, 1914.



Particular description of goods.—Rubber Tires.
Claims use since Mar. 1, 1914.

Ser. No. 78,533. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed May 25, 1914.

A CASE OF GOOD HEALTH

Particular description of goods.—Malt Extract.
Claims use since Dec. 1, 1913.

Ser. No. 78,542. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILEY-SPENCER COMPANY, Los Angeles, Cal. Filed May 25, 1914.

KALEIDOGRAPH

Particular description of goods.—Games.
Claims use since March, 1914.

Ser. No. 78,560. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) MAIER PIPE COMPANY, Wilmington, Del. Filed May 26, 1914.

Maier

The display of the name "Maier" is a facsimile as written by J. D. Maier.
Particular description of goods.—Smoking-Pipes.
Claims use since Nov. 1, 1913.

Ser. No. 78,588. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) POTTER & WRIGHTINGTON, Boston, Mass. Filed May 27, 1914.

GUARDIAN

Particular description of goods.—Dog-Soap.
Claims use since Apr. 1, 1914.

Ser. No. 78,600. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CINCINNATI OIL WORKS CO., Cincinnati, Ohio. Filed May 28, 1914.

BEACON



Particular description of goods.—Metal-Polish.
Claims use since September, 1913.

Ser. No. 78,608. (CLASS 33. GLASSWARE.) GILLINDER & SONS, INC., Philadelphia, Pa. Filed May 28, 1914.

MICRA

Particular description of goods.—Glass Lamp Globes, Shades, Reflectors, Bodies, and Chimneys.
Claims use since about Feb. 18, 1911.

Ser. No. 78,609. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEZEL MILLING COMPANY, East St. Louis, Ill. Filed May 28, 1914.



Particular description of goods.—Wheat-Flour.
Claims use since Feb. 9, 1914.

Ser. No. 78,617. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWKS, INCORPORATED, Bloomington, Ill. Filed May 28, 1914. Under ten-year proviso.

Roseberry

Particular description of goods.—Sugar, Wheat-Flour, Canned Caviar, Canned Sea Food, Canned Fish, Canned Fish Flakes, Canned Kippered Herring, Canned Mackerel, Canned Pork and Beans, Canned Oysters, Canned Fruits, Maraschino Cherries in Glass, Figs, Fruit Jellies and Jams, Fruit Preserves, Canned Sliced Beef, Canned Milk, Canned Soup, Canned Vegetables, Canned Hominy, Canned Sauer-Kraut, Canned Mushrooms, Candy, Chocolate, Tomato Catsup, Cheese, Cocoa, Oatmeal, Alimentary Pastes, Rice, Gelatin, Strained Honey, Shredded Cocoanut, Coffee, Tea, Flavoring Extracts for Foods, Fruit and Nut Essences for Foods, Apple-Butter, Pickles in Glass, and Salad-Dressing, Table Sauces, Maple-Syrup, Corn-Syrup, Cane-Syrup, Vinegar, and Spices, Olives, Olive-Oil, Mustard, Peanut-Butter, and Pimentos.
Claims use since January, 1895.

Ser. No. 78,628. (CLASS 48. MALT EXTRACTS AND LIQUORS.) UNIONSBRÄUEREI SCHÜLEIN & CO. A. G., Munich, Germany. Filed May 28, 1914.



Particular description of goods.—Beer.
Claims use since Dec. 1, 1895.

Ser. No. 78,643. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES NIEDNER'S SONS CO., Malden, Mass. Filed May 29, 1914.

RENDEIN

Particular description of goods.—Linen Hose.
Claims use since Sept. 5, 1907.

Ser. No. 78,662. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BENZINWERKE RHENANIA G. M. B. H., Dusseldorf, Germany. Filed May 29, 1914.



Particular description of goods.—Turpentine and Turpentine Substitutes.
Claims use since the 14th day of February, 1907.

Ser. No. 78,663. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BENZINWERKE RHENANIA G. M. B. H., Dusseldorf, Germany. Filed May 29, 1914.

Sangajol

Particular description of goods.—Turpentine and Turpentine Substitutes.
Claims use since the 17th day of February, 1907.

Ser. No. 78,673. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK GAIUS BURKE, New York, N. Y. Filed June 1, 1914.



No claim being made to any of the printed matter upon the drawing, excepting the word "Sweetheart," or to the representation of a can.
Particular description of goods.—Talcum Powder.
Claims use since the 18th of July, 1913.

Ser. No. 78,736. (CLASS 39. CLOTHING.) BERNE MANUFACTURING COMPANY, Berne, Ind. Filed June 2, 1914.

THE WINNER

Particular description of goods.—Men's and Boys' Overalls, Shirts, and Blouses.
Claims use for a period of ten years.

Ser. No. 78,739. (CLASS 37. PAPER AND STATIONERY.) EBERHARD FABER, New York, N. Y. Filed June 2, 1914.

PONY

Particular description of goods.—Lead-Pencils, Colored Pencils, Automatic Lead-Pencils, Chalk Crayons, Pen and Pencil Holders and Pen and Pencil Clips, Rubber Erasers.
Claims use since January, 1914.

Ser. No. 78,747. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HENSEL CHEMICAL WORKS, Sioux City, Iowa. Filed June 2, 1914.

Julius Hensel

The facsimile signature of Julius Hensel, deceased.

Particular description of goods.—A Medicine Used in the Treatment of Faulty Metabolism, Anemia, Gout, Rheumatism, Chronic Constipation, Acute and Chronic Catarrh of the Stomach and Intestines, Neurasthenia, Insomnia, Melancholia, Dyspepsia, Osteomalacia, Suppurations, Furunculosis, Eczema, Struma, Weak and Backward Children, Pregnant and Nursing Mothers, Scrofulosis, Slow Convalescence, Malaria, and for the Treatment of Bees to Stimulate Honey Production.

Claims use since Feb. 10, 1914.

Ser. No. 78,763. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONVERSE RUBBER SHOE CO., Malden, Mass. Filed June 3, 1914.



Particular description of goods.—Rubber Tires, Casings, and Inner Tubes.

Claims use since May 2, 1914.

Ser. No. 78,782. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. BURDICK, Sandwich, Ill. Filed June 4, 1914.

EGG-MORE

Particular description of goods.—Liquid Tonic for Poultry.

Claims use since Mar. 20, 1913.

Ser. No. 78,814. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE KAMLEE COMPANY, Milwaukee, Wis. Filed June 4, 1914.



The background being of a red color and the letter and margin of a yellow or gold color.

Particular description of goods.—Trunks, Suitcases, and Traveling-Bags.

Claims use since in July, 1908.

Ser. No. 78,834. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GIANT TIRE & RUBBER COMPANY, Omaha, Nebr. Filed June 5, 1914.

TROJAN

Particular description of goods.—Rubber Inner and Outer Tubes for Pneumatic Tires.

Claims use since Feb. 12, 1914.

Ser. No. 78,890. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE SCHUBERT PIANO CO., New York, N. Y. Filed June 6, 1914.

FIRST SCHUBERT MELODISTYLE QUALITY NEW YORK

No claim being made to the words "First," "Quality," and "New York."

Particular description of goods.—Pianos and Piano-Players.

Claims use since May 25, 1914.

Ser. No. 78,891. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) TURTON BROS. & MATTHEWS, LTD., Sheffield, England. Filed June 6, 1914.

"FLYGO"

Particular description of goods.—Unwrought and Partly-Wrought Metals Used in Manufacture.

Claims use since the year 1905.

Ser. No. 78,892. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) TURTON BROS. & MATTHEWS, LTD., Sheffield, England. Filed June 6, 1914.



Particular description of goods.—Steel and Iron.

Claims use since the year 1889.

Ser. No. 78,893. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) TURTON BROS. & MATTHEWS, LTD., Sheffield, England. Filed June 6, 1914.

TB&M

Particular description of goods.—Steel and Iron Bars, Sheets, Plates, Hoops, and Wire, Unwrought and Partly Wrought.

Claims use since the year 1872.

Ser. No. 78,909. (CLASS 37. PAPER AND STATIONERY.) THE SCHMITZ-HORNING CO., Cleveland, Ohio. Filed June 8, 1914.

San-kro-mura. THE SANITARY WALL COVERING.

The words "The Sanitary Wall Covering" being disclaimed.

Particular description of goods.—Paper Wall-Covering.

Claims use since about the 7th day of August, 1913.

Ser. No. 78,913. (CLASS 39. CLOTHING.) WILLIAM BARKER COMPANY, Watervliet, N. Y. Filed June 9, 1914.



Particular description of goods.—Collars.

Claims use since about May 15, 1914.

Ser. No. 78,931. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PORCELA RADAX COMPANY, Pittsburgh, Pa. Filed June 9, 1914.

PORCELA

Particular description of goods.—A Preparation for Cleaning Enameled and Porcelain Ware.

Claims use since January, 1900.

Ser. No. 78,949. (CLASS 5. ADHESIVES.) LACKLAND BROTHERS, Fort Worth, Tex. Filed June 10, 1914.

No-Pach

Particular description of goods.—A Tire-Puncture Compound.

Claims use since April, 1913.

Ser. No. 78,952. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD J. MORG, New York, N. Y. Filed June 10, 1914.

TOOTH-TY-TENER

Particular description of goods.—A Medicinal Preparation to be Used in the Treatment of Diseases of the Teeth and Mouth.

Claims use since May 29, 1914.

Ser. No. 78,999. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. S. FOULDS-BRIGGS COMPANY, Cincinnati, Ohio. Filed June 11, 1914.

CLEANLINESS FIRST

Particular description of goods.—Macaroni, Elbow-Macaroni, Spaghetti, and Noodles.

Claims use since May 15, 1914.

Ser. No. 79,010. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RELIANCE GAS MANTLE COMPANY, New York, N. Y. Filed June 11, 1914.

TWO IN ONE

Particular description of goods.—Gas-Mantles.

Claims use since May 1, 1911.

Ser. No. 79,016. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UNION SALT COMPANY, Cleveland, Ohio. Filed June 11, 1914.

DIXIE HIGH GRADE BRAND PURE WHITE

SALT FOR Table and Dairy

MADE BY THE UNION SALT CO. CLEVELAND, OHIO.

All printed matter on the drawing being disclaimed except the word "Dixie."

Particular description of goods.—Salt.

Claims use since April, 1913.

Ser. No. 79,019. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UNION SALT COMPANY, Cleveland, Ohio. Filed June 11, 1914.



All printed matter on the drawing being disclaimed except the word "Cowboy."

Particular description of goods.—Salt.

Claims use since May, 1914.

Ser. No. 79,020. (CLASS 6. CHEMICALS, MEDICINE, AND PHARMACEUTICAL PREPARATIONS.) THE UNION SALT COMPANY, Cleveland, Ohio. Filed June 11, 1914.



All printed matter on the drawing being disclaimed except the word "Buckeye."

Particular description of goods.—Salt.

Claims use since 1895.

Ser. No. 79,034. (CLASS 5. ADHESIVES.) HALLY & SULLIVAN, Denver, Colo. Filed June 12, 1914.

MUCKUM

Particular description of goods.—A Compound Used to Bind Joints in Plumbing and All Kinds of Pipe-Fitting.

Claims use since Nov. 15, 1912.

Ser. No. 79,074. (CLASS 48. MALT EXTRACTS AND LIQUORS.) IHLERS & BELL, LIMITED, Liverpool, England. Filed June 13, 1914. Under ten-year proviso.



Particular description of goods.—Beer.

Claims use since the year 1873.

Ser. No. 79,079. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BERNARD MORGAN, Newport, R. I. Filed June 13, 1914.

MORGAN BRITE

Particular description of goods.—Metal-Polish.

Claims use since Mar. 20, 1914.

Ser. No. 79,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINNESOTA MACARONI CO., St. Paul, Minn. Filed June 13, 1914.

SPAGETS

Particular description of goods.—Spaghetti.

Claims use since Apr. 8, 1914.

Ser. No. 79,091. (CLASS 39. CLOTHING.) SWEET, ORR & CO., INC., New York, N. Y. Filed June 13, 1914.



Particular description of goods.—Overalls, Trousers, Negligée and Work Shirts.

Claims use since January, 1907.

Ser. No. 79,102. (CLASS 37. PAPER AND STATIONERY.) THE ESTERBROOK STEEL PEN MFG. CO., Camden, N. J. Filed June 15, 1914.



The portrait shown being that of R. Esterbrook, deceased.

Particular description of goods.—Steel Pens of All Kinds.

Claims use since Jan. 1, 1912.

Ser. No. 79,111. (CLASS 37. PAPER AND STATIONERY.) MCCLELLAN PAPER COMPANY, Minneapolis, Minn. Filed June 15, 1914.

CHARACTER

Particular description of goods.—Writing-Paper.

Claims use since about the 1st day of July, 1910.

Ser. No. 79,115. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BERNARD MORGAN, Newport, R. I. Filed June 15, 1914.



Particular description of goods.—Metal-Polish.

Claims use since Mar. 20, 1914.

Ser. No. 79,125. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JOHN A. STEVENS, Lowell, Mass. Filed June 15, 1914.



The trade-mark consists of a plain circle with a plain letter "S" therein of a height equal to one-half the diameter of the circle.

Particular description of goods.—Steam-Boilers and Parts Thereof.

Claims use since May 18, 1914.

Ser. No. 79,129. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VALENTINE & COMPANY, New York, N. Y. Filed June 15, 1914.

Val-Enamel

The word "Enamel", being disclaimed.

Particular description of goods.—Enamels, Undercoatings, and Dry and Ready-Mixed Paints.

Claims use since Dec. 19, 1913.

Ser. No. 79,152. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) IMPERIAL RUBBER CO., New York, N. Y. Filed June 16, 1914.

INNOVATION

Particular description of goods.—Cotton and Rubber Lined Hose, Linen Hose, Rubber Hose, Rubber and Fabric Hose, Rubber Tubing, Rubber, Cotton, and Leather Belting, Rubber Gaskets, Rubber Valves, and Machinery Packing in Sheet, Spiral, and Ring Form Composed of Rubber, Rubber and Metal, Rubber and Asbestos, Rubber and Cloth, Rubber and Fiber, and Rubber and Flax, and Automobile-Tires.

Claims use since the year 1913.

Ser. No. 79,164. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTI-VAPOR CO., New York, N. Y. Filed June 17, 1914.



Particular description of goods.—Compounds for the Prevention of Moisture on Glass Surfaces.

Claims use since Mar. 10, 1914.

Ser. No. 79,186. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WATERLESS WINDOW WASHER MANUFACTURING COMPANY, Winchester, Ky. Filed June 17, 1914.



Particular description of goods.—A Window-Washing Preparation.

Claims use since May 6, 1914.

Ser. No. 79,192. (CLASS 15. OILS AND GREASES.) THE HAWKEYE OIL COMPANY, Waterloo, S. D. Filed June 18, 1914.



No claim being made to the exclusive use of the word "Faultless," no exclusive claim being made to the words "Brands" and "The Hawkeye Oil Co. Incorporated" appearing thereon.

Particular description of goods.—Anticarbon Auto-Oil, Hard-Oil, Light-Oil, Cylinder-Oil, Separator-Oil, Harvester-Oil, Gas-Engine Oil, Harness-Oil, Transmission-Grease, Cup-Grease, Axle-Grease.

Claims use since January, 1908.

Ser. No. 79,205. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LANMAN & KEMP, New York, N. Y. Filed June 18, 1914.



The picture being that of C. C. Bristol, deceased, and the signature being a facsimile of the signature of the same person, no trade-mark claim being made for the following words: "The Original Inventor of the Celebrated Sarsaparilla. None Genuine without His Portrait and Signature over the Cork of the Bottle."

Particular description of goods.—Sarsaparilla.
Claims use since the year 1854.

Ser. No. 79,211. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDREW J. COLTON, Stapleton, N. Y. Filed June 19, 1914.

E-TA-FO

Particular description of goods.—A Compound Digestive Powder.
Claims use since Apr. 3, 1912.

Ser. No. 79,233. (CLASS 39. CLOTHING.) LILLIAN L. TAFT, Boston, Mass. Filed June 18, 1914.

Madame Taft's
NEW TUBE PETTICOAT

The words "New Tube Petticoat" appearing in the trade-mark are disclaimed. The mark used by me is my personal signature, and I have adopted the same as my trade-mark.

Particular description of goods.—Petticoats.
Claims use since December, 1908.

Ser. No. 79,240. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. FRANK & SON COMPANY, Milwaukee, Wis. Filed June 20, 1914.

MEAT-TREATS

Particular description of goods.—Sausage.
Claims use since May 26, 1914.

Ser. No. 79,286. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WM. WALTKE & CO., St. Louis, Mo. Filed June 22, 1914.

OXYDOL.

Particular description of goods.—Soap.
Claims use since about June 10, 1914.

Ser. No. 79,301. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEVI B. MYERS, Altoona, Pa. Filed June 23, 1914.

MELROSE

Particular description of goods.—A Remedy for Piles.
Claims use since Nov. 10, 1913.

Ser. No. 79,308. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RHEUMEOLUM CHEM CO., Seattle, Wash. Filed June 20, 1914.

RHEUME OLUM

Particular description of goods.—A Solid Liniment in Collapsible Tubes.
Claims use since Jan. 1, 1913.

Ser. No. 79,337. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RELIANCE MFG. CO., Rock Stream, N. Y. Filed June 24, 1914.

RELIANCE

Particular description of goods.—Baking-Powder and Baking-Soda.
Claims use since May 1, 1914.

Ser. No. 79,345. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WATSON BROTHERS, Boston, Mass., assignors to Micagraphic Slide Company, Boston, Mass., a Corporation of Massachusetts. Filed June 24, 1914.

MICAGRAPH

Particular description of goods.—Lantern-Slides and Apparatus for Display by Optical Projection.
Claims use since June 1, 1914.

Ser. No. 79,348. (CLASS 15. OILS AND GREASES.) INDIAN REFINING COMPANY, Augusta, Me., and New York, N. Y. Filed June 24, 1914.

SAXON

Particular description of goods.—Petroleum Lubricating-Oil.
Claims use since Apr. 10, 1914.

Ser. No. 79,357. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ANNA V. GREGORY, Davenport, Cal. Filed June 25, 1914.

THE DREAM



Particular description of goods.—Stove-Polish.
Claims use since Jan. 15, 1914.

Ser. No. 79,362. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINTO COMPANY INC., Rochester, N. Y. Filed June 25, 1914.

MINTO GUM

Exclusive use of the word "Gum" as a part of the trade-mark is disclaimed.

Particular description of goods.—Chewing-Gum.
Claims use since Mar. 14, 1914.

Ser. No. 79,364. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARLOWE MANUFACTURING COMPANY, New York, N. Y. Filed June 25, 1914.

Prima Donna

Particular description of goods.—Hair-Nets.
Claims use since about Mar. 23, 1914.

Ser. No. 79,407. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ALUMINUM CASTINGS COMPANY, Cleveland, Ohio. Filed June 27, 1914.

LYNITE

Particular description of goods.—Aluminum Castings.
Claims use since June 18, 1914.

Ser. No. 79,439. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) VICTOR ELECTRIC COMPANY, Chicago, Ill. Filed June 29, 1914.

TELEFLASHER

Particular description of goods.—Automatic Switches to be Used in Connection with an X-Ray Apparatus.
Claims use since May 15, 1914.

Ser. No. 79,440. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WIEBUSCH & HILGER, LIMITED, New York, N. Y. Filed June 29, 1914.

CHALLENGE

Particular description of goods.—Folding Rules.
Claims use since July 1, 1911.

Ser. No. 79,441. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WIEBUSCH & HILGER, LIMITED, New York, N. Y. Filed June 29, 1914.

CHALLENGE

Particular description of goods.—Steel Letters and Figures for Stamping.
Claims use since June 20, 1914.

Ser. No. 79,456. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) PAUL BOUCHE, New York, N. Y. Filed June 30, 1914.

MONACO

Consists of the arbitrarily-selected word "Monaco."

Particular description of goods.—Alcoholic Fruit-Juice Made from Currants with the Addition of Sugar.
Claims use since June 26, 1914.

Ser. No. 79,469. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) ALLISON & LAMSON, New York, N. Y. Filed June 30, 1914.

ONYX

Particular description of goods.—Canes, Parasols, and Umbrellas.
Claims use since about the 25th day of May, 1914.

Ser. No. 79,480. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed July 1, 1914.

CE-EL-CE

Particular description of goods.—Gasolene, Naphtha, Benzin, Kerosene, Lubricating Oils and Greases.
Claims use since January, 1914.

Ser. No. 79,481. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIAMOND STAR INSECTICIDE CO., Philadelphia, Pa. Filed July 1, 1914.



Particular description of goods.—Insecticides.
Claims use since June 16, 1914.

Ser. No. 79,492. (CLASS 39. CLOTHING.) THE EDW. MALLEY CO., New Haven, Conn. Filed July 1, 1914.

QUAL-I-FIT

Comprising the words "Qual-I-Fit."

Particular description of goods.—Women's, Misses', and Children's Muslin Underwear—viz., Combinations, Drawers, Skirts, Nightgowns, Corset-Covers—House-Dresses, and Silk Shirts.

Claims use since June 22, 1914.

Ser. No. 79,495. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY W. MCCHESNEY, St. Louis, Mo. Filed July 1, 1914.

PENETROIL

Particular description of goods.—A Medicinal Liniment.

Claims use since Jan. 1, 1914.

Ser. No. 79,501. (CLASS 32. FURNITURE AND UPHOLSTERY.) VICTOR TALKING MACHINE COMPANY, Camden, N. J. Filed July 1, 1914.



VICTROLA

Particular description of goods.—Cabinets for Holding or Storing Talking-Machine Records.

Claims use since Sept. 25, 1909.

Ser. No. 79,526. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEORGE H. WOLF, New York, N. Y. Filed July 2, 1914.

U-C-R

Comprising the letters and characters "U-C-R."

Particular description of goods.—Cotton Piece Goods and Cotton and Silk Piece Goods.

Claims use since June 26, 1914.

Ser. No. 79,551. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALABAMA GROCERY COMPANY, Birmingham, Ala. Filed July 6, 1914.

BISCO

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since February, 1913.

Ser. No. 79,566. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHRISTIAN J. DIERCKX, New York, N. Y. Filed July 6, 1914.



PEPERKOEK

Particular description of goods.—A Bread Composed of Pure Honey and Rye-Flour.

Claims use since June 6, 1914.

Ser. No. 79,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEY-MILLER CO., Beaumont, Tex. Filed July 6, 1914.

"MO-EGGS"

Particular description of goods.—Poultry Feed.

Claims use since January, 1914.

Ser. No. 79,571. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEY-MILLER CO., Beaumont, Tex. Filed July 6, 1914.



Particular description of goods.—Horse and Cattle Feed.

Claims use since January, 1914.

Ser. No. 79,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEY-MILLER CO., Beaumont, Tex. Filed July 6, 1914.

MO CREAM

Particular description of goods.—Horse and Cattle Feed.

Claims use since January, 1914.

Ser. No. 79,584. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ALEXANDER G. RITCHIE, New York, N. Y. Filed July 6, 1914.

SHADOW-HEM

The words "Shadow-Hem" as shown in the accompanying drawing, the exclusive use of the word "Hem" not being claimed.

Particular description of goods.—Handkerchiefs and Serviettes.

Claims use since Jan. 1, 1914.

Ser. No. 79,587. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. & E. STERN, New York, N. Y. Filed July 6, 1914.

SUEDETTE

Particular description of goods.—Cotton Piece Goods.

Claims use since the 25th day of February, 1914.

Ser. No. 79,595. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) P. BEIERSDORF & CO., Hamburg, Germany. Filed July 7, 1914.

NIVOSA

Particular description of goods.—Perfumery, Cosmetic Preparations for the Hair, Mouth, and Teeth.

Claims use since June 27, 1913.

Ser. No. 79,603. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WILLIAM H. JARDINE, Philadelphia, Pa. Filed July 7, 1914.

IONA

Particular description of goods.—Ventilators.

Claims use since about Aug. 8, 1905.

Ser. No. 79,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MEN-THO-MAGIC CO., Mechanicsville, N. Y. Filed July 7, 1914.

MEN-THO-MAGIC

Particular description of goods.—Salves for External Use for Catarrh, Cold in the Head, Asthma, Hay-Fever, Colic, Cramps, Croup, Headache, Toothache, Neuralgia, Tired or Sore Feet, and Rheumatism.

Claims use since June 30, 1914.

Ser. No. 79,613. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIMONDS MANUFACTURING COMPANY, Fitchburg, Mass. Filed July 7, 1914.

ROYAL CHINOOK

Particular description of goods.—Saws.

Claims use since the year 1906.

Ser. No. 79,632. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INGERSOLL-RAND COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 8, 1914.

JACKSTOPER

Particular description of goods.—Air-Feed Hammer-Drills with Automatic Steel-Rotating Mechanism.

Claims use since the 1st day of June, 1914.

Ser. No. 79,644. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) F. A. PATRICK & CO., Duluth, Minn. Filed July 8, 1914.

Bigger-Than-Weather

Particular description of goods.—Cotton, Linen, Silk, and Woolen Piece Goods and Piece Goods Composed of Two or More of These Materials, Burlap, Pillow-Casing, Pillow-Tubing, Quilting, Mosquito-Netting, Trimming-Laces, Ribbons, Scarfs, Blankets, Automobile-Robes, Carriage-Robes, Steamer-Robes, Couch-Robes, Portières, and Textile Mats.

Claims use since Dec. 25, 1913.

Ser. No. 79,667. (CLASS 39. CLOTHING.) NATHAN HATCH, Albany and Cohoes, N. Y. Filed July 9, 1914.

Hatch

The signature shown is a facsimile of my signature.

Particular description of goods.—Woven and Knitted Underwear, Combination-Garments, Union Suits, Undershirts, Drawers, Vests, and Bloomers.

Claims use since on or about June 5, 1914.

Ser. No. 79,669. (CLASS 5. ADHESIVES.) THE JOHNSTOWN AUTOMOBILE CO., Johnstown, Pa. Filed July 9, 1914.

JACO

Particular description of goods.—Friction-Tape for Wheel-Tires and Vulcanizing-Cement.

Claims use since July 1, 1913.

Ser. No. 79,670. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE JOHNSTOWN AUTOMOBILE CO., Johnstown, Pa. Filed July 9, 1914.

JACO

Particular description of goods.—Inner Tubes, Blow-Out Patches, Tire-Boots, and Reliners for Rubber Tires and Vulcanizing Rubber.

Claims use since July 1, 1913.

Ser. No. 79,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed July 9, 1914.

Summer Snaps

Particular description of goods.—Candies.

Claims use since June 30, 1914.

Ser. No. 79,684. (CLASS 2. RECEPTACLES.) NEWTON L. SCHLOSS, New York, N. Y., assignor to Ovanite Company, New York, N. Y., a Corporation of New York. Filed July 9, 1914.

FIT THE POCKET AND THE POCKETBOOK

Particular description of goods.—Cases for Toilet Articles.

Claims use since about June 1, 1914.

Ser. No. 79,688. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WILLIAMS & DALY COMPANY, Boston, Mass. Filed July 9, 1914.

Eclipse

Particular description of goods.—Screening Devices and Separators.
Claims use since May 15, 1914.

Ser. No. 79,689. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WORCESTER SALT CO., Silver Springs and New York, N. Y. Filed July 9, 1914.

NEPTONE

Particular description of goods.—Salt for Bath and Bathing Purposes.
Claims use since Feb. 15, 1914.

Ser. No. 79,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARAGON COFFEE CO., INC., South Richmond, Va. Filed July 10, 1914.

REGIONAL BANK

Particular description of goods.—Tea and Coffee.
Claims use since July 8, 1914.

Ser. No. 79,711. (CLASS 39. CLOTHING.) KRUSKEL & KRUSKEL, New York, N. Y. Filed July 10, 1914.

K&K

Particular description of goods.—Fur Garments—Namely, Fur and Fur-Lined Coats, Fur Neck-Pieces, and Fur Muffs.
Claims use since Feb. 1, 1913.

Ser. No. 79,723. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE J. A. SCHWOB CO., Moundsville, W. Va. Filed July 10, 1914. Under ten-year proviso.

CHAMPION CRADLE

Particular description of goods.—Grain, Rice, and Corn Cradles.
Claims use prior to the year 1895.

Ser. No. 79,725. (CLASS 12. CONSTRUCTION MATERIALS.) UNIONITE CO., Philadelphia, Pa. Filed July 10, 1914.

UNIONITE

Particular description of goods.—Pavements and Roads and Bituminous and Asphaltic Materials and Compounds for Use in the Construction and Maintenance of Pavements and Roads.
Claims use since about Aug. 1, 1913.

Ser. No. 79,732. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed July 11, 1914.



Particular description of goods.—Handkerchiefs.
Claims use since Dec. 1, 1913.

Ser. No. 79,743. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH, KLINE & FRENCH CO., Philadelphia, Pa. Filed July 11, 1914.

CASCA-PHEN

Particular description of goods.—A Laxative.
Claims use since June 12, 1914.

Ser. No. 79,750. (CLASS 39. CLOTHING.) THOMAS B. CORPENING, St. Louis, Mo. Filed July 13, 1914.

HAVALUK

Particular description of goods.—Hosiery.
Claims use since on or about the 20th day of June, 1914.

Ser. No. 79,752. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) J. ENGLISH & SON LIMITED, Redditch, England. Filed July 13, 1914. Under ten-year proviso.



Particular description of goods.—Toilet Pins and Needles for Hand-Sewing.
Claims use since about Aug. 13, 1869.

Ser. No. 79,753. (CLASS 12. CONSTRUCTION MATERIALS.) FARR BRICK COMPANY, Cleveland, Ohio. Filed July 13, 1914.

F

Particular description of goods.—Brick.
Claims use since Jan. 16, 1913.

Ser. No. 79,772. (CLASS 12. CONSTRUCTION MATERIALS.) THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS (1900), LIMITED, London, England. Filed July 14, 1914. Under ten-year proviso.



Particular description of goods.—Portland Cement.
Claims use since at least the year 1857.

Ser. No. 79,782. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

PRENEX

Particular description of goods.—Biscuit.
Claims use since at least July 9, 1914.

Ser. No. 79,784. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

CIRCUS

Particular description of goods.—Biscuit.
Claims use since at least December, 1884.

Ser. No. 79,785. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

HOBNOB

Particular description of goods.—Biscuit.
Claims use since at least July 9, 1914.

Ser. No. 79,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

PRETZEENOS

Particular description of goods.—Biscuit.
Claims use since at least July 9, 1914.

Ser. No. 79,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1914.

MYRTLE

Particular description of goods.—Biscuit.
Claims use since at least July 9, 1914.

Ser. No. 79,804. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ECLIPSE MACHINE COMPANY, Elmira, N. Y. Filed July 15, 1914.



Particular description of goods.—Clutches and Drill-Chucks.
Claims use since Nov. 30, 1908.

Ser. No. 79,816. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES F. MATTLAGE & SONS, New York, N. Y. Filed July 15, 1914. Under ten-year proviso.

C.F.M.

Particular description of goods.—Pickled, Salted, Dried, and Preserved Fish.
Claims use since about the year 1885.

Ser. No. 79,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WHITMAN CHEMICAL CO., INC., Boston, Mass. Filed July 15, 1914.



Particular description of goods.—A Remedy Externally as a Liniment and Internally as a Stimulant, Antiseptic, Antispasmodic, and Carminative.
Claims use since July 7, 1914.

Ser. No. 79,833. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WALDEN MANUFACTURING COMPANY, Worcester, Mass. Filed July 15, 1914.

TOMAHAWK

Particular description of goods.—Wrenches.
Claims use since June 1, 1914.

Ser. No. 79,840. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARTHUR CHEMICAL CO., New Haven, Conn. Filed July 16, 1914.

PEG O
MY
HEART

Particular description of goods.—Perfume, Toilet Water, Talcum Powder, Complexion Powder, and Cold-Cream.
Claims use since Jan. 6, 1913.

Ser. No. 79,846. (CLASS 10. FERTILIZERS.) THE COE-MORTIMER COMPANY, New York, N. Y. Filed July 16, 1914.



No claim being made to the exclusive use of the representation of the top of the bag.
Particular description of goods.—A Combination Fertilizer and Worm and Weed Killer.
Claims use since May 3, 1910.

Ser. No. 79,851. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed July 16, 1914.

NAILSTIC

Particular description of goods.—Nail-Polish.
Claims use since June 30, 1914.

Ser. No. 79,852. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROTHSCHILD BROS., Philadelphia, Pa. Filed July 16, 1914.

ARBRO

Which consists of the word "Arbro."
Particular description of goods.—A Compound of Buchu and Gin.
Claims use since about June 26, 1914.

Ser. No. 79,864. (CLASS 39. CLOTHING.) MAX AUSPITZ, Chicago, Ill. Filed July 17, 1914.

EMPRESS

Particular description of goods.—Petticoats.
Claims use since about the last of May, 1914.

Ser. No. 79,865. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CHALLENGE CUTLERY CORPORATION, Bridgeport, Conn. Filed July 17, 1914.

CHALLENGE

Particular description of goods.—Chiropodists' Knives.
Claims use since 1893.

Ser. No. 79,870. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JAMES W. DUNHAM, New York, N. Y. Filed July 17, 1914.

VANITIE

Particular description of goods.—Electric Lamps and Stands.
Claims use since July 14, 1914.

Ser. No. 79,874. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed July 17, 1914.

NAILISTIC

Particular description of goods.—Nail-Polish.
Claims use since July 16, 1914.

Ser. No. 79,887. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BESSIE LEE MOSSO, Chicago, Ill. Filed July 17, 1914. Under ten-year proviso.



The photograph being that of the deceased husband of applicant.
Particular description of goods.—A Tempering Compound.
Claims use since Jan. 1, 1885.

Ser. No. 79,888. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed July 17, 1914.

HECTOR

Particular description of goods.—Electric Batteries.
Claims use since July 7, 1914.

Ser. No. 79,891. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HERMANN RICHTER, Denver, Colo. Filed July 17, 1914.

Success

Particular description of goods.—Embroidery.
Claims use since June 1, 1914.

Ser. No. 79,908. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HEMINGWAY & COMPANY, INC., Boundbrook, N. J. Filed July 18, 1914.

ARISTOLAC

Particular description of goods.—Enamel Paint.
Claims use since June 4, 1914.

Ser. No. 79,909. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. S. HOLT COMPANY—MANUFACTURING PHARMACISTS, INCORPORATED, Cedar Rapids, Iowa. Filed July 18, 1914.

Zymopan

Particular description of goods.—A Compound of Enzyms or Ferments for the Conversion of Food-Assimilable Products.
Claims use since Jan. 1, 1914.

Ser. No. 79,921. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JAMES F. SULLIVAN, Camden, N. J. Filed July 18, 1914.



Particular description of goods.—A Shoe-Dressing for White Shoes.
Claims use since Mar. 1, 1914.

Ser. No. 79,927. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE PHARIS TIRE & RUBBER CO., Newark, Ohio. Filed July 20, 1914.



Particular description of goods.—Pneumatic Tires and Inner Tubes Therefor.
Claims use since about July, 1912.

Ser. No. 79,963. (CLASS 39. CLOTHING.) A. E. LITTLE & COMPANY, Lynn, Mass. Filed July 21, 1914.

OASIS

Particular description of goods.—Boots and Shoes of Leather and of Leather and Cloth.
Claims use since June 15, 1914.

Ser. No. 79,977. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed July 21, 1914.

OTELLO

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since July 8, 1909.

Ser. No. 79,978. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CO., Prague-Wrschowitz, Austria-Hungary. Filed July 21, 1914.

MOTO

Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since Feb. 23, 1910.

Ser. No. 79,980. (CLASS 39. CLOTHING.) WILLIAM BROWN COMPANY, Philadelphia, Pa. Filed July 22, 1914.



Vanitie

Particular description of goods.—Ladies', Gentlemen's, and Children's Hosiery.
Claims use since July 18, 1914.

Ser. No. 79,981. (CLASS 39. CLOTHING.) WILLIAM BROWN COMPANY, Philadelphia, Pa. Filed July 22, 1914.



Particular description of goods.—Ladies', Gentlemen's, and Children's Hosiery.
Claims use since July 18, 1914.

Ser. No. 79,995. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAME COMPANY, Buffalo, N. Y. Filed July 22, 1914.

568

Particular description of goods.—Hames and Parts Thereof.
Claims use since July 21, 1914.

Ser. No. 80,000. (CLASS 39. CLOTHING.) THE L. N. GROSS COMPANY, Cleveland, Ohio. Filed July 23, 1914.

Welworth

Particular description of goods.—Women's Garments—Namely, Shirt-Waists and Blouses.
Claims use since June 1, 1914.

Ser. No. 80,021. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) J. F. WHELIHAN, Cedar Rapids, Iowa. Filed July 23, 1914.



The picture being fanciful.
Particular description of goods.—Ginger-Beer Extract.
Claims use since 1908.

Ser. No. 80,107. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) STRAUSS BROS. & Co., New York, N. Y. Filed July 27, 1914.

Piquette

Particular description of goods.—Braids.
Claims use since Apr. 15, 1914.

Ser. No. 80,118. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CALIFORNIA FRUIT BEVERAGE COMPANY, Los Angeles, Cal. Filed July 28, 1914.

Toxie

Particular description of goods.—Carbonated Soda-Water.
Claims use since June 1, 1914, and in the business of its predecessors, California Products Co., since June 1, 1911.

Ser. No. 80,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HORACE WILCOX, Wakefield, R. I. Filed July 28, 1914.

Which is the signature of myself.
Particular description of goods.—An Antiseptic Lotion.
Claims use since Sept. 9, 1912.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 18, 1914.

99,073. SUBSTANCE FOR CLEANING AND POLISHING. AMERICAN CLEANSER COMPANY, Haoke Ranch, near Boerne, Tex.
Filed March 23, 1914. Serial No. 76,834. PUBLISHED JUNE 9, 1914.

99,074. DRESS-BANDING. THE AMERICAN MILLS COMPANY, Waterbury, Conn.
Filed May 7, 1914. Serial No. 78,042. PUBLISHED JUNE 16, 1914.

99,075. REMEDIES FOR CERTAIN NAMED DISEASES. AMERICAN REMEDIAL CO., Trenton, N. J.
Filed April 20, 1914. Serial No. 77,577. PUBLISHED JUNE 16, 1914.

99,076. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed April 9, 1914. Serial No. 77,335. PUBLISHED JUNE 16, 1914.

99,077. COATS AND CAPES. A. BELLER & CO., New York, N. Y.
Filed May 9, 1914. Serial No. 78,147. PUBLISHED JUNE 16, 1914.

99,078. PLUSHES AND VELVETS. SIDNEY BLUMENTHAL & COMPANY, New York, N. Y.
Filed May 11, 1914. Serial No. 78,187. PUBLISHED JUNE 16, 1914.

99,079. SCOURING-SOAP IN CAKE OR POWDER FORM. THE BON AMI CO., New York, N. Y.
Filed March 25, 1914. Serial No. 76,916. PUBLISHED JUNE 9, 1914.

99,080. INK-RIBBONS FOR TIME-PRINTING MACHINES. CALCULAGRAPH COMPANY, New York, N. Y.
Filed April 17, 1913. Serial No. 69,842. PUBLISHED JUNE 16, 1914.

99,081. CONFECTION OF POPCORN AND PEANUTS, POPPED CORN, AND SALTED PEANUTS. GEORGE E. CLARK, East Cleveland, Ohio, assignor to Superior Peanut Company, a Partnership comprising Louis A. Kirchner, Audley P. MacCallie, Carl C. Sigler, and Frank R. McNamara, doing business at Cleveland, Ohio.
Filed December 16, 1912. Serial No. 67,435. PUBLISHED MAY 13, 1913.

99,082. OUTER COATS. HARRY COHEN, Philadelphia, Pa.
Filed February 15, 1913. Serial No. 68,557. PUBLISHED MARCH 31, 1914.

99,083. SAFETY-PINS. CONSOLIDATED SAFETY PIN CO., Bloomfield, N. J.
Filed January 6, 1914. Serial No. 74,983. PUBLISHED JUNE 16, 1914.

99,084. MUSLIN. CONVERSE & COMPANY, New York, N. Y.
Filed January 14, 1914. Serial No. 75,163. PUBLISHED MARCH 24, 1914.

99,085. OVERCOATS. ALFRED DECKER & COHN, Chicago, Ill.
Filed April 20, 1914. Serial No. 77,584. PUBLISHED JUNE 16, 1914.

99,086. CORSETS. DERBY CORSET COMPANY, Derby, Conn.
Filed March 5, 1914. Serial No. 76,354. PUBLISHED JUNE 16, 1914.

99,087. LADIES' TUB-DRESSES, HOUSE-DRESSES, AND NURSES' AND WAITRESSES' UNIFORMS. HENRY A. DIX & SONS COMPANY, Millville, N. J., and New York, N. Y.
Filed March 20, 1914. Serial No. 76,793. PUBLISHED JUNE 16, 1914.

99,088. PREPARATION TO BE APPLIED TO LEATHER FOOTWEAR TO INCREASE THE WEAR. WILLIAM A. EGGERS, Newark, N. J.
Filed August 24, 1912. Serial No. 65,416. PUBLISHED JUNE 9, 1914.

99,089. ELASTIC TEXTILES FOR CERTAIN PURPOSES, USUALLY SOLD IN ROLLS. J. EINSTEIN, INC., New York, N. Y.
Filed May 19, 1914. Serial No. 78,384. PUBLISHED JUNE 16, 1914.

99,090. LAUNDRY, TOILET, AND SHAVING SOAP. F. L. FALCK & Co., Allegheny, Pa.
Filed August 4, 1911. Serial No. 58,041. PUBLISHED SEPTEMBER 30, 1913.

99,091. MUFFLERS. FRANK & MEYER NECKWEAR COMPANY, St. Louis, Mo.
Filed January 30, 1914. Serial No. 75,548. PUBLISHED MARCH 31, 1914.

99,092. NON-ALCOHOLIC CARBONATED BEVERAGE AND SYRUP FOR MAKING THE SAME. MINNIE QUINN GASSAWAY, Greenville, S. C.
Filed April 25, 1914. Serial No. 77,743. PUBLISHED JUNE 16, 1914.

99,093. CORSET FABRICS OF CERTAIN MATERIALS OR COMBINATIONS THEREOF. EMMA E. GOODWIN, New York, N. Y.
Filed April 22, 1914. Serial No. 77,649. PUBLISHED JUNE 16, 1914.

99,094. WOOLEN PIECE GOODS. HAAS BROTHERS, New York, N. Y.
Filed April 7, 1914. Serial No. 77,280. PUBLISHED JUNE 16, 1914.

99,095. JEWELRY FOR PERSONAL WEAR. HALLAM-RICE Co., Providence, R. I.
Filed February 4, 1914. Serial No. 75,675. PUBLISHED JUNE 16, 1914.

99,096. LUBRICATING-OILS. A. W. HARRIS OIL CO., Providence, R. I.
Filed March 2, 1914. Serial No. 76,276. PUBLISHED MAY 5, 1914.

99,097. LUBRICATING-OILS. A. W. HARRIS OIL CO., Providence, R. I.
Filed March 2, 1914. Serial No. 76,279. PUBLISHED MAY 5, 1914.

99,098. BEER. G. HEILEMAN BREWING CO., La Crosse, Wis.
Filed May 13, 1914. Serial No. 78,242. PUBLISHED JUNE 16, 1914.

99,099. SHOE-POLISH. THE HERMES COMPANY, Chicago, Ill.
Filed April 13, 1914. Serial No. 77,443. PUBLISHED JUNE 9, 1914.

99,100. BUFFING AND POLISHING COMPOUND. THE HILL & GRIFFITH CO., Cincinnati, Ohio.
Filed March 13, 1914. Serial No. 76,603. PUBLISHED JUNE 16, 1914.

99,101. SHAVING-SOAP. JOHNSON & JOHNSON, New Brunswick, N. J.
Filed March 10, 1914. Serial No. 76,499. PUBLISHED JUNE 16, 1914.

99,102. HOOKS AND EYES. S. KANN SONS & CO., Washington, D. C.
Filed March 7, 1912. Serial No. 62,000. PUBLISHED JUNE 16, 1914.

99,103. COTTON PIECE GOODS. KING PHILIP MILLS, Fall River, Mass.
Filed April 2, 1914. Serial No. 77,151. PUBLISHED JUNE 16, 1914.

99,104. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 7, 1914. Serial No. 78,081. PUBLISHED JUNE 16, 1914.

99,105. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 7, 1914. Serial No. 78,082. PUBLISHED JUNE 16, 1914.

99,106. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 12, 1914. Serial No. 78,221. PUBLISHED JUNE 16, 1914.

99,107. COTTON PIECE AND DRESS GOODS AND COTTON BED-COVERING GOODS. LANCASTER MILLS, Clinton, Mass.
Filed December 11, 1913. Serial No. 74,520. PUBLISHED JUNE 16, 1914.

99,108. LADIES' HAIR-NETS AND LADIES' FACE-CHAMOIS. K. LANDAU & CO., Chicago, Ill.
Filed April 30, 1914. Serial No. 77,889. PUBLISHED JUNE 16, 1914.

99,109. SILVER FLAT WARE. PAUL LATZKE, New York, N. Y.
Filed March 17, 1914. Serial No. 76,714. PUBLISHED JUNE 16, 1914.

99,110. SILVER FLAT WARE. PAUL LATZKE, New York, N. Y.
Filed April 8, 1914. Serial No. 77,310. PUBLISHED JUNE 16, 1914.

99,111. INSECTICIDE. ARTHUR LAVER, Bernardsville, N. J.
Filed April 21, 1914. Serial No. 77,633. PUBLISHED JUNE 16, 1914.

99,112. CERTAIN NAMED ARTICLES MADE OF OR PLATED WITH PRECIOUS METAL. MASON, HOWARD & CO., Attleboro, Mass.
Filed April 2, 1914. Serial No. 77,155. PUBLISHED JUNE 16, 1914.

99,113. BLANKETS OF WOOL, COTTON, AND MIXTURES OF THESE FIBERS. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed September 15, 1913. Serial No. 72,861. PUBLISHED JUNE 16, 1914.

99,114. PLAYER-PIANOS. HENRY F. MILLER & SONS PIANO COMPANY, Boston, Mass.
Filed April 25, 1914. Serial No. 77,753. PUBLISHED JUNE 16, 1914.

99,115. COLLARS AND CUFFS. NURSES OUTFITTING ASSOCIATION, INC., New York, N. Y.
Filed April 4, 1914. Serial No. 77,214. PUBLISHED JUNE 16, 1914.

99,116. PREPARED STOCK FOOD COMPOSED OF GROUND HAY TREATED WITH MOLASSES AND VARIOUS GRAINS. MILTON C. PETERS, Omaha, Nebr., assignor to M. C. Peters Mill Co., Omaha, Nebr., a Corporation of Nebraska.
Filed April 24, 1908. Serial No. 34,337. PUBLISHED JUNE 16, 1914.

99,117. RUBBER HEEL-PADS AND TIPS FOR BOOTS AND SHOES. PHILLIPS' PATENTS, LIMITED, London, England.
Filed May 15, 1914. Serial No. 78,312. PUBLISHED JUNE 16, 1914.

99,118. LADIES' HATS. GEORGE RAWAK, New York, N. Y.
Filed August 12, 1913. Serial No. 72,305. PUBLISHED JUNE 16, 1914.

99,119. TONIC BITTERS. WILLIAM R. REEVE, Boston, Mass.
Filed April 22, 1914. Serial No. 77,659. PUBLISHED JUNE 16, 1914.

99,120. REMEDY FOR HEADACHE, TOOTHACHE, AND NEURALGIA. REMEDY SALES CORPORATION, Charlotte, N. C.
Filed April 25, 1914. Serial No. 77,756. PUBLISHED JUNE 16, 1914.

99,121. COMPOUND FOR CLEANING AND SOFTENING RUBBER AND RUBBER PRODUCTS. THE RESILIA CORPORATION, San Francisco, Cal.
Filed April 15, 1914. Serial No. 77,494. PUBLISHED JUNE 16, 1914.

99,122. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,101. PUBLISHED JUNE 16, 1914.

99,123. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,102. PUBLISHED JUNE 16, 1914.

99,124. ABRASIVE WHEELS, BLOCKS, POWDERS, FABRICS, AND PAPERS. STE. AME. "LE BORO CARBONE," Paris, France.
Filed October 18, 1913. Serial No. 73,491. PUBLISHED JUNE 16, 1914.

99,125. ABRASIVE WHEELS, BLOCKS, POWDERS, FABRICS, AND PAPERS. STE. AME. "LE BORO CARBONE," Paris, France.
Filed October 18, 1913. Serial No. 73,492. PUBLISHED JUNE 16, 1914.

99,126. DENTIFRICES. JACK FRANCIS STEEN, Cairo, Egypt.
Filed April 25, 1914. Serial No. 77,759. PUBLISHED JUNE 16, 1914.

99,127. COATS AND SUITS FOR OUTER WEAR. BISCHOF STERNE & STEIN, Cincinnati, Ohio.
Filed March 25, 1914. Serial No. 76,919. PUBLISHED JUNE 16, 1914.

99,128. DEVICE USED IN SOUND-BOXES FOR CLARIFYING TONES OF SOUND-REPRODUCING INSTRUMENTS. THE STETSON MANUFACTURING COMPANY, Cleveland, Ohio.
Filed April 4, 1914. Serial No. 77,222. PUBLISHED MAY 5, 1914.

99,129. SHIRTS, UNDERWEAR, NIGHT-SHIRTS, PAJAMAS, COLLARS, AND CUFFS. TIM & CO., New York and Troy, N. Y.
Filed March 4, 1914. Serial No. 76,333. PUBLISHED JUNE 16, 1914.

99,130. CERTAIN NAMED ROOFING AND ROOF-COATING COMPOSITION. THE TEXAS COMPANY, Port Arthur, Tex., and New York, N. Y.
Filed December 13, 1913. Serial No. 74,597. PUBLISHED JUNE 16, 1914.

99,131. MEN'S, WOMEN'S, AND CHILDREN'S HOSIERY. TRYON HOSIERY COMPANY, Tryon, N. C.
Filed June 22, 1911. Serial No. 57,250. PUBLISHED JUNE 16, 1914.

99,132. WATCHES, CLOCKS OF ALL DESCRIPTIONS AND FOR ALL PURPOSES, MARINE CHRONOMETERS, BOX-CHRONOMETERS, AND STOP-WATCHES. WALTHAM WATCH COMPANY, Waltham and Boston, Mass.
Filed November 24, 1913. Serial No. 74,179. PUBLISHED JUNE 16, 1914.

99,133. ROLLED METAL SHEETS, ROLLED METAL PLATES, TIN AND TERNE PLATES. AMERICAN SHEET & TIN PLATE COMPANY, Pittsburgh, Pa.
Filed October 15, 1912. Serial No. 66,300. PUBLISHED JUNE 16, 1914.

99,134. PAINTS FOR SHIPS' BOTTOMS. AMERICAN VENEZIANI PAINT COMPANY, Jersey City, N. J.
Filed March 25, 1914. Serial No. 76,914. PUBLISHED JUNE 16, 1914.

99,135. EXTRACTS, ESSENCES, FLAVORS, SYRUPS USED IN THE PREPARATION OF SODA-WATER, AND CARBONATED TONIC BEVERAGES. ASTRA PRODUCTS CO., Carthage, Mo.
Filed June 6, 1913. Serial No. 70,888. PUBLISHED JUNE 16, 1914.

99,136. FERTILIZERS. THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va.
Filed May 7, 1914. Serial No. 78,043. PUBLISHED JUNE 16, 1914.

99,137. PERFUMES. EDWARD W. AUSTEN, Oswego, N. Y.
Filed January 9, 1913. Serial No. 67,797. PUBLISHED JUNE 16, 1914.

99,138. DRILL-CHUCKS. AUTOMATIC DRILL CHUCK CORPORATION, Detroit, Mich.
Filed April 2, 1914. Serial No. 77,145. PUBLISHED JUNE 16, 1914.

99,139. TOOTH-BRUSHES. ALBA C. BOOTH, Burlington, Vt.
Filed April 4, 1914. Serial No. 77,196. PUBLISHED JUNE 16, 1914.

99,140. REMEDY FOR THE TREATMENT OF ASTHMA AND HAY-FEVER. CAPITAL DRUG COMPANY, Augusta, Me.
Filed March 27, 1914. Serial No. 76,989. PUBLISHED JUNE 16, 1914.

99,141. FUSES AND TORPEDOES. CENTRAL RAILWAY SIGNAL CO., Pittsburgh, Pa.
Filed February 17, 1914. Serial No. 75,959. PUBLISHED JUNE 16, 1914.

99,142. FURNITURE-POLISH. CHANNELL CHEMICAL COMPANY, Chicago, Ill.
Filed March 11, 1912. Serial No. 62,110. PUBLISHED JUNE 16, 1914.

99,143. WOOL-FAT. THE CORONA MFG. CO., Kenton, Ohio.
Filed February 26, 1914. Serial No. 76,166. PUBLISHED JUNE 16, 1914.

99,144. EXTERNAL APPLICATION FOR THE RELIEF OF GOITER. F. HORACE DESJARDINS, Marquette, Mich.
Filed August 29, 1912. Serial No. 65,479. PUBLISHED JUNE 16, 1914.

99,145. CERTAIN NAMED BRIDGES AND LIKE STRUCTURES. DEUTSCHE MASCHINENFABRIK AKTIEN GESELLSCHAFT, Duisburg, Germany, and New York, N. Y.
Filed January 16, 1914. Serial No. 75,224. PUBLISHED JUNE 16, 1914.

99,146. REMEDY FOR CERTAIN NAMED DISEASES. FREDRICK S. DICKINSON, New York, N. Y.
Filed April 3, 1914. Serial No. 77,174. PUBLISHED JUNE 16, 1914.

99,147. BRAKE-BAND LINING. ESSEX RUBBER COMPANY, Trenton, N. J.
Filed April 7, 1914. Serial No. 77,270. PUBLISHED JUNE 16, 1914.

99,148. CERAMIC TITANIUM YELLOW. FOOTE MINERAL CO., Philadelphia, Pa.
Filed March 10, 1914. Serial No. 76,493. PUBLISHED JUNE 16, 1914.

99,149. WINES. ENRICO FUCINI, New York, N. Y.
Filed May 20, 1914. Serial No. 78,416. PUBLISHED JUNE 16, 1914.

99,150. PREPARATION FOR THE EXTERMINATION OF INSECTS. P. GOLDBERG, Edgewater, N. J.
Filed March 14, 1914. Serial No. 76,644. PUBLISHED JUNE 16, 1914.

99,151. CERTAIN NAMED CUTLERY AND PARTS THEREOF. HARRINGTON CUTLERY CO., Southbridge, Mass.
Filed May 1, 1912. Serial No. 63,234. PUBLISHED DECEMBER 9, 1913.

99,152. PAINT, VARNISH, HORSE, WALL, WINDOW, AND SCRUB BRUSHES. HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,833. PUBLISHED JUNE 16, 1914.

99,153. GUANO AND FERTILIZERS. THE HOME GUANO COMPANY, Dothan, Ala.
Filed December 9, 1912. Serial No. 67,320. PUBLISHED JUNE 16, 1914.

99,154. TABLETS FOR THE STOMACH AND BREATH. ALBERT BRADLEE HUNT, New York, N. Y.
Filed April 19, 1913. Serial No. 69,919. PUBLISHED JUNE 16, 1914.

99,155. ENAMEL IN THE NATURE OF PAINT. THE JAPANOL ENAMEL COMPANY, Islington, London, England.
Filed December 16, 1913. Serial No. 74,635. PUBLISHED JUNE 16, 1914.

99,156. POWDER FOR ARTIFICIAL TEETH. EARL B. KEIGHLEY & CO., Pawtucket, R. I.
Filed June 13, 1913. Serial No. 71,090. PUBLISHED JUNE 16, 1914.

99,157. MOTION-PICTURES. KLAW & ERLANGER, New York, N. Y.
Filed March 28, 1914. Serial No. 77,024. PUBLISHED JUNE 16, 1914.

99,158. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 7, 1914. Serial No. 78,083. PUBLISHED JUNE 16, 1914.

99,159. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 7, 1914. Serial No. 78,084. PUBLISHED JUNE 16, 1914.

99,160. DRESS-SHIELDS. I. B. KLEINERT RUBBER COMPANY, New York, N. Y.
Filed May 7, 1914. Serial No. 78,085. PUBLISHED JUNE 16, 1914.

99,161. TALCUM, SACHET, FACE, AND BATH POWDER. LAZELL, PERFUMER, New York, N. Y.
Filed February 25, 1914. Serial No. 76,142. PUBLISHED JUNE 16, 1914.

99,162. WIRE, FIBER, HAIR, AND BRISTLE BRUSHES. THE MANUFACTURERS BRUSH COMPANY, Cleveland, Ohio.
Filed April 17, 1914. Serial No. 77,541. PUBLISHED JUNE 16, 1914.

99,163. CONCRETE-HARDENING, CONCRETE-FILLING, AND CONCRETE-BONDING MATERIAL. THE MASTER BUILDERS COMPANY, Cleveland, Ohio.
Filed March 26, 1914. Serial No. 76,962. PUBLISHED JUNE 16, 1914.

99,164. AUTOMOBILES. MAXWELL MOTOR COMPANY, INCORPORATED, Detroit, Mich.
Filed November 7, 1913. Serial No. 73,850. PUBLISHED JUNE 16, 1914.

99,165. SPARK-PLUGS AND PARTS, INCLUDING TERMINALS, PORCELAINS, HOODS, BUSHINGS, AND SHELLS. DAVID B. MILLS, Bloomfield, N. J., assignor to Pasha Spark-Plug Company, a Corporation of New Jersey.
Filed May 14, 1914. Serial No. 78,281. PUBLISHED JUNE 16, 1914.

99,166. ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed April 7, 1914. Serial No. 77,290. PUBLISHED JUNE 16, 1914.

99,167. BUTTER AND OTHER DISHES MADE OF WOOD, PULP, AND PAPER. NORTHERN BAG & PLATE CO., Carthage, N. Y.
Filed March 23, 1914. Serial No. 76,869. PUBLISHED JUNE 16, 1914.

99,168. TWINE. TIMOTHY LEO O'NEIL, Marseilles, Ill.
Filed April 14, 1913. Serial No. 69,780. PUBLISHED JUNE 16, 1914.

99,169. TOY SPRING-GUN. PARKER BROTHERS, Portland, Me., and Salem, Mass.
Filed April 23, 1914. Serial No. 77,684. PUBLISHED JUNE 16, 1914.

99,170. REMEDY FOR DISEASES OF THE BLOOD AND SKIN. SAMUEL B. PAYNE, Kansas City, Kans.
Filed February 6, 1913. Serial No. 68,370. PUBLISHED JUNE 16, 1914.

99,171. BROOMS. PLATTSBURG BROOM CO., INC., Plattsburg, N. Y.
Filed May 6, 1914. Serial No. 78,034. PUBLISHED JUNE 16, 1914.

99,172. PREPARATIONS FOR THE TREATMENT OF HEADACHE, CATARRH, PILES, EARACHE, HAY-FEVER, AND NEURALGIA. C. B. ROBINSON CHEMICAL CO., Los Angeles, Cal.
Filed April 14, 1914. Serial No. 77,480. PUBLISHED JUNE 16, 1914.

99,173. PAPER OR FIBER BASKETS. ROCHESTER CARRIER CO., Rochester, N. Y.
Filed March 2, 1914. Serial No. 76,294. PUBLISHED JUNE 16, 1914.

99,174. CERTAIN NAMED PIECE GOODS. ROGERS & THOMPSON, INC., New York, N. Y.
Filed May 16, 1914. Serial No. 78,336. PUBLISHED JUNE 16, 1914.

99,175. CERTAIN NAMED PIECE GOODS. ROGERS & THOMPSON, INC., New York, N. Y.
Filed May 19, 1914. Serial No. 78,396. PUBLISHED JUNE 16, 1914.

99,176. CERTAIN NAMED PIECE GOODS. ROGERS & THOMPSON, INC., New York, N. Y.
Filed May 20, 1914. Serial No. 78,425. PUBLISHED JUNE 16, 1914.

99,177. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed April 23, 1914. Serial No. 77,706. PUBLISHED JUNE 16, 1914.

99,178. FERTILIZERS. F. S. ROYSTER GUANO CO., Norfolk, Va.
Filed May 7, 1914. Serial No. 78,098. PUBLISHED JUNE 16, 1914.

99,179. CERAMIC COLORS. THE SCHMIDT CERAMIC CHEMICAL COMPANY, Chicago, Ill.
Filed April 27, 1914. Serial No. 77,812. PUBLISHED JUNE 16, 1914.

99,180. PREPARATION FOR THE TREATMENT OF RHEUMATISM. SHANGO REMEDY CO., Laurium, Mich.
Filed July 10, 1913. Serial No. 71,643. PUBLISHED JUNE 16, 1914.

99,181. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. GEBRÜDER SIEMENS & COMPANY, Berlin-Lichtenberg, Germany.
Filed December 5, 1913. Serial No. 74,402. PUBLISHED JUNE 16, 1914.

99,182. PREPARATIONS FOR THE TREATMENT OF THE SCALP AND HAIR. THE SLAUGHTER SYSTEM, St. Louis, Mo.
Filed April 9, 1914 Serial No. 77,357. PUBLISHED JUNE 16, 1914.

99,183. ENAMELS, READY-MIXED PAINTS, VARNISHES, VARNISH-REMOVERS. STANDARD VARNISH WORKS, New York and Port Richmond, N. Y.
Filed June 19, 1912. Serial No. 64,274. PUBLISHED JUNE 16, 1914.

99,184. BRAKE-LININGS AND CLUTCH-FACINGS. STANDARD WOVEN FABRIC COMPANY, Worcester, Mass.
Filed March 31, 1913. Serial No. 69,479. PUBLISHED JULY 22, 1913.

99,185. POLISH USED ON FURNITURE AND OTHER WOODWORK. FRANKLIN H. STEERE, Providence, R. I.
Filed March 2, 1914. Serial No. 76,295. PUBLISHED JUNE 16, 1914.

99,186. EVAPORATORS, PANS, AND BUCKET-COVERS. TRUE & BLANCHARD CO., Newport, Vt.
Filed March 12, 1910. Serial No. 48,370. PUBLISHED JUNE 16, 1914.

99,187. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET USE. CLARENCE F. YOUNG, Chicago, Ill.
Filed April 4, 1914. Serial No. 77,226. PUBLISHED JUNE 16, 1914.

TRADE-MARK REGISTRATIONS RENEWED.

11,433. FINISHED LEATHER USED FOR ROLLERS, UPHOLSTERY, BOOKBINDING, SHOES, AND FOR OTHER PURPOSES AND SKINS IN CURED AND RAW CONDITION. JONES & ROCKE, Wrexham, Wales, (J. Meredith-Jones & Sons, Limited, assignee.)
Registered August 19, 1884. Renewed August 19, 1914.

11,434. FINISHED LEATHER USED FOR ROLLERS, UPHOLSTERY, BOOKBINDING, SHOES, AND FOR OTHER PURPOSES, ALSO FOR SKINS IN CURED AND RAW CONDITION. JONES & ROCKE, Wrexham, Wales, (J. Meredith-Jones & Sons, Limited, assignee.)
Registered August 19, 1884. Renewed August 19, 1914.

LABELS

REGISTERED AUGUST 18, 1914.

17,900.—*Title:* "SPAR-ITE." (For Varnish.) ADAMS & ELTING COMPANY, Chicago, Ill. Filed July 2, 1914.

17,901.—*Title:* "ARBEITER'S VERMINDEATH." (For Vermin-Destroyer.) PETER J. ARBEITER, New York, N. Y. Filed March 23, 1914.

17,902.—*Title:* "B & H." (For Cigars.) BERNINGER & HENRY, Allentown, Pa. Filed July 28, 1914.

17,903.—*Title:* "O-CEDAR POLISH MOP." (For Mops.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed July 18, 1914.

17,904.—*Title:* "A. H. COLLER LILIEN GESICHT-SALBE." (For Face-Pomade.) ADOLPH H. COLLER, New York, N. Y. Filed May 12, 1914.

17,905.—*Title:* "EISEMANN'S KLONDIKE HEAD RUB GRAIN ALCOHOL 50 PER CENT. MOST DELIGHTFUL; COOLING AND INVIGORATING. ALLAYS ITCHING OF THE SCALP AND RELIEVES HEADACHES." (For Head-Rub.) PHIL. EISEMANN, Lancaster, Pa. Filed April 24, 1914.

17,906.—*Title:* "ENGINE FOOD." (For a Preparation for Mixing with Gasolene to Increase the Explosive Nature Thereof.) J. C. ENGINE FOOD CO., Chicago, Ill. Filed July 17, 1913.

17,907.—*Title:* "BOBS." (For Candy-Coated Chewing-Gum.) FRANK H. FLEER CORPORATION, Philadelphia, Pa. Filed July 30, 1914.

17,908.—*Title:* "SPRING-ROOT." (For Candy-Coated Chewing-Gum.) FRANK H. FLEER CORPORATION, Philadelphia, Pa. Filed July 30, 1914.

17,909.—*Title:* "18 KARAT FLOOR VARNISH." (For Varnish.) CHAS. GOLDSCHMITT, Chicago, Ill. Filed May 21, 1914.

17,910.—*Title:* "HOFMUNTER." (For Beer.) GUTSCH BREWING CO., Sheboygan, Wis. Filed July 20, 1914.

17,911.—*Title:* "RED LION." (For Beer.) GUTSCH BREWING CO., Sheboygan, Wis. Filed July 20, 1914.

17,912.—*Title:* "PROF. ERNST HAECKEL." (For Cigars.) A. C. HENSCHEL & CO., Chicago, Ill. Filed July 30, 1914.

17,913.—*Title:* "CONSUMERS BOND." (For Cigars.) A. C. HENSCHEL & CO., Chicago, Ill. Filed August 1, 1914.

17,914.—*Title:* "MAGIC BALM." (For a Medicinal Preparation.) SAM'L J. KEYES, Easton, Pa. Filed July 2, 1914.

17,915.—*Title:* "SUN FLOWER." (For Cigars.) KRAUS & CO., Baltimore, Md. Filed July 24, 1914.

17,916.—*Title:* "GLORIOUSLY GOOD." (For Cigars.) KRAUS & CO., Baltimore, Md. Filed July 24, 1914.

17,917.—*Title:* "SIX DAYS." (For Cigars.) KRAUS & CO., Baltimore, Md. Filed July 24, 1914.

17,918.—*Title:* "THE PEREGOY & MOORE CO. PERFECTOS." (For Cigars.) KRAUS & CO., Baltimore, Md. Filed July 24, 1914.

17,919.—*Title:* "RED LABEL S. S. S." (For Cigars.) KRAUS & CO., Baltimore, Md. Filed July 24, 1914.

17,920.—*Title:* "LEWIS-IDEAL." (For Cigars.) F. P. LEWIS CIGAR CO., Peoria, Ill. Filed July 28, 1914.

17,921.—*Title:* "LANZON." (For Cigars.) JOSE LLANZA COMPANY, Chicago, Ill. Filed July 11, 1914.

17,922.—*Title:* "DELICIOUS SAPPHIRE OATS." (For Oats.) MONTANA FLOUR MILLS COMPANY, Lewiston, Mont. Filed July 27, 1914.

17,923.—*Title:* "IT'S THE OATS." (For Rolled Oats.) MONTANA FLOUR MILLS COMPANY, Lewiston, Mont. Filed July 27, 1914.

17,924.—*Title:* "IRISH LACE." (For Whisky.) THOMAS E. POLLARD, Pittsburgh, Pa. Filed July 27, 1914.

17,925.—*Title:* "PURE RELIANCE BAKING POWDER." (For Baking-Powder.) RELIANCE MANUFACTURING COMPANY, Rock Stream, N. Y. Filed July 29, 1914.

17,926.—*Title:* "JAEGER BRÄU." (For Beer.) RUFF BREWING CO., Quincy, Ill. Filed July 20, 1914.

17,927.—*Title:* "SAGINAW CREAMERY CO. DAIRY PRODUCTS." (For Butter.) SAGINAW CREAMERY COMPANY, Saginaw, Mich. Filed July 29, 1914.

17,928.—*Title:* "U. S. TIRELESS SPINNER TOP." (For Tops.) SCHMIDT BROS., MACHINE WORKS, INC., New York, N. Y. Filed July 25, 1914.

17,929.—*Title:* "IT HAS THE OLD STYLE SWEETNESS." (For Meal.) SHANNON & MOTT COMPANY, Des Moines, Iowa. Filed June 10, 1914.

17,930.—*Title:* "TAYLOR'S BEST BLOOD MEDICINE." (For Medicine.) MILTON M. TAYLOR, Tampa, Fla. Filed June 22, 1914.

17,931.—*Title:* "'AMERICAN BEAUTIES' FAVORITE FACE CREAM." (For Face-Cream.) THE AUGUST COMPANY, New York, N. Y. Filed July 17, 1914.

17,932.—*Title:* "DELAWARE PUNCH." (For a Drink.) THE PIONEER VINEGAR WORKS, San Antonio, Tex. Filed June 25, 1914.

17,933.—*Title:* "DOUBLE SHIELD." (For Paints.) THE UNITED PAINT CO., Bridgeport, Conn. Filed June 17, 1914.

PRINTS

REGISTERED AUGUST 18, 1914.

3,693.—*Title:* "ARBUCKLE BRAND TEAS." (For Teas.) ARBUCKLE BROTHERS, New York, N. Y., and Chicago, Ill. Filed July 10, 1914.

3,694.—*Title:* "CENTRALENE OILS 'POWER IN EVERY DROP.'" (For Oils.) CENTRALENE OIL COMPANY, Galesburg, Ill. Filed January 4, 1912.

3,695.—*Title:* "'STANDISH' THE NEW ARROW COLLAR." (For Collars.) CLUETT, PEABODY & Co. INC., Troy, N. Y. Filed May 27, 1914.

3,696.—*Title:* "ARROW SILK SHIRTS." (For Arrow Silk Shirts.) CLUETT, PEABODY & Co. INC., Troy, N. Y. Filed May 27, 1914.

3,697.—*Title:* "NO, SAH! AH DON'T WANT NO 'STUBSTUTE.' AH WANT CREAM O' WHEAT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed August 1, 1914.

3,698.—*Title:* "WITCHAL." (For Witch-Hazel.) E. E. DICKINSON, Essex, Conn. Filed July 20, 1914.

3,699.—*Title:* "INNER STRAP." (For Mattresses.) DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill. Filed July 6, 1914.

3,700.—*Title:* "JUMBO A BIG MATTRESS FOR A LITTLE MONEY." (For Mattresses.) DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill. Filed July 6, 1914.

3,701.—*Title:* "PIPPINS." (For Cigars.) LOUIS ETTLINGER, New York, N. Y. Filed July 8, 1914.

3,702.—*Title:* "BOBS." (For Candy-Coated Chewing-Gum.) FRANK H. FLEER CORPORATION, Philadelphia, Pa. Filed July 30, 1914.

3,703.—*Title:* "GOTHAM TANGO GIRDLE." (For Girdles.) GOTHAM GARTER AND NOVELTY COMPANY, New York, N. Y. Filed June 25, 1914.

3,704.—*Title:* "LOAD-BEARING TILE." (For Load-Bearing Tile.) MASON CITY BRICK AND TILE COMPANY, Mason City, Iowa. Filed June 1, 1914.

3,705.—*Title:* "SHE'S SOLVED HER TROUBLES FOR HEELS AND TOES." (For Ladies' Hosiery.) SOLOMON S. MILLER, Reading, Pa. Filed July 13, 1914.

3,706.—*Title:* "OUR LIGHTS SHINE EVERYWHERE." (For Lighting-Fixtures.) THE C. J. NETTING CO., Detroit, Mich. Filed July 13, 1914.

3,707.—*Title:* "THE BULGE PROTECTS THE EDGE." (For Drinking-Glasses.) ALBERT PICK & COMPANY, Chicago, Ill. Filed April 18, 1914.

3,708.—*Title:* "OH, MAN! GET THIS RIGHT AND SIT IN." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,709.—*Title:* "P. A. JUST TICKLES US ALL!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,710.—*Title:* "WATCH YOUR STEP!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,711.—*Title:* "WHEN WE PUT IT UP TO GEORGE." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,712.—*Title:* "P. A. IS A DOUBLE HEADER!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,713.—*Title:* "P. A. SURE DOES SET THE CLIP." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

3,714.—*Title:* "BOOST SOME JOY SMOKE INTO YOUR SYSTEM!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed August 1, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

STEEL AND STEEL *v.* MYERS.

Decided July 22, 1914.

1. INTERFERENCE—PROOF OF FOREIGN APPLICATIONS.

If an applicant who is involved in interference has stated in the oath to his original application that he filed the application in a foreign country, that should be taken, in my opinion, as establishing *prima facie* that the foreign application was filed by him or with his knowledge and consent. If, however, the original oath does not state that the foreign application had been filed, but the allegation is made in a subsequent oath or in the preliminary statement, the applicant should, in view of conflicting affidavits, be given the benefit of the filing of the foreign application only upon a stipulation of the parties or where it is established by duly taken testimony that he was in fact the party who filed the foreign application or that it was filed with his knowledge and consent.

2. SAME—SAME—BENEFIT OF FOREIGN APPLICATION.

The Examiner of Interferences upon the filing of a proper motion, accompanied by a certified copy of the foreign application, shall in cases falling within the above ruling give the party filing the same the benefit of the foreign application if in his opinion the invention in issue is disclosed therein.

ON REFERENCE.

BLOWPIPE OUTFIT.

Messrs. Wilkinson, Fisher, Witherspoon & Mackaye and *Messrs. Wilkinson, Giusta & Mackaye* for Steel and Steel.

Mr. E. G. Siggers for Myers.

EWING, *Commissioner:*

The Examiner of Interferences has referred this case, with a request for instructions as to the practice to be followed in fixing the burden of proof where the benefit of a foreign application is claimed by one or more of the parties under the provisions of section 4887 of the Revised Statutes.

It appears that it has been the practice to disregard the foreign application in fixing the burden of proof and to require the applicant, in order to obtain the benefit of such foreign application, to establish either by testimony or by stipulation that he is the same person that filed the foreign application, and, if such foreign application was filed in the name of another, that it was done with his knowledge and consent.

The Examiner of Interferences points out that this practice occasions considerable cost and delay, since if the parties will not stipulate these facts it is necessary, if the applicant resides in a foreign country, to take testimony abroad, which requires the filing of interrogatories and a deposit with the State Department and the suspension of the taking of testimony in this country. It does not appear that in any case it has been established that an applicant was not entitled to the benefit of the foreign application as claimed if, as a matter of fact, it disclosed the invention. This latter question is one which is determined not by the testimony but by a comparison of a certified copy of the original application with the application in the interference.

In the case of *Raulet and Nicholson* v. *Adams* (114 O. G., 1827) the Primary Examiner had shifted the burden of proof in view of the fact that the filing date of the foreign application referred to in Adams's oath was prior to the filing of Raulet and Nicholson's United States application. The Commissioner held that this was not a question to be considered by the Primary Examiner and remanded the case to the Examiner of Interferences. The record of that case shows that Adams was made the junior party, but was given the benefit of his foreign filing date in view of his testimony and that of his attorney that he was the same Daniel B. Adams who filed the foreign application.

This question was raised in the cases of *Greenbaum* v. *Barker and Jeapes* (98 MS. Dec., 425) and *Braun* v. *Wahl*, (189 O. G., 254). In the former case it was held that it would be necessary for the applicant to establish by proper proof that he was entitled to the benefit of the filing of his foreign application, which had been filed by his assignee. In the latter case the Examiner of Interferences had refused to shift the burden of proof, and a petition from that action was dismissed on the ground that no appeal lay from such a decision of the Examiner of Interferences and that the question could be raised at final hearing.

Section 4887 of the Revised Statutes reads in part as follows:

An application for patent for an invention or discovery or for a design filed in this country by any person who has previously regularly filed an application for a patent for the same invention, discovery, or design in a foreign country which, by treaty, convention, or law, affords similar privileges to citizens of the United States shall have the same force and effect as the same application would have if filed in this country on the date on which

the application for patent for the same invention, discovery, or design was first filed in such foreign country, provided the application in this country is filed within twelve months in cases within the provisions of section forty-eight hundred and eighty-six of the Revised Statutes, and within four months in cases of designs, from the earliest date on which any such foreign application was filed.

Article 4 of the International Convention for the Protection of Industrial Property, as revised at Washington June 2, 1911, with relation to the rights of priority in the contracting countries, reads in part as follows:

(*d*) Whoever shall wish to avail himself of the priority of an anterior filing, shall be required to make a declaration showing the date and the country of this filing. Each country shall determine at what moment, at the latest, this declaration must be executed. This information shall be mentioned in the publications issued by the competent Administration, particularly on patents and the specifications relative thereto. The contracting countries shall require of one who makes a declaration of priority the production of a copy of the application (specification, drawings, etc.) previously filed, certified to be a true copy by the Administration which shall have received it. This copy shall be dispensed from any legalization. It may be required that it be accompanied by a certificate of the date of filing, issuing from this Administration, and of a translation. Other formalities shall not be required for the declaration of priority at the time of the filing of the application. Each contracting country shall determine the consequences of the omission of the formalities prescribed by the present article, unless these consequences exceed the loss of the right of priority.

(*e*) Later other justifications can be demanded.

If an applicant who is involved in interference has stated in the oath to his original application that he filed the application in a foreign country, that should be taken, in my opinion, as establishing *prima facie* that the foreign application was filed by him or with his knowledge and consent. If, however, the original oath does not state that the foreign application had been filed, but the allegation is made in a subsequent oath or in the preliminary statement, the applicant should, in view of conflicting affidavits, be given the benefit of the filing of the foreign application only upon a stipulation of the parties or where it is established by duly taken testimony that he was in fact the party who filed the foreign application or that it was filed with his knowledge and consent.

The question whether an interferant is entitled to the benefit of his foreign application should be raised before the Examiner of Interferences rather than before the Primary Examiner, since it is one of evidence, as stated in *Raulet and Nicholson* v. *Adams*, *supra*, and at the time the interference is declared copies of the foreign application are not usually on file.

The Primary Examiner should therefore prepare the notices of interference in accordance with the date of filing of the applications in this country; but the Examiner of Interferences upon the filing of a proper motion, accompanied by a certified copy of the foreign application, shall in cases falling within the above ruling give the party filing the same the benefit of the foreign application if in his opinion the invention in issue is disclosed therein.

ADJUDICATED PATENTS.

(U. S. D. C.) The Barnett patent, No. 529,847, for a die for making lock-washers, *Held* void for lack of patentable invention. *Positive Lock Washer Co.* v. *Reliance Mfg. Co.*, 214 Fed. Rep., 134.

(U. S. C. C. A.) The Sachs patent, No. 660,341, for a safety-fuse, *Held* valid and infringed. *Johns-Pratt Co.* v. *Snow*, 214 Fed. Rep., 110.

(U. S. C. C. A.) A verdict finding the Nielsen patent, No. 777,441, for a horn for phonographs or similar machines, valid and infringed, *Held* supported by the evidence. *Sherman-Clay & Co.* v. *Searchlight Horn Co.*, 214 Fed. Rep., 86.

(U. S. C. C. A.) The Sulman, Picard, and Ballot patent, No. 836,120, for a process of ore concentration, *Held* void for lack of patentable invention in view of the prior art. *Hyde* v. *Minerals Separation*, 214 Fed. Rep., 100.

(U. S. D. C.) The Rembusch patent, No. 937,550, for a screen for use in exhibiting moving pictures or stereopticon-views, *Held* valid and infringed. *Rembusch* v. *Bennethum*, 214 Fed. Rep., 257.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 15, 1914.

William Seeger, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene G. Gassaway, Fort Worth, Tex., for registration of a trade-mark and trade-mark registered November 10, 1908, No. 71,263, to William Seeger, 3515 Dodier street, St. Louis, Mo., and a notice of such declaration sent by registered mail to said William Seeger at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Seeger, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

The notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 28, 1914.

Joseph Shattuck, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Pepsinaid Company, Lexington, Ky., for registration of a trade-mark and trade-mark registered November 24, 1896, No. 29,195, to Joseph Shattuck, Nashua, N. H., and a notice of such declaration sent by registered mail to said Joseph Shattuck at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Joseph Shattuck, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 205—No. 4. TUESDAY, AUGUST 25, 1914. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 25, 1914	1023
CHANGES IN CLASSIFICATION	1023
PUBLISHERS' CATALOGUES	1023
BRIEFS IN APPEALED CASES	1024
APPLICATIONS UNDER EXAMINATION	1025
PATENTS GRANTED	1288
REISSUES	1292
DESIGNS	1297
TRADE-MARKS—REGISTRATION APPLIED FOR	1315
TRADE-MARK REGISTRATIONS GRANTED	None.
LABELS AND PRINTS	
DECISIONS OF THE U. S. COURTS—	
Wm. B. Scaife & Sons Co. *v.* Falls City Woolen Mills	1323
INTERFERENCE NOTICES	1327

ISSUE OF AUGUST 25, 1914.

Patents	760—No.	1,108,114 to No. 1,108,873, inclusive.
Designs	24—No.	46,306 to No. 46,329, inclusive.
Trade-Marks	225—No.	99,188 to No. 99,412, inclusive.
Labels	None.	
Prints	None.	
Reissues	3—No.	13,790 to No. 13,792, inclusive.
Total	1012	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	3	North Carolina	4	1
Arizona			North Dakota	4	
Arkansas			Ohio	43	11
California	31	12	Oklahoma	6	
Colorado	10	1	Oregon	9	1
Connecticut	28	2	Pennsylvania	53	18
Delaware	1	1	Rhode Island	8	4
Florida	2	1	South Carolina	1	
Georgia	5	3	South Dakota	3	
Idaho	1		Tennessee	6	5
Illinois	63	29	Texas	11	3
Indiana	22	1	Utah	3	
Iowa	6	3	Vermont	3	
Kansas	10	1	Virginia	7	1
Kentucky	2	1	Washington	11	4
Louisiana	4	1	West Virginia	5	1
Maine	1	4	Wisconsin	22	4
Maryland	8	1	Wyoming		
Massachusetts	50	6			
Michigan	38	3	Alaska, District of		
Minnesota	16	5	Canal Zone		
Mississippi	2	1	District of Columbia	5	2
Missouri	25	17	Hawaii Territory	1	5
Montana	1		Philippine Islands		
Nebraska	8		Porto Rico		
Nevada			U. S. Army		
New Hampshire	1		U. S. Navy	4	
New Jersey	41	8			
New Mexico			Total to residents of the United States	679	199
New York	110	35			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina			Mexico		
Austria-Hungary	2	1	Netherlands	2	2
Belgium	2		New South Wales	3	
British India			New Zealand	1	
Brazil			Nicaragua	1	
British West Indies			Norway		
Canada	15		Portugal	1	
Chile			Portuguese East Africa		
China			Russia	1	
Costa Rica			Scotland	1	
Cuba	1		Sweden	1	
Denmark	1		Switzerland	2	
Dominican Republic			Transvaal, South Africa		
England	15	9	Uruguay		
France	3	4	Victoria		
Germany	27	7	Western Australia		
Guatemala					
Ireland					
Italy	2	1	Total to residents of foreign countries	81	24
Java					
Luxemburg					

Changes in Classification.

(ORDER NO. 2,145.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 9, 1914.

Class 167, Medicines, is hereby transferred from Division VI to Division II.

J. T. NEWTON,
Acting Commissioner of Patents.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 22, 1914.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 6	June 22	542
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 3	June 20	657
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	July 30	Aug. 17	97
232	4. Bridges; Conveyers; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures; Railway Mail Delivery; Traversing Hoists.	Mar 2	July 27	694
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 29	July 9	441
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Medicines; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Apr. 14	July 10	584
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	May 15	June 22	598
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 25	July 15	1248
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	June 1	632
235	10. Carriages and Wagons.....	Apr. 2	June 24	1040
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 6	July 27	250
322	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 26	May 7	1185
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 5	July 6	457
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 4	July 23	421
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 26	July 8	937
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Mar. 2	June 8	75
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 10	July 25	22
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 7	July 16	224
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	June 5	July 9	338

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 11	July 3	422
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 20	June 30	440
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	June 10	July 1	237
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 11	June 30	487
144	24. Apparel; Apparel Apparatus; Sewing Machines.	Apr. 20	July 15	609
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	July 16	July 16	246
106	26. Electricity, Generation; Motive Power.	Nov. 20	June 1	943
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing, Apparatus.	June 25	June 29	497
60	28. Internal Combustion Engines....	Apr. 17	June 23	634
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	June 25	July 1	436
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	June 6	July 15	398
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	May 22	June 11	407
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 20	July 1	710
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 14	July 18	381
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 11	June 16	344
87	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 24	July 21	590
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 15	June 20	808
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 21	June 24	765
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Mar. 3	July 13	810
321	39. Water Distribution.....	Apr. 20	June 23	534
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	July 29	1085
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	July 8	July 13	456
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Apr. 14	June 26	406
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 17	July 22	272

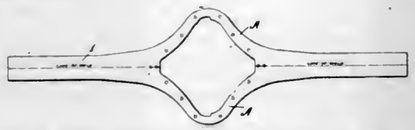
Oldest new case, Nov. 20; oldest amended, May 7
Total number of applications awaiting action.. 24,238

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	June 15	July 23	1009
	Designs.....	July 17	July 30	245
	Labels and Prints.....	Aug. 4	Aug. 3	101

PATENTS

GRANTED AUGUST 25, 1914.

1,108,114. AXLE. HERBERT W. ALDEN, Detroit, Mich., assignor to The Timken Detroit Axle Company, Detroit, Mich., a Corporation of Ohio. Filed Mar. 31, 1910. Serial No. 552,547. (Cl. 21—5.)

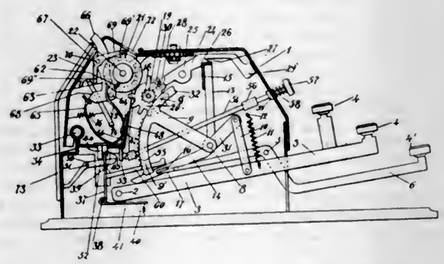


1. A pressed steel tubular axle comprising duplicate channeled top and bottom half-sections whose middle portions are bowed apart in a vertical plane, and the meeting edge portions of said top and bottom half-sections being welded together along lines substantially in a horizontal plane or the neutral axis of the axle and extending from the bowed middle portion to the ends of said half-sections.

2. A pressed steel tubular axle comprising channeled top and bottom half-sections whose middle portions are substantially right angular in cross section and bowed apart in a vertical plane, and the outer portions of said half-sections on each side of the middle portions thereof being substantially semi-circular in cross section and the meeting edges thereof being welded together on lines adjacent to a horizontal plane or the neutral axis of the axle.

3. A tubular axle comprising a pressed steel main member, and a tubular spindle member having its inner end portion sleeved over the end portion of said main member and having its outer portion drawn to a reduced diameter and arranged externally to receive the bearings of the wheel hub, and a brake spider sleeved on the inner end portion of said spindle member.

1,108,115. ADDING-MACHINE. LOUIS BABINI, Brooklyn, N. Y., assignor to American Adding Machine Corporation, a Corporation of New York. Filed July 14, 1911. Serial No. 638,595. (Cl. 235—59.)



1. The combination of a plurality of adding wheels, a carriage carrying the same, a geared longitudinally extending element, a toothed wheel having a portion of its teeth removed mounted on the same, and means for revolving said longitudinally extending element at different angles.

2. The combination of a plurality of geared adding wheels, a carriage carrying the same, elements of a smaller diameter leaving a free gap between adjacent wheels, a rack controlling the motion of said carriage, a longitudinally extending element, a toothed wheel mounted on the same adapted to come in mesh with said adding wheels, geared means for revolving said longitudinally extending element at different angles, finger-keys controlling the same, and means for causing said rack to disengage said carriage allowing the same to move for a portion of its stroke upon the pressing of said finger-keys, and for causing said rack to return to its former position permitting the completion of the stroke of said carriage upon the releasing of said finger-keys.

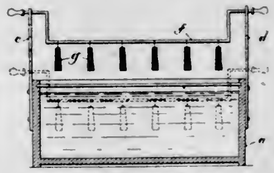
3. The combination of a plurality of geared adding wheels, a carriage carrying the same, elements of a smaller diameter separating adjacent wheels, a rack controlling the motion of said carriage, a toothed wheel adapted to come in mesh with said adding wheels, a rocking element controlling the motion of said rack, means for locking said rocking element in two different positions, and finger-key operated means for governing said toothed wheel and said rocking element.

4. The combination of a plurality of geared adding wheels, a carriage carrying the same, elements of a smaller diameter separating adjacent wheels leaving a free gap between the same, a rack controlling the motion of said carriage, a toothed wheel from which a portion of its teeth has been removed adapted to come in mesh with said adding wheels, geared means for revolving said toothed wheel and means for operating the same and for operating said rack, causing a two-step escapement of said carriage.

5. The combination of a plurality of geared adding wheels, a carriage carrying the same, elements of a smaller diameter separating adjacent wheels, a rack controlling the motion of said carriage, a longitudinally extending element, a toothed wheel from which a portion of its teeth has been removed mounted on the same, a plurality of geared segments capable of revolving said longitudinally extending element at different angles, levers controlling said segments, a rocking element controlling the motion of said rack operated by said segments and levers, and means for locking said rocking element at different points.

[Claims 6 to 28 not printed in the Gazette.]

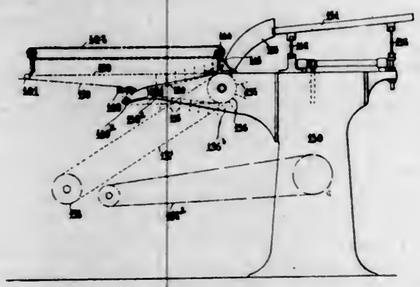
1,108,116. PROCESS FOR IMPREGNATING THE FILAMENTS AND MANTLES USED IN INCANDESCENT GAS-LIGHTING. GREGOIRE BAGRACHOW, Paris, France. Filed July 13, 1911. Serial No. 638,301. (Cl. 67—100.)



1. Improved process for coating with an incandescence layer woven mantles composed of metallic wire of thickness not materially exceeding three hundredths of a millimeter which consists in preparing a bath of the rare earths in a combustible liquid, igniting the said bath, dipping the woven wire mantle in said bath and withdrawing it from the flaming bath in a heated state.

2. Improved process for coating with an incandescence layer woven mantles composed of metallic wire of thickness not materially exceeding three hundredths of a millimeter which consists in preparing a bath of the rare earths in a combustible liquid, igniting the said bath, dipping the woven wire mantle in said bath and withdrawing it from the flaming bath in a heated state and completing the drying and calcining over a flame.

1,108,117. MACHINE FOR STACKING, WEIGHING, AND FEEDING BISCUITS. GEORGE SAMUEL BAKER, London, England. Filed June 6, 1913. Serial No. 772,144. (Cl. 214—1.)



1. In a biscuit machine, the combination of mechanism for automatically stacking biscuits, mechanism for weighing same, means for transferring stacked biscuits from the stacking mechanism to the weighing mechanism, a feeding device, and means for transferring weighed biscuits from the weighing mechanism to said feeding device.

2. In a biscuit machine, the combination of mechanism for automatically stacking biscuits, mechanism for weighing same including a balance, means for transferring stacked biscuits from the stacking mechanism to said balance, electrically controlled mechanism including a clutch controlled by the balance to positively stop the machine if a predetermined weight of biscuits is not transferred to the weighing mechanism, a feeding device and means for automatically discharging the biscuits from said balance to the feeding device.

3. In a biscuit machine, the combination of mechanism for feeding biscuits, mechanism for weighing the biscuits, and means for transferring weighed biscuits to the feeding mechanism, of mechanism for stacking the biscuits and feeding same to the weighing mechanism, said stacking mechanism comprising an oscillating tray, a chute into which the biscuits are deposited from said tray, an endless pronged traveling band receiving the biscuits from said chute, an endless feed belt at each side of said pronged belt, and an endless traveling brush coacting with said pronged belt to maintain the biscuits in a vertical position on said feed belts.

4. In a biscuit machine, the combination of an oscillating tray, a chute into which the biscuits are deposited from said tray, an endless pronged traveling band receiving the biscuits from said chute, an endless feed belt at each side of said pronged belt, means for maintaining the biscuits in a vertical position on said feed belts, a balance adjacent said feed belts, and means for forcing the biscuits off said belt onto said balance.

5. In a biscuit machine, the combination of an oscillating tray, a chute into which the biscuits are deposited from said tray, an endless pronged traveling band receiving the biscuits from said chute, an endless feed belt at each side of said pronged belt, means for maintaining the biscuits in a vertical position on said feed belts, a balance adjacent said feed belts, means for forcing the biscuits off said belt onto said balance, and mechanism controlled by said balance to stop the machine if insufficient biscuits are fed to said balance.

[Claims 6 to 8 not printed in the Gazette.]

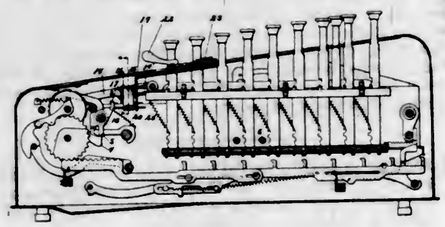
1,108,118. ACTUATING DEVICE FOR KEY-SET CALCULATING-MACHINES. GLENN J. BARRETT, Grand Rapids, Mich., assignor, by mesne assignments, to Barrett Adding Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 15, 1911. Serial No. 644,081. (Cl. 235—60.)



1. In an adding machine of the class described, the combination with a dial actuating means, a dial resetting means, a plurality of keys controlling said dial actuating means, operating means, means for holding said keys depressed, releasing members for said keys, a suitably journaled rock shaft, a rod secured to crank arms fixed on said rock shaft and engaging the key releasing members, means connected to said operating means for rocking said shaft, a crank arm on said shaft and a key stem secured to said crank arm whereby said shaft may be independently rocked, all coacting substantially as described for the purpose specified.

2. In an adding machine of the class described, the combination with operating means, dial actuating means, a dial resetting means, a plurality of keys controlling said dial actuating means, means for holding said keys depressed, releasing members for said keys, a rock shaft suitably journaled, a rod secured to crank arms fixed on said rock shaft and engaging the key releasing members, means connected with the operating means for rocking said shaft, and means directly connected to said operating shaft for independently operating the same, all coacting substantially as described for the purpose specified.

1,108,119. ITEM-COUNTER FOR CALCULATING-MACHINES. GLENN J. BARRETT, Grand Rapids, Mich., assignor to Barrett Adding Machine Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 14, 1912. Serial No. 725,592. (Cl. 235—60.)



1. In a calculating machine having handle operating mechanism, dial mechanism with transfer devices, the combination of movable transfer stops; dial actuating reciprocating members normally arrested by said stops, a lever pivotally mounted adjacent to one of said movable transfer stops; contact connection between said lever and said handle operating mechanism; a spring for returning said lever to normal position; a sliding, tripping member carried by one end of said lever adapted to slide in and out of contact relation with said movable transfer stop; a switching member adapted to contact with said sliding tripping member; a finger piece on the keyboard of said adding machine and suitable connections between said finger piece and said switching member, substantially as described.

2. In a calculating machine having a key board and handle operating mechanism, and dial mechanism with transfer devices, the combination of movable transfer stops; dial actuating reciprocating members normally arrested by said stops; a lever pivotally mounted in said calculating machine; connections between said lever and said handle operating mechanism; a movable tripping member carried by one extremity of said lever, and adapted to move in and out of operative relation to said movable transfer stop; a switching member connected to said movable tripping member; a finger piece on the keyboard of said adding machine and suitable connections between said finger piece and said switching member, substantially as described.

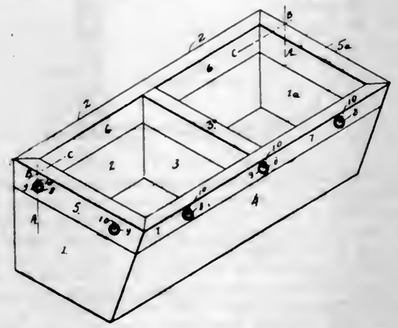
3. In a calculating machine having a key board and handle operating mechanism, the combination of movable transfer stops; dial actuating reciprocating members normally arrested by said stops; a lever pivotally mounted in said calculating machine; connections between said lever and said handle operating mechanism; a movable tripping member carried by said lever normally out of operative position with reference to said movable transfer stops; and means connected to the keyboard of said calculating machine for throwing said tripping member into operative position with reference to one of said movable stops, substantially as described.

4. In a calculating machine having handle operating means and dial mechanism with transfer means, the combination of movable transfer stops; dial actuating reciprocating members normally arrested by said stops; a movable member normally out of engaging relation with said transfer stops; actuating connection between said movable member and said handle operating means; and means connected to the keyboard of said calculating machine for throwing said movable member into engaging relation with one of said transfer stops, substantially as described.

5. In a calculating machine having handle operating means and dial mechanism with movable transfer stops; a reciprocating member actuated by said handle operating means; tripping means carried by said reciprocating member adapted to be moved into and out of engaging relation with one of said transfer stops; and a suitable finger piece for moving said tripping means, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,108,120. LAUNDRY TUB OR TRAY. MORRIS BATTER, New Haven, Conn. Filed Mar. 24, 1913. Serial No. 756,499. (Cl. 68—31.)

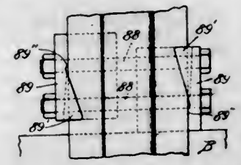


1. A laundry tub or tray comprising a body of cement and a metallic rim or casing, having embossed in said casing sockets adapted to support suitable curtain suspending means.

2. A laundry tub or tray comprising a body of cement and a metallic ring or casing, and having embossed in said casing sockets and alcoves, said sockets being adapted to support curtain-suspending means, and said alcoves being adapted to house the said sockets.

1,108,121. RAIL-ANCHOR. BENJAMIN B. BETTS, St. Louis, Mo. Filed Jan. 25, 1909. Serial No. 474,144. (Cl. 238—4.)

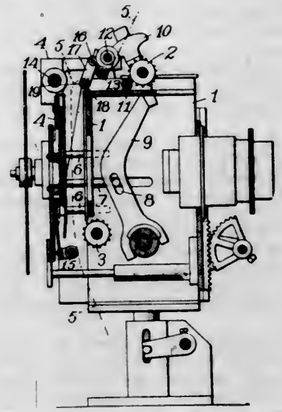
1. A Z-rail anchor of the character described comprising two separate, substantially-similar oppositely disposed jaws, said jaws being formed to grip the upper and lower surfaces of the rail base, but not to contact with the edges thereof, a bolt passing through said jaws to draw the same together, and a tie engaging abutment projecting laterally from each of said jaws and extending beyond the other of said jaws to permit the movement of the latter jaw toward the tie and thereby effect the rotative wedging action of said jaws on the rail base, substantially as described.



2. A rail anchor comprising opposed jaws for engaging the base flange of the rail, and parallel motion bolts connecting said jaws, substantially as described.

3. A rail anchor comprising opposed jaws for engaging the opposite flanges of the rail base, and parallel motion bolts connecting said jaws, and tie engaging abutments extending laterally in opposite directions from the jaws at the opposite ends of said parallel motion bolts, substantially as described.

1,108,122. KINETOSCOPE. THOMAS H. BLAIR, Northboro, Mass., assignor to Whiting Manufacturing Company, Northboro, Mass., a Corporation of Massachusetts. Filed Nov. 4, 1911. Serial No. 658,490. (Cl. 88—18.)



1. In an apparatus of the class described, a stationary casing, a movable frame, mechanism for moving a film through the machine, part of said mechanism being supported by said casing and part by said movable frame, and means for forming a loop in the film actuated by the movement of said movable frame.

2. In an apparatus of the class described, mechanism for moving a film through the machine, a fixed support for part of said mechanism and a movable support for a part of said mechanism, a swinging member for forming a loop in the film, and means for actuating said swinging member by the movement of said movable support.

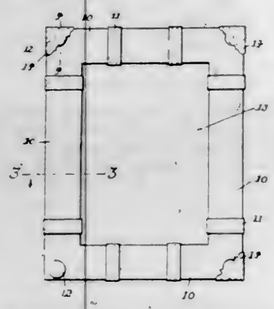
3. In an apparatus of the class described, a movable frame, a swinging member carried by said frame and extending beneath the film, and means for actuating said swinging member to form a loop in the film by the movement of said movable frame.

4. In an apparatus of the class described, a movable frame, a crank shaft journaled in said frame, a radial arm carried by said crank shaft, a roll carried by the free end of said arm, and means supported on the stationary part of the machine for rocking said crank shaft as said frame is moved.

5. In an apparatus of the class described, mechanism for moving a film through the machine, a rocking shaft, a swinging member carried by said shaft and extending beneath the film, and means for actuating said rocking shaft to form a loop in the film.

[Claims 6 and 7 not printed in the Gazette.]

1,108,123. ADJUSTABLE FRAME. LOUIS BLAND, Schenectady, N. Y. Filed Mar. 4, 1912. Serial No. 681,538. (Cl. 40—135.)



1. The combination with a frame adapted to lie upon the face of the picture to be framed, of push pins projecting through the corners of the frame and picture and adapted to engage a support, said pins having flat heads lying upon the face of the frame, and detachable guards, each guard embracing one corner of the frame, the body of the guard extending over and bearing against the head of a corresponding pin and holding it in place, the body of the guard being provided with portions angularly arranged with relation to each other and engaging over the adjacent edges of the corner of the frame to embrace the same.

2. A frame comprising a plurality of co-acting frame members arranged to overlap and slidably engage, a headed pin extending through each of said frame members and adapted to engage in a support, and guards embracing the corners of said frame members and bearing respectively over the heads of said pins.

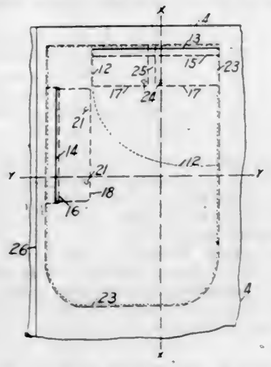
3. A frame comprising a plurality of co-acting frame-members arranged to overlap and slidably engage, a backing member of fixed dimensions, and a pin projecting from each of said frame members for engaging said backing member.

4. The combination with a frame, of push pins projecting through the corners of the frame and adapted to engage a support, said pins having heads lying upon the face of the frame, and corner pieces forming guards and embracing each one corner of the frame, each corner piece comprising a triangular face portion enlarged at its middle to form a cover for the head of the pin, and rearwardly and inwardly bent portions formed integral with the first named portion and embracing the side edges of the frame and extending over the rear face thereof.

5. The combination with a frame, of a push pin extending through the frame at the corner thereof, and having a head bearing upon the outer face of the frame, and a guard comprising an approximately triangular body portion lying upon the face of the frame and bearing against and housing the head upon the pin, the material along the whole extent of two sides of the body portion being bent over to form flanges engaging beneath the sides of the corner of the frame, said flanges being less in width than the distance between the push pin and the adjacent edge of the frame.

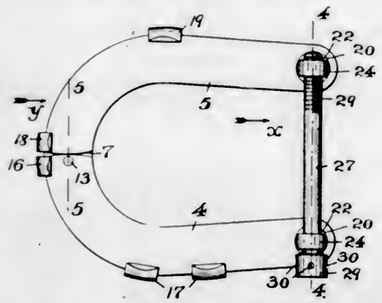
1,108,124. SAFETY-POCKET. MAX BLOOMENSTEIN, Brooklyn, N. Y. Filed Sept. 28, 1912. Serial No. 722,818. (Cl. 2—15.)

In combination with a garment, strips of fabric secured to the garment, said strips being sewed together adjacent the sides and bottom thereof, a curve line of stitching extending from an intermediate point of the upper edges of the strips and terminating adjacent one of the side edges



of the strips, thereby forming pairs of upper and lower pockets, and means adjacent the opening of the pockets for closing one pocket of each pair.

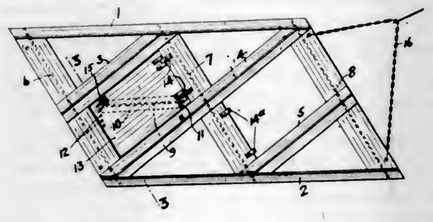
1,108,125. HORSESHOE. FRANK BONALI, Clifton, N. J., assignor of one-fourth to Abbondio Macchioni, one-fourth to Pasquale Paladino, and one-fourth to Victor Oclappo, Clifton, N. J. Filed Apr. 8, 1914. Serial No. 830,502. (Cl. 168—19.)



1. A horse-shoe comprising a pair of members pivotally connected at the toe-portion of the shoe, said members being provided at their heel-portions with receiving openings, hoof or shoe-engaging clamping means connected with said pivoted members, block-like bodies arranged in the receiving openings of the heel-portions of said pivoted members, perforated posts extending upwardly from said block-like bodies, one of said posts being internally screw-threaded, and the other post having a smooth bore, and a bolt-like stem mounted in said smooth bore of the one post and having a screw-threaded portion adapted to be screwed into the screw-threaded perforation of the other post, substantially as and for the purposes set forth.

2. A horse-shoe comprising a pair of members pivotally connected at the toe-portion of the shoe, said members being provided at their heel-portions with receiving openings, hoof or shoe-engaging retaining elements extending upwardly from the said pivoted members, block-like bodies arranged in the receiving openings of the heel-portions of said pivoted members, perforated posts extending upwardly from said block-like bodies, one of said posts being internally screw-threaded, and the other post having a smooth bore, and a bolt-like stem mounted in said smooth bore of the one post and having a screw-threaded portion adapted to be screwed into the screw-threaded perforation of the other post, substantially as and for the purposes set forth.

1,108,126. ROAD-DRAG. THOMAS Y. BOYD, Honesdale, Pa. Filed Dec. 11, 1913. Serial No. 805,879. (Cl. 37—5.)



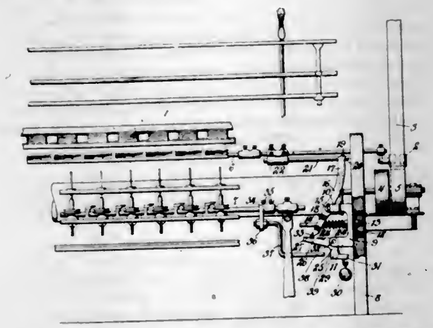
1. A drag consisting of the combination of a frame, scrapers depending from the frame, and a rudder arranged crosswise of and interposed between two of the scrapers so as to be followed by one of them, substantially as described.

2. A drag consisting of the combination of a frame provided with two different attaching devices, scrapers depending from the frame, and a rudder carrier provided with a rudder and adapted to be connected with the frame in either one of two positions in each of which the rudder is arranged between the scrapers.

3. A drag comprising the combination of a frame, scrapers depending from the frame, a floor section pivotally connected with the frame and provided with a stop adapted to abut on the frame, and a rudder adjustably connected with the floor sections, substantially as described.

4. A drag comprising the combination of a set of parallel side bars and a set of parallel cross bars arranged at an inclination and constituting a frame, scrapers depending from the frame, two different sets of hinge fittings carried by the intermediate cross bar, a rudder adapted to be connected with the intermediate cross bar in each of two different positions in both of which the rudder is arranged between scrapers.

1,108,127. STOP-MOTION FOR SPINNING-FRAMES. ESTON G. BROOKSHIRE and HERBERT G. WILES, Kansas City, Kans. Filed Aug. 30, 1913. Serial No. 787,543. (Cl. 118—12.)



1. A stop motion attachment for a spinning frame provided with a shifter and a traverse rod, comprising a rockable latch lever, a support therefor constructed for attachment to the frame of the machine, means constructed for attachment to the shifter rod and to engage the rockable latch lever, a latch member separate from and in operative relation to the latch lever to lock the latter in one position, means constructed for attachment to the traverse rod and shaped to engage the latch member to operate it on a predetermined movement of the traverse rod, and a spring carried by the supporting means for the latch lever for moving the latter in a direction to actuate the shifter to stop the machine.

2. In a spinning frame provided with a shifter rod and a traverse rod, a bracket having spaced arms and adapted to be attached to the frame of the machine, a lever mounted on one of the arms of the bracket, another lever mounted on the other arm of the bracket, and said levers having coacting latch parts, a spring carried by the bracket in position to move the first-named lever in one direction, the second-named lever being normally constrained to move in a direction to engage and hold the first-named lever, a member adapted to be attached to the shifter rod and having a portion shaped to engage the corresponding end of the first-named lever, and a member having means for attachment to the traverse rod and shaped to engage the second-named lever to move it in opposition to its normal tendency.

3. A stop motion attachment for spinning frames comprising a bracket adapted to be attached to the spinning frame, two rock levers mounted on the frame with coacting ends shaped to cause a latching together of the levers, one of the levers having a normal tendency to move toward the other and the other lever being provided with a spring tending to move it in a direction away from its latched position, and means adapted to be attached to moving parts of the spinning frame for actuating the respective levers.

4. In a spinning frame provided with a shifter rod and a traverse rod, a latch lever carried by a fixed portion of the spinning frame, a spring tending to move the latch lever in one direction, a connection between the latch lever and the shifter rod of the spinning frame, another lever having a normal tendency toward the latch lever and shaped to engage and hold the latch lever against the tendency of the spring, and means adapted to be attached to the traverse rod and movable thereby into engagement with the second-named lever to cause its disengagement from the latch lever.

5. In a spinning frame provided with a shifter rod and a traverse rod, a bracket adapted to be attached to a fixed portion of the spinning frame, a bolt for connecting the bracket to the fixed portion of the spinning frame and provided with an extension, a lever mounted on the bracket with one arm traversed by the extension of the bolt, a spring surrounding the bolt extension and engaging the corresponding arm of the lever, a rod adapted to be attached to the shifter rod of the spinning frame and shaped to engage the other arm of the lever, an angle lever mounted on the bracket and having one arm in the path of the first-named arm of the first-named lever and shaped to engage and latch the first-named arm of the first-named lever when the shifter rod is in one position, said second-named lever having a normal tendency toward the first-named lever, and a rod having means for attachment to the traverse rod and shaped to engage the second-named lever to move it against its normal tendency to cause the release of the first-named lever from its latched position.

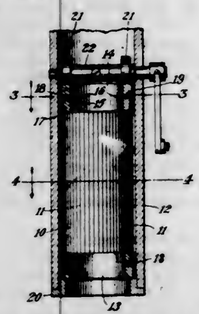
1,108,128. TUBE OF VARIABLE DIAMETER. HERBERT H. BUFFUM, The Weirs, N. H., assignor of one-third to Robert M. Pierson, Elizabeth, N. J. Filed Mar. 24, 1913. Serial No. 756,457. (Cl. 137—75.)

1. A tube having its wall composed of flexible, overlapping, longitudinal, spring plates adapted to bend inwardly to form a throat of variable diameter, and means for varying the distance between the ends of said plates without relative rotation thereof.

2. A tube having its wall composed of flexible, overlapping, longitudinal, spring plates which are substantially flat or non-angular at the part which forms the waist, so as to curve gradually when the ends are caused to approach and produce the contraction of the tube, and means for varying the distance between said ends without relative rotation thereof.

3. A tube having its wall composed of flexible, resilient, overlapping plates, rings in which the ends of said plates are confined against edgewise tilting movement, said rings being capable of relative axial movement, and means for bending said plates inwardly to contract the intermediate

portion of the tube, without substantial relative twisting movement of the rings.



4. A tube having its wall composed of flexible, overlapping plates, and means for exerting longitudinal pressure on one end of said tube to contract the diameter of its intermediate portion.

5. A tube having its wall composed of flexible, overlapping plates, means for holding one end of said tube against longitudinal movement, a ring connecting said plates at the opposite end of the tube, a shaft, and connections whereby the turning of said shaft exerts axial pressure upon, and thereby moves said ring toward the fixed end of the tube.

[Claim 6 not printed in the Gazette.]

1,108,129. PROCESS FOR THE PRODUCTION OF BORIC ACID. ALFRED BURGER, New Brighton, N. Y. Filed Jan. 22, 1914. Serial No. 813,645. (Cl. 23—1.)

1. The herein described process for the production of boric acid which comprises calcining a borate and treating the resulting products with carbon dioxid in the presence of water.

2. The herein described process for the production of boric acid which comprises mixing water with the products produceable by calcining earth-alkali-borates, treating with carbon dioxid gas decomposing the resultant acid-earth-alkali-borates, and separating the produced boric acid.

3. The herein described process for the production of boric acid which comprises calcining a boric-acid-containing mineral, mixing the resulting products with water, treating with carbon dioxid gas, adding a mineral acid, and separating the produced boric acid.

4. The herein described process for the production of boric acid which comprises calcining an earth-alkali-borate, mixing the resulting products with water, treating with carbon dioxid gas decomposing the resultant acid-earth-alkali-borates, under pressure, and separating the produced boric acid.

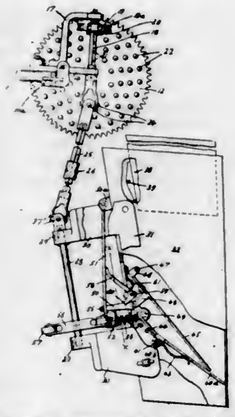
5. The herein described process for the production of boric acid which comprises mixing water with products produceable by calcining calcium-borates, treating with carbon dioxid gas, decomposing the resultant acid-calcium-borates, and separating the produced boric acid.

[Claims 6 and 7 not printed in the Gazette.]

1,108,130. SEED-PLANTER. ISAAC D. CANTRELL, Aubrey, Tex. Filed Sept. 5, 1913. Serial No. 788,269. (Cl. 111—6.)

1. A seed planter comprising a wheeled frame, a seed-can mounted upon said frame, a seed chute receiving the discharge from the seed-can, valves or doors mounted in the seed chute, a shaft mounted upon the seed chute, a variable speed mechanism communicating a constant rotation from the axle to said shaft during the travel of the planter, an arm transverse with said shaft mounted at its center upon the shaft, rollers mounted in the extremities of said arm and a mechanism correlated with the valves or doors periodically acted upon by said rollers during the rotation of said shaft, actuating the valves or doors.

2. A seed planter comprising a wheeled frame, a seed-can mounted upon said frame, a seed chute receiving the discharge from the seed-can, an upper and a lower valve or door mounted in the bottom portion of the seed chute, the upper valve or door being normally opened and the lower valve or door being normally closed, a spring tending, under compression, to simultaneously close the upper valve or door and open the lower one, a shaft mounted upon the seed chute, means carried by said shaft for periodically compressing said spring during the rotation of the shaft, means preventing the valves or doors from yielding under said spring until a compression of the same has been effected, and a variable speed mechanism communicating a constant rotation to said shaft from the axle during the travel of the planter.

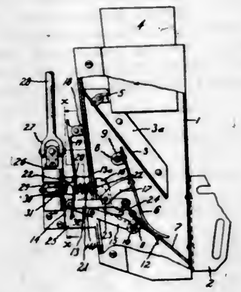


3. A seed planter comprising a wheeled frame, a seed-can mounted upon said frame, a seed chute receiving the discharge from the seed-can, a pair of valves or doors mounted one above the other in the bottom portion of the seed chute, the upper valve or door being normally opened and the lower valve or door normally closed, a swinging connection between said valves or doors, a spring intimately associated with the swinging connection tending, when under compression, to close the upper valve or door and open the lower one, a latch member acting upon said swinging connection holding the same against the pressure of said spring, a shaft mounted upon the chute, means carried by the shaft periodically compressing said spring during rotation of the shaft and releasing the swinging member from the latch member when the spring is compressed, and a mechanism communicating a constant rotation to the shaft from the axle during the travel of the planter.

1,108,131. SEED-CHUTE VALVE MECHANISM. ISAAC D. CANTRELL, Aubrey, Tex. Filed Nov. 22, 1913. Serial No. 802,409. (Cl. 111—6.)

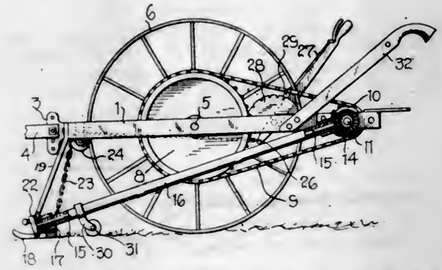
1. In a device of the character described, the combination with a seed-chute, of two valves mounted therein, one above the other, the upper valve being normally open and the lower one closed, a connection between the valves, maintaining either one open when the other is closed, a spring tending to return the valves to their normal positions after a displacement, a linkage locking the valves against displacement when they occupy their normal positions, a spring tending, when compressed to close the upper door and open the lower one, a cam correlated with said linkage, normally permitting the same to remain locked, but serving to unlock the same when subjected to a slight rotation, and a rotating member mounted exterior to the chute, periodically acting upon the last mentioned spring, compressing the same, and also subjecting the cam to a sufficient rotation to unlock the linkage after the spring has been compressed.

2. In a device of the character described, the combination with a seed-chute, of two valves mounted therein one above the other, the upper valve being normally open, and the lower one closed, a connection between the valves, maintaining either one open, when the other is closed, a linkage locking the valves against displacement when they occupy their normal positions, a spring tending to return the valves to their normal position after a displacement, a spring tending when compressed to close the upper door and open the lower one, a cam correlated with said linkage, normally permitting the same to remain locked, but serving to unlock the same when subjected to a slight rotation, a tripping lever exteriorly pivoted upon the chute, normally occupying one limiting position, a displacement of said lever to its other limiting position, serving first to compress said spring and then to subject said cam to a sufficient rotation to unlock the linkage, and a rotating member, periodically acting upon the tripping lever to displace the same from its normal to its other limiting position.



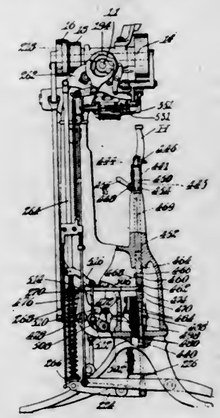
3. In a device of the character described, the combination with a seed-chute, of two valves mounted therein, one above the other, the upper valve being normally open and the lower one closed, a connection between the valves maintaining either one open when the other is closed, a spring tending to return the valves to their normal positions after a displacement, a spring tending when compressed to close the upper valve and open the lower one, a swinging linkage correlated with the valves and including two links which are alined with each other in the normal positions of the valves, locking the latter against displacement, a cam correlated with said linkage, normally permitting the same to remain locked, but serving to displace the two alined links to an angular relation when subjected to a slight rotation and a rotating member mounted exterior to the chute, periodically acting upon the last mentioned spring, compressing the same, and also subjecting the cam to a sufficient rotation to displace the two alined links to an angular relation.

1,108,132. MOWING-MACHINE. EDGAR CARUTHERS, Hamshire, Tex. Filed Dec. 22, 1913. Serial No. 808,234. (Cl. 56—73.)



A device of the character described including a frame, a traction wheel supporting such frame and mounted thereon, a tubular member carried by the frame adjacent one side thereof and disposed on a downward incline and terminating in close proximity to the surface over which the device travels, the upper extremity of the tubular member being secured to the frame adjacent one end thereof, an arm depending from the forward end of the frame, the lower extremity of the tubular member being disposed through the free extremity of the arm, a shaft directed through such tubular member, a shaft mounted transversely of the frame and rearwardly of the supporting wheel, an operative connection between the transverse shaft and the upper extremity of the shaft disposed through the tubular member, a mowing mechanism pivotally carried by the tubular member rearwardly of the depending arm, an operative connection between the mowing mechanism and the lower extremity of the shaft disposed through such tubular member, and a supporting wheel carried by the tubular member adjacent the lower end thereof and rearwardly of the pivotal connection of the mowing mechanism with the tubular member and adapted to contact with the surface over which the device travels.

1,108,133. WORK-SUPPORT. LOUIS A. CASGRAIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 10, 1910. Serial No. 560,459. (Cl. 1—41.)



1. In a machine of the class described, a work support movable between a work clamping position and a work releasing position, a spring arranged to move said work support into work clamping position and a single means for locking said work support in work clamping position and for locking said spring against action upon the work support during the work releasing movement of the latter.

2. In a machine of the class described, a work support movable between a work clamping position and a work releasing position, a spring tending normally to maintain said work support in work clamping position, a single means for locking said spring against action during the work releasing movement and for locking said work support in its work clamping position, and means for operating said locking means constructed to permit the spring to adjust the work support to the thickness of the work between the locking operations.

3. In a machine of the class described, a work support movable between a work clamping position and a work releasing position, a spring tending normally to maintain said work support in work clamping position, a single means for locking said spring against action during the work releasing movement and for locking said work support in its work clamping position, and a single means for operating said locking means and for depressing and raising the work support constructed to permit the spring

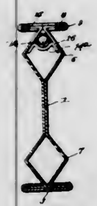
to adjust the work support to the thickness of the work between the locking operations.

4. In a machine of the class described, a work support, a spring, a toggle operatively connecting the work support and spring, and a single means for locking said spring to permit the toggle to draw down the work support and for locking said toggle against longitudinal movement when it is in straightened position.

5. In a machine of the class described, a work support; a spring and a toggle arranged to transmit pressure from the spring to the work support, and means acting simultaneously to prevent said spring from exerting pressure upon the work support and to lock said toggle against longitudinal movement in either direction.

(Claims 6 to 23 not printed in the Gazette.)

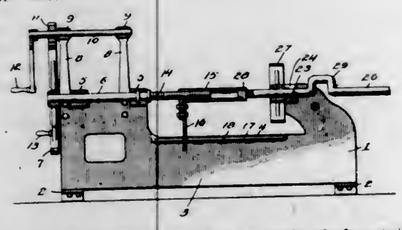
1,108,134. SPIRIT-LEVEL. WILLIAM J. CASSITY, Guthrie, Okla. Filed Feb. 28, 1914. Serial No. 821,823. (Cl. 33—211.)



1. In a spirit level, a sheet metal stock comprising side plates having their medial portions closely abutting and their upper and lower portions bulged outwardly to form longitudinal compartments, the extreme longitudinal edges of the side plates being bent laterally to form flanges arranged at right angles to the vertical plane of the longitudinal axis of the stock, top and bottom strips of metal secured to the outer faces of the said flanges, the said stock being provided in its medial web portion with a transverse opening communicating with the upper and lower compartments, and a spirit tube mounted within the said opening with its ends projecting into the said compartments and being arranged at right angles to the longitudinal axis of the stock.

2. In a spirit level, a sheet metal stock comprising side plates having their medial portions closely abutting and their upper portions bulged outwardly to form a longitudinal compartment, the extreme longitudinal edges of the side plates being bent laterally to form flanges arranged at right angles to the vertical plane of the longitudinal axis of the stock, top and bottom strips of metal secured to the outer faces of the said flanges, and a spirit tube mounted within the longitudinal compartment of the stock, the top strip and the bulging portions of the side plate being provided with longitudinal view openings to expose portions of the said tube.

1,108,135. PULLEY REMOVER AND REPLACER. WALTER R. CLAYTON and DAVID H. JONES, Fayetteville, N. C. Filed May 21, 1913. Serial No. 769,051. (Cl. 29—85.)



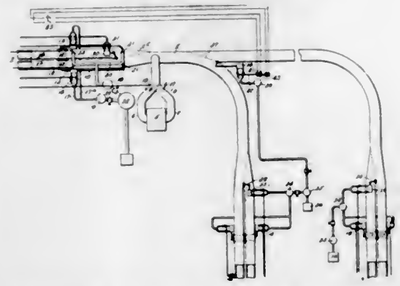
1. A press including a frame, a main shaft rotatably mounted therein and having a threaded portion, a plunger sleeve coöperating with the threaded portion of the shaft, means for preventing rotation of the sleeve, said frame being formed with a ledge remote from the shaft, a block removably engaging said ledge to support the shaft being operated upon, and means for operating the main shaft.

2. A press of the class described including a frame, a shaft rotatably mounted in the frame and held against independent longitudinal movement therein, a plunger sleeve having threaded connection with the shaft, and means cooperating with the sleeve and held against other than longitudinal movement in the frame for preventing rotation of the sleeve in the operation of the shaft.

3. A press including a frame, a main shaft rotatably mounted therein, a plunger sleeve having threaded connection with the shaft, a guide depending from the sleeve, and spaced plates forming part of the frame between which the guide projects, whereby to prevent rotary movement of the sleeve in the operation of the shaft.

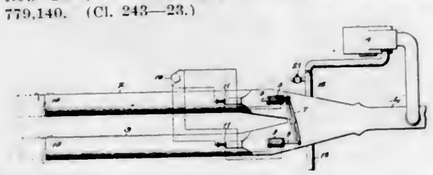
4. A press including a frame, a main shaft rotatably mounted therein, a plunger sleeve having threaded connection with the shaft, a guide depending from the sleeve, and spaced plates forming part of the frame between which the guide projects and guide ribs formed on said plates and seating in depressions in the guides.

1,108,136. PNEUMATIC - DESPATCH APPARATUS. RODERICK G. COLLINS, Jr., New York, N. Y. Filed Apr. 16, 1913. Serial No. 761,584. (Cl. 243—2.)



In pneumatic-despatch-apparatus, the combination with a transmitting-tube, a control station communicating therewith, an opposite terminal station and a branch station also communicating therewith, a combined air-and-gate-switch at the point of communication of said branch station with said tube, means for operating said air-and-gate-switch from the control station to close communication between the control station and the opposite terminal station and stop the flow of air therethrough and establish operative communication between said control station and the branch station, or vice versa, and a combined suction and pressure pneumatic power mechanism located at said control station and means for selectively subjecting said tube to the suction or pressure thereof.

1,108,137. APPARATUS FOR CONTROLLING THE MOVEMENT OF CARRIERS IN PNEUMATIC-DESPATCH APPARATUS. RODERICK G. COLLINS, Jr., New York, N. Y. Filed July 15, 1913. Serial No. 779,140. (Cl. 243—23.)

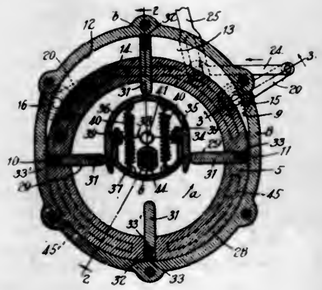


1. In pneumatic tube despatch apparatus, the combination of a tube having a horizontally arranged terminal, pneumatic means for despatching a carrier through said tube, said terminal being provided with an opening at its end for the discharge of the carrier and being normally closed against access of extraneous plus-atmospheric pressure other than car-despatching air, an air gate pivotally arranged within the transmitting tube, means including a trip arranged in the path of movement of the carrier for shifting the position of said gate to close communication between said tube and its terminal, said gate being interposed intermediate the trip and the transmission tube, so that a car-movement retarding vacuum is, by the movement of the car, established behind the car, substantially as described.

2. In pneumatic tube despatch apparatus, the combination of a tube and means communicating therewith for despatching a carrier therethrough, a horizontally arranged plural-member terminal, the members of which are normally closed against access of extraneous plus-atmospheric pressure other than car-despatching air, and an air gate pivotally arranged within the transmitting tube at the junction of the terminal therewith to coöperate with both of said terminal members, means including trips arranged in the terminal members in the path of movement of the carriers to close communication between the despatching tube and that terminal member onto which the carrier passes for shifting the position of said gate whereby a car movement retarding vacuum is, by the movement of the car, established in said terminal member, substantially as described.

3. In pneumatic tube despatch apparatus, the combination of a tube having a horizontally arranged terminal, pneumatic means for despatching a carrier through said tube, said terminal being provided at its end with an opening for the discharge of the carrier and being normally closed against access of extraneous plus-atmospheric pressure other than car-despatching air, an air gate arranged within the transmitting tube, means including a trip arranged in the path of movement of the carrier for shifting the position of said gate to close communication between said tube and its terminal, said gate being interposed intermediate the trip and the transmission tube so that a car-movement retarding vacuum is, by the movement of the car, established behind the car, and means for automatically introducing air pressure behind the carrier, substantially as described.

1,108,138. BRAKE MECHANISM. WILLIAM P. COLLINS, Boston, Mass., assignor to Automatic Air Brake Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 24, 1913. Serial No. 750,091. (Cl. 74—69.)



1. A brake mechanism having, in combination, a rotary member, a casing within which said member is arranged to rotate, a portion of the wall of said casing being offset to form a chamber adjacent to a portion of the periphery of said rotary member, said chamber having ports at opposite ends thereof, a blade carried by said rotary member adapted to engage the inner wall of said casing during the rotation thereof, means adapted to open and close said ports, means to lock said rotary member to said casing including a recess in said rotary member, a pin having screw-threaded engagement with said casing, and means to rotate said pin to move the same into and out of engagement with said rotary member within said recess.

2. A brake mechanism having, in combination, a piston blade carrier, a series of piston blades mounted on said carrier, said blades adapted to be reciprocated radially relatively to said carrier, a casing within which said carrier is arranged, said casing having a chamber arranged outside of and adjacent a portion of the periphery of said carrier, means adapted to create a relative rotary movement between said carrier and said casing, an expansible drum adapted to engage said piston blades and reciprocate the same on said carrier during the passage of said blades through said chamber, and means to expand said drum whereby the length of the reciprocations of said blades will be varied.

3. A brake mechanism having, in combination, a piston blade carrier, a series of piston blades mounted on said carrier adapted to be reciprocated radially relatively thereto, a casing for said carrier provided with a chamber arranged outside of and adjacent to a portion of the periphery of said carrier, a split drum adapted to engage the inner ends of said piston blades and project the same beyond the periphery of said carrier into said chamber, and a screw mounted in said casing, said screw having a tapered end adapted to be moved into said drum to expand the same and increase the projection of said piston blades beyond the periphery of said carrier.

4. A brake mechanism having, in combination, a piston blade carrier, a series of piston blades mounted on said carrier and adapted to be reciprocated radially relatively thereto, a casing for said carrier provided with a chamber arranged outside of and adjacent to a portion of the periphery of said carrier, a drum arranged within said carrier adapted to engage the inner ends of said piston blades and project the outer ends of said blades into said chamber, said drum being split longitudinally thereof, springs adapted to yieldingly retain the sections of said drum together, and a tapered screw adapted to be moved longitudinally of said drum to expand the same whereby the projection of said blades into said chamber may be increased.

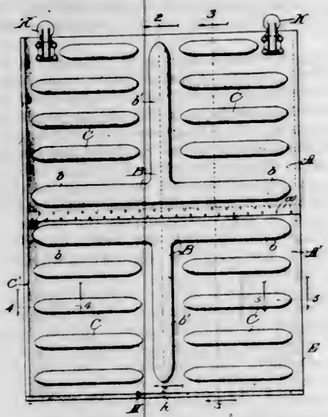
5. A brake mechanim having, in combination, a piston blade carrier, a series of piston blades mounted in said carrier adapted to be reciprocated radially relatively thereto, a casing for said carrier provided with a chamber arranged outside of and adjacent to a portion of the periphery of said carrier, a pair of drums arranged within and adjacent opposite ends of said piston carrier, said drums adapted to engage opposite inner ends of said piston blades and project the same into said chamber, said drums being split longitudinally, springs arranged in said drums adapted to yieldingly retain the sections thereof together, and tapered screws arranged in said casing adapted to be moved into said drums to separate said sections whereby the projection of said piston blades into said chamber may be increased.

1,108,139. CAR-DOOR. JOSEPH F. COMEE, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Filed June 7, 1913. Serial No. 772,408. (Cl. 189—46.)

1. A car door formed of two sheets of metal having overlapping edges secured together and extending transversely of the door adjacent its center, each of said metal sheets being formed with T-shaped corrugations, the horizontal portions of said corrugations extending approximately across the central portion of the door above and below said overlapping edges and the vertical portions of said corrugations extending from said horizontal portions to points adjacent the top and bottom of the door.

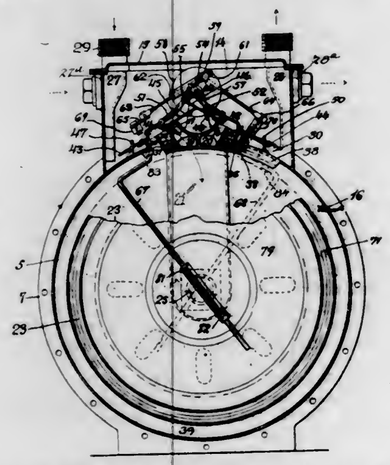
2. A car door formed of sheet metal having oppositely disposed T-shaped corrugations, the horizontal portions of said corrugations extending from side to side of the central portion of the door and the vertical portions of

said corrugations extending from said horizontal portions to points adjacent the top and bottom of the door, and a



plurality of individual corrugations at each side of said vertical portions and arranged at an angle thereto.

1,108,140. METER. MARSHALL CORNINE, New York, N. Y. Filed Jan. 18, 1910. Serial No. 538,597. (Cl. 73—1.)



1. The combination in a meter, of a bellows composed in part of a flexible diaphragm, substantially impervious to the passage of gas, with a central opening, a rigid wall surrounding said opening, secured to said diaphragm and provided with an engaging device and a disk extending on that side of the diaphragm which is within the bellows, a compartment containing said bellows, a conduit leading into said compartment and provided, at its inner part, with engaging means adapted to engage with the engaging means connected with the diaphragm, a disk between the flexible diaphragm and the inner wall of the compartment, but outside of the bellows, and a closure for the bellows opposite to the side which is in contact with the disk within the bellows, all substantially as set forth.

2. In a meter, the combination of a valve chest, a gas compartment provided with a bellows, a flag wire connected to said bellows and extending through to the valve chest, and therein set at a given and permanent angle to a vertical line passing through said valve chest, and means for connecting the flag wire and the bellows, all substantially as set forth.

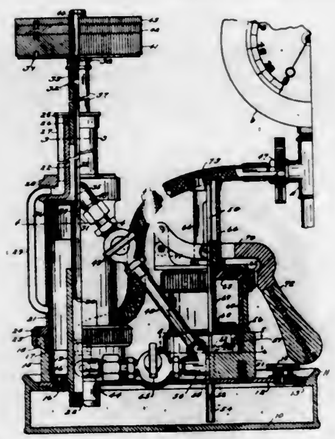
3. In a meter, a collapsible bellows with a central opening, a conduit leading to a point opposite the said central opening in the bellows and provided with an opening surrounded by a flange having engaging means, a rigid disk located within the bellows and provided with an aperture whose wall is provided with engaging means adapted to engage with and be thereby secured to the engaging means on the flange of the conduit, and a further disk on the outer side of the bellows and between it and the main wall of the conduit, all substantially as set forth.

4. The combination of a conduit having a flanged port wall, provided with engaging means, and a collapsible bellows, said bellows being provided with an apertured and flanged internal rigid disk having a second engaging means adapted to engage with and be secured to the engaging means on the port wall flange and a second disk on the other side of the bellows and between it and the passage wall, apertured to permit the insertion of the flange of the first disk, and provided with a flange surrounding said aperture, proportioned to fit closely between the diaphragm of the bellows and the port wall, all substantially as set forth.

5. The combination of a conduit having a wall with a flanged port the wall of said port being provided with a screw thread, a collapsible bellows, said bellows, though elsewhere closed, being provided with an apertured internal disk provided with an opening, flanged and threaded, said flange being adapted to engage and make a tight joint with the screw thread on the flanged port wall, and a flexible diaphragm extending to and secured about the flange of the aperture in the internal disk, all substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,108,141. DEVICE FOR TESTING GAGES. RICHARD C. COX, Dorchester, Mass., assignor of one-half to himself and one-half to Franklin A. Wyman, Dorchester, Mass. Filed Dec. 3, 1912. Serial No. 734,666. (Cl. 73—51.)



1. A pressure testing device comprising a series of vertically disposed rotatable and relatively slidable piston members all movable in the same direction under pressure and means for rotating all of said members in unison.

2. A pressure testing device comprising a series of superposed cylinders of different diameters, a series of compression piston members rotatable and slidable therein and closely fitting said cylinders, two of said members having a relative movement in the same direction under pressure and means for rotating said relatively movable members in unison.

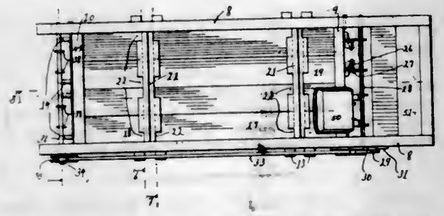
3. A pressure testing device comprising a pair of superposed cylinders of different diameters, a pair of pressure members slidable in unison in their respective cylinders, means for rotating said pair of members including a third pressure member, and a cylinder in which said third pressure member is slidable independently of said pair of members, all of said members adapted to move in one direction under pressure applied to said third member.

4. A pressure testing device comprising a pair of superposed cylinders of different diameters, a pair of members having a close sliding fit in said cylinders and independently movable vertically and connected to rotate in unison.

5. A pressure testing device comprising a pair of superposed cylinders of different diameters opening the one into the other, a plunger head slidable in the larger of said cylinders, a plunger slidable independently in the smaller of said cylinders, a pressure member operated through the movement of said plunger head and of less area than said head and means for effecting rotation of said plunger head.

[Claims 6 to 18 not printed in the Gazette.]

1,108,142. CUT-UNDER-WAGON DUMP. CARL C. CRABB, Topeka, Kans. Filed May 1, 1914. Serial No. 835,611. (Cl. 21—20.)

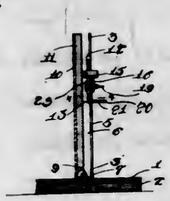


1. The combination of sides and end gates, two transverse bolsters between the ends, four rods journaled in the end gates and bolsters, a three-piece sheet metal door secured to each rod and fitting between the bolsters and between the bolsters and the respective ends and each door having a lip extending along the rod opposite to the main portion of the door, two of said lips butting against the sides and two butting against each other, and said bolsters being formed with inverted V-shaped ridges with lips overlapping adjacent ends of the doors and cut away to provide clearance for said first-named lips, and means for operating said doors and for locking them in closed position.

2. The combination of sides and ends, transverse bolsters between the ends, a series of pairs of rods journaled lengthwise of the bed in the bolsters and in the ends, the ends of said rods being bent at substantially right angles, plates secured to the rods and fitting between the bolsters and between the bolsters and the respective ends, a rod transversely disposed and journaled in the sides at each end, a series of arms mounted on the front rod, a link connecting each arm with the front turned end of the first-named rods, respectively, a lever secured to said front rod, a ratchet and pawl for said lever, a series of latch bars secured to the rear rod for engaging the respective rear turned ends, and a rod operatively connecting the lever with said rear rod, said latch bars being adapted to engage the said ends when the doors are closed and adapted to be disengaged from said ends upon shifting the lever.

1,108,143. COMBINATION SKIRT-MARKER, BIAS-FOLDER, AND PATTERN-MARKER. BERTHA S. CRAMER, Minneapolis, Minn. Filed Dec. 7, 1912. Serial No. 735,491. (Cl. 33—9.)

1. A device of the class described, comprising a base, a vertical gage carried by said base and comprising a pair of spaced plates connected together by means of an integral bridge portion, said integral bridge portion provided with a notched portion at one end, a thumb screw passing through said notched portion for detachably securing said gage to said base, an adjustable plate slidably mounted upon one of said spaced plates, a marking chalk carried by said adjustable plate, and means for securing said adjustable plate in a locked position upon one of said spaced plates.



2. A device of the class described comprising a front plate and a rear plate, a marker device slidably mounted upon said front plate, a stick of chalk carried by said marker device, the rear plate provided with a channel formed therein, a second stick of chalk positioned within said channel, and said first mentioned stick of chalk adapted to mark upon one side of a sheet placed between said front and rear plates for causing said last mentioned stick of chalk to mark upon the opposite side of said sheet by means of the pressure of said first mentioned stick of chalk upon said sheet.

1,108,144. METHOD OF MAKING HOT-FINISHED FLATS. FRED H. DANIELS, Worcester, Mass.; Sarah L. Daniels, executrix of said Fred H. Daniels, deceased, assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed May 23, 1911. Serial No. 629,037. (Cl. 29—17.)



1. The method of making rolled metal flats and like materials consisting in simultaneously reducing the metal at a plurality of points in its length in the passes of a rolling mill and applying tension to the metal between the rolling passes during the reducing operation to thereby straighten the metal, and then wrapping the straightened metal into a bundle or coil.

2. The method of making rolled metal flats and like materials consisting in reducing the metal in the passes of a rolling mill, passing the metal through pools of cooling medium between successive rolling passes and simultaneously applying tension to the metal to thereby straighten the metal.

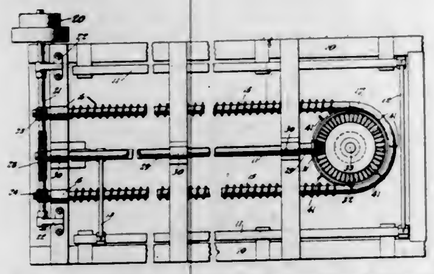
3. The method of making rolled metal flats and like materials consisting in reducing the metal in the passes of the rolling mill, passing the rolled metal through a cooling medium while applying tension thereto to cool and straighten the metal and to prevent oxidation.

4. The method of rolling metal flats and like materials consisting in simultaneously reducing different portions of the length of the metal and applying tension to the portions of the metal extending between the points of reduction during the rolling operation.

5. The method of rolling metal flats and like materials consisting in simultaneously reducing different portions of the length of the flat, and submerging the portions of the metal extending between the parts in engagement with the rolls in a cooling medium while passing from one roll pass to another.

[Claims 6 to 10 not printed in the Gazette.]

1,108,145. ELECTROPLATING APPARATUS. JOHN T. DANIELS, Newark, N. J., assignor to The Hanson & Van Winkle Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 10, 1913. Serial No. 753,284. (Cl. 204—11.)



1. In electrolytic apparatus the combination with a plurality of electrically conductive supporting and conveying screws, and electrically conductive hangers supported on and conveyed by said screws; of means for transferring said hangers from one of said conveyer screws to another, and means for supplying electric current to said supporting and conveying screws.

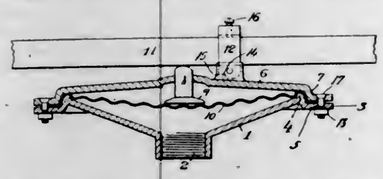
2. In electrolytic apparatus the combination with a vat, a plurality of electrically conductive supporting and conveying screws, electrically conductive hangers supported upon and conveyed by said screws and means for driving said conveyer screws; of means for transferring said hangers from one of said screws to another, and means for supplying electric current to said screws.

3. Apparatus of the character described, comprising in combination a tank adapted to contain a bath, conveyer screws mounted on said tank above the bath, hangers carried by said conveyer screws and extending into the bath, means for rotating said screws to effect the conveying operation, and means for transferring said hangers from one of said screws to another.

4. Apparatus of the character described, comprising in combination a tank adapted to contain a bath, a pair of conveyer screws mounted on said tank above the bath, hangers carried by said screws and extending into the bath, a stationary curved transfer rod connected with said conveyer screws, and a transfer wheel journaled on an axis perpendicular to the plane of the conveyer screws and transfer rod and provided with transfer fingers for moving the hangers from one of said conveyer screws to the other by way of said transfer rod.

5. Apparatus of the character described, comprising in combination a tank adapted to contain a bath, a pair of conveyer screws mounted on said tank above the bath, hangers moved thereby, means for rotating said screws to effect the moving operation, a stationary curved transfer rod connected with said conveyer screws, a transfer wheel journaled on an axis perpendicular to the conveyer screws and transfer rod and provided with transfer fingers for moving the hangers from one of said conveyer screws to the other by way of said transfer rod.

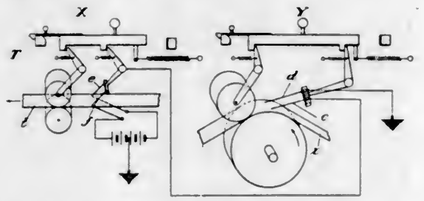
1,108,146. REGULATOR. EDWARD J. DEEGAN, New York, N. Y. Filed Nov. 22, 1913. Serial No. 802,393. (Cl. 60—2.)



1. In a regulator, a base with a rim or flange, a metal diaphragm extending over said base and its flange and provided with corrugations in that part which overlays the rim or flange of the base, a clamping piece overlaying the corrugated part of the diaphragm and secured to the base, all substantially as set forth.

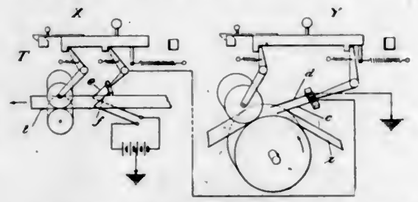
2. In a regulator, a base with a rim or flange, a metal diaphragm extending over said base and its flange and provided with corrugations in that part which overlays the rim or flange of the base together with a sealing material, located in the corrugations, a clamping piece overlaying the corrugated part of the diaphragm and secured to the base, all substantially as set forth.

1,108,147. TELEGRAPHY. PATRICK B. DELANY, South Orange, N. J., assignor to The Telepost Company, New York, N. Y., a Corporation of Maine. Filed Jan. 18, 1909. Serial No. 472,939. (Cl. 178—46.)



A chemical tape receiver having two recording fingers one of which makes on the tape in one line a record of the signal initiating impulses, and the other in a parallel line a record of the signal terminating impulses, the latter finger being extended beyond its mate in the direction of travel of the tape combined with a transmitter that sends signal initiating impulses and signal terminating impulses, said impulses being of alternating polarity.

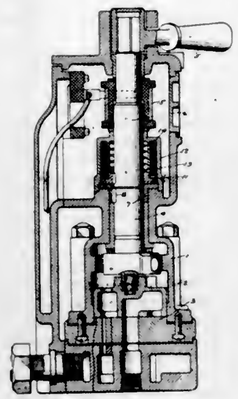
1,108,148. TELEGRAPHY. PATRICK B. DELANY, South Orange, N. J., assignor to The Telepost Company, New York, N. Y., a Corporation of Maine. Filed Jan. 18, 1909. Serial No. 472,938. Renewed Jan. 9, 1914. Serial No. 811,279. (Cl. 178—46.)



1. In an automatic chemical telegraphy a method of transmitting and recording dot and dash signals which consists in initiating all signals by current impulses of the same polarity, terminating all signals by current impulses of the same polarity but of opposite polarity to that used for initiating the signals, the interval between a signal initiating impulse and a signal terminating impulse determining whether the signal is a dash or a dot, and making a record of received signal initiating impulses in one line and in a line parallel thereto a record of received signal terminating impulses arbitrarily displaced relatively to the record of the signal initiating impulses whereby greater definition of the record is attained.

2. In automatic chemical telegraphy a method of transmitting and recording dot and dash signals which consists in initiating all signals by current impulses of the same polarity, terminating all signals by current impulses of the same polarity but of opposite polarity to that used for initiating the signals, the interval between a signal initiating impulse and a signal terminating impulse determining whether the signal is a dot or a dash, and making a record of received signal initiating impulses in one line and in a line parallel thereto a record of received signal terminating impulses with the record of the dot impulses in lines perpendicular, or substantially so, and the record of dash impulses in lines oblique, whereby greater definition of the record is attained.

1,108,149. ELECTROPNEUMATIC BRAKE-VALVE. EDWARD H. DEWSON, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 9, 1908. Serial No. 456,958. (Cl. 188—7.)



1. In a brake valve for controlling fluid pressure brakes, the combination with a valve having parts for supplying and releasing air to and from the brake system and an operating handle for said valve, of a valve stem composed of two parts in axial alinement and arranged between said handle and valve and means controlled by the handle for operatively connecting the parts of the valve stem upon movement of the handle in the same plane of rotation to effect the movement of the valve by the handle.

2. A brake valve device comprising a rotary valve for controlling variations in pressure in the brake system, an operating handle therefor, a two part valve stem with the parts in axial alinement, and means adapted to disconnect the two parts of the valve stem at one position in the movement of the handle.

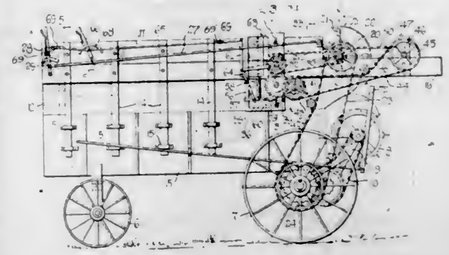
3. In an electro-pneumatic brake valve device, valve means for controlling the brakes pneumatically, electric contact means for controlling the brakes electrically, a manually operated handle for actuating the valve means and the electric contact means, and electric means for operatively disconnecting the handle from said valve means upon movement of the handle to control the brakes electrically.

4. In an electro-pneumatic brake valve device, valve means for controlling the brakes pneumatically, electric contact means for controlling the brakes electrically, a manually operated handle for actuating the valve means and the electric contact means, and means operating upon flow of current in the brake controlling electric circuit for operatively disconnecting said valve means from the handle.

5. In an electro-pneumatic brake valve device, valve means for controlling the brakes pneumatically, electric contact means for controlling the brakes electrically, a manually operated handle for actuating the valve means and the electric contact means, a clutch device for operatively connecting the handle with said valve means, and means for opening said clutch upon movement of the handle to an electric brake control position, to thereby operate the electric contact means without actuating said valve means.

[Claims 6 and 7 not printed in the Gazette.]

1,108,150. MANURE-SPREADER. ASA L. DUDLEY and JOHN J. SCHMIDT, Glenville, Nebr. Filed Mar. 28, 1914. Serial No. 828,010. (Cl. 111—40.)



1. The combination with a manure spreader provided with a distributing cylinder, of a hopper adapted to be mounted upon the body of the spreader, endless chains mounted upon the side walls of the hopper, a follower secured to the upper stretches of said chains, and means for operating said chains to impart an intermittent rearward movement to the follower to forcibly feed the material to the distributing cylinder.

2. The combination with a manure spreader provided with a distributing cylinder, of a hopper adapted to be mounted upon the body of the spreader, endless chains mounted upon the side walls of the hopper, a follower secured to the upper streches of said chains, means for operating said chains to impart an intermittent rearward movement to the follower to forcibly feed the material to the distributing cylinder, and a trip device actuated by the follower at the end of its rearward movement to render said chain operating means inoperative.

3. The combination with a manure spreader provided with a distributing cylinder, of a hopper adapted to be mounted upon the body of the spreader, endless chains mounted upon the side walls of the hopper, a follower secured to the upper stretches of said chains, means for operating said chains to impart an intermittent rearward movement to the follower to forcibly feed the material to the distributing cylinder, a trip device actuated by the follower at the end of its rearward movement to render said chain operating means inoperative, and manually operable means to further actuate the trip device whereby the movement of the follower is reversed by said operating means.

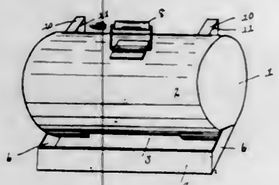
4. The combination with a manure spreader provided with a distributing cylinder, of a hopper adapted to be mounted upon the body of the spreader, endless chains mounted upon the side walls of the hopper, a follower secured to the upper stretches of said chains, means for operating said chains to impart an intermittent rearward movement to the follower to forcibly feed the material to the distributing cylinder, a trip device actuated by the follower at the end of its rearward movement to render said chain operating means inoperative, and manually operable means to further actuate said trip device whereby the movement of the follower is reversed and an uninterrupted forward movement imparted thereto by the operating means.

5. The combination with a manure spreader provided with a distributing cylinder, of a hopper adapted to be removably mounted upon the body of the spreader, endless chains mounted upon the side walls of said hopper, a follower secured to the upper stretches of said chains, gearing for driving said chains including a power transmission gear, a shiftable driven gear adapted to engage said transmission gear, means actuated in the rotation of the driven gear to impart an intermittent rotary movement to the transmission gear in one direction, whereby the follower is intermittently moved rearwardly in the hopper to feed the material to the distributing roller, and manually operable means to shift said driven gear and said means whereby said means is disengaged from the transmission gear and the driven gear is engaged with the trans-

mission gear and the direction of rotation of the latter reversed, to move the follower forwardly in the hopper.

[Claims 6 to 10 not printed in the Gazette.]

1,108,151. WATERING DEVICE. GEORGE C. EATON, Norwich, N. Y. Filed June 19, 1911. Serial No. 634,037. (Cl. 119—77.)



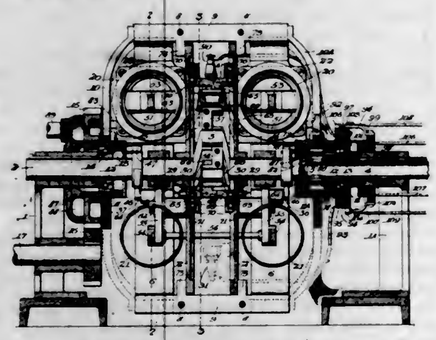
1. A self-righting watering device consisting of a cylindrical body, a trough with its bottom projecting tangentially from the wall of the body, the body having a longitudinal slit through its wall opening into the trough near the bottom thereof, and brackets with their sides tangential to the body mounted thereon substantially opposite the trough whereby to act as a stop to prevent rolling of the device.

2. A device of the character described consisting of a cylindrical body, a trough projecting with its bottom tangential to the wall of the body and of a size and weight to support and maintain the device normally in upright position, and brackets mounted on and a part of the body and projecting from the wall whereby to prevent rolling of the device into inverted position.

3. A device of the character described consisting of a cylindrical body, the wall of the body extending tangentially from one point in the circumference whereby to form the bottom of a trough extending a substantial distance beyond a vertical line dropped from the side of the device, and brackets placed on the body substantially opposite the trough to prevent the rolling of the device beyond the quarter of a revolution.

4. A self-righting watering device consisting of a cylindrical body, a trough projecting from one side and of a size and weight normally to hold the device in position for use, and means mounted on the body and projecting therefrom opposite the trough to serve as a stop in the rolling of the device, the said means being formed whereby to support the device in elevated fixed position.

1,108,152. ROTARY GAS-ENGINE. OLOF F. EDQVIST, Denver, Colo. Filed May 13, 1913. Serial No. 767,290. (Cl. 123—43.)



1. In a rotary combustion engine, the combination with a stationary shaft having a crank portion, of a casing rotatably mounted on said shaft, cylinders supported in said casing in diametrically opposite pairs, and having pistons and rods connected therewith, rock arms rotatably mounted on the shaft and connecting the diametrically opposite piston rods in pairs, links on the crank portion of the shaft, cranks connected to the free ends of said links and to the rock arms intermediate of their connection with the shaft and with the piston rods, inlet and exhaust valves for said cylinders, and cams for operating said valves at predetermined points in the rotative travel of the casing.

2. In a rotary combustion engine, the combination with a stationary shaft having a crank, a casing rotatable on said shaft, cylinders supported in said casing in diametrically opposite pairs, and having pistons and piston rods, rock arms rotatable on the shaft and connecting the diametrically opposite piston rods in pairs, cranks pivotally connecting said rock arms on opposite sides of the shaft, links connecting said cranks and the crank portion of the shaft, of means for turning the links on their axes, as the casing is rotated, whereby the pistons are caused to reciprocate, inlet and exhaust valves connected with said cylinders, and cams for operating said valves at predetermined points in the rotative travel of the casing.

3. In a rotary combustion engine, the combination with a stationary shaft, a casing rotatably mounted thereon, having diametrically opposite integral base members, each provided with pairs of cylinder-receiving sockets, and ports connecting said sockets, of cylinders in said sockets, having pistons and rods, inlet and exhaust valves in said bases communicating with said ports and with inlet and exhaust ports also formed in said bases, means for operating said valves at predetermined points in the rotative travel of the casing, rock arms rotatable on the shaft which connect diametrically opposite piston rods in pairs, and means connected with the rock arms and with the shaft for imparting a rocking movement to said arms and thereby causing the pistons to reciprocate during the rotation of the cylinder.

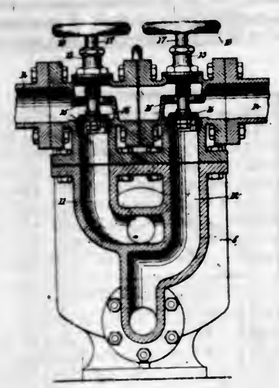
4. In a rotary combustion engine, the combination with a stationary shaft having a crank portion, of a casing rotatably mounted on said shaft, cylinders supported in said casing in diametrically opposite pairs, and having pistons and rods, and rock arms rotatable on said shaft and connected at their ends to diametrically opposite piston rods, of double cranks pivotally connecting said rock arms on opposite sides of their centers, and links connecting said double cranks and the crank portion of the shaft, said arms being thereby rocked whereby the pistons are each given four reciprocations during each rotation of the casing.

5. In a rotary combustion engine, a stationary shaft having a crank portion, a casing rotatably mounted thereon having diametrically opposite pairs of cylinders, with pistons and rods, rock arms rotatable on said shaft and connected with diametrically opposite piston rods, double cranks connecting the rock arms on opposite sides of their centers, links connecting the double cranks and the crank portion of the shaft, guides extending across the casing, and slides connected to said links and mounted on said guides, whereby when the casing rotates the links are turned and double cranks operate the rock arms so that the pistons are each given the intake, compression, explosion, and exhaust strokes, during one complete rotation of the casing.

(Claims 6 to 8 not printed in the Gazette..)

1,108,153. FILTER CONNECTION. HENRY B. EELLS and IRVIN H. KAUFMAN, New York, N. Y., assignors to James Beggs & Co., New York, N. Y., a Corporation of New York. Filed Dec. 5, 1908. Serial No. 466,043. (Cl. 210—15.)

1. The combination with a filter having an inlet and an outlet, of a detachable supply pipe connection comprising two valve casings detachably secured to the filter and connected together, one casing having an inlet at one end and a passage at one side connected to the filter inlet and with a valve seat thereat and the other casing having an outlet at the opposite end and a passage at one side connected to the filter outlet and with a valve seat thereat, said casings having communicating chambers at their adjacent ends with a valve seat in each chamber opposite the before mentioned seats and a double seated valve in each casing adapted to co-act with the valve seats in its casing substantially as described.



2. In a filter construction the combination of a filter body having an inlet and an outlet, a pair of valve casings detachably secured together and having a main passage and lateral extensions therefrom, an intermediate member detachably secured to said body and to said valve casings and having passages connecting said extensions with the filter inlet and outlet, valve seats in said casings and valves coacting therewith for opening the filter to the main or opening the main past the filter.

3. The combination with a filter having an inlet and an outlet of a detachable connection comprising a body having a passage leading to the filter inlet and a second passage leading from the filter outlet, a pair of detachable casings having a main passage and a pair of valve seats in each casing, one seat of each pair being in the main passage and the other seats being opposite the first and at the mouths of the passages leading to and from the filter inlet and outlet respectively.

4. A detachable filter connection having a longitudinal main passage with two lateral extensions and a valve seat at the entrance to each extension and each extension also having one end turned substantially at right angles to the main passage and at right angles to the portions adjacent the main passage and valves coacting with said valve seats for the purpose specified.

5. In a filter construction the combination of a filter body having an inlet and an outlet, a removable cover for said body and a member for connecting the main supply pipe and the filter body independently of said cover, said member having valve seats located above the filter inlet and outlet and valves coöperating with said seats so that when both valves are "opened" the filter is in operation and all sediment will collect in the filter and when both valves are "closed" the filter is cut off and may be disconnected or opened and the passage through the main is open.

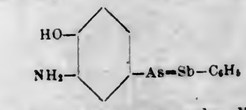
[Claim 6 not printed in the Gazette.]

1,108,154. ARSENOSTIBINO COMPOUNDS AND PROCESS OF MAKING SAME. PAUL EHRLICH and PAUL KARAKA, Frankfort-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed July 30, 1913. Serial No. 782,014. (Cl. 23—24.)

1. The process of preparing arseno-stibino compounds of the constitutional formula: (aromatic residue—As=SbX which consists in causing halogenantimony compounds of the formula Hlg_2SbX, wherein X stands for a monovalent residue, to act upon aromatic primary arsins.

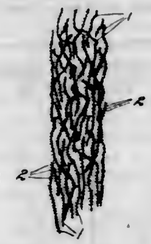
2. As new products, salts with acids of arsepo-stibino compounds of the general formula: (aromatic residue)—As=SbX wherein X stands for a monovalent residue and the aromatic residue contains a salt-forming atom group, said salts being amorphous yellowish-brown to brown powders which have a strongly reducing action in an ammoniacal solution of silver nitrate, being readily soluble in water and diluted hydrochloric acid, but difficultly soluble in ether and benzene.

3. As a new product, the hydrochloric acid salt of the arseno-stibino compound of the constitutional formula



the salt being a yellowish-brown powder, difficultly soluble in ether and benzene, readily dissolving in water and diluted hydrochloric acid, having a strongly reducing action in an ammoniacal solution of silver nitrate; its solution yielding in presence of sulfuric acid a precipitate of the difficultly soluble sulfate.

1,108,155. INSULATING FABRIC. GEORGE H. ELLIS, St. Paul, Minn., assignor, by mesne assignments, to Northern Insulating Company, St. Paul, Minn., a Corporation of Minnesota. Filed Mar. 19, 1910. Serial No. 550,359. (Cl. 154—44.)



1. An insulating fabric composed of shredded and fibrous stock felted together the fibers being provided with a beard or fuzz, said beard or fuzz being intertangled and matted to provide a reinforcement in addition to that resulting from the felting of the fibers.

2. An insulating fabric composed of long partly degummed fiber and shive or woody particles, the said fibrous portions being shredded or frayed and formed with a beard or fuzz intertangled and matted together to provide a reinforcement in addition to the reinforcement resulting from the felting.

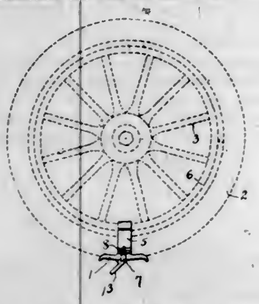
3. An insulating fabric composed of shredded and fibrous stock felted together the fibers being provided with a beard or fuzz, the beard or fuzz on each fiber being intertangled both with the beard or fuzz on adjacent fibers and with the adjacent fibers themselves, thereby providing a reinforcement in addition to that resulting from the felting of the fibers.

1,108,156. CHOCK FOR VEHICLE-WHEELS. HALLETT D. ELLS, Kansas City, Mo., assignor of one-half to Edward E. McKee, Kansas City, Kans. Filed Nov. 3, 1913. Serial No. 798,836. (Cl. 21—8.)

1. A chock provided with a body adapted to engage the tread of the tire of a wheel, said body having a downwardly extending projection adapted to engage the ground for retarding revolving of the wheel, an arm pivoted to said body and adapted to be swung to a closed position in engagement with the rim of the wheel, and releasable means for locking said arm in the closed position.

2. A chock having a body adapted to clamp the tread of the tire of a wheel, said body having a downwardly and obliquely extending projection for engaging the

ground, an arm pivoted to one side of said body and adapted to embrace the rim of the wheel for holding the



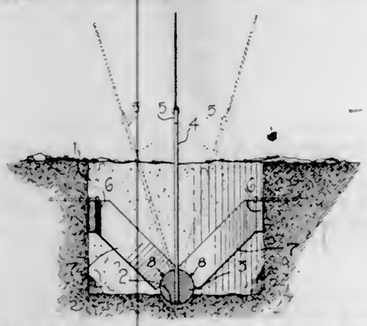
body clamped to the tire, and releasable means for locking the free end of said arm to the opposite side of said body.

1,108,157. HAIR-DYE. RICHARD ERNST, New York, N. Y. Filed Sept. 23, 1913. Serial No. 791,332. (Cl. 167—5.)

1. A hair dye substantially as described, having the combination of burnt sugar, pyrogallol, and logwood.

2. A hair dye substantially as described, having a combination of burnt sugar, pyrogallol, and logwood in a powder form adapted to form a creamy mixture on the addition of water.

1,108,158. LAND-ANCHOR. GEORGE HENRY EVANS, Memphis, Tenn. Filed Jan. 23, 1914. Serial No. 813,947. (Cl. 189—92.)

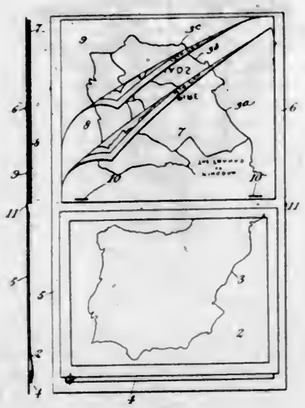


1. A land anchor of the character described comprising an elongated beam substantially circular in cross section, elongated flat members, spaced parallel flat arms projecting from the members on an incline disposed transversely of the members, the free extremities of said arms being adapted to freely contact with the periphery of the beam, and a rod projecting from the beam at a point intermediate the engagement of the arms with the beam.

2. A land anchor of the character described comprising an elongated beam substantially circular in cross section, elongated flat members, spaced parallel flat arms projecting from the members on an incline disposed transversely of the members, the free extremities of said arms being adapted to freely contact with the periphery of the beam, and a rod projecting from the beam at a point intermediate of the engagement of the arms with the beam, the ends of the arms adapted to contact with the beam being recessed.

1,108,159. MAP. MARIA EWING, Tarrytown, N. Y. Filed May 21, 1913. Serial No. 768,928. (Cl. 35—6.)

1. In an article of the class described, the combination with a hinged cover, of a pair of map sheets one being a relatively opaque base sheet secured at its outer edge to an outer edge of the cover and the other being a transparent sheet hinged at its inner edge near the hinge of the cover and containing a map of like outline to said base map and having within said outline indications differing from those of said base map, said transparent map being adapted to be swung over on to the base sheet to bring its map outline into registration with that of said base map and also adapted to be swung under said base map and covered thereby.



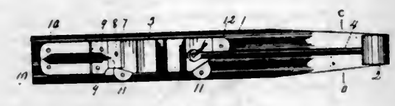
2. In an article of the class described, the combination with a hinged cover, of a pair of map sheets one being a relatively opaque base sheet hinged at its outer edge to an outer edge of the cover for swinging movement, and the other being a transparent sheet hinged at its inner edge near the hinge of the cover and containing a map of like outline to said base map and having within said outline indications differing from those of said base map, said transparent map being adapted to be swung over on to the base sheet to bring its map outline into registration with that of said base map and also adapted to be swung under said base map and covered thereby.

3. In an article of the class described, the combination with a hinged cover, of a relatively opaque base sheet secured at its outer edge to an outer edge of the cover and containing a base map, and a plurality of transparent sheets hinged at their inner edges near the hinge of the cover and each containing a map of like outline to said base map but having within said outline indications differing from those of every other map, each of said transparent maps being adapted to be swung over on to the base sheet to bring its map outline into registration with that of said base map.

4. In an article of the class described, the combination with a hinged cover, of a relatively opaque base sheet hinged at its outer edge to an outer edge of the cover for swinging movement and containing a base map, and a plurality of transparent sheets hinged at their inner edges near the hinge of the cover and each containing a map of like outline to said base map but having within said outline indications differing from those of every other map, each of said transparent maps being adapted to be swung over on to the base sheet to bring its map outline into registration with that of said base map.

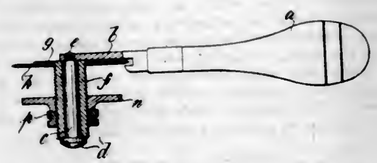
5. In an article of the class described, the combination with a hinged cover, of a relatively opaque base sheet hinged at its outer edge to an outer edge of the cover for swinging movement and containing a base map, and a plurality of transparent sheets hinged at their inner edges along a common line near the hinge of the cover and each containing a map of like outline to said base map but having within said outline indications differing from those of every other map, each of said transparent maps being adapted to be swung over on to the base sheet to bring its map outline into registration with that of said base map.

1,108,160. NON-SKID METAL SLEIGH-RUNNER. THOMAS J. FIELD and IVER SIMLEY, Black Earth, Wis. Filed Apr. 17, 1914. Serial No. 832,620. (Cl. 21—48.)



A metal sleigh runner comprising an eye or socket at the front end thereof, a concave downwardly curving nose, a corrugated bottom or tread with the outer edges turned downward presenting substantially vertical outer edges to the road bed, in combination with a knee mounted on said runner, a draft rod extending from said knee to the front end of said runner, a plate connecting the rear side of said knee to the rear end of said runner, a plate connecting the front side of said knee to said runner, rivets or means for securing together the several members as described.

1,108,161. DEVICE FOR CUTTING WALL-PAPER. WILLIAM FIELD, Penge, England, assignor to James Parkin, London, England. Filed Sept. 8, 1913. Serial No. 788,637. (Cl. 164—84.)



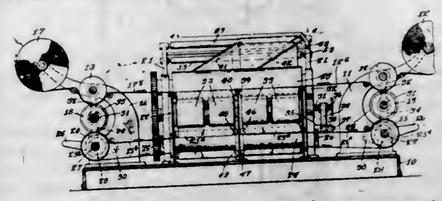
1. In a device for cutting wall paper, the combination of a handle, a flattened metal rod carried by said handle, a pin screwed into said flattened rod, a sleeve rotatable upon said pin and provided with an external screw thread, a rotary cutter fixed on said sleeve, a gaging roller adapted to screw on to said sleeve and to be adjusted at various distances from the said rotary cutter, a locking nut adapted to screw on to the said sleeve and to lock the gaging roller after adjustment, and an enlarged head to said pin for holding the sleeve in position on said pin substantially as described.

2. In a device for cutting wall paper the combination of a handle, a flattened metal rod on said handle, a pin screwed into said flattened rod, a sleeve rotatable upon said pin and furnished with an external screw thread on the exterior thereof and with a flange at the end adjacent to the flattened rod, a rotary cutter adapted to be passed on to said sleeve, screws screwing through the flange on the sleeve and into the blade of the cutter for holding same in position, a gaging roller provided with an internally screw threaded central hole and adapted to screw on to the sleeve so that its distance from the rotary cutter can be adjusted, a lock nut adapted to screw on to the sleeve and to lock the gaging roller in position after adjustment and an enlarged head to the fixed pin for holding the sleeve in position substantially as described.

1,108,162. PRINTING-PRESS. JOSEPH L. FIRM, Berwyn, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 18, 1913. Serial No. 785,395. (Cl. 101—124.)

1. The combination of a form cylinder, an impression cylinder coacting therewith, and means for moving said cylinders slightly toward and from each other whereby a printing plate may readily be slipped longitudinally between said cylinders into position upon said form cylinder suitable clearance being provided to enable the plate to be positioned in alinement with the form cylinder at one end preparatory to being slipped into position thereon between said two cylinders.

2. The combination of a frame, a form cylinder revolubly mounted therein, and an impression cylinder revolubly mounted in said frame and movable toward and from said form cylinder whereby a printing plate may readily be slipped longitudinally between said cylinders into position upon said form cylinder suitable clearance being provided to enable the plate to be positioned in alinement with the form cylinder at one end preparatory to being slipped into position thereon between said two cylinders.



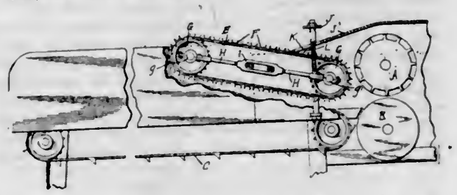
3. The combination of a form cylinder, two impression cylinders coacting therewith, and means for supporting said cylinders adapted to permit of a longitudinally-slotted tubular printing plate being slipped longitudinally upon said form cylinder with its slot engaging said form cylinder and one of said impression cylinders at their point of contact, the body of said plate being passed between the form cylinder and the other of said impression cylinders.

4. The combination of a form cylinder, two impression cylinders coacting therewith, and means for moving said form cylinder and one of said impression cylinders slightly from each other whereby a longitudinally-slotted printing plate may readily be slipped longitudinally between said last-mentioned cylinders into position upon said form cylinder with its slot between said form cylinder and the other of said impression cylinders.

5. The combination of a frame, a form cylinder revolubly mounted therein, an impression cylinder revolubly mounted in said frame in position to coact with said form cylinder, and a second impression cylinder revolubly mounted in said frame and movable toward and from said form cylinder to permit of a longitudinally-slotted tubular printing plate being slipped longitudinally between said last-mentioned cylinders into position upon said form cylinder with its slot between said form cylinder and the other of said impression cylinders.

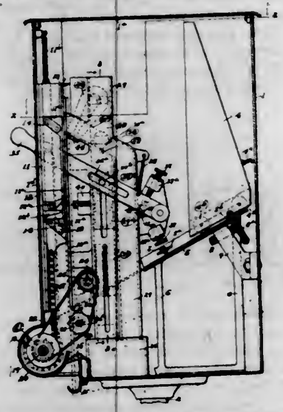
[Claims 6 to 17 not printed in the Gazette.]

1,108,163. FEEDING DEVICE FOR FEED-CUTTERS. ORLANDO C. FRICK, Manitowoc, Wis., assignor to Smalley Manufacturing Company, Manitowoc, Wis., a Corporation of Wisconsin. Filed Feb. 14, 1913. Serial No. 748,318. (Cl. 193—14.)



In a floating auxiliary conveyer of the belt type, the combination with a fixed, forward, driving shaft, a rear end shaft floated from said driving shaft by adjustable strut rods and adapted to raise and lower under varying pressure of the material, and means for providing resilient downward pressure on the floating end of said conveyer,—of supporting guides journaled upon the driving shaft at one end and provided with open ended slots at the other wherein said floating shaft is mounted, endless conveyer chains carried by said shafts, and bearing cross slats adapted to travel along the upper and lower margins of said guides.

1,108,164. COIN-OPERATED VENDING-MACHINE. WILLIAM S. GLINES, Cleveland, Ohio. Filed Apr. 27, 1914. Serial No. 834,605. (Cl. 211—8.)



1. In a vending machine provided with a vertically extending delivery front, gravity supply mechanism therein in coöperative relation to said front, linked plunger sections and paper feed sections within said front and vertically movable therein, and means for depressing said plunger sections whereby said feed sections are moved toward said gravity supply mechanism.

2. In a vending machine, a pair of spring resisted vertically movable plunger sections, link members connected thereto, paper feed sections connected to said link members, and adapted to be moved outwardly from said vertically movable plunger sections when the latter are depressed, and gravity feed mechanism in coöperative relation to said spring resisted plunger sections.

3. In a newspaper vending machine, a casing provided at its front with spring resisted vertically movable plunger sections, a magazine chute adjustably mounted therein and inclined toward said plunger sections, a gravity follower member mounted above said inclined chute and adapted to travel toward said plunger sections, and depressing mechanism operatively connected to said plunger sections at the front of said base casing.

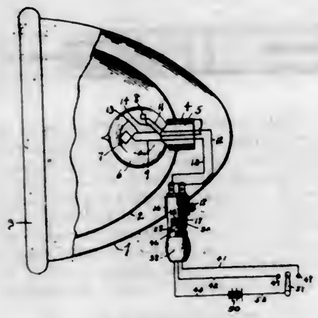
4. In a newspaper vending machine, a casing provided with a vertically extending transparent front, and plunger and paper feed sections therein, gravity feed supply mechanism including an inclined magazine chute inclined toward and spaced from said transparent front affording an intermediate feed ejection slot, means for adjusting said inclined chute to adjust said slot, and plunger mechanism operatively connected to said plunger sections.

5. In a newspaper vending machine, a casing provided with a vertically extending transparent delivery front, spring resisted paper feed plunger sections within said front, a magazine chute adjustably mounted within said casing and inclined toward said front, means for adjusting said chute toward and from said front, and a gravity feed follower member mounted above said inclined chute adapted to carry the supply against and toward said paper feed plunger sections in a vertical position.

[Claims 6 to 9 not printed in the Gazette.]

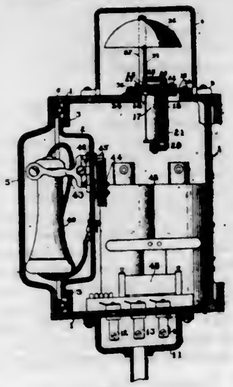
1,108,165. CONNECTOR. CHARLES E. GODLEY, Detroit, Mich., assignor to Edmunds and Jones Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 9, 1914. Serial No. 823,316. (Cl. 173—328.)

1. In a connector for electric wires the combination of a female member consisting of a metal shell, a core of insulating material, a binding post slidably mounted in the core, and a spring to normally hold the post inwardly; and a male member fitting within the shell and consisting of a body of insulating material, a plurality of posts mounted in the body, each formed to receive the end of a wire, one of the posts contacting with the shell and the other contacting end to end with the binding post; and means to secure the members together.



2. In a connector for electric wires, the combination of a female member consisting of a metal shell adapted to connect into an electric circuit, a core of insulating material within the shell, a pair of binding posts slidably mounted in the core, and springs on said posts; and a male member fitting within the shell and consisting of a cylinder of insulating material, a series of posts mounted in said cylinder, each formed to receive an end of a wire, one of the posts contacting with the shell and the other two contacting with the adjacent ends of the spring pressed posts; said shell formed with notches, and a pin carried by the cylindrical male member adapted to engage in the notches to secure the members together.

1,108,166. MOISTURE-PROOF TELEPHONE SET. CHARLES E. HAGUE, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 25, 1910. Serial No. 563,260. (Cl. 179—178.)



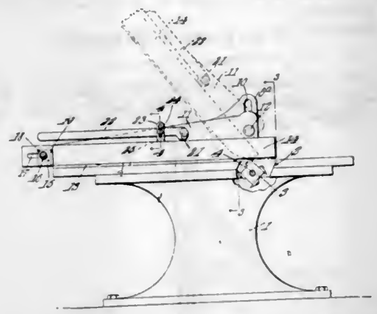
1. In a telephone set, the combination with a water and gas proof casing, of a polarized ringer mechanism, a permanent magnet for said mechanism, said magnet being in two pieces, one piece within the waterproof casing and the other piece outside the waterproof casing, said pieces being joined by connectors of magnetic material and an armature outside the casing polarized by the portion of the permanent magnet extending outside the casing.

2. In a telephone set, the combination with a plate, of an electromagnet and a permanent magnet on one side of said plate and an armature and an extension for said permanent magnet on the other side of said plate, said plate forming a water and gas proof partition between the armature and the electromagnet.

3. In a telephone set, the combination with a non-magnetic plate, of a ringer coil having its core extending through said plate, a nut on the end of said core to secure said core and said plate together, a permanent magnet extending from the other end of said core to said plate, a magnetic extension for said permanent magnet on the opposite side of said plate, binders of magnetic material extending through portions of said magnets and said plate, and an armature adapted to be polarized by said permanent magnet.

4. In a telephone set, the combination with a non-magnetic plate, of a pair of electro-magnets secured to one side of said plate, an armature secured to the other side of said plate in position to be actuated by said electro-magnets, a permanent magnet on the former side of said plate having a portion resting against that side of said plate, an extension for said permanent magnet on the latter side of the plate for polarizing said armature, and magnetic means for securing the extension to said permanent magnet.

1,108,167. PICKET SHARPENER AND SHAPER. WILLIAM C. HAMMOND, Sault Ste. Marie, Ontario, Canada. Filed Dec. 1, 1913. Serial No. 804,021. (Cl. 144—146.)

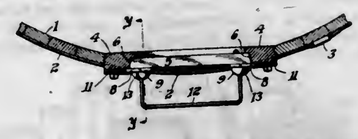


1. The combination with a table having an opening, and a cutter working within the opening, of an attachment comprising a base plate mounted on the table adjoining the opening, a fulcrum member carried by the base plate above the cutter, a carrier fulcrumed to the fulcrum member and extending away from the said opening, and means carried by the carrier for holding a picket with its end protruding above the cutter for engagement therewith when the carrier is swung away from the table.

2. The combination with a table having an opening, and a cutter working within the said opening, of an attachment comprising a base plate adjustably mounted upon the table to move to and from the said opening, the base plate having a standard above the cutter, a fulcrum member vertically adjustable along the standard, a carrier fulcrumed to the fulcrum member and extending away from the said opening, and means carried by the carrier for holding a picket with its end protruding above the cutter, whereby the end of the picket will engage the cutter when the carrier is swung upwardly away from the table.

3. The combination with a table having an opening, and a cutter working within the opening, of an attachment comprising a base plate mounted upon the table adjoining the said opening, and having a longitudinal upstanding flange, a fulcrum member carried by one end of the said flange above the cutter, a carrier plate disposed adjacent the said flange, one end of the carrier plate being fulcrumed to the said fulcrum member, and the carrier plate extending away from the said opening, the carrier plate having a lower ledge forming a picket rest, and clamping means carried by the carrier plate above the said ledge for holding a picket thereon with one end of the picket projecting over the cutter.

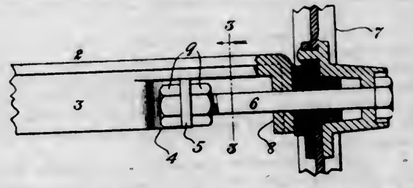
1,108,168. DOOR-FASTENING DEVICE. ELBERT E. HAWKINS, Unadilla, N. Y. Filed Oct. 17, 1913. Serial No. 795,744. (Cl. 20—1.4.)



1. In a device of the character stated, a suitable frame, a door adapted to fit therein, keepers fixed to said frame at each side of said door, a pair of latches slidably mounted on said door and each having a cup shaped portion provided with a cam slot, said latches being adapted to engage the respective keepers, and a ball pivoted at each end to said door and within the cup-shaped portions of said latches, said ball also passing through the respective cam slots whereby movement of said ball simultaneously actuates said latches to engage or disengage said keepers.

2. In a device of the character stated, a suitable frame, a door adapted to fit therein, a keeper fixed to said frame at each side of said door, a pair of latches slidably mounted on said door and each adapted to engage a keeper, said latches having a cup shaped portion provided with a cam slot, a pair of U-shaped clamps secured to said door and projecting within the respective cup shaped portions of said latches, and a ball having its ends passing respectively through said cam slots and pivoted to the respective clamps within the cup shaped portions, whereby the pivot bearings of said ball are shielded and the ball is always freely movable to cause said latches to be moved into or out of engagement with said keepers.

1,108,169. WAGON. CHARLES M. HAYNES, Newark, N. J. Filed Dec. 13, 1912. Serial No. 736,580. (Cl. 21—5.)



1. An axle having a part slit therefrom and bent to constitute a support, and also having a second part bent therefrom to constitute a second support, the two supports having portions approximately in parallelism which portions have registering spindle receiving perforations.

2. An axle having a portion cut therefrom and bent to constitute a support and a wheel supporting spindle connected with the body of the axle and also with the support, the spindle having projections thereon engaging opposite sides of said support.

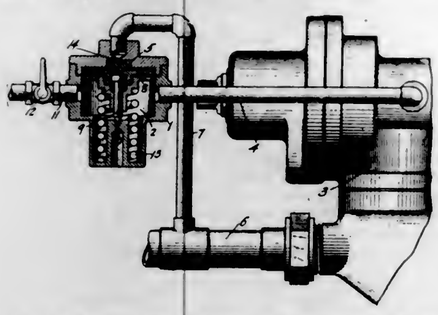
3. An axle of T-form in cross section, a portion of the web thereof being cut therefrom and bent to constitute a support, the body of the axle being bent to constitute a second support, the two supports having approximately registering perforations.

4. An axle of T-form in cross section, the web of the T being bent in substantially U-shape, the head of the T being downturned, the downturned portion and the outer branch of the U-shape bent portion having perforations which are in approximate registration.

1,108,170. PRESSURE-RETAINING-VALVE DEVICE. THEODORE A. HEDENDAHL, Denver, Colo., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1911. Serial No. 602,820. (Cl. 188—12.)

1. In a fluid pressure brake, the combination with a train pipe and a valve device operated by a reduction in

train pipe pressure for effecting an application of the brakes, of a pressure retaining valve device comprising a valve for controlling the release of air from the brake cylinder and a movable abutment subject in one direction to brake cylinder pressure tending to open the valve and in the opposite direction to train pipe pressure tending to close the valve.



2. In a fluid pressure brake, the combination with a train pipe and triple valve device, of a valve for controlling the release of air from the brake cylinder through the triple valve exhaust port, a movable abutment subject in one direction to train pipe pressure tending to close the valve and in the opposite direction to brake cylinder pressure tending to open the valve, and means for neutralizing the effect of the train pipe pressure on said abutment to a predetermined extent.

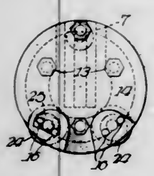
3. In a fluid pressure brake, the combination with a train pipe and triple valve device, of a valve for controlling the release of air from the brake cylinder through the triple valve exhaust port, a movable abutment subject in one direction to train pipe pressure tending to close the valve and in the opposite direction to brake cylinder pressure and the pressure of a spring.

4. In a fluid pressure brake, the combination with a train pipe and triple valve device, of a pressure retaining valve device subject to train pipe pressure for controlling the exhaust of air from the brake cylinder and operated to retain a relative degree of pressure in the brake cylinder corresponding with the degree to which the train pipe pressure is increased.

5. In a fluid pressure brake, the combination with a train pipe and triple valve device operated by variations in train pipe pressure to apply the brakes, of a pressure retaining valve device subject to train pipe pressure for controlling the exhaust of air from the brake cylinder and operating to retain pressure in the brake cylinder according to the amount of increase in train pipe pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,108,171. FLUE-CUTTER. BERNHARDT HENRIKSON, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 815,018. (Cl. 81—194.)



1. A rotary flue cutter comprising a tool stock, an outwardly movable cutter mounted on one side of the tool stock, fluid pressure operated mechanism for moving the cutter outwardly, and thrust rollers mounted in the tool stock on the opposite side thereof, the cutter and rollers being in the same plane which is transverse of the tool stock and at right angles to the axes of such cutter and rollers.

2. A rotary flue cutter comprising a tool stock, an outwardly movable cutter therein, fluid pressure operated mechanism for moving the cutter outwardly, and a pair of thrust rollers mounted in the tool stock on the side opposite the cutter and on either side of a diametrical line passing through the cutter, the cutter and rollers being in the same plane which is transverse of the tool stock and at right angles to the axes of such cutter and rollers.

3. A rotary flue cutter comprising a tool stock, an outwardly movable cutter therein, fluid pressure operated mechanism for moving the cutter outwardly, and thrust rollers mounted in the tool stock opposite the cutter, and having adjustable bearings.

4. A rotary flue cutter comprising a tool stock, an outwardly movable cutter therein, fluid pressure operated mechanism for moving the cutter outwardly, eccentric bearing blocks adjustably mounted in the tool stock, and a thrust roller having gudgeons mounted to rotate in the blocks.

5. A rotary flue cutter comprising a tool stock, an outwardly movable cutter therein, fluid pressure operated mechanism for moving the cutter outwardly, eccentric bearing blocks adjustably mounted in the tool stock, and a thrust roller having gudgeons mounted to rotate in the blocks, said blocks each having a projecting pin and the tool stock having a recess to receive a block and a plurality of holes in such recess in one of which holes such pin is received.

[Claims 6 to 14 not printed in the Gazette.]

1,108,172. GRAIN-BINDING TOOL. ALPHONS HIRTH, Oberburnhaupt, Germany. Filed May 21, 1913. Serial No. 768,996. (Cl. 100—31.)

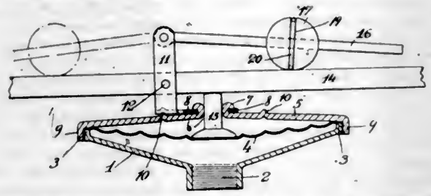


As an improved article of manufacture, a binding tool comprising a hollow, longitudinally slotted handle recessed at one of its ends at the slotted side thereof to form projections for retaining the knotted end of a binding cord and having an aperture at said slotted side near its opposite end for the reception of the other hooked end of said binding cord.

1,108,173. REGULATOR. WILLIAM HODGSON and EDWARD J. DEEGAN, New York, N. Y. Filed Nov. 25, 1913. Serial No. 802,888. (Cl. 60—2.)

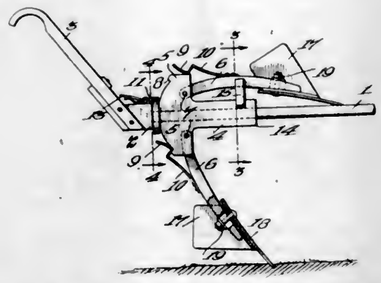
1. A regulator composed of a dished base provided with means for securing it to a fluid conducting pipe, and a rim, a diaphragm extending over the dished part of the base and the rim, a cover of steel plate with a flange at its edge, pressed so tightly upon the rim of the diaphragm and the base as to form a steam tight joint therewith, together with a lever and means for transmitting the movement of the diaphragm to the lever, all substantially as set forth.

2. A regulator composed of a dished base provided with means for securing it to a fluid conducting pipe, and a rim, a diaphragm extending over the dished part of the base and the rim, a cover secured to the base and holding the diaphragm between, an aperture through said cover, a lever sustaining bracket swiveled about said aperture, a lever pivoted in said backet and means for transmitting the movement of the diaphragm to the lever, all substantially as set forth.



3. A regulator provided with a pivoted arm carrying a weight, arranged as described, to rest upon the lever and adapted to be swung to the respective sides of the lever bearing, all substantially as set forth.

1,108,174. PLOW. ELI W. HOLLINGSWORTH, Zirconia, N. C. Filed Apr. 30, 1913. Serial No. 764,722. (Cl. 97—27.)



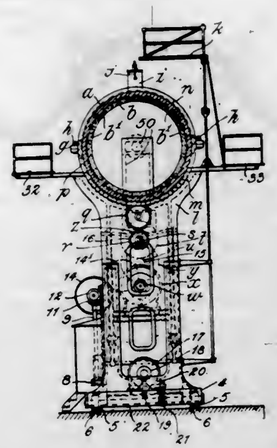
1. In a reversible plow, a beam, a sleeve rotatable thereon, standards foldably mounted upon said sleeve, means for holding said sleeve with one of said standards in operative position, and means holding such standard against movement upon its pivot when in such operative position.

2. In a reversible plow, a beam, a sleeve rotatable thereon, standards foldably mounted upon said sleeve, means for holding said sleeve with one of said standards in operative position, means holding such standard against movement upon its pivot when in such operative position and means on said sleeve for detachably receiving the other standard when in its folded inoperative position above the beam and out of the line of vision of the operator.

3. In a reversible plow, a beam, a sleeve rotatably mounted thereon and provided at its rear end with oppositely disposed projections each having a recess, oppositely disposed standards independently pivoted on said projections and each carrying a plow, means for holding said sleeve against rotation with either of said standards extended downwardly, a spring mounted on each standard and having an angular portion to engage its corresponding recess and means on the sleeve to receive the uppermost standard when folded and hold it out of the line of vision of the operator.

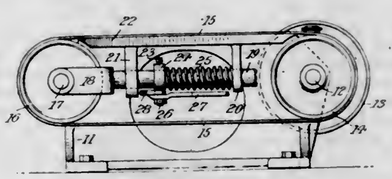
4. In a reversible plow, a beam, a sleeve freely rotatable thereon, means for automatically locking said sleeve in adjusted position, standards pivotally mounted at diametrically opposite points on said sleeve, means for automatically locking each standard to the sleeve in its depending operative position, and means on the beam independent of said sleeve and bearing against the end thereof to receive the inoperative standard folded substantially parallel with the beam.

1,108,175. SMELTING-FURNACE. THOMAS HOWARD HOLROYD, Southfields, England. Filed Dec. 21, 1912. Serial No. 738,029. (Cl. 75—57.)



In a device of the kind described, a carriage, a cradle mounted in tilting movement on the carriage, a furnace mounted on the cradle, an operating platform hinged to said cradle, and a link connection between the operating platform and the carriage whereby the platform is maintained in horizontal position when the cradle is tilted.

1,108,176. GRINDING-MACHINE. AUGUST HORMEL, New York, N. Y. Filed Feb. 7, 1914. Serial No. 817,104. (Cl. 51—12.)

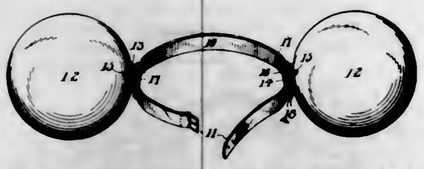


1. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, spring-controlled means for forcing the second drum away from the first drum, thereby tightening the apron, and means for tilting the second drum relatively to the first drum.

2. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, spring-controlled means for forcing the second drum away from the first drum, means for tilting the second drum relatively to the first drum, and means for rendering inactive the first named means.

3. A grinding machine of the character described, comprising a frame, a first drum journaled therein, a second drum, an endless grinding apron engaging said drums, a plunger having a fork in which the second drum is journaled, a table arranged below the upper apron run, a pair of bearings engaged by the plunger, a collar adjustably secured to the plunger, a spring interposed between said collar and one of the bearings, an eccentric fulcrumed to the collar and adapted to engage the other bearing, and a set screw tapped into the frame and engaging the fork, whereby the second drum may be tilted relatively to the first drum.

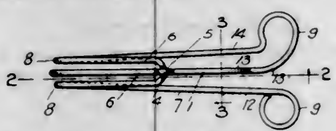
1,108,177. LIFE-PRESERVER. GEORGE HORTY, Elkhart, Ind. Filed June 1, 1914. Serial No. 842,145. (Cl. 9—17.)



1. A life preserver comprising a body strap, inflatable bags carried thereby, each of said bags provided with a solid neck extension, a radial flange carried by the outer end of the solid neck extension, a plate positioned on the opposite face of the strap in alinement with the neck flange and fastening means passing through the plate, strap and flange.

2. In a life preserver, a body harness comprising a single strap adapted to be positioned transversely about the body, inflatable bags carried by said strap, each bag provided with a solid neck extension circular in cross section, a flange carried by the outer end of the neck portion rectangular in plan view, a rectangular reinforcing plate positioned at the opposite side of the strap in alinement with the neck flange, fastening means extending through the plate, strap and flange and an inflating valve positioned in the bag at a point spaced from the neck.

1,108,178. GARMENT-FASTENING HOOK. ELIZABETH E. HOWELL, Denver, Colo. Filed Jan. 14, 1914. Serial No. 812,038. (Cl. 24—228.)



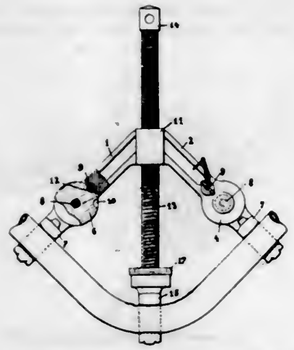
1. A garment hook comprising a shank and a bill connected by an eye-engaging bend, the said shank being composed of three members and the said bill being formed of continuations of the same, the middle shank member having adjacent the said bend, a thread receiving recess formed by a downward bend, and the said member being bent upwardly for placing the lower surface of its portion in which the recess is formed, in the plane of the lower surfaces of the outer shank members.

2. A garment hook composed of a single length of wire including a shank composed of three members and a bill formed of continuations of the same, the outer members and their continuations being disposed in substantially parallel planes, the outer ones of the said continuations being integrally connected by a bend at the rearward end of the bill, the middle one of the said continuations being connected at the said bend by an eye formed at its extremity, and the transverse portion of the said bend being arched to provide a recess which disposes the lower portion of the eye outside the space between the bill and the shank.

3. A garment hook comprising a shank composed of three members and a bill formed of three-members which are continuations of the shank-members with which they are respectively connected by bends, the bends between the outer members of the bill and the shank extending rearwardly of the bend between the middle members of the same to engage, exclusive of the latter, with an eye into which the bill is inserted, and the middle shank-member having at its extreme forward end, a thread receiving recess formed by an abrupt downward bend the forward part of which forms an extension of the bend between the said shank-member and the respective bill-member and the opposite part of which provides a shoulder capable of preventing displacement of threads disposed in the recess, rearwardly along the shank.

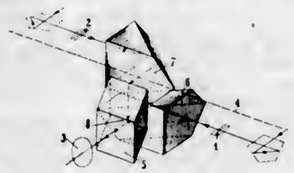
4. A garment hook comprising a shank composed of three members and a bill formed of three members which are continuations of the shank-members with which they are respectively connected by bends, the bends between the outer members of the bill and the shank extending rearwardly of the bend between the middle members of the same to engage exclusive of the latter, with an eye into which the bill is inserted, the middle shank-member having at its extreme forward end, a thread receiving recess formed by an abrupt downward bend the forward part of which forms an extension of the bend between the said shank-member and the respective bill-member and the opposite part of which provides a shoulder capable of preventing displacement of thread disposed in the recess, rearwardly along the shank, and the said middle shank member being bent upwardly for placing the lower surface of its portion in which the recess is formed, in the plane of the lower surfaces of the outer shank-members.

1,108,179. PIPE-BENDING DEVICE. JACQUES HUBER, Zurich, Switzerland. Filed Nov. 27, 1912. Serial No. 733,895. (Cl. 153—38.)



A pipe bending device of the character described comprising in combination, a block having a threaded bore, a threaded spindle passing through said block, two arms rigidly connected to said block and having bifurcated outer ends, hooks adapted to parallelly engage the pipe walls and pivotally secured by disks provided with notches at their outer circumference between said bifurcated ends of said arms, bolts passing through said notches for securing said hooks in their adjusted position to said arms, a hook connected by swivel joint joined to said spindle and means for turning said spindle to operate said hooks for holding and bending a pipe.

1,108,180. BASE-LINE TELEMETER. HEINRICH JACOB, Steglitz, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed Nov. 10, 1908. Serial No. 461,862. (Cl. 88—27.)



1. In a base line telemeter, two objectives, one ocular, reflectors and a prismatic device, the said reflectors arranged in the path of the rays from the objectives and adapted to transmit such rays through the prismatic device, and said prismatic device comprising two parallel

reflecting surfaces arranged in planes at angles to the measuring triangle, whereby a coincidence of rays from said reflectors occurs in said prismatic device, producing two adjacent images in the ocular.

2. In a base line telemeter two objectives, one ocular, an image uniting ocular prism device and reflectors inserted in the path of the rays and adapted to throw the rays coming from said objectives on said ocular prism device, said ocular prism device being provided with two surfaces substantially parallel with each other and further provided with two surfaces likewise substantially parallel with each other but obliquely to the first named surfaces, the pairs of surfaces arranged in such a manner that one pair of surfaces is perpendicular both to the axis of the ocular prism device and to the axis of the rays thrown thereon by said reflectors in rear of the prism device, whereas the other pair arranged obliquely to the first named pair forms two reflecting surfaces whereby a coincidence of rays from said reflectors occurs in said ocular prism device and thus two adjacent partial images are produced in the field of view of the ocular.

3. In a base line telemeter two objectives, one ocular, an image uniting ocular prism device and reflectors inserted in the path of the rays and adapted to throw the rays coming from said objectives on said ocular prism device, said ocular prism device provided with two surfaces substantially parallel with each other and with the base line of the instrument and further provided with two surfaces likewise substantially parallel with each other and with the base line but obliquely to the first named surfaces, the pairs of surfaces arranged in such a manner that one pair of surfaces is perpendicular both to the axis of the ocular in front of said ocular prism device and to the axis of the rays thrown thereon by said reflectors in rear of the prism device, whereas the other pair arranged obliquely to the first named pair forms two reflecting surfaces whereby a coincidence of rays from said reflectors occurs in said ocular prism device and thus two adjacent partial images are produced in the field of view of the ocular.

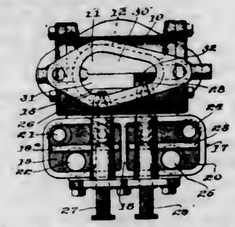
4. In a base line telemeter two objectives, one ocular, an image uniting ocular prism device, and reflectors inserted in the path of the rays and adapted to throw the rays coming from said objectives on said ocular prism device, the last named prism device consisting of a rhombohedral prism, that is to say a prism with two pairs of parallel surfaces inclined to each other, and a further prism contacting with one of its surfaces with one surface of said rhombohedral prism and having a further surface in substantially the same plane as that surface of the rhombohedral prism which is remote from the ocular, the contact surface of the two prisms, forming the ocular prism, intersecting the image plane of the ocular and being in part provided with a reflecting coating, the edge of which forms the dividing line of the two parts of the image produced by the two objectives.

5. In a base line telemeter two objectives, one ocular, an image uniting ocular prism device and reflectors inserted in the path of the rays and adapted to throw the rays coming from said objectives on said ocular prism device, the last named prism device comprising two prisms contacting with each other, the contact surface crossing an image plane of the instrument and being in part provided with a reflecting coating the edge of which forms the dividing line of the two parts of the image produced by the two objectives, said edge being parallel to the plane of the masuring triangle and perpendicular to the axis of the rays which pass through that part of said contact surface which is not provided with a reflecting coating; so as to appear sharp throughout its length.

[Claims 6 to 9 not printed in the Gazette.]

1,108,181. CARBURETER. EDMUND J. KANE, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed June 30, 1913. Serial No. 776,623. (Cl. 48—155.1.)

1. A carbureter for internal combustion engines, said carbureter having an air passageway, liquid fuel and water inlets directly associated with said air passageway, and means for localizing engine vacuum around the fuel inlet to the exclusion of the water inlet.



2. A carbureter for internal combustion engines, said carbureter having an air passageway, fuel and water inlets directly associated with said air passageway, and means for localizing engine vacuum around one of said inlets to the exclusion of the other.

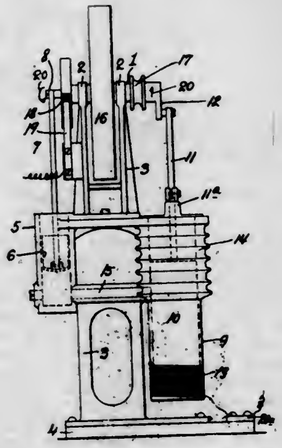
3. A carbureter for internal combustion engines, said carbureter having an air passageway, fuel and water inlets, directly associated with said passageway, and means for first localizing engine vacuum around the fuel inlet and then around the fuel and water inlets as the load on the engine increases.

4. A carbureter for internal combustion engines, said carbureter having an air passageway, fuel and water inlets directly associated with said passageway, and means for localizing successively a vacuum around the fuel and water inlets as the engine load increases.

5. A carbureter for internal combustion engines, said carbureter having an air passageway of irregular section, fuel and water inlets associated with different parts of said passageway, and a throttling valve in said passageway by means of which a vacuum may be localized around one of said inlets to the exclusion of another.

[Claims 6 to 9 not printed in the Gazette.]

1,108,182. ENGINE OR MOTOR. WILLIAM V. D. KELLEY, Newark, N. J. Filed Aug. 17, 1912. Serial No. 715,530. (Cl. 60—39.)



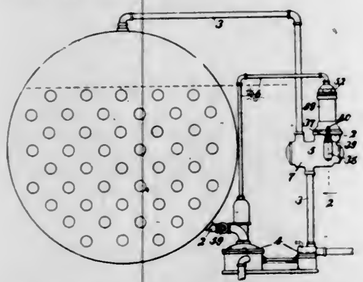
1. In a device of the character described, a shaft, a power cylinder, a piston tightly fitted in said cylinder and connected to said shaft, an expansion cylinder, a displacing piston element loosely movable in said expansion cylinder and connected to said shaft, means for effecting communication of the actuating medium between said power cylinder and said expansion cylinder, and for cooling the actuating medium in the upper portion of said expansion cylinder, an electric heating coil carried by the lower end of said expension cylinder for heating the actu-

ating medium contained therein, and a switch mechanism driven by the shaft for cutting said heating coil into and out of circuit at predetermined times in each revolution and for a predetermined part of each revolution.

2. In a device of the character described, a shaft, a power cylinder, a piston tightly fitted in said cylinder and connected to said shaft, an expansion cylinder, a displacing piston element loosely movable in said expansion cylinder and connected to said shaft, means for effecting communication of the actuating medium between said power cylinder and said expansion cylinder, and for cooling the actuating medium in the upper portion of said expansion cylinder, an electric heating coil carried by the lower end of said expansion cylinder for heating the actuating medium contained therein, a switch mechanism driven by the shaft for cutting said heating coil into and out of circuit at predetermined times in each revolution and for a predetermined part of each revolution, and means in conjunction with said switch for preventing complete opening of the circuit and arcing at the switch.

3. In a device of the character described, a shaft, a power cylinder, a piston tightly fitted in said cylinder and connected to said shaft, an expansion cylinder, a displacing piston element loosely movable in said expansion cylinder and connected to said shaft, means for effecting communication of the actuating medium between said power cylinder and said expansion cylinder, and for cooling the actuating medium in the upper portion of said expansion cylinder, an electric heating coil carried by the lower end of said expansion cylinder for heating the actuating medium contained therein, and a switch mechanism driven by the shaft for cutting said heating coil into and out of circuit at predetermined times in each revolution and for a predetermined part of each revolution, said heating coil being at the lower end of the heating chamber and in close contact therewith.

1,108,183. PUMP-GOVERNOR. KARL A. KENDRICK, Detroit, Mich. Filed Oct. 11, 1913. Serial No. 794,574. (Cl. 103—92.)

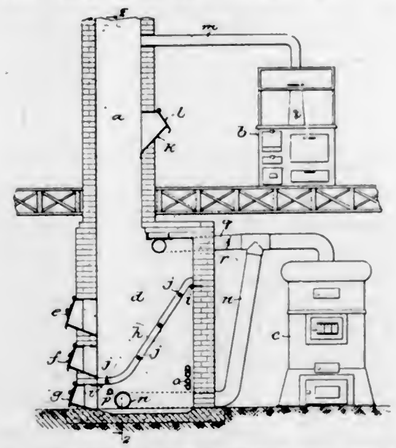


1. A pump governor comprising a retaining case, a steam chamber in said case having an induct and an educt port communicating therewith, a valve case within said chamber having ports communicating with said induct port, a valve journaled to rotate in said valve case and having ports adapted to communicate with the ports of said valve case and with said educt port, a pump pressure chamber adapted for connection with a pump, a spring tensioned piston contained within said chamber adapted to be actuated by said pump pressure, and means adjustably fulcrumed in said case and pivotally connecting said piston with said valve for imparting rotary motion thereto.

2. In a pump governor the combination of a retaining case, a direct pressure steam chamber in said case having an induct and an educt port communicating therewith, a valve case within said chamber having ports communicating with said induct port, a valve journaled to rotate in said valve case and having ports adapted to communicate with the ports of said valve case and with said educt port, a pump pressure chamber adapted for connection with a pump, a spring tensioned piston contained within said chamber and adapted to be actuated by said pump pressure, a lever having a linked connection with said piston and with said rotatable valve, one end of said lever being pivoted to an adjustable fulcrum within said case, whereby said lever may be adjusted to set the ports of said valve with respect to the ports of said valve case.

3. In a pump governor, the combination of a retaining case, a direct steam pressure chamber in said case having an induct and an educt port comunicating therewith, a cylindrical valve case within said chamber having ports communicating with said induct port, a valve having ports adapted to communicate with the ports of said valve case and with said educt port seated to rotate in said valve case upon a valve stem journaled in said retaining case, a crank-arm attached to the end of said valve stem, a pump pressure chamber adapted for connection with a pump, a piston contained within said chamber and adapted to be actuated by said pump pressure, a compression coiled spring interposed between the end of said piston and the end wall of said chamber for retarding said piston against end movement by said pressure, a screw threaded stem seated to rotate in said case, a screw threaded nut movably carried on said stem, a lever fulcrumed at one end to said nut, a link pivotally connecting said lever with said crank-arm, and a link pivotally connected to the free end of said lever and to the end of said piston, whereby a reciprocal movement of said piston will impart a rotary movement to said valve.

1,108,184. GARBAGE AND REFUSE INCINERATOR. THEODORE KERNER, Milwaukee, Wis. Filed Apr. 15, 1912. Serial No. 690,977. (Cl. 110—18.)



1. A garbage and refuse incinerator comprising a chimney flue having a side door for the reception of the garbage or refuse and constituting a conduit for the garbage or refuse into a cremating chamber formed by a lateral enlargement of said flue at its lower end, said chamber having an overhanging wall at its top to one side of the flue leading therefrom, a refuse containing receptacle in the cremating chamber and lying below the overhanging wall and the flue leading from the chamber, and a by-pass leading from below the receptacle to above the same and at its upper end opening into the space above the refuse receptacle and beneath the overhanging wall.

2. A garbage and refuse incinerator comprising a chimney flue having a side door for the reception of the garbage or refuse and constituting a conduit for the garbage or refuse into a cremating chamber formed by a lateral enlargement of said flue at its lower end, said chamber having an overhanging wall at its top to one side of the flue leading therefrom, a refuse containing receptacle in the cremating chamber and lying below the overhanging wall and the flue leading from the chamber, a by-pass leading

from below the receptacle to above the same and at its upper end opening into the space above the refuse receptacle and beneath the overhanging wall, and means for warming the air in the incinerator and producing and maintaining an upward draft through the refuse receptacle and by-pass.

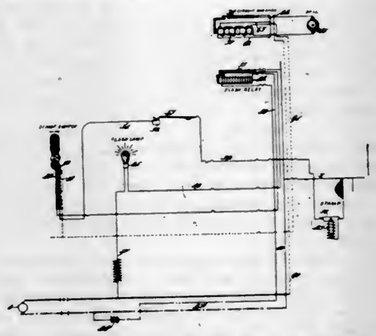
3. A garbage and refuse incinerator comprising a chimney flue having a side door for the reception of the garbage or refuse and constituting a conduit for the garbage or refuse into a cremating chamber formed by a lateral enlargement of said flue at its lower end, said chamber having an overhanging wall at its top to one side of the flue leading therefrom, a refuse containing receptacle in the cremating chamber and lying below the overhanging wall and the flue leading from the chamber, a by-pass leading from below the receptacle to above the same and at its upper end opening into the refuse receptacle and beneath the overhanging wall, fire, draft and ash doors above and below the refuse receptacle, and means for producing a current of warm air through said receptacle and by-pass.

4. A garbage and refuse incinerator comprising a chimney flue forming a garbage and refuse conduit and having an inwardly enlarging and downwardly inclined garbage and refuse chute opening into it and provided at its upper and smaller end with a self-closing door, said flue being enlarged laterally at its lower end to form a cremating chamber having an overhanging wall at its top to one side of the flue leading therefrom, a refuse containing receptacle in the cremating chamber spaced from the wall of the chamber to form a by-pass below the overhanging wall from the space below the receptacle into said flue, and means for warming the air and producing an upward draft in the incinerator through the refuse receptacle and by-pass.

5. A grabage and refuse incinerator comprising a chimney flue having a side door for the reception of garbage or refuse and constituting a conduit for the garbage or refuse into a cremating chamber formed by a lateral enlargement of said flue at its lower end, said chamber having an overhanging wall at its top to one side of the flue leading therefrom, a refuse containing receptacle in the cremating chamber spaced from the wall of the chamber to form a by-pass below the overhanging wall from the space below said receptacle into said flue, and a heater in communication with said chamber below the refuse containing receptacle.

[Claim 6 not printed in the Gazette.]

1,108,185. STORE-SERVICE-CREDIT-SYSTEM APPARATUS. CHARLES F. KETTERING, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Co., Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Feb. 17, 1906. Serial No. 301,707. (Cl. 179—2.)



1. A store service system having in combination with a telephone line including telephone sets, an electrically controlled stamping device, a circuit for same including a distant switch for operatively controlling the stamping device, and means for indicating by the operation of the switch the absence of an article to be marked.

2. A store service system having in combination with a means of communication, a stamping device, distant means for controlling the operation of said device and means at said distant controlling means for indicating the absence of an article to be marked when the controlling means is actuated.

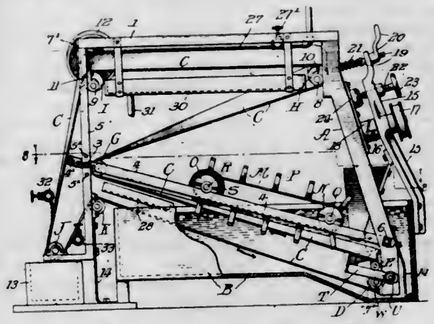
3. A store service system having in combination with a telephone line for communication, an electrically controlled stamp, an electric circuit and circuit closer for operatively controlling said stamp from a distance, and means at said circuit closer and controlled thereby for audibly announcing the absence of an article to be stamped when the circuit closer is operated.

4. A store service system having in combination with a means of communication, a stamp, means for controlling the operation of said stamp from a distance, means at the said controlling means giving warning of the absence of an article to be marked, and means at said controlling means for announcing the said absence when the warning means is unheaded and the controlling means operated.

5. A store service system having in combination with a telephone system, an electrically controlled stamp, a circuit closer distant from the stamp and having connections for controlling the operation of the latter, a local circuit including a lamp near the circuit closer, a relay for controlling the local circuit, and means regulated by the presence of the article to be marked for rendering the relay ineffective.

[Claims 6 to 28 not printed in the Gazette.]

1,108,186. BELT CONCENTRATING OR VANNING MACHINE FOR SEPARATING PULVERIZED ORES AND SIMILAR MATERIAL. ORRIN H. KING, Chicago, Ill., assignor to United States Concentrating Co., a Corporation of Illinois. Filed June 20, 1910. Serial No. 567,817. (Cl. 83—83.)



1. An ore concentrating or vanning machine, comprising a liquid containing receptacle, an endless movable member arranged to travel through said receptacle and be submerged during a part of its travel, frame members provided with rollers at their lower ends about which said endless member travels, the lower ends of said frame members being yieldingly mounted, means whereby said frame members are vibrated and vibrations imparted to the endless member, means for depositing material on said endless member, mechanism arranged adjacent to the point of deposit of said material whereby the material is spread across the surface of the endless member, means whereby the material laden endless member may be washed or sprayed at points in its travel after leaving the liquid containing receptacle, and a series of receptacles arranged in proximity to said last mentioned means.

2. An ore concentrating or vanning machine comprising a liquid containing receptacle, an endless member arranged to travel through said receptacle and be submerged during a part of its travel, frame members yieldingly mounted at their lower ends and provided with

rollers at their lower ends, means whereby said frame members will be given vibrations and the same imparted to the endless member, means whereby the rollers at the lower ends of said frame members are adjustably held at an incline transversely to the endless member, means whereby the endless member may be given a varying inclination at the submerged point of its travel, means whereby material is deposited on said endless member, and mechanism for spreading said material transversely across said endless member.

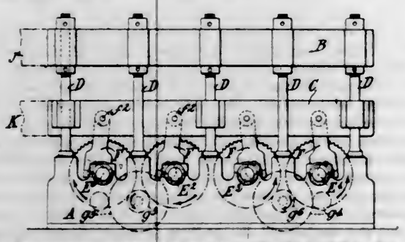
3. An ore concentrating or vanning machine comprising a liquid containing receptacle, an endless member arranged to travel through said liquid containing receptacle, frame members yieldingly mounted and provided with rollers at their lower ends about which the endless member travels, means whereby the frame members are vibrated and vibrations imparted to the endless member, means whereby said rollers are adjustably held and the endless member given a varying transverse crowning inclination, means whereby the endless member is given the desired degree of inclination longitudinally, a hopper for depositing material on said endless member, and means whereby the endless member is sprayed or washed at points beyond its submergence.

4. An ore concentrating or vanning machine comprising a liquid containing receptacle, an endless member arranged to travel through said receptacle, frame members yieldingly mounted at their lower ends, means whereby said frame members may be vibrated, a set of rollers adjustably secured to the lower ends of said frame members, a yoke arranged to provide bearings for one end of a portion of said rollers whereby said rollers may be given varying degrees of inclination transversely of the endless member, a hopper for depositing the material on said endless member, and means whereby the material will be spread across said endless member.

5. An ore concentrating or vanning machine comprising a liquid containing receptacle, an endless member a portion of whose travel extends through said receptacle, frame members yieldingly mounted and provided with rollers at their lower ends, means whereby said frame members will be given vibrations, means adjustably mounted to the frame members and providing bearings for adjacent ends of said rollers whereby the latter may be given varying degrees of inclination transversely of the endless member, means whereby the endless member may be given varying degrees of inclination longitudinally, means for depositing material on said endless member, and means arranged along the path of said endless member whereby the latter may be washed or sprayed.

[Claims 6 to 9 not printed in the Gazette.]

1,108,187. PRESS. WILLIAM KLOCKE, Brooklyn, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 8, 1913. Serial No. 753,068. (Cl. 113—46.)



1. In a power press for heavy work, the combination of a plunger, and a plurality of crank-shafts connected to said plunger, and means for rotating said shafts in opposite directions whereby the diagonal thrust transmitted to the plunger by one crank-shaft, when off center, will be counteracted by that of another, each of said crank shafts being continuously rotatable in one direction.

2. In a power press for heavy work, the combination of a plunger, a plurality of crank-shafts, connections between said crank-shafts and said plunger, and means for rotating said shafts in opposite directions whereby the diagonal thrust transmitted to the plunger by one crank-shaft, when off center, will be counteracted by that of another, each of said crank shafts being continuously rotatable in one direction.

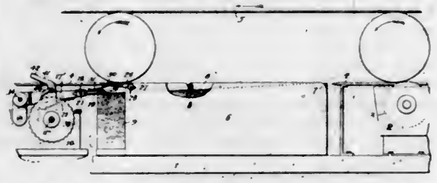
3. In a power press for heavy work, the combination of a plunger, a plurality of crank-shafts, crank connections pivotally connected to said plunger upon an axis perpendicularly above that of said crank-shafts, and means for rotating said shafts in opposite directions whereby the diagonal thrust transmitted to the plunger by one crank-shaft, when off center, will be counteracted by that of another, each of said crank shafts being continuously rotatable in one direction.

4. In a power press for heavy work, the combination of a plunger, a plurality of crank-shafts connected to said plunger and means for rotating said shafts in opposite directions in pairs, whereby the diagonal thrust transmitted to the plunger by one crank-shaft, when off center, will be counteracted by that of another, each of said crank shafts being continuously rotatable in one direction.

5. In a power press for heavy work, the combination of a plunger, a plurality of crank-shafts connected to said plunger, gears on said crank-shafts, and pinions engaging gears on pairs of crank-shafts and rotating said gears on one pair in an opposite direction to those in another, whereby the diagonal thrust transmitted to the plunger by one crank-shaft, when off center, will be counteracted by another.

[Claims 6 to 12 not printed in the Gazette.]

1,108,188. CAN-LABELING MACHINE. FREDERICK H. KNAPP, Westminster, Md., assignor to Fred H. Knapp Company, Westminster, Md., a Corporation of Maryland. Filed Apr. 2, 1912. Serial No. 688,058. (Cl. 216—48.)



1. In a can labeling machine, a can runway, a label support intermediate the ends of the runway and over which the article to be labeled passes, and lap end pasting means comprising a lengthwise movable paste applying member, and means for moving the said member up and down or into and out of contact with the supply of labels on the support.

2. In a can labeling machine, a can runway, a label support intermediate the ends of the runway and over which the article to be labeled passes, lap end pasting means comprising a lengthwise movable paste applying member, and means controlled by the movement of a can along the runway for moving the said member up and down or into and out of contact with the supply of labels on the support.

3. In a can labeling machine, a can runway, a label support, label pick up pasting means, lap end pasting means comprising an endless belt, means for positively moving the belt up and down into and out of contact with the lap end of stack of labels on the support, and means for imparting rotary movement to the belt when in raised position.

4. In a can labeling machine, a can runway, a label support intermediate the ends of the runway and over which the article to be labeled passes, label pick up pasting means, lap end pasting means comprising an endless belt, means for positively moving the belt up and down into and out of contact with the stack of labels on the support, and means controlled by the movement of a can along the runway for imparting rotary movement to the belt when in raised position.

5. In a can labeling machine, a can runway, a label support, label pick up pasting means, lap end pasting means comprising a movable belt normally raised above the label support, and means for bodily moving the belt up and down, into contact with the lap end of the label positioned on said support.

[Claims 6 to 87 not printed in the Gazette.]

1,108,189. FERTILIZER AND PROCESS OF MANUFACTURING THE SAME. THEODOR KNÖSEL, Neustadt, Germany. Filed Dec. 13, 1910. Serial No. 597,123. (Cl. 71—9.)

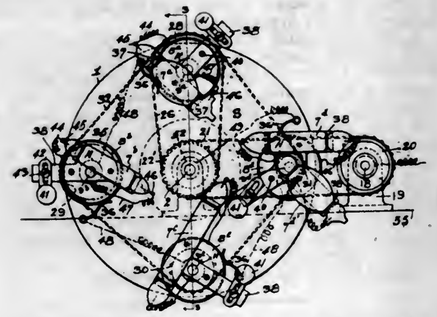
1. As a new article of manufacture, a fertilizer composed of calcium cyanamid and sulfite cellulose lye.

2. As a new article of manufacture, a fertilizer composed of calcium cyanamid, sulfite cellulose waste lye and neutralizing substances.

3. The hereindescribed process of manufacturing a fertilizer, consisting in mixing sulfite cellulose waste lye with calcium cyanamid.

4. The hereindescribed process of manufacturing a fertilizer consisting in neutralizing sulfite cellulose waste lye and mixing the same with calcium cyanamid.

1,108,190. ELECTRICAL DISPLAY DEVICE. HANNIBAL A. KUNITZ, Pittsburgh, Pa., assignor of one-half to William T. Caboon, Pittsburgh, Pa. Filed May 19, 1911. Serial No. 628,324. (Cl. 240—9.)



1. A device of the character described comprising a plurality of electric light-tubes, a rotatable support for each tube, a frame in which said supports are journaled, and actuating mechanism forming part of the electric circuit of said tubes and coöperating with said frame to simultaneously rotate the same and said tube supports.

2. A device of the character described comprising a plurality of Geissler tubes, a rotatable support for each tube, a frame in which said supports are journaled, and actuating mechanism coöperating with said frame to simultaneously rotate the same and said supports, said actuating mechanism forming part of the electric circuit of said tubes.

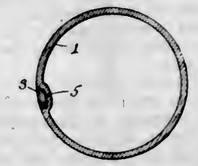
3. A device of the character described comprising an insulating frame, an insulating support and a conducting shaft carrying the same and journaled in said frame, and a light carried by said support, in combination with a second conducting shaft carrying said frame, an electrical connection between said second shaft and said light, and another conductor connected to said conducting shaft journaled in said frame, and means for independently rotating said frame and support.

4. A device of the character described comprising an insulating frame, an insulating support and a conducting shaft carrying the same and journaled in said frame, and a light carried by said support, in combination with a second conducting shaft carrying said frame, an electrical connection between said second shaft and said light, an insulating gear wheel journaled on said shaft carrying said frame, and conducting gearing connections between said gear wheel and said shaft journaled in said frame.

5. A device of the character described comprising an insulating frame, a plurality of insulating disk supports, a conducting shaft carrying each support and journaled in said frame; an electrical connection carrying current to one of said shafts, a light carried by each shaft and provided with a conductor communicating therewith, another conductor leading from each light to the shaft of another light, a return conductor leading from one of the other lights, and means for simultaneously rotating said frame and said shafts journaled therein.

[Claims 6 to 8 not printed in the Gazette.]

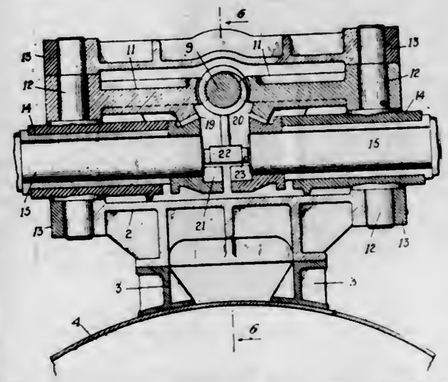
1,108,191. WELDED TUBING. LAURENCE S. LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed June 14, 1913. Serial No. 773,655. (Cl. 29—180.)



1. Metal tubing having the meeting or abutting edges of the longitudinal joint united at intervals by buttons welded across the edges and sunk in the material of the tubing.

2. Metal tubing having the meeting or abutting edges of its longitudinal joint united at intervals by bridging pieces welded across the edges and flush with the surface of the tubing.

1,108,192. SUBMERSIBLE BOAT. GUSTAV M. LAGERGREN, New London, Conn., assignor to Electric Boat Company, a Corporation of New Jersey. Filed Apr. 29, 1914. Serial No. 835,068. (Cl. 114—16.)



1. A submersible vessel having a body, hydroplanes mounted thereon and movable to inoperative positions against the body and to extended positions and a single operating mechanism connected to the hydroplanes and operable to move them from the inoperative to the extended position and to move them to any desired angular position while in the extended position; substantially as described.

2. A submersible vessel having a body, a pair of hydroplanes mounted thereon and movable to inoperative position against the body and to an extended position and movable to different angular positions while extended,

and operating mechanism connected to the hydroplanes for effecting movement thereof, the continuous operation of said mechanism causing the hydroplanes to be first moved from the inoperative to the extended position and then turned angularly while in the extended position; substantially as described.

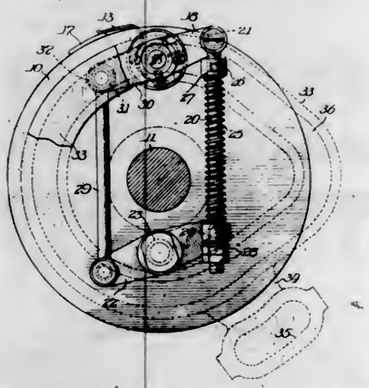
3. A submersible vessel having a body, bearing mechanisms pivotally mounted thereon, hydroplanes pivotally mounted in the bearing mechanisms, a single operating device, and means intermediate said device and the hydroplanes for causing operation of said device to both turn the hydroplanes in the bearing mechanisms and turn the bearing mechanisms relatively to the body; substantially as described.

4. A submersible vessel having a body, a pair of hydroplanes mounted thereon and movable to an extended position at substantially a right angle to the length of the body and also to an inoperative position against the sides of the body, said hydroplanes being also movable to different angular positions while in the extended position, and a single operating mechanism connected to the hydroplanes which by its continuous operation first varies the angular relation of the hydroplanes while the latter are in the extended position, and then moves the hydroplanes from the extended to the inoperative position; substantially as described.

5. submersible vessel having a pair of hydroplanes, bearing mechanism in which the hydroplanes are mounted permitting lateral extension of the hydroplanes and also partial rotation thereof to vary their angular relation, operating mechanism for effecting the lateral extension of the hydroplanes and the rotational movement thereof and means for preventing rotational movement of the hydroplanes to vary their angular relation except when the hydroplanes are in the extended position; substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,108,193. SHEET-GRIPPING DEVICE FOR PRINTING-PRESSES. HUBERT LANG, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1913. Serial No. 770,965. (Cl. 101—115.)



1. The combination of a cylinder, a gripper-shaft revolubly mounted thereon, a plurality of grippers fixed on said shaft, and positively-actuated means connected to said shaft for rotating it for opening and closing said grippers, the connections between said positively-actuated means and said shaft comprising yielding means adapted to be moved bodily by the operative movement of the actuating means, said yielding means being adapted to be stressed only at approximately the end of the operative closing stroke of said actuating means.

2. The combination of a cylinder, a gripper-shaft revolubly mounted thereon, a plurality of grippers fixed on said shaft, a cam member provided with a cam groove, a stud adapted to be actuated positively by movement along said cam groove, and connections between said stud and said shaft whereby the movement of said stud along said cam groove serves to rock said shaft for opening and closing said grippers, said connection comprising yielding means adapted to be moved bodily by the operative movement of said stud, said yielding means being adapted to be stressed so as to exert a yielding pressure upon said cam only at approximately the limit of the operative closing stroke of said stud.

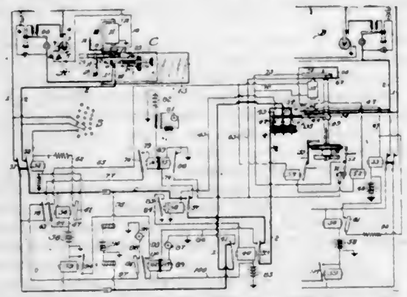
3. The combination of a cylinder, a gripper shaft revolubly mounted thereon, a plurality of grippers fixed on said shaft, a lever connected with said gripper shaft for rocking it for opening and closing said grippers, and a cam-member provided with a cam-groove for operating said lever positively for both opening and closing said grippers, the connections between said gripper shaft and said lever comprising yielding means adapted to be moved bodily by the operative movement of said lever and adapted to cause said grippers to close upon the complete closing movement of said lever, the compression of said yielding means caused by the closing movement of the lever being controlled by the thickness of the matter gripped.

4. The combination of a cylinder, a gripper shaft revolubly mounted thereon, a plurality of grippers fixed on said shaft, a lever connected with said gripper shaft for rocking it for opening and closing said grippers, and a cam-member provided with a cam-groove for operating said lever positively for both opening and closing said grippers, the connections between said gripper shaft and said lever comprising a second lever fixed on said shaft, and a spring interposed between said two levers adapted to cause said grippers to close upon the complete closing movement of said first-named lever.

5. The combination of a cylinder, a gripper shaft revolubly mounted thereon, a plurality of grippers fixed on said shaft, a lever connected with said gripper shaft for rocking it for opening and closing said grippers, and a cam-member provided with a cam-groove for operating said lever positively for both opening and closing said grippers, the connections between said gripper shaft and said lever comprising a second lever fixed on said shaft, a rod pivotally mounted on said second lever and passing through an eye on said first-named lever, and a compression spring mounted on said rod adapted to cause said grippers to close upon the complete closing movement of said first-named lever.

[Claims 6 to 10 not printed in the Gazette.]

1,108,194. COIN-CONTROLLED AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. WINFIELD W. LEACH, Chicago, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 1, 1906. Serial No. 341,517. (Cl. 179—6.5.)



1. The combination with a calling and a called telephone line extending from substations to a central office, of a toll device at the substation of the calling line, automatic means at the central office for uniting said lines, operable from the calling station, upon the tentative operation of said toll device, and automatic means for finally completing the cycle of operations of said toll device, controlled jointly in the response of the called subscriber and in the replacement of the calling subscriber's telephone.

2. The combination with a calling and a called telephone line extending from substations to a central office, of a toll device at the substation of the calling line, automatic line selecting mechanism at the central office operable upon the tentative operation of said toll device for uniting said lines, a magnet for said toll device connected with the calling line adapted to finally complete the cycle of operations of said toll device, a relay at the central office, an operative circuit for said relay controlled in the response of the called subscriber, a source of current for operating said magnet, and means controlled jointly by said relay and in the restoration of the calling station apparatus to normal condition, for connecting said source of current with the line to operate said magnet.

3. The combination with a calling and a called telephone line extending from substations to a central office battery, of a switch at each substation controlling the line circuit thereof, a toll device at the substation of the calling line, automatic line selecting mechanism at the central office, operable upon the tentative operation of said toll device for uniting said lines, a magnet for said toll device connected with the calling line adapted to finally complete the cycle of operations of said toll device, a source of current for operating said magnet, a relay in the calling line circuit responsive to said substation switch, an armature for said relay, a relay having a sluggish armature, an operative circuit for said relay completed upon the response of the called subscriber, and means actuated upon the attraction of the sluggish armature, and the retraction of the armature of said first-mentioned relay, when said substation switch is opened, for connecting said source of current with said line to operate said magnet and complete the cycle of operations of said toll device.

4. The combination with a calling and a called telephone line extending from substations to a central office battery, of a switch at each substation controlling its line circuit, a relay at the central office in the line circuit of said calling line, a toll device at the calling station, automatic line selecting mechanism at the central office operable upon the tentative operation of said toll device, for uniting said lines, an electromagnet for said toll device connected with the calling line and adapted to finally complete the cycle of operations of said toll device, a relay at the central office operative upon the response of the called subscriber, a source of current for operating said electromagnet, a conductor for connecting said source with the line to operate said electromagnet, and contacts for closing said conductor, actuated upon the operation of said last-mentioned relay and the quiescence of the relay in the calling line circuit.

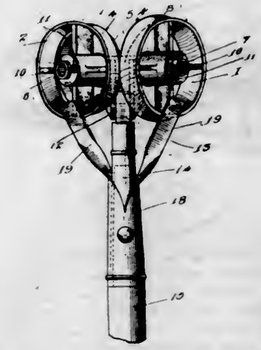
5. The combination with a calling and a called telephone line extending from substations to a central office, of a toll device at the substation of the calling line, automatic line selecting mechanism at the central office, operable from the calling station upon the actuation of said toll device thereat, a source of ringing current, automatic mechanism actuated when said lines are united for applying said ringing current to the called line, and automatic means operated upon the response of the called subscriber, for cutting off said ringing current from the called line.

[Claims 6 to 16 not printed in the Gazette.]

1,108,195. TROLLEY. WILLARD M. LEARNED, Los Angeles, Cal., assignor of one-third to J. H. Mixer and one-third to William Jochum, Los Angeles, Cal. Filed Apr. 21, 1913. Serial No. 762,727. (Cl. 191—73.)

1. A trolley comprising a pair of wheels rotatably mounted upon fixed centers adapted to receive the trolley conductor, one of said wheels adapted to receive the greater portion of the downward thrust of the trolley conductor, and means for bracing said wheel against the downward thrust of the trolley conductor.

2. A trolley comprising a pair of angularly disposed wheels, a pair of upwardly diverging axles fixed with relation to each other, upon which said wheels are mounted, said wheels adapted to contact with each other and grooved to receive the trolley conductor, the walls of the groove formed by said wheels diverging upwardly and the upper gap between said wheels being of sufficient width to permit free and easy entrance of the trolley conductor thereinto.



3. A trolley comprising a pair of wheels arranged at an angle to each other and adapted to contact with each other to receive the trolley conductor, said wheels being provided with a pair of annular contacting surfaces, the wheels being of relatively different diameters at their contacting surfaces so that the point of contact of said surfaces lies at one side of the center of the groove formed by the peripheries of the wheels whereby the wheel of a greater diameter will present a greater contact surface to the trolley conductor and receive the greater portion of the downward reaction of the trolley conductor, and means comprising an annular shoulder on one wheel for sustaining the other wheel against said downward reaction of the trolley conductor.

4. A trolley comprising a head and a pair of angularly disposed wheels mounted upon said head adapted to coact with each other to receive the trolley conductor, said head provided with ears, a tongue on the end of the trolley pole adapted to fit between said ears, a bolt extending through said ears and tongue to pivot the head and wheels to the trolley pole whereby the said head and wheels may be adjusted to the trolley conductor, the respective co-acting surfaces of said ears and tongue being provided with serrations to prevent the head and wheels slipping out of adjustment.

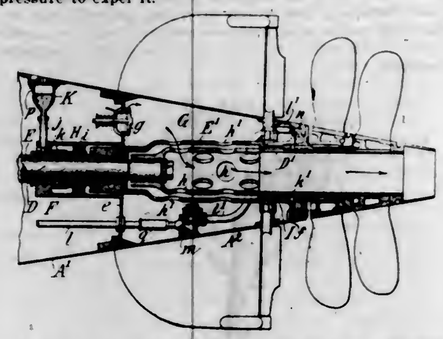
5. A trolley comprising a pair of wheels rotatably mounted upon fixed centers adapted to receive the trolley conductor, one of said wheels adapted to receive the greater portion of the downward thrust of the trolley conductor, said wheels provided with contacting surfaces to brace the wheel receiving the greater portion of the downward thrust of the conductor against said downward thrust.

1,108,196. AUTOMOBILE TORPEDO. FRANK M. LEAVITT, Smithtown, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Aug. 21, 1912. Serial No. 716,189. (Cl. 114—20.)

1. In an automobile torpedo comprising a compressed air motor, oppositely revolving propeller shafts one within the other, a chamber receiving the exhaust from said motor, an oil-cup having a discharge duct leading to a bearing, said cup open to the air pressure in said chamber above the oil level for subjecting the oil to pressure to expel it.

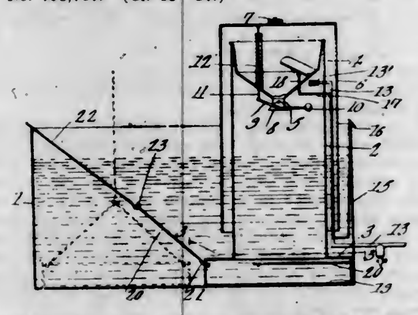
2. In an automobile torpedo comprising a compressed air motor, oppositely revolving propeller shafts one within the other, a chamber receiving the exhaust from said motor, a spring-pressed valve opening from said chamber whereby a back pressure is induced therein by the resistance of said valve, and an oil-cup having a discharge duct

leading to a bearing, said cup open to the air pressure in said chamber above the oil level for subjecting the oil to pressure to expel it.



3. In an automobile torpedo comprising a compressed air motor, oppositely revolving propeller shafts one within the other, a chamber receiving the exhaust from said motor, an oil-cup having a discharge duct leading to a bearing, said cup open to the air pressure in said chamber above the oil level for subjecting the oil to pressure to expel it, and a check valve in said oil duct adapted to prevent any back flow of water through said duct into said air chamber.

1,108,197. ACETYLENE-GAS GENERATOR. JAMES BIRD LEE, Chandler, Ind. Filed Oct. 6, 1913. Serial No. 793,707. (Cl. 48—57.)

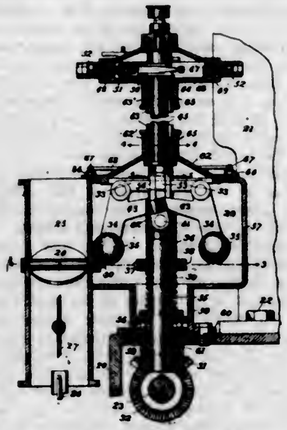


In a device of the character described, a tank, a hollow column disposed therein, a removable pan seated on the tank bottom below the column, bails pivoted to the opposite portions of the pan, one bail normally lying within the pan, and the other bail normally projecting from the pan to one side of the column, the pan having means for supporting the last mentioned bail in an inclined position, and a handle having a hook engageable with the last mentioned bail for pulling the pan from under the column, and then engageable with both of the bails to litt the pan from the tank.

1,108,198. THROTTLE AND SPARK GOVERNOR. VINCENT LINK, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 24, 1909. Serial No. 504,168. (Cl. 123—99.)

1. In a governor, in combination, a rotating shaft having a sleeve mounted thereon, a centrifugal member mounted to rotate with one of said members and move in a plane extending axially of said shaft, and a connection between the centrifugal member and the other member constructed to directly move it angularly and axially.

2. In a governor, in combination, a governor shaft, a centrifugal member mounted thereon to rotate therewith and move in a plane extending axially of said shaft, a sleeve on said shaft, and connections between the centrifugal member and the sleeve constructed to directly move the sleeve angularly and axially on the shaft.



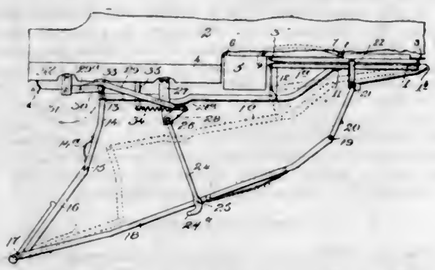
3. In a governor, in combination, a governor shaft, a centrifugal member mounted thereon to rotate therewith and move in a plane extending axially of said shaft, a sleeve on said shaft, and an arm on said centrifugal member connected to the sleeve so as to directly move it angularly and longitudinally on the shaft.

4. In a governor, in combination, a governor shaft, centrifugal members mounted thereon to rotate therewith and provided with rigid arms, a sleeve on said shaft provided with radial bearing lugs, and blocks connecting the arms and the lugs so as to simultaneously move the sleeve angularly and axially.

5. In a governor, in combination, a governor shaft, centrifugal members mounted thereon to rotate therewith and swinging about pivots at right angles to the shaft and provided with rigid arms, a sleeve on said shaft provided with radial bearing lugs, and blocks connecting the arms and the lugs so as to simultaneously move the sleeve angularly and axially.

[Claims 6 to 22 not printed in the Gazette.]

1,108,199. PEDALING MECHANISM FOR MUSICAL INSTRUMENTS. LOUIS H. MAIER, New York, N. Y. Filed July 15, 1912. Serial No. 709,401. (Cl. 84—169.)



1. The combination of a grand piano, a pump carried thereby, an arm connected with the pump and extending substantially horizontally beneath the piano, a pedal pivotally connected with the arm, a frame pivotally connected with the pedal and pivotally connected with said piano and extending substantially horizontally to swing with the pedal bodily from front to rear, and vice versa, beneath the piano, and means to retain said frame folded upwardly in a substantially horizontal position beneath the piano.

2. The combination of a grand piano, a pump carried thereby, an arm connected with the pump and extending substantially horizontally beneath the piano, a pedal pivotally connected with the arm, a frame pivotally connected with the pedal and pivotally connected with said piano and extending substantially horizontally to swing with the pedal bodily from front to rear, and vice versa, beneath the piano, an arm pivotally carried by the instrument and pivotally connected with said frame, a crank arm connected with the last named arm for rocking the latter, and means to retain the frame folded upwardly beneath the piano.
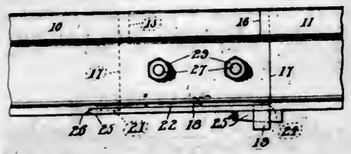
3. The combination of a grand piano, a pump carried thereby, an arm connected with the pump and extending substantially horizontally beneath the piano, a pedal pivotally connected with the arm, a frame pivotally connected with the pedal and pivotally connected with said piano and extending substantially horizontally to swing with the pedal bodily from front to rear, and vice versa, beneath the piano, an arm pivotally carried by the piano and pivotally connected with said frame, a crank arm carried by the piano, a link connecting the crank arm with the last named arm for operating the latter, and means to retain the frame folded upwardly beneath the piano.

4. The combination of a grand piano, a pump carried thereby, an arm extending from said pump substantially horizontally beneath the piano, a link pivotally depending from the piano, a frame pivotally connected with said link and extending substantially horizontally beneath the piano, a pedal connected with the frame forward of said link, a second link connecting the pedal with said arm, and means for holding said frame folded beneath the piano.

5. The combination of a grand piano, a pump carried thereby, an arm extending from said pump substantially horizontally beneath the piano, a link pivotally depending from the piano, a frame pivotally connected with said link and extending substantially horizontally beneath the piano, a pedal connected with the frame forward of said link, a second link connecting the pedal with said arm, an arm connected with said frame to raise the latter, a crank-arm connected with the piano, and a third link connecting the crank arm with said last named arm for operating the latter.

[Claims 6 to 8 not printed in the Gazette.]

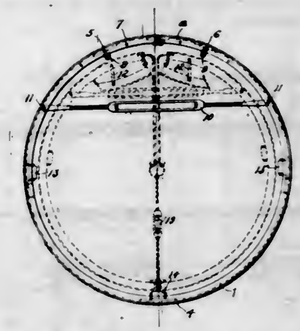
1,108,200. RAIL-JOINT. ANTONI MAZUR, New York Mills, N. Y. Filed June 15, 1914. Serial No. 845,122. (Cl. 239—8.)



1. A rail joint comprising complemental rail ends having a laterally cut away tread and web portion at the end of each rail, one of said rails having substantially the lower half of its base flange cut away and the other rail end having substantially the upper half of its base flange cut away and the remaining portion of said base flange being provided with a wedge-shaped socket and an opening therethrough, a wedge and a perforated lug formed upon the lower face of the first named cut away base flange and adapted for interengagement with said socket and opening, the adjacent ends of the tread and web portions being inclined.

2. A rail joint comprising complemental rail ends having a laterally cut away tread and web portion at the end of each rail, one of said rails having substantially the lower half of its base flange cut away and the other rail end having substantially the upper half of its base flange cut away, one of said web portions having an upper engaging face and the other having a lower engaging face, said upper face provided with a wedge-shaped socket in its outer end and an opening at its inner end, said lower face provided with a wedge and also with a perforated end lug, the said lug and wedge adapted for reception within said socket and opening respectively and the end faces of said rails being complementally formed and adapted to contact with each other.

1,108,201. COLLAPSIBLE TELESCOPING FORM. CHARLES D. MCARTHUR, Pittsburgh, Pa., assignor to The Blaw Collapsible Steel Centering Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 3, 1910. Serial No. 590,567. (Cl. 25—128.)



1. In combination in a collapsible mold, supporting ribs covered with lagging and comprising main rib portions, and relatively short portions hinged to the ends thereof with knuckle joints so as to swing inwardly, and lying at the top of the mold; the said ribs being sufficiently yielding to spring inwardly when the hinged portions are swung inwardly, but sufficiently stiff to maintain the mold in expanded position leaving the interior of the mold unobstructed when the hinged portions are in their outer operative position.

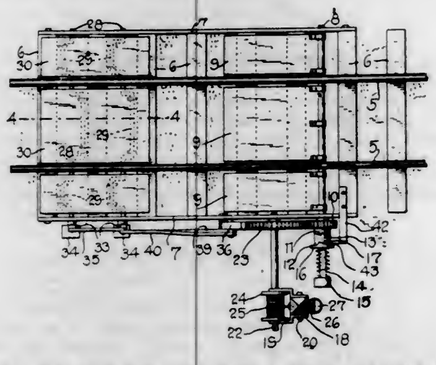
2. In combination in a collapsible mold, supporting ribs covered with lagging and comprising main rib portions, and relatively short portions hinged to both ends of each main rib with knuckle joints so as to swing inwardly but not outwardly past operative position, the said ribs being sufficiently yielding to spring inwardly when the hinged portions are swung inwardly, but sufficiently stiff to maintain the mold in expanded position leaving the interior of the mold unobstructed when the hinged portions are in their outer operative position.

3. In combination in a collapsible mold, supporting ribs covered with lagging and comprising main rib portions, and relatively short portions, hinged to the ends thereof and constructed to swing inwardly from operative position but not outwardly past such position, the said ribs being sufficiently yielding to spring inwardly when the hinged portions are swung inwardly, but sufficiently stiff to maintain the mold in expanded position leaving the interior of the mold unobstructed when the hinged portions are in their outer operative position.

1,108,202. CATTLE-GUARD. EDMUND L. MCCORMICK, St. Louis, Mo. Filed Feb. 11, 1914. Serial No. 818,132. (Cl. 39—42.)

1. In a cattle guard, a shaft disposed transversely beneath the track rails, a series of barrier plates fixed upon said shaft, a second shaft geared to said first named shaft, a weight and a flexible connection between the same and the latter shaft whereby said first named shaft is rotated in the gravity movement of the weight, and the barrier plates elevated to vertical positions, a trip device normally holding the latter shaft against rotation, and animal operated means connected to the trip device, to move the same to its release position.

2. In a cattle guard, a transversely disposed shaft, a series of barrier plates fixed upon said shaft, a pinion loosely mounted upon said shaft, a movable clutch member to normally lock the pinion upon said shaft, a second shaft, a gear on the latter shaft meshing with said pinion, a gravity movable weight and a flexible connection between the same and said second shaft, a trip dog engaged with the gear on said second shaft, a crank shaft, a tread plate mounted thereon, a connection between the crank shaft and said trip dog whereby the dog is moved to its release position by the weight of an animal on the tread plate and the second shaft is rotated by the gravity movement of the weight and the barrier plates elevating to a vertical position, and means for shifting the clutch member out of locking engagement with the pinion, whereby the barrier plates will fall to their normal horizontal positions.



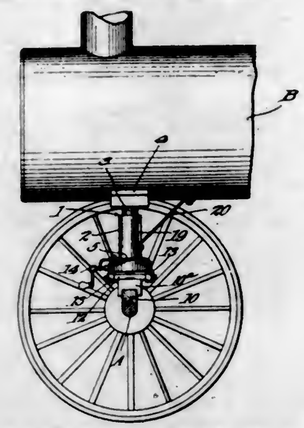
3. In a cattle guard, a transversely disposed shaft, a series of barrier plates fixed upon said shaft, a second shaft geared to the first named shaft, a pivoted dog engaging the gear on the latter shaft to hold the same againtst rotation, a pair of crank shafts, tread plates mounted upon said crank shafts, each of said shafts being provided with a plurality of cranks alternately extending in opposite directions from the rotative axis of the shaft, said tread plates being mounted upon the corresponding cranks, weighter bars fixed to one of the ends of the crank shafts and normally disposed in a vertical position, and levers connecting one of the bars upon opposite sides of the crank shaft to said trip dog whereby the dog is moved to its release position when the crank shafts are rotated in either direction to permit of the rotation of the operating shaft whereby the barrier plates are elevated to their vertical positions.

1,108,203. LEVELING DEVICE FOR TRACTION-ENGINES. JOHN FRANCIS MCGUIRE, Pender, Nebr. Filed May 14, 1913. Serial No. 767,697. (Cl. 21—114.)

1. In a device of the character described, a bolster, a pair of members adjustably connected, one of the said members having a ball and socket joint with the bolster, and the other member being attachable to an object to support the same, a sleeve telescoping over the last mentioned member and movable longitudinally with the first mentioned of said members and having a bell at its lower end, and bearings carried by the bolster at quadrature to the bolster and engaging the rim of the bell.

2. In a device of the character described, a bolster, a screw loosely connected thereto, a supporting member in threaded engagement with the screw, a sleeve telescoping over the said member having a bell at its lower end, a gear secured to the screw within the bell, a shaft journaled through one side of the bell, and a gear secured to the inner end of the shaft and meshing with the aforesaid gear.

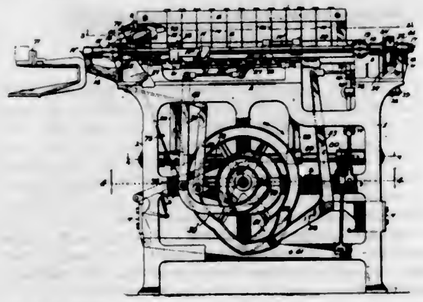
3. In a device of the character described, a bolster, a screw loosely connected thereto, a supporting member in threaded engagement with the screw, a sleeve telescoping over the said member and having a bell at its lower end, bearings carried by the bolster on an axis at quadrature to the bolster, and engaging the rim of the bell, and means passing through one side of the bell and operatively connected to the screw for rotating the same.



4. In a device of the character described, a bolster, a screw loosely connected thereto, a supporting member in threaded engagement with the screw, a sleeve telescoping over the aforesaid member having a lower bell, an auxiliary axle carried by the bolster at quadrature thereto, rollers journaled to the ends of the auxiliary axle and engaging the rim of the bell, a gear secured to the screw within the bell, a shaft journaled through one side of the bell, and a gear secured to the inner end of the shaft and intermeshing with the aforesaid gear.

5. In combination with a boiler, a bolster, a screw loosely connected thereto, a supporting member in threaded engagement with the screw and secured to the boiler, a sleeve telescoping over the supporting member and having a longitudinal slot therein, a brace secured to the boiler and supporting member and passing through the said slot, and means carried by the sleeve and operably connected to the screw for rotating the same.

1,108,204. SLAB CUTTING AND SEPARATING MACHINE. FREDERICK H. MERRELL and WILLIAM K. BLACKBURN, Milwaukee, Wis., assignors to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1913. Serial No. 764,412. (Cl. 31—65.)



1. A slab-cutting and separating machine comprising a series of alined fixed cutters, a slab-engaging follower arranged to one side of the cutters, actuating means for the follower whereby a slab of material is fed through the series of cutters to divide the same into cubes, a separator disposed adjacent to one end of the line of cutters and upon that side opposite the follower, and an intermittently movable cube feeder arranged transversely of the cutters in alinement with the separator.

2. A slab-cutting and separating machine comprising a series of equally spaced alined fixed cutters, a slab-engaging follower strip arranged to one side of the cutters, actuating means for the follower strip whereby a slab of material is fed through the series of cutters to divide the same into cubes, a separator disposed adjacent to one end of the line of cutters and upon that side opposite the follower strip, a cube feeder arranged transversely of the cutter in alinement with the separator, an intermittent feed mechanism for the cube feeder.

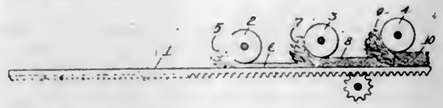
3. A slab-cutting and separating machine comprising a series of alined fixed cutters, a slab-engaging follower arranged to one side of the cutters, actuating means for the follower whereby a slab of material is fed through the series of cutters to divide the same into cubes, a rocking separator disposed adjacent to one end of the line of cutters and upon that side opposite the follower, and an intermittently movable cube feeder arranged transversely of the cutters in alinement with the separator.

4. A slab-cutting and separating machine comprising a table adapted to receive a slab of material to be cut, a series of alined fixed cutters extending above the table, means for feeding the slab of material through the cutters whereby it is divided into sections, means for feeding the group of separated slab sections longitudinally of the line of cutters intermittently at distances equal to the width of the separated slab sections, a separator arranged to receive the forward slab section of the series, and actuating means for the separator whereby the slab contained therein is broken from the succeeding slab.

5. A slab-cutting and separating machine comprising a series of alined fixed cutters, a slab-engaging follower strip arranged to one side of the cutters, actuating means for the follower strip, a separator disposed adjacent to one end of the line of cutters and upon that side opposite the follower strip, actuating means for the separator, a feeder arranged transversely of the cutters in alinement with the separator, intermittent actuating means for the feeder, and a correlated gear connection between the follower actuating means, separator actuating means and feeder actuating means.

[Claims 6 to 37 not printed in the Gazette.]

1,108,205. PROCESS OF MAKING HEAVY STRUCTURAL WHITE GLASS. GEORGE R. MEYERCORD, Chicago, Ill. Filed Mar. 4, 1912. Serial No. 681,357. (Cl. 49—87.)



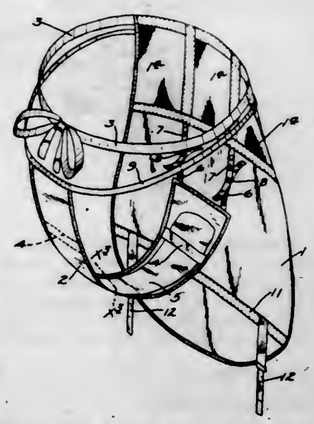
1. The method of making sheets or slabs of glass having a thickness of one inch or more, which consists in making them in layers formed progressively and fused together as they are formed.

2. The method of making sheets or slabs of glass having a thickness of one inch or more, which consists in casting and rolling a plurality of superimposed layers in such a manner that as each layer is formed the succeeding layer is applied and fuses the partially formed skin on the underlying layer.

3. The method of making sheets or slabs of glass having a thickness of one inch or more, which consists in rolling and casting each sheet in at least three layers formed and fused together progressively, so as to permit each layer to cool partially before the succeeding layer is applied.

4. The method of making thick homogeneous sheets or slabs of glass which consists in forming each sheet of a plurality of individual layers made progressively and fused together as they are made.

1,108,206. CATAMENIAL APPLIANCE. LEAH G. MILKES, Minneapolis, Minn. Filed Mar. 27, 1914. Serial No. 827,614. (Cl. 128—5.)

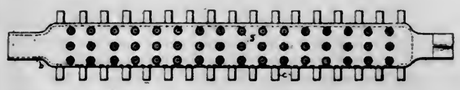


1. In a device of the character described, the combination of an apron, a napkin-holder, separate and independent waist-bands for securing said apron and front end of said napkin holder around the waist of the wearer, and means on the rear end of the napkin-holder for securing the same to said apron or to the waist band of the napkin-holder when said napkin-holder is worn without the apron.

2. In a device of the character described, the combination of an apron or skirt protector, a napkin-holder detachably and adjustably secured to the body of said apron, and separate and independent means for securing the said apron and napkin-holder around the waist of the wearer.

3. In a device of the character described, the combination of an apron, a napkin-holder detachably secured to said apron at its rear end, separate and independent waist straps or bands for securing said apron and front end of said napkin-holder around the waist of the wearer and means on the rear end of said napkin-holder for securing the same to said napkin-holder waist band when said napkin-holder is worn independent of the apron.

1,108,207. COMBINED GAS-BURNER AND GRATE-BAR. CHARLES H. MILLER and CARL H. MILLER, Cleveland, Ohio. Filed Jan. 8, 1914. Serial No. 811,032. (Cl. 158—12.)



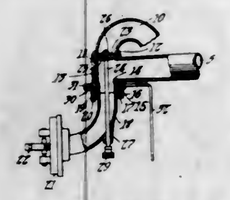
A combined gas burner and grate bar substantially square in cross section and hollow interior and provided with burner jets in series transversely on one side and a series of transversely disposed grids on the opposite side adapted for burning solid fuel, the said bar having an opening at one end and closed at the other and provided with trunnions at its ends on which it is reversible.

1,108,208. PHONOGRAPH. WALTER H. MILLER, Orange, N. J. Filed Oct. 21, 1911. Serial No. 655,977. (Cl. 181—3.)

1. In a phonograph, the combination with a hollow sound conveyer, of a plurality of reproducers secured thereto, and a hand operated push valve for throwing any one of said reproducers into communication with the interior of said sound conveyer, substantially as set forth.

2. In a phonograph, the combination with a hollow sound conveyer, of a plurality of reproducers secured

thereto, and a push valve in said sound conveyer and provided with an exteriorly projecting handle for throwing any one of said reproducers into communication with said sound conveyer, substantially as set forth.



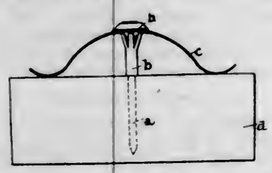
3. In a phonograph, the combination with a hollow sound conveyer, of a reproducer swiveled thereto on one side, a second reproducer swiveled thereto on the other side, and a push valve in said sound conveyer for causing either of said reproducers to communicate with the interior of said sound conveyer at will, substantially as set forth.

4. In a phonograph, the combination with a hollow sound conveyer, of two reproducers adapted for reproduction from records of different types rotatably secured thereto, and a push valve in said sound conveyer for throwing either of said reproducers into communication with the interior of said sound conveyer, substantially as set forth.

5. In a phonograph, the combination with a hollow sound conveyer, of two separate reproducers swiveled thereto, and a single hand operated means for throwing either of said reproducers into communication with the interior of said sound conveyer, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,108,209. MEANS FOR SECURING GALVANIZED-IRON SHEETS AND FOR ANALOGOUS PURPOSES. JOHN MITCHELL, Ponsonby, New Zealand, and JOHN GELL, London, England. Filed May 20, 1913. Serial No. 768,886. (Cl. 108—13.)



1. In means for fastening metal sheets, or the like, the combination of a metal sheet having a nail aperture, a support spaced therefrom, a nail adapted to be driven through said aperture into said support to secure the sheet thereto, and a bush insertible through the sheet aperture to a position intermediate the sheet and support and having means to engage and brace the sheet at its inner side.

2. In means for fastening metal sheets, or the like, the combination of a metal sheet having a nail aperture, a support spaced therefrom, a nail adapted to be driven through said aperture into said support to secure the sheet thereto, and a bush insertible through the sheet aperture and including expansible members to engage the inner side of the sheet to brace the former against pounding stresses due to driving the nail home in its support.

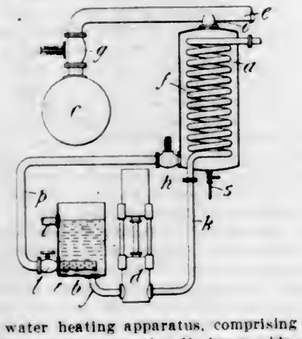
3. In means for fastening metal sheets, or the like, the combination of a metal sheet having a nail aperture, a support spaced therefrom, a nail adapted to be driven through said aperture into said support to secure the sheet thereto, and a bush intermediate the sheet and support to brace the former against pounding stresses due to driving the nail home in said support, and means on the nail to expand the bush beneath the sheet.

4. In means for fastening metal sheets, or the like, the combination of a metal sheet having a nail aperture, a support spaced therefrom, a nail adapted to be driven through said aperture into said support to secure the sheet thereto, and means insertible through the nail aperture to assume a position intermediate the sheet and support and engage and brace the sheet on its inner side.

5. In means for fastening metal sheets, or the like, the combination of a metal sheet having a nail aperture, a support spaced therefrom, a nail adapted to be driven through said aperture into said support to secure the sheet thereto, and a bush insertible through the sheet aperture and slitted at one end for expansion intermediate the sheet and support to brace the former against pounding stresses due to driving the nail home in said support, and means on the nail to expand said bush.

[Claims 6 and 7 not printed in the Gazette.]

1,108,210. APPARATUS FOR HEATING BOILER FEED-WATER. DONALD BARNS MORISON, Hartlepool, England. Filed Feb. 1, 1913. Serial No. 745,644. (Cl. 62—29.)



1. Feed water heating apparatus, comprising a surface steam heater arranged on the discharge side of a feed pump, a secondary steam heater arranged on the suction side of the feed pump, said secondary heater being supplied with steam which is not condensed in the primary heater, and a condenser which receives the steam that is not utilized in the heaters.

2. Feed water heating apparatus, comprising a steam heater arranged on the discharge side of a feed pump, a secondary heater consisting of a tank containing a steam heating nozzle or nozzles arranged on the suction side of the feed pump, said secondary heater being supplied with steam which is not condensed in the primary heater, and a condenser which receives the surplus steam that is not utilized in the heaters.

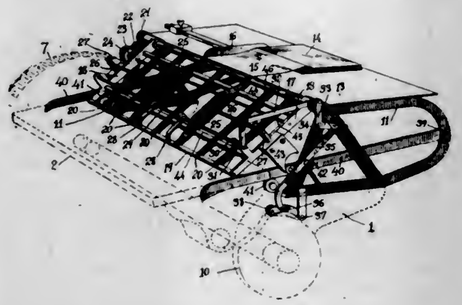
3. Feed water heating apparatus, comprising a steam heater arranged on the discharge side of a feed pump, a secondary heater arranged on the suction side of the feed pump, said secondary heater being supplied with steam which is not condensed in the primary heater, a condenser into which steam not utilized in the heaters is discharged, and a pipe for draining the water of condensation from said primary heater into said secondary heater.

4. Feed water heating apparatus, comprising a steam heater arranged on the discharge side of a feed pump, a secondary heater arranged on the suction side of the feed pump, and a looped pipe leading from the bottom of the primary heater into the lower portion of the secondary heater and serving for the escape of steam and drainage water from the primary heater, said pipe extending below the two heaters so as to provide a head of water corresponding to the pressure at which it is desired steam shall pass from the primary heater into the secondary heater, and a condenser into which steam not utilized in the heaters is discharged.

5. Feed water heating apparatus, comprising a steam surface heater arranged on the discharge side of a feed pump, a secondary heater arranged on the suction side of the feed pump, said secondary heater being supplied with steam which is not condensed in the primary heater, a pipe leading from the primary heater and terminating in a nozzle placed in the water in the secondary heater said pipe serving for the discharge of air from said primary heater into said secondary heater, and a condenser which receives the steam that is not utilized in the heaters.

[Claims 6 to 25 not printed in the Gazette.]

1,108,211. SHEET-FEEDING DEVICE. LEWIS E. MORRISON, Newark, N. J., assignor to himself and Matthias Plum, Newark, N. J. Filed Feb. 17, 1908. Serial No. 416,203. (Cl. 101—36.)



1. A sheet feeding device for platen presses having a movable platen and a cam for locking said platen in printing position comprising a sheet conveying means, mechanism for arresting the movement of the sheet at a predetermined point and at predetermined intervals, means for operating said mechanism by the said cam, means for driving said conveying means constantly in one direction, and means for oscillating said device by the movement of said platen.

2. A sheet feeding device for platen presses, having a movable platen comprising a frame, a feed table, a sheet conveying mechanism pivoted on said frame for conveying a sheet from the said feed table to the platen, two levers pivoted on the frame, and means for oscillating the said levers to move the said conveying mechanism up when the said platen moves into printing position.

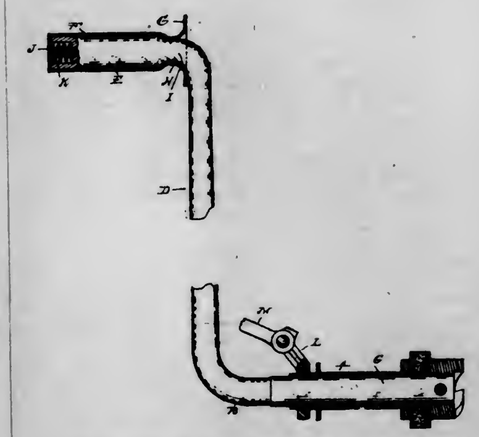
3. A sheet feeding mechanism for platen presses comprising means for conveying and registering a sheet, means for timing the movement of said sheet at predetermined intervals before the same reaches the position to be printed, means for driving said conveying means, means for operating the said timing means, a frame for supporting all of the above mentioned mechanisms and combining the same into a machine unit adapted to be operated by the combined actions of the platen, the driving gear and the platen locking cam of the said press.

4. A sheet feeding mechanism for platen presses, having a movable platen, comprising a frame, a table on said frame for receiving a pile of sheets, an adjustable side guide on said table, sheet conveying means pivoted on said frame, adjustable side registering guides carried by the said conveying means, adjustable means for stopping the movement of the sheet at predetermined intervals, all of the aforesaid means being supported by the said frame and means for automatically operating the said feeding mechanism by the action of the said press.

5. A sheet feeding device for platen presses having a movable platen comprising brackets detachably mounted on the frame of the said press, sheet conveying means pivoted in the said brackets and overhanging the said platen, driving means carried by one of said brackets for driving the said conveying means constantly in one direction and means for oscillating the said conveying means by the movements of the said platen.

[Claims 6 to 30 not printed in the Gazette.]

1,108,212. STARTING-CRANK. EMIL A. NELSON, Detroit, Mich., assignor to Hupp Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 19, 1912. Serial No. 678,674. (Cl. 74—33.)

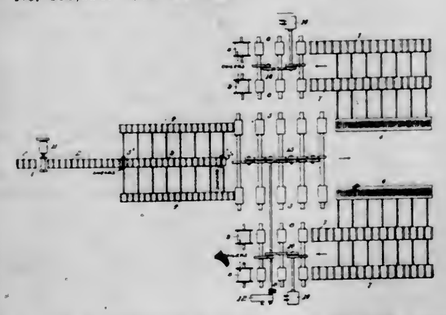


1. The combination with a crank having an outwardly-extending handle provided with a contracted neck portion, of a sheet metal member sleeved upon said handle having an outwardly-extending flange at its inner end forming a hand-guard and having a spun portion adjacent to said flange engaging the contracted neck portion of said handle.

2. The combination with a crank having an outwardly extending integral handle and a contracted neck portion, of a cupped cylidrical sheet metal member sleeved upon said handle having at its inner end an outwardly extending flange adjacent to the crank, and an inwardly spun bead adjacent to said flange engaging the contracted neck portion of said handle, and a resilient member engaging a recess in the end of said handle and yieldably bearing against the end of said cupped member.

3. The combination with a crank having an outwardly extending handle provided with a recess in the end thereof, of a sheet metal member sleeved upon said handle and having a spun portion engaging a contracted portion of said handle, and a resilient member positioned within said recess and yieldably bearing against the end of said sleeve member.

1,108,213. ART OF MAKING METAL SHEETS. EDWIN NORTON, New York, N. Y. Filed Oct. 20, 1911. Serial No. 655,696. (Cl. 29—19.)



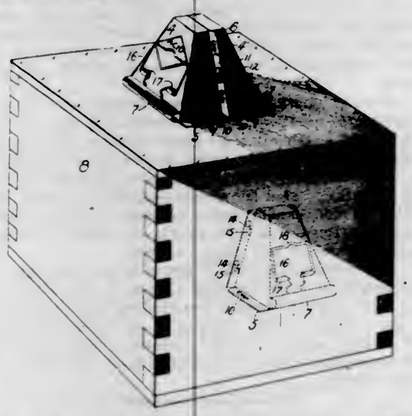
1. In the continuous manufacture of thin sheet metal, reducing the heated ingot or slab to a long thin sheet, shearing the sheet into lengths, delivering the sheared

sheets in single lengths alternately to different trains of tandem hot reducing rolls having a sufficient number of stands to complete the hot rolling at a single pass and simultaneously stretching the sheets between the roll passes to prevent their looping or buckling, and finally delivering the thin single sheets from which the heat has been extracted by the previous step into sufficient number of trains of cold rolls to consecutively and continuously finish the single sheets to the desired gage.

2. In the manufacture of thin sheet metal, reducing a heated slab or ingot to a long thin plate, shearing the plate into a plurality of plates while hot, reducing the plates while hot in a plurality of mills to long thin sheets, and then reducing the sheets in a plurality of cold mills, the sheets being passed through the cold mills in a direction opposite that given in plate-reducing mills, thereby causing the metal to flow in the cold mills opposite to its flow in the plate-reducing rolls.

3. In the continuous manufacture of thin sheet metal, reducing the heated ingot or slab to a long thin sheet, shearing the sheet into lengths, and delivering the sheared sheets in single lengths to different trains of tandem hot reducing rolls having a sufficient number of stands to complete the hot rolling at a single pass and simultaneously stretching the sheets between the roll passes to prevent their looping or buckling.

1,108,214. CARBOY-NOSE PROTECTOR. FREDERICK EUGENE OLIVER, Bath, Me. Filed Feb. 13, 1914. Serial No. 818,529. (Cl. 215—3.)



1. A carboy nose protector comprising two similar units removably secured to the carboy box and having flanges removably connected to each other.

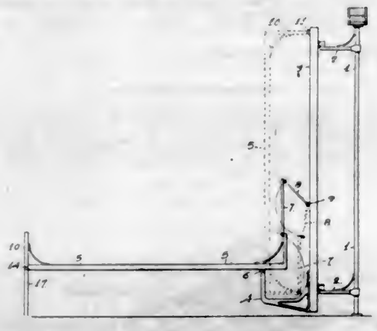
2. A carboy nose protector comprising two similar sheet-metal units secured to the carboy box and having projecting flanges removably secured to each other.

3. A carboy nose protector comprising two similar units removably secured to the carboy box and to each other, said units being adapted to be secured to the side of said box to serve as handles when not in transit.

4. A carboy nose protector comprising two similar units removably secured to the carboy box and to each other, said units being adapted to be secured to the side of said box when not in transit and having rolled edges to serve as handles.

1,108,215. DISAPPEARING BED. FRANK W. OLSEN, San Francisco, Cal. Filed Nov. 11, 1913. Serial No. 801,539. (Cl. 5—18.)

1. A disappearing bed comprising a panel pivotally secured within the doorway of a closet; a bedstead pivotally secured to the panel; a folding head pivotally secured to the bed; means for maintaining the head of the bed in substantially a vertical position; means for counterbalancing the bed; and automatic means for providing rigid supports for the foot of the bed.

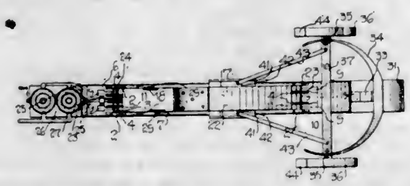


2. A disappearing bed comprising a rod pivotally secured in a vertical position within the doorway of a closet; a panel pivotally secured to the rod by means of vertical pivots; a bed pivotally secured to the lower end of the panel by means of horizontal pivots; a folding head pivotally secured to the bed; means operatively connected to the head and to the panel and adapted to maintain the head in substantially a vertical position; means for counterbalancing the bed; and automatic means for providing a rigid support for the foot of the bed when the same is lowered to a horizontal position.

3. A disappearing bed comprising a vertical rod vertically pivoted within the doorway of a closet and having horizontal arms secured thereto; a vertical panel vertically pivoted to the ends of the horizontal arms; suitable brackets rigidly secured to the lower end of the panel; a bedstead pivotally secured to the ends of the brackets by means of horizontal pivots; suitable weights secured to the head of the bed and beyond each side of the panel; a folding head pivotally secured to the bed; a suitable connection pivotally secured to the folding head and to the panel and adapted to maintain the said head in a vertical position; and automatic means for providing a rigid support for the foot of the bed when the same is in a horizontal position.

4. A disappearing bed comprising a vertical rod rotatably secured within the doorway of a closet and having horizontal arms secured thereto; a vertical panel pivotally secured to the ends of the arms; suitable brackets secured to the lower end of the panel; a suitable bumper secured to the upper end of the panel; a bedstead pivotally secured to the ends of the brackets and adapted to support the head end of the bed; a folding head pivotally secured to the bed; a suitable connection pivotally secured to the folding head and to the panel and adapted to maintain the said folding head in substantially a vertical position; counterweights secured to the head of the bed; and legs pivotally secured to the bed and adapted to support the foot thereof when the same is lowered to a horizontal position.

1,108,216. VEHICLE. ADOLPH W. OLSON, McIntosh, Minn. Filed Feb. 4, 1914. Serial No. 816,548. (Cl. 21—47.)



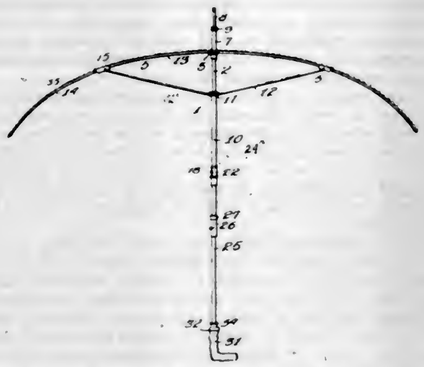
1. A device of the character described including a body having longitudinally disposed elongated slots extended therethrough intermediate its length, such slots being angular in cross section, transversely disposed shafts supported by the body adjacent the opposite ends of the slots, a platform supported by the body and positioned between the shafts and substantially bridging the space therebetween, such platform being provided with spaced parallel grooves in its upper surface angular in cross section, endless members operatively connected with the shafts and traveling through the slots of the body and the grooves of the platform, arms carried by the endless members adapted to project through the slots of the body, calks carried by the projected portions of the arms, and means for rotating one of the shafts.

2. A device of the character described including a body having longitudinally disposed elongated slots extended therethrough intermediate its length, by such slots being angular in cross section, transversely disposed shafts supported by the body adjacent the opposite ends of the slots, a platform supported by the body and positioned between the shafts and substantially bridging the space therebetween, such platform being provided with spaced parallel grooves in its upper surface angular in cross section, endless members operatively connected with the shafts and traveling through the slots of the body and the grooves of the platform, arms carried by the endless members adapted to project through the slots of the body, calks carried by the projected portions of the arms, means for rotating one of the shafts, and a cover member carried by the platform substantially entirely inclosing the same.

3. A device of the character described comprising an elongated body, a resilient member projecting beyond opposite sides of the body, and runners positioned at opposite sides of the body and connected with the free end portions of such member.

4. A device of the character described comprising an elongated body, a resilient member projecting beyond opposite sides of the body, a bar in pivotal connection with the body and projecting beyond opposite sides thereof, runners positioned at opposite sides of the body and connected to the bar, and operative connections between the runners and the extremities of the member.

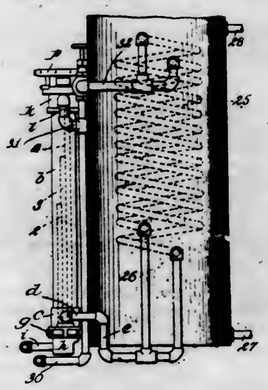
1,108,217. UMBRELLA. JOSEPH O. OSTMAN, Hancock, Mich. Filed Mar. 14, 1911, Serial No. 614,480. Renewed Jan. 31, 1914. Serial No. 815,832. (Cl. 135—46.)



1. A folding umbrella consisting of a standard, ribs pivoted on said standard, a tubular portion incasing said standard, stay ribs uniting said first mentioned ribs and said tubular member, said tubular member and standard provided with longitudinal slots, a spring catch mounted within said slot and secured to said standard, a slide having a plurality of apertures upon one side thereof slidably mounted upon said tubular member, and a lug formed at the base of said standard engaging one of said apertures in said slide and rigidly securing said slide to said standard, the free terminal of said spring catch extending through said slot in the tubular member and the other aperture in said slide.

2. A folding umbrella consisting of a standard, ribs pivoted on said standard, a tubular portion incasing said standard, stay ribs uniting said first mentioned ribs and said tubular member, said tubular member and standard provided with longitudinal slots, a spring catch mounted within said slot and secured to said standard, a slide having a plurality of apertures upon one side thereof slidably mounted upon said tubular member, a lug formed at the base of said standard engaging one of said apertures in said slide and rigidly securing said slide to said standard, the free terminal of said spring catch extending through said slot in the tubular member and the other aperture in said slide, means formed adjacent the upper terminal of said slot to hold said slide in its extended position, and a hinged joint intermediate said handle and said slide.

1,108,218. MEANS FOR REGULATING STEAM-HEATING SYSTEMS. LEWIS CRAVEN ORD, Montreal, Quebec, Canada, assignor to Canadian Gold Car Heating & Lighting Company, Limited, Montreal, Canada, a Corporation of Canada. Filed Aug. 3, 1910. Serial No. 575,381. (Cl. 237—9.)



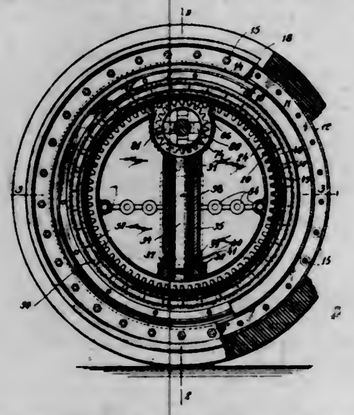
The combination with a steam heating system and a heating coil therein, of a stand pipe connected to the heating coil and adapted to have the water of condensation escape therethrough, a conduit leading from the heating coil to the stand pipe and having a downwardly offset portion providing a water pocket therein, means providing the stand pipe with a plurality of discharge openings arranged at different levels for the water of condensation, and means whereby the water of condensation may be caused to collect in the said stand pipe and rise therein to any one of such discharge openings.

1,108,219. VEHICLE-WHEEL. ALFRED ORTENGREN, Brooklyn, N. Y. Filed June 22, 1912. Serial No. 705,228. (Cl. 21—90.)

1. A wheel comprising a rotary outer member, an inner member supported thereby having provision for pivotal connection with a fixed axle and having gearing adapted to be connected to a driving shaft, a pair of similar sets of bosses on the inner member, and a bracket adapted to be secured to the one or the other of said sets of bosses whereby the wheel is adapted for use on either side of the vehicle, said bracket constituting a portion of the steering apparatus of the vehicle with which the wheel is used.

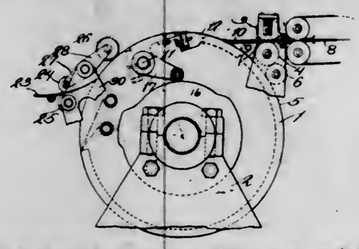
2. A wheel comprising a rotary outer member, an inner member having provision for pivotal connection with a fixed axle, bearings between the outer and inner members, a gear mounted to rotate with the outer member, a pinion rotatably mounted in said inner member and meshing with the gear, a driving shaft connected to the pinion by a universal joint connection, a pair of similar sets of bosses on the inner member, and a bracket adapted to be secured

to the one or the other of said sets of bosses whereby the wheel is adapted for use on either side of the vehicle, said



bracket constituting a portion of the steering apparatus of the vehicle with which the wheel is used.

1,108,220. SHEET FEEDING AND REGISTERING MECHANISM FOR PRINTING-PRESSES. GEORGE E. PANCOAST, Brooklyn, N. Y., assignor to American Lithographic Company, a Corporation of New York. Filed June 7, 1902. Serial No. 110,570. (Cl. 101—38.)



1. In a device for presenting sheets to a moving sheet carrying member the combination with the sheet carrying member, of a sheet gripper, and a sheet positioning device, moving with said gripper, said gripper and said positioning device traveling with and while so traveling having a movement relatively to said sheet carrying member for adjusting the sheets upon the member.

2. In a device for presenting sheets to a moving sheet carrying member the combination with the sheet carrying member, of means for feeding the sheets to said member with an advancing movement, a sheet gripper, and a sheet positioning device moving with said gripper, said gripper and said positioning device traveling with and while so traveling having a movement relatively to said sheet carrying member for adjusting the sheets upon the member.

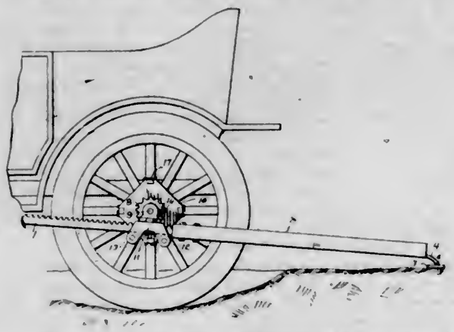
3. In a device for presenting sheets to a moving sheet carrying member the combination with a sheet carrying member, of means for advancing the sheet to said member at substantially the same speed as that of the member, a sheet gripper, and a sheet positioning device moving with said gripper, said gripper and said positioning device traveling with and while so traveling having a movement relatively to said sheet carrying member for adjusting the sheets upon the member.

4. In a device for presenting sheets to a moving sheet carrying member the combination with the sheet carrying member, of a sheet gripper and an abutment or gage carried by said gripper, said gripper and gage traveling with and while so traveling having a movement relatively to said sheet carrying member for adjusting the sheets upon the member.

5. In a device for presenting sheets to a moving sheet carrying member the combination with the sheet carrying member, of means for advancing the sheets to said member, a sheet gripper carried by said member, an abutment or gage carried by said gripper, and means for giving said gripper and gage a movement relatively to said sheet carrying member for adjusting the sheets upon the member while the latter is in motion.

[Claims 6 to 10 not printed in the Gazette.]

1,108,221. TRACTION ATTACHMENT FOR AUTOMOBILES. CHEANEY L. PARISH and FRED C. FERRELL, Harrisburg, Ill. Filed June 16, 1913. Serial No. 774,023. (Cl. 21—114.)



1. A traction attachment for automobiles including a rack bar, a housing for said rack bar, means for holding said rack bar in extended relation to said housing, a pinion movable on said rack bar, and means for operatively and detachably connecting said pinion to the rear wheel of an automobile.

2. A traction attachment for automobiles including a rack bar, a housing for said rack bar, means for holding said rack bar in extended relation to said housing, a pinion movable longitudinally of said rack bar, a squared shaft for said pinion, a hook plate splined on said shaft, a plurality of hook members pivotally attached to said hook plate, said hook members being adapted for attachment to the spokes of the rear wheel of an automobile, and a hub cup carried terminally of said shaft and adapted for engagement with the hub of the wheel when the said hooks are in operative relation to the wheel.

3. A traction attachment for automobiles including a rack bar, a housing for said rack bar, said rack bar being slidably mounted in said housing, means for holding said rack bar in extended relation to said housing, a bifurcated road engaging member carried by said housing, a pinion movable longitudinally of said rack bar, and means for operatively connecting said pinion to the rear wheel of an automobile.

4. An automobile traction attachment including a rack bar, a pinion movable longitudinally of said rack bar, a pair of side plates mounted for sliding movement along the sides of said rack bar, said pinion being journaled in the upper portion of said plates, rollers carried by said plates and disposed to engage the under face of said rack bar, and means for detachably connecting the said pinion to the rear wheel of an automobile.

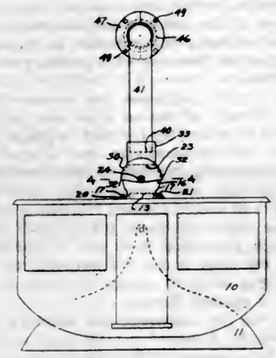
5. A traction attachment for automobiles including a rack bar, a movable pinion on said rack bar, and means for operatively and detachably connecting said pinion to the rear wheel of an automobile.

[Claims 6 to 8 not printed in the Gazette.]

1,108,222. SMOKE-UPTAKE. ROBERT L. PAULSON, Brooklyn, N. Y. Original application filed Oct. 24, 1912, Serial No. 727,553. Divided and this application filed Aug. 26, 1913. Serial No. 786,683. (Cl. 126—308.)

1. A compensating smoke-uptake for self-leveling stoves, comprising in combination with a stove, a smoke outlet

having a pivotal connection with the latter, a telescopic joint above said connection, an elbow having a rim, and a retaining flange behind which said rim is free to rotate.



2. A compensating smoke-uptake for self-leveling stoves, comprising in combination with a stove and the smoke outlet thereof, a relatively stationary member having its lower portion secured to the top of the stove over its said outlet, a movable member pivoted concentrically to said stationary member and provided with an annular chamber, and a smoke pipe having its lower end in telescopic engagement with said chamber.

3. A compensating smoke-uptake for self-leveling stoves, comprising in combination with a stove, a member fixed to the latter and having straight front and rear sides and curved ends, a semi-circular member taking over said fixed member and pivoted to the straight sides thereof equidistantly from its said ends, a neck extending from the top of said movable member, a sleeve spaced from the outside of said neck and providing an annular chamber therewith, and a smoke pipe having its lower end telescopically received in said annular chamber.

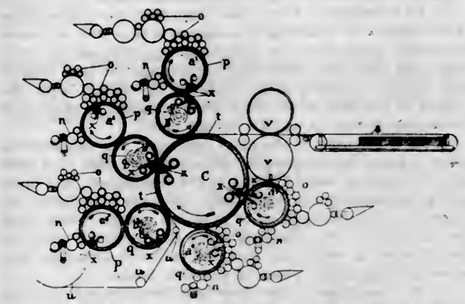
4. A compensating smoke-uptake for self-leveling stoves, comprising in combination with a stove, a member fixed to the latter and communicating with the flue thereof, said member having flattened front and rear walls and curved ends, a correspondingly formed movable member adapted to take over the outside of said fixed member, bolts threaded into the flattened sides of said latter member on which the movable member is pivoted equidistantly from said curved ends, the upper part of said movable member being formed with an annular chamber, and a smoke-pipe having its lower end in telescopic engagement with said chamber and the other end free to follow the motions of the stove.

5. A compensating smoke-uptake for self-leveling stoves, comprising in combination with a stove, a hollow member fixed to the latter, a correspondingly formed movable member taking over said fixed member and pivoted concentrically thereto and provided with an annular chamber, a smoke-pipe having one end in telescopic engagement with said chamber and its other end formed with an angularly offset portion, and means for securing said portion rotatably in position on a primary support.

[Claim 6 not printed in the Gazette.]

1,108,223. ROTARY LITHOGRAPHIC-PRINTING MACHINE. RAYMOND PERCIVAL PAYNE and JOHN WILLIAM PAYNE, Leeds, England. Filed Mar. 29, 1913. Serial No. 757,569. (Cl. 101—180.)

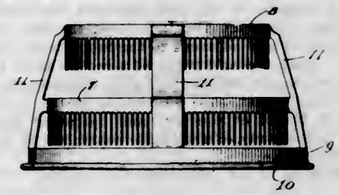
A rotary lithographic offset printing machine for the production of multi-color printing continuously and simultaneously upon one side or both sides of the material to be printed upon, comprising in combination a plurality of planographic and transfer cylinders arranged around a common impression cylinder having a plurality of rubber-covered printing surfaces capable of receiving inked impressions from any of the contacting cylinders, said impression cylinder being of a diameter divisible



equally by the diameter of both the planographic and the transfer cylinders.

1,108,224. COMB. ABRAHAM P. PERLIN, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,719. (Cl. 132—31.)

1. A device of the kind described comprising a comb; a guard spaced from said comb; and a laterally projecting flange on said guard, substantially as described.



2. A device of the kind described comprising a comb; a guard positioned lower than and at one side of the teeth of said comb; a flange on the side of said guard away from said comb; and a web joining said comb and said guard, substantially as described.

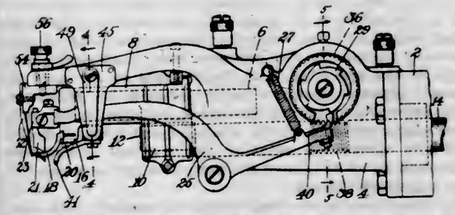
3. A device of the kind described comprising an arcuate comb; a guard disposed coaxially with said comb; and webs joining said comb and said guard, substantially as described.

4. A device of the kind described comprising a comb; a guard disposed coaxially with said comb; a laterally projecting flange on said guard; and webs joining said comb and said guard, substantially as described.

5. A device of the kind described comprising two spaced combs one disposed above and at one side of the other; a guard below and at one side of said lower comb; and a web joining said combs and said guard, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,225. TRIMMING-MACHINE. FREDERICK H. PERRY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 3, 1913. Serial No. 798,915. (Cl. 12—85.)



1. In a machine of the class described, the combination with means for trimming the edge of a shoe sole and

means for detaching the trimmed material from the sole, of means arranged to be operated by the shoe for controlling the operation of said detaching means.

2. In a machine of the class described, the combination with means for trimming the edge of a shoe sole of means normally inoperative for detaching the trimmed material from the sole, and controlling mechanism for said detaching means arranged to be actuated by contact with the breast of the heel of the shoe being trimmed to cause said detaching means to operate on the shoe.

3. In a machine of the class described, the combination with a knife constructed to trim along the edge of a shoe sole in front of and adjacent to the heel breast, and operating mechanism for said knife, of means normally inoperative but arranged to be actuated automatically upon the arrival of the trimming knife in alinement with the heel breast to sever the trimmed material from the sole substantially in the plane of the heel breast.

4. In a machine of the class described, the combination with a knife constructed to trim along the edge of a shoe sole in front of and adjacent to the heel breast, and mechanism for giving said knife rapid to and fro movements, of a second knife normally inoperative but arranged to cut transversely into the sole edge substantially in line with the heel breast, and mechanism acting automatically upon the movement of the breast of the heel into alinement with said second knife to set the latter knife into operation.

5. In a machine of the class described, the combination with a knife constructed to trim along the edge of a shoe sole in front of and adjacent to the heel breast, and mechanism for operating said knife, of a second knife arranged to cut transversely into the sole edge substantially in line with the heel breast, shoe positioning means arranged to engage the breast of the heel and operating mechanism for said transversely cutting knife controlled by said shoe positioning means.

[Claims 6 to 15 not printed in the Gazette.]

1,108,226. NOSE-CLIP FOR EYEGLASSES. CHARLES O. PETTERSSON, New York, N. Y. Filed Oct. 21, 1912. Serial No. 726,967. (Cl. 88—50.)



1. In a nose clip for eyeglasses, two members, each having a bracket formed of spaced arms and each bracket being adapted to be removably fastened to one of the lenses of the glasses, two cushions, each eccentrically pivoted on one arm of one of the brackets so as to be in spaced opposed relation, means adapted to force the cushions toward each other, and two levers, each projecting from one of the cushions and adapted to be manually moved for swinging the cushions in opposite directions so as to engage the nose of a person when the clip is applied thereon.

2. In a nose clip for eyeglasses, two members, each having a bracket formed of spaced arms and each bracket being adapted to be removably fastened to one of the lenses of the glasses, two cushions, each eccentrically pivoted on one arm of one of the brackets so as to be in spaced opposed relation, means adapted to yieldingly force the cushions toward each other, and two levers, each projecting from one of the cushions and adapted to be manually moved for swinging the cushions in opposite directions so as to engage the nose of a person when the clip is applied thereon.

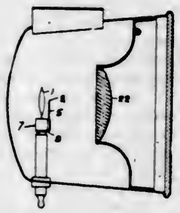
3. In a nose clip for eyeglasses, two members, each having a bracket formed of spaced arms and each bracket being adapted to be removably fastened to one of the lenses of the glasses, two cushions, each eccentrically mounted on one arm of one of the brackets so as to be in spaced opposed relation, two springs, each arranged between the arms of one of the brackets and normally serving to force the cushions toward each other, and two levers, each projecting from one of the cushions and adapted to be manually moved for swinging the cushions in opposite directions so as to engage the nose of a person when the clip is applied thereon.

4. In a nose clip for eyeglasses, two members, each having a bracket formed of spaced arms and each bracket being adapted to be removably fastened to one of the lenses of the glasses, two substantially oval-shaped resilient disks, each eccentrically pivoted on one arm of each of the brackets so that the corresponding narrow curved parts thereof are in spaced opposed relation, means adapted to force the disks yieldingly toward each other, and two levers, each projecting from one of the disks and adapted to be manually moved for swinging the disks in opposite directions so as to engage the nose of a person when the clip is applied thereon.

5. In a nose clip for eyeglasses, two members, each having a substantially S-shaped bracket and each bracket being adapted to be removably fastened to one of the lenses of the glasses, two resilient gripping elements, each eccentrically pivoted on one arm of each of the brackets so as to be in spaced opposed relation, two springs, each arranged between the other arms of each of the brackets and normally serving to force the disks toward each other, two levers, each projecting from one of the gripping elements and adapted to be manually moved for swinging said elements in opposite directions so as to engage the nose of a person when the clip is applied thereon, and two guides, each serving to guide the movement of each of the levers.

[Claim 6 not printed in the Gazette.]

1,108,227. LAMP. WALTER CECIL MANTBY PETTINGILL, Birmingham, England. Filed May 19, 1913. Serial No. 768,548. (Cl. 240—45.)

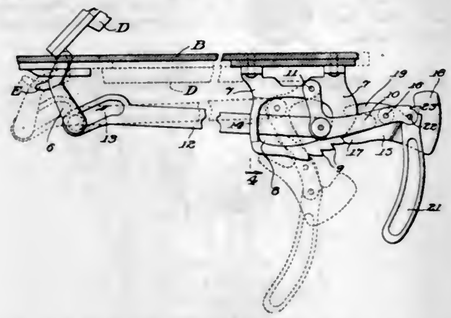


1. In a lamp, the combination of a source of light, means for increasing the intensity of the projected beam, and a screen having a substantially horizontal upper edge and situated in the focal plane of the intensifying means, said screen lying wholly below the optical axis and close to said source of light so as to prevent the rays propagated by that part of the source of light which lies below the optical axis from reaching the intensifying means.

2. In a lamp, the combination of a source of light, refracting means arranged in front of said source of light, and a screen with a substantially horizontal upper edge, said screen being arranged close to and in front of said source of light and with its said edge substantially in or about the plane of the axis of the refracting means.

1,108,228. TOP-PLATE-LIFTING DEVICE. GEORGE E. PICKUP, Newark, Ohio, assignor to The Wehrle Company, Newark, Ohio, a Corporation of Ohio. Filed May 14, 1913. Serial No. 767,683. (Cl. 126—211.)

1. In a stove, the combination of a body, a top plate section mounted thereon for pivotal movement, a downwardly projecting arm rigidly carried by said section, a bracket rigidly mounted on said body beneath the top of the stove, said bracket having a rack at its lower edge, a lever pivoted at its upper end on said bracket and normally hanging downwardly from said pivot, a link having one end pivotally attached to said lever at a point between the ends of the lever, the opposite end of said link being attached to said arm, and a dog pivoted between its ends on said lever, one end of said dog being arranged to engage said rack and the opposite end of the dog being weighted to normally hold the dog in such engagement.



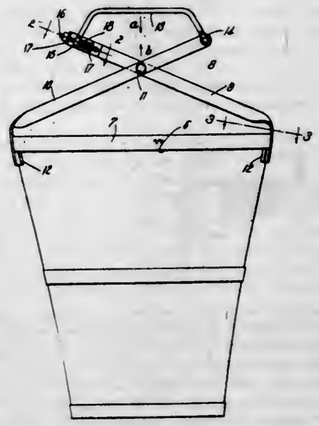
2. In a stove, the combination of a body, a top plate section mounted thereon for pivotal movement, a downwardly projecting arm rigidly fixed to said top plate section, a downwardly projecting bracket fixed to said body and having rack teeth in its lower edge, said bracket having a central opening therein, a lever having its upper end pivoted to said bracket at a point above said opening, said lever normally hanging downwardly from its pivot, a link connected at one end to said arm, the opposite end of said link being attached to said lever at a point between the ends of the lever, the last mentioned end of the link lying in the opening in said bracket and arranged to abut against one wall of said opening to determine the upward swinging movement of the top plate section, and a dog pivoted on said lever adjacent to the free end of the latter and adapted to engage the rack teeth in said bracket for holding said top plate section in its elevated position.

3. In a stove, the combination of a body, a top plate section mounted for pivotal movement thereon, a bracket mounted on said body and carrying a rack, a lever pivoted on one side of said bracket, means including a link for connecting said lever to said top plate section, a dog pivoted between its ends on said lever, said dog comprising a tooth adapted to engage said rack, a weighted portion at the opposite side of the pivot point, and a guard finger engaging said bracket at the side opposite to said lever.

4. In a stove, the combination of a body, a top plate section mounted thereon for pivotal movement about an axis adjacent to one edge, a downwardly extending arm fixed to said section near said edge, a bracket mounted on said body and carrying a rack, a lever pivoted at its upper end on said bracket, a link having one end pivotally attached to said lever at a point between the ends of the latter, said link being attached at its other end to said arm, and a dog pivotally mounted on said lever adjacent to its free end, said dog being arranged to engage said rack for holding said top plate section in its elevated position.

5. In a stove, the combination of a top comprising a section pivoted at one edge, a downwardly extending arm fixed to said section near said edge, a bracket secured to the underside of said top and having a rack at its lower edge, a lever pivoted at its upper end on one side of said bracket, a link having one end pivoted to said lever between the ends of the latter, the other end of said link being attached to said arm, a dog pivotally mounted on said lever near the free end thereof, said dog comprising a tooth at one side of the pivot point arranged to engage said rack, a weighted portion at the opposite side of the pivot point arranged to hold the tooth in such engagement, and a guard finger lying at the side of said bracket opposite to said lever for holding the parts in proper position.

1,108,229. RECEPTACLE-CARRIER. CHARLES P. POLLARD, Woburn, Mass., assignor of one-half to Elmer B. Parker, Wilton, N. H. Filed Jan. 2, 1914. Serial No. 809,904. (Cl. 57—9.)



1. A carrier embodying in its construction a pair of crossed members pivotally connected together at their crossing point, inturned lateral projections adjacent the lower extremities of said members, a bolt mounted adjacent the upper end of one of said crossed members, a handle pivotally connected at one of its ends to the upper end of one of said members, said handle slidably engaging at its opposite end, said bolt, and a spring encircling said bolt adapted to normally yieldingly retain said sliding end adjacent the outer end of said bolt.

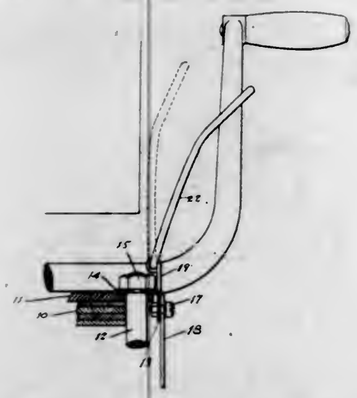
2. A carrier embodying in its construction a pair of crossed members pivotally connected together at their crossing point, shoulders formed at the lower extremities of said members, a pair of ears formed adjacent the upper end of one of said members, said ears being separated one from the other, a bolt extending through said ears, a handle having one of its ends slidably mounted on said bolt intermediate said ears, the opposite end of said handle being pivotally secured to the upper end of the other of said crossed members, and a spring interposed between the end of said handle engaging said bolt and the lowermost ear supporting said bolt, said spring being adapted to normally yielding retain said crossed members in close relation to each other.

1,108,230. CRANK-HANDLE HOLDER FOR AUTOMOBILES. HERMAN G. POSSNER and ALBERT W. POSSNER, Providence, R. I. Filed May 5, 1914. Serial No. 836,585. (Cl. 21—90.)

1. An auto crank handle holder comprising a base plate having ears adapted to be readily secured to the frame of the vehicle, fingers on said plate having joint eyes, a holder arm constructed of a thin strip of resilient metal having its ends turned substantially at right angles to the body thereof and engaging said joint eyes by spring pressure, the outer portion of said arm being bent in a U shape to receive and grip the handle to hold the same in desired position and means in said joint finger for retaining said arm in inoperative position.

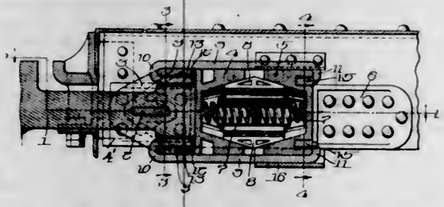
2. An auto crank handle holder comprising a base plate having ears adapted to be readily secured to the frame of the vehicle, fingers on said plate having joint eyes, the stock in the edges of said eyes being notched, a holder arm constructed of a spring wire bent in substantially

an inverted U shape to receive and grip the handle to hold it in desired position, the notches in said eyes being adapted to receive and retain the legs of the arm when swinging back into disengaged position.



3. An auto crank handle holder comprising a base plate formed to be readily secured to the frame of the vehicle, a holder arm constructed of a thin strip of resilient metal having its ends pivotally connected to said plate the outer portion of said arm being bent in a U shape to receive and grip the handle by a spring pressure to hold the same in desired position and means for retaining said arm in inoperative position.

1,108,231. DRAFT-GEAR. HERMAN C. PRIEBE, Blue Island, Ill. Filed Sept. 12, 1913. Serial No. 789,432. (Cl. 213—42.)



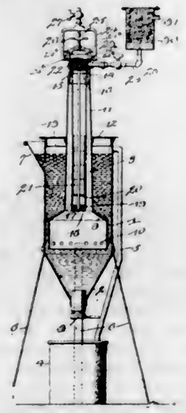
1. A draft gear including a coupler; a yoke having spaced apart side members engaged at their forward ends with the coupler stem, the inner ends of said side members being turned to form hooks; and an inner follower connected with said yoke by said hooks and with respect to which inner follower the yoke side members and short hook sides are movable longitudinally of the gear upon relative movement between the coupler and inner follower, said short hook sides extending lengthwise of and facing their companion hook sides, there being means for preventing the hooks from straightening.

2. A draft gear including a coupler; a yoke having spaced apart side members engaged at their forward ends with the coupler stem, the inner ends of said side members being turned to form hooks; and an inner follower having pocketed portions in the pockets of which the short sides of said hooks are received and with respect to which pockets said yoke side members and short hook sides are movable longitudinally of the gear, said short hook sides extending lengthwise of and facing their companion hook sides, the pockets that receive the short hook sides closely engaging the same to prevent the same to prevent the hooks from straightening.

3. A draft gear including a coupler; a yoke having spaced apart side members engaged at their forward ends with the coupler stem, the inner ends of said side members being turned to form hooks; and an inner follower having pocketed portions in the pockets of which the short sides of said hooks are received, said short hook sides extending lengthwise of and facing their companion hook sides, the pockets that receive the short hook sides closely engaging the same to prevent the hooks from straightening.

4. A draft gear including a coupler; a yoke having spaced apart side members engaged at their forward ends with the coupler stem, the inner ends of said side members being turned to form hooks; and an inner follower connected with said yoke by said hooks, said short hook sides extending lengthwise of and facing their companion hook sides, there being means for preventing hooks from straightening.

1,108,232. ACETYLENE-GAS GENERATOR. DANIEL G. PUTNAM and GERLOF BOERSMA, Traverse City, Mich. Filed July 8, 1912. Serial No. 708,339. (Cl. 48—22.)



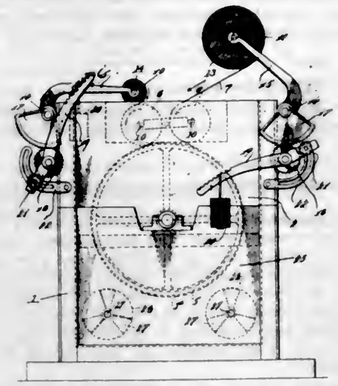
In an acetylene gas generator, the combination of a cylindrical tank having a valve controlled discharge opening in its lower end, an overflow pipe connected with said tank near its upper end, a closure for the upper end of said tank having a central opening with a downturned flange arranged around it and extending into the tank, a gas bell removably mounted in said tank and having an upwardly tapering elongated hollow neck extending through the opening in said closure and secured to the flange thereof, a casing secured to the upper end of said neck and having an annular ledge on its inner face, a skeleton carbid holder having a band removably engaged with said ledge, said holder extending throughout the length of said neck, and a gas delivery pipe connected with said casing.

1,108,233. DYEING APPARATUS. ALBERT J. RAU and JULIUS A. RAU, Clifton, N. J. Filed Mar. 4, 1914. Serial No. 822,359. (Cl. 8—19.)

1. In dyeing apparatus or the like, in combination, a vat for the dye-bath, a drum mounted to rotate in said vat, means for guiding the web of material to be dyed around the underside of said drum, and a delivery roller disposed above said vat and receiving the web directly therefrom, and means for producing an excess of hydrostatic pressure in said bath on the outer face of said drum.

2. In dyeing apparatus or the like, in combination, a vat for the dye-bath, a drum in the form of a screen mounted to rotate in said vat, means for guiding the web of material to be dyed around said drum, said drum being adapted to be immersed in the bath within said vat, said drum having an open end, said vat having means for partially closing the end of said drum and having an opening communicating with the interior of said drum through the open end thereof, and means for withdrawing the lye liquor through the said opening and returning the same to the exterior of said drum to create an excess hydrostatic pressure on the outer side of said drum.

3. In dyeing apparatus or the like, in combination, a vat for the dye-bath, a drum rotatably mounted within said vat, means for guiding a web of material to be dyed onto said drum, a supply-roll, means for supporting the same in a fixed position to deliver the web to said guiding means, and a delivery roll arranged to receive the web after passing around said drum and arranged to be rotated by rotating said drum.

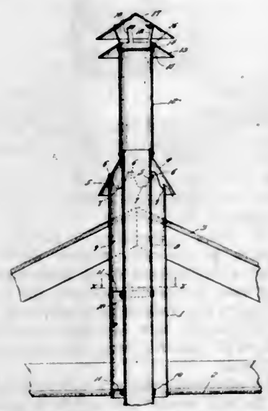


4. In dyeing appartus or the like, in combination, a vat for the dye bath, a drum rotatably mounted within said vat, means for guiding a web of material to be dyed onto said drum, a supply-roll for supporting the same in a fixed position to deliver the web to said guiding means, and a delivery-roll mounted to rotate about a laterally movable axle arranged to receive the web after passing around said drum and supported by peripheral contact from beneath so as to rotate said delivery-roll to wind up the web thereupon.

5. In dyeing apparatus or the like, in combination, a vat for the dye bath, a drum rotatably mounted within said vat, means for guiding a web of material to be dyed onto said drum, a supply-roll, an arm for supporting the same in a position to deliver the web to said guiding means, a second arm, a delivery-roll supported thereby arranged to receive the web after passing around said drum and arranged to be rotated when said drum rotates, and means for holding either of said arms fixed.

[Claims 6 to 14 not printed in the Gazette.]

1,108,234. SMOKE-JACK. WALTER REENSTROM, Chicago, Ill. Filed May 7, 1914. Serial No. 836,943. (Cl. 104—208.)



1. A device of the class described comprising a tubular member; a smoke pipe of less diameter than said tubular member extending through the latter; means for centering said smoke pipe in said tubular member; a conical hood at the upper end of said tubular member, there being openings at the upper end of said tubular member below said hood; and a tubular extension at the upper end of said tubular member of less diameter than the latter in which the upper end of said smoke pipe snugly fits, substantially as described.

2. A device of the class described comprising a tubular member; a smoke pipe of less diameter than said tubular member extending through the latter; means for centering said smoke pipe in said tubular member, said means comprising a ring embracing said smoke pipe; and arms having their outer ends rigidly secured to said tubular member and having their inner ends connected with said ring for rigidly supporting the latter, substantially as described.

3. A device of the class described comprising a tubular member; a smoke pipe of less diameter than said tubular member extending through the latter; means for centering said smoke pipe in said tubular member, said means comprising means embracing said smoke pipe; arms inwardly projecting from said tubular member for supporting said embracing means; and a conical hood at the upper end of said tubular member, there being openings at the upper end of said tubular member below said hood, substantially as described.

4. A device of the class described comprising a tubular member; a conical hood arranged at the upper end of said tubular member; and arms formed integral with and upwardly projecting from said end of said tubular member for supporting said hood, there being ventilation openings formed between said arms at the under side of said hood, substantially as described.

5. A device of the class described comprising a tubular member; a conical hood arranged at the upper end of said member; the upper end of said member being recessed to form supporting arms for said hood and to constitute ventilation openings between said arms at the under side of said hood, substantially as described.

[Claim 6 not printed in the Gazette.]

1,108,235. METHOD OF TREATING ALLOY-STEEL SCRAP. PAUL P. REESE and EMORY L. DIEHL, Munhall, Pa. Filed Feb. 7, 1911. Serial No. 607,115. (Cl. 204—64.)

1. In the treatment of alloy steel scrap containing nickel, the steps consisting in heating the scrap by regenerative heat to about its melting point, then further heating and melting the heated scrap by means of an electric current, maintaining a non-oxidizing atmosphere for the scrap during the melting operation, and adding reducing agents to form a reduced slag and thereby restore oxidized alloying elements to the steel.

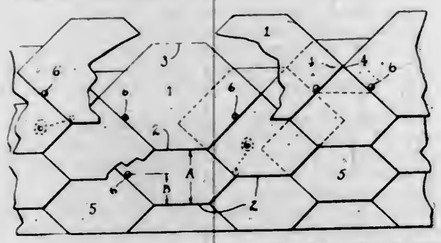
2. In the treatment of alloy steel scrap containing nickel and chromium, the steps consisting in heating the scrap by regenerative heat to about its melting point, then further heating and melting the heated scrap by means of an electric current, maintaining an atmosphere of non-oxidizing gases for the scrap during the melting operation to lessen oxidation of the alloying elements, and adding reducing agents to form a reduced slag and thereby restore oxidized alloying elements in the slag to the steel.

3. In the treatment of alloy steel scrap containing nickel, chromium, and vanadium, the steps consisting in heating the scrap by regenerative heat to about its melting point, then melting and heating the scrap to the tapping temperature by means of an electric current, maintaining an atmosphere of non-oxidizing gases for the scrap during the melting operation to lessen oxidation of alloying elements in the steel, and adding reducing agents to the melted scrap to form a reduced slag and thereby restore oxidized alloying elements to the steel.

4. In the treatment of alloy steel scrap containing nickel, chromium, vanadium and manganese, the steps consisting in heating the scrap by regenerative heat to about its melting point, then melting and further heating

the heated scrap by means of an electric current, passing a stream of non-oxidizing gases over the scrap during the melting operation, and adding slag forming materials to the scrap during the melting operation to form a reduced slag and thereby reduce the oxidized alloying elements in the slag.

1,108,236. ROOFING-SHINGLE. HARRY M. REYNOLDS, Grand Rapids, Mich. Filed July 16, 1913. Serial No. 779,278. (Cl. 108—9.)



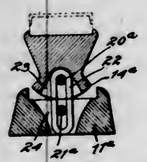
1. Shingles having obtuse lower angles and hexagonal exposed portions, and fastenings for each course located beneath the lower angles of the next course above and substantially on a horizontal line extending through the middle of the exposed portion of the shingles.

2. Shingles having obtuse lower angles and hexagonal exposed portions, said exposed portions having opposed horizontal margins and horizontally opposite angles, and fastenings for said shingles near said angles and covered by the lower angles of the shingles next above.

3. Shingles each having an outline of hexagonal form, and laid in courses with the opposite angles adjacent and the lower side overlapping the next lower course to substantially opposite the middle of the exposed portion thereof and the lower angles covering the securing nails of said lower course.

4. Shingles each having an outline of hexagonal form and laid in courses with two sides of each shingle horizontal, and its opposite angles in line, fastening nails inserted opposite the ends of the exposed portion of each shingle and beneath the lower angles of the next course above, each course overlapping the course below to near the middle of the exposed portion thereof and covering the fastenings for the same.

1,108,237. DUMP-CART SUPPORT. JAY B. RHODES, Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Original application filed Dec. 28, 1911, Serial No. 668,342. Divided and this application filed Apr. 1, 1912. Serial No. 687,647. (Cl. 105—190.)



1. A rocker-bearing, comprising a base having a channel in its upper surface, a rocker adapted to fit and rock in said channel, and a longitudinally-movable link connected with said rocker and with said base for limiting the movement of said rocker in either direction.

2. A rocker-bearing, comprising a base having a recess in its upper surface, a rocker adapted to fit upon said base and having a recess overlying the recess in the base, and means in said recesses connected with the rocker and loosely connected with the base for limiting the movement of the rocker in either direction.

3. A rocker-bearing, comprising a base having a recess, a rocker adapted to rock on said base and having a recess adapted to overlie the recess in the base, a link in said recesses, a pin connecting said link centrally with said rocker, and means loosely connecting the link with the base so that it may move longitudinally when the rocker is rocked.

4. A support for dump-cars, comprising a base having a recess, a rocker adapted to rock on said base and having a recess adapted to overlie the recess in the base, a link fitted in said recesses, and pins connecting said link with said rocker and with said base, said link being movable longitudinally of itself when the rocker is rocked.

1,108,238. ALFALFA PRODUCT. MARK C. RICH, Hot Springs, S. D. Filed Nov. 28, 1911, Serial No. 662,919. Renewed June 22, 1914. Serial No. 846,698. (Cl. 99—11.)

1. That improvement which consists in grinding alfalfa which is free from woody fiber and mixing it with ground wheat.

2. That improvement which consists in cutting alfalfa before it has become woody and fibrous, then drying it, grinding it, mixing it with ground wheat and a saccharine material, and then roasting the mixture until it is brown.

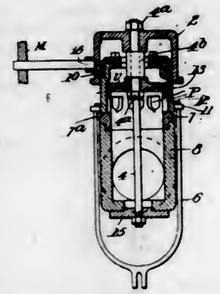
3. That improvement which consists in cutting alfalfa before it has become woody and fibrous, partially curing it in the field then subjecting it to artificial heat to prevent bleaching, then grinding it, and mixing it with ground wheat.

4. That improvement which consists in cutting alfalfa before it has become woody and fibrous, partially curing it in the field, then grinding it, then drying it by artificial heat to prevent bleaching, then mixing it with ground wheat and a saccharine material, and then roasting the mixture.

5. An alfalfa product containing alfalfa which is free from woody fiber and ground wheat.

[Claims 6 and 7 not printed in the Gazette.]

1,108,239. THROTTLE-VALVE. JOSEPH C. ROHE, Danville, Ill., assignor of one-half to John P. Curry, Danville, Ill. Filed July 3, 1913. Serial No. 777,254. (Cl. 137—4.)



1. A throttle valve comprising a hollow head provided with side ports, and a vent in the top thereof, a cap above said head, provided with an exhaust vent, and a sleeve slidable on the head and within the cap and adapted to open and close said ports and the exhaust vent in the cap, substantially as described.

2. A throttle valve comprising a hollow head provided with ports in the side thereof and a vent in the top thereof, a cap spaced above said head and having an exhaust vent in the side thereof, and a sleeve the lower end of which fits around said head and the upper end of which fits within said cap, the sleeve being movable up and down to open the ports and close the exhaust vent and vice versa.

3. A throttle valve comprising a hollow head provided with ports in the side thereof and a vent in the top thereof, a cap spaced above said head and having an exhaust vent in the side thereof, and a sleeve the lower end of which fits around said head and the upper end of which fits within said cap, the sleeve being movable up and down to open the ports and close the exhaust vent and vice versa, the area of the vent in the top of the head being less than that of the exhaust vent.

4. A throttle valve comprising a hollow head provided with ports, a cap spaced from said head, and a sleeve fitting at one end around the head and within the cap at the other end and movable to open or close the ports, and a passage between the interior of the head and the interior of the cap, to equalize the pressure therein, the cap having a vent to exhaust pressure from the cap when the ports are closed.

1,108,240. UMBRELLA-CASE. JOHN ROSE, Philadelphia, Pa. Filed Dec. 9, 1913. Serial No. 805,524. (Cl. 135—33.)



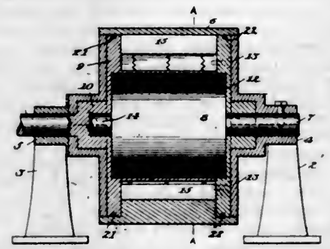
1. An umbrella case comprising an outer face portion of flexible material, a lining having a smooth inner face, and an interposed layer connected to the face portion and the lining, whereby a flexible case capable of close folding and whose surface when applied to a rolled umbrella is unaffected by the folds of the cover thereof, is provided.

2. An umbrella case comprising an outer face portion of flexible material, a lining having a smooth inner face, and an interposed adhesive layer.

3. A taper umbrella case comprising an outer portion of flexible material, a lining having a smooth inner face, an interposed connecting layer, and a hollow ferrule having a closed outer end connected to the smaller end of the case, the ferrule being of a size and shape to form an unbroken surface throughout the case and ferrule.

4. The combination with an umbrella of a taper case the larger end of which corresponds in size to the inner end of the handle of the umbrella, the body of the case being composed of an outer flexible face, a lining having a smooth inner face, and an interposed connecting layer, and a hollow ferrule having a closed end connected to the smaller end of the case, the ferrule being adapted to receive and inclose the tip end of the umbrella rod and being of an exterior size and shape to form an unbroken surface throughout the case and ferrule.

1,108,241. ROTARY ENGINE. SOLON E. ROSE, Detroit, Mich. Filed May 18, 1912. Serial No. 698,226. (Cl. 121—78.)



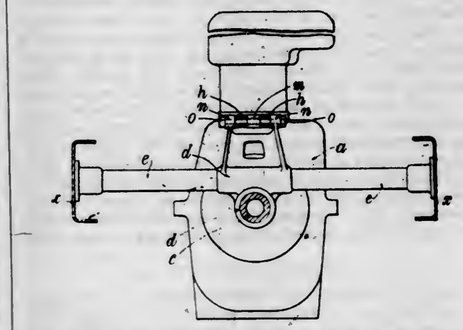
1. In a rotary engine, a rotor having separate and opposed pressure surfaces of substantially equal area, nonrotative elements having corresponding pressure surfaces, such sets of surfaces arranged to form between them closed pressure chambers, means for admitting the pressure fluid at the same pressure into each chamber, and pistons carried by said rotor and extending into said chambers, whereby the pressure surfaces of the rotor are subjected to substantially equal countervailing pressures.

2. In a rotary engine, a rotor having concave and convex pressure surfaces of substantially equal area, nonrotative elements having corresponding surfaces, such sets of surfaces arranged to form between them closed pressure chambers, means for admitting the pressure fluid at the same pressure to each chamber, and pistons carried by said rotor and extending into said chambers, whereby the pressure surfaces of the rotor are subjected to substantially equal countervailing pressures.

3. In a rotary engine, a rotor having separate and opposed pressure surfaces of substantially equal area and having sliding pistons mounted therein, said pistons extending into eccentric chambers in open communication with each other, said chambers being formed between said rotor and fixed portions of the engine, whereby the piston rotating with the moving parts uncover substantially equal pressure surfaces on the rotative parts.

4. In a rotary engine, a cylinder, heads secured to the ends of the cylinder, a power shaft journaled through the heads of the cylinders, a rotatable piston carrier secured to the shaft and provided with piston guideways, a piston slidably mounted in each guideway, eccentric chambers into which said pistons extend, said chambers connected together at the point of exhaust by passage ports, whereby parts of each chamber are at all times in communication one with the other and subject to substantially equal pressures.

1,108,242. ENGINE-MOUNTING FOR MOTOR-VEHICLES. FREDERICK HENRY ROYCE, Derby, England. Filed Nov. 25, 1913. Serial No. 802,939. (Cl. 21—90.)



1. In a motor vehicle, the combination of a power or transmission unit mounted in the frame thereof so that it can rock about its longitudinal axis, of springs controlling the movement of said unit about said axis, and of a friction damper operating between said unit and said frame.

2. In a motor vehicle the combination of a power or transmission unit mounted in the frame thereof so that it can rock about a longitudinal axis passing through its center of gravity, of springs for controlling the movement of said unit about said axis, and of friction dampers operating between said unit and the frame.

3. In a motor vehicle an engine mounted in or on its frame so as to be free to rock about its longitudinal axis, springs operating between the engine and the frame to limit and control said movement, and means for producing friction between the relatively moving parts of the engine and frame, as set forth.

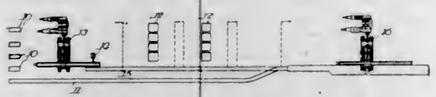
4. In a motor vehicle, the combination of fore and aft trunnions formed on or carried by the crank-chamber of the engine, of housings or bearings carried by the side members of the frame and adapted to receive said trunnions, of springs operating directly between the engine and the frame for controlling the rotary motion of the engine, and of a frictional device operating directly or indirectly between the engine and the frame for damping said motion.

5. In a motor vehicle, the combination with the engine and frame of the vehicle, of cross tubes supported by the side members of the frame, fore and aft trunnions formed on said engine, bearings carried by said cross tubes

adapted to receive said trunnions, and spring means operating between said bearings and said engine for limiting the rotary motion of said engine.

[Claim 6 not printed in the Gazette.]

1,108,243. METHOD OF TREATING INGOTS. HERBERT C. RYDING, Birmingham, Ala. Filed Mar. 31, 1913, Serial No. 757,967. Renewed Feb. 12, 1914. Serial No. 818,388. (Cl. 80—60.)



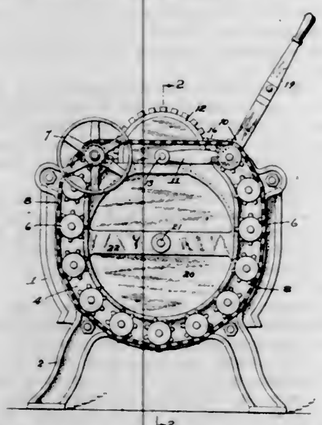
1. A method of treating ingots which consists in subjecting them after stripping from the molds and prior to treatment in a soaking pit, to a rolling action, then reheating the ingots and finally rolling the same into a finished shape, substantially as described.

2. A method of treating ingots which consists in subjecting them after stripping from the molds and prior to reheating in a soaking pit, to a rolling operation whereby the ingot is reduced in cross section and the surfaces thereof rendered more tough, then reheating the ingot and finally rolling the same into a finished shape, substantially as described.

3. A method of treating ingots which consists in stripping the same from the molds, then slightly reducing the cross sectional area of the ingots by light passes through a rolling mill, whereby the cross section of the ingot is made uniform and the surfaces made more tough and less crystalline, then reheating the ingot, and finally rolling the same into a finished shape, substantially as described.

4. The method of treating ingots, which consists in stripping the same from the mold, then slightly reducing the cross sectional area of the ingot in the rolls of a rolling mill while the interior of the ingot is still in a semi-fluid condition, whereby the cross section of the ingot is made uniform, its surfaces are made tough and less crystalline, then reheating the ingot, and finally rolling the same into the desired form, substantially as described.

1,108,244. FELTING-MACHINE. FRANCIS SCHAEFFER and WILLIAM J. SHEAGER, Reading, Pa., assignors of one-third to John J. Miller, Reading, Pa. Filed Jan. 17, 1914. Serial No. 812,669. (Cl. 38—8.)



1. In a hat felting machine the combination of a receptacle for the hat bodies, having open top and bottom and provided with a series of felting rolls with two rotatable disks forming respectively two opposite side walls of said receptacle.

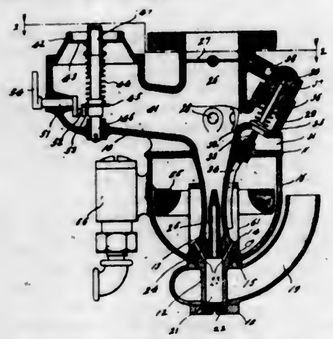
2. In a machine for felting and sizing fur hats, the combination of a frame having open top and bottom, a receptacle for the hat bodies comprising a series of rolls and a pair of oppositely disposed rotatable disks, with a relatively large roll adapted to serve as a closure for the top of the receptacle and means for rotating said rolls.

3. In a machine of the character described, a frame; a series of rolls rotatably mounted therein; two oppositely disposed disks mounted to rotate in said frame, and to form, in conjunction with said rolls, a receptacle for a mass of hat bodies; an individual roll adapted to rest upon the surface of said mass of hat bodies, and means for conveying rotary motion to all of said rolls whereby the hat bodies will be submitted to a tumbling motion, substantially as and for the purpose specified.

4. In a felting machine having a series of felting rolls and means for rotating said rolls, a frame provided with two oppositely disposed, rotatable disks.

5. In a hat felting machine having a series of felting rolls and means for rotating said rolls, a receptacle for the hats comprising a frame and a pair of oppositely disposed, rotatable disks mounted in said frame and forming the two side walls of said receptacle.

1,108,245. CARBURETER. GEORGE M. SCHEBLER, Indianapolis, Ind., assignor to Frank H. Wheeler, Indianapolis, Ind. Filed Mar. 21, 1912. Serial No. 685,252. (Cl. 48—155.2.)



1. In a carbureter, the combination with a main body having a mixture outlet, a fuel reservoir, a primary carbureting unit comprising a fuel nozzle and an air inlet passage delivering to the mixture outlet, and one or more supplemental carbureting units each comprising a supplemental air inlet passage, a mixture passage delivering to the mixture passage of the main body, a valve arranged between the supplemental air inlet and the adjacent mixture chamber, a fuel nozzle having its discharge end in the supplemental air inlet passage materially above the normal fuel level in the main body and above the fuel nozzle of the primary carbureter unit and its receiving end connected to the fuel reservoir by a capillary tube, and an independently adjustable spring acting to normally hold the valve closed.

2. In a carbureter, the combination with a main body having a mixture outlet, a fuel reservoir, a primary carbureting unit comprising a fuel nozzle and an air inlet passage delivering to the mixture outlet, and one or more supplemental carbureting units each comprising a supplemental air inlet passage, a mixture passage delivering to the mixture passage of the main body, a valve arranged between the supplemental air inlet and the adjacent mixture chamber, a fuel nozzle having its discharge end in the supplemental air inlet passage materially above the normal fuel level in the main body and above the fuel nozzle of the primary carbureter unit and its receiving end connected to the fuel reservoir, means being provided for maintaining the normal fuel level in the supplemental fuel nozzle higher than that in the fuel nozzle of the primary carbureter unit, and an independently adjustable spring acting to normally hold the valve closed.

3. A carbureter comprising a main body having a mixture chamber and outlet, a secondary valve-controlled air inlet, a primary air inlet, and one or more supplemental mixture inlets discharging into the main mixture chamber and each provided with a supplemental air inlet; a fuel reservoir carried by the main body; a primary fuel nozzle communicating with the fuel reservoir and arranged in the primary air inlet; a supplemental fuel nozzle arranged in each supplemental air inlet materially above the normal fuel level in the main body and above the primary fuel nozzle and communicating with the fuel reservoir, means being provided for maintaining the normal fuel level in the supplemental fuel nozzle higher than that in the primary fuel nozzle; a valve arranged between each supplemental air inlet and the communicating supplemental mixture inlet, and a spring normally holding said valve to its seat.

4. A carbureter comprising a main body having a mixture chamber and outlet, a primary air inlet, and one or more supplemental mixture inlets discharging into the main mixture chamber and each provided with a supplemental air inlet; a fuel reservoir carried by the main body; a primary fuel nozzle communicating with the fuel reservoir and arranged in the primary air inlet; a supplemental fuel nozzle arranged in each supplemental air inlet materially above the normal fuel level in the main body and above the primary fuel nozzle and communicating with the fuel reservoir, means being provided for maintaining the normal fuel level in the supplemental fuel nozzle higher than that in the primary fuel nozzle; a valve arranged between each supplemental air inlet and the communicating supplemental mixture inlet, and a spring normally holding said valve to its seat.

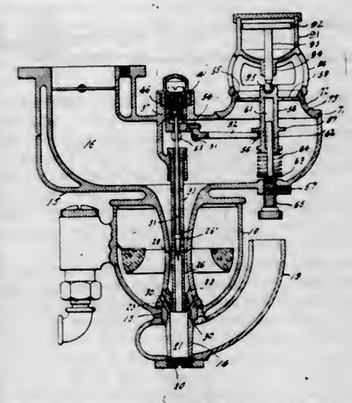
5. A carbureter comprising a main body having a main mixture chamber and outlet, a depending tubular stem arranged in substantial alinement with said main mixture chamber in communication therewith and forming a primary air inlet, and one or more supplemental mixture passages each communicating with the main mixture chamber and each communicating with a supplemental air inlet; a fuel reservoir sleeved over the depending tubular stem; a primary fuel nozzle arranged in the primary air inlet and communicating with the fuel reservoir; one or more supplemental fuel nozzles each arranged in a supplemental air inlet over the fuel reservoir and at a higher level than the primary fuel nozzle and communicating with the fuel reservoir through a capillary tube; one or more valves each arranged to normally close communication between a supplemental air inlet and the connected supplemental mixture passage; one or more springs each acting upon one of said valves to normally close the same, and an independently adjustable abutment for each of said springs.

[Claims 6 to 9 not printed in the Gazette.]

1,108,246. AIR-VALVE FOR CARBURETERS. GEORGE M. SCHEBLER, Indianapolis, Ind., assignor to Frank H. Wheeler, Indianapolis, Ind. Original application filed Feb. 5, 1912, Serial No. 675,429. Divided and this application filed June 27, 1912. Serial No. 706,182. (Cl. 137—32.)

1. In a carbureter, the combination with the main body having an air inlet provided with an inwardly opening valve seat, an air valve arranged within said body and associated with said valve seat, a guide stem projected into an axial bore of the valve, said axial bore exceeding the diameter of the guide stem except for a sufficiently short distance at the entrance end of the bore to allow slight disalinement and the guide stem projecting past the smaller portion of the bore into the larger portion thereof, a spring arranged to act axially upon the valve to drive it to its seat, a dash pot arranged in substantial alinement with the valve, a piston mounted in said dash pot, a stem carried by said piston, a bearing for said stem, and a flexible positive connection between said piston and the valve.

2. In a carbureter, the combination with the main body having an air inlet provided with an inwardly opening valve seat, an air valve arranged within said body and associated with said valve seat, a guide stem projected into an axial bore of the valve and sufficiently loose therein to permit slight disalinement, a spring arranged to act axially upon the valve to drive it to its seat, a dash pot arranged in substantial alinement with the valve, a piston mounted in said dash pot, a stem carried by said piston, a bearing for said stem, and a flexible positive connection between said piston stem and the valve.



3. In a carbureter, the combination with the main body having an air inlet provided with an inwardly opening valve seat, an air valve arranged within said body and associated with said valve seat, a guide stem projected into an axial bore of the valve, said axial bore exceeding the diameter of the guide stem except for a sufficiently short distance at the entrance end of the bore to allow slight disalinement and the guide stem projecting past the smaller portion of the bore into the larger portion thereof, a spring arranged to act axially upon the valve to drive it to its seat, a second stem and bearing therefor, and a flexible connection between said second stem and the air valve.

4. In a carbureter, the combination with the main body having an air inlet provided with an inwardly opening valve seat, an air valve arranged within said body and associated with said valve seat, a guide stem projected into an axial bore of the valve, said axial bore exceeding the diameter of the guide stem except at the entrance end of the bore, a spring interposed between the valve and the guide stem to normally drive the valve to its seat, an adjusting screw mounted in the main body and forming an adjustable support for the guide stem, a dash pot, a stem carried by said piston, a bearing for said stem, and a flexible connection between said stem and valve.

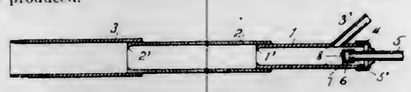
5. In a carbureter, the combination with the main body having an air inlet provided with an inwardly opening valve seat, an air valve arranged within said body and associated with said valve seat, a guide stem projected into an axial bore of the valve, said axial bore exceeding the diameter of the guide stem except at the entrance end of the bore and the guide stem projecting past the smaller portion of the bore into the larger portion thereof, a spring interposed between the valve and the guide stem to normally drive the valve to its seat, an adjustable screw mounted in the main body and forming an adjustable support for the guide stem, a second stem and bearing therefor, and a flexible connection between said second stem and the air valve.

[Claims 6 and 7 not printed in the Gazette.]

1,108,247. VACUUM-PRODUCER. EUGENE A. SCHENCK, Kansas City, Kans., assignor of one-half to Frank Hagerman, Kansas City, Mo. Filed Mar. 1, 1911. Serial No. 611,627. (Cl. 230—13.)

1. In a suction apparatus, the combination with a fitting adapted to be connected with a supply system and

having a suction branch communicating therewith intermediate the pressure and discharge end, of a spray nozzle located within the fitting at the pressure side of the opening of the suction branch and embodying two parallel fixed diaphragms with a distance chamber between and having central openings therein whose areas are less than the areas in cross section of the adjacent parts of the fitting and the distance chamber, whereby a vacuum spray is produced.



2. A vacuum producer having a barrel open at its discharge end and having an air inlet, and a conductor for conveying fluid under pressure and having means for discharging a jet lengthwise into the barrel toward its discharge end, the barrel being choke bored at a place between the place of entrance of the jet and the discharge end of the barrel, the internal diameter of the barrel at the discharge side of said choke bored place being greater than at the inlet side of said choke bored place.

3. A vacuum producer having a barrel open at its discharge end and having an air inlet, and a conductor for conveying fluid under pressure and having means for discharging lengthwise into the barrel toward its discharge end a jet which expands laterally to the walls of the barrel, the barrel being choke bored at a place between the place of contact of the jet with the walls and the discharge end of the barrel, the internal diameter of the barrel at the discharge side of the choke bored place being greater than at the inlet side of said choke bored place.

4. A vacuum producer having a barrel open at its discharge end and having an air inlet, and a conductor for conveying fluid under pressure and having means for discharging lengthwise into the barrel toward its discharge end a jet which expands laterally to the walls of the barrel, the barrel being choke bored at a place between the place of contact of the jet with the walls and the discharge end of the barrel, the internal diameter of the barrel at the discharge side of the choke bored place being greater than at the inlet side thereof, and the air inlet being located at the rear of the place of contact of the jet with the walls.

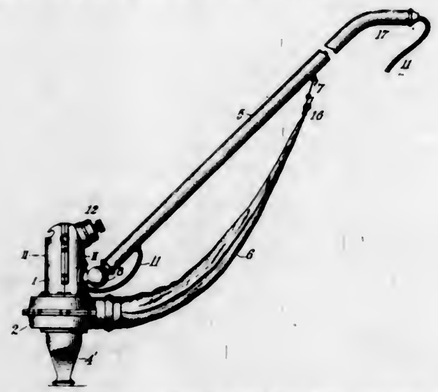
5. In a jet former for a vacuum producer, a conductor for fluid under pressure, and a cap mounted on the discharge end of the conductor and having an internal diameter greater than that of the conductor and provided with an axial opening having a portion at its inner end of less diameter than the bore of the conductor, said portion having parallel sides, said opening being flaring at its outer end.

[Claims 6 to 11 not printed in the Gazette.]

1,108,248. SUCTION-CLEANER. GEORGE C. SCHMITZ, Racine, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 1, 1910. Serial No. 546,640. (Cl. 15—60.)

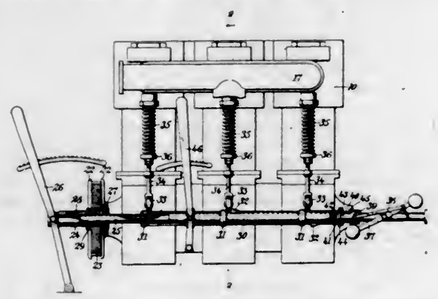
1. Apparatus for cleaning floors and floor coverings by suction comprising a suction creating device, means for driving the same, a suction nozzle adapted to support and carry said suction creating device and its driving means, a handle for use in moving the said suction nozzle over the surface to be cleaned and a dust receptacle carried by the apparatus and connected to the discharge from said suction creating device, said suction creating device and driving means being arranged so that the center of gravity thereof will be in a vertical transverse plane passing through the suction nozzle when it is in its operative position.

2. Apparatus for cleaning floors and floor coverings by suction, comprising a rotary fan, a motor operatively connected thereto, a suction nozzle adapted to support and carry said motor and fan, a handle for use in moving said suction nozzle over the surface to be cleaned and secured above the suction nozzle, and a dust receptacle carried by the apparatus and connected to the exhaust from said fan, said parts being arranged so that the center of gravity thereof will be substantially in a central transverse vertical plane passing through the suction nozzle when the same is held in its operative position.



3. Apparatus for cleaning floors and floor coverings by suction comprising a rotary fan, a motor operatively connected thereto, a suction nozzle, said motor and fan being supported entirely by the suction nozzle and operating handle, and a dust receptacle supported in part by said nozzle when the same is in its operative position.

1,108,249. VALVE-GEAR FOR GAS-ENGINES. WILLIAM H. SCHOONMAKER, Montclair, N. J. Filed Jan. 14, 1905. Serial No. 241,026. (Cl. 123—41.)



1. In a gas engine, the combination with an inlet valve, of a cam shaft, fixed bearings for the shaft, means for rotating the shaft, means for turning the shaft independently of the rotating movement, a sleeve splined on the shaft and having a cam thereon for operating said valve, and means for manually shifting the sleeve longitudinally of the shaft.

2. In a gas engine the combination with a valve thereof and its actuating cam and the prime mover shaft, of two rotatable members respectively in connection with said cam and shaft and a relatively shiftable part having screw connection with one of the rotatable members and longitudinal sliding connection with the other, whereby said shiftable part connects the two rotatable members to turn together, but by shifting said part the relative positions of the rotatable members are changed to change the action of the cam on the valve.

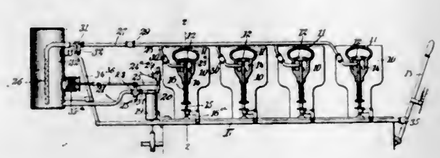
3. In a gas engine, the combination with the inlet valve thereof and its actuating cam and the prime mover shaft, of two rotatable members respectively in connection with said cam and shaft and a relatively shiftable part having screw connection with one of the rotatable members and longitudinal sliding connection with the other, whereby said shiftable part connects the two rotatable members to turn together, but by shifting said part the relative positions of the rotatable members are changed to change the action of the cam on the valve, means for supplying an explosive charge under pressure to the inlet valve and means for manually lifting the inlet valve from its seat.

4. In a gas engine, the combination with an inlet valve, means for supplying thereto an explosive mixture under pressure, of a cam shaft, fixed bearings for the shaft, means for rotating the shaft, means for turning the shaft independently of the rotating movement, a sleeve splined on the shaft and having a cam thereon for operating said valve, means for manually shifting the sleeve longitudinally of the shaft, and a bead on the sleeve adjacent to but separate from the cam to raise the valve from its seat upon manually shifting the sleeve.

5. In a gas engine, the combination with a valve thereof and its actuating cam and the prime mover shaft, of two rotatable members respectively in connection with said cam and shaft and a relatively shiftable part having screw connection with one of the rotatable members and longitudinal sliding connection with the other, whereby said shiftable part connects the two rotatable members to turn together, but by shifting said part the relative positions of the rotatable members are changed to change the action of the cam on the valve, a governor and means placing it in connection with the cam, automatically to control the position of the cam without interference with the aforesaid action of said rotatable members.

[Claims 6 and 7 not printed in the Gazette.]

1,108,250. GAS-ENGINE-STARTING MECHANISM. WILLIAM H. SCHOONMAKER, Montclair, N. J. Filed Feb. 14, 1906, Serial No. 301,004. Renewed Sept. 13, 1912. Serial No. 720,274. (Cl. 123—180.)



1. An internal combustion engine having a means for establishing communication between the admission port and the source of fuel mixture, a starting reservoir also communicating with the admission port, means for charging the starting reservoir with fuel mixture under pressure, a reservoir valve controlling communication between the reservoir and the admission port, and means for simultaneously opening said valve and the admission port of the engine.

2. An internal combustion engine having a means for establishing communication between the admission port and the source of fuel mixture, a starting reservoir also communicating with the admission port, means for charging the starting reservoir with fuel mixture under pressure, a reservoir valve controlling communication between the reservoir and the admission port, and a manually operative means for simultaneously opening said valve and the admission port of the engine.

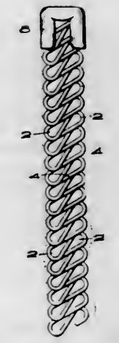
3. An internal combustion engine having a means for establishing communication between the admission port and the source of fuel mixture, a starting reservoir also communicating with the admission port, means for charging the starting reservoir with fuel mixture under pressure, a reservoir valve controlling communication between the reservoir and the admission port, and means for simultaneously opening said valve and the admission port of the engine, the last named means being arranged to leave the reservoir valve open upon the closure of the admission valve.

4. An internal combustion engine having a means for establishing communication between the admission port and the source of fuel mixture, a starting reservoir also communicating with the admission port, means for charging the starting reservoir with fuel mixture under pressure, a reservoir valve controlling communication between the reservoir and the admission port, and a manually operative means for simultaneously opening said valve and the admission port of the engine, the last named means being arranged to leave the reservoir valve open upon the closure of the admission valve.

5. An internal combustion engine having a means for establishing communication between the admission port and the source of fuel mixture, a starting reservoir also communicating with the admission port, means for charging the starting reservoir with fuel mixture under pressure, a reservoir valve controlling communication between the reservoir and the admission port, means for simultaneously opening said valve and the admission port of the engine, and means for rendering the engine ignition system inoperative during the operation of said means for simultaneously opening the valve.

[Claims 6 to 17 not printed in the Gazette.]

1,108,251. GARMENT-STAY. DAVID SCHULER, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1909. Serial No. 470,508. (Cl. 2—76.)



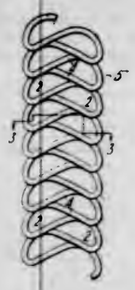
1. A garment stay consisting of wire bent to form a series of oppositely disposed loops or eyes forming the edges of the stay and having the connecting portions extending diagonally across the stay, all said connecting portions being inclined in the same direction with reference to the longitudinal axis of the stay, and each side of each loop overlapping the adjacent loop.

2. A garment stay consisting of wire bent to form a series of oppositely disposed loops forming the edges of the stay and with the connecting portions extending diagonally across the stay, all said connecting portions being inclined in the same direction with reference to the longitudinal axis of the stay and being bent to concave the stay on one side, each side of each loop overlapping an adjacent loop.

3. A garment stay consisting of wire bent to form a series of oppositely disposed loops or eyes forming the edges of the stay and having the connecting portions extending diagonally across the stay, all said connecting portions being inclined in the same direction with relation to the longitudinal axis of the stay, each side of each loop overlapping the adjacent loop, and said wire having no crossing or contacting portions other than those due to such overlapping.

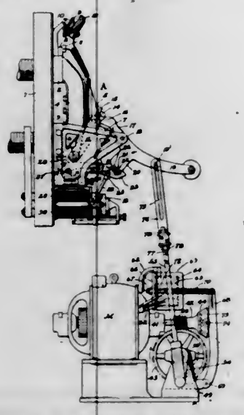
4. A wire garment stay, formed of a single wire, bent in alternately progressive loops, each extending laterally entirely across the width of the stay, and disposed at an acute or oblique angle to the longitudinal axis of the stay, substantially as shown and set forth.

1,108,252. GARMENT-STAY. DAVID SCHULER, Kerrtown, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Sept. 9, 1910. Serial No. 581,153. (Cl. 2—76.)



A garment stay comprising wire bent back and forth to form two series of oppositely disposed, progressively arranged loops or eyes, said loops or eyes being substantially palette shaped with broad outer ends forming substantially straight side edges of the stay and terminating in acute reverse bends near the side edges thereof, the transverse portions or crossings being inclined and each having a straight portion beginning at one of said reverse bends near one edge of the stay and extending nearly to the other edge thereof and terminating in the curved broad outer end of a loop or eye on the other edge of the stay, the acute reverse bends at opposite edges of the stay all pointing in the same direction longitudinally thereof, and the straight portions of the crossings overlapping the curved portions of the next adjacent crossings and thereby distributing wear over a considerable length of wire.

1,108,253. SYSTEM OF REMOTE CONTROL. WILLIAM M. SCOTT, Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company, a Corporation of New Jersey. Filed Mar. 8, 1907. Serial No. 361,282. (Cl. 175—294.)



1. In combination, a circuit breaker, tripping means therefor, a motor for resetting said breaker, a rod having pin and slot connection with the operating member of said circuit breaker, a crank for operating said rod, a second crank having lost motion with respect to said first mentioned crank, and a motor for driving said second crank.

2. In combination, a circuit breaker, a series motor for actuating the same, a brake for said motor, and an electro-magnet for lifting said brake when said motor is started, the winding of said electro-magnet being connected in shunt with the field winding of said motor.

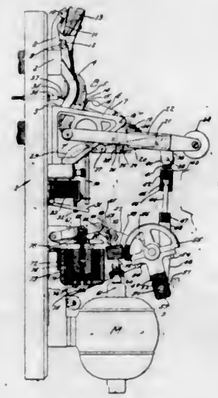
3. In combination, a circuit breaker, a series motor for operating the same, a brake for said motor, and an electro-magnet for lifting said brake when the motor is started, the winding of said electro-magnet being connected in shunt with the field winding of said motor, said electro-magnet being deënergized for setting the brake when said motor is deënergized.

4. In combination, a circuit breaker, a motor for operating the same, a coil for tripping said circuit breaker independently of said motor, a crank and rod connection to the operating member of said circuit breaker, a second crank driven by said motor to drive said crank and rod connection, a switch for controlling said motor, the movable member of said switch movable in fixed relation with respect to said first mentioned crank, and a switch having contacts in the circuits of said tripping coil and said motor control switch.

5. In combination, a circuit breaker, automatic means for tripping the same, a motor for resetting the breaker, a crank and rod connection with the operating member of said breaker, a lost motion connection between said crank and operating member of the breaker, and a lost motion connection between said motor and said crank.

[Claims 6 to 58 not printed in the Gazette.]

1,108,254. SYSTEM OF REMOTE CONTROL. WILLIAM M. SCOTT, Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company, a Corporation of New Jersey. Filed Oct. 7, 1907, Serial No. 396,265. Renewed Feb. 17, 1913. Serial No. 749,030. (Cl. 175—294.)



1. The combination with an electric switch, of a motor for closing the same, means for closing the circuit of said motor to start the same, automatic means for maintaining the motor circuit closed until said switch has been closed by said motor, and a snap switch for breaking the motor circuit when said switch is closed.

2. The combination with an electric switch, of a motor for closing the same, an operator's switch for closing the circuit of the motor to start the same, automatic means operative after said motor has started to maintain the motor circuit closed independently of said operator's switch, and a snap switch for breaking the motor circuit when said switch reaches closed position.

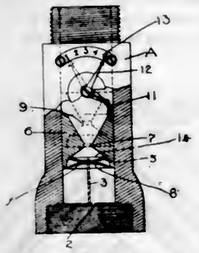
3. The combination with an electric switch, of a motor for closing the same, a connection between said motor and switch, an electrically controlled clutch between said motor and said connection, an operator's switch for closing the circuit of the motor to start the same, automatic means operative after said motor has started for maintaining said motor circuit closed independently of said operator's switch, and a snap switch for breaking the motor circuit and releasing said clutch when said switch is closed.

4. The combination with an electric switch, of a motor for closing the same, an electrically controlled clutch between said motor and switch, an operator's switch for closing the circuit of the motor to start the same, means actuated by said motor after starting for maintaining its circuit closed independently of said operator's switch, and a snap switch controlled by the connection between said motor and switch for breaking the motor circuit when said switch is closed.

5. The combination with an electric switch, of a worm gear for actuating the same, a worm for driving said gear, a motor for driving said worm, an electro-magnet for moving said worm into mesh with said gear, an operator's switch for closing the circuit of said magnet and said motor, whereby said worm is brought into mesh with said gear and motor started, means independent of said motor controlled by said operator's switch for opening said switch, and an automatic switch controlled by the movement of said switch for rupturing the circuit of said motor and electro-magnet at the end of the switch closing movement and for automatically restoring the circuit of said motor and magnet when said switch is opened.

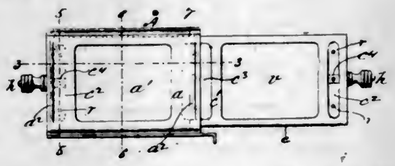
[Claims 6 to 44 not printed in the Gazette.]

1,108,255. REGULATING DEVICE. JOEL M. SETZER, St. Paul, Minn., assignor of one-third to John H. Colwell, St. Paul, Minn. Filed Mar. 25, 1913. Serial No. 756,731. (Cl. 67—121.)



In combination with a gas pipe, a concave spreader plate having a central fixed support therein, a sleeve slidably supported within the pipe and formed with a restricted opening, said opening being enlarged toward said spreader plate sufficient to receive the same at its enlarged end.

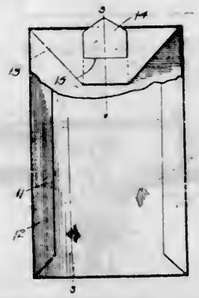
1,108,256. LANTERN-SLIDE CARRIER. CHARLES E. SHARLOW, Union Hill, N. J., assignor to Sharlow Bros. Co., New York, N. Y. Filed Oct. 6, 1913. Serial No. 793,570. (Cl. 88—28.)



1. As an article of manufacture, a slide carrier formed of a single piece of sheet metal folded along two parallel lines to constitute parallel side walls, said side walls being formed with coinciding view openings, the metal between the sides thus formed constituting the bottom of the carrier, said side walls being also countersunk in part to form spacing panels flanking the view openings, the coinciding countersunk portions in the opposite walls abutting back to back and being rigidly secured together for the purpose described.

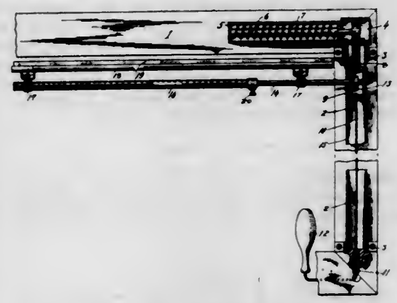
2. As an article of manufacture, a slide carrier formed of a single piece of sheet metal folded along two parallel lines to constitute parallel side walls, said side walls being formed with coinciding view openings, the metal between the sides thus formed constituting the bottom of the carrier, said side walls being also countersunk in part to form spacing panels flanking the view openings, the coinciding countersunk portions in the opposite walls abutting back to back and being rigidly secured together, said flanking partitions being arranged to cause the slides to register with said view openings substantially in the manner set forth.

1,108,257. ENVELOP FOR CIRCULAR-LETTERS. GEORGE R. SHARP, Larned, Kans. Filed Mar. 26, 1912. Serial No. 686,424. (Cl. 229—76.)



An envelop comprising a body portion having an open end, a closure flap extending from the open end of said body portion and provided with a transversely extending slit and adapted to be placed within the open end of the body, and a tongue carried by and extending from the end of the closure flap in alinement with said slit whereby the tongue may be doubled back upon the flap with its free end passed through the slit and extending beyond the end of said body portion when said closure flap is placed within the body portion.

1,108,258. WINDOW-CLEANING DEVICE. SAMUEL S. SIGEL, Portland, and AXEL W. JOHNSON, Lents, Oreg. Filed Mar. 13, 1913. Serial No. 754,168. (Cl. 15—59.)



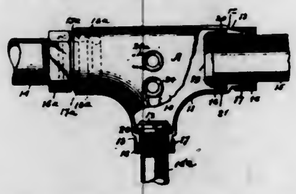
1. In a device of the character described, a tubular frame comprising a vertical portion and a horizontal portion, a slide mounted to move in said vertical portion, a horizontal cleaning frame rotatably fixed in said slide, a spring-held spindle in said horizontal portion and connected to draw said slide upward, manual means for drawing the slide downward, and resilient fingers on said vertical portion coöperating with said cleaning frame for the purpose of directing the frame relative to the glass.

2. In a device of the character described, a horizontal support to be mounted on a sash frame, means for yieldingly retaining the support at the top of said frame, means for drawing said support downwardly, a detachable cleaning bar on said support, means on the support to

longitudinally adjust the cleaning bar and means to press the cleaning bar against the adjacent window glass on the down stroke and away from said glass on the up stroke.

3. In a device of the character described, a vertical tube, a slide movable in said tube, a horizontal rod fixed to oscillate in said slide and extending through a slot the length of the tube, a pawl on said rod within said slide and presenting its apex toward an opening in the slide, resilient fingers fixed at the top and bottom of the tube, a cleaning frame detachably fixed on said rod, means for drawing said slide downward through the tube, a retracting spring for returning the slide, the said fingers operating on reversing the movement of the slide to shift the said cleaning frame against the adjacent window pane on the downstroke and away from the pane on the upstroke.

1,108,259. FITTING FOR ELECTRICAL CONDUITS. KLAAS SIXMA, Brooklyn, N. Y. Filed Sept. 3, 1913. Serial No. 787,840. (Cl. 247—10.)

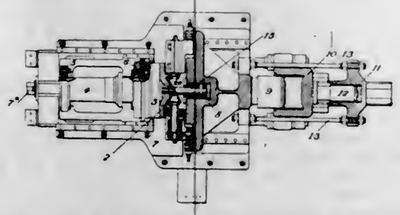


1. A conduit fitting of the kind described, comprising a sectional body provided with a tapered tubular nipple, a threaded conduit fitted in the nipple, a bushing having an interiorly threaded portion for engagement with the threads of the conduit, a lock nut to coöperate with the threaded portion of the conduit and the tapered part of the nipple.

2. A conduit fitting of the kind described, comprising a sectional body provided with a tapered tubular nipple, and having a shoulder forming the inner portion of the nipple, a threaded conduit fitted in the nipple, a bushing inserted over the threaded end of the conduit and in contact with the shoulder, a lock nut to engage the threaded part of the conduit and the tapered portion of the nipple.

3. A conduit coupling of the kind described, comprising a sectional body provided with a tubular tapered nipple, and including a shoulder constituting the inner portion of the nipple, a conduit having a threaded end fitted in the nipple, a bushing threaded onto the end of the conduit, said bushing having a rim to engage the end of the conduit and a shoulder to co-act with the shoulder of the body, a lock nut to engage the threaded portion of the conduit and the tapered portion of the nipple.

1,108,260. METHOD OF AND APPARATUS FOR FORGING CAR-WHEELS. EDWIN E. SLICK, Pittsburgh, Pa. Filed Apr. 5, 1910. Serial No. 553,599. (Cl. 80—16.)



1. The method of forming metal consisting in subjecting a metal blank to forging pressure between the co-acting faces of a supporting die and a rotating forming roll and applying the forging pressure to at least part of said blank at an oblique angle to the axes of said die and roll; substantially as described.

2. The method of forming metal consisting in subjecting a metal blank to forging pressure between the co-acting faces of a supporting die and a rotating forming roll, applying the forging pressure to at least part of said blank at an oblique angle to the axes of said die and roll and then bending the forged blank to the desired cross sectional contour; substantially as described.

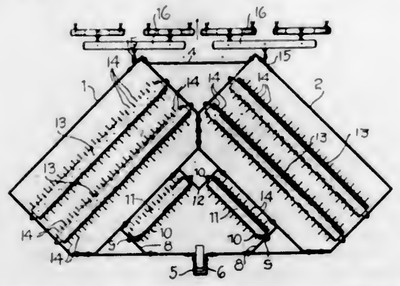
3. The method of forming metal consisting in subjecting a metal blank to forging pressure between the co-acting faces of a rotating supporting die and a rotating forming roll and applying the forging pressure to at least part of said blank at an oblique angle to the axes of said die and roll; substantially as described.

4. Apparatus for forging comprising a rotary supporting die, a forming roll co-acting therewith in forging the metal, means for rotating said die and means for causing a relative approach of the forming faces of said die and roll, at least part of the forming faces of the die and roll being inclined respectively to the axes thereof; substantially as described.

5. Apparatus for forging metal comprising a supporting die, a forming roll, at least part of the co-acting forming faces of said die and roll being inclined respectively to the axes thereof, means for causing a relative rotary movement of the die and roll and means for causing a relative approach of the forming faces of said die and roll; substantially as described.

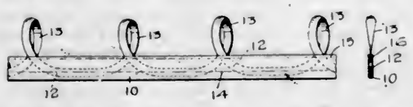
[Claims 6 and 7 not printed in the Gazette.]

1,108,261. HARROW. EDGAR W. SMITH, Carbon, Alberta, Canada, assignor of one-half to Alexander J. McLeod, Carbon, Canada. Filed Jan. 19, 1914. Serial No. 813,009. (Cl. 55—11.)



A device of the class described including divergent frames having their inner corners rigidly connected, the rear portions of said frames having portions extending part-way across the rear of the harrow, a U-shaped member connecting the extended portions at the central portion of the harrow, a second U-shaped member arranged between the frames adjacent the forward corners thereof, angular pieces between each frame and extended portion, rollers disposed between the second U-shaped member and the angular pieces, and a second set of rollers rotatably mounted within each of said frames, and teeth carried by said rollers, as and for the purpose set forth.

1,108,262. LOOP-TAPE. GILMAN B. SMITH, Montclair, N. J. Filed July 24, 1911. Serial No. 640,239. (Cl. 2—57.)



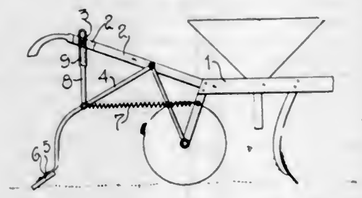
1. A loop tape comprising a strip of material and a comparatively narrow strip of material secured to said first named strip by a line of stitches passing through both of said strips, and projecting laterally from said first named strip so as to form at intervals laterally projecting loops; said narrow strip being doubled upon itself so that it crosses or passes over itself near the point of its attachment to said first named strip.

2. A loop tape comprising a strip of material and a comparatively narrow strip of material secured to said first named strip by a line of stitches and projecting laterally from said first named strip so as to form at intervals laterally projecting loops; said first named strip being folded over upon itself and upon said comparatively narrow strip and the edges of said first named strip being secured together and to said comparatively narrow strip near the base of said loops, and said narrow strip being doubled upon itself so that it passes over or crosses itself near the point where the edges of the first named strip are attached together.

3. A loop tape comprising a strip of material and a second strip secured to said first named strip by a line of stitches passing through both of said strips, and projecting laterally from said first named strip so as to form at intervals laterally projecting loops; said second named strip being doubled upon itself so that it crosses or passes over itself near the point of its attachment to said first named strip.

4. A loop tape comprising a strip of material and a second strip secured to said first named strip by a line of stitches and projecting laterally from said first named strip so as to form at intervals laterally projecting loops; said first named strip being folded over upon itself and upon said second named strip and the edges of said first named strip being secured together and to said second named strip near the base of said loops, and said second named strip being doubled upon itself so that it passes over or crosses itself near the point where the edges of the first named strip are attached together.

1,108,263. FERTILIZER-DISTRIBUTER. JOHN RANSOM SMITH, Haynesville, La. Filed May 9, 1914. Serial No. 837,514. (Cl. 111—32.)

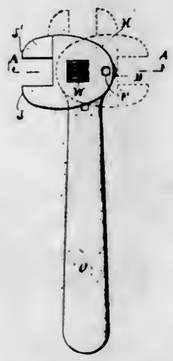


1. In combination with a distributer provided with handle bars, rods pivotally engaged with the handle bars, a covering member secured to the lower extremities of such rods, spring members interposed between the rods and the distributer for maintaining the covering member normally in contact with the surface over which the distributer travels.

2. In combination with a distributer provided with handle bars, rods pivotally engaged with the handle bars, a covering member secured to the lower extremities of such rods, spring members interposed between the rods and the distributer for maintaining the covering member normally in contact with the surface over which the distributer travels, supplemental arms engaged with the first-mentioned arms and operatively engaged with the handle bars.

3. In combination with a distributer including handle bars, and a cross bar connecting such handle bars, arms pivotally engaged with the handle bars, a covering member operatively connected with the handle bars, a spring interposed between the bars and the distributer for maintaining the covering member normally in contact with the surface over which the distributer travels, and supplemental bars engaged with the first mentioned bars, such supplemental bars being provided in their upper extremities with elongated slots through which the cross bar of the handle bars are connected.

1,108,264. WRENCH. JACOB SOKOLOV, Brooklyn, N. Y., assignor of one-half to John Firth, New York, N. Y. Filed July 1, 1913. Serial No. 776,748. (Cl. 81—60.)



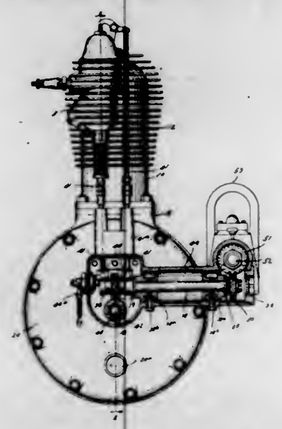
1. In a wrench, the combination with a head, of a detent member carried thereby and movable normally at right angles to the plane of movement of said head, a handle pivotally mounted upon said head, said handle having a plurality of grooves or slots adapted to receive said detent, and means for depressing and rotating said detent, said detent member adapted to engage in said grooves or slots in three positions, whereby said handle may drive said head in either or both directions.

2. In a wrench, the combination with a wrench head, of a cylindrical socket therein, a hollow cylindrical shell adapted to move longitudinally in said socket at right angles to the plane of movement of the wrench head and to rotate in said socket, a handle pivoted to said head, said handle having a plurality of grooves or slots, and a member carried by said shell and adapted to engage in said grooves or slots.

3. In a wrench such as described, a handle member, a rotatable head carried by said handle member, said handle member having radial notches formed therein, a detent member carried by the head and movable to engage said notches, said detent member having a projection thereon provided with two parallel faces adapted when the detent is in one position to engage the sides of the notches and when said detent member is in the position opposite thereto to extend at right angles to the said notches, said projection having a second pair of faces extending at right angles to the parallel faces, said second mentioned faces being disposed in angular planes, said second mentioned faces terminating short of the first mentioned faces producing shoulders adapted to engage the wrench handle upon opposite sides of the notches when the projection is disposed at right angles to the notches, means for forcing said detent member in the direction of the notches of the handle, and means whereby said detent member can be operated.

4. In a wrench such as described, a handle member, said handle member having radial notches formed therein, a head having a socket formed therein, a detent member rotatable and slidable in said socket, said detent member comprising a cylindrical body portion having a milled periphery projecting through said head member, a sleeve extending from one side of said body portion of the detent member and a boss having angularly disposed end surfaces, projecting from said body portion, upon the side opposite to the sleeve, for engagement with the notches in the handle member, and a spring interposed between the detent member and body portion and disposed within the sleeve.

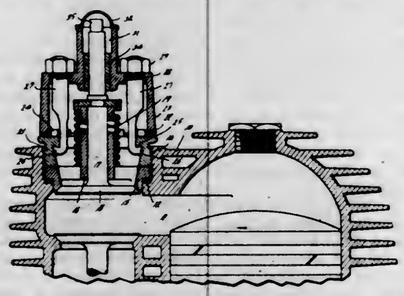
1,108,265. INTERNAL-COMBUSTION ENGINE. FRED W. SPACKE, DALMAR T. BROWNLEE, and WILLIAM SPACKE, Indianapolis, Ind., assignors to The F. W. Spacke Machine Company, Indianapolis, Ind., a Corporation of Indiana. Original application filed Sept. 8, 1911, Serial No. 648,377. Divided and this application filed Dec. 11, 1912. Serial No. 736,080. (Cl. 123—91.)



1. In an internal combustion engine, the combination with a cylinder, piston, crank shaft, engine valves, and magneto, of a crank case, a cap for said crank case having an integral shaft chamber, a shaft mounted in said shaft chamber and driving said magneto and operating said valves, and gearing between said last named shaft and the crank shaft.

2. In an internal combustion engine, the combination with a cylinder, piston, crank shaft, engine valves, and magneto, of a crank case, a cap for said crank case having an integral shaft chamber, a shaft mounted in said shaft chamber and driving said magneto and operating said valves, said shaft being removable endwise from said shaft chamber, and gearing between said last named shaft and the crank shaft.

1,108,266. INLET-VALVE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM SPACKE, Indianapolis, Ind., assignor to The F. W. Spacke Machine Company, Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 28, 1914. Serial No. 815,078. (Cl. 123—188.)



1. The combination with an engine and a valve therefor, of a clamping ring for said valve provided with an inwardly projected flange, a casing member arranged to cover the valve, and a casing clamp comprising a hook-shaped member projected through the casing member and engaging the inwardly projected flange of the clamping ring said hook-shaped member having a threaded outer end and a nut threaded thereon and engaging the casing.

2. The combination with an engine and a valve therefor, of a clamping ring for said valve provided with an inwardly projected flange, a casing member arranged to cover the valve, and a casing clamp comprising a hook-shaped member projected through the casing member and engaging the inwardly projected flange of the clamping ring.

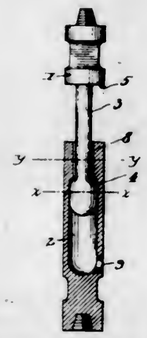
3. The combination with an engine having a valve opening, of a valve associated with said opening, a casing surrounding said opening, and clamping means for said casing, said clamping means comprising a bolt having a hook-shaped inner end projected through the casing and engaging with a portion carried by the engine within the casing.

4. The combination with an engine having a valve opening, of a valve associated therewith, a casing encompassing said valve, a valve-operating member, an intermediate connection, carried by the casing, operatively connecting the valve operating member and the valve and engaging the valve operating member in one direction only, and means for clamping the casing in position said means comprising a hook-shaped member projected through the casing and engaging with a portion within the casing.

5. The combination with an engine having a valve opening, of a valve associated therewith, a casing encompassing said valve and removable independently of the valve, a valve-operating member, an intermediate connection, carried by and within the casing, operatively connecting the valve operating member and the valve and engaging the valve operating member in one direction only, and means for clamping the casing in position.

[Claims 6 to 8 not printed in the Gazette.]

1,108,267. WELL-DRILL JAR. WILLIAM A. SPARKS, St. Marys, W. Va., assignor to Sparks Drilling Jar Company, Charleston, W. Va., a Corporation of West Virginia. Filed Jan. 24, 1912. Serial No. 673,106. (Cl. 255—27.)



1. A set of drill jars comprising two members each made of a single solid piece of metal entirely free from welds and united by a ball and socket joint, the socket being imperforate except for a waste opening at one end thereof.

2. A set of drill jars comprising an upper member having a depending plunger provided with a ball near its lower end, a lower member having a socket, for said ball, and an integral stop near the upper end of said socket for limiting the upward movement of said ball and retaining the two members in operative connection.

3. A set of drill jars comprising two members connected by a ball and socket joint, capable of reciprocating and rotating movements.

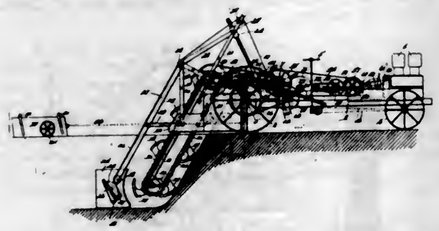
4. A set of drill jars comprising two members each made of a single piece of metal free from welds, one of said members being provided with a socket, and the other of said members with a ball integral therewith, said ball being completely housed by said socket.

5. As a new article of manufacture, a jar for well-boring comprising two members of solid metal, one of said members having a ball integral therewith, and the other of said members being provided with a socket having

rounded seats at opposite ends thereof, said rounded seats conforming substantially to the portion of the ball with which they engage.

[Claims 6 and 7 not printed in the Gazette.]

1,108,268. EXCAVATING-MACHINE. CHARLES E. STAHL, Hartford City, Ind., assignor to Jacob B. Stahl, Hartford City, Ind. Filed May 19, 1913. Serial No. 768,482. (Cl. 37—24.)



1. An excavator comprising a wheeled frame; an arm pivoted at one end to said wheeled frame; a beam pivoted to the other end of said arm; a lock locking said beam against pivotal movement on said arm; an endless digging element operatively mounted on said beam, a support carried by said beam; a shoe adjustably mounted on the lower end of said support; and means for adjusting said shoe on said support to move said beam vertically and swing said arm on its pivotal connection with said frame, substantially as described.

2. An excavator comprising a wheeled frame; an arm pivoted at one end to said frame; a beam pivoted at a point intermediate its length to the other end of said arm; an endless digging element operatively mounted on said beam; a connecting link pivotally connected at one of its ends to said arm and adjustably connected to the upper end of said beam at its other end portion; supporting bars rigidly spaced from said beam and substantially co-extensive therewith; and a shoe adjustably mounted on the lower end of said bars and adapted with the pivotal connection between said arm and frame to support said beam, digging element, bars and arm, substantially as described.

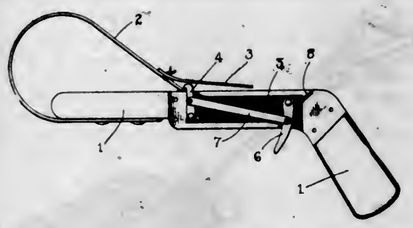
3. An excavator comprising a wheeled frame; a beam; an endless element carrying digging members mounted for travel upon said beam; a pivotal connection between said beam and said frame permitting of vertical movement of said beam; a shoe adapted to slide in contact with the bottom of the trench cut by the excavator when operating; an adjustable connection between said shoe and said beam; and a flexible element connected at one end with said shoe and having its other end connected with said frame forming a bight in said element adapted to adjustably support said beam, substantially as described.

4. An excavator comprising a wheeled frame; a beam; an endless element carrying digging members mounted for travel upon said beam; a pivotal connection between said beam and said frame permitting of vertical movement of said beam; a shoe adapted to slide in contact with the bottom of the trench cut by the excavator when operating; a bar fixed to said beam and extending substantially parallel therewith at the lower portion thereof; a slidable connection between the lower end of said bar and said shoe permitting of relative vertical movement of said bar; and means for locking said bar against downward movement in positions of vertical adjustment relative to said shoe, substantially as described.

5. An excavator comprising a wheeled frame; a beam; an endless element carrying digging members mounted for travel upon said beam; a pivotal connection between said beam and said frame permitting of vertical movement of said beam; a shoe adapted to slide in contact with the bottom of the trench cut by the excavator when operating; a bar fixed to said beam and extending substantially parallel therewith at the lower end portion thereof; a slidable connection between the lower end of said bar and said shoe permitting of relative vertical movement of said bar; and a flexible element connected at one end to said shoe forming a bight in said element in which the lower end of said bar is supported, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,108,269. TOY FLY-SWATTER. JASPER H. STANFIELD, Muskegon, Mich., assignor of one-half to Frank Schuler, Muskegon, Mich. Filed Nov. 8, 1912. Serial No. 730,120. (Cl. 43—1.)



1. A fly swatter comprising a body, a relatively long flat spring having one end secured to the underside of said body and normally extending beyond the end of same, a pad secured to the free end of said spring and extending beyond the same and a latch secured to said body to engage the free end of the spring to hold it in looped position with the free end on the upper side of said body, and adapted to be operated to release the spring to throw the free end of said spring and the pad outwardly away from said body.

2. A fly swatter comprising a body, a relatively long spring having one end secured to the body and normally extending beyond the end of same, a pad secured to the free end of said spring and extending beyond the same, and a latch secured to the body to engage the free end of the spring to hold it in looped position and adapted to be operated to release the spring to throw the free end of the same and the pad outwardly relatively far from said body.

3. A fly swatter comprising a body, a spring secured to the body and normally extending beyond one end of the body and adapted to be looped over said end of the body, and means to hold the looped spring and adapted to be operated to release the spring to throw the free end of the same away from and beyond the end of the body.

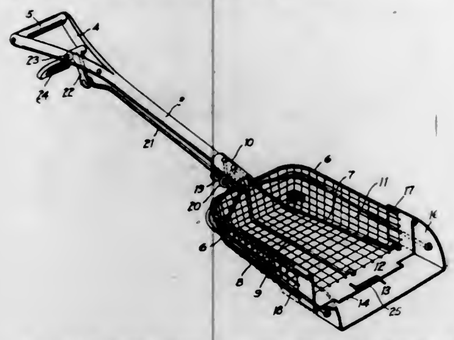
4. A fly swatter, comprising a pistol shaped body having a barrel portion, a normally straight spring attached at one end to the barrel portion of the body and extending nearly its entire length beyond the same, a pad on the free end of the spring, a hooked latch pivoted to the body, a curved portion on the end of the spring adapted to catch under the latch to hold the spring in looped position, a trigger pivoted in the body and connected to the latch to operate the same, and a spring to yieldably hold the latch in its engagement with the first mentioned spring.

5. A fly swatter, comprising a pistol shaped body member having a barrel portion, a normally straight spring attached at one end to the underside of barrel portion, and extending nearly its entire length beyond the same and having a curved portion at its free end, a pad attached to the free end of the spring, a hooked latch pivoted to the body and adapted to hook over the curved end of the spring, a trigger pivoted in the body and connected to the latch to operate the same to release the spring, and a spring engaging the trigger to yieldably thrust the same forward together with the latch to hold the latch in its engagement with the first mentioned spring.

1,108,270. ASH-SIFTER. ALBERT F. STAPLES, Dorchester, Mass. Filed July 5, 1913. Serial No. 777,437. (Cl. 83—60.)

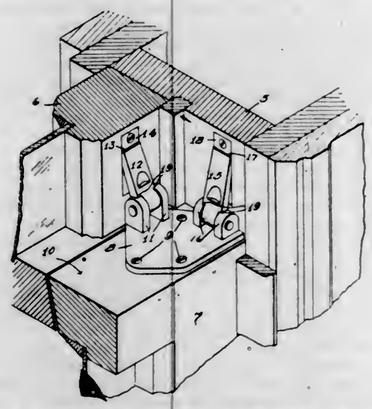
1. An ash-sifter comprising a foraminous, shovel-like body provided with an elongated handle; a plurality of

laterally separated, narrow supporting-members movably attached to the body near its forward end; and manually-operable means, extending to a point of convenient accessibility on the handle, for raising and lowering the supporting-members with respect to the body, said members, when lowered, extending to a substantial distance below all other parts of the sifter so that they may engage a floor-surface and support the body at a sufficient distance above such surface to clear ashes discharged thereon through the body, and said supporting-members being movable to a raised position in which they permit the body to rest substantially flat upon the floor-surface, to facilitate its use in the manner of a shovel.



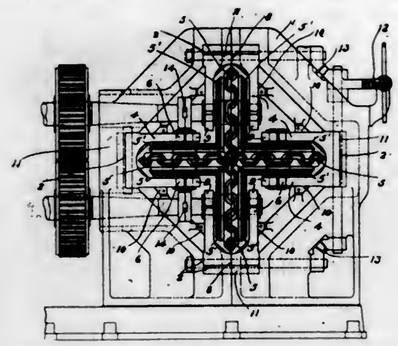
2. An ash-sifter having, in combination, a handle; a foraminous shovel-like body rigidly supported on the handle; a sheet-metal member pivoted, at one edge, to the forward edge of the body and bent, at its ends, to provide side-walls and supporting-means extending beyond the side-walls; and manually-operable means for swinging said member alternatively into position to provide a lip and side-walls for the forward end of the body, or an end-wall and supports for the body.

1,108,271. WINDOW-SASH FASTENER. ALFRED J. STHAY, Seattle, Wash. Filed Mar. 2, 1914. Serial No. 821,859. (Cl. 16—52.)



In a window sash fastener of the class described, a base-plate, a pair of lugs fixed on said base-plate to project upwardly from the top surface thereof, the edges of the upper portion of said lugs being in the form of a semi-circle, a pawl having one of its ends pivotally mounted between said lugs so that its pivotal axis is disposed eccentrically with relation to said semi-circular edges of the upper portion of said lugs, said pawl being provided with shoulders formed to adapt them to engage with said semi-circular edges of said lugs only when said pawl is moved to swing upwardly from a position parallel with said base-plate to a position of more than ninety degrees therefrom, whereby when said pawl is in the latter named position then said shoulders of said pawl may be supported directly by said lugs to relieve the strain on the pivots of said pawl.

1,108,272. MACHINE FOR IMPRESSING METAL BARS BY ROLLING THE SAME. ALEXANDER GEORGE STRATHERN, Coatbridge, Scotland. Filed Dec. 17, 1913. Serial No. 807,194. (Cl. 80—55.)



1. A machine for impressing metal bars by rolling the same, comprising, in combination, a recessed frame, a plurality of rotatable rolls, pivoted members carrying said rolls, said members and rolls being housed within said frame when in operative position and each being adapted to be oscillated on axes parallel to the axis of rotation of the roll carried thereby to shift the rolls into inoperative position.

2. A machine for impressing metal bars by rolling the same, comprising, in combination, a recessed frame, a plurality of cruciformly disposed fork-like members each member being pivoted to said frame at one end and adapted to be oscillated out of the plane of said frame, bearing members carried by said members remote from the pivoted ends thereof, and rolls rotatably mounted in said bearing members.

3. A machine for impressing metal bars by rolling the same, comprising, in combination, a frame formed with recesses, divided forked members, and rolls carried by said forked members, said forked members and rolls being housed in said recesses when in operative position and adapted to be oscillated out of said recesses to shift said rolls into inoperative position.

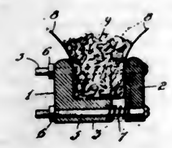
4. A machine for impressing metal bars by rolling the same, comprising, in combination, a frame formed with recesses, forked members, and rolls carried by said forked members, said members and rolls housed in said recesses when in operative position and adapted to be oscillated simultaneously out of said recesses to bring said rolls into inoperative position.

5. A machine for impressing metal bars by rolling the same, comprising, in combination, a frame, a plurality of rotatable rolls, cruciformly disposed forked members supporting said rolls, each forked member pivoted to said frame on an axis parallel with the axis of rotation of the roll carried thereby and adapted to be swung outwardly on its pivot, whereby said rolls are shifted to inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

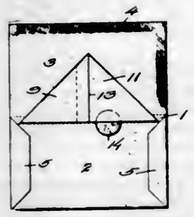
1,108,273. CIGAR-MAKING DEVICE. RAMON SUAREZ, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,014. (Cl. 131—48.)

1. A cigar making device comprising a body having a channel therein opening at one side of said body, said body consisting of two side sections adjustably connected together so as to permit of relative movement toward and from each other; and helical compression springs for normally holding said sections in spaced relation, substantially as described.



2. A cigar making device comprising a body having a channel therein opening at one side of said body, said body consisting of two sections adapted to be moved toward and away from each other, there being aliining perforations in said sections and recesses around said perforations at the adjacent sides of said sections; bolts through said perforations; and a spring around each bolt with its ends in two of said recesses, substantially as described.

1,108,274. COMBINED ENVELOP AND COIN-CARRIER. CHARLES C. TAYLOR, Philadelphia, Pa. Filed Apr. 15, 1913. Serial No. 761,253. (Cl. 222—69.)



1. A combined envelop and pocket comprising the front and back folds of the envelop, a pocket attached to the edge of the back fold, and a closing flap attached to the front fold and adapted to be folded over the pocket and secured to the body of the envelop to hold the said pocket against the back fold and to close the envelop.

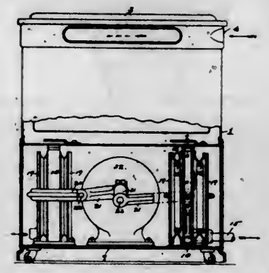
2. A combined envelop and pocket for carrying a coin or similar article comprising front and back folds, a closing flap formed from an extension of the free edge of the front fold, which flap may be of substantially the same size as the front and back folds, and a pocket formed from an extension of the free edge of the back fold, the opening into said pocket being along the line of the free edge of said back fold and adapted to be closed by folding said pocket over upon the back fold, and the said envelop adapted to be closed and the pocket secured in folded-over position by said closing.

3. A combined envelop and pocket comprising front and back folds, the free edge of the back fold being extended and having its corner portions folded along lines at right angles to each other, one edge of one of the folded over corner portions overlapping the edge of the other folded over portion, the said folded over portions forming a pocket which pocket is adapted to be folded into parallel relation with respect to the front and back folds and the free edge of the front fold being extended to form a flap which is adapted to be folded over and secured to the body portion of the envelop to close the same and to hold the said pocket in position.

4. A combined envelop and pocket comprising front and back folds, the free edge of the back fold being extended, one portion thereof to a greater extent than the other portion thereof, the corner portions of the said extensions being folded against the said extension, the extended edge of one of the said folded over corner portions being overlapped by the edge of the other folded over portion, the said folded over portions forming a pocket which is adapted to be folded into parallel relation with respect to the front and back folds and the free edge of the front fold being extended to form a flap which is adapted to be folded over against and to be secured to the body portion of the envelop to close the same and to hold the said pocket in position.

5. A combined envelop and pocket comprising the front and back folds of the envelop, the free edge of the back fold of the said envelop being extended and folded to form a pocket, which pocket is adapted to be folded into parallel relation with respect to the front and back folds of the envelop, and a flap formed by extending the free edge of the front fold of the said envelop, which flap is adapted to be folded over against and secured to the body portion of the said envelop to close the same.

1,108,275. VACUUM RENOVATING APPARATUS. JOSEPH H. TEMPLIN, Philadelphia, Pa., assignor, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Original application filed July 23, 1909, Serial No. 503,969. Divided and this application filed July 23, 1910. Serial No. 573,463. (Cl. 30—36.)



1. A vacuum pump including in combination, a fixed frame having inlet and outlet ports and valves for closing the same, movable plates, flexible annular diaphragms connecting said movable plates to said fixed frame, said diaphragms being hermetically secured to each other at their inner edges, stiffening rings secured to said inner joints for clamping the edges of said diaphragms together, and means for reciprocating said plates including a yoke surrounding said frame and secured to said movable plates.

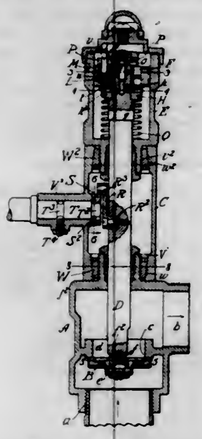
2. A vacuum pump including in combination, a fixed frame having inlet and outlet ports and valves for closing the same, a movable plate, flexible annular diaphragms connecting said movable plate to said fixed frame, said diaphragms being hermetically secured to each other alternately at their inner and outer edges respectively, stiffening rings secured to said inner and outer joints for clamping the edges of said diaphragms together, and means for reciprocating said plate, said reciprocating means including a yoke surrounding the frame and supported by said movable plate.

3. A vacuum pump including in combination a fixed frame having inlet and outlet ports and valves for closing the same, movable plates at each side of the frame, flexible annular diaphragms connecting said movable plates to said fixed frame, said diaphragms being hermetically secured to each other alternately at their inner and outer edges respectively, stiffening rings secured to said inner joints for clamping the edges of said diaphragms together, and means for reciprocating said plates, said reciprocating means including a yoke surrounding the frame and supported by said movable plates.

1,108,276. DASH-POT. LEWIS J. TETLOW, West Springfield, Mass., assignor, by mesne assignments, to D. Edward Hennessey, Holyoke, Mass. Filed July 17, 1913. Serial No. 779,612. (Cl. 74—69.)

1. In combination, a stem, means for operating the stem, a casing surrounding one end of the stem, said surrounded stem end having lateral openings and an axial passage, a collar on said stem, a spring between the collar and one

end of the casing, a sleeve on the stem, a piston on the sleeve, said piston having openings closed by the collar, and means carried by the stem for holding the piston against the collar to close said openings.



2. In combination, a casing, a piston slidable in the casing and dividing the same into two compartments, and provided with relatively large passages through which liquid may flow from one compartment to the other, a stem extending through into the casing and through the piston and provided with lateral passages located on one side of the piston and an axial passage communicating with the lateral passages at one end and at its opposite end with the chamber on the opposite side of the piston, a collar on the stem normally closing the passage in the piston, a spider secured to the stem, and a spring between the spider and the piston to hold the piston against the collar.

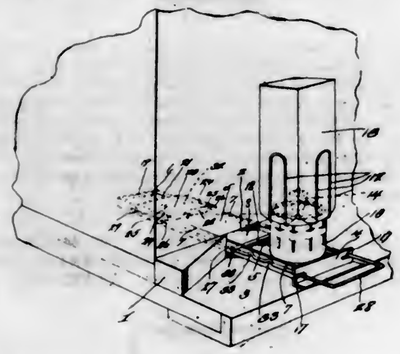
3. In combination, a casing, a piston slidable in the casing and dividing the same into two compartments, and provided with relatively large passages through which liquid may flow from one compartment to the other, a stem extending through into the casing and through the piston and provided with lateral passages located on one side of the piston and an axial passage communicating with the lateral passages at one end and at its opposite end with the chamber on the opposite side of the piston, a collar on the stem normally closing the passages in the piston, said piston having sockets, springs in the sockets, and a spider secured to the stem for confining the springs in the sockets.

4. In combination, a casing, a stem having one end in the casing and formed with lateral passages and an axial passage leading from said lateral passage through the end of the stem, a collar on the stem, a sleeve on the stem, a piston on the sleeve and sliding against the wall of the casing, said piston having relatively large openings and dividing the casing into two chambers, a stop on the stem and springs between the stop and the piston for holding the piston against the collar to close said piston openings.

1,108,277. BEE-CULTURE APPARATUS. HARRY H. THALE, Maywood, Mo. Filed Nov. 24, 1913. Serial No. 802,730. (Cl. 6—5.)

1. A feeder for bee hives comprising a hollow elongated member, the upper plate of which at one end being provided with perforations and the surrounding flange, a slide having a yielding flange adapted to coöperate with said perforations for controlling the feed, guide rods and guides therefor so constructed and arranged as to coöoperate yieldably with the slide to hold the yielding flange in the slide in close contact with the upper surface of the upper wall of said hollow member, and means for holding the guide rods and the slide in adjusted positions.

2. A feeder for bee hives comprising a hollow elongated member, the upper plate of which at one end being provided with perforations and the surrounding flange, a slide having a yielding flange adapted to coöperate with said perforations for controlling the feed, guide rods and guides therefor so constructed and arranged as to coöperate yieldably with the slide to hold the yielding flange in the slide in close contact with the upper surface of the upper wall of said hollow member, and a syrup cup including a feed receptacle for the hollow member.



3. A feeder for a bee hive comprising an elongated hollow member, the upper plate of which at one end being provided with a series of perforations and a surrounding flange, a slide guided upon the surrounding flange, said slide having a rearwardly extending yieldable flange to coöperate with said perforations to control the flow of the feed, one end of the hollow member having a plate having slots in its ends, lugs projecting laterally from the hollow member, guide rods engaging the slots of the plate and under said lugs and attached to the slide to hold the same and the yielding flange thereof closely in contact with the upper plate of the hollow member, and a feeding receptacle for the hollow member.

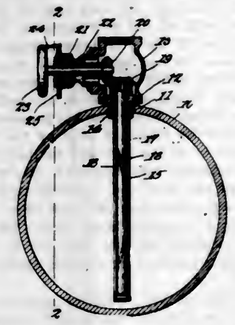
4. A feeder for a bee hive comprising an elongated hollow member, the upper plate of which at one end being provided with a series of perforations and a surrounding flange, a slide guided upon the surrounding flange, said slide having a rearwardly extending yieldable flange to coöperate with said perforations to control the flow of the feed, one end of the hollow member having a plate having slots in its ends, lugs projecting laterally from the hollow member, guide rols engaging the slots of the plate and under said lugs and attached to the slide to hold the same and the yielding flange thereof closely in contuct with the upper plate of the hollow member, devices upon one of the guide rods to hold the same and the slides in different adjusted positions, a syrup cup at one end of the hollow member having spring arms, and a feed receptacle including a valve member supported in the syrup cup by said arm.

1,108,278. SAMPLING-TUBE FOR CALORIMETERS. CARL C. THOMAS, Roland Park, Md. Filed June 1, 1914. Serial No. 842,215. (Cl. 73—184.)

1. In a device of the character described, a tube adapted for insertion in a steam pipe, said tube being provided with a longitudinal slot extending along one side thereof, a second tube revolubly fitted within the first tube, said second tube having spirally disposed port communication with said slot, and means to rotate the second tube within the first tube.

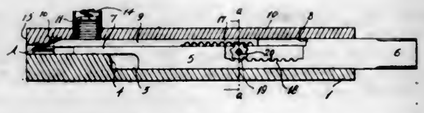
2. In a device of the character described, a tube adapted for insertion in a steam pipe, said tube being provided with a longitudinal slot extending along one side thereof, said second tube being provided with a spirally disposed slot forming port communication between the first mentioned slot and the interior of the second tube.

3. In a device of the character described, a T fitting open at its upper end, a nipple secured in the lower end of said T fitting, a tube having its upper end secured in said nipple and provided with a longitudinal slot, a second tube fitting within the first tube and provided with a



spirally disposed slot, a bevel gear mounted on the second tube within said fitting, a shaft adapted for hand manipulation extending laterally into said fitting, and a bevel gear mounted in said shaft and engaging the first mentioned bevel gear.

1,108,279. TOOL FOR DRIVING CORRUGATED FASTENERS. CARL S. THOMPSON, Dallas, Tex. Filed July 21, 1913. Serial No. 780,345. (Cl. 1—46.)



1. In a staple driving device, the combination of an elongated casing having a staple entrance in one side and a staple ejecting opening at one end, a feed plunger mounted in the casing and reciprocating across the staple entrance, a driving plunger reciprocating in the casing parallel to the feed plunger, means for retracting one plunger and moving the other forward, the feed plunger being arranged to deliver staples in the path of the driving plunger, and a stop limiting the forward movement of the driving plunger.

2. In a staple driving device, the combination of a casing having a longitudinal plunger guideway and a staple entrance opening into the guideway, said casing having a staple ejecting opening at one end, a feed plunger reciprocating in the casing guideway across the staple entrance, a driving plunger reciprocating in the guideway of the casing parallel to the feed plunger, said plungers being connected to reciprocate in opposite directions, and a staple holding member disposed in the ejecting opening of the casing out of the path of the feeding plunger.

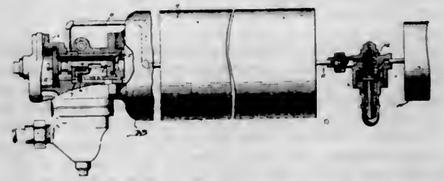
3. In a staple driving device, the combination of a casing having a staple entrance in one side and a staple ejecting opening at one end, a feed plunger reciprocating in the casing across the staple opening, a driving plunger reciprocating in the casing parallel to the feed plunger, a gearing connection between the plungers for moving the feed plunger in an opposite direction to the driving plunger, and a spring mounted in the casing acting to retract the driving plunger.

4. In a tool of the character described, a casing, a magazine arranged on the casing, a driving plunger, a feed plunger, the feed plunger adapted to receive corrugated fasteners from the magazine and deliver said fasteners to the guideway of the driving plunger, and means disposed between the plungers for establishing an opposed movable relation therebetween.

5. In a tool of the character described, a casing, feed and driving plungers mounted in the casing, the feed plunger being arranged to receive corrugated fasteners from the magazine and dispose said fasteners in the path of the driving plunger, gear racks carried by the two plungers, and a pinion interposed between the two gear racks, establishing an opposed movable relation between the two plungers.

[Claim 6 not printed in the Gazette.]

1,108,280. FLUID-PRESSURE-BRAKE APPARATUS. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 5, 1909. Serial No. 470,792. (Cl. 188—1.)



1. The combination with a fluid pressure brake comprising a train pipe, triple valve, auxiliary reservoir, and a supplemental reservoir for supplying fluid to graduate the release of the brakes, of a receptacle from which fluid is supplied for purposes other than controlling the brakes, said supplemental reservoir being connected to and serving as the source of fluid supply for said receptacle.

2. The combination with a fluid pressure brake comprising a train pipe, triple valve, and auxiliary reservoir, of a supplemental reservoir from which fluid is supplied to the auxiliary reservoir side of the triple valve upon movement to release position and a pipe connected to said supplemental reservoir for supplying fluid for purposes other than controlling the brakes.

3. The combination with a fluid pressure brake comprising a train pipe, triple valve, and auxiliary reservoir, of a supplemental reservoir from which fluid is supplied to the auxiliary reservoir side of the triple valve upon movement to release position, a receptacle from which fluid is supplied for purposes other than controlling the brakes, a pipe connecting said supplemental reservoir with said receptacle, and a pressure reducing valve device in said pipe for limiting the pressure of fluid supplied from the supplemental reservoir to said receptacle.

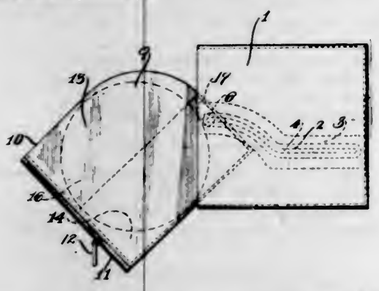
4. The combination with a triple valve, brake cylinder, and auxiliary reservoir, of a receptacle from which fluid is taken for purposes other than controlling the brakes and a single reservoir having connections to serve as the usual supplemental reservoir for graduating the release of the brakes and also as the direct source of fluid pressure for said receptacle.

1,108,281. CONTAINER. HYMAN UFFNER, New York, N. Y. Filed Apr. 2, 1914. Serial No. 829,004. (Cl. 211—16.)

1. The herein described container for phonograph blanks and the like, consisting of the inclosing receptacle, the containing receptacle adapted to fit within the inclosing receptacle, and a cam mechanism securing the two together but adapted to permit the withdrawal of the containing receptacle from the inclosing receptacle for a limited distance, and then permit a pivoting of the containing receptacle.

2. The herein described container for phonograph blanks and the like, consisting of the inclosing receptacle, the containing receptacle adapted to fit within the inclosing receptacle, and a cam mechanism securing the two together but adapted to permit the withdrawal of the containing receptacle from the inclosing receptacle for a limited distance, and then permit a pivoting of the containing receptacle, the containing receptacle having its inner and

upper edges of less height and length than its outer and lower sides respectively.

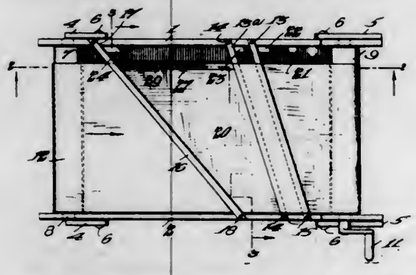


3. The herein described container for phonograph blanks, and the like, consisting of the inclosing receptacle, the containing receptacle adapted to fit within the inclosing receptacle, and a cam mechanism securing the two together, but adapted to permit the withdrawal of the containing receptacle from the inclosing receptacle for a limited distance, and then permit a pivoting of the containing receptacle, said cam mechanism consisting of a cam slot in the wall of the inclosing member and a pin retaining the containing member at all times in movable but permanent relation to the inclosing member.

4. The herein described device consisting of the inclosing member having a cam slot and guard plate, a headed stud, the head within the cam slot, the stem of the stud projecting through the guard plate, a containing member, the side of which is secured to said stud.

5. The herein described device consisting of the inclosing member having a cam slot and guard plate, a headed stud, the head within the cam slot, the stem of the stud projecting through the guard plate, a containing member, the side of which is secured to said stud, the containing member of rectangular shape, with the upper inner corner cut away whereby it may be slid and guided horizontally for part of its distance, and permitted to rock during the rest of its motion.

1,108,282. SEED-GRADING MACHINE. EMMIT WILLIS VAN FLEET, Evart, Mich. Filed May 3, 1913. Serial No. 765,270. (Cl. 130—18.)



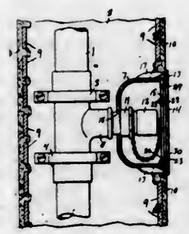
1. In a machine of the character specified, comprising a supporting frame and an endless belt supported for movement in the frame, said frame having discharge openings at one side and the adjacent edge of the belt being spaced apart from the said side to permit the discharge of material carried by the belt through the openings, of means for preventing lateral movement of the edge of the said belt toward the discharge openings, said means comprising a groove in the frame at the said edge of the belt, and a bead on the said edge of the belt engaging the groove, and a rigid bar above the said edge of the belt between the discharge openings.

2. In a machine of the character specified, comprising a supporting frame and an endless belt supported for movement in the frame, said frame having discharge openings at one side and the adjacent edge of the belt being spaced apart from the said side to permit the discharge of material carried by the belt through the openings, of means for preventing lateral movement of the edge of the said belt toward the discharge openings, said means comprising a groove in the frame at the said edge of the belt, and a bead on the said edge of the belt engaging the groove.

3. In a machine of the character specified, comprising an inclined frame and an endless belt supported by the frame and of lesser width than the frame and having one of its side edges spaced apart from the adjacent side of the frame, the frame having discharge openings between the said side and the adjacent edge of the belt, bars arranged transversely of the belt and inclining downwardly toward the discharge openings and spaced apart from the upper run of the belt, and cleaning members comprising flexible sheets connecting the said bars, said cleaning members inclining upwardly away from the belt toward the discharge openings, the bar adjacent to the high end of the frame being inclined at a lesser angle than the bar at the low end.

4. In a machine of the character specified, comprising an inclined frame and an endless belt supported by the frame and of lesser width than the frame and having one of its side edges spaced apart from the adjacent side of the frame, the frame having discharge openings between the said side and the adjacent edge of the belt, bars arranged transversely of the belt and inclining downwardly toward the discharge openings and spaced apart from the upper run of the belt, and cleaning members comprising flexible sheets connecting the said bars, said cleaning members inclining upwardly away from the belt toward the discharge openings.

1,108,283. RECESS-BOX. FRANK W. VAN NESS, Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Filed May 2, 1910. Serial No. 558,810. (Cl. 137—13.)



1. The combination with a stand pipe of a projecting pipe removably and temporarily connected therewith and a recess-box, provided with an aperture, movably supported upon said projecting pipe.

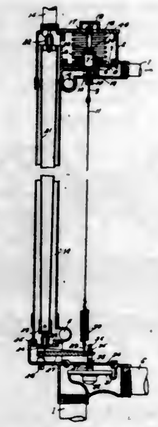
2. The combination with a stand pipe of a projecting pipe removably and temporarily connected therewith, a recess-box, provided with an aperture, movably supported upon said projecting pipe, and a cap secured to the end of said projecting pipe.

3. The combination with a recess-box, adapted to be secured permanently and immovably in position having a groove extending aronnd the interior circumference thereof, of a cover-plate, screws extending through said cover-plate and nuts engaging said screws and extending into said groove.

4. The combination with a recess-box, having a groove extending around the interior circumferenee thereof, of a cover-plate, provided with centering lugs adapted to be received within said recess-box, screws extending through said cover-plate and nuts engaging said screws and extending into said groove.

5. The combination with a recess-box, having a groove extending around the interior circumference thereof, of a cover-plate, provided with centering lugs adapted to be received within said recess-box, screws extending through said cover-plate, nuts engaging said screws and extending into said groove, and a cover hinged to said cover-plate.

1,108,284. WATER-HEATER CONSTRUCTION. FRANK L. O. WADSWORTH, Sewickley, Pa. Filed Nov. 10, 1911. Serial No. 659,546. (Cl. 126—351.)



1. In combination in an instantaneous water heater, a water actuated member operated by opening and closing the outlet from the heater, a gas valve yieldingly maintained in closed position when not acted upon externally, a thermostat controlled by the water of the heater, a controlling lever for the gas valve intermediate the water actuated member and the gas valve, a resilient connection between the controlling member and water actuated member whereby the controlling lever is moved by the water actuated member to open the gas valve when the outlet from the heater is opened, and an operative connection between the thermostat and controlling lever, whereby such lever is held against movement by the water actuated member tending to open the gas valve when the temperature of the water is above a predetermined point, and whereby such lever is permitted to be moved by the water actuated member to a position to open the gas valve when the temperatnre of the water is below such predetermined point.

2. In combination in an instantaneous water heater, a water actuated member operated by opening and closing the outlet from the heater, a gas valve yieldingly maintained in closed position when not acted upon externally, a thermostat controlled by the water of the heater, a controlling lever for the gas valve intermediate the water actuated member and the gas valve, a resilient connection between the controlling member and water actuated member whereby the controlling lever is moved by the water actuated member to open the gas valve when the outlet from the heater is opened, and an operative connection between the thermostat and controlling lever whereby such lever is moved to a position to secure the closure of the gas valve against the force of the said resilient connection when the outlet from the heater is open and the temperature of the water in the heater rises above a predetermined point for which the thermostat is set and whereby the said lever is permitted to be moved by the water actuated member to a position to open the gas valve when the temperature of the water is below such predetermined point.

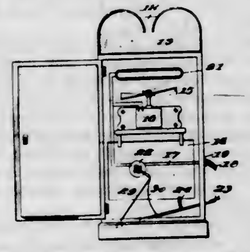
3. In combination in an instantaneous water heater, a water actuated member operated by opening and closing the outlet from the heater, a gas valve yieldingly maintained in closed position when not acted upon externally, a thermostat controlled by the water in the heater, a controlling member for the gas valve, a resilient connection between the controlling member and water actuated member whereby the controlling member is moved in one direction by the water actuated member to open the gas valve when the outlet from the heater is opened, and a direct connection between the controlling member and thermostat for moving the said controlling member in the other direction to secure the closure of the gas valve against the force of the said resilient connection when the temperature of the water in the heater rises above a predetermined point.

4. In combination in an instantaneous water heater, a water actuated member operated by opening and closing the outlet from the heater, a gas valve yieldingly maintained in closed position when not acted upon externally, an expansible member acted upon by the water of the heater, a controlling member for the gas valve, a resilient connection between the controlling member and the water actuated member whereby the controlling member is moved in one direction by the water actuated member to open the gas valve when the outlet from the heater is opened, and means carried by the expansible member for directly and positively moving the controlling member in the other direction to secure the closure of the gas valve against the force of the said resilient connection when the temperature of the water in the heater rises above a predetermined point.

5. In combination in an instantaneous water heater, a water actuated member operated by opening and closing the outlet from the heater, a gas valve yieldingly maintained in closed position when not actuated upon externally, a controlling member for the gas valve, a resilient connection between the controlling member and the water actuated member whereby the controlling member is moved in one direction by the water actuated member to open the gas valve when the outlet from the heater is opened, and an expansible member acted upon by the water of the heater and carrying means engaging the controlling member for positively moving such controlling member reversely and in the direction of the expansion of the expansible member to secure the closure of the gas valve against the force of the said resilient connection when the temperatnre of the water in the heater rises above a predetermined point.

[Claims 6 to 14 not printed in the Gazette.]

1,108,285. PNEUMATIC DRIER. JOHN MOULTRIE WARD, Washington, D. C. Filed Mar. 27, 1914. Serial No. 827,622. (Cl. 34—26.)



1. In a drier of the character described, in combination, a relatively stationary casing having an opening adjacent to which the hands are adapted to be placed, a heating element, means adapted to force an air current thereover, and means for directing the air current back upon itself.

2. In a drier of the character described, in combination, a relatively stationary casing having an opening adjacent to which the hands are adapted to be placed, a heating element, means adapted to force an air current thereover, and means for directing portions of the air current in opposite directions.

3. In a drier of the character described, in combination, a relatively stationary casing having an opening adjacent to which the hands are adapted to be placed, a heating element, means adapted to force an air current thereover, and curved deflectors positioned adjacent to the opening

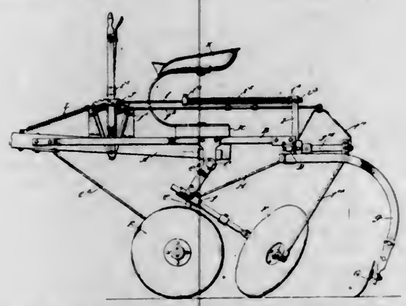
for directing the air currents to all portions of the surface of the hands.

4. In a drier of the character described, in combination, a casing having an opening adjacent which the hands are adapted to be placed, a heating element within said casing, pneumatic means for directing air currents over said heating element, and means for simultaneously placing the heating element and pneumatic means in operative condition.

5. In a drier of the character described, in combination, a casing having an opening adjacent which the hands are adapted to be placed, an electric heating element, an electrically operated fan for directing a current of air over said heating element, and a quick operating switch adapted to be actuated by the foot of the operator for simultaneously completing the circuit for operating the heating element and fan.

[Claims 6 to 10 not printed in the Gazette.]

1,108,266. CULTIVATOR. THOMAS S. WARNER, Springfield, Ohio. Filed Oct. 31, 1908. Serial No. 460,417. (Cl. 97—31.)



1. In a lister cultivator, a pair of angularly disposed cultivator disks, spindles on which said disks are mounted, bearings in which said spindles are mounted, said bearings permitting said spindles to be rotated to change the disks from the in-throw to the out-throw, a pair of shovels connected to trail behind said disks, said shovels mounted on a suitable rock shaft and brace rods extending from said rock shaft to a point adjacent said spindle bearings, and a pair of supporting wheels disposed in front of said disks.

2. In a lister cultivator, a pair of angularly disposed cultivator disks, spindles on which said disks are mounted, bearings in which said spindles are mounted, said bearings permitting said spindles to be rotated to change the disks from the out-throw to the in-throw, a pair of shovels connected to trail behind said disks, said shovels mounted on a suitable rock shaft and brace rods extending from said rock shaft to a point adjacent said spindle bearings, and a pair of supporting wheels disposed in front of said disks.

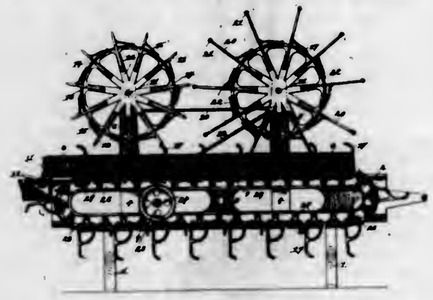
3. In a lister cultivator, a frame, a rock shaft carried thereby, shovel beams secured to said rock shaft, swingingly mounted cultivator disks, arms loosely mounted on said rock shaft, rods connecting said arms with said disks, a lever connected for rocking said shaft to raise and lower the shovels, a lever connected with said arms for raising and lowering the disks, and an interlocking connection between said levers, whereby one of said levers is operated to raise and lower both the disks and shovels.

4. In a lister cultivator, a frame, a rock shaft supported thereon, shovel beams rigidly secured to said rock shaft, swingingly mounted cultivator disks, arms loosely mounted on said rock shaft and connected with said disks, means for rocking said arms on the shaft to raise and lower the disks, and means for rocking said shaft to raise and lower the shovels.

5. In a lister cultivator, a rock shaft, a pair of clips secured to said rock shaft, each clip provided on its underside with a pair of crossed grooves, and a pair of interchangeable shovels provided with beams adapted to be secured to said grooves by the clips, said shovels being interchangeable from one clip to the other, and said clips being interchangeable from one end of the shaft to the other.

[Claims 6 to 11 not printed in the Gazette.]

1,108,287. TILE AND BRICK FORMING AND CUTTING TABLE. LEVI WARSTLER and PAUL F. LOICHOT, Louisville, Ohio, assignors to The Louisville Machine Company, Louisville, Ohio, a Corporation of Ohio. Filed Sept. 13, 1913. Serial No. 789,696. (Cl. 25—110.)



1. In a tile and brick forming and cutting table, the combination of a frame, an endless conveyer consisting of a series of slats, a series of strike arms carried by and movable with the endless conveyer, a series of groove forming plates connected to and carried by the conveyer, a reel adapted to be rotated by the movement of the conveyer, said reel provided with a series of groove forming bars.

2. In a tile and brick forming and cutting table, the combination of an endless conveyer made up of a series of slats, said slats provided with a series of groove forming plates and a series of strike arms, two reels, one of said reels provided with groove forming bars and the other reel provided with cutting wires, both of said reels adapted to be rotated by the strike arms and in unison with each other.

3. In a tile and brick forming and cutting table, the combination of an endless conveyer, a series of groove forming plates secured to the conveyer in predetermined spaced relationship with reference to each other, said plates formed in pairs and each plate of each pair spaced from each other, a reel provided with a series of groove forming bars spaced in predetermined relationship with reference to each other, and means for rotating the reel provided with the groove-forming bars.

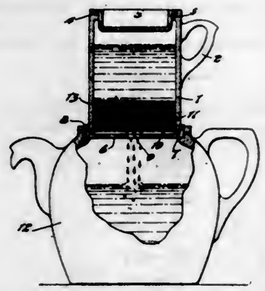
4. In a tile and brick forming and cutting table, the combination of an endless conveyer, means for imparting motion to said endless conveyer, a series of groove-forming plates carried by the conveyer, a series of strike arms connected to said conveyer and provided with curved outer ends, a reel adapted to be rotated by the series of strike arms, said reel being provided with a series of groove-forming bars, said bars adapted to impress grooves in a column of clay.

5. In a tile and brick forming and cutting table, the combination of a frame, an endless conveyer adapted to support and carry a column of clay, said conveyer consisting of a series of slats spaced from each other, a series of groove forming plates connected to predetermined pairs of conveyer slats and means for imparting movement to the endless conveyer.

[Claims 6 and 7 not printed in the Gazette.]

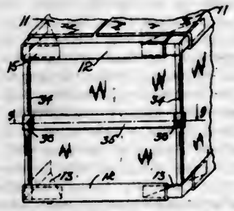
1,108,288. COFFEE-PERCOLATOR. JAMES ALEXANDER WATSON, Winnipeg, Manitoba, Canada. Filed May 9, 1913. Serial No. 766,541. (Cl. 53—3.)

1. A percolator comprising an open ended cylindrical casing having the bottom thereof screw threaded and provided with an inturned flange at the upper end, a perforated cup-shaped top resting on the flange, a bottom for the receptacle, said bottom having a centrally located opening therein and being provided with an annular shoulder and an annular interiorly threaded flange adjoining the shoulder and having the ribs passing radially between the opening and the shoulder and being screw threaded onto the lower end of the receptacle and a substantially circular straining element passing across the lower end of the receptacle and bearing on the shoulder, said straining element being free of the bottom, as and for the purpose specified.



2. A percolator comprising a receptacle, a bottom for the receptacle, said bottom having a centrally located opening therein and being provided with an annular shoulder, ribs radiating from said opening to said shoulder, a straining element resting on said ribs and said annular shoulder above said opening, said receptacle clamping the outer edges of said straining element against said shoulder when said receptacle and bottom are secured together.

1,108,289. REINFORCED COLLAPSIBLE BOX. JOSEPH W. WEISS, Baltimore, Md. Filed June 3, 1913. Serial No. 771,380. (Cl. 229—37.)



1. A collapsible box having sides, ends, removable corner pieces disposed between the sides and ends and retained in place thereby, and freely removable reinforcing struts between the opposing corner pieces, the latter retaining the struts in place.

2. A collapsible box having sides, end flaps forming closures for the box, removable corner pieces at the junction of the sides and flaps, and retained in place by the latter, and freely removable struts between the opposing corner pieces, the latter retaining the struts in place.

3. A reinforced collapsible box, comprising sides, end flaps, a fold between the flaps and sides, removable corner pieces disposed within the folds, and struts between the opposing corner pieces and retained thereby.

4. A reinforced collapsible box, comprising sides, end flaps, a fold between the flaps and sides, removable corner pieces disposed within the folds, compression members located within the folds, and struts between the opposing corner pieces, the latter retaining the struts in place.

5. A reinforced collapsible box, comprising sides, end flaps, a fold between the flaps and sides, removable corner pieces disposed within the folds, angle pieces located within the folds, and struts between the opposing corner pieces, the latter retaining the struts in place.

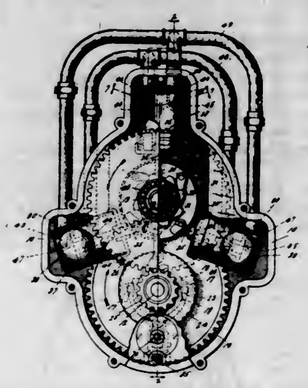
[Claims 6 and 7 not printed in the Gazette.]

1,108,290. SET OF TEETH FOR PRACTICE-WORK IN DENTAL SURGERY. FANEUIL D. WEISSE, New York, N. Y. Filed Jan. 27, 1913. Serial No. 744,338. (Cl. 35—16.)



In an artificial set of teeth for practice work of dental surgery the combination of a number of single celluloid teeth and a base of gutta-percha, said single celluloid teeth set into said gutta-percha substantially as described and shown.

1,108,291. PNEUMATIC ENGINE-STARTER. GRANVILLE G. WESTERFIELD, Indianapolis, Ind. Filed Mar. 27, 1912. Serial No. 686,605. (Cl. 250—37.)



1. A pneumatic starter for internal combustion engines, comprising a cylinder and piston, a crank shaft therefor, a shaft for connection to the engine, two mechanical connections of different speed ratios between said two shafts, each of said connections including a pawl and ratchet device which allows the transmission of power in one direction only and one of said connections including a clutch, a reservoir for fluid under pressure, a valve for controlling the connections of the ports of said cylinder to cause the latter to operate as an engine by pressure from said reservoir or as a pump to supply fluid to said reservoir, and means responsive to the pressure in said reservoir for controlling said clutch.

2. A pneumatic starter for internal combustion engines, comprising a cylinder and piston, a crank shaft therefor, a shaft for connection to the engine, two mechanical connections of different speed ratios between said two shafts, each of said connections including a device which allows the transmission of power in one direction only and one of said connections including a clutch, a reservoir for fluid under pressure, a valve for controlling the connections of the ports of said cylinder to cause the latter to operate as an engine by pressure from said reservoir or as a pump to supply fluid to said reservoir, and means responsive to the pressure in said reservoir for controlling said clutch.

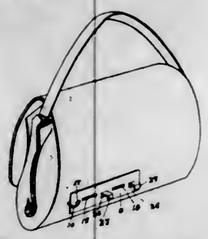
3. A pneumatic starter for internal combustion engines, comprising a cylinder and piston, a crank shaft therefor, a shaft for connection to the engine, two mechanical connections of different speed ratios between said two shafts, each of said connections including a pawl and ratchet device which allows the transmission of power in one direction only and one of said connections including a clutch, a reservoir for fluid under pressure, a valve for controlling the connections of the ports of said cylinder to cause the latter to operate as an engine by pressure from said reservoir or as a pump to supply fluid to said reservoir, and means responsive to the pressure in said reservoir for controlling said clutch, said valve being independent of said pressure-responsive means.

4. A pneumatic starter for internal combustion engines, comprising a cylinder and piston, a crank shaft therefor, a shaft for connection to the engine, two mechanical connections of different speed ratios between said two shafts, each of said connections including a device which allows the transmission of power in one direction only and one of said connections including a clutch, a reservoir for fluid under pressure, a valve for controlling the connections of the ports of said cylinder to cause the latter to operate as an engine by pressure from said reservoir or as a pump to supply fluid to said reservoir, and means responsive to the pressure in said reservoir for controlling said clutch, said valve being independent of said pressure-responsive means.

5. A pneumatic starter for internal combustion engines, comprising a cylinder and piston, a crank shaft to which said piston is connected, said cylinder being provided with intake and outlet ports, a reservoir for air under pressure, a controlling valve having three positions in which it respectively connects the reservoir to the intake port and the outlet port of the atmosphere, connects the intake port to the atmosphere and the reservoir to the outlet port and closes the connection from the reservoir and connects the inlet and outlet ports together, an operating lever for said valve, and a pawl and ratchet connection between said valve and said operating lever.

[Claims 6 to 28 not printed in the Gazette.]

1,108,292. COIN-HOLDER FOR SATCHELS. FRANK M. WHITE, Canton, Ohio. Filed Mar. 11, 1914. Serial No. 823,885. (Cl. 133—5.)

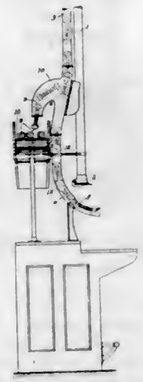


1. In a device of the character described, the combination of a coin receptacle consisting of front, bottom and rear plates and an angle plate, said receptacle provided with partition plates, said front plate provided with coin receiving and delivery apertures, an outer plate provided with coin receiving apertures adapted to register with the coin receiving apertures in the front plate and adjustably connected to said outer plate of the receptacle and means for holding said adjustable plate in fixed adjustment, a series of coin delivery levers pivotally attached to the coin receptacle and means for actuating said coin delivery levers, substantially as and for the purpose specified.

2. In a device of the character described, the combination of a coin receptacle consisting of front, bottom and rear plates and an angle plate, said receptacle provided with partition plates, said front plate provided with coin receiving and delivery apertures, an outer plate provided with coin receiving apertures adapted to register with the coin receiving apertures in the front plate and adjustably connected to said outer plate of the receptacle and means for holding said adjustable plate in fixed adjustment, a series of coin delivery levers pivotally attached to the coin receptacle and means for actuating said coin delivery levers, said means for actuating the coin delivery levers in one direction extended through the front and adjustable plates.

1,108,293. PNEUMATIC-DESPATCH-TUBE SELECTIVE SYSTEM. FREDERICK G. WHITTIER, Brookline, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New York. Filed Oct. 28, 1912. Serial No. 728,048. (Cl. 243—16.)

1. In pneumatic despatch tube apparatus, the combination of two classes of carriers with a pneumatic tube for conveying said carriers, carriers of one class being of different construction from and being normally indiscriminately interposed between carriers of the other class in said tube when in transit therethrough, a repository adapted to maintain carriers delivered thereto from said tube substantially in sequential order, means co-acting with carriers of one class to remove only said carriers from the path of travel of the remaining carriers so that the latter are delivered in uninterrupted sequence to said repository, and separate means for maintaining the so removed carriers in substantially proper sequence with respect to each other.



2. In pneumatic despatch tube apparatus, the combination of two classes of carriers with a pneumatic tube for conveying said carriers, carriers of one class being of different construction from and being normally indiscriminately interposed between carriers of the other class in said tube when in transit therethrough, a repository adapted to maintain carriers delivered thereto from said tube substantially in sequential order, means co-acting with carriers of one class from the path of travel of the remaining carriers so that the latter are delivered in uninterrupted sequence to said repository, and separate means, a portion at least of which is normally moving, for maintaining the so removed carriers in substantially proper sequence with respect to each other.

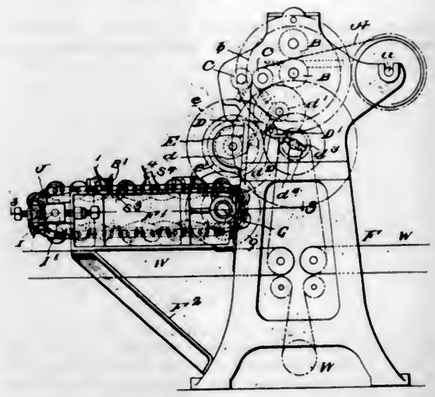
3. In pneumatic despatch tube apparatus, the combination of two distinct classes of carriers with a plurality of pneumatic tubes for conveying said carriers, carriers of said classes being normally indiscriminately intermixed when in course of transit through said tubes, repositories at the delivery ends of said tubes adapted to maintain carriers delivered thereto from the respective tubes, in substantially sequential order, means for removing carriers of one class from the respective tubes before said last mentioned carriers reach said repositories, so that the carriers of the remaining class will be disposed in uninterrupted sequence in said repositories, and means, common to substantially all of said tubes, for displacing the so removed carriers from each of said tubes, laterally with respect to the corresponding tube and substantially in the order received therefrom.

4. In pneumatic despatch tube apparatus, the combination of two distinct classes of carriers with a plurality of pneumatic tubes for conveying said carriers, carriers of said classes being normally indiscriminately intermixed when in course of transit through said tubes, repositories at the delivery ends of said tubes adapted to maintain carriers delivered thereto from the respective tubes, in substantially sequential order, means for removing carriers of one class from the respective tubes before said last mentioned carriers reach said repositories, so that the carriers of the remaining class will be disposed in uninterrupted sequence in said repositories and normally moving means, common to substantially all of said tubes, for displacing the so removed carriers from each of said tubes, laterally with respect to the corresponding tube and substantially in the order received therefrom.

5. In pneumatic despatch tube apparatus, the combination of two distinct classes of carriers with a plurality of pneumatic tubes for conveying said carriers, carriers of said classes being normally indiscriminately intermixed when in course of transit through said tubes, two stations, one for carriers of one class and the other for carriers of the other class, and a plurality of co-acting means, one of which is common to substantially all of said tubes, for selectively collecting from said tubes the carriers other than those destined for one of said stations and delivering these segregated carriers consecutively at the other of said stations.

[Claims 6 and 7 not printed in the Gazette.]

1,108,294. MACHINE FOR FOLDING NOODLES. ANTON WILD, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich., a Firm. Filed Apr. 15, 1913. Serial No. 761,242. (Cl. 107—7.)



1. A machine for making folded noodles, comprising mechanism for cutting a sheet of dough into strips, and folding mechanism consisting of an endless series of sets of tables which receive the noodles from the cutting mechanism, each set of tables being provided with devices for operating the tables to fold the noodles over upon themselves and means for shifting the tables of each set in opposite directions.

2. A machine for making folded noodles, comprising mechanism for cutting a sheet of dough into strips, and folding mechanism consisting of a set of tables which receive the noodles from the cutting mechanism, mechanism for moving the tables toward and away from the cutting mechanism, devices for operating the tables to fold the noodles over upon themselves while they are being carried away from the cutting mechanism and means for shifting the tables transversely to different extents.

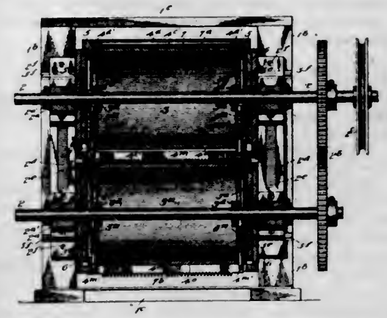
3. A machine for making folded noodles, comprising mechanism for cutting a sheet of dough into strips and folding mechanism comprising a set of horizontally arranged folding tables which receive the strips of dough from the cutting mechanism, mechanism for moving the tables successively away from the cutting mechanism, means for operating the two end tables in the set to give the first fold to the noodles, means for operating another table in the set to give the final fold to the noodles, and mechanism for shifting the tables laterally before the noodles are folded.

4. The combination with noodle-cutting mechanism, of a horizontally arranged set of folding tables, mechanism for moving them successively past the cutting mechanism, means for shifting the tables laterally to cause the noodles to assume a position diagonal to the line of movement of the tables, and devices for operating the tables to fold the noodles over upon themselves as they move away from the cutting mechanism.

5. Noodle-folding mechanism comprising conveyer chains, a set of folding tables carried thereby, means for shifting the tables laterally and mechanism for operating the tables to fold the noodles after they have been shifted.

[Claims 6 to 13 not printed in the Gazette.]

1,108,295. WEB-FOLDING APPARATUS. JOSEPH E. WILDMAN, Landover, Md., assignor, by mesne assignments, to The McCaskey Register Company (incorporated in 1914), Alliance, Ohio, a Corporation of Ohio. Filed Oct. 24, 1911. Serial No. 656,446. (Cl. 101—43.)



1. In a paper folding apparatus, the combination with two rollers arranged to receive a web of paper between them, of sets of devices carried by said rollers for folding the web of paper in opposite directions, each set of devices including a pair of reciprocating roller paper gripping members, a movable inserter, means for controlling the opening and closing of the paper gripping members, and means for controlling the movements of the inserter to insert the paper web between the paper gripping members when the latter are opened.

2. In a paper folding apparatus, the combination with two rollers arranged to receive a web of paper between them, of sets of devices carried by said rollers for folding the web of paper in opposite directions, each set of devices including a pair of reciprocating roller paper gripping members, a movable inserter, means arranged at one side of one roller for controlling the opening and closing of said paper gripping members, and means arranged at one side of the other roller for controlling the movements of the inserter to insert the paper web between the paper gripping members when the latter are opened.

3. In a paper folding apparatus, the combination with two rollers arranged to receive a web of paper between them, of sets of devices carried by said rollers for folding the web of paper in opposite directions, each set of devices including a pair of reciprocating roller paper gripping members, a movable inserter, a cam arranged at one side of one roller for controlling the movements of the paper gripping members, and a cam arranged at one side of the other roller for controlling the movements of the inserter to insert the paper web between the paper gripping members when the latter are opened, the last mentioned cam being provided with a shoulder to permit the receding of the inserter after the closing of the gripping members.

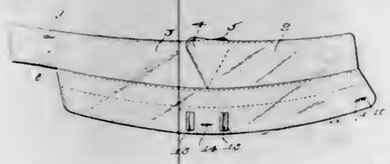
4. In a paper folding apparatus, the combination with two rollers arranged to receive between them a web of paper, of a pair of stationary cams arranged at one side of each roller, sets of devices carried by said rollers for folding the web of paper in opposite directions along transverse lines, each set of devices comprising an inserter carried by one roller and extending laterally at one end and arranged to ride on one of said stationary cams, a pair of paper gripping members carried by the other roller for gripping and creasing the web of paper, said members being extended laterally beyond one end of the adjacent roller, and a device interposed between the extended ends

of the gripping members and the other of said stationary cams and operated by the latter for controlling the movement of said gripping members.

5. In a paper folding apparatus, the combination with two rollers arranged to receive between them a web of paper, of a stationary cam arranged at one side of each roller, sets of devices carried by said rollers for folding the web of paper in opposite directions along transverse lines, each set of devices comprising an inserter carried by one roller, a pair of paper gripping members carried by the other roller and arranged to move simultaneously toward and from each other, for gripping and creasing the web of paper, said members being extended laterally beyond one end of the adjacent roller, and a slidable device interposed between the extended ends of the gripping members and the stationary cam and operated by the latter for controlling the movement of said gripping members.

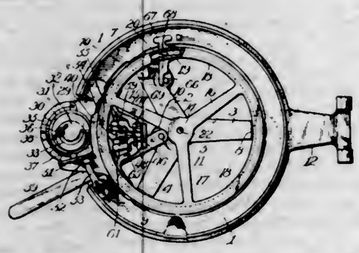
[Claims 6 to 19 not printed in the Gazette.]

1,108,296. COLLAR. ARTHUR E. WILMOT, Seattle, Wash. Filed Apr. 12, 1913. Serial No. 760,758. (Cl. 2—67.)



A collar comprising a neck band, a plurality of outer flaps connected thereto and provided with substantially V-shape projecting ends, the end of one flap adapted to overlap the end of the opposite flap for facilitating the close fitting of the edges of said flaps when said flaps are folded upon said neck band, said neck band having its ends extending at an angle to the lower edge thereof, one of said flaps provided with a projecting tongue adapted to fit under the junction of the neck band and the opposite flap, said tongue and neck band provided with apertures formed therein for allowing a button to pass therethrough, said flap adapted to hold the respective ends of said neck band in contacting relation throughout approximately the entire width of said neck band for presenting a smooth flush surface throughout the entire inner face of the rear of the collar.

1,108,297. COMPUTING CHEESE-CUTTER. JOHN WINKELMEYER, Anderson, Ind., assignor to Specialty Manufacturing Company, Greenfield, Ind., a Corporation of Indiana. Filed Sept. 14, 1912. Serial No. 720,382. (Cl. 31—68.)



1. A cheese cutter including a frame, a table rotatable on the frame, a guided clutch carrier having a shoulder thereon, a stop fixed on the frame to be engaged by the shoulder, and two reversely acting clutch devices adapted for engaging the table mounted on the carrier.

2. A cheese cutter including a rotatable table a guided clutch carrier, and an actuator clutch and also an arrester clutch mounted on the carrier and simultaneously acting automatically, the actuator engaging the table for rotating it, and the arrester engaging the table for stopping its movement on stopping of the actuator.

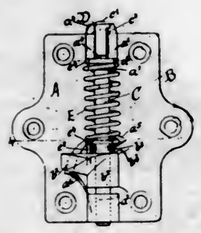
3. A cheese cutter including a frame, a table rotatable on the frame, an adjustable stop and also a fixed stop on the frame, a clutch carrier suitably guided and movable alternately to the stops, and devices for actuating and also stopping the table movably mounted on the carrier.

4. A cheese cutter including a rotatable table, a clutch carrier movably guided, and two spring-pressed clutch devices movably mounted on the carrier for engaging and applying force to the table in opposite directions for enabling the carrier to rotate and subsequently also stop the table automatically.

5. A cheese cutter including a frame, a table rotatable on the frame, a clutch carrier guided to move adjacent to the table and provided with clutching means for moving the table and also clutch means for arresting momentum of the table, and a stop mounted on the frame in the path of movement of the clutch carrier.

[Claims 6 to 15 not printed in the Gazette.]

1,108,298. HINGE. RUDOLPH G. WINTER, Milwaukee, Wis. Filed Mar. 9, 1907. Serial No 361,502. (Cl 16—25.)



1. In a gravity-hinge the combination with a pair of hinge-leaves having interacting cam-lugs which coact to cause a closing-movement of the door by gravity, a spring acting between the two hinge-leaves which is distorted by the opening thereof beyond a certain minimum angle of opening of said leaves; the ends of said spring engaging both hinge-leaves beyond said minimum angle and not engaging both hinge-leaves within said minimum angle; whereby said spring acts to assist the action of gravity in closing the door by any angle of opening greater than said minimum angle, said spring ceasing to act within said angle.

2. In a gravity hinge, in combination with a pair of hinge-leaves having interacting cam-lugs which coact to cause a closing movement of the door by gravity, a spring acting by joint torsion and compression to assist the action of gravity in closing the door through a limited angle of opening thereof.

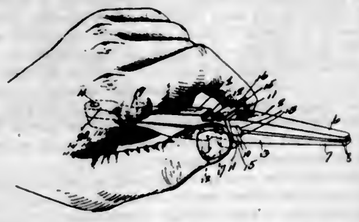
3. The combination with a gravity hinge comprising a pair of hinge-leaves pivoted together, a pintle connecting and forming the pivot for said leaves, and a pair of interacting cam-lugs on the respective leaves acting by gravity to close the door, of a coiled torsion-spring surrounding said pintle and having one end abutting against a fixed part of one of said leaves, and the other free when the door is closed but arranged to abut against a fixed part of the other leaf at a predetermined point in the opening movement of the door.

4. The combination with a gravity hinge comprising a pair of hinge-leaves, one having a pair of pintle-lugs at its opposite ends and the other having an intermediate pintle-lug, and a pintle pivotally connecting said lugs, said intermediate lug being movable longitudinally on said pintle, of a coiled spring surrounding said pintle between said upper and said intermediate lug and having one end fixed to the former, the other end of said spring having an axially bent end adapted to lie in the path of a projecting portion of said intermediate lug, and to come into contact with said projection at a predetermined point in the opening movement of the door, whereby the further opening of the door tends to twist and compress said spring while the reaction thereof assists the action of gravity in the initial closing of the door.

5. The combination with a gravity hinge comprising a pair of hinge-leaves, one having a pair of pintle-lugs at its opposite ends and the other having an intermediate pintle-lug, and a pintle pivotally connecting said lugs, said intermediate lug being movable longitudinally on said pintle, of a coiled spring surrounding said pintle between said upper and said intermediate lug and having one end fixed to the former, the other end of said spring in its normal length being separated by a certain distance from the upper face of said intermediate pintle-lug corresponding to the rise of said pintle-lug in opening said swinging-leaf through a given angle of movement; and said end of said spring carrying an axially bent extension which at the same point in angular opening of the hinge engages a radially projecting part of said intermediate pintle-lug and is twisted thereby whereby the action tends to assist gravity action to close the door upon any further opening thereof.

[Claims 6 to 11 not printed in the Gazette.]

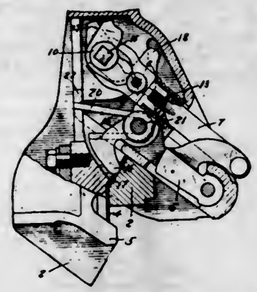
1,108,299. JEWELER'S TONGS. GEORGE E. WISMAN, Franklinton, N. C. Filed Apr. 24, 1914. Serial No. 834,191. (Cl. 81—14.)



A pair of jeweler's tongs comprising a pair of blades riveted together at one end of said tongs, and terminating in clamping jaws at the opposite end of the tongs, each blade substantially midway of its length having diametrically opposite faces parallel to each other, but extending at angles to the opposite faces of the body of said blade, the outer faces of the parallel faces of said blade terminating in shoulders toward the pivot of said blades, the adjacent faces of said parallel faces of the blades terminating in shoulders toward the free ends of said blades, said blades having clamping surfaces extending from the adjacent shoulders entirely to the free ends of said blades, the inner shoulders being diagonally opposite the outer shoulders, a strap surrounding said blades engaging the outer faces and designed to be limited in its movement in one direction by the outer shoulders, a cylindrical pin carried by said strap extending transversely thereof and transversely disposed between the adjacent faces and adapted to contact with the inner adjacent shoulders to limit the strap in its movement in the opposite direction, said strap and pin constituting means to hold the jaws in substantially adjusted rigid positions between the extreme open and closed positions of said jaws, and interengaging elements adjacent the rivet of said blades for holding the blades diametrically opposite and in registration with one another.

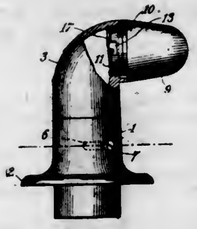
1,108,300. AUTOMATIC CAR AND PIPE COUPLING. HARRY F. WOERNLEY, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1912. Serial No. 671,254. (Cl. 213—17.)

1. An automatic car coupling comprising a member having a laterally projecting hooked portion adapted to engage a similar portion of a counterpart coupling, a locking lever for clamping said members together laterally, a spring tending to move said lever to the locking position, a cam for shifting said locking lever to and holding same in its unlocked position to permit uncoupling, and a rocker arm in engagement with said cam and adapted to move upon withdrawal of the counterpart coupling from the coupled position and thereby trip said cam out of the unlocked position to permit said spring to shift the locking lever to the locking position.



2. An automatic car coupling comprising a member having a laterally projecting hooked portion adapted to engage a similar portion of a counterpart coupling and provided with an inclined face adapted to engage a similar face on the counterpart coupling to thereby cause a lateral and longitudinal movement of the coupling members in the act of uncoupling, a locking device for clamping the members together laterally, a cam for shifting the locking device to and holding the same in its unlocked position to permit uncoupling, and a rocker arm for tripping said cam from its unlocked position to permit the locking device to return to the locking position, said rocker arm being operated by the lateral movement of the counterpart coupling in the act of uncoupling.

1,108,301. TALKING-MACHINE. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Nov. 30, 1912. Serial No. 734,236. (Cl. 181—3.)



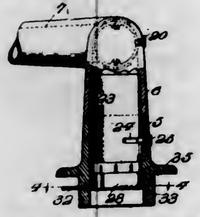
1. In a tone-arm for talking machines, a vertical member having a horizontally extending elbow, a horizontal member having a horizontally extending elbow, a bayonet-joint connection between said horizontally extending members, and a spring mounted on one of said members and reacting against the other, the tendency of said spring being to force said members apart.

2. In a tone-arm for talking machines, the combination of a vertical member having a horizontally extending elbow and a horizontal member having a corresponding horizontally extending elbow, one of said elbow members having interiorly formed bayonet-joint elements and the other elbow member having corresponding bayonet-joint members on the reduced end thereof, and a spring mounted on said reduced end and bearing against the other member.

3. In a tone-arm for talking machines, the combination of a vertical member having a horizontally extending elbow and a horizontal member having a corresponding horizontally extending elbow, one of said elbow members

having interiorly formed bayonet-joint elements and the other elbow member having corresponding bayonet-joint members on the reduced end thereof, a spring mounted on said reduced end and bearing against the other member, and means for adjusting the tension of said spring.

1,108,302. TONE-ARM FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Aug. 30, 1913. Serial No. 787,461. (Cl. 181—3.)

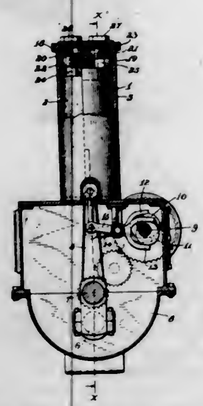


1. In combination, a tone-arm having a vertical section and a horizontal section, a hollow support on which the vertical section rests, a sleeve secured to said vertical section and projecting into said support, a split ring connected to said sleeve to participate in its rotary movements, and an annulus member secured to said split ring.

2. In combination, a tone-arm having a vertical section and a horizontal section, a hollow support on which the vertical section rests, a part moving with said vertical section and projecting into said support, means connected to the lower end of said projecting part to participate in its rotary movements, and a member secured to said means.

3. In combination, a tone-arm having a vertical section and a horizontal section, a hollow support on which the vertical section rests, a sleeve secured to said vertical section and projecting into said support, means connected to the lower end of said sleeve to participate in its rotary movements, and a member secured to said means.

1,108,303. EXPLOSIVE-ENGINE. WILLIAM WOODWARD, Chicago, Ill. Filed May 19, 1913. Serial No. 768,588. (Cl. 123—188.)



1. An explosive engine comprising a crank case; a main cylinder secured at one end to said crank case; two valve cylinders arranged at the other end of said main cylinder in open communication therewith, said valve cylinders being provided with ports; a reciprocating valve in each of said valve cylinders, each of said valves being an annular member of resilient material split longitudinally thereof; a pair of sleeves in said main cylinder; an operative connection between each of said valves and one of said sleeves; a piston within said sleeves; a crank shaft in said crank case; and means in said crank case operatively connected with said crank shaft and arranged to operate said sleeves and valves, substantially as described.

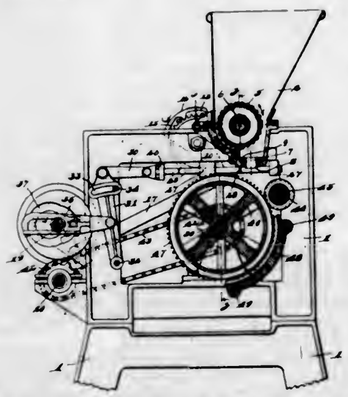
2. An explosive engine comprising a main cylinder, a piston and coöperating parts; valve chambers independent of said main cylinder, in open communication therewith and provided with suitable ports; valves in said valve chamber, each of said valves being an annular member of resilient material split longitudinally thereof; a crank shaft; and operative connections for said valves with said crank shaft passing through said main cylinder, substantially as described.

3. An explosive engine comprising a main cylinder, a piston and coöperating parts; independent reciprocating sleeve sections in said cylinder, each of said valves being an annular member of resilient material split longitudinally thereof; two valve chambers arranged at the head of said cylinder in open communication therewith, there being an exhaust port in one of said chambers and an admission port in the other; a valve in each of said chambers; a tongue on each of said sleeve sections engaging one of said valves; and means for reciprocating said sleeve sections to control said valves and ports, substantially as described.

4. An explosive engine comprising a main cylinder, a piston and coöperating parts; independently reciprocating sleeve sections in said cylinder surrounding said piston; two cylindrical valve chambers arranged at the head of said cylinder and in open communication therewith, there being an exhaust port in one of said chambers and an admission port in the other; a valve in each of said chambers; a tongue on each of said sleeve sections engaging one of said valves; and means for reciprocating said sleeve sections to control said valves and ports, substantially as described.

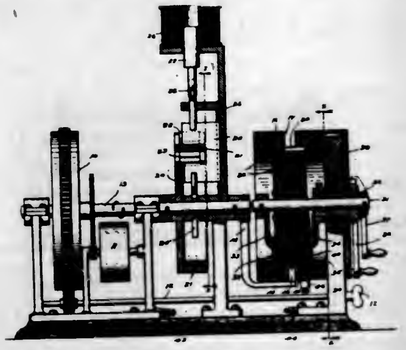
5. An explosive engine comprising a main cylinder, a piston and coöperating parts; independently reciprocating sleeve sections in said cylinder surrounding said piston; two cylindrical valve chambers arranged at the head of said cylinder and in open communication therewith, there being an exhaust port in one of said chambers and an admission port in the other; a spring ring valve in each of said chambers; a tongue on each of said sleeve sections engaging one of said valves; and means for reciprocating said sleeve sections to control said valves and ports, substantially as described.

1,108,304. CANDY-MACHINE. FRANK H. WOOLF, Chicago, Ill., assignor of one-half to Isaac E. Block, Chicago, Ill. Filed Oct. 28, 1911. Serial No. 657,333. (Cl. 107—13.)



A machine of the kind described comprising a frame; a candy lump cutting means in said frame; a shaft rotatively mounted in said frame; a sleeve secured on said shaft; a plurality of grooved candy forming wheels secured independently on said sleeve; a second set of grooved candy forming wheels formed integrally and journaled in said frame, said first set and second set of grooved wheels coacting to catch material drooped from said candy lump cutting means and disposed lower than the latter in said frame; and a grooved candy forming sector secured concentric with each of said first set of grooved wheels and disposed under said second set of grooved wheels, substantially as described.

1,108,305. TELEPHONE SIGNALING APPARATUS. DUDLEY D. WRIGHT, San Francisco, Cal. Filed Nov. 27, 1912. Serial No. 733,825. (Cl. 179—89.)



1. An automatic telephone signaling apparatus for producing a code signal, comprising a series of contacts, a contact finger movable over said contacts in cyclic succession, a spring motor for producing such movement, means for varying the effective arrangement of said contacts, and means controlled by an incoming calling current to the associated telephone for causing the movement of said contact finger over said contacts by said spring motor and for necessarily stopping said movement at the end of a complete cycle until another incoming calling current separate from the first shall be supplied subsequent to the completion of such cycle.

2. An automatic telephone signaling apparatus for producing a code signal, comprising a series of contacts, a contact finger movable over said contacts in cyclic succession, means for varying the effective arrangement of said contacts, and means controlled by an incoming calling current to the associated telephone for causing the movement of said contact finger over said contacts for a complete cycle and for necessarily stopping such movement at the end of such cycle until another incoming calling current separate from the first shall be supplied subsequent to the completion of such cycle.

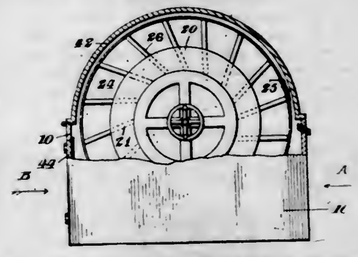
3. An automatic telephone signaling apparatus for producing a code signal, comprising a series of contacts, a contact finger movable over said contacts in cyclic succession, a spring motor for producing such movement, and means controlled by an incoming calling current to the associated telephone for causing the movement of said contact finger over said contacts by said spring motor and for necessarily stopping said movement at the end of a complete cycle until another incoming calling current separate from the first shall be supplied subsequent to the completion of such cycle.

4. An automatic telephone signaling apparatus for producing a code signal, comprising a series of contacts, a contact finger movable over said contacts in cyclic succession, and means controlled by an incoming calling current to the associated telephone for causing the movement of said contact finger and for necessarily stopping said movement at the end of a complete cycle until another incoming calling current separate from the first shall be supplied subsequent to the completion of such cycle.

5. An automatic telephone signaling apparatus for producing a code signal, comprising a device for automatically making and breaking a circuit in a plurality of time-separated groups of makes and breaks, means for setting such device to vary the number of makes and breaks produced in the several groups in an operation, and means controlled by an incoming calling current to the associated telephone for starting the operation of said circuit making and breaking means and for causing such operation necessarily to stop upon the completion of the last of the groups of makes and breaks until another incoming calling current separate from the first shall be supplied subsequent to such completion.

[Claims 6 to 37 not printed in the Gazette.]

1,108,306. FILM-DRIER. CHARLES MACKENZIE YOUNG, Ottawa, Ontario, Canada, assignor of one-third to Thomas Reginald Arkell and one-third to Claude Feild, Ottawa, Ontario, Canada. Filed Aug. 1, 1913. Serial No. 782,494. (Cl. 34—28.)



1. A photographic drying apparatus comprising a casing, a series of rotatably mounted frames or racks in said casing and means for heating said frames or racks.

2. A photographic drying apparatus comprising a casing, a rotatably mounted drum in said casing, a series of frames or racks mounted on said drum in said casing, and means for heating said drum.

3. A photographic drying apparatus comprising a casing, a rotatably mounted drum in said casing, a series of frames or racks mounted on said drum in said casing, means for heating said drum, means of ventilating said casing and drum, and means for regulating said ventilation.

4. A photographic drying apparatus comprising a casing, a rotatably mounted drum in said casing, a series of frames or racks mounted on said drum in said casing, means for heating said drum, means of ventilating said casing and drum, and means for regulating said ventilation, said means comprising adjustable doors in said casing.

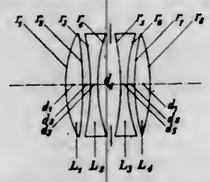
5. A photographic drying apparatus, comprising a casing, a rotatably mounted drum in said casing, a series of frames or racks mounted on said drum in said casing, means for heating said drum, means of ventilating said casing and drum, and means for regulating said ventilation, and means for rotating said drum in said casing.

[Claims 6 to 14 not printed in the Gazette.]

1,108,307. SPHERICALLY, CHROMATICALLY, ASTIGMATICALLY, AND COMATICALLY CORRECTED DOUBLE OBJECTIVE. WALTHER ZSCHOKKE, Steglitz, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Berlin, Germany. Filed Jan. 17, 1913. Serial No. 742,523. (Cl. 88—57.)

1. A spherically, chromatically, astigmatically and comatically corrected double objective the members of which comprising each a positive lens of highly refractive barytcrown and a negative lens of less refractive power each of the two negative lenses separated by an air-space of the shape of a positive meniscus from the positive lens of its

member and provided with two surfaces of different curvatures, the more strongly curved surface of the negative lens of the front member, and the less strongly curved surface of the negative lens of the rear member being directed toward each other.



2. A spherically, chromatically, astigmatically and comatically corrected double objective the members of which comprising each a positive lens of highly refractive baryt-crown and a negative lens of less refractive power each of the two negative lenses separated by an air-space of the shape of a positive meniscus from the positive lens of its member and provided with two surfaces of different curvatures, the more strongly curved surface of the negative lens of the front member and the less strongly curved surface of the negative lens of the rear member being directed toward each other, the two members having different focal lengths, the focal length of the front member being greater than that of the rear member, but not more than twice as great.

1,108,308. HINGE. EMIL ZUCKERMAN, Yonkers, N. Y. Filed June 17, 1913. Serial No. 774,135. (Cl. 16—105.)



1. A hinge, comprising attaching members arranged one for attachment to a fixed part and the other to a movable part of the device on which the hinge is to be used, a connection for connecting the said attaching members with each other, the said connection consisting of main links pivoted to the attaching members at the same sides thereof, and connecting links independent one of the other and each connecting the main link of one attaching member with the main link of the other attaching member.

2. A hinge, comprising attaching members, arranged one for attachment to a fixed part and the other to a movable part of the device on which the hinge is to be used, a connection for connecting the said attaching members with each other, the said connection consisting of main links pivoted to the attaching members at the same sides thereof, separate connecting links independent one of the other and each connecting the main link of one attaching member with the main link of the other attaching member, and guiding means connected with the attaching members and with the said connection.

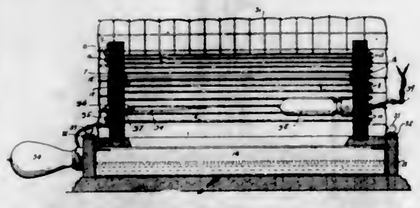
3. A hinge, comprising attaching members arranged one for attachment to a fixed part and the other to a movable part of the device on which the hinge is to be used, main links pivotally connected with the said attaching members at the same sides thereof, connecting links each separately connected to the main links and connecting the main links with each other, and guide links pivoted in the attaching members and pivotally connected with the said connecting links.

4. A hinge, comprising attaching members arranged one for attachment to a fixed part and the other to a movable part of the device on which the hinge is to be used, and a connection for connecting the said attaching members with each other, the said connection consisting of two links separately pivoted on one attaching member and two links separately pivoted on the other attaching member, a connecting link connecting the links of one attaching member, and a connecting link connecting the links of the other attaching member, the free portions of the said connecting links crossing each other, and the free end of each of the said connecting links connected with one of the links connected by the other connecting link.

5. A hinge, comprising attaching members, pivots held on the said attaching members, and extending in the same plane at the time the hinge is closed, links mounted to swing on the said pivots and connected with each other so that two of the links pivoted on one attaching member are connected to a link pivoted on the other attaching member, and a third link pivoted on the first-mentioned attaching member is connected to the other two links pivoted on the other atatching member.

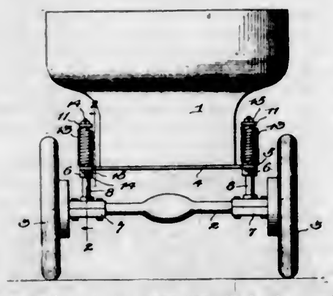
[Claims 6 to 12 not printed in the Gazette.]

1,108,309. INSECT-EXTERMINATOR. ERNEST A. ALLEN and FRANK A. SPEENBURG, Denver, Colo. Filed Aug. 4, 1911. Serial No. 642,421. (Cl. 43—34.)



In an insect exterminator the combination with a source of electrical energy, of a plurality of bars connected with the said source, and forming a part of a circuit, supports upon which the said bars are mounted, said supports being formed of insulating material and the bars being insulated from each other, the front portion of one of the supports having a pair of separated sector-shaped contacts mounted thereon, over which the forward extremities of the bars alternately overlap, the circuit being adapted to be closed through the body of an insect when coming into contact with any two adjacent bars, and a removable drawer arranged beneath said bars into which the insects are adapted to drop after having been electrocuted for the purpose set forth.

1,108,310. AUTOMOBILE-SPRING. THADDEUS D. ALLEN, Youngstown, Ohio. Filed Apr. 13, 1914. Serial No. 831,503. (Cl. 21—50.)



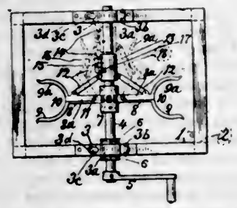
1. In a device of the class described, the combination with a body and an axle therebelow; of a transverse bar secured to said body and having longitudinally extending strips at the ends thereof, vertically extending arms carried on said axle adjacent the ends thereof and guided loosely through said strips, additional strips carried on the upper ends of said arms and coil springs secured between said strips.

2. In a device of the class described, the combination with the body of a vehicle and an axle; of a transverse bar secured to the under face of said body and projecting beyond the sides thereof, the ends of said bar terminating in longitudinal strips, vertically extending bearings formed centrally of said strips, arms removably secured to said axle adjacent the ends thereof and slidably disposed through the aforesaid bearings, additional strips carried on the upper ends of said arms and coil springs secured between said strips on opposite sides of said arms and bearings.

3. In a device of the class described, the combination with a vehicle body of an axle therefor; of a transverse bar secured to the body and projecting beyond the sides thereof, the ends of said bars terminating in longitudinal strips, vertically disposed bearings formed centrally of said strips and projecting above and below the same, the upper portion projecting to a greater degree than the lower portion thereof, vertically extending arms removably secured to said axle adjacent the ends thereof and guided through said bearings, additional strips removably secured to the upper ends of said arms in alinement with the aforesaid strips, and coil springs removably secured between said strips on opposite sides of said bearings and arms.

4. In a device of the class described, the combination with a body and an axle therefor; of a transverse bar secured to the under face of said body and projecting beyond the sides thereof, the ends of said bar terminating in longitudinal strips, vertically extended bearings formed centrally of said strips and projecting above and below the same, the upper projecting portion extending to a greater degree than the lower projecting portion thereof, vertically extending bars removably secured to said axle adjacent the ends thereof and loosely disposed through said bearings, an additional strip removably secured to the upper end of each arm in alinement with the strip therebelow, coil springs disposed between said strips on opposite sides of said bearings, the end coils of said springs having the ends thereof bent and disposed loosely through said strips, the last mentioned portions of said coils being threaded, and nuts engaged with the threaded portions of said springs whereby to secure the latter in position between said strips.

1,108,311. FENCE-WIRE REEL. CARL ANDERSON, Westbrook, Minn. Filed Dec. 15, 1913. Serial No. 806,715. (Cl. 242—111.)

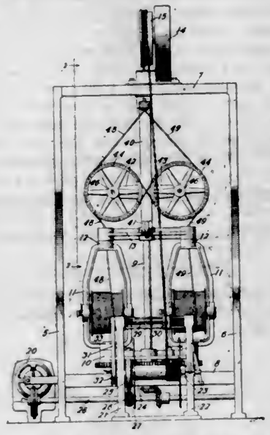


In a device of the class described, the combination with a shaft and means for rotating the same, of a reel having radial arms with crutch-shaped outer ends forming the wire-holding parts of the reel; each of said radial arms composed of a rigid primary arm with half of the crutch on it and a secondary arm pivoted near the hub of the reel and having the other half of the crutch fixed on it, a sleeve slidable on the shaft and having a spring-pressed catch adapted to engage a cavity in the shaft when the primary and the secondary arms are in parallel position, links connecting each secondary arm with the sleeve so as to raise said arms and brace them in normal position, said shaft having a cavity in which the catch engages when the secondary arms are in normal position.

1,108,312. TWISTING-MACHINE. GUSTAVUS A. ANDEREGG, Oak Park, Ill., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Sept. 18, 1913. Serial No. 790,427. (Cl. 28—21.)

1. In a twisting machine, a plurality of independently revolvable means each traversed and driven by each of the conductors to be twisted for equalizing the speed thereof.

2. In a twisting machine, a revolving frame, a plurality of spool supports carried thereby, means for drawing off the twisted conductors, and independently revoluble wheels around each of a plurality of which each conductor to be twisted passes.

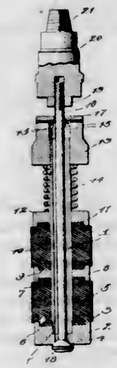


3. In a machine of the character described, mechanism for twisting a plurality of conductors, means for drawing the conductors through said mechanism, and a plurality of drums around the periphery of each of which each of the conductors is passed for equalizing the speed thereof through said mechanism.

4. In a machine of the character described, a revolving frame for twisting a plurality of conductors, means for drawing the conductors through said frame, and a plurality of flat rimmed wheels around the periphery of each of which each of the conductors is passed for equalizing the speed thereof.

5. In a machine of the character described, a revolving frame for twisting a plurality of conductors, means for drawing the conductors through said frame, and means for equalizing the speed of the conductors comprising an auxiliary frame mounted upon said revolving frame and two wheels mounted in said auxiliary frame each of which is traversed by each of the conductors.

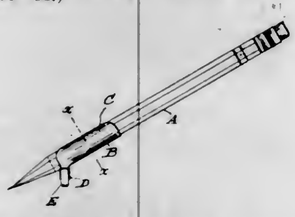
1,108,313. OIL-WELL SWAB. HARRY M. ANDERSON, Lancaster, Ohio. Filed Apr. 14, 1913. Serial No. 761,026. (Cl. 166—19.)



A device of the class described comprising a tubular core of elongated design having the opposite ends thereof externally threaded, a disk provided with a threaded bore

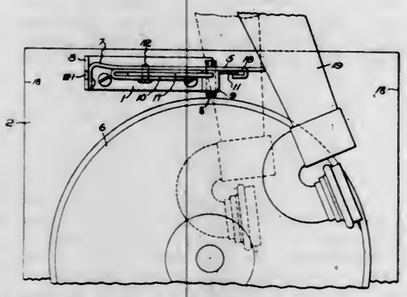
engaged with the lower threaded end of the core, said bore of the disk being offset to provide a shoulder for engagement with the peripheral edge of the core to limit the movement of the disk thereon, a series of packing rings and spacing disks loosely applied on the core and supported on the first mentioned disk, a hollow head engaged with the upper threaded end of said core, the upper portion of said head being reduced and provided with a plurality of radial channels, the outer ends thereof terminating in the outer wall of the head and said head also having the upper end thereof provided with a reduced central aperture of smaller diameter than the diameter of the bore of said core, a coil spring encircling the core between the series of packing rings and disks and the hollow head, a stem guided through the core and the aperture in said hollow head, the upper end of said stem being threaded and the lower end thereof provided with a valve head, a coupling head engaged with the upper threaded end of said stem, and means to lock said coupling head in various adjusted positions on the threaded end of the stem.

1,108,314. PENCIL-STAMP. MARGARET M. ANDERSON, Detroit, Mich. Filed Mar. 28, 1913. Serial No. 757,471. (Cl. 101—58.)



An attachment for a pen or pencil, comprising a tubular sleeve having a longitudinal slot extending uninterruptedly from end to end, and a U-shaped stamp-holding section extending laterally of and beneath the sleeve, said sleeve being provided with a downwardly-extending attaching section connected to the top of the stamp-holding section intermediate the ends of the latter.

1,108,315. AUTOMATIC STOP FOR TALKING-MACHINES. QUINCY A. ATWOOD and LILLA D. ATWOOD, Newton, Mass. Filed Sept. 9, 1912. Serial No. 719,310. (Cl. 74—46.)



1. A device of the class described comprising a support, a shoe carrying member movably secured thereto adapted to co-act with a rotatable member, a latch on said member and pivoted thereto, said support having a catch for the latch, a rigid latch releasing member on said latch and adapted for frictional adjustment thereon to engage a movable machine member at any predetermined time during the operation thereof.

2. A device of the class described comprising a support, a shoe carrying member movably secured thereto adapted to co-act with a rotatable member, a latch on said member and pivoted thereto, said latch member folded on itself, a rigid latch releasing lever frictionally engaged by the folds of said latch, said support having a catch for the latch, said releasing lever adapted to be positioned to engage a movable machine member at any predetermined time during the operation thereof.

3. A device of the class described comprising a support, a shoe carrying member movably secured thereto adapted to co-act with a rotatable member and provided with a rigid-frictional-lever engaging member, a latch on said lever engaging member and pivotally secured to said member and adjacent the pivoted end of said lever, said shoe carrying support having a catch for the latch, said lever adapted to be adjusted in the same plane to render inoperative said shoe carrying member and also to engage a movable machine member at any predetermined time during the operation thereof.

1,108,316. MEANS FOR ATTACHING BOLSTER-SPRINGS. THADDEUS R. BAKER, Indianapolis, Ind. Filed Mar. 25, 1914. Serial No. 827,152. (Cl. 21—102.)



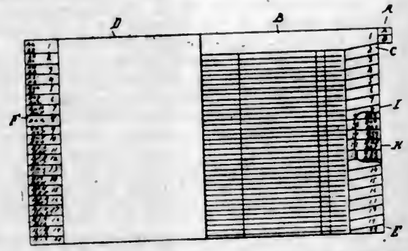
1. In a device for the purposes specified, a base-plate, one or more coiled springs mounted on said plate, each spring having an extension of its lower end made in the direction of the adjacent standard and bent near the standard to form a cross-bar transverse to the bolster, said extension passing thence under the bottom convolution of the spring and supporting the latter on the opposite side of the bolster from the starting place of said spring extension and thence continued and bent to form a second cross-bar resting upon the bolster upon the opposite side of the spring from said first cross-bar, and loops formed out of the material of the base-plate engaging said spring base-extensions whereby the latter are secured to the base-plate.

2. In a device for the purposes specified, a base-plate, one or more coiled springs mounted on said plate, each spring having an extension of its lower end made in the direction of the adjacent standard and bent near the standard to form a cross-bar transverse to the bolster, said extension passing thence under the bottom convolution of the spring and supporting the latter on the opposite side of the bolster from the starting place of said spring extension and thence continued and bent to form a second cross-bar resting upon the bolster upon the opposite side of the spring from said first cross-bar, loops formed out of the material of the base-plate engaging the cross-bars of said spring base-extensions whereby the latter are secured to the base-plate, and a bearing plate resting upon said spring or springs.

3. The combination with a bolster having a standard near each of its ends, of a base-plate on said bolster having end notches to receive the standards, one or more coiled springs mounted on said base-plate, each spring having an extension of its lower end made in the direction of the adjacent standard and bent near the standard to form a cross-bar transverse to the bolster, said extension passing thence under the bottom convolution of the spring and supporting the latter on the opposite side of the bolster from the starting place of said spring extension and thence continued and bent to form a second cross-bar resting upon the bolster upon the opposite side of the spring from said first cross-bar, and loops formed out of the material of the base-plate and engaging each of said two opposite the cross-bars of base-extensions of each spring.

4. The combination with a bolster having a pair of standards, one at each end, of a base-plate on said bolster having end notches to receive the standards, a pair of coiled springs mounted on said base-plate, each spring having an extension of its lower end made in the direction of the adjacent standard and bent near the standard to form a cross-bar transverse to the bolster, said extension passing thence under the bottom convolution of the spring and supporting the latter on the opposite side of the bolster from the starting place of said spring extension and thence continued and bent to form a second cross-bar resting upon the bolster upon the opposite side of the spring from said first cross-bar, loops formed out of the material of the base-plate engaging the cross-bars of each base-extension, and a bearing plate having its ends notched to receive the bolster standards, said plate resting upon said coiled spring.

1,108,317. INDEX-BOOK. JAMES BARKER, Detroit, Mich. Filed Sept. 17, 1912. Serial No. 720,885. (Cl. 11—7.)



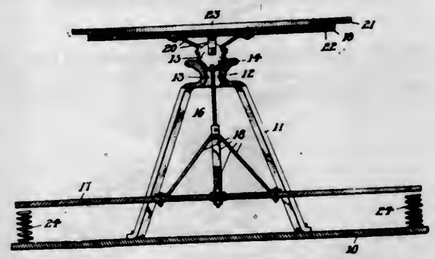
1. A book including a section composed of a plurality of leaves divided into subdivisions and having tabs on the same edges thereof indicating the subdivisions, said tabs being arranged in stepped relation, indices on the tabs, each tab being provided with like indices upon both faces thereof, an index sheet positioned at the end of the section, a column of indices designating the subdivisions arranged along the edge of the sheet subjacent to the tabbed edges of the leaves, sub-indices in said column relating to the indices on said tabs, said index sheet having the marginal edge thereof containing the vertical column positioned substantially in the plane of the outer edges of the tabs, and a second index sheet arranged at the beginning of the section and similar to the first-mentioned index sheet.

2. A book comprising a plurality of leaves, master tabs dividing said leaves into sections, the leaves of each section being arranged in subdivisions and having tabs on the edges thereof opposite the bound edge indicating the subdivisions, said tabs being arranged in stepped relation, indices on the tabs, each of the latter having like indices upon opposite faces thereof, an index sheet at the end of each section, a secondary index designating the subdivisions arranged in a vertical column along the edge of the sheet opposite the bound edge, sub-indices in said column relating to the indices on said tabs and positioned subjacent their respective secondary indices, said index sheet having the marginal edge thereof containing the vertical column positioned substantially in the plane of the outer edges of the tabs, and a second index sheet arranged at the beginning of each section and similar to the first-mentioned index sheet.

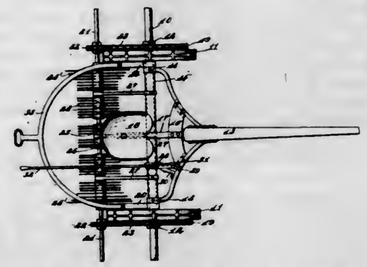
1,108,318. SHIP-TABLE. STEVEN BEKER, Caro, Mich. Filed Apr. 16, 1914. Serial No. 832,378. (Cl. 114—195.)

1. In combination with a deck, a neck having a central passage and rigidly secured to said deck, a ball freely mounted in the flaring upper end of said neck passage, a depending rod secured to said ball and extending through said passage, a platform secured horizontally to the lower end of said rod, a dish-shaped table top mounted upon said ball above said neck, and a revoluble dish-shaped cover mounted upon said table top.

2. A device of the class described comprising a deck member, legs rigidly mounted thereon, a neck upon the upper ends of said legs and having a passage therethrough with a flaring upper and lower end, a ball freely positioned in the upper flaring end of said neck, a depending rod secured to said ball and extending through said passage, a platform rigidly secured to the lower end of said rod above said deck and extending in opposite directions between separate ones of said legs, a plurality of cushioning springs secured to said deck beneath said platform, a dish-shaped table top mounted upon said ball above said neck, an annular row of anti-friction balls carried by the upper face of said table, a dish-shaped cover upon said table top rotatably mounted upon said balls.



1,108,319. CULTIVATOR. HARRY L. BELL, Norfolk, Va. Filed Feb. 12, 1914. Serial No. 818,342. (Cl. 97—25.)



1. In a cultivator, a frame, an axle on the frame, hangers on the axle, a shaft journaled in the free ends of the hangers, traction wheels mounted on the axle adapted for adjustment toward and from each other, driving means between the axle and the shaft and adapted for adjustment with the traction wheels, a transversely extensible rotary earth working implement mounted on the shaft, and adjusting means on the frame engaging the shaft whereby to raise and lower the same.

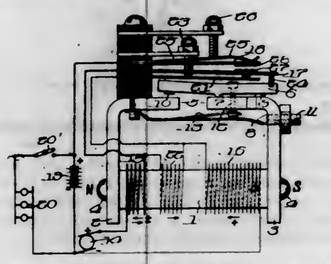
2. In a cultivator, a frame, an axle on the frame, a shaft on the frame, an earth working implement mounted on the shaft adapted to be transversely extended, traction wheels mounted on the axle, and driving means between the shaft and the axle for driving the shaft upon the rotation of said wheels, said wheels and said driving means being adjustable toward and from each other on the axle and the shaft whereby to accommodate the various adjustments of the earth working implement.

3. In a cultivator, a shaft, an earth working implement on said shaft, a frame, a plurality of hinged arms on the frame having bearings in their outer ends for the reception of said shaft, a handle connected to said arms for raising and lowering the same, traction wheels on the frame adapted for adjustment toward and from each other, and rotating means on the frame connected to said traction wheels and to said shaft whereby to rotate the latter upon the movement of the traction wheels, said rotating means being adjustable with said traction wheels and upon said shaft to accommodate the rotating means to the adjustment of the wheels and the width of said implement.

4. In a cultivator, a frame, an axle on the frame, a shaft mounted for adjustment in the frame, a laterally extensible earth working implement on the shaft, trac-

tion wheels on the axle, and driving connections between the traction wheels and the opposite ends of said shaft for turning the latter, said wheels and said driving means being laterally expansible whereby to accommodate the adjustments of said earth working implement.

1,108,320. ELECTRIC-CURRENT-CONTROLLING APPARATUS. ALBERT E. BERDON, Indianapolis, Ind. Filed May 10, 1913. Serial No. 766,874. (Cl. 171—313.)



1. An electric current controlling device and an electric circuit controlled thereby, which circuit has a current supplying generator, said device including an electromagnet having an energizing current winding receiving current from the controlled circuit, an energizing pressure winding subject to the pressure of such circuit, these two windings being cumulatively wound, and a third energizing winding of high resistance compared with the first energizing winding and differentially wound with respect to the aforesaid windings; and a switch having a contact actuated by the magnet and serially in the controlled circuit, a normal follow-up contact engaging the first contact and by which follow-up contact the second winding is included in shunt of the generator, and an alternate contact serially in the controlled circuit and engaged by the first contact before the first contact leaves its normal follow-up contact, the first two contacts having circuit association causing them, by their engagement, to shunt the third winding from the remaining windings and by their separation to bring the third winding in shunt of the generator by way of the second winding, while the latter two contacts, by their engagement, serve to establish the controlled circuit.

2. An electric current controlled thereby, which circuit has a current supplying generator, said device including an electro-magnet having an energizing current winding receiving current from the controlled circuit, an energizing pressure winding subject to the pressure of such circuit, these two windings being cumulatively wound, and a third energizing winding differentially wound with respect to the aforesaid windings; and a switch having a contact actuated by the magnet and serially in the controlled circuit, a normal follow-up contact engaging the first contact and by which follow-up contact the second winding is included in shunt of the generator, and an alternate contact serially in engaged by the first contact before the first contact leaves its normal follow-up contact, the first two contacts having circuit association causing them, by their engagement, to shunt the third winding from the remaining windings and by their separation to bring the third winding in shunt of the generator by way of the second winding, while the latter two contacts, by their engagement, serve to establish the controlled circuit.

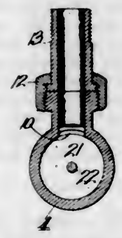
3. An electric current controlling device and an electric circuit controlled thereby, which circuit has a current supplying generator, said device including an electro-magnet having an energizing current winding receiving current from the controlled circuit, and an energizing pressure winding subject to the pressure of such circuit, these two windings being cumulatively wound; a resistance that is high compared with the first aforesaid winding; and a switch having a contact actuated by the magnet and serially in the controlled circuit, a normal follow-up contact engaging the first contact and by which follow-up contact the second winding is included in shunt of the generator, and an alternate contact serially in the controlled circuit and engaged by the first contact before the first contact leaves its normal follow-up contact, the first two contacts having circuit association causing them, by their engagement, to shunt the resistance from the windings and by their separation to bring the second winding in shunt of the generator by way of the resistance, while the latter two contacts, by their engagement, serve to establish the controlled circuit.

4. An electric current controlling device and an electric circuit controlled thereby, which circuit has a current supplying generator, said device including an electromagnet having an energizing current winding receiving current from the controlled circuit, an energizing pressure winding subject to the pressure of such circuit, these two windings being cumulatively wound, and a third energizing winding of high resistance compared with the first energizing winding and differentially wound with respect to the aforesaid windings; and a switch operable by the electro-magnet and serving, when unactuated by the magnet, to open the controlled circuit and exclude the third winding from circuit relation with the first two windings and when actuated by the magnet to close the controlled circuit and bring the third winding in shunt of the generator by the way of the second winding.

5. An electric current controlling device and an electric circuit controlled thereby, which circuit has a current supplying generator, said device including an electromagnet having an energizing current winding receiving current from the controlled circuit, an energizing pressure winding subject to the pressure of such circuit, these two windings being cumulatively wound, and a third energizing winding differentially wound with respect to the aforesaid windings; and a switch operable by the electro-magnet and serving, when actuated by the magnet, to open the controlled circuit and exclude the third winding from circuit relation with the first two windings and when actuated by the magnet to close the controlled circuit and bring the third winding in shunt of the generator by way of the second winding.

[Claims 6 to 14 not printed in the Gazette.]

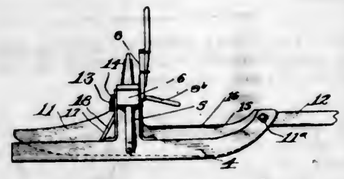
1,108,321. WATER AND GAS CONTROLLER FOR WATER-HEATERS. EDWARD T. BETKER, Kansas City, Mo., assignor to Imperial Heater Company, Kansas City, Mo., a Corporation of Missouri. Filed Apr. 22, 1911. Serial No. 622,804. (Cl. 126—351.)



In an automatic gas and water controller for water heaters, a water-supply casing having inlet and outlet openings located out of alinement and a reduced hollow extension at one end of the casing, said outlet opening being located nearer than the inlet opening to said extension, a piston operating within the casing and adapted to reciprocate across said outlet opening, said casing being provided with an interior water channel leading around said piston from the outlet opening to the extension to permit water to flow toward and from the extension during the movements of the piston, a sprug seated in said extension and adapted to react against said piston, a plug fitted in the other end of said cas-

ing, a gas-supply casing fitted on said plug and having gas inlet and outlet ports, a slide valve within said gas-supply casing for controlling said inlet port, a piston-rod operating through said plug and connecting said valve and piston, and a spring coiled about said rod between said plug and valve and coöperating with said first-named spring in maintaining the piston and valve normally in position to close said outlet opening and inlet port respectively.

1,108,322. BOB-SLED. CHARLES BOARD, Hailey, Idaho. Filed July 6, 1912. Serial No. 708,019. (Cl. 21—46.)



In combination with a pair of runners having a forward connecting brace, a brake comprising auxiliary runners, each of the auxiliary runners having its forward end pivotally connected to the connecting brace, and provided with a rearwardly disposed groove in the sides thereof, the grooves of each runner being connected by a groove in the upper and lower edges thereof, a brake band in the grooves of each runner, said bands being held in the respective grooves, so that a portion of the bands will extend beyond the tread of the runner to which it is applied.

1,108,323. HANGER FOR SCREEN-FRAMES OR THE LIKE. EDWARD F. BODLEY, Toledo, Ohio. Filed Jan. 9, 1914. Serial No. 811,162. (Cl. 16—48.)

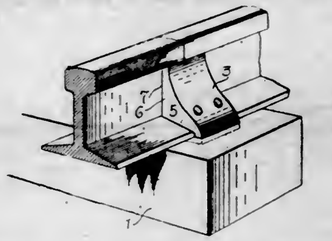


1. A hinge of the class described comprising two members, one having a vertically disposed slot with its upper end opening without the member and its lower end outwardly angled, and the other member having a pivot-stud adjustably carried thereby for removably fitting down into said slot.

2. A hinge of the class described comprising two members, which are slotted in intersecting planes, and a pivot-stud projecting from and adjustable within the slot of one member and adapted to removably fit into the slot of the other member.

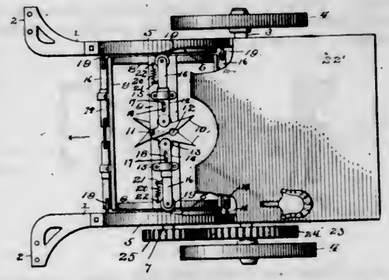
1,108,324. RAIL-JOINT. JOHN E. BOLAND, Arnold, Pa., assignor of one-half to John Erb, Arnold, Pa. Filed Oct. 15, 1913. Serial No. 795,335. (Cl. 239—6.)

The combination with the meeting ends of two rails, the web portion of one of said rails being provided with a short recess and the web portion of the other of said rails being provided with a long recess, a joint chair including a base, inclined portions formed on said base, side walls extending upwardly from the inclined portions, a web connecting the upper ends of said side walls and having its upper face flush with the upper edges of the side walls to provide an unbroken surface upon the upper face of the connection, said web forming long and short recesses adapted to coincide with the long and short recesses of the rail ends, whereby one of said rail ends may be moved



longitudinally within the joint chair to disengage the same therefrom.

1,108,325. STALK-PULLER. ROBERT W. BROOKS, Pollard, Ala. Filed Dec. 26, 1913. Serial No. 808,752. (Cl. 55—66.)



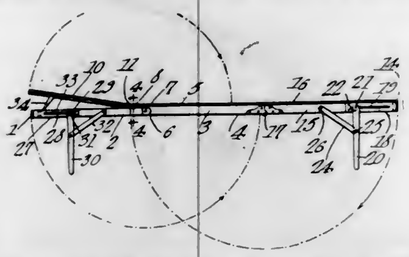
1. In a stalk puller, a supporting frame, a drum carried thereby, gripping jaws pivotally-connected with the drum, a sleeve pivotally-connected with each jaw, a spring drawn bar slidably-mounted in each sleeve and carrying at its outer end a roller, cams supported by the frame to be engaged by the roller, the opposed faces of the cams being provided with cut-away portions to permit release of the jaws, and cams depending from the under side of the frame and in the path of travel of the rollers to effect their closing.

2. In a stalk puller, a supporting frame, a drum carried thereby, a pair of outwardly converging jaws pivoted to the drum, a sleeve pivotally connected with each jaw, a spring drawn bar having a sliding connection with each sleeve, a roller carried by the outer end of each bar, cams supported by the frame, each provided with a cut-away portion serving to release the jaws, and cams depending from the under side of the frame and arranged in the path of travel of the rollers to close the jaws.

1,108,326. EMBALMING-BOARD. ELBRIDGE M. BROWN and HARRY E. BROWN, Cedar Falls, Iowa. Filed May 13, 1913. Serial No. 767,419. (Cl. 45—50.)

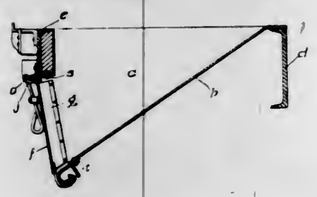
In a device of the class described, an intermediate frame comprising side walls and a top; a head frame including side walls pivoted to the side walls of the intermediate frame and lying between the side walls of the intermediate frame whereby the head frame may be folded within the contour of the intermediate frame, the intermediate frame being centrally open and unencumbered to receive the head frame; a foot frame comprising a top and side walls, the side walls of the foot frame being pivoted to the side walls of the intermediate frame and the foot frame being of the same length as the intermediate frame whereby the edges of the walls of the foot and the intermediate frames may be brought together to dispose the tops of the foot and intermediate frames upon opposite sides of the head frame thereby to define a compartment in which the head frame

is completely housed; a head board hinged to the intermediate frame and coöperating with the head frame and adapted to be folded over upon the top of the intermediate



frame and movable legs upon the head and foot frame only, and adapted to be folded, respectively, within the contour of the head and foot frames.

1,108,327. DUMP-CAR. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Aug. 30, 1912. Serial No. 717,927. (Cl. 105—186.)



1. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly, and the other to the door and turned upwardly, and each extending throughout the full length of the hinged edge of the door.

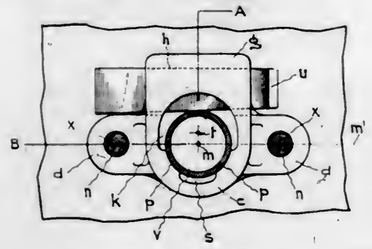
2. In a hopper for dump cars,—end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor, and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates bent to spiral form, one secured to the hopper floor and turned downwardly and the other to the door and turned upwardly, and each extending throughout the full length of the hinged edge of the door.

3. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and the other to the door and each extending throughout the full length of the hinged edge of the door and means preventing relative lateral displacement of the said plates.

4. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly and the other to the door and turned upwardly and each extending throughout the full length of the hinged edge of the door and a stop upon one of the plates for preventing relative lateral displacement thereof.

5. In a hopper for dump cars, end plates, hopper sills at the opposite sides of the top thereof, an inclined floor member; a door for closing the opening inclosed by the end plates, the floor and the last mentioned side member; and a hinge carried by and joining the door and the floor member, and consisting of a pair of plates having engaging bent edges, one secured to the hopper floor and turned downwardly and the other to the door and turned upwardly and each extending throughout the full length of the hinged edge of the door and an angle-iron upon one of the plates for preventing relative lateral displacement thereof.

1,108,328. TRAIN-PIPE ANCHOR. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed May 31, 1913. Serial No. 771,002. (Cl. 248—36.)



1. A train pipe anchor comprising a member having a train pipe opening therethrough, a vertical extension at the forward end of the member and having a horizontal key-way therethrough disposed at right angles to the opening, attachment means for the member and a tapered key of greater length than the key-way for the purpose of having its smaller end bent to lock such key against displacement in the key-way.

2. A train pipe anchor comprising a member having a train pipe opening therethrough, a vertical extension at the forward end of the member and having a horizontal key-way therethrough disposed at right angles to the opening, a pair of alined horizontal attachment lugs upon the rear end of the member and a tapered key of greater length than the key-way for the purpose of having its smaller end bent to lock such key against displacement in the key-way.

3. A train pipe anchor comprising a member having a train pipe-opening therethrough and a key-way at right angles to the opening such opening having a pair of spaced pipe rests in the same transverse plane as the key-way; and a key passed through the key-way and intersecting the opening through the anchor.

1,108,329. CONDENSATION PRODUCTS AND PROCESS OF TREATING THE SAME. MICHAEL J. CALLAHAN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1912. Serial No. 696,704. (Cl. 106—22.)

1. The process of preparing a homogeneous infusible resinous product from a fusible condensation product of phthalic anhydrid and polyhydric alcohol which consists in heating said product to a temperature of about 135° C. until complete polymerization or condensation has taken place.

2. The process of preparing a homogeneous infusible resinous product from a fusible condensation product of an organic compound containing alcoholic hydroxyl groups and phthalic anhydrid which consists in heating said product to a temperature high enough to cause reaction to take place but low enough to avoid bubbling or frothing and continuing the heating until complete polymerization or condensation has taken place, without bubbling or frothing with the formation of a dense material which does not melt without decomposition.

3. The process which consists in heating a fusible intermediate reaction product of glycerin and phthalic anhydric at a temperature of about 85 to 135° C. for several hours until said product is converted to an infusible, insoluble state.

4. The process which consists in heating a fusible acetone-soluble intermediate reaction product of glycerin and phthalic anhydrid at a temperature of about 85 to 135° C. at atmospheric pressure until said product has become substantially insoluble and infusible without decomposition.

5. A hard, infusible, insoluble condensation product of a polyhydric aliphatic alcohol and phthalic anhydrid having a dense, compact structure.

[Claims 6 to 10 not printed in the Gazette.]

1,108,330. RESINOUS CONDENSATION PRODUCTS. MICHAEL J. CALLAHAN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 8, 1913. Serial No. 747,114. (Cl. 106—22.)

1. A hard, tough, bubble free condensation product saponifiable by an alkali to form a phthalate and a polyhydric alcohol, being substantially chemically inert with respect to water.

2. A mechanically strong, machinable condensation product saponifiable by an alkali to form a phthalate and glycerol, said product being substantially inert with respect to cold water and being free from bubbles.

3. A tough, strong, homogeneous resinous material saponifiable with hot alkaline solution to regenerate glycerol and form a phthalate, substantially chemically inert with respect to water and both dilute acid and dilute alkali at ordinary room temperatures and completely insoluble in acetone.

4. A tough, hard, resinous material produced by the condensation of a polyhydric alcohol and phthalic anhydrid, substantially chemically inert with respect to cold water and completely insoluble in acetone, and having at ordinary temperatures an electrical breakdown resistance of about 370 volts per mil.

5. A tough, hard, machinable resin produced by heating phthalic anhydrid and polyhydric alcohol until condensation of said ingredients takes place and until substantially all distillable alcohol is eliminated, said resin being characterized by complete insolubility in acetone and solubility in glycerin.

[Claims 6 to 10 not printed in the Gazette.]

1,108,331. RESINOUS COMPOSITION. MICHAEL J. CALLAHAN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 8, 1913. Serial No. 747,115. (Cl. 106—22.)

1. The process of preventing the hardening of a fusible resin of a polyhydric alcohol and phthalic anhydrid which consists in maintaining dissolved therein a hydrocarbon of the aromatic series with condensed nuclei.

2. The process of maintaining a resinous compound saponifiable to yield polyhydric alcohol and a phthalate in a fluid state at an elevated temperature which consists in dissolving therein a hydrocarbon of the aromatic series with condensed nuclei and maintaining said hydrocarbon in solution by compensating pressure.

3. The process of preventing the conversion of a fusible, soluble resin of glycerol and phthalic anhydrid to the infusible, insoluble state at an elevated temperature which consists in maintaining naphthalene in contact therewith.

4. A composition of matter comprising a fusible resinous condensation product saponifiable by alkali to form

5. A composition of matter comprising naphthalene and carbon of the aromatic series dissolved therein.

a condensation product saponifiable by alkali to yield a phthalate and a polyhydric alcohol and a heavy hydroglycerol and a phthalate of the alkali.

[Claims 6 and 7 not printed in the Gazette.]

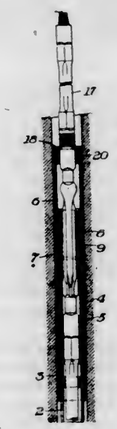
1,108,332. RESINOUS COMPOSITION AND PROCESS OF MAKING THE SAME. MICHAEL J. CALLAHAN Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 9, 1913. Serial No. 778,116. (Cl. 106—22.)

1. The herein described tough, flexible material, being a mixture of esters formed by the interaction of a polyhydric alcohol, a dibasic acid of the aliphatic series and a polybasic acid of the aromatic series, insoluble and infusible without decomposition, possessing high electrical insulating properties, and being saponifiable with dilute alkali to regenerate the polyhydric alcohol and form a corresponding alkali salt of the acids employed.

2. As a composition of matter, a tough, flexible resinous material, being a mixture of glyceryl esters formed by the interaction of glycerin, succinic acid and phthalic anhydrid, infusible without decomposition, insoluble in common organic solvents, being saponifiable with dilute alkali to regenerate glycerin and form the succinate and the phthalate of the alkali.

3. As a composition of matter, a tough, flexible resin, being a mixture of glyceryl esters formed by the interaction of about 184 parts of glycerin, about 141 parts of succinic acid and about 118 parts of phthalic anhydrid by weight, having high insulating properties infusible without decomposition, substantially insoluble in common solvents, being saponifiable with dilute alkali to regenerate glycerin and form the succinate and the phthalate of the alkali.

1,108,333. WELL-PACKER. CHARLES S. CAMERON, Pittsburgh, Pa. Filed Oct. 24, 1908. Serial No. 459,330. (Cl. 166—10.)

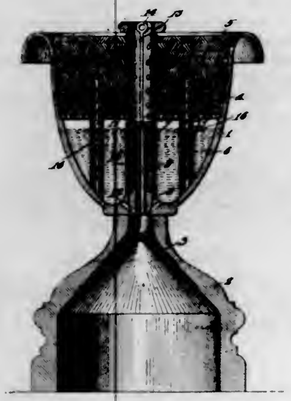


A well packer, comprising a casing extension member, a packing member seated around the same, a coupling member secured to the upper end of the casing and forming a seat for the lower end of the packing member, the lower end of the coupling member forming a driving surface, and a driving member telescoped onto the upper end portion of the extension member and having a driving surface at its upper end, the latter being screw-threaded, and there being a holding down connection between the driving member and the casing extension, said packer being reversible end for end to cause the driving member to become the coupling member, and vice-versa; substantially as described.

1,108,334. APPARATUS FOR AERATING AND IRRIGATING SOIL. LUCIAN W. CARR, Crawfordsville, Ind. Filed Oct. 20, 1913. Serial No. 796,311. (Cl. 137—66.)

1. In an apparatus of the class described, the combination of a liquid containing reservoir, a plate extending

thereacross and supported thereby, said plate adapted to support soil thereabove and allowing for the passage of moisture and air therethrough, an air and water inlet tube extending through the said plate and communicating with the reservoir, means positioned within said tube preventing the rise of liquid within the reservoir above a certain height, to thereby insure an air space between the upper level of the liquid and below the said plate, and moisture and air conducting tubes positioned within the said liquid containing reservoir and extending through and above said plate, said tubes allowing for the passage of water and air therethrough for the irrigating and aerating of the soil disposed upon the said plate.

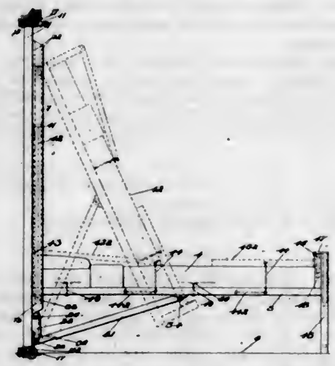


2. In an apparatus of the class described, the combination of a liquid receiving reservoir, a plate extending thereacross and supported thereby, said plate adapted to support soil thereabove and allowing for the passage of moisture and air therethrough, an air and water inlet tube extending through the said plate communicating with the said liquid containing reservoir, a valve disposed within said tube allowing for the draining of said liquid containing reservoir, an overflow for said reservoir preventing the level of the water reaching the height of the said plate to thereby provide an air chamber therebetween, and means extending through the said plate adapted to conduct air and moisture from the air chamber up in the said soil.

3. An apparatus of the class described comprising a liquid receiving reservoir, a plate extending thereacross and supported thereby, an air and water inlet tube extending through said plate and communicating with the said reservoir, a valve controlled means for the draining of said reservoir, said valve provided with an overflow opening for limiting the height of liquid within the reservoir to provide an air chamber between the liquid and the said plate, and aerating and irrigating tubes positioned within the said liquid receiving reservoir extending through and above the said plate adapted to supply air and moisture to the soil supported by the said plate.

4. An apparatus of the character indicated, including a liquid-tight vessel, a perforated plate extending thereacross and dividing the same into upper and lower compartments, a perforated tube projecting through said compartments and through said plate, said lower compartment provided with an outlet opening, a valve member closing said opening and guided in its motion by the walls of said tube, said valve provided with a bore extending centrally therethrough, an overflow opening communicating with the bore of said valve, automatically governing the level of liquid within the said reservoir, said tube providing for the ingress of air and water within the reservoir, supplying vaporous gases to the soil.

1,108,335. FOLDING BED AND FOLDING MECHANISM. HORACE D. CARTER, Portland, Oreg. Filed Oct. 16, 1913. Serial No. 795,476. (Cl. 5—18.)



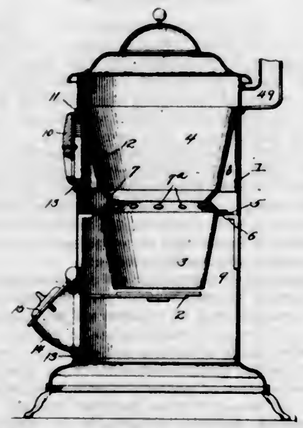
1. The combination with a supporting member provided with a pair of channeled rails, of a bed frame provided with rollers working in the channels of said rails, struts pivotally connected with said member and midwise with the bed frame, and a latch for securing the parts together.

2. The combination with a supporting member provided with a pair of channeled rails, of a bed frame provided with rollers working in the channels of said rails, struts pivotally connected with said member and midwise with the bed frame, and means for retarding the movement of said rollers in said channels.

3. The combination with a supporting member and a bed-frame carried by and movable to and from said member, of a latch for securing said parts together, and an arm coöperating with said latch to impart an impulse to the frame when the latch is operated to release the frame.

4. As a part of folding bed mechanism a supporting member, channeled ways formed therein, rollers adapted to work within said ways, and a shoe coöperating with said ways to retard movement of said rollers therein.

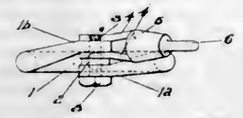
1,108,336. STOVE. ALFRED L. CASTLE, Quincy, Ill. Filed Feb. 10, 1913. Serial No. 747,392. (Cl. 126—58.)



The herein described stove comprising a body, a conical-shaped member supported in the body and separated therefrom by an annular space; said member being open

at its lower and upper ends and having imperforate side walls, and said space being closed at its upper end and open at its lower end, a fire pot supported in the body below said member and open at its upper and lower ends and having an imperforate side wall; the fire pot being surrounded by an annular space that is open at its lower and upper ends and is in communication with the first-named annular space, and the conical-shaped member resting on the upper end of the fire pot and being formed at its lower end with an inwardly-projecting annular portion, V-shaped in cross-section, the lower inclined part of the said V-shaped portion being provided with openings, an outlet for products of combustion leading from the body at a point above the conical-shaped member, a draft regulator connected with the body opposite the upper portion of the first-named annular space, and an ash door connected with the body at a point below the second-named annular space.

1,108,337. RIGGING COUPLING-LINK. THOMAS CHIGRIS, Knappa, Oreg. Filed Mar. 13, 1914. Serial No. 824,578. (Cl. 214—14.)

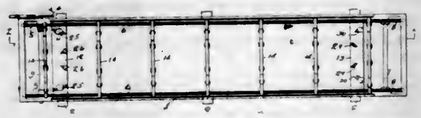


1. A rigging coupling link comprising a split ring whose ends are positioned in spaced relation, and are provided with registering apertures, a transverse bolt uniting said end portions, and a swivel connecting element pivotally mounted upon said bolt intermediate said end portions.

2. A rigging coupling-link comprising a split ring, a transverse bolt uniting the end portions thereof, a swivel connecting element pivotally secured upon said bolt, and a detachable bar for preventing intercommunication between the end-portions of the link.

3. A rigging coupling-link comprising a split ring, a transverse bolt uniting the end portions thereof, a swivel connecting element pivotally secured upon said bolt, a detachable bar for preventing intercommunication between the end-portions of the link, and a stay for supporting said transverse bolt.

1,108,338. PAPER-FEED FOR PERFORATING-MACHINES. ERNEST G. CLARK, De Kalb, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,845. (Cl. 164—116.)



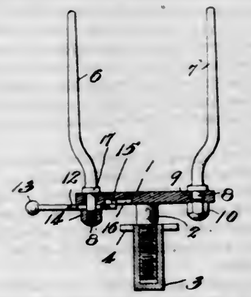
1. In a web-feeding mechanism, in combination with a table onto which the web is delivered; bars extending transversely of the table, and means for propelling them transversely in an endless path comprising courses longitudinal of the table above and below the same; web-clamping grippers mounted on the bars, movable thereon to positions outside of the lane in which the web is delivered; cam-encountering abutments on the grippers; cams on the table positioned for encounter with the abutments after the bars have entered upon their upper course over the table, and adapted by such encounter to move the grippers inward to cause their jaws to overhang the margins of the web; means for clamping the grippers on the web and additional cams on the table positioned for encounted with the clamping means to clamp the grippers after they have been moved inward by the first mentioned cams; both said sets of cams being near the entering end of the table, and additional cams near the delivery end of the table positioned for first releasing the clamping devices and afterward withdrawing the movable grippers.

2. In a web-feeding mechanism, in combination with the table, the endless belts and the transverse bars connecting the belts; grippers mounted for rocking and sliding on the bars, comprising each a jaw above the bar projecting inward for overhanging the path of the web, a lever below the bar projecting inward there-along, and a spring reacting between the gripper and the bar to normally hold the jaw and the lever elevated at their inner ends; a cam mounted movably on the bar for encounter with the inner end of the lever to wedge it downward; cam-encountering abutments on the gripper and cam, and cams on the table positioned for encounter of said abutments successively as the bar travels along the table from the entering end, said cams being adapted respectively to move the gripper inward to cause its jaws to overhang the web, and to move the cam on the bar outward to clamp the jaw onto the web.

3. In a paper feeding mechanism, in combination with the table, the parallel endless belts and their carrying and operating and driving wheels, respectively, mounted on the table for travel of a ply of each belt longitudinally there-above from receiving to delivering end; bars connecting the belts; a web-engaging gripper mounted on each bar, comprising a jaw adapted to overhang the margin of the web and a lever under the bar for clamping the jaw onto the web; a cam movable on the bar for operating the lever; means for moving the grippers inward for moving the cam on the bar for clamping; cams on the table near the delivery end, positioned for encountering the lever-operating cam and the gripper respectively, to first give the cam its lever-releasing movement and afterward move the gripper outward to carry its jaw off the margin of the web.

4. In a web-feeding mechanism, in combination with a table onto which the web is delivered longitudinally; bars transverse to the table; means for moving them laterally in an endless path comprising courses longitudinal of the table above and below the same; means carried by the bars for clamping the margins of the web, and cams on the table adapted for operating said clamping devices by the movement of the bars longitudinally of the table at the entering and delivering ends thereof, the table having longitudinally-extending up-standing ribs for resisting the tendency of the cams to crowd the rods endwise in operating the clamping devices.

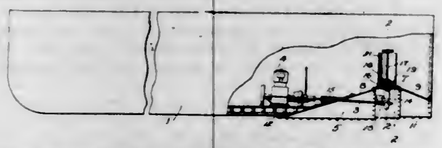
1,108,339. DIRIGIBLE LAMP-SUPPORT. WALTER RAYMOND COCHRAN, Biggsville, Ill. Filed Jan. 15, 1914. Serial No. 812,322. (Cl. 248—30.)



The combination in a dirigible lamp with a perforated bracket, a socket and a pintle and a lamp post fitted in and having a threaded end extending through the bracket,

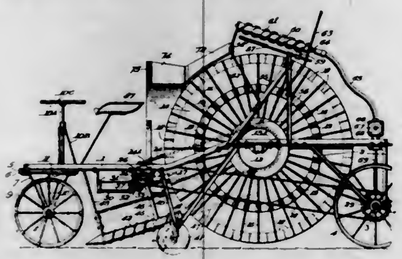
of a slotted lever arm fitted over said post and formed with an end lug, said bracket having a groove to receive the lug, and a nut for clamping said arm and post to the bracket.

1,108,340. POWER-BOAT. CHARLES A. CRIQUI, Buffalo, N. Y. Filed Mar. 28, 1912. Serial No. 686,717. (Cl. 115—39.)



The combination of the hull of a boat having an opening in its bottom, and a tunnel separate from the hull and arranged therein, said tunnel having at its base a projecting flange bearing against the underside of the hull and secured thereto, whereby the flanged tunnel may be introduced upwardly into said hull-opening through the bottom of the boat and said flange is exposed to the upward pressure of the water.

1,108,341. COMBINED BEET PULLER AND TOPPER. ANDREW B. CROSS, Denver, Colo. Filed Apr. 18, 1913. Serial No. 761,942. (Cl. 55—108.)



1. The combination with a rotatable series of beet gripping levers, of a V-shaped beet guide, operatingly supported in the path of said levers, a V-shaped knife upon the closed end of said guide, and opposing horizontally disposed U-shaped knives on said guide adjacent the extremities thereof, the closed ends of which are toward each other.

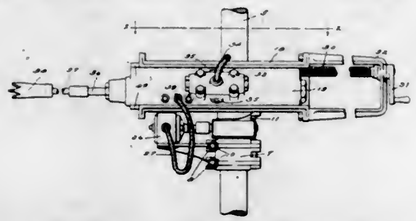
2. The combination with a rotatable series of beet gripping levers arranged in coöperating pairs, and means for opening and closing said pairs of levers at predetermined points in their rotative travel, of a resiliently-yielding beet guide operatively supported at a predetermined point in the path of said levers, a topping knife on said guide and gouges at the entrance of said guide, and secured thereto, for removing portions from opposite sides of beets.

3. The combination with a rotatable series of beet gripping jaws arranged in coöperating pairs, a guide and a topping knife on said guide, of parallel rotatable beet scrubbers operatively supported above said guide, and means for operating them.

4. The combination with a rotatable series of beet gripping levers arranged in coöperating pairs, a beet guide supported in the path of said levers, and a topping knife on said guide, of spaced parallel rollers supported above and adjacent said beet guide, having spirally arranged brushes thereon, and means for rotating said rollers in opposite directions.

5. In a beet puller and topper, a rotatable series of radially disposed gripping levers arranged in coöperating pairs, means for automatically closing said levers at predetermined points in their rotative travel, for holding them closed for a fixed period and for opening them and holding them open for a fixed period, the outer ends of said levers being out of contact with the ground, a resiliently yielding V-shaped beet guide supported in operative relation to the path of the clamping ends of the lever, and a V-shaped knife on said beet guide.

1,108,342. MINE DRILLING AND CHANNELING MACHINE. LONGFELLOW J. DAFT, Seattle, Wash. Filed June 23, 1913. Serial No. 775,270. (Cl. 125—14.)

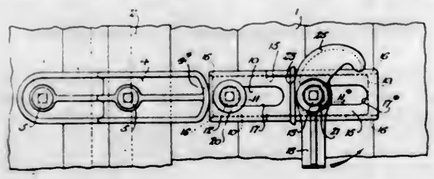


1. In a mining drill, the combination with a supporting column, of a lower two-part sleeve rigidly clamped to said column, a two-part upper sleeve rotatably-mounted on said column, a drill casing provided on one side with a conical disk, a clamp carried by said upper sleeve and recessed to receive said disk, a drill cylinder carried by said casing, a motor supported adjacent to said lower sleeve, an air conduit for said cylinder, an air conduit connection between said cylinder and motor, a drill carried by the piston-rod of the drill cylinder, and means for rotating said cylinder about said column when the drill is withdrawn.

2. In a mining drill, the combination with a supporting column, of an upper and a lower sleeve on said column, said lower sleeve being rigidly clamped upon the column, and said upper sleeve rotatably-mounted thereon, a drill cylinder carried upon the upper sleeve, a motor supported adjacent to the lower sleeve, worm gearing interposed between said rotatable sleeve and motor and driven by the latter to rotate said cylinder about the column by successive movements of the motor shaft.

3. In a mining drill, the combination with a supporting column, of a lower sleeve fixed upon the column, an upper sleeve rotatably-mounted on said column and formed with worm gearing, a drill cylinder carried by said upper sleeve, a motor supported adjacent to said lower sleeve, a worm wheel driven by said motor and meshing with said gearing to impart intermittent rotary movement to said cylinder around the column, and an air conduit connecting said motor and drill cylinder whereby the motor is operated on the backward movement of the piston rod of the cylinder.

1,108,343. DOOR-OPENING MECHANISM FOR FREIGHT-CARS. WILLIAM W. DARROW, Chicago, Ill. Filed June 27, 1913. Serial No. 776,155. (Cl. 59—92.)



1. The combination with a car door and its frame, of a stop plate mounted upon one of said parts, an operating lever pivotally mounted upon the other of said parts and a movable member intermediate said operating lever and said stop plate whereby the initial opening of the door may be effected.

2. The combination with a car door and its frame having an outwardly projecting post, of a stop plate having a free end extending across and beyond said post to guide

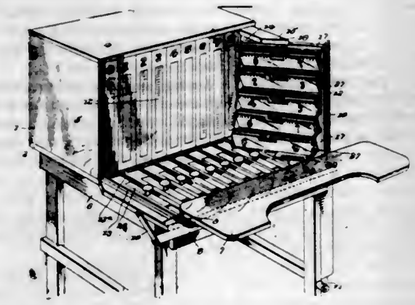
the door, an operating lever pivotally mounted upon the door and a movable member intermediate said operating lever and said stop plate whereby the initial opening of the door may be effected.

3. The combination with a car door and its frame, of a stop plate mounted upon one of said parts, an operating lever pivotally mounted upon the other of said parts, a movable member intermediate said operating lever and said stop plate and a plate whereon said intermediate member is slidably supported.

4. The combination with a car door and its frame, of a stop plate mounted upon one of said parts, an operating lever pivotally mounted upon the other of said parts, a slotted movable member intermediate said operating lever and said stop plate, and a plate whereon said movable member is supported, and a guide projecting from said plate through said movable member.

5. The combination with a car door and its frame, of a stop plate mounted upon one of said parts, an operating lever pivotally mounted upon the other of said parts and a movable member intermediate said operating lever and said stop plate, said movable member having an outwardly projecting part against which said operating lever will bear to shift said movable member.

1,108,344. INDEXING APPARATUS. ERNEST S. DAVIS, Knoxville, Tenn., assignor, by direct and mesne assignments, to Davis Automatic Filing Company, Bristol, Tenn., a Corporation of Tennessee. Filed Oct. 31, 1911, Serial No. 657,846. Renewed Jan. 6, 1914. Serial No. 810,656. (Cl. 45—2.)



1. A filing appliance, including a cabinet, a drawer movable into and out of the cabinet, means for withdrawing the drawer from the cabinet and for turning it around after its withdrawal, and means for locking the turning means and for automatically releasing the same upon the withdrawal of the drawer from the cabinet.

2. A filing appliance, including a cabinet, a drawer movable into and out of the cabinet, means for withdrawing the drawer from the cabinet, means for turning the drawer, means for automatically locking the turning means when the drawer is in the cabinet, means for automatically releasing said locking means upon the withdrawal of the drawer from the cabinet, and means for locking the drawer withdrawing means against a return movement thereof to move the drawer toward the cabinet, until after the drawer has been turned back again to its initial position.

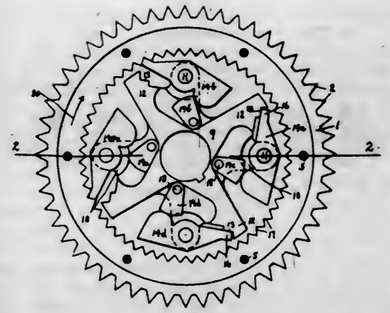
3. A filing appliance, including a cabinet, a drawer movable into and out of the cabinet, means for pulling the drawer out of the cabinet and pushing it into the same, means for turning the drawer around from the plane it occupies in the cabinet, and means for preventing the inward movement of the drawer pulling means, that is, in the direction to replace the drawer in the cabinet, until the drawer has been turned back again into such plane.

4. A filing appliance, including a cabinet, a drawer movable into and out of the cabinet, a supporting bar sliding into and out of the cabinet and supporting said drawer, the drawer being mounted to turn on said bar, and means carried by the bar for turning the drawer.

5. A filing appliance, including a cabinet, a sliding bar movable into and out of the cabinet, a drawer mounted to turn on said bar and movable thereby into and out of the cabinet, means for locking the drawer in the plane of the bar, in the withdrawing movement of the bar until the latter has been entirely removed from the cabinet, means for then automatically releasing said locking means, and means for turning the drawer on the bar in the subsequent continued movement thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,108,345. CENTRIFUGAL CLUTCH. SIMON DEUTSCH, Detroit, Mich. Filed June 16, 1913. Serial No. 773,922. (Cl. 74—45.)



1. In a centrifugal clutch, the combination of a shaft, a driving member revolubly mounted thereon and having internal teeth, a driven member secured to said shaft, main pawls mounted on the driven member and adapted to engage said internal teeth, said pawls having counterweighted portions adapted to swing the pawls out of engagement with said teeth when the shaft attains a predetermined speed, and auxiliary members pivoted on the driven member and adapted to hold the main pawls out of engagement with said teeth.

2. In a centrifugal clutch, the combination of a shaft, a pair of disks revolubly mounted on the shaft, an internally toothed ring mounted between said disks, a spider secured to the shaft between the disks, pawls pivoted to said spider and adapted to engage the internal teeth of the ring and having counterweights adapted to swing out by centrifugal force and carry the pawls out of engagement with said internal teeth when said shaft attains a predetermined speed, and auxiliary members pivoted to said spider and adapted to swing out by centrifugal force and engage the pawls to hold them out of engagement with said internal teeth of said ring.

3. In a centrifugal clutch, the combination of concentrically mounted driving and driven members, a plurality of counter-weighted members pivoted on the driven member and adapted to operatively engage the driving member until the driven member has attained a predetermined speed, and a plurality of auxiliary members pivoted on the driven member and adapted to swing out into engagement with the counter-weighted members and temporarily hold them out of engagement with the driving member.

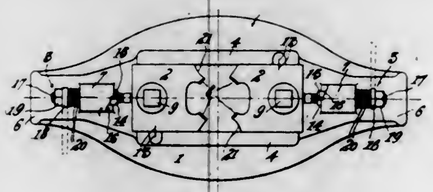
4. In a centrifugal clutch, the combination of a spider and an internally toothed ring concentrically mounted, a plurality of pawls pivoted on the spider and adapted to engage the teeth of the ring until the spider has attained a predetermined speed, and a plurality of dogs pivoted on the spider and adapted to swing out into engagement with the pawls and to hold them out of engagement with said teeth at sudden reversals of the driven member.

5. In a centrifugal clutch, the combination of a shaft, a driving member revolubly mounted thereon and having an internal engaging surface, a driven member secured to

said shaft, a pivot on the driven member, a pawl mounted to swing on the pivot, one end of the pawl being provided with an engaging surface adapted to contact with the internal engaging surface, and the other end of the pawl being of greater weight than the engaging end whereby the latter may be withdrawn from engagement with the internal engaging surface by the action of centrifugal force when the shaft attains a certain speed, a second pivot on the driven member, a third member mounted to swing upon the second pivot, and having an end adapted to swing into contact with the pawl to withhold the same from contact with the internal engaging surface.

[Claims 6 to 8 not printed in the Gazette.]

1,108,346. STOCK AND DIES. HARMAN K. DRAWBAUGH, York, Pa., assignor of one-half to O. B. Morse, York, Pa. Filed Dec. 4, 1913. Serial No. 804,700. (Cl. 10—122.)



1. A device of the character described comprising a die stock, a die movably carried thereby, a guide and a cam carried by said stock, a sliding element engaged with said guide and contacting with said die, a shoulder on said sliding element engaging said cam, and means for rotating said sliding element to project the same into contact with said die.

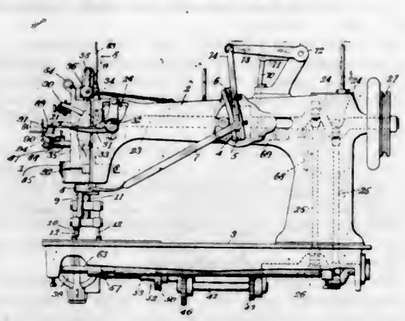
2. A device of the character described comprising a die stock, a die movably carried thereby, a guide on said stock, a cam on said guide, a sleeve rotatably and slidably mounted in said guide, a shoulder on said sleeve in contact with said cam, a screw threaded through said sleeve and bearing against said die, means for retaining said shoulder in contact with said cam for holding said screw in contact with said die, and means for rotating said sleeve to move said screw out of contact with said die.

3. A device of the character described comprising a die stock, a die movably carried thereby, a guide on said stock, a cam face on one end of said guide, a sleeve slidably and rotatably mounted in said guide, a projection on said sleeve, a spring for holding said projection in contact with said cam face, a screw threaded through said sleeve and in contact with said die, and a handle for rotating said sleeve and withdrawing said screw from contact with said die through the action of the cam, the projection and the spring.

4. A device of the character described comprising a die stock, a die movably carried thereby, a guide on said stock, a cam face on one end of said guide, a sleeve slidably and rotatably mounted in said guide, and projecting beyond the opposite ends thereof, a projection on one end of said sleeve, a screw threaded through said sleeve and projecting beyond the opposite ends thereof and contacting at one end with said die, a handle on said screw, a lock nut for forcing said handle into contact with one end of said sleeve, and a coil spring on said sleeve between said guide and said handle.

1,108,347. SEWING-MACHINE. MAX DRUCKERMAN, Brooklyn, N. Y. Filed June 25, 1913. Serial No. 775,669. (Cl. 112—7.)

1. The combination in a sewing machine of a vertically and laterally movable needle, means to operate it both vertically and laterally in a single vertical plane, a rotary shuttle, a pivoted main take up, a spring take up, and an independently pivoted auxiliary take up.



2. The combination in a sewing machine of a vertically and laterally movable needle, means to operate it both vertically and laterally in a single vertical plane, a rotary shuttle, a main take up, a spring take up, an auxiliary take up, and means to render the spring take up inoperative during the initial stages of the formation of the loop.

3. The combination in a sewing machine of a vertically and laterally movable needle, means to operate it both vertically and laterally in a single vertical plane, a rotary shuttle, take up mechanism having means to play out a long length of thread for the maximum length of stitches, and resilient means to automatically take up the surplus length of thread when the sewing machine makes a shorter length of stitch than its maximum, and means to render the resilient means inoperative during a portion of the formation of the stitch.

4. The combination in a sewing machine of a vertically and laterally movable needle, means to operate it both vertically and laterally in a single vertical plane, a rotary shuttle, a pin upon the head of the machine, a coil spring mounted on the pin and provided with a loop to receive the thread, a main take up, an auxiliary take up, a fixed guide, a plate mounted on the pin and provided with an arm to coöperate with the loop of the coil spring, and means carried by the auxiliary take up adapted to actuate the plate mounted on the pin.

5. The combination in a sewing machine of a rotary shuttle mounted to rotate in a vertical plane, a needle bar provided with means to permit it to swing in the same vertical plane that the shuttle rotates in, means to reciprocate the needle bar vertically, a rocking arm, a slide mounted on the rocking arm, a pitman connecting the slide with the needle bar, and means to operate the slide.

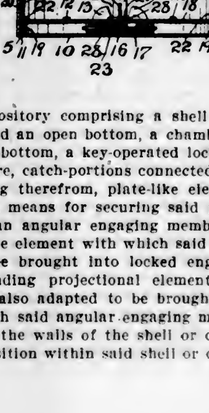
[Claim 6 not printed in the Gazette.]

1,108,348. SEWING-MACHINE. MAX DRUCKERMAN, Brooklyn, N. Y. Original application filed June 25, 1913, Serial No. 775,669. Divided and this application filed Aug. 26, 1913. Serial No. 786,658. (Cl. 112—26.)

1. In a sewing machine, the combination of a support carried by the head of the machine, resilient means mounted on the support and adapted to engage the thread to take up any slack, a main take up, an auxiliary take up, and means partly carried by the support and partly by the auxiliary take up adapted to render the resilient means carried by the support inoperative.

2. In a sewing machine, the combination of a support carried by the head of the machine, a coil spring mounted upon the support and adapted to take up any slack, a main take up, an auxiliary take up, and means partly carried by the support and partly by the auxiliary take up adapted to render the coil spring take up inoperative.

3. In a sewing machine the combination of a support upon the head of the machine, a coil spring mounted on the support and provided with means to engage and normally pull the thread, a main take up, an auxiliary take up, and means actuated by the auxiliary take up to render the coil spring inoperative.

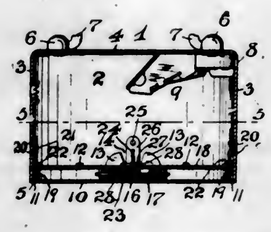


4. In a sewing machine, the combination of a support upon the head of the machine, a coil spring mounted upon the support and provided with a loop to receive the thread, a main take up, an auxiliary take up, a fixed guide, a plate mounted on the support and provided with an arm to coöperate with the loop of the coil spring, and means carried by the auxiliary take up adapted to actuate the plate mounted on the support.

5. In a take up mechanism for a sewing machine, the combination of a main pivoted take up, an auxiliary pivoted take up separately mounted adjacent to the main pivoted take up, a fixed thread guide mounted between the main and auxiliary take ups, and a resilient take up.

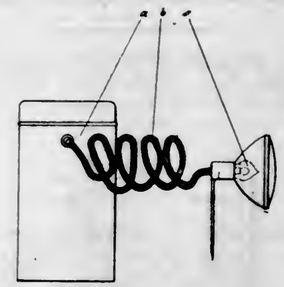
[Claims 6 to 11 not printed in the Gazette.]

1,108,349. CLOSURE FOR COIN-REPOSITORIES. BENNO VOM EIGEN, Newark, N. J., assignor to Aug. Goertz & Co., a Corporation of New Jersey. Filed June 22, 1912. Serial No. 705,220. (Cl. 232—6.)



A coin-repository comprising a shell or case having a closed top and an open bottom, a chambered closure within said open bottom, a key-operated lock-mechanism within said closure, catch-portions connected with said closure and extending therefrom, plate-like elements within said shell or case, means for securing said plate-like elements in position, an angular engaging member connected with each plate-like element with which said catch-portions are adapted to be brought into locked engagement, and upwardly extending projectional elements connected with said closure also adapted to be brought into holding engagement with said angular engaging members to prevent spreading of the walls of the shell or case when the closure is in position within said shell or case.

1,108,350. ELECTRIC CONDUCTOR. FRITZ FÄRBER, Dortmund, Germany. Filed Dec. 2, 1913. Serial No. 804,275. (Cl. 240—17.5.)



The combination, with a battery and an electric safety lamp, of connecting conductors consisting of a metal the fusing point of which lies below the ignition temperature of an explosive gas that may be present in the space around said lamp, for the purpose as described.

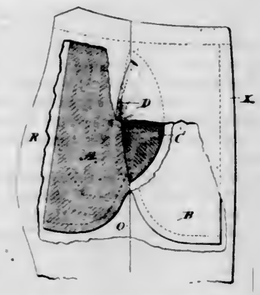
1,108,351. MOTOR-SPIRIT. ROMOLO DE FAZI, Rome, Italy. Filed Oct. 31, 1912. Serial No. 728,780. (Cl. 44—8.)

1. A process for the production of fuel oil for internal combustion engines from distillation products of crude oils combined with light hydrocarbons, which consists in first combining the distillates of said crude oils with a small percentage of tar oil, this combination being effected in the presence of a small percentage of sulfuric acid, and then combining the last noted combination with gasolene in the presence of a light aromatic hydrocarbon.

2. A process for the production of fuel oil for internal combustion engines from distillation products of crude oil, petroleum or shale oil in combination with light hydrocarbons in which said crude oil, petroleum or shale oil is combined with a small percentage of tar oil in the presence of a small percentage of sulfuric acid, and the last noted combination being then combined with gasolene in the presence of a light aromatic hydrocarbon.

3. A process for the production of fuel oil for internal combustion engines from distillation products of crude oil, petroleum or shale oil in combination with light hydrocarbons, in which the said crude oil, petroleum or shale oil is combined with about 1 to 2 per cent. of tar oil in the presence of 1 per cent. of sulfuric acid, the said combination being then combined with gasolene in the presence of a light aromatic hydrocarbon, the latter being added in proportions of from 5 to 20 per cent.

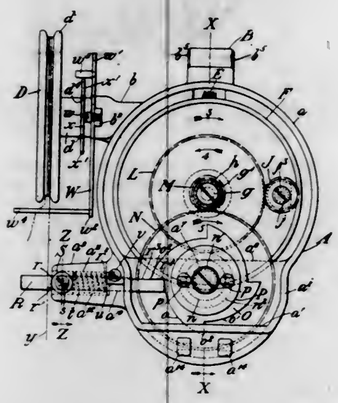
1,108,352. HIP-POCKET FOR MEN'S TROUSERS. JOHN CHRISTOPHER FERRY, Sydney, New South Wales, Australia. Filed May 24, 1912. Serial No. 699,606. (Cl. 2—15.)



In a device of the class described, the combination with a garment having a substantially vertical pocket

opening, of two pockets leading downward therefrom in different directions, and a loose flap secured along the edge of said opening and adapted to extend into one pocket across the entrance to the other pocket.

1,108,353. MEASURING DEVICE. GEORGE W. FOSTER, Providence, R. I. Filed Nov. 1, 1912. Serial No. 728,985. (Cl. 33—130.)



1. In a measuring-device, the combination with means for severing the material after a predetermined length has been measured, of timing-mechanism for operating the severing-means, a member operated by the draft of the material being measured, a worm driven thereby, and a worm-gear having concentric rings of gear-teeth adapted to be interchangeably engaged with the worm, said gear arranged to operate the timing-mechanism.

2. In a measuring-device, the combination with means for severing the material after a predetermined length has been measured, of a timing-mechanism for operating the severing-means, a driving-gear having concentric gear-rings of different diameters, a worm adapted to mesh with any one of the rings, a bearing for the worm adjustable to bring the latter into mesh with the various gear-rings, and means operated by the draft of the material being measured to drive the worm.

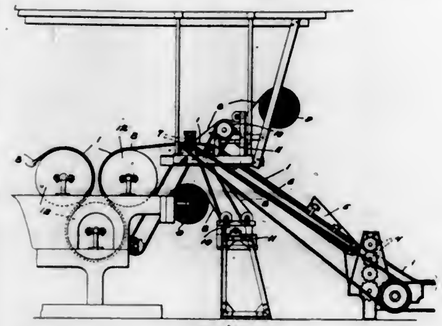
3. In a measuring-device, the combination with the timing-mechanism therefor, of means operated thereby to sever the material after a predetermined length has been measured, a driving-gear for the timing-mechanism, and a gear driven from the material being measured and arranged to be engaged with the driving-gear at different distances from its axis to regulate the time of action of the severing-means.

4. In a measuring-device, the combination with means for severing the material after a predetermined length has been measured, of means for actuating the severing-means, timing-devices for releasing the actuating-means, a driving-gear therefor, a gear driven from the material being measured, and means to adjust the driven gear in relation to the axis of the driving-gear to vary the ratio between the two and change the time of action of the severing-means.

5. In a measuring-device, the combination with a casing, of timing-mechanism inclosed therein, means operated thereby to sever the material after a predetermined length has been measured, a driving-gear formed with concentric gear-rings of different diameters, a worm adapted to mesh with the different gear-rings, and a bracket adjustable on the casing to regulate the position of the worm in relation to the axis of the gear.

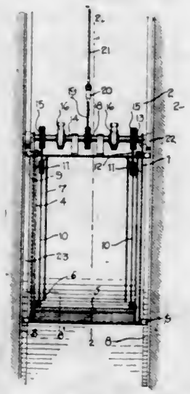
[Claims 6 to 14 not printed in the Gazette.]

1,108,354. METHOD OF MAKING PADDING. D'ROY F. FOWLER, Melrose Park, Pa. Filed Apr. 25, 1912. Serial No. 693,075. (Cl. 154—33.)



The herein described process of making padding consisting in applying superimposed layers of stock consisting of a mixture of two or more fibrous materials with the fibers of the several layers arranged angularly to each other and then applying sheets of flexible material to the opposite faces of the sheet thus formed, substantially as described.

1,108,355. SAFETY DEVICE FOR ELEVATORS. WILHELM FRIMAN, Newport News, Va. Filed Sept. 17, 1913. Serial No. 790,326. (Cl. 187—87.)



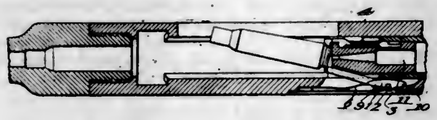
1. The combination with an elevator shaft provided with tracks, a car arranged to engage the tracks, and suspension means for the car; of a pair of shafts mounted for partial rotation on the top of the car, three pairs of intermeshing gears carried by the shafts, independent flexible connections between the intermediate pair of gears and the suspension means connected to rotate the shafts in one direction, reversing springs connecting the shafts, a movable platform arranged in the car, connections between the terminal pairs of gears and the platform arranged to rotate the shafts in the same direction as the springs, and track clutches carried by the ends of the shafts and disposed on opposite sides of the tracks and arranged to grip the tracks when the shafts are rotated by the springs and platform by the breaking of the suspension means.

2. The combination with an elevator shaft provided with tracks, a car arranged to engage the tracks, and suspension means for the car; of a pair of horizontal shafts mounted for partial rotation on the top of the car and projecting beyond the sides thereof, three pairs of intermeshing gears carried by the shafts, independent flexible connections between the intermediate pair of gears and the suspension means connected to rotate the shafts in one direction, reversing springs connecting the shafts, means for adjusting the tension of the springs, a movable platform mounted within the car, yielding connections between the terminal pairs of gears and the platform arranged to rotate the shafts in the same direction as the springs, and means carried by the outer ends of the shafts and arranged to engage frictionally with the tracks when the shafts are rotated by the springs and platform.

3. The combination with an elevator shaft provided with tracks, a car arranged to engage the tracks, and suspension means for the car; of a pair of horizontal shafts mounted for partial rotation on the top of the car and projecting beyond the sides thereof, three pairs of intermeshing combined gears and pulleys mounted on the shafts, independent flexible connections between the intermediate pairs of pulleys and the suspension means connected to rotate the shafts in one direction, adjustable reversing springs connecting the shafts, a movable platform arranged within the car, yielding connections between the platform and the two terminal pairs of pulleys arranged to rotate the shafts in the same direction as the springs, and cams carried by the outer ends of the shafts and arranged to engage with the tracks when the shafts are rotated by the springs and platform.

4. The combination with an elevator shaft provided with tracks, a car arranged to engage the tracks, and suspension means for the car; of a pair of horizontal shafts mounted for partial rotation on the top of the car and projecting beyond the sides thereof, three pairs of intermeshing combined gears and pulleys carried by the shafts, independent flexible connections between the intermediate pair of pulleys and the suspension means connected to rotate the shafts in one direction, adjustably connected reversing springs connecting the shafts, a movable platform, resilient connections between the terminal pairs of pulleys and the platform, arranged to rotate the shafts in the same direction as the springs, and pairs of cams carried by the terminals of the shafts and disposed on each side of the tracks, and arranged to be thrown into engagement therewith by the reversing springs and platform upon breakage of the suspension means.

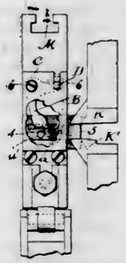
1,108,356. RESILIENT EJECTOR FOR FIREARMS. RUDOLF FROMMER, Budapest, Austria-Hungary. Filed Jan. 5, 1912. Serial No. 669,553. (Cl. 42—25.)



A device of the character described, comprising in combination with a grooved breech casing having an open seat or recess, a breech block therein, an ejector, trunnions integral therewith adapted to be received in said seat or recess for readily and conveniently placing the ejector in position and for removing it, said ejector swiveling around said trunnions, and a spring within the groove of said casing adapted to be depressed by said ejector during the closure of the breech and to force the ejector into its operative position on the breech being opened.

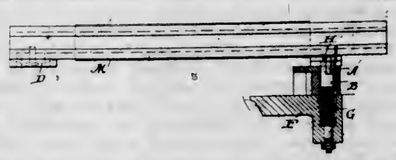
1,108,357. SIDE-KNIFE WIPER. EDWARD F. GODDARD, Stratford, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1912. Serial No. 736,468. (Cl. 199—14.)

1. In a line casting machine, the combination of side trimming knives, and a mold which is movable in a horizontal path behind said knives between the slug casting and the slug ejecting positions, with a knife wiper movably mounted on the mold adjacent to that end thereof which is directed toward the ejecting position; a spring acting on said wiper to move it forward into operative position, a bar which is movably mounted on said mold and extends and is movable lengthwise thereof and projects beyond both ends thereof,—said bar having a cam surface, means engageable and movable by said cam surface for moving said wiper in opposition to its spring into an inoperative position, and two abutments located near opposite ends of the path of the mold and in positions to be engaged by the projecting ends of said bar before the mold completer its movement in either direction.



2. In a line casting machine, the combination of side trimming knives, and a mold which is movable in a horizontal path behind said knives between the slug casting and the slug ejecting positions, with a knife wiper movably mounted on the mold adjacent to that end thereof which is directed toward the ejecting position, a spring acting on said wiper to move it forward into operative position, a bar which is movably mounted on said mold and extends and is movable lengthwise thereof and projects beyond both ends thereof, said bar having a cam surface, a bell crank lever pivoted to said mold and having its horizontal arm extended to a position to be engaged by the cam surface on said bar, a laterally projecting shoulder on the wiper with which the nearly vertical arm of said bell crank engages, and two abutments located near opposite ends of the path of the mold and in positions to be engaged by the projecting ends of said bar before the mold completes its movement in either direction.

1,108,358. MOLD-WIPER. EDWARD F. GODDARD, Stratford, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 14, 1912. Serial No. 736,720. (Cl. 199—14.)

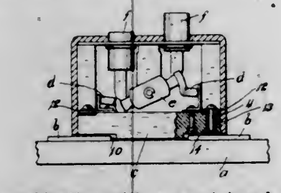


1. In a line casting machine, the combination of a mold which is movable back and forth between the casting and ejecting position, a fixed frame member adjacent to and in front of the path of said mold, a mold wiper which is movably mounted in said frame member and is movable forward and backward therein, a spring acting on said wiper to move it rearward into contact with the front face of the mold, a latch adapted to automatically engage said wiper when the latter is moved forward and to hold it against rearward movement, means carried by the mold and secured thereto near that end thereof which is adjacent to the ejecting position adapted to engage with said wiper and to push it forward, and means secured to the mold near that end thereof which is adjacent to the casting position for engaging the latch and withdrawing it from engagement with the wiper.

2. In a line casting machine, the combination of a mold which is movable back and forth between the casting and ejecting positions, a fixed frame member which is ad-

jacent to and in front of the path of said mold, a mold wiper mounted in said frame member and movable therein forward and backward, which wiper has a latch shoulder, a spring acting on the wiper to move it rearward into contact with the face of the mold, a spring actuated latch mounted on said frame member and adapted to be pressed upward by its spring into engagement with the latching shoulder on the wiper, a rearwardly projecting shelf fixed to said latch and having an inclined upper surface, a cam plate fixed to the front face of the mold near that end thereof which is adjacent to the ejecting position, which cam plate is adapted to engage the edge of the wiper and push it forward, and a pin which projects forward from the front face of the mold near that end thereof which is adjacent to the casting position and which is adapted to engage the inclined surface carried by the latch, whereby the latter is moved out of engagement with the wiper.

1,108,359. ELECTRIC SWITCH. MONROE GUETT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 2, 1913. Serial No. 739,673. (Cl. 175—298.)



1. The combination with a panel board and coöperatively-arranged bus-bar terminals thereon, of a switch base adapted to fit over said terminals, switch terminals carried by the base, yielding members electrically connected with the switch terminals, and means passing through said yielding members and engaging said bus-bars to secure the base in position and establish electrical connection between the bus-bars and switch terminals.

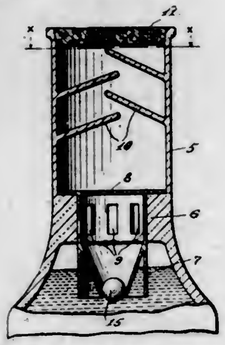
2. The combination with a panel board and the bus-bar terminal coöperatively arranged thereon, of a switch base having parts overlying said terminals, switch terminals mounted on the base, a yielding member mounted on the base, and electrically connected with the switch terminals, sleeves carried by said yielding members and extending through the base into contact with the bus-bars, and screws extending through said sleeves and having threaded engagement with said bus-bars.

3. The combination with a panel board and the bus-bar terminals coöperatively arranged thereon, of an insulating base overlying in part said terminals, switch terminals mounted on the base, plates secured to the bases of said terminals, recesses in said base under the ends of said plates, sleeves mounted in said plates and extending through apertures in the base into contact with the bus-bars, and screws extending through said sleeves and having threaded engagement with the bus-bars.

4. The combination with a panel board and the bus-bar terminals coöperatively arranged thereon, of a switch base overlying said terminals and apertured opposite thereto, switch terminals mounted on the base, sleeves extending through apertures in the base to contact with said bus-bars, said sleeves being movable longitudinally in the apertures, means for attaching said sleeves to the bus-bars, and a yielding connection between said sleeves and switch terminals.

5. The combination with a pair of spaced circuit terminals, of a switch base, switch terminals carried thereby, electrical conductors connected at one end with said terminals, the opposite ends thereof being provided with yielding parts, and means passing through said yielding parts and engaging said circuit terminals to secure said base in position and establish electrical connection between said circuit terminals and switch terminals.

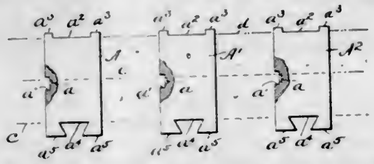
1,108,360. BOTTLE-CLOSURE. GUSTAF W. GUSTAFSON, Seattle, Wash. Filed Oct. 2, 1911. Serial No. 652,422. (Cl. 215—69.)



1. In apparatus of the class described, the combination with a bottle having its neck constricted at some distance below its mouth to form a plane annular valve seat surrounding a cylindrical passage below the same, of a tubular, laterally perforated, cylindrical member sliding in said passage, closed at its upper end provided at its upper end with a plane perforated annular flange fitting said seat, and with an internal downwardly-converging hollow conical frustrum below the perforations, and a ball normally closing the lower end of said frustrum and free within the same.

2. In apparatus of the class described, the combination with a bottle having its neck constricted at some distance below its mouth to form a plane annular valve seat surrounding an axial cylindrical passage leading to the body of the bottle, of a hollow cylindrical member sliding in said passage closed at its upper end, laterally perforated near its upper end, provided at its upper end with an external annular flange fitting said seat and having below the perforations in said member an internal, downwardly convergent, hollow frustrum peripherally united at its upper end with said member, and a loose ball normally closing the lower end of said frustrum; said neck being provided with a baffle plate in position to limit the upward sliding of said member.

1,108,361. LINOTYPE-MATRIX. GUY LEE HAMMOND, Woonsocket, R. I., assignor to Electric Compositor Company, Woonsocket, R. I., a Corporation of New Jersey. Filed Aug. 25, 1911. Serial No. 645,914. (Cl. 199—12.)



1. A type matrix having two parallel horizontal alining surfaces, one facing upward and one facing downward, and other horizontal surfaces which are adjacent to said alining surfaces,—the said alining surfaces being depressed with respect to the said adjacent horizontal surfaces of said matrix.

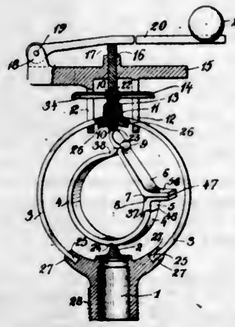
2. A type matrix having its character depression in one vertical edge and having at its upper and lower ends respectively, two parallel horizontal alining surfaces which are depressed with respect to the adjacent top and bottom surfaces of said matrix.

3. A type matrix having two horizontal parallel alining surfaces and having adjacent thereto other surfaces which project outward beyond the planes of said alining surfaces, whereby the alining surfaces are protected from frictional contact with the surfaces in a linotype machine, as the matrix is moved about in said machine.

4. A set of type matrices, each of which has two alining surfaces, one faced upward and one faced downward, which two alining surfaces are the same distances apart on all matrices, each of said matrices having also a character depression in one vertical edge, the characters being larger on some matrices than on others, and being so placed on each matrix that the distance between the base line of the character and both alining surfaces are the same as the corresponding distances on every other matrix.

5. A set of type matrices, each of which has two parallel depressed alining surfaces, one faced upward and one faced downward, which two alining surfaces are the same distances apart on all matrices, each of said matrices having also a character depression in one vertical edge, the characters being larger on some matrices than on others, and being so placed on each matrix that the distance between the base line of the character and both alining surfaces are the same as the corresponding distances on every other matrix.

1,108,362. AUTOMATIC SPRINKLER-HEAD. JOHN R. HAMILTON, Yonkers, N. Y., assignor to Venturi Alarm Company, Dover, N. J., a Corporation of New Jersey. Filed June 14, 1909. Serial No. 502,004. (Cl. 169—5.)



1. The automatic sprinkler head comprising a valve seat, a valve coöperating with said seat, a closed spring frame composed of a resilient metal strip having enlarged ends embraced by the portions of said head adjacent said seat, a bushing mounted in said frame opposite said valve, a deflector mounted on said frame, a thermal releasing retainer mounted between said valve and said frame and comprising a spring loop having a notch engaged by said valve, a strut having a recess engaged by the upper end of said loop and having an upper end out of line with said recess and said notch, a lever having a socket coöperating with the free end of said loop and having a lip in loose coöperation therewith, there being coöperating link members on said strut and said lever and alining members adjacent said link members, fusible solder connecting said link members, a stud having a depression coöperating with the upper end of said strut and fitting adjustably in said bushing to allow the preliminary adjustment of said head, gripping means on said stud and bushing to hold them in relative position when said resilient frame and retainer have been put under standard pressure normally holding said valve in closed position upon its seat, and locking means engaging said stud and bushing to positively hold them in adjusted position.

2. The automatic sprinkler head comprising a valve seat, a valve coöperating with said seat, a spring frame composed of resilient metal secured to the head adjacent said seat, a thermal releasing retainer mounted between said valve and said frame and comprising a spring loop having a bearing portion engaged by said valve, a strut having a recess engaged by the upper end of said loop and having an upper end out of line with said recess and said bearing portion to receive pressure from said frame, a lever having a socket coöperating with the free end of said loop, there being coöperating link members on said strut and said lever and alining members adjacent said link members, fusible material connecting said link members, said resilient frame and retainer normally holding said valve in closed position upon its seat.

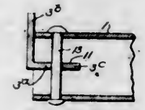
3. The automatic sprinkler head comprising a valve seat, a valve coöperating with said seat, a spring frame comprising resilient material secured to said head, a thermal releasing retainer mounted between said frame and said valve to normally hold said valve in closed position, said retainer comprising a loop having a bearing portion, a strut having a recess engaged by the upper end of said loop and having an upper end out of line with said recess and said bearing portion to receive pressure from said frame, a lever coöperating with the free end of said loop, there being coöperating link members on said strut and said lever and thermal releasing means connecting said link members.

4. The automatic sprinkler head comprising a valve seat, a valve coöperating with said seat, a spring frame substantially composed of resilient wrought metal strip secured to said head, a thermal releasing retainer mounted between said frame and said valve to normally hold said valve in closed position, said retainer comprising a loop having a bearing portion, a strut having a bearing engaged by the upper end of said loop and having an upper end out of line with said bearing and said bearing portion, and a lever coöperating with the free end of said loop, there being coöperating thermally releasing link members on said strut and said lever.

5. The automatic sprinkler head comprising a valve seat, a valve coöperating with said seat, a frame formed on said head, a releasing retainer mounted between said frame and said valve to normally hold said valve in closed position, said retainer comprising a loop having a bearing portion to transmit pressure to said valve, a strut having a bearing engaged by the upper end of said loop and having an upper end out of line with said bearing and said bearing portion, and a lever coöperating with the free end of said loop, there being coöperating releasing members on said strut and lever.

[Claims 6 to 26 not printed in the Gazette.]

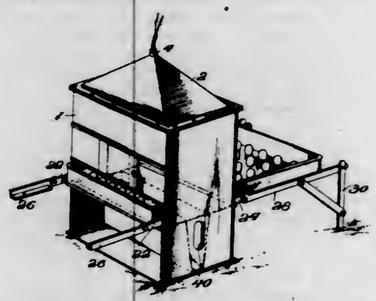
1,108,363. JOINT. WILLIAM P. HAMMOND, Charlestown, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 17, 1912. Serial No. 720,789. (Cl. 5—4.)



1. A rigid joint comprising a tube having at an end thereof a pair of opposite slots extending longitudinally of the tube, a right angle bar having one flange fitting in said slots and extending to the inner end thereof, and having its other flange engaging the end of the tube, and a bolt extending transversely through the end of the tube and through said first mentioned flange, and securing the tube and bar in fixed relation.

2. A bed-frame or like structure consisting of two parallel side tubes, each of which has terminal slots at each end, extending transversely of the tube, and a pair of transverse, end, right angle bars each having a flange fitting the slots of the adjacent ends of said side bars and engaging the inner ends of said slots, said bars each having its other flange extending transversely of and abutting the said adjacent ends of said tubes, and a bolt extending transversely through each end of each tube and the inserted flange, the said bolts holding the tubes and angle bars in fixed, rigid relation.

1,108,364. EGG-TESTER. JAMES J. HARPER, Defiance, Ohio. Filed June 13, 1913. Serial No. 773,452. (Cl. 99—6.)



1. In an egg tester, a casing having a source of light therein and an opening extending entirely through the casing from one side thereof to the other, a mirror located to receive the rays from the said source of light, and a tray adapted to support eggs constructed to be inserted in one side of the casing and passed therethrough out of the other side of the casing between the source of light and the aforesaid mirror, substantially as described.

2. In an egg tester, a casing having a source of light therein and an opening extending entirely through the casing from one side thereof to the other, a mirror located to receive the rays from the said source of light, a tray adapted to support eggs constructed to be inserted in one side of the casing and passed therethrough out of the other side of the casing between the source of light and the aforesaid mirror, and guide ways in alinement with said opening arranged to guide the tray in its passage through the casing, substantially as described.

3. In an egg tester, a casing having a source of light at the top thereof, openings on opposite sides of the casing, framework within said casing under said openings having a narrow recess provided with a mirror therein, and a tray adapted to support eggs and constructed to pass through said openings over framework whereby the eggs will be moved between the source of light and the aforesaid mirror, the narrow recess with the mirror being of the proper width to light one row of eggs at a time, substantially as described.

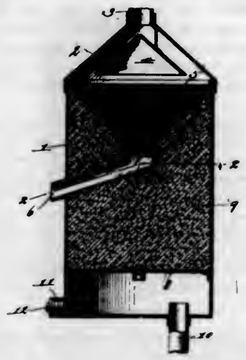
4. In an egg tester, a casing having a source of light therein, a mirror located to receive the rays from said source of light, openings in the casing on opposite sides thereof, tracks for guide-ways projecting from said openings, and a tray adapted to support eggs and constructed to be passed through said openings whereby the eggs will be moved between the source of light and the aforesaid mirror, substantially as described.

5. In an egg tester, a casing having a source of light therein, a mirror located to receive the rays from said source of light, openings in the casing on opposite sides thereof, foldable tracks or guide-ways projecting from said openings, and a tray adapted to support eggs and constructed to be passed through said openings whereby the eggs will be moved between the source of light and the aforesaid mirror, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

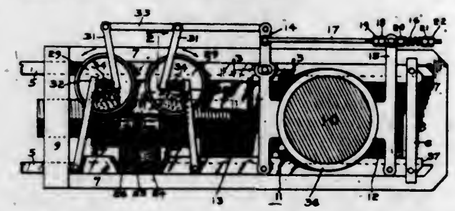
1,108,365. CISTERN-WATER FILTER. JOHN RAYMOND HASELDEN and SAMUEL GORDON HASELDEN, Lancaster, Ky. Filed Mar. 5, 1914. Serial No. 822,721. (Cl. 210—4.)

1. A device of the kind described comprising a receptacle, a discharge pipe opening centrally therein, a conical deflector suspended within said receptacle and in alinement with the discharge pipe, an inverted conical screen arranged within the receptacle and below the deflector, a discharge pipe leading from the apex of said inverted cone outwardly through a side of the receptacle, a filtering material inclosing said pipe and said inverted cone, said pipe having an opening upon its under side in alinement with the apex of the cone, and a screen in said opening.



2. A device of the kind described comprising a receptacle, a conical cap therefor, an inlet pipe opening centrally through said cap, a spreader cone hung within said cap, an inverted reticulated cone arranged beneath the spreader cone and opening downwardly in the apex portion, an obliquely arranged discharge pipe secured to said open apex portion of the reticulated cone, a false perforated bottom for said receptacle, a filter bed packed between the false bottom and the reticulated cone, a discharge pipe leading from the lower portion of the receptacle, said receptacle having a clean out opening and means for closing said clean out opening.

1,108,366. AUTOMATIC JOURNAL-BOX TAKE-UP. JOHN T. HAY, Union City, Ind. Filed Apr. 11, 1913. Serial No. 760,481. (Cl. 64—55.)



1. In a journal for rotary shafts, a pair of bearing-brasses disposed on opposite sides of the shaft, screw-operated means to move the bearing-brasses toward the shaft, and means comprising a lever bearing against the shaft for actuating said screw-operated means.

2. In a journal for pitmen shafts, two pairs of bearing-brasses one for each pitman shaft disposed on opposite sides of said shaft, means for mutually adjusting the two sets of brasses, and means comprising a lever contacting the shaft to automatically adjust the bearing-brasses to maintain the original axial relation of the two shafts.
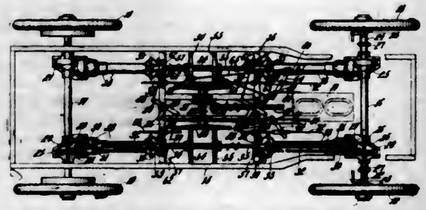
3. In a journal for pitmen shafts, two pairs of bearing-brasses one for each pitman shaft disposed on opposite sides of said shaft, blocks contacting with the brasses, screw-operated means for mutually adjusting the blocks, and means contacting the shaft for operating said screw-means.

4. In a journal for rotary shafts, a pair of bearing brasses disposed on opposite sides of the shaft, screw-operated means to move the bearing-brasses toward the shaft, a pair of levers disposed on opposite sides of the shaft and having extensions bearing against the shaft, and means operated by said levers for actuating said screw-operated means.

5. In a journal for rotary shafts, a pair of bearing-brasses disposed on opposite sides of the shaft, blocks contacting with the brasses, screw-operated means for moving the blocks in a direction to press the bearing-brasses toward the shaft, a pair of levers disposed on opposite sides of the shaft and having extensions bearing against the shaft, and means operated by said levers for actuating said screw-operated means.

[Claims 6 to 8 not printed in the Gazette.]

1,108,367. FOUR-WHEEL DRIVE. AUGUST E. HOLTERMANN, Depere, Wis. Filed Mar. 21, 1913. Serial No. 755,897. (Cl. 21—90.)



1. A transmission means for motor vehicles, comprising a driving shaft, friction disks thereon, pairs of friction wheels bearing against the friction disks in opposite directions on opposite sides of the axis of the driving shaft and having independent driving connection with the four wheels of the vehicle.

2. A transmission means for motor vehicles, comprising a driving shaft, friction disks thereon, friction wheels bearing against the friction disks in opposite directions and on opposite sides of the axis of the driving shaft, pairs of transmission shafts on which the friction wheels are splined, driving connections between the transmission shafts and the several wheels of the vehicle, and means for shifting the friction wheels on the transmission shafts simultaneously in opposite directions for equally varying the driving speed of the several vehicle wheels.

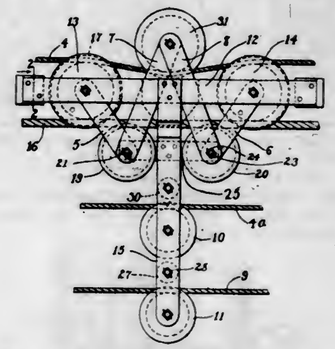
3. A transmission means for motor vehicles, comprising a driving shaft, friction disks thereon, friction wheels bearing against the friction disks in opposite directions and on opposite sides of the axis of the driving shaft, pairs of transmission shafts on which the friction wheels are splined, driving connections between the transmission shafts and the several wheels of the vehicle, suitably mounted walking beams, connecting rods connecting the ends of the walking beams with the friction wheels, and means for swinging the walking beams on their transmission shafts in opposite directions.

4. A transmission means for motor vehicles, comprising a driving shaft, friction disks thereon, friction wheels bearing against the friction disks in opposite directions and on opposite sides of the axis of the driving shaft, pairs of transmission shafts on which the friction wheels are splined, driving connections between the transmission shafts and the four wheels of the vehicle, suitably mounted walking beams, connecting rods connecting the ends of the walking beams with the friction wheels, means for swinging the walking beams for causing a shifting of the friction wheels on their transmission shafts in opposite directions, and means for bodily moving the walking beams to carry one friction wheel of each pair out of engagement with the friction disks and for carrying the other friction wheels beyond the center of the friction disks for reversing the direction of drive of the vehicle.

5. A transmission means for vehicles, comprising a driving shaft, friction disks thereon, friction wheels engaging the friction disks on opposite faces thereof and on opposite sides of the center thereof, pairs of interfitting transmission shafts adjustably mounted to have a movement nearer to or farther from the friction disks, friction wheels splined on the transmission shafts, driving connections for connecting the transmission shafts with the several wheels of the vehicle, slidably mounted rods, walking beams fulcrumed on the slidable rods, connecting rods connecting the ends of the walking beams with the friction wheels whereby the swinging movements of the walking beams produces a sliding movement in opposite directions of the friction wheels in each pair for equally varying the driving speed of the vehicle wheels, and means for moving the slidable rods for carrying one friction wheel of each pair beyond the edge of the friction disks and for carrying the other friction wheel of each pair beyond the center of the friction disks for reversing the driving direction of the vehicle.

[Claims 6 to 8 not printed in the Gazette.]

1,108,368. FALL-ROPE CARRIER. JOHN T. HORTON, New York, N. Y. Filed Nov. 21, 1912. Serial No. 732,704. (Cl. 212—120.)



1. A fall rope carrier including in combination, two supporting cable traverse wheels rotatably mounted in fixed relation to each other, a gripper wheel for engagement with the under side of the supporting cable and rotatably mounted in the free end of a swingable arm, a tension wheel for engagement with the upper side of said driving line and rotatably mounted in the upper end of a second swingable arm, the free ends of the gripper wheel and tension wheel arms being linked together, and means remote from the fixed axes of said swingable arms for maintaining said swingable arms in their normal planes of movement respectively.

2. A fall rope carrier including in combination, two supporting cable traverse wheels rotatably mounted in fixed relation to each other for engaging the upper side of the supporting cable, a wheel mounted coaxially with and fixed to each cable traverse wheel for engagement with the lower side of the driving line, a gripper wheel for engagement with the under side of the supporting cable and rotatably mounted in the free end of a swingable arm the other end of which is rotatably mounted on an axis fixed relatively to the cable traverse wheels, a tension wheel for engagement with the upper side of said driving line and rotatably mounted in the upper end of a second swingable arm, the free ends of the gripper wheel and tension wheel arms being linked together, and means remote from the fixed axes of said swingable arms for maintaining said swingable arms in their normal planes of movement respectively.

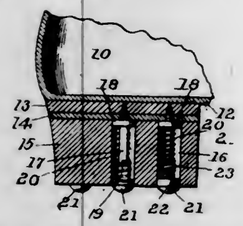
3. A fall rope carrier including in combination, two supporting cable traverse wheels rotatably mounted in fixed relation to each other, a gripper wheel for engagement with the under side of the supporting cable and rotatably mounted in the free end of a swingable arm, a tension wheel for engagement with the upper side of said driving line and rotatably mounted in the upper end of a second swingable arm, the free ends of the gripper wheel and tension wheel arms being linked together, and means between said swingable arms and said main frame for maintaining said arms in their normal planes of movement respectively.

4. A fall rope carrier including in combination, two supporting cable traverse wheels rotatably mounted in fixed relation to each other, a gripper wheel for engagement with the under side of the supporting cable and rotatably

mounted in the free end of a swingable arm, a tension wheel for engagement with the upper side of said driving line and rotatably mounted in the upper end of a second swingable arm, the free ends of the gripper wheel and tension wheel arms being linked together, and a resistance bar fixed to said main frame and coacting with said swingable arms for preventing sidewise deflection of said swingable arms.

5. A fall rope carrier including in combination, two supporting cable traverse wheels rotatably mounted in fixed relation to each other for engaging the upper side of the supporting cable, a wheel mounted coaxially with and fixed to each cable traverse wheel for engagement with the lower side of the driving line, a gripper wheel for engagement with the under side of the supporting cable and rotatably mounted in the free end of a swingable arm the other end of which is rotatably mounted on an axis fixed relatively to the cable traverse wheels, a tension wheel for engagement with the upper side of said driving line and rotatably mounted in the upper end of a second swingable arm, the free ends of the gripper wheel and tension wheel arms being linked together, and means between said swingable arms and said main frame for maintaining said arms in their normal planes of movement respectively.

1,108,369. SPRING-HEEL CONSTRUCTION. STEPHEN HORVÁTH, Racine, Wis. Filed Mar. 20, 1914. Serial No. 826,006. (Cl. 36—38.)



1. A device of the class described comprising a shoe heel having a vertical bore therein, a disk seated upon the top of said bore, a screw within said bore extending through said disk and engaging the heel, a helical spring encircling said screw and secured to said disk, and a head normally projecting from said bore and having a threaded extension engaging the outer free end of said spring.

2. In a combination with a shoe having a heel block, a heel member and an intermediate plate secured to said block, said heel member provided with socket bores opening at the tread portion of the heel member, disks seated within said bores, screws centrally positioned in said bores and extending through said disks and engaging said plate and heel block, helical springs encircling said screws and secured to said disks, and head members mounted upon the free ends of said springs and normally partially projected from the open ends of said bores.

3. A heel structure comprising a block secured to a shoe and having a plurality of inwardly-extending open sockets extended therethrough, disks within said sockets, securing screws extending through said disk and engaging the shoe, helical springs encircling said screws and secured to said disks, head disks slidably-mounted within the outer ends of said bores, threaded collars inwardly carried by said head disks and adjustably receiving the free ends of said springs, and dome-shaped heads carried by said head disks and normally projected exteriorly of said bores and extending from the tread surface of the heel.

1,108,370. RAILWAY-TIE AND RAIL-FASTENING. JACOB A. HYLE, Philadelphia, and JACOB W. HERMAN, Harrisburg, Pa., assignors to National Steel Tie Company, Harrisburg, Pa., a Corporation of Delaware. Filed Dec. 2, 1913. Serial No. 804,212. (Cl. 238—5.)

1. A metallic railway tie comprising, a metal shell having upper and lower flattened portions and rounded side portions, and provided with a circular opening and an elongated opening extending from either side of and connecting with said central opening near each end of the tie, a plate of insulating fiber and a metallic plate secured centrally within the tie against its inner upper surface.



2. A metallic railway tie comprising, a metal shell having upper and lower flattened portions and rounded side portions, and provided with a circular opening and an elongated opening extending from either side of and connecting with said central opening near each end of the tie, a plate of insulating fiber and a metallic plate secured centrally within the tie against its inner upper surface, and a bolt and nut for firmly securing said plates within the tie, said bolt having a head provided with flattened sides, substantially as described and for the purpose set forth.

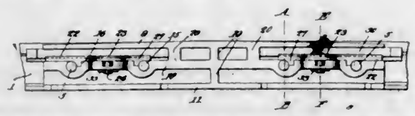
3. A metallic railway tie comprising, a metal shell having upper and lower flattened portions and rounded side portions, and provided with a circular opening and an elongated opening extending from either side of and connected with said central opening near each end of the tie, a plate of insulating fiber and a metallic plate secured within the tie against its inner upper surface, track rails, and means for securing said track rails and plates to the tie.

4. A metallic railway tie comprising, a metal shell having upper and lower flattened portions and rounded side portions, a plate of insulating fiber and a metallic plate secured within the tie against its inner upper surface, track rails, and rail securing means consisting of a metal plate located on top of the tie, said plate having upward projections near each end thereof and a recess between said projections, securing bolts passing through said plate and through and within the tie, and rail securing clips fastened by said bolts to the upper face of said plate and within said recesses formed between the projections.

5. A metallic railway tie comprising, a metal shell having upper and lower flattened portions and rounded side portions, a slotted metallic plate secured within the tie, a plate of insulating material secured within the tie between its inner upper surface and said slotted metallic plate, a metal plate resting on the upper face of the tie, said plate being provided with upwardly extended projections and a recess formed between said projections, and means substantially as described for securing the track rails to the tie.

[Claims 6 to 11 not printed in the Gazette.]

1,108,371. RAIL-JOINT. ALBERT C. KELLEY and SWAN A. MURPHY, Gradyville, Ga. Filed June 9, 1914. Serial No. 844,067. (Cl. 239—3.)



1. In a rail joint, a fish plate having superposed flanges, one of said flanges being provided with transverse seats registering with apertures in the fish plates, pins insertible transversely through rails and into said apertures and seats, said pins having shoulders, a locking plate insertible between the flanges, separate means carried by the locking plate for engaging the flange thereunder and the respective pins, and means insertible between the flanges and into engagement with the plate for holding said plate against movement relative to the flanges.

2. The combination with abutting rails, of a rail joint including opposed fish plates, superposed flanges extending longitudinally along one of the fish plates, there being transverse seats within the lower one of said flanges and registering with the apertures in the fish plates and rails, pins extending through said apertures and into the seats, said pins having shoulders, a locking plate interposed between the flanges, a stud depending therefrom and insertible into engagement with the lower one of said flanges, teeth depending from the plate and into engagement with the shoulders of the pins, a wedge insertible longitudinally between the flanges and above and back of the plate to secure the plate against movement relative to the flanges, and means integral with the flanges for engaging and spreading the wedge during its insertion between the flanges.

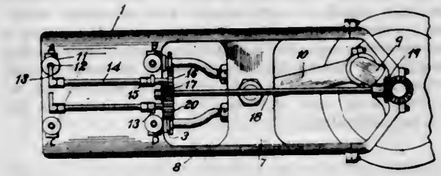
3. The combination with abutting rails, of a rail joint including opposed fish plates, superposed flanges extending longitudinally along one of the fish plates, there being transverse seats within the lower one of said flanges and registering with the apertures in the fish plates and rails, pins extending through said apertures and into the seats, said pins having shoulders, a locking plate interposed between the flanges, a stud depending therefrom and insertible into engagement with the lower one of said flanges, teeth depending from the plate and into engagement with the shoulders of the pins, a wedge insertible longitudinally between the flanges and above and back of the plate to secure the plate against movement relative to the flanges, a spreading element for engaging and spreading one end portion of the wedge when moved to position between the flanges, and means coöperating with said spreading element for partly wrapping a portion of the wedge about the spreading element to anchor the wedge between the flanges.

4. In a rail joint, a fish plate having parallel laterally extending flanges formed longitudinally thereon, the lower one of said flanges having transverse seats, rail fastening pins insertible through the fish plate and into the seats, said pins having shoulders, a locking plate insertible between the flanges and above the pins, means depending from the plate for engaging the lower one of said flanges to hold the plate against removal from between the flanges, means depending from the plate for engaging the shoulders on the pins to hold said pins against withdrawal from the fish plate, a wedge insertible longitudinally between the flanges and above and back of the plate to hold said plate against movement, said wedge having a split end, and means in the path of the split end of the wedge and integral with the flanges for spreading said wedge to anchor it between the flanges.

5. In a rail joint, a fish plate having parallel laterally extending flanges formed longitudinally thereon, the lower one of said flanges having transverse seats, rail fastening pins insertible through the fish plate and into the seats, said pins having shoulders, a locking plate insertible between the flanges and above the pins, means depending from the plate for engaging the lower one of said flanges to hold the plate against removal from between the flanges, means depending from the plate for engaging the shoulders on the pins for holding the pins against withdrawal from the fish plate, a wedge insertible longitudinally between the flanges and above and back of the plate to hold said plate against movement, said wedge having a split end, a spreading element in the path of the wedge for engaging and spreading one end portion of the wedge when inserted between the flanges, and means coöperating with said spreading means for partly wrapping a portion of the wedge about the spreading means to anchor the wedge between the flanges.

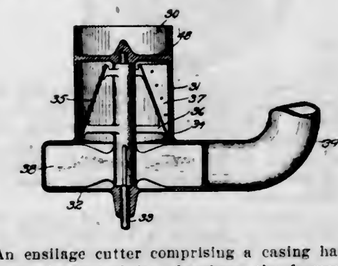
1,108,372. GAS-ENGINE. RAY KELLY, Knobnoster, Mo. Filed Nov. 4, 1912. Serial No. 729,388. (Cl. 123—60.)

A gas engine comprising a suitable frame, a crank shaft revolubly mounted in said frame, a reciprocatory cross-head mounted in said frame, pitman connection between said cross-head and said crank shaft, a plurality of cylinders in said frame, a piston in each of said cylinders, a stuffing box in one end of each of said cylinders, a piston rod slidably mounted in each of said stuffing boxes and connecting said pistons with said cross-head, an exhaust valve in each end of each of said cylinders, a pair of shafts revolubly mounted on said frame adjacent said valves, a plurality of arms on said shafts adapted for operative engagement with said exhaust valves, inter-



meshing gears on said shafts, a third shaft revolubly mounted in said frame, a pinion on said shaft for meshing with one of said gears, and means for operatively connecting said third shaft with said crank shaft to actuate each of said exhaust valves once during two revolutions of said crank shaft.

1,108,373. ENSILAGE-MACHINE. RAY KELLY and EDWIN F. SIBERT, Knobnoster, Mo. Filed Apr. 4, 1913. Serial No. 758,750. (Cl. 146—30.)



1. An ensilage cutter comprising a casing having communicating knife and fan chambers, the former provided with a hopper mouth, a shaft journaled in said casing, a knife fixed on the part of said shaft within the knife chamber, a fan fixed on said shaft within the fan chamber, means for delivering stalks endwise through the hopper mouth and longitudinal with the shaft, a conduit opening from the fan chamber, and common means for actuating the knife and fan.

2. An ensilage cutter comprising a cylindrical casing, a hopper opening into one end of said casing, a shaft revolubly mounted in said casing and concentric with said hopper, stationary knives in said chamber, a knife on said shaft adapted for coöperation with said stationary knife, a fan chamber opening into said cylindrical chamber, a fan rigidly mounted on said shaft within said fan chamber, a conduit opening from said fan chamber, and means for revolving said shaft.

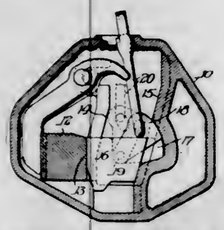
3. An ensilage cutter comprising an upright cylindrical casing, a hopper opening into the upper end of said casing, a bearing supported in the mouth of said hopper and concentric with said cylindrical casing, a fan casing opening from the lower end of said cylindrical casing, a bearing in said fan casing concentric with said cylindrical casing, a shaft revolubly mounted in said bearings, a knife rigidly mounted in said cylindrical casing, a plurality of knives on said shaft adapted for coöperation with said stationary knife, a fan rigidly mounted on said shaft within said fan casing, and means for revolving said shaft.

4. An ensilage cutter comprising an upright cylindrical casing, a hopper opening into the top of said casing, a fan casing opening from the bottom of said casing, a bearing supported across the mouth of said hopper and concentric with said cylindrical casing, a stationary knife in said cylindrical casing inclined upwardly and inwardly toward said bearing, a shaft revolubly mounted in said bearing and in said fan casing, a plu-

rality of inclined knives on said shaft for coöperating with said stationary inclined knife, a fan rigidly mounted on said shaft with said fan casing, and means for revolving said shaft.

5. An ensilage cutter comprising a fan casing, a hopper opening into said fan casing, a bearing supported across the mouth of said hopper and concentric therewith, a plurality of stationary knives on said bearing, a shaft revolubly mounted in said bearing and in said fan casing, a fan in said fan casing rigidly mounted on said shaft, a knife on each of said fan blades adapted for cooperation with said stationary knives, and means for revolving said shaft.

1,108,374. ANTICREEP FOR WEDGE-LOCKS. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. a Corporation of New Jersey. Filed Mar. 17, 1913. Serial No. 754,699. (Cl. 213—14.)

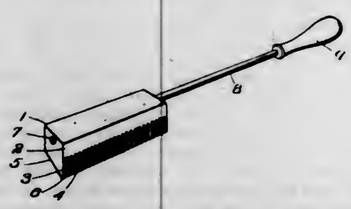


1. In a car coupler, the combination of a head having a curved anti-creeping surface, a swinging knuckle and a wedging locking block, a movable anti-creeping member on said lock, said member progressively co-acting with said curved surface on the coupler head in a plurality of positions of said lock to prevent creeping thereof, substantially as described.

2. In a car coupler, the combination of a head having a curved anti-creeping surface, a swinging knuckle and a wedging locking block, a swinging anti-creeping member associated with said lock, said member progressively engaging at different points on the curved anti-creeping surface in said head in a plurality of positions of said lock whereby creeping of the lock is prevented, substantially as described.

3. In a car coupler, the combination of a head, a swinging knuckle and a wedging lock, an anti-creeping latch pivoted to said lock, said latch coöperating with a curved surface on said head, the curve of said surface being concentric to the center of rotation of said latch, and means for swinging said latch prior to lifting said locks, substantially as described.

1,108,375. COMB. JOHN E. LAING, Kansas City, Mo. Filed Nov. 3, 1913. Serial No. 798,947. (Cl. 34—26.)



1. A comb comprising a body member having relatively wide and narrow opposite longitudinal faces, and slit transversely to form spaced tines with the slots extended into the body at the narrow free edge to form channels of graduated depth.

2. A comb comprising a heat retaining back having end apertures, a plurality of heat conducting tines integral with said back, and a handle adapted for insertion into either of said apertures.

3. A comb comprising a heat retaining body, a handle adapted for application to either end of said body, and a plurality of tines integral with said body having straight forward edges, inclined rear edges and slightly rounded points.

4. A comb comprising a heat retaining body, a non-heat conducting handle adapted for application to either end of said body, and a plurality of heat conducting tines integral with said body having straight forward edges and inclined rear edges.

5. A comb comprising a heat retaining body, having a plurality of equally spaced elongated channels along one side adapted to receive heat from said body, and a handle adapted for application to either end of said body.

1,108,376. SALT-CELLAR. JOSEPH G. LANNOYE, Detroit, Mich. Filed Dec. 10, 1913. Serial No. 805,702. (Cl. 65—45.)



1. As a new article of manufacture, a salt cellar consisting of two separable parts formed of flexible material, one of said parts having a channel whose walls extend each side of the wall of the other part providing a support therefor.

2. As a new article of manufacture, a salt cellar consisting of two parts formed of flexible material, one being insertible within the other and provided with an annular flange upon the exterior thereof, said other part being adapted to engage both the interior and exterior of the first part, and having a flange adapted to engage the said shoulder to detachably secure the parts together.

3. In a salt cellar, a flexible rubber body having perforations for the discharge of condiment and a filling opening, and a flexible rubber closure therefor having a channel whose walls extend each side of the wall about the opening providing a support therefor, the two parts having corresponding internal and external annular shoulders for detachably retaining the parts in assembled relation.

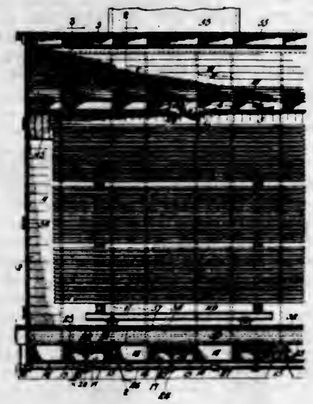
4. A salt cellar comprising a hollow elongated body of flexible material having a perforate end, the opposite end being open, and a closure for said open end formed of flexible material and provided with a channel adapted to receive the end of the body part and support the same upon both the interior and exterior, and means for releasably holding the parts in assembled relation.

5. A salt cellar comprising two separable parts formed of flexible material, one of said parts having perforations for the discharge of condiment, and an open end provided with an annular shoulder, the other of said parts having an annular channel to receive the end of the other part extending upon each side of the wall thereof to support said other part, and also having an annular flange for engaging the shoulder whereby said parts are releasably held in assembled relation.

[Claims 6 and 7 not printed in the Gazette.]

1,108,377. DRY-KILN FOR LUMBER, &c. JAMES M. LEAVER, Long Beach, Cal. Filed May 24, 1912. Serial No. 699,578. (Cl. 34—19.)

1. A dry kiln including a drying chamber, a duct or passage extending from the bottom to the top of the kiln and communicating at the bottom with the outside atmosphere and at the top with the interior of the kiln for conducting air from the outside atmopshere to the drying chamber and for introducing it into the same at the upper portion thereof, heating means located exteriorly of the drying chamber and arranged in the path of the said air for heating the same before the air from the outside reaches the drying chamber, a chimney or stack, and a suction duct or passage connected with the chimney or stack and extending to the lower portion of the drying chamber and communicating thereat with the interior thereof to produce a positive and continuous down draft in the drying chamber and convey away heated air and moisture therefrom to the chimney or stack.



2. A dry kiln including a drying chamber, means for conducting air from the outside atmosphere to the drying chamber and for introducing such air into the said chamber at the upper portion thereof, means for heating the said air before the same reaches the drying chamber, means contained within the kiln for mixing a portion of the hot moist air of the drying chamber with the air from the outside atmopshere before the latter enters the drying chamber, a chimney or stack, and a suction duct or passage connected with the chimney or stack and communicating with the drying chamber at the lower portion thereof to carry away the heated air and moisture and to produce a down draft through the drying chamber.

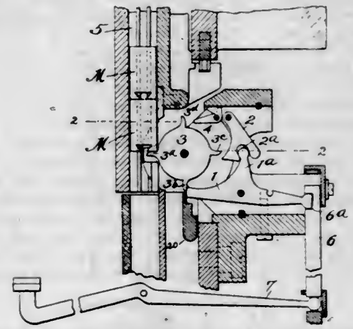
3. A dry kiln including a drying chamber, means for conducting air from the outside atmopshere to the drying chamber and for introducing such air into the said chamber at the upper portion thereof, means for heating the said air before the same reaches the drying chamber, means contained within the kiln for mixing a portion of the hot moist air of the drying chamber with the aid from the outside atmopshere before the latter enters the drying chamber, a chimney or stack, a suction duct or passage connected with the chimney or stack and communicating with the drying chamber at the lower portion thereof to carry away the heated air and moisture and to produce a down draft through the drying chamber, and dampers or valves for controlling the admission of outside air and the mixture of the hot moist air with the same and the escape of heated air and moisture through the chimney or stack.

4. A dry kiln including a drying chamber, vertical ducts or passages communicating at their lower ends with the outside atmopshere and connected at their upper ends with the upper portion of the drying chamber, heating means located in the vertical ducts or passages for causing an upward draft through the said ducts and for heating the outside air before the same enters the drying chamber, a chimney or stack, an outlet or suction duct or passage extending from the top to the bottom of the kiln and connected at the upper end with the chimney or stack and communicating at the lower end with the drying chamber at the lower portion thereof to produce a positive and continuous down draft through the drying chamber and carry away heated air and moisture from the same.

5. A dry kiln including a drying chamber, vertical ducts or passages communicating at their lower ends with the outside atmosphere and connected at their upper ends with the upper portion of the drying chamber, heating means located in the vertical ducts and for causing an upward draft through the said ducts and for heating the outside air before the same enters the drying chamber, a chimney or stack, means for introducing a portion of hot moist air of the drying chamber into the vertical ducts, a chimney or stack, and a suction duct connected with the chimney or stack and communicating with the drying chamber at the lower portion thereof to produce a down draft through the said chamber and to permit heated air and moisture to pass therefrom to the stack.

[Claims 6 to 31 not printed in the Gazette.]

1,108,378. ESCAPEMENT MECHANISM FOR LINE-CASTING MACHINES. ARTHUR W. LE BOEUF, Woonsocket, R. I., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1912. Serial No. 736,490. (Cl. 199—7.)



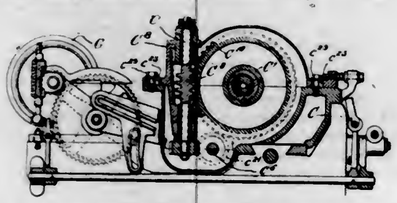
1. In escapement mechanism, the combination with a magazine adapted to contain small pieces of metal such as matrices and spacers, and a rotatable star wheel disposed so that its arms may project into said magazine, with a detent lever adapted for movement such as will carry it into or withdraw it from the path of the star wheel arms, a stop lever adapted for movement into and out of the path of said star wheel arms, said two levers being respectively provided with a notch, and a finger which projects into said notch whereby they are compelled to move reciprocally.

2. In escapement mechanism, the combination with a magazine adapted to contain small pieces of metal such as matrices and spacers, and a rotatable star wheel disposed so that its arms may project into said magazine, with a restraining detent lever adapted to engage one arm of the star wheel to prevent the rotation of the latter in one direction or to move out of the path of said arm to permit said rotation, a stop lever adapted to be moved into and out of the path of a star wheel arm reciprocally with respect to said detent lever, said stop lever carrying a pawl which is placed so as to project into the path of said star wheel arms, while said stop lever does not project into said path, and vice versa.

1,108,379. GEAR-GENERATOR. ERNEST J. LEES, Cleveland, Ohio, assignor to The Lees-Bradner Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 27, 1913. Serial No. 786,931. (Cl. 90—4.)

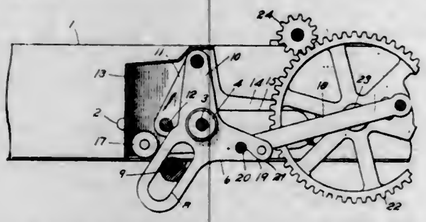
1. In a gear-generating machine, the combination of a main work-holding slide-member; a rotatable work-holding spindle mounted in said slide member; a compound gear comprising a worm-wheel element and a spur-gear element; a worm adapted to engage said worm-wheel and mounted so as to be movable in a direction transverse with respect to its axis; a spindle connected with said worm adapted to drive same; and a pinion movably mounted upon said spindle so as to be capable of being

brought into or out of mesh with said spur-gear element; and means for rotatably connecting said pinion with or disconnecting same from said spindle.



2. In a gear-generating machine, the combination of a main work-holding slide-member; a work-rotating spindle rotatably mounted in said slide member; a compound gear comprising a worm-wheel element and a spur-gear element; a housing slidably mounted upon said main work-holding slide-member, and having a direction of movement transverse with respect to the direction of sliding movement of said slide-member; a spindle mounted in said housing; a worm fixedly secured to said spindle and adapted to engage the worm-wheel element of said compound gear; a driving-spindle mounted in said main slide-member, and having its axis parallel with the axis of said work-rotating spindle; a screw-gear mounted upon said driving-spindle; a screw-gear mounted upon said worm-spindle and meshing with first-named screw-gear; a lug fixedly secured to or integral with said housing; a pinion slidably mounted upon said driving spindle and adapted to engage said spur-gear element of said compound gear; and means for rotatably connecting said pinion with said spindle and disconnecting same therefrom; said projection lying in the path of sliding movement of said pinion when said worm is in engagement with said worm-wheel.

1,108,380. MECHANICAL MOVEMENT. WINFIELD S. LIVENGOOD, Kansas City, Mo., assignor to Missouri Hay Press Company, Moberly, Mo., a Corporation of Missouri. Filed Nov. 18, 1912. Serial No. 731,994. (Cl. 74—14.)



1. In a mechanical movement, a driven member and an axle adapted for reciprocation in the same longitudinal plane, a transmission element pivotally mounted on the axle, and provided with arms, one of which is operatively connected with the driven member, a driver operatively connected with a second arm of said element, and a fulcrum member slidably engaged by a third arm of said element.

2. In a mechanical movement, the combination with a frame having slots in its opposite sides, of an axle adapted for guided travel in said slots, a crank member carried by the axle, driving and driven members eccentrically connected with said crank member, and a fulcrum adapted for sliding contact by the crank member, for the purpose set forth.

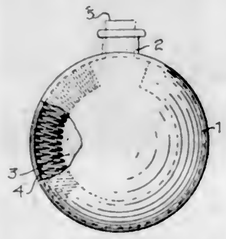
3. In a mechanical movement, the combination with a frame having parallel slots in its opposite sides and having guide rails adjacent said slots, an axle adapted for travel in said slots and having rollers contacting the guide rails, a crank member mounted on the axle, driving and driven members having eccentric link connection with the crank member, and a stationary fulcrum adapted for sliding contact by the crank member, for the purpose set forth.

4. In a mechanical movement, an axle adapted for reciprocation in a fixed path, a transmission element pivotally mounted on the axle and having radial arms, one provided with a radial slot, a stationary fulcrum inclosed by the slot, and driving and driven members having pivotal connection with other of said arms.

5. In a mechanical movement, the combination with driving and driven members and a fulcrum, of an oscillatory and reciprocatory element having a fulcrum engaging member and having eccentric connection with both the driving and driven members whereby the driven member is actuated by either the oscillatory or the reciprocatory movement of the element independently of each other or by both simultaneously.

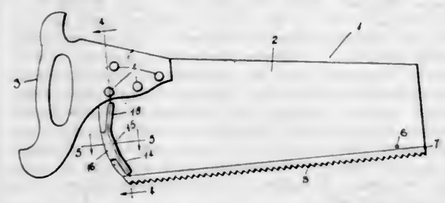
[Claim 6 not printed in the Gazette.]

1,108,381. FIRE-EXTINGUISHER. ROBERT L. MARTIN, Thomas, W. Va. Filed May 7, 1913. Serial No. 766,152. (Cl. 169—15.)



As a new article of manufacture, a fire extinguisher comprising a hollow shell of frangible material provided with a restricted opening, a coil spring insertible through such opening and normally in constant contact under tension throughout its entire length with the interior wall of such shell, said spring being of such a length as to terminate when in applied position to either side of the opening in close proximity thereto, and a diffusible compound insertible within the shell through the opening thereof and adapted to enter between the coils of the spring.

1,108,382. COMBINATION-SAW. ERIC MATSON, Miller, Ind. Filed Nov. 11, 1912. Serial No. 730,763. (Cl. 143—139.)



1. A saw blade having a grooved lower edge with a pin across the outer end of the groove and apertures in the side walls of the groove near its inner end; combined with a bit having a tongue to fit said groove, and the tongue having a hook at its outer end to engage the pin and an aperture through its inner end to register with those in said wall, and a clasp movably sprung onto the rear end of the saw blade and having a stud passing through the alined apertures.

2. A saw blade having a grooved lower edge with a pin across the outer end of the groove and apertures in the side walls of the groove near its inner end; combined with a bit having a tongue to fit said groove, the tongue having a hook at its outer end to engage the pin and an aperture through its inner end to register with those in said wall, and a clasp movably sprung onto the rear end of the saw blade and having a depending arm provided with an inturned stud to engage the alined apertures and an upper arm with means for fastening it to the saw blade.

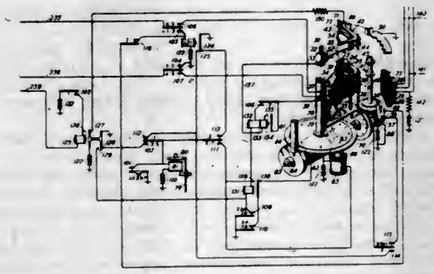
3. A saw blade having a grooved lower edge with a pin across the outer end of the groove and apertures in the side walls of the groove near its inner end; combined with a bit having a tongue to fit said groove, the tongue having a hook at its outer end to engage the pin and an aperture through its inner end to register with those in said wall, a clasp having a U-shaped body adapted to be sprung onto the rear end of the saw blade, the latter having an aperture near its upper edge, an arm depending from said clasp-body and carrying a stud engaging the alined apertures, and a second arm rising from said U-shaped body and provided with a hook adapted to engage the aperture in the blade.

4. The combination with a saw blade having an aperture through it near its lower edge and at its inner end, a bit fitting said edge and pierced with an aperture adapted to register with that in the blade, and connections between the outer ends of the blade and bit; of a clasp whose body is adapted to embrace the rear end of the saw blade, the latter being provided with recesses in its opposite faces to receive the clasp, and an arm depending from the latter and having a stud engaging the alined apertures.

5. The combination with a saw blade having an aperture through it near its lower edge and at its inner end, a bit fitting said edge and pierced with an aperture adapted to register with that in the blade, and connections between the outer ends of the blade and bit; of a clasp having a U-shaped body adapted to embrace the rear end of the saw blade, and upwardly and downwardly extending arms, the latter having a stud adapted to enter the alined apertures, the blade being provided with recesses to receive said body and arms whereby they will lie flush with its faces, and means for detachably securing the upper arm to the blade.

[Claim 6 not printed in the Gazette.]

1,108,383. TELEPHONE-EXCHANGE SYSTEM. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Dec. 4, 1909. Serial No. 531,369. (Cl. 179—20.)



1. The combination with a selector, of a test circuit therefor having a path of high resistance closed during the testing operation and a path of low resistance open during the testing operation, and means controlled by flow of current in said high resistance path for closing said low resistance path.

2. The combination with a selector, of a test circuit therefor having a path of high resistance including the winding of a relay and another path of low resistance including a normally open contact of said relay.

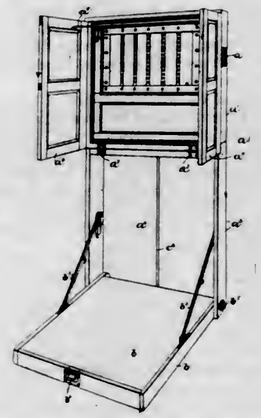
3. The combination with a selector, of a relay, a test circuit for said selector including a high resistance winding of said relay, and a low resistance normally open shunt of said high resistance winding controlled by said relay.

4. The combination with a selector, of a relay having high and low resistance windings, a test circuit for said selector having two paths including said high and low resistance windings respectively, and a contact controlled by said relay for closing the path through the low resistance winding.

5. The combination with a selector, of a relay, a test circuit for said selector having two paths, one of said paths being of high resistance and including a winding of said relay, and another of said paths being of low resistance and including a second winding and a normally open contact of said relay, means included in said circuit for governing the advance and return of said selector, and a switch arranged to close said high resistance path only during the advance movement of the selector.

[Claims 6 to 24 not printed in the Gazette.]

1,108,384. VOTING-MACHINE. JOHN MCTAMMANY, Spencer, Mass., assignor, by mesne assignments, to McTammany Ballot Company, Portland, Me., a Corporation of Maine. Filed Sept. 23, 1897. Serial No. 652,704. (Cl. 235—50.)



1. A voting machine comprising a record strip, a series of manually operable punches, each adapted to perforate the record strip, a device movable by the voter before voting, and means controlled by the said device for returning the operated punches to original position and holding them against perforating movement.

2. A voting machine comprising a record strip, a series of manually operated punches, each adapted to perforate the record strip, a movable platform, and means controlled by the platform for returning the operated punches to original position and holding them against inward movement.

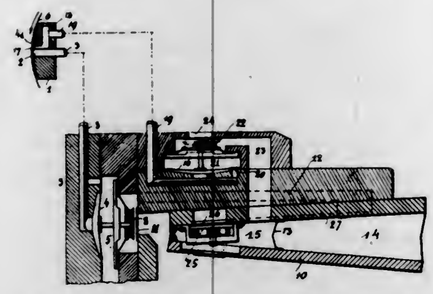
3. A voting machine comprising a series of actuators each adapted to be thrust inward by a voter, a sliding frame, means actuated thereby for simultaneously returning the actuators to original position and holding them against movement, and a movable platform connected to said frame to draw it to inoperative position for permitting the manipulation of the actuators.

4. A voting machine comprising a plurality of actuators, each consisting of a longitudinally movable pin and adapted to be moved by a voter, a series of rock-shafts for moving said pins or actuators longitudinally to original position, and voter-controlled means for simultaneously actuating all of said rock-shafts.

5. A voting machine comprising a series of actuators, each adapted to be manipulated by a voter, a series of rock-shafts for positively returning said actuators to original position, a sliding frame for simultaneously actuating said shafts and the voter-controlled platform connected to the frame.

[Claims 6 to 35 not printed in the Gazette.]

1,108,385. PNEUMATICALLY-OPERATED MUSICAL INSTRUMENT. FRIEDRICH MORITZ, Dortmund, Germany. Filed Nov. 17, 1911. Serial No. 660,918. (Cl. 84—160.)



1. The combination with a pair of wind chests; of a bellows provided with a partition dividing the bellows into two chambers, each of said chambers having a passage leading therefrom and communicating with the atmosphere, and valves controlling respective passages and being in turn controlled by pressure conditions in the respective wind chests.

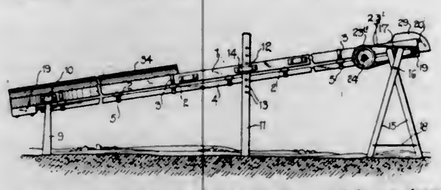
2. In a device of the kind described, a bellows provided with a partition dividing said bellows into a pair of chambers, said bellows being provided with passages leading from respective chambers to the atmosphere, valves controlling said passages, a lever pivoted intermediate its ends and carrying one of said valves, the remaining valve being movably connected to said lever for independent limited movement with relation to the lever, and means to control the action of said valves.

3. The combination with a pair of wind chests, of a bellows provided with a partition dividing the same into two chambers, separate passages connecting said wind chests with said chambers, said passages having connections leading to the atmosphere, and pneumatically operated valves for controlling the communication between said passages and said wind chests or the atmosphere.

4. The combination with a pair of wind chests, of a bellows provided with a partition dividing the same into two chambers, separate passages connecting said wind chests with said chambers, said passages having connections leading to the atmosphere, pneumatically operated valves for controlling the communication between said passages and said wind chests or the atmosphere, means forming a passage between said chambers, and a quick acting non-return valve adapted to control said passage.

5. A pneumatic instrument comprising in combination, a bellows provided with a partition dividing said bellows into a pair of chambers, means providing a passage connecting said chambers, a quick acting automatic non-return valve for controlling said passage, and means for varying the air tension in said chambers.

1,108,386. ENDLESS CONVEYER. REUBEN W. NORTON, Hastings, Nebr. Filed Mar. 2, 1914. Serial No. 822,021. (Cl. 193—4.)



1. A device of the class described comprising a frame including upper longitudinal bars, transverse bars connected to the lower faces of the longitudinal bars, lower longitudinal bars positioned against the lower faces of the transverse bars, transverse brace members secured to the lower faces of the lower bars and having their ends extending upwardly and secured to the transverse bars, an endless conveyer member mounted in the frame and having its stretches disposed above and below the transverse bars, and means carried by said transverse bars and said transverse brace members to prevent sagging of the stretches of the conveyer member.

2. A device of the class described comprising a frame including upper longitudinal bars, transverse bars secured against the lower faces of said upper bars, lower longitudinal bars positioned against the lower faces of the transverse members, transversely extending brace members secured against the lower edges of the lower longitudinal frame members, longitudinal brace strips connected to the upper faces of the transverse brace strips and to the upper faces of the transverse bars, an endless conveyer member mounted in the frame and extending around said transverse bars, said longitudinal brace strips being adapted to support the upper and lower stretches of the conveyer member to prevent the same from sagging, and means for supporting the frame in an elevated position.

1,108,387. PROCESS OF UTILIZING WASTE FERROUS LIQUORS. WILLIAM F. OESTERLE, Jr., CLIFFORD A. BEALE, and JOSEPH MCFETRIDGE, Vandergrift, Pa., assignors to American Sheet and Tin Plate Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 10, 1913. Serial No. 794,413. (Cl. 148—42.)

1. The process of utilizing spent ferrous liquor, which consists in oxidizing the ferrous to ferric salts, and adding said ferric salts to an acid cleaning solution, whereby polarization is prevented in the presence of a metal to be cleaned, substantially as described.

2. The process of utilizing spent ferrous liquor, which consists in neutralizing the free acid in said liquor, oxidizing the ferrous to ferric salts, and adding said ferric salts to an acid cleaning solution, whereby polarization is prevented in the presence of a metal to be cleaned, substantially as described.

3. The process of utilizing spent ferrous liquor, which consists in treating the liquor with ferric oxid to neutralize the free acid with the formation of a ferric salt, oxidizing the ferrous to ferric salts, and adding said ferric salts to an acid cleaning solution, whereby polarization is prevented in the presence of a metal to be cleaned, substantially as described.

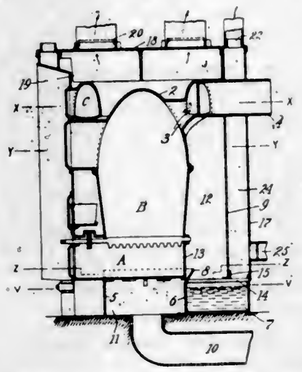
4. The process of utilizing spent ferrous liquor, which consists in neutralizing the free acid of said liquor, furnacing to oxidize the ferrous to ferric salts, digesting with water to dissolve the soluble salts, and adding said solution to an acid cleaning solution, whereby in the presence of a metal to be cleaned polarization is prevented, substantially as described.

5. The process of utilizing spent ferrous liquor, which consists in neutralizing the free acid of said liquor, furnacing to oxidize the ferrous to ferric salts, digesting with water to dissolve the soluble salts, filtering to separate the soluble from the insoluble salts, and adding the filtrate to an acid cleaning solution, whereby in the presence of a metal to be cleaned the ferric salts are reduced to ferrous salts and polarization is prevented, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

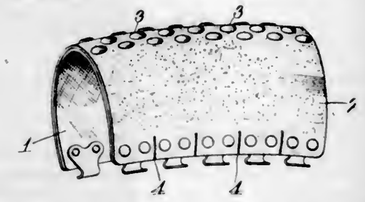
1,108,388. HOT-AIR FURNACE. ALLAN O'LOUGHLIN, St. Paul, Minn. Filed Aug. 29, 1908. Serial No. 450,844. (Cl. 126—99.)

1. A furnace comprising a fire pot, an inner shell outside the fire pot and spaced apart therefrom to form a hot air chamber, an outer shell extending around the inner shell and spaced apart therefrom to form a return chamber for the air, the hot air chamber having an inlet port near the bottom for the entrance of fresh air and an outlet at the top for the discharge of heated air to the rooms to be heated, and the return chamber having an inlet port at the top for the return of air from the rooms, and a water receptacle extending around under, the bottoms of both of said chambers, the wall constituting the inner shell terminating short of the top of the water receptacle so as to permit the returning air in the outer chamber to pass between the lower end of the shell and the top of the receptacle to the hot-air chamber.



2. A furnace comprising a fire box, interspaced concentric walls around the fire box forming inner and outer chambers, said chambers communicating at their lower ends and the inner chamber having an opening near the bottom and on the side adjacent to the fire pot for the entrance of air to be heated and the outer chamber having an inlet opening at the top for the return of air, a water receptacle below the lower ends of said chambers and in communication therewith, and a cap fitting over the top of the inner chamber, said cap being formed on its underside with a plurality of separated passages and with an outlet port leading from each of said passages and adapted to receive a pipe.

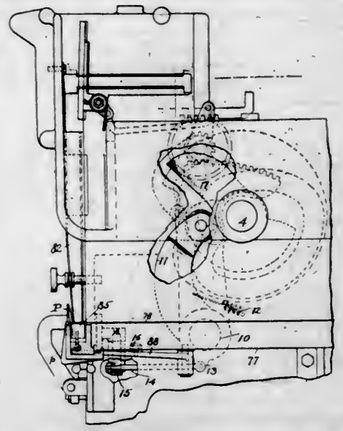
1,108,389. TIRE-BOOT. WILLIAM F. O'NEIL, Kansas City, Mo. Filed Mar. 21, 1914. Serial No. 826,379. (Cl. 152—24.)



In a pneumatic tire bottom composed of an inner layer of tire fabric previously stretched to the shape of a section of a tire, an outer layer of leather permanently cemented to said fabric, incisions in the longitudinal margins of said leather to permit it to be shaped to conform to said fabric, hooks riveted to the side margins of said boot, said rivets passing entirely through said leather and said fabric each hook being riveted at two or more places, and said rivets being in longitudinal alinement.

1,108,390. SLUG-EVENER FOR LINE-CASTING MACHINES. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 14, 1912. Serial No. 736,723. (Cl. 199—9.)

1. In a line casting machine, the combination of an inclined chute, adapted to receive a type slug into its upper end, a galley arranged to receive slugs discharged from the lower end of said chute, a forwardly movable slide, and an upwardly extended impact block secured to said slide and extending upward into the path of a slug discharged into the galley from said chute—said slide being without any restraint other than friction to forward movement when struck by a slug discharged onto the galley from said chute.



2. In a line casting machine, the combination of an inclined chute adapted to receive into its upper end a type slug, and a galley arranged to receive onto its floor slugs discharged from the lower delivery end of said chute, said galley having an upwardly extended front wall, with a forwardly slidable impact block arranged opposite the discharge end of said chute and normally occupying a position where it forms a part of the front wall of the galley, and means, which are disengaged from said impact block when the same is struck and moved forward by a slug delivered into the galley from said chute, for moving said impact block rearward to restore it to its normal position.

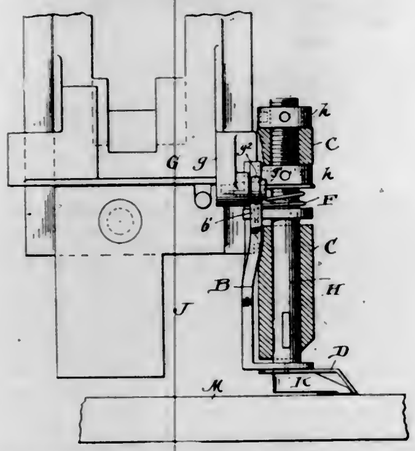
3. In a line casting machine, the combination of an inclined chute adapted to receive into its upper end a type slug, and a galley arranged to receive onto its floor slugs discharged from the lower delivery end of said chute,—said galley having an upwardly extended front wall, with an unrestrained forwardly movable slide having an upward projecting impact block fixed thereto and normally occupying a position in front of the delivery end of the chute and in alinement with the front wall of the galley, a device which normally holds said impact block in the normal position stated, means for moving said device forward to free the impact block from restraint, and means for moving said device rearward to restore said impact block to its normal position after it has been displaced by the impact from a slug discharged into the galley from said chute.

4. In a line casting machine, the combination of an inclined chute adapted to receive into its upper end a type slug, and a galley arranged to receive onto its floor slugs discharged from the lower delivery end of said chute,—said galley having an upwardly extended front wall, with an unrestrained forwardly movable slide having an upward projecting impact block fixed thereto and normally occupying a position in front of the delivery end of the chute and in alinement with the front wall of the galley, a downwardly projecting shoulder on said slide, a swinging arm projecting in front of said shoulder, means by which to move said arm forward to free said slide from restraint, and means to swing said arm rearward, whereby it will, by engaging the shoulder on said slide restore the impact block to its normal position.

5. In a line casting machine, the combination of an inclined chute adapted to receive into its upper end a type slug, and a galley arranged to receive onto its floor slugs discharged from the lower delivery end of said chute,—said galley having an upwardly extended front wall, with an unrestrained forwardly movable slide having an upward projecting impact block fixed thereto and normally

occupying a position in front of the delivery end of the chute and in alinement with the front wall of the galley, a downwardly projecting shoulder on said slide, a swinging arm projecting in front of said shoulder, a rotatable shaft carrying a cam, means operated by said cam for swinging said arm forward to free said slide from restraint so as to leave it free to move unrestrainedly forward when struck by a slug delivered onto the floor of the galley from said chute, and for subsequently swinging said arm rearward to restore said impact block to its normal position.

1,108,391. BOTTOM-TRIMMING-KNIFE WIPER. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1912. Serial No. 736,578. (Cl. 199—14.)



1. In a line casting machine, the combination with the movable mold, and a bottom trimming knife which engages the pot-side face of the mold and has its cutting edge in the form of the arc of a circle, with a knife wiper frame which is mounted to rock about an axis which is coincident with the center of the knife edge arc, a knife wiper secured to said frame for engagement with the knife edge, and means for rocking said frame from and then back to its normal position while the mold is in the slug-ejecting position.

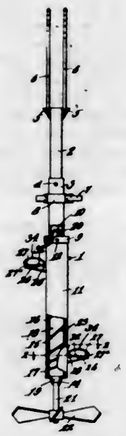
2. In a line casting machine, the combination with the movable mold, and a bottom trimming knife which engages the pot-side face of the mold and has its cutting edge in the form of the arc of a circle, with a knife wiper frame which is mounted to rock about an axis which is coincident with the center of the knife edge arc, a knife wiper secured to said frame for engagement with the knife edge,—the throw of the said wiper frame being such as to carry the wiper beyond and out of engagement with the knife edge at both ends thereof.

3. In a line casting machine, the combination with the movable mold, and a bottom trimming knife which engages the pot-side face of the mold and has its cutting edge in the form of the arc of a circle, with a knife wiper frame which is mounted to rock about an axis which is coincident with the center of the knife edge arc, and is also capable of endwise movement, a wiper finger secured to said frame for engagement with said knife edge, a spring acting on said frame to turn it in the knife wiping direction and to simultaneously move it endwise to cause the wiper to engage said knife edge, and means for turning said frame in the opposite direction to carry it back to its normal position.

4. In a line casting machine, the combination with a movable mold, and a bottom trimming knife which engages the pot-side face of the mold and has its cutting edge in the form of the arc of a circle, a cylindrical non-rotatable shank to which the knife is attached, which shank is concentric with the circle of which the knife edge is an arc, a wiper frame mounted upon said shank so as to be capable of turning and moving endwise thereon, a spring acting on said frame and tending to turn it in one direction and to move it forward, a knife wiper fixed to said frame and adapted by the forward movement thereof to closely contact with the knife edge, and means for swinging said frame in the opposite direction back to its normal position.

5. In a line casting machine, the combination with a movable mold, and a bottom trimming knife which engages the pot-side face of the mold and has its cutting edge in the form of the arc of a circle, a cylindrical non-rotatable shank to which the knife is attached, which shank is concentric with the circle of which the knife edge is an arc, a wiper frame which is mounted upon said shank and is capable of turning and of moving endwise thereon and is provided with a cam surface, a spring acting upon said wiper frame to turn it in one direction and to move it endwise forward, and a slide movable in a path at right angles to the path of the mold, and a roller carried by said frame and engaging with said cam surface.

1,108,392. SWIMMING DEVICE. JAMES H. PICKEN, Cambridge, Mass. Filed Feb. 12, 1913. Serial No. 748,005. (Cl. 9—18.)



1. In a device of the class described, a frame; a shaft journaled in the frame and a propeller operable by the shaft, the shaft having a thread, the pitch of which decreases in the direction of the propeller; and an actuating structure slidable upon the frame and engaged with the thread.

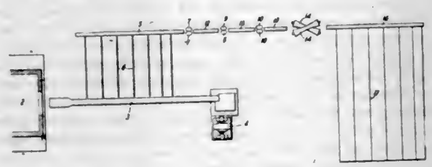
2. In a device of the class described, a frame; a shaft journaled in the frame and a propeller operable by the shaft, the shaft having a thread; a support mounted to slide on the frame; a shaft engaging the thread and held in the support for right line movement; a pedal held to the support for sliding movement with the support and mounted to tilt with respect to the last specified shaft; and interengaging elements upon the last specified shaft and the pedal for imparting right line movement to the shaft when the pedal is tilted, thereby to withdraw the said shaft from engagement with the thread.

3. In a device of the class described, a frame; a shaft journaled in the frame and a propeller operable by the shaft, the shaft having a thread the pitch of which decreases in the direction of the propeller; a support mounted to slide on the frame; a shaft engaging the thread and held in the support for right line movement; a pedal held to the support for sliding movement with the support and mounted to tilt with respect to the last specified shaft; and interengaging elements upon the last specified shaft and the pedal for imparting right line movement to said shaft, when the pedal is tilted, thereby to disengage the said shaft from the thread.

4. In a device of the class described, a frame; a shaft journaled in the frame and a propeller operable by the shaft; the shaft being provided with a thread; actuating structures slidable upon the frame and including opposed movable elements under the control of the operator and engaged with the thread and selectively disengageable from the thread for simultaneous reciprocation in opposite directions.

5. In a device of the class described, a frame; a shaft journaled on the frame and a propeller operable by the shaft, the shaft having a thread; an actuating structure slidable upon the frame and including a movable member operable at an angle to the axis of the shaft, the actuating structure including a tiltable pedal; and means for operatively connecting the pedal with the movable member whereby, when the pedal is tilted, the movable member will be brought into and out of engagement with the thread upon the shaft.

1,108,393. METHOD OF MAKING WELDED PIPES. FRANK L. PINKHAM, Wilkinsburg, Pa., assignor to The National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 8, 1913. Serial No. 747,020. (Cl. 78—87.)



1. The method of making welded pipes which consists in welding a pipe skelp to form a tubular blank having an external diameter materially greater than that of the finished pipe, and then rolling the tubular blank in the reducing pass of a rolling mill to thereby reduce the pipe to diameter.

2. The method of making welded pipes consisting in welding a pipe skelp to form a tubular blank having an external diameter materially greater and a wall thickness less than that of the finished pipe, and then rolling the tubular blank in the reducing pass of a rolling mill to thereby form the pipe to diameter and wall thickness.

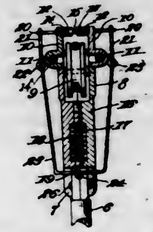
3. The method of making welded pipes consisting in welding a pipe skelp to form a tubular blank having internal and external diameters materially greater than those of the finished pipe, and then rolling the welded tubular blank in a rolling mill to thereby reduce the pipe to diameter.

4. The method of making welded pipes which consists in welding a pipe skelp to form a tubular blank having an external diameter materially greater than that of the finished pipe, then rolling the tubular blank in a series of the reducing passes of a rolling mill to thereby reduce the pipe to diameter, and then cross rolling and thereby straightening the rolled pipe.

5. The method of making welded pipes consisting in welding a pipe skelp to form a tubular blank having an external diameter materially greater than that of the finished pipe, then rolling the welded tubular blank to thereby form the pipe to diameter, and then cross rolling and thereby straightening the rolled pipe.

1,108,394. TROLLEY-GUARD. RALPH L. QUEEN, Millville, N. J. Filed July 10, 1913. Serial No. 778,369. (Cl. 191—80.)

1. A trolley guard including a harp, a wheel journaled in said harp, an elongated sleeve extending from said harp for engagement with a trolley pole, a cylinder depending from the bottom of the harp adjacent said sleeve, jaws hingedly mounted on the upper edges of said harp, a spring pressed block carried by each of said jaws having yielding engagement with each other, a plunger arranged in said cylinder, and a frame the opposite ends of which are engaged with the sides of said jaws, said frame having connection midway the ends thereof with the end of said plunger for the purpose specified.



2. A trolley guard including a harp, a wheel journaled in the harp, an elongated sleeve extending from the lower side thereof, a cylinder depending from the bottom side of said harp adjacent said sleeve, a plunger mounted in said cylinder, a spring encircling said plunger adapted for normally retaining the same within said cylinder, jaws hingedly mounted on the upped edges of said harp, a spring pressed block carried by each of said jaws, having yielding engagement with each other whereby to prevent the casual displacement of the trolley wire, and a frame the opposite ends of which are connected to the sides of said jaws for opening the same, said frame having engagement with the end of said plunger whereby to facilitate the simultaneous actuation of the jaws and the trolley pole.

3. A trolley guard including a pair of sides detachably connected together, comprising a harp, a sleeve extending from the bottom of said harp for sliding engagement with a trolley pole, a cylinder depending from said harp, a plunger mounted in said cylinder, a spring encircling said plunger adapted for normally retaining the same within said cylinder, jaws hingedly mounted on the upper edge of said harp, a spring pressed block carried by each of said jaws, having yielding engagement with each other whereby to prevent the casual displacement of the trolley wire, and a frame the opposite ends of which are connected to the sides of said jaws for opening the same, said frame having engagement with the end of said plunger whereby to facilitate the simultaneous actuation of the jaws and the trolley pole.

4. A trolley guard including a harp, a wheel journaled in the harp, an elongated sleeve formed on said harp, for engagement with a trolley pole, and extending at an inclination therefrom, jaws hingedly mounted on the upper edges of said harp, means for normally holding said jaws in a closed position, a spring pressed block carried by the upper inner face of each of said jaws, for engagement with each other, a cylinder depending from said harp, a spring pressed plunger mounted in said cylinder, and means connected with said jaws and extending in parallelism with said cylinder and having engagement with said plunger for simultaneously opening said jaws and operating said harp in a vertical plane.

5. A trolley guard including a pair of detachably connected sides, a wheel journaled between said sides adjacent the upper ends thereof, a jaw hingedly arranged on the upper edge of each of said sides, a segmental block carried by the upper inner face of each of said jaws, a spring pressed block mounted in each of said segmental blocks, means for normally holding said jaws in a closed position, said sides being formed to provide a sleeve, for engagement with a trolley pole, and a cylinder, a spring pressed plunger carried by said cylinder, and means in connection with each of said jaws and extending in parallelism with said harp and said cylinder and having engagement with said plunger for simultaneously operating said jaws and said trolley pole.

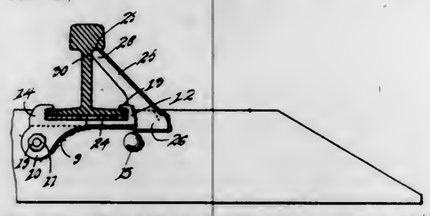
[Claims 6 and 7 not printed in the Gazette.]

1,108,395. MANUFACTURE OF PAINT FOR PROTECTING IRON, WOOD, AND THE LIKE FROM SEA GROWTHS. MARINUS RAPPARD, Den Helder, Netherlands. Filed Oct. 7, 1912. Serial No. 724,431. (Cl. 134—40.)

1. The herein described paint for iron, wood, and the like, comprising 3–6 parts of finely divided metal containing copper, 1–2.5 parts of dry shellac dissolved in 3–7 parts of alcohol, and 3.5–8.75 parts of a siccative oil.

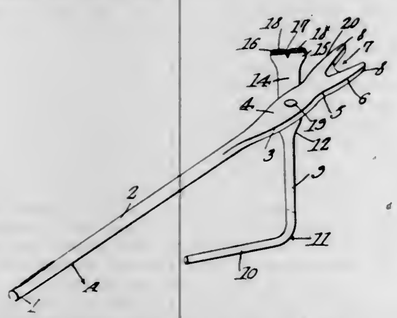
2. A paint containing finely-divided metal containing a high percentage of copper, mixed and suspended in an alcoholic solution of shellac and a siccative oil.

1,108,396. RAILROAD-TIE. JOHN J. REDKEY, Denver, Colo. Filed July 18, 1913. Serial No. 779,787. (Cl. 238—2.)



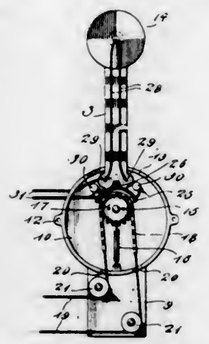
In combination with a metallic tie comprising a base portion, upstanding members formed at the lateral extremities of the base portion, said upstanding members having recesses adjacent their ends and apertures immediately beneath the recesses, flared portion formed on the lower wall of the recesses, clamping plates, depending ears formed integral with said clamping plates having apertures therein, flange engaging members formed at the lateral extremities of the clamping plates, bolts adapted to extend through the recesses of the ears and the recesses in the tie, springs surrounding the bolts at their threaded ends, and nuts threaded on the ends of the bolts and forming abutments for the ends of the springs.

1,108,397. WIRE-STRETCHER AND FENCE MENDER AND TIGHTENER. FRANCES NEWTON RENFROW, Yazoo City, Miss. Filed Aug. 18, 1913. Serial No. 785,420. (Cl. 39—54.)



A wire stretcher comprising a pair of primary and secondary members pivotally connected intermediate their ends, the primary member being substantially straight, one end of the primary member constituting a post engaging fulcrum and the other end of the primary member constituting a handle, the secondary member terminating at one end in a wire grip located opposite to the fulcrum end of the primary member and the other end of the secondary member terminating in an angularly disposed handle projecting toward the handle of the primary member and adapted to be grasped simultaneously therewith to swing the grip of the secondary member toward the fulcrum end of the primary member.

1,108,398. SIGNAL. OTTO W. SAMMT, Lake Park, Iowa. Filed Jan. 10, 1913. Serial No. 741,300. (Cl. 177—311.)



1. A signal of the character set forth comprising a casing, an arm pivotally mounted within the casing, a wheel rigid with the arm, an arcuate cap secured to the arm and extending over the said wheel, and a flexible driving member engaging the said wheel and disposed within the cap.

2. A signal of the character set forth comprising a casing, an arm pivotally mounted within and rising from the said casing, means connected with said arm within the casing for oscillating the same, a lamp carried by the upper end of the arm, spaced contact points on the arm near the lower end thereof, electrical conductors between the lamp and the said contact points, a fixed contact in the casing, a pair of contact points fixed in the casing at opposite sides of the first mentioned contact point, an electrical conductor leading from the first mentioned contact point, and a branched electrical conductor leading from the said pair of contact points, all of said points being arranged to be engaged by the contact points on the arm.

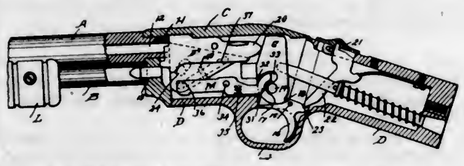
1,108,399. TIRE COMPOUND. HENRY SANTROCK, Kensington, Kans. Filed Jan. 31, 1914. Serial No. 815,807. (Cl. 134—17.5.)

1. A composition for the purpose described, comprising paper ground to a pulp, salt, wood alcohol, resin, comminuted dry leaves of trees, and water.

2. A composition for the purpose described, comprising printed paper ground to a pulp, a preservative, an antifreezing ingredient, powdered resin, comminuted dry leaves of trees, and water.

3. A compound for the purpose described, comprising paper pulp, salt, wood alcohol, resin, comminuted dry leaves of trees and water in substantially the following proportions: two pounds of printed paper ground to a pulp, one pint of salt, one pint of wood alcohol, ten ounces of resin ground to a powder, five ounces of leaves ground to a powder, and sufficient water to produce five gallons of the composition.

1,108,400. FIREARM. ARTHUR J. SAVAGE, Meriden, Conn., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 27, 1913. Serial No. 757,203. (Cl. 42—21.)

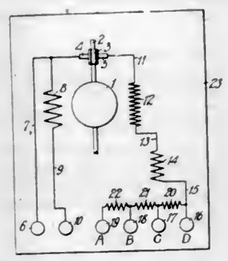


1. In a magazine fire arm, in combination with a vertically and longitudinally movable breech bolt; a hammer retracted in the rearward movement of the breech bolt, a hammer lock holding the hammer in retracted position, and releasing means actuated in the forward and upward movement of the breech bolt to disengage the hammer lock from the hammer; said releasing means being carried by the breech bolt.

2. In a magazine fire arm, in combination with a vertically and longitudinally movable breech bolt; a hammer retracted in the rearward movement of the breech bolt, a hammer lock holding the hammer in retracted position, and releasing means actuated in the forward and upward movement of the breech bolt to disengage the hammer lock from the hammer; said hammer lock comprising a pivoted member provided at one end with a finger disposed for engagement with the hammer adjacent to an opening in the hammer arranged to accommodate the finger when out of engagement with the hammer; said member being provided at the other end with a lateral projection; and said releasing means including a projecting member adapted to be engaged with said lateral projection upon said member.

3. In a magazine fire arm, in combination with a vertically and longitudinally movable breech bolt, a hammer retracted in the rearward movement of the breech bolt, a hammer lock holding the hammer in retracted position, and releasing means actuated in the forward and upward movement of the breech bolt to disengage the hammer lock from the hammer; said hammer lock comprising a pivoted member provided at one end with a finger disposed for engagement with the hammer adjacent to an opening in the hammer arranged to accommodate the finger when out of engagement with the hammer; said member being provided at the other end with a lateral projection; and said releasing means including a projecting member adapted to be engaged with said lateral projection upon said member; said finger being curved and the opening in the hammer being similarly curved.

1,108,401. ELECTRIC TEST-METER. GUSTAVE A. SCHEEFFER, Indianapolis, Ind., assignor, by mesne assignments, to Roller Smith Co., New York, N. Y., a Corporation of New York. Filed Oct. 21, 1910. Serial No. 588,265. (Cl. 171—268.)



1. In an electric test meter, the combination of a rotatable armature, a main series field coil, an auxiliary pressure field coil, a controlling resistance in circuit with the auxiliary field coil, a plurality of binding posts for terminating the pressure circuit of the meter, and fixed resistances between the binding posts to produce rates of rotation of the armature corresponding to different meters to be tested.

2. In an electric test meter, the combination of a rotatable armature, a field coil, a plurality of binding posts for terminating the pressure circuit of the meter, and fixed resistances between the binding posts to produce operating conditions of the armature corresponding to different meters to be tested.

3. In an electric test meter, the combination of a rotatable armature, a field coil, resistances connected with the pressure circuit of the meter for producing operating conditions of the armature corresponding to different meters to be tested, and terminals for such resistances.

4. In an electric test meter, the combination of a rotatable armature, a field coil, a plurality of binding posts for terminating the pressure circuit of the meter, fixed resistances between the binding posts to produce operating conditions of the armature corresponding to different meters to be tested, and devices associated with the binding posts for indicating the corresponding meters to be tested.

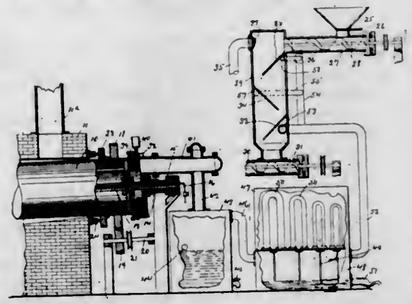
5. In an electric test meter, the combination of a rotatable armature, a field coil, resistances connected with the pressure circuit of the meter for producing operating conditions of the armature corresponding to different meters to be tested, terminals for such resistances, and devices associated with the terminals for indicating the meters to be tested corresponding to the different steps.

[Claims 6 to 11 not printed in the Gazette.]

1,108,402. USE OF RAWHIDE. PAUL SCHMITZ, Cologne-Niehl, Germany, assignor to Wilhelm Jungbecker, Aachen, Germany. Filed June 20, 1913. Serial No. 774,839. (Cl. 244—3.)

An improved balloon envelop made of raw hide dried and pressed so that it adopts the required form, substantially as described and shown and for the purpose set forth.

1,108,403. DESTRUCTIVE DISTILLATION OF WOOD. STEWART E. SEAMAN, Brooklyn, N. Y. Filed Dec. 27, 1913. Serial No. 809,112. (Cl. 203—6.)



1. The herein described improvement in the art of destructive distillation of wood and the like, which consists in treating the charge in a sealed retort from which air is excluded, and eliminating the air from the charge before it reaches the retort by forcing the cool uncondensed gases generated in the retort through the charge before it enters the retort.

2. The herein described improvement in the art of the destructive distillation of wood and the like, which consists in heating the charge in a suitable retort, drawing off the gaseous products of the charge from the retort, condensing said gaseous products, forcing the cool uncondensed gases of the condenser through the charge before the latter enters the retort, thereby expelling the air from the charge and delivering the mixed gas and air so obtained as a fuel beneath the retort.

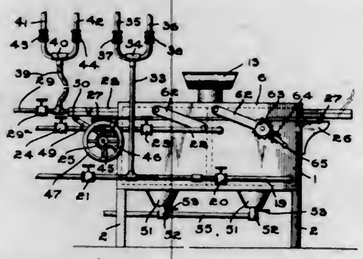
3. The herein described improvement in the art of the destructive distillation of wood and the like, which consists in feeding a charge through an air tight casing into a suitable retort, condensing the gaseous products of the retort, discharging the cool uncondensed gases from the condenser into the aforesaid air tight casing, and withdrawing the air and gases from said casing and discharging them as fuel beneath the retort.

4. The improvement in the art of the destructive distillation of wood and the like, which consists in feeding a charge to a retort through an essentially air tight casing, drawing off the gaseous products of the charge from said retort, then trapping said gaseous products to collect the tar, then condensing said gaseous products, next drawing the cool uncondensed gases through the

aforesaid feed casing thereby forcing the air from the charge, and finally delivering the mingled air and gas collected from said casing to a point below the retort as a fuel.

5. The herein described improvement in the art of the destructive distillation of wood and the like, which consists in feeding the finely divided charge to the retort from an essentially air tight casing, condensing the gaseous products of the retort, and forcing the cool uncondensed gases through the aforesaid air tight casing, thereby driving out the excess of air from the charge.

1,108,404. APPARATUS FOR PASTEURIZING AND COOLING MILK. SAMUEL SHAPIRO, Philadelphia, Pa. Filed Aug. 29, 1913. Serial No. 787,281. (Cl. 210—20.)



1. An apparatus of the character described, comprising a receptacle, heating and cooling coils in the receptacle, one coil located inside the other, and means for moving one of said coils, substantially as described.

2. An apparatus of the character described, comprising a receptacle, two heating and cooling coils in the receptacle, one coil located inside the other, parallel bars supporting one of said coils and movable on top of the receptacle, means on one end of the receptacle for reciprocating said bars, the inlet and outlet pipes of said last-mentioned coil located parallel to each other and supported on said bars, substantially as described.

3. In an apparatus of the character described, the combination with a receptacle, a stationary coil within the receptacle, a movable coil within the receptacle, means for directing fluid into said coils, reciprocating bars supporting said movable coil, and means for reciprocating the bars, substantially as described.

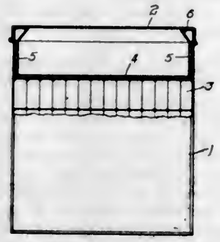
4. In an apparatus of the character described, the combination with a tank divided into a plurality of receptacles, of relatively large stationary coils in the said receptacles, reciprocating bars mounted in the upper portions of the receptacles, relatively small coils supported by said bars and located within the relatively large coils, and means for supplying heating and cooling agents to said coils, substantially as described.

5. In an apparatus of the character described, the combination with a tank divided into a plurality of receptacles, of relatively large stationary coils in the said receptacles, reciprocating bars mounted in the upper portions of the receptacles, relatively small coils supported by said bars and located within the relatively large coils, means for supplying heating and cooling agents to said coils, brackets on the ends of the apparatus, rollers on said brackets supporting the bars, and means at one end of the receptacles for reciprocating the bars, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,108,405. FILLER FOR CRACKER AND CAKE BOXES. FRANK A. SHUNK, Streator, Ill., assignor to Sawyer Biscuit Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,260. (Cl. 229—43.)

A box filler comprising a corrugated board scored along two parallel lines extending across the corrugations between the ends of the board at a distance apart less than one-half the length of the board, the ends of the board

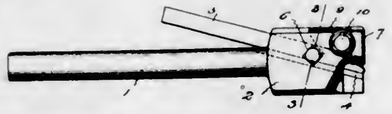


being bent laterally toward each other so as to bring their free edges into engagement with each other.

1,108,406. METHOD OF DRESSING MORTAR MADE OF LIME AND SAND. CARL SIEDENTOPF, Magdeburg, Germany. Filed Nov. 24, 1913. Serial No. 802,761. (Cl. 83—73.)

An improved method for dressing mortar made of lime and sand consisting in admixing with the fresh mixture of lime and sand, mortar from a previous dressing which is hot by reason of chemical action, for the purpose of substituting for the heat from slaking which is usually absorbed by the sand admixed with the lime the heat of the mortar already dressed, substantially as described and shown and for the purpose set forth.

1,108,407. POINTING-TOOL. HENRY L. SMITH, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 17, 1914. Serial No. 825,225. (Cl. 10—21.)



1. A tool for a screw machine having a supporting shank, a head at one end of the shank, said head having a transverse mortise in the front end and a blade opening obliquely through it from the front end to the back end, a blade extending obliquely to the axis of the head through the opening therein, means for clamping the blade in place, a centering and backing block in the transverse mortise in the front end of the head and opposite the cutting end of the blade, and means for clamping the said block in place.

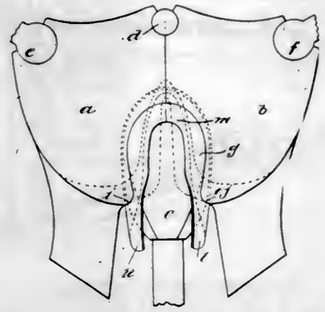
2. A tool for a screw machine having a supporting shank, a head with an oblique hole at one end of the shank, a grooved plug set in the hole obliquely through the head, a blade fitting the groove in said plug, and means for clamping the blade in said groove.

3. A tool for a screw machine having a supporting shank, a head with an oblique hole at one end of the shank, a grooved plug driven into the hole obliquely through the head, a blade fitting the groove in said plug, a screw for holding the blade in said groove, a backing block movable axially in the front end of the head opposite the cutting end of the blade, and a screw for clamping the backing block in place.

1,108,408. PROCESS OF TREATING TEXTILE AND OTHER POROUS FABRICS. FREDERIC J. STAUNTON, Milwaukee, Wis. Filed July 30, 1913. Serial No. 782,104. (Cl. 134—11.)

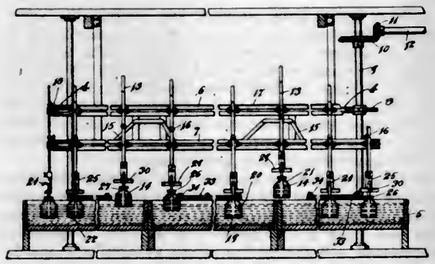
The process of treating textile and other porous fabrics whereby the porous nature thereof is retained and preserved, consisting of applying thereto a liquid compound composed of a base pigment, and a binding medium for the pigment, combined with an amount of thinning material of not less than thirty-two per cent. of the entire compound.

1,108,409. METHOD OF MOLDING COUNTERS. JOHN H. STEWART, Lynn, Mass. Filed Apr. 25, 1911. Serial No. 623,276. (Cl. 12—66.)



The improvement in the art of molding counters for boots and shoes to furnish counters having flangeless, flexible tips, which consists in gripping the counter blank at its rear bent portion only, leaving the tips unconfined, and so holding the blank that an edge of such gripped portion projects beyond the gripping means, and bending such edge sharply over to form a permanent flange at the gripped part of the counter.

1,108,410. ELECTROPLATING APPARATUS. ELMER B. STONE, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 9, 1913. Serial No. 805,526. (Cl. 204—11.)



1. In an electroplating apparatus including a vat within which the articles to be plated are received, a carrier, a holder supported by the carrier, said holder having a plural number of sides upon which the articles to be plated are supported, means for moving the carrier, and means for turning the holder within the vat.

2. In an electroplating apparatus including a plural number of vats within which the articles to be plated are received, a carrier, means for operating the carrier, a holder supported by the carrier, said holder having a plural number of sides upon which the articles to be plated are supported, means for turning the holders within the vats, means for moving the holders out of the vats, and means for moving the holders into said vats.

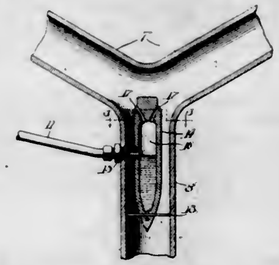
3. In an electroplating apparatus including a vat to receive the articles to be plated, a carrier having traveling movement over said vat, means for operating the carrier, a stem longitudinally movable on the carrier, a holder suspended from the end of said stem, said holder having a plural number of sides upon which the articles to be plated are supported, and means for rotating the holder.

4. In an electroplating apparatus including a vat within which the articles to be plated are received, a carrier having traveling movement over said vat, means for operating the carrier, a stem supported by said carrier, means for imparting longitudinal movement to said stem, a holder supported at the lower end of the stem and rotatable independently thereof, and means for rotating the holder.

5. In an electroplating apparatus including a number of vats, a carrier mounted for traveling movement over said vats, a stem supported by said carrier, means for imparting longitudinal movement to said stem, a holder rotatably supported at the lower end of the stem, a sprocket wheel secured to said holder, and a series of sprocket chains fixed against movement and located to engage said sprocket wheel when the latter is traveling horizontally and to be disengaged therefrom when the holder is traveling vertically.

[Claims 6 to 11 not printed in the Gazette.]

1,108,411. PRIMER FOR INTERNAL-COMBUSTION ENGINES. CHARLES BENTON STRANG and JOHN F. STRANG, Lindenwood, Ill. Filed Feb. 6, 1913. Serial No. 746,556. (Cl. 123—180.)



1. A primer for internal combustion engines adapted to charge an explosive mixture passing through the main intake section of an engine manifold, with fuel gas, the primer having discharge openings located at points adjacent the divergence of said section to several cylinders, said openings adapted to deliver a discharge at an angle conforming with and in the direction of said divergence.

2. A primer for internal combustion engines comprising a distributing head located within the main intake section of an engine manifold, the distributing head being a fuel receptacle formed with a stream line body and having openings adjacent its top end, and means for admitting fuel and air to the receptacle.

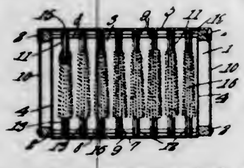
3. A primer for internal combustion engines comprising a distributing head located within the main intake section of an engine manifold and said head having discharge openings therein, a fuel supply tank having a connection therewith, an auxiliary fuel pocket located on said connection between the tank and distributing head, a valve for controlling the supply of fuel to said distributing head, and an air valve adapted to communicate with the distributing head.

4. A primer for internal combustion engines comprising a receptacle located within the main section of an engine manifold, the receptacle having openings communicating with the manifold, means for admitting fuel to the receptacle, and an air valve communicating with the receptacle, the air and fuel adapted to be drawn from said receptacle in the form of a vapor, by the suction of the engine.

1,108,412. SEED-CORN CRATE AND DRIER. OLE G. VOLD, Dawson, Minn. Filed Mar. 17, 1914. Serial No. 825,395. (Cl. 34—26.)

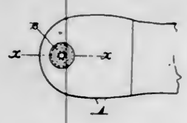
1. In a device of the character described, a container, racks removably disposed therein and each embodying upper and lower apertured rails, and pins insertible

through the apertures of the rails of each rack to engage the ends of ears of corn.



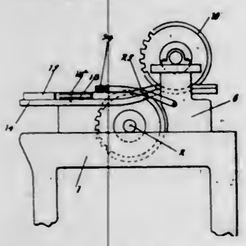
2. In a device of the character described, a container including end plates having upper and lower inturned notched flanges, racks each comprising upper and lower apertured rails and end pieces connecting the rails, the end pieces of the racks engaging the notches of the said flanges, and pins insertible through the apertures of the racks and engageable with the ends of the ears of corn.

1,108,413. HEEL-PLATE. JOHN F. WAIDELICH, Lansing, Mich. Filed Jan. 23, 1914. Serial No. 813,914. (Cl. 36—75.)



A heel plate composed of a metallic member, provided with an aperture extending therethrough, the aperture being smaller adjacent the inner face of the member forming a shoulder or seat, said member being provided with an annular channel in its inner face surrounding said aperture, and the peripheral edge of the inner face being beveled, for the purpose described.

1,108,414. CUTTING-MACHINE. WILLIAM H. WELLS, Norwich, N. Y. Filed Feb. 19, 1913. Serial No. 749,350. (Cl. 144—204.)

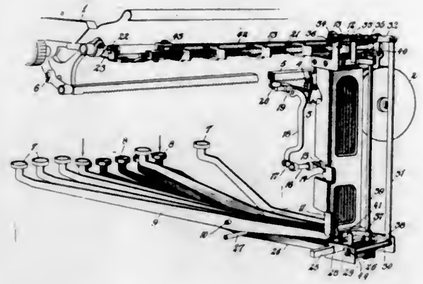


1. A machine of the character described having a plurality of cutting members, a feed-table lying between the cutting members and curved to present one surface of an article to be cut to one of the cutting members for a certain extent of cutting and another portion of the article to the other cutting member, and stops limiting the extent of the cutting by each cutting member.

2. A machine of the character described, having in combination with upper and lower cutting members, a table having an upward bend between the cutting members lifting the article to be cut at a given time out of contact with one cutting member and feeding it to the other cutting member.

1,108,415. TYPE-WRITING MACHINE. LESTER A. WERNERY, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 29, 1913. Serial No. 770,576. (Cl. 197—177.)

1. In a typewriting machine, the combination with a carriage, of a rack bar on said carriage, stops on said rack bar, a counter-stop for said carriage, a pivot on which said rack bar swings, so that it normally holds the stops thereon out of the path of said counter-stop, selectively operable keys, and means operated by the keys for depressing said rack bar at a selected column in the travel of the carriage corresponding to the selector key for causing said stops to be intercepted by the counter-stop.



2. In a typewriting machine, the combination with a carriage and a rack bar thereon, of stops settable on said rack bar, counter-stops on the frame of the typewriter, a spring normally holding said rack bar to carry its stops clear of said counter-stops, a wheel turned by the passing stops during the travel of the carriage, a selector bar moved by said wheel, and column-selecting keys to operate the counter-stops and controlled by said selector bar.

3. In a typewriting machine, the combination with a carriage and rack bar thereon, of stops settable on said rack bar, a pivot on which said rack bar turns, a counter-stop on the frame of the typewriter, means normally holding said rack bar so that the stops thereon are out of the range of the counter-stop, column-selecting keys normally incompletely operable, a selector bar for determining when a column key shall become completely operable, and a wheel turned by said rack stops for operating said selector bar.

4. In a typewriting machine, the combination with a carriage and a rack bar thereon, of stops settable on said rack bar, a pivot on which said rack bar turns, a counter-stop on the frame of the machine, means for holding said rack bar to keep its stops from engaging the counter-stop, keys adapted to move said rack bar to carry the stops thereon into the path of the counter-stop, and a selector bar moved by said stops for determining which of said keys shall become effective at a given time.

5. In a typewriting machine, the combination with a carriage and a rack bar pivoted thereon, of stops settable on said rack bar, a counter-stop out of the path of which said rack stops are normally held, a series of column-selecting keys, a universal bar moved by said column-selecting keys, and a selector bar operated by said stops for determining what column-selecting key shall become effective on said universal bar to make said rack stops effective.

[Claims 6 to 30 not printed in the Gazette.]

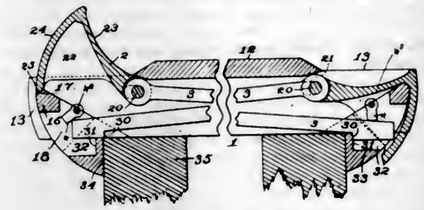
1,108,416. LOGGING-BUNK. HERBERT L. WILLIAMS, Everett, Wash., assignor of one-half to Percy E. Ames, Everett, Wash. Filed May 18, 1914. Serial No. 839,223. (Cl. 105—173.)

1. A logging bunk composed of two diverging webs joined along one edge and forming a sharp apex, the base of said angle being open.

2. A logging bunk composed of two diverging plates or webs joined along one edge and forming a sharp apex, said webs being slightly convexed outwardly.

3. A logging bunk composed of two diverging webs joined along one edge, the separated edges of said webs being disconnected and having outwardly extending bearing flanges.

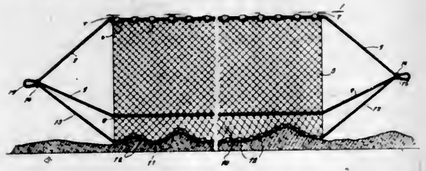
4. A logging bunk composed of two diverging webs connected along one edge, said webs being convexed outwardly and terminating at the apex in flat planes.



5. A logging bunk having a cross section of an inverted V-shape terminating in a sharp upper edge.

[Claims 6 to 17 not printed in the Gazette.]

1,108,417. DRAG-SEINE. ERNEST E. WOODFIELD, Astoria, Oreg. Filed Apr. 24, 1914. Serial No. 834,085. (Cl. 43—9.)



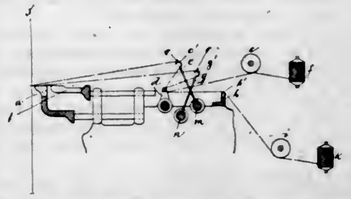
1. A drag-seine comprising a body portion, a plurality of longitudinally extending lines connected with the body portion and spaced laterally for a substantial distance with the lower part of said body portion extending downwardly beyond the lower line for a substantial distance to provide a bottom-engaging apron, and a line secured to the lower longitudinal edge of the bottom-engaging apron and being substantially longer than the first named lines.

2. A drag-seine comprising a body portion, a plurality of laterally spaced longitudinally extending lines connected with the body portion, a permanently longitudinally loose apron depending from the body portion and extending downwardly beyond the lower line for a substantial distance, and a longitudinal line connected with the apron near its lower longitudinal edge and having a substantially greater length than the first named lines.

3. A drag-seine comprising a body portion, a float-carrying longitudinal line secured to the body portion near its upper longitudinal edge and extending beyond the opposite ends thereof for a substantial distance, an intermediate longitudinal line secured to the body portion at a point spaced a substantial distance from the float-carrying line and extending beyond the opposite ends of the body portion for a substantial distance and being of substantially the same length as the float-carrying line with its ends secured to the ends thereof, a longitudinally lose apron depending from the body portion and extending downwardly beyond the lower line for a substantial distance, and a sinker-carrying line substantially longer than either of the first named lines and secured to the apron near the free edge thereof with its opposite ends secured to the ends of the first named lines.

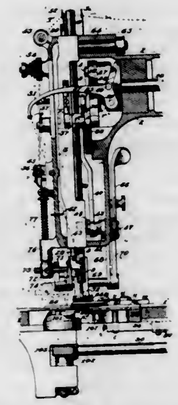
1,108,418. TAKE-UP MECHANISM FOR EMBROIDERING-MACHINES. ROBERT ZAHN, Plauen, Germany; Alfred Rietzsch administrator of said Zahn, deceased. Filed Jan. 25, 1913. Serial No. 744,206. (Cl. 112—7.)

1. In an embroidering machine, the combination with groups of needles for carrying different threads, of a secondary take up mechanism and groups of primary take up mechanisms, one for each group of needles, said primary take up mechanisms comprising spindles arranged eccentrically parallel and adjacent to one another and primary take up levers secured to said spindles, whereby the different groups of primary take up mechanisms during operation without interference can overlap one another.



2. In an embroidering machine, the combination with groups of needles for carrying different threads, of a secondary take up mechanism and groups of primary take up mechanisms, one for each group of needles, said primary take up mechanisms comprising spindles arranged eccentrically parallel and adjacent to one another and primary take up levers secured to said spindles and each having a rounded hook-shaped head and lateral guide fingers on said head.

1,108,419. FOLDING ATTACHMENT FOR SEWING-MACHINES. DAGOBERT ZEISER, Troy, N. Y. Original application filed Aug. 14, 1905, Serial No. 274,069. Divided and this application filed Sept. 20, 1907. Serial No. 393,766. (Cl. 112—24.)



1. In combination, a folding mechanism for sewing machines comprising a bed plate, a former having a body part mounted on the bed plate and a transverse tongue part, the edge of which latter is arranged parallel with the direction of feed and has a recess forming relatively thin upper and lower blades, of an upper vertically movable presser jaw having a ledge along one edge to form a folding shoulder substantially parallel with the edge of the upper former blade; a lower folding jaw positioned on the bed plate to the side of the body part of the former, said lower jaw being fixed against vertical movement but laterally adjustable relative to the vertically movable jaw, and said lower jaw having a ledge along one edge to form a folding shoulder to coöperate with the folding shoulder of the moving jaw, a transversely movable rammer suitably guided on the bed plate, said rammer being adapted in its movement to force the material into the space between the former blades and the shoulders of said jaws having recesses adapted to register with each other and form a guide way for the rammer.

2. In a folding mechanism for sewing machines, the combination of a stationary former, a movable presser foot having an integral folding jaw, an auxiliary stationary folding jaw, the said jaws being adapted to coöperate with opposite blades of said former in bending the plies

of fabric over the edge of the blades, means for laterally adjusting the stationary jaw relative to the jaw of the presser foot, and means movable betwen the jaws for bending the plies of fabric between the same, said last mentioned means being also adjustable.

3. In a folding mechanism for sewing machines, the combination of a stationary former, a stationary folding jaw, a movable folding jaw, a rammer for turning the folded edges of the plies in against the insides of the blades of the former, and means for adjusting the stationary folding jaw in a line parallel to the longitudinal axis of the rammer, and said jaws having a guide way for the rammer.

4. In a folding mechanism for sewing machines, the combination of a supporting table or bed, of a stationary former with means slidably connecting the same to the bed whereby it may be adjusted laterally, a stationary folding jaw adjustably mounted on said bed, a movable folding jaw, and a reciprocating rammer for inturning the folded edges of the plies against the insides of the blades of the former, the said jaws forming therebetween a guide way for the rammer.

5. In a folding mechanism for sewing machines, the combination, of a stationary former, a stationary folding jaw, a movable folding jaw, and an end-wise reversible reciprocating rammer for turning the folded edges of the plies in against the insides of the former blades, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

1,108,420. SKEWER-STEP MOUNTING. CHARLES A. ALLEN, Linwood, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed May 7, 1910, Serial No. 559,911. Renewed July 9, 1914. Serial No. 850,039. (Cl. 242—131.)



1. The combination in a creel, of a metallic creel-plate provided with a recess suited for holding a skewer-step, and a latch movably secured to said plate and normally overlying said recess and the margin of the step contained therein.

2. The combination of a sheet metal creel-plate provided with a perforation therethrough, a skewer step of vitreous material in said perforation and a latch device movably secured to said plate and adapted to be moved laterally into retaining engagement with said step to confine the same to said perforation.

3. The combination in a creel, of a metallic creel-plate having a perforation, a skewer-step formed to seat on the margin of said perforation and a latch adapted to overlie the margin of said skewer-step.

4. The combination in a creel, of a metallic creel-plate recessed by depressing a portion thereof, a skewer-step seated on said depressed portion and a latch holding said step in the recess.

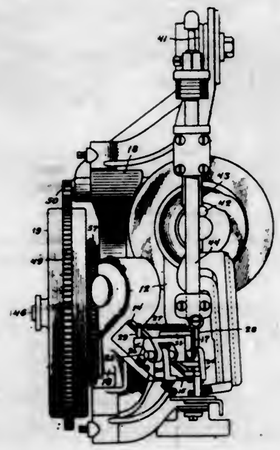
5. The combination in a creel, of a metallic creel-plate formed to provide a seat for a skewer-step, a latch for confining the step to its seat and a detent means on said latch for removably holding said latch in its step-confining position.

[Claim 6 not printed in the Gazette.]

1,108,421. MACHINE FOR INSERTING FASTENERS. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, South Boston, Mass., a Corporation of New Jersey. Filed Jan. 28, 1909. Serial No. 474,668. (Cl. 1—18.)

1. A machine of the character described comprising picking means movable about an axis and movable lengthwise of said axis, a tack-delivering device and means for effecting a relative reciprocation of said device and said picking means.

2. A machine of the character described comprising picking means movable about an axis and movable lengthwise of the axis, a stop for limiting rotary movement, a stop for limiting lengthwise movement, yielding means for holding the picking means normally against both stops, a tack-delivering device and means for effecting relative reciprocation of said picking means and said tack-delivering device.



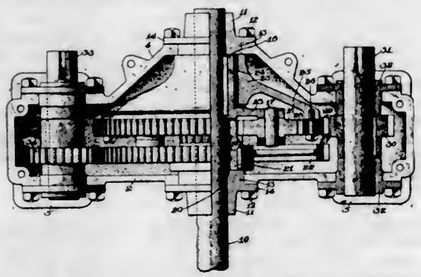
3. A machine of the character described comprising a tack race, a pick arranged transversely of the race, means for effecting a relative movement of the race and pick transversely of the race to separate the end tack in the race, means for mounting said pick to move about an axis transverse to the tack race, and means for moving said pick about said axis to release a separated tack.

4. A machine of the character described comprising a tack race, a driver, and a tack pick movable about an axis extending transversely of the race and driver and movable lengthwise of said axis.

5. A machine of the character described comprising a movable tack pick, a movable tack race for supporting a tack in position to be fed by the pick, and means actuated by the race for moving the pick.

[Claims 6 to 21 not printed in the Gazette.]

1,108,422. DIFFERENTIAL GEAR. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 13, 1909. Serial No. 495,739. (Cl. 74—34.)



1. In a differential gear, in combination, a driven shaft, a pair of driving shafts, a gear wheel loosely mounted on the driven shaft, a member rigidly secured to the driven shaft, a plurality of pinions carried by said member and arranged to mesh with said gear wheel, a spider loosely mounted on the driven shaft, a ring supported by the arms of said spider, said ring being arranged to surround said pinions and having on its inner face a series of gear teeth arranged to mesh with said pinions, and connections for causing one of said driving shafts to rotate said ring and the other of said driving shafts to rotate said gear wheel.

2. In a differential gear, in combination, a driven shaft, a pair of driving shafts, a gear wheel loosely mounted on the driven shaft, a member rigidly secured to the driven shaft, a plurality of pinions carried by said member and arranged to mesh with said gear wheel, a spider loosely mounted on the driven shaft, a ring supported by the arms of said spider, said ring being arranged to surround said pinions and having on its inner face a series of gear teeth arranged to mesh with said pinions, connections for causing one of said driving shafts to rotate said ring and the other of said driving shafts to rotate said gear wheel, and a casing inclosing said shafts and said gearing, said shafts having portions projecting through said casing.

3. In a differential gear, in combination, a driven shaft, a pair of driving shafts, a gear wheel loosely mounted on the driven shaft, a member rigidly secured to the driven shaft, a plurality of pinions carried by said member and arranged to mesh with said gear wheel, a spider loosely mounted on the driven shaft, a ring supported by the arms of said spider, said ring being arranged to surround said pinions and having on its inner face a series of gear teeth arranged to mesh with said pinions, connections for causing one of said driving shafts to rotate said ring and the other of said driving shafts to rotate said gear wheel, and a casing inclosing said shafts and said gearing, said casing having bearings for revolubly supporting said shafts.

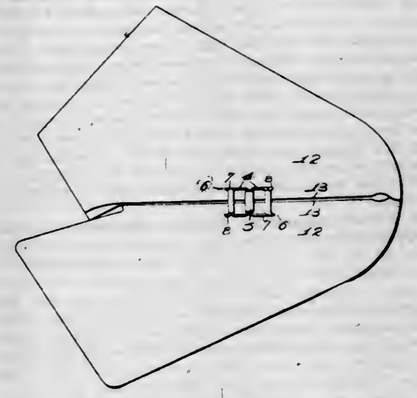
4. In a differential gear, in combination, a driven shaft, a pair of driving shafts, a gear wheel loosely mounted on the driven shaft, a member rigidly secured to the driven shaft, a plurality of pinions carried by said member and arranged to mesh with said gear wheel, a spider loosely mounted on the driven shaft, a ring supported by the arms of said spider, said ring being arranged to surround said pinions and having on its inner face a series of gear teeth arranged to mesh with said pinions, connections for causing one of said driving shafts to rotate said ring and the other of said driving shafts to rotate said gear wheel, and a casing inclosing said shafts and said gearing, said casing being formed in two sections, one of said sections having bearing portions for revolubly supporting all of said shafts, and the other section being detachable without disturbing any of the mechanism.

5. In a differential gear, in combination, a driven shaft, a pair of driving shafts, a pinion loosely mounted on the driven shaft, said pinion having an elongated hub, a gear wheel rigidly mounted on the hub of said pinion, a member rigidly mounted on the driven shaft, a plurality of pinions carried by said member and arranged to mesh with said first mentioned pinion, said member having an elongated hub, a spider having a hub loosely fitting on the hub of said member, said spider having radial arms, a ring secured to the arms of said spider, said ring being arranged to surround the pinions carried by said member and having on its inner face a series of gear teeth arranged to mesh therewith, a pinion rigidly mounted on each of said driving shafts, one of said last mentioned pinions being arranged to mesh with said gear wheel to drive said first mentioned pinion, and the other of said last mentioned pinions being arranged to mesh with a series of gear teeth on the outer periphery of said ring to drive said ring and said spider.

[Claims 6 to 8 not printed in the Gazette.]

1,108,423. FLY-CLOSER FOR BUTTON-SHOES. CHARLES A. BONNEY, St. Louis, Mo., assignor to United Shoe Machinery Company, a Corporation of New Jersey. Filed Aug. 16, 1909. Serial No. 513,128. (Cl. 12—113.)

1. A fly-closer for button shoes comprising two members hinged back-to-back, each of said members being provided with a pair of outwardly projecting parallel points, said points being adapted to pierce the lining of a shoe.



2. A fly-closer for button shoes comprising two members hinged back-to-back, each of said members consisting of a single wire pointed at both ends and bent upon itself to provide a hinge-seat; and a strengthening bar for said two projecting parallel points, substantially as described.

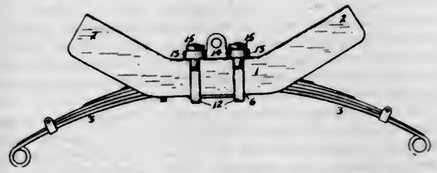
3. A fly-closer for shoes comprising two members having their adjacent ends hinged together in parallel relation, each of said members being provided with projecting points arranged to pierce the lining of a shoe, and means extending in substantially parallel relation to the hinged portions of said member to limit the extent of penetration of said points.

4. A fly-closer for shoes comprising two members hinged together, each member formed substantially in a single plane and having a pair of points arranged to penetrate respectively the linings of opposite flies of the shoe.

5. A fly-closer, constructed and arranged to be detached while the flies are under tension, having a pair of members hinged together, each member having devices arranged to pierce respectively the linings of opposite flies upon a relative turning movement of said members toward parallel relation.

[Claims 6 to 10 not printed in the Gazette.]

1,108,424. VEHICLE-SPRING. CHARLES A. BOREHAM, Coalinga, Cal. Filed Feb. 18, 1914. Serial No. 819,406. (Cl. 21—99.)

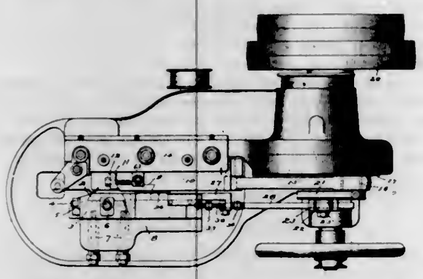


1. A leaf spring of the character described, comprising a series of two-part superposed resilient leaves, the inner ends of the two parts of each leaf being adjacent to each other, and the inner portion of each leaf section having a concavo-convex portion forming on one side a recess and on the other side a projection, said leaves being arranged with said concavo-convex portions interlocking, upper and lower plates between which said leaves are confined, said plates also having concavo-convex portions interlocking with the concavo-convex portions of the leaves, an inverted channel-shaped housing inclosing said leaves and plates, and means for clamping said leaves and plates within the housing.

2. A leaf spring of the character described, comprising a series of two-part superposed resilient leaves, the inner ends of the two parts of each leaf being adjacent to each other, and the inner portion of each leaf section having a concavo-convex portion forming on one side a recess and on the other side a projection, said leaves being arranged with said concavo-convex portions interlocking, upper and lower plates between which said leaves are confined, said plates also having concavo-convex portions interlocking with the concavo-convex portions of the leaves, an inverted channel-shaped housing inclosing said leaves and plates, the upper plate having an upward projection through a hole in the housing, and means for clamping said leaves and plates within the housing.

3. A leaf spring of the character described, comprising a series of two-part superposed resilient leaves, the inner ends of the two parts of each leaf being adjacent to each other, and the inner portion of each leaf section having a concavo-convex portion forming on one side a recess and on the other side a projection, said leaves being arranged with said concavo-convex portions interlocking, upper and lower plates between which said leaves are confined, said plates also having concavo-convex portions interlocking with the concavo-convex portions of the leaves, an inverted channel-shaped housing inclosing said leaves and plates, a supporting plate above the housing having laterally projecting ears, U-bolts encircling the housing and the plates and leaves therewithin, and extending through said ears, and nuts on said bolts.

1,108,425. THREAD-ROLLING MACHINE. CHARLES T. BRENNAN, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 10, 1914. Serial No. 830,952. (Cl. 80—8.)



1. In a thread rolling machine in combination, a stationary die holder, a movable die slide, a starter slide movable between said die holder and die slide, a driving gear, a crank pin projecting from said driving gear, a rod connecting the crank pin and the movable die slide, a crank arm fastened to said crank pin, and a rod connecting said crank arm and the starter slide.

2. In a thread rolling machine in combination, a stationary die holder, a movable die slide, a starter slide movable between said die holder and die slide, a driving gear, a crank pin projecting from said driving gear, a rod connecting the crank pin and movable die slide, a crank arm fastened to said crank pin, a stud adjustably connected with said crank arm, and a rod connecting said stud and the starter slide.

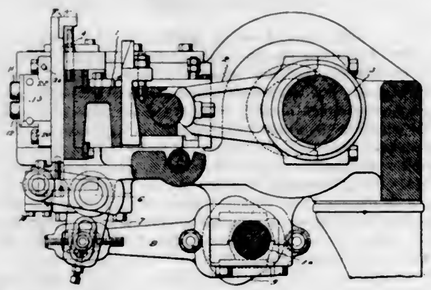
3. In a thread rolling machine in combination, a stationary die holder, a movable die slide, a starter slide movable between said die holder and die slide, a driving gear, a crank pin projecting from said driving gear, a rod connecting the crank pin and the movable die slide, a crank arm fastened to said crank pin, a stud adjustably connected with said crank arm, a block pivotally hung on said stud, and a rod connecting said block and the starter slide.

4. In a thread rolling machine in combination, a stationary die holder, a movable die slide, a starter slide movable between said die holder and die slide, a driving gear, a crank pin projecting from said driving gear, a rod connecting the crank pin and the movable die slide, a crank arm fastened to said crank pin, a stud adjustably connected with said crank arm, a block pivotally hung on said stud, and a rod with one end frictionally connected with said block and its other end pivotally connected with the starter slide.

5. In a thread rolling machine in combination, a stationary die holder, a movable die slide, a starter slide movable between said die holder and die slide, means extending from the stationary die holder for fixing the limit of movement of the starter slide, a driving gear, a crank pin projecting from said driving gear, a rod connecting the crank pin and the movable die slide, a crank arm fastened to said crank pin, a stud adjustably connected with said crank arm, a block pivotally hung on said stud, and a rod with one end frictionally connected with said block, and its other end pivotally connected with the starter slide.

[Claims 6 to 9 not printed in the Gazette.]

1,108,426. HEADING-MACHINE. CHARLES T. BRENNAN, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 18, 1914. Serial No. 832,893. (Cl. 10—12.)



1. The combination in a heading machine of a horizontally movable ram, a vertically movable slide carried by the ram, a block movable horizontally in the slide, means for moving said block horizontally in the slide, a punch holder carried by said block, and means for clamping the punch holder to the slide.

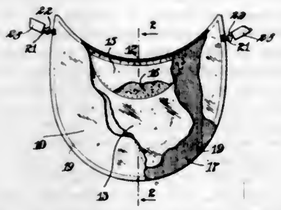
2. The combination in a heading machine of a horizontally movable ram, a vertically movable slide carried by the ram, a block with inclined edges movable horizontally in the slide, wedge rods and nuts carried by the slide for adjusting said block horizontally, a punch holder carried by said block, and means for clamping the punch holder to the slide.

3. The combination in a heading machine of a slide, a block movably carried by the slide, rods and nuts carried by the slide and adapted to adjust said block horizontally, a punch holder carried by said block, and means for clamping the punch holder to the slide.

4. The combination in a heading machine of a slide, a block with inclined edges movable horizontally in the slide, rods with wedge surfaces engaging the inclined edges of said block, nuts for adjusting said rods, a punch holder carried by said block, and means for clamping the punch holder to the slide.

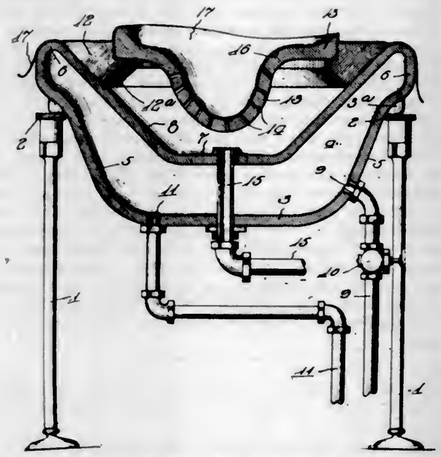
5. The combination in a heading machine of a horizontally movable ram, a vertically movable slide carried thereby, a punch holder movable horizontally on the face of the slide, a block movable in the slide for adjusting the punch holder horizontally, and rods extending up through the slide for wedging said block horizontally.

1,108,427. DRESS-SHIELD. ELIZABETH MARABLE BRENNAN, Brooklyn, N. Y. Filed Jan. 31, 1914. Serial No. 815,643. (Cl. 2—34.)



A dress shield, comprising a pair of crescent shaped outer walls of a single thickness of fabric, connected at their upper edges, a flexible insert member comprising a pair of integral crescent shaped walls, the upper edge of said member resting under the upper connected edges of the outer fabric walls, a pair of crescent shaped inner walls of a single thickness of fabric and having their upper edges connected and lying immediately under the upper edge of said flexible member said inner and outer walls being separate from each other, and means arranged about the inner peripheries of the outer and inner fabric walls and passing through the periphery of said flexible insert member for releasably connecting the latter and said inner and outer fabric walls together.

1,108,428. PROCESS AND MACHINE FOR SHAPING AND PRESSING HATS. WILLIAM F. CHINIQUY and WILLIAM O. WINCH, Chicago, Ill. Filed Mar. 16, 1914. Serial No. 824,899. (Cl. 223—31.)



1. A machine for shaping and pressing hats comprising a double-walled vessel, means for introducing heating fluid between the walls of said vessel to produce a superheated condition within the same, a perforate hat form mounted on said vessel, and means for exhausting air from between said hat form and said vessel during the superheated condition of the latter.

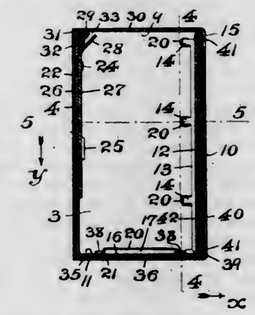
2. A machine for shaping and pressing hats comprising a double-walled vessel, means for causing the circulation of a heating fluid between the walls thereof, a perforate hat form mounted above the upper wall of said vessel and spaced therefrom, an impervious tissue adapted to cover said vessel and hat form, and means for exhausting air from between said hat form and said vessel during the circulation of said heating fluid.

3. A machine for shaping and pressing hats comprising a double-walled vessel, means for introducing heating fluid between the walls of said vessel to produce a superheated condition within the same, a gasket fitting said vessel, a perforate hat form seated on said gasket, and means for exhausting air from said vessel during the superheated condition of the latter.

4. A machine for shaping and pressing hats comprising a double-walled vessel, means for causing the circulation of a heating fluid between the walls thereof, a gasket fitting said vessel, a perforate hat form mounted on said gasket, an impervious tissue adapted to cover said vessel, hat form and gasket, and means for exhausting air from said vessel during the circulation of said heating fluid.

5. A process for shaping and pressing hats comprising the placing of a hat blank upon a perforated form disposed upon a superheated vessel, the covering of said hat form and vessel with an impervious tissue, and the exhausting of air from said vessel while said superheated condition is maintained therein.

1,108,429. MATCH-BOX. BENNO VOM EIGEN, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Nov. 4, 1913. Serial No. 799,055. (Cl. 206—33.)



1. A match-box comprising a pair of side-plates and a connecting back-edge member, said side-plates and back-edge member being formed at their connected parts with guiding retaining portions, plate-like closing members secured in the front and bottom of the match-box between the marginal edge-portions of said side-plates, and another plate-like member slidably mounted in said guiding retaining portions, said last-mentioned plate-like member being provided with a hinged lid and a spring-member in engagement with a portion of said lid.

2. A match-box comprising a pair of side-plates and a connecting back-edge member, said side-plates and back-edge member being formed at their connected parts with guiding retaining portions, plate-like closing members secured in the front and bottom of the match box between the marginal edge-portions of said side-plates, another plate-like member slidably mounted in said guiding retaining portions, said last-mentioned plate-like member being provided with a hinged lid and a spring-member in engagement with a portion of said lid, and a plate-like member in the bottom of the match-box provided with means in engagement with a portion of the plate-like member in the back of the match-box to secure said last-mentioned plate-like member in its fixed position in said guiding retaining portions.

3. A match-box comprising a pair of side-plates and a connecting back-edge member, said side-plates and back-edge member being formed at their connected parts with guiding retaining portions, plate-like closing members secured in the front and bottom of the match-box between the marginal edge-portions of said side-plates, another plate-like member slidably mounted in said guiding retaining portions, said last-mentioned plate-like member being provided with a hinged lid and a spring-member in engagement with a portion of said lid, and a forwardly projecting lower end-portion also connected with said last-mentioned plate-like member, and a plate-like member in the

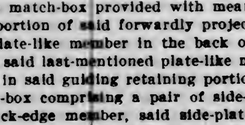
bottom of the match-box provided with means in engagement with a portion of said forwardly projecting end-portion of the plate-like member in the back of the match-box to secure said last-mentioned plate-like member in its fixed position in said guiding retaining portions.

4. A match-box comprising a pair of side-plates and a connecting back-edge member, said side-plates and back-edge member being provided at their connected parts with guiding retaining portions, plate-like closing members secured in the front and bottom of the match-box between the marginal edge-portions of said side-plates, another plate-like member slidably mounted in said guiding retaining portions, said last-mentioned plate-like member being provided with a hinged lid and a spring-member in engagement with a portion of said lid, and a forwardly projecting lower end-portion also connected with said last-mentioned plate-like member, said forwardly projecting lower end-portion being formed with marginal lug-receiving cut-away recesses, and a plate-like member in the bottom of the match-box provided with marginal retaining lugs inserted in said cut-away recesses and bent over said forwardly projecting lower end-portion of the plate-like member in the back of the match-box to secure said last-mentioned plate-like member in its fixed position in said guiding retaining portions.

5. A match-box comprising a pair of side-plates and a connecting back-edge member, a plate-like member in the front and part of the bottom of the match-box, said plate-like member being provided with marginal flanges and lugs arranged between the inner face-portions of said side-plates, means for permanently securing said lugs to said side-plates, and a plate-like portion extending at right angles from the lower end of said plate-like member, said plate-like portion being arranged in the bottom of the match-box between said side-plates, another plate-like member arranged in the back of the match-box, said last-mentioned plate-like member being provided with a hinged lid and a spring-member in engagement with said lid, and a plate-like member in the bottom of the match-box provided with means in engagement with the right-angled plate-like portion which extends from the plate-like member in the front of the match-box and also with the plate-like member in the back of the match-box.

[Claims 6 to 10 not printed in the Gazette.]

1,108,430. SAFETY-CATCH FOR BAG-FRAMES. BENNO VOM EIGEN, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Dec. 20, 1913. Serial No. 807,832. (Cl. 70—116.)



1. The combination with the hinged members of a bag-frame, and its closing catch comprising a pair of members, one of said members having a locking post-receiving opening, and the other member being provided with a locking post adapted to enter said opening and engage a portion of said first-mentioned member, and a locking lever pivotally connected with said first-mentioned member, said lever being adapted to be brought into holding engagement with a portion of said locking post.

2. The combination with the hinged members of a bag-frame, and its closing catch comprising a pair of members, one of said members having a locking post-receiving opening, and the other member being provided with a locking post adapted to enter said opening and engage a portion of said first-mentioned member, a locking lever pivotally connected with said first-mentioned member, said lever being adapted to be brought into holding engagement with a portion of said locking post, and means connected with said pivoted lever adapted to be brought into separable holding engagement with another portion of said first-mentioned member to prevent accidental separation of the parts.

3. The combination with the hinged members of a bag-frame, and its closing catch comprising a pair of members, one of said members having a locking post-receiving opening, and the other member being provided with a locking post adapted to enter said opening and engage a portion of said first-mentioned member, a locking lever pivotally connected with said first-mentioned member, said lever being adapted to be brought into holding engagement with a portion of said locking post, and means connected with said pivoted lever adapted to be brought into separable holding engagement with another portion of said first-mentioned member to prevent accidental separation of the parts, consisting of a projection extending from one side of said lever adapted to be sprung into a receiving depression with which the said first-mentioned member is provided.

4. The combination with the hinged members of a bag-frame and its closing catch comprising a substantially elliptical fastener member provided with a locking post-receiving opening, and a second post-carrying member, a post extending laterally from said post-carrying member, said post being provided on opposite sides with flattened parts and retaining lips, said flattened parts being of different widths, said locking post being adapted to enter the perforation in said elliptical fastener member, and the lip adjacent to the larger flattened post-portion being adapted to be brought into retaining engagement with a part of the marginal edge-portion surrounding the opening in said elliptical fastener-member, and a locking lever pivotally connected with said elliptical fastener member, said lever being adapted to enter upon the narrower flattened post-portion and engage the retaining lip adjacent to said narrower flattened post-portion.

5. The combination with the hinged members of a bag-frame and its closing catch comprising a substantially elliptical fastener member provided with a locking post-receiving opening, and a second post-carrying member, a post extending laterally from said post-carrying member, said post being provided on opposite sides with flattened parts and retaining lips, said flattened parts being of different widths, said locking post being adapted to enter the perforation in said elliptical fastener member, and the lip adjacent to the larger flattened post-portion being adapted to be brought into retaining engagement with a part of the marginal edge-portion surrounding the opening in said elliptical fastener member, a locking lever pivotally connected with said elliptical fastener member, said lever being adapted to enter upon the narrower flattened post-portion and engage the retaining lip adjacent to said narrower flattened post-portion, and means connected with said pivoted lever adapted to be brought into separable holding engagement with another portion of said elliptical fastener-member to prevent accidental separation of the parts.

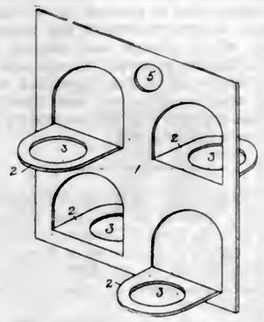
1,108,431. BUTTON. JENNIE F. FARNUM, New York, N. Y. Filed Apr. 22, 1912. Serial No. 692,224. (Cl. 24—113.)



1. In a button, the combination with a mold adapted to receive a covering of fabric, of a base with a slot at a central point, and a shank on the mold with an eye adapted to pass through the slot and be turned so as to prevent its retraction.

2. In a button, the combination with a base having a rim and a slot at a central point, of a mold to fit within the rim and adapted to receive a covering, and an eye secured to the mold by a shank and adapted to be passed through the slot and turned so as to prevent the retraction of the eye and mold.

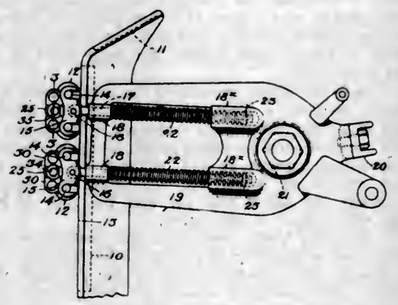
1,108,432. CONE-CARRIER. CHARLES A. FOSTER, Arlington, Md. Filed Aug. 25, 1913. Serial No. 786,375. (Cl. 224—48.)



1. A cone-carrier comprising a piece of card-board, or other suitable material, having a number of holders cut therefrom on all but their lower edges along which they are indented and adapted to be bent outwardly in opposite directions, all of said holders being of the same size and each provided with an aperture in which the cone rests.

2. A cone-carrier comprising a piece of card board, or other suitable material, having a number of holders cut therefrom indented on a line where they join the said piece of card board, and projecting from both sides of said card board, and arranged so that the adjoining holders either on the longitudinal rows or on the vertical rows will project in opposite directions, all of the said holders being of the same size, and each provided with an aperture in which the cone rests.

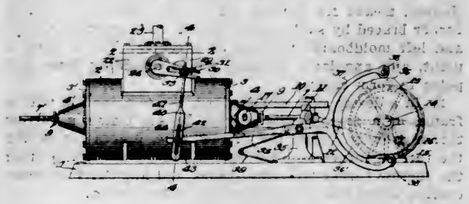
1,108,433. INKING MECHANISM. WILLIAM H. GOLDING, Franklin, Mass. Filed June 21, 1912. Serial No. 705,003. (Cl. 101—79.)



1. In a printing press, the combination with a chase, an inking roll therefor, and coöperative trucks for said roll; of a roll for distributing the ink upon said inking roll, means including clamping members for supporting said distributing roll, said trucks having slideways for said clamping members, whereby said distributing roll may be adjusted toward and from said inking roll, said clamping members having flanges bearing upon the inner sides of said trucks, and means coöperating with the outer sides of said truck for pressing said flanges against the inner sides of the trucks to secure the clamping members to the trucks.

2. In a printing press, the combination with a chase, an inking roll therefor, and coöperative trucks for said roll; of a roll for distributing the ink upon said inking roll, a rod extending through and beyond the ends of said distributing roll, cap members engaging the end faces of said rod, said truck having slideways to receive said cap members, whereby said distributing roll is adjustable toward and from said inking roll, said cap members having flanges bearing upon the inner sides of said trucks, and screws extending toward each other through the outer ends of said cap members and into the ends of said rod, said rod being internally threaded for coöperating with said screws, said screws having heads at their outer ends for bearing against the outer sides of said trucks to clamp said flanges relatively to said trucks, and to clamp said rod relatively to said cap members.

1,108,434. AIR COMPRESSOR OR PUMP. VENABLE J. GUTHRIE, Cambria, Va. Filed May 16, 1913. Serial No. 768,109. (Cl. 230—34.)



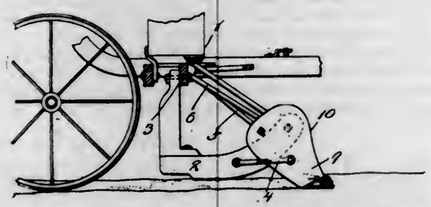
1. The combination in a device of the character described, of a chamber, a plunger disposed therein and having terminal stems slidable through the ends of the chamber, a sleeve slidable on the plunger and terminally abuttable against the ends of the chamber, the plunger and sleeve being of approximately equal length and each being of a length over one half the length of the chamber, means connected to one plunger stem for reciprocating the plunger, and means for reciprocating the sleeve from one end of the chamber to the other when the plunger is at the ends of its strokes, the ends of the chamber having valved inlet ports to communicate with the ends of the sleeve.

2. The combination in a device of the character described, of a chamber, a plunger disposed therein having conical ends and stems projecting from the apices of the said ends, the stems being slidable through the ends of the chamber, a sleeve slidable on the plunger and terminally abutable against the ends of the chamber, the plunger and sleeve being of approximately equal length and each being of a length over one half the length of the chamber, means connected to one plunger stem for reciprocating the plunger, and means for reciprocating the sleeve from one end of the chamber to the other, when the plunger is at the ends of its strokes, the ends of the chamber having conical pockets to receive the conical ends of the plunger, and the said pockets having valved inlet ports.

3. The combination in a device of the character described, of a chamber, a plunger reciprocable between the ends thereof, a sleeve slidable on the plunger and terminally abutable against the ends of the chamber, the ends of the chamber having valved ports to communicate with the ends of the sleeve, a shaft journaled for oscillation through the chamber, an arm attached to the said shaft within the chamber and having its free end operatively connected to the sleeve, and means connected to the outer end of the said shaft for intermittently oscillating it.

4. The combination in a device of the character described, of a chamber, a plunger reciprocable between the ends thereof, a sleeve slidable on the plunger and terminally abutable against the ends of the chamber, the ends of the chamber having valved ports to communicate with the ends of the sleeve, a shaft journaled for oscillation through the chamber, an arm attached to the said shaft within the chamber and having its free end operatively connected to the sleeve, an arm attached to the outer end of the said shaft, and actuating means adjustably connected to the last mentioned arm, and including yieldable means.

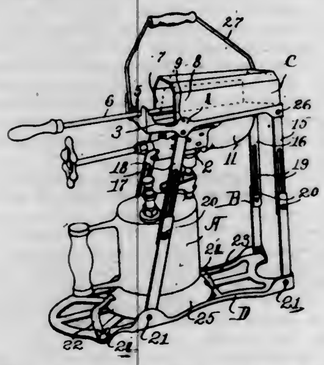
1,108,435. FURROW-OPENER FOR CORN-PLANTERS. KARL L. HANSON, Herman, Nebr. Filed May 18, 1912. Serial No. 698,101. (Cl. 111—6.)



1. A furrow shoe, a frame member mounted on the toe thereof, means for bracing said frame member, a furrow turner braced by said bracing means and comprising right and left moldboards meeting at a central line to form a point, and angularly disposed wings extending from said point to form cutters.

2. In a device such as described, the combination with a frame, of a furrow shoe carried by the frame, a furrow turner mounted upon the furrow shoe, braces connecting the furrow turner and the furrow shoe, braces connecting the furrow turner with the frame, and angularly disposed cutting wings extending from the furrow turner.

1,108,436. BLOW-TORCH. JOHN W. JOHNSTON, Trempealeau, Wis. Filed Sept. 11, 1911. Serial No. 648,805. (Cl. 126—239.)



1. A device of the class set forth, comprising, in combination, a portable blow torch having a body and burner tube, a stand having a tray for carrying said torch, clamps on said tray for adjustably and detachably securing said body thereto, a furnace on said stand above said torch, and an elbow tube depending from said furnace and with the lower end of which said burner tube is adapted to be connected.

2. A device of the class set forth, comprising, in combination, a blow torch having a burner tube, a furnace above said torch, an elbow connected between said furnace and tube through which the flame from said burner tube is conducted into said furnace, and a stand supporting said blow torch and furnace adjustably to vary the height of the lower end of said elbow to receive the end of said burner tube.

3. A device of the class set forth, comprising, in combination, a blow torch having a burner tube, a furnace above said torch, an elbow adapted to form a connection between said furnace and tube to conduct the flame from the burner tube upwardly into said furnace and a stand for supporting said furnace having a tray below to support said blow torch, said tray being adjustably secured to said stand to vary the distance between said tray and furnace and admit the burner tube into the lower end of said elbow.

4. A device of the class set forth, comprising, in combination, a blow torch having a burner tube, a furnace above said torch, a detachable elbow secured to the floor of said furnace, said elbow having a depending lower end to which said burner tube is adapted to be adjusted and a deflector formed integral therewith and extending across the upper end of its passage and adapted to divide a current of heat passing upwardly through said elbow from said burner tube, a stand for supporting said furnace having a tray adapted to support said torch and clamps pivotally secured to said tray for detachably holding the body of said torch on said tray.

1,108,437. ANTIMONY-SULFID-COATED GRANULATED EXPLOSIVE. WALTER R. HIBBARD, Wilmington, Del., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Sept. 20, 1913. Serial No. 790,815. (Cl. 52—4.)

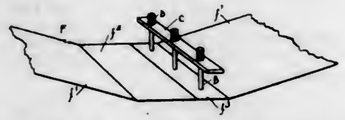
1. An explosive, the grains of which are coated with a sulfid of antimony.

2. An explosive, the grains of which are coated with antimony pentasulfid.

3. A black powder, the grains of which are coated with a sulfid of antimony.

4. A black powder, the grains of which are coated with antimony pentasulfid.

1,108,438. LOOSE-LEAF BINDER. ROBERT J. HOPPINGER, Cleveland, Ohio. Filed Apr. 2, 1913. Serial No. 758,324. (Cl. 129—4.)



1. A loose-leaf binder comprising the combination of a base member, a pair of rigid prongs projecting therefrom each provided near its free extremitiey with screw-threads, a clamping bar provided with openings spaced as said prongs, and a pair of complementarily threaded screw-caps loosely seated in said openings respectively and adapted to engage such prongs the outer sides of the camps being closed.

2. A loose-leaf binder comprising the combination of an elongated member, a plurality of substantially straight prongs projecting transversely therefrom, a bar having upwardly recessed portions closed above, said portions being correspondingly spaced as and adapted to cover said prongs, and means operatively connecting said portions and prongs for fixing said bar and the ends of said prongs with respect to each other.

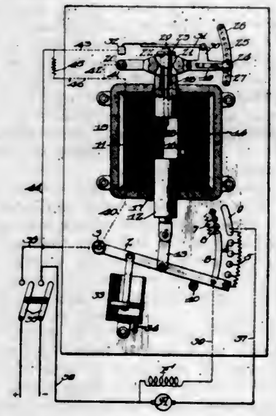
3. A loose-leaf binder comprising the combination of a base-member, a plurality of prongs projecting therefrom, said prongs being screw-threaded, a bar provided with openings correspondingly spaced as said prongs, and screw-caps pivotally mounted in said openings and adapted to engage said prongs said caps having their outer sides closed.

4. A loose-leaf binder comprising the combination of a base-member, a plurality of prongs projecting therefrom, said prongs being screw-threaded near their extremities, a bar provided with openings correspondingly spaced as said prongs and intersected by the latter, and screw-caps pivotally secured in said openings respectively and having their outer sides closed, said screw-caps being adapted to coöperate with said threads.

5. A loose-leaf binder comprising the combination of a supporting member, a plurality of prongs projecting therefrom, a clamping member provided with a plurality of apertures spaced as and adapted to be intersected by said prongs, and means movably supported upon said clamping member for fixing the latter to said prongs, said means adapted to cover the extremities of said prongs.

[Claims 6 to 9 not printed in the Gazette.]

1,108,439. MOTOR-CONTROLLER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 4, 1908. Serial No. 430,829. (Cl. 172—288.)



1. The combination with a solenoid operated speed regulator, of means associated therewith to limit the movement of said regulator at will to obtain any one of a number of different predetermined speeds of the motor, the operating solenoid having a movable plunger arranged to always magnetically seal when the regulator reaches the limit of its movement.

2. The combination with a speed controller for electric motors, of an operating solenoid having a relatively stationary core, and a movable core connected to said controller for operating the same, means including said relatively stationary core for limiting the movement of said controller and varying the range of movement thereof at will, whereby said controller may be caused to automatically bring the motor up to any one of a number of different predetermined speeds.

3. In a speed controller for electric motors, the combination with a controlling member, of an electromagnetic winding, a movable core within said winding and connected to said controlling member, a stationary core within said winding, one of said cores being adjustable relative to the other for limiting the range of movement of said controlling member, to cause the motor to operate at different predetermined speeds.

4. In combination, a speed controlling rheostat, a solenoid having a stationary core and a movable plunger, said movable plunger being connected to the movable element of said rheostat, said stationary core being arranged to serve as a stop for said movable plunger, means for setting said stationary core at different positions to vary the range of movement of the movable element of said rheostat.

5. The combination with an electromagnetically operated speed controller, of means for adjusting the same at will to cause the motor to operate at a predetermined speed, and automatically operated means for reducing the flow of current through the operating magnet after the controller has been operated.

[Claims 6 to 15 not printed in the Gazette.]

1,108,440. SEPARATION OF ZINC-BLENDE AND OTHER METALLIFEROUS CONSTITUENTS FROM ORE CONCENTRATES AND SLIMES BY FLOTATION OR GRANULATION. EDWARD JAMES HORWOOD, Broken Hill, New South Wales, Australia. Filed Dec. 4, 1913. Serial No. 804,617. (Cl. 83—85.)

1. In a process of separating sulfids, the method which comprises extracting water soluble substances from a material comprising a plurality of such sulfids and thereafter submitting to a heating operation for deadening certain of such sulfids.

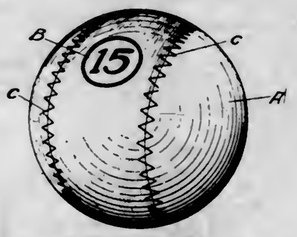
2. In a process of separating sulfids, the method which comprises extracting water soluble substances from a material comprising a plurality of such sulfids, thereafter submitting to a heating operation to deaden certain of such sulfids and finally separating the sulfids by a selective wetting operation.

3. In the separation of sulfids, the process which comprises thoroughly washing with water a material comprising zinc blende and other sulfids, submitting to a heating operation to deaden sulfids other than zinc sulfids and finally separating the various sulfids by a selective wetting operation.

4. In the separation of sulfids, the process which comprises washing a material comprising a plurality of such sulfids with water, thereafter deadening certain of such sulfids by an oxidizing treatment and finally separating the various sulfids by a selective wetting operation.

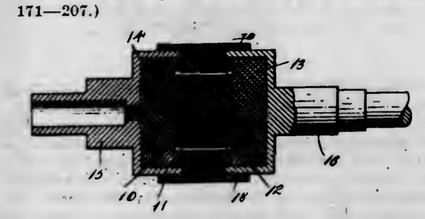
5. In the separation of sulfids, the process which comprises thoroughly washing with water a material comprising zinc blende and other sulfids, submitting to a heating operation at about 400° C. to deaden sulfids other than zinc sulfid and finally separating the various sulfids by a selective wetting operation.

1,108,441. POOL-BALL. VINCENT B. HUBBELL, New York, N. Y. Filed Feb. 24, 1914. Serial No. 820,534. (Cl. 46—7.)



A device for indicating the angular position of pool balls with relation to each other embodying one or more zigzag lines located on the surface thereon, some part of which is always visible no matter what the position of the ball.

1,108,442. MAGNETO-ARMATURE. DOW B. HUGHES, New York, N. Y., assignor to The Citizens Savings and Trust Company, Cleveland, Ohio, a Corporation of Ohio, trustee. Filed May 10, 1912. Serial No. 696,336. (Cl. 171—207.)



1. A magneto armature comprising a two-part casing of non-magnetic material provided with shaft extensions, a core of laminæ extending transversely across said casing, a coil surrounding the core, and means for clamping together the two parts of the casing.

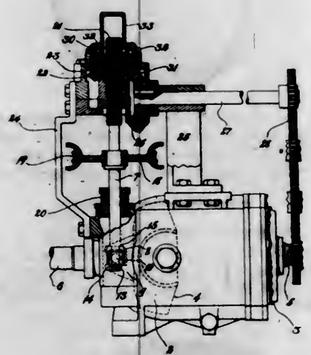
2. A magneto armature comprising a two-part casing, each part cylindrical in shape and provided with a shaft extension, a core comprising a bundle of laminæ extending transversely across the casing and through the walls thereof at diametrically opposite points, a coil surrounding the core within the casing, and means for clamping together the two parts of the casing.

3. A magneto armature comprising a two-part casing having integral shaft extensions, a core comprising a bundle of laminæ projecting transversely across the casing and through the walls thereof at diametrically opposite points, means for clamping together the two parts of the casing, and pole tips on the exterior of the casing and surrounding the ends of the core.

4. A magneto armature comprising a two-part casing provided with shaft extensions, a core comprising a bundle of laminæ extending transversely of the casing and through the wall thereof at diametrically opposite points, said core having shoulders or abutments engaging the inner wall of both parts of the casing, so as to prevent endwise movement of the core relative to the casing, a coil within the casing surrounding the core, and means for clamping together the two parts of the casing.

5. A magneto armature comprising a two-part casing of non-magnetic material provided with integral shaft extensions, a core comprising a bundle of laminæ extending transversely of the casing and through the wall thereof at diametrically opposite points, said core having shoulders or abutments engaging the inner wall of both parts of the casing, so as to prevent endwise movement of the core relative to the casing; a coil within the casing surrounding the core, means for clamping together adjacent faces of the two parts of the casing, and pole tips of magnetic material secured to the exterior of the casing centrally with respect to the core and having openings through which the ends of the core extend.

1,108,443. CONTROLLING APPARATUS FOR HYDRAULIC VARIABLE-SPEED GEARS. REYNOLD JANNEY, New York, N. Y., assignor to The Waterbury Tool Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 17, 1914. Serial No. 825,252. (Cl. 138—3.)



1. The combination of a hydraulic variable speed gear involving a regulator, a rotary control shaft connected with said regulator, a power transferring member having a threaded connection with said shaft, the latter when rotated being longitudinally movable in one direction by said threaded connection to thereby shift the regulator, and means operable by the hydraulic variable speed gear, for turning said power-transferring member to move said shaft endwise in the opposite direction.

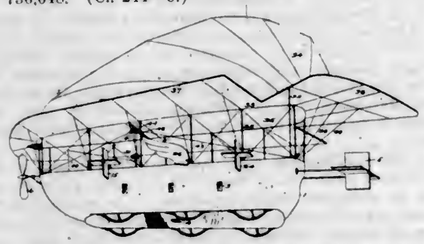
2. The combintaion of a hydraulic variable speed gear involving a regulator, a rotary control shaft connected with said regulator, a power transferring member having a threaded connection with said shaft, the latter when rotated being longitudinally movable in one direction by said threaded connection to thereby shift the regulator, means operable by the hydraulic variable speed gear, for turning said power transferring member to move said shaft endwise in the opposite direction, and means for compensating for wear between said shaft and said power transferring member.

3. The combination of a hydraulic variable speed gear involving a regulator, a rotary shaft connected with said regulator and having a threaded portion thereon, a rotary member constituting a nut interiorly threaded to receive the threaded portion of said shaft, whereby when the shaft is rotated it will be moved in one direction by said rotary member to thereby shift the regulator, means operable by the hydraulic variable speed gear, for automatically turning said rotary member to thereby cause the movement of said shaft endwise in the opposite direction, means for preventing movement of said rotary member in the direction of its axis of movement, and means for relatively operating said shaft and rotary member to take up wear between the threaded portions of the shaft and the rotary member.

4. The combination of a hydraulic variable speed gear involving a regulator, a rotary shaft connected with said regulator and having a threaded portion thereon, a rotary member constituting a nut interiorly threaded to receive the threaded portion of said shaft, whereby when the shaft is rotated it will be moved in one direction by said rotary member to thereby shift the regulator, means operable by the hydraulic variable speed gear, for automatically turning said rotary member to thereby cause the movement of said shaft endwise in the opposite direction, means for preventing movement of said rotary member in the direction of its axis of movement, and a nut having a threaded connection with the threaded portion of said shaft and also having a threaded connection with said rotary member.

5. The combination of a hydraulic variable speed gear involving a regulator, a rotary shaft connected with said regulator and having a threaded portion thereon, a rotary member constituting a nut interiorly threaded to receive the threaded portion of said shaft, whereby when the shaft is rotated it will be moved in one direction by said rotary member to thereby shift the regulator, means operable by the hydraulic variable speed gear, for automatically turning said rotary member to thereby cause the movement of said shaft endwise in the opposite direction, means for preventing movement of said rotary member in the direction of its axis of movement, a nut having a threaded connection with the threaded portion of said shaft and also having a threaded connection with said rotary member, and screws tapped through the nut and engaging said rotary member for adjusting said nut and for holding the same in an adjusted relation.

1,108,444. DIRIGIBLE AIRSHIP. SARKIS JELALIAN, Providence, R. I. Filed Dec. 10, 1912. Serial No. 736,048. (Cl. 244—5.)



1. An apparatus of the character described comprising a car, a flat frame mounted above said car, a lateral projection extending from the bow and each side of said frame, a revolving propeller at the forward end of said car, revolving propellers and a vertically reciprocating wing upon each side of the car, all of said propellers and wings being located directly beneath said lateral projection, means for operating said propellers and wings, and a gas bag supported upon said frame.

2. An apparatus of the character described comprising a car, a flat frame mounted above said car and provided with an elongated central opening covered with canvas, a lateral flange extending from the bow and each side of said frame, a flat flaring tail portion extending from said frame, and a gas-bag mounted upon said frame and having a flat bottom and an oval top.

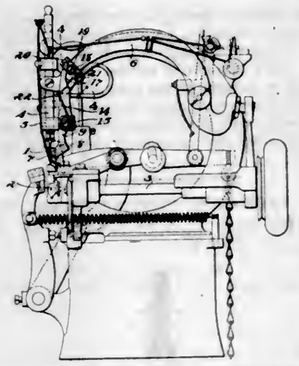
3. An apparatus of the character described comprising a car, propellers carried by said car, means for driving said propellers, a flat-frame mounted above said car upon a series of vertical supports and provided with an elongated central opening, a lateral flange extending from the bow and each side of said frame, a tail portion extending from said frame, and a turtle-shaped gas-bag supported by said frame.

4. An apparatus of the character described, comprising a car, a vertical stationary shaft within and near the front part of said car, a tubular shaft loosely mounted on the said first mentioned shaft and having a hand wheel secured at its upper end, a flat vertical rudder having its rear edge secured to the said tubular shaft and its front edge provided with a lower cutaway portion, a segmental member secured to the car and designed to form a support for the cutaway portion of the rudder, and a locking means to hold the latter in various angular positions upon the said supporting member.

5. An apparatus of the character described, comprising a car having a surrounding wall, a flat frame closing the bottom of said car and secured to the wall of the latter, said frame composed of a layer of fine wire gauze and a canvas cover secured beneath the same, to lessen the downward movement of the apparatus, a slidable door arranged in the said frame, and tread members each of a scalloped form secured to the side walls of the car.

[Claim 6 not printed in the Gazette.]

1,108,445. LUBRICATING DEVICE FOR SEWING-MACHINE NEEDLES. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 13, 1913. Serial No. 741,829. (Cl. 112—20.)



1. A sewing machine, having, in combination, a needle, a needle lubricating device, yielding means for holding the lubricating device against the needle, and positive means acting in opposition to said yielding means for withdrawing the lubricating device from the needle by a movement in a path transverse to the path of movement of the needle.

2. A sewing machine, having, in combination, a straight needle, a needle bar, a needle lubricating device normally maintained in engagement with the needle, and a single means for vibrating the needle bar and needle vertically and for withdrawing the needle lubricating device from the path of movement of the needle bar as it descends.

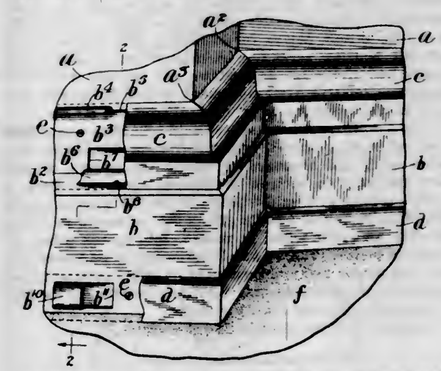
3. A sewing machine, having, in combination, a straight needle, a needle bar, means for causing a reciprocation of the needle, an independently mounted needle lubricating device normally held in the path of movement of the needle, and means other than the needle bar, for positively withdrawing the needle lubricating device from said path.

4. A sewing machine, having, in combination, a needle, a needle carrier, a needle lubricating device, a holder therefor movable about a fixed axis, yielding means for swinging the holder in one direction about said axis to project the lubricating device into the path of movement of the needle, and positive means other than the needle carrier, for swinging the holder in the other direction about said axis to withdraw the lubricating device from the path of movement of the needle.

5. A sewing machine, having, in combination, a needle, a needle carrier, a needle actuating lever, means for vibrating said lever, a needle lubricating device, a holder for said device mounted on a lever movable about a fixed axis, and means separate from said means for vibrating the needle actuating lever and separate from the needle carrier for engaging said lubricating device lever to swing the holder about said axis and cause the lubricating device to move into and out of the path of movement of the needle.

[Claims 6 and 7 not printed in the Gazette.]

1,108,446. BASE-BOARD CONSTRUCTION FOR BUILDINGS. JOHN F. JOHNSON, Elmhurst, N. Y. Filed Feb. 10, 1914. Serial No. 817,766. (Cl. 16—69.)



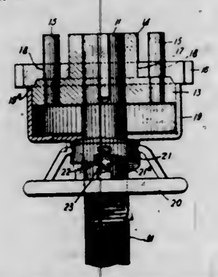
A baseboard or finishing construction for the inner walls of buildings, comprising a main body part supported above the floor by headed devices passed therethrough near the bottom thereof, said part being provided between said devices with upwardly directed spring tongues and a detachable strip provided at the top edge thereof with a backwardly and downwardly directed flange adapted to engage said spring tongues, said strip being adapted to cover said devices and to be moved vertically and to be held in place by friction and to bear on a carpet or other floor covering the edge of which is passed under the main body part.

1,108,447. ADJUSTING MECHANISM FOR COLD-ROLLING MILLS. PAUL R. JOHNSON and FRED W. LODDING, Worcester, Mass., assignors to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 26, 1912. Serial No. 722,488. (Cl. 80—56.)

1. In a rolling mill, a roll adjusting mechanism comprising in combination housing screws for holding the rolls in adjusted position, gear wheels on said screws to rotate therewith, a pinion meshing with said wheels to turn the screws in unison, means for operating said pinion to adjust the housing screws, and means non-rotatably connecting the gear wheels and housing screws and permitting relative axial movement thereof in disengaging said gear wheels from the pinion.

2. In a rolling mill, a roll adjusting mechanism comprising in combination housing screws, screw adjusting gear wheels on said screws, a pinion meshing therewith to turn the wheels in unison, and means on each screw for detaching the gear wheel thereon from said pinion and permit independent adjustment of the housing screws.

3. In a rolling mill, a roll adjusting mechanism comprising in combination vertically extending housing screws, screw adjusting gear wheels on said screws, a pinion meshing therewith to turn the gear wheels in unison, a hand wheel on the screws to lift the gear wheels vertically thereon, and means operatively connecting the hand wheels and gear wheels.

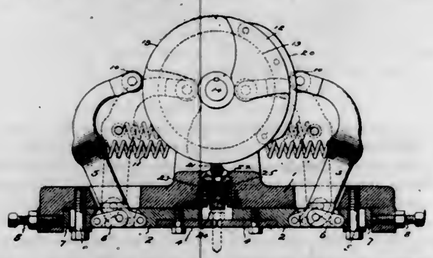


4. In a rolling mill, a roll-adjusting mechanism comprising in combination housing screws for holding the rolls in adjusted positions, gear wheels on said screws to rotate therewith, a pinion meshing with said wheels to turn the screws in unison, means for operating said pinion to adjust the housing screws, and means non-rotatably connecting one of the housing screws and its gear wheel and permitting relative axial movement of said screw and gear wheel in disengaging said gear wheel from the pinion.

5. In a rolling mill, an adjusting mechanism comprising a pair of housing screws, cylindrical disks operatively connected with and arranged to rotate the screws, a gear wheel mounted on each of the screws above the disks, a pinion meshing with said wheels to turn the wheels, means connecting each disk and its gear wheel arranged to rotate said disk and gear wheel in unison, said means being arranged to permit relative axial movement of said gear and disk, and means rotatably mounted on each housing screw for moving the adjacent gear vertically relative to its disk to disengage the gear from the pinion.

[Claims 6 to 9 not printed in the Gazette.]

1,108,448. STOCK HOLDING AND DELIVERING MECHANISM FOR BOLT-POINTING MACHINES. DAVID JULIAN, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Jan. 30, 1914. Serial No. 815,371. (Cl. 10—21.)



1. A chuck mechanism for a pointing machine consisting of movable chuck jaws, levers for opening and closing the chuck jaws, cams for causing the levers to close the chuck jaws, a plunger for locating the stock in the chuck jaws, and a cam for causing the plunger to locate the stock in the jaws.

2. A chuck mechanism for a pointing machine having movable chuck jaws, levers mounted upon swinging pivots for opening and closing the chuck jaws, cams for swinging the levers and causing the chuck jaws to close, a plunger for locating the stock in the chuck jaws, and a cam for causing the plunger to locate the stock.

3. A chuck mechanism for a pointing machine consisting of movable chuck jaws, levers connected with the chuck jaws, adjustable backing blocks, links hinging the levers to the backing blocks, and cams for swinging the levers and causing them to close the chuck jaws toward each other.

4. A chuck mechanism for a pointing machine consisting of movable chuck jaws, backing blocks, means for clamping the backing blocks, means for adjusting the backing blocks, levers connected with the chuck jaws, links connecting the levers with the backing blocks, and cams for swinging the levers and links and causing them to close the chuck jaws.

5. A chuck mechanism for a pointing machine consisting of movable chuck jaws, levers for opening and closing the chuck jaws, a spring plunger for locating the stock between the chuck jaws, a spring retracted block carrying said plunger, and a cam for forcing the block and plunger forward.

[Claims 6 to 10 not printed in the Gazette.]

1,108,449. ARTIFICIAL TOOTH. WILLIAM N. KIDDER, Providence, R. I. Filed Sept. 2, 1913. Serial No. 787,563. (Cl. 32—9.)



1. A metal backing member for artificial teeth, the same comprising a plate having a dovetail recess therein forming a seat arranged to receive and support a metal gib or block element fixed to an artificial tooth, said recess being closed on all sides and adapted to cover and completely conceal said element when the latter is seated in the recess.

2. In an artificial tooth, the combination of a porcelain facing or crown member, a metal gib-block rigidly secured to the back face of the crown, said gib having a dovetail form and being materially thicker at the root end than at the incisive portion of the crown, and a metal backing plate having a recess therein the counter-part of said gib, in which recess said gib is firmly seated, said recess being closed on all sides and completely concealing and protecting the gib.

1,108,450. PACKAGING PIPE-CLEANERS. WILLIAM R. LEE, Rochester, N. Y. Filed Aug. 6, 1912. Serial No. 713,575. (Cl. 206—46.)



1. A package or pipe cleaners comprising a bundle of stem cleaners, a wrapper passed about the stem cleaners, and a bowl cleaner provided with a blade fitting in said wrapper and having a hand piece deflected laterally with relation to the blade and formed with an opening through which at least one of the cleaners is passed.

2. A package of pipe cleaners comprising a bundle of stem cleaners and a bowl cleaner having a portion surrounding the stem cleaners.

3. A package of pipe cleaners comprising a bundle of stem cleaners and a bowl cleaner having a blade extending in the direction of the length of the bundle and a hand piece surrounding the entire bundle.

4. A package of pipe cleaners comprising a bundle of stem cleaners and a bowl cleaner provided with a blade and a hand piece, the latter having a substantially U-shaped portion formed with two openings through which the stem cleaners are passed.

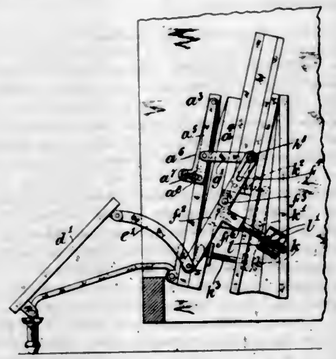
1,108,451. SOUND-REPRODUCING MACHINE. ARCHIBALD S. B. LITTLE, Nashville, Tenn. Filed Feb. 20, 1914. Serial No. 820,022. (Cl. 181—11.)



1. In a machine of the character described, and in combination, a needle-support comprising a rubber member, terminal flanged disks carried thereby and spaced apart, a stem leading in one direction from one of the disks, and a needle-socket leading in the opposite direction from the opposite disk.

2. In a machine of the character described, and in combination, a needle-support comprising a sound-absorber member provided with terminal metallic heads or members spaced apart, a stem on one of the heads, and a needle-socket on the opposite head.

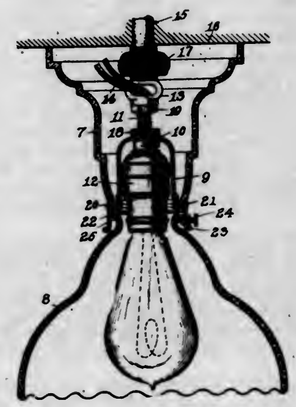
1,108,452. PEDAL MECHANISM FOR PNEUMATIC PIANO-PLAYERS. FRANK G. LYNDE, Newark, N. J., assignor to Lauter Co., Newark, N. J., a Corporation of New Jersey. Filed Feb. 7, 1913. Serial No. 746,712. (Cl. 74—81.)



1. A pedal mechanism comprising a pedal member, a swinging lever arm connected operatively to the pedal member, a second arm secured to the member actuated by the pedal and independent of the connection between the lever arm and the pedal member, and a slot and stud connection between said arms to permit their relative adjustment whereby for a given stroke of the pedal member the effective movement of the actuated member may be varied at the will of the operator.

2. A pedal mechanism comprising a pedal member, a swinging lever arm to which the pedal member is operatively connected, an adjustable slot and stud connection between the lever arm and the member actuated by the pedal, a second arm fixedly carried by the lever arm and angularly disposed thereto and a weight adjustably secured to said second arm and operative to return the actuated member to its normal position after displacement by the pedal member.

1,108,453. LIGHTING-FIXTURE. GEORGE A. MACBETH, Pittsburgh, Pa. Filed Feb. 15, 1913. Serial No. 748,539. (Cl. 240—78.)



1. A lighting fixture comprising in combination a support, a canopy, a shade, and a holder carried by the support adapted to support both the canopy and the shade, said holder comprising a member secured to the support and a second member detachably secured to the first member, said second member having a canopy holding portion and a shade holding portion.

2. A lighting fixture comprising in combination a support, a canopy, a shade, and a holder carried by the support adapted to support both the canopy and the shade, said holder comprising a shell secured to the support and socket detachably secured to the shell, said socket having a canopy holding portion and a shade holding portion.

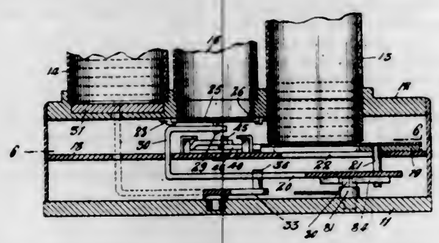
3. A lighting fixture comprising in combination a support, a canopy, a shade, and a holder carried by the support adapted to support both the canopy and the shade, said holder comprising a shell secured to the support and socket having threaded engagement with the shell, said socket having a shoulder adapted to support the canopy and a flange adapted to support the shade.

4. A lighting fixture comprising in combination a support, a canopy, a shade, and a holding device adjustably mounted on said support and extending within the canopy and adapted to support both the canopy and the shade the said holding device comprising two parts which are adjustably secured together.

5. A lighting fixture comprising in combination a stem, a canopy, a shade, a holding device for supporting the canopy and shade having an aperture to receive the stem, a lamp socket threaded to the stem, and a nut adapted to clamp the holding device against the socket.

[Claims 6 to 9 not printed in the Gazette.]

1,108,454. SANDWICH-MACHINE. AUGUST T. MAISCH, New York, N. Y., assignor to S. M. M. Manufacturing Corporation, a Corporation of New York. Filed Dec. 7, 1911. Serial No. 664,335. (Cl. 146—12.)



1. The combination with a cracker-container, of a cheese-container, a pusher for shifting a cracker from the cracker-container to a position below the cheese-container, a knife for slicing cheese contained in such container upon the said cracker, and an ejector having faces for respectively engaging the cracker and the cheese.

2. In a sandwich machine, the combination with a pair of cracker-containers, an ejector for each cracker-container, of a cheese-container, a knife for the cheese-container, a follower for the cheese-container, an ejector for the assembled sandwich, an actuator operatively connected with the ejectors, knife and follower and timed for functioning the respective ejectors, knife and follower in timed sequence, and mechanism for preventing retrograde movement of the actuator after the inauguration of its movement.

3. A sandwich forming and delivering device comprising a casing, means operating within the casing for depositing a slice of filling material on one of the covering members of a sandwich, a delivery table located exteriorly of the casing, means for placing said covering material and filler upon said delivery table, and means for placing the second covering member upon the filler upon the delivery table.

4. In a sandwich machine, means for positioning the investing material in place for the reception of the filling material, means for removing the filling material so as to place it on said investing material, means for delivering the sandwich so formed, and a single reciprocating operating member for all of said means.

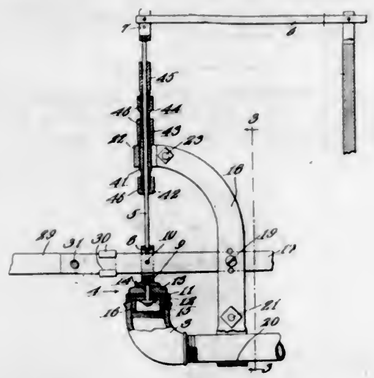
5. In a sandwich machine, means for positioning the investing material in place for the reception of the filling material, means for removing the filling material so as to place it on said investing material, means for delivering the sandwich so formed, and a single manually controlled reciprocating operating member for all of said means.

[Claims 6 to 9 not printed in the Gazette.]

1,108,455. TANK-VALVE. JOHN MALQUIST, Riverton, Utah, assignor of one-half to Dan C. Coy, Riverton, Utah. Filed Aug. 6, 1913. Serial No. 783,359. (Cl. 137—67.)

1. The combination with a tank, and a discharge pipe having an upwardly extending valve seat within the tank, of a vertical tube supported above the valve seat and arranged to have its lower end submerged in the contents of the tank and to have its upper end project above the level of the contents, a rod passing through the tube, a valve carried by the lower end of the rod and coöperating with the said seat, packing means carried by the lower end of the tube and embracing the rod for preventing the contents of the tank from rising into the tube, actuating means connected to the upper end of the said rod for lifting the rod, a lever fulcrumed within the tank and having one arm connected to the lower end of the said rod, and a float attached to one arm of the lever for unseating the valve when the level of the contents rises to a predetermined height.

2. The combination with a tank, and a discharge pipe having an upwardly extending valve seat therein, of a guide supported above the valve seat, a lever fulcrumed within the tank and having one arm arranged between the valve seat and guide, a pivot member carried by the said arm of the lever, an actuating rod passing through the said guide and having its lower end pivotally connected to the said pivot member, a valve pivotally connected to the said pivot member and coöperating with the said valve seat, and a float attached to one arm of the lever for unseating the valve when the level of the contents of the tank rises to a predetermined level.



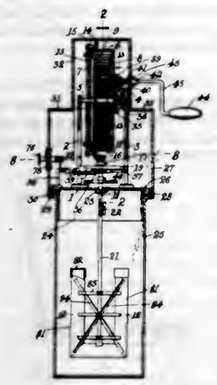
3. The combination with a tank, and a discharge pipe therefor having an upwardly extending valve seat within the tank, of a vertically disposed rod, means connected to the upper end of the rod for actuating the same, an inverted U-shaped member secured to the lower end of the rod, a valve coöperating with the said seat, an upright U-shaped member secured to the valve, the arms of the two U-shaped members being overlapped, a pivot member passing through the said overlapped arms, and a lever fulcrumed within the tank and having one arm engaged to the said pivot member.

4. The combination with a tank, and, a discharge pipe therefor, having an upwardly extending valve seat within the tank, of a guide supported above the valve seat, a rod passing through the guide, a lever fulcrumed within the tank and pivotally connected to the lower end of the rod, a valve carried by the lever coöperating with the said seat, means connected to the upper end of the rod for raising the same manually, and an attachment engaged to one arm of the said lever and including a float for automatically unseating the valve when the water level rises to a predetermined height.

1,108,456. SPRING-MOTOR. FRANCISCUS B. MARRIOTT, Homewood, Ala. Filed Oct. 18, 1912. Serial No. 726,505. (Cl. 185—37.)

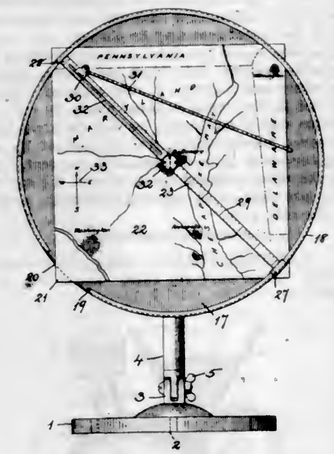
1. In a spring motor mechanism, the combination with a circular base plate having a depending annular flange, of motor mechanism supported by said plate, and a drive shaft connected with said mechanism extending through said plate and projecting vertically downward, such shaft being provided with a coupling located between the base plate and the lower edge of said flange, whereby, when the lower portion of said shaft is removed, said flange may be capable of resting upon a flat support.

2. In a spring motor mechanism, the combination with a horizontal base plate, of a pair of standards carried thereby, a spring coiled around said shaft, a shaft journaled in said standards, a beveled drive wheel carried by said shaft, a cross-bar extending between said standards below said drive wheel, a vertically disposed drive shaft journaled in said cross-bar, and passing downwardly through said base plate, a beveled pinion secured to said shaft, and in mesh with said drive wheel, and a thrust



bearing between said shaft and cross-bar, whereby the weight of the former is supported.

1,108,457. GUIDE APPARATUS. ALLEN B. MAULL, Baltimore, Md. Filed May 21, 1912. Serial No. 698,771. (Cl. 35—6.)



1. A guide apparatus of the character described comprising a holder provided with means for removably holding a map or chart, and a distance scale bar pivotally connected to said holder and movable away therefrom.

2. A guide apparatus of the character described comprising a holder, and a scale bar pivotally connected to said holder and movable away therefrom, and means for permitting relative rotation of said scale bar and said holder.

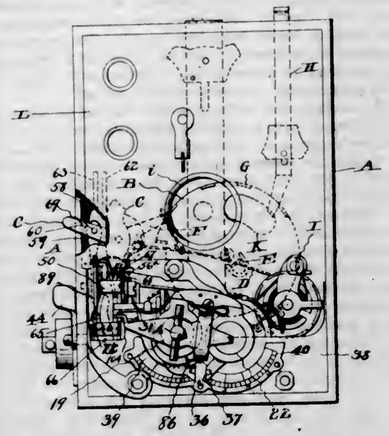
3. A guide apparatus of the character described comprising a holder, and a scale bar pivotally connected to said holder and movable away therefrom, said pivotal connection being provided with means for permitting said scale bar to rotate over the face of said holder.

4. A guide apparatus of the character described comprising a holder provided with means for removably holding a map or chart, a pivot member slidably connected with said holder, and a distance scale bar connected with said pivot member.

5. A guide apparatus of the character described comprising a holder, a pivot member slidably connected with said holder, a scale bar connected with said pivot member, said holder being also provided with a stationary pivot member arranged to engage said scale bar.

[Claims 6 to 21 not printed in the Gazette.]

1,108,458. SHUTTER-OPERATOR FOR CAMERAS. ARTHUR L. MCKINNEY and LYMAN H. ZEIGLER, Redkey, Ind. Filed Sept. 1, 1910, Serial No. 580,045. Renewed Apr. 11, 1914. Serial No. 831,279. (Cl. 161—26.)



1. In combination with a camera having a lever-actuated shutter, a shoe detachably engaging the lever, a bell-crank lever pivotally secured to said shoe to actuate it and the shutter-lever, a spring-actuated lever operatively secured to the bell-crank lever and engaging the shoe to release the shoe from the shutter-lever, in moving the shoe from the shutter-lever, in moving the lever against the resistance of its actuating spring, pawls positioned to engage the lever and hold it against the pull of its actuating spring, one of said pawls holding the lever in the position to open the shutter when released, the other pawl positioned to hold the lever when the shutter is open, and means to release said pawls at predetermined intervals of time, substantially as shown and described.

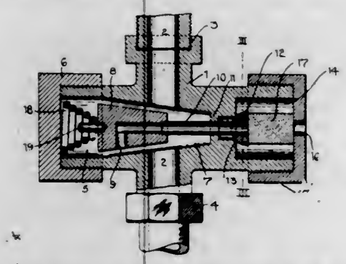
2. In combination with a camera having a lever-operated shutter, a shoe detachably engaging the lever, a bell-crank lever pivotally secured to said shoe to actuate it and the shutter-lever, a spring-actuated lever operatively secured to the bell-crank lever and engaging the shoe to release the shoe from the shutter-lever, in moving the lever against the resistance of its actuating spring, pawls positioned to engage the lever and hold it against the pull of its actuating spring, one of said pawls holding the lever in the position to open the shutter when released, the other pawl positioned to hold the lever when the shutter is open, a spring-motor comprising a main shaft and a driven shaft, mechanism operatively secured to the main shaft to release the first-mentioned pawl, and means operatively secured to the driven shaft to release the last-mentioned pawl, substantially as shown and described.

3. In combination with a camera having a lever-actuated shutter, mechanism for actuating the said lever controlled by releasable holding means, a spring-motor comprising a main shaft and a driven shaft, a disk secured to each shaft, a cup loosely mounted on each shaft and adapted to frictionally engage the disk thereon, means operated by said cups to release said holding means, and a lever actuated by the shutter-actuating mechanism to severally move the cups into engagement with the aforesaid disks, substantially as shown and described.

4. In combination with a camera having a lever-actuated shutter, mechanism for actuating said shutter-lever, pawls positioned to engage the actuating mechanism and hold it from operation, one of said pawls positioned to hold the mechanism from moving the shutter, the other pawl positioned to hold the mechanism inactive with the shutter open, rods engaging said pawls to hold them in position to prevent operation of the shutter-actuating mechanism, dogs secured to said rods, a spring-motor comprising a main shaft and a driven shaft, disks secured to said shafts, a cup loosely mounted on each shaft and adapted to engage the disk thereon, said cups formed to engage said dogs to move the rods from engaging the pawls, and a lever actuated by the shutter-operating mechanism to severally move the cups into engagement with the disks to cause them to rotate with the motor-shafts, substantially as shown and described.

5. In combination with a camera having a lever-actuated shutter, a shoe detachably engaging the lever, a bell-crank lever pivotally secured to said shoe, to actuate it and the shutter-lever, a spring-actuated lever operatively secured to the bell-crank lever and engaging the shoe to release the shoe from the shutter-lever in moving the lever against the resistance of its actuating spring, pawls positioned to engage the lever and hold it against the pull of its actuating spring, one of said pawls holding the lever in the position to open the shutter when released, the other pawl positioned to hold the lever when the shutter is open, rods engaging said pawls to hold them in position to prevent operation of the spring-actuated lever, dogs secured to said rods, a spring-motor comprising a main shaft, a driven shaft, and a balance-wheel, a spring-rod having an arm to engage the balance-wheel at times, said rod engaging the spring-actuated lever at the completion of its operating movement to stop the movement of the motor, disks secured to the motor-shafts, a cup loosely mounted on each shaft and adapted to engage the disk thereon, said cups having projections to severally engage the dogs aforesaid, a lever actuated by the spring-actuated lever and positioned to severally engage the cups aforesaid and move them into engagement with the disks to cause them to rotate with the motor-shafts, substantially as shown and described.

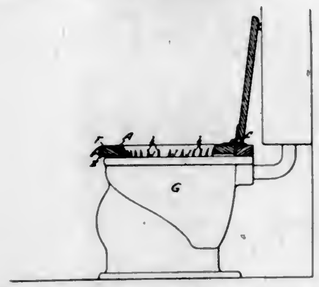
1,108,459. VALVED THERMAL DEVICE. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed May 5, 1911. Serial No. 625,351. (Cl. 137—92.)



1. A fluid controlling device, comprising a fluid conduit, a valve chamber disposed substantially transversely thereof and having a valve seat, a valve member in said chamber adapted to close said conduit by engaging the valve seat, fusible means normally holding said valve member away from said seat, means in said valve member for venting a limited portion of said conduit when said valve member is seated, and means comprising guide members secured to said valve member to prevent said valve member from turning axially.

2. A fluid controlling device, comprising a fluid conduit, a valve chamber disposed substantially transversely thereof and having a valve seat, a valve member in said chamber adapted to close said conduit by engaging the valve seat, fusible means normally holding said valve member away from said seat, means in said valve member for venting a limited portion of said conduit when said valve member is seated, and a disk of material substantially insoluble in hydrocarbons separating said fusible means from said valve chamber.

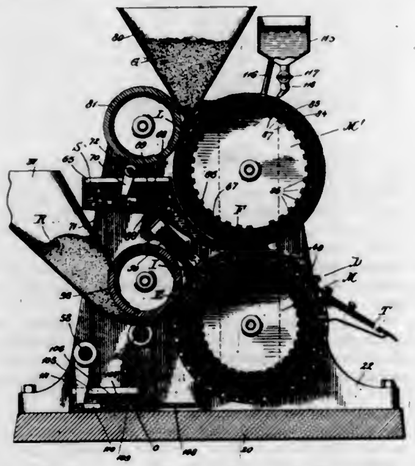
1,108,460. SANITARY COVERING FOR CLOSET-SEATS. FRANK I. MESICK, EMMA P. W. ELLIOT, and MABEL E. WOODCOCK, Albany, N. Y. Filed Apr. 4, 1914. Serial No. 829,670. (Cl. 4—18.)



1. A removable cover for closet seats, comprising a piece of thin, pliable material cut out in the center, provided at one side with openings into which the hinges of the closet seat may be placed; and a strip secured to the outer edge of said piece, forming a sack-like portion into which the front of the closet seat may be placed.

2. A removable cover for closet seats, comprising a piece of thin, pliable material cut out in the center, adapted to cover the closet seat; a curved, thin strip of pliable material cut out in the center secured along its outer edges to the reverse side of said cover, leaving the strip detached from the cover throughout a greater part of its extent, permitting the cover to be slipped onto the seat, the seat occupying the space between the strip and the cover; and said cover provided with openings through which the hinges of the seat pass.

1,108,461. CANDY-MACHINE. JOHN MICHITSCH, Detroit, Mich. Filed July 19, 1913. Serial No. 779,952. (Cl. 107—1.)



1. The combination with a pair of coöperative molds, one a body mold and the other a cap mold, each having recesses, means for supplying paste, and means for forcing paste into said recesses, of means for advancing said molds, ejector devices each comprising a bar having pins projecting into said recesses, and means for moving said ejector devices to discharge the paste from said cap mold prior to the operation of the other ejector device for discharging the completed candy products from the body mold.

2. The combination with a pair of mold rollers, one a body mold the other a cap mold, each having recesses in its peripheral surface, means for connecting said rollers for movement together, and means for supplying paste, of means for forcing paste into said recesses, means for rotating said rollers, ejector devices for said rollers respectively, and means for moving the ejector device of the cap mold prior to the operation of the ejector device of the second roller, whereby the caps are first pressed upon the candy bodies and then the completed candies ejected.

3. The combination with a body mold roller, a cap mold roller, both rollers having recesses, of means for supplying paste, means for rotating said mold rollers, ejector devices for said mold rollers, and means for operating the ejector for the cap roller in advance of that of the body roller, whereby the caps are first pressed upon the candy bodies and then the completed candies ejected.

4. The combination with a body mold roller having a series of recesses arranged in rows of longitudinal and circumferential alinement, a cap roller having recesses adapted to register with those of the body mold roller, and means for supplying paste, of means for forcing paste into said recesses, means for operating said rollers simultaneously, ejector devices carried by said mold rollers, and means for operating the ejector device for the cap roller prior to the operation of the ejector device for the body roller, whereby the caps are first pressed upon the candy bodies and then the completed candies ejected.

5. The combination with a body mold roller, a cap mold roller coöperative therewith, both rollers having recesses adapted to register with one another, means for supplying paste to the recesses, means for forming cavities in the contents of the body mold recesses, of means for supplying filler, means for applying the filler to said cavities in the contents of the body mold recesses, independent ejector devices carried by said rollers, and means for advancing said rollers intermittently to present successive recesses to the filler supply.

[Claims 6 to 15 not printed in the Gazette.]

1,108,462. ARTIFICIAL LIMB. ELMER C. MOORE, Baltimore, Md., assignor to J. E. Hanger, Inc., a Corporation of the District of Columbia. Filed May 7, 1914. Serial No. 836,904. (Cl. 3—3.)



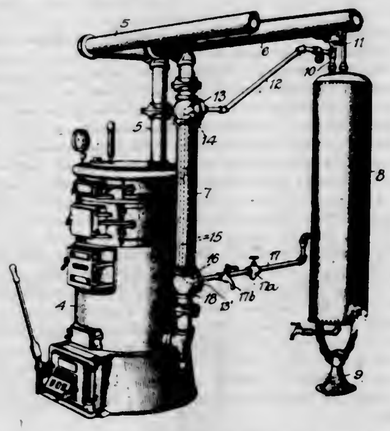
1. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of a flexible strip attached at its lower end to the lower-leg section on each side thereof, a rocking cross bar pivoted on the upper free end of each of said flexible strips, intermediate their ends, and shoulder straps attached to the ends of said rocking bar, substantially as described.

2. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of a flexible strip attached at its lower end to the lower-leg section on each side thereof, shoulder straps attached to the free ends of said side strips, and elastic strips attached to said side strips adjacent the free ends, and attached at their opposite ends to the rear of the lower-leg section, substantially as described.

3. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of a flexible strip on each side thereof attached at their lower ends to the opposite sides of the lower-leg section, a rigid plate secured on the upper free ends of said strips, a rocking cross bar pivoted on each of said plates, buttons on the outer ends of said cross bar, and shoulder straps attached to said buttons, substantially as described.

4. In an artificial leg, the combination with a thigh section and a lower-leg section pivotally jointed thereto, of a flexible strip on each side thereof attached at their lower ends to the opposite sides of the lower-leg section, a rocking cross bar pivoted on the upper ends of said side strips, flexible strips attached at their upper ends to said side strips adjacent their upper ends and attached at their opposite ends to the rear of the lower-leg section, and shoulder straps attached to the outer ends of said rocking bars, all adapted to swing said lower-leg section forward on the joint, substantially as described.

1,108,463. HOT-WATER-SERVICE SYSTEM. STEWART H. MOORE, Chicago, Ill. Filed Oct. 22, 1913. Serial No. 796,553. (Cl. 126—362.)



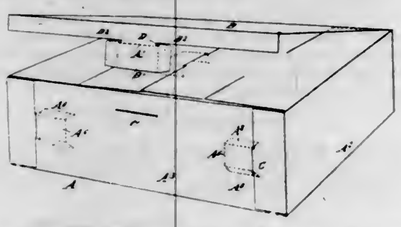
1. In combination, a standpipe through which hot fluid is passed after it has been circulated through the passages of a house heating system, a reducing T attached to each end of said standpipe, one reducing T being arranged to be attached to the return pipe of the house heating system and the other reducing T arranged to be connected with a boiler, a pair of parallel tubes vertically disposed in said standpipe and extending the full length thereof, couplings connecting the corresponding ends of said tubes, and a pipe attached to each of said couplings extending substantially at right angles to said tubes and passing through the adjacent reducing T whereby service water may be circulated through said tubes to be heated by hot fluid previously passed through the pipes of the house heating system.

2. In combination a standpipe through which hot fluid is passed after it has been circulated through the pas-

sages of a house heating system, a plurality of parallel tubes of small cross-section vertically disposed in said standpipe, couplings connecting the corresponding end of said tubes, and a pipe attached to each of said couplings extending substantially at right angles to said tubes and passing through said stand-pipe whereby service water may be circulated through said tubes to be heated by hot fluid previously passed through the several pipes of the house heating system.

3. In combination, a standpipe through which hot fluid is passed after it has been circulated through the fluid passages of a house heating system, a tube of comparatively small cross-section and of good heat-conducting material vertically disposed in said standpipe and surrounded by the hot fluid in said standpipe, and pipes connected with the ends of said tube extending substantially at right angles to said tube and passing through said stand-pipe whereby service water may be circulated through said tube to be heated by conduction from the hot fluid previously passed through the several passages of the house heating system.

1,108,464. LOCKING ATTACHMENT FOR BOXES. FRED W. MOREY, East Taunton, Mass. Filed Apr. 30, 1912. Serial No. 694,044. (Cl. 229—36.)

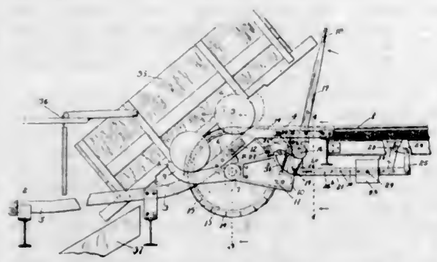


A knock-down paper box having two of its sides folded so that their edges contact to form a corner of the box with one of such sides provided with a slot extending approximately parallel with said corner, a fold on the edge of one of said sides at said corner turned over the edge of the other side, and a tongue on the outer edge of said fold comprising a main portion of a width approximately the same as the length of said slot and of flaps of comparatively large area extending laterally from the opposite sides of said main portion, said flaps being separated from the edge of the adjacent fold by cuts of considerable width and having parallel edges, the said flaps being foldable against said main portion so that the tongue with the folded flaps can pass through said slot, the said flaps operating to unfold through the resiliency of the paper after the insertion of the tongue through the slot to prevent the withdrawal of the tongue, the said fold and tongue having comparatively large notches at the inner ends of the cuts separating the flaps of the tongue from the fold, said notches operating to engage the corners of the slot after the tongue has been inserted in the slot and the flaps have unfolded.

1,108,465. CAR-DUMPING APPARATUS. GEORGE HENRY MUELLER, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed July 19, 1911. Serial No. 639,306. (Cl. 214—11.)

1. In a car dumping apparatus, the combination of a track, a car engaging device movable in the same general direction as the car from a point in the path thereof to a point out of the path thereof, a brake connected with the car engaging device and adapted to resist its movement together with that of the car, the said device being freely movable except as retarded by the brake, a stop dog, an element rigidly connected with the car engaging device and adapted to be positively engaged by the dog to arrest the movement of the said device, and means for releasing the stop dog from the said element and at the same time releasing the brake to permit the movement of the car engaging device in its initial direction out of the path of the car.

2. In a car dumping apparatus, the combination of a track, a device mounted for reciprocable movement and arranged when in one extreme position to engage a car on the said track and when in the other extreme position to lie outside of the path of the car, a brake connected with the device and adapted to resist its movement together with that of the car, the said device being freely movable except as retarded by the brake, a stop dog, an element rigidly connected with the reciprocable device and arranged to be positively engaged by the stop dog to arrest the movement of the device together with that of the car, means for moving the stop dog out of engagement with the said element and for releasing the brake whereby the device is permitted to move to its extreme position out of the path of the car, and means for returning the said device to its initial extreme position.



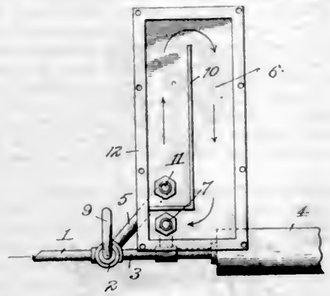
3. In a car dumping apparatus, the combination of a track, an oscillatory device arranged when in one extreme position to engage a car on the said track and when in its other extreme position to lie outside of the path of the car, a brake connected with the device and adapted to resist its movement together with that of the car, the said device being freely movable except as retarded by the brake, a stop dog, an element rigidly connected with the oscillatory device and adapted to be positively engaged by the stop dog to arrest the movement of the device and of the car, means for moving the stop dog out of engagement with the said element and for releasing the said brake whereby the device is permitted to move to its extreme position out of the path of the car, and means for returning the oscillatory device to its initial extreme position.

4. In a car dumping apparatus, the combination of a track, a pivotally mounted device adapted to engage a car on the track, a brake connected with the pivotally mounted device and adapted to resist its movement together with that of the car, the said device being freely movable except as retarded by the brake, a stop dog, an element rigidly connected with the said device and arranged to be positively engaged by the stop dog to arrest the movement of the device and of the car, and means for moving the stop dog out of engagement with the element and for at the same time releasing the brake whereby the pivotally mounted device is permitted to move in its initial direction out of the path of the car.

5. In a car dumping apparatus, the combination of an inclined track, a reciprocable device arranged to engage a car on the said track when in one extreme position and to lie outside the path of the car when in its other extreme position, a brake connected with the said reciprocable device, the device being freely movable except as retarded by the brake, a stop dog, an element rigidly connected with the device and adapted to be engaged by the stop dog to arrest the movement of the device together with that of the car, means for moving the stop dog out of engagement with the element and for simultaneously releasing the brake whereby the device is permitted to move in its initial direction out of the path of the car, automatic means for returning the reciprocable device to its initial position, and manually controlled means for retarding the return movement.

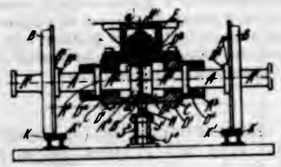
[Claims 6 to 21 not printed in the Gazette.]

1,108,466. HEATER FOR AUTOMOBILES AND THE LIKE. CLARENCE R. NELSON, Yonkers, N. Y. Filed June 26, 1912. Serial No. 705,981. (Cl. 237—4.)



In an automobile heater the combination of an exhaust pipe, a drum arranged with one end adjacent the exhaust pipe, said drum being provided with a partition having one portion extending longitudinally of the drum and terminating near the far end thereof and a portion extending transversely of the drum and terminating at one side adjacent the opposite end thereof, and forming communicating passageways, short branch pipes extending from the exhaust pipe and communicating with the drum on opposite sides of the transverse portion of the said partition and a valve for governing the flow of exhaust gases through said drum.

1,108,467. RAILWAY VEHICLE AND TRACK ADAPTABLE TO CHANGE OF GAGE. JAMES HARPER NEWTON, Sydney, New South Wales, Australia. Filed Feb. 5, 1914. Serial No. 816,760. (Cl. 105—11.)



1. A railway vehicle axle divided into two interchangeable parts, each part being of an equal length and of similar formation, such formation comprising the outer journal made longer than the width of the bearing in which it is supported, the inner journal also made longer than the width of the bearing in which it is supported, the said inner journal being formed between collars which serve as stops to control the outward and inward movements of the axle parts, contiguous to the end collar of such journal the circular roller bearing formed in the end of each interchangeable part of the axle, the diameter of the said roller bearing on the one part being larger than the roller bearing on the other part so that when the half parts are contiguous to each other the ball bearings on the one end of the shaft will bear against the end of the adjacent shaft, each said half part of the axle having a centrally located oil feeding channel extending its entire length, and a channel communicating therewith and with the inner journal, and being further provided with a collar as a means of attachment with a screw threaded bolt to the axle wheel, as described and shown, and for the purposes set forth.

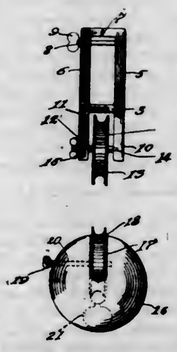
2. As an attachment to a railway vehicle, the combination, with an extendible axle composed of two parts of equal length which are interchangeable, of the centrally situated hanger divided horizontally at its central line, an oil chamber formed therein, a bearing on each side of the said oil chamber, guide flanges extending above the oil chamber and separated from each other to admit a distance block moving therein, and, an under carriage attachment fitting on either side of the guide flanges, and secured, by means of bolts, to the said hanger, as described and shown, and for the purposes set forth.

3. The combination, with a railway vehicle axle having circular roller bearings in the inner ends of each half part, of, a distance block which is supported by the inner end collars when said collars are contiguous to each other and the roller bearings in contact with the adjacent parts of the axle, and which, when separated, forms the distance piece between the said collars and is in contact with the roller bearings of each part of the axle, as described and shown, and for the purposes set forth.

4. The combination, comprising a central hanger, a central oil chamber therein, axle bearings located on either side of the said oil chamber, two projecting guide pieces on both sides of said hanger to form a guide channel, a horse-shoe strap, adapted to slide between said guide pieces, to which is attached at its upper end a distance block, the said block being raised or lowered simultaneously with the ascent and descent of the said horse-shoe strap, the circular part of said strap being adapted to run upon and to be moved by a gradient track arranged in position between railway lines, as described and shown, and for the purposes set forth.

5. In apparatus for operating the distance block piece of an extendible railway vehicle axle, the collapsible gradient track consisting of a jointed gradient part and a level part, secured to each other by pin attachments, supporting links which are the attachment of the said level part and fixed supporting chairs, the said links being adapted to oscillate upon the said chairs and moving with the level track part, a link, centrally supporting the gradient part, a slide block attached to said link and adapted to move with it, connecting links forming attachment with a central slide block which is adapted to run upon the sloping part of a fixed bed plate, a forwardly situated slide block attached both to the connecting rod of the central slide block and to the forward end of the gradient part, a jointed lever attached at one end to the forward end of the gradient slide block and at its other end to a similar slide block, both of the said slide blocks being adapted to slide upon the level part of a fixed bed plate, the said jointed lever being connected up to and operated by a pair of cranked levers, the operating spindle connecting said cranks, bearings supporting said spindle, an operating lever on said spindle, and, a weight on said lever adapted to be operated in the forward and backward positions so as to raise and lower the gradient track, as described and shown, and for the purposes set forth.

1,108,468. ADJUSTER FOR FLEXIBLE PENDANTS. RICHARD J. NORTON, Washington, D. C. Filed Oct. 25, 1912. Serial No. 727,745. (Cl. 248—6.)

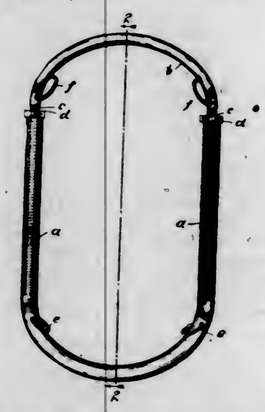


1. In combination with a flexible cord and pendant fixture, an adjuster comprising a body having two bifurcated end portions, one of which portions is adapted to clamp and offset the flexible cord between it and be readily

end portions bifurcated, one portion being adapted to receive, and provided with, a pulley, means for retaining the pulley in place in the portion, said pulley being grooved for the cord, and a balancing member having a pulley recessed therein and means for retaining the pulley in place adapted to be quickly removed and replaced, said pulley being grooved to ride on said cord, said balancing member being arranged to counterbalance the lamp and take up the cord when adjusted.

2. In combination with a flexible cord and pendant fixture, an adjuster comprising an elongated body having its end portions bifurcated, one portion being adapted to clamp and offset the flexible cord and to be slidable thereon, and to cause the body to extend angularly out from said cord, the other of said portions being adapted to retain a pulley, said pulley being grooved for the flexible cord and disposed away from the cord offset by the first portion, and a balancing member having a pulley completely recessed therein and arranged to ride on said cord and bring it adjacent to the inside of the member whereby it will not be able to jump the cord, and means for retaining the wheel easily removably in place, said balancing member being arranged to counterbalance the fixture and take-up the cord when adjusted and avoid contact with the cord adjacent to the lamp.

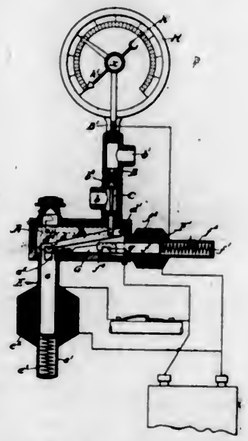
1,108,469. FRACTURE AND EXTENSION APPARATUS. EMORY O. ONION, Summum, and CHARLES D. SNIVELY, Ipava, Ill. Filed July 27, 1910. Serial No. 574,081. (Cl. 128—52.)



A device of the class described, comprising a pair of substantially U-shape telescopic members, the ends or legs of the inner member being screw threaded, the portions of both members intermediate of their ends being bowed at an angle to the axes of said ends, rotative members operatively connected with the ends of both members, but maintained against movement lengthwise of the outer member, whereby the relation of both ends or legs may be independently controlled, and attaching means secured intermediate of the ends of both members.

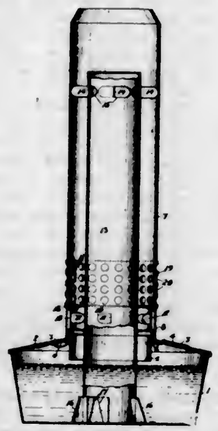
1,108,470. ELECTRIC PNEUMATIC-PRESSURE CONTROL. EDWARD K. PARKER, Santa Barbara, Cal. Original application filed Aug. 12, 1912, Serial No. 714,584. Divided and this application filed Mar. 14, 1913. Serial No. 754,256. (Cl. 137—4.)

1. In a device of the class described, a casing having an inlet port and an outlet port, a valve and valve seat located between said ports, a lever pivoted in said casing, a connection between said lever and said valve, an electro-magnet mounted on said casing comprising a spring-pressed armature having a projection, said projection adapted to coöperate with said lever to open said valve, a bolt, another electro-magnet mounted on said casing and comprising a spring-pressed armature adapted to cooperate with said bolt to lock said valve in open position, and to unlock said valve.



2. In a device of the class described, a casing having an inlet port and an outlet port, a valve and valve seat located between said ports, a lever pivoted in said casing, a pivotal connection between said lever and said valve, an electro magnet mounted on said casing comprising a spring-pressed armature having a projection, said projection adapted to coöperate with said lever to open said valve, a bolt slidably mounted on said casing and having a stud, another electro-magnet mounted on said casing and comprising a spring-pressed armature having a projection, said armature adapted to coöperate with said bolt to lock said valve in open position and said projection adapted to coöperate with said stud to withdraw said bolt, thereby unlocking said valve.

1,108,471. ORCHARD-HEATER. RUDOLPH PETER, San Jose, Cal. Filed May 11, 1914. Serial No. 837,739. (Cl. 158—91.)



1. In combination with a vessel for containing oil, a stack communicating directly with the vessel for conducting away the products of combustion of the oil, and a tube within the stack extending upward from the lower portion of the vessel and having an opening near the top to permit

the escape of the vapor generated from the oil in said tube.

2. In combination with a vessel for containing oil, a stack for conducting away the products of combustion of the oil, and a tube within the stack extending upward from the lower portion of the vessel and having a closed top and outwardly directed holes near the top to permit the escape of vapor generated from the oil in said tube.

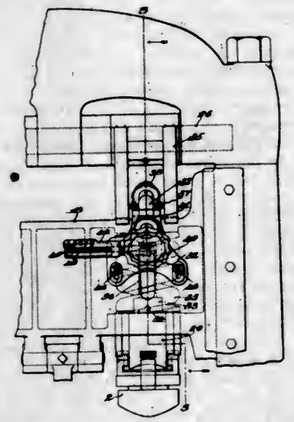
3. In combination with a vessel for containing oil, a cover therefor, a stack communicating directly with the vessel for conducting away the products of combustion of the oil, and a tube within the stack, its lower portion being in the lower portion of the vessel and having a series of holes at the top.

4. In combination with a vessel for containing oil, a cover therefor, a stack for conducting away the products of combustion of the oil, a tube within the stack depending into said vessel, and heat conductors in said vessel extending sufficiently in height and length to conduct to the bottom of the vessel heat absorbed by their upper portions sufficient to completely vaporize oil in said bottom.

5. In combination with a vessel for containing oil, a stack for conducting away the products of combustion of the oil, and a vertically and outwardly extending heat conductor in said vessel extending from the bottom thereof to a considerable fraction of its height.

[Claims 6 to 9 not printed in the Gazette.]

1,108,472. SOLE-PRESSING MACHINE. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 1, 1912. Serial No. 674,686. (Cl. 12—33.)



1. A sole pressing machine having, in combination, a sole pressing form, a shoe supporting jack, means for relatively actuating the jack and form to exert pressure upon the sole of a shoe, means for regulating the pressure, and means for indicating the total pressure which is exerted upon the sole, substantially as described.

2. A sole pressing machine having, in combination, a shoe supporting jack, a sole pressing form, means for relatively actuating the jack and form, a spring for imparting the desired pressure to the form, means for adjusting the compression of the spring, and means for indicating the pressure exerted upon the sole of a shoe, substantially as described.

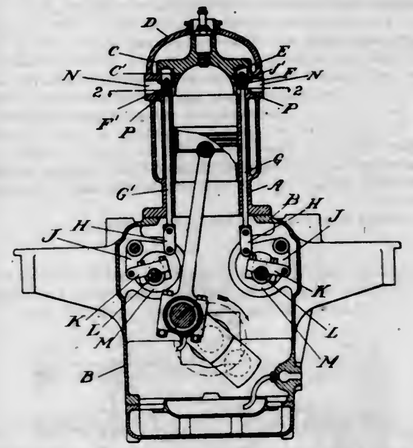
3. A sole pressing machine having, in combination, a shoe supporting jack, a sole pressing form, means for relatively actuating the jack and form, a spring for imparting the desired pressure to the form, adjusting mechanism for regulating the compression of the spring, and an indicator actuated by the adjusting mechanism and arranged to register the pressure exerted upon the sole, substantially as described.

4. A sole pressing machine having, in combination, a shoe supporting jack, a sole pressing form, means for relatively actuating the jack and form, a spring for imparting the desired pressure to the form, an adjusting shaft, connections between the adjusting shaft and spring, an indicator shaft having an indicating member connected thereto, and connections between the two shafts, substantially as described.

5. A sole pressing machine having, in combination, a shoe supporting jack, a sole pressing form, means for relatively actuating the jack and form, a form carrier, a cross head, a spring interposed between the cross head and form carrier, an adjusting member rigidly connected to the form carrier at its lower end, a gear threadedly mounted upon the upper end of the adjusting member, and means for rotating the gear to adjust the form carrier with relation to the cross head and vary the initial compression of the spring, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,473. INTERNAL-COMBUSTION ENGINE. GEORGE RACTLIFFE, New York, N. Y., assignor, by mesne assignments, to John T. Pratt, New York, N. Y. Filed Jan. 6, 1913. Serial No. 740,393. (Cl. 123—86.)



1. In an internal combustion engine, a cylinder, a plurality of ports near the head of said cylinder, valve mechanism for each port comprising a recess in the inner wall of the cylinder open on one side to the combustion chamber, and extending from the upper end of the cylinder to a point slightly beyond the port, a projection on the inside of the cylinder head concentric with the inner surface of the cylinder wall proper, a valve for each recess having its outer side symmetrical with the outer wall of its recess, and its inner side substantially flush with the remaining surface of the inner wall of the cylinder, a valve stem for each of said valves to operate them independently one of the other, said valve stems passing through holes in the cylinder wall parallel with the axis of the cylinder and adapted to reciprocate said valves respectively, valve mechanism in the crank-case of the engine operated by the engine to reciprocate said stems.

2. In an engine, a cylinder and cylinder wall having inlet and outlet ports, a cylinder-head to close one end of said cylinder, a circular projection on said head extending inwardly below the top of said cylinder wall, recesses in the cylinder wall counter-bored from the inside of and extending from the head end of said cylinder and forming spaces adjacent to said ports partly inclosed by the inner extension of said cylinder-head, valves fitting said spaces with inner faces flush with the interior cylinder wall and of a width slightly in excess of the width of said port openings, a stem for each of said valves extending from

said valve space to the lower end of said cylinder and connections to operate said valve stem.

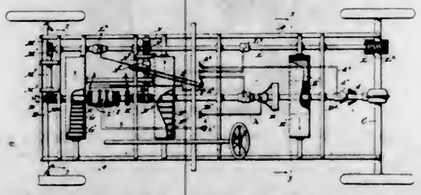
3. In an internal combustion engine, inlet and outlet ports near the head of the cylinder, a main cylinder section, a water-jacket therefor, a cylinder head, a piston having a predetermined movement in said cylinder, two separately disposed counterbores about the top of said cylinder above the limit of movement of said piston, valves in said counter-bores adapted to engage the outer surface thereof and having their inner surfaces concentric with the upwardly projected surface of the cylinder wall above the limit of movement of said piston, a stem for each of said valves projecting through the cylinder proper and valve operating mechanism to move said stems and valves.

4. In an internal combustion engine, a cylinder having a main portion with water-jacket, a cylinder head, the main portion of said cylinder having its inner surface cylindrical throughout its length to within a short distance of the upper end, the upper end of said inner surface being expanded to form two separate recesses connecting with the inlet and outlet ports of the cylinder, valves conforming to the shape of said recesses and engaging on their inner surface and inner projection of the cylinder-head, a cylinder-head having a cylindrical inner projection and a lateral flange for attachment to the head of the cylinder, operating mechanism between said valves and the moving parts of said engine for the purpose described.

5. In an internal combustion engine, a valve mechanism comprising a recess cut into the inner wall of the cylinder for only a part of the length of the cylinder, a port in the outer wall of the cylinder connecting with said recess, a valve in said recess conforming on its outer side to the wall of the recess and on its inner side conforming to the extension of the inner surface of the cylinder, means extending from the top of the cylinder above the piston throw to the crank chamber and located outside the inner surface of the wall of the cylinder to operate said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,108,474. DRIVING MECHANISM FOR MOTOR-VEHICLES. HAMPTON P. RHODES, Shreveport, La. Filed Feb. 23, 1912. Serial No. 679,502. (Cl. 185—41.)



1. In a motor vehicle, a drive shaft, a power spring for rotating the drive shaft, an auxiliary spring adapted to be directly connected to the power spring to wind the same, and means for connecting the auxiliary spring to the power spring.

2. In a motor vehicle, a drive shaft, a power spring for rotating said drive shaft, and means for winding said power spring including a spring motor adapted to be directly coupled thereto, and gearing between said spring motor and one of the wheels of the vehicle for storing up power therein.

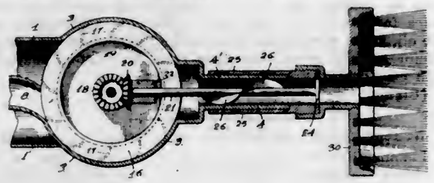
3. In a motor vehicle, a drive shaft, a power spring for rotating said drive shaft, a second shaft in alinement with said drive shaft, a spring adapted to rotate said second shaft in a direction opposite to the direction of rotation of the power shaft, means for normally holding said second shaft against rotation by its spring, and means for coupling the drive shaft and said second shaft together.

4. In a motor vehicle, a drive shaft, a power spring for rotating said drive shaft, a second shaft in alinement with said drive shaft, a spring adapted to rotate said second shaft in a direction opposite to the direction of rotation of the power shaft, means for normally holding said second shaft against rotation by its spring, means for rotating said second shaft against the tension of its spring, and means for coupling the drive shaft and said second shaft together.

5. In a motor vehicle, a drive shaft, a power spring for rotating said drive shaft, a second shaft in alinement with said drive shaft, a spring adapted to rotate said second shaft in a direction opposite to the direction of rotation of the power shaft, means for normally holding said second shaft against rotation by its spring, gearing between said second shaft and one of the wheels of the vehicle for rotating said second shaft against the tension of its spring, and means for coupling the drive shaft and said second shaft together.

[Claims 6 to 13 not printed in the Gazette.]

1,108,475. ROTARY FOUNTAIN-BRUSH. ARTHUR M. ROLAND, San Francisco, Cal., assignor of two-fifths to Alphonse Newhouse, San Francisco, Cal. Filed Feb. 27, 1914. Serial No. 822,232. (Cl. 15—37.)

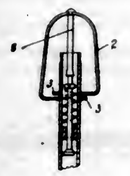


1. In a rotary fountain brush, the combination of a hollow cylindrical handle having a soap chamber therein and a reduced portion with a circular portion integral therewith; a wheel having suitable buckets rotatably mounted within the circular portion; a shaft rotatably mounted within the reduced portion of the handle and having a spiral secured thereto; suitable bevel gears secured to the shaft and to the wheel; a suitable brush detachably secured to the shaft; and a delivery tube within the handle adapted to deliver water to the buckets on the wheel and to the spiral on the shaft and thereby rotate the said shaft and to draw liquid soap from the chamber.

2. In a rotary fountain brush, the combination of a hollow cylindrical handle having a soap chamber therein and a reduced portion with a tubular extension thereto, and a circular portion integral therewith; a shaft rotatably mounted within the tubular extension and having a spiral secured thereto; a suitable wheel having buckets thereon and rotatably mounted within the circular portion of the reduced portion of the handle; suitable gears connecting the inner end of the shaft with the wheel; a suitable brush detachably secured to the shaft; a delivery tube within the handle arranged to deliver water onto the buckets of the wheel and to the spiral of the shaft for the purpose of rotating the said shaft; a suitable nozzle adapted to deliver liquid soap from the soap chamber in the handle to the delivery tube; and means for regulating the flow of liquid soap through the said nozzle.

3. In a rotary fountain brush, the combination of a hollow cylindrical handle having a soap chamber therein, a reduced portion with a flat circular portion, and an extension to the reduced portion; a sleeve rotatably mounted on the extension of the reduced portion; a tube having apertures therein and bristles secured thereto detachably secured to the sleeve; a shaft having a spiral thereon and secured at one end to the sleeve and the other end rotatably mounted within the reduced portion of the handle; a wheel having buckets and rotatably mounted within the flat circular portion of the handle; suitable gears connecting the end of the shaft and the wheel; a delivery tube adapted to direct a stream of water on the wheel, said water being adapted to rotate the said wheel and the spiral on the shaft; a suitable nozzle within the delivery tube connecting the said tube with the soap chamber; and means for regulating the supply of soap through the said nozzle.

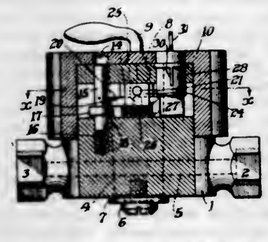
1,108,476. VALVE-RELEASER. CHARLES S. SAPP, Mount Vernon, Ohio. Filed Jan. 13, 1914. Serial No. 811,859. (Cl. 152—12.)



1. A valve releaser for a pneumatic tube, comprising a spring clip provided with perforated overlapping flanges for engaging with the valve tube, and having a pin for pushing open the valve.

2. A valve releaser for a pneumatic tube, comprising an arch-shaped spring clip having inwardly projecting overlapping flanges at its bottom edges, said flanges being provided with holes which are normally out of line with each other and which can be slipped over the valve tube when placed in line, and a pin, for pushing open the valve, projecting from the top of the clip toward the said holes.

1,108,477. LOCKING MECHANISM FOR VALVES. JOHN A. SCHNEIDER, Philadelphia, Pa. Filed Mar. 7, 1914. Serial No. 823,069. (Cl. 137—7.)



1. In a device of the character stated, a casing having an inlet and an outlet, a plug rotatably mounted in said casing between said inlet and said outlet and having a socket opening therein, a spring pressed pin slidably mounted in said casing in alinement with the path of movement of said opening and adapted to seat in said opening in alined position, a cap for said casing removably secured thereto and overlapping the end of said plug, said cap having an opening therein, a spring pressed plunger slidably mounted in said casing in the path of movement of said cap opening and adapted to seat in said opening in alined position thereof, and means operable by a suitable key for retracting both said plunger and said pin whereby said plug and cap are released.

2. In a device of the character stated, a casing having an inlet and an outlet, a plug rotatably mounted in said casing between said inlet and said outlet and having a socket opening therein, a spring pressed pin slidably mounted in said casing in alinement with the path of movement of said opening and adapted to seat under the action of its spring in said opening in alined position thereof, a spring pressed block adjacent said pin, having a beveled portion adapted to coöperate with a portion of said pin, and means operable by a suitable key for shifting said block to retract said pin and release said plug.

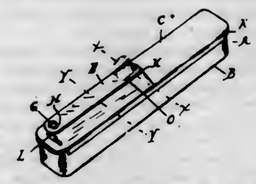
3. In a device of the character stated, a casing having an inlet and an outlet, a plug rotatably mounted in said casing between said inlet and said outlet and having a socket opening therein, a cap removably secured to said casing and overlapping a portion of the end of said plug to prevent removal of said plug, means to lock said cap in assembled condition, a spring pressed pin slidably mounted in said casing in alinement with the path of movement of said opening and adapted to seat under the action of its spring in said opening in alined position thereof, a spring pressed block adjacent said pin and having a beveled portion adapted to coöperate with a portion of said pin, and means operable by a suitable key for shifting said block to retract said pin and release said plug.

4. In a device of the character stated, a casing having an inlet and an outlet, a plug rotatably mounted in said casing between said inlet and said outlet and having a socket opening therein, a cap removably secured to said casing and overlapping a portion of the end of said plug to prevent removal of said plug, said cap having an opening therein, a spring pressed plunger slidably mounted in said casing and adapted to project into the path of movement of said opening, a spring pressed pin slidably mounted in said casing in alinement with the path of movement of said plug opening and adapted to seat in said opening in alined position thereof, a block slidably mounted in said casing and provided with beveled surfaces for respectively engaging portions of said plunger and said pin, and means operable by a suitable key for shifting said block to retract said plunger and pin whereby said rotatable plug and cap are released for movement.

5. In a valve device, a body portion having a thoroughfare for the passage of the fluid, and a rotary plug for controlling the passage of the fluid through the thoroughfare, combined with a cap detachably connected with the body portion and arranged to prevent the plug from being withdrawn, and a key operated mechanism shielded by the cap and provided with means for locking the cap against removal and the plug against rotation.

[Claim 6 not printed in the Gazette.]

1,108,478. PENCIL-SHARPENER. JOHN R. SEARIGHT, Detroit, Mich. Filed Dec. 28, 1912. Serial No. 738,983. (Cl. 120—90.)



1. A pencil sharpener, comprising an elongated receptacle having a wall thereof provided with a seat slotted longitudinally of the receptacle and extending for a portion only of the length of the receptacle, the remaining portion of the receptacle forming a hand-grip, and a knife engaging said seat having its cutting edge extending longitudinally of the receptacle and positioned in operative relation to said slot.

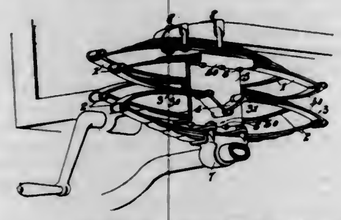
2. A pencil sharpener, comprising a body portion stamped from a piece of metal and having out-turned flanges and a cover having in-turned flanges slidably engageable by a relative longitudinal movement of the cover and body, said flanges preventing disengagement of the cover from the body by a relative lateral movement, said cover being provided with a seat slotted longitudinal of the cover, and a knife engaging said seat having its cutting edge extending longitudinally of the cover and positioned in operative relation to said slot.

3. A pencil sharpener, comprising a comparatively narrow elongated receptacle having a wall thereof provided with a seat slotted longitudinally of the receptacle and extending for a portion only of the length of the receptacle, the remaining portion of the receptacle forming a hand-grip, said seat having inclines arranged at opposite ends of said slot with the apices of the inclines slightly in rear of said slot, a blade provided with elongated apertures and having the cutting edge thereof extending longitudinally of the receptacle, said blade engaging said seat and having its cutting edge positioned by said inclines in operative relation to the front edge of said slot, and securing screws passing through the elongated apertures

and engaging the receptacle, said receptacle including a cover.

4. A pencil sharpener, comprising a comparatively narrow elongated receptacle composed of a body portion stamped from a single piece of metal and a cover formed from a stamping, said cover and body portion being provided with interlocking flanges engageable by a relative longitudinal sliding movement of the body and cover, said cover being longitudinally slotted for a portion only of the length of the cover, and a knife arranged in operative relation to said slot and extending longitudinally of the cover, said receptacle having a portion of sufficient length beyond one end of the slot to form a hand-grip, for the purpose described.

1,108,479. VEHICLE-SPRING. MARTIN J. SMITH, Brockton, Mass. Filed May 16, 1914. Serial No. 838,994. (Cl. 21—103.)



1. A vehicle spring that comprises a plurality of sets of multiple springs, each set consisting of an upper and a lower bow spring, resilient members located between and connected with the said bow springs, and a rigid intermediate connection between each pair of sets of springs, the said connection being fixedly joined with the upper bow springs of one set of springs, and the lower bow spring of the adjacent set of springs.

2. A spring suspension embracing a plurality of sets of multiple spring members having pivotal connections, means for connecting one set of said springs to the vehicle axle, other means for connecting the other set of springs to the vehicle body, and a rigid connection between each adjacent set of springs, said connection being fixedly joined to the upper part of one set of the springs and to the lower part of an adjacent set of springs.

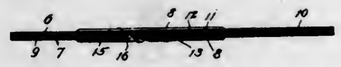
3. A spring suspension embracing two sets of multiple springs, each set including an upper and a lower bow spring member, a pair of forked spring connections, one of said connections having its free end fixedly joined with the adjacent ends of the upper and lower bow springs, the other connection being likewise joined to the adjacent upper and lower ends of the said bow springs, and a rigid connection between the two sets of springs, said connection being joined to the top of one set of springs and to the bottom of the other set of springs.

4. A spring suspension comprising two sets of multiple springs, each including an upper and a lower bow spring member, a pair of forked spring connections, one of the said connections being located between each of the ends of the upper and lower bow springs, means for fixedly connecting the lower bow spring member of one set of springs to the axle, other means for connecting the upper bow springs of the upper set to the vehicle body, and further means for keeping the two sets of springs relatively fixedly positioned.

5. A spring suspension comprising two sets of multiple springs, each including an upper and a lower bow spring member, a pair of forked spring connections, one of the said connections being located between each of the ends of the upper and lower bow springs, means for fixedly connecting the lower bow spring member of one set of springs to the axle, other means for connecting the upper bow springs of the upper set to the vehicle body, further means for keeping the two sets of springs relatively fixedly positioned, the said means including a bracket plate located between the two sets of springs whose upper end forms a seat for fixedly holding the upper bow spring of one set of springs and whose lower end forms a seat for holding the lower bow spring of the adjacent set of springs.

[Claims 6 to 8 not printed in the Gazette.]

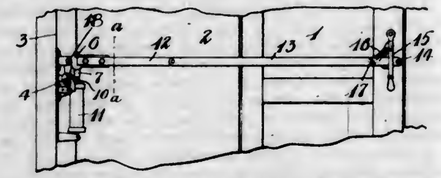
1,108,480. SLIDE-RULE. HENRY WEBSTER TOMLINSON, Chicago, Ill. Filed Apr. 8, 1913. Serial No. 759,683. (Cl. 235—70.)



1. A slide-rule, comprising a frame formed with an opening, the side walls of which are formed with grooves and the end walls are formed with transverse openings, two adjacent slidable members, each consisting of two surface plates and an intermediate plate, the edges of the intermediate plate of one member projecting beyond the surface plates to form tongues, one of the latter sliding in one of the side grooves in the frame, the surface plates of the companion member extending over one edge of its intermediate plate to form a groove which receives the tongue on the adjacent slidable member, the opposite edge of the aforesaid intermediate plate of the companion member projecting beyond said surface plates to form a tongue which slides in one of the side grooves in the frame, and clamping means acting at a right angle to the surface of the slidable members.

2. A slide rule comprising a frame formed of upper and lower plates provided with elongated registering openings and two side intermediate plates parallel with the side walls of the openings, the ends of the upper and lower plates of the frame between the inner edges of the two intermediate side plates being spaced to form passages for a slidable member, one of the intermediate side plates being cut away, two adjacent slidable members, each consisting of two surface plates and an intermediate plate, the edges of the intermediate plate of one member projecting beyond the surface plates to form tongues, one of the latter sliding in one of the side grooves in the frame, the surface plates of the companion member extending over one edge of its intermediate plate to form a groove which receives the tongue on the adjacent slidable member, the opposite edge of the aforesaid intermediate plate of the companion member projecting beyond said surface plates to form a tongue which slides in one of the side grooves in the frame, and means adjacent the cut away portion of the side intermediate plate for drawing the upper and lower plates of the frame together to bind the tongue of the adjacent slidable member.

1,108,481. DOOR-CONTROLLING MEANS FOR ELEVATORS. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed May 8, 1913. Serial No. 766,247. (Cl. 107—31.)



1. A device of the character described, comprising an elevator car, and an elevator well door arranged for reciprocating movement, an electric circuit controlling the movement of said elevator car, said circuit including a rotary electric switch including an operating shaft therefor arranged adjacent said door, a rock shaft adjacent said switch, an arm connected to said door and to said rock shaft and moving with the reciprocations of said door to oscillate said shaft in successive opposite directions, and connections between said rock shaft and said switch operating shaft arranged to continuously rotate the latter in the same direction and into alternate circuit breaking and making positions with the successive and oppositely directed door opening and closing movements of said rock shaft, to thereby prevent the movement of said elevator car while said door is open.

2. A device of the character described comprising an elevator car and an elevator well door arranged for reciprocating movement, an electric circuit controlling the movement of said elevator car and including a rotary electric switch arranged on the well casing adjacent the said door, an operating shaft for said switch, an arm connected to said door to swing with the opening and closing movement thereof, operative connections between said arm and said switch operating shaft arranged to continuously rotate the latter in the same direction with successive and oppositely directed door opening and closing movements of said arm, said switch and said arm cooperating to break said controlling electric circuit when said door is open to close said circuit when said door is closed whereby said car may be operated.

3. A device of the character described comprising an elevator car and an elevator well door arranged for reciprocating movement, an electric circuit controlling the movement of said elevator car and including a rotary electric switch arranged on the well casing adjacent the said door, an operating shaft for said switch, a pivoted arm operatively connected with said door and swinging with the opening and closing movements thereof, operative connections between said arm and said switch operating shaft, said arm being arranged to operate said connections to continuously rotate said shaft in the same direction and into successive circuit making and breaking positions with the successive and oppositely directed movements of said arm into door closed and door opened positions respectively whereby said elevator car controlling circuit is conditioned for car operation when the door is closed and is conditioned to prevent car operation when the door is opened.

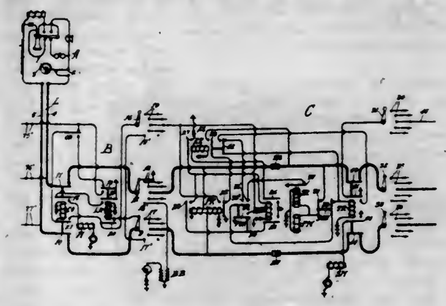
4. A device of the character described comprising an elevator car and an elevator well door mounted for reciprocating movement, an electric circuit for controlling the movement of said car, said circuit including a rotary electric switch having circuit making and breaking positions operating in said respective positions to prevent and permit movement of the elevator car, said circuit being positioned adjacent said door and having an operating shaft, an arm connected to said door to move in opposite directions with the reciprocation of said door in opposite directions, and a pawl and ratchet connection between said arm and said switch operating shaft, said connections being arranged to continuously rotate said shaft in the same direction and to alternate circuit breaking and making positions with the successive and oppositely directed door opening and closing movements of said arm.

5. A device of the character described comprising an elevator car and an elevator well door mounted for reciprocating movement, an electric circuit for controlling the movement of said car, said circuit including a rotary electric switch having circuit making and breaking positions operating in said respective positions to prevent and permit movement of the elevator car, a pivoted arm connected with said door and swinging in opposite directions with the opening and closing of the door, and pawl and ratchet connections between said pivoted arm and said switch operating shaft arranged to continuously rotate said shaft in the same direction with the successive and oppositely directed door opening and closing movements of said arm.

[Claim 6 not printed in the Gazette.]

1,108,482. TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1912. Serial No. 719,328. (Cl. 179—18.)

1. A selector switch comprising an operating magnet, a quick-acting relay, a multiple circuit including said magnet and relay, means adapted for transmitting impulses of current over said multiple circuit to operate said magnet and relay, the winding of said magnet and relay being so related that a discharge of current from said relay, after each impulse, flows through the windings of said relay and magnet to maintain the armature of the relay attracted between impulses, and a secondary circuit controlled through contacts of said relay.



2. A selector switch comprising a primary magnet, a quick-acting secondary relay, a multiple circuit including said primary magnet and said secondary relay, means adapted for transmitting impulses of current over said multiple circuit whereby said primary magnet is operated and said secondary relay energized to attract its armature, the windings of said primary magnet and secondary relay being so related that a discharge of current from said relay, after each impulse, flows through the windings of said secondary relay and magnet to maintain the armature of the relay attracted between impulses, and a secondary circuit effective upon retraction of said armature upon cessation of the impulses.

3. A selector switch comprising a primary relay, a primary magnet and a quick-acting secondary relay, a multiple circuit including a source of current said primary magnet and said secondary relay, means for transmitting impulses from said primary relay over said multiple circuit whereby said primary magnet is operated to step the switch and said secondary relay energized to attract its armature, the windings of said primary magnet and secondary relay being so related that a discharge of current from said relay after each impulse flows through the winding of said secondary relay and magnet to maintain the armature of the relay attracted between impulses, a secondary magnet and secondary circuit for causing operation thereof effective upon retraction of said armature.

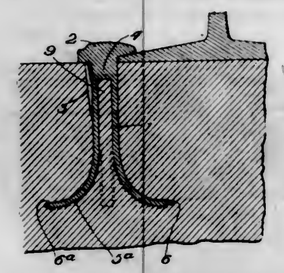
4. A selector switch comprising a primary relay, a primary magnet, an impulse circuit including said magnet and contacts of said primary relay, a quick-acting secondary relay connected in multiple circuit with said primary magnet and adapted to receive said primary impulses whereby its armature is attracted and whereby a discharge of current from its winding through said primary magnet after each impulse causes the armature of the relay to remain attracted, said armature retracting upon cessation of said primary impulses, a secondary magnet for said switch, and a secondary circuit for operating said magnet effective responsive to retraction of said armature.

5. A telephone system comprising a metallic circuit telephone line, selector and connector switches, a primary relay, a primary magnet and quick-acting secondary relay for each of said selectors and connectors, a multiple circuit for each of said selectors and connectors including a source of current and its said primary magnet and secondary relay, means for transmitting impulses from a primary relay over the multiple circuits of selector and connector switches in extending the circuit of said line, the windings of each primary magnet and secondary relay being so related that impulses through the secondary relay assisted by the discharge from its winding through said winding and the primary magnet after each impulse,

maintain the armature of the secondary relay attracted during the transmission of the impulses, and a secondary circuit for each switch effective upon retraction of the armature of the associated secondary relay.

[Claims 6 to 16 not printed in the Gazette.]

1,108,483. SPIKE. NATHAN ABRAMSON, Washington, D. C. Filed July 25, 1913. Serial No. 781,155. (Cl. 85—13.)



1. A spike comprising a head and a shank, the shank being solid for a substantial distance below the plane of the bottom of the head, said shank being hollow below the solid portion and provided at its lower end with slits to form a series of prongs, the bottom of the solid portion of the stem compressing the wood confined in the hollow portion which serves to spread the prongs and increase the friction between the spike and the wood.

2. A spike comprising a head and a shank, the shank being solid for a substantial distance below the plane of the bottom of the head, said shank being hollow below the solid portion, whereby when the spike is driven into a piece of wood, the bottom will compress the wood confined in the hollow portion and serve to increase the friction between the stem and the wood and to distort the lower end of the stem.

3. A spike comprising a head and a shank, the shank being solid for a substantial distance below the plane of the bottom of the head, said shank being hollow below the solid portion and provided at its lower end with slits to form a series of prongs, the lower ends of the prongs being sharpened on both sides, the bottom of the solid portion of the stem compressing the wood confined in the hollow portion which serves to spread the prongs and increase the friction between the spike and the wood.

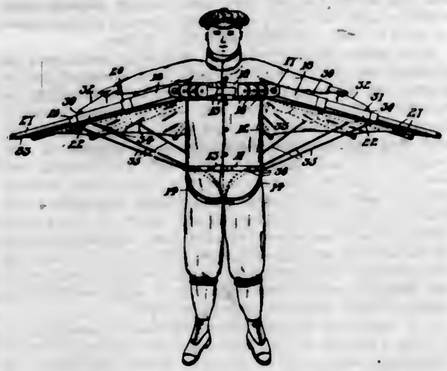
4. A spike comprising a head and a shank, the shank being hollow for a portion of its length and open at the bottom, the closed portion extending below the plane of the bottom of the head, the shank having lateral openings connecting with the hollow portion.

1,108,484. PARACHUTE. STEPHAN BANIC, Greenville, Pa. Filed June 3, 1914. Serial No. 842,645. (Cl. 244—21.)

1. In a parachute, a body harness, comprising a breast strap, a waist strap and crotch straps, longitudinal straps connecting the breast and waist straps, telescoping rib sections carried by the breast strap, a canvas disposed beneath the tube sections, and means connected to the waist strap and tube sections to limit the same in their upward movement.

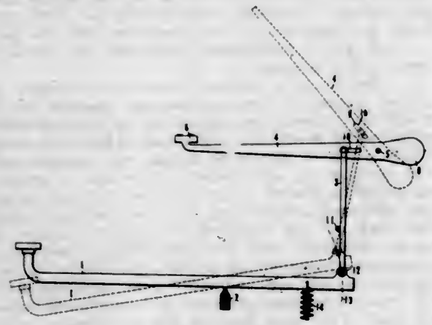
2. In a parachute, a body harness, a plurality of telescoping tube sections, a canvas parachute section disposed beneath the same, each rib section comprising a plurality of telescoping sections, and a spring adapted to cause each of the sections to telescope.

3. In a parachute, a body harness comprising a breast strap, a waist strap and crotch straps, angle members carried by the breast strap, a plurality of telescoping rib sections pivotally-mounted in the angle members, means for holding the telescoping rib sections in distended posi-



tion, and means for causing the sections to telescope when the aforesaid means is released from operative position.

1,108,485. TYPE-WRITING MACHINE. ROBERT S. BLAIR, South Orange, N. J., assignor to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Feb. 21, 1910. Serial No. 545,174. (Cl. 197—28.)



1. In a typewriting machine, in combination, a key lever, a type bar, and an intermediate connection between the key lever and the type bar for transmitting motion from one to the other, said connection engaging the latter substantially at the center of percussion.

2. In a typewriting machine, in combination, a key lever, an upwardly swinging pivoted type bar and means connecting the key lever with the type bar adapted to convey motion from one to the other and engaging the latter at substantially the center of percussion.

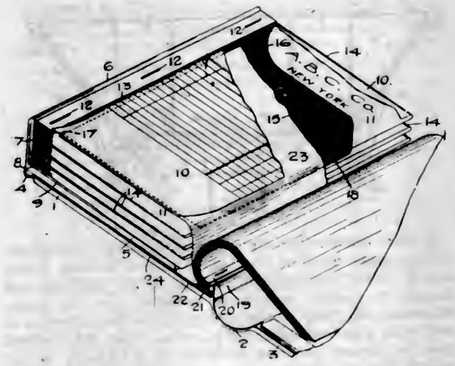
3. In a typewriting machine, in combination, a key lever, a pivoted type bar, and a link connecting the key lever with the type bar for transmitting motion from one to the other, said link engaging the latter at the beginning of its movement at substantially the center of percussion.

4. In a typewriting machine, in combination, a platen, a key lever, a type bar, and means for transmitting motion from the key lever to the type bar, said means engaging the latter at substantially its center of percussion at the beginning of the movement and capable of shifting its position as the type bar approaches the platen.

5. In a typewriting machine, in combination, a platen, a key lever, a pivoted type bar, means associated with said type bar to bring its center of percussion relatively close to its pivot point, and means connecting the type bar at its center of percussion with said key lever, whereby motion is transmitted from one to the other.

[Claims 6 to 39 not printed in the Gazette.]

1,108,486. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Canada. Filed Nov. 24, 1911. Serial No. 662,210. (Cl. 11—23.)



1. In a device of the character described, in combination, a cover, a pad removably secured to one side of said cover, a back hinged to the opposite side of said cover, a pad removably mounted on said back, the leaves of said pads being adapted to register when in operative position, and tip-up means adapted to move said second mentioned pad out of operative relation with the first mentioned pad.

2. In a device of the character described, in combination, a cover, a pad removably secured to one side of said cover, a back hinged to the opposite side of said cover, a second pad removably mounted on said back, the leaves of said pads being adapted to register when in operative position, tip-up means for moving one of said pads about one of its edges as an axis, and means for returning the last mentioned pad to operative position.

3. In a device of the charncter described, in combination, a cover, a pad removably secured to one side of said cover, a back hinged to the opposite side of said cover, a second pad removably mounted on said back, the leaves of said pads being adapted to register when in operative position, tip-up means for moving one of said pads about one of its side edges as an axis, and resilient means connecting the back with said cover for returning the last mentioned pad to operative position when released.

4. In a manifolding sales book, in combination, a support, a member hinged to said support, pads carried by said support and member and means for holding said support and member in normal position.

5. In a manifolding sales book, in combination, a support, a member hinged to said support, pads mounted on said support and member respectively, the leaves of said pads being adapted to register when in operative position, and means for holding said support and member in normal position.

[Claims 6 to 17 not printed in the Gazette.]

1,108,487. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed July 17, 1912. Serial No. 709,856. (Cl. 11—23.)

1. In a device of the character described, in combination, a plurality of sets of original and duplicate leaves, the duplicate leaves being bound together along one end edge and the free end edge of each origonal leaf being temporarily secured by the stub portions of the adjacent leaves.



2. In a device of the character described, in combination, a plurality of sets of leaves connected at one end, the opposite ends of the alternate leaves being bound together at their stub portions, the free ends of the other alternate leaves being temporarily secured independently of the binding means.,

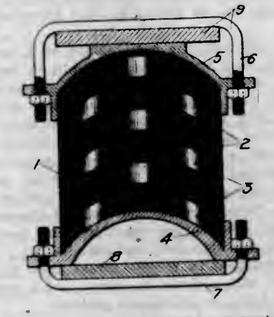
3. In a device of the character described, in combination, a plurality of sets of leaves connected at one end, binding means for the opposite ends of the alternate leaves, the free ends of the other alternate leaves being temporarily secured beneath the stub of the leaves thereabove, the back of each of said last-mentioned leaves being carbonized.

4. In a device of the character described, in combination, a plurality of sets of original and duplicate leaves connected at one end, the opposite ends of the duplicate leaves only being bound together to form a stub, the free ends of the original leaves being temporarily secured to the stub, and manifolding means between the sets of leaves.

5. In a device of the character described, in combination, a plurality of sets of original and duplicate leaves, the leaves of each set being connected at one end and the opposite end of the duplicate leaves being bound together to form a stub, and lines of perforation separating the stub from the duplicate leaves, the free end of each original leaf extending beyond the line of perforations to be temporarily retained between the stub portions of the duplicate leaves.

[Claims 6 to 15 not printed in the Gazette.]

1,108,488. SHOCK-ABSORBER. OWEN T. BUGG, Hoboken, N. J., assignor to E-Z-Ryde Shock Absorber Co., New York, N. Y. Filed Aug. 7, 1913. Serial No. 783,474. (Cl. 21—103.)



1. A shock absorber embracing atmospheric air inclosed in a plurality of hermetically sealed cells and located at different heights in yielding containing means having substantially the same elasticity as the air.

2. A shock absorber composed of a yielding material and having throughout its body cells filled with air at substantially atmospheric pressure, said cells being hermetically sealed and located at different heights.

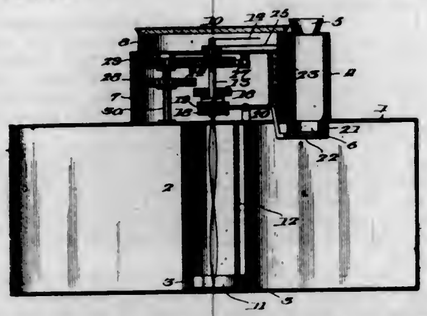
3. A shock absorber constructed of a plurality of disks of soft elastic material, each disk being provided with a plurality of cells hermetically sealed and containing air at atmospheric pressure.

4. A shock absorber embracing a mass of elastic material, as rubber, having located throughout its volume a plurality of cells filled with air at substantially atmospheric pressure said cells being hermetically sealed and located at different heights, the elasticity of the material being substantially the same as that of the air.

5. A shock absorber composed of a mass of elastic material having a plurality of cells located at different heights throughout the mass and hermetically sealed, said cells containing air at substantially atmospheric pressure, the elasticity of the mass being substantially that of the air.

[Claims 6 to 8 not printed in the Gazette.]

1,108,489. INDICATOR. JOHN T. CAMPBELL, Norfolk, Va., assignor of one-half to Clifton G. Keesee, Norfolk, Va. Filed June 16, 1913. Serial No. 773,990. (Cl. 73—82.)



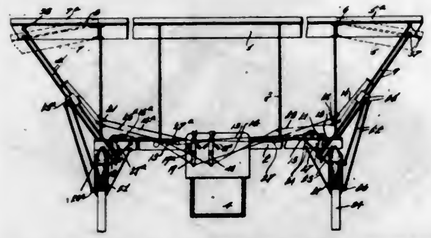
1. In an indicator, the combination of a tank, a vertically-movable float controlled by liquid in the tank and held against rotation, a shaft constructed and arranged to be rotated by vertical movement of the float and provided with a hand, a gear mounted on the shaft to turn therewith and move vertically thereon, a gear movable independently of the shaft and having a hand, a dial having scales complementary to the hands, gearing connected with the latter gear and arranged to be engaged and moved by the vertically movable gear, a tube through which the tank is charged, a vertically swinging lever having one of its arms connected with the vertically movable gear and also having a cup on its other arm, arranged to receive liquid from the said tube and provided with a drain aperture, and a spring for returning said lever to its normal position.

2. In an indicator, the combination of a tank, a vertically-movable float controlled by liquid in the tank and held against rotation, a shaft constructed and arranged to be rotated by vertical movement of the float, a gear mounted on the shaft to turn therewith and move vertically thereon, a gear movable independently of the shaft and having a hand, a dial having a scale complementary to the hand, gearing connected with the latter gear and arranged to be engaged and moved by the vertically movable gear, a tube through which the tank is charged, a vertically swinging lever having one of its arms connected with the vertically movable gear and also having a cup on its other arm arranged to receive liquid from the said tube and provided with a drain aperture, and a spring for returning said lever to its normal position.

3. In an indicator, the combination of a tank, a pointer, a graduated scale complementary thereto, means controlled by the rise and fall of liquid in the tank for moving said pointer, a second pointer, a graduated scale complementary thereto, a driving connection for the second pointer, comprising a movable element actuated by the rise and fall of liquid in the tank and adapted to be engaged with and disengaged from the remainder of the driving connection, means for moving the said element into engagement with the remainder of the driving connection when liquid is poured into the tank, said means being actuable by the pouring of liquid into the tank, and means for moving said element out of engagement with the remainder of the driving connection when the supply of liquid to the tank is discontinued.

4. In an indicator, the combination of a tank, a movable pointer, means controlled by the rise of liquid in the tank, connections whereby said means control said pointer, said connections being constructed and arranged to be interrupted and reëstablished, means for establishing the said connections when liquid is placed in the tank, said means being actuable by the pouring of liquid into the tank, and means for interrupting the connections when the placing of liquid in the tank is discontinued.

1,108,490. FLYING-MACHINE. GLENN H. CURTISS, Hammondsport, N. Y. Filed Jan. 28, 1913. Serial No. 744,626. (Cl. 244—29.)



1. In a heavier-than-air flying machine in combination, a main plane fixed in position, a central floating device located below the longitudinal axis of the machine and adapted to support said entire machine upon the water, adjustable auxiliary planes pivoted at the lateral edges of said main plane and adapted to swing about longitudinal axes to present inclined surfaces to a current of air coming toward the side of the machine, and auxiliary float members spaced from said central floating device and mounted at each side of the machine substantially beneath said auxiliary planes for supporting from the water that portion of the machine carrying the auxiliary planes, said float members being adjustable bodily up and down for trimming the machine upon the water in lateral equilibrium.

2. In a heavier-than-air flying machine in combination, a main plane fixed in position, a central floating device located below the longitudinal axis of the machine and adapted to support said entire machine upon the water, adjustable auxiliary planes pivoted at the lateral edges of said main plane and adapted to swing about longitudinal axes to present inclined surfaces to a current of air coming toward the side of the machine, auxiliary float members spaced from said central floating device and mounted at each side of the machine substantially beneath said auxiliary planes for supporting from the water that portion of the machine carrying the auxiliary planes, said float members being adjustable bodily up and down for trimming the machine upon the water in lateral equilibrium, and manually controlled means for independently adjusting said auxiliary planes or said auxiliary floats.

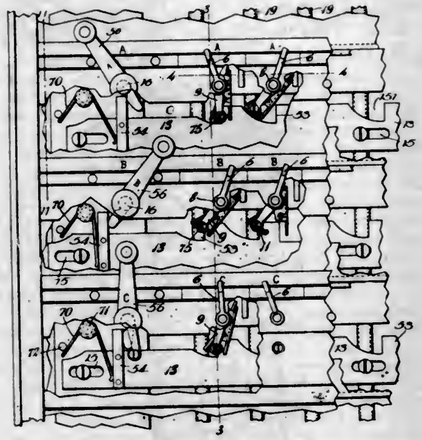
3. In a heavier-than-air flying machine in combination, laterally extending planes each pivotally mounted for adjustable movement about longitudinal axes, manually controlled means for adjusting said planes simultaneously to equal angles in the same direction up or down, a central floating device for supporting said entire machine upon the water, and auxiliary float members spaced from said central floating device and mounted at each side of said machine substantially beneath the lateral ends of said planes for supporting the same from the water, said auxiliary float members being adjustable bodily up and down for trimming the machine upon the water in lateral equilibrium.

4. In a heavier-than-air flying machine in combination, laterally extending planes pivotally mounted for adjustable movement about longitudinal axes, manually controlled means comprising a single hand-lever for adjusting said planes simultaneously to equal angles in the same direction up or down a central floating device for supporting said entire machine upon the water, auxiliary float members spaced from said central floating device and mounted at each side of said machine substantially beneath the lateral ends of said planes for supporting the same from the water, said auxiliary float members being adjustable bodily up and down for trimming the machine upon the water in lateral equilibrium.

5. In a heavier-than-air flying machine in combination, a main plane, adjustable auxiliary planes pivoted at the lateral edges of said main plane for movement up and down about longitudinal axes, supporting struts connected to said movable auxiliary planes and guided for slidable movement on said machine, an operator's controlling lever, and connections from said lever to said struts for swinging said auxiliary planes simultaneously in the same direction up or down when said lever is moved.

[Claims 6 to 10 not printed in the Gazette.]

1,108,491. VOTING-MACHINE. WILLIAM H. DANA, Dayton, Ohio, assignor to Leopold Rauh, Dayton, Ohio. Filed Feb. 19, 1912. Serial No. 678,503. (Cl. 235—54.)



1. In a voting machine, the combination of a series of key plates, one for each party row, running horizontally across the machine, a series of transverse guide bars, said bars having grooves, a series of interlocking plates, one series for each office row mounted in said grooves, each key plate having a web near its upper edge, a party lever, and a series of individual voting levers rotatably mounted beneath said web, one for each office row, with means intermediate the individual voting levers and the interfering plates to resiliently actuate the same, as and for the purpose set forth.

2. In a voting machine, the combination of straight ticket voting levers rotatably mounted, one for each party row, each lever having an arm carrying a screw, also another arm having an elongated radial bearing surface and a slidable and automatically returnable bar, with which said latter arm engages, said bar having a series of transverse bearing surfaces, as and for the purposes set forth.

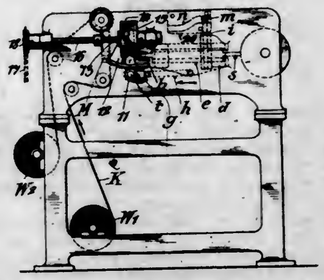
3. In a voting machine, the combination of a straight ticket bar, with bearing surfaces thereon, a series of voting levers rotatably mounted and arranged in party and office rows, each lever having an arm carrying a screw pin, said pin normally to be engaged by its respective bearing surface of the straight ticket bar, whenever the said bar is being operated, by means of its respective party lever and adapted to be withdrawn from said bearing surface, as and for the purpose set forth.

4. In a voting machine, the combination with a series of interlocking plates, of a series of voting levers, rotatably mounted, arranged in party and office rows, said levers having a shaft, with a spring-pressed plate mounted thereon, said plate carrying an actuating pin to engage with and resiliently actuate its respective interlocking plate, whenever the said lever is operated, as and for the purpose set forth.

5. In a voting machine, the combination of a straight ticket voting bar, and a series of voting levers, rotatably mounted, in party and office rows, said levers having a shaft, with a spring-pressed plate carrying an actuating pin mounted therein, the said shaft having an arm carrying a screw pin capable of being adjusted for engagement or disengagement with the said bar, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,108,492. JACQUARD-CARD-PERFORATING MACHINE. KARL EGGART, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Aug. 28, 1913. Serial No. 787,064. (Cl. 164—114.)



1. In a jacquard card perforating machine, a selective device, a support for the car to be punched, a carrier, means to reciprocate the carrier between the selective device and the support, needles mounted on the carrier, and adapted at one end to coöperate with the selective device and having each a punch at the other end and locking means to coöperate with the needles to lock them to the carrier during the punching movement and acting to release the needles during the movement of selection.

2. In a jacquard card perforating machine, a selective device, a support for the card to be punched, a carrier, means to reciprocate the carrier between the selective device and the support, needles mounted on the carrier and adapted at one end to coöperate with the selective device and having each a punch at the other end, the needles having each two locking notches, and locking means to coöperate with the needles to lock them to the carrier during the punching movement and acting to release the needles during the movement of selection.

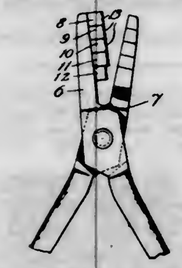
3. In a jacquard card perforating machine, a selective device, a support for the car to be punched, a carrier, means to reciprocate the carrier between the selective device and the support, needles mounted on the carrier and adapted at one end to coöperate with the selective device and having each a punch at the other end, a locking plate to coöperate with the needles and movable with the carrier and devices coöperating in the movement of the carrier to actuate the plate to lock the needles during the punching movement of the carrier and to release the needles during the movement of selection.

4. In a jacquard card perforating machine, a selective device, a support for the card to be punched, a carrier, means to reciprocate the carrier between the selective device and the support, needles mounted on the carrier and adapted at one end to coöperate with the selective device and having each a punch at the other end, a locking plate moving with the carrier and cams fixed on the frame of the machine and coöperating with the plate to cause the same to lock the needles during the punching movement and to release the needles during the movement of selection.

1,108,493. ORTHODONTIA-PLIERS. MATTHEW N. FEDERSPIEL, Milwaukee, Wis., assignor to Christoph F. Montag and Theodore H. Montague, doing business as Blue Island Specialty Company, Blue Island, Ill. Filed July 2, 1914. Serial No. 848,571. (Cl. 81—15.)

1. A device of the class described comprising two opposing plane jaws, a rib projecting from one jaw and con-

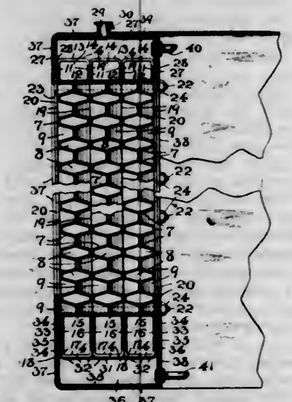
sisting of a series of separate parts of different widths, the other jaw being bifurcated to straddle the rib and having the space between its furcations of various widths corresponding to the width of the rib parts.



2. Orthodontia pliers having opposing plane jaws, a rib on one jaw consisting of a series of parts differing in width and height, the other jaw being bifurcated to straddle the rib and having the space between its furcations of different widths corresponding to the different rib parts, for the purpose set forth.

3. A device of the class described comprising two opposing plane jaws, a rib projecting from one jaw and consisting of a series of separate parts of different widths, the other jaw being bifurcated to straddle the rib and having the space between its furcations of various widths corresponding to the width of the rib parts, the said rib parts being provided with notches to hold the material operated upon.

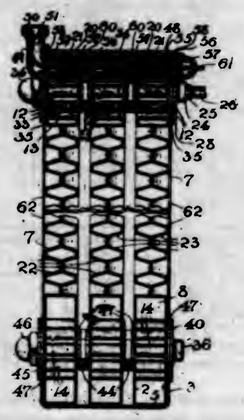
1,108,494. RADIATOR AND RADIATOR-SECTIONS FOR AUTOMOBILES, MOTOR-CARS, AND THE LIKE. FREDERICK A. FELDKAMP, Newark, N. J., assignor to Electrolytic Products Company, a Corporation of New Jersey. Filed Apr. 10, 1909. Serial No. 489,178. (Cl. 62—28.)



1. A radiator for automobiles and the like, comprising a series of radiator-sections, each radiator-section being made in the form of a casing provided with interiorly disposed ducts, each radiator-section being also formed with hollow top and bottom-portions providing chambers with which the said ducts communicate, said top and bottom portions being respectively provided with inlet and outlet-openings, and each radiator-section being formed with a multiplicity of openings providing air-passages interspersed between said ducts, ⊔-shaped frames arranged upon the opposite sides of said sections, said frames being provided with bolt-holes, a series of bolts extending through said holes and through some of the openings in the radiator-sections, and nuts upon said bolts for securing a number of radiator-sections side by side, a water-receiving hood mounted upon the upper portions of said radiator-sections, and a lower water-receiving shell extending downwardly from the lower portions of said radiator-sections.

2. A radiator for automobiles and the like, comprising a multiplicity of hollow radiator-sections, and a perforated pan-shaped bottom in which the lower portions of said sections rest, said bottom providing a support for said sections and a pan-like shell beneath said bottom, forming a water receiving receptacle, the perforations in said bottom establishing communication with the interior of said hollow radiator-sections and the said water-receiving receptacle.

1,108,495. RADIATOR AND RADIATOR-SECTIONS THEREFOR AUTOMOBILES AND THE LIKE. FREDERICK A. FELDKAMP, Union, N. J., assignor to Electrolytic Products Company, a Corporation of New Jersey. Filed Mar. 12, 1910. Serial No. 548,756. (Cl. 62—28.)



1. A radiator for automobiles and the like, comprising a plurality of radiator-sections, each section being made in the form of a chambered casing with a multiplicity of hollow elements and arranged to provide interiorly disposed water-conducting passages surrounded at the top and bottom, as well as at the sides within said casing, with water-spaces, said hollow elements providing the said radiator-section with a multiplicity of ventilating and cooling ducts staggered between said water-conducting passages, tubular elements within the upper and lower water-spaces of said casing, said tubular elements being provided with perforations, and an upper inlet pipe and a lower outlet pipe, each having perforations and an annular depression registering with the perforations of the tubular elements respectively in the upper and lower water-space of the casing.

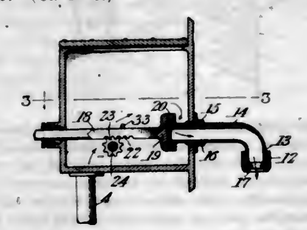
2. A radiator for automobiles and the like, comprising a plurality of radiator-sections, each section being made in the form of a chambered casing with a multiplicity of hollow elements and arranged to provide interiorly disposed water-conducting passages surrounded at the top and bottom, as well as at the sides within said casing, with water-spaces, said hollow elements providing the said radiator-section with a multiplicity of ventilating and cooling ducts staggered between said water-conducting passages, tubular elements within the upper and lower water-spaces of said casing, said tubular elements being provided with perforations, an upper inlet pipe and a lower outlet pipe, each pipe having perforations and an annular depression registering with the perforations of the tubular elements respectively in the upper and lower water-spaces of the casing, and a series of tubular stays within said upper and lower water-spaces of the casing.

3. A radiator for automobiles and the like, comprising

a plurality of radiator-sections, each section being made in the form of a chambered casing with a multiplicity of hollow elements and arranged to provide interiorly disposed water-conducting passages surrounded at the top and bottom, as well as at the sides within said casing, with water-spaces, said hollow elements providing the said radiator-section with a multiplicity of ventilating and cooling ducts staggered between said water-conducting passages, tubular elements within the upper and lower water-spaces of said casing, said tubular elements being provided with perforations, an upper inlet pipe and a lower outlet pipe, each pipe having perforations and an annular depression registering with the perforations of the tubular elements respectively in the upper and lower water-spaces of the casing, another set of tubular elements in the upper water-space of said radiator-sections; said tubular elements being formed with perforations, and a filling pipe extending into said last-mentioned tubular elements, said pipe being formed with annular depressions having perforations registering with the perforations in said last-mentioned tubular elements.

4. A radiator for automobiles and the like, comprising a plurality of radiator-sections, each section being made in the form of a chambered casing with a multiplicity of hollow elements and arranged to provide interiorly disposed water-conducting passages surrounded at the top and bottom, as well as at the sides within said casing, with water-spaces, said hollow elements providing the said radiator-section with a multiplicity of ventilating and cooling ducts staggered between said water-conducting passages, tubular elements within the upper and lower water-spaces of said casing, said tubular elements being provided with perforations, an upper inlet pipe and a lower outlet pipe, each pipe having perforations and an annular depression registering with the perforations of the tubular elements respectively in the upper and lower water spaces of the casing, a series of tubular stays within said upper and lower water-spaces of the casing, another set of tubular elements in the upper water-space of said radiator-sections, said tubular elements being formed with perforations, and a filling pipe extending into said last-mentioned tubular elements, said pipe being formed with annular depressions having perforations registering with the perforations in said last-mentioned tubular elements.

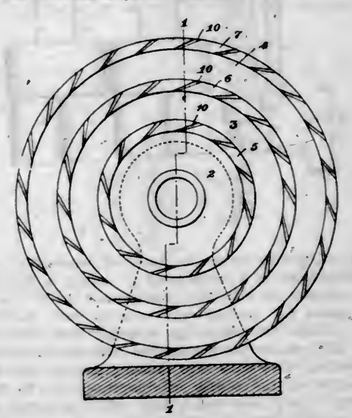
1,108,496. FLUSHING APPARATUS. EDGAR W. FORDYCE, Anniston, Ala., assignor of one-half to Joseph Saks, Anniston, Ala. Filed May 11, 1912. Serial No. 696,599. (Cl. 4—5.)



In a flushing apparatus, the combination with the reservoir, the discharge pipe having its inner end projecting into the reservoir, the valve rod having one end guided in the reservoir and having its other end formed with a cup-shaped valve for opening and closing the said inner end of the discharge pipe, a rack formed on said valve rod, a shaft carrying a gear wheel meshing with said rack, and means for rocking said shaft to reciprocate said valve rod.

1,108,497. MULTIPLE-STAGE TURBINE. GEORGE O. GRIDLEY, Windsor, Vt. Filed Nov. 7, 1910. Serial No. 591,004. (Cl. 121—58.)

1. A reaction turbine consisting of a rotating member having end walls and concentric outer and inner cylindrical walls connected and rotating in unison, each said cylindrical wall inclosing a chamber for working fluid and each having approximately tangential nozzle passages, and means for admitting the working fluid to the chamber nearest the axis, said walls having their outer surfaces flush with the discharge orifices of the nozzles, and being continuously curved concentrically with the axis of rotation between adjacent nozzles.



2. A rotor having disk-like end walls and intermediate concentric inner and outer cylindrical walls all rotating in unison, said cylindrical walls having approximately tangential nozzle passages, and each of said walls having all points on its outer and inner surfaces at equal radial distance respectively from the axis, whereby projections productive of retarding fan action are eliminated.

3. An elastic-fluid-impelled turbine, comprising a single rotor having internally inclosed chambers, and inclined nozzles arranged to conduct the working fluid from one chamber to the next, and finally entirely out of the rotor, the partitions between the chambers being of uniform thickness and containing the nozzles entirely between their bonding surfaces.

4. In an elastic fluid turbine, a rotor having a plurality of inclosed chambers, a hollow trunnion for admitting the working fluid to one of said chambers and nozzles arranged between the successive chambers and entirely inclosed within the walls thereof, in directions approaching the path of rotation to drive the rotor by reaction of the working fluid.

5. A multi-stage reaction turbine, comprising a rotor having a series of closed chambers in its interior, means for admitting steam to one of said chambers, a nozzle through which the steam is discharged into the next chamber in such a direction as to drive the rotor by its reaction, and a discharge nozzle arranged to permit escape of the steam from such chamber tangentially, to impart a further driving force to the rotor, the discharge orifice of such nozzle being in the outer surface of the chamber wall.

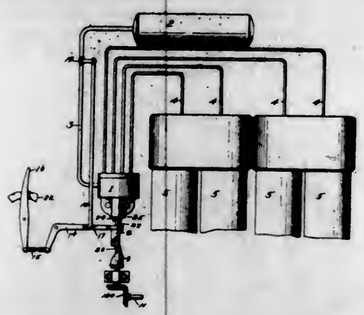
[Claims 6 to 12 not printed in the Gazette.]

1,108,498. STARTING DEVICE FOR EXPLOSIVE-ENGINES. SAMUEL HOWARD HEGINBOTTOM, FRANK H. HEGINBOTTOM, and BERT W. HEGINBOTTOM, Saginaw, Mich. Filed July 26, 1912. Serial No. 711,761. (Cl. 123—181.)

1. In a starting device for internal combustion engines the combination of a distributing valve, means for manually rotating said distributing valve, means for mechanically rotating the same, and means for connecting and disconnecting the distributing valve with both of said rotating means.

2. In a starting device for internal combustion engines the combination of a compressed air supply, a distributing valve adapted to distribute compressed air to the cylinders, means for mechanically rotating said distributing

valve, means for manually rotating said distributing valve and means for connecting and disconnecting the distributing valve with both of said rotating means.



3. In a starting device for internal combustion engines the combination of a compressed air supply, a distributing valve adapted to distribute compressed air to the cylinders, means for mechanically rotating said distributing valve, means for manually rotating said distributing valve, and means for connecting and disconnecting the distributing valve with said rotating means; and a valve for controlling the supply of compressed air to the distributing valve, said controlling valve operated by the said connecting and disconnecting means.

4. In a starting device for internal combustion engines the combination of a compressed air supply, a distributing valve adapted to distribute compressed air to the cylinders, means for mechanically rotating said distributing valve, means for manually rotating said distributing valve, and means for connecting and disconnecting the distributing valve with said rotating means, and a valve for controlling the supply of compressed air to the distributing valve and connected to said manually rotating means.

5. In a compressed air starting device for internal combustion engines the combination of a compressed air supply, a distributing valve adapted to distribute compressed air to the cylinders, a driving shaft for rotating said distributing valve, means whereby said distributing valve may be rotated for a portion of a turn in a reverse direction independently of said driving shaft and means for connecting and disconnecting the distributing valve with said driving shaft.

[Claim 6 not printed in the Gazette.]

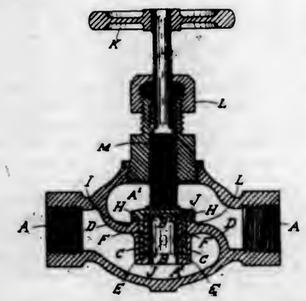
1,108,499. DRY CONCENTRATOR. JOHN F. HILTSCHER, Fullerton, Cal. Filed Dec. 4, 1911, Serial No. 663,829. Renewed Jan. 26, 1914. Serial No. 814,582. (Cl. 83—54.)



1. A concentrator, comprising an inclined table having transversely extending riffles formed thereon and air blast pipes extending transversely of the table and supported in contact with and near the upper edges of said riffles, said pipes being adapted to deliver an air blast approximately even with the upper edges of the riffles for assisting in the concentration of the ores.

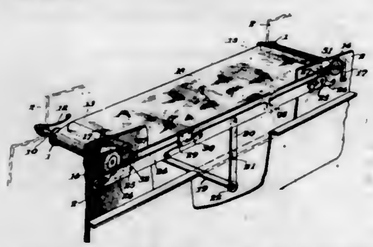
2. A concentrator, comprising an inclined table having transversely extending riffles upon its upper surface, air blast pipes extending across the table in contact with and adjacent to the top of said riffles and adapted to deliver an air blast toward the upper end of the table, and means for agitating the table and said pipes.

1,108,500. STEAM-VALVE AND FITTING THEREFOR. WILLIAM MCCORD JAMIESON, Onehunga, Auckland, New Zealand. Filed July 31, 1912. Serial No. 712,492. (Cl. 137—4.)



A steam valve of the kind described, comprising a casing formed with an inlet and outlet; a depending member forming an integral part of the casing and constituting a passageway between the inlet and outlet and having a deep, vertical, annular groove; a seating formed with a downwardly inclined beveled portion; a vertically adjustable valve formed with a depending annulus adapted always to engage in said groove said annulus formed with a plurality of ports, said valve also having a flanged portion beveled on its under side which is of larger diameter than said annulus and adapted to coact with the beveled portion of said seating.

1,108,501. WEB-FEEDING MECHANISM. WILLIAM G. KIRCHHOFF, St. Louis, Mo., assignor to Theodore W. Remmers, St. Louis, Mo. Original application filed Sept. 24, 1912, Serial No. 722,062. Divided and this application filed Jan. 20, 1913. Serial No. 743,180. (Cl. 242—55.)



1. A web feeding mechanism comprising a combination of reels, ratchet wheels for rotating said reels, a reciprocating link, a shiftable link, dogs carried by said links and adapted to be shifted by relative movement of the links to coöperate with said ratchet wheels, and means for changing the relative positions of said links to throw said dogs into and out of engagement with their respective ratchet wheels.

2. In a device of the class described in combination, reels adapted to receive a web, movable rods out of operative position in said reels, means operable by a web on said reels for moving said rods, ratchet wheels for driving said reels, a reciprocating member for driving said reels including a dog adapted to engage each ratchet wheel, and members adapted to coöperate with said rods to shift said dogs into and out of engagement with said ratchet wheels when the web is unwound from a reel.

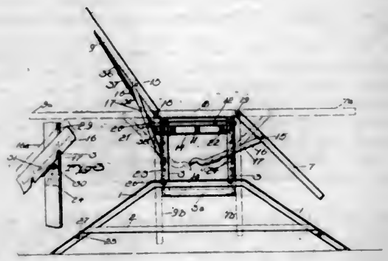
3. A web feeding and reversing mechanism comprising suitable spools for the reception of a web, feeding means coöperating with each spool for rotating the same to wind the web thereon, shifting mechanism for controlling said feeding mechanism, and means carried by said spools and operable by the pressure of the web wound on said spools and adapted to coöperate with said feeding mechanism to operate said shifting mechanism upon the exhaustion of the web from a reel.

4. A web feeding and reversing mechanism comprising in combination suitable spools for the reception of a web, feeding means adapted to intermittently rotate said spools to feed the web, shifting means for shifting the operation of said feeding means from one to the other of said spools, and means carried by said spools and controlled by the pressure of the web wound upon said spools and adapted to control the operation of said shifting means upon the exhaustion of the web from a reel.

5. A web feeding and reversing mechanism comprising the combination of suitable spools for the reception of the web, means adapted to coöperate selectively with said spools to rotate the same to feed the web, a shifting mechanism adapted to transfer the operation of said feeding means from one to the other of said spools to reverse the direction of feed, a movable member carried by each of said spools and adapted to coöperate with said shifting mechanism to effect the operation of the same, and means operable by the pressure of the web to retain said movable member in inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

1,108,502. ADJUSTABLE BED. FRANK W. KRAMER, Portland, Oreg. Filed Nov. 20, 1911, Serial No. 661,283. Renewed Feb. 12, 1914. Serial No. 818,371. (Cl. 5—12.)



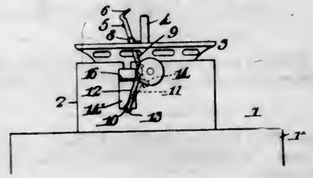
1. In a bed comprising a frame, an intermediate body section vertically adjustable therein, a spring pad vertically adjustable in the body section, end members hinged to said section and independently adjustable thereon, and braces pivotally secured upon the end members and slidably engaged in the body section, whereby the end members may be secured at any desired angle with reference thereto.

2. A bed comprising a frame, an intermediate body section vertically adjustable therein, a spring pad vertically adjustable in the body section, end members hinged to said section and independently adjustable thereon, braces pivotally mounted upon the end members and adjustably engaged in the body section, whereby the end members may be secured at any desired angle with reference thereto, and means for yieldingly limiting the upward movement of said end members.

3. A bed comprising a frame, an intermediate body section vertically adjustable therein, a spring pad vertically adjustable in the body section, end members hinged to said section and independently adjustable thereon, braces having spaced notches along their lower edges pivotally secured upon said members and adapted for adjustable engagement in said body section, each of said braces terminating in an irregular curve whereby the end members are permitted to be raised to a vertical position, when the braces will engage in said body section to limit such movement.

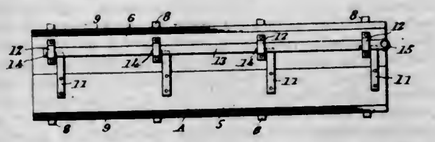
4. A bed comprising a frame, an intermediate body section vertically adjustable therein, a spring pad vertically adjustable in the body section, end members hinged to said section and independently adjustable thereon, braces having spaced notches along their lower edges, pivotally mounted on said members and adapted for adjustable engagement in said body section, whereby the end sections may be secured at any desired angle with reference to the body section, and means mounted on the body section for holding said braces from engagement therein during the downward movement of the end members.

1,108,503. LAMP-EXTINGUISHER. CLAS H. KRANTZ, Red Wing, Minn. Filed Apr. 8, 1914. Serial No. 830,356. (Cl. 67—78.)



In a lamp comprising a burner surrounded by a vertical rim, a lamp extinguisher comprising a snuffing element mounted upon the deck of said burner to oscillate over or away from the end of the wick tube, an arm depending from one end of said element, the said rim provided with a slot extending from its upper edge to a point below the lower end of said depending arm, a bearing in the lower end of said slot, a crank mounted in said bearing and loosely engaging at one end the said depending arm, the opposite end of said crank extending upwardly beside said rim, a plate secured to said rim to span said slot and to hold said bearing in place, and a stop secured to said plate to be engaged by said lever, substantially as described.

1,108,504. MOLD. IRA WINFRED KYLE, Mankato, Kans. Filed Sept. 12, 1913. Serial No. 789,548. (Cl. 25—131.5.)

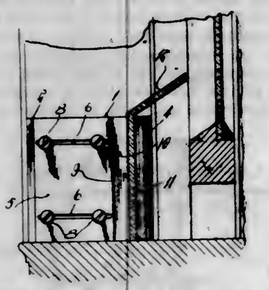


A form of the class described comprising a top and side sections separable from each other, the said top being formed in two parts, hinges connecting the two parts of the top to permit the folding thereof, keepers carried by the two parts of the top and adapted to engage the uppermost edges of the side sections, bars fixed to one part of the top and adapted to overlie the other part when the said parts are in alinement with each other, a locking bar slidably mounted on the other part and adapted to be moved into locking engagement with the first-named bars for preventing folding of the parts of the top.

1,108,505. WINDOW-VENTILATOR. GUSTAF K. LARSON and AUGUST A. LARSON, Johnsonburg, Pa. Filed Jan. 14, 1914. Serial No. 812,085. (Cl. 98—31.)

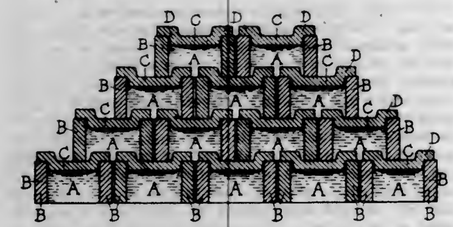
A window ventilator comprising a pair of brackets for engaging the sides of a window frame, said brackets consisting of perforated plates having their outer ends terminating in right angle flanges, second plates having slots formed therein for registry with the perforations of the first named plates, the second named plates terminating in right angle flanges, and securing devices engaging the sides of the window frame and passing through the slots and perforations of the respective plates for holding said

plates in relative adjusted positions, and thus the right angle flanges, a plate having its side edges clampingly



engaged between said flanges, said plate having its upper edge inclined outwardly, as and for the purpose set forth.

1,108,506. BUILDING-BLOCK. THOMAS LOUDEN, Fairfield, Iowa. Filed Feb. 3, 1913. Serial No. 745,822. (Cl. 72—38.)



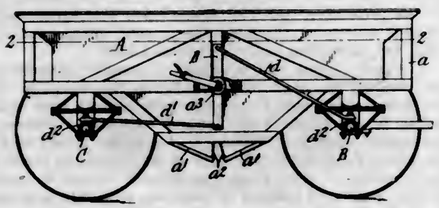
1. In a wall, the combination of a series of hollow building blocks placed in a row, each having a vertically disposed opening and transverse walls, a series of tie-plates, each having a depressed center corresponding approximately to and entering the upper edge of the opening in the block below it and having upwardly offset ends resting on the transverse walls of the block, and another series of hollow blocks similar to the first laid upon the first series so as to break joints, and the lower edges of the adjacent transverse walls of said blocks inserted in the depressed portion between the upwardly offset ends of the tie-plate immediately below said transverse walls.

2. In a hollow wall, the combination of a series of superposed blocks having vertical openings and abutting transverse walls, a series of tie-plates each having a depressed center, corresponding to and entering the upper edge of the opening in a block, and upwardly offset ends resting upon the transverse walls of the block, the upwardly offset ends of the adjoining tie-plates being bound together by entering the lower edge of the vertical openings of the blocks above and being held by the transverse walls of said blocks.

3. In a wall, a plurality of superposed series of hollow building blocks, open at their upper and lower ends and having transverse walls, in combination with a plurality of series of interposed tie-plates, each provided with a depressed portion and upwardly offset ends, the said depressed portion corresponding to and entering the opening in the upper end of an adjacent block, the upwardly offset ends resting upon the transverse walls thereof, and the lower edges of the transverse walls fitting loosely in the depressed portions of the tie-plates in the next lower series of blocks and plates.

4. A plurality of superposed series of hollow building blocks, having vertical openings and abutting transverse walls, in combination with a plurality of series of interposed tie-plates each provided with a depressed portion and upwardly offset ends, the depressed portions of the tie-plates corresponding to and entering the openings in the blocks below, the upwardly offset ends resting upon the transverse walls thereof, and the lower edges of the abutting transverse walls of the blocks fitting loosely in the depressed portions of the tie-plates in the next lower series.

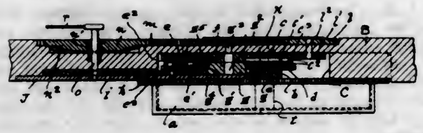
1,108,507. SHORT-TURNING GEAR. JAMES T. MACK, Buffalo, N. Y. Filed Oct. 27, 1908. Serial No. 459,729. (Cl. 21—143.)



1. In a dumping wagon, the combination with a body provided with a bottom dumping door, of front and rear swiveled supporting trucks for the body, a draft device connected to said front truck for propelling and steering the wagon, levers pivoted between their ends on said body at opposite sides of said dumping door to swing independently of each other in upright planes, a rod connecting each end of said front truck to one end of each of said levers for swinging said levers when the front truck is turned, and a rod connecting the other end of each of said levers to one end of said rear truck for causing said rear truck to turn in a direction opposite to the direction of movement of the front truck, substantially as set forth.

2. The combination with a dumping wagon provided with front and rear swiveled trucks and a body mounted thereon having dumping means in its bottom, and an operating shaft for said dumping means, of levers pivoted between their ends to said operating shaft at opposite sides of said body, and rods connecting the opposite ends of each lever to said front and rear trucks, substantially as set forth.

1,108,508. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Apr. 21, 1911. Serial No. 622,584. (Cl. 58—85.)



1. In a watch or the like, the combination with the main-spring barrel, of a ratchet-wheel, connections between said ratchet-wheel and the winding mechanism, recessed gear-wheels forming a space between the same, connections between one of said gear-wheels and said ratchet-wheel, connections between the other gear-wheel and said main-spring barrel, and reversing gears contained within said space formed by said gear-wheels.

2. In a watch or the like, the combination with the main-spring barrel, of a ratchet-wheel, connections between the ratchet-wheel and winding mechanism, recessed gear-wheels forming a space between the same, connections between one of said wheels and said ratchet-wheel, connections between the other wheel and said main-spring barrel, a winding indicator hand, a double planetary gear carried by one of said wheels in the space between the same, and connections between said planetary-gear and said indicator hand.

3. In a watch or the like, the combination of the main-spring barrel, of a ratchet-wheel, connections between said ratchet-wheel and winding mechanism, two recessed gear-wheels forming a space between the same, connections between one of said gear-wheels and said ratchet-wheel, connections between the other gear-wheel and said spring-barrel, a double planetary-gear carried by one of said gear-wheels, a double-pinion extending up into said space between said gear-wheels and engaged by said planetary-gear, said pinion having a bearing in the watch-plate, a winding indicator hand, and connections between said winding indicator hand and said double pinion.

4 In a watch or the like, the combination of the main-spring barrel, of a ratchet-wheel, connections between said ratchet-wheel and winding mechanism, two recessed gear-wheels forming a space between the same, connections between one of said gear-wheels and said ratchet-wheel, connections between the other gear and said spring-barrel, a double planetary-gear within said space between said gear-wheels and carried by one of said gear-wheels engaging the other of said gear-wheels, a double pinion having a bearing in the watch-plate and extending up through an opening in one of said recessed gears, and engaged by said planetary-gear, a winding indicator hand, and connections between said winding indicator hand and said double pinion.

5. In a watch or the like, the combination of a plate, a main spring barrel seated on one side thereof, a ratchet-wheel and connections therefrom to the winding mechanism on the opposite side of said plate and flush, or substantially flush, therewith, a winding indicator hand, and connections from said ratchet-wheel and main spring barrel to said indicator hand interposed between said plate and said barrel.

[Claims 6 to 11 not printed in the Gazette.]

1,108,509. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Apr. 21, 1911. Serial No. 622,585. (Cl. 58—85.)



.. In a watch or the like, the combination of the main-spring barrel, of winding mechanism including a ratchet wheel, a pinion carried by said barrel, a recessed gear-wheel loosely mounted on said pinion, connections between said gear wheel and said ratchet wheel, reversing mechanism carried by said gear-wheel and engaged by said pinion, said reversing mechanism being contained within the space formed by said recessed wheel and the inner face of the watch-plate.

2. In a watch or the like, the combination of the main-spring barrel, of winding mechanism including a ratchet wheel, a pinion on said main-spring barrel, a recessed gear-wheel through which said pinion extends and forming a bearing for same, connections between said gear wheel and said ratchet wheel, reversing mechanism carried by said recessed-gear and engaged by said pinion, said reversing mechanism being contained within the space formed by said recessed-gear and the inner face of the watch-plate.

3. In a watch or the like, the combination with the main-spring barrel, of winding mechanism including a ratchet wheel, a pinion on said barrel, a recessed gear-wheel located in a recess formed in the watch-plate, said pinion passing up through said gear-wheel and forming a bearing for same, connections between said gear wheel and said ratchet wheel, reversing mechanism carried by said dished gear-wheel in the space between said recessed gear-wheel and the inner face of the recess, said reversing mechanism being engaged by said pinion.

4. In a watch or the like, the combination with the main-spring barrel, of winding mechanism including a ratchet wheel, a pinion carried by said barrel, a recessed gear-wheel, said pinion extending up through said gear-wheel and forming a bearing therefor, means for spacing said gear-wheel from said spring-barrel, connections between said gear wheel and ratchet wheel, reversing mechanism carried by said gear-wheel in the space between the gear-wheel and the inner face of a recess formed in the watch-plate, said reversing mechanism being engaged by said pinion.

5. In a watch or the like, the combination of the main-spring barrel, of winding mechanism, a pinion carried by said barrel, a gear-wheel, said pinion extending up through an opening in said gear-wheel and forming a bearing on which said gear-wheel is loosely mounted, a planet-gear carried by said gear-wheel engaged by said pinion, a double pinion in line with said first named pinion and engaged by said planet-gear, a winding indicator-hand, and connections between said indicator-hand and said double pinion.

[Claims 6 and 7 not printed in the Gazette.]

1,108,510. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Nov. 18, 1911. Serial No. 661,132. (Cl. 58—85.)



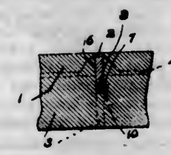
1. In a watch or the like, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, an indicator hand, a stud on the watch-plate, gear-mechanism mounted on said stud, connections between said mechanism and indicator hand, connections between said gear-mechanism and said ratchet wheel in reversing, connections between said gear-mechanism and said spring-barrel in unwinding, and a cap engaging said stud to hold said mechanism in place.

2. In a watch or the like, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, a combined spur and crown tooth gear-wheel, connections between said ratch-wheel and the spur teeth of said gear, an indicator-hand, and connections between the crown teeth of said gear and said indicator-hand for operating the same.

3. In a watch or the like, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, a combined spur and crown tooth gear-wheel engaging with the upper plate of the watch and supported therein, connections between the spur teeth of said gear-wheel and the ratchet-wheel, an indicator hand, and connections between the crown teeth of said gear and said indicator-hand for operating the same.

4. In a watch or the like, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, a combined spur and crown tooth gear-wheel, connections between said ratchet-wheel and the spur teeth of said crown gear, a planet-gear engaging the crown-teeth of said gear, an indicator-hand, and connections between said planet-gear and said indicator hand for operating the same.

1,108,511. METAL-SASH JOINT. LEONARD V. MIDDLESWORTH, Philadelphia, Pa. Filed Dec. 2, 1913. Serial No. 804,195. (Cl. 189—36A.)



1. In a joint of the character described, the combination of two muntins located at an angle to each other, one muntin having a slot therein with a recess at the inner end of the slot, and the other muntin having a tongue to enter the slot and lock in the recess, substantially as described.

2. In a joint of the character described, the combination with two muntins located at an angle to each other,

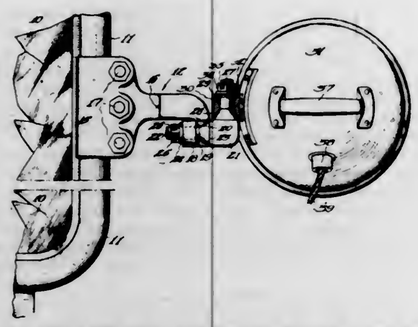
one muntin having a slot therein with a recess at the inner end of the slot, and the other muntin having a bendable tongue adapted to be bent into the recess and lock the muntins together, substantially as described.

3. In a joint of the character described, the combination of two muntins adapted to be positioned at an angle to each other, each muntin comprising a web having a bead at one edge extending at both sides of the web, said beads recessed at both sides of the webs, one of said muntins having a slot extending inwardly from the webbed edge and at its inner end having a recess in one wall, the other muntin having a slot in its web portion with a tongue formed at the inner end of the slot, said tongue adapted to be bent laterally when the muntins are forced together and projected into the recess, substantially as described.

4. In a joint of the character described, the combination of two muntins adapted to be positioned at an angle to each other, each muntin comprising a web having a bead at one edge extending at both sides of the web, said beads recessed at both sides of the webs, one of said muntins having a slot extending inwardly from the webbed edge and at its inner end having a recess in one wall, the other muntin having a slot in its web portion with a tongue formed at the inner end of the slot, said tongue thinnest at its free end and tapering to its other end, and said tongue curved transversely whereby the tongue at its sides is fragilely connected to the web and adapted to be bent into the recess in the other muntin and lock the muntins together, substantially as described.

5. In a sash joint of the character described, the combination of two muntins, both muntins having slots in their edges of a width to receive the other muntin, one muntin having a recess at the inner end of its slot and the other muntin having a tongue at the inner end of its slot adapted to be bent into the recess when the muntins are forced together, substantially as described.

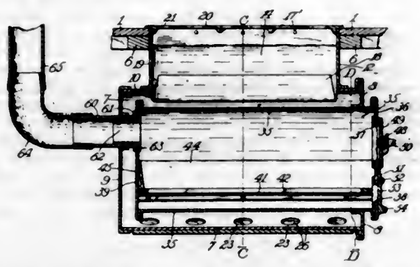
1,108,512. AUTOMOBILE-LAMP. SIDNEY G. MILLER, Los Angeles, Cal. Filed Sept. 8, 1913. Serial No. 788,761. (Cl. 248—30.)



An automobile lamp and support, for use on an automobile having a wind shield with a tubular frame, comprising a bracket adapted to be clamped to said frame, a clamp adapted to engage said frame and to clamp said bracket to said frame, a fastening means between said clamp and said bracket, a knuckle having a pivot with a conical seat, said pivot being elastically secured in said bracket, a pivot having a conical seat at right angles to said first named pivot and a lamp pivoted upon said last named pivot, said pivot being elastically secured therein.

1,108,513. VEHICLE-HEATER. WILLIAM H. MILLER, Crawfordsville, Ind., assignor to Miller Vehicle Heater Company, Crawfordsville, Ind., a Corporation of Indiana. Filed July 28, 1913. Serial No. 781,551. (Cl. 237—3.)

1. A vehicle body including a floor having an aperture therein, a duct connected to the floor at the aperture and extending downward therefrom, a horizontal cylindrical drum having an outlet-opening in the normal upper portion thereof that is connected with the lower end of the duct, the under portion of the drum having an inlet-opening therein, a grating on the upper end of the duct supported by the floor, a curved door hinged to the under portion of the drum and extending over the inlet-opening, and a cylindrical fire-box supported in the drum clear of the cylindrical wall thereof and extending between the inlet-opening and the outlet-opening apart therefrom.



2. A vehicle body including a floor having an aperture therein, the body having a driver's station distant from the aperture, a grating on the floor extending across the aperture, a duct connected to the floor at the aperture, a cylindrical casing connected horizontally to the duct and having a row of openings in the under portion thereof, the row being arranged longitudinally of the casing, a curved deflecting door hinged to the casing on the normal forward portion thereof adjacent to the openings to swing and close the openings, a fire-box mounted in the casing between the openings and the duct, and a controlling cable guided by the vehicle body and connected to the door and extending to the driver's station.

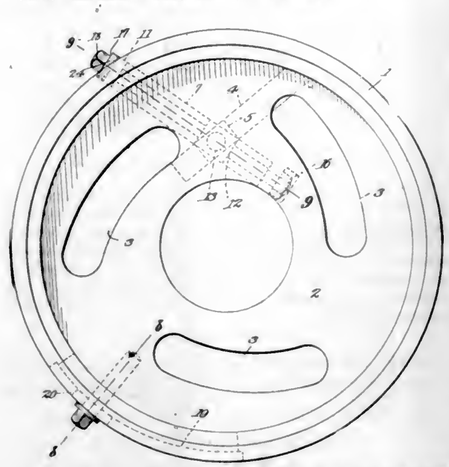
3. A vehicle body including a floor having an aperture therein, the body having a fixed driver's station distant from the aperture, a grating on the floor extending across the aperture, a duct connected to the floor at the aperture and having two opposite sides converging downward from the floor, a cylindrical casing connected horizontally to the duct and having an opening in the under portion thereof, a fire-box mounted in the casing between the opening and the duct and having a front, a draft-door mounted on the front, and a controlling cable guided by the vehicle body and connected to the draft-door and extending to the driver's station.

4. A vehicle comprising a body having an apertured floor and also a fixed driver's station distant from the aperture in the floor, a cylindrical casing having a duct connected to the upper portion thereof and openings in the under curved portion thereof, the duct being connected to the floor at the aperture therein, said duct having two opposite upwardly diverging side portions, a grating on the floor extending across the duct, a curved door hinged to the under portion of the casing for closing the opening and having a projecting finger thereon, a cable connected to the finger and extending to the driver's station, a cylindrical fire-box supported in the casing and having a front, a draft-door hinged to the front, a cable connected to the draft-door and extending to the driver's station, two devices movably supported by the body at the driver's station to which the two cables may respectively be detachably connected, a guide supported by the body and guiding one of the cables, and another guide supported by the body and guiding the remaining cable.

5. In a vehicle, the combination of a vehicle body comprising a floor having an aperture therein, a cylindrical drum arranged below the said floor and having inlet-openings in the curved under portion thereof arranged in a row, the normal forward portion of the drum having a horizontal hinge pin thereon forward of the row of inlet openings, the upper portion of the drum having an outlet-opening therein, a duct connected with the said outlet-opening and also with the aperture of said floor, a grating on the upper end of said duct, a cylindrical fire-box in said drum, a curved regulator door connected to said hinge pin to swing and close said inlet-openings and to deflect air-currents therefrom, said door having a rearwardly extending finger thereon, and a controlling device for said door connected to said finger.

[Claims 6 to 11 not printed in the Gazette.]

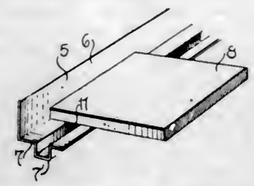
1,108,514. ADJUSTING DEVICE FOR CUTTER-HEADS. VICTOR R. KOONTZ, Waynesboro, Pa. Filed Mar. 21, 1913. Serial No. 756,038. (Cl. 10—96.)



1. A cutter head, including a die carrier actuating disk, said disk being provided with a tangentially disposed recess extending from a point near its center to its periphery, a block slidably mounted in said recess, a supporting disk for the actuating disk and in which said actuating disk is mounted for oscillatory movement, and a screw journaled tangentially within the last disk and in angular relation to the recess of the first disk for operating the block to adjust the carrier disk relatively to the supporting disk.

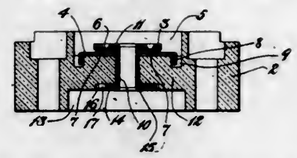
2. A cutter head, including a die carrier actuating disk, said disk being provided with a recess extending from a point near its center to its periphery, a block slidably mounted in said recess and projecting beyond the face of the disk, a supporting disk for the actuating disk and in which said actuating disk is mounted for oscillatory movement, and a screw journaled within the last disk and embracing the projecting portion of the block, whereby as the screw is rotated, the die carrier is moved relatively to the supporting disk.

1,108,515. BED. JOE G. LADEN, Idabel, Okla., assignor of one-fourth to John W. De Witt, one-fourth to B. L. Laden, and one-fourth to Harry B. Drake, Idabel, Okla. Filed May 23, 1914. Serial No. 840,566. (Cl. 5—25.)



The combination with a bedstead rail having an inwardly-projecting flange provided with a longitudinal channel, of a bed slat, and a sheet metal plate secured to one face of said slat at its end and provided with a U-shaped rib spaced from the end of the bed slat adapted for sliding engagement in said channel.

1,108,516. RATCHET MECHANISM FOR ELECTRIC SWITCHES. JOHANN G. PETERSON, Jersey City, N. J., assignor to Manhattan Electrical Supply Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 30, 1914. Serial No. 828,231. (Cl. 175—290.)



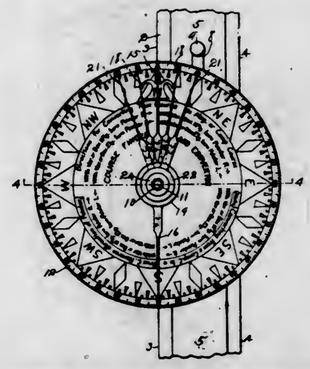
1. An electric switch comprising a body of non-conducting, fictile material, said body having a seat, a ratchet to fit against said seat, a washer having several spring fingers slit therefrom, the free ends of the fingers acting against the body of the switch, and a connection between the washer and the ratchet to cause the washer to constantly draw the ratchet against said seat.

2. An electric switch comprising a body of non-conducting, fictile material, a ratchet, the body having a seat for the ratchet, and a washer connected with the ratchet and provided with spring means acting against said body, to constantly draw said ratchet against said seat.

3. An electric switch comprising a body of non-conducting, fictile material, a ratchet, the body having a seat for the ratchet, and yieldable means acting constantly against the ratchet to draw the same against its seat.

4. An electric switch comprising a body of non-conducting, fictile material, a ratchet, the body having a seat for the ratchet, a stud connected with the ratchet, the body having an opening for the passage of the stud, and spring means connected with the stud and acting against the body to draw the ratchet constantly against said seat.

1,108,517. COURSE-FINDER AND COURSE-CONVERTER. CHARLES A. POTTER, Oswego, N. Y. Filed Feb. 12, 1914. Serial No. 818,393. (Cl. 33—75.)



1. A course finder, including a direction-bar, a plate slidable on said bar, said plate having a groove to receive the bar and having a post, a compass dial rotatable on said post above said plate, fixed pointers mounted on said post above said dial and coinciding with one edge of said bar, and a plurality of movable pointers journaled on said post above the fixed pointers adapted to be set in different positions relatively to the fixed pointers and also to each other.

2. A course finder, comprising a direction-bar, a plate slidable on said bar, said plate having a groove to receive said bar and having a post, a compass dial rotatable on said post, fixed pointers supported by said post above said dial, and a plurality of movable pointers journaled on said post above said fixed pointers, adapted to be set relatively to the edges of said bar and also to each other.

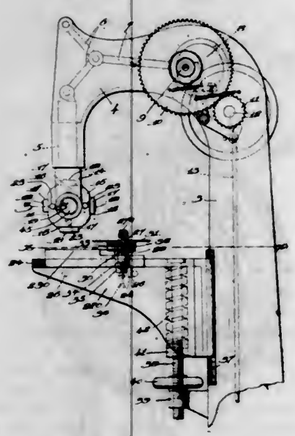
3. A course finder, including a direction-bar a plate slidable on said bar, said plate having a groove to receive said bar, and having a post whose axis coincides with one edge of said bar, a compass dial rotatable on said post and movable with said plate, fixed pointers secured to said post above said dial and coinciding with said edge of said bar, and a plurality of movable pointers pivoted on said post above the dial, adapted to be independently set for indicating different courses than said fixed pointers.

4. A course finder, including a direction-bar, a compass dial, a groove plate slidable on said bar and having a post for pivotally supporting said dial, fixed pointers carried by said plate above said dial and coinciding with one edge thereof for indicating the true course on said dial, a movable pointer pivoted on said post above the fixed pointers adjustable for indicating the magnetic course, and a second movable pointer pivoted on said post above said first movable pointer adjustable for indicating the compass course.

5. A course finder and a course converter, including a direction-bar, adapted to be applied to a sailing course on a chart, a plate slidable on said bar, and having a post a compass dial rotatable on said post, the center of said dial coinciding with one edge of said bar, a pair of fixed pointers supported by said post above said dial and coinciding with the said edge of said bar, a movable pointer adapted to be manipulated for indicating the variation of a ship's compass, and a movable pointer adapted to be manipulated for indicating the deviation of a ship's compass.

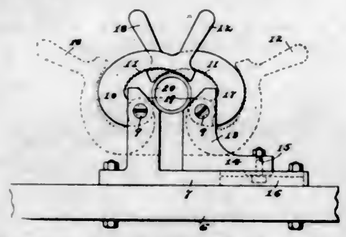
[Claims 6 to 8 not printed in the Gazette.]

1,108,518. MACHINE FOR EMBOSSING OR MARKING LEATHER. FRED A. PUTNAM, Melrose, Mass., assignor to Markem Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 2, 1911. Serial No. 606,117. (Cl. 101—83.)



In a device of the class described, the combination with a stand having an overhanging head, of a plunger movable vertically in said head, a die-holder sustained by the plunger, a bed extending laterally from the stand, an inking plate rotatably mounted in the bed, a platen slidably mounted horizontally on said bed, two standards sustained by said platen, an inking roll carried by the standards, springs for yieldingly holding the standards in elevated position, a projection extending laterally from the stand, an adjusting screw extending loosely through the projection and carrying a nut, a spring confined between the nut and the bed for yieldingly supporting the latter, and means for rotating the nut whereby the bed may be raised or lowered.

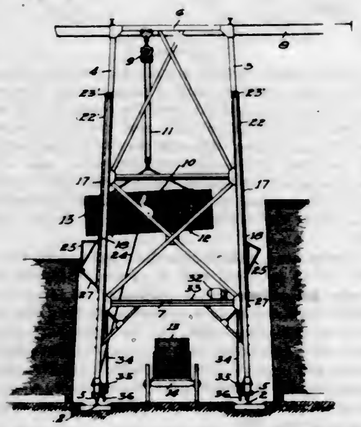
1,108,519. PIPE-VISE. DAVID W. REESE, Cleveland, Ohio, assignor of one-third to Rudolph E. Lanz, Cleveland, Ohio. Filed May 4, 1914. Serial No. 836,130. (Cl. 81—19.)



1. A vise comprising a base provided with upright seat members one of which is adjustable, and swinging jaws pivoted to the members and adapted to grip work thereon.

2. A vise comprising a base having a rigid upright seat member S, a curved jaw pivoted thereto, an adjustable seat member 13 mounted on the base, means to hold said member at adjustment, and a curved jaw pivoted to said adjustable member.

1,108,520. LUMBER-STACKER. GEORGE H. RICE, Green Bay, Wis. Filed Sept. 22, 1913. Serial No. 791,127. (Cl. 214—6.)



1. A lumber stacking apparatus comprising a tower, a lumber sling and hoist carried by said tower, and movable horizontally therein from one side to the other of said tower, and a vertically adjustable lumber rest adapted to support the adjacent end of the lumber carried by said hoist.

2. A lumber stacking apparatus comprising a tower, a lumber sling and hoist therefor, a vertically adjustable bar arranged to support one end of the lumber in said sling, and a lumber plumbing device movable vertically with respect to said tower.

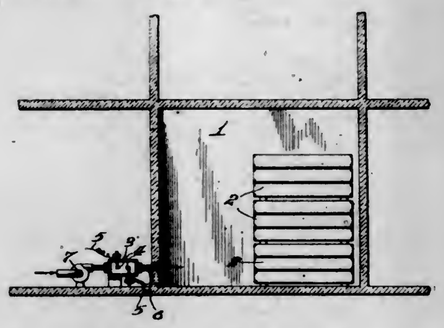
3. A lumber stacking apparatus comprising a tower, a lumber sling and hoist therefor, a lumber rest vertically movable in said tower and adapted to support one end of the lumber in said sling, a lumber plumbing device supported by said rest and comprising a hinged frame and bars pivotally connected with said frame and having a bearing on said tower.

4. A lumber stacking apparatus comprising a tower, a lumber sling and hoist mounted thereon, a rest adapted to support one end of the pile of lumber in said sling, reciprocating bars mounted in said lumber rest, means for operating the same, and pins arranged one above another in said tower and adapted to engage and support said bars and rest.

5. A lumber stacking apparatus comprising a tower, means for hoisting the pile of lumber to the desired elevation in said tower, and a vertically movable lumber plumbing device carried by said tower.

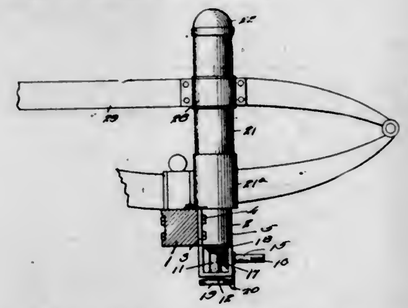
[Claim 6 not printed in the Gazette.]

1,108,521. PROCESS OF TREATING FRUITS. PHILIP J. SCHEUERMANN, St. Louis, Mo., assignor of one-third to Stephen G. Martin, Chicago, Ill., one-third to William O. Bartholomew, St. Louis, Mo., and one-third to Edward Schaaf, St. Marys, Mo. Filed May 24, 1909, Serial No. 497,885. Renewed July 16, 1914. Serial No. 851,402. (Cl. 99—9.)



The herein described process of treating fruit, which consists in subjecting the fruit to a gaseous medium consisting of a mixture of an oxid of nitrogen and air, substantially in the proportions of two per centum of an oxid of nitrogen and ninety-eight per centum of air.

1,108,522. COMBINED LIFTING-JACK AND SHOCK-ABSORBER FOR AUTOMOBILES AND LIKE VEHICLES. HARRY R. SEARLES, Youngstown, Ohio, and CYE A. THURSTON, St. Paul, Minn. Filed Mar. 27, 1914. Serial No. 827,618. (Cl. 21—105.)

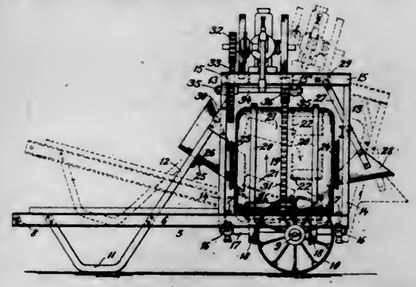


1. A combination jack and shock-absorber for vehicles, comprising a tubular core having an external collar near its upper end, a jack-screw within said core, a housing below said core, bevel-gears within said housing, one being threaded to engage the screw, a crank-shaft for operating said gears, a telescopic casing the lower section of which is supported on the vehicle axle while the upper section is secured to the chassis, and coil springs disposed within said telescopic sections on opposite sides of said collar.

2. A combination vehicle jack, and shock-absorber comprising a cylindrical housing provided at its lower end with a hollow stud, a tubular core externally-threaded at its lower end to engage said housing, a collar on said tubular core, a jack-screw within said tubular core, intermeshing bevel gears within said housing, a shaft for revolving said gears, a telescopic casing surrounding said tubular core, and having its lower section supported by said housing, and its upper section secured to the chassis, and coil springs disposed within the telescope sections on opposite sides of said collar.

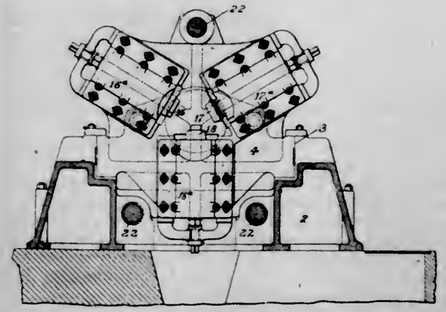
3. The combination with a vehicle frame and its supporting springs, of a combined jack and shock-absorber comprising a housing secured to said frame, a tubular core externally-threaded to engage said housing, and adapted to coact with a jack-screw, a hollow stud at the lower end of said housing, a loosely keyed jack-screw in said tubular core and having a supporting foot, a catch on said housing to engage said foot, bevel gears within said housing, a crank-shaft for revolving said gears, a telescopic casing surrounding said tubular core, a collar on said tubular core, and coil springs disposed in opposite sides of said collar.

1,108,523. PORTABLE CONCRETE-MIXER. GEORGE LYTTON SEXTON, Waukesha, Wis., assignor to The Badger Concrete Mixer and Machinery Co. Filed Jan. 29, 1913. Serial No. 745,051. (Cl. 83—73.)



In a portable concrete mixer, a suitable running gear, a mixer mounted thereon, a frame carried by said running gear, and a motive power device mounted upon said frame in such a position that the center of gravity of the device will be shifted from its position without the vertical plane of the axle to a position substantially within said plane when the device is in position for translation.

1,108,524. METHOD OF AND APPARATUS FOR FORGING CAR-WHEELS AND SIMILAR METAL BODIES. EDWIN E. SLICK, Pittsburgh, Pa. Filed Apr. 5, 1910. Serial No. 553,600. (Cl. 80—16.)



1. Apparatus for forging metal comprising a supporting die, a plurality of rotary forming rolls and means for causing a relative approach of the die and rolls, said rolls respectively co-acting with the die at angularly and annu-

larly separated points on the die in forging the metal; substantially as described.

2. Apparatus for forging metal comprising a supporting die, a plurality of rotary forming rolls and means for causing a relative approach of the die and rolls, said rolls simultaneously co-acting with the die at angularly and annularly separated points on the die in forging the metal; substantially as described.

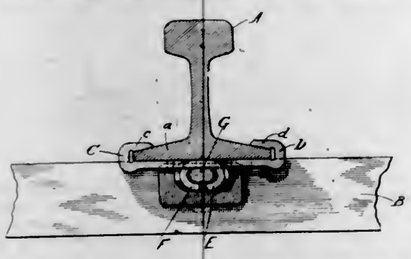
3. Apparatus for forging metal comprising a supporting die, a plurality of rotary forming rolls arranged to form each a different annular portion of the blank, and means for causing a relative approach of the die and rolls, said rolls being arranged to co-act with the die and forge annularly separated portions of the metal blank; substantially as described.

4. Apparatus for forging metal comprising a supporting die, a plurality of forming rolls and means for causing a relative approach of the die and rolls, said rolls co-acting with the die at angularly and annularly separated points on the die in forging the metal and being adapted to co-act with the die and form annularly different portions of the blank angularly separated points on the surface of said die; substantially as described.

5. The method of forging metal consisting in rotatably supporting the metal blank and applying roller forging pressure to angularly and annularly separated portions of the blank; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,108,525. ANTICREEPING DEVICE FOR RAILS. ADOLPH H. SMITH and GEORGE W. NIBBE, Chicago, Ill. Filed Dec. 20, 1913. Serial No. 808,036. (Cl. 238—4.)



1. The combination with a railroad rail and supporting tie therefor, of a pair of clamping members engaging the opposite sides of the rail base and having transversely overlapping portions below the rail base, one of said members having on the end of its transversely overlapping portion a depending flange longitudinally overlapping the adjacent portion of the other member, and means bearing against the tie and engaging said depending flange to draw said members into tightly gripping contact with the rail base.

2. The combination with a railroad rail and supporting tie therefor, of a pair of clamping members engaging the opposite sides of the rail base and having longitudinally and transversely overlapping portions below the rail base, and means bearing against the tie and extending between said overlapped portions to draw said members into tightly gripping contact with the rail base.

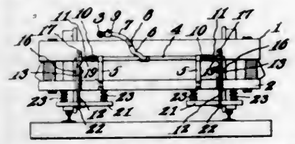
3. The combination with a railroad rail and supporting tie therefor, of a pair of clamping members engaging the opposite sides of the rail base comprising transversely overlapping portions beneath the rail base, and also comprising depending longitudinally overlapping projections on the ends of said transversely overlapped portions, and means bearing against the tie and extending between said depending projections for drawing said members into tightly gripping contact with the rail.

4. The combination with a railroad rail and supporting tie therefor, of a pair of clamping members engaging the opposite sides of the rail comprising transversely overlapping portions extending beneath the rail base, each of said transversely overlapping portions being cut away to receive the other portion, the ends of said overlapping portions having depending flanges thereon, and means bearing against the tie and interposed between said flanges to draw said members into tightly gripping contact with the rail.

5. The combination with a railroad rail and supporting tie therefor, of a pair of clamping members engaging the opposite sides of the rail comprising transversely overlapping portions extending beneath the rail base, each of said transversely overlapping portions being cut away to receive the other portion, the ends of said overlapping portions having depending flanges diverging toward the tie, and a wedge bearing against the tie and extending between said flanges to draw said members into tightly gripping contact with the rail.

[Claim 6 not printed in the Gazette.]

1,108,526. BRAKE ATTACHMENT FOR RAILWAY-CARS. JOHN B. STEVENS, Macon, Ga. Filed Jan. 26, 1914. Serial No. 814,566. (Cl. 188—2.)



1. In a brake attachment, a brake applying device, a vertically movable slide operatively connected thereto, and a spring pressed lever fulcrumed to the slide for coöperation with the rail.

2. In a brake attachment, a brake applying device, a vertically movable slide operatively connected thereto, a lever fulcrumed intermediate its ends to the slide, and balanced springs coöperating with the arms of the lever.

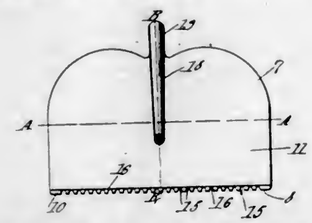
3. In a brake attachment, a valve adapted for connection to a train pipe, a vertically movable slide coöperable with the said valve to open the same, and a spring pressed lever fulcrumed to the slide for coöperation with a rail.

4. In a brake attachment, a valve adapted for connection to a train pipe, a vertically movable slide coöperating with the valve to open the same, a lever fulcrumed intermediate its ends to the slide, and balanced springs cooperating with the arms of the lever.

5. The combination with a car truck, of a brake applying device carried thereby, a guide carried by the truck, a slide movable through the guide and operatively connected to the said device, and a spring pressed lever carried by the lower portion of the slide for coöperation with a rail.

[Claims 6 to 13 not printed in the Gazette.]

1,108,527. HOE. JOSEPH W. TIMMONS, Orlando, Fla. Filed Dec. 20, 1913. Serial No. 807,994. (Cl. 55—44.)



1. A blade comprising parallel, plane front and rear surfaces, the lower edge of the blade being beveled toward and forming a cutting edge at the rear surface, said blade provided with a plurality of spaced grooves in the rear surface with the bottom wall thereof beveled toward the front surface and forming a cutting edge at the said front surface.

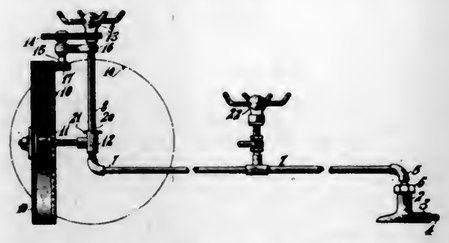
2. A blade comprising parallel, plane front and rear surfaces, the lower edge of the blade being beveled toward

and forming a serrated cutting edge at the rear surface, said blade provided with a plurality of spaced grooves in the rear surface with the bottom wall thereof beveled toward the front surface and forming a serrated cutting edge at the said front surface.

3. A blade comprising parallel plane front and rear surfaces, the lower edge of said blade beveled toward and forming a cutting edge at the rear surface, said blade provided with a plurality of beveled grooves spaced a distance apart, with the beveling extending toward the front surface and providing a cutting edge at the said front surface, the said grooves thus providing superimposed serrated cutting edges at the front and rear surfaces.

4. A blade comprising parallel plane front and rear surfaces, the lower edge of said blade beveled toward and forming a cutting edge at the rear surface, said blade provided with a plurality of beveled grooves spaced a distance apart, with the beveling extending toward the front surface and providing a cutting edge at the said front surface, the said grooves thus providing superimposed serrated cutting edges at the front and rear surfaces, said grooves of gradually diminishing width.

1,108,528. TRAVELING LAWN-SPRINKLER. WILLIAM C. TODD and JAMES WM. POMEROY, Victoria, British Columbia, Canada. Filed Aug. 25, 1913. Serial No. 786,470. (Cl. 137—63.)



1. In a rotatable lawn sprinkler, a central standard, a pipe pivoted at one end in said standard for movement in a horizontal plane, the free end of said pipe extending vertically upward, a re-action sprinkler mounted on the end of the upward extension of said pipe, an axle member mounted on the upward extension of said pipe and projecting in a horizontal direction, a wheel mounted on said axle and supporting the free end of said pipe, said wheel having a peripheral tooth portion, a bracket carried by said upwardly extending end of said pipe, a stub shaft in said bracket, a pinion on said stub shaft meshing with said peripheral tooth portion, and a direct gear connection between said stub shaft and said sprinkler.

2. In a rotatable lawn sprinkler, a central standard, a pipe pivoted at one end in said standard for movement in a horizontal plane, the free end of said pipe extending vertically upward, a re-action sprinkler mounted on the end of the upward extension of said pipe, an axle member mounted on the upward extension of said pipe and projecting in a horizontal direction, a wheel mounted on said axle and supporting the free end of said pipe, said wheel having a peripheral tooth portion, a bracket carried by said upwardly extending end of said pipe, a stub shaft in said bracket, a pinion on said stub shaft meshing with said peripheral tooth portion, a direct gear connection between said stub shaft and said sprinkler, said wheel shaft being swivelly mounted on said upward extension of said pipe whereby it may be swung to disconnect the wheel from said pinion, and means for holding said wheel shaft in its different positions of adjustment.

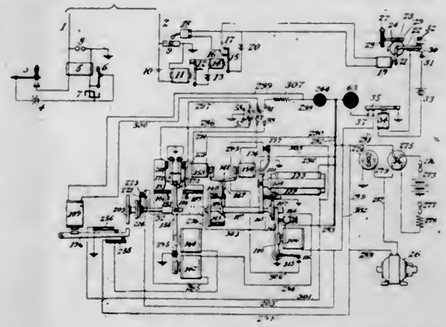
3. In a rotatable lawn sprinkler, a central standard, a pipe pivoted at one end in said standard for movement in a horizontal plane, the free end of said pipe extending vertically upward, a re-action sprinkler mounted on the end of the upward extension of said pipe, an axle member mounted on the upward extension of said pipe and projecting in a horizontal direction, a wheel mounted on said axle and supporting the free end of said pipe, said wheel having a peripheral tooth portion, a bracket carried by said upwardly extending end of said pipe, a stub shaft in said bracket, a pinion on said stub shaft meshing with said peripheral tooth portion, a direct gear connection between said stub shaft and said sprinkler, said pipe including two sections telescopic one within the other, and a supplemental sprinkling means mounted on the larger of said pipe sections, the smaller of said pipe sections when telescoped past said supplemental sprinkling means serving to cut off the supply of water to said supplemental sprinkling means, substantially as shown and described.

4. In a rotatable lawn sprinkler, a central standard, a pipe pivoted at one end in said standard for movement in a horizontal plane, the free end of said pipe extending vertically upward, a reaction sprinkler mounted on the end of the upward extension of said pipe, an axle member mounted on the upward extension of said pipe and projecting in a horizontal direction, a wheel mounted on said axle and supporting the free end of said pipe, said wheel having a peripheral tooth portion, a bracket carried by said upwardly extending end of said pipe, a stub shaft in said bracket, a pinion on said stub shaft meshing with said peripheral tooth portion, a direct gear connection between said stub shaft and said sprinkler, said wheel shaft being swivelly mounted on said upward extension of said pipe whereby it may be swung to disconnect the wheel from said pinion, means for holding said wheel shaft in its different positions of adjustment, said pipe including two sections telescopic one within the other, and a supplemental sprinkling means mounted on the larger of said pipe sections, the smaller of said pipe sections when telescoped past said supplemental sprinkling means serving to cut off the supply of water to said supplemental sprinkling means, substantially as shown and described.

5. In a rotatable lawn sprinkler, a central standard to which the water service is delivered, a pipe having one end upturned and the other end pivoted to said central standard, a rotatable lawn sprinkler mounted on the upturned end of said pipe, a wheel supporting the free end of said pipe, an axle for said wheel, and means for connecting said axle to said pipe whereby said wheel may be secured to rotate in a plane at right angles to the line of the radial pipe or parallel thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,108,529. TELEGRAPH SYSTEM. CHARLES R. UNDERHILL, Providence, R. I., assignor to Underhill Telegraph Translator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 25, 1904. Serial No. 222,041. (Cl. 178—26.)



1. A receiving telegraph instrument comprising a plurality of character-indicating devices and also a translating receiver embodying the following elements, viz.—a feed-screw, a pair of reciprocally-operative selectors operable by said feed-screw the working stroke of one selector being controlled by one component and the working stroke of the other selector being controlled by a com-

plementary component of the receiver-influencing signals, and means governed by said selectors for controlling said character-indicating devices selectively in accordance with the combinations of receiver-influencing signals representing their respective code characters.

2. A receiving telepgraph instrument comprising a plurality of character-indicating devices and also a translating receiver embodying the following elements, viz.—a feed-screw, a pair of reciprocally-operative variably-movable selectors operable by said feed-screw the working stroke of one selector being controlled by variable components of one character and the working stroke of the other selector being controlled by complementary variable components of the receiver-influencing signals, and means governed by said selectors for controlling said character-indicating devices selectively in accordance with the combinations of receiver-influencing signals representing their respective code characters.

3. A receiving telegraph instrument comprising a plurality of character-indicating devices and also a translating receiver embodying the following elements, viz.—a constant-speed driver, a pair of reciprocally-operative reciprocatory circuit-controllers operable by said driver the working atroke of one circuit-controller being governed by one component and the working stroke of the other circuit-controller being governed by a complementary component of the receiver-influencing signals, and means governed by said circuit-controllers for controlling said character-indicating devices selectively in accordance with the combination of receiver-influencing signals representing their respective code characters.

4. A receiving telegraph instrument comprising a plurality of character-indicating devices and also a translating receiver embodying the following elements, viz.—a constant-speed driver, a pair of reciprocally-operative variably-movable reciprocatory circuit-controllers operable by said driver the working stroke of one circuit-controller being governed by variable components of one character and the working stroke of the other circuit-controller being governed by complementary variable components of the receiver-influencing signals, and means governed by said circuit-controllers for controlling said character-indicating devices selectively in accordance with the combinations of receiver-influencing signals representing their respective code characters.

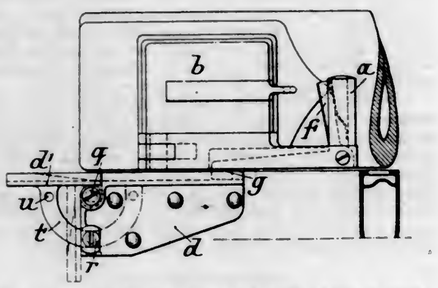
5. A receiving telegraph instrument comprising a plurality of character-indicating devices and also a translating receiver embodying the following elements, viz.—a feed-screw, a pair of reciprocally-operative reciprocatory circuit-controllers operable by said feed-screw the working stroke of one circuit-controller being governed by one component and the working stroke of the other circuit-controller being governed by a complementary component of the receiver-influencing signals, and means governed by said circuit-controllers for controlling said character-indicating devices selectively in accordance with the combinations of receiver-influencing signals representing their respective code characters.

[Claims 6 to 46 not printed in the Gazette.]

1,108,530. DEVICE FOR AUTOMATICALLY OPENING THE BREECH OF A GUN WITH A RECOILING BARREL. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Filed Jan. 17, 1907. Serial No. 352,766. (Cl. 89—4.)

1. In a device for automatically opening the breech of a gun having a recoiling barrel, the combination with a closing lever, of a locking device mounted on the handle end of the closing lever, a lever hinged together by a horizontal pin and adapted to be engaged by the locking device, a detachable bolt for securing the two parts of the guide in an operative position, said guide arranged to operate the closing lever at a certain position of the barrel.

2. In a breech-opening device for guns having a recoiling barrel, the combination, with a closing lever, of a locking device mounted on the closing lever, a guide member hinged on a horizontal pin having its axis transverse to the axis of the gun and arranged to be engaged by said locking device when in its elevated position, the guide member being arranged when elevated to operate the closing lever during counter-recoil, and releasable means for locking said swinging guide member in its elevated position.



3. In a breech-opening device for guns having a recoiling barrel, the combination with a closing lever, of a locking device mounted on said lever, a horizontal pin whose axis is transverse to the axis of the gun, a swinging-guide member hinged on the horizontal pin having its axis transverse to the axis of the barrel, said guide-member when in its elevated position being engaged by said locking device, the guide member arranged when elevated to operate the closing lever to open the breech during counter-recoil.

4. In a breech-opening device for guns having a recoiling barrel, the combination with a closing lever, of a locking device mounted on the lever, a swinging guide member hinged on a horizontal pin having its axis transverse to the axis of the barrel, said guide-member when in its elevated position being engaged by the locking device, a detachable bolt to secure said guide member in its adjusted elevated position, the guide member arranged when elevated to operate the closing lever to open the breech during counter recoil.

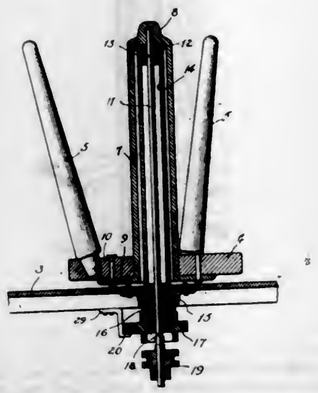
5. In an automatic breech opening device for guns, the combination of a bracket having a stationary and a swinging part and having guide grooves in the upper surface of said parts, a breech operating lever, and a locking pin mounted in said lever and engaging the guide grooves, the said grooves being arranged when the swinging part of the bracket is raised to hold the lever normally in its closed position and to throw the same to the open position during the movement of the barrel of the gun due to recoil and return.

1,108,531. WASHING-MACHINE AND GEAR. WILLIAM H. VOSS, Davenport, Iowa. Filed Mar. 2, 1912. Serial No. 681,228. (Cl. 68—15.)

1. In a washing machine, the combination with a tub, of a tubular support detachably secured thereto and extending upwardly therein, a bushing freely mounted in each end of the support, a squared shaft connecting said bushings, a sleeve suspended over one of said bushings, upwardly extending pins carried by the sleeve, the upper end of said shaft resting within said sleeve to form a connection, means for operatively connecting the other of said bushings for driving the sleeve alternately in opposite directions.

2. In a washing machine, the combination with a tub, of a support mounted within the tub, a sleeve encircling said support, the upper end of said sleeve being closed and resting upon the support, a shaft extending through said support and connected directly to the closed portion of the sleeve, the said sleeve depending over the support and resting a short distance above the bottom of the tub, a wooden block secured to the lower end of the sleeve, a plurality of pins mounted within the upper face of said block and means for driving the shaft whereby the sleeve will be oscillated for the purpose specified.

3. In a washing machine, the combination with the tub, a tubular support detachably mounted within said tub, a squared shaft extending through said tubular support, a sleeve mounted upon said tubular support and having a squared socket for the reception of the upper end of the said squared shaft, pins detachably mounted in said sleeve extending upwardly and outwardly, and means for driving said agitator alternately in opposite directions.

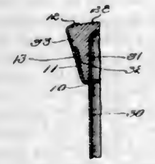


4. In a washing machine, the combination with the tub, an agitator support carried by the bottom of the tub, an agitator rotatably mounted on said support, an annular flange formed integral with the lower end of said agitator and extending adjacent the bottom of the tub, a wooden block detachably secured to said flange, a plurality of pins extending upwardly and outwardly adjacent to the top of the tub, and means for operating said agitator.

5. In a washing machine, the combination with the tub, of an internally threaded plate secured to the bottom of said tub, a tubular support detachably secured within said plate, bushings freely mounted within the opposite ends of said support, means for connecting said bushings, an agitator supported upon said tubular support, means operatively connecting one of the said bushings with the agitator, and means operatively connecting the other said bushing for driving said agitator alternately in opposite directions.

[Claim 6 not printed in the Gazette.]

1,108,532. RADIATOR-JOINT. ARTHUR W. WALKER, Malden, Mass. Filed Dec. 2, 1912. Serial No. 734,512. (Cl. 126—102.)

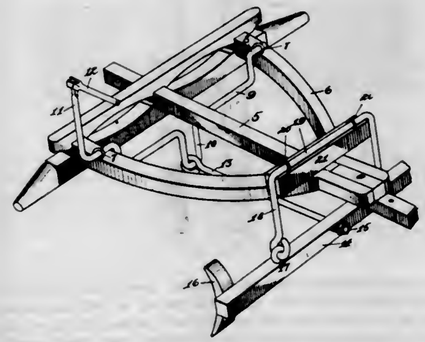


1. A joint for radiators, comprising a cast metal end piece, formed with a recess in its outer side; and a sheet metal side having its end portion bent to form a ledge on which the end piece rests and extended to cover the outer side of said end piece and terminating in a lip bent over the end piece; and calking material filling said recess in the end piece and inclosed by the sheet metal extending over the outer side of the end piece.

2. A joint for radiators, comprising a round thin cast metal end piece, formed with a thick marginal rim with a recess in its outer side; and a cylindrical sheet metal side having its end portion bent to form a ledge on which said rim rests and extended to cover the outer side of said rim and terminating in a lip bent over the said rim; and calking material filling said recess in the rim and inclosed by the sheet metal extending over the outer side of the rim.

3. A joint for radiators, comprising a cast metal end piece, formed with a recess located approximately at its periphery; a sheet metal side piece having its end portion bent to form a ledge, on which the said end piece rests approximately at its said periphery, and extended to cover the said recess and periphery, and to engage the said end piece adjacent to said periphery, to hold said end piece in place; and calking material filling said recess and inclosed by the sheet metal extending over it.

1,108,533. WAGON-BRAKE. GEORGE M. WATT and JOHN E. BRYANT, Oakland City, Ind. Filed May 20, 1912. Serial No. 698,539. (Cl. 21—8.)



In a wagon brake construction, the combination with a running gear comprising a centrally disposed reach and hounds between which said reach passes, of a block disposed transversely upon the upper face of said hounds adjacent the forward portion thereof, a substantially U-shape yoke having its central portion pivotally mounted upon the upper face of said block, and a brake beam flexibly connected to the free ends of the legs of said yoke, a centrally disposed rod rigidly connected to said beam and lying centrally beneath said reach, and an operating member bent from a single rod of metal to form transversely disposed members pivoted upon the upper face of said hounds, an offset portion which extends from one of said hounds to the other and which prevents transverse movement of said member by engagement with said hounds and an additional offset portion formed in the first named offset portion and centrally arranged to adapt it to straddle said reach, said last named offset portion constituting a crank with which said rod is pivotally connected.

1,108,534. GARMENT STAY AND CLASP. JAMES M. WELSH, Niagara Falls, N. Y., assignor, by mesne assignments, to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Mar. 19, 1913. Serial No. 755,378. (Cl. 2—76.)

1. A garment stay or stiffener, comprising wires each bent back and forth into sinuous or serpentine form to form alternate oppositely disposed corrugations or loops and transverse portions or crossings, the closed ends of the corrugations or loops being formed by bending the wire at the edges of the stay at less than a right angle, and the crossings being substantially straight from edge to edge of the stay when the same is viewed flatwise, each wire where it crosses another wire being bent or kinked and lying in a hollow of the other wire, thereby stiffening the stay against edgewise flexure.

2. A garment stay or stiffener, comprising wires each bent back and forth into sinuous or serpentine form to form alternate oppositely disposed corrugations or loops and transverse portions or crossings, the closed ends of the corrugations or loops being formed by bending the wire at the edges of the stay at less than a right angle, and the crossings being substantially straight from edge to edge of the stay when the same is viewed flatwise, the wire being of large diameter with relation to the distance between successive crossings so that where two wires cross each other said wires are bent or kinked around each other and thus stiffen the stay against edgewise flexure.



3. A garment stay or stiffener, comprising wires each bent back and forth into sinuous or serpentine form to form alternate oppositely disposed corrugations or loops and transverse portions or crossings, the closed ends of the corrugations or loops being formed by acutely bending the wire at the edges of the stay, and the crossings being substantially straight from edge to edge of the stay when the same is viewed flatwise, each crossing portion being bent out of the plane of the stay first in one direction and then in the other to form a plurality of hollows or kinks open or concave on opposite sides of the stay, each said hollow or kink in each crossing portion of the wire having the crossing portion of another wire lying therein.

4. A clasp or eyelet strip for corsets and the like, comprising a wire fabric formed of a plurality of wires each bent back and forth into sinuous or serpentine form to form alternate oppositely disposed corrugations or loops and transverse portions or crossings, the eyes or loops being formed by sharp bends in the wire at the edges of the stay, and the crossings being inclined transversely of the stay and substantially straight from edge to edge thereof when the same is viewed flatwise, and clasp members rigidly secured at intervals to said wire fabric and each comprising a flat plate bent on itself to embrace said fabric and provided with a hook opening toward one end of the stay, part of the hooks opening in one direction and part in the other.

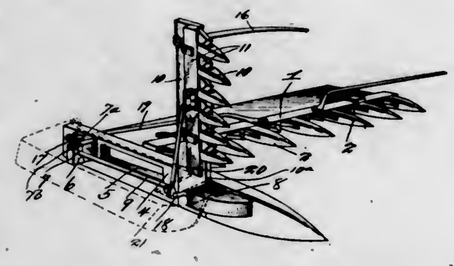
5. A clasp or eyelet strip for corsets or the like, comprising wire bent to form a series of loops or convolutions, and clasp members rigidly secured at intervals along the length of said strip, each member comprising a flat plate secured to the wire fabric and provided with a hook opening toward one end of the stay, part of the hooks opening in one direction and part in the other.

1,108,535. FENCE-POST. CHARLES JACOB WESTPHALL, Portland, Oreg., and JOSEPH BOOTH SKIFF, Clinton, Iowa. Filed Oct. 20, 1911. Serial No. 655,707. (Cl. 189—31.)

A fence post comprising a spring metal body portion, said body portion being folded longitudinally upon itself, and provided at its lower end with triangular shaped lateral extensions, said extensions projecting in opposite directions, said post being adapted to spring into open position and force said extensions horizontally into the earth.



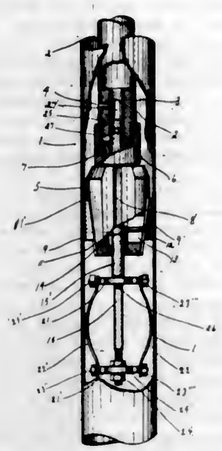
1,108,536. VERTICAL MOWER. GOTTLIEB WODTLI, Sweet Home, Oreg. Filed July 29, 1910. Serial No. 574,552. (Cl. 56—30.)



1. In combination, a bar having a recess and provided with laterally extending offset bearing blocks, a horizontally arranged finger bar projecting laterally from the rear end of the first bar and provided with a cutter bar, a vertical finger bar secured in said recess in advance of the horizontal finger bar and provided with a cutter bar, a crank shaft having a crank at each end and mounted in the offset bearing blocks, one of the cranks having connections with the cutter bar of the vertical finger bar, the other crank having connections with the cutter of the horizontal finger bar, and means for detachably mounting one end of the crank shaft in one of the bearing blocks.

2. In combination, a bar having a recess and provided with laterally extending offset bearing blocks, a horizontally arranged finger bar projecting laterally from the rear end of the first bar and provided with a cutter bar, a vertical finger bar secured in said recess in advance of the horizontal finger bar and provided with a cutter bar, a crank shaft having a crank at each end and mounted in the offset bearing blocks, one of the cranks having connections with the cutter bar of the vertical finger bar, the other crank having connections with the cutter of the horizontal finger bar, and means for detachably mounting one end of the crank shaft in one of the bearing blocks, and a shield carried by the first bar for the crank shaft and its connections.

1,108,537. PUMP-ANCHOR. CLIO L. WOOD, Coalinga, Cal. Filed Oct. 20, 1913. Serial No. 796,358. (Cl. 103—65.)



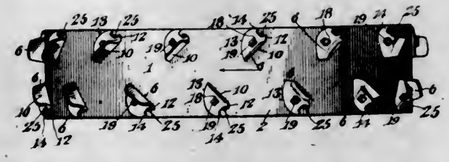
1. In a pump anchor having a swedge shaped body attached to the suction pipe of a pump, and slidable plates upon the faces of the swedge, means for sliding the plates upon the swedge shaped body as follows: a rod passing freely vertically through the center of the swedge shaped body, a projection on the side of the upper end of said rod, means for catching and releasing the projecting portion of said rod, a collar around the middle part of the rod, free therefrom so the rod may rotate without moving the collar, means upon the rod for raising and lowering said collar with said rod, pins extending from the collar outward into the slidable plates and carrying the plates upon them, a well casing a friction device fixed upon the lower end of said rod, adjusted to press against the side of a well casing, in combination substantially as shown.

2. A pump suction pipe and pump anchor comprising a swedge shaped body adapted to be attached to the pump suction pipe, said swedge shaped body having a plurality of plane faces each such face being provided with a dovetail ridge, and toothed convex plates with dovetail grooves slidable upon the faces of the swedge, means for sliding said plates upon the faces of said swedge as follows: a rod extending vertically through the anchor, means extending from said rod into said plates to raise and lower them as the rod is raised and lowered, flat springs on arms attached to the lower end of the rod, pressing against the casing of the well, a slot and groove device near the top of the rod workable in connection with a pin through the rod whereby the rod is raised and lowered with the suction pipe and swedge shaped body at the will of the operator.

3. A pump suction pipe and pump anchor comprising a swedge shaped body adapted to be attached to the pump suction pipe, said swedge shaped body having a plurality of plane faces each such face being provided with a dovetail ridge, toothed convex plates with dovetail grooves slidable upon the dovetail faces of the swedge, a rod passing vertically through the center of the swedge shaped body, a collar around said rod carrying pins which extend into and carry the said plates, a spring friction device fixed upon the lower end of said rod, a suction pipe provided with a continuous groove and slot, the pump suction pipe being provided with a bayonet slot, a pin extending laterally from the top of said rod and adapted to move vertically and to rotate laterally within the portions of the bayonet slot in combination substantially as shown.

4. In a pump suction pipe and a pump anchor having a swedge shaped body adapted to be attached to the pump suction pipe, said swedge shaped body having a plurality of plane faces, slidable plates upon the faces of the swedge, means for sliding the swedge upon the plates as follows: a rod passing freely vertically through the center of the swedge, arms extending from said rod into said plates and carrying them up and down with the rod, a well casing a friction device upon the lower end of the rod adjusted to press lightly against the side of the well casing, the pump suction pipe being provided with a vertical groove and a horizontal groove opening into the lower end of the vertical groove, a pin extending laterally from the top of said rod and adapted to slide in the vertical groove and to rotate in the horizontal groove, in combination substantially as shown.

1,108,538. MASTER-WHEEL. JAMES E. WOOD, deceased, Aurora, Ill., by Flora A. Wood, administratrix, Aurora, Ill., assignor of one-half to Charles A. Love, Aurora, Ill. Filed June 12, 1913. Serial No. 773,256. (Cl. 21—208.)



1. A master wheel having elongated ground lugs each pivoted intermediately of its ends to the rim of the wheel to turn about its pivotal axis and having a ground engaging face directed forwardly at an angle to the direction of travel, and means for limiting the pivotal movements of the lug to always maintain the same end of the lug in the forward direction.

2. A master wheel having elongated ground lugs, each provided with a relatively thin ground entering outer edge and a broad base where engaging the wheel rim, and with an intermediately located pivotal extension entering the rim of the wheel, each lug having a forwardly presented ground entering face at an angle to the direction of travel, and said lug and wheel rim at one end of the lug having coacting means for limiting pivotal movements of the lug on its pivotal axis to always maintain the same end of the lug in a forward direction.

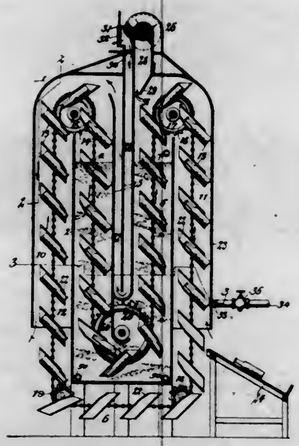
3. A master wheel having two rows of ground entering lugs on opposite sides of its circumferential center line, with ground engaging faces presented at an angle toward said center line, and each lug being pivoted intermediate of its length to rock about the pivotal axis, and each provided with stop means for limiting the rocking movements to always maintain the same end of the lug in the forward direction.

4. A master wheel having a series of ground lugs on the rim of the wheel, each comprising a block with a substantially flat ground engaging face, and a relatively thin outer edge and reversely curved from said face toward the other side of the lug, said lug having spaced stop members at one end and also provided with an intermediately located pivotal support connecting the lug to the rim of the wheel and about the axis of which pivotal support the lug is movable, and the wheel being provided with a stop member between the stop members on the lug and located to maintain the active face of the lug at a forward angle to the direction of rotation of the wheel.

5. A master wheel provided with circumferential series of ground engaging lugs on opposite sides of a circumferential center line, each lug comprising a block with a broad face adapted to the rim of the wheel and there provided intermediately of its length and breadth with a hub extending through the rim of the wheel and having fastening means for holding the lug to the wheel, said lug being movable about the longitudinal axis of its hub and provided with a ground engaging face substantially perpendicular to the rim of the wheel and also substantially flat and arranged at a forward angle to the direction of

rotation of the wheel and with the face remote from the ground engaging face reversely curved to provide the lug with an outer relatively thin ground-entering edge, and stop means permitting a limited rocking movement of the lug on its pivotal support and at all times maintaining the same end of the lug in the forward direction.

1,108,539. METHOD OF STERILIZING BOTTLES. EDWARD ZAHM, Buffalo, N. Y., assignor to Zahm Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Feb. 24, 1912, Serial No. 679,604. Renewed May 28, 1914. Serial No. 841,651. (Cl. 167—3.)



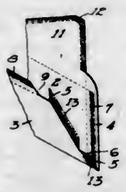
1. The hereindescribed method of sterilizing bottles comprising passing the bottles through a current of heated vapor, then passing said bottles through heated water and filling the bottles with the same, then emptying the water from said bottles, and then passing the bottles through a cooling current of air without again bringing the same in contact with water.

2. The hereindescribed method of sterilizing bottles comprising passing the bottles through an inlet passage communicating with the atmosphere, then through a body of sterilizing liquid having a temperature of at least 140 degrees, Fahrenheit, and thence through an outlet passage communicating with the atmosphere, subjecting the bottles while passing through said outlet passage to the cooling action of a current of air drawn from the external atmosphere and through said outlet passage in a direction opposite to the direction of movement of the bottles, heating said air after engaging with the bottles in said outlet passage by passing the air in contact with the inner side of a conduit the outer side of which is in contact with said sterilizing liquid, mixing said air as it escapes from said conduit with the vapor rising from said sterilizing liquid, and delivering said mixture of heated air and vapor through said inlet passage to the atmosphere and in a direction opposite to the direction of movement of the bottles therein and in contact with the latter so as to heat the same preparatory to entering the sterilizing liquid without condensing the vapors in said inlet passage.

3. The hereindescribed method of sterilizing bottles comprising passing the bottles through a sterilizing liquid having a temperature of at least 140 degrees, Fahrenheit, heating a stream of air by passing the same in contact with the inner side of a conduit the outer side of which is in contact with said sterilizing liquid, and delivering said stream of air upon issuing from said conduit against said bottles before the latter enter said sterilizing liquid, said bottles entering said sterilizing liquid in an upright position so as to become filled therewith and leaving said liquid in an inverted position so as to discharge the same therefrom.

4. The hereindescribed method of sterilizing bottles comprising passing the bottles through an inlet passage communicating with the atmosphere, then through a body of sterilizing liquid having a temperature of at least 140 degrees, Fahrenheit, and thence through an outlet passage communicating with the atmosphere, subjecting the bottles while passing through said outlet passage to the cooling action of a current of air drawn from the external atmosphere and through said outlet passage in a direction opposite to the direction of movement of the bottles, heating said air after engaging with the bottles in said outlet passage by passing the air in contact with the inner side of a conduit the outer side of which is in contact with said sterilizing liquid, mixing said air as it escapes from said conduit with the vapors rising from said sterilizing liquid, and delivering said mixture of heated air and vapor through said inlet passage to the atmosphere and in a direction opposite to the direction of movement of the bottles therein and in contact with the latter so as to heat the same preparatory to entering the sterilizing liquid without condensing the vapors in said inlet passage, siad bottom entering said sterilizing liquid in an upright position so as to become filled therewith and leaving said liquid in an inverted position so as to discharge the same therefrom.

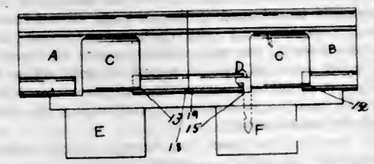
1,108,540. ENVELOP. EUGENE F. AHLQUIST, Minneapolis, Minn. Filed Dec. 19, 1913. Serial No. 807,620. (Cl. 229—80.)



1. An envelop comprising a blank scored along its middle line to form the front and rear panels and also scored to form a longitudinal sealing flap, said front and rear panels being scored transversely to form end flaps, the inner faces of said end flaps being gummed on one side of said middle score line and the outer faces of said end flaps being gummed on the other side of said score line, and said end flaps having slits therein between a longitudinal edge of the blank and said middle score line, the portions of the end flaps on one side of said slits being folded inwardly upon one of the panels to expose the gummed faces of these flaps to contact with the other panel when the blank is folded along said middle score line, and the portions of the end flaps on the other side of said slits being folded over the ends of both panels to close the ends of the envelop, the parts of said last named flap portions between said middle score line and said slits forming a reinforcing or strengthening means for the lower corners of the envelop.

2. An envelop comprising a blank having a score line extending lengthwise thereof along the middle line forming the front and back of the envelop, the back of the envelop having a longitudinal flap thereon and the front of the envelop having a longitudinal flap on its outer edge, the flap of said back portion of the envelop being gummed and adapted to be turned inwardly to seal the envelop, and the flap of the front portion of the envelop being folded over the flap of the back portion to form a secondary seal, said front and back of the envelop being scored transversely to form end flaps which extend across the score line between the front of the envelop and the longitudinal flap therefor, said end flaps being turned inwardly and the extensions thereof being folded downwardly with the flap on the front of the envelop upon the back portion of the envelop when the envelop is closed, thereby strengthening and reinforcing the upper closed corners of the envelop.

1,108,541. JOINT FOR RAILROAD-RAILS. JOHN AHO, Lawrence, Mass. Filed Feb. 26, 1914. Serial No. 821,111. (Cl. 239—6.)



1. A joint for railroad rails consisting of a base plate having upwardly projecting ears, the flanges of the rail being cut away to form recesses to receive the ears, said ears having at their bases recesses into which the rail flanges at the sides of the recesses enter, spikes driven into the tie between the flange and opposite side of the ear for holding them interlocked.

2. A joint for railroad rails consisting of a base plate placed under the railroad rails having two ears rising from the upper side of the plate on each side of the web of the rail and interlocking recesses cut into the ears of the plate gripping the flange of the rail and made secure by a spike driven into the slot cut into the flange of the rail against the ear of the tie plate; slots cut into the flange of the rail receiving the ears of the tie plate.

3. A tie plate consisting of a base and two ears rising perpendicularly from the upper side of the plate forming the receiving recess into which the web of the rail is placed; interlocking recesses gripping the flange of the rail made secure by a spike driven against the ear into the slot of the flange of the rail; slots cut into the flange of the rail to receive the ears of the tie plate and entering into the interlocking recesses.

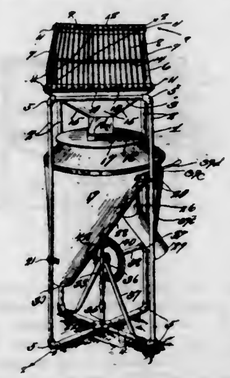
4. The combination of the track rails with a chair having a horizontal base supporting the adjacent ends of said rails with four upward projecting members engaging in and passing through recesses in the flanges of the rails so the inner faces or the projecting members of the chair rest against and support the webs of the rails on each side, said chair base containing a hole large enough for a rail spike to pass through at the inner end of one of the members.

5. The combination with the track rails of a chair having a horizontal base supporting the adjacent ends of said rails and having four upward extending members engaging in and passing through recesses in the flanges of the rails so the inner faces of the projecting members of the chair rest against and support the webs of the rails on each side, each of the said projecting members being notched at its lower end to interlock with the rail flanges and the chair being provided with a hole through the base to allow a spike to pass through and hold the rails in a locked position.

[Claims 6 to 9 not printed in the Gazette.]

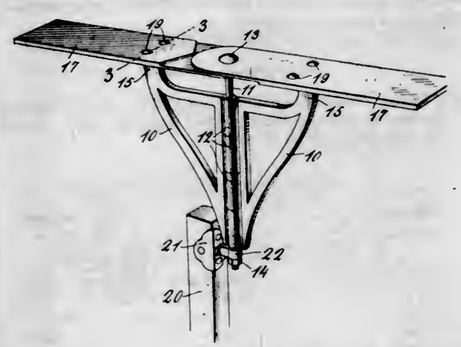
1,108,542. CENTRIFUGAL SAND SCREENING AND SEPARATING MACHINE. ELBERT FINLEY ANDERSON, Urbana, Ill. Filed Feb. 16, 1914. Serial No. 818,971. (Cl. 83—56.)

In a machine for separating sand and gravel, a frame, main and supplemental casings having screening means therebetween and being adjustably mounted in said frame, a hopper having an outlet spout connected to the main casing, a vertical shaft mounted in bearings of the frame and the casings, a revoluble member on the vertical shaft provided with curved flanges extending from the center of the revoluble member to its periphery, said flanges through the medium of the centrifugal force of the revoluble member acting to swirl the sand and gravel against



the screening means, and a crank mechanism having connections with the vertical shaft for rotating the same.

1,108,543. SHELF-BRACKET. HARRY T. AUBRY, Chicago, Ill. Filed Nov. 19, 1913. Serial No. 801,844. (Cl. 248—18.)



1. A bracket composed of a pair of members having matching hinge-knuckles, and a pintle passing through said knuckles, the upper end of the pintle rising above the top of the members, said top being shaped to support a shelving through which the upper end of the pintle is adapted to pass.

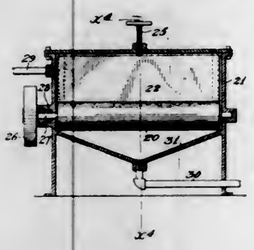
2. A bracket composed of a pair of members having matching hinge-knuckles, and a pintle passing through said knuckles and projecting from the top and bottom of the members, the top of the members being shaped to support a shelving through which the upper end of the pintle is adapted to pass, and a support for the bracket members having an aperture through which the lower end of the pintle passes.

1,108,544. METHOD OF SOFTENING WATER. GILBERT E. BAILEY and BERT ARTHUR HATCH, Los Angeles, Cal., assignors to The Ferrochem Company, Los Angeles, Cal., a Corporation of California. Filed June 15, 1912. Serial No. 703,985. (Cl. 210—1.)

1. A process of purifying water consisting of providing a continuous abrasion between two solid bodies of a material suited to correct the impurities in the water, said solid bodies being submerged in the water and maintained in contact by external pressure.

2. A process of purifying water consisting of maintaining high pressures between moving bodies submerged

in said water of a material suited to purify water, the particles thereby abraded being released in the water to be purified.



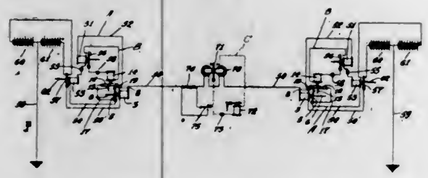
3. A process of purifying water consisting of maintaining high pressures between two bodies of a material suited to purify water, and maintaining a mutual movement between said bodies, the particles thereby abraded being released into the water to be purified.

4. A process of purifying water consisting of providing an abrasion between solid bodies of a material suited to correct the impurities in the water, and maintaining high pressure between said solid bodies, the particles abraded being released into the water to be purified.

5. A process of purifying water consisting of providing an abrasion between solid bodies of a material suited to purify water, said bodies being maintained in contact by external pressure and the particles abraded being released into the water to be purified.

[Claims 6 and 7 not printed in the Gazette.]

1,108,545. TELEGRAPH APPARATUS. GAY PRENTICE BLESSING, Seattle, Wash. Filed Aug. 18, 1913. Serial No. 785,386. (Cl. 178—16.)



1. In an instrument of the character described, a relay comprising an electro-magnet and an armature, a contact arm operable by the armature, contact means mounted for engagement by the contact arm for closing a circuit, means for locking the arm against the contact means, said locking means being in metallic connection with the contact arm and adapted for engagement with the contact means, and means for releasing the arm from the locking means.

2. In an instrument of the character described, a relay comprising an electro-magnet and an armature, contact means, an arm operable by the armature for engagement with the contact means for closing a circuit, a second relay comprising an electro-magnet and an armature, means for locking the first armature against the contact means and releasable by the second armature, said locking means being in metallic connection with the arm and adapted for engagement with the contact means.

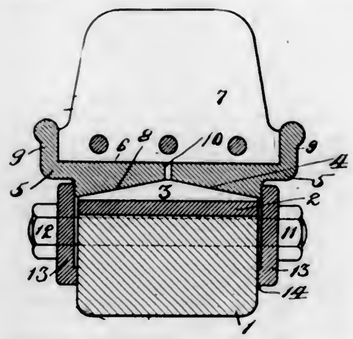
3. In combination, electrical energy supply means, a pole changer normally connected with one pole of the supply means and adapted to connect with the opposite pole of the latter, an electro-magnet for moving the pole changer, a local circuit including the magnet and normally maintained opened, a main circuit including the supply means and pole changer, a second electro-magnet included in the main circuit, means for closing the local circuit operated by the second magnet when a certain amount of current passes through the latter for energizing the same, and means for controlling the current through the main circuit.

4. In combination, electrical energy supply means, a pole changer normally connected with one pole of the supply means and adapted to connect with the opposite pole of the latter, an electro-magnet for moving the pole changer to connect with the last named pole, means for returning the pole changer to normal position when released by the magnet, a local circuit including the magnet and normally maintained opened, a main circuit including the supply means and pole changer, a second electro-magnet included in the main circuit, means for closing the local circuit operated by the second magnet when a certain amount of current passes through the latter for energizing the same, and means for controlling the current through the main circuit.

5. In combination, electrical energy supply means, a pole changer normally connected with one pole of the supply means and adapted to connect with the opposite pole of the latter, an electro-magnet for moving the pole changer, a local circuit including the magnet and normally maintained opened, a main circuit including the supply means and pole changer, a second electro-magnet included in the main circuit, means for closing the local circuit operated by the second magnet when a certain amount of current passes through the latter for energizing the same, a telegraph key for operation in the main circuit, a polarized relay in the main circuit, a sounder, and a circuit including the sounder and polarized relay closed by the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,108,546. RIM FOR WHEELS. PERCY B. BOSWORTH, Akron, Ohio. Filed Aug. 27, 1913. Serial No. 786,875. (Cl. 152—7.)



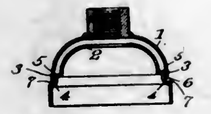
1. A vehicle wheel provided on the peripheral portion thereof with a circumferentially-extending broken annulus approximately triangular in cross-section, a pair of annularly-formed tire-holding members seated on the inclined faces of said annulus, the inner faces of said tire-holding members fashioned to engage and coöperate with the inclined faces of said broken annulus and with outwardly-extending portions adapted to engage the base portion of a tire whereby when said tire-holding members are forced toward each other said broken annulus is clamped on said wheel, said tire-holding members are clamped on said annulus against movement and the base portion of the tire is compressed or distorted.

2. A vehicle wheel provided on the peripheral portion thereof with a circumferentially-extending, laterally-removable, broken annulus, approximately triangular in cross-section, a pair of endless tire-holding bands having their inner faces inclined to coöperate with the outer faces of said annulus and with their outer portions fashioned to engage the base portion of a solid tire, means having connection with the wheel adapted to force said tire-holding bands toward each other to thereby simultaneously contract said annulus on said wheel, hold said tire-holding bands removably on said wheel and simultaneously compress or distort the base portion of a tire.

3. A vehicle wheel provided on the peripheral portion thereof with a circumferentially-extending, laterally-detachable, broken annulus, approximately triangular in cross-section, a pair of tire-holding bands having their inner faces fashioned to coöperate with the outer faces of said annulus and with the outer portions thereof adapted to engage the base portion of a solid tire, a pair of annular rings ararnged along the side faces of said wheel and constituting means for shifting said tire-holding bands toward each other to thereby cause a contraction of said annulus, a temporary locking of said tire-holding bands in position, and a simultaneous compression or distortion of the base portion of tbe tire.

4. A vehicle wheel provided on the peripheral portion thereof with a circumferentially-extending, laterally-detachable, broken annulus approximately triangular in cross section with the inclined portions thereof extending toward each other, a pair of annularly-formed tire-holding bands arranged to be seated on said annulus and cooperate therewith and with the outwardly-extending portion thereof fashioned to engage the base portion of a solid tire, and means to shift said tire-holding bands toward each other, thereby clamping said bands on said annulus, contracting said annulus and simultaneously compressing or distorting the base portion of the tire.

1,108,547. SOCKET-SHELL. TONJES AUGUST CARL BOTH, Malden, Mass., assignor to The Zee Socket and Mfg. Co., Boston, Mass., a Corporation of Massachusetts. Filed Aug. 7, 1912. Serial No. 713,770. (Cl. 173—312.)



1. In an electrical apparatus the combination of a casing provided with apertures, a removable insulating lining provided with fingers or projections to coöperate with the apertures and exterior means mounted on the outside of the casing and coöperating with the insulating lining to hold it within the casing.

2. In an electrical apparatus the combination of a casing provided with apertures, a removable substantially rigid insulating lining provided with fingers or projections to coöperate with the apertures and exterior means mounted on the outside of the casing and coöperating with the substantially rigid insulating lining to hold it within the casing.

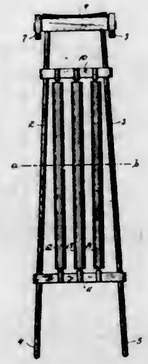
3. In electric light sockets, the combination of a cap having an offset portion and slots, an insulating lining mounted in the cap and provided with means to coöperate with the slots, and resilient means coöperating with the offset portion and the means carried by the insulating lining to secure the lining within the cap.

4. In electric light sockets, the combination of a cap having an offset portion and slots, an insulating lining mounted in the cap and provided with means to coöperate with the slots, and a split ring to coöperate with the offset portion of the cap and with the means carried by the insulating lining to secure the latter within the cap.

5. In an electrical apparatus, the combination of a casing, an insulating lining mounted wholly within the casing, and means separable from the casing and mounted on its exterior adapted to coöperate with the casing and the insulating lining to hold the latter within the casing.

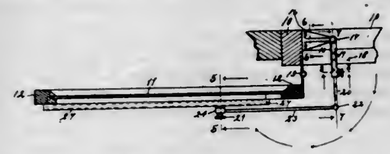
[Claims 6 to 12 not printed in the Gazette.]

1,108,548. HAND-TRUCK. ALBERT E. BRADLEY, New Haven, Conn. Filed Nov. 24, 1913. Serial No. 802,681. (Cl. 21—65.)



A hand truck comprising side bars and wheels, downwardly bowed braces connecting said side bars near their upper and lower ends, three longitudinal rollers mounted in said braces whereby the middle roller will stand in a plane below the other two rollers.

1,108,549. ADJUSTABLE HOLDER FOR CASEMENT-WINDOWS. LEONARD BUKOWSKI, Pasadena, Cal. Filed Feb. 3, 1914. Serial No. 816,354. (Cl. 16—22.)



The combination of a frame, a window, hinges at one side of the sash of the window connecting the window to the frame, a slideway on the rear of the sash, a bracket having one end thereof secured to the frame and arranged to the rear of the hinges, a link adjustable in length and having one end thereof pivotally connected to the bracket, an arm having one end thereof pivotally connected to the end of said link remote from the bracket, and a clamping sliding connection between said arm and said slideway.

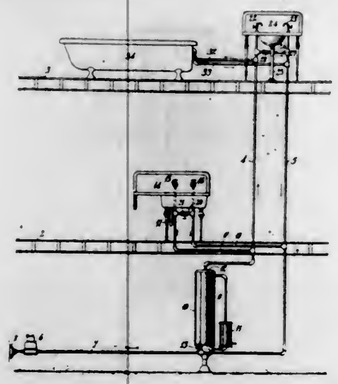
1,108,550. SYSTEM OF WATER DISTRIBUTION. LEWIS W. CHUBB, Edgewood, Pa. Filed Jan. 15, 1913. Serial No. 742,281. (Cl. 137—79.)

1. The combination with a hot-water system and a cold-water system receiving water from a common supply, and independent valves respectively associated with the ends of said systems, of means independent of said valves for interconnecting the upper portions of said systems whereby warm water is circulated through substantially the whole of said systems.

2. The combination with a hot-water system and a cold-water system receiving water from a common supply, and a plurality of independent valves respectively associated with the ends of said systems, of an interconnecting means independent of said valves associated with the upper portions of said systems for permitting hot-water to pass through the entire cold-water system.

3. The combination with a hot-water system and a cold-water system receiving water from a common source, and a plurality of valves respectively associated with said systems, of means independent of said valves for inter-

connecting said systems for effecting a circulation of water through the entire systems.

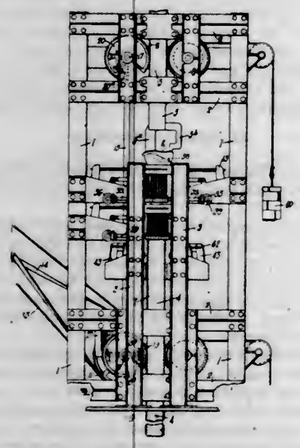


4. The combination with a hot-water system and a cold-water system and a plurality of independent valves respectively associated with the ends thereof, of interconnecting means independent of said valves and disposed between said systems at substantially the ends thereof and on the supply side of said valves for causing water from the hot-water system to pass through substantially the whole of said cold-water system.

5. The combination with a branched system of water distribution, a water-heating apparatus in one of said branches, and controlling valves respectively associated with the ends of said branches, of means independent of said valves and disposed above said apparatus and on the supply side of said valves for causing a circulation of warm water through the entire system and said heating apparatus for preventing the freezing of water in any part of the system.

[Claims 6 to 15 not printed in the Gazette.]

1,108,551. LASTING-MACHINE. LE BARON C. COLT, Bristol, R. I. Filed Aug. 12, 1908. Serial No. 448,164. (Cl. 12—12.)



1. In a lasting machine, the combination of a series of automatically actuated rolls, a support for the last, means for clamping the last upon said support, and means for automatically moving said support and said clamping means past said rolls first in one direction and then in the other.

2. In a lasting machine, the combination of a series of spring-actuated rolls, a support for the last, a clamping member for clamping the last upon said support, means for moving said last and said clamping member past said rolls, and means for automatically separating said last and said clamping member.

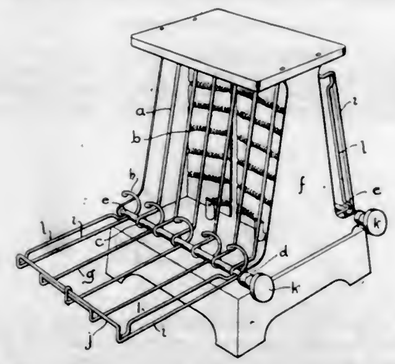
3. In a lasting machine, the combination of a series of spring actuated rolls, a support for the last, a clamping member for clamping the last upon said support, means for moving said support and said clamping member past said rolls, and means for automatically moving said clamping member toward and from said support.

4. In a lasting machine, the combination of a series of spring actuated rolls, a support for the last, a clamping member for clamping the last upon said support, means for moving said support and said clamping member past said rolls, and means for automatically moving said support toward and from said clamping member.

5. The combination of a support, a clamping member, means for moving said support and said clamping member in the same direction, and means for automatically separating said support and said clamping member.

[Claims 6 to 28 not printed in the Gazette.]

1,108,552. TOAST-TURNER. HAZEL B. COPEMAN, Flint, Mich., assignor to Copeman Electric Stove Company, Flint, Mich., a Corporation of Michigan. Filed June 13, 1913. Serial No. 773,422. (Cl. 219—19.)

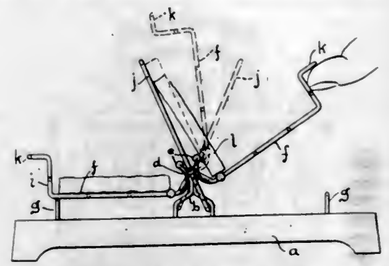


1. The combination with a toaster provided with a grid against which the bread is held, of a toast-turning device comprising a turning surface in pivotal relation with the said grid and trips connected with the turning surface to turn therewith, the said trips being located near the pivoted end of the turning surface so that when the turning surface is turned out with respect to the grid the bottom of the toast is forced out onto the turning surface, substantially as described.

2. The combination with a vertical toaster provided with a toaster-grid inclined from bottom to top toward the center of the toaster, of a turning surface journaled in respect to the toaster and trips attached to the turning surface and adapted to force the lower end of the toast outward from the toaster to cause the same to slide across the turning surface and whereby on returning the turning surface to initial position the opposite side of the toast is presented to the heating element, substantially as described.

3. The combination with a toaster provided with a grid formed into a sill at the bottom inclosed by a fence, of a toast turning device comprising a turning surface in pivotal relation with the said grid, and lifters connected with the turning surface to turn therewith, the said lifters being located near the pivotal end of the turning surface so that when the turning surface is turned with respect to the said grid the lifters lift the bread upward and then force the bottom out so that it slides onto the turning surface in inverted relation.

1,108,553. TOAST-TURNER. LLOYD GROFF COPEMAN, Flint, Mich., assignor to Copeman Electric Stove Company, Flint, Mich., a Corporation of Michigan. Filed June 13, 1913. Serial No. 773,423. (Cl. 219—19.)



1. The combination with a horizontal toaster provided with a horizontally disposed base, of a toast-turner comprising a pivoted surface for retaining the toast in horizontal position over the base, an upright surface for temporarily retaining the toast when the same has been thrown against such surface by raising the pivoted surface, and trips attached to the pivoted surface for forcing the lower end of the toast outward to invert it upon the pivoted surface when the same is returned to the horizontal, substantially as described.

2. The combination with a horizontal toaster provided with a horizontally disposed base, of a pivoted surface for retaining the toast over the base in a substantially horizontal position, an inclined upright surface against which the toast may be thrown by raising the pivoted surface, and means for causing the toast or bread to slide down the inclined surface when the pivoted surface is returned to its substantially horizontal position.

3. The combination with a horizontal toaster provided with a horizontally disposed base, of a pivoted grid for normally holding the toast over the base, an upright surface inclined from the vertical and away from said pivoted grid, and means for causing the toast or bread to slide down the said inclined upright surface when the pivoted grid has thrown the bread or toast against such upright surface and has returned to its initial position.

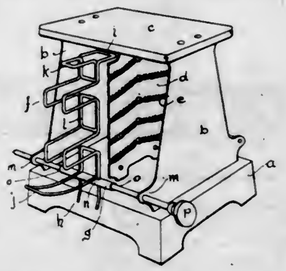
4. The combination with a horizontal toaster provided with a horizontally disposed base, of a pair of pivoted surfaces, a pivoted upright surface adapted to oscillate through a limited arc so as to bring it into position inclined away from the vertical as regards either pivoted surface, and means for causing the bread or toast to slide down the said upright surface when the bread or toast has been thrown against the inclined upright surface and said pivoted surface that has thrown the bread against the upright surface returns to its initial position.

5. The combination with a horizontal toaster provided with a horizontally disposed base, of a bifurcated post rising from the toaster, an upright surface pivoted in said post, an arm attached to said surface and adapted to swing between the bifurcated portion of snid posts, and a pair of pivoted surfaces arranged on either side of the upright member and adapted to normally rest in substantially horizontal position above the horizontally disposed base, substantially as described.

1,108,554. TOASTER. LLOYD GROFF COPEMAN, Flint, Mich., assignor to Copeman Electric Stove Company, Flint, Mich., a Corporation of Michigan. Filed Dec. 13, 1913. Serial No. 806,359. (Cl. 219—19.)

1. The combination with a toaster provided with a heating element, of a bread holder mounted to swing parallel to the plane of the heating element and adapted to be slid to the opposite side of the heating element where it may be again swung parallel to the heating element.

2. The combination with a toaster provided with a heating element, of a slidable turning rod slidably journaled at the end of the heating element, a holder attached to the turning rod and adapted to swing parallel to the heating element, one on each side, and means for preventing the holder from being swung except when the turning rod is in position to allow the holder to swing in predetermined planes.



3. The combination with a toaster provided with a heating element, of a turning rod journaled at one end of the heating element, a holder fastened thereto, a thickened portion on the turning rod adjacent the holder providing shoulders at each end, and a key on one end of the turning rod, the said toaster provided with bearings in which the turning rod is journaled and one of said bearings being provided with a slot to allow of the passage of the key when the turning rod is in position to hold the holder away from the heating element.

1,108,555. PROCESS FOR PREPARING FOOD FOR INFANTS, INVALIDS, AND OLD PERSONS. MACEY F. DEMING, Tappan, N. Y. Filed June 19, 1913. Serial No. 774,532. (Cl. 99—11.)

1. A process of preparing and pasteurizing food for infants, invalids and old persons consisting of heating a mixture comprising comminuted starch containing material, water, protein, fat, carbohydrate, and diastatic enzym to the point where the mixture becomes flocculent.

2. A process of preparing and pasteurizing food for infants, invalids and old persons consisting of heating a mixture comprising comminuated cereal, water, protein, fat, and diastatic enzym to the point where the mixture becomes flocculent.

3. A process of preparing and pasteurizing food for infants, invalids and old persons consisting of heating a mixture comprising comminuated cereal, water, protein, and diastatic enzym to the point where the mixture becomes flocculent.

4. A process of preparing and pasteurizing food for infants, invalids and old persons consisting of heating a mixture of comminuted cereal, water, and diastatic enzym to the point where the mixture becomes flocculent.

5. In a process of preparing and pasteurizing food for infants, invalids and old persons the heating of a mixture comprising comminuted starch containing material, water, and diastatic enzym to the point where the mixture becomes flocculent whereby the temperature of pasteurization of the mixture is indicated.

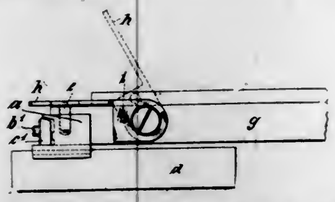
[Claim 6 not printed in the Gazette.]

1,108,556. MATRIX-LINE SETTING AND CASTING MACHINE. JULIUS DORNETH, Berlin, Germany, assignor to Typograph Gesellschaft M. B. H., Berlin, Germany, a Corporation of Germany. Filed Dec. 29, 1913. Serial No. 809,391. (Cl. 199—13.)

1. In apparatus for trimming type lines in matrix line setting and casting machines, the combination of two knives located one on each side of the type line to be trimmed, a holder for said knives, means to reciprocate said holder, and a detachable device to connect the holder to the reciprocating means.

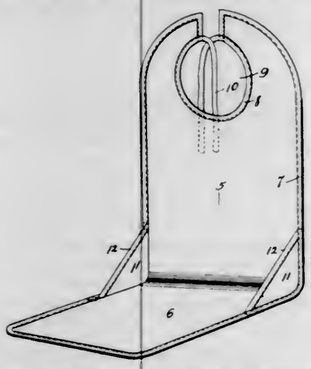
2. In apparatus for trimming type lines in matrix line setting and casting machines, the combination of two knives located one on each side of the type line to be

trimmed, a holder for said knives, a member to carry said holder, means to reciprocate said member, and a device pivoted to said member and adapted to detachably connect the holder to the member.



3. In apparatus for trimming type lines in matrix line setting and casting machines, the combination of two knives located one on each side of the type line to be trimmed, a holder for said knives, a rod to carry said holder, a hook pivoted to said rod, a projection on the holder adapted to detachably engage the hook, means to reciprocate said rod, and a locking pin in the hook for the purpose set forth.

1,108,557. BIB. CAROL DUDLEY, San Diego, Cal. Filed Nov. 5, 1913. Serial No. 799,259. (Cl. 2—54.)

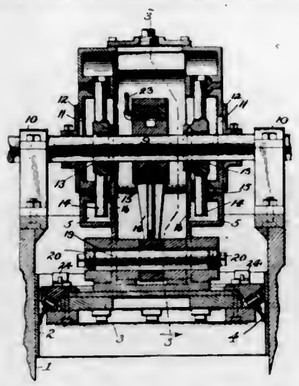


A device of the character described comprising a body covering portion and a lap covering portion and triangular connecting pieces lying in vertical planes and secured to the aforesaid portions of the bib at the juncture thereof, said triangular pieces serving to hold said portions of the bib at right angles to each other substantially as shown and described.

1,108,558. JIG-PLUNGER. GUY H. ELMORE, Swarthmore, and HORATIO V. CROLL, Philadelphia, Pa. Filed Mar. 4, 1914. Serial No. 822,367. (Cl. 103—62.)

1. In a jig the combination of a plunger casing or compartment; a plunger guided in said compartment; a hollow apertured oil retaining shell rigidly connected to said plunger; guides within said shell and carried thereby; a rotatable drive shaft passing freely through the apertures in said shell; means for sealing said apertures around said shaft, while permitting motion of said shell transverse to said shaft; a guide member journaled on said shaft and running in the guides on the shell; and crank connections between said shaft and shell and wholly inclosed by the latter.

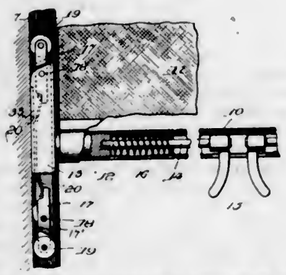
2. In a jib the combination of a plunger casing or compartment; a plunger guided in said compartment; a hollow apertured oil retaining shell rigidly connected to said plunger; guides within said shell and carried thereby; a rotatable drive shaft passing freely through the apertures in said shell; sealing plates carried by said shaft and adapted to seal said apertures while permitting motion of said shell transverse to said shaft; a separable guide member journaled on said shaft and guided in said guides on said shell; and an eccentric and rod connecting said shaft and shell and wholly inclosed by the latter.



3. In a jig the combination of a plunger casing or compartment; a plunger guided therein; a drive shaft; crank connections between said shaft and plunger; a guide member journaled on said shaft; and an oil retaining casing rigidly connected to the plunger, completely inclosing said crank connections and guided on said guide member to have a reciprocating motion transverse to said shaft and substantially coincident in direction with the motion of the plunger.

4. In a jig the combination of a plunger casing or compartment; a plunger guided therein; a drive shaft; crank connections between said shaft and plunger; a guide member journaled on said shaft; and a complementary guide rigidly mounted on said plunger and adapted to coact with the first named guide member to constrain said plunger to rectilinear motion.

1,108,559. SHADE-HOLDING MECHANISM. PLATO G. EMERY, Chicago, Ill. Filed Sept. 19, 1904. Serial No. 225,027. (Cl. 156—26.)



1. A shade holding mechanism comprising a stick, an elongated guiding element at the end of the stick to frictionally engage the window frame and guide the shade in its movement, means for pressing the guiding element outward, anti-friction devices adjacent to the ends of said guiding element, and an element separate from the means pressing the guiding element for pressing said devices outward in the direction of the length of the stick, one of said elements being constructed to limit inward movement of said devices relatively to said guiding element.

2. A shade holding mechanism comprising a stick, a combined guide and friction device at the end of the stick to frictionally engage a window frame, means for pressing said combined guide and friction device outward, anti-friction devices carried by said device and having a limited movement relative thereto, the inward movement of said anti-friction devices being limited by engagement with the

combined guide and friction device, and other means independent of said combined guide and friction device pressing means, for pressing the anti-friction devices outward in the direction of the length of the stick.

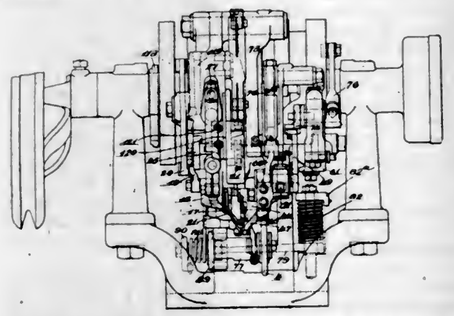
3. A shade holding mechanism comprising a stick, an elongated guide at the end of the stick to frictionally engage a window frame, and anti-friction devices elastically mounted on the friction-guide at the ends thereof to move inwardly and outwardly in the direction of the length of the stick, said friction-guide being constructed to limit the elastic movement of said anti-friction devices inwardly.

4. A shade holding mechanism comprising a stick, an elongated guide at the end of the stick to frictionally engage a window frame, and anti-friction devices mounted elastically to swing on the friction-guide at the ends thereof, said friction-guide being constructed to limit the swinging movement of said anti-friction devices inwardly.

5. A shade holding mechanism comprising a stick, an elongated guide at the end of the stick to frictionally engage a window frame, anti-friction rollers mounted to swing on the friction-guide at the ends thereof and having a limited movement relative thereto, said friction-guide being constructed to limit the swinging movement of said anti-friction devices inwardly, and means for pressing said devices outward.

[Claims 6 to 9 not printed in the Gazette.]

1,108,560. SHOE-SEWING MACHINE. ANDREW EPPLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 8, 1908. Serial No. 447,542. (Cl. 112—20.)



1. A chain stitch shoe sewing machine, having, in combination, a hook needle, a looper, work feeding means, means for positively actuating the needle through the whole of its retracting stroke to tighten the preceding loop, and means for yieldingly supporting the needle against the pull extereted upon the needle by the thread during the feed.

2. A chain stitch shoe sewing machine, having, in combination, a hook needle, a looper, work feeding means, mechanism for positively retracting the needle to tighten the preceding loop and means for releasing the needle from said retracting mechanism and for supporting it under light spring pressure during the feed.

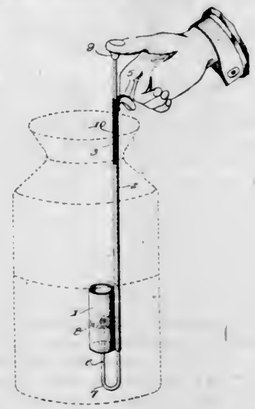
3. A chain stitch shoe sewing machine, having, in combination, a hook needle, a looper, means for feeding the work, means for actuating the needle to exert a strain on the thread sufficient to tighten the preceding loop, and means for yieldingly supporting the needle during the feed arranged to exert a less strain on the thread.

4. A chain stitch shoe sewing machine, having, in combination, a curved hook needle arranged to pierce the shoe from the outside and emerge from the channel, a looper, and a curved awl movable about an axis eccentric to the needle in a path of smaller radius than that of the needle and substantially tangent to the path of the needle at the point where the needle pierces the work.

5. A chain stitch shoe sewing machine, having, in combination, a curved hook needle arranged to pierce the shoe from the outside and emerge from the channel, a looper, and a curved awl movable about an axis at the rear and below the axis of the needle, said awl moving in a curved path of smaller radius than that of the needle and substantially tangent to the path of the needle at the point where the needle pierces the work.

[Claims 6 to 13 not printed in the Gazette.]

1,108,561. DEVICE FOR SAMPLING MILK OR CREAM. NELS ERICKSON, Coon Valley, Wis. Filed Feb. 18, 1914. Serial No. 819,364. (Cl. 73—165.)



A device for sampling milk or cream consisting of an open sleeve forming a cup, a tube rising from one side of said cup and having a slot and scale at its upper end of the same length as said cup, a finger loop at the upper end of said tube, a rod fitting in said tube and having its lower end passing upward into said cup, and having a thumb piece at its upper end and carrying a pointer guided in the slot of the tube and indicating upon said scale, and a piston carried by the lower end of said rod and fitting in said cup.

1,108,562. COMPOSITION OF MATTER TO BE USED AS A PIGMENT. EDWIN EUSTON, St. Louis, Mo. Filed June 27, 1913. Serial No. 776,013. (Cl. 134—78.)

The hereindescribed composition of matter to be used as a pigment, consisting of basic zinc carbonate and lead hydroxid in intimate molecular combination.

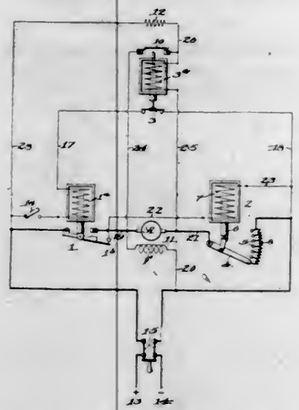
1,108,563. MOTOR-CONTROLLER. CLARENCE T. EVANS, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 14, 1910. Serial No. 561,408. (Cl. 172—288.)

1. In a motor controller in combination, electroresponsive protective means for the motor, circuit connections rendering said means responsive to abnormal voltage conditions in the motor circuit and other circuit connections for maintaining said means energized after response thereof until normal conditions are restored.

2. In a motor controller in combination, electroresponsive protective means for the motor, circuit connections rendering said means responsive to abnormal electrical conditions in the motor circuit and other circuit connections for maintaining said means energized after response thereof until normal conditions are restored, said first mentioned circuit connections being interrupted upon response of said means.

3. In a motor controller in combination, electroresponsive protective means for the motor responsive upon the occurrence of abnormal electrical conditions in the motor circuit and means rendered effective upon initial movement of said protective means toward normal position to weaken the operating winding thereof.

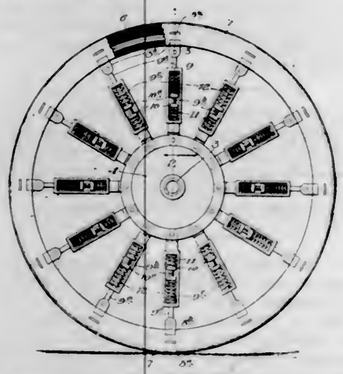
4. In a motor controller, in combination, an electroresponsive protective device for the motor and means for rendering said device responsive to abnormal electric conditions in the motor circuit and for insuring substantially full deënergization of said device upon initial return movement thereof toward normal position.



5. In a motor controller in combination, an electroresponsive protective means for the motor, an energizing circuit therefor connected across the terminals of the motor armature and a maintaining circuit therefor connected across the supply circuit.

[Claims 6 to 19 not printed in the Gazette.]

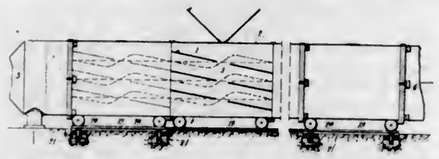
1,108,564. SPRING VEHICLE-WHEEL. WILLIAM H. FAHRNEY, Chicago, Ill. Filed Mar. 9, 1914. Serial No. 823,440. (Cl. 152—29.)



1. A spring vehicle-wheel having an annular band-spring, a wheel-center, and spring-devices connecting the band-spring and wheel-center at intervals and each comprising a frame pivotally connected at its inner end with said center, a stem pivotally connected with the band-spring, said stem working lengthwise in the frame and having a threaded section, nuts on said threaded section, a spring confined about the stem between one nut and the outer end of the frame, and a spring confined about the stem between the other nut and the inner end of the frame.

2. A spring vehicle-wheel having an annular band-spring, a wheel-center, and spring-devices connecting the band-spring and wheel-center at intervals and each comprising a frame having a socket in its inner end at which it is pivotally connected with said center, a stem pivotally connected with the band-spring, said stem extending through the frame into said socket and having a threaded section, nuts on said threaded section, a spring confined about the stem between one nut and the outer end of the frame, and a spring confined about the stem between the other nut and the inner end of the frame.

1,108,565. DRYING APPARATUS. EMILE FEUILLETTE, Boulogne-sur-Seine, France, assignor to Societe Etablissements E. Feuillette, Boulogne-sur-Seine, France. Filed Jan. 6, 1914. Serial No. 810,602. (Cl. 34—39.)



1. In an installation for the drying of textile materials such as flax, hemp and so forth, a drum for the introduction of hot gases, a series of chambers arranged in juxtaposition for the reception of the textile materials and in which the hot gases circulate, inclined frames in each of these chambers upon which the textile materials are extended in such a manner as to constitute oblique parallel passages throughout the chambers as a whole with a break in the frames or supports at the middle of each chamber, in such a manner as to cause the hot gases to mingle and to render uniform the drying, and means for bringing the said chambers into position and for displacing them.

2. In an installation for the drying of textile materials such as flax, hemp and so forth, a drum for the introduction of hot gases, a series of chambers arranged in juxtaposition for the reception of the textile material and permitting of the circulation of the hot gases, inclined frames or supports in each chamber, a break in the supports at the central portion of each chamber, two shutters hinged upon a central cross member to form the roof of each chamber, hinged shutters lined with felt or other insulating material at one of the extremities of each chamber, a rod passing through the lateral shutters in such a manner as to apply them hermetically to the panels of the adjacent chamber, means for fixing the rod in position, and means for bringing the said chambers into position and for displacing them.

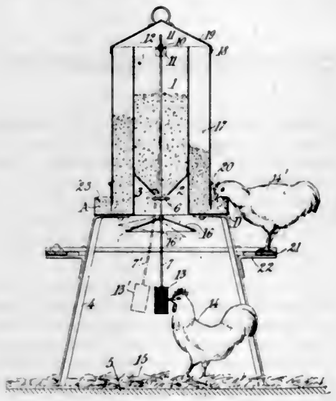
3. In an installation for the drying of the textile materials such as flax, hemp and so forth, a drum for the introduction of hot gases, a series of chambers arranged in juxtaposition for the reception of the textile materials and permitting of the circulation of the hot gases, inclined frames or supports in each chamber, a break in the supports at the central portion of each chamber, two shutters hinged to a central cross member for forming the roof of each chamber, hinged shutters covered with felt or other insulating material at one of the extremities of each chamber, a rod passing through the lateral shutters in such a manner as to apply them hermetically to the panels of the adjacent chamber, dogs or drivers, and a running chassis or truck for each chamber, rails forming a track for the chambers as a whole and means for bringing the chambers into position and for displacing them.

4. In an installation for the drying of textile materials such as flax, hemp and so forth, a drum for the introduction of hot gases, a series of chambers arranged in juxtaposition for the reception of the textile materials, and permitting of the circulation of the hot gases, inclined frames or supports in the said chambers, means for forming a good joint between the said chambers, drivers or dogs and a running chassis or truck for each chamber, rails forming a track for the chambers as a whole, traverse tables arranged transversely at the extremities of this track in such a manner as to connect it with a parallel track for charging and discharging the chambers, and means for displacing the said chambers as a whole when the chamber in which the drying is finished has been conducted onto the discharging track.

5. In an installation for the drying of textile materials, such as flax, hemp and so forth, a drum for the introduction of hot gases, a series of chambers arranged in juxtaposition for the reception of the textile materials and permitting of the circulation of the hot gases, means for insuring a good joint between the said chambers, a running chassis or truck for each chamber and drivers or dogs, rails forming a track for the chambers as a whole, a charging and discharging track arranged parallel with the first, a traverse table connecting one of the extremities of the said tracks, another traverse table connecting the other extremity and displaceable upon rails, independent trucks carrying two lengths of rails, a chain for actuating the said trucks, means permitting the lengths of rails to form extensions of the charging or discharging track, or on the other hand permitting of bringing them together, and means for bringing the drying chambers into position and for displacing them.

[Claims 6 and 7 not printed in the Gazette.]

1,108,566. POULTRY EXERCISER AND FEEDER. JOEL M. FOSTER, Brown Mills, N. J. Filed Sept. 26, 1913. Serial No. 792,066. (Cl. 119—52.)



1. In a poultry feeder, the combination with a scratch feed container, and a spout for discharging the feed from the container, of a feed trough associated with the container and located in such position relatively to the said spout that spillings from the trough will fall within the zone of discharge of such spout.

2. In a poultry feeder, the combination with a scratch feed container, and a spout for discharging the feed from the container, of a plurality of feed troughs associated with the container and each located in such position relatively to the said spout that spillings from it will fall within the zone of discharge of such spout.

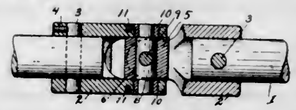
3. In a poultry feeder, the combination with a scratch feed container, and a spout for discharging the feed from the container, of a plurality of feed troughs associated with the container and each located in such position relatively to the said spout that spillings from it will fall within the zone of discharge of such spout, and a platform disposed outwardly of the troughs for the birds while feeding at the troughs.

4. In a poultry feeder, the combination with a scratch feed container, supporting means for maintaining the same above a feeding floor, and a spout for discharging the feed from the container upon the floor, of a feed trough carried by the supporting means above the floor and located in such position relatively to the said spout that spillings from the trough will fall upon the feeding floor within the zone of discharge of such spout.

5. In a poultry feeder, the combination with a scratch feed container, supporting means for maintaining the same above a feeding floor, and a spout for discharging the feed from the container upon the floor, of a plurality of feed troughs carried by the supporting means above the floor and each located in such position relatively to the said spout that spillings from it will fall upon the feeding floor within the zone of discharge of such spout.

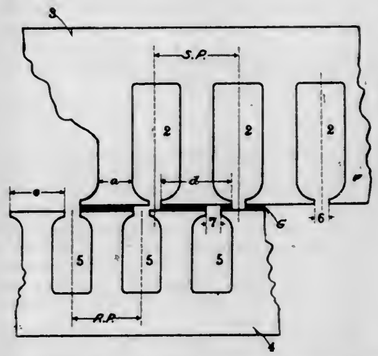
[Claims 6 to 10 not printed in the Gazette.]

1,108,567. UNIVERSAL JOINT. WILLIAM R. FOX, Grand Rapids, Mich. Filed May 20, 1910. Serial No. 562,449. (Cl. 74—19.)



In a universal joint, the combination of the bifurcated joint members; a joint block having pin holes of unequal diameter therethrough disposed transversely to each other; a pin with shouldered journals at its ends arranged through the larger of said holes in said joint block; journal bearing bushings for said shouldered journals threaded into the arms of the corresponding joint member, the said bushings being shouldered at their outer ends forming an enlarged head on each bushing, said head being counter-sunk and seated substantially flush with the surface of said joint member, the inner ends of said bearing bushings being adapted to bear against the shoulders of said journal pin and said block; locking screws for said bushings projecting into the outer face of said joint member and engaging the enlarged head end thereof and being flush with the faces of the bushings; a smaller journal pin for the other joint member disposed and journaled through the smaller hole of said joint block and transversely through said shouldered pin; and a locking screw for retaining said smaller journal pin in its joint member.

1,108,568. DYNAMO-ELECTRIC MACHINE. VALERE ALFRED FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 15, 1912. Serial No. 703,779. (Cl. 172—120.)

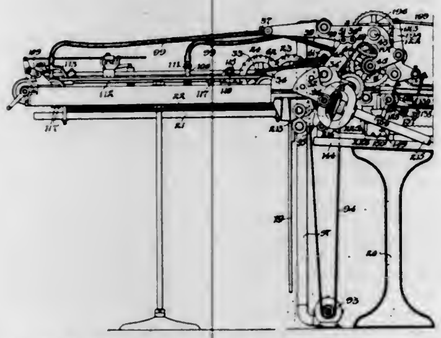


1. A dynamo electric machine having slotted members for the reception of windings, in which, in one member, the portion of the width of the tooth crowns, over any part of which magnetic lines of force can distribute uniformly in the operation of the machine, is substantially equal to the tooth pitch of the other member.

2. A dynamo electric machine having slotted members for the reception of windings in which the width of the tooth crowns of one member is substantially equal to the tooth pitch of the other member, the shape of the teeth of the first member being such that magnetic lines of force can distribute uniformly over the portions of the tooth crowns which are, at any given instant during the operation of the machine, opposite to a tooth or portions of teeth of the other member.

3. A dynamo electric machine having laminated inducing and induced members, each provided with slots for the reception of windings, in which the width of the tooth crowns of the inducing member is substantially equal to the tooth pitch of the induced member, the shape of the teeth of the inducing member being such that magnetic lines of force can distribute uniformly over the portions of the tooth crowns which are, at any given instant, during the operation of the machine, opposite to a tooth or portions of teeth of the induced member, said machine also having as small an air gap as mechanical conditions will permit.

1,108,569. PAPER-FEEDING MACHINE. VERNON GARNER, Boston, Mass., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Nov. 16, 1911. Serial No. 660,668. (Cl. 101—39.)



1. In a sheet feeder, two supports one of which is higher than the other, said supports being so related that a plurality of the upper sheets of a pile of sheets of sufficient depth resting on the lower support may slide to and upon the upper support, sheet-feathering means disposed to coöperate with the upper support, means disposed to cooperate with the lower support to feed sheets from the pile to the upper support, means for holding said feeding means above and out of contact with the top sheet of the pile, and means controlled by said feathering means for actuating said holding means to release said feeding means.

2. In a sheet feeder, two supports one of which is higher than the other, said supports being so related that a plurality of the upper sheets of a pile of sheets of sufficient depth resting on the lower support may slide to and upon the upper support, sheet-feathering means disposed to coöperate with the upper support, sheet-feathering means disposed to coöperate with the lower support to feather sheets from the pile to the upper support, means for holding above and out of contact with the top sheet of the pile the feathering means which coöperates with the lower support, and means controlled by the other feathering means for actuating said holding means to release the feathering means so held.

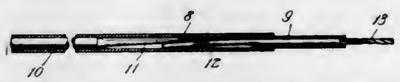
3. In a sheet feeder, two supports one of which is higher than the other, said supports being so related that a plurality of the upper sheets of a pile of sheets of sufficient depth resting on the lower support may slide to and upon the upper support, sheet-feathering means disposed to coöperate with the upper support, sheet-feathering means disposed to coöperate with the lower support to feather sheets from the pile to the upper support, means for holding one of said feathering means above and out of contact with the top sheet, and means controlled by the other feathering means for actuating said holding means to release the feathering means so held.

4. In a sheet feeder, two supports one of which is higher than the other, said supports being so related that a plurality of the upper sheets of a pile of sheets of sufficient depth resting on the lower support may slide to and upon the upper support, sheet-feathering means disposed to coöperate with the upper support, sheet-feathering means disposed to coöperate with the lower support to feather sheets from the pile to the upper support, means for holding one of said feathering means above and out of contact with the top sheet, and means controlled by the other feathering means for actuating said holding means to release the feathering means so held.

5. In a paper-feeding machine, a support for a pile of sheets, primary combing means adapted to act upon the sheets during each cycle of the machine, means controlled by the foremost combed sheet for rendering the primary combing means inoperative, auxiliary combing means, means for holding said auxiliary combing means out of contact with the sheets, and means controlled by the primary combing means for causing the auxiliary combing means to operatively engage the sheets.

[Claims 6 to 42 not printed in the Gazette.]

1,108,570. DENTAL TOOL-HOLDER. JOHN M. GILMORE, Chicago, Ill. Filed July 15, 1911. Serial No. 638,648. (Cl. 29—141.)



1. A mandrel for the purpose set forth, comprising telescoping tubes, the inner one of which is open at both ends and receives the tool to be secured to the mandrel, and wedging means secured to the other of said tubes for frictionally holding the mandrel-tubes and tool together, adapted to enter between the free end-portion of said tool and the wall of said inner tube, for the purpose set forth.

2. A mandrel for the purpose set forth, comprising telescoping tubes, the inner one of which is open at both ends for receiving the tool to be secured to the mandrel, said inner tube having a beveled inner end-portion, and wedging means carried by the outer tube for frictionally holding the tool and tubes together, said wedging means adapted to enter between the inner end-portion of said tool, and the wall of the beveled end of said inner tube, for the purpose set forth.

3. A mandrel for the purpose set forth, comprising telescoping tubes, the inner one of which is open at both ends for receiving the tool to be secured in the mandrel, and a needle secured in the other of said tubes and extending lengthwise thereof and adapted to enter between the free end-portion of said tool and the wall of said inner tube, for the purpose set forth.

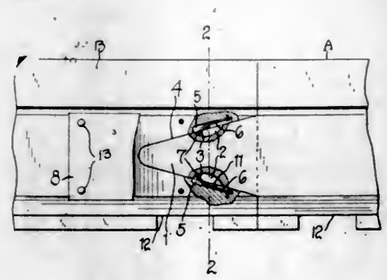
4. A mandrel for the purpose set forth, comprising telescoping tubes, the inner one of which is open at both ends for receiving the tool to be secured in the mandrel, the inner end of said inner tube being beveled, and a needle secured in the other of said tubes and extending lengthwise thereof and adapted to enter between the inner portion of said tool and the wall of the inner beveled end of said inner tube, for the purpose set forth.

5. A mandrel for the purpose set forth, comprising tubes adapted to telescope one with the other and into one of which the tool to be secured is insertible, and means carried by said mandrel operating upon the act of telescoping said tubes with a tool in place therein to clamp the tubes together and clamp said tool to the mandrel.

[Claims 6 to 9 not printed in the Gazette.]

1,108,571. RAILWAY-RAIL JOINT. ARTHUR F. GOLDEN, Sylvester, Ga. Filed May 4, 1914. Serial No. 836,249. (Cl. 239—8.)

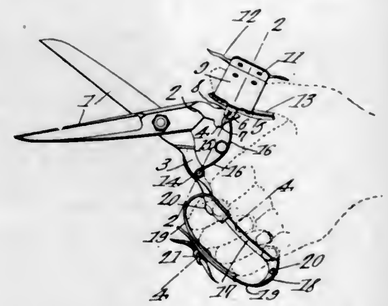
1. In a railway rail joint, a rail having its web projected to provide an extension provided on opposite sides with notches, a second rail having its web provided with a recess corresponding in contour to the extension and to receive the same, and spring latches carried by the opposite walls of the recess to interlock with the notches in the extension.



2. In a railway rail joint, a rail having its web projected to provide an extension provided on opposite sides with notches, a second rail having its web provided with a recess corresponding in contour to the extension and to receive the same, spring latches carried by the opposite walls of the recess to interlock with the notches in the extension, and means for releasing the locking springs whereby to permit separation of the rails.

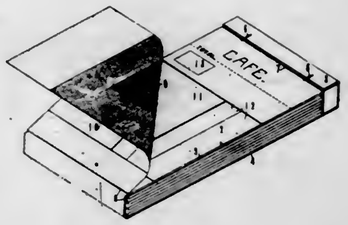
3. In a railway rail joint, a rail having its web projected to provide an extension provided on opposite sides with notches, a second rail having its web provided with a recess corresponding in shape to the extension and to receive the same, plates covering the sides of the recess, spring locks secured to the opposed walls of the recess and having inturned terminals to engage with the notches in the extension, the plates being provided on opposite sides with key holes disposed adjacent to the locking spring, and keys to engage in the key holes and to release the two springs.

1,108,572. CHERRY-CLIPPER. WILBUR M. GORDON, Traverse City, Mich. Filed Apr. 21, 1913, Serial No. 762,681. Renewed July 9, 1914. Serial No. 850,053. (Cl. 30—24.)



In a cherry clipper, a pair of crossed and pivoted blades, one blade having a relatively short shank, the other blade having a shank extended into a relatively long member over which the four fingers of the operator's hand may be placed, a thumb piece pivoted to the short shank, a transverse strap having its intermediate portion secured on the thumb piece, a pair of straps having their remote ends turned back and secured to the end portions of the said relatively long member, means for adjustably connecting the end portions of the first mentioned strap to cause the strap to snugly embrace the thumb, and means for adjustably connecting the adjoining ends of the last mentioned straps whereby the said straps may snugly embrace the fingers.

1,108,573. MULTICOLOR MANIFOLDING SALES-BOOK. WALTER GREIG, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed May 31, 1912. Serial No. 700,583. (Cl. 11—23.)



1. A web for use in manifolding devices having manifolding materials of different colors applied in patches directly to the back thereof.

2. A web for use in manifolding devices having a recording surface and a series of patches of manifolding materials of different colors applied directly to the back thereof.

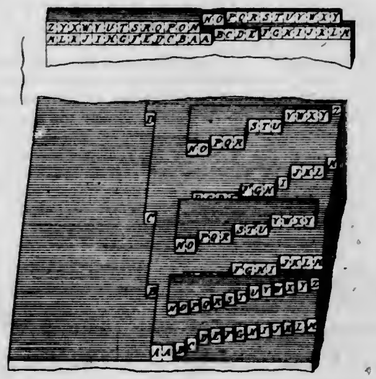
3. A leaf for a manifolding salesbook, or the like, adapted to receive a record on one side and having manifolding material of different colors applied directly to the reverse surface thereof.

4. A leaf for a manifolding salesbook, or the like, adapted to receive a record on one side and having portions of the rear surface thereof coated with manifolding material of different colors.

5. A set of original and duplicate leaves connected along one edge and manifolding materials in different colors applied directly to the back of the original leaf.

[Claims 6 to 10 not printed in the Gazette.]

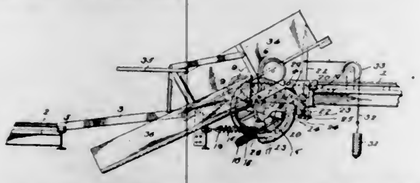
1,108,574. MOVABLE INDEX-CARDS. PAUL GREINDL, Brussels, Belgium. Filed Apr. 16, 1914. Serial No. 832,220. (Cl. 129—16.)



1. An improved index-card, comprising a substantially rectangular card, the characters of two alphabets marked in opposite directions near the upper end of the card and intended to be cut away substantially as set forth.

2. An improved index-card, comprising a substantially rectangular card, the characters of several alphabets marked on different horizontal lines near one end of the card and intended to be cut away substantially as set forth.

1,108,575. CAR-DUMPING APPARATUS. CHARLES A. GRIFFITH, Pruden, Tenn. Filed Mar. 16, 1911, Serial No. 614,819. Renewed Apr. 6, 1914. Serial No. 830,088. (Cl. 104—49.)



1. In an apparatus of the class described, the combination of a track, a movable element adapted to engage a car on the said track, a spring connected with the said element and adapted to resist its movement together with that of the car, a brake also connected with the said element, and also adapted to resist its movement together with that of the car, and means for regulating the resisting action of the said brake.

2. In an apparatus of the class described, the combination of a track, a pivotally mounted element arranged to move along lines extending from points in the path of a car on the track to points outside the said path in the general direction of movement of the car, a spring connected with the said element for resisting its movement and the movement of the car, and a brake also connected with said element and also adapted for resisting its movement and the movement of the car.

3. In an apparatus of the class described, the combination of a track, a pivotally mounted element movable along lines extending from points in the path of a car on the track to points outside the said path in the general direction of movement of the car, a spring connected with the said element for resisting its movement and the movement of the car, and a reciprocable means supplementary to the said spring for also resisting the movement of the element and of the car.

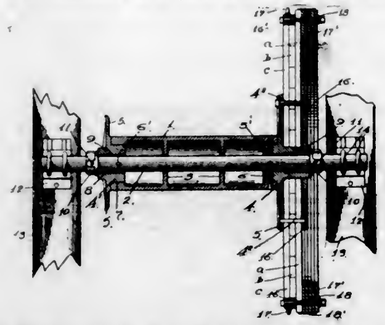
4. In an apparatus of the class described, the combination of a track comprising a sharply inclined section, a movable element adapted to engage a car in dumping position on the said inclined section, means for first resisting and then stopping the movement of the said element in one direction together with that of the car, the said means comprising a spring connected with the element, and a resisting device supplementary to the said spring, also connected with the said element.

5. In an apparatus of the class described, the combination of a track comprising a sharply inclined section, a movable element adapted to engage a car in dumping position on the said inclined section, means for first resisting and then stopping the movement of the said element and of the car in one direction, the said means comprising a spring connected with the element, a brake also connected with the elements, and means for regulating the resisting action of the brake.

[Claims 6 to 25 not printed in the Gazette.]

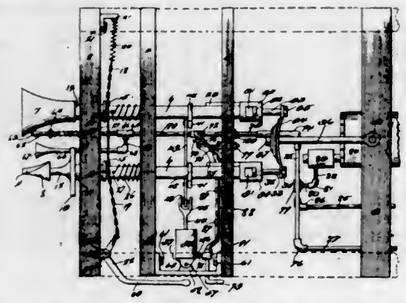
1,108,576. COMBINED CALF-WHEEL AND DRIVE MEMBER. JAMES T. HALL, Coalinga, Cal., assignor to Bunting Iron Works, Coalinga, Cal., a Corporation of California. Filed Dec. 9, 1911. Serial No. 664,715. (Cl. 242—117.)

In a calf wheel for oil derricks, the combination with a fixed sustaining shaft, a shell loosely mounted thereon for free rotation, end bearing hubs loose on said shaft and united to the ends of said rotatable shell, end collars adjustable on the sustaining shaft for preventing longitudinal movement of the hubs and shell relative to said shaft, annular flanges projecting from said hubs, a drive disk secured to said last mentioned flange, said drive disk being composed of a plurality of segments arranged in layers, each layer being arranged transversely to an adjacent layer to form a solid mass, a drive ring encircling the periphery of said drive disk, an annular brake member constructed of a plurality of annular segments and of a diameter greater than said drive disk, a metallic



brake band surrounding said brake member, and means for uniting said brake member to said drive member and for retaining said drive ring in position on said disk.

1,108,577. AUTOMATIC CAR-COUPLING WITH AIR-OPERATED RELEASE. MATT HIMBERGER, Woodward, Iowa. Filed Apr. 24, 1914. Serial No. 834,240. (Cl. 213—53.)

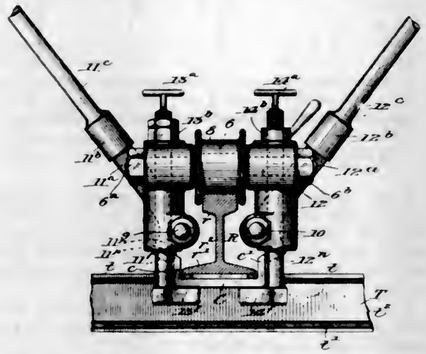


1. In an automatic car coupling, twin shanks attached to the under framing of a car, a female coupling member on the free end of one shank, a male coupling member on the free end of the other shank, keys at the rear ends of said shanks which limit their rotation to one quarter of a revolution, springs for holding said shanks with their attendant couplings in their normal positions, cranks on said shanks, a swinging air cylinder attached to the car body a piston in the cylinder, a rod connecting the piston and the cranks by which the piston may rotate the shanks through one quarter of a revolution.

2. In an automatic car coupling, twin coupler shanks mounted in the under framing of a car, a female coupling member on the free end of one shank, a male coupling member on the free end of the other shank, means at the rear end of said shanks for limiting their rotation to one quarter of a revolution, resilient means for holding said shanks with their attending couplings in their normal positions, cranks on said shanks, a rod connecting said cranks whereby they may be partially rocked synchronously, pivotally mounted pneumatic means having connections with said rod for automatically actuating the same, and spring tensioned means having connections with said shanks and including a lever for manually rotating said shanks partially.

1,108,578. RAILWAY-CONSTRUCTION MACHINERY. JAMES B. HOGE, Cleveland, Ohio. Filed Oct. 13, 1911. Serial No. 654,526. (Cl. 153—17.)

1. A machine of the class described comprising a frame arranged to rest upon the head of a rail, a clamping member having a substantially horizontal anvil face connected with said frame, a fastener securing device also connected to said frame and arranged to exert pressure against said anvil through a fastening device interconnecting the crossing portions of rails and ties, one of the said cooperating elements having both vertical and lateral movement with respect to the supporting frame whereby it may be lowered between the ties and moved laterally into position beneath the lower end of the fastener.



2. A machine of the class described comprising a frame arranged to rest upon the head of a rail, a clamping member having an anvil face connected with said frame and having both vertical and lateral movement with respect thereto whereby it may be lowered between the ties and moved laterally into position beneath the lower end of fastenings extending between the crossed portions of rails and ties, and a fastener securing device connecting with said frame in coöperative relation to said clamping member and arranged to compress a fastener between itself and the said anvil member.

3. A machine of the class described comprising in combination the following elements arranged symmetrically with respect to the longitudinal vertical plane of the rail, a traveler arranged to bear upon the head of a rail, clamping devices supported from said traveler one on each side thereof and each provided an anvil member having both vertical and lateral movement with respect to said traveler whereby it may be lowered between the ties and moved laterally into position beneath the lower portion of a fastener extending between a crossed rail and tie, and fastener securing devices connected with said traveler one on each side thereof in coöperative relation to the corresponding clamping device and arranged to compress a fastener between itself and the said anvil member.

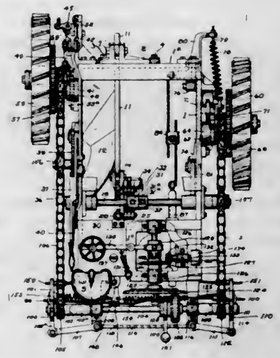
4. A machine of the class described comprising a supporting frame arranged to rest upon the head of a rail in substantially fixed lateral position, and clamping means connected therewith and provided with a laterally projecting substantially horizontal clamping face having both vertical and lateral movement whereby the same may be lowered and moved laterally into a clamping position beneath a portion of a tie, together with actuating devices arranged to impart said movements to the clamping means.

5. A machine of the class described comprising a structure for clamping a rail and tie together and simultaneously holding a fastener in applied position to the clamped parts, and means on the structure for forming the fastener into tie and rail holding shape, together with means for supporting the same from the rails.

[Claims 6 to 33 not printed in the Gazette.]

1,108,579. WHEEL-PLOW. JOHN F. HUBLER, near Fort Wayne, Ind. Filed Mar. 7, 1912. Serial No. 682,083. (Cl. 97—30.)

1. In a wheeled plow a main frame, two traction wheels pivotally supported on the frame, a lever pivotally mounted on the frame, adjustable means connecting the lever and one of the traction wheels, a shaft revolubly mounted on the frame, means connecting the lever and shaft to cause the latter to rotate when the former is actuated, means connecting the shaft and the other traction wheel, and a plow having a movable supporting connection to the shaft, the parts being so arranged that the operation of the lever rotates the shaft to raise or lower the plow and shifts the frame longitudinally relatively to the traction wheels.



2. In a wheeled plow a main frame, two traction wheels pivotally supported on the frame, a lever pivotally mounted on the frame, a shaft revolubly mounted on the frame and operatively connected to the lever, means operatively connecting the lever and one of the traction wheels, means operatively connecting the shaft and the other traction wheel, means operatively connected to both traction wheels for propelling the same and means connected to the latter means and to the second named means for automatically cutting in and out the transmission of power to one of the traction wheels, the parts being so arranged that the actuation of the lever shifts the frame relatively to the traction wheels and automatically disconnects one of the traction wheels from the propelling means.

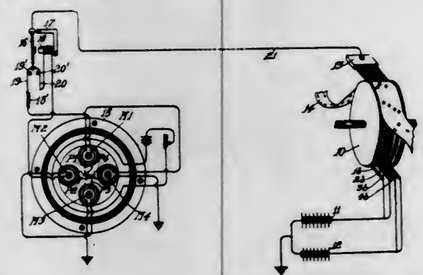
3. In a wheeled plow a main frame, a lever pivotally secured to the frame, a shaft revolubly mounted on the frame and operatively connected to the lever, two traction wheels pivotally mounted on the frame, mechanism on the frame and connected to the wheels to rotate the same, means connecting the lever to one of the traction wheels, means connecting the shaft and the other traction wheel, a movable rack connected to the latter means, a segment gear in mesh with the rack and having an adjustable disk thereon, a lever adapted to be actuated by the disk and connected to the traction wheel driving mechanism and adapted to disconnect said mechanism from one of the traction wheels, the parts being so arranged that by actuating the lever forwardly the shaft is caused to rotate to shift the frame relatively to the traction wheels whereby the rack is moved rearwardly to rotate the segment gear and disk and actuate the second lever for the purposes described.

4. In a wheeled plow, a frame, two traction wheels pivotally supported on the frame, a power mechanism to rotate the wheels, a lever having a connection to the power mechanism for connecting or disconnecting the mechanism to or from either traction wheel, a revolubly mounted disk to rock the lever, a reciprocating rack to rotate the disk, means pivotally connected to one of the driving wheel supports and to the rack, and means operatively connected to the latter means to reciprocate the same and the rack whereby the lever is actuated to connect or disconnect the power mechanism to or from either traction wheel.

5. In a wheeled plow a main frame, two traction wheels pivotally supported on the frame, a lever pivotally mounted on the frame, adjustable means connecting the

lever and one of the traction wheels, a shaft revolubly mounted on the frame, means connecting the lever and shaft to cause the latter to rotate when the former is actuated, means connecting the shaft and the other traction wheel for providing relative movement between the main frame and the pivotal point of said wheel and a plow having a movable supporting connection to the shaft, said connection comprising a bracket secured to the plow and a member adjustably secured to the shaft and adapted to articulate with the bracket to raise or lower the plow upon the rotation of the shaft.

1,108,580. PRINTING-TELEGRAPH. DAVID S. HULFISH, Chicago, Ill, assignor to McMeen & Miller, Chicago, Ill., a Copartnership composed of Samuel G. McMeen and Kempster B. Miller. Filed Oct. 23, 1909, Serial No. 524,146. Renewed Dec. 30, 1913. Serial No. 809,588. (Cl. 178—30.)



1. In a printing telegraph system, a vibrating reed; electrical switching contacts controlled by said reed; a circuit including two printing magnets and closed by said reed during one-half of the vibrating period of said reed; and another circuit including two printing magnets and closed during the alternative half of the vibrating period of said reed, substantially as described.

2. In a printing telegraph system, a single line wire; two groups of printing magnets; a switching member adapted to bring said groups alternately into operative relation with one end of said line, a magnet associated with said line controlling said switching member; a perforated tape transmitter at the other end of said line; said transmitter including means for sending periodic impulses over said line for the operation of said switching member and also including means for sending aperiodic impulses over said line for controlling said printing magnets.

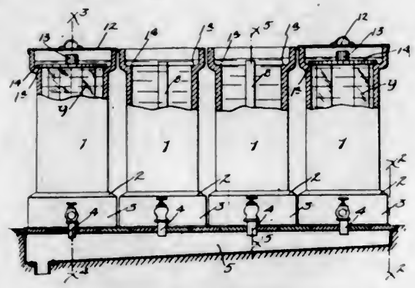
3. In a printing telegraph system, a line wire; two groups of printing magnets; a vibratory member adapted to bring said groups alternately into operative relation with one end of said line wire; a magnet, receiving its current from said line wire, for controlling said switching member; a perforated tape transmitter at the other end of said line wire; means controlled by the tape of said transmitter for sending current impulses to maintain the rapid vibration of said switching member, and means also controlled by said tape for sending impulses for operating said printing magnet selectively to form printed characters.

4. In a printing telegraph system, a vibrating reed connected to the telegraph line; alternate paths through receiving printing magnets; electrical contacts on said reed whereby said reed connects the telegraph line to said paths alternatively when said reed is in vibration; and a propelling magnet for said reed and included in one of said paths, substantially as described.

5. In a printing telegraph system, a polarized vibrating reed; a propelling electromagnet therefor; and a line circuit including the telegraph line, said propelling electromagnet and electrical contacts controlled by said reed, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,108,581. PHOTOGRAPHIC DEVELOPING-TANK. LOUIS H. JEFFRIES, Minneapolis, Minn. Filed Feb. 28, 1914. Serial No. 821,826. (Cl. 95—98.)



1. The combination with an approximately cylindrical photographic developing tank, of an approximately circular film holding rack having radial arms adapted to support and efficiently distribute films or plates within said tank, the said tank, at its upper edge having a ledge adapted to engage and support said rack.

2. A photographic developing tank, comprising a concrete base and a tubular tile having its lower end embedded in said concrete base.

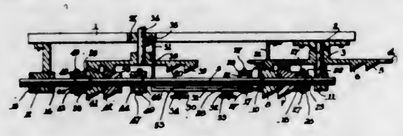
3. A photographic developing tank, comprising a concrete base and a tubular tile having its lower end embedded in said concrete base, the inner surface of said tile being glazed and the lower outer surface thereof being natural and unglazed.

4. A photographic developing tank, comprising a concrete base and a tubular tile having its lower end embedded in said concrete base, and the said tubular tile having an expanded upper end affording a ledge adapted to support a film holding rack.

5. A photographic developing tank, comprising a concrete base and a tubular tile having its lower end embedded in said concrete base, and a metallic shell in which the concrete base of said tank is molded.

[Claims 6 to 8 not printed in the Gazette.]

1,108,582. TRANSMISSION-GEARING. JENS H. JENSEN, Minden, Nebr. Original application filed May 16, 1904, Serial No. 208,292. Divided and this application filed July 16, 1912. Serial No. 709,626. (Cl. 74—59.)

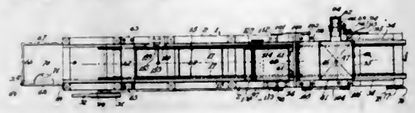


1. A transmission gearing of the specified class, comprising a driving gear mounted on a stud axle and having peripheral sprocket teeth as well as concentric courses of beveled gear teeth, a driven gear having concentric courses of beveled gear teeth, a shaft journaled in a box bearing on the free end of the stud axle, a plurality of free beveled pinions, rotatable on the shaft, and meshing constantly with the courses of gear teeth respectively, a plurality of clutch blocks rotatable with the shaft and slidable thereon to engage the pinions respectively, and yokes engaging the clutch blocks in pairs for the purpose of sliding those blocks into and out of engagement with their respective pinions.

2. A transmission gearing of the specified class, comprising a driving gear mounted on a stud axle and having peripheral sprocket teeth as well as concentric courses of bevel gear teeth, a driven gear having concentric courses of bevel gear teeth, a shaft journaled in a box bearing on the free end of the stud axle, a plurality of free beveled pinions severally rotatable on the shaft, and meshing constantly with the courses of gear teeth respectively, a plurality of clutch blocks rotating constantly with the shaft, and slidable thereon, yokes for sliding the clutch blocks in pairs into and out of engagement with their respective pinions, and means for operating the yokes independently of each other.

3. A transmission gearing of the specified class, comprising a driving gear mounted on a stud axle and having two concentric courses of beveled gear teeth, a driven gear having two concentric courses of beveled gear teeth, a shaft journaled in a bearing on the end of the stud axle, two pairs of beveled pinions rotatable severally on the shaft, and meshing constantly with the teeth of the driving and the driven gears respectively, two pairs of clutch blocks rotating constantly with the shaft and slidable thereon, yokes for sliding the clutch blocks in pairs into and out of engagement with their respective pinions, pivoted levers linked to the yokes respectively, and means for locking the levers severally in alternative positions.

1,108,583. LABEL PASTING AND MARKING MACHINE. JUNIUS ROMAINE JOHNSON, CHARLES SUMNER HAMILTON, and RICHARD DUDLEY VAN DUYNE, East Highlands, Cal. Filed May 16, 1912. Serial No. 697,790. (Cl. 216—2.)



1. A machine for pasting labels on box heads comprising a frame, a magazine on said frame for holding a series of box heads, a movable carrier in said frame, means on said carrier for successively removing a single box head from said magazine, a rotary brush adapted to engage the upper face of said box head, a paste reservoir, means for delivering paste from said reservoir to said rotary brush, a rotary spreading brush behind said first named brush adapted to engage the upper face of said box head, a rotary cleaning brush behind said spreading brush adapted to engage the end of said box head, and a stationary brush adapted to smooth a label on the coated face of said box head.

2. A machine for pasting labels on box heads comprising a frame, a magazine on said frame for holding a series of box heads, a pair of supporting guides extending longitudinally in said frame, a carrier chain on the inside of each supporting guide, projections on each of said chains adapted to engage the lower box head in the magazine and remove the same therefrom, means for applying paste to the upper face of said box head, means for smoothing the paste thereon, means for removing the paste from the ends of said box head, means for smoothing a label on the coated face of said box head, a hopper at the end of said machine, and means for delivering said box head into said hopper.

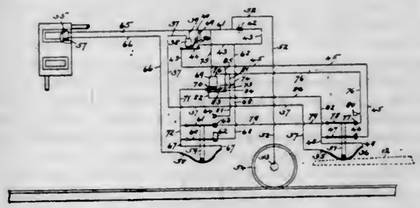
3. A machine for pasting labels on box heads comprising a frame, a magazine mounted on said frame adapted to retain a series of box heads one above another, a pair of supporting guides extending longitudinally in said frame adapted to support said box heads in the magazine, a movable carrier in said frame consisting of a chain on the inner side of each supporting guide, means on each of said chains adapted to engage the lower head in said magazine and remove the same therefrom, a rotary brush adapted to engage the upper face of said box head, a paste reservoir, a perforated delivery pipe connected to said reservoir and adapted to deliver paste on said brush, a rotary spreading brush at the rear of said first named brush, a rotary cleaning brush behind said spreading brush adapted to engage the forward and rear ends of said box head, a series of elastic fingers adapted to hold said box head on said cleaning brush, a stationary brush for smoothing a label on the coated face of said box head, a magazine at the end of said supporting guides, and means for cleaning said chains, said means consisting of a reservoir having a body of water therein and a rotary brush adapted to engage said chains and extend into said water.

4. A machine for pasting labels on box heads comprising a frame, a magazine mounted on said frame adapted to retain a series of box heads one above another, a pair of supporting guides extending longitudinally in said frame adapted to support said box heads in the magazine, a movable carrier in said frame consisting of a chain on the inner side of each supporting guide, means on each of said chains adapted to engage the lower head in said magazine and remove the same therefrom, a rotary brush adapted to engage the upper face of said box head, a paste reservoir, a perforated delivery pipe connected to said reservoir adapted to deliver paste on said brush, a rotary spreading brush at the rear of said first named brush, a rotary cleaning brush behind said spreading brush adapted to engage the forward and rear ends of said box head, a series of elastic fingers adapted to hold said box head on said cleaning brush, a stationary brush for smoothing a label on the coated face of said box head, a magazine at the end of said supporting guides, means for cleaning said chains, said means consisting of a reservoir having a body of water therein and a rotary brush adapted to engage said chains and extend into said water, a hopper under the pasting brush and spreading brush adapted to catch the surplus paste therefrom, and means for carrying the paste from said hopper to the paste reservoir.

5. A machine for pasting labels on box heads comprising a frame, a magazine mounted on said frame adapted to hold a series of box heads therein one above another, a pair of supporting guides extending longitudinally in said frame adapted to support said box heads in said magazine, a movable carrier in said frame consisting of an endless chain on the inner side of each supporting guide, a plurality of sets of sprocket wheels on said frame adapted to support said chains, means for driving one set of sprocket wheels to drive said chains, means for supporting said chains between said sprocket wheels, means on each chain adapted to engage the lower box head in said magazine and remove the same therefrom, a rotary paste brush adapted to engage the upper face of said box head, a paste reservoir, means for supplying paste to said paste brush, a rotary spreading brush adapted to engage the upper face of said box head behind said past brush, a rotary cleaning brush behind said spreading brush adapted to engage the forward and rear ends of said box heads, a series of elastic fingers adapted to hold said box head on said cleaning brush, a stationary brush for smoothing a label on the coated face of said box head, a magazine at the rear end of said supporting guides, and means for rotating all of said brushes.

[Claims 6 to 9 not printed in the Gazette.]

1,108,584. TRAIN-CONTROLLING MECHANISM. FRANK T. JONES, Baltimore, Md., assignor to The Jones Safety Train Control System Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 12, 1912. Serial No. 670,791. (Cl. 246—58.)



1. In a train-controlling mechanism for railways having track rails which are insulated at intervals to form blocks or sections, and also having ramp rails adjacent to the track rails, in combination with a vehicle having a controlling device with a magnet to control the same; a contact shoe on the vehicle to engage and be moved by

the ramp rails; a circuit on the vehicle including the magnet and shoe when the vehicle is traveling between ramp rails; a relay also on the vehicle; a normal circuit to energize the relay and means operated by the shoe to close a substitute circuit through the relay and maintain a circuit through the controlling device magnet at times when the normal circuit through said magnet is interrupted by a movement of the shoe.

2. A train-controlling mechanism for railways having track rails which are insulated at intervals to form blocks or sections and also having ramp rails adjacent to the track rails, in combination with a vehicle having a safety device thereon, of an electro-magnet to control said safety device and hold the same normally inoperative; a contact shoe also on the vehicle to coact with and be moved by the ramp rails along the trackway; a circuit on the vehicle normally including a current supply on the vehicle and also including the said electro-magnet and contact shoe while the shoe is in its normal inoperative position so as to keep said magnet energized, and means actuated by the shoe for electrically maintaining said safety device in the said normal inoperative position upon a sudden movement of the shoe.

3. A train-controlling mechanism for railways having track rails which are insulated at intervals to form blocks or sections and also having ramp rails adjacent to the track rails, in combination with a vehicle having a normally inoperative safety device thereon; an electro-magnet to control said safety device; a contact shoe also on the vehicle to coact with and be moved by the ramp rails along the trackway; a normal circuit on the vehicle including a current supply on the vehicle and also including the said electro-magnet and contact shoe while the shoe is in its normal inoperative position to keep the said magnet energized; a relay magnet; a circuit on the vehicle which normally energizes said relay-magnet, and means operated by the shoe for electrically forming another circuit through the relay to enable the latter to maintain a circuit through the electro-magnet that controls the said safety device.

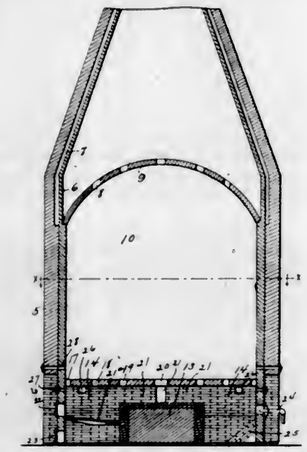
4. A train-controlling mechanism for railways having track rails insulated from each other to form blocks or sections, in combination with a vehicle having a normally inoperative safety device thereon; an electro-magnet for controlling said safety device; a contact shoe also on the vehicle; a normal circuit on the vehicle including a current supply on the vehicle and also including said electro-magnet and contact shoe while the shoe is in its normal inoperated position to keep the magnet energized; ramp rails at intervals along the track to coact with and cause a movement of the contact shoe on the vehicle,—said ramp rails having an inclined contact surface whereby to move said shoe fast or slow according to the speed of the vehicle, and means controlled by a slow movement of the shoe for electrically maintaining the said electro-magnet in an energized condition.

5. A train-controlling mechanism for railways which latter have track rails insulated from each other to form blocks or sections and also having ramp rails adjacent to the track rails, in combination with a vehicle having a normally inoperative safety device thereon, of an electro-magnet for controlling said safety device; a contact shoe on the vehicle; a switch on the vehicle; means connecting the switch and shoe; a normal circuit on the vehicle including a current supply on the vehicle and also including the electro-magnet, switch and shoe while the latter is in the normal inoperative position to maintain the safety device in said inoperative position; a relay magnet; an armature for said relay magnet, and a circuit including the said electro-magnet, shoe and armature to maintain the safety device in the inoperative position.

[Claims 6 to 12 not printed in the Gazette.]

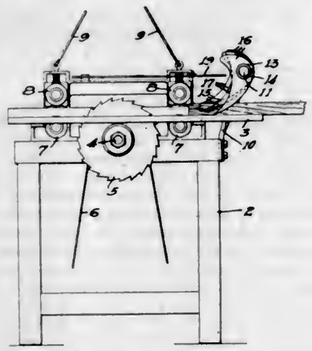
1,108,585. PORCELAIN-KILN. HENRY C. KAPELLE, Schenectady, N. Y. Filed Jan. 2, 1914. Serial No. 809,988. (Cl. 25—147.)

1. A kiln of the character described, comprising an outer inclosing wall, a centrally arranged masonry mass located therein, alternating direct and indirect firing holes radially disposed about said masonry mass, equalizing flues between said firing holes, said direct firing holes being extended to the center of the kiln over said masonry mass and said indirect firing holes terminating short of the center of said kiln, and a baking chamber above said firing holes with which said firing holes have communication.



2. In a porcelain kiln the composition with an inclosing outer wall, of a masonry mass centrally disposed therein and lying in spaced relation to the side walls thereof, a baking chamber bottom disposed within said kiln and lying horizontally over and in spaced relation to said mass, a plurality of firing holes all radially disposed within the confines of said outer wall and comprising flues extended above said masonry mass to the center of the kiln, a plurality of additional radial firing holes alternating with first named firing holes which terminate short of the center of the kiln there being openings leading from all of said firing holes through the baking chamber bottom, and there being a central opening in said baking chamber bottom beneath which the inner ends of all of the first named flues join.

1,108,586. GUARD FOR LATH-MACHINES. FERDINAND G. KLEINEGGER, Minneapolis, Minn. Filed June 2, 1913. Serial No. 771,236. (Cl. 143—159.)



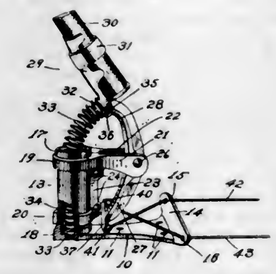
1. The combination, with a frame, a feed table and saws and feed rolls, of a series of guards loosely mounted in front of said rolls and in the path of the material thrown back by said saws, said guards having surfaces adapted to direct the splinters or broken pieces of wood inwardly and upwardly with respect to said table, and a shield mounted to cover the space between said guards and said feed roll.

2. The combination, with a frame, a feed table and gang of saws, and feed rollers operating to feed the material to said saws, of a rod supported on said frame above said feed table and adjacent to said rolls, collars mounted on said rod and capable of adjustment thereon, a series of guards loosely mounted on said rod between said collars, said guards being substantially crescent shaped in form, and each having a tapered lower end adapted to normally rest upon the feed table and backwardly inclined with respect thereto, the inner edges of said guards presenting a concave surface to the feed rolls and saws and operating to direct the slivers and pieces of wood thrown back by the saws upwardly and inwardly with respect to said feed table, said guards being adapted to rest by gravity upon the material fed to said saws and preventing backward movement of such material.

3. The combination, with a frame, a feed table and gang of saws and feed rollers operating to feed the material to said saws, of a series of plates substantially crescent shaped in form, each having a tapered lower end adapted to normally rest upon the feed table and backwardly inclined with respect thereto, the upper portions of said plates being pivotally supported, the inner edges of said plates presenting a concave surface to the feed rolls and saws and operating to direct the slivers and pieces of wood thrown back by the saws upwardly and inwardly with respect to said feed table, said plates being adapted to rest by gravity upon the material fed to said saws and preventing backward movement of said material, and a shield overhanging said table and saws and extending to a point near the upper portion of said plates.

4. The combination, with a frame and feed table and gang of saws, and feed rollers operating to feed the material to said saws, of a series of guard plates pivotally supported near their upper ends and depending upon said table in front of said feed rollers, each plate having a lower end that is backwardly inclined with respect to said feed table and adapted to rest by gravity upon the material fed to said saws and preventing backward movement of such material, the inner edges of said plates presenting a concave surface to the feed rollers and saws and operating to direct the slivers and pieces of wood thrown back by the saws upwardly and inwardly with respect to said feed table.

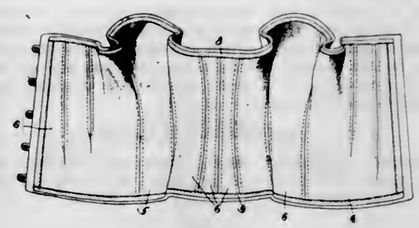
1,108,587. WHIPPING DEVICE. SIGVART KVAM, Minneapolis, Minn., assignor of one-half to J. E. Hawkinson, Parkers Prairie, Minn. Filed Mar. 10, 1913. Serial No. 753,206. (Cl. 21—129.)



1. A whipping device comprising a hollow tubular standard, a bracket mounted for oscillation about said standard in a horizontal plane, a whip-holding arm centrally pivoted to said bracket for oscillation in a vertical plane, a spiral spring extending within the tubular standard and connected to the whip-holding arm above its pivot, and a pair of cords connected to the lower portion of said arm and operative upon the same from different angles, either of said cords simultaneously oscillating the bracket about the standard and the whip-holding arm about its pivot, the oscillations of the bracket being effected in opposite directions by the respective cords.

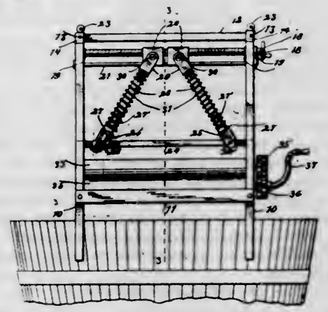
2. A whipping device comprising a standard, a bracket mounted for oscillation about said standard in a horizontal plane, a whip-holding arm centrally pivoted to said bracket for oscillation in a vertical plane, a crossbar on the end of said arm below its pivot, a pair of guides, and a pair of cords extending through the guides and connected in crossed relation to the ends of the crossbar farthest removed from the guides through which the respective cords pass.

1,108,588. CORSET-SHIELD. JAMES S. LAMONT, Mattenawan, N. Y. Filed Nov. 19, 1910. Serial No. 593,223. (Cl. 2—75.)



A corset lining comprising a plurality of pieces of non-absorbent material sewed together to form a body, said body being of such size and shape as to cover the entire interior of a corset and the seams between the pieces of the body being formed by doubling and stitching the edges thereof and forming reinforce ribs for the body, which reinforce ribs also serve to stiffen the corset in which the lining is used, certain of the pieces being also provided with doubled and stitched portions forming reinforce ribs which extend downwardly from the upper edges of said pieces and terminate short of the lower edges thereof.

1,108,589. CLOTHES-WRINGER. CHESTER B. LEBCHER, Long Beach, Cal. Filed June 2, 1914. Serial No. 842,419. (Cl. 68—32.)



In a clothes wringer of the character described, a frame, an operating shaft connected therewith and provided with right and left screw-threads, means to rotate the operating shaft, blocks having screw-threaded openings to receive the screw-threaded portions of the operating shaft, a movable depressing member, longitudinally extensible members pivotally connected with the blocks and with the depressing member, means to prevent the blocks from turning upon their longitudinal axes, coil springs surrounding the longitudinally extensible members to normally maintain the same extended, vertically movable bearings slidably engaging the frame and adapted to be engaged by the depressing member, an upper roll carried by the bearings, a lower roll arranged within the frame to cooperate with the upper roll, and means to drive the shaft.

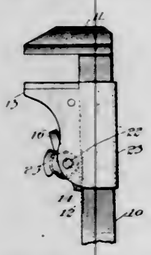
1,108,590. PENCIL-POINTER. CHARLES EDWIN LEE, New York, N. Y. Filed Feb. 21, 1913. Serial No. 749,838. (Cl. 120—90.)



1. A pencil pointer having a body member, a portion of which is dropped below the general plane, a shoulder between said body member and said dropped portion, lugs formed integral with said dropped portion, a blade retained between said lugs and said shoulder and a spring member projecting over said blade and under said dropped portion for securing said knife in its operable position for the purpose set forth.

2. A pencil pointer having a body, a portion of which is dropped out of the general plane, a shoulder formed between said dropped portion and said body, a rib at one end of said dropped portion, a blade between said rib and said shoulder, and a spring member for retaining said blade in position as herein set forth.

1,108,591. WRENCH. KARL LEISSLE and FRANK BACH, Chicago, Ill. Filed Apr. 16, 1914. Serial No. 832,269. (Cl. 81—134.)



1. A wrench, comprising a shank and a jaw affixed to one end thereof; ratchet teeth, formed upon one side of the shank; a second jaw, slidable upon said shank; an eccentric, rotatably secured at its axis in the slidable jaw; a pawl, journaled upon said eccentric and adapted to engage said ratchet teeth; a thumb piece, projecting from said pawl, and resilient means for normally holding said pawl in engagement with the ratchet teeth.

2. A wrench, comprising a shank and a jaw affixed to one end thereof; ratchet teeth, formed upon one side of the shank; a second jaw, slidable upon said shank; an eccentric, rotatably secured at its axis in the slidable jaw; a pawl, journaled upon said eccentric and having a projection at one side adapted to engage said ratchet teeth; a thumb piece, projecting from said pawl at the side opposite to that which engages with the ratchet teeth, and an open helical spring interposed between said thumb piece and said movable jaw substantially as and for the purpose set forth.

1,108,592. PROCESS OF WELDING METALS. JOHN C. LINCOLN, East Cleveland, Ohio. Filed Jan. 21, 1913. Serial No. 743,282. (Cl. 219—7.)

1. The method, substantially as herein described, for welding metals, which consists in supplying minute quantities of a metallic structural modifying element thereto, in the presence of a welding heat.

2. The method, substantially as herein described, for welding metallic surfaces, which consists in applying minute quantities of another metal having a deoxydizing effect, to the surfaces subjected to the welding operation, under the influence of a welding heat.

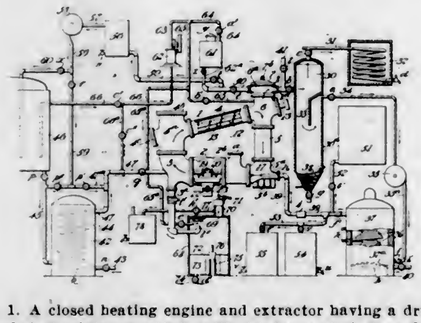
3. The method, substantially as herein described, for welding iron or steel, which consists in applying minute quantities of magnesium to the surfaces to be welded, and subjecting the same to a welding heat.

4. The method, substantially as herein described, for welding metallic surfaces, which consists in applying a minute coating of a finely-divided foreign metal thereto, and subjecting the same to a welding heat.

5. The method, substantially as herein described, for welding metallic surfaces, which consists in supplying minute quantities of metallic alloying and deoxydizing agents, in the presence of a welding heat prior to the completion of fusion.

[Claims 6 to 8 not printed in the Gazette.]

1,108,593. BEATING-ENGINE AND EXTRACTING APPARATUS FOR MAKING CELLULOSE. BURDETT LOOMIS, Hartford, Conn., assignor to Loomis Utilization Company, East Orange, N. J., a Corporation of New Jersey. Filed Nov. 27, 1912. Serial No. 733,808. (Cl. 92—6.)



1. A closed beating engine and extractor having a drum and bed plate provided with blades and independent means including a screw conveyer and an injector inlet pipe for causing circulation of fiber material or pulp and treating liquor.

2. A closed beating engine and extractor having a beating drum, a vertically adjustable bed plate and separate means including a screw conveyer and a liquid injector feed pipe for causing circulation of fiber material and treating liquor.

3. A closed beating engine and extractor having a horizontal body provided with a beating drum and bed plate, an inclined pipe or trunk above said body and drum and connecting at one end with said body and having means for conveying material and causing circulation in the engine, a down take pipe connecting with the other end of the body and said inclined pipe connecting at its other end with the upper end of the down-take pipe.

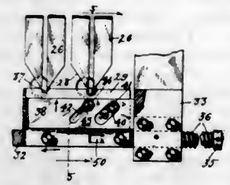
4. A closed beating engine and extractor having a horizonal body containing a beating drum and bed plate, an inclined pipe or trunk connecting at its lower end with the body, a down-take stand pipe connecting the elevated end of said inclined trunk with the body and a conveyer device in the inclined trunk for causing circulation of material and liquor in the engine.

5. A beating engine and extractor having a horizontal body containing a beating drum and bed plate, an inclined pipe or trunk connecting at its lower end with one end of the body, a mouth piece having a feed opening and cover connecting with its upper end, a down-take stand pipe also connecting with said upper end and with the other end of the body, and means for causing circulation of material and liquor in the engine and extractor.

[Claims 6 to 18 not printed in the Gazette.]

1,108,594. NAIL-PICKING MACHINE FOR BOX-NAILING MACHINERY. CHARLES G. LUNDHOLM, San Bernardino, Cal., assignor to John J. Hanford, San Bernardino, Cal. Filed Apr. 7, 1913. Serial No. 759,288. (Cl. 1—16.)

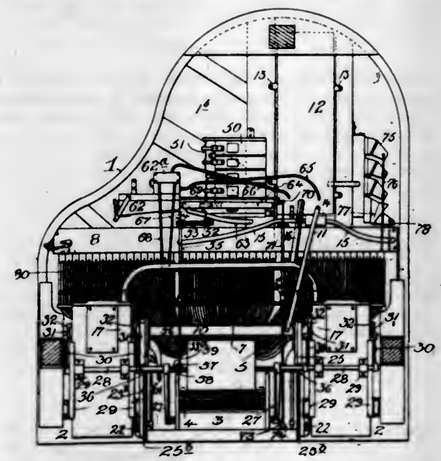
1. In a box nailing machine, the combination with a slotted nail hopper, of a plurality of bars forming guideways extending from said slots in said hopper to a plurality of nail chutes, a reciprocating slotted nail picker arranged to remove nails transversely from said guideways, and sliding means to remove the nails from the said picker to deliver the same to the nail chutes.



2. In a box nailing machine, the combination with a slotted nail hopper, and a plurality of nail chutes, of a plurality of guide-bars forming a plurality of nail guideways registering with the slots in said nail hopper, the lower ends of said bars being cut away and terminating adjacent and vertically disposed over said nail chutes, a reciprocating picker bar mounted transversely and adjacent the terminations of said guide-bars, a push bar arranged to slide across said picker bar, and means to reciprocate said picker bar and slide said push bar coöperatively.

3. In a box nailing machine, the combination with a nail hopper, and a plurality of nail chutes leading to nail chucks, the said chutes having slotted upper ends, of a plurality of inclined guide-ways, their upper ends terminating adjacent said hopper and their lower ends provided with guide plates terminating within the slotted upper ends of said chutes, a picker bar provided with notches registering with and adjacent the lower ends of said nail guide-ways, guide pins on said picker bar, a push bar mounted upon said picker bar and having inclined slots to engage said pins, and means to actuate said bars coöperatively, whereby nails are picked from engagement with said guide-ways and deposited in said nail chutes.

1,108,595. AUTOMATIC MUSICAL INSTRUMENT. LOUIS H. MAIER, New York, N. Y. Filed May 31, 1913. Serial No. 770,839. (Cl. 84—233.)



1. An automatic musical instrument having a casing a key bottom, and a tracker in the plane of the key bottom, and provided with pumping bellows supported beneath the key bottom on opposite sides of the tracker.

2. An automatic musical instrument having a casing and a key bottom, a tracker supported within an opening in the key bottom, and pumping bellows carried by and below the key bottom on opposite sides of the tracker.

3. An automatic musical instrument having a casing provided with a key bottom having an opening at its front portion, a tracker, and means to support the tracker in said opening, combined with pumping bellows carried by the casing on opposite sides of said opening and tracker and substantially in the plane of the tracker.

4. An automatic musical instrument having a casing provided with a key bottom having an opening at its front portion, a tracker, and means to support the tracker in said opening, combined with pumping bellows carried beneath the key bottom on opposite sides of said opening and tracker and substantially in the plane of the tracker.

5. An automatic musical instrument having a key bottom, and a tracker box supported thereby combined with a pumping bellows beneath and carried by said key bottom on opposite sides of the tracker box, and substantially in the plane of the tracker.

[Claims 6 to 24 not printed in the Gazette.]

1,108,596. MINIATURE PARACHUTE. HAROLD MANSON-OLIN, New York, N. Y. Filed Oct. 9, 1913. Serial No. 794,235. (Cl. 244—21.)



1. In a toy of the class described, a collapsible parachute structure, a tube connected with said parachute structure, and a weight loosely positioned in said tube for directing the movement of the parachute structure in both its upward and its downward travel.

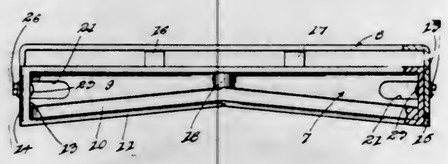
2. In a toy of the class described, a collapsible canopy, a guiding tube connected with said canopy, a plurality of bracing members connected with said canopy at its periphery, said bracing members being connected together at a point adjacent the end of said tube, whereby the tube limits the upward movement of the bracing members and the periphery of the canopy when the toy is falling, and a movable weight arranged in said tube, said weight moving automatically to the top of the tube under the action of momentum when the toy is moving upwardly, and moving to the bottom of said tube under the action of gravity when the toy is moving downwardly.

3. In a toy of the class described, a parachute structure, a tube connected near its upper end to the canopy of the parachute structure and adapted to engage the lower portion of the canopy structure when the toy is descending so as to limit the spreading of the canopy of the parachute structure, and a weight arranged in said tube, said weight comprising a liquid, said weight being adapted to act at opposite ends of said tube as the toy is moving upwardly, and as the toy is moving downwardly.

1,108,597. SADDLE. LOUIS MARTIN, New York, N. Y. Filed Dec. 23, 1913. Serial No. 808,446. (Cl. 105—194.)

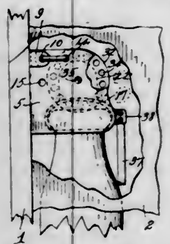
1. In a device of the character described, the combination with a body portion being substantially T-shaped in cross section, a U-shaped member formed integral with the stem of the T-shaped member, said U-shaped member forming a longitudinal trough, webs formed at the ends of the body portion, said webs connecting the U-shaped member with the arms of the T-shaped member, of a coöperating element comprising a U-shaped member, the ends of the U-shaped member being provided with recesses conforming to the shape of the first mentioned U-shaped member, means to hold the second mentioned U-shaped member in place on the body portion, and means to secure the body portion, to the top of a railway car.

2. In a device of the character described, the combination with a railway car having a ribbed roof, of a body portion adapted to be secured to the roof of the car, said body portion comprising a T-shaped member and a U-shaped member formed at the end of the stem of the T-shaped member and extending throughout its entire length, said U-shaped member being adapted to straddle the ribs on the top of the car, guide ways formed integral at the ends of the body portion, and a second U-shaped member adapted to coöperate with the body portion, the arms of said U-shaped member being adapted to extend into the guide ways formed on the body portion, and means to secure the second mentioned U-shaped member to the body portion.



3. In a device of the character described the combination with a railway car, of a body portion adapted to be secured to the roof of the car and conform to the shape thereof, guide ways formed at the ends of the body portion, a plurality of bearing portions formed at the top of the body portion and adapted to receive running boards, and a U-shaped member coöperating with the body portion and adapted to overlie the whole, said U-shaped member having the ends of the arms to straddle the ribs on the roof of a railway car, and means to hold the U-shaped member in place on the body portion.

1,108,598. RECEPTACLE-HOLDER. ROBERT DIAMOND MAYO and ROBERT DAVID MAYO, Cleveland, Ohio, assignors to H. S. Lavine, Cleveland, Ohio. Filed Sept. 30, 1912. Serial No. 723,132. (Cl. 232—41.)



1. Receptacle holding and locking mechanism comprising a door frame, a door movable with respect to the frame, a receptacle holder frame mounted on one of said members, a receptacle holder movable in the receptacle holder frame, and locking mechanism between the receptacle holder frame and the receptacle holder and arranged to be held in a locked position by the door when closed and to be free to be unlocked when the door is opened.

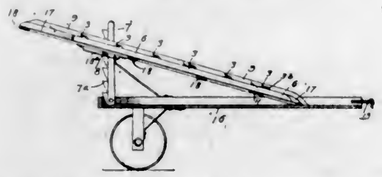
2. In a bottle holder, a frame, a holding channel movably mounted in said frame, a locking member slidably mounted in the frame and adapted to extend beyond the same and to engage said channel and lock it agninst movement, and means normally tending to force said lock into locked position.

3. In a bottle holder, a frame, a bottle holder movably mounted in the frame, a supporting bracket extending from the frame and having an opening therein and adapted to be secured behind the frame, a U-shaped latch having one leg of the loop extending through the bracket and through the frame to form a supporting guide, with the other leg of the U-shaped member engaging in a suitable opening in the frame and in the receptacle holder, and a spring normally holding the latch in locked position.

4. In a receptacle holder, a frame, a receptacle holder pivoted in the frame, and suitable locking mechanism between the receptacle holder and the frame and comprising a locking plate, and suitable ratchet mechanism comprising teeth struck up from the face of the locking plate, and teeth carried by corresponding plate held from rotation by the receptacle holder, and a suitable spring for holding the ratchet plate against the locking plate.

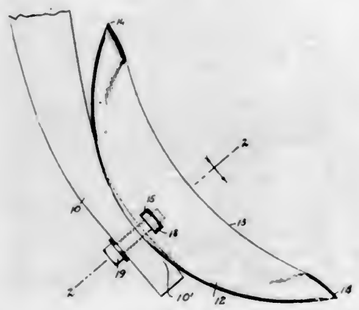
5. In a receptacle holder, a frame, a receptacle holder pivoted in the frame, and suitable locking mechanism between the receptacle holder and the frame and comprising a locking plate, a ratchet plate movable in the receptacle holder but held against rotation thereby, said locking plate and said ratchet plate having nesting projections forming ratchet teeth, and a spring between the bottle holder and the ratchet plate for holding them in engagement.

1,108,599. BALED-HAY CONVEYER AND ELEVATOR. CHARLES MCCULLOUGH, Haines, Oreg. Filed Sept. 13, 1912. Serial No. 720,196. (Cl. 193—11.)



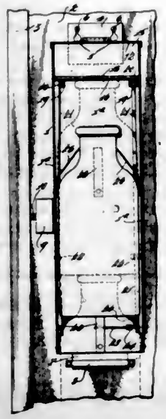
The combination, in a baled hay elevator, of a runway, a plunger associated with said runway and reciprocable longitudinally thereof, apertured plates disposed on the upper surface of said runway, fastening means passing through said apertures and removably securing said plates to said plunger, dogs pivoted to said plates, springs carried by said plunger and operatively associated with said dogs and maintaining them in position to engage the hay-bales as the plunger reciprocates forward, and returning said dogs to normal position after depression thereof, and means for automatically engaging the hay-bales after release thereof by said dogs, on the return stroke of the plunger.

1,108,600. CULTIVATOR-TOOTH. ROBERT E. MCCULLEY, WALTER G. REA, and DRYDEN BLAIR FORWARD, Cedarville, Cal. Filed Sept. 25, 1913. Serial No. 791,772. (Cl. 97—11.)



A cultivator tooth of the character set forth substantially crescent-shaped in side view, the body portion thereof being solid and of an acute triangular form in cross section, the acute angle constituting the front cutting edge, and the back thereof being formed with a transverse socket and a bolt hole leading from the rear surface of the tooth into and extending beyond said socket, substantially as and for the purposes set forth.

1,108,601. SAFETY-BOX FOR MILK-BOTTLES. GEORGE S. MCNEIL, Newark, N. J., assignor to Charles A. McNeil, New York, N. Y. Filed Sept. 9, 1913. Serial No. 788,862. (Cl. 232—41.)



1. The combination with a swinging door of a milk bottle box detachably mounted adjacent thereto, means for locking said box in position comprising a bolt recess in said box and a sliding bolt mounted in the path of said door so as to be thrust into said recess when said door is closed, and a spring normally tending to withdraw the bolt from its recess.

2. A safe for milk bottles and the like comprising in combination, a box having a bottle-receiving-space therein with an outlet opening for a bottle, a movable cover for said outlet opening, locking means for said cover, and means operable by a bottle shaped key for releasing said cover from said locking means.

3. A safe for milk bottles and the like comprising in combination, a box having a bottle-receiving-space therein with separate inlet and outlet openings for a bottle, a movable cover for said outlet opening, locking means for said cover, and means operable by a bottle entering said inlet opening for releasing said cover from said locking means.

4. A safe for milk bottles and the like comprising in combination, a box having a bottle-receiving-space therein with separate inlet and outlet openings for a bottle, a movable cover for said outlet opening, locking means for said cover, means mounted at the inlet opening for releasing said cover from said locking means, and catch members for retaining a bottle within said box against movement toward said inlet opening.

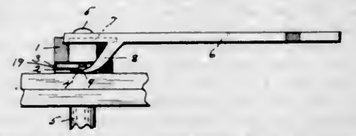
5. A safe for milk bottles and the like comprising in combination, a box having a bottle-receiving-space therein with separate inlet and outlet openings for a bottle, a movable cover for said outlet opening, means normally tending to move said cover into closed position, locking means for said cover, and means operable by a bottle entering the inlet opening of said box for releasing said cover from said locking means.

[Claims 6 to 8 not printed in the Gazette.]

1,108,602. WRENCH. OLIVER A. MENTZER, Lancaster, Pa., assignor of one-half to Henry E. Ransing, Lancaster, Pa. Filed May 18, 1914. Serial No. 839,193. (Cl. 81—10.)

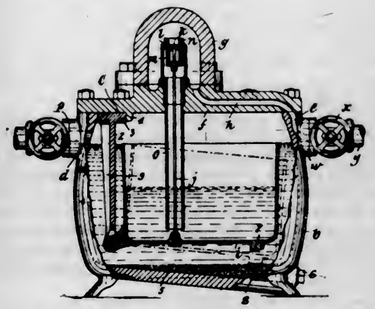
1. A wrench of the class described having a bifurcated end adapted to engage the top and sides of the nut, and curved arms depending therefrom and adapted to engage the nut locking means and release the same.

2. In combination with a nut locking device comprising two washers, one being corrugated and the other provided with pawls engaging the same, of a wrench having an end portion adapted to engage the face and sides of the nut and a depending portion adapted to engage



the pawls and raise the same out of engagement when pressure is exerted on said wrench.

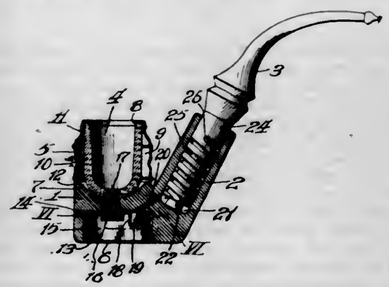
1,108,603. STEAM-TRAP. GRANT U. MERRILL, Paterson, N. J. Filed Sept. 13, 1913. Serial No. 789,670. (Cl. 137—103.)



1. In a steam-trap, a hollow structure having an inlet and means whereby to discharge the water accumulating in said structure and also having a removable cover, trapping means for the discharge means including a floating bucket housed in said structure, and a depending leg to which said bucket is pivoted removably attached to the cover and held against removal by said structure in the assembled disposition of said structure and cover.

2. In a steam-trap, a hollow structure having an inlet in one side thereof and means whereby to discharge the water accumulating in said structure, and trapping means for the discharge means including a floating bucket, said structure having a depending leg opposite and relatively close to the inlet affording a pivot for the bucket and said leg having a vertical channel on the side thereof adjoining the inlet, and said structure also having a sediment channel substantially alined with said channel of the leg and under the bucket, an outlet in the side of said structure opposite that having the inlet and communicating with said channel, and means to close said outlet.

1,108,604. TOBACCO-PIPE. FREDERICK H. A. MOEHLENBROCK, St. Louis, Mo. Filed July 13, 1911. Serial No. 638,249. (131—12.)



1. In a pipe, the combination with a base-member provided with an upper curved surface with a smoke duct

extending therethrough, of a detachable bowl provided with a base portion of less curvature than said upper surface of the base to provide an air space beneath and around said bowl, said bowl being in open communication with said smoke duct.

2. In a pipe, the combination with a base with a bottom recess, of a bowl surmounting said base, a receptacle in said recess, and a stud for securing said bowl and receptacle to said base, said stud being provided with a smoke duct leading from said bowl to said receptacle, said base being provided with finger openings for engagement with said receptacle.

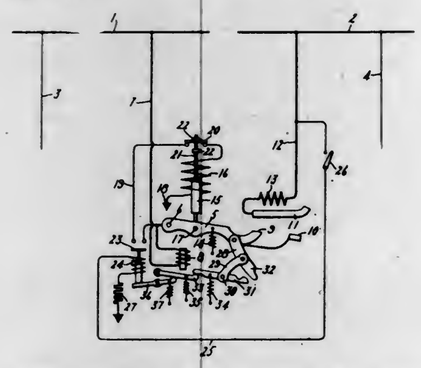
3. In a pipe, a recessed base member, a receptacle in the recess, a stem provided with a duct in communication with said receptacle, and a bowl surmounting said base member, said receptacle being provided with a serrated top flange in engagement with the walls of said recess.

4. In a pipe, the combination with a base member provided with a stem socket, a recess, and a duct connecting said recess and socket, of a bowl surmounting said base member, and a receptacle in said recess in communication with said bowl, said receptacle being provided with a depending funnel having its enlarged upper end covering the end of said smoke duct.

5. In a pipe, the combination with a base member surmounted by a bowl and provided with a stem socket, of a stem comprising a mouth piece having a smoke duct and a depending portion provided with a central chamber of a larger diameter than the stem duct, said chamber being open at its lower end, and a helical duct in its outer wall, the upper end of said duct being in communication with said central chamber, and a stopper for the opening in the lower end of said central chamber, said stopper being adapted to form an annular chamber.

[Claims 6 to 13 not printed in the Gazette.]

1,108,605. AUTOMATIC SECTIONALIZING-SWITCH. JAMES E. MOLONY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 11, 1909. Serial No. 517,278. (Cl. 175—294.)



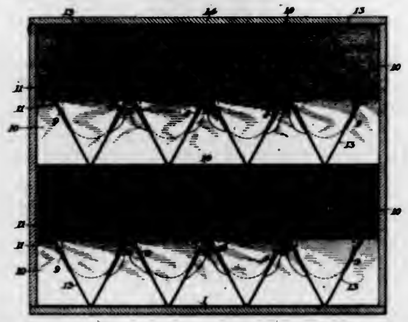
1. The combination with two sections of an electrical conductor each having its own feeder, of an automatic connecting switch comprising an electromagnet, a contact arm actuated thereby, and two interlocks controlling the circuit of said electromagnet, one opened by the electromagnet when it is energized, and the other controlled by a no-voltage coil connected with one of said sections.

2. The combination with two sections of an electric conductor each having its own feeder, of an automatic connecting switch comprising an electromagnet, a contact-arm actuated thereby, a mechanical lock for holding said arm closed, an overload coil adapted to trip said lock, and two interlocks controlling the circuit of said electromagnet, one adapted to be opened by the electromagnet when energized, and the other controlled by a no-voltage coil connected to one of said sections.

3. The combination with two sections of an electrical conductor each having its own feeder, of an automatic connecting switch comprising an electromagnet, a contact arm actuated thereby, a toggle and catch for locking said arm when closed, an overload coil adapted to trip said toggle, a no-voltage coil also adapted to trip said toggle, and two interlocks in circuit with said electromagnet, one controlled by said electromagnet, and the other by said no-voltage coil.

4. An electric switching device for connecting two sections of an electric conductor comprising, a switch for electrically connecting said sections, a locking toggle for holding said switch in a closed position, an overload coil, an armature coöperating with said overload coil to release said locking toggle and open said switch on appearance of overload, a lever coöperating with said armature, and a no-voltage coil acting directly upon said lever to independently release said locking toggle and open said switch on appearance of an abnormally low voltage.

1,108,606. EGG HOLDER AND CARRIER. HERBERT L. G. MOORE, Hohokus, N. J. Filed Sept. 12, 1913. Serial No. 780,407. (Cl. 217—33.)



1. An egg tray composed of two members interlocked and forming a plurality of adjoining pockets open at the top, each pocket having four converging walls.

2. An egg tray composed entirely of two members interlocked and forming a plurality of adjoining single egg receptacles each having four walls inclined toward one point, substantially on the same plane.

3. An egg tray composed of two folded members interlocked and forming a plurality of adjoining pockets open at the top and each having four converging walls.

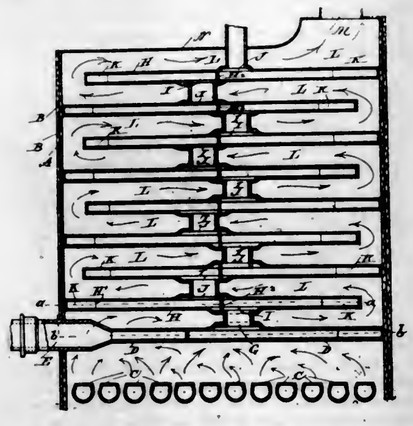
4. An egg tray composed of two folded members interlocked at right angles and forming a plurality of adjoining pockets open at the top and each having four converging walls.

5. An egg tray composed of two members only, interlocked at right angles and forming a plurality of adjoining single egg receptacles each provided with four converging walls forming a closed bottom, the ends of said two members being extended in zig-zag form beyond the egg receptacles on the sides and ends of the tray.

[Claims 6 to 9 not printed in the Gazette.]

1,108,607. WATER-HEATER. JOSEPH B. MOWRY, Cleveland, Ohio. Filed Feb. 17, 1913. Serial No. 748,790. (Cl. 122—216.)

1. In a water heater, a bottom unit comprising a hollow chamber, provided with an inlet opening at one end, and a central outlet opening in its upper wall, and a vertical forked partition longitudinally disposed in said chamber, and having the extremities of the stem end and forks spaced from the end walls of the chamber, the stem end adjacent to the outlet opening, and water heating units superimposed above said bottom unit, said superimposed units provided with vertical longitudinal partitions spaced at their ends from the ends of the chamber, and provided with inlet and outlet openings on opposite sides of said partitions and an inclosing casing for all said units.



2. In a water heater, a casing, a heat supplying device, and a series of superimposed horizontal staggered hollow water units within said casing separated to form a circulating passage for the heating medium, the lower unit provided with a water inlet at one end, and with a substantially central outlet opening in its upper wall, said lower unit having a vertical fork shaped partition therein, the sleeve of the fork adapted to divide the water flow into equal portions at the sides of the unit, and the branches of the fork adapted to receive the flow from the said sides and return same to the outlet opening, the upper units provided each with a vertical portion extending in different planes on each side of its longitudinal center, and connected by a transverse partition and having its inlet and outlet openings arranged one one each side of said transverse portion, whereby the flow of water is first directed longitudinally of the unit toward its ends, and afterward is returned toward the center thereof, the outlet opening of one unit communicating with the inlet opening of the next adjacent unit.

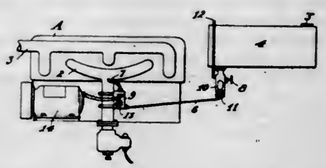
3. In a water heater, a bottom unit comprising a closed chamber having an inlet opening at one end and an outlet opening in its upper wall, and a forked partition in said chamber, having its extremities spaced from the end walls of said chamber, and having the stem end of the forks adjacent to the inlet opening of the chamber, the said outlet opening being arranged between the forked extremities of said partition.

4. In a water heater, in combination, a closed bottom chamber having an inlet opening for water at one end and an outlet opening in its upper wall, and provided with a forked partition spaced at its ends from the end walls of the chamber and having its stem end adjacent to and in line with the inlet opening, the forks of said partition inclosing the outlet opening, and a second chamber superimposed upon said bottom chamber, said second chamber provided with a longitudinal partition spaced from the end walls of said chamber, and with inlet and outlet openings arranged on opposite sides of said partition, the inlet opening in the second chamber communicating with the outlet opening in the bottom chamber.

5. In a water heater, a water circulating unit comprising a closed chamber having an inlet opening in the bottom and an outlet opening in the top, said openings being spaced apart, a transverse partition in said chamber separating said openings, and vertical partition walls extending longitudinally from the ends of said partition, and having their outer ends spaced from the end walls of said chamber.

[Claim 6 not printed in the Gazette.]

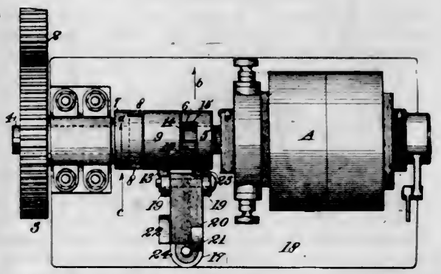
1,108,608. METHOD FOR ECONOMIZING FUEL AND PREVENTING CARBON DEPOSITS IN EXPLOSIVE-ENGINES. CHARLES L. NEDOMA, San Francisco, Cal., assignor of one-half to Joseph H. Fletcher, San Francisco, Cal. Filed Sept. 2, 1913. Serial No. 787,594. (Cl. 48—180.)



1. The method of increasing combustibility of hydrocarbon fuels and preventing carbon deposits in explosive engines consisting in heating H_2O_2 (peroxid of hydrogen) to liberate oxygen therefrom, converting the remaining H_2O into steam, and mixing the steam and oxygen with the vaporized hydrocarbon fuel.

2. The method of increasing combustibility of hydrocarbon fuels and preventing carbon deposits in explosive engines which consists in subjecting H_2O_2 to heat to liberate oxygen and then in converting the remainder into steam and introducing the steam and oxygen into the manifold of the engine.

1,108,609. ENGINE-STARTER. ROBERT NELSON, San Jose, Cal. Filed Dec. 26, 1913. Serial No. 808,696. (Cl. 123—149.)



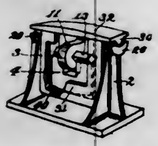
1. The combination with the armature shaft on a magneto, of a drive shaft, a coil spring connecting the two shafts, a collar on the armature shaft, a lug projecting from said collar, a collar on the drive shaft, a sleeve surrounding the coil spring lugs on the ends of said sleeve, the faces of the respective collars having slots into which said lugs project, a radially disposed releasing lug on the outer surface of the sleeve, a catch member engageable with the lug on the armature shaft collar, a releasing cam engageable with the releasing lug on the sleeve, and means for moving the catch and cam out of and into engagement with the last-named lugs.

2. In an engine starter, in combination with the armature shaft of a magneto and a drive shaft, a pair of spaced collars on the respective shafts each having a slot, a sleeve in said space between the collars having lugs at its ends which extend into the respective collar slots, one of said slots being of a length permitting movement of the sleeve independent of the collar which has said last named slot, a coil spring surrounding the shaft and being surrounded by the sleeve and having its ends connected to the respective collars, a releasing lug extending outwardly from the sleeve periphery, a lug extending outwardly from the periphery of one of the collars, and a spring actuated member having a cam to engage the releasing lug and a catch to engage the peripheral lug of the collar, said cam and catch being located in side by side relation and being relatively spaced in a direction longitudinally of the shafts.

3. An accelerator for ignition dynamos comprising in combination with the dynamo and its shaft, a driving shaft for the dynamo shaft, a collar carried by the driving shaft and provided with a plurality of notches, a collar on the dynamo shaft provided with an elongated slot, said collars being spaced one from the other, a hollow coupling member, lugs on the ends of the coupling member projecting into the slots of the collars, a spring within the hollow coupling member having one end projecting into one of the notches of the drive shaft collar, and having its opposite end projecting into the elongated slot of the armature shaft collar, a peripheral lug on the armature shaft collar, means for engaging the last mentioned lug to prevent said sleeve from turning until the lug on the coupling member has traversed the elongated slot, and means for releasing the locking means when the lug on the coupling member has completed its traverse of the elongated slot.

4. An accelerator for ignition dynamos comprising in combination with the dynamo and its shaft, a driving shaft, a collar carried thereby, a collar carried by the dynamo shaft; a coupling rigidly connected to the collar on the driving shaft, and yieldingly connected to the collar on the dynamo shaft, an exterior lug on the last mentioned collar, an exterior lug on the coupling member, a pivoted spring plate, a lug on each side of the spring plate, one of said lugs adapted to engage the exterior lug of the collar on the dynamo shaft to prevent the same from turning, and the other lug being adapted to successively engage the exterior lug on the coupling member to rock the spring plate on its pivot and release the collar on the dynamo shaft to permit same to rotate under the influence of the yielding connection.

1,108,610. WEIGHING-SCALE. HERMAN G. NORDEEN, Everett, Wash. Filed May 26, 1913. Serial No. 769,828. (Cl. 73—121.)



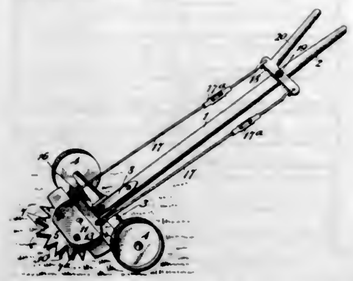
1. A pivot supporting means for scales comprising two separated standards provided with pivot-pin-receiving sockets in their upper ends, a yoke frame fitting between said standards and having projecting bearing pins adapted to bear upon said sockets in the standards, and a U-shaped bearing member fitting within said yoke frame and having a rounded bottom-bearing surface and bearing-pin-receiving recesses in the upper end faces of its arms, the yoke frame having flanges extending over the edges of said bearing member to retain it in place.

2. A pivot connection for scales comprising a yoke frame having projecting pivot-bearing members at one end and inwardly projecting flanges, a bearing member having a U-shape with its bottom surface slightly rounded and pin-receiving recesses in its upper end faces and adapted to engage with said flanges of the yoke frame to be held in place thereby.

3. A pivot connection for scale levers comprising a yoke frame having a pivot suspension bearing at its upper end, and a U-shaped bearing member fitting between the sides of said yoke frame and having pivot bearings upon the upper ends of its side arms, said two members having supporting bearing surfaces of a relatively rounded character, and one having projections engaging the other to hold the two in proper relative position.

1,108,611. GRASS-TRIMMER. CHARLES NYSTROM, New York, N. Y. Filed Apr. 16, 1914. Serial No. 832,198. (Cl. 56—19.)

1. A grass trimmer comprising a wheeled supporting structure including a handle, a fixed toothed element, a movable blade under the element and having cutting teeth, an oscillatory plate disposed over the element and having an upstanding flange, means connecting the plate and movable blade together and both oscillating about a single axis, operating rods connected with the flange of the said plate and including tensioning devices, and a hand lever mounted on the handle bar and connected with the rods to simultaneously push one and pull the other for oscillating the movable blade.



2. A grass trimmer comprising a movable supporting structure, a fixed blade thereon, a movable blade disposed under the fixed blade, an oscillatory element mounted over the fixed blade and having two members, a connection between one member and the movable blade for oscillating the latter, said connection passing through the fixed blade, and a pair of actuating rods connected with the other member for oscillating the said element and movable blade, said actuating rods including means for exerting a tension on the said element in a direction to maintain the movable blade against the fixed blade.

3. A grass trimmer comprising a movable supporting structure including a handle, a fixed blade thereon, a movable blade associated with and disposed under the fixed blade, an oscillatory element disposed over the fixed blade and connected with the movable blade whereby the element and movable blade oscillate in a plane parallel with the fixed blade, an upstanding member on the said element, rods connected with the upstanding member at opposite sides of the center of oscillation of the element, and an actuator connected with the rods for causing movement thereof simultaneously in opposite directions, each rod including means for exerting a tension on the said element to maintain the movable blade in contact with the fixed blade.

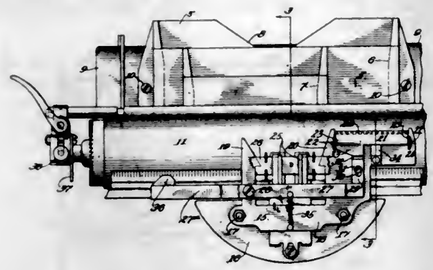
4. A grass trimmer comprising a movable supporting structure including a handle, a fixed blade thereon, a movable blade disposed under the fixed blade, a movable element disposed over the fixed blade, connecting means between the element and movable blade, a member rigidly connected with the element and extending at an angle to the plane in which the element moves, and means for exerting a tension on the member, whereby the element exerts an upward pull on the movable blade to maintain the same in contact with the fixed blade.

1,108,612. PAPER-POSITIONING DEVICE FOR TYPEWRITERS. CLINTON D. PALMER, Chicago, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1913. Serial No. 745,123. (Cl. 197—140.)

1. In a typewriter, a framework, a platen carriage mounted on the framework, feed mechanism on the carriage, two card-holding fingers mounted on the framework adjacent to the printing point, one of said fingers being fixed in position, and a card-stopping member mounted on the upper portion of said fixed finger for engaging the upper edge of a card fed by said feed mechanism.

2. In a typewriter, a framework; a paper carriage movable from right to left and vice versa on the framework; a paper stop mechanism on the framework, said stop mechanism tending to assume an inoperative position; and means attached to the carriage for actuating said mechanism.

3. A typewriting machine comprising a frame-work, a carriage movably mounted thereon and having a platen, guide means to direct cards into uniform position on said platen, a movable stop device on the frame-work, means for moving said stop device into position to stop a card, and means mounted on said carriage for operating said moving means.

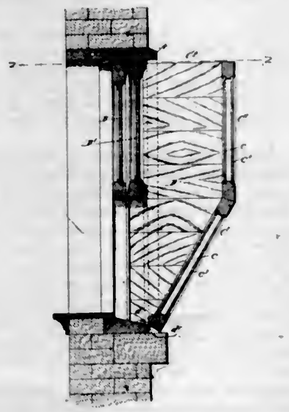


4. In a typewriter, a framework, a carriage movable from right to left and vice versa on the framework; a platen on the carriage; type bars arranged to strike the platen; key levers for actuating said type bars; an escapement for controlling the movement of the carriage, said escapement being operated by the key levers; a paper stop on the framework; a member on the framework for actuating the stop; and a member on the carriage arranged to engage said other member in a certain position of the carriage.

5. A typewriter comprising a frame-work, a carriage mounted thereon and having a platen, means mounted on said frame-work for stopping a card at a definite position with relation to the writing line, and means on the carriage for operating said stopping means.

[Claims 6 to 16 not printed in the Gazette.]

1,108,613. WINDOW-SHIELD. FREDERIC PARKER, Bedford, Mass. Filed Sept. 30, 1912. Serial No. 723,055. (Cl. 20—40.)



1. A window shield comprising a sound reflector having a surface adapted to be located at an agle to a window and means for supporting it with relation to a window frame with its upper edge farther from the window than its lower edge whereby sound striking it from without will be reflected.

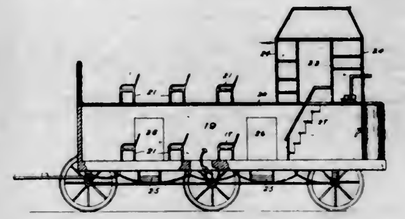
2. A window shield comprising a reflector having a surface adapted to be located at an angle to a window, means for supporting it with relation to a window frame with its upper edge farther from said frame than its lower edge whereby sound striking it an an angle from without will be reflected, in combination with walls adapted to form with the window shield a ventilating duct thereto.

3. In combination with a window, a sound shield comprising a reflecting surface located at an acute angle to the base of said window and opposite said window whereby sounds arising from without and tending to enter said window will be reflected outward, said shield being provided with means adapted to coöperate with said window whereby ventilation may be secured.

4. In combination, a reflector comprising a series of non-contacting parallel plates arranged at an acute angle to the base of the window and means for supporting them, and a window frame and means whereby said reflector may be supported at an acute angle to the base of said window frame whereby it will reflect sounds from below and the speed of any sound waves passing through it will be deadened in transit.

5. In combination with a window frame, a sound shield extending from side to side thereof and comprising a reflecting section located at an acute angle to the base of said window frame whereby it will reflect upwardly and outwardly sounds coming from below.

1,108,614. TRAVELING-WAGON. JENETTIE PATTERSON, Edmonton, Alberta, Canada. Filed Jan. 27, 1913. Serial No. 744,473. (Cl. 21—7.)



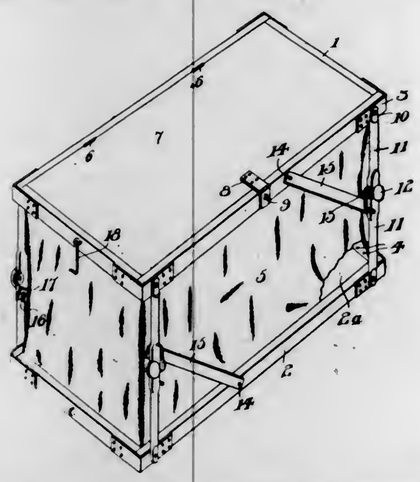
1. In a traveling wagon, a body 19, provided with doors 26 in each side of said body, folding steps 25, secured to the base sill of said body immediately under said doors, an observation platform 20, erected at the top of said body, seats situated in said body and on top of said platform, a room situated at the rear end and on top of the observation platform, said room having a door, windows, bunks and closets, a pair of stairs leading from the bottom floor of said body up to said room, said wagon body adapted to carry, at its rear end, a water cooler, substantially as shown and described and for the purposes set forth.

2. In a traveling wagon of the character described, a wagon body divided into rooms, a top of said body being substantially flat, forming an observation platform, and provided with observation seats, said body adapted to carry at its rear end a water tank, said body being provided with side doors and folding steps, one pair under each door and secured to the base sills, substantially as shown and described and for the purposes set forth.

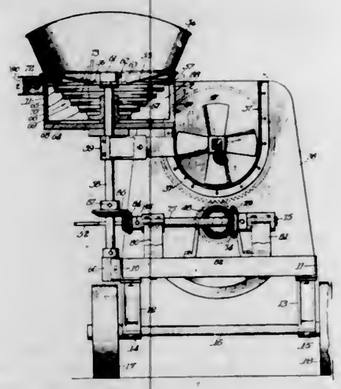
1,108,615. FOLDING CRATE. PETER PAUL, Boulder, Colo. Filed Dec. 11, 1913. Serial No. 806,049. (Cl. 150—49.)

A folding crate comprising top and bottom rectangular frames, a lid hingedly mounted on said top frame, a bottom plate secured to said bottom frame, flexible walls secured to the inner edges of said top and bottom frames, angle straps bracing the said frames, hinged members pivotally connected to said straps and having springs thereto for maintaining stiff connections, pivoted angularly disposed braces carried by the top and bottom frames and be-

ing adapted for connection to certain of said members and hooks and staples mounted in the ends of the top and bottom frames for maintaining the said crate in collapsed condition.



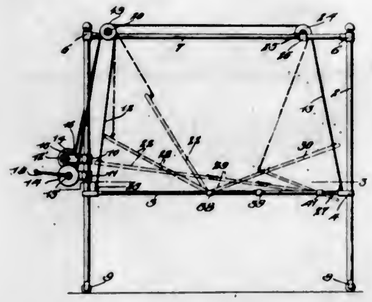
1,108,616. SCREENING APPARATUS. JAMES W. PETTIBONE, Muskegon, Mich., assignor to Philip P. Schnorbach, Louis E. Schnorbach, and James W. Pettibone, Muskegon, Mich., Copartners doing business as Mixer Machine Company. Filed Mar. 8, 1913. Serial No. 753,072. (Cl. 83—56.)



1. A screen of the character described comprising a vertically disposed shaft; a series of concentric rings spaced apart and gradually increasing in diameter as they approach the top portion of the screen, thereby providing an inclined perforate wall; a plurality of angularly formed scrapers comprising integral parts of said rings, and an integral hub for attaching said frame to a vertically disposed shaft; a casing, surrounding said screen, having a discharge opening for the screened material near its bottom and a tangentially disposed opening near its top for discharge of the rejected material.

2. A screen of the character described, comprising a vertically disposed shaft; a series of concentric rings spaced apart and gradually increasing in diameter as they approach the top portion of the screen, thereby providing an inclined perforate wall; a plurality of angularly formed scrapers comprising integral parts of said ring, a casing, surrounding said screen, having a discharge opening for the screen material near its bottom and a tangentially disposed opening near its top for discharge of the rejected material.

1,108,617. INVALID-BED. JOHN R. PHILLIPS, Poughkeepsie, N. Y. Filed June 28, 1913. Serial No. 776,300. (Cl. 5—44.)



1. An invalid's bed, comprising a supporting framework, a bed frame mounted therein and embodying hingedly connected head, foot and intermediate sections, and a removable seat carried by the intermediate section and extending transversely thereof, said seat being formed with a plurality of relatively small apertures and a single large opening, as and for the purpose set forth.

2. An invalid's bed, comprising a supporting framework, a bed frame mounted therein and embodying hingedly connected head, foot and intermediate sections, and a removable seat extending transversely of the intermediate section and provided at its ends with hinged strips, the sides of said intermediate section being provided with inwardly projecting lugs designed for engagement by the flanges of said straps whereby to removably support the seat on said intermediate section.

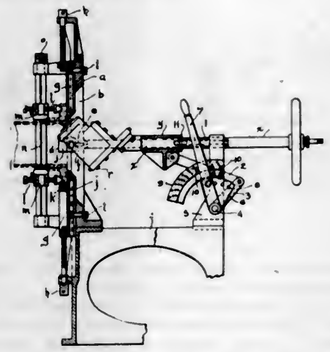
3. An invalid's bed, comprising a supporting framework, a bed frame mounted therein and including a hingedly connecting head section, provided with hinges and pintles therefor, which latter are extended outwardly in a lateral direction and are provided at their extremities with rounded heads, the supporting frame being provided at its sides with collars provided with sockets on which the heads of said pintles are adapted to rest removably, whereby the bed may be tilted laterally with either side above the other, as and for the purpose set forth.

4. An invalid's bed, comprising a supporting framework, a bed frame mounted therein and embodying hingedly connected head, foot and intermediate sections, means for rigidly connecting said sections together in alinement with each other, and a plurality of supporting devices carried by the supporting framework at the sides thereof, one pair of said supporting devices being designed to loosely support the bed frame at the joints between the head and intermediate sections, another pair of supporting devices being designed to support the bed frame at the points between the foot and intermediate sections, and another set of supporting devices being designed to support the foot section near the rear end thereof.

5. An invalid's bed, comprising a supporting framework, a bed frame mounted therein and embodying hingedly connected head, foot and intermediate sections, means for rigidly connecting said sections together in alinement with each other, and a plurality of supporting devices carried by the supporting framework at the sides thereof, one pair of said supporting devices being designed to loosely support the bed frame at the joints between the head and intermediate sections, another pair of supporting devices being designed to support the bed frame at the joints between the foot and intermediate sections, and another set

of supporting devices being designed to support the foot section near the rear end thereof, said last named supporting devices being extended inwardly from the sides of the supporting framework and the foot section being provided at such point with clips projecting outwardly from the sides thereof and adapted to removably rest upon the last named supporting devices, the latter being provided at their rear ends with upstanding lugs, for the purpose specified.

1,108,618. PIPE-EXPANDING MACHINE. JOHN I. PILSTON, Wyandotte, Mich. Filed Oct. 31, 1913. Serial No. 798,396. (Cl. 153—81.)



1. The combination of means for supporting a pipe flange, a rotatable supply pipe, a bracket on the end of said rotatable supply pipe provided with a passage therethrough, a holder adjustably connectible to said bracket and provided with a passage that connects with the passage of the bracket at selected positions, the said holder being adjustable across a face of the bracket which face lies at an angle of about forty-five degrees to the supply pipe, and an expanding tool supported by the holder at an angle of approximately one hundred thirty-five degrees with respect to the axis of the supply pipe, said expanding tool having a passage connecting with the passage of the holder.

2. The combination with means for supporting a pipe flange, of a supply pipe that is rotatable, a bracket provided with a passage carried on the end of the supply pipe, a holder provided with a passage connected with the passage of the bracket, said holder being angularly disposed with respect to the bracket, and an expanding tool disposed at an angle of approximately one hundred thirty-five degrees with respect to the supply pipe by reason of the angular disposition of the holder and the bracket, the said expanding tool being provided with a striking tool having a V-shaped recess on its end.

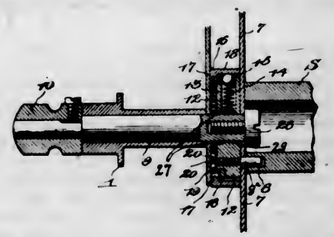
3. The combination with means for supporting a pipe flange, of a rotatable supply pipe, an angular bracket carried on the end of the same, an angular holder comprising a T-casting, a pipe expanding tool carried by the T-casting, the said angular bracket and holder having passageways for the operating fluid, and the angular bracket being connectible at various points along the T-casting to vary the radial projection of the expanding tool, substantially as described.

4. The combination with means for supporting a pipe flange, of a rotatable supply pipe, a bracket carried on the end thereof comprising a nipple and an angularly disposed flange, an angular holder comprising a T-casting bored for the passageway of the operating fluid and having a plurality of tap holes, the said angular bracket and T-casting being connectible at selectable places to vary the radial projection of the holder and a pipe expanding tool fastened to the holder and angularly disposed with respect to the plane of the pipe flange.

5. The combination of means for supporting a pipe flange, a rotatable supply pipe, a pipe expanding tool carried on the end of the supply pipe, a sliding cross-head connected with the supply pipe to shift the same but to allow the same to rotate within the cross-head, a lever for operating the cross-head, and adjustable stops for limiting the travel of the cross-head, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

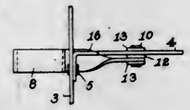
1,108,619. REWINDER. SPRIGG POLAND, Olney, Ill. Filed Mar. 2, 1914. Serial No. 822,092. (Cl. 197—133.)



1. In a mechanism of the character described, the combination of a supporting bracket arm, means for attaching the said member to a typewriting machine, a shaft in the outer end of the bracket arm, a reel disk mounted thereon, a spool-actuating disk adjacent the reel disk and having radial channels, springs mounted in the channels, balls against which the springs press, a ring inclosing the spool-actuating disk and driven by the balls, the aforesaid ring also having a ratch portion, and means engageable with the ratch to prevent the device from being driven in both directions.

2. In a mechanism of the character described, the combination of a bracket arm adapted to be attached to a typewriting machine, a shaft mounted in said arm, a reel disk mounted on the shaft, an inner disk adjacent the reel disk and having a pin projecting therethrough to engage with and actuate a reel or spool, the inner disk having radial channels, a spring and a ball against which the spring presses within each of the aforesaid channels, a ring within which the aforesaid inner disk is mounted, said ring having a ratchet portion, a pawl engageable with the aforesaid ratchet portion of the ring, a disk arm mounted adjacent the aforesaid ring, means for maintaining the pawl in engagement with the ratch, a longitudinally reciprocable arm pivotally attached to the disk arm to actuate same, and means for securing the members set forth in operative engagement.

1,108,620. BEDSTEAD. ANGELO PROFETO and HARRY E. GROSS, Pittsburgh, Pa. Filed Apr. 8, 1913. Serial No. 759,677. (Cl. 5—25.)



In a mattress supporting frame, the combination with the end bar and a cross bar connected therewith at right angles, of a hanger having an outer U-shaped portion adapted to engage over a supporting side bar, a middle flat portion adapted to bear simultaneously underneath the end bar and cross bar adjacent to their juncture and providing a support therefor, and an inner portion twisted into alinement with the cross bar and pivoted thereto closely adjacent to its face, the edge of the twisted portion being adapted to spring laterally and bind against the face of the cross bar to effect frictional holding engagement therewith when the hanger is thrown backwardly thereon, substantially as set forth.

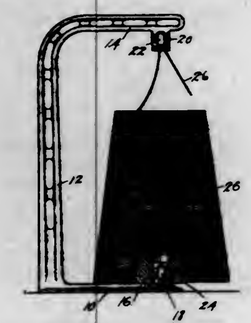
1,108,621. COMBINED GARMENT-HANGER. STANLEY RATAICZYK, Milwaukee, Wis. Filed Feb. 25, 1914. Serial No. 820,934. (Cl. 211—13.)



1. A garment hanger comprising a rod, a sleeve secured to each end thereof and terminating into two pairs of supporting arms, the arms of each pair forming at their upper termini a barrel, a coat support including a pair of triangular-shaped portions connected to said barrels, and a hanger element connected with said coat support and provided with a hook.

2. A garment hanger comprising a rod, a sleeve secured to each end thereof and terminating into two pairs of supporting arms, the arms of each pair forming at their upper termini a barrel, a coat support including a pair of triangular-shaped portions connected to said barrels, and a hanger element connected with said coat support and provided with a hook, the pairs of arms at each end of said rod being spaced from each other and further extending upwardly and outwardly at an inclination.

1,108,622. REVERSIBLE TWINE-HOLDER. HOMER B. RICH, Cambridge, Mass., assignor to Wright Cutter Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 29, 1913. Serial No. 798,124. (Cl. 242—141.)

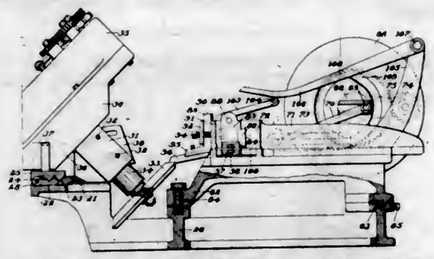


1. A reversible twine holder, comprising a base and an overhanging arm, each provided with a supporting member adapted to hold the mass of twine, each supporting member having provision for guiding the twine as it is drawn from the mass, said members being oppositely disposed so that when one is employed for supporting the mass the other may be employed for guiding the twine as it is drawn from said mass.

2. A reversible twine holder, comprising an attaching portion and a portion substantially parallel thereto, each portion being provided with a boss, said bosses being in substantially axial alinement and each having a twine-guiding aperture, whereby when said holder is secured in position one boss is adapted to support a mass of twine and the other boss is in position to guide the twine as it is drawn from the mass.

1,108,623. GEAR-CUTTING MACHINE. EDWARD F. ROBERTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 15, 1912. Serial No. 725,954. (Cl. 90—9.)

1. In a gear cutting machine, the combination with the bed thereof and former-cone, of a support adjustably mounted on said bed and arranged to be bodily moved about an axis perpendicular to the plane upon which the former-cone rolls, blank holding and operating mechanism including said former-cone and the surface upon which it rolls, and tool holding and operating mechanism, one of said mechanisms being mounted on said adjustable support and the other said mechanism being mounted on said bed.



2. In a gear cutting machine, the combination with the bed thereof, and means for holding the blank, of a support for the tool operating mechanism adjustably mounted on said bed, and arranged to be bodily moved about a vertical axis adjacent the blank, a tool operating head mounted on said support to reciprocate substantially in a plane across the face of the blank, a tool support mounted to slide in the head, means for reciprocating the head, and means for simultaneously sliding the tool support.

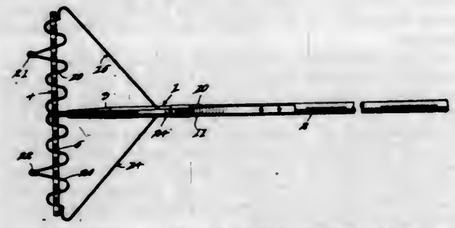
3. In a gear cutting machine, the combination with the bed thereof, and means mounted on said bed for holding the blank, of tool holding and operating mechanism mounted on the bed, and means permitting adjustment of the tool holding mechanism, relative to the blank holding mechanism, parallel to a plane which is tangent to the surface of the blank, said tool operating mechanism comprising means for operating the tool in a curved path across the face of the blank.

4. In a gear cutting machine, the combination with the bed, and blank holding and operating mechanism mounted thereon, of a tool supporting head mounted for reciprocation on said bed, means for operating said head, means permitting adjustment of the part of said bed supporting the head relative to the blank holding mechanism, and means for causing a relative movement between the blank and the tool in a horizontal plane but transversely to the reciprocating movement of the head and simultaneously with the latter movement.

5. In a machine for cutting bevel gears, in combination, the bed or frame, means mounted on the bed for holding and feeding the blank, a tool holding and operating mechanism including means for moving the tool in a curved path across the face of the blank and substantially parallel to a plane tangent to the conical pitch surface of the blank, and a movable support for said mechanism, on said bed, permitting the mechanism to be adjusted parallel to said tangent plane.

[Claim 6 not printed in the Gazette.]

1,108,624. ATTACHMENT FOR RAKES. ALBERT L. RUMRILL, West Somerville, Mass. Filed Feb. 27, 1914. Serial No. 821,467. (Cl. 55—146.)

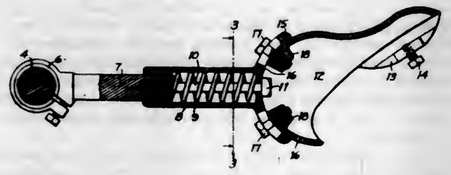


1. In combination with a rake a cleaning device comprising a pair of triangular members secured together, the bases of each of said triangular members being bent to form a plurality of U-shaped members, each of said U-shaped members being so arranged that the arms thereof extend between the teeth of the rake, means to pivotally secure the cleaning device to the rake handle, and yieldable means to normally hold the stripping member in its raised position.

2. In combination with a rake a stripping member comprising a pair of triangular members, the base of each of said triangular members being bent to form U-shaped members, the arms of said U-shaped members extending between each of the rake teeth, one of the U-shaped members on each of the triangular members being extended to form projections by means of which the stripping element may be forced toward the ends of the rake teeth, means to pivotally secure the stripping element to the rake handle, and a leaf spring adapted to normally hold the stripping element in its raised position.

3. In combination with a rake a stripping element comprising a pair of triangular members, the adjacent sides of said triangular members being welded, a plurality of U-shaped members formed of the forward sides of the triangular members, a sleeve secured to the triangular members and pivotally secured to the rake handle, and a spring to normally hold the stripping element in its raised position.

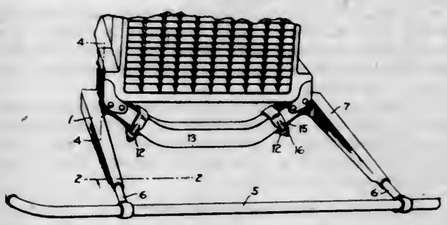
1,108,625. AUTOMOBILE-BUMPER. JAMES H. SAGER, Rochester, N. Y., assignor to J. H. Sager Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 24, 1912. Serial No. 679,719. (Cl. 213—39.)



1. In an automobile bumper, the combination of a base-member formed to seat upon the forward extremity of the side frame-member of an automobile and provided with a hollow forwardly-convex portion and an opening in the front-wall thereof; a sleeve having a rear extremity fitting against the convex surface of said front-wall and covering said opening; means for fixing the sleeve adjustably upon said surface, whereby vertical angular adjustment of the sleeve is permitted; a slide-member mounted in the sleeve and adapted, at its forward end, to support a bumper-bar or the like, the rear-end of the slide-member projecting through the rear-end of the sleeve and into the opening in the base-member, and the hollow forwardly-projecting portion of the base-member affording space in which the slide-member may move when it is forced rearwardly; and a spring interposed between the sleeve and the slide-member and tending to hold the latter in its normal forward position within the sleeve.

2. An automobile bumper having, in combination, a transverse bumper-bar, hollow base-members formed to seat upon the forward extremities of the side frame-members of an automobile and provided, at their forward extremities, with circularly-curved surfaces and with central openings therein, supports extending forwardly from the base-members and carrying the bumper-bar, each of said supports comprising a stem fixed to the bumper-bar, a sleeve in which the stem is slidingly mounted, a spring inclosed within the sleeve, a rod extending rearwardly, from the stem, through the rear end of the sleeve and into the central opening in the base-member, and lugs extending upwardly and downwardly from the sleeve and forming a segmentally-curved surface seated upon the curved surface of the base-member; and means for clamping said lugs adjustably against said surface.

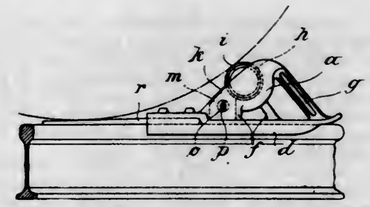
1,108,626. BUMPER FOR AUTOMOBILES. JAMES H. SAGER, Rochester, N. Y., assignor to J. H. Sager Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 30, 1912. Serial No. 739,337. (Cl. 213—39.)



1. An automobile-bumper having, in combination, a bumper-bar, supports for the bar comprising arms extending rearwardly therefrom, and arms extending transversely and inwardly from the rear-ends of said rearwardly-extending arms, the inwardly-extending arms being adapted to lie within a channel-shaped transverse frame-member of an automobile, and means for clamping the inwardly-extending arms within the channel of said frame-member.

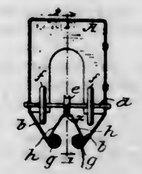
2. An automobile-bumper having, in combination, a bumper-bar, supports for the bar comprising hollow members extending rearwardly therefrom, and channel-shaped upwardly-opening transverse inwardly-directed arms extending integrally from the rear-portions of said rearwardly-extending members and adapted to lie within a channel-shaped transverse frame-member of an automobile, and clips adapted to surround said frame-member and clamp said arms therein.

1,108,627. SCOTCH-BLOCK WITH ROLLER. EDUARD SCHOLLE, Neuss, Germany, assignor to The Firm of Wecks & Co., proprietors Messrs. Graf, Keller and Jost, Oberhausen, Rhineland, Germany. Filed June 6, 1914. Serial No. 843,357. (Cl. 104—49.)



Scotch block with roller consisting of a strongly designed body, said body having on its underside a gliding surface and in front of the same a readily exchangeable tongue, on the top of said body a pan, in said pan a pinless roller, a separate extension of said pan, supporting the roller therein, said extension consisting of a block detachably secured in position by means of a bolt penetrating the sides of the pan, and having means to secure it in position.

1,108,628. TOY CAR. FRED EDWIN SEAL, Winchester, Va. Filed Apr. 21, 1914. Serial No. 833,438. (Cl. 46—48.)



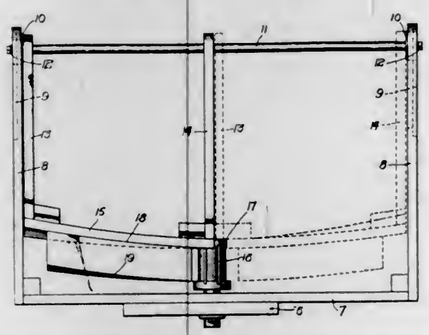
1. A car body formed of a sheet of thin flexible material which is bent or doubled along its transverse middle, the

sides of the same being in parallel position and the lower edges of the sides bent inward at a considerable angle and their terminals or lower edges spaced apart to permit the application of a car to, and removal of the same from, a wire or other support.

2. A sheet metal car-body having internal running wheels, and its lower edges extending downward and curved at their extremities to produce pockets, and weights inserted and held in said pockets, the same being spaced apart, as described.

3. A toy car comprising a body having transverse axles near its end and running wheels mounted fast thereon, central momentum wheels also mounted on the same axles and arranged in pairs and on opposite sides of the running wheels, as described.

1,108,629. MACHINE FOR FORMING WOODEN GEAR-TEETH. WILLIAM SEIDEL, Chicago, Ill., assignor to American Pattern & Model Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1913. Serial No. 804,724. (Cl. 90—1.)



1. In a machine of the class described, the combination of cutting means, a templet to which the work is secured, carrying means for the templet, and a mounting for said carrying means providing a center of movement on which said carrying means is permitted a simultaneous sliding and swinging movement whereby the work is carried past the cutting means and maintained in engagement therewith, substantially as described.

2. In a machine of the class described, the combination of cutting means, a templet to which the work is secured, carrying means for the templet, a mounting for said carrying means providing a center of movement on which said carrying means is permitted a simultaneous sliding and swinging movement whereby the work is carried past the cutting means and maintained in engagement therewith, and means permitting adjustment of said mounting toward and from said cutting means, substantially as described.

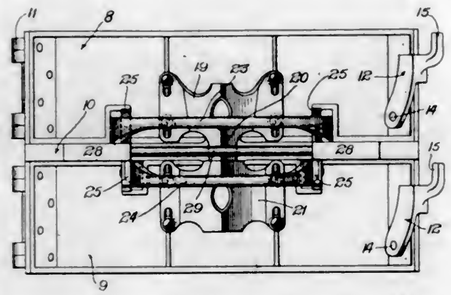
3. In a machine of the class described, the combination of cutting means, a templet to which the work is secured, carrying means for the templet, a mounting for said carrying means providing a center of movement on which said carrying means is permitted a simultaneous sliding and swinging movement whereby the work is carried past the cutting means and maintained in engagement therewith, and a surface upon said cutting means serving as a gage against which the templet engages, substantially as described.

4. In a machine of the class described, the combination of cutting means, a templet to which the work is secured, carrying means for the templet, and a mounting on which the carrying means is permitted a simultaneous sliding and rotary movement, said templet extending below said mounting and diagonally disposed thereto, substantially as described.

5. In a machine of the class described, the combination of cutting means, a templet to which the work is secured, carrying means for the templet, a mounting on which the carrying means is permitted a simultaneous sliding and rotary movement, templet extending below said mounting and diagonally disposed thereto, and means permitting adjustment of said mounting toward and from said cutting means, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,630. MOLDER'S FLASK. WILLIAM SEIDEL, Chicago, Ill., assignor to American Pattern & Model Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1914. Serial No. 830,648. (Cl. 22—48.)



1. In a molder's flask, the combination of a match board, a cope section, a drag section, members arranged upon opposite sides of the match board, centering members carried by the cope section, centering members carried by the drag section, said centering members being adapted to engage the members carried by the match board whereby the cope and drag sections are each independently centered with respect to the match board, substantially as described.

2. In a molder's flask, the combination of a match board, a cope section, a drag section vertically extending oppositely disposed members on the match board, centering members on the cope section arranged to engage said vertical members, centering members on the drag section arranged to engage said vertical members whereby the cope section and drag section are independently centered with respect to the match board, substantially as described.

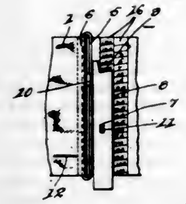
3. In a molder's flask, the combination of a match board, a cope section, a drag section, members arranged upon opposite sides of the match board, centering members carried by the cope section, centering members carried by the drag section, said members being adapted to engage the members carried by the match board whereby the cope and drag sections are independently centered with respect to the match board and the centering members carried by one of said drag sections telescoping with respect to the centering members carried by the other of said sections when the sections are placed in position, substantially as described.

4. In a molder's flask, the combination of a match board, a cope section, a drag section, vertically extending oppositely disposed members on the match board, centering members on the cope section arranged to engage with said vertically extending members, centering members on the drag section arranged to engage with said vertically extending members whereby the cope section and drag section are independently centered with respect to the match board, and the centering members on one of said sections telescoping with the centering members on the other of said sections when the sections are placed in position, substantially as described.

5. In a molder's flask, the combination of a match board, a cope section and a drag section, lever members on the cope section, lever members on the drag section, said lever members acting to initially lift said sections away from the match board, and means for independently centering the cope and drag sections with respect to the match board, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,108,631. CHECK-BOOK HOLDER. JOHN F. SHOEMAKER, Brandsville, Mo. Filed Dec. 27, 1913. Serial No. 809,023. (Cl. 11—3.)



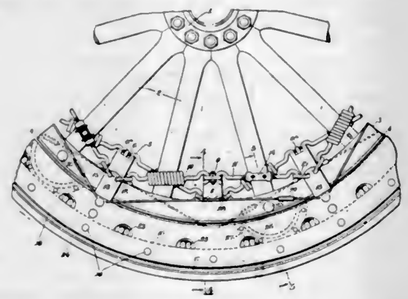
1. A check book holder provided with means for holding a check book, and a sliding pivoted cutter supported within the book, and provided with means for severing the checks and for indicating the amount of the face of the check.

2. A check book holder provided with means for holding a check book, therein, the checks of said book having vertical columns of indicating amounts for which the check may be drawn, and a cutter mounted to slide on a guide loop connected to the holder, said cutter being pivotally mounted to the guide and adapted to be swung on the pivot out of the way and held in connection with the holder when not required for use.

3. A check book holder having a pocket for receiving the shortened back cover of the check book, a pocket for deposit slips, a pivoted and sliding cutter for severing the checks from the stub to indicate the amount called for by the face of the checks, and means for holding the check book holder closed.

4. A check book holder provided with a cutter for severing the checks from the stub, a guide loop upon which said cutter is mounted to slide, said cover being pivoted to said guide, and means for holding the cutter out of the way when not required for use.

1,108,632. SPRING-WHEEL FOR VEHICLES. JOHN F. SIPE and HARRY E. SIPE, New York, N. Y. Filed Feb. 11, 1910. Serial No. 543,268. (Cl. 152—32.)



1. In a spring wheel the combination of a wheel member containing a hub, a wheel member containing a tread, a plurality of suspension devices attached at both ends to one of the members and arranged at an angle to the axis of the wheel, and a plurality of operating devices attached by movable joints to the other member and connected to the suspension devices and arranged substantially parallel to the axis of the wheel, thereby suspending the hub member within the tread member, substantially as set forth.

2. In a spring wheel the combination of a wheel member containing a hub, a wheel member containing a tread, a plurality of spring devices attached at both ends to one of the members and arranged at an angle to the axis of the wheel, and a plurality of operating devices attached by movable joints to the other member and connected to the spring devices and arranged substantially parallel to the axis of the wheel, thereby suspending the hub member within the tread member, substantially as set forth.

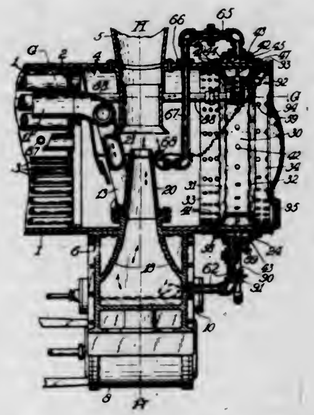
3. In a spring wheel, the combination of a wheel member containing a hub, a wheel member containing a tread, a plurality of yielding suspension devices attached at each end to one of the members, and a plurality of operating devices attached by movable joints to the other member and connected to an intermediate part of the suspension devices, and the operating devices set parallel to the axis of the wheel, substantially as set forth.

4. In a spring wheel the combination of a wheel member containing a hub, a wheel member containing a tread, a plurality of yielding suspension devices attached at each end to the tread member, and a plurality of operating devices attached by movable joints to the hub member and connected to an intermediate part of the suspension devices and the operating devices set parallel to the axis of the wheel.

5. In a spring wheel the combination of a wheel member containing a hub, a wheel member containing a tread, a plurality of spring suspension devices attached at each end to the tread member, and a plurality of opearting rods attached at one end by movable joints to the hub member and connected at the other end to an intermediate part of the suspension devices and the operating devices set parallel to the axis of the wheel.

[Claim 6 not printed in the Gazette.]

1,108,633. MEANS FOR HEATING BOILER FEED-WATER. BUAR R. SKINNER, Aberdeen, S. D. Filed May 12, 1913. Serial No. 767,103. (Cl. 122—425.)



1. Means for heating feed water including a heating boiler comprising three concentrically arranged rings secured together to form two annular chambers, and stay-bolts secured to the two inner ones of the rings.

2. Means for heating feed water including a heating boiler comprising a partitional ring, an inner ring having two end portions secured to the inner side of the partitional ring, and an outer ring having two end portions secured to the outer side of the partitional ring.

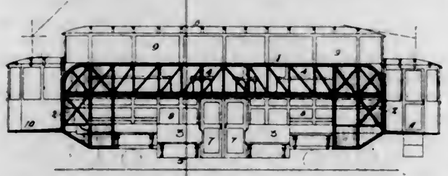
3. A steam-boiler provided with an annular heating boiler having two concentrically arranged chambers, the outer one of the chambers having an inlet and also an outlet, and two conduits connected with the inner chamber and also with the steam-boiler on opposite sides respectively of a horizontal plane.

4. Means for heating feed water including a water-chamber, a steam-chamber having an inlet and an outlet, a casing, a feed pipe extending through the casing to the water-chamber, and a steam-pipe connected with the steam-chamber and extending into the casing through one end and nearly to the opposite end thereof.

5. Means for heating feed water including a smoke-box to receive heat and having a water-heating extension thereon provided with two chambers, one chamber being encircled by the other to receive the feed water, an inlet for conducting steam into the encircling chamber, a front mounted on the water-heating extension, and a door mounted on the front.

[Claims 6 to 22 not printed in the Gazette.]

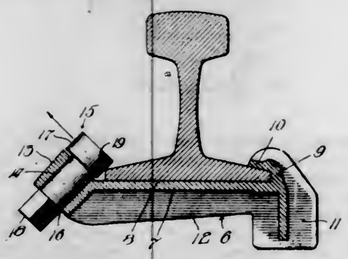
1,108,634. FRAMEWORK OF DOUBLE-DECKED VEHICLES. LUDWIG SPÄNGLER, Vienna, Austria-Hungary. Filed Mar. 5, 1914. Serial No. 822,737. (Cl. 105—190.)



1. In a double decked vehicle the combination of a lower deck having windows and central entrance doors at the sides and an upper deck having windows at the sides with longitudinal girders located on both sides of the vehicle between the lower edges of the windows in the upper deck and the upper edges of the windows and entrance doors of the lower deck, and uprights connected to the ends of the said longitudinal girders, such uprights being supported by the trucks at both ends of the vehicle.

2. In a double decked vehicle the combination of a lower deck having windows and central entrance doors at the sides and an upper deck having windows at the sides with longitudinal girders located on both sides of the vehicle between the lower edges of the windows in the upper deck and the upper edges of the windows and entrance doors of the lower deck, and uprights connected to the ends of the said longitudinal girders, such uprights being supported by the trucks at both ends of the vehicle and end platforms extending beyond and supported by the said end uprights.

1,108,635. RAIL-ANCHOR. ARTHUR L. STANFORD, Chicago, Ill. Filed Mar. 21, 1914. Serial No. 826,294. (Cl. 238—4.)



1. In a rail anchor the combination of a body portion embodying a floor underlying the rail, a tie abutment, a gripping jaw fixed with respect to the body portion, a rotatable member oppositely disposed from the fixed gripping jaws and having its axis of rotation at an angle to the floor of the body portion and forming the movable gripping jaw of the anchor, said rotatable member extending diagonally across the upper edge of the rail base with its acting face arranged to be brought into engagement with such edge and a mounting for said member carried by said body, substantially as described.

2. In a rail anchor the combination of a body portion embodying a floor underlying the rail, a tie abutment, a rail gripping jaw fixed with respect to said body portion, a rotatable member embodying an eccentric head, said member being oppositely disposed from the fixed jaw and constituting a movable gripping jaw, said member having its axis of rotation at an angle to the floor of the rail base, said head extending diagonally across the upper edge of the rail base and arranged to be brought into engagement with such edge and a mounting for said member carried by said body portion, substantially as described.

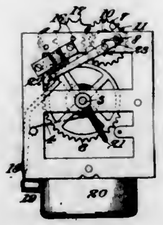
3. In a rail anchor the combination of a body portion embodying a floor underlying the rail, a tie abutment, and a fixed gripping jaw formed integral with the body portion, a rotatable member embodying an eccentric head and forming a movable gripping jaw and oppositely disposed from the fixed gripping jaw, said head being angularly disposed with respect to the floor of the body portion and extending diagonally across the upper edge of the rail base and arranged to be brought into engagement with such edge and a mounting for said rotatable member integral with said body, substantially as described.

4. In a rail anchor the combination of a body portion embodying a floor underlying the rail, a tie abutment and a gripping jaw integral with the body portion and located at one end thereof, an angularly disposed sleeve at the other end of the body, a stem rotatably mounted in said sleeve, an eccentric head on the stem, said head extending diagonally across the upper edge of the rail base and arranged to be brought into engagement with such edge, said head constituting a movable gripping jaw, substantially as described.

5. In a rail anchor, the combination of a body portion embodying a floor underlying the rail, a tie abutment and a fixed gripping jaw formed integral with said body portion, a stem movable with respect to the body portion and oppositely disposed from the fixed jaw and forming a movable gripping jaw, said stem being diagonally disposed with respect to the floor of the body portion, the outer end of the stem extending diagonally across and in engagement with the upper edge of the rail base and a sleeve integral with said body and forming a mounting for said stem, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,636. AUTOMATIC ALARM TIME-CLOCK. GEORGE B. STARR, Oakland, Cal., assignor of one-half to O. J. Meads, Oakland, Cal. Filed Jan. 21, 1913. Serial No. 743,299. (Cl. 161—16.)

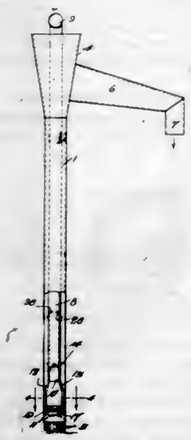


1. In an automatic alarm timer, a spring actuated winding shaft, alarm mechanism, means to hold the alarm inoperative, means whereby operation of the winding shaft winds said alarm mechanism, including a member which is disengaged from the alarm mechanism after the winding shaft has moved a predetermined distance, and means operated by the winding shaft to release the alarm mechanism holding means after disengagement of said member from the alarm mechanism.

2. In an automatic alarm timer, a winding shaft, alarm mechanism, means to hold the alarm inoperative, means operative by said shaft for winding the alarm mechanism and being moved out of operative engagement with the alarm mechanism when the shaft has traveled a predetermined distance, and means operated by the shaft to release said means which holds the alarm inoperative after the winding means has been disengaged from the alarm mechanism.

3. In an automatic alarm timer, a spring actuated winding shaft, a mutilated gear on said shaft, alarm mechanism including a spring actuated alarm shaft and a hammer carrying lever, means for winding the alarm shaft from the gear, a trip finger carried by said winding shaft, a bell crank arranged to have one arm thereof engaged by said trip finger, a spring detent normally disposed in the path of the hammer carrying lever, and means carried by the other arm of the bell crank to actuate said detent to release the hammer carrying lever after the gear has been disengaged from the winding means.

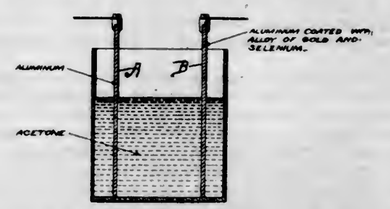
1,108,637. HAND-PUMP. ALVIN CHARLES STIEFEL, Houma, La. Filed Aug. 21, 1913. Serial No. 785,929. (Cl. 103—80.)



1. A hand operated pump, comprising a cylindrical casing having one end flaring and provided with a discharge spout at the flaring portion, a plunger rod within the casing, said rod extending out of the casing at the flaring end and having a handle, arms connected with the opposite end of the rod from the handle and extending longitudinally beyond said end, a ring rigidly connected with one arm and arranged coaxial with the plunger, a pivot pin rigid with the other arm and lying diametrically of the ring on the inner side thereof, a sectional valve consisting of approximately semi-circular flaps hinged to the pivot pin and normally lying on the ring, a sleeve engaging the end of the casing remote from the flaring end and extending beyond the casing, and having openings in its side wall, the upper end of the sleeve being cut away from each side inwardly and downwardly to the center of the said sleeve, a pivot pin arranged transversely of the sleeve at the junction of the said cut-away portion, a sectional valve consisting of approximately semi-circular flaps, said flaps being hinged to the pivot pin and normally resting on the cutaway edge of the sleeve, and means in connection with the sleeve for limiting the lifting movement of the said flaps.

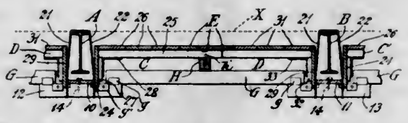
2. A pump comprising a tubular casing provided near one end with a lateral outlet, a plunger rod within the casing and extending beyond the casing at the end adjacent to the lateral outlet, arms connected with the opposite end of the rod from the outlet and extending longitudinally beyond the said end, a ring rigidly connected with one arm, a pivot pin rigid with the other arm and extending diametrically of the ring on the inner side thereof, a sectional valve consisting of a plurality of flaps, each flap being hinged to the pivot pin and normally lying on the ring, a pivot pin held transversely of the casing at the end remote from the outlet, a sectional valve consisting of flaps hinged to the pivot pin, and a support for the last-named pivot pin detachably engaged with the casing and having means for holding the flaps in inclined position and having other means for limiting the lifting movement of the flaps.

1,108,638. ELECTRO-OPTICAL CELL. CURT STILLE, Zehlendorf-West, near Berlin, Germany. Filed Apr. 22, 1913. Serial No. 762,926. (Cl. 204—33.)



In a photo-electric cell the combination with acetone as electrolyte of two metallic aluminum plates, one of pure aluminum and the other of aluminum coated with an alloy of gold and selenium.

1,108,639. CENTERING FOR CONCRETE ARCHES. LOUIS F. SYLVESTER, Hoboken, N. J., assignor to National Fire Proofing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1911. Serial No. 657,947. (Cl. 25—131.5.)



1. A centering for constructing arches between parallel beams embodying a series of hangers attached to said beams and depending therefrom, soffit boards positioned below said beams, substantially parallel thereto, said soffit boards being supported by said hangers in spaced relation to the under surfaces of said beams, unitary sections positioned to span the space between said parallel beams, each section comprising a haunch board and a plurality of arms attached to the haunch board and extending horizontally therefrom so that the section is adapted as a unit to be placed in position and to be removed when required, said haunch boards of the two unitary sections being supported adjacent to the sides of the suspended soffit boards so as to be in spaced relation to the adjacent beams and said horizontal arms of one unitary section being in overlapping relation to the similar arms of the other unitary section, means by which the horizontal arms of the two sections are upheld between the haunch boards, and sheathing boards supported on said horizontal arms between the haunch boards.

2. A centering for use in installing arches embodying soffit boards adapted to be positioned below the beams, soffit blocks fast with said soffit boards, the length of each soffit block exceeding the width of the soffit board to which it is attached, means for suspending the soffit blocks from the beams, and unitary sections or members positioned between the soffit boards, each section or member having a haunch board which is supported by the extended end portions of the soffit blocks of one soffit board.

3. A centering for use in installing arches embodying soffit boards adapted to be positioned below the beams, soffit blocks fast with said soffit boards, the length of each soffit block exceeding the width of the soffit board to which

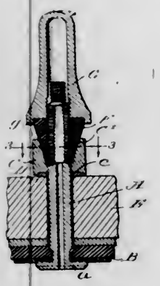
it is attached, means for suspending the soffit blocks from the beams, unitary sections or members positioned between the soffit boards, each section or member having a haunch board which is supported by the extended end portions of the soffit blocks of one soffit board, and means for retaining the haunch board in position with relation to the soffit blocks.

4. A centering for use in installing arches embodying soffit boards provided with attached soffit blocks, said soffit blocks being extended at their ends beyond the side edges of the soffit boards and said extended end portions of the soffit blocks being provided with notches, suspending means engaging with the soffit blocks for supporting the soffit boards in position below certain beams, and unitary members or sections positioned between the beams, each member or section being provided with a haunch board which is engaged with the notches of the soffit blocks on one soffit board.

5. A centering for use in installing arches embodying soffit boards provided with attached soffit blocks, the ends of which are extended beyond the side edges of the soffit boards, means for supporting the soffit boards in operative positions relative to certain beams, stretchers extending between the beams, said stretchers being supported by the extended end portions of the soffit blocks, unitary members or sections each provided with a haunch board positioned to be supported by the extended end portions of the soffit blocks, and means on the stretchers for supporting the adjacent ends of the unitary sections or members.

[Claims 6 to 10 not printed in the Gazette.]

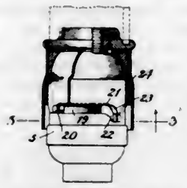
1,108,640. VALVE FOR PNEUMATIC TIRES. JAMES WALTER TAYLOR, Lansing, Mich., assignor of one-third to George A. Mohr and one-third to Fred L. Fulton, Lansing, Mich. Filed Oct. 20, 1913. Serial No. 796,178. (Cl. 152—12.)



The combination of a threaded valve tube, a nut or bur threaded on the valve stem and having a grooved inner face, a washer extending within the groove and adapted to bear against a wheel rim and the like, the bore of said nut or bur being enlarged at its opposite end to form a conical recess at the outer face thereof, a flexible conical gasket having its inner end projecting within the conical recess of the nut or bur, and a thimble threaded upon the inner end of the valve stem and having a grooved inner face receiving the enlarged end of the gasket, the said grooved faces of the thimble and nut or bur forming retaining rings to respectively prevent the gasket and the washer from spreading, all for the purpose described.

1,108,641. OPERATING MEANS FOR ELECTRIC-LAMP SWITCHES. ARTHUR JAMES TIZLEY, New York, N. Y., assignor to E. F. Caldwell & Co., New York, N. Y. Filed May 25, 1914. Serial No. 840,780. (Cl. 175—290.)

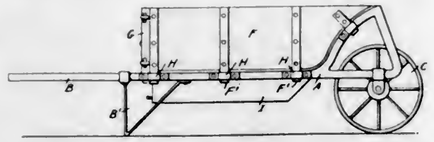
1. In a means for operating an electric lamp switch, a rotary member having a stud, a casing having a slot in which the stud is movably disposed, there being a recess in the casing at one side and adjacent an end of the slot, a collar for rotating relatively to the casing and provided with a cam for moving the stud in the slot, and from the slot into the recess, means for returning the rotary member and the stud to a normal position, and switch means operable by the rotary member.



2. In a means for operating an electric lamp switch, a rotary member having a stud, a casing having a slot in which the stud is movably disposed, a cam for moving the stud in the slot, means for operating the cam, means for returning the rotary member and the stud to a normal position, and switch means operable by the rotary member.

3. In a means for operating an electric lamp switch, a rotary member having a stud, a collar rotatably mounted and having a cam for engaging and moving the stud, means for returning the rotary member and the stud to a normal position after the termination of said movement by the cam, and switch means operable by the rotary member.

1,108,642. GARDEN-TRUCK-BURNER BARROW. THOMAS TRAVIS, Montclair, N. J. Filed Mar. 18, 1914. Serial No. 825,578. (Cl. 21—68.)

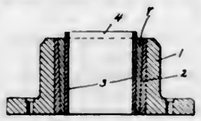


1. In a garden truck-burner barrow, the combination of a wheelbarrow frame, a metal body comprising a perforate bottom fixed on the said frame and terminating in a fixed front, detachable sides and a detachable back a covering plate removably covering the said perforate bottom, and an ash pit on the under side of the said bottom.

2. In a garden truck-burner barrow, the combination of a wheelbarrow frame, a metal body comprising a perforate bottom fixed on the said frame and terminating in a fixed front, detachable sides and a detachable back, a covering plate removably covering the said perforate bottom, and an ash pit on the under side of the said bottom and provided with a removable bottom plate.

3. In a garden truck-burner barrow, the combination of a wheelbarrow frame, a metal body comprising a perforate bottom fixed on the said frame and terminating in a fixed front, detachable sides and a detachable back, a covering plate provided at one edge with lugs adapted to engage apertures in said bottom, and a locking means for locking the said covering plate in place over the said bottom, and an ash pit on the under side of the said bottom.

1,108,643. PRESS-BOX. CHARLES M. WALL, Curwensville, Pa., assignor of one-half to James A. Bickford, Curwensville, Pa. Filed Apr. 12, 1913. Serial No. 760,781. (Cl. 25—122.)

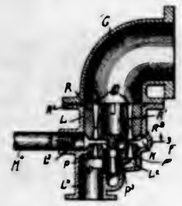


1. A press box comprising an exterior member, pairs of liners disposed in the exterior member and spaced from the interior thereof; one pair of said liners having notches in their ends and the other pair of liners having grooves in their ends registered with the notches of the first-named pair, and a filler occupying the spaces between the interior of the exterior member and the outer sides of the liners and also occupying the notches and the complementary grooves of the liners, and securing said liners together and in position.

2. A press box, comprising an exterior member, pairs of liners disposed in the exterior member and spaced from the interior thereof; all of the said liners being smooth at their opposite side and of even thickness throughout, and one pair of liners having notches in their ends midway between their upper and lower edges and the other pair of liners having grooves in their ends midway between their upper and lower edges and registered with the notches of the first-named pair, and a filler occupying the spaces between the interior of the exterior member and the outer sides of the liners and also occupying the notches and the complementary grooves of the liners, and securing said liners together and in position.

3. A press box, comprising an exterior member, a lining permanently arranged in the exterior member and having an interior that is tapered downwardly and inwardly, liners disposed in the exterior member and spaced from the said lining thereof, and a poured filler occupying the spaces between the said lining and the outer sides of the liners, and securing said liners together and in position.

1,108,644. VACUUM-PRODUCING APPARATUS. FERDINAND A. WEIMANN, West Hoboken, N. J. Filed July 31, 1912. Serial No. 712,449. (Cl. 230—13.)



1. A vacuum producing apparatus provided with a casing having a water inlet, an air and dust inlet, a water supply nozzle connected with the said water inlet and formed of two concentric parts secured in the casing and spaced apart to form an unobstructed annular passage, a discharge nozzle within the casing and spaced from the said water inlet nozzle to form a chamber connected with the said air and dust inlet, the said discharge nozzle being made of two concentric parts spaced apart to form an unobstructed annular passage, the outer concentric part of the discharge nozzle being held on the casing and the other being attached to the inner part of the said water supply nozzle.

2. A vacuum producing apparatus provided with a casing having a water inlet, an air and dust inlet and an outlet for the water, air and dust, a water supply nozzle connected with the said water inlet and formed of two concentric parts secured in the casing and spaced apart to form an unobstructed annular passage, the inner concentric part of the water supply nozzle being hollow and connected with an air supply, a discharge nozzle within the casing and spaced from the said water inlet nozzle to form a chamber connected with the said air and dust inlet, the said discharge nozzle being made of two concentric parts spaced apart to form an unobstructed annular passage, the outer concentric part of the discharge nozzle being held on the casing and the other being attached to the inner part of the said water supply nozzle.

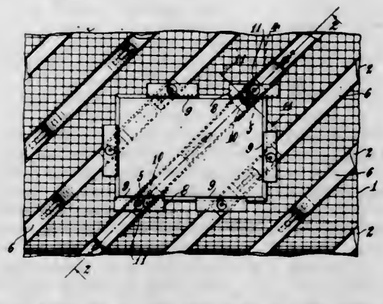
1,108,645. CLOSURE FOR JARS, &c. ALFRED L. WEISSENTHANNER, Bayonne, N. J. Filed Nov. 7, 1911. Serial No. 658,957. (Cl. 215—34.)

The combination with the mouth portion of a vessel, of a flanged ring seated upon and locked to said portion, the inner edge of said ring being shaped to provide an externally projecting annular bead, a cover hinged on said ring having a corresponding peripheral bead adapted to register frictionally with the bead on the ring, a gasket



on the underside of the ring, and a frangible diaphragm of water-proof material covering the underside of the ring and the opening thereof and clamped with the gasket upon the top of the rim of said mouth portion.

1,108,646. PLATE-HOLDING DEVICE. FOLKE W. WESTON, New York, N. Y., assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 31, 1911. Serial No. 618,051. (Cl. 101—169.)



1. In a device of the class described the combination of a base having a slotted portion, a plate engaging member having ears entering the same which member can be removed from the base by a transverse movement relative thereto and an operating screw in the slotted portion engaging teeth therein, the screw operating member being normally supported and held in place by spring means carried by the base, the slotted portion being of such shape that by pressing the screw member against the spring means the former can be moved longitudinal in the slotted portion from one position to another.

2. In a device of the class described the combination of a base having a slotted portion, a plate clamping member having ears entering the same which member can be removed from the base by a transverse movement relative thereto an operating screw held in place in the slotted portion and engaging teeth therein, the screw operating member being normally held in place by spring means carried by the base, the slotted portion being of such shape and the spring means of such construction that by pressing the screw member against the spring means it can be moved longitudinally in the slotted portion from one position to another and be resiliently supported in said positions, the screw being provided with inwardly extending holes.

3. In a device of the class described the combination of a base having a slotted portion, a plate engaging member having ears entering the same which member can be removed from the base by a transverse movement relative thereto and an operating screw in the slotted portion and normally held in place by springs carried by the base, the slotted portion being of such shape that by pressing the screw against the spring it can be moved longitudinally in the slotted portion from one position to another and be resiliently supported in said positions, the screw being provided with inwardly extending holes which are spaced a distance less than the distance between the adjacent faces of the slot, the slotted portion being curved and provided with portions of screw threaded teeth arranged along overhanging portions of the slotted portion.

4. The combination of a cylindrical base having a curved slotted portion provided with screw threaded portions

formed integral with the base and a plate engaging member operated by a screw member in the slotted portion which engages the screw threads therein.

5. The combination of a cylindrical base having spiral slots therein which are provided with overhanging portions having sections of screw threaded teeth extending along the same and a register hook screw operating means in said slot.

[Claims 6 to 8 not printed in the Gazette.]

1,108,647. SUPPORTING, SPACING, AND REINFORCING MEANS FOR CONCRETE CONSTRUCTION. BARCLAY WHITE, Lansdowne, Pa. Filed July 31, 1911. Serial No. 641,624. (Cl. 72—122.)



1. A supporting and spacing means for reinforcing rods comprising a strip whose body portion is continuous in one plane having supporting portions displaced therefrom at intervals whereby walls laterally disposed with respect to the strip are formed in the body portion, and members engaging said walls and bridging said rods for confining the latter to said strip.

2. A supporting and spacing means for reinforcing rods comprising a flat strip whose body portion is continuous in one plane having portions displaced therefrom at intervals forming integral depending legs whereby walls are formed in the body portion of said strip at an angle with respect thereto, and independent members engaging said walls and bridging said rods for confining the latter to said strip.

3. Supporting and spacing means for reinforcing rods comprising a strip of material having its edges notched, the portions displaced in providing such notches being bent downwardly to form integral legs and the notches having walls at right angles to the length of the strip, and independent means for engaging the walls of said notches for confining reinforcing rods to said strip.

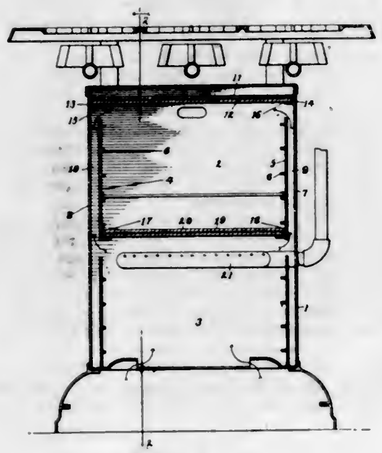
4. Supporting and spacing means for reinforcing rods comprising a strip of material having its edges notched, the portions cut away to provide said notches being bent downwardly to form integral legs, and independent means for engaging the walls of said notches for confining reinforcing rods to said strip, said legs being disposed directly below the reinforcing rods.

5. The combination of supporting, spacing and reinforcing means comprising a strip of metal having struck up portions forming walls at an angle with respect to the strip, the material displaced depending from said strip in the form of integral legs, reinforcing rods or bars carried by said supporting and spacing means, said elements being disposed substantially at right angles to each other and the supporting means being proportioned to afford a reinforcing value, and means engaging the walls adjacent the struck up portions for confining the elements together.

[Claims 6 to 9 not printed in the Gazette.]

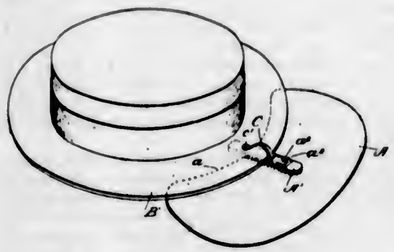
1,108,648. STOVE. CHARLES A. WILKINSON, Worcester, Mass. Filed Aug. 8, 1912. Serial No. 714,042. (Cl. 126—39.)

1. A gas stove, comprising a body having inner and outer walls, the inner walls being spaced from the outer walls, divided intermediate of their height and having their upper ends terminating short of the upper ends of the outer walls, oppositely arranged angle irons secured to the inner faces of the outer walls above the top of the upper ends of the inner walls, a reinforced concrete plate resting upon the angle irons and having its reinforcing means secured to said angle irons, oppositely arranged angle irons secured to the inner faces of the inner walls above the division thereof, a reinforced concrete plate resting upon the angle irons and having the reinforcing means secured to the angle irons, and a gas burner arranged below the last named concrete plate.



2. A gas stove, comprising a body having inner and outer spaced walls, the inner walls being divided intermediate of their height at opposite sides and having their upper ends terminating short of the upper ends of the outer walls, a plate supported on the outer walls above the upper ends of the inner walls and spaced from the top wall, a second plate supported on the inner walls directly above the division thereof, and a burner below the last named plate.

1,108,649. COMBINED FAN AND EYE-SHADE. ERNEST J. WILLIAMS, St. Louis, Mo. Filed Dec. 8, 1913. Serial No. 805,344. (Cl. 2—112.)



1. A combined fan and eye shade comprising, a fan having a handle provided with a socket near one edge and a spring clip provided with a longitudinally extending shank received within said socket; the said clip adapted to clamp the fan flatwise to the brim of a hat to form an eye shade.

2. A combined fan and eye shade comprising, a fan having a handle provided with a socket in its upper face between its ends, and a spring clip having a shank held in said socket and extending at its free end toward the free end of the handle to clamp the fan to a hat brim parallel therewith.

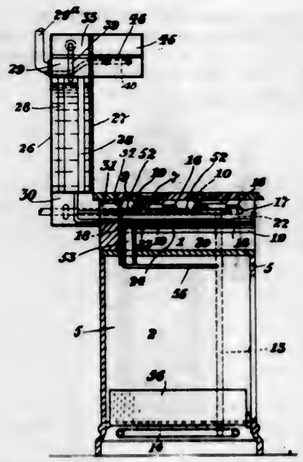
3. A combined fan and eye shade comprising, a fan having a curved or concaved edge and a handle secured to the fan at the middle of said concave edge, and a spring clip rigidly secured to the fan at one end and extending at its free end toward the said concave edge to clamp the fan to a hat brim parallel therewith.

4. A combined fan and eye shade comprising, a fan having a handle provided with a longitudinal recess in one face, a plate overlying the inner end of said recess to form a socket, and a spring clip having a shank at its inner end received in said socket and extending at its free end toward the free end of the handle to clamp the fan to a hat brim parallel therewith.

5. A combined fan and eye shade comprising, a fan having a handle provided with a longitudinal recess at its inner end, a plate overlying the inner end of the recess and formed with an inclined spring tongue entering the socket formed by the recess and plate, and a spring clip having a shank held in said recess, the free end of the clip extending toward the free end of the handle to clamp the fan to a hat brim parallel therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,108,650. GAS COOKING-STOVE. CLARA ELLEN WILLS, Southport, England. Filed Sept. 6, 1910. Serial No. 580,680. (Cl. 126—39.)



1. In combination, a gas stove having an oven, a hollow chamber communicating therewith, said chamber being open at the front, means for closing the front of the chamber, a lateral passageway at each side of the chamber for the admission of air when the front thereof is closed, each passageway communicating by a series of openings with the interior of the chamber, gas burners located in said chamber, a water vessel, a waste hot gas chamber at the bottom thereof, a flue connecting said waste hot gas chamber with said hollow chamber, and a series of tubes communicating with said waste hot gas chamber and extending through said water vessel, said tubes being adapted to convey the waste hot gases from the waste hot gas chamber through the water and thereby heat the same.

2. In combination, a gas stove having a hollow chamber at the top thereof, gas burners located in said chamber, a water vessel on the stove and which is divided into a lower compartment, an intermediate compartment and an upper compartment, the lower compartment communicating with said chamber, the intermediate compartment being supplied with water and having a series of tubes therein establishing communication between the lower compartment and the upper compartment, the upper compartment having a water supply pipe extending into the intermediate compartment and a vent pipe extending from the intermediate compartment to the upper compartment.

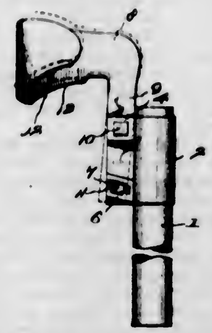
3. In combination, a gas stove having a hollow chamber at the top thereof, gas burners located in said chamber, a water vessel connected with the stove and which is divided into a lower compartment, an intermediate compartment and an upper compartment, the lower compartment communicating with said chamber, the intermediate compartment being supplied with water and having a series of tubes therein establishing communication between the lower compartment and the upper compartment, the upper compartment having a partition therein dividing it into two chambers, the upper one an air chamber which can be filled with water through means provided at the top thereof and the lower chamber being for the waste hot gases.

4. A gas cooking stove having an oven, a rectangular hollow chamber thereover, said hollow chamber being open at the front, removable cover plates for the hollow chamber, a sliding tray dividing the hollow chamber into two compartments, gas jets located in one of the compartments of the hollow chamber, means for closing the front of the hollow chamber, a lateral passage way at each side of the hollow chamber for the admission of air when the front thereof is closed, each passage way communicating by a series of openings with the interior of the hollow chamber, a water vessel arranged in connection with the stove and flues through which the waste hot gases from the gas jets in the hollow chamber may pass through the water vessel.

5. A gas stove comprising, in combination, a hollow chamber, gas burners located in said chamber, a water vessel connected with the stove and which is divided into a lower compartment, an intermediate compartment and an upper compartment, the lower compartment communicating with said chamber, the intermediate compartment being adapted to be supplied with water and having a series of tubes therein establishing communication between the lower compartment and the upper compartment, the upper compartment having a partition therein dividing it into two chambers, the upper one an air chamber which can be filled with water through means provided therefor and the lower chamber being for the waste hot gases, and piping located round about the gas burners and communicating with the water vessel and adapted to be supplied with water therefrom.

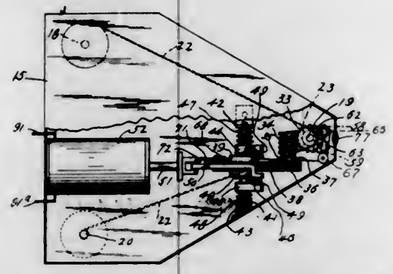
[Claims 6 to 10 not printed in the Gazette.]

1,108,651. TURPENTINE-HACK. JOSEPH T. WORCESTER, Mobile, Ala. Filed Dec. 8, 1913. Serial No. 805,343. (Cl. 47—40.)



In a tool of the character described, the combination of a handle; a split sleeve fitting on the handle and having an upper and a lower pair of integral lugs, said upper lugs provided with apertures and said lower lugs disposed diagonally relative to the axis of the sleeve and provided with diagonal slots; a working member having a shank fitting between said upper and lower pairs of lugs; a bolt passing through said upper lugs and said shank and providing a pivotal bearing; and a bolt passing through the diagonal slots of the lower lugs, and shank and providing an adjustable clamp, and said bolts and lugs providing clamping means for securing the split sleeve to the handle, substantially as described.

1,108,652. STREET AND STATION INDICATOR. CLEVELAND O. YOUNG, Chicago, Ill. Filed July 9, 1913. Serial No. 778,031. (Cl. 40—59.)



1. In a street and station indicator, the combination with an indicating web and means including a trip operated switch to advance the same, of a signal, and means to operate the same including a second trip operated switch whereby the signal may be operated at selected operations of the web.

2. In a street and station indicator, the combination with an indicating web and means to intermittently advance the same, a movable shutter adapted to conceal the indicating part of the web, and means to close the shutter while the web is being advanced, said means including a trolley contact and electrical devices operatively connected to the shutter.

3. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said roller, a pair of pawls engageable with the respective ratchets, an operating device engageable with either pawl, and means to shift the pawls to engage one with and disengage the other from the corresponding ratchet and the operating device.

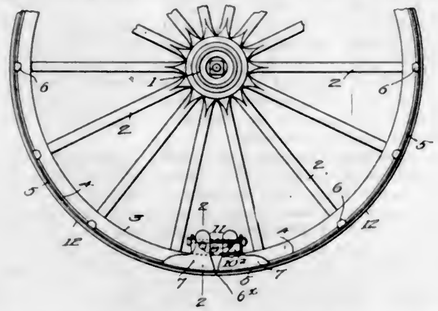
4. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said rollers, a pair of pawls engageable with the respective ratchets, a shaft on which the pawls are slidable laterally, a shifter having wedge-shaped ends engageable with the pawls respectively to shift the same on the shaft and disengage either one from the corresponding ratchet and operating device, and a spring pressing on each pawl and tending to shift the same to engagement.

5. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said roller, a pair of pawls engageable with the respective ratchets, a contact operated solenoid and its armature, a yoke connected to the armature and the pawls, to operate the latter, and means to shift either pawl to disengage the same from the corresponding ratchet, a shutter adapted to conceal the indicating part of the web, and operating devices connected between the armature and the shutter to operate the latter when the former is operated.

[Claims 6 and 7 not printed in the Gazette.]

1,108,653. SUPPLEMENTAL TIRE. LOUIS ZEMAN, Tobias, Nebr. Filed Apr. 11, 1913. Serial No. 760,415. (Cl. 21—161.)

The combination with a wheel having a felly and a tire, of a supplemental tire, said supplemental tire comprising a split band arranged to engage the tire and having integral lugs extending on each side of said felly, integral flanges disposed at the ends of said split band, bolts for securing together the end flanges on opposite sides of the felly, wedges disposed between the end flanges and having inclined surfaces arranged to engage said bolts, and a tightening bolt for forcing said wedges together.



1,108,654. LUMINOUS PROJECTILE. FRIEDRICH ZIEGENFUSS, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Dec. 26, 1912. Serial No. 738,761. (Cl. 102—29.)



1. An illuminating projectile comprising a projectile shell, a base-chamber charge, and an illuminating body having a parachute contained within and adapted to be expelled from the shell during the flight of the projectile; the diameter of said illuminating body being equal to the internal diameter of the projectile shell.

2. An illuminating projectile comprising a projectile shell, having a base-chamber charge; and two superposed illuminating bodies, each having a parachute and located within the shell and adapted to be expelled therefrom, as a whole, during the flight of the projectile; the diameter of each illuminating body corresponding to the internal diameter of the projectile shell.

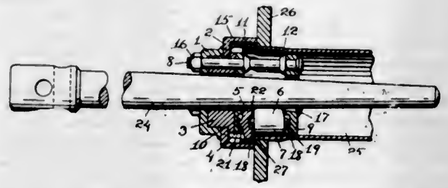
3. In an illuminating projectile, a projectile shell having a base-chamber charge, and a front-end igniting charge, and two illuminating bodies superposed in said shell, each having an illuminating mass; said illuminating bodies being introduced, one with its illuminating mass in igniting relation to the igniting charge and the other with its illuminating mass in igniting relation to the base-chamber charge.

4. In an illuminating projectile having a shell with a base-chamber charge and a front-end igniting charge; two illuminating bodies superposed in the projectile shell and adapted to be expelled therefrom by said base-chamber charge during the flight of the projectile; each of said illuminating bodies being provided with an illuminating substance and with a parachute, and being introduced with their illuminating masses presented toward and in igniting relation to the respective charges in the shell and with their parachutes confined between the said illuminating bodies.

5. In an illuminating projectile having a shell with a base-chamber charge and a front-end igniting charge; two illuminating bodies superposed in the projectile shell and adapted to be expelled therefrom by said base-chamber charge during the flight of the projectile; each of said illuminating bodies being provided with an illuminating substance and with a parachute, and being introduced with their illuminating masses presented toward and in igniting relation to the respective charges in the shell and with their parachutes confined between the said illuminating bodies, there being a separating disk in said shell between said parachutes.

[Claims 6 to 12 not printed in the Gazette.]

1,108,655. BOILER-TUBE ROLLER-EXPANDER. RALEIGH J. ADAMS, Los Angeles, Cal. Filed Jan. 26, 1914. Serial No. 814,486. (Cl. 153—82.)



1. In a tube expander, a mandrel, a carrier frame upon said mandrel, expanding rollers in said frame, and means for adjusting and reversing said rollers to advance or retract one end thereof in the direction of rotation of the mandrel.

2. In a tube expander, a mandrel, a carrier frame upon said mandrel embodying end pieces, and means for connecting said end pieces having shoulders bearing against said pieces, expanding rollers in said frame, and means for adjusting and reversing said rollers to advance or retract one end thereof in the direction of rotation of the mandrel.

3. In a tube expander, a carrier frame embodying end pieces, and means of connection for said end pieces having shoulders bearing against said pieces, said end pieces having elongated recess bearings, expanding rollers having end projections seated in said recesses, and means including one of said end pieces for adjusting and reversing said rollers to oppositely inclined and straight positions.

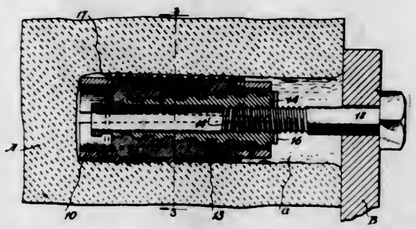
4. In a tube expander, a carrier frame embodying end members, and means of connection for said end members having shoulders bearing against said members, said members having elongated recess bearings, expanding rollers having rounded conoid end projections seated in said recess bearings, one of said end members being circularly adjustable for adjusting and reversing said rollers to oppositely inclined and straight positions.

5. In a tube expander, a carrier frame embodying end members and longitudinal bolts connecting said end members to provide a skeleton frame and having shoulders bearing against said end members, expanding rollers in said frame, and means for adjusting said rollers to oppositely inclined and straight positions.

[Claims 6 to 10 not printed in the Gazette.]

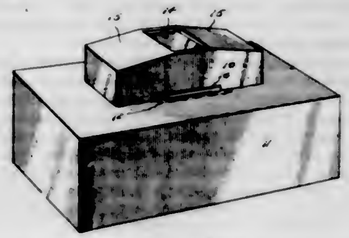
1,108,656. EXPANSION-BOLT. EPHRAIM ADLER, New York, N. Y. Filed Jan. 9, 1914. Serial No. 811,175. (Cl. 85—24.)

1. The herein described expansion bolt comprising, in combination, a pair of independent sleeve members movable toward and from each other, said members having teeth or points for engagement with the wall of the socket and being provided on their inner or adjacent faces with divergent walls having transverse ribs, a wedge acting between said sleeve members and having movable engagement with said ribs and serving to force the sleeve members apart, said wedge having an internal socket with a screw thread, and a clamping bolt coöperating with said wedge thread.



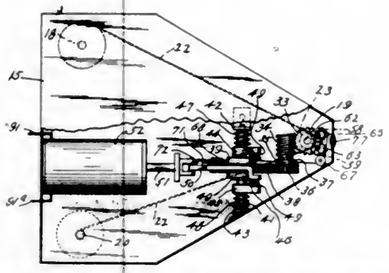
2. The herein described expansion bolt comprising, in combination, a pair of sleeve members having along parts of their opposite walls a series of teeth, temporary connections surrounding said sleeve members and maintaining them together but permitting expansion of separation thereof, a wedge of solid construction acting between said sleeve members and serving to interlock therewith and hold the sleeve members in separated relation, and a threaded bolt coöperating with the interior of said wedge, substantially as and for the purposes set forth.

1,108,657. TRAP. WILLIAM F. ALDERMAN, Lake Park, Ga. Filed Nov. 16, 1912. Serial No. 731,754. (Cl. 43—24.)



In a rat trap, the combination with a substantially rectangular container having a plane upper face provided with a central opening, of a casing reposing on the upper face of the container and provided with an outlet opening registering with the opening in the container, said casing projecting across the central opening of the container but of slightly less width than the opening of the container so as not to completely cover the opening of the container, a plurality of the walls of the casing being inclined toward each other and terminating in a substantially rectangular inlet opening lying immediately above the outlet opening and the opening in the container, a trap door formed of a single flat plate mounted to swing on the casing beneath the inlet opening, with the point of pivotal connection of the trap door with the casing lying within the horizontal plane of the bottom of the casing and with the trap door proper lying within the horizontal plane of the top of the container with edges of the trap door projecting through the uncovered portions of the opening in the container and the said trap door normally closing the greater part of the opening in the container, a bait hook carried by the trap door and projecting from its upper face to normally lie within the casing, and a U-shaped spring having its ends secured to the casing on the under side thereof and on a portion of the casing projecting across the opening of the container, with a medial portion of the spring engaging the under side of the trap door and coiled portions of the spring between its ends depending within the container through the opening formed therein.

1,108,652. STREET AND STATION INDICATOR. CLEVELAND O. YOUNG, Chicago, Ill. Filed July 9, 1913. Serial No. 778,031. (Cl. 40—59.)



1. In a street and station indicator, the combination with an indicating web and means including a trip operated switch to advance the same, of a signal, and means to operate the same including a second trip operated switch whereby the signal may be operated at selected operations of the web.

2. In a street and station indicator, the combination with an indicating web and means to intermittently advance the same, a movable shutter adapted to conceal the indicating part of the web, and means to close the shutter while the web is being advanced, said means including a trolley contact and electrical devices operatively connected to the shutter.

3. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said roller, a pair of pawls engageable with the respective ratchets, an operating device engageable with either pawl, and means to shift the pawls to engage one with and disengage the other from the corresponding ratchet and the operating device.

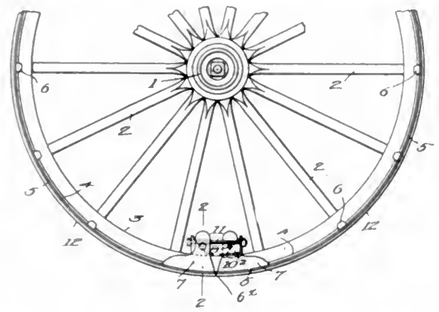
4. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said rollers, a pair of pawls engageable with the respective ratchets, a shaft on which the pawls are slidable laterally, a shifter having wedge-shaped ends engageable with the pawls respectively to shift the same on the shaft and disengage either one from the corresponding ratchet and operating device, and a spring pressing on each pawl and tending to shift the same to engagement.

5. In a street and station indicator, the combination with a double reel and indicating web operated thereby, of means to wind the web in either direction, said means including a roller over which the web passes, a wheel having opposite ratchets and geared to said roller, a pair of pawls engageable with the respective ratchets, a contact operated solenoid and its armature, a yoke connected to the armature and the pawls, to operate the latter, and means to shift either pawl to disengage the same from the corresponding ratchet, a shutter adapted to conceal the indicating part of the web, and operating devices connected between the armature and the shutter to operate the latter when the former is operated.

[Claims 6 and 7 not printed in the Gazette.]

1,108,653. SUPPLEMENTAL TIRE. LOUIS ZEMAN, Tobias, Nebr. Filed Apr. 11, 1913. Serial No. 760,415. (Cl. 21—161.)

The combination with a wheel having a felly and a tire, of a supplemental tire, said supplemental tire comprising a split band arranged to engage the tire and having integral lugs extending on each side of said felly, integral flanges disposed at the ends of said split band, bolts for securing together the end flanges on opposite sides of the felly, wedges disposed between the end flanges and having inclined surfaces arranged to engage said bolts, and a tightening bolt for forcing said wedges together.



1,108,654. LUMINOUS PROJECTILE. FRIEDRICH ZIEGENFUSS, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Dec. 26, 1912. Serial No. 738,761. (Cl. 102—29.)



1. An illuminating projectile comprising a projectile shell, a base-chamber charge, and an illuminating body having a parachute contained within and adapted to be expelled from the shell during the flight of the projectile; the diameter of said illuminating body being equal to the internal diameter of the projectile shell.

2. An illuminating projectile comprising a projectile shell, having a base-chamber charge; and two superposed illuminating bodies, each having a parachute and located within the shell and adapted to be expelled therefrom, as a whole, during the flight of the projectile; the diameter of each illuminating body corresponding to the internal diameter of the projectile shell.

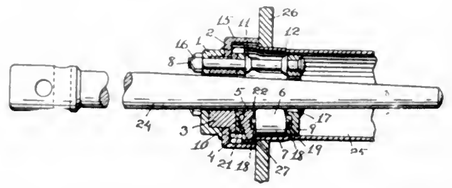
3. In an illuminating projectile, a projectile shell having a base-chamber charge, and a front-end igniting charge, and two illuminating bodies superposed in said shell, each having an illuminating mass; said illuminating bodies being introduced, one with its illuminating mass in igniting relation to the igniting charge and the other with its illuminating mass in igniting relation to the base-chamber charge.

4. In an illuminating projectile having a shell with a base-chamber charge and a front-end igniting charge; two illuminating bodies superposed in the projectile shell and adapted to be expelled therefrom by said base-chamber charge during the flight of the projectile; each of said illuminating bodies being provided with an illuminating substance and with a parachute, and being introduced with their illuminating masses presented toward and in igniting relation to the respective charges in the shell and with their parachutes confined between the said illuminating bodies.

5. In an illuminating projectile having a shell with a base-chamber charge and a front-end igniting charge; two illuminating bodies superposed in the projectile shell and adapted to be expelled therefrom by said base-chamber charge during the flight of the projectile; each of said illuminating bodies being provided with an illuminating substance and with a parachute, and being introduced with their illuminating masses presented toward and in igniting relation to the respective charges in the shell and with their parachutes confined between the said illuminating bodies, there being a separating disk in said shell between said parachutes.

[Claims 6 to 12 not printed in the Gazette.]

1,108,655. BOILER-TUBE ROLLER-EXPANDER. RALEIGH J. ADAMS, Los Angeles, Cal. Filed Jan. 26, 1914. Serial No. 814,486. (Cl. 153—82.)



1. In a tube expander, a mandrel, a carrier frame upon said mandrel, expanding rollers in said frame, and means for adjusting and reversing said rollers to advance or retract one end thereof in the direction of rotation of the mandrel.

2. In a tube expander, a mandrel, a carrier frame upon said mandrel embodying end pieces, and means for connecting said end pieces having shoulders bearing against said pieces, expanding rollers in said frame, and means for adjusting and reversing said rollers to advance or retract one end thereof in the direction of rotation of the mandrel.

3. In a tube expander, a carrier frame embodying end pieces, and means of connection for said end pieces having shoulders bearing against said pieces, said end pieces having elongated recess bearings, expanding rollers having end projections seated in said recesses, and means including one of said end pieces for adjusting and reversing said rollers to oppositely inclined and straight positions.

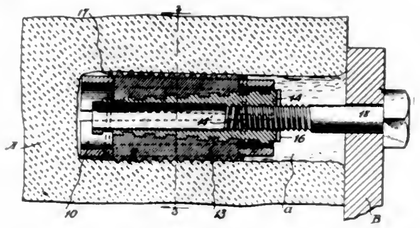
4. In a tube expander, a carrier frame embodying end members, and means of connection for said end members having shoulders bearing against said members, said members having elongated recess bearings, expanding rollers having rounded conoid end projections seated in said recess bearings, one of said end members being circularly adjustable for adjusting and reversing said rollers to oppositely inclined and straight positions.

5. In a tube expander, a carrier frame embodying end members and longitudinal bolts connecting said end members to provide a skeleton frame and having shoulders bearing against said end members, expanding rollers in said frame, and means for adjusting said rollers to oppositely inclined and straight positions.

[Claims 6 to 10 not printed in the Gazette.]

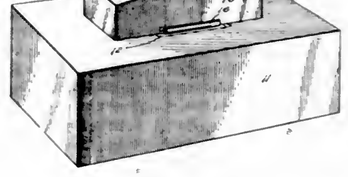
1,108,656. EXPANSION-BOLT. EPHRAIM ADLER, New York, N. Y. Filed Jan. 9, 1914. Serial No. 811,175. (Cl. 85—24.)

1. The herein described expansion bolt comprising, in combination, a pair of independent sleeve members movable toward and from each other, said members having teeth or points for engagement with the wall of the socket and being provided on their inner or adjacent faces with divergent walls having transverse ribs, a wedge acting between said sleeve members and having movable engagement with said ribs and serving to force the sleeve members apart, said wedge having an internal socket with a screw thread, and a clamping bolt coöperating with said wedge thread.



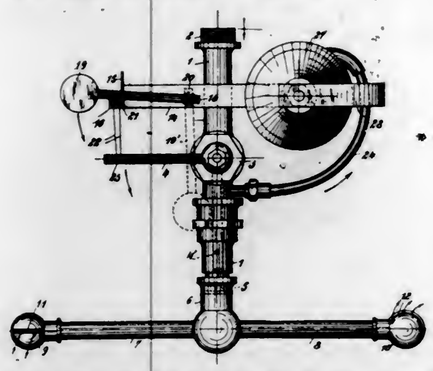
2. The herein described expansion bolt comprising, in combination, a pair of sleeve members having along parts of their opposite walls a series of teeth, temporary connections surrounding said sleeve members and maintaining them together but permitting expansion of separation thereof, a wedge of solid construction acting between said sleeve members and serving to interlock therewith and hold the sleeve members in separated relation, and a threaded bolt coöperating with the interior of said wedge, substantially as and for the purposes set forth.

1,108,657. TRAP. WILLIAM F. ALDERMAN, Lake Park, Ga. Filed Nov. 16, 1912. Serial No. 731,754. (Cl. 43—24.)



In a rat trap, the combination with a substantially rectangular container having a plane upper face provided with a central opening, of a casing reposing on the upper face of the container and provided with an outlet opening registering with the opening in the container, said casing projecting across the central opening of the container but of slightly less width than the opening of the container so as not to completely cover the opening of the container, a plurality of the walls of the casing being inclined toward each other and terminating in a substantially rectangular inlet opening lying immediately above the outlet opening and the opening in the container, a trap door formed of a single flat plate mounted to swing on the casing beneath the inlet opening, with the point of pivotal connection of the trap door with the casing lying within the horizontal plane of the bottom of the casing and with the trap door proper lying within the horizontal plane of the top of the container with edges of the trap door projecting through the uncovered portions of the opening in the container and the said trap door normally closing the greater part of the opening in the container, a bait hook carried by the trap door and projecting from its upper face to normally lie within the casing, and a U-shaped spring having its ends secured to the casing on the under side thereof and on a portion of the casing projecting across the opening of the container, with a medial portion of the spring engaging the under side of the trap door and coiled portions of the spring between its ends depending within the container through the opening formed therein.

1,108,658. AUTOMATIC FIRE-EXTINGUISHER. HECTOR ALLARD, Laeken-Brussels, Belgium. Filed Sept. 27, 1913. Serial No. 792,134. (Cl. 169—5.)

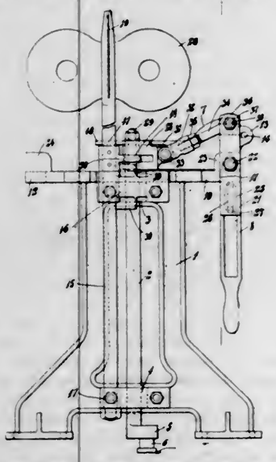


1. In a fire extinguisher of the type specified, the combination of a pipe; a valve therein; a sprinkler communicating with the pipe; a pair of spaced brackets; and a pivoted hammer receivable between the brackets when in its raised position and adapted to strike and operate the valve.

2. In a fire extinguisher of the type specified, the combination of a pipe having a sprinkler communicating therewith; a valve having a handle in the intermediate part of the pipe; a bar secured to the pipe and having a pair of spaced upwardly hooked brackets; and a hammer having its handle pivoted on said bar and receivable between said brackets when in its raised position, and its weight adapted to strike said valve handle.

3. In a fire extinguisher of the type specified, the combination of a vertical pipe; a sprinkler on the lower end of the pipe; a valve in the intermediate part of the pipe and having a handle; a bar secured on the upper part of the pipe and having an angularly bent end provided with a pair of upwardly hooked brackets and an upwardly curved part between the brackets; a hammer pivoted on said bar and having its shank receivable between said brackets when in its raised position, its weight being adapted to strike the valve handle.

1,108,659. SWITCH-STAND TARGET MECHANISM. FRANK C. ANDERSON, Cincinnati, Ohio. Filed Oct. 15, 1913. Serial No. 795,221. (Cl. 246—41.)



1. In combination with a switch stand and a target thereon, a switch-operating element requiring initial movement in one plane before being movable in another plane to operate the switch, a target shaft, a target-operating lever, means for operative engagement between the switch-operating element and the target-operating lever whereby the lever moves with the switch-operating element during the initial movement of the switch-operating element, an arm with which the target shaft turns, and operative connection from the target-operating lever to this arm, whereby said target is completely operated during said initial movement of the switch-operating element.

2. In combination with a switch stand and a target thereon, a switch-operating element requiring initial movement in one plane before being movable in another plane to operate the switch, a target shaft, a target-operating lever, means for operative engagement between the switch-operating element and the target-operating lever whereby the lever moves with the switch-operating element during the initial movement of the switch-operating element, an arm with which the target shaft turns, operative connection from the target-operating lever to this arm, whereby said target is completely operated during said initial movement of the switch-operating element, means moved by said switch-operating element into the path of travel of the operative connection between the target-operating lever and the arm of the target shaft, whereby operation of the target independently of the operation of the switch-operating element is prevented.

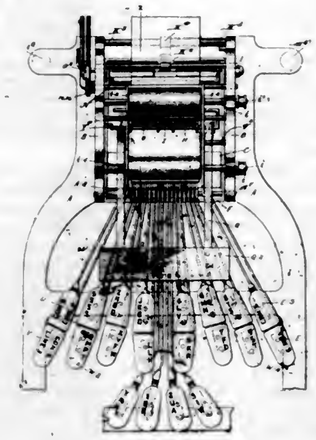
3. In combination with a switch stand and a target thereon, a switch-operating element requiring initial movement in one plane before being movable in another plane to operate the switch, disengageable operative connections between this element and the target, whereby the target is completely operated during said initial movement of said element, means carried along with said element in its switch-operating movement, and thereby projected into the path of travel of said operative connection, whereby operation of said operative connection to operate the target independently of the operation of said element is prevented, stationary guiding means on said switch stand for the operative connection, said means carried along with said element forming another guiding means for the operative connection during said initial movement of said element.

4. In combination with a switch stand and a target thereon, a main switch-operating shaft, a fulcrum-head fixed to rotate said main shaft, a switch-operating lever pivoted in the fulcrum-head, a stationary plate having a slot, said switch-operating lever being received in the slot and requiring to be initially swung on its pivot in the fulcrum-head to disengage from the slot and permit rotation of the fulcrum-head and main shaft, a target shaft parallel to said main shaft, a target-operating lever pivoted concentric with the pivoting of the switch-operating lever, means for operative engagement between the switch-operating lever and this target-operating lever, whereby the two levers swing together during the initial movement of said switch-operating lever, and operative connection between this target-operating lever and said target shaft, whereby said target is completely operated during said initial swinging of the switch-operating lever.

5. In combination with a switch stand and a target thereon, a main switch-operating shaft, a fulcrum-head fixed to rotate said main shaft, a switch-operating lever pivoted in the fulcrum-head, a stationary plate having a slot, said switch-operating lever being received in the slot and requiring to be initially swung on its pivot in the fulcrum-head to disengage from the slot and permit rotation of the fulcrum-head and main shaft, a target shaft parallel to said main shaft, a target-operating lever pivoted concentric with the pivoting of the switch-operating lever, means for operative engagement between the switch-operating lever and this target-operating lever, whereby the two levers swing together during the initial movement of said switch-operating lever, an arm fixed on the target shaft, and operative connection between the target-operating lever and said arm, whereby the target is completely operated during the initial swinging of said switch-operating lever.

[Claims 6 to 16 not printed in the Gazette.]

1,108,660. SHORTHAND TYPE-WRITING MACHINE. GEORGE KERR ANDERSON, Memphis, Tenn. Filed Aug. 10, 1908. Serial No. 447,749. (Cl. 197—9.)



1. In a shorthand typewriter, the figure-shift frame Q, provided with guide-arms for the strip of paper and the small roller *g* to facilitate its travel.

2. In a shorthand typewriter using a continuous strip of paper, a series of key-bars, a feed frame operated thereby for feeding the paper through the machine, and means for re-winding the paper, operated by the feed-frame.

3. In a shorthand type-writer a series of key-bars adapted to operate simultaneously and a feed frame bearing on the key-bars and provided with a grip for gripping the paper when one or more of said keys are operated.

4. In a shorthand typewriter, a series of key bars suitably mounted, having their outer ends resting side by side and provided on the upper side with recesses of uniform depth, in combination with a feed frame having a pressure frame pivotally mounted therein opposite said recesses and adapted to rest in the recesses.

5. In a shorthand typewriter using a continuous strip of paper, a series of key-bars and a feed frame provided with an oscillating grip for moving the paper when the feed-frame is operated.

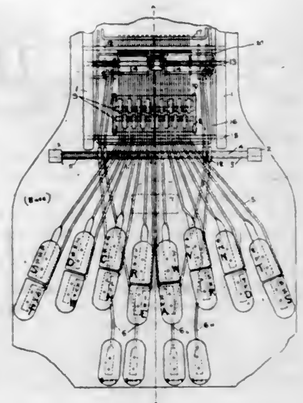
[Claims 6 to 45 not printed in the Gazette.]

1,108,661. SHORTHAND TYPE-WRITING MACHINE. GEORGE KERR ANDERSON, Philadelphia, Pa. Original application filed Aug. 10, 1908, Serial No. 447,749. Divided and this application filed Oct. 23, 1912. Serial No. 727,459. (Cl. 197—98.)

1. In a shorthand typewriter a series of printing keys mounted parallel to each other and having their ends resting side by side beneath type-frames provided with type arranged in rows corresponding in number and location to the ends of the key-bars beneath them; said type-frames being moved by a plurality of shift-keys as hereinbefore described said printing keys and shift keys being provided with key-buttons so arranged that all the printing keys can be operated by the fingers and all the shift-keys by the thumbs.

2. In a shorthand typewriter, a type frame provided with vowels, revolubly mounted between other type-frames provided with consonants, a series of printing keys adapted to operate against said type-frames and a shift key for moving said vowel type-frame, the key-button of said shift-key being located in a separate field from the key-buttons of the printing keys, but in close proximity to the key-buttons of the printing keys which operate in connection with said vowel type-frame.

3. In a shorthand typewriter, a type-frame provided with vowels revolubly mounted between other type-frames provided with consonants, printing keys adapted to operate against said type-frames and shift-keys for moving said type-frames, the key button of the vowel shift key being located between the key-buttons of the consonant shift-keys.

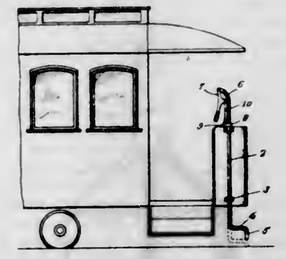


4. In a shorthand typewriter, a type-frame provided with vowels and a type-frame provided with consonants, said type-frames being revolubly mounted side by side and the characters thereon arranged in a plurality of longitudinal and transverse rows, in combination with shift-keys for moving said type-frames, the key-buttons of said shift-keys being located close enough together for the consonant and vowel shifts to be simultaneously operated by the same finger or thumb.

5. In a typewriting machine, a series of printing keys each operating in connection with a plurality of printing characters comprising both vowels and consonants arranged in a plurality of rows and key buttons in pairs, and a series of shift keys operating to vary the characters printed by said printing keys, the key-buttons of the vowel shift-keys and consonant shift-keys being located close enough together to be simultaneously operated by the same finger or thumb, and the vowel shift-key and the consonant shift-key operating independently of each other.

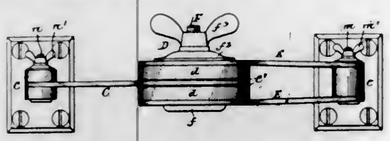
[Claims 6 to 24 not printed in the Gazette.]

1,108,662. SWITCH-THROWING DEVICE. ELI J. ANDREWS, Richmond, Va. Filed Dec. 6, 1913. Serial No. 805,104. (Cl. 104—171.)



A switch throwing device comprising a vertically movable rod having the upper end thereof bent rearwardly, a foot on the lower end of said rod adapted to engage the switch point in the downward movement of said rod, an operating handle pivotally connected to the rearwardly extending end of said rod, a collar surrounding said rod below the upper end thereof, and a link connection between said collar and handle whereby in the downward movement of said handle the rod will be elevated and the link thrown by the pivotal connection between the handle and rod to maintain the rod elevated.

1,108,663. FRICTION DEVICE FOR DOORS, &c. CHARLES T. ASHMAN, Philadelphia, Pa. Filed Dec. 7, 1909. Serial No. 531,815. (Cl. 16—111.)



1. The combination in a friction device of a plurality of arms pivotally connected together and having inclined friction surfaces; with friction disks interposed between the arms in position to exert friction thereon during a portion of their possible movement, the inclined friction surfaces of the arms being placed to come into engagement only after said arms have turned through a predetermined angle.

2. The combination in a friction device of two arms pivotally secured together and each having a flange of varying depth; with a friction disk interposed between the arms, said flanges being placed to engage each other during a part only of the pivotal movement of the arms, and remain out of contact during the remainder of said movement.

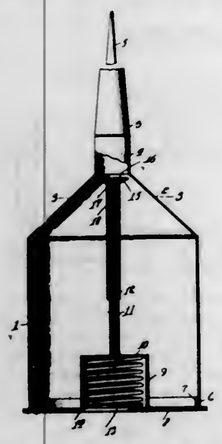
3. The combination in a friction device of two arms, each having a friction-producing flange of varying depth; a third arm having a flange of varying depth on each face and pivotally interposed between said other arms; and friction disks respectively mounted between the third arm and each of the other two arms, the flanges of the third arm being placed to contact with the flanges of the other arms during a portion of the movement of the arms.

4. A friction device comprising a plurality of arms pivotally joined together; friction disks interposed between said arms; with means independent of the disks and actuated by the arms for exerting friction between the same during a portion only of their possible movement.

5. A friction device for a door comprising a plurality of arms pivotally joined together; brackets pivoted to the arms and adapted to be secured to the door and to the supporting structure of the door respectively; friction disks interposed between said arms; and means independent of the disks and actuated by the arms for exerting friction between said arms during a portion only of their possible movement.

[Claims 6 to 9 not printed in the Gazette.]

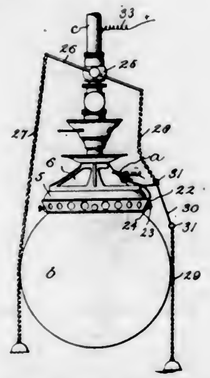
1,108,664. OIL-CAN. WYLIE ASHWORTH, Helena, Mont. Filed Aug. 5, 1913. Serial No. 783,105. (Cl. 221—48.)



1. An oil can comprising a hollow body, a discharge spout provided upon said body and including a cylindrical inner portion, a guide tube provided in the body in axial alinement with the said spont and having its inner end disposed in spaced relation to the inner end of the spout, a plunger slidably mounted within said tube, a circular head secured to the inner end of the plunger and adapted for movement through the cylindrical portion of the discharge spout, a sleeve secured to the said head and projecting inwardly therefrom for the slidable reception of the inner end of the guide tube, yieldable means for normally maintaining the said plunger in its outermost position with its head in engagement with the inner end of the guide tube, and means by which the plunger may be operated inwardly.

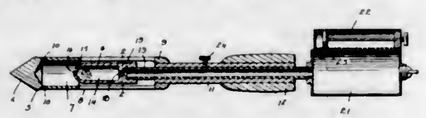
2. An oil can comprising a hollow body, a discharge spout provided upon the said body and including a cylindrical inner portion, a detachable bottom for the said body, a guide tube extending inwardly from the bottom of the body in axial alinement with the said spout and having its inner end disposed in spaced relation to the inner end of the spout, a plunger slidably mounted within said tube and having its inner end threaded, a circular head having a medial threaded opening engaged with the threaded end of the plunger, a tubular sleeve formed upon the head and projecting inwardly therefrom to embrace the inner end of the guide tube for slidable and rotary movement thereon, yieldable means for normally maintaining the plunger in its outermost inoperative position, and means by which the plunger may be operated inwardly.

1,108,665. IGNITION DEVICE. SERENO N. AYRES, Plainfield, N. J. Filed Aug. 13, 1913. Serial No. 784,585. (Cl. 175—115.)



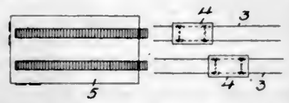
An ignition device for gas fixtures comprising a support, a filament carried by the support, a plate connected to the support and insulated therefrom and including an integral tongue, and a flexible operating element adapted for moving the tongue in contact with the support.

1,108,666. SELF-HEATING SOLDERING-IRON. HERBERT C. BALCH, Munising, Mich. Filed Nov. 19, 1913. Serial No. 801,938. (Cl. 158—27.)



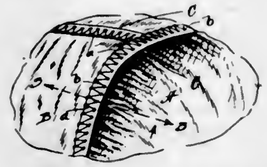
In a self-heating soldering iron, a hollow cylindrical head open at its inner end, a pair of arms extending longitudinally from the inner end of said head, a tubular shank connected to the inner ends of said arms, a fuel conveying tube slidable through said shank, a cylindrical burner having a longitudinal chamber formed therein adjacent its outer end, a vent piercing the outer end wall of the burner and communicating with the longitudinal chamber, a threaded socket formed in the other end of the burner to receive the outer end of the fuel tube, a passage connecting said socket with the chamber of the burner, and a needle valve threaded transversely into the burner to control the flow of fuel through said passage.

1,108,667. METHOD OF MANUFACTURING IRON AND STEEL SHEETS. ROBERT T. BANFIELD, Pittsburgh, Pa. Filed Sept. 19, 1913. Serial No. 790,760. (Cl. 29—18.)



A method of manufacturing metallic sheets consisting in first heating cold sheet bars, then subjecting the heated material to a roughing mill to roll the material to the desired length, then removing the rolled material from the front of the mill, then again heating the material, then subjecting the heated material to a finishing mill arranged at one side of the roughing mill to draw said material, then removing the material from the front of the finishing mill, then doubling and hammering down the drawn material, then heating the hammered down and doubled material, and then subjecting the heated material to the finishing mill.

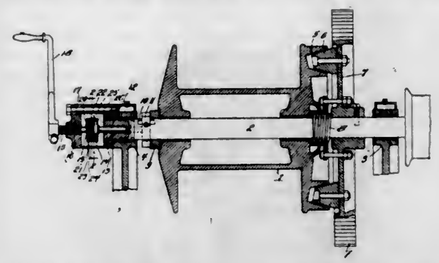
1,108,668. GARMENT. WALTER E. BARNES, Bridgeport, Conn., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 23, 1905. Serial No. 242,358. (Cl. 112—34.)



A garment comprising two or more parts, the edge of one of the parts being superimposed upon and coinciding with the edge of the other part, a tape upon the outer face and adjacent the edge of one of said parts, a securing thread extending along the face of one of said parts and having loops extending through the two parts and the tape at a distance from the edge of the united parts, said loops terminating substantially at the outer face of the tape, a second thread having loops passing through the loops in the first named thread and locking the same, the loops in the second thread being extended to the edge of the united parts, a third thread having loops interlocking the loops in the second thread, the loops of the third thread lying on the opposite face of the united parts and being locked by the loops formed in the first named thread.

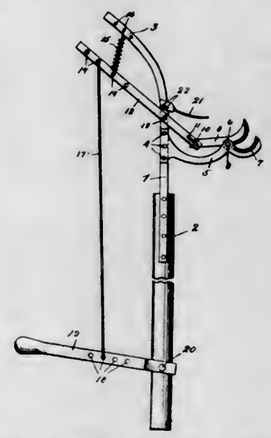
1,108,669. CLUTCH-OPERATING MECHANISM. HORACE S. BARNWELL, Seattle, Wash. Filed Mar. 18, 1913. Serial No. 755,183. (Cl. 192—8.)

In a device of the class described, the combination with a shaft and clutch mechanism mounted thereon, the said shaft being provided with a longitudinal slot adjacent one end thereof and with a central bore in communication therewith, of a cross key slidably mounted within the shaft slot for engagement with the clutch mechanism, friction pin slidably and rotatably mounted within the shaft bore with its inner end frictionally engageable with the cross key, a head provided upon the outer end of said pin and having a flat end face, a casing, a longitudinally adjustable friction screw mounted within said casing, means by which said screw may be operated, a bearing head provided upon the inner end of said screw and provided with an annular race-way in its inner face, a plurality of anti-friction elements mounted within the said race-way for engagement with the end face of the head



provided upon the friction pin, and means provided upon the bearing head for retaining the said balls within the race-way.

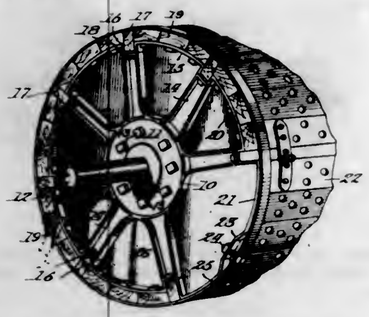
1,108,670. PRUNING IMPLEMENT. SAMFORD O. BARRON and GEORGE W. FAULKNER, Bell, Fla. Filed July 7, 1913. Serial No. 777,648. (Cl. 30—13.)



1. A pruning implement comprising a handle, a frame secured upon said handle, an arm rigidly secured to said frame and extending at a substantial right angle laterally therefrom, a blade formed on the free end of said arm, the cutting edge being the upper edge, a movable arm pivotally secured intermediate its ends upon said arm, a blade formed on one end of said movable arm, the cutting edge being the bottom edge, a pin secured upon the other end of said arm, a lever pivoted intermediate its ends transversely of said frame and provided at one end with a slot engaged by said pin, a spring connected with said frame and the other end of said lever, and means for actuating said lever.

2. A pruning implement comprising a handle, a frame secured upon said handle, an arm rigidly secured to said frame and extending at a substantially right angle laterally therefrom, a blade formed on the free end of said arm, the cutting edge being the upper edge, a movable arm pivotally secured intermediate its ends upon said arm, a blade formed on one end of said movable arm, the cutting edge being the bottom edge, a pin secured upon the other end of said arm, a lever pivoted intermediate its ends transversely of said frame and provided at one end with a slot engaged by said pin, a spring connected with said frame and the other end of said lever, an operating lever pivoted upon said handle and adapted to be swung vertically, and a link connected with said operating lever and the free end of said first named lever.

1,108,671. WASHING-CYLINDER. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed July 11, 1910. Serial No. 571,464. (Cl. 68—18.)



1. In a washing cylinder, a head comprising a hub having radiating spokes, a rim having inwardly projecting rib sockets arranged on the ends of said spokes, ribs seated in said sockets and secured therein by bolts passing radially through said rim, ribs and spokes, and staves arranged on said rim between said ribs.

2. A washing cylinder, comprising head members, ribs mounted upon said head members, said ribs being provided with kerfs upon their lower ends and sides, staves arranged on said head members between said ribs provided with kerfs, metal head plates having their peripheral edges arranged within the kerfs of said staves, said head plates being provided with notches embracing said ribs and extending into the kerfs thereof, and hoops surrounding said ribs and staves.

3. In a washing cylinder, a head comprising a hub having radiating channel spokes, a rim provided with peripheral rib sockets detachably mounted on the ends of said spokes, ribs seated in said sockets and secured therein by bolts extending radially through said ribs, rib sockets and spokes, staves secured to said rim, and a hoop surrounding said staves.

4. A washing cylinder comprising a head having a rim, ribs and staves arranged on said rim provided with transverse recesses on their inner faces, a head plate arranged against the inner face of said head having notches to receive said ribs, the peripheral edge of said plate being disposed within the recesses of said ribs and staves, and means for holding said ribs and staves in position on said rim.

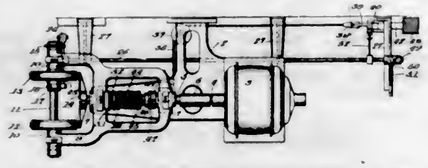
5. In a washing cylinder, a head provided with a rim having rib sockets therein, a rib provided with a recessed seat to enter said socket and a kerf at the inner end of said seat, an attaching bolt extending through said rib and rim and secured to said head, a head plate at the inner face of said head and entering said kerf, and staves carried by said rim and provided with kerfs to receive the periphery of said head plate.

[Claims 6 and 7 not printed in the Gazette.]

1,108,672. VARIABLE-SPEED FRICTIONAL DRIVE MECHANISM. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed May 15, 1911. Serial No. 627,269. (Cl. 74—26.)

1. In a driving mechanism, the combination with a movable driven member, of a driving member mounted to engage said driven member, a rock shaft, a connection between said rock shaft and driven member, a lever for rocking said shaft, a segment fixed on said rock shaft, a treadle, a flexible connection between said treadle and driving member, and a lug extending laterally from said treadle in the path of travel of said segment.

2. In a driving mechanism, the combination with driving and driven members mounted to move at right angles to each other, of a rock shaft for moving said driven member, a pivoted lever for moving said driving member in one direction, a spring for moving said driving member in a reverse direction, a treadle for shifting said lever, a segmental rack carried by said rock shaft, and a lug arranged on said treadle in the path of travel of said segmental rack.



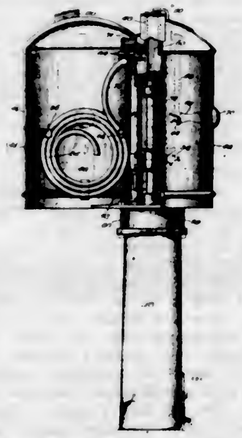
3. In a driving mechanism, the combination with a driven member and a driving member mounted to move at right angles to each other, of a spring for holding said driving member in contact with the driven member, a treadle-control for said driving member, a rock shaft-control for said driven member, a segment on said rock shaft, and a lug extending from said treadle in the path of travel of said segment.

4. In a driving mechanism for ironing machines, the combination with a driving shaft, of a driven shaft, a driving member fixed on said driving shaft, a driven member feathered upon said driven shaft, a spring for forcing said driving shaft in one direction, a treadle mechanism for moving said shaft in a reverse direction, a rock shaft for shifting said driven member upon said driven shaft, a segment upon said rock shaft, and a lug upon said treadle arranged in the path of travel of said segment.

5. In a driving mechanism for ironing machines, the combination with a continuously rotating motor, of a driving shaft having a sliding connection with said motor, a driving member fixed upon said driving shaft, a spring surrounding said driving shaft for moving said shaft in one direction, a lever having a circular portion surrounding said driving shaft and having a connection therewith, a cable for operating said lever, a treadle for operating said cable, a driven member coöperating with said driving member, a rock shaft for operating said driven member, a segment upon said rock shaft, and a lug upon said treadle arranged in the path of travel of said segment.

[Claims 6 and 7 not printed in the Gazette.]

1,108,673. DISPENSING APPARATUS. REUBEN E. BECHTOLD and HERBERT J. GROSVENOR, Fort Wayne, Ind., assignors to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Dec. 11, 1911. Serial No. 664,960. (Cl. 221—99.)



1. In dispensing apparatus, the combination with liquid dispensing and filtering means having a common manifold, of an inclosing structure secured to the manifold above and below the same to inclose the apparatus above and below the manifold.

2. In dispensing apparatus, the combination with liquid dispensing and filtering mechanisms having a common manifold, of an inclosing structure for the apparatus above and below the manifold comprising a closed casing below the manifold and hinged inclosing members above the manifold.

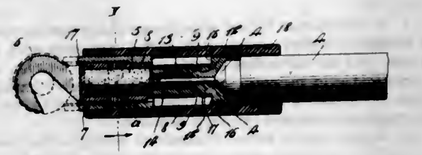
3. In dispensing apparatus, the combination with liquid dispensing and filtering mechanisms having a common manifold and liquid discharging and measuring mechanism above the manifold of an inclosing structure comprising a casing below the manifold, and hinged doors above the manifold adapted to be opened and closed and to form a water-proof casing for the dispensing and measuring mechanism.

4. In dispensing apparatus of the class described, the combination with a supporting member, of a narrow upwardly extending yoke secured to the member, and outwardly rounded closures adapted to be removably positioned on opposite sides of the yoke and forming with the yoke a complete waterproof inclosure for all the apparatus above the supporting member.

5. In dispensing apparatus of the class described, the combination with a supporting member, of a narrow upwardly extending yoke secured at the ends to the member, and outwardly rounded doors, each curved inwardly at the top, pivoted in the yoke on opposite sides and adapted, when closed, to form with the yoke an inclosing waterproof casing for the apparatus above the supporting member.

[Claims 6 to 23 not printed in the Gazette.]

1,108,674. TERMINAL CONNECTOR FOR SPARK-PLUGS. CHARLES W. BECK, Rockville Center, N. Y., assignor, by mesne assignments, to Michigan Motor Specialties Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 15, 1910. Serial No. 577,328. (Cl. 175—183.)



1. In a terminal connector the combination with an insulating base, fixed electrodes mounted on said base and having a space between them, a movable sleeve adapted to inclose said electrodes and to bridge the space between them, whereby said electrodes may be electrically connected together by said sleeve, and means for electrically connecting one of said electrodes to a spark plug terminal and means for connecting the other electrode to a terminal wire.

2. In a terminal connector the combination with an insulating base, fixed electrodes mounted on said base and having a space between them, movable means for inclosing said electrodes and bridging the space between them, said means serving to electrically connect said electrodes together, means for connecting one of said electrodes to a spark plug terminal, and means to connect the other electrode to a terminal wire.

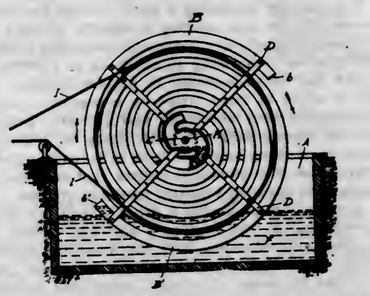
3. In a terminal connector the combination with an insulating base, fixed electrodes mounted on said base and having a space between them one of said electrodes being externally threaded, an internally threaded sleeve adapted to engage the threaded electrode and to bridge the space between said electrodes, means for connecting one of said electrodes to a spark plug terminal, and means for connecting the other electrode to a terminal wire.

4. In a terminal connector the combination with an insulating block or base, electrodes mounted on said base and having a space between them one of said electrodes having a projecting sparking point extending toward the other electrode, and tubular movable means for bridging the space between the electrodes and inclosing the sparking point, said means being adapted to open and close the circuit between said electrodes.

5. In a terminal connector the combination with an insulating base, fixed electrodes mounted on said base and having a space between them one of said electrodes being adapted to be connected to a spark plug terminal, means for connecting the other electrode to a terminal wire, and a longitudinally movable sleeve for bridging the gap between said electrodes said sleeve in its bridging position being adapted to contact with the spark plug terminal to lock the electrode thereto.

[Claims 6 to 16 not printed in the Gazette.]

1,108,675. IRRIGATION COIL-WHEEL. JAMES A. BECK, Stewartsville, Mo., assignor of one-third to David Flinn, Stewartsville, Mo. Filed Nov. 17, 1913. Serial No. 801,500. (Cl. 103—43.)



The combination with suitable motor power of a solid axle suitably supported in proximity to the level of the ground, a hollow shaft forming a common center around said axle serving as an overflow pipe, two or more coiled tubings forming a wheel their outer ends adapted to take up water from a reservoir at points equidistant from each other on the periphery of said wheel and to empty the water into said hollow shaft, a discharge pipe from an end of said hollow shaft and a plurality of strips across the coiled tubings forming a frame on both sides of the wheel to strengthen the same.

1,108,676. PROCESS OF MANUFACTURING THE CARBAMIC-ACID ESTER OF DICHLORHYDRIN. BRUNO BECKMANN, Berlin, Germany. Filed Nov. 22, 1913. Serial No. 802,537. (Cl. 23—24.)

The hereindescribed process of manufacturing carbamic acid ester of α-dichlorhydrin, consisting in subjecting α-dichlorhydrin to the action of carbamic acid chlorid.

1,108,677. METHOD OF PRODUCING PAPER MATRICES FOR HALF-TONE STEREOTYPING. NIELS BENDIXEN, Copenhagen, Denmark. Filed Nov. 9, 1911. Serial No. 659,415. (Cl. 198—7.)



1. A method of producing a matrix for stereotyping consisting in first applying to an etching a coating suitable for producing a relief surface; secondly in pasting together several layers of paper to form a pad by means of a paste containing saponaceous, absorbing and adhesive substances; thirdly in placing said pad while damp on said coating; fourthly in pressing said pad upon said coating and lastly in drying the thus produced matrix and subsequently detaching the completed matrix from the etching.

2. A method of producing a paper matrix for stereotyping consisting in first coating a suitable etching with a paste containing adhesive fatty and absorbing substances; secondly in pasting together several layers of paper to form a pad by means of a paste containing saponaceous, absorbing and adhesive substances; thirdly in placing said pad while damp on said coating; fourthly in pressing said pad upon said coating and lastly in drying the thus produced matrix and subsequently detaching the completed matrix from the etching.

3. A method of producing a paper matrix for stereotyping consisting in first coating a suitable etching with a paste containing adhesive, fatty and absorbing substances; secondly in pasting together several layers of paper to form a pad by means of a paste containing saponaceous, absorbing and adhesive substances, said pad being composed of alternate sheets of tissue paper and plate paper; thirdly in placing said pad while damp on said coating; fourthly in pressing said pad upon said coating and lastly in drying the thus produced matrix and subsequently detaching the completed matrix from the etching.

4. A method of producing a paper matrix for stereotyping consisting in first coating a suitable etching with a paste containing adhesive, fatty and absorbing substances; said substances comprising an emulsion of paraffin in fish glue and pipe clay; secondly in pasting together several layers of paper to form a pad by means of a paste containing saponaceous absorbing and adhesive substances; thirdly in placing said pad while damp on said coating; fourthly in pressing said pad upon said coating and lastly in drying the thus produced matrix and subsequently in detaching the completed matrix from the etching.

5. A method of producing a paper matrix for stereotyping consisting in first coating a suitable etching with a paste containing adhesive, fatty and absorbing substances; secondly in pasting together several layers of paper to form a pad by means of a paste containing saponaceous, absorbing and adhesive substances, said substances of the paste being respectively an alcoholic solution of soap, pipe-clay and an adhesive; thirdly in placing said pad while damp on said coating; fourthly in pressing said pad upon said coating and lastly in drying the thus produced matrix and subsequently detaching the completed matrix from the etching.

[Claim 6 not printed in the Gazette.]

1,108,678. LAMP-SOCKET CASING. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1912. Serial No. 681,003. (Cl. 173—362.)



1. In a socket casing, the combination with a cap having an internal shoulder, of a shell having a projection adapted to engage said shoulder thereby to prevent longitudinal withdrawal of the shell from the cap, said projection being movable inwardly out of engagement with said shoulder, and releasable means for preventing inward movement of said projection.

2. In a socket casing, the combination with a cap having an inwardly concave circular bead adjacent its lower edge, of a shell having a projection adapted to engage in said bead thereby to prevent longitudinal withdrawal of the shell from the cap, said projection being movable inwardly out of engagement with said bead, and releasable means for preventing inward movement of said projection.

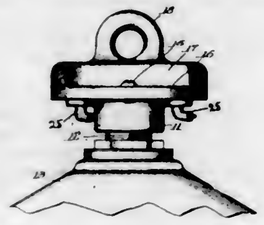
3. In a socket casing, the combination with a cap having an internal shoulder, of a shell adapted to telescope, at its upper end, into said cap, a projection carried by said shell and adapted to engage said shoulder to prevent withdrawal of said shell, and a clamping screw carried by said shell and engaging said cap to clamp the latter against said shell so as to prevent angular movement of the shell relatively to the cap.

4. In a socket casing, the combination with a cap having an inwardly concave circular bead adjacent its lower edge, of a shell having a projection adapted to engage in said bead thereby to prevent longitudinal withdrawal of the shell from the cap, said projection being movable inwardly out of engagement with said bead, and releasable means for preventing inward movement of said projection, and also serving to prevent angular movement of said shell relatively to said cap.

5. In a socket casing, the combination with a cap having an internal shoulder, of a shell, a projection carried by said shell and adapted to engage said shoulder, and a screw for locking said projection in engagement with said shoulder to prevent withdrawal of said shell, said screw also serving to clamp said cap to said shell so as to prevent angular movement of said shell relatively to said cap.

[Claims 6 and 7 not printed in the Gazette.]

1,108,679. SUSPENSION-FITTING. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1913. Serial No. 758,139. (Cl. 240—78.)



1. A suspension fitting comprising a supporting cover, a conduit-carrying member detachably connected with said cover, and an insulating member contained between said cover and said member, said insulating member having a pair of conductor-receiving bushings extending outwardly through said conduit-carrying member.

2. A suspension fitting comprising a supporting cover, a conduit-carrying member detachably connected with said cover, and an insulating member contained between said cover and said member, said insulating member having a pair of conduit-receiving bushings extending outwardly through said conduit-carrying member and being formed with a channel between said bushings, said channel having a central opening for permitting passage of the conductors to the conduit.

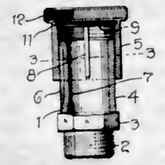
3. A suspension fitting comprising a supporting cover, a plate detachably connected with said cover, said plate being formed with a pair of openings and having a hollow conduit-receiving boss, and an insulating member contained between said plate and said cover, said insulating member being formed with openings for receiving conductors registering with the openings of said plate and being formed with a channel between said openings, said channel having an opening registering with said boss but of less diameter than the internal diameter of said boss, for the purposes set forth.

4. A suspension fitting comprising a supporting cover, a plate detachably connected with said cover, said plate having a hollow conduit-receiving boss, and an insulating member contained between said plate and said cover, said insulating member having a pair of conductor-receiving bushings extending outwardly through said plate and being formed with a channel between said bushings, said channel having an opening registering with said boss but of less diameter than the internal diameter of said boss, for the purposes set forth.

5. A suspension fitting comprising a disk-shaped supporting cover, said cover having a rectangular enlargement forming a casing, an elongated conductor-receiving insulating member contained in said casing, and a disk-shaped conduit-supporting member detachably secured to said cover for retaining said insulating member in position.

[Claims 6 to 10 not printed in the Gazette.]

1,108,680. GREASE-CUP. JOHN H. BENNETT, Worcester, Mass. Filed Mar. 5, 1914. Serial No. 822,646. (Cl. 184—48.)



1. A grease cup of the character described, including a body portion, a cap mounted thereon, a locking member within the cap and movable therewith and engageable with the body portion for the purpose specified, and a disk-like washer engaging the wall of the cap underneath the top thereof and extending across the top from one side to the other and holding the locking member in place.

2. A grease cup of the character described, including a body portion, a rotatable cap mounted thereon, a locking member within the cap and movable therewith and engageable with the body portion, for the purpose specified, and a flat disk washer having its edge engaged with the interior side wall of the body portion, and holding said locking member in place.

3. A grease cup of the character described, including a body portion, a rotatable cap mounted thereon, a locking member mounted within the cap and movable therewith and engageable with the body portion, for the purpose specified, and a notched washer connected to said locking member and engaging the wall of the cap to hold itself and the locking member in place.

4. A grease cup of the character described, including a body portion, a rotatable cap mounted thereon, a locking member of U formation mounted within the cap and engageable with the body portion, for the purpose specified, and a notched disk of ductile metal extending across the locking member and engaging the wall of the cap whereby to hold itself and the locking member in place.

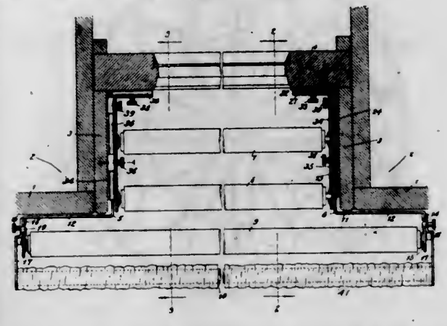
5. A grease cup of the character described, including an exteriorly threaded body portion formed with longitudinally disposed interior ribs, an internally threaded cap adapted to screw on the body portion, a locking member of U formation mounted within the cap and engageable with said ribs, for the purpose specified, and a notched disk extending across the cross bar of said locking member, the arms of the latter being received in the notches of the disk and said disk engaging the inner wall of the cap whereby to hold itself and the locking member in place.

[Claims 6 to 9 not printed in the Gazette.]

1,108,681. WINDOW-SHADE SUPPORT. JOHN A. BERCHTOLD, Sigel, Ill., assignor of one-half to August Schlicher, Mattoon, Ill. Filed Apr. 30, 1914. Serial No. 835,429. (Cl. 156—23.)

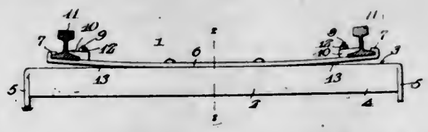
1. In a device of the character described, a pair of brackets, means for connecting an exterior shade with said brackets, means for connecting an interior shade with said brackets, a pair of pivotally mounted arms arranged on the outer ends of said brackets, said arms being formed with apertures and with means for limiting the movement of the arms in one direction, means for clamping said arms against movement in either direction, and a curtain pole mounted in the apertures in said arms.

2. In a device of the character described, the combination with a window, of a plate connected to the upper sash of the window, said plate being formed with a pair of guideways, a bracket designed to be supported by each of said plates, each of said brackets being provided with a locking sliding member fitting into the ways in said plate, means for locking said sliding member to said plate, a telescoping section, means for locking the telescoping section to the body of the bracket, means arranged on said telescoping section for receiving and supporting a roller, a pair of individual roller brackets mounted on the body of said first mentioned bracket, and a clamping screw for each of said individual brackets for clamping the same against movement.



3. In a device of the character described, a shade roller bracket comprising a supporting plate, a body formed with a turned-over end slidingly fitting against said plate, means for locking said turned-over end to said plate, a telescoping section interlocking with said body, said telescoping section having a bent-over arm which extends at right angles to said body, the end of said arm being formed with means for receiving the end of a shade roller, a pair of individual shaped roller brackets slidingly mounted on said body, and a locking member for each of said individual shaped roller brackets, said locking member being adapted to engage said telescoping section for locking the same in any of its adjusted positions.

1,108,682. RAIL-TIE. CARL BERG, Brooklyn, N. Y., assignor to James W. Beard, New York, N. Y. Filed Dec. 6, 1913. Serial No. 805,114. (Cl. 238—5.)



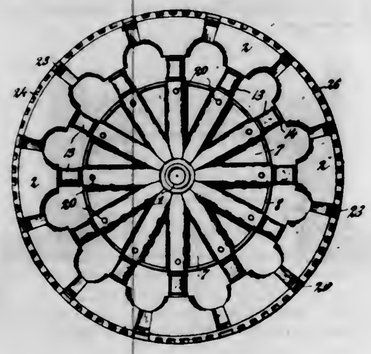
1. A metallic tie having a flat top, sides and ends, the corners of the tie being inclined, a flat spring plate secured centrally to the top of the tie, saddle blocks between the inclined corners and the under face of the plate, said plate having its ends elevated above the tie, means for securing rails to the said ends of the plate.

2. A meallic tie comprising sides, ends extending below the sides and a top which is inclined to its sides and ends, a saddle block arranged centrally upon the inclined top, a flat resilient plate extending longitudinally of the tie and secured to the saddle block, and means upon the opposite ends of the plate for securing rails to the plate.

1,108,683. VEHICLE-WHEEL. ISAAC BIRD, Barnesville, Minn. Filed Apr. 12, 1913. Serial No. 760,711. (Cl. 152—30.)

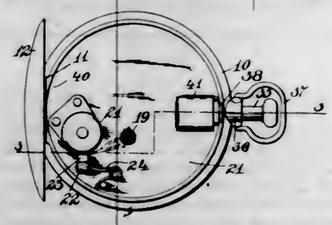
1. A spring wheel embodying a circular series of independent radially movable felly sections having a tongue and groove engagement at their abutting ends and formed

with longitudinal grooves in their outer faces, a spoke attached to each section and radially movable therewith, sprocket teeth on the outer peripheral faces of the felly sections and located within said grooves, an endless sprocket chain engaging said teeth and extending entirely around the periphery of the felly within the grooves of the sections, and tread plate sections secured to the felly sections and covering said chain and its containing groove.



2. A spring wheel embodying a circular series of independent radially movable felly sections having a tongue and groove engagement at their abutting ends and formed with longitudinal grooves in their outer faces, a spoke attached to each section and radially movable therewith, sprocket teeth on the outer peripheral faces of the felly sections and located within said grooves, an endless sprocket chain engaging said teeth and extending entirely around the periphery of the felly within the grooves of the sections, and tread plate sections secured to the felly sections and covering said chain and its containing groove, the curvature of the felly sections being of less radius than that of the circumference of the wheel as a whole when not subjected to a load and of such curvature as to be concentric to the axis of the wheel when the sections are at the inner limit of their movement.

1,108,684. LIGHTER. ANDREAS R. BLUM, Newark, N. J. Filed Nov. 26, 1913. Serial No. 803,091. (Cl. 67—7.1.)



1. A lighting device comprising a casing, a lid for the casing, a lighting device in the casing, a latch for holding the lid shut, an operating mechanism for the lighting device, and a handle operatively connected to the latch and to the operating mechanism in such a manner that a slight movement of the handle releases the latch and a further movement of the handle actuates the operating mechanism.

2. A lighter comprising a casing of substantially flat form, a plate mounted in the casing and having a passage therethrough for a wick, a lighting device mounted above the plate, an operating mechanism for the lighting device, a handle adapted to actuate the operating mechanism and projecting from the side of the casing, a spring for normally holding the handle and the operating mechanism in inoperating position, a spring for normally forcing the lid open, and a latch mounted on the handle and adapted to hold the lid shut, the latch being so disposed that it releases the lid when the handle is operated but before the handle has traveled a distance sufficient to cause an appreciable movement of the operating mechanism.

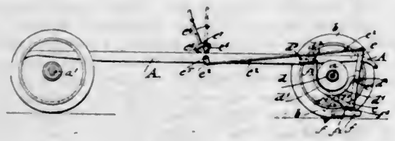
3. A lighter comprising a casing of substantially flat form, a lid on the top of the casing and having means for normally swinging it open, a plate arranged horizontally in the casing forming, with the casing, a reservoir for fuel, an ignition point above the plate and connected with the reservoir, a sparking device on the plate adjacent to the ignition point, an operating means above the plate and adapted to actuate the sparking device, a handle sliding in the side of the casing, a latch on the handle and engaging the lid to release the lid on a slight movement of the handle, and an anti-friction connection between the handle and the operating mechanism for actuating said mechanism when the handle is moved beyond the releasing point of the latch.

4. A lighter comprising a casing, a rotatable sparking wheel in the casing, a bell-crank arranged to swing in the casing, an operative connection between one end of the bell-crank and the sparking wheel to cause the rotation of the sparking wheel when the bell-crank is swung, spring means for forcing the bell-crank to its normal position, and a handle connected to the bell-crank and projecting from the side of the casing and in sliding relation thereto.

5. A lighter comprising a casing, a rotatable sparking wheel in the casing, a bell-crank arranged to swing in the casing, an operative connection between one end of the bell-crank and the sparking wheel to cause the rotation of the sparking wheel when the bell-crank is swung, spring means for forcing the bell-crank to its normal position, a handle connected to the bell-crank and projecting from the side of the casing and in sliding relation thereto, a lid on the casing, and a latch secured to the handle, said latch being adapted to normally hold the lid shut.

[Claims 6 and 7 not printed in the Gazette.]

1,108,685. BRAKE FOR AUTOMOBILES. PHILIPP BOCH, New York, N. Y., assignor of one-half to Paul Reich, New York, N. Y. Filed July 9, 1912. Serial No. 708,489. (Cl. 21—8.)

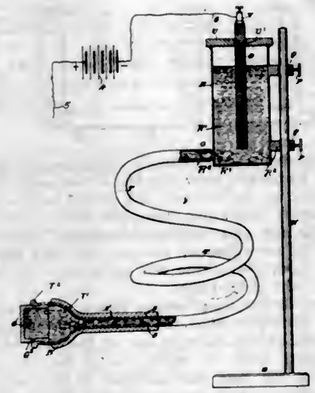


1. The combination of a disk brake mechanism, a drag brake mechanism, and a single brake setting mechanism operative to set one of said brakes on a partial stroke and both thereof on a full stroke.

2. The combination of a brake disk, a pivoted brake shoe therefor, an auxiliary brake lever pivoted adjacent to the pivot of said brake shoe, a drag brake shoe pivoted to the opposite end of said auxiliary brake lever, a brake lever pivoted to said auxiliary brake lever and provided with means for engaging the free end of said brake shoe, and an actuating device connected with said brake lever.

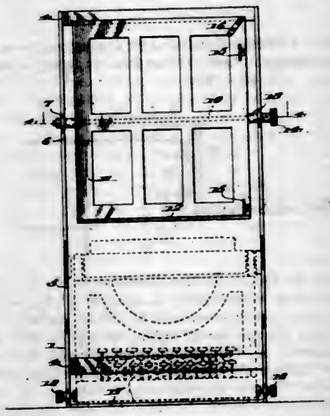
3. The combination of a brake disk, a pivoted brake shoe therefor, an auxiliary brake lever pivoted adjacent to the pivot of said brake shoe, a drag brake shoe pivoted to the opposite end of said auxiliary brake lever, a brake lever pivoted to said auxiliary brake lever and provided with a link connecting said brake lever with the free end of said brake shoe, and an actuating device connected with said brake lever.

1,108,686. ELECTROTHERAPEUTIC FLUID ELECTRODE. HARRY BONIS, Listowel, Ontario, Canada. Filed Aug. 3, 1912. Serial No. 713,193. (Cl. 174—89.)



An electro-therapeutic device, including a porous cup-shaped terminal and a flexible tube having an end-enlargement encompassing and gripping said cup-shaped terminal, adapting it to extend over the mouth of the latter, as and for the purpose specified.

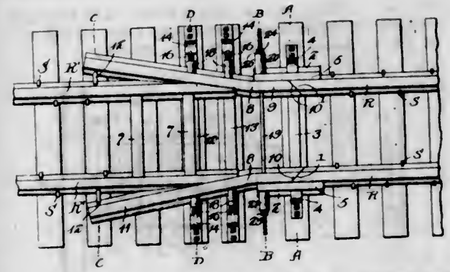
1,108,687. HOLDER. ORA M. BOORMAN, Oshkosh, Wis. Filed Sept. 3, 1913. Serial No. 787,972. (Cl. 120—28.)



1. A manuscript holder for typewriters comprising supporting uprights adapted to extend upon opposite sides of the machine, means for connecting the uprights together, means for securing the uprights to the machine, integral arms projecting horizontally from the uprights and having slots therein which are continued throughout a portion of the uprights, a shaft rotatably and adjustably mounted in said slots and a manuscript holding rack carried upon the shaft.

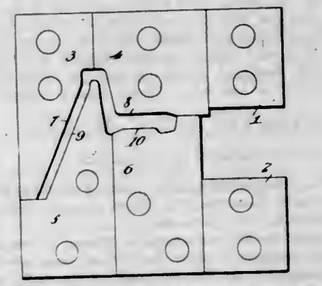
2. In a manuscript holder for typewriters, a pair of uprights having forwardly offset vertical portions and horizontally arranged forwardly extending supporting feet, said supporting feet adapted to be arranged upon opposite sides of the typewriter, means carried by the supporting feet for attaching the device to the typewriter, means for connecting the uprights together, integral arms projecting horizontally from the upper portions of the uprights, said arms being provided with slots which are continued throughout a portion of the uprights, a shaft rotatably mounted and adjustably arranged in the slots, means for locking the shaft against rotation and adjustment in the slots, a manuscript holding rack secured to the shaft and means for holding the manuscript on the rack.

1,108,688. RAIL-CONTROLLER. WILLIAM H. BOYD, Helena, Okla. Filed Sept. 17, 1913. Serial No. 790,278. (Cl. 239—8.)



In a device for the purpose set forth, registering rails having their ends spaced, angle bars engaging the outer faces of two of the adjacent rails and extending beyond the ends thereof, brace members for the angle bars, a rod passing through the angle bars beyond the rail ends, tubular members adjustably secured to the opposite ends of the rod, springs within the tubes and exerting a tension upon the angle bars, compensating rails for filling the gaps between the registering rails, each of said compensating rails including a straight and an angle portion and the said straight portions of the said compensating rails having their ends arranged in contact with the ends of the aforementioned rails and also in contacting engagement with the angle bars, the second mentioned pair of registering rails having their sides beveled outwardly from their ends and engaged by the angular portions of the compensating rails, brace means for preventing the lateral movement of the compensating rails in an outward direction, and said brace members permitting a longitudinal movement of the said compensating rails to move the same laterally into contact with the ends of the first mentioned registering rails.

1,108,689. SECTIONAL SHEARS FOR METAL BARS. WILLIAM J. BRADLEY, Troy, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Apr. 12, 1913. Serial No. 760,633. (Cl. 164—47.)



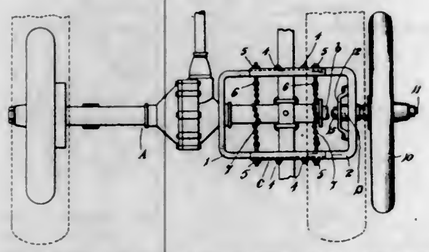
1. A sectional shear for metal bars, each knife member of which consists of a plurality of separately attachable and detachable blade sections having irregular adjoining cutting edges, the combined cutting edges of the two sectional knife members respectively conforming to the outside and inside configurations of the metal bar.

2. A sectional shear for metal bars, each knife member of which consists of a plurality of separately attachable

and detachable blade sections, the blade sections of one member having edges arranged to form a reëntrant space, and one of the blade sections of the other knife member having a tongue piece adapted to operate within said space.

3. A sectional shear for metal bars including a knife member having cutting edges and a reëntrant space, and another knife member having a separately detachable and renewable tongue piece coöperating with said space.

1,108,690. AUTOMOBILE WRECKING APPARATUS. CHARLES H. BREWSTER, Middletown, Conn. Filed Oct. 17, 1913. Serial No. 795,750. (Cl. 21—5.)



1. In a device of the character described, a frame adapted to be located above a broken axle and supported at one end thereby, a wheel secured to and constituting a support for the other end of the frame, and flexible members wrapped about said axle and with their ends secured to the side bars of said frame.

2. In a device of the character described, a frame, a pair of chains connected at their ends to the sides of said frame and with their center portions adapted to be wrapped about an axle, a shaft supported in and projecting from the outer end of said frame, and a wheel mounted upon said shaft.

3. In a device of the character described, a frame comprising inner and outer members, means for securing together the side arms of said members, chains secured to said side arms near the ends thereof and adapted to have their center portions wrapped about an axle, a shaft mounted in and projecting from the end of the outer frame member, and a wheel supported on said shaft.

4. In a device of the character described, a frame, flexible means for securing said frame to an axle, a strut secured to the outer end of said frame and spaced therefrom, a filling block interposed between said strut and frame, a stub shaft supported in the bearing formed by said frame, filling block and strut, and a wheel mounted upon said shaft.

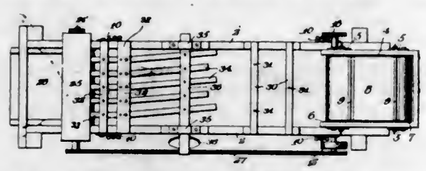
5. In a device of the character described, a frame formed of two parts from channel iron bent to U shape, the side arms of said parts adapted to telescope together, means for binding said arms together, chains secured at their ends to said side arms and adapted at their central parts to be wrapped about an axle, a shaft projecting from the end of the outer frame, and a wheel mounted thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,108,691. BEAN-SHELLER. JOHN F. BULLARD and JAY F. BULLARD, Swanton, Vt. Filed Dec. 20, 1913. Serial No. 808,019. (Cl. 130—30.)

1. A bean sheller comprising a frame, a belt mounted for orbital movement upon the frame, bean shelling elements located at the delivery end of the belt, bars pivotally mounted above the upper run of the belt and means for swinging the said bars simultaneously in a direction transversely of the line of movement of the belt.

2. A bean sheller comprising a frame, a belt mounted for orbital movement upon the frame, bean shelling elements located at the delivery end of the belt, fixed bars located above the upper run of the belt, bars pivotally mounted at the ends of said fixed bars and means for swinging the free end portions of the said pivoted bars transversely of the line of movement of the belt.



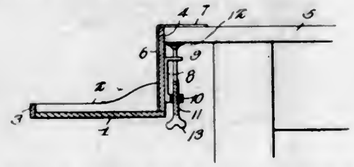
3. A bean sheller comprising a frame, a belt mounted for orbital movement upon the frame, bean shelling elements located at the delivery end of the belt, bars pivotally supported above the upper run of the belt, means for swinging the said bars simultaneously transversely of the line of movement of the belt and pins supported above the upper run of the belt in advance of the free ends of the said pivoted bars.

4. A bean sheller comprising a frame, a belt mounted for orbital movement upon the frame, bean shelling elements located at the delivery end of the belt, bars pivotally mounted above the upper run of the belt, means for swinging the free end portions of the said bars simultaneously transversely of the line of movement of the belt, said bars being of different lengths, each alternate bar being shorter than the intervening bars.

5. A bean sheller comprising a frame, a belt mounted for orbital movement along the frame, bean shelling elements located at the delivery end of the belt, bars pivoted above the upper run of the belt, a cross bar pivotally connecting said pivoted bars together and provided with spaced lugs, a wheel journaled upon the frame and having a spiral cam which is received between the said lugs.

[Claim 6 not printed in the Gazette.]

1,108,692. DINING-TABLE ATTACHMENT. IRVING J. BURD, Olympia, Wash. Filed Feb. 17, 1912. Serial No. 678,226. (Cl. 45—75.)

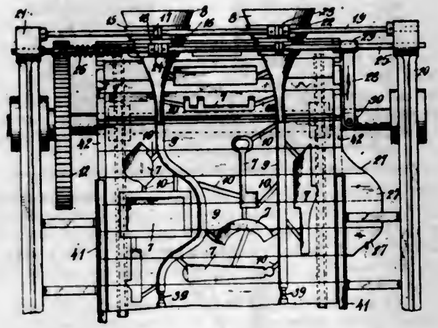


A device of the character described comprising a tray, said tray being substantially L-shaped, a channel-shaped member having its base secured to one of the sides of said tray, a right angular metal strap having one side secured to the opposite face of said last mentioned side of said tray, and having its opposite side projecting forwardly of the sides of said channel-shaped member, a threaded bolt operating in one of the sides of said channel-shaped member, a head formed upon said bolt, said bolt having an unthreaded extension projecting through the remaining side of said channel-shaped member, and a flat disk secured at the end of said rod extension and adapted to move toward said metal strap.

1,108,693. CASTING-MACHINE. JOHN BURKHARDT, New York, N. Y. Filed Dec. 17, 1910. Serial No. 597,744. (Cl. 22—76.)

1. The combination of a plurality of series of movable mold-blocks adapted to be brought together to form a plurality of molding spaces of any desired sizes and shapes, a plurality of main gate-ways for the passage of the metal, and a plurality of sub-gate-ways for leading the metal from the main gate-ways to the molding spaces, the different series of mold-blocks adapted to be separated to discharge the cast articles, and a funnel for each main gate-way for supplying metal thereto.

2. The combination of a plurality of chains provided with mold link-blocks adapted to be brought and moved together to form a plurality of molding spaces of any desired sizes and shapes, a main gate-way for the passage of the metal shifting in its course from the line of movement of the chains, and sub-gate-ways for leading the metal from the main gate-way to the molding spaces, the chains and mold link-blocks adapted in their further movement to be separated to discharge the cast articles.



3. The combination of a plurality of chains provided with mold link-blocks adapted to be brought and moved together to form a plurality of molding spaces of any desired sizes and shapes, a main gate-way for the passage of the metal shifting in its course from the line of movement of the chains, and sub-gate-ways for leading the metal from the main gate-way to the molding spaces, the chains and mold link-blocks adapted in their further movement to be separated to discharge the cast articles, and a movable funnel for supplying metal to the main gate-way adapted to shift its position to correspond with the shifting of the main gate-way.

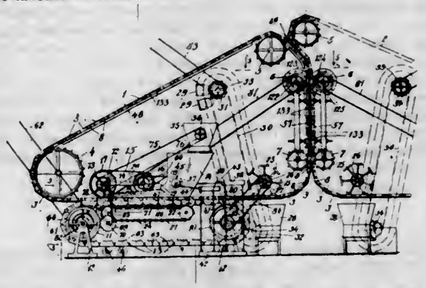
4. The combination of a plurality of chains provided with mold link-blocks adapted to be brought and moved together to form a plurality of molding spaces of any desired sizes and shapes, a plurality of main gate-ways for the passage of the metal, one or more of said gate-ways shifting in its course from the line of movement of the chains, a plurality of sub-gate-ways for leading the metal from the main gate-ways to the molding spaces, the chains and mold link-blocks adapted in their further movement to be separated to discharge the cast articles, a funnel for each main gate-way for supplying metal thereto and means for shifting the position of a funnel to correspond with the shifting of its gate-way.

5. In a molding machine the combination with a plurality of series of movable mold-blocks adapted to be brought together to cause the corresponding mold-blocks in the different series to form between them a hollow space adapted to constitute a molding space and to be separated to discharge the cast article, of a plunger of desired size and shape adapted to be moved into and to occupy part of the molding space during the casting operation and to be withdrawn at or prior to the separation of the blocks.

[Claims 6 to 13 not printed in the Gazette.]

1,108,694. CASTING-MACHINE. JOHN BURKHARDT, New York, N. Y. Filed Jan. 31, 1912. Serial No. 674,575. (Cl. 22—20.)

1. In a machine for making castings, two series of flasks, two series of patterns adapted to enter the flasks, each flask and its pattern in one series complementary to the corresponding flask and pattern in the other series, the two flasks with their sand molds forming, when brought together, a complete molding flask, means for feeding sand into the flasks and patterns, compressing devices for compressing the sand in the same, means for feeding metal into the completed molding flasks, and conveyers for bringing the flasks and patterns in each series together, for moving them into position to receive sand, and then into position to be compressed, for separating the patterns from the flasks and for bringing the complementary flasks together to form the completed molding flasks, and into position to receive metal, and for removing and separating the complementary flasks to discharge the molded articles.



2. In a machine for making castings, two series of flasks, two series of patterns adapted to enter the flasks, each flask and its pattern in one series complementary to the corresponding flask and pattern in the other series, the two flasks with their sand molds forming, when brought together, a complete molding flask, means for feeding sand into the flasks and patterns, compressing devices for compressing the sand in the same, means for feeding metal into the completed molding flasks, conveyers for bringing the flasks and patterns in each series together, for moving them into position to receive sand, and then into position to be compressed, for separating the patterns from the flasks and for bringing the complementary flasks together to form the completed molding flasks, and into position to receive metal, and for removing and separating the complementary flasks to discharge the molded articles, and sand ejectors for forcing the sand out of the flasks.

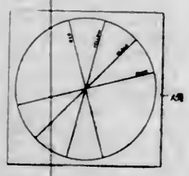
3. In a machine for making castings, two series of flasks, two series of patterns adapted to enter the flasks, each flask and its pattern in one series complementary to the corresponding flask and pattern in the other series, the two flasks with their sand molds forming, when brought together, a complete molding flask, means for feeding sand into the flasks and patterns, compressing devices for compressing the sand in the same, means for feeding metal into the completed molding flasks, conveyers for bringing the flasks and patterns in each series together, for moving them into position to receive sand, and then into position to be compressed, for separating the patterns from the flasks and for bringing the complementary flasks together to form the completed molding flasks, and into position to receive metal, and for removing and separating the complementary flasks to discharge the molded articles, and means for brushing the sand out of the patterns.

4. In a machine for making castings, two series of flasks, two series of patterns adapted to enter the flasks, each flask and its pattern in one series complementary to the corresponding flask and pattern in the other series, the two flasks with their sand molds forming, when brought together, a complete molding flask, means for feeding sand into the flasks and patterns, compressing devices for compressing the sand in the same, means for feeding metal into the completed molding flasks, conveyers for bringing the flasks and patterns in each series together, for moving them into position to receive sand, and then into position to be compressed, for separating the patterns from the flasks and for bringing the complementary flasks together to form the completed molding flasks, at an angle sufficiently removed from the vertical to permit the introduction and retention of cores in the completed flask, and for separating the complementary flasks to discharge the molded articles.

5. In a machine for making castings, two series of flasks, two series of patterns adapted to enter the flasks, each flask and its pattern in one series complementary to the corresponding flask and pattern in the other series, the two flasks with their sand molds forming, when brought together, a complete molding flask, means for feeding sand into the flasks and patterns, compressing devices for compressing the sand in the same, means for feeding metal into the completed molding flasks, conveyers for bringing the flasks and patterns in each series together, for moving them into position to receive sand, and then into position to be compressed, for separating the patterns from the flasks and for bringing the complementary flasks together to form the completed molding flasks, two separate series of molds adapted to be brought together adjacent to the completed molding flasks to form a main gateway for the metal communicating with the hollow spaces in the molds, and means for feeding metal to the main gateway.

[Claims 6 to 12 not printed in the Gazette.]

1,108,695. METHOD OF PREPARING LITHOGRAPHIC STONES. HENRY BUSCH and WALTER SCHUPBACH, New York, N. Y. Filed Mar. 9, 1914. Serial No. 823,534. (Cl. 101—159.)



1. A method as characterized, consisting in providing a series of stones with offset transfers; then providing said stones with color markings to indicate the desired direction of the tinting lines for said stones; and then superposing a tinting screen on said stones, said screen having a direction line thereon for registry thereof with the marks on said stones.

2. A method as characterized, consisting in providing a series of stones with offset transfers; then providing said stones with color markings to indicate the desired direction of the tinting lines for said stones; and then providing a tint on said stones in conformity with the color markings thereon.

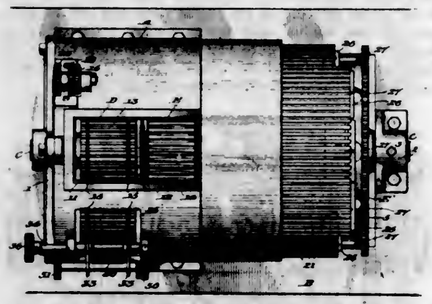
3. A method as characterized, consisting in providing a series of stones with offset transfers; then providing said stones with color markings to indicate the desired direction of the tinting lines for said stones; and then registering a tinting screen with the color markings on said stones; and then manipulating said screen to produce parallel tinting lines in offset areas on said stones.

4. A method as characterized, consisting in providing a series of stones with a series of offset transfers; then marking on said stones indicating lines for showing the direction of the tinting lines desired for the particular offset; then marking a tinting screen with a direction line coinciding with the line of movement of said screen and the direction for manipulating the same; then superposing said screen and registering the direction mark thereon with the indicating marks on said stones; and then rubbing and shifting said screen to form tinting lines on the stones coincident with the offset areas.

5. A method of forming line tinting areas on lithographic stones for the production of two and three color work, consisting in providing a series of stones with offset transfers and providing said stones with markings to indicate the desired direction of the tinting lines for said stones, said markings being mutually related to form angles of 30 degrees; then providing a tinting screen with registering marks, wherewith to place said screen on each of said stones to form tinting lines in parallel relation to the markings thereon.

[Claim 6 not printed in the Gazette.]

1,108,696. ARTICLE-PACKAGING MACHINE. CARL CASEY, Washington, D. C. Filed Oct. 21, 1913. Serial No. 796,481. (Cl. 93—6.)



1. An article-packaging machine comprising traveling means to receive and hold the containers, traveling means to receive the articles to be packaged, means to simultaneously insert the articles into a plurality of the containers, and means to dissimultaneously close the ends of the containers.

2. An article-packaging machine comprising two rotary drums having grooves which travel in continuous alinement with each other, the grooves in one drum to receive the containers, and the grooves in the other drum the articles to be packaged, and means to force the articles to be packaged from the grooves in one drum into the containers in alinement therewith in the other drum.

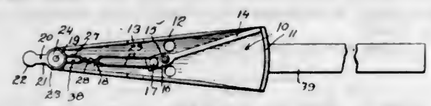
3. An article-packaging machine comprising two traveling members having recesses which travel in continuous alinement with each other to receive respectively the container and the article to be packaged, means for forcing the articles to be packaged endwise into the containers, and means for closing the containers.

4. An article-packaging machine comprising two traveling members having recesses which travel in continuous alinement with each other to receive respectively the container and the article to be packaged, means for forcing the articles to be packaged endwise into the containers, means for closing one end of the containers prior to the insertion of the articles thereinto, and independent means for closing the open end of the containers after the insertion of the articles thereinto.

5. An article-packaging machine comprising hoppers for feeding the packages in the form of completed tubes and the articles to be packaged to the machine, means to receive and hold the tubes, means to receive the articles to be packaged in each tube, a plunger to place the articles in the tube, means for closing the tube, and means for operating said plunger and tube-closing means.

[Claims 6 to 26 not printed in the Gazette.]

1,108,697. INDICATOR. ALFRED GEO. CASH, Rochester, N. Y. Filed Sept. 2, 1913. Serial No. 787,782. (Cl. 33—172.)

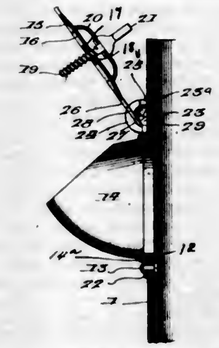


1. In an indicator, a base plate, a finger pivoted to said base plate, a contact element pivoted to the base plate, a spring lever carried by the contact element and operatively engaging said finger, said lever being held against movement relative to the contact element by frictional engagement therewith which may be overcome by a slight force, and spring means for holding the lever against movement in one direction.

2. In an indicator of the character described, the combination of a base plate, a finger pivoted intermediate its ends to said base plate, a stud carried by the finger, a contact element including a pair of spaced rings disposed in parallel planes, a bearing disk secured within said rings, a pivot pin passing through said disk, a forked lever partially encircling the disk between said rings, said lever extending toward the finger and engaging the stud on opposite sides; and spring means engaging the lever and holding the same normally against movement in one direction, the position of the contact element being adjustable with respect to the lever.

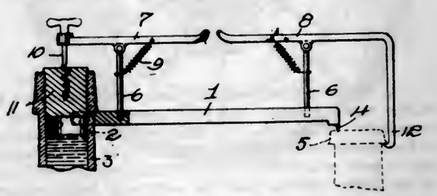
3. In an indicator, the combination of a base plate, a pivoted finger carried thereon, a stud formed upon the finger, a pivoted contact element, a lever movable with said element and engaging the stud on opposite sides, said lever being formed with a loop, a cover plate, a cross head pivoted to said plate; and a spring carried by the cross head and projecting through the loop, said spring tending to hold the lever against movement in one direction or the other.

1,108,698. STOVE-DOOR. ALFRED L. CASTLE, Quincy, Ill. Filed June 16, 1913. Serial No. 773,966. (Cl. 126—77.)



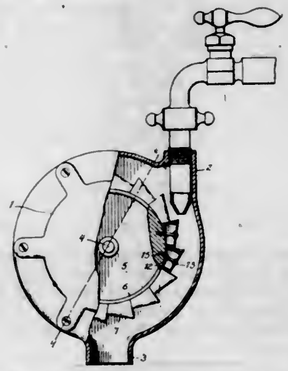
In a stove, the combination of a body having an upright side wall, an ash-door frame fixed with respect to the body and having on its upper portion a flange provided with an upwardly extending catch having an upwardly and inwardly beveled head and further having chambered lugs arranged at opposite sides of said catch and provided in their upper walls adjacent the side wall of the body with notches that are open at their inner ends and also at their upper and lower sides, and an ash door having a stem on which is a T-head disposed in the chambered lugs and also having the outer side of the end of said stem beveled and further having side notches disposed in front of the said T-head; said ash door being further provided at its outer side with means detachably connected therewith and extending laterally therefrom and adapted to bring up against the upright wall of the body and thereby prevent alinement of the T-head with the notches in the chambered lugs, as and for the purpose set forth.

1,108,699. BOTTLE-OPENING DEVICE. JOHN CHANI, Canal Dover, Ohio. Filed May 15, 1913. Serial No. 767,930. (Cl. 65—46.)



A bottle opening device comprising a bar formed at one end with a depending prong adapted for engagement with the bottle cap, an upright detachably mounted on said bar, a lever pivotally mounted on said upright, the outer end of said lever being formed with a downwardly extending portion having a hook formed on the end thereof and adapted for engagement under the edge of a bottle cap, and a spring connected to the said upright for holding said lever normally parallel to said bar.

1,108,700. FLUID-MOTOR. JOHN M. CHRISTOFFEL, Milwaukee, Wis. Filed Mar. 21, 1913. Serial No. 755,996. (Cl. 138—18.)



1. In a fluid motor, a rotor, a plurality of buckets mounted on said rotor, and a plurality of detachable baffle members mounted within the buckets for deflecting a fluid injected therein.

2. In a fluid motor a rotor, a plurality of buckets mounted on said rotor, a plurality of detachable baffle members mounted within the buckets for deflecting a fluid injected therein, and means for securing said baffle members to the buckets and to said rotor.

3. In a fluid motor a rotor, a plurality of buckets mounted on said rotor, a plurality of detachable members mounted within the buckets for deflecting a fluid injected therein, the buckets being provided with depressions adapted to support said baffle members, and means for securing said baffle members to the buckets and to said rotor.

4. In a fluid motor a rotor, a plurality of buckets mounted on said rotor, a plurality of detachable baffle members mounted within the buckets for deflecting a fluid injected therein, and screw threaded bolts passing through said buckets and the baffle members and engaging said rotor.

5. In a fluid motor a rotor, a plurality of buckets mounted on said rotor, a plurality of hollow detachable baffle members mounted within said buckets for deflecting a fluid injected therein, the buckets being provided with apertured depressions for supporting the baffle members, and means for securing said baffle members to the buckets and to said rotor.

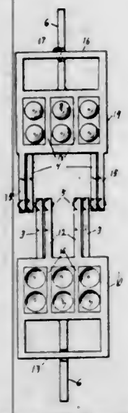
[Claim 6 not printed in the Gazette.]

1,108,701. BAKING APPARATUS. JOSEPH CIAMPAGLIA, Louisville, Ky. Filed Mar. 7, 1913. Serial No. 752,664. (Cl. 107—66.)

1. A baking apparatus comprising a matrix-plate, a core-plate and stripper-plates disposed on the aforesaid plates, hinge arms on the rear of and in proximity to each end of each of said plates, said arms extending in parallel planes, those adjacent the respective ends being connected by a common pivot pin.

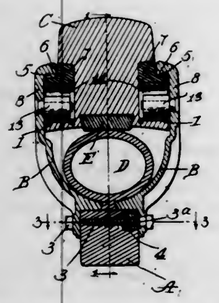
2. A baking apparatus comprising a matrix-plate, a core-plate a stripper-plate disposed on each of the aforesaid plates, hinge arms on the rear of and in proximity to each end of each of said plates, said arms extending in parallel planes, those adjacent the respective ends being connected by a common pivot pin, handles extending forward from each of said plates, said core-plate and asso-

cinted stripper-plate adapted to be raised separately or in unison.



3. A baking apparatus of the character described, a matrix and a core-plate in hinged relationship, a stripper-plate associated with each of said plates and hinged coincidently therewith in such relationship thereto that either stripper-plate may be separated from its associated plate.

1,108,702. VEHICLE WHEEL-TIRE. MELVILLE CLARK, Chicago, Ill. Filed Sept. 8, 1911, Serial No. 648,348. Renewed Nov. 21, 1913. Serial No. 802,328. (Cl. 152—10.)



1. In a vehicle wheel tire, in combination with the felly, lateral rigid guards secured thereto; a rubber tread member engaged between the guards and together with said guards and felly inclosing an annular cavity; an inflatable tube inclosed in said cavity and proportioned in respect thereto so as to be inflated to its limit without filling the cavity and so as to present a transversely convex surface toward the tread member, said tread member comprising wooden blocks having the grain filled with a waxy substance, said blocks being embedded fixedly at intervals in the inner circumference of said tread member and formed at their inner surfaces for seating tangentially upon the outer circumference of the inflatable tube.

2. In a vehicle wheel tire, in combination with the felly, lateral rigid guards secured thereto; a rubber tread member engaged between the guards and together with said guards and felly inclosing an annular cavity; an inflatable tube inclosed in said cavity and proportioned in respect thereto so as to be inflated to its limit without filling the cavity and so as to present a transversely convex surface toward the tread member, said tread member comprising paraffin-treated wooden blocks embedded fixedly at intervals in its inner circumference and formed at their inwardly exposed surfaces for seating tangentially upon the outer circumference of the inflatable tube.

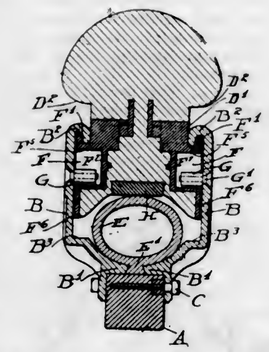
3. A vehicle wheel tire comprising, in combination with the rubber tread member and lateral metal guards by which it is retained, the tread member having lateral annular projections forming shoulders facing radially outward, and the guards having laterally inturned flanges which overhang said shoulders for engagement of the tread against radially outward displacement; a multiplicity of metal reinforcements embedded in the tread member having each an edge exposed at the outer surface of the tread member at and adjacent to the angle or curve between said shoulder of the tread and the lateral face thereof extending radially outward from the shoulder, for taking the thrust and wear of the tread member against the guard flanges.

4. In a vehicle wheel tire, in combination with a rubber tread member and lateral metal guards between which it is retained, stud-and-roll abutments projecting inwardly from the guards at relatively short intervals in the circumference thereof, and metal housings embedded in the sides of the tread member elongated radially with respect to the wheel to receive said stud-and-roll abutments with accommodation for the radial movement of the tread member with respect to the wheel, said housings having lateral wings embedded in the substance of the tread member for securing the housings firmly to the latter.

5. In a vehicle wheel tire, in combination with a rubber tread member and lateral metal guards between which it is retained, the tread member having lateral projections forming shoulders which face radially outward, and the guards having laterally inturned flanges overhanging such radially facing shoulders for retention of the tread member against radially outward displacement, said guards having a multiplicity of inwardly projecting stud-and-roll abutments taking into the tread member; metal housings embedded in the tread member having radially elongated cavities forming tracks for said stud-and-roll abutments in the radial movement of the tread member with respect to the wheel, said housings having rigid with them and projecting outward radially with respect to the wheel stirrup lugs having their radially outer ends exposed and conformed to the cross section of the tread member at and adjacent to the angle or curve between the lateral surface of said tread member and its radially facing shoulder.

[Claim 6 not printed in the Gazette.]

1,108,703. VEHICLE WHEEL-TIRE. MELVILLE CLARK, Chicago, Ill. Filed Mar. 18, 1912, Serial No. 684,513. Renewed Nov. 21, 1913. Serial No. 802,329. (Cl. 152—10.)



1. A vehicle wheel tire comprising lateral guards; an elastic tread member embraced between them, and a multiplicity of separate rigid members separately secured to the elastic tread member at intervals in its circumference, a part of said rigid members being engaged with one of the lateral guards, and the remainder being engaged with the other lateral guard, said engagement being near the outer circumference of the guards, respectively, whereby the elastic tread member constitutes a part of flexible connections from guard to guard at a multiplicity of points in their circumference.

2. A vehicle wheel tire comprising lateral guards and an elastically flexible and compressible tread member embraced between them; separate inelastic lug members permanently engaged in the opposite sides of the tread member against detachment therefrom by lateral stress, and means by which such lugs at each side engage the guard at that side, whereby said lugs, together with the intervening portion of the tread member in which they are embedded, flexibly tie together the opposite guards.

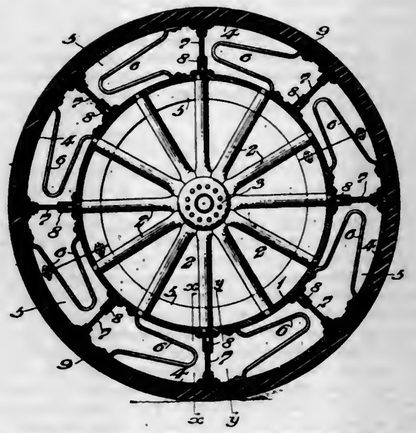
3. A vehicle wheel tire comprising rigid lateral guards and an elastically flexible and compressible tread member embraced between them; a multiplicity of separate metal lug members embedded in the opposite sides of the tread member at the portion thereof which is embraced by the guards, said guards and lugs being adapted to coöperate for engagement of the lugs with the guards with a range of movement of the lug members radially with respect to the wheel, whereby said lug member and intervening portion of the elastic tread flexibly tie together the opposite guards without interfering with such radial movement.

4. In a vehicle wheel tire which comprises rigid lateral guards and an elastic flexible compressible tread member embraced between them, a multiplicity of metal lug members embedded in the opposite sides of the tread member at the portion thereof which is between the guards, the guards and lug members being relatively formed for engagement of the lug members with the guards against lateral stress, the lug members having each a flange extending in a plane transverse to the wheel axis and circumferentially thereof within the body of the tread member for engagement therewith against such lateral stress.

5. In a vehicle wheel, in combination with the felly, a tire comprising separate lateral guards secured to opposite sides of the felly and extending circumferentially therefrom; a flexible and elastic tread member embraced between the guards, said guards having each a circumferential groove opening toward the wheel axis; separate inelastic lug members permanently engaged in the opposite sides of the tread member against detachment therefrom by lateral stress, having lugs projecting into engagement with the grooves of the guards respectively, whereby with said tread member they flexibly tie together the opposite guards at their circumferences.

[Claims 6 and 7 not printed in the Gazette.]

1,108,704. WHEEL-TIRE. GEORGE W. CLAYVILLE and DAVID W. DAVIS, Philadelphia, Pa., assignors of one-third to Walter B. Gray, Philadelphia, Pa. Filed Sept. 16, 1913. Serial No. 790,000. (Cl. 152—38.)



1. In a resilient and non-puncturable tire, a tire proper, a felly encircled thereby and separated therefrom, a substantially semi-elliptical spring interposed between said tire proper and felly and having its ends attached directly to said tire proper and felly at points in radial alinement, a socket secured to said felly, and a resilient tongue secured at one end to said tire proper and having its other end freely movable in said socket and adapted to abut against the base thereof.

2. In a wheel tire of the character stated, a tire proper, a felly, the former freely encircling the latter, semi-elliptical springs between said tire proper and felly and connected respectively with the same, sockets and resilient tongues fitted to each other telescopically between said tire proper and felly and connected respectively with the same, said tongues adapted to abut against the bases of the sockets, and plates which extend from the sides of said tire proper radially therefrom over the sides of said felly toward the hub of the wheel and being adapted to ride freely on said felly and to close the sides of the space between the felly and tire proper in which said resilient device and sockets and tongues are contained.

1,108,705. PROCESS OF EXTRACTING AMMONIA AND SULFUR COMPOUNDS FROM GAS. JOHN WILLIAM CORD, Leeds, England. Filed May 31, 1913. Serial No. 771,066. (Cl. 23—21.)

1. A process of extracting ammonia and sulfur compounds from gas which comprises treating the gas with metal sulfate capable of being attacked by sulfureted hydrogen and forming thereby ammonium sulfate and metal sulfid; recovering the ammonium sulfate, treating the sulfid to obtain therefrom metal sulfate and oxid, treating the oxid so as to regenerate sulfate.

2. A process of extracting ammonia and sulfur compounds from gas which comprises washing the gas with water containing metal sulfate capable of being attacked by sulfureted hydrogen, forming thereby ammonium sulfate and metal sulfid, recovering the ammonium sulfate, treating the precipitated sulfid to obtain therefrom metal sulfate and oxid, and treating said mixture with air and with sulfur oxid so as to regenerate metal sulfate from the oxid.

3. A process of extracting ammonia and sulfur compounds from gas, which comprises washing the gas with water containing metal sulfate capable of being attacked by sulfureted hydrogen, obtaining the ammonium sulfate formed thereby from the liquid, roasting the precipitated sulfid to obtain a mixture of metal sulfate and oxid and treating said mixture with air and with sulfur oxid so as to regenerate sulfate from the oxid.

4. A process of extracting ammonia and sulfur compounds from gas, which comprises washing the gas with water containing metal sulfate capable of being attacked by sulfureted hydrogen to obtain ammonium sulfate and metal sulfid, recovering ammonium sulfate from the liquid, roasting or calcining the precipitated sulfid to obtain a solid residue of metal sulfate and oxid, suspending said calcined residue in water, and treating said suspension with air and with sulfur oxids to regenerate metal sulfate.

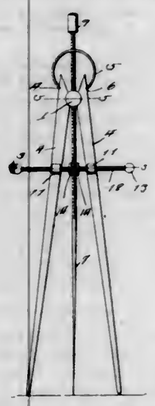
5. A process of extracting ammonia and sulfur compounds from gas, which comprises treating the gas with metal sulfate, capable of being attacked by sulfureted hydrogen, forming thereby ammonium sulfate and metal sulfid, treating said sulfid to obtain therefrom metal sulfate and oxid free from deleterious tar contamination and in such condition as to transform readily into sulfate when treated with sulfurous acid and air, and regenerating metal sulfate from the oxid.

[Claims 6 and 7 not printed in the Gazette.]

1,108,706. DIVIDERS. HENRY FRANKLIN COFFMAN, Carrville, Cal. Filed Apr. 24, 1914. Serial No. 834,185. (Cl. 33—191.)

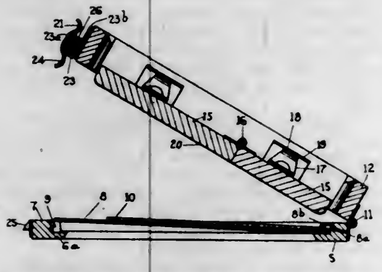
A divider of the class described comprising a head, legs having their upper ends loosely engaging said head, a centering pin threaded through the head, lugs pivotally mounted upon the legs, an adjusting screw engaged in said lugs, spaced disks carried by the adjusting screw and

spanning the centering pin, whereby upon rotation of the adjusting screw the legs may be expanded or contracted to regulate the distances between their points and the



point of the centering pin, and a knob carried by the upper end of the centering pin to facilitate the rotation of the pin, as and for the purpose set forth.

1,108,707. PRINTING-FRAME. HENRY COHN, New York, N. Y. Filed Jan. 11, 1913. Serial No. 741,397. (Cl. 95—77.)



1. In a printing frame, an open frame member having an inner flange spaced from one face of the frame member, a glass member normally disposed on the flange, and a spring for raising an end of the glass member relatively to the frame member, so that a print may be readily slid off the end of the glass member and the frame member.

2. In a printing frame, an upper open frame member, a lower open frame member hinged at one end to the upper frame member, and having an inner flange spaced from one face of the frame member, a glass member normally disposed on the flange, a spring for raising an end of the glass member relatively to the lower frame member, two back members hinged together for closing the opening in the open frame member, the hinges extending over portions of the upper frame member to limit the downward movement of the back members relatively to the upper frame member, and means for holding the back member down relatively to the upper frame member.

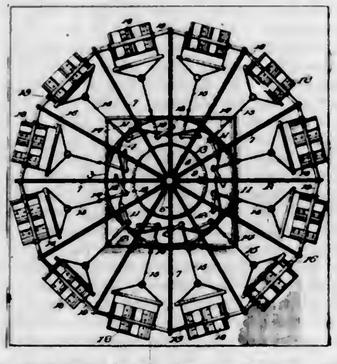
3. In a printing frame, an open frame member, two back members hinged together for closing the opening, the hinges extending over portions of the frame member to limit the movement of the back members relatively to the frame member, resilient clamps for holding the back members relatively to the frame member, and a second frame member for coöperating with the first frame member.

4. In a printing frame, an open frame member, two back members hinged together for closing the opening, the hinges extending over portions of the frame member to limit the movement of the back members relatively to the frame member, resilient clamps for holding the back members relatively to the frame member, a second frame member hinged at one end to the first frame member, and means for holding the other end of the second frame member against the first frame member.

5. In a printing frame, an open frame member, two back members hinged together for closing the opening, the hinges extending over portions of the frame member to limit the movement of the back members relatively to the frame member, resilient clamps for holding the back members relatively to the frame member, a second open frame member hinged at one end to the first frame member, means for holding the other end of the second frame member against the first frame member, a glass disposed in the opening in the second frame member, and resilient means for holding one end of the glass at or above the upper plane of the second frame member.

[Claim 6 not printed in the Gazette.]

1,108,708. AMUSEMENT DEVICE. CHARLES H. COOLEY, Wichita, Kans. Filed Oct. 12, 1912. Serial No. 725,405. (Cl. 46—27.)

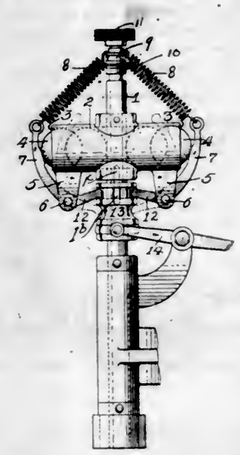


In an amusement device, the combination with a support, of a frame rotatably mounted thereon, having cars suspended therefrom, a rail carried by the support having an undulating surface on one side thereof, levers pivotally connected at one end thereof to the rotatable frame, wheels journaled on the free ends of the levers and lying in a horizontal plane, said wheels adapted to engage the undulating surface of the rail, and flexible means connected to the cars and to the free ends of the levers for supporting the cars and causing the wheels to be brought into contact with the undulating surface of the rail, so that, upon the rotation of the frame, an oscillating movement will be transmitted to the levers, whereby movement will be imparted to the cars and cause the cars to receive several distinct motions.

1,108,709. CENTRIFUGAL GOVERNOR. EARL G. CROOKS, Bucyrus, Ohio, assignor of one-fourth to Edward Vollrath, one-fourth to John Martinitz, and one-fourth to F. A. Wise, Bucyrus, Ohio. Filed Mar. 30, 1914. Serial No. 828,341. (Cl. 121—112.)

1. In a centrifugal governor, a revolving governor head, having substantially radial ball guides, balls fitted to said guides and partaking of the revolution of said head, actuating levers extending across the ball guides, in positions to receive the radial effort developed by the balls, and having fulcrums offset from the balls in the direction of the axis of revolution of the governor, and tension-springs connected with the free ends of the actuating levers and having an anchorage axially offset in the direction opposite to that of the actuating lever fulcrums.

2. In a centrifugal governor, a revolving governor head, having substantially radial ball guides, balls fitted to said guides and partaking of the revolution of said head, fulcrum-brackets carried by and extending in the direction of the axis of revolution from said ball-guides, actuating levers extending across the ball guides, in positions to receive the radial effort developed by the balls, and having fulcrums located on said fulcrum-brackets and thereby offset from the balls in the direction of the axis of revolution of the governor, and tension-springs connected with the free ends of the actuating levers and having an anchorage axially offset in the direction opposite to that of the actuating lever fulcrums.



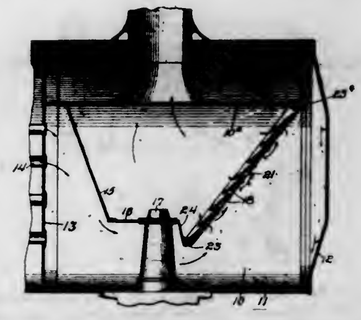
3. In a centrifugal governor, a revolving governor head, having substantially radial ball guides, balls fitted to said guides and partaking of the revolution of said head, actuating levers extending across the ball guides, in positions to receive the radial effort developed by the balls, and having fulcrums offset from the balls in the direction of the axis of revolution of the governor, and tension-springs connected with the free ends of the actuating levers and having an anchorage axially offset in the direction opposite to that of the actuating lever fulcrums; said actuating levers having transmitting arms extending from their fulcrums toward the axis of revolution, and an axially sliding sleeve being provided to receive said transmitting arms.

4. In a centrifugal governor, a governor shaft, a revolving governor head, having substantially radial ball guides, balls fitted to said guides and partaking of the revolution of said head, actuating levers extending across the ball guides, in positions to receive the radial effort developed by the balls, and having fulcrums offset from the balls in the direction of the axis of revolution of the governor, and tension-springs connected with the free ends of the actuating levers and having an axially adjustable anchorage member mounted on the governor shaft and axially offset in the direction opposite to that of the actuating lever fulcrums.

5. In a centrifugal governor, a governor shaft, a revolving governor head, having substantially radial ball guides, balls fitted to said guides and partaking of the revolution of said head, actuating levers extending across the ball guides, in positions to receive the radial effort developed by the balls, and having fulcrums offset from the balls in the direction of the axis of revolution of the governor, and tension-springs connected with the free ends of the actuating levers and having an anchorage member mounted on the governor shaft with freedom of rotation relatively thereto, and at a point axially offset in the direction opposite to that of the actuating lever fulcrums, and having means for axially adjusting it relatively to said shaft for regulating tension of the springs.

[Claims 6 to 9 not printed in the Gazette.]

1,108,710. SPARK-ARRESTER. RICHARD M. CROSBY, Tacoma, Wash. Filed Aug. 3, 1911. Serial No. 642,115. (Cl. 110—124.)



1. In a locomotive boiler or the like, a channel through which the products of combustion pass away from said boiler, a series of deflecting plates extending across said channel, said plates lying in parallel planes which are inclined to the plane of the series, the plane of the series being inclined toward one wall of said channel, and means to space the upper portion of each plate from the lower portion of the next adjacent plate whereby apertures are formed through which the gases of combustion pass in a direction opposite to that in which they enter said channel.

2. In a locomotive boiler or the like, a channel through which the products of combustion pass away from said boiler, a screening partition made up of a series of deflecting plates extending across said channel, said plates lying in substantially parallel planes which are inclined to the plane of the series, the plane of the series being inclined toward one wall of said channel, one edge of each plate being bent toward the next adjacent plate, and spaced outwardly therefrom such that the projections of all of said plates on the plane of the series substantially covers said plane within the limits of said screening partition, and means to space the upper portion of each plate from the lower portion of the next adjacent plate.

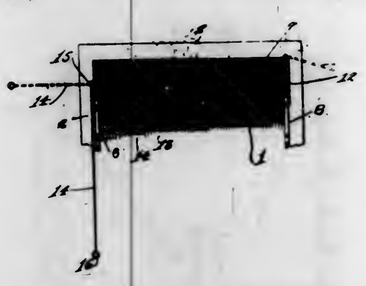
3. In a locomotive boiler or the like, a channel through which the products of combustion pass away from said boiler, a series of deflecting plates extending entirely across said channel, said plates being inclined to the plane of the series and each having one edge bent toward the adjacent plate, and supporting bars arranged transversely of said plates, said series being inclined toward one wall of the channel.

4. In a locomotive boiler or the like, a smoke box through which the products of combustion pass away from said boiler, a series of deflecting plates sloping upwardly and forwardly across said smoke-box toward the front wall thereof, and adapted to throw solid bodies in said products toward and against said front wall, said plates being inclined to the plane of the series and each having one edge bent toward the adjacent plate, supporting bars arranged transversely of said plates, means for spacing said plates apart, and means to direct the products of combustion toward a position beneath said deflecting plates.

5. In a locomotive boiler or the like, a smoke box through which the products of combustion pass away from said boiler, a series of deflecting plates sloping upwardly and forwardly across said smoke-box toward the front wall thereof, and adapted to throw solid bodies in said products toward and against said front wall, said plates being inclined to the plane of the series and each having one edge bent toward the adjacent plate, supporting bars arranged transversely of said plates, means for spacing said plates apart, means for holding said plates in said spaced relation on said supporting bars, and means to direct the products of combustion toward a position beneath said deflecting plates.

[Claims 6 to 8 not printed in the Gazette.]

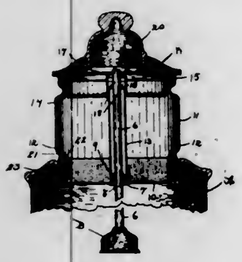
1,108,711. FLY-TRAP. JAMES A. CRUTTENDEN, Ramirena, Tex. Filed Dec. 12, 1912. Serial No. 736,357. (Cl. 43—22.)



1. In a fly trap, a screen, a fly trap constructed of screen wire disposed upon the inner side of said screen, said screen provided with openings surrounded by binding means adapted to communicate with openings in said trap whereby the flies may pass through the screen into said trap, means for retaining the flies within said trap, a door-way in said trap and a member disposed within said trap having a bar pivotally connected thereto adapted to force the flies out of the trap through said door way.

2. In a fly trap, a screen, a fly trap constructed of screen wire disposed upon the inner side of said screen, said screen provided with openings surrounded by a binding means for communication with openings in said trap for allowing flies to pass through said screen into said trap, means for retaining the flies within the trap, a door-way in one end of said trap, a member normally disposed in the opposite end of said trap conforming to the inner surface of the trap and arranged in close relation with the sides thereof for coöperating with the door-way in aiding the maintenance of the shape of the trap, and a bar pivotally connected to said member for sliding said member toward said door-way for forcing the flies out of the trap through the door-way.

1,108,712. PERCOLATOR. GEORGE E. CURTISS, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn. Filed Dec. 18, 1913. Serial No. 807,429. (Cl. 53—3.)

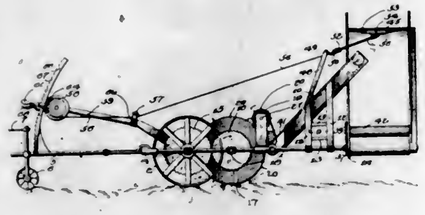


1. In a percolator having a liquid vessel and a fountain tube, a drip cup fitted to and received within the mouth of the said vessel and having an overflow tube extending upwardly from its base around the fountain tube, a liquid distributer fitted to the mouth of the said drip cup and having an overflow boss extending upwardly around the fountain tube and upper end of the said overflow tube, the said boss having overflow passages at a point above the bottom of the said liquid distributer and a centering cone positioned between the lower end of the said overflow tube and the fountain tube.

2. In a percolator, the combination of a liquid vessel, a drip cup fitted to the upper part of the said vessel, an overflow tube fixed on and extending upwardly from the bottom of the said drip cup, a liquid distributer fitted to and covering the upper part of the said drip cup, an overflow boss projecting upwardly from the bottom of the said distributer, and a fountain tube extended upwardly through the said overflow tube and boss, the top of the said boss having a central opening fitted to the upper end of the said fountain tube and a centering cone mounted on the said fountain tube and positioned adjacent the lower end of the said overflow tube.

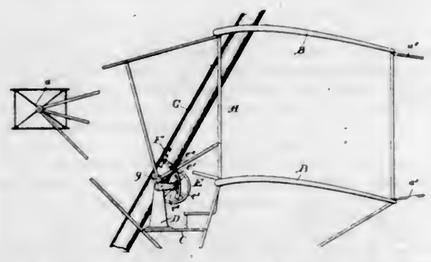
3. In a percolator, a liquid vessel, a drip cup fitted to the upper part of the said vessel and having a central overflow tube, a liquid distributer fitted to the mouth of the said drip cup, a fountain tube and base and a perforated centering and supporting cone mounted on the middle portion of the said fountain tube for receiving the weight of the said drip cup and its contents.

1,108,713. CONVEYER. JOHN A. DAILEY, La Crosse, Kans. Filed May 1, 1912. Serial No. 694,563. (Cl. 193—18.)



A loading device comprising a portable frame, a pair of upright bars carried thereby and having their upper ends in convergent relation and overlapped, a pulley carried by the overlapped ends of the arm, an operating lever pivotally connected to the frame, a winding drum carried by the lever, a pulley carried by the lever, a cable wound upon the drum, passing over the pulleys, a conveyer carried by the frame and adjusted by the cable, and means for locking the lever in the desired adjustment.

1,108,714. AEROPLANE-GUN. CLELAND DAVIS, U. S. Navy, assignor to Ordnance Development Company, a Corporation of Delaware. Filed Aug. 22, 1911. Serial No. 645,365. (Cl. 89—40.)



1. In a flying machine, the combination with a gun sleeve of a gun slidably mounted therein and adapted to pass rearwardly through and entirely clear of said sleeve, and a projectile adapted to move forward as the gun moves backward with approximately equal force whereby the strain on the gun support is reduced to a minimum, substantially as described.

2. In a flying machine, the combination with a gun platform of a sleeve trunnioned thereon, a gun connected to said sleeve by a friable connection, and a projectile containing a high explosive mounted in said gun, with means for firing said gun, substantially as described.

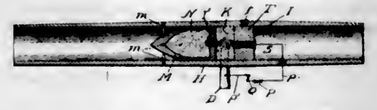
3. In a flying machine, the combination with a gun platform of a sleeve trunnioned thereon, an elevating gear for turning said sleeve through a limited angle in depression, a gun connected to said sleeve by a friable connection, and a projectile containing a high explosive mounted in said gun, with means for firing said gun, substantially as described.

4. An apparatus adapted for firing projectiles from flying machines, comprising a tube open at both ends, a gun mounted in said tube and adapted to contain a projectile and a propelling charge, a severable connection between said gun and said tube, and means for firing said propelling charge whereby said projectile is discharged in one direction out of said tube, and said gun is expelled in the opposite direction entirely clear of said tube, substantially as described.

5. An apparatus adapted for firing projectiles from flying machines, comprising a tube open at both ends, a gun mounted in said tube and adapted to contain a projectile and a propelling charge, a separable connection between said gun and said tube, and means for firing said propelling charge whereby said projectile is discharged in one direction out of said tube, and said gun is expelled in the opposite direction entirely clear of said tube, with means for elevating and depressing said tube, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,108,715. APPARATUS FOR FIRING PROJECTILES FROM AEROPLANES. CLELAND DAVIS, U. S. Navy, assignor to Ordnance Development Company, a Corporation of Delaware. Filed Nov. 21, 1911. Serial No. 661,566. (Cl. 89—40.)



1. An apparatus for propelling projectiles adapted for use in air, comprising a gun barrel open at both ends to the atmosphere, a projectile, a propelling charge for said projectile, and a recoil weight in rear of said propelling charge, and adapted to be expelled from the gun into the air when the propelling charge is fired, for neutralizing the backward thrust incident to the expulsion of the projectile, substantially as described.

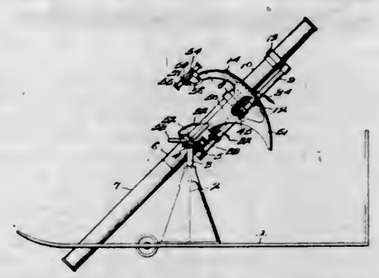
2. The combination of a flying machine, a gun carried thereby, and a projectile and breech block for said gun, said breech block and said projectile being adapted to fly in opposite directions when the gun is fired, substantially as described.

3. In a flying machine, the combination with a gun support carried by said machine, of a gun tube open at both ends and carried by said support, and projecting clear of the framework of the machine, a projectile and a breech block both mounted in said gun tube, a propelling charge interposed between said projectile and said breech block, and means for exploding said propelling charge, substantially as described.

4. In a flying machine, the combination with a gun support carried by said machine, of a gun tube open at both ends and carried by said support, and projecting clear of the framework of the machine, a projectile and a breech block both mounted in said gun tube, a propelling charge interposed between said projectile and said breech block, means for yieldingly holding said projectile and said breech block in said gun tube, and means for exploding said propelling charge, substantially as described.

5. The combination of a flying machine, a gun open at both ends and carried thereby, and a projectile and breech block in said gun, with a propelling charge interposed between said projectile and said breech block, said projectile and said breech block being of approximately the same weight, and adapted to fly in opposite directions when the gun is fired, substantially as described.

1,108,716. APPARATUS FOR FIRING PROJECTILES FROM AIR-CRAFT. CLELAND DAVIS, U. S. Navy, assignor to Ordnance Development Company, a Corporation of Delaware. Filed July 7, 1913. Serial No. 777,763. (Cl. 89—40.)



1. A gun having a barrel of light, high-grade material made up of two interlocking sections, both sections having the bore continuous therethrough, with means for locking said sections together and unlocking the same, and means for swinging the rear section clear of the front section, substantially as described.

2. A gun having its barrel composed of two members with the bore open through each, with means for detachably connecting said members together, and means for swinging the breech member laterally away from the forward member of the gun when the two members are disengaged and for returning the same to the initial locked position, substantially as described.

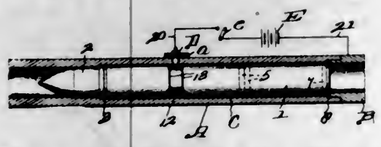
3. A gun having its barrel composed of two members with the bore open through each, with means for detachably connecting said members together, and means for swinging the breech member laterally away from the forward member of the gun when the two members are disengaged and for returning the same to the initial locked position, said means comprising a spindle journaled on the forward member parallel to the axis thereof, bands secured to said spindle and loosely mounted on the breech member, a slotted screw engagement between the two members, and means for rotating the breech member in its bands, drawing the same to the rear, and swinging same about its spindle, substantially as described.

4. A gun having its barrel composed of two members with the bore open through each, with means for detachably connecting said members together, and means for swinging the breech member laterally away from the forward member of the gun when the two members are disengaged and for returning the same to the initial locked position, said means comprising a spindle journal on the forward member parallel to the axis thereof, bands secured to said spindle and loosely mounted on the breech member, a slotted screw engagement between the two members, and means for rotating the breech member in its bands, drawing the same to the rear, and swinging same about its spindle, said means comprising a handle attached to the breech member, and a cam groove provided in one of said bands and engaging said handle, substantially as described.

5. A gun having its barrel composed of two members with the bore open through each, with means for detachably connecting said members together, and means for swinging the breech member laterally away from the forward member of the gun when the two members are disengaged and for returning the same to the initial locked position, with a stop carried by the forward portion to limit the swing of the rear portion about the axis of said spindle, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,108,717. FIXED AMMUNITION FOR USE ON AIRCRAFT. CLELAND DAVIS, U. S. Navy, assignor to Ordnance Development Company, Groton, Conn., a Corporation of Delaware. Original application filed July 7, 1913, Serial No. 777,763. Divided and this application filed Dec. 5, 1913. Serial No. 804,919. (Cl. 102—12.)



1. Fixed ammunition for use in a gun having its bore open both at the breech and muzzle, comprising a cartridge case open at the rear, a projectile secured in the forward end of said cartridge case, a propelling charge mounted in rear of said projectile, one or more wads in rear of said propelling charge, a counter weight mounted in rear of said wad or wads, and one or more wads closing the rear end of the cartridge case and normally holding said counter weight in position, substantially as described.

2. Fixed ammunition for use in a gun having its bore open both at the breech and muzzle, comprising a cartridge case open at the rear, a projectile secured in the forward end of said cartridge case, a propelling charge mounted in rear of said projectile, one or more wads in rear of said propelling charge, a counter weight composed of disintegratable material mounted in the rear of said wad or wads, and one or more wads closing the rear end of the cartridge case and normally holding said counter weight in position, substantially as described.

3. Fixed ammunition for use in a gun having its bore open both at the breech and muzzle, comprising a cartridge case open at the rear, a projectile secured in the forward end of said cartridge case, a propelling charge mounted in rear of said projectile, one or more wads in rear of said propelling charge, a counter weight composed of fine solid particles adapted to be dispersed when the gun is fired mounted in the rear of said wad or wads, and one or more wads closing the rear end of the cartridge case and normally holding said counter weight in position, substantially as described.

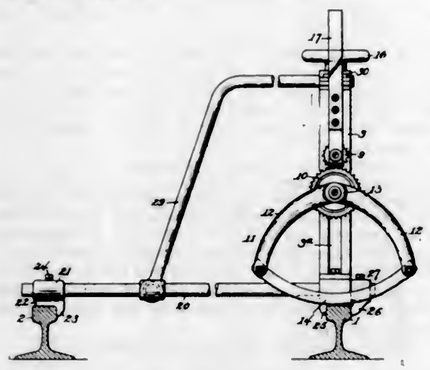
4. Fixed ammunition for use in a gun having its bore open both at the breech and muzzle, comprising a cartridge case open at the rear, a projectile secured in the forward end of said cartridge case, a propelling charge mounted in rear of said projectile, one or more wads in rear of said propelling charge, a counter weight mounted in the rear of said wad or wads, and one or more wads closing the rear end of the cartridge case and normally holding said counter weight in position, with means for firing said propelling charge when desired, substantially as described.

5. Fixed ammunition for use in a gun having its bore open both at the breech and muzzle, comprising a cartridge case open at the rear, a projectile secured in the forward end of said cartridge case, a propelling charge mounted in rear of said projectile, one or more wads in rear of said propelling charge, a counter weight composed of disintegratable material mounted in the rear of said wad or wads, and one or more wads closing the rear end of the cartridge case and normally holding said counter weight in position, with means for firing said propelling charge when desired, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

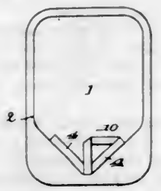
1,108,718. SAWING APPARATUS. WILLIAM R. DAWSON, East Liverpool, Ohio. Filed Mar. 24, 1913. Serial No. 756,301. (Cl. 29—72.)

1. An apparatus for sawing railway track rails, comprising a base member adapted for resting upon the head of a rail, means for clamping said base member on said rail, a pair of rods connected to said base-member and extending across to the opposite track rail, means adjustably mounted on said rods for assuming clamping engagement with said opposite track rail, a pair of upright members mounted on said base-member, means disposed between said rods and said upright members for bracing the latter, a vertically movable head-piece disposed between said upright members, means for raising and lowering said head-piece, an oscillatory hack-saw carried by said head piece, and means for communicating oscillatory movement to said saw.



2. An apparatus for sawing railway track rails, comprising a base-member adapted for resting upon the head of a rail, means for clamping said base-member on said rail, a pair of rods connected to said base-member and extending across to the opposite track rail, means adjustably mounted on said rods for assuming clamping engagement with said opposite track rail, a pair of upright members mounted on said base-member, means disposed between said rods and said upright members for bracing the latter, a vertically movable head-piece disposed between said upright members, means for raising and lowering said head-piece, a spindle carried by said head-piece, a hub mounted on said spindle, inclined oppositely disposed arms formed on said hub, an arcuately curved saw blade having its ends attached to said arms, a lever pivotally mounted on said head-piece, and means whereby power applied to said lever effects the oscillation of said hub.

1,108,719. CAN-OPENING DEVICE. LÉON DELFEUT, Lisbon, Portugal. Filed Sept. 26, 1910. Serial No. 583,838. (Cl. 220—68.)



1. The combination with a tin can having a slit therein, of a device for opening said can comprising a guide secured to the inner face of the wall of the can to be broken through, one of the edges of said guide being placed close to the slit in said wall, and a tongue pinced through said slit and under the guide and secured to said wall, to break through the wall through the medium of said guide.

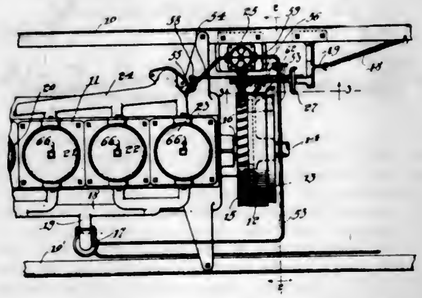
2. The combination with a tin can having a slit in its wall to be broken through, of a device for opening said can comprising a tongue passed through said slit, the inner end of said tongue being secured to said wall at a distance from said slit, and a guide placed between the said wall and tongue, between said slit and the point at which the inner end of the said tongue is placed transversely to the tongue.

3. The combination with a tin can having a slit therein, of a device for opening said can comprising a tin laminated guide secured beneath the wall to be broken through, near the slit in said wall, and a tin tongue placed through the said slit and underneath the guide, the directions of the laminating of the guide and of the tongue crossing one another.

4. The combination with a tin can having a slit therein, of a device for opening said can comprising a guide secured beneath the wall to be broken through, a tongue passed through said slit and secured to said wall, the guide being bent in V-shape and the bend thereof placed adjacent said slit between the wall and the tongue.

5. The combination with a tin can having a slit therein, of a device for opening said can comprising a guide secured beneath the wall to be broken through and having one edge thereof placed adjacent said slit, and a tongue placed through said slit and underneath the guide, said guide and tongue being made of a single piece of bent tin.

1,108,720. MEANS FOR STARTING INTERNAL-COMBUSTION ENGINES. JOHN DESMOND, Wilmette, Ill., assignor to William S. Potwin, Chicago, Ill. Filed Jan. 3, 1913. Serial No. 740,052. (Cl. 123—179.)



1. In a device of the character described, an engine to be started, a starting engine to be manually started, connecting means between the two engines, normally disconnected, comprising a worm wheel on the larger engine, and a worm slidably mounted on the shaft of the smaller engine; a spring for moving the worm into connection with said worm wheel; an automatic stop for holding said worm out of connection with said wheel; a lever for rotating the shaft of the smaller engine and for moving said automatic stop to release said worm.

2. In a device of the character described, an engine to be started, a starting engine to be manually started, connecting means between the two engines, normally disconnected, means for starting the smaller engine, comprising a lever movable for rotating the shaft thereof; and means, operable by a further movement of said lever, for effecting the engagement of said connecting means.

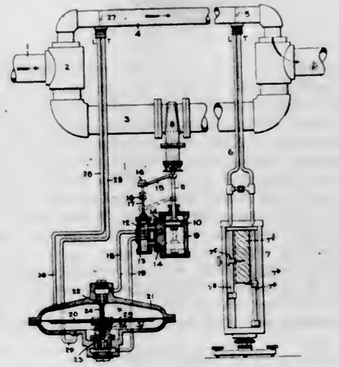
3. In a device of the character described, an engine to be started; a starting engine to be manually started; connecting means between the two engines, normally disconnected; means for starting the starting engine, comprising a lever movable for rotating the shaft thereof; and means, within the path of said lever upon its further movement, for initiating the connecting operation of said connecting means.

4. In a device of the character described, an engine to be started; a starting engine to be manually started; connecting means between the two engines, normally disconnected; means for starting the starting engine and for operating said connecting means; fuel supply and charge igniting means to which the engine to be started is connected; manually operable means for connecting the starting engine to said fuel supply and igniting means; and means for automatically disconnecting said starting engine from the engine to be started after the latter has become self-propelling.

5. In a device of the character described, a larger engine to be started; a smaller starting engine, manually operable means for starting the small engine; connecting means between the two engines initiated to connect the engines together by the manually operable starting means, said connecting means adapted to be disconnected when the larger engine becomes self-propelling; and automatic means for effecting a further separation of the parts of the connecting means and to hold said connecting parts so disconnected.

[Claims 6 to 9 not printed in the Gazette.]

1,108,721. METERING LOW-VELOCITY FLUID-FLOWS. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1912. Serial No. 730,351. (Cl. 73—167.)



1. Means for accurately measuring the flow of fluid comprising parallel flow conduits of different cross-sectional areas, a meter, means for creating a pressure difference responsive to changes in the rate of flow of the fluid passing through said conduits and constantly subjecting said meter to the effects thereof, a valve for shutting off one of the conduits when the rate of flow of fluid falls below a predetermined value, and means responsive to changes in the rate of flow of the fluid being metered and independent of the meter for actuating said valve.

2. Means for accurately measuring the flow of fluid comprising a large and a small conduit arranged for parallel flow, a meter, means responsive to changes in the rate of flow of the fluid in the small conduit for causing the meter to act, a valve for putting the large conduit into and out of service, means for actuating the valve, and means in the small conduit and acting independently of the meter to control said valve actuating means.

3. Means for accurately measuring small flows of fluid, consisting of a large conduit and a small branch conduit, a flow meter, a nozzle plug in the small conduit connected to the meter, a valve in the large conduit, a motor for actuating said valve, a pressure-difference device in the stream of fluid to be metered, and a differential pressure regulator connected with said device and controlling said motor.

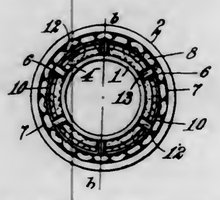
4. Means for accurately measuring small flows of fluid, consisting of a large conduit and a small branch conduit, a flow meter having a nozzle plug in the small conduit, a valve in the large conduit, a motor for actuating said valve, a pressure-difference device in the fluid stream, a casing having a diaphragm forming two chambers communicating with said pressure-difference device, and valves controlled by said diaphragm for admitting fluid pressure from said chambers to said motor.

5. The combination of parallel flow conduits of different cross-sections, a flow meter, a device responsive to changes in the rate of fluid flow located in the smaller conduit and conveying fluid under pressure to the meter, a valve

for shutting off one of said conduits, a motor for actuating said valve, a member that is moved in response to variations in the rate of flow of the fluid being metered, and a means actuated by said member controlling the motor.

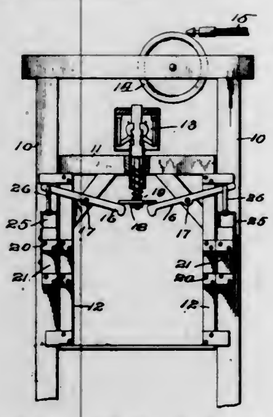
[Claims 6 to 8 not printed in the Gazette.]

1,108,722. ROLLER-BEARING. BURT E. DOHNER and ALBERT J. HUFF, Dayton, Ohio. Filed Feb. 17, 1913. Serial No. 748,828. (Cl. 64—62.)



In a bearing of the type specified, the combination with an inner and an outer bearing ring provided with conical shoulders arranged at opposite ends of said rings, and rollers having conical ends mounted between said rings, of a cylindrical cage mounted between said bearing rings and provided with radial openings the under edges of which are chamfered to permit the rollers to extend through said radial openings, conical flanges attached to said cylindrical cage, the conical flanges and the cage being provided with openings which form enlarged ends of said radial openings and through which the conical ends of the rollers project, and ears extending from one of said conical flanges and engaging the inner bearing ring, whereby said inner bearing ring, said rollers and said cage may be handled as a unit, substantially as specified.

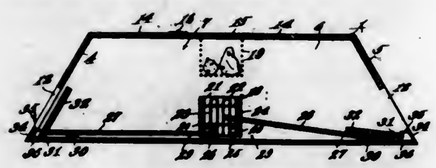
1,108,723. SAFETY-CATCH FOR ELEVATORS. SELDEN H. DOLPH, Olyphant, Pa. Filed Sept. 7, 1912. Serial No. 719,124. (Cl. 187—88.)



1. The combination with the upright guide-ways of an elevator shaft, a car having side rails movable along said guide-ways, a cable, spring actuated cable releasing mechanism, and a pair of levers pivoted on the car frame and adapted to be depressed at their inner ends by the movement of said releasing mechanism; of a pair of blocks carried by each side rail and standing astride one of said guide-ways, the inner faces of said blocks diverging downwardly and being serrated and their bodies having guide shoulders also diverging downwardly but on a lesser angle than their inner faces, a stirrup of inverted U-shape for each block, its head overlying said block and the rear edges of its side plates being beveled to correspond with the bevel of said shoulders, a link connecting the head with one of said levers, and a pair of rollers journaled within the side plates of the stirrup and adapted to make contact with said serrated face of the block when the stirrup is raised.

2. The combination with the upright guide-ways of an elevator shaft, a car having side rails movable along said guide-ways, a cable, cable releasing mechanism, and a lever pivoted on the car frame and adapted to be moved by the actuation of said mechanism; of a pair of straps secured to the side rail of the car, a block carried by said straps and having its inner face diverging downwardly from the guide-way and its body provided with a shoulder also diverging downwardly from the guide-way, a stirrup loosely inclosing said block and slidable along said shoulder, connections between the stirrup and lever, and a roller journaled in the stirrup and standing between the block and guide-way.

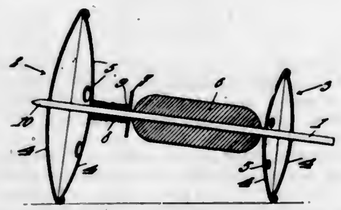
1,108,724. TRAP. JOHN FORNEY DRAPER and JOHN JACOB TAGLAUER, Eddyville, Iowa. Filed Oct. 13, 1913. Serial No. 794,957. (Cl. 43—26.)



1. In a device of the class described, a case; barriers controlling egress from the case; platforms pivoted in the case and coöperating at their outer ends with the barriers to close the latter when the inner ends of the platforms are depressed; a door pivoted in the case and provided with resilient arms, the arms being flexed against the edges of the platforms by the weight of the door when the inner ends of the platforms are elevated, the arms being adapted to engage above the inner ends of the platforms when the inner ends of the platforms are depressed.

2. In a device of the class described, a case; a partition in the case and dividing the case into a runway and a compartment, the partition having a doorway; a barrier controlling the runway; a tiltable platform operatively connected with the barrier; a pivoted door for the doorway, the door comprising a strip of material formed into zig-zag outline to define intermediate and terminal arms, one terminal arm being disposed at an angle to the plane of the door to define a platform engaging latch; and a counterweight held between a pair of the intermediate arms of the doorway; and a tie connecting the intermediate arms.

1,108,725. TOY. JAY ROSCOE DUNCAN, Good Thunder, Minn. Filed May 26, 1914. Serial No. 841,110. (Cl. 46—32.)



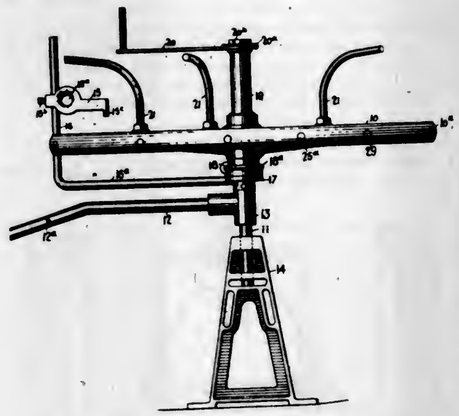
1. In a toy, an axle, wheels secured thereon, a handle mounted loosely upon the axle between the wheels, and a drum provided upon the axle between the handle and one wheel.

2. In a toy, an axle, a pair of large and small wheels secured thereon, a handle mounted loosely upon the axle between the wheels and adjacent the small wheel, and

a disk secured on the axle between the handle and large wheel and forming a drum with the large wheel.

3. In a toy, an axle, wheels secured thereon, each comprising oppositely dished peripherally attached disks, certain of the disks having apertures therein, a handle mounted loosely upon the axle between the wheels, and a drum provided upon the axle between one wheel and the handle.

1,108,726. WIRE-REEL. WALTER ELLSWORTH EICHHOFF, South Pasadena, Cal. Filed Dec. 10, 1912, Serial No. 735,924. Renewed June 22, 1914. Serial No. 846,697. (Cl. 242—77.)



1. A wire-reel comprising a hub, a rim, spokes extending from the hub to the rim and provided with arms for holding the wire, the said spokes being approximately flush with the rim for the greater portion of their length and inclining within the plane of the rims at their outer ends, said outer ends joining the rim inward from the edges thereof, and additional spokes alternating with the first-mentioned spokes, joining the rim in annular alinement with the ends of the first mentioned spokes and said additional spokes being inclined rearwardly from the rim to the hub and being also at an angle to the first-mentioned spokes.

2. The combination with a reel, of a reversible T-axle comprising a shank and a T-head, on one arm of the T-head of which the reel is mounted to rotate, the reel and the said arm being coaxial and a support in which either the remaining arm of the T-head of the axle or the mentioned shank is receivable.

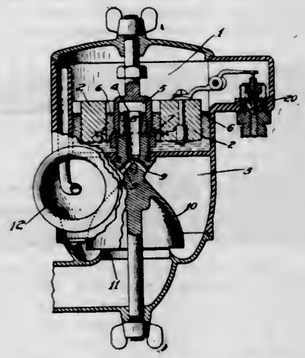
3. The combination with a reel, of a reversible T-axle comprising a shank and a T-head, on one arm of the T-head of which the reel is mounted to rotate, and a support having a socket in which either the remaining arm of the T-head of the axle or the mentioned shank is receivable, the said shank of the T-axle being at the end opposite the T-head terminating in an inclined portion.

4. The combination of a support having a socket, a reversible T-shaped axle, and a reel revoluble on one arm of the T-head of said axle and co-axial therewith, either the other arm of the T-head or the said shank being receivable in said socket.

5. A wire-reel comprising a fixed axle, a hub having a handle thereon at one end and revoluble on said axle, a sleeve fixed on said hub, spokes secured at their inner ends on said sleeve, wire-holding arms on said spokes, a crank handle on the hub outside of the said arms, additional spokes also secured to said sleeve alternating with the first-mentioned spokes and disposed at an angle thereto, and a rim secured to the outer ends of all of said spokes.

[Claims 6 and 7 not printed in the Gazette.]

1,108,727. VAPORIZER. ROY FRANCIS ENSIGN, Pasadena, Cal., assignor to Orville H. Ensign, Pasadena, Cal. Filed May 23, 1912. Serial No. 699,348. (Cl. 48—155.1.)



1. In a vaporizer the combination with supply and mixing chambers and with means to maintain a determined liquid level in the supply chamber, of a nozzle chamber provided with a restricted inlet orifice near the bottom of the nozzle chamber leading from the supply chamber into the nozzle chamber and a passage opening from the nozzle chamber above the normal liquid level therein and leading downward therefrom and communicating with the mixing chamber; the cross sectional area of the passage leading down from the nozzle chamber being greater than the cross sectional area of the inlet to such chamber, and the mixing chamber being below the level of the nozzle chamber.

2. A vaporizer comprising a supply chamber and a mixing chamber below the supply chamber, a nozzle chamber within the supply chamber, there being a restricted orifice communicating from the supply chamber into the nozzle chamber near the bottom of the nozzle chamber, and a vertical passage terminating above the liquid in the nozzle chamber and communicating between the air space in the nozzle chamber and the mixing chamber, said passage having a cross-sectional area throughout its length several times that of the restricted orifice, and means to maintain the static liquid level in the supply chamber and the nozzle chamber slightly below the top of said passage.

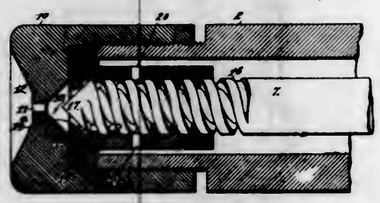
3. A vaporizer comprising a supply chamber, a mixing chamber below the supply chamber, means to maintain a practically constant height of the liquid in the supply chamber, a vertical tube communicating from above the static liquid surface in the supply chamber to the mixing chamber, means to seal the top of the tube from the air in the supply chamber, and means consisting of a submerged restricted orifice for admitting the liquid from the supply chamber to surround the tube and to flow over and down the tube to the mixing chamber when the pressure in the mixing chamber is less than atmospheric, the area of the bore of the tube being several times the area of the restricted orifice.

4. The combination with a mixing chamber having a nozzle communicating therewith, of a supply chamber, and a nozzle chamber fastened to the nozzle and provided with an inlet in constant communication with the supply chamber, said inlet being of less cross sectional area than the bore of said nozzle.

1,108,728. LIQUID-FUEL BURNER. ALEXANDER EWING, Victoria, British Columbia, Canada. Filed Oct. 7, 1912. Serial No. 724,382. (Cl. 137—86.)

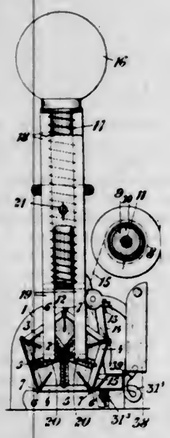
A liquid fuel burner, comprising in combination a tubular body having an oil receiving opening, a cap threaded to said body at one end, a nut secured between said cap and the end of said body and projecting into said body and spaced from the walls thereof, said nut having a threaded bore one portion of which is mutilated to form a

chamber intermediate the ends of the nut, said nut having radial apertures for affording communication between said chamber and the interior of said body, and a valve rod threaded into said nut and having a valve end, said cap having a valve seat to coöperate with said valve end, and having an aperture to permit passage of the fluid the



threads in the bore of the said nut between the mutilated chamber and the inner end of the nut being designed to closely fit the threads of said valve rod, whereby to effect a substantial closure of the inner end of said nut to cause the oil to pass through the space between said nut and the walls of said body and flow through said radial apertures into said bore.

1,108,729. STAMP-AFFIXING DEVICE. ADOLPH FISCHER, Weimar, Germany. Filed Nov. 11, 1913. Serial No. 800,380. (Cl. 216—33.)



1. In a stamp-affixing device, the combination, with means for supporting a perforated strip of stamps; of a drum over which the strip passes having counterpart, radially-movable plates constituting the circumference thereof; means for rotating the drum; coöperating strip-feeding means provided upon said plates and the longitudinal edges of the drum for engagement in the perforations in said strip during the rotation of said drum; and means for depressing the lowermost plate after each rotation of the drum, to sever the stamp carried thereby from said strip.

2. In a stamp-affixing device, the combination of a strip-feeding drum having counterpart, radially-movable stamp-applying plates constituting the circumference thereof; means for imparting a step-by-step rotary movement to the drum; and means for depressing the lowermost plate after each rotation of said drum.

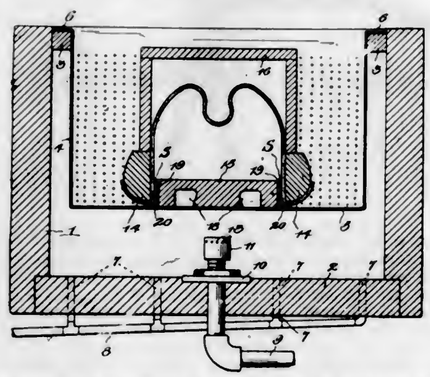
3. In a stamp-affixing device, the combination of a strip-feeding drum having counterpart, radially-movable stamp-applying plates constituting the circumference thereof; means for imparting a step-by-step rotary movement to the drum; and a depressible element provided with means for actuating the first-named means during its downward movement and with additional means for depressing the lowermost plate at the conclusion of such movement.

4. In a stamp-affixing device, the combination of a strip-feeding drum having counterpart, radially-movable stamp-applying plates constituting the circumference thereof; lever-operated means for imparting a step-by-step rotary movement to the drum; and a depressible element provided with a pin for actuating the first-named means, and with inwardly-projecting means arranged to engage and depress the lowermost plate at the conclusion of such movement.

5. In a stamp-affixing device, the combination, with means for supporting a perforated strip of stamps; of a drum over which the strip passes having counterpart, radially-movable plates constituting the circumference thereof; means for rotating the drum; coöperating series of rake teeth provided upon the rear edges of said plates and between the adjacent edges of successive plates, for engagement in the perforations in the said strip, to feed the latter during the rotation of the drum; and means for depressing the lowermost plate after each rotation of the drum, to sever the stamp carried thereby from said strip.

[Claims 6 and 7 not printed in the Gazette.]

1,108,730. HAT-FLANGING MACHINE. GEORGE P. FOOTE, Danbury, Conn. Filed Mar. 5, 1914. Serial No. 822,585. (Cl. 223—22.)



1. In a hat flanging apparatus, a steam box having its bottom provided with means for discharging water of condensation, a steaming receptacle depending within said box and having a perforated bottom which latter is spaced from the bottom of the box, the side walls of said receptacle being also perforated and spaced from the respective side walls of the box, and a steam inlet pipe extending up through the box bottom and terminating within the space between the bottom of said box and receptacle, said pipe being closed at the top and having lateral perforations whereby the steam will be initially discharged into said space in substantially a horizontal plane.

2. In a hat flanging apparatus, a foraminous steaming receptacle and protecting means for the hat consisting of a forming rim which engages the inner side of the hat brim, a filling block having a felt strip secured to its periphery to engage the sweat band and a flange which projects outwardly from said strip and across the joint between the sweat band and the brim and a cover which incloses the hat crown and engages said rim.

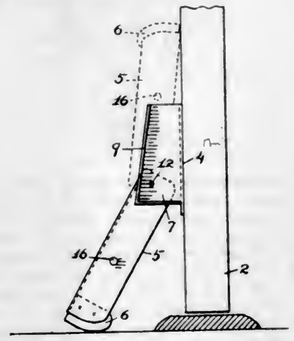
3. In a hat flanging apparatus, a foraminous steaming receptacle and protecting means for the hat consisting of a forming rim which engages the inner side of the hat brim, a filling block having a felt strip secured to its periphery to engage the sweat band and a flange which projects outwardly from said strip and across the joint between the sweat band and the brim and a cover which incloses the hat crown and engages said rim, said block and flange of the felt strip being for seating engagement on the bottom of said receptacle.

4. In a hat flanging apparatus, a steam box, a foraminous steaming receptacle projecting within the box and having its bottom and sides spaced from the bottom and sides respectively of the box, and means in the space between the bottoms of the box and receptacle for supplying steam to the interior of the box to enable same to simultaneously enter the receptacle from the bottom and sides of the receptacle.

5. In a hat flanging apparatus, a steaming receptacle, and protecting means for the hat consisting of a forming rim, a filling block for insertion in the head opening of the hat, and means borne by said block for engaging the sweat band and sealing the joint between the sweat band and the hat brim and a cover for the hat crown engaged with the brim.

[Claims 6 and 7 not printed in the Gazette.]

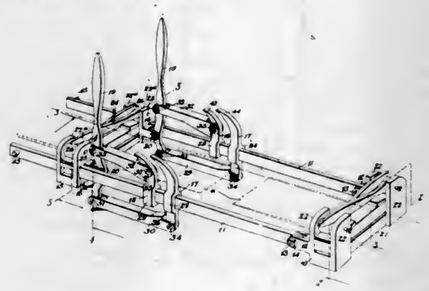
1,108,731. COMBINED DOOR AND GATE STOP. JOHN OWEN FORD, Jacksonville, Tex. Filed Apr. 16, 1914. Serial No. 832,303. (Cl. 16—82.)



1. A door stop consisting of a holder having a back portion for attachment to the door, and side walls projecting forward therefrom, a pivot pin in the lower part of the holder, and an oblique lengthwise tapering bearing foot pivoted by its narrow end on said pin between said side walls, and adapted to engage the side walls of said holder by the sides of its broader end when upturned to oblique position, said foot having laterally projecting lugs.

2. A door stop consisting of a bent sheet metal holder having a back portion and side walls projecting forward therefrom, a pivot pin in the lower part of the holder, and a bent sheet metal bearing foot having sides tapering lengthwise toward each other and engaging the pivot pin by its narrow end, said bearing foot being reversible from oblique working position to an oblique upturned position of engagement by the sides of its broader end with the side walls of said holder.

1,108,732. STRETCHING DEVICE. EDWARD OSCAR FOULK, Pioneer, La. Filed Feb. 26, 1914. Serial No. 821,282. (Cl. 57—122.)



1. A stretching device of the character described, comprising relatively movable structures, each having securing means for attaching the device in proper position relatively to the article to be stretched, one of said structures having a slide bar on which the other structure has guided movement, the said other structure having a lever, a pair of dogs slidable and rockable on the bar, and links connecting the lever and dogs, said links being pivoted to the lever at opposite sides of the fulcrum thereof, and having yokes embracing the slide bar, the said links being connected with the respective dogs at opposite ends of the latter and at opposite sides of the said bar to rock oppositely in response to the rocking of the lever, said links furthermore having shoulders adjacent to the dogs and opposite to that side of the dogs facing the lever to contact with the dogs in the forward movement of the links, the dogs being free to rock away from the shoulders upon reverse movements of the links, adjacent ends of the dogs having corresponding fingers adapted to engage and lie against each other when the dogs are brought together, for disposing the yokes of the dogs in parallel relation to each other and to the bar.

2. A stretching device comprising two relatively movable structures having securing means at opposite ends to secure said structures in proper relation to the article to be stretched, the one structure having a slide bar and the other structure having sliding guided movement on said bar and comprising a lever, a pair of dogs slidable and rockable on the bar relatively to the bar, and links connecting the lever and dogs, the links being disposed at opposite sides of the fulcrum of the lever and oppositely connected with the dogs to alternately rock the same into gripping engagement with the bar by reverse movements of the lever.

3. A stretching device of the character described, comprising two relatively movable structures having securing means at opposite ends to secure said structures in proper relation to the article to be stretched, the one structure having a pull bar, the other structure having guided movement on said bar and comprising a lever rockable relatively to the bar, a pair of dogs having yokes embracing the bar, and links connecting the lever and dogs, the links being disposed at opposite sides of the fulcrum of the lever and connected with the respective dogs at opposite sides of the yokes to alternately rock the same into gripping engagement with the bar by reverse movements of the lever.

4. In a device of the character described, two relatively movable structures having securing means at opposite ends, one of said structures having a bar and the other structure having guided movement on said bar and comprising dogs formed with loops embracing the bar, and links connecting the lever with the respective dog at opposite sides of the fulcrum of the lever, the said links having shoulders adjacent to the dogs at the sides of the latter facing the lever to engage the dogs and dispose them perpendicularly to the bar upon forward movements of the links, the dogs being free to rock relatively to the links and shoulders upon reverse movements of the links.

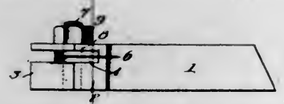
5. In a device of the character described, two relatively movable structures having securing means at opposite ends to secure said structures in proper relation to the article to be stretched by a movement of the structures toward each other, the one structure having a slide bar, the other structure having guided movement on the slide bar and comprising a pair of dogs formed with yokes slidable on the bar, a lever, and links connecting the lever and dogs, the links being disposed at opposite sides of the fulcrum of the lever and connected with the dogs at opposite sides of the yokes to alternately rock the dogs into gripping engagement with the bar by reverse movements of the lever, the said dogs having adjacent ends inclined in the direction of the lever and adapted to engage each other to dispose the yokes in parallel relation.

[Claim 6 not printed in the Gazette.]

1,108,733. TOOL-HOLDER. JOHN HARRY FRANZ, Baltimore, Md. Filed Dec. 18, 1911. Serial No. 666,323. (Cl. 29—99.)

1. A tool holder comprising a shank, an integral head carried by said shank, said head having angular faces, the

planes of said faces intersecting, and each face having an angular slot extending inwardly from the face, the inner walls of the slots being parallel with said faces, said head being divided into two spring portions by means of a slot extending inwardly from the angular intersection of said faces toward the shank, and means for clamping said spring portions together.



2. A tool holder comprising a shank, an integral head carried by said shank, said head having angular faces, the planes of said faces intersecting, and each face having an angular slot extending inwardly from the face, the inner walls of the slots being parallell with said faces, said head being divided into two spring portions by means of a slot extending inwardly from the angular intersection of said faces toward the shank, means for clamping said spring portions together, said means comprising a stud bolt secured in one portion and arranged to pass loosely through the other portion, and a nut disposed on said bolt and arranged to bear on one of said portions.

3. A tool holder comprising a shank, an integral head carried by said shank, said head having angular faces, the planes of said faces intersecting, and each face having an angular slot extending inwardly from the face, the inner walls of the slots being parallel with said faces, said head being divided into two spring portions by means of a slot extending inwardly from the angular intersection of said faces toward the shank, flanges carried by each of said spring portions at the outer edges of said angular slots, and means for forcing said spring portions toward each other.

4. A tool holder comprising a shank having an end face, a slot extending inwardly from said face, whose inner wall is parallel with said face, and whose length is parallel with the base of said tool holder, said shank being divided into two spring portions by a slot extending inwardly from said inner wall, and means for forcing said spring portions toward each other.

5. A tool holder comprising a shank having an end face, a slot extending inwardly from said face, whose inner wall is parallel with said face, and whose length is parallel with the base of said tool holder, said shank being divided into two spring portions by a slot extending inwardly from said inner wall, means for forcing said spring portions toward each other, and dependent flanges carried by each of said spring portions at the outer edge of said slot.

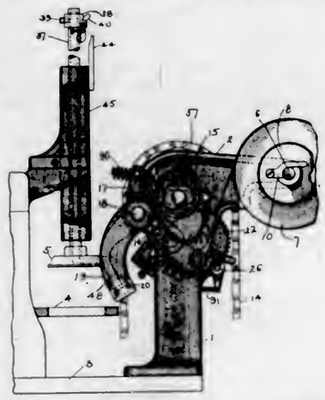
[Claim 6 not printed in the Gazette.]

1,108,734. ENVELOP-MACHINE. JOSEPH FROEHLICH, New York, N. Y., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Jan. 22, 1909. Serial No. 473,621. (Cl. 93—61.)

1. In an envelop machine, the combination with a creasing box to receive an envelop blank having an opening and a gummed strip around said opening, of a reciprocating plunger arranged to coöperate with said creasing box in folding an envelop blank, and having a recess corresponding with the gummed strip around said opening.

2. In an envelop machine, the combination with a creasing box to receive an envelop blank having an opening and a vertically reciprocating plunger arranged to cooperate with said creasing box in folding an envelop blank, of means for applying a single piece of paper to said plunger in its raised position over said creasing box and in registration with the opening in the envelop blank, and means for holding said piece of paper in contact with said plunger during its movement into said creasing box.

3. The combination with the folding mechanism of an envelop machine, comprising a vertically reciprocating plunger and means for holding a gummed envelop blank below said plunger and in registration therewith, of means for feeding a continuous strip of paper, means for severing a piece from said continuous strip arranged to be applied to said blank by the descent of said plunger, and means for receiving said severed piece and carrying it to the under side of said plunger when in its raised position.

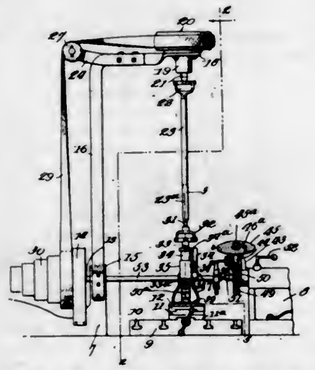


4. The combination with the folding mechanism of an envelop machine, comprising a vertically reciprocating plunger and means for holding a gummed envelop blank below said plunger and in registration therewith, of means for feeding a continuous strip, a rocking arm at one end of its movement arranged to receive said strip, means for severing from said strip a piece held by said arm, and with said rocking arm at the other end of its movement arranged to convey said severed piece to the under side of said plunger when in its raised position.

5. The combination with the folding mechanism of an envelop machine, comprising a vertically reciprocating plunger and means for holding a gummed envelop blank below said plunger and in registration therewith, of means for feeding a continuous strip of paper, means for severing a piece from said continuous strip arranged to be applied to said blank by the descent of said plunger, means for receiving said severed piece and carrying it to the under side of said plunger when in its raised position, and means for holding said piece in contact with said under side during said descent.

[Claims 6 to 8 not printed in the Gazette.]

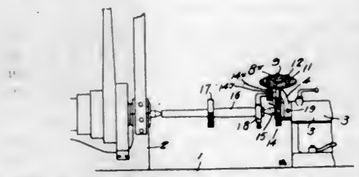
1,108,735. GEAR-CUTTING MACHINE. AUGUST FRYKMAN, Souris, N. D. Filed Oct. 29, 1912. Serial No. 728,343. (Cl. 90—11.)



1. The combination with a lathe having a head stock and a tail stock, of means carried by said head stock at one end and said tail stock at the other end for supporting work, an L-shaped upright secured to the body portion of said lathe, a pulley carried by said L-shaped upright, said pulley being arranged to revolve in a horizontal plane around a vertical axis, means connected with the lathe operating mechanism for rotating said pulley, a shaft section secured to said pulley, a second shaft section, a universal joint connecting said first mentioned shaft section and said second mentioned shaft section, a third shaft section, a universal joint connecting said second shaft section with said third shaft section, a cutter, means for adjustably securing said cutter to said third shaft section, said means comprising a sleeve slidably mounted on the shaft, a split socket encircling said sleeve, and means for causing a relative movement of said sleeve and said socket in a direction parallel to their common axes.

2. The combination with a lathe having a head stock and a tail stock, of means carried by said head stock at one end and said tail stock at the other end for supporting work, an L-shaped upright secured to the body portion of said lathe, a pulley carried by said L-shaped upright, said pulley being arranged to revolve in a horizontal plane around a vertical axis, means connected with the lathe operating mechanism for rotating said pulley, a shaft section secured to said pulley, a second shaft section, a universal joint connecting said first mentioned shaft section and said second mentioned shaft section, a third shaft section, a universal joint connecting said second shaft section with said third shaft section, a cutter, means for adjustably securing said cutter to said third shaft section, said means comprising a sleeve slidably mounted on the shaft, a split socket encircling said sleeve, and a screw bolt carried by said socket and having a threaded connection with said sleeve for effecting a relative movement of the sleeve and the socket along their common axes.

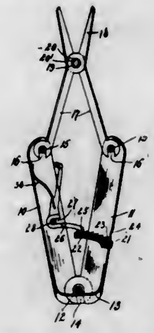
1,108,736. INDEX-HEAD FOR LATHES. AUGUST FRYKMAN, Souris, N. D. Original application filed Oct. 29, 1912, Serial No. 728,343. Divided and this application filed Jan. 28, 1914. Serial No. 814,952. (Cl. 90—57.)



The combination with a lathe having a head stock and a tail stock, of indexing mechanism therefor comprising a spindle arranged to enter said tail stock and having a tapered end, a work support carried by the head stock at one end and by the tapered end of the spindle at the other, a bracket carried by said tail stock, a bearing carried by said bracket, a shaft disposed in said bearing, a perforated gage plate carried by said bearing, an index arm secured to said shaft and provided with a locking member arranged to enter said gage plate, means connected with said shaft for rotating the work support when the index arm is turned, said last named means comprising a worm carried by said shaft, a gear loosely mounted on said spindle and arranged to mesh with said worm, an arm rigidly secured to said gear and extending laterally therefrom, said arm having a longitudinal slot, an eye bolt disposed in said slot and movable therealong, said eye bolt being arranged to receive the tail of the dog, and means for moving the eye bolt to clamp the dog against said laterally extending arm.

1,108,737. SURGICAL INSTRUMENT. GEORGE GAJDOS, New York, N. Y. Filed Apr. 22, 1914. Serial No. 833,688. (Cl. 128—44.)

In a device of the character described, the combination with a hollow handle member provided with a pivot at each of its ends and at a point intermediate said ends, of a second hollow handle member having a pivot at its upper end and a slot extending at an angle to the longitudinal axis thereof at its lower end, the pivot at the lower end of said first mentioned handle member being adapted to be seated in said slot, a nippers-like instrument having slots in the lower ends of the shanks thereof, said slots being adaptted to receive the pivots at the upper ends of said handle members, whereby the jaws of said nippers-like instrument are adapted to be closed by forcing said



handle members toward each other, a spring for swinging apart said handle members, a rack-bar detachably fastened to said second named handle member, and a spring pressed pawl having a slot in which is adapted to be seated the pivot located intermediate the ends of said first named handle member, said pawl being normally kept in engagement by its spring with the teeth of said rack-bar, but adapted to be disengaged from said rack-bar, whereby said handle members are forced apart by said first mentioned spring and the jaws of said nippers-like instrument opened.

1,108,738. TIPPED LACING. ERNEST A. GALLISON, Everett, Mass., assignor to Colonial Fast Color Tipping Company, Kittery, Me., a Corporation of Maine. Filed Feb. 20, 1912. Serial No. 678,917. (Cl. 24—143.)



1. A fabric lacing having a tip of sheet material wrapped around it, said material being of a nature that will permit it to be partially softened by the application of heat and a solvent, the fabric being held in compressed condition by the said wrapped sheet material and intimately united with the inner surface thereof.

2. A fabric lacing having a tip of sheet celluloid wrapped around it, the fabric being held in compressed condition by the celluloid and intimately united with the inner surface thereof.

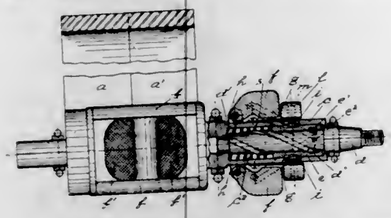
3. A fabric lacing having a tip of sheet celluloid wrapped around it, the celluloid tip having overlapping portions, the fabric being held in compressed condition by the celluloid and intimately united with the inner surface thereof.

4. A fabric lacing having a tip of sheet celluloid wrapped around it, the celluloid tip having overlapping portions, the overlying portion being embedded in the portion under it, the fabric being held in compressed condition by the celluloid and intimately united with the inner surface thereof.

1,108,739. ELECTRICAL IGNITING DEVICE FOR INTERNAL-COMBUSTION ENGINES. EUGENE GASSMANN, Brooklyn, N. Y., assignor to Eisemann Magneto Co., Brooklyn, N. Y., a Corporation of New York. Filed Aug. 6, 1913. Serial No. 783,341. (Cl. 123—117.)

1. The combination with a regulating device, comprising a shaft, rotatably mounted in bearings, means for

rotating the shaft; a movable part, and mechanism, actuated by variations in the speed of the rotating shaft, mounted thereon, of means for locking the movable part, thereby suspending the action of the regulating device, and of means, operatively connected with the locking means, and actuated by an increase in the speed of the rotating shaft, to, or above, a predetermined limit, and to release the movable part of the regulating device when the said shaft is rotated at, or above, the predetermined speed.



2. The combination with a regulating device, comprising a rotating shaft, a movable part and mechanism for moving it, mounted on, and actuated by variations in the speed of the rotating shaft, of spring actuated means for locking the movable part of the regulating device, and reversely operatable by a predetermined increase in the speed of the rotating shaft, to release the movable part of the regulating device when the said shaft is rotated at, or above, the predetermined speed, substantially as herein shown and described.

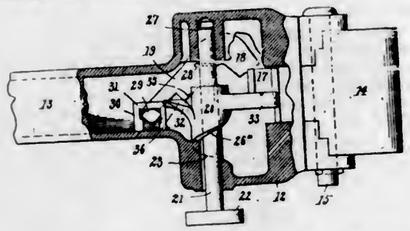
3. The combination with a regulating device, comprising a hollow shaft, and means for rotating it; a shaft turnably mounted in the hollow shaft; spiral ridges on the shaft; a correspondingly grooved sleeve, non-turnably mounted on the shaft, and means, actuated by variations in the speed of the rotating shaft, for reciprocating the sleeve, of a locking device, comprising spring-actuated means adapted to engage the sleeve and to hold it in fixed position on the shaft; and reversely operatable by a predetermined increase in the speed of the rotating shaft, so as to release the sleeve and hold the locking means from engaging the sleeve when the hollow shaft is rotated at, or above, a predetermined speed; substantially as herein shown and described.

4. The combination with a regulating device, comprising a hollow shaft, a shaft, provided with spiral ridges, turnably mounted in the hollow shaft; a correspondingly grooved sleeve, non-turnably mounted on the shaft; means for rotating the hollow shaft, and means connected therewith, for reciprocating the sleeve correspondingly to the speed, at which the hollow shaft, is rotated, of a locking device, comprising recesses in the sleeve, bolts mounted on springs upon the hollow shaft, and in position to engage in the recesses of the sleeve, and means, connected with the bolts, and operatable by centrifugal force at a predetermined increase in the speed of the rotating shaft, for withdrawing the bolts and for holding them withdrawn while the hollow shaft is being rotated at, or above, the predetermined speed; substantially as herein shown and described.

5. The combination with a regulating device, comprising, *inter alia*, a hollow shaft, a shaft, provided with spiral ridges, turnably mounted in the hollow shaft; a correspondingly grooved sleeve, non-turnably mounted on the shaft and means for reciprocating the sleeve, of a locking device, comprising recesses in the sleeve, springs secured to the hollow shaft, and weighted bolts, adapted to engage the recesses in the sleeve, secured to the springs; substantially as herein shown and described.

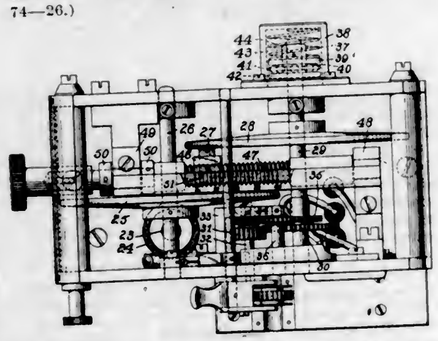
1,108,740. CAR-COUPLING. ERNEST F. GEBHARDT, Bridgeport, Conn. Filed Dec. 11, 1912. Serial No. 736,114. (Cl. 213—10.)

1. The combination of a body having a spiral incline bearing surface, a knuckle having a horizontally swinging arm, a pivotal locking member adapted to lie in the path of movement of the arm to prevent it from opening, said locking member being pivotally connected to the body of the coupler and having suitable engaging surfaces, an operating member supported upon said spiral bearing and having two arms one of which is designed to engage and raise the locking member to free the knuckle arm and the other adapted to engage the said knuckle and throw it open, and a rocker pin journaled in the body central of the spiral incline and passing through the operating member and adapted to turn the same against the spiral bearing to raise both the operating and locking member to release the knuckle.



2. In a car coupler of the class described, the combination with a coupler head having a spiral incline cam surface, of a knuckle having a horizontally swinging arm, a pivotal locking member to automatically engage and lock the swinging arm, and having suitable engaging shoulders to insure first the raising of the pivotal end to a pivotal position, a vertically disposed rocker pin, an operating member slidably mounted upon the pin and resting upon the incline cam surface and having an arm with inclines which are designed to first raise the pivotal end and then raise the forward end of the locking member to free the knuckle and also suitable bearing surfaces for holding the locking member in a rigid open position, and a second arm on said operating member to engage and throw the knuckle open.

1,108,741. VARIABLE-SPEED MECHANISM. JOHN GELL, London, England. Original application filed Jan. 24, 1911, Serial No. 604,487. Divided and this application filed Feb. 26, 1913. Serial No. 750,896. (Cl. 74—26.)

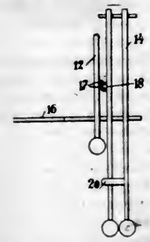


1. In combination in a variable speed mechanism, a rotary member to be driven, a drive shaft, and transmission means comprising a pair of parallel friction disks, arranged on parallel shafts, a friction wheel bearing on the opposing faces of the disks, a screw shaft, extending transversely to the shafts of the disks, and a hanger depending from said screw shaft and free to turn about the same carrying the friction wheel, substantially as described.

2. In combination in a variable speed mechanism, a rotary member to be driven, a power shaft, a friction wheel thereon, a pair of friction disks mounted on parallel shafts, a friction wheel between them, a connection from the driven friction disk to the rotary member, and a spring for pressing one friction disk, which pressure is transmitted through the intermediate friction wheel to the other friction disk and to the friction wheel on the motor shaft, said intermediate friction wheel being mounted in a bearing adjustable radially and movable transversely in respect to the friction disks, substantially as described.

3. In combination in a variable speed mechanism, a member to be rotated, a motor shaft, a friction drive wheel thereon, adjustable longitudinally of the said shaft, a friction disk mounted on a shaft at right angles to the motor shaft and upon which disk the driving friction wheel bears, a second friction disk, rotating in a plane parallel with the first, a shaft therefor arranged parallel with that of the first disk, a friction wheel journaled in a movable banger between the two disks adjustably mounted, and when adjusted moving toward the periphery of one and toward the axis of the other disk, and a connection between the second disk and the rotary member to be driven, substantially as described.

1,108,742. TYPE-WRITER. WILLEM JOHANNES GIEL, The Hague, Netherlands. Filed Oct. 8, 1912. Serial No. 724,660. (Cl. 197—1.)

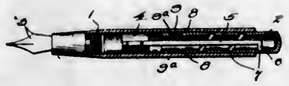


1. In a typewriting machine, the combination of a type-shuttle, a shift-key therefor, a back-space-key arranged to interlock with said shift-key; and means for disconnecting said keys after the paper has been brought back to the position which it occupied at the printing of the character last printed.

2. In a typewriting machine, the combination with a back-space key; of a shift lever provided with a detent adapted to engage said back-space key.

3. In a typewriting machine, the combination with a back-space key; of a pair of shift levers, one of which is provided with means for engaging said back-space key and the other of which is provided with means for engaging its cooperating shift lever.

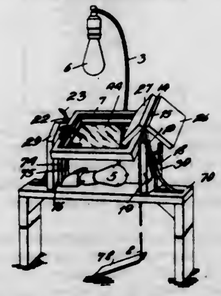
1,108,743. SELF-FILLING FOUNTAIN-PEN. JUSTIN GILBERT, Victoria, British Columbia, Canada. Filed Aug. 5, 1912. Serial No. 713,399. (Cl. 120—47.)



1. In a self-filling fountain pen having an ink reservoir composed of two barrels mutually opening into each other and sliding one in the other telescopically for the purpose of intaking ink, the combination of a spiral groove made inside of one barrel and a frame attached to the other barrel and carrying the stud which fits into the spiral groove and produces the telescopic movement of the two barrels when one is twisted relatively to the other for the purpose of intaking ink, substantially as described.

2. In a self-filling fountain pen having an ink reservoir composed of two barrels mutually opening into each other and slidable one in the other telescopically for the purpose of intaking ink, the combination of a spiral groove formed in the inner face of one of said barrels, and a frame attached to the other barrel, a stud carried by said frame adapted to fit into said spiral groove and produce a telescopic movement of the two barrels when one is twisted relative to the other, an abutment at the end of said groove against which said stud abuts to prevent the barrels from being accidentally separated.

1,108,744. PHOTOGRAPHIC-PRINTING APPARATUS. NATHAN J. GOLDFARB, New York, N. Y., assignor of one-half to Philip Rabinowitz, Brooklyn, N. Y. Filed July 25, 1913. Serial No. 781,091. (Cl. 95—73.)



1. A photographic printing frame, comprising an oscillatory frame, and means automatically operative to open the frame when the latter arrives in a predetermined position.

2. A photographic printing apparatus, comprising an oscillatory frame, automatic means for opening the same after printing, and means for oscillating the frame into engagement with said opening means.

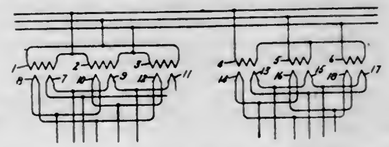
3. A photographic printing apparatus, comprising an oscillatory frame, a latch and latch-plate normally retaining the same closed, and a catch in the path of the latch-plate, adapted to release the same from the latch at a predetermined point in the oscillation of the frame.

4. A photographic printing apparatus, comprising an oscillatory frame, and a source of light at printing distance therefrom, controlled by the oscillation of the frame, there being a free and unobstructed space for hand-retarding of the exposure, between said frame and said source of light.

5. A photographic printing apparatus, comprising an oscillatory frame spring-actuated toward open position, and means for arresting the same in printing position against the tension of its spring.

[Claims 6 to 15 not printed in the Gazette.]

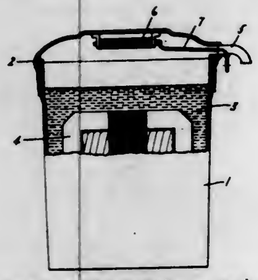
1,108,745. SYSTEM OF PHASE TRANSFORMATION. FRANK C. GREEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 21, 1911. Serial No. 661,458. (Cl. 172—238.)



1. The combination of two groups of windings; the members of each group being connected in double delta, and a group of windings inductively related to each of the first mentioned groups, the members of one of said last mentioned groups being connected in delta and the members of the other in Y.

2. The combination with a three-phase system of distribution, of two groups of transformers, one delta connected and the other Y connected thereto, the secondaries of each of the two groups being double delta connected.

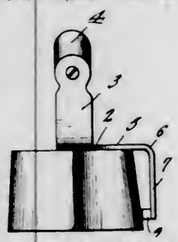
1,108,746. MEANS FOR PREVENTING CONDENSATION OF MOISTURE IN TRANSFORMER-TANKS. FRANK C. GREEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 12, 1913. Serial No. 800,540. (Cl. 171—124.)



1. The combination with a transformer tank, an insulating fluid partly filling said tank, the space above the fluid communicating with the atmosphere, and a transformer submerged in said fluid, of an electric heating device in the space between the surface of the fluid and the top of the tank.

2. The combination with a transformer tank, an insulating fluid partly filling said tank, the space above the fluid communicating with the atmosphere, and a transformer submerged in said fluid, of an electric heating device attached to the cover of the tank above the surface of the insulating fluid.

1,108,747. FLAT-IRON HANDLE AND STAND. HARRY GREENWOOD, Sr., Barnesboro, Pa., assignor of one-half to Antonio Bongiovanni, Barnesboro, Pa. Filed June 26, 1913. Serial No. 775,989. (Cl. 68—27.)



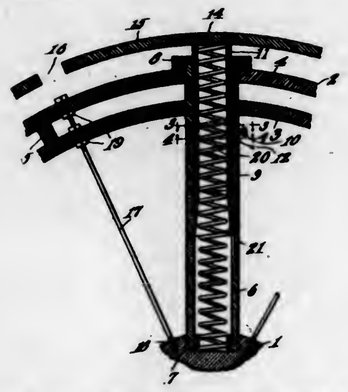
A sad iron holder formed of a single piece of sheet metal and cut to form a body portion, the ends thereof bent upwardly and forming upstanding posts, outstanding horizontal arms carried by the body portion extending beyond the edge of said sad iron, downwardly extending legs carried by the said arms, a longitudinal strip extending between and carried by the said legs, a lug extending inwardly and carried by said longitudinal strip contacting with the side wall of the sad iron and holding the said longitudinal strip in spaced relation with respect thereto, means for detachably securing the body portion to a sad iron, and a hand grip extending between the upper extremities of said upstanding posts.

1,108,748. CABLE-GUIDE. SECOND M. HAMPTON, Leaksville, N. C. Filed May 3, 1913. Serial No. 765,400. (Cl. 247—23.)



In a cable guide, the combination with a suspension strand and supporting rings connected to said strand and spaced apart thereon, of a cone-shaped tube having the relatively small end thereof designed to receive a hauling rope and the large end thereof split and designed to receive the adjacent end of the cable, said tube being movable through said rings under the action of the hauling rope, the split portion of the tube permitting the latter to adjust itself to rings of various diameters and different size cable heads.

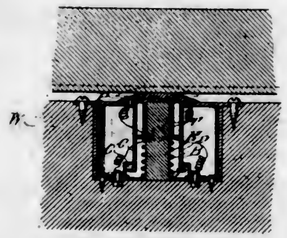
1,108,749. WHEEL. ANDREW J. HARLAN, Sr., London Mills, Ill. Filed Dec. 29, 1913. Serial No. 809,346. (Cl. 152—31.)



1. In a device of the class described, a hub; a primary tubular spoke secured to the hub and provided in its interior with a longitudinal guide which opens through the end of the primary spoke; a secondary spoke slidable within the primary spoke and provided with a projection slidable in the guide and coöperating with the guide to limit relative rotation between the spokes; a movable element in the primary spoke and entering the guide and adapted to engage the projection to limit relative longitudinal movement in the spokes; a tread carried by the secondary spoke; and spring means for supporting the secondary spoke.

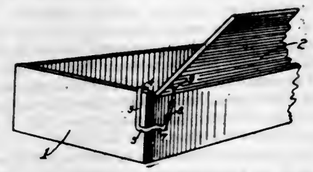
2. In a device of the class described, a hub; a rim comprising inner and outer parts; a primary tubular spoke connected with the hub and passing through the rim parts; a securing device on the primary spoke and engaging one rim part; a secondary, spring supported spoke slidable within the primary spoke; a tread carried by the secondary spoke; a tensional spoke connected with the hub and passing through the rim parts; and means on the tensional spoke for engaging the rim parts.

1,108,750. COMBINED ALARM AND ELECTRIC-LIGHT SWITCH. JAMES G. HARRISON, Goldfield, Colo., assignor of one-half to Una Coy Harrison, Parkdale, Colo. Filed Mar. 26, 1912. Serial No. 686,450. (Cl. 177—10.)



The combination with a fixed member and a movable member, the former being formed with a depression, of a casing secured in said depression, a support fixed in said casing and rising centrally therefrom, a sleeve slidably mounted on said support, a disk carried by the upper end of the sleeve, said support limiting the movement of the sleeve and disk in one direction, a spring coöperating with the sleeve to normally actuate the same in the upward direction, spaced independent contacts arranged in pairs, the similar contacts of each pair being carried by the disk and the remaining contacts of each pair by the casing, and independent electric circuits connected to the respective coöperating pairs of contacts, the coöperation of the respective contacts limiting movement of the disk under the influence of the spring.

1,108,751. CIGAR-BOX-LID HOLDER. RUFUS P. HASKINS, Spokane, Wash. Filed June 30, 1913. Serial No. 776,673. (Cl. 217—61.)



A cigar box-lid holder comprising a U-shaped member, an extension formed on one of the arms of the U-shaped member, said extension projecting rearwardly from the face of the U-shaped member and terminating in an angular projection which extends at right angles to the aforesaid extension, a second angular extension formed at the innermost extremity of the previously mentioned angular projection and being bent upwardly to form the lid-engaging member, and a point formed on the end of the lid-engaging member, said point being adapted to enter the wood of a cigar box-lid and hold the same from accidental movement and to also be easily disengaged, whereby when it is so desired, the user may close the box without moving the holder.

1,108,752. MANUFACTURE OF HYDROGEN PEROXID. HUGO HENKEL and WALTER WEBER, Dusseldorf, Germany, assignors to The Firm of Henkel & Cie., Dusseldorf, Germany. Filed June 16, 1913. Serial No. 774,054. (Cl. 23—10.)

1. Process for the manufacture of hydrogen peroxid from hydrogen and oxygen, consisting in causing gaseous oxygen to act under pressure, in the presence of water, on gaseous hydrogen in the presence of suitable catalytic agents.

2. Process for the manufacture of hydrogen peroxid from hydrogen and oxygen, consisting in causing oxygen containing gas-mixtures, which are free from gases having a disturbing catalytic effect, to act under pressure, in the presence of water, on gaseous hydrogen in the presence of suitable catalytic agents.

3. Process for the manufacture of hydrogen peroxid from hydrogen and oxygen, consisting in causing gaseous oxygen to act under pressure, in the presence of water, on hydrogen containing gas-mixtures, which are free from gases having a disturbing-catalytic effect, in the presence of suitable catalytic agents.

4. Process for the manufacture of hydrogen peroxid from hydrogen and oxygen, consisting in causing oxygen containing gas-mixtures, which are free from gases having a disturbing catalytic effect, to act under pressure, in the presence of water, on hydrogen containing gas-mixtures, which are free from gases having a disturbing catalytic effect, in the presence of suitable catalytic agents.

5. Process for the manufacture of hydrogen peroxid from hydrogen and oxygen, consisting in causing gaseous oxygen to act under pressure, in the presence of water, on gaseous hydrogen in the presence of suitable catalytic agents, in admitting additional hydrogen as it is used, in constantly drawing off the solution of hydrogen peroxid and in supplying a corresponding amount of water.

1,108,753. FIRE-ALARM. FRANK HERBECK, Athol, Mass. Filed Apr. 7, 1913. Serial No. 759,320. (Cl. 177—303.)

1. In a device of the class described a normally open annunciator circuit, a circuit closer normally disposed in non-circuit closing relation thereto, a retaining member for said circuit closer, a bearing member, a thermal control element ejectably held by said retaining member against said bearing member with a bearing which has a relatively high coefficient of friction under normal temperatures effective to hold said element against displacement and which bearing has a relatively lower coefficient of friction under abnormal rises in temperature effective to permit said element to be ejected from the retaining member and the circuit closer to move to circuit closing position and actuate the annunciator.



2. In a device of the class described, an annunciator circuit, a normally open circuit closer, a supporting member having a bearing surface, a thermal element having a bearing on the bearing surface of the support and spaced from said circuit closer by said support, a retaining member for said circuit closer ejectably holding said thermal element against said support with a bearing which has a relatively high coefficient of friction under normal temperatures and a relatively lower coefficient of friction under abnormal temperatures, said element being normally effective to maintain said circuit closer in open position while held by said retaining member and being ejected from said retaining member by the lowering of its coefficient of friction to permit the circuit closer to move to circuit closing position and actuate the annunciator.

3. A device of the class described comprising a contact normally held in open circuit with an annunciator and effective when released to close said circuit and actuate said annunciator, a holding device connected with said contact, and a fusible plug frictionally engaged with said holding device and effective to hold said contact in non-circuit closing position under normal temperatures by its frictional engagement with said holder and adapted to release said contact to permit it to close the circuit when its frictional engagement with the holder is reduced by the softening of its bearing surface under an increase in temperature.

4. A device of the class described comprising a spring contact normally held in open circuit with an annunciator and effective when released to close said circuit and to actuate the annunciator, and means normally effective to hold said contact in open circuit including a member spaced from said contact, a member connected to said contact, and a wedge shaped fusible plug normally finding bearing between said members under ordinary temperatures but displaceable by the softening of its bearing surface under an increase in temperature so as to be ejected from its engagement with said members under the spring action of the contact to permit said contact to close the circuit.

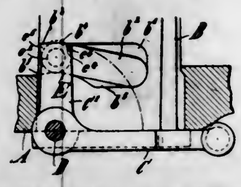
5. A device of the class described comprising an insulated base, terminals mounted thereon in electrical circuit with an annunciator, a contact operatively associated with said terminals, a housing for said contact, a ball shaped holding device fastened to said contact, and a fusible element wedged beneath said ball and normally effective to hold said contact in non-circuit closing position by its frictional engagement with the ball, and adapted to release said ball when softened under a rise in temperature to permit said contact to descend to close the circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,108,754. GUN WEDGE BREECH-CLOSURE. MAX HERMSDORF, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Oct. 29, 1910. Serial No. 589,751. (Cl. 89—24.)

1. In a gun wedge breech closure, the combination with the wedge block, an operating groove in one of the parts

of the closure, of an operating lever journaled on the other part of the closure, a member on said lever engaging the groove to operate the closure, a supporting face on the lever adapted to bear against a supporting face on that part of the closure having the operating groove when the breech is closed, said supporting faces being so arranged that they may enter into engagement with each other without producing any movement of the wedge block, and means for completely relieving from the effect of firing the member of the operating lever engaging the operating groove.



2. In a gun wedge breech closure the combination with a wedge block, an operating groove in the wedge block, of an operating lever journaled on the breech of the gun barrel, a roller journaled on said lever and engaging the operating groove to operate the closure, a supporting face on the operating lever adapted to bear against a supporting face on the wedge block when the breech is closed, said supporting faces being so arranged that they may enter into engagement with each other without producing any movement of the wedge block, and a recess in one of the side walls of the operating groove for completely relieving the roller from the effect of firing.

3. In a gun wedge breech closure, the combination with a wedge block, a partly curved operating groove in the wedge block, having an open end, and a closed end, said groove having recesses in both of its side walls toward its closed end, and a recess near its open end in its side wall remote from the axis of operation, and an operating lever adapted to engage with said grove and said recesses alternately.

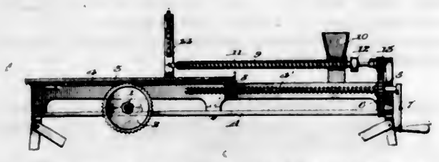
4. In a gun wedge breech closure, the combination with the wedge block having a curved operating groove with an open end and a closed end, said groove being provided with a recess in one of its side walls near its open end, of an operating lever journaled on the breech of the gun barrel, a roller journaled on said lever engaging said groove and registering with said recess when the breech closure is closed, to operate the closure, the end of the lever extending beyond the periphery of the roller for engagement with said side wall of the groove, when the breech is closed whereby the lever acts to sustain the effect of the discharge of the gun and protect the roller from injury.

5. In a gun wedge breech closure, the combination with a wedge block provided with a curved operating groove having an open end and a closed end and recesses in both of its side walls toward its closed end, and at the same level, and a recess at a different level in one of its side walls near its open end, of an operating lever journaled on the breech of the gun and having an arm with a broad working surface, a roller journaled on said lever so that its periphery does not extend beyond said working surface of the lever, said roller projecting within the operating groove, the broad working surface of the lever engaging the side wall of the operating groove at its open end when the block is in closed position so as to act as a compression member between the block and the breech, the recess in the side wall of the groove near its open end, freeing the roller from contact with the wall of the groove when the block is in closed position.

[Claim 6 not printed in the Gazette.]

1,108,755. MEAT-CURING DEVICE. BALTHASER HILLER, Hudson, Wis. Filed Sept. 29, 1913. Serial No. 792,376. (Cl. 99—2.)

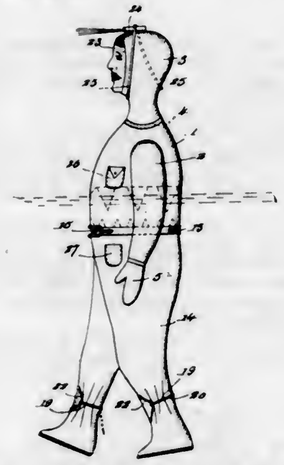
1. The combination with a frame having a movable table, of a stationary tube, means for moving the table for causing the meat to be penetrated by the tube, means for holding the meat on the table so that it can be penetrated and means for introducing a curing substance into the meat through the tube.



2. The combination with a frame having a movable table, of a stationary tube, means for moving the table for causing the meat to be penetrated by the tube, means for holding the meat on the table so that it can be penetrated and means actuated by said first-named means for introducing a curing substance into the meat as said first-named means is actuated for moving the table in another direction to remove the meat from the tube.

3. The combination with a frame having pinions mounted thereon, of a movable table provided with rack bars adapted to engage the pinions for supporting the table, means on the table for holding the meat so that it may be penetrated, a stationary tube through which the curing substance is introduced into the meat, means engaging an end of the table for causing the table to be moved for forcing the tube into the meat, and means actuated by said last-mentioned means for introducing the curing substance into the meat as the table is moved in another direction for removing the meat from the tube.

1,108,756. LIFE-PRESERVER. THORSTEIN HIMLE, Santa Rosa, Cal. Filed June 28, 1913. Serial No. 776,328. (Cl. 9—20.)



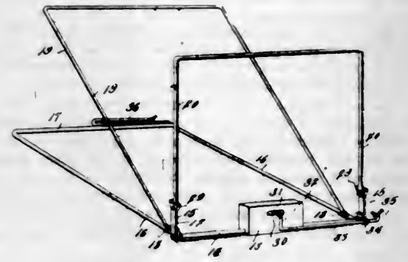
1. In a life preserver, the combination with a coat and trousers, of an undivided non-yielding circumferentially grooved belt section upon said coat, a yieldable divided circumferentially grooved belt section upon said trousers, the latter section adapted to circumferentially inclose the said first section, and means carried by one of said sections operable to draw the said section tight upon the other of the said sections to effect a water tight joint between the coat and trousers, as and for the purpose set forth.

2. In a life preserver, the combination with a coat and trousers, of a belt section upon said coat, a divided belt section upon said trousers, the latter section adapted to circumferentially inclose the said first section, and means pivoted to one of the terminals of the said second section and connected to the other terminal of the said second section, operation of said means adapted to draw said second section tight upon said first section to effect a watertight joint between the coat and trousers, as and for the purpose set forth.

3. In a life preserver, the combination with a coat and trousers, and buoyant means carried thereby, of a circumferentially grooved one piece belt section upon said coat, an expansible belt section, correspondingly grooved, secured to said trousers, and means including a lever operable to draw said second section tight upon said first section to effect a water tight joint between the coat and trousers, as and for the purpose set forth.

4. A life preserver including a water proof coat having a helmet formed integrally therewith, the helmet having a face opening formed therein, water proof trousers adapted to be detachably fastened to the said coat, a pair of removable casings adapted to be disposed upon the interior of the coat near the waist line thereof, a plurality of inflated air tight containers adapted to be arranged within the said casing, a grooved belt section secured to the said coat at the base thereof, a second belt section adapted to conform to the configuration of the said first mentioned belt section secured to the top of the said trousers, the said last mentioned belt section adapted to overlap the said first mentioned belt section for effecting a water tight connection therebetween, a lever pivotally connected to the said last mentioned section adapted to clamp the said section over the said first mentioned section, and means including a pair of adjustable garters arranged exteriorly upon the legs of the trousers, as and for the purpose set forth.

1,108,757. AUTOMATIC FOLDABLE COVER. ALFRED W. HOLMAN, St. Matthews, S. C. Filed June 2, 1913. Serial No. 771,290. (Cl. 45—120.)

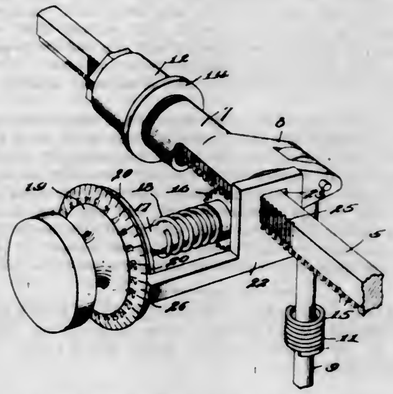


A cover comprising a U-shaped support, a rotatable shaft journaled in the support, a bow frame having its limbs fixed to the shaft, a pair of bow frames, pivoted to the first-named frame and support respectively, a casing on the support, a slide in the casing and having a cam slot, pins mounted for vertical sliding movement within the casing and engaged in the cam slot, reversely coiled springs connected to the shaft and also connected to the said pins, a cover carried by the frames, and means for moving the slide for changing the position of the pins to alternately wind and unwind the said spring for the opening and closing of the cover.

1,108,758. VISE FOR MACHINES OF THE LINOTYPE CLASS. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1913. Serial No. 740,486. (Cl. 199—7.)

1. In a machine of the linotype class, in combination, a movable vise jaw, an adjusting rod for setting said jaw, a pinion meshed with said rod for setting said jaw in different positions, said pinion having a dial rotatable therewith for indicating the different set positions of said vise jaw, and means for holding the vise jaw in position when set.

2. In a machine of the linotype class, in combination, a movable vise jaw, a toothed adjusting rod for setting said jaw and independent thereof, a pinion meshed with said rod comprising a handle for rotating the same supplied with means for indicating the position of the adjusting rod, and means for locking the adjusting rod in any desired and indicated position.



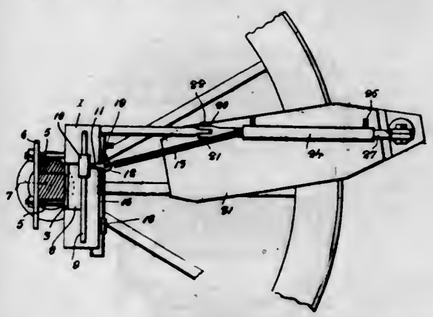
3. In a machine of the linotype class, the combination with a normally fixed matrix vise jaw and a relatively movable vise jaw, of means for adjusting said movable jaw embodying a knob or handle capable of rotary and axial movement, means operative by the rotative movement thereof for moving said movable jaw, and means operative by the axial movement of the knob or handle for locking or unlocking the movable jaw.

4. In a machine of the linotype class, in combination, a movable vise jaw, a threaded member provided with means for turning it automatically to close and open the jaw, a toothed adjusting rod passing through said threaded member, and a detent or lock adapted to engage said toothed rod and to bear against the end of said threaded member.

5. A vise for machines of the linotype class embodying a movable jaw, an adjusting member therefor, means for reciprocating said member to cause the jaw to clamp and release a line of matrices embodying an automatically actuated rotatable sleeve through which said member extends, a device for setting said member in different positions relatively to said sleeve, and means for locking said member in different set positions.

[Claims 6 to 8 not printed in the Gazette.]

1,108,759. MUD-GUARD. TOM L. JOHNSON, Panna Maria, Tex., assignor of one-third to Valentine Biela, Cestohowa, Tex. Filed Jan. 28, 1914. Serial No. 815,050. (Cl. 21—23.)



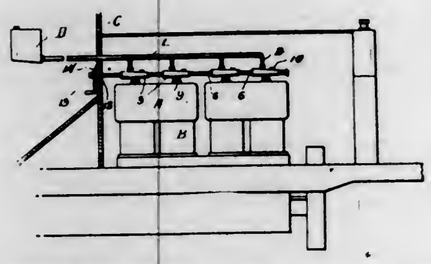
1. In a device of the class described, a supporting head block, means for securing said block to a vehicle axle, a main supporting arm having a jointed connection with said block and embodying a pivotally mounted extension, spring mechanism for centering said pivoted extension, and a pair of oppositely arranged scraper blades carried by

said pivoted extension and operating at opposite sides of the wheel.

2. In a device of the class described, a supporting head block, means for clamping said block to a vehicle axle, a pivoted arm connected with said head block, oppositely arranged springs for centering said pivoted arm, said springs being interposed between said arm and head block, and a pair of oppositely arranged scraping blades carried by said pivoted arm and working at opposite sides of the wheel.

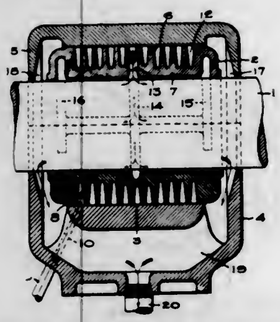
3. In a device of the class described, a supporting head block, clamping means for securing said head block to a vehicle axle, guide rods extending longitudinally of said head block at opposite sides thereof, a laterally swinging arm supported by said head block, oppositely arranged arm centering springs connected with said arm and having an adjustable connection with said guide rods, and a pair of oppositely arranged scraping blades carried by said arm and adapted to operate at opposite sides of the wheel.

1,108,760. PRIMING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. AINER W. JUNTUNEN, Rolla, N. D. Filed Feb. 7, 1914. Serial No. 817,304. (Cl. 123—187.5.)



Priming apparatus for multiple cylinder internal combustion engines comprising a series of axially alined priming valves, longitudinally alined stems for said valves connected to each other for simultaneous turning movement, valve casings for said valves attached to and communicating with the respective cylinders, a feed pipe leading from the fuel supply to said valve casings, and means for turning said valves, each of said valves embodying a fuel cavity in one side and a compression relief passage adapted to register with the priming inlet of its cylinder under different positions of said valve.

1,108,761. SHAFT-BEARING. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 8, 1908. Serial No. 425,813. (Cl. 64—28.)



1. In combination, a shaft, a shaft bearing comprising bearing surfaces which receive the shaft, a series of cooling surfaces for radiating the heat generated by friction between the shaft and the bearing surfaces, a conduit extending between one end of the cooling surfaces and the bearing surfaces, and means for supplying lubricating oil from a suitable source to flow in series over the cooling surfaces, through the connecting conduit and over the bearing surfaces to lubricate the bearing and to cool said bearing by absorbing and conveying heat from the cooling surfaces.

2. In combination, a shaft, a bearing therefor which receives a continuous supply of lubricating oil for the bearing surfaces from a suitable source, said bearing having cooling surfaces which surround the shaft outside of the bearing surfaces and over which the whole of said oil supply is circulated both above and below the shaft, said oil cooling the bearing by absorbing and removing heat generated by the friction of said bearing surfaces, and a conduit means that receives all of the oil from the cooling surfaces after it is heated and conveys the same to the space between the shaft and the bearing.

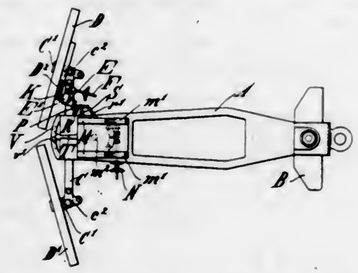
3. In combination, a shaft, a bearing therefor which requires lubricating oil from a suitable source of supply, said bearing having cooling surfaces arranged above and below the shaft over which all of said lubricating oil is circulated adjacent the bearing surfaces both above and below the shaft to raise its temperature by heat generated by the friction between the shaft and said bearing surfaces before it is delivered to said surfaces, and conduit means connecting the portions of said cooling surfaces that are located above and below the shaft respectively in series with the shaft bearing surfaces.

4. In combination, a shaft, a divided bearing shell therefor which receives lubricating oil from a suitable source, each of the bearing parts being provided with walls over which the lubricating oil flows to be heated by absorbing therefrom heat generated by the friction between the shaft and bearing surfaces before its delivery to said surfaces, conduit means for conveying all of the oil from one part of the shell to another and delivering it to the shaft bearing surfaces, a casing for the bearing having a chamber that receives the oil from the ends of the shell, and a conduit for conveying the oil from the casing.

5. In combination, a shaft, a divided bearing shell therefor, each part of the shell being provided with a conduit to receive lubricating oil, means for supplying oil to the parts of the bearing and causing it to pass serially through said parts, a conduit that receives the oil after it has passed through said parts and conveys it inwardly to the shaft, a casing for the bearing having chambers at ends of the shell that receive oil from the shaft, and a conduit which conveys oil from the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,108,762. MOBILE-GUN MOUNT. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Sept. 28, 1912. Serial No. 722,953. (Cl. 89—41.)

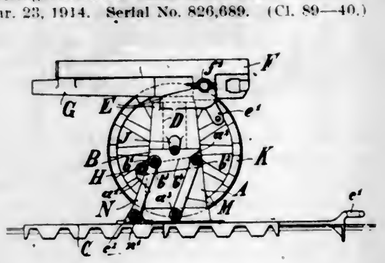


1. A mobile gun having a bottom-carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a second training gear for rough training of the bottom-carriage and an indicating device for showing the direction and amount of fine training between said top and bottom carriages; said indicating device being arranged in the vicinity of the driving member of the training gear for rough training, in order to enable the gunner attending the training gear for rough training to observe said indicating device.

2. A mobile gun having a bottom carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a fixed training center for the bottom carriage, wheels on said bottom carriage and axle arms for said wheels whose axes intersect with the axis of said fixed center when the wheels are in their training position, a training gear for rough training adapted to rotate said wheels in order to train the bottom carriage around said fixed center, and an indicating device for showing the direction and amount of fine training between said top and bottom carriage, said indicating device being arranged in the vicinity of the driving member of the training gear for rough training, in order to enable the gunner attending the training gear for rough training to observe said indicating device.

3. A mobile gun having a bottom carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a fixed training center for the bottom carriage, wheels on said bottom carriage and axle arms for said wheels whose axes intersect with the axis of said fixed center when the wheels are in their training position, a training gear for rough training adapted to rotate said wheels in order to train the bottom carriage around said fixed center, and two indicating devices for showing the direction and amount of fine training between said top and bottom carriage, one of said indicating devices being arranged in the vicinity of the driving member of the training gear for rough training, and the second indicating device being arranged on the front end of the gun mount.

1,108,763. PIVOT-MOUNT FOR GUNS. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 23, 1914. Serial No. 826,689. (Cl. 89—40.)



1. A pivot mount for guns comprising a fork with trunnion bearings, means for connecting carriage wheels to said fork, a pedestal on which said fork is mounted to turn around a vertical axis, a foundation plate and link connection between said foundation plate and said pedestal, whereby the mount may be transferred from traveling to firing position.

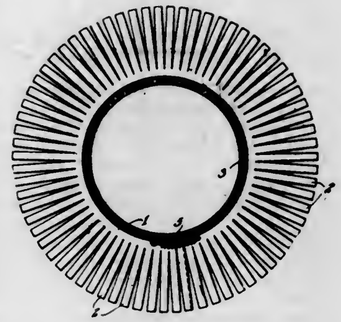
2. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate.

3. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate; suitable members for securing the upper portion of the pedestal in the two positions.

4. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate, said foundation plate having one portion narrower than the track of the wheels.

5. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate; said foundation plate being provided with a limber eye.

1,108,764. TRAP-BELT. ALFRED JOHN KULL, Far Hills, N. J. Filed Feb. 19, 1914. Serial No. 819,843. (Cl. 47—35.)



1. A trap belt comprising a body of flexible material for disposition about the trunk of a tree and having guard members formed thereon by cutting the material transversely a portion of the width of said material whereby upon flexing the same about the tree to cause the guard members to curve longitudinally, and assume a position projecting away from the tree with their extremities spaced from each other.

2. A trap belt comprising a body of flexible metallic material adapted to be disposed about the trunk of a tree and having a plurality of curved guard members spaced from the tree and formed by cutting the material transversely the greater portion of its width a number of times, the uncut portion constituting a band adapted to fit closely to the tree, a fabric member secured to the inner surface of the band portion, and a flexible connection connecting the ends of the band to permit expansion of said belt.

1,108,765. COVER-FASTENING DEVICE FOR RECEPTACLES. MICHAEL J. LAWLESS, Omaha, Nebr. Filed Aug. 8, 1912. Serial No. 714,088. (Cl. 70—3.)

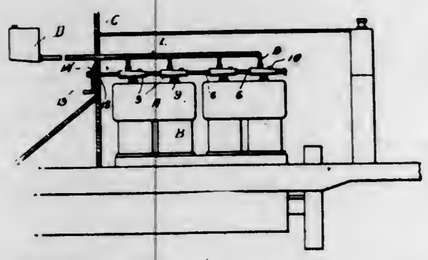
The combination with a receptacle, of a cover provided with a flange engaging the sides of the receptacle permitting rotary movement but not lateral movement of the cover, ears formed upon the receptacle positioned adjacent the periphery of the cover and open in opposite direc-

said pivoted extension and operating at opposite sides of the wheel.

2. In a device of the class described, a supporting head block, means for clamping said block to a vehicle axle, a pivoted arm connected with said head block, oppositely arranged springs for centering said pivoted arm, said springs being interposed between said arm and head block, and a pair of oppositely arranged scraping blades carried by said pivoted arm and working at opposite sides of the wheel.

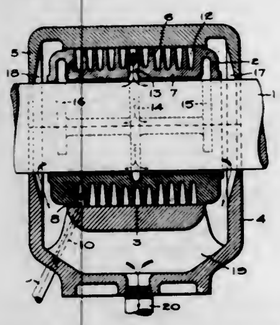
3. In a device of the class described, a supporting head block, clamping means for securing said head block to a vehicle axle, guide rods extending longitudinally of said head block at opposite sides thereof, a laterally swinging arm supported by said head block, oppositely arranged arm centering springs connected with said arm and having an adjustable connection with said guide rods, and a pair of oppositely arranged scraping blades carried by said arm and adapted to operate at opposite sides of the wheel.

1,108,760. PRIMING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. AINER W. JUNTUNEN, Rolla, N. D. Filed Feb. 7, 1914. Serial No. 817,304. (Cl. 123—187.5.)



Priming apparatus for multiple cylinder internal combustion engines comprising a series of axially alined priming valves, longitudinally alined stems for said valves connected to each other for simultaneous turning movement, valve casings for said valves attached to and communicating with the respective cylinders, a feed pipe leading from the fuel supply to said valve casings, and means for turning said valves, each of said valves embodying a fuel cavity in one side and a compression relief passage adapted to register with the priming inlet of its cylinder under different positions of said valve.

1,108,761. SHAFT-BEARING. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 8, 1908. Serial No. 425,813. (Cl. 64—28.)



1. In combination, a shaft, a shaft bearing comprising bearing surfaces which receive the shaft, a series of cooling surfaces for radiating the heat generated by friction between the shaft and the bearing surfaces, a conduit extending between one end of the cooling surfaces and the bearing surfaces, and means for supplying lubricating oil from a suitable source to flow in series over the cooling surfaces, through the connecting conduit and over the bearing surfaces to lubricate the bearing and to cool said bearing by absorbing and conveying heat from the cooling surfaces.

2. In combination, a shaft, a bearing therefor which receives a continuous supply of lubricating oil for the bearing surfaces from a suitable source, said bearing having cooling surfaces which surround the shaft outside of the bearing surfaces and over which the whole of said oil supply is circulated both above and below the shaft, said oil cooling the bearing by absorbing and removing heat generated by the friction of said bearing surfaces, and a conduit means that receives all of the oil from the cooling surfaces after it is heated and conveys the same to the space between the shaft and the bearing.

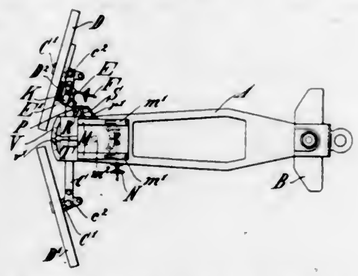
3. In combination, a shaft, a bearing therefor which requires lubricating oil from a suitable source of supply, said bearing having cooling surfaces arranged above and below the shaft over which all of said lubricating oil is circulated adjacent the bearing surfaces both above and below the shaft to raise its temperature by heat generated by the friction between the shaft and said bearing surfaces before it is delivered to said surfaces, and conduit means connecting the portions of said cooling surfaces that are located above and below the shaft respectively in series with the shaft bearing surfaces.

4. In combination, a shaft, a divided bearing shell therefor which receives lubricating oil from a suitable source, each of the bearing parts being provided with walls over which the lubricating oil flows to be heated by absorbing therefrom heat generated by the friction between the shaft and bearing surfaces before its delivery to said surfaces, conduit means for conveying all of the oil from one part of the shell to another and delivering it to the shaft bearing surfaces, a casing for the bearing having a chamber that receives the oil from the ends of the shell, and a conduit for conveying the oil from the casing.

5. In combination, a shaft, a divided bearing shell therefor, each part of the shell being provided with a conduit to receive lubricating oil, means for supplying oil to the parts of the bearing and causing it to pass serially through said parts, a conduit that receives the oil after it has passed through said parts and conveys it inwardly to the shaft, a casing for the bearing having chambers at ends of the shell that receive oil from the shaft, and a conduit which conveys oil from the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,108,762. MOBILE-GUN MOUNT. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Sept. 28, 1912. Serial No. 722,953. (Cl. 89—41.)

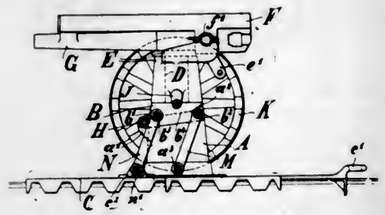


1. A mobile gun having a bottom-carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a second training gear for rough training of the bottom-carriage and an indicating device for showing the direction and amount of fine training between said top and bottom carriages; said indicating device being arranged in the vicinity of the driving member of the training gear for rough training, in order to enable the gunner attending the training gear for rough training to observe said indicating device.

2. A mobile gun having a bottom carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a fixed training center for the bottom carriage, wheels on said bottom carriage and axle arms for said wheels whose axes intersect with the axis of said fixed center when the wheels are in their training position, a training gear for rough training adapted to rotate said wheels in order to train the bottom carriage around said fixed center, and an indicating device for showing the direction and amount of fine training between said top and bottom carriage, said indicating device being arranged in the vicinity of the driving member of the training gear for rough training, in order to enable the gunner attending the training gear for rough training to observe said indicating device.

3. A mobile gun having a bottom carriage and a top carriage pivoted thereon, a training gear for fine training interposed between said carriages, a fixed training center for the bottom carriage, wheels on said bottom carriage and axle arms for said wheels whose axes intersect with the axis of said fixed center when the wheels are in their training position, a training gear for rough training adapted to rotate said wheels in order to train the bottom carriage around said fixed center, and two indicating devices for showing the direction and amount of fine training between said top and bottom carriage, one of said indicating devices being arranged in the vicinity of the driving member of the training gear for rough training, and the second indicating device being arranged on the front end of the gun mount.

1,108,763. PIVOT-MOUNT FOR GUNS. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 23, 1914. Serial No. 826,689. (Cl. 89—40.)



1. A pivot mount for guns comprising a fork with trunnion bearings, means for connecting carriage wheels to said fork, a pedestal on which said fork is mounted to turn around a vertical axis, a foundation plate and link connection between said foundation plate and said pedestal, whereby the mount may be transferred from traveling to firing position.

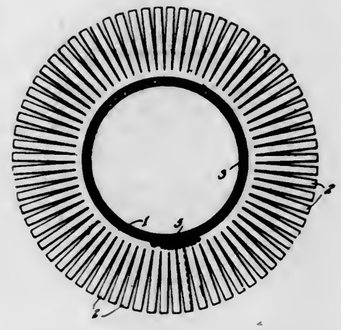
2. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate.

3. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate; suitable members for securing the upper portion of the pedestal in the two positions.

4. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate, said foundation plate having one portion narrower than the track of the wheels.

5. A pivot mount for guns comprising a fork with trunnion bearings, axle arms for the carriage wheels on said fork, a pedestal on which said fork is mounted to turn around a vertical axis, said pedestal having an upper portion and a lower portion, a foundation plate on which said lower portion of the pedestal is rigidly secured; link connection between said foundation plate and said upper portion of the pedestal, whereby the upper portion may be displaced from engagement with the lower portion and moved toward the foundation plate; said foundation plate being provided with a limber eye.

1,108,764. TRAP-BELT. ALFRED JOHN KULL, Far Hills, N. J. Filed Feb. 19, 1914. Serial No. 819,843. (Cl. 47—35.)



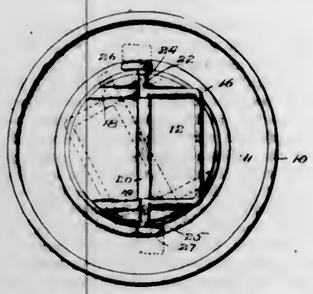
1. A trap belt comprising a body of flexible material for disposition about the trunk of a tree and having guard members formed thereon by cutting the material transversely a portion of the width of said material whereby upon flexing the same about the tree to cause the guard members to curve longitudinally, and assume a position projecting away from the tree with their extremities spaced from each other.

2. A trap belt comprising a body of flexible metallic material adapted to be disposed about the trunk of a tree and having a plurality of curved guard members spaced from the tree and formed by cutting the material transversely the greater portion of its width a number of times, the uncut portion constituting a band adapted to fit closely to the tree, a fabric member secured to the inner surface of the band portion, and a flexible connection connecting the ends of the band to permit expansion of said belt.

1,108,765. COVER-FASTENING DEVICE FOR RECEPTACLES. MICHAEL J. LAWLESS, Omaha, Nebr. Filed Aug. 8, 1912. Serial No. 714,088. (Cl. 70—3.)

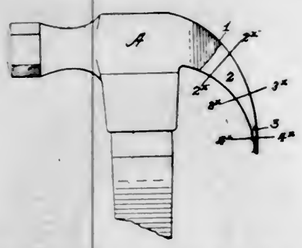
The combination with a receptacle, of a cover provided with a flange engaging the sides of the receptacle permitting rotary movement but not lateral movement of the cover, ears formed upon the receptacle positioned adjacent the periphery of the cover and open in opposite direc-

tions and an eccentric rock shaft carried by the cover having its ends extending beyond the periphery of the cover



and in position to engage under the ears, such eccentricity serving to clamp the cover when the rock shaft is rotated.

1,108,766. NAIL-EXTRACTING CLAW. PHILIP J. LEAVENS, Palmyra, N. J. Filed Feb. 10, 1914. Serial No. 817,854. (Cl. 145—44.)



1. A nail extracting claw constructed with a tapered slot, and a fulcrum face intersected thereby; said slot providing a pair of gripping faces; said gripping faces being constructed with opposed biting edges extending longitudinally thereof; said biting edges comprising ribs protruding from the gripping faces and said ribs being located inward from the said fulcrum face along the wider portion of the tapered slot and coincident with said fulcrum face along the narrower portion of said slot.

2. A nail extracting claw constructed with a tapered slot, and a fulcrum face intersected thereby; said slot providing a pair of gripping faces; said gripping faces being constructed with opposed biting edges extending longitudinally thereof; said biting edges comprising ribs protruding from the gripping faces and said ribs converging toward the fulcrum face from a point inset from said fulcrum face at the wider end of the slot, to points coincident with said fulcrum face at an intermediate part of the slot and extending coincident with said fulcrum face beyond said intermediate points, toward the narrower end of the slot.

1,108,767. SPOON. WILLIAM H. LECHNER, Hamilton, Ontario, Canada. Filed Oct. 29, 1913. Serial No. 798,076. (Cl. 30—22.)

1. In a device of the class described, the combination with a spoon section including a longitudinal groove, of a handle section, a longitudinal rib on the handle section and slidable in the groove of the spoon section, and means carried by the handle section and adapted to engage the spoon section for holding the spoon and handle sections in relatively rigid position.

2. In a device of the class described, the combination with a spoon section having a longitudinal groove, of a handle section, a longitudinal rib on the handle section and slidable in a groove in the spoon section, guides on the spoon section, guideways on the handle section and having the guides on the spoon section slidable therein,



and means for securing the spoon and handle sections in relatively rigid position.

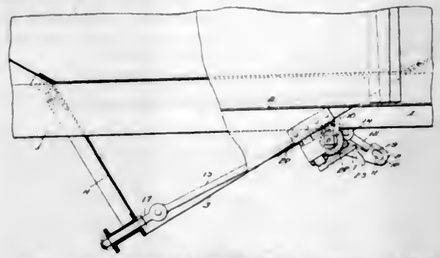
1,108,768. PNEUMATIC-CUSHION BOLSTER FOR VEHICLES. JOSEPH M. LEWIS, Trenton, N. J. Filed June 4, 1913. Serial No. 771,694. (Cl. 21—50.)

1. A pneumatic cushion bolster for vehicles, involving the combination of a vehicle axle, a body supporting bolster embodying separate and independent sections each hinged at its inner end to the central portion of said axle and having its outer end slotted, guide posts on said axle passing through the slots of the bolster sections and on which the outer ends of said sections slide up and down, pneumatic cushions interposed between said axle and the bolster sections, and an independent check spring for each of said sections encircling one of said posts.

2. A pneumatic cushion bolster for vehicles, involving the combination of a vehicle axle, a body supporting bolster embodying a pair of separate and independent sections each consisting of a spring metal strap hinged at its inner end to the central portion of said axle and having its outer end slotted, guide posts on said axle passing through the slots on the bolster sections and on which the outer ends of said sections slide up and down, and pneumatic cushions interposed between said axle and the spring bolster sections.

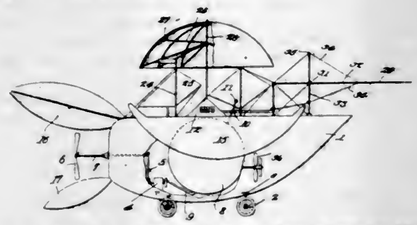
1,108,769. DOOR-OPERATING MECHANISM. BENJAMIN F. LIVELY, Lenoir City, Tenn. Filed Apr. 10, 1914. Serial No. 830,983. (Cl. 105—185.)

1. In a door operating mechanism for hopper cars, an actuating shaft capable of rotation, an arm fast to said shaft and extending outwardly therefrom, a link connected with the outer end of said arm and lying upon said arm when the latter is at one side of said shaft and coextensive with the arm when the latter is at the opposite side of the shaft, a door actuating rod having one end pivotally connected to said link and said end curved to fit around said shaft in the closed position of the door whereby the pivotal connection between said link and rod will be disposed upon the side of the center line of said shaft opposite the door to lock the door against opening movement, and a lug extending outwardly from said shaft at an angle to said arm and adapted to engage the arm end of said link in the closing of the door to actuate said rod independently of said arm.



2. In a door operating mechanism for hopper cars, an actuating shaft capable of rotation, an arm fast to said shaft and extending ontwardly therefrom and having the outer end thereof formed to provide a forked pivot knuckle, a link having one end thereof equipped with a pivot knuckle lying between the limbs of said first knuckle, a pin and slot connection between said knuckles, a pivot knuckle on the opposite end of said link, said link lying upon said arm when the latter is at one side of said shaft and coextensive with said arm when the latter is at the opposite side of the shaft, a door actuating rod having one end thereof curved and formed with a forked pivot knuckle receiving the last-mentioned pivot knuckle, the curved end of said rod fitting around said shaft in the closed position of the door whereby the pivotal connection between said link and rod will be disposed upon the side of the center line of said shaft opposite the door to lock the door against opening movement, and a lug extending outwardly from said shaft at an angle to said arm and adapted to enter the forked end of said rod behind the link pivot knuckle therein to actuate said rod independently of the arm.

1,108,770. AIRSHIP. DANIEL LOPEZ and MIKE R. LERMA, San Bernardino, Cal. Filed Aug. 18, 1913. Serial No. 785,417. (Cl. 244—6.)



1. An airship including a boat-like body, a gas container extending transversely of the center of and completely housed within the body, a motor housed within the body, means for conveying the exhaust from the motor into the container to fill said container, there being a valved outlet extending from the container, said container being concentric with a line extending transversely through the body at its center of gravity, thereby to avoid resistance to the tilting of the body about said center and planes for controlling the tilting of the body about said center.

2. An air ship including a body, controlling planes for tilting the body about a transverse axis while in flight, and a gas container housed in the body and concentric with said axis.

3. An air ship including a body, a cylindrical gas container therein and concentric with a line extending transversely through the body at its center of gravity, thereby to avoid resistance to the tilting of the body about said center, and planes for tilting the body about said center while in flight.

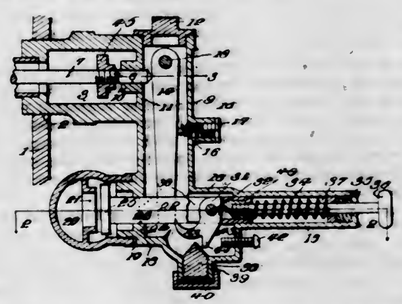
1,108,771. PORTABLE ELEVATOR. THOMAS S. MCLENDON, Carrollton, Ga. Filed Sept. 24, 1913. Serial No. 791,637. (Cl. 187—11.)



1. In a portable elevator of the class described, a base frame including side members, a front bar, and an intermediate cross bar, said base frame having supporting wheels, brake levers pivoted on the side members of the frame and having slots at their front ends, a rock shaft supported on the frame between the front bar and the cross bar and having cranks engaging the slots, and an arm extending from the rock shaft and obstructed terminally by the front bar and the cross bar of the base frame.

2. In a portable elevator of the class described, a base frame having supporting wheels, said base frame including side members, a front bar and an intermediate cross bar, brake levers pivoted on the outer faces of the side bars and having slots at their front ends and recesses in their inner faces adjacent to said slots, a rock shaft supported on the side members of the base frame between the front bar and the cross bar and having terminal cranks accommodated in the recesses of the brake levers and engaging the slots therein, and an operating arm connected with the rock shaft and terminally obstructed by the front bar and the cross bar of the base frame.

1,108,772. THERMOSTATIC GAS CUT-OFF FOR WATER-HEATERS. BENJAMIN E. MEACHAM, Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 14, 1911. Serial No. 614,504. (Cl. 236—5.)



1. An automatic gas cut-off, comprising a valve normally spring closed, a pivoted lever engaging the valve, a latch for locking the lever to the valve, and thermostatic means for controlling the lever and means for releasing the latch by the closing of the valve.

2. An automatic gas cut-off, comprising a valve normally spring closed, a latch for locking the valve open, thermostatic means engaging the latch for controlling the said valve and means for releasing the latch by the closing of the valve.

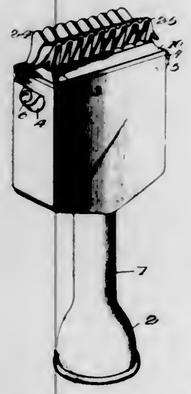
3. An automatic gas cut-off comprising a valve normally spring closed, a latch for locking the valve open, thermostatic means engaged by the latch for controlling the said valve, and means for engaging the latch during the closing of the valve for uncoupling the valve from the thermostatic means.

4. An automatic gas-cut-out, comprising a valve normally spring closed, a valve stem carried by the valve and having an opening therethrough, a pivoted lever adapted to pass into the opening in the stem, thermostatic means for controlling said lever, a latch carried by the stem for locking the lever in the stem, and means for releasing the latch by the closing of the valve, in which unlatched position the valve may be opened independent of the lever.

5. An automatic gas-cut-out, comprising a valve normally spring closed, a pivoted lever engaging the valve, a latch for locking the lever to the valve, thermostatic means for controlling the lever, and means for releasing the latch by the closing of the valve, in which unlatched position the valve may be opened independent of the lever.

[Claims 6 to 17 not printed in the Gazette.]

1,108,773. GAS-BURNER. BENJIMAN EDWARD MEACHAM, Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 29, 1913. Serial No. 792,491. (Cl. 158—112.)



1. A gas burner comprising a housing, having an open upper end, a mixing chamber supported by the upper edge of the housing, and extending therein and spaced from the sides thereof, and having inlet openings adapted to receive the gas from the housing.

2. A gas burner comprising a housing having an open upper end, a combined air and gas supply for the lower end of the housing, a mixing chamber supported by the upper edge of the housing and extending therein, and spaced from the walls thereof and having horizontally arranged openings in its two opposite walls and adapted to allow the gas to pass within the mixing chamber from the housing.

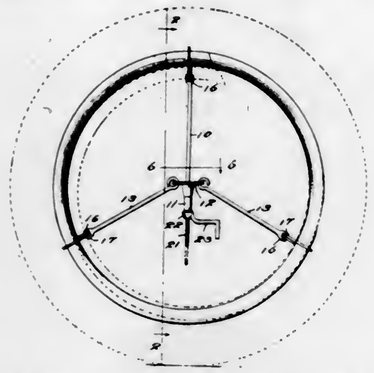
3. A gas burner comprising a housing having an open upper end, a mixing chamber removably supported by the upper edge of the housing and spaced therefrom, and having horizontally arranged openings and adapted to allow the gas to pass from the housing into the mixing chamber.

4. A gas burner comprising a housing having an open upper end, a combined air and gas supply for the lower end of the housing, a mixing chamber extending within the upper open end of the housing and spaced therefrom and having horizontally arranged openings adapted to allow the gas to pass from the housing into the mixing chamber and a distributer head within the upper end of the mixing chamber.

5. A gas burner comprising a housing having an open upper end, a combined air and gas supply for the lower end of said housing, a mixing chamber resting upon the upper end of the housing and extending within the same and spaced therefrom, means for removably securing the chamber within the housing, said chamber having horizontal slots in its sides to allow the gas to pass from the housing into the mixing chamber, and a distributer head closing the upper end of the mixing chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,108,774. RIM-CONTRACTOR. GARRY P. MEYERS, Mountain View, Mo. Filed Nov. 6, 1913. Serial No. 799,606. (Cl. 29—84.)



1. In a rim contractor, a rod having a pair of gripper claws at one end and screw-threaded at the opposite end; a sleeve slidable upon the screw-threaded portion of the rod, links each pivoted at one end to the sleeve and having a pair of gripper claws at its other end, one claw being long and the other short, and a nut upon the screw-threaded portion of the rod adapted to move the sleeve slidably upon such rod.

2. In a rim contractor, a plurality of rods, each provided with a pair of gripper claws at its outer end, a spring connecting the members of each pair, said rods adapted to extend substantially radially from a common center; and means to draw one of said rods toward the center upon such radius.

3. In a rim contractor, a plurality of rods radiating from a central point; gripper claws carried at the ends of each of said rods, said gripper claws being composed respectively of one long and one short claw; and means to draw one of said rods through the center upon its radius.

4. In a rim contractor, a plurality of grippers composed respectively of pairs of pivoted long and short claws; means connecting said grippers to a central point; and means to draw one of said grippers toward the center.

5. The combination with a rim, of a contractor embodying a plurality of grippers, each consisting of a pivoted long and short claw, the short claw of one gripper adapted to engage one edge of the rim and the short claw of another gripper adapted to engage the opposite edge of the rim; and means to draw said grippers toward each other on a line at an angle to the main plane of the rim.

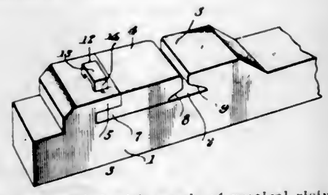
1,108,775. GAGE. WALKER S. MILES, Jr., Madera, Pa. Filed Feb. 25, 1914. Serial No. 821,052. (Cl. 33—44.)

1. A gage of the class described comprising a cylindrical bar having a longitudinal scale inscribed thereon, a slide mounted upon said bar for longitudinal movement and having an outer guiding surface, a radially disposed marking pin mounted in one end of the said bar with its active extremity projecting outward therefrom, means by which the slide may be secured in adjusted position upon the bar, and means coöperating with the said securing means for preventing rotation of the slide upon the bar during its longitudinal movement thereon, the said slide being provided interiorly with a longitudinal slot opening through its opposite ends for the reception of the marking pin, the said slot being disposed normally in a plane at right angles to the pin.



2. A gage of the class described comprising a cylindrical bar having a longitudinal scale inscribed thereon, a slide mounted upon said bar for longitudinal movement and having an outer guiding surface, a radially disposed marking pin mounted in one end of the said bar with its active extremity projecting outward therefrom, the said slide being provided interiorly with a longitudinal slot opening through its opposite ends for the reception of the protruding end of the marking pin, the said slot being disposed normally in a plane at right angles to the said pin end, the bar being provided with a longitudinal groove in its outer periphery, and a radially adjustable set screw provided within the slide with its inner end engageable within the bar groove.

1,108,776. RAIL-FASTENER. ENOCH MINER, Elem Grove, Pa. Filed Jan. 17, 1914. Serial No. 812,804. (Cl. 238—5.)



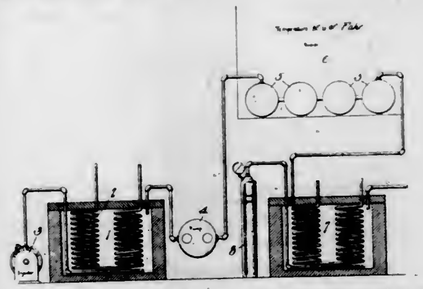
A rail tie provided with a pair of vertical rising lugs, a block slidable on the tie and having a portion extending beneath one of the lugs, the portion beneath one of said lugs being provided with a pair of vertical apertures, and a fastening key having a rectangular head of substantially inverted U-form, provided with a pair of parallel cylindrical stems, shoulders being provided at the juncture of the stems with the head for spacing a portion of said head from the tie, the said stems extending through the openings in the sliding block, and through the adjacent lugs in the lower portion of the tie.

1,108,777. PROCESS OF CLARIFYING, AGING, AND REFINING WINES, LIQUEURS, AND OTHER VEGETABLE EXTRACTS. EUDO MONTI, Turin, Italy. Filed Sept. 29, 1905. Serial No. 280,700. (Cl. 195—36.)

1. A process of treating beverages consisting in cooling the beverages almost to their freezing point, in repeatedly saturating the beverages with air while cool in order to oxidize said beverages, in subsequently warming the beverages slowly to a temperature not to exceed +35° C. thereby liberating oxygen contained in the dissolved air, and finally in cooling the beverages in the absence of air in order to separate the tartar and other insoluble matter formed during oxidation.

2. A process of clarifying and oxidizing beverages, consisting in cooling the beverages almost to their freezing point, in saturating the beverages, while cool, with finely divided air, subsequently in slowly warming the beverages to a temperature not to exceed +35° C. and finally in cooling said beverages in a non-oxidizing atmosphere.

3. A process of clarifying and oxidizing alcoholic liquors, consisting in first cooling said liquors almost to their freezing point, in repeatedly saturating the liquors with finely sprayed air while maintained at the low temperature, subsequently in slowly warming the liquors to a temperature not to exceed +35° C. and finally in cooling them in an inert atmosphere.

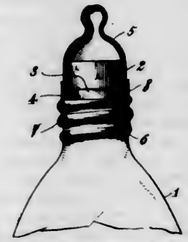


4. A process of treating wine, consisting in cooling the wine almost to freezing point, repeatedly saturating the wine with air at said temperature until the wine becomes clear, then slowly transferring said wine to a chamber of a temperature not exceeding +35° C. in order to permit the acid to slowly oxidize, subsequently cooling the wine with the exclusion of air almost to freezing point, and maintaining said wine at this temperature until perfectly clear.

5. A process of treating wine consisting in cooling the wine almost to its freezing point, saturating the wine with air while at this temperature and slowly warming said wine in order to cause the dissolved oxygen to be slowly liberated and to oxidize the acids and coagulate the albumin and other noxious ingredients in the wine, subsequently cooling the wine to almost its freezing point and maintaining said wine at this temperature until the oxidizable acids have separated as bitartrates, or have combined with the alcohol to form ethers.

[Claim 6 not printed in the Gazette.]

1,108,778. NURSING-BOTTLE. STANLEY D. NICHOLS, Roxbury, Vt. Filed Apr. 19, 1913. Serial No. 762,267. (Cl. 215—117.)

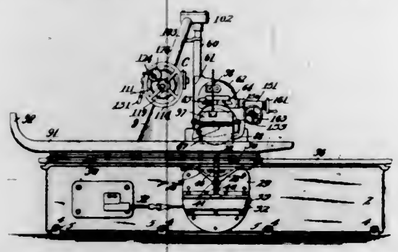


In combination, a bottle provided with an annular groove in its neck adapted to receive the bead of a nipple, a nipple having a bead to fit said groove, an enlarged threaded portion on said neck below the groove, and a continuous circular locking band threaded on the neck and adapted to hold said bead within the groove, said band arranged to pass over the nipple when the nipple is applied to the neck, whereby the nipple can be removed without removing the band.

1,108,779. SURFACE-GRINDING MACHINE. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed June 6, 1913. Serial No. 772,054. (Cl. 51—12.)

1. In a grinding machine, the combination with a base, of a screw connected therewith, a slide connected with the screw to be moved thereby and having means for sup-

porting a grinding wheel, a shaft carried by said base, a gear loose on the shaft, means for connecting said gear with said screw for rotating the screw, a gear fixed with respect to the first named gear, a shaft provided with a pinion thereon meshing with said last named gear, and means fixed to the last named shaft and pinion for giving the pinion a planatory motion and rotating the gears.



2. In a grinding machine, the combination with the base, of a vertical screw, a slide connected with said screw to be moved vertically thereby and having means for supporting a grinding wheel, a shaft, a gear loose on said shaft, means for constantly connecting said gear to said screw for rotating the screw, a hand wheel loose on said shaft, a gear fixed to the hub of the first named gear, a shaft on said hand wheel having a pinion thereon meshing with the last named gear, and means fixed to the last named shaft and pinion and mounted on the hand wheel for rotating the pinion and gears.

3. In a grinding machine, the combination with the base, of a vertical screw, a slide connected with said screw to be moved vertically thereby and having means for supporting a grinding wheel, a shaft, a gear loose on said shaft, means for constantly connecting said gear to said screw for rotating the screw, a hand wheel loose on said shaft, a gear fixed to the hub of the first named gear, a shaft on said hand wheel having a pinion thereon meshing with the last named gear, an index plate fixed on the hand wheel, an index arm fixed to the shaft and rotatable along the plate, and a spring-pressed pin on said arm for engaging in the plate.

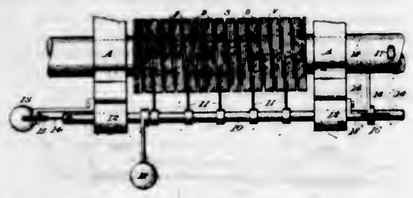
4. In a grinding machine, the combination with the bed and a vertically movable slide, means for raising and lowering the slide, a gear constantly connected with said means for operating it, a shaft on which said gear is rotatably mounted, an internal gear fixed to the first named gear, a hand wheel rotatably mounted on said shaft, an index mechanism on the hand wheel having a pinion meshing with the internal gear, a plate keyed to said shaft and adjacent to said hand wheel, and means for clamping the hand wheel to said plate.

5. In a grinding machine, the combination with the bed, of a slide, means for raising and lowering the slide, a gear constantly connected with said means for operating it, a shaft on which said gear is rotatably mounted, an internal gear fixed to the first named gear, a hand wheel rotatably mounted on said shaft, an index mechanism on the hand wheel having a pinion meshing with the internal gear, a plate keyed to said shaft and adjacent to said hand wheel, means for clamping the hand wheel to said plate, an external gear fixed with respect to said internal gear, a motor, a shaft adapted to be connected with the motor, a pinion slidably mounted on said shaft for meshing with said external gear, whereby the slide can be operated by the motor, and means for preventing the last named pinion from being moved into engagement with its gear.

[Claims 6 to 22 not printed in the Gazette.]

1,108,780. FEED-ROLLER MECHANISM FOR SUGAR-MILLS. JAMES OGG, Pahala, Hawaii. Filed Apr. 16, 1914. Serial No. 832,149. (Cl. 100—47.)

1. In a cane crusher, the combination of a pair of co-operating crushing rollers one only of said rollers having a deep spiral peripheral groove forming a channel whereby the expressed juices will pass along with the roller instead of back-flowing over the front side of the roller, substantially as described.



2. In a feed roller mechanism for sugar mills, a roller having its surface provided with shallow annular grooves and in addition thereto a deep peripheral spiral groove.

3. In a feed roller mechanism, the combination of coöperating crushing rollers, one of said rollers having a peripheral spiral groove, and a scraper finger operative in said spiral groove.

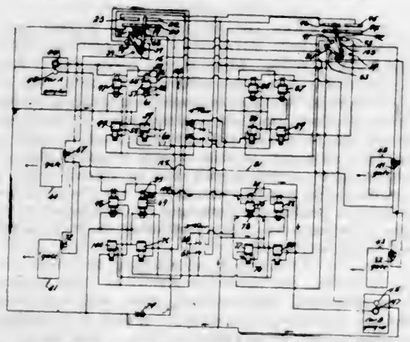
4. In a feed roller mechanism, the combination of coöperating crushing rollers, one of said rollers having a peripheral spiral groove, a scraper finger operative in said spiral groove, and means for periodically lifting the finger from the groove and returning it to initial position for re-insertion into the groove.

5. In a cane crusher, the combination of a plurality of feed rollers, one of which is provided with a peripheral groove, a reciprocating scraper bar having fingers engageable with the groove, means for periodically lifting the fingers, and means whereby on the fingers being lifted the scraper bar and fingers are returned to initial position.

1,108,781. PROCESS OF MANUFACTURING ERYTHRENE HYDROCARBONS. IWAN OSTROMISLENSKY, Moscow, Russia. Filed Apr. 16, 1912. Serial No. 691,161. (Cl. 23—24.)

A process of manufacturing an erythrene hydrocarbon from isomeric terpenes boiling at about 175° C, which consists in converting the raw material into a vapor at a temperature lower than the normal boiling temperature of the said raw material, by adding thereto some easily condensed and sufficiently permanent compound which is not a gas, at the normal temperature and heating the mixture, and then exposing the vaporous mixture thus obtained to a high temperature.

1,108,782. ELECTRIC SIGNALING DEVICE FOR ELEVATORS. FRED S. PAYNE, Boston, Mass., assignor, by mesne assignments, to Elevator Supply & Repair Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 17, 1904. Serial No. 228,778. (Cl. 177—336.)



1. In an elevator signaling apparatus in combination, a car, electrically operated signaling means, means for operating the same comprising an "up" and a "down" passenger's button at each of several floors and mechanism corresponding to and set by each button, an electrically-operated restoring device for each button-set mechanism to cause the same to be restored to normal condition, a single electric switch corresponding to each floor, circuit-shifting switch mechanism having a shiftable portion in electric connection with said single switches and arranged to connect said switches with the "up"-restoring devices in one position and with the "down"-restoring devices in the other position, and means to automatically shift said shiftable portion correspondingly with the car's direction.

2. In an elevator signaling apparatus in combination, a pair of cars, electrically-operated signaling means corresponding to each car, means for operating the same comprising an "up" and a "down" passenger's-button at each of several floors and mechanism corresponding to and set by each button, an electrically-operated restoring device for each button-set mechanism to cause the same to be restored to normal condition, a single electric switch corresponding to each floor for each car, circuit-shifting switch mechanism corresponding to each car and each having a shiftable portion, said shiftable portions being operable independently of each other and each in electric connection with those single switches which correspond to its car and arranged to connect said switches corresponding to that car with the "up"-restoring devices in one position and with the "down"-restoring devices in the other position, and means to automatically shift said portions independently of each other and correspondingly with the car's direction.

3. In an elevator signaling apparatus in combination, a car, electrically-operated signaling means, means for operating the same comprising an up and a down passenger's-button at a floor and mechanism corresponding to and set by each button, an electrically-controlled restoring means for each passenger's-button-set mechanism, a single normally open switch controllable by the car-operator and a circuit-shifting switch serving to connect said single normally-open switch with said restoring means alternately.

4. In an elevator signaling apparatus in combination, a car, electrically-operated signaling means, means for operating the same comprising an up and a down passenger's-button at a floor and mechanism corresponding to and set by each button, an electrically-operated restoring means for each passenger's-button-set mechanism, a gate at the floor, a single normally open switch closed by said gate and a circuit-shifting switch serving to connect said normally open switch with said restoring means alternately.

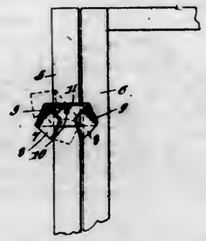
5. In an elevator signaling apparatus in combination, a car, electrically-operated signaling means for signaling the car operator, means for operating the same comprising an "up" and "down" passenger's-button at a floor, and mechanism corresponding to and set by each button, a gate at the floor, a single electric switch located at said floor and operable by the said gate, electrically-controlled restoring devices for each of said passenger's-button-set mechanisms and a circuit-shifting switch thrown by the car's movement and arranged to operatively connect said single floor switch with said restoring devices alternately.

[Claims 6 to 43 not printed in the Gazette.]

1,108,783. DOOR OR GATE LATCH. ROBERT T. PEIRCE, Newport News, Va. Filed Sept. 23, 1913. Serial No. 791,420. (Cl. 70—28.)

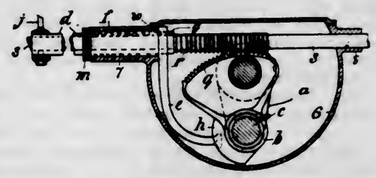
1. A door latch including a metallic strap for pivotal engagement with a door jamb, the opposite ends of which are bent at acute angles toward each other to provide inclined door engaging surfaces, said strap normally lying transversely of the door, whereby to automatically actuate the same when the door contacts therewith and automatically assuming its normal position after the door is closed for locking the same, and a reinforcing means associated with the opposite ends of said strap substantially as specified.

2. A door latch including a metallic strap for pivotal engagement with a door jamb, the opposite ends of which are bent at acute angles to the body to provide inclined door engaging surfaces, one of the marginal sides having a portion extended therefrom to provide a reinforcing portion, said latch being automatically actuated when the



door contacts therewith to permit of the closing of the door and immediately automatically assuming its normal position for locking the door.

1,108,784. CHANGE-SPEED GEARING. LARS AUGUST PETERSON, Stockholm, Sweden. Filed Apr. 19, 1913. Serial No. 762,248. (Cl. 74—39.)



1. In change speed control mechanism, the combination of a casing, a slidable and swinging support mounted therein, a shaft mounted on the casing, means intermediate the shaft and support to swing the latter on sliding the shaft, means intermediate the shaft and support to slide the latter on rotating the shaft, and operating means for the shaft.

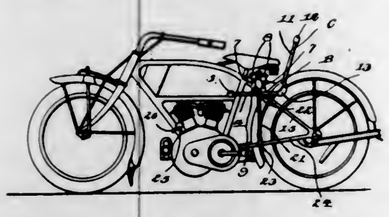
2. In change speed control mechanism, the combination of a casing, a slidable and swinging support mounted therein, a shaft mounted on the casing, means including a toothed member intermediate the shaft and support to swing the latter on sliding the shaft, means intermediate the shaft and support to slide the latter on rotating the shaft, and operating means for the shaft.

3. In change speed control mechanism, the combination of a casing, a slidable and swinging support mounted therein, a shaft mounted on the casing, means comprising a toothed sector carried by the support and a member on the shaft engaging said sector whereby to swing the support on sliding the shaft, means intermediate the shaft and support to slide the latter on rotating the shaft, and operating means for the shaft.

4. In change speed control mechanism, the combination of a casing, a slidable and swinging support mounted therein, a shaft slidably and rotatably mounted on the casing and having a toothed element, a sector connected with said support and engaged by the toothed element aforesaid whereby on sliding the shaft the support will be swung, an arm rotatable with the shaft and engaging said support whereby to slide the latter when the shaft is turned, and means for actuating the shaft.

5. In change speed control mechanism, the combination of a casing, a shaft slidably and rotatably mounted thereon, a member for actuating the shaft, the shaft being provided with a toothed element, a slidable and swinging support mounted in the casing, a sector projecting from said support and engaging the toothed element of the shaft whereby on sliding the latter longitudinally the support aforesaid will be swung in a predetermined direction, and an arm rigid with the shaft and engaging the support whereby on rotating the shaft a sliding movement will be imparted to the support.

1,108,785. MOTOR-CYCLE PASSENGER-SEAT. GEORGE F. PLANK, Eugene, Oreg. Filed Apr. 10, 1914. Serial No. 831,028. (Cl. 208—111.)

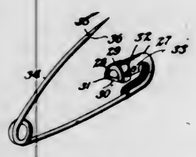


1. A two passenger seat for motorcycles, embodying twin seat frames, parallel tie arches rigidly connecting said seat frames, a wedge-shaped supporting block straddled by said arches, means for fastening said arches to said block, and braces extending from the outer portions of both seat frames convergently downward to connect with the motorcycle frame.

2. A two passenger seat for motorcycles, embodying twin seat frames, parallel tie arches rigidly connecting said seat frames, a wedge-shaped supporting block straddled by said arches, means for fastening said arches to said block, braces extending from the outer portions of both seat frames convergently downward to connect with the motorcycle frame, and a back frame embodying a bail-shaped bar terminally fastened to the outer rear corners of said seat frames.

3. A two passenger seat for motorcycles, embodying twin seat frames, parallel tie arches rigidly connecting said seat frames, a wedge-shaped supporting block straddled by said arches, means for fastening said arches to said block, braces extending from the outer portions of both seat frames convergently downward to connect with the motorcycle frame, and a back frame embodying a bail-shaped bar terminally fastened to the outer rear corners of said seat frames, the structure comprising the twin seat frames, tie arches and back frame being entirely made up of pipes and pipe fittings.

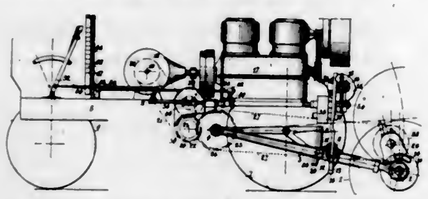
1,108,786. SAFETY-PIN. JOHN M. PYRON, Wills Point, Tex. Filed June 18, 1912. Serial No. 704,347. (Cl. 24—156.)



1. A safety pin comprising a wire bent to form the legs of a pin, a shield provided upon one of said legs and including a fixed member substantially U-shaped in transverse section, a transverse rib provided within said fixed member, a yoke-shaped movable member mounted for longitudinal sliding movement upon the fixed member and having a cross portion bridging the longitudinal edges of the fixed member, and a transversely extending, inwardly projecting rib formed upon the cross portion of the movable member, the said ribs forming jaws for engagement with the opposite leg of the pin.

2. A safety pin comprising a wire bent to form the legs of a pin, a shield provided upon one of said legs and including a fixed member substantially U-shaped in transverse section, a transverse rib provided within said fixed member, a yoke-shaped movable member mounted for longitudinal sliding movement upon the fixed member and having a cross portion bridging the longitudinal edges of the fixed member, a transversely extending, inwardly projecting rib formed upon the cross portion of the movable member, the said ribs forming jaws for engagement with the opposite leg of the pin, and an outward projection being formed upon one side of the fixed shield member, an indentation being provided within the corresponding side portion of the movable member for engagement with the said projection.

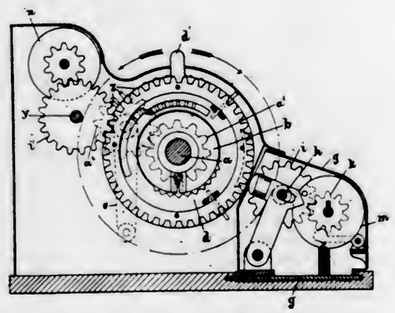
1,108,787. SELF-PROPELLED PLOWING-MACHINE. EDOUARD MARIE QUELLENNEC, Paris, France. Filed Apr. 30, 1910. Serial No. 558,562. (97—71.)



1. In a self-propelled plowing machine, the combination, with a vehicle, a pair of side arms fulcrumed on the vehicle to swing in a vertical plane, a rotary digger shaft journaled in the side arms, diggers on said shaft and a motor arranged to propel the vehicle, of means for driving the digger shaft from said motor, a rack swiveled to each side arm, gears engaging said racks, a shaft on which both gears are mounted, a worm-wheel on said shaft, a worm engaging said worm-wheel, a reversing gear transmission mechanism intermediate said motor and the worm and arranged to drive the latter, manually controlled means for throwing the reversing gear transmission mechanism into or out of operation, a screw-threaded rod, means for driving said rod at a speed proportional to the speed of the rack-engaging gears, a nut on the screw-threaded rod, and a level or position indicator actuated by the said nut whereby the relative height of the diggers is indicated.

2. In a self-propelling plowing machine, the combination, with a vehicle, side arms fulcrumed thereon, a rotary digger journaled in said side arms, and a gear-wheel mounted in a side arm and arranged to drive the digger, of a casing adjustable about the axis of the said gear-wheel, a chain-wheel and gear-wheel connected to each other and carried by the casing, the two gear-wheels being in mesh with each other, a motor arranged to propel the vehicle, a chain-wheel carried by the vehicle and arranged to be driven by the motor, a chain connecting the two chain-wheels, and means for securing the casing in any position to which it may be adjusted, whereby the tension of the chain may be adjusted.

1,108,788. CALCULATING-MACHINE. CARL RASMUSSEN, Leipzig, Germany. Filed Jan. 24, 1914. Serial No. 814,176. (Cl. 235—73.)

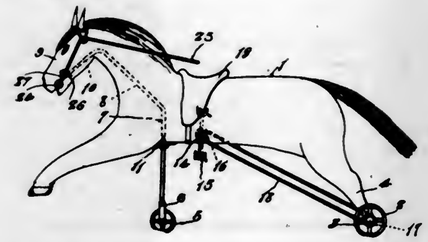


1. In a calculating machine, the combination with the setting mechanism comprising setting disks and coöperating setting members provided with radially projecting

hand pieces, of a registering mechanism comprising numeral disks and gear wheels, and intermediate gear wheels interposed between the setting disks and the first-named gear wheels, the distance between the axis of said setting disks and setting members and the axis of said intermediate gear wheels being greater than that between the first-named axis and the free ends of said hand pieces.

2. In a calculating machine, the combination with the setting mechanism comprising setting disks and setting members therefor provided with radially projecting hand pieces, of numeral disks, gear wheels connected with the numeral disks and intermediate gear wheels interposed between the first named gear wheels and the setting disks, the distance between the axis of said setting disks and setting members and the axis of said intermediate gear wheels being greater than that between the first-named axis and the free ends of said projections.

1,108,789. VELOCIPEDE. HURLEY H. ROBBINS, Brooklyn, N. Y. Filed May 14, 1914. Serial No. 838,559. (Cl. 208—42.)



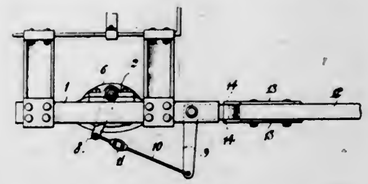
1. A velocipede comprising a body portion, wheels supporting the body portion, and means to steer or guide the velocipede comprising a steering rod operatively connected with one of the wheels, a plate slidable laterally in the body portion, flexible elements connected with the ends of the plate, means to connect the plate with the steering rod and guides for the flexible elements projecting laterally from the body.

2. A velocipede comprising a body formed in the nature of a horse, wheels supporting the body and means to steer or guide the velocipede comprising a steering rod operatively connected with one of the wheels and extending upwardly into the body of the horse and in the head thereof, said body being hollow, that portion of the steering rod which extends into the head being arranged to swing back and forth, means slidable within the head of the horse whereby the steering rod is moved back and forth, and means to move said slidable means.

3. A velocipede comprising a body formed in the nature of a horse, wheels supporting the body, a steering rod operatively connected with one of the wheels and extending upwardly into the body and having its free end disposed within the head of the horse, said body being hollow, a plate having a plurality of openings therein slidable within the head of the horse, said plate being slidable in a horizontal plane, flexible elements mounted on opposite sides of the head of the horse and operatively connected with the ends of the plate, extensions extending at right angles to the sides of the head, rollers journaled in the ends of the extensions, said flexible elements being mounted on the rollers, said rollers being positioned beyond the outer end of the plate, a plate arranged transversely of and secured to the steering rod at the free end thereof, and a plurality of spaced pins carried by said plate and being positioned within the apertures in the first named plate, said flexible elements to be pulled to slide the first named plate whereby the turning of the wheel to which the steering rod is connected, is provided.

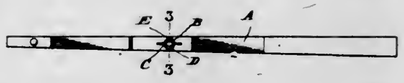
1,108,790. TONGUE-TRUCK. PETER ROERIG, Kranzburg, S. D. Filed Sept. 19, 1913. Serial No. 790,750. (Cl. 21—205.)

In combination with a tub tongue a tongue truck comprising a bearing mounted at one side of the stub tongue, a shaft journaled in the bearing and having an intermediate angularly disposed portion located under the intermediate portion of the stub tongue, a wheel journaled at the lower end of the shaft and disposed under the intermediate portion of the stub tongue, an arm fixed to the



upper portion of said shaft and disposed transversely under the intermediate portion of the stub tongue, a bell crank lever fulcrumed to the forward portion of the stub tongue at a point between the sides thereof, means connecting one end of the bell crank lever with the arm and a draft tongue pivotally connected with the bell crank lever.

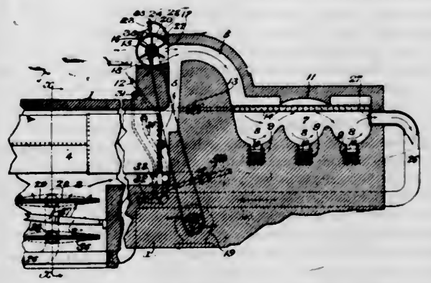
1,108,791. PIANO-KEY BUSHING. KARL C. ROGERS, Beaumont, Tex. Filed Mar. 16, 1914. Serial No. 825,139. (Cl. 84—16.)



1. In combination with a piano key, a metallic holder driven into the shank portion of the key and having parts which are bent laterally and upon themselves, bushings held by said parts which are laterally bent, each holder having a slight space intervening between the bushings, said holder having laterally extending corrugated parts which are driven into the piano key, as set forth.

2. In combination with a piano key, a metallic holder driven into the shank portion of the key and having parts which are bent laterally and upon themselves, bushings held by said parts which are laterally bent, each holder having a slight space intervening between the bushings for the reception of center rail pins, a slight space intervening between said laterally bent parts of the holder and the wall of the aperture in the key, said holder having laterally extending corrugated parts which are driven into the piano key, as set forth.

1,108,792. METHOD OF OPERATING A FURNACE. MORRIS ROSENBAUM, Philadelphia, Pa. Filed May 24, 1912. Serial No. 699,556. (Cl. 110—49.)



1. The method of operating a furnace, which consists in injecting air into the unconsumed products of combustion as they pass from the furnace, treating the resultant mixture with liquid to deposit the carbon there-

from, enriching said gases with hydrocarbon, then heating the purified gases, and conducting them into the combustion chamber above the bed of fuel.

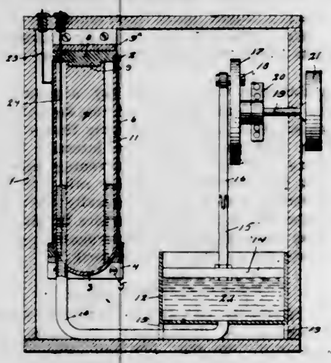
2. The method of operating a furnace, which consists in injecting air into the unconsumed products of combustion and escaping heat as they pass from the furnace, then treating such mixture with water to precipitate the carbon, enriching such gases with hydrocarbon injected thereinto by steam pressure, and then heating the gases and causing them to pass into the furnace above and below the bed of fuel.

3. The method of operating a furnace which consists in forcing air into the unconsumed products of combustion, and heat products escaping from the furnace to impart a travel thereto, then removing the free carbon therefrom, then injecting into the purified gases hydrocarbon, and then discharging the enriched gases into the furnace above the bed of fuel.

4. The method of operating a furnace, which consists in forcing air into the unconsumed products of combustion, and heat products escaping from the furnace to impart a travel thereto, then removing the free carbon therefrom, then injecting into the purified gases hydrocarbon, and then discharging the enriched gases into the furnace above and below the bed of fuel.

5. The method of operating a furnace, which consists in forcing air into the unconsumed products of combustion and heat products from the furnace to impart a travel thereto, then removing the free carbon therefrom, then injecting into the purified gases hydrocarbon, and then discharging the enriched gases into the furnace below the bed of fuel.

1,108,793. VARIABLE MERCURY-CONDENSER. RENÉ SAN MARTIN, Habana, Cuba, assignor of one-half to Jorge Aballí, Habana, Cuba. Filed Jan. 9, 1913. Serial No. 741,055. (Cl. 250—41.)

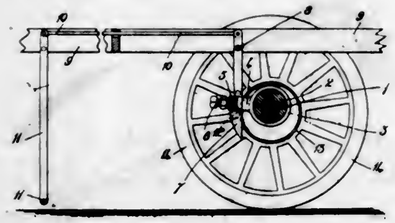


1. A condenser comprising a tubular dielectric open at its upper end and having a spheroidical bottom, means for supporting said tube in a vertical position, a metallic coating surrounding the exterior of said tube, a solid cylindrical member positioned within said tube and forming between its exterior and the interior of the tube an annular chamber, a container, a pipe connecting the bottom of said container with the bottom of said chamber, a fluid conductor, and means whereby the same may be forced from said container into said chamber.

2. The combination with a casing, of a condenser comprising a tubular dielectric open at one end and closed at the other end, a bracket secured to said casing for supporting the dielectric, a solid cylindrical dielectric positioned within said tube and forming therein an annular chamber, the top of said last mentioned dielectric being annularly recessed, a second bracket secured to said casing, a disk carried upon said bracket and projecting into the tube and the annular recess formed in said solid cylindrical dielectric, a container, a piston slidably movable within said container, means for actuating said piston, said means comprising a rotatable shaft, a disk fixed to said shaft, and a pitman centrally connected to said disk and to the piston; a pipe connecting the bottom of said container with the bottom of the annular chamber, a conducting fluid adapted to be forced from said container into said chamber, and a conducting coating surrounding said dielectric tube.

3. The combination with a casing, of a condenser including a tubular glass container open at its upper end, a bracket secured to the casing for supporting the container, a solid cylindrical dielectric positioned within said tube and forming therein an annular chamber, a conducting fluid within the container, means for varying the height of said fluid, a metallic coating surrounding the container, a lead connected to the metallic coating and a second lead engaging the conducting fluid.

1,108,794. VEHICLE-BRAKE. WILLIAM SAY, London, England. Filed Dec. 26, 1913. Serial No. 808,887. (Cl. 21—8.)



1. A vehicle brake comprising an eccentric adapted for attachment to the axle of the vehicle; a ring encircling said eccentric and provided with a radial arm; a cross-rod connected to said arm and provided with a pair of brake blocks; a pivotally-mounted, depending hook releasably engaged with said rod, for normally holding the latter elevated and its brake blocks in inoperative position; and means for rocking said hook to release the same.

2. A vehicle brake comprising an eccentric adapted for attachment to the axle of the vehicle; a ring encircling said eccentric and provided with a radial arm; a cross-rod connected to said arm and provided with a pair of brake blocks; a shaft mounted in the chassis of said vehicle; a pair of vertical members connected intermediate their ends to said shaft and having hooked lower ends releasably engaged with said rod, for normally holding the latter elevated and its brake blocks in inoperative position; a pair of forwardly-extending rods pivotally connected at their rear ends to the upper ends of said hooked members; and a rocking frame pivoted to said chassis and connected to the front end of the last-named rods, for releasing the said hooked members from such engagement.

3. A vehicle brake comprising an eccentric adapted for attachment to the axle of the vehicle; a ring encircling said eccentric and provided with a radial arm; a cross-rod connected to said arm and provided with a pair of brake blocks; a member releasably engaged with said rod for normally holding the latter elevated, and its brake blocks in inoperative position; and means for tripping said member, to release the same from such engagement.

1,108,795. FENDER FOR MOTOR-CARS. WILLIAM SAY, London, England. Filed Dec. 26, 1913. Serial No. 808,888. (Cl. 105—130.)

1. A vehicle fender consisting, in combination, of a rocking feeler; a pair of depending, pivotally-mounted, supporting means engaging the front end thereof; a rocking catcher arranged directly above said feeler and provided with rearwardly-projecting detent means; trip-means normally engaging said detent means, to hold said catcher and said feeler end in raised position; and connections between said supporting means and said trip means for disengaging the latter from said detent means when said feeler is actuated; to permit said feeler end and said catcher to drop.



2. A vehicle fender consisting, in combination, of a pivotally-mounted feeler; a pair of depending, pivotally-mounted levers supporting the front end thereof; a rocking catcher arranged directly above said feeler and provided with rearwardly-projecting detent levers; a pair of depending, pivotally-mounted trip levers normally engaging said detent levers, to hold said catcher and said feeler end in raised position; and connections between said supporting levers, and said trip levers for disengaging the latter from said detent levers when said feeler is actuated; to permit said feeler end and said catcher to drop.

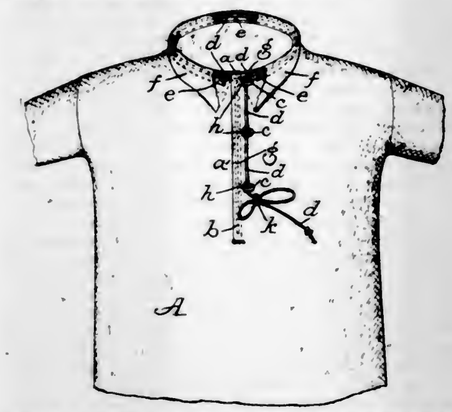
3. A vehicle fender consisting, in combination, of a feeler; a catcher supported thereon and embodying a pair of hinged sections; means for normally supporting said feeler and catcher in raised position; and means for automatically releasing said supporting means when said feeler is actuated, to permit the latter and said catcher to drop.

4. A vehicle fender consisting, in combination, of a feeler; a catcher supported thereon and embodying front and rear sections hinged together, the front section normally resting on said feeler; means for normally supporting said feeler and catcher in raised position; and means for automatically releasing said supporting means when said feeler is actuated, to permit the latter and said catcher to drop.

5. A vehicle fender consisting, in combination, of a feeler; a catcher supported thereon and embodying front and rear sections hinged together, the front section normally resting on said feeler; rearwardly-projecting detent means connected with the rear section; trip means normally engaged with said detent means for supporting said feeler and said catcher in raised position; and means for automatically releasing said trip means when said feeler is actuated, to permit both the feeler and the catcher to drop.

[Claims 6 to 8 not printed in the Gazette.]

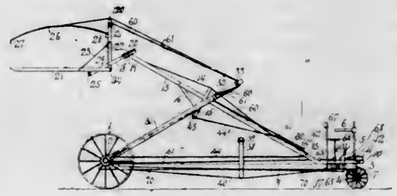
1,108,796. FLEXIBLE GARMENT-FASTENER. MILO M. SCHELL, West Alexandria, Ohio, assignor of one-half to John W. Trump, Arcanum, Ohio. Filed Mar. 25, 1914. Serial No. 827,229. (Cl. 2—41.)



1. A garment provided with a neck opening and a slit extending downwardly therefrom, and having slots formed in one of the sides of said slit, a flexible member secured to said garment and formed with loops adapted to pass through said slots, said member being slidably retained around the neck of said garment and having its free end passed through said loops; substantially as described.

2. A garment provided with a neck opening formed with a tube, and a slit extending downwardly therefrom, and having eyes located in one of the sides of said slit, a cord securely attached to said garment and formed with loops adapted to pass through said eyes while the free end of said cord passes through said tube and said loops; all substantially in the manner and for the purposes described.

1,108,797. HOISTING APPARATUS FOR CERTAIN FARM IMPLEMENTS. HERMAN J. SCHEPP and ALBERT J. SCHEPP, near Manhattan, Kans. Filed Sept. 27, 1911. Serial No. 651,557. (Cl. 57—53.)



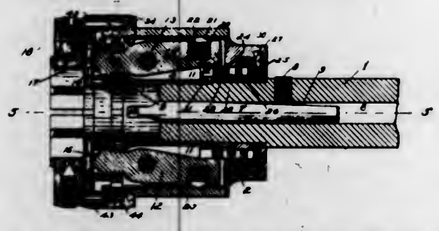
1. In a device of the class described, the combination with a frame comprising spaced grooved reaches, of a hoisting frame having at the rear end projections adapted to slide in such grooves, a brace member pivoted to and coacting with said hoisting frame to produce a rising support, a pulley carried by said first frame above the plane thereof, and at a point near the center of such frame, a second pulley mounted at the rear end of said hoisting frame, and a flexible connection secured to said hoisting frame adjacent the pivotal point of said brace member, passing upwardly over said first pulley, and thence around said second pulley and parallel with said reaches, whereby, when tension is exerted thereon, a positive lifting force is applied to the point of pivotal connection between said hoisting frame and brace member, and said frame thus caused to rise.

2. In a device of the class described, the combination with a frame comprising spaced grooved reaches, of a hoisting frame having at one end projections adapted to slide in said grooves, and also having a pulley mounted thereon adjacent such end, a pivoted member co-acting with such frame to produce a rising support, a pair of pulleys carried by said first frame intermediate its ends and disposed, one at each side of the frame and above the plane thereof, a pair of cables passing over said last named pulleys and attached at one end to said hoisting frame near its center, an evener bar to which the other ends of said cables are attached, and a third cable attached to the middle of said evener bar, passing around said first named pulley, and thence parallel with said reaches, whereby when tension is exerted upon such cable, the hoisting frame is first lifted till it reaches the level of said pair of pulleys, and the lower end thereof is then caused to travel along said reaches in the direction of the tension.

3. In a device of the class described, the combination with a frame comprising spaced grooved reaches, of a hoisting frame having at one end projections adapted to slide in such grooves, a brace member pivoted to and coacting with said hoisting frame to produce a rising support, a pulley carried by said first frame above the plane thereof, a strut secured to the hoisting frame adjacent the pivotal connection with said brace member and extending transversely of the plane thereof, and a hoisting cable attached to the lower end of said strut and passing up over said pulley, whereby, when tension is exerted upon said cable, said hoisting frame will be lifted until the lower end of said strut reaches the level of said pulley.

4. In a device of the class described, the combination with a frame comprising spaced grooved reaches, of a hoisting frame having at one end projections adapted to slide in said grooves, and also having a pulley mounted thereon adjacent such end, a pivoted member co-acting with such frame to produce a rising support, a pair of struts carried by said hoisting frame near its center, disposed one at each side of said frame and extending downwardly transversely of the plane thereof, a bar connecting the lower ends of said struts, a pair of pulleys carried by said first frame intermediate its ends and above the plane thereof, a pair of cables passing over said last named pulleys, one end of each of said cables being attached to the lower end of one of said struts, an evener bar to which the other ends of said cables are attached, and a third cable attached to the middle of said evener bar, passing around said first named pulley, and thence parallel with said reaches, said bar being arranged to rest upon said cable when said hoisting frame is in its lowermost position, whereby, when tension is exerted on such cable, the hoisting frame is initially lifted jointly by the pull on said pair of cables, and by the upward thrust of said third cable on said bar.

1,108,798. THREADING DEVICE. CHARLES F. SCHULTIS, Cleveland, Ohio, assignor, by direct and mesne assignments, to Christian Girl, Cleveland, Ohio. Filed Jan. 19, 1912. Serial No. 672,094. (Cl. 10—96.)



1. In a device of the character specified, the combination of a shank, a rotatably adjustable collar mounted upon said shank, a ring carried by said collar, a die head mounted in said shank and having an inwardly directed abutment surrounding said collar at the rear of said ring and forming a spring-receiving space with said ring, a spring in said space, levers pivoted to said head and having their rear ends normally in engagement with said ring, springs tending to force the rear ends of the levers inwardly, and connections between the front ends of the levers and the die carriers, said ring being of different thicknesses from point to point.

2. In a device of the character specified, the combination of a shank, a ring mounted upon said shank, a die head slidably mounted on said shank and having an inwardly directed abutment forming a spring receiving space with said ring, a spring in said space, levers pivoted to said head, springs tending to force the rear ends of the levers inwardly, and connections between the front ends of the levers and the die carriers, said ring forming an abutment for receiving the rear ends of said levers and preventing their inward movement while said die head is in rearward position.

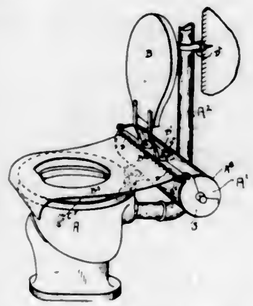
3. In a device of the character specified, the combination of a shank having a reduced cylindrical front end, a ring threaded upon said shank at the rear of such reduced front end, a collar mounted upon said shank at the rear of said ring and adapted to abut against the same, a ring threaded upon the front end of said collar and projecting outwardly beyond the first ring, an outwardly projecting flange carried by said collar at the rear of the ring thereon, a head mounted upon the front end of the shank and having at its rear end an inwardly or radially extending ring surrounding said collar at the rear of the ring thereon, a spring interposed between the two last mentioned rings, levers pivoted to said head and having their rear ends normally engaged by the ring on said collar, springs tending to force the rear ends of said levers inwardly, and die carriers connected to the front ends of said levers.

4. In a device of the character specified, the combination of a shank, a ring upon said shank, a collar mounted upon said shank at the rear of said ring and adapted to abut against the same, a ring threaded upon said collar and projecting outwardly beyond the first ring, a head mounted upon the shank and having at its rear end an inwardly or radially extending ring surrounding said collar at the rear of the ring thereon, a spring interposed between the two last mentioned rings, levers pivoted to said head and having rings, levers pivoted to said head and having their rear ends normally engaged by the ring on said collar, springs tending to force the rear ends of said levers inwardly, and die carriers connected to the front ends of said levers.

5. In a device of the character specified, the combination of a head having radially extending guides therein, die carriers mounted in said guides, each carrier having inserted thereinto a pin provided with a head having reversely inclined surfaces, a ring rotatably mounted on the head and extending over said carriers, pins mounted in said ring and overhanging said carriers, rollers on said pins, and yielding means for moving said carriers outwardly in their guides.

[Claim 6 not printed in the Gazette.]

1,108,799. WATER-CLOSET. JOHN HAGGERTY SHORTT, Kewanee, Ill. Filed Aug. 5, 1913. Serial No. 783,193. (Cl. 4—18.)



1. The combination with a closet of the class described, of a cylindrical case designed to receive and rotatably support a roll of antiseptic covers for the closet seat, such casing having a feed slot, a stationary jaw extending from one side of the feed slot and a movable jaw extending from the other side of the feed slot, a closet seat cover having a hinged support provided with cam shaped portions designed to bear against the hinged jaw when the cover is forced backwardly as and for the purpose specified.

2. The combination with a closet, of a cylindrical case carrying a rolled strip of paper for closet seats, having an exit slot through which the antiseptic covers pass, a rigid stationary jaw extending outwardly from the one side of the slot, a hinged jaw extending outwardly from the other side of such slot, and means operated by the closet seat cover for forcing the jaws together to grip the paper.

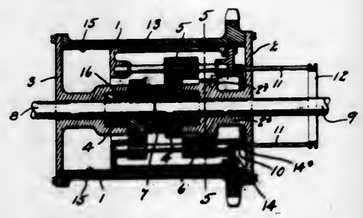
3. The combination with a closet, of a cylindrical case carrying a rolled strip of paper for closet seats having an exit slot through which the antiseptic covers pass, a rigid stationary jaw extending outwardly from the one side of the slot, a hinged jaw extending outwardly from the other side of such slot and a closet cover hinged to the cover of the case, such hinge having cam shaped extensions at the base rearwardly to engage and close the hinged jaw of the slot on the antiseptic seat cover passing through the slot.

4. In a closet, the combination with the seat member and closet cover of a suitably supported cylindrical casing divided longitudinally to form a body and cover portion and adapted to carry a roll of paper seat covers and having a feed slot through which the paper covers pass, a hinged connection between the body and the cover portion and a hinged connection in a line with the aforesaid connection whereby the closet cover is connected to the casing cover as and for the purpose specified.

5. The combination with a closet of the class described, of a cylindrical casing designed to receive and rotatably support a roll of antiseptic covers for the closet seat and comprising a body portion and a cover portion hinged together at the side next to the closet and a closet seat cover hinged to the casing cover in axial alinement with the hinged point of such cover, as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,108,800. DIFFERENTIAL LOCKING-GEARING. ANDREW O. SHRADER, St. Louis, Mo. Filed Jan. 29, 1913. Serial No. 744,871. (Cl. 74—34.)



1. In a gearing of the character described, the combination of driven shafts carrying pinions, a housing inclosing said pinions and loosely mounted on said shafts or axles, said housing being provided with gear teeth and constituting a driving element, a member arranged to slide within said housing and to partake of the rotary movement thereof, and pinions mounted in said sliding element and in mesh with each other, said pinions having their teeth removed at certain portions in their length and capable of coöperating with the axle pinions for the purposes set forth.

2. In a gearing of the character described, the combination of driven shafts, a power driven housing provided with bearings in which said driven shafts are mounted and are free to turn, said power driven housing constituting an oil containing receptacle, an element slidable within the power driven housing and partaking of the rotary movement thereof, meshed pairs of pinions carried by said sliding element and having their teeth cut away at certain points in their length, and gears mounted on the driven shafts with which said sliding pinions coöperate, the power driven housing having gear teeth with which said pinions coöperate in certain positions.

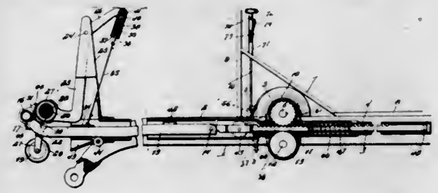
3. A power transmission mechanism comprising the combination of driven shafts, driven pinions carried thereby, a driving member, a transmission member driven by said driving member, a pair of transmission pinions carried by said transmission member and adapted to engage said driven pinions selectively and simultaneously so as to transmit power to either or both of said driven shafts, said transmission pinions having coöperation with each other whereby differential movement may be transmitted from said driving member to said driven shafts.

4. A transmission gearing comprising the combination of driven shafts, a driving member, a pair of transmission pinions movable by said driving member, driven pinions carried by said driven shafts, and means for shifting said transmission pinions into engagement with said driven pinions selectively and collectively whereby to transmit power to said driven shafts selectively and collectively, said transmission pinions having coöperation with each other whereby differential movement may be transmitted to said driven shafts simultaneously.

5. In a transmission gearing, the combination of driven shafts, a driven pinion on each, a driving member, transmission pinions carried by said driving member and having mutual coöperative engagement, said transmission pinions being mounted for shifting movement whereby both of said transmission pinions may be engaged with either one of said driven pinions at the same time to transmit power to said driven pinion, and whereby each of said transmission pinions may be placed in engagement with one each of said driven pinions to transmit differential movement to said driven pinions, and whereby one of said transmission pinions may be moved to position wherein it is held against rotation while said transmission pinions are severally in engagement with the different driven pinions to transmit uniform movement to both of said driven pinions.

[Claims 6 to 11 not printed in the Gazette.]

1,108,801. FENDER. EDWARD F. SHUE, New York, N. Y. Filed Jan. 11, 1913. Serial No. 741,488. (Cl. 105—255.)



1. A fender comprising parallel slidable elements, a flexible apron, upper and lower apron spreading means actuated by the movement of the slidable elements, a spring for actuating the slidable elements, and a rotary shaft actuated by said spring and geared to the slidable elements.

2. A fender comprising parallel slidable elements, a flexible apron, upper and lower apron spreading means actuated by the movement of the slidable elements, a spring for actuating the slidable elements, and means for winding said spring.

3. A fender comprising parallel slidable elements, a flexible apron, upper and lower apron spreading means actuated by the movement of the slidable elements, a spring for actuating the slidable elements, and ratchet mechanism for winding said spring.

4. A fender comprising parallel slidable elements, a flexible apron, upper and lower apron spreading means actuated by the movement of the slidable elements, a spring for actuating the slidable elements, ratchet mechanism for winding said spring, and means for tripping said spring.

5. A fender comprising parallel slidable elements, a flexible apron, upper and lower apron spreading means actuated by the movement of the slidable elements, a spring for actuating the slidable elements, and means for winding said spring and retracting the slidable elements.

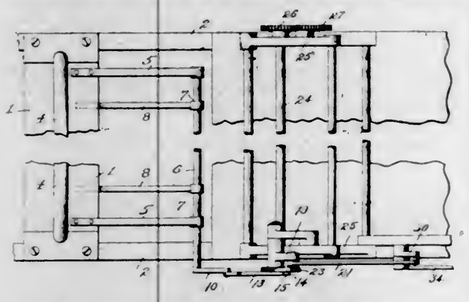
[Claims 6 to 17 not printed in the Gazette.]

1,108,802. DELIVERY TRIP MECHANISM. ALBERT J. SLADE, Jr., Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Aug. 21, 1913. Serial No. 785,928. (Cl. 101—29.)

1. In a machine of the character described, a power transmitting member provided with teeth, a member for operating a stop mechanism for said machine, a pawl pivotally connected to said operating member, a tripping device adapted to permit the passage of an uncrumpled sheet and to be displaced by a crumpled sheet, and yieldable means adapted to normally retain said pawl away from the toothed power-transmitting member, said tripping device being adapted to throw the pawl into engagement with said toothed member when displaced by a crumpled sheet.

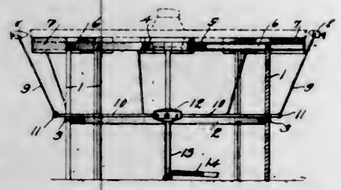
2. The combination with a machine embodying a surface over which sheets of paper are passed, a power driven shaft, a ratchet carried by said shaft, a lever for operating

a stop mechanism, a pawl carried by said lever, said pawl being normally retained out of engagement with said ratchet, a finger spaced from said surface to permit the passage of paper, said finger being displaceable under the



action of crumpled paper, and means connecting said finger to said pawl, said means being adapted to throw the pawl into engagement with the ratchet to effect the operation of said stop mechanism.

1,108,803. WHEELWRIGHT APPARATUS. ARTHUR G. SLOCUM, Ensign, Kans. Filed Apr. 4, 1914. Serial No. 829,459. (Cl. 75—184.)



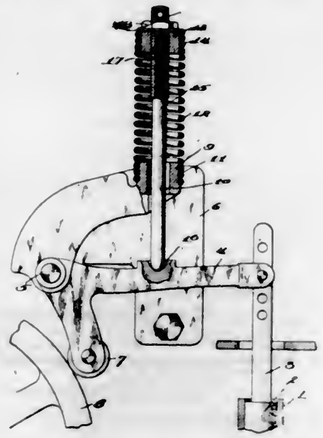
1. In wheelwright apparatus of the class described, the combination of a frame comprising supporting legs and horizontally disposed radiating arms supported by said legs, an adjustable rest carried by each arm and freely movable therealong, and heating instrumentalities associated with said rests and pivotally carried by the frame to swing independently of the rests.

2. In wheelwright apparatus of the class described, the combination of a frame comprising supporting legs, a brace member connected to said legs, horizontally disposed arms arranged radially, each leg having connection with an arm intermediate its length whereby said arm extends beyond the leg, a rest member slidably mounted on each arm and formed with spaced connecting elements for its arm whereby to permit movement of the rests therealong and past its supporting leg, burners associated with the rests, and supply conduits for said burners each comprising a relatively stationary portion supported upon the leg brace and a movable portion extending therefrom carrying a burner for independent adjustment of said burner with respect to the rest.

1,108,804. PUMP-ACTUATING MEANS FOR TYPE-CASTING MACHINES. SAMUEL E. SPERRY, Woodhaven, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 29, 1913. Serial No. 745,042. (Cl. 22—70.)

1. In casting mechanism of the class described, the combination of a pump, a helical tension spring having one end thereof fixed, and a rod adjustably connected to the free end of the spring, said rod extending through the spring and coöperating with the pump and being removable independently of the spring.

2. In casting mechanism of the class described, the combination of a metal pump, a member for operating it, a helical tension spring having its lower end fixed directly above said pump-operating member, and a rod connected to the upper end of the spring and extending downwardly through the spring and bearing on said operating member, said rod being removable while the spring remains in position.



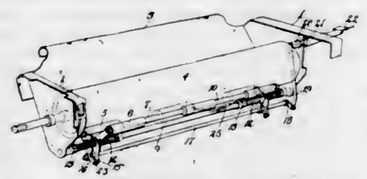
3. In casting mechanism of the class described, the combination of a metal pump, a helical tension spring having one end thereof fixed, a head coöperative with the opposite end of the spring, and a rod coöperative with the pump to actuate it, said rod being longitudinally adjustable through said head and extending through the spring.

4. In casting mechanism of the character described, the combination of a metal pump having a lever for actuating it, a relatively fixed bracket having a lug thereon formed with a vertical bore above said lever, a helical tension spring having its lower end attached to said lug, and means connecting the upper end of the spring to the pump lever, said connecting means extending axially through the spring and through the bore in said lug and being removable from the spring while the latter remains in position.

5. In a machine of the linotype class, the combination of the metal pump lever, the supporting frame or bracket, and an expanded helical spring mounted on the supporting frame above the pump lever having its lower end fastened to the frame and having means connecting its upper end to the pump lever, the connecting means passing through the spring whereby a downward pressure is exerted upon the pump lever, and said connecting means being removable while the spring remains in positon.

[Claim 6 not printed in the Gazette.]

1,108,805. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 28, 1913. Serial No. 763,974. (Cl. 197—138.)



1. In a typewriting machine, the combination with a rotatable platen and rolls movable to and from said platen, of arms on which said rolls are carried, a rock shaft journaled on one set of said arms, a rock arm fast on said shaft, and means for rotating said shaft to cause the rock arm thereon to cast off said rolls from the platen.

2. In a typewriting machine, the combination with a rotatable platen and front and rear pressure rolls therefor, of arms on which said rolls are respectively carried, extensions on said arms, a shaft journaled on one set of said extensions, a rock arm fast on said shaft arranged to strike an extension of the other set, and means to turn said shaft to separate said extensions and swing said rolls away from the platen.

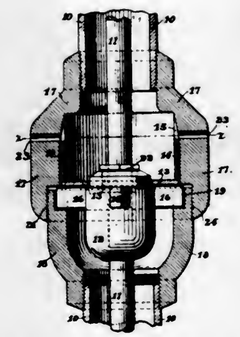
3. In a type writing machine, the combination with a rotatable platen and pressure rolls therefor, of a platen frame, a rod in said frame, arms journaled on said rod on which said rolls are curried, a shaft journaled on one set of said arms, a tappet fast on said shaft coöperating with an arm of the other set, and a finger-piece for rotating said shaft to force said arms apart and move said rolls from the platen.

4. In a typewriting machine, the combination with a rotatable platen and front and rear pressure rolls therefor, of arms on which said rolls are respectively journaled, a shaft journaled on one set of said arms, a rock arm fast on said shaft coöperating with an arm of the other set, a finger-piece whereby said shaft may be rocked to swing said rock arm against said last-named arm, and means for locking said rock arm in its position when so swung.

5. In a typewriting machine, the combination with a rotatable platen and front and rear pressure rolls therefor, of arms on which said rolls are respectively journaled, a shaft journaled on one set of said arms, a rock arm fast on said shaft coöperating with an arm of the other set, a finger-piece whereby said shaft may be rocked to swing said rock arm against said last-named arm, means for locking said rock arm in its position when so swung, and stops limiting the throw of said pressure rolls.

[Claims 6 to 12 not printed in the Gazette.]

1,108,806. ANTIFREEZING APPLIANCE. FLOYD B. STOMER, Byers, Colo. Filed July 2, 1913. Serial No. 777,013. (Cl. 103—60.)



1. In combination, a pump tube having a waste outlet at a point below the frost line, a valve located in the length of such tube and controlled in its movements by the flow of water through the tube and a wing carried by such valve and adapted to close the waste outlet when the valve is unseated and to uncover the waste outlet when such valve is seated.

2. In combination, a pump tube having a valve seat in its length and a waste outlet near such valve seat, a valve arranged within the tube and adapted to close upon the valve seat and a wing carried by the valve and adapted to close the waste outlet when the valve is unseated, said valve being controlled in its movements by the flow of water through the tube.

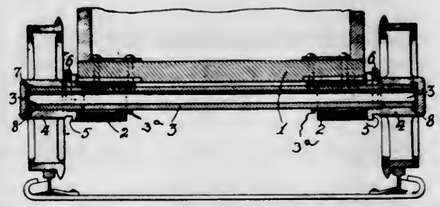
3. A pump tube having a valve seat and a waste outlet near the valve seat and at a point below the frost line, said tube being further provided with a vertical groove between the valve seat and waste outlet, a valve for closing upon the valve seat and a wing carried by the valve and adapted to operate in the before mentioned vertical groove and adapted to close the waste outlet when the valve is unseated.

4. A pump tube having a valve seat, opposed waste outlets and relatively vertical grooves, a valve for closing upon the valve seat and wings projecting from the valve and arranged to operate in the said veritcal grooves to close the waste of which when the valve is unseated.

5. In an anti-freezing means of the character specified, the combination of a chamber having an inner valve seat and a waste opening, a guide located within the chamber to receive and direct the pump rod in its movements, a valve for closing upon the valve seat and a wing carried by the valve and adapted to close the waste outlets.

[Claims 6 to 8 not printed in the Gazette.]

1,108,807. SELF-LUBRICATING WHEELED VEHICLE. WALTER D. STOCKLY, Fairmont, W. Va., assignor to Mining Appliances Company, a Corporation of West Virginia. Filed Oct. 20, 1913. Serial No. 796,255. (Cl. 105—67.)



1. In a wheeled vehicle, the combination of wheels having hubs formed with axle bearings and with closed outer ends, a floating axle entering the hubs of said wheels and unrestricted thereby except by abutment against their closed outer ends, a car body, attaching boxes on the car body in which the axle has bearings, but is free to rotate and shift longitudinally and which attaching boxes have direct abutment against the wheel hubs, and couplings carried solely by the attaching boxes and engaging directly with the wheels in the direction to restrain outward movement of the wheels relatively to the car body but with a freedom permitting relative axial movement between the wheels and body.

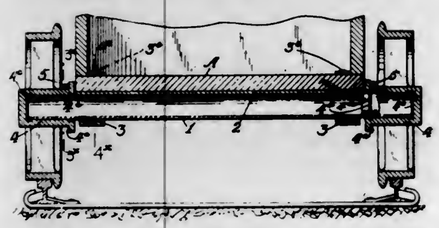
2. In a wheeled vehicle, the combination of a body, attaching boxes carried by said body, an axle mounted in said boxes with freedom of rotation and axial movement, wheels fitted upon the ends of said axle but having freedom of axial movement relatively thereto, said wheels being in direct abutment with the attaching boxes, and means fixing the wheels against outward displacement relatively to the attaching boxes consisting of flanges on the inner ends of the wheel hubs, pockets formed in the attaching boxes and overlapping said wheel hub flanges, and yokes inserted in front of the wheel hub flanges and into said pockets, but permitting limited relative movement between the body and wheels in the direction of the axis of the wheels.

3. In a wheeled vehicle, the combination of wheels having hubs formed with axle bearings and with closed outer ends, a floating axle entering the hubs of said wheels and unrestricted thereby except by abutment against their closed outer ends, a car body, attaching boxes on the car body in which the axle has bearings, but is free to rotate and shift longitudinally and which attaching boxes have direct abutment against the wheel hubs, and couplings carried solely by the attaching boxes and engaging directly with the wheels in the direction to restrain outward movement of the wheels relatively to the car body but with a freedom permitting relative axial movement between the wheels and body; said axles having abutments in position to be abutted by the inner end of an attaching box on one side, before the wheel hub is abutted by the outer end of the attaching box on the other side.

4. In a wheeled vehicle, the combination of a body, attaching boxes carried by said body, an axle, mounted in

said boxes with freedom of rotation and axial movement, wheels fitted upon the ends of said axle but having freedom of axial movement relatively thereto, said wheels being in direct abutment with the attaching boxes, and means fixing the wheels against outward displacement relatively to the attaching boxes consisting of flanges on the inner ends of the wheel hubs, pockets formed in the attaching boxes and overlapping said wheel hub flanges, and enlarged in the direction of end thrust upon the axle to permit of lost motion between the wheel and the box, and yokes inserted in and carried by said boxes in front of the wheel hub flanges, but permitting limited relative motion between the body and the wheels in the direction of the axis of the wheels.

1,108,808. MINE-CAR. WALTER D. STOCKLY, Fairmont, W. Va., assignor to Mining Appliances Company, a Corporation of West Virginia. Filed Jan. 20, 1914. Serial No. 813,245. (Cl. 105—67.)



1. In a vehicle, a floating hollow axle and wheels independently secured relatively to and revolubly mounted on said axle and free to have a limited longitudinal movement on said axle, said wheels having closed hubs.

2. A running gear for vehicles including a hollow axle forming a lubricant reservoir and having wheel bearings at each end, wheels independently and revolubly mounted on the bearings of said axle, the axle box of the wheels being closed at their outer ends by an end wall which lies when in assembled position, in close proximity to the end of the floating axle, whereby the said end wall and the end of the axle coact to feed the lubricant from the axle to the axle bearings within the hub of the wheel.

3. In a wheeled vehicle, a reservoir axle, a wheel having a closed hub fitting over the end of said axle, and a packing ring between the hub and the axle near the inner end of the hub.

4. In a wheeled vehicle, a reservoir axle, a wheel having a closed hub fitting over the end of said axle, and a packing ring between the hub and the axle near the inner end of the hub, said ring having an opening to permit restricted escape of lubricant.

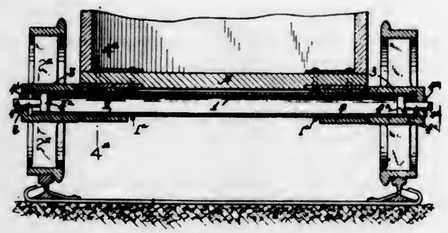
5. In a wheeled vehicle, a reservoir axle having an open end and a wheel having a hub with a closed end fitting over the open end of the axle; said hub having a diametrically enlarged chamber for conducting lubricant from the hollow of the axle on to the outer surface of the same.

[Claims 6 to 8 not printed in the Gazette.]

1,108,809. WHEEL-CONNECTOR FOR TUBULAR AXLES. WALTER D. STOCKLY, Fairmont, W. Va., assignor to Mining Appliances Company, a Corporation of West Virginia. Filed Jan. 20, 1914. Serial No. 813,246. (Cl. 105—67.)

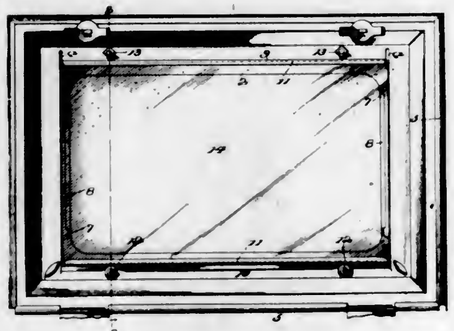
1. In combination with an open end tubular axle and closed-end wheels fitted thereon, means for securing the wheels against displacement from the axle while permitting both wheels to rotate and move axially with relation to the axle and to each other; said means comprising independent pins projecting centrally from the open ends of the axle and through the closed-ends of the hubs, each pin having independent means for securing it within the bore of the axle without closing the open end.

2. In combination with a tubular axle, wheels mounted to rotate on the ends thereof and constructed with closed hubs; said axle having longitudinal movement in said wheels; independent means for securing each wheel to the axle comprising pins projecting centrally from the ends of the axle and through the closed hubs, and T heads on said pins secured diametrically in the bore of the axle.



3. In combination with a tubular axle, wheels mounted to rotate on the ends thereof and constructed with closed hubs; said axle having longitudinal movement in said wheels, independent means for securing each wheel to the axle comprising pins projecting centrally from the ends of the axle and through the closed hubs, and T heads on said pins fitting the bore of the axle, and rivets projecting from said T heads and into the walls of the axle.

1,108,810. OVEN-DOOR. LOUIS STOCKSTROM, St. Louis, Mo., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 9, 1912. Serial No. 682,707. (Cl. 126—200.)

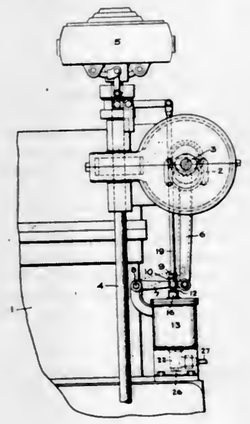


1. An improved oven door comprising a door frame having an opening, a door frame lining having a correspondingly shaped opening, a glass panel, the outer edges of the lining and door frame connected, the opposite inner edges of the door frame opening connected to the adjacent edges of the lining opening, the other opposite inner edges of the lining opening normally of a distance away from the door frame to admit the entrance of the glass panel, and one of said inner edges flexible toward and away from the door frame.

2. An oven door comprising a door-frame having an opening, a door-frame lining having a correspondingly-shaped opening, a glass panel, the outer edges of the lining and the door-frame connected, two integral opposite inner edges of the lining opening having outwardly extending shoulders, the outer edges of the said shoulders separated from the door-frame to admit the entrance of the glass panel between them and the adjacent edges of the door-frame, one of the said shoulders adjustable toward and away from the door-frame and means for holding said shoulder in its adjusted position.

3. An improved oven door comprising a door-frame having an opening, a lining having a correspondingly shaped opening, a glass panel, the outer edges of the lining and the door-frame connected, two integral opposite inner edges of the lining opening having outwardly extending shoulders, the outer edges of the said shoulders separated from the door-frame to admit the entrance of the glass panel between them and the adjacent edges of the door-frame, one of the said shoulders adjustable toward and away from the door-frame and means for holding said shoulder in its adjusted positions.

1,108,811. FUEL-PUMP. LEO V. STOELTZLEN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Sept. 19, 1912. Serial No. 721,211. (Cl. 125—140.)



1. The combination, of an internal combustion engine with a fuel pump comprising a ported cylinder, a stationary hollow member on which the cylinder is movable longitudinally and through which fluid is discharged, a solid plunger in the cylinder which covers and uncovers the port, means for driving the plunger, means for adjusting the cylinder longitudinally on said member, a discharge valve controlling the flow of liquid through the hollow member and means for supplying fluid to the port.

2. The combination, of an internal combustion engine with a fuel pump comprising a ported cylinder, a stationary hollow member on which the cylinder is movable longitudinally and through which fluid is discharged, a solid plunger in the cylinder which covers and uncovers the port, means for actuating the plunger, a discharge valve controlling the flow of liquid fuel through the hollow member, means for supplying fluid to the port, a speed governor driven by the engine, and a rod connecting a movable part of the governor with the cylinder for adjusting it longitudinally on said member to vary the amount of fluid discharged on each working stroke of the plunger.

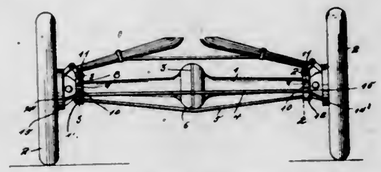
3. The combination, of an internal combustion engine with a fuel pump comprising a ported cylinder, a stationary hollow member on which the cylinder is movable and through which fluid is discharged, a plunger having a closed end located in the cylinder and arranged to cover and uncover the port, an eccentric for imparting to the plunger a working stroke of constant length, a spring for moving the plunger on its suction stroke, a discharge valve through which the fluid flows from said member, a means for supplying fluid to the port, and a speed governor driven by the engine which is connected to and moves the cylinder.

4. The combination, of an internal combustion engine with a fuel pump comprising a ported cylinder, a stationary hollow member on which the cylinder is movable and through which fluid is discharged, a plunger having a closed end located in the cylinder and arranged to cover and uncover the port, a lever for moving the plunger on its working stroke, a means for imparting a vibratory movement to the lever, a spring for moving the plunger on its suction stroke, a spring pressed discharge valve in communication with the member, a means for supplying fluid to the port, a speed governor driven by the engine, and a rod that is pivotally connected to the governor and cylinder for moving the latter longitudinally on said member.

5. The combination, of an internal combustion engine with a fuel pump comprising a tank, a combined valve casing and tubular member, the latter extending through the bottom of the tank, an outwardly opening discharge valve in the casing, a cylinder in the tank having a side port and mounted to slide on said member, a plunger mounted in the cylinder and arranged to force fluid through said member past the valve, an actuator for the plunger, a spring to move the plunger on its suction stroke, a means for maintaining a sufficient amount of fluid in the tank to cover the lowest part of the port, and a speed governor arranged to move the cylinder on the member to vary the amount of fluid displaced by the plunger.

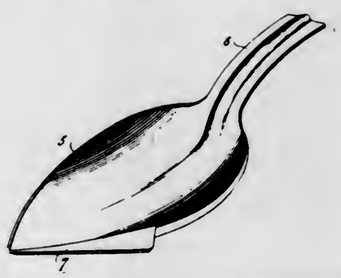
[Claims 6 to 8 not printed in the Gazette.]

1,108,812. REAR-AXLE TRUSS. HERMAN H. SUNVOLD, Sacred Heart, Minn. Filed Feb. 26, 1914. Serial No. 821,267. (Cl. 21—5.)



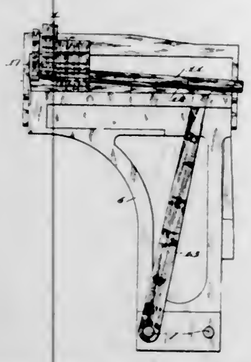
In a rear axle truss for automobiles, the combination with an axle, a plurality of truss rods, one of said rods adapted to fit upon the lower portion of the axle and the other rod adapted to fit upon the rear portion of the axle, a clamp carried by the axle adjacent each end thereof, each clamp comprising a primary and an auxiliary section, said sections adapted to be secured together for holding said clamp in position, each of said primary sections provided upon its lower side with a depending lug, each of said primary sections also provided with a diagonally extending lug formed adjacent said depending lug, said lugs provided with transverse openings adapted to receive said truss rods whereby said truss rods will efficiently brace the central portion of the axle, said lugs being formed in a position to efficiently hold said truss rods in their correct positions.

1,108,813. SPOON. ALFRED J. TARTISS, Rochester, N. Y. Filed Jan. 20, 1914. Serial No. 813,268. (Cl. 30—22.)



A spoon comprising an imperforate bowl, the margin of which is curved at its sides and pointed at its tip and a flange lying in the plane of said margin and having a straight edge disposed tangentially thereto at said tip.

1,108,814. ASSEMBLING-ELEVATOR. RICHARD TOEPLITZ, New York, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 3, 1913. Serial No. 758,683. (Cl. 199—7.)



1. In a machine of the linotype class, an assembling elevator having a movable rail mounted therein for supporting matrices at an upper level; and a device carried by said rail for closing the entrance thereto, said device being adapted to be acted upon by the in-coming matrices to push the rail away from the elevator entrance, to allow matrices to pass to a lower level.

2. In a machine of the linotype class, an assembling elevator having a movable rail mounted therein for supporting matrices at an upper level; and a gate carried by said rail at its receiving end and adapted for movement into position to close the entrance to said end, said gate when in such position extending into the path of the in-coming matrices, whereby it will be engaged by the latter and pushed with said rail away from the elevator entrance, to allow matrices to pass to a lower level.

3. In a machine of the linotype class, the combination, with the assembling elevator; of a rail for supporting matrices at an upper level having a downwardly extending pivot arm pivotally mounted in said elevator at a point sufficiently below and forward of the receiving end of the latter to guide the receiving end of the rail in an upward and forward direction, thereby permitting said rail end to clear the in-coming matrices as the same are being assembled in a downward and forward direction at a lower level.

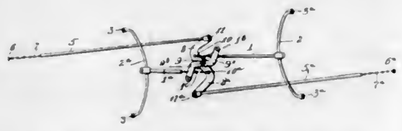
4. In a machine of the linotype class, the combination, with the assembling elevator; of a rail for supporting matrices at an upper level; means, controllable at will, to automatically move said rail in an endwise and upward direction away from the path of the in-coming matrices; and means actuated by the raising of the elevator to return the rail to normal position.

5. In a machine of the linotype class, the combination, with the assembling elevator; of a rail for supporting matrices at an upper level pivotally mounted in said elevator at a point sufficiently below and forward of the receiving end of the latter to guide the receiving end of the rail in an upward and forward direction, thereby permitting said rail end to clear the in-coming matrices as the same are being assembled in a downward and forward direction at a lower level; and a device carried by said rail for closing the entrance thereto, said device being adapted to be acted upon by the in-coming matrices to effect the movement of the rail.

[Claims 6 to 8 not printed in the Gazette.]

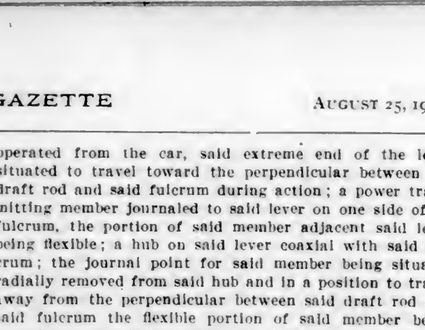
1,108,815. RAILWAY-CAR BRAKE. STONEWALL TOMPKINS, Brooklyn, N. Y. Filed Mar. 26, 1913. Serial No. 757,033. (Cl. 188—24.)

1. In a car brake lever fulcrumed in the car; a draft rod hinged at the extreme end of said lever and suitably operated from the car, said extreme end of the lever situated to travel toward the perpendicular between the draft rod and said fulcrum during action; a power transmitting member journaled to said lever on one side of its fulcrum, the portion of said member adjacent said lever being flexible; a hub on said lever coaxial with said fulcrum; the journal point for said member being situated radially removed from said hub and in a position to travel away from the perpendicular between said draft rod and said fulcrum the flexible portion of said member being wound around said hub during the latter part of action.



2. In a car brake an S-shaped lever fulcrumed at its center in the car; a draft rod hinged at each of the extreme ends of said lever and suitably operated from the car, said extreme ends of the lever situated to travel toward the perpendicular between the draft rods during action; a pair of power transmitting members journaled to said S-shaped lever symmetrically on either side of its fulcrum, the portion of said members adjacent said lever being flexible; a central hub on said lever coaxial with said fulcrum; the journal points for said members being situated radially removed from said hub and in a position to travel away from the perpendicular between said draft rods, and the flexible portion of said members being wound around said hub during the latter part of action.

1,108,816. APPLIANCE FOR LOCOMOTIVE CABS AND TENDERS. HENRY H. VAUGHAN, Montreal, Quebec, Canada. Filed Sept. 20, 1912. Serial No. 721,444. (Cl. 105—61.)



1. A locomotive cab having an extension at its rear end, such extension having side doors for ingress and egress to and from the cab, and a vestibule structure forming a passageway between the cab and a tender.

2. The combination with the rear end of a locomotive cab and the forward end of a tender, one side of the cab having a door for ingress and egress to and from the cab, of a rubbing plate rigidly secured upon the cab; a second rubbing plate; means carried by the tender for supporting the said last mentioned rubbing plate and causing the same to bear upon the first mentioned rubbing plate; and telescopic means constructed to present a relatively narrow inclosed passageway between the tender and locomotive.

3. A locomotive cab having a rearward extension for connection with a tender and the cab *b* having a side door therein.

4. A locomotive cab having a rearward extension for connection with a tender and a cab having a side door therein and steps within the extension.

5. A locomotive cab having a rearward extension with side doors therein, steps within the extension, the said extension being arranged to accommodate tool boxes within the cab at the rear of the steps.

[Claims 6 to 21 not printed in the Gazette.]

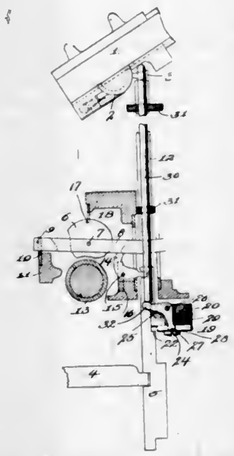
1,108,817. CORN-HUSKER. PETER A. WALLER, Kewanee, Ill. Filed June 13, 1913. Serial No. 773,436. (Cl. 130—4.)



1. A corn husker comprising a husking hook formed from a metal blank and having a shank, a bill, and a connecting portion between the same, said connecting portion having its body part bent inwardly toward the bill with its inclined side portions extending outwardly to the edges thereof whereby the connection is stiffened and serves to shed the material on both sides of the hook.

2. A corn husker comprising a husking hook formed from a metal blank and having a shank, a bill having an inward longitudinal bend, and a connecting portion between the shank and bill, said connecting portion having its body part bent inwardly toward the bill with its inclined side portions extending outwardly to the edges thereof whereby the connection is stiffened and serves to shed the material on both sides of the hook.

1,108,818. LINOTYPE-MACHINE. WOOLMAN G. WHITE, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed June 18, 1912. Serial No. 704,445. (Cl. 199—7.)



1. In a linotype machine, the combination of a keyboard mechanism, a removable matrix magazine, escapement mechanism actuated by said keyboard mechanism for controlling the delivery of matrices from the magazine, and means controlled by the position occupied by the magazine for locking the keyboard mechanism from operation.

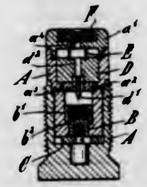
2. In a linotype machine, the combination of a keyboard mechanism, a removable matrix magazine, escapement mechanism actuated by said keyboard mechanism for controlling the delivery of matrices from the magazine, and locking means controlled by the magazine for preventing operation of the keyboard except while the magazine is in operative position.

3. In a linotype machine, the combination of a keyboard mechanism, a removable matrix magazine, escapement mechanism actuated by said keyboard mechanism for controlling the delivery of matrices from the magazine, locking means to prevent actuation of the keyboard mechanism, and means for automatically causing said locking means to lock the keyboard mechanism from operation when the magazine is removed from operative position and for causing said locking means to unlock the keyboard mechanism when the magazine is placed in operative position.

4. In a linotype machine, the combination of a keyboard mechanism, a removable matrix magazine, escapement mechanism actuated by said keyboard mechanism for controlling the delivery of matrices from the magazine, and locking means normally tending to prevent actuation of the keyboard mechanism and restrained by the magazine while the latter is in operative position.

5. In a linotype machine, the combination of a keyboard mechanism, a removable matrix magazine, escapement mechanism actuated by said keyboard mechanism for controlling the delivery of matrices from the magazine, locking means normally tending to lock the keyboard mechanism from operation, and means operative automatically by a magazine when placed in operative position to retract the locking means and permit actuation of the keyboard and automatically causing the locking means to lock the keyboard when the magazine is removed.

1,108,819. PERCUSSION-FUSE. KARL WIESER, Bredeney, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 7, 1913. Serial No. 752,670. (Cl. 102—39.)



1. A combination fuse for quick and delayed action, having a self adjusting firing pin, a primer and a striker; said striker moving on impact of the projectile, thereby, in coöperation with said firing pin, causing the ignition of said primer, said primer comprising two pellets one behind the other, the one pellet consisting of a slow burning composition and the other pellet consisting of quick match, the position of said firing pin varying in accordance with the resistance of the target, whereby the firing pin in one case ignites one of said pellets and in the other case ignites both pellets.

2. A combination fuse for quick and delayed action, having a self adjusting firing pin, a primer and a striker, said striker moving on impact of the projectile, thereby, in coöperation with said firing pin causing the ignition of said primer comprising two pellets one behind the other, the one pellet nearest to the firing pin consisting of a slow burning composition and the other pellet remotest from the firing pin consisting of quick match; said firing pin after an impact of the projectile with a target of great resistance, having such a position that it can reach only the slow burning pellet, and the firing pin after an impact of the projectile with a target of slight resistance having such a position that it will reach the quick burning pellet.

3. A combination fuse for quick and delayed action, having a self-adjusting firing pin, a primer, two strikers and a housing therefor; both of said strikers being in alinement, and one of the strikers carrying said firing pin and the other striker carrying said primer; said primer

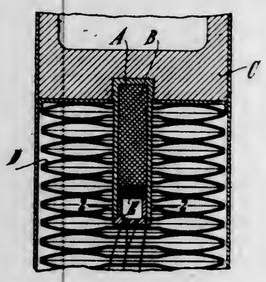
comprising two pellets one behind the other, the pellet nearest the firing pin consisting of a slow burning composition and the other pellet consisting of quick match; a yielding member interposed between the wall of said housing and one of said strikers, said yielding member constructed to withstand the blow of impact with a target of slight resistance, but constructed to collapse through the movement of said strikers on the impact with a target of great resistance, whereby said firing pin will penetrate both of said pellets causing quick action in the first instance, but will penetrate only the slow burning pellet causing delayed action of the fuse in the second instance.

4. A combination fuse for quick and delayed action, having an impact member carrying a firing pin, another impact member carrying a primer, said impact members being arranged one behind the other and the rear one adapted to move on impact of the projectile thereby causing said firing pin to ignite the primer, said primer comprising two priming charges one behind the other, the one priming charge lying next said firing pin consisting of a composition adapted to burn away slowly without explosion when ignited by said firing pin on impact, but to explode when ignited by a powerful jet of flame, and the other priming charge consisting of a quick match; and means for holding said impact members in a variable distance from another at the end of the movement of said rear impact member, whereby the firing pin according to the quantity of said distance may ignite either said first-named priming charge only or both priming charges.

5. A combination fuse for quick and delayed action, having an impact member carrying a firing pin, another impact member carrying a primer, said impact members being arranged one behind the other and the rear one adapted to move on impact of the projectile thereby causing said firing pin to ignite the primer, said primer comprising two priming charges one behind the other, the one priming charge lying next said firing pin consisting of a homogeneous mass adapted to burn away slowly without explosion when ignited by said firing pin on impact, but to explode when ignited by a powerful jet of flame, and the other priming charge consisting of a quick match; and means for holding said impact members in a variable distance from another at the end of the movement of said rear impact member, whereby the firing pin according to the quantity of said distance may ignite either said first-named priming charge only or both priming charges.

[Claim 6 not printed in the Gazette.]

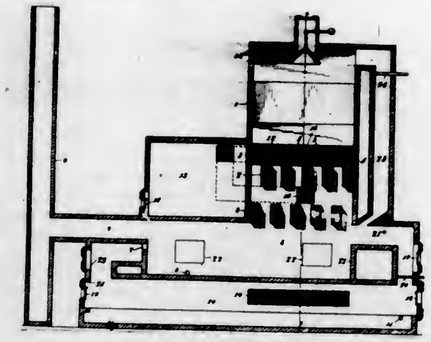
1,108,820. PROJECTILE-TRACER. KARL WIESER, Bredeney, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Mar. 7, 1913. Serial No. 752,671. (Cl. 102—26.)



1. A projectile tracer comprising a casing secured in the projectile, an illuminating compositon in said casing, a thimble closing the rear end of said casing, a chamber between said illuminating composition and said thimble, the rear wall of said thimble having fine holes communicating between said chamber and the space containing the propelling charge for the projectile; whereby only a small portion of considerably reduced tension of the propelling gases is admitted through said holes into said chamber and after further expanding therein ignites said illuminating composition.

2. A projectile tracer comprising a casing secured in the projectile, an illuminating composition in said casing, a thimble closing the rear end of said casing, said thimble being provided with a chamber and a retarding charge interposed between said chamber and said illuminating composition, the rear wall of said thimble having fine holes communicating between said chamber and the space containing the propelling charge for the projectile; whereby only a small portion of considerably reduced tension of the propelling gases is admitted through said holes into said chamber and after further expanding therein ignites the retarding charge which subsequently ignites the illuminating composition.

1,108,821. SMELTING-FURNACE. WILLIAM E. WILLIAMS, Massillon, Ohio, assignor of one-half to Philip H. Holdsworth, Seattle, Wash. Filed Dec. 21, 1910. Serial No. 598,562. (Cl. 75—57.)



1. In a smelting furnace consisting of vertical and horizontal portions, a slag chamber located below the horizontal portion, a chamber adapted to be heated by the vertical and horizontal portion of the furnace, air flues leading from the slag chamber upward and into the vertical portion of the furnace and air flues leading from the chamber heated by the vertical and horizontal furnace, said latter flues leading into the flues extended from the slag chamber to the vertical furnace and grate bars located intermediate the vertical and horizontal portion of the furnace, substantially as and for the purpose specified.

2. In a smelting furnace consisting of vertical and horizontal portions, a slag chamber located below the horizontal portion, a chamber adapted to be heated by vertical and horizontal portions of the furnace, air flues leading from the slag chamber upward and into the vertical portion of the chamber and an air flue leading from the chamber heated by the vertical and horizontal furnace, said latter flues leading into the flues extended from the slag chamber to the vertical furnace and two series of grate bars located intermediate the vertical and horizontal portion of the furnace, substantially as and for the purpose specified.

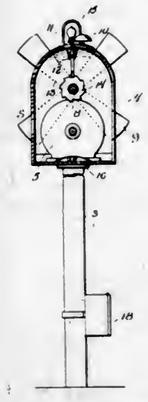
3. In a smelting furnace consisting of vertical and horizontal portions, a slag chamber located below the horizontal portion, a chamber adapted to be heated by vertical and horizontal portions of the furnace, air flues leading from the slag chamber upward and into the vertical portion of the chamber and an air flue leading from the chamber heated by the vertical and horizontal furnace, said latter flues leading into the flues extended from the slag chamber to the vertical furnace and two series of staggered grate bars located intermediate the vertical and horizontal portion of the furnace, substantially as and for the purpose specified.

4. A smelting furnace consisting of vertical and horizontal portions located in operative relationship with reference to each other, a draft flue leading from the top of the horizontal furnace, a down draft flue leading from the top of the vertical furnace and extending to the top of the horizontal furnace and at the opposite end from the first mentioned draft flue and grate bars located intermediate the horizontal and vertical furnaces, said last mentioned flue opening into the horizontal furnace below the grate bars, substantially as and for the purpose specified.

5. A smelting furnace consisting of vertical and horizontal portions located in operative relationship with reference to each other, a draft flue leading from the upper portion of the horizontal furnace, a down draft flue leading from the top of the vertical furnace into the horizontal furnace and two series of grate bars located intermediate the horizontal and vertical furnace, the upper series of grate bars provided with beveled tops, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,108,822. RAILWAY-CROSSING SIGNAL. WILLIAM P. ADLETA and OSEA M. ADLETA, Dallas, Tex. Filed June 14, 1913. Serial No. 773,801. (Cl. 246—21.)

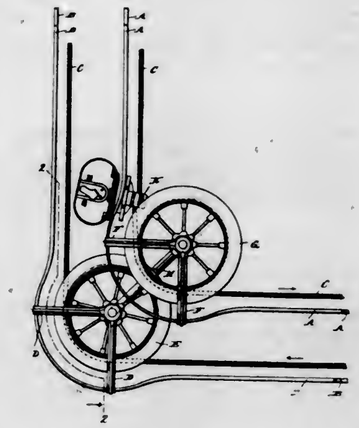


A railway crossing signal comprising a casing, a motor within said casing, a shaft journaled in the end walls of said casing and extending longitudinally thereof, driving connections between said motor and shaft, an electric lamp mounted upon the top of said casing, blades radiating from the opposite ends of said shaft and movable across the path of the light rays from said lamp, a bell mounted upon said casing, a tapper for said bell, a ratchet wheel fixed to said shaft and adapted to actuate said tapper to sound the bell, an electric circuit including said motor and lamp, and means for closing said circuit whereby the motor and lamp will be energized and the shaft rotated to revolve the blades across the path of the light rays issuing from the lamp and sound the bell.

1,108,823. CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, Mass., assignor to The Lamson Company, (formerly Lamson Consolidated Store Service Company,) Boston, Mass., a Corporation of New Jersey. Filed Nov. 23, 1912. Serial No. 733,115. (Cl. 186—34.)

1. In a cable carrier apparatus, a track or way, an actuating cable for driving carriers along said track or way, a carrier having a clamp comprising opposing jaws one at least of which is resilient, said jaws adapted to be resiliently clipped onto said cable, pulleys for supporting said cable, and means for momentarily locking the jaws of said clamp to prevent the resilient opening thereof and consequent disengagement of said cable therefrom when the carrier passes said pulleys.

2. In a cable carrier apparatus, a track or way, a carrier adapted to travel on said track or way, a cable for driving said carrier, a spring clamp comprising opposing jaws, one at least of which is resilient, located on said carrier and adapted to be clipped into engagement with said cable, and a pulley located at a bend and adapted to support said cable, said pulley carrying a central peripheral flange thereon adapted to hold said cable securely between the jaws of said clamp when said carrier is passing said bend.



3. Cable carrier apparatus comprising a track, a carrier to travel thereon, a cable for driving said carrier, said carrier having means to engage said cable, a pulley about which said cable normally passes and around which said carrier is drawn by said cable, and means, independent of the carrier and its cable engaging means, to directly engage said cable and air in retaining it in place in said cable engaging means when said cable is pulled away from the surface of said pulley by the passage of said carrier therearound.

4. Cable carrier apparatus comprising a track, a carrier to travel thereon, a cable for driving said carrier, said carrier having means to engage said cable, a pulley about which said cable normally passes and around which said carrier is drawn by said cable, means, carried by said pulley for directly engaging said cable and for also engaging the cable engaging means of said carrier, to retain said cable in place in said cable engaging means when the cable is pulled away from the surface of the pulley by the passage of the carrier therearound.
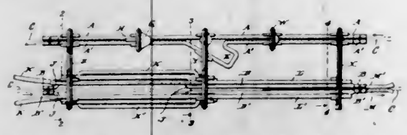
5. In a cable carrier apparatus, a track or way, a carrier adapted to travel on said track or way, a cable for driving said carrier, a spring clamp comprising opposing jaws, one at least of which is resilient, located on said carrier and adapted to engage said cable, and pulleys or idlers located at the bends in said way and adapted to support said cable, each of said pulleys or idlers carrying a central peripheral flange thereon adapted to hold said cable securely between the jaws of said clamp when said carrier is passing said bends, each of said pulleys also being provided with flanges to engage the jaws of the carrier and hold them clamped on the cable when said carrier is passing around a pulley.

[Claims 6 and 7 not printed in the Gazette.]

1,108,824. CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, Mass., assignor to The Lamson Company, (formerly Lamson Consolidated Store Service Company,) Boston, Mass., a Corporation of New Jersey. Filed Nov. 23, 1912. Serial No. 733,116. (Cl. 186—14.)

1. In a cable carrier apparatus, a track or way, a cable for driving carriers along said track or way, a carrier having a grip adapted to engage said cable by being thrust thereagainst, means whereby carriers may be placed into coöperation with said track or way and into operative engagement with said cable, and means to resist lateral displacement of said cable at the point therein against which said grip is exerting a thrust action as said grip is being placed in operative engagement with said cable.

2. In a cable carrier apparatus, a track or way, a cable for driving a carrier along said track or way, carriers adapted to travel on said track or way and having a grip for engaging said cable, means whereby said carrier may be placed into coöperation with said track or way, and means for tilting said grip of said carrier with respect to said cable when said grip is being driven into engagement with said driving cable.



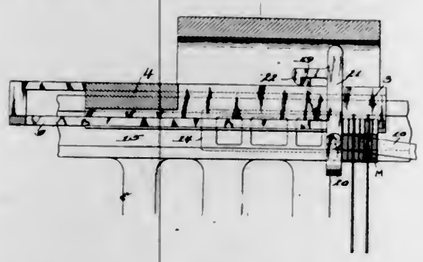
3. In a cable carrier apparatus, a track or way, a cable for driving a carrier along said track or way, carriers adapted to travel on said track or way and having a grip adapted to engage said cable by being thrust thereagainst, means whereby said carrier may be placed into coöperation with said track or way, means for tilting the grip of said carrier with respect to said cable when said grip is being thrust into engagement with said driving cable, and a support or guide adapted to resist the thrust against said cable when said grip is being engaged with said cable.

4. In a cable carrier apparatus, a track or way, a cable for driving a carrier along said track or way, carriers adapted to travel on said track or way and having a grip thereon for engaging said cable, said track having means whereby said carrier may be inserted into coöperation therewith and also having a portion inclined to said cable to guide said carrier with its grip theretoward, said grip being inclined with respect to said cable when being engaged therewith.

5. In a cable carrier apparatus, a track or way, a cable for driving carriers along said track or way, a carrier adapted to travel along said track or way and having a spring clamp adapted to yield to receive said cable when thrust into operative engagement therewith, means whereby when said cable is held against lateral movement to resist said thrust, said carrier may be placed into coöperation with said track or way and with said cable, and means for holding said cable against lateral movement to resist the thrust of said clamp when the latter is being engaged with said cable.

[Claims 6 to 11 not printed in the Gazette.]

1,108,825. LINE-STOP FOR LINE-CASTING MACHINES. HENRY A. ARMSTRONG, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 4, 1913. Serial No. 740,250. (Cl. 199—7.)



1. In a machine of the linotype class, the combination of the first elevator, a line stop reciprocable in the matrix channel of the elevator adapted to be advanced by an incoming line of matrices, and means for moving the stop toward the receiving end of the elevator preparatory to the reception of a line of matrices.

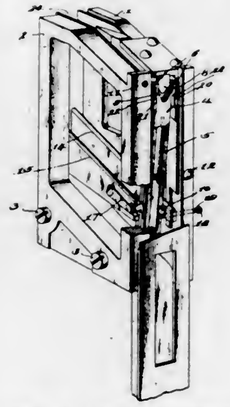
2. In a machine of the linotype class, the combination with the first elevator, of a line stop frictionally engaging the elevator and adapted to be engaged and advanced by an incoming line of matrices, and means for moving the stop in the matrix channel and toward the receiving end of the elevator when a line of matrices is removed from the elevator.

3. In a machine of the linotype class, the combination with the first elevator and the line transfer slide, of a line stop reciprocable in said elevator, and means for engaging the transfer slide with the line stop to move the latter to the receiving end of the elevator.

4. In a machine of the linotype class, in combination with the first elevator, a line stop reciprocable in the matrix channel of said elevator having a normal position at the receiving end of the elevator and adapted to be moved out by the incoming matrices, and automatic means for returning said line stop to its normal position.

5. In a machine of the linotype class, the combination with the vertically movable first elevator and the coöperative line delivery slide, of a line stop movably carried by the elevator and adapted to be advanced to different positions by an incoming line of matrices, and means for connecting said stop to the line delivery slide when the elevator is in elevated position whereby the operative movement of said slide will automatically move the line stop toward the receiving end of the elevator.

1,108,826. LINE COMPOSING AND CASTING MACHINE. HENRY A. ARMSTRONG, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 25, 1913. Serial No. 750,615. (Cl. 199—7.)



1. In a machine of the class described, escapement mechanism for spacers embodying upper and lower abutments, spacer-supporting devices located between the upper and lower abutments, and means for moving the spacer laterally to release it from the lower abutment.

2. In a machine of the class described, escapement mechanism for spacers embodying upper and lower abutments against which a spacer is adapted to rest, means located below the upper abutment for supporting the spacer while the latter rests against said abutments, and means for deflecting the spacer laterally to release it from the lower abutment whereby the spacer will assume a position which will free it from said supporting means.

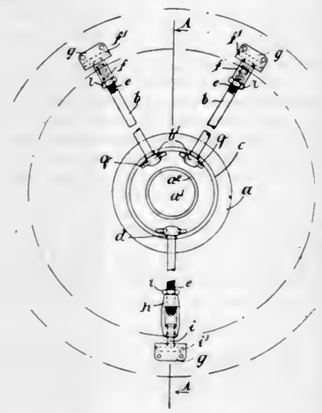
3. In a machine of the linotype class, a spacer-controlling escapement consisting of upper and lower abutments adapted to detain the spacer from advancing, a supporting ledge below the upper abutment adapted to prevent the spacer from falling, and means for moving the spacer laterally to release it from its lower abutment whereby the lower end of the spacer may advance and thus allow the supported part to clear the ledge.

4. In a machine of the class described, spacer-controlling escapement mechanism embodying means for holding the spacer in inclined position, means for supporting the spacer while occupying such position, and means for moving the spacer laterally whereby it may approach an upright position and thereby disengage from said supporting means.

5. In a machine of the class described, spacer-controlling escapement mechanism embodying vertically spaced devices coöperative to hold a spacer in inclined position, a ledge arranged between said devices and operative to support the spacer while held by said devices, and means for moving the spacer laterally to release it from the lower of said holding devices whereby the spacer may move toward an upright position and thereby free itself from said supporting ledge.

[Claim 6 not printed in the Gazette.]

1,108,827. MEANS FOR ATTACHING A TIRE-INFLATING DEVICE TO A ROAD-VEHICLE WHEEL. ROBERT BARNFATHER, Hammersmith, London, England. Filed May 23, 1914. Serial No. 840,651. (Cl. 152—11.)



1. Means for attaching a tire-inflating device to a road vehicle wheel, comprising a frame having pumping devices mounted thereon, arms secured at their inner ends to said frame, said arms extending outwardly toward the rim of the said wheel, the outer ends of said arms being provided with adjustable engaging devices, and means carried by said rim or felly whereby said devices may be engaged with said means so that the said frame is directly supported from the said rim or felly.

2. Means for attaching a tire-inflating device to a road vehicle wheel, comprising a frame having pumping devices mounted thereon, arms jointed at their inner ends to said frame, said arms extending outwardly to the rim of said wheel with their outer ends screw-threaded, nuts upon said screw-threaded ends and means carried by said nuts whereby said nuts may be connected to the rim or felly of said wheel.

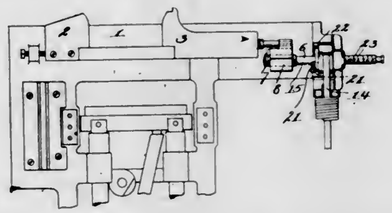
3. Means for attaching a tire-inflating device to a road vehicle wheel, comprising a frame having pumping devices mounted thereon, arms jointed at their inner ends to said frame, said arms extending outwardly to the rim of said wheel, and having their outer ends screw-threaded, nuts upon said screw-threaded ends, lateral projections from said nuts, and claw devices fixed on the rim of said wheel adapted to be engaged by said lateral projections.

4. Means for attaching a tire-inflating device to a road vehicle wheel, comprising a frame, pumping devices mounted thereon, a flange upon said frame, perforations in said flange, arms passed through said perforations and having heads seated on the inner side of said flange, said arms being three in number and arranged two close together so that these two act in opposition to the third, and means for engaging the outer ends of said arms with the rim or felly of the said wheel.

5. Means for attaching a tire-inflating device to a road vehicle wheel, comprising a frame having pumping devices mounted thereon, arms jointed at their inner ends to said frame, said arms extending outwardly to the rim of said wheel and said arms at their outer ends being screw-threaded, nuts upon said screw-threaded ends, one of said nuts comprising a tensioning device, and attachments to said nuts whereby said nuts may be locked to the rim of said wheel.

[Claims 6 to 16 not printed in the Gazette.]

1,108,828. LINOTYPE-MACHINE. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1911. Serial No. 661,940. (Cl. 199—7.)



1. In a machine of the linotype class, vise mechanism embodying an abutment to coöperate with the movable vise jaw, a combined jaw-operating and adjusting member coöperative with said abutment, means for rotating said member, and a device for adjustably attaching said means to said member at different points in the length of said member.

2. In a machine of the linotype class, vise mechanism embodying a movable jaw, an abutment coöperative therewith, an actuating member for said jaw, and an operating screw having a threaded engagement with said abutment and adjustable axially relatively to said actuating member.

3. In a machine of the linotype class, vise mechanism embodying a movable jaw, an abutment therefor, an actuating member for said jaw, an operating screw having a threaded engagement with said abutment, and means to adjust said abutment and screw bodily relatively to the actuating member in a direction axially of the screw.

4. In a machine of the linotype class, a vise embodying a movable abutment for one of the jaws thereof, an operating screw having a threaded engagement with the abutment, and actuating means coöperative with the screw and having a device to hold the actuating means in different positions of adjustment with respect to the length of the screw.

5. In a machine of the linotype class, vise mechanism embodying an abutment to coöperate with the movable vise jaw, a rotatable member having a threaded engagement with said abutment and provided with axially graduated points, and means whereby the rotatable member may be set in different operative positions in the direction of its axis to correspond with said axially graduated points.

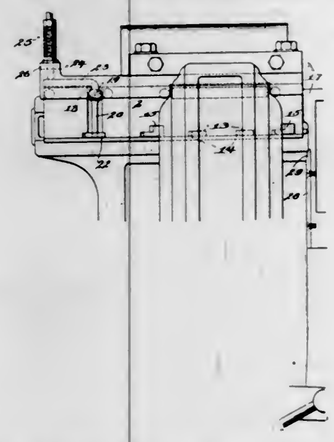
[Claims 6 to 8 not printed in the Gazette.]

1,108,829. LINOTYPE-MACHINE. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 8, 1912. Serial No. 730,227. (Cl. 199—7.)

1. In a linotype machine, in combination with a first elevator to receive a line of matrices, a rail adapted to support the matrices at an upper level, and means to retract the rail in a direction toward but oblique to the direction of motion of the incoming matrices.

2. In a linotype machine, in combination with matrices having more than one character each, a first elevator

having a channel adapted to receive such matrices, and a rail mounted in said elevator and means to retract said rail from said channel in a direction toward but oblique to the motion of the incoming matrices.



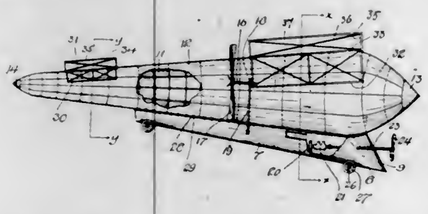
3. In a linotype machine, the combination of a first elevator, a horizontally movable rail carried thereby for supporting matrices at an upper level, and means for positively locking the rail in operative position to receive the next incoming line of matrices.

4. The combination of an elevator adapted to receive matrices assembled in a line at different levels, a shiftable rail adapted to support matrices at an upper level, means operative by the movement of the elevator for retracting said rail, and means also operative by movement of the elevator for positively restoring the rail to operative position.

5. The combination, in a line casting machine, of an elevator adapted to receive matrices assembled in a line at different levels, a shiftable rail adapted to support matrices at an upper level, a yieldable abutment operative to retract said rail when the elevator reaches a predetermined point in its movement, and positive means for restoring the rail to operative position.

[Claims 6 to 8 not printed in the Gazette.]

1,108,830. AERIAL VESSEL. LOJOS BOGNÁR, Whiting, Ind. Filed June 1, 1914. Serial No. 842,094. (Cl. 244—6.)



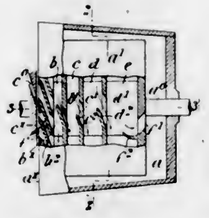
1. An aerial vessel comprising a hull having a pointed prow and being substantially V-shaped in cross section, said hull gradually decreasing in height from its bow to its stern and further having the top thereof gradually decreasing in width from its bow to its stern, a cigar-shaped buoyant body mounted upon and secured to said hull and having the smaller portion thereof projecting rearwardly from the stern of the hull, steadying planes mounted upon and secured to the buoyant body and projecting transversely with respect thereto, driving propellers supported from said body, means for operating said propellers from said hull, steering propellers arranged forwardly of the bow of the hull, and means for driving said steering propellers from said hull.

2. An aerial vessel comprising a hull substantially V-shaped in cross section and having a pointed prow, a buoyant body gradually increasing in diameter from its rear toward its forward end, of greater length than said hull, said body mounted upon and secured to said hull and projecting rearwardly from the stern of the hull, driving propellers supported from said body, steering propellers supported forwardly of said hull, and means arranged in said hull and operatively connected with said driving and steering propellers for operating them.

3. An aerial vessel comprising a hull substantially V-shaped in cross section and having a pointed prow, a buoyant body gradually increasing in diameter from its rear toward its forward end, of greater length than said hull, said body mounted upon and secured to said hull and projecting rearwardly from the stern of the hull, driving propellers supported from said body, steering propellers supported forwardly of said hull, means arranged in said hull and operatively connected with said driving and steering propellers for operating them, and a plurality of steadying planes mounted upon and extending transversely with respect to said body.

4. An aerial vessel comprising a hull substantially V-shaped in cross section and having a pointed prow, a buoyant body gradually increasing in diameter from its rear toward its forward end, of greater length than said hull, said body mounted upon and secured to said hull and projecting rearwardly from the stern of the hull, driving propellers supported from said body, steering propellers supported forwardly of said hull, means arranged in said hull and operatively connected with said driving and steering propellers for operating them, and a plurality of steadying planes mounted upon and extending transversely with respect to said body, said planes arranged one in advance of the other and the forward plane being of greater length than the rear plane.

1,108,831. TURBINE. JULES HIPPOLYTE CORTHÉSY, Barnsbury, London, England. Filed Apr. 29, 1912. Serial No. 693,849. (Cl. 60—4.)



1. A turbine comprising a closed cylindrical chamber which constitutes a rotor, a plurality of inclined passages provided in one end of the said chamber and adapted to direct the motive fluid introduced through the said passages directly against the inner surfaces of the said cylinder to cause the same to rotate in the same direction as that in which the jets of motive fluid are flowing, and means for allowing the escape of the motive fluid so as to prevent the accumulation of pressure in the chamber which would retard the velocity.

2. A turbine comprising a closed cylindrical chamber which constitutes the rotor and which is provided with a plain inner surface, a plurality of inclined passages provided in one end of the said chamber and adapted to direct the motive fluid introduced through the said passages against the inner surface of the said cylinder to cause the same to rotate, means for allowing the escape of the motive fluid, and means for introducing the motive fluid directly into the inclined passages of the rotor without passing through the atmosphere.

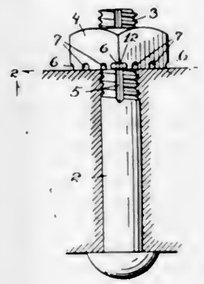
3. A turbine comprising a closed cylindrical casing which constitutes the rotor, a plurality of inclined passages provided in one end of said casing and adapted to direct the motive fluid introduced through the said passages directly against the inner surfaces of the said cylinder to cause the same to rotate in the same direction as that in which the motive fluid is flowing, a plurality of chambers in communication with one another provided in said casing, and means for allowing the escape of the motive fluid.

4. A turbine comprising a closed cylindrical casing which constitutes the rotor, a plurality of inclined passages provided in one end of said casing and adapted to direct the motive fluid introduced through said passages directly against the inner surfaces of the said cylinder to cause the same to rotate in the same direction as that in which the motive fluid is flowing, a plurality of chambers provided in said rotor, said chambers being in communication with one another through oblique passages and being progressively increased in area toward the rotor exhaust, and means for allowing the escape of the motive fluid.

5. A turbine comprising a closed cylindrical casing which constitutes the rotor, a plurality of partitions dividing the casing into a plurality of cylindrical chambers, a plurality of inclined passages provided in one end of said casing and in said partitions adapted to direct the motive fluid introduced through the said passages directly against the inner surfaces of the said cylindrical chambers to cause the same to rotate in the same direction as that in which the motive fluid is flowing, and means for allowing the escape of the motive fluid from the rotor.

[Claims 6 to 10 not printed in the Gazette.]

1,108,832. NUT-LOCK. HENRY TOWNSON CRAVEN, Vineland, N. J. Filed June 4, 1913. Serial No. 771,761. (Cl. 151—5.)



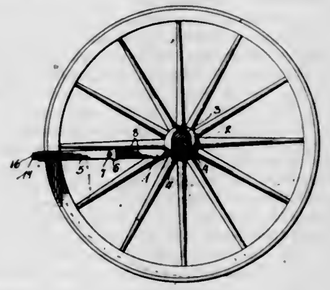
1. A lock-nut for a longitudinally grooved bolt, having in its base a transverse groove and intersecting the same a radial groove having between the transverse groove and the bolt hole an outwardly diverging wall, and between the transverse groove and the exterior of the nut, a corner bearing projecting within the span of said diverging wall.

2. A lock nut for a longitudinally grooved bolt provided with a radial passage, said passage having an outer portion provided with parallel walls and an inner portion provided with an oblique wall and a transverse shoulder between said oblique wall and one of said parallel walls.

3. In a nut lock, the combination with a longitudinally grooved bolt, of a nut having threaded engagement with said bolt and having a radial passage, said passage having an outer portion provided with parallel walls and an inner portion provided with an oblique wall and a transverse shoulder between said oblique wall and one of said parallel walls, and a key having engagement with said passage and the bolt groove and provided with an inner spring end in engagement with said shoulder.

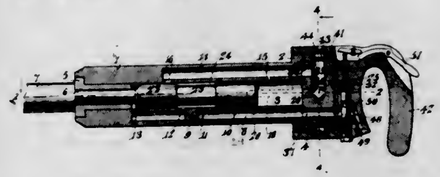
4. In a nut lock, the combination with a longitudinally grooved bolt, of a nut having threaded engagement with said bolt and having a radial passage, said passage having an outer portion provided with parallel walls and an inner portion provided with an oblique wall, a transverse shoulder between said oblique wall and one of said parallel walls, and a cam wall, and a key having an outer portion in close engagement with said parallel walls and an inner spring end in engagement with said shoulder, said key being capable of being turned to bring said spring end in engagement with said cam wall for release.

1,108,833. MUD-GUARD. JAMES CRUES, Moberly, Mo. Filed Aug. 23, 1912. Serial No. 716,732. (Cl. 21—23.)



An attachment for vehicles involving the combination of a supporting arm having a laterally extending end portion provided with a longitudinal slot, means for fastening said arm to a vehicle wheel axle, and a self-adjusting wheel rim straddling cutter having a squared and shouldered shank slidable freely back and forth in said slot and held against rotation thereby, and a shank retaining nut, the shoulder of said shank serving to limit the tightening of the nut for the purpose set forth, whereby the cutter is prevented from tilting relatively to said supporting arm.

1,108,834. PNEUMATIC HAMMER. EMMETT G. DETRICK, Vicksburg, Miss. Filed Sept. 25, 1913. Serial No. 791,803. (Cl. 121—20.)



1. A pneumatic hammer comprising an elongated body member with a longitudinal bore, a live air duct leading into one end of the bore and having its continuity intermediately interrupted and there having ports opening into the bore on each side of the interruption, two other ducts each having a plurality of ports leading into the bore, with one of said two ducts opening constantly to the atmosphere and the other of said two ducts constituting both a live air and an exhaust duct, means responsive to live air pressure for controlling the last-named duct to open and close it to the atmosphere, and a reciprocatory power plunger in the bore controlling certain of the ports opening into the bore.

2. A pneumatic hammer comprising an elongated body member with a longitudinal bore, a live air duct extending longitudinally through the body member and at one end opening into the corresponding end of the bore, said duct having its continuity intermediately interrupted and provided with ports opening into the bore on each side of the interruption, another duct shorter than the first-

named duct and provided with a plurality of ports opening into the bore and said duct also opening constantly to the atmosphere, another duct in the body member having a plurality of ports opening into the bore, a fourth duct extending longitudinally of the body member and communicating with the bore at the end thereof into which the first-named duct leads, and a valve structure located at the opposite end of the body member and there communicating with the third and fourth named ducts, said valve structure being responsive to live air pressure supplied through the said ducts controllable thereby and opening and closing said ducts to the atmosphere.

3. A pneumatic hammer comprising an elongated body member with a longitudinal bore and a live air duct extending longitudinally through the body member and at one end opening into the corresponding end of the bore, said duct having its continuity intermediately interrupted and provided with ports opening into the bore on each side of the interruption, another duct shorter than the first-named duct and provided with a plurality of ports opening into the bore and said duct also opening constantly to the atmosphere, another duct in the body member having a plurality of ports opening into the bore, a fourth duct extending longitudinally of the body member and communicating with the bore at the end thereof into which the first-named duct leads, and a valve structure located at the opposite end of the body member and there communicating with the third and fourth named ducts, said valve structure being responsive to live air pressure supplied through the said ducts controlled thereby and opening and closing said ducts to the atmosphere, the valve structure comprising separate valves and including a duct constantly open to the atmosphere at an intermediate point and provided at opposite sides with oppositely directed valve seats for the valves.

4. A pneumatic hammer having an elongated body member provided with a longitudinal bore and with air ducts leading into the bore and spaced apart to direct air under pressure into opposite ends of the bore, and one of said air ducts also leading to the atmosphere, the body member being provided with an exhaust duct distinct from the other ducts and leading from the bore and open constantly to the atmosphere, a reciprocatory power plunger in the bore constituting a reciprocatory valve for the air and exhaust ducts, and means controlled by live air pressure for in turn controlling the exhaust of air from the bore through the live air duct communicating with the atmosphere.

5. A pneumatic hammer provided with an elongated body member having an elongated bore, and a reciprocatory plunger therein, said body member having air ducts with ports communicating with the bore and controlled by the reciprocatory plunger, certain of the ducts being arranged to receive live air under pressure and direct it against opposite ends of the plunger with one of the live air ducts leading to the atmosphere and another of the ducts serving solely as an exhaust duct, the device being provided with means responsive to air under pressure and arranged to be operated by live air other than that operating the plunger for controlling the exhaust of utilized air.

[Claims 6 to 11 not printed in the Gazette.]

1,108,835. TAG. CLAUDE R. DODGE, Rockford, Ill. Filed Aug. 23, 1912. Serial No. 716,694. (Cl. 40—25.)

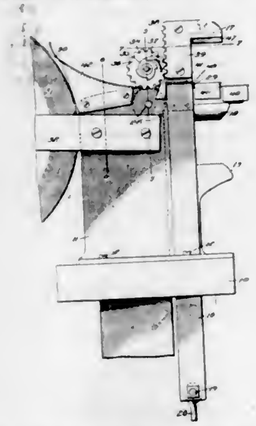


1. A tag comprising a flat body having inner and outer series of spurs struck therefrom, and a covering piece disposed over one face of the body and having opposite ends bent about the end edges of the latter on to the opposite face of said body and engaged with the inner series of spurs, the said outer series of spurs being outwardly bowed and normally concealed between the stretches of the covering piece on both sides of the body and having their free ends directed toward each other, whereby on inwardly depressing the said outer series of spurs they will pass through the covering piece at one side of the body for biting engagement in an article for the fastening of a tag thereto.

2. A tag comprising a blank, spurs struck from said blank near opposite ends thereof and projected intermediate their ends beyond one face of the blank with the free ends of the spurs normally flush with the surfaces of the said blank, and a covering for the blank completely inclosing the said blank and spurs.

3. A tag comprising a blank, spurs struck from said blank and projecting intermediate their ends beyond one face of the blank with the free ends of each spur normally flush with the faces of the blank, and a covering for the blank completely inclosing the same and the spurs.

1,108,836. TAG FORMER AND AFFIXER. CLAUDE R. DODGE, St. George, Utah. Filed Aug. 19, 1913. Serial No. 785,554. (Cl. 113—1.)



1. A tag forming and affixing machine comprising a frame, superposed feed rollers journaled on the frame and between which is adapted to be fed a tag tape, a reciprocating plunger mounted on the frame, a hammer formed on the plunger, an anvil carried by the frame and projected below the hammer, a tag forming rail projecting outwardly from the frame into operative relation to the plunger, means for guiding such tape onto the tag forming rail, means on the plunger for bending successively tags into U-shape from the tape about the said rail, and means carried by the plunger and acting upon the bent tags for singly severing the same from the tape.

2. A tag forming and affixing machine comprising a frame, superposed feed rollers journaled on the frame and between which is adapted to be fed a tag tape, a reciprocating plunger mounted on the frame, a hammer formed on the plunger, an anvil carried by the frame and projected below the hammer, a tag forming rail projecting outwardly from the frame into operative relation to the plunger, means for guiding such tape onto the tag forming rail, means on the plunger for bending successively tags into U-shape from the tape about the said rail, means carried by the plunger and acting upon the bent tags for singly severing the same from the tape, and means on the plunger and acting upon one of the feed rollers for intermittently moving the same when the plunger is shifted in one direction.

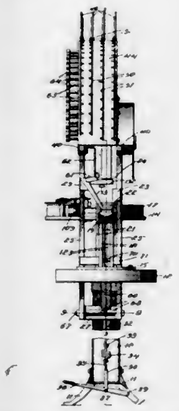
3. A tag forming and affixing machine comprising a frame, superposed feed rollers journaled on the frame and between which is adapted to be fed a tag tape, a reciprocating plunger mounted on the frame, a hammer formed on the plunger, an anvil carried by the frame and projected below the hammer, a tag forming rail projecting outwardly from the frame into operative relation to the plunger, means for guiding such tape onto the tag forming rail, means on the plunger for bending successively tags into U-shape from the tape about the said rail, means carried by the plunger and acting upon the bent tags for singly severing the same from the tape, means on the plunger and acting upon one of the feed rollers for intermittently moving the same when the plunger is shifted in one direction, means for moving the plunger to normal position, and means for guiding the tape between the feed rollers.

4. A tag forming and affixing machine comprising a frame, superposed feed rollers journaled on the frame and between which is adapted to be fed a tag tape, a reciprocating plunger mounted on the frame, a hammer formed on the plunger, an anvil carried by the frame and projected below the hammer, a tag forming rail projecting outwardly from the frame into operative relation to the plunger, means for guiding such tape onto the tag forming rail, means on the plunger for bending successively tags into U-shape from the tape about the said rail, means carried by the plunger and acting upon the bent tags for singly severing the same from the tape, means on the plunger and acting upon one of the feed rollers for intermittently moving the same when the pluger is shifted in one direction, means for moving the pluuger to normal position, and means for guiding the tape between the feed rollers.

5. A tag forming and affixing machine comprising a frame, superposed feed rollers journaled on the frame and between which is adapted to be fed a tag tape, a reciprocating plunger mounted on the frame, a hammer formed on the plunger, an anvil carried by the frame and projected below the hammer, a tag forming rail projecting outwardly from the frame into operative relation to the plunger, means for guiding such tape onto the tag forming rail, means on the plunger for bending successively tags into U-shape from the tape about the said rail, means carried by the plunger and acting upon the bent tags for singly severing the same from the tape, means on the plunger and acting upon one of the feed rollers for intermittently moving the same when the plunger is shifted in one direction, means for moving the plunger to normal position, means for guiding the tape between the feed rollers, and tag bending means carried by the plunger and acting upon the tags of the tape to bend the same about the tag forming rails when the plunger is moved from normal position.

[Claims 6 to 9 not printed in the Gazette.]

1,108,837. COMBINED TAG AFFIXING AND MARKING MACHINE. CLAUDE R. DODGE, St. George, Utah. Filed Oct. 14, 1913. Serial No. 795,158. (Cl. 93—87.)



1. In a machine of the class described, the combination with a support for the tag, of a tag feeding mechanism, a movable tag clamping mechanism, printing mechanism movable toward and away from the said support, tag bending mechanism operative upon the tag feeding mechanism, means coöperative with the tag bending mechanism for severing a tag subsequent to the bending thereof, and mechanism common to the tag bending mechanism, printing mechanism and the clamping mechanism for simultaneously imparting motion to the same for the successive operation thereof.

2. In a machine of the class described, the combination with a support for the tag, of a tag feeding mechanism, a movable tag clamping mechanism, printing mechanism movable toward and away from the said support, tag bending mechanism operative upon the tag feeding mechanism, means coöperative with the tag bending mechanism for severing a tag subsequent to the bending thereof, mechanism common to the tag bending mechanism, printing mechanism and the clamping mechanism for simultaneously imparting motion to the same for the successive operation thereof, and means for guiding the tags to the feeding mechanism.

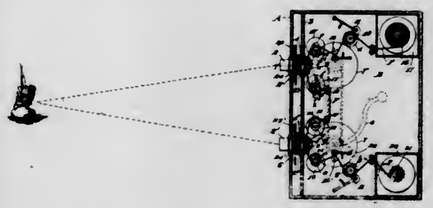
3. In a machine of the class described, the combination with a support for the tag, of a tag feeding mechanism, a movable tag clamping mechanism, printing mechanism movable toward and away from the said support, tag bending mechanism operative upon the tag feeding mechanism, means coöperative with the tag bending mechanism for severing a tag subsequent to the bending thereof, mechanism common to the tag bending mechanism, printing mechanism and the clamping mechanism for simultaneously imparting motion to the same for the successive operation thereof, means for guiding the tags to the feeding mechanism, and means for freeing the tag feeding mechanism on the forward movement of the tag bending mechanism.

4. In a machine of the class described, the combination with a support for the tags, of mechanism movable toward and away from the support for bending said tags, a cutter carried by said mechanism and adapted to sever the tags successively after the bending thereof, mechanism for feeding the tags into the path of the tag bending mechanism, and mechanism successively operated for first clamping a tag to an article and subsequently marking the same.

5. In a machine of the class described, the combination with a support for the tags, of mechanism movable toward and away from the support for bending said tags, a cutter carried by said mechanism and adapted to sever the tags successively after the bending thereof, mechanism for feeding the tags into the path of the tag-bending mechanism, mechanism successively operated for first clamping a tag to an article and subsequently marking the same, and mechanism for successively operating the tag feeding mechanism, clamping mechanism and marking mechanism.

[Claims 6 to 48 not printed in the Gazette.]

1,108,838. MOVING-PICTURE MACHINE. VICTOR L. DUHEM, Oakland, Cal., assignor to Vim Motion Picture Company, a Corporation of California. Filed May 15, 1911. Serial No. 627,216. (Cl. 88—16.4.)



1. In an apparatus for the production of motion pictures in color, the combination with a pair of superposed spaced lenses, shutters therefor, and color screens adjacent to the shutters, of a pair of disks adjacent to each color screen, means for rotating said disks in unison, a

film engaging wheel eccentrically mounted on each of said disks, said wheels so arranged in relation to each other that the wheels on the upper pair of disks will be below the axis thereof when the wheels on the lower pair of disks will be above the axis thereof, and means for directing a single film to and from said wheels.

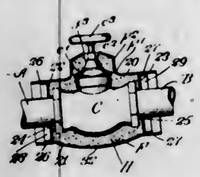
2. In an apparatus for the production of motion pictures in color, the combination with a pair of superposed lenses, color screens behind the lenses and shutters interposed between the screens and lenses, of a pair of spaced gear wheels, means for rotating said gear wheels in unison, means for operating the shutter from said gear wheels, a pair of disks geared to each of said gear wheels, a film engaging wheel eccentrically mounted on each of said disks, arranged with the wheels on one pair of disks on corresponding sides of its axes, and with the wheels on the other pair of disks on the sides thereof opposite thereto, means for directing a single film to and from said wheels, and means controlled by one of the spaced gears for winding the film.

1,108,839. RAZOR ATTACHMENT. JOSEPH W. FOLEY, Ottawa, Ontario, Canada. Filed Nov. 29, 1912. Serial No. 734,184. (Cl. 30—12.)



A razor attachment comprising, in combination with a razor blade having a continuous flat edge and transversely concave sides merging into the edges of said flat edge, a resilient member fitting the blade and consisting of a single length of material bent upon itself to provide relatively springy face engaging members co-extensive with the length of the blade, and a flat crown overlying and engaging the flat edge, concaved impinging members extending upwardly from the lower edges of the face engaging members co-extensive in length therewith, the said impinging members fitting into the concavities in the sides of the blade for the major portion of the width of the blade, and each having its lower edge gradually merging into the lower edge of the adjacent face engaging member whereby to provide a relatively broad lower edge to engage against the face of the operator.

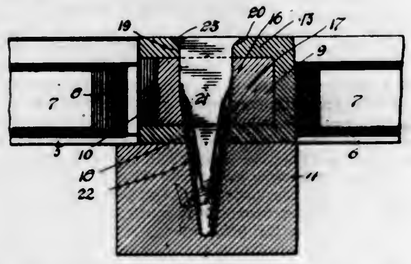
1,108,840. REMOVABLE VALVE-INSULATION CASING. FREDERICK W. FRANKE, Jamaica, N. Y., assignor of one-third to Matthew P. Van Ness and one-third to Ernest A. Weidlich, Jr., Jamaica, N. Y. Filed Oct. 19, 1912. Serial No. 726,597. (Cl. 154—44.)



1. A casing of the class described formed of a pair of sections divided from each other longitudinally approximately along the median line of the casing, each of said sections comprising an outer wall and internal solid partitions, said partitions having recesses to receive the pipe and being spaced from each other and set back from the extremities of the casing, whereby outwardly open pockets at the ends of the casing and a single chamber between said pockets are provided, the chamber being adapted to receive coupling packing, said chamber being independent of and separate from the adjoining pockets which latter are adapted to receive pipe covering, said casing also having means for securing its sections together, said means being adapted to permit the casing to be readily opened along the line of separation of the sections.

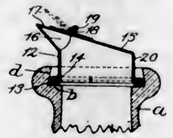
2. A casing of the class described, consisting of a cylindrical member and end members secured to the cylindrical member and spaced inwardly from its ends to form the outwardly opening pockets, and a central separate and independent chamber, each end member being provided with an opening therein for the pipe, the casing being divided approximately along its median line whereby it is formed of two approximately equal sections, one of the sections being provided with a dome, with an opening therein, and the other section being provided with a drain opening, means for securing the two sections together, the central chamber being adapted to receive an insulating material and the pockets to receive the pipe covering.

1,108,841. RAIL-JOINT. MICHAEL G. HELM, Streeter, N. D. Filed Oct. 30, 1913. Serial No. 798,303. (Cl. 239—8.)



A rail joint comprising the combination with a pair of opposing rails, one of which being provided with a pocket and the other with a tongue, the said tongue extending into said pocket, and a fastener member extending down through the head and base of one rail and through said tongue and being adapted to engage in a tie for connecting together the opposite ends of the rails and securing the same to the tie, said fastening member having its head countersunk in the head of said rail and its lower portion formed substantially wedge-shape.

1,108,842. MILK-BOTTLE STOPPER. ALFRED HOPKINS, Boston, Mass., assignor to Innovation Specialty Company, a Copartnership consisting of Alfred Hopkins, Samuel Simons, and John G. MacIntire, Boston, Mass. Filed May 22, 1913. Serial No. 769,261. (Cl. 215—34.)

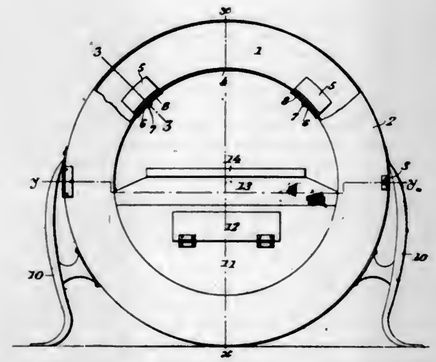


1. A bottle stopper consisting of two metallic members, a hinge and a packing, one of said members comprising a cylindrical body having at one end an integral outwardly projecting flange and having at the other end a laterally extending inclined head to restrict the outflow, a portion of the body being extended at one side to form a spout, the other member comprising a lid for the spout, said lid having a hinged connection with the head, the packing being carried by said flange.

2. A bottle stopper consisting of two metallic members, a hinge and a packing, one of said members comprising a cylindrical body having at one end an integral outwardly projecting flange and having at the other end a laterally extending head to restrict the outflow, a portion of the body being extended at one side to form a spout, the other member comprising a lid for the spout, said lid having a hinged connection with the head, and an elastic band fitted over the upper and lower surfaces and the outer edge of the flange of the body to provide a packing.

3. A bottle stopper consisting of two metallic members, a hinge and a packing, one of said members comprising a cylindrical body having at one end an integral outwardly projecting flange and having at the other end a laterally extending head to restrict the outflow, a portion of the body being extended at one side to form a spout, the other member comprising a lid for the spout, said lid having a hinged connection with the head, and an elastic band fitted over the upper and lower surfaces and the outer edge of the flange of the body to provide a packing, the body having an air inlet out of the path of liquid escaping through the pouring orifice.

1,108,843. TIRE-HOLDER. RUDOLPH A. HRUBY, Cleveland, Ohio. Filed Mar. 18, 1914. Serial No. 825,615 (Cl. 150—54.)



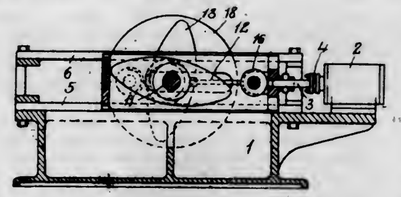
1. A tire holder comprising an annular casing closed upon three sides and embodying inner and outer concentric walls and a back, a door of annular shape for closing the front of the casing, and slides arranged within the casing and formed with crimps or depressions constituting seats to receive the tire.

2. A tire holder comprising an annular casing closed upon three sides and embodying inner and outer concentric walls and a back, a door of annular shape for closing the front of the casing, and slides mounted within the casing, each of such slides embodying a plurality of crimps or depressions forming seats to receive a number of tires and hold the same separated.

3. A tire holder comprsing an annular casing closed upon three sides and embodying inner and outer concentric walls and a back, a door of annular shape for closing the front of the casing, the inner wall of the casing having transverse slots, spacers arranged to operate within the casing and comprising inner and outer parts arranged in line with the transverse slots and covering the same, and fastenings connecting the inner and outer parts of the spacers and operating in the said transverse slots.

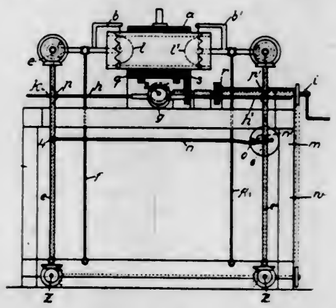
1,108,844. MECHANICAL MOVEMENT. HERMAN F. JACOBS, Natick, Mass. Filed Nov. 26, 1909. Serial No. 529,886. (Cl. 74—1.)

1. A mechanical movement comprising a reciprocating cross-head frame, means for reciprocating said cross-head frame, a transverse shaft between the ends of said cross-head frame, a pair of diametrically opposite arms projecting perpendicularly from said shaft in the line of thrust of said cross-head reciprocating means, two pairs of arms quartering with said first pair of arms secured to said shaft at equal distances on each side of such line of thrust, and antifriction means carried by said cross-head frame arranged to bear on said arms oppositely during opposite reciprocations of the cross-head.



2. A mechanical movement comprising a reciprocating cross-head frame, guides for said frame, a shaft crossing the frame perpendicular to the direction of movement thereof, a pair of oppositely projecting arms on the shaft in the line of thrust applied by the frame, an engaging element on the frame in the same line arranged to bear on the sides of the arms on successive strokes in one direction, two pairs of oppositely projecting arms at right angles to the first-named pair fixed to the shaft at equal distances on each side of the line of thrust, and engaging elements carried by the frames in line with said two pairs of arms respectively, and on the opposite side of the shaft from the first-named engaging member.

1,108,845. MACHINE FOR CUTTING THE ENDS OF CLAY PIPES IN AN UNDULATING LINE. JENS K. JENSEN, Klitzow, Pomerania, Germany. Filed Jan. 27, 1914. Serial No. 814,772. (Cl. 25—105.)



1. A machine for cutting the ends of pipes in an undulating line, comprising a reciprocable carriage for the pipes, means for holding the pipes thereon, cutting frames arranged in pairs, one on each side of said carriage, means for revolving the cutter frames around the axes of the respective pipes, an eccentric adapted to reciprocate said frames axially to said pipes, and means for moving said frames into and out of operative position.

2. A machine for cutting the ends of pipes in undulating lines, comprising a reciprocable carriage for the pipes, means for holding the pipes thereon, cutter frames arranged in pairs, one on each side of said carriage, driving gears for revolving said frames around the axes of the respective pipes, oscillatory, parallel guided supports for said gears and frames, and means for swinging said supports to reciprocate the gears and frames axially of the pipes.

3. A machine for cutting the ends of pipes in undulating lines, comprising a reciprocable carriage for the pipes, means for holding the pipes thereon, cutter frames arranged in pairs, one on each side of said carriage, driving gears for revolving said frames around the axes of the respective pipes, oscillatory, parallel guided supports for said gears and frames, means for swinging said supports

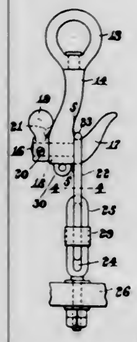
to reciprocate the gears and frames axially of the pipes, and means for moving the frame into and out of operative position.

4. A machine for cutting the ends of pipes in undulating lines, comprising a reciprocable carriage for the pipes, means for holding the pipes thereon, cutter frames arranged in pairs, one on each side of said carriage, driving gears operated by a common shaft for revolving said frames around the axes of the respective pipes, oscillatory, parallel guided supports for said gears and frames, an eccentric, rods connecting the latter with the supports and adapted to reciprocate the frames axially of the pipes, and means for moving the supports independently of said rods to permit the movement of the carriage.

5. A machine for cutting the ends of pipes in an undulating line, comprising a carriage for the pipes, a driving shaft, means operated by the latter for reciprocating the carriage, cutting frames arranged in pairs, one on each side of said carriage, parallel swinging supports for said frames, driving mechanism coupled with said supports adapted to revolve the frames around the axes of the respective pipes, an eccentric driven from the driving shaft adapted to reciprocate the frames axially to the pipes, means for moving the frames into and out of operative position, and holders pivoted to the machine frame and slidably connected to the carriage adapted to hold the pipes during the cutting operation.

[Claim 6 not printed in the Gazette.]

1,108,846. ATTACHMENT FOR LIFE-BOATS. CHARLES H. LANGILL, East Boston, Mass. Filed June 27, 1913. Serial No. 776,177. (Cl. 9—23.)

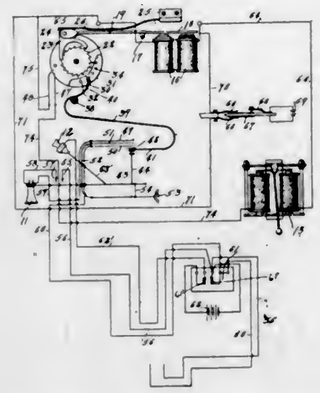


1. In a device of the class described, the combination of a supported member having a bearing in its lower end perpendicular to the line of support; a hook member having a shank positioned in said bearing in which it is adapted to oscillate and provided with a flat link-engaging surface adapted when sustaining a weight to retain said hook in engaging position; and a weight on the end of said shank at one side of the plane of said supported member and said hook when in engaging position.

2. In a device of the class described, the combination of a supporting hook adapted to be retained in supporting position by the load thereon and having a shank in the same plane therewith; a weight on said shank to move said hook into releasing position when the load is removed from said hook; a load supporting member; and a link movable lengthwise thereof adapted to engage said hook, said link being provided near its lower end with a ring surrounding said load supporting member.

3. In a device of the class described, the combination of a supporting hook adapted to be retained in supporting position by the load thereon and having a flat surface perpendicular to the plane of said hook; a weight to move said hook into releasing position when the load is removed from said hook; a load supporting member; and a link movable lengthwise thereof having a straight end adapted to engage the flat surface of said hook.

1,108,847. RINGER AND SECRET-SERVICE DEVICE. JOHN G. NEFF and CHARLES A. NEFF, Davey, Nebr. Filed June 2, 1909. Serial No. 499,644. (Cl. 179—30.)



1. In a device of the kind described, a series of telephones, a step by step mechanism for each of said telephones, a common normally open circuit for all of said step by step mechanisms, a central station, means at said central station to close all of said step by step mechanisms, means actuated by the several step by step mechanisms to close the signal circuit successively at the several telephones, talking circuit closing elements at each of said telephones, and means at each of said telephones operable by said step by step mechanisms to successively place said circuit closing elements in operative position.

2. In a device of the kind described, a series of telephones, a transmitter fork at each of said telephones, a step by step mechanism for each of said telephones, a common normally open circuit for all of said mechanism, a central station, means at said central station to close the circuit through all of said step by step mechanisms, means actuated by the several step by step mechanisms to close the signal circuit successively at the several telephones, a talking circuit closing element supported on said receiver fork, a second talking circuit closing element movable into and out of operative relation to the first element at each of said telephones, and means at each of said telephones operable by said step by step mechanisms to successively place the second element in operative relation to the first and permit the closing of said talking circuit successively at the several telephones.

3. In a device of the kind described, a series of telephones each provided with a receiver fork, a step by step mechanism for each of said telephones, a common normally open circuit for all of said step by step mechanisms, a central station, means at said central station to simultaneously close the circuit through all of said step by step mechanisms, a shaft rotated by said step by step mechanisms, a disk on said shaft, a pin projecting from said disk, a circuit closer in the path of and operable by each of said pins, said circuit closers forming a part of said signal circuit, said pins being displaced in step by step relation around the several disks to successively close the signal circuit at the successive telephones, a talking circuit closing element carried by each of said receiver forks, a second talking circuit closing element at each of said telephones movable into operative relation to the first mentioned talking circuit closing element and means at each of said telephones operable by said step by step mechanisms to successively place the second talking circuit elements in operative position with relation to the first talking circuit closing elements.

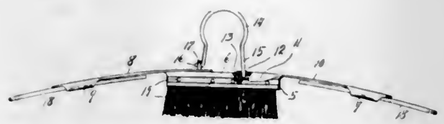
4. In a device of the kind described, a series of telephones each provided with a receiver fork, a step by step mechanism for each of said telephones, a common normally open circuit for all of said step by step mechanisms, a

central station, means at said central station to simultaneously close all of said step by step mechanisms, a shaft rotated by said step by step mechanisms, a disk on said shaft, a pin projecting from said disk, a circuit closer in the path of and operable by each of said pins, said circuit closers forming a part of said signal circuit, said pins being displaced in step by step relation around the several disks to successively close the signal circuit at the successive telephones, a talking circuit closing element carried by each of said receiver forks, a second talking circuit closing element at each of said telephones movable into operative relation to the first mentioned talking circuit closing element, a second disk carried by and rotating with said shaft, a pin on said second disk normally holding the second element in operative relation to the first element, a second pin carried by said second disk, each of said second pins being in stepped relation successively throughout the several telephones, and means supporting the second circuit closing element at each of said telephones adapted to move the same into operative relation with the first circuit closing element, said means being arranged to be simultaneously freed from all of the first mentioned pins and successively struck by the second mentioned pins of the successive telephones.

5. In a device of the kind described, an electrically actuated step by step mechanism, a shaft rotated thereby, a disk rigidly mounted on said shaft provided with a series of openings concentrically arranged thereabout, a circuit closing element, means for supporting the same, a pin projecting from said disk normally in contact with said means, a second disk slidably and rotatably held upon said shaft, a pin fixed on said second disk adapted to be projected through one of said openings, and a spring normally forcing the second disk toward the first.

[Claim 6 not printed in the Gazette.]

1,108,848. CLOTHES BRUSH AND HANGER. KUMAJIRO OKUBO, Denver, Colo. Filed Sept. 16, 1913. Serial No. 790,101. (Cl. 211—13.)



1. A clothes hanger comprising a central member, a suspending means attached to said central member, two diametrically opposed arms extending in a substantially horizontal direction from said central member and two other arms removably mounted upon the central member and extending horizontally therefrom upon one side of the first mentioned arms, the second named arms being so arranged as to form equal angles between each pair of adjacent arms.

2. A clothes hanger comprising a central member, two horizontally arranged arms extending outwardly from said central member in diametrically opposed directions, removable extensions slidably mounted upon the extremities of said arms, and means for removably mounting said extensions upon said central member.

3. In combination, a central member, suspending means removably attached to the back of said member, an arm extending longitudinally from one end of the back of said member to which it is fixed, and a second arm removably mounted upon the back of said member to extend in a direction diametrically opposed to that of the first arm, said second named arm being also adapted to be removably mounted upon the central member above said fixed arm.

4. In combination, a central member, means for suspending the same, and arms extending longitudinally from either end of said member to constitute a clothes hanger, at least one of said arms being removable, and adapted to be removably mounted upon the central member above the other arm, for the purpose set forth.

5. In combination, a central member, arms extending longitudinally from either end of said member to constitute a clothes hanger, the central member and one of said arms having registering perforations, and means for suspending the hanger, one extremity of which enters said perforations for securing the last named arm in place.

[Claim 6 not printed in the Gazette.]

1,108,849. METHOD OF PRODUCTION OF HALF-TONES. JOHN V. RANCK, Brooklyn, N. Y., assignor to Powers Photo Engraving Company, a Corporation of New York. Filed Apr. 14, 1913. Serial No. 761,119. (Cl. 95—5.)



1. The method of obtaining half-tone reproductions devoid of dots in the high lights, which comprises producing an original having high lights of pronounced high actinic value and its lower lights of pronounced low actinic value, and photographing such original through a screen onto a sensitized surface for a period of time sufficient to take such lower lights correctly and to eliminate the dots in the high lights of the negative by overexposure.

2. The method of obtaining half-tone reproductions devoid of dots in the high lights, which comprises coating an original positive with a transparent substance of relatively low actinic value, applying non-transparent coatings of high actinic value over the relatively non-actinic coating when clear high lights are desired, and photographing the original thus prepared through a screen onto a sensitized surface with an exposure determined with reference to the portion of the original covered by the first coating outside of such high light portions.

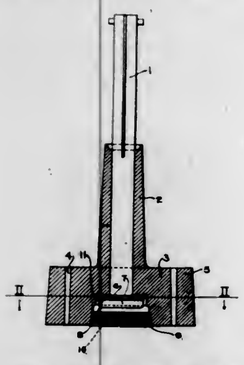
3. The method of obtaining half-tone reproductions devoid of dots in the high lights, which comprises coating the high lights of an original with a white substance of high actinic value and the lower lights with a yellow substance of low actinic value, and photographing the original thus prepared through a screen onto a sensitized surface for a period of time sufficient to correctly expose the principal features and to overexpose the high lights to an extent which causes the dots to disappear.

4. The method of obtaining half-tone reproductions devoid of dots in the high lights, which comprises lowering the low lights or principal features of an original and reinforcing the high lights, and photographing the original thus prepared through a screen onto a sensitized surface for a period of time sufficient to correctly expose the principal features and to overexpose the high lights to an extent which causes the dots to disappear.

1,108,850. CRUSHING-ROLLER. JAMES C. REID, Bluefields, Nicaragua, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Sept. 3, 1910. Serial No. 580,324. (Cl. 83—45.)

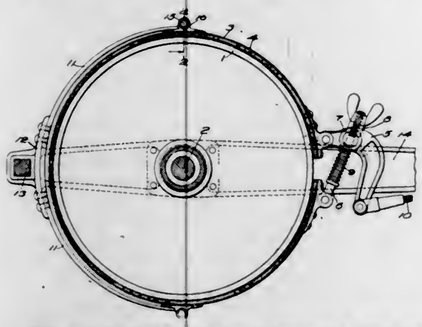
1. In a crushing roller, a shaft having an enlarged end, a roller head having a cavity and a through bore for re-

ceiving said enlarged end and shaft, said cavity being screw-threaded, and a solid tapered screw-threaded plug for closing said cavity, said plug having means for screwing same into said head and the outer surface of said plug when screwed home being substantially flush with the bottom of said roller head, and said screwing means lying entirely within said outer surface of said plug.



2. In a crushing roller, a shaft having an enlarged end, a roller head having a cavity for receiving said enlarged shaft end, a bearing plate between said roller head and said shaft end, said head and said bearing plate being formed for locking said bearing plate to said head, and a solid screw-threaded plug for closing said cavity in said head, said plug having means for screwing same into said head and the outer surface of said plug being substantially flush with the bottom of said roller head, and said screwing means lying entirely within said outer surface of said plug.

1,108,851. BAND-BRAKE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Aug. 30, 1911. Serial No. 646,778. (Cl. 74—37.)



1. The combination with a brake drum of a band brake encircling the same, means engaging the ends of the band for clasping the same about the drum, and intermediate band freeing means comprising a member in the form of a leaf spring fixed at its middle at a point substantially 180° from the ends of the band and curved to embrace the band for substantially its semi-circumference, the ends of the spring being connected to the band and the intermediate part thereof being detached therefrom.

2. The combination with a brake drum of a band brake encircling the same, band clasping means, and intermediate band attachment means comprising a curved spring member encircling substantially one-half of the band and having its ends connected thereto, said spring member being secured to a fixed support at an intermediate point.

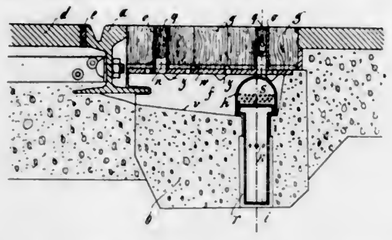
3. The combination with a brake drum of a band brake encircling the same, band clasping means, and band freeing means comprising a fixed support intermediate the ends of the band, a curved resilient member secured to said support but extending therefrom to partly encircle the band, said support being attached to said band to free the latter when unclasped.

4. The combination with a brake drum 1 of the band brake 4, the resilient arm 11 having the connection 15—16 to the brake band, and the fixed support 13.

5. The combination with a brake drum of a band brake encircling the same, band-clasping means, and means connected to two separated points of the band to free the intermediate part thereof from the drum, said means comprising resilient members having each a fixed end and a connection to the band and serving as the anchor or support for the band.

[Claim 6 not printed in the Gazette.]

1,108,852. DRAINAGE PLANT FOR ROAD-BEDS. KARL SCHEUERMANN, Wiesbaden, Germany. Filed Apr. 8, 1914. Serial No. 830,362. (Cl. 61—9.)



1. In a drainage plant for road-beds containing tracks, the combination of chambers having inclined bottoms and removable covers on the outside of the rails and arranged beneath the surface of the road, and troughs in the bedding of the road on the outside of the rails, and opening into the said chambers.

2. In drainage plants for road-beds containing tracks, the combination of chambers having inclined bottoms, clarifying pots at the outer ends of said chambers and having their inlets above said inclined bottoms, and troughs in the concrete bedding having grooved passages lead to the chambers.

3. In drainage plants for road-beds containing tracks, the combination of chambers beneath the road-bed, removable clarifying pots in the chambers and provided with outlet holes in the middle of their side walls, and caps on said pots having inlet openings situated above the bottoms of the said chambers.

4. In drainage plants for road-beds containing tracks, the combination of chambers having removable cover plates beneath the road-bed, a removable wood paving supported by said plates, and troughs formed with grooves leading to the chambers.

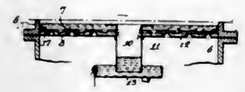
5. In drainage plants for road-beds containing tracks, the combination of chambers beneath the road-bed, removable, grooved cover plates over said chambers, asphalt plates carried by said cover plates, and troughs having small passages leading to said chambers.

[Claim 6 not printed in the Gazette.]

1,108,853. APPARATUS FOR SCRUBBING OR SIMILARLY TREATING LIQUIDS AND GASES. BENJAMIN F. BROOKE SEWELL, Washington, D. C. Filed Oct. 21, 1910. Serial No. 588,339. (Cl. 195—13.)

1. In apparatus for the treatment of gases or vapor by means of liquids flowing countercurrent to the direction of movement of said gases or vapors, means for maintaining layers of liquid of suitable depth disposed at intervals throughout the apparatus, said means comprising a pair of perforated burred plates arranged in parallel opposing

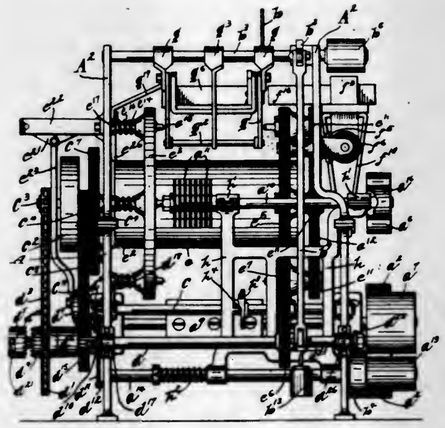
relation and with the burs of one plate projecting toward those of the other plate, and in staggered relation thereto to form a liquid seal.



2. In a fractionating column, the combination with a plurality of sections suitably connected together, of pan-like elements carried by said sections supporting bodies of liquid, said elements comprising a pair of horizontal, opposed perforated plates having burs surrounding the perforations, the burs of one plate extending toward those of the other plate and projecting into the spaces between adjacent burs of said other plate to form a liquid seal.

3. In a fractionating column, the combination with a plurality of sections suitably connected together, of pan-like elements carried by said sections supporting bodies of liquid, said elements comprising a pair of horizontal, opposed perforated plates having burs surrounding the perforations, the burs of one plate extending toward those of the other plate and projecting into the spaces between adjacent burs of said other plate to form a liquid seal, and a foraminous plate submerged within said liquid for distributing over a large liquid reaction area the vapor bubbles passing said liquid seal.

1,108,854. WOODWORKING-MACHINE. CHARLES C. SHEELEY, Harshman, and FREDRICK J. GRUENEWALD, Dayton, Ohio. Filed July 26, 1909. Serial No. 509,552. (Cl. 142—5.)



1. In a many spindle lathe, comprising a carrier, driving mechanism for said carrier, means for automatically engaging said mechanism with said carrier, and means operated by the carrier for disengaging said mechanism, substantially as specified.

2. In a many spindle lathe, a carrier, continuously rotating cutting tools coöperating with said carrier, driving mechanism for said carrier, means for automatically engaging said driving mechanism with said carrier, and means operated by said carrier for disengaging said mechanism at predetermined points determined by the position of said tools, substantially as specified.

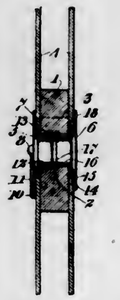
3. In a many spindle lathe, a rotatable carrier, a series of cutting tools coöperating therewith, a series of work engaging devices on said carrier, driving mechanism for said carrier, means for automatically throwing said driving mechanism into engagement with said carrier, and means operated by said carrier for throwing said driving mechanism out of engagement therewith when said devices have reached the point determined by the position of said cutting tools, substantially as specified.

4. In a many spindle lathe, a rotatable carrier, a series of cutting tools arranged about said carrier, a shaft having a driving engagement with said carrier, continuously rotating driving mechanism for said shaft, means for automatically throwing said mechanism into engagement with said shaft, and means operated by said carrier to disengage said mechanism from said shaft to cause said carrier to be intermittently stopped at a point to permit said work engaging device to coöperate with said cutting tools, substantially as specified.

5. In a many spindle lathe, a rotatable carrier, work engaging devices thereon, cutting tools arranged about said carrier, a shaft having a driving engagement with said carrier, driving mechanism for said shaft, said mechanism comprising a continuously rotating sprocket-wheel on said shaft, clutch faces on said shaft and sprocket-wheel, means for automatically throwing and holding said clutch faces into engagement, and means operated by the carrier for causing the disengagement of said clutch faces when said work engaging devices have reached a point co-incident with said cutting tools, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,108,855. REEL-FIXTURE. ERNEST D. SIMONS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Jan. 12, 1914. Serial No. 811,637. (Cl. 242—70.)



1. A reel fixture, adapted to connect the winding spool and the sides of a reel for packaging narrow fabrics and permit the winding and unwinding of such fabrics on such reel, comprising similar eyelet-like parts or members, each having a flange or head and a barrel provided with laterally extending teeth adapted to be expanded into permanent engagement with the spool.

2. A reel fixture, adapted to connect the winding spool and the sides of a reel for packaging narrow fabrics and permit the winding and unwinding of such fabrics on such reel, comprising similar eyelet-like parts or members, each having a flange or head and a barrel provided with laterally extending teeth adapted to be expanded into permanent engagement with the spool, and an operating medium applied to one of the members.

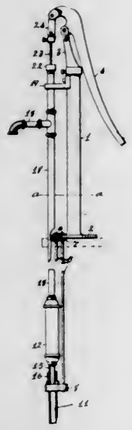
3. A reel fixture, comprising similar eyelet-like parts or members, each having a flange or head and a tapering barrel provided with laterally extending teeth, combined with a spool, the barrels adapted to be expanded so as to embed their teeth permanently in the spool to effect the application of the fixture to the reel.

4. The combination with the sides and an interposed spool provided with alined holes, of a reel fixture composed of similar eyelet-like parts having barrels provided with laterally extending teeth permanently forced into the wall surrounding the hole in the spool, and exterior flanges engaging the sides.

5. The combination with the sides and an interposed spool provided with alined holes, of a reel fixture composed of similar eyelet-like parts having exterior flanges engaging the sides and longitudinally tapering barrels terminating in laterally projecting teeth, these barrels inserted in the hole in the spool at opposite ends and expanded therein to thereby drive their teeth permanently into the wall of the hole and thus unite the sides, spool and eyelet-like parts.

[Claim 6 not printed in the Gazette.]

1,108,856. PUMP FOR WELLS. GEORGE H. ALBEE, Neenah, Wis. Filed Aug. 14, 1913. Serial No. 784,738. (Cl. 103—53.)

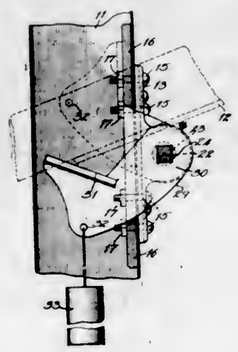


1. A pump consisting of a suitable pump stand having a flange at its lower end adapted to be secured to the platform of a well, a pump handle pivotally mounted upon the upper end of the stand, one or more rods connected with said stand adapted for insertion into a well and to extend downward the required distance therein, a suction pipe holding arm connected with the lower end of each rod and extending at right angles therefrom a short distance, a suction pipe inserted through and depending from said arm extension and adapted to be extended into the water of the well, a pump cylinder connected with said suction pipe having a piston and check valve therein, a pipe extending upward from said cylinder above the pump stand flange to near the top of the stand, a delivery spout below the upper end of said pipe, a rod connected with said piston valve and extending upward through said pipe and being connected with said pump handle, said cylinder at its lower end above said arm extension, having a slip joint connection with the suction pipe aforesaid, and its upward extending delivery pipe being connected to the pump stand with a suitable connecting arm and a bolt, the construction being such, that by uncoupling its valve rod from the pump handle and removing said bolt, the delivery pipe, the cylinder and its valves can be lifted from its slip joint connection and removed from the well, without disturbing the position of the pump stand and suction pipe.

2. A pump consisting of a suitable pump stand having a flange at its lower end adapted to be secured to the platform of a well, a pump handle pivotally mounted upon the upper end of the stand, a plurality of rods connected with said pump stand adapted for insertion into a well and to extend downward therein the required distance, a suction pipe holding arm connected with the lower end of each rod and extending at right angles therefrom a short distance, a suction pipe inserted into and depending from said arm extension and adapted to extend into the water of the well, one member of a pipe slip joint connection inserted into said arm extension and forming a continuation of said suction pipe, a pump cylinder having upon its lower end the other member of the aforesaid slip joint connection, connecting it with the suction pipe, and having the usual piston and check valves therein, a pipe extending upward from the upper end of the cylinder above the pump stand flange to near the upper end of the pump stand, a delivery spout below the upper end of said pipe, means for securing said pipe at a point above the delivery spout to the pump stand, a rod connected with said piston valve and extending upward through said delivery pipe and being connected with said pump handle, two of the aforesaid suction pipe arm supporting rods being spaced apart a less distance than the outside diameter of said cylinder and arranged in position for acting as guides in inserting one member of said slip joint connection into the other after the suction pipe has been suspended in a well.

3. A pump consisting of a suitable pump stand having a flange at its lower end adapted to be secured to the platform of a well, a pump handle pivotally mounted upon the upper end of the stand, a plurality of rods connected with said stand adapted for insertion into a well and to extend downward therein the required distance, a suction pipe holding arm connected with the lower end of each rod and extending at right angles therefrom a short distance, a suction pipe inserted into and depending from said arm extension and adapted to extend into the water of the well, one member of a slip joint connection inserted into said arm extension and forming a continuation of said suction pipe, a pump cylinder having the usual piston and check valves therein, and upon its lower end the other member of the aforesaid slip joint connection, connecting it with the suction pipe, a pipe extending upward from the upper end of the cylinder to near the upper end of said stand, a delivery spout below said upper end, means for securing said pipe near its upper end to said pump stand, a rod connected with said piston valve, and with the pump handle, and all of said suction pipe supporting rods, the suction pipe holding arm and pump cylinder being arranged within the circle of the inside diameter of a standard gage pipe for bored and piped wells.

1,108,857. HINGE FOR TILTING SASH. JOHN WEBB, Chicago, Ill. Filed Aug. 27, 1913. Serial No. 786,859. (Cl. 16—142.)



1. The combination with a stationary member, a journal bearing mounted thereon, a tilting member, and a trunnion mounted on the latter and journaled within the bearing, of an arm mounted on the trunnion and extending behind the stationary member and adapted to engage the same to limit the swing of the tilting member, substantially as described.

2. The combination with a hollow stationary member having a slot in its front wall, journal bearings mounted thereon, a tilting member, and a pair of trunnions mounted on the latter and journaled within the bearings, of an arm mounted on one of the trunnions and extending through the slot into the stationary member and adapted to engage behind the front wall of the same to limit the swing of the tilting member, substantially as described.

3. The combination with a hollow stationary member having a slot in its front wall, journal bearings mounted thereon, a tilting member, and a pair of trunnions mounted on the latter and journaled within the bearings, of an arm mounted on one of the trunnions and extending through the slot into the stationary member and adapted to engage behind the front wall of the same to limit the swing of the tilting member, the arm having a narrow portion playing within the slot and a broad terminal portion to engage the rear wall of the member, substantially as described.

4. The combination with a hollow stationary member having a slot in its front wall, journal bearings mounted thereon, a tilting member, and a pair of trunnions mounted on the latter and journaled within the bearings, of an arm mounted on one of the trunnions and extending through the slot into the stationary member and adapted to engage behind the front wall of the same to limit the swing of the tilting member, the arm having a narrow portion playing within the slot and a broad terminal portion to engage the rear wall of the member, the two portions of the arm lying in planes at substantially right angles to each other, the narrow portion parallel to the plane of the tilting movement and the broad portion at right angles thereto, substantially as described.

5. The combination with a stationary member, journal bearings mounted thereon, a tilting member, and trunnions mounted on the latter and journaled within the bearings, of an arm mounted on one of the trunnions and extending behind the stationary member and adapted to engage the same to limit the swing of the tilting member, and a weight carried by the arm to assist in the return movement of the tilting member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,108,858. SOFA-BED. HARRY D. BARTLETT, Chicago, Ill., assignor to Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 28, 1914. Serial No. 814,917. (Cl. 5—51.)



1. In a device of the class described, a plurality of bed sections adapted to fold together, in combination with a handle pivoted to the outer end of the outermost section and adapted to be swung by gravity beneath said section when the bed is unfolded and to be swung outwardly manually to serve as a section-lifting handle for manipulating the bed, said handle having a latch member carried thereby for turning therewith and adapted to engage an inner section when the said outer section is folded thereupon.

2. In a device of the class described, a plurality of bed sections adapted to fold together, in combination with a medially disposed handle pivoted to the outer end of the outermost section and adapted to be swung by gravity beneath said section when the bed is unfolded and to be swung outward manually to serve as a handle for manipulating the bed, said handle having latch members carried thereby and secured rigidly thereto one at each end thereof and adapted to engage the sides of an inner section when the said outer section is folded thereupon, said latch members being disengageable by lifting on said handle in unfolding the bed.

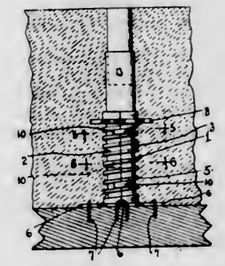
3. In a device of the class described, a plurality of bed sections adapted to fold together, and a combined latch and handle member of unitary character pivoted to the outer section for swinging freely in parallel with the folding movement through its range of operation, said latch and handle member being formed at an angle and adapted normally to be held by gravity with the handle portion projecting downward and the latch portion horizontally when the bed is unfolded and to turn upon said outer section by gravity when the same is folded upon an inner section so that the latch member will project downward for engagement with said inner section to secure said sections locked together and with the handle member disposed horizontally upon said outer section.

4. In a device of the class described, a plurality of bed sections having a bed spring carried thereby and adapted to fold together, and a combined latch and handle member of unitary character pivoted to the outer section for swinging freely in parallel with the folding movement through its range of operation, said latch and handle member comprising an axial portion adapted for pivotal support at its ends upon the sides of said outer section, and a pair of parallel latch portions disposed transversely thereto, the axial portion also having a handle part laterally disposed from the axis thereof at an angle from said latch portions, said latch and handle parts being adapted normally to be held by gravity with the handle portion projecting downward and the latch portion horizontally when the bed is unfolded and to turn when said outer section is folded upon an inner section so that the latch portions will project downward for engagement with the sides of said inner section to secure said sections locked together and with said handle part disposed horizontally upon the bed spring.

5. In a device of the class described, a combined latch and handle member of unitary character comprising an axial portion formed and adapted for pivotal support at points spaced apart and including a handle disposed at one side of the axis between the bearing points, and a pair of latch portions spaced apart and carried by opposite ends of said axial portion adjacent to the bearing points and disposed in a plane at an angle from said handle, said handle being relatively heavy with respect to the latch portions and being adapted for actuation by gravity to swing downward and hold the latch portions substantially horizontal.

[Claim 6 not printed in the Gazette.]

1,108,859. BOLT-ANCHOR. DWIGHT WILSON BENNETT, Somerton, Pa. Filed Mar. 17, 1913, Serial No. 754,863. Renewed July 27, 1914. Serial No. 853,447. (Cl. 85—2.4.)



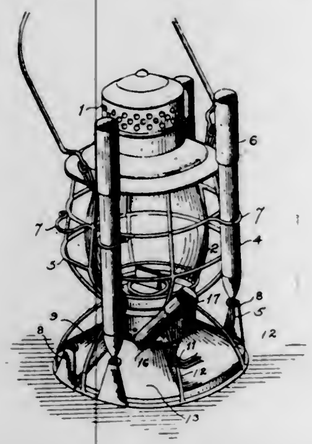
1. A tubular bolt anchor having an annular seat near its upper end, a spiral rib formed on the outside of said anchor, and a bolt casing having engagement with said seat and adapted to form a passage through which the bolt is inserted for engagement with the anchor.

2. A bolt anchor comprising segmental interiorly threaded tubular sections having therein near their upper ends semi-circular recesses which when the sections are brought together form an annular seat, means to fasten said sections together to form the anchor, a spiral rib formed on the outer sides of said sections, and a bolt casing engaged with the seat in the upper end of said sections and adapt-

ed to form a passage through which the bolt is inserted for engagement with the anchor.

3. A bolt anchor for concrete structures comprising hollow segmental interiorly threaded sections having in their upper ends semi-circular recesses which when the sections are brought together form an annular recess, malleable clamping lugs formed on one of said sections and adapted to be bent around the opposing section whereby said sections are fastened together to form the anchor, a bolt casing formed in tubular telescopically engaged sections adapted to be engaged with the annular seat in the upper end of said anchor and to project upwardly therefrom through the concrete, said sections being adapted to be adjusted to correspond with the thickness of the concrete above the anchor whereby a bolt hole is formed in the concrete, and a lining provided therefor by said casing.

1,108,860. SIGNAL APPARATUS. SAMUEL BORLAND, Wellston, Ohio. Filed Sept. 30, 1912. Serial No. 723,044. (Cl. 240—1.)



1. In a lantern, an annular rotatable chamber surrounding the pedestal of the lantern and having an access opening therein, a rotatable tray located within the chamber and concentric therewith, and a fixed closure shield for the access opening with which the rotatable chamber coöperates.

2. In a lantern, an annular chamber surrounding the pedestal of the lantern and having an access opening therein, a rotatable tray contained within the annular chamber adapted by its rotation to present successive portions of the tray at the access opening and a closure shield for said opening.

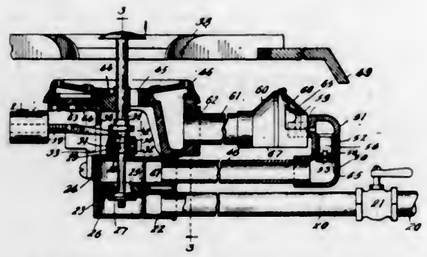
3. In a lantern, an annular rotatable chamber concentric with the base plate of the lantern, and having an access opening therein, a tray located within the chamber and concentric therewith, and a fixed shield with which the rotatable chamber coöperates to close the access opening.

4. In a lantern, an annular chamber surrounding the pedestal of the lantern, and having an access opening therein, a tray concentrically located within the chamber, said chamber and tray being relatively rotatable in relation one with the other to present successive portions of the tray at the access opening.

5. In a lantern, an annular chamber surrounding the pedestal of the lantern and having an access opening, a tray concentrically located within the chamber, and a closure shield for the access opening, the chamber and shield being concentrically adjustable in relation one with the other.

[Claims 6 to 10 not printed in the Gazette.]

1,108,861. AUTOMATIC BURNER FOR GAS-STOVES. GEORGE BRUTON, Joliet, Ill., assignor to Franklin L. Rockey, Joliet, Ill. Filed Dec. 12, 1908. Serial No. 467,133. (Cl. 126—52.)



1. In a gas-stove burner, in combination: a burner; gas-conduits thereto; an automatically-actuated valve controlling the gas-supply of said burner; and a pilot-light tube having an enlarged flame-shielding tip provided with twyers for injecting air into the flame; substantially as specified.

2. In a gas-stove burner, in combination: a burner; gas-conduits thereto; an automatically-actuated valve controlling the gas-supply of said burner; and a pilot-light tube having an enlarged flame-shielding tip of hollow sub-cylindric form and provided with twyers for injecting air into the flame; substantially as specified.

3. In a gas-stove burner, in combination: a burner; gas-conduits thereto; an automatically-actuated valve controlling the gas-supply of said burner; and a pilot-light tube having an enlarged flame-shielding tip of hollow sub-cylindric form and provided near its base with twyers for injecting air into the flame; substantially as specified.

4. In a gas-stove burner, in combination: a burner; gas-conduits thereto; a pilot-light tapping said conduits; an automatically-actuated valve controlling the gas-supply of said burner and located in said conduits intermediate the pilot and the burner; and a check-valve in said conduits intermediate the aforesaid automatic valve and the burner, for maintaining adequate back-pressure to insure the feed of the pilot; substantially as specified.

5. In a gas-stove burner, in combination: a burner; gas-conduits thereto; a stop-cock controlling said conduits; a pilot-light tapping said conduits intermediate the stop-cock and the burner; an automatically actuated valve controlling the gas-supply of said burner and located intermediate the pilot and the burner; and a check valve in said conduits intermediate the aforesaid automatic valve and the burner, for maintaining adequate back-pressure to insure the feed of the pilot; substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

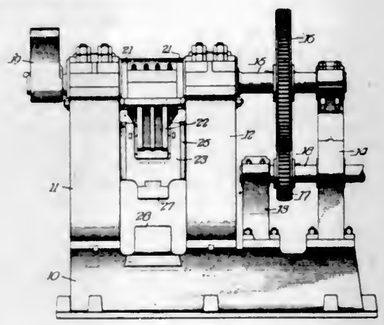
1,108,862. METHOD OF TREATING INGOTS. GEORGE G. CRAWFORD, Birmingham, Ala. Filed Mar. 31, 1913. Serial No. 757,968. (Cl. 29—148.)

1. The method of treating ingots which consists in first suitably heating the same, then forging the ingots between dies in order to toughen and improve their structure, then rolling the ingots, substantially as described.

2. The method of treating ingots which consists in first suitably heating the same, then forging two opposing surfaces of the ingots in order to change the molecular structure thereof, then rolling the ingots, substantially as described.

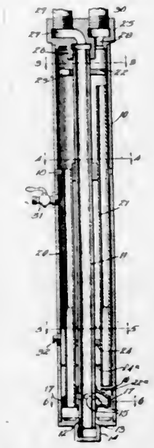
3. The method of treating ingots which consists in suitably heating the same, then forging two opposing surfaces, then forging two additional opposing surfaces whereby the cross section of the ingots is made substantially uniform and their outer surfaces are densified and toughened, then rolling the ingots, substantially as described.

4. The method of treating ingots, whereby the tearing of the surfaces thereof in the first rolling pass is avoided, which consists in first suitably heating the ingots, then forging their surfaces and making the ingots of substantially uniform cross section, then rolling the ingots, substantially as described.



5. The method of forging ingots which consists in placing an ingot between opposing dies, partially reducing a transverse dimension of said ingot in one stroke of the die and in another and later stroke of the die completing the reduction and partially reducing an advanced portion of the ingot, substantially as described.

1,108,863. HYDRAULIC BACK-PRESSURE VALVE. OTTO G. HAEDIKE and ROBERT D. BRADEN, Chicago, Ill., assignors to Oxweld Acetylene Company, Chicago, Ill., a Corporation of West Virginia. Filed June 6, 1914. Serial No. 843,425. (Cl. 48—192.)



1. A hydraulic back-pressure valve comprising two compartments, an acetylene gas tube extending into one compartment, a vent tube in communication with both compartments, a return tube in communication with both compartments, an outlet opening in one compartment and a vent opening in the other compartment.

2. A hydraulic back-pressure valve comprising two compartments arranged in different vertical planes, an acetylene gas tube extending into the lower compartment, a vent tube in communication with both compartments, a return tube in communication with both compartments, a vent opening in the upper compartment and an outlet opening in the lower compartment.

3. A hydraulic back-pressure valve comprising a casing divided into two compartments, an acetylene gas tube extending through one compartment into the other compartment and having an opening in the latter compartment, a vent tube in communication with both compartments, a return tube in communication with both compartments, a vent opening in one compartment and an outlet opening in the other compartment.

4. A hydraulic back-pressure valve divided into two compartments, an acetylene gas tube extending through one compartment into the other compartment and having an opening adjacent the end thereof in the latter compartment, a vent tube in communication with both compartments, a return tube in communication with both compartments, a vent opening in one compartment adjacent one end of said vent tube and an outlet opening in the other compartment disposed between the ends of the return tube.

5. A hydraulic back-pressure valve comprising a main casing divided into two compartments, a gas tube extending through one compartment into the other compartment and having an opening near its lower end, a casing surrounding said opening and also provided with an opening, a vent tube in communication with both compartments and having its lower end arranged above the opening in said casing, a return tube in communication with both compartments and having its upper end arranged below the upper end of said vent tube, a vent opening in one compartment and an outlet opening in said casing into the other compartment and intermediate the ends of said return tube.

[Claims 6 to 9 not printed in the Gazette.]

1,108,864. SHEATH OR SCABBARD. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 20, 1911. Serial No. 639,635. (Cl. 224—2.)



1. In a sheath or scabbard, the combination with the body thereof having an enlarged external diameter at and below the mouth-end thereof, of a covering consisting of a seamless woven tube of firm and inextensible fabric inclosing said body and fitting the exterior thereof, said tube having a section of its length woven of a diameter of a greater fixed limit and adjustable to fit the enlargement of the exterior of the body, said section of uniform closeness of weave with the remainder of the tube.

2. In a sheath or scabbard, the combination with the body thereof having an enlarged external diameter at and below its mouth-end, of a covering consisting of a seamless-fabric tube inclosing said body and fitting the exterior thereof, said tube woven with a longitudinal tuck or plait produced by additional threads forming an integral widening which adjustably fits the enlargement of the body.

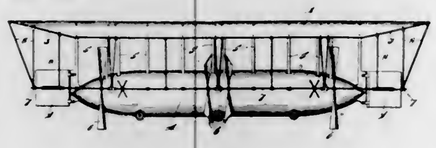
3. In a sheath or scabbard, the combination with the body thereof having an enlarged external diameter at and below its mouth-end, of a covering consisting of a seamless-fabric tube inclosing said body and fitting the ex-

terior thereof, said tube formed with an integral widening located at one broad side of the sheath or scabbard which enables the mouth-end thereof to fit the enlargement of the body, fastenings securing the widened portion of the length of the tube in expanded shape, and a supporting-tab applied to the said side and covering the widening and the said fastenings.

4. A sheath or scabbard having a cap or mouth-piece provided with an outwardly-projecting radial rim or flange, and a covering consisting of a seamless-fabric tube inclosing the body of the sheath or scabbard and the body-portion of said cap or mouth-piece, snugly and smoothly fitting the exterior thereof, with its upper end-portion folded back and inward upon itself at the exterior of said body portion of the cap or mouth-piece, and with the fold abutting against the said projecting rim or flange and protected by the overhang of the rim or flange.

5. The combination with a sheath or scabbard having an enlarged external diameter at and below the mouth-end thereof and an outwardly-projecting rim or flange at such end, of a covering consisting of a seamless-fabric tube snugly and smoothly fitting the exterior of the sheath or scabbard, with its upper portion woven of increased diameter, to fit the enlarged portion of the length of the sheath or scabbard, and having such portion folded inwardly back upon itself at the outer surface of the sheath or scabbard and with the fold abutting against the said projecting rim or flange and protected by the overhang of the rim or flange.

1,108,865. AIRSHIP. HERMAN LEINWEBER, Chicago, Ill. Filed Feb. 1, 1913. Serial No. 745,564. (Cl. 244—12.)



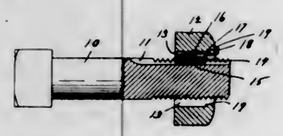
1. An air ship plane concavo-convex in form in its main portion with its longitudinal sides depressed and having its forward corners upwardly and longitudinally inclined, substantially as described.

2. An air ship plane concavo-convex in form in its main portion with its longitudinal sides depressed and having its corners upwardly and longitudinally inclined, substantially as described.

3. An air ship plane concavo-convex in form in its main portion with its longitudinal sides depressed and having its forward corners upwardly and longitudinally inclined to the same level as the corresponding central portion thereof, substantially as described.

4. An air ship plane concavo-convex in form in its main portion with its longitudinal sides depressed and having its corners upwardly and longitudinally inclined to the same level as the corresponding central portion thereof, substantially as described.

1,108,866. NUT-LOCK. ENEAS B. MESSNER, Bowmansville, Pa. Filed Oct. 22, 1913. Serial No. 796,692. (Cl. 151—8.)



1. In a nut-lock of the class described, the combination with a bolt provided with a longitudinal key-way, and a nut provided with one or more key-ways adapted to register with the key-way in the bolt, of a shoulder formed in the key-ways of the nut near the outer ends thereof, a key contained in said alined key-ways, and a cage for containing said key, said cage adapted to be inserted into said alined key-ways and means for retaining the same therein from accidental displacement.

2. In a nut-lock of the class described, the combination with a bolt provided with a longitudinal key-way, and a nut provided with a series of key-ways, each of which is formed with a shoulder near the outer end thereof, of a key adapted to enter said key-ways when the same are in an alined position, a cage for containing said key, a resilient lever formed on said cage having a bent end adapted to engage the shoulder of the key-way in the nut for preventing the accidental displacement of said cage and key.

1,108,867. DIFFERENTIAL CAR-WHEEL. HENRY HUBERT MUGGLEY, San Francisco, Cal. Filed Oct. 31, 1913. Serial No. 798,457. (Cl. 105—67.)



1. In a differential car-wheel, the combination of an axle; a bushing rotatably fitted on the axle; a wheel fast on the bushing; and interengaging instrumentalities between the bushing and axle to lock the rotatable bushing against end movement, consisting of an inwardly projecting annular flange on the bushing and a circumferential groove in the axle in which said flange rotates.

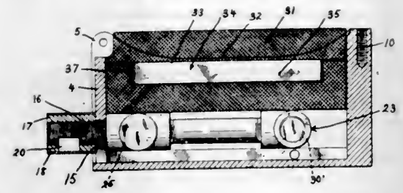
2. In a differential car-wheel, the combination of an axle; a bushing rotatably fitted on the axle; a wheel fast on the bushing; and interengaging instrumentalities between the bushing and axle to lock the bushing against end movement, consisting of an inwardly projecting annular flange on the bushing, a circumferential groove in the axle in which said flange rotates, and a circumferential shoulder on the axle against which the inner end of the bushing is seated.

3. Differential car-wheels comprising an axle; a wheel fast on said axle; an opposing wheel; a bushing upon which said opposing wheel is fast, said bushing having a running fit on the axle adapting it for rotation thereon; and interengaging instrumentalities between the bushing and axle to lock the rotatable bushing against end movement, consisting of an inwardly projecting annular flange on the bushing and a circumferential groove in the axle in which said flange rotates.

4. Differential car-wheels comprising an axle; a wheel fast on said axle; an opposing wheel; a bushing upon which said opposing wheel is fast, said bushing having a running fit on the axle adapting it for rotation thereon; and interengaging instrumentalities between the bushing and axle to lock the rotatable bushing against end movement, consisting of an inwardly projecting annular flange on the bushing, a circumferential groove in the axle in which said flange rotates, and a circumferential shoulder on the axle against which the inner end of the bushing is seated.

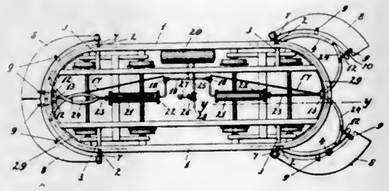
1,108,868. GAS SAD-IRON. REUBEN J. MYERS, Mount Joy, Pa. Filed Oct. 28, 1913. Serial No. 797,709. (Cl. 158—23.1.)

An iron of the class described, having a perforation formed in its rear wall, a nipple mounted in the perforation, one end of said nipple projecting from the wall, a sleeve connected to the nipple, a supply pipe having communication with the nipple, a heating unit within the iron, means carried by the sleeve for regulating the supply of air to the heating unit, said unit consisting of a section arranged transversely of the iron, lateral connections carried by the section, one of said connections being connected to the nipple, a pipe having one end secured to



the other connection of the section, a T connected to the other end of said pipe, perforations formed in the parts of the unit for the passage of gas, which, when ignited is directed toward the bottom of the iron, and a pivotally connected top for the iron.

1,108,869. CAR-FENDER. WILLIAM D. RUSSELL, Fort Worth, Tex. Filed July 26, 1912. Serial No. 711,722. (Cl. 105—128.)



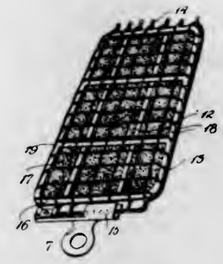
1. In a device of the character described, the combination with a pair of fender frames mounted upon the end of a street car frame, of means having the nature of vertical pivots for supporting the ends of the fender frames at each side of the car frame whereby said frames may be swung laterally from each other, a device arranged to swing the fender frames laterally with relation to the longitudinal center of the car frame, an air cylinder, a piston operating in the cylinder and connected to the said device, a valve controlling the passage of air into the cylinder, a valve operating device, and depressible parts carried by the fender frames having means for engaging the valve operating device.

2. In a device of the character described, the combination with a street car frame, of a pair of fender frames mounted at one extremity of the car frame, a vertical pivotal axis for one end of each fender frame, the adjacent ends of the fender frames being free to be swung, a cylinder and piston rod centrally mounted beneath the car frame longitudinally thereof, a valve controlling the passage of air into said cylinder, a rod adapted to actuate said valve extending from the valve to the extremity of the car frame at which the fender frames are located, a bell-crank lever having one arm connected to the actuating rod, and means correlating the bell-crank lever with each fender frame whereby a downward displacement of said means swings the bell-crank lever.

3. In a device of the character described, the combination with a car frame, of a pair of fender frames having their adjacent ends free and their opposite ends pivoted on the car frame, a spring sustained fender part mounted on each fender frame, a valve actuating device mounted on the car frame, means for operating the actuating device connected to the spring sustained part of each fender frame and normally out of engagement with said device, an air cylinder, a piston working in the cylinder and connected to the fender frames, a valve controlling the passage of air to the cylinder, and a connection between the valve and the valve actuating device.

4. In a device of the character described, the combination with a car frame, of a pair of fender frames having their adjacent ends free and their opposite ends pivoted on the car frame, a spring sustained fender part mounted on each fender frame, a bell crank lever mounted on the car frame, rods connected to the spring sustained parts of the fender frames and having projections extending over the bell-crank lever, an air cylinder mounted on the car frame, a piston working in the cylinder, links having pivoted connection at their extremities with the fender frames and the piston, a valve controlling the supply of air to the cylinder, and a connection between the valve and the bell-crank lever.

1,108,870. TRAP. EMMER B. ARNOLD, Los Angeles, Cal. Filed Dec. 29, 1911. Serial No. 668,551. (Cl. 43—22.)



1. A trap consisting of an insect trapping sheet, in combination with a reticulate envelop completely inclosing and surrounding said sheet, said sheet disposed centrally of said envelop and free of the walls thereof, and a brush attached to the outside of said envelop.

2. A trap consisting of a reticulate fabric forming a complete inclosure, an insect trapping body, and means to support said body centrally of said inclosure and free of the walls thereof, said means also serving to hold said walls spaced from said body.

3. A trap consisting of an insect trapping sheet, a reticulate inclosure for said sheet completely inclosing said sheet, a frame within and disposed centrally of said inclosure and supporting said sheet centrally and free of the walls thereof, said frame also serving to prevent contact of the walls with said body.

4. A trap comprising a hollow reticulate envelop of flexible material, an insect trapping body within said envelop and means to hold said body free of the walls thereof during flexures thereof.

5. A portable trap comprising a reticulate envelop having an insect trapping body disposed centrally therein and free of the walls thereof, said envelop completely enveloping said body on all sides.

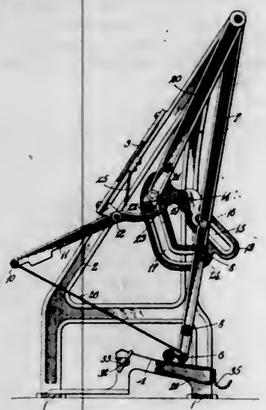
1,108,871. CIGAR-BUNCHING MACHINE. ALEXANDER GORDON, Detroit, Mich. Filed July 22, 1912. Serial No. 710,819. (Cl. 131—42.)

1. A cigar bunching machine comprising a bunching table, a flexible web thereon, means including a hand operated suspended frame operatable entirely above said table for forming a bight in the web and drawing it across the table, and means including a set of slotted cams cooperating therewith to contract the bight as it moves across the table.

2. A cigar bunching machine comprising a bunching table, a flexible web thereon, means including a suspended frame operatable entirely above said table for forming a bight in the web and drawing it across the table, adapted to open out the bight as the table is cleared thereby, and means including an oscillatory frame and slotted cam member above said table cooperating with the forming means to gradually contract the bight as the latter approaches its limit of motion.

3. A cigar bunching machine comprising a bunching table, a flexible web thereon, means including a suspended frame reciprocable across the table for forming a bight

in the web and drawing it forward across the table, and means including a pivoted frame and a cam action for gradually contracting the bight as the reciprocable means move toward its forward limit of motion, both of said means being located and operatable entirely above said bunching table.

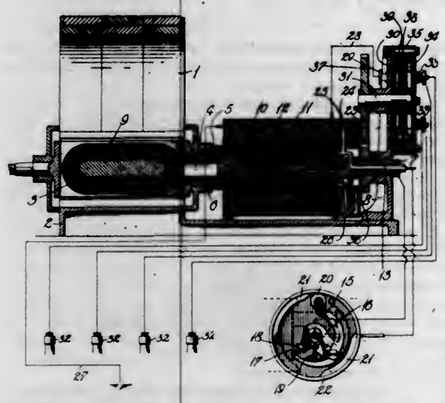


4. A cigar bunching machine comprising a bunching table, a flexible web thereon, means including a frame suspended above said table to reciprocate across the table for forming a bight in the web and drawing it forward across the table, means operatable entirely above said table for gradually contracting the bight as the reciprocable means moves toward its forward limit of motion, the reciprocable means being adapted to open out the bight as the table is cleared thereby, and a cam action between said means whereby the last mentioned means is operated in timed relation to the first mentioned means.

5. A cigar bunching machine, comprising a bunching table, a flexible web thereon, means adjustably securing one end of the web adjacent the table, means including a suspended frame operatable entirely above said table for forming a bight in the web and drawing it across the table, and means including a cam actuated frame coöperating with the latter means to contract the bight gradually as it is drawn across the table.

[Claims 6 to 15 not printed in the Gazette.]

1,108,872. MAGNETO-GENERATOR. RICHARD G. KIRCHNER, Detroit, Mich. Filed Mar. 8, 1913. Serial No. 752,830. (Cl. 123—149.)



1. The combination in a magneto generator, with an armature coil having an extension coil in series therewith, of a circuit breaker operatively connected to the magneto in series with the armature coil, and a condenser turning with the armature coil in shunt across the circuit breaker.

2. The combination in a magneto generator, with an armature shaft, an armature coil thereon, an extension mounted on the shaft coil in series with the armature coil, a condenser secured on the shaft, and a circuit breaker mounted on the shaft across which the condenser is in shunt, and an interrupter in series with the secondary coil.

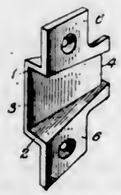
3. In a magneto generator, a rotatable armature shaft, an armature coil thereof, an extension mounted on the shaft coil in series with the armature coil, a circuit breaker mounted on the shaft in series with the coils, a condenser mounted on the shaft in shunt across the circuit breaker, a high tension secondary coil in inductive relation to the extension coil and an interrupter in series with the secondary coil operated by the shaft.

4. In a magneto generator, permanent field magnets, an armature shaft rotatable between the pole pieces of the field magnets, an armature coil on the shaft between the field magnets, a coil on the shaft forming an extension in series with the armature coil, a circuit breaker mounted on the shaft in series with the coils, a condenser mounted on the shaft connected across the circuit breaker, a fixed secondary coil within which the extension coil revolves, and an interrupter in series with the secondary coil.

5. In a magneto generator, permanent field magnets, an armature shaft journaled between the pole pieces thereon, an armature coil on the shaft between the pole pieces, a hollow extension secured to the shaft, a core secured in the extension, a coil mounted on the extension in series with the armature coil, a condenser mounted on the extension in parallel with the coils, a circuit breaker mounted on the extension in series with the coils, a stationary secondary coil concentric with the extension coil, and an interrupter in series with the secondary coil.

[Claim 6 not printed in the Gazette.]

1,108,873. STRIKE-PLATE. ARCHIBALD D. METHVEN, Monroe, Mich. Filed Nov. 24, 1913. Serial No. 802,640. (Cl. 70—15.)

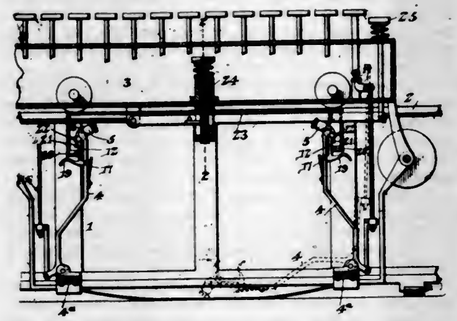


A strike plate having bolt and latch openings formed therein, a guide member carried by the front edge thereof adjacent the latch opening and having converging top and bottom walls provided with inclined edges, and a side wall carried by the inclined edges of said top and bottom walls and extending from the forward ends of said top and bottom walls to a point beyond said top and bottom walls and merging into said plate to form a wall of the latch opening and a latch engaging shoulder between said wall.

REISSUES.

13,790. TYPE-WRITING MACHINE. ROBERT JOSEPH FISHER, Athens, Tenn., assignor, by mesne assignments, to Elliott-Fisher Company, a Corporation of Delaware. Filed Feb. 5, 1904. Serial No. 192,246. Original No. 708,213, dated Sept. 2, 1902, Serial No. 28,419. (Cl. 197—75.)

1. In a typewriting machine, the combination with the type bar, of a pivotal type head carried by the type bar and having a cam ear formed with an arcuate bearing face, a trigger carried by the type bar and having a shifter element coöperating with said bearing face, and means for actuating said trigger.



2. In a typewriting machine, the combination with the type bar, and the type head pivoted thereto, of a device carried by the type bar for shifting the type head to either of two positions by engaging with said head at opposite sides of its pivotal point.

3. In a typewriting machine, the combination with the type bar, and the type head pivoted thereto, of a device carried by the type bar for shifting the type head to either of two positions and locking the same in each position, said operations being effected by direct engagement with the head at opposite sides of its pivotal point.

4. In a typewriting machine, the combination with the type bar, the type head pivoted thereto, and means for limiting the swinging movement of the type head beyond either of two positions, of a device carried by the type bar for positively shifting the head to and locking the same in either position.

5. In a typewriting machine, the combination with the type bar, and the type head pivoted thereto, of a device carried by the type bar directly engaging with the type head for shifting the same to and locking said type-head in either of two positions, and means for limiting the movement of said device so as to hold it in engagement.

6. In a typewriting machine, the combination with the type bar, and the shiftable type head, of a device carried by the type bar to shift the type head to either of two positions and to lock the same, and separate trips arranged at all times outside of the path of the type head and adapted to be brought alternately in contact with the device to cause the shifting of the type head to one position and to restore said head to its normal position.

7. In a typewriting machine, the combination with the type bar, and the pivoted type head carried thereby and provided with a portion projecting beyond the pivotal point, of a device carried by the type bar and having a shifting finger engaging with the type head and adapted to be transferred to opposite sides of the pivot of the head to shift the same into either of two positions.

8. In a typewriting machine, the combination with the type bar, and the pivoted type head carried thereby and provided with a portion projecting beyond the pivotal point, of a device carried by the type bar and having a shifting finger engaging with the type head and adapted to be transferred to opposite sides of the pivot of the head to shift the same into either of two positions, a resetting arm and a tripping tail carried by the device, and a double trip engaging with the tripping tail and the resetting arm.

9. In a typewriting machine, the combination with the type bar, and a movable type head mounted thereon and adapted to be shifted to either of two positions, of a single device carried by the type bar and engaging with the type head for positively shifting the head to and locking the same in each position.

10. In a typewritting machine, the combination with the type bar, and a movable type head mounted thereon and adapted to be shifted to either of two positions, of a single spring-actuated device carried by the type bar and engaging with the type head for positively shifting the head to and locking the same in each position.

11. In a typewriting machine the combination with the type bar, and a type head pivoted thereto, of a device mounted on the type bar, independent of the type head, but adapted to engage the same to shift it to either of two operative positions and also lock the same in each position.

12. In a typewriting machine, the combination with the type bar, and a type head pivoted thereto, of a device pivoted on the type bar, independent of the type head, but adapted to engage the same to shift it to either of two operative positions and also lock the same in each position.

13. The combination with the type bar, and the type head pivoted thereto, of a single device pivoted on the type bar, independent of the type head, but adapted to engage the same to shift the type head to either of two positions and serve as a lock for the said head in each position, and a spring acting against the said device for the purposes described.

14. The combination with the type bar, and the shiftable type head pivoted thereto, of a single device carried by the type bar, independent of the type head, and constituting a combined shifting and locking means for the type head, to shift the latter to either of two positions and lock the same in each position and a spring for the said device.

15. In a typewriter, a plural type head movable toward and from the printing point and also shiftable to present different type in the printing position, and mechanism coöperating with the head to shift same during the printing stroke but before the final portion thereof, and to hold said head locked during the remainder of the stroke.

16. In a typewriter, a plural type head movable toward and from the printing point and also shiftable to present different type in the printing position, and mechanism cooperating with the head to shift and lock the same during the first part of the printing stroke.

17. In a typewriter, a plural type head movable toward and from the printing point and also shiftable to present different type in the printing position, a head shifting device operating prior to the completion of the printing stroke to completely shift the head from one printing position to another, and means including the shifting device for locking the head when so shifted, and for holding the same locked during the remainder of the printing stroke.

18. In a typewriter, a type bar movable toward and from the printing point, a plural type head shiftable on the bar to present different type in the printing position, and a device separately mounted on the bar for shifting the head during the printing stroke of the type bar, said shifting device and the type bar coöperating to lock the head when shifted.

19. In a typewriter, a type bar movable toward and from the printing point, a plural type head pivoted on the bar and shiftable to present different type in the printing position, and means including an actuator carried by the bar for effecting the shifting and locking of the type head during the printing stroke of the type bar.

20. In a typewriter, a type head movable toward and from the printing point and shiftable to present different type in the printing position, and mechanism whereby the head will be completely shifted from one printing position to another and locked prior to the completion of printing stroke and subsequently unlocked.

21. In a typewriter, a type head movable toward and from the printing point and also shiftable to present different type in the printing position, head shifting and locking means arranged to begin its operation substantially at the commencement of the printing stroke of the type head and including an actuator, and means for moving the actuator to unlock the head.

22. In a typewriter, a type head, and mechanism for performing the following functions, to-wit: the movement of the type head toward and from the printing point, the shifting of the head to present different type in the printing position, the locking of the type head when so

shifted, and the unlocking of the head during the return thereof from the printing point, said mechanism including a type bar and an actuator mounted thereon separate from the type head.

23. In a typewriter, a type bar, a pivoted plural type head thereon, means including an actuator for moving the type head on its pivot and for locking the same during the first part of the printing stroke of the bar, and means for unlocking the head.

24. In a typewriter, a type bar movable toward and from the printing point, a type head pivoted thereon and shiftable to present different type in the printing position, means for shifting and locking the type head during the early part of the printing stroke of the type bar, said means including an actuator, and means for moving the actuator to unlock the head.

25. In a typewriter, a type head, and mechanism for performing the following functions, to-wit: the movement of the type head toward the printing point, the shifting of the type head during the first part of such movement to present a different type in the printing position and the locking of the type head in its shifted position, said mechanism including a type arm and an actuator carried thereby, and means for unlocking the type head after the printing of the character.

26. In a typewriter, a type bar movable toward and from the printing point, a type head carried by the bar and shiftable to present different type in the printing position, and mechanism carried in part by the type bar for performing the following functions, to-wit: the shifting of the type head during the first part of the printing stroke, the locking of the head in its shifted position, and the unlocking of the head during the last part of the return stroke of the type bar.

27. In a typewriter, a type bar movable toward and from the printing point, a plural type head mounted on the bar and shiftable to present different type in the printing position, an actuator mounted on the type bar independently of the type head, and means for moving the actuator, the several recited elements coöperating to shift and lock the type head during the printing stroke of the type bar and to unlock the head and reshift the same to its normal position upon the return of the type bar from the printing stroke.

28. In a typewriter, a type head, and mechanism for performing the following functions, to-wit: the movement of the type head to the printing point, the shifting of the type head during the first part of such movement to present a different type in the printing position, the locking of the type head in its shifted position, the return of the type head from the printing point, and the unlocking of the head and the reshifting thereof to its normal position during the last portion of its return movement.

29. In a typewriter, a type head movable toward and from the printing point and shiftable to present different type in the printing position, a projection extended from the head, and mechanism mounted on the type bar and including a part directly coöperating with said projection to shift and lock the head during the printing stroke and movable to unlock the head as the latter returns to its normal position.

30. In a typewriter, a type bar movable toward and from the printing point, a plural type head mounted on the bar and shiftable to present different type in the printing position, and mechanism for shifting and locking the type head during the first part of the printing stroke of the type bar, said mechanism including an element removed from but adjacent to the type bar.

31. In a typewriter, a type bar, a shiftable type head thereon, mechanism carried in part by the type bar for shifting and locking the type head during the first part of the printing stroke of the bar and for unlocking the head and reshifting the same to its normal position upon the return of the type bar from the printing stroke, said mechanism including a trip and a buffer mounted independently of the type bar.

32. In a typewriter, a type bar, a plural type head shiftably mounted thereon, and coöperating devices mounted on the type bar and independently thereof, respectively, for effecting the shifting of the type head and the locking thereof during the first part of the printing stroke of the bar.

33. In a typewriter, a type bar, a plural type head shiftable thereon, mechanism including a trip for shifting and locking the type head during the first part of the printing stroke of the type bar, and a key for operating the trip.

34. In a typewriter, a type bar, a plural type head movable thereon, an actuator for moving the head during the first part of the printing stroke of the bar, said actuator also serving to positively oppose the movement of the type head to a different printing position when actuated in the manner stated.

35. In a typewriter, a type bar, a type head movably supported thereby, and a combined shifting and locking device carried by the bar to shift the head from its normal position during the printing stroke of the bar and to positively lock the head in said position.

36. The combination with a type bar, of a movable type head carrying a plurality of type, and a locking device carried by the type bar to lock the type head in a position other than normal, said locking device constituting means for shifting the head from one position to another.

37. The combination with a type bar, of a plural type head movably supported thereon and provided with a projection, and a locking device carried by the type bar and engaging said projection to positibely lock the head in a position other than normal, said locking device constituting means for shifting the head from one position to another.

38. The combination with a type bar and a plural type head pivoted thereto and having a projecting portion, of a device carried by the type bar separate from the type head and coöperating with the projecting portion to effect the turning of the head, said device serving also as a positive lock for the head in a position other than the normal position of said head.

39. In a typewriter, the combination with a type bar and a type head movably mounted thereon and adapted to be shifted to either of two positions, of a single device mounted on the bar, said device serving to shift the type head to either position and to lock the head in a position other than normal.

40. In a typewriter, a plural type head movable toward and from the printing point and shiftable to present different type in the printing position, and an actuator movable to shift the head during the commencement of the printing stroke and serving to resist the reshifting of the head to its normal position.

41. In a typewriter, a plural type head movable toward and from the printing point and shiftable to present different type in the printing position, an actuator movable to shift the head during the first part of the printing stroke, said actuator positively opposing the reshifting of the head to its normal position during the remainder of the printing stroke, and means coacting with the actuator and assisting the same in opposing the reshifting of the head.

42. In a typewriter, a normally vertical type bar pivoted at its lower end, a type head pivoted at the upper end of the type bar and having a plurality of radially disposed types arranged one above another, the lowermost type being normally disposed in the printing position, and mechanism operating during the first part of the printing stroke of the type bar for shifting the head from its normal position to present another type in the printing position.

43. In a typewriter, a normally vertical type bar pivoted at its lower end, a type head pivoted at the upper end of said bar and having a plurality of radially disposed types arranged one above another, the lowermost type being disposed in the printing position in the normal position of the head, and mechanism carried by the type bar and acting during the early part of the printing stroke thereof to shift the head from its normal position and to prevent reshifting of the head in the opposite direction until the printing stroke is completed.

44. In a typewriter, a swinging type bar movable toward and from the printing point, a type head pivotally mounted on the type bar to shift on a horizontal axis, a plurality of type faces arranged one above another on the type head, an actuator pivoted on the bar and coöperatively related to the head, a trip coacting with the actuator during the first part of the printing stroke to swing the type carrying side of the head toward the axis of the type bar, and an element mounted on the type bar, and coöperating with said actuator to oppose such movement of the shifted head as would serve to represent the displaced type in the printing position.

13,791. PROCESS OF PRODUCING AN OPAQUING AGENT FOR WHITE ENAMEL. IGNAZ KREIDL, Vienna, Austria-Hungary. Filed Oct. 29, 1912. Serial No. 728,509. Original No. 1,024,469, dated Apr. 23, 1912, Serial No. 630,157. (Cl. 49—82.)

1. The process of producing a clouding or opaquing agent for white enamel consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with four times the weight of caustic alkali, heating to a temperature of from 500 to 600 degrees centigrade, treating with a fluid to remove the alkali, drying and glowing.

2. The process of producing a clouding or opaquing agent for white enamel, consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with caustic alkali, heating to between 500 and 600 degrees centigrade, washing out the alkali, drying and glowing.

3. The process of producing a clouding or opaquing agent for while enamel consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with four times the weight of caustic soda, heating to between 500 and 600 degrees centigrade, washing out the alkali, drying and glowing.

4. The process of producing a clouding or opaquing agent for white enamel consisting in partially removing the silicic acid from silicate of zirconium by means of an alkaline agent and treating the mass to remove alkaline matter.

5. The process of producing a clouding or opaquing agent for white enamel, consisting in heating silicate of zirconium with an alkaline agent to partially remove the silicic acid, then removing alkaline matter, and drying the mass to produce a voluminous product.

6. The process of producing a clouding or opaquing agent for white enamel, consisting in treating zirconium silicate with an alkaline agent to partially remove the silicic acid, and removing the combined alkali therefrom.

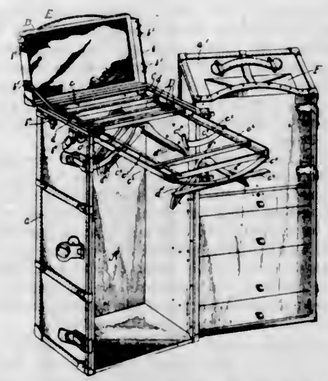
7. The process of producing a clouding or opaquing agent for white enamel, consisting in partially removing the silicic acid from silicate or zirconium by means of an alkaline agent, then washing, removing alkaline matter, and drying or heating the mass to produce a voluminous product.

8. The process of producing a clouding or opaquing agent for white enamel consisting in partially removing the silicic acid from a natural silicate of zirconium by means of an alkaline agent and treating the mass to remove alkaline matter contained in the mass.

9. The described clouding or opaquing agent for white enamel, being a voluminous product consisting of a natural silicate of zirconium from which a portion of silicic acid has been removed.

13,792. WARDROBE-TRUNK. GEORGE HENRY WHEARY, Racine, Wis., assignor to The Hartmann Trunk Company, Racine, Wis., a Corporation of Wisconsin. Filed Dec. 22, 1913. Serial No. 808,302. Original No. 1,057,195, dated Mar. 25, 1913, Serial No. 575,742. (Cl. 190—13.)

1. In a trunk, one or more clothes hangers, each having a bar upon which the clothes are supported, by draping the clothes over the upper edge of the bar, and a movable end wall for said trunk, having a rigid wall faced inside with padding which engages the clothes to clamp the same upon the said upper edge of the bar, said padding adapted to make contact with the said bar, or with the clothes thereon, for substantially the full length thereof, whereby the clothes are securely held on the bar without injury thereto.



2. In a trunk, one or more clothes hangers, each having a bar upon which the clothes are supported, by draping the clothes over the upper edge of the bar, a movable end wall for said trunk, having a rigid wall faced inside with padding which engages the clothes to clamp the same upon the said upper edge of the bar, said padding adapted to make contact with the said bar, or with the clothes thereon, for substantially the full length thereof, whereby the clothes are securely held on the bar without injury thereto, and means for locking said end wall in closed position.

3. In a trunk having a movable end wall and provided with garment hanger rails and one or more garment hangers adjustably mounted thereon, the said garment hangers being formed in part of bars which extend in lines parallel with the movable end wall of the trunk, and a yielding pad interposed between the movable end wall and the rails of the hangers and which is adapted to be pressed embeddingly into engagement with the rail portions of the hangers and clothes draped thereon to hold the same in adjusted position when the end wall is moved to closed position.

4. In a trunk having a movable end wall and provided with garment hanger supporting means and one or more garment hangers adjustably mounted thereon, a yielding pad interposed between and engaging the movable end wall and the garment hangers for holding the garment hangers and clothes draped thereon in adjusted position, and means for holding the movable end wall in pad engaging position and in a position to cause the draped clothes and portions of the hangers to embed into the pad.

5. A wardrobe trunk, comprising a trunk body divided vertically into two sections which are hinged together, one of said sections having an upper open end, a cover hinged to the trunk body for closing said upper end, garment hanger rails mounted in the upper portion of the open ended section, garment hangers slidably mounted on said rails, and a pad interposed between the cover and the garment hangers and into which the garment hangers are adapted to embed when the cover is in closed position.

6. A wardrobe trunk, comprising a trunk body divided vertically into two sections which are hinged together, one of said sections having an upper open end, a cover hinged to the trunk body for closing said open end, garment hanger rails mounted within the upper portion of the open end section on the opposite side walls of said section, garment hangers extending transversely across the open ended section and slidably mounted on said rails, and a pad interposed between the cover and the rails and engaging the portions of the hangers between the rails, the said pad being of greater thickness than the distance between the cover and the upper edge portions of the garment

hangers to cause the said hangers to embed into the pad when the cover is closed.

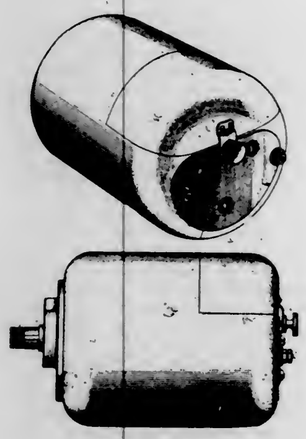
7. A wardrobe trunk, garment hanger rails mounted within the upper portion of the wardrobe and at a distance below the top of the wardrobe, garment hangers extending transversely across said wardrobe, and slidably mounted on said rails, and a yielding pad interposed in the space between the top of the wardrobe and the rails, and engaging the portions of the hangers between the rails, said pad being of greater thickness than the distance between the top of the wardrobe and the upper edge portions of the garment hangers, to cause said hangers or clothes draped thereon to embed into the pad when the cover is closed.

8. A wardrobe trunk, rails mounted in the upper end of the wardrobe a desired distance below the top or cover of said wardrobe, hangers comprising lower coat-suspending arms and an upper horizontal arm, the latter movably mounted on the rails and adapted to have clothing draped thereover, and a pad interposed between the top edges of the horizontal arms of the hangers and the underside of the top or cover of the wardrobe section, and into which pad the said horizontal arms of the hangers or the clothes suspended thereover are adapted to embed.

9. A wardrobe trunk divided longitudinally to form two trunk sections adapted to stand on end and hinged together along their longitudinal edges, to adapt the trunk sections to be opened outwardly away from each other when the trunk is standing on end, and the top of one of said sections being hinged at its rear edge to adapt it to swing upwardly and backwardly when the trunk is open, the section carrying this hinged lid being provided interiorly with clothes hanger elements, and an interposed pad between the clothes hanger elements and the underside of the hinged top wall, and into which pad the clothes hanger elements or clothing suspended thereover are adapted to embed.

DESIGNS.

46,306. DYNAMO-CASING. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 8, 1914. Serial No. 830,545. Term of patent 14 years.



The ornamental design for a dynamo-casing, as shown.

46,307. JEWELER'S CABINET. ELMER F. ASHBROOK, Jamesport, Mo. Filed June 25, 1914. Serial No. 847,318. Term of patent 14 years.



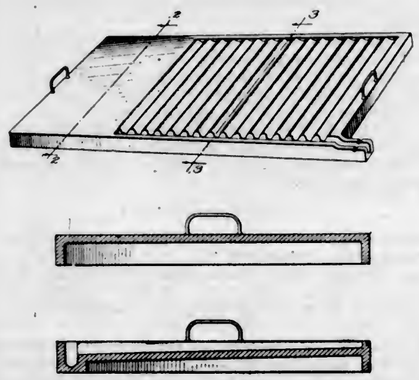
The ornamental design for a jeweler's cabinet as shown.

46,308. CHRISTMAS-TREE FENCE. MARTIN L. BEISTLE, Shippensburg, Pa. Filed June 27, 1914. Serial No. 847,763. Term of patent 7 years.



The ornamental design for a Christmas tree fence, as shown.

46,309. BROILER-GRIDDLE. SIMON BINSWANGER, St. Joseph, Mo., assignor to Ross Broiler Company, St. Joseph, Mo., a Corporation of Missouri. Filed May 9, 1914. Serial No. 837,590. Term of patent 14 years.



The ornamental design for a broiler-griddle, as shown.

46,310. TOOL. CLAYTON H. BLANTZ, Lebanon, Pa. Filed June 24, 1914. Serial No. 847,126. Term of patent 3½ years.



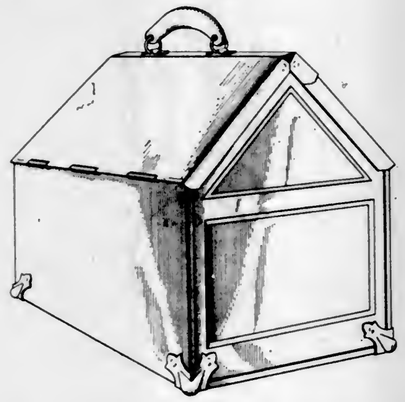
The ornamental design for a tool, as shown.

46,311. BOTTLE-OPENER AND PICK. THOMAS HARDING, Newark, N. J., assignor to J. L. Sommer Manufacturing Co., a Corporation of New Jersey. Filed June 25, 1913. Serial No. 775,805. Term of patent 14 years.



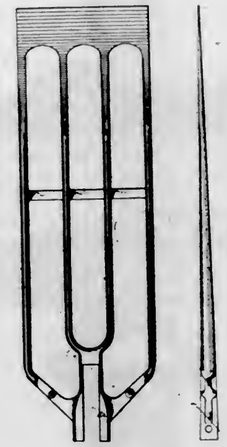
The ornamental design for a combined bottle opener and pick, as shown.

46,312. TRAVELER'S GRIP OR BAG. HOWARD L. KENNEDY, Fort Wayne, Ind. Filed June 8, 1914. Serial No. 843,891. Term of patent 14 years.



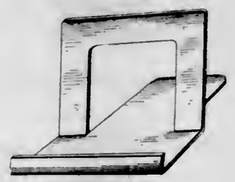
The ornamental design for a grip, as shown and described.

46,313. BAKER'S PEEL. GEORGE J. KRAUSHAAR, Cleveland, Ohio. Filed Oct. 27, 1913. Serial No. 797,693. Term of patent 7 years.



The ornamental design for a baker's peel, as shown.

46,314. NEWSPAPER-HOLDER. LOUIS W. LEVY, New York, N. Y. Filed Apr. 1, 1914. Serial No. 828,917. Term of patent 3½ years.



The ornamental design for a newspaper holder as shown.

46,315. HOSIERY-TICKET. JOHN WYCKOFF METTLER, East Millstone, N. J., assignor to Interwoven Stocking Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Mar. 21, 1914. Serial No. 826,420. Term of patent 14 years.



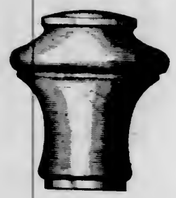
The ornamental design for a hosiery ticket as shown.

46,316. HANDLE FOR SHAVING-BRUSHES. JESSE CANBY MORGAN, New York, N. Y. Filed Apr. 1, 1914. Serial No. 828,913. Term of patent 14 years.



The ornamental design for the handle of a shaving brush, as shown.

46,317. BED-TRIMMING. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 18, 1914. Serial No. 851,832. Term of patent 7 years.





The ornamental design for bed trimming, substantially as shown.

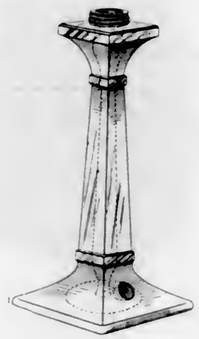
46,318. BED-TRIMMING. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 18, 1914. Serial No. 851,833. Term of patent 7 years.





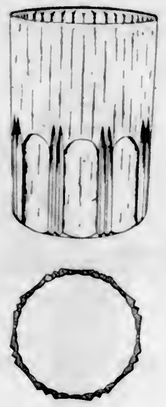
The ornamental design for bed trimming, substantially as shown.

46,319. CANDLESTICK. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio, a Copartnership. Filed June 24, 1913. Serial No. 775,596. Term of patent 14 years.



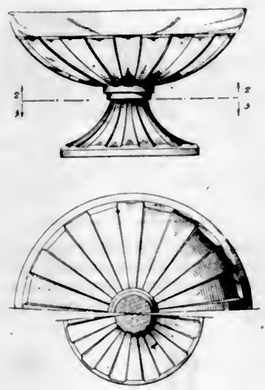
The ornamental design for a candlestick, as shown.

46,320. TUMBLER OR SIMILAR ARTICLE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Jan. 29, 1914. Serial No. 815,311. Term of patent 7 years.



The ornamental design for a tumbler or similar article, substantially as shown.

46,321. BOWL OR SIMILAR ARTICLE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Jan. 29, 1914. Serial No. 815,312. Term of patent 7 years.



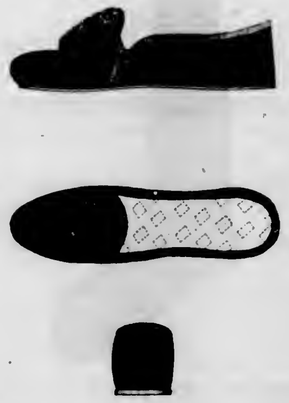
The ornamental design for a bowl or similar article, substantially as shown and described.

46,322. GOBLET OR SIMILAR ARTICLE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed May 20, 1914. Serial No. 839,909. Term of patent 3½ years.



The design for a goblet or similar article, substantially as shown and described.

46,323. SLIPPER. MAX E. SCHENKE, Brooklyn, N. Y. Filed June 15, 1914. Serial No. 845,319. Term of patent 3½ years.



The ornamental design for a slipper as shown.

46,324. STOCKING. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 28, 1913. Serial No. 781,653. Term of patent 14 years.



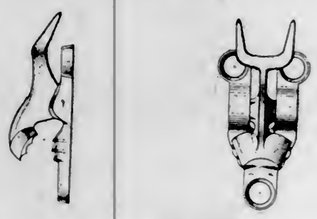
The ornamental design for a stocking as shown and described.

46,325. STOCKING. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 28, 1913. Serial No. 781,655. Term of patent 14 years.



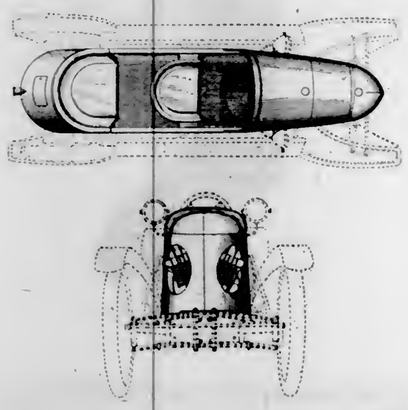
The ornamental design for a stocking as shown and described.

46,326. DEVICE FOR FASTENING CLOTHES-LINES. EDWARD W. STEIMER, Dubois, Pa. Filed June 24, 1914. Serial No. 847,127. Term of patent 7 years.

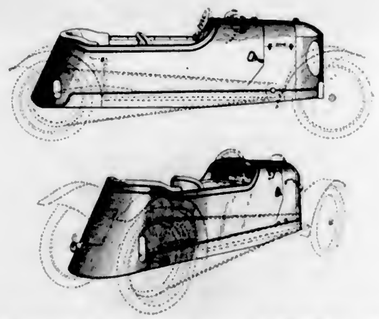


The ornamental design for a device for fastening clothes lines, as shown.

46,327. VEHICLE-BODY. JAMES S. STEPHENS, Chicago, Ill. Filed May 20, 1914. Serial No. 839,892. Term of patent 7 years.

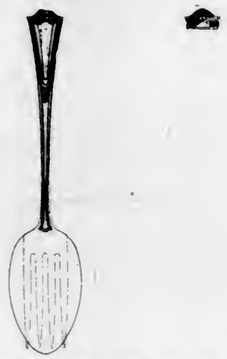


46,327.



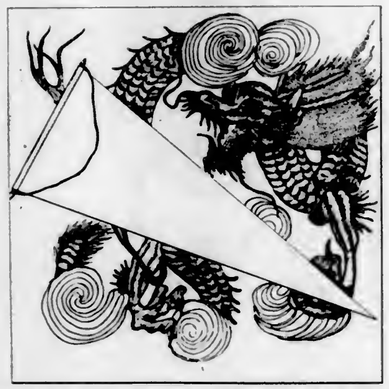
The ornamental design for a vehicle body substantially as shown.

46,328. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL STOHR, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed June 29, 1914. Serial No. 848,096. Term of patent 14 years.



The ornamental design for a spoon, fork or similar article, as shown.

46,329. PILLOW-COVER. SHUGO TANAKA, Chicago, Ill. Filed June 19, 1914. Serial No. 846,211. Term of patent 7 years.



The ornamental design for a pillow cover, as shown.

TRADE-MARKS

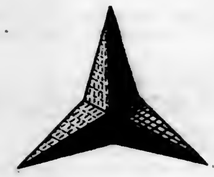
PUBLISHED AUGUST 25, 1914.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

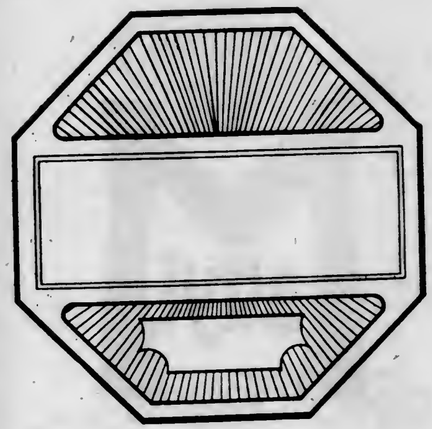
Ser. No. 56,471. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DAIMLER-MOTOREN-GESELLSCHAFT, Unterturkheim, near Stuttgart, Germany. Filed May 13, 1911.



Particular description of goods.—Airships of All Kinds—Namely, Balloons, Parachutes, Flying-Machines, Aeroplanes, Monoplanes, Biplanes, Multiplanes, and Inflated Aeroplanes, Monoplanes, Biplanes, and Multiplanes, (Excluding Those of Rubber or in Combination with Rubber or Rubber Substitutes or Galalite)—Boats, Motor-Boats, Steamships, Vessels of War, and Submarine Vessels, Cycles, Pedals, Hinges for Vehicle Parts, Rear-Axle Brackets, Steering-Pivots, Live-Axles, Supporting-Axles, Brake-Blocks and Holders and Supports Therefor, Brake-Disks, Vehicle-Spring-Carrier Arms, Vehicle-Spring Brackets, Non-Skid Studs, Control-Lever Gates for Use on Vehicles, Pivots for Hinged Motor-Vehicle Cover-Frames, Hood-Hoops, Covers and Hoods for Motor-Vehicles, Cycles and Velocipedes, Luggage and Hat Racks for Use in Conjunction with Vehicles, Stirrups for Fastening Springs to Axles, Axle-Bearings, Pressed, Forged, and Built-Up Metal Frames for Vehicles, Motor-Carriage Bodies, Gear-Cases, Engine-Bonnets, Mud-Guards, Metal Tires, Axle-Boxes, Axle-Trucks, Motor-Vehicle Bogies, Foot and Hand Levers for Vehicles, Motor-Vehicle Chassis, Sledges and Sleighs, Cycle Supports or Stands, Motor-Carriage Steps, Motor-Vehicle Undercarriages, Axle-Box Guides, Wheel-Forks, Frames for Motor-Vehicles, Wheel-Hubs, Vehicle Steering-Handles, Handles and Knobs for Vehicle-Doors and for the Covers of Motor-Vehicle Parts, Handles for the Hand-Levers of Motor-Vehicles, Metal Brackets for Supporting Parts of Motor-Vehicles, Plugs or Bungs for the Fuel, Oil, and Water Receptacles of Motor-Vehicles, Protecting-Plates for Covering in the Exposed Parts of Motor-Vehicles, Cycle-Forks, Forks for Retaining the Foot or Hand Levers of Clutch and Brake Mechanism, Metal Pillars and Posts for Supporting the Superstructures of Undercarriages, Steering-Pillars, Metal Plates for Motor-Vehicle Bodies and Seats, Motor Road-Vehicles, Railway and Tramway Vehicles, Motor-Carts, Motor-Wagons, Motor-Vans, Motor-Cabs, Motor-Carriages, Motor-Omnibuses, Ferry-Boats, Ambulances, Motor-Coaches, Motor-Gigs, Tram-Cars, Axletrees, Axle-Trusses, Cycle-Frames, Axle-Caps, Weather-Screens for Vehicles, Vehicle-Doors, Fixed and Folding Roofs for Vehicles, Vehicle-Brakes, Dash-Boards, Motor-Vehicle Fore-Carriages, Motor-Vehicle Body-Panels and Paneled Work, Carriage-Windows, Hand-Trucks, Watering-Carts, Free-Wheel Clutches for Motor-Vehicles, Pressed, Forged, and Built-Up Vehicle-Wheels, Steering and Brake Mechanism, Brake-Rings, Lamp-Pedestals for Use in Conjunction with Vehicle-Lamps, and Foot-step-Bearings.

Claims use since June 24, 1909.

Ser. No. 63,399. (CLASS 12. CONSTRUCTION MATERIALS.) FLINTKOTE MANUFACTURING CO., Boston, Mass. Filed May 7, 1912.



Particular description of goods.—Artificial Board.

Claims use since on or about Apr. 24, 1912.

Ser. No. 64,217. (CLASS 15. OILS AND GREASES.) INDIAN REFINING COMPANY, INC., Augusta, Me., and New York, N. Y. Filed June 15, 1912.



Particular description of goods.—Crude Petroleums, Fuel-Oils, Lubricating-Oils, Gas-Oils, Illuminating-Oils, Naphtha, Benzin, Gasolene, Paraffin-Wax, and Residuums from Petroleum Distillation.
Claims use since the 1st of January, 1910.

Ser. No. 67,818. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GEHE & Co., AKTIENGESELLSCHAFT, Dresden, Germany. Filed Jan. 10, 1913.

Maltyl

Particular description of goods.—Malt Extracts.
Claims use since May 11, 1908.

Ser. No. 68,158. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) TEXAS FIRE AND WATER PROOF PAINT COMPANY, Houston, Tex. Filed Jan. 27, 1913.



No claim being made to the word "Knant-Burn."
Particular description of goods.—Dry, Paste, and Ready-Mixed Paint.
Claims use since Aug. 10, 1912.

Ser. No. 70,494. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNHARD LAUER, Berlin, Germany. Filed May 19, 1913.

MAMMUTH

Particular description of goods.—Mountain-Herbs, an Internal Remedy for Purifying the Blood and for Laxative Purposes.
Claims use since June 13, 1898.

Ser. No. 70,836. (CLASS 7. CORDAGE.) AMERICAN MANUFACTURING COMPANY, Boston, Mass., and New York, N. Y. Filed June 3, 1913.

PARCEL POST

Particular description of goods.—Twines Manufactured from Vegetable Fiber.
Claims use since May 12, 1913.

Ser. No. 71,347. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) AKTIESELSKABET H. E. GOSCH & CO.'S TÆNDSTIKFABRIKER OG AKTIETÆNDSTIKFABRIKEN GODTHAAB, Copenhagen, Denmark. Filed June 25, 1913. Under ten-year proviso.



No claim is made to the exclusive use of the words "Tændstiksfabriks Patent Paraffinerede Sikkerheds-Tændstikker uden Svovl og Fosfor, H. E. Gosch & Cos. Tændstikfabrikker Kjobenhavn," which appear in the accompanying drawing.
Particular description of goods.—Matches.
Claims use since November, 1886.

Ser. No. 71,650. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

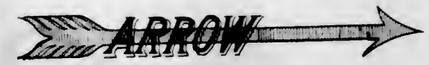
Particular description of goods.—Machinery - Castings, Anchors, Bed-Plates, Iron, Steel, Brass, Copper, and Silver Wire, Fish-Plates, Rolled or Cast Metal Beams, Printing-Type, Solder, Rolled Metal Bars, Rolled Metal Rails, Rolled Metal Sheet and Corrugated Metal Sheet, Rolled Metal Cylinders, Cast-Iron Bars and Rods, Cast-Iron Plate, Forged Metal Bars, Forged Rails, and Forged Metal Sheets, Rolled Girders, Cast Cylinders.
Claims use since November, 1910.

Ser. No. 71,651. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1913.

MERCEDES-KNIGHT

Particular description of goods.—Electric Motors, Armatures, Ignition-Batteries, Accumulators, Transformers, Inductors, Magnets, Electromagnets, Magnetos, Ignition Plugs and Armatures, Dynamo-Machines, Electrical Lifts, Electric Bells, Electric Foot-Warmers, Electric Batteries, Electric Couplings, Electric Cut-Outs, Electric Switches, Electric Ceiling and Wall Roses, Electric-Wire Casings and Conduits, Electric-Wire Clips and Staples, Electric-Wire-Insulation Blocks, Electric-Lamp Holders, Fuse Wire and Strips, Resistances, Electric Igniters, Electric Junction and Test Boxes, Electric-Arc Lamps, Carbon-Holders, Electrodes, Mercury - Vapor Lamps, Electric Head and Tail Lights, Portable Electric Lamps, Electric Signal-Lamps, Electric Incandescent Lamps, Lamp - Filaments, Electric Roof-Lamps, Electric Pendants, Electric Contacts, Electric Pushes and Pulls, Switchboards, Electroliers, Electric Candles and Electric Night-Lights, Insulated Wire.
Claims use since November, 1910.

Ser. No. 71,946. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE GOTTLIEB BAUERNSCHMIDT STRAUS BREWING COMPANY, Baltimore, Md. Filed July 24, 1913.



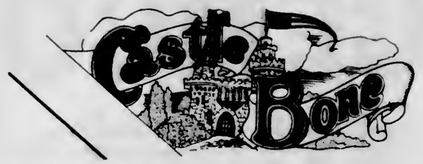
The picture of the arrow being red.
Particular description of goods.—Lager-Beer.
Claims use since Feb. 22, 1913.

Ser. No. 72,567. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) A. THEODORE ABBOTT & COMPANY, Philadelphia, Pa. Filed Aug. 28, 1913.



The word "Kapock" being disclaimed.
Particular description of goods.—Silk Curtains and Silk Goods to be Sold in the Piece or by the Yard.
Claims use since Aug. 15, 1913.

Ser. No. 73,599. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CASTLEBONE COMPANY, New York, N. Y. Filed Oct. 25, 1913.



No claim being made to the exclusive use of the word "Bone," shown in the drawing.
Particular description of goods.—Featherbone.
Claims use since Oct. 23, 1913.

Ser. No. 74,638. (CLASS 38. PRINTS AND PUBLICATIONS.) JOS. G. KITCHELL, Haddam, Conn. Filed Dec. 16, 1913.

Mezzotone

"Mezzotone."
Particular description of goods.—Pictures, Prints, Paintings, Etchings, and Drawings.
Claims use since Nov. 1, 1913.

Ser. No. 75,004. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH GOODMAN, New York, N. Y. Filed Jan. 7, 1914.

Movies

Particular description of goods.—Corn-Plasters, Foot-Powders, Bunion-Plasters, and Preparations for the Treatment of Sore and Callous Feet.
Claims use since Dec. 16, 1913.

Ser. No. 75,880. (CLASS 15. OILS AND GREASES.) THE WHITE & BAGLEY CO., Worcester, Mass. Filed Feb. 12, 1914.

Made with both eyes on our Reputation

Particular description of goods.—Lubricating Oils and Greases.
Claims use since Jan. 23, 1914.

Ser. No. 77,017. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE CLEVELAND ELECTRO METALS COMPANY, Cleveland, Ohio. Filed Mar. 28, 1914.

CEMCO

Consists of the word "Cemco" in capital letters.
Particular description of goods.—Aluminum Castings.
Claims use since May 20, 1913.

Ser. No. 77,304. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARR AND BAILEY MANUFACTURING COMPANY, Camden, N. J. Filed Apr. 8, 1914.

LINOLAC

Particular description of goods.—A Chemical Composition for the Treatment of New Floor Oil-Cloth and New Linoleum and the Restoration of Old Floor Oil-Cloth and Old Linoleum.
Claims use since about December, 1913.

Ser. No. 77,347. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ARTHUR J. KAHN, New York, N. Y. Filed Apr. 9, 1914.

A.J.K.

Particular description of goods.—Knitting-Needles, Crotchet-Hooks, Shuttles, Spool-Holders, and Needle-Protectors.
Claims use since Mar. 1, 1913.

Ser. No. 77,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUGUSTA CANNING CO., Brunswick, Me. Filed Apr. 11, 1914.

Montrose

Particular description of goods.—Canned Corn, Succotash, and Lima Beans.
Claims use since 1899.

Ser. No. 77,511. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILLVILLE FLOUR AND GRAIN COMPANY, Millville, N. J. Filed Apr. 16, 1914.



All words shown in the drawing and specimens excepting the word "Marcello" are hereby disclaimed.
Particular description of goods.—Wheat-Flour.
Claims use since Mar. 1, 1914.

Ser. No. 77,685. (CLASS 31. FILTERS AND REFRIGERATORS.) THE PORTSMOUTH ENGINE CO., Portsmouth, Ohio. Filed Apr. 23, 1914.

THE "JACK FROST"

Particular description of goods.—Small Ammonia-Compressors.
Claims use since 1913.

Ser. No. 77,747. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE R. M. HOLLINGSHEAD CO., Camden, N. J. Filed Apr. 25, 1914.

WHIZ

Particular description of goods.—Liniment, Ammonia, Cough-Syrup, and Disinfectants.
Claims use since about Sept. 1, 1905.

Ser. No. 77,841. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASHVILLE ROLLER MILLS, Nashville, Tenn. Filed Apr. 28, 1914.



The trade-mark consists of a circular band colored red, divided horizontally. In the upper portion appear the words "First Honors," and within the band is an open scroll with wreaths and heads of wheat.
Particular description of goods.—Wheat-Flour.
Claims use since May 7, 1912.

Ser. No. 78,006. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN AUKAM & CO., New York, N. Y. Filed May 5, 1914.



Particular description of goods.—Handkerchiefs.
Claims use since November, 1913.

Ser. No. 78,156. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914

1660

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,157. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1220

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,158. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1330

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,159. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1440

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,160. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1550

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,161. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1770

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,162. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1880

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUTH CHOCOLATE COMPANY, Wilmington, Del., and Baltimore, Md. Filed May 9, 1914.

1990

Particular description of goods.—Candy.
Claims use since Apr. 22, 1914.

Ser. No. 78,377. (CLASS 39. CLOTHING.) ALFRED BENJAMIN-WASHINGTON CO., New York, N. Y. Filed May 19, 1914.

GLAMORGAN

Particular description of goods.—Men's and Young Men's Outer Clothing.
Claims use since Apr. 1, 1914.

Ser. No. 78,459. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) RELIANCE BUGGY CO., St. Louis, Mo. Filed May 21, 1914.

RBC

The trade-mark consists of a wheel having transversely thereof an elliptic vehicle-spring, within which is the legend "R. B. Co."
Particular description of goods.—Carriages and Buggies.
Claims use since Dec. 14, 1913.

Ser. No. 78,863. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULFPORT GROCERY CO., Gulfport, Miss. Filed June 6, 1914.

RAINBOW

The trade-mark is shown in colors in the similitude of a rainbow, blue, red, and green, as indicated in the accompanying drawing.
Particular description of goods.—Stock Feed.
Claims use since May 6, 1914.

Ser. No. 78,873. (CLASS 39. CLOTHING.) ISIDOR KAITZ, New York, N. Y. Filed June 6, 1914.

Martha Washington



Particular description of goods.—Ladies' Shirt-Waists.
Claims use since June 3, 1914.

Ser. No. 78,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. KOHNSTAMM & CO., New York, N. Y. Filed June 10, 1914.

ATLAS



Comprising the word "Atlas" and the representation of Atlas.
Particular description of goods.—Fruit Concentrates, Essences, Essential Oils and Synthetic Flavors for Use in Flavoring Extracts, and Flavoring Extracts, All for Use in Food Products.
Claims use since 1908.

Ser. No. 79,031. (CLASS 42. KNITED, NETTED, AND TEXTILE FABRICS.) FRANKEN & FRANK, New York, N. Y. Filed June 12, 1914.

Crepe Vinita

The word "Crepe" being disclaimed.
Particular description of goods.—Crape Piece Goods.
Claims use since May 15, 1914.

Ser. No. 79,043. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE TABOR MANUFACTURING COMPANY, Philadelphia, Pa. Filed June 12, 1914. Under ten-year proviso.

TABOR

Particular description of goods.—Molding Machinery Used in Casting Metals.
Claims use since August, 1893.

Ser. No. 79,049. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EMIL BENDER, Kaiserslautern, Germany. Filed June 13, 1914.

Ideal bandage



No claim being made to the exclusive right to the use of the word "Bandages."
Particular description of goods.—Bandages.
Claims use since 1904.

Ser. No. 79,145. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed June 16, 1914.

REX

Particular description of goods.—Fertilizers.
Claims use since 1898.

Ser. No. 79,271. (CLASS 39. CLOTHING.) RED DIAMOND CLOTHING CO., St. Louis, Mo. Filed June 22, 1914.

RED DIAMOND



Particular description of goods.—Men's and Boys' Outer Shirts and Children's Rompers.
Claims use since about May 1, 1908.

Ser. No. 79,280. (CLASS 39. CLOTHING.) THE STEIN-BLOCH CO., Rochester, N. Y. Filed June 22, 1914.

"NEWFLEX"

Particular description of goods.—Coats.
Claims use since May 5, 1914.

Ser. No. 79,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KREKELER GROCER CO., St. Louis, Mo. Filed June 23, 1914.



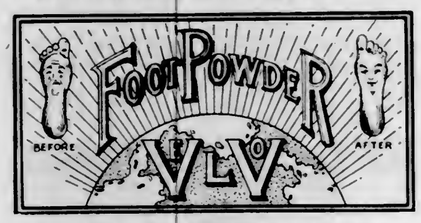
The picture shown being fanciful.
Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Oysters, Canned Salmon, Canned Pork and Beans, Canned Sardines, and Evaporated Milk.
Claims use since May 15, 1910.

Ser. No. 79,305. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES M. STEIN, New York, N. Y. Filed June 23, 1914.

VEXITOL

Particular description of goods.—Salves, Ointments, Liniments, and Tooth-Soap.
Claims use since January, 1914.

Ser. No. 79,325. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK DEDEK, Chicago, Ill. Filed June 24, 1914.



The words "Foot Powder" being disclaimed.
Particular description of goods.—Foot-Powder Composition.
Claims use since October, 1913.

Ser. No. 79,340. (CLASS 39. CLOTHING.) STANDARD KNITTING MILLS COMPANY, New York, N. Y. Filed June 24, 1914.

Modest Maid

Particular description of goods.—Knitted Vests and Undershirts.
Claims use since June 17, 1914.

Ser. No. 79,353. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERLIN LABORATORY, LTD., INC., New York, N. Y. Filed June 25, 1914.

SENTANOL

Particular description of goods.—Medical Preparations for Use as a Spray in Nose or Throat Affections.
Claims use since June 1, 1914.

Ser. No. 79,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERLIN LABORATORY, LTD., INC., New York, N. Y. Filed June 25, 1914.

Rusol

Particular description of goods.—Medical Preparations for Gastro-Intestinal Disturbances.
Claims use since June 1, 1914.

Ser. No. 79,406. (CLASS 39. CLOTHING.) DAVID E. SICHER, New York, N. Y., by Dudley D. Sicher and Samuel A. Sicher, New York, N. Y., executors. Filed June 27, 1914.

DOVE



Particular description of goods.—Women's Misses', and Children's Muslin, Nainsook, Lawn, Cambric, Batiste, Flannelette, Silk, and Silk and Cotton Undergarments—viz., Underskirts, Nightgowns, Princess-Slips, Chemise, Skirt-Chemise, Envelop-Chemise Chemise-Drawers, Shadow-Protectors, Combinations, Drawers, Corset-Covers, Brassières, Kimonos, Pajamas, and Petticoats.
Claims use since June 1, 1914.

Ser. No. 79,419. (CLASS 5. ADHESIVES.) ATSCO, INCORPORATED, New York, N. Y. Filed June 29, 1914.

ATSCO INC.

Particular description of goods.—Viscous Cement.
Claims use since about May 30, 1912.

Ser. No. 79,430. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOLD MEDAL STOCK FOOD CO., Perrysville, Ohio. Filed June 29, 1914.



But we disclaim as any part of our trade-mark the descriptive words "Gold Medal Stock Tonic," which appear in the drawing.
Particular description of goods.—Stock-Tonics.
Claims use since Oct. 28, 1913.

Ser. No. 79,457. (CLASS 39. CLOTHING.) THE CROWN OVERALL MANUFACTURING CO., Cincinnati, Ohio. Filed June 30, 1914.

Overland TROUSERS

No claim being made to the word "Trousers," shown in the drawing.
Particular description of goods.—Trousers and Overalls.
Claims use since Apr. 15, 1914.

Ser. No. 79,499. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PHILO HAY SPECIALTIES CO., Newark, N. J. Filed July 1, 1914.

Harfina

Particular description of goods.—Toilet-Combs.
Claims use since May 20, 1914.

Ser. No. 79,502. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MICHELE AJELLO, Brooklyn, N. Y. Filed July 2, 1914. Under ten-year proviso.

Romolo-Monti

Particular description of goods.—Canned Olive-Oil, Fruits, and Vegetables.
Claims use since January, 1889.

Ser. No. 79,514. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM A. FAHRENWALD, New York, N. Y. Filed July 2, 1914.

VAF

Le Ferne

Particular description of goods.—Cold-Cream.
Claims use since June 17, 1914.

Ser. No. 79,527. (CLASS 39. CLOTHING.) OSCAR CARRABINE, New York, N. Y. Filed July 3, 1914.

Breakers

Particular description of goods.—Bathing-Suits.
Claims use since June 24, 1914.

Ser. No. 79,529. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DUNLOP MILLING CO., Clarksville, Tenn. Filed July 3, 1914.



The picture shown being a portrait of Mr. Dunlop's son.
Particular description of goods.—Wheat-Flour.
Claims use since May 1, 1914.

Ser. No. 79,579. (CLASS 15. OILS AND GREASES.) NEW YORK & NEW JERSEY LUBRICANT CO., New York, N. Y. Filed July 6, 1914.

MOTOROL

Particular description of goods.—Lubricating-Oils for Gas Engines and Motors.
Claims use since August, 1907.

Ser. No. 79,594. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY ARMSTRONG, Atlanta, Ga. Filed July 7, 1914.

ARMSTRONG'S



The portrait is that of myself.
Particular description of goods.—A Remedy for Asthma, Bronchitis, Hay-Fever, Catarrh, and Blood-Purifier.
Claims use since 1909.

Ser. No. 79,643. (CLASS 10. FERTILIZERS.) NORSK HYDRO-ELEKTRISK KVAELSTOFAKTIESELSKAB, Christiania and Notodden, Norway. Filed July 8, 1914.



Particular description of goods.—Fertilizer.
Claims use since 1912.

Ser. No. 79,647. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOWARD GEORGE SCHAUERMANN, Philadelphia, Pa. Filed July 8, 1914.

Phen-Alba

Particular description of goods.—A Massage and Skin Cream and Antiseptic Ointment.
Claims use since April, 1914.

Ser. No. 79,741. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPERO CHEMICAL CO., Cleveland, Ohio. Filed July 11, 1914.

SOK-UM

Particular description of goods.—A Foot-Tablet Which is to Relieve Sore, Tired, Tender, Aching, Sweaty, Swollen, and Bad-Smelling Feet, also Painful Corns, Bunions, Callouses, &c.
Claims use since Apr. 15, 1914.

Ser. No. 79,747. (CLASS 15. OILS AND GREASES.) BRODERICK & BASCOM ROPE COMPANY, St. Louis, Mo. Filed July 13, 1914.

ROPE-A-LENE

Particular description of goods.—Wire-Rope Lubricants and Preservatives.
Claims use since early in the year 1905.

Ser. No. 79,769. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. SONNEBORN SONS, INC., New York, N. Y. Filed July 13, 1914.

TEXTILINE

Particular description of goods.—A Chemical Compound Used for the Treatment of Textile Fibers to Soften the Same.
Claims use since about January, 1910.

Ser. No. 79,776. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. KOHNSTAMM & CO., New York, N. Y. Filed July 14, 1914.

ALPHA

Comprising the word "Alpha."
Particular description of goods.—Laundry Starch.
Claims use since about the 20th day of June, 1914.

Ser. No. 79,778. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) H. KOHNSTAMM & CO., New York, N. Y. Filed July 14, 1914.

OMEGA

Comprising the word "Omega."
Particular description of goods.—Laundry Starch.
Claims use since about the 20th day of June, 1914.

Ser. No. 79,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. J. WATTERS CO., Buffalo, N. Y. Filed July 14, 1914.

"KLEANRITE"

Particular description of goods.—Metal-Pickling Compound for Removing the Scale, Rust, and Oil from Iron and Steel Products Before Finishing.
Claims use since July 1, 1913.

Ser. No. 79,808. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & CO., Chicago, Ill. Filed July 15, 1914.

VANHELLER

Particular description of goods.—Flavoring Extracts for Foods.
Claims use since Apr. 2, 1914.

Ser. No. 79,829. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo. Filed July 15, 1914.

COUNTRY GIRL

Particular description of goods.—Bleached and Unbleached Muslins.
Claims use since Nov. 18, 1909.

Ser. No. 79,830. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo. Filed July 15, 1914.

QUEEN OF THE HOME

Particular description of goods.—Bleached and Unbleached Sheetings.
Claims use since November, 1909.

Ser. No. 79,831. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo. Filed July 15, 1914.

EDRIS

Particular description of goods.—Bleached and Unbleached Muslins.
Claims use since July, 1908.

Ser. No. 79,834. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WAYNE PAINT CO., Waynesboro, Pa. Filed July 15, 1914.



The portrait being that of General Anthony Wayne, deceased.
Particular description of goods.—Ready-Mixed and Liquid Paints.
Claims use since May 28, 1914.

Ser. No. 79,835. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BROWN CRACKER & CANDY CO., Dallas, Tex. Filed July 16, 1914.

HIPPODROME

Consisting of the word "Hippodrome."
Particular description of goods.—Cakes.
Claims use since September, 1909.

Ser. No. 79,837. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY F. C. KILIAN, New York, N. Y. Filed July 16, 1914.

LA FAMOSA

Particular description of goods.—Canned Vegetables, Canned Fruits, Canned Salmon, and Canned Jam.
Claims use since Apr. 21, 1914.

Ser. No. 79,849. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) DETROIT OAK BELTING CO., Detroit, Mich. Filed July 16, 1914.

DET-CO

Particular description of goods.—Leather Belting.
Claims use since July 7, 1914.

Ser. No. 79,858. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MISSISSIPPI PACKING COMPANY, INCORPORATED, Natchez, Miss. Filed July 16, 1914.

PECAN

Particular description of goods.—Lard and Smoked Meats.
Claims use since June 18, 1914.

Ser. No. 79,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed July 16, 1914.

POMONA

Consisting of the word "Pomona."
Particular description of goods.—Cakes.
Claims use since April, 1914.

Ser. No. 79,878. (CLASS 15. OILS AND GREASES.) KENDALL REFINING COMPANY, Bradford, Pa. Filed July 17, 1914. Under ten-year proviso.

KENDALL

Particular description of goods.—Kerosene, Gasolene, Neutral Oils, Steam-Cylinder Stocks, and Lubricating-Grease.
Claims use since Jan. 1, 1885.

Ser. No. 79,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSOLIDATED GROCERY COMPANY, Tampa, Jacksonville, and Pensacola, Fla. Filed July 18, 1914.

Over Sea

Particular description of goods.—Butter.
Claims use since July 13, 1914.

Ser. No. 79,911. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO L. KUEHN CO., Milwaukee, Wis. Filed July 18, 1914.

Pride of Norway

Particular description of goods.—Canned Sardines.
Claims use since Mar. 9, 1914.

Ser. No. 79,912. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO L. KUEHN CO., Milwaukee, Wis. Filed July 18, 1914.

PENGUIN

Particular description of goods.—Canned Sardines.
Claims use since Mar. 9, 1914.

Ser. No. 79,913. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO L. KUEHN CO., Milwaukee, Wis. Filed July 18, 1914.

ZOO

Particular description of goods.—Canned Sardines.
Claims use since Mar. 9, 1914.

Ser. No. 79,914. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO L. KUEHN CO., Milwaukee, Wis. Filed July 18, 1914.

DOMINO

Particular description of goods.—Canned Sardines.
Claims use since Mar. 9, 1914.

Ser. No. 79,915. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OTTO L. KUEHN CO., Milwaukee, Wis. Filed July 18, 1914.

KAYAK

Particular description of goods.—Canned Sardines.
Claims use since Mar. 9, 1914.

Ser. No. 79,916. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT MELROSE AND COMPANY, LIMITED, Edinburgh, Scotland. Filed July 17, 1914.



Particular description of goods.—Tea.
Claims use since the 13th of March, 1914.

Ser. No. 79,920. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RHU-LUM-GOU CO., New York, N. Y. Filed July 18, 1914.



Particular description of goods.—A Specific in Rheumatism and a Medicinal Tonic.
Claims use since Aug. 1, 1912.

Ser. No. 79,923. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. WASHINGTON COFFEE REFINING COMPANY, New York, N. Y. Filed July 18, 1914.

CRYSTALS

Particular description of goods.—A Powdered Preparation Made from Fruits and Flowers to be Used as a Food-Flavoring.
Claims use since Apr. 28, 1914.

Ser. No. 79,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CANTON BISCUIT CO., Canton, Ohio. Filed July 20, 1914.

I've gota

Particular description of goods.—Crackers and Biscuits.
Claims use since July 10, 1914.

Ser. No. 79,932. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTH AMERICAN MERCANTILE Co., San Francisco, Cal. Filed July 20, 1914.



Particular description of goods.—Rice.
Claims use since May 14, 1909.

Ser. No. 79,936. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PREMIER PACKING Co., Chicago, Ill. Filed July 20, 1914.

CHIC-I-NUNA

Particular description of goods.—Canned Albicore.
Claims use since June 17, 1914.

Ser. No. 79,938. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLMES & SON, Washington, D. C. Filed July 20, 1914.



Particular description of goods.—Bread.
Claims use since Apr. 11, 1914.

Ser. No. 79,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDGEMONT CHEMICAL MFG. Co., Edgemont, S. D. Filed July 20, 1914.

NO-WHO-GO

Uno Stone

The signature being the facsimile signature of Uno Stone, one of the members of the firm.
Particular description of goods.—A Medicine for Use in Treating Whooping-Cough.
Claims use since June 30, 1914.

Ser. No. 79,954. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTI-FOG COMPANY, Portland, Oreg. Filed July 21, 1914.

ANTI-FOG

Particular description of goods.—A Chemical Composition for Preventing Accumulation or Condensation of Water Upon Glass and other Polished Surfaces.
Claims use since May 12, 1914.

Ser. No. 79,967. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. F. PYLE & SON, San Jose, Cal. Filed July 21, 1914.



Particular description of goods.—Sauces and Canned Fruits and Vegetables.
Claims use since about Jan. 1, 1909.

Ser. No. 79,972. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. RIPPEN, Perth Amboy, N. J. Filed July 21, 1914.



Particular description of goods.—Coffee.
Claims use since June 22, 1914.

Ser. No. 79,975. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEGGERMAN BROS., INC., New York, N. Y. Filed July 21, 1914.



Particular description of goods.—Green, Dried, and Evaporated Apples.
Claims use since Jan. 1, 1914.

Ser. No. 79,983. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BEGGS MANUFACTURING Co., Chicago, Ill. Filed July 22, 1914.

B.M.C.

Particular description of goods.—A Blood Remedy.
Claims use since May 29, 1914.

Ser. No. 80,002. (CLASS 39. CLOTHING.) BLOOM & MILLMAN, New York, N. Y. Filed July 23, 1914.

Gold BRAND

No claim being made to the word "Brand."
Particular description of goods.—Outer Waists for Women and Girls.
Claims use since July 1, 1914.

Ser. No. 80,003. (CLASS 39. CLOTHING.) BLOOM & MILLMAN, New York, N. Y. Filed July 23, 1914.

Silver BRAND

No claim being made to the word "Brand."
Particular description of goods.—Outer Waists for Women and Girls.
Claims use since July 1, 1914.

Ser. No. 80,011. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LEAVENWORTH MILLING Co., Leavenworth, Kans. Filed July 23, 1914.



No claim being made to the exclusive use of the word "Flour."
Particular description of goods.—Wheat-Flour.
Claims use since Mar. 12, 1914.

Ser. No. 80,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WEIDEMAN COMPANY, Cleveland, Ohio. Filed July 23, 1914.

MITY-NICE

Particular description of goods.—Coffee.
Claims use since January, 1913.

Ser. No. 80,025. (CLASS 48. MALT EXTRACTS AND LIQUORS.) BUFFALO BREWING CO., Sacramento, Cal. Filed July 24, 1914.

BUFFALO



Particular description of goods.—Beer.
Claims use for at least twenty-five years.

Ser. No. 80,026. (CLASS 15. OILS AND GREASES.) THE CLIFFORD AND RAGOT COMPANY, Lawrence, Mass. Filed July 24, 1914.

All-in-One

Particular description of goods.—Lubricating and Cleaning Oil for Metal.
Claims use since May 1, 1908.

Ser. No. 80,032. (CLASS 12. CONSTRUCTION MATERIALS.) NORTON COMPANY, Worcester, Mass. Filed July 24, 1914.

Alundum

Particular description of goods.—Refractory Bricks or Blocks.
Claims use since May, 1911.

Ser. No. 80,034. (CLASS 12. CONSTRUCTION MATERIALS.) NORTON COMPANY, Worcester, Mass. Filed July 24, 1914.

Crystolon

Particular description of goods.—Refractory Bricks or Blocks.
Claims use since May, 1911.

Ser. No. 80,038. (CLASS 15. OILS AND GREASES.) PIERCE OIL CORPORATION, Richmond, Va., and St. Louis, Mo. Filed July 24, 1914.



Particular description of goods.—Lubricating-Oils, Automobile Lubricating-Oil, and Transmission-Grease.
The trade-mark has been continuously used in the business of said corporation and in the business of its predecessor, the Waters Pierce Oil Company, since Nov. 1, 1909, and has been actually used by this applicant upon all of the particular description of goods specified above since on or about Jan. 1, 1914.

Ser. No. 80,044. (CLASS 39. CLOTHING.) THISSEN SILK MANUFACTURING CO., Kane, Pa. Filed July 24, 1914.

Princess

Particular description of goods.—Gloves.
Claims use since July 1, 1914.

Ser. No. 80,077. (CLASS 15. OILS AND GREASES.) WEST INDIA OIL COMPANY, Bayonne, N. J. Filed July 25, 1914.

LLAMA



Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.
Claims use since July 10, 1914.

Ser. No. 80,091. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. H. CROCKER, San Pedro and Los Angeles, Cal. Filed July 27, 1914.

DRIV-IT

Particular description of goods.—Remedies for Rheumatism.
Claims use since Nov. 20, 1910.

Ser. No. 80,099. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDUSTRIAL APPLIANCE COMPANY, Chicago, Ill. Filed July 27, 1914.

BETA-CHLORA

Particular description of goods.—Gas for Maturing and Bleaching Flour.
Claims use since Aug. 1, 1910.

Ser. No. 80,111. (CLASS 15. OILS AND GREASES.) E. A. TYGERT, CO., INC., Camden, N. J., and Philadelphia, Pa. Filed July 27, 1914.

MOTORLUBE

Particular description of goods.—Lubricating-Oils.
Claims use since May, 1903.

Ser. No. 80,122. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FITZGERALD MFG. CO., Torrington, Conn. Filed July 28, 1914.

BULLDOG

Particular description of goods.—Electrical Horns.
Claims use since about June 1, 1912.

Ser. No. 80,123. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FITZGERALD MFG. CO., Torrington, Conn. Filed July 28, 1914.

CLERO

Particular description of goods.—Electrical Horns.
Claims use since about June 1, 1912.

Ser. No. 80,167. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES H. WALKER, New York, N. Y. Filed July 29, 1914.

SULFO-SELENE

SULFO SELENE

Particular description of goods.—Medicinal Compounds of Selenium.
Claims use since the 1st day of June, 1914.

Ser. No. 80,182. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL S. METZLER, Chicago, Ill. Filed July 30, 1914.



Dr Metzler

A photograph and a facsimile of the signature of applicant.
Particular description of goods.—Liniments.
Claims use since Dec. 1, 1913.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 25, 1914.

99,188. SELF-RISING WHEAT-FLOUR. The Ansted & Burk Co., Springfield, Ohio.
Filed March 30, 1914. Serial No. 77,043. PUBLISHED JUNE 16, 1914.

99,189. EGGS IN NATURAL FORM. Leigh S. Bache, Boundbrook, N. J., assignor to William W. Smalley, Boundbrook, N. J.
Filed March 4, 1914. Serial No. 76,308. PUBLISHED JUNE 16, 1914.

99,190. CROUSTADES. The F. Beaumont National-Croustade Manufacturing Company, Inc., New York, N. Y.
Filed March 30, 1914. Serial No. 77,046. PUBLISHED JUNE 16, 1914.

99,191. CROUSTADES. The F. Beaumont National-Croustade Manufacturing Company, Inc., New York, N. Y.
Filed March 30, 1914. Serial No. 77,047. PUBLISHED JUNE 16, 1914.

99,192. SHELLAC GUM. Berry Brothers, Detroit, Mich.
Filed March 29, 1913. Serial No. 69,404. PUBLISHED JUNE 16, 1914.

99,193. SMOKING-TOBACCO AND CIGARETTES. Alexander Bogusławsky Limited, London, England.
Filed September 15, 1913. Serial No. 72,855. PUBLISHED JUNE 16, 1914.

99,194. CONDENSED MILK. Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y.
Filed January 21, 1914. Serial No. 75,324. PUBLISHED JUNE 16, 1914.

99,195. PINEAPPLES. Buhl-Mills Company, New York, N. Y.
Filed March 27, 1914. Serial No. 76,988. PUBLISHED JUNE 16, 1914.

99,196. COFFEE. Cheek-Neal Coffee Co., Nashville, Tenn.
Filed April 6, 1914. Serial No. 77,231. PUBLISHED JUNE 16, 1914.

99,197. CIGARS. Lewis Cohen, Bloomsburg, Pa.
Filed March 25, 1914. Serial No. 76,924. PUBLISHED JUNE 16, 1914.

99,198. MACARONI, SPAGHETTI, VERMICELLI, NOODLES, PIECEATELLO, SOUP STARS AND ALPHABETS. Dallas Macaroni & Paste Manufacturing Co., Dallas, Tex.
Filed February 9, 1914. Serial No. 75,783. PUBLISHED JUNE 16, 1914.

99,199. MACARONI, SPAGHETTI, VERMICELLI, NOODLES, PIECEATELLO, SOUP PASTE AND ALPHABETS. Dallas Macaroni & Paste Manufacturing Co., Dallas, Tex.
Filed February 12, 1914. Serial No. 75,867. PUBLISHED JUNE 16, 1914.

99,200. PUBLICATIONS RELATING TO THE PRACTICE AND PROFESSION OF TREE SURGERY. The Davey Tree Expert Company, Inc., Kent, Ohio.
Filed March 25, 1912. Serial No. 62,399. PUBLISHED JUNE 9, 1914.

99,201. BURNERS FOR LAMPS AND LANTERNS. R. E. Dietz Company, New York, N. Y.
Filed May 16, 1913. Serial No. 70,442. PUBLISHED JUNE 9, 1914.

99,202. WHEAT-FLOUR. The Dunlop Milling Co., Clarksville, Tenn.
Filed March 23, 1914. Serial No. 76,846. PUBLISHED JUNE 16, 1914.

99,203. FRESH ORANGES, LEMONS, LIMES, AND GRAPE-FRUIT. Elephant Orchards, Redlands, Cal.
Filed May 1, 1912. Serial No. 63,225. PUBLISHED JUNE 16, 1914.

99,204. TEST-TUBES OF GLASS FOR CLINICAL DIAGNOSIS. Fletcher, Fletcher & Co., Limited, London, England.
Filed May 2, 1914. Serial No. 77,954. PUBLISHED JUNE 16, 1914.

99,205. EGGS. The Fox River Butter Company, Chicago, Ill.
Filed March 25, 1914. Serial No. 76,932. PUBLISHED JUNE 16, 1914.

99,206. FIGS. Guggenhime & Company, San Franciso, Cal.
Filed October 28, 1913. Serial No. 73,642. PUBLISHED JUNE 16, 1914.

99,207. PUDDINGS TO BE USED ALONE OR IN THE PREPARATION OF OTHER DESSERTS. William Haigh, Baltimore, Md.
Filed February 5, 1914. Serial No. 75,704. PUBLISHED JUNE 16, 1914.

99,208. ASBESTOS JOINTING AND ASBESTOS PACKING. Hall & Hall, London, England.
Filed March 16, 1914. Serial No. 76,682. PUBLISHED JUNE 9, 1914.

99,209. WHEAT-FLOUR. The Harter Milling Co., Toledo and Fostoria, Ohio.
Filed March 23, 1914. Serial No. 76,854. PUBLISHED JUNE 16, 1914.

99,210. CANNED PINEAPPLE. Hawaiian Pineapple Co. Ltd., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,204. PUBLISHED JUNE 16, 1914.

99,211. CANNED PINEAPPLES. Hawaiian Pineapple Co., Ltd., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,205. PUBLISHED JUNE 16, 1914.

99,212. CANNED PINEAPPLE. Hawaiian Pineapple Co., Ltd., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,208. PUBLISHED JUNE 16, 1914.

99,213. CANNED PINEAPPLE. Hawaiian Pineapple Co., Ltd., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,209. PUBLISHED JUNE 16, 1914.

99,214. IMITATION COFFEE. Holzhauser & Kenney, New Orleans, La.
Filed August 27, 1913. Serial No. 72,555. PUBLISHED JUNE 16, 1914.

99,215. HOSE AND PACKING MADE FROM CERTAIN NAMED MATERIALS. Hudson & Thurber Co., Minneapolis, Minn.
Filed March 21, 1913. Serial No. 69,229. PUBLISHED JUNE 16, 1914.

99,216. CANDY. Imperial Candy Co., Seattle, Wash.
Filed March 30, 1914. Serial No. 77,062. PUBLISHED JUNE 16, 1914.

99,217. COFFEE. THE JOHNSON-LAYNE COFFEE CO., St. Louis, Mo.
Filed July 5, 1913. Serial No. 71,539. PUBLISHED NOVEMBER 18, 1913.

99,218. MIXTURE OF SEED AND FERTILIZER. THE KALAKA COMPANY, Augusta, Me., and Chicago, Ill.
Filed March 9, 1914. Serial No. 76,470. PUBLISHED JUNE 16, 1914.

99,219. SWEET CHOCOLATES. KLEIN CHOCOLATE COMPANY, Elizabethtown, Pa.
Filed February 5, 1914. Serial No. 75,705. PUBLISHED JUNE 16, 1914.

99,220. RAZORS. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed April 30, 1914. Serial No. 77,883. PUBLISHED JUNE 23, 1914.

99,221. RAZORS. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed April 30, 1914. Serial No. 77,885. PUBLISHED JUNE 23, 1914.

99,222. RAZORS. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed April 30, 1914. Serial No. 77,886. PUBLISHED JUNE 23, 1914.

99,223. RAZORS. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed April 30, 1914. Serial No. 77,887. PUBLISHED JUNE 23, 1914.

99,224. RAZORS. KOKEN BARBERS' SUPPLY COMPANY, St. Louis, Mo.
Filed April 30, 1914. Serial No. 77,888. PUBLISHED JUNE 23, 1914.

99,225. RICE. OTTO L. KUEHN CO., Milwaukee, Wis.
Filed March 23, 1914. Serial No. 76,859. PUBLISHED JUNE 16, 1914.

99,226. CANNED VEGETABLES AND EVAPORATED MILK. THE H. T. LANGE CO., Eau Claire, Wis.
Filed March 23, 1914. Serial No. 76,861. PUBLISHED JUNE 16, 1914.

99,227. CHEESE. ALBERT LINKE, Radeberg, Germany.
Filed March 23, 1914. Serial No. 76,860. PUBLISHED JUNE 16, 1914.

99,228. BEER. LONE STAR BREWING CO., San Antonio, Tex.
Filed May 2, 1913. Serial No. 70,186. PUBLISHED JUNE 16, 1914.

99,229. CANNED SALMON. THE MACLEAY ESTATE CO., Portland, Oreg.
Filed February 2, 1914. Serial No. 75,623. PUBLISHED JUNE 16, 1914.

99,230. CIGARS. HARRY MANEKIN, Philadelphia, Pa.
Filed April 10, 1914. Serial No. 77,385. PUBLISHED JUNE 16, 1914.

99,231. CERTAIN FOOD COMPOUND. MCILHENNY COMPANY, Portland, Me., and Avery Island, La.
Filed January 20, 1914. Serial No. 75,314. PUBLISHED JUNE 16, 1914.

99,232. BREAD. JAMES P. MURRAY, Kansas City, Kans.
Filed December 17, 1913. Serial No. 74,656. PUBLISHED JUNE 16, 1914.

99,233. PANCAKE-FLOUR. NORTHERN LIGHT MILLING CO., Owatonna, Minn.
Filed April 4, 1914. Serial No. 77,215. PUBLISHED JUNE 16, 1914.

99,234. COAL. EDWARD RUSSELL NORTON, Boston, Mass., and New York, N. Y.
Filed May 2, 1913. Serial No. 70,187. PUBLISHED JUNE 16, 1914.

99,235. FRUIT-JARS. PACIFIC COAST GLASS WORKS, San Francisco, Cal.
Filed April 13, 1914. Serial No. 77,448. PUBLISHED JUNE 16, 1914.

99,236. METAL CAPS USED ON GLASS JARS OR BOTTLES AND THE LIKE. PARAGON METAL CAP COMPANY, Brooklyn, N. Y.
Filed March 19, 1914. Serial No. 76,777. PUBLISHED JUNE 9, 1914.

99,237. FLOWERS. PENN THE FLORIST, Boston, Mass.
Filed March 9, 1914. Serial No. 76,478. PUBLISHED JUNE 9, 1914.

99,238. HONEY AND CANE-SYRUP. GUSTAVO PRESTON, Boston, Mass., and Naguabo, Porto Rico.
Filed April 6, 1914. Serial No. 77,250. PUBLISHED JUNE 16, 1914.

99,239. CHOCOLATES. QUAKER CITY CHOCOLATE AND CONFECTIONERY COMPANY, INC., Philadelphia, Pa.
Filed February 4, 1914. Serial No. 75,690. PUBLISHED JUNE 16, 1914.

99,240. CANDY. QUAKER CITY CHOCOLATE AND CONFECTIONERY COMPANY, INC., Philadelphia, Pa.
Filed March 26, 1914. Serial No. 76,968. PUBLISHED JUNE 16, 1914.

99,241. WHEAT-FLOUR. REA & PAGE MILLING CO., Marshall, Mo.
Filed April 6, 1914. Serial No. 77,251. PUBLISHED JUNE 16, 1914.

99,242. SAUCE TO BE USED ON OYSTERS, SHELL-FISH, SALAD-DRESSINGS, AND FOOD-STUFFS. FRITZ REUSSER, New York, N. Y.
Filed April 2, 1914. Serial No. 77,159. PUBLISHED JUNE 16, 1914.

99,243. WELDING-TORCHES AND APPARATUS FOR CUTTING METALS AND APPARATUS FOR AUTOGENOUS SOLDERING. OCTAVIE RINCHEVAL, Paris, France.
Filed November 17, 1911. Serial No. 59,767. PUBLISHED DECEMBER 23, 1913.

99,244. CANDY. THE ROOD CANDY CO., Pueblo, Colo.
Filed April 6, 1914. Serial No. 77,254. PUBLISHED JUNE 16, 1914.

99,245. PEANUT-BUTTER, SPICES, COFFEE, TEA, PREPARED PUDDING, SPAGHETTI, MACARONI, AND VERMICELLI. ROYAL TEA COMPANY, Chicago, Ill.
Filed February 21, 1914. Serial No. 76,087. PUBLISHED JUNE 16, 1914.

99,246. CIGARS, CIGARETTES, CHEROOTS, AND CUT TOBACCO. RESHID SADI, New York, N. Y.
Filed April 14, 1914. Serial No. 77,482. PUBLISHED JUNE 16, 1914.

99,247. WEEKLY MAGAZINES. WILLIAM H. SCHEETZ, San Francisco, Cal.
Filed March 11, 1914. Serial No. 76,566. PUBLISHED JUNE 9, 1914.

99,248. WHEAT-FLOUR. THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo.
Filed April 4, 1914. Serial No. 77,218. PUBLISHED JUNE 16, 1914.

99,249. SELF-RISING WHEAT-FLOUR. J. ALLEN SMITH & COMPANY, Knoxville, Tenn.
Filed March 28, 1914. Serial No. 77,036. PUBLISHED JUNE 16, 1914.

99,250. SELF-RISING WHEAT-FLOUR. J. ALLEN SMITH & COMPANY, Knoxville, Tenn.
Filed March 28, 1914. Serial No. 77,037. PUBLISHED JUNE 16, 1914.

99,251. FRESH APPLES PACKED IN BOXES AND LIKE CONTAINERS. SPOKANE FRUIT GROWERS' CO., Spokane, Wash..
Filed February 4, 1914. Serial No. 75,694. PUBLISHED JUNE 16, 1914.

99,252. FOOD PREPARATION FOR POULTRY AND BIRDS. SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J.
Filed October 31, 1913. Serial No. 73,720. PUBLISHED JUNE 16, 1914.

99,253. WHEAT-FLOUR. STAHL AND JAEGER INC., New York, N. Y.
Filed March 28, 1914. Serial No. 77,030. PUBLISHED JUNE 16, 1914.

99,254. CERTAIN APPARATUS, AND PARTS THEREOF, FOR HATCHING AND REARING POULTRY. STANDARD ELECTRIC INCUBATOR CO., New York, N. Y.
Filed January 15, 1914. Serial No. 75,205. PUBLISHED JUNE 16, 1914.

99,255. LAMP-CHIMNEYS. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed February 6, 1914. Serial No. 75,737. PUBLISHED JUNE 16, 1914.

99,256. GAS AND OIL BURNERS. STUART AMERICAN PRODUCTS COMPANY, Memphis, Tenn.
Filed February 25, 1914. Serial No. 76,155. PUBLISHED JUNE 9, 1914.

99,257. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed March 30, 1914. Serial No. 77,082. PUBLISHED JUNE 16, 1914.

99,258. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed March 30, 1914. Serial No. 77,083. PUBLISHED JUNE 16, 1914.

99,259. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed March 23, 1914. Serial No. 76,884. PUBLISHED JUNE 16, 1914.

99,260. WHEAT-FLOUR. VALIER & SPIES MILLING CO., St. Louis, Mo.
Filed March 30, 1914. Serial No. 77,085. PUBLISHED JUNE 16, 1914.

99,261. GLAZED KID. MATTHIEU VAN LOON, Waalwijk, Netherlands.
Filed October 6, 1913. Serial No. 73,244. PUBLISHED JUNE 16, 1913.

99,262. MONTHLY PERIODICAL DEVOTED TO HOME DRESSMAKING, HOME MILLINERY, FANCY WORK, AND HOUSEHOLD DECORATION. VICKERY AND HILL PUBLISHING COMPANY, Augusta, Me.
Filed March 10, 1914. Serial No. 76,519. PUBLISHED JUNE 9, 1914.

99,263. CERTAIN NAMED LAMPS, LANTERNS, IGNITION APPARATUS, STOVES, AND PARTS THEREOF. WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany.
Filed April 12, 1913. Serial No. 69,763. PUBLISHED JUNE 16, 1914.

99,264. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,898. PUBLISHED JUNE 23, 1914.

99,265. BLEACHED AND UNBLEACHED MUSLINS. WHEELER & MOTTER MERCANTILE COMPANY, St. Joseph, Mo.
Filed April 30, 1914. Serial No. 77,902. PUBLISHED JUNE 23, 1914.

99,266. CERTAIN NAMED ARTICLES FOR CHANDELIERS AND LIGHTING-FIXTURES. J. H. WHITE MFG. CO., New York, N. Y.
Filed March 18, 1914. Serial No. 76,757. PUBLISHED JUNE 9, 1914.

99,267. FOOD PRODUCT CONSISTING OF CERTAIN NAMED INGREDIENTS. WORKMAN PACKING COMPANY, San Francisco, Cal.
Filed March 24, 1914. Serial No. 76,911. PUBLISHED JUNE 16, 1914.

99,268. DRY PAINT. AMERICAN CEMENT PAINT CO., Rossville, Ga.
Filed May 7, 1914. Serial No. 78,052. PUBLISHED JUNE 23, 1914.

99,269. KNITTING-WOOLS. BALDWIN & WALKER, LTD., Halifax, England.
Filed May 15, 1914. Serial No. 78,297. PUBLISHED JUNE 23, 1914.

99,270. WOOLEN AND WORSTED YARNS. BALDWIN & WALKER, LTD., Halifax, England.
Filed May 15, 1914. Serial No. 78,298. PUBLISHED JUNE 23, 1914.

99,271. PREPARED ROOFINGS IN WHICH THE WATERPROOF AGENT IS TAR OR ASPHALT. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed April 24, 1914. Serial No. 77,718. PUBLISHED JUNE 23, 1914.

99,272. LIQUID PROTECTIVE COATING COMPOSED OF CERTAIN NAMED INGREDIENTS. BAYWAY CHEMICAL COMPANY, Elizabeth, N. J.
Filed December 13, 1913. Serial No. 74,553. PUBLISHED JUNE 23, 1914.

99,273. POSITIVE BLACK PRINT-PAPER. ALFRED BERTSCH, Gundershofen, near Strassburg, Germany.
Filed February 7, 1912. Serial No. 61,322. PUBLISHED JUNE 23, 1914.

99,274. WRENCHES. BONNEY VISE & TOOL WORKS INC., Philadelphia and Allentown, Pa., and New York, N. Y.
Filed May 13, 1914. Serial No. 78,229. PUBLISHED JUNE 23, 1914.

99,275. GAMES. MILTON BRADLEY CO., Springfield, Mass.
Filed January 15, 1914. Serial No. 75,191. PUBLISHED MARCH 24, 1914.

99,276. CANDIES. WALTER BROWNLEY, Washington, D. C.
Filed April 9, 1914. Serial No. 77,337. PUBLISHED JUNE 23, 1914.

99,277. WATER-CLOSET SEATS. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed May 11, 1914. Serial No. 78,191. PUBLISHED JUNE 23, 1914.

99,278. SPORTING-POWDER, AMMUNITION, SHELLS, SHOTGUN AND RIFLE CARTRIDGES, GUNS, RIFLES, AND REVOLVERS. THE WILLIAM R. BURKHARD CO., St. Paul, Minn.
Filed April 21, 1914. Serial No. 77,613. PUBLISHED JUNE 23, 1914.

99,279. LUBRICANTS. AUGUSTUS CRANE BUZBY, Philadelphia, Pa.
Filed May 9, 1913. Serial No. 70,310. PUBLISHED JUNE 23, 1914.

99,280. WHIPS. CARGILL, CLEVELAND & COMPANY, Westfield, Mass.
Filed April 16, 1914. Serial No. 77,504. PUBLISHED JUNE 23, 1914.

99,281. CERTAIN NAMED SCIENTIFIC APPLIANCES AND SUPPLIES THEREFOR. COMPAGNIE GÉNÉRALE DES ÉTABLISSEMENTS PATHÉ FRÈRES, PHONOGRAPHE ET CINÉMATOGRAPHE, Paris, France.
Filed May 29, 1913. Serial No. 70,750. PUBLISHED JUNE 23, 1914.

99,282. HOSIERY. HARRY H. CONDIT, Indianapolis, Ind.
Filed May 12, 1914. Serial No. 78,217. PUBLISHED JUNE 23, 1914.

99,283. CERTAIN NAMED CARBONS, CARBON SPECIALTIES, AND THE LIKE. C. CONRADTY, Nuremberg, Germany.
Filed May 18, 1914. Serial No. 78,346. PUBLISHED JUNE 23, 1914.

99,284. ELECTRICAL AND GALVANIC CARBONS. C. CONRADTY, Nuremberg, Germany.
Filed May 18, 1914. Serial No. 78,347. PUBLISHED JUNE 23, 1914.

99,285. FIREWORKS. CONSOLIDATED FIRE WORKS COMPANY OF AMERICA, New York, N. Y.
Filed April 9, 1914. Serial No. 77,340. PUBLISHED JUNE 23, 1914.

99,286. PRACTICE TYPE-WRITERS. WILLIAM P. COSPER, Chicago, Ill.
Filed May 9, 1913. Serial No. 70,313. PUBLISHED JUNE 23, 1914.

99,287. COMPOSITE ROD-PACKING MADE OF RUBBER FABRIC AND SOFT FIBROUS WICKING. CHAS. A. DANIEL, Philadelphia, Pa.
Filed August 29, 1909. Serial No. 37,028. PUBLISHED JUNE 9, 1914.

99,288. METALLIC SASH. DETROIT STEEL PRODUCTS Co., Detroit, Mich.
Filed February 14, 1913. Serial No. 68,543. PUBLISHED JUNE 23, 1914.

99,289. LIFTING-MAGNETS, ELECTRIC FURNACES, MAGNETIC CLAMPS FOR PLANING-MACHINES, ELECTRIC CONTROLLING APPARATUS. DEUTSCHE MASCHINENFABRIK AKTIEN GESELLSCHAFT, Duisburg, Germany, and New York, N. Y.
Filed January 16, 1914. Serial No. 75,223. PUBLISHED JUNE 23, 1914.

99,290. WHISKY, BRANDY, AND GIN. WILLIAM C. DITTUS, Lancaster, Pa.
Filed February 3, 1914. Serial No. 75,646. PUBLISHED JUNE 23, 1914.

99,291. WOODEN SOLDERING-IRON HANDLES. JAMES DONOGHUE, Cleveland, Ohio.
Filed May 27, 1914. Serial No. 78,579. PUBLISHED JUNE 23, 1914.

99,292. BRICKS. DOVER FIRE BRICK COMPANY, Cleveland, Ohio.
Filed May 11, 1914. Serial No. 78,196. PUBLISHED JUNE 23, 1914.

99,293. MOVING-PICTURE FILMS. ESSANAY FILM MANUFACTURING CO., Chicago, Ill.
Filed May 4, 1914. Serial No. 77,972. PUBLISHED JUNE 23, 1914.

99,294. DOLLS AND STUFFED ANIMAL TOYS. FAIR AND CARNIVAL TRADING CO., INC., New York, N. Y.
Filed April 16, 1914. Serial No. 77,507. PUBLISHED JUNE 23, 1914.

99,295. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. FEDERAL SIGN SYSTEM (ELECTRIC), Chicago, Ill.
Filed August 30, 1913. Serial No. 72,597. PUBLISHED JUNE 16, 1914.

99,296. FELTS. THE FELTERS COMPANY, New York, Middleville, and Lestershire, N. Y., and Boston and Millbury, Mass.
Filed March 11, 1914. Serial No. 76,542. PUBLISHED JUNE 9, 1914.

99,297. FELTS. THE FELTERS COMPANY, New York, Middleville, and Lestershire, N. Y., and Boston and Millbury, Mass.
Filed March 11, 1914. Serial No. 76,543. PUBLISHED JUNE 9, 1914.

99,298. FURNITURE-POLISH. ELWOOD H. FOWLER, Newark, N. J.
Filed May 2, 1914. Serial No. 77,953. PUBLISHED JUNE 23, 1914.

99,299. CANDIES. THE GOLDEN PHEASANT, San Francisco, Cal.
Filed April 9, 1914. Serial No. 77,345. PUBLISHED JUNE 23, 1914.

99,300. CHILDREN'S PLAY-SUITS. GOLDENBERGS, Washington, D. C.
Filed May 8, 1914. Serial No. 78,124. PUBLISHED JUNE 23, 1914.

99,301. RUBBER BOOTS AND SHOES. GOODYEAR'S INDIA RUBBER GLOVE MFG. CO., Naugatuck, Conn.
Filed June 12, 1913. Serial No. 71,065. PUBLISHED JUNE 23, 1914.

99,302. LUBRICATING-OILS. ABRAHAM WALTER HARRIS, Providence, R. I.; Annie Corey Harris, Warwick, R. I., and Seeber Edwards, Providence, R. I., executors of said Abraham Walter Harris, deceased, assignors to A. W. Harris Oil Company, Providence, R. I., a Corporation of Rhode Island.
Filed February 15, 1912. Serial No. 61,515. PUBLISHED MARCH 17, 1914.

99,303. SPECTACLES. ANDREW J. HARRISON, Birmingham, England.
Filed December 1, 1913. Serial No. 74,287. PUBLISHED JUNE 23, 1914.

99,304. CANNED PINEAPPLE. HAWAIIAN PINEAPPLE CO. LTD., Honolulu, Territory of Hawaii.
Filed April 4, 1914. Serial No. 77,207. PUBLISHED JUNE 23, 1914.

99,305. TIN CANS AND BUCKETS. THE HEEKIN CAN COMPANY, Cincinnati, Ohio.
Filed April 6, 1914. Serial No. 77,239. PUBLISHED JUNE 23, 1914.

99,306. SMOKELESS RIFLE-POWDER. HERCULES POWDER COMPANY, Wilmington, Del.
Filed April 7, 1914. Serial No. 77,286. PUBLISHED JUNE 23, 1914.

99,307. WASHBOARDS AND WRINGERS AND CLOTHES-WASHERS. HIBBARD, SPENCER, BARTLETT & Co., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,830. PUBLISHED JUNE 23, 1914.

99,308. FENDER-FINISH, MIXED PAINT, ROOF-COATING, SHINGLE-STAIN, AND BRASS-BLACK. HIBBARD, SPENCER, BARTLETT & Co., Chicago, Ill.
Filed April 28, 1914. Serial No. 77,835. PUBLISHED JUNE 23, 1914.

99,309. DATES. THE HILLS BROTHERS COMPANY, New York, N. Y.
Filed April 11, 1914. Serial No. 77,415. PUBLISHED JUNE 23, 1914.

99,310. CERTAIN PAINTS, VARNISHES, STAINS, ENAMELS, POLISHES, FILLERS, LACQUERS, AND PAINT AND VARNISH REMOVER. THE R. M. HOLLINGSHEAD CO., Camden, N. J.
Filed April 25, 1914. Serial No. 77,748. PUBLISHED JUNE 23, 1914.

99,311. EVAPORATED SWEET CORN. ELMER B. HOSTETTER, Richwood, Ohio.
Filed April 11, 1914. Serial No. 77,417. PUBLISHED JUNE 23, 1914.

99,312. CERTAIN NAMED CONSTRUCTION MATERIALS. HUTTIG SASH & DOOR CO., St. Louis, Mo.
Filed May 23, 1914. Serial No. 78,501. PUBLISHED JUNE 23, 1914.

99,313. COMPOSITION BOARD MADE OF WOOD FIBER AND USED FOR WALLS AND CEILINGS. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed April 21, 1914. Serial No. 77,630. PUBLISHED JUNE 23, 1914.

99,314. GARTERS AND ARMBANDS. KABO CORSET COMPANY, Chicago, Ill.
Filed April 22, 1914. Serial No. 77,652. PUBLISHED JUNE 23, 1914.

99,315. WOOL, WORSTED, AND HAIR PIECE GOODS. KAFKA, ROTHENSTEIN CO., Bradford, England.
Filed February 27, 1914. Serial No. 76,215. PUBLISHED JUNE 23, 1914.

99,316. BOOTS, SHOES, AND SLIPPERS MADE OF LEATHER, CANVAS, OR OTHER TEXTILE. JOHN KELLY, INC., Rochester, N. Y.
Filed April 1, 1914. Serial No. 77,131. PUBLISHED JUNE 23, 1914.

99,317. CONDENSERS USED IN CONNECTION WITH CAMERAS, AND PROJECTING-MACHINES USED IN THE PROJECTION OF MOTION-PICTURES. KLEINE OPTICAL COMPANY, Chicago, Ill.
Filed February 18, 1914. Serial No. 76,003. PUBLISHED JUNE 23, 1914.

99,318. RUBBER TIRES, INNER TUBES, VALVE-PATCHES, INNER CASES, AND RUBBER TUBING OF ALL DESCRIPTIONS. LEE TIRE & RUBBER CO., Whitemarsh township, Montgomery county, Pa.
Filed March 16, 1914. Serial No. 76,698. PUBLISHED JUNE 9, 1914.

99,319. CERTAIN NAMED ARTICLES MADE EITHER WHOLLY OR PARTLY OF PORCELAIN. ANNA B. LEONARD, New York, N. Y.
Filed March 5, 1914. Serial No. 76,367. PUBLISHED MAY 26, 1914.

99,320. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. LIEBENTHAL BROS. & Co., Cleveland, Ohio.
Filed March 16, 1914. Serial No. 76,695. PUBLISHED JUNE 23, 1914.

99,321. SWEET TABLE-WINES. LIEBENTHAL BROS. & Co., Cleveland, Ohio.
Filed April 4, 1914. Serial No. 77,211. PUBLISHED JUNE 23, 1914.

99,322. SPECTACLES, EYEGLASSES, OPHTHALMOSCOPES, AND RETINOSCOPES OF SHELL, GOLD, SILVER, STEEL, ALUMINUM, ZYLONITE, AND RUBBER. THE J. E. LIMEBURNER COMPANY, Philadelphia, Pa.
Filed June 26, 1912. Serial No. 64,420. PUBLISHED JUNE 23, 1914.

99,323. BOOTS AND SHOES OF LEATHER AND LEATHER AND CLOTH. A. E. LITTLE & COMPANY, Lynn, Mass.
Filed March 5, 1912. Serial No. 61,944. PUBLISHED JUNE 23, 1914.

99,324. PUNCTURE-PROOFING SUBSTANCES. LIVE AIR COMPANY, Oakland, Cal.
Filed March 25, 1914. Serial No. 76,941. PUBLISHED JUNE 16, 1914.

99,325. FURNITURE-POLISH. THOMAS LOWRY, Duluth, Minn.
Filed January 19, 1914. Serial No. 75,293. PUBLISHED JUNE 23, 1914.

99,326. METAL BARRELS, BOXES, LOCKERS, AND TOOL-BOXES. LYON METALLIC MANUFACTURING COMPANY, Montgomery, Ill.
Filed February 5, 1914. Serial No. 75,706. PUBLISHED JUNE 23, 1914.

99,327. DRY, PASTE, AND READY-MIXED PAINTS, VARNISHES, AND LACQUERS. MAATSCHAPPIJ VEREENIGDE VAN DER BURG'S JAPANLAK FABRIEKEN (UNITED VAN DER BURG'S JAPANLAC- AND VARNISH-WORKS), Rotterdam, Netherlands.
Filed December 20, 1913. Serial No. 74,738. PUBLISHED JUNE 23, 1914.

99,328. MACHINERY AND PARTS USED IN CONSTRUCTING MACHINES FOR ATTACHING BUTTONS TO SHOES. HARRY J. MACDONALD, Chicago, Ill.
Filed March 30, 1914. Serial No. 77,067. PUBLISHED JUNE 23, 1914.

99,329. [WITHDRAWN.]

99,330. CARBONATED MINERAL WATER. ISAAC MERKEL & SON, Plattsburg, N. Y.
Filed May 18, 1914. Serial No. 78,357. PUBLISHED JUNE 23, 1914.

99,331. LINSEED-OIL. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed July 30, 1913. Serial No. 72,049. PUBLISHED JUNE 23, 1914.

99,332. WHISKY. C. P. MOORMAN & COMPANY, INC., Louisville, Ky.
Filed May 18, 1914. Serial No. 78,361. PUBLISHED JUNE 23, 1914.

99,333. CANDY. JOSEPH H. MORAN, Woonsocket, R. I.
Filed April 13, 1914. Serial No. 77,444. PUBLISHED JUNE 23, 1914.

99,334. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 30, 1914. Serial No. 77,070. PUBLISHED JUNE 23, 1914.

99,335. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 30, 1914. Serial No. 77,071. PUBLISHED JUNE 23, 1914.

99,336. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 30, 1914. Serial No. 77,072. PUBLISHED JUNE 23, 1914.

99,337. HOLLOW BUILDING BLOCKS AND TILES OF TERRA-COTTA. NATIONAL FIRE PROOFING COMPANY, Pittsburgh, Pa.
Filed February 24, 1914. Serial No. 76,118. PUBLISHED JUNE 23, 1914.

99,338. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,788. PUBLISHED JUNE 23, 1914.

99,339. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,789. PUBLISHED JUNE 23, 1914.

99,340. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,794. PUBLISHED JUNE 23, 1914.

99,341. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,796. PUBLISHED JUNE 23, 1914.

99,342. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,797. PUBLISHED JUNE 23, 1914.

99,343. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,798. PUBLISHED JUNE 23, 1914.

99,344. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,799. PUBLISHED JUNE 23, 1914.

99,345. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,800. PUBLISHED JUNE 23, 1914.

99,346. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,802. PUBLISHED JUNE 23, 1914.

99,347. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,805. PUBLISHED JUNE 23, 1914.

99,348. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,806. PUBLISHED JUNE 23, 1914.

99,349. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,807. PUBLISHED JUNE 23, 1914.

99,350. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn.
Filed April 27, 1914. Serial No. 77,808. PUBLISHED JUNE 23, 1914.

99,351. BLENDED AND RYE WHISKY, DRY GIN AND SLOE-GIN, AND ROCK AND RYE. DAVID NICHOLSON GROCER COMPANY, St. Louis, Mo.
Filed July 18, 1913. Serial No. 71,836. PUBLISHED JUNE 23, 1914.

99,352. TOILET-COMBS. NOYES COMB COMPANY, Binghamton, N. Y.
Filed April 10, 1914. Serial No. 77,387. PUBLISHED JUNE 23, 1914.

99,353. NON-ALCOHOLIC, CARBONATED, FLAVORED BEVERAGE, AND SYRUP FOR MAKING SAME. JOHN C. O'DELL, Rome, Ga.
Filed April 10, 1914. Serial No. 77,388. PUBLISHED JUNE 23, 1914.

99,354. CARD GAMES. PARKER BROTHERS, Portland, Me., and Salem, Mass.
Filed October 1, 1913. Serial No. 73,153. PUBLISHED JANUARY 27, 1914.

99,355. SEWING-SILK. JAS. PEARSALL & CO., London, England.
Filed April 14, 1914. Serial No. 77,479. PUBLISHED JUNE 23, 1914.

99,356. CASKETS AND COFFINS. PEETZ BROTHERS LIVERY & UNDERTAKING COMPANY, St. Louis, Mo.
Filed March 26, 1914. Serial No. 76,984. PUBLISHED JUNE 23, 1914.

99,357. FRESH CITRUS AND DECIDUOUS GREEN FRUITS, GRAPES, AND BERRIES. PENRYN FRUIT COMPANY, Penryn, Cal.
Filed February 26, 1914. Serial No. 76,194. PUBLISHED JUNE 23, 1914.

99,358. DRIED FRUITS. PETER ADRIAN PINCOFFS, New York, N. Y.
Filed April 8, 1914. Serial No. 77,315. PUBLISHED JUNE 23, 1914.

99,359. COCOANUT-OIL PRODUCTS. PURITAN COCONUT BUTTER CO., Philadelphia, Pa,
Filed April 10, 1914. Serial No. 77,392. PUBLISHED JUNE 23, 1914.

99,360. SAUCES AND CANNED FRUITS AND VEGETABLES. J. F. PYLE & SON, San Jose, Cal.
Filed April 9, 1914. Serial No. 77,355. PUBLISHED JUNE 23, 1914.

99,361. METALLIC VALVES, WATER-CLOSETS, AND PARTS THEREOF. SLOAN VALVE COMPANY, Chicago, Ill.
Filed June 6, 1913. Serial No. 70,917. PUBLISHED JUNE 23, 1914.

99,362. CIGARETTE PAPERS, HOLDERS, CASES, CIGAR HOLDERS, CASES, CUTTERS, PIPES, TOBACCO-POUCHES, AND PIPE-STOPPERS. SOCIÉTÉ JOB, ANCIENS ETABLISSEMENTS BARDOU-JOB ET PAUILHAC, Perpignan, France.
Filed February 28, 1914. Serial No. 76,257. PUBLISHED JUNE 23, 1914.

99,363. CORDIAL. SOCIETE ANONYME DE LA DISTILLERIE DE LA LIQUEUR BENEDICTINE DE L'ABBAYE DE FECAMP, Fecamp, France.
Filed May 15, 1914. Serial No. 78,315. PUBLISHED JUNE 23, 1914.

99,364. RAZORS. A. SPAGNA AND L. CLINCO, New York, N. Y.
Filed July 26, 1913. Serial No. 71,998. PUBLISHED OCTOBER 21, 1913

99,365. REFINED PETROLEUM FOR ILLUMINATING, HEATING, AND POWER PURPOSES. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed August 19, 1913. Serial No. 72,423. PUBLISHED JUNE 23, 1914.

99,366. REFINED PETROLEUM FOR ILLUMINATING, HEATING, AND POWER PURPOSES. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed August 19, 1913. Serial No. 72,424. PUBLISHED JUNE 23, 1914.

99,367. GRAPE TONIC BEVERAGE. GEORGE W. STEIGER, New York, N. Y.
Filed May 26, 1914. Serial No. 78,567. PUBLISHED JUNE 23, 1914.

99,368. METALLIC EYELETS. EDWIN B. STIMPSON COMPANY, Brooklyn, N. Y.
Filed March 11, 1914. Serial No. 76,567. PUBLISHED JUNE 23, 1914.

99,369. FLOOR AND FURNITURE OIL. TAMPA VARNISH COMPANY, Tampa, Fla.
Filed April 18, 1914. Serial No. 77,576. PUBLISHED JUNE 23, 1914.

99,370. TYPE-SETTING MACHINES. THE UNITYPE COMPANY, New York, N. Y.
Filed May 17, 1913. Serial No. 70,480. PUBLISHED JUNE 23, 1914.

99,371. MACARONI. LUIGI VERNA, Philadelphia, Pa.
Filed September 27, 1912. Serial No. 66,015. PUBLISHED JUNE 23, 1914.

99,372. CERTAIN NAMED HARDWARE AND SUPPLIES. WATROUS MFG. CO., Des Moines, Iowa.
Filed March 21, 1914. Serial No. 76,830. PUBLISHED JUNE 23, 1914.

99,373. COTTON-PLANTERS. S. R. WHITE'S SONS, INCORPORATED, Norfolk, Va.
Filed May 28, 1914. Serial No. 78,631. PUBLISHED JUNE 23, 1914.

99,374. CERTAIN PASTE-LIKE MASS USED AS AN ARTICLE OF CONFECTIONERY. STEPHEN F. WHITMAN & SON, INCORPORATED, Philadelphia, Pa.
Filed April 8, 1914. Serial No. 77,322. PUBLISHED JUNE 23, 1914.

99,375. PHOTOGRAPHIC LENSES AND SHUTTERS. WOLLENSAK OPTICAL COMPANY, Rochester, N. Y.
Filed May 19, 1914. Serial No. 78,405. PUBLISHED JUNE 23, 1914.

99,376. RAZORS. YOUNG SAFETY RAZOR COMPANY, Philadelphia, Pa.
Filed May 16, 1912. Serial No. 63,582. PUBLISHED JUNE 23, 1914.

99,377. SELF-RISING WHEAT-FLOUR. GEORGE W. ZIEBOLD, Waterloo, Ill.
Filed March 23, 1914. Serial No. 76,893. PUBLISHED JUNE 16, 1914.

99,378. ORGANIC FOOD TONIC. COLEMAN BARDOS, Jr., New York, N. Y.
Filed May 26, 1914. Serial No. 78,552. PUBLISHED JUNE 23, 1914.

99,379. SUBSTITUTE FOR SUGAR FOR USE IN DIABETES, OBESITY, GOUT, AND RHEUMATISM. ALEXANDER BEAUVAIS, New York, N. Y.
Filed May 6, 1914. Serial No. 78,014. PUBLISHED JUNE 23, 1914.

99,380. SERUMS AND VACCINES FOR PREVENTING AND TREATING CERTAIN DISEASES; AND PREVENTING AND TREATING HOG-CHOLERA. ALESSANDRO BRUSCHETTINI, Genoa, Italy.
Filed April 4, 1913. Serial No. 69,587. PUBLISHED JUNE 23, 1914.

99,381. REMEDY FOR GONORRHEA. JOHN D. BURKE, Montgomery, Ala.
Filed May 19, 1914. Serial No. 78,378. PUBLISHED JUNE 23, 1914.

99,382. REMEDY FOR GONORRHEA. JOHN D. BURKE, Montgomery, Ala.
Filed May 19, 1914. Serial No. 78,379. PUBLISHED JUNE 23, 1914.

99,383. CALCIUM CHLORID. CARBONDALE CALCIUM CO., Carbondale, Pa.
Filed May 11, 1914. Serial No. 78,192. PUBLISHED JUNE 23, 1914.

99,384. CERTAIN NAMED FOODS. L. S. DONALDSON COMPANY (INC.), Minneapolis, Minn.
Filed April 15, 1912. Serial No. 62,910. PUBLISHED JUNE 23, 1914.

99,385. TOILET ROUGE. JAMES F. DORRANCE, Flushing, N. Y.
Filed May 7, 1914. Serial No. 78,071. PUBLISHED JUNE 23, 1914.

99,386. POULTRY-TONICS, REMEDIES FOR DISEASES OF POULTRY, AND POULTRY-INSECTICIDES. THE S. R. FEIL COMPANY, Cleveland, Ohio.
Filed May 9, 1914. Serial No. 78,154. PUBLISHED JUNE 23, 1914.

99,387. REMEDY FOR FOOT AILMENTS. ALPHONSE P. FOOSE, Dayton, Ohio.
Filed May 9, 1914. Serial No. 78,153. PUBLISHED JUNE 23, 1914.

99,388. WHITE LINIMENT AND COLIC REMEDY. GEORGIA MEDICINE CO., Wrightsville, Ga.
Filed May 26, 1914. Serial No. 78,554. PUBLISHED JUNE 23, 1914.

99,389. CANNED VEGETABLES. GRAND RIVER CANNING COMPANY, Markesan, Wis.
Filed March 31, 1913. Serial No. 69,459. PUBLISHED JUNE 16, 1914.

99,390. ANTISEPTICS, SALVES, OINTMENTS, AND REMEDIES FOR TREATING CERTAIN NAMED DISEASES AND CONDITIONS. HAMMER REMEDY CO., Lamoni, Iowa.
Filed May 5, 1914. Serial No. 77,998. PUBLISHED JUNE 23, 1914.

99,391. POWDER OF CERTAIN INGREDIENTS INTENDED TO BUILD UP HUMAN ORGANS. ERNEST HANDL, Chicago, Ill.
Filed May 20, 1914. Serial No. 78,419. PUBLISHED JUNE 23, 1914.

99,392. [WITHDRAWN.]

99,393. PREPARATION FOR TREATING CERTAIN AILMENTS OF MAN AND LIVE STOCK. CLETUS C. HUDKINS, Jane Lew, W. Va.
Filed May 8, 1914. Serial No. 78,128. PUBLISHED JUNE 23, 1914.

99,394. REMEDY FOR CHILLS, FEVER, AND MALARIA. W. C. IRVIN, Talladega, Ala.
Filed April 14, 1914. Serial No. 77,474. PUBLISHED JUNE 23, 1914.

99,395. OINTMENT. E. L. MARR BROS. CO., Westerly, R. I.
Filed May 6, 1914. Serial No. 78,030. PUBLISHED JUNE 23, 1914.

99,396. REMEDY FOR CHOLERA, ROUP, CANKER, SOREHEAD, AND LIMBERNECK. RALPH H. MILLER, Algona, Iowa.
Filed May 6, 1914. Serial No. 78,088. PUBLISHED JUNE 23, 1914.

99,397. OIL FOR THE HAIR AND HEAD. GOLD S. MORGAN, Greenwood, Miss.
Filed May 8, 1914. Serial No. 78,133. PUBLISHED JUNE 23, 1914.

99,398. CERTAIN NAMED FOODS. J. H. NEWBAUER & CO., San Francisco, Cal.
Filed September 5, 1912. Serial No. 65,584. PUBLISHED AUGUST 12, 1913.

99,399. ROUGE, FACE-POWDER, AND THEATRICAL ROUGE. THE OWL DRUG COMPANY, San Francisco, Cal.
Filed May 25, 1914. Serial No. 78,530. PUBLISHED JUNE 23, 1914.

99,400. PERFUMERY, FACE-POWDERS, AND TALCUM POWDERS. PENINSULAR CHEMICAL CO., Detroit, Mich.
Filed January 31, 1914. Serial No. 75,588. PUBLISHED JUNE 23, 1914.

99,401. COMPLEXION-POWDERS, ROUGE, AND RICE-POWDER. THE J. A. POZZONI PHARMACAL CO., Chicago, Ill.
Filed June 30, 1913. Serial No. 71,450. PUBLISHED JUNE 23, 1914.

99,402. ANTISEPTIC FOR CLEANING, DEODORIZING, AND DISINFECTING. ALBERT VICTOR RHODES, Tacoma, Wash.
Filed May 19, 1914. Serial No. 78,398. PUBLISHED JUNE 23, 1914.

99,403. SALTS REMEDY FOR THE RELIEF OF CERTAIN NAMED DISEASES. THE SALCURA COMPANY, Milwaukee, Wis.
Filed April 17, 1914. Serial No. 77,546. PUBLISHED JUNE 23, 1914.

99,404. LAXATIVES. FLORA SCHINDLER-BARNAY, Vienna, Austria-Hungary.
Filed March 21, 1914. Serial No. 76,824. PUBLISHED JUNE 23, 1914.

99,405. BREAD. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed April 10, 1914. Serial No. 77,395. PUBLISHED JUNE 23, 1914.

99,406. SKIN-CREAM. THE SPALDING CHEMICAL CO., New Haven, Conn.
Filed April 6, 1914. Serial No. 77,255. PUBLISHED JUNE 23, 1914.

99,407. SOLUBLE STARCHES, SOFTENER AND FINISHING COMPOUNDS FOR COTTON AND OTHER VEGETABLE FIBERS. CHAS. S. TANNER COMPANY, Providence, R. I.
Filed May 18, 1914. Serial No. 78,373. PUBLISHED JUNE 23, 1914.

99,408. HEADACHE-POWDERS. CALVIN A. WALKER, Asheville, N. C.
Filed January 10, 1914. Serial No. 75,106. PUBLISHED JUNE 23, 1914.

99,409. MEDICATED SALVE. WILLIAM A. WELLIVER, Montrose, Pa.
Filed May 27, 1914. Serial No. 78,597. PUBLISHED JUNE 23, 1914.

99,410. REMEDY FOR HABITUAL CONSTIPATION, HEADACHE, AND PIMPLES, AND COUGH-BALSAM. LOUIS WOLFOW, New York, N. Y.
Filed May 15, 1914. Serial No. 78,323. PUBLISHED JUNE 23, 1914.

99,411. THROAT AND LUNG REMEDY. EDWIN WOODRUFF, East Durham, N. Y.
Filed May 19, 1914. Serial No. 78,406. PUBLISHED JUNE 23, 1914.

99,412. CANNED, DRIED, AND EVAPORATED FRUITS AND JELLIES. YAKIMA VALLEY FRUIT GROWERS' ASSOCIATION, Yakima, Wash.
Filed February 28, 1914. Serial No. 76,265. PUBLISHED MAY 5, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

WM. B. SCAIFE & SONS CO. *v.* FALLS CITY WOOLEN MILLS.

Decided November 4, 1913.

209 FED. REP., 210.

1. PATENTS—INFRINGEMENT—ANTICIPATION.
Where the broader view of a claim is necessary to make out infringement, the proof of anticipation must be considered from the same point of view.

2. SAME — CONSTRUCTION — READING LIMITATION INTO CLAIM.
Where a patentee has made an improvement entitled to protection and in the claim directed to that feature it is described in terms which are capable of a broad construction, rendering the claim invalid in view of the prior art, or of a narrower construction, which will preserve to it the validity which it should have had, the courts will give it that narrow construction and so sustain the patent; but where from the specification or history of the application or the language of the claim it is clear that the patentee intended to claim and the Patent Office to grant the broader monopoly, which turns out to be invalid, the courts will not, for the arbitrary purpose of saving the claim, read into it a limitation which it does not have.

3. SAME—SAME—DIFFERENTIATION OF CLAIMS.
The propriety of the rule that proper construction and effect can be given to each claim of a patent only by differentiating it from the other claims in a normal case, where it can be clearly applied, is not affected by the fact that in many cases it is difficult to make such differentiation because of repetition and confusion.

4. SAME—SAME—SAME.
When satisfied that a particular claim had for its dominant purpose to secure one particular feature, we should not construe it as specific also in its calls for other elements.

5. SAME—CLAIMS—CONSTRUCTION.
In construing a claim in that respect ambiguous a given element should be implied if its presence was necessary to distinguish from the prior art or from the other claims. Otherwise it should not operate as a limitation.

6. SAME—EFFECT OF PATENT OFFICE PROCEEDINGS.
A statement by the solicitor that the claim was to be confined to the "exact form" *Held* not an estoppel, because limitation was not required, and not a persuasive admission because of the context.

7. SAME—VALIDITY AND INFRINGEMENT—WATER-PURIFYING APPARATUS.
The Greth patent, No. 775,901, for a water-purifying apparatus, claim 11, as differentiated from most of the other claims, is not limited to a combination calling for separate compartments in which the lime treatment and the soda treatment are carried on, but has for its principal element the specific battery of independent-unit filters described, each of which can be cut off for cleaning without affecting the others, used in combination with a settling-compartment and a chemical-treating compartment, broadly specified, which may or may not be subdivided. As so construed the claim was not anticipated and discloses patentable invention; also *Held* infringed.

APPEAL from the District Court of the United States for the Western District of Kentucky; Walter Evans, Judge.

Mr. F. W. H. Clay for the appellant.

Mr. A. M. Hood (*Messrs. Bodley & Baskin* of counsel) for the appellee.

Before WARRINGTON, KNAPPEN, and DENISON, Circuit Judges.

DENISON, *Cir. J.:*

Appellant filed, in the court below, the usual infringement bill based upon Patent No. 775,901, issued to Greth, November 22, 1904. It planted its *prima facie* case on claims 9, 10, 11, and 12. Later, it withdrew claims 9 and 12, and went to final hearing on claims 10 and 11 only. The district court dismissed the bill and filed an elaborate opinion which so fully discloses the facts involved that we shall need to make thereto only brief additional references. The opinion below is reported in 194 Fed., 139.

In construing claims 10 and 11 (quoted in margin)[1] to determine either validity or infringement, the important underlying situation is this: Greth's patent was upon an apparatus, and not a process. His drawing showed and his specification described a structure embodying four parts through which successively water continuously flowed. These were a tank or chamber in which the water received lime and in which the resultant chemical reaction took

[1] Claim 10. In water purifying apparatus the combination in a single tank 8 of the various compartments for lime treatment and soda treatment and water settling, the settling tank being fed directly from the treatment tank and having an inclined bottom therein below the opening from the treatment tank, and having a filter at the top of the settling tank fed by overflow from said tank, substantially as described.

Claim 11. In continuous flow water purifying apparatus, the combination with a single tank containing the chemical reacting compartment, and an upward flow settling compartment, of a series of independent gravity filters carried on the top of the tank, fed by overflow from the settling compartment, and each having means for washing the filter and a valve to close communication with the settling compartment, whereby any one of said filters may be isolated and washed, while the flow continues through the others from said supporting tank.

place; a tank or chamber in which soda was added and the chemical reaction therefrom followed; a tank or chamber where, after the chemical treatment, the water entered at the bottom and overflowed from the top and in which sedimentation occurred; and a filter through which passed the water overflowing from the top of the settling-tank. The structure in which these parts were embodied, as illustrated by Greth, may be described in general terms as a vertical cylindrical all-inclosing tank (8) divided into two main compartments by a segmental vertical partition reaching from the top nearly to the bottom. One of these is the settling-tank; the other is subdivided by a horizontal partition having a flow-opening; the upper subdivision being the lime and the lower the soda compartment. The defendant's device had these same parts, thus generally described, excepting that the two main chambers were formed by an inner concentric vertical partition, and both the lime treatment and reaction and the soda treatment and reaction occurred in one chamber (the inner) which had no physical partition between its upper and lower parts.

(1) Keeping this situation in mind, when we scrutinize claim 10, we see that it calls distinctly for the element filter and for the element settling-tank and, apparently, also for the two elements lime-tank and soda-tank. It is the patentee's theory that these two latter are really one element or that one treatment-tank for both reactions is the equivalent of the two; while it is the defendant's position that the claim calls for four elements, and is therefore not infringed by a device having only three. Obviously, the former or broader view of the claim is necessary to make out infringement, and so the proof of anticipation must be considered from the same point of view, viz., that the claim was for a chemical-treatment tank, a settlement-tank, and a filter, arranged in the specified mutual relation.[2] So considered, it is anticipated. The English patent to Patterson, mentioned in the opinion below, discloses these three elements in the same substantial form, operating in the same succession and in substantially the same way. Claim 10, with this construction, which it must have in order to be infringed, reads perfectly upon Patterson.

(2) It is suggested that the phrase—

having a filter at the top of the settling tank fed by the overflow from the said tank substantially as described—

should be construed as calling for the specific kind of filter shown and described, viz., a filter divided into several units, each one of which can be independently cleaned, and that, if the call in the claim for "a filter" is so construed, the invention is not anticipated. Where it appears that the patentee had made an improvement upon which he was entitled to receive protection, and that in the claim which was directed to that feature of his invention it is described in terms which are capable of a broad construction rendering the claim invalid in view of the prior art, or of a narrower constructon which will preserve to it the validity which it should have had, the courts will give it that narrow construction, and so sustain the patent; but where, from the specification or the history of the application or the language of the claim it is clear that the patentee intended to claim and the Patent Office intended to grant the broader monopoly which turns out to be invalid, the courts will not, for the arbitrary purpose of saving the claim, read into it a limitation which it does not have.[3] Resorting to all these means of interpretation, including a comparison of the several claims, we are satisfied that claim 10 will not bear this narrow construction; and not the least of the considerations compelling this result is the fact that this peculiar form of fiber is the dominant thought of another claim.

Coming now to examine claim 11 from the same general point of view, we see at once that the claim is ambiguous in respect to whether it calls for the three or the four main elements. It refers to the tank "containing the chemical reacting compartment." If by this is meant the compartment shown and described, and in its specific form, it means a compartment having two chambers with a nearly-closed partition between them; but if it intends to refer to the structure more generally, it designates that portion on the treatment side of the main partition, and is satisfied by one chemical-treatment compartment. The latter construction spells infringement; the former, escape.

(3) This patent is one having a series of twelve claims. It is sometimes said that in such case each claim should be considered as a separate patent. This statement, accurate enough for some purposes, is misleading, if followed too far; but we must at least say that, usually, proper construction and effect can be given to each claim only by differentiating it from the other claims. Each claim should be capable of such differentiation, else it has no right to exist; and the difficulty often found in doing so, caused by repetition and confusion, does not affect the propriety of this rule of construction in a normal case where it can be clearly applied.[4] Each claim should be directed at some function, step, or advantage to give it individuality; it should have a characterizing thought or point by which it can be identified; and, if the court which is to construe the claim can find this dominant thought, its task will be simplified. We may make this concrete by supposing that elements A, B, and C are each old in several specific forms, but are operative only in

[2] For instances of the general rule that which infringes if later anticipates if earlier, see *Miller* v. *Eagle*, (151 U. S., 186, 203; 14 Sup. Ct., 310; 38 L. Ed., 121;) *Wells* v. *Curtis*, (C. C. A., 6; 66 Fed., 318, 324; 13 C. C. A., 494;) *Eames* v. *Worcester*, (C. C. A., 6; 123 Fed., 67, 72; 60 C. C. A., 37;) *Grever* v. *Hoffman*, (C. C. A., 6; 202 Fed., 923, 926; 121 C. C. A., 281.)

[3] That an ambiguous claim will be read in the more limited sense when necessary to sustain its validity, see *Lamb Co.* v. *Lamb Co.*, (C. C. A., 6; 120 Fed., 267, 269; 56 C. C. A., 547.) That a limiting element cannot be read into a clear claim to save it from invalidity, see *McCarty* v. *Railroad*, (160 U. S., 110, 116; 16 Sup. Ct., 240; 40 L. Ed., 358;) *Stearns* v. *Russell*, (C. C. A., 6; 85 Fed., 218, 224; 29 C. C. A., 121.)

[4] *Anderson* v. *Potts*, (C. C. A., 7; 108 Fed., 379, 383, 384; 47 C. C. A., 409;) *Lamson* v. *Hillman*, (C. C. A., 7; 123 Fed., 416, 419; 59 C. C. A., 510; *Duncan v. Cincinnati Co.*, (C. C. A., 6; 171 Fed., 656, 663; 96 C. C. A., 400; *O'Rouke* v. *McMullen*, (C. C. A., 2; 160 Fed., 933, 939, 940; 88 C. C. A., 115;) *Thomson-Houston Electric Co.* v. *Union* R. Co., (C. C. A., 2; 86 Fed., 636, 638; 30 C. C. A., 313.)

the combination A, B, C. An inventor perfects new and useful specific forms of each, *a*, *b*, *c*. The most desirable form of his invention is the combination *a*, *b*, *c*, and this the inventor considers his perfect work; but he may use and is entitled to monopolize one or two of the old forms in combination with two or one of his new forms. He may have, and the proper drafting of his patent will secure for him, a series of combination claims like this (capitals representing generic, lower case, his new specific forms): (1) *a*, *b*, *c*; (2) *a*, *b*, C; (3) *a*, B, *c*; (4) *a*, B, C; (5) A, *b*, *c*; (6) A, B, *c*; (7) A, *b*, C. In this series, claim 3, for example, we assume is intended to secure the new specific forms, *a*, *c*, united with any form, new or old, of the well-known element B; and claim 7 protects the exclusive use of the new form, *b*, with any variety or equivalent, new or old, of the elements A, C. In practice, however, the claim elements often cannot be effectively labeled "generic" or "specific;" terms are used capable of either construction; and there is the interpretative usefulness of claim differentiation. If, in claim 7, A and C were recited in ambiguous words which might import only the species shown and described, *a* or *c*, or might refer to the genus, A or C, comparison of the claims shows that the former narrower monopoly has been variantly and fully granted by claims 1, 2, and 5. Hence claim 7 either has the effect above assumed or it is a useless and inoperative repetition of one of the others. Obviously the former alternative should be accepted, and we solve our problem by concluding that the fullest attainable protection of the presence in this combination of the new specific form, *b*, is the identifying-point or characterizing thought of this claim.

(4) We may solve this same problem by more rough and ready methods of claim comparison, since few cases admit of such accurate analysis as our illustration. In practice, the claims rarely show with certainty whether their reference to the named element is generic or specific; they may use or omit reference-letters; they may employ the definite or indefinite article; they may or may not say "substantially as described." These things are usually of little help in construcution—often none at all.[5] But if we can be satisfied from the specification and a comparison of the claims that a particular claim was intended and had for its dominant purpose to secure and protect the use, in the combination, of one particular feature, we should give its fullest permissible effect for that purpose, and should not construe it as specific also in its calls for other elements—unless some other rule of construction requires us to do so.

In the present case, the specification describes the progress of the water through the lime-chamber and the soda-chamber and the settlement-tank, giving full descriptions of each. Greth not only describes the two treatment-tanks, but says:

I regard the separate and distinct treatment of the lime in one tank and the soda in another as important.

He then takes up and describes the filter, explaining the division of the filter into sections or units, and the means employed for reversing the flow of water through and cleaning any one unit without disturbing the settlement-tank and without interfering with the operation in any other filter unit, whereby a continuous flow of filtered water is secured without interruption by the necessary, frequent cleaning. In each of the first eight or nine claims there is an express requirement for a lime-tank and a soda-treatment tank, separate and distinct from each other; for example, claim 1 says "a separate soda treatment tank;" claim 2, "an independent tank for treatment by a second chemical;" claim 3, "a soda treatment tank being below and entirely separate from the lime treatment tank:" claim 8, "each of which compartments is separate from the rest," etc.

These eight or nine claims make up various combinations and subcombinations to which we assume the patentee was entitled; each one expressly stating or implying that there were to be two independent and separate chemical-treatment tanks. In only part of these nine claims is the filter mentioned at all, and then only in general terms as "a filter," etc. In claim 10, the language is:

The combination in a single tank (8) of the various compartments for lime treatment and soda treatment and water settling.

The fact that the two chemical-treatment tanks are separate is not here emphasized as it has been before, although perhaps it is implied. When, however, we come to claim 11, we find less ambiguity. The language is:

The combination of a single tank containing the chemical reacting compartment and an upward flow settling compartment with a series of independent gravity filters,

which filters are then specifically described, and their function is pointed out. The question then is: Should this claim, because it refers to "the compartment," be confined to the specific form of compartment which has been made the subject of previous claims, and is here not mentioned? We are satisfied that the patentee thought he had invented a new improvement in filters which would be especially useful in connection with his complete apparatus, but was also useful in combination with any treatment and settlement tanks, and that he intended by his claim to protect the right to use his form of filter in combination with his general type of apparatus. The reference to the filter is and must be considered as specific; the reference to the treatment-tank is apt and suitable to be and should be considered as generic. The claim and the structure it fairly imports ought not to be sacrificed to the words found in other parts of the grant.

(5) Another analogous consideration leads to the same result. It is only applying to a patent the ordinary rules of construction applied to other grants, to say that, in determining whether a given element should be considered as present with a limiting effect in a claim in that respect ambiguous, we should observe the occasion or the necessity for its introduction by the claim draftsman. If its presence was necessary to distinguish the claim in point of patentability from the prior art or in point of effect from the other claims, it should be implied;

[5] *Houser* v. *Starr*, (C. C. A., 6; 203 Fed., 264, 269, 270; 121 C. C. A., 462.)

but if it can be of no use in either of these particulars, it should not operate as a limitation.[6] Of course, we are speaking only of ambiguous claims and not of those where the claim language requires the limitation.[7] Applying this formula, claim 11 must be treated as calling only broadly for the chemical-treating compartment as a unit, distinguished from the settling-compartment; the characterizing thought of the claim had to do with the presence in this general combination of Greth's particular improvements in filters. The filter received its water from the top of the settling-tank; the settling-tank received its water from the bottom of the treatment-tank, and, necessarily, from the last treatment-tank, if there was more than one; the treatment-tank, broadly considered, was a proper element of the combination, because thereby the water was given ultimate character affecting its conduct in the settlement-tank; but there could be neither inventive thought nor patentable novelty in adding to this combination one or two or ten tanks in which the water had been treated before it came to the treatment-tank from which it passed to the settlement-tank. There was therefore no occasion for Greth to include in this claim the preliminary, separate lime-treatment tank; every presumption must be that he did not unnecessarily limit his claim; and such presumption must prevail where, as here, the selected language is not at all inconsistent with the broader interpretation.

Still further confirmatory of this construction is what happened in the Patent Office. Claim 11 is the evolution of original claim 16, which was drawn merely to the combination of a tank and Greth's battery of independent-unit filters with means for separately cleaning each. This was rejected, because anticipated by separately-operating filters in connection with the pond or river used for a city water-supply. Greth then amended by identifying his tank as—

> a single tank containing the chemical reacting compartment and an upward flow settlement compartment,

and the claim was then allowed. There is here no intimation that the Examiner required Greth, or that Greth intended, to confine his claim to a device having two separate chemical-reacting compartments. It is true, he said, in making this amendment:

> The two claims (10 and 11) as now drawn, are confined to the exact structure and are different from the prior art in the following particulars: The washing of the filters does not interrupt the flow through the tank, and all the filters are fed only from the top overflow from the tank and not under variable pressure; the filters are independent and are carried on the tank itself, which is necessary to the unity and simplicity of the apparatus aimed at. The filter *per se* is not supposed to be new, but it has a peculiar function as modified and adapted to coöperate with this tank and other filters of a series in a continuous flow single tank system.

(6) This statement that the claim was confined to the "exact form" falls distinctly short of making either an estoppel or a conclusive admission as to the meaning of the claim in the respect now under discussion. It is not an estoppel, because Greth was not required to put the two separate treatment-tanks into this claim in order to get his patent allowed;[8] it is not a conclusive or at all persuasive admission because the whole context shows he did not have this point in his mind. The claim was confined to the (comparatively) exact form and distinguished from the prior art in all the various particulars which he proceeds to enumerate, but none of them have anything to do with the question of one treatment-tank or two.[9]

(7) There remains only the question whether claim 11 discloses patentable invention as compared with the prior art. We have construed this claim as calling, somewhat broadly, for the combination in one continuous-flow structure of the chemical-treatment (downward-flow) compartment, the upward-flow settling-tank and Greth's battery of overflow-filters. So construed, its only distinction from the Patterson English patent or the De la Coux device described in a French publication in 1900, is in the form and operation of the filter. Each of these devices had a single filter at the top of the tank and fed by overflow from the tank. Patterson had a sand filter-bed through which the water passed downwardly. De la Coux had a filter-bed through which the water passed upwardly, being first carried in a passageway from the top of the tank to the bottom of the filter. Neither of these disclosed any means of cleaning the filter-bed, except by stopping the operation of the entire structure. The idea of a group of filters each of which could be cut out independently without affecting the work of the others was broadly old, but had been applied nowhere except in city water-supply systems or for analogous uses where the lake, river, or pond was the settlement-basin and the water was brought therefrom in conduits to the filters. It had never been applied as a part of a unitary structure in the treatment of water to produce a comparatively small continuous flow for industrial purposes. When so united with such a structure, in a compact, unitary, well-designed, and effective form, it makes a new combination, and it produces a result different from what had before been accomplished. It seems now a simple thing to substitute the battery of independently-cleanable filters for the single filter; if it had been a common expedient in analogous situations to substitute one for the other, we would have a different question; but this substitution involved both the thought and considerable necessary structural adaptation. The patent has been granted, the defendant by adoption has certified its usefulness, and the lack of anything more than mechanical skill is not clear enough to justify us in saying that there was lack of invention.[10] Our only difficulty in reaching this conclusion arises because De la Coux, in the French publication, in 1909, and referring to his upward-flow filter, said:

> A filter formed of an annular space concentric with the outer wall of the center may be divided into two parts to facilitate the cleaning, without stopping the purification.

This was a suggestion of the very thing which Greth did, and it was in connection with the otherwise complete combination use by Greth; but we think it only a suggestion. Neither drawing nor description told how to do it. Such matter as this must be either a full disclosure equivalent to a full anticipation, or else it is properly classifiable as a suggestion. Greth adapted and combined together the treatment and settlement tanks of De la Coux, the separable-unit idea of the city water systems, and the cleaning by reverse flow idea found in other filters. To do this, he devised suitable forms and arrangement for the entire unitary structure, and for the filtering apparatus, gates, and inlet and outlet pipes necessary. All had to be adapted to the combination. The fact that De la Coux suggested it might be done is not enough. It was no more efficient than the suggestion which, in *Herman* v. *Youngstown Co.*, (191 Fed., 579; 112 C. C. A., 185,) we thought not enough to negative invention.

The defendant is using the structure of claim 11, as we interpret that claim. Its structure embodies, just as Greth's device does, a gate shutting the filter off from the settling-compartment, a discharge-pipe carrying away to the sewer the overflow from the top of the filter when it is washed, and the ordinary outlet-pipe from the bottom of the filter, usually carrying away clear water, but which, by suitable connection, could be made to receive the washing-water and force it up from the bottom of the filter-bed. That the only time when its operation was observed by witnesses, defendant was cleaning one filter at a time, cut out from the settling-tank, by washing the same with a hose instead of by water reversed through the discharge-pipe, and considering that the defendant had the complete device capable of use, just as contemplated, by turning a valve or adding the water connection, is not vital. We think it did not escape infringement if it did in fact use the device only in a less perfect and more awkward way. The claim does not specify nor necessarily imply the precise method of cleaning.

The decree must be reversed and the record remanded, with instructions to enter the usual decree for injunction and accounting on claim 11, provided that, within thirty days after the filing of the mandate, complainant has made disclaimer under claim 10 according to the practice established in this circuit.[11] The appellant will recover costs of this court, but not, up to this point, in the court below.[12]

[6] *Ryder* v. *Schlichter*, (C. C. A., 3; 126 Fed., 487, 491, 492; 61 C. C. A., 469;) *Wagner* v. *Wyckoff*, (C. C. A., 2; 151 Fed., 585, 591; 81 C. C. A., 129.)

[7] *Keystone* v. *Phanix*, (95 U. S., 274, 278; 24 L. Ed., 344;) *Ciniotti* v. *American*, 198 U. S., 399, 415; 25 Sup. Ct., 697; 49 L. Ed., 1100.)

[8] *Bundy* v. *Detroit*, (C. C. A., 6; 94 Fed., 524, 543; 36 C. C. A., 375;) *Wayne* v. *Benbow*, (C. C. A., 8; 168 Fed., 271, 279; 93 C. C. A., 573;) *Sly* v. *Russell*, (C. C. A., 6; 189 Fed., 61; 110 C. C. A., 625.)

[9] *Vrooman* v. *Penhallow*, (C. C. A., 6; 179 Fed., 296; 102 C. C. A., 484.)

[10] For illustrations of rule that adding an element to an existing structure may or may not be invention, see *Kellogg* v. *Dean*, (C. C. A., 6; 182 Fed., 991, 996; 105 C. C. A., 545;) *Houser* v. *Starr* (C. C. A., 6; 203 Fed., 264, 272; 121 C. C. A., 462.) See, also, *Sly* v. *Russell*, (C. C. A., 6; 189 Fed., 61, 66; 110 C. C., 625.)

[11] *Herman* v. *Youngstown*, (C. C. A., 6; 191 Fed., 579, 588; 112 C. C. A., 185.)

[12] *Houser* v. *Starr*, (C. C. A., 6; 203 Fed., 264, 275; 121 C. C. A., 462.)

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Kennard & Oudesheys, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Capital City Dairy Co., of West First avenue and Perry street, Columbus, Ohio, for registration of a trade-mark and trade-mark registered August 16, 1881, No. 8,571, to Kennard & Oudesheys, of Baltimore, Md., and a notice of such declaration sent by registered mail to said Kennard & Oudesheys at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Kennard & Oudesheys, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 21, 1914.

Sallie P. Ayres, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Cereo Company, of Tappan, N. Y., for registration of a trade-mark and trade-mark registered February 25, 1902, No. 37,850, to Sallie P. Ayres, of 1331 F street, Washington, D. C., and a notice of such declaration sent by registered mail to said Sallie P. Ayres at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Sallie P. Ayres, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 19, 1914.

The Great Golden Seal Drug Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Styron-Beggs Company, of 37 South Fourth street, Newark, Ohio, for registration of a trade-mark and trade-mark registered November 22, 1887, No. 14,954, to The Great Golden Seal Drug Co., of Chicago, Ill., and the Office having failed to secure proof of service upon The Great Golden Seal Drug Co. at the said address within the time allowed for that purpose, notice is hereby given that unless The Great Golden Seal Drug Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 15, 1914.

William Seeger, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Eugene G. Gassaway, Fort Worth, Tex., for registration of a trade-mark and trade-mark registered November 10, 1908, No. 71,263, to William Seeger, 3515 Dodier street, St. Louis, Mo., and a notice of such declaration sent by registered mail to said William Seeger at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said William Seeger, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

The notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

AUGUST, 1914.

[Decisions of the United States Circuit Court of Appeals are indicated by the letter d.]

TABLE OF CASES.

	Page.
dRossmann v. Garnier	661
dScaife & Sons Co., Wm. B., v. Falls City Woolen Mills	1323
Steel and Steel v. Myers	1021

SUBJECT-MATTER INDEX.

	Page.
dCommerce, statutory provisions, validity of Trade-Mark Acts, Rossmann v. Garnier	661
dConstruction of claims, anticipation and disclosure, Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills	1323
dReading limitations into, Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills	1323
dConstruction of statutes, International Convention for the Protection of Industrial Property, Rossmann v. Garnier	661
dConstruction of trade-mark statutes, Rossmann v. Garnier	661
dDifferentiation of claims, necessity of for proper construction and effect, Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills	1323
dInfringement, anticipation, Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills	1323
Interference, foreign application, benefit of, Steel and Steel v. Myers	1021
Evidence of filing, Steel and Steel v. Myers	1021
dJurisdiction of the United States courts, matters arising under trade-mark statutes under jurisdiction of Federal courts, Rossmann v. Garnier	661
dProceedings in the Patent Office, effect of, Wm. B. Scaife & Sons Co. v. Falls City Woolen Mills	1323
dTrade-marks, actions, sufficiency of evidence, Rossmann v. Garnier	661
dDefinition of term, Rossmann v. Garnier	661
dForeign registration, effect of, Rossmann v. Garnier	661
dInfringement, damages not recoverable when infringer had no notice and when articles were sold without notice affixed thereto, Rossmann v. Garnier	661
dWhat constitutes, Rossmann v. Garnier	661
dMarks subject to ownership, Rossmann v. Garnier	661
dSuits for infringement, judicial notice not taken of foreign uses and customs, only of those of our own country considered, Rossmann v. Garnier	661
dTen-years clause, marks may be registered thereunder even though descriptive words, Rossmann v. Garnier	661
dThe word "Abricotine," with the initials "P. G.," on a tabret or shield infringed by the word "Abricotine," used for the same class of goods, Rossmann v. Garnier	661

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

AUGUST, 1914.

[Decisions of the United States Circuit Court of Appeals are indicated by the letter ᵈ.]

ALLEGATION.

See Interference, 1.

AMBIGUOUS CLAIMS.

See Construction of Claims, 4.

ANTICIPATION.

See Infringement, 3; Particular Patents.

CITIZENSHIP.

See Jurisdiction of Federal Courts.

COMMERCE.

See Construction of Trade-Mark Statutes, 1, 2; Suits for Infringement.

CONSTRUCTION OF CLAIMS.

See Infringement, 3; Particular Patents.

1. PATENTS—READING LIMITATION INTO CLAIM.
Where a patentee has made an improvement entitled to protection and in the claim directed to that feature it is described in terms which are capable of a broad construction, rendering the claim invalid in view of the prior art, or of a narrower construction, which will preserve to it the validity which it should have had, the courts will give it that narrow construction and so sustain the patent; but where from the specification or history of the application or the language of the claim it is clear that the patentee intended to claim and the Patent Office to grant the broader monopoly, which turns out to be invalid, the courts will not, for the arbitrary purpose of saving the claim, read into it a limitation which it does not have.
[ᵈWm. B. Scaife & Sons Co. *v.* Falls City Woolen Mills, 1323.

2. SAME—DIFFERENTIATION OF CLAIMS.
The propriety of the rule that proper construction and effect can be given to each claim of a patent only by differentiating it from the other claims in a normal case, where it can be clearly applied, is not affected by the fact that in many cases it is difficult to make such differentiation because of repetition and confusion. [ᵈId.

3. SAME—SAME.
When satisfied that a particular claim had for its dominant purpose to secure one particular feature, we should not construe it as specific also in its calls for other elements. [ᵈId.

4. SAME—AMBIGUOUS—LIMITATIONS.
In construing a claim in that respect ambiguous a given element should be applied if its presence was necessary to distinguish from the prior art or from the other claims. Otherwise it should not operate as a limitation. [ᵈId.

5. SAME—EFFECT OF PATENT OFFICE PROCEEDINGS.
A statement by the solicitor that the claim was to be confined to the "exact form" *Held* not an estoppel, because limitation was not required, and not a persuasive admission because of the context. [ᵈId.

CONSTRUCTION OF STATUTES.

See Foreign Registration.

CONSTRUCTION OF TRADE-MARK STATUTES.

See Infringement, 2.

1. COMMERCE — STATUTORY PROVISIONS — VALIDITY — "TRADE-MARK."
Congress had power under the Constitution of the United States (art. 1, sec. 8, cl. 3, authorizing it to regulate foreign and interstate commerce and commerce with the Indian tribes) to enact the trade-mark laws (act Mar. 3, 1881, c. 138; 21 Stat., 502; U. S. Comp. St., 1901, p. 3401; act Aug. 5, 1882, c. 393; 22 Stat., 298; U. S. Comp. St., 1901, p. 3404, and act Feb. 20, 1905, c. 592; 33 Stat., 724; U. S. Comp. St. Supp., 1911, p. 1459) especially as a "trade-mark" is a distinctive mark of authenticity through which the products of particular manufacturers or the vendible commodities of particular merchants may be distinguished from those of others.
[ᵈRossmann *v.* Garnier, 661.

2. TRADE-MARKS AND TRADE-NAMES—STATUTORY PROVISIONS—VALIDITY.
The provision of Trade-Mark Act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461,) that nothing therein shall prevent the registration of any mark used by the applicant or his predecessor or by those from whom title to the mark is derived in interstate or foreign commerce or commerce with Indian tribes which was in actual or exclusive use as a trade-mark of the applicant or his predecessor for ten years next preceding the passage of that act is not unconstitutional. [ᵈId.

3. SAME—MARKS SUBJECT TO OWNERSHIP—DESCRIPTIVE WORDS.
Such provision of act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461,) is not limited to technical trade-marks, and a word used exclusively for ten years may be registered under that provision even though it is a descriptive word. [ᵈId.

4. ACTIONS—SUFFICIENCY OF EVIDENCE.
Under Trade-Mark Act February 20, 1905, (c. 592, sec. 5; 33 Stat., 725; U. S. Comp. St. Supp., 1911, p. 1461, authorizing the registration of any mark in actual and exclusive use as a trade-mark by the applicant or his predecessor in title for ten years next preceding the passage thereof, and sec. 16, making the registration of a trade-mark *prima facie* evidence of ownership,) the *prima facie* case made by the registration of a trade-mark containing as a part thereof the word "Abricotine," in connection with cordials, was not overcome by the presence of the word "Abricotine," as applied to liqueurs, in a French encyclopedia bearing a date subsequent to the date of the beginning of the ten-year period and more than twenty years after the original registration of complainant's French trade-mark, it not appearing that it was not complainant's product that placed the term in the encyclopedia. [ᵈId.

DAMAGES.

See Infringement 2.

DESCRIPTIVE TERMS.

See Construction of Trade-Mark Statutes, 3.

DIFFERENTIATION OF CLAIMS.

See Construction of Claims, 2, 3; Particular Patents.

DISCLOSURE OF INVENTION.

See Interference, 2; Particular Patents.

ELEMENTS.

See Construction of Claims, 3, 4; Particular Patents.

ESTOPPEL.

See Construction of Claims, 5.

EVIDENCE.

See Construction of Trade-Mark Statutes, 4; Suits for Infringement.

FOREIGN APPLICATIONS.

See Interference.

FOREIGN LANGUAGE.

See Suits for Infringement.

FOREIGN REGISTRATION.

TRADE-MARKS AND TRADE-NAMES.

Under article 6 of the convention of March 20, 1883, (25 Stat., 1376,) for the protection of industrial property, providing that every trade-mark regularly deposited in the country of origin shall be admitted to deposit and so protected in all other countries of the Union thereby constituted, the owner of a trade-mark registered in France was entitled to protection in this country, whether or not such mark would have been allowed under the laws of this country. [d Rossmann *v.* Garnier, 661.

INFRINGEMENT.

See Particular Patents.

1. WHAT CONSTITUTES.

A trade-mark consisting of the word "Abricotine" in connection with the initials "P. G." on a tabret or shield and the facsimile of a signature was infringed by using the word "Abricotine" in connection with similar goods. [d Rossmann *v.* Garnier, 661.

2. ACTIONS—NOTICE AS CONDITION PRECEDENT.

Under the express provisions of Trade-Mark Act February 20, 1905, (c. 592, sec. 28, 33 Stat., 730; U. S. Comp. St. Supp., 1911, p. 1470,) where the registrant neither gave notice of the registration by affixing a notice to that effect to the articles sold under such trade-mark nor notified defendant of the infringement damages were not recoverable for the infringement. [d Id.

3. PATENTS—ANTICIPATION.

Where the broader view of a claim is necessary to make out infringement, the proof of anticipation must be considered from the same point of view.

[d Wm. B. Scaife & Sons Co. *v.* Falls City Woolen Mills, 1323.

INTERFERENCE.

1. PROOF OF FOREIGN APPLICATIONS.

If an applicant who is involved in interference has stated in the oath to his original application that he filed the application in a foreign country, that should be taken, in my opinion, as establishing *prima facie* that the foreign application was filed by him or with his knowledge and consent. If, however, the original oath does not state that the foreign application had been filed, but the allegation is made in a subsequent oath or in the preliminary statement, the applicant should, in view of conflicting affidavits, be given the benefit of the filing of the foreign application only upon a stipulation of the parties or where it is established by duly taken testimony that he was in fact the party who filed the foreign application or that it was filed with his knowledge and consent.

[d Wm. B. Scaife & Sons Co. *v.* Falls City Woolen Mills, 1323.

2. SAME—BENEFIT OF FOREIGN APPLICATION.

The Examiner of Interferences upon the filing of a proper motion, accompanied by a certified copy of the foreign application, shall in cases falling within the above ruling give the party filing the same the benefit of the foreign application if in his opinion the invention in issue is disclosed therein. [d Id.

INTERNATIONAL CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY.

See Foreign Registration.

JUDICIAL NOTICE.

See Suits for Infringement.

JURISDICTION OF FEDERAL COURTS.

COURTS—CASES ARISING UNDER TRADE-MARK LAWS.

The Federal courts have jurisdiction of all matters arising under the trade-mark statute, even though both parties be citizens of the same State. [d Rossmann *v.* Garnier, 661.

LIMITATION OF CLAIMS.

See Construction of Claims, 1, 4; Particular Patents.

OATH.

See Interference, 1.

OWNERSHIP.

See Construction of Trade-Mark Statutes, 4.

PARTICULAR PATENTS.

GRETH—WATER-PURIFYING APPARATUS—No. 775,901—VALIDITY AND INFRINGEMENT.

The Greth patent, No. 775,901, for a water-purifying apparatus, claim 11, as differentiated from most of the other claims, is not limited to a combination calling for separate compartments in which the lime treatment and the soda treatment are carried on, but has for its principal element the specific battery of independent-unit filters described, each of which can be cut off for cleaning without affecting the others, used in combination with a settling-compartment and a chemical-treating compartment, broadly specified, which may or may not be subdivided. As so construed the claim was not anticipated and discloses patentable invention; also *Held* infringed.

[d Wm. B. Scaife & Sons Co. *v.* Falls City Woolen Mills, 1323.

PRELIMINARY STATEMENT.

See Interference, 1.

PROCEEDINGS IN THE PATENT OFFICE.

See Construction of Claims, 5.

REGISTRATION OF TRADE-MARKS.

See Construction of Trade-Mark Statutes, 2, 3, 4; Foreign Registration; Infringement, 2.

SPECIFIC CLAIMS.

See Construction of Claims, 3.

STATE OF THE ART.

See Construction of Claims, 1, 4.

STIPULATION.

See Interference, 1.

SUITS FOR INFRINGEMENT.

EVIDENCE—JUDICIAL NOTICE—FOREIGN LANGUAGE.

In a suit for infringing a trade-mark judicial notice would not be taken that the word "Abricotine" is a word in general use in the French language in connection with French commerce and descriptive of apricot cordial, since, while the court is bound to take judicial notice of the ordinary meaning of words in our own language, it has judicially neither memory nor understanding of the French language, and judicial notice as to uses and customs is confined to our own country. [d Rossmann *v.* Garnier, 661.

TECHNICAL MARKS.

See Construction of Trade-Mark Statutes, 3.

TEN-YEARS CLAUSE.

See Construction of Trade-Mark Statutes, 2, 3, 4.

TERMINOLOGY.

See Construction of Trade-Mark Statutes, 1; Suits for Infringement.

TESTIMONY.

See Interference, 1.

TRADE-MARKS.

See Construction of Trade-Mark Statutes; Foreign Registration; Infringement, 1; Jurisdiction of Federal Courts.

VALID PATENTS.

See Construction of Claims, 1; Particular Patents.

O

BANGOR PUBLIC LIBRARY NOV 16 1914

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF AUGUST, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

A. G. Spalding & Bros. Manf'g. Co. (See Reach, Milton B., assignor.)

A. H. Andrews Co., The. (See Olson, Charles O., assignor.)

Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Adjustable joint. No. 1,107,241; Aug. 11; Gaz. vol. 205; p. 622.

Aballi, Jorge. (See San Martin, René, assignor.)

Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Voting mechanism for voting-machines. No. 1,105,597; Aug. 4; Gaz. vol. 205; p. 3.

Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Voting-machine. No. 1,105,598; Aug. 4; Gaz. vol. 205; p. 3.

Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Multi-indorsement mechanism. No. 1,107,008; Aug. 11; Gaz. vol. 205; p. 539.

Abraham, Lawrence, New York, N. Y. Repeating mechanism for talking-machines. No. 1,107,242; Aug. 11; Gaz. vol. 205; p. 622.

Abrahams, William, Philadelphia, Pa. Lining for sleeves. No. 1,106,912; Aug. 11; Gaz. vol. 205; p. 508.

Abrams, William T. (See Shallbetter and Abrams.)

Abramson, Nathan, Washington, D. C. Spike. No. 1,108,483; Aug. 25; Gaz. vol. 205; p. 1154.

Adair, Thomas D., Boston, Mass., assignor to Standard Thermometer Company, Portland, Me. Gasolene and water separator. No. 1,106,352; Aug. 4; Gaz. vol. 205; p. 264.

Adamec, Franz, Martinoves, near Budin, Austria-Hungary. Protecting-roof for haystacks and the like and its manufacture. No. 1,106,353; Aug. 4; Gaz. vol. 205; p. 264.

Adams, Albert L., Cedar Rapids, Iowa. Metal receptacle. No. 1,106,022; Aug. 4; Gaz. vol. 205; p. 152.

Adams, Arthur H., Sparkill, N. Y., and A. F. Dixon, Newark, N. J., assignors to Western Electric Company, New York, N. Y. Telegraph system. No. 1,108,109; Aug. 18; Gaz. vol. 205; p. 976.

Adams, Harry A., East Hartford, Conn., assignor to A. C. Fairbanks, trustee, Springfield, Mass. Pliers. No. 1,107,210; Aug. 11; Gaz. vol. 205; p. 611.

Adams, Harry A., East Hartford, Conn., assignor to A. C. Fairbanks, trustee, Springfield, Mass. Pliers. No. 1,107,243; Aug. 11; Gaz. vol. 205; p. 623.

Adams, Marshall L., Goldsboro, N. C. Stalk-cutter. No. 1,105,949; Aug. 4; Gaz. vol. 205; p. 127.

Adams, Raleigh J., Los Angeles, Cal. Boiler-tube roller-expander. No. 1,108,655; Aug. 25; Gaz. vol. 205; p. 1213.

Adams, Walter S., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,108,110; Aug. 18; Gaz. vol. 205; p. 976.

Adamson, Cecil F., East Palestine, Ohio. Spreader for the leaves of springs. No. 1,108,111; Aug. 18; Gaz. vol. 205; p. 977.

Adler, Ephraim, New York, N. Y. Expansion-bolt. No. 1,108,656; Aug. 25; Gaz. vol. 205; p. 1213.

Adleta, Osea M. (See Adleta, William P. and O. M.)

Adleta, William P. and O. M., Dallas, Tex. Railway-crossing signal. No. 1,108,822; Aug. 25; Gaz. vol. 205; p. 1269.

Ahlquist, Eugene F., Minneapolis, Minn. Envelop. No. 1,108,540; Aug. 25; Gaz. vol. 205; p. 1174.

Aho, John, Lawrence, Mass. Joint for railway-rails. No. 1,108,541; Aug. 25; Gaz. vol. 205; p. 1175.

Albee, George H., Neenah, Wis. Pump for wells. No. 1,108,856; Aug. 25; Gaz. vol. 205; p. 1282.

Albert Chemische Fabrik, Dr. Kurt. (See Berend, Ludwig, assignor.)

Albert, William, La Fayette, Ohio. Tool. No. 1,106,857; Aug. 11; Gaz. vol. 205; p. 489.

Albisser, Henry L., and J. Simon, Rahway, N. J. Clothes-pounder. No. 1,107,009; Aug. 11; Gaz. vol. 205; p. 539.

Albrecht, Christian A., Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical line-casting machine. No. 1,107,399; Aug. 18; Gaz. vol. 205; p. 726.

Alcorn, Robert E., Lake Village, Ark. Tool-handle connection. No. 1,105,599; Aug. 4; Gaz. vol. 205; p. 4.

Alden, Herbert W., assignor to The Timken Detroit Axle Company, Detroit, Mich. Axle. No. 1,108,114; Aug. 25; Gaz. vol. 205; p. 1025.

Alderman, William F., Lake Park, Ga. Trap. No. 1,108,657; Aug. 25; Gaz. vol. 205; p. 1213.

Alefs, Henry, Milwaukee, Wis. Machine for working hides and leather. No. 1,107,640; Aug. 18; Gaz. vol. 205; p. 812.

Alkire, Homer R., and D. O. Mabin, Mount Sterling, Ohio. Collapsible housing device. No. 1,107,871; Aug. 18; Gaz. vol. 205; p. 893.

Allard, Hector, Laeken-Brussels, Belgium. Automatic fire-extinguisher. No. 1,108,658; Aug. 25; Gaz. vol. 205; p. 1214.

Allen-Bradley Company. (See Bradley, Lynde and H. L., assignors.)

Allen, Charles A., Linwood, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass. Skewer-step mounting. No. 1,108,420; Aug. 25; Gaz. vol. 205; p. 1130.

Allen, Ernest A., and F. A. Speenburg, Denver, Colo. Insect-exterminator. No. 1,108,309; Aug. 25; Gaz. vol. 205; p. 1094.

Allen, Isaac A., Jr., and C. W. Sponsel, assignors to The Allen-Sponsel Company, Hartford, Conn. Cord-fastener. No. 1,107,010; Aug. 11; Gaz. vol. 205; p. 540.

Allen, John M., Anaconda, Mont. Separator. No. 1,107,472; Aug. 18; Gaz. vol. 205; p. 753.

Allen-Sponsel Company, The. (See Allen and Sponsel, assignors.)

Allen, Thaddeus D., Youngstown, Ohio. Automobile-spring. No. 1,108,310; Aug. 25; Gaz. vol. 205; p. 1094.

Allen, Thomas B., assignor to The Carborundum Company, Niagara Falls, N. Y. Bonding fused crystalline alumina. No. 1,107,011; Aug. 11; Gaz. vol. 205; p. 540.

Allen, Thomas B., assignor to The Carborundum Company, Niagara Falls, N. Y. Refractory article and manufacturing the same. No. 1,107,012; Aug. 11; Gaz. vol. 205; p. 540.

Allis-Chalmers Manufacturing Company. (See Fischer, Charles A., assignor.)

Allis-Chalmers Manufacturing Company. (See Nichols, Louis C., assignor.)

Allis-Chalmers Manufacturing Company. (See Reid, James C., assignor.)

Allis-Chalmers Manufacturing Company. (See Webster, Frederick L., assignor.)

Allmand, John T., assignor to Fisher Closed Body Company, Detroit, Mich. Window for vehicles. No. 1,107,189; Aug. 11; Gaz. vol. 205; p. 603.

Alloway, William E. (See Gettz and Foster, assignors.)

Allyn, Walter S., assignor of one-half to T. G. Puckett, Thompsonville, Ill. Resilient wheel. No. 1,105,600; Aug. 4; Gaz. vol. 205; p. 4.

Altenberg, George P., assignor to The Icy-Hot Bottle Company, Cincinnati, Ohio. Casing for bottles and the like. No. 1,106,609; Aug. 11; Gaz. vol. 205; p. 405.

Altenfeld, Paul, New York, N. Y. Making a ferment. No. 1,105,601; Aug. 4; Gaz. vol. 205; p. 4.

Alvey-Ferguson Company, The. (See Bernheim, Morris U., assignor.)

Amberold Chemical Products Company. (See Redman, Lawrence V., assignor.)

American Adding Machine Corporation. (See Babini, Louis, assignor.)

American Bankers Safety Co. (See Benham, Edgar M., assignor.)

American Beet Topper Company. (See Gardner, William R., assignor.)

American Can Company. (See Taylor, William E., assignor.)

American Dyewood Company. (See Chapin and Lesser, assignors.)

American Electrical Heater Company. (See Kuhn and Shailor, assignors.)

American Glue Company. (See Campbell, Charles H., assignor.)

American Graphophone Company. (See Capps, Frank L., assignor.)

American Graphophone Company. (See Emerson, Victor H., assignor.)

American Graphophone Company. (See Woods, Clinton E., assignor.)

American Graphophone Company. (See Yerkes, Hulbert A., assignor.)
American Hardware Corporation, The. (See Stone, Elmer B., assignor.)
American Hardware Corporation, The. (See Voight, Henry G., assignor.)
American Heat & Power Co. (See Becker, Julius H., assignor.)
American Key Can Company. (See McColl, Francis P., assignor.)
American Lithographic Company. (See Pancoast, George E., assignor.)
American Mechanical Cashier Company. (See Dement, Isaac S., assignor.)
American Multigraph Company, The. (See Bates, Albert H., assignor.)
American Multigraph Company, The. (See West, Brennan B., assignor.)
American Nitro-Products Company. (See Brownlee and Uhlinger, assignors.)
American Optical Company. (See Styll, Harry H., assignor.)
American Paper Goods Company, The. (See Cooley, Henry B., assignor.)
American Pattern & Model Co. (See Seidel, William, assignor.)
American Planograph Company. (See Cornwall, George R., assignor.)
American Pneumatic Service Company. (See Emerson, Merton L., assignor.)
American Pneumatic Service Company. (See Fordyce, Edmond A., assignor.)
American Radiator Co. (See Marshall, Aquila B., assignor.)
American Road Appliance Corporation. (See Pezzetti, Henry, assignor.)
American Sales Book Company. (See Bottle, Edward K., assignor.)
American Sales Book Company. (See Greig, Walter, assignor.)
American Seeding Machine Company, The. (See Packham, Frank R., assignor.)
American Sheet and Tin Plate Company. (See Oesterle, Beale, and McFetridge, assignors.)
American Steel Foundries. (See Blanchard, Henry, assignor.)
American Steel Foundries. (See Floyd, George G., assignor.)
American Steel Foundries. (See Geddert, William J., assignor.)
American Steel Foundries. (See Kinne, Edmund P., assignor.)
American Steel and Wire Company of New Jersey, The. (See Daniels, Fred H., assignor.)
American Steel and Wire Company of New Jersey, The. (See Johnson and Lodding, assignors.)
American Stove Company. (See Meacham, Benjamin E., assignor.)
American Stove Company. (See Stockstrom, Louis, assignor.)
American Tobacco Company, The. (See Prescott, Sydney I., assignor.)
American Water Supply Company. (See Provandie, Herbert F., assignor.)
Ames, Percy E. (See Williams, Herbert L., assignor.)
Amsden, George A., Littleton, assignor to The Lamson Company, Boston, Mass. Cable-carrier apparatus. No. 1,108,823; Aug. 25; Gaz. vol. 205; p. 1269.
Amsden, George A., Littleton, assignor to The Lamson Company, Boston, Mass. Cable-carrier apparatus. No. 1,108,824; Aug. 25; Gaz. vol. 205; p. 1269.
Anderegg, Gustavus A., Oak Park, Ill., assignor to Western Electric Company, New York, N. Y. Twisting-machine. No. 1,108,312; Aug. 25; Gaz. vol. 205; p. 1095.
Andersen, Anders N., Hougsund, Norway. Peeling-machine for wood logs. No. 1,106,177; Aug. 4; Gaz. vol. 205; p. 207.
Andersen, Niels K., Oakland, assignor of one-third to C. Duthie, San Mateo, Cal. Manufacturing artificial marble. No. 1,105,950; Aug. 4; Gaz. vol. 205; p. 127.
Anderson, Andrew G., Clay Center, Nebr. Circuit-closer. No. 1,107,013; Aug. 11; Gaz. vol. 205; p. 540.
Anderson, Carl, Westbrook, Minn. Fence-wire reel. No. 1,108,311; Aug. 25; Gaz. vol. 205; p. 1095.
Anderson, Edward L., assignor to R. and G. Company, Attleboro, Mass. Collar-button. No. 1,107,190; Aug. 11; Gaz. vol. 205; p. 604.
Anderson, Elam I., Chicago, Ill. Rotary explosive-engine. No. 1,107,872; Aug. 18; Gaz. vol. 205; p. 893.
Anderson, Elbert, Andalusia, Ala. Mail-box. No. 1,105,869; Aug. 4; Gaz. vol. 205; p. 99.
Anderson, Elbert F., Urbana, Ill. Centrifugal sand screening and separating machine. No. 1,108,542; Aug. 25; Gaz. vol. 205; p. 1175.
Anderson, Elias B., Rock Falls, Ill. Nut-lock. No. 1,107,473; Aug. 18; Gaz. vol. 205; p. 753.
Anderson, Emil, assignor to H. S. Todd, New York, N. Y. Turbine. No. 1,105,602; Aug. 4; Gaz. vol. 205; p. 4.
Anderson, Frank C., Cincinnati, Ohio. Interlocking switch-stand mechanism. No. 1,106,533; Aug. 11; Gaz. vol. 205; p. 374.
Anderson, Frank C., Cincinnati, Ohio. Switch-stand target mechanism. No. 1,108,659; Aug. 25; Gaz. vol. 205; p. 1214
Anderson, Frank E. (See Jacobson and Anderson.)
Anderson, George K., Memphis, Tenn. Shorthand typewriting machine. No. 1,108,660; Aug. 25; Gaz. vol. 205; p. 1215.
Anderson, George K., Philadelphia, Pa. Shorthand typewriting machine. No. 1,108,661; Aug. 25; Gaz. vol. 205; p. 1215.
Anderson, Harold B. (See Winton and Anderson.)
Anderson, Harry M., Lancaster, Ohio. Oil-well swab. No. 1,108,313; Aug. 25; Gaz. vol. 205; p. 1095.
Anderson, Irving A. (See Clark, Louis F., assignor.)
Anderson, Johannes G. (See Nelson, Nels G., assignor.)
Anderson, Margaret M., Detroit, Mich. Pencil-stamp. No. 1,108,314; Aug. 25; Gaz. vol. 205; p. 1096.
Anderson, Per, Arvika, and E. E. son Odelstierna, Stocksund, Sweden. Reduction of ores by means of peat. No. 1,105,870; Aug. 4; Gaz. vol. 205; p. 100.
Anderson, Walter H., assignor to Kino Limited, Wellington, New Zealand. Kinematograph apparatus. No. 1,106,069; Aug. 4; Gaz. vol. 205; p. 169.
Andres, J. Frank, assignor to United States Safety Gas Machine Company, St. Louis, Mo. Carbureter. No. 1,106,070; Aug. 4; Gaz. vol. 205; p. 169.
Andrew, Cecil D., Manchester, England. Lathe-dog. No. 1,107,566; Aug. 18; Gaz. vol. 205; p. 786.
Andrews, Eli J., Richmond, Va. Switch-throwing device. No. 1,108,662; Aug. 25; Gaz. vol. 205; p. 1215.
Andrews, Elva C., Vermilion, S. D. Open-air sleeping-bed. No. 1,108,060; Aug. 18; Gaz. vol. 205; p. 958.
Andrews, William F., Worcester, Mass., assignor of one-half to G. Roper, Brooklyn, N. Y. Hydraulic rotary engine. No. 1,106,023; Aug. 4; Gaz. vol. 205; p. 153.
Anthony, Howard E. (See Cadwallader and Anthony.)
Antoine, Aloise and E., Passaic, N. J. Machine for printing clothing-tickets. No. 1,106,178; Aug. 4; Gaz. vol. 205; p. 207.
Antoine, Ernest. (See Antoine, Aloise and E.)
Anzelewitz, Abraham, Antwerp, Belgium. Needle-threading device for sewing-machines. No. 1,107,873; Aug. 18; Gaz. vol. 205; p. 893.
Apoll, Jacob, Hammond, Ind. Fastener. No. 1,106,534; Aug. 11; Gaz. vol. 205; p. 375.
Appleby, John F., assignor, by mesne assignments, to Bullock Tractor Company, Chicago, Ill. Vehicle. No. 1,107,874; Aug. 18; Gaz. vol. 205; p. 894.
Areson, Thomas, New York, N. Y. Fire-extinguisher. No. 1,106,327; Aug. 4; Gaz. vol. 205; p. 255.
Aristo Company. (See Kohler, Jacob C., assignor.)
Aristo Company. (See Linder, Ellis, assignor.)
Arkell, Thomas R., *et al.* (See Young, Charles M., assignor.)
Armstrong, Charles H., Bridgeport, Conn. Attachable ratchet for die-stocks. No. 1,106,535; Aug. 11; Gaz. vol. 205; p. 375.
Armstrong, Henry A., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,106,610; Aug. 11; Gaz. vol. 205; p. 403.
Armstrong, Henry A., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Line-stop for line-casting machines. No. 1,108,825; Aug. 25; Gaz. vol. 205; p. 1270.
Armstrong, Henry A., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Line composing and casting machine. No. 1,108,826; Aug. 25; Gaz. vol. 205; p. 1270.
Arnold, Emmer B., Los Angeles, Cal. Trap. No. 1,108,870; Aug. 25; Gaz. vol. 205; p. 1287.
Arnold, Oscar M., New York, N. Y. Display-rack. No. 1,108,061; Aug. 18; Gaz. vol. 205; p. 958.
Arotzer, Samuel. (See Berzak and Arotzer.)
Arrants, James E., Elizabethton, Tenn. Tobacco-cutter. No. 1,106,858; Aug. 11; Gaz. vol. 205; p. 489.
Arthur D. Little Inc. (See Hawley, Lee F., assignor.)
Artista Piano Player Company. (See Bennett, Robert J., assignor.)
Artista Piano Player Company. (See Steinhilber, Adolf A., assignor.)
Artista Piano Player Company. (See Turney, Eugene T., assignor.)
Ashcroft, Edgar A., London, England. Electrolytic manufacture of alkali metals. No. 1,106,436; Aug. 11; Gaz. vol. 205; p. 337.
Ashman, Charles T., Philadelphia, Pa. Friction device for doors, &c. No. 1,108,663; Aug. 25; Gaz. vol. 205; p. 1216.
Ashworth, Wylie, Helena, Mont. Oil-can. No. 1,108,664; Aug. 25; Gaz. vol. 205; p. 1216.
Askin, Morris W., Edgewater, Colo. Illuminating signletter. No. 1,107,875; Aug. 18; Gaz. vol. 205; p. 894.
Associated Automatic Sprinkler Company. (See Rowley, Arthur C., assignor.)
Athons, Joseph H., assignor to Cambria Spring Company, Los Angeles, Cal. Spring. No. 1,107,567; Aug. 18; Gaz. vol. 205; p. 786.
Atkinson, Cyril J., Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill. Preheater for gases. No. 1,106,611; Aug. 11; Gaz. vol. 205; p. 404.
Atwood, Albert A. (See Myers, Hubert A., assignor.)
Atwood, Lilla D. (See Atwood, Quincy A. and L. D.)
Atwood, Quincy A. and L. D., Newton, Mass. Automatic stop for talking-machines. No. 1,108,315; Aug. 25; Gaz. vol. 205; p. 1096.
Aubry, Harry T., Chicago, Ill. Shelf-bracket. No. 1,108,543; Aug. 25; Gaz. vol. 205; p. 1175.
Aud, William E., *et al.* (See Kollenberg, Frederick G., assignor.)

Aug. Goertz & Co. (See Elgen, Benno vom, assignor.)
August Goertz & Co. (See Elgen, Benno vom, assignor.)
Aurora Automatic Machinery Company. (See Levedahl and Norling, assignors.)
Aurora Automatic Machinery Company. (See Norling, Reinhold A., assignor.)
Aurora Automatic Machinery Company. (See Ottaway, William, assignor.)
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Electric action for organs. No. 1,107,127; Aug. 11; Gaz. vol. 205; p. 579.
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Organ-action. No. 1,107,128; Aug. 11; Gaz. vol. 205; p. 579.
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Key and stop action for organs. No. 1,107,129; Aug. 11; Gaz. vol. 205; p. 580.
Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Organ-action. No. 1,107,130; Aug. 11; Gaz. vol. 205; p. 580.
Austin Organ Company. (See Austin, John T., assignor.)
Auto Pneumatic Action Company. (See Johnson, Oscar, assignor.)
Auto Pneumatic Action Company. (See Keeley, William J., assignor.)
Automatic Accounting Company. (See Nichols, Charles H., assignor.)
Automatic Air Brake Company. (See Collins, William P., assignor.)
Automobile Development Company. (See Bates, Ralph E., assignor.)
Automobile Development Company. (See Fox, Ansley H., assignor.)
Avery, Arthur D., Los Angeles, Cal. Type-writer attachment. No. 1,106,612; Aug. 11; Gaz. vol. 205; p. 404.
Avery, William G., Painesville, Ohio. Tote-box. No. 1,107,014; Aug. 11; Gaz. vol. 205; p. 541.
Ayers, Edward L., North Vancouver, British Columbia, Canada. Bowling-alley. No. 1,106,859; Aug. 11; Gaz. vol. 205; p. 490.
Ayres, Elwood B., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Leather-drier. No. 1,106,271; Aug. 4; Gaz. vol. 205; p. 236.
Ayres, Elwood B., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Leather-drier. No. 1,106,272; Aug. 4; Gaz. vol. 205; p. 237.
Ayres, Sereno N., Plainfield, N. J. Ignition device. No. 1,108,665; Aug. 25; Gaz. vol. 205; p. 1216.
Baach, John, Jr., assignor to Wittemann Brothers, New York, N. Y. Siphon-head. No. 1,107,738; Aug. 18; Gaz. vol. 205; p. 847.
Baas, Jacob, Darmstadt, Germany. Lift. No. 1,107,739, Aug. 18; Gaz. vol. 205; p. 847.
Babcock, Henry D., Leonardsville, F. C. Wells, Holland Patent, and J. W. Brown, River Forks, assignors to Charles H. Childs & Company, Utica, N. Y. Dust-spraying machine. No. 1,107,015; Aug. 11; Gaz. vol. 205; p. 541.
Babcock & Wilcox Company, The. (See Jacobus, David S., assignor.)
Babini, Louis, Brooklyn, N. Y., assignor to American Adding Machine Corporation. Adding-machine. No. 1,108,115; Aug. 25; Gaz. vol. 205; p. 1025.
Bach, Anton M., San Francisco, Cal. Internal-combustion engine. No. 1,106,024; Aug. 4; Gaz. vol. 205; p. 154.
Bach, Frank. (See Leissle and Bach.)
Bachelder, Herbert W., Herkimer, N. Y. Engine-starter. No. 1,106,180; Aug. 4; Gaz. vol. 205; p. 208.
Bachmayer, Joseph J. (See Saxton and Bachmayer.)
Backus, Edward A., Little Rock, Ark. Lubricator. No. 1,106,273; Aug. 4; Gaz. vol. 205; p. 237.
Badger, Charles E., and F. G. Halladay, Appleton, Wis. Brake for hand-trucks. No. 1,106,913; Aug. 11; Gaz. vol. 205; p. 508.
Badger Concrete Mixer and Machinery Co., The. (See Sexton, George L., assignor.)
Badini, Angelo, New York, N. Y. Fountain-pen. No. 1,107,641; Aug. 18; Gaz. vol. 205; p. 813.
Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)
Badische Anilin & Soda Fabrik. (See Pollak, Leopold, assignor.)
Badische Anilin & Soda Fabrik. (See Reinking and Stiegelmann, assignors.)
Bagnall, Alfred, Philadelphia, Pa., assignor to Scott Paper Company. Fixture for supplying paper, &c., from rolls. No. 1,105,951; Aug. 4; Gaz. vol. 205; p. 127.
Bagrachow, Gregoire, Paris, France. Impregnating the filaments and mantles used in incandescent gas-lighting. No. 1,108,116; Aug. 25; Gaz. vol. 205; p. 1025.
Bailey, Ervin G., Newton Highlands, Mass. Radii-averaging instrument. No. 1,107,740; Aug. 18; Gaz. vol. 205; p. 848.
Bailey, Gilbert E., and B. A. Hatch, assignors to The Ferrochem Company, Los Angeles, Cal. Softening water. No. 1,108,544; Aug. 25; Gaz. vol. 205; p. 1175.
Bailey, Percy T., Middletown, R. I. Post-anchor. No. 1,107,016; Aug. 11; Gaz. vol. 205; p. 541.
Baird Machine Company, The. (See Lewis, Arthur J., assignor.)
Baken, Melvin P., Hayfield, Minn. Egg-testing device. No. 1,106,127; Aug. 4; Gaz. vol. 205; p. 191.
Baker, George S., London, England. Biscuit-wrapping machine. No. 1,107,474; Aug. 18; Gaz. vol. 205; p. 754.
Baker, George S., London, England. Machine for stacking, weighing, and feeding biscuits. No. 1,108,117; Aug. 25; Gaz. vol. 205; p. 1026.
Baker, Thaddeus R., Indianapolis, Ind. Means for attaching bolster-springs. No. 1,108,316; Aug. 25; Gaz. vol. 205; p. 1096.
Baker, Thomas W., and F. P. Hepding, Chrome, N. J. Combined cooking and heating apparatus. No. 1,107,475; Aug. 18; Gaz. vol. 205; p. 754.
Balch, Herbert C., Munising, Mich. Self-heating soldering-iron. No. 1,108,666; Aug. 25; Gaz. vol. 205; p. 1216.
Baldwin Company, The. (See Gally, Robert A., assignor.)
Baldwin Company, The. (See Knagge, Joseph, assignor.)
Baldwin, Edward C., Boston, Mass. Device for applying gummed strips to packages, &c. No. 1,106,437; Aug. 11; Gaz. vol. 205; p. 338.
Baldwin, Tuthill and Bolton. (See Marshall, Bruno E., assignor.)
Baldwin, William S., Worcester, Mass., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,106,613; Aug. 11; Gaz. vol. 205; p. 404.
Ball, Augustus A., Jr., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Brake mechanism. No. 1,107,642; Aug. 18; Gaz. vol. 205; p. 813.
Ball, Reuben S. (See Mitchell, Ira G., assignor.)
Ballard, Frank S. and G. W., Duff, Nebr. Pump-rod coupling. No. 1,107,876; Aug. 18; Gaz. vol. 205; p. 894.
Ballard, George L. (See Wildman and Ballard.)
Ballard, George W. (See Ballard, Frank S. and G. W.)
Ballard, Harrie A., Boston, assignor to The Boylston Mfg. Company, South Boston, Mass. Last. No. 1,105,871; Aug. 4; Gaz. vol. 205; p. 100.
Ballard, Harrie A., Boston, assignor to The Boylston Manufacturing Company, South Boston, Mass. Machine for inserting fasteners. No. 1,108,421; Aug. 25; Gaz. vol. 205; p. 1130.
Ballard, Harrie A., Ashland, assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass. Tree. No. 1,106,438; Aug. 11; Gaz. vol. 205; p. 338.
Balliet, Letson, Tonopah, Nev. Balancing means for hoisting apparatus. No. 1,107,191; Aug. 11; Gaz. vol. 205; p. 604.
Ballin, Frederick A., and E. H. Dodge, Portland, Oreg. Unit-cargo vessel. No. 1,107,741; Aug. 18; Gaz. vol. 205; p. 848.
Ballou, Waldo R., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Butt-hinge. No. 1,106,181; Aug. 4; Gaz. vol. 205; p. 208.
Balogh, Alex, and L. Nagy, St. Catharines, Ontario, Canada. Horseshoe. No. 1,106,351; Aug. 4; Gaz. vol. 205; p. 263.
Balogh, Lörincz, and G. Széles, Detroit, Mich. Soldering implement. No. 1,106,357; Aug. 11; Gaz. vol. 205; p. 311.
Bamberger, Alfred P., and W. S. Guistwhite, assignors of one-third to B. F. Garver, New Cumberland, Pa. Roofing. No. 1,107,568; Aug. 18; Gaz. vol. 205; p. 786.
Bancroft, William P., Bostwick, Nebr. Latching device. No. 1,107,569; Aug. 18; Gaz. vol. 205; p. 786.
Bandringa, Michael, Chicago, Ill. Squeegee. No. 1,107,131; Aug. 11; Gaz. vol. 205; p. 581.
Banfield, Robert T., Pittsburgh, Pa. Manufacturing iron and steel sheets. No. 1,108,667; Aug. 25; Gaz. vol. 205; p. 1217.
Banic, Stephan, Greenville, Pa. Parachute. No. 1,108,484; Aug. 25; Gaz. vol. 205; p. 1154.
Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Regulating mechanism for mixed-pressure engines. No. 1,105,952; Aug. 4; Gaz. vol. 205; p. 128.
Banning, Raymond H., San Francisco, Cal. Screen attachment for window-sashes. No. 1,107,877; Aug. 18; Gaz. vol. 205; p. 895.
Barba, Charles E., Altoona, Pa. Suspension-spring for car-trucks. No. 1,106,025; Aug. 4; Gaz. vol. 205; p. 154.
Barber-Colman Company. (See Peterson, Burt A., assignor.)
Barber, Edgar F., Winston-Salem, N. C. Slug-cutter. No. 1,106,026; Aug. 4; Gaz. vol. 205; p. 155.
Barber, Franklin L., and E. W. Webb, assignors to Standard Car Truck Company, Chicago, Ill. Spring-equalized truck. No. 1,106,027; Aug. 4; Gaz. vol. 205; p. 155.
Barber, James R., Cedartown, Ga. Extension car-step. No. 1,106,614; Aug. 11; Gaz. vol. 205; p. 405.
Bard, Walter E., Clarksville, Tenn. Automatic ignition-grounder for motor-cycles. No. 1,107,245; Aug. 18; Gaz. vol. 205; p. 671.
Bardsley, William, Kearney, N. J. Shock-absorber. No. 1,105,603; Aug. 4; Gaz. vol. 205; p. 5.
Barger, James W. S., Eddyville, Ill. Nut-lock. No. 1,105,742; Aug. 4; Gaz. vol. 205; p. 55.
Barleau, Jerome E., Colfax, Cal. Constant-discharge irrigation-module. No. 1,108,090; Aug. 18; Gaz. vol. 205; p. 969.
Barker, James, Detroit, Mich. Index-book. No. 1,108,317; Aug. 25; Gaz. vol. 205; p. 1097.
Barker, John H., Sheffield, England. File. No. 1,106,536; Aug. 11; Gaz. vol. 205; p. 376.
Barnes, Elvis L., Hobart, Okla. Rail-joint. No. 1,107,017; Aug. 11; Gaz. vol. 205; p. 542.

Barnes, Walter E., Bridgeport, Conn., assignor to Union Special Machine Company, Chicago, Ill. Garment. No. 1,108,668; Aug. 25; Gaz. vol. 205; p. 1217.

Barney and Smith Car Company, The. (See Estabrook, Harry M., assignor.)

Barnfather, Robert. Hammersmith, London, England. Means for attaching a tire-inflating device to a road-vehicle wheel. No. 1,108,827; Aug. 25; Gaz. vol. 205; p. 1271.

Barnhart, Andrew J., Azusa, Cal. Cultivator. No. 1,107,570; Aug. 18; Gaz. vol. 205; p. 787.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Differential gear. No. 1,108,442; Aug. 25; Gaz. vol. 205; p. 1130.

Barnwell, Horace S., Seattle, Wash. Clutch-operating mechanism. No. 1,108,669; Aug. 25; Gaz. vol. 205; p. 1217.

Barot, Georges, Chauny, France. Flexible table for curving glass. No. 1,107,476; Aug. 18; Gaz. vol. 205; p. 754.

Barr, Frederic, New York, N. Y. Electric switch. No. 1,107,246; Aug. 18; Gaz. vol. 205; p. 671.

Barr, Frederic, New York, N. Y. Electric switch. No. 1,107,247; Aug. 18; Gaz. vol. 205; p. 671.

Barr, Wilson, Jr., Hamilton, Ontario, Canada. Account-file. No. 1,107,742; Aug. 18; Gaz. vol. 205; p. 849.

Barrett Adding Machine Company. (See Barrett, Glenn J., assignor.)

Barrett, Glenn J., Grand Rapids, Mich., assignor, by mesne assignments, to Barrett Adding Machine Company, Wilmington, Del. Actuating device for key-set calculating-machines. No. 1,108,118; Aug. 25; Gaz. vol. 205; p. 1026.

Barrett, Glenn J., Grand Rapids, Mich., assignor to Barrett Adding Machine Co., Philadelphia, Pa. Item-counter for calculating-machines. No. 1,108,119; Aug. 25; Gaz. vol. 205; p. 1026.

Barrett, Harvey N. (See Newberry and Barrett.)

Barrett Manufacturing Company. (See Ewell, John F., assignor.)

Barron, Abner A., Duck Hill, Miss. Insect-destroyer. No. 1,106,615; Aug. 11; Gaz. vol. 205; p. 405.

Barron, Samford O., and G. W. Faulkner, Bell, Fla. Pruning implement. No. 1,108,670; Aug. 25; Gaz. vol. 205; p. 1217.

Barry, James E. (See Zika, Frank A., assignor.)

Bartels, Carl, Hamilton, Ohio, assignor to The Mosler Safe Company, New York, N. Y. Plate-edge joint. No. 1,107,477; Aug. 18; Gaz. vol. 205; p. 755.

Barter, Percy L. (See Schlacks and Barter.)

Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Washing-cylinder. No. 1,108,671; Aug. 25; Gaz. vol. 205; p. 1218.

Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Variable-speed frictional drive mechanism. No. 1,108,672; Aug. 25; Gaz. vol. 205; p. 1218.

Bartholomew, William O., *et al.* (See Scheuermann, Philip J., assignor.)

Bartlett, Arthur W. A., and R. M. Kerr, assignors to Detroit Dental Manufacturing Company, Detroit, Mich. Blowpipe. No. 1,106,914; Aug. 11; Gaz. vol. 205; p. 508.

Bartlett, Charles H., Elizabeth, N. J., assignor to Electric Boat Company, New York, N. Y. Engine construction. No. 1,105,804; Aug. 4; Gaz. vol. 205; p. 5.

Bartlett, Harry D., assignor to Pullman Couch Company, Chicago, Ill. Sofa-bed. No. 1,108,858; Aug. 25; Gaz. vol. 205; p. 1283.

Bartley, Milton, Pittsburgh, Pa. Railway-track construction. No. 1,107,018; Aug. 11; Gaz. vol. 205; p. 542.

Bartol, Michael J., Dunlo, Pa. Non-refillable bottle. No. 1,106,616; Aug. 11; Gaz. vol. 205; p. 405.

Barton, Louis E. (See Rossi and Barton.)

Baskerville, Charles, New York, N. Y. Bleaching cotton-seed oil. No. 1,105,743; Aug. 4; Gaz. vol. 205; p. 55.

Baskerville, Charles, New York, N. Y. Refining vegetable and animal oils. No. 1,105,744; Aug. 4; Gaz. vol. 205; p. 55.

Batdorf, Charles S., Brooklyn, N. Y. Manual start and stop motion. No. 1,107,878; Aug. 18; Gaz. vol. 205; p. 895.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Valve-bag. No. 1,107,879; Aug. 18; Gaz. vol. 205; p. 895.

Bates, Albert H., assignor to The American Multigraph Company, Cleveland, Ohio. Duplicating-machine. No. 1,106,071; Aug. 4; Gaz. vol. 205; p. 170.

Bates, Arthur, and T. Briggs, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon boots and shoes. No. 1,105,605; Aug. 4; Gaz. vol. 205; p. 6.

Bates, Arthur, and T. Briggs, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,107,248; Aug. 18; Gaz. vol. 205; p. 672.

Bates, Ralph E., assignor, by mesne assignments, to Automobile Development Company, Philadelphia, Pa. Pneumatic shock-absorber. No. 1,105,953; Aug. 4; Gaz. vol. 205; p. 128.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Batt, Frank, North Tonawanda, N. Y. Transportation-ticket. No. 1,107,743; Aug. 18; Gaz. vol. 205; p. 849.

Batter, Frank, St. Johns, Oreg. Apparatus for therapeutic treatment of air of a sick-room. No. 1,107,744; Aug. 18; Gaz. vol. 205; p. 849.

Batter, Frank, St. Johns, Oreg. Therapeutic treatment of air in a sick-room. No. 1,107,745; Aug. 18; Gaz. vol. 205; p. 850.

Batter, Morris, New Haven, Conn. Laundry tub or tray. No. 1,108,120; Aug. 25; Gaz. vol. 205; p. 1027.

Bauer & Black. (See Bauer, Perry S., assignor.)

Bauer, Perry S., assignor to Bauer & Black, Chicago, Ill. Air-tight receptacle. No. 1,107,746; Aug. 18; Gaz. vol. 205; p. 850.

Bauer, Perry S., assignor to Bauer & Black, Chicago, Ill. Surgical-bandage container. No. 1,107,747; Aug. 18; Gaz. vol. 205; p. 850.

Baum, Erich, and M. Mugdan, assignors to Consortium für elektrochemische Industrie G. m. b. H., Nuremberg, Germany. Preparing acetaldehyde. No. 1,107,019; Aug. 11; Gaz. vol. 205; p. 542.

Bayard, Robert A., Niagara Falls, N. Y. Electric furnace and operating the same. No. 1,107,478; Aug. 18; Gaz. vol. 205; p. 755.

Bayer, William F., Buffalo, N. Y. Automatic musical instrument. No. 1,107,571; Aug. 18; Gaz. vol. 205; p. 787.

Bayton, Albert, assignor to Reed Manufacturing Company, Erie, Pa. Forming headed rods. No. 1,106,860; Aug. 11; Gaz. vol. 205; p. 490.

Bench, Clarence E., Binghamton, assignor to G. O. Knapp, New York, N. Y. Frangible covered guard. No. 1,106,072; Aug. 4; Gaz. vol. 205; p. 170.

Beach, Harry W., Evanston, Ill. Nut-lock. No. 1,105,606; Aug. 4; Gaz. vol. 205; p. 6.

Beach, Oscar C., assignor to F. W. Braun, Los Angeles, Cal. Centrifugal extractor. No. 1,105,954; Aug. 4; Gaz. vol. 205; p. 129.

Beacon Miniature Electric Company. (See Benedict, Bernhard, assignor.)

Beadle, Ellas R., and H. V. Etter, Norfolk, Va. Combined staple-setting and wire-stretching tool. No. 1,106,861; Aug. 11; Gaz. vol. 205; p. 490.

Beale, Clifford A. (See Oesterle, Beale, and McFetridge.)

Beard, Ferdinand W., Yountville, Cal. Bottle-opener. No. 1,106,862; Aug. 11; Gaz. vol. 205; p. 491.

Beard, James, Two Rivers, Cal. Tractor-wheel. No. 1,106,182; Aug. 4; Gaz. vol. 205; p. 209.

Beard, James W. (See Berg, Carl, assignor.)

Beatrice Iron Works, The. (See Smethers, James A., assignor.)

Beaudin, George J., Flat River, Mo. Rock-drill. No. 1,106,537; Aug. 11; Gaz. vol. 205; p. 376.

Beausejour, Reme A., assignor to Standard Varnish Works, New York, N. Y. Article-holder for liquid-coating devices. No. 1,106,915; Aug. 11; Gaz. vol. 205; p. 509.

Bechtold, Reuben E., and H. J. Grosvenor, assignors to S. F. Bowser & Co., Inc., Fort Wayne, Ind. Dispensing apparatus. No. 1,108,673; Aug. 25; Gaz. vol. 205; p. 1218.

Beck, Charles W., Rockville Center, N. Y., assignor, by mesne assignments, to Michigan Motor Specialties Company, Detroit, Mich. Terminal connector for sparkplugs. No. 1,108,674; Aug. 25; Gaz. vol. 205; p. 1219.

Beck, James A., assignor of one-third to D. Flinn, Stewartsville, Mo. Irrigation coil-wheel. No. 1,108,675; Aug. 25; Gaz. vol. 205; p. 1219.

Beck, John C. (See Doddridge and Beck.)

Becker, Amalie M., *et al.*, executors. (See Hoffmann, Ernst G.)

Becker, Emilius C. F., Laurens, S. C. Wagon. No. 1,106,358; Aug. 11; Gaz. vol. 205; p. 311.

Becker, Jacob F., assignor of one-half to H. C. Hansen, Muskegon, Mich. Adjustable light-shield for automobiles. No. 1,106,485; Aug. 11; Gaz. vol. 205; p. 357.

Becker, Julius H., assignor to American Heat & Power Co., San Francisco, Cal. Automatic cut-off mechanism for oil-burners. No. 1,107,748; Aug. 18; Gaz. vol. 205; p. 851.

Becker, Louis H., Seymour, Ind. Fireless hover. No. 1,106,768; Aug. 11; Gaz. vol. 205; p. 457.

Becker, Philip A., New York, N. Y. Removable display-lid. No. 1,107,643; Aug. 18; Gaz. vol. 205; p. 813.

Beckmann, Bruno, Berlin, Germany. Manufacturing the carbamic-acid ester of dichlorhydrin. No. 1,108,676; Aug. 25; Gaz. vol. 205; p. 1219.

Beere, Wynford O. (See Raymond, Beere, and Rough.)

Beery, Samuel M., Indianapolis, Ind. Resilient tire-filling. No. 1,106,769; Aug. 11; Gaz. vol. 205; p. 458.

Beidler, George C., Newton, Kans. Fountain-pen holder. No. 1,107,644; Aug. 18; Gaz. vol. 205; p. 814.

Beker, Steven, Caro, Mich. Ship-table. No. 1,108,318; Aug. 25; Gaz. vol. 205; p. 1097.

Belcher, Wallace E. (See Welch, Walter J., assignor.)

Belger, Hermann, Cullercoates, England. Composition for agglutinating dust. No. 1,107,880; Aug. 18; Gaz. vol. 205; p. 896.

Belger, Otto A., Boston, Mass. Waste-collector for combing-machines. No. 1,106,073; Aug. 4; Gaz. vol. 205; p. 170.

Bell, Edwin H., Chicago, Ill. Manufacturing tie-plates. No. 1,106,770; Aug. 11; Gaz. vol. 205; p. 458.

Bell, Harry L., Norfolk, Va. Cultivator. No. 1,108,319; Aug. 25; Gaz. vol. 205; p. 1097.

Bellamy, Elmer E., Lakewood, Ohio. Device for forming display-signs. No. 1,106,340; Aug. 4; Gaz. vol. 205; p. 260

Bendixen, Niels, Copenhagen, Denmark. Producing paper matrices for half-tone stereotyping. No. 1,108,677; Aug. 25; Gaz. vol. 205; p. 1219.

Benedict, Bernhard, assignor to Beacon Miniature Electric Company, New York, N. Y. Circuit-closer. No. 1,107,645; Aug. 18; Gaz. vol. 205; p. 814.

Benedict, Bernhard, assignor to Beacon Miniature Electric Company, New York, N. Y. Electric switch. No. 1,107,646; Aug. 18; Gaz. vol. 205; p. 815.

Benham, Charles E., Schenectady, N. Y. Keyboard for composing-machines. No. 1,106,538; Aug. 11; Gaz. vol. 205; p. 377.

Benham, Edgar M., Norwood, Ohio, assignor to American Bankers Safety Co. Lock. No. 1,106,916; Aug. 11; Gaz. vol. 205; p. 509.

Benjamin Electric Mfg. Company. (See Benjamin, Reuben B., assignor.)

Benjamin, George H., New York, N. Y. Fertilizer and making the same. No. 1,105,607; Aug. 4; Gaz. vol. 205; p. 7.

Benjamin, George H., New York, N. Y. Electric furnace. No. 1,106,486; Aug. 11; Gaz. vol. 205; p. 358.

Benjamin, Reuben B., assignor to Benjamin Electric Mfg. Company, Chicago, Ill. Lamp-socket casing. No. 1,108,678; Aug. 25; Gaz. vol. 205; p. 1220.

Benjamin, Reuben B., assignor to Benjamin Electric Company, Chicago, Ill. Suspension-fitting. No. 1,108,679; Aug. 25; Gaz. vol. 205; p. 1220.

Bennett, Dwight W., Somerton, Pa. Bolt-anchor. No. 1,108,859; Aug. 25; Gaz. vol. 205; p. 1283.

Bennett, John H., Worcester, Mass. Grease-cup. No. 1,108,680; Aug. 25; Gaz. vol. 205; p. 1221.

Bennett, Robert J., Moline, assignor to Artista Piano Player Company, Milan, Ill. Playing attachment for automatic musical instruments. No. 1,107,572; Aug. 18; Gaz. vol. 205; p. 787.

Bennett, Robert J., Moline, assignor to Artista Piano Player Company, Milan, Ill. Automatic pneumatic musical instrument. No. 1,107,573; Aug. 18; Gaz. vol. 205; p. 788.

Bennett, Robert J., Moline, assignor to Artista Piano Player Company, Milan, Ill. Pneumatic playing attachment for musical instruments. No. 1,107,574; Aug. 18; Gaz. vol. 205; p. 788.

Bennett, Robert J., Moline, assignor to Artista Piano Player Company, Milan, Ill. Automatic pneumatic musical instrument. No. 1,107,575; Aug. 18; Gaz. vol. 205; p. 789.

Bennett, Samuel E., South Williamsport, Pa. Inflating device. No. 1,105,608; Aug. 4; Gaz. vol. 205; p. 7.

Benson, Josephine A., Valley City, N. D. Cake-tin. No. 1,107,479; Aug. 18; Gaz. vol. 205; p. 755.

Benson, Tully W., Winkelman, Ariz. Rotary engine. No. 1,106,617; Aug. 11; Gaz. vol. 205; p. 405.

Berchtold, John A., Sigel, assignor of one-half to A. Schilcher, Mattoon, Ill. Window-shade support. No. 1,108,681; Aug. 25; Gaz. vol. 205; p. 1221.

Berdon, Albert E., Indianapolis, Ind. Electric-current-controlling apparatus. No. 1,108,320; Aug. 25; Gaz. vol. 205; p. 1098.

Berend, Ludwig, assignor to Dr. Kurt Albert Chemische Fabrik, Amöneburg-on-the-Rhine, Germany. Emulsion products and producing them. No. 1,107,020; Aug. 11; Gaz. vol. 205; p. 543.

Berg, Carl, Brooklyn, assignor to J. W. Beard, New York, N. Y. Rail-tie. No. 1,108,682; Aug. 25; Gaz. vol. 205; p. 1221.

Berger, Arthur F., Holden, W. Va. Cable-hook. No. 1,106,183; Aug. 4; Gaz. vol. 205; p. 209.

Berger, James A., Schenectady, N. Y. Piston packing-ring. No. 1,106,539; Aug. 11; Gaz. vol. 205; p. 377.

Berger, Max, and R. Weisbach, San Francisco, Cal.; said Weisbach assignor to said Berger. Non-refillable bottle. No. 1,108,091; Aug. 18; Gaz. vol. 205; p. 969.

Bergin, Patrick H. (See Painter, William A., assignor.)

Bergner, Karl, Borsdorf, near Leipzig, Germany. Closing contrivance for ladies' waists, blouses, and corsets. No. 1,106,359; Aug. 11; Gaz. vol. 205; p. 311.

Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Means for setting eyelets. No. 1,105,872; Aug. 4; Gaz. vol. 205; p. 100.

Bernatz, Frank, Dixon, Mont. Current-operated device. No. 1,105,745; Aug. 4; Gaz. vol. 205; p. 56.

Bernheim, Morris U., Louisville, Ky., assignor, by mesne assignments, to The Alvey-Ferguson Company, Oakley, Ohio. Conveyer. No. 1,106,618; Aug. 11; Gaz. vol. 205; p. 406.

Bernier, Oscar, Fall River, assignor to Draper Company, Hopedale, Mass. Filling-replenishing loom. No. 1,107,400; Aug. 18; Gaz. vol. 205; p. 726.

Berntsen, Aksel H., and P. P. Kilstofte, Waupun, Wis. Cotter-pin. No. 1,107,881; Aug. 18; Gaz. vol. 205; p. 896.

Berold, Frederick H., Wyoming, Ohio. Printer's block. No. 1,107,647; Aug. 18; Gaz. vol. 205; p. 815.

Berold, Frederick H., Wyoming, Ohio. Printer's block. No. 1,107,648; Aug. 18; Gaz. vol. 205; p. 815.

Berryman, Henry C., Brooklyn, N. Y. Shirt. No. 1,107,021; Aug. 11; Gaz. vol. 205; p. 543.

Berson, Nathan, New York, N. Y., assignor, by mesne assignments, to Irving Iron Works Company. Means for fastening floor and sidewalk gratings. No. 1,105,873; Aug. 4; Gaz. vol. 205; p. 101.

Bertram, William E., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,108,828; Aug. 25; Gaz. vol. 205; p. 1271.

Bertram, William E., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,108,829; Aug. 25; Gaz. vol. 205; p. 1271.

Berzak, Samuel, New York, N. Y., and S. Arotzer, Newark, N. J. Clothes-line holder. No. 1,106,917; Aug. 11; Gaz. vol. 205; p. 510.

Bethlehem Steel Company. (See Melgs and Stout, assignors.)

Bethlehem Steel Company. (See Stout and Sullivan, assignors.)

Betker, Edward T., assignor to Imperial Heater Company, Kansas City, Mo. Water and gas controller for water-heaters. No. 1,108,321; Aug. 25; Gaz. vol. 205; p. 1098.

Betts, Benjamin B., St. Louis, Mo. Rail-anchor. No. 1,108,121; Aug. 25; Gaz. vol. 205; p. 1027.

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Co., Buffalo, N. Y. Stave-jointing machine. No. 1,105,609; Aug. 4; Gaz. vol. 205; p. 7.

Beuttell, Alfred W., New York, N. Y. Illuminating device. No. 1,107,649; Aug. 18; Gaz. vol. 205; p. 816.

Beuttell, Alfred W., New York, N. Y. Incandescent lamp. No. 1,107,650; Aug. 18; Gaz. vol. 205; p. 816.

Beuttell, Alfred W., London, and J. A. Manners-Smith, Haslemere, England. Stage-lighting device. No. 1,107,651; Aug. 18; Gaz. vol. 205; p. 816.

Beverly, James A., Topeka, Kans. Rat-trap. No. 1,105,874; Aug. 4; Gaz. vol. 205; p. 101.

Beyer, Albert, Coleman, Tex. Adjustable tongs. No. 1,105,875; Aug. 4; Gaz. vol. 205; p. 101.

Bibra, Wolfgang von. (See Jürgens, Johann, assignor.)

Bicheroux, Lambotte and Cie., Gesellschaft mit beschrankter Haftung. (See Bicheroux, Max, assignor.)

Bicheroux, Max, Aix-la-Chapelle, assignor to Bicheroux, Lambotte and Cie., Gesellschaft mit beschrankter Haftung, Herzogenrath, Rheinland, Germany. Apparatus for cutting plate-glass. No. 1,105,610; Aug. 4; Gaz. vol. 205; p. 8.

Bickford, James A. (See Wall, Charles M., assignor.)

Bickhart, Grabill J., Hilbert, Wis. Elevator-head. No. 1,107,882; Aug. 18; Gaz. vol. 205; p. 896.

Bidlake, Joshua, Victoria, British Columbia, Canada. Gang-plank. No. 1,106,074; Aug. 4; Gaz. vol. 205; p. 171.

Biebinger, David A., Moline, Ill., assignor to La Crosse Plow Company, La Crosse, Wis. Planter. No. 1,107,249; Aug. 18; Gaz. vol. 205; p. 673.

Biela, Valentine. (See Johnson, Tom L., assignor.)

Bigham, Neal J., Detroit, Mich. Conduit-wiring device. No. 1,107,250; Aug. 18; Gaz. vol. 205; p. 673.

Billington, Charles, and R. F. Gibbs, Attleboro, assignors to The O. M. Draper Co., North Attleboro, Mass. Joint for bracelets. No. 1,107,132; Aug. 11; Gaz. vol. 205; p. 581.

Bingham, Robert L., Midland, Tex. Tool for building and repairing wire fences. No. 1,106,771; Aug. 11; Gaz. vol. 205; p. 458.

Birch, John H. (See Birch, John H. and J. H.)

Birch, John H. and J. H., assignors to Greenstreet Folding Box Machine Company, Crawfordsville, Ind. Wire-bound-box machine. No. 1,107,192; Aug. 11; Gaz. vol. 205; p. 604.

Bird, Isaac, Barnesville, Minn. Vehicle-wheel. No. 1,108,683; Aug. 25; Gaz. vol. 205; p. 1221.

Birdsell, Harold R., Toledo, Ohio. Calendar. No. 1,107,251; Aug. 18; Gaz. vol. 205; p. 673.

Bissell, Carl H., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electrical coupling. No. 1,107,401; Aug. 18; Gaz. vol. 205; p. 727.

Black, Edward S., Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me. Two-part dipper for excavating-machines. No. 1,107,252; Aug. 18; Gaz. vol. 205; p. 674.

Black, Edward S., Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me. Dipper-tooth. No. 1,107,253; Aug. 18; Gaz. vol. 205; p. 674.

Blackburn, Jasper, Kirkwood, Mo. Train-pipe coupling. No. 1,106,619; Aug. 11; Gaz. vol. 205; p. 406.

Blackburn, William K. (See Merrell and Blackburn.)

Blackford, Charles T., Philadelphia, Pa. Printing-press. No. 1,107,254; Aug. 18; Gaz. vol. 205; p. 674.

Blackstone, Clarence W. (See Knapp and Blackstone.)

Blága, Gergely. (See Karácsonyi, Frank, assignor.)

Blair, Robert S., South Orange, N. J., assignor to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,108,485; Aug. 25; Gaz. vol. 205; p. 1154.

Blair, Thomas H., assignor to Whiting Manufacturing Company, Northboro, Mass. Kinetoscope. No. 1,108,122; Aug. 25; Gaz. vol. 205; p. 1027.

Blake, James O., Gary, Ind. Railway-tie. No. 1,105,955; Aug. 4; Gaz. vol. 205; p. 129.

Blake Signal and Manufacturing Co. (See Jansson, Bennett G., assignor.)

Blakely, Frank D. (See Casson and Blakely.)

Blanchard, Henry, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Centering device for couplings. No. 1,105,611; Aug. 4; Gaz. vol. 205; p. 8.

Bland, Louis, Schenectady, N. Y. Adjustable frame. No. 1,108,123; Aug. 25; Gaz. vol. 205; p. 1028.

Blanthorn, John E. (See Donnelly and Blanthorn.)

Blattmann, Ernst, Nonnendamm, near Berlin, assignor to Siemens & Halske, A. G., Berlin, Germany. Sparking plug for internal-combustion engines. No. 1,105,746; Aug. 4; Gaz. vol. 205; p. 56.

Blaw Collapsible Steel Centering Company, The. (See McArthur, Charles D., assignor.)

Blessing, Gay P., Seattle, Wash. Telegraph apparatus. No. 1,108,345; Aug. 25; Gaz. vol. 205; p. 1176.

Blevins, Alonzo, *et al.* (See Dillon, James F., assignor.)

Bloch, Bruno, Berlin, Germany, assignor to Mergenthaler Linotype Company. Means for aligning the pieces of a typographical line in a line-producing machine. No. 1,105,612; Aug. 4; Gaz. vol. 205; p. 8.

Block, Isaac E. (See Woolf, Frank H., assignor.)

Block, Samuel, New York, N. Y. Valve. No. 1,107,022; Aug. 11; Gaz. vol. 205; p. 543.

Blomstrom, August, *et al.* (See Valind, Joseph, assignor.)

Bloomenstein, Max, Brooklyn, N. Y. Safety-pocket. No. 1,108,124; Aug. 25; Gaz. vol. 205; p. 1028.

Blue Island Specialty Company. (See Federspiel, Matthew N., assignor.)

Blum, Andreas R., Newark, N. J. Lighter. No. 1,108,684; Aug. 25; Gaz. vol. 205; p. 1222.

Board, Charles, Hailey, Idaho. Bob-sled. No. 1,108,322; Aug. 25; Gaz. vol. 205; p. 1099.

Boardman, Ralph E., *et al.* (See Harvey, Daniel, assignor.)

Boch, Philipp, assignor of one-half to P. Reich, New York, N. Y. Brake for automobiles. No. 1,108,685; Aug. 25; Gaz. vol. 205; p. 1222.

Boddy, Henry M. (See Brown, Frank, assignor.)

Bodine, Henry M., Wichita, Kans. Walk-cleaner. No. 1,106,620; Aug. 11; Gaz. vol. 205; p. 407.

Bodley, Edward F., Toledo, Ohio. Hanger for screen-frames or the like. No. 1,108,323; Aug. 25; Gaz. vol. 205; p. 1099.

Bodmer, Ernest, assignor to Dye-Works formerly L. Durand, Huguenin & Co., Basel, Switzerland. Green mordant dyestuffs and making same. No. 1,106,185; Aug. 4; Gaz. vol. 205; p. 210.

Boehck, William E., assignor to New York Revolving Portable Elevator Company, Jersey City, N. J. Sectional portable elevator. No. 1,105,956; Aug. 4; Gaz. vol. 205; p. 129.

Boersma, Gerlof. (See Putnam and Boersma.)

Boes, Jacob F., Bay City, Mich. Combined harrow and clod crusher. No. 1,107,480; Aug. 18; Gaz. vol. 205; p. 756.

Boggs, Hugh E., Centerville, Iowa. Hydroballoon. No. 1,107,481; Aug. 18; Gaz. vol. 205; p. 756.

Bogle, Curtis E., Union, Iowa. Plow. No. 1,107,482; Aug. 18; Gaz. vol. 205; p. 756.

Bognár, Lojos, Whiting, Ind. Aerial vessel. No. 1,108,830; Aug. 25; Gaz. vol. 205; p. 1272.

Bohl, George F. (See Swift, Walter G., assignor.)

Bohlig, Martin, St. Paul, Minn. Tenon-cutter. No. 1,107,483; Aug. 18; Gaz. vol. 205; p. 757.

Böhlke, Ernst von, Lemberg, Austria-Hungary. Switch-operating device. No. 1,106,274; Aug. 4; Gaz. vol. 205; p. 237.

Bohlman, Ernest A., Cedar Rapids, Iowa, assignor to J. E. Cagney, Jr., Chicago, Ill. Metallic power-belt. No. 1,106,355; Aug. 4; Gaz. vol. 205; p. 265.

Bohlman, Ernest A., Cedar Rapids, Iowa, assignor to J. E. Cagney, Jr., Chicago, Ill. Metallic power-belt. No. 1,106,356; Aug. 4; Gaz. vol. 205; p. 265.

Bohne, Gustave B., West Hoboken, N. J. Votive-offering stand. No. 1,108,062; Aug. 18; Gaz. vol. 205; p. 959.

Boland, John E., assignor of one-half to J. Erb, Arnold, Pa. Rail-joint. No. 1,108,324; Aug. 25; Gaz. vol. 205; p. 1099.

Boland, John V., St. Louis, Mo. Chimney. No. 1,107,883; Aug. 18; Gaz. vol. 205; p. 896.

Bolger, Thomas P., Gloucester, Mass. Trap for refrigerator drain-pipes. No. 1,107,884; Aug. 18; Gaz. vol. 205; p. 897.

Bolfinger, Alexander M., deceased, Leechburg, Pa.; A. L. Hill, administrator. Toy. No. 1,107,885; Aug. 18; Gaz. vol. 205; p. 897.

Boltless Rail Joint Company, The. (See Young, Jefferson D., assignor.)

Bombard, Charley. (See Müller and Bombard.)

Bonall, Frank, assignor of one-fourth to A. Macchioni, one-fourth to P. Paladino, and one-fourth to V. Oclappo, Clifton, N. J. Horseshoe. No. 1,108,125; Aug. 25; Gaz. vol. 205; p. 1028.

Bonhomme, Philorum, Montreal, Quebec, Canada. Coin-freed clock. No. 1,106,128; Aug. 4; Gaz. vol. 205; p. 191.

Bonis, Harry, Listowel, Ontario, Canada. Electrotherapeutic fluid electrode. No. 1,108,686; Aug. 25; Gaz. vol. 205; p. 1223.

Bonkemeyer, William H., Randleman, N. C. Plow. No. 1,106,186; Aug. 4; Gaz. vol. 205; p. 210.

Bonney, Charles A., St. Louis, Mo., assignor to United Shoe Machinery Company. Fly-closer for button-shoes. No. 1,108,423; Aug. 25; Gaz. vol. 205; p. 1131.

Bonnier, Pierre, Paris, France. Color-printing. No. 1,108,063; Aug. 18; Gaz. vol. 205; p. 959.

Bonom, Alfred, Paterson, N. J. Bearing. No. 1,108,064; Aug. 18; Gaz. vol. 205; p. 959.

Boorman, Ora M., Oshkosh, Wis. Holder. No. 1,108,687; Aug. 25; Gaz. vol. 205; p. 1223.

Booth, Charles A., Brunswick, assignor of seven-sixteenths to J. W. Cavey, Baltimore, Md. Automatic adjusting device for brakes. No. 1,107,576; Aug. 18; Gaz. vol. 205; p. 789.

Borden's Condensed Milk Company. (See Hausheer, Bernard, assignor.)

Borden's Condensed Milk Company. (See James, Llewellyn, assignor.)

Borders, Michael W. (See Cleary, James C., assignor.)

Bordo, Lambert J., Philadelphia, Pa. Flexible metallic train-pipe connection. No. 1,106,918; Aug. 11; Gaz. vol. 205; p. 510.

Boreham, Charles A., Coalinga, Cal. Vehicle-spring. No. 1,108,424; Aug. 25; Gaz. vol. 205; p. 1131.

Borland, Bruce, Chicago, Ill. Moving-picture machine. No. 1,106,076; Aug. 4; Gaz. vol. 205; p. 171.

Borland, Samuel, Wellston, Ohio. Signal apparatus. No. 1,108,860; Aug. 25; Gaz. vol. 205; p. 1284.

Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing ammonium sulfate. No. 1,106,919; Aug. 11; Gaz. vol. 205; p. 510.

Bosch, Firm of Robert. (See Diemer, Anton, assignor.)

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Boss Manufacturing Company, The. (See Miller, Gustave L., assignor.) (Reissue.)

Bossu, Pierre, assignor to Société Anonyme des Etablissements L. Bleriot, Paris, France. Electromagnet and similar apparatus. No. 1,106,187; Aug. 4; Gaz. vol. 205; p. 210.

Bostwick Steel Lath Company, The. (See Sanderson, Robert L., assignor.)

Bosworth, Percy B., Akron, Ohio. Rim for wheels. No. 1,108,546; Aug. 25; Gaz. vol. 205; p. 1176.

Both, Tonjes A. C., Malden, assignor to The Zee Socket and Mfg. Co., Boston, Mass. Socket-shell. No. 1,108,547; Aug. 25; Gaz. vol. 205; p. 1177.

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding sales-book. No. 1,107,577; Aug. 18; Gaz. vol. 205; p. 790.

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding sales-book. No. 1,107,578; Aug. 18; Gaz. vol. 205; p. 790.

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding sales-book. No. 1,108,486; Aug. 25; Gaz. vol. 205; p. 1155.

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding sales-book. No. 1,108,487; Aug. 25; Gaz. vol. 205; p. 1155.

Bottomley, William B., London, England. Treatment of peat for manurial and other purposes. No. 1,106,275; Aug. 4; Gaz. vol. 205; p. 238.

Bouglovanni, Antonio. (See Greenwood, Harry, Sr., assignor.)

Bovee, Ransom Y., Denver, Colo. Internal-combustion pressure-pump. No. 1,105,747; Aug. 4; Gaz. vol. 205; p. 56.

Bowdle, George F. (See O'Brien and Bowdle.)

Bowen, George W. (See Pribil, Alexis R., assignor.)

Bowman, Thomas B., Chicago, Ill. Rail-anchor. No. 1,107,484; Aug. 18; Gaz. vol. 205; p. 757.

Bowser, Allen A., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Separator. No. 1,107,485; Aug. 18; Gaz. vol. 205; p. 758.

Bowser, Allen A., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Tank-filling apparatus. No. 1,107,886; Aug. 18; Gaz. vol. 205; p. 897.

Bowser, Allen A., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Controlling device for pumping systems. No. 1,107,887; Aug. 18; Gaz. vol. 205; p. 897.

Bowyer, John A., assignor to The Turner Brass Works, Sycamore, Ill. Appliance for hand-torches. No. 1,107,023; Aug. 11; Gaz. vol. 205; p. 544.

Box, Leonard, assignor of one-half to W. F. Habekost, San Francisco, Cal. Automatic fender. No. 1,106,772; Aug. 11; Gaz. vol. 205; p. 458.

Boyce, Laurin S., Rockwell City, Iowa, and O. E. Boyce, Glencoe, Minn. Telephone. No. 1,107,024; Aug. 11; Gaz. vol. 205; p. 544.

Boyce, Oliver E. (See Boyce, Laurin S. and O. E.)

Boyd, Thomas Y., Honesdale, Pa. Road-drag. No. 1,108,126; Aug. 25; Gaz. vol. 205; p. 1029.

Boyd, William H., Helena, Okla. Rail-controller. No. 1,108,688; Aug. 25; Gaz. vol. 205; p. 1223.

Boye, James H., assignor to The Boye Needle Co., Chicago, Ill. Bed attachment. No. 1,107,749; Aug. 18; Gaz. vol. 205; p. 851.

Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Hook and eye. No. 1,107,750; Aug. 18; Gaz. vol. 205; p. 851.

Boye Needle Co., The. (See Boye, James H., assignor.)

Boyer, August, assignor to Sumner Iron Works, Everett, Wash. Edger-guide. No. 1,107,751; Aug. 18; Gaz. vol. 205; p. 851.

Boylston Mfg. Company, The. (See Ballard, Harrie A., assignor.)

Boyn, John F., New York, N. Y. Nozzle for pneumatic cleaners. No. 1,106,695; Aug. 11; Gaz. vol. 205; p. 431.

Bozell, William H., *et al.* (See Stanfield, Jasper H., assignor.)

Brabant, Augustus F., Yonkers, N. Y. Needle-case. No. 1,106,773; Aug. 11; Gaz. vol. 205; p. 459.

Braden, Robert D. (See Haedike and Braden.)

Bradford Co., The. (See Ittner, Ferdinand, assignor.)

Bradley, Albert E., New Haven, Conn. Hand-truck. No. 1,108,548; Aug. 25; Gaz. vol. 205; p. 1177.

Bradley, Harry L. (See Bradley, Lynde and H. L.)

Bradley, Jacob A., Wabeno, Wis. Clothes-pin. No. 1,106,487; Aug. 11; Gaz. vol. 205; p. 358.

Bradley, Lynde and H. L., Muskegon, Mich., assignors to Allen-Bradley Company. Telephone-transmitter. No. 1,107,255; Aug. 18; Gaz. vol. 205; p. 675.

Bradley, William J., Troy, assignor to The Rail Joint Company, New York, N. Y. Sectional shears for metal bars. No. 1,108,689; Aug. 25; Gaz. vol. 205; p. 1223.

Bradshaw, Herbert B., assignor to C. M., Jr., and L. A. Siebert, Columbus, Ohio. Hand massage device. No. 1,106,276; Aug. 4; Gaz. vol. 205; p. 238.

Brady, Frank, Denver, Colo. Railway-velocipede. No. 1,107,579; Aug. 18; Gaz. vol. 205; p. 790.

Bragstad, Joseph W., Sioux City, Iowa. Reinforced concrete construction. No. 1,107,480; Aug. 18; Gaz. vol. 205; p. 758.

Braud, Samuel, *et al.* (See Ryan, Patrick, assignor.)

Brandeis, Izidor, assignor to S. Rosenbaum, Ujvidek, Austria-Hungary. Preserving compound. No. 1,107,892; Aug. 18; Gaz. vol. 205; p. 899.

Brandock, Andrew S., Pueblo, Colo. Railway-switch. No. 1,107,402; Aug. 18; Gaz. vol. 205; p. 727.

Brandt, Folke E., Bemidji, Minn. Window-sash. No. 1,107,580; Aug. 18; Gaz. vol. 205; p. 791.

Brasington, John M., Bennettsville, S. C. Plow. No. 1,107,403; Aug. 18; Gaz. vol. 205; p. 728.

Braswell, William T., assignor of one-half to C. E. Register, Atlanta, Ga. Adjustable eaves-trough hanger. No. 1,105,748; Aug. 4; Gaz. vol. 205; p. 57.

Braun, F. W. (See Beach, Oscar C., assignor.)

Bray, John R., New York, N. Y. Process and articles for producing moving pictures. No. 1,107,193; Aug. 11; Gaz. vol. 205; p. 605.

Breitenstein, Julius G., Chicago, Ill. Press. No. 1,105,749; Aug. 4; Gaz. vol. 205; p. 57.

Brelle, Frank, Sr., and F., Jr., Ferndale, Cal. Machine for cutting rubber gaskets. No. 1,107,404; Aug. 18; Gaz. vol. 205; p. 728.

Brennan, Charles T., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Thread-rolling machine. No. 1,108,425; Aug. 25; Gaz. vol. 205; p. 1132.

Brennan, Charles T., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Heading-machine. No. 1,108,426; Aug. 25; Gaz. vol. 205; p. 1132.

Brennan, Elizabeth M., Brooklyn, N. Y. Dress-shield. No. 1,108,427; Aug. 25; Gaz. vol. 205; p. 1133.

Brewster, Charles H., Middletown, Conn. Automobile wrecking apparatus. No. 1,108,690; Aug. 25; Gaz. vol. 205; p. 1224.

Brewster, Harry C., Shreveport, La. Tube-gripping apparatus for boring wells. No. 1,107,025; Aug. 11; Gaz. vol. 205; p. 544.

Briand, Charles C., Revere, Mass., assignor to Peter Gray & Sons, Inc. Lamp-burner. No. 1,107,211; Aug. 11; Gaz. vol. 205; p. 611.

Bridge, Robert. (See Cummins, Arthur E., assignor.)

Bridges, Andrew M., assignor of one-half to G. M. Chapman, Bostic, N. C. Surveying instrument or range-finder. No. 1,106,774; Aug. 11; Gaz. vol. 205; p. 459.

Briegel, Gottlieb, Fond du Lac, Wis. Pneumatic tool. No. 1,105,876; Aug. 4; Gaz. vol. 205; p. 101.

Briggs, Thomas. (See Bates and Briggs.)

Brigham, Albert H., Whitman, Mass. Apparatus for heading nails or tacks. No. 1,105,613; Aug. 4; Gaz. vol. 205; p. 9.

Brigham, Albert H., Whitman, Mass. Apparatus for heading nails or tacks. No. 1,105,614; Aug. 4; Gaz. vol. 205; p. 9.

Brigham, Martin E., Philadelphia, Pa. Oiling device. No. 1,106,775; Aug. 11; Gaz. vol. 205; p. 459.

Briles, James M., Alice, Tex. Soil-pulverizer. No. 1,107,891; Aug. 18; Gaz. vol. 205; p. 899.

Brinkmann, Charles J., Glencoe, Minn. Automobile-horn. No. 1,105,615; Aug. 4; Gaz. vol. 205; p. 9.

Bristol Company, The. (See Bristol, William H., assignor.)

Bristol, William H., assignor to The Bristol Company, Waterbury, Conn. Measuring instrument. No. 1,106,341; Aug. 4; Gaz. vol. 205; p. 260.

Bristol, William H., assignor to The Bristol Company, Waterbury, Conn. Screw-fastening device. No. 1,106,342; Aug. 4; Gaz. vol. 205; p. 260.

Britt, Paul A., St. Louis, Mo. Water-heater for combination stoves and ranges. No. 1,105,616; Aug. 4; Gaz. vol. 205; p. 10.

Broad, William, Beaver Falls, Pa. Renewal element for semi-dry-cell batteries. No. 1,106,540; Aug. 11; Gaz. vol. 205; p. 377.

Brochu, Michael, assignor of one-half to F. D. Campau, Grand Rapids, Mich. Feed mechanism. No. 1,106,328; Aug. 4; Gaz. vol. 205; p. 256.

Brock, Matthias, Roxbury, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Pincers. No. 1,106,360; Aug. 11; Gaz. vol. 205; p. 311.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-lasting mechanism. No. 1,108,100; Aug. 18; Gaz. vol. 205; p. 973.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-band. No. 1,108,101; Aug. 18; Gaz. vol. 205; p. 973.

Brock, William D., Oxford, Pa. Safety-guard for machines. No. 1,106,920; Aug. 11; Gaz. vol. 205; p. 511.

Brodhage, William, St. Louis, Mo. Grain-car door. No. 1,107,752; Aug. 18; Gaz. vol. 205; p. 852.

Bronarsky, Stephan S., Chicago, Ill. Combined ironing-table and step-ladder. No. 1,108,092; Aug. 18; Gaz. vol. 205; p. 970.

Bronnert, Emile, Niedermorschweiler, assignor to Vereinigte Glanzstoff-Fabriken A.-G., Elberfeld, Germany. Production of shaped articles from copper-ammonium cellulose solution. No. 1,106,077; Aug. 4; Gaz. vol. 205; p. 172.

Bronstien, Samuel, St. Paul, Minn. Mattress. No. 1,107,753; Aug. 18; Gaz. vol. 205; p. 852.

Brooke, Hadley Y. (See Brooke, James E. M., assignor.)

Brooke, James E. M., Washington, D. C., assignor of one-half to H. Y. Brooke, Luverne, Ala. Printer's galley. No. 1,105,957; Aug. 4; Gaz. vol. 205; p. 130.

Brooks, Charles E., Redlands, Cal. Power meat-saw. No. 1,107,405; Aug. 18; Gaz. vol. 205; p. 728.

Brooks, Edward J., East Orange, N. J. Snap-seal. No. 1,107,026; Aug. 11; Gaz. vol. 205; p. 545.

Brooks, James A., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,106,621; Aug. 11; Gaz. vol. 205; p. 407.

Brooks, Robert W., Pollard, Ala. Stalk-puller. No. 1,108,325; Aug. 25; Gaz. vol. 205; p. 1099.

Brookshire, Eston G., and H. G. Wiles, Kansas City, Kans. Stop-motion for spinning-frames. No. 1,108,127; Aug. 25; Gaz. vol. 205; p. 1029.

Brown Burrell Co. (See Thorpe, Joseph B., assignor.)

Brown, Egbert B., Los Angeles, Cal. Vehicle wheel-tire. No. 1,105,958; Aug. 4; Gaz. vol. 205; p. 130.

Brown, Elbridge M. and H. E., Cedar Falls, Iowa. Embalming-board. No. 1,108,326; Aug. 25; Gaz. vol. 205; p. 1099.

Brown, Frank, assignor to H. M. Boddy, Vancouver, British Columbia, Canada. Clothes-line sheave. No. 1,106,696; Aug. 11; Gaz. vol. 205; p. 437.

Brown, George W., *et al.* (See Waddell, Edward B., Jr., assignor.)

Brown, Harry E. (See Brown, Elbridge M. and H. E.)

Brown, Henry A., Antwerp, N. Y. Animal-truss. No. 1,106,277; Aug. 4; Gaz. vol. 205; p. 238.

Brown, Jay W. (See Babcock, Wells, and Brown.)

Brown, John W., *et al.* (See Schaffer, Charles, assignor.)

Brown, Nimrod W. L., Marietta, Ga. Oil-press. No. 1,107,487; Aug. 18; Gaz. vol. 205; p. 758.

Brown, Samuel W., and W. H. Michael, assignors of one-third to J. H. Bruce, Colorado Springs, Colo. Illuminated indicator. No. 1,106,361; Aug. 11; Gaz. vol. 205; p. 312.

Brown & Sharpe Manufacturing Company. (See Spalding, Frank, assignor.)

Brown, William F., Cedarville, Ark. Churn. No. 1,106,188; Aug. 4; Gaz. vol. 205; p. 211.

Browne, Arthur B., Branford, Conn. Carbureter. (Reissue.) No. 13,784; Aug. 4; Gaz. vol. 205; p. 265.

Browne, Carl D., Hot Springs township, Napa county, assignor to W. Kent, Kentfield, Cal., trustee. Tractor, propeller, or helicopter for airships. No. 1,105,750; Aug. 4; Gaz. vol. 205; p. 58.

Browne, W. J. (See Guild, George R., assignor.)

Brownlee, Dalmar T. (See Spacke, Brownlee, and Spacke.)

Brownlee, Roy H., and R. H. Uhlinger, assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa. Making carbon monoxid, hydrogen, and nitrogen. No. 1,107,581; Aug. 18; Gaz. vol. 205; p. 791.

Brownlee, Roy H., and R. H. Uhlinger, assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa. Making carbon monoxid and hydrogen. No. 1,107,582; Aug. 18; Gaz. vol. 205; p. 792.

Brox, George M., and H. S. Knight, Milford, Nebr. Spike. No. 1,106,622; Aug. 11; Gaz. vol. 205; p. 407.

Bruce, James H. (See Brown and Michael, assignors.)

Bruce, James W., Ozark, Ohio. Mowing-machine. No. 1,105,751; Aug. 4; Gaz. vol. 205; p. 58.

Bruce, James W., Ozark, Ohio. Agricultural implement. No. 1,106,541; Aug. 11; Gaz. vol. 205; p. 377.

Brumby, Clarence P., East Point, Ga. Automatic sacking and weighing machine. No. 1,105,752; Aug. 4; Gaz. vol. 205; p. 58.

Brumfield, Cadwell L., Sunny Hill, La. Plow-fender. No. 1,106,278; Aug. 4; Gaz. vol. 205; p. 239.

Brunner, Otto, Saimannsleben, Austria-Hungary. Screw-propeller for aeroplanes, airships, vessels, and the like. No. 1,105,753; Aug. 4; Gaz. vol. 205; p. 59.

Bruss, Carl, Milwaukee, Wis. Furnace-damper regulator. No. 1,105,959; Aug. 4; Gaz. vol. 205; p. 130.

Bruton, George, assignor to F. L. Rockey, Joliet, Ill. Automatic burner for gas-stoves. No. 1,108,861; Aug. 25; Gaz. vol. 205; p. 1284.

Bryant Electric Company, The. (See Seeley, Frank E., assignor.)

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bryant, George H., Windsor, N. C. Washstand. No. 1,105,960; Aug. 4; Gaz. vol. 205; p. 130.

Bryant, John E. (See Watt and Bryant.)

Bucher, John E., Coventry, assignor to Nitrogen Products Company, Providence, R. I. Obtaining argon and rare atmospheric gases. No. 1,106,921; Aug. 11; Gaz. vol. 205; p. 511.

Buchstein, Ferdinand, Minneapolis, Minn. Artificial leg. No. 1,107,893; Aug. 18; Gaz. vol. 205; p. 899.

Buck, Charles E., Boston, Mass. Therapeutical vacuum apparatus. No. 1,107,888; Aug. 18; Gaz. vol. 205; p. 898.

Buckeye Iron and Brass Works. (See Sauer and Trace, assignors.)

Buckeye Iron and Brass Works. (See Trace, Russell A., assignor.)

Buckeye Steel Castings Company, The. (See Bush, Samuel P., assignor.)

Buckham, George T. (See Dawson and Buckham.)

Buckingham, Edward J., Brixton Oval, London, England. Apparatus for preventing side slip of motor road-vehicles. No. 1,107,256; Aug. 18; Gaz. vol. 205; p. 675.

Buehner, Philip, Portland, Oreg. Nipple. No. 1,106,542; Aug. 11; Gaz. vol. 205; p. 378.

Buell, William H., assignor to Winchester Repeating Arms Company, New Haven, Conn. Priming charge. No. 1,106,343; Aug. 4; Gaz. vol. 205; p. 260.

Buellesbach, Caspar, New York, N. Y. Spring-tread for stairways. No. 1,105,877; Aug. 4; Gaz. vol. 205; p. 102.

Buffum, Herbert H., The Weirs, N. H., assignor of one-third to R. M. Pierson, Elizabeth, N. J. Tube of variable diameter. No. 1,108,128; Aug. 25; Gaz. vol. 205; p. 1029.

Bugatti, Ettore, Molsheim, Germany. Spring for vehicle suspension. No. 1,107,027; Aug. 11; Gaz. vol. 205; p. 545.

Bugg, Owen T., Hoboken, N. J., assignor to E-Z-Ryde Shock Absorber Co., New York, N. Y. Shock-absorber. No. 1,108,488; Aug. 25; Gaz. vol. 205; p. 1155.

Bulger, Ciril, St. Paul, Minn. Clothes-hanger. No. 1,107,488; Aug. 18; Gaz. vol. 205; p. 759.

Bukowski, Leonard, Pasadena, Cal. Adjustable holder for casement-windows. No. 1,108,549; Aug. 25; Gaz. vol. 205; p. 1177.

Bullard, Albert M., New York, N. Y., assignor to Western Electric Company, Chicago, Ill. Selector. No. 1,106,922; Aug. 11; Gaz. vol. 205; p. 511.

Bullard, Jay F. (See Bullard, John F. and J. F.)

Bullard, John F. and J. F., Swanton, Vt. Bean-sheller. No. 1,108,691; Aug. 25; Gaz. vol. 205; p. 1224.

Bullock Tractor Company. (See Appleby, John F., assignor.)

Bullock Tractor Company. (See Houghton, Orley C., assignor.)

Bunn, Everett E., and E. O. Robinson, Harrisonville, Mo. Carbureter. No. 1,107,489; Aug. 18; Gaz. vol. 205; p. 759.

Bunting Iron Works. (See Hall, James T., assignor.)

Burchell, Samuel E., assignor of one-half to J. A. Komer, Paterson, N. J. Shovel. No. 1,107,583; Aug. 18; Gaz. vol. 205; p. 792.

Burcky, William E., Chicago, Ill. Lamp. No. 1,106,776; Aug. 11; Gaz. vol. 205; p. 460.

Burd, Irving J., Olympia, Wash. Dining-table attachment. No. 1,108,692; Aug. 25; Gaz. vol. 205; p. 1224.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrolytic cell. No. 1,107,257; Aug. 18; Gaz. vol. 205; p. 675.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrolytic cell. No. 1,107,258; Aug. 18; Gaz. vol. 205; p. 676.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrolytic cell. No. 1,107,259; Aug. 18; Gaz. vol. 205; p. 676.

Burger, Alfred, New Brighton, N. Y. Production of boric acid. No. 1,108,129; Aug. 25; Gaz. vol. 205; p. 1030.

Burgewitz, John W., Muskegon, Mich. Envelop. No. 1,106,623; Aug. 11; Gaz. vol. 205; p. 408.

Burke, Alfred W., Wilkinsburg, Pa. Lightning-arrester. No. 1,107,584; Aug. 18; Gaz. vol. 205; p. 792.

Burkhardt, John, New York, N. Y. Casting-machine. No. 1,108,693; Aug. 25; Gaz. vol. 205; p. 1224.

Burkhardt, John, New York, N. Y. Casting-machine. No. 1,108,694; Aug. 25; Gaz. vol. 205; p. 1225.

Burnam, James F., Huntsville, Ala. Sign. No. 1,107,585; Aug. 18; Gaz. vol. 205; p. 792.

Burnam, James F., Huntsville, Ala. Spring-actuated gun. No. 1,107,586; Aug. 18; Gaz. vol. 205; p. 793.

Burnett, John W. (See Mason, William K., assignor.)

Burnett, Richard W., Montreal, Quebec, Canada. Dump-car. No. 1,108,327; Aug. 25; Gaz. vol. 205; p. 1100.

Burnett, Richard W., Montreal, Quebec, Canada. Trainpipe anchor. No. 1,108,328; Aug. 25; Gaz. vol. 205; p. 1100.

Burney, Charles D., Kilmeston, Alresford, England. Hydroaeronautical apparatus. No. 1,107,260; Aug. 18; Gaz. vol. 205; p. 677.

Burnham, John M., and H. J. Schneider, Adams, Nebr. Braid-cabinet. No. 1,106,543; Aug. 11; Gaz. vol. 205; p. 379.

Burnhart, George W., Ward, Colo., and A. Krieg, Kansas City, Mo. Ore-concentrating machine. No. 1,106,923; Aug. 11; Gaz. vol. 205; p. 512.

Burns, Dallas R., Gwynneville, Ind. Fence-post. No. 1,107,406; Aug. 18; Gaz. vol. 205; p. 729.

Burns, Joseph, Okmulgee, Okla. Wire-line rope-socket. No. 1,107,889; Aug. 18; Gaz. vol. 205; p. 898.

Burnworth, William H. (See Case and Burnworth.)

Burrows, Charley J., Parsons, Kans. Hand-rail column. No. 1,106,279; Aug. 4; Gaz. vol. 205; p. 239.

Burton, Oliver M., Chicago, Ill. Life-raft. No. 1,107,652; Aug. 18; Gaz. vol. 205; p. 817.

Burton, William M., Chicago, Ill., assignor to Standard Oil Company, Whiting, Ind. Manufacture of gasolene. No. 1,105,961; Aug. 4; Gaz. vol. 205; p. 131.

Busch, Henry, and W. Schupbach, New York, N. Y. Preparing lithographic stones. No. 1,108,695; Aug. 25; Gaz. vol. 205; p. 1226.

Busch, Max O., Newark, N. J. Machine for cooling finished or unfinished cocoa-powder. No. 1,107,028; Aug. 11; Gaz. vol. 205; p. 545.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-truck side frame and journal-box. No. 1,107,890; Aug. 18; Gaz. vol. 205; p. 899.

Butler, Clinton C., Waterloo, Iowa. Starting device for internal-combustion engines. No. 1,107,407; Aug. 18; Gaz. vol. 205; p. 729.

Butts, Daniel G., New Orleans, La. Faucet-hole cover. No. 1,107,490; Aug. 18; Gaz. vol. 205; p. 759.

Cadwallader, Lewis T., and H. E. Anthony, Los Angeles, Cal. Protective covering for orchards. No. 1,106,624; Aug. 11; Gaz. vol. 205; p. 408.

Cagney, James E., Jr. (See Bohlman, Ernest A., assignor.)

Cahill, Arthur T., *et al.*, trustees. (See Cahill, Thaddeus, assignor.)

Cahill, George F., *et al.*, trustees. (See Cahill, Thaddeus, assignor.)

Cahill, Thaddeus, Washington, D. C., assignor to E. Spear, E. H. Jackson, and G. F., A. T., and T. Cahill, trustees. Music-generating and music-distributing apparatus. No. 1,107,261; Aug. 18; Gaz. vol. 205; p. 677.

Cahoon, William T. (See Kunitz, Hannibal A., assignor.)

Caille, Auguste A., Detroit, Mich. Foldable rudder. No. 1,107,408; Aug. 18; Gaz. vol. 205; p. 730.

Cain, Benham, Chicago, Ill. Heel-cushion. No. 1,107,894; Aug. 18; Gaz. vol. 205; p. 899.

Cain, Thomas F., Montgomery City, and W. A. Skinner, Moberly, Mo. Dump ash-pan for locomotives. No. 1,106,544; Aug. 11; Gaz. vol. 205; p. 379.

Caine, William P., assignor of one-half to Shook & Fletcher, Birmingham, Ala. Feed-water heater. No. 1,107,409; Aug. 18; Gaz. vol. 205; p. 731.

Caldwell, Thomas, Pittsburgh, Pa. Wrench. No. 1,107,029; Aug. 11; Gaz. vol. 205; p. 546.

Callaghan, Andrew J., Jackson, Mich. Valve. No. 1,106,488; Aug. 11; Gaz. vol. 205; p. 358.

Callahan, Michael J., Pittsfield, Mass., assignor to General Electric Company. Condensation products and treating the same. No. 1,108,329; Aug. 25; Gaz. vol. 205; p. 1100.

Callahan, Michael J., Pittsfield, Mass., assignor to General Electric Company. Resinous condensation products. No. 1,108,330; Aug. 25; Gaz. vol. 205; p. 1101.

Callahan, Michael J., Pittsfield, Mass., assignor to General Electric Company. Resinous composition. No. 1,108,331; Aug. 25; Gaz. vol. 205; p. 1101.

Callahan, Michael J., Pittsfield, Mass., assignor to General Electric Company. Resinous composition and making the same. No. 1,108,332; Aug. 25; Gaz. vol. 205; p. 1101.

Callanan, William A., Denver, Colo. Calendar-hanger. No. 1,107,262; Aug. 18; Gaz. vol. 205; p. 677.

Calligan, A. H. (See Stephens, Charles, assignor.)

Cambria Spring Company. (See Athons, Joseph H., assignor.)

Camel Company. (See Comee, Joseph F., assignor.)

Cameron, Charles S., Pittsburgh, Pa. Well-packer. No. 1,108,333; Aug. 25; Gaz. vol. 205; p. 1101.

Camp, Warner H., Atlanta, Ga. Internal-combustion engine. No. 1,107,754; Aug. 18; Gaz. vol. 205; p. 852.

Campau, Francis D. (See Brochu, Michael, assignor.)

Campbell, Charles H., Chicago, Ill., assignor to American Glue Company, Boston, Mass. Retarder for plaster. No. 1,106,777; Aug. 11; Gaz. vol. 205; p. 461.

Campbell, Charles H., Chicago, Ill., assignor to American Glue Company, Boston, Mass. Making a retarder for plaster and the like from lime wastage. No. 1,106,778; Aug. 11; Gaz. vol. 205; p. 461.

Campbell, Charles H., Chicago, Ill., assignor to American Glue Company, Boston, Mass. Converting hair. No. 1,106,779; Aug. 11; Gaz. vol. 205; p. 461.

Campbell, Harry A., Denver, Colo. Gage holder and connection. No. 1,108,085; Aug. 18; Gaz. vol. 205; p. 960.

Campbell, John T., assignor of one-half to C. G. Keesee, Norfolk, Va. Indicator. No. 1,108,489; Aug. 25; Gaz. vol. 205; p. 1156.

Campbell, Layard L., New Brighton, N. Y. Photographic-printing frame. No. 1,106,489; Aug. 11; Gaz. vol. 205; p. 359.

Campbell, Robert E., Berkeley, Cal. Washing-machine. No. 1,107,653; Aug. 18; Gaz. vol. 205; p. 817.

Camus, Emile F., Detroit, Mich. Socket ratchet-wrench. No. 1,106,545; Aug. 11; Gaz. vol. 205; p. 379.

Canadian Gold Car Heating & Lighting Company. (See Ord, Lewis C., assignor.)

Canda, Ferdinand E., New York, N. Y., assignor to Chrome Steel Works, Chrome, N. J. Producing composite bars. No. 1,107,755; Aug. 18; Gaz. vol. 205; p. 853.

Canfield, Charles H., Paola, Kans. Acetylene-gas generator. No. 1,107,030; Aug. 11; Gaz. vol. 205; p. 546.

Canfield, Lewis T., Chicago, Ill. Tank-car. No. 1,106,697; Aug. 11; Gaz. vol. 205; p. 432.

Cantrell, Edwin B. (See Miller and Cantrell.)

Cantrell, Isaac D., Aubrey, Tex. Seed-planter. No. 1,108,130; Aug. 25; Gaz. vol. 205; p. 1030.

Cantrell, Isaac D., Aubrey, Tex. Seed-chute valve mechanism. No. 1,108,131; Aug. 25; Gaz. vol. 205; p. 1030.

Capps, Frank L., assignor to American Graphophone Company, Bridgeport, Conn. Production of disk sound-records. No. 1,107,491; Aug. 18; Gaz. vol. 205; p. 760.

Carborundum Company, The. (See Allen, Thomas B., assignor.)

Carborundum Company, The. (See Clark, Bennett F., assignor.)

Cardwell, James R., assignor to Union Draft Gear Company, Chicago, Ill. Railway-car. No. 1,106,129; Aug. 4; Gaz. vol. 205; p. 192.

Carhart, Herbert A., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,106,924; Aug. 11; Gaz. vol. 205; p. 512.

Carlehoff, Eugene R., Schenectady, N. Y., assignor to General Electric Company. Electric train distribution. No. 1,105,754; Aug. 4; Gaz. vol. 205; p. 59.

Carle, Robert G., Woonsocket, R. I. Tension device for spinning-frames. No. 1,106,280; Aug. 4; Gaz. vol. 205; p. 239.

Carlson, Frederick E., assignor to Landers, Frary & Clark, New Britain, Conn. Electrically-heated device. No. 1,105,962; Aug. 4; Gaz. vol. 205; p. 131.

Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Pipe-hanger. No. 1,106,078; Aug. 4; Gaz. vol. 205; p. 172.

Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Machine for truing and the like. No. 1,106,079; Aug. 4; Gaz. vol. 205; p. 172.

Carnahan, J. Worth, *et al.*, trustees. (See Paffrath, Theodor H., assignor.)

Carpenter, Benjamin F., Summit, N. J. Extension-ladder with rescue-car. No. 1,106,698; Aug. 11; Gaz. vol. 205; p. 432.

Carr, John H., Alhambra, Cal. Platform-wheel. No. 1,107,492; Aug. 18; Gaz. vol. 205; p. 760.

Carr, Lucian W., Crawfordsville, Ind. Apparatus for aerating and irrigating soil. No. 1,108,334; Aug. 25; Gaz. vol. 205; p. 1101.

Carroll, George G., assignor to Electro Surgical Instrument Company, Rochester, N. Y. Myringoscope. No. 1,106,699; Aug. 11; Gaz. vol. 205; p. 433.

Carroll, Thomas, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,106,490; Aug. 11; Gaz. vol. 205; p. 359.

Carson, Clarence, Detroit, Mich. Horn. No. 1,107,654; Aug. 18; Gaz. vol. 205; p. 817.

Carter, Albert, New York, N. Y., assignor to Carter Metals Cleaning Company. Sand-blast nozzle. No. 1,107,244; Aug. 11; Gaz. vol. 205; p. 623.

Carter, Fred, Letcher, S. D. Rotary engine. No. 1,105,617; Aug. 4; Gaz. vol. 205; p. 10.

Carter, Horace D., Portland, Oreg. Folding bed and folding mechanism. No. 1,108,335; Aug. 25; Gaz. vol. 205; p. 1102.

Carter Metals Cleaning Company. (See Carter, Albert, assignor.)

Carter, Wiley T., Henderson, N. C. Mop-holder. No. 1,106,362; Aug. 11; Gaz. vol. 205; p. 312.

Caruthers, Edgar, Hamshire, Tex. Mowing-machine. No. 1,108,132; Aug. 25; Gaz. vol. 205; p. 1031.

Casa-Calvo, Ernest J., Greenville, Miss. Safety chimney-throat. No. 1,106,491; Aug. 11; Gaz. vol. 205; p. 360.

Case, Albert W., Highland Park, Conn. Machine for smoothing fiber-board. No. 1,106,492; Aug. 11; Gaz. vol. 205; p. 360.

Case, Frederick W., and W. H. Burnworth, Columbia City, Ind. Mold. No. 1,106,625; Aug. 11; Gaz. vol. 205; p. 408.

Casey, Carl, Washington, D. C. Article-packaging machine. No. 1,108,696; Aug. 25; Gaz. vol. 205; p. 1276.

Casgrain, Louis A., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Cutting-machine. No. 1,106,363; Aug. 11; Gaz. vol. 205; p. 312.

Casgrain, Louis A., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,108,133; Aug. 25; Gaz. vol. 205; p. 1031.

Cash, Alfred G., Rochester, N. Y. Indicator. No. 1,108,697; Aug. 25; Gaz. vol. 205; p. 1226.

Caskey, William J., Des Moines, Iowa. Acetylene-generator. No. 1,107,756; Aug. 18; Gaz. vol. 205; p. 853.

Cassella Color Company. (See Herz, Richard, assignor.)

Cassity, William J., Guthrie, Okla. Spirit-level. No. 1,108,134; Aug. 25; Gaz. vol. 205; p. 1032.

Casson, George D., and F. D. Blakely, Winnipeg, Manitoba, Canada. Internal-combustion engine. No. 1,107,895; Aug. 18; Gaz. vol. 205; p. 900.

Castle, Alfred L., Quincy, Ill. Stove. No. 1,108,336; Aug. 25; Gaz. vol. 205; p. 1102.

Castle, Alfred L., Quincy, Ill. Stove-door. No. 1,108,698; Aug. 25; Gaz. vol. 205; p. 1227.

Castleberg, Henry. (See Sellar, John L., assignor.)

Castor, Lewis D., Binghamton, and A. Kiefer, assignors of one-third to A. Kiefer and two-thirds to Eisler Manufacturing Company, Rochester, N. Y. Labeling-machine. No. 1,106,925; Aug. 11; Gaz. vol. 205; p. 513.

Caswell, William A., Chicago, Ill., assignor to National Dump Car Company. Dump-car and door-operating mechanism. No. 1,107,896; Aug. 18; Gaz. vol. 205; p. 900.

Cathey, Everitt, New Edinburgh, Ark. Nut-lock. No. 1,107,897; Aug. 18; Gaz. vol. 205; p. 900.

Catlin, De Forest B., Mankato, Minn. Massage-belt. No. 1,106,493; Aug. 11; Gaz. vol. 205; p. 360.

Catrevas, Christina, Brooklyn, N. Y. Toy theater. No. 1,107,757; Aug. 18; Gaz. vol. 205; p. 854.

Cavanagh, James, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Manufacture of shoes. No.1,106,780; Aug. 11; Gaz. vol. 205; p. 461.

Cavey, John W. (See Booth, Charles A., assignor.)

Celus, August, Moline, Ill. Puzzle. No. 1,105,878; Aug. 4; Gaz. vol. 205; p. 102.

Central Foundry Specialty Company. (See Lonskey, John H., assignor.)

Central Oil & Gas Stove Company. (See Wilder and White, assignors.)

Central Railway Signal Company. (See Clark, Robert M., assignor.)

Central Railway Signal Company. (See Dutcher, Frank, assignor.)

Central Trust Company of New York, trustee. (See Mead, Clarence E., assignor.)

Central Trust Company of New York, trustee. (See Moskowitz, Morris, assignor.)

Chaffey, Oscar, Alliance, Cal. Excelsior-machine. No. 1,107,031; Aug. 11; Gaz. vol. 205; p. 546.

Chalmers & Williams. (See McInrue, John, assignor.)

Chamberlain, Annette J. (See Sanders, Wilbur E., assignor.)

Chamberlin, Lewis A., and C. H. Williams, De Soto, Mo. Dental instrument. No. 1,105,755; Aug. 4; Gaz. vol. 205; p. 60.

Chance & Hunt. (See Hunt and Gidden, assignors.)

Chani, John, Canal Dover, Ohio. Bottle-opening device. No. 1,108,699; Aug. 25; Gaz. vol. 205; p. 1227.

Chapin, Edward S., Sharon, and E. Lesser, Boston, Mass., assignors to American Dyewood Company, New York, N. Y. Dyestuff and manufacturing the same. No. 1,106,781; Aug. 11; Gaz. vol. 205; p. 462.

Chapman, George M. (See Bridges, Andrew M., assignor.)

Chappeau, Paul, Saintes, France. Packing. No. 1,107,032; Aug. 11; Gaz. vol. 205; p. 547.

Charles H. Besly and Company. (See Miller, John, Jr., assignor.)

Charles H. Childs & Company. (See Babcock, Wells, and Brown, assignors.)

Charles J. Tagliabue Manufacturing Co. (See Witham and Roesch, assignors.)

Charles, Samuel W., Palo Alto, Cal. Razor. No. 1,105,756; Aug. 4; Gaz. vol. 205; p. 60.

Charles Parker Company, The. (See Walker, Victor E. and P. H. D., assignors.)

Chartener, Victor, Pittsburgh, Pa. Edging-mill. No. 1,107,493; Aug. 18; Gaz. vol. 205; p. 760.

Charter, James A., Chicago, Ill. Explosive-engine. No. 1,106,782; Aug. 11; Gaz. vol. 205; p. 462.

Chase, John Q., Dayton, Ohio. Aeroplane. No. 1,107,494; Aug. 18; Gaz. vol. 205; p. 760.

Chase Rolling Mill Co. (See Parish, Ralph R., assignor.)

Chatham, Sheldon C., Philadelphia, Pa. Bed-bottom. No. 1,107,587; Aug. 18; Gaz. vol. 205; p. 793.

Chemical Products Company. (See Mork, Harry S., assignor.)

Chenette, Frank A. (See Chenette, Frederick and F. A.)

Chenette, Frederick, St. Albans, Vt., and F. A. Chenette, Worcester, Mass. Shut-off for gage-cocks. No. 1,106,494; Aug. 11; Gaz. vol. 205; p. 361.

Chi-Ill-Electric Company. (See Deiser, Frederick, assignor.)

Chiavetta, Michael, New York, N. Y. Time-switch. No. 1,106,281; Aug. 4; Gaz. vol. 205; p. 239.

Chicago Railway Equipment Company. (See Le Beau, Ernest A., assignor.)

Chicago Railway Equipment Company. (See Williams, Charles H., Jr., assignor.)

Chicago Safety Appliance Company. (See Hawk, Lewis E., assignor.)

Chicago Spring Butt Company. (See Keene, William J., assignor.)

Chickering, Frank W., assignor of one-half to J. J. Gallagher, Hardwick, Vt. Safety holdback-iron. No. 1,107,898; Aug. 18; Gaz. vol. 205; p. 900.

Chigris, Thomas, Knappa, Oreg. Rigging coupling-link. No. 1,108,337; Aug. 25; Gaz. vol. 205; p. 1103.

Chiniquy, William F., and W. O. Winch, Chicago, Ill. Process and machine for shaping and pressing hats. No. 1,108,428; Aug. 25; Gaz. vol. 205; p. 1133.

Chiron, Hippolyte M., Vancouver, British Columbia, Canada. Flying-machine. No. 1,106,626; Aug. 11; Gaz. vol. 205; p. 409.

Christensen, Niels C., Jr., and T. P. Holt; said Christensen assignor to G. H. Dern, Salt Lake City, Utah. Treating ores. No. 1,107,240; Aug. 11; Gaz. vol. 205; p. 622.

Christianson, Anton B., Hendricks, Minn. Grain weigher and measurer. No. 1,105,618; Aug. 4; Gaz. vol. 205; p. 10.

Christie, Alexander. (See Culbertson, Esta F., assignor.)

Christie, Walter, Highwood Park, N. J. Clutch. No. 1,107,588; Aug. 18; Gaz. vol. 205; p. 793.

Christoffel, John M., Milwaukee, Wis. Fluid-motor. No. 1,108,700; Aug. 25; Gaz. vol. 205; p. 1227.

Christy, James, Chicago, Ill. Mechanism for securing balls to tape or the like. No. 1,107,758; Aug. 18; Gaz. vol. 205; p. 854.

Chrome Steel Works. (See Canda, Ferdinand E., assignor.)

Chronik, August and L., New York, N. Y. Kinetographic apparatus. No. 1,106,080; Aug. 4; Gaz. vol. 205; p. 172.

Chronik, Louis. (See Chronik, August and L.)

Chubb, Lewis W., Edgewood, Pa. System of water-distribution. No. 1,108,550; Aug. 25; Gaz. vol. 205; p. 1177.

Church, Albert E., New Britain, Conn. Chuck. No. 1,106,189; Aug. 4; Gaz. vol. 205; p. 211.

Ciampaglia, Joseph, Louisville, Ky. Baking apparatus. No. 1,108,701; Aug. 25; Gaz. vol. 205; p. 1227.

Cincinnati Milling Machine Company, The. (See De Leeuw, Adolph L., assignor.)

Cincinnati Sand Blast Company, The. (See Clark, Frank R., assignor.)

Citizens Savings and Trust Company, The, trustee. (See Hughes, Dow B., assignor.)

Clarin, Werner E., assignor of one-half to A. Nelson, Chicago, Ill. Gas-heater. No. 1,107,589; Aug. 18; Gaz. vol. 205; p. 794.

Clark, Bennett F., assignor to The Carborundum Company, Niagara Falls, N. Y. Sickle-bar-holding attachment for grinding-machines. No. 1,107,033; Aug. 11; Gaz. vol. 205; p. 547.

Clark, Charles G. (See Thacker and Clark.)

Clark, Ernest G., De Kalb, assignor to Melville Clark Piano Company, Chicago, Ill. Paper-feed for perforating-machines. No. 1,108,338; Aug. 25; Gaz. vol. 205; p. 1103.

Clark, Frank R., assignor to The Cincinnati Sand Blast Company, Cincinnati, Ohio. Printing on tartatan and other like fabrics. No. 1,106,364; Aug. 11; Gaz. vol. 205; p. 313.

Clark, Louis F., assignor of one-half to I. A. Anderson, Grand Rapids, Mich. Internal-combustion engine. No. 1,106,365; Aug. 11; Gaz. vol. 205; p. 313.

Clark, Melville A., Syracuse, N. Y. Harp. No. 1,105,879; Aug. 4; Gaz. vol. 205; p. 102.

Clark, Melville, Chicago, Ill. Vehicle wheel-tire. No. 1,108,702; Aug. 25; Gaz. vol. 205; p. 1228.

Clark, Melville, Chicago, Ill. Vehicle wheel-tire. No. 1,108,703; Aug. 25; Gaz. vol. 205; p. 1228.

Clark, Robert M., Newton Center, Mass., assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal fusee. No. 1,107,034; Aug. 11; Gaz. vol. 205; p. 547.

Clarkson, Thomas, and W. J. Morison, Chelmsford, assignors to The National Steam Car Company, Limited, London, England. Metal wheel. No. 1,107,263; Aug. 18; Gaz. vol. 205; p. 678.

Clausing, George, assignor to The Vulcan Box Toe Process Co., Portsmouth, Ohio. Last. No. 1,107,655; Aug. 18; Gaz. vol. 205; p. 818.

Clausing, George, assignor to The Vulcan Box Toe Process Co., Portsmouth, Ohio. Last. No. 1,107,656; Aug. 18; Gaz. vol. 205; p. 818.

Clay, Boston, Muscatine, assignor to J. T. Sissel, Muscatine county, Iowa. Button-making machine. No. 1,105,757; Aug. 4; Gaz. vol. 205; p. 60.

Clay, Odin O., Washington, D. C. Auto-fender. No. 1,106,783; Aug. 11; Gaz. vol. 205; p. 462.

Clayton, Walter R., and D. H. Jones, Fayetteville, N. C. Pulley remover and replacer. No. 1,108,135; Aug. 25; Gaz. vol. 205; p. 1032.

Clayville, George W., and D. W. Davis, assignors of one-third to W. B. Gray, Philadelphia, Pa. Wheel-tire. No. 1,108,704; Aug. 25; Gaz. vol. 205; p. 1229.

Cleary, James C., assignor to M. W. Borders, Chicago, Ill. Tanning leather. No. 1,107,759; Aug. 18; Gaz. vol. 205; p. 855.

Clem, Joseph A., Sidney, Ohio. Door check and holder. No. 1,105,963; Aug. 4; Gaz. vol. 205; p. 131.

Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,107,152; Aug. 11; Gaz. vol. 205; p. 591.

Clement, Edward E., Washington, D. C. Electric switch. No. 1,107,153; Aug. 11; Gaz. vol. 205; p. 591.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,133; Aug. 11; Gaz. vol. 205; p. 581.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,134; Aug. 11; Gaz. vol. 205; p. 582.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system and apparatus. No. 1,107,135; Aug. 11; Gaz. vol. 205; p. 582.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,136; Aug. 11; Gaz. vol. 205; p. 583.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,137; Aug. 11; Gaz. vol. 205; p. 583.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Automatic telephone-exchange system. No. 1,107,138; Aug. 11; Gaz. vol. 205; p. 584.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,139; Aug. 11; Gaz. vol. 205; p. 584.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,140; Aug. 11; Gaz. vol. 205; p. 585.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,141; Aug. 11; Gaz. vol. 205; p. 585.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,142; Aug. 11; Gaz. vol. 205; p. 586.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,143; Aug. 11; Gaz. vol. 205; p. 586.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone system. No. 1,107,144; Aug. 11; Gaz. vol. 205; p. 587.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,145; Aug. 11; Gaz. vol. 205; p. 587.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,146; Aug. 11; Gaz. vol. 205; p. 588.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,147; Aug. 11; Gaz. vol. 205; p. 588.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,148; Aug. 11; Gaz. vol. 205; p. 589.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Selective apparatus for systems of communication. No. 1,107,149; Aug. 11; Gaz. vol. 205; p. 589.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,150; Aug. 11; Gaz. vol. 205; p. 590.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,151; Aug. 11; Gaz. vol. 205; p. 590.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,154; Aug. 11; Gaz. vol. 205; p. 592.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to F. C. Stevens, Attica, N. Y. Telephone-exchange system. No. 1,107,157; Aug. 11; Gaz. vol. 205; p. 593.

Clement, Edward E., Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y. Telephone registering system. No. 1,107,155; Aug. 11; Gaz. vol. 205; p. 592.

Clement, Edward E., Washington, D. C., assignor to The Telephone Improvement Company, Attica, N. Y. Telephone registering system. No. 1,107,156; Aug. 11; Gaz. vol. 205; p. 593.

Clemmensen, Erik C., and W. M. Jenkins, Detroit, Mich. Bottle-closure. No. 1,106,366; Aug. 11; Gaz. vol. 205; p. 313.

Clifford, Edward C., New York, N. Y. Wind-shield for cigars and cigarettes. No. 1,106,495; Aug. 11; Gaz. vol. 205; p. 361.

Clifford, William, Jeannette, assignor to Elliott Company, Pittsburgh, Pa. Mine-ventilating apparatus. No. 1,107,264; Aug. 18; Gaz. vol. 205; p. 678.

Clifton Manufacturing Company. (See Thoma, Andrew, assignor.)

Clinger, William T., Oil City, Pa. Sucker-rod elevator. No. 1,106,130; Aug. 4; Gaz. vol. 205; p. 192.

Clippinger, Cecil E., and J. A. Smith, Carmi, Ill. Adjustable printer's chase. No. 1,105,758; Aug. 4; Gaz. vol. 205; p. 61.

Cloke, Thomas H., and L. J. Shearer, Chicago, Ill. Rake-cleaner. No. 1,107,035; Aug. 11; Gaz. vol. 205; p. 548.

Clune, John H., Springfield, Mass. Cushioning device for vehicles. No. 1,106,496; Aug. 11; Gaz. vol. 205; p. 362.

Clutter, Leroy P., Deer Lick, Pa. Excavator. No. 1,107,899; Aug. 18; Gaz. vol. 205; p. 901.

Coates, Clinton T., St. Louis, Mo., assignor of one-half to G. G. Heller, East St. Louis, Ill. Guard-rail connector. No. 1,107,036; Aug. 11; Gaz. vol. 205; p. 548.

Coats, William E., Firesteel, S. D. Dust-pan. No. 1,106,282; Aug. 4; Gaz. vol. 205; p. 239.

Cobb, John W., Leeds, England. Extracting ammonia and sulfur compounds from gas. No. 1,108,705; Aug. 25; Gaz. vol. 205; p. 1229.

Cochran, Walter R., Biggsville, Ill. Dirigible lamp-support. No. 1,108,339; Aug. 25; Gaz. vol. 205; p. 1103.

Cochran, William R., Jr., Toledo, Ohio. Fuel-oil burner. No. 1,107,900; Aug. 18; Gaz. vol. 205; p. 901.

Codling, Robert B., Bristol, Conn. Shoe-stretcher. No. 1,107,037; Aug. 11; Gaz. vol. 205; p. 548.

Coe, Robert A., Tupelo, Okla. Automobile-top. No. 1,106,784; Aug. 11; Gaz. vol. 205; p. 462.

Coffman, Henry F., Carrville, Cal. Dividers. No. 1,108,706; Aug. 25; Gaz. vol. 205; p. 1229.

Cohen, Hyman, Brooklyn, N. Y. Vehicle-top. No. 1,106,131; Aug. 4; Gaz. vol. 205; p. 192.

Cohen, Maurice H., Brooklyn, N. Y. Combined gas-burner and water-heater. No. 1,107,038; Aug. 11; Gaz. vol. 205; p. 548.

Cohen, Philip F., New York, N. Y. Paper-plaiting machine. No. 1,107,265; Aug. 18; Gaz. vol. 205; p. 678.

Cohn, Henry, New York, N. Y. Printing-frame. No. 1,108,707; Aug. 25; Gaz. vol. 205; p. 1230.

Colby, Daniel W., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fasteners. No. 1,106,367; Aug. 11; Gaz. vol. 205; p. 314.

Cole, Francis J., Schenectady, N. Y. Drifting-valve for locomotives. No. 1,106,081; Aug. 4; Gaz. vol. 205; p. 173.

Coleman, Clyde, Chicago, Ill., assignor, by mesne assignments, to G. B. French, Boston, Mass., and F. L. Hall, New York, N. Y. Electrically-operated musical instrument. No. 1,107,495; Aug. 18; Gaz. vol. 205; p. 761.

Coleman, John W., and A. Gorden, Spot, Tenn. Wire-stretcher. No. 1,107,039; Aug. 11; Gaz. vol. 205; p. 549.

Coleman, Oscar B., Hartsells, Ala. Furrow-gage. No. 1,106,028; Aug. 4; Gaz. vol. 205; p. 155.

Collardon, Louis, West Bromwich, England. Antifouling paint and varnish. No. 1,105,619; Aug. 4; Gaz. vol. 205; p. 10.

Collins, Roderick G., Jr., New York, N. Y. Pneumatic-despatch apparatus. No. 1,108,136; Aug. 25; Gaz. vol. 205; p. 1032.

Collins, Roderick G., Jr., New York, N. Y. Apparatus for controlling the movement of carriers in pneumatic-despatch apparatus. No. 1,108,137; Aug. 25; Gaz. vol. 205; p. 1032.

Collins, William P., assignor to Automatic Air Brake Company, Boston, Mass. Brake mechanism. No. 1,108,138; Aug. 25; Gaz. vol. 205; p. 1033.

Collinson, Francis E., Walthamstow, London, England, assignor of one-half to Taylor Instrument Companies, Rochester, N. Y. Barometer. No. 1,107,496; Aug. 18; Gaz. vol. 205; p. 761.

Colombel, Gaston E., Paris, France. Compass with angular-shifting magnifying device. No. 1,107,901; Aug. 18; Gaz. vol. 205; p. 901.

Colonial Fast Color Tipping Company. (See Gallison, Ernest A., assignor.)

Colonial Fireplace Co. (See Guy, Walter W., assignor.)

Colt, Le Baron C., Bristol, R. I. Lasting-machine. No. 1,108,551; Aug. 25; Gaz. vol. 205; p. 1178.

Colvocoresses, George M., New York, N. Y. Manufacturing iron alloys. No. 1,106,785; Aug. 11; Gaz. vol. 205; p. 463.

Colvocoresses, George M., New York, N. Y. Manufacturing iron alloys. No. 1,106,786; Aug. 11; Gaz. vol. 205; p. 463.

Colwell, John H. (See Setzer, Joel M., assignor.)

Comee, Joseph F., assignor to Camel Company, Chicago, Ill. Car-door. No. 1,108,139; Aug. 25; Gaz. vol. 205; p. 1033.

Comes, Frederick, New York, N. Y. Clothes-line fastener. No. 1,106,132; Aug. 4; Gaz. vol. 205; p. 193.

Commercial Wireless and Development Company. (See Jensen, Peter L., assignor.)

Commercial Wireless & Development Co. (See Jensen and Pridham, assignors.)

Commercial Wireless & Development Company. (See Pridham and Jensen, assignors.)

Commonwealth Steel Company. (See Westlake, Charles T., assignor.)

Conde, James B., Philadelphia, Pa. Revolver flash-light. No. 1,107,040; Aug. 11; Gaz. vol. 205; p. 549.

Condon-Autostop Company. (See Tozzi, Angelo M., assignor.)

Conine, James B., Camp Hill, Ala. Machine for gathering stones. No. 1,106,190; Aug. 4; Gaz. vol. 205; p. 211.

Conne, Louis, assignor of one-half to H. Isaacs, Chicago, Ill. Tool for opening and closing the links of chains. No. 1,106,439; Aug. 11; Gaz. vol. 205; p. 338.

Connecticut Telephone & Electric Company, The. (See Wilcox, Ernest C., assignor.)

Connersville Blower Company, The. (See Wilkin, John T., assignor.)

Connors, Patrick J., assignor of one-half to G. Kitch, Greenville, Pa. Safety device for water-gages. No. 1,107,902; Aug. 18; Gaz. vol. 205; p. 902.

Conrad, Frank, Swissvale, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Electrical apparatus. No. 1,106,368; Aug. 11; Gaz. vol. 205; p. 314.

Conrardy, Casper M., Willowdale, Kans. Feeding attachment for threshing-machines. No. 1,107,266; Aug. 18; Gaz. vol. 205; p. 679.

Consortium für elektrochemische Industrie G. m. b. H. (See Baum and Mugdan, assignors.)

Continental & Commercial Trust & Savings Bank, trustee. (See Miehle, Robert, assignor.)

Continental Foundry and Machine Company. (See Pekat, Charles, assignor.)

Conwell, Walter L. (See Hipple and Conwell.)

Cook, Benjamin H., Anderson, Ind. Coupling device. No. 1,107,041; Aug. 11; Gaz. vol. 205; p. 550.

Cook, Everett J., Detroit, Mich., assignor of fifty-one one-hundredths to R. M. Cori, Toledo, Ohio. Valve for motors. No. 1,107,903; Aug. 18; Gaz. vol. 205; p. 902.

Cook, Walter T., Cleveland, Ohio. Fare-box. No. 1,105,620; Aug. 4; Gaz. vol. 205; p. 11.

Cook, Walter T., Cleveland, Ohio. Fare-box. No. 1,105,621; Aug. 4; Gaz. vol. 205; p. 11.

Cooke, Charles S. (See Cooke, William A., Jr., assignor.)

Cooke, Eugene B., and C. O. Lewis, New Philadelphia, Ohio. Advertising waste-paper box. No. 1,108,066; Aug. 18; Gaz. vol. 205; p. 900.

Cooke, William A., Jr., New York, N. Y. Letter-file or the like. No. 1,107,657; Aug. 18; Gaz. vol. 205; p. 819.

Cooke, William A., Jr., New York, assignor to C. S. Cooke, Brooklyn, N. Y. Binder. No. 1,107,658; Aug. 18; Gaz. vol. 205; p. 819.

Cooley, Charles H., Wichita, Kans. Amusement device. No. 1,108,708; Aug. 25; Gaz. vol. 205; p. 1230.

Cooley, Henry B., New Britain, assignor to The American Paper Goods Company, Kensington, Conn. Feeding and creasing device. No. 1,107,194; Aug. 11; Gaz. vol. 205; p. 605.

Cooper, George L. (See Denehie, William A., assignor.)

Cooper, Henry S., *et al.* (See Cooper, Robert S., assignor.)

Cooper, Lovell W., Schenectady, N. Y. Automatic stop-valve. No. 1,107,760; Aug. 18; Gaz. vol. 205; p. 855.

Cooper, Robert S., assignor to H. S. Cooper and H. G. Johnson, Kenosha, Wis. Underwear. No. 1,106,133; Aug. 4; Gaz. vol. 205; p. 193.

Cooper, Thomas W., Caldwell, N. J. Tire-shoe. No. 1,105,880; Aug. 4; Gaz. vol. 205; p. 102.

Cooper, William, Denver, Colo. Moving material. No. 1,106,863; Aug. 11; Gaz. vol. 205; p. 491.

Copeman Electric Stove Company. (See Copeman, Hazel B., assignor.)

Copeman, Hazel B., assignor to Copeman Electric Stove Company, Flint, Mich. Toast-turner. No. 1,108,552; Aug. 25; Gaz. vol. 205; p. 1178.

Copeman, Lloyd G., assignor to Copeman Electric Stove Company, Flint, Mich. Toast-turner. No. 1,108,553; Aug. 25; Gaz. vol. 205; p. 1179.

Copeman, Lloyd G., assignor to Copeman Electric Stove Company, Flint, Mich. Toaster. No. 1,108,554; Aug. 25; Gaz. vol. 205; p. 1179.

Copland, Alexander W., Detroit, Mich. Frying-machine. No. 1,106,926; Aug. 11; Gaz. vol. 205; p. 513.

Corby, William S., and J. L. Parsons, Jr., Washington, D. C. Baking-oven. No. 1,107,195; Aug. 11; Gaz. vol. 205; p. 606.

Cori, Robert M. (See Cook, Everett J., assignor.)

Cornelius, Henry D., Indianapolis, Ind. Cement-step form. No. 1,106,627; Aug. 11; Gaz. vol. 205; p. 409.

Cornell, Evan W., assignor to Page Woven Wire Fence Company, Adrian, Mich. Fence-machine. No. 1,105,622; Aug. 4; Gaz. vol. 205; p. 12.

Cornine, Marshall, New York, N. Y. Meter. No. 1,108,140; Aug. 25; Gaz. vol. 205; p. 1034.

Cornwall, George R., Rye, N. Y., assignor to American Planograph Company. Printing-press. No. 1,105,964; Aug. 4; Gaz. vol. 205; p. 132.

Cornwall, George R., Rye, N. Y., assignor to American Planograph Company. Printing-press. No. 1,105,965; Aug. 4; Gaz. vol. 205; p. 132.

Cornwall, George R., Rye, N. Y., assignor to American Planograph Company. Printing-press. No. 1,105,966; Aug. 4; Gaz. vol. 205; p. 133.

Cornwall, George R., Rye, N. Y., assignor to American Planograph Company. Producing letter-press printing plates or forms. No. 1,106,369; Aug. 11; Gaz. vol. 205; p. 314.

Corrall, Herbert, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company. Multiple-tuck-folding attachment. No. 1,106,787; Aug. 11; Gaz. vol. 205; p. 463.

Corthell, Fred H., assignor to E. R. Hills, Chicago, Ill. Escapement mechanism for timepieces. No. 1,107,410; Aug. 18; Gaz. vol. 205; p. 731.

Corthésy, Jules H., Barnsbury, London, England. Turbine. No. 1,108,831; Aug. 25; Gaz. vol. 205; p. 1272.

Corvin, James F., assignor to McCord and Company, Chicago, Ill. Journal-box and lid. No. 1,106,628; Aug. 11; Gaz. vol. 205; p. 409.

Costello, Walter J., Washington, D. C. Beer-dispenser. No. 1,105,881; Aug. 4; Gaz. vol. 205; p. 103.

Courtauids Limited. (See Wilson, Leonard P., assignor.)

Cowell, Marcus R., Prince Albert, Saskatchewan, Canada. Connecting device. No. 1,107,497; Aug. 18; Gaz. vol. 205; p. 761.

Cowgill, Orph W., assignor of ninety one-hundredths to O. F. Stifel, St. Louis, Mo. Signal for motor-vehicles. No. 1,106,134; Aug. 4; Gaz. vol. 205; p. 193.

Cowles, Edward P., Sparta, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,107,042; Aug. 11; Gaz. vol. 205; p. 550.

Cowles, George, Sacramento, Cal. Pipe connection. No. 1,106,546; Aug. 11; Gaz. vol. 205; p. 380.

Cox, Edwin A., assignor to The Rotospeed Company, Dayton, Ohio. Sheet-attaching device for stencil-machines. No. 1,106,440; Aug. 11; Gaz. vol. 205; p. 339.

Cox, Richard C., assignor of one-half to himself and one-half to F. A. Wyman, Dorchester, Mass. Device for testing gages. No. 1,108,141; Aug. 25; Gaz. vol. 205; p. 1034.

Coy, Dan C. (See Malquist, John, assignor.)

Coyner, Robert G., Chicago, Ill., assignor to Positive Supply Company, Davenport, Iowa. Holder and automatic lock for milk-bottles. No. 1,107,043; Aug. 11; Gaz. vol. 205; p. 551.

Crabb, Carl C., Topeka, Kans. Cut-under wagon-dump. No. 1,108,142; Aug. 25; Gaz. vol. 205; p. 1035.

Crabill, William L., Battle Creek, Mich. Feed device or trough. No. 1,106,547; Aug. 11; Gaz. vol. 205; p. 380.

Craig, Alvin M., New Haven, Conn. Apparatus for casting metals. No. 1,107,904; Aug. 18; Gaz. vol. 205; p. 902.

Craig, Alvin M., New Haven, Conn. Casting metals. No. 1,107,905; Aug. 18; Gaz. vol. 205; p. 903.

Craine, William, Brookfield, N. Y. Adjustable ventilator. No. 1,106,029; Aug. 4; Gaz. vol. 205; p. 156.

Cramer, Bertha S., Minneapolis, Minn. Combination skirt-marker, bias-folder, and pattern-marker. No. 1,108,143; Aug. 25; Gaz. vol. 205; p. 1035.

Crane, Arthur T., assignor to Waterbury Mfg. Co., Waterbury, Conn. Nut. No. 1,106,082; Aug. 4; Gaz. vol. 205; p. 173.

Craven, Henry T., Vineland, N. J. Nut-lock. No. 1,108,832; Aug. 25; Gaz. vol. 205; p. 1273.

Crawford, George G., Birmingham, Ala. Treating ingots. No. 1,108,862; Aug. 25; Gaz. vol. 205; p. 1284.

Crawford, Henry J., Los Angeles, Cal. Two-cycle internal-combustion engine. No. 1,105,882; Aug. 4; Gaz. vol. 205; p. 103.

Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Fault-localizer. No. 1,105,883; Aug. 4; Gaz. vol. 205; p. 103.

Crew, Royal A., Portland, Oreg. Temperature-regulator. No. 1,107,761; Aug. 18; Gaz. vol. 205; p. 855.

Crichton-Clarke, William H., New York, N. Y., assignor to Gillette Safety Razor Company, Boston, Mass. Blade-sharpening mechanism. No. 1,106,548; Aug. 11; Gaz. vol. 205; p. 380.

Criqui, Charles A., Buffalo, N. Y. Power-boat. No. 1,108,340; Aug. 25; Gaz. vol. 205; p. 1104.

Crites, Stanley M., St. Martinville, La. Pole-anchor. No. 1,105,884; Aug. 4; Gaz. vol. 205; p. 104.

Crittenden, Myron T., Carthage, Mo. Railway-tie. No. 1,106,283; Aug. 4; Gaz. vol. 205; p. 240.

Croll, Horatio V. (See Elmore and Croll.)

Crompton & Knowles Loom Works. (See Smith, Harry W., assignor.)

Crooks, Charles L., *et al.* (See Newkirk, William P., assignor.)

Crooks, Earl G., assignor of one-fourth to E. Vollrath, one-fourth to J. Martinitz, and one-fourth to F. A. Wise, Bucyrus, Ohio. Centrifugal governor. No. 1,108,709; Aug. 25; Gaz. vol. 205; p. 1230.

Crooks, Harry R., Philadelphia, Pa. Bottle. No. 1,106,191; Aug. 4; Gaz. vol. 205; p. 212.

Crosby, Richard M., Tacoma, Wash. Spark-arrester. No. 1,108,710; Aug. 25; Gaz. vol. 205; p. 1231.

Crosby Steam Gage & Valve Company. (See Phillips, Arthur P., assignor.)

Cross, Andrew B., Denver, Colo. Combined beet puller and topper. No. 1,108,341; Aug. 25; Gaz. vol. 205; p. 1104.

Cross, Andrew J., New York, N. Y. Multiple-focus lens. No. 1,106,629; Aug. 11; Gaz. vol. 205; p. 410.

Crossley, William H., Lewiston, Idaho. Doubletree. No. 1,106,549; Aug. 11; Gaz. vol. 205; p. 381.

Crouan, Henry M. L., Asnières, France. Carbureter. No. 1,106,192; Aug. 4; Gaz. vol. 205; p. 212.

Crouse-Hinds Company. (See Bissell, Carl H., assignor.)

Crouse-Hinds Company. (See Greaves, Edwin E., assignor.)

Crowell, John H., Vineyard Haven, Mass. Poultry scratch grain-feeder. No. 1,105,885; Aug. 4; Gaz. vol. 205; p. 104.

Crowley, James W. (See Powers, Harvey, and Crowley.)

Crues, James, Moberly, Mo. Mud-guard. No. 1,108,833; Aug. 25; Gaz. vol. 205; p. 1273.

Cruickshank, Arthur B., London, England. Portable trousers press and stretcher. No. 1,106,550; Aug. 11; Gaz. vol. 205; p. 381.

Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Lath. No. 1,107,906; Aug. 18; Gaz. vol. 205; p. 903.

Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Veneer lath. No. 1,107,907; Aug. 18; Gaz. vol. 205; p. 903.

Crumpton, William J., Evanston, Ill., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Accounting system. No. 1,106,284; Aug. 4; Gaz. vol. 205; p. 240.

Crumrine, Henry C., Cleveland, Ohio. Signaling mechanism. No. 1,106,441; Aug. 11; Gaz. vol. 205; p. 339.

Cruttenden, James A., Ramirena, Tex. Fly-trap. No. 1,108,711; Aug. 25; Gaz. vol. 205; p. 1232.

Culbertson, Esta F., assignor of one-half to A. Christie, Seattle, Wash. Hasp-fastener. No. 1,105,886; Aug. 4; Gaz. vol. 205; p. 104.

Cumfer, Harry A., assignor to Guyton & Cumfer Manufacturing Company, Chicago, Ill. Sheet splitting and cutting machine. No. 1,107,762; Aug. 18; Gaz. vol. 205; p. 855.

Cummins, Arthur E., Hampstead, assignor of one-half to R. Bridge, Manchester, England. Apparatus for enabling samples to be taken from bales. No. 1,105,759; Aug. 4; Gaz. vol. 205; p. 61.

Cunningham, Matthew G., Corsicana, Tex. Cotton-picker. No. 1,107,908; Aug. 18; Gaz. vol. 205; p. 904.

Cuppies, John, Bayonne, N. J. Portable bag-holder. No. 1,107,590; Aug. 18; Gaz. vol. 205; p. 794.

Curran, John W., Cincinnati, Ohio. Milk-bottle cover. No. 1,107,909; Aug. 18; Gaz. vol. 205; p. 904.

Curry, John P. (See Rohe, Joseph C., assignor.)

Curtis, Charles G., New York, N. Y., and L. D. Lovekin, Philadelphia, Pa. Elastic-fluid turbine. No. 1,106,497; Aug. 11; Gaz. vol. 205; p. 362.

Curtiss, George E., assignor to Landers, Frary & Clark, New Britain, Conn. Percolator. No. 1,108,712; Aug. 25; Gaz. vol. 205; p. 1232.

Curtiss, Glenn H., Hammondsport, N. Y. Flying-machine. No. 1,108,490; Aug. 25; Gaz. vol. 205; p. 1156.

Cutler, Clifford A., Buffalo, N. Y. Varnish-kiln. No. 1,105,623; Aug. 4; Gaz. vol. 205; p. 12.

Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)

Cutler-Hammer Mfg. Co., The. (See Evans, Clarence T., assignor.)

Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)

Cutter Electrical and Manufacturing Company, The. (See Scott, William M., assignor.)

D. M. Sechler Implement & Carriage Co. (See Garst, Stephen H., assignor.)

D'Antonio, Remigius, New York, N. Y. Automobile signal device. No. 1,106,179; Aug. 4; Gaz. vol. 205; p. 207.

D'Ollier Centrifugal Pump and Machine Company. (See De Huff, Henry, assignor.)

Daft, Longfellow J., Seattle, Wash. Mine drilling and channeling machine. No. 1,108,342; Aug. 25; Gaz. vol. 205; p. 1104.

Dahl, Berent O., Viroqua, Wis. Hoe. No. 1,105,760; Aug. 4; Gaz. vol. 205; p. 61.

Dailey, John A., La Crosse, Kans. Conveyer. No. 1,108,713; Aug. 25; Gaz. vol. 205; p. 1232.

Dain, Joseph, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Coupling for hay-loaders. No. 1,107,763; Aug. 18; Gaz. vol. 205; p. 856.

Dain Manufacturing Company of Iowa. (See Dain, Joseph, assignor.)

Dake, Charles W., assignor to Pyle-National Electric Headlight Company, Chicago, Ill. Arc-lamp electrode. No. 1,105,887; Aug. 4; Gaz. vol. 205; p. 104.

Dale, Charles O., Seattle, assignor of four-tenths to A. Peterson, Renton, Wash. Logging-bunk. No. 1,105,827; Aug. 4; Gaz. vol. 205; p. 84.

Dalitz, Harry, Seattle, Wash. Spark-plug tester and terminal. No. 1,107,498; Aug. 18; Gaz. vol. 205; p. 762.

Daly, William L., Schenectady, N. Y. Tag-hook. No. 1,107,910; Aug. 18; Gaz. vol. 205; p. 904.

Dana, William H., assignor to L. Rauh, Dayton, Ohio. Voting-machine. No. 1,108,491; Aug. 25; Gaz. vol. 205; p. 1157.

Danculovich, Joe, Ely, Minn. Railway-spike. No. 1,108,067; Aug. 18; Gaz. vol. 205; p. 961.

Danenhower, Sloan, Bridgeport, Conn. Signaling apparatus. No. 1,106,788; Aug. 11; Gaz. vol. 205; p. 464.

Daniel, William F., Bristol, Tenn. Car-wheel bearing. No. 1,108,068; Aug. 18; Gaz. vol. 205; p. 961.

Daniels, Fred H., deceased, Worcester, Mass.; S. L. Daniels, executrix, assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Making hot-finished flats. No. 1,108,144; Aug. 25; Gaz. vol. 205; p. 1035.

Daniels, John T., assignor to The Hanson & Van Winkle Company, Newark, N. J. Electroplating apparatus. No. 1,108,145; Aug. 25; Gaz. vol. 205; p. 1036.

Daniels, Sarah L., executrix. (See Daniels, Fred H.)

Darrow, Charles W., Glenwood Springs, Colo. Flushing device. No. 1,106,285; Aug. 4; Gaz. vol. 205; p. 241.

Darrow, Charles W., Glenwood Springs, Colo. Flushing device. No. 1,106,286; Aug. 4; Gaz. vol. 205; p. 241.

Darrow, Charles W., Glenwood Springs, Colo. Flushing device. No. 1,107,911; Aug. 18; Gaz. vol. 205; p. 904.

Darrow, William W., Chicago, Ill. Door-opening mechanism for freight-cars. No. 1,108,343; Aug. 25; Gaz. vol. 205; p. 1104.

Darrow, Wilton E., Sutter Creek, Cal. Hydraulic classifier for separating sand and slime. No. 1,106,630; Aug. 11; Gaz. vol. 205; p. 410.

Davidson, Samuel C., Belfast, Ireland. Centrifugal fan and pump. No. 1,105,967; Aug. 4; Gaz. vol. 205; p. 133.

Davies, Charles W. T., New York, N. Y. Buttonhole for wearing-apparel. No. 1,106,700; Aug. 11; Gaz. vol. 205; p. 433.

Davies, Ephraim J., Hiawatha, Utah. Coal-pick sharpener. No. 1,107,912; Aug. 18; Gaz. vol. 205; p. 905.

Davies, Henry E., West New York, N. J. Arc-lamp. No. 1,106,789; Aug. 11; Gaz. vol. 205; p. 464.

Davis Automatic Filing Company. (See Davis, Ernest S., assignor.)

Davis-Bournonville Company. (See Burdett, John B., assignor.)

Davis-Bournonville Company. (See Luening, Eugene G., assignor.)

Davis-Bournonville Company. (See Pleiss, Paul, assignor.)

Davis, Charles W., Edgeworth, assignor to Standard Underground Cable Company, Pittsburgh, Pa. Junction-box. No. 1,107,499; Aug. 18; Gaz. vol. 205; p. 762.

Davis, Cleland, U. S. Navy, assignor to Ordnance Development Company. Aeroplane-gun. No. 1,108,714; Aug. 25; Gaz. vol. 205; p. 1232.

Davis, Cleland, U. S. Navy, assignor to Ordnance Development Company. Apparatus for firing projectiles from aeroplanes. No. 1,108,715; Aug. 25; Gaz. vol. 205; p. 1233.

Davis, Cleland, U. S. Navy, assignor to Ordnance Development Company. Apparatus for firing projectiles from air-craft. No. 1,108,716; Aug. 25; Gaz. vol. 205; p. 1233.

Davis, Cleland, U. S. Navy, assignor to Ordnance Development Company, Groton, Conn. Fixed ammunition for use on air-craft. No. 1,108,717; Aug. 25; Gaz. vol. 205; p. 1234.

Davis, Clement. (See Wolfe, Abner K., assignor.)

Davis, David W. (See Clayville and Davis.)

Davis, Elmer O., Denver, Colo. Hot-bearing alarm. No. 1,105,888; Aug. 4; Gaz. vol. 205; p. 105.

Davis, Ernest S., Knoxville, assignor to Davis Automatic Filing Company, Bristol, Tenn. Indexing apparatus. No. 1,108,344; Aug. 25; Gaz. vol. 205; p. 1105.

Davis, George H., Portland, Me. Paper cap for milk-bottles. No. 1,107,267; Aug. 18; Gaz. vol. 205; p. 679.

Davis, George M., *et al.* (See Swyers, Price P., assignor.)

Davis, Harry L., Saratoga Springs, N. Y. Automatic water-feed for poultry. No. 1,107,268; Aug. 18; Gaz. vol. 205; p. 679.

Davis, John M., McGraw, assignor of one-half to D. Kernan, Cortland, N. Y. Aeroplane. No. 1,107,913; Aug. 18; Gaz. vol. 205; p. 905.

Davis, Lewis K., New York, N. Y. Building construction. No. 1,107,411; Aug. 18; Gaz. vol. 205; p. 731.

Davis, Lewis W., Seattle, Wash. Power-transmission means. No. 1,107,412; Aug. 18; Gaz. vol. 205; p. 732.

Davis, Roy, Long Beach, Cal. Rope-clutch for hoists. No. 1,105,624; Aug. 4; Gaz. vol. 205; p. 13.

Davis, William J., Chicago, Ill. Series of holding-vats. No. 1,107,764; Aug. 18; Gaz. vol. 205; p. 856.

Davis, William J., Chicago, Ill. Pasteurizing apparatus. No. 1,107,765; Aug. 18; Gaz. vol. 205; p. 857.

Davis, William J., Jr., Chicago, Ill. Inverted lamp. No. 1,106,631; Aug. 11; Gaz. vol. 205; p. 410.

Dawes, John L., Pittsburgh, Pa. Illuminated sign. No. 1,106,135; Aug. 4; Gaz. vol. 205; p. 193.

Daws, Edgar F., Sioux City, Iowa. Gasolene-strainer. No. 1,107,766; Aug. 18; Gaz. vol. 205; p. 857.

Dawson, Artemas L., Westfield, N. Y. Grape-scissors. No. 1,108,112; Aug. 18; Gaz. vol. 205; p. 977.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Percussive firing mechanism of breech-loading guns. No. 1,105,625; Aug. 4; Gaz. vol. 205; p. 13.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Percussive firing mechanism. No. 1,105,626; Aug. 4; Gaz. vol. 205; p. 13.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Percussive firing mechanism. No. 1,105,627; Aug. 4; Gaz. vol. 205; p. 14.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, England. Ranging and pointing gear of ordnance. No. 1,106,083; Aug. 4; Gaz. vol. 205; p. 174.

Dawson, William R., East Liverpool, Ohio. Sawing apparatus. No. 1,108,718; Aug. 25; Gaz. vol. 205; p. 1234.

Day, Frank E., Tacoma, Wash. Belt-strap for overalls. No. 1,107,158; Aug. 11; Gaz. vol. 205; p. 594.

Day, Gerald S., Oldham, England. Connector. No. 1,105,889; Aug. 4; Gaz. vol. 205; p. 105.

Day, Park L., Frazee, Minn., assignor of one-half to F. Klene, Kennedy, Mich. Bean-sorting machine. No. 1,105,890; Aug. 4; Gaz. vol. 205; p. 105.

Dayton Paper Novelty Company, The. (See Numann, Theodore L., assignor.)

De Bevoise, Charles R., Newark, N. J. Brassière. No. 1,106,184; Aug. 4; Gaz. vol. 205; p. 209.

De Buhr, John H., St. Louis, Mo. Automatic clutch-release. No. 1,107,915; Aug. 18; Gaz. vol. 205; p. 906.

De Clairmont, Adolfo, Toledo, Ohio. Stethoscope for automobiles. No. 1,107,212; Aug. 11; Gaz. vol. 205; p. 611.

De Huff, Henry, Cynwyd, assignor to D'Ollier Centrifugal Pump and Machine Company, Philadelphia, Pa. Pump construction. No. 1,107,591; Aug. 18; Gaz. vol. 205; p. 795.

De Kay, George A., Camden, S. C. Cotton-planter. No. 1,107,044; Aug. 11; Gaz. vol. 205; p. 551.

De Laval Separator Company, The. (See Miller, Theodore H., assignor.)

De Leeuw, Adolph L., assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio. Feed mechanism for machine-tools. No. 1,108,107; Aug. 18; Gaz. vol. 205; p. 975.

De Moure, Adolph B., Piper City, Ill. Grain-elevator. No. 1,106,632; Aug. 11; Gaz. vol. 205; p. 411.

De Saussure, William P., Jr., Englewood Cliffs, and G. S. Tiffany, Summit, N. J.; said Tiffany assignor, by mesne assignments, to said De Saussure. Index or information rack. No. 1,106,344; Aug. 4; Gaz. vol. 205; p. 261.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Chain-stitch sewing-machine. No. 1,107,659; Aug. 18; Gaz. vol. 205; p. 820.

De Witt, John W., *et al.* (See Laden, Joe G., assignor.)

De Wolf, Charles E. (See Fry, Henry E., assignor.)

Dean, Harry. (See Turner and Dean.)

Dean, William W., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Apparatus for governing the speed of motors. No. 1,107,914; Aug. 18; Gaz. vol. 205; p. 906.

Deckel, Friedrich, Munich, Germany. Engraving-machine. No. 1,106,084; Aug. 4; Gaz. vol. 205; p. 174.

Decker, William M., Buffalo, N. Y. Nursing device. No. 1,106,927; Aug. 11; Gaz. vol. 205; p. 513.

Deegan, Edward J. (See Hodgson and Deegan.)

Deegan, Edward J., New York, N. Y. Regulator. No. 1,108,146; Aug. 25; Gaz. vol. 205; p. 1036.

Deiser, Frederick, assignor to Chi Ill-Electric Company, Chicago, Ill. Electric plug. No. 1,106,442; Aug. 11; Gaz. vol. 205; p. 339.

Delany, Patrick B., South Orange, N. J., assignor to The Telepost Company, New York, N. Y. Telegraphy. No. 1,108,147; Aug. 25; Gaz. vol. 205; p. 1036.

Delany, Patrick B., South Orange, N. J., assignor to The Telepost Company, New York, N. Y. Telegraphy. No. 1,108,148; Aug. 25; Gaz. vol. 205; p. 1036.

Deleplanque, Armand A., Paris, France. Portable circular saw for working metals. No. 1,108,093; Aug. 18; Gaz. vol. 205; p. 970.

Delpeut, Léon, Lisbon, Portugal. Can-opening device. No. 1,108,719; Aug. 25; Gaz. vol. 205; p. 1234.

Dement, Isaac S., East Orange, N. J., assignor to American Mechanical Cashier Company, New York, N. Y. Computing-machine. No. 1,107,269; Aug. 18; Gaz. vol. 205; p. 679.

Deming, Macey F., Tappan, N. Y. Preserving food for infants, invalids, and old persons. No. 1,108,555; Aug. 25; Gaz. vol. 205; p. 1179.

Demory, Alexander F., Hagerstown, Md. Milking-pail. No. 1,107,413; Aug. 18; Gaz. vol. 205; p. 733.

Denehie, William A., assignor of one-half to G. L. Cooper, Los Angeles, Cal. Throttle-valve. No. 1,106,633; Aug. 11; Gaz. vol. 205; p. 411.

Denis, Luc L. B., Paris, France. Elastic wheel. No. 1,107,916; Aug. 18; Gaz. vol. 205; p. 906.

Denk, Simon, Brooklyn, N. Y. Roll for twist-drills. No. 1,106,928; Aug. 11; Gaz. vol. 205; p. 514.

Dennis, Adolphus S., Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,106,929; Aug. 11; Gaz. vol. 205; p. 514.

Dennis, Fred J. (See Seegmiller, Charles H., assignor.)

Deperdussin, Armand J. A., Paris, France. Aeroplane-fuselage. No. 1,106,193; Aug. 4; Gaz. vol. 205; p. 212.

Deray, Jean F., assignor to himself, C. E. Lebrecht, and A. P. Freeman, Sunnyvale, Cal., trustees. Diver's air-pump. No. 1,107,414; Aug. 18; Gaz. vol. 205; p. 733.

Derks, Ernest V., *et al.* (See Heina, William M., assignor.)

Dern, George H., *et al.* (See Christensen and Holt, assignors.)

Derrick, Millard F., Montreal, Quebec, Canada. Suction gas-producer. No. 1,107,917; Aug. 18; Gaz. vol. 205; p. 907.

Deshler, Henry D., Belvidere, N. J. Vending-machine. No. 1,107,270; Aug. 18; Gaz. vol. 205; p. 680.

Desmond, John, Wilmette, assignor to W. S. Potwin, Chicago, Ill. Flexible piston-rod and cylinder therefor. No. 1,106,930; Aug. 11; Gaz. vol. 205; p. 515.

Desmond, John, Wilmette, assignor to W. S. Potwin, Chicago, Ill. Means for starting internal-combustion engines. No. 1,108,720; Aug. 25; Gaz. vol. 205; p. 1235.

Desso, William F., Somers, Conn. Car-replacing device. No. 1,106,864; Aug. 11; Gaz. vol. 205; p. 491.

Detrick, Emmett G., Vicksburg, Miss. Pneumatic hammer. No. 1,108,834; Aug. 25; Gaz. vol. 205; p. 1273.

Detroit Demountable Rim Co. (See Snyder, Harry M., assignor.)

Detroit Dental Manufacturing Company. (See Bartlett and Kerr, assignors.)

Detwiler, Forest V., Chicago, Ill. Cooker. No. 1,106,634; Aug. 11; Gaz. vol. 205; p. 411.
Deutsch, Simon, Detroit, Mich. Centrifugal clutch. No. 1,108,345; Aug. 25; Gaz. vol. 205; p. 1105.
Devarney, Mitchel E., St. Albans, Vt. Bottle. No. 1,106,030; Aug. 4; Gaz. vol. 205; p. 156.
Dewey, Haywood G., Newark, N. J. Weighing-machine. No. 1,107,592; Aug. 18; Gaz. vol. 205; p. 795.
Dewson, Edward H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Electropneumatic brake-valve. No. 1,108,149; Aug. 25; Gaz. vol. 205; p. 1037.
Dexter Folder Company. (See Slade, Albert J., Jr., assignor.)
Diaz, Bárbaro J., Madrid, Spain. Hat pressing or blocking device. No. 1,106,635; Aug. 11; Gaz. vol. 205; p. 412.
Dick, Archie P., Jr., Clarksville, Tex. Burglar-alarm. No. 1,107,767; Aug. 18; Gaz. vol. 205; p. 858.
Dickson, Sylva L., Short Creek, W. Va. Relay sounder attachment. No. 1,105,761; Aug. 4; Gaz. vol. 205; p. 62.
Diehl, Emory L. (See Reese and Diehl.)
Diehl, Philip, and M. Hemleb, Elizabeth, N. J., assignors to The Singer Manufacturing Company. Sewing-machine pull-off. No. 1,105,968; Aug. 4; Gaz. vol. 205; p. 134.
Diemer, Anton, assignor to Firm of R. Bosch, Stuttgart, Germany. Apparatus for automatically adjusting the sparking period of ignition systems. No. 1,105,628; Aug. 4; Gaz. vol. 205; p. 14.
Dignan, Ruth, assignor to Waterloo Skirt & Garment Company, Waterloo, Iowa. Placket-fastener. No. 1,106,360; Aug. 11; Gaz. vol. 205; p. 315.
Dillon, James F., Dante, assignor of three-fourths to C. F. Kilgore and one-fourth to A. Blevins, Coeburn, Va. Mine-door. No. 1,107,045; Aug. 11; Gaz. vol. 205; p. 551.
Dillon, William L., Council Bluffs, Iowa. Fence-clamp. No. 1,107,159; Aug. 11; Gaz. vol. 205; p. 594.
Dimmerling, Elizabeth M. M., Braddock, Pa. Combined chair and cradle. No. 1,107,918; Aug. 18; Gaz. vol. 205; p. 907.
Dines, William L., Jr., assignor to William L. Dines, Jr., Co., Worcester, Mass. Hulling-machine. No. 1,106,085; Aug. 4; Gaz. vol. 205; p. 174.
Dismuke, William H., *et al.* (See Morton, Frank M., assignor.)
Ditsworth, Alfred R., Lonerock, Iowa. Root digging and gathering machine. No. 1,105,762; Aug. 4; Gaz. vol. 205; p. 62.
Dixon, Amos F. (See Adams and Dixon.)
Dixon, Amos F., Newark, N. J., assignor to Western Electric Company, New York, N. Y. Four-party key. No. 1,105,629; Aug. 4; Gaz. vol. 205; p. 15.
Doane, Joseph W. (See Woodward and Doane.)
Dobbs, James A., and R. Krebs, Jr., Olive, Cal. Metallic railway-tie and rail-fastener. No. 1,106,636; Aug. 11; Gaz. vol. 205; p. 412.
Doble, Abner, Waltham, Mass. Oil-separator. No. 1,107,271; Aug. 18; Gaz. vol. 205; p. 680.
Dockendorff, Clarence E., Estacada, Oreg. Gin-pole cap. No. 1,106,498; Aug. 11; Gaz. vol. 205; p. 362.
Doddridge, James M., Milton, and J. C. Beck, Indianapolis, Ind. Detachable casket-handle. No. 1,106,031; Aug. 4; Gaz. vol. 205; p. 156.
Dodge, Alfred C., Yonkers, N. Y. Weighing-machine. No. 1,105,891; Aug. 4; Gaz. vol. 205; p. 106.
Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Metering low-velocity fluid-flows. No. 1,108,721; Aug. 25; Gaz. vol. 205; p. 1235.
Dodge, Claude R., Rockford, Ill. Tag. No. 1,108,835; Aug. 25; Gaz. vol. 205; p. 1274.
Dodge, Claude R., St. George, Utah. Tag former and affixer. No. 1,108,836; Aug. 25; Gaz. vol. 205; p. 1274.
Dodge, Claude R., St. George, Utah. Combined tag affixing and marking machine. No. 1,108,837; Aug. 25; Gaz. vol. 205; p. 1275.
Dodge, Edward H. (See Ballin and Dodge.)
Doelling, Louis K. (See Schliemann, William, assignor.)
Doelling, Louis K., New Rochelle, N. Y. Refrigerating apparatus. No. 1,106,287; Aug. 4; Gaz. vol. 205; p. 242.
Dohner, Burt E., and A. J. Huff, Dayton, Ohio. Roller-bearing. No. 1,108,722; Aug. 25; Gaz. vol. 205; p. 1236.
Dolph, Selden H., Olyphant, Pa. Safety-catch for elevators. No. 1,108,723; Aug. 25; Gaz. vol. 205; p. 1236.
Dombelek, Klemens, New Castle, Pa. Rail-chair. No. 1,108,069; Aug. 18; Gaz. vol. 205; p. 961.
Donatz, Otto. (See Mühl, Ernst, assignor.)
Donisi, Luigi, New York, N. Y. Cheese-grinding mill. No. 1,106,931; Aug. 11; Gaz. vol. 205; p. 515.
Donnelly, Frank A., and J. E. Blanthorn, New York, N. Y. Fabric-clamp. No. 1,106,136; Aug. 4; Gaz. vol. 205; p. 194.
Donnelly, Lawrence F., Lansford, Pa. Goggles. No. 1,105,630; Aug. 4; Gaz. vol. 205; p. 15.
Donnelly, Peter H., New Bedford, assignor to Draper Company, Hopedale, Mass. Tension-controlling means for spoolers. No. 1,105,969; Aug. 4; Gaz. vol. 205; p. 137.
Donnelly, William T., Brooklyn, N. Y. Floating dry-dock. No. 1,107,768; Aug. 18; Gaz. vol. 205; p. 858.
Donner, Philip C., Summit, N. J. Carroting fur. No. 1,106,371; Aug. 11; Gaz. vol. 205; p. 316.
Dooley, Frank P., Chicago, Ill. Wire fabric. No. 1,106,551; Aug. 11; Gaz. vol. 205; p. 381.
Dorneth, Julius, assignor to Typograph Gesellschaft m. b. H., Berlin, Germany. Matrix-line setting and casting machine. No. 1,108,556; Aug. 25; Gaz. vol. 205; p. 1179.
Dorr, John V., Denver, Colo. Resistance-indicator. No. 1,106,865; Aug. 11; Gaz. vol. 205; p. 491.
Dorsey Manufacturing Company. (See Gifford, Harry E., assignor.)
Double Body Bolster Company. (See Pulliam, Oswald S., assignor.)
Double Body Bolster Co. (See Smith, Clarence E., assignor.)
Douglas, Charles H., Springfield, assignor to Douglas Saw & Machinery Co., Boston, Mass. Machine for ribbing the teeth of saws. No. 1,107,500; Aug. 18; Gaz. vol. 205; p. 763.
Douglas Saw & Machinery Co. (See Douglas, Charles H., assignor.)
Douglas, Walter L. (See Heyne, Howard A., assignor.)
Douglass, David P. T., Jackson, Tenn. Floor-scraper. No. 1,107,919; Aug. 18; Gaz. vol. 205; p. 908.
Dowdy, Dorin C., Huntington, W. Va. Rivet-holding device. No. 1,105,892; Aug. 4; Gaz. vol. 205; p. 106.
Down, Thomas M., London, England. Bullet for kinema-targets. No. 1,107,593; Aug. 18; Gaz. vol. 205; p. 795.
Downey, Hugh J., Modesto, Cal. Match-container. No. 1,105,893; Aug. 4; Gaz. vol. 205; p. 107.
Doyle, Francis J., Chicago, Ill. Furnace. No. 1,107,594; Aug. 18; Gaz. vol. 205; p. 796.
Doyle, William E., Bloomfield, N. J. Trousers-stretcher. No. 1,106,137; Aug. 4; Gaz. vol. 205; p. 194.
Drain, Edwin G., Tacoma, Wash. Timber-dolly. No. 1,105,631; Aug. 4; Gaz. vol. 205; p. 15.
Drake, Harry B., *et al.* (See Laden, Joe G., assignor.)
Drake, William C., Lyra, Tex. Ice-can fastener for ice plants. No. 1,106,637; Aug. 11; Gaz. vol. 205; p. 412.
Draper Company. (See Bernier, Oscar, assignor.)
Draper Company. (See Donnelly, Peter H., assignor.)
Draper Company. (See Koechlin, Albert G., assignor.)
Draper, John F., and J. J. Taglauer, Eddyville, Iowa. Trap. No. 1,108,724; Aug. 25; Gaz. vol. 205; p. 1236.
Drawbaugh, Harman K., assignor of one-half to O. B. Morse, York, Pa. Stock and die. No. 1,108,346; Aug. 25; Gaz. vol. 205; p. 1106.
Dressel Railway Lamp Works, The. (See Wilkie, Fred, assignor.)
Dresser, Solomon R., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Clamping-ring for pipe-couplings. No. 1,107,595; Aug. 18; Gaz. vol. 205; p. 796.
Drewell, Heinrich, Charlottenburg, Germany. Band-perforating apparatus. No. 1,106,638; Aug. 11; Gaz. vol. 205; p. 412.
Drewitz, Albert, Syracuse, N. Y. Receptacle-closure. No. 1,106,032; Aug. 4; Gaz. vol. 205; p. 157.
Driebusch, Otto P., Medford, Wis. Lock. No. 1,105,632; Aug. 4; Gaz. vol. 205; p. 16.
Drohan, Edward R., Lynn, Mass. Umbrella. No. 1,107,415; Aug. 18, Gaz. vol. 205; p. 733.
Droz, Earl L., Colville, Wash. Fender. No. 1,107,046; Aug. 11; Gaz. vol. 205; p. 552.
Druckerman, Max, Brooklyn, N. Y. Sewing-machine. No. 1,108,347; Aug. 25; Gaz. vol. 205; p. 1106.
Druckerman, Max, Brooklyn, N. Y. Sewing-machine. No. 1,108,348; Aug. 25; Gaz. vol. 205; p. 1106.
Drummond, Roy, Seattle, Wash. Wrench. No. 1,106,932; Aug. 11; Gaz. vol. 205; p. 515.
Du Brul, Albert. (See Du Brul, Napoleon and A.)
Du Brul, Napoleon, Cincinnati, Ohio, and A. Du Brul, Fort Thomas, Ky., assignors to The Miller Du Brul and Peters Mfg. Co., Cincinnati, Ohio. Carding tobacco. No. 1,107,047; Aug. 11; Gaz. vol. 205; p. 552.
Du Pont, Ernest. (See Du Pont, Francis I. and E.)
Du Pont, Francis I., Wilmington, Del. Apparatus for forming explosive powder into spherical grains. No. 1,106,138; Aug. 4; Gaz. vol. 205; p. 194.
Du Pont, Francis I., Wilmington, Del., assignor to International Haloid Company. Apparatus for liquid separation of solids. No. 1,106,195; Aug. 4; Gaz. vol. 205; p. 213.
Du Pont, Francis I. and E., Wilmington, Del. Forming explosive black powder into spherical grains. No. 1,106,087; Aug. 4; Gaz. vol. 205; p. 175.
Dudley, Asa L., and J. J. Schmidt, Glenville, Nebr. Manure-spreader. No. 1,108,150; Aug. 25; Gaz. vol. 205; p. 1037.
Dudley, Carol, San Diego, Cal. Bib. No. 1,108,557; Aug. 25; Gaz. vol. 205; p. 1180.
Dudley, Joseph G. (See Meadows, Harold G., assignor.)
Duff Manufacturing Company, The. (See Hindman, Isaiah E., assignor.)
Duffy, Burnley S., Elkton, Ky. Banana-rack for cars. No. 1,106,288; Aug. 4; Gaz. vol. 205; p. 242.
Duffy, Thomas F., *et al.* (See Ryan, Patrick, assignor.)
Dufloth, Gottlieb G., Tolstoy, S. D. Tank-gage. No. 1,106,552; Aug. 11; Gaz. vol. 205; p. 382.
Duhem, Victor L., Oakland, Cal., assignor to Vim Motion Picture Company. Motion-picture machine. No. 1,108,838; Aug. 25; Gaz. vol. 205; p. 1275.
Dumesnil, Paul, Paris, France. Blowpipe. No. 1,107,272; Aug. 18; Gaz. vol. 205; p. 681.
Duncan, Jay R., Good Thunder, Minn. Toy. No. 1,108,725; Aug. 25; Gaz. vol. 205; p. 1236.

Duncan, Otis B., Chicago, Ill., assignor to George Cutter Company, South Bend, Ind. Motor-switch. No. 1,106,639; Aug. 11; Gaz. vol. 205; p. 413.
Dunham, George W., assignor to Saxon Motor Car Company, Detroit, Mich. Engine-lubricating system. No. 1,105,894; Aug. 4; Gaz. vol. 205; p. 107.
Dunham, Hermon E., assignor to The Hermon E. Dunham Motor Company, Seattle, Wash. Internal-combustion engine and operating the same. No. 1,106,194; Aug. 4; Gaz. vol. 205; p. 213.
Dunn, Frank P., Anderson, Ind. Vending-machine. No. 1,107,660; Aug. 18; Gaz. vol. 205; p. 820.
Dunn, Harry E. (See Dunn, William E. and H. E.)
Dunn, Irwin L., Long Beach, Cal. Restoring and increasing the production of oil and gas wells. No. 1,107,416; Aug. 18; Gaz. vol. 205; p. 734.
Dunn, James, assignor to The Warner Brothers Company, Bridgeport, Conn. Paper-box blank. No. 1,107,048; Aug. 11; Gaz. vol. 205; p. 552.
Dunn, William E. and H. E., Chicago, Ill. Cement-tile machine. No. 1,106,086; Aug. 4; Gaz. vol. 205; p. 175.
Duntley, John W. (See Ferguson, Leonard L., assignor.)
Durand, Nelson C., Newark, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Controlling device. No. 1,106,443; Aug. 11; Gaz. vol. 205; p. 340.
Duryea, Charles E., Reading, Pa. Internal-combustion engine. No. 1,107,501; Aug. 18; Gaz. vol. 205; p. 763.
Dustin, Charles, Avoca, N. Y. Lantern-lighter. No. 1,107,049; Aug. 11; Gaz. vol. 205; p. 553.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,107,050; Aug. 11; Gaz. vol. 205; p. 553.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Fiber-case railway-torpedo. No. 1,107,051; Aug. 11; Gaz. vol. 205; p. 553.
Duthie, Charles. (See Andersen, Niels K., assignor.)
Dye-Works. (See Bodmer, Ernest, assignor.)
Dyer, Charles J., Oakland, Cal. Game apparatus. No. 1,106,499; Aug. 11; Gaz. vol. 205; p. 362.
Dymond, Jacob F., Uniontown, Pa. Carbon fuel. No. 1,106,289; Aug. 4; Gaz. vol. 205; p. 242.
E. & B. Holmes Machinery Co. (See Bengler, Edwin F., assignor.)
E. F. Caldwell & Co. (See Tizley, Arthur J., assignor.)
E. I. du Pont de Nemours Powder Company. (See Hibbard, Walter R., assignor.)
E. J. Manville Machine Company, The. (See Brennan, Charles T., assignor.)
E. J. Manville Machine Company. (See Julian, David, assignor.)
E. J. Manville Machine Company, The. (See Smith, Henry L., assignor.)
E. W. Bliss Company. (See Klocke, William, assignor.)
E. W. Bliss Company. (See Leavitt, Frank M., assignor.)
E-Z-Ryde Shock Absorber Co. (See Bugg, Owen T., assignor.)
Eagle Square Manufacturing Company. (See Harris, Henry E., assignor.)
Eames, Gardner T., assignor to G. T. Eames Company, Kalamazoo, Mich. Arbor-press. No. 1,106,500; Aug. 11; Gaz. vol. 205; p. 363.
Earl, Ernest J., *et al.* (See Earl, Malcolm W., assignor.)
Earl, John H., Somerville, Mass. Reversible valve-gear. No. 1,106,866; Aug. 11; Gaz. vol. 205; p. 492.
Earl, Malcolm W., assignor of three-fourths to P. J., S. E., and E. J. Earl, Watertown, N. Y. Machine for wrapping celery. No. 1,107,273; Aug. 18; Gaz. vol. 205; p. 681.
Earl, Persis J., *et al.* (See Earl, Malcolm W., assignor.)
Earl, Sheridan E., *et al.* (See Earl, Malcolm W., assignor.)
Earl, Virgil D., and F. E. Mangold, Portland, Oreg. Adjustable socket-wrench bit. No. 1,107,769; Aug. 18; Gaz. vol. 205; p. 858.
Earle, Richard B., and L. P. Kyriakides, assignors to Hood Rubber Company, Boston, Mass. Producing isoprene. No. 1,106,290; Aug. 4; Gaz. vol. 205; p. 242.
Easterling, Crawford L., Plant City, Fla. Plow-stock. No. 1,107,920; Aug. 18; Gaz. vol. 205; p. 908.
Eastman Kodak Company. (See Robertson and Kroedel, assignors.)
Eaton, Clara S., New York, N. Y. Belt-fastener. No. 1,106,790; Aug. 11; Gaz. vol. 205; p. 465.
Eaton, George C., Norwich, N. Y. Watering device. No. 1,108,151; Aug. 25; Gaz. vol. 205; p. 1038.
Eberling, Charles M., Cleveland, Ohio. Tile-making machine. No. 1,106,088; Aug. 4; Gaz. vol. 205; p. 176.
Eberling, Charles M., Cleveland, Ohio. Cement-working machinery. No. 1,106,089; Aug. 4; Gaz. vol. 205; p. 176.
Eccleston, Josiah, Roy, Wash. Door-closer. No. 1,106,640; Aug. 11; Gaz. vol. 205; p. 413.
Eckardt, Friedrich. (See Eppenstein and Eckardt.)
Eckenrod, Annie. (See Haverty and Eckenrod.)
Eddystone Manufacturing Company, The. (See Macadam, John, assignor.)
Edgar Allen American Manganese Steel Company. (See Black, Edward S., assignor.)
Edison, Thomas A., Llewellyn Park, Orange, N. J. Fuel-feeding apparatus. No. 1,106,444; Aug. 11; Gaz. vol. 205; p. 340.
Edmondson, Thomas R., assignor of one-half to E. G. Sporleder, Tucson, Ariz. Vehicle-bed. No. 1,107,596; Aug. 18; Gaz. vol. 205; p. 797.
Edmunds and Jones Manufacturing Company. (See Godley, Charles E., assignor.)
Edqvist, Olof F., Denver, Colo. Rotary gas-engine. No. 1,108,152; Aug. 25; Gaz. vol. 205; p. 1038.
Edwards, Whitfield H., Tamina, Tex. Nut-lock. No. 1,105,763; Aug. 4; Gaz. vol. 205; p. 62.
Eells, Henry B., and I. H. Kaufman, assignors to James Boggs & Co., New York, N. Y. Filter connection. No. 1,108,153; Aug. 25; Gaz. vol. 205; p. 1038.
Eggart, Karl, assignor to Firm of A. Saurer, Arbon, Switzerland. Jacquard-card-perforating machine. No. 1,108,492; Aug. 25; Gaz. vol. 205; p. 1157.
Eggleston, Harvey L., Tulare, Cal. Road-dresser. No. 1,107,770; Aug. 18; Gaz. vol. 205; p. 859.
Ehrlich, Paul, and P. Karrer, Frankfort-on-the-Main, assignors to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany. Arsenostibino compounds and making same. No. 1,108,154; Aug. 25; Gaz. vol. 205; p. 1039.
Eiberle, Paul, Baltimore, Md. Hair braiding or weaving apparatus. No. 1,107,052; Aug. 11; Gaz. vol. 205; p. 554.
Eichhoff, Walter E., South Pasadena, Cal. Wire-reel. No. 1,108,726; Aug. 25; Gaz. vol. 205; p. 1237.
Eick, Otto, Baltimore, Md. Apparatus for handling bottles or other containers. No. 1,106,033; Aug. 4; Gaz. vol. 205; p. 157.
Eick, Otto, Baltimore, Md. Brush for cleaning bottles or other containers. No. 1,106,034; Aug. 4; Gaz. vol. 205; p. 157.
Elgen, Benno vom, Newark, N. J., assignor to Aug. Goertz & Co. Closure for coin-repositories. No. 1,108,349; Aug. 25; Gaz. vol. 205; p. 1107.
Elgen, Benno vom, Newark, N. J., assignor to August Goertz & Co. Match-box. No. 1,108,429; Aug. 25; Gaz. vol. 205; p. 1133.
Elgen, Benno vom, Newark, N. J., assignor to August Goertz & Co. Safety-catch for bag-frames. No. 1,108,430; Aug. 25; Gaz. vol. 205; p. 1134.
Elsemann Magneto Co. (See Gassmann, Eugene, assignor.)
Elsenmann, Carl W., Chicago, Ill. Automatically-operated switch. No. 1,106,372; Aug. 11; Gaz. vol. 205; p. 316.
Eisler Manufacturing Company. (See Castor and Kiefer, assignors.)
Eklund, Georg T., San Francisco, Cal. Swinging-sash connection. No. 1,106,791; Aug. 11; Gaz. vol. 205; p. 465.
Electric Boat Company. (See Bartlett, Charles H., assignor.)
Electric Boat Company. (See Lagergren, Gustav M., assignor.)
Electric Compositor Company. (See Goddard, Edward F., assignor.)
Electric Compositor Company. (See Hammond, Guy L., assignor.)
Electric Compositor Company. (See Le Boeuf, Arthur W., assignor.)
Electric Compositor Company. (See Petri-Palmedo, David, assignor.)
Electric Goods Manufacturing Company. (See Thomson and Michaelsen, assignors.)
Electric Railway Improvement Company, The. (See Herrick, Albert B., assignor.)
Electro Surgical Instrument Company. (See Carroll, George G., assignor.)
Electrolytic Products Company. (See Feldkamp, Frederick A., assignor.)
Elevator Supply & Repair Company. (See Payne, Fred S., assignor.)
Elliot, Emma P. W. (See Mesick, Elliot, and Woodcock.)
Elliott, Charles L., Detroit, Mich. Internal-combustion engine. No. 1,107,274; Aug. 18; Gaz. vol. 205; p. 681.
Elliott Company. (See Clifford, William, assignor.)
Elliott-Fisher Company. (See Fisher, Robert J., assignor.) (Reissue.)
Ellis, George H., assignor, by mesne assignments, to Northern Insulating Company, St. Paul, Minn. Insulating fabric. No. 1,108,155; Aug. 25; Gaz. vol. 205; p. 1039.
Ellis, John J. (See Shepheard, James, assignor.)
Ells, Hallett D., Kansas City, Mo., assignor of one-half to E. E. McKee, Kansas City, Kans. Chock for vehicle-wheels. No. 1,108,156; Aug. 25; Gaz. vol. 205; p. 1039.
Elmore, Guy H., Swarthmore, and H. V. Croll, Philadelphia, Pa. Jig-plunger. No. 1,108,558; Aug. 25; Gaz. vol. 205; p. 1180.
Emeringer, John, Randolph, Nebr. Gearing. No. 1,106,792; Aug. 11; Gaz. vol. 205; p. 465.
Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)
Emerson, George H., and H. Yoerg, St. Paul, Minn., assignors to Locomotive Superheater Company. Superheater. No. 1,105,633; Aug. 4; Gaz. vol. 205; p. 16.
Emerson, George H., and H. Yoerg, St. Paul, Minn., assignors to Locomotive Superheater Company. Superheater. No. 1,105,634; Aug. 4; Gaz. vol. 205; p. 17.
Emerson, Merton L., Braintree, assignor to American Pneumatic Service Company, Boston, Mass. Pneumatic-despatch-tube apparatus. No. 1,107,661; Aug. 18; Gaz. vol. 205; p. 820.
Emerson, Victor H., New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn. Sound-record. No. 1,107,502; Aug. 18; Gaz. vol. 205; p. 763.
Emery, Plato G., Chicago, Ill. Shade-holding mechanism. No. 1,108,559; Aug. 25; Gaz. vol. 205; p. 1180.

Engby, Cornelius. (See Mathiesen, James C., assignor.)
Engelberg, Evaristo C., São Paulo, Brazil. Machine for hulling and polishing rice. No. 1,105,635; Aug. 4; Gaz. vol. 205; p. 17.
Engelman, William F., Nokomis, Ill. Corn-planter. No. 1,106,373; Aug. 11; Gaz. vol. 205; p. 316.
England, James R., assignor of one-third to J. D. Milford, Columbus, Ga. Harvesting-machine. No. 1,106,196; Aug. 4; Gaz. vol. 205; p. 214.
English, Albert S., Anaconda, Mont. Train-pipe coupling. No. 1,106,354; Aug. 4; Gaz. vol. 205; p. 264.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,107,597; Aug. 18; Gaz. vol. 205; p. 707.
Enos, Robert C. (See Palmer, Harold N., assignor.)
Ensign, Orville H. (See Ensign, Roy F., assignor.)
Ensign, Roy F., assignor to O. H. Ensign, Pasadena, Cal. Vaporizer. No. 1,108,727; Aug. 25; Gaz. vol. 205; p. 1237.
Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Optical square. No. 1,105,895; Aug. 4; Gaz. vol. 205; p. 107.
Eppenstein, Otto, and F. Eckardt, assignors to Firm of C. Zeiss, Jena, Germany. Telemeter. No. 1,107,503; Aug. 18; Gaz. vol. 205; p. 763.
Eppler, Andrew, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-sewing machine. No. 1,108,560; Aug. 25; Gaz. vol. 205; p. 1181.
Erb, John. (See Boland, John E., assignor.)
Erdman, Otto H., Birmingham, Ala. Furnace-grate. No. 1,105,636; Aug. 4; Gaz. vol. 205; p. 18.
Erickson, Nels, Coon Valley, Wis. Device for sampling milk or cream. No. 1,108,561; Aug. 25; Gaz. vol. 205; p. 1181.
Ern, Charles F., Jr., New York, N. Y. Razor. No. 1,107,662; Aug. 18; Gaz. vol. 205; p. 821.
Ernenwein, Phillip J., New York, N. Y., assignor to Kelly-Springfield Tire Company, Jersey City, N. J. Rubber tire. No. 1,106,701; Aug. 11; Gaz. vol. 205; p. 433.
Erney, Frank J., Cleveland, Ohio. Signaling device for automobiles. No. 1,105,637; Aug. 4; Gaz. vol. 205; p. 18.
Ernst, Richard, New York, N. Y. Hair-dye. No. 1,108,157; Aug. 25; Gaz. vol. 205; p. 1040.
Erskine, James E., assignor of one-half to A. Isenberg, Louisville, Ky. Piston-bearing. No. 1,106,702; Aug. 11; Gaz. vol. 205; p. 433.
Esplen, Alexander, Liverpool, England. Controlling the starting and working of engines. No. 1,106,197; Aug. 4; Gaz. vol. 205; p. 214.
Estabrook, Alvah W., Kansas City, Mo., and H. E. Weaver, Kansas City, assignors to The Larabee Flour Mills Company, Hutchinson, Kans. Dry-shortening flour. No. 1,105,638; Aug. 4; Gaz. vol. 205; p. 19.
Estabrook, Harry M., assignor to The Barney and Smith Car Company, Dayton, Ohio. Closure for hoppers. No. 1,105,639; Aug. 4; Gaz. vol. 205; p. 19.
Estate of P. D. Beckwith, Inc. (See Howes, George W., assignor.)
Etter, Harvey V. (See Beadle and Etter.)
Euchenhofner, Albert J. (See Rieske, Otto G., assignor.)
Euston, Edwin, St. Louis, Mo. Producing white lead. No. 1,106,793; Aug. 11; Gaz. vol. 205; p. 465.
Euston, Edwin, St. Louis Mo. Producing white lead. No. 1,106,794; Aug. 11; Gaz. vol. 205; p. 466.
Euston, Edwin, St. Louis, Mo. Composition of matter to be used as a pigment. No. 1,108,562; Aug. 25; Gaz. vol. 205; p. 1181.
Evans, Clarence T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,108,563; Aug. 25; Gaz. vol. 205; p. 1181.
Evans, George H., Memphis, Tenn. Land-anchor. No. 1,108,158; Aug. 25; Gaz. vol. 205; p. 1040.
Evans, Thomas F., Wilmslow, England. Driving-gear for motor-vehicles. No. 1,105,640; Aug. 4; Gaz. vol. 205; p. 19.
Evenson, Martin, Hudson, Wis. Window-frame. No. 1,107,504; Aug. 18; Gaz. vol. 205; p. 764.
Everett, Archie L., Mount Carmel, Pa. Device for compressing piston-rings. No. 1,106,198; Aug. 4; Gaz. vol. 205; p. 214.
Every, Elmer D. (See Tyler and Every.)
Ewald, Albert J., Los Angeles, Cal. Load brake apparatus. No. 1,107,505; Aug. 18; Gaz. vol. 205; p. 764.
Ewald, Leo, Minneapolis, Minn. Cleaning-brush for linotype-machine plungers. No. 1,106,795; Aug. 11; Gaz. vol. 205; p. 466.
Ewart, Arthur F., assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Sugar-cane mill. No. 1,106,291; Aug. 4; Gaz. vol. 205; p. 243.
Ewell, John F., assignor to Barrett Manufacturing Company, Chicago, Ill. Underbody for tank-cars. No. 1,107,053; Aug. 11; Gaz. vol. 205; p. 554.
Ewing, Alexander, Victoria, British Columbia, Canada. Liquid-fuel burner. No. 1,108,728; Aug. 25; Gaz. vol. 205; p. 1237.
Ewing, Maria, Tarrytown, N. Y. Map. No. 1,108,159; Aug. 25; Gaz. vol. 205; p. 1040.
Excelsior Needle Company. (See Lamb, Amherst G., assignor.)
Ezbelent, Engène L., Paris, France. Plaiting-machine for producing textile fabrics resembling velvet. No. 1,107,771; Aug. 18; Gaz. vol. 205; p. 859.
F. Wesel Manufacturing Company. (See Weston, Folke W., assignor.)
F. W. Spacke Machine Company, The. (See Spacke, William, assignor.)
F. W. Spacke Machine Company, The. (See Spacke, Brownlee, and Spacke, assignors.)
F. W. Webb Manufacturing Company. (See Thorndike, Herbert W., assignor.)
Faber & Co., M. (See Mattitsch, August, assignor.)
Fackenthall, Charles S., Pacific Grove, Cal. Filter. No. 1,106,641; Aug. 11; Gaz. vol. 205; p. 414.
Fader, Fenwick D., J. and J. W. Tibb, Vancouver, British Columbia, Canada. Call-registering telephone. No. 1,106,501; Aug. 11; Gaz. vol. 205; p. 363.
Fahrney, William H., Chicago, Ill. Spring vehicle-wheel. No. 1,108,564; Aug. 25; Gaz. vol. 205; p. 1182.
Fairbanks, Alfred C., trustee. (See Adams, Harry A., assignor.)
Fairbanks, Morse & Company. (See Atkinson, Cyril J., assignor.)
Fairbanks, Morse & Company. (See Macneill, Martin B., assignor.)
Fancher, Ward I., Glen Cove, N. Y. Eyeglass and mounting. No. 1,107,598; Aug. 18; Gaz. vol. 205; p. 797.
Färber, Fritz, Dortmund, Germany. Electric conductor. No. 1,108,350; Aug. 25; Gaz. vol. 205; p. 1107.
Farbwerke vorm. Meister Lucius & Bruning. (See Ehrlich and Karrer, assignors.)
Faries Manufacturing Co. (See Lucas, Clarence W., assignor.)
Farland, Louis J., Au Sable Forks, N. Y. Meat-tenderer. No. 1,106,642; Aug. 11; Gaz. vol. 205; p. 414.
Farley, Alfred C., Martinsburg, W. Va. Combination shade and curtain bracket. No. 1,106,796; Aug. 11; Gaz. vol. 205; p. 466.
Farley, John P., Kansas City, Mo. Compression-faucet. No. 1,106,933; Aug. 11; Gaz. vol. 205; p. 515.
Farm Products Distributing Company. (See Subert, Max, assignor.)
Farmer, Clyde C., Chicago, Ill., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Twin draft-gear. No. 1,107,275; Aug. 18; Gaz. vol. 205; p. 682.
Farmer, Luke W., Somerville, Mass. Apparatus for forming paper cups. No. 1,107,506; Aug. 18; Gaz. vol. 205; p. 764.
Farmer's Handy Wagon Co. (See Holnagel, William A., assignor.)
Farnum, Jennie F., New York, N. Y. Button. No. 1,108,431; Aug. 25; Gaz. vol. 205; p. 1134.
Farrington, Horace P., Brooklyn, N. Y. Combination-tool. No. 1,107,276; Aug. 18; Gaz. vol. 205; p. 682.
Fassett, James W. (See Wiwi and Fassett.)
Faulkner, George W. (See Barron and Faulkner.)
Faulkner, Joseph, *et al.*, executors. (See Goodyear, George W. and E. F.)
Fay, John L., St. Louis, Mo., and S. B. Way, Milwaukee, Wis. Electric insulator. No. 1,106,797; Aug. 11; Gaz. vol. 205; p. 466.
Fazi, Romolo de, Rome, Italy. Motor-spirit. No. 1,108,351; Aug. 25; Gaz. vol. 205; p. 1107.
Fenster, Luther T., Fairmont, W. Va. Adjustable finger-piece eyeglass-holder. No. 1,105,641; Aug. 4; Gaz. vol. 205; p. 20.
Federal Metallic Packing Company. (See Staples, Willard G., assignor.)
Federspiel, Matthew N., Milwaukee, Wis., assignor to Blue Island Specialty Company, Blue Island, Ill. Orthodontia-pliers. No. 1,108,493; Aug. 25; Gaz. vol. 205; p. 1157.
Feild, Claude, *et al.* (See Young, Charles M., assignor.)
Feldkamp, Frederick A., Newark, N. J., assignor to Electrolytic Products Company. Radiator and radiator-sections for automobiles, motor-cars, and the like. No. 1,108,494; Aug. 25; Gaz. vol. 205; p. 1158.
Feldkamp, Frederick A., Union, N. J., assignor to Electrolytic Products Company. Radiator and radiator-sections therefor for automobiles and the like. No. 1,108,495; Aug. 25; Gaz. vol. 205; p. 1158.
Ferguson, Leonard L., assignor to J. W. Duntley, Chicago, Ill. Filter for pneumatic carpet-cleaners. No. 1,108,094; Aug. 18; Gaz. vol. 205; p. 970.
Fernández, Angel, Habana, Cuba. Steam-boiler. No. 1,105,896; Aug. 4; Gaz. vol. 205; p. 107.
Fernholtz, Emil, Los Angeles, Cal., assignor to The National Briquetting and Clay Working Machinery Company, Phoenix, Ariz. Briquet-mold. No. 1,107,663; Aug. 18; Gaz. vol. 205; p. 821.
Ferrell, Fred C. (See Paris and Ferrell.)
Ferres, Jeffrey T., Los Angeles, Cal. Machine for making corrugated paper. No. 1,106,502; Aug. 11; Gaz. vol. 205; p. 364.
Ferrin, Moroni D., Salt Lake City, Utah. Flying-machine. No. 1,107,921; Aug. 18; Gaz. vol. 205; p. 908.
Ferro Machine and Foundry Company. (See Weber, Albert, assignor.)
Ferrochem Company, The. (See Bailey and Hatch, assignors.)
Ferry, John C., Sydney, New South Wales, Australia. Hip-pocket for men's trousers. No. 1,108,352; Aug. 25; Gaz. vol. 205; p. 1107.
Feuillette, Emile, assignor to Societe Etablissements E. Feuillette, Boulogne-sur-Seine, France. Drying apparatus. No. 1,108,565; Aug. 25; Gaz. vol. 205; p. 1182.

Fidler, Robert, and P. Napier, Chicago, Ill. Attachment for vehicles. No. 1,106,445; Aug. 11; Gaz. vol. 205; p. 341.
Fiege, Henry C., Bayfield, Wis. Wagon. No. 1,106,139; Aug. 4; Gaz. vol. 205; p. 194.
Field, Thomas J., and I. Simley, Black Earth, Wis. Non-skid metal sleigh-runner. No. 1,108,160; Aug. 25; Gaz. vol. 205; p. 1041.
Field, William, Penge, assignor to J. Parkin, London, England. Device for cutting wall-paper. No. 1,108,161; Aug. 25; Gaz. vol. 205; p. 1041.
Fields Company, The. (See Fields, George R., assignor.)
Fields, George R., Terre Haute, Ind., assignor to The Fields Company. Apparatus for making catsup. No. 1,107,161; Aug. 11; Gaz. vol. 205; p. 594.
Fields, John D., Maxville, Mont. Agitator and filter for treating ores. No. 1,107,922; Aug. 18; Gaz. vol. 205; p. 908.
Fields, William, Trenton, N. J. Lock. No. 1,106,292; Aug. 4; Gaz. vol. 205; p. 243.
Finch, Nathan W., Plano, Ill. Draft-equalizer. No. 1,107,277; Aug. 18; Gaz. vol. 205; p. 682.
Fink, Abraham L., Buffalo, N. Y. Garment. No. 1,106,199; Aug. 4; Gaz. vol. 205; p. 215.
Fink, John, New York, N. Y. Sewing-machine. No. 1,107,599; Aug. 18; Gaz. vol. 205; p. 797.
Finkelman, Louis, and J. Wilhelm, Philadelphia, Pa. Car-fender. No. 1,106,643; Aug. 11; Gaz. vol. 205; p. 414.
Firestone Tire & Rubber Company, The. (See Greenwald, Lemon, assignor.)
Firm, Joseph L., Berwyn, assignor to The Goss Printing Press Company, Chicago, Ill. Printing-press. No. 1,108,162; Aug. 25; Gaz. vol. 205; p. 1041.
Firsching, Joseph A., Utica, N. Y. Fabric-drying apparatus. No. 1,107,162; Aug. 11; Gaz. vol. 205; p. 595.
Firth, John. (See Sokolov, Jacob, assignor.)
Fischer, Adolph, Weimar, Germany. Stamp-affixing device. No. 1,108,729; Aug. 25; Gaz. vol. 205; p. 1238.
Fischer, Charles A., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Gib and key. No. 1,106,934; Aug. 11; Gaz. vol. 205; p. 516.
Fischer, Martin, Zurich, Switzerland, assignor, by mesne assignments, to J. T. Pratt, New York, N. Y. Interchangeable wheel of motor-cars. No. 1,106,345; Aug. 4; Gaz. vol. 205; p. 261.
Fischer, Pyrma E., New York, N. Y. Rotatable soap-holder. No. 1,107,278; Aug. 18; Gaz. vol. 205; p. 683.
Fischer, Wenzl R., Bellevue, Pa. Rail-joint. No. 1,107,923; Aug. 18; Gaz. vol. 205; p. 909.
Fisher Closed Body Company. (See Allmand, John T., assignor.)
Fisher, Harvey L., Woodstock, assignor to Fisher Manufacturing Company, Chicago, Ill. Type-writing machine. No. 1,107,664; Aug. 18; Gaz. vol. 205; p. 821.
Fisher, Hermon E., Hopkinton, N. Y. Folding egg-crate. No. 1,106,200; Aug. 4; Gaz. vol. 205; p. 215.
Fisher Manufacturing Company. (See Fisher, Harvey L., assignor.)
Fisher, Robert J., Athens, Tenn., assignor, by mesne assignments, to Elliott-Fisher Company. Type-writing machine. (Reissue.) No. 13,790; Aug. 25; Gaz. vol. 205; p. 1288.
Fitchet, Charles L., San Jose, Cal. Adjustable mirror. No. 1,106,503; Aug. 11; Gaz. vol. 205; p. 364.
Fitzwater, Marshall V., Stephens, Ark. Water-heater. No. 1,107,507; Aug. 18; Gaz. vol. 205; p. 765.
Fleetwood, James H., New Orleans, La. Continuously-operating filter. No. 1,107,924; Aug. 18; Gaz. vol. 205; p. 909.
Fletcher, Joseph H. (See Nedoma, Charles L., assignor.)
Flinn, David. (See Beck, James A., assignor.)
Flock, Lee P., Fyffe, Ala. Resilient vehicle-tire. No. 1,107,508; Aug. 18; Gaz. vol. 205; p. 765.
Floeter, Frederick S., Saginaw, Mich. Blue-print-making machine. No. 1,106,504; Aug. 11; Gaz. vol. 205; p. 365.
Flood & Conklin Co. (See Hambrock, Louis, Jr., assignor.)
Floyd, George G., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Car-truck. No. 1,105,897; Aug. 4; Gaz. vol. 205; p. 108.
Fogle, Basil L., Boyd, Ky. Folding hammock-frame. No. 1,106,293; Aug. 4; Gaz. vol. 205; p. 243.
Fogwell, Charles R., assignor to M. D. Taylor, Philadelphia, Pa. Printing-press. No. 1,107,772; Aug. 18; Gaz. vol. 205; p. 859.
Folberth, Frederick G., Cleveland, Ohio. Pump attachment for motor-vehicle engines. No. 1,107,054; Aug. 11; Gaz. vol. 205; p. 554.
Foley, Joseph W., Ottawa, Ontario, Canada. Razor attachment. No. 1,108,839; Aug. 25; Gaz. vol. 205; p. 1276.
Foote, George P., Danbury, Conn. Hat-flanging machine. No. 1,108,730; Aug. 25; Gaz. vol. 205; p. 1238.
Ford, Albert J., New York, N. Y., assignor to The Fuchs & Lang Manufacturing Company. Bronzing-machine. No. 1,107,773; Aug. 18; Gaz. vol. 205; p. 860.
Ford, John J., Ottumwa, Iowa. Card game. No. 1,107,417; Aug. 18; Gaz. vol. 205; p. 734.
Ford, John O., Jacksonville, Tex. Combined door and gate stop. No. 1,108,731; Aug. 25; Gaz. vol. 205; p. 1239.
Fordyce, Edgar W., assignor of one-half to J. Saks, Anniston, Ala. Flushing apparatus. No. 1,108,496; Aug. 25; Gaz. vol. 205; p. 1159.
Fordyce, Edmond A., assignor, by mesne assignments, to American Pneumatic Service Company, Boston, Mass. Pneumatic-despatch-tube apparatus. No. 1,106,346; Aug. 4; Gaz. vol. 205; p. 262.
Forman, Robert E., Paris, assignor of one-half to J. R. Hainline, Mount Sterling, Ky. Cutting and slicing machine. No. 1,106,035; Aug. 4; Gaz. vol. 205; p. 158.
Forst, John P., Chicago, Ill. Mower. No. 1,106,374; Aug. 11; Gaz. vol. 205; p. 316.
Forster, Frank, Orchid, Fla. Insecticide, fungicide, and soil antiseptic. No. 1,105,642; Aug. 4; Gaz. vol. 205; p. 20.
Forster, John, St. Helens, England. Apparatus for making glass articles. No. 1,106,140; Aug. 4; Gaz. vol. 205; p. 195.
Forster, Joseph, Warrington, England. Apparatus for preparing tanning liquors. No. 1,107,925; Aug. 18; Gaz. vol. 205; p. 910.
Forster, Joseph A. (See Metzger, Forster, and Kune.)
Forsyth, George H., Chicago, Ill. Sash construction. No. 1,105,970; Aug. 4; Gaz. vol. 205; p. 135.
Forward, Dryden B. (See McCulley, Rea, and Forward.)
Foster, Charles A., Arlington, Md. Cone-carrier. No. 1,108,432; Aug. 25; Gaz. vol. 205; p. 1135.
Foster, Edward C. (See Gettz and Foster.)
Foster, Ernest H., New York, N. Y. Superheater. No. 1,106,036; Aug. 4; Gaz. vol. 205; p. 158.
Foster, George A., Chicago, Ill. Liquid-package. No. 1,107,509; Aug. 18; Gaz. vol. 205; p. 765.
Foster, George W., Providence, R. I. Measuring device. No. 1,108,353; Aug. 25; Gaz. vol. 205; p. 1108.
Foster, Joel M., Brown Mills, N. J. Poultry exerciser and feeder. No. 1,108,566; Aug. 25; Gaz. vol. 205; p. 1183.
Foster, William S., Dallas, Wis. Road-planer. No. 1,107,279; Aug. 18; Gaz. vol. 205; p. 683.
Foulk, Edward O., Pioneer, La. Stretching device. No. 1,108,732; Aug. 25; Gaz. vol. 205; p. 1239.
Fouyer, Joseph F., Marseille, France. Antiseptic case for tooth-brushes. No. 1,107,280; Aug. 18; Gaz. vol. 205; p. 683.
Fowler, D'Roy F., Melrose Park, Pa. Making padding. No. 1,108,354; Aug. 25; Gaz. vol. 205; p. 1108.
Fox, Ansley H., Philadelphia, Pa., assignor to Automobile Development Company. Vehicle-spring. No. 1,105,971; Aug. 4; Gaz. vol. 205; p. 135.
Fox, William R., Grand Rapids, Mich. Universal joint. No. 1,108,567; Aug. 25; Gaz. vol. 205; p. 1183.
France, Robert N., assignor of one-half to E. B. Mott, Oswego, N. Y. Waste-collector for carding-machines. No. 1,108,070; Aug. 18; Gaz. vol. 205; p. 961.
Frank, Albert R., Halensee, near Berlin, Germany. Producing hydrogen. No. 1,107,926; Aug. 18; Gaz. vol. 205; p. 910.
Franke, Frederick W., assignor of one-third to M. P. Van Ness and one-third to E. A. Weidlich, Jr., Jamaica, N. Y. Removable valve-insulation casing. No. 1,108,840; Aug. 25; Gaz. vol. 205; p. 1276.
Franz, John H., Baltimore, Md. Tool-holder. No. 1,108,733; Aug. 25; Gaz. vol. 205; p. 1239.
Frasier, Emory M., assignor of one-third to G. B. Seaman and one-third to A. D. Seaman, San Francisco, Cal. Elevator-door safety device. No. 1,106,294; Aug. 4; Gaz. vol. 205; p. 243.
Fred H. Knapp Company. (See Knapp, Frederick H., assignor.)
Fred H. Knapp Company. (See Knapp and Blackstone, assignors.)
Frederick, Clarence H. (See Gall and Frederick.)
Frederick, John H., Casper, Wyo. Funnel. No. 1,107,774; Aug. 18; Gaz. vol. 205; p. 860.
Freeman, Arthur P., *et al.*, trustees. (See Deray, Jean F., assignor.)
Freer, Phelps M., Detroit, Mich. Vaporizer and carburetor. No. 1,106,935; Aug. 11; Gaz. vol. 205; p. 516.
Freiberg, Oskar, Gautzsch, near Leipzig, Germany. Sparking plug. No. 1,106,703; Aug. 11; Gaz. vol. 205; p. 434.
French, George R., *et al.* (See Coleman, Clyde, assignor.)
Freund, Robert, Augsburg, Germany. Spring device for cycles and motor-cycles. No. 1,106,867; Aug. 11; Gaz. vol. 205; p. 492.
Frey, Ernest H., Willoughby, Ohio. Receptacle for type-holders. No. 1,106,553; Aug. 11; Gaz. vol. 205; p. 382.
Frey, William J., St. Louis, Mo. Tube-expander. No. 1,106,798; Aug. 11; Gaz. vol. 205; p. 467.
Frick, Orlando C., assignor to Smalley Manufacturing Company, Manitowoc, Wis. Feeding device for feed-cutters. No. 1,108,163; Aug. 25; Gaz. vol. 205; p. 1041.
Frick, William C., Deal Beach, N. J. Apparatus for making welded tubing. No. 1,105,764; Aug. 4; Gaz. vol. 205; p. 62.
Frick, William C., Deal Beach, N. J. Apparatus for welding tubing. No. 1,105,765; Aug. 4; Gaz. vol. 205; p. 63.
Fricke, John W. (See Poehlman, Henry E., assignor.)
Fried. Krupp Aktiengesellschaft. (See Hermsdorf, Max, assignor.)
Fried. Krupp Aktiengesellschaft. (See Koch, Norbert, assignor.)
Fried. Krupp Aktiengesellschaft. (See Wieser, Karl, assignor.)
Fried. Krupp Aktiengesellschaft. (See Ziegenfuss, Friedrich, assignor.)

Friedman, Herman B., New York, N. Y. Interconnected steam-boiler and water-heater. No. 1,106,037; Aug. 4; Gaz. vol. 205; p. 159.

Friedman, William L., Oakland, Cal. Recording-thermometer. No. 1,105,898; Aug. 4; Gaz. vol. 206; p. 108.

Friese, Robert. Charlottenburg, assignor to Siemens-Schuckert-Werke G. m. b. H., Berlin, Germany. Insulator. No. 1,107,281; Aug. 18; Gaz. vol. 205; p. 683.

Friesecke, Albert and C., Berlin, Germany. Shaking-machine for use in the manufacture of concrete or artificial stone. No. 1,106,644; Aug. 11; Gaz. vol. 205; p. 415.

Friesecke, Carl. (See Friesecke, Albert and C.)

Friman, Wilhelm, Newport News, Va. Safety device for elevators. No. 1,108,355; Aug. 25; Gaz. vol. 205; p. 1108.

Frisbie, Mahlon C., St. Louis, Mich. Silo. No. 1,106,868; Aug. 11; Gaz. vol. 205; p. 492.

Froehlich, Joseph, New York, N. Y., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Envelop-machine. No. 1,108,734; Aug. 25; Gaz. vol. 205; p. 1240.

Frommer, Rudolf, Budapest, Austria-Hungary. Resilient ejector for firearms. No. 1,108,356; Aug. 25; Gaz. vol. 205; p. 1109.

Frühling, Otto, Brunswick, Germany. Cutter for suction-dredgers. No. 1,106,038; Aug. 4; Gaz. vol. 205; p. 159.

Fry, Henry E., Godmanstone, Dorchester, assignor to C. E. De Wolf, London, England. Treatment of seed-grain. No. 1,106,039; Aug. 4; Gaz. vol. 205; p. 159.

Frykman, August, Souris, N. D. Gear-cutting machine. No. 1,108,735; Aug. 25; Gaz. vol. 205; p. 1240.

Frykman, August, Souris, N. D. Index-head for lathes. No. 1,108,736; Aug. 25; Gaz. vol. 205; p. 1241.

Fuchs, Gustave F., Belleville, Ill. Sectional boiler. No. 1,107,510; Aug. 18; Gaz. vol. 205; p. 765.

Fuchs, Heinrich, Friedrichsfelde, near Berlin, Germany. Ground-auger. No. 1,107,927; Aug. 18; Gaz. vol. 205; p. 910.

Fuehs & Lang Manufacturing Company, The. (See Ford, Albert J., assignor.)

Fugate, Morgan P., Dewey, Okla. Animal-trap. No. 1,107,775; Aug. 18; Gaz. vol. 205; p. 861.

Fuller, Edgar L., Everett, Mass. Hammock. No. 1,106,554; Aug. 11; Gaz. vol. 205; p. 382.

Fulper, John W., Annandale, N. J. Vacuum-cleaner. No. 1,106,329; Aug. 4; Gaz. vol. 205; p. 256.

Fülscher, Johann, Hamburg-Elmsbüttel, Germany. Molding-machine. No. 1,106,645; Aug. 11; Gaz. vol. 205; p. 415.

Fulton, Fred L., *et al.* (See Taylor, James W., assignor.)

Fulweiler, Walter H., Moylan, assignor to The United Gas Improvement Company, Philadelphia, Pa. Registering-meter for gas and the like. No. 1,107,600; Aug. 18; Gaz. vol. 205; p. 798.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Burnishing-machine. No. 1,107,282; Aug. 18; Gaz. vol. 205; p. 683.

Furnas, Linus T., Lima, Ohio. Dress-form. No. 1,107,055; Aug. 11; Gaz. vol. 205; p. 555.

Furniss, Henry D., New York, N. Y. Oiling system. No. 1,107,601; Aug. 18; Gaz. vol. 205; p. 798.

Fussell, George, Chicago, Ill. Non-refillable-bottle closure. No. 1,106,505; Aug. 11; Gaz. vol. 205; p. 365.

Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Dynamo-electric machine. No. 1,108,568; Aug. 25; Gaz. vol. 205; p. 1183.

G. T. Eames Company. (See Eames, Gardner T., assignor.)

Gadbois, Alfred J., Duluth, and F. W. Gadbois, St. Paul, Minn. Game apparatus. No. 1,107,776; Aug. 18; Gaz. vol. 205; p. 861.

Gadbois, Frank W. (See Gadbois, Alfred J. and F. W.)

Gail, Fred S., Cody, Wyo. Device for capping oil and gas wells. No. 1,106,295; Aug. 4; Gaz. vol. 205; p. 244.

Gail, John F., Kenosha, Wis. Satin-finish machine. No. 1,107,214; Aug. 11; Gaz. vol. 205; p. 612.

Gail, John F., and C. H. Frederick, Kenosha, Wis. Automatic abradant-feed for buffing-machines. No. 1,107,215; Aug. 11; Gaz. vol. 205; p. 612.

Gajdos, George, New York, N. Y. Surgical instrument. No. 1,108,737; Aug. 25; Gaz. vol. 205; p. 1241.

Gallagher, John J. (See Chickering, Frank W., assignor.)

Gallagher, Richard D., Jr., New York, N. Y. Car-coupling. No. 1,107,602; Aug. 18; Gaz. vol. 205; p. 798.

Gallagher, William H., Baltimore, and L. E. Grimes, Boring, Md. Pipe-cutting appliance. No. 1,107,511; Aug. 18; Gaz. vol. 205; p. 766.

Gallison, Ernest A., Everett, Mass., assignor to Colonial Fast Color Tipping Company, Kittery, Me. Tipped lacing. No. 1,108,738; Aug. 25; Gaz. vol. 205; p. 1241.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Music-player valve-action. No. 1,106,040; Aug. 4; Gaz. vol. 205; p. 159.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Doors in multiple with control. No. 1,106,041; Aug. 4; Gaz. vol. 205; p. 160.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Musical-instrument self-playing device. No. 1,106,296; Aug. 4; Gaz. vol. 205; p. 244.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Music-roll winding and rewinding apparatus. No. 1,106,297; Aug. 4; Gaz. vol. 205; p. 244.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Music-player and other tracker-bar. No. 1,108,671; Aug. 18; Gaz. vol. 205; p. 902.

Galway, John, *et al.* (See Taylor, James C., assignor.)

Gamble, John, assignor to G. A. Reach, Philadelphia, Pa. Caddy-bag. No. 1,107,283; Aug. 18; Gaz. vol. 205; p. 684.

Gardner, Adelbert L., Norwood Park, Ill., assignor of one-half to C. H. Gardner. Meat-slicing machine. No. 1,105,643; Aug. 4; Gaz. vol. 205; p. 20.

Gardner, Alice M., executrix. (See Gardner, Frederick N. and F. E.)

Gardner, Curtis H. (See Gardner, Adelbert L., assignor.)

Gardner, Frederic E. (See Gardner, Frederick N. and F. E.)

Gardner, Frederick N., deceased. (A. M. Gardner, executrix.) and F. E. Gardner, assignors of one-third to L. W. Thompson, Beloit, Wis. Grinding or polishing wheel. No. 1,107,512; Aug. 18; Gaz. vol. 205; p. 766.

Gardner, Henry A., Washington, D. C. Colored cement structure and making same. No. 1,106,298; Aug. 4; Gaz. vol. 205; p. 245.

Gardner, John P., Cairo, Ill. Tack-driver. No. 1,106,646; Aug. 11; Gaz. vol. 205; p. 415.

Gardner, John W., Quincy, Ill. Valve structure for air-compressors and the like. No. 1,107,284; Aug. 18; Gaz. vol. 205; p. 684.

Gardner, William R., assignor to American Beet Topper Company, Los Angeles, Cal. Beet-topper. No. 1,107,603; Aug. 18; Gaz. vol. 205; p. 799.

Gárdonyi, Géza, Cleveland, Ohio. Refrigerator. No. 1,107,928; Aug. 18; Gaz. vol. 205; p. 911.

Garner, Vernon, assignor to United Printing Machinery Company, Boston, Mass. Paper-feeding machine. No. 1,108,569; Aug. 25; Gaz. vol. 205; p. 1184.

Garrett, Myers A., Chicago, Ill. Car-coupling. No. 1,107,929; Aug. 18; Gaz. vol. 205; p. 911.

Garst, Stephen H., assignor to D. M. Sechler Implement & Carriage Co., Moline, Ill. Antifriction-bearing for furrow-openers. No. 1,107,777; Aug. 18; Gaz. vol. 205; p. 861.

Garver, Benjamin F. (See Bamberger and Guistwhite, assignors.)

Gasau, Otto, and O. Marklein, New York, N. Y. Couch-bed. No. 1,107,665; Aug. 18; Gaz. vol. 205; p. 822.

Gassmann, Eugene, assignor to Elsemann Magneto Co., Brooklyn, N. Y. Electrical igniting device for internal-combustion engines. No. 1,108,739; Aug. 25; Gaz. vol. 205; p. 1241.

Gaugh, Maria A., Newport, Ky. Vehicle-seat. No. 1,107,778; Aug. 18; Gaz. vol. 205; p. 862.

Gebhardt, Ernest F., Bridgeport, Conn. Car-coupling. No. 1,108,740; Aug. 25; Gaz. vol. 205; p. 1242.

Geddert, William J., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Pocket-coupling. No. 1,105,644; Aug. 4; Gaz. vol. 205; p. 21.

Geer, Maurice F., and R. C. Leake, Rochester, assignors to General Railway Signal Company, Gates, N. Y. Individual calling-key. No. 1,105,766; Aug. 4; Gaz. vol. 205; p. 63.

Gell, John. (See Mitchell and Gell.)

Gell, John, London, England. Variable-speed mechanism. No. 1,108,741; Aug. 25; Gaz. vol. 205; p. 1242.

General Asbestos & Rubber Company. (See Taylor, William F., assignor.)

General Electric Company. (See Callahan, Michael J., assignor.)

General Electric Company. (See Carichoff, Eugene R., assignor.)

General Electric Company. (See Creighton, Elmer E. F., assignor.)

General Electric Company. (See Dodge, Austin R., assignor.)

General Electric Company. (See Green, Frank C., assignor)

General Electric Company. (See Hall, John L., assignor.)

General Electric Company. (See Halvorson, Cromwell A. B., Jr., assignor.)

General Electric Company. (See Hobart, Henry M., assignor.)

General Electric Company. (See Ingalls, Charles H., assignor.)

General Electric Company. (See Kieser, Walter, assignor.)

General Electric Company. (See Krämer, Bernhard, assignor.)

General Electric Company. (See Molony, James E., assignor.)

General Electric Company. (See Moore, Chester N., assignor.)

General Electric Company. (See Moss, Sanford A., assignor.)

General Electric Company. (See Remané, Hermann C. G., assignor.)

General Electric Company. (See Samuelson, Frederick, assignor.)

General Electric Company. (See Schroeder, Josef, assignor.)

General Electric Company. (See Stoeltzlen, Leo V., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Westendarp, Henry O., assignor.)

General Electric Company. (See Wilkinson, James, assignor.)

General Fire Extinguisher Company. (See Loepsinger, Albert J., assignor.)

General Railway Signal Company. (See Geer and Leake, assignors.)

George Cutter Company. (See Duncan, Otis B., assignor.)

George H. Frothingham Company. (See Prescott, Arthur T., assignor.)

George, William L., Hanover, N. Mex. Screen or sieve. No. 1,106,201; Aug. 4; Gaz. vol. 205; p. 215.

Geraerdts, Theodoorus H., New York, N. Y. Fireproof wall. No. 1,107,779; Aug. 18; Gaz. vol. 205; p. 862.

Gerelch, Fredrick A., and J. Vaughn, Oakland, Cal. Oven. No. 1,107,285; Aug. 18; Gaz. vol. 205; p. 685.

Gerding, Louis H., Baltimore, Md., assignor, by mesne assignments, to The Tobacco Stemming Machine Company. Tobacco-stemming machine. No. 1,107,056; Aug. 11; Gaz. vol. 205; p. 555.

Gerlach, Thomas A., Harvey, Ill. Switch-stand. No. 1,106,869; Aug. 11; Gaz. vol. 205; p. 493.

Germanson, Julius M., Milwaukee, Wis. Revoluble office-chair. No. 1,107,780; Aug. 18; Gaz. vol. 205; p. 862.

Gersabeck, Emil, Potsdam, Germany. Making plates for wall-coverings and similar purposes. No. 1,107,286; Aug. 18; Gaz. vol. 205; p. 685.

Gessner, Charles H., Bergenfield, N. J. Game device. No. 1,106,090; Aug. 4; Gaz. vol. 205; p. 177.

Gettz, William H., Philadelphia, Pa., and E. C. Foster, Pitman, N. J., assignors of one-third to W. E. Alloway, Philadelphia, Pa. Burglar-alarm. No. 1,105,899; Aug. 4; Gaz. vol. 205; p. 108.

Gibbard, William F., Fruitvale, Cal. Sash-lock. No. 1,107,418; Aug. 18; Gaz. vol. 205; p. 734.

Gibbon, Robert J., New York, N. Y., assignor to The Ostrander Seymour Company. Electrically-operated stereotype-matrix-drying machine. No. 1,106,936; Aug. 11; Gaz. vol. 205; p. 516.

Gibbs, George. (See Stevenson and Gibbs.)

Gibbs, John C., Philadelphia, Pa. Lid-raising device. No. 1,107,781; Aug. 18; Gaz. vol. 205; p. 863.

Gibbs, Oscar D., Spokane, Wash. Box-lid presser. No. 1,105,900; Aug. 4; Gaz. vol. 205; p. 109.

Gibbs, Ralph F. (See Billington and Gibbs.)

Gibson, Angus H. (See Roberts and Gibson.)

Gibson, Frederick J., Oakland, Cal. Amusement device. No. 1,107,287; Aug. 18; Gaz. vol. 205; p. 685.

Gibson, George P., Braddock, Pa. Ore-roasting furnace. No. 1,107,604; Aug. 18; Gaz. vol. 205; p. 799.

Gibson, Robert A., Berkeley, and J. B. Sartolow, Emeryville, assignors to Universal Display Advertising Company, Oakland, Cal. Music-leaf turner. (Reissue.) No. 13,789; Aug. 18; Gaz. vol. 205; p. 978.

Gidden, William T. (See Hunt and Gidden.)

Giddings, Homer E., Pitt Meadows, British Columbia, Canada. Rail-joint. No. 1,107,930; Aug. 18; Gaz. vol. 205; p. 911.

Giel, Willem J., The Hague, Netherlands. Type-writer. No. 1,108,742; Aug. 25; Gaz. vol. 205; p. 1243.

Gifford, Harry E., assignor to Dorsey Manufacturing Company, Boston, Mass. Cover. No. 1,108,108; Aug. 18; Gaz. vol. 205; p. 976.

Gilbert, Justin, Victoria, British Columbia, Canada. Self-filling fountain-pen. No. 1,108,743; Aug. 25; Gaz. vol. 205; p. 1243.

Gilbert, William N., Springfield, Ohio. Scale. No. 1,106,799; Aug. 11; Gaz. vol. 205; p. 407.

Gillam, Manly M., Flushing, N. Y. Nut-cracking device. No. 1,107,288; Aug. 18; Gaz. vol. 205; p. 686.

Gillam, Manly M., Flushing, N. Y. Adjustable heat and fuel economizer. No. 1,107,605; Aug. 18; Gaz. vol. 205; p. 800.

Gillett, Walter, London, England. Carbureter for internal-combustion engines. No. 1,106,091; Aug. 4; Gaz. vol. 205; p. 177.

Gillette Safety Razor Company. (See Crichton-Clarke, William H., assignor.)

Gillier, Louis E. A., Troyes, France. Vaporizing device for weaving apparatus. No. 1,106,299; Aug. 4; Gaz. vol. 205; p. 245.

Gillmor, Horatio G., Bath, Me. Rail-joint. No. 1,107,419; Aug. 18; Gaz. vol. 205; p. 734.

Gillmor, Horatio G., Portsmouth, Va. Rail-anchor. No. 1,107,782; Aug. 18; Gaz. vol. 205; p. 863.

Gilmore, John M., Chicago, Ill. Dental tool-holder. No. 1,108,570; Aug. 25; Gaz. vol. 205; p. 1184.

Gilmore, William E., Holmesville, Ohio. Automobile. No. 1,107,057; Aug. 11; Gaz. vol. 205; p. 556.

Girl, Christian. (See Schultis, Charles F., assignor.)

Gitenstein, Israel, New York, N. Y. Undergarment. No. 1,105,901; Aug. 4; Gaz. vol. 205; p. 109.

Glasschleiferei Wattens A. Kosmann, D. Swarovski & Co. (See Swarovski and Weis, assignors.)

Glauber, Joseph H. (See Schulder and Glauber.)

Glauber, Joseph H., Cleveland, Ohio. Coupling-pipe for bath-tubs, basins, and like vessels. No. 1,107,289; Aug. 18; Gaz. vol. 205; p. 686.

Glines, William S., Cleveland, Ohio. Coin-operated vending-machine. No. 1,108,164; Aug. 25; Gaz. vol. 205; p. 1042.

Globe Manufacturing Company. (See Modlin, Hanford C., assignor.)

Goddard, Edward F., Stratford, Conn., assignor to Electric Compositor Company, New York, N. Y. Side-knife wiper. No. 1,108,357; Aug. 25; Gaz. vol. 205; p. 1109.

Goddard, Edward F., Stratford, Conn., assignor to Electric Compositor Company, New York, N. Y. Mold-wiper. No. 1,108,358; Aug. 25; Gaz. vol. 205; p. 1109.

Goddu, Louis, Winchester, Mass., assignor, by mesne assignments, to Goddu Sewing Machine Company. Sewing-machine. No. 1,106,800; Aug. 11; Gaz. vol. 205; p. 467.

Goddu Sewing Machine Company. (See Goddu, Louis, assignor.)

Godley, Charles E., assignor to Edmunds and Jones Manufacturing Company, Detroit, Mich. Connector. No. 1,108,165; Aug. 25; Gaz. vol. 205; p. 1042.

Goff, Abbot P., St. Joseph, Mo. Automatic reacting siphon air-pump and stopper. No. 1,106,937; Aug. 11; Gaz. vol. 205; p. 517.

Goff, Leonard C. (See West and Goff.)

Goff, William D., Joplin, Mo. Animal poke and weaner. No. 1,105,767; Aug. 4; Gaz. vol. 205; p. 64.

Gold Car Heating & Lighting Company. (See Gold, Edward E., assignor.)

Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Steam-heating system. No. 1,106,801; Aug. 11; Gaz. vol. 205; p. 468.

Gold, Egbert H., Chicago, Ill. Ventilator for railway-cars. No. 1,105,645; Aug. 4; Gaz. vol. 205; p. 21.

Goldberg, Heinrich, Crefeld, and F. Ludwigs, Crefeld-Bockum, assignors to Mech. Bandfabrik Goldberg & Co., Crefeld, Germany. Equalizing device for silk fabrics. No. 1,106,704; Aug. 11; Gaz. vol. 205; p. 434.

Goldberg, John S., assignor to Stromberg Motor Devices Company, Chicago, Ill. Carbureter. No. 1,106,802; Aug. 11; Gaz. vol. 205; p. 468.

Goldberg, Louis B. and N., Denver, Colo. Knockdown stove. No. 1,106,555; Aug. 11; Gaz. vol. 205; p. 382.

Goldberg, Nathan. (See Goldberg, Louis B. and N.)

Golden, Arthur F., Sylvester, Ga. Railway-rail joint. No. 1,108,571; Aug. 25; Gaz. vol. 205; p. 1184.

Goldfarb, Nathan J., New York, assignor of one-half to P. Rabinowitz, Brooklyn, N. Y. Photographic-printing apparatus. No. 1,108,744; Aug. 25; Gaz. vol. 205; p. 1243.

Golding, William H., Franklin, Mass. Inking mechanism. No. 1,108,433; Aug. 25; Gaz. vol. 205; p. 1135.

Goldschmidt, Hans, Essen-on-the-Ruhr, Germany. Manufacturing stannic chlorid from materials containing oxid of tin. No. 1,105,902; Aug. 4; Gaz. vol. 205; p. 110.

Goodell Company. (See Mower, Fred G., assignor.)

Goodes, Paul, *et al.* (See Kelly, Albert F., assignor.)

Goodman, Nathan J., St. Louis, Mo. Laundried-shirt protector. No. 1,107,513; Aug. 18; Gaz. vol. 205; p. 767.

Goodyear, Charles W., *et al.*, executors. (See Goodyear, George W. and E. F.)

Goodyear, Ernest F. (See Goodyear, George W. and E. F.)

Goodyear, George W., deceased, (M. and C. W. Goodyear and J. Faulkner, executors,) and E. F. Goodyear, Dudley, England. Road-wheel of automobiles and the like. No. 1,105,646; Aug. 4; Gaz. vol. 205; p. 21.

Goodyear, Maria, *et al.*, executors. (See Goodyear, George W. and E. F.)

Gorden, Alexander. (See Coleman and Gorden.)

Gordon, Alexander, Detroit, Mich. Cigar-bunching machine. No. 1,108,871; Aug. 25; Gaz. vol. 205; p. 1287.

Gordon, James C., Calgary, Alberta, Canada. Milking-machine. No. 1,106,202; Aug. 4; Gaz. vol. 205; p. 215.

Gordon, John, Jr., East Orange, N. J., and A. W. Stringham, Brooklyn, N. Y. Control for mechanical sound-producers. No. 1,106,446; Aug. 11; Gaz. vol. 205; p. 341.

Gordon, Wilbur M., Traverse City, Mich. Cherry-clipper. No. 1,108,572; Aug. 25; Gaz. vol. 205; p. 1185.

Gore, George W. and L. E., Mena, Ark. Saw-set. No. 1,107,514; Aug. 18; Gaz. vol. 205; p. 767.

Gore, Louis E. (See Gore, George W. and L. E.)

Gorham, Patrick, *et al.* (See Schaffer, Charles, assignor.)

Goss, Louis A., Cambridge, England. Transposing attachment for pianofortes. No. 1,107,783; Aug. 18; Gaz. vol. 205; p. 863.

Goss Printing Press Company, The. (See Firm, Joseph L., assignor.)

Goss Printing Press Company, The. (See Lang, Hubert, assignor.)

Gould Coupler Company. (See Richards, Willard F., assignor.)

Gould Storage Battery Company. (See Hubbard, Albert S., assignor.)

Gould Storage Battery Company. (See Winship, Walter E., assignor.)

Grabe, Georg, Nikolassee, near Berlin, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany. Apparatus for metering conversations in automatic telephone systems. No. 1,107,290; Aug. 18; Gaz. vol. 205; p. 686.

Grabowsky, Robert, Hanover, Germany. Water-cooled fire-bar. No. 1,107,291; Aug. 18; Gaz. vol. 205; p. 687.

Grabowsky, Robert, Hanover, Germany. Furnace-grate. No. 1,107,292; Aug. 18; Gaz. vol. 205; p. 687.

Grad, Hyman, S. H. Kleeberg, and W. Harris, Newark, N. J. Advertising display device. No. 1,107,293; Aug. 18; Gaz. vol. 205; p. 687.

Graham, George E., assignor to W. J. Payne, Candor, N. Y. Toilet device. No. 1,106,300; Aug. 4; Gaz. vol. 205; p. 245.

Graham, Robert H., New York, N. Y. Feed-bag holder. No. 1,105,972; Aug. 4; Gaz. vol. 205; p. 136.

Grant, Alfred, *et al.* (See Valind, Joseph, assignor.)

Grant Automatic Machine Company. (See Grant, Robert H., assignor.)

Grant, Robert H., assignor to Grant Automatic Machine Company, Detroit, Mich. Grinding-machine. No. 1,106,803; Aug. 11; Gaz. vol. 205; p. 469.

Grau, Curt, Niederuzwil, Switzerland. Drying apparatus. No. 1,107,294; Aug. 18; Gaz. vol. 205; p. 687.

Grauheding, Oscar, Dusseldorf, Germany. Telescope gun-sight. No. 1,107,163; Aug. 11; Gaz. vol. 205; p. 595.

Graves, Frank J., Springfield, Mass. Sanitary closet-seat. No. 1,106,647; Aug. 11; Gaz. vol. 205; p. 416.

Graves, George W., Plainview, Tex. Front rigging for riding-saddles. No. 1,106,648; Aug. 11; Gaz. vol. 205; p. 416.

Gray, Charles B. (See Teter and Gray.)

Gray, Charles B., and W. E. Teter, Dallas, Tex. Adjustable headlight for vehicles. No. 1,105,973; Aug. 4; Gaz. vol. 205; p. 136.

Gray, Chester E., Eureka, assignor of one-half to A. Jensen, Oakland, Cal. Process of desiccating. No. 1,107,784; Aug. 18; Gaz. vol. 205; p. 864.

Gray, Walter B. (See Claysville and Davis, assignors.)

Greau, Alexandre M., New York, N. Y. Leg-covering means. No. 1,106,375; Aug. 11; Gaz. vol. 205; p. 317.

Greaves, Edwin E., assignor to Crouse-Hinds Company, Syracuse, N. Y. Screw-retaining device. No. 1,105,647; Aug. 4; Gaz. vol. 205; p. 22.

Green, Charles, Jr., London, England. Water-waste-preventing cistern. No. 1,106,141; Aug. 4; Gaz. vol. 205; p. 195.

Green, Ernest. (See Gunn, Charles H., assignor.)

Green, Frank C., Pittsfield, Mass., assignor to General Electric Company. System of phase transformation. No. 1,108,745; Aug. 25; Gaz. vol. 205; p. 1243.

Green, Frank C., Pittsfield, Mass., assignor to General Electric Company. Means for preventing condensation of moisture in transformer-tanks. No. 1,108,746; Aug. 25; Gaz. vol. 205; p. 1244.

Green, Harry B., Woodbury, assignor to The Speed Press Co., Camden, N. J. Sheet-feeding mechanism for printing-presses. No. 1,108,072; Aug. 18; Gaz. vol. 205; p. 962.

Greenfield, Edwin T., Klamesha, N. Y. Staple blank or strip. No. 1,106,938; Aug. 11; Gaz. vol. 205; p. 517.

Greenstreet Folding Box Machine Company. (See Birch, John H. and J. H., assignors.)

Greenstreet Folding Box Machine Company, The. (See Hood, Arthur M., assignor.)

Greenwald, Edward L., Dinuba, Cal. Brake for trip-hammers. No. 1,105,768; Aug. 4; Gaz. vol. 205; p. 64.

Greenwald, Lemon, assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Expansible collapsible tire-core. No. 1,106,506; Aug. 11; Gaz. vol. 205; p. 366.

Greenwood, Harry, Sr., assignor of one-half to A. Bouglovanni, Barnesboro, Pa. Flat-iron handle and stand. No 1,108,747; Aug. 25; Gaz. vol. 205; p. 1244.

Gregson, John J., Fulwood, near Preston, England. Crank and tappet shaft of looms for weaving cloth. No. 1,105,648; Aug. 4; Gaz. vol. 205; p. 22.

Greig, Walter, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Sales-book. No. 1,107,295; Aug. 18; Gaz. vol. 205; p. 688.

Greig, Walter, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Multi-color manifolding sales-book. No. 1,108,573; Aug. 25; Gaz. vol. 205; p. 1185.

Greindl, Paul, Brussels, Belgium. Movable index-card. No. 1,108,574; Aug. 25; Gaz. vol. 205; p. 1185.

Greist, Hubert M., New Haven, Conn., assignor to The Greist Manufacturing Company, Sewing-machine ruffler. No. 1,107,420; Aug. 18; Gaz. vol. 205; p. 735.

Greist, Hubert M., New Haven, Conn., assignor to The Greist Manufacturing Company. Sewing-machine ruffler. No. 1,107,421; Aug. 18; Gaz. vol. 205; p. 735.

Greist, Hubert M., New Haven, Conn., assignor to The Greist Manufacturing Company. Sewing-machine-attachment holder. No. 1,107,931; Aug. 18; Gaz. vol. 205; p. 912.

Greist Manufacturing Company, The. (See Greist, Hubert M., assignor.)

Grémillet, Marie J. Bezons, assignor to F. Massard, Paris, France. Locking device for motor-cars or other vehicles. No. 1,106,556; Aug. 11; Gaz. vol. 205; p. 383.

Gridley, George O., Windsor, Vt. Multiple-stage turbine No. 1,108,497; Aug. 25; Gaz. vol. 205; p. 1159.

Griffin, William H., New Boston, Tex. Clothes-pin. No. 1,107,058; Aug. 11; Gaz. vol. 205; p. 556.

Griffith, Charles A., Pruden, Tenn. Car-dumping apparatus. No. 1,108,375; Aug. 25; Gaz. vol. 205; p. 1186.

Griffith, Lawrence, Yonkers, N. Y. Insulated rail-joint. No. 1,107,666; Aug. 18; Gaz. vol. 205; p. 822.

Grimes, Lewis E. (See Gallagher and Grimes.)

Grimm, Frank C., Cleveland, Ohio. Sanitary locking bottle-holder. No. 1,107,667; Aug. 18; Gaz. vol. 205; p. 822.

Grinnell Washing Machine Company. (See Lewis, George W., assignor.)

Grob, Hugo, Furstenwalde, Germany. Drive mechanism. No. 1,107,196; Aug. 11; Gaz. vol. 205; p. 606.

Grob, Julius, Horgen, Switzerland. Heddle. No. 1,107,296; Aug. 18; Gaz. vol. 205; p. 688.

Gros, Claude E., Puteaux, France. Running-gear for automobile vehicles. No. 1,106,705; Aug. 11; Gaz. vol. 205; p. 485.

Grose, John A., Sioux Falls, S. D. Automobile-railway. No. 1,106,507; Aug. 11; Gaz. vol. 205; p. 366.

Gross, Elam A., Camden, N. J. Planting implement. No. 1,106,203; Aug. 4; Gaz. vol. 205; p. 216.

Gross, Elam A., Camden, N. J. Holder. No. 1,106,204; Aug. 4; Gaz. vol. 205; p. 216.

Gross, Harry E. (See Profeto and Gross.)

Gross, Joseph, Chicago, Ill. Sad-iron. No. 1,106,649; Aug. 11; Gaz. vol. 205; p. 417.

Grossmann, Julius, Westchester, N. Y. Lock. No. 1,107,297; Aug. 18; Gaz. vol. 205; p. 688.

Grosvenor, Herbert J. (See Bechtold and Grosvenor.)

Grove, Edwin W. (See Crumbaugh, George P., assignor.)

Grubman, Leo, New York, N. Y. Means for preventing sparking in electrical devices. No. 1,107,932; Aug. 18; Gaz. vol. 205; p. 912.

Gruenewald, Fredrick J. (See Sheeley and Gruenewald.)

Grundstein, Julius, assignor to Maschinenfabrik Lorenz, Ettlingen, Germany. Gear-cutting machine. No. 1,105,649; Aug. 4; Gaz. vol. 205; p. 22.

Grundstrom, John, Bullrun, Oreg. Carpenter's triangle. No. 1,106,205; Aug. 4; Gaz. vol. 205; p. 216.

Gsell, Henry A., Paris, France. Apparatus for measuring off matches for machines for packing matches in boxes. No. 1,107,059; Aug. 11; Gaz. vol. 205; p. 556.

Gsell, Henry A., Paris, France. Match-making machine. No. 1,107,060; Aug. 11; Gaz. vol. 205; p. 557.

Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Electric switch. No. 1,108,359; Aug. 25; Gaz. vol. 205; p. 1110.

Guhrauer, Ferdinand. (See Hay and Guhrauer.)

Guild, George R., assignor of one-half to W. J. Browne, Fort Bayard, N. Mex. Train controlling and stopping system. No. 1,106,092; Aug. 4; Gaz. vol. 205; p. 178.

Guillaume, Charles E., Sèvres, France, assignor to Société des Fabriques de Spiraux Réunies, La Chaux-de-Fonds, Switzerland. Balance-spring having elasticity increasing with a rise in temperature. No. 1,106,206; Aug. 4; Gaz. vol. 205; p. 216.

Guillaume, Charles E., Sèvres, France, assignor to Société des Fabriques de Spiraux Réunies, La Chaux-de-Fonds, Switzerland. Balance-spring having elasticity increasing with rise in temperature. No. 1,106,207; Aug. 4; Gaz. vol. 205; p. 217.

Guistwhite, Wintfield S. (See Bamberger and Guistwhite.)

Gunm, George C., Washington, D. C. Baking utensil. No. 1,106,042; Aug. 4; Gaz. vol. 205; p. 160.

Gunn, Charles H., Modesto, assignor of one-half to E. Green, Stanislaus county, Cal. Resilient wheel. No. 1,105,650; Aug. 4; Gaz. vol. 205; p. 23.

Gussman, August H., East Orange, N. J. Key-duplicating machine. No. 1,105,769; Aug. 4; Gaz. vol. 205; p. 64.

Gustafson, Gustaf W., Seattle, Wash. Bottle-closure. No. 1,108,360; Aug. 25; Gaz. vol. 205; p. 1110.

Gustafson, Herbert E., Pueblo, Colo. Miniature electric lamp. No. 1,105,770; Aug. 4; Gaz. vol. 205; p. 65.

Guthrie, Venable J., Cambria, Va. Air compressor or pump. No. 1,108,434; Aug. 25; Gaz. vol. 205; p. 1135.

Gutmann, Frederick, New York, N. Y. Collapsible velocipede. No. 1,106,939; Aug. 11; Gaz. vol. 205; p. 517.

Guttenbrunner, Georg, Vienna, Austria-Hungary. Lock construction for waterways. No. 1,107,933; Aug. 18; Gaz. vol. 205; p. 912.

Guy, Walter W., assignor to Colonial Fireplace Co., Chicago, Ill. Dome for fireplaces. No. 1,105,651; Aug. 4; Gaz. vol. 205; p. 23.

Guyton & Cumfer Manufacturing Company. (See Cumfer, Harry A., assignor.)

H. Koppers Company. (See Koppers, Heinrich, assignor.)

H. Mueller Mfg. Co. (See Schuermann, Anton C., assignor.)

Haas, Fritz, Quedlinburg, Germany. Manometer. No. 1,107,298; Aug. 18; Gaz. vol. 205; p. 689.

Haas, Philip, Dayton, Ohio. Detachable flush-rim fixture. No. 1,107,515; Aug. 18; Gaz. vol. 205; p. 767.

Habekost, William F. (See Box, Leonard, assignor.)

Habenicht, Henry W., Hartington, Nebr. Combined mail-box. No. 1,106,376; Aug. 11; Gaz. vol. 205; p. 317.

Habicht, Thomas J., Charlotte, N. C. Carpet-cleaning apparatus. No. 1,105,903; Aug. 4; Gaz. vol. 205; p. 110.

Habick, Emil H., Euclid, Minn. Mower attachment for cars. No. 1,106,650; Aug. 11; Gaz. vol. 205; p. 417.

Hacker, Williamson T., Columbus, Ind. Copy-holder. No. 1,107,785; Aug. 18; Gaz. vol. 205; p. 864.

Hadaway, John B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Edge-trimming machine. No. 1,107,668; Aug. 18; Gaz. vol. 205; p. 823.

Hadwiger, Hugo, Vienna, Austria-Hungary. Internal-combustion engine. No. 1,106,940; Aug. 11; Gaz. vol. 205; p. 518.

Haedike, Otto G., and R. D. Braden, assignors to Oxweld Acetylene Company, Chicago, Ill. Hydraulic back-pressure valve. No. 1,108,863; Aug. 25; Gaz. vol. 205; p. 1285.

Hagan, Arthur J., New York, N. Y. Pulley and lock for cables. No. 1,107,934; Aug. 18; Gaz. vol. 205; p. 913.

Hagemeyer, Henry F., Rockford, Ill., assignor to The Mechanical Process Manufacturing Company, Toledo, Ohio. Glassware re-forming mechanism. No. 1,107,935; Aug. 18; Gaz. vol. 205; p. 913.

Hagerman, Frank. (See Schenck, Eugene A., assignor.)

Hague, Charles E., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Moisture-proof telephone set. No. 1,108,166; Aug. 25; Gaz. vol. 205; p. 1042.

Hahle, Christian F., Riverside, N. J. Furnace-cleaner. No. 1,106,093; Aug. 4; Gaz. vol. 205; p. 179.

Hainline, J. R. (See Forman, Robert E., assignor.)

Halbleib, Edward A., assignor to North East Electric Company, Rochester, N. Y. Power-transmission mechanism. No. 1,105,904; Aug. 4; Gaz. vol. 205; p. 110.

Hald, Martin R., Fresno, Cal. Adjustable wrench. No. 1,106,557; Aug. 11; Gaz. vol. 205; p. 384.

Hale, Arthur, Rowlandsville, Md. Reinforced stocking. No. 1,106,208; Aug. 4; Gaz. vol. 205; p. 217.

Hall, Frank H., Yonkers, N. Y., assignor to Strauss Manufacturing Company. Toy. No. 1,105,652; Aug. 4; Gaz. vol. 205; p. 23.

Hall, Frank L., *et al.* (See Coleman, Clyde, assignor.)

Hall, James T., assignor to Bunting Iron Works, Conlinga, Cal. Combined calf-wheel and drive member. No. 1,108,576; Aug. 25; Gaz. vol. 205; p. 1186.

Hall, John L., Schenectady, N. Y., assignor to General Electric Company. Search-light mechanism. No. 1,105,771; Aug. 4; Gaz. vol. 205; p. 65.

Hall, Joseph B., Chicago, Ill., assignor to E. R. Williams, Sharpsburg, Pa. Liquid-dispenser. No. 1,107,299; Aug. 18; Gaz. vol. 205; p. 689.

Hall, Samuel N., Houston, Tex. Wrench. No. 1,107,936; Aug. 18; Gaz. vol. 205; p. 913.

Hall, Samuel N., Houston, Tex. Pipe-wrench. No. 1,107,937; Aug. 18; Gaz. vol. 205; p. 914.

Hall, Samuel N., Houston, Tex. Bit-brace. No. 1,107,938; Aug. 18; Gaz. vol. 205; p. 914.

Hall Switch & Signal Company. (See Rhoads, Charles S., Jr., assignor.)

Hall Switch & Signal Company. (See Rugh, Harry O., assignor.)

Hall, William A., New York, N. Y. Making gas from oil. No. 1,105,772; Aug. 4; Gaz. vol. 205; p. 65.

Halladay, Fred G. (See Badger and Halladay.)

Halliday, Lewis P., Streator, Ill. Automobile-bumper. No. 1,106,558; Aug. 11; Gaz. vol. 205; p. 384.

Haller, Adam J., assignor to The Ohio Match Company, Wadsworth, Ohio. Protecting-strip for match and other boxes. No. 1,106,330; Aug. 4; Gaz. vol. 205; p. 256.

Hallett, William R., Castor, Alberta, Canada. Hydrocarbon-engine. No. 1,106,043; Aug. 4; Gaz. vol. 205; p. 160.

Halley, George W., Nevada, Iowa. Wheel-guard. No. 1,106,209; Aug. 4; Gaz. vol. 205; p. 217.

Halliday, Wyatt S., Cairo, Ill. Clothes-pounder. No. 1,107,939; Aug. 18; Gaz. vol. 205; p. 915.

Hallowell, Howard T., Philadelphia, Pa. Shaft-coupling. No. 1,107,606; Aug. 18; Gaz. vol. 205; p. 800.

Hallowell, Howard T., Philadelphia, Pa. Making shaft-coupling sleeves. No. 1,107,607; Aug. 18; Gaz. vol. 205; p. 800.

Halsey, James T., assignor to Philadelphia Holding Company, Philadelphia, Pa. Car-truck. No. 1,106,331; Aug. 4; Gaz. vol. 205; p. 256.

Halterman, James R., Anna, Ill. Gasolene-motor. No. 1,106,210; Aug. 4; Gaz. vol. 205; p. 217.

Halvorson, Cromwell A. B., Jr., Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 1,107,061; Aug. 11; Gaz. vol. 205; p. 557.

Hamaker, Aaron W., New York, N. Y. Toy gun. No. 1,106,706; Aug. 11; Gaz. vol. 205; p. 435.

Hambrock, Louis, Jr., assignor to Flood & Conklin Co., Newark, N. J. Varnish-kettle. No. 1,106,142; Aug. 4; Gaz. vol. 205; p. 195.

Hamburger, Manes L., Baltimore, Md. Umbrella bust-form. No. 1,107,062; Aug. 11; Gaz. vol. 205; p. 557.

Hamilton, Belton T., London, England. Aeroplane. No. 1,106,804; Aug. 11; Gaz. vol. 205; p. 469.

Hamilton, Charles S. (See Johnson, Hamilton, and Van Duyne.)

Hamilton, Ernest A., Philadelphia, Pa., assignor to Scott Paper Company. Cabinet for toilet-paper. No. 1,106,559; Aug. 11; Gaz. vol. 205; p. 384.

Hamilton, John R., Yonkers, N. Y., assignor to Venturi Alarm Company, Dover, N. J. Automatic sprinkler-head. No. 1,108,362; Aug. 25; Gaz. vol. 205; p. 1111.

Hamilton, Lewis A., Elko, Nev. Railway-tie. No. 1,107,063; Aug. 11; Gaz. vol. 205; p. 558.

Hamm, William S., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,106,377; Aug. 11; Gaz. vol. 205; p. 317.

Hammack, Martin V., Kansas City, Mo. Trousers appliance. No. 1,107,300; Aug. 18; Gaz. vol. 205; p. 689.

Hammer, Frederick H., Highland Park, Mich. Device for printing photographs. No. 1,106,143; Aug. 4; Gaz. vol. 205; p. 196.

Hammock Egg Carrier Company. (See Milliron, Ira A., assignor.)

Hammond, Guy L., assignor to Electric Compositor Company, Woonsocket, R. I. Linotype-matrix. No. 1,108,361; Aug. 25; Gaz. vol. 205; p. 1110.

Hammond, William C., Sault Ste. Marie, Ontario, Canada. Picket sharpener and shaper. No. 1,108,167; Aug. 25; Gaz. vol. 205; p. 1043.

Hammond, William P., Charlestown, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Joint. No. 1,108,363; Aug. 25; Gaz. vol. 205; p. 1111.

Hampton, Second M., Leaksville, N. C. Cable-guide. No. 1,108,748; Aug. 25; Gaz. vol. 205; p. 1244.

Hand Vacuum Sweeper Company. (See Schirra, Julius, assignor.)

Handwerck, Max, Waltersbausen, Germany. Hollow article made of paper, cloth, and the like. No. 1,106,211; Aug. 4; Gaz. vol. 205; p. 218.

Hanford, John J. (See Lundholm, Charles G., assignor.)

Hauggi, John A., St. Paul, Minn. Sign. No. 1,105,653; Aug. 4; Gaz. vol. 205; p. 24.

Hans, Edmund E., Minneapolis, Minn. Constant-level lubricator. No. 1,105,773; Aug. 4; Gaz. vol. 205; p. 66.

Hansen, H. Chris. (See Becker, Jacob F., assignor.)

Hansen, Karl H., assignor to Orenstein-Arthur Koppel Co., Pittsburgh, Pa. Dump-car. No. 1,106,805; Aug. 11; Gaz. vol. 205; p. 470.

Hansmann Manufacturing Company. (See Hansmann, Paul, assignor.)

Hansmann, Paul, assignor to Hansmann Manufacturing Company, Long Prairie, Minn. Steering apparatus for vehicles. No. 1,106,806; Aug. 11; Gaz. vol. 205; p. 470.

Hanson, Christian R., Waterloo, Iowa. Pendulum-lamp for clocks. No. 1,106,807; Aug. 11; Gaz. vol. 205; p. 470.

Hanson, Karl L., Herman, Nebr. Furrow-opener for corn-planters. No. 1,108,435; Aug. 25; Gaz. vol. 205; p. 1136.

Hanson & Van Winkle Company, The. (See Daniels, John T., assignor.)

Hantke, John F., Los Angeles, Cal. Safety-gate for elevators. No. 1,107,608; Aug. 18; Gaz. vol. 205; p. 801.

Harbinger, Waldemar, London, England. Boat-lowering apparatus for vessels. No. 1,106,094; Aug. 4; Gaz. vol. 205; p. 179.

Hardinge Brothers. (See Hardinge, Franklin, assignor.)

Hardinge, Franklin, assignor to Hardinge Brothers, Chicago, Ill. Machine-bench. No. 1,107,609; Aug. 18; Gaz. vol. 205; p. 801.

Hardman, Herbert V., Belleville, N. J. Shaving-brush and the like. No. 1,106,378; Aug. 11; Gaz. vol. 205; p. 318.

Harlan, Andrew J., Sr., London Mills, Ill. Wheel. No. 1,108,749; Aug. 25; Gaz. vol. 205; p. 1244.

Harper, James J., Defiance, Ohio. Egg-tester. No. 1,108,364; Aug. 25; Gaz. vol. 205; p. 1112.

Harris, Charles H., Kenosha, Wis. Mold for walls. No. 1,108,073; Aug. 18; Gaz. vol. 205; p. 962.

Harris, Henry E., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt. Separable square. No. 1,107,516; Aug. 18; Gaz. vol. 205; p. 768.

Harris, John G., *et al.* (See Lake and Marks, assignors.)

Harris, Roy, Winchester, Idaho. Device for raising logs. No. 1,106,651; Aug. 11; Gaz. vol. 205; p. 417.

Harris, Sanford, Monrovia, Cal. Burglar-alarm. No. 1,107,064; Aug. 11; Gaz. vol. 205; p. 558.

Harris, William. (See Grad, Kleeberg, and Harris.)

Harrison, Francis R. (See Harrison and Smith, assignors.)

Harrison, James G., Goldfield, assignor of one-half to U. C. Harrison, Parkdale, Colo. Combined alarm and electric-light switch. No. 1,108,750; Aug. 25; Gaz. vol. 205; p. 1244.

Harrison, Samuel M., and W. E. Smith, Chester, W. Va., assignors of one-third to F. R Harrison, East Liverpool, Ohio. Clothes-line holder. No. 1,107,786; Aug. 18; Gaz. vol. 205; p. 864.

Harrison, Una C. (See Harrison, James G., assignor.)

Harrison, William L., Branford, Conn. Carbon-tetrachlorid package. No. 1,106,144; Aug. 4; Gaz. vol. 205; p. 196.

Harrisson, James A. G., Canterbury, England. Constant-discharge gage. No. 1,107,065; Aug. 11; Gaz. vol. 205; p. 558.

Hart, Frederick A., Newark, N. J., assignor to J. T. Underwood, Brooklyn, N. Y. Variable-throw device. No. 1,105,774; Aug. 4; Gaz. vol. 205; p. 66.

Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)

Hartley, Cyril J. (See Hartley, John W. and C. J.)

Hartley, John W. and C. J., Stone, England. Sewage-distributer. No. 1,106,212; Aug. 4; Gaz. vol. 205; p. 218.

Hartmann Trunk Company. (See Wheary, George H., assignor.) (Reissue.)

Hartsough, D. Maurice, Minneapolis, Minn. Starter for explosive-engines. No. 1,105,775; Aug. 4; Gaz. vol. 205; p. 66.

Hartwell, Floyd S., and L. C. Sears, assignors to Monarch Manufacturing Corporation, Onawa, Iowa. Frame for tile-making machines. No. 1,107,940; Aug. 18; Gaz. vol. 205; p. 915.

Harvey, Daniel, Box Hill, Melbourne, assignor to R. E. Boardman, St. Kilda, and F. C. Schulze, Brunswick, Victoria, Australia. Orchard-plow. No. 1,106,213; Aug. 4; Gaz. vol. 205; p. 218.

Harvey, James R. (See Powers, Harvey, and Crowley.)

Haselden, John R. and S. G., Lancaster, Ky. Cistern-water filter. No. 1,108,365; Aug. 25; Gaz. vol. 205; p. 1112.

Haselden, Samuel G. (See Haselden, John R. and S. G.)

Haseltine, Marie. (See Miller, Daisy O., assignor.)

Haskell, Broderick, Franklin, Pa. Telegraph-pole and the like. No. 1,105,776; Aug. 4; Gaz. vol. 205; p. 67.

Haskell, Broderick, Franklin, Pa. Telegraph-pole and the like. No. 1,105,777; Aug. 4; Gaz. vol. 205; p. 67.

Haskins, Rufus P., Spokane, Wash. Cigar-box-lid holder. No. 1,108,751; Aug. 25; Gaz. vol. 205; p. 1245.

Hatch, Bert A. (See Bailey and Hatch.)

Hatfield, Joseph M., Robinson, Ill. Brace for drilling mechanisms. No. 1,107,941; Aug. 18; Gaz. vol. 205; p. 915.

Hatfield, Schuyler C., Baltimore, Md. Elastic wheel. No. 1,105,654; Aug. 4; Gaz. vol. 205; p. 24.

Haug, Anton J., assignor to The Improved Paper Machinery Company, Nashua, N. H. Centrifugal pulp-screen. No. 1,106,808; Aug. 11; Gaz. vol. 205; p. 471.

Hausheer, Bernard, Norwich, assignor to Borden's Condensed Milk Company, New York, N. Y. Soldering caps to cans. No. 1,105,778; Aug. 4; Gaz. vol. 205; p. 68.

Hausser, George H. (See Plummer, Hausser, and Warner.)

Haustetter, Alfred P., assignor to The Victor Safe & Lock Co., Norwood, Ohio. Planer. No. 1,107,787; Aug. 18; Gaz. vol. 205; p. 865.

Haverty, Raymond J., and A. Eckenrod, assignors of one-third to W. T. Haverty, Altoona, Pa. Kitchen utensil. No. 1,106,809; Aug. 11; Gaz. vol. 205; p. 471.

Haverty, William T. (See Haverty and Eckenrod, assignors.)

Hawk, Lewis E., assignor to Chicago Safety Appliance Company, Chicago, Ill. Safety device for elevators. No. 1,106,379; Aug. 11; Gaz. vol. 205; p. 318.

Hawkins, Elbert E., Unadilla, N. Y. Door-fastening device. No. 1,108,168; Aug. 25; Gaz. vol. 205; p. 1043.

Hawkinson, J. E. (See Kvam, Sigvart, assignor.)

Hawley, Lee F., assignor to A. D. Little Inc., Boston, Mass. Refining wood-alcohol. No. 1,106,707; Aug. 11; Gaz. vol. 205; p. 435.

Hawthorne Manufacturing Company, The. (See Maytrott, Henry, assignor.)

Hay, John T., Union City, Ind. Automatic journal-box take-up. No. 1,108,366; Aug. 25; Gaz. vol. 205; p. 1112.

Hay, Marley F., and F. Guhrauer, Dumbarton, Scotland. Submarine or submersible boat. No. 1,107,942; Aug. 18; Gaz. vol. 205; p. 915.

Haynes, Charles M., Newark, N. J. Wagon. No. 1,108,169; Aug. 25; Gaz. vol. 205; p. 1043.

Hayward Company, The. (See Quimby, William J., assignor.)

Hayward, Jonathan B. (See Longstreth, Charles B., assignor.)

Hazard, Robert J., Victoria, British Columbia, Canada. Glove. No. 1,106,708; Aug. 11; Gaz. vol. 205; p. 435.

Hazeltine, Benjamin. (See Munson and Hazeltine.)

Hazelton, John T., Somerville, N. J. Carbureter. No. 1,106,145; Aug. 4; Gaz. vol. 205; p. 196.

Head, Arthur F. H., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,107,301; Aug. 18; Gaz. vol. 205; p. 690.

Heap & Sons, William. (See Heap, William L., assignor.)

Heap, William L., assignor to W. Heap & Sons, Grand Haven, Mich. Flushing-tank. No. 1,106,380; Aug. 11; Gaz. vol. 205; p. 318.

Heath, William R. (See Crumpton, William J., assignor.)

Hedemann, Christian J., assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Sugar-cane mill. No. 1,106,301; Aug. 4; Gaz. vol. 205; p. 246.

Hedendahl, Theodore A., Denver, Colo., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Pressure-retaining-valve device. No. 1,108,170; Aug. 25; Gaz. vol. 205; p. 1043.

Hedstrom, John P., Big Rapids, Mich. Knife-grinding machine. No. 1,106,560; Aug. 11; Gaz. vol. 205; p. 385.

Heerwagen Company. (See Schwertner, Joseph, assignor.)

Heginbottom, Bert W. (See Heginbottom, Samuel H., F. H., and B. W.)

Heginbottom, Frank H. (See Heginbottom, Samuel H., F. H., and B. W.)

Heginbottom, Samuel H., F. H., and B. W., Saginaw, Mich. Starting device for explosive-engines. No. 1,108,498; Aug. 25; Gaz. vol. 205; p. 1159.

Heidenreich, Isidor, Chicago, Ill. Advertising novelty. No. 1,105,655; Aug. 4; Gaz. vol. 205; p. 24.

Heilman, Frederick, Johnstown, Pa. Inhaler. No. 1,106,214; Aug. 4; Gaz. vol. 205; p. 219.

Heim, George C., Newark, N. J. Receptacle. No. 1,107,066; Aug. 11; Gaz. vol. 205; p. 559.

Heina, William M., assignor of twenty-three and one-third one-hundredths to E. V. Derks, twenty-three and one-third one-hundredths to E. Kammler, New York, N. Y., and twenty-three and one-third one-hundredths to A. R. Southworth, Westwood, N. J. Resilient tire. No. 1,106,302; Aug. 4; Gaz. vol. 205; p. 246.

Heinbach, William I., Phoenixville, Pa. Nut-lock. No. 1,107,213; Aug. 11; Gaz. vol. 205; p. 611.

Heineke, Martin L., Springfield, Ill. Self-feeder for threshing-machines. No. 1,107,517; Aug. 18; Gaz. vol. 205; p. 768.

Heinkel, Christian F., Cleveland, Ohio. Cutting-tool. No. 1,106,561; Aug. 11; Gaz. vol. 205; p. 385.

Heise, Fred H., Manson, Iowa. Cupola. No. 1,106,215; Aug. 4; Gaz. vol. 205; p. 219.

Heitmiller, Herman E., St. Paul, assignor to Ware Grain Binder Attachment Co., Minneapolis, Minn. Binder-head for harvesters. No. 1,106,562; Aug. 11; Gaz. vol. 205; p. 386.

Heller, George G. (See Coates, Clinton T., assignor.)

Hellerstedt, Peter F., Chattanooga, Tenn. Auxiliary spring. No. 1,107,067; Aug. 11; Gaz. vol. 205; p. 559.

Hellman, John, Brooklyn, N. Y. Miter-box. No. 1,106,044; Aug. 4; Gaz. vol. 205; p. 161.

Hellmuth, August, and S. Maulbeck, West Hoboken, N. J. Controlling apparatus for sewage-disposal plants. No. 1,107,788; Aug. 18; Gaz. vol. 205; p. 865.

Helm, Michael G., Streeter, N. D. Rail-joint. No. 1,108,841; Aug. 25; Gaz. vol. 205; p. 1276.

Helmers, Gerhard P., Baltimore, Md. Cuff. No. 1,105,779; Aug. 4; Gaz. vol. 205; p. 68.

Hemleb, Martin. (See Diehl and Hemleb.)

Hemleb, Martin, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Chain-stitch sewing-machine. No. 1,107,302; Aug. 18; Gaz. vol. 205; p. 690.

Henderson, Carl, Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Compensating cylinder for printing-presses. No. 1,106,508; Aug. 11; Gaz. vol. 205; p. 366.

Henderson, Douglas, Dallas, Tex. Weighing attachment for ice-tongs. No. 1,107,422; Aug. 18; Gaz. vol. 205; p. 735.

Henderson, Mark M., Norwalk, Conn. Athletic garment. No. 1,107,303; Aug. 18; Gaz. vol. 205; p. 691.

Henebergh, John A., Kansas City, Kans. Combined portfolio and sheet-music turner. No. 1,106,941; Aug. 11; Gaz. vol. 205; p. 518.

Henkel & Cie. (See Henkel and Weber, assignors.)

Henkel, Hugo, and W. Weber, assignors to Firm of Henkel & Cie., Dusseldorf, Germany. Manufacture of hydrogen peroxid. No. 1,108,752; Aug. 25; Gaz. vol. 205; p. 1245.

Hennessey, D. Edward. (See Tetlow, Lewis J., assignor.)

Henrici, William A. E., assignor, by mesne assignments, to Liberty Trust Company, trustee, Boston, Mass. Reversing mechanism. No. 1,107,943; Aug. 18; Gaz. vol. 205; p. 916.

Henrikson, Bernhardt, Chicago, Ill. Flue-cutter. No. 1,108,171; Aug. 25; Gaz. vol. 205; p. 1044.

Henry, Daniel D., Fordville, N. D. Sheaf-loader. No. 1,106,652; Aug. 11; Gaz. vol. 205; p. 418.

Henry, Guilford W., St. Louis, Mo. Folding davenport. No. 1,107,423; Aug. 18; Gaz. vol. 205; p. 735.

Henry, Jacob, Chicago, Ill. Window-shade adjuster. No. 1,106,870; Aug. 11; Gaz. vol. 205; p. 493.

Henry, William W., Wollaston, assignor to S. H. Couch Co., Inc., Atlantic, Mass. Annunciator-drop. No. 1,107,610; Aug. 18; Gaz. vol. 205; p. 801.

Hepding, Frederick P. (See Baker and Hepding.)

Herbeck, Frank, Athol, Mass. Fire-alarm. No. 1,108,753; Aug. 25; Gaz. vol. 205; p. 1245.

Hercules Powder Company. (See Talley, Herbert, assignor.)

Herling, Carl, Philadelphia, Pa. Electric-furnace process and electric furnace. No. 1,105,656; Aug. 4; Gaz. vol. 205; p. 25.

Hering, Carl, Philadelphia, Pa. Electrode for furnaces. No. 1,106,381; Aug. 11; Gaz. vol. 205; p. 319.

Herman, Jacob W. (See Hyle and Herman.)

Herman, John F., Bridgeport, Conn. Reamer. No. 1,107,304; Aug. 18; Gaz. vol. 205; p. 691.

Herman Wile & Co. (See Rethorn, Edward C., assignor.)

Hermon E. Dunham Motor Company, The. (See Dunham, Hermon E., assignor.)

Hermsdorf, Max, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Gun wedge breech-closure. No. 1,108,754; Aug. 25; Gaz. vol. 205; p. 1245.

Herold, Edmund, Brooklyn, N. Y. Automobile-clock. No. 1,107,068; Aug. 11; Gaz. vol. 205; p. 559.

Herpolsheimer, Rudolph F., Chicago, Ill. Liquid-clutch. No. 1,107,944; Aug. 18; Gaz. vol. 205; p. 916.

Herrick, Albert B., New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Electrode for welding. No. 1,106,347; Aug. 4; Gaz. vol. 205; p. 262.

Herskovitz, Abraham, Chicago, Ill. Incandescent mantle. No. 1,107,518; Aug. 18; Gaz. vol. 205; p. 768.

Herty Turpentine Co. (See Kruger, Charles L., assignor.)

Herz, Richard, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company. Producing fast dyeings on the fiber. No. 1,107,164; Aug. 11; Gaz. vol. 205; p. 595.

Heslop, William, Johnstown, Pa. Artificial-stone composition. No. 1,105,905; Aug. 4; Gaz. vol. 205; p. 111.

Hess, Edward B., Brooklyn, assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y. Type-writing machine. No. 1,105,657; Aug. 4; Gaz. vol. 205; p. 25.

Hess, Wendell, Jr., Troy, N. Y., assignor to W. & L. E. Gurley. Recorder. No. 1,105,906; Aug. 4; Gaz. vol. 205; p. 111.

Hesse, Herman, Easton, Pa. Fire and burglar alarm. No. 1,107,945; Aug. 18; Gaz. vol. 205; p. 917.

Hesselman, Knut J. E., Stockholm, Sweden. Cylinder-head for internal-combustion engines. No. 1,107,946; Aug. 18; Gaz. vol. 205; p. 917.

Hesser Maschinenfabrik Aktiengesellschaft, Fr. (See Hesser, Otto, assignor.)

Hesser, Otto, assignor to Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, near Stuttgart, Germany. Packing-machine. No. 1,106,303; Aug. 4; Gaz. vol. 205; p. 246.

Hesser, Otto, assignor to Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, near Stuttgart, Germany. Machine for charging and closing paper bags. No. 1,106,304; Aug. 4; Gaz. vol. 205; p. 247.

Hesser, Otto, assignor to Fr. Hesser Maschinenfabrik Aktiengesellschaft, Cannstatt, Germany. Machine for closing up parcels. No. 1,106,305; Aug. 4; Gaz. vol. 205; p. 247.

Hetherington, Carl F., Indianapolis, Ind. Clutch. No. 1,106,563; Aug. 11; Gaz. vol. 205; p. 386.

Heyne, Howard A., assignor of one-half to W. L. Douglas, New York, N. Y. Percolator. No. 1,106,045; Aug. 4; Gaz. vol. 205; p. 161.

Hibbard, Walter R., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Antimony-sulfid-coated granulated explosive. No. 1,108,437; Aug. 25; Gaz. vol. 205; p. 1136.

Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Filing appliance. No. 1,107,305; Aug. 18; Gaz. vol. 205; p. 691.

Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Paper-holder. No. 1,107,306; Aug. 18; Gaz. vol. 205; p. 692.

Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Filing appliance. No. 1,107,307; Aug. 18; Gaz. vol. 205; p. 692.

Hicks, Harrison W., Alexandria, assignor to The Huntington Specialty Company, Huntington, Ind. Clock. No. 1,107,947; Aug. 18; Gaz. vol. 205; p. 917.

Higgins, Daniel, New London, Conn. Outside rolling window-shutter. No. 1,107,069; Aug. 11; Gaz. vol. 205; p. 559.

Higgins, John W., Jackson, Ohio. Gas-burner. No. 1,105,780; Aug. 4; Gaz. vol. 205; p. 68.

Higgins, Joseph J., Silver Creek, Pa. Excavating-bucket. No. 1,106,146; Aug. 4; Gaz. vol. 205; p. 197.

Higgins, Virginia K., *et al.* (See Lorenz, Friedrich, assignor.)

Hight, Urias T., Candor, N. C. Pea-huller. No. 1,107,424; Aug. 18; Gaz. vol. 205; p. 736.

Hildreth, Lawrence, Lexington, Ky. Animal-trap. No. 1,106,382; Aug. 11; Gaz. vol. 205; p. 319.

Hill, A. Leroy, administrator. (See Bollinger, Alexander M.)

Hill, Charles, New Bedford, Mass. Match-striker. No. 1,106,216; Aug. 4; Gaz. vol. 205; p. 219.

Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Buttonhole-sewing machine. No. 1,106,810; Aug. 11; Gaz. vol. 205; p. 472.

Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Stitched buttonhole. No. 1,107,669; Aug. 18; Gaz. vol. 205; p. 823.

Hill, Irving. (See Morscher, Lawrence N., assignor.)

Hill, Thomas A., New York, N. Y. Guard and curb. No. 1,105,781; Aug. 4; Gaz. vol. 205; p. 68.

Hiller, Balthaser, Hudson, Wis. Meat-curing device. No. 1,108,755; Aug. 25; Gaz. vol. 205; p. 1246.

Hills, Edward R. (See Corthill, Fred H., assignor.)

Hiltscher, John F., Fullerton, Cal. Dry concentrator. No. 1,108,499; Aug. 25; Gaz. vol. 205; p. 1160.

Himberger, Matt., Woodward, Iowa. Automatic car-coupling with air-operated release. No. 1,108,577; Aug. 25; Gaz. vol. 205; p. 1186.

Himle, Thorstein, Santa Rosa, Cal. Life-preserver. No. 1,108,756; Aug. 25; Gaz. vol. 205; p. 1246.

Hindman, Isaiah E., Crafton, assignor to The Duff Manufacturing Company, Pittsburgh, Pa. Lever-socket for lifting-jacks. No. 1,107,611; Aug. 18; Gaz. vol. 205; p. 802.

Hinds, Thomas, Winnipeg, Manitoba, Canada. Pipe-wrench. No. 1,105,782; Aug. 4; Gaz. vol. 205; p. 68.

Hipple, Solomon R., Williamsport, Pa., and W. L. Conwell, Montclair, N. J. Contact switch-box. No. 1,105,907; Aug. 4; Gaz. vol. 205; p. 111.

Hirth, Alphons, Oberburnhaupt, Germany. Grain-binding tool. No. 1,108,172; Aug. 25; Gaz. vol. 205; p. 1044.

Hise, John P., Hightown, Va., assignor to The Hise Wagon Brake Company, Marlinton, W. Va. Attachment for wagon-brakes. No. 1,106,942; Aug. 11; Gaz. vol. 205; p. 519.

Hise Wagon Brake Company, The. (See Hise, John P., assignor.)

Hoag, George M., Galveston, Tex. Self-propelled truck. No. 1,106,217; Aug. 4; Gaz. vol. 205; p. 219.

Hoagland, Frank O., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Rim-fire cartridge. No. 1,107,519; Aug. 18; Gaz. vol. 205; p. 769.

Hoagland, Frank O., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Mushroom-bullet. No. 1,107,948; Aug. 18; Gaz. vol. 205; p. 918.

Hoal, James T., Atlanta, Ga. Drill. No. 1,106,306; Aug. 4; Gaz. vol. 205; p. 248.

Hoar, Walter J., assignor to W. J. Hoar Shoe Manufacturing Co., Portland, Me. Shoe. No. 1,106,811; Aug. 11; Gaz. vol. 205; p. 472.

Hobart, Henry M., Schenectady, N. Y., assignor to General Electric Company. Cooling electrical apparatus. No. 1,105,783; Aug. 4; Gaz. vol. 205; p. 69.

Hock, Edward C., Buffalo, N. Y. Smoke-consuming device for heaters or boilers. No. 1,106,709; Aug. 11; Gaz. vol. 205; p. 436.

Hodge, Arthur J., assignor to Reliance Gas Regulator & Machine Company, Pasadena, Cal. Gas-regulator. No. 1,107,612; Aug. 18; Gaz. vol. 205; p. 802.

Hodgson, William, and E. J. Deegan, New York, N. Y. Regulator. No. 1,108,173; Aug. 25; Gaz. vol. 205; p. 1044.

Hoefer, Emil A. (See Hoefer, Simon and E. A.)

Hoefer, Simon and E. A., Freeport, Ill. Mixing device. No. 1,106,447; Aug. 11; Gaz. vol. 205; p. 342.

Hoersch, Anton, Menasha, Wis. Storm-window ventilator. No. 1,105,784; Aug. 4; Gaz. vol. 205; p. 69.

Hofer, Bruno, Munich, Germany. Apparatus for separating solid matter, more particularly cellular matter, from liquids. No. 1,108,095; Aug. 18; Gaz. vol. 205; p. 971.

Hoffmann, Ernst G., deceased, New Rochelle; A. W. Kiddle, New York, N. Y., and A. M. Becker, Frankfort-on-the-Main, Germany, executors. Forming-dies. No. 1,106,564; Aug. 11; Gaz. vol. 205; p. 387.

Hofmann, Wilhelm H., Hamburg, Germany. Deodorizing oleic and fatty acids derived from train or fish oils. No. 1,106,509; Aug. 11; Gaz. vol. 205; p. 366.

Hogan, George F., Chicago, Ill. Closure for envelops. No. 1,105,785; Aug. 4; Gaz. vol. 205; p. 69.

Hoge, James B., Cleveland, Ohio. Railway-construction machinery. No. 1,108,578; Aug. 25; Gaz. vol. 205; p. 1186.

Hohagen, Walter, Charlottenburg, assignor to Siemens-Schuckert Werke G. m. b. H., Berlin, Germany. Valveless pump for conveying gases. No. 1,107,425; Aug. 18; Gaz. vol. 205; p. 736.

Hohaus, Theodore, assignor to Union Fibre Company, Winona, Minn. Machine for making fiber insulating-sheets. No. 1,105,786; Aug. 4; Gaz. vol. 205; p. 69.

Holdaway, Hall H., Salt Lake City, Utah, assignor to F. Spencer, Jr., Los Angeles, Cal. Button-sewing attachment. No. 1,108,074; Aug. 18; Gaz. vol. 205; p. 963.

Holdsworth, Philip H. (See Williams, William E., assignor.)

Holland, Newman H., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,106,449; Aug. 11; Gaz. vol. 205; p. 342.

Holland, William H., Alderley Edge, England. Mud-guard for motor-vehicles. No. 1,107,949; Aug. 18; Gaz. vol. 205; p. 918.

Hollandt, Friedrich A., and J. W. Smith, Ilion, N. Y. Gage. No. 1,107,789; Aug. 18; Gaz. vol. 205; p. 865.

Hollar, William H. (See Rees, Walter, assignor.)

Hollings, Harry V., assignor of one-half to C. T. Jacobsen, San Francisco, Cal. Truck-tire. No. 1,106,812; Aug. 11; Gaz. vol. 205; p. 473.

Hollingsworth, Charles M., Washington, D. C. Cuff-holder. No. 1,106,653; Aug. 11; Gaz. vol. 205; p. 418.

Hollingsworth, Eli W., Zirconia, N. C. Plow. No. 1,108,174; Aug. 25; Gaz. vol. 205; p. 1045.

Holliwell, Charles. (See Whittaker and Holliwell.)

Holm, Gustave H., Bridgeport, Conn. Means for protecting countersunk screw-heads. No. 1,105,658; Aug. 4; Gaz. vol. 205; p. 25.

Holman, Alfred W., St. Matthews, S. C. Automatic foldable cover. No. 1,108,757; Aug. 25; Gaz. vol. 205; p. 1247.

Holmes, Robert E. L., assignor to Keystone Driller Company, Beaver Falls, Pa. Valve for deep-well pumps. No. 1,107,426; Aug. 18; Gaz. vol. 205; p. 737.

Holnagel, William A., assignor to Farmer's Handy Wagon Co., Saginaw, Mich. Stave-retaining device for silos. No. 1,106,383; Aug. 11; Gaz. vol. 205; p. 319.

Holroyd, Thomas H., Southfields, England. Non-refillable bottle. No. 1,107,790; Aug. 18; Gaz. vol. 205; p. 865.

Holroyd, Thomas H., Southfields, England. Smelting-furnace. No. 1,108,175; Aug. 25; Gaz. vol. 205; p. 1045.

Holsen, Joseph J., Manitowoc, Wis. Watch-charm. No. 1,107,050; Aug. 18; Gaz. vol. 205; p. 918.

Holst, Lodewyk J. R., Lansdowne, assignor to Williams, Brown and Earle, Inc., Philadelphia, Pa. Machine for building up designs on cylindrical printing-surfaces. No. 1,107,520; Aug. 19; Gaz. vol. 205; p. 769.

Holt, James B., Pullman, Wash. Fruit-picking sack. No. 1,106,654; Aug. 11; Gaz. vol. 205; p. 419.

Holt, Theodore P. (See Christensen and Holt.)

Holtermann, August E., Depere, Wis. Four-wheel drive. No. 1,108,367; Aug. 25; Gaz. vol. 205; p. 1113.

Holtzer-Cabot Electric Company. (See Tormin, Egmont M., assignor.)

Holtzmann, John, deceased, Baltimore, Md.; L. Holtzmann, executrix. Thread-drawing attachment for sewing-machines. No. 1,106,813; Aug. 11; Gaz. vol. 205; p. 473.

Holtzmann, Louise, executrix. (See Holtzmann, John.)

Holzel, Berthold, New York, N. Y. Attachment for finger-rings. No. 1,106,814; Aug. 11; Gaz. vol. 205; p. 473.

Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Vise for machines of the linotype class. No. 1,108,758; Aug. 25; Gaz. vol. 205; p. 1247.

Homburg, Alfred J., Chicago, Ill. Match-safe. No. 1,106,218; Aug. 4; Gaz. vol. 205; p. 220.

Honold, Gottlob, Germany. assignor to Firm of R. Bosch, Stuttgart, Sparking device for internal-combuation engines. No. 1,105,659; Aug. 4; Gaz. vol. 205; p. 26.

Honold, Gottlob, gart, Germany. assignor to Firm of R. Bosch, Stutt- Coupling for ignition-machines. No. 1,105,660; Aug. 4; Gaz. vol. 205; p. 26.

Honold, Gottlob, gart, Germany. assignor to Firm of R. Bosch, Stutt- Apparatus for ignition of reversible internal-combuation motors. No. 1,105,787; Aug. 4; Gaz. vol. 205; p. 70.

Honolulu Iron Works Company. (See Ewart, Arthur F., assignor.)

Honolulu Iron Works Company. (See Hedemann, Christian J., assignor.)

Hood, Alexander J., Muscoda, Wis. Milking-stool. No. 1,107,521; Aug. 18; Gaz. vol. 205; p. 769.

Hood, Arthur M., Indianapolis, assignor to The Greenstreet Folding Box Machine Company, Crawfordsville, Ind. Wire bound-box machine. No. 1,107,216; Aug. 11; Gaz. vol. 205; p. 613.

Hood Rubber Company. (See Earle and Kyriakides, assignors.)

Hookey, Charles H. and S., Wyandotte, Mich., assignors to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa. Can-heading machine. No. 1,105,661; Aug. 4; Gaz. vol. 205; p. 26.

Hookey, Samuel. (See Hookey, Charles H. and S.)

Hooks, Charles A., Oxford, Fla. Bean-huller. No. 1,107,165; Aug. 11; Gaz. vol. 205; p. 596.

Hoover, Thomas A., Fresno, Cal. Bumper for vehicles. No. 1,105,974; Aug. 4; Gaz. vol. 205; p. 136.

Hopkins, Alfred, assignor to Innovation Specialty Company, Boston, Mass. Milk-bottle stopper. No. 1,108,842; Aug. 25; Gaz. vol. 205; p. 1276.

Hopkins, William J., Chicago, Ill. Dental instrument. No. 1,106,815; Aug. 11; Gaz. vol. 205; p. 473.

Hopper, William, Jefferson, Iowa. Collapsible life-boat. No. 1,106,307; Aug. 4; Gaz. vol. 205; p. 249.

Hoppinger, Robert J., Cleveland, Ohio. Loose-leaf binder. No. 1,108,438; Aug. 25; Gaz. vol. 205; p. 1136.

Hormel, August, New York, N. Y. Grinding-machine. No. 1,108,176; Aug. 25; Gaz. vol. 205; p. 1045.

Horn, Charles A., Chickasha, Okla. Ice-shaver. No. 1,107,070; Aug. 11; Gaz. vol. 205; p. 560.

Hornbeck, John A., Hinsdale, Ill. Cultivator. No. 1,107,071; Aug. 11; Gaz. vol. 205; p. 560.

Hornstein, Fredrick C., Indianapolis, Ind. Insulated trolley-crossing. No. 1,105,662; Aug. 4; Gaz. vol. 205; p. 27.

Horowitz, Sigmund, Lemberg, Austria-Hungary. Gasification apparatus. No. 1,105,975; Aug. 4; Gaz. vol. 205; p. 136.

Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,108,433; Aug. 25; Gaz. vol. 205; p. 1137.

Horton, Charles M., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Seam for sewed articles. No. 1,106,565; Aug. 11; Gaz. vol. 205; p. 387.

Horton, Charles M., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Loop-taker mechanism for sewing-machines. No. 1,107,308; Aug. 18; Gaz. vol. 205; p. 692.

Horton, John T., New York, N. Y. Fall-rope carrier. No. 1,108,368; Aug. 25; Gaz. vol. 205; p. 1113.

Horton, Samuel C., St. Paul, Minn. Box. No. 1,105,788; Aug. 4; Gaz. vol. 205; p. 70.

Horty, George, Elkhart, Ind. Life-preserver. No. 1,108,177; Aug. 25; Gaz. vol. 205; p. 1046.

Horváth, George, Cleveland, Ohio. Drapery-support for windows. No. 1,106,308; Aug. 4; Gaz. vol. 205; p. 249.

Horváth, Stephen, Racine, Wis. Spring-heel construction. No. 1,108,369; Aug. 25; Gaz. vol. 205; p. 1114.

Horwood, Edward J., Broken Hill, New South Wales, Australia. Separation of zinc-blende and other metalliferous constituents from ore concentrates and slimes by flotation or granulation. No. 1,108,440; Aug. 25; Gaz. vol. 205; p. 1137.

Hosler, George W., Findlay, Ohio. Gas-lighter. No. 1,105,663; Aug. 4; Gaz. vol. 205; p. 27.

Hough, William B., Chicago, Ill., assignor of one-half to F. C. Taxis, St. Louis, Mo., and one-half to Metal Building Materials Company. Reinforced concrete construction. No. 1,105,789; Aug. 4; Gaz. vol. 205; p. 71.

Houghton, Orley C., assignor to Bullock Tractor Company, Chicago, Ill. Traction-engine. No. 1,106,046; Aug. 4; Gaz. vol. 205; p. 162.

Houghton, Orley C., assignor to Bullock Tractor Company, Chicago, Ill. Traction-engine. No. 1,107,791; Aug. 18; Gaz. vol. 205; p. 866.

Honston, James D., Nebraska City, Nebr. Nut-lock. No. 1,107,792; Aug. 18; Gaz. vol. 205; p. 866.

Houston, James E. (See Klumph and Houston.)

Houze, Leon J., Point Marion, Pa. Manufacturing and tempering glass articles. No. 1,107,072; Aug. 11; Gaz. vol. 205; p. 560.

Hovey, Selden P., assignor of one-half to J. C. Spann, Los Angeles, Cal. Combination-lock. No. 1,107,793; Aug. 18; Gaz. vol. 205; p. 866.

Hovey, Silas B., Kansas City, Kans. Curtain-supporter. No. 1,106,566; Aug. 11; Gaz. vol. 205; p. 387.

Howard, Fred R. (See Musgrove and Howard.)

Howell, Elizabeth E., Denver, Colo. Garment-fastening hook. No. 1,108,178; Aug. 25; Gaz. vol. 205; p. 1046.

Howes, George W., assignor to Estate of P. D. Beckwith, Inc., Dowagiac, Mich. Heating-stove. No. 1,106,871; Aug. 11; Gaz. vol. 205; p. 493.

Hoynes Safety Powder Company. (See Waddell, William C., assignor.)

Hoyt, Alfred, Baltimore, Md. Whisk-broom holder. No. 1,106,219; Aug. 4; Gaz. vol. 205; p. 220.

Hruby, Rudolph A., Cleveland, Ohio. Tire-holder. No. 1,108,843; Aug. 25; Gaz. vol. 205; p. 1277.

Hubbard, Albert S., Belleville, N. J., assignor to Gould Storage Battery Company. Electrical battery. No. 1,106,095; Aug. 4; Gaz. vol. 205; p. 179.

Hubbard, Albert S., Belleville, N. J., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 1,106,510; Aug. 11; Gaz. vol. 205; p. 366.

Hubbell, Harvey, Bridgeport, Conn. Incandescent-lamp socket. No. 1,107,951; Aug. 18; Gaz. vol. 205; p. 918.

Hubbell, Vincent B., New York, N. Y. Pool-ball. No. 1,108,441; Aug. 25; Gaz. vol. 205; p. 1137.

Huber, Jacques, Zurich, Switzerland. Pipe-bending device. No. 1,108,179; Aug. 25; Gaz. vol. 205; p. 1046.

Hubler, John F., near Fort Wayne, Ind. Wheel-plow. No. 1,108,579; Aug. 25; Gaz. vol. 205; p. 1187.

Huff, Albert J. (See Dohner and Huff.)

Huff, George H., Syracuse, N. Y. Scraper attachment for wheel-plows. No. 1,107,952; Aug. 18; Gaz. vol. 205; p. 919.

Huffman, Louis, Toronto, Ontario, Canada. Variable-speed mechanism. No. 1,107,613; Aug. 18; Gaz. vol. 205; p. 802.

Hughes, Dow B., New York, N. Y., assignor to The Citizens Savings and Trust Company, trustee, Cleveland, Ohio. Magneto-armature. No. 1,108,442; Aug. 25; Gaz. vol. 205; p. 1137.

Hughes, William G., Pittsburgh, Pa. Incandescent electric lamp. No. 1,105,908; Aug. 4; Gaz. vol. 205; p. 112.

Hughes, William G., Pittsburgh, Pa. Incandescent body for electric lamps. No. 1,106,384; Aug. 4; Gaz. vol. 205; p. 320.

Hulett, Thomas, Chicago, Ill. Automobile-starter. No. 1,106,449; Aug. 11; Gaz. vol. 205; p. 343.

Hulfish, David S., assignor to McMeen & Miller, Chicago, Ill. Printing-telegraph. No. 1,108,580; Aug. 25; Gaz. vol. 205; p. 1188.

Humboldt Cement Products Mfg. Co. (See Mayer, John H., assignor.)

Hunt, Edwin J., Oldbury, and W. T. Glidden, Warley, assignors to Chance & Hunt, Limited, Oldbury, England. Electrolysis and treatment of sulfate liquors. No. 1,107,309; Aug. 18; Gaz. vol. 205; p. 693.

Hunt, George G., Plano, assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill. Quick-acting clamp. No. 1,106,096; Aug. 4; Gaz. vol. 205; p. 180.

Huntington Specialty Company, The. (See Hicks, Harrison W., assignor.)

Hupp Motor Car Company. (See Nelson, Emil A., assignor.)

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hyle, Jacob A., Philadelphia, and J. W. Herman, assignors to National Steel Tie Company, Harrisburg, Pa. Railway-tie and rail-fastening. No. 1,108,370; Aug. 25; Gaz. vol. 205; p. 1114.

Hyman, Charles H., assignor of one-half to W. J. Solls, Denver, Colo. Change-receiving device. No. 1,106,385; Aug. 11; Gaz. vol. 205; p. 320.

Icsiar, Adrian de, Ligao, Philippine Islands. Apparatus for extracting the fiber from the stalk of the abacá-plant. No. 1,108,075; Aug. 18; Gaz. vol. 205; p. 963.

Icy-Hot Bottle Company, The. (See Altenberg, George P., assignor.)

Imperial Brass Manufacturing Company. (See McCanna, John F., assignor.)

Imperial Heater Company. (See Betker, Edward T., assignor.)

Imperial Stopper Company. (See Miller, Eseck C., assignor.)

Improved Paper Machinery Company, The. (See Haug, Anton J., assignor.)

Ingalls, Charles H., Danvers, Mass., assignor to General Electric Company. Recording electric meter. No. 1,106,710; Aug. 11; Gaz. vol. 205; p. 436.

Ingells, James, Muskegon, Mich. Extension-table. No. 1,106,872; Aug. 11; Gaz. vol. 205; p. 494.

Ingenlath, Robert, San Francisco, Cal. Hanger for clothes and the like. No. 1,106,511; Aug. 11; Gaz. vol. 205; p. 367.

Ingersoll, Clarence B. (See Ingersoll, Homer H. and C. B.)

Ingersoll Electric Vaporizer Co. (See Ingersoll, Homer H. and C. B., assignors.)

Ingersoll, Homer H. and C. B., Chicago, Ill., assignors to Ingersoll Electric Vaporizer Co. Fuel-vaporizer for explosion-engines. No. 1,106,386; Aug. 11; Gaz. vol. 205; p. 320.

Ingersoll-Rand Company. (See Banner, Otto, assignor.)

Ingersoll-Rand Company. (See Peck, Caid H., assignor.)

Ingstrom, Albin, Mechanicsville, N. Y. Railway-car construction. No. 1,106,873; Aug. 11; Gaz. vol. 205; p. 494.

Inman, William H., Keokuk, Iowa. Bottle-cap. No. 1,107,522; Aug. 18; Gaz. vol. 205; p. 769.

Innes, Albert E., Denver, Colo. Adjustable bridge for trial-frames. No. 1,105,790; Aug. 4; Gaz. vol. 205; p. 71.

Innovation Specialty Company. (See Hopkins, Alfred, assignor.)

International Haloid Company. (See Du Pont, Francis I., assignor.)

International Harvester Company of New Jersey. (See Schutt, Dunn A., assignor.)

International Harvester Corporation. (See Kane, Edmund J., assignor.)

International Motor Company. (See Mueller, Frank, assignor.)

International Typesetting Machine Company. (See Armstrong, Henry A., assignor.)

International Typesetting Machine Company. (See Bertram, William E., assignor.)

International Typesetting Machine Company. (See Homans, Thomas S., assignor.)

International Typesetting Machine Company. (See Sperry, Samuel E., assignor.)

International Typesetting Machine Company. (See Toeplitz, Richard, assignor.)

International Typesetting Machine Company. (See White, Woolman G., assignor.)

Internationale Siegwarthalkengesellschaft. (See Wilhelmi, Otto, assignor.)

Ireland, Rex, Edison, Ohio. Auxiliary signal device. No. 1,107,794; Aug. 18; Gaz. vol. 205; p. 867.

Irrgang, Max R., Chicago, Ill. Beer and hop separator. No. 1,106,450; Aug. 11; Gaz. vol. 205; p. 343.

Irvin, John J., and W. Sheppard, Bellwood, Pa. Car-dumping device. No. 1,106,220; Aug. 4; Gaz. vol. 205; p. 220.

Irvine, John M., Williams Bay, Wis. Egg-tester. No. 1,106,348; Aug. 4; Gaz. vol. 205; p. 262.

Irving Iron Works Company. (See Berson, Nathan, assignor.)

Irving, John J., Liverpool, England. Beacon for comparatively shallow water, (instead of buoys.) No. 1,107,197; Aug. 11; Gaz. vol. 205; p. 607.

Irving, Walter E., Glenbrook, Conn. Means for fastening floor and sidewalk gratings. No. 1,105,791; Aug. 4; Gaz. vol. 205; p. 71.

Isaacs, Henry. (See Conne, Louis, assignor.)

Isenberg, Alfred. (See Erskine, James E., assignor.)

Isenhour, Luther J., Indianapolis, Ind. Incubator and brooder. No. 1,106,451; Aug. 11; Gaz. vol. 205; p. 344.

Isgrig, Washington D., *et al.* (See Newkirk, William P., assignor.)

Ittner, Ferdinand, Brooklyn, N. Y., assignor to The Bradford Co., Middletown, Conn. Gasolene-vaporizer. No. 1,106,452; Aug. 11; Gaz. vol. 205; p. 344.

Ives, Frederic E., Woodcliff-on-Hudson, N. J. Color photography. No. 1,106,816; Aug. 11; Gaz. vol. 205; p. 474.

Iwan, William L., South Bend, Ind. Earth-auger. No. 1,106,097; Aug. 4; Gaz. vol. 205; p. 180.

J. B. Wise Inc. (See Perkins, Walter H., assignor.)

J. E. Hanger, Inc. (See Moore, Elmer C., assignor.)

J. E. Porter Company. (See Jacobs, William F., assignor.)

J. G. Brill Co. (See Adams, Walter S., assignor.)

J. G. Brill Co., The. (See Brooks, James A., assignor.)

J. G. Brill Co., The. (See Head, Arthur F. H., assignor.)

J. H. Sager Company. (See Sager, James H., assignor.)

J. I. Case Plow Works. (See Sobey, William, assignor.)

Jablonski, Boleslaw, assignor of one-half to W. Rostowski, Natrona, Pa. Non-skidding attachment for wheels. No. 1,107,953; Aug. 18; Gaz. vol. 205; p. 919.

Jackson, Aldin B., Fort Wayne, Ind. Adjustable gouge. No. 1,107,523; Aug. 18; Gaz. vol. 205; p. 769.

Jackson, Dugald C., Madison, Wis. Electric motor. No. 1,106,513; Aug. 11; Gaz. vol. 205; p. 368.

Jackson, Dugald C., Madison, Wis. Dynamo-electric machine. No. 1,106,514; Aug. 11; Gaz. vol. 205; p. 368.

Jackson, E. Hilton, *et al.*, trustees. (See Cahill, Thaddeus, assignor.)

Jackson, Harry N. (See Weeks and Jackson.)

Jackson, William H., Halifax, England. Autographic-message register or memorandum-tablet. No. 1,106,711; Aug. 11; Gaz. vol. 205; p. 436.

Jacob, Heinrich, Steglitz, near Berlin, assignor to Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Base-line telemeter. No. 1,108,180; Aug. 25; Gaz. vol. 205; p. 1046.

Jacob, William, San Leandro, Cal. Life-saving raft. No. 1,105,976; Aug. 4; Gaz. vol. 205; p. 137.

Jacobs, Frank F. and M. S., Indianapolis, Ind. Horseshoe-creeper. No. 1,106,943; Aug. 11; Gaz. vol. 205; p. 519.

Jacobs, Henry W. (See Lanning, Howard H., assignor.)

Jacobs, Herman F., Natick, Mass. Mechanical movement. No. 1,108,844; Aug. 25; Gaz. vol. 205; p. 1277.

Jacobs, Minnie S. (See Jacobs, Frank F. and M. S.)

Jacobs, William F., assignor to J. E. Porter Company, Ottawa, Ill. Hay-carrier. No. 1,106,512; Aug. 11; Gaz. vol. 205; p. 367.

Jacobs, William F., assignor to J. E. Porter Company, Ottawa, Ill. Cattle-stanchion. No. 1,107,524; Aug. 18; Gaz. vol. 205; p. 770.

Jacobsen, Christian T. (See Hollings, Harry V., assignor.)

Jacobson, Severt, and F. E. Anderson, Lynch, Nebr. Steering apparatus. No. 1,107,073; Aug. 11; Gaz. vol. 205; p. 561.

Jacobus, David S., Jersey City, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Water-tube boiler. No. 1,106,453; Aug. 11; Gaz. vol. 205; p. 345.

Jacovatos, Nicholas, New York, N. Y. Extensible table. No. 1,107,954; Aug. 18; Gaz. vol. 205; p. 919.

Jaeger, Carl L., Mahwah, N. J. Recording device. No. 1,106,944; Aug. 11; Gaz. vol. 205; p. 519.

Jagenberg, Emil, Dusseldorf, Germany. Paper-feeding apparatus. No. 1,107,795; Aug. 18; Gaz. vol. 205; p. 867.

James Beggs & Co. (See Eells and Kaufman, assignors.)

James, Frank S., Grass Valley, Cal. Rod-extractor. No. 1,107,955; Aug. 18; Gaz. vol. 205; p. 919.

James, Llewellyn, Tilsonburg, Ontario, Canada, assignor to Borden's Condensed Milk Company, New York, N. Y. Can-printing machine. No. 1,106,712; Aug. 11; Gaz. vol. 205; p. 437.

Jamieson, William M., Onehunga, Auckland, New Zealand. Steam-valve and fitting therefor. No. 1,108,500; Aug. 25; Gaz. vol. 205; p. 1160.

Jandus, William, Cleveland, Ohio. Electrometric appliance. No. 1,107,670; Aug. 18; Gaz. vol. 205; p. 823.

Janney, Reynold, New York, N. Y., assignor to The Waterbury Tool Company, New Britain, Conn. Controlling apparatus for hydraulic variable-speed gears. No. 1,108,443; Aug. 25; Gaz. vol. 205; p. 1138.

Janney, Robert E. L., Chicago, Ill. Contour car-coupling. No. 1,107,166; Aug. 11; Gaz. vol. 205; p. 596.

Janpole, William M., Los Angeles, Cal. Apparatus for constructing sheets of material for building or other purposes. No. 1,107,074; Aug. 11; Gaz. vol. 205; p. 561.

Jansson, Bennett G., Malden, assignor to Blake Signal and Manufacturing Co., Boston, Mass. Insulated cleat. No. 1,105,664; Aug. 4; Gaz. vol. 205; p. 27.

Jaques, Arthur, Redding, Polmont Station, Scotland, and G. Wells, St. Albans, England, assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Explosive priming composition. No. 1,106,147; Aug. 4; Gaz. vol. 205; p. 197.

Jarvis, Thompson P., San Francisco, Cal. Oil-burner. No. 1,107,614; Aug. 18; Gaz. vol. 205; p. 803.

Jaworek, Engelbert, Crescent City, Cal. Logging-shoe. No. 1,106,098; Aug. 4; Gaz. vol. 205; p. 181.

Jefferis, Joshua M., Wilmington, Ohio. Corn-planter. No. 1,105,665; Aug. 4; Gaz. vol. 205; p. 27.

Jeffrey Manufacturing Company, The. (See Mueller, George H., assignor.)

Jeffries, Louis H., Minneapolis, Minn. Photographic developing-tank. No. 1,108,581; Aug. 25; Gaz. vol. 205; p. 1188.

Jeffries, Nicholas J., Atlantic City, N. J. Antenna for wireless telegraphy. No. 1,106,945; Aug. 11; Gaz. vol. 205; p. 520.

Jehlicka, Gottlieb F., Williamsville, Mass. Bleaching beeswax. No. 1,106,221; Aug. 4; Gaz. vol. 205; p. 221.

Jelalian, Sarkis, Providence, R. I. Dirigible airship. No. 1,108,444; Aug. 25; Gaz. vol. 205; p. 1138.

Jenkins, Ulysses S. (See Poindexter, William B., assignor.)

Jenkins, Walter M. (See Clemmensen and Jenkins.)

Jenner, George A., San Antonio, Tex. Number-displaying device. No. 1,107,525; Aug. 18; Gaz. vol. 205; p. 770.

Jennings, David J., Cleveland, Ohio. Machine for the manufacture of paper receptacles. No. 1,107,956; Aug. 18; Gaz. vol. 205; p. 920.

Jennings, Frederick W., London, England. Control-valve. No. 1,106,454; Aug. 11; Gaz. vol. 205; p. 345.

Jennings, Victor H., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Sheath or scabbard. No. 1,108,864; Aug. 25; Gaz. vol. 205; p. 1285.

Jenol, Eugene, and J. Stevenson, Jenkins, Ky.; said Jenol assignor to S. Kruchio, R. M. Szabo, and S. Kruchio, Uniontown, Pa. Rail-contact for vehicles. No. 1,106,387; Aug. 11; Gaz. vol. 205; p. 320.

Jenöl, Eugene, and S. Kruchió, assignors of twenty-five one-hundredths to G. R. Szíles and twenty-five one-hundredths to A. Kruchio, Uniontown, Pa. Antiskid device. No. 1,107,796; Aug. 18; Gaz. vol. 205; p. 867.

Jensen, Aage. (See Gray, Chester E., assignor.)

Jensen, Jens H., Minden, Nebr. Transmission-gearing. No. 1,108,582; Aug. 25; Gaz. vol. 205; p. 1188.

Jensen, Jens K., Klutzow, Pomerania, Germany. Machine for cutting the ends of clay pipes in an undulating line. No. 1,108,845; Aug. 25; Gaz. vol. 205; p. 1277.

Jensen, Julius N., Lake City, Colo. Stanchion. No. 1,106,713; Aug. 11; Gaz. vol. 205; p. 437.

Jensen, Peter L. (See Pridham and Jensen.)

Jensen, Peter L., assignor to Commercial Wireless and Development Company, San Francisco, Cal. Wireless apparatus. No. 1,106,874; Aug. 11; Gaz. vol. 205; p. 494.

Jensen, Peter L., and E. S. Pridham, Napa, assignors to Commercial Wireless & Development Co., San Francisco, Cal. Wireless apparatus. No. 1,106,875; Aug. 11; Gaz. vol. 205; p. 495.

Jessen, Arnold H., Los Angeles, Cal. Variable-speed power-transmitting device. No. 1,105,792; Aug. 4; Gaz. vol. 205; p. 71.

Joachim, Ferencz, Pullman, Ill. Receptacle. No. 1,106,946; Aug. 11; Gaz. vol. 205; p. 520.

Jochum, William, *et al.* (See Learned, Willard M., assignor.)

John Church Company, The. (See Lambert, Clayton A., assignor.)

Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lubricating device for sewing-machine needles. No. 1,108,445; Aug. 25; Gaz. vol. 205; p. 1139.

Johnson, Aron, New York, N. Y. Bottle-capping machine. No. 1,106,222; Aug. 4; Gaz. vol. 205; p. 221.
Johnson, Axel W. (See Sigel and Johnson.)
Johnson, Charles G. (See Langhammer and Johnson.)
Johnson, Gerald M., Washington, D. C. Hinge. No. 1,105,666; Aug. 4; Gaz. vol. 205; p. 28.
Johnson, Horace G., *et al.* (See Cooper, Robert S., assignor.)
Johnson, John F., Elmhurst, N. Y. Base-board construction for buildings. No. 1,108,446; Aug. 25; Gaz. vol. 205; p. 1139.
Johnson, John W. (See Johnson, William C. and J. W.)
Johnson, Joseph E., Jr., New York, N. Y. Treating cast-iron. No. 1,106,817; Aug. 11; Gaz. vol. 205; p. 474.
Johnson, Junius R., C. S. Hamilton, and R. D. Van Duyne, East Highlands, Cal. Label pasting and marking machine. No. 1,108,583; Aug. 25; Gaz. vol. 205; p. 1189.
Johnson, Lewis A. W., Los Angeles, Cal. Dry concentrator. No. 1,105,977; Aug. 4; Gaz. vol. 205; p. 137.
Johnson, Oscar, New York, N. Y., assignor to Auto Pneumatic Action Company. Expression-controlling device for mechanically and manually operated player-pianos. No. 1,107,797; Aug. 18; Gaz. vol. 205; p. 868.
Johnson, Paul R., and F. W. Lodding, Worcester, Mass., assignors to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Adjusting mechanism for cold-rolling mills. No. 1,108,447; Aug. 25; Gaz. vol. 205; p. 1139.
Johnson, Peter C., Halifax, Nova Scotia, Canada. Automatic signaling device. No. 1,105,793; Aug. 4; Gaz. vol. 205; p. 72.
Johnson Steel Wheels Corporation. (See Johnson, William C. and J. W., assignors.)
Johnson, Tom L., Panna Maria, assignor of one-third to V. Biela, Cestohowa, Tex. Mud-guard. No. 1,108,759; Aug. 25; Gaz. vol. 205; p. 1247.
Johnson, William C., Braintree, and J. W. Johnson, assignors to Johnson Steel Wheels Corporation, Boston, Mass. Making wheels, and resulting wheel. No. 1,108,096; Aug. 18; Gaz. vol. 205; p. 974.
Johnson, Woolsey M., Hartford, Conn. Metallurgical process. No. 1,107,310; Aug. 18; Gaz. vol. 205; p. 693.
Johnston, Gustave, Jamestown, N. Y. Rail-saw. No. 1,105,794; Aug. 4; Gaz. vol. 205; p. 72.
Johnston, John W., Trempealeau, Wis. Blow-torch. No. 1,108,436; Aug. 25; Gaz. vol. 205; p. 1136.
Johnston, William A., Prince Bay, N. Y., assignor to The S. S. White Dental Manufacturing Company. Flexible tubing. No. 1,105,795; Aug. 4; Gaz. vol. 205; p. 73.
Jones, Daniel P., assignor to The Patent Rapid Scaffold Tie Company Limited, London, England. Scaffold-tie. No. 1,107,798; Aug. 18; Gaz. vol. 205; p. 868.
Jones, David H. (See Clayton and Jones.)
Jones, Edward A., Scranton, and J. E. Jones, Throop, Pa. Automatic stoker. No. 1,107,217; Aug. 11; Gaz. vol. 205; p. 613.
Jones, Edward M., Macon, Ga. Crematory. No. 1,107,615; Aug. 18; Gaz. vol. 205; p. 803.
Jones, Edwin W., Ipswich, England. Apparatus for compressing air and other elastic fluids. No. 1,107,957; Aug. 18; Gaz. vol. 205; p. 920.
Jones, Frank T., Baltimore, Md. Aeroplane. No. 1,106,099; Aug. 4; Gaz. vol. 205; p. 181.
Jones, Frank T., assignor to The Jones Safety Train Control System Company, Baltimore, Md. Train-controlling mechanism. No. 1,108,584; Aug. 25; Gaz. vol. 205; p. 1189.
Jones, John, Portland, Oreg. Tray. No. 1,107,799; Aug. 18; Gaz. vol. 205; p. 868.
Jones, John E. (See Jones, Edward A. and J. E.)
Jones Safety Train Control System Company, The. (See Jones, Frank T., assignor.)
Jordan Machine Company. (See Warner, Len P., assignor.)
Jorgensen, Theodore O., East Chicago, Ind. Pocket-book protector. No. 1,107,958; Aug. 18; Gaz. vol. 205; p. 921.
Joseph, Carl, Bayonne, N. J. Fastener. No. 1,105,796; Aug. 4; Gaz. vol. 205; p. 73.
Joseph, Daniel, New York, N. Y. Hat-frame machine. No. 1,107,167; Aug. 11; Gaz. vol. 205; p. 596.
Joyce, Edward F., and W. B. Kain, Wheeling, W. Va. Pole latch and cavel. No. 1,106,309; Aug. 4; Gaz. vol. 205; p. 249.
Joyce, Robert, Philadelphia, Pa. Gas-heated iron. No. 1,107,526; Aug. 18; Gaz. vol. 205; p. 770.
Joynes, Albert W., Norfolk, Va. Lock-controlled valve. No. 1,107,800; Aug. 18; Gaz. vol. 205; p. 868.
Juergens, Henry F., New York, N. Y. Ear-pendant. No. 1,106,388; Aug. 11; Gaz. vol. 205; p. 320.
Julian, David, assignor to The E. J. Manville Machine Company, Waterbury, Conn. Stock holding and delivering mechanism for bolt-pointing machines. No. 1,108,448; Aug. 25; Gaz. vol. 205; p. 1140.
Julius Kayser & Co. (See Mayer, Laurance, assignor.)
Jungbecker, Wilhelm. (See Schmitz, Paul, assignor.)
Juntunen, Ainer W., Rolla, N. D. Priming apparatus for internal-combustion engines. No. 1,108,760; Aug. 25; Gaz. vol. 205; p. 1248.
Jürgens, Johann, Brooklyn, N. Y., assignor of one-half to W. von Bibra, Jersey City, N. J. Closure for shoes. No. 1,107,616; Aug. 18; Gaz. vol. 205; p. 804.
Jurkowski, Edward, New York, N. Y. Combined ironing-board and ladder. No. 1,107,527; Aug. 18; Gaz. vol. 205; p. 771.
Kaddatz, Emil, Ortonville, Minn. Spreading-rail indicator. No. 1,106,876; Aug. 11; Gaz. vol. 205; p. 493.
Kadle, Carl H., assignor to Stark Car Coupler Corporation, Strasburg, Va. Car-coupling. No. 1,107,959; Aug. 18; Gaz. vol. 205; p. 921.
Kain, William B. (See Joyce and Kain.)
Kaiser, Carl, assignor to Kaiser Manufacturing Company, New York, N. Y. Ash-can. No. 1,106,877; Aug. 11; Gaz. vol. 205; p. 496.
Kaiser, Edward F. W., St. Louis, Mo. Rack for printing-chases and the like. No. 1,107,960; Aug. 18; Gaz. vol. 205; p. 921.
Kaiser Manufacturing Company. (See Kaiser, Carl, assignor.)
Kaisling, William, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone call-bell or ringer. No. 1,106,655; Aug. 11; Gaz. vol. 205; p. 419.
Kal-Pheno Chemical Company. (See Waller, Lee O., assignor.)
Kalma, Loeser, New York, N. Y. Washboard. No. 1,107,168; Aug. 11; Gaz. vol. 205; p. 597.
Kalle and Company Aktiengesellschaft. (See Wray, Edward, assignor.)
Kammler, Edward, *et al.* (See Heina, William M., assignor.)
Kamp, Walter V., New York, N. Y. Airship. No. 1,108,113; Aug. 18; Gaz. vol. 205; p. 977.
Kane, Edmund J., Chicago, Ill., assignor to International Harvester Corporation. Carbureter. No. 1,108,181; Aug. 25; Gaz. vol. 205; p. 1047.
Kane, Katherine C., Oldtown, Me. Dust-pan. No. 1,107,961; Aug. 18; Gaz. vol. 205; p. 921.
Kapelle, Henry C., Schenectady, N. Y. Porcelain-kiln. No. 1,108,585; Aug. 25; Gaz. vol. 205; p. 1190.
Kapteina, John E., Springdale, Pa. Handling glass. No. 1,107,528; Aug. 28; Gaz. vol. 205; p. 771.
Karácsonyi, Frank, Yonkers, assignor of one-third to G. Blága, Hastings-upon-Hudson, N. Y. Door-lock. No. 1,106,223; Aug. 4; Gaz. vol. 205; p. 222.
Karcher, Otto, assignor of one-half to J. L. Russell, Canton, Ohio. Dispensing device. No. 1,105,797; Aug. 4; Gaz. vol. 205; p. 73.
Karczag, Ladislaus, Charlottenburg, and E. Kopetschni, Mannheim, Germany. Production of acid chlorids of the oxyacids. No. 1,106,455; Aug. 11; Gaz. vol. 205; p. 345.
Karges, Julius J., Maywood, Mo. Display device. No. 1,107,075; Aug. 11; Gaz. vol. 205; p. 562.
Karrer, Paul. (See Ehrlich and Karrer.)
Kasdorff, Richard B., Cleveland, Ohio. Bicycle-support. No. 1,107,427; Aug. 18; Gaz. vol. 205; p. 737.
Kassa, Jozsef, Sandcoulee, Mont. Life-boat. No. 1,105,909; Aug. 4; Gaz. vol. 205; p. 112.
Katz, Alexander, New York, N. Y. Clothes-washer. No. 1,105,978; Aug. 4; Gaz. vol. 205; p. 137.
Kaufler, Fannie A., Weedsport, N. Y. Skirt. No. 1,106,818; Aug. 11; Gaz. vol. 205; p. 474.
Kaufler, Felix, Brückl, Austria-Hungary. Producing amyl acetate and its homologues. No. 1,106,047; Aug. 4; Gaz. vol. 205; p. 162.
Kaufman, Irvin H. (See Eells and Kaufman.)
Kearney, George F., assignor of one-half to C. D. Scofield, Gorham, N. Y. Cover for kettles and the like. No. 1,106,656; Aug. 11; Gaz. vol. 205; p. 419.
Kearney, Stanley C., Wilkes-Barre, Pa. Whip-lock. No. 1,107,617; Aug. 18; Gaz. vol. 205; p. 804.
Keck, Charles R., Nelsonville, Mo. Attachment for plow-guards. No. 1,106,389; Aug. 11; Gaz. vol. 205; p. 321.
Keeley, William J., New York, N. Y. Accenting attachment for music-playing devices. No. 1,107,801; Aug. 18; Gaz. vol. 205; p. 869.
Keeley, William J., New York, N. Y., assignor to Auto Pneumatic Action Company. Grand player-piano. No. 1,107,802; Aug. 18; Gaz. vol. 205; p. 869.
Keene, William J., assignor to Chicago Spring Butt Company, Chicago, Ill. Spring-hinge. No. 1,107,076; Aug. 11; Gaz. vol. 205; p. 562.
Keesee, Clifton G. (See Campbell, John T., assignor.)
Keil, Henry F., New York, N. Y. Plate-glass structure. No. 1,107,671; Aug. 18; Gaz. vol. 205; p. 824.
Keil & Son, Francis. (See Morris, De Witt C., assignor.)
Keller, Josef, Munich, Germany. Collapsible frame for floating structures. No. 1,108,076; Aug. 18; Gaz. vol. 205; p. 964.
Keiver, Charles W., *et al.* (See Smith, Stephen P., assignor.)
Kelleher, Patrick H., Auburn, assignor of one-half to J. P. Sutton, Lewiston, Me. Stand. No. 1,105,910; Aug. 4; Gaz. vol. 205; p. 112.
Keller, Bernhard, Duisburg-Meiderich, Germany. Multiplex molding apparatus. No. 1,105,911; Aug. 4; Gaz. vol. 205; p. 113.
Kelley, Albert C., and S. A. Murphy, Gradyville, Ga. Rail-joint. No. 1,108,371; Aug. 25; Gaz. vol. 205; p. 1114.
Kelley, John C., Terre Haute, Ind. Brick-machine. No. 1,106,456; Aug. 11; Gaz. vol. 205; p. 346.
Kelley, William V. D., Newark, N. J. Engine or motor. No. 1,108,182; Aug. 25; Gaz. vol. 205; p. 1047.
Kellner, Walter, Barmen-Wichlinghausen, Germany. Paper-tube-rolling machine. No. 1,106,714; Aug. 11; Gaz. vol. 205; p. 438.

Kellogg Switchboard & Supply Company. (See Dean, William W., assignor.)
Kellogg Switchboard & Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard and Supply Company. (See Simpson, Charles A., assignor.)
Kellogg Switchboard and Supply Company. (See Winston, Charles S., assignor.)
Kelly, Albert F., assignor of one-third to P. Goodes and one-third to W. Shasberger, Toledo, Ohio. Overshoe. No. 1,106,568; Aug. 11; Gaz. vol. 205; p. 388.
Kelly, George W., Chicago, Ill. Union suit. No. 1,106,310; Aug. 4; Gaz. vol. 205; p. 250.
Kelly, John F., Pittsfield, Mass. Playing apparatus for musical instruments. No. 1,106,819; Aug. 11; Gaz. vol. 205; p. 475.
Kelly, Ray, Knobnoster, Mo. Gas-engine. No. 1,108,372; Aug. 25; Gaz. vol. 205; p. 1115.
Kelly, Ray, and E. F. Sibert, Knobnoster, Mo. Ensilage-machine. No. 1,108,373; Aug. 25; Gaz. vol. 205; p. 1115.
Kelly-Springfield Tire Company. (See Ernenwein, Phillip J., assignor.)
Kendall, John S., Hamilton, Ontario, Canada. Rotating sign. No. 1,106,148; Aug. 4; Gaz. vol. 205; p. 197.
Kendrick, Karl A., Detroit, Mich. Pump-governor. No. 1,108,183; Aug. 25; Gaz. vol. 205; p. 1048.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,105,667; Aug. 4; Gaz. vol. 205; p. 28.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,106,715; Aug. 11; Gaz. vol. 205; p. 438.
Kennedy, Thomas J., Stockton, Cal. Draft-equalizer for tubular boilers. No. 1,105,798; Aug. 4; Gaz. vol. 205; p. 74.
Kennell, Henry, New York, N. Y. Safety bottle-holder. No. 1,106,457; Aug. 11; Gaz. vol. 205; p. 346.
Kent-Johnston, Arthur G., Balham, London, England. Gas lighting and extinguishing apparatus. No. 1,107,962; Aug. 18; Gaz. vol. 205; p. 922.
Kent, William, trustee. (See Browne, Carl D., assignor.)
Kenworthy, Charles A., Tenino, Wash. Combination-square. No. 1,107,077; Aug. 11; Gaz. vol. 205; p. 562.
Kernan, Daniel. (See Davis, John M., assignor.)
Kernen, Clifford F., Cincinnati, Ohio. Tire for automobiles. No. 1,107,672; Aug. 18; Gaz. vol. 205; p. 824.
Kerner, Theodore, Milwaukee, Wis. Garbage and refuse incinerator. No. 1,108,184; Aug. 25; Gaz. vol. 205; p. 1048.
Kerns, Edward J., Worcester, Mass. Oar. No. 1,107,169; Aug. 11; Gaz. vol. 205; p. 597.
Kerr, Robert M. (See Bartlett and Kerr.)
Kessler, Charles A., Pittsburgh, Pa. Folding shelf. No. 1,106,569; Aug. 11; Gaz. vol. 205; p. 388.
Kettering, Charles F., assignor, by mesne assignments, to The National Cash Register Co., Dayton, Ohio. Store-service-credit-system apparatus. No. 1,108,185; Aug. 25; Gaz. vol. 205; p. 1049.
Kewitz, Charles F., Lakewood, Ohio. Ejecting mechanism. No. 1,106,570; Aug. 11; Gaz. vol. 205; p. 388.
Keystone Driller Company. (See Holmes, Robert E. L., assignor.)
Kidder, William N., Providence, R. I. Artificial tooth. No. 1,108,449; Aug. 25; Gaz. vol. 205; p. 1140.
Kiddle, Alfred W., *et al.*, executors. (See Hoffmann, Ernst G.)
Kiefer, Andrew. (See Castor and Kiefer.)
Kiene, Frank. (See Day, Park L., assignor.)
Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Rotor for elastic-fluid turbines. No. 1,107,238; Aug. 11; Gaz. vol. 205; p. 621.
Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Shaft-bearing. No. 1,108,761; Aug. 25; Gaz. vol. 205; p. 1248.
Kilberry, George D., assignor to Rice, Barton & Fales Machine & Iron Co., Worcester, Mass. Drying-cylinder. No. 1,108,077; Aug. 18; Gaz. vol. 205; p. 964.
Kilgore, C. F., *et al.* (See Dillon, James F., assignor.)
Kilstofte, Peder P. (See Berntsen and Kilstofte.)
Kind, Paolo, Turin, Italy. Device for producing alterations in the movements of valves. No. 1,107,963; Aug. 18; Gaz. vol. 205; p. 922.
King, John B., London, England. Shock-absorbing spring for vehicles. No. 1,107,964; Aug. 18; Gaz. vol. 205; p. 923.
King, Orrin H., Chicago, Ill., assignor to United States Concentrating Co. Belt concentrating or vanning machine for separating pulverized ores and similar material. No. 1,108,186; Aug. 25; Gaz. vol. 205; p. 1049.
Kingsford, Thomas P., *et al.* (See Lorenz, Friedrich, assignor.)
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill. Coupling-knuckle stop. No. 1,106,458; Aug. 11; Gaz. vol. 205; p. 346.
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Anticreep for wedge-locks. No. 1,108,374; Aug. 25; Gaz. vol. 205; p. 1116.
Kino Limited. (See Anderson, Walter H., assignor.)
Kirby, Edmund B., St. Louis, Mo. Operating ore-concentrating tables. No. 1,105,799; Aug. 4; Gaz. vol. 205; p. 74.
Kirby, Edmund B., Rossland, British Columbia, Canada. Concentrating-table. No. 1,105,912; Aug. 4; Gaz. vol. 205; p. 113.
Kirchhoff, William G., assignor to T. W. Remmers, St. Louis, Mo. Web-feeding mechanism. No. 1,108,501; Aug. 25; Gaz. vol. 205; p. 1160.
Kirchner, Richard G., Detroit, Mich. Magneto-generator. No. 1,108,872; Aug. 25; Gaz. vol. 205; p. 1288.
Kirk, Cassius M. C., South Fort George, British Columbia, Canada. Animal-trap. No. 1,107,218; Aug. 11; Gaz. vol. 205; p. 614.
Kirkley, Hiram D., assignor of one-half to G. O. Light, Paragould, Ark. Foldable or extensible car-step. No. 1,107,170; Aug. 11; Gaz. vol. 205; p. 597.
Kitch, George. (See Connors, Patrick J., assignor.)
Kitton, John C., Chicago, Ill. Mechanical movement. No. 1,107,529; Aug. 18; Gaz. vol. 205; p. 771.
Kizer, John D., Scranton, Pa. Shingle-cutter. No. 1,106,224; Aug. 4; Gaz. vol. 205; p. 222.
Kleeberg, Sydney H. (See Grad, Kleeberg, and Harris.)
Klein, Paula, New York, N. Y. Bandage-corset. No. 1,107,078; Aug. 11; Gaz. vol. 205; p. 563.
Kleinegger, Ferdinand G., Minneapolis, Minn. Guard for lath-machines. No. 1,108,586; Aug. 25; Gaz. vol. 205; p. 1190.
Klenke Cushion Axle Company. (See Klenke, Theodore A., assignor.)
Klenke, Theodore A., New York, N. Y., assignor to Klenke Cushion Axle Company. Vehicle. No. 1,107,311; Aug. 18; Gaz. vol. 205; p. 694.
Kline, Richard E., Los Angeles, Cal. Crown-block. No. 1,108,078; Aug. 18; Gaz. vol. 205; p. 964.
Kling, Orlando, Denver, Colo. Knockdown crate. No. 1,107,312; Aug. 18; Gaz. vol. 205; p. 694.
Klinghammer, Charles, La Grande, Oreg. Potato-harvester. No. 1,107,965; Aug. 18; Gaz. vol. 205; p. 923.
Klobukowski, Wladyslaw P., Warsaw, Russia. Heater. No. 1,107,966; Aug. 18; Gaz. vol. 205; p. 924.
Klocke, William, assignor to E. W. Bliss Company, Brooklyn, N. Y. Press. No. 1,108,187; Aug. 25; Gaz. vol. 205; p. 1050.
Klumph, George H., and J. E. Houston, Chicago, Ill. Water-heater. No. 1,107,313; Aug. 18; Gaz. vol. 205; p. 695.
Knaak, Frank J. C. F., Saratoga Springs, N. Y. Heater for internal-combustion engines. No. 1,107,967; Aug. 18; Gaz. vol. 205; p. 924.
Knagge, Joseph, Chicago Heights, Ill., assignor to The Baldwin Company, Cincinnati, Ohio. Player-piano pneumatic bellows. No. 1,106,820; Aug. 11; Gaz. vol. 205; p. 475.
Knapp, Edward L. (See Knapp, George J. and E. L.)
Knapp, Fred H., Westminster, Md., and C. W. Blackstone, Chicago, Ill., assignors to Fred H. Knapp Company, Westminster, Md. Labeling-machine. No. 1,106,100; Aug. 4; Gaz. vol. 205; p. 181.
Knapp, Frederick H., assignor to Fred H. Knapp Company, Westminster, Md. Can-labeling machine. No. 1,108,188; Aug. 25; Gaz. vol. 205; p. 1050.
Knapp, George J. and E. L., Dayton, Ohio. Dust-collector. No. 1,106,101; Aug. 4; Gaz. vol. 205; p. 182.
Knapp, George O. (See Beach, Clarence E., assignor.)
Knauff, George C., Chicago, Ill. Lamp-socket. No. 1,106,459; Aug. 11; Gaz. vol. 205; p. 347.
Knight, Howard S. (See Brox and Knight.)
Knoll, George W., Chicago, Ill., assignor to J. T. Underwood, Brooklyn, N. Y. Carriage-return mechanism. No. 1,107,530; Aug. 18; Gaz. vol. 205; p. 772.
Knösel, Theodor, Neustadt, Germany. Fertilizer and manufacturing the same. No. 1,108,189; Aug. 25; Gaz. vol. 205; p. 1051.
Knudsen, Anders M., West Branch, Iowa. Combined churn and butter-worker. No. 1,106,460; Aug. 11; Gaz. vol. 205; p. 347.
Kobler, Victor, Rorschach, assignor to Firm of A. Saurer, Arbon, Switzerland. Mechanical movement. No. 1,107,673; Aug. 18; Gaz. vol. 205; p. 824.
Kobler, Victor, assignor to Firm of A. Saurer, Arbon, Switzerland. Embroidery-machine jacquard apparatus. No. 1,107,674; Aug. 18; Gaz. vol. 205; p. 825.
Koch, Norbert, Essen-Rellinghausen, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Mobile gun-mount. No. 1,108,762; Aug. 25; Gaz. vol. 205; p. 1248.
Koch, Norbert, Essen-Rellinghausen, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Pivot-mount for guns. No. 1,108,763; Aug. 25; Gaz. vol. 205; p. 1249.
Koechlin, Albert G., Basel, Switzerland, assignor to Draper Company, Hopedale, Mass. Automatic weft-bobbin-exchange device for looms. No. 1,106,716; Aug. 11; Gaz. vol. 205; p. 439.
Koehring Machine Company. (See Koehring, Philip A., assignor.)
Koehring, Philip A., assignor to Koehring Machine Company, Milwaukee, Wis. Charging device for concrete-mixers. No. 1,107,171; Aug. 11; Gaz. vol. 205; p. 598.
Koeker, Carl H., Dayton, Ohio. Shade and curtain bracket. No. 1,107,317; Aug. 18; Gaz. vol. 205; p. 696.
Koenig, Harry A., Philadelphia, Pa. Gas-heated sad-iron. No. 1,107,531; Aug. 18; Gaz. vol. 205; p. 772.
Koepplinger, Hermann, Vienna, Austria-Hungary. Device for perforating figured iron. No. 1,105,800; Aug. 4; Gaz. vol. 205; p. 74.
Kohler, Jacob C., Newark, N. J., assignor to Aristo Company. Spool for music-rolls. No. 1,107,314; Aug. 18; Gaz. vol. 205; p. 695.

Kohn, Julius, Bridgeport, Conn. Automatic stop for talking-machines. No. 1,107,079; Aug. 11; Gaz. vol. 205; p. 563.
Kolasinski, Michael. (See Wroclawski and Kolasinski.)
Kollenberg, Frederick G., assignor of one-fourth to W. E. Aud and one-fourth to R. L. McFarland, Owensboro, Ky. Desk. No. 1,106,515; Aug. 11; Gaz. vol. 205; p. 368.
Koloen, John N., Silverton, Oreg. Combined burglar and fire alarm. No. 1,106,947; Aug. 11; Gaz. vol. 205; p. 520.
Koltko, Emil E., Waterbury, Conn. Brake for marine vessels. No. 1,107,968; Aug. 18; Gaz. vol. 205; p. 925.
Komancsek, Joseph, Astoria, N. Y. Device for trimming linotype-slugs. No. 1,106,948; Aug. 11; Gaz. vol. 205; p. 521.
Komer, Joseph A. (See Burchell, Samuel E., assignor.)
Koontz, Victor R., Waynesboro, Pa. Adjusting device for cutter-heads. No. 1,108,514; Aug. 25; Gaz. vol. 205; p. 1165.
Kopetschni, Eduard. (See Karczag and Kopetschni.)
Koppers, Heinrich, Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill. Separating the hydrocarbons contained in natural gas. No. 1,107,803; Aug. 18; Gaz. vol. 205; p. 870.
Kops Bros. (See Kops, Waldemar, assignor.)
Kops, Waldemar, assignor to Kops Bros., New York, N. Y. Apparel-corset. No. 1,107,219; Aug. 11; Gaz. vol. 205; p. 614.
Kornfeld, Emil L. (See Minehart, Denman D., assignor.)
Kovalevich, Grigory, South Portland, Oreg. Propeller. No. 1,105,801; Aug. 4; Gaz. vol. 205; p. 74.
Krager, Charles L., Daisy, Tenn., assignor to Herty Turpentine Co., Jacksonville, Fla. Sap-directing spout. No. 1,107,969; Aug. 18; Gaz. vol. 205; p. 925.
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Pump-regulator. No. 1,106,949; Aug. 11; Gaz. vol. 205; p. 521.
Kramer, Frank W., Portland, Oreg. Adjustable bed. No. 1,108,502; Aug. 25; Gaz. vol. 205; p. 1161.
Krantz, Clas H., Red Wing, Minn. Lamp-extinguisher. No. 1,108,503; Aug. 25; Gaz. vol. 205; p. 1161.
Krause, William G. C., and G. H. Thomas, Waterbury, Conn.; said Thomas assignor to said Krause. Bung-extractor. No. 1,107,804; Aug. 18; Gaz. vol. 205; p. 870.
Krebs, Arthur C., assignor to Société Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France. Flexible joint for coupling two transmission-shafts. No. 1,107,315; Aug. 18; Gaz. vol. 205; p. 695.
Krebs, Richard, Jr. (See Dobbs and Krebs.)
Kreeger, Joseph A., Lees Summit, Mo. Ice-cutter. No. 1,106,225; Aug. 4; Gaz. vol. 205; p. 222.
Kreidl, Ignaz, Vienna, Austria-Hungary. Producing an opaquing agent for white enamel. (Reissue.) No. 13,791; Aug. 25; Gaz. vol. 205; p. 1291.
Kremers, John G., Milwaukee, Wis. Refining sugar. No. 1,107,172; Aug. 11; Gaz. vol. 205; p. 598.
Kress, Jacob A., Canton, Ohio. Razor-sharpener. No. 1,106,717; Aug. 11; Gaz. vol. 205; p. 439.
Krieg, Albert. (See Burnhart and Krieg.)
Kriha, Joseph C., Ravenna, Nebr. Adjustable fork-socket. No. 1,107,970; Aug. 18; Gaz. vol. 205; p. 925.
Krippendorf, Paul R. W. C., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,106,461; Aug. 11; Gaz. vol. 205; p. 348.
Kroedel, Robert. (See Robertson and Kroedel.)
Krohn, Wolf. (See Steiner, Sigmund, assignor.)
Krokavetz, Martin, Cleveland, Ohio. Storage-battery plate. No. 1,107,618; Aug. 18; Gaz. vol. 205; p. 804.
Kruchio, Anthony, *et al.* (See Jenöl and Kruchió, assignors.)
Kruchio, Sarah, *et al.* (See Jenoi and Stevenson, assignors.)
Kruchió, Steve. (See Jenöl and Kruchió.)
Kruchio, Steve, *et al.* (See Jenoi and Stevenson, assignors.)
Kuhn, Frank, Detroit, Mich. Electrical plug-connector. No. 1,107,318; Aug. 18; Gaz. vol. 205; p. 696.
Kuhn, Frank, Detroit, Mich. Electrically-heated radiator. No. 1,107,319; Aug. 18; Gaz. vol. 205; p. 696.
Kuhn, Frank, Detroit, Mich. Electrical heating unit. No. 1,107,320; Aug. 18; Gaz. vol. 205; p. 697.
Kuhn, Frank, Detroit, Mich. Electrically-heated hot-plate. No. 1,107,321; Aug. 18; Gaz. vol. 205; p. 697.
Kuhn, Frank, Detroit, Mich. Electrical heater. No. 1,107,322; Aug. 18; Gaz. vol. 205; p. 698.
Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Thermostat. No. 1,107,316; Aug. 18; Gaz. vol. 205; p. 696.
Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Electric heater. No. 1,107,323; Aug. 18; Gaz. vol. 205; p. 698.
Kuhn, Harry A., and W. W. Macfarren, Pittsburgh, Pa.; said Macfarren assignor to said Kuhn. Mining-machine. No. 1,107,239; Aug. 11; Gaz. vol. 205; p. 621.
Kuhn, Paul, New York, N. Y. Artificial stone. No. 1,105,979; Aug. 4; Gaz. vol. 205; p. 137.
Kuhner, Herman E., deceased, Oxford, Md.; R. L. Kuhner, executrix. Testing-machine. No. 1,107,619; Aug. 18; Gaz. vol. 205; p. 805.
Kuhner, Rose L., executrix. (See Kuhner, Herman E.)
Kulhawy, Ferdinand, assignor of one-half to L. Michalski, Philadelphia, Pa. Life-boat. No. 1,106,718; Aug. 11; Gaz. vol. 205; p. 439.
Kull, Alfred J., Far Hills, N. J. Trap-belt. No. 1,108,764; Aug. 25; Gaz. vol. 205; p. 1249.
Küller, Max, Berlin-Lichterfelde, Germany. Removable-rim attachment for vehicle-wheels. No. 1,107,080; Aug. 11; Gaz. vol. 205; p. 563.
Kundis, Joseph, Youngstown, Ohio. Horseshoe. No. 1,107,620; Aug. 18; Gaz. vol. 205; p. 805.
Kune, William E. (See Metzger, Forster, and Kune.)
Küng, Sigg & Cie. (See Stücki, Willy, assignor.)
Kunitz, Hannibal A., assignor of one-half to W. T. Cahoon, Pittsburgh, Pa. Electrical display device. No. 1,108,190; Aug. 25; Gaz. vol. 205; p. 1051.
Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,106,950; Aug. 11; Gaz. vol. 205; p. 521.
Kuwayama, Senzo. (See Miyatu and Kuwayama.)
Kvam, Sigvart, Minneapolis, assignor of one-half to J. E. Hawkinson, Parkers Prairie, Minn. Whipping device. No. 1,108,587; Aug. 25; Gaz. vol. 205; p. 1191.
Kyle, Ira W., Mankato, Kans. Mold. No. 1,108,504; Aug. 25; Gaz. vol. 205; p. 1161.
Kyriakides, Lucas P. (See Earle and Kyriakides.)
Kytlica, John F., Chicago, Ill. Packing-ring. No. 1,106,462; Aug. 11; Gaz. vol. 205; p. 348.
La Crosse Plow Company. (See Biebinger, David A., assignor.)
La Vine, Edward, Brussels, Belgium. Hygienic sugar-bowl. No. 1,105,803; Aug. 4; Gaz. vol. 205; p. 75.
Lachman, Laurence S., New York, N. Y. Stretching sheet material. No. 1,106,516; Aug. 11; Gaz. vol. 205; p. 369.
Lachman, Laurence S., assignor to Universal Electric Welding Company, New York, N. Y. Welded tubing. No. 1,108,191; Aug. 25; Gaz. vol. 205; p. 1051.
Laden, B. L., *et al.* (See Laden, Joe G., assignor.)
Laden, Joe G., assignor of one-fourth to J. W. De Witt, one-fourth to B. L. Laden, and one-fourth to H. B. Drake, Idabel, Okla. Bed. No. 1,108,515; Aug. 25; Gaz. vol. 205; p. 1165.
Lagergren, Gustav M., New London, Conn., assignor to Electric Boat Company. Submersible bont. No. 1,108,192; Aug. 25; Gaz. vol. 205; p. 1051.
Laing, John E., Kansas City, Mo. Comb. No. 1,108,375; Aug. 25; Gaz. vol. 205; p. 1116.
Lake, Benjamin D., and N. G. Marks, assignors of one-fourth to J. G. Harris and one-fourth to J. C. Stone, Springfield, Ky. Motor-vehicle headlight. No. 1,107,081; Aug. 11; Gaz. vol. 205; p. 564.
Lake, Simon, Milford, Conn. Battery. No. 1,106,719; Aug. 11; Gaz. vol. 205; p. 440.
Lamb, Amherst G., assignor to Excelsior Needle Company, Torrington, Conn. Carbureter. No. 1,106,226; Aug. 4; Gaz. vol. 205; p. 222.
Lamb Bros. & Greene. (See Lamb, David C., assignor.)
Lamb, David C., assignor to Lamb Bros. & Greene, Nappanee, Ind. Electric-conductor take-up. No. 1,106,821; Aug. 11; Gaz. vol. 205; p. 476.
Lambert, Clayton A., Indian View, assignor to The John Church Company, Cincinnati, Ohio. Pneumatic piano. No. 1,106,822; Aug. 11; Gaz. vol. 205; p. 476.
Lamblase, Gustavo, Brooklyn, N. Y. Fall-board for pianos. No. 1,105,802; Aug. 4; Gaz. vol. 205; p. 75.
Lamont, James S., Matteawan, N. Y. Corset-shield. No. 1,108,588; Aug. 25; Gaz. vol. 205; p. 1191.
Lamson Company, The. (See Amsden, George A., assignor.)
Lamson Company. (See Pearsall, Albert W., assignor.)
Lamson Company, The. (See Whittier, Frederick G., assignor.)
Landers, Frary & Clark. (See Carlson, Frederick E., assignor.)
Landers, Frary & Clark. (See Curtiss, George E., assignor.)
Landis, Abraham B., Enfield, Pa. Bolt-threading machine. No. 1,107,621; Aug. 18; Gaz. vol. 205; p. 805.
Lane, Benjamin T., Baird, Wash. Weeder for harrows. No. 1,107,173; Aug. 11; Gaz. vol. 205; p. 599.
Lane, Forrest D., Bisbee, Ariz. Cuspidor. No. 1,106,048; Aug. 4; Gaz. vol. 205; p. 162.
Lang, Hubert, assignor to The Goss Printing Press Company, Chicago, Ill. Sheet-gripping device for printing-presses. No. 1,108,193; Aug. 25; Gaz. vol. 205; p. 1052.
Lange, Paul H., and H. L. Weigel, assignors to Niagara Machine & Tool Works, Buffalo, N. Y. Sheet-shearing machine. No. 1,105,668; Aug. 4; Gaz. vol. 205; p. 28.
Langer, Joseph F., Miles City, Mont. Combined road grader and roller. No. 1,106,951; Aug. 11; Gaz. vol. 205; p. 522.
Langhammer, Frank L., and C. G. Johnson, assignors to Warner Brothers Company, Bridgeport, Conn. Buckle. No. 1,106,952; Aug. 11; Gaz. vol. 205; p. 522.
Langill, Charles H., East Boston, Mass. Attachment for life-boats. No. 1,108,846; Aug. 25; Gaz. vol. 205; p. 1278.
Langston, Samuel M., Camden, N. J. Feeding mechanism for printing-presses. No. 1,107,971; Aug. 18; Gaz. vol. 205; p. 926.
Lanning, Howard H., assignor of one-half to H. W. Jacobs, Topeka, Kans. Spark-controlling device for magneto ignition. No. 1,106,953; Aug. 11; Gaz. vol. 205; p. 523.
Lannoye, Joseph G., Detroit, Mich. Salt-cellar. No. 1,108,376; Aug. 25; Gaz. vol. 205; p. 1116.

Lanz, Rudolph E. (See Reese, David W., assignor.)
Lanzdorf, Adolf, Vienna, Austria-Hungary. Automatic railway-coupling. No. 1,107,324; Aug. 18; Gaz. vol. 205; p. 698.
Larabee Flour Mills Company, The. (See Estabrook and Weaver, assignors.)
Larson, August A. (See Larson, Gustaf K. and A. A.)
Larson, Elmer J., Mount Vernon, Wash. Toy. No. 1,106,878; Aug. 11; Gaz. vol. 205; p. 496.
Larson, Gustaf K. and A. A., Johnsonburg, Pa. Window-ventilator. No. 1,108,505; Aug. 25; Gaz. vol. 205; p. 1161.
Laskey, William B., Marblehead, Mass. Candy and making the same. No. 1,107,325; Aug. 18; Gaz. vol. 205; p. 699.
Lässig, Friedrich W., Chemnitz, Germany. Boring apparatus for embroidering-machines. No. 1,107,622; Aug. 18; Gaz. vol. 205; p. 806.
Laurent, Olex B., New Roads, La. Curtain-shade roller. No. 1,106,227; Aug. 4; Gaz. vol. 205; p. 223.
Lauter Co. (See Lynde, Frank G., assignor.)
Lavine, H. S. (See Mayo, Robert D. and R. D., assignors.)
Lawless, Michael J., Omaha, Nebr. Cover-fastening device for receptacles. No. 1,108,765; Aug. 25; Gaz. vol. 205; p. 1249.
Lawrence, John. (See Newcomb, David L., assignor.)
Lawson, Franklin A., Trout Run, Pa. Card-holder. No. 1,106,954; Aug. 11; Gaz. vol. 205; p. 523.
Lawton, John, Irvington, assignor to The Notwal Company, Newark, N. J. Trolley-guard. No. 1,106,823; Aug. 11; Gaz. vol. 205; p. 477.
Lawton, Robert W., San Francisco, Cal. Hydrocarbon-burner. No. 1,105,804; Aug. 4; Gaz. vol. 205; p. 75.
Le Beau, Ernest A., assignor to Chicago Railway Equipment Company, Chicago, Ill. Side bearing for railway-cars. No. 1,106,824; Aug. 11; Gaz. vol. 205; p. 477.
Le Boeuf, Arthur W., Woonsocket, R. I., assignor to Electric Compositor Company, New York, N. Y. Escapement mechanism for line-casting machines. No. 1,108,378; Aug. 25; Gaz. vol. 205; p. 1117.
Leach, Winfield W., assignor to Western Electric Company, Chicago, Ill. Coin-controlled automatic telephone-exchange system. No. 1,108,194; Aug. 25; Gaz. vol. 205; p. 1052.
Leahy, Herbert V. (See Ricketts and Leahy.)
Leake, Richard C. (See Geer and Leake.)
Learned, Willard M., assignor of one-third to J. H. Mixer and one-third to W. Jochum, Los Angeles, Cal. Trolley. No. 1,108,195; Aug. 25; Gaz. vol. 205; p. 1053.
Leatherbee, Clifton F., Newton, Mass., assignor to Painting Machine Company, Kittery, Me. Wood-treating machine. No. 1,107,623; Aug. 18; Gaz. vol. 205; p. 806.
Leavens, Philip J., Palmyra, N. J. Nail-extracting claw. No. 1,108,766; Aug. 25; Gaz. vol. 205; p. 1250.
Leaver, James M., Long Beach, Cal. Dry-kiln for lumber, &c. No. 1,108,377; Aug. 25; Gaz. vol. 205; p. 1116.
Leavitt, Frank M., Smithtown, assignor to E. W. Bliss Company, Brooklyn, N. Y. Automobile torpedo. No. 1,108,196; Aug. 25; Gaz. vol. 205; p. 1053.
Lebcher, Chester B., Long Beach, Cal. Clothes-wringer. No. 1,108,589; Aug. 25; Gaz. vol. 205; p. 1191.
Lebrecht, Charles E., *et al.*, trustees. (See Deray, Jean F., assignor.)
Lechner, William H., Hamilton, Ontario, Canada. Spoon. No. 1,108,767; Aug. 25; Gaz. vol. 205; p. 1250.
Lederer, August, *et al.* (See Meunier, Georges, assignor.)
Lederer, Emil, *et al.* (See Meunier, Georges, assignor.)
Lee, Anderson, Salt Lake City, Utah. Collapsible egg-crate. No. 1,106,228; Aug. 4; Gaz. vol. 205; p. 223.
Lee, Charles E., New York, N. Y. Pencil-pointer. No. 1,108,590; Aug. 25; Gaz. vol. 205; p. 1192.
Lee, James B., Chandler, Ind. Acetylene-gas generator. No. 1,108,197; Aug. 25; Gaz. vol. 205; p. 1054.
Lee, William R., Rochester, N. Y. Packaging pipe-cleaners. No. 1,108,450; Aug. 25; Gaz. vol. 205; p. 1140.
Lees-Bradner Company, The. (See Lees, Ernest J., assignor.)
Lees, Ernest J., assignor to The Lees-Bradner Company, Cleveland, Ohio. Gear-generator. No. 1,108,379; Aug. 25; Gaz. vol. 205; p. 1117.
Lehmann, Christian G., Detroit, Mich. Coin-controlled lock. No. 1,105,980; Aug. 4; Gaz. vol. 205; p. 137.
Leidigh, John J., Milwaukee, Wis., assignor to The National Cash Register Company, Dayton, Ohio. Credit-marking apparatus. No. 1,106,463; Aug. 11; Gaz. vol. 205; p. 349.
Leinweber, Herman, Chicago, Ill. Airship. No. 1,108,865; Aug. 25; Gaz. vol. 205; p. 1286.
Leischner, Gotthilf, Megargel, Tex. Planter. No. 1,106,879; Aug. 11; Gaz. vol. 205; p. 496.
Leissle, Karl, and F. Bach, Chicago, Ill. Wrench. No. 1,108,591; Aug. 25; Gaz. vol. 205; p. 1192.
Lembke, Charles F., Valparaiso, Ind. Internal-combustion engine. No. 1,106,720; Aug. 11; Gaz. vol. 205; p. 440.
Lemke, August, Detroit, Mich. Garment-hanger. No. 1,105,981; Aug. 4; Gaz. vol. 205; p. 138.
Lemkin, Max, *et al.* (See Martin, William, assignor.)
Lentz, Hugo, Grunewald, near Berlin, Germany. Fluid transmission-gear. No. 1,106,390; Aug. 11; Gaz. vol. 205; p. 321.
Lentz, Hugo, Berlin-Grunewald, Germany. Valve mechanism for hydraulic transmission. No. 1,107,675; Aug. 18; Gaz. vol. 205; p. 825.
Leonard, Leon E., Buffalo, assignor, by mesne assignments, to The Superior Register Company, Canisteo, N. Y. Account file or register. No. 1,107,326; Aug. 18; Gaz. vol. 205; p. 699.
Leopold, Carl A. and C. S., Burlington, Iowa. Pedestal type-writer stand. No. 1,106,311; Aug. 4; Gaz. vol. 205; p. 250.
Leopold, Carl S. (See Leopold, Carl A. and C. S.)
Lerma, Mike R. (See Lopez and Lerma.)
Lesser, Emil. (See Chapin and Lesser.)
Levedahl, Axel, and R. A. Norling, Aurora, assignors to Aurora Automatic Machinery Company, Chicago, Ill. Rivet-set retainer. No. 1,105,669; Aug. 4; Gaz. vol. 205; p. 29.
Lewis, Arthur J., Stratford, assignor to The Baird Machine Company, Bridgeport, Conn. Tandem press. No. 1,106,571; Aug. 11; Gaz. vol. 205; p. 389.
Lewis, Chauncey O. (See Cooké and Lewis.)
Lewis, Edward J., Chico, Cal. Safety-envelop. No. 1,106,721; Aug. 11; Gaz. vol. 205; p. 441.
Lewis, Fitz James, Empire, Canal Zone. Pipe-coupling. No. 1,107,327; Aug. 18; Gaz. vol. 205; p. 700.
Lewis, George W., assignor to Grinnell Washing Machine Company, Grinnell, Iowa. Clothes-wringer. No. 1,107,676; Aug. 18; Gaz. vol. 205; p. 825.
Lewis, Isaac N., Fort Hamilton, N. Y. Stake-mount for firearms. No. 1,107,805; Aug. 18; Gaz. vol. 205; p. 870.
Lewis, Joseph M., Trenton, N. J. Pneumatic-cushion bolster for vehicles. No. 1,108,768; Aug. 25; Gaz. vol. 205; p. 1250.
Leyner, John G., Denver, Colo. Percussive drill. No. 1,106,332; Aug. 4; Gaz. vol. 205; p. 257.
Libbers, Clarence G., Fremont, Mich. Lock for differential gearing. No. 1,106,464; Aug. 11; Gaz. vol. 205; p. 349.
Liberty Trust Company, trustee. (See Henrici, William A. E., assignor.)
Liebowitz, Benjamin, New York, N. Y. Vehicle suspension. No. 1,105,805; Aug. 4; Gaz. vol. 205; p. 75.
Light, G. O. (See Kirkley, Hiram D., assignor.)
Likes, Elbridge T., Des Moines, Iowa. Building-block. No. 1,107,428; Aug. 18; Gaz. vol. 205; p. 738.
Lincoln, John C., East Cleveland, Ohio. Welding metals. No. 1,108,592; Aug. 25; Gaz. vol. 205; p. 1192.
Lindemann, Berthold, Los Angeles, Cal. Suspended railway. No. 1,106,102; Aug. 4; Gaz. vol. 205; p. 182.
Linder, Ellis, Belleville, N. J., assignor to Aristo Company. Spool for music-rolls. No. 1,107,328; Aug. 18; Gaz. vol. 205; p. 700.
Lindgren, Alexus C., Moline, Ill., assignor to Moline Plow Company. Cultivator. No. 1,106,722; Aug. 11; Gaz. vol. 205; p. 441.
Lindgren, Alexus C., and G. G. Mandt, Moline, Ill., assignors to Moline Plow Company. Manure-spreader. No. 1,107,329; Aug. 18; Gaz. vol. 205; p. 700.
Lindsay Auto Parts Company. (See Lindsay, Thomas J., assignor.)
Lindsay, Thomas J., Indianapolis, Ind. Wire-wheel hub. No. 1,105,670; Aug. 4; Gaz. vol. 205; p. 29.
Lindsay, Thomas J., Indianapolis, Ind., assignor to Lindsay Auto Parts Company. Wheel hub and spindle for automobiles. No. 1,107,330; Aug. 18; Gaz. vol. 205; p. 701.
Lindsey, Charles, Waynesboro, Miss. Crosscut-saw handle. No. 1,106,229; Aug. 4; Gaz. vol. 205; p. 223.
Lines, William A., Spokane, Wash. Switch-throw. No. 1,106,657; Aug. 11; Gaz. vol. 205; p. 419.
Link, Vincent, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Throttle and spark governor. No. 1,108,198; Aug. 25; Gaz. vol. 205; p. 1054.
Linotype and Machinery Limited. (See Pearce, Parker, and Wright, assignors.)
Linotype and Machinery Limited. (See Pearson, James, assignor.)
Linotype and Machinery Limited. (See Whittaker and Holliwell, assignors.)
Linquist, William A., Minneapolis, Minn. Automobile-fender. No. 1,105,671; Aug. 4; Gaz. vol. 205; p. 29.
Linton, Nettie, Aliaben, N. Y. Device for producing stage-rain. No. 1,106,391; Aug. 11; Gaz. vol. 205; p. 321.
Litchfield, Byron A., and L. Zimmermann, Pontiac, Mich. Device for forming springs. No. 1,105,982; Aug. 4; Gaz. vol. 205; p. 138.
Little, Archibald S. B., Nashville, Tenn. Sound-reproducing machine. No. 1,108,451; Aug. 25; Gaz. vol. 205; p. 1141.
Little Giant Hay Press Company. (See Stopple, Walter W., assignor.)
Littlejohn, Demetrius D., Statesville, N. C. Subsoil attachment. No. 1,106,312; Aug. 4; Gaz. vol. 205; p. 250.
Lively, Benjamin F., Lenoir City, Tenn. Door-operating mechanism. No. 1,108,769; Aug. 25; Gaz. vol. 205; p. 1250.
Livengood, Winfield S., Kansas City, assignor to Missouri Hay Press Company, Moberly, Mo. Mechanical movement. No. 1,108,380; Aug. 25; Gaz. vol. 205; p. 1118.

Lobnitz, Fred, Crookston, Scotland. Lubricator for submerged bearings. No. 1,107,806; Aug. 18; Gaz. vol. 205; p. 870.

Locke Steel Belt Company. (See Locke, Sylvanus D., assignor.)

Locke Steel Chain Company. (See Osswald, Herman, assignor.)

Locke, Sylvanus D., assignor to Locke Steel Belt Company, Bridgeport, Conn. Chain-link. No. 1,107,808; Aug. 18; Gaz. vol. 205; p. 871.

Locke, Sylvanus D., assignor to Locke Steel Belt Company, Bridgeport, Conn. Chain-making machine. No. 1,107,809; Aug. 18; Gaz. vol. 205; p. 871.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Pressed-steel hanger-box. No. 1,107,677; Aug. 18; Gaz. vol. 205; p. 825.

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

Locomotive Superheater Company. (See Emerson and Yoerg, assignors.)

Lodding, Fred W. (See Johnson and Lodding.)

Loebbecke, Georg, Zehlendorf, near Berlin, Germany. Manufacturing bag or packing paper. No. 1,107,807; Aug. 18; Gaz. vol. 205; p. 871.

Loepsinger, Albert J., assignor to General Fire Extinguisher Company, Providence, R. I. Insulating-joint for pipe systems. No. 1,106,572; Aug. 11; Gaz. vol. 205; p. 389.

Lofton, Herbert M., Chattanooga, Tenn. Gate-valve. No. 1,106,723; Aug. 11; Gaz. vol. 205; p. 441.

Lofton, Herbert M., Chattanooga, Tenn. Meter-box. No. 1,107,532; Aug. 18; Gaz. vol. 205; p. 773.

Loichot, Paul F. (See Warstler and Loichot.)

Long, Eugene M., New York, N. Y. Automatic sprinkler-head. No. 1,107,198; Aug. 11; Gaz. vol. 205; p. 607.

Long, George D., and E. W. Rapp, Granite City, Ill. Soldering alloy. No. 1,107,082; Aug. 11; Gaz. vol. 205; p. 564.

Longstreth, Charles B., Dayton, Ohio, assignor to J. B. Hayward, New York, N. Y. Computing-scale-illuminating device. No. 1,105,806; Aug. 4; Gaz. vol. 205; p. 76.

Lonskey, John H., assignor to Central Foundry Specialty Company, Detroit, Mich. Stack-fitting. No. 1,106,392; Aug. 11; Gaz. vol. 205; p. 322.

Looman, William J., *et al.* (See Nicholaus, Herman C., assignor.)

Loomer, Henry M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Cutter. No. 1,105,672; Aug. 4; Gaz. vol. 205; p. 30.

Loomis, Alfred L., Tuxedo Park, N. Y. External shoe-tree. No. 1,106,465; Aug. 11; Gaz. vol. 205; p. 350.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Gearing. No. 1,106,149; Aug. 4; Gaz. vol. 205; p. 197.

Loomis, Burdett, Hartford, Conn., assignor to Loomis Utilization Company, East Orange, N. J. Beating-engine and extracting apparatus for making cellulose. No. 1,108,593; Aug. 25; Gaz. vol. 205; p. 1192.

Loomis Utilization Company. (See Loomis, Burdett, assignor.)

Looney, John. (See Thompson and Looney.)

Lopez, Daniel, and M. R. Lerma, San Bernardino, Cal. Airship. No. 1,108,770; Aug. 25; Gaz. vol. 205; p. 1251.

Lorch, George E., *et al.* (See Swyers, Brice P., assignor.)

Lorch, Louis, Jr., *et al.* (See Swyers, Brice P., assignor.)

Lorenz, Friedrich, Teltow, Germany, assignor to T. P. Kingsford and W. K. Higgins, Oswego, N. Y. Priming centrifugal pumps. No. 1,107,533; Aug. 18; Gaz. vol. 205; p. 773.

Louden, Thomas, Fairfield, Iowa. Building-block. No. 1,108,506; Aug. 25; Gaz. vol. 205; p. 1162.

Loudon, Archibald M., Elmira, N. Y., assignor to Whiting Foundry Equipment Company, Harvey, Ill. Drawer-type core-oven. No. 1,107,678; Aug. 18; Gaz. vol. 205; p. 826.

Louisville Machine Company, The. (See Warstler and Loichot, assignors.)

Love, Charles A. (See Wood, James E., assignor.)

Lovejoy, Daniel B., Purmela, Tex. Cotton-harvester. No. 1,107,083; Aug. 11; Gaz. vol. 205; p. 564.

Lovekin, Luther D. (See Curtis and Lovekin.)

Lovekin, Luther D., Philadelphia, Pa. Water-heater. No. 1,107,534; Aug. 18; Gaz. vol. 205; p. 773.

Loveland, Byron S., assignor to B. D. Whitney & Son, Winchenden, Mass. Scraping-machine. No. 1,107,810; Aug. 18; Gaz. vol. 205; p. 872.

Low, Everett M., Brooklyn, N. Y. Chute-spring. No. 1,107,679; Aug. 18; Gaz. vol. 205; p. 826.

Lowry, Walter J., Waco, Tex. Cake-cloth remover and truck-loader. No. 1,107,972; Aug. 18; Gaz. vol. 205; p. 926.

Lucas, Clarence W., assignor to Farles Manufacturing Co., Decatur, Ill. Electric-light bracket. No. 1,107,811; Aug. 18; Gaz. vol. 205; p. 872.

Lucka, Dora, Vienna, Austria-Hungary. Arrangement for closing leaks in ships. No. 1,107,680; Aug. 18; Gaz. vol. 205; p. 827.

Luckwell, Arthur, Mannheim-Neckarau, Germany. Rope belt, rope band, and the like. No. 1,106,658; Aug. 11; Gaz. vol. 205; p. 420.

Ludlow Typograph Company, The. (See Read, William A., assignor.)

Ludlum, William, Jr., Mount Vernon, N. Y., assignor of one-half to J. O. Stevens, Plainfield, N. J. Toy puzzle. No. 1,106,049; Aug. 4; Gaz. vol. 205; p. 162.

Ludwigs, Fritz. (See Goldberg and Ludwigs.)

Luening, Eugene G., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Metal-cutting tip. No. 1,106,724; Aug. 11; Gaz. vol. 205; p. 442.

Luening, Eugene G., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Welding-tip. No. 1,107,429; Aug. 18; Gaz. vol. 205; p. 738.

Luery, Michael, assignor to Model Form Company, Chicago, Ill. Adjusting device for model dress-forms. No. 1,107,331; Aug. 18; Gaz. vol. 205; p. 701.

Lufkin Rule Co. (See Putnam, George F., assignor.)

Lukomski, Anthony. (See Lukomski, John B. and A.)

Lukomski, John B. and A., Detroit, Mich. Mold for traps. No. 1,107,681; Aug. 18; Gaz. vol. 205; p. 827.

Lundgren, John P., Minot, N. D. Automatic steering-gear. No. 1,107,973; Aug. 18; Gaz. vol. 205; p. 927.

Lundholm, Charles G., assignor to J. J. Hanford, San Bernardino, Cal. Nail-picking machine for box-nailing machinery. No. 1,108,594; Aug. 25; Gaz. vol. 205; p. 1192.

Lundquist, Henning W., St. Louis, Mo. Slide-valve. No. 1,105,913; Aug. 4; Gaz. vol. 205; p. 114.

Lunham, William, and W. Moore, Bronxville, N. Y. Portable heater. No. 1,105,983; Aug. 4; Gaz. vol. 205; p. 139.

Luten, Daniel B., Indianapolis, Ind. False work. No. 1,106,880; Aug. 11; Gaz. vol. 205; p. 496.

Lutz, George A., Plainfield, N. J. Means for supporting electric devices. No. 1,106,103; Aug. 4; Gaz. vol. 205; p. 182.

Lynde, Frank G., assignor to Lauter Co., Newark, N. J. Pedal mechanism for pneumatic piano-players. No. 1,108,452; Aug. 25; Gaz. vol. 205; p. 1141.

Lyon, Clarence E., Norbury, England. Autopiano and analogous musical instrument. No. 1,105,673; Aug. 4; Gaz. vol. 205; p. 30.

Lyon, Conklin & Company. (See Marvell, Roy W., assignor.)

Lytle, Joseph, Jr., Formby, Liverpool, England. Weed-killing device. No. 1,105,674; Aug. 4; Gaz. vol. 205; p. 30.

Maag, Philip, near Webster Groves, Mo. Antiskidding device for automobiles and the like. No. 1,107,430; Aug. 18; Gaz. vol. 205; p. 738.

Mabin, David O. (See Alkire and Mabin.)

MacDonald, James H., New Haven, Conn. Sewer-inlet. No. 1,107,812; Aug. 18; Gaz. vol. 205; p. 872.

MacKenzie, Fred L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,106,393; Aug. 11; Gaz. vol. 205; p. 322.

Macadam, John, Chester, assignor to The Eddystone Manufacturing Company, Eddystone, Pa. Apparatus for bleaching and scouring fibrous materials. No. 1,107,160; Aug. 11; Gaz. vol. 205; p. 594.

Macbeth, George A., Pittsburgh, Pa. Lighting-fixture. No. 1,108,453; Aug. 25; Gaz. vol. 205; p. 1141.

Maccallum, Norman E., Phoenixville, Pa. Furnace-wall construction. No. 1,106,725; Aug. 11; Gaz. vol. 205; p. 442.

Macchioni, Abbondio, *et al.* (See Bonali, Frank, assignor.)

Macfarren, Walter W. (See Kuhn and Macfarren.)

Machlet, Adolph W., Elizabeth, N. J. Case-hardening. No. 1,106,573; Aug. 11; Gaz. vol. 205; p. 390.

Mack, James T., Buffalo, N. Y. Short-turning gear. No. 1,108,507; Aug. 25; Gaz. vol. 205; p. 1162.

Macneill, Martin B., Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill. Centrifugal pump. No. 1,105,807; Aug. 4; Gaz. vol. 205; p. 77.

Macneill, Martin B., Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill. Centrifugal pump. No. 1,105,808; Aug. 4; Gaz. vol. 205; p. 78.

Madden, Patrick J., Deposit, N. Y. Railway-tie. No. 1,105,675; Aug. 4; Gaz. vol. 205; p. 31.

Madden, Thomas P., St. Louis, Mo. Locomotive ash-pan. No. 1,107,682; Aug. 18; Gaz. vol. 205; p. 827.

Maddox, Lofton V., Coldwater, Tenn. Automatic time-stop. No. 1,107,332; Aug. 18; Gaz. vol. 205; p. 701.

Maier, Louis H., New York, N. Y. Pedaling mechanism for musical instruments. No. 1,108,199; Aug. 25; Gaz. vol. 205; p. 1054.

Maier, Louis H., New York, N. Y. Automatic musical instrument. No. 1,108,595; Aug. 25; Gaz. vol. 205; p. 1193.

Maiers, Charles H., *et al.* (See Taylor, James C., assignor.)

Maisch, August T., New York, N. Y., assignor to S. M. M. Manufacturing Corporation. Sandwich-machine. No. 1,108,454; Aug. 25; Gaz. vol. 205; p. 1142.

Maitre, Alcide H., and V. H. Martin, Rouen, France. Contact-interrupter. No. 1,106,230; Aug. 4; Gaz. vol. 205; p. 223.

Majestic Manufacturing Company. (See McSorley, William B., assignor.)

Major, Frank, Mishawaka, Ind. Bed-mattress. No. 1,106,659; Aug. 11; Gaz. vol. 205; p. 420.

Malarkey, Isabel E., Portland, Oreg. Reversible sanitary mattress for invalids. No. 1,107,683; Aug. 18; Gaz. vol. 205; p. 828.

Malinovszky, Andrew, assignor to H. H. Randolph, Chicago, Ill. Manufacture of building material. No. 1,107,431; Aug. 18; Gaz. vol. 205; p. 739.

Mallory, Livingston, New York, N. Y. Wire-clamp. No. 1,107,684; Aug. 18; Gaz. vol. 205; p. 828.

Malmquist, Adolph K., South Bellingham, Wash., assignor to Perfect Vacuum Can Company, Chicago, Ill. Can-sealing apparatus. No. 1,107,974; Aug. 18; Gaz. vol. 205; p. 927.

Malquist, John, assignor of one-half to D. C. Coy, Riverton, Utah. Tank-valve. No. 1,108,455; Aug. 25; Gaz. vol. 205; p. 1142.

Manders, Horace, London, England. Apparatus for the production of continuous electrical oscillations. No. 1,105,984; Aug. 4; Gaz. vol. 205; p. 139.

Mandt, Gunder G. (See Lindgren and Mandt.)

Mangold, Frank E. (See Earl and Mangold.)

Manhattan Electrical Supply Company. (See Peterson, Johann G., assignor.)

Manitowoc Ship Building & Dry Dock Company. (See West, Charles C., assignor.)

Mann, Alice L., New York N. Y. Collapsible garment-hanger support. No. 1,107,624; Aug. 18; Gaz. vol. 205; p. 806.

Manners-Smith, John A. (See Beuttell and Manners-Smith.)

Mansfield, George H., and C. W. Wild, Canton, Ohio. Electric heater. No. 1,107,333; Aug. 18; Gaz. vol. 205; p. 702.

Manson-Olin, Harold, New York, N. Y. Miniature parachute. No. 1,108,596; Aug. 25; Gaz. vol. 205; p. 1193.

Mantius, Otto. (See Zaremba and Mantius.)

Mantz, Nelson A., Akron, Ohio. Drawing implement. No. 1,107,432; Aug. 18; Gaz. vol. 205; p. 739.

Marak, Stanley O., Swisher, Iowa. Ice-cutting machine. No. 1,106,955; Aug. 11; Gaz. vol. 205; p. 524.

Marczi, John, La Belle, Pa. Boltless rail-joint. No. 1,107,433; Aug. 18; Gaz. vol. 205; p. 739.

Margach, Andrew L., Utica, N. Y., assignor to Mergenthaler Linotype Company. Type or matrix. No. 1,105,676; Aug. 4; Gaz. vol. 205; p. 31.

Markem Machine Company. (See Putnam, Fred A., assignor.)

Markiein, Otto. (See Gasau and Markiein.)

Marks, Charles J. (See Pfachler and Marks.)

Marks, Nathanial G. (See Lake and Marks.)

Marks, Sam R., Jacksonville, Fla. Turnstile. No. 1,107,975; Aug. 18; Gaz. vol. 205; p. 928.

Marlow, William, New York, N. Y., assignor to Standard Knitting Mills Company. Union suit. No. 1,105,677; Aug. 4; Gaz. vol. 205; p. 31.

Marriott, Franciscus B., Homewood, Ala. Spring-motor. No. 1,108,456; Aug. 25; Gaz. vol. 205; p. 1142.

Marshall, Albert H., and T. L. Richardson, Chicago, Ill. Apparatus for printing tape. No. 1,106,660; Aug. 11; Gaz. vol. 205; p. 420.

Marshall, Aquila B., New York, assignor to American Radiator Co., Brooklyn, N. Y. Vacuum-cleaner. No. 1,106,231; Aug. 4; Gaz. vol. 205; p. 224.

Marshall, Bruno E., Williams, Ariz., assignor to Baldwin, Tuthill and Bolton, Grand Rapids, Mich. Limiting and stopping device. No. 1,106,574; Aug. 11; Gaz. vol. 205; p. 390.

Martin, Charles E., Mansfield, Ohio. Roof for silos. No. 1,106,150; Aug. 4; Gaz. vol. 205; p. 198.

Martin, Frank P., Williamsburg, Kans. Mold. No. 1,106,661; Aug. 11; Gaz. vol. 205; p. 421.

Martin, Horace E., Athens, Ga. Chain saw. No. 1,107,535; Aug. 18; Gaz. vol. 205; p. 774.

Martin, Horace E., Athens, Ga. Chain saw. No. 1,107,625; Aug. 18; Gaz. vol. 205; p. 807.

Martin, Louis, New York, N. Y. Saddle. No. 1,108,597; Aug. 25; Gaz. vol. 205; p. 1193.

Martin, Robert L., Thomas, W. Va. Fire-extinguisher. No. 1,108,381; Aug. 25; Gaz. vol. 205; p. 1118.

Martin, Stephen G., *et al.* (See Scheuermann, Philip J., assignor.)

Martin, Victor H. (See Maitre and Martin.)

Martin, William, assignor of one-fourth to C. Wineapple, one-fourth to M. Lemkin, and one-fourth to M. Wineapple, Salem, Mass. Curtain-fixture. No. 1,107,334; Aug. 18; Gaz. vol. 205; p. 702.

Martinitz, John, *et al.* (See Crooks, Earl G., assignor.)

Maruyama, Yasuji, Kansas City, Mo. Internal-combustion engine. No. 1,106,881; Aug. 11; Gaz. vol. 205; p. 497.

Marvell, Roy W., Baltimore, Md., assignor, by mesne assignments, to Lyon, Conklin & Company. Self-heating soldering-iron. No. 1,107,813; Aug. 18; Gaz. vol. 205; p. 872.

Marx, George B., New York, N. Y. Extension-body for trucks, &c. No. 1,106,104; Aug. 4; Gaz. vol. 205; p. 182.

Maschinenfabrik Augsburg-Nurnberg A. G. (See Schwarz, Karl, assignor.)

Maschinenfabrik Lorenz. (See Grundstein, Julius, assignor.)

Mason, Charles T., Sumter, S. C. Vent and overflow for batteries. No. 1,107,084; Aug. 11; Gaz. vol. 205; p. 565.

Mason, Hallock B. (See Mason, Julius H. and H. B.)

Mason, Julius H. and H. B., Duncan Falls, Ohio. Bottle-receptacle. No. 1,106,050; Aug. 4; Gaz. vol. 205; p. 163.

Mason, William K., assignor to J. W. Burnett, Cambridge, Mass. Electric drying apparatus. No. 1,107,814; Aug. 18; Gaz. vol. 205; p. 873.

Massard, Felix. (See Grémillet, Marie J., assignor.)

Massatsch, Cornelius, Berlin-Tempelhof, assignor to Permutit-Aktiengesellschaft, Berlin, Germany. Clarifying and sterilizing water. No. 1,107,199; Aug. 11; Gaz. vol. 205; p. 607.

Matchette, Frank J., and R. Raddatz, Milwaukee, Wis., assignors, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Vacuum cleaning and heating system. No. 1,106,349; Aug. 4; Gaz. vol. 205; p. 263.

Mathews, Ernest C., Minneapolis, Minn. Hen's nest. No. 1,106,517; Aug. 11; Gaz. vol. 205; p. 369.

Mathiesen, Frances E., administratrix. (See Mathiesen, James C.)

Mathiesen, James C., deceased; F. E. Mathiesen, administratrix, Oakland, assignor of one-half to C. Engby, San Francisco, Cal. Rotary steam-engine. No. 1,106,882; Aug. 11; Gaz. vol. 205; p. 497.

Matitsch, August, Nottingham, England, assignor to M. Faber & Co., Vienna, Austria-Hungary. Pillow-lace-making machine. No. 1,107,335; Aug. 18; Gaz. vol. 205; p. 702.

Matson, Eric, Miller, Ind. Combination-saw. No. 1,108,382; Aug. 25; Gaz. vol. 205; p. 1118.

Matthews, George H., Uniontown, Pa. Fire-alarm system. No. 1,106,151; Aug. 4; Gaz. vol. 205; p. 198.

Mattl, Hermann, Berne, Switzerland. Locking device for tongs or forceps. No. 1,106,518; Aug. 11; Gaz. vol. 205; p. 370.

Maul, Margaret, *et al.* (See Swyers, Brice P., assignor.)

Maulbeck, Sebastian. (See Hellmuth and Maulbeck.)

Maull, Allen B., Baltimore, Md. Guide apparatus. No. 1,108,457; Aug. 25; Gaz. vol. 205; p. 1143.

Mauser, Paul, Oberndorf-on-the-Neckar, Germany. Automatic firearm. No. 1,107,815; Aug. 18; Gaz. vol. 205; p. 873.

Mayer, John H., assignor to Humboldt Cement Products Mfg. Co., Humboldt, Iowa. Silo-door. No. 1,106,662; Aug. 11; Gaz. vol. 205; p. 421.

Mayer, Laurance, assignor to Julius Kayser & Co., New York, N. Y. Lady's undergarment. No. 1,106,663; Aug. 11; Gaz. vol. 205; p. 421.

Mayo, Benjamin F., Salem, assignor to United Shoe Machinery Company, Boston, Mass. Machine for use in the manufacture of boots and shoes. No. 1,106,394; Aug. 11; Gaz. vol. 205; p. 322.

Mayo, George D., Laconia, N. H. Knitting-machine. No. 1,107,816; Aug. 18; Gaz. vol. 205; p. 873.

Mayo, Robert D. and R. D., assignors to H. S. Lavine, Cleveland, Ohio. Receptacle-holder. No. 1,108,598; Aug. 25; Gaz. vol. 205; p. 1194.

Maytrott, Henry, assignor to The Hawthorne Manufacturing Company, Inc., Bridgeport, Conn. Bell. No. 1,108,103; Aug. 18; Gaz. vol. 205; p. 974.

Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,108,508; Aug. 25; Gaz. vol. 205; p. 1162.

Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,108,509; Aug. 25; Gaz. vol. 205; p. 1163.

Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,108,510; Aug. 25; Gaz. vol. 205; p. 1163.

Mazur, Antoni, New York Mills, N. Y. Ball-joint. No. 1,108,200; Aug. 25; Gaz. vol. 205; p. 1055.

McAll, Henry W., Toronto, Ontario, Canada. Templet for drawing railway switches and crossovers. No. 1,105,809; Aug. 4; Gaz. vol. 205; p. 78.

McAll, Henry W., Toronto, Ontario, Canada. Lettering-templet. No. 1,105,810; Aug. 4; Gaz. vol. 205; p. 79.

McArthur, Charles D., assignor to The Blaw Collapsible Steel Centering Company, Pittsburgh, Pa. Collapsible telescoping form. No. 1,108,201; Aug. 25; Gaz. vol. 205; p. 1055.

McAuliffe, John W., New York, N. Y. Lavatory or sink. No. 1,107,817; Aug. 18; Gaz. vol. 205; p. 874.

McBerty, Frank R. (See Scribner and McBerty.)

McBerty, Frank R., New Rochelle, N. Y., assignor to Western Electric Company, Chicago, Ill. Sequence-switch. No. 1,105,811; Aug. 4; Gaz. vol. 205; p. 79.

McBerty, Frank R., New Rochelle, assignor to Western Electric Company, New York, N. Y. Printing-telegraph. No. 1,107,336; Aug. 18; Gaz. vol. 205; p. 703.

McBerty, Frank R., New Rochelle, assignor to Western Electric Company, New York, N. Y. Relay. No. 1,107,536; Aug. 18; Gaz. vol. 205; p. 774.

McBerty, Frank R., New Rochelle, assignor to Western Electric Company, New York, N. Y. Telephone-exchange system. No. 1,108,383; Aug. 25; Gaz. vol. 205; p. 1119.

McCann, Charles A., New York, N. Y. Comb. No. 1,107,537; Aug. 18; Gaz. vol. 205; p. 775.

McCanna, John F., assignor to Imperial Brass Manufacturing Company, Chicago, Ill. Force-feed lubricator. No. 1,107,220; Aug. 11; Gaz. vol. 205; p. 614.

McCarty, Eugene J., assignor to T. J. McNamara, Clinton, Mass. Trolley-harp. No. 1,107,818; Aug. 18; Gaz. vol. 205; p. 874.

McCaskey, Perry A., Lakewood, Ohio. Account-filing device. No. 1,106,051; Aug. 4; Gaz. vol. 205; p. 163.

McCaskey Register Company, The. (See Hick, Harry J., assignor.)

McCaskey Register Company, The. (See Wildman, Joseph E., assignor.)

McCaskill, Oscar E., Fort Worth, Tex. Involuting drawing instrument. No. 1,106,883; Aug. 11; Gaz. vol. 205; p. 497.

McClintock, J. Y., Rochester, N. Y. Making pavements. (Reissue.) No. 13,785; Aug. 4; Gaz. vol. 205; p. 266.

McCloskey, George M., New York, N. Y. Closet connection. No. 1,106,726; Aug. 11; Gaz. vol. 205; p. 443.

McCloskey, John, Boston, Mass. Water-heater. No. 1,105,678; Aug. 4; Gaz. vol. 205; p. 31.

McClymont, Bryce W., assignor to Penberthy Injector Co., Detroit, Mich. Ejector. No. 1,105,985; Aug. 4; Gaz. vol. 205; p. 139.

McColl, Francis P., Eastport, Me., assignor to American Key Can Company, Chicago, Ill. Feeding mechanism for can parts. No. 1,106,575; Aug. 11; Gaz. vol. 205; p. 390.

McCord and Company. (See Corvin, James F., assignor.)

McCord Manufacturing Company. (See Schlacks and Barter, assignors.)

McCormack, Angus G., Port Arthur, Ontario, Canada. Grain-car door. No. 1,106,395; Aug. 11; Gaz. vol. 205; p. 323.

McCormick, Allen L., Louisville, Ky. Weather-strip for wind-shields of automobiles. No. 1,107,819; Aug. 18; Gaz. vol. 205; p. 874.

McCormick, Edmund L., St. Louis, Mo. Cattle-guard. No. 1,108,202; Aug. 25; Gaz. vol. 205; p. 1055.

McCoy, John F., New Orleans, La. Tamp. No. 1,107,976; Aug. 18; Gaz. vol. 205; p. 928.

McCulley, Robert E., W. G. Rea, and D. B. Forward, Cedarville, Cal. Cultivator-tooth. No. 1,108,600; Aug. 25; Gaz. vol. 205; p. 1194.

McCullough, Charles, Haines, Oreg. Baled-hay conveyer and elevator. No. 1,108,599; Aug. 25; Gaz. vol. 205; p. 1194.

McDermott, Charles K., Charleston, W. Va. Rail fastening and gage. No. 1,107,085; Aug. 11; Gaz. vol. 205; p. 565.

McDermott, Thomas E., Somerville, Mass. Safety-razor. No. 1,107,538; Aug. 18; Gaz. vol. 205; p. 775.

McDonald, Beverly, Picton, Ontario, Canada. Filing device. No. 1,106,396; Aug. 11; Gaz. vol. 205; p. 323.

McFarland, Charles M., assignor of one-half to W. R. Neal, Linden, Tex. Combination rule, square, and miter. No. 1,106,232; Aug. 4; Gaz. vol. 205; p. 224.

McFarland, Roy L., *et al.* (See Kollenberg, Frederick G., assignor.)

McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-supplying mechanism. No. 1,107,337; Aug. 18; Gaz. vol. 205; p. 703.

McFetridge, Joseph. (See Oesterle, Beale, and McFetridge.)

McGann, James H., *et al.* (See Ryan, Patrick, assignor.)

McGinty, Bernard, Doylestown, Pa. Composing-stick. No. 1,107,539; Aug. 18; Gaz. vol. 205; p. 775.

McGuire, John F., Pender, Nebr. Leveling device for traction-engines. No. 1,108,203; Aug. 25; Gaz. vol. 205; p. 1056.

McInrue, John, assignor to Chalmers & Williams, Inc., Chicago Heights, Ill. Gyratory crusher. No. 1,106,333; Aug. 4; Gaz. vol. 205; p. 257.

McIntosh, Cora E., New York, and O. A. McIntosh, Greene, N. Y. Skirt-marker. No. 1,106,152; Aug. 4; Gaz. vol. 205; p. 198.

McIntosh, Oren A. (See McIntosh, Cora E. and O. A.)

McKaig, Archie, Buffalo, N. Y. Mixing-machine. No. 1,105,812; Aug. 4; Gaz. vol. 205; p. 79.

McKee, Edward B. (See Ellis, Hallett D., assignor.)

McKeen Motor Car Company. (See McKeen, William R., Jr., assignor.)

McKeen, William R., Jr., assignor to McKeen Motor Car Company, Omaha, Nebr. Car construction. No. 1,107,086; Aug. 11; Gaz. vol. 205; p. 566.

McKenna, A. (See Sellors, Edward M., assignor.)

McKenzie, Margaret S., East Rutherford, N. J. Lady's hat-case. No. 1,105,986; Aug. 4; Gaz. vol. 205; p. 140.

McKenzie, William J., Nederland, Colo. Rail-joint chair. No. 1,107,540; Aug. 18; Gaz. vol. 205; p. 776.

McKinney, Arthur L., and L. H. Zeigler, Redkey, Ind. Shutter-operator for cameras. No. 1,108,458; Aug. 25; Gaz. vol. 205; p. 1143.

McLanahan, Austin. (See Potts, Louis M., assignor.)

McLane, Lloyd L., Newark, Del. Vending-machine. No. 1,105,679; Aug. 4; Gaz. vol. 205; p. 32.

McLean, Hilliard N. A., Detroit, Mich. Sanitary closet. No. 1,107,685; Aug. 18; Gaz. vol. 205; p. 829.

McLendon, Thomas S., Carrollton, Ga. Portable elevator. No. 1,108,771; Aug. 25; Gaz. vol. 205; p. 1251.

McLeod, Alexander J. (See Smith, Edgar W., assignor.)

McLeod, George T., Dedham, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Top-lift scalloper or concaver. No. 1,107,820; Aug. 18; Gaz. vol. 205; p. 875.

McMeen & Miller. (See Hulfish, David S., assignor.)

McMillan, John L., Syracuse, N. Y. Loose-leaf binder. No. 1,106,825; Aug. 11; Gaz. vol. 205; p. 477.

McMurtry, Alden L., Sound Beach, Conn. Control-pedal for automobiles. No. 1,106,466; Aug. 11; Gaz. vol. 205; p. 350.

McNamara, Thomas J. (See McCarty, Eugene J., assignor.)

McNeil, Charles, Govan, Glasgow, Scotland. Three-roller sugar-cane and like mill. No. 1,107,087; Aug. 11; Gaz. vol. 205; p. 566.

McNeil, Charles A. (See McNeil, George S., assignor.)

McNeil, George S., Newark, N. J., assignor to C. A. McNeil, New York, N. Y. Safety-box for milk-bottles. No 1,108,601; Aug. 25; Gaz. vol. 205; p. 1195.

McNeil, James. (See Montgomery, Thomas, assignor.)

McNutt, William H., New York, assignor to C. E. Owen, Franklin, N. Y. Valved thermal device. No. 1,108,459; Aug. 25; Gaz. vol. 205; p. 1144.

McSorley, William B., assignor to Majestic Manufacturing Company, St. Louis, Mo. Gas and air mixer. No. 1,105,987; Aug. 4; Gaz. vol. 205; p. 140.

McTammany Ballot Company. (See McTammany, John, assignor.)

McTammany, John, Stamford, Conn. Automatic typewriter operator. No. 1,106,397; Aug. 11; Gaz. vol. 205; p. 323.

McTammany, John, Spencer, Mass., assignor, by mesne assignments, to McTammany Ballot Company, Portland, Me. Voting-machine. No. 1,108,384; Aug. 25; Gaz. vol. 205; p. 1119.

Meacham, Benjamin E., Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Thermostatic gas cut-off for water-heaters. No. 1,108,772; Aug. 25; Gaz. vol. 205; p. 1251.

Meacham, Benjamin E., Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-burner. No. 1,108,773; Aug. 25; Gaz. vol. 205; p. 1252.

Mead, Clarence E., Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Generator-suspension member. No. 1,105,988; Aug. 4; Gaz. vol. 205; p. 140.

Meadows, Harold G., assignor to J. G. Dudley, Buffalo, N. Y. Bar for reinforced concrete construction. No. 1,107,434; Aug. 18; Gaz. vol. 205; p. 740.

Meads, O. J. (See Starr, George B., assignor.)

Means, John D. (See Wallace and Means.)

Means, Thomas D. (See Wallace and Means.)

Mears, William N., Brookline, Mass. Packing. No. 1,106,467; Aug. 11; Gaz. vol. 205; p. 350.

Mech. Bandfabrik Goldberg & Co. (See Goldberg and Ludwigs, assignors.)

Mechanical Process Manufacturing Company, The. (See Hagemeyer, Henry F., assignor.)

Megosin Company. (See Menden, William S., assignor.)

Mehrmann, William, Brooklyn, N. Y. Hanger for picture-frames. No. 1,107,686; Aug. 18; Gaz. vol. 205; p. 829.

Meier, Henry B., Port Chester, N. Y. Feed-hopper. No. 1,107,088; Aug. 11; Gaz. vol. 205; p. 566.

Meigs, John F., and R. P. Stout, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Ammunition-hoisting car. No. 1,105,813; Aug. 4; Gaz. vol. 205; p. 80.

Melville Clark Piano Company. (See Clark, Ernest G., assignor.)

Menchion, Thomas H., Fall River, Mass. Crate. No. 1,107,089; Aug. 11; Gaz. vol. 205; p. 567.

Menden, William S., Brooklyn, N. Y., assignor to Megosin Company, Inc. Car-heater. No. 1,106,334; Aug. 4; Gaz. vol. 205; p. 257.

Meunickheim, Frederick W., Jr., assignor of one-half to M. J. Walsh, Sussex, N. J. Spigot. No. 1,107,435; Aug. 18; Gaz. vol. 205; p. 740.

Mentzer, Oliver A., assignor of one-half to H. E. Ransing, Lancaster, Pa. Wrench. No. 1,108,602; Aug. 25; Gaz. vol. 205; p. 1195.

Mergenthaler Linotype Company. (See Albrecht, Christian A., assignor.)

Mergenthaler Linotype Company. (See Armstrong, Henry A., assignor.)

Mergenthaler Linotype Company. (See Baldwin, William S., assignor.)

Mergenthaler Linotype Company. (See Bloch, Bruno, assignor.)

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mergenthaler Linotype Company. (See Margach, Andrew L., assignor.)

Mergenthaler Linotype Company. (See Röger, Karl, assignor.)

Merrills, William A., Detroit, Mich. Engine-starter. No. 1,107,687; Aug. 18; Gaz. vol. 205; p. 829.

Merrell, Frederick H., and W. K. Blackburn, Milwaukee, Wis., assignors to Package Machinery Company, Springfield, Mass. Slab cutting and separating machine. No. 1,108,204; Aug. 25; Gaz. vol. 205; p. 1056.

Merrill, Grant U., Paterson, N. J. Steam-trap. No. 1,108,603; Aug. 25; Gaz. vol. 205; p. 1195.

Merrill, Louis D., Clarksburg, W. Va. Knockdown box. No. 1,107,174; Aug. 11; Gaz. vol. 205; p. 599.

Mesick, Frank L., E. P. W. Elliot, and M. E. Woodcock, Albany, N. Y. Sanitary covering for closet-seats. No. 1,108,460; Aug. 25; Gaz. vol. 205; p. 1144.

Messner, Enens B., Bowmansville, Pa. Nut-lock. No. 1,108,866; Aug. 25; Gaz. vol. 205; p. 1286.

Mesta, George, Pittsburgh, Pa. Motive means for pickling and washing apparatus. No. 1,107,821; Aug. 18; Gaz. vol. 205; p. 875.

Metal Building Materials Company *et al.* (See Hough, William B., assignor.)

Metcalf, George W. (See Wilcoxson, Isham F., assignor.)

Methven, Archibald D., Monroe, Mich. Strike-plate. No. 1,108,873; Aug. 25; Gaz. vol. 205; p. 1288.

Metzger, Charles L., J. A. Forster, and W. E. Kune, Alameda, Cal. Sound-operating mechanism. No. 1,106,664; Aug. 11; Gaz. vol. 205; p. 422.

Meunier, Georges, Raab, assignor to A. and E. Lederer Vienna, Austria-Hungary. Treating distillery-wash. No. 1,107,175; Aug. 11; Gaz. vol. 205; p. 599.

Meyer, Charles L., Omaha, Nebr. Removable mold for concrete floors. No. 1,106,665; Aug. 11; Gaz. vol. 205; p. 422.

Meyer, Franz, assignor to Firm of C. Zeiss, Jena, Germany. Device for the fine adjustment of microscopes. No. 1,106,956; Aug. 11; Gaz. vol. 205; p. 524.

Meyer, Henry F., New York, N. Y. Sent. No. 1,107,090; Aug. 11; Gaz. vol. 205; p. 567.

Meyer, John H. (See Ramsey and Meyer.)

Meyer, Thomas F., Bristol, Wis. Silo-roof. No. 1,106,398; Aug. 11; Gaz. vol. 205; p. 324.

Meyercord, George R., Chicago, Ill. Making heavy structural white glass. No. 1,108,205; Aug. 25; Gaz. vol. 205; p. 1057.

Meyers, Garry P., Mountain View, Mo. Rim-contractor. No. 1,108,774; Aug. 25; Gaz. vol. 205; p. 1252.

Meyers, Nicholas, assignor to P. C. Meyers, Buffalo, N. Y. Addressing-machine. No. 1,105,814; Aug. 4; Gaz. vol. 205; p. 80.

Meyers, Peter C. (See Meyers, Nicholas, assignor.)

Meyers, William G., Mitchell, S. D. Measuring-tool. No. 1,107,436; Aug. 18; Gaz. vol. 205; p. 740.

Michael, William H. (See Brown and Michael.)

Michaelsen, Harold N. (See Thomson and Michaelsen.)

Michalski, Louis. (See Kulhawy, Ferdinand, assignor.)

Michigan Motor Specialties Company. (See Beck, Charles W., assignor.)

Michigan Washing Machine Company *et al.* (See Stanfield, Jasper H., assignor.

Michitsch, John, Detroit, Mich. Candy-machine. No. 1,108,461; Aug. 25; Gaz. vol. 205; p. 1144.

Michod, Charles L., Chicago Heights, Ill. Electric transmission-line. No. 1,106,468; Aug. 11; Gaz. vol. 205; p. 351.

Michod, Charles L., Chicago Heights, Ill. Fence. No. 1,106,826; Aug. 11; Gaz. vol. 205; p. 478.

Mickelson, Carl P., Mason, Mich. Attachment for cleaning-rods. No. 1,107,688; Aug. 18; Gaz. vol 205; p. 829.

Middlesworth, Leonard V., Philadelphia, Pa. Metal-sash joint. No. 1,108,511; Aug. 25; Gaz. vol. 205; p. 1163.

Miehle Printing Press & Manufacturing Company. (See Henderson, Carl, assignor.)

Miehle Printing Press & Manufacturing Company, The. (See Robertson, Charles J., assignor.)

Miehle Printing Press & Manufacturing Company, The. (See Stevens, Burt D., assignor.)

Miehle, Robert, Plymouth, Ind., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Sheet-delivery mechanism. No. 1,107,437; Aug. 18; Gaz. vol. 205; p. 741.

Mielke, Edward, Rocklyn, Wash. Fly-trap. No. 1,107,091; Aug. 11; Gaz. vol. 205; p. 567.

Miles, Frank W., St. Louis, Mo. Brick-cutting machine. No. 1,105,989; Aug. 4; Gaz. vol. 205; p. 140.

Miles, Walker S., Jr., Madera, Pa. Gage. No. 1,108,775; Aug. 25; Gaz. vol. 205; p. 1252.

Milford, Jefferson D. (See England, James R., assignor.)

Milkes, Leah G., Minneapolis, Minn. Catamenial appliance. No. 1,108,206; Aug. 25; Gaz. vol. 205; p. 1057.

Milks, John H., Grays River, Wash. Razor-sharpener. No. 1,107,626; Aug. 18; Gaz. vol. 205; p. 807.

Milleman, Herman, Boise, Idaho. Rake and hoe. No. 1,105,815; Aug. 4; Gaz. vol. 205; p. 80.

Miller, Bert W., Arteslan, S. D. Sectional wheel-rim. No. 1,107,092; Aug. 11; Gaz. vol. 205; p. 567.

Miller, Carl H. (See Miller, Charles H. and C. H.)

Miller, Charles H. and C. H., Cleveland, Ohio. Combined gas-burner and grate-bar. No. 1,108,207; Aug. 25; Gaz. vol. 205; p. 1059.

Miller, Daisy O., assignor of one-half to M. Haseltine, Washington, D. C. Toilet article. No. 1,107,077; Aug. 18; Gaz. vol. 205; p. 928.

Miller Du Brul and Peters Mfg. Co. (See Du Brul, Napoleon and A., assignors.)

Miller, Edwin C. (See Young, Howard W., assignor.)

Miller Electric Switch Company, The. (See Miller, Royal R., assignor.)

Miller, Eseck C., Newark, N. J., assignor to Imperial Stopper Company. Bottle-feeding machine. No. 1,106,884; Aug. 11; Gaz. vol. 205; p. 498.

Miller, George E., Oakland, and E. B. Cantrell, San Francisco, Cal. Portable universal milling-machine. No. 1,107,221; Aug. 11; Gaz. vol. 205; p. 615.

Miller, George H., Brooklyn, N. Y. Printing-press. No. 1,105,816; Aug. 4; Gaz. vol. 205; p. 81.

Miller, Gustave, Los Angeles, Cal. Acetylene generating and storing apparatus. No. 1,106,885; Aug. 11; Gaz. vol. 205; p. 498.

Miller, Gustave L., Geneseo, assignor to The Boss Manufacturing Company, Kewanee, Ill. Corn-husker. (Reissue.) No. 13,787; Aug. 11; Gaz. vol. 205; p. 624.

Miller, Henry E., Linden Heights, Ohio. Segmental block. No. 1,107,689; Aug. 18; Gaz. vol. 205; p. 830.

Miller, James A., Jersey City, N. J. Apparatus for bending pipes, rods, &c. No. 1,105,914; Aug. 4; Gaz. vol. 205; p. 114.

Miller, John, Jr., Beloit, Wis., assignor to Charles H. Besly and Company, Chicago, Ill. Grinding or drum-sanding machine. No. 1,107,338; Aug. 18; Gaz. vol. 205; p. 704.

Miller, John J. (See Schaeffer and Shearer, assignors.)

Miller, Nathan H., Paterson, N. J. Opera-chair. No. 1,105,990; Aug. 4; Gaz. vol. 205; p. 141.

Miller, Royal R., Pueblo, Colo., assignor to The Miller Electric Switch Company. Electromechanical switch. No. 1,106,576; Aug. 11; Gaz. vol. 205; p. 391.

Miller, Sidney G., Los Angeles, Cal. Automobile-lamp. No. 1,108,512; Aug. 25; Gaz. vol. 205; p. 1164.

Miller, Theodore H., Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Spring for spring-bearings. No. 1,107,690; Aug. 18; Gaz. vol. 205; p. 830.

Miller, Theodore H., Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Spring-bearing. No. 1,107,691; Aug. 18; Gaz. vol. 205; p. 830.

Miller Vehicle Heater Company. (See Miller, William H., assignor.)

Miller, Walter E., Madison, Wis. Device for preventing backflow in water-supply systems. No. 1,105,991; Aug. 4; Gaz. vol. 205; p. 141.

Miller, Walter H., Orange, N. J. Phonograph. No. 1,108,208; Aug. 25; Gaz. vol. 205; p. 1057.

Miller, William H., assignor to Miller Vehicle Heater Company, Crawfordsville, Ind. Vehicle-heater. No. 1,108,513; Aug. 25; Gaz. vol. 205; p. 1164.

Miller, William O., Billings, Mont. Rotary internal-combustion engine. No. 1,106,666; Aug. 11; Gaz. vol. 205; p. 422.

Milliken, Walter L. (See Shiek, Daniel W., assignor.)

Milliron, Ira A., New York, N. Y., assignor, by mesne assignments, to Hammock Egg Carrier Company. Package for use in sending fragile articles. No. 1,107,339; Aug. 18; Gaz. vol. 205; p. 704.

Mills Woven Cartridge Belt Company. (See Jennings, Victor H., assignor.)

Millspaugh, W. L. (See Venners, James H., assignor.)

Milz, Max J., Taft, Cal. Casing-cutter. No. 1,107,822; Aug. 18; Gaz. vol. 205; p. 876.

Minahan, Patrick R., Fond du Lac, Wis. Eyeless needle. No. 1,106,667; Aug. 11; Gaz. vol. 205; p. 423.

Minehart, Denman D., assignor of one-half to E. L. Kornfeld, Los Angeles, Cal. Tire-trunk. No. 1,107,692; Aug. 18; Gaz. vol. 205; p. 831.

Miner, Enoch, Elem Grove, Pa. Rail-fastener. No. 1,108,776; Aug. 25; Gaz. vol. 205; p. 1253.

Miner, James H., Lumberton, Miss. Wheel-flange lubricator. No. 1,107,978; Aug. 18; Gaz. vol. 205; p. 929.

Mining Appliances Company. (See Stockly, Walter D., assignor.)

Minnick, William, Barberton, Ohio. Vehicle-wheel. No. 1,107,093; Aug. 11; Gaz. vol. 205; p. 568.

Missouri Hay Press Company. (See Livengood, Winfield S., assignor.)

Mitchell, Alonzo H., Phoenix, Ariz. Plaster. No. 1,107,979; Aug. 18; Gaz. vol. 205; p. 929.

Mitchell, Ira G., assignor of one-half to R. S. Ball, Meeker, Colo. Checkrein-holder. No. 1,105,680; Aug. 4; Gaz. vol. 205; p. 32.

Mitchell, John, Ponsonby, New Zealand, and J. Gell, London, England. Means for securing galvanized iron sheets and for analogous purposes. No. 1,108,209; Aug. 25; Gaz. vol. 205; p. 1058.

Mitchell, William R., Detroit, Mich. Water-closet. No. 1,107,094; Aug. 11; Gaz. vol. 205; p. 568.

Mitchell, William S., Somerville, Mass., assignor of one-third to J. W. Smith, Paterson, N. J. Automatic motor control. No. 1,106,469; Aug. 11; Gaz. vol. 205; p. 351.

Mixer, J. H., *et al.* (See Learned, Willard M., assignor.)

Mixer Machine Company. (See Pettibone, James W., assignor.)

Miyata, Taichiro, and S. Kuwayama, New York, N. Y. Shoe-dressing and making the same. No. 1,106,957; Aug. 11; Gaz. vol. 205; p. 524.

Model Form Company. (See Luery, Michael, assignor.)

Modlin, Hanford C., assignor to Globe Manufacturing Company, Perry, Iowa. Operating device for washing-machines. No. 1,106,827; Aug. 11; Gaz. vol. 205; p. 478.

Modlin, Keup, Clio, S. C. Broom. No. 1,107,541; Aug. 18; Gaz. vol. 205; p. 776.

Moehlenbrock, Frederick H. A., St. Louis, Mo. Tobacco-pipe. No. 1,108,304; Aug. 25; Gaz. vol. 205; p. 1195.

Mohr, George A., *et al.* (See Taylor, James W., assignor.)

Moldenhauer, Bruno, Berlin, Germany. Detachable lens-mount for eyeglasses. No. 1,107,823; Aug. 18; Gaz. vol. 205; p. 876.

Moldenhauer, Otto A., assignor to Wisconsin Sanitary Cow-Milker Co., Watertown, Wis. Suction-cup for milking-machines. No. 1,105,681; Aug. 4; Gaz. vol. 205; p. 33.

Molina, Louis G., assignor of one-half to E. L. Windom, Chicago, Ill. Carbureter. No. 1,107,693; Aug. 18; Gaz. vol. 205; p. 831.

Moline Plow Company. (See Lindgren, Alexus C., assignor.)

Moline Plow Company. (See Lindgren and Mandt, assignors.)

Molloy, William J., Chicago, Ill. Garment-supporter. No. 1,106,886; Aug. 11; Gaz. vol. 205; p. 499.

Molony, James E., Schenectady, N. Y., assignor to General Electric Company. Automatic sectionalizing-switch. No. 1,108,605; Aug. 25; Gaz. vol. 205; p. 1196.

Monaghan, William J., assignor to Waterbury Mfg. Co., Waterbury, Conn. Portable electric lamp. No. 1,106,828; Aug. 11; Gaz. vol. 205; p. 478.

Monarch Manufacturing Corporation. (See Hartwell and Sears, assignors.)
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)
Monk, Robert W., Mobeetie, Tex. Cotton-boll harvester. No. 1,105,915; Aug. 4; Gaz. vol. 205; p. 114.
Monnier, Robert, Paris, France. Mechanical kneading apparatus. No. 1,107,980; Aug. 18; Gaz. vol. 205; p. 929.
Monroe, Delplain B., Endicott, N. Y. Crutch. No. 1,107,981; Aug. 18; Gaz. vol. 205; p. 929.
Monte, Manuel P., Stockton, Cal. Land-grader. No. 1,105,817; Aug. 4; Gaz. vol. 205; p. 81.
Montgomery, Thomas, assignor of one-half to J. McNeil, Greenock, Scotland. Time-checking machine. No. 1,106,958; Aug. 11; Gaz. vol. 205; p. 524.
Monti, Eudo, Turin, Italy. Clarifying, aging, and refining wines, liqueurs, and other vegetable extracts. No. 1,108,777; Aug. 25; Gaz. vol. 205; p. 1253.
Moon, Arch, Fallon, Nev. Vehicle-wheel. No. 1,107,982; Aug. 18; Gaz. vol. 205; p. 930.
Moore, Chester N., Schenectady, N. Y., assignor to General Electric Company. Resistance element. No. 1,107,233; Aug. 11; Gaz. vol. 205; p. 619.
Moore, Elmer C., Baltimore, Md., assignor to J. E. Hanger, Inc. Artificial limb. No. 1,108,462; Aug. 25; Gaz. vol. 205; p. 1145.
Moore, Herbert L. G., Hohokus, N. J. Egg holder and carrier. No. 1,108,606; Aug. 25; Gaz. vol. 205; p. 1196.
Moore, Hugh K. (See Mulliken and Moore.)
Moore, Stewart H., Chicago, Ill. Hot-water-service system. No. 1,108,463; Aug. 25; Gaz. vol. 205; p. 1145.
Moore, Thomas S., Shoshoni, Wyo. Potato-harvester. No. 1,106,668; Aug. 11; Gaz. vol. 205; p. 423.
Moore, Walter. (See Lunham and Moore.)
Moore, William G., Cleveland, Ohio. Clothes pounder and washer. No. 1,107,824; Aug. 18; Gaz. vol. 205; p. 876.
Moore, William H. S., West Chicago, Ill. Magazine-handle. No. 1,105,818; Aug. 4; Gaz. vol. 205; p. 81.
Moreau, Joseph, St. Germain de Grantham, Quebec, Canada. Potato-digger. No. 1,106,669; Aug. 11; Gaz. vol. 205; p. 423.
Moreton, Everett D., Erie, Pa. Protractor. No. 1,107,983; Aug. 18; Gaz. vol. 205; p. 930.
Morey, Fred W., East Taunton, Mass. Locking attachment for boxes. No. 1,108,464; Aug. 25; Gaz. vol. 205; p. 1146.
Morgan-Gardner Electric Company. (See Noble, Ralph E., assignor.)
Morgan, Ocran B., Liverpool, W. Va. Quilting-frame. No. 1,107,542; Aug. 18; Gaz. vol. 205; p. 776.
Morison, Donald B., Hartlepool, England. Apparatus for heating boiler feed-water. No. 1,108,210; Aug. 25; Gaz. vol. 205; p. 1058.
Morison, William J. (See Clarkson and Morison.)
Moritz, Friedrich, Dortmund, Germany. Pneumatically-operated musical instrument. No. 1,108,385; Aug. 25; Gaz. vol. 205; p. 1120.
Mork, Harry S., assignor to Chemical Products Company, Boston, Mass. Preparing filaments, films, and masses from cellulose acetate. No. 1,107,222; Aug. 11; Gaz. vol. 205; p. 615.
Morrill, William C., New York, N. Y. Saw-set. No. 1,106,829; Aug. 11; Gaz. vol. 205; p. 479.
Morris, Beverly Y., deceased, Corte Madera, Cal.; F. C. Morris, administratrix. Print-drier. No. 1,106,670; Aug. 11; Gaz. vol. 205; p. 424.
Morris, Charles E., Lane, Kans. Propelling mechanism for tractors. No. 1,107,825; Aug. 18; Gaz. vol. 205; p. 877.
Morris, De Witt C., assignor to F. Keil & Son, New York, N. Y. Show-case corner. No. 1,107,694; Aug. 18; Gaz. vol. 205; p. 832.
Morris, Freda C., administratrix. (See Morris, Beverly Y.)
Morris, George. (See Stout, Charles N., assignor.)
Morrison, John, Jr., Glens Falls, N. Y. Brush. No. 1,108,079; Aug. 18; Gaz. vol. 205; p. 964.
Morrison, Lewis E., assignor to himself and M. Plum, Newark, N. J. Envelop-manipulating mechanism. No. 1,106,470; Aug. 11; Gaz. vol. 205; p. 352.
Morrison, Lewis E., assignor to himself and M. Plum, Newark, N. J. Sheet-feeding device. No. 1,108,211; Aug. 25; Gaz. vol. 205; p. 1059.
Morrow, Robert C., Thetford Mines, Quebec, Canada. Rail-chair. No. 1,107,984; Aug. 18; Gaz. vol. 205; p. 931.
Morscher, Lawrence N., Lawrence, Kans., assignor to himself and I. Hill. Horse-power indicator and recorder. No. 1,107,234; Aug. 11; Gaz. vol. 205; p. 619.
Morse, O. B. (See Drawbaugh, Harman K., assignor.)
Mortensen, Martin. (See Ohlsen, Ulrich, assignor.)
Morton, Frank M., Phoenix, Ala., assignor of one-third to W. H. Dismuke and one-third to H. L. Woodruff, Columbus, Ga. Beam dyeing-machine. No. 1,107,095; Aug. 11; Gaz. vol. 205; p. 568.
Moseley, Alexander W., Evanston, Ill. Traveling rule. No. 1,107,340; Aug. 18; Gaz. vol. 205; p. 705.
Moseley, Peter B. (See Williamson, Newton H., assignor.)
Moses, Leslie W., Baltimore, Md. Presser-foot. No. 1,105,819; Aug. 4; Gaz. vol. 205; p. 81.
Moskowitz, Morris, New York, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Selenium-cell regulator. No. 1,107,438; Aug. 18; Gaz. vol. 205; p. 741.
Moskowitz, Samuel, New York, N. Y. Display-box. No. 1,107,985; Aug. 18; Gaz. vol. 205; p. 931.
Mosler Safe Company, The. (See Bartels, Carl, assignor.)
Moss, Sanford A., Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,105,820; Aug. 4; Gaz. vol. 205; p. 82.
Mott, Elliot B. (See France, Robert N., assignor.)
Mouromoff, Serge J., St. Petersburg, Russia. Gage-cock for use on steam-boilers. No. 1,106,105; Aug. 4; Gaz. vol. 205; p. 183.
Mower, Fred G., assignor to Goodell Company, Antrim, N. H. Fruit and vegetable slicer. No. 1,107,695; Aug. 18; Gaz. vol. 205; p. 832.
Mowry, Joseph B., Cleveland, Ohio. Water-heater. No. 1,108,607; Aug. 25; Gaz. vol. 205; p. 1196.
Mueller, August E., Los Angeles, Cal. Combination aeroplane and dirigible balloon. No. 1,106,350; Aug. 4; Gaz. vol. 205; p. 263.
Mueller, Frank, Allentown, Pa., assignor to International Motor Company, Wilmington, Del. Automobile post-hole digger. No. 1,108,102; Aug. 18; Gaz. vol. 205; p. 973.
Mueller, George H., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Car-dumping apparatus. No. 1,108,465; Aug. 25; Gaz. vol. 205; p. 1146.
Mueller, Russell, Glencoe, Mo. Door-hanger. No. 1,106,233; Aug. 4; Gaz. vol. 205; p. 224.
Mugdan, Martin. (See Baum and Mugdan.)
Muggley, Henry H., San Francisco, Cal. Differential car-wheel. No. 1,108,867; Aug. 25; Gaz. vol. 205; p. 1286.
Mühl, Ernst, Philadelphia, Pa., assignor of one-half to O. Donatz, Trenton, N. J. Turbine. No. 1,105,992; Aug. 4; Gaz. vol. 205; p. 142.
Müller, Arno, Leipzig-Schleussig, and C. Bomhard, Berlin, Germany. Apparatus for purifying gases. No. 1,107,986; Aug. 18; Gaz. vol. 205; p. 931.
Müller, Carl, and O. Pilz, Boston, Mass. Elastic strap. No. 1,106,959; Aug. 11; Gaz. vol. 205; p. 525.
Mulliken, Samuel P., Newburyport, Mass., and H. K. Moore, Berlin, N. H.; said Mulliken assignor to said Moore. Manufacturing ethane. No. 1,107,696; Aug. 18; Gaz. vol. 205; p. 832.
Mullins, Henry W., New Decatur, Ala. Bridle-bit. No. 1,107,223; Aug. 11; Gaz. vol. 205; p. 616.
Mullins, William H., Salem, Ohio. Automobile mud-guard. No. 1,107,826; Aug. 18; Gaz. vol. 205; p. 877.
Mulloy, Martin, Sr., Nashville, Tenn. Catch-basin for sewers. No. 1,107,096; Aug. 11; Gaz. vol. 205; p. 568.
Mullvain, Earnest E., Los Angeles, Cal. Signal system. No. 1,107,697; Aug. 18; Gaz. vol. 205; p. 832.
Multi-Lux Illuminating Company, The. (See Smith, Eamond M., assignor.)
Mumford, Edgar H., Plainfield, N. J. Jolt ramming-machine. No. 1,105,821; Aug. 4; Gaz. vol. 205; p. 82.
Mumford, Edgar H., Plainfield, N. J. Liquid seal for jolt ramming-machines. No. 1,106,671; Aug. 11; Gaz. vol. 205; p. 424.
Mumford, Gurdon S., Garden City, N. Y. Concrete wall construction. No. 1,107,200; Aug. 11; Gaz. vol. 205; p. 607.
Munson, Henry, Great Falls, Mont., and B. Hazeltine, Center Point, Iowa. Wrench. No. 1,106,672; Aug. 11; Gaz. vol. 205; p. 424.
Munson, Homer S., Redlands, Cal. Sprayer. No. 1,105,993; Aug. 4; Gaz. vol. 205; p. 142.
Munz, Victor E. (See Szekfu, Stephen, assignor.)
Murphy, George F., New York, N. Y. Vehicle-seat. No. 1,105,822; Aug. 4; Gaz. vol. 205; p. 82.
Murphy Iron Works. (See Stewart, Burt C., assignor.)
Murphy, Swan A. (See Kelley and Murphy.)
Murray, John, Edinburgh, Scotland. Multicolor-printing machinery. No. 1,106,313; Aug. 4; Gaz. vol. 205; p. 251.
Musgrove, Roy M., and F. R. Howard, Salt Lake City, Utah. Grease-cup. No. 1,106,153; Aug. 4; Gaz. vol. 205; p. 199.
Myers, David M., Chaseley, assignor to Myers Manufacturing Company, Fargo, N. D. Hay and grain loader. No. 1,105,916; Aug. 4; Gaz. vol. 205; p. 115.
Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Motor-vehicle gear-shifter. No. 1,107,827; Aug. 18; Gaz. vol. 205; p. 877.
Myers Manufacturing Company. (See Myers, David M., assignor.)
Myers, Reuben J., Mount Joy, Pa. Gas sad-iron. No. 1,108,868; Aug. 25; Gaz. vol. 205; p. 1286.
Myers, William H., Mount Clinton, Va. Fruit-press charger. No. 1,106,234; Aug. 4; Gaz. vol. 205; p. 225.
Nadrowski, Edmond, Newark, N. J. Churn. No. 1,107,828; Aug. 18; Gaz. vol. 205; p. 878.
Nagy, Lajos. (See Balogh and Nagy.)
Napier, Peter. (See Fidler and Napier.)
Nash, H. C. (See O'Connor, Charles B., assignor.)
Nash, John A., Butler, Pa. Switch-locking device. No. 1,106,154; Aug. 4; Gaz. vol. 205; p. 199.
Nash, Thomas J., Lincoln, Nebr. Griddle. No. 1,107,987; Aug. 18; Gaz. vol. 205; p. 932.
Nashua Card Gummed & Coated Paper Company. (See Phillips, William H., assignor.)
Nasinec, John G., (now by judicial change of name John G. Nasin,) St. Paul, Minn. Ejector. No. 1,108,104; Aug. 18; Gaz. vol. 205; p. 974.
Nassie, Fred A., *et al.* (See Smith, Stephen P., assignor.)
National Briquetting and Clay Working Machinery Company, The. (See Fernholtz, Emil, assignor.)
National Cash Register Company, The. (See Carroll, Thomas, assignor.)

National Cash Register Co., The. (See Kettering, Charles F., assignor.)
National Cash Register Company, The. (See Leidigh, John J., assignor.)
National Dump Car Company. (See Caswell, William A., assignor.)
National Enameling and Stamping Company. (See Schwartzburg, Edward H., assignor.)
National Fire Proofing Company. (See Sylvester, Louis F., assignor.)
National Piano Company. (See Watson, William A., assignor.)
National Sewing Machine Company. (See Smith, Albert D., assignor.)
National Steam Car Company, The. (See Clarkson and Morison, assignors.)
National Steel Tie Company. (See Hyle and Herman, assignors.)
National Supply Company, The. (See Wright, Clyde S., assignor.)
National Tube Company, The. (See Pinkham, Frank L., assignor.)
Neal, W. R. (See McFarland, Charles M., assignor.)
Near-Side Car Company, The. (See Senter, Ralph T., assignor.)
Neckerman, William M., assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio. Apparatus for making lapweld-pipes. No. 1,106,577; Aug. 11; Gaz. vol. 205; p. 391.
Nedoma, Charles L., assignor of one-half to J. H. Fletcher, San Francisco, Cal. Economizing fuel and preventing carbon deposits in explosive-engines. No. 1,108,608; Aug. 25; Gaz. vol. 205; p. 1197.
Neff, Charles A. (See Neff, John G. and C. A.)
Neff, John G. and C. A., Davey, Nebr. Ringer and secret-service device. No. 1,108,847; Aug. 25; Gaz. vol. 205; p. 1278.
Nelson, Axel. (See Clarin, Werner E., assignor.)
Nelson, Clarence R., Yonkers, N. Y. Heater for automobiles and the like. No. 1,108,466; Aug. 25; Gaz. vol. 205; p. 1147.
Nelson, Emil A., assignor to Hupp Motor Car Company, Detroit, Mich. Starting-crank. No. 1,108,212; Aug. 25; Gaz. vol. 205; p. 1059.
Nelson, Nels G., Rockford, Ill., assignor of one-half to J. G. Anderson. Marble-shooter. No. 1,106,830; Aug. 11; Gaz. vol. 205; p. 479.
Nelson, Robert, San Jose, Cal. Engine-starter. No. 1,108,609; Aug. 25; Gaz. vol. 205; p. 1197.
Nernst Lamp Company. (See Nernst, Walther, assignor.)
Nernst, Walther, Göttingen, Germany, assignor to Nernst Lamp Company. Electric glow-lamp. No. 1,106,960; Aug. 11; Gaz. vol. 205; p. 525.
Nernst, Walther, Göttingen, Germany, assignor to Nernst Lamp Company, Pittsburgh, Pa. Electric glow-lamp. No. 1,106,961; Aug. 11; Gaz. vol. 205; p. 525.
Neuman, Maurice, Chicago, Ill. Tobacco-pipe. No. 1,107,988; Aug. 18; Gaz. vol. 205; p. 932.
Neumann, Theodore L., assignor to The Dayton Paper Novelty Company, Dayton, Ohio. Paper box. No. 1,106,831; Aug. 11; Gaz. vol. 205; p. 479.
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Jersey Patent Company. (See Durand, Nelson C., assignor.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New York Revolving Portable Elevator Company. (See Boebck, William E., assignor.)
Newberry, Spencer B., and H. N. Barrett, Baybridge, Ohio. Making barium hydrate. No. 1,106,578; Aug. 11; Gaz. vol. 205; p. 391.
Newcomb, David L., assignor of one-half to J. Lawrence, San Diego, Cal. Roundabout for playgrounds. No. 1,108,080; Aug. 18; Gaz. vol. 205; p. 965.
Newcomb, Everett H., Ephrata, Pa. Garment-taping machine. No. 1,107,097; Aug. 11; Gaz. vol. 205; p. 569.
Newell, Henry G., Le Raysville, Pa. Game-board. No. 1,106,052; Aug. 4; Gaz. vol. 205; p. 163.
Newerf, Nicholas C., Buffalo, N. Y. Concrete building construction. No. 1,105,682; Aug. 4; Gaz. vol. 205; p. 33.
Newhouse, Alphonse. (See Roland, Arthur M., assignor.)
Newkirk, William P., assignor of one-fourth to W. D. Isgrig and one-fourth to C. L. Crooks, Pueblo, Colo. Portable derailing device. No. 1,106,155; Aug. 4; Gaz. vol. 205; p. 199.
Newman, Samuel S. (See Wagner, Michael, assignor.)
Newman, Samuel S. (See Wincrantz, John S., assignor.)
Newsom, James A., Yazoo City, Miss. Insect-catcher. No. 1,106,673; Aug. 11; Gaz. vol. 205; p. 424.
Newton, James H., Sydney, New South Wales, Australia. Railway vehicle and track adaptable to change of gage. No. 1,108,467; Aug. 25; Gaz. vol. 205; p. 1147.
Niagara Machine & Tool Works. (See Lange and Weigel, assignors.)
Nibbe, George W. (See Smith and Nibbe.)
Nicholaus, Herman C., assignor of one-half to F. H. Rateick and one-half to W. J. Looman, Detroit, Mich. Timing mechanism. No. 1,107,176; Aug. 11; Gaz. vol. 205; p. 599.
Nichols, Charles C., and W. H. Wright, assignors to Nichols & Wright Motor Co., Buffalo, N. Y. Internal-combustion engine. No. 1,107,232; Aug. 11; Gaz. vol. 205; p. 619.
Nichols, Charles H., Haverhill, assignor, by mesne assignments, to Automatic Accounting Company, Boston, Mass. Apparatus for cost system. No. 1,105,994; Aug. 4; Gaz. vol. 205; p. 142.
Nichols, Charles H., Haverhill, assignor to Automatic Accounting Company, Boston, Mass. Factory tag or ticket making apparatus. No. 1,105,995; Aug. 4; Gaz. vol. 205; p. 143.
Nichols, Louis C., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Connector. No. 1,106,053; Aug. 4; Gaz. vol. 205; p. 164.
Nichols, Stanley D., Roxbury, Vt. Nursing-bottle. No. 1,108,778; Aug. 25; Gaz. vol. 205; p. 1253.
Nichols & Wright Motor Co. (See Nichols and Wright, assignors.)
Nicholson, Lloyd C., Buffalo, N. Y. Automatic switch arrangement. No. 1,105,823; Aug. 4; Gaz. vol. 205; p. 83.
Nielsen, Alfred H., Minneapolis, Minn. Egg-turning device for incubators. No. 1,107,201; Aug. 11; Gaz. vol. 205; p. 608.
Nightingale Company, The. (See Ricketts, James B., assignor.)
Nippert, John W., New Brighton, Pa. Spring-wheel. No. 1,107,439; Aug. 18; Gaz. vol. 205; p. 741.
Nitrogen Products Company. (See Bucher, John E., assignor.)
Nixon, Thomas C., Chicago, Ill. Mechanism for reducing grain to filamentous form. No. 1,106,962; Aug. 11; Gaz. vol. 205; p. 526.
Nobel's Explosives Company. (See Jaques and Wells, assignors.)
Noble, Ralph E., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Set-screw. No. 1,107,177; Aug. 11; Gaz. vol. 205; p. 600.
Noble, Ralph E., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Brake for cars or locomotives. No. 1,107,178; Aug. 11; Gaz. vol. 205; p. 600.
Noblett, Robert, Audenshaw, near Manchester, England. Apparatus for stretching hides, skins, and the like. No. 1,105,824; Aug. 4; Gaz. vol. 205; p. 83.
Noiseless Typewriter Company, The. (See Blair, Robert S., assignor.)
Norberg, Oscar W., Alamosa, Colo. Pneumatic tool. No. 1,107,179; Aug. 11; Gaz. vol. 205; p. 600.
Nordeen, Herman G., Everett, Wash. Weighing-scale. No. 1,108,610; Aug. 25; Gaz. vol. 205; p. 1198.
Norling, Reinhold A. (See Levedahl and Norling.)
Norling, Reinhold A., assignor to Aurora Automatic Machinery Company, Aurora, Ill. Pneumatic turbine-drill. No. 1,105,825; Aug. 4; Gaz. vol. 205; p. 83.
North East Electric Company. (See Halbleib, Edward A., assignor.)
North & Judd Manufacturing Company. (See Schoellkopf, Jacob F., assignor.)
Northern Insulating Company. (See Ellis, George H., assignor.)
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Surface-grinding machine. No. 1,108,779; Aug. 25; Gaz. vol. 205; p. 1253.
Norton, Edwin, New York, N. Y. Making metal sheets. No. 1,108,213; Aug. 25; Gaz. vol. 205; p. 1059.
Norton Grinding Company. (See Norton, Charles H., assignor.)
Norton, Ralph A., Newcastle-upon-Tyne, England. Vault-cover. No. 1,105,826; Aug. 4; Gaz. vol. 205; p. 84.
Norton, Raymond P., Marshalltown, Iowa. Carbureter. No. 1,107,698; Aug. 18; Gaz. vol. 205; p. 833.
Norton, Reuben W., Hastings, Nebr. Endless conveyer. No. 1,108,386; Aug. 25; Gaz. vol. 205; p. 1120.
Norton, Richard J., Washington, D. C. Adjuster for flexible pendants. No. 1,108,468; Aug. 25; Gaz. vol. 205; p. 1147.
Norton, Samuel T. (See Norton, Simon, assignor.)
Norton, Simon, assignor to S. T. Norton, Los Angeles, Cal. Desk-clamp. No. 1,107,543; Aug. 18; Gaz. vol. 205; p. 776.
Notman, Clarence A., Alliance, Ohio. Stove. No. 1,105,683; Aug. 4; Gaz. vol. 205; p. 33.
Notwal Company, The. (See Lawton, John, assignor.)
Nuttall, Daniel E., Emsworth, Pa. Weed-puller. No. 1,105,684; Aug. 4; Gaz. vol. 205; p. 34.
Nutting, Lucius R., Seattle, Wash. Vehicle-wheel. No. 1,106,963; Aug. 11; Gaz. vol. 205; p. 526.
Nystrom, Charles, New York, N. Y. Grass-trimmer. No. 1,108,611; Aug. 25; Gaz. vol. 205; p. 1198.
O. M. Draper Co., The. (See Billington and Gibbs, assignors.)
O'Brien, Henry D., Forsyth, Mont. Truss. No. 1,106,314; Aug. 4; Gaz. vol. 205; p. 251.
O'Brien, John F., and G. F. Bowdle, assignors of one-half to C. H. F. Schutte, Piqua, Ohio. Box-topping machine. No. 1,106,727; Aug. 11; Gaz. vol. 205; p. 443.
O'Connor, Charles B., assignor of one-half to H. C. Nash, Portsmouth, Va. Stanchion for hand-rails. No. 1,105,685; Aug. 4; Gaz. vol. 205; p. 34.
O'Donnell, Dominick, New York, N. Y. Adjustment device. No. 1,107,699; Aug. 18; Gaz. vol. 205; p. 833.
O'Kelly, William L., Long Beach, Cal. Composition of matter for waterproofing porous surfaces. No. 1,107,545; Aug. 18; Gaz. vol. 205; p. 777.
O'Loughlin, Allan, St. Paul, Minn. Hot-air furnace. No. 1,108,388; Aug. 25; Gaz. vol. 205; p. 1120.
O'Neil, William F., Kansas City, Mo. Tire-boot. No. 1,108,389; Aug. 25; Gaz. vol. 205; p. 1121.

Obenauer, Charles, Binghamton, N. Y. Shipping-crate for eggs. No. 1,106,235; Aug. 4; Gaz. vol. 205; p. 225.

Obrador, Antonio L., Manila, Philippine Islands. Continuous distilling apparatus. No. 1,106,832; Aug. 11; Gaz. vol. 205; p. 480.

Oclappo, Victor, *et al.* (See Bonali, Frank, assignor.)

Ocumpaugh, Edmund, 2d, Rochester, N. Y. Printing-machine. No. 1,107,829; Aug. 18; Gaz. vol. 205; p. 878.

Odell, Albert P., deceased, Lima, Ohio. H. E. Odell, administratrix. Storage-case. No. 1,106,236; Aug. 4; Gaz. vol. 205; p. 225.

Odell, Helen E., administratrix. (See Odell, Albert P.)

Odelstierna, Erik E., son. (See Anderson and Odelstierna.)

Oefele, Felix von, assignor of one-half to H. Schweitzer, New York, N. Y. Alloy of vanadium and precious metals. No. 1,107,180; Aug. 11; Gaz. vol. 205; p. 601.

Oefele, Felix von, assignor of one-half to H. Schweitzer, New York, N. Y. Vanadium-gold alloy. No. 1,107,181; Aug. 11; Gaz. vol. 205; p. 601.

Oesterle, William F., Jr., C. A. Beale, and J. McFetridge, Vandergrift, assignors to American Sheet and Tin Plate Company, Pittsburgh, Pa. Utilizing waste ferrous liquors. No. 1,108,387; Aug. 25; Gaz. vol. 205; p. 1120.

Oestreich, Norman, assignor of one-half to A. Schulte, Plymouth, Wis. Cheese-follower. No. 1,107,989; Aug. 18; Gaz. vol. 205; p. 933.

Ogden, Ferris, assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Lubricating system for rotary mills. No. 1,107,830; Aug. 18; Gaz. vol. 205; p. 878.

Ogden, John E., Brooklyn, N. Y. Wall-socket. No. 1,107,544; Aug. 18; Gaz. vol. 205; p. 777.

Ogg, Harry L., Newton, Iowa. Speed-regulator. No. 1,106,156; Aug. 4; Gaz. vol. 205; p. 200.

Ogg, James, Pahala, Hawaii. Center-finder. No. 1,105,917; Aug. 4; Gaz. vol. 205; p. 115.

Ogg, James, Pahala, Hawaii. Feed-roller mechanism for sugar-mills. No. 1,108,780; Aug. 25; Gaz. vol. 205; p. 1254.

Ohio Cultivator Company, The. (See Swanson, Starley S., assignor.)

Ohio Match Company, The. (See Haller, Adam J., assignor.)

Ohlsen, Ulrich, assignor of one-half to M. Mortensen, Denver, Colo. Flooring-pincers. No. 1,106,399; Aug. 11; Gaz. vol. 205; p. 324.

Okubo, Kumajiro, Denver, Colo. Clothes brush and hanger. No. 1,108,848; Aug. 25; Gaz. vol. 205; p. 1279.

Oldfield, Richard J., Phoebus, Va. Swing. No. 1,107,341; Aug. 18; Gaz. vol. 205; p. 705.

Olds, Ransom E., Lansing, Mich. Tractor. No. 1,105,686; Aug. 4; Gaz. vol. 205; p. 35.

Oliver, Fred S., San Francisco, Cal. Carbureting apparatus. No. 1,108,081; Aug. 18; Gaz. vol. 205; p. 965.

Oliver, Frederick E., Bath, Me. Carboy-nose protector. No. 1,108,214; Aug. 25; Gaz. vol. 205; p. 1060.

Olsen, Frank W., San Francisco, Cal. Disappearing bed. No. 1,108,215; Aug. 25; Gaz. vol. 205; p. 1060.

Olsen, George E., Laconia, N. H. Machine for refining used gasolene or naphtha. No. 1,106,887; Aug. 11; Gaz. vol. 205; p. 499.

Olson, Adolph W., McIntosh, Minn. Vehicle. No. 1,108,216; Aug. 25; Gaz. vol. 205; p. 1060.

Olson, Charles O., assignor to The A. H. Andrews Co., Chicago, Ill. Seat-hinge. No. 1,107,440; Aug. 18; Gaz. vol. 205; p. 742.

Olson, John J., trustee. (See Peterson, James, assignor.)

Olson, Maurithz W., Galesburg, Ill. Vulcanizer. No. 1,107,441; Aug. 18; Gaz. vol. 205; p. 742.

Onion, Emory O., Summum, and C. D. Snively, Iuava, Ill. Fracture and extension apparatus. No. 1,108,469; Aug. 25; Gaz. vol. 205; p. 1148.

Opelt, Frank, Muscatine, Iowa. Scaffolding-support. No. 1,107,698; Aug. 11; Gaz. vol. 205; p. 569.

Opsal, Andrew, Vancouver, British Columbia, Canada. Wire-rope-transmission carriage. No. 1,106,471; Aug. 11; Gaz. vol. 205; p. 352.

Optische Anstalt C. P. Goerz Aktiengesellschaft. (See Jacob, Heinrich, assignor.)

Optische Anstalt C. P. Goerz Aktiengesellschaft. (See Zschokke, Walther, assignor.)

Orblk, John, Hurley, Wis. Railway-switch. No. 1,105,996; Aug. 4; Gaz. vol. 205; p. 143.

Ord, Lewis C., assignor to Canadian Gold Car Heating & Lighting Company, Limited, Montreal, Quebec, Canada. Means for regulating steam-heating systems. No. 1,108,218; Aug. 25; Gaz. vol. 205; p. 1061.

Ordnance Development Company. (See Davis, Cleland, assignor.)

Orenstein-Arthur Koppel Co. (See Hansen, Karl H., assignor.)

Orme, Harry A., Wesley Heights, D. C. Front wheel for aeroplanes. No. 1,106,519; Aug. 11; Gaz. vol. 205; p. 370.

Orr, Mark P., Indianapolis, Ind. Sterilizing apparatus. No. 1,106,579; Aug. 11; Gaz. vol. 205; p. 392.

Ortengren, Alfred, Brooklyn, N. Y. Vehicle-wheel. No. 1,108,219; Aug. 25; Gaz. vol. 205; p. 1061.

Osswald, Herman, Brooklyn, assignor, by mesne assignments, to Locke Steel Chain Company, Great River, N. Y. Apparatus for making chain. No. 1,107,831; Aug. 18; Gaz. vol. 205; p. 879.

Ostman, Joseph O., Hancock, Mich. Umbrella. No. 1,108,217; Aug. 25; Gaz. vol. 205; p. 1061.

Ostrander Seymour Company, The. (See Gibbon, Robert J., assignor.)

Ostromislensky, Iwan, Moscow, Russia. Manufacturing erythrene hydrocarbons. No. 1,108,781; Aug. 25; Gaz. vol. 205; p. 1254.

Ott, Frederick, Conshohocken, Pa. Loose reed-motion for looms. No. 1,107,546; Aug. 18; Gaz. vol. 205; p. 777.

Ottaway, William, Aurora, assignor to Aurora Automatic Machinery Company, Chicago, Ill. Carbureter. No. 1,105,687; Aug. 4; Gaz. vol. 205; p. 35.

Otto, Louis H., Cedar Mills, Minn. Brake for phonographs. No. 1,106,237; Aug. 4; Gaz. vol. 205; p. 225.

Owen, Carrie E. (See McNutt, William H., assignor.)

Owen, Lake E. (See Van Epp, Paul N., assignor.)

Owens, George W., St. Louis, Mo. Packing-ring. No. 1,106,054; Aug. 4; Gaz. vol. 205; p. 164.

Ownbey, Marion K., Shawnee, Okla. Rotary electric switch. No. 1,107,099; Aug. 11; Gaz. vol. 205; p. 569.

Oxweld Acetylene Company. (See Haedike and Braden, assignors.)

Package Machinery Company. (See Merrell and Blackburn, assignors.)

Packard Motor Car Company. (See Cowles, Edward P., assignor.)

Packard Motor Car Company. (See Link, Vincent, assignor.)

Packard Motor Car Company. (See Loomis, Allen, assignor.)

Packard Motor Car Company. (See Roberts, Edward F., assignor.)

Packham, Frank R., assignor to The American Seeding Machine Company, Springfield, Ohio. Disk furrow-opener. No. 1,107,442; Aug. 18; Gaz. vol. 205; p. 742.

Paffrath, Theodor H., Butler, Pa., assignor to J. W. Carnahan, Washington, D. C., and A. P. Starr, Butler, Pa., trustees. Gas-producer. No. 1,105,688; Aug. 4; Gaz. vol. 205; p. 35.

Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Padlock. No. 1,106,400; Aug. 11; Gaz. vol. 205; p. 325.

Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Saw-vise. No. 1,106,401; Aug. 11; Gaz. vol. 205; p. 325.

Page Woven Wire Fence Company. (See Cornell, Evan W., assignor.)

Pahler, Martin A., New York, N. Y. Signal-cord bushing. No. 1,106,964; Aug. 11; Gaz. vol. 205; p. 526.

Painter, William A., assignor of one-half to P. H. Bergin, Pittsburgh, Pa. Buffing or polishing wheel. No. 1,106,833; Aug. 11; Gaz. vol. 205; p. 480.

Painting Machine Company. (See Leatherbee, Clifton F., assignor.)

Paladino, Pasquale, *et al.* (See Bonali, Frank, assignor.)

Palls, Alexander, Spandau, Germany. Motor-car protection device. No. 1,107,832; Aug. 18; Gaz. vol. 205; p. 879.

Palmer, Clinton D., assignor to Sears, Roebuck and Co., Chicago, Ill. Paper-positioning device for type-writers. No. 1,108,612; Aug. 25; Gaz. vol. 205; p. 1198.

Palmer, Gustavus L., Tacoma, Wash. Fish-slimer. No. 1,107,100; Aug. 11; Gaz. vol. 205; p. 570.

Palmer, Harold N., Jackson, assignor of one-half to R. C. Enos, Grand Rapids, Mich. Tank-indicator. No. 1,106,106; Aug. 4; Gaz. vol. 205; p. 183.

Palmer, Harvey D., and B. C. Sanderson, Topeka, Kans. Blowpipe. No. 1,106,965; Aug. 11; Gaz. vol. 205; p. 527.

Pamer, George, Dayton, Ohio. Motor-cycle. No. 1,107,990; Aug. 18; Gaz. vol. 205; p. 933.

Pancoast, George E., Brooklyn, N. Y., assignor to American Lithographic Company. Printing mechanism. No. 1,106,472; Aug. 11; Gaz. vol. 205; p. 352.

Pancoast, George E., Brooklyn, N. Y., assignor to American Lithographic Company. Embossing-press. No. 1,106,473; Aug. 11; Gaz. vol. 205; p. 353.

Pancoast, George E., Brooklyn, N. Y., assignor to American Lithographic Company. Sheet feeding and registering mechanism for printing-presses. No. 1,108,220; Aug. 25; Gaz. vol. 205; p. 1062.

Papadopoulos, Theodore C., Dayton, Ohio. Resilient tire. No. 1,106,238; Aug. 4; Gaz. vol. 205; p. 226.

Papal, Coloman, and J. Petri, Elberta, Ala. Vehicle brake appliance. No. 1,106,834; Aug. 11; Gaz. vol. 205; p. 480.

Paramount Knitting Company. (See Rieck and Randall, assignors.)

Paris, Cheaney L., and Fred C. Ferrell, Harrisburg, Ill. Traction attachment for automobiles. No. 1,108,221; Aug. 25; Gaz. vol. 205; p. 1062.

Parish, Ralph R., assignor to Chase Rolling Mill Co., Waterbury, Conn. Pickling brass. No. 1,106,107; Aug. 4; Gaz. vol. 205; p. 184.

Park, Richard T., Albert Park, Melbourne, Victoria, Australia. Machine for extracting the juice and pulp from lemons and the like. No. 1,107,991; Aug. 18; Gaz. vol. 205; p. 933.

Parker, Charles W., Kansas City, Mo. Jack for automobiles. No. 1,107,833; Aug. 18; Gaz. vol. 205; p. 879.

Parker, Edward K., Santa Barbara, Cal. Electric pneumatic pressure control. No. 1,108,470; Aug. 25; Gaz. vol. 205; p. 1148.

Parker, Elmer B. (See Pollard, Charles P., assignor.)

Parker, Frederic, Bedford, Mass. Window-shield. No. 1,108,613; Aug. 25; Gaz. vol. 205; p. 1199.

Parker, Frederick R., Chicago, Ill. Safety-valve. No. 1,106,108; Aug. 4; Gaz. vol. 205; p. 184.

Parker, Henry E. (See Thornton and Parker.)

Parker, Howard. (See Sherman, John C., assignor.)

Parker, Thomas R. G. (See Pearce, Parker, and Wright.)

Parker, William M., *et al.*, executors. (See Waltz, John W.)

Parkin, James. (See Field, William, assignor.)

Parks, Harry T., Cuyahoga Falls, Ohio. Combined rail chair and joint. No. 1,106,157; Aug. 4; Gaz. vol. 205; p. 200.

Parrish, John E., Richmond, Va. Broadcasting mechanism. No. 1,107,992; Aug. 18; Gaz. vol. 205; p. 934.

Parsons, Charles A., Newcastle-upon-Tyne, England. Propeller. No. 1,107,101; Aug. 11; Gaz. vol. 205; p. 570.

Parsons, James L., Jr. (See Corby and Parsons.)

Parsons, Percy R., London, and O. Silberrad, Buckhurst Hill, England. Alloy. No. 1,106,055; Aug. 4; Gaz. vol. 205; p. 164.

Partridge, William, Salem, Ohio. Guide for molding-flasks. No. 1,106,674; Aug. 11; Gaz. vol. 205; p. 425.

Pass, Arthur, Letchworth, England. Tire-tool. No. 1,106,888; Aug. 11; Gaz. vol. 205; p. 499.

Pastaleniec, Joe A., New Kensington, Pa. Combined step-ladder and ironing-board. No. 1,107,443; Aug. 18; Gaz. vol. 205; p. 742.

Pate, Henry D., Abbott, Tex. Horse-collar. No. 1,107,993; Aug. 18; Gaz. vol. 205; p. 934.

Pate, Lolley T., Jr., Norphlet, Ark. Hay-press. No. 1,106,580; Aug. 11; Gaz. vol. 205; p. 392.

Patent Rapid Scaffold Tie Company Limited, The. (See Jones, Daniel P., assignor.)

Patric, Charles E., Springfield, Ohio. Planting-machine. No. 1,105,997; Aug. 4; Gaz. vol. 205; p. 144.

Patrick, Roy E., Clayton, N. Y. High chair. No. 1,107,994; Aug. 18; Gaz. vol. 205; p. 935.

Patterson, Franklin M., Bayonne, N. J. Screw-jack. No. 1,106,835; Aug. 11; Gaz. vol. 205; p. 481.

Patterson, Franklin M., Philadelphia, Pa. Valve. No. 1,107,342; Aug. 18; Gaz. vol. 205; p. 705.

Patterson, Jenettie, Edmonton, Alberta, Canada. Traveling-wagon. No. 1,108,614; Aug. 25; Gaz. vol. 205; p. 1199.

Paull, Carl, Roselle Park, N. J., assignor to N. H. Steward, Philadelphia, Pa. Drill. No. 1,106,966; Aug. 11; Gaz. vol. 205; p. 527.

Paul, Peter, Boulder, Colo. Folding crate. No. 1,108,615; Aug. 25; Gaz. vol. 205; p. 1199.

Paulson, Robert L., Brooklyn, N. Y. Smoke-uptake. No. 1,108,222; Aug. 25; Gaz. vol. 205; p. 1062.

Payne, Fred S., Boston, Mass., assignor, by mesne assignments, to Elevator Supply & Repair Company, Chicago, Ill. Electric signaling device for elevators. No. 1,108,782; Aug. 25; Gaz. vol. 205; p. 1254.

Payne, John W. (See Payne, Raymond P. and J. W.)

Payne, Raymond P. and J. W., Leeds, England. Rotary lithographic-printing machine. No. 1,109,223; Aug. 25; Gaz. vol. 205; p. 1063.

Payne, William J. (See Graham, George E., assignor.)

Payne, William J., Candor, N. Y. Purse-mirror. No. 1,106,315; Aug. 4; Gaz. vol. 205; p. 252.

Peacock, Peter M., Columbus, Ohio. Flexible pipe connection. No. 1,105,689; Aug. 4; Gaz. vol. 205; p. 36.

Pearce, Herbert, T. R. G. Parker, and F. W. Wright, Broadheath, assignors to Linotype and Machinery Limited, London, England. Ink-fountain for printing-presses. No. 1,105,690; Aug. 4; Gaz. vol. 205; p. 36.

Pearce, Herbert, T. R. G. Parker, and F. W. Wright, Broadheath, assignors to Linotype and Machinery Limited, London, England. Trip mechanism of two-revolution printing-presses. No. 1,106,402; Aug. 11; Gaz. vol. 205; p. 325.

Pearce, Herbert, T. R. G. Parker, and F. W. Wright, Broadheath, assignors to Linotype and Machinery Limited, London, England. Trip mechanism of two-revolution printing-presses. No. 1,106,403; Aug. 11; Gaz. vol. 205; p. 326.

Pearsall, Albert W., Lowell, Mass., assignor to Lamson Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 1,107,547; Aug. 18; Gaz. vol. 205; p. 777.

Pearson & Co., Gesellschaft mit beschränkter Haftung. (See Wünsche, Helmuth H., assignor.)

Pearson, James, Broadheath, assignor to Linotype and Machinery Limited, London, England. Typographical distributing mechanism. No. 1,105,691; Aug. 4; Gaz. vol. 205; p. 36.

Pearson, James, Broadheath, assignor to Linotype and Machinery Limited, London, England. Typographical composing-machine. No. 1,105,692; Aug. 4; Gaz. vol. 205; p. 37.

Pearson, John, Chicago, Ill. Car-roof. No. 1,105,828; Aug. 4; Gaz. vol. 205; p. 85.

Pearson, John B., Tazewell, Tenn. Window. No. 1,107,102; Aug. 11; Gaz. vol. 205; p. 570.

Peaslee, Hugh D., Fresno, Cal. Carbureter. No. 1,107,103; Aug. 11; Gaz. vol. 205; p. 570.

Peck, Caid H., Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Fluid-operated drill and handle therefor. No. 1,105,998; Aug. 4; Gaz. vol. 205; p. 144.

Pedery, Joseph, assignor of one-fourth to A. E. Schoeller, Trenton, N. J. Automatic stop mechanism. No. 1,107,343; Aug. 18; Gaz. vol. 205; p. 706.

Péducasse, Bernard, Lyon, France. Automatic fender. No. 1,107,995; Aug. 18; Gaz. vol. 205; p. 935.

Peirce, Robert T., Newport News, Va. Door or gate latch. No. 1,108,783; Aug. 25; Gaz. vol. 205; p. 1255.

Pekat, Charles, assignor to Continental Foundry and Machine Company, East Gary, Ind. Bench-vise. No. 1,106,056; Aug. 4; Gaz. vol. 205; p. 164.

Pekkala, Alfred, Hibbing, Minn. Wrench. No. 1,107,996; Aug. 18; Gaz. vol. 205; p. 935.

Pelton, Charles H., assignor to The Thomas Manufacturing Company, Springfield, Ohio. Seed-drill. No. 1,107,344; Aug. 18; Gaz. vol. 205; p. 707.

Penberthy Injector Co. (See McClymont, Bryce W., assignor.)

Pennock, Lewis W., Los Angeles, Cal. Table-drawer. No. 1,108,082; Aug. 18; Gaz. vol. 205; p. 966.

Pennsylvania Salt Manufacturing Company. (See Hookey, Charles H. and S., assignors.)

Peppard, Mayme J., Minneapolis, Minn. Trunk. No. 1,106,581; Aug. 11; Gaz. vol. 205; p. 392.

Perfect Vacuum Can Company. (See Malmquist, Adolph K., assignor.)

Perfection Gas Regulator Company. (See Ricketts and Leahy, assignors.)

Perkins, Augustus T., Chicago, Ill. Conveyer-bucket. No. 1,106,404; Aug. 11; Gaz. vol. 205; p. 326.

Perkins, Hiram A., Rochester, N. Y. Chip-breaker for wood-planing machines. No. 1,107,182; Aug. 11; Gaz. vol. 205; p. 601.

Perkins, Walter H., assignor to J. B. Wise, Inc., Watertown, N. Y. Pipe-coupling. No. 1,106,967; Aug. 11; Gaz. vol. 205; p. 527.

Perlin, Abraham P., Chicago, Ill. Comb. No. 1,108,224; Aug. 25; Gaz. vol. 205; p. 1063.

Permutit-Aktiengesellschaft. (See Massatsch, Cornelius, assignor.)

Perognat, Pierre, Thiers, France. Machine for grinding rough-forged blades of knives and other cutting instruments. No. 1,107,997; Aug. 18; Gaz. vol. 205; p. 936.

Perrin, Thomas L., Brooklyn, N. Y. Sterilizing apparatus for surgical instruments. No. 1,107,834; Aug. 18; Gaz. vol. 205; p. 880.

Perrin, William H., New Liskeard, Ontario, Canada. Sheaf-shocker. No. 1,105,999; Aug. 4; Gaz. vol. 205; p. 145.

Perrine, Charles S., Flint, Ark. Planter. No. 1,107,224; Aug. 11; Gaz. vol. 205; p. 616.

Perry, Frederick H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Trimming-machine. No. 1,108,225; Aug. 25; Gaz. vol. 205; p. 1063.

Perry-Prentice Electric Company, The. (See Prentice, Frank W., assignor.)

Persoons, Alphonse. (See Persoons, Julien and A.)

Persoons, Julien and A., Childonck, near Louvain, Belgium. Yielding bearing. No. 1,107,998; Aug. 18; Gaz. vol. 205; p. 936.

Persson, Gottfrid, Lueders, Tex. Coverlet-holder. No. 1,106,474; Aug. 11; Gaz. vol. 205; p. 353.

Peter Gray & Sons. (See Briand, Charles C., assignor.)

Peter, Rudolph, San Jose, Cal. Orchard-heater. No. 1,108,471; Aug. 25; Gaz. vol. 205; p. 1148.

Petermöller, Joseph, Cathcart, Glasgow, Scotland. Rotary elastic-fluid pump. No. 1,107,999; Aug. 18; Gaz. vol. 205; p. 936.

Peterson, Axel. (See Dale, Charles O., assignor.)

Peterson, Burt A., assignor to Barber-Colman Company, Rockford, Ill. Bobbin cleaning and handling mechanism. No. 1,106,239; Aug. 4; Gaz. vol. 205; p. 226.

Peterson, Burt A., assignor to Barber-Colman Company, Rockford, Ill. Bobbin-handling apparatus. No. 1,108,097; Aug. 18; Gaz. vol. 205; p. 971.

Peterson, James, Price, assignor to J. J. Olson, trustee, Salt Lake City, Utah. Folding umbrella. No. 1,107,835; Aug. 18; Gaz. vol. 205; p. 880.

Peterson, Johann G., assignor to Manhattan Electrical Supply Company, Jersey City, N. J. Ratchet mechanism for electric switches. No. 1,108,516; Aug. 25; Gaz. vol. 205; p. 1165.

Peterson, Lars A., Stockholm, Sweden. Change-speed gearing. No. 1,108,784; Aug. 25; Gaz. vol. 205; p. 1255.

Petri, John. (See Papai and Petri.)

Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Slug-evener for line-casting machines. No. 1,108,390; Aug. 25; Gaz. vol. 205; p. 1121.

Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Bottom-trimming-knife wiper. No. 1,108,391; Aug. 25; Gaz. vol. 205; p. 1122.

Pettersson, Charles O., New York, N. Y. Nose-clip for eyeglasses. No. 1,108,226; Aug. 25; Gaz. vol. 205; p. 1064.

Pettibone, James. (See Welkert and Pettibone.)

Pettibone, James W., assignor to Mixer Machine Company, Muskegon, Mich. Screening apparatus. No. 1,108,616; Aug. 25; Gaz. vol. 205; p. 1200.

Pettingill, Walter C. M., Birmingham, England. Lamp. No. 1,108,227; Aug. 25; Gaz. vol. 205; p. 1064.

Pettis, Edson S., San Francisco, Cal. Process and apparatus for the extraction of pregnant cyanid solutions from pulp. No. 1,106,836; Aug. 11; Gaz. vol. 205; p. 481.

Peugh, William F., Aberdeen, Miss. Jack for raising automobiles and other vehicles. No. 1,108,000; Aug. 18; Gaz. vol. 205; p. 937.

Peyton, Isaac, Springfield, Ill. Nut-lock. No. 1,106,316; Aug. 4; Gaz. vol. 205; p. 252.

Pezzetti, Henry, assignor to American Road Appliance Corporation, Philadelphia, Pa. Dump-wagon. No. 1,106,675; Aug. 11; Gaz. vol. 205; p. 425.

Pfaehler, Herman G., New York, N. Y., and C. J. Marks, New Brunswick, N. J. Cooking utensil. No. 1,106,837; Aug. 11; Gaz. vol. 205; p. 482.

Pfeiffer, Louis N., Kenton, Ohio. Fence-wire splicing. No. 1,107,104; Aug. 11; Gaz. vol. 205; p. 571.

Pfordt, Charles C., Indiana, Pa. Brick-press. No. 1,106,838; Aug. 11; Gaz. vol. 205; p. 482.

Philadelphia Holding Company. (See Halsey, James T., assignor.)

Philadelphia Holding Company. (See Stevenson and Gibbs, assignors.)

Philadelphia Textile Machinery Company, The. (See Ayres, Elwood R., assignor.)

Phillips, Arthur P., Haverhill, assignor to Crosby Steam Gage & Valve Company, Boston, Mass. Pressure-weighing machine. No. 1,106,839; Aug. 11; Gaz. vol. 205; p. 482.

Phillips, Charles, Crocker, Mo. Animal-trap. No. 1,107,105; Aug. 11; Gaz. vol. 205; p. 571.

Phillips, Daniel E., Cleveland, Ohio. Treating old iron and steel pipe. No. 1,106,109; Aug. 4; Gaz. vol. 205; p. 184.

Phillips, George C., Bogalusa, La. Cotton-picking machine. No. 1,107,627; Aug. 18; Gaz. vol. 205; p. 807.

Phillips, John R., Poughkeepsie, N. Y. Invalid-bed. No. 1,108,617; Aug. 25; Gaz. vol. 205; p. 1200.

Phillips, William H., assignor to Nashua Card Gummed & Coated Paper Company, Nashua, N. H. Cutting and counting machine. No. 1,106,968; Aug. 11; Gaz. vol. 205; p. 528.

Phoenix Foundry and Machine Company, The. (See Swedenborg, Swan, assignor.)

Piché, Joseph, Steelton, Ontario, Canada. Hose-protector. No. 1,106,840; Aug. 11; Gaz. vol. 205; p. 483.

Pick, Hugo, Chicago, Ill. Drinking-glass. No. 1,107,700; Aug. 18; Gaz. vol. 205; p. 833.

Pickard, Joseph, Philadelphia, Pa. Heddle. No. 1,107,345; Aug. 18; Gaz. vol. 205; p. 707.

Picken, James H., Cambridge, Mass. Swimming device. No. 1,108,392; Aug. 25; Gaz. vol. 205; p. 1122.

Pickett, Ocren G., Jefferson City, Mo. Means employed in indexing systems. No. 1,106,158; Aug. 4; Gaz. vol. 205; p. 201.

Pickup, George E., assignor to The Wehrle Company, Newark, Ohio. Top-plate-lifting device. No. 1,108,228; Aug. 25; Gaz. vol. 205; p. 1064.

Pierce, Jesse C., Tacoma, Wash. Automatic stand-lifter for motor-cycles. No. 1,106,240; Aug. 4; Gaz. vol. 205; p. 226.

Pierce, Simeon F., St. Paul, Minn. Generating apparatus. No. 1,107,836; Aug. 18; Gaz. vol. 205; p. 881.

Pierman, Alexander N., Newark, N. J. Motion-picture-film carton. No. 1,106,676; Aug. 11; Gaz. vol. 205; p. 425.

Pierson, Robert M. (See Buffum, Herbert H., assignor.)

Pilston, John L., Wyandotte, Mich. Pipe-expanding machine. No. 1,108,618; Aug. 25; Gaz. vol. 205; p. 1201.

Pilz, Oscar. (See Müller and Pilz.)

Pinel, Adrien, Le Houlme, France. Manufacturing gum or mucilage from locust-beans. No. 1,106,335; Aug. 4; Gaz. vol. 205; p. 258.

Pines, Lewis V., Millersburg, Pa. Nut-lock. No. 1,107,106; Aug. 11; Gaz. vol. 205; p. 571.

Pinkham, Frank L., Wilkinsburg, assignor to The National Tube Company, Pittsburgh, Pa. Making welded pipes. No. 1,108,393; Aug. 25; Gaz. vol. 205; p. 1123.

Pinnick, Harry B. (See Shelton, Frank M., assignor.)

Pipes, Albert L., Sapulpa, Okla. Railway-switch point. No. 1,107,444; Aug. 18; Gaz. vol. 205; p. 743.

Pitt, William A., New York, N. Y. Reciprocating engine. No. 1,107,837; Aug. 18; Gaz. vol. 205; p. 881.

Plank, George P., Eugene, Oreg. Motor-cycle passenger-seat. No. 1,108,785; Aug. 25; Gaz. vol. 205; p. 1256.

Plant, Thomas G., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. No. 1,107,838; Aug. 18; Gaz. vol. 205; p. 882.

Plein, Grover, Racine, Wis. Spiral tool-driver. No. 1,107,701; Aug. 18; Gaz. vol. 205; p. 834.

Pleiss, Paul, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Welding-tip. No. 1,107,346; Aug. 18; Gaz. vol. 205; p. 707.

Plice, Thomas V., assignor to W. V. B. Topping, Ashland, Ohio. Barn-door hanger part. No. 1,105,918; Aug. 4; Gaz. vol. 205; p. 116.

Plice, Thomas V., assignor to W. V. B. Topping, Ashland, Ohio. Door-hanger. No. 1,105,919; Aug. 4; Gaz. vol. 205; p. 116.

Plocher, Martin, St. Louis, Mo. Sanitary cuspidor. No. 1,105,693; Aug. 4; Gaz. vol. 205; p. 37.

Plum, Matthias. (See Morrison, Lewis E., assignor.)

Plummer, Oscar D., G. H. Hausser, and E. A. Warner, Altoona, Pa. Electric signaling mechanism. No. 1,105,829; Aug. 4; Gaz. vol. 205; p. 85.

Poehlman, Henry E., assignor of one-half to J. W. Fricke, San Francisco, Cal. Toy. No. 1,107,183; Aug. 11; Gaz. vol. 205; p. 601.

Poeppel, Emil, Chicago, Ill. Bedpost-fastening. No. 1,106,677; Aug. 11; Gaz. vol. 205; p. 426.

Poindexter, William B., assignor of one-half to U. S. Jenkins, Chicago, Ill. Radiator vent-valve. No. 1,106,475; Aug. 11; Gaz. vol. 205; p. 354.

Poland, Sprigg, Olney, Ill. Rewinder. No. 1,108,619; Aug. 25; Gaz. vol. 205; p. 1201.

Pollak, Leopold, Aussig, Austria-Hungary, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Compound for tanning skins and process of making them. No. 1,107,107; Aug. 11; Gaz. vol. 205; p. 572.

Pollard, Charles P., Woburn, Mass., assignor of one-half to E. B. Parker, Wilton, N. H. Receptacle-carrier. No. 1,108,229; Aug. 25; Gaz. vol. 205; p. 1065.

Pomeroy, James W. (See Todd and Pomeroy.)

Poniatowski, Wladyslaw, Camden, N. J. Driving-gearing. No. 1,107,108; Aug. 11; Gaz. vol. 205; p. 572.

Poole, G. Denton, *et al.* (See Waddell, Edward B., Jr., assignor.)

Porteous, James, Fresno, Cal. Traction-wheel. No. 1,106,841; Aug. 11; Gaz. vol. 205; p. 483.

Porteous, James, Fresno, Cal. Traction-wheel. No. 1,106,842; Aug. 11; Gaz. vol. 205; p. 483.

Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Stem-winding and stem-setting watch. No. 1,107,839; Aug. 18; Gaz. vol. 205; p. 882.

Positive Supply Company. (See Coyner, Robert G., assignor.)

Possner, Albert W. (See Possner, Herman G. and A. W.)

Possner, Herman G. and A. W., Providence, R. I. Crank-handle holder for automobiles. No. 1,108,230; Aug. 25; Gaz. vol. 205; p. 1065.

Posson, Edward, Chicago, assignor to F. E. Posson, Park Ridge, Ill. Parcel-rack. No. 1,105,830; Aug. 4; Gaz. vol. 205; p. 86.

Posson, Fay E. (See Posson, Edward, assignor.)

Post, Claude L., Chicago, Ill. Water-heater. No. 1,107,548; Aug. 18; Gaz. vol. 205; p. 778.

Poths, Friedrich J., Hamburg, Germany. Bottle-closure. No. 1,105,831; Aug. 4; Gaz. vol. 205; p. 86.

Potter, Charles A., Oswego, N. Y. Course-finder and course-converter. No. 1,108,517; Aug. 25; Gaz. vol. 205; p. 1165.

Potter, Edwin W. (See Rhodes and Potter.)

Potts, Louis M., assignor, by mesne assignments, to A. McLanahan, Baltimore, Md. Telegraphy. No. 1,105,920; Aug. 4; Gaz. vol. 205; p. 116.

Potts, Louis M., assignor, by mesne assignments, to A. McLanahan, Baltimore, Md. Punching-machine. No. 1,105,921; Aug. 4; Gaz. vol. 205; p. 117.

Potts, Louis M., assignor, by mesne assignments, to A. McLanahan, Baltimore, Md. Telegraphy. No. 1,105,922; Aug. 4; Gaz. vol. 205; p. 117.

Potwin, William S. (See Desmond, John, assignor.)

Poucher, Charles C. and R. C., Aurora, Ill. Plant-replanter. No. 1,106,405; Aug. 11; Gaz. vol. 205; p. 327.

Poucher, Ralph C. (See Poucher, Charles C. and R. C.)

Powell, H. G., *et al.* (See Price, John D., assignor.)

Powell, William B. (See Ross, Clifton, assignor.)

Powers, Edward W., Waltham, Mass. Automatic clothes-line reel. No. 1,107,445; Aug. 18; Gaz. vol. 205; p. 743.

Powers, James, Newark, N. J. Sanitary drinking-cup. No. 1,107,347; Aug. 18; Gaz. vol. 205; p. 708.

Powers, James, New York, N. Y. Manufacturing sanitary drinking-cups. No. 1,107,348; Aug. 18; Gaz. vol. 205; p. 708.

Powers, Leonard D., Kenesaw, Nebr. Burial-vault. No. 1,106,889; Aug. 11; Gaz. vol. 205; p. 500.

Powers Photo Engraving Company. (See Ranck, John V., assignor.)

Powers, Thomas A., J. R. Harvey, and J. W. Crowley, Subiaco, Western Australia, Australia. Safety-cradle for dropping life-boats. No. 1,107,109; Aug. 11; Gaz. vol. 205; p. 572.

Pratt, John T. (See Fischer, Martin, assignor.)

Pratt, John T. (See Ractliffe, George, assignor.)

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,108,472; Aug. 25; Gaz. vol. 205; p. 1149.

Prentice, Frank W., Toronto, Ontario, Canada, assignor to The Perry-Prentice Electric Company. Railway signaling or train control. No. 1,105,923; Aug. 4; Gaz. vol. 205; p. 118.

Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Making soles for spring-heel shoes. No. 1,105,694; Aug. 4; Gaz. vol. 205; p. 38.

Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y. Ferry-landing apparatus. No. 1,107,702; Aug. 18; Gaz. vol. 205; p. 834.

Prescott, Herbert F., Detroit, Mich. Soap-container. No. 1,108,083; Aug. 18; Gaz. vol. 205; p. 966.

Prescott, Sydney I., assignor to The American Tobacco Company, New York, N. Y. Mouthpiece-forming mechanism. No. 1,105,832; Aug. 4; Gaz. vol. 205; p. 86.

Preston, Charles E., Lake City, Iowa. Combined paper-weight and calendar-support. No. 1,107,349; Aug. 18; Gaz. vol. 205; p. 708.

Přibáň, Václav, Prague, Austria-Hungary. Sausage-stuffing machine. No. 1,107,184; Aug. 11; Gaz. vol. 205; p. 602.

Pribil, Alexis R., Detroit, Mich., assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,107,350; Aug. 18; Gaz. vol. 205; p. 708.

Price, John D., assignor of one-third to H. G. Powell and one-third to H. Spies, Cleveland, Ohio. Arch-support. No. 1,106,000; Aug. 4; Gaz. vol. 205; p. 145.

Price, Samuel W., London, England. Apparatus for burning liquid fuel. No. 1,105,833; Aug. 4; Gaz. vol. 205; p. 86.

Pridham, Edwin S. (See Jensen and Pridham.)

Pridham, Edwin S., and P. L. Jensen, Napa, assignors to Commercial Wireless & Development Company, San Francisco, Cal. Telephone. No. 1,105,924; Aug. 4; Gaz. vol. 205; p. 118.

Priebe, Herman C., Blue Island, Ill. Draft-gear. No. 1,108,231; Aug. 25; Gaz. vol. 205; p. 1066.

Priem, Otto, Carpenter, Iowa. Adjustable hanger. No. 1,107,110; Aug. 11; Gaz. vol. 205; p. 573.

Profeto, Angelo, and H. E. Gross, Pittsburgh, Pa. Bedstead. No. 1,108,620; Aug. 25; Gaz. vol. 205; p. 1201.

Proudfit, James M., Chicago, Ill. Book-leaf. No. 1,107,351; Aug. 18; Gaz. vol. 205; p. 709.

Provandie, Herbert F., Melrose, assignor to American Water Supply Company of New England, Boston, Mass. Machine for forming paper receptacles. No. 1,107,225; Aug. 11; Gaz. vol. 205; p. 616.

Puckett, Charles A., Brooklyn, N. Y. Supporting-table. No. 1,106,057; Aug. 4; Gaz. vol. 205; p. 165.

Puckett, Thomas G. (See Allyn, Walter S., assignor.)

Pugh, Frederick W., London, England. Movable glass panel for glass wind-screens. No. 1,107,352; Aug. 18; Gaz. vol. 205; p. 709.

Pulliam, Oswald S., Pittsburgh, Pa., assignor, by mesne assignments, to Double Body Bolster Company, St. Louis, Mo. Underframe for cars. No. 1,106,110; Aug. 4; Gaz. vol. 205; p. 184.

Pullman Couch Company. (See Bartlett, Harry D., assignor.)

Purkey, Benjiman S., Tacoma, Wash. Insulator. No. 1,107,111; Aug. 11; Gaz. vol. 205; p. 573.

Putnam, Daniel G., and G. Boersma, Traverse City, Mich. Acetylene-gas generator. No. 1,108,232; Aug. 25; Gaz. vol. 205; p. 1066.

Putnam, Edward E. (See Weathersby and Putnam.)

Putnam, Fred A., Melrose, assignor to Markem Machine Company, Boston, Mass. Machine for embossing or marking leather. No. 1,108,518; Aug. 25; Gaz. vol. 205; p. 1166.

Putnam, George F., Goodrich, assignor, by mesne assignments, to The Lufkin Rule Co., Saginaw, Mich. Tape-reel. No. 1,106,969; Aug. 11; Gaz. vol. 205; p. 528.

Putnam, George H., Boston, Mass. Wheel-guard for street-cars. No. 1,107,112; Aug. 11; Gaz. vol. 205; p. 573.

Pyle-National Electric Headlight Company. (See Dake, Charles W., assignor.)

Pyron, John M., Wills Point, Tex. Safety-pin. No. 1,108,786; Aug. 25; Gaz. vol. 205; p. 1256.

Queen, Ralph L., Millville, N. J. Trolley-guard. No. 1,108,394; Aug. 25; Gaz. vol. 205; p. 1123.

Quellennec, Edouard M., Paris, France. Self-propelled plowing-machine. No. 1,108,787; Aug. 25; Gaz. vol. 205; p. 1256.

Quigley, Wirt S., Rockaway Park, N. Y. Apparatus for heating ovens. No. 1,107,353; Aug. 18; Gaz. vol. 205; p. 709.

Quimby, William J., assignor to The Hayward Company, New York, N. Y. Digging and dredging machinery. No. 1,108,001; Aug. 18; Gaz. vol. 205; p. 937.

R. and G. Company. (See Anderson, Edward L., assignor.)

R. J. Reynolds Tobacco Company. (See Richter, Hans F., assignor.)

Raab, Heinrich, Pirmasens, Germany. Shoe machinery. No. 1,105,834; Aug. 4; Gaz. vol. 205; p. 87.

Rabinowitz, Philip. (See Goldfarb, Nathan J., assignor.)

Racine, Louis, St. Gedeon de Beauce, Quebec, Canada. Plow-beam. No. 1,106,582; Aug. 11; Gaz. vol. 205; p. 393.

Ractliffe, George, assignor, by mesne assignments, to J. T. Pratt, New York, N. Y. Internal-combustion engine. No. 1,108,473; Aug. 25; Gaz. vol. 205; p. 1149.

Raddatz, Richard. (See Matchette and Raddatz.)

Radlein, Albert L., and G. Selander, Chicago, Ill. Rotary scratch-brush. No. 1,107,354; Aug. 18; Gaz. vol. 205; p. 710.

Radley, John J., New York, N. Y., Combined pad-holder and paper-weight. No. 1,105,835; Aug. 4; Gaz. vol. 205; p. 87.

Rae, George, Portland, Oreg. Manufacturing reinforced-concrete pressure-pipes. No. 1,107,235; Aug. 11; Gaz. vol. 205; p. 620.

Ragan, Ralph, Atlanta, Ga. Packing-ring. No. 1,106,678; Aug. 11; Gaz. vol. 205; p. 426.

Rail Joint Company, The. (See Bradley, William J., assignor.)

Railway Roller Bearing Company. (See Vandegrift, James N., assignor.)

Rammelsberg, Ernst, Dortmund, Germany. Spring-wheel. No. 1,107,355; Aug. 18; Gaz. vol. 205; p. 710.

Ramsey, Edla R., and J. H. Meyer, Penn Yan, N. Y.; said Meyer assignor to said Ramsey. Machine for making flexible tubular armor. No. 1,105,836; Aug. 4; Gaz. vol. 205; p. 87.

Ranck, John V., Brooklyn, N. Y., assignor to Powers Photo Engraving Company. Production of half-tones. No. 1,108,849; Aug. 25; Gaz. vol. 205; p. 1279.

Rand, George M., Brockton, Mass. Mailing-folder. No. 1,106,058; Aug. 4; Gaz. vol. 205; p. 165.

Rand, James H. and J. H., Jr., North Tonawanda, N. Y. Adjustable indicator. No. 1,106,843; Aug. 11; Gaz. vol. 205; p. 484.

Randall, Edison E. (See Rieck and Randall.)

Randall, Harry W., St. Johnsbury, Vt. Nozzle for fire-extinguishers. No. 1,106,679; Aug. 11; Gaz. vol. 205; p. 426.

Randolph, Harry H. (See Malinovszky, Andrew, assignor.)

Ransing, Henry E. (See Mentzer, Oliver A., assignor.)

Ransom, Richard B., Sutherland, Fla. Rotary valve. No. 1,108,002; Aug. 18; Gaz. vol. 205; p. 938.

Ranson, Corbin C. (See Verner and Ranson.)

Rapp, Eugene W. (See Long and Rapp.)

Rappard, Marinus, Den Helder, Netherlands. Manufacture of paint for protecting iron, wood, and the like from sea growths. No. 1,108,395; Aug. 25; Gaz. vol. 205; p. 1124.

Rasmussen, Carl, Leipzig, Germany. Calculating-machine. No. 1,108,788; Aug. 25; Gaz. vol. 205; p. 1256.

Rataiczyk, Stanley, Milwaukee, Wis. Combined garment-hanger. No. 1,108,621; Aug. 25; Gaz. vol. 205; p. 1202.

Ratelck, Frank H., *et al.* (See Nicholaus, Herman C., assignor.)

Rather, Lee O., assignor to R. H. Waller, Nashville, Tenn. Motion-picture screen. No. 1,106,111; Aug. 4; Gaz. vol. 205; p. 185.

Rau, Albert J. and J. A., Clifton, N. J. Dyeing apparatus. No. 1,108,233; Aug. 25; Gaz. vol. 205; p. 1066.

Rau, John, Indianapolis, Ind. Dash-pot for glass-blowing machines. No. 1,107,446; Aug. 18; Gaz. vol. 205; p. 743.

Rau, Julius A. (See Rau, Albert J. and J. A.)

Raub, Leopold. (See Dana, William H., assignor.)

Rawdon, George L., Cleveland, Ohio. Telegraph-repeater. No. 1,106,001; Aug. 4; Gaz. vol. 205; p. 145.

Rawlins, Frederick, Hackney, London, England. Mud-guard for motor and other road-vehicles. No. 1,106,159; Aug. 4; Gaz. vol. 205; p. 201.

Raymond, Frank V., Invercargill, W. O. Beere, Wellington, and J. E. Rough, Foxton, New Zealand. Apparatus for obtaining fibers, gums, and juices from fibrous plants. No. 1,107,840; Aug. 18; Gaz. vol. 205; p. 882.

Rea, Walter G. (See McCulley, Rea, and Forward.)

Reach, George A. (See Gamble, John, assignor.)

Reach, Milton B., Chicopee, Mass., assignor to A. G. Spalding & Bros. Manf'g. Co. Gymnasium-ring. No. 1,108,003; Aug. 18; Gaz. vol. 205; p. 938.

Read, Emery C., Franklin, Pa. Apparatus for promoting combustion in furnaces. No. 1,106,583; Aug. 11; Gaz. vol. 205; p. 393.

Rechnitz, Otto, Cottbus, Germany. Foundation on which plaster may be laid. No. 1,107,841; Aug. 18; Gaz. vol. 205; p. 883.

Redkey, John J., Denver, Colo. Railway-tie. No. 1,108,396; Aug. 25; Gaz. vol. 205; p. 1124.

Redman, Lawrence V., Lawrence, Kans., assignor, by mesne assignments, to Amberoid Chemical Products Company, Chicago, Ill. Composition of matter and producing the same. No. 1,107,703; Aug. 18; Gaz. vol. 205; p. 835.

Reed Manufacturing Company. (See Bayton, Albert, assignor.)

Reenstrom, Walter, Chicago, Ill. Smoke-jack. No. 1,108,234; Aug. 25; Gaz. vol. 205; p. 1067.

Rees, Walter, assignor to W. H. Hollar, Philadelphia, Pa. Vault. No. 1,108,105; Aug. 18; Gaz. vol. 205; p. 974.

Reese, David W., assignor of one-third to R. E. Lanz, Cleveland, Ohio. Pipe-vise. No. 1,108,519; Aug. 25; Gaz. vol. 205; p. 1166.

Reese, Paul P., and E. L. Diehl, Munhall, Pa. Treating alloy-steel scrap. No. 1,108,235; Aug. 25; Gaz. vol. 205; p. 1067.

Regar Brass Manufacturing Company, The. (See Regar, Joseph, assignor.) (Reissue.)

Regar, Joseph, assignor to The Regar Brass Manufacturing Company, Cleveland, Ohio. Faucet attachment. (Reissue.) No. 13,786; Aug. 4; Gaz. vol. 205; p. 266.

Register, Claude E. (See Braswell, William T., assignor.)

Reglin, Edward, Cochrane, Wis. Lubricator. No. 1,107,226; Aug. 11; Gaz. vol. 205; p. 617.

Reich, Paul. (See Boch, Philipp, assignor.)

Reiche, Hermann, Millstone, N. J. Pencil. No. 1,106,160; Aug. 4; Gaz. vol. 205; p. 201.

Reid, Fredrick D., Laurel, Miss. Bicycle-brake. No. 1,107,113; Aug. 11; Gaz. vol. 205; p. 574.

Reid, James C., Bluefields, Nicaragua, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Crushing-roller. No. 1,108,850; Aug. 25; Gaz. vol. 205; p. 1279.

Reimann, Franz M., Frankfort-on-the-Main, Germany, assignor to United Shoe Machinery Company, Paterson, N. J. Safety attachment for presses. No. 1,105,695; Aug. 4; Gaz. vol. 205; p. 38.

Reinking, Karl, and A. J. Stiegelmann, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Compound of leuco vat dyes with aralkyl compounds and making same. No. 1,106,970; Aug. 11; Gaz. vol. 205; p. 528.

Reliable Electric Company. (See Smith, Jacob A., assignor.)

Reliance Gas Regulator & Machine Company. (See Hodge, Arthur J., assignor.)

Remané, Hermann C. G., Berlin, Germany, assignor to General Electric Company. Filament-mounting. No. 1,106,971; Aug. 11; Gaz. vol. 205; p. 528.

Remington Typewriter Company. (See Carhart, Herbert A., assignor.)

Remington Typewriter Company. (See Smith, Arthur W., assignor.)

Remington Typewriter Company. (See Yaw, Clio B., assignor.)

Remmers, Theodore W. (See Kirchhoff, William G., assignor.)

Renfrow, Frances N., Yazoo City, Miss. Wire-stretcher and fence mender and tightener. No. 1,108,397; Aug. 25; Gaz. vol. 205; p. 1124.

Renner, Charles W., Altoona, Pa. Waste-guard for journal-boxes. No. 1,108,004; Aug. 18; Gaz. vol. 205; p. 938.

Rennerfelt, Gustaf, New York, assignor of one-half to A. Sundh, Yonkers, N. Y. Speed-governor for prime movers. No. 1,105,696; Aug. 4; Gaz. vol. 205; p. 38.

Rethorn, Edward C., Buffalo, N. Y., assignor to Herman Wile & Co. Trousers. No. 1,107,236; Aug. 11; Gaz. vol. 205; p. 620.

Reuter, Ludwig H., Berkeley, Cal. Coating composition. No. 1,107,356; Aug. 18; Gaz. vol. 205; p. 710.

Reuter, Ludwig H., Berkeley, Cal. Surgical bandage or splint. No. 1,107,357; Aug. 18; Gaz. vol. 205; p. 711.

Rex, Harry E., Des Moines, Iowa. Egg-handling device. No. 1,106,059; Aug. 4; Gaz. vol. 205; p. 166.

Rey, Ramon, Tampa, Fla. Cigar-container. No. 1,108,005; Aug. 18; Gaz. vol. 205; p. 939.

Rey, Ramon, Tampa, Fla. Paper cigar-case. No. 1,108,006; Aug. 18; Gaz. vol. 205; p. 939.

Reynolds, Harry M., Grand Rapids, Mich. Roofing-shingle. No. 1,108,236; Aug. 25; Gaz. vol. 205; p. 1068.

Reynolds, James W., Chester, Nebr. Rail-joint. No. 1,105,697; Aug. 4; Gaz. vol. 205; p. 39.

Reynolds, Walter J., Providence, R. I. Locking-chain for automobiles. No. 1,105,925; Aug. 4; Gaz. vol. 205; p. 119.

Rheinische Metallwaren- und Maschinenfabrik. (See Völler, Karl, assignor.)

Rhoads, Charles S., Jr., Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company. Signal-receiving device. No. 1,105,837; Aug. 4; Gaz. vol. 205; p. 88.

Rhodes, Hampton P., Shreveport, La. Driving mechanism for motor-vehicles. No. 1,108,474; Aug. 25; Gaz. vol. 205; p. 1150.

Rhodes, Jay B., Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill. Dump-cart support. No. 1,108,237; Aug. 25; Gaz. vol. 205; p. 1068.

Rhodes, William E., Alhambra, and E. W. Potter, Los Angeles, Cal. Water-grate. No. 1,105,926; Aug. 4; Gaz. vol. 205; p. 119.

Ribbe, François, Maurlac, France. Manufacture of industrial objects from volcanic and other fusible rock. No. 1,108,007; Aug. 18; Gaz. vol. 205; p. 939.

Rice, Barton & Fales Machine & Iron Co. (See Kilberry, George D., assignor.)

Rice, George H., Green Bay, Wis. Lumber-stacker. No. 1,108,520; Aug. 25; Gaz. vol. 205; p. 1166.

Rich, Homer B., Cambridge, assignor to Wright Cutter Company, Boston, Mass. Reversible twine-holder. No. 1,108,622; Aug. 25; Gaz. vol. 205; p. 1202.

Rich, Mark C., Hot Springs, S. D. Alfalfa product. No. 1,108,238; Aug. 25; Gaz. vol. 205; p. 1068.

Rich, Rumsey L., *et al.* (See Smith, Stephen P., assignor.)

Richards, Emanuel L., Philadelphia, Pa. Tablet-machine. No. 1,105,838; Aug. 4; Gaz. vol. 205; p. 88.

Richards-Wilcox Manufacturing Company. (See Hunt, George G., assignor.)

Richards, Willard F., Lancaster, assignor to Gould Coupler Company, New York, N. Y. Car-coupling. No. 1,105,839; Aug. 4; Gaz. vol. 205; p. 89.

Richardson, Calvin N., Waverly, Ill. Staple driver and puller. No. 1,106,241; Aug. 4; Gaz. vol. 205; p. 227.

Richardson, Thomas L. (See Marshall and Richardson.)

Richmond Radiator Company. (See Matchette and Raddatz, assignors.)

Richmond Radiator Company. (See Schmitz, George C., assignor.)

Richmond Radiator Company. (See Van Ness, Frank W., assignor.)

Richter, Gustave, New York, N. Y. Window-shade hanger. No. 1,105,698; Aug. 4; Gaz. vol. 205; p. 39.

Richter, Hans F., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N. C. Safety feed mechanism for beading-machines. No. 1,105,840; Aug. 4; Gaz. vol. 205; p. 89.

Ricketts, James B., New York, N. Y., assignor to The Nightingale Company. Incinerator. No. 1,106,317; Aug. 4; Gaz. vol. 205; p. 252.

Ricketts, James R., and H. V. Leahy, assignors to Perfection Gas Regulator Company, Los Angeles, Cal. Gas-regulator. No. 1,105,841; Aug. 4; Gaz. vol. 205; p. 89.

Rieck, William, and E. E. Randall, Kankakee, assignors to Paramount Knitting Company, Chicago, Ill. Machine for sewing looped fabrics. No. 1,107,704; Aug. 18; Gaz. vol. 205; p. 835.

Rieske, Otto G., Beaver Dam, Wis., assignor to A. J. Euchenhofner, Indianapolis, Ind. Milking apparatus. No. 1,106,846; Aug. 11; Gaz. vol. 205; p. 484.

Rietzsch, Alfred, administrator. (See Zahn, Robert, assignor.)

Rigby, Thomas. (See Testrup and Rigby.)

Rigby, Thomas, Dumfries, Scotland, and N. Testrup, assignors, by mesne assignments, to Wetcarbonizing Limited, London, England. Cleaning tubular and other vessels. No. 1,106,161; Aug. 4; Gaz. vol. 205; p. 201.

Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Band-brake. No. 1,108,851; Aug. 25; Gaz. vol. 205; p. 1280.

Riley, Robert S., Providence, R. I. Mechanical stoker. No. 1,107,842; Aug. 18; Gaz. vol. 205; p. 883.

Rinke, George, Detroit, Mich. Sanitary napkin. No. 1,107,447; Aug. 18; Gaz. vol. 205; p. 744.

Robbins, Harry G., Minneapolis, Minn. Wall construction. No. 1,106,584; Aug. 11; Gaz. vol. 205; p. 394.

Robbins, Hurley H., Brooklyn, N. Y. Velocipede. No. 1,108,789; Aug. 25; Gaz. vol. 205; p. 1257.

Roberts, Bernard F., Sabetha, Kans. Auxiliary step for railway-coaches. No. 1,106,972; Aug. 11; Gaz. vol. 205; p. 529.

Roberts, Edward F., assignor to Packard Motor Car Company, Detroit, Mich. Gear-cutting machine. No. 1,108,623; Aug. 25; Gaz. vol. 205; p. 1202.

Roberts, Eugene, and A. H. Gibson, Lehi, assignors to Sugar Centrifugal Discharger Company, Salt Lake City, Utah. Basket for centrifugal machines. No. 1,108,098; Aug. 18; Gaz. vol. 205; p. 972.

Roberts, Fredrick A., Dickey, N. D. Life-saving suit. No. 1,106,728; Aug. 11; Gaz. vol. 205; p. 443.

Roberts, Stephen R., Centralia, Mo. Washing-machine. No. 1,105,699; Aug. 4; Gaz. vol. 205; p. 40.

Robertshaw, Frederick W. (See Robertshaw, George A., assignor.)

Robertshaw, George A., assignor to F. W. Robertshaw, Pittsburgh, Pa. Gas-controlling mechanism. No. 1,107,549; Aug. 18; Gaz. vol. 205; p. 778.

Robertson, Charles J., Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Trip mechanism for printing-presses. No. 1,107,843; Aug. 18; Gaz. vol. 205; p. 883.

Robertson, George L., Philadelphia, Pa. Pneumatic hammer. No. 1,107,550; Aug. 18; Gaz. vol. 205; p. 778.

Robertson, Harvey A., Economy, Pa. Gage. No. 1,105,700; Aug. 4; Gaz. vol. 205; p. 40.

Robertson, John A., and R. Kroedel, assignors to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,107,358; Aug. 18; Gaz. vol. 205; p. 711.

Robey, Claude, Canon City, Colo. Centrifugally-controlled clutch. No. 1,106,242; Aug. 4; Gaz. vol. 205; p. 227.

Robinson, Charles F., San Francisco, Cal. Motor-car axle. No. 1,107,448; Aug. 18; Gaz. vol. 205; p. 744.

Robinson, Elmer O. (See Bunn and Robinson.)

Robinson, Robert B., Kansas City, Mo. Retaining device for demountable rims. No. 1,106,890; Aug. 11; Gaz. vol. 205; p. 500.

Robischon, Herbert. (See Robischon, Michael F., assignor.)

Robischon, Michael F., assignor of two-fifths to H. Robischon, Utica, N. Y. Union undergarment. No. 1,105,701; Aug. 4; Gaz. vol. 205; p. 40.

Rockey, Franklin L. (See Bruton, George, assignor.)

Rockwell, Charles L., Jersey City, N. J. Writing-pad holder and cover. No. 1,106,891; Aug. 11; Gaz. vol. 205; p. 500.

Rockwood Sprinkler Company of Massachusetts. (See Carlson, Hjalmar G., assignor.)

Rodden, Richard M., Montreal, Quebec, Canada. Collar. No. 1,107,359; Aug. 18; Gaz. vol. 205; p. 711.

Roden, Newton A., Jonesboro, La. Attachment for plows. No. 1,107,628; Aug. 18; Gaz. vol. 205; p. 808.

Roderick Lean Manufacturing Company, The. (See Warne, Frederick C., assignor.)

Roedel, Arthur J., Cincinnati, Ohio. Wrapping-machine. No. 1,107,360; Aug. 18; Gaz. vol. 205; p. 711.

Roerig, Peter, Kranzburg, S. D. Tongue-truck. No. 1,108,790; Aug. 25; Gaz. vol. 205; p. 1257.

Roesch, Alfred. (See Witham and Roesch.)

Röger, Karl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,105,702; Aug. 4; Gaz. vol. 205; p. 40.

Rogers, Edmund, Glenville, Conn. Signaling device. No. 1,106,973; Aug. 11; Gaz. vol. 205; p. 529.

Rogers, Karl C., Beaumont, Tex. Piano-key bushing. No. 1,108,791; Aug. 25; Gaz. vol. 205; p. 1257.

Rohe, Joseph C., assignor of one-half to J. P. Curry, Danville, Ill. Throttle-valve. No. 1,108,239; Aug. 25; Gaz. vol. 205; p. 1068.

Rohrig, George W. (See Seiss and Rohrig.)

Roland, Arthur M., assignor of two-fifths to A. Newhouse, San Francisco, Cal. Rotary fountain-brush. No. 1,108,475; Aug. 25; Gaz. vol. 205; p. 1150.

Roller Smith Co. (See Scheeffer, Gustave A., assignor.)

Röntgen, Robert, Remscheid, Germany. Apparatus for automatically charging hardening and the like furnaces. No. 1,107,449; Aug. 18; Gaz. vol. 205; p. 744.

Root, Francis S., Springfield, Mass. Invalid-lifting device. No. 1,106,847; Aug. 11; Gaz. vol. 205; p. 485.

Roovers, Alfred W., Brooklyn, N. Y. Vending-machine. No. 1,106,848; Aug. 11; Gaz. vol. 205; p. 485.

Roper, George. (See Andrews, William F., assignor.)

Roper, Walter F., Hopedale, Mass. Wind-shield-adjusting device. No. 1,106,892; Aug. 11; Gaz. vol. 205; p. 500.

Rose, John, Philadelphia, Pa. Umbrella-case. No. 1,108,240; Aug. 25; Gaz. vol. 205; p. 1069.

Rose, Solon E., Detroit, Mich. Rotary engine. No. 1,108,241; Aug. 25; Gaz. vol. 205; p. 1069.

Rose, William, Gainsborough, England. Packeting-machine for filling or delivering granular or other materials into bags or the like. No. 1,107,114; Aug. 11; Gaz. vol. 205; p. 574.

Rosenbaum, Morris, Philadelphia, Pa. Operating a furnace. No. 1,108,792; Aug. 25; Gaz. vol. 205; p. 1257.

Rosenbaum, Simon. (See Brandels, Izidor, assignor.)

Ross, Clifton, assignor of one-half to W. B. Powell, Utica, Miss. Fish-trap. No. 1,106,318; Aug. 4; Gaz. vol. 205; p. 253.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Titanic-oxid concentrate and producing the same. No. 1,106,406; Aug. 11; Gaz. vol. 205; p. 327.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Concentrating titanic oxid. No. 1,106,407; Aug. 11; Gaz. vol. 205; p. 328.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Concentrating titanic oxid from substances containing it and iron oxid. No. 1,106,408; Aug. 11; Gaz. vol. 205; p. 328.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Obtaining titanic oxid. No. 1,106,409; Aug. 11; Gaz. vol. 205; p. 328.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Obtaining titanic oxid. No. 1,106,410; Aug. 11; Gaz. vol. 205; p. 328.

Rostowski, Wladyslaw. (See Jablonski, Boleslaw, assignor.)

Röthig, Robert, Leipzig-Gohlis, Germany. Model-building material for educational purposes and games. No. 1,106,162; Aug. 4; Gaz. vol. 205; p. 202.

Rotospeed Company, The. (See Cox, Edwin A., assignor.)

Rough, James E. (See Raymond, Beere, and Rough.)

Rouzet, Lucien, Paris, France. Wireless-telegraph installation for aerial vessels. No. 1,106,729; Aug. 11; Gaz. vol. 205; p. 444.

Rowan, Russell R., Verdi, Kans. Fodder-loader. No. 1,107,361; Aug. 18; Gaz. vol. 205; p. 712.

Rowley, Arthur C., assignor to Associated Automatic Sprinkler Company, Philadelphia, Pa. Dry pipe-valve for fire-extinguishing systems. No. 1,108,106; Aug. 18; Gaz. vol. 205; p. 975.

Royal Type Company. (See Hess, Edward B., assignor.)

Royce, Frederick H., Derby, England. Engine-mounting for motor-vehicles. No. 1,108,242; Aug. 25; Gaz. vol. 205; p. 1069.

Royce, James C., Toronto, Ontario, Canada. Electric soldering-iron. No. 1,106,476; Aug. 11; Gaz. vol. 205; p. 354.

Rucker, Martin D., Purley, England. Tire for vehicles. No. 1,106,113; Aug. 4; Gaz. vol. 205; p. 185.

Ruddy, James B., Medina, Wash. Weeding device. No. 1,107,705; Aug. 18; Gaz. vol. 205; p. 836.

Ruggles, William B., Bayonne, N. J. Drier. No. 1,105,927; Aug. 4; Gaz. vol. 205; p. 119.

Rugh, Harry O., Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company. Substation signaling apparatus. No. 1,105,842; Aug. 4; Gaz. vol. 205; p. 90.

Rugh, Harry O., Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company. Control system. No. 1,105,843; Aug. 4; Gaz. vol. 205; p. 90.

Rugh, Harry O., Sandwich, Ill., assignor, by mesne assignments, to Hall Switch & Signal Company. Substation signal-receiving device. No. 1,106,680; Aug. 11; Gaz. vol. 205; p. 426.

Rumbaugh, Charles M., Elkhart, Iowa. Door-securing means. No. 1,107,362; Aug. 18; Gaz. vol. 205; p. 712.

Rumolino, Santo, Genoa, Italy. Marine governor. No. 1,107,844; Aug. 18; Gaz. vol. 205; p. 884.

Rumrill, Albert L., West Somerville, Mass. Attachment for rakes. No. 1,108,624; Aug. 25; Gaz. vol. 205; p. 1202.

Rundle, Fred A., assignor to Whiting Foundry Equipment Company, Harvey, Ill. Screw-jack locomotive-hoist. No. 1,107,706; Aug. 18; Gaz. vol. 205; p. 836.

Ruppelt, Philipp A., Steamboat Rock, Iowa. Clothes-pounder. No. 1,107,707; Aug. 18; Gaz. vol. 205; p. 836.

Rusby, John M., assignor to The United Gas Improvement Company, Philadelphia, Pa. Controlling combustion. No. 1,106,319; Aug. 4; Gaz. vol. 205; p. 253.

Rush, George F., Chicago, Ill. Lamp-socket. No. 1,106,974; Aug. 11; Gaz. vol. 205; p. 529.

Rusnak, Samuel, Chicago, Ill. Sofa or davenport and bed. No. 1,105,928; Aug. 4; Gaz. vol. 205; p. 120.

Russell, Joseph L. (See Karcher, Otto, assignor.)

Russell, William D., Fort Worth, Tex. Car-fender. No. 1,108,869; Aug. 25; Gaz. vol. 205; p. 1287.

Rutledge, Jerome T., Millbury, Mass. Rivet-cloth. No. 1,106,060; Aug. 4; Gaz. vol. 205; p. 166.

Ryan, Patrick, assignor of one-fourth to J. H. McGann, one-fourth to S. Brand, and one-fourth to T. F. Duffy, New York, N. Y. Carousel. No. 1,107,115; Aug. 11; Gaz. vol. 205; p. 574.

Ryan, Patrick F., Syracuse, N. Y. Grass-shears. No. 1,107,227; Aug. 11; Gaz. vol. 205; p. 617.

Ryding, Herbert C., Birmingham, Ala. Treating ingots. No. 1,108,243; Aug. 25; Gaz. vol. 205; p. 1070.

S. E. T. Valve & Hydrant Company, New York. (See Tyler and Every, assignors.)

S. F. Bowser & Co. (See Bechtold and Grosvenor, assignors.)

S. F. Bowser & Company. (See Bowser, Allen A., assignor.)

S. H. Couch Co. (See Henry, William W., assignor.)

S. M. M. Manufacturing Corporation. (See Maisch, August T., assignor.)

S. R. Dresser Manufacturing Company. (See Dresser, Solomon R., assignor.)

S. S. White Dental Manufacturing Company, The. (See Johnston, William A., assignor.)

Sabatino, John, Queens, N. Y. Vibratory massage apparatus. No. 1,106,893; Aug. 11; Gaz. vol. 205; p. 501.

Sackett, Frank V., La Grange, Ill. Sprinkler-head. No. 1,107,845; Aug. 18; Gaz. vol. 205; p. 884.

Sager, James H., assignor to J. H. Sager Company, Rochester, N. Y. Automobile-bumper. No. 1,108,625; Aug. 25; Gaz. vol. 205; p. 1203.

Sager, James H., assignor to J. H. Sager Company, Rochester, N. Y. Bumper for automobiles. No. 1,108,626; Aug. 25; Gaz. vol. 205; p. 1203.

Saks, Joseph. (See Fordyce, Edgar W., assignor.)

Salvesen, Clement T., Chicago, Ill. Window. No. 1,107,450; Aug. 18; Gaz. vol. 205; p. 745.

Samaia, Dino D., Milan, Italy. Block system for tramways. No. 1,108,084; Aug. 18; Gaz. vol. 205; p. 966.

Sammt, Otto W., Lake Park, Iowa. Signal. No. 1,108,398; Aug. 25; Gaz. vol. 205; p. 1124.

Samphere, Orin C., Milwaukee, Wis. Dental mandrel. No. 1,106,894; Aug. 11; Gaz. vol. 205; p. 501.

Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Valve mechanism. No. 1,106,895; Aug. 11; Gaz. vol. 205; p. 502.

San Martin, René, assignor of one-half to J. Aballi, Habana, Cuba. Variable mercury-condenser. No. 1,108,793; Aug. 25; Gaz. vol. 205; p. 1258.

Sanders, Wilbur E., Sonora, assignor of one-half to A. J. Chamberlain, Berkeley, Cal. Bin. No. 1,107,846; Aug. 18; Gaz. vol. 205; p. 885.

Sanderson, Burton C. (See Palmer and Sanderson.)

Sanderson, Eugene W., New York, N. Y. Agricultural trolley system. No. 1,107,228; Aug. 11; Gaz. vol. 205; p. 617.

Sanderson, Robert L., assignor to The Bostwick Steel Lath Company, Niles, Ohio. Corner bead or strip. No. 1,106,730; Aug. 11; Gaz. vol. 205; p. 444.

Sanderson, Robert M., Akron, and C. P. Whisler, Kenmore, Ohio. Inner pad for shoes. No. 1,106,114; Aug. 4; Gaz. vol. 205; p. 186.

Sandreczki, Karl T., Hamburg, Germany. Hair-pin and the like. No. 1,106,585; Aug. 11; Gaz. vol. 205; p. 394.

Santo, Charles E., London, Ontario, Canada. Spring-hinge. No. 1,107,708; Aug. 18; Gaz. vol. 205; p. 836.

Santo Manufacturing Company. (See Templin, Joseph H., assignor.)

Santrock, Henry, Kensington, Kans. Tire compound. No. 1,108,399; Aug. 25; Gaz. vol. 205; p. 1124.

Sapp, Charles S., Mount Vernon, Ohio. Valve-releaser. No. 1,108,476; Aug. 25; Gaz. vol. 205; p. 1151.

Sargent & Company. (See Page, Albert A., assignor.)

Sargent & Company. (See Sargent, Edward R., assignor.)

Sargent, Edward R., assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,106,731; Aug. 11; Gaz. vol. 205; p. 444.

Sartolow, John B. (See Gibson and Sartolow.) (Reissue.)

Sato, Kurakichi, Los Angeles, Cal. Beet-harvester. No. 1,107,551; Aug. 18; Gaz. vol. 205; p. 779.

Sauer, George A., Jr., and R. A. Trace, assignors to Buckeye Iron and Brass Works, Dayton, Ohio. Cooker for seeds and the like. No. 1,106,586; Aug. 11; Gaz. vol. 205; p. 394.

Saunders, Philip L., Ashland, Va. Clothes-drier. No. 1,107,847; Aug. 18; Gaz. vol. 205; p. 885.

Saurer, Firm of Adolph. (See Eggart, Karl, assignor.)

Saurer, Firm of Adolph. (See Kobler, Victor, assignor.)

Saussard, Louis, assignor to Societe Ballot & Co., Paris, France. Distributing apparatus for engines. No. 1,106,243; Aug. 4; Gaz. vol. 205; p. 227.

Sauvage-Ward Brake Company. (See Sauvage, William H., assignor.)

Sauvage, William H., New York, N. Y., assignor to Sauvage-Ward Brake Company, Inc. Pressure-indicator. No. 1,106,681; Aug. 11; Gaz. vol. 205; p. 427.

Savage, Arthur J., Meriden, Conn., assignor to Sears, Roebuck and Company, Chicago, Ill. Firearm. No. 1,108,400; Aug. 25; Gaz. vol. 205; p. 1124.

Savage, Edward S., Rochester, N. Y. Micrometer-calipers. No. 1,107,202; Aug. 11; Gaz. vol. 205; p. 608.

Savage, Edward S., Rochester, N. Y. Micrometer-calipers. No. 1,107,203; Aug. 11; Gaz. vol. 205; p. 609.

Sawyer Biscuit Company. (See Shunk, Frank A., assignor.)

Saxon Motor Car Company. (See Dunham, George W., assignor.)

Saxton, Albert H., Deerfield, Mich., and J. J. Bachmayer, Tilby, Ohio, assignors of one-third to F. S. Saxton, Blissfield, Mich. Bundle-tier. No. 1,105,703; Aug. 4; Gaz. vol. 205; p. 41.

Saxton, Frank S. (See Saxton and Bachmayer, assignors.)

Say, William, London, England. Vehicle-brake. No. 1,108,794; Aug. 25; Gaz. vol. 205; p. 1258.

Say, William, London, England. Fender for motor-cars. No. 1,108,795; Aug. 25; Gaz. vol. 205; p. 1258.

Schaaf, Edward, *et al.* (See Scheuermann, Philip J., assignor.)

Schnake, William, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Braking system. No. 1,107,552; Aug. 18; Gaz. vol. 205; p. 779.

Schade, Frederik, Skive, Denmark. Apparatus for tearing or cutting off pieces from rolled-up paper. No. 1,107,848; Aug. 18; Gaz. vol. 205; p. 885.

Schaefer, John W., Beardstown, Ill. Store-window display-machine. No. 1,108,008; Aug. 18; Gaz. vol. 205; p. 940.

Schaeffer, August, Frankfort-on-the-Main, Germany. Electric heater for fans. No. 1,106,975; Aug. 11; Gaz. vol. 205; p. 530.

Schaeffer, Francis, and W. J. Shearer, assignors of one-third to J. J. Miller, Reading, Pa. Felting-machine. No. 1,108,244; Aug. 25; Gaz. vol. 205; p. 1070.

Schaffer, Charles, assignor of one-third to J. W. Brown and one-third to P. Gorham, Florence, Ariz. Railwaytie. No. 1,107,116; Aug. 11; Gaz. vol. 205; p. 575.

Schaperjahn, Herman, New York, N. Y. Pipe-covering. No. 1,105,844; Aug. 4; Gaz. vol. 205; p. 91.

Schatz, Adam E., Mount Vernon, N. Y. Shoe for furniture-legs. No. 1,106,520; Aug. 11; Gaz. vol. 205; p. 370.

Schebler, George M., assignor to F. H. Wheeler, Indianapolis, Ind. Carbureter. No. 1,108,245; Aug. 25; Gaz. vol. 205; p. 1070.

Schebler, George M., assignor to F. H. Wheeler, Indianapolis, Ind. Air-valve for carbureters. No. 1,108,246; Aug. 25; Gaz. vol. 205; p. 1071.

Scheeffer, Gustave A., Indianapolis, Ind., assignor, by mesne assignments, to Roller Smith Co., New York, N. Y. Electric test-meter. No. 1,108,401; Aug. 25; Gaz. vol. 205; p. 1125.

Scheel, George L., Chicago, Ill. Hair-drying comb. No. 1,106,411; Aug. 11; Gaz. vol. 205; p. 329.

Scheible, Albert, Chicago, Ill. Collar-fastener. No. 1,107,709; Aug. 18; Gaz. vol. 205; p. 837.

Scheinman, Isaac, New York, N. Y. Trousers. No. 1,106,587; Aug. 11; Gaz. vol. 205; p. 395.

Schell, Milo M., West Alexandria, assignor of one-half to J. W. Trump, Arcanum, Ohio. Flexible garment-fastener. No. 1,108,796; Aug. 25; Gaz. vol. 205; p. 1259.

Schellhammer, Alfred L., Warren, Pa. Incinerator for garbage, excrement, &c. No. 1,106,732; Aug. 11; Gaz. vol. 205; p. 445.

Schenck, Eugene A., Kansas City, Kans., assignor of one-half to F. Hagerman, Kansas City, Mo. Vacuum-producer. No. 1,108,247; Aug. 25; Gaz. vol. 205; p. 1071.

Schepp, Albert J. (See Schepp, Herman J. and A. J.)

Schepp, Herman J. and A. J., near Manhattan, Kans. Hoisting apparatus for certain farm implements. No. 1,108,797; Aug. 25; Gaz. vol. 205; p. 1259.

Scheuermann, Karl, Wiesbaden, Germany. Drainage plant for road-beds. No. 1,108,852; Aug. 25; Gaz. vol. 205; p. 1280.

Scheuermann, Philip J., St. Louis, Mo., assignor of one-third to S. G. Martin, Chicago, Ill., one-third to W. O. Bartholomew, St. Louis, and one-third to E. Schaaf, St. Marys, Mo. Treating fruits. No. 1,108,521; Aug. 25; Gaz. vol. 205; p. 1167.

Schirmer, Theodore F., assignor to The Standard Register Company, Dayton, Ohio. Autographic register. No. 1,106,976; Aug. 11; Gaz. vol. 205; p. 530.

Schirra, Julius, assignor to Hand Vacuum Sweeper Company, Pittsburgh, Pa. Suction-creating mechanism for vacuum cleaning apparatus. No. 1,106,682; Aug. 11; Gaz. vol. 205; p. 427.

Schlacks, Joseph T., and P. L. Barter, assignors to McCord Manufacturing Company, Detroit, Mich. Metal window-sash. No. 1,106,412; Aug. 11; Gaz. vol. 205; p. 329.

Schleinkofer, Joseph J., St. Louis, Mo. Cigar-tip cutter. No. 1,106,733; Aug. 11; Gaz. vol. 205; p. 445.

Schlemmer, Oliver, Cincinnati, Ohio. Valve. No. 1,106,002; Aug. 4; Gaz. vol. 205; p. 146.

Schlicher, August. (See Berchtold, John A., assignor.)

Schlicht, Hans, Walnut, Iowa. Clutch. No. 1,107,710; Aug. 18; Gaz. vol. 205; p. 837.

Schliemann, William, Washington, D. C., assignor to L. K. Doelling, New Rochelle, N. Y. Ammonia force-feed refrigerating system. No. 1,106,244; Aug. 4; Gaz. vol. 205; p. 227.

Schmid, William. (See Shakespeare and Schmid.)

Schmidt, Alfred G., Baltimore, Md. Waste-pipe plug. No. 1,107,363; Aug. 18; Gaz. vol. 205; p. 713.

Schmidt, Ernst R., Marknewkirchen, Germany. Device for shipping violin and other strings. No. 1,106,413; Aug. 11; Gaz. vol. 205; p. 329.

Schmidt, John J. (See Dudley and Schmidt.)

Schmidt, Wilhelm, Wilhelmshöhe, near Cassel, Germany. Smoke-tube superheater. No. 1,106,734; Aug. 11; Gaz. vol. 205; p. 445.

Schmidt, Wilhelm, assignor to Schmidt'sche Heissdampf Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Automatic engine-governor. No. 1,107,204; Aug. 11; Gaz. vol. 205; p. 609.

Schmidt'sche Heissdampf Gesellschaft m. b. H. (See Schmidt, Wilhelm, assignor.)

Schmitz, Frank C., Flatbush, N. Y. Shipping-barrel. No. 1,107,364; Aug. 18; Gaz. vol. 205; p. 713.

Schmitz, George C., Racine, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Suction-cleaner. No. 1,108,248; Aug. 25; Gaz. vol. 205; p. 1072.

Schmitz, Joseph, Philadelphia, Pa., assignor, by mesne assignments, to Uniform Dyeing Machine Company. Dyeing apparatus. No. 1,105,845; Aug. 4; Gaz. vol. 205; p. 91.

Schmitz, Paul, Cologne-Niehl, assignor to W. Jungbecker, Aachen, Germany. Use of rawhide. No. 1,108,402; Aug. 25; Gaz. vol. 205; p. 1125.

Schnackel, Frank, Rochester, N. Y. Antiskid device for tires. No. 1,106,896; Aug. 11; Gaz. vol. 205; p. 502.

Schneider, Eugène, Le Creuzot, France. Charge-forming device for internal-combustion engines. No. 1,106,115; Aug. 4; Gaz. vol. 205; p. 186.

Schneider, Eugène, Le Creuzot, France. Hydraulic transmission apparatus. No. 1,106,245; Aug. 4; Gaz. vol. 205; p. 228.

Schneider, Herman J. (See Burnham and Schneider.)

Schneider, John A., Philadelphia, Pa. Locking mechanism for valves. No. 1,108,477; Aug. 25; Gaz. vol. 205; p. 1151.

Schneider, John H., Brooklyn, N. Y. Water-wheel. No. 1,105,846; Aug. 4; Gaz. vol. 205; p. 91.

Schneider, William. (See Stungo, Josef, assignor.)

Schneller, Joseph W. (See Stiglich and Schneller.)

Schnitzler, Oscar, Remington, and B. J. Welage, Norwood, Ohio. Fire-escape. No. 1,106,588; Aug. 11; Gaz. vol. 205; p. 395.

Schoedelin, Marie J. G., Paris, France. Power-transmission mechanism. No. 1,106,246; Aug. 4; Gaz. vol. 205; p. 228.

Schoeller, Albert E. (See Pedery, Joseph, assignor.)

Schoellkopf, Jacob F., Dallas, Tex., assignor to North & Judd Manufacturing Company, New Britain, Conn. Toggle and clip combination. No. 1,106,414; Aug. 11; Gaz. vol. 205; p. 330.

Schoen, Charles T., Media, Pa. Carbureter. No. 1,107,849; Aug. 18; Gaz. vol. 205; p. 885.

Schoenfeld, Morris, Rorschach, Switzerland. Thread-cutting mechanism for embroidering-machines. No. 1,107,711; Aug. 18; Gaz. vol. 205; p. 837.

Scholle, Eduard, Neuss, assignor to Wecks & Co., Oberhausen, Rhineland, Germany. Scotch-block with roller. No. 1,108,627; Aug. 25; Gaz. vol. 205; p. 1203.

Schoonmaker, William H., Montclair, N. J. Valve-gear for gas-engines. No. 1,108,249; Aug. 25; Gaz. vol. 205; p. 1072.

Schoonmaker, William H., Montclair, N. J. Gas-engine-starting mechanism. No. 1,108,250; Aug. 25; Gaz. vol. 205; p. 1073.

Schroeder, Henry L., Chicago, Ill. Strap-holder. No. 1,107,451; Aug. 18; Gaz. vol. 205; p. 745.

Schroeder, Josef, Tegel, Germany, assignor to General Electric Company. Flying-machine. No. 1,106,061; Aug. 4; Gaz. vol. 205; p. 166.

Schuermann, Anton C., assignor to H. Mueller Mfg. Co., Decatur, Ill. Cock or faucet. No. 1,107,452; Aug. 18; Gaz. vol. 205; p. 746.

Schuermann, Anton C., assignor to H. Mueller Mfg. Co., Decatur, Ill. Self-closing cock or faucet. No. 1,107,453; Aug. 18; Gaz. vol. 205; p. 746.

Schulder, Fred, assignor to J. H. Glauber, Cleveland, Ohio. Compression faucet or cock. No. 1,107,205; Aug. 11; Gaz. vol. 205; p. 609.

Schuler, David, Niagara Falls, Ontario, Canada, assignor, by mesne assignments, to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,106,477; Aug. 11; Gaz. vol. 205; p. 354.

Schuler, David, assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,108,251; Aug. 25; Gaz. vol. 205; p. 1073.

Schuler, David, Kerrtown, assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,108,252; Aug. 25; Gaz. vol. 205; p. 1074.

Schuler, Frank. (See Stanfield, Jasper H., assignor.)

Schuler, George, Woodside, N. Y. Snow gathering and melting machine. No. 1,106,735; Aug. 11; Gaz. vol. 205; p. 446.

Schuler, George, Woodside, N. Y. Conveyer. No. 1,106,736; Aug. 11; Gaz. vol. 205; p. 446.

Schulte, Anton. (See Oestreich, Norman, assignor.)

Schulthels, Ludwig, Frankfort-on-the-Main, Germany. Lubricator for elevator guide-rails. No. 1,105,929; Aug. 4; Gaz. vol 205; p. 120.

Schultis, Charles F., assignor to C. Girl, Cleveland, Ohio. Threading device. No. 1,108,798; Aug. 25; Gaz. vol. 205; p. 1260.

Schulz, Josef, Budapest, Austria-Hungary. Boat and oar therefor. No. 1,107,117; Aug. 11; Gaz. vol. 205; p. 575.

Schulze, Frank C., *et al.* (See Harvey, Daniel, assignor.)

Schumacher, Henry, Buffalo, N. Y. Steering-gear for vehicles. No. 1,106,589; Aug. 11; Gaz. vol. 205; p. 395.

Schupbach, Walter. (See Busch and Schupbach.)

Schutt, Duny A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Combined disk harrow and seeder. No. 1,106,737; Aug. 11; Gaz. vol. 205; p. 446.

Schutte, Charles H. F. (See O'Brien and Bowdle, assignors.)

Schwartzburg, Edward H., Milwaukee, Wis., assignor to National Enameling and Stamping Company, Baltimore, Md. Feed and water fountain for poultry. No. 1,107,206; Aug. 11; Gaz. vol. 205; p. 610.

Schwarz, Karl, assignor to Maschinenfabrik Augsburg-Nürnberg A. G., Nuremberg, Germany. Cylinder. No. 1,106,977; Aug. 11; Gaz. vol. 205; p. 530.

Schwarz, Karl, assignor to Maschinenfabrik Augsburg-Nürnberg A. G., Nuremberg, Germany. Cylinder. No. 1,107,850; Aug. 18; Gaz. vol. 205; p. 886.

Schweitzer, Heinrich. (See Oefele, Felix von, assignor.)

Schweitzer, Heinrich, New York, N. Y. Pressure apparatus for dental castings. No. 1,107,185; Aug. 11; Gaz. vol. 205; p. 602.

Schwertner, Joseph, New York, N. Y., assignor to Heerwagen Company. Bleed-hole-regulating device. No. 1,107,851; Aug. 18; Gaz. vol. 205; p. 886.

Scientific Treatments Limited. (See Thomson, Hugh A., assignor.)

Scofield, Charles D. (See Kearney, George F., assignor.)

Scott, Arthur H., Philadelphia, Pa. Supporting device for packages. No. 1,106,003; Aug. 4; Gaz. vol. 205; p. 146.

Scott, Chester A., Stockton, Cal. Grade attachment for transits. No. 1,105,930; Aug. 4; Gaz. vol. 205; p. 120.

Scott, George M., McConnelsville, Ohio. Ventilating device for wind shields. No. 1,106,849; Aug. 11; Gaz. vol. 205; p. 486.

Scott Paper Company. (See Bagnall, Alfred, assignor.)

Scott Paper Company. (See Hamilton, Ernest A., assignor.)

Scott, Robert P., Cadiz, Ohio. Green-pea, bean, and cow-pea huller. No. 1,107,207; Aug. 11; Gaz. vol. 205; p. 610.

Scott, Robert W., assignor to Scott & Williams, Incorporated, Camden, N. J. Knit article and making the same. No. 1,106,336; Aug. 4; Gaz. vol. 205; p. 258.

Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Philadelphia, Pa. Welted knitted web and making the same. (Reissue.) No. 13,788; Aug. 18; Gaz. vol. 205; p. 978.

Scott, William M. (See Ytterberg, Arle T., assignor.)

Scott, William M., Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company. Remote control system. No. 1,106,116; Aug. 4; Gaz. vol. 205; p. 186.

Scott, William M., Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company. System of remote control. No. 1,108,253; Aug. 25; Gaz. vol. 205; p. 1074.

Scott, William M., Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company. System of remote control. No. 1,108,254; Aug. 25; Gaz. vol. 205; p. 1074.

Scott & Williams. (See Scott, Robert W., assignor.)

Scott & Williams. (See Scott, Robert W., assignor.) (Reissue.)

Scovill Manufacturing Company. (See Simons, Ernest D., assignor.)

Scribner, Charles E., Jericho, Vt., assignor to Western Electric Company, New York, N. Y. Telegraph-receiver. No. 1,107,366; Aug. 18; Gaz. vol. 205; p. 713.

Scribner, Charles E., Jericho, Vt., assignor to Western Electric Company, New York, N. Y. Telegraph-receiver. No. 1,107,367; Aug. 18; Gaz. vol. 205; p. 714.

Scribner, Charles E., Jericho, Vt., and F. R. McBerty, New Rochelle, assignors to Western Electric Company, New York, N. Y. Printing-telegraph. No. 1,107,365; Aug. 18; Gaz. vol. 205; p. 713.

Scripps, William E., Detroit, Mich. Stove. No. 1,107,712; Aug. 18; Gaz. vol. 205; p. 838.

Seal, Fred E., Winchester, Va. Toy car. No. 1,108,628; Aug. 25; Gaz. vol. 205; p. 1203.

Seale, Daniel T., Florala, Ala. Wagon. No. 1,107,118; Aug. 11; Gaz. vol. 205; p. 575.

Seaman, Agnes D., *et al.* (See Frasier, Emory M., assignor.)

Seaman, George B., *et al.* (See Frasier, Emory M., assignor.)

Seaman, Stewart E., Brooklyn, N. Y. Destructive distillation of wood. No. 1,108,403; Aug. 25; Gaz. vol. 205; p. 1125.

Searight, John R., Detroit, Mich. Pencil-sharpener. No. 1,108,478; Aug. 25; Gaz. vol. 205; p. 1151.

Searle, John C., Lalamilo, Hawaii. Traveling irrigator. No. 1,107,119; Aug. 11; Gaz. vol. 205; p. 576.

Searles, Harry R., Youngstown, Ohio, and C. A. Thurston, St. Paul, Minn. Combined lifting-jack and shock-absorber for automobiles and like vehicles. No. 1,108,522; Aug. 25; Gaz. vol. 205; p. 1167.

Sears, Leonard C. (See Hartwell and Sears.)

Sears, Roebuck and Co. (See Palmer, Clinton D., assignor.)

Sears, Roebuck and Company. (See Savage, Arthur J., assignor.)

Sebastian, John L., Salt Lake City, Utah. Deep-well pump. No. 1,106,850; Aug. 11; Gaz. vol. 205; p. 486.

Sebastian, Louis, *et al.* (See Wranau, Gottlieb H. E. von, assignor.)

Seegmiller, Charles H., assignor of one-half to F. J. Dennis, Chicago, Ill. Folding box. No. 1,107,852; Aug. 18; Gaz. vol. 205; p. 886.

Seeley, Charles L., La Junta, Colo. Locking device. No. 1,106,521; Aug. 11; Gaz. vol. 205; p. 370.

Seeley, Frank E., assignor to The Bryant Electric Company, Bridgeport, Conn. Plural socket. No. 1,107,120; Aug. 11; Gaz. vol. 205; p. 576.

Seeley, Warren A., Minneapolis, Minn. Compound rail. No. 1,105,847; Aug. 4; Gaz. vol. 205; p. 92.

Seery, Edward L., Waterbury, Conn. Engine. No. 1,107,853; Aug. 18; Gaz. vol. 205; p. 887.

Seidel, William, assignor to American Pattern & Model Co., Chicago, Ill. Machine for forming wooden gear-teeth. No. 1,108,629; Aug. 25; Gaz. vol. 205; p. 1204.

Seidel, William, assignor to American Pattern & Model Co., Chicago, Ill. Molder's flask. No. 1,108,630; Aug. 25; Gaz. vol. 205; p. 1204.

Seiss, August P., Omaha, Nebr., and G. W. Rohrig, Council Bluffs, Iowa. Combined spark-plug, primer, and indicator. No. 1,108,009; Aug. 18; Gaz. vol. 205; p. 940.

Selander, Gustaf. (See Radlein and Selander.)

Sellar, John L., assignor of two-thirds to H. Castelberg, Baltimore, Md. Non-refillable bottle. No. 1,108,099; Aug. 18; Gaz. vol. 205; p. 972.

Sellers, Edward M., assignor of one-half to A. McKenna, Fort Worth, Tex. Silo. No. 1,106,897; Aug. 11; Gaz. vol. 205; p. 502.

Semans, George E. L., Pittsburgh, Pa. Wrench of a quick-acting type. No. 1,106,117; Aug. 4; Gaz. vol. 205; p. 187.

Semmler, Carl, Wiesbaden, Germany. Utilization of the waste heat of combustion-motors for heating purposes. No. 1,107,368; Aug. 18; Gaz. vol. 205; p. 714.

Semple, John B., Sewickley, Pa. Projectile. No. 1,105,848; Aug. 4; Gaz. vol. 205; p. 92.

Semple, John B., Sewickley, Pa. Explosive projectile. No. 1,105,849; Aug. 4; Gaz. vol. 205; p. 92.

Senter, Ralph T., Buffalo, assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y. Passenger-car. No. 1,105,704; Aug. 4; Gaz. vol. 205; p. 42.

Senter, Ralph T., Philadelphia, Pa., assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y. Step and step-operating mechanism. No. 1,105,705; Aug. 4; Gaz. vol. 205; p. 42.

Senter, Ralph T., Philadelphia, Pa., assignor to The Near-Side Car Company, New York, N. Y. Passenger-vehicle. No. 1,105,706; Aug. 4; Gaz. vol. 205; p. 42.

Senter, Ralph T., Philadelphia, Pa., assignor, by mesne assignments, to The Near-Side Car Company, New York, N. Y. Door and step operating mechanism. No. 1,105,707; Aug. 4; Gaz. vol. 205; p. 43.

Setzer, Joel M., assignor of one-third to J. H. Colwell, St. Paul, Minn. Regulating device. No. 1,108,255; Aug. 25; Gaz. vol. 205; p. 1075.

Sewall, James H., Keene, N. H. Belt-tightener. No. 1,108,085; Aug. 18; Gaz. vol. 205; p. 967.

Sewell, Benjamin F. B., Washington, D. C. Apparatus for scrubbing or similarly treating liquids and gases. No. 1,108,853; Aug. 25; Gaz. vol. 205; p. 1280.

Sexton, George L., Waukesha, Wis., assignor to The Badger Concrete Mixer and Machinery Co. Portable concrete-mixer. No. 1,108,523; Aug. 25; Gaz. vol. 205; p. 1167.

Sexton, Isaac E., West Medford, Mass. Sheet-metal can. No. 1,107,854; Aug. 18; Gaz. vol. 205; p. 887.

Seymour, George E., Newcastle-upon-Tyne, England. Gearing. No. 1,107,454; Aug. 18; Gaz. vol. 205; p. 746.

Shallor, Frank E. (See Kuhn and Shallor.)

Shakespeare, William, Jr., and W. Schmid, assignors to William Shakespeare, Jr., Company, Kalamazoo, Mich. Carbureter. No. 1,107,713; Aug. 18; Gaz. vol. 205; p. 838.

Shallbetter, Benedict W., and W. T. Abrams, Minneapolis, Minn. Ink-fountain for printing-presses. No. 1,105,850; Aug. 4; Gaz. vol. 205; p. 92.

Shamroy, Nicholas J., New York, N. Y. Vending-machine. No. 1,105,708; Aug. 4; Gaz. vol. 205; p. 43.

Shane, George H., assignor to The Steel Railway Tie and Appliance Company, Denver, Colo. Railway-tie and rail-chair. No. 1,106,415; Aug. 11; Gaz. vol. 205; p. 330.

Shantz, Edgar, Rochester, N. Y. Button-making machine. No. 1,107,629; Aug. 18; Gaz. vol. 205; p. 808.

Shapiro, Samuel, Philadelphia, Pa. Apparatus for pasteurizing and cooling milk. No. 1,108,404; Aug. 25; Gaz. vol. 205; p. 1126.

Sharlow Bros. Co. (See Sharlow, Charles E., assignor.)

Sharlow, Charles E., Union Hill, N. J., assignor to Sharlow Bros. Co., New York, N. Y. Lantern-slide carrier. No. 1,108,256; Aug. 25; Gaz. vol. 205; p. 1075.

Sharp, Archibald, London, England. Pneumatic spring. No. 1,107,714; Aug. 18; Gaz. vol. 205; p. 839.

Sharp, George H., Larned, Kans. Envelop for circular-letters. No. 1,108,257; Aug. 25; Gaz. vol. 205; p. 1075.

Sharpneck, Ellel L., Winthrop, Mass. Brush. No. 1,107,715; Aug. 18; Gaz. vol. 205; p. 839.

Shasberger, William, *et al.* (See Kelly, Albert F., assignor.)

Shattuck, Edwin H., Granby, Conn. Internal-combustion engine. No. 1,108,010; Aug. 18; Gaz. vol. 205; p. 941.

Shearer, Leslie J. (See Cloke and Shearer.)

Shearer, William J. (See Schaeffer and Shearer.)

Sheeley, Charles C., Harshman, and F. J. Gruenewald, Dayton, Ohio. Woodworking-machine. No. 1,108,854; Aug. 25; Gaz. vol. 205; p. 1281.

Shelton, Frank M., assignor of one-half to H. E. Pinnick, Richmond, Ind. Ventilated door. No. 1,107,369; Aug. 18; Gaz. vol. 205; p. 715.

Shepheard, James, assignor of one-half to J. J. Ellis, Detroit, Mich. Gas instantaneous water-heater. No. 1,107,370; Aug. 18; Gaz. vol. 205; p. 715.

Sheppard, William. (See Irvin and Sheppard.)

Sherburne, Charles H. (See Webster, George A., assignor.)

Sherman, John C., Brookline, Mass., assignor to H. Parker, Berlin, N. H. Electric web-drying machine. No. 1,106,683; Aug. 11; Gaz. vol. 205; p. 428.

Sherry, Walter J., St. Louis, Mo. Motor-locking mechanism. No. 1,107,855; Aug. 18; Gaz. vol. 205; p. 887.

Sherwood, Ludlow S., Cleveland, Ohio. Joist-hanger. No. 1,105,851; Aug. 4; Gaz. vol. 205; p. 93.

Sherwood, Ludlow S., Cleveland, Ohio. Hinge. No. 1,105,852; Aug. 4; Gaz. vol. 205; p. 93.

Shetler, Karl Z., Cleveland, Ohio. Internal-combustion engine. No. 1,106,522; Aug. 11; Gaz. vol. 205; p. 371.

Shevlin, Charles W., Chicago, Ill. Container. No. 1,106,004; Aug. 4; Gaz. vol. 205; p. 146.

Shevlin, Charles W., Chicago, Ill. Container. No. 1,106,005; Aug. 4; Gaz. vol. 205; p. 146.

Shibe, Benjamin F., Bala, Pa. Playing-ball. No. 1,106,978; Aug. 11; Gaz. vol. 205; p. 530.

Shibe, Benjamin F., Bala, Pa. Boxing glove. No. 1,106,979; Aug. 11; Gaz. vol. 205; p. 530.

Shiek, Daniel W., Chicago, Ill. Stair-carpet retainer. No. 1,106,320; Aug. 4; Gaz. vol. 205; p. 253.

Shiek, Daniel W., Chicago, Ill., assignor to W. L. Milliken, Barnstable, Mass. Paper-feed device for computing-machines, &c. No. 1,105,853; Aug. 4; Gaz. vol. 205; p. 94.

Shively, Emily J. (See Whitney, Claire, assignor.)

Shoemaker, John F., Brandsville, Mo. Check-book holder. No. 1,108,631; Aug. 25; Gaz. vol. 205; p. 1205.

Shone, Isaac, Westminster, London, England. Sewerage system. No. 1,108,011; Aug. 18; Gaz. vol. 205; p. 941.

Shontz, Edgar A., Phillipsburg, Pa. Bottle-centering attachment for bottling-machines. No. 1,106,738; Aug. 11; Gaz. vol. 205; p. 447.

Shook & Fletcher. (See Caine, William P., assignor.)

Shores, Orrie B., St. Louis, Mo. Mechanism for transmitting motion. No. 1,106,006; Aug. 4; Gaz. vol. 205; p. 146.

Shortt, John H., Kewanee, Ill. Water-closet. No. 1,108,799; Aug. 25; Gaz. vol. 205; p. 1260.

Shows, Judge N., and C. B. Tucker, Ponchatoula, La. Non-refillable bottle. No. 1,108,012; Aug. 18; Gaz. vol. 205; p. 941.

Shrader, Andrew O., St. Louis, Mo. Differential locking-gearing. No. 1,108,800; Aug. 25; Gaz. vol. 205; p. 1261.

Shriver, Jay R., Elkhart, Ind. Ratchet-wrench. No. 1,105,854; Aug. 4; Gaz. vol. 205; p. 94.

Shue, Edward F., New York, N. Y. Fender. No. 1,108,801; Aug. 25; Gaz. vol. 205; p. 1261.

Shultz, Albert E., Pinners, Va. Air-feeding and air-operated grate. No. 1,107,121; Aug. 11; Gaz. vol. 205; p. 576.

Shunk, Frank A., Strentor, assignor to Sawyer Biscuit Company, Chicago, Ill. Filler for cracker and cake boxes. No. 1,108,405; Aug. 25; Gaz. vol. 205; p. 1126.

Sibert, Edwin F. (See Kelly and Sibert.)

Sickler, Marion M., Palo, Cal. Road-machine. No. 1,107,186; Aug. 11; Gaz. vol. 205; p. 602.

Sidell, Philip S., Shreve, Ohio. Jointer attachment for plows. No. 1,106,739; Aug. 11; Gaz. vol. 205; p. 447.

Siebert, Charles M., *et al.* (See Bradshaw, Herbert B., assignor.)

Siebert, Louis A., *et al.* (See Bradshaw, Herbert B., assignor.)

Siedentopf, Carl, Magdeburg, Germany. Dressing mortar made of lime and sand. No. 1,108,406; Aug. 25; Gaz. vol. 205; p. 1126.

Siemens & Halske, A. G. (See Blattmann, Ernst, assignor.)

Siemens & Halske Aktiengesellschaft. (See Grabe, George, assignor.)

Siemens-Schuckert-Werke G. m. b. H. (See Friese, Robert, assignor.)

Siemens-Schuckert Werke G. m. b. H. (See Hohagen, Walter, assignor.)

Sigel, Samuel S., Portland, and A. W. Johnson, Lents, Oreg. Window-cleaning device. No. 1,108,258; Aug. 25; Gaz. vol. 205; p. 1075.

Siggelkow, Stanley E., McFarland, Wis. Demountable rim. No. 1,106,980; Aug. 11; Gaz. vol. 205; p. 531.

Silberrad, Oswald. (See Parsons and Silberrad.)

Silberstein, Samuel. (See Wagner, Michael, assignor.)

Silver, Chester O., Trenton, Nebr. Automatic wagon-brake. No. 1,106,247; Aug. 4; Gaz. vol. 205; p. 229.

Simley, Iver. (See Field and Simley.)

Simmons, George T., Janesville, Wis. Fire-starter. No. 1,106,007; Aug. 4; Gaz. vol. 205; p. 147.

Simmons, Leroy W., Broad Ripple, Ind. Cultivator. No. 1,107,856; Aug. 18; Gaz. vol. 205; p. 888.

Simmons, Van L., Cadillac, Mich. Sheet-music holder. No. 1,106,851; Aug. 11; Gaz. vol. 205; p. 487.

Simon, Joseph. (See Albisser and Simon.)

Simonds, Frank A., Grand Rapids, Mich. Hoisting device for motor-vehicles. No. 1,106,684; Aug. 11; Gaz. vol. 205; p. 428.

Simons, Ernest D., assignor to Scovill Manufacturing Company, Waterbury, Conn. Reel-fixture. No. 1,108,855; Aug. 25; Gaz. vol. 205; p. 1281.

Simpson, Charles A., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,107,371; Aug. 18; Gaz. vol. 205; p. 715.

Simpson, Frank M., Alameda, Cal. Nut-lock. No. 1,106,248; Aug. 4; Gaz. vol. 205; p. 229.

Singer Manufacturing Company, The. (See Corrall, Herbert, assignor.)

Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)

Singer Manufacturing Company, The. (See Diehl and Hemleb, assignors.)

Singer Manufacturing Company, The. (See Hemleb, Martin, assignor.)

Singer Manufacturing Company, The. (See Horton, Charles M., assignor.)

Sintz, Clande, Detroit, Mich. Cooling-tank. No. 1,107,455; Aug. 18; Gaz. vol. 205; p. 747.

Sipe, Harry E. (See Sipe, John F. and H. E.)

Sipe, John F. and H. E., New York, N. Y. Spring-wheel for vehicles. No. 1,106,008; Aug. 4; Gaz. vol. 205; p. 147.

Sipe, John F. and H. E., New York, N. Y. Spring-wheel for vehicles. No. 1,108,632; Aug. 25; Gaz. vol. 205; p. 1205.

Sissel, James T. (See Clay, Boston, assignor.)

Siverd, William, Genesee, N. Y. Back-stop or brake for vehicles. No. 1,106,321; Aug. 4; Gaz. vol. 205; p. 253.

Sixma, Klaas, Brooklyn, N. Y. Fitting for electrical conduits. No. 1,108,259; Aug. 25; Gaz. vol. 205; p. 1076.

Skalstad, Carl A., Chicago, Ill. Umbrella. No. 1,105,709; Aug. 4; Gaz. vol. 205; p. 44.

Skiff, Joseph B. (See Westphall and Skiff.)

Skinner, Burr R., Aberdeen, S. D. Means for heating boiler feed-water. No. 1,108,633; Aug. 25; Gaz. vol. 205; p. 1205.

Skinner Engine Company. (See Stevens, Robert C., assignor.)

Skinner, James A., East Orange, assignor to F. F. Uehling, Passaic, N. J. Time-switch mechanism. No. 1,106,416; Aug. 11; Gaz. vol. 205; p. 330.

Skinner, Walter A. (See Cain and Skinner.)

Slade, Albert J., Jr., assignor to Dexter Folder Company, Pearl River, N. Y. Delivery trip mechanism. No. 1,108,802; Aug. 25; Gaz. vol. 205; p. 1261.

Slaght, Elias E., Toronto, Ontario, Canada. Tobacco-pipe. No. 1,107,716; Aug. 18; Gaz. vol. 205; p. 839.

Slattery, John, Chrome, N. J. Wheel-forging mill. No. 1,107,717; Aug. 18; Gaz. vol. 205; p. 840.

Slaughter, George W., Jr., San Augustine, Tex. Well-drilling machine. No. 1,106,322; Aug. 4; Gaz. vol. 205; p. 254.

Slick, Edwin E., Pittsburgh, Pa. Hotbed. No. 1,106,478; Aug. 11; Gaz. vol. 205; p. 355.

Slick, Edwin E., Pittsburgh, Pa. Punching and shearing apparatus. No. 1,106,740; Aug. 11; Gaz. vol. 205; p. 447.

Slick, Edwin E., Pittsburgh, Pa. Blank shearing and forming apparatus. No. 1,106,741; Aug. 11; Gaz. vol. 205; p. 447.

Slick, Edwin E., Pittsburgh, Pa. Method of and apparatus for forging car-wheels. No. 1,108,260; Aug. 25; Gaz. vol. 205; p. 1076.

Slick, Edwin E., Pittsburgh, Pa. Method of and apparatus for forging car-wheels and similar metal bodies. No. 1,108,524; Aug. 25; Gaz. vol. 205; p. 1167.

Slipcevic, Andrew, Erie, Pa. Non-skid device. No. 1,105,931; Aug. 4; Gaz. vol. 205; p. 121.

Slocum, Arthur G., Ensign, Kans. Wheelwright apparatus. No. 1,108,803; Aug. 25; Gaz. vol. 205; p. 1262.

Smangaard, Gunder P., Cerrogordo, Minn. Neck-yoke. No. 1,106,417; Aug. 11; Gaz. vol. 205; p. 331.

Smalley Manufacturing Company. (See Frick, Orlando C., assignor.)

Smenner, Frederick D., Fort Wayne, Ind. Pitch-regulating device for ocarinas. No. 1,106,249; Aug. 4; Gaz. vol. 205; p. 229.

Smethers, James A., assignor to The Beatrice Iron Works, Beatrice, Nebr. Caster-wheel truck attachment for cultivators, &c. No. 1,106,742; Aug. 11; Gaz. vol. 205; p. 448.

Smith, Adolph H., and G. W. Nibbe, Chicago, Ill. Anti-creeping device for rails. No. 1,108,525; Aug. 25; Gaz. vol. 205; p. 1168.

Smith, Albert D., assignor to National Sewing Machine Company, Belvidere, Ill. Sewing-machine feeding mechanism. No. 1,107,718; Aug. 18; Gaz. vol. 205; p. 840.

Smith, Arthur W., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,106,898; Aug. 11; Gaz. vol. 205; p. 503.

Smith, Cicero G., Palisade, Colo., assignor to Smith Spring Wheel Company. Spring-wheel for vehicles. No. 1,105,932; Aug. 4; Gaz. vol. 205; p. 121.

Smith, Clarence E., assignor to Double Body Bolster Co., St. Louis, Mo. Equalizing car-truck. No. 1,107,857; Aug. 18; Gaz. vol. 205; p. 888.

Smith, Edgar W., assignor of one-half to A. J. McLeod, Carbon, Alberta, Canada. Harrow. No. 1,108,261; Aug. 25; Gaz. vol. 205; p. 1076.

Smith, Esmond M., assignor to The Multi-Lux Illuminating Company, Cleveland, Ohio. Lighting-fixture. No. 1,106,685; Aug. 11; Gaz. vol. 205; p. 428.

Smith, Gilman B., Montclair, N. J. Loop-tape. No. 1,108,262; Aug. 25; Gaz. vol. 205; p. 1076.

Smith, Guy O., Newton, Mass. Cast-off for suspenders. No. 1,105,933; Aug. 4; Gaz. vol. 205; p. 122.

Smith, Harry W., North Grafton, Mass., assignor to Crompton & Knowles Loom Works. Loom. No. 1,107,553; Aug. 18; Gaz. vol. 205; p. 779.

Smith, Henry L., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Pointing-tool. No. 1,108,407; Aug. 25; Gaz. vol. 205; p. 1126.

Smith, Jacob A., assignor to Reliable Electric Company, Chicago, Ill. Support for electric-lamp sockets. No. 1,105,855; Aug. 4; Gaz. vol. 205; p. 94.

Smith, James H., Buckeystown, Md. Adjustable sanitary cuspidor. No. 1,106,163; Aug. 4; Gaz. vol. 205; p. 202.

Smith, Jesse A. B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,107,372; Aug. 18; Gaz. vol. 205; p. 716.

Smith, John A. (See Clippinger and Smith.)

Smith, John G., Wahoo, Nebr. Snap-fastener. No. 1,106,122; Aug. 11; Gaz. vol. 205; p. 577.

Smith, John H., McDonough, Ga. Gin-saw-dressing machine. No. 1,107,456; Aug. 18; Gaz. vol. 205; p. 747.

Smith, John R., Haynesville, La. Fertilizer-distributer. No. 1,108,263; Aug. 25; Gaz. vol. 205; p. 1077.

Smith, John W. (See Hollandt and Smith.)

Smith, Joseph W. (See Mitchell, William S., assignor.)

Smith, Linsey F., Rockford, Ala. Grading-machine. No. 1,107,457; Aug. 18; Gaz. vol. 205; p. 747.

Smith, Martin J., Brockton, Mass. Vehicle-spring. No. 1,108,479; Aug. 25; Gaz. vol. 205; p. 1152.

Smith, Oliver H., Washington, D. C. Mail-marker. No. 1,107,630; Aug. 18; Gaz. vol. 205; p. 808.

Smith Spring Wheel Company. (See Smith, Cicero G., assignor.)

Smith, Stephen P., assignor of one-fourth to R. L. Rich, one-fourth to F. A. Nassle, Berkeley, and one-fourth to C. W. Keiver, Oakland, Cal. Stove. No. 1,105,856; Aug. 4; Gaz. vol. 205; p. 95.

Smith, Thomas L., Milwaukee, Wis. Method of and device for mixing concrete. No. 1,107,237; Aug. 11; Gaz. vol. 205; p. 621.

Smith, Thomas W., Delphos, Ohio. Fence-post. No. 1,107,858; Aug. 18; Gaz. vol. 205; p. 889.

Smith, Walter J., Bessemer, Ala. Splice-bar. No. 1,107,123; Aug. 11; Gaz. vol. 205; p. 577.

Smith, Walter O., Spur, Tex. Tank-bottom holder. No. 1,106,743; Aug. 11; Gaz. vol. 205; p. 448.

Smith, William E. (See Harrison and Smith.)

Smith, William J., assignor to Waterbury Clock Co., Waterbury, Conn. Alarm-clock. No. 1,106,852; Aug. 11; Gaz. vol. 205; p. 487.

Smouse, George E., Washington, D. C. Caster. No. 1,106,853; Aug. 11; Gaz. vol. 205; p. 487.

Snider, John W., Denton, N. C. Screw-jack. No. 1,106,009; Aug. 4; Gaz. vol. 205; p. 148.

Snively, Charles D. (See Onion and Snively.)

Snook, John E., Loganton, Pa. Combination screen-frame. No. 1,105,857; Aug. 4; Gaz. vol. 205; p. 95.

Snyder, Daniel W. (See Upp and Snyder.)

Snyder, Frank A., Pittsburgh, Pa. Spit-valve for cornets. No. 1,107,458; Aug. 18; Gaz. vol. 205; p. 748.

Snyder, Harry M., assignor to Detroit Demountable Rim Co., Detroit, Mich. Wheel-rim construction. No. 1,107,719; Aug. 18; Gaz. vol. 205; p. 840.

Snyder, Harry M., assignor to Detroit Demountable Rim Co., Detroit, Mich. Wheel-rim construction. No. 1,107,720; Aug. 18; Gaz. vol. 205; p. 840.

Snyder, John R., Dallas Center, Iowa. Harrow. No. 1,108,013; Aug. 18; Gaz. vol. 205; p. 942.

Snyder, Lemuel H., White Lake, S. D. Switchboard-plug. No. 1,106,118; Aug. 4; Gaz. vol. 205; p. 187.

Snyder, Saul S., Columbus, Ohio. Railway-tie. No. 1,107,459; Aug. 18; Gaz. vol. 205; p. 748.

Sobey, William, assignor to J. I. Case Plow Works, Racine, Wis. Gang-plow. No. 1,106,119; Aug. 4; Gaz. vol. 205; p. 187.

Société Anonyme des Anciens Etablissements Panhard & Levassor. (See Krebs, Arthur C., assignor.)

Société Anonyme des Etablissements L. Bleriot. (See Bossu, Pierre, assignor.)

Societe Ballot & Co. (See Saussard, Louis, assignor.)

Société des Fabriques de Spiraux Réunies. (See Guillaume, Charles E., assignor.)

Societe Etablissements E. Feuillette. (See Feuillette, Emile, assignor.)

Sokolov, Jacob, Brooklyn, assignor of one-half to J. Firth, New York, N. Y. Wrench. No. 1,108,264; Aug. 25; Gaz. vol. 205; p. 1077.

Solis, William J. (See Hyman, Charles H., assignor.)

Sottong, Henry F., Ponca, Okla. Horseshoe. No. 1,108,014; Aug. 18; Gaz. vol. 205; p. 942.

Southworth, August R., *et al.* (See Heina, William M., assignor.)

Souzon, Peter N., Philadelphia, Pa. Securing device for dental brush-mandrels. No. 1,107,631; Aug. 18; Gaz. vol. 205; p. 809.

Spacke, Fred W., D. T. Brownlee, and W. Spacke, assignors to The F. W. Spacke Machine Company, Indianapolis, Ind. Internal-combustion engine. No. 1,108,265; Aug. 25; Gaz. vol. 205; p. 1078.

Spacke, William. (See Spacke, Brownlee, and Spacke.)

Spacke, William, assignor to The F. W. Spacke Machine Company, Indianapolis, Ind. Inlet-valve for internal-combustion engines. No. 1,108,266; Aug. 25; Gaz. vol. 205; p. 1078.

Spain, Henry P., Draketown, Ga. Door-holder. No. 1,107,124; Aug. 11; Gaz. vol. 205; p. 578.

Spalding, Frank, assignor to Brown & Sharpe Manufacturing Company, Providence, R. I. Micrometer-caliper. No. 1,107,187; Aug. 11; Gaz. vol. 205; p. 603.

Spängler, Ludwig, Vienna, Austria-Hungary. Framework of double-decked vehicles. No. 1,108,634; Aug. 25; Gaz. vol. 205; p. 1206.

Spann, James C. (See Hovey, Selden P., assignor.)

Sparks Drilling Jar Company. (See Sparks, William A., assignor.)

Sparks, William A., St. Marys, assignor to Sparks Drilling Jar Company, Charleston, W. Va. Well-drill jar. No. 1,108,267; Aug. 25; Gaz. vol. 205; p. 1078.

Spear, Ellis, *et al.*, trustees. (See Cahill, Thaddeus, assignor.)

Spear, John G., Springfield, Mass. Metal-working machine. No. 1,106,250; Aug. 4; Gaz. vol. 205; p. 230.

Specialty Manufacturing Company. (See Winkelmeyer, John, assignor.)

Speckman, Charles H., Philadelphia, Pa. Radiator connection. No. 1,106,981; Aug. 11; Gaz. vol. 205; p. 531.

Speed Press Co., The. (See Green, Harry B., assignor.)

Speenburg, Frank A. (See Allen and Speenburg.)

Spencer, Franklin, Jr. (See Holdaway, Hall H., assignor.)

Sperry, Samuel E., Woodhaven, assignor to International Typesetting Machine Company, New York, N. Y. Pump-actuating means for type-casting machines. No. 1,108,804; Aug. 25; Gaz. vol. 205; p. 1262.

Spies, Henry, *et al.* (See Price, John D., assignor.)

Spirella Company, The. (See Schuler, David, assignor.)

Spirella Company, The. (See Wadsworth, Frank L. O., assignor.)

Spirella Company, The. (See Welsh, James M., assignor.)

Sponsel, Charles W. (See Allen and Sponsel.)

Sporleder, Edward. (See Edmondson, Thomas R., assignor.)

Sprunger, Isaac, Fort Wayne, Ind. Combined clothes-rack and table. No. 1,106,418; Aug. 11; Gaz. vol. 205; p. 331.

Stacey, William S. (See Wright, James, assignor.)

Stachnick, John W., Baltimore, Md. Automatic automobile rear signal. No. 1,106,982; Aug. 11; Gaz. vol. 205; p. 531.

Stack, Fred, Gardner, Colo. Gearing. No. 1,107,721; Aug. 18; Gaz. vol. 205; p. 841.

Stahl, Charles E., assignor to J. B. Stahl, Hartford City, Ind. Excavating-machine. No. 1,108,268; Aug. 25; Gaz. vol. 205; p. 1079.

Stahl, Jacob B. (See Stahl, Charles E., assignor.)

Standard Car Truck Company. (See Barber and Webb, assignors.)

Standard Knitting Mills Company. (See Marlow, William, assignor.)

Standard Oil Company. (See Burton, William M., assignor.)

Standard Register Company, The. (See Schirmer, Theodore F., assignor.)

Standard Thermometer Company. (See Adair, Thomas D., assignor.)

Standard Underground Cable Company. (See Davis, Charles W., assignor.)

Standard Varnish Works. (See Beausejour, Reme A., assignor.)

Stanfield, Jasper H., assignor of one-half to F. Schuler, Muskegon, Mich. Toy fly-swatter. No. 1,108,269; Aug. 25; Gaz. vol. 205; p. 1079.

Stanfield, Jasper H., Muskegon, assignor of one-half to Michigan Washing Machine Company, Muskegon Heights, and one-fourth to W. H. Bozell, Muskegon, Mich. Cherry seeder or pitter. No. 1,105,858; Aug. 4; Gaz. vol. 205; p. 95.

Stanford, Arthur L., Chicago, Ill. Rail-anchor. No. 1,108,635; Aug. 25; Gaz. vol. 205; p. 1206.

Stanley, Joseph, Huntington, Ind. Automatic signaling apparatus for locomotives. No. 1,108,015; Aug. 18; Gaz. vol. 205; p. 942.

Staples, Albert F., Dorchester, Mass. Ash-sifter. No. 1,108,270; Aug. 25; Gaz. vol. 205; p. 1079.

Staples, Willard G., Newburyport, assignor, by mesne assignments, to Federal Metallic Packing Company, Boston, Mass. Twisting-machine. No. 1,106,899; Aug. 11; Gaz. vol. 205; p. 503.

Stark Car Coupler Corporation. (See Kadle, Carl H., assignor.)

Starkweather, Henry W., assignor to Winchester Repeating Arms Co., New Haven, Conn. Mushroom-bullet. No. 1,107,722; Aug. 18; Gaz. vol. 205; p. 841.

Starr, A. P., *et al.*, trustees. (See Paffrath, Theodor H., assignor.)
Starr, Alden B., New York, N. Y. Bottoming-machine. No. 1,106,419; Aug. 11; Gaz. vol. 205; p. 331.
Starr, George B., assignor of one-half to O. J. Meads, Oakland, Cal. Automatic alarm time-clock. No. 1,108,636; Aug. 25; Gaz. vol. 205; p. 1206.
Stassano, Ernesto, Turin, Italy. Electric furnace. No. 1,105,859; Aug. 4; Gaz. vol. 205; p. 96.
Staunton, Frederic J., Milwaukee, Wis. Treating textile and other porous fabrics. No. 1,108,408; Aug. 25; Gaz. vol. 205; p. 1126.
Steel, Leonard R., Cleveland, Ohio. Carrier for receptacles. No. 1,108,016; Aug. 18; Gaz. vol. 205; p. 943.
Steel, Leonard R., Cleveland, Ohio. Bottle-receptacle. No. 1,108,017; Aug. 18; Gaz. vol. 205; p. 943.
Steel Railway Tie and Appliance Company, The. (See Shane, George H., assignor.)
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,106,420; Aug. 11; Gaz. vol. 205; p. 332.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,106,744; Aug. 11; Gaz. vol. 205; p. 449.
Steele, John E., Terra Bella, Cal. Wheeled scraper. No. 1,107,460; Aug. 18; Gaz. vol. 205; p. 748.
Stein, Meyer, Springfield, Ill. Acetylene-lamp. No. 1,106,062; Aug. 4; Gaz. vol. 205; p. 167.
Steiner, Sigmund, assignor of one-half to W. Krohn, Borysław, Austria-Hungary. Apparatus for raising sunken ships. No. 1,106,983; Aug. 11; Gaz. vol. 205; p. 532.
Steinhilber, Adolf A., Rock Island, assignor to Artista Piano Player Company, Milan, Ill. Pneumatic action. No. 1,107,554; Aug. 18; Gaz. vol. 205; p. 780.
Stephens, Charles, Barton Heights, assignor, by mesne assignments, to A. H. Cailigan, Richmond, Va. Signaling system. No. 1,105,860; Aug. 4; Gaz. vol. 205; p. 96.
Stephens, Roscoe W., Pasadena, Cal. Drilling-rig. No. 1,106,900; Aug. 11; Gaz. vol. 205; p. 503.
Stevens, Alfred L., Chicago, Ill. Means for supporting railway-rails. No. 1,106,421; Aug. 11; Gaz. vol. 205; p. 332.
Stevens, Alfred L., Chicago, Ill. Locomotive attachment. No. 1,106,422; Aug. 11; Gaz. vol. 205; p. 333.
Stevens, Alfred L., Chicago, Ill. Railway cross-tie. No. 1,106,423; Aug. 11; Gaz. vol. 205; p. 333.
Stevens, Archie H., Hornell, N. Y. Tool-holder. No. 1,106,745; Aug. 11; Gaz. vol. 205; p. 449.
Stevens, Burt D., Riverside, assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Jogger for printing-presses. No. 1,107,859; Aug. 18; Gaz. vol. 205; p. 889.
Stevens, Ernest J., Philadelphia, Pa. Inhaler. No. 1,105,934; Aug. 4; Gaz. vol. 205; p. 122.
Stevens, Frederick C. (See Clement, Edward E., assignor.)
Stevens, J. O. (See Ludlum, William, Jr., assignor.)
Stevens, John B., Macon, Ga. Brake attachment for railway-cars. No. 1,108,526; Aug. 25; Gaz. vol. 205; p. 1168.
Stevens, Robert C., assignor to Skinner Engine Company, Erie, Pa. Apparatus for controlling steam-superheaters. No. 1,106,337; Aug. 4; Gaz. vol. 205; p. 258.
Stevens, Robert C., assignor to Skinner Engine Company, Erie, Pa. Steam-engine. No. 1,106,338; Aug. 4; Gaz. vol. 205; p. 259.
Stevenson, John. (See Jenol and Stevenson.)
Stevenson, William H., Chicago, Ill., and G. Gibbs, New York, N. Y., assignors to Philadelphia Holding Company, Philadelphia, Pa. Car-truck. No. 1,106,339; Aug. 4; Gaz. vol. 205; p. 259.
Steward, N. Harper. (See Paull, Carl, assignor.)
Stewart, Burt C., assignor to Murphy Iron Works, Detroit, Mich. Grate-bar. No. 1,107,860; Aug. 18; Gaz. vol. 205; p. 889.
Stewart, John H., Lynn, Mass. Molding counters. No. 1,108,409; Aug. 25; Gaz. vol. 205; p. 1127.
Stewart, Robert P., Jamestown, N. Y. Sheet-metal receptacle. No. 1,105,710; Aug. 4; Gaz. vol. 205; p. 44.
Sthay, Alfred J., Seattle, Wash. Window-sash fastener. No. 1,108,271; Aug. 25; Gaz. vol. 205; p. 1080.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,108,805; Aug. 25; Gaz. vol. 205; p. 1262.
Stiefel, Alvin C., Houma, La. Hand-pump. No. 1,108,637; Aug. 25; Gaz. vol. 205; p. 1207.
Stiefel, George, Chicago, Ill. Bung-closure. No. 1,107,723; Aug. 18; Gaz. vol. 205; p. 842.
Stiegelmann, Armand J. (See Reinking and Stiegelmann.)
Stifel, Otto F. (See Cowgill, Orph W., assignor.)
Stiglich, Stephen, Laurium, and J. W. Schneller, Calumet, Mich. Match-box. No. 1,108,018; Aug. 18; Gaz. vol. 205; p. 943.
Stille, Curt, Zehlendorf-West, near Berlin, Germany. Electro-optical cell. No. 1,108,638; Aug. 25; Gaz. vol. 205; p. 1207.
Stillman, Thomas B., Hoboken, N. J. Extracting potassium compounds from siliceous minerals. No. 1,106,984; Aug. 11; Gaz. vol. 205; p. 532.
Stimpson, Estelle H. (See Stimpson, Walter F., assignor.)
Stimpson, Walter F., assignor, by mesne assignments, to E. H. Stimpson, Detroit, Mich. Computing-scale. No. 1,106,323; Aug. 4; Gaz. vol. 205; p. 254.
Stinebring, George, Wooster, Ohio. Clutch. No. 1,107,724; Aug. 18; Gaz. vol. 205; p. 842.
Stober, Floyd B., Byers, Colo. Antifreezing appliance. No. 1,108,806; Aug. 25; Gaz. vol. 205; p. 1263.
Stockly, Walter D., Fairmont, W. Va., assignor to Mining Appliances Company. Self-lubricating wheeled vehicle. No. 1,108,807; Aug. 25; Gaz. vol. 205; p. 1263.
Stockly, Walter D., Fairmont, W. Va., assignor to Mining Appliances Company. Mine-car. No. 1,108,808; Aug. 25; Gaz. vol. 205; p. 1264.
Stockly, Walter D., Fairmont, W. Va., assignor to Mining Appliances Company. Wheel-connector for tubular axles. No. 1,108,809; Aug. 25; Gaz. vol. 205; p. 1264.
Stockov, Max and S., New York, N. Y. Machine for forming shanks on buttons. No. 1,105,711; Aug. 4; Gaz. vol. 205; p. 44.
Stockov, Solomon. (See Stockov, Max and S.)
Stockstrom, Louis, assignor to American Stove Company, St. Louis, Mo. Oven-door. No. 1,108,810; Aug. 25; Gaz. vol. 205; p. 1264.
Stockwell, William H., Shreveport, La. Automobile towing attachment. No. 1,106,746; Aug. 11; Gaz. vol. 205; p. 449.
Stoeltzlen, Leo V., Erie, Pa., assignor to General Electric Company. Fuel-pump. No. 1,108,811; Aug. 25; Gaz. vol. 205; p. 1265.
Stofa, Jozsef, Elgin, Ill. Inspection-car. No. 1,106,161; Aug. 4; Gaz. vol. 205; p. 203.
Stolley, William, Vivian, S. D. Fly-screen. No. 1,106,010; Aug. 4; Gaz. vol. 205; p. 148.
Stone, Elmer B., assignor to The American Hardware Corporation, New Britain, Conn. Electroplating apparatus. No. 1,108,410; Aug. 25; Gaz. vol. 205; p. 1127.
Stone, James, Chicago, Ill. Lap-board. No. 1,106,901; Aug. 11; Gaz. vol. 205; p. 504.
Stone, James C., *et al.* (See Lake and Marks, assignors.)
Stoner, Henry E., Walton-on-Thames, England. Roller-bearing. No. 1,105,935; Aug. 4; Gaz. vol. 205; p. 122.
Stopple, Walter W., assignor to Little Giant Hay Press Company, Alma, Mich. Baling-press. No. 1,106,251; Aug. 4; Gaz. vol. 205; p. 230.
Stopple, Walter W., assignor to Little Giant Hay Press Company, Alma, Mich. Hay-press power mechanism. No. 1,106,252; Aug. 4; Gaz. vol. 205; p. 230.
Story, Ward B., assignor to Ward B. Story Company, Inc., New York, N. Y. Inking device for printing-presses. No. 1,105,861; Aug. 4; Gaz. vol. 205; p. 97.
Stout, Charles N., assignor of one-half to G. Morris Hamilton, Ontario, Canada. Refillable fuse. No. 1,107,861; Aug. 18; Gaz. vol. 205; p. 890.
Stout, Robert P. (See Meigs and Stout.)
Stout, Robert P., and F. A. Sullivan, Bethlehem, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Gun-sight. No. 1,106,747; Aug. 11; Gaz. vol. 205; p. 450.
Strait, William, Eau Claire, Wis. Tractor. No. 1,105,862; Aug. 4; Gaz. vol. 205; p. 97.
Strand, George H., Merrill, Wis. Railway-tie. No. 1,106,165; Aug. 4; Gaz. vol. 205; p. 203.
Strang, Charles B. and J. F., Lindenwood, Ill. Primer for internal-combustion engines. No. 1,108,411; Aug. 25; Gaz. vol. 205; p. 1127.
Strang, John F. (See Strang, Charles B. and J. F.)
Strange, Harry B., Blackheath, assignor to Thos. Firth and Sons, Limited, Sheffield, England. Fuse for projectiles. No. 1,107,461; Aug. 18; Gaz. vol. 205; p. 748.
Strathern, Alexander G., Coatbridge, Scotland. Machine for impressing metal bars by rolling the same. No. 1,108,272; Aug. 25; Gaz. vol. 205; p. 1080.
Straubel, Rudolf, assignor to Firm of C. Zeiss, Jena, Germany. Cooling-chamber for projection purposes. No. 1,107,725; Aug. 18; Gaz. vol. 205; p. 842.
Strauss Manufacturing Company. (See Hall, Frank H., assignor.)
Strebel, Louis, Bergenfield, N. J. Cap-feeder for bottle-capping machines. No. 1,106,590; Aug. 11; Gaz. vol. 205; p. 396.
Streett, George A., Cleveland, Ohio. Loose-leaf binder. No. 1,106,479; Aug. 11; Gaz. vol. 205; p. 355.
Streich, Charles G., Oshkosh, Wis. Dumping-wagon or analogous container. No. 1,106,528; Aug. 11; Gaz. vol. 205; p. 371.
Streich, Charles G., Oshkosh, Wis. Wagon-body. No. 1,106,524; Aug. 11; Gaz. vol. 205; p. 371.
Strickler, Mary E., Meadville, Mo. Chicken-feeder. No. 1,108,019; Aug. 18; Gaz. vol. 205; p. 944.
Stringham, Albert W. (See Gordon and Stringham.)
Stritzel, John J., Elma, Iowa. Compound cushion-heel. No. 1,106,985; Aug. 11; Gaz. vol. 205; p. 532.
Stromberg-Carlson Telephone Manufacturing Company. (See Hague, Charles E., assignor.)
Stromberg Motor Devices Company. (See Goldberg, John S., assignor.)
Strong, Elisha E., Paris, France, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,106,424; Aug. 11; Gaz. vol. 205; p. 333.
Stubbs, Ellen M. J., Philadelphia, Pa. Portable washtub. No. 1,107,862; Aug. 18; Gaz. vol. 205; p. 890.

Stücki, Willy, assignor to Küng, Sigg & Cie., Biel, Switzerland. Insole. No. 1,106,986; Aug. 11; Gaz. vol. 205; p. 532.
Stukart, Hendrik, assignor to U. S. Slicing Machine Company, Chicago, Ill. Slicing-machine. No. 1,106,591; Aug. 11; Gaz. vol. 205; p. 396.
Stungo, Josef, Berlin, assignor of one-half to W. Schneider, Charlottenburg, Germany. Pneumatic tire. No. 1,106,748; Aug. 11; Gaz. vol. 205; p. 450.
Sturdevant, Nelson, Detroit, Mich. Wind-shield joint. No. 1,107,863; Aug. 18; Gaz. vol. 205; p. 890.
Sturgiss, Wilbur R., assignor of one-half to R. D. White, Conway, Ark. Cultivator attachment. No. 1,107,864; Aug. 18; Gaz. vol. 205; p. 891.
Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)
Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)
Sturtevant, Thomas J. (See Sturtevant, Thomas L. and T. J.)
Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Crushing-mill. No. 1,105,712; Aug. 4; Gaz. vol. 205; p. 45.
Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Crushing-mill. No. 1,107,373; Aug. 18; Gaz. vol. 205; p. 716.
Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Crushing-machine. No. 1,105,713; Aug. 4; Gaz. vol. 205; p. 45.
Styche, George F., San Francisco, Cal. Shoe for roof-walking. No. 1,107,208; Aug. 11; Gaz. vol. 205; p. 610.
Styll, Harry H., assignor to American Optical Company, Southbridge, Mass. Goggles. No. 1,105,714; Aug. 4; Gaz. vol. 205; p. 46.
Suarez, Ramon, Chicago, Ill. Cigar-making device. No. 1,108,273; Aug. 25; Gaz. vol. 205; p. 1080.
Subert, Max, assignor to Farm Products Distributing Company, New York, N. Y. Shipping-crate. No. 1,106,011; Aug. 4; Gaz. vol. 205; p. 148.
Sugar Centrifugal Discharger Company. (See Roberts and Gibson, assignors.)
Suhr, Charles A., Chicago, Ill. Earth-auger. No. 1,106,425; Aug. 11; Gaz. vol. 205; p. 333.
Sullivan, Frank A. (See Stout and Sullivan.)
Summers, Frank E., Memphis, Mo. Telephone system. No. 1,106,592; Aug. 11; Gaz. vol. 205; p. 397.
Sumner Iron Works. (See Boyer, August, assignor.)
Sunden, August J., Washington, D. C. Combination suspensory and protector. No. 1,106,987; Aug. 11; Gaz. vol. 205; p. 533.
Sundh, August. (See Rennerfelt, Gustaf, assignor.)
Sunvold, Herman H., Sacred Heart, Minn. Rear-axle truss. No. 1,108,812; Aug. 25; Gaz. vol. 205; p. 1265.
Superior Register Company, The. (See Leonard, Leon E., assignor.)
Surface, Walter M., Kingman, Kans. Oil-burner. No. 1,106,426; Aug. 11; Gaz. vol. 205; p. 334.
Sutton, John P. (See Kelleher, Patrick H., assignor.)
Suzuki, Heishichi, Shibaku, Tokyo, Japan. Welding copper. No. 1,107,865; Aug. 18; Gaz. vol. 205; p. 891.
Swaim, Cecil J., Montreal, Quebec, Canada. Attachment for type-writers. No. 1,106,120; Aug. 4; Gaz. vol. 205; p. 188.
Swanson, Starley S., assignor to The Ohio Cultivator Company, Bellevue, Ohio. Cultivator. No. 1,108,020; Aug. 18; Gaz. vol. 205; p. 944.
Swarovski, Daniel, and H. Weis, Wattens, near Hall, assignors to Glasschleiferei Wattens A. Kosmann, D. Swarovski & Co., Wattens, Tyrol, Austria-Hungary. Apparatus for supplying measured quantities. No. 1,106,686; Aug. 11; Gaz. vol. 205; p. 429.
Swedenborg, Swan, Cleveland, assignor to The Phoenix Foundry and Machine Company, Ashtabula, Ohio. Lift for drop-hammers and the like. No. 1,107,866; Aug. 18; Gaz. vol. 205; p. 891.
Sweers, Riley, Toledo, Ohio. Dish and holder for ice-cream. No. 1,105,715; Aug. 4; Gaz. vol. 205; p. 46.
Swift, Walter G., Providence, assignor of one-half to G. F. Bohl, Cranston, R. I. Attachment for installing magnetos on gas-engines. No. 1,107,374; Aug. 18; Gaz. vol. 205; p. 717.
Swindell, John A., Pittsburgh, Pa. Charging apparatus for open-hearth furnaces and the like. No. 1,106,988; Aug. 11; Gaz. vol. 205; p. 533.
Swyers, Brice P., assignor of eight thirty-seconds to B. P. Swyers, seven thirty-seconds to G. E. Lorch, four thirty-seconds to G. M. Davis, two thirty-seconds to M. Maul, seven thirty-seconds to L. Lorch, Jr., Pittsburgh, and four thirty-seconds to J. H. Wagner, Mount Oliver borough, Pa. Electric switch. No. 1,106,593; Aug. 11; Gaz. vol. 205; p. 397.
Sylvester, Louis F., Hoboken, N. J., assignor to National Fire Proofing Company, Pittsburgh, Pa. Centering for concrete arches. No. 1,108,639; Aug. 25; Gaz. vol. 205; p. 1207.
Szabo, Rozalia M., *et al.* (See Jenol and Stevenson, assignors.)
Szekfu, Stephen, assignor of one-half to V. E. Munz, Ellensburg, Wash. Heel for foot-gear. No. 1,106,989; Aug. 11; Gaz. vol. 205; p. 533.
Szekfu, Stephen, assignor of one-half to V. E. Munz, Ellensburg, Wash. Heel for foot-gear. No. 1,106,990; Aug. 11; Gaz. vol. 205; p. 533.
Széles, Gusztáv. (See Balogh and Széles.)
Szot-Czeten, Iwan, Warsaw, Russia. Axle-box. No. 1,107,867; Aug. 18; Gaz. vol. 205; p. 891.
Szücs, Gregor R., *et al.* (See Jenöl and Kruchló, assignors.)
Tabulo, Louis, London, England. Life-saving appliance for use at sea. No. 1,107,632; Aug. 18; Gaz. vol. 205; p. 809.
Taft, Harrison S., Seattle, Wash. Reinforced-concrete shelter. No. 1,106,063; Aug. 4; Gaz. vol. 205; p. 167.
Taglauer, John J. (See Draper and Taglauer.)
Talt, John, Dunedin, New Zealand. Water-circulator for boilers. No. 1,106,749; Aug. 11; Gaz. vol. 205; p. 450.
Talley, Herbert, Joplin, Mo., assignor, by mesne assignments, to Hercules Powder Company. Shell carrier and shuttle. No. 1,105,936; Aug. 4; Gaz. vol. 205; p. 123.
Talley, Herbert, Joplin, Mo., assignor, by mesne assignments, to Hercules Powder Company. Shell-assembling machine. No. 1,105,937; Aug. 4; Gaz. vol. 205; p. 123.
Tarkington, Clarence G., Chicago, Ill., assignor to Westinghouse Electric and Manufacturing Company. Control system for electric motors. No. 1,107,555; Aug. 18; Gaz. vol. 205; p. 781.
Tartiss, Alfred J., Rochester, N. Y. Spoon. No. 1,108,813; Aug. 25; Gaz. vol. 205; p. 1265.
Taxis, Frederick C., *et al.* (See Hough, William B., assignor.)
Taylor, Charles C., Philadelphia, Pa. Combined envelop and coin-carrier. No. 1,108,274; Aug. 25; Gaz. vol. 205; p. 1081.
Taylor Instrument Companies. (See Collinson, Francis E., assignor.)
Taylor, James C., Boston, assignor of one-third to C. H. Maiers, Norwood, and one-third to J. Galway, Boston, Mass. Automatic shut-off valve. No. 1,106,427; Aug. 11; Gaz. vol. 205; p. 334.
Taylor, James W., assignor of one-third to G. A. Mohr and one-third to F. L. Fulton, Lansing, Mich. Valve for pneumatic tires. No. 1,108,640; Aug. 25; Gaz. vol. 205; p. 1208.
Taylor, John L., assignor to H. D. Yerxa, Chicago, Ill. Vending-machine. No. 1,107,462; Aug. 18; Gaz. vol. 205; p. 749.
Taylor, Mary D. (See Fogwell, Charles R., assignor.)
Taylor, William E., Eastport, Me., assignor to American Can Company, New York, N. Y. Measuring and feeding mechanism. No. 1,106,012; Aug. 4; Gaz. vol. 205; p. 148.
Taylor, William F., assignor to General Asbestos & Rubber Company, Charleston, S. C. Gasketing-tape. No. 1,108,021; Aug. 18; Gaz. vol. 205; p. 944.
Tcherniakofsky, Itzko, Lille, France. Triple-regulation cock for low-pressure heating systems. No. 1,106,594; Aug. 11; Gaz. vol. 205; p. 398.
Teague, Joseph W., Salt Lake City, Utah. Oil-can. No. 1,108,022; Aug. 18; Gaz. vol. 205; p. 945.
Telephone Improvement Company, The. (See Clement, Edward E., assignor.)
Telepost Company, The. (See Delany, Patrick B., assignor.)
Templin, Joseph H., assignor, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa. Vacuum renovating apparatus. No. 1,108,275; Aug. 25; Gaz. vol. 205; p. 1081.
Terrill, Arthur C., Glendale, Cal. Lock for portable articles. No. 1,105,938; Aug. 4; Gaz. vol. 205; p. 123.
Testrup, Nils. (See Rigby and Testrup.)
Testrup, Nils, London, England, and T. Rigby, Dumfries, Scotland, assignors, by mesne assignments, to Wetcarbonizing Limited, London, England. Electric furnace. No. 1,106,166; Aug. 4; Gaz. vol. 205; p. 203.
Teter, William E. (See Gray and Teter.)
Teter, William E., and C. B. Gray, Dallas, Tex. Mechanism for rotating a locomotive-headlight. No. 1,107,726; Aug. 18; Gaz. vol. 205; p. 842.
Tetlow, Lewis J., West Springfield, assignor, by mesne assignments, to D. E. Hennessey, Holyoke, Mass. Dash-pot. No. 1,108,276; Aug. 25; Gaz. vol. 205; p. 1081.
Texter, Charles H., Philadelphia, Pa. Milk-bottle. No. 1,108,023; Aug. 18; Gaz. vol. 205; p. 945.
Thacker, William R., Council Bluffs, and C. G. Clark, Logan, Iowa. Gasolene-engine. No. 1,107,375; Aug. 18; Gaz. vol. 205; p. 717.
Thale, Harry H., Maywood, Mo. Bee-culture apparatus. No. 1,108,277; Aug. 25; Gaz. vol. 205; p. 1082.
Thatcher, Hervey D., Potsdam, N. Y. Game. No. 1,106,991; Aug. 11; Gaz. vol. 205; p. 534.
Thestrup, Valdemar, Omaha, Nebr. Sheet-buckling tool. No. 1,108,024; Aug. 18; Gaz. vol. 205; p. 945.
Thiel, Heinrich, Ruhla, Germany. Escapement for running-gears. No. 1,106,253; Aug. 4; Gaz. vol. 205; p. 231.
Thies, Frederick A., New York, N. Y. Snake-puller. No. 1,108,025; Aug. 18; Gaz. vol. 205; p. 945.
Thies, Jacob W. N., New York, N. Y. Ice-box. No. 1,106,167; Aug. 4; Gaz. vol. 205; p. 204.
Thiman, Knut G., New York, N. Y. Lock mechanism and key therefor. No. 1,107,376; Aug. 18; Gaz. vol. 205; p. 718.
Thoma, Andrew, Cambridge, assignor to Clifton Manufacturing Company, Boston, Mass. Insole-finishing machine. No. 1,108,026; Aug. 18; Gaz. vol. 205; p. 946.
Thomas, Carl C., Roland Park, Md. Sampling-tube for calorimeters. No. 1,108,278; Aug. 25; Gaz. vol. 205; p. 1082.

Thomas, Ferdinand, New York, N. Y. Tile structure. No. 1,106,168; Aug. 4; Gaz. vol. 205; p. 204.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Shade-holder. No. 1,106,254; Aug. 4; Gaz. vol. 205; p. 231.
Thomas, George H. (See Krause and Thomas.)
Thomas, John G. P., Chiswick, England. Railway motor-coach. No. 1,106,169; Aug. 4; Gaz. vol. 205; p. 204.
Thomas, Leroy, Mombaccus, N. Y. Gearing for washing-machines. No. 1,107,727; Aug. 18; Gaz. vol. 205; p. 843.
Thomas Manufacturing Company, The. (See Pelton, Charles H., assignor.)
Thomas, Paul W., Brooklyn, N. Y. Door-hanger. No. 1,106,992; Aug. 11; Gaz. vol. 205; p. 534.
Thomas, Stephen S., Gulfport, Miss. Cotton-picker. No. 1,107,633; Aug. 18; Gaz. vol. 205; p. 809.
Thomasson, Hiram S., Portland, Iowa. Spark-plug. No. 1,107,634; Aug. 18; Gaz. vol. 205; p. 810.
Thompson, Benjamin F., Arlington, Md. Telegraph system. No. 1,106,750; Aug. 11; Gaz. vol. 205; p. 451.
Thompson, Carl S., Dallas, Tex. Tool for driving corrugated fasteners. No. 1,108,279; Aug. 25; Gaz. vol. 205; p. 1083.
Thompson, Charles E., Cleveland, Ohio. Valve. No. 1,106,064; Aug. 4; Gaz. vol. 205; p. 167.
Thompson, George, Chicago, Ill. Die-press for forming railway-car journal-boxes. No. 1,106,902; Aug. 11; Gaz. vol. 205; p. 504.
Thompson, George E., McCook, Nebr. Monolithic constructor. No. 1,107,377; Aug. 18; Gaz. vol. 205; p. 718.
Thompson, George T., Washington, D. C. Spectacular display apparatus. No. 1,106,255; Aug. 4; Gaz. vol. 205; p. 231.
Thompson, Louis W. (See Gardner, Frederick N. and F. E., assignors.)
Thompson, William F., and J. Looney, Biggs, Cal. Cooling attachment for explosive-motors. No. 1,107,728; Aug. 18; Gaz. vol. 205; p. 843.
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. System of distribution. No. 1,105,716; Aug. 4; Gaz. vol. 205; p. 46.
Thomson, Henry C., Boston, and H. N. Michaelsen, Canton, Mass., assignors to Electric Goods Manufacturing Company. Igniter. No. 1,106,525; Aug. 11; Gaz. vol. 205; p. 372.
Thomson, Hugh A, assignor to Scientific Treatments Limited, Glasgow, Scotland. Ozone-producer. No. 1,105,717; Aug. 4; Gaz. vol. 205; p. 47.
Thomson, James S., Seattle, Wash. Sleigh attachment for motor-vehicles. No. 1,105,939; Aug. 4; Gaz. vol. 205; p. 124.
Thomson, James S., Seattle, Wash. Propeller for auto-sleigh mechanism. No. 1,105,940; Aug. 4; Gaz. vol. 205; p. 124.
Thomson, Samuel G. (See Thomson, William P. and S. G.)
Thomson, William P. and S. G., Philadelphia, Pa. Railway-tie. No. 1,105,718; Aug. 4; Gaz. vol. 205; p. 47.
Thomson, William P. and S. G., Philadelphia, Pa. Railway-tie. No. 1,105,719; Aug. 4; Gaz. vol. 205; p. 47.
Thomson, William P. and S. G., Philadelphia, Pa. Railway-tie. No. 1,105,720; Aug. 4; Gaz. vol. 205; p. 48.
Thorndike, Herbert W., assignor to F. W. Webb Manufacturing Company, Boston, Mass. Floor connection. No. 1,107,209; Aug. 11; Gaz. vol. 205; p. 610.
Thornton, William E., and H. E. Parker, Philadelphia, Pa. Gas-iron. No. 1,105,721; Aug. 4; Gaz. vol. 205; p. 48.
Thorpe, Joseph B., Highlandville, assignor to Brown Burrell Co., Boston, Mass. Infant's band. No. 1,106,687; Aug. 11; Gaz. vol. 205; p. 429.
Thorschmidt, Ernest C., New York, N. Y. Candy-wrapping machine. No. 1,108,027; Aug. 18; Gaz. vol. 205; p. 946.
Thorslend, Charly A., Berwyn, Ill. Railway safety appliance. No. 1,105,863; Aug. 4; Gaz. vol. 205; p. 97.
Thos. Firth and Sons. (See Strange, Harry B., assignor.)
Thum, William, Hammond, Ind. Apparatus for refining and desilverizing lead. No. 1,106,480; Aug. 11; Gaz. vol. 205; p. 355.
Thurston, Cye A. (See Searles, Harry R., assignor.)
Tibb, John. (See Fader and Tibb.)
Tibb, John W. (See Fader and Tibb.)
Tiffany, George S. (See De Saussure and Tiffany.)
Timberlake, William A. (See Tiner, John F., assignor.)
Timken Detroit Axle Company, The. (See Alden, Herbert W., assignor.)
Timmons, Joseph W., Orlando, Fla. Hoe. No. 1,108,527; Aug. 25; Gaz. vol. 205; p. 1168.
Tiner, John F., assignor of one-half to W. A. Timberlake, Uvalde, Tex. Flying-machine. No. 1,105,941; Aug. 4; Gaz. vol. 205; p. 124.
Tinkham, Francis M., Springfield, Mass. Convertible couch. No. 1,107,729; Aug. 18; Gaz. vol. 205; p. 843.
Titanium Alloy Manufacturing Company, The. (See Rossi and Barton, assignors.)
Titcomb, George E., New Rochelle, N. Y. Apparatus for freight transference. No. 1,107,378; Aug. 18; Gaz. vol. 205; p. 718.
Titus, John W., Mannington, W. Va. Front-axle coupling. No. 1,106,751; Aug. 11; Gaz. vol. 205; p. 451.
Tizley, Arthur J., assignor to E. F. Caldwell & Co., New York, N. Y. Operating means for electric-lamp switches. No. 1,108,641; Aug. 25; Gaz. vol. 205; p. 1208.
Tobacco Stemming Machine Company, The. (See Gerding, Louis H., assignor.)
Todd, H. Stanley. (See Anderson, Emil, assignor.)
Todd, William C., and J. W. Pomeroy, Victoria, British Columbia, Canada. Traveling lawn-sprinkler. No. 1,108,528; Aug. 25; Gaz. vol. 205; p. 1169.
Toeplitz, Richard, assignor to International Typesetting Machine Company, New York, N. Y. Assembling-elevator. No. 1,108,814; Aug. 25; Gaz. vol. 205; p. 1266.
Tolles, Charles L., Eau Claire, Wis. Traction-machine. No. 1,106,595; Aug. 11; Gaz. vol. 205; p. 398.
Tolles, Charles L., Eau Claire, Wis. Traction-belt. No. 1,106,596; Aug. 11; Gaz. vol. 205; p. 398.
Tolman, Scott H., Boston, Mass. Display-mount. No. 1,106,688; Aug. 11; Gaz. vol. 205; p. 429.
Toivstad, Nelson L., Groton, S. D. System of electrical selection. No. 1,108,028; Aug. 18; Gaz. vol. 205; p. 947.
Tomlinson, Henry W., Chicago, Ill. Slide-rule. No. 1,108,480; Aug. 25; Gaz. vol. 205; p. 1152.
Tompkins, Stonewall, Brooklyn, N. Y. Railway-car brake. No. 1,108,815; Aug. 25; Gaz. vol. 205; p. 1266.
Topping, W. V. B. (See Price, Thomas V., assignor.)
Torgrud, Martin P., Whalan, Minn. Gate-fastener. No. 1,106,324; Aug. 4; Gaz. vol. 205; p. 254.
Tormin, Egmont M., Newton Center, assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Dynamo. No. 1,108,086; Aug. 18; Gaz. vol. 205; p. 967.
Tormin, Egmont M., Newton Center, assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Dynamo. No. 1,108,087; Aug. 18; Gaz. vol. 205; p. 968.
Tormin, Egmont M., Newton Center, assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Centrifugal switch. No. 1,108,088; Aug. 18; Gaz. vol. 205; p. 968.
Tornberg, Carl A., Marathon, Fla. Wrench. No. 1,106,752; Aug. 11; Gaz. vol. 205; p. 452.
Torrance, George J., Harrison, N. J. Apron for fiber-treating machines. No. 1,107,730; Aug. 18; Gaz. vol. 205; p. 844.
Townsend, Charles E., Lebanon, Nebr. Corn-binder. No. 1,107,463; Aug. 18; Gaz. vol. 205; p. 749.
Tozzi, Angelo M., Bayonne, N. J., assignor to Condon-Autostop Company. Automatic brake mechanism. No. 1,107,868; Aug. 18; Gaz. vol. 205; p. 892.
Trace, Russell A. (See Saner and Trace.)
Trace, Russell A., assignor to Buckeye Iron and Brass Works, Dayton, Ohio. Cooker. No. 1,106,597; Aug. 11; Gaz. vol. 205; p. 399.
Travis, Thomas, Montclair, N. J. Garden-truck-burner barrow. No. 1,108,642; Aug. 25; Gaz. vol. 205; p. 1208.
Trax, Judson D., *et al.*, executors. (See Waltz, John W.)
Traylor, Bruce W., New York, N. Y., assignor to Traylor Engineering and Manufacturing Co. Gearing. No. 1,106,256; Aug. 4; Gaz. vol. 205; p. 232.
Traylor Engineering and Manufacturing Co. (See Traylor, Bruce W., assignor.)
Trischan, John, Chicago, Ill. Rubber heel. No. 1,106,753; Aug. 11; Gaz. vol. 205; p. 452.
Triumph Voting Machine Company. (See Abbott, Charles C., assignor.)
Trout, Miles W., Youngwood, Pa. Galvanizing-machine. No. 1,107,464; Aug. 18; Gaz. vol. 205; p. 750.
Troxell, Harry J., Gettysburg, Pa. Film reel and casing. No. 1,106,754; Aug. 11; Gaz. vol. 205; p. 452.
Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)
Trump, John W. (See Schell, Milo M., assignor.)
Tubbs, Lee J., Charleston, S. C. Registering device. No. 1,106,257; Aug. 4; Gaz. vol. 205; p. 232.
Tucker, Clyde B. (See Shows and Tucker.)
Tucker, John M., and J. A. Wilding, London, England. Carbureter. No. 1,106,258; Aug. 4; Gaz. vol. 205; p. 232.
Tull, William L., Gridley, Cal. Hay-loading derrick. No. 1,108,029; Aug. 18; Gaz. vol. 205; p. 947.
Turck, Frederick M., New York, N. Y. Slip-sheet machine for printing-presses. No. 1,107,556; Aug. 18; Gaz. vol. 205; p. 781.
Turner Brass Works, The. (See Bowyer, John A., assignor.)
Turner, Charles A., Mount Carmel, Ill. Non-refillable bottle. No. 1,106,598; Aug. 11; Gaz. vol. 205; p. 399.
Turner, Claude A. P., Minneapolis, Minn. Drawbridge. No. 1,106,259; Aug. 4; Gaz. vol. 205; p. 233.
Turner, Claude A. P., Minneapolis, Minn. Ice-house. No. 1,106,854; Aug. 11; Gaz. vol. 205; p. 488.
Turner, Edward T., Dayton, Ohio. Feed-water heater. No. 1,107,379; Aug. 18; Gaz. vol. 205; p. 719.
Turner, Joseph, and H. Dean, assignors to Read Holliday & Sons, Ltd., Huddersfield, England. Dyeing vegetable fibers. No. 1,105,722; Aug. 4; Gaz. vol. 205; p. 48.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Triple-valve device. No. 1,107,380; Aug. 18; Gaz. vol. 205; p. 719.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electro-pneumatic brake. No. 1,107,381; Aug. 18; Gaz. vol. 205; p. 719.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Fluid-pressure brake apparatus. No. 1,108,280; Aug. 25; Gaz. vol. 205; p. 1083.
Turner, William W., Washington, D. C. Chair. No. 1,108,030; Aug. 18; Gaz. vol. 205; p. 948.
Turney Company, The. (See Turney, Eugene T., assignor.)

Turney, Eugene T., assignor to The Turney Company, Chicago, Ill. Playing attachment for musical instruments. No. 1,107,557; Aug. 18; Gaz. vol. 205; p. 782.
Turney, Eugene T., Rock Island, assignor to The Turney Company, Chicago, Ill. Winding and rewinding mechanism for music sheets or records. No. 1,107,559; Aug. 18; Gaz. vol. 205; p. 782.
Turney, Eugene T., Rock Island, assignor to The Turney Company, Chicago, Ill. Music sheet or record. No. 1,107,560; Aug. 18; Gaz. vol. 205; p. 783.
Turney, Eugene T., Rock Island, assignor to Artista Piano Player Company, Milan, Ill. Music sheet or record for playing attachments for musical instruments. No. 1,107,558; Aug. 18; Gaz. vol. 205; p. 782.
Turney, Eugene T., Rock Island, assignor to Artista Piano Player Company, Milan, Ill. Winding and rewinding mechanism for music sheets or records. No. 1,107,561; Aug. 18; Gaz. vol. 205; p. 783.
Turney, Eugene T., Rock Island, assignor to Artista Piano Player Company, Milan, Ill. Winding and rewinding mechanism for music sheets or records. No. 1,107,562; Aug. 18; Gaz. vol. 205; p. 784.
Tuseth, Charles J., Osseo, Minn. Plow. No. 1,106,526; Aug. 11; Gaz. vol. 205; p. 372.
Tuttle, Harry, Connersville, Ind. Tire-holder. No. 1,106,755; Aug. 11; Gaz. vol. 205; p. 453.
Tygard, Frederick C., Pittsburgh, Pa. Internal-combustion engine. No. 1,107,382; Aug. 18; Gaz. vol. 205; p. 720.
Tyler, Clarence E., Passaic, N. J., and E. D. Every, Walton, assignors to S. E. T. Valve & Hydrant Company, New York, Inc., New York, N. Y. Curb-box. No. 1,108,031; Aug. 18; Gaz. vol. 205; p. 948.
Typograph Gesellschaft m. b. H. (See Dorneth, Julius, assignor.)
U. S. Expansion Bolt Company. (See Zifferer, Lothar R., assignor.)
U. S. Splicing Machine Company. (See Stukart, Hendrik, assignor.)
Ubl, John, New York, N. Y. Clothes-drier. No. 1,106,993; Aug. 11; Gaz. vol. 205; p. 534.
Udstad, Sivert, Aurora, Ill. Pressure-regulator. No. 1,107,383; Aug. 18; Gaz. vol. 205; p. 720.
Uehling, Fritz F. (See Skinner, James A., assignor.)
Uffner, Hyman, New York, N. Y. Container. No. 1,108,281; Aug. 25; Gaz. vol. 205; p. 1083.
Uhlinger, Roy H. (See Brownlee and Uhlinger.)
Umlauer, Karl, Freiburg, Breisgau, Germany. Lock. No. 1,106,599; Aug. 11; Gaz. vol. 205; p. 399.
Underhill, Charles R., Providence, R. I., assignor to Underhill Telegraph Translator Company, Jersey City, N. J. Telegraph system. No. 1,108,529; Aug. 25; Gaz. vol. 205; p. 1169.
Underhill Telegraph Translator Company. (See Underhill, Charles R., assignor.)
Underwood Engineering Company. (See Underwood, John T., assignor.)
Underwood, John T. (See Hart, Frederick A., assignor.)
Underwood, John T. (See Knoll, George W., assignor.)
Underwood, John T., assignor to Underwood Engineering Company, Detroit, Mich. Burner for kilns. No. 1,105,723; Aug. 4; Gaz. vol. 205; p. 49.
Underwood, John T., assignor to Underwood Engineering Company, Detroit, Mich. Brick-kiln. No. 1,105,724; Aug. 4; Gaz. vol. 205; p. 49.
Underwood Typewriter Company. (See Dennis, Adolphus S., assignor.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See Smith, Jesse A. B., assignor.)
Underwood Typewriter Company. (See Stickney, Burnham C., assignor.)
Underwood Typewriter Company. (See Strong, Elisha E., assignor.)
Underwood Typewriter Company. (See Wernery, Lester A., assignor.)
Uniform Dyeing Machine Company. (See Schmitz, Joseph, assignor.)
Union Draft Gear Company. (See Cardwell, James R., assignor.)
Union Fibre Company. (See Hohaus, Theodore, assignor.)
Union Metallic Cartridge Company. (See Hoagland, Frank O., assignor.)
Union Special Machine Company. (See Barnes, Walter E., assignor.)
United Gas Improvement Company, The. (See Fulweiler, Walter H., assignor.)
United Gas Improvement Company, The. (See Rusby, John M., assignor.)
United Printing Machinery Company. (See Garner, Vernon, assignor.)
United Shoe Machinery Company. (See Ball, Augustus A., Jr., assignor.)
United Shoe Machinery Company. (See Bates and Briggs, assignors.)
United Shoe Machinery Company. (See Bonney, Charles A., assignor.)
United Shoe Machinery Company. (See Brock, Matthias, assignor.)
United Shoe Machinery Company. (See Casgrain, Louis A., assignor.)
United Shoe Machinery Company. (See Cavanagh, James, assignor.)
United Shoe Machinery Company. (See Colby, Daniel W., assignor.)
United Shoe Machinery Company. (See Eppler, Andrew, assignor.)
United Shoe Machinery Company. (See Furber, Frederick M., assignor.)
United Shoe Machinery Company. (See Hadaway, John B., assignor.)
United Shoe Machinery Company. (See Hamm, William S., assignor.)
United Shoe Machinery Company. (See Hammond, William P., assignor.)
United Shoe Machinery Company. (See Hill, George S., assignor.)
United Shoe Machinery Company. (See Johnson, Albert E., assignor.)
United Shoe Machinery Company. (See Krippendorf, Paul F. W. C., assignor.)
United Shoe Machinery Company. (See Loomer, Henry M., assignor.)
United Shoe Machinery Company. (See MacKenzie, Fred L., assignor.)
United Shoe Machinery Company. (See Mayo, Benjamin F., assignor.)
United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)
United Shoe Machinery Company. (See McLeod, George T., assignor.)
United Shoe Machinery Company. (See Perry, Frederick H., assignor.)
United Shoe Machinery Company. (See Plant, Thomas G., assignor.)
United Shoe Machinery Company. (See Preble, Edwin N., assignor.)
United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)
United Shoe Machinery Company. (See Reimann, Franz M., assignor.)
United States Concentrating Co. (See King, Orrin H., assignor.)
United States Envelope Company. (See Froehlich, Joseph, assignor.)
United States Safety Gas Machine Company. (See Andres, J. Frank, assignor.)
Universal Display Advertising Company. (See Gibson and Sartolow, assignors.) (Reissue.)
Universal Electric Welding Company. (See Lachman, Laurence S., assignor.)
Upp, Charles B., assignor to D. W. Snyder, Reading, Pa. Drying-former for stockings. No. 1,106,260; Aug. 4; Gaz. vol. 205; p. 233.
Upton, Emory, Benton Harbor, Mich., and L. C. Upton, La Grange, Ill., assignors to Upton Machine Co. Power-transmitting device. No. 1,106,903; Aug. 11; Gaz. vol. 205; p. 505.
Upton, Louis C. (See Upton, Emory and L. C.)
Upton Machine Co. (See Upton, Emory and L. C., assignors.)
Vains, Antoine R. de, Paris, France. Bleaching lignocellulose and pectocellulose. No. 1,106,994; Aug. 11; Gaz. vol. 205; p. 535.
Valind, Joseph, Gladstone, assignor of one-half to A. Blomstrom, Wells, and A. Grant, Escanaba, Mich. Wrench. No. 1,105,725; Aug. 4; Gaz. vol. 205; p. 49.
Vallilee, Edward F., Syracuse, N. Y. Scaffolding or attachment for ladders. No. 1,106,013; Aug. 4; Gaz. vol. 205; p. 149.
Van Duyne, Richard D. (See Johnson, Hamilton, and Van Duyne.)
Van Epp, Paul N., Medina, assignor of one-third to L. E. Owen, Catawba Island, Ohio. Trolley-retriever. No. 1,107,465; Aug. 18; Gaz. vol. 205; p. 750.
Van Fleet, Emmit W., Evart, Mich. Seed-grading machine. No. 1,108,282; Aug. 25; Gaz. vol. 205; p. 1084.
Van Mater, John H. (See Waterhouse and Van Mater.)
Van Ness, Frank W., Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Recess-box. No. 1,108,283; Aug. 25; Gaz. vol. 205; p. 1084.
Van Ness, Marvin B., Welsh, La. Centrifugal pumping mechanism. No. 1,108,089; Aug. 18; Gaz. vol. 205; p. 968.
Van Ness, Matthew P., *et al.* (See Franke, Frederick W., assignor.)
Van Rensselaer, Joseph L., New York, N. Y. Non-refillable bottle. No. 1,107,384; Aug. 18; Gaz. vol. 205; p. 721.
Van Vorst, George A., Scotia, N. Y. Automobile-fender. No. 1,106,121; Aug. 4; Gaz. vol. 205; p. 188.
Vance Company, The. (See Vance, Lee M., assignor.)
Vance, Lee M., assignor to The Vance Company, Incorporated, Davis, Cal. Staple-retainer. No. 1,106,600; Aug. 11; Gaz. vol. 205; p. 400.
Vandegrift, James N., assignor to Railway Roller Bearing Company, Syracuse, N. Y. Antifriction thrust-bearing. No. 1,106,065; Aug. 4; Gaz. vol. 205; p. 167.
Vandenberg, William H., Chicago, Ill. Lubricator. No. 1,106,756; Aug. 11; Gaz. vol. 205; p. 453.
Vandenorth, James P., Chicago, Ill. Window-shade. No. 1,106,601; Aug. 11; Gaz. vol. 205; p. 400.
Vaughan, Henry H., Montreal, Quebec, Canada. Appliance for locomotive cabs and tenders. No. 1,108,816; Aug. 25; Gaz. vol. 205; p. 1266.
Vaughn, Joseph. (See Gersich and Vaughn.)
Velardo, John. (See Velardo, Paul and J.)

Velardo, Paul, Somerville, and J. Velardo, Boston, Mass. Hat-protector. No. 1,106,527; Aug. 11; Gaz. vol. 205; p. 372.

Venners, James H., assignor of one-half to W. L. Millspaugh, Brooklyn, N. Y. Interchangeable motor-vehicle. No. 1,106,689; Aug. 11; Gaz. vol. 205; p. 430.

Venturi Alarm Company. (See Hamilton, John R., assignor.)

Verclaire, Walter E., Chicago, Ill. Aeroplane. No. 1,106,428; Aug. 11; Gaz. vol. 205; p. 334.

Vereinigte Glanzstoff-Fabriken A.-G. (See Bronnert, Emile, assignor.)

Verner, Hamilton T., Charlotte, N. C., and C. C. Ranson, Richmond, Va. Pawl-and-ratchet mechanism. No. 1,106,995; Aug. 11; Gaz. vol. 205; p. 535.

Vickers Limited. (See Dawson and Buckham, assignors.)

Vickery, Frederick W., London, England. Sheet-delivery mechanism. No. 1,106,261; Aug. 4; Gaz. vol. 205; p. 233.

Victel, Olaf A., Granville, N. D. Vehicle spring and shock-absorber. No. 1,105,726; Aug. 4; Gaz. vol. 205; p. 50.

Victor Safe & Lock Co., The. (See Haustetter, Alfred P., assignor.)

Victor Talking Machine Company. (See English, John C., assignor.)

Vlig, Anders, Christiania, Norway. Steelyard dairy-scale. No. 1,106,528; Aug. 11; Gaz. vol. 205; p. 373.

Vim Motion Picture Company. (See Duhem, Victor L., assignor.)

Vincent, Heywell, Portland, Me. Window-screen. No. 1,107,385; Aug. 18; Gaz. vol. 205; p. 721.

Violett, William H., Rifle, Colo. Wheeled scraper. No. 1,106,170; Aug. 4; Gaz. vol. 205; p. 204.

Voelker, August, Beuel, near Bonn, Germany. Producing hollow quartz bodies. No. 1,107,386; Aug. 18; Gaz. vol. 205; p. 721.

Voelker, August, Beuel, near Bonn, Germany. Producing transparent quartz. No. 1,107,387; Aug. 18; Gaz. vol. 205; p. 722.

Vogt, George E., Tallmadge, Ohio. Heating-tool. No. 1,107,188; Aug. 11; Gaz. vol. 205; p. 603.

Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Holding and releasing device for doors. No. 1,107,388; Aug. 18; Gaz. vol. 205; p. 722.

Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Door-controlling means for elevators. No. 1,108,481; Aug. 25; Gaz. vol. 205; p. 1152.

Void, Lars H., Westville, N. J., assignor to William Sellers & Company, Incorporated, Philadelphia, Pa. Means for eliminating vibrations in rotary shafts. No. 1,107,731; Aug. 18; Gaz. vol. 205; p. 844.

Void, Ole G., Dawson, Minn. Seed-corn crate and drier. No. 1,108,412; Aug. 25; Gaz. vol. 205; p. 1127.

Völler, Karl, Dusseldorf, Germany. Mounting gun-carriage spades. No. 1,108,032; Aug. 18; Gaz. vol. 205; p. 948.

Völler, Karl, Dusseldorf, assignor to Rheinische Metallwaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Device for automatically opening the breech of a gun with a recoiling barrel. No. 1,108,530; Aug. 25; Gaz. vol. 205; p. 1170.

Vollrath, Edward, *et al.* (See Crooks, Earl G., assignor.)

Vondrachek, Louis F. E., Valley City, N. D. Motor-driven vehicle. No. 1,107,563; Aug. 18; Gaz. vol. 205; p. 785.

Voris, Anthony, New York, N. Y. Photographic camera. No. 1,108,033; Aug. 18; Gaz. vol. 205; p. 948.

Voss, William H., Davenport, Iowa. Washing-machine and gear. No. 1,108,551; Aug. 25; Gaz. vol. 205; p. 1170.

Vulcan Box Toe Process Co., The. (See Clausing, George, assignor.)

W. J. Hoar Shoe Manufacturing Co. (See Hoar, Walter J., assignor.)

W. & L. E. Gurley. (See Hess, Wendell, Jr., assignor.)

Waddell, Edward B., Jr., assignor of one-third to G. D. Poole and one-third to G. W. Brown, Williamson, W. Va. Wrench. No. 1,106,262; Aug. 4; Gaz. vol. 205; p. 234.

Waddell, William C., assignor to Hoynes Safety Powder Company, Cleveland, Ohio. Manufacturing explosive compounds. No. 1,105,864; Aug. 4; Gaz. vol. 205; p. 98.

Waddell, William C., assignor to Hoynes Safety Powder Company, Cleveland, Ohio. Explosive compound. No. 1,105,865; Aug. 4; Gaz. vol. 205; p. 98.

Wadsworth, Frank L. O., Sewickley, Pa. Water-heater construction. No. 1,108,284; Aug. 25; Gaz. vol. 205; p. 1085.

Wadsworth, Frank L. O., Sewickley, assignor, by mesne assignments, to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,106,481; Aug. 11; Gaz. vol. 205; p. 356.

Wagar, Jerome. (See Walton and Wagar.)

Wagner, Edwin, Molalla, Oreg. Means for the prevention of kicking by milking-cows. No. 1,106,996; Aug. 11; Gaz. vol. 205; p. 535.

Wagner Electric Manufacturing Company. (See Fynn, Valère A., assignor.)

Wagner, Fritz, Gross Lichterfelde, near Berlin, Germany. Main pressure-valve. No. 1,106,757; Aug. 11; Gaz. vol. 205; p. 453.

Wagner, John H., *et al.* (See Swyers, Brice P., assignor.)

Wagner, Michael, assignor, by mesne assignments, to S. S. Newman, Pittsburgh, Pa. Drill-grinding attachment. No. 1,107,229; Aug. 11; Gaz. vol. 205; p. 618.

Wagner, Michael, assignor of one-fourth to S. Silberstein, Pittsburgh, Pa. Valve for water-jacketed explosion-engines. No. 1,107,635; Aug. 18; Gaz. vol. 205; p. 810.

Waldelich, John E., Lansing, Mich. Heel-plate. No. 1,108,413; Aug. 25; Gaz. vol. 205; p. 1128.

Wainwright, John, Benezette, Pa. Surveying instrument. No. 1,108,034; Aug. 18; Gaz. vol. 205; p. 949.

Waltz, John W., deceased, Oil City, Pa.; J. D. Trax and W. M. Parker, executors. Producing gasolene. No. 1,105,727; Aug. 4; Gaz. vol. 205; p. 60.

Walker, Arthur W., Malden, Mass. Draft-regulator. No. 1,106,904; Aug. 11; Gaz. vol. 205; p. 505.

Walker, Arthur W., Malden, Mass. Shaker for grates. No. 1,107,466; Aug. 18; Gaz. vol. 205; p. 751.

Walker, Arthur W., Malden, Mass. Radiator-joint. No. 1,108,532; Aug. 25; Gaz. vol. 205; p. 1171.

Walker, Benjamin F., Bridgeport, Conn. Dental floss-holder. No. 1,106,758; Aug. 11; Gaz. vol. 205; p. 454.

Walker, Bertram O., Portland, Oreg. Rotary steam-engine. No. 1,106,997; Aug. 11; Gaz. vol. 205; p. 535.

Walker, David. (See Walker, Raymond R., assignor.)

Walker, Freeman V., Bluffton, S. C. Display-sign. No. 1,107,125; Aug. 11; Gaz. vol. 205; p. 578.

Walker, Percy H. D. (See Walker, Victor E. and P. H. D.)

Walker, Raymond R., assignor of one-half to D. Walker, Follansbee, W. Va. Shock-absorber. No. 1,106,014; Aug. 4; Gaz. vol. 205; p. 149.

Walker, Victor E. and P. H. D., assignors to The Charles Parker Company, Meriden, Conn. Swivel-vise. No. 1,106,602; Aug. 11; Gaz. vol. 205; p. 400.

Wall, Charles M., assignor of one-half to J. A. Bickford, Curwensville, Pa. Press-box. No. 1,108,643; Aug. 25; Gaz. vol. 205; p. 1208.

Wall, Robert M., Americus, Ga. Wasteway. No. 1,106,015; Aug. 4; Gaz. vol. 205; p. 150.

Wall, Samuel, Harrisburg, Ill. Railway-tie. No. 1,106,482; Aug. 11; Gaz. vol. 205; p. 356.

Wallace, Edwin C., East Auburn, Cal. Protecting-sheet. No. 1,107,732; Aug. 18; Gaz. vol. 205; p. 845.

Wallace, Henry W., Monroe, Oreg. Saw-gage. No. 1,108,035; Aug. 18; Gaz. vol. 205; p. 949.

Wallace, Jacob H., T. D. and J. D. Means, Boulder, Colo. Beet-harvester. No. 1,105,728; Aug. 4; Gaz. vol. 205; p. 50.

Waller, Francis M., Wembley, England. Mechanically-propelled plow. No. 1,106,603; Aug. 11; Gaz. vol. 205; p. 400.

Waller, Lee O., Philadelphia, Pa., assignor to Kal-Pheno Chemical Company, Smyrna, Del. Dentifrice. No. 1,107,389; Aug. 18; Gaz. vol. 205; p. 722.

Waller, Peter A., Kewanee, Ill. Corn-husker. No. 1,108,817; Aug. 25; Gaz. vol. 205; p. 1267.

Waller, Robert H. (See Rather, Lee O., assignor.)

Walsh, Michael F., New York, N. Y. Rear signal for vehicles. No. 1,108,036; Aug. 18; Gaz. vol. 205; p. 950.

Walsh, Michael J. (See Meunickheim, Frederick W., Jr., assignor.)

Walsh, William J., Creston, Iowa. Gambrel. No. 1,107,467; Aug. 18; Gaz. vol. 205; p. 751.

Walther, Otto, Chemnitz, Germany. Embroidering-machine. No. 1,106,429; Aug. 11; Gaz. vol. 205; p. 335.

Walton, William L., and J. Wagar, Bantry, N. D. Motor-plow. No. 1,106,529; Aug. 11; Gaz. vol. 205; p. 373.

Wangsness, Carl M., Finley, N. D. Loader. No. 1,106,171; Aug. 4; Gaz. vol. 205; p. 205.

Ward B. Story Company. (See Story, Ward B., assignor.)

Ward, Edward K., Davenport, Iowa. Vacuum street-sweeper. No. 1,107,564; Aug. 18; Gaz. vol. 205; p. 785.

Ward, John M., Washington, D. C. Pneumatic drier. No. 1,108,285; Aug. 25; Gaz. vol. 205; p. 1085.

Warden, William F., Akron, Ohio. Filter. No. 1,108,037; Aug. 18; Gaz. vol. 205; p. 950.

Ware Grain Binder Attachment Co. (See Heitmiller, Herman E., assignor.)

Ware Grain Binder Attachment Company. (See Ware, Joseph L., assignor.)

Ware, Joseph L., assignor to Ware Grain Binder Attachment Company, St. Paul, Minn. Binder-head. No. 1,106,604; Aug. 11; Gaz. vol. 205; p. 401.

Ware, Raymond, Boston, Mass. Internal-combustion engine. No. 1,107,468; Aug. 18; Gaz. vol. 205; p. 751.

Waring, Edward M., New York, N. Y. Suction cleaning apparatus. No. 1,105,942; Aug. 4; Gaz. vol. 205; p. 125.

Warne, Frederick C., assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio. Cultivator. No. 1,107,390; Aug. 18; Gaz. vol. 205; p. 723.

Warne, Frederick C., assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio. Head for land-roller drums. No. 1,108,038; Aug. 18; Gaz. vol. 205; p. 951.

Warner Brothers Company, The. (See Dunn, James, assignor.)

Warner Brothers Company. (See Laughammer and Johnson, assignors.)

Warner, Earl A. (See Plummer, Hausser, and Warner.)

Warner, Lea P., assignor to Jordan Machine Company, Philadelphia, Pa. Machine for tonguing and grooving box parts. No. 1,106,759; Aug. 11; Gaz. vol. 205; p. 454.

Warner, Thomas S., Springfield, Ohio. Cultivator. No. 1,108,286; Aug. 25; Gaz. vol. 205; p. 1086.

Warstler, Levi, and P. F. Loichot, assignors to The Louisville Machine Company, Louisville, Ohio. Tile and brick forming and cutting table. No. 1,108,287; Aug. 25; Gaz. vol. 205; p. 1086.

Waterbury Clock Co. (See Smith, William J., assignor.)

Waterbury Mfg. Co. (See Crane, Arthur T., assignor.)

Waterbury Mfg. Co. (See Monaghan, William J., assignor.)

Waterbury Tool Company, The. (See Janney, Reynold, assignor.)

Waterhouse, Addison G., Leonardo, and J. H. Van Mater, Atlantic Highlands, N. J. Treating vegetable and mineral matter by heat. No. 1,105,729; Aug. 4; Gaz. vol. 205; p. 51.

Waterloo Skirt & Garment Company. (See Dignan, Ruth, assignor.)

Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Plow-beam. No. 1,107,733; Aug. 18; Gaz. vol. 205; p. 845.

Waterous, Charles P., *et al.*, executors. (See Waterous, Frederick L.)

Waterous, Frank J., *et al.*, executors. (See Waterous, Frederick L.)

Waterous, Frederick L., deceased, St. Paul, Minn.; J. C. P., and F. J. Waterous, executors. Clutch mechanism. No. 1,106,605; Aug. 11; Gaz. vol. 205; p. 401.

Waterous, Jane, *et al.*, executors. (See Waterous, Frederick L.)

Watkins, John, Dykes, Mo. Sickle-bar holder. No. 1,108,039; Aug. 18; Gaz. vol. 205; p. 951.

Watrous, Earl G., Chicago, Ill. Water-closet. No. 1,106,122; Aug. 4; Gaz. vol. 205; p. 189.

Watson, James A., Winnipeg, Manitoba, Canada. Coffee-percolator. No. 1,108,288; Aug. 25; Gaz. vol. 205; p. 1086.

Watson, William A., Malden, assignor to National Piano Company, Boston, Mass. Control for self-playing musical instruments. No. 1,106,998; Aug. 11; Gaz. vol. 205; p. 536.

Watt, George M., and J. E. Bryant, Oakland City, Ind. Wagon-brake. No. 1,108,533; Aug. 25; Gaz. vol. 205; p. 1171.

Watters, Edward C., Kansas City, Mo. Dressmaker's rule. No. 1,108,040; Aug. 18; Gaz. vol. 205; p. 951.

Waugh, James A., Louisiana, Mo. Combined letter and parcel-post mail-box. No. 1,105,730; Aug. 4; Gaz. vol. 205; p. 51.

Way, Sylvester B. (See Fay and Way.)

Weathersby, Robert H., and E. E. Putnam, Mammoth, Ariz. Non-refillable bottle. No. 1,106,263; Aug. 4; Gaz. vol. 205; p. 234.

Weaver, Harry E. (See Estabrook and Weaver.)

Weaver, James M., Los Angeles, Cal. Mortise-catch. No. 1,106,760; Aug. 11; Gaz. vol. 205; p. 454.

Weaver, Mary J., Cincinnati, Ohio. Dish-washing machine. No. 1,106,430; Aug. 11; Gaz. vol. 205; p. 335.

Webb, Edwin W. (See Barber and Webb.)

Webb, John, Chicago, Ill. Hinge for tilting sash. No. 1,108,857; Aug. 25; Gaz. vol. 205; p. 1282.

Weber, Albert, Hoboken, N. J. Turbine. No. 1,108,041; Aug. 18; Gaz. vol. 205; p. 951.

Weber, Albert, assignor to The Ferro Machine and Foundry Company, Cleveland, Ohio. Producing pistons. No. 1,106,905; Aug. 11; Gaz. vol. 205; p. 505.

Weber, Christopher J. (See Weber, Frank R. and C. J.)

Weber, Frank R. and C. J., St. Paul, Minn. Ventilator. No. 1,106,123; Aug. 4; Gaz. vol. 205; p. 189.

Weber, Walter. (See Henkel and Weber.)

Webster, Frederick L., Seattle, Wash., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Shaft-bearing. No. 1,108,042; Aug. 18; Gaz. vol. 205; p. 952.

Webster, George A., Somerville, assignor to C. H. Sherburne, Boston, Mass. Brake-handle. No. 1,105,866; Aug. 4; Gaz. vol. 205; p. 98.

Wecks & Co. (See Schulle, Eduard, assignor.)

Weder, Hermann, Sr., and C. H. Wolff, Philadelphia, Pa. Toilet-bracket. No. 1,108,043; Aug. 18; Gaz. vol. 205; p. 952.

Wedge, Utley, Ardmore, Pa. Sulfuric-acid manufacture. No. 1,106,999; Aug. 11; Gaz. vol. 205; p. 536.

Weeks, Clinton M., and H. N. Jackson, Babylon, N. Y. Short-circuiting attachment for gas-engine igniters. No. 1,107,000; Aug. 11; Gaz. vol. 205; p. 536.

Wehrle Company, The. (See Pickup, George E., assignor.)

Weidlich, Ernest A., Jr., *et al.* (See Franke, Frederick W., assignor.)

Weigel, Herbert L. (See Lange and Weigel.)

Weikert, Alvin W., and J. Pettibone, Washington, D. C. Self-locking junction-box coupling. No. 1,106,761; Aug. 11; Gaz. vol. 205; p. 455.

Weimann, Ferdinand A., West Hoboken, N. J. Vacuum-producing apparatus. No. 1,108,644; Aug. 25; Gaz. vol. 205; p. 1209.

Wels, Hugo. (See Swarovski and Wels.)

Wels, Otto, Vancouver, British Columbia, Canada. Fruit-squeezer. No. 1,107,230; Aug. 11; Gaz. vol. 205; p. 618.

Welsbach, Rudolph. (See Berger and Welsbach.)

Weiss, David, Cleveland, Ohio. Combined head-shield and band for cigars. No. 1,106,016; Aug. 4; Gaz. vol. 205; p. 150.

Weiss, Joseph W., Baltimore, Md. Reinforced collapsible box. No. 1,108,289; Aug. 25; Gaz. vol. 205; p. 1087.

Weisse, Fanueil D., New York, N. Y. Set of teeth for practice-work in dental surgery. No. 1,108,290; Aug. 25; Gaz. vol. 205; p. 1087.

Weissenthanner, Alfred L., Bayonne, N. J. Closure for jars, &c. No. 1,108,645; Aug. 25; Gaz. vol. 205; p. 1209.

Welage, Bernard J. (See Schnitzler and Welage.)

Welch, Clarence R., Scranton, Pa. Controlling apparatus for hoisting-engines. No. 1,108,044; Aug. 18; Gaz. vol. 205; p. 952.

Welch, Walter J., assignor of one-half to W. E. Belcher, Chicago, Ill. Tank-skimmer. No. 1,107,391; Aug. 18; Gaz. vol. 205; p. 723.

Welland, Bardenes P., Bricelyn, Minn. Horse-protector. No. 1,108,045; Aug. 18; Gaz. vol. 205; p. 953.

Wells, Elmer E., Goltry, Okla. Silo-roof. No. 1,107,002; Aug. 11; Gaz. vol. 205; p. 537.

Wells, Frank B., Kansas City, Mo. Combination velocipede and cart. No. 1,105,731; Aug. 4; Gaz. vol. 205; p. 51.

Wells, Frank C. (See Babcock, Wells, and Brown.)

Wells, Gordon. (See Jaques and Wells.)

Wells, William H., Norwich, N. Y. Cutting-machine. No. 1,108,414; Aug. 25; Gaz. vol. 205; p. 1128.

Welsh, James M., Niagara Falls, N. Y., assignor, by mesne assignments, to The Spirella Company, Meadville, Pa. Garment stay and clasp. No. 1,108,534; Aug. 25; Gaz. vol. 205; p. 1171.

Welsh, Linnie J., Plainville, Ill. Tongue-truck. No. 1,107,001; Aug. 11; Gaz. vol. 205; p. 537.

Wendelken, Cyrus F., Newark, Ohio. Extensible billiard-table. No. 1,106,017; Aug. 4; Gaz. vol. 205; p. 150.

Wendorf, Herman E., Lakemills, Wis. Post-hole digger. No. 1,107,734; Aug. 18; Gaz. vol. 205; p. 845.

Wennagel, Theodor S., Hamburg, Germany. Manufacture of elastic plastic masses. No. 1,107,003; Aug. 11; Gaz. vol. 205; p. 538.

Wenzel, Max, Spremberg, Germany. Apparatus for successively separating single threads from a warp. No. 1,105,867; Aug. 4; Gaz. vol. 205; p. 98.

Werner & Pfleiderer Co. (See Wild, Anton, assignor.)

Wernery, Lester A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,108,415; Aug. 25; Gaz. vol. 205; p. 1128.

West, Brennan B., assignor to The American Multigraph Company, Cleveland, Ohio. Printing-machine. No. 1,106,906; Aug. 11; Gaz. vol. 205; p. 506.

West, Charles C., assignor to Manitowoc Ship Building & Dry Dock Company, Manitowoc, Wis. Sand-barge. No. 1,106,124; Aug. 4; Gaz. vol. 205; p. 190.

West, William, and L. C. Goff, Denver, Colo. Dispensing device. No. 1,105,732; Aug. 4; Gaz. vol. 205; p. 52.

Westendarp, Henry O., Lynn, Mass., assignor to General Electric Company. Hydrocarbon-engine. No. 1,107,636; Aug. 18; Gaz. vol. 205; p. 810.

Westerfield, Granville G., Indianapolis, Ind. Pneumatic engine-starter. No. 1,108,291; Aug. 25; Gaz. vol. 205; p. 1087.

Western Electric Company. (See Adams and Dixon, assignors.)

Western Electric Company. (See Anderegg, Gustavus A., assignor.)

Western Electric Company. (See Bullard, Albert M., assignor.)

Western Electric Company. (See Dixon, Amos F., assignor.)

Western Electric Company. (See Leach, Winfield W., assignor.)

Western Electric Company. (See McIlerty, Frank R., assignor.)

Western Electric Company. (See Scribner, Charles E., assignor.)

Western Electric Company. (See Scribner and McBerty, assignors.)

Western Electric Company. (See Zwilling, Joseph, assignor.)

Western Wheeled Scraper Company. (See Rhodes, Jay B., assignor.)

Western Wire Products Company. (See Young, Ira J., assignor.)

Westinghouse Air Brake Company, The. (See Dewson, Edward H., assignor.)

Westinghouse Air Brake Company, The. (See Farmer, Clyde C., assignor.)

Westinghouse Air Brake Company, The. (See Hedendahl, Theodore A., assignor.)

Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)

Westinghouse Air Brake Company, The. (See Westinghouse, Henry H., assignor.)

Westinghouse Air Brake Company, The. (See Woernley, Harry F., assignor.)

Westinghouse Electric and Manufacturing Company. (See Aalborg, Christian, assignor.)

Westinghouse Electric & Manufacturing Company. (See Conrad, Frank, assignor.)

Westinghouse Electric and Manufacturing Company. (See Schaake, William, assignor.)

Westinghouse Electric and Manufacturing Company. (See Tarkington, Clarence G., assignor.)

Westinghouse, Henry H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Combined car and pipe coupling. No. 1,106,431; Aug. 11; Gaz. vol. 205; p. 335.

Westlake, Charles T., assignor to Commonwealth Steel Company, St. Louis, Mo. Six-wheel-car-truck brake. No. 1,107,637; Aug. 18; Gaz. vol. 205; p. 811.

Westlake, Charles T., assignor to Commonwealth Steel Company, St. Louis, Mo. Six-wheel-car-truck brake. No. 1,107,638; Aug. 18; Gaz. vol. 205; p. 811.

Westlake, Charles T., assignor to Commonwealth Steel Company, St. Louis, Mo. Six-wheel-car-truck brake. No. 1,107,639; Aug. 18; Gaz. vol. 205; p. 812.

Weston, Folke W., New York, assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y. Plate-holding device. No. 1,108,646; Aug. 25; Gaz. vol. 205; p. 1209.

Westphall, Charles J., Portland, Oreg., and J. B. Skiff, Clinton, Iowa. Fence-post. No. 1,108,535; Aug. 25; Gaz. vol. 205; p. 1172.

Wetcarbonizing Limited. (See Rigby and Testrup, assignors.)

Wetcarbonizing Limited. (See Testrup and Rigby, assignors.)

Wetcke, Johann M., Duisburg, Germany. Rolling-mill for sheet metal. No. 1,106,172; Aug. 4; Gaz. vol. 205; p. 205.

Wheury, George H., assignor to The Hartmann Trunk Company, Racine, Wis. Wardrobe-trunk. (Reissue.) No. 13,792; Aug. 25; Gaz. vol. 205; p. 1291.

Wheeler, Frank H. (See Schebler, George M., assignor.)

Whisler, Chauncy P. (See Sanderson and Whisler.)

Whitcomb, John M., Redwood Falls, Minn. Band-knife. No. 1,107,004; Aug. 11; Gaz. vol. 205; p. 538.

White, Barclay, Jamsiowne, Pa. Supporting, spacing, and reinforcing means for concrete construction. No. 1,108,647; Aug. 25; Gaz. vol. 205; p. 1210.

White, Charles, Baltimore, Md. Apparatus for making piston packing-rings. No. 1,107,005; Aug. 11; Gaz. vol. 205; p. 538.

White, Frank M., Canton, Ohio. Coin-holder for satchels. No. 1,108,292; Aug. 25; Gaz. vol. 205; p. 1088.

White, Frank W., Brooklyn, N. Y. Attachment for tools. No. 1,106,264; Aug. 4; Gaz. vol. 205; p. 234.

White, Fred E. (See Wilder and White.)

White, Ralph D. (See Sturgiss, Wilbur R., assignor.)

White, Woolman G., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,108,818; Aug. 25; Gaz. vol. 205; p. 1267.

Whitehead, Richard G., Trenton, N. J. Water-heater for gas-ranges. No. 1,107,565; Aug. 18; Gaz. vol. 205; p. 785.

Whiteside, James G., Youngstown, Ohio. Grip-truck. No. 1,105,943; Aug. 4; Gaz. vol. 205; p. 125.

Whitin Machine Works, The. (See Allen, Charles A., assignor.)

Whiting Foundry Equipment Company. (See Loudon, Archibald M., assignor.)

Whiting Foundry Equipment Company. (See Rundle, Fred A., assignor.)

Whiting Manufacturing Company. (See Blair, Thomas H., assignor.)

Whitney, Claire, assignor of one-half to E. J. Shively, San Francisco, Cal. Toy bank. No. 1,108,046; Aug. 18; Gaz. vol. 205; p. 953.

Whitney & Son, Baxter D. (See Loveland, Byron S., assignor.)

Whitney, Willie D., Holley, N. Y. Washing-machine. No. 1,108,047; Aug. 18; Gaz. vol. 205; p. 954.

Whittaker, Matthew H., Manchester, and C. Holliwell, Broadheath, assignors to Linotype and Machinery Limited, London, England. Mold of typographical line-casting machines. No. 1,107,392; Aug. 18; Gaz. vol. 205; p. 723.

Whittier, Frederick G., Brookline, assignor to The Lamson Company, Boston, Mass. Pneumatic-despatch-tube selective system. No. 1,108,293; Aug. 25; Gaz. vol. 205; p. 1088.

Whittle, William H., Palmesdale, Mich. File-box. No. 1,106,265; Aug. 4; Gaz. vol. 205; p. 235.

Whitworth, John M., Korn, Okla. Lubricator for spindle-skeins. No. 1,107,469; Aug. 18; Gaz. vol. 205; p. 752.

Whyte, John D., Manchester, England. Device to facilitate threading shuttles. No. 1,105,733; Aug. 4; Gaz. vol. 205; p. 52.

Widegren, Emil H. and K. A., Alby, Sweden. Electric-writing-telegraph. No. 1,106,762; Aug. 11; Gaz. vol. 205; p. 455.

Widegren, Klas A. (See Widegren, Emil H. and K. A.)

Wieboldt, Elmer F., Chicago, Ill. Duplex cashier's desk. No. 1,107,735; Aug. 18; Gaz. vol. 205; p. 846.

Wieser, Karl, Bredeney, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Percussion-fuse. No. 1,108,819; Aug. 25; Gaz. vol. 205; p. 1267.

Wieser, Karl, Bredeney, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Projectile-tracer. No. 1,108,820; Aug. 25; Gaz. vol. 205; p. 1268.

Wilcox, Ernest C., assignor to The Connecticut Telephone & Electric Company, Meriden, Conn. Ignition system. No. 1,106,432; Aug. 11; Gaz. vol. 205; p. 336.

Wilcox, Frank, Cedar Falls, Iowa. Jar holding and spacing means. No. 1,105,734; Aug. 4; Gaz. vol. 205; p. 52.

Wilcoxson, Isham F., assignor of one-half to G. W. Metcalf, Dryden, Okla. Harvesting-machine. No. 1,106,018; Aug. 4; Gaz. vol. 205; p. 151.

Wilcoxson, Isham F., assignor of one-half to G. W. Metcalf, Dryden, Okla. Harvesting-machine. No. 1,106,019; Aug. 4; Gaz. vol. 205; p. 151.

Wild, Anton, assignor to Werner & Pfleiderer Co., Saginaw, Mich. Machine for folding noodles. No. 1,108,294; Aug. 25; Gaz. vol. 205; p. 1089.

Wild, Charles W. (See Mansfield and Wild.)

Wilder, William H., and F. E. White, Gardner, Mass., assignors to Central Oil & Gas Stove Company. Oven. No. 1,107,470; Aug. 18; Gaz. vol. 205; p. 752.

Wilding, James A. (See Tucker and Wilding.)

Wildman, Frank B., and G. L. Ballard, Norristown, Pa., assignors to Wildman Mfg. Co. Circular French-welt knitting-machine. No. 1,105,735; Aug. 4; Gaz. vol. 205; p. 53.

Wildman, Frank B., and G. L. Ballard, assignors to Wildman Mfg. Co., Norristown, Pa. Knitting-machine. No. 1,106,763; Aug. 11; Gaz. vol. 205; p. 455.

Wildman, Frank B., and G. L. Ballard, assignors to Wildman Mfg. Co., Norristown, Pa. Circular-knitting machine. No. 1,106,764; Aug. 11; Gaz. vol. 205; p. 456.

Wildman, Joseph E., Landover, Md., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Web-folding apparatus. No. 1,108,295; Aug. 25; Gaz. vol. 205; p. 1089.

Wildman Mfg. Co. (See Wildman and Ballard, assignors.)

Wilds, George, Detroit, Mich. Aeroplane. No. 1,106,020; Aug. 4; Gaz. vol. 205; p. 151.

Wiles, Herbert G. (See Brookshire and Wiles.)

Wilhelm, Johannes. (See Finkelman and Wilhelm.)

Wilhelmi, Otto, Lucerne, Switzerland, assignor of one-half to Internationale Siegwartbalkengesellschaft. Making firm foundations in the ground for piles, tubed shafts, and the like. No. 1,106,606; Aug. 11; Gaz. vol. 205; p. 402.

Wilkie, Fred, New York, N. Y., assignor to The Dressel Railway Lamp Works. Signal-lamp. No. 1,106,690; Aug. 11; Gaz. vol. 205; p. 430.

Wilkin, John T., assignor to The Connersville Blower Company, Connersville, Ind. Extractor of liquids and solids from gases. No. 1,105,868; Aug. 4; Gaz. vol. 205; p. 99.

Wilkinson, Charles A., Worcester, Mass. Stove. No. 1,108,648; Aug. 25; Gaz. vol. 205; p. 1210.

Wilkinson, Frank W., and F. Ziganek, West Toledo, Ohio. Door-lock. No. 1,107,736; Aug. 18; Gaz. vol. 205; p. 846.

Wilkinson, James, Boston, Mass., assignor to General Electric Company. Boiler-feed system. No. 1,105,736; Aug. 4; Gaz. vol. 205; p. 53.

Wilkinson, James, Schenectady, N. Y., assignor to General Electric Company. Electric contact-maker for flow-meters. No. 1,106,907; Aug. 11; Gaz. vol. 205; p. 506.

Willette, Charles W., Seattle, Wash. Log-manipulating mechanism. No. 1,108,018; Aug. 18; Gaz. vol. 205; p. 954.

William L. Dines, Jr., Co. (See Dines, William L., Jr., assignor.)

William Schollhorn Company, The. (See Bernard, William A., assignor.)

William Sellers & Company. (See Vold, Lars H., assignor.)

William Shakespeare, Jr., Company. (See Shakespeare and Schmid, assignors.)

Williams, Brown and Earle. (See Holst, Lodewyk J. R., assignor.)

Williams, Charles H. (See Chamberlin and Williams.)

Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Cast-metal brake-beam. No. 1,106,765; Aug. 11; Gaz. vol. 205; p. 456.

Williams, David L., assignor to Williams-Gregg Manufacturing Company, Ord, Nebr. Horse-collar pad. No. 1,108,049; Aug. 18; Gaz. vol. 205; p. 955.

Williams, Edgar A., Upper Black Eddy, Pa. Penholder. No. 1,106,173; Aug. 4; Gaz. vol. 205; p. 205.

Williams, Edward R. (See Hall, Joseph B., assignor.)

Williams, Edward R., Sharpsburg, Pa. Liquid-dispensing apparatus. No. 1,107,393; Aug. 18; Gaz. vol. 205; p. 723.

Williams, Ernest J., St. Louis, Mo. Combined fan and eye-shade. No. 1,108,649; Aug. 25; Gaz. vol. 205; p. 1210.

Williams Foundry and Machine Company. (See Williams, John K., assignor.)

Williams-Gregg Manufacturing Company. (See Williams, David L., assignor.)

Williams, Henry A., Murphysboro, Ill. Combination go-cart and sulky. No. 1,106,174; Aug. 4; Gaz. vol. 205; p. 206.

Williams, Herbert L., assignor of one-half to P. E. Ames, Everett, Wash. Logging-bunk. No. 1,108,416; Aug. 25; Gaz. vol. 205; p. 1128.

Williams, John K., assignor of one-half to Williams Foundry and Machine Company, Akron, Ohio. Collapsible core. No. 1,105,737; Aug. 4; Gaz. vol. 205; p. 54.

Williams, Oscar C., Williamstown, W. Va. Heating-stove. No. 1,105,944; Aug. 4; Gaz. vol. 205; p. 125.

Williams Patent Crusher and Pulverizer Company. (See Ogden, Ferris, assignor.)

Williams, William E., Massillon, Ohio, assignor of one-half to P. H. Holdsworth, Seattle, Wash. Smelting-furnace. No. 1,108,821; Aug. 25; Gaz. vol. 205; p. 1268.

Williams, Wynant J., Albany, N. Y. Compound transformer. No. 1,108,050; Aug. 18; Gaz. vol. 205; p. 955.

Williamson, Newton H., assignor of one-half to P. B. Moseley, Greenfield, Tenn. Back-band hook. No. 1,105,945; Aug. 4; Gaz. vol. 205; p. 126.

Willis, Thomas H., Plattsburg, Ohio. Securing means. No. 1,106,691; Aug. 11; Gaz. vol. 205; p. 430.

Wills, Clara E., Southport, England. Gas cooking-stove. No. 1,108,650; Aug. 25; Gaz. vol. 205; p. 1211.

Wills, Garland S., Twin Buttes, Ariz. Wire-connector. No. 1,106,855; Aug. 11; Gaz. vol. 205; p. 488.

Wilmot, Arthur E., Seattle, Wash. Collar. No. 1,108,296; Aug. 25; Gaz. vol. 205; p. 1090.

Wilson, Frank E., Lancaster, Ohio. Game-board. No. 1,106,530; Aug. 11; Gaz. vol. 205; p. 373.

Wilson, George H., Louisville, Ky. Garment-supporter. No. 1,107,126; Aug. 11; Gaz. vol. 205; p. 579.

Wilson, George H., Spokane, Wash. Preheater. No. 1,108,051; Aug. 18; Gaz. vol. 205; p. 955.

Wilson, Leonard P., Coventry, assignor to Courtaulds Limited, London, England. Regeneration of sulfids of the alkalis or alkaline earths. No. 1,106,266; Aug. 4; Gaz. vol. 205; p. 235.

Wilson, Robert N., Colegrove, Pa. Rail-brace. No. 1,106,433; Aug. 11; Gaz. vol. 205; p. 336.

Wilson, Walter R., Oakland, Cal. Coop. No. 1,106,267; Aug. 4; Gaz. vol. 205; p. 235.

Winch, William O. (See Chiniquy and Winch.)

Winchester Repeating Arms Co. (See Starkweather, Henry W., assignor.)

Winchester Repeating Arms Company. (See Buell, William H., assignor.)

Wincrantz, John S., assignor to S. S. Newman, Pittsburgh, Pa. Twist-drill-grinding attachment. No. 1,106,692; Aug. 11; Gaz. vol. 205; p. 431.

Windom, Elias L. (See Molina, Louis G., assignor.)

Wineapple, Charles, *et al.* (See Martin, William, assignor.)

Wineapple, Morris, *et al.* (See Martin, William, assignor.)

Winkelmeyer, John, Anderson, assignor to Specialty Manufacturing Company, Greenfield, Ind. Computing cheese-cutter. No. 1,108,297; Aug. 25; Gaz. vol. 205; p. 1090.

Winks, Walter H., Baltimore, Md. Engine-starting device. No. 1,106,268; Aug. 4; Gaz. vol. 205; p. 235.

Winship, Walter E., New York, N. Y., assignor to Gould Storage Battery Company. Battery. No. 1,106,125; Aug. 4; Gaz. vol. 205; p. 190.

Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,108,482; Aug. 25; Gaz. vol. 205; p. 1153.

Winter, John, Goshen, Ind. Separable fastener. No. 1,105,738; Aug. 4; Gaz. vol. 205; p. 54.

Winter, Rudolph G., Milwaukee, Wis. Hinge. No. 1,108,298; Aug. 25; Gaz. vol. 205; p. 1090.

Winton, Alexander, assignor to Winton Gas Engine and Manufacturing Company, Cleveland, Ohio. Fuel-governing mechanism for internal-combustion engines. No. 1,106,326; Aug. 4; Gaz. vol. 205; p. 255.

Winton, Alexander, and H. B. Anderson, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Universal joint and system of lubrication therefor. No. 1,106,325; Aug. 4; Gaz. vol. 205; p. 255.

Winton, Alexander, and H. B. Anderson, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Signal device for automobiles. No. 1,108,052; Aug. 18; Gaz. vol. 205; p. 955.

Winton Gas Engine and Manufacturing Company. (See Winton, Alexander, assignor.)

Winton Motor Carriage Company, The. (See Winton and Anderson, assignors.)

Wisconsin Sanitary Cow-Milker Co. (See Moldenhauer, Otto A., assignor.)

Wise, F. A., *et al.* (See Crooks, Earl G., assignor.)

Wisman, George E., Franklinton, N. C. Jeweler's tongs. No. 1,108,299; Aug. 25; Gaz. vol. 205; p. 1091.

Witham, George S., Sr., Hudson Falls, and A. Roesch, New York, assignors to Charles J. Tagliabue Manufacturing Co., Brooklyn, N. Y. Thermostatic regulation for heated rollers. No. 1,107,737; Aug. 18; Gaz. vol. 205; p. 847.

Withnell, Edward W., Jud, N. D. Plow lifting or elevating mechanism. No. 1,106,766; Aug. 11; Gaz. vol. 205; p. 456.

Wittemann Brothers. (See Baach, John, Jr., assignor.)

Wiwi, Thomas R., and J. Fassett, Denver, Colo. Portable electric fan. No. 1,108,053; Aug. 18; Gaz. vol. 205; p. 956.

Wodtli, Gottlieb, Foster, Oreg. Nail-extractor. No. 1,105,946; Aug. 4; Gaz. vol. 205; p. 126.

Wodtli, Gottlieb, Sweet Home, Oreg. Vertical mower. No. 1,108,536; Aug. 25; Gaz. vol. 205; p. 1172.

Woellert, Gustave J. F., Rockford, Ill. Cap-feeding machine. No. 1,106,607; Aug. 11; Gaz. vol. 205; p. 402.

Woernley, Harry F., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Automatic car and pipe coupling. No. 1,108,300; Aug. 25; Gaz. vol. 205; p. 1091.

Wolfe, Abner K., Atchison, Kans., assignor of one-half to C. Davis, Rulo, Nebr. Side bearing. No. 1,108,054; Aug. 18; Gaz. vol. 205; p. 956.

Wolfe, John E. (See Wolfe, Samuel C. and J. E.)

Wolfe, Samuel C. and J. E., Angola, Ind. Poultry cooling and display rack. No. 1,108,055; Aug. 18; Gaz. vol. 205; p. 957.

Wolff, Charles H. (See Weder and Wolff.)

Wolff, Harry E., New York, N. Y. Automatic lighter. No. 1,106,175; Aug. 4; Gaz. vol. 205; p. 206.

Wolmer, John A., Indianapolis, Ind. Steam-boiler construction. No. 1,106,066; Aug. 4; Gaz. vol. 205; p. 168.

Wood, Clio L., Coalinga, Cal. Pump-anchor. No. 1,108,537; Aug. 25; Gaz. vol. 205; p. 1173.

Wood, De Forrest, Kipton, Ohio. Automatic poultry-feeder. No. 1,107,394; Aug. 18; Gaz. vol. 205; p. 724.

Wood, Flora A., administratrix. (See Wood, James E.)

Wood, Henry A. W., New York, N. Y. Means for keeping margins clean in intaglio-printing. No. 1,106,067; Aug. 4; Gaz. vol. 205; p. 168.

Wood, James E., deceased; F. A. Wood, administratrix, assignor of one-half to C. A. Love, Aurora, Ill. Master-wheel. No. 1,108,538; Aug. 25; Gaz. vol. 205; p. 1173.

Wood, William H., Media, Pa. Boiler. No. 1,106,908; Aug. 11; Gaz. vol. 205; p. 507.

Woodcock, Mabel E. (See Mesick, Elliot, and Woodcock.)

Woodfield, Ernest E., Astoria, Oreg. Drag-seine. No. 1,108,417; Aug. 25; Gaz. vol. 205; p. 1129.

Woodruff, Henry L., *et al.* (See Morton, Frank M., assignor.)

Woods, Allie, administratrix. (See Woods, Harry.)

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Talking-machine. No. 1,106,269; Aug. 4; Gaz. vol. 205; p. 236.

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Talking-machine. No. 1,108,301; Aug. 25; Gaz. vol. 205; p. 1091.

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Tone-arm for talking-machines. No. 1,108,302; Aug. 25; Gaz. vol. 205; p. 1092.

Woods, Harry, deceased, Steubenville, Ohio; A. Woods, administratrix. Hydraulic valve. No. 1,105,947; Aug. 4; Gaz. vol. 205; p. 126.

Woodward, Charles H., and J. W. Doane, Portland, Oreg. Bag-holder. No. 1,106,483; Aug. 11; Gaz. vol. 205; p. 356.

Woodward, Elmer E., Rockford, Ill. Speed-regulator. No. 1,106,434; Aug. 11; Gaz. vol. 205; p. 337.

Woodward, William, Chicago, Ill. Explosive-engine. No. 1,108,303; Aug. 25; Gaz. vol. 205; p. 1092.

Woolf, Frank H., assignor of one-half to I. E. Block, Chicago, Ill. Candy-machine. No. 1,108,304; Aug. 25; Gaz. vol. 205; p. 1092.

Worcester, Joseph T., Mobile, Ala. Turpentine-hack. No. 1,108,651; Aug. 25; Gaz. vol. 205; p. 1211.

Workman, James C., *et al.* (See Wranau, Gottlieb H. E. von, assignor.)

Wormser, Alfred G., Harrisburg, Pa. Combined lunch carrier and heater. No. 1,106,176; Aug. 4; Gaz. vol. 205; p. 206.

Wranau, Gottlieb H. E. von, assignor of one-third to J. C. Workman, Cleveland, and one-third to L. Sebastian, Toledo, Ohio. Folding seat. No. 1,106,693; Aug. 11; Gaz. vol. 205; p. 431.

Wray, Edward, assignor to Kalle and Company, Aktiengesellschaft, Biebrich-on-the-Rhine, Germany. Manufacture of vat dyestuffs. No. 1,108,056; Aug. 18; Gaz. vol. 205; p. 957.

Wray, Edward, assignor to Kalle and Company, Aktiengesellschaft, Biebrich-on-the-Rhine, Germany. Manufacture of vat dyestuffs. No. 1,108,057; Aug. 18; Gaz. vol. 205; p. 957.

Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Universal pull-rod clamp. No. 1,106,856; Aug. 11; Gaz. vol. 205; p. 488.

Wright Cutter Company. (See Rich, Homer B., assignor.)

Wright, Dudley D., San Francisco, Cal. Telephone signaling apparatus. No. 1,108,305; Aug. 25; Gaz. vol. 205; p. 1093.

Wright, Fred W. (See Pearce, Parker, and Wright.)

Wright, Irn O., Baltimore, Md. Draft and buffing gear for cars. No. 1,106,531; Aug. 11; Gaz. vol. 205; p. 373.

Wright, James, assignor of three-eighths to W. S. Stacey, Hamilton, Ontario, Canada. Safety-guard for power-presses. No. 1,107,395; Aug. 18; Gaz. vol. 205; p. 724.

Wright, Samson D., Cleveland, Ohio. Dump-car. No. 1,105,948; Aug. 4; Gaz. vol. 205; p. 127.

Wright, Wilbur L., Washington, D. C. Paper-material receptacle and the like. No. 1,107,869; Aug. 18; Gaz. vol. 205; p. 892.

Wright, Wilbur L., Washington, D. C. Paper bottle and the like. No. 1,107,870; Aug. 18; Gaz. vol. 205; p. 892.

Wright, William H. (See Nichols and Wright.)

Wroclawski, Valenty, and M. Kolasinski, Chicago, Ill. Draft-gear. No. 1,107,396; Aug. 18; Gaz. vol. 205; p. 724.

Wukstich, Peter, East Pittsburgh, Pa. Fire-escape. No. 1,106,608; Aug. 11; Gaz. vol. 205; p. 402.

Wünsche, Helmuth H., Kirchsteinbek, near Hamburg, assignor to Pearson & Co., Gesellschaft mit beschränkter Haftung, Hamburg, Germany. Stable mixture containing perborates. No. 1,105,739; Aug. 4; Gaz. vol. 205; p. 54.

Wylie, Thomas B., Pittsburgh, Pa. Volume and pressure register for fluids. No. 1,105,740; Aug. 4; Gaz. vol. 205; p. 54.

Wyman, Franklin A. (See Cox, Richard C., assignor.)

Yale & Towne Manufacturing Company, The. (See Ballou, Waldo R., assignor.)

Yaw, Clio B., Arlington, N. J., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,106,435; Aug. 11; Gaz. vol. 205; p. 337.
Yemiker, John, Akron, Ohio. Collapsible core. No.1,107,397; Aug. 18; Gaz. vol. 205; p. 725.
Yemiker, John, Akron, Ohio Collapsible core. No. 1,107,398; Aug. 18; Gaz. vol. 205; p. 725.
Yerkes, Albert E., Los Angeles, Cal. Multiple spraying device. No. 1,108,058; Aug. 18; Gaz. vol. 205; p. 958.
Yerkes, Hulbert A., Hackensack, N. J., assignor to American Graphophone Company, Bridgeport, Conn. Coupling for listening-tubes. No. 1,107,471; Aug. 18; Gaz. vol. 205; p. 753.
Yerxa, Harry D. (See Taylor, John L., assignor.)
Yoerg, Henry. (See Emerson and Yoerg.)
Yoerger, George, Brooklyn, N. Y. Punching-bag hanger. No. 1,106,068; Aug. 4; Gaz. vol. 205; p. 168.
Young, Charles M., assignor of one-third to T. R. Arkell and one-third to C. Feild, Ottawa, Ontario, Canada. Film-drier. No. 1,108,306; Aug. 25; Gaz. vol. 205; p. 1093.
Young, Cleveland O., Chicago, Ill. Street and station indicator. No. 1,108,652; Aug. 25; Gaz. vol. 205; p. 1212.
Young, Howard W., assignor of one-half to E. C. Miller, Baltimore, Md. Rail-holding device. No. 1,106,767; Aug. 11; Gaz. vol. 205; p. 457.
Young, Ira J., assignor to Western Wire Products Company, St. Louis, Mo. Machine for forming split pins or cotter-pins. No. 1,106,484; Aug. 11; Gaz. vol. 205; p. 357.
Young, Jefferson D., Chattanooga, Okla., assignor to The Boltless Rail Joint Company, Wilmington, Del. Rail-joint. No. 1,106,021; Aug. 4; Gaz. vol. 205; p. 152.
Youngstown Sheet and Tube Company, The. (See Neckerman, William M., assignor.)
Ytterberg, Arle T., Wisby, Sweden, assignor to W. M. Scott, Berwyn, Pa. Operating device for electric switches. No. 1,106,126; Aug. 4; Gaz. vol. 205; p. 190.
Zagora, Joseph, Racine, Wis. Fuel-delivery system. No. 1,106,270; Aug. 4; Gaz. vol. 205; p. 236.
Zahm, Albert F., Washington, D. C. Flying-machine. No. 1,107,231; Aug. 11; Gaz. vol. 205; p. 618.
Zahm, Edward, assignor to Zahm Manufacturing Company, Buffalo, N. Y. Sterilizing bottles. No. 1,108,539; Aug. 25; Gaz. vol. 205; p. 1174.
Zahm Manufacturing Company. (See Zahm, Edward, assignor.)
Zahn, Robert, deceased, Plauen, Germany; A. Rietzsch, administrator. Take-up mechanism for embroidering-machines. No. 1,108,418; Aug. 25; Gaz. vol. 205; p. 1129.
Zaremba Company. (See Zaremba and Mantius, assignors.)
Zaremba, Edward, and O. Mantius, Buffalo, N. Y., assignors to Zaremba Company. Evaporator. No. 1,106,532; Aug. 11; Gaz. vol. 205; p. 374.
Zaring, Glenn E., Washington, Iowa. Composition fence-post. No. 1,106,694; Aug. 11; Gaz. vol. 205; p. 431.
Zavelberg, Albert, Hohenlohehütte, Germany. Roasting-furnace. No. 1,107,006; Aug. 11; Gaz. vol. 205; p. 538.
Zee Socket and Mfg. Co., The. (See Both, Tonjes A. C., assignor.)
Zeigler, Lyman H. (See McKinney and Zeigler.)
Zelser, Dagobert, Troy, N. Y. Folding attachment for sewing-machines. No. 1,108,419; Aug. 25; Gaz. vol. 205; p. 1126.
Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)
Zeiss, Firm of Carl. (See Eppenstein and Eckardt, assignors.)
Zeiss, Firm of Carl. (See Meyer, Franz, assignor.)
Zeiss, Firm of Carl. (See Straubel, Rudolf, assignor.)
Zeman, Louis, Tobias, Nebr. Supplemental tire. No. 1,108,653; Aug. 25; Gaz. vol. 205; p. 1212.
Ziegenfuss, Friedrich, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Luminous projectile. No. 1,108,654; Aug. 25; Gaz. vol. 205; p. 1212.
Zifferer, Lothar R., Chicago, Ill., assignor to U. S. Expansion Bolt Company, New York, N. Y. Anchored wall-fixture. No. 1,106,909; Aug. 11; Gaz. vol. 205; p. 507.
Ziganek, Ferdinand. (See Wilkinson and Ziganek.)
Zihler, Léon L., Buffalo, N. Y. Stub-puller. No. 1,108,059; Aug. 18; Gaz. vol. 205; p. 958.
Zika, Frank A., assignor of one-half to J. E. Barry, Chicago, Ill. Current conducting and distributing device for internal-combustion engines. No. 1,105,741; Aug. 4; Gaz. vol. 205; p. 54.
Zimmermann, Louis. (See Litchfield and Zimmermann.)
Zlotorzynski, Alexander J., Shamokin, Pa. Safety cranking device for automobiles. No. 1,107,007; Aug. 11; Gaz. vol. 205; p. 538.
Zschokke, Walther, Steglitz, assignor to Optische Anstalt C. P. Goerz Aktiengesellschaft, Berlin, Germany. Spherically, chromatically, astigmatically, and comatically corrected double objective. No. 1,108,307; Aug. 25; Gaz. vol. 205; p. 1093.
Zuckerman, Emil, Yonkers, N. Y. Hinge. No. 1,108,308; Aug. 25; Gaz. vol. 205; p. 1094.
Zukor, Arnold, New York, N. Y. Automatic stop for railways. No. 1,106,910; Aug. 11; Gaz. vol. 205; p. 507.
Zwilling, Joseph, assignor to Western Electric Company, New York, N. Y. Protector. No. 1,106,911; Aug. 11; Gaz. vol. 205; p. 507.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Adams & Westlake Company, The. (See Newbold, Roger M., assignor.)
Allison, Estelle, San Francisco, Cal. Toy figure. No. 46,241; Aug. 11; Gaz. vol. 205; p. 625.
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Pin Company. (See Nash, John J., assignor.)
Anklam, William F., assignor to C. M. Hall Lamp Company, Detroit, Mich. Lamp. No. 46,272; Aug. 18; Gaz. vol. 205; p. 979.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Dynamo-casing. No. 46,306; Aug. 25; Gaz. vol. 205; p. 1292.
Armstrong Cork Company. (See Humphreys, Charles F., assignor.)
Ashbrook, Elmer F., Jamesport, Mo. Jeweler's cabinet. No. 46,307; Aug. 25; Gaz. vol. 205; p. 1292.
Automatic Electric Company. (See Setter, Michael, assignor.)
Badger Brass Mfg. Co. (See Welles, Richard H., assignor.)
Beardslee Chandelier Manufacturing Company. (See Beardslee and French, assignors.)
Beardslee, George M., and I. L. French, assignors to Beardslee Chandelier Manufacturing Company, Chicago, Ill. Lighting-fixture. No. 46,196; Aug. 4; Gaz. vol. 205; p. 267.
Beistle, Martin L., Shippensburg, Pa. Christmas-tree fence. No. 46,308; Aug. 25; Gaz. vol. 205; p. 1292.
Bluswanger, Simon, assignor to Ross Broiler Company, St. Joseph, Mo. Broiler-griddle. No. 46,309; Aug. 25; Gaz. vol. 205; p. 1292.
Blantz, Clayton H., Lebanon, Pa. Tool. No. 46,310; Aug. 25; Gaz. vol. 205; p. 1293.
Blesch, Charles, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio. Burial-casket handle. No. 46,242; Aug. 11; Gaz. vol. 205; p. 625.
Bragger, John W., assignor to J. B. Wise Inc., Watertown, N. Y. Sanitary trap. No. 46,197; Aug. 4; Gaz. vol. 205; p. 267.
Bromley & Sons, John. (See Petzold, Adolph, assignor.)
Brucker, Ferdinand F., assignor to The Miller Rubber Company, Akron, Ohio. Water-bag. No. 46,198; Aug. 4; Gaz. vol. 205; p. 268.
Bundy, Clifton L., Philadelphia, Pa. Insulator. No. 46,243; Aug. 11; Gaz. vol. 205; p. 625.
Burgner Manufacturing and Sales Co., The. (See Pottelger, Harry E., assignor.)
Bush, Noël M., Montclair, N. J. Rain-coat. No. 46,244; Aug. 11; Gaz. vol. 205; p. 625.
C. M. Hall Lamp Company. (See Anklam, William F., assignor.)
Chatillon, George E., New York, N. Y. Scale-dial. No. 46,245; Aug. 11; Gaz. vol. 205; p. 626.
Christian, James H., Detroit, Mich. Tire-casing. No. 46,273; Aug. 18; Gaz. vol. 205; p. 979.
Codman, William, assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 46,199; Aug. 4; Gaz. vol. 205; p. 268.
Cook, Everett J., Toledo, Ohio. Front end for motor-vehicles. No. 46,200; Aug. 4; Gaz. vol. 205; p. 268.
Coty, Louis R., Helena, Mont. Housing for hay-rack wheels. No. 46,246; Aug. 11; Gaz. vol. 205; p. 626.
Cramer, Virgil P., Elyria, Ohio. Savings-bank. No. 46,201; Aug. 4; Gaz. vol. 205; p. 268.
Crane & Breed Manufacturing Company, The. (See Blesch, Charles, assignor.)
Cronk, Charles J., Clifton Park, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Fabric for car-curtains. Nos. 46,274–5; Aug. 18; Gaz. vol. 205; p. 979.
Curtiss, Charles C., Grand Rapids, Mich. Drawer-section. No. 46,247; Aug. 11; Gaz. vol. 205; p. 626.
Curtiss, Charles C., Grand Rapids, Mich. Sectional store furniture. No. 46,248; Aug. 11; Gaz. vol. 205; p. 626.
Dailuaine Talisker Distilleries. (See Mackenzie, Thomas, assignor.)
Danzer, Albert, assignor to Danzer Metal Works, Hagerstown, Md. Snow-guard for roofs. No. 46,202; Aug. 4; Gaz. vol. 205; p. 269.
Danzer Metal Works. (See Danzer, Albert, assignor.)
De Vries, Hein, Hood, Cal. Loving-cup. No. 46,249; Aug. 11; Gaz. vol. 205; p. 626.
Diamond Glass Company. (See Rowland, Edward J., assignor.)
Dix, Donald R., Denver, Colo. Bracelet. Nos. 46,203–6; Aug. 4; Gaz. vol. 205; p. 269.
Doty, Edward J., assignor to Siegel, Rothschild & Co., Baltimore, Md. Parasol. No. 46,250; Aug. 11; Gaz. vol. 205; p. 627.
E. I. du Pont de Nemours Powder Company. (See Cronk, Charles J., assignor.)
Erichsen, Henry F., Chicago, Ill. Emblem for a religious society. No. 46,207; Aug. 4; Gaz. vol. 205; p. 269.
Erskine, James L., Upper Montclair, N. J. Lathering implement. No. 46,208; Aug. 4; Gaz. vol. 205; p. 270.
Everson, Charles W., Orange, N. J. Framework or head of a printing-wheel hand-stamp. No. 46,276; Aug. 18; Gaz. vol. 205; p. 980.
Ewing, Robert E. (See Kopp and Ewing.)
Federal Sign System (Electric). (See Goehst, John H., assignor.)
Finn, George, Newark, N. J. Self-heating sad-iron. No. 46,277; Aug. 18; Gaz. vol. 205; p. 980.
Forbes, Armitage S. C. and H. R. P., South Pasadena, Cal. Bell-guide-post souvenir. No. 46,278; Aug. 18; Gaz. vol. 205; p. 980.
Forbes, Harrye R. P. (See Forbes, Armitage S. C. and H. R. P.)
French, Ira L. (See Beardslee and French.)
Goehst, John H., assignor to Federal Sign System (Electric), Chicago, Ill. Electric hand-lamp. No. 46,279; Aug. 18; Gaz. vol. 205; p. 980.
Gorham Manufacturing Company. (See Codman, William, assignor.)
Greenpoint Metallic Bed Company. (See Lies, William, assignor.)
Hansen, Augie L., assignor to Justrite Manufacturing Company, Chicago, Ill. Multiple carbid-container. No. 46,280; Aug. 18; Gaz. vol. 205; p. 981.
Harding, Thomas, Newark, N. J., assignor to J. L. Sommer Manufacturing Co. Bottle-opener and pick. No. 46,311; Aug. 25; Gaz. vol. 205; p. 1293.
Hasbrouck, John, New York, N. Y. Tile flooring. No. 46,251; Aug. 11; Gaz. vol. 205; p. 627.
Helsey & Co., A. H. (See Sanford, Andrew J., assignor.)
Henckel, Gustave A., South Orange, N. J. Border-section. No. 46,209; Aug. 4; Gaz. vol. 205; p. 270.
Hillbom, Henrik, assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Spoon, fork, or similar article. No. 46,281; Aug. 18; Gaz. vol. 205; p. 981.
Humphrey, Herbert S., Kalamazoo, Mich., assignor to Ruud Manufacturing Company, Pittsburgh, Pa. Water-heater body. No. 46,252; Aug. 11; Gaz. vol. 205; p. 627.
Humphreys, Charles F., Lancaster, assignor to Armstrong Cork Company, Pittsburgh, Pa. Linoleum, oil-cloth, or floor-covering. Nos. 46,210–17; Aug. 4; Gaz. vol. 205; pp. 270–1.
International Silver Company. (See Lashar, Thomas B., assignor.)
International Silver Co. (See Stohr, Samuel, assignor.)
Interwoven Stocking Company. (See Mettler, John W., assignor.)
J. B. Wise Inc. (See Bragger, John W., assignor.)
J. H. Williams & Co. (See Martin, Clifford A., assignor.)
J. L. Sommer Manufacturing Co. (See Harding, Thomas, assignor.)
J. L. Sommer Manufacturing Co. (See Sommer, John L., assignor.)
Jacobus, Nelson L., West Orange, N. J. Bottle-cap remover. No. 46,218; Aug. 4; Gaz. vol. 205; p. 271.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Hanger for light-reflecting bowls. No. 46,219; Aug. 4; Gaz. vol. 205; p. 271.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Clamp for light-reflecting bowls. No. 46,220; Aug. 4; Gaz. vol. 205; p. 272.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Lighting-bracket. No. 46,221; Aug. 4; Gaz. vol. 205; p. 272.
Justrite Manufacturing Company. (See Hansen, Augie L., assignor.)
Kennedy, Howard L., Fort Wayne, Ind. Traveler's grip or bag. No. 46,312; Aug. 25; Gaz. vol. 205; p. 1293.
Kimes, Hugh W., assignor to The Valle-Kimes Company, Dayton, Ohio. Power-pump casing. No. 46,222; Aug. 4; Gaz. vol. 205; p. 272.
Kopp, Nicholas, and R. E. Ewing, assignors to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Light-shade. No. 46,253; Aug. 11; Gaz. vol. 205; p. 627.
Kraushaar, George J., Cleveland, Ohio. Baker's peel. No. 46,313; Aug. 25; Gaz. vol. 205; p. 1293.
Kuhlke, Martin D., Akron, Ohio. Vehicle wheel-tire. Nos. 46,282–4; Aug. 18; Gaz. vol. 205; p. 981.
Kunze, Charles, Los Angeles, Cal. Medal. No. 46,254; Aug. 11; Gaz. vol. 205; p. 628.

Lahiere, Eugene A., Washington, D. C. Toy. No. 46,256; Aug. 11; Gaz. vol. 205; p. 628.
Lashar, Thomas B., Bridgeport, assignor to International Silver Company, Meriden, Conn. Handle for spoons, forks, or similar articles. No. 46,255; Aug. 11; Gaz. vol. 205; p. 628.
Lenahan, Daniel. (See Reynolds and Lenahan.)
Levy, Louis W., New York, N. Y. Newspaper-holder. No. 46,314; Aug. 25; Gaz. vol. 205; p. 1293.
Lies, William, assignor to Greenpoint Metallic Bed Company, Brooklyn, N. Y. Corner-post for metal bedsteads. No. 46,257; Aug. 11; Gaz. vol. 205; p. 628.
Mackenzie, Thomas, assignor to Dailuaine Talisker Distilleries, Limited, Glasgow, Scotland. Glass bottle. No. 46,285; Aug. 18; Gaz. vol. 205; p. 982.
Mangene, Charles S., Boston, Mass. Tile or paving block. No. 46,286; Aug. 18; Gaz. vol. 205; p. 982.
Marsden, John E., Sedgwick, Pa. Article of manufacture. Nos. 46,258–9; Aug. 11; Gaz. vol. 205; pp. 628–9.
Martin, Clifford A., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Spanner-wrench. No. 46,260; Aug. 11; Gaz. vol. 205; p. 629.
McKee, Raymond E., Chicago, Ill. Rope-clamp. No. 46,287; Aug. 18; Gaz. vol. 205; p. 982.
Meilicke, Carl A., Chicago, Ill. Calculating-machine casing. No. 46,261; Aug. 11; Gaz. vol. 205; p. 629.
Meinecke, Christian W., Jersey City, N. J., assignor to Meinecke & Company, New York, N. Y. Surgical basin. No. 46,262; Aug. 11; Gaz. vol. 205; p. 629.
Meinecke & Company. (See Meinecke, Christian W., assignor.)
Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)
Mettler, John W., East Millstone, assignor to Interwoven Stocking Company, New Brunswick, N. J. Hosiery-ticket. No. 46,315; Aug. 25; Gaz. vol. 205; p. 1293.
Miller Rubber Company, The. (See Brucker, Ferdinand F., assignor.)
Moe, Aaron B., Chicago, Ill., assignor to Otis & Moe Manufacturing Company. Feeder. No. 46,288; Aug. 18; Gaz. vol. 205; p. 982.
Morgan, Jesse C., New York, N. Y. Handle for shaving-brushes. No. 46,316; Aug. 25; Gaz. vol. 205; p. 1294.
Mumma, Ira, assignor to The St. Clair Manufacturing Company, Dayton, Ohio. Lighting-fixture. No. 46,289; Aug. 18; Gaz. vol. 205; p. 983.
Mygatt, Otis A., New York, N. Y. Shade, reflector, or similar article. Nos. 46,290–1; Aug. 18; Gaz. vol. 205; p. 983.
Nash, John J., assignor to American Pin Company, Waterbury, Conn. Bed-trimming. Nos. 46,317–18; Aug. 25; Gaz. vol. 205; p. 1294.
Newbold, Roger M., assignor to The Adams & Westlake Company, Chicago, Ill. Lamp. No. 46,264; Aug. 11; Gaz. vol. 205; p. 630.
Olston Electric Company. (See Whitney, Roswell A., assignor.)
Otis & Moe Manufacturing Company. (See Moe, Aaron B., assignor.)
Petzold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Rug. Nos. 46,223–36; Aug. 4; Gaz. vol. 205; pp. 272–5.
Pittsburgh Lamp, Brass & Glass Company. (See Kopp and Ewing, assignors.)
Potteiger, Harry E., assignor to The Burgner Manufacturing and Sales Co., Sinking Spring, Pa. Bottle. No. 46,265; Aug. 11; Gaz. vol. 205; p. 630.
R. Wallace & Sons Mfg. Co. (See Hillbom, Henrik, assignor.)
Reynolds, Francis J., and D. Lenahan, Watertown, N. Y. Shoe-buttoner. No. 46,266; Aug. 11; Gaz. vol. 205; p. 630.
Ritters, Roman W., Los Angeles, Cal. Badge or similar article. No. 46,292; Aug. 18; Gaz. vol. 205; p. 983.
Rogers, Robert B., Somerville, Mass. Cuff-button protector. No. 46,237; Aug. 4; Gaz. vol. 205; p. 275.
Ross Broiler Company. (See Binswanger, Simon, assignor.)
Rowland, Edward J., assignor to Diamond Glass Company, Indiana, Pa. Toy candy-box. No. 46,293; Aug. 18; Gaz. vol. 205; p. 983.
Rubes, Ernest, Brooklyn, N. Y. Automobile-horn. No 46,294; Aug. 18; Gaz. vol. 205; p. 984.
Ruud Manufacturing Company. (See Humphrey, Herbert S., assignor.)
Salomon, Joseph, and H. Shaw, Chicago, Ill. Mirror-support. No. 46,295; Aug. 18; Gaz. vol. 205; p. 984.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Tumbler. No. 46,296; Aug. 18; Gaz. vol. 205; p. 984.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Candlestick. No. 46,319; Aug. 25; Gaz. vol. 205; p. 1294.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Tumbler or similar article. No. 46,320; Aug. 25; Gaz. vol. 205; p. 1294.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Bowl or similar article. No. 46,321; Aug. 25; Gaz. vol. 205; p. 1295.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Goblet or similar article. No. 46,322; Aug. 25; Gaz. vol. 205; p. 1295.
Savill, Robert G., assignor to Thomas Savill's Sons, Philadelphia, Pa. Faucet. No. 46,238; Aug. 4; Gaz. vol. 205; p. 275.
Schenke, Max E., Brooklyn, N. Y. Slipper. No. 46,323; Aug. 25; Gaz. vol. 205; p. 1295.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Stocking. Nos. 46,324–5; Aug. 25; Gaz. vol. 205; pp. 1295–6.
Scott & Williams. (See Scott, Robert W., assignor.)
Setter, Michael, assignor to Automatic Electric Company, Chicago, Ill. Casing for hand-telephones. No. 46,267; Aug. 11; Gaz. vol. 205; p. 630.
Shaw, Harry. (See Salomon and Shaw.)
Shields, Carl E., Rock Island, Ill. Bench-vise anvil. No. 46,268; Aug. 11; Gaz. vol. 205; p. 631.
Siegel, Rothschild & Co. (See Doty, Edward J., assignor.)
Smith, Audus N., Morristown, Tenn. Combination window-shade fastener and curtain-pole bracket. No. 46,297; Aug. 18; Gaz. vol. 205; p. 984.
Sommer, John L., Newark, N. J., assignor to J. L. Sommer Manufacturing Co. Bottle-opener. No. 46,298; Aug. 18; Gaz. vol. 205; p. 984.
St. Clair Manufacturing Company, The. (See Mumma, Ira, assignor.)
Stelmer, Edward W., Dubois, Pa. Device for fastening clothes-lines. No. 46,326; Aug. 25; Gaz. vol. 205; p. 1296.
Stephens, James S., Chicago, Ill. Vehicle-body. No. 46,327; Aug. 25; Gaz. vol. 205; p. 1296.
Stewart, Will T., Opelousas, La. Key-wrench, bottle-cap opener, and key-ring. No. 46,269; Aug. 11; Gaz. vol. 205; p. 631.
Stohr, Samuel, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 46,328; Aug. 25; Gaz. vol. 205; p. 1296.
Tanaka, Shugo, Chicago, Ill. Pillow-cover. No. 46,329; Aug. 25; Gaz. vol. 205; p. 1296.
Thomas Savill's Sons. (See Savill, Robert G., assignor.)
Thompson, Ralph C., Attleboro, Mass. Medal. No. 46,299; Aug. 18; Gaz. vol. 205; p. 985.
Valle-Kimes Company, The. (See Kimes, Hugh W., assignor.)
Welles, Richard H., assignor to Badger Brass Mfg. Co., Kenosha, Wis. Tail-lamp. No. 46,270; Aug. 11; Gaz. vol. 205; p. 631.
Whitehouse, John N., Newark, N. J. Button. Nos. 46,300–1; Aug. 18; Gaz. vol. 205; p. 985.
Whitney, Roswell A., assignor to Olston Electric Company, Los Angeles, Cal. Electric stove. No. 46,239; Aug. 4; Gaz. vol. 205; p. 275.
Williams, Bradford L., Camden, N. J. Hand-operated massage device. No. 46,240; Aug. 4; Gaz. vol. 205; p. 275.
Williamson, Daniel E., Dyersburg, Tenn. Bottle. No. 46,271; Aug. 11; Gaz. vol. 205; p. 631.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Tone-arm for talking-machines. No. 46,302; Aug. 18; Gaz. vol. 205; p. 985.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Motor-board for talking-machines. Nos. 46,303–4; Aug. 18; Gaz. vol. 205; p. 986.
Young, Leonard A., Detroit, Mich. Latch-casing. No. 46,305; Aug. 18; Gaz. vol. 205; p. 986.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Beller & Co., New York, N. Y. Coats and capes. No. 99,077; Aug. 18; Gaz. vol. 205; p. 1015.
A. Mecky & Co., Philadelphia, Pa. Certain named hand and foot propelled vehicles and wheelbarrows. No. 98,798; Aug. 4; Gaz. vol. 205; p. 299.
A. W. Harris Oil Company. (See Harris, Abraham W., assignor.)
A. W. Harris Oil Co., Providence, R. I. Lubricating-oils. No. 98,870; Aug. 4; Gaz. vol. 205; p. 301.
A. W. Harris Oil Co., Providence, R. I. Lubricating-oils. Nos. 99,096–7; Aug. 18; Gaz. vol. 205; p. 1015.
Adler, Julian, Baltimore, Md. Certain named clothing for men and boys. No. 99,033; Aug. 11; Gaz. vol. 205; p. 658.
Advertogram Co., The, Chicago, Ill. Illuminated structural show-window signs. No. 98,727; Aug. 4; Gaz. vol. 205; p. 297.
Air-tight Steel Tank Co., Pittsburgh, Pa. Spraying apparatus. No. 98,847; Aug. 4; Gaz. vol. 205; p. 300.
Albert Dickinson Company, The, Chicago, Ill. Cultures of nodule bacteria. No. 99,039; Aug. 11; Gaz. vol. 205; p. 658.
Alberti Importing and Exporting Co., Boston, Mass. Olive-oil. No. 98,848; Aug. 4; Gaz. vol. 205; p. 300.
Alden Speare's Sons Co., The, Cambridge, Mass. Abrasives in comminuted form. Nos. 98,728–9; Aug. 4; Gaz. vol. 205; p. 297.
Alexander Boguslavsky Limited, London, England. Smoking-tobacco and cigarettes. No. 99,193; Aug. 25; Gaz. vol. 205; p. 1315.
Allaire, Charles M., New York, N. Y. Bituminous paints. No. 98,914; Aug. 11; Gaz. vol. 205; p. 655.
Allith-Prouty Company, Danville, Ill. Certain named hardware supplies. No. 98,849; Aug. 4; Gaz. vol. 205; p. 300.
Ambrold Company, New York, N. Y. Liquid nitrocellulose compound for coating the skin. No. 98,915; Aug. 11; Gaz. vol. 205; p. 655.
American Agricultural Chemical Co., New York, N. Y. Fertilizers. No. 98,732; Aug. 4; Gaz. vol. 205; p. 297.
American Cement Paint Co., Rossville, Ga. Dry paint. No. 99,268; Aug. 25; Gaz. vol. 205; p. 1317.
American Cleaner Company, Haoke Ranch, near Boerne, Tex. Substance for cleaning and polishing. No. 99,073; Aug. 18; Gaz. vol. 205; p. 1015.
American Distilled Water Company, New York, N. Y. Certain named non-alcoholic beverages. No. 98,916; Aug. 11; Gaz. vol. 205; p. 655.
American Implement Company, The, Waterbury, Conn. Foundry-riddles. No. 98,993; Aug. 11; Gaz. vol. 205; p. 657.
American Mills Company, The, Waterbury, Conn. Dress-banding. No. 99,074; Aug. 18; Gaz. vol. 205; p. 1015.
American Remedial Co., Trenton, N. J. Remedies for certain named diseases. No. 99,075; Aug. 18; Gaz. vol. 205; p. 1015.
American Sheet & Tin Plate Company, Pittsburgh, Pa. Rolled metal sheets and plates, tin and terne plates. No. 99,133; Aug. 18; Gaz. vol. 205; p. 1016.
American Veneziani Paint Company, Jersey City, N. J. Paints for ships' bottoms. No. 99,134; Aug. 18; Gaz. vol. 205; p. 1017.
Amoskeag Manufacturing Company, Manchester, N. H. Cotton piece goods. No. 98,850; Aug. 4; Gaz. vol. 205; p. 300.
Anchor Sawmills Company, Pelham Manor, N. Y.; Memphis and Jackson, Tenn., and Devall Bluff, Ark. Boat-oars. Nos. 98,733–5; Aug. 4; Gaz. vol. 205; p. 297.
Anderson-Brown Company, The, Buffalo, N. Y. Medicines for constipation, hepatic torpor, &c. No. 98,917; Aug. 11; Gaz. vol. 205; p. 655.
Anderson & Company, W. A., New York, N. Y. Signs and placards. No. 98,736; Aug. 4; Gaz. vol. 205; p. 297.
Annis, Charles A., Stoneham, Mass. Waterproof coats. No. 98,918; Aug. 11; Gaz. vol. 205; p. 655.
Ansted & Burk Co., The, Springfield, Ohio. Self-rising wheat-flour. No. 99,188; Aug. 25; Gaz. vol. 205; p. 1315.
Appleton Company, Lowell, Mass. Cotton piece goods. No. 99,076; Aug. 18; Gaz. vol. 205; p. 1015.
Arbuckle Brothers, New York, N. Y., and Chicago, Ill. Certain named spices and flavoring extracts. No. 98,737; Aug. 4; Gaz. vol. 205; p. 297.
Armour & Company, Chicago, Ill. Fish. No. 99,034; Aug. 11; Gaz. vol. 205; p. 658.
Armstrong Mfg. Co., Waterloo, Iowa. Certain named machinery and engines, not electrical. No. 98,851; Aug. 4; Gaz. vol. 205; p. 300.
Arnold, William C., Kansas City, Mo. Ointment and preparation for treatment of certain named ailments. No. 98,994; Aug. 11; Gaz. vol. 205; p. 657.
Astra Products Co., Carthage, Mo. Extracts, &c., for soda-water and carbonated tonic beverages. No. 99,135; Aug. 18; Gaz. vol. 205; p. 1017.
Atlantic Chemical Corporation, The, Norfolk, Va. Fertilizers. Nos. 98,919–20; Aug. 11; Gaz. vol. 205; p. 655.
Atlantic Chemical Corporation, The, Norfolk, Va. Fertilizers. No. 99,136; Aug. 18; Gaz. vol. 205; p. 1017.
Austen, Edward W., Oswego, N. Y. Perfumes. No. 99,137; Aug. 18; Gaz. vol. 205; p. 1017.
Automatic Drill Chuck Corporation, Detroit, Mich. Drill-chucks. No. 99,138; Aug. 18; Gaz. vol. 205; p. 1017.
Ayer, Harriet H., New York, N. Y. Certain named pharmaceutical preparations. No. 98,739; Aug. 4; Gaz. vol. 205; p. 297.
B. Altman & Co., New York, N. Y. Ribbons. Nos. 98,730–1; Aug. 4; Gaz. vol. 205; p. 297.
Bache, Leigh S., assignor to W. W. Smalley, Boundbrook, N. J. Eggs. No. 99,189; Aug. 25; Gaz. vol. 205; p. 1315.
Baldwin & Walker, Ltd., Halifax, England. Knitting-wools. No. 99,269; Aug. 25; Gaz. vol. 205; p. 1317.
Baldwin & Walker, Ltd., Halifax, England. Woolen and worsted yarns. No. 99,270; Aug. 25; Gaz. vol. 205; p. 1317.
Bardos, Coleman, Jr., New York, N. Y. Organic food tonic. No. 99,378; Aug. 25; Gaz. vol. 205; p. 1320.
Barr Bros. Co. Inc., Oakland, Cal. Spring and solid eye sack, burlap, bag, hop, and packing needles. No. 98,852; Aug. 4; Gaz. vol. 205; p. 300.
Barrett Manufacturing Company, New York, N. Y. Prepared roofings. No. 99,271; Aug. 25; Gaz. vol. 205; p. 1317.
Bartels & Phelps Company, Chelsea, Mass. Leather boots and shoes. No. 98,995; Aug. 11; Gaz. vol. 205; p. 657.
Bartolotta & Co., S., New Orleans, La. Alimentary paste products. No. 99,035; Aug. 11; Gaz. vol. 205; p. 658.
Bates, Arthur J., Bridgeport, Conn. Salve. No. 98,996; Aug. 11; Gaz. vol. 205; p. 657.
Bayer Company, The, Inc., New York, N. Y. Antisyphilitic. No. 98,740; Aug. 4; Gaz. vol. 205; p. 297.
Bayway Chemical Company, Elizabeth, N. J. Liquid protective coating composed of certain named ingredients. No. 99,272; Aug. 25; Gaz. vol. 205; p. 1317.
Beauvais, Alexander, New York, N. Y. Substitute for sugar for use in diabetes, obesity, gout, and rheumatism. No. 99,379; Aug. 25; Gaz. vol. 205; p. 1320.
Berry Brothers, Detroit, Mich. Stains, varnishes, and a combined stain and varnish. No. 98,997; Aug. 11; Gaz. vol. 205; p. 657.
Berry Brothers, Detroit, Mich. Shellac gum. No. 99,192; Aug. 25; Gaz. vol. 205; p. 1315.
Bertsch, Alfred, Gundershofen, near Strassburg, Germany. Positive black print-paper. No. 99,273; Aug. 25; Gaz. vol. 205; p. 1317.
Birkett Mills, The, Penn Yan, N. Y. Self-rising wheat-flour. No. 99,036; Aug. 11; Gaz. vol. 205; p. 658.
Bischof, Sterne & Stein, Cincinnati, Ohio. Coats and suits. No. 99,127; Aug. 18; Gaz. vol 205; p. 1016.
Böhmische Pilsner Brauerei Aktien-Gesellschaft in Pilsen, Pilsen, Austria-Hungary. Beer. No. 98,741; Aug. 4; Gaz. vol. 205; p. 297.
Bon Ami Co., The, New York, N. Y. Scouring-soap. No. 99,079; Aug. 18; Gaz. vol. 205; p. 1015.
Bonney Vise & Tool Works Inc., Philadelphia and Allentown, Pa., and New York, N. Y. Wrenches. No. 99,274; Aug. 25; Gaz. vol. 205; p. 1317.
Booth, Alba C., Burlington, Vt. Tooth-brushes. No. 99,139; Aug. 18; Gaz. vol. 205; p. 1017.
Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y. Condensed milk. No. 99,194; Aug. 25; Gaz. vol. 205; p. 1315.
Bradley, Thos. W., Bluefield, W. Va. Antiseptic solution. No. 98,743; Aug. 4; Gaz. vol. 205; p. 297.
Brame Drug Company Inc., Northwilkesboro, N. C. Certain named chemicals, medicines, and pharmaceutical preparations. No. 98,744; Aug. 4; Gaz. vol. 205; p. 297.
Brinser Remedy Co., York, Pa. Medicinal oil. No. 98,745; Aug. 4; Gaz. vol. 205; p. 297.
Brown Brothers, Limited, London, England. Power-transmission chains. No. 98,922; Aug. 11; Gaz. vol. 205; p. 655.
Brown Shoe Company, Inc., St. Louis, Mo. Leather shoes. No. 98,923; Aug. 11; Gaz. vol. 205; p. 655.
Brownley, Walter, Washington, D. C. Candles. No. 99,276; Aug. 25; Gaz. vol. 205; p. 1317.
Brunswick-Balke-Collender Co., The, Chicago, Ill. Water-closet seats. No. 99,277; Aug. 25; Gaz. vol. 205; p. 1317.
Bruschettini, Alessandro, Genoa, Italy. Serums and vaccines for preventing and treating certain diseases and preventing and treating hog-cholera. No. 99,380; Aug. 25; Gaz. vol. 205; p. 1320.

Buffinton, Elisha W., Fall River, Mass. Cleats for electric wiring. No. 98,999; Aug. 11; Gaz. vol. 205; p. 657.
Buhl-Mills Company, New York, N. Y. Pineapples. No. 99,195; Aug. 25; Gaz. vol. 205; p. 1315.
Burgess, John A., Toronto, Ontario, Canada. Tire-fillers. No. 98,746; Aug. 4; Gaz. vol. 205; p. 297.
Burke, John D., Montgomery, Ala. Remedy for gonorrhea. Nos. 99,381–2; Aug. 25; Gaz. vol. 205; p. 1320.
Bushnell & Co., D. L., St. Louis, Mo. Grass-seeds. No. 98,747; Aug. 4; Gaz. vol. 205; p. 297.
Buzby, Augustus C., Philadelphia, Pa. Lubricants. No. 99,279; Aug. 25; Gaz. vol. 205; p. 1317.
C. A. Woolsey Paint & Color Co., Jersey City, N. J. Waterproof varnish. No. 98,991; Aug. 11; Gaz. vol. 205; p. 657.
C. F. Blanke Tea & Coffee Company, St. Louis, Mo. Tea and coffee. No. 98,854; Aug. 4; Gaz. vol. 205; p. 300.
C. F. Blanke Tea & Coffee Company, St. Louis, Mo. Coffee substitute. No. 98,921; Aug. 11; Gaz. vol. 205; p. 655.
C. P. Moorman & Company, Inc., Louisville, Ky. Whisky. No. 99,332; Aug. 25; Gaz. vol. 205; p. 1319.
Calculagraph Company, New York, N. Y. Ink-ribbons for time-printing machines. No. 99,080; Aug. 18; Gaz. vol. 205; p. 1015.
Camp Importation Co., The, Inc., New York, N. Y. Cigarettes. No. 98,748; Aug. 4; Gaz. vol. 205; p. 297.
Capital Drug Company, Augusta, Me. Remedy for asthma and hay-fever. No. 99,140; Aug. 18; Gaz. vol. 205; p. 1017.
Carbondale Calcium Co., Carbondale, Pa. Calcium chlorid. No. 99,383; Aug. 25; Gaz. vol. 205; p. 1321.
Cargill, Cleveland & Company, Westfield, Mass. Whips. No. 99,280; Aug. 25; Gaz. vol. 205; p. 1317.
"Carrosserie Van den Plas," Sté. en nom collectif, Brussels, Belgium. Motor-bodies, mud-guards, wind-shields, &c. No. 98,749; Aug. 4; Gaz. vol. 205; p. 297.
Carson, Pirie, Scott & Co., Chicago, Ill. Men's outer shirts. No. 98,924; Aug. 11; Gaz. vol. 205; p. 655.
Central Ohio Paper Co., The, Columbus, Ohio. Cover, bond, writing, and printing paper. No. 98,750; Aug. 4; Gaz. vol. 205; p. 297.
Central Railway Signal Co., Pittsburgh, Pa. Fuses and torpedoes. No. 99,141; Aug. 18; Gaz. vol. 205; p. 1017.
Channell Chemical Co., Chicago, Ill. Furniture-polish. No. 99,142; Aug. 18; Gaz. vol. 205; p. 1017.
Charles Kinloch & Company, Limited, London, England. Rum. No. 98,785; Aug. 4; Gaz. vol. 205; p. 298.
Chas. S. Tanner Company, Providence, R. I. Soluble starches, softener and finishing compounds for cotton, &c., fibers. No. 99,407; Aug. 25; Gaz. vol. 205; p. 1321.
Cheek-Neal Coffee Co., Nashville, Tenn. Coffee. No. 99,196; Aug. 25; Gaz. vol. 205; p. 1315.
Chemical Specialties Co., The, Kansas City, Mo. Alloys for welding and repairing aluminum castings, crank-cases, &c. No. 98,856; Aug. 4; Gaz. vol. 205; p. 300.
Cima y García, José, Oviedo, Spain. Cider. No. 98,760; Aug. 4; Gaz. vol. 205; p. 298.
Clark, George E., assignor to Superior Peanut Company, Cleveland, Ohio. Confection of popcorn and peanuts. No. 99,081; Aug. 18; Gaz. vol. 205; p. 1015.
Cleveland Suction Cleaner Co., The, Cleveland, Ohio. Electrically-operated vacuum-cleaners. No. 99,001; Aug. 11; Gaz. vol. 205; p. 657.
Cohen, Harry, Philadelphia, Pa. Outer coats. No. 99,082; Aug. 18; Gaz. vol. 205; p. 1015.
Cohen, Lewis, Bloomsburg, Pa. Cigars. No. 99,197; Aug. 25; Gaz. vol. 205; p. 1315.
Colgate & Co., Jersey City, N. J., and New York, N. Y. Soaps and soap powders. No. 98,751; Aug. 4; Gaz. vol. 205; p. 297.
Columbia Guano Co., Norfolk, Va. Fertilizers. Nos. 98,926–34; Aug. 11; Gaz. vol. 205; p. 655.
Columbia Star Milling Co., Columbia, Ill. Wheat-flour. No. 98,857; Aug. 4; Gaz. vol. 205; p. 300.
Compagnie Générale des Etablissements Pathé Frères, Phonographe et Cinematographe, Paris, France. Certain named scientific appliances and supplies therefor. No. 99,281; Aug. 25; Gaz. vol. 205; p. 1317.
Condit, Harry H., Indianapolis, Ind. Hosiery. No. 99,282; Aug. 25; Gaz. vol. 205; p. 1317.
Conrad Seipp Brewing Company, Chicago, Ill. Beer. Nos. 98,822–3; Aug. 4; Gaz. vol. 205; p. 299.
Conradty, Firm of C., Nuremberg, Germany. Certain named carbons, carbon specialties, and the like. No. 99,283; Aug. 25; Gaz. vol. 205; p. 1317.
Conradty, Firm of C., Nuremberg, Germany. Electrical and galvanic carbons. No. 99,284; Aug. 25; Gaz. vol. 205; p. 1317.
Consolidated Fire Works Company of America, New York, N. Y. Fireworks. No. 99,285; Aug. 25; Gaz. vol. 205; p. 1317.
Consolidated Safety Pin Co., Bloomfield, N. J. Safety-pins. No. 99,083; Aug. 18; Gaz. vol. 205; p. 1015.
Converse & Company, New York, N. Y. Muslin. No. 99,084; Aug. 18; Gaz. vol. 205; p. 1015.
Cordley & Hayes, New York, N. Y. Freezers and beverage-coolers. No. 98,752; Aug. 4; Gaz. vol. 205; p. 297.
Corona Mfg. Co., The, Kenton, Ohio. Wool-fat. No. 99,143; Aug. 18; Gaz. vol. 205; p. 1017.
Cosper, William P., Chicago, Ill. Practice type-writers. No. 99,286; Aug. 25; Gaz. vol. 205; p. 1318.
Crary Pure Food Company, Waukesha, Wis. Evaporated milk. No. 99,037; Aug. 11; Gaz. vol. 205; p. 658.
Cremolite Manufacturing Co., Portland, Oreg. Powders used in preparing whipped cream, eggs, &c. No. 98,858; Aug. 4; Gaz. vol. 205; p. 301.
Cross, Abbott Co., White River Junction, Vt. Certain named foods. No. 99,038; Aug. 11; Gaz. vol. 205; p. 658.
Daggett & Miller Company, Providence, R. I. Medicated lozenges for throat and bronchial affections. No. 99,002; Aug. 11; Gaz. vol. 205; p. 657.
Dallas Macaroni & Paste Manufacturing Co., Dallas, Tex. Macaroni, spaghetti, vermicelli, &c. Nos. 99,198–9; Aug. 25; Gaz. vol. 205; p. 1315.
Daniel, Chas A., Philadelphia, Pa. Composite rod-packing. No. 99,287; Aug. 25; Gaz. vol. 205; p. 1318.
Darling & Company, Chicago, Ill. Poultry foods. No. 98,859; Aug. 4; Gaz. vol. 205; p. 301.
Davey Tree Expert Company, Inc., The, Kent, Ohio. Publications relating to tree surgery. No. 99,200; Aug. 25; Gaz. vol. 205; p. 1315.
David Nicholson Grocer Company, St. Louis, Mo. Certain named wines. No. 98,806; Aug. 4; Gaz. vol. 205; p. 299.
David Nicholson Grocer Company, St. Louis, Mo. Certain named distilled alcoholic liquors. No. 98,888; Aug. 4; Gaz. vol. 205; p. 301.
David Nicholson Grocer Company, St. Louis, Mo. Whisky, gin, and rock and rye. No. 99,351; Aug. 25; Gaz. vol. 205; p. 1320.
De Long Hook and Eye Company, Philadelphia, Pa. Snap-fasteners. No. 98,860; Aug. 4; Gaz. vol. 205; p. 301.
Decker & Cohn, Alfred, Chicago, Ill. Overcoats. No. 99,085; Aug. 18; Gaz. vol. 205; p. 1015.
Deming Company, Salem, Ohio. Pumps. No. 99,003; Aug. 11; Gaz. vol. 205; p. 657.
Derby Corset Company, Derby, Conn. Corsets. No. 99,086; Aug. 18; Gaz. vol. 205; p. 1015.
Dermin Mfg. Co., Newark and Perth Amboy, N. J. Eczema and skin eruptions. No. 98,753; Aug. 4; Gaz. vol. 205; p. 297.
Desjardins, F. Horace, Marquette, Mich. External application for relief of goiter. No. 99,144; Aug. 18; Gaz. vol. 205; p. 1017.
Detroit Steel Products Co., Detroit, Mich. Metallic sash. No. 99,288; Aug. 25; Gaz. vol. 205; p. 1318.
Deutsche Maschinenfabrik Aktien Gesellschaft, Duisburg, Germany, and New York, N. Y. Certain named bridges. No. 99,145; Aug. 18; Gaz. vol. 205; p. 1017.
Deutsche Maschinenfabrik Aktien Gesellschaft, Duisburg, Germany. Lifting-magnets, electric furnaces, and controlling apparatus, &c. No. 99,289; Aug. 25; Gaz. vol. 205; p. 1318.
Dewerdt, William H., Brooklyn, N. Y. Liquid dentifrice. No. 98,754; Aug. 4; Gaz. vol. 205; p. 297.
Dickinson, Frederick S., New York, N. Y. Remedy for certain named diseases. No. 99,146; Aug. 18; Gaz. vol. 205; p. 1017.
Diehl, Edward, Nashville, Tenn. Non-intoxicating carbonated tonic beverages. Nos. 98,936–7; Aug. 11; Gaz. vol. 205; p. 655.
Diehm-Fansler Grocer Co., East St. Louis, Ill. Canned fruits, vegetables, and salmon and tomato catsup. No. 99,040; Aug. 11; Gaz. vol. 205; p. 658.
Dittus, William C., Lancaster, Pa. Whisky, brandy, and gin. No. 99,290; Aug. 25; Gaz. vol. 205; p. 1318.
Doerr, Fredric P., Ridgewood, N. J. Wood-finish. No. 98,861; Aug. 4; Gaz. vol. 205; p. 301.
Donoghue, James, Cleveland, Ohio. Wooden soldering-iron handles. No. 99,291; Aug. 25; Gaz. vol. 205; p. 1318.
Dorrance, James F., Flushing, N. Y. Toilet rouge. No. 99,385; Aug. 25; Gaz. vol. 205; p. 1321.
Dover Fire Brick Company, Cleveland, Ohio. Bricks. No. 99,292; Aug. 25; Gaz. vol. 205; p. 1318.
Dowd & Co., J. C., New York, N. Y. Toilet-combs, pin-cushions, and button-hooks. No. 99,041; Aug. 11; Gaz. vol. 205; p. 658.
Doyle-Kidd Dry Goods Co., Little Rock, Ark. Shirts. No. 99,004; Aug. 11; Gaz. vol. 205; p. 657.
Driver-Harris Wire Co., Harrison, N. J. Metallic strips for use in thermostats, &c. No. 99,005; Aug. 11; Gaz. vol. 205; p. 657.
Dry Milk Company, The, New York, N. Y. Desiccated milk. No. 99,042; Aug. 11; Gaz. vol. 205; p. 659.
Dunlop Milling Co., The, Clarksville, Tenn. Wheat-flour. No. 99,202; Aug. 25; Gaz. vol. 205; p. 1315.
Durham Duplex Razor Company, Jersey City, N. J. Soap. No. 98,756; Aug. 4; Gaz. vol. 205; p. 298.
Durham Hosiery Mills, Durham, N. C. Hosiery. No. 98,938; Aug. 11; Gaz. vol. 205; p. 655.
Eagle Pencil Company, New York, N. Y. Writing and drawing pencils. No. 98,939; Aug. 11; Gaz. vol. 205; p. 655.
Eagle Pencil Company, New York, N. Y. Fountain-pens. No. 98,940; Aug. 11; Gaz. vol. 205; p. 655.
Eagle Pencil Company, New York, N. Y. Writing and drawing pencils. Nos. 98,941–2; Aug. 11; Gaz. vol. 205; p. 655.
Eastern Thread Co., New York, N. Y. Sewing-thread. No. 98,862; Aug. 4; Gaz. vol. 205; p. 301.
Eckhard, Joseph J., Alton, Ill. Liquid dressing and polish for boots and shoes and leather articles. No. 98,757; Aug. 4; Gaz. vol. 205; p. 298.
Edwards, Seeber, *et al.*, executors. (See Harris, Abraham W.)

Edwin B. Stimpson Company, Brooklyn, N. Y. Metallic eyelets. No. 99,368; Aug. 25; Gaz. vol. 205; p. 1320.
Eggers, William A., Newark, N. J. Preparation for leather footwear. No. 99,088; Aug. 18; Gaz. vol. 205; p. 1015.
Ehlerman Brothers Co., Sioux City, Iowa. Hair-nets. No. 98,863; Aug. 4; Gaz. vol. 205; p. 301.
Einzig & Co., J., New York, N. Y. Candy. No. 99,043; Aug. 11; Gaz. vol. 205; p. 659.
Elephant Orchards, Redlands, Cal. Fresh oranges, lemons, limes, and grape-fruit. No. 99,203; Aug. 25; Gaz. vol. 205; p. 1315.
Enterprise Manufacturing Company, The, Akron, Ohio. Artificial fishing-bait. Nos. 98,758–9; Aug. 4; Gaz. vol. 205; p. 298.
Entzminger, C. W., Sanford, Fla. Blood-tonics. No. 99,006; Aug. 11; Gaz. vol. 205; p. 657.
Essanay Film Manufacturing Co., Chicago, Ill. Moving-picture films. No. 99,293; Aug. 25; Gaz. vol. 205; p. 1318.
Essex Rubber Company, Trenton, N. J. Brake-band lining. No. 99,147; Aug. 18; Gaz. vol. 205; p. 1017.
Evansville Paint & Varnish Co., Evansville, Ind. Varnishes, paints, and colors ground in oil. No. 98,943; Aug. 11; Gaz. vol. 205; p. 655.
F. Beaumont National-Croustade Manufacturing Company, Inc., The, New York, N. Y. Croustades. Nos. 99,190–1; Aug. 25; Gaz. vol. 205; p. 1315.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 98,969–83; Aug. 11; Gaz. vol. 205; pp. 656–7.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. No. 99,067; Aug. 11; Gaz. vol. 205; p. 659.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 99,122–3; Aug. 18; Gaz. vol. 205; p. 1016.
F. S. Royster Guano Co., Norfolk, Va. Fertilizers. Nos. 99,177–8; Aug. 18; Gaz. vol. 205; p. 1018.
Fair and Carnival Trading Co., Inc., New York, N. Y. Dolls and stuffed animal toys. No. 99,294; Aug. 25; Gaz. vol. 205; p. 1318.
Falck & Co., F. L., Allegheny, Pa. Soap. No. 99,090; Aug. 18; Gaz. vol. 205; p. 1015.
Faulkner & Colony Manufg. Co., Keene, N. H. Certain named textile fabrics. No. 98,864; Aug. 4; Gaz. vol. 205; p. 301.
Fear-Campbell Company, Frankfort, Ind. Eggs, dressed poultry, and butter. No. 99,044; Aug. 11; Gaz. vol. 205; p. 659.
Federal Sign System (Electric), Chicago, Ill. Certain named electrical apparatus and supplies. No. 99,295; Aug. 25; Gaz. vol. 205; p. 1318.
Felten & Guilleaume Carlswerk Actien Gesellschaft, Mülheim-on-the-Rhine, Germany. Certain named hardware and plumbing supplies. No. 98,944; Aug. 11; Gaz. vol. 205; p. 656.
Felters Company, The, New York, Middleville, and Lestershire, N. Y., and Boston and Millbury, Mass. Felts. Nos. 99,296–7; Aug. 25; Gaz. vol. 205; p. 1318.
Fletcher, Fletcher & Co., Limited, London, England. Glass test-tubes for clinical diagnosis. No. 99,204; Aug. 25; Gaz. vol. 205; p. 1315.
Foose, Alphonse P., Dayton, Ohio. Remedy for foot ailments. No. 99,387; Aug. 25; Gaz. vol. 205; p. 1321.
Foote Mineral Co., Philadelphia, Pa. Ceramic titanium yellow. No. 99,148; Aug. 18; Gaz. vol. 205; p. 1017.
Fowler, Elwood H., Newark, N. J. Furniture-polish. No. 99,298; Aug. 25; Gaz. vol. 205; p. 1318.
Fox River Butter Company, The, Chicago, Ill. Eggs. No. 99 205; Aug. 25; Gaz. vol. 205; p. 1315.
Frank & Meyer Neckwear Company, St. Louis, Mo. Mufflers. No. 99,091; Aug. 18; Gaz. vol. 205; p. 1015.
Frankel, Frank & Co., Kansas City, Mo. Hats, bonnets, and caps. No. 98,865; Aug. 4; Gaz. vol. 205; p. 301.
Friedland Bros. Bottling Works, Phillipsburg, N. J. Non-intoxicating tonic beverages and syrups for making same. No. 99,045; Aug. 11; Gaz. vol. 205; p. 659.
Fritz, Ray J., Philadelphia, Pa. Headache-powder. No. 98,945; Aug. 11; Gaz. vol. 205; p. 656.
Frog Switch & Manufacturing Company, The, Carlisle, Pa. Manganese-steel castings. No. 99,007; Aug. 11; Gaz. vol. 205; p. 657.
Frye & Co., E. M., Harrington, Me. Canned blueberries. No. 99,046; Aug. 11; Gaz. vol. 205; p. 659.
Fucini, Enrico, New York, N. Y. Wines. No. 99,149; Aug. 18; Gaz. vol. 205; p. 1017.
G. Heileman Brewing Co., La Crosse, Wis. Beer. No. 99,098; Aug. 18; Gaz. vol. 205; p. 1015.
Gassaway, Minnie Q., Greenville, S. C. Non-alcoholic carbonated beverage and syrup for making same. No. 99,092; Aug. 18; Gaz. vol. 205; p. 1015.
Gauvreau, Joseph R. L., Montreal, Quebec, Canada, and Woonsocket, R. I., assignor to L. F. Robert, Montreal, Quebec, Canada. Insecticide-powder. No. 98,946; Aug. 11; Gaz. vol. 205; p. 656.
Gay, John A., Aberdeen, Miss. Remedy for chills, fever, and malaria. No. 98,761; Aug. 4; Gaz. vol. 205; p. 298.
Gebr. Dix, Untermhaus-Gera, Germany. Harmonium-tongues. No. 98,755; Aug. 4; Gaz. vol. 205; p. 297.
Geo. Borgfeldt & Co., New York, N. Y. Aluminum hot-water bottles of a therapeutic character. No. 98,742; Aug. 4; Gaz. vol. 205; p. 297.
Georgia Medicine Co., Wrightsville, Ga. White liniment and colic remedy. No. 99,388; Aug. 25; Gaz. vol. 205; p. 1321.
Georgiades, Soperios J., Atlanta, Ga. Cigars and cigarettes. No. 98,762; Aug. 4; Gaz. vol. 205; p. 298.
Gerhardt & Co., Jacob, New York, N. Y. Negligée and sporting shirts. No. 99,008; Aug. 11; Gaz. vol. 205; p. 657.
Gerstendorfer Bros., New York, N. Y. Enamels, stains, and carriage-colors. No. 98,947; Aug. 11; Gaz. vol. 205; p. 656.
Gestetner, David, London, England. Stencil-duplicating apparatus and papers used therewith. No. 98,763; Aug. 4; Gaz. vol. 205; p. 298.
Geveshausen, Minnie, Arbuckle, Cal. Hair-tonic. No. 98,948; Aug. 11; Gaz. vol. 205; p. 656.
Giusiana, Firm of F. D., Turin, Italy. Liquors. No. 98,764; Aug. 4; Gaz. vol. 205; p. 298.
Globe Manufacturing Company, Perry, Iowa. Laundry-washing machines and washing-machine wringers. No. 98,765; Aug. 4; Gaz. vol. 205; p. 298.
Glühstrumpffabrik Basel, Basel, Switzerland. Gas-mantle with attachments. No. 98,766; Aug. 4; Gaz. vol. 205; p. 298.
Goldberg, Firm of P., Edgewater, N. J. Preparation for the extermination of insects. No. 99,150; Aug. 18; Gaz. vol. 205; p. 1017.
Golden Gate Packing Co., San Jose, Cal. Canned and preserved fruits and vegetables. No. 98,866; Aug. 4; Gaz. vol. 205; p. 301.
Golden Pheasant, The, San Francisco, Cal. Candies. No. 99,299; Aug. 25; Gaz. vol. 205; p. 1318.
Goldenbergs, Washington, D. C. Children's play-suits. No. 99,300; Aug. 25; Gaz. vol. 205; p. 1318.
Goodwin, Emma E., New York, N. Y. Corset fabrics. No. 99,093; Aug. 18; Gaz. vol. 205; p. 1015.
Goodyear's India Rubber Glove Mfg. Co., Naugatuck, Conn. Rubber boots and shoes. No. 99,301; Aug. 25; Gaz. vol. 205; p. 1318.
Gordon-Thorne Co., The, Utica, N. Y. Toilet powder. No. 98,767; Aug. 4; Gaz. vol. 205; p. 298.
Graham Paper Company, St. Louis, Mo. Paper for printing and writing. No. 98,768; Aug. 4; Gaz. vol. 205; p. 298.
Grand River Canning Company, Markesan, Wis. Canned vegetables. No. 99,389; Aug. 25; Gaz. vol. 205; p. 1321.
Grasser, Johannes, Nuremberg, Germany. Lead and colored pencils, lead-pencil holders, penholders, &c. No. 98,949; Aug. 11; Gaz. vol. 205; p. 656.
Gray, Gustavus, St. Louis, Mo. Garment-fasteners. No. 98,867; Aug. 4; Gaz. vol. 205; p. 301.
Grinnell Bros., Detroit, Mich. Pianos. No. 98,769; Aug. 4; Gaz. vol. 205; p. 298.
Griscom-Russell Company, The, New York, N. Y. Certain named steam-fitting supplies. No. 98,950; Aug. 11; Gaz. vol. 205; p. 656.
Guess, John E., Kentwood, La. Medicated salve. No. 98,770; Aug. 4; Gaz. vol. 205; p. 298.
Guggenhime & Company, San Francisco, Cal. Figs. No. 99,206; Aug. 25; Gaz. vol. 205; p. 1315.
H. M. H. Company, Pawtucket, R. I. Rosaries. No. 98,771; Aug. 4; Gaz. vol. 205; p. 298.
H. T. Dewey & Sons Co., New York, N. Y. Medicinal tonic. No. 98,935; Aug. 11; Gaz. vol. 205; p. 655.
H. T. Lange Co., The, Eau Claire, Wis. Canned vegetables and evaporated milk. No. 99,226; Aug. 25; Gaz. vol. 205; p. 1316.
H. W. Johns-Manville Co., New York, N. Y. Wood-fiber composition board for walls and ceilings. No. 99,313; Aug. 25; Gaz. vol. 205; p. 1318.
Haas Bros., New York, N. Y. Woolen piece goods. No. 99,094; Aug. 18; Gaz. vol. 205; p. 1015.
Haigh, William, Baltimore, Md. Puddings. No. 99,207; Aug. 25; Gaz. vol. 205; p. 1315.
Hairlight Company, The, Leominster, Mass. Hair rolls and puffs. No. 98,868; Aug. 4; Gaz. vol. 205; p. 301.
Hall & Hall, London, England. Asbestos jointing and packing. No. 99,208; Aug. 25; Gaz. vol. 205; p. 1315.
Hallan-Rice Co., Providence, R. I. Jewelry. No. 99,095; Aug. 18; Gaz. vol. 205; p. 1015.
Ham, Kelley P., Lynn, Mass. Non-intoxicating carbonated tonic beverages. No. 99,047; Aug. 11; Gaz. vol. 205; p. 659.
Hamilton, Richard D., La Grande, Oreg. Remedy for sensickness. No. 98,951; Aug. 11; Gaz. vol. 205; p. 656.
Hammer Remedy Co., Lamoni, Iowa. Antiseptics, salves, ointments, remedies for diarrhea, &c. No. 99,390; Aug. 25; Gaz. vol. 205; p. 1321.
Hancock, Charlton R., Bonaire, Ga. Peach-trees. No. 98,772; Aug. 4; Gaz. vol. 205; p. 298.
Handl, Ernest, Chicago, Ill. Powder intended to build up human organs. No. 99,391; Aug. 25; Gaz. vol. 205; p. 1321.
Harrington Cutlery Co., Southbridge, Mass. Certain named cutlery and parts thereof. No. 99,151; Aug. 18; Gaz. vol. 205; p. 1017.
Harris, Abraham W., deceased, Providence, R. I.; A. C. Harris, Warwick, and S. Edwards, Providence, R. I., executors, assignors to A. W. Harris Oil Company, Providence, R. I. Lubricating-oils. No. 99,302; Aug. 25; Gaz. vol. 205; p. 1318.
Harris, Annie C., *et al.*, executors. (See Harris, Abraham W.)
Harris, William M., Camden, N. J. Oil-paints. No. 98,869; Aug. 4; Gaz. vol. 205; p. 301.
Harrison, Andrew J., Birmingham, England. Spectacles. No. 99,303; Aug. 25; Gaz. vol. 205; p. 1318.

Harter Milling Co., The, Toledo and Fostoria, Ohio. Wheat-flour. No. 99,209; Aug. 25; Gaz. vol. 205; p. 1315.

Haserot Company, The, Cleveland, Ohio. Coffee. No. 98,871; Aug. 4; Gaz. vol. 205; p. 301.

Hatch, Nathan, Albany and Cohoes, N. Y. Certain named woven and knitted underwear. No. 99,009; Aug. 11; Gaz. vol. 205; p. 657.

Hawaiian Pineapple Co., Ltd., Honolulu, Hawaii. Canned pineapple. Nos. 99,210–13; Aug. 25; Gaz. vol. 205; p. 1315.

Hawaiian Pineapple Co. Ltd., Honolulu, Hawaii. Canned pineapple. No. 99,304; Aug. 25; Gaz. vol. 205; p. 1318.

Heekin Can Company, The, Cincinnati, Ohio. Tin cans and buckets. No. 99,305; Aug. 25; Gaz. vol. 205; p. 1318.

Heekin Spice Company, The, Cincinnati, Ohio. Flavoring extracts for foods and tea. No. 98,872; Aug. 4; Gaz. vol. 205; p. 301.

Heller & Co., B., Chicago, Ill. Inks and thinners therefor. No. 98,773; Aug. 4; Gaz. vol. 205; p. 298.

Heltsley, James M., Drakesboro, Ky. Tonic for cleansing and purifying the system. No. 98,952; Aug. 11; Gaz. vol. 205; p. 656.

Hemingway's London Purple Company, Ltd., London, England, and New York, N. Y. Insecticides and fungicides. No. 99,010; Aug. 11; Gaz. vol. 205; p. 658.

Hemmerdinger, Louis, New York, N. Y. Gold paints. No. 98,873; Aug. 4; Gaz. vol. 205; p. 301.

Henderson, Firm of Wm., New Orleans, La. Sugar. No. 99,048; Aug. 11; Gaz. vol. 205; p. 659.

Hennenhoefer, Louisa, St. Louis, Mo. Eczema and skin remedy. No. 99,011; Aug. 11; Gaz. vol. 205; p. 658.

Henry A. Dix & Sons Company, Millville, N. J., and New York, N. Y. Ladies' tub and house dresses, nurses' and waitresses' uniforms. No. 99,087; Aug. 18; Gaz. vol. 205; p. 1015.

Henry F. Miller & Sons Piano Company, Boston, Mass. Player-pianos. No. 99,114; Aug. 18; Gaz. vol. 205; p. 1016.

Heppenstall Forge & Knife Company, Pittsburgh, Pa. Shear-knives and die-blocks. Nos. 98,774–5; Aug. 4; Gaz. vol. 205; p. 298.

Hercules Powder Company, Wilmington, Del. Smokeless rifle-powder. No. 99,306; Aug. 25; Gaz. vol. 205; p. 1318.

Hermes Company, The, Chicago, Ill. Shoe-polish. No. 99,099; Aug. 18; Gaz. vol. 205; p. 1015.

Herson Chemical Company, Gary, Ind. Tooth-paste. No. 98,953; Aug. 11; Gaz. vol. 205; p. 656.

Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Brushes. No. 99,152; Aug. 18; Gaz. vol. 205; p. 1017.

Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Washboards, wringers, and clothes-washers. No. 99,307; Aug. 25; Gaz. vol. 205; p. 1318.

Hibbard, Spencer, Bartlett & Co., Chicago, Ill. Fender-finish, mixed paint, roof-coating, &c. No. 99,308; Aug. 25; Gaz. vol. 205; p. 1318.

Hill & Griffith Co., The, Cincinnati, Ohio. Buffing and polishing compound. No. 99,100; Aug. 18; Gaz. vol. 205; p. 1015.

Hills Brothers Company, The, New York, N. Y. Dates. No. 99,309; Aug. 25; Gaz. vol. 205; p. 1318.

Hog-Joy Company, The, Springfield, Ill. Machines for applying oil to animals. No. 98,776; Aug. 4; Gaz. vol. 205; p. 298.

Holland, William, Slough, England. Polish and cleaning preparation for certain named articles. No. 98,777; Aug. 4; Gaz. vol. 205; p. 298.

Holliston Mills, The, Norwood, Mass. Sized and stiffened cloth. No. 99,012; Aug. 11; Gaz. vol. 205; p. 658.

Holmes, Charles N., Peoria, Ill. Salves. No. 98,779; Aug. 4; Gaz. vol. 205; p. 298.

Holzhauser & Kenney, New Orleans, La. Imitation coffee. No. 99,214; Aug. 25; Gaz. vol. 205; p. 1315.

Home Guano Company, The, Dothan, Ala. Guano and fertilizers. No. 99,153; Aug. 18; Gaz. vol. 205; p. 1017.

Hopkins & Son, Ferd. T., New York, N. Y. Skin-lotion. No. 98,954; Aug. 11; Gaz. vol. 205; p. 656.

Hostetter, Elmer B., Richwood, Ohio. Evaporated sweet corn. No. 99,311; Aug. 25; Gaz. vol. 205; p. 1318.

Howard, George H., Dalston, London, England. Game apparatus. No. 98,780; Aug. 4; Gaz. vol. 205; p. 298.

Hudkins, Cletus C., Jane Lew, W. Va. Preparations for treating certain ailments of man and live stock. No. 99,393; Aug. 25; Gaz. vol. 205; p. 1321.

Hudson & Thurber Co., Minneapolis, Minn. Hose and packing made from certain named materials. No. 99,215; Aug. 25; Gaz. vol. 205; p. 1315.

Hughes, George W., Birmingham, England. Steel pens. No. 99,050; Aug. 11; Gaz. vol. 205; p. 659.

Hull & Dillon Pkg. Co., The, Pittsburg, Kans. Lard. No. 99,051; Aug. 11; Gaz. vol. 205; p. 659.

Hunt, Albert B., New York, N. Y. Tablets for the stomach and breath. No. 99,154; Aug. 18; Gaz. vol. 205; p. 1017.

Huttig Sash & Door Co., St. Louis, Mo. Certain named construction materials. No. 99,312; Aug. 25; Gaz. vol. 205; p. 1318.

I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. Nos. 98,786–8; Aug. 4; Gaz. vol. 205; p. 298.

I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. No. 98,876; Aug. 4; Gaz. vol. 205; p. 301.

I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. Nos. 99,104–6; Aug. 18; Gaz. vol. 205; p. 1016.

I. B. Kleinert Rubber Company, New York, N. Y. Dress-shields. Nos. 99,158–60; Aug. 18; Gaz. vol. 205; p. 1017.

Iceless Refrigeration Company, The, Cleveland, Ohio. Refrigerating apparatus. No. 98,781; Aug. 4; Gaz. vol. 205; p. 298.

Imperial Candy Co., Seattle, Wash. Candy. No. 99,216; Aug. 25; Gaz. vol. 205; p. 1315.

Indera Mills, Winston-Salem, N. C. Knit and woven underwear. No. 98,955; Aug. 11; Gaz. vol. 205; p. 656.

Indera Mills, Winston-Salem, N. C. Knit and woven underwear. No. 99,052; Aug. 11; Gaz. vol. 205; p. 659.

International Channelling Machines Limited, Sheffield, England. Coal-cutters, rock and hammer drills, and parts thereof. No. 99,053; Aug. 11; Gaz. vol. 205; p. 659.

International Steam Pump Company, Jersey City, N. J. Pumps and well-heads. No. 99,013; Aug. 11; Gaz. vol. 205; p. 658.

International Tooth Company, Philadelphia, Pa. Artificial teeth. No. 98,782; Aug. 4; Gaz. vol. 205; p. 298.

Irvin, W. C., Talladega, Ala. Remedy for chills, fever, and malaria. No. 99,394; Aug. 25; Gaz. vol. 205; p. 1321.

J. Allen Smith & Company, Knoxville, Tenn. Self-rising wheat-flour. Nos. 99,249–50; Aug. 25; Gaz. vol. 205; p. 1316.

J. Einstein, Inc., New York, N. Y. Elastic textiles. No. 99,089; Aug. 18; Gaz. vol. 205; p. 1015.

J. A. Pozzoni Pharmacal Co., The, Chicago, Ill. Complexion-powders, rouge, and rice-powder. No. 99,401; Aug. 25; Gaz. vol. 205; p. 1321.

J. E. Limeburner Company, The, Philadelphia, Pa. Spectacles, eyeglasses, ophthalmoscopes, and retinoscopes. No. 99,322; Aug. 25; Gaz. vol. 205; p. 1319.

J. F. Pyle & Son, San Jose, Cal. Sauces and canned fruit and vegetables. No. 99,360; Aug. 25; Gaz. vol. 205; p. 1320.

J. H. Newbauer & Co., San Francisco, Cal. Certain named foods. No. 99,398; Aug. 25; Gaz. vol. 205; p. 1321.

J. H. White Mfg. Co., New York, N. Y. Certain named articles for chandeliers and lighting-fixtures. No. 99,266; Aug. 25; Gaz. vol. 205; p. 1317.

J. O. C. Union, Los Angeles, Cal. Prints and publications. No. 98,835; Aug. 4; Gaz. vol. 205; p. 300.

J. R. Newberry Co., Los Angeles, Cal. Coffee. No. 98,887; Aug. 4; Gaz. vol. 205; p. 301.

J. R. Newberry Co., Los Angeles, Cal. Coffee. No. 98,963; Aug. 11; Gaz. vol. 205; p. 656.

Japanol Enamel Company, Islington, London, England. Enamel in the nature of paint. No. 99,155; Aug. 18; Gaz. vol. 205; p. 1017.

John Kelly, Inc., Rochester, N. Y. Boots, shoes, and slippers. No. 99,316; Aug. 25; Gaz. vol. 205; p. 1318.

Johnson Educator Food Co., Boston, Mass. Crackers. No. 98,874; Aug. 4; Gaz. vol. 205; p. 301.

Johnson & Johnson, New Brunswick, N. J. Shaving-soap. No. 99,101; Aug. 18; Gaz. vol. 205; p. 1016.

Johnson-Layne Coffee Company, The, St. Louis, Mo. Coffee. No. 99,217; Aug. 25; Gaz. vol. 205; p. 1316.

K. & E. Blouse Makers, Cleveland, Ohio. Blouses, rompers, shirt-waists, and children's frocks. No. 98,998; Aug. 11; Gaz. vol. 205; p. 657.

K. Landau & Co., Chicago, Ill. Ladies' hair-nets and face-chamois. No. 99,108; Aug. 18; Gaz. vol. 205; p. 1016.

Kabo Corset Company, Chicago, Ill. Garters and arm-bands. No. 99,314; Aug. 25; Gaz. vol. 205; p. 1318.

Kafka, Rothenstein Co., Bradford, England. Wool, worsted, and hair piece goods. No. 99,315; Aug. 25; Gaz. vol. 205; p. 1318.

Kalaka Company, The, Augusta, Me., and Chicago, Ill. Mixture of seed and fertilizers. No. 99,218; Aug. 25; Gaz. vol. 205; p. 1316.

Kane, Marshall C., Hollis, N. Y. Medicated ointment and a medicinal preparation for rheumatism, &c. No. 98,783; Aug. 4; Gaz. vol. 205; p. 298.

Kann Sons & Co., S., Washington, D. C. Hooks and eyes. No. 99,102; Aug. 18; Gaz. vol. 205; p. 1016.

Keighley & Co., Earl B., Pawtucket, R. I. Powder for artificial teeth. No. 99,156; Aug. 18; Gaz. vol. 205; p. 1017.

Keltner, William L., Dexter, Mo. Veterinary medicines. No. 98,784; Aug. 4; Gaz. vol. 205; p. 298.

Kienzle, Erich, New York, N. Y. Watches and clocks. No. 99,054; Aug. 11; Gaz. vol. 205; p. 659.

King Philip Mills, Fall River, Mass. Cotton piece goods. No. 99,103; Aug. 18; Gaz. vol. 205; p. 1016.

Kirsch Manufacturing Company, Sturgis, Mich. Metal curtain portières and stair rods and fixtures therefor. No. 98,875; Aug. 4; Gaz. vol. 205; p. 301.

Klaw & Erlanger, New York, N. Y. Motion-pictures. No. 99,157; Aug. 18; Gaz. vol. 205; p. 1017.

Klein Chocolate Company, Elizabethtown, Pa. Sweet chocolates. No. 99,219; Aug. 25; Gaz. vol. 205; p. 1316.

Kleine Optical Company, Chicago, Ill. Condensers used with cameras, and motion-picture-projecting machines. No. 99,317; Aug. 25; Gaz. vol. 205; p. 1318.

Koken Barbers' Supply Company, St. Louis, Mo. Razors. Nos. 99,220–4; Aug. 25; Gaz. vol. 205; p. 1316.

Krementz & Co., Newark, N. J. Cuff-buttons, shirt-studs, vest-buttons, and cuff-links. No. 99,055; Aug. 11; Gaz. vol. 205; p. 659.

Kuchler & Son, F. H., Brooklyn, N. Y. Candles. No. 99,056; Aug. 11; Gaz. vol. 205; p. 659.

Kurrasch, Albert A., Chicago, Ill. Laxative. No. 98,789; Aug. 4; Gaz. vol. 205; p. 298.

Kurth, Frank, Wheaton, Minn. Remedy for hog-cholera. No. 98,790; Aug. 4; Gaz. vol. 205; p. 298.

L. S. Donaldson Company, Inc., Minneapolis, Minn. Certain named foods. No. 99,384; Aug. 25; Gaz. vol. 205; p. 1321.

Lancaster Mills, Clinton, Mass. Aprons, rompers, wrappers, shirts, and pajamas. No. 98,956; Aug. 11; Gaz. vol. 205; p. 656.

Lancaster Mills, Clinton, Mass. Cotton piece, dress, and bed-covering goods. No. 99,107; Aug. 18; Gaz. vol. 205; p. 1016.

Lard, S. S., Houston, Tex. Butter. No. 98,877; Aug. 4; Gaz. vol. 205; p. 301.

Latzke, Paul, New York, N. Y. Silver flat ware. Nos. 99,109–10; Aug. 18; Gaz. vol. 205; p. 1016.

Laver, Arthur, Bernardsville, N. J. Insecticide. No. 99,111; Aug. 18; Gaz. vol. 205; p. 1016.

Lazell Perfumer, New York, N. Y. Talcum, sachet, face, and bath powder. No. 99,161; Aug. 18; Gaz. vol. 205; p. 1017.

Lee Tire & Rubber Co., Whitemarsh township, Montgomery county, Pa. Rubber tires and tubing, inner tubes and cases, valve-patches. No. 99,318; Aug. 25; Gaz. vol. 205; p. 1319.

Lehmann, Annie, Brooklyn, N. Y. Salve. No. 98,791; Aug. 4; Gaz. vol. 205; p. 298.

Leonard, Anna B., New York, N. Y. Certain named articles made either wholly or partly of porcelain. No. 99,319; Aug. 25; Gaz. vol. 205; p. 1319.

Levi, Clemente, Rome, Italy. Kinematographic films. No. 98,925; Aug. 11; Gaz. vol. 205; p. 655.

Lewis & Bennett Hardware Co., Wilkes-Barre, Pa. Certain named cutlery, tools, and parts thereof. No. 98,878; Aug. 4; Gaz. vol. 205; p. 301.

Liebenthal Bros. & Co., Cleveland, Ohio. Certain named non-alcoholic beverages. No. 99,320; Aug. 25; Gaz. vol. 205; p. 1319.

Liebenthal Bros. & Co., Cleveland, Ohio. Sweet table-wines. No. 99,321; Aug. 25; Gaz. vol. 205; p. 1319.

Life-Photo Film Corporation, New York, N. Y. Motion-picture films. No. 99,014; Aug. 11; Gaz. vol. 205; p. 658.

Link, Adolf P., Brooklyn, N. Y. Water-stills. No. 99,015; Aug. 11; Gaz. vol. 205; p. 658.

Linke, Albert, Radeberg, Germany. Cheese. No. 99,227; Aug. 25; Gaz. vol. 205; p. 1316.

Little & Company, A. E., Lynn, Mass. Leather and leather and cloth boots and shoes. No. 99,323; Aug. 25; Gaz. vol. 205; p. 1319.

Live Air Company, Oakland, Cal. Puncture-proofing substances. No. 99,324; Aug. 25; Gaz. vol. 205; p. 1319.

London Waterproof Co., The, New York, N. Y. Rain-coats and overcoats. No. 99,016; Aug. 11; Gaz. vol. 205; p. 658.

Lone Star Brewing Co., San Antonio, Tex. Beer. No. 99,228; Aug. 25; Gaz. vol. 205; p. 1316.

Lonergan's, Firm of Dr., Pittsburgh, Pa. Medical compounds for the digestive organs. No. 98,792; Aug. 4; Gaz. vol. 205; p. 299.

Lopez & Company, Y., New York, N. Y. Butter and butter compounds and substitutes. No. 99,057; Aug. 11; Gaz. vol. 205; p. 659.

Low-Taussig-Karpeles Co., The, Providence, R. I. Certain named precious and imitation stones. No. 98,793; Aug. 4; Gaz. vol. 205; p. 299.

Lowry, Thomas, Duluth, Minn. Furniture-polish. No. 99,325; Aug. 25; Gaz. vol. 205; p. 1319.

Luyties Pharmacy Company, St. Louis, Mo. Preparation for relief of certain named diseases. No. 98,794; Aug. 4; Gaz. vol. 205; p. 299.

Lyon Metallic Manufacturing Company, Montgomery, Ill. Metal barrels, lockers, and tool, &c., boxes. No. 99,326; Aug. 25; Gaz. vol. 205; p. 1319.

M. C. Peters Mill Co. (See Peters, Milton C., assignor.)

Maatschappij Vereenigde Van der Burg's Japaniak Fabrieken (United Van der Burg's Japaniac- and Varnish Works), Rotterdam, Netherlands. Paints, varnishes, and lacquers. No. 99,327; Aug. 25; Gaz. vol. 205; p. 1319.

MacDonald, Harry J., Chicago, Ill. Machinery and parts used in the construction of machines for attaching buttons to shoes, &c. No. 99,328; Aug. 25; Gaz. vol. 205; p. 1319.

Macleay Estate Co., The, Portland, Oreg. Canned salmon. No. 99,229; Aug. 25; Gaz. vol. 205; p. 1316.

Macy & Co., R. H., New York, N. Y. Textile rugs. No. 98,879; Aug. 4; Gaz. vol. 205; p. 301.

Manekin, Harry, Philadelphia, Pa. Cigars. No. 99,230; Aug. 25; Gaz. vol. 205; p. 1316.

Manhattan Drug Co., New York, N. Y. Tooth-paste. No. 98,795; Aug. 4; Gaz. vol. 205; p. 299.

Manufacturers Brush Company, The, Cleveland, Ohio. Brushes. No. 99,162; Aug. 18; Gaz. vol. 205; p. 1017.

Marlowe Manufacturing Company, New York, N. Y. Hair-nets. Nos. 98,880–1; Aug. 4; Gaz. vol. 205; p. 301.

Marr Bros. Co., E. L., Westerly, R. I. Ointment. No. 99,395; Aug. 25; Gaz. vol. 205; p. 1321.

Mason, Howard & Co., Attleboro, Mass. Certain named articles made of or plated with precious metal. No. 99,112; Aug. 18; Gaz. vol. 205; p. 1016.

Master Builders Company, The, Cleveland, Ohio. Concrete hardening, filling, and bonding materials. No. 99,163; Aug. 18; Gaz. vol. 205; p. 1017.

Maxwell Motor Company, Incorporated, Detroit, Mich. Automobiles. No. 99,164; Aug. 18; Gaz. vol. 205; p. 1017.

McCready & Webster, Baltimore, Md. Canned fruits, vegetables, and oysters. No. 99,058; Aug. 11; Gaz. vol. 205; p. 659.

McGarrett, Franklin, Attleboro, Mass. Insecticide. No. 98,796; Aug. 4; Gaz. vol. 205; p. 299.

McIlhenny Company, Portland, Me., and Avery Island, La. Certain food compound. No. 99,231; Aug. 25; Gaz. vol. 205; p. 1316.

McInturff, Robert E., McComb, Miss. Medical preparations for certain named uses. No. 98,797; Aug. 4; Gaz. vol. 205; p. 299.

McNamee, Thomas H., Watsonville, Cal. Preparation for the treatment of certain named diseases. No. 98,957; Aug. 11; Gaz. vol. 205; p. 656.

Merkel & Son, Isaac, Plattsburg, N. Y. Carbonated mineral water. No. 99,330; Aug. 25; Gaz. vol. 205; p. 1319.

Meyer, Firm of Arnold O., Hamburg, Germany. Duck. No. 98,882; Aug. 4; Gaz. vol. 205; p. 301.

Meyer, Firm of Arnold O., Hamburg, Germany. Certain named tools, parts thereof, cutlery, and machinery. No. 98,958; Aug. 11; Gaz. vol. 205; p. 656.

Meyer, Firm of Arnold O., Hamburg, Germany. Leather and rubber boots and shoes. No. 98,959; Aug. 11; Gaz. vol. 205; p. 656.

Meyer, Firm of Arnold O., Hamburg, Germany. Blankets. No. 99,113; Aug. 18; Gaz. vol. 205; p. 1016.

Meyer, Firm of Arnold O., Hamburg, Germany. Linseed-oil. No. 99,331; Aug. 25; Gaz. vol. 205; p. 1319.

Middleton, Hubert J., New York, N. Y. Ginger-beer. No. 98,799; Aug. 4; Gaz. vol. 205; p. 299.

Middletown Silver Company, The, Middletown, Conn. Silver-plated hollow ware and tableware. No. 98,800; Aug. 4; Gaz. vol. 205; p. 299.

Miller, Ralph H., Algona, Iowa. Remedy for cholera, roup, limberneck, &c. No. 99,396; Aug. 25; Gaz. vol. 205; p. 1321.

Mills, David B., Bloomfield, N. J., assignor to Pasha Spark-Plug Company. Spark-plugs and parts. No. 99,165; Aug. 18; Gaz. vol. 205; p. 1017.

Milton Bradley Co., Springfield, Mass. Games. No. 99,275; Aug. 25; Gaz. vol. 205; p. 1317.

Mission Brewing Company, San Diego, Cal. Beer. No. 98,801; Aug. 4; Gaz. vol. 205; p. 299.

Moran, Joseph H., Woonsocket, R. I. Candy. No. 99,333; Aug. 25; Gaz. vol. 205; p. 1319.

Morgan, Gold S., Greenwood, Miss. Oil for the hair and head. No. 99,397; Aug. 25; Gaz. vol. 205; p. 1321.

Morris, Mann & Reilly, Chicago, Ill. Ladies' hand-bags. No. 98,802; Aug. 4; Gaz. vol. 205; p. 299.

Mosier Fruit Growers Association, Mosier, Oreg. Fresh fruits. No. 99,059; Aug. 11; Gaz. vol. 205; p. 659.

Mount Vernon Company—Silversmiths, Inc., Mount Vernon, N. Y. Certain named flat, table, hollow, and toilet ware made of or plated with precious metals. No. 98,960; Aug. 11; Gaz. vol. 205; p. 656.

Mülhens & Kropff, New York, N. Y. Glycerin toilet soap. No. 98,803; Aug. 4; Gaz. vol. 205; p. 299.

Munyon, James M., Jr., Philadelphia, Pa., and New York, N. Y. Preservative of rubber products. No. 99,060; Aug. 11; Gaz. vol. 205; p. 659.

Murray, James P., Kansas City, Kans. Bread. No. 99,232; Aug. 25; Gaz. vol. 205; p. 1316.

Naamlooze Vennootschap Maatschappij tot Voortzetting der Zaken Gedreven onder den Naam Klaas Tilly, Haarlem, Netherlands. Haarlem oil, a medicinal oil. No. 98,961; Aug. 11; Gaz. vol. 205; p. 656.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 98,883; Aug. 4; Gaz. vol. 205; p. 301.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit, sugar wafers, and candy. No. 98,884; Aug. 4; Gaz. vol. 205; p. 301.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 99,334–6; Aug. 25; Gaz. vol. 205; p. 1319.

National Carbon Company, Cleveland, Ohio. Electric batteries. No. 99,166; Aug. 18; Gaz. vol. 205; p. 1017.

National Fire Proofing Company, Pittsburgh, Pa. Terra-cotta hollow building blocks and tiles. No. 99,337; Aug. 25; Gaz. vol. 205; p. 1319.

National Malleable Castings Company, The, Cleveland, Ohio. Specially-treated steel. No. 98,885; Aug. 4; Gaz. vol. 205; p. 301.

National Starch Co., New York, N. Y. Stock feed. No. 98,962; Aug. 11; Gaz. vol. 205; p. 656.

National Washboard Company, Chicago, Ill.; Saginaw, Mich., and Memphis, Tenn. Washboards. Nos. 99,338–50; Aug. 25; Gaz. vol. 205; pp. 1319–20.

Naumann, Firm of Dr. L., Dresden-Plauen, Germany. Extract of radish for relieving indigestion. No. 98,804; Aug. 4; Gaz. vol. 205; p. 299.

Neagley, James K., Pittsburgh, Pa. Digestive ferment. No. 98,805; Aug. 4; Gaz. vol. 205; p. 299.

New York Blue Print Paper Co., New York, N. Y. Blue-print paper and cloth and certain named drawing materials. No. 98,886; Aug. 4; Gaz. vol. 205; p. 301.

Niemoeller, Ernest H., St. Louis, Mo. Liquid corn-remover and court-plaster. No. 98,807; Aug. 4; Gaz. vol. 205; p. 299.
North American Pharmacal Co. Inc., New York, N. Y. Certain antiseptic liquid. No. 98,964; Aug. 11; Gaz. vol. 205; p. 656.
Northern Bag & Plate Co., Carthage, N. Y. Butter and other dishes of wood, pulp, and paper. No. 99,167; Aug. 18; Gaz. vol. 205; p. 1018.
Northern Light Milling Co., Owatonna, Minn. Pancake-flour. No. 99,233; Aug. 25; Gaz. vol. 205; p. 1316.
Norton Company, Worcester, Mass. Oilstones, whetstones, scythe-stones, rubbing-bricks, &c. No. 98,889; Aug. 4; Gaz vol. 205; p. 301.
Norton, Edward R., Boston, Mass., and New York, N. Y. Coal. No. 99,234; Aug. 25; Gaz. vol. 205; p. 1316.
Noyes Comb Company, Binghamton, N. Y. Toilet-combs. No. 99,352; Aug. 25; Gaz. vol. 205; p. 1320.
Nurses Outfitting Association, Inc., New York, N. Y. Collars and cuffs. No. 99,115; Aug. 18; Gaz. vol. 205; p. 1016.
O'Dell, John C., Rome, Ga. Non-alcoholic carbonated beverage and syrup for making same. No. 99,353; Aug. 25; Gaz. vol. 205; p. 1320.
O'Neil, Timothy L., La Salle, Ill. Twine. No. 99,168; Aug. 18; Gaz. vol. 205; p. 1018.
Oko Company, Wilmington, Del., and St. Louis, Mo. Food and food ingredient. No. 98,890; Aug. 4; Gaz. vol. 205; p. 301.
Old Woolen Mills Co., The, Chicago, Ill. Men's clothing. No. 99,017; Aug. 11; Gaz. vol. 205; p. 658.
Oneida Community, Limited, Oneida, N. Y. Mouse-traps. No. 98,809; Aug. 4; Gaz. vol. 205; p. 299.
Otto L. Kuehn Co., Milwaukee, Wis. Rice. No. 99,225; Aug. 25; Gaz. vol. 205; p. 1316.
Owl Drug Company, The, San Francisco, Cal. Rouge and face-powder. No. 99,399; Aug. 25; Gaz. vol. 205; p. 1321.
Pacific Coast Glass Works, San Francisco, Cal. Fruit-jars. No. 99,235; Aug. 25; Gaz. vol. 205; p. 1316.
Paragon Metal Cap Company, Brooklyn, N. Y. Metal caps used on glass jars or bottles, &c. No. 99,236; Aug. 25; Gaz. vol. 205; p. 1316.
Parker Brothers, Portland, Me., and Salem, Mass. Toy spring-gun. No. 99,169; Aug. 18; Gaz. vol. 205; p. 1018.
Parker Brothers, Portland, Me., and Salem, Mass. Card games. No. 99,354; Aug. 25; Gaz. vol. 205; p. 1320.
Pasha Spark-Plug Company. (See Mills, David B., assignor.)
Payne, Samuel B., Kansas City, Kans. Remedy for diseases of the blood and skin. No. 99,170; Aug. 18; Gaz. vol. 205; p. 1018.
Pearce Bros. Leather Co., Newark, N. J. Leather substitute. No. 98,810; Aug. 4; Gaz. vol. 205; p. 299.
Pearsall & Co., Jas., London, England. Sewing silk. No. 99,355; Aug. 25; Gaz. vol. 205; p. 1320.
Peetz Brothers Livery & Undertaking Company, St. Louis, Mo. Caskets and coffins. No. 99,356; Aug. 25; Gaz. vol. 205; p. 1320.
Peninsular Chemical Co., Detroit, Mich. Perfumery, face and talcum powders. No. 99,400; Aug. 25; Gaz. vol. 205; p. 1321.
Penn The Florist, Boston, Mass. Flowers. No. 99,237; Aug. 25; Gaz. vol. 205; p. 1316.
Pennsylvania Steel Company, The, Steelton, Pa., and New York, N. Y. Iron ingots, bars, pigs, castings, and forgings, steel, and alloys of iron and steel. No. 98,891; Aug. 4; Gaz. vol. 205; p. 301.
Penryn Fruit Company, Penryn, Cal. Fresh citrus and deciduous green fruits, grapes, and berries. No. 99,357; Aug. 25; Gaz. vol. 205; p. 1320.
Peters, Milton C., assignor to M. C. Peters Mill Co., Omaha, Nebr. Prepared stock food. No. 99,116; Aug. 18; Gaz. vol. 206; p. 1016.
Peyton Paper Company, Duluth, Minn. Writing-paper. No. 99,061; Aug. 11; Gaz. vol. 205; p. 659.
Peyton Paper Company, Duluth, Minn. Writing-tablets. No. 99,062; Aug. 11; Gaz. vol. 205; p. 659.
Phillips' Patents, Limited, London, England. Rubber heel-pads and tips for boots and shoes. No. 99,117; Aug. 18; Gaz. vol. 205; p. 1016.
Pincoffs, Peter A., New York, N. Y. Dried fruits. No. 99,358; Aug. 25; Gaz. vol. 205; p. 1320.
Plattsburg Broom Co., Inc., Plattsburg, N. Y. Brooms. No. 99,171; Aug. 18; Gaz. vol. 205; p. 1018.
Pneumo-Vapo-Tone Co., Jackson City, Mo. Remedy for diseases of the air-passages. No. 98,811; Aug. 4; Gaz. vol. 205; p. 299.
Pratt-Low Preserving Co., Santa Clara, Cal. Canned cherries, peaches, pears, tomatoes, &c. No. 98,892; Aug. 4; Gaz. vol. 205; p. 302.
Premier Packing Co., San Diego, Cal. Canned fish. No. 99,063; Aug. 11; Gaz. vol. 205; p. 659.
Premier Vacuum Cleaner Company, The, Cleveland, Ohio. Electrical vacuum cleaning-machines and parts thereof. No. 99,018; Aug. 11; Gaz. vol. 205; p. 658.
Prenzlau's Fabrikwerke, L., Hamburg, Germany. Eggs, white and yolk of eggs. No. 98,893; Aug. 4; Gaz. vol. 205; p. 302.
Preston, Gustavo, Boston, Mass., and Naguabo, Porto Rico. Honey and cane-syrup. No. 99,238; Aug. 25; Gaz. vol. 205; p. 1316.
Purcell, Isaac S., Oak Park and Chicago, Ill. Pianos. No. 99,064; Aug. 11; Gaz. vol. 205; p. 659.
Puritan Cocoanut Butter Co., Philadelphia, Pa. Cocoanut-oil products. No. 99,359; Aug. 25; Gaz. vol. 205; p. 1320.
Pyrene Manufacturing Co., New York, N. Y. Fire-extinguishing compounds. No. 98,812; Aug. 4; Gaz. vol. 205; p. 299.
Pyrene Manufacturing Co., New York, N. Y. Syringes for fire-extinguishing compounds. No. 98,965; Aug. 11; Gaz. vol. 205; p. 656.
Pyrography Art Company, Dixon, Ill. Salve. No. 98,966; Aug. 11; Gaz. vol. 205; p. 656.
Quaker City Chocolate and Confectionery Company, Inc., Philadelphia, Pa. Chocolates. No. 99,239; Aug. 25; Gaz. vol. 205; p. 1316.
Quaker City Chocolate and Confectionery Company, Inc., Philadelphia, Pa. Candy. No. 99,240; Aug. 25; Gaz. vol. 205; p. 1316.
R. Blankenburg Company, The, Philadelphia, Pa. Cotton comforts. No. 98,855; Aug. 4; Gaz. vol. 205; p. 300.
R. E. Dietz Company, New York, N. Y. Burners for lamps and lanterns. No. 99,201; Aug. 25; Gaz. vol. 205; p. 1315.
R. M. Hollingshead Co., The, Camden, N. J. Cements for rubber, &c., glue, library-paste, and sealing-wax. No. 98,778; Aug. 4; Gaz. vol. 205; p. 298.
R. M. Hollingshead Co., The, Camden, N. J. Edge, leather, and writing inks. No. 99,049; Aug. 11; Gaz. vol. 205; p. 659.
R. M. Hollingshead Co., The, Camden, N. J. Certain paints, varnishes, stains, enamels, &c. No. 99,310; Aug. 25; Gaz. vol. 205; p. 1318.
Radio Company, Brooklyn, N. Y. Furniture-polishing oil. No. 98,967; Aug. 11; Gaz. vol. 205; p. 656.
Ratner, Aaron, New York, N. Y. Ladies' and children's muslin undergarments. No. 98,804; Aug. 4; Gaz. vol. 205; p. 302.
Rawak, George, New York, N. Y. Ladies' hats. No. 99,118; Aug. 18; Gaz. vol. 205; p. 1016.
Rea & Page Milling Co., Marshall, Mo. Wheat-flour. No. 99,241; Aug. 25; Gaz. vol. 205; p. 1316.
Red Wing Milling Company, Red Wing, Minn. Wheat-flour. No. 98,813; Aug. 4; Gaz. vol. 205; p. 299.
Reeve, William R., Boston, Mass. Tonic bitters. No. 99,119; Aug. 18; Gaz. vol. 205; p. 1016.
Reilly, Edward J., Baltimore, Md. Paste for millinery purposes. No. 98,814; Aug. 4; Gaz. vol. 205; p. 299.
Remedy Sales Corporation, Charlotte, N. C. Remedy for headache, toothache, and neuralgia. No. 99,120; Aug. 18; Gaz. vol. 205; p. 1016.
Resilia Corporation, The, San Francisco, Cal. Compound for cleaning and softening rubber and rubber products. No. 99,121; Aug. 18; Gaz. vol. 205; p. 1016.
Reusser, Fritz, New York, N. Y. Sauce for oysters, shellfish, salad-dressings, and foodstuffs. No. 99,242; Aug. 25; Gaz. vol. 205; p. 1316.
Rhodes, Albert V., Tacoma, Wash. Antiseptic for cleaning, deodorizing, and disinfecting. No. 99,402; Aug. 25; Gaz. vol. 205; p. 1321.
Richards-Glover Company, Dallas, Tex. Toilet-paper, paper towels, napkins, and table-cloths. No. 98,815; Aug. 4; Gaz. vol. 205; p. 299.
Richmond Chemical Co., Wheeling, W. Va. Hand fire-extinguishers. No. 98,895; Aug. 4; Gaz. vol. 205; p. 302.
Riley Shoe Manufacturing Company, Columbus, Ohio. Leather boots and shoes. No. 98,968; Aug. 11; Gaz. vol. 205; p. 656.
Rincheval, Octavie, Paris, France. Welding-torches and apparatus for cutting metals, &c. No. 99,243; Aug. 25; Gaz. vol. 205; p. 1316.
Robert, L. F. (See Gauvreau, Joseph R. L., assignor.)
Robins Conveying Belt Company, Passaic, N. J., and New York, N. Y. Conveying mechanism and parts thereof. No. 98,896; Aug. 4; Gaz. vol. 205; p. 302.
Robinson Chemical Co., C. B., Los Angeles, Cal. Preparations for the treatment of headache, catarrh, piles, &c. No. 99,172; Aug. 18; Gaz. vol. 205; p. 1018.
Rochester Carrier Co., Rochester, N. Y. Paper or fiber baskets. No. 99,173; Aug. 18; Gaz. vol. 205; p. 1018.
Roethlisberger, Hans, San Francisco, Cal. Cheese. No. 99,065; Aug. 11; Gaz. vol. 205; p. 659.
Rogers Peet Company, New York, N. Y. Certain named clothing for men and boys. No. 99,019; Aug. 11; Gaz. vol. 205; p. 658.
Rogers & Thompson, Inc., New York, N. Y. Certain named piece goods. Nos. 99,174–6; Aug. 18; Gaz. vol. 205; p. 1018.
Rood Candy Co., The, Pueblo, Colo. Candy. No. 99,244; Aug. 25; Gaz. vol. 205; p. 1316.
Rosenwald & Weil, Inc., Chicago, Ill. Rubberized fabrics. No. 98,817; Aug. 4; Gaz. vol. 205; p. 299.
Rotor Vacuum Cleaner Company, Inc., The, New York, N. Y. Vacuum-cleaners. No. 99,066; Aug. 11; Gaz. vol. 205; p. 659.
Rowland Drug Co., Oxford, Miss. Headache and neuralgia medicine. No. 98,818; Aug. 4; Gaz. vol. 205; p. 299.
Royal Tea Company, Chicago, Ill. Peanut-butter, spices, coffee, tea, &c. No. 99,245; Aug. 25; Gaz. vol. 205; p. 1316.
S. Obermayer Company, Cincinnati, Ohio, and Chicago, Ill. Foundry-facings, charcoal, graphite, and plumbago. No. 98,808; Aug. 4; Gaz. vol. 205; p. 299.

S. R. Feil Company, The, Cleveland, Ohio. Poultry tonics and insecticides and remedies for poultry diseases. No. 99,386; Aug. 25; Gaz. vol. 205; p. 1321.
S. R. White's Sons Incorporated, Norfolk, Va. Cotton-planters. No. 99,373; Aug. 25; Gaz. vol. 205; p. 1320.
Sadl, Reshid, New York, N. Y. Cigars, cigarettes, cheroots, and cut tobacco. No. 99,246; Aug. 25; Gaz. vol. 205; p. 1316.
Saleura Company, The, Milwaukee, Wis. Salts remedy for certain named diseases. No. 99,403; Aug. 25; Gaz. vol. 205; p. 1321.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and plushes in the piece. No. 98,819; Aug. 4; Gaz. vol. 205; p. 299.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn, and New York, N. Y. Velvets and plushes in the piece. No. 98,897; Aug. 4; Gaz. vol. 205; p. 302.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Coats, cloaks, wraps, and capes. Nos. 99,020–3; Aug. 11; Gaz. vol. 205; p. 658.
Samuel Cabot, Incorporated, Boston, Mass. Emulsifiable coal-tar-creosote compound. No. 99,000; Aug. 11; Gaz. vol. 205; p. 657.
Sanin-Gesellschaft m. b. H. Fabrik chem. pharmac. Praeparate, Koetzschenbroda, Dresden, Germany. Medicinal preparation for the treatment of diabetes. No. 99,024; Aug. 11; Gaz. vol. 205; p. 658.
Sanin-Gesellschaft m. b. H. Fabrik chem. pharmac. Praeparate, Koetzschenbroda, Dresden, Germany. Medicinal preparation used in the treatment of certain named diseases. No. 99,025; Aug. 11; Gaz. vol. 205; p. 658.
Sartory, Eugène, Paris, France. Bows for musical instruments. No. 98,820; Aug. 4; Gaz. vol. 205; p. 299.
Scheetz, William H., San Francisco, Cal. Weekly magazines. No. 99,247; Aug. 25; Gaz. vol. 205; p. 1316.
Schindler-Barnay, Flora, Vienna, Austria-Hungary. Laxatives. No. 99,404; Aug. 25; Gaz. vol. 205; p. 1321.
Schlick, Henry H. von, Pittsburgh, Pa. Polishing-cloth. No. 98,837; Aug. 4; Gaz. vol. 205; p. 300.
Schmidt Ceramic Chemical Company, The, Chicago, Ill. Ceramic colors. No. 99,179; Aug. 18; Gaz. vol. 205; p. 1018.
Schmidt, Frank F., La Cygne, Kans. Candy. No. 98,899; Aug. 4; Gaz. vol. 205; p. 302.
Schulze Baking Company, Chicago, Ill. Bread. No. 99,405; Aug. 25; Gaz. vol. 205; p. 1321.
Schweitzer and Conrad, Chicago, Ill. Electrical fuses. No. 98,898; Aug. 4; Gaz. vol. 205; p. 302.
Sclavo, Achille, Siena, Italy. Remedy for anemic conditions. No. 98,913; Aug. 11; Gaz. vol. 205; p. 655.
Scott County Milling Company, The, Sikeston, Mo. Wheat-flour. No. 99,248; Aug. 25; Gaz. vol. 205; p. 1316.
Seelye Myers Co., Cleveland, Ohio. Certain preparation for head shampoo. No. 98,984; Aug. 11; Gaz. vol. 205; p. 657.
Seignious, Charles W., Atlanta, Ga. Medicinal preparation for the alleviation of certain named diseases. No. 98,821; Aug. 4; Gaz. vol. 205; p. 299.
Shango Remedy Co., Laurium, Mich. Preparation for the treatment of rheumatism. No. 99,180; Aug. 18; Gaz. vol. 205; p. 1018.
Shivar, Nathan F., Shelton, S. C. Mineral water and ginger-ale. No. 98,824; Aug. 4; Gaz. vol. 205; p. 299.
Stereoscope Manufacturing Co., Kansas City, Mo. Reflectoscope. No. 99,026; Aug. 11; Gaz. vol. 205; p. 658.
Shriraplin, Marion, Tonganoxie, Kans. Cultivator-shovels. No. 98,900; Aug. 4; Gaz. vol. 205; p. 302.
Shultz, Arthur E., Olney, Ill. Certain named seeds. No. 98,825; Aug. 4; Gaz. vol. 205; p. 300.
Shuman & Co., A., Boston, Mass. Juvenile suits. No. 98,901; Aug. 4; Gaz. vol. 205; p. 302.
Sidney Blumenthal & Company, New York, N. Y. Plushes and velvets. No. 99,078; Aug. 18; Gaz. vol. 205; p. 1015.
Siemens & Company, Gebrüder, Berlin-Lichtenberg, Germany. Certain named electrical apparatus and supplies. No. 99,181; Aug. 18; Gaz. vol. 205; p. 1018.
Simonds Manufacturing Company, Fitchburg, Mass. Saws and machine knives. No. 99,027; Aug. 11; Gaz. vol. 205; p. 658.
Skiamberg, Isadore, Chicago, Ill. Roach and vermin powder. No. 98,826; Aug. 4; Gaz. vol. 205; p. 300.
Slaughter System, The, St. Louis, Mo. Preparations for treatment of the scalp and hair. No. 99,182; Aug. 18; Gaz. vol. 205; p. 1018.
Sloan Valve Company, Chicago, Ill. Metallic valves, water-closets, and parts thereof. No. 99,361; Aug. 25; Gaz. vol. 205; p. 1320.
Smalley, William W. (See Bache, Leigh S., assignor.)
Smith, Henry A., Elgin and Carpentersville, Ill. Wrenches. No. 98,902; Aug. 4; Gaz. vol. 205; p. 302.
Société Anonyme de la Distillerie de la Liqueur Benedictine de l'Abbaye De Fecamp, Fecamp, France. Cordial. No. 99,363; Aug. 25; Gaz. vol. 205; p. 1320.
Société Job, Anciens Etablissements Bardou-Job et Paulhac, Perpignan, France. Cigarette papers and holders, pipes, &c. No. 99,362; Aug. 25; Gaz. vol. 205; p. 1320.
Sol Duc Hot Springs Company, Seattle, Wash. Mineral waters. No. 98,827; Aug. 4; Gaz. vol. 205; p. 300.
Spagna A., and L. Cinco, New York, N. Y. Razors. No. 99,364; Aug. 25; Gaz. vol. 205; p. 1320.
Spalding Chemical Co., The, New Haven, Conn. Skin-cream. No. 99,406; Aug. 25; Gaz. vol. 205; p. 1321.
Spears, Noa, San Antonio, Tex. Medicine for pyorrhea, alveolaris, and diseases of the gums. No. 98,985; Aug. 11; Gaz. vol. 205; p. 657.
Spokane Fruit Growers' Co., Spokane, Wash. Fresh apples packed in boxes, &c. No. 99,251; Aug. 25; Gaz. vol. 205; p. 1316.
Spratt's Patent (America) Limited, London, England, and Newark, N. J. Food preparation for poultry and birds. No. 99,252; Aug. 25; Gaz. vol. 205; p. 1316.
Stahl and Jaeger Inc., New York, N. Y. Wheat-flour. No. 99,253; Aug. 25; Gaz. vol. 205; p. 1317.
Standard Electric Incubator Co., New York, N. Y. Certain apparatus and parts therefor for hatching and rearing poultry. No. 99,254; Aug. 25; Gaz. vol. 205; p. 1317.
Standard Motor Parts Mfg. Co., Philadelphia, Pa. Mechanically-operated automobile-horns. No. 98,828; Aug. 4; Gaz. vol. 205; p. 300.
Standard Oil Co. of New York, New York, N. Y. Illuminating-oils. No. 98,986; Aug. 11; Gaz. vol. 205; p. 657.
Standard Oil Company of New York, New York, N. Y. Lamp-chimneys. No. 99,255; Aug. 25; Gaz. vol. 205; p. 1317.
Standard Oil Company of New York, New York, N. Y. Refined petroleum for illuminating, heating, and power purposes. Nos. 99,365–6; Aug. 25; Gaz. vol. 205; p. 1320.
Standard Paper Company, Indianapolis, Ind. Toilet-paper. No. 99,068; Aug. 11; Gaz. vol. 205; p. 659.
Standard Varnish Works, New York and Port Richmond, N. Y. Enamels, paints, varnishes, and varnish-removers. No. 99,183; Aug. 18; Gaz. vol. 205; p. 1018.
Standard Woven Fabric Company, Worcester, Mass. Brake-linings and clutch-facings. No. 99,184; Aug. 18; Gaz. vol. 205; p. 1018.
Ste. Ame. "Le Boro Carbone," Paris, France. Abrasive wheels, blocks, powders, fabrics, and papers. Nos. 99,124–5; Aug. 18; Gaz. vol. 205; p. 1016.
Steen, Jack F., Cairo, Egypt. Dentifrices. No. 99,126; Aug. 18; Gaz. vol. 205; p. 1016.
Steere, Franklin H., Providence, R. I. Furniture, &c., polish. No. 99,185; Aug. 18; Gaz. vol. 205; p. 1018.
Steiger, George W., New York, N. Y. Grape tonic beverage. No. 99,367; Aug. 25; Gaz. vol. 205; p. 1320.
Stenography & Reporting Company, The, Trenton, N. J. Type-writer ribbons and carbon-paper. No. 99,069; Aug. 11; Gaz. vol. 205; p. 659.
Stephen F. Whitman & Son, Incorporated, Philadelphia, Pa. Certain paste-like mass used as an article of confectionery. No. 99,374; Aug. 25; Gaz. vol. 205; p. 1320.
Stetson Manufacturing Company, The, Cleveland, Ohio. Devices for sound-boxes of sound-reproducing instruments, &c. No. 99,128; Aug. 18; Gaz. vol. 205; p. 1016.
Stone Hill Wine Company, Hermann, Mo. Whiskies. No. 98,987; Aug. 11; Gaz. vol. 205; p. 657.
Strader, Frank D., Madison, Wis. Preparation for the treatment of asthma. No. 98,829; Aug. 4; Gaz. vol. 205; p. 300.
Stuart-American Products Company, Memphis, Tenn. Gas and oil burners. No. 99,256; Aug. 25; Gaz. vol. 205; p. 1317.
Superior Peanut Company. (See Clark, George E., assignor.)
Swift and Company, Chicago, Ill. Toilet soap. Nos. 98,830–1; Aug. 4; Gaz. vol. 205; p. 300.
Tampa Varnish Company, Tampa, Fla. Floor and furniture oil. No. 99,369; Aug. 25; Gaz. vol. 205; p. 1320.
Taylor-Burt Co., The, Holyoke, Mass. Paper for printing purposes. No. 98,832; Aug. 4; Gaz. vol. 205; p. 300.
Texas Company, Port Arthur, Tex., and New York, N. Y. Certain named roofing and roof-coating composition. No. 99,130; Aug. 18; Gaz. vol. 205; p. 1016.
Theinhardt's Nährmittel-Gesellschaft G. m. b. H., Dr., Stuttgart-Cannstatt, Germany. Prepared foods for infants and invalids. No. 99,070; Aug. 11; Gaz. vol. 205; p. 659.
Thieme Bros. Co., Fort Wayne, Ind. Hose. No. 99,028; Aug. 11; Gaz. vol. 205; p. 658.
Thom, Burton P., New York, N. Y. Douche-powders. No. 98,988; Aug. 11; Gaz. vol. 205; p. 657.
Tilney, Farrar, New York, N. Y. Bread. No. 98,903; Aug. 4; Gaz. vol. 205; p. 302.
Tim & Co., New York and Troy, N. Y. Shirts, underwear, pajamas, collars and cuffs, &c. No. 99,129; Aug. 18; Gaz. vol. 205; p. 1016.
Tousey Varnish Company, Chicago, Ill. Varnishes. No. 98,833; Aug. 4; Gaz. vol. 205; p. 300.
Tower, Constantine A., New York, N. Y. Advertising and informative pamphlets. No. 98,834; Aug. 4; Gaz. vol. 205; p. 300.
Trippe, Parker & Co., New York, N. Y. Cotton and linen piece goods. No. 99,071; Aug. 11; Gaz. vol. 205; p. 659.
True & Blanchard Co., Newport, Vt. Evaporators, pans, and bucket-covers. No. 99,186; Aug. 18; Gaz. vol. 205; p. 1018.
Tryon Hosiery Company, Tryon, N. C. Hosiery. No. 99,131; Aug. 18; Gaz. vol. 205; p. 1016.
Turtle Brothers, New York, N. Y. Cotton and linen piece goods. No. 98,904; Aug. 4; Gaz. vol. 205; p. 302.
Union Special Machine Company, Chicago, Ill. Certain named clothing. No. 98,836; Aug. 4; Gaz. vol. 205; p. 300.
Unitype Company, The, Brooklyn, N. Y. Type-setting machines. No. 99,370; Aug. 25; Gaz. vol. 205; p. 1320.

Valier & Spies Milling Co., St. Louis, Mo. Wheat-flour. No. 98,905; Aug. 4; Gaz. vol. 205; p. 302.
Valier & Spies Milling Co., St. Louis, Mo. Wheat-flour. Nos. 99,257–60; Aug. 25; Gaz. vol. 205; p. 1317.
Van Loon, Matthieu, Waalwijk, Netherlands. Glazed kid. No. 99,261; Aug. 25; Gaz. vol. 205; p. 1317.
Vance, Joseph W., Pierce City, Mo. Wheat-flour. No. 99,072; Aug. 11; Gaz. vol. 205; p. 659.
Verna, Luigi, Philadelphia, Pa. Macaroni. No. 99,371; Aug. 25; Gaz. vol. 205; p. 1320.
Vickery and Hill Publishing Company, Augusta, Me. Monthly periodical. No. 99,262; Aug. 25; Gaz. vol. 205; p. 1317.
Viscoloid Company, The, Leominster, Mass. Hair-pins and hair-ornaments. No. 99,029; Aug. 11; Gaz. vol. 205; p. 658.
Walker, Calvin A., Asheville, N. C. Headache-powders. No. 99,408; Aug. 25; Gaz. vol. 205; p. 1321.
Waltham Watch Company, Waltham and Boston, Mass. Watches, clocks, and chronometers. No. 99,132; Aug. 18; Gaz. vol. 205; p. 1016.
Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named cases, boxes, bags, tills, and covers. No. 98,989; Aug. 11; Gaz. vol. 205; p. 657.
Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft, Schönau, near Chemnitz, Germany. Certain named lamps, lanterns, ignition apparatus, &c. No. 99,263; Aug. 25; Gaz. vol. 205; p. 1317.
Warshaw Brothers, New York, N. Y. Hair tonic and dye, cold and massage creams, &c. No. 98,838; Aug. 4; Gaz. vol. 205; p. 300.
Watrous Mfg. Co., Des Moines, Iowa. Certain named hardware and supplies. No. 99,372; Aug. 25; Gaz. vol. 205; p. 1320.
Wellington, James T., Norwood, Mass. Tonic laxative preparation. Nos. 99,030–1; Aug. 11; Gaz. vol. 205; p. 658.
Wellington, Sears & Company, Boston, Mass. Cotton duck. No. 98,906; Aug. 4; Gaz. vol. 205; p. 302.
Wellington, Sears & Company, Boston, Mass. Drilling. No. 98,907; Aug. 4; Gaz. vol. 205; p. 302.
Welliver, William A., Montrose, Pa. Medicated salve. No. 99,409; Aug. 25; Gaz. vol. 205; p. 1321.
Wellworth Mills Company, Minneapolis, Minn. Hosiery, sweaters, knit underwear, gloves, mittens, and caps. No. 98,908; Aug. 4; Gaz. vol. 205; p. 302.
West Point Manufacturing Co., Langdale, Ga. Cotton-duck cloth. No. 98,909; Aug. 4; Gaz. vol. 205; p. 302.
West Side Wholesale Grocery Company, Chicago, Ill. Canned fruits, vegetables, and fish. No. 98,910; Aug. 4; Gaz. vol. 205; p. 302.
Wheeler & Motter Mercantile Company, St. Joseph, Mo. Bleached and unbleached muslins. Nos. 98,839–43; Aug. 4; Gaz. vol. 205; p. 300.
Wheeler & Motter Mercantile Company, St. Joseph, Mo. Bleached and unbleached muslins. Nos. 99,264–5; Aug. 25; Gaz. vol. 205; p. 1317.
Whitlock, Claude I., St. Paul, Minn. Certain named pharmaceutical preparations. No. 98,844; Aug. 4; Gaz. vol. 205; p. 300.
Whitlock, Claude I., St. Paul, Minn. Soap. No. 98,911; Aug. 4; Gaz. vol. 205; p. 302.
Wilhelmi, Hock & Co., Frankfort-on-the-Main, Germany. Wine. No. 98,845; Aug. 4; Gaz. vol. 205; p. 300.
William R. Burkhard Co., The, St. Paul, Minn. Sporting-powder, ammunition, shells, cartridges, guns, &c. No. 99,278; Aug. 25; Gaz. vol. 205; p. 1317.
Wilmer Atkinson Co., Philadelphia, Pa. Monthly periodicals. No. 98,738; Aug. 4; Gaz. vol. 205; p. 297.
Wilson Brothers, Chicago, Ill. Shirts, undershirts, drawers, and one-piece pajamas. No. 99,032; Aug. 11; Gaz. vol. 205; p. 658.
Wm. C. Robinson & Son Co., Baltimore, Md. Leather-oil. No. 98,816; Aug. 4; Gaz. vol. 205; p. 299.
Wolf, David, New York, N. Y. Dolls and toys. No. 98,846; Aug. 4; Gaz. vol. 205; p. 300.
Wolfram, Theodor, Columbus, Ohio. Coffee substitute. No. 98,912; Aug. 4; Gaz. vol. 205; p. 302.
Wollensak Optical Company, Rochester, N. Y. Photographic lenses and shutters. No. 99,375; Aug. 25; Gaz. vol. 205; p. 1320.
Wolpow, Louis, New York, N. Y. Remedy for habitual constipation, &c., and a cough-balsam. No. 99,410; Aug. 25; Gaz. vol. 205; p. 1321.
Wonder Manufacturing Co., Sumner, Iowa. Poultry remedies. No. 98,990; Aug. 11; Gaz. vol. 205; p. 657.
Woodruff, Edwin, East Durham, N. Y. Throat and lung remedy. No. 99,411; Aug. 25; Gaz. vol. 205; p. 1321.
Workman Packing Company, San Francisco, Cal. Food product consisting of certain named ingredients. No. 99,267; Aug. 25; Gaz. vol. 205; p. 1317.
Wright's Indian Vegetable Pill Company, New York, N. Y. Vermifuge. No. 98,992; Aug. 11; Gaz. vol. 205; p. 657.
Yakima Valley Fruit Growers' Association, Yakima, Wash. Canned, dried, and evaporated fruits and jellies. No. 99,412; Aug. 25; Gaz. vol. 205; p. 1321.
Young, Clarence F., Chicago, Ill. Certain named pharmaceutical preparations for toilet use. No. 99,187; Aug. 18; Gaz. vol. 205; p. 1018.
Young Safety Razor Company, Philadelphia, Pa. Razors. No. 99,376; Aug. 25; Gaz. vol. 205; p. 1320.
Ziebold, George W., Waterloo, Ill. Self-rising wheat-flour. No. 99,377; Aug. 25; Gaz. vol. 205; p. 1320.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Adams & Elting Company, Chicago, Ill. "Spar-Ite." (For Varnish.) No. 17,900; Aug. 18; Gaz. vol. 205; p. 1019.
Alday Mfg. Co., The, Cleveland, Ohio. "Double Master Vibrator." (For Double Master-Vibrators.) No. 17,879; Aug. 4; Gaz. vol. 205; p. 303.
Arbelter, Peter J., New York, N. Y. "Arbelter's Vermindeath." (For Vermin-Destroyer.) No. 17,901; Aug. 18; Gaz. vol. 205; p. 1019.
August Company, The, New York, N. Y. "'American Beauties' Favorite Face Cream." (For Face-Cream.) No. 17,931; Aug. 18; Gaz. vol. 205; p. 1019.
Aunt Jemima Mills Company, St. Joseph, Mo. "Aunt Jemima's Buckwheat Flour." (For Flour.) No. 17,894; Aug. 11; Gaz. vol. 205; p. 660.
Berninger & Henry, Allentown, Pa. "B & H." (For Cigars.) No. 17,902; Aug. 18; Gaz. vol. 205; p. 1019.
Blaisdell, R. W., Milwaukee, Wis. "Diamond Liniment." (For a Liniment.) No. 17,880; Aug. 4; Gaz. vol. 205; p. 303.
Brubaker, E. E., Carroll, Iowa. "Cream Nut." (For Bread.) No. 17,881; Aug. 4; Gaz. vol. 205; p. 303.
Channell Chemical Company, Chicago, Ill. "O-Cedar Mop." (For Mops.) No. 17,903; Aug. 18; Gaz. vol. 205; p. 1019.
Coller, Adolph H., New York, N. Y. "A. H. Coller Lilien Gesichtsalbe." (For Face-Pomade.) No. 17,904; Aug. 18; Gaz. vol. 205; p. 1019.
Dillehay Bros., New Decatur, Ala. "Quit-Tobac." (For Quit-Tobac.) No. 17,882; Aug. 4; Gaz. vol. 205; p. 303.
Eichbaum, Charles, Port Jervis, N. Y. "Chas. Eichbaum's Minisink Club Frozen Ginger Ale." (For Ginger-Ale.) No. 17,883; Aug. 4; Gaz. vol. 205; p. 303.
Eisemann, Phil, Lancaster, Pa. "Eisemann's Klondike Head Rub Grain Alcohol 50 Per Cent. Most Delightful; Cooling and Invigorating. Allays Itching of the Scalp and relieves Headaches." (For Head-Rub.) No. 17,905; Aug. 18; Gaz. vol. 205; p. 1019.
F. P. Lewis Cigar Co., Peoria, Ill. "Lewis-Ideal." (For Cigars.) No. 17,920; Aug. 18; Gaz. vol. 205; p. 1019.
Frank H. Fleer Corporation, Philadelphia, Pa. "Bobs." (For Candy-Coated Chewing-Gum.) No. 17,907; Aug. 18; Gaz. vol. 205; p. 1019.
Frank H. Fleer Corporation, Philadelphia, Pa. "Spring-Root." (For Candy-Coated Chewing-Gum.) No. 17,908; Aug. 18; Gaz. vol. 205; p. 1019.
Goldschmitt, Chas., Chicago, Ill. "18 Karat Floor Varnish." (For Varnish.) No. 17,909; Aug. 18; Gaz. vol. 205; p. 1019.
Gordon, William, Philadelphia, Pa., and Atlantic City, N. J. "Fancy Print Butter." (For Butter.) No. 17,895; Aug. 11; Gaz. vol. 205; p. 660.
Gutsch Brewing Co., Sheboygan, Wis. "Hofmunter." (For Beer.) No. 17,910; Aug. 18; Gaz. vol. 205; p. 1019.
Gutsch Brewing Co., Sheboygan, Wis. "Red Lion." (For Beer.) No. 17,911; Aug. 18; Gaz. vol. 205; p. 1019.
Hair-A-Gain Company, Portland, Oreg. "Hair-A-Gain." (For a Scalp and Hair Food.) No. 17,884; Aug. 4; Gaz. vol. 205; p. 303.
Harris, Woodson Co., Inc., Lynchburg, Va. "Meleo." (For Confections.) No. 17,896; Aug. 11; Gaz. vol. 205; p. 660.
Henschel & Co., A. C., Chicago, Ill. "Prof. Ernst Haeckel." (For Cigars.) No. 17,912; Aug. 18; Gaz. vol. 205; p. 1019.
Henschel & Co., A. C., Chicago, Ill. "Consumer's Bond." (For Cigars.) No. 17,913; Aug. 18; Gaz. vol. 205; p. 1019.
Holton Power Company, Redlands and El Centro, Cal. "Mermaid Brand Pure Artesian Water." (For Artesian Water.) No. 17,885; Aug. 4; Gaz. vol. 205; p. 303.
Importers Coffee Co., Ltd., New Orleans, La. "French Restaurant." (For Coffee and Chicory.) No. 17,886; Aug. 4; Gaz. vol. 205; p. 303.
J. C. Engine Food Co., Chicago, Ill. "Engine Food." (For a Preparation for Mixing with Gasolene to Increase the Explosive Nature Thereof.) No. 17,906; Aug. 18; Gaz. vol. 205; p. 1019.
Jose Llanza Company, Chicago, Ill. "Lanzon." (For Cigars.) No. 17,921; Aug. 18; Gaz. vol. 205; p. 1019.
Kebart, Joseph J., New York, N. Y. "Kebart's." (For Clothes.) No. 17,887; Aug. 4; Gaz. vol. 205; p. 303.
Keeler, George E., Albany, N. Y. "Natura Natures Medicine." (For Mineral Water.) No. 17,888; Aug. 4; Gaz. vol. 205; p. 303.
Keyes, Sam'l J., Easton, Pa. "Magic Balm." (For a Medicinal Preparation.) No. 17,914; Aug. 18; Gaz. vol. 205; p. 1019.
Kopf, Henry B., New Haven, Conn. "Pineisle Beauties." (For Pineapples.) No. 17,889; Aug. 4; Gaz. vol. 205; p. 303.
Kraus & Co., Baltimore, Md. "Sun Flower." (For Cigars.) No. 17,915; Aug. 18; Gaz. vol. 205; p. 1019.
Kraus & Co., Baltimore, Md. "Gloriously Good." (For Cigars.) No. 17,916; Aug. 18; Gaz. vol. 205; p. 1019.
Kraus & Co., Baltimore, Md. "Six Days." (For Cigars.) No. 17,917; Aug. 18; Gaz. vol. 205; p. 1019.
Kraus & Co., Baltimore, Md. "The Peregoy & Moore Co. Perfectos." (For Cigars.) No. 17,918; Aug. 18; Gaz. vol. 205; p. 1019.
Kraus & Co., Baltimore, Md. "Red Label S. S. S." (For Cigars.) No. 17,919; Aug. 18; Gaz. vol. 205; p. 1019.
Montana Flour Mills Company, Lewiston, Mont. "Delicious Sapphire Oats." (For Oats.) No. 17,922; Aug. 18; Gaz. vol. 205; p. 1019.
Montana Flour Mills Company, Lewiston, Mont. "It's The Oats." (For Rolled Oats.) No. 17,923; Aug. 18; Gaz. vol. 205; p. 1019.
North American Mercantile Co., San Francisco, Cal. "Rising Sun." (For Canned Pickles.) No. 17,890; Aug. 4; Gaz. vol. 205; p. 303.
Park & Tilford, New York, N. Y. "Mona Lisa's Smile Chocolates." (For Chocolates.) No. 17,897; Aug. 11; Gaz. vol. 205; p. 660.
Park & Tilford, New York, N. Y. "Tango Chocolates." (For Chocolates.) No. 17,898; Aug. 11; Gaz. vol. 205; p. 660.
Pioneer Vinegar Works, The, San Antonio, Tex. "Delaware Punch." (For a Drink.) No. 17,932; Aug. 18; Gaz. vol. 205; p. 1019.
Pollard, Firm of Thomas E., Pittsburgh, Pa. "Irish Lace." (For Whisky.) No. 17,924; Aug. 18; Gaz. vol. 205; p. 1019.
Reliance Manufacturing Company, Rock Stream, N. Y. "Pure Reliance Baking Powder." (For Baking-Powder.) No. 17,925; Aug. 18; Gaz. vol. 205; p. 1019.
Ruff Brewing Co., Quincy, Ill. "Jaeger Brau." (For Beer.) No. 17,926; Aug. 18; Gaz. vol. 205; p. 1019.
Russell, Wm. H., Jersey City, N. J. "Russell's Ideal Sanitary Unfermented Individual Grape Juice Cupette." (For a Grape-Juice Product.) No. 17,891; Aug. 4; Gaz. vol. 205; p. 303.
Saginaw Creamery Company, Saginaw, Mich. "Saginaw Creamery Co. Dairy Products." (For Butter.) No. 17,927; Aug. 18; Gaz. vol. 205; p. 1019.
Schmidt Bros., Machine Works, Inc., New York, N. Y. "U. S. Tireless Spinner Top." (For Tops.) No. 17,928; Aug. 18; Gaz. vol. 205; p. 1019.
Shannon & Mott Company, Des Moines, Iowa. "It Has The Old Style Sweetness." (For Meal.) No. 17,929; Aug. 18; Gaz. vol. 205; p. 1019.
Siska, Frank, Chicago, Ill. "Britanica." (For Cigars.) No. 17,893; Aug. 4; Gaz. vol. 205; p. 303.
Steiger, George W., New York, N. Y. "Nutrito." (For a Grape Tonic.) No. 17,892; Aug. 4; Gaz. vol. 205; p. 303.
Taylor, Milton M., Tampa, Fla. "Taylor's Best Blood Medicine." (For Medicine.) No. 17,930; Aug. 18; Gaz. vol. 205; p. 1019.
United Paint Co., The, Bridgeport, Conn. "Double Shield." (For Paints.) No. 17,933; Aug. 18; Gaz. vol. 205; p. 1019.
Weber, Angelika, Pittsburgh, Pa. "Weber's Ointment." (For Ointment.) No. 17,899; Aug. 11; Gaz. vol. 205; p. 660.

PRINTS.

Albert Pick & Company, Chicago, Ill. "The Bulge Protects the Edge." (For Drinking-Glasses.) No. 3,707; Aug. 18; Gaz. vol. 205; p. 1020.

Arbuckle Brothers, New York, N. Y., and Chicago, Ill. "Arbuckle Brand Teas." (For Teas.) No. 3,693; Aug. 18; Gaz. vol. 205; p. 1020.

C. J. Netting Co., The, Detroit, Mich. "Our Lights Shine Everywhere." (For Lighting-Fixtures.) No. 3,706; Aug. 18; Gaz. vol. 205; p. 1020.

Centralene Oil Company, Galesburg, Ill. "Centralene Oils, 'Power In Every Drop.'" (For Oils.) No. 3,694; Aug. 18; Gaz. vol. 205; p. 1020.

Cluett, Peabody & Co., Inc., Troy, N. Y. "'Standish' the new Arrow Collar." (For Collars.) No. 3,695; Aug. 18; Gaz. vol. 205; p. 1020.

Cluett, Peabody & Co., Inc., Troy, N. Y. "Arrow Silk Shirts." (For Arrow Silk Shirts.) No. 3,696; Aug. 18; Gaz. vol. 205; p. 1020.

Cream of Wheat Co., Minneapolis, Minn. "No, Sah! Ah don't want no 'stubstute.' Ah want Cream o' Wheat." (For Wheat Breakfast Food.) No. 3,697; Aug. 18; Gaz. vol. 205; p. 1020.

Dickey, Walter K., Kansas City, Mo. "Tight as a Jug." (For Silos.) No. 3,692; Aug. 11; Gaz. vol. 205; p. 660.

Dickinson, E. E., Essex, Conn. "Witchal." (For Witch-Hazel.) No. 3,698; Aug. 18; Gaz. vol. 205; p. 1020.

Dixie Cotton Felt Mattress Company, Chicago, Ill. "Inner Strap." (For Mattresses.) No. 3,699; Aug. 18; Gaz. vol. 205; p. 1020.

Dixie Cotton Felt Mattress Company, Chicago, Ill. "Jumbo A Big Mattress for a Little Money." (For Mattresses.) No. 3,700; Aug. 18; Gaz. vol. 205; p. 1020.

Ettlinger, Louis, New York, N. Y. "Pippins." (For Cigars.) No. 3,701; Aug. 18; Gaz. vol. 205; p. 1020.

Frank H. Fleer Corporation, Philadelphia, Pa. "Bobs." (For Candy-Coated Chewing-Gum.) No. 3,702; Aug. 18; Gaz. vol. 205; p. 1020.

Gotham Garter and Novelty Company, New York, N. Y. "Gotham Tango Girdle." (For Girdles.) No. 3,703; Aug. 18; Gaz. vol. 205; p. 1020.

Knappmann, William, Brooklyn, N. Y. "Luco." (For a Silver-Polish.) No. 3,691; Aug. 4; Gaz. vol. 205; p. 303.

Mason City Brick and Tile Company, Mason City, Iowa. "Load-Bearing Tile." (For Load-Bearing Tile.) No. 3,704; Aug. 18; Gaz. vol. 205; p. 1020.

Miller, Solomon S., Reading, Pa. "She's solved her troubles for heels and toes." (For Ladies' Hosiery.) No. 3,705; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Oh, Man! Get This Right and Sit In." (For Smoking-Tobacco.) No. 3,708; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "P. A. just tickles us all!" (For Smoking-Tobacco.) No. 3,709; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Watch Your Step!" (For Smoking-Tobacco.) No. 3,710; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "When We Put It Up to George." (For Smoking-Tobacco.) No. 3,711; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "P. A. is a double header!" (For Smoking-Tobacco.) No. 3,712; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "P. A. sure does set the clip." (For Smoking-Tobacco.) No. 3,713; Aug. 18; Gaz. vol. 205; p. 1020.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Boost some joy smoke into your system!" (For Smoking-Tobacco.) No. 3,714; Aug. 18; Gaz. vol. 205; p. 1020.

DISCLAIMER.

Pflueger, Joseph E., Akron, Ohio; disclaimer filed by assignee, The Enterprise Manufacturing Company. Artificial bait. No. 954,691; disclaimer filed Aug. 6, 1914; Gaz. vol. 205; p. 669.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF AUGUST, 1914.

[Abbreviations: "Gaz."=Official Gazette.]

Accounting system. W. J. Crumpton. No. 1,106,284; Aug. 4; Gaz. vol. 205; p. 240.

Acetaldehyde, Preparing. E. Baum and M. Mugdan. No. 1,107,019; Aug. 11; Gaz. vol. 205; p. 542.

Acetylene generating and storing apparatus. G. Miller. No. 1,106,885; Aug. 11; Gaz. vol. 205; p. 498.

Acetylene-generator. W. J. Caskey. No. 1,107,756; Aug. 18; Gaz. vol. 205; p. 853.

Acid chlorids of the oxyacids, Production of. L. Karczag and E. Kopetschni. No. 1,106,455; Aug. 11; Gaz. vol. 205; p. 345.

Acid manufacture, Sulfuric-. U. Wedge. No. 1,106,999; Aug. 11; Gaz. vol. 205; p. 536.

Acid, Production of boric. A. Burger. No. 1,108,129; Aug. 25; Gaz. vol. 205; p. 1030.

Adding-machine. L. Babini. No. 1,108,115; Aug. 25; Gaz. vol. 205; p. 1025.

Addressing-machine. N. Meyers. No. 1,105,814; Aug. 4; Gaz. vol. 205; p. 80.

Adjustable frame. L. Bland. No. 1,108,123; Aug. 25; Gaz. vol. 205; p. 1028.

Adjustable hanger. O. Priem. No. 1,107,110; Aug. 11; Gaz. vol. 205; p. 573.

Adjustable indicator. J. H. and J. H. Rand, Jr. No. 1,106,843; Aug. 11; Gaz. vol. 205; p. 484.

Adjustable joint. C. Aalborg. No. 1,107,241; Aug. 11; Gaz. vol. 205; p. 622.

Adjustable ventilator. W. Craine. No. 1,106,029; Aug. 4; Gaz. vol. 205; p. 156.

Adjustable wrench. M. R. Hald. No. 1,106,557; Aug. 11; Gaz. vol. 205; p. 384.

Adjustment device. D. O'Donnell. No. 1,107,699; Aug. 18; Gaz. vol. 205; p. 833.

Advertising display device. H. Grad, S. H. Kleeberg, and W. Harris. No. 1,107,293; Aug. 18; Gaz. vol. 205; p. 687.

Advertising novelty. I. Heidenreich. No. 1,105,655; Aug. 4; Gaz. vol. 205; p. 24.

Advertising waste-paper box. E. B. Cooke and C. O. Lewis. No. 1,108,066; Aug. 18; Gaz. vol. 205; p. 960.

Aerating and irrigating apparatus, Soil. L. W. Carr. No. 1,108,334; Aug. 25; Gaz. vol. 205; p. 1101.

Aerial vessel. L. Bognár. No. 1,108,830; Aug. 25; Gaz. vol. 205; p. 1272.

Aeroplane. G. Wilds. No. 1,106,020; Aug. 4; Gaz. vol. 205; p. 151.

Aeroplane. F. T. Jones. No. 1,106,099; Aug. 4; Gaz. vol. 205; p. 181.

Aeroplane. W. E. Verclaire. No. 1,106,428; Aug. 11; Gaz. vol. 205; p. 334.

Aeroplane. B. T. Hamilton. No. 1,106,804; Aug. 11; Gaz. vol. 205; p. 469.

Aeroplane. J. Q. Chase. No. 1,107,494; Aug. 18; Gaz. vol. 205; p. 760.

Aeroplane. J. M. Davis. No. 1,107,913; Aug. 18; Gaz. vol. 205; p. 905.

Aeroplane and dirigible balloon, Combination. A. E. Mueller. No. 1,106,350; Aug. 4; Gaz. vol. 205; p. 263.

Aeroplane-fuselage. A. J. A. Deperdussin. No. 1,106,193; Aug. 4; Gaz. vol. 205; p. 212.

Aeroplane-gun. C. Davis. No. 1,108,714; Aug. 25; Gaz. vol. 205; p. 1232.

Aeroplanes, airships, vessels, and the like, Screw-propeller for. O. Brunner. No. 1,105,753; Aug. 4; Gaz. vol. 205; p. 59.

Aeroplanes, Apparatus for firing projectiles from. C. Davis. No. 1,108,715; Aug. 25; Gaz. vol. 205; p. 1233.

Aeroplanes, Front wheel for. H. A. Orme. No. 1,106,519; Aug. 11; Gaz. vol. 205; p. 370.

Agricultural implement. J. W. Bruce. No. 1,106,541; Aug. 11; Gaz. vol. 205; p. 377.

Air and other elastic fluids, Apparatus for compressing. E. W. Jones. No. 1,107,957; Aug. 18; Gaz. vol. 205; p. 920.

Air compressor or pump. V. J. Guthrie. No. 1,108,434; Aug. 25; Gaz. vol. 205; p. 1135.

Air-craft, Apparatus for firing projectiles from. C. Davis. No. 1,108,716; Aug. 25; Gaz. vol. 205; p. 1233.

Air-craft, Fixed ammunition for use on. C. Davis. No. 1,108,717; Aug. 25; Gaz. vol. 205; p. 1234.

Air in a sick-room, Therapeutic treatment of. F. Batter. No. 1,107,745; Aug. 18; Gaz. vol. 205; p. 850.

Air of a sick-room, Apparatus for therapeutic treatment of. F. Batter. No. 1,107,744; Aug. 18; Gaz. vol. 205; p. 849.

Air-tight receptacle. P. S. Bauer. No. 1,107,746; Aug. 18; Gaz. vol. 205; p. 850.

Airship. W. V. Kamp. No. 1,108,113; Aug. 18; Gaz. vol. 205; p. 977.

Airship. D. Lopez and M. R. Lerma. No. 1,108,770; Aug. 25; Gaz. vol. 205; p. 1251.

Airship. H. Leinweber. No. 1,108,865; Aug. 25; Gaz. vol. 205; p. 1286.

Airship, Dirigible. S. Jelalian. No. 1,108,444; Aug. 25; Gaz. vol. 205; p. 1138.

Airships, Tractor, propeller, or helicopter for. C. D. Browne. No. 1,105,750; Aug. 4; Gaz. vol. 205; p. 58.

Alarm: *See* Burglar-alarm; Burglar and fire alarm; Fire-alarm; Fire and burglar alarm; Hot-bearing alarm.

Alarm and electric-light switch, Combined. J. G. Harrison. No. 1,108,750; Aug. 25; Gaz. vol. 205; p. 1244.

Alcohol, Refining wood-. L. F. Hawley. No. 1,106,707; Aug. 11; Gaz. vol. 205; p. 435.

Alfalfa product. M. C. Rich. No. 1,108,238; Aug. 25; Gaz. vol. 205; p. 1068.

Alkali metals, Electrolytic manufacture of. E. A. Ashcroft. No. 1,106,436; Aug. 11; Gaz. vol. 205; p. 337.

Alloy. P. R. Parsons and O. Silberrad. No. 1,106,055; Aug. 4; Gaz. vol. 205; p. 164.

Alloy of vanadium and precious metals. F. von Oefele. No. 1,107,180; Aug. 11; Gaz. vol. 205; p. 601.

Alloy-steel scrap, Treating. P. P. Reese and E. L. Diehl. No. 1,108,235; Aug. 25; Gaz. vol. 205; p. 1067.

Alloy, Vanadium-gold. F. von Oefele. No. 1,107,181; Aug. 11; Gaz. vol. 205; p. 601.

Alloys, Manufacturing iron. G. M. Colvocoresses. No. 1,106,785; Aug. 11; Gaz. vol. 205; p. 463.

Alloys, Manufacturing iron. G. M. Colvocoresses. No. 1,106,786; Aug. 11; Gaz. vol. 205; p. 463.

Alumina, Bonding fused crystalline. T. B. Allen. No. 1,107,011; Aug. 11; Gaz. vol. 205; p. 540.

Ammonium sulfate, Producing. C. Bosch. No. 1,106,919; Aug. 11; Gaz. vol. 205; p. 510.

Amusement device. F. J. Gibson. No. 1,107,287; Aug. 18; Gaz. vol. 205; p. 685.

Amusement device. C. H. Cooley. No. 1,108,708; Aug. 25; Gaz. vol. 205; p. 1230.

Amyl acetate and its homologues, Producing. F. Kaufler. No. 1,106,047; Aug. 4; Gaz. vol. 205; p. 162.

Animal-trap. L. Hildreth. No. 1,106,382; Aug. 11; Gaz. vol. 205; p. 319.

Animal-trap. C. Phillips. No. 1,107,105; Aug. 11; Gaz. vol. 205; p. 571.

Animal-trap. C. M. C. Kirk. No. 1,107,218; Aug. 11; Gaz. vol. 205; p. 614.

Animal-trap. M. P. Fugate. No. 1,107,775; Aug. 18; Gaz. vol. 205; p. 801.

Annunciator-drop. W. W. Henry. No. 1,107,610; Aug. 18; Gaz. vol. 205; p. 801.

Antifreezing appliance. F. B. Stober. No. 1,108,806; Aug. 25; Gaz. vol. 205; p. 1263.

Antiskid device. E. Jenöl and S. Kruchló. No. 1,107,796; Aug. 18; Gaz. vol. 205; p. 867.

Antiskid device for tires. F. Schnackel. No. 1,106,896; Aug. 11; Gaz. vol. 205; p. 502.

Antiskidding device for automobiles and the like. P. Maag. No. 1,107,430; Aug. 18; Gaz. vol. 205; p. 738.

Arbor-press. G. T. Eames. No. 1,106,500; Aug. 11; Gaz. vol. 205; p. 393.

Arch-support. J. D. Price. No. 1,106,000; Aug. 4; Gaz. vol. 205; p. 145.

Argon and rare atmospheric gases, Obtaining. J. E. Rucher. No. 1,106,921; Aug. 11; Gaz. vol. 205; p. 511.

Armature, Magneto-. D. B. Hughes. No. 1,108,442; Aug. 25; Gaz. vol. 205; p. 1137.

Armor, Machine for making flexible tubular. E. R. Ramsey and J. H. Meyer. No. 1,105,836; Aug. 4; Gaz. vol. 205; p. 87.

Arsenostibino compounds and making same. P. Ehrlich and P. Karrer. No. 1,108,154; Aug. 25; Gaz. vol. 205; p. 1039.

Ash-can. C. Kaiser. No. 1,106,877; Aug. 11; Gaz. vol. 205; p. 496.
Assembling-elevator. R. Toeplitz. No. 1,108,814; Aug. 25; Gaz. vol. 205; p. 1266.
Auger, Earth-. W. L. Iwan. No. 1,106,097; Aug. 4; Gaz. vol. 205; p. 180.
Auger, Earth-. C. A. Suhr. No. 1,106,425; Aug. 11; Gaz. vol. 205; p. 333.
Auger, Ground-. H. Fuchs. No. 1,107,927; Aug. 18; Gaz. vol. 205; p. 910.
Auto-fender. O. G. Clay. No. 1,106,783; Aug. 11; Gaz. vol. 205; p. 462.
Autographic register. T. F. Schirmer. No. 1,106,976; Aug. 11; Gaz. vol. 205; p. 530.
Automatic fender. L. Box. No. 1,106,772; Aug. 11; Gaz. vol. 205; p. 458.
Automatic fender. B. Péducasse. No. 1,107,995; Aug. 18; Gaz. vol. 205; p. 935.
Automatic sectionalizing-switch. J. E. Molony. No. 1,108,605; Aug. 25; Gaz. vol. 205; p. 1196.
Automatically-operated switch. C. W. Eisenmann. No. 1,106,372; Aug. 11; Gaz. vol. 205; p. 316.
Automobile. W. E. Gilmore. No. 1,107,057; Aug. 11; Gaz. vol. 205; p. 556.
Automobile and the like heater. C. R. Nelson. No. 1,108,466; Aug. 25; Gaz. vol. 205; p. 1147.
Automobile-brake. P. Boch. No. 1,108,685; Aug. 25; Gaz. vol. 205; p. 1222.
Automobile-bumper. L. P. Halladay. No. 1,106,558; Aug. 11; Gaz. vol. 205; p. 384.
Automobile-bumper. J. H. Sager. No. 1,108,625; Aug. 25; Gaz. vol. 205; p. 1203.
Automobile-bumper. J. H. Sager. No. 1,108,626; Aug. 25; Gaz. vol. 205; p. 1203.
Automobile control-pedal. A. L. McMurtry. No. 1,106,466; Aug. 11; Gaz. vol. 205; p. 350.
Automobile crank-handle holder. H. G. and A. W. Possner. No. 1,108,230; Aug. 25; Gaz. vol. 205; p. 1065.
Automobile-fender. W. A. Linquist. No. 1,105,671; Aug. 4; Gaz. vol. 205; p. 29.
Automobile-fender. G. A. Van Vorst. No. 1,106,121; Aug. 4; Gaz. vol. 205; p. 188.
Automobile-horn. C. J. Brinkmann. No. 1,105,615; Aug. 4; Gaz. vol. 205; p. 9.
Automobile-jack. C. W. Parker. No. 1,107,833; Aug. 18; Gaz. vol. 205; p. 879.
Automobile mud-guard. W. H. Mullins. No. 1,107,826; Aug. 18; Gaz. vol. 205; p. 877.
Automobile rear signal, Automatic. J. W. Stachnick. No. 1,106,982; Aug. 11; Gaz. vol. 205; p. 531.
Automobile safety cranking device. A. J. Zlotorzynski. No. 1,107,007; Aug. 11; Gaz. vol. 205; p. 538.
Automobile signal device. R. D'Antonio. No. 1,106,179; Aug. 4; Gaz. vol. 205; p. 207.
Automobile signal device. A. Winton and H. B. Anderson. No. 1,108,052; Aug. 18; Gaz. vol. 205; p. 955.
Automobile signaling device. F. J. Erney. No. 1,105,637; Aug. 4; Gaz. vol. 205; p. 18.
Automobile-spring. T. D. Allen. No. 1,108,310; Aug. 25; Gaz. vol. 205; p. 1094.
Automobile-starter. T. Hulett. No. 1,106,449; Aug. 11; Gaz. vol. 205; p. 343.
Automobile-top. R. A. Coe. No. 1,106,784; Aug. 11; Gaz. vol. 205; p. 462.
Automobile towing attachment. W. H. Stockwell. No. 1,106,746; Aug. 11; Gaz. vol. 205; p. 449.
Automobile traction attachment. C. L. Paris and F. C. Ferrell. No. 1,108,221; Aug. 25; Gaz. vol. 205; p. 1062.
Automobile-vehicle running-gear. C. F. Gros. No. 1,106,705; Aug. 11; Gaz. vol. 205; p. 435.
Automobile wheel hub and spindle. T. J. Lindsay. No. 1,107,330; Aug. 18; Gaz. vol. 205; p. 701.
Automobile wrecking apparatus. C. H. Brewster. No. 1,108,690; Aug. 25; Gaz. vol. 205; p. 1224.
Automobiles, Adjustable light-shield for. J. F. Becker. No. 1,106,485; Aug. 11; Gaz. vol. 205; p. 357.
Automobiles, Locking-chain for. W. J. Reynolds. No. 1,105,925; Aug. 4; Gaz. vol. 205; p. 119.
Automobiles, Stethescope for. A. De Clairmont. No. 1,107,212; Aug. 11; Gaz. vol. 205; p. 611.
Automobiles, Weather-strip for wind-shields of. A. L. McCormick. No. 1,107,819; Aug. 18; Gaz. vol. 205; p. 874.
Autopiano and analogous musical instrument. C. E. Lyon. No. 1,105,673; Aug. 4; Gaz. vol. 205; p. 30.
Autosleigh mechanism, Propeller for. J. S. Thomson. No. 1,105,940; Aug. 4; Gaz. vol. 205; p. 124.
Auxiliary spring. P. F. Hellerstedt. No. 1,107,067; Aug. 11; Gaz. vol. 205; p. 559.
Axle. H. W. Alden. No. 1,108,114; Aug. 25; Gaz. vol. 205; p. 1025.
Axle-box. I. Szot-Czeten. No. 1,107,867; Aug. 18; Gaz. vol. 205; p. 891.
Axle coupling, Front-. J. W. Titus. No. 1,106,751; Aug. 11; Gaz. vol. 205; p. 451.
Axle, Motor-car. C. F. Robinson. No. 1,107,448; Aug. 18; Gaz. vol. 205; p. 744.
Axle truss, Rear-. H. H. Sunvold. No. 1,108,812; Aug. 25; Gaz. vol. 205; p. 1265.
Axles, Wheel-connector for tubular. W. D. Stockly. No. 1,108,809; Aug. 25; Gaz. vol. 205; p. 1264.
Back-band hook. N. H. Williamson. No. 1,105,945; Aug. 4; Gaz. vol. 205; p. 126.
Bag: *See* Candy-bag; Valve-bag.
Bag-frame safety-catch. B. vom Eigen. No. 1,108,430; Aug. 25; Gaz. vol. 205; p. 1134.
Bag-holder. C. H. Woodward and J. W. Doane. No. 1,106,483; Aug. 11; Gaz. vol. 205; p. 356.
Bag holder, Feed-. R. H. Graham. No. 1,105,972; Aug. 4; Gaz. vol. 205; p. 136.
Bag-holder, Portable. J. Cupples. No. 1,107,590; Aug. 18; Gaz. vol. 205; p. 794.
Baking apparatus. J. Ciampaglia. No. 1,108,701; Aug. 25; Gaz. vol. 205; p. 1227.
Baking utensil. G. C. Gumm. No. 1,106,042; Aug. 4; Gaz. vol. 205; p. 160.
Balance-spring having elasticity increasing with a rise in temperature. C. E. Guillaume. No. 1,106,206; Aug. 4; Gaz. vol. 205; p. 216.
Balance-spring having elasticity increasing with rise in temperature. C. S. Guillaume. No. 1,106,207; Aug. 4; Gaz. vol. 205; p. 217.
Bales, Apparatus for enabling samples to be taken from. A. E. Cummins. No. 1,105,759; Aug. 4; Gaz. vol. 205; p. 61.
Baling-press. W. W. Stopple. No. 1,106,251; Aug. 4; Gaz. vol. 205; p. 230.
Ball: *See* Playing-ball; Pool-ball.
Balls to tape or the like, Mechanism for securing. J. Christy. No. 1,107,758; Aug. 18; Gaz. vol. 205; p. 854.
Band-brake. A. L. Riker. No. 1,108,851; Aug. 25; Gaz. vol. 205; p. 1280.
Band, Infant's. J. B. Thorpe. No. 1,106,687; Aug. 11; Gaz. vol. 205; p. 429.
Band-knife. J. M. Whitcomb. No. 1,107,004; Aug. 11; Gaz. vol. 205; p. 538.
Bar: *See* Fire-bar; Grate-bar; Splice-bar.
Bars by rolling the same, Machine for impressing metal. A. G. Strathern. No. 1,108,272; Aug. 25; Gaz. vol. 205; p. 1080.
Bars, Producing composite. F. E. Canda. No. 1,107,755; Aug. 18; Gaz. vol. 205; p. 853.
Barge, Sand-. C. C. West. No. 1,106,124; Aug. 4; Gaz. vol. 205; p. 190.
Barium hydrate, Making. S. B. Newberry and H. N. Barrett. No. 1,106,578; Aug. 11; Gaz. vol. 205; p. 391.
Barometer. F. E. Collinson. No. 1,107,496; Aug. 18; Gaz. vol. 205; p. 761.
Barrel, Shipping-. F. C. Schmitz. No. 1,107,364; Aug. 18; Gaz. vol. 205; p. 713.
Barrow, Garden-truck-burner. T. Travis. No. 1,108,642; Aug. 25; Gaz. vol. 205; p. 1208.
Base-board construction for buildings. J. F. Johnson. No. 1,108,446; Aug. 25; Gaz. vol. 205; p. 1139.
Batteries, Renewal element for semi-dry-cell. W. Broad. No. 1,106,540; Aug. 11; Gaz. vol. 205; p. 377.
Batteries, Vent and overflow for. C. T. Mason. No. 1,107,084; Aug. 11; Gaz. vol. 205; p. 565.
Battery: *See* Electrical battery.
Battery. W. E. Winship. No. 1,106,125; Aug. 4; Gaz. vol. 205; p. 190.
Battery. S. Lake. No. 1,106,719; Aug. 11; Gaz. vol. 205; p. 440.
Battery plate, Storage-. M. Krokavetz. No. 1,107,618; Aug. 18; Gaz. vol. 205; p. 804.
Beacon for comparatively shallow water. (instead of buoys.) J. J. Irving. No. 1,107,197; Aug. 11; Gaz. vol. 205; p. 607.
Beading-machines, Safety feed mechanism for. H. F. Richter. No. 1,105,840; Aug. 4; Gaz. vol. 205; p. 89.
Bean-huller. C. A. Hooks. No. 1,107,165; Aug. 11; Gaz. vol. 205; p. 596.
Bean-sheller. J. F. and J. F. Bullard. No. 1,108,691; Aug. 25; Gaz. vol. 205; p. 1224.
Bean-sorting machine. P. L. Day. No. 1,105,890; Aug. 4; Gaz. vol. 205; p. 105.
Bearing. A. Bonom. No. 1,108,064; Aug. 18; Gaz. vol. 205; p. 959.
Bearing, Antifriction thrust-. J. N. Vandegrift. No. 1,106,065; Aug. 4; Gaz. vol. 205; p. 167.
Bearing, Car-wheel. W. F. Daniel. No. 1,108,068; Aug 18; Gaz. vol. 205; p. 961.
Bearing for furrow-openers, Antifriction-. S. H. Garst. No. 1,107,777; Aug. 18; Gaz. vol. 205; p. 861.
Bearing lubricator, Submerged-. F. Lobnitz. No. 1,107,806; Aug. 18; Gaz. vol. 205; p. 870.
Bearing, Piston-. J. E. Erskine. No. 1,106,702; Aug. 11; Gaz. vol. 205; p. 433.
Bearing, Roller-. H. E. Stoner. No. 1,105,935; Aug. 4; Gaz. vol. 205; p. 122.
Bearing, Roller-. B. E. Dohner and A. J. Huff. No. 1,108,722; Aug. 25; Gaz. vol. 205; p. 1236.
Bearing, Shaft-. F. L. Webster. No. 1,108,042; Aug. 18; Gaz. vol. 205; p. 952.
Bearing, Side. A. K. Wolfe. No. 1,108,054; Aug. 18; Gaz. vol. 205; p. 956.
Bearing, Spring-. T. H. Miller. No. 1,107,691; Aug. 18; Gaz. vol. 205; p. 830.
Bearing, Yielding. J. and A. Persoons. No. 1,107,998; Aug. 18; Gaz. vol. 205; p. 936.
Beating-engine and extracting apparatus for making cellulose. B. Loomis. No. 1,108,593; Aug. 25; Gaz. vol. 205; p. 1192.
Bed. J. G. Laden. No. 1,108,515; Aug. 25; Gaz. vol. 205; p. 1165.
Bed, Adjustable. F. W. Kramer. No. 1,108,502; Aug. 25; Gaz. vol. 205; p. 1161.

Bed and folding mechanism, Folding. H. D. Carter. No. 1,108,335; Aug. 25; Gaz. vol. 205; p. 1102.
Bed attachment. J. H. Boye. No. 1,107,749; Aug. 18; Gaz. vol. 205; p. 851.
Bed-bottom. S. C. Chatham. No. 1,107,587; Aug. 18; Gaz. vol. 205; p. 793.
Bed, Couch-. O. Gasau and O. Marklein. No. 1,107,665; Aug. 18; Gaz. vol. 205; p. 822.
Bed, Disappearing. F. W. Olsen. No. 1,108,215; Aug. 25; Gaz. vol. 205; p. 1060.
Bed, Invalid-. J. R. Phillips. No. 1,108,617; Aug. 25; Gaz. vol. 205; p. 1200.
Bed, Open-air-sleeping. E. C. Andrews. No. 1,108,060; Aug. 18; Gaz. vol. 205; p. 958.
Bed, Sofa-. H. D. Bartlett. No. 1,108,858; Aug. 25; Gaz. vol. 205; p. 1283.
Bedpost-fastening. E. Poeppel. No. 1,106,677; Aug. 11; Gaz. vol. 205; p. 426.
Bedstead. A. Profeto and H. E. Gross. No. 1,108,620; Aug. 25; Gaz. vol. 205; p. 1201.
Bee-culture apparatus. H. H. Thale. No. 1,108,277; Aug. 25; Gaz. vol. 205; p. 1082.
Beer and hop separator. M. R. Irrgang. No. 1,106,450; Aug. 11; Gaz. vol. 205; p. 343.
Beer-dispenser. W. J. Costello. No. 1,105,881; Aug. 4; Gaz. vol. 205; p. 103.
Beet puller and topper. Combined. A. B. Cross. No. 1,108,341; Aug. 25; Gaz. vol. 205; p. 1104.
Beet-topper. W. R. Gardner. No. 1,107,603; Aug. 18; Gaz. vol. 205; p. 799.
Bell. H. Maytrott. No. 1,108,103; Aug. 18; Gaz. vol. 205; p. 974.
Belt-fastener. C. S. Eaton. No. 1,106,790; Aug. 11; Gaz. vol. 205; p. 465.
Belt, Massage-. D. B. Catlin. No. 1,106,493; Aug. 11; Gaz. vol. 205; p. 360.
Belt, Metallic power-. E. A. Bohlman. No. 1,106,355; Aug. 4; Gaz. vol. 205; p. 265.
Belt, Metallic power-. E. A. Bohlman. No. 1,106,356; Aug. 4; Gaz. vol. 205; p. 265.
Belt-tightener. J. H. Sewall. No. 1,108,085; Aug. 18; Gaz. vol. 205; p. 967.
Belt, Traction-. C. L. Tolles. No. 1,106,596; Aug. 11; Gaz. vol. 205; p. 398.
Belt, Trap-. A. J. Kull. No. 1,108,764; Aug. 25; Gaz. vol. 205; p. 1249.
Bench: *See* Machine-bench.
Bib. C. Dudley. No. 1,108,557; Aug. 25; Gaz. vol. 205; p. 1180.
Bicycle-brake. F. D. Reid. No. 1,107,113; Aug. 11; Gaz. vol. 205; p. 574.
Bicycle-support. R. B. Kasdorff. No. 1,107,427; Aug. 18; Gaz. vol. 205; p. 737.
Billiard-table, Extension. C. F. Wandelken. No. 1,106,017; Aug. 4; Gaz. vol. 205; p. 150.
Bin. W. E. Sanders. No. 1,107,846; Aug. 18; Gaz. vol. 205; p. 885.
Binder. W. A. Cooke, Jr. No. 1,107,658; Aug. 18; Gaz. vol. 205; p. 819.
Binder-head. J. L. Ware. No. 1,106,604; Aug. 11; Gaz. vol. 205; p. 401.
Binder, Loose-leaf. G. A. Streett. No. 1,106,479; Aug. 11; Gaz. vol. 205; p. 355.
Binder, Loose-leaf. J. L. McMillan. No. 1,106,825; Aug. 11; Gaz. vol. 205; p. 477.
Binder, Loose-leaf. R. J. Hoppinger. No. 1,108,438; Aug. 25; Gaz. vol. 205; p. 1136.
Biscuit stacking, weighing, and feeding machine. G. S. Baker. No. 1,108,117; Aug. 25; Gaz. vol. 205; p. 1026.
Biscuit-wrapping machine. G. S. Baker. No. 1,107,474; Aug. 18; Gaz. vol. 205; p. 754.
Bit: *See* Bridle-bit; Wrench-bit.
Bit-brace. S. N. Hall. No. 1,107,938; Aug. 18; Gaz. vol. 205; p. 914.
Blank shearing and forming apparatus. E. E. Slick. No. 1,106,741; Aug. 11; Gaz. vol. 205; p. 447.
Bleaching and scouring fibrous materials, Apparatus for. J. Macadam. No. 1,107,160; Aug. 11; Gaz. vol. 205; p. 594.
Bleaching lignocellulose and pectocellulose. A. R. de Vains. No. 1,106,994; Aug. 11; Gaz. vol. 205; p. 535.
Bleed-hole-regulating device. J. Schwertner. No. 1,107,851; Aug. 18; Gaz. vol. 205; p. 886.
Block: *See* Building-block; Crown-block; Printer's-block; Scotch-block; Segmental block.
Block system for tramways. D. D. Samaia. No. 1,108,084; Aug. 18; Gaz. vol. 205; p. 966.
Blowpipe. A. W. A. Bartlett and R. M. Kerr. No. 1,106,914; Aug. 11; Gaz. vol. 205; p. 508.
Blowpipe. H. D. Palmer and B. C. Sanderson. No. 1,106,965; Aug. 11; Gaz. vol. 205; p. 527.
Blowpipe. P. Dumesnil. No. 1,107,272; Aug. 18; Gaz. vol. 205; p. 681.
Board: *See* Embalming-board; Game-board; Ironing-board; Lap-board; Piano fall-board; Washboard.
Boat and oar therefor. J. Schulz. No. 1,107,117; Aug. 11; Gaz. vol. 205; p. 575.
Boat attachment, Life-. C. H. Langill. No. 1,108,846; Aug. 25; Gaz. vol. 205; p. 1278.
Boat, Collapsible life-. W. Hopper. No. 1,106,307; Aug. 4; Gaz. vol. 205; p. 249.
Boat, Life-. J. Kassa. No. 1,105,909; Aug. 4; Gaz. vol. 205; p. 112.
Boat, Life-. F. Kulhawy. No. 1,106,718; Aug. 11; Gaz. vol. 205; p. 439.
Boat, Power-. C. A. Criqui. No. 1,108,340; Aug. 25; Gaz. vol. 205; p. 1104.
Boat, Submarine or submersible. M. F. Hay and F. Guhrauer. No. 1,107,942; Aug. 18; Gaz. vol. 205; p. 915.
Boat, Submersible. G. M. Lagergren. No. 1,108,192; Aug. 25; Gaz. vol. 205; p. 1051.
Boats, Safety-cradle for dropping life-. T. A. Powers, J. R. Harvey, and J. W. Crowley. No. 1,107,109; Aug. 11; Gaz. vol. 205; p. 572.
Bobbin cleaning and handling mechanism. B. A. Peterson. No. 1,106,239; Aug. 4; Gaz. vol. 205; p. 226.
Bobbin-handling apparatus. B. A. Peterson. No. 1,108,097; Aug. 18; Gaz. vol. 205; p. 971.
Boiler: *See* Sectional boiler; Steam-boiler; Water-tube boiler.
Boiler. W. H. Wood. No. 1,106,908; Aug. 11; Gaz. vol. 205; p. 507.
Boiler construction, Steam-. J. A. Wolmer. No. 1,106,066; Aug. 4; Gaz. vol. 205; p. 108.
Boiler-feed system. J. Wilkinson. No. 1,105,736; Aug. 4; Gaz. vol. 205; p. 53.
Boiler feed-water, Means for heating. B. R. Skinner. No. 1,108,633; Aug. 25; Gaz. vol. 205; p. 1205.
Boiler-tube roller-expander. R. J. Adams. No. 1,108,655; Aug. 25; Gaz. vol. 205; p. 1213.
Boiler water-circulator. J. Tait. No. 1,106,749; Aug. 11; Gaz. vol. 205; p. 450.
Bolster-springs, Means for attaching. T. R. Baker. No. 1,108,316; Aug. 25; Gaz. vol. 205; p. 1096.
Bolt: *See* Expansion-bolt.
Bolt-anchor. D. W. Bennett. No. 1,108,859; Aug. 25; Gaz. vol. 205; p. 1283.
Bolt-pointing machines, Stock holding and delivering mechanism for. D. Julian. No. 1,108,448; Aug. 25; Gaz. vol. 205; p. 1140.
Bolt-threading machine. A. B. Landis. No. 1,107,621; Aug. 18; Gaz. vol. 205; p. 805.
Book holder, Check-. J. F. Shoemaker. No. 1,108,631; Aug. 25; Gaz. vol. 205; p. 1205.
Book, Index-. J. Barker. No. 1,108,317; Aug. 25; Gaz. vol. 205; p. 1097.
Book-leaf. J. M. Proudfit. No. 1,107,351; Aug. 18; Gaz. vol. 205; p. 709.
Book, Manifolding sales-. E. K. Bottle. No. 1,107,577; Aug. 18; Gaz. vol. 205; p. 790.
Book, Manifolding sales-. E. K. Bottle. No. 1,107,578; Aug. 18; Gaz. vol. 205; p. 790.
Book, Manifolding sales-. E. K. Bottle. No. 1,108,486; Aug. 25; Gaz. vol. 205; p. 1155.
Book, Manifolding sales-. E. K. Bottle. No. 1,108,487; Aug. 25; Gaz. vol. 205; p. 1155.
Book, Multicolor manifolding sales-. W. Greig. No. 1,108,573; Aug. 25; Gaz. vol. 205; p. 1185.
Book, Sales-. W. Greig. No. 1,107,295; Aug. 18; Gaz. vol. 205; p. 688.
Boots and shoes, Machine for operating upon. A. Bates and T. Briggs. No. 1,105,605; Aug. 4; Gaz. vol. 205; p. 6.
Boots and shoes, Machine for use in the manufacture of. B. F. Mayo. No. 1,106,394; Aug. 11; Gaz. vol. 205; p. 322.
Bottle. M. E. Devarney. No. 1,106,030; Aug. 4; Gaz. vol. 205; p. 156.
Bottle. H. R. Crooks. No. 1,106,191; Aug. 4; Gaz. vol. 205; p. 212.
Bottle-cap. W. H. Inman. No. 1,107,522; Aug. 18; Gaz. vol. 205; p. 769.
Bottle-capping machine. A. Johnson. No. 1,106,222; Aug. 4; Gaz. vol. 205; p. 221.
Bottle-capping machines, Cap-feeder for. L. Strebel. No. 1,106,590; Aug. 11; Gaz. vol. 205; p. 396.
Bottle-closure. F. J. Poths. No. 1,105,831; Aug. 4; Gaz. vol. 205; p. 86.
Bottle-closure. E. C. Clemmensen and W. M. Jenkins. No. 1,106,366; Aug. 11; Gaz. vol. 205; p. 313.
Bottle-closure. G. W. Gustafson. No. 1,108,360; Aug. 25; Gaz. vol. 205; p. 1110.
Bottle closure, Non-refillable-. G. Fussell. No. 1,106,505; Aug. 11; Gaz. vol. 205; p. 365.
Bottle cover, Milk-. J. W. Curran. No. 1,107,909; Aug. 18; Gaz. vol. 205; p. 904.
Bottle-feeding machine. E. C. Miller. No. 1,106,884; Aug. 11; Gaz. vol. 205; p. 498.
Bottle holder and automatic lock, Milk-. R. G. Coyner. No. 1,107,043; Aug. 11; Gaz. vol. 205; p. 551.
Bottle-holder, Safety. H. Kennell. No. 1,106,457; Aug. 11; Gaz. vol. 205; p. 346.
Bottle-holder, Sanitary locking. F. C. Grimm. No. 1,107,667; Aug. 18; Gaz. vol. 205; p. 822.
Bottle, Milk-. C. H. Texter. No. 1,108,023; Aug. 18; Gaz. vol. 205; p. 945.
Bottle, Non-refillable. R. H. Weathersby and E. E. Putnam. No. 1,106,263; Aug. 4; Gaz. vol. 205; p. 234.
Bottle, Non-refillable. C. A. Turner. No. 1,106,598; Aug. 11; Gaz. vol. 205; p. 399.
Bottle, Non-refillable. M. J. Bartol. No. 1,106,616; Aug. 11; Gaz. vol. 205; p. 405.
Bottle, Non-refillable. J. L. Van Rensselaer. No. 1,107,384; Aug. 18; Gaz. vol. 205; p. 721.
Bottle, Non-refillable. T. H. Holroyd. No. 1,107,790; Aug. 18; Gaz. vol. 205; p. 865.

Bottle, Non-refillable. J. N. Shows and C. B. Tucker. No. 1,108,012; Aug. 18; Gaz. vol. 205; p. 941.
Bottle, Non-refillable. M. Berger and R. Weisbach. No. 1,108,091; Aug. 18; Gaz. vol. 205; p. 969.
Bottle, Non-refillable. J. L. Sellar. No. 1,108,099; Aug. 18; Gaz. vol. 205; p. 972.
Bottle, Nursing-. S. D. Nichols. No. 1,108,778; Aug. 25; Gaz. vol. 205; p. 1253.
Bottle-opener. F. W. Beard. No. 1,106,862; Aug. 11; Gaz. vol. 205; p. 491.
Bottle-opening device. J. Chani. No. 1,108,690; Aug. 25; Gaz. vol. 205; p. 1227.
Bottle-receptacle. J. H. and H. B. Mason. No. 1,106,050; Aug. 4; Gaz. vol. 205; p. 163.
Bottle-receptacle. L. R. Steel. No. 1,108,017; Aug. 18; Gaz. vol. 205; p. 943.
Bottle stopper, Milk-. A. Hopkins. No. 1,108,842; Aug. 25; Gaz. vol. 205; p. 1276.
Bottles and the like, Casing for. G. P. Altenberg. No. 1,106,609; Aug. 11; Gaz. vol. 205; p. 403.
Bottles or other containers, Apparatus for handling. O. Eick. No. 1,106,033; Aug. 4; Gaz. vol. 205; p. 157.
Bottles, Paper cap for milk-. G. H. Davis. No. 1,107,267; Aug. 18; Gaz. vol. 205; p. 679.
Bottles, Safety-box for milk-. G. S. McNell. No. 1,108,601; Aug. 25; Gaz. vol. 205; p. 1195.
Bottles, Sterilizing. E. Zahm. No. 1,108,539; Aug. 25; Gaz. vol. 205; p. 1174.
Bottling-machines, Bottle-centering attachment for. E. A. Shontz. No. 1,106,738; Aug. 11; Gaz. vol. 205; p. 447.
Bottoming-machine. A. B. Starr. No. 1,106,419; Aug. 11; Gaz. vol. 205; p. 331.
Bowl, Hygienic sugar-. E. La Vine. No. 1,105,803; Aug. 4; Gaz. vol. 205; p. 75.
Bowling-alley. E. L. Ayers. No. 1,106,859; Aug. 11; Gaz. vol. 205; p. 490.
Box: *See* Advertising waste-paper box; Axle-box; Collapsible box; Curb-box; Display-box; Fare-box; File-box; Folding box; Ice-box; Journal-box; Junction-box; Knockdown box; Mail-box; Match-box; Meter-box; Miter-box; Paper box; Press-box; Recess-box; Steel hanger-box; Switch-box; Tote-box.
Box, S. C. Horton. No. 1,105,788; Aug. 4; Gaz. vol. 205; p. 70.
Box-lid presser. O. D. Gibbs. No. 1,105,900; Aug. 4; Gaz. vol. 205; p. 109.
Box-locking attachment. F. W. Morey. No. 1,108,464; Aug. 25; Gaz. vol. 205; p. 1146.
Box machine, Wire-bound-. J. H. and J. H. Birch. No. 1,107,192; Aug. 11; Gaz. vol. 205; p. 604.
Box machine, Wire-bound-. A. M. Hood. No. 1,107,216; Aug. 11; Gaz. vol. 205; p. 613.
Box-nailing machinery. Nail-picking machine for. C. G. Lundholm. No. 1,108,594; Aug. 25; Gaz. vol. 205; p. 1192.
Box-part-tonguing-and-grooving machine. L. P. Warner. No. 1,106,759; Aug. 11; Gaz. vol. 205; p. 454.
Box-topping machine. J. F. O'Brien and G. F. Bowdle. No. 1,106,727; Aug. 11; Gaz. vol. 205; p. 443.
Boxes, Protecting-strip for match and other. A. J. Haller. No. 1,106,330; Aug. 4; Gaz. vol. 205; p. 256.
Brace: *See* Bit-brace; Drilling-mechanism brace; Rail-brace.
Bracelet-joint. C. Billington and R. F. Gibbs. No. 1,107,132; Aug. 11; Gaz. vol. 205; p. 581.
Bracket: *See* Electric-light bracket; Shade and curtain bracket; Shelf-bracket; Toilet-bracket.
Brake: *See* Automobile-brake; Band-brake; Bicycle-brake; Car-brake; Car or locomotive brake; Electropneumatic brake; Hammer-brake; Phonograph-brake; Truck-brake; Vehicle-brake; Vessel-brake; Wagon-brake.
Brake apparatus, Fluid-pressure. W. V. Turner. No. 1,108,280; Aug. 25; Gaz. vol. 205; p. 1083.
Brake apparatus, Load. A. J. Ewald. No. 1,107,505; Aug. 18; Gaz. vol. 205; p. 764.
Brake appliance, Vehicle. C. Papai and J. Petri. No. 1,106,834; Aug. 11; Gaz. vol. 205; p. 480.
Brake attachment, Wagon-. J. P. Hise. No. 1,106,942; Aug. 11; Gaz. vol. 205; p. 519.
Brake-beam, Cast-metal. C. H. Williams, Jr. No. 1,106,765; Aug. 11; Gaz. vol. 205; p. 456.
Brake-handle. G. A. Webster. No. 1,105,866; Aug. 4; Gaz. vol. 205; p. 98.
Brake mechanism. A. A. Ball, Jr. No. 1,107,642; Aug. 18; Gaz. vol. 205; p. 813.
Brake mechanism. W. P. Collins. No. 1,108,138; Aug. 25; Gaz. vol. 205; p. 1033.
Brake mechanism, Automatic. A. M. Tozzi. No. 1,107,868; Aug. 18; Gaz. vol. 205; p. 892.
Brakes, Automatic adjusting device for. C. A. Booth. No. 1,107,576; Aug. 18; Gaz. vol. 205; p. 789.
Braking system. W. Schaake. No. 1,107,552; Aug. 18; Gaz. vol. 205; p. 779.
Brass, Pickling. R. R. Parish. No. 1,106,107; Aug. 4; Gaz. vol. 205; p. 184.
Brassière. C. R. De Bevoise. No. 1,106,184; Aug. 4; Gaz. vol. 205; p. 209.
Brick-cutting machine. F. W. Miles. No. 1,105,989; Aug. 4; Gaz. vol. 205; p. 140.
Brick-kiln. J. T. Underwood. No. 1,105,724; Aug. 4; Gaz. vol. 205; p. 49.
Brick-machine. J. C. Kelley. No. 1,106,456; Aug. 11; Gaz. vol. 205; p. 346.
Brick-press. C. C. Pfordt. No. 1,106,838; Aug. 11; Gaz. vol. 205; p. 482.
Bridge for trial-frames, Adjustable. A. E. Innes. No. 1,105,790; Aug. 4; Gaz. vol. 205; p. 71.
Bridle-bit. H. W. Mullins. No. 1,107,223; Aug. 11; Gaz. vol. 205; p. 616.
Briquet-mold. E. Fernholtz. No. 1,107,663; Aug. 18; Gaz. vol. 205; p. 821.
Broadcasting mechanism. J. E. Parrish. No. 1,107,992; Aug. 18; Gaz. vol. 205; p. 934.
Bronzing-machine. A. J. Ford. No. 1,107,773; Aug. 18; Gaz. vol. 205; p. 860.
Broom. K. Modlin. No. 1,107,541; Aug. 18; Gaz. vol. 205; p. 776.
Broom holder, Whisk-. A. Hoyt. No. 1,106,219; Aug. 4; Gaz. vol. 205; p. 220.
Brush. E. L. Sharpneck. No. 1,107,715; Aug. 18; Gaz. vol. 205; p. 839.
Brush. J. Morrison, Jr. No. 1,108,079; Aug. 18; Gaz. vol. 205; p. 964.
Brush and hanger, Clothes. K. Okubo. No. 1,108,848; Aug. 25; Gaz. vol. 205; p. 1279.
Brush and the like, Shaving-. H. V. Hardman. No. 1,106,378; Aug. 11; Gaz. vol. 205; p. 318.
Brush for cleaning bottles or other containers. O. Eick. No. 1,106,034; Aug. 4; Gaz. vol. 205; p. 157.
Brush for linotype-machine plungers, Cleaning-. L. Ewald. No. 1,106,795; Aug. 11; Gaz. vol. 205; p. 466.
Brush, Rotary fountain-. A. M. Roland. No. 1,108,475; Aug. 25; Gaz. vol. 205; p. 1150.
Brush, Rotary scratch-. A. L. Radlein and G. Selander. No. 1,107,354; Aug. 18; Gaz. vol. 205; p. 710.
Brushes, Antiseptic case for tooth-. J. F. Fouyer. No. 1,107,280; Aug. 18; Gaz. vol. 205; p. 683.
Bucket, Conveyer-. A. T. Perkins. No. 1,106,404; Aug. 11; Gaz. vol. 205; p. 326.
Bucket, Excavating-. J. J. Higgins. No. 1,106,146; Aug. 4; Gaz. vol. 205; p. 197.
Buckle. F. L. Langhammer and C. G. Johnson. No. 1,106,952; Aug. 11; Gaz. vol. 205; p. 522.
Buffing-machines, Automatic abradant-feed for. J. F. Gail and C. H. Frederick. No. 1,107,215; Aug. 11; Gaz. vol. 205; p. 612.
Buffing or polishing wheel. W. A. Painter. No. 1,106,833; Aug. 11; Gaz. vol. 205; p. 480.
Building-block. E. T. Likes. No. 1,107,428; Aug. 18; Gaz. vol. 205; p. 738.
Building-block. T. Louden. No. 1,108,506; Aug. 25; Gaz. vol. 205; p. 1162.
Building construction. L. K. Davis. No. 1,107,411; Aug. 18; Gaz. vol. 205; p. 731.
Building material, Manufacture of. A. Malinovszky. No. 1,107,431; Aug. 18; Gaz. vol. 205; p. 739.
Building or other purposes, Apparatus for constructing sheets of material for. W. M. Jampole. No. 1,107,074; Aug. 11; Gaz. vol. 205; p. 561.
Bullet for kinema-targets. T. M. Down. No. 1,107,593; Aug. 18; Gaz. vol. 205; p. 795.
Bullet, Mushroom-. H. W. Starkweather. No. 1,107,722; Aug. 18; Gaz. vol. 205; p. 841.
Bullet, Mushroom-. F. O. Hoagland. No. 1,107,948; Aug. 18; Gaz. vol. 205; p. 918.
Bundle-tier. A. H. Saxton and J. J. Bachmayer. No. 1,105,703; Aug. 4; Gaz. vol. 205; p. 41.
Bung-closure. G. Stiefel. No. 1,107,723; Aug. 18; Gaz. vol. 205; p. 842.
Bung-extractor. W. G. C. Krause and G. H. Thomas. No. 1,107,804; Aug. 18; Gaz. vol. 205; p. 870.
Burglar-alarm. W. H. Gettz and E. C. Foster. No. 1,105,899; Aug. 4; Gaz. vol. 205; p. 108.
Burglar-alarm. S. Harris. No. 1,107,064; Aug. 11; Gaz. vol. 205; p. 558.
Burglar-alarm. A. P. Dick, Jr. No. 1,107,767; Aug. 18; Gaz. vol. 205; p. 858.
Burglar and fire alarm, Combined. J. N. Koloen. No. 1,106,947; Aug. 11; Gaz. vol. 205; p. 520.
Burner: *See* Gas-burner; Hydrocarbon-burner; Kiln-burner; Lamp-burner; Liquid-fuel burner; Oil-burner; Stove automatic burner.
Burnishing-machine. F. M. Furber. No. 1,107,282; Aug. 18; Gaz. vol. 205; p. 683.
Bushing, Signal-cord. M. A. Pahler. No. 1,106,964; Aug. 11; Gaz. vol. 205; p. 526.
Button. J. F. Farnum. No. 1,108,431; Aug. 25; Gaz. vol. 205; p. 1134.
Button, Collar-. E. L. Anderson. No. 1,107,190; Aug. 11; Gaz. vol. 205; p. 604.
Button-making machine. B. Clay. No. 1,105,757; Aug. 4; Gaz. vol. 205; p. 60.
Button-making machine. E. Shantz. No. 1,107,629; Aug. 18; Gaz. vol. 205; p. 808.
Buttons, Machine for forming shanks on. M. and S. Stockov. No. 1,105,711; Aug. 4; Gaz. vol. 205; p. 44.
Buttonhole for wearing-apparel. C. W. T. Davies. No. 1,106,700; Aug. 11; Gaz. vol. 205; p. 433.
Buttonhole, Stitched. G. S. Hill. No. 1,107,669; Aug. 18; Gaz. vol. 205; p. 823.
Cabinet, Braid-. J. M. Burnham and H. J. Schneider. No. 1,106,543; Aug. 11; Gaz. vol. 205; p. 379.
Cabinet for toilet-paper. E. A. Hamilton. No. 1,106,559; Aug. 11; Gaz. vol. 205; p. 384.
Cable-carrier apparatus. G. A. Amsden. No. 1,108,823; Aug. 25; Gaz. vol. 205; p. 1269.
Cable-carrier apparatus. G. A. Amsden. No. 1,108,824; Aug. 25; Gaz. vol. 205; p. 1269.

Cable-guide. S. M. Hampton. No. 1,108,748; Aug. 25; Gaz. vol. 205; p. 1244.
Cable-hook. A. F. Berger. No. 1,106,183; Aug. 4; Gaz. vol. 205; p. 209.
Cake-cloth remover and truck-loader. W. J. Lowry. No. 1,107,972; Aug. 18; Gaz. vol. 205; p. 926.
Cake-tin. J. A. Benson. No. 1,107,479; Aug. 18; Gaz. vol. 205; p. 755.
Calculating-machine. C. Rasmussen. No. 1,108,788; Aug. 25; Gaz. vol. 205; p. 1256.
Calculating-machines, Actuating device for key-set. G. J. Barrett. No. 1,108,118; Aug. 25; Gaz. vol. 205; p. 1020.
Calculating-machines, Item-counter for. G. J. Barrett. No. 1,108,119; Aug. 25; Gaz. vol. 205; p. 1026.
Calendar. H. R. Birdsell. No. 1,107,251; Aug. 18; Gaz. vol. 205; p. 673.
Calendar-hanger. W. A. Callanan. No. 1,107,262; Aug. 18; Gaz. vol. 205; p. 677.
Calf-wheel and drive member, Combined. J. T. Hall. No. 1,108,576; Aug. 25; Gaz. vol. 205; p. 1186.
Caliper, Micrometer-. F. Spalding. No. 1,107,187; Aug. 11; Gaz. vol. 205; p. 603.
Caliper, Micrometer-. E. S. Savage. No. 1,107,202; Aug. 11; Gaz. vol. 205; p. 608.
Caliper, Micrometer-. E. S. Savage. No. 1,107,203; Aug. 11; Gaz. vol. 205; p. 609.
Calling-key, Individual. M. F. Geer and R. C. Leake. No. 1,105,766; Aug. 4; Gaz. vol. 205; p. 63.
Calorimeters, Sampling-tube for. C. C. Thomas. No. 1,108,278; Aug. 25; Gaz. vol. 205; p. 1082.
Camera, Photographic. J. A. Robertson and R. Kroedel. No. 1,107,358; Aug. 18; Gaz. vol. 205; p. 711.
Camera, Photographic. A. Voris. No. 1,108,033; Aug. 18; Gaz. vol. 205; p. 948.
Camera-shutter operator. A. L. McKinney and L. H. Zeigler. No. 1,108,458; Aug. 25; Gaz. vol. 205; p. 1143.
Can: *See* Ash-can; Oil-can; Sheet-metal can.
Can-heading machine. C. H. and S. Hookey. No. 1,105,661; Aug. 4; Gaz. vol. 205; p. 26.
Can-opening device. L. Delpeut. No. 1,108,719; Aug. 25; Gaz. vol. 205; p. 1234.
Can parts, Feeding mechanism for. F. P. McColl. No. 1,106,575; Aug. 11; Gaz. vol. 205; p. 390.
Candy and making the same. W. B. Laskey. No. 1,107,325; Aug. 18; Gaz. vol. 205; p. 699.
Candy-bag. J. Gamble. No. 1,107,283; Aug. 18; Gaz. vol. 205; p. 684.
Candy-machine. F. H. Woolf. No. 1,108,304; Aug. 25; Gaz. vol. 205; p. 1092.
Candy-machine. J. Michitsch. No. 1,108,461; Aug. 25; Gaz. vol. 205; p. 1144.
Candy-wrapping machine. E. C. Thorschmidt. No. 1,108,027; Aug. 18; Gaz. vol. 205; p. 946.
Cane and like mill, Three-roller sugar-. C. McNell. No. 1,107,087; Aug. 11; Gaz. vol. 205; p. 566.
Cane mill, Sugar-. A. F. Ewart. No. 1,106,291; Aug. 4; Gaz. vol. 205; p. 243.
Cane mill, Sugar-. C. J. Hedemann. No. 1,106,301; Aug. 4; Gaz. vol. 205; p. 246.
Cap-feeding machine. G. J. F. Woellert. No. 1,106,607; Aug. 11; Gaz. vol. 205; p. 402.
Car, Ammunition-hoisting. J. F. Meigs and R. P. Stout. No. 1,105,813; Aug. 4; Gaz. vol. 205; p. 80.
Car and door-operating mechanism, Dump-. W. A. Caswell. No. 1,107,896; Aug. 18; Gaz. vol. 205; p. 900.
Car and pipe coupling, Automatic. H. F. Woernley. No. 1,108,300; Aug. 25; Gaz. vol. 205; p. 1091.
Car and pipe coupling, Combined. H. H. Westinghouse. No. 1,106,431; Aug. 11; Gaz. vol. 205; p. 335.
Car brake attachment, Railway-. J. B. Stevens. No. 1,108,526; Aug. 25; Gaz. vol. 205; p. 1168.
Car brake, Railway-. S. Tompkins. No. 1,108,815; Aug. 25; Gaz. vol. 205; p. 1266.
Car construction. W. R. McKeen, Jr. No. 1,107,086; Aug. 11; Gaz. vol. 205; p. 566.
Car construction, Railway-. A. Ingstrom. No. 1,106,873; Aug. 11; Gaz. vol. 205; p. 494.
Car-coupling. W. F. Richards. No. 1,105,839; Aug. 4; Gaz. vol. 205; p. 89.
Car-coupling. R. D. Gallagher, Jr. No. 1,107,602; Aug. 18; Gaz. vol. 205; p. 798.
Car-coupling. M. A. Garrett. No. 1,107,929; Aug. 18; Gaz. vol. 205; p. 911.
Car-coupling. C. H. Kadle. No. 1,107,959; Aug. 18; Gaz. vol. 205; p. 921.
Car-coupling. E. F. Gebhardt. No. 1,108,740; Aug. 25; Gaz. vol. 205; p. 1242.
Car-coupling, Contour. R. E. L. Janney. No. 1,107,166; Aug. 11; Gaz. vol. 205; p. 596.
Car-coupling with air-operated release, Automatic. M. Himberger. No. 1,108,577; Aug. 25; Gaz. vol. 205; p. 1186.
Car-door. J. F. Comee. No. 1,108,139; Aug. 25; Gaz. vol. 205; p. 1033.
Car door, Grain-. A. G. McCormack. No. 1,106,395; Gaz. 11; Gaz. vol. 205; p. 323.
Car door, Grain-. W. Brodhage. No. 1,107,752; Aug. 18; Gaz. vol. 205; p. 852.
Car-door-opening mechanism, Freight-. W. W. Darrow. No. 1,108,343; Aug. 25; Gaz. vol. 205; p. 1104.
Car draft and buffing gear. I. O. Wright. No. 1,106,531; Aug. 11; Gaz. vol. 205; p. 373.
Car, Dump-. S. D. Wright. No. 1,105,948; Aug. 4; Gaz. vol. 205; p. 127.
Car, Dump-. K. H. Hansen. No. 1,106,805; Aug. 11; Gaz. vol. 205; p. 470.
Car, Dump-. R. W. Burnett. No. 1,108,327; Aug. 25; Gaz. vol. 205; p. 1100.
Car-dumping apparatus. G. H. Mueller. No. 1,108,465; Aug. 25; Gaz. vol. 205; p. 1146.
Car-dumping apparatus. C. A. Griffith. No. 1,108,575; Aug. 25; Gaz. vol. 205; p. 1186.
Car-dumping device. J. J. Irvin and W. Sheppard. No. 1,106,220; Aug. 4; Gaz. vol. 205; p. 220.
Car-fender. L. Finkelman and J. Wilhelm. No. 1,106,643; Aug. 11; Gaz. vol. 205; p. 414.
Car-fender. W. D. Russell. No. 1,108,869; Aug. 25; Gaz. vol. 205; p. 1287.
Car fender, Motor-. W. Say. No. 1,108,795; Aug. 25; Gaz. vol. 205; p. 1258.
Car-heater. W. S. Menden. No. 1,106,334; Aug. 4; Gaz. vol. 205; p. 257.
Car, Inspection-. J. Stofa. No. 1,106,164; Aug. 4; Gaz. vol. 205; p. 203.
Car interchangeable wheel, Motor-. M. Fischer. No. 1,106,345; Aug. 4; Gaz. vol. 205; p. 261.
Car, Mine-. W. D. Stockly. No. 1,108,808; Aug. 25; Gaz. vol. 205; p. 1264.
Car or locomotive brake. R. E. Noble. No. 1,107,178; Aug. 11; Gaz. vol. 205; p. 600.
Car, Passenger-. R. T. Senter. No. 1,105,704; Aug. 4; Gaz. vol. 205; p. 42.
Car-protection device, Motor-. A. Palls. No. 1,107,832; Aug. 18; Gaz. vol. 205; p. 879.
Car, Railway-. J. R. Cardwell. No. 1,106,129; Aug. 4; Gaz. vol. 205; p. 192.
Car-replacing device. W. F. Desso. No. 1,106,864; Aug. 11; Gaz. vol. 205; p. 491.
Car-roof. J. Pearson. No. 1,105,828; Aug. 4; Gaz. vol. 205; p. 85.
Car side bearing, Railway-. E. A. Le Beau. No. 1,106,824; Aug. 11; Gaz. vol. 205; p. 477.
Car-step, Extension. J. R. Barber. No. 1,106,614; Aug. 11; Gaz. vol. 205; p. 405.
Car-step, Foldable or extensible. H. D. Kirkley. No. 1,107,170; Aug. 11; Gaz. vol. 205; p. 597.
Car, Tank-. L. T. Canfield. No. 1,106,697; Aug. 11; Gaz. vol. 205; p. 432.
Car underbody, Tank-. J. F. Ewell. No. 1,107,053; Aug. 11; Gaz. vol. 205; p. 554.
Car-underframe. O. S. Pulliam. No. 1,106,110; Aug. 4; Gaz. vol. 205; p. 184.
Car ventilator, Railway-. E. H. Gold. No. 1,105,645; Aug. 4; Gaz. vol. 205; p. 21.
Car-wheel, Differential. H. H. Muggley. No. 1,108,867; Aug. 25; Gaz. vol. 205; p. 1286.
Car wheel-guard, Street-. G. H. Putnam. No. 1,107,112; Aug. 11; Gaz. vol. 205; p. 573.
Cars, Banana-rack for. B. S. Duffy. No. 1,106,288; Aug. 4; Gaz. vol. 205; p. 242.
Cars, Mower attachment for. E. H. Hablek. No. 1,106,650; Aug. 11; Gaz. vol. 205; p. 417.
Cars or other vehicles, Locking device for motor-. M. J. Grémillet. No. 1,106,556; Aug. 11; Gaz. vol. 205; p. 383.
Carbamic-acid ester of dichlorhydrin, Manufacturing the. B. Beckmann. No. 1,108,676; Aug. 25; Gaz. vol. 205; p. 1219.
Carbon monoxid and hydrogen, Making. R. H. Brownlee and R. H. Uhlinger. No. 1,107,582; Aug. 18; Gaz. vol. 205; p. 792.
Carbon monoxid, hydrogen, and nitrogen, Making. R. H. Brownlee and R. H. Uhlinger. No. 1,107,581; Aug. 18; Gaz. vol. 205; p. 791.
Carbon-tetrachlorid package. W. L. Harrison. No. 1,106,144; Aug. 4; Gaz. vol. 205; p. 196.
Carboy-nose protector. F. E. Oliver. No. 1,108,214; Aug. 25; Gaz. vol. 205; p. 1060.
Carbureter. W. Ottaway. No. 1,105,687; Aug. 4; Gaz. vol. 205; p. 35.
Carbureter. J. F. Andres. No. 1,106,070; Aug. 4; Gaz. vol. 205; p. 169.
Carbureter. J. T. Hazelton. No. 1,106,145; Aug. 4; Gaz. vol. 205; p. 196.
Carbureter. H. M. L. Crouan. No. 1,106,192; Aug. 4; Gaz. vol. 205; p. 212.
Carbureter. A. G. Lamb. No 1,106,226; Aug. 4; Gaz. vol. 205; p. 222.
Carbureter. J. M. Tucker and J. A. Wilding. No. 1,106,258; Aug. 4; Gaz. vol. 205; p. 232.
Carbureter. A. B. Browne. (Reissue.) No. 13,784; Aug. 4; Gaz. vol. 205; p. 265.
Carbureter. J. S. Goldberg. No. 1,106,802; Aug. 11; Gaz. vol. 205; p. 468.
Carbureter. H. D. Peaslee. No. 1,107,103; Aug. 11; Gaz. vol. 205; p. 570.
Carbureter. E. E. Bunn and E. O. Robinson. No. 1,107,489; Aug. 18; Gaz. vol. 205; p. 759.
Carbureter. L. G. Molina. No. 1,107,693; Aug. 18; Gaz. vol. 205; p. 831.
Carbureter. R. P. Norton. No. 1,107,698; Aug. 18; Gaz. vol. 205; p. 833.
Carbureter. W. Shakespeare, Jr., and W. Schmid. No. 1,107,713; Aug. 18; Gaz. vol. 205; p. 838.
Carbureter. C. T. Schoen. No. 1,107,849; Aug. 18; Gaz. vol. 205; p. 885.

Carbureter. E. J. Kane. No. 1,108,181; Aug. 25; Gaz. vol. 205; p. 1047.
Carbureter. G. M. Schebler. No. 1,108,245; Aug. 25; Gaz. vol. 205; p. 1070.
Carbureter for internal-combustion engines. W. Gillett. No. 1,106,091; Aug. 4; Gaz. vol. 205; p. 177.
Carbureters, Air-valve for. G. M. Schebler. No. 1,108,246; Aug. 25; Gaz. vol. 205; p. 1071.
Carbureting apparatus. F. S. Oliver. No. 1,108,081; Aug. 18; Gaz. vol. 205; p. 965.
Card-holder. F. A. Lawson. No. 1,106,954; Aug. 11; Gaz. vol. 205; p. 523.
Card, Movable index-. P. Greindl. No. 1,108,574; Aug. 25; Gaz. vol. 205; p. 1185.
Card-perforating machine, Jacquard-. K. Eggart. No. 1,108,492; Aug. 25; Gaz. vol. 205; p. 1157.
Carding-machine waste-collector. R. N. France. No. 1,108,070; Aug. 18; Gaz. vol. 205; p. 961.
Carousel. P. Ryan. No. 1,107,115; Aug. 11; Gaz. vol. 205; p. 574.
Carpet-cleaners, Filter for pneumatic. L. L. Ferguson. No. 1,108,094; Aug. 18; Gaz. vol. 205; p. 970.
Carpet-cleaning apparatus. T. J. Habicht. No. 1,105,903; Aug. 4; Gaz. vol. 205; p. 110.
Carpet retainer, Stair-. D. W. Shiek. No. 1,106,320; Aug. 4; Gaz. vol. 205; p. 253.
Carriage-return mechanism. G. W. Knoll. No. 1,107,530; Aug. 18; Gaz. vol. 205; p. 772.
Carrier: *See* Cone-carrier; Hay-carrier; Lantern-slide carrier; Lunch-carrier; Receptacle-carrier; Rope carrier; Shell-carrier.
Cart support, Dump-. J. B. Rhodes. No. 1,108,237; Aug. 25; Gaz. vol. 205; p. 1068.
Cartridge, Rim-fire. F. O. Hoagland. No. 1,107,519; Aug. 18; Gaz. vol. 205; p. 769.
Case: *See* Hat-case; Needle-case; Paper cigar-case; Storage-case; Umbrella-case.
Case-hardening. A. W. Machlet. No. 1,106,573; Aug. 11; Gaz. vol. 205; p. 390.
Casing-cutter. M. J. Milz. No. 1,107,822; Aug. 18; Gaz. vol. 205; p. 876.
Cash-register. T. Carroll. No. 1,106,490; Aug. 11; Gaz. vol. 205; p. 359.
Casket-handle. E. R. Sargent. No. 1,106,731; Aug. 11; Gaz. vol. 205; p. 464.
Casket-handle, Detachable. J. M. Doddridge and J. C. Beck. No. 1,106,031; Aug. 4; Gaz. vol. 205; p. 156.
Caster. G. E. Smouse. No. 1,106,853; Aug. 11; Gaz. vol. 205; p. 487.
Casting apparatus, Metal-. A. M. Craig. No. 1,107,904; Aug. 18; Gaz. vol. 205; p. 902.
Casting-machine. J. Burkhardt. No. 1,108,693; Aug. 25; Gaz. vol. 205; p. 1224.
Casting-machine. J. Burkhardt. No. 1,108,694; Aug. 25; Gaz. vol. 205; p. 1225.
Casting metals. A. M. Craig. No. 1,107,905; Aug. 18; Gaz. vol. 205; p. 903.
Catamenial appliance. L. G. Milkes. No. 1,108,206; Aug. 25; Gaz. vol. 205; p. 1057.
Catsup-making apparatus. G. R. Fields. No. 1,107,161; Aug. 11; Gaz. vol. 205; p. 594.
Cattle-guard. E. L. McCormick. No. 1,108,202; Aug. 25; Gaz. vol. 205; p. 1055.
Celery-wrapping machine. M. W. Earl. No. 1,107,273; Aug. 18; Gaz. vol. 205; p. 681.
Cement structure and making same, Colored. H. A. Gardner. No. 1,106,298; Aug. 4; Gaz. vol. 205; p. 245.
Cement-working machinery. C. M. Eberling. No. 1,106,089; Aug. 4; Gaz. vol. 205; p. 176.
Center-finder. J. Ogg. No. 1,105,917; Aug. 4; Gaz. vol. 205; p. 115.
Centrifugal extractor. O. C. Beach. No. 1,105,954; Aug. 4; Gaz. vol. 205; p. 129.
Centrifugal machines, Basket for. E. Roberts and A. H. Gibson. No. 1,108,098; Aug. 18; Gaz. vol. 205; p. 972.
Centrifugal switch. E. M. Tormin. No. 1,108,088; Aug. 18; Gaz. vol. 205; p. 968.
Chain-link. S. D. Locke. No. 1,107,808; Aug. 18; Gaz. vol. 205; p. 871.
Chain-links, Tool for opening and closing. L. Conne. No. 1,106,439; Aug. 11; Gaz. vol. 205; p. 338.
Chain-making apparatus. H. Osswald. No. 1,107,831; Aug. 18; Gaz. vol. 205; p. 879.
Chain-making machine. S. D. Locke. No. 1,107,809; Aug. 18; Gaz. vol. 205; p. 871.
Chair: *See* High chair; Opera-chair; Rail-chair; Rail-joint chair; Revolving office-chair.
Chair. W. W. Turner. No. 1,108,030; Aug. 18; Gaz. vol. 205; p. 948.
Chair and cradle, Combined. E. M. M. Dimmerling. No. 1,107,918; Aug. 18; Gaz. vol. 205; p. 907.
Change-receiving device. C. H. Hyman. No. 1,106,385; Aug. 11; Gaz. vol. 205; p. 320.
Checkrein-holder. I. G. Mitchell. No. 1,105,680; Aug. 4; Gaz. vol. 205; p. 32.
Cheese-cutter, Computing. J. Winkelmeyer. No. 1,108,297; Aug. 25; Gaz. vol. 205; p. 1090.
Cheese-follower. N. Oestreich. No. 1,107,989; Aug. 18; Gaz. vol. 205; p. 933.
Cherry-clipper. W. M. Gordon. No. 1,108,572; Aug. 25; Gaz. vol. 205; p. 1185.
Chimney. J. V. Boland. No. 1,107,883; Aug. 18; Gaz. vol. 205; p. 896.
Chimney-throat, Safety. E. J. Casa-Calvo. No. 1,106,491; Aug. 11; Gaz. vol. 205; p. 360.
Chuck. A. E. Church. No. 1,106,189; Aug. 4; Gaz. vol. 205; p. 211.
Churn. W. F. Brown. No. 1,106,188; Aug. 4; Gaz. vol. 205; p. 211.
Churn. E. Nadrowski. No. 1,107,828; Aug. 18; Gaz. vol. 205; p. 878.
Churn and butter-worker, Combined. A. M. Knudsen. No. 1,106,460; Aug. 11; Gaz. vol. 205; p. 347.
Chute-spring. E. M. Low. No. 1,107,679; Aug. 18; Gaz. vol. 205; p. 826.
Cigar-box-lid holder. R. P. Haskins. No. 1,108,751; Aug. 25; Gaz. vol. 205; p. 1245.
Cigar-bunching machine. A. Gordon. No. 1,108,871; Aug. 25; Gaz. vol. 205; p. 1287.
Cigar-container. R. Rey. No. 1,108,005; Aug. 18; Gaz. vol. 205; p. 939.
Cigar-making device. R. Suarez. No. 1,108,273; Aug. 25; Gaz. vol. 205; p. 1080.
Cigar-tip cutter. J. J. Schleinkofer. No. 1,106,733; Aug. 11; Gaz. vol. 205; p. 445.
Cigars and cigarettes, Wind-shield for. E. C. Clifford. No. 1,106,495; Aug. 11; Gaz. vol. 205; p. 361.
Cigars, Head-shield and band for. D. Weiss. No. 1,106,016; Aug. 4; Gaz. vol. 205; p. 150.
Circuit-closer. A. G. Anderson. No. 1,107,013; Aug. 11; Gaz. vol. 205; p. 540.
Circuit-closer. B. Benedict. No. 1,107,645; Aug. 18; Gaz. vol. 205; p. 814.
Cistern, Water-waste-preventing. C. Green, Jr. No. 1,106,141; Aug. 4; Gaz. vol. 205; p. 195.
Clamp: *See* Desk-clamp; Fabric-clamp; Fence-clamp; Pull-rod clamp; Quick-acting clamp; Wire-clamp.
Cleaner: *See* Furnace-cleaner; Rake-cleaner; Suction-cleaner; Vacuum-cleaner; Walk-cleaner.
Cleaning apparatus, Suction. E. M. Waring. No. 1,105,942; Aug. 4; Gaz. vol. 205; p. 125.
Clock. H. W. Hicks. No. 1,107,947; Aug. 18; Gaz. vol. 205; p. 917.
Clock, Alarm-. W. J. Smith. No. 1,106,852; Aug. 11; Gaz. vol. 205; p. 487.
Clock, Automatic alarm time-. G. B. Starr. No. 1,108,636; Aug. 25; Gaz. vol. 205; p. 1206.
Clock, Automobile-. E. Herold. No. 1,107,068; Aug. 11; Gaz. vol. 205; p. 559.
Clock, Coin-freed. P. Bonhomme. No. 1,106,128; Aug. 4; Gaz. vol. 205; p. 191.
Closet: *See* Sanitary closet; Water-closet.
Closet connection. G. M. McCloskey. No. 1,106,726; Aug. 11; Gaz. vol. 205; p. 443.
Closet-seat, Sanitary. F. J. Graves. No. 1,106,647; Aug. 11; Gaz. vol. 205; p. 416.
Closet-seat sanitary covering. F. I. Mesick, E. P. W. Elliot, and M. E. Woodcock. No. 1,108,460; Aug. 25; Gaz. vol. 205; p. 1144.
Clothes and the like hanger. R. Ingenlath. No. 1,106,511; Aug. 11; Gaz. vol. 205; p. 367.
Clothes-drier. J. Ubl. No. 1,106,993; Aug. 11; Gaz. vol. 205; p. 539.
Clothes-drier. P. I. Saunders. No. 1,107,847; Aug. 18; Gaz. vol. 205; p. 885.
Clothes-hanger. C. Bujger. No. 1,107,488; Aug. 18; Gaz. vol. 205; p. 759.
Clothes-line fastener. F. Comes. No. 1,106,132; Aug. 4; Gaz. vol. 205; p. 193.
Clothes-line holder. S. Berzak and S. Arotzer. No. 1,106,917; Aug. 11; Gaz. vol. 205; p. 510.
Clothes-line holder. S. M. Harrison and W. E. Smith. No. 1,107,786; Aug. 18; Gaz. vol. 205; p. 864.
Clothes-line reel. E. W. Powers. No. 1,107,445; Aug. 18; Gaz. vol. 205; p. 743.
Clothes-line sheave. F. Brown. No. 1,106,696; Aug. 11; Gaz. vol. 205; p. 432.
Clothes-pin. J. A. Bradley. No. 1,106,487; Aug. 11; Gaz. vol. 205; p. 358.
Clothes-pin. W. H. Griffin. No. 1,107,058; Aug. 11; Gaz. vol. 205; p. 556.
Clothes-pounder. H. L. Albisser and J. Simon. No. 1,107,009; Aug. 11; Gaz. vol. 205; p. 539.
Clothes-pounder. P. A. Ruppelt. No. 1,107,707; Aug. 18; Gaz. vol. 205; p. 836.
Clothes-pounder. W. S. Halliday. No. 1,107,939; Aug. 18; Gaz. vol. 205; p. 915.
Clothes pounder and washer. W. G. Moore. No. 1,107,824; Aug. 18; Gaz. vol. 205; p. 876.
Clothes-rack and table, Combined. I. Sprunger. No. 1,106,418; Aug. 11; Gaz. vol. 205; p. 331.
Clothes-washer. A. Katz. No. 1,105,978; Aug. 4; Gaz. vol. 205; p. 137.
Clothes-wringer. G. W. Lewis. No. 1,107,676; Aug. 18; Gaz. vol. 205; p. 825.
Clothes-wringer. C. B. Lebcher. No. 1,108,589; Aug. 25; Gaz. vol. 205; p. 1191.
Clutch. C. F. Hetherington. No. 1,106,563; Aug. 11; Gaz. vol. 205; p. 386.
Clutch. W. Christie. No. 1,107,588; Aug. 18; Gaz. vol. 205; p. 793.
Clutch. H. Schlicht. No. 1,107,710; Aug. 18; Gaz. vol. 205; p. 837.
Clutch. G. Stinebring. No. 1,107,724; Aug. 18; Gaz. vol. 205; p. 842.
Clutch, Centrifugal. S. Deutsch. No. 1,108,345; Aug. 25; Gaz. vol. 205; p. 1105.
Clutch, Centrifugally-controlled. C. Robey. No. 1,106,242; Aug. 4; Gaz. vol. 205; p. 227.

Clutch, Liquid-. R. F. Herpolsheimer. No. 1,107,944; Aug. 18; Gaz. vol. 205; p. 916.
Clutch mechanism. F. L. Waterous. No. 1,106,605; Aug. 11; Gaz. vol. 205; p. 401.
Clutch-operating mechanism. H. S. Barnwell. No. 1,108,669; Aug. 25; Gaz. vol. 205; p. 1217.
Clutch-release, Automatic. J. H. De Buhr. No. 1,107,915; Aug. 18; Gaz. vol. 205; p. 906.
Coating composition. L. H. Reuter. No. 1,107,356; Aug. 18; Gaz. vol. 205; p. 710.
Coating devices, Article-holder for liquid-. R. A. Beausejour. No. 1,106,915; Aug. 11; Gaz. vol. 205; p. 509.
Cock for use on steam-boilers, Gage-. S. J. Mouromoff. No. 1,106,105; Aug. 4; Gaz. vol. 205; p. 183.
Cock or faucet. A. C. Schuermann. No. 1,107,452; Aug. 18; Gaz. vol. 205; p. 746.
Cock or faucet, Self-closing. A. C. Schuermann. No. 1,107,453; Aug. 18; Gaz. vol. 205; p. 746.
Cocks, Shut-off for gage-. F. and F. A. Chenette. No. 1,106,494; Aug. 11; Gaz. vol. 205; p. 361.
Cocoa-powder, Machine for cooling finished or unfinished. M. O. Busch. No. 1,107,028; Aug. 11; Gaz. vol. 205; p. 545.
Coin-controlled lock. C. G. Lehmann. No. 1,105,980; Aug. 4; Gaz. vol. 205; p. 137.
Coin-holder for satchels. F. M. White. No. 1,108,292; Aug. 25; Gaz. vol. 205; p. 1088.
Coin-repository closure. B. vom Eigen. No. 1,108,349; Aug. 25; Gaz. vol. 205; p. 1107.
Collapsible box, Reinforced. J. W. Weiss. No. 1,108,289; Aug. 25; Gaz. vol. 205; p. 1087.
Collapsible frame for floating structures. J. Keller. No. 1,108,076; Aug. 18; Gaz. vol. 205; p. 964.
Collar. R. M. Rodden. No. 1,107,359; Aug. 18; Gaz. vol. 205; p. 711.
Collar. A. E. Wilmot. No. 1,108,296; Aug. 25; Gaz. vol. 205; p. 1090.
Collar-fastener. A. Scheible. No. 1,107,709; Aug. 18; Gaz. vol. 205; p. 837.
Collar, Horse-. H. D. Pate. No. 1,107,993; Aug. 18; Gaz. vol. 205; p. 934.
Collar pad, Horse-. D. L. Williams. No. 1,108,049; Aug. 18; Gaz. vol. 205; p. 955.
Column, Hand-rail. C. J. Burrows. No. 1,106,279; Aug. 4; Gaz. vol. 205; p. 239.
Comb: *See* Hair-drying comb.
Comb. C. A. McCann. No. 1,107,537; Aug. 18; Gaz. vol. 205; p. 775.
Comb. A. P. Perlin. No. 1,108,224; Aug. 25; Gaz. vol. 205; p. 1063.
Comb. J. E. Laing. No. 1,108,375; Aug. 25; Gaz. vol. 205; p. 1116.
Combing-machine waste-collector. O. A. Belger. No. 1,106,073; Aug. 4; Gaz. vol. 205; p. 170.
Combination-lock. S. P. Hovey. No. 1,107,793; Aug. 18; Gaz. vol. 205; p. 866.
Combustion, Controlling. J. M. Rusby. No. 1,106,319; Aug. 4; Gaz. vol. 205; p. 253.
Compass with angular-shifting magnifying device. G. E. Calombel. No. 1,107,901; Aug. 18; Gaz. vol. 205; p. 901.
Composing-machine keyboard. C. E. Benham. No. 1,106,538; Aug. 11; Gaz. vol. 205; p. 377.
Composing-stick. B. McGinty. No. 1,107,539; Aug. 18; Gaz. vol. 205; p. 775.
Composition of matter and producing the same. L. V. Redman. No. 1,107,703; Aug. 18; Gaz. vol. 205; p. 835.
Computing-machine. I. S. Dement. No. 1,107,269; Aug. 18; Gaz. vol. 205; p. 679.
Computing-machines, &c., Paper-feed device for. D. W. Shiek. No. 1,105,853; Aug. 4; Gaz. vol. 205; p. 94.
Concentrating or vanning machine for separating pulverized ores and similar material, Belt. O. H. King. No. 1,108,186; Aug. 25; Gaz. vol. 205; p. 1049.
Concentrating-table. E. B. Kirby. No. 1,105,912; Aug. 4; Gaz. vol. 205; p. 113.
Concentrator, Dry. L. A. W. Johnson. No. 1,105,077; Aug. 4; Gaz. vol. 205; p. 137.
Concentrator, Dry. J. F. Hiltscher. No. 1,108,499; Aug. 25; Gaz. vol. 205; p. 1160.
Concrete arches, Centering for. L. F. Sylvester. No. 1,108,630; Aug. 25; Gaz. vol. 205; p. 1207.
Concrete building construction. N. C. Newerf. No. 1,105,682; Aug. 4; Gaz. vol. 205; p. 33.
Concrete construction, Bar for reinforced. H. G. Meadows. No. 1,107,434; Aug. 18; Gaz. vol. 205; p. 740.
Concrete construction, Reinforced. W. B. Hough. No. 1,105,789; Aug. 4; Gaz. vol. 205; p. 71.
Concrete construction, Reinforced. J. W. Bragstad. No. 1,107,486; Aug. 18; Gaz. vol. 205; p. 758.
Concrete construction, Supporting, spacing, and reinforcing means of. B. White. No. 1,108,647; Aug. 25; Gaz. vol. 205; p. 1210.
Concrete floors, Removable mold for. C. L. Meyer. No. 1,106,665; Aug. 11; Gaz. vol. 205; p. 422.
Concrete, Method of and device for mixing. T. L. Smith. No. 1,107,237; Aug. 11; Gaz. vol. 205; p. 621.
Concrete-mixer charging device. P. A. Koehring. No. 1,107,171; Aug. 11; Gaz. vol. 205; p. 598.
Concrete-mixer, Portable. G. L. Sexton. No. 1,108,523; Aug. 25; Gaz. vol. 205; p. 1167.
Concrete or artificial stone, Shaking-machine for use in the manufacture of. A. and C. Friesecke. No. 1,106,644; Aug. 11; Gaz. vol. 205; p. 415.
Concrete pressure-pipes, Manufacturing reinforced-. G Rae. No. 1,107,235; Aug. 11; Gaz. vol. 205; p. 620.
Concrete shelter, Reinforced-. H. S. Taft. No. 1,106,063; Aug. 4; Gaz. vol. 205; p. 167.
Concrete wall construction. G. S. Mumford. No. 1,107,200; Aug. 11; Gaz. vol. 205; p. 607.
Condensation product and treating the same. M. J. Callahan. No. 1,108,329; Aug. 25; Gaz. vol. 205; p. 1100.
Condenser, Variable mercury-. R. San Martin. No. 1,108,793; Aug. 25; Gaz. vol. 205; p. 1258.
Conduit-wiring device. N. J. Bigham. No. 1,107,250; Aug. 18; Gaz. vol. 205; p. 673.
Cone-carrier. C. A. Foster. No. 1,108,432; Aug. 25; Gaz. vol. 205; p. 1135.
Connecting device. M. R. Cowell. No. 1,107,497; Aug. 18; Gaz. vol. 205; p. 761.
Connector. G. S. Day. No. 1,105,889; Aug. 4; Gaz. vol. 205; p. 105.
Connector. L. C. Nichols. No. 1,106,053; Aug. 4; Gaz. vol. 205; p. 164.
Connector. C. E. Godley. No. 1,108,165; Aug. 25; Gaz. vol. 205; p. 1042.
Constant-discharge gage. J. A. G. Harrisson. No. 1,107,065; Aug. 11; Gaz. vol. 205; p. 558.
Constant-level lubricator. E. E. Hans. No. 1,105,773; Aug. 4; Gaz. vol. 205; p. 66.
Contact-interrupter. A. H. Maitre and V. H. Martin. No. 1,106,230; Aug. 4; Gaz. vol. 205; p. 223.
Container. C. W. Shevlin. No. 1,106,004; Aug. 4; Gaz. vol. 205; p. 146.
Container. C. W. Shevlin. No. 1,106,005; Aug. 4; Gaz. vol. 205; p. 146.
Container. H. Uffner. No. 1,108,281; Aug. 25; Gaz. vol. 205; p. 1083.
Control system. H. O. Rugh. No. 1,105,843; Aug. 4; Gaz. vol. 205; p. 90.
Control system, Remote. W. M. Scott. No. 1,106,116; Aug. 4; Gaz. vol. 205; p. 186.
Control system, Remote. W. M. Scott. No. 1,108,253; Aug. 25; Gaz. vol. 205; p. 1074.
Control system, Remote. W. M. Scott. No. 1,108,254; Aug. 25; Gaz. vol. 205; p. 1074.
Controlling device. N. C. Durand. No. 1,106,443; Aug. 11; Gaz. vol. 205; p. 340.
Conveyer. M. U. Bernheim. No. 1,106,618; Aug. 11; Gaz. vol. 205; p. 406.
Conveyer. G. Schuler. No. 1,106,736; Aug. 11; Gaz. vol. 205; p. 446.
Conveyer. J. A. Dailey. No. 1,108,713; Aug. 25; Gaz. vol. 205; p. 1232.
Conveyer, Endless. R. W. Norton. No. 1,108,386; Aug. 25; Gaz. vol. 205; p. 1120.
Cooker. R. A. Trace. No. 1,106,597; Aug. 11; Gaz. vol. 205; p. 399.
Cooker. F. V. Detwiler. No. 1,106,634; Aug. 11; Gaz. vol. 205; p. 411.
Cooker for seeds and the like. G. A. Sauer, Jr., and R. A. Trace. No. 1,106,586; Aug. 11; Gaz. vol. 205; p. 394.
Cooking and heating apparatus, Combined. T. W. Baker and F. P. Hepding. No. 1,107,475; Aug. 18; Gaz. vol. 205; p. 754.
Cooking utensil. H. G. Pfachler and C. J. Marks. No. 1,106,837; Aug. 11; Gaz. vol. 205; p. 482.
Cooling-chamber for projecting purposes. R. Straubel. No. 1,107,725; Aug. 18; Gaz. vol. 205; p. 842.
Cooling-tank. C. Sintz. No. 1,107,455; Aug. 18; Gaz. vol. 205; p. 747.
Coop. W. R. Wilson. No. 1,106,267; Aug. 4; Gaz. vol. 205; p. 235.
Copper-ammonium cellulose solution, Production of shaped articles from. E. Bronnert. No. 1,106,077; Aug. 4; Gaz. vol. 205; p. 172.
Copy-holder. W. T. Hacker. No. 1,107,785; Aug. 18; Gaz. vol. 205; p. 864.
Cord-fastener. I. A. Allen, Jr., and C. W. Sponsel. No. 1,107,010; Aug. 11; Gaz. vol. 205; p. 540.
Core, Collapsible. J. K. Williams. No. 1,105,737; Aug. 4; Gaz. vol. 205; p. 54.
Core, Collapsible. J. Yemiker. No. 1,107,397; Aug. 18; Gaz. vol. 205; p. 725.
Core, Collapsible. J. Yemiker. No. 1,107,398; Aug. 18; Gaz. vol. 205; p. 725.
Core-oven, Drawer-type. A. M. Loudon. No. 1,107,678; Aug. 18; Gaz. vol. 205; p. 826.
Corn-binder. C. E. Townsend. No. 1,107,463; Aug. 18; Gaz. vol. 205; p. 749.
Corn-husker. G. L. Miller. (Reissue.) No. 13,787; Aug. 11; Gaz. vol. 205; p. 624.
Corn-husker. P. A. Waller. No. 1,108,817; Aug. 25; Gaz. vol. 205; p. 1267.
Corner bead or strip. R. L. Sanderson. No. 1,106,730; Aug. 11; Gaz. vol. 205; p. 444.
Corset, Apparel-. W. Kops. No. 1,107,219; Aug. 11; Gaz. vol. 205; p. 614.
Corset, Bandage-. P. Klein. No. 1,107,078; Aug. 11; Gaz. vol. 205; p. 563.
Corset-shield. J. S. Lamont. No. 1,108,588; Aug. 25; Gaz. vol. 205; p. 1191.
Cost system, Apparatus for. C. H. Nichols. No. 1,105,994; Aug. 4; Gaz. vol. 205; p. 142.
Cotter-pin. A. H. Berntsen and P. P. Kilstofte. No. 1,107,881; Aug. 18; Gaz. vol. 205; p. 896.
Cotton-picker. S. S. Thomas. No. 1,107,633; Aug. 18; Gaz. vol. 205; p. 809.

Cotton-picker. M. G. Cunningham. No. 1,107,908; Aug. 18; Gaz. vol. 205; p. 904.
Cotton-picking machine. G. C. Phillips. No. 1,107,627; Aug. 18; Gaz. vol. 205; p. 807.
Couch, Convertible. F. M. Tinkham. No. 1,107,729; Aug. 18; Gaz. vol. 205; p. 843.
Counters, Molding. J. H. Stewart. No. 1,108,409; Aug. 25; Gaz. vol. 205; p. 1127.
Coupling: *See* Axle-coupling; Car-coupling; Car and pipe coupling; Electrical coupling; Hay-loader coupling; Ignition-machine coupling; Junction-box coupling; Pipe-coupling; Pocket-coupling; Pump-rod coupling; Railway-coupling; Shaft-coupling; Tube-coupling.
Coupling-centering device. H. Blanchard. No. 1,105,611; Aug. 4; Gaz. vol. 205; p. 8.
Coupling device. B. H. Cook. No. 1,107,041; Aug. 11; Gaz. vol. 205; p. 550.
Coupling-knuckle stop. E. P. Kinne. No. 1,106,458; Aug. 11; Gaz. vol 205; p. 346.
Coupling-pipe for bath-tubs, basins, and the like. J. H. Glauber. No. 1,107,289; Aug. 18; Gaz. vol. 205; p. 686.
Course-finder and course-converter. C. A. Potter. No. 1,108,517; Aug. 25; Gaz. vol. 205; p. 1165.
Cover. H. E. Gifford. No. 1,108,108; Aug. 18; Gaz. vol. 205; p. 976.
Cover, Automatic foldable. A. W. Holman. No. 1,108,757; Aug. 25; Gaz. vol. 205; p. 1247.
Cover-fastening device for receptacles. M. J. Lawless. No. 1,108,765; Aug. 25; Gaz. vol. 205; p. 1249.
Cover for kettles and the like. G. F. Kearney. No. 1,106,656; Aug. 11; Gaz. vol. 205; p. 419.
Coverlet-holder. G. Persson. No. 1,106,474; Aug. 11; Gaz. vol. 205; p. 353.
Cracker and cake box filler. F. A. Shunk. No. 1,108,405; Aug. 25; Gaz. vol. 205; p. 1126.
Crank, Starting-. E. A. Nelson. No. 1,108,212; Aug. 25; Gaz. vol. 205; p. 1059.
Crate, T. H. Menchion. No. 1,107,089; Aug. 11; Gaz. vol. 205; p. 567.
Crate and drier, Seed-corn. O. G. Vold. No. 1,108,412; Aug. 25; Gaz. vol. 205; p. 1127.
Crate, Collapsible egg-. A. Lee. No. 1,106,228; Aug. 4; Gaz. vol. 205; p. 223.
Crate, Folding. P. Paul. No. 1,103,615; Aug. 25; Gaz. vol. 205; p. 1199.
Crate, Folding egg-. H. E. Fisher. No. 1,106,200; Aug. 4; Gaz. vol. 205; p. 215.
Crate for eggs, Shipping-. C. Obenauer. No. 1,106,235; Aug. 4; Gaz. vol. 205; p. 225.
Crate, Knockdown. O. Kling. No. 1,107,312; Aug. 18; Gaz. vol. 205; p. 894.
Crate, Shipping-. M. Subert. No. 1,106,011; Aug. 4; Gaz. vol. 205; p. 148.
Credit-marking apparatus. J. J. Leidigh. No. 1,106,463; Aug. 11; Gaz. vol. 205; p. 349.
Crematory. E. M. Jones. No. 1,107,615; Aug. 18; Gaz. vol. 205; p. 803.
Crown-block. R. E. Kline. No. 1,108,078; Aug. 18; Gaz. vol. 205; p. 964.
Crusher: *See* Gyratory crusher.
Crushing-machine. T. L. and T. J. Sturtevant. No. 1,105,713; Aug. 4; Gaz. vol. 205; p. 45.
Crushing-mill. T. J. Sturtevant. No. 1,105,712; Aug. 4; Gaz. vol. 205; p. 45.
Crushing-mill. T. J. Sturtevant. No. 1,107,373; Aug. 18; Gaz. vol. 205; p. 716.
Crushing-roller. J. C. Reid. No. 1,108,850; Aug. 25; Gaz. vol. 205; p. 1279.
Crutch. D. B. Monroe. No. 1,107,981; Aug. 18; Gaz. vol. 205; p. 929.
Cuff. G. P. Helmers. No. 1,105,779; Aug. 4; Gaz. vol. 205; p. 68.
Cuff-holder. C. M. Hollingsworth. No. 1,106,653; Aug. 11; Gaz. vol. 205; p. 418.
Cultivator. A. C. Lindgren. No. 1,106,722; Aug. 11; Gaz. vol. 205; p. 441.
Cultivator. J. A. Hornbeck. No. 1,107,071; Aug. 11; Gaz. vol. 205; p. 560.
Cultivator. F. C. Warne. No. 1,107,390; Aug. 18; Gaz. vol. 205; p. 723.
Cultivator. A. J. Barnhart. No. 1,107,570; Aug. 18; Gaz. vol. 205; p. 787.
Cultivator. L. W. Simmons. No. 1,107,856; Aug. 18; Gaz. vol. 205; p. 888.
Cultivator. S. S. Swanson. No. 1,108,020; Aug. 18; Gaz. vol. 205; p. 944.
Cultivator. T. S. Warner. No. 1,108,286; Aug. 25; Gaz. vol. 205; p. 1086.
Cultivator. H. L. Bell. No. 1,108,319; Aug. 25; Gaz. vol. 205; p. 1097.
Cultivator attachment. W. R. Sturgiss. No. 1,107,864; Aug. 18; Gaz. vol. 205; p. 891.
Cultivator-tooth. R. E. McCulley, W. G. Rae, and D. B. Forward. No. 1,108,600; Aug. 25; Gaz. vol. 205; p. 1194.
Cup: *See* Drinking-cup; Grease-cup.
Cupola. F. H. Heise. No. 1,106,215; Aug. 4; Gaz. vol. 205; p. 219.
Curb-box. C. E. Tyler and E. D. Every. No. 1,108,031; Aug. 18; Gaz. vol. 205; p. 948.
Current-operated device. F. Bernatz. No. 1,105,745; Aug. 4; Gaz. vol. 205; p. 56.
Curtain-fixture. W. Martin. No. 1,107,334; Aug. 18; Gaz. vol. 205; p. 702.
Curtain-supporter. S. B. Hovey. No. 1,106,566; Aug. 11; Gaz. vol. 205; p. 387.
Cushion: *See* Heel-cushion.
Cuspidor. F. D. Lane. No. 1,106,048; Aug. 4; Gaz. vol. 205; p. 162.
Cuspidor, Adjustable sanitary. J. H. Smith. No. 1,106,163; Aug. 4; Gaz. vol. 205; p. 202.
Cuspidor, Sanitary. M. Plocher. No. 1,105,693; Aug. 4; Gaz. vol. 205; p. 37.
Cutter: *See* Casing-cutter; Cheese-cutter; Cigar-tip cutter; Dredger-cutter; Flue-cutter; Ice-cutter; Shingle-cutter; Slug-cutter; Stalk-cutter; Tenon-cutter; Tobacco-cutter.
Cutter. H. M. Loomer. No. 1,105,672; Aug. 4; Gaz. vol. 205; p. 30.
Cutter-head-adjusting device. V. R. Koontz. No. 1,108,514; Aug. 25; Gaz. vol. 205; p. 1165.
Cutting and counting machine. W. H. Phillips. No. 1,106,968; Aug. 11; Gaz. vol. 205; p. 528.
Cutting and slicing machine. R. E. Forman. No. 1,106,035; Aug. 4; Gaz. vol. 205; p. 158.
Cutting-machine. L. A. Casgrain. No. 1,106,363; Aug. 11; Gaz. vol. 205; p. 312.
Cutting-machine. W. H. Wells. No. 1,108,414; Aug. 25; Gaz. vol. 205; p. 1128.
Cutting-tool. C. F. Heinkel. No. 1,106,561; Aug. 11; Gaz. vol. 205; p. 385.
Cyanid solutions from pulp, Process and apparatus for the extraction of pregnant. E. S. Pettis. No. 1,106,836; Aug. 11; Gaz. vol. 205; p. 481.
Cycle, Motor-. G. Famer. No. 1,107,990; Aug. 18; Gaz. vol. 205; p. 933.
Cycle passenger-seat, Motor-. G. F. Plank. No. 1,108,785; Aug. 25; Gaz. vol. 205; p. 1256.
Cycles and motor-cycles, Spring device for. R. Freund. No. 1,106,867; Aug. 11; Gaz. vol. 205; p. 492.
Cycles, Automatic ignition-grounder for motor-. W. E. Bard. No. 1,107,245; Aug. 18; Gaz. vol. 205; p. 671.
Cycles, Automatic stand-lifter for motor-. J. C. Pierce. No. 1,106,240; Aug. 4; Gaz. vol. 205; p. 226.
Cylinder. K. Schwarz. No. 1,106,977; Aug. 11; Gaz. vol. 205; p. 530.
Cylinder. K. Schwarz. No. 1,107,850; Aug. 18; Gaz. vol. 205; p. 886.
Damper regulator, Furnace-. C. Bruss. No. 1,105,959; Aug. 4; Gaz. vol. 205; p. 130.
Dash-pot. L. J. Tetlow. No. 1,108,276; Aug. 25; Gaz. vol. 205; p. 1081.
Davenport, Folding. G. W. Henry. No. 1,107,423; Aug. 18; Gaz. vol. 205; p. 735.
Delivery trip mechanism. A. J. Slade, Jr. No. 1,108,802; Aug. 25; Gaz. vol. 205; p. 1261.
Dental brush-mandrels, Securing device for. P. N. Souzon. No. 1,107,631; Aug. 18; Gaz. vol. 205; p. 869.
Dental castings, Pressure apparatus for. H. Schweitzer. No. 1,107,185; Aug. 11; Gaz. vol. 205; p. 602.
Dental floss-holder. B. F. Walker. No. 1,106,758; Aug. 11; Gaz. vol. 205; p. 454.
Dental instrument. L. A. Chamberlin and C. H. Williams. No. 1,105,755; Aug. 4; Gaz. vol. 205; p. 60.
Dental instrument. W. J. Hopkins. No. 1,106,815; Aug. 11; Gaz. vol. 205; p. 473.
Dental mandrel. O. C. Samphere. No. 1,106,894; Aug. 11; Gaz. vol. 205; p. 501.
Dental tool-holder. J. M. Gilmore. No. 1,108,570; Aug. 25; Gaz. vol. 205; p. 1184.
Dentifrice. L. O. Waller. No. 1,107,389; Aug. 18; Gaz. vol. 205; p. 722.
Derailing device, Portable. W. P. Newkirk. No. 1,106,155; Aug. 4; Gaz. vol. 205; p. 199.
Derrick, Hay-loading. W. L. Tull. No. 1,108,029; Aug. 18; Gaz. vol. 205; p. 947.
Desiccating process. C. E. Gray. No. 1,107,784; Aug. 18; Gaz. vol. 205; p. 864.
Desk. F. G. Kollenberg. No. 1,106,515; Aug. 11; Gaz. vol. 205; p. 368.
Desk-clamp. S. Norton. No. 1,107,543; Aug. 18; Gaz. vol. 205; p. 776.
Desk, Duplex cashier's. E. F. Wieboldt. No. 1,107,735; Aug. 18; Gaz. vol. 205; p. 846.
Die-stocks, Attachable ratchet for. C. H. Armstrong. No. 1,106,535; Aug. 11; Gaz. vol. 205; p. 375.
Dies, Forming-. E. G. Hoffmann. No. 1,106,564; Aug. 11; Gaz. vol. 205; p. 387.
Digger: *See* Post-hole digger; Potato-digger.
Digging and dredging machinery. W. J. Quimby. No. 1,108,001; Aug. 18; Gaz. vol. 205; p. 937.
Digging and gathering machine, Root. A. R. Ditsworth. No. 1,105,762; Aug. 4; Gaz. vol. 205; p. 62.
Dipper-tooth. E. S. Black. No. 1,107,253; Aug. 18; Gaz. vol. 205; p. 674.
Dish-washing machine. M. J. Weaver. No. 1,106,430; Aug. 11; Gaz. vol. 205; p. 335.
Dispensing apparatus. R. E. Bechtold and H. J. Grosvenor. No. 1,108,673; Aug. 25; Gaz. vol. 205; p. 1218.
Dispensing device. W. West and L. C. Goff. No. 1,105,732; Aug. 4; Gaz. vol. 205; p. 52.
Dispensing device. O. Karcher. No. 1,105,797; Aug. 4; Gaz. vol. 205; p. 73.
Display apparatus, Spectacular. G. T. Thompson. No. 1,106,255; Aug. 4; Gaz. vol. 205; p. 231.
Display-box. S. Moskowitz. No. 1,107,985; Aug. 18; Gaz. vol. 205; p. 931.

Display device. J. J. Karges. No. 1,107,075; Aug. 11; Gaz. vol. 205; p. 562.
Display device, Electrical. H. A. Kunitz. No. 1,108,190; Aug. 25; Gaz. vol. 205; p. 1051.
Display-lid, Removable. P. A. Becker. No. 1,107,643; Aug. 18; Gaz. vol. 205; p. 813.
Display-machine, Store-window. J. W. Schaefer. No. 1,108,008; Aug. 18; Gaz. vol. 205; p. 940.
Display-mount. S. H. Tolman. No. 1,106,688; Aug. 11; Gaz. vol. 205; p. 429.
Display-rack. O. M. Arnold. No. 1,108,061; Aug. 18; Gaz. vol. 205; p. 958.
Distillation of wood, Destructive. S. E. Seaman. No. 1,108,403; Aug. 25; Gaz. vol. 205; p. 1125.
Distillery waste, Treating. G. Meunier. No. 1,107,175; Aug. 11; Gaz. vol. 205; p. 599.
Distilling apparatus, Continuous. A. L. Obrador. No. 1,106,832; Aug. 11; Gaz. vol. 205; p. 480.
Distribution system. E. Thomson. No. 1,105,716; Aug. 4; Gaz. vol. 205; p. 46.
Dividers. H. F. Coffman. No. 1,108,706; Aug. 25; Gaz. vol. 205; p. 1229.
Dock, Floating dry-. W. T. Donnelly. No. 1,107,768; Aug. 18; Gaz. vol. 205; p. 858.
Door and gate stop, Combined. J. O. Ford. No. 1,108,731; Aug. 25; Gaz. vol. 205; p. 1239.
Door and step operating mechanism. R. T. Senter. No. 1,105,707; Aug. 4; Gaz. vol. 205; p. 43.
Door check and holder. J. A. Clem. No. 1,105,963; Aug. 4; Gaz. vol. 205; p. 131.
Door-closer. J. Eccleston. No. 1,106,640; Aug. 11; Gaz. vol. 205; p. 413.
Door-fastening device. E. E. Hawkins. No. 1,108,168; Aug. 25; Gaz. vol. 205; p. 1043.
Door-hanger. T. V. Plice. No. 1,105,919; Aug. 4; Gaz. vol. 205; p. 116.
Door-hanger. R. Mueller. No. 1,106,233; Aug. 4; Gaz. vol. 205; p. 224.
Door-hanger. P. W. Thomas. No. 1,106,992; Aug. 11; Gaz. vol. 205; p. 534.
Door hanger part, Barn-. T. V. Plice. No. 1,105,918; Aug. 4; Gaz. vol. 205; p. 116.
Door-holder. H. P. Spain. No. 1,107,124; Aug. 11; Gaz. vol. 205; p. 578.
Door holding and releasing device. H. G. Voight. No. 1,107,388; Aug. 18; Gaz. vol. 205; p. 722.
Door-lock. F. Karácsonyi. No. 1,106,223; Aug. 4; Gaz. vol. 205; p. 222.
Door-lock. F. W. Wilkinson and F. Ziganck. No. 1,107,736; Aug. 18; Gaz. vol. 205; p. 846.
Door-operating mechanism. B. F. Lively. No. 1,108,769; Aug. 25; Gaz. vol. 205; p. 1250.
Door-securing means. C. M. Rumbaugh. No. 1,107,362; Aug. 18; Gaz. vol. 205; p. 712.
Door, Ventilated. F. M. Shelton. No. 1,107,369; Aug. 18; Gaz. vol. 205; p. 715.
Doors, &c., Friction device for. C. T. Ashman. No. 1,108,663; Aug. 25; Gaz. vol. 205; p. 1216.
Doors in multiple with control. R. A. Gally. No. 1,106,041; Aug. 4; Gaz. vol. 205; p. 160.
Doubletree. W. H. Crossley. No. 1,106,549; Aug. 11; Gaz. vol. 205; p. 381.
Draft-equalizer. N. W. Finch. No. 1,107,277; Aug. 18; Gaz. vol. 205; p. 682.
Draft-equalizer for tubular boilers. T. J. Kennedy. No. 1,105,798; Aug. 4; Gaz. vol. 205; p. 74.
Draft-gear. V. Wrociawski and M. Kolasinski. No. 1,107,396; Aug. 18; Gaz. vol. 205; p. 724.
Draft-gear. H. C. Priebe. No. 1,108,231; Aug. 25; Gaz. vol. 205; p. 1066.
Draft-gear, Twin. C. C. Farmer. No. 1,107,275; Aug. 18; Gaz. vol. 205; p. 682.
Draft-regulator. A. W. Walker. No. 1,106,904; Aug. 11; Gaz. vol. 205; p. 505.
Drag, Road-. T. Y. Boyd. No. 1,108,126; Aug. 25; Gaz. vol. 205; p. 1029.
Drain-pipe trap, Refrigerator-. T. P. Bolger. No. 1,107,884; Aug. 18; Gaz. vol. 205; p. 897.
Drawbridge. C. A. P. Turner. No. 1,106,259; Aug. 4; Gaz. vol. 205; p. 233.
Drawer, Table-. L. W. Pennock. No. 1,108,082; Aug. 18; Gaz. vol. 205; p. 966.
Drawing implement. N. A. Mantz. No. 1,107,432; Aug. 18; Gaz. vol. 205; p. 739.
Drawing instrument, Involuting. O. E. McCaskill. No. 1,106,883; Aug. 11; Gaz. vol. 205; p. 497.
Dredger cutter, Suction-. O. Frühling. No. 1,106,038; Aug. 4; Gaz. vol. 205; p. 159.
Dress-shield. E. M. Brennan. No. 1,108,427; Aug. 25; Gaz. vol. 205; p. 1133.
Drier: *See* Clothes-drier; Film-drier; Leather-drier; Pneumatic drier; Print-drier.
Drier. W. B. Ruggles. No. 1,105,927; Aug. 4; Gaz. vol. 205; p. 119.
Dry-kiln for lumber, &c. J. M. Leaver. No. 1,108,377; Aug. 25; Gaz. vol. 205; p. 1116.
Drying apparatus. C. Grau. No. 1,107,294; Aug. 18; Gaz. vol. 205; p. 687.
Drying apparatus. E. Feuillette. No. 1,108,565; Aug 25; Gaz. vol. 205; p. 1182.
Drying apparatus, Electric. W. K. Mason. No. 1,107,814; Aug. 18; Gaz. vol. 205; p. 873.
Drying-cylinder. G. D. Kilberry. No. 1,108,077; Aug. 18; Gaz. vol. 205; p. 964.
Drill: *See* Fluid-operated drill; Percussive drill; Rock-drill; Seed-drill; Turbine-drill.
Drill. J. T. Hoal. No. 1,106,306; Aug. 4; Gaz. vol. 205; p. 248.
Drill. C. Pauli. No. 1,106,966; Aug. 11; Gaz. vol. 205; p. 527.
Drill jar, Well-. W. A. Sparks. No. 1.108.267; Aug. 25; Gaz. vol. 205; p. 1078.
Drill rod, Twist-. S. Denk. No. 1,106,928; Aug. 11; Gaz. vol. 205; p. 514.
Drilling-mechanism brace. J. M. Hatfield. No. 1,107,941; Aug. 18; Gaz. vol. 205; p. 915.
Drilling-rig. R. W. Stephens. No. 1,106,900; Aug. 11; Gaz. vol. 205; p. 503.
Drinking-cup, Sanitary. J. Powers. No. 1,107,347; Aug. 18; Gaz. vol. 205; p. 708.
Drinking-cups, Manufacturing sanitary. J. Powers. No. 1,107,348; Aug. 18; Gaz. vol. 205; p. 708.
Drinking-glass. H. Pick. No. 1,107,700; Aug. 18; Gaz. vol. 205; p. 833.
Drive, Four-wheel. A. E. Holtermann. No. 1,108,367; Aug. 25; Gaz. vol. 205; p. 1113.
Drive mechanism. H. Grob. No. 1,107,196; Aug. 11; Gaz. vol. 205; p. 606.
Drive mechanism, Variable-speed frictional. W. Bartholomew. No. 1,108,672; Aug. 25; Gaz. vol. 205; p. 1218.
Driving-gearing. W. Poniatowski. No. 1,107,108; Aug. 11; Gaz. vol. 205; p. 572.
Duplicating-machine. A. H. Bates. No. 1,106,071; Aug. 4; Gaz. vol. 205; p. 170.
Dust-agglutinating composition. H. Belger. No. 1,107,880; Aug. 18; Gaz. vol. 205; p. 896.
Dust-collector. G. J. and E. L. Knapp. No. 1,106,101; Aug. 4; Gaz. vol. 205; p. 182.
Dust-pan. W. E. Coats. No. 1,106,282; Aug. 4; Gaz. vol. 205; p. 239.
Dust-pan. K. C. Kane. No. 1,107,961; Aug. 18; Gaz. vol. 205; p. 921.
Dyeing apparatus. J. Schmitz. No. 1,105,845; Aug. 4; Gaz. vol. 205; p. 91.
Dyeing apparatus. A. J. and J. A. Pau. No. 1,108,233; Aug. 25; Gaz. vol. 205; p. 1066.
Dyeing-machine, Beam. F. M. Morton. No. 1,107,095; Aug. 11; Gaz. vol. 205; p. 568.
Dyeing vegetable fibers. J. Turner and H. Dean. No. 1,105,722; Aug. 4; Gaz. vol. 205; p. 48.
Dyeings on the fiber, Producing fast. R. Herz. No. 1,107,164; Aug. 11; Gaz. vol. 205; p. 595.
Dyes with aralkyl compounds and making same, Compounds of leuco vat. K. Reinking and A. J. Stiegelmann. No. 1,106,970; Aug. 11; Gaz. vol. 205; p. 528.
Dyestuff and manufacturing the same. E. S. Chapin and E. Lesser. No. 1,106,781; Aug. 11; Gaz. vol. 205; p. 462.
Dyestuffs and making same, Green mordant. E. Bodmer. No. 1,106,185; Aug. 4; Gaz. vol. 205; p. 210.
Dyestuffs, Manufacture of vat. E. Wray. No. 1,108,056; Aug. 18; Gaz. vol. 205; p. 957.
Dyestuffs, Manufacture of vat. E. Wray. No. 1,108,057; Aug. 18; Gaz. vol. 205; p. 957.
Dynamo. E. M. Tormin. No. 1,108,086; Aug. 18; Gaz. vol. 205; p. 967.
Dynamo. E. M. Tormin. No. 1,108,087; Aug. 18; Gaz. vol. 205; p. 968.
Eaves-trough hanger, Adjustable. W. T. Braswell. No. 1,105,748; Aug. 4; Gaz. vol. 205; p. 57.
Edge-trimming machine. J. B. Hadawny. No. 1,107,668; Aug. 18; Gaz. vol. 205; p. 823.
Edger-guide. A. Boyer. No. 1,107,751; Aug. 18; Gaz. vol. 205; p. 851.
Edging-mill. V. Chartener. No. 1,107,493; Aug. 18; Gaz. vol. 205; p. 760.
Egg-handling device. H. E. Rex. No. 1,106,059; Aug. 4; Gaz. vol. 205; p. 166.
Egg holder and carrier. H. L. G. Moore. No. 1,108,606; Aug. 25; Gaz. vol. 205; p. 1196.
Egg-tester. J. M. Irvine. No. 1,106,348; Aug. 4; Gaz. vol. 205; p. 262.
Egg-tester. J. J. Harper. No. 1,108,364; Aug. 25; Gaz. vol. 205; p. 1112.
Egg-testing device. M. P. Baken. No. 1,106,127; Aug. 4; Gaz. vol. 205; p. 191.
Ejecting mechanism. C. F. Kewitz. No. 1,106,570; Aug. 11; Gaz. vol. 205; p. 388.
Ejector. B. W. McClymont. No. 1,105,985; Aug. 4; Gaz. vol. 205; p. 139.
Ejector. J. G. Nasinec. (now by change of name J. G. Nasin.) No. 1,108,104; Aug. 18; Gaz. vol. 205; p. 974.
Elastic strap. C. Müller and O. Pilz. No. 1,106,959; Aug. 11; Gaz. vol. 205; p. 525.
Elastic wheel. S. C. Hatfield. No. 1,105,654; Aug. 4; Gaz. vol. 205; p. 24.
Elastic wheel. L. L. B. Denis. No. 1,107,916; Aug. 18; Gaz. vol. 205; p. 906.
Electric conductor. F. Färber. No. 1,108,350; Aug. 25; Gaz. vol. 205; p. 1107.
Electric-conductor take-up. D. C. Lamb. No. 1,106,821; Aug. 11; Gaz. vol. 205; p. 476.
Electric contact-maker for flow-meters. J. Wilkinson. No. 1,106,907; Aug. 11; Gaz. vol. 205; p. 506.
Electric-current-controlling apparatus. A. E. Berdon. No. 1,108,320; Aug. 25; Gaz. vol. 205; p. 1098.
Electric devices, Means for supporting. G. A. Lutz. No. 1,106,103; Aug. 4; Gaz. vol. 205; p. 182.

Electric furnace. E. Stassano. No. 1,105,859; Aug. 4; Gaz. vol. 205; p. 90.
Electric furnace. N. Testrup and T. Rigby. No. 1,106,166; Aug. 4; Gaz. vol. 205; p. 203.
Electric furnace. G. H. Benjamin. No. 1,106,486; Aug. 11; Gaz. vol. 205; p. 358.
Electric furnace and operating the same. R. A. Bayard. No. 1,107,478; Aug. 18; Gaz. vol. 205; p. 755.
Electric-furnace process and electric furnace. C. Hering. No. 1,105,656; Aug. 4; Gaz. vol. 205; p. 25.
Electric heater. F. Kuhn and F. E. Shallor. No. 1,107,323; Aug. 18; Gaz. vol. 205; p. 698.
Electric heater. G. H. Mansfield and C. W. Wild. No. 1,107,333; Aug. 18; Gaz. vol. 205; p. 702.
Electric-light bracket. C. W. Lucas. No. 1,107,811; Aug. 18; Gaz. vol. 205; p. 872.
Electric machine, Dynamo-. D. C. Jackson. No. 1,106,514; Aug. 11; Gaz. vol. 205; p. 368.
Electric machine, Dynamo-. V. A. Fynn. No. 1,108,568; Aug. 25; Gaz. vol. 205; p. 1183.
Electric meter, Recording. C. H. Ingalls. No. 1,106,710; Aug. 11; Gaz. vol. 205; p. 436.
Electric motor. D. C. Jackson. No. 1,106,513; Aug. 11; Gaz. vol. 205; p. 368.
Electric plug. F. Deiser. No. 1,106,442; Aug. 11; Gaz. vol. 205; p. 339.
Electric pneumatic-pressure control. E. K. Parker. No. 1,108,470; Aug. 25; Gaz. vol. 205; p. 1148.
Electric switch. B. F. Swyers. No. 1,106,593; Aug. 11; Gaz. vol. 205; p. 397.
Electric switch. E. E. Clement. No. 1,107,153; Aug. 11; Gaz. vol. 205; p. 591.
Electric switch. F. Harr. No. 1,107,246; Aug. 18; Gaz. vol. 205; p. 671.
Electric switch. F. Harr. No. 1,107,247; Aug. 18; Gaz. vol. 205; p. 671.
Electric switch. B. Benedict. No. 1,107,646; Aug. 18; Gaz. vol. 205; p. 815.
Electric switch. M. Guett. No. 1,108,359; Aug. 25; Gaz. vol. 205; p. 1110.
Electric switch, Rotary. M. K. Ownbey. No. 1,107,099; Aug. 11; Gaz. vol. 205; p. 569.
Electric switches, Ratchet mechanism for. J. G. Peterson. No. 1,108,516; Aug. 25; Gaz. vol. 205; p. 1165.
Electric test-meter. G. A. Scheeffer. No. 1,108,401; Aug. 25; Gaz. vol. 205; p. 1125.
Electric train distribution. E. R. Carichoff. No. 1,105,754; Aug. 4; Gaz. vol. 205; p. 59.
Electric transmission-line. C. L. Michod. No. 1,106,468; Aug. 11; Gaz. vol. 205; p. 351.
Electrical apparatus. F. Conrad. No. 1,106,368; Aug. 11; Gaz. vol. 205; p. 314.
Electrical apparatus, Cooling. H. M. Hobart. No. 1,105,783; Aug. 4; Gaz. vol. 205; p. 69.
Electrical battery. A. S. Hubbard. No. 1,106,095; Aug. 4; Gaz. vol. 205; p. 179.
Electrical-conduit fitting. K. Sixma. No. 1,108,259; Aug. 25; Gaz. vol. 205; p. 1076.
Electrical coupling. C. H. Bissell. No. 1,107,401; Aug. 18; Gaz. vol. 205; p. 727.
Electrical devices, Means for preventing sparking in. L. Grubman. No. 1,107,932; Aug. 18; Gaz. vol. 205; p. 912.
Electrical distribution system. A. S. Hubbard. No. 1,106,510; Aug. 11; Gaz. vol. 205; p. 366.
Electrical heater. F. Kuhn. No. 1,107,322; Aug. 18; Gaz. vol. 205; p. 698.
Electrical oscillations, Apparatus for the production of continuous. H. Manders. No. 1,105,984; Aug. 4; Gaz. vol. 205; p. 139.
Electrical plug-connector. F. Kuhn. No. 1,107,318; Aug. 18; Gaz. vol. 205; p. 696.
Electrical selection system. N. L. Tolvstad. No. 1,108,028; Aug. 18; Gaz. vol. 205; p. 947.
Electrically-heated device. F. E. Carlson. No. 1,105,962; Aug. 4; Gaz. vol. 205; p. 131.
Electro-optical cell. C. Stille. No. 1,108,638; Aug. 25; Gaz. vol. 205; p. 1207.
Electrode, Arc-lamp. C. W. Dake. No. 1,105,887; Aug. 4; Gaz. vol. 205; p. 104.
Electrode, Electrotherapeutic fluid. H. Bonis. No. 1,108,686; Aug. 25; Gaz. vol. 205; p. 1223.
Electrode for welding. A. B. Herrick. No. 1,106,347; Aug. 4; Gaz. vol. 205; p. 262.
Electrode, Furnace-. C. Hering. No. 1,106,381; Aug. 11; Gaz. vol. 205; p. 319.
Electrolysis and treatment of sulfate liquors. E. J. Hunt and W. T. Gidden. No. 1,107,309; Aug. 18; Gaz. vol. 205; p. 693.
Electrolytic cell. J. B. Burdett. No. 1,107,257; Aug. 18; Gaz. vol. 205; p. 675.
Electrolytic cell. J. B. Burdett. No. 1,107,258; Aug. 18; Gaz. vol. 205; p. 676.
Electrolytic cell. J. B. Burdett. No. 1,107,259; Aug. 18; Gaz. vol. 205; p. 676.
Electromagnet and similar apparatus. P. Bossu. No. 1,106,187; Aug. 4; Gaz. vol. 205; p. 210.
Electromechanical switch. R. R. Miller. No. 1,106,576; Aug. 11; Gaz. vol. 205; p. 391.
Electrometric appliance. W. Jandus. No. 1,107,670; Aug. 18; Gaz. vol. 205; p. 823.
Electroplating apparatus. J. T. Daniels. No. 1,108,145; Aug. 25; Gaz. vol. 205; p. 1036.
Electroplating apparatus. E. B. Stone. No. 1,108,410; Aug. 25; Gaz. vol. 205; p. 1127.
Electropneumatic brake. W. V. Turner. No. 1,107,381; Aug. 18; Gaz. vol. 205; p. 719.
Elevator: *See* Assembling-elevator; Grain-elevator; Portable elevator; Sucker-rod elevator.
Elevator-door-controlling means. H. G. Voight. No. 1,108,481; Aug. 25; Gaz. vol. 205; p. 1152.
Elevator-door safety device. E. M. Frasier. No. 1,106,294; Aug. 4; Gaz. vol. 205; p. 243.
Elevator electric signaling device. F. S. Payne. No. 1,108,782; Aug. 25; Gaz. vol. 205; p. 1254.
Elevator-guide-rail lubricator. L. Schulthels. No. 1,105,929; Aug. 4; Gaz. vol. 205; p. 120.
Elevator-head. G. J. Bickhart. No. 1,107,882; Aug. 18; Gaz. vol. 205; p. 896.
Elevator safety-catch. S. H. Dolph. No. 1,108,723; Aug. 25; Gaz. vol. 205; p. 1236.
Elevator safety device. L. E. Hawk. No. 1,106,379; Aug. 11; Gaz. vol. 205; p. 318.
Elevator safety device. W. Friman. No. 1,108,355; Aug. 25; Gaz. vol. 205; p. 1108.
Elevator safety-gate. J. F. Hantke. No. 1,107,608; Aug. 18; Gaz. vol. 205; p. 801.
Embalming-board. E. M. and H. E. Brown. No. 1,108,326; Aug. 25; Gaz. vol. 205; p. 1099.
Embossing-press. G. E. Pancoast. No. 1,106,473; Aug. 11; Gaz. vol. 205; p. 353.
Embroidering-machine. O. Walther. No. 1,106,429; Aug. 11; Gaz. vol. 205; p. 335.
Embroidering-machine take-up mechanism. R. Zahn. No. 1,108,418; Aug. 25; Gaz. vol. 205; p. 1129.
Embroidering-machines, Boring apparatus for. F. W. Lässig. No. 1,107,622; Aug. 18; Gaz. vol. 205; p. 806.
Embroidering-machines, Thread-cutting mechanism for. M. Schoenfeld. No. 1,107,711; Aug. 18; Gaz. vol. 205; p. 837.
Embroidery-machine jacquard apparatus. V. Kobler. No. 1,107,674; Aug. 18; Gaz. vol. 205; p. 825.
Emulsion products and producing them. L. Berend. No. 1,107,020; Aug. 11; Gaz. vol. 205; p. 543.
Enamel, Producing an opaquing agent for white. I. Kreidl. (Reissue.) No. 13,791; Aug. 25; Gaz. vol. 205; p. 1291.
Engine: *See* Beating-engine; Explosive-engine; Gas-engine; Gasolene-engine; Hydrocarbon-engine; Internal-combustion engine; Reciprocating engine; Rotary engine; Rotary gas-engine; Rotary internal-combustion engine; Rotary steam-engine; Steam-engine; Traction-engine.
Engine. E. L. Seery. No. 1,107,853; Aug. 18; Gaz. vol. 205; p. 887.
Engine construction. C. H. Bartlett. No. 1,105,604; Aug. 4; Gaz. vol. 205; p. 5.
Engine-controlling apparatus, Hoisting-. C. R. Welch. No. 1,108,044; Aug. 18; Gaz. vol. 205; p. 952.
Engine cylinder-head, Internal-combustion-. K. J. E. Hesselman. No. 1,107,946; Aug. 18; Gaz. vol. 205; p. 917.
Engine distributing apparatus. L. Saussard. No. 1,106,243; Aug. 4; Gaz. vol. 205; p. 227.
Engine fuel-governing mechanism, Internal-combustion-. A. Winton. No. 1,106,326; Aug. 4; Gaz. vol. 205; p. 255.
Engine heater, Internal-combustion-. F. J. C. F. Knaak. No. 1,107,967; Aug. 18; Gaz. vol. 205; p. 924.
Engine igniters, Short-circuiting attachment for gas-. C. M. Weeks and H. N. Jackson. No. 1,107,000; Aug. 11; Gaz. vol. 205; p. 536.
Engine-lubricating system. G. W. Dunham. No. 1,105,894; Aug. 4; Gaz. vol. 205; p. 107.
Engine-mounting for motor-vehicles. F. H. Royce. No. 1,108,242; Aug. 25; Gaz. vol. 205; p. 1069.
Engine or motor. W. V. D. Kelley. No. 1,108,182; Aug. 25; Gaz. vol. 205; p. 1047.
Engine sparking device, Internal-combustion-. G. Honold. No. 1,105,659; Aug. 4; Gaz. vol. 205; p. 26.
Engine sparking plug, Internal-combustion-. E. Blattmann. No. 1,105,746; Aug. 4; Gaz. vol. 205; p. 56.
Engine-starter. H. W. Bachelder. No. 1,106,180; Aug. 4; Gaz. vol. 205; p. 208.
Engine-starter. W. A. Merralls. No. 1,107,687; Aug. 18; Gaz. vol. 205; p. 829.
Engine-starter. R. Nelson. No. 1,108,609; Aug. 25; Gaz. vol. 205; p. 1197.
Engine starter, Explosive-. D. M. Hartsough. No. 1,105,775; Aug. 4; Gaz. vol. 205; p. 66.
Engine-starter, Pneumatic. G. G. Westerfield. No. 1,108,291; Aug. 25; Gaz. vol. 205; p. 1087.
Engine-starting device. W. H. Winks. No. 1,106,268; Aug. 4; Gaz. vol. 205; p. 235.
Engine-starting device, Explosive-. S. H., F. H., and B. W. Heginbottom. No. 1,108,498; Aug. 25; Gaz. vol. 205; p. 1159.
Engine-starting device, Internal-combustion-. C. C. Butler. No. 1,107,407; Aug. 18; Gaz. vol. 205; p. 729.
Engine-starting means, Internal-combustion-. J. Desmond. No. 1,108,720; Aug. 25; Gaz. vol. 205; p. 1235.
Engine-starting mechanism, Gas-. W. H. Schoomaker. No. 1,108,250; Aug. 25; Gaz. vol. 205; p. 1073.
Engines, Charge-forming device for internal-combustion. E. Schneider. No. 1,106,115; Aug. 4; Gaz. vol. 205; p. 186.
Engines, Controlling the starting and working of. A. Esplen. No. 1,106,197; Aug. 4; Gaz. vol. 205; p. 214.
Engines, Current conducting and distributing device for internal-combustion. F. A. Zika. No. 1,105,741; Aug. 4; Gaz. vol. 205; p. 54.

Engines, Economizing fuel and preventing carbon deposits in explosive-. C. L. Nedoma. No. 1,108,608; Aug. 25; Gaz. vol. 205; p. 1197.
Engines, Electrical igniting device for internal-combustion. E. Gassmann. No. 1,108,739; Aug. 25; Gaz. vol. 205; p. 1241.
Engines, Fuel-vaporizer for explosion-. H. H. and C. B. Ingersoll. No. 1,106,386; Aug. 11; Gaz. vol. 205; p. 320.
Engines, Leveling device for traction-. J. F. McGuire. No. 1,108,203; Aug. 25; Gaz. vol. 205; p. 1056.
Engines, Primer for internal-combustion. C. B. and J. F. Strang. No. 1,108,411; Aug. 25; Gaz. vol. 205; p. 1127.
Engines, Priming apparatus for internal-combustion. A. W. Juntunen. No. 1,108,760; Aug. 25; Gaz. vol. 205; p. 1248.
Engines, Regulating mechanism for mixed-pressure. O. Banner. No. 1,105,952; Aug. 4; Gaz. vol. 205; p. 128.
Engraving-machine. F. Deckel. No. 1,106,084; Aug. 4; Gaz. vol. 205; p. 174.
Ensilage-machine. R. Kelly and E. F. Sibert. No. 1,108,373; Aug. 25; Gaz. vol. 205; p. 1115.
Envelop. J. W. Burgewitz. No. 1,106,623; Aug. 11; Gaz. vol. 205; p. 408.
Envelop. E. F. Ahlquist. No. 1,108,540; Aug. 25; Gaz. vol. 205; p. 1174.
Envelop and coin-carrier, Combined. C. C. Taylor. No. 1,108,274; Aug. 25; Gaz. vol. 205; p. 1081.
Envelop-closure. G. F. Hogan. No. 1,105,785; Aug. 4; Gaz. vol. 205; p. 69.
Envelop for circular-letters. G. R. Sharp. No. 1,108,257; Aug. 25; Gaz. vol. 205; p. 1075.
Envelop-machine. J. Froehlich. No. 1,108,734; Aug. 25; Gaz. vol. 205; p. 1240.
Envelop-manipulating mechanism. L. E. Morrison. No. 1,106,470; Aug. 11; Gaz. vol. 205; p. 352.
Envelop, Safety-. E. J. Lewis. No. 1,106,721; Aug. 11; Gaz. vol. 205; p. 441.
Ethane, Manufacturing. S. P. Mulliken and H. K. Moore. No. 1,107,696; Aug. 18; Gaz. vol. 205; p. 832.
Evaporator. E. Zaremba and O. Mantius. No. 1,106,532; Aug. 11; Gaz. vol. 205; p. 374.
Excavating-machine. C. E. Stahl. No. 1,108,268; Aug. 25; Gaz. vol. 205; p. 1079.
Excavating-machines, Two-part dipper for. E. S. Black. No. 1,107,252; Aug. 18; Gaz. vol. 205; p. 674.
Excavator. L. P. Clutter. No. 1,107,899; Aug. 18; Gaz. vol. 205; p. 901.
Excelsior-machine. O. Chaffey. No. 1,107,031; Aug. 11; Gaz. vol. 205; p. 546.
Expansion-bolt. E. Adler. No. 1,108,656; Aug. 25; Gaz. vol. 205; p. 1213.
Explosive, Antimony-sulfid-coated granulated. W. R. Hibbard. No. 1,108,437; Aug. 25; Gaz. vol. 205; p. 1136.
Explosive compound. W. C. Waddell. No. 1,105,865; Aug. 4; Gaz. vol. 205; p. 98.
Explosive compounds, Manufacturing. W. C. Waddell. No. 1,105,864; Aug. 4; Gaz. vol. 205; p. 98.
Explosive-engine. J. A. Charter. No. 1,106,782; Aug. 11; Gaz. vol. 205; p. 462.
Explosive-engine. W. Woodward. No. 1,108,303; Aug. 25; Gaz. vol. 205; p. 1092.
Explosive-engine, Rotary. E. I. Anderson. No. 1,107,872; Aug. 18; Gaz. vol. 205; p. 893.
Explosive priming composition. A. Jaques and G. Wells. No. 1,106,147; Aug. 4; Gaz. vol. 205; p. 197.
Extensible table. N. Jacovatos. No. 1,107,954; Aug. 18; Gaz. vol. 205; p. 919.
Extension-table. J. Ingells. No. 1,106,872; Aug. 11; Gaz. vol. 205; p. 494.
Extractor: *See* Bung-extractor; Centrifugal extractor; Nail-extractor; Rod-extractor.
Eyeglass-holder, Adjustable finger-piece. L. T. Feaster. No. 1,105,641; Aug. 4; Gaz. vol. 205; p. 20.
Eyeglasses and mounting. W. I. Fancher. No. 1,107,598; Aug. 18; Gaz. vol. 205; p. 797.
Eyeglasses, Detachable lens-mount for. B. Moldenhauer. No. 1,107,823; Aug. 18; Gaz. vol. 205; p. 876.
Eyeglasses, Nose-clip for. C. O. Pettersson. No. 1,108,226; Aug. 25; Gaz. vol. 205; p. 1064.
Eyelet-setting means. W. A. Bernard. No. 1,105,872; Aug. 4; Gaz. vol. 205; p. 100.
Fabric: *See* Insulating fabric; Wire fabric.
Fabric-clamp. F. A. Donnelly and J. E. Blanthorn. No. 1,106,136; Aug. 4; Gaz. vol. 205; p. 194.
Fabric-drying apparatus. J. A. Firsching. No. 1,107,162; Aug. 11; Gaz. vol. 205; p. 595.
Fabrics, Treating textile and other porous. F. J. Staunton. No. 1,108,408; Aug. 25; Gaz. vol. 205; p. 1126.
False work. D. B. Luten. No. 1,106,880; Aug. 11; Gaz. vol. 205; p. 496.
Fan and eye-shade, Combined. E. J. Williams. No. 1,108,649; Aug. 25; Gaz. vol. 205; p. 1210.
Fan and pump, Centrifugal. S. C. Davidson. No. 1,105,967; Aug. 4; Gaz. vol. 205; p. 133.
Fan, Portable electric. T. R. Wiwi and J. W. Fassett. No. 1,108,053; Aug. 18; Gaz. vol. 205; p. 956.
Fans, Electric heater for. A. Schaeffer. No. 1,106,975; Aug. 11; Gaz. vol. 205; p. 530.
Fare-box. W. T. Cook. No. 1,105,620; Aug. 4; Gaz. vol. 205; p. 11.
Fare-box. W. T. Cook. No. 1,105,621; Aug. 4; Gaz. vol. 205; p. 11.
Fastener. C. Joseph. No. 1,105,796; Aug. 4; Gaz. vol. 205; p. 73.
Fastener. J. Apoll. No. 1,106,534; Aug. 11; Gaz. vol. 205; p. 375.
Fastener-inserting machine. D. W. Colby. No. 1,106,367; Aug. 11; Gaz. vol. 205; p. 314.
Fastener-inserting machine. H. A. Ballard. No. 1,108,421; Aug. 25; Gaz. vol. 205; p. 1130.
Fastener, Separable. J. Winter. No. 1,105,738; Aug. 4; Gaz. vol. 205; p. 54.
Fasteners, Tool for driving corrugated. C. S. Thompson. No. 1,108,279; Aug. 25; Gaz. vol. 205; p. 1083.
Fastening-inserting machine. A. Bates and T. Briggs. No. 1,107,248; Aug. 18; Gaz. vol. 205; p. 672.
Fastening-inserting means. F. L. MacKenzie. No. 1,106,393; Aug. 11; Gaz. vol. 205; p. 322.
Faucet attachment. J. Regar. (Reissue.) No. 13,786; Aug. 4; Gaz. vol. 205; p. 266.
Faucet, Compression-. J. P. Farley. No. 1,106,933; Aug. 11; Gaz. vol. 205; p. 515.
Faucet-hole cover. D. G. Butts. No. 1,107,490; Aug. 18; Gaz. vol. 205; p. 759.
Faucet or cock, Compression. F. Schulder. No. 1,107,205; Aug. 11; Gaz. vol. 205; p. 609.
Fault-localizer. E. E. F. Creighton. No. 1,105,883; Aug. 4; Gaz. vol. 205; p. 103.
Feed and water fountain for poultry. E. H. Schwartzburg. No. 1,107,206; Aug. 11; Gaz. vol. 205; p. 610.
Feed-cutter feeding device. O. C. Frick. No. 1,108,163; Aug. 25; Gaz. vol. 205; p. 1041.
Feed device or trough. W. L. Crabill. No. 1,106,547; Aug. 11; Gaz. vol. 205; p. 380.
Feed for poultry, Automatic water-. H. L. Davis. No. 1,107,268; Aug. 18; Gaz. vol. 205; p. 679.
Feed mechanism. M. Brochu. No. 1,106,328; Aug. 4; Gaz. vol. 205; p. 256.
Feed-water heater. E. T. Turner. No. 1,107,379; Aug. 18; Gaz. vol. 205; p. 719.
Feed-water heater. W. P. Caine. No. 1,107,409; Aug. 18; Gaz. vol. 205; p. 731.
Feed-water-heating apparatus, Boiler-. D. B. Morison. No. 1,108,210; Aug. 25; Gaz. vol. 205; p. 1058.
Feeder, Automatic poultry-. D. Wood. No. 1,107,394; Aug. 18; Gaz. vol. 205; p. 724.
Feeder, Chicken-. M. E. Strickler. No. 1,108,019; Aug. 18; Gaz. vol. 205; p. 944.
Feeder, Poultry scratch grain-. J. H. Crowell. No. 1,105,885; Aug. 4; Gaz. vol. 205; p. 104.
Feeding and creasing device. H. B. Cooley. No. 1,107,194; Aug. 11; Gaz. vol. 205; p. 605.
Felting-machine. F. Schaeffer and W. J. Shearer. No. 1,108,244; Aug. 25; Gaz. vol. 205; p. 1070.
Fence. C. L. Michod. No. 1,106,826; Aug. 11; Gaz. vol. 205; p. 478.
Fence-clamp. W. L. Dillon. No. 1,107,159; Aug. 11; Gaz. vol. 205; p. 594.
Fence-machine. E. W. Cornell. No. 1,105,622; Aug. 4; Gaz. vol. 205; p. 12.
Fence-post. D. R. Burns. No. 1,107,406; Aug. 18; Gaz. vol. 205; p. 729.
Fence-post. T. W. Smith. No. 1,107,858; Aug. 18; Gaz. vol. 205; p. 889.
Fence post. C. J. Westphall. No. 1,108,535; Aug. 25; Gaz. vol. 205; p. 1172.
Fence-post, Composition. G. E. Zaring. No. 1,106,694; Aug. 11; Gaz. vol. 205; p. 431.
Fence-wire reel. C. Anderson. No. 1,108,311; Aug. 25; Gaz. vol. 205; p. 1095.
Fence-wire splicing. L. N. Pfeiffer. No. 1,107,104; Aug. 11; Gaz. vol. 205; p. 571.
Fences, Tool for building and repairing wire. R. L. Bingham. No. 1,106,771; Aug. 11; Gaz. vol. 205; p. 458.
Fender: *See* Auto-fender; Automatic fender; Automobile-fender; Car-fender; Plow-fender.
Fender. E. L. Droz. No. 1,107,046; Aug. 11; Gaz. vol. 205; p. 552.
Fender. E. F. Shue. No. 1,108,801; Aug. 25; Gaz. vol. 205; p. 1261.
Ferment, Making a. P. Altenfeld. No. 1,105,601; Aug. 4; Gaz. vol. 205; p. 4.
Ferrous liquors, Utilizing waste. W. F. Oesterle, Jr., C. A. Beale, and J. McFetridge. No. 1,108,387; Aug. 25; Gaz. vol. 205; p. 1120.
Ferry-landing apparatus. A. T. Prescott. No. 1,107,702; Aug. 18; Gaz. vol. 205; p. 834.
Fertilizer and making the same. G. H. Benjamin. No. 1,105,607; Aug. 4; Gaz. vol. 205; p. 7.
Fertilizer and manufacturing the same. T. Knösel. No. 1,108,189; Aug. 25; Gaz. vol. 205; p. 1051.
Fertilizer-distributer. J. R. Smith. No. 1,108,263; Aug 25; Gaz. vol. 205; p. 1077.
Fiber-board, Machine for smoothing. A. W. Case. No. 1,106,492; Aug. 11; Gaz. vol. 205; p. 360.
Fiber from the stalk of the abaca-plant, Apparatus for extracting the. A. de Icsiar. No. 1,108,075; Aug. 18; Gaz. vol. 205; p. 963.
Fiber-treating machines, Apron for. G. J. Torrance. No. 1,107,730; Aug. 18; Gaz. vol. 205; p. 844.
Fibers, gums, and juices from fibrous plants, Apparatus for obtaining. F. V. Raymond, W. O. Beere, and J. E. Rough. No. 1,107,840; Aug. 18; Gaz. vol. 205; p. 882.
Filament-mounting. H. C. G. Remané. No. 1,106,971; Aug. 11; Gaz. vol. 205; p. 528.

Filaments, films, and masses from cellulose acetate, Preparing. H. S. Mork. No. 1,107,222; Aug. 11; Gaz. vol. 205; p. 615.
File. J. H. Barker. No. 1,106,536; Aug. 11; Gaz. vol. 205; p. 376.
File, Account-. W. Barr, Jr. No. 1,107,742; Aug. 18; Gaz. vol. 205; p. 849.
File-box. W. H. Whittle. No. 1,106,265; Aug. 4; Gaz. vol. 205; p. 235.
File or register, Account. L. E. Leonard. No. 1,107,326; Aug. 18; Gaz. vol. 205; p. 699.
File or the like, Letter-. W. A. Cooke, Jr. No. 1,107,657; Aug. 18; Gaz. vol. 205; p. 819.
Filing appliance. H. J. Hick. No. 1,107,305; Aug. 18; Gaz. vol. 205; p. 691.
Filing appliance. H. J. Hick. No. 1,107,307; Aug. 18; Gaz. vol. 205; p. 692.
Filing device. B. McDonald. No. 1,106,396; Aug. 11; Gaz. vol. 205; p. 323.
Filing device, Account-. P. A. McCaskey. No. 1,106,051; Aug. 4; Gaz. vol. 205; p. 163.
Film-drier. C. M. Young. No. 1,108,306; Aug. 25; Gaz. vol. 205; p. 1093.
Film reel and casing. H. J. Troxell. No. 1,106,754; Aug. 11; Gaz. vol. 205; p. 452.
Filter. C. S. Fackenthall. No. 1,106,641; Aug. 11; Gaz. vol. 205; p. 414.
Filter. W. F. Warden. No. 1,108,037; Aug. 18; Gaz. vol. 205; p. 950.
Filter, Cistern-water. J. R. and S. G. Haselden. No. 1,108,365; Aug. 25; Gaz. vol. 205; p. 1112.
Filter connection. H. B. Eells and I. H. Kaufman. No. 1,108,153; Aug. 25; Gaz. vol. 205; p. 1038.
Filter, Continuously-operating. J. H. Fleetwood. No. 1,107,924; Aug. 18; Gaz. vol. 205; p. 909.
Fire-alarm. F. Herbeck. No. 1,108,753; Aug. 25; Gaz. vol. 205; p. 1245.
Fire-alarm system. G. H. Matthews. No. 1,106,151; Aug. 4; Gaz. vol. 205; p. 198.
Fire and burglar alarm. H. Hesse. No. 1,107,945; Aug. 18; Gaz. vol. 205; p. 917.
Fire-bar, Water-cooled. R. Grabowsky. No. 1,107,291; Aug. 18; Gaz. vol. 205; p. 687.
Fire-escape. O. Schnitzler and B. J. Welage. No. 1,106,588; Aug. 11; Gaz. vol. 205; p. 395.
Fire-escape. P. Wukstich. No. 1,106,608; Aug. 11; Gaz. vol. 205; p. 402.
Fire-extinguisher. T. Areson. No. 1,106,327; Aug. 4; Gaz. vol. 205; p. 255.
Fire-extinguisher. R. L. Martin. No. 1,108,381; Aug. 25; Gaz. vol. 205; p. 1118.
Fire-extinguisher, Automatic. H. Allard. No. 1,108,658; Aug. 25; Gaz. vol. 205; p. 1214.
Fire-extinguisher nozzle. H. W. Randall. No. 1,106,679; Aug. 11; Gaz. vol. 205; p. 426.
Fire-extinguishing systems, Dry pipe-valve for. A. C. Rowley. No. 1,108,106; Aug. 18; Gaz. vol. 205; p. 975.
Fire-starter. G. T. Simmons. No. 1,106,007; Aug. 4; Gaz. vol. 205; p. 147.
Firearm. A. J. Savage. No. 1,108,400; Aug. 25; Gaz. vol. 205; p. 1124.
Firearm, Automatic. P. Mauser. No. 1,107,815; Aug. 18; Gaz. vol. 205; p. 873.
Firearms, Resilient ejector for. R. Frommer. No. 1,108,356; Aug. 25; Gaz. vol. 205; p. 1109.
Firearms, Stake-mount for. I. N. Lewis. No. 1,107,805; Aug. 18; Gaz. vol. 205; p. 870.
Firing mechanism, Percussive. A. T. Dawson and G. T. Buckham. No. 1,105,627; Aug. 4; Gaz. vol. 205; p. 14.
Fireplace-dome. W. W. Guy. No. 1,105,651; Aug. 4; Gaz. vol. 205; p. 23.
Fireproof wall. T. H. Geraerdts. No. 1,107,779; Aug. 18; Gaz. vol. 205; p. 862.
Fish-skinner. G. L. Palmer. No. 1,107,100; Aug. 11; Gaz. vol. 205; p. 570.
Fish-trap. C. Ross. No. 1,106,318; Aug. 4; Gaz. vol. 205; p. 253.
Flash-light, Revolver. J. B. Conde. No. 1,107,040; Aug. 11; Gaz. vol. 205; p. 549.
Flask: *See* Molder's flask.
Flat-iron handle and stand. H. Greenwood, Sr. No. 1,108,747; Aug. 25; Gaz. vol. 205; p. 1244.
Flats, Making hot-finished. F. H. Daniels. No. 1,108,144; Aug. 25; Gaz. vol. 205; p. 1035.
Flexible joint for coupling two transmission-shafts. A. C. Krebs. No. 1,107,315; Aug. 18; Gaz. vol. 205; p. 695.
Floor and sidewalk gratings, Means for fastening. W. E. Irving. No. 1,105,791; Aug. 4; Gaz. vol. 205; p. 71.
Floor and sidewalk gratings, Means for fastening. N. Berson. No. 1,105,873; Aug. 4; Gaz. vol. 205; p. 101.
Floor connection. H. W. Thorndike. No. 1,107,209; Aug. 11; Gaz. vol. 205; p. 610.
Floor-joists, Metal bridging for. F. H. Ream. No. 1,106,844; Aug. 11; Gaz. vol. 205; p. 484.
Floor-joists, Metal bridging for. F. H. Ream. No. 1,106,845; Aug. 11; Gaz. vol. 205; p. 484.
Floor-scraper. D. P. T. Douglass. No. 1,107,919; Aug. 18; Gaz. vol. 205; p. 908.
Flour, Dry-shortening. A. W. Estabrook and H. E. Weaver. No. 1,105,638; Aug. 4; Gaz. vol. 205; p. 19.
Flows, Metering low-velocity fluid-. A. R. Dodge. No. 1,108,721; Aug. 25; Gaz. vol. 205; p. 1235.
Flue-cutter. B. Henrikson. No. 1,108,171; Aug. 25; Gaz. vol. 205; p. 1044.
Fluid-motor. J. M. Christoffel. No. 1,108,700; Aug. 25; Gaz. vol. 205; p. 1227.
Fluid-operated drill and handle therefor. C. H. Peck. No. 1,105,998; Aug. 4; Gaz. vol. 205; p. 144.
Flushing apparatus. E. W. Fordyce. No. 1,108,496; Aug. 25; Gaz. vol. 205; p. 1159.
Flushing device. C. W. Darrow. No. 1,106,285; Aug. 4; Gaz. vol. 205; p. 241.
Flushing device. C. W. Darrow. No. 1,106,286; Aug. 4; Gaz. vol. 205; p. 241.
Flushing device. C. W. Darrow. No. 1,107,911; Aug. 18; Gaz. vol. 205; p. 904.
Flushing-tank. W. L. Heap. No. 1,106,380; Aug. 11; Gaz. vol. 205; p. 318.
Fly-screen. W. Stolley. No. 1,106,010; Aug. 4; Gaz. vol. 205; p. 148.
Fly-trap. E. Mielke. No. 1,107,091; Aug. 11; Gaz. vol. 205; p. 567.
Fly-trap. J. A. Cruttenden. No. 1,108,711; Aug. 25; Gaz. vol. 205; p. 1232.
Flying-machine. J. F. Tiner. No. 1,105,941; Aug. 4; Gaz. vol. 205; p. 124.
Flying-machine. J. Schroeder. No. 1,106,061; Aug. 4; Gaz. vol. 205; p. 166.
Flying-machine. H. M. Chiron. No. 1,106,626; Aug. 11; Gaz. vol. 205; p. 409.
Flying-machine. A. F. Zahm. No. 1,107,231; Aug. 11; Gaz. vol. 205; p. 618.
Flying-machine. M. D. Ferrin. No. 1,107,921; Aug. 18; Gaz. vol. 205; p. 908.
Flying-machine. G. H. Curtiss. No. 1,108,490; Aug. 25; Gaz. vol. 205; p. 1156.
Fodder-loader. R. R. Rouan. No. 1,107,361; Aug. 18; Gaz. vol. 205; p. 712.
Folding box. C. H. Seegmiller. No. 1,107,852; Aug. 18; Gaz. vol. 205; p. 886.
Folding seat. G. H. E. von Wranau. No. 1,106,693; Aug. 11; Gaz. vol. 205; p. 431.
Food for infants, invalids, and old persons. Preparing. M. F. Deming. No. 1,108,555; Aug. 25; Gaz. vol. 205; p. 1179.
Force-feed lubricator. J. F. McCanna. No. 1,107,220; Aug. 11; Gaz. vol. 205; p. 614.
Forging car-wheels and similar metal bodies, Method of and apparatus for. E. E. Slick. No. 1,108,524; Aug. 25; Gaz. vol. 205; p. 1167.
Forging car-wheels, Method of and apparatus for. E. E. Slick. No. 1,108,260; Aug. 25; Gaz. vol. 205; p. 1076.
Fork-socket, Adjustable. J. C. Kriha. No. 1,107,970; Aug. 18; Gaz. vol. 205; p. 925.
Form, Collapsible telescoping. C. D. McArthur. No. 1,108,201; Aug. 25; Gaz. vol. 205; p. 1055.
Form, Dress-. L. T. Furnas. No. 1,107,055; Aug. 11; Gaz. vol. 205; p. 555.
Form, Umbrella bust-. M. I. Hamburger. No. 1,107,062; Aug. 11; Gaz. vol. 205; p. 557.
Forms, Adjusting device for model dress-. M. Luery. No. 1,107,331; Aug. 18; Gaz. vol. 205; p. 701.
Foundation on which plaster may be laid. O. Rechnitz. No. 1,107,841; Aug. 18; Gaz. vol. 205; p. 883.
Fountain: *See* Feed and water fountain; Printing-press ink-fountain.
Four-party key. A. F. Dixon. No. 1,105,629; Aug. 4; Gaz. vol. 205; p. 15.
Fracture and extension apparatus. E. O. Onion and C. D. Snively. No. 1,108,469; Aug. 25; Gaz. vol. 205; p. 1148.
Frame: *See* Adjustable frame; Collapsible frame; Hammock-frame; Photographic-printing frame; Printing-frame; Quilting-frame; Truck side frame; Window-frame.
Freight transference, Apparatus for. G. E. Titcomb. No. 1,107,378; Aug. 18; Gaz. vol. 205; p. 718.
Fruit-picking sack. J. B. Holt. No. 1,106,654; Aug. 11; Gaz. vol. 205; p. 419.
Fruit-press charger. W. H. Myers. No. 1,106,234; Aug. 4; Gaz. vol. 205; p. 225.
Fruit-squeezer. O. Weis. No. 1,107,230; Aug. 11; Gaz. vol. 205; p. 618.
Fruits, Treating. P. J. Scheuermann. No. 1,108,521; Aug. 25; Gaz. vol. 205; p. 1167.
Frying-machine. A. W. Copland. No. 1,106,926; Aug. 11; Gaz. vol. 205; p. 513.
Fuel, Carbon. J. F. Dymond. No. 1,106,289; Aug. 4; Gaz. vol. 205; p. 242.
Fuel-delivery system. J. Zagora. No. 1,106,270; Aug. 4; Gaz. vol. 205; p. 236.
Fuel-feeding apparatus. T. A. Edison. No. 1,106,444; Aug. 11; Gaz. vol. 205; p. 340.
Funnel. J. H. Frederick. No. 1,107,774; Aug. 18; Gaz. vol. 205; p. 860.
Fur, Carroting. P. C. Donner. No. 1,106,371; Aug. 11; Gaz. vol. 205; p. 316.
Furnace: *See* Electric furnace; Hot-air furnace; Ore-roasting furnace; Roasting-furnace; Smelting-furnace.
Furnace. F. J. Doyle. No. 1,107,594; Aug. 18; Gaz. vol. 205; p. 796.
Furnace-cleaner. C. F. Hahle. No. 1,106,093; Aug. 4; Gaz. vol. 205; p. 179.
Furnace-grate. O. H. Erdman. No. 1,105,636; Aug. 4; Gaz. vol. 205; p. 18.
Furnace-grate. R. Grabowsky. No. 1,107,292; Aug. 18; Gaz. vol. 205; p. 687.

Furnace, Operating a. M. Rosenbaum. No. 1,108,792; Aug. 25; Gaz. vol. 205; p. 1257.
Furnace-wall construction. N. E. Maccallum. No. 1,106,725; Aug. 11; Gaz. vol. 205; p. 442.
Furnaces and the like, Charging apparatus for open-hearth. J. A. Swindell. No. 1,106,988; Aug. 11; Gaz. vol. 205; p. 533.
Furnaces, Apparatus for automatically charging hardening and the like. R. Röntgen. No. 1,107,449; Aug. 18; Gaz. vol. 205; p. 744.
Furnaces, Apparatus for promoting combustion in. E. C. Read. No. 1,106,583; Aug. 11; Gaz. vol. 205; p. 393.
Furniture-legs, Shoe for. A. E. Schatz. No. 1,106,520; Aug. 11; Gaz. vol. 205; p. 370.
Furrow-gage. O. B. Coleman. No. 1,106,028; Aug. 4; Gaz. vol. 205; p. 155.
Furrow-opener, Disk. F. R. Packham. No. 1,107,442; Aug. 18; Gaz. vol. 205; p. 742.
Fuse for projectiles. H. B. Strange. No. 1,107,461; Aug. 18; Gaz. vol. 205; p. 748.
Fuse, Percussion-. K. Wieser. No. 1,108,819; Aug. 25; Gaz. vol. 205; p. 1267.
Fuse, Refillable. C. N. Stout. No. 1,107,861; Aug. 18; Gaz. vol. 205; p. 890.
Fusee, Railway signal-. R. M. Clark. No. 1,107,034; Aug. 11; Gaz. vol. 205; p. 547.
Gage: *See* Constant-discharge gage; Furrow-gage; Sawgage; Tank-gage.
Gage. H. A. Robertson. No. 1,105,700; Aug. 4; Gaz. vol. 205; p. 40.
Gage. F. A. Hollandt and J. W. Smith. No. 1,107,789; Aug. 18; Gaz. vol. 205; p. 865.
Gage. W. S. Miles, Jr. No. 1,108,775; Aug. 25; Gaz. vol. 205; p. 1252.
Gage holder and connection. H. A. Campbell. No. 1,108,065; Aug. 18; Gaz. vol. 205; p. 960.
Gage-testing device. R. C. Cox. No. 1,108,141; Aug. 25; Gaz. vol. 205; p. 1034.
Galvanizing-machine. M. W. Trout. No. 1,107,464; Aug. 18; Gaz. vol. 205; p. 750.
Gambrel. W. J. Walsh. No. 1,107,467; Aug. 18; Gaz. vol. 205; p. 751.
Game. H. D. Thatcher. No. 1,106,991; Aug. 11; Gaz. vol. 205; p. 534.
Game apparatus. C. J. Dyer. No. 1,106,499; Aug. 11; Gaz. vol. 205; p. 362.
Game apparatus. A. J. and F. W. Gadbois. No. 1,107,776; Aug. 18; Gaz. vol. 205; p. 861.
Game-board. H. G. Newell. No. 1,106,052; Aug. 4; Gaz. vol. 205; p. 163.
Game-board. F. E. Wilson. No. 1,106,530; Aug. 11; Gaz. vol. 205; p. 373.
Game, Card. J. J. Ford. No. 1,107,417; Aug. 18; Gaz. vol. 205; p. 734.
Game device. C. H. Gessner. No. 1,106,090; Aug. 4; Gaz. vol. 205; p. 177.
Gang-plank. J. Bidlake. No. 1,106,074; Aug. 4; Gaz. vol. 205; p. 171.
Garbage and refuse incinerator. T. Kerner. No. 1,108,184; Aug. 25; Gaz. vol. 205; p. 1048.
Garment. A. L. Fink. No. 1,106,199; Aug. 4; Gaz. vol. 205; p. 215.
Garment. W. E. Barnes. No. 1,108,668; Aug. 25; Gaz. vol. 205; p. 1217.
Garment, Athletic. M. M. Henderson. No. 1,107,303; Aug. 18; Gaz. vol. 205; p. 691.
Garment-fastener, Flexible. M. M. Schell. No. 1,108,796; Aug. 25; Gaz. vol. 205; p. 1259.
Garment-fastening hook. E. E. Howell. No. 1,108,178; Aug. 25; Gaz. vol. 205; p. 1046.
Garment-hanger. A. Lemke. No. 1,105,981; Aug. 4; Gaz. vol. 205; p. 138.
Garment-hanger, Combined. S. Ratajczyk. No. 1,108,621; Aug. 25; Gaz. vol. 205; p. 1202.
Garment-hanger support, Collapsible. A. L. Mann. No. 1,107,624; Aug. 18; Gaz. vol. 205; p. 806.
Garment-supporter. W. J. Molloy. No. 1,106,886; Aug. 11; Gaz. vol. 205; p. 499.
Garment-supporter. G. H. Wilson. No. 1,107,120; Aug. 11; Gaz. vol. 205; p. 579.
Garment-taping machine. E. H. Newcomb. No. 1,107,097; Aug. 11; Gaz. vol. 205; p. 569.
Gas and air mixer. W. B. McSorley. No. 1,105,987; Aug. 4; Gaz. vol. 205; p. 140.
Gas and the like registering meter. W. H. Fulweiler. No. 1,107,600; Aug. 18; Gaz. vol. 205; p. 798.
Gas-burner. J. W. Higgins. No. 1,105,780; Aug. 4; Gaz. vol. 205; p. 68.
Gas-burner. B. E. Meacham. No. 1,108,773; Aug. 25; Gaz. vol. 205; p. 1252.
Gas-burner and grate-bar, Combined. C. H. and C. H. Miller. No. 1,108,207; Aug. 25; Gaz. vol. 205; p. 1057.
Gas-burner and water-heater, Combined. M. H. Cohen. No. 1,107,038; Aug. 11; Gaz. vol. 205; p. 548.
Gas-controlling mechanism. G. A. Robertshaw. No. 1,107,549; Aug. 18; Gaz. vol. 205; p. 778.
Gas cut-off for water-heaters, Thermostatic. B. E. Meacham. No. 1,108,772; Aug. 25; Gaz. vol. 205; p. 1251.
Gas-engine. R. Kelly. No. 1,108,372; Aug. 25; Gaz. vol. 205; p. 1115.
Gas, Extracting ammonia and sulfur compounds from. J. W. Cobb. No. 1,108,705; Aug. 25; Gaz. vol. 205; p. 1229.
Gas from oil, Making. W. A. Hall. No. 1,105,772; Aug. 4; Gaz. vol. 205; p. 65.
Gas generator, Acetylene-. C. H. Canfield. No. 1,107,030; Aug. 11; Gaz. vol. 205; p. 546.
Gas generator, Acetylene-. J. B. Lee. No. 1,108,197; Aug. 25; Gaz. vol. 205; p. 1054.
Gas generator, Acetylene-. D. G. Putnam and G. Boersma. No. 1,108,232; Aug. 25; Gaz. vol. 205; p. 1066.
Gas-heated iron. R. Joyce. No. 1,107,526; Aug. 18; Gaz. vol. 205; p. 770.
Gas-heater. W. E. Clarin. No. 1,107,589; Aug. 18; Gaz. vol. 205; p. 794.
Gas-iron. W. E. Thornton and H. E. Parker. No. 1,105,721; Aug. 4; Gaz. vol. 205; p. 48.
Gas-lighter. G. W. Hosler. No. 1,105,663; Aug. 4; Gaz. vol. 205; p. 27.
Gas lighting and extinguishing apparatus. A. G. Kent-Johnston. No. 1,107,962; Aug. 18; Gaz. vol. 205; p. 922.
Gas-lighting, Impregnating the filaments and mantles used in incandescent. G. Bagrachow. No. 1,108,116; Aug. 25; Gaz. vol. 205; p. 1025.
Gas-producer. T. H. Parrath. No. 1,105,688; Aug. 4; Gaz. vol. 205; p. 35.
Gas-producer, Suction. M. F. Derrick. No. 1,107,917; Aug. 18; Gaz. vol. 205; p. 907.
Gas-purifying apparatus. A. Müller and C. Bomhard. No. 1,107,986; Aug. 18; Gaz. vol. 205; p. 931.
Gas-regulator. J. R. Ricketts and H. V. Leahy. No. 1,105,841; Aug. 4; Gaz. vol. 205; p. 89.
Gas-regulator. A. J. Hodge. No. 1,107,612; Aug. 18; Gaz. vol. 205; p. 802.
Gas, Separating the hydrocarbons contained in natural. H. Koppers. No. 1,107,803; Aug. 18; Gaz. vol. 205; p. 870.
Gases, Extractor of liquids and solids from. J. T. Wilkin. No. 1,105,868; Aug. 4; Gaz. vol. 205; p. 99.
Gases, Preheater for. C. J. Atkinson. No. 1,106,611; Aug. 11; Gaz. vol. 205; p. 404.
Gasification apparatus. S. Horowitz. No. 1,105,975; Aug. 4; Gaz. vol. 205; p. 136.
Gasketing-tape. W. F. Taylor. No. 1,108,021; Aug. 18; Gaz. vol. 205; p. 944.
Gasolene and water separator. T. D. Adair. No. 1,106,352; Aug. 4; Gaz. vol. 205; p. 264.
Gasolene-engine. W. R. Thacker and C. G. Clark. No. 1,107,375; Aug. 18; Gaz. vol. 205; p. 717.
Gasolene, Manufacture of. W. M. Burton. No. 1,105,961; Aug. 4; Gaz. vol. 205; p. 131.
Gasolene-motor. J. R. Halterman. No. 1,106,210; Aug. 4; Gaz. vol. 205; p. 217.
Gasolene or naphtha, Machine for refining used. G. E. Olsen. No. 1,106,887; Aug. 11; Gaz. vol. 205; p. 499.
Gasolene, Producing. J. W. Waltz. No. 1,105,727; Aug. 4; Gaz. vol. 205; p. 50.
Gate: *See* Elevator safety-gate.
Gate-fastener. M. P. Torgrud. No. 1,106,324; Aug. 4; Gaz. vol. 205; p. 254.
Gear-cutting machine. J. Grundstein. No. 1,105,649; Aug. 4; Gaz. vol. 205; p. 22.
Gear-cutting machine. E. F. Roberts. No. 1,108,623; Aug. 25; Gaz. vol. 205; p. 1202.
Gear-cutting machine. A. Frykman. No. 1,108,735; Aug. 25; Gaz. vol. 205; p. 1240.
Gear, Differential. T. E. Barnum. No. 1,108,422; Aug. 25; Gaz. vol. 205; p. 1130.
Gear, Fluid transmission-. H. Lentz. No. 1,106,390; Aug. 11; Gaz. vol. 205; p. 321.
Gear-generator. E. J. Lees. No. 1,108,379; Aug. 25; Gaz. vol. 205; p. 1117.
Gear, Short-turning. J. T. Mack. No. 1,108,507; Aug. 25; Gaz. vol. 205; p. 1162.
Gear-teeth, Machine for forming wooden. W. Seidel. No. 1,108,629; Aug. 25; Gaz. vol. 205; p. 1204.
Gears, Controlling apparatus for hydraulic variable-speed. R. Janney. No. 1,108,443; Aug. 25; Gaz. vol. 205; p. 1138.
Gearing. A. Loomis. No. 1,106,149; Aug. 4; Gaz. vol. 205; p. 197.
Gearing. B. W. Traylor. No. 1,106,256; Aug. 4; Gaz. vol. 205; p. 232.
Gearing. J. Emeringer. No. 1,106,792; Aug. 11; Gaz. vol. 205; p. 465.
Gearing. G. E. Seymour. No. 1,107,454; Aug. 18; Gaz. vol. 205; p. 746.
Gearing. F. Stack. No. 1,107,721; Aug. 18; Gaz. vol. 205; p. 841.
Gearing, Change-speed. L. A. Peterson. No. 1,108,784; Aug. 25; Gaz. vol. 205; p. 1255.
Gearing, Differential locking-. A. O. Shrader. No. 1,108,800; Aug. 25; Gaz. vol. 205; p. 1261.
Gearing lock, Differential-. C. G. Libbera. No. 1,106,464; Aug. 11; Gaz. vol. 205; p. 349.
Gearing, Transmission-. J. H. Jensen. No. 1,108,582; Aug. 25; Gaz. vol. 205; p. 1188.
Generating apparatus. S. F. Pierce. No. 1,107,836; Aug. 18; Gaz. vol. 205; p. 881.
Generator: *See* Acetylene-generator; Gas-generator; Gear-generator; Magneto-generator.
Generator-suspension member. C. E. Mead. No. 1,105,988; Aug. 4; Gaz. vol. 205; p. 140.
Gib and key. C. A. Fischer. No. 1,106,934; Aug. 11; Gaz. vol. 205; p. 516.
Gin-pole cap. C. E. Dockendorff. No. 1,106,498; Aug. 11; Gaz. vol. 205; p. 362.

Gin-saw-dressing machine. J. R. Smith. No. 1,107,456; Aug. 18; Gaz. vol. 205; p. 747.
Glass: *See* Drinking-glass.
Glass articles, Apparatus for making. J. Forster. No. 1,106,140; Aug. 4; Gaz. vol. 205; p. 195.
Glass articles, Manufacturing and tempering. L. J. Houze. No. 1,107,072; Aug. 11; Gaz. vol. 205; p. 560.
Glass-blowing machines, Dash-pot for. J. Rau. No. 1,107,446; Aug. 18; Gaz. vol. 205; p. 743.
Glass-cutting apparatus, Plate-. M. Richeroux. No. 1,105,610; Aug. 4; Gaz. vol. 205; p. 8.
Glass, Flexible table for curving. G. Barot. No. 1,107,476; Aug. 18; Gaz. vol. 205; p. 754.
Glass, Handling. J. E. Kapteina. No. 1,107,528; Aug. 18; Gaz. vol. 205; p. 771.
Glass, Making heavy structural white. G. R. Meyercord. No. 1,108,205; Aug. 25; Gaz. vol. 205; p. 1057.
Glass panel for glass wind-screens, Movable. F. W. Pugh. No. 1,107,352; Aug. 18; Gaz. vol. 205; p. 709.
Glass structure, Plate-. H. E. Kell. No. 1,107,671; Aug. 18; Gaz. vol. 205; p. 824.
Glassware re-forming mechanism. H. F. Hagemeyer. No. 1,107,935; Aug. 18; Gaz. vol. 205; p. 913.
Glove. R. J. Hazard. No. 1,106,708; Aug. 11; Gaz. vol. 205; p. 435.
Glove, Boxing-. B. F. Shibe. No. 1,106,979; Aug. 11; Gaz. vol. 205; p. 530.
Go-cart and sulky, Combination. H. A. Williams. No. 1,106,174; Aug. 4; Gaz. vol. 205; p. 206.
Goggles. L. F. Donnelly. No. 1,105,630; Aug. 4; Gaz. vol. 205; p. 15.
Goggles. H. H. Styll. No. 1,105,714; Aug. 4; Gaz. vol. 205; p. 46.
Gouge, Adjustable. A. B. Jackson. No. 1,107,523; Aug. 18; Gaz. vol. 205; p. 769.
Governor, Automatic engine-. W. Schmidt. No. 1,107,204; Aug. 11; Gaz. vol. 205; p. 609.
Governor, Centrifugal. E. G. Crooks. No. 1,108,709; Aug. 25; Gaz. vol. 205; p. 1230.
Governor, Marine. S. Rumolino. No. 1,107,844; Aug. 18; Gaz. vol. 205; p. 884.
Grader and roller, Combined road. J. F. Langer. No 1,106,951; Aug. 11; Gaz. vol. 205; p. 522.
Grader, Land-. M. P. Monte. No. 1,105,817; Aug. 4; Gaz. vol. 205; p. 81.
Grading-machine. L. F. Smith. No. 1,107,457; Aug. 18; Gaz. vol. 205; p. 747.
Grain-binding tool. A. Hirth. No. 1,108,172; Aug. 25; Gaz. vol. 205; p. 1044.
Grain-elevator. A. B. De Moure. No. 1,106,632; Aug. 11; Gaz. vol. 205; p. 411.
Grain to filamentous form, Mechanism for reducing. T. C. Nixon. No. 1,106,962; Aug. 11; Gaz. vol. 205; p. 526.
Grain, Treatment of seed-. H. E. Fry. No. 1,106,039; Aug. 4; Gaz. vol. 205; p. 159.
Grass-shears. P. F. Ryan. No. 1,107,227; Aug. 11; Gaz. vol. 205; p. 617.
Grass-trimmer. C. Nystrom. No. 1,108,611; Aug. 25; Gaz. vol. 205; p. 1198.
Grate, Air-feeding and air-operated. A. E. Shultz. No. 1,107,121; Aug. 11; Gaz. vol. 205; p. 576.
Grate-bar. B. C. Stewart. No. 1,107,860; Aug. 18; Gaz. vol. 205; p. 889.
Grate-shaker. A. W. Walker. No. 1,107,466; Aug. 18; Gaz. vol. 205; p. 751.
Grate, Water-. W. E. Rhodes and E. W. Potter. No. 1,105,926; Aug. 4; Gaz. vol. 205; p. 119.
Grease-cup. R. M. Musgrove and F. R. Howard. No. 1,106,153; Aug. 4; Gaz. vol. 205; p. 199.
Grease-cup. A. R. Pribil. No. 1,107,350; Aug. 18; Gaz. vol. 205; p. 708.
Grease-cup. J. H. Bennett. No. 1,108,680; Aug. 25; Gaz. vol. 205; p. 1221.
Griddle. T. J. Nash. No. 1,107,987; Aug. 18; Gaz. vol. 205; p. 932.
Grinding attachment, Drill-. M. Wagner. No. 1,107,229; Aug. 11; Gaz. vol. 205; p. 618.
Grinding attachment, Twist-drill-. J. S. Wincrantz. No. 1,106,692; Aug. 11; Gaz. vol. 205; p. 431.
Grinding-machine. R. H. Grant. No. 1,106,803; Aug. 11; Gaz. vol. 205; p. 469.
Grinding-machine. A. Hormel. No. 1,108,176; Aug. 25; Gaz. vol. 205; p. 1045.
Grinding machine, Knife-. J. P. Hedstrom. No. 1,106,560; Aug. 11; Gaz. vol. 205; p. 385.
Grinding machine, Surface-. C. H. Norton. No. 1,108,779; Aug. 25; Gaz. vol. 205; p. 1253.
Grinding-machines, Sickle-bar-holding attachment for. B. F. Clark. No. 1,107,033; Aug. 11; Gaz. vol. 205; p. 547.
Grinding mill, Cheese-. L. Donisi. No. 1,106,931; Aug. 11; Gaz. vol. 205; p. 515.
Grinding or drum-sanding machine. J. Miller, Jr. No. 1,107,338; Aug. 18; Gaz. vol. 205; p. 704.
Grinding or polishing wheel. F. N. and F. E. Gardner. No. 1,107,512; Aug. 18; Gaz. vol. 205; p. 766.
Grinding rough-forged blades of knives and other cutting instruments, Machine for. P. Perognat. No. 1,107,997; Aug. 18; Gaz. vol. 205; p. 936.
Guard and curb. T. A. Hill. No. 1,105,781; Aug. 4; Gaz. vol. 205; p. 68.
Guard, Frangible covered. C. E. Beach. No. 1,106,072; Aug. 4; Gaz. vol. 205; p. 170.
Guide apparatus. A. B. Maull. No. 1,108,457; Aug. 25; Gaz. vol. 205; p. 1143.
Gum or mucilage from locust-beans, Manufacturing. A. Pinel. No. 1,106,335; Aug. 4; Gaz. vol. 205; p. 258.
Gummed strips to packages, &c., Device for applying. E. C. Baldwin. No. 1,106,437; Aug. 11; Gaz. vol. 205; p. 338.
Gun-carriage spades, Mounting. K. Völler. No. 1,108,032; Aug. 18; Gaz. vol. 205; p. 948.
Gun mount, Mobile-. N. Koch. No. 1,108,762; Aug. 25; Gaz. vol. 205; p. 1248.
Gun-sight. R. P. Stout and F. A. Sullivan. No. 1,106,747; Aug. 11; Gaz. vol. 205; p. 450.
Gun-sight, Telescope. O. Grauheding. No. 1,107,163; Aug. 11; Gaz. vol. 205; p. 595.
Gun, Spring-actuated. J. F. Burnam. No. 1,107,586; Aug. 18; Gaz. vol. 205; p. 793.
Gun wedge breech-closure. M. Hermsdorf. No. 1,108,754; Aug. 25; Gaz. vol. 205; p. 1245.
Gun with a recoiling barrel, Device for automatically opening the breech of a. K. Völler. No. 1,108,530; Aug. 25; Gaz. vol. 205; p. 1170.
Guns, Percussive firing mechanism of breech-loading. A. T. Dawson and G. T. Buckham. No. 1,105,625; Aug. 4; Gaz. vol. 205; p. 13.
Guns, Pivot-mount for. N. Koch. No. 1,108,763; Aug. 25; Gaz. vol. 205; p. 1249.
Gymnasium-ring. M. B. Reach. No. 1,108,003; Aug. 18; Gaz. vol. 205; p. 938.
Gyratory crusher. J. McInrue. No. 1,106,333; Aug. 4; Gaz. vol. 205; p. 257.
Hair braiding or weaving apparatus. P. Eiberle. No. 1,107,052; Aug. 11; Gaz. vol. 205; p. 554.
Hair, Converting. C. H. Campbell. No. 1,106,779; Aug. 11; Gaz. vol. 205; p. 461.
Hair-drying comb. G. L. Scheel. No. 1,106,411; Aug. 11; Gaz. vol. 205; p. 329.
Hair-dye. R. Ernst. No. 1,108,157; Aug. 25; Gaz. vol. 205; p. 1040.
Hair-pin and the like. K. T. Sandreczki. No. 1,106,585; Aug. 11; Gaz. vol. 205; p. 394.
Hammer brake, Trip-. E. L. Greenwald. No. 1,105,768; Aug. 4; Gaz. vol. 205; p. 64.
Hammer, Pneumatic. G. L. Robertson. No. 1,107,550; Aug. 18; Gaz. vol. 205; p. 778.
Hammer, Pneumatic. E. G. Detrick. No. 1,108,834; Aug. 25; Gaz. vol. 205; p. 1273.
Hammers and the like, Lift for drop-. S. Swedenborg. No. 1,107,866; Aug. 18; Gaz. vol. 205; p. 891.
Hammock. E. L. Fuller. No. 1,106,554; Aug. 11; Gaz. vol. 205; p. 382.
Hammock-frame, Folding. B. L. Fogle. No. 1,106,293; Aug. 4; Gaz. vol. 205; p. 243.
Handle: *See* Brake-handle; Casket-handle; Flat-iron handle; Magazine-handle; Saw-handle.
Hanger: *See* Adjustable hanger; Calendar-hanger; Clothes-hanger; Clothes and the like hanger; Door-hanger; Eaves-trough hanger; Garment-hanger; Joist-hanger; Picture-frame hanger; Pipe-hanger; Punching-bag hanger; Screen-frame or the like hanger; Shade-hanger.
Harp. M. A. Clark. No. 1,105,879; Aug. 4; Gaz. vol. 205; p. 102.
Harrow. J. R. Snyder. No. 1,108,013; Aug. 18; Gaz. vol. 205; p. 942.
Harrow. E. W. Smith. No. 1,108,261; Aug. 25; Gaz. vol. 205; p. 1076.
Harrow and clod-crusher, Combined. J. F. Boes. No. 1,107,480; Aug. 18; Gaz. vol. 205; p. 756.
Harrow and seeder, Combined disk. D. A. Schutt. No. 1,106,737; Aug. 11; Gaz. vol. 205; p. 446.
Harrows, Weeder for. B. T. Lane. No. 1,107,173; Aug. 11; Gaz. vol. 205; p. 599.
Harvester, Beet-. J. H. Wallace, T. D. and J. D. Means. No. 1,105,728; Aug. 4; Gaz. vol. 205; p. 50.
Harvester, Beet-. K. Sato. No. 1,107,551; Aug. 18; Gaz. vol. 205; p. 779.
Harvester binder-head. H. E. Heitmiller. No. 1,106,562; Aug. 11; Gaz. vol. 205; p. 386.
Harvester, Cotton-. D. B. Lovejoy. No. 1,107,083; Aug. 11; Gaz. vol. 205; p. 564.
Harvester, Cotton-boll. R. W. Monk. No. 1,105,915; Aug. 4; Gaz. vol. 205; p. 114.
Harvester, Potato-. T. S. Moore. No. 1,106,668; Aug. 11; Gaz. vol. 205; p. 423.
Harvester, Potato-. C. Klinghammer. No. 1,107,965; Aug. 18; Gaz. vol. 205; p. 923.
Harvesting-machine. I. F. Wilcoxson. No. 1,106,018; Aug. 4; Gaz. vol. 205; p. 151.
Harvesting-machine. I. F. Wilcoxson. No. 1,106,019; Aug. 4; Gaz. vol. 205; p. 151.
Harvesting-machine. J. R. England. No. 1,106,196; Aug. 4; Gaz. vol. 205; p. 214.
Hasp-fastener. E. F. Culbertson. No. 1,105,886; Aug. 4; Gaz. vol. 205; p. 104.
Hat-case, Lady's. M. S. McKenzie. No. 1,105,986; Aug. 4; Gaz. vol. 205; p. 140.
Hat-flanging machine. G. P. Foote. No. 1,108,730; Aug. 25; Gaz. vol. 205; p. 1238.
Hat-frame machine. D. Joseph. No. 1,107,167; Aug. 11; Gaz. vol. 205; p. 596.
Hat pressing or blocking device. B. J. Diaz. No. 1,106,635; Aug. 11; Gaz. vol. 205; p. 412.

Hat-protector. P. and J. Velardo. No. 1,106,527; Aug. 11; Gaz. vol. 205; p. 372.
Hats, Process and machine for shaping and pressing. W. F. Chiniquy and W. O. Winch. No. 1,108,428; Aug. 25; Gaz. vol. 205; p. 1133.
Hay and grain loader. D. M. Myers. No. 1,105,916; Aug. 4; Gaz. vol. 205; p. 115.
Hay-carrier. W. F. Jacobs. No. 1,106,512; Aug. 11; Gaz. vol. 205; p. 367.
Hay conveyer and elevator, Baled-. C. McCullough. No. 1,108,599; Aug. 25; Gaz. vol. 205; p. 1194.
Hay-loader coupling. J. Dain. No. 1,107,763; Aug. 18; Gaz. vol. 205; p. 856.
Hay-press. L. T. Pate, Jr. No. 1,106,580; Aug. 11; Gaz. vol. 205; p. 392.
Hay-press power mechanism. W. W. Stopple. No. 1,106,252; Aug. 4; Gaz. vol. 205; p. 230.
Heading-machine. C. T. Brennan. No. 1,108,426; Aug. 25; Gaz. vol. 205; p. 1132.
Headlight for vehicles, Adjustable C. B. Gray and W. E. Teter. No. 1,105,973; Aug. 4; Gaz. vol. 205; p. 136.
Headlight, Mechanism for rotating a locomotive-. W. E. Teter and C. B. Gray. No. 1,107,726; Aug. 18; Gaz. vol. 205; p. 842.
Headlight, Motor-vehicle. B. D. Lake and N. G. Marks. No. 1,107,081; Aug. 11; Gaz. vol. 205; p. 564.
Heat and fuel economizer, Adjustable. M. M. Gillam. No. 1,107,605; Aug. 18; Gaz. vol. 205; p. 800.
Heat of combustion-motors for heating purposes, Utilization of. C. Semmler. No. 1,107,368; Aug. 18; Gaz. vol. 205; p. 714.
Heater: *See* Automobile and the like heater; Car-heater; Electric heater; Electrical heater; Engine-heater; Feed-water heater; Gas-heater; Orchard-heater; Portable heater; Vehicle-heater; Water-heater.
Heater. W. P. Klobukowski. No. 1,107,906; Aug. 18; Gaz. vol. 205; p. 924.
Heating system, Steam-. E. E. Gold. No. 1,106,801; Aug. 11; Gaz. vol. 205; p. 468.
Heating systems, Means for regulating steam-. L. C. Ord. No. 1,108,218; Aug. 25; Gaz. vol. 205; p. 1061.
Heating systems, Triple-regulation cock for low-pressure. I. Tchernikofsky. No. 1,106,594; Aug. 11; Gaz. vol. 205; p. 398.
Heating-tool. G. E. Vogt. No. 1,107,188; Aug. 11; Gaz. vol. 205; p. 603.
Heating unit, Electrical. F. Kuhn. No. 1,107,320; Aug. 18; Gaz. vol. 205; p. 697.
Heddle. J. Grob. No. 1,107,296; Aug. 18; Gaz. vol. 205; p. 688.
Heddle. J. Pickard. No. 1,107,345; Aug. 18; Gaz. vol. 205; p. 707.
Heel-band. M. Brock. No. 1,108,101; Aug. 18; Gaz. vol. 205; p. 973.
Heel-breasting machine. T. G. Plant. No. 1,107,838; Aug. 18; Gaz. vol. 205; p. 882.
Heel, Compound cushion-. J. J. Stritzel. No. 1,106,985; Aug. 11; Gaz. vol. 205; p. 532.
Heel construction, Spring-. S. Horváth. No. 1,108,369; Aug. 25; Gaz. vol. 205; p. 1114.
Heel-cushion. B. Cain. No. 1,107,894; Aug. 18; Gaz. vol. 205; p. 899.
Heel for foot-gear. S. Szekfu. No. 1,106,989; Aug. 11; Gaz. vol. 205; p. 533.
Heel for foot-gear. S. Szekfu. No. 1,106,990; Aug. 11; Gaz. vol. 205; p. 533.
Heel-plate. J. F. Waldelich. No. 1,108,413; Aug. 25; Gaz. vol. 205; p. 1128.
Heel, Rubber. J. Trischan. No. 1,106,753; Aug. 11; Gaz. vol. 205; p. 452.
Hide and leather working machine. H. Alefs. No. 1,107,640; Aug. 18; Gaz. vol. 205; p. 812.
Hides, skins, and the like, Apparatus for stretching. R. Noblett. No. 1,105,824; Aug. 4; Gaz. vol. 205; p. 83.
High chair. R. E. Patrick. No. 1,107,994; Aug. 18; Gaz. vol. 205; p. 935.
Hinge. G. M. Johnson. No. 1,105,666; Aug. 4; Gaz. vol. 205; p. 28.
Hinge. L. S. Sherwood. No. 1,105,852; Aug. 4; Gaz. vol. 205; p. 93.
Hinge. R. G. Winter. No. 1,108,298; Aug. 25; Gaz. vol. 205; p. 1090.
Hinge. E. Zuckerman. No. 1,108,308; Aug. 25; Gaz. vol. 205; p. 1094.
Hinge, Butt-. W. R. Ballou. No. 1,106,181; Aug. 4; Gaz. vol. 205; p. 208.
Hinge for tilting sash. J. Webb. No. 1,108,857; Aug. 25; Gaz. vol. 205; p. 1282.
Hinge, Seat-. C. O. Olson. No. 1,107,440; Aug. 18; Gaz. vol. 205; p. 742.
Hinge, Spring-. W. J. Keene. No. 1,107,076; Aug. 11; Gaz. vol. 205; p. 562.
Hinge, Spring-. C. E. Santo. No. 1,107,708; Aug. 18; Gaz. vol. 205; p. 836.
Hoe. B. O. Dahl. No. 1,105,760; Aug. 4; Gaz. vol. 205; p. 61.
Hoe. J. W. Timmons. No. 1,108,527; Aug. 25; Gaz. vol. 205; p. 1168.
Hoisting apparatus, Balancing means for. L. Balliet. No. 1,107,191; Aug. 11; Gaz. vol. 205; p. 604.
Hoisting apparatus for certain farm implements. H. J. and A. J. Schepp. No. 1,108,797; Aug. 25; Gaz. vol. 205; p. 1259.
Hoists, Rope-clutch for. R. Davis. No. 1,105,624; Aug. 4; Gaz. vol. 205; p. 13.
Holdback-iron, Safety. F. W. Chickering. No. 1,107,898; Aug. 18; Gaz. vol. 205; p. 900.
Holder. E. A. Gross. No. 1,106,204; Aug. 4; Gaz. vol. 205; p. 216.
Holder. O. M. Boorman. No. 1,108,687; Aug. 25; Gaz. vol. 205; p. 1223.
Hollow article made of paper, cloth, and the like. M. Handwerck. No. 1,106,211; Aug. 4; Gaz. vol. 205; p. 218.
Hook: *See* Back-band hook; Cable-hook; Garment-fastening hook; Tag-hook.
Hook and eye. J. H. Boye. No. 1,107,750; Aug. 18; Gaz. vol. 205; p. 851.
Hopper-closure. H. M. Estabrook. No. 1,105,639; Aug. 4; Gaz. vol. 205; p. 19.
Hopper, Feed-. H. B. Meier. No. 1,107,088; Aug. 11; Gaz. vol. 205; p. 566.
Horn. C. Carson. No. 1,107,654; Aug. 18; Gaz. vol. 205; p. 817.
Horse-power indicator and recorder. L. N. Morscher. No. 1,107,234; Aug. 11; Gaz. vol. 205; p. 619.
Horse-protector. B. P. Welland. No. 1,108,045; Aug. 18; Gaz. vol. 205; p. 953.
Horseshoe. A. Balogh and L. Nagy. No. 1,106,351; Aug. 4; Gaz. vol. 205; p. 263.
Horseshoe. J. Kundis. No. 1,107,620; Aug. 18; Gaz. vol. 205; p. 805.
Horseshoe. H. F. Sottong. No. 1,108,014; Aug. 18; Gaz. vol. 205; p. 942.
Horseshoe. F. Bonall. No. 1,108,125; Aug. 25; Gaz. vol. 205; p. 1028.
Horseshoe-creeper. F. F. and M. S. Jacobs. No. 1,106,943; Aug. 11; Gaz. vol. 205; p. 519.
Hose-protector. J. Piché. No. 1,106,840; Aug. 11; Gaz. vol. 205; p. 483.
Hot-air furnace. A. O'Loughlin. No. 1,108,388; Aug. 25; Gaz. vol. 205; p. 1120.
Hot-bearing alarm. E. O. Davis. No. 1,105,888; Aug. 4; Gaz. vol. 205; p. 105.
Hot-plate, Electrically-heated. F. Kuhn. No. 1,107,321; Aug. 18; Gaz. vol. 205; p. 697.
Hot-water-service system. S. H. Moore. No. 1,108,463; Aug. 25; Gaz. vol. 205; p. 1145.
Hotbed. E. E. Slick. No. 1,106,478; Aug. 11; Gaz. vol. 205; p. 355.
House: *See* Ice-house.
Housing device, Collapsible. H. R. Alkire and D. O. Mabin. No. 1,107,871; Aug. 18; Gaz. vol. 205; p. 893.
Hover, Fireless. L. H. Becker. No. 1,106,768; Aug. 11; Gaz. vol. 205; p. 457.
Hub, Wire-wheel. T. J. Lindsay. No. 1,105,670; Aug. 4; Gaz. vol. 205; p. 29.
Huller: *See* Bean-huller; Pea-huller; Pea, bean, and cow-pea huller.
Hulling-machine. W. L. Dines, Jr. No. 1,106,085; Aug. 4; Gaz. vol. 205; p. 174.
Hydraulic transmission apparatus. E. Schneider. No. 1,106,245; Aug. 4; Gaz. vol. 205; p. 228.
Hydroaeronautical apparatus. C. D. Burney. No. 1,107,260; Aug. 18; Gaz. vol. 205; p. 677.
Hydroballoon. H. E. Boggs. No. 1,107,481; Aug. 18; Gaz. vol. 205; p. 756.
Hydrocarbon-burner. R. W. Lawton. No. 1,105,804; Aug. 4; Gaz. vol. 205; p. 75.
Hydrocarbon-engine. W. R. Hallett. No. 1,106,043; Aug. 4; Gaz. vol. 205; p. 160.
Hydrocarbon-engine. H. O. Westendarp. No. 1,107,636; Aug. 18; Gaz. vol. 205; p. 810.
Hydrocarbons, Manufacturing erythrene. I. Ostromislensky. No. 1,108,781; Aug. 25; Gaz. vol. 205; p. 1254.
Hydrogen peroxid, Manufacture of. H. Henkel and W. Weber. No. 1,108,752; Aug. 25; Gaz. vol. 205; p. 1245.
Hydrogen, Producing. A. R. Frank. No. 1,107,926; Aug. 18; Gaz. vol. 205; p. 910.
Ice-box. J. W. N. Thies. No. 1,106,167; Aug. 4; Gaz. vol. 205; p. 204.
Ice-can fastener for ice plants. W. C. Drake. No. 1,106,637; Aug. 11; Gaz. vol. 205; p. 412.
Ice-cream dish and holder. R. Sweers. No. 1,105,715; Aug. 4; Gaz. vol. 205; p. 46.
Ice-cutter. J. A. Kreeger. No. 1,106,225; Aug. 4; Gaz. vol. 205; p. 222.
Ice-cutting machine. S. O. Marak. No. 1,106,955; Aug. 11; Gaz. vol. 205; p. 524.
Ice-house. C. A. P. Turner. No. 1,106,854; Aug. 11; Gaz. vol. 205; p. 488.
Ice-shaver. C. A. Horn. No. 1,107,070; Aug. 11; Gaz. vol. 205; p. 560.
Ice-tongs, Weighing attachment for. D. Henderson. No. 1,107,422; Aug. 18; Gaz. vol. 205; p. 735.
Igniter. H. C. Thomson and H. N. Michaelsen. No. 1,106,525; Aug. 11; Gaz. vol. 205; p. 372.
Ignition device. S. N. Ayres. No. 1,108,665; Aug. 25; Gaz. vol. 205; p. 1216.
Ignition-machine coupling. G. Honold. No. 1,105,660; Aug. 4; Gaz. vol. 205; p. 26.
Ignition of reversible internal-combustion motors, Apparatus for. G. Honold. No. 1,105,787; Aug. 4; Gaz. vol. 205; p. 70.
Ignition system. E. C. Wilcox. No. 1,106,432; Aug. 11; Gaz. vol. 205; p. 336.

Ignition systems, Apparatus for automatically adjusting the sparking period of. A. Diemer. No. 1,105,628; Aug. 4; Gaz. vol. 205; p. 14.
Illuminated indicator. S. W. Brown and W. H. Michael. No. 1,106,361; Aug. 11; Gaz. vol. 205; p. 312.
Illuminating device. A. W. Beuttell. No. 1,107,649; Aug. 18; Gaz. vol. 205; p. 816.
Incandescent mantle. A. Herskovitz. No. 1,107,518; Aug. 18; Gaz. vol. 205; p. 768.
Incinerator. J. B. Ricketts. No. 1,106,317; Aug. 4; Gaz. vol. 205; p. 252.
Incinerator for garbage, excrement, &c. A. L. Schellhammer. No. 1,106,732; Aug. 11; Gaz. vol. 205; p. 445.
Incubator and brooder. L. J. Isenhour. No. 1,106,451; Aug. 11; Gaz. vol. 205; p. 344.
Incubators, Egg-turning device for. A. H. Nielsen. No. 1,107,201; Aug. 11; Gaz. vol. 205; p. 608.
Index or information rack. W. P. De Saussure, Jr., and G. S. Tiffany. No. 1,106,344; Aug. 4; Gaz. vol. 205; p. 261.
Indexing apparatus. E. S. Davis. No. 1,108,344; Aug. 25; Gaz. vol. 205; p. 1105.
Indexing systems, Means employed in. O. G. Pickett. No. 1,106,158; Aug. 4; Gaz. vol. 205; p. 201.
Indicator: *See* Adjustable indicator; Illuminated indicator; Pressure-indicator; Rail-indicator; Resistance-indicator; Street and station indicator; Tank-indicator; Winding-indicator.
Indicator. J. T. Campbell. No. 1,108,489; Aug. 25; Gaz. vol. 205; p. 1156.
Indicator. A. G. Cash. No. 1,108,697; Aug. 25; Gaz. vol. 205; p. 1226.
Industrial objects from volcanic or other fusible rock, Manufacture of. F. Ribbe. No. 1,108,007; Aug. 18; Gaz. vol. 205; p. 929.
Inflating device. S. E. Bennett. No. 1,105,608; Aug. 4; Gaz. vol. 205; p. 7.
Ingots, Treating. H. C. Ryding. No. 1,108,243; Aug. 25; Gaz. vol. 205; p. 1070.
Ingots, Treating. G. G. Crawford. No. 1,108,862; Aug. 25; Gaz. vol. 205; p. 1284.
Inhaler. E. J. Stevens. No. 1,105,934; Aug. 4; Gaz. vol. 205; p. 122.
Inhaler. F. Heilman. No. 1,106,214; Aug. 4; Gaz. vol. 205; p. 219.
Inking mechanism. W. H. Golding. No. 1,108,433; Aug. 25; Gaz. vol. 205; p. 1135.
Insect-catcher. J. A. Newsom. No. 1,106,673; Aug. 11; Gaz. vol. 205; p. 424.
Insect-destroyer. A. A. Barron. No. 1,106,615; Aug. 11; Gaz. vol. 205; p. 405.
Insect-exterminator. E. A. Allen and F. A. Speenburg. No. 1,108,309; Aug. 25; Gaz. vol. 205; p. 1094.
Insecticide, fungicide, and soil antiseptic. F. Forster. No. 1,105,642; Aug. 4; Gaz. vol. 205; p. 20.
Insole. W. Stückl. No. 1,106,986; Aug. 11; Gaz. vol. 205; p. 532.
Insole-finishing machine. A. Thoma. No. 1,108,026; Aug. 18; Gaz. vol. 205; p. 946.
Insulated cleat. B. G. Jansson. No. 1,105,664; Aug. 4; Gaz. vol. 205; p. 27.
Insulating fabric. G. H. Ellis. No. 1,108,155; Aug. 25; Gaz. vol. 205; p. 1039.
Insulating-joint for pipe systems. A. J. Loepsinger. No. 1,106,572; Aug. 11; Gaz. vol. 205; p. 389.
Insulating-sheets, Machine for making fiber. T. Hohaus. No. 1,105,786; Aug. 4; Gaz. vol. 205; p. 69.
Insulator. B. S. Purkey. No. 1,107,111; Aug. 11; Gaz. vol. 205; p. 573.
Insulator. R. Friese. No. 1,107,281; Aug. 18; Gaz. vol. 205; p. 683.
Insulator, Electric. J. L. Fay and S. B. Way. No. 1,106,797; Aug. 11; Gaz. vol. 205; p. 466.
Internal-combustion engine. A. M. Bach. No. 1,106,024; Aug. 4; Gaz. vol. 205; p. 154.
Internal-combustion engine. L. F. Clark. No. 1,106,365; Aug. 11; Gaz. vol. 205; p. 313.
Internal-combustion engine. K. Z. Shetler. No. 1,106,522; Aug. 11; Gaz. vol. 205; p. 371.
Internal-combustion engine. C. F. Lembke. No. 1,106,720; Aug. 11; Gaz. vol. 205; p. 440.
Internal-combustion engine. Y. Maruyama. No. 1,106,881; Aug. 11; Gaz. vol. 205; p. 497.
Internal-combustion engine. H. Hadwiger. No. 1,106,940; Aug. 11; Gaz. vol. 205; p. 518.
Internal-combustion engine. C. C. Nichols and W. H. Wright. No. 1,107,232; Aug. 11; Gaz. vol. 205; p. 619.
Internal-combustion engine. C. L. Elliott. No. 1,107,274; Aug. 18; Gaz. vol. 205; p. 681.
Internal-combustion engine. F. C. Tygard. No. 1,107,382; Aug. 18; Gaz. vol. 205; p. 720.
Internal-combustion engine. R. Ware. No. 1,107,468; Aug. 18; Gaz. vol. 205; p. 751.
Internal-combustion engine. C. E. Duryea. No. 1,107,501; Aug. 18; Gaz. vol. 205; p. 763.
Internal-combustion engine. W. H. Camp. No. 1,107,754; Aug. 18; Gaz. vol. 205; p. 852.
Internal-combustion engine. G. D. Casson and F. D. Blakely. No. 1,107,895; Aug. 18; Gaz. vol. 205; p. 900.
Internal-combustion engine. E. H. Shattuck. No. 1,108,010; Aug. 18; Gaz. vol. 205; p. 941.
Internal-combustion engine. F. W. Spacke, D. T. Brownlee, and W. Spacke. No. 1,108,265; Aug. 25; Gaz. vol. 205; p. 1078.
Internal-combustion engine. G. Ractliffe. No. 1,108,473; Aug. 25; Gaz. vol. 205; p. 1149.
Internal-combustion engine and operating the same. H. E. Dunham. No. 1,106,194; Aug. 4; Gaz. vol. 205; p. 213.
Internal-combustion engine, Two-cycle. H. J. Crawford. No. 1,105,882; Aug. 4; Gaz. vol. 205; p. 103.
Invalid-lifting device. F. S. Root. No. 1,106,847; Aug. 11; Gaz. vol. 205; p. 485.
Iron: *See* Gas-iron; Gas-heated iron; Holdback-iron; Sad-iron; Soldering-iron.
Iron and steel sheets, Manufacturing. R. T. Banfield. No. 1,108,667; Aug. 25; Gaz. vol. 205; p. 1217.
Iron sheets and for analogous purposes, Means for securing galvanized-. J. Mitchell and J. Gell. No. 1,108,209; Aug. 25; Gaz. vol. 205; p. 1058.
Iron, Treating cast-. J. E. Johnson, Jr. No. 1,106,817; Aug. 11; Gaz. vol. 205; p. 474.
Ironing-board and ladder, Combined. E. Jurkowski. No. 1,107,527; Aug. 18; Gaz. vol. 205; p. 771.
Ironing-table and step-ladder, Combined. S. S. Bronarsky. No. 1,108,092; Aug. 18; Gaz. vol. 205; p. 970.
Irrigation coil-wheel. J. A. Beck. No. 1,108,675; Aug. 25; Gaz. vol. 205; p. 1219.
Irrigation-module, Constant-discharge. J. E. Barlean. No. 1,108,090; Aug. 18; Gaz. vol. 205; p. 969.
Irrigator, Traveling. J. C. Searle. No. 1,107,119; Aug. 11; Gaz. vol. 205; p. 576.
Isoprene, Producing. R. B. Earle and L. P. Kyrlakides. No. 1,106,290; Aug. 4; Gaz. vol. 205; p. 242.
Jack: *See* Automobile-jack; Lifting-jack; Screw-jack; Smoke-jack.
Jack for raising automobiles and other vehicles. W. G. Peugh. No. 1,108,000; Aug. 18; Gaz. vol. 205; p. 937.
Jar: *See* Drill-jar.
Jar holding and spacing means. F. Wilcox. No. 1,105,734; Aug. 4; Gaz. vol. 205; p. 52.
Jars, &c., Closure for. A. L. Weissenthanner. No. 1,108,645; Aug. 25; Gaz. vol. 205; p. 1209.
Jeweler's tongs. G. E. Wisman. No. 1,108,299; Aug. 25; Gaz. vol. 205; p. 1091.
Jig-plunger. G. H. Elmore and H. V. Croll. No. 1,108,558; Aug. 25; Gaz. vol. 205; p. 1180.
Joint: *See* Bracelet-joint; Flexible joint; Insulating-joint; Plate-edge joint; Radiator-joint; Rail-joint; Railway-rail joint; Sash-joint; Universal joint; Windshield joint.
Joint. W. P. Hammond. No. 1,108,363; Aug. 25; Gaz. vol. 205; p. 1111.
Joist-hanger. L. S. Sherwood. No. 1,105,851; Aug. 4; Gaz. vol. 205; p. 93.
Jolt ramming-machine. E. H. Mumford. No. 1,105,821; Aug. 4; Gaz. vol. 205; p. 82.
Journal box and lid. J. F. Corvin. No. 1,106,628; Aug. 11; Gaz. vol. 205; p. 409.
Journal-box take-up, Automatic. J. T. Hay. No. 1,108,366; Aug. 25; Gaz. vol. 205; p. 1112.
Journal-box waste-guard. C. W. Renner. No. 1,108,004; Aug. 18; Gaz. vol. 205; p. 938.
Journal-boxes, Die-press for forming railway-car. G. Thompson. No. 1,106,902; Aug. 11; Gaz. vol. 205; p. 504.
Junction-box. C. W. Davis. No. 1,107,499; Aug. 18; Gaz. vol. 205; p. 762.
Junction-box coupling, Self-locking. A. W. Weikert and J. Pettibone. No. 1,106,761; Aug. 11; Gaz. vol. 205; p. 455.
Kettle, Varnish-. L. Hambrock, Jr. No. 1,106,142; Aug. 4; Gaz. vol. 205; p. 195.
Key: *See* Calling-key; Four-party key.
Key-duplicating machine. A. H. Gussman. No. 1,105,769; Aug. 4; Gaz. vol. 205; p. 64.
Kiln: *See* Brick-kiln; Dry-kiln; Porcelain-kiln; Varnish-kiln.
Kiln-burner. J. T. Underwood. No. 1,105,723; Aug. 4; Gaz. vol. 205; p. 49.
Kinematograph apparatus. W. H. Anderson. No. 1,106,069; Aug. 4; Gaz. vol. 205; p. 169.
Kinetographic apparatus, A. and L. Chronik. No. 1,106,080; Aug. 4; Gaz. vol. 205; p. 172.
Kinetoscope. T. H. Blair. No. 1,108,122; Aug. 25; Gaz. vol. 205; p. 1027.
Kitchen utensil. R. J. Haverty and A. Eckenrod. No. 1,106,809; Aug. 11; Gaz. vol. 205; p. 471.
Kneading apparatus, Mechanical. R. Monnier. No. 1,107,980; Aug. 18; Gaz. vol. 205; p. 929.
Knife: *See* Band-knife.
Knife wiper, Bottom-trimming-. D. Petri-Palmedo. No. 1,108,391; Aug. 25; Gaz. vol. 205; p. 1122.
Knife wiper, Side-. E. F. Goddard. No. 1,108,357; Aug. 25; Gaz. vol. 205; p. 1109.
Knit article and making the same. R. W. Scott. No. 1,106,336; Aug. 4; Gaz. vol. 205; p. 258.
Knitted web and making the same, Welted. R. W. Scott. (Reissue.) No. 13,788; Aug. 18; Gaz. vol. 205; p. 978.
Knitting-machine. F. B. Wildman and G. L. Ballard. No. 1,106,763; Aug. 11; Gaz. vol. 205; p. 455.
Knitting-machine. G. D. Mayo. No. 1,107,816; Aug. 18; Gaz. vol. 205; p. 873.
Knitting machine, Circular-. F. B. Wildman and G. L. Ballard. No. 1,106,764; Aug. 11; Gaz. vol. 205; p. 456.
Knitting-machine, Circular French-welt. F. B. Wildman and G. L. Ballard. No. 1,105,735; Aug. 4; Gaz. vol. 205; p. 53.

Knockdown box. L. D. Merrill. No. 1,107,174; Aug. 11; Gaz. vol. 205; p. 599.
Label pasting and marking machine. J. R. Johnson, C. S. Hamilton, and R. D. Van Duyne. No. 1,108,583; Aug. 25; Gaz. vol. 205; p. 1189.
Labeling-machine. F. H. Knapp and C. W. Blackstone. No. 1,106,100; Aug. 4; Gaz. vol. 205; p. 181.
Labeling-machine. L. D. Castor and A. Kiefer. No. 1,106,925; Aug. 11; Gaz. vol. 205; p. 513.
Labeling machine, Can-. F. H. Knapp. No. 1,108,188; Aug. 25; Gaz. vol. 205; p. 1050.
Lace-making machine, Pillow-. A. Matitsch. No. 1,107,335; Aug. 18; Gaz. vol. 205; p. 702.
Lacing, Tipped. E. A. Gallison. No. 1,108,738; Aug. 25; Gaz. vol. 205; p. 1241.
Ladder and ironing-board, Combined step-. J. A. Pastaleniec. No. 1,107,443; Aug. 18; Gaz. vol. 205; p. 742.
Ladder with rescue-car, Extension-. B. F. Carpenter. No. 1,106,698; Aug. 11; Gaz. vol. 205; p. 432.
Ladders, Scaffolding or attachment for. E. F. Vallilee. No. 1,106,013; Aug. 4; Gaz. vol. 205; p. 149.
Lamp. W. E. Burcky. No. 1,106,776; Aug. 11; Gaz. vol. 205; p. 460.
Lamp. W. C. M. Pettingill. No. 1,108,227; Aug. 25; Gaz. vol. 205; p. 1064.
Lamp, Acetylene-. M. Stein. No. 1,106,062; Aug. 4; Gaz. vol. 205; p. 167.
Lamp, Arc-. H. E. Davies. No. 1,106,789; Aug. 11; Gaz. vol. 205; p. 464.
Lamp, Arc-. C. A. B. Halvorson, Jr. No. 1,107,061; Aug. 11; Gaz. vol. 205; p. 557.
Lamp, Automobile-. S. G. Miller. No. 1,108,512; Aug. 25; Gaz. vol. 205; p. 1164.
Lamp-burner. C. C. Briand. No. 1,107,211; Aug. 11; Gaz. vol. 205; p. 611.
Lamp, Electric glow-. W. Nernst. No. 1,106,960; Aug. 11; Gaz. vol. 205; p. 525.
Lamp, Electric glow-. W. Nernst. No. 1,106,961; Aug. 11; Gaz. vol. 205; p. 525.
Lamp-extinguisher. C. H. Krantz. No. 1,108,503; Aug. 25; Gaz. vol. 205; p. 1161.
Lamp for clocks, Pendulum-. C. R. Hanson. No. 1,106,807; Aug. 11; Gaz. vol. 205; p. 470.
Lamp, Incandescent. A. W. Beuttell. No. 1,107,650; Aug. 18; Gaz. vol. 205; p. 816.
Lamp, Incandescent electric. W. G. Hughes. No. 1,105,908; Aug. 4; Gaz. vol. 205; p. 112.
Lamp, Inverted. W. J. Davis, Jr. No. 1,106,631; Aug. 11; Gaz. vol. 205; p. 410.
Lamp, Miniature electric. H. E. Gustafson. No. 1,105,770; Aug. 4; Gaz. vol. 205; p. 65.
Lamp, Portable electric. W. J. Monaghan. No. 1,106,828; Aug. 11; Gaz. vol. 205; p. 478.
Lamp, Signal-. F. Wilkie. No. 1,106,690; Aug. 11; Gaz. vol. 205; p. 430.
Lamp-socket. G. C. Knauff. No. 1,106,459; Aug. 11; Gaz. vol. 205; p. 347.
Lamp-socket. G. F. Rush. No. 1,106,974; Aug. 11; Gaz. vol. 205; p. 529.
Lamp-socket casing. R. B. Benjamin. No. 1,108,678; Aug. 25; Gaz. vol. 205; p. 1220.
Lamp socket, Incandescent-. H. Hubbell. No. 1,107,951; Aug. 18; Gaz. vol. 205; p. 918.
Lamp-socket support, Electric-. J. A. Smith. No. 1,105,855; Aug. 4; Gaz. vol. 205; p. 94.
Lamp-support, Dirigible. W. R. Cochran. No. 1,108,339; Aug. 25; Gaz. vol. 205; p. 1103.
Lamp switches. Operating means for electric-. A. J. Tizley. No. 1,108,641; Aug. 25; Gaz. vol. 205; p. 1208.
Lamps, Incandescent body for electric. W. G. Hughes. No. 1,106,384; Aug. 11; Gaz. vol. 205; p. 320.
Land-anchor. G. H. Evans. No. 1,108,158; Aug. 25; Gaz. vol. 205; p. 1040.
Land-roller drums, Head for. F. C. Warne. No. 1,108,038; Aug. 18; Gaz. vol. 205; p. 951.
Lantern-lighter. C. Dustin. No. 1,107,049; Aug. 11; Gaz. vol. 205; p. 553.
Lantern-slide carrier. C. E. Sharlow. No. 1,108,256; Aug. 25; Gaz. vol. 205; p. 1075.
Lap-board. J. Stone. No. 1,106,901; Aug. 11; Gaz. vol. 205; p. 504.
Last. H. A. Ballard. No. 1,105,871; Aug. 4; Gaz. vol. 205; p. 100.
Last. G. Clausing. No. 1,107,655; Aug. 18; Gaz. vol. 205; p. 818.
Last. G. Clausing. No. 1,107,656; Aug. 18; Gaz. vol. 205; p. 818.
Lasting-machine. W. S. Hamm. No. 1,106,377; Aug. 11; Gaz. vol. 205; p. 317.
Lasting-machine. L. C. Colt. No. 1,108,551; Aug. 25; Gaz. vol. 205; p. 1178.
Lasting mechanism, Heel-. M. Brock. No. 1,108,100; Aug. 18; Gaz. vol. 205; p. 973.
Latch and cavel, Pole. E. F. Joyce and W. B. Kain. No. 1,106,309; Aug. 4; Gaz. vol. 205; p. 249.
Latch, Door or gate. R. T. Pelree. No. 1,108,783; Aug. 25; Gaz. vol. 205; p. 1255.
Latching device. W. P. Bancroft. No. 1,107,569; Aug. 18; Gaz. vol. 205; p. 786.
Lath. G. P. Crumbaugh. No. 1,107,906; Aug. 18; Gaz. vol. 205; p. 903.
Lath-machine guard. F. G. Kleinegger. No. 1,108,586; Aug. 25; Gaz. vol. 205; p. 1190.
Lathe-dog. C. D. Andrew. No. 1,107,566; Aug. 18; Gaz. vol. 205; p. 786.
Lathes, Index-head for. A. Frykman. No. 1,108,736; Aug. 25; Gaz. vol. 205; p. 1241.
Laundry tub or tray. M. Batter. No. 1,108,120; Aug. 25; Gaz. vol. 205; p. 1027.
Lavatory or sink. J. W. McAuliffe. No. 1,107,817; Aug. 18; Gaz. vol. 205; p. 874.
Lawn-sprinkler, Traveling. W. C. Todd and J. W. Pomeroy. No. 1,108,528; Aug. 25; Gaz. vol. 205; p. 1169.
Lead, Producing white. E. Euston. No. 1,106,793; Aug. 11; Gaz. vol. 205; p. 465.
Lead, Producing white. E. Euston. No. 1,106,794; Aug. 11; Gaz. vol. 205; p. 466
Lead refining and desilverizing apparatus. W. Thum. No. 1,106,480; Aug. 11; Gaz. vol. 205; p. 355.
Leather-drier. E. B. Ayres. No. 1,106,271; Aug. 4; Gaz. vol. 205; p. 236.
Leather-drier. E. B. Ayres. No. 1,106,272; Aug. 4; Gaz. vol. 205; p. 237.
Leather embossing or marking machine. F. A. Putnam. No. 1,108,518; Aug. 25; Gaz. vol. 205; p. 1166.
Leg, Artificial. F. Buchstein. No. 1,107,893; Aug. 18; Gaz. vol. 205; p. 899.
Leg-covering means. A. M. Grean. No. 1,106,375; Aug. 11; Gaz. vol. 205; p. 317.
Lemons and the like, Machine for extracting the juice and pulp from. R. T. Park. No. 1,107,991; Aug. 18; Gaz. vol. 205; p. 933.
Lens, Multiple-focus. A. J. Cross. No. 1,106,629; Aug. 11; Gaz. vol. 205; p. 410.
Level, Spirit-. W. J. Cassity. No. 1,108,134; Aug. 25; Gaz. vol. 205; p. 1032.
Lid-raising device. J. C. Gibbs. No. 1,107,781; Aug. 18; Gaz. vol. 205; p. 863.
Life-preserver. G. Horty. No. 1,108,177; Aug. 25; Gaz. vol. 205; p. 1046.
Life-preserver. T. Himle. No. 1,108,756; Aug. 25; Gaz. vol. 205; p. 1246.
Life-raft. O. M. Burton. No. 1,107,652; Aug. 18; Gaz. vol. 205; p. 817.
Life-saving appliance for use at sea. L. Tabulo. No. 1,107,632; Aug. 18; Gaz. vol. 205; p. 809.
Life-saving suit. F. A. Roberts. No. 1,106,728; Aug. 11; Gaz. vol. 205; p. 443.
Lift. J. Baas. No. 1,107,739; Aug. 18; Gaz. vol. 205; p. 847.
Lifting-jack and shock-absorber for automobiles and like vehicles, Combined. H. R. Searles and C. A. Thurston. No. 1,108,522; Aug. 25; Gaz. vol. 205; p. 1167.
Lifting-jacks, Lever-socket for. I. E. Hindman. No. 1,107,611; Aug. 18; Gaz. vol. 205; p. 802.
Light: *See* Flash-light.
Lighter. A. R. Blum. No. 1,108,684; Aug. 25; Gaz. vol. 205; p. 1222.
Lighter, Automatic. H. E. Wolff. No. 1,106,175; Aug. 4; Gaz. vol. 205; p. 206.
Lighting-fixture. E. M. Smith. No. 1,106,685; Aug. 11; Gaz. vol. 205; p. 428.
Lighting-fixture. G. A. Macbeth. No. 1,108,453; Aug. 25; Gaz. vol. 205; p. 1141.
Lightning-arrester. A. W. Burke. No. 1,107,584; Aug. 18; Gaz. vol. 205; p. 792.
Limb, Artificial. E. C. Moore. No. 1,108,462; Aug. 25; Gaz. vol. 205; p. 1145.
Limiting and stopping device. B. E. Marshall. No. 1,106,574; Aug. 11; Gaz. vol. 205; p. 390.
Line-casting machines, Escapement mechanism for. A. W. Le Boeuf. No. 1,108,378; Aug. 25; Gaz. vol. 205; p. 1117.
Line-casting machines, Line-stop for. H. A. Armstrong. No. 1,108,825; Aug. 25; Gaz. vol. 205; p. 1270.
Line-casting machines, Slug-evener for. D. Petri-Palmedo. No. 1,108,390; Aug. 25; Gaz. vol. 205; p. 1121.
Line composing and casting machine. H. A. Armstrong. No. 1,108,826; Aug. 25; Gaz. vol. 205; p. 1270.
Line setting and casting machine, Matrix-. J. Dorneth. No. 1,108,556; Aug. 25; Gaz. vol. 205; p. 1179.
Linotype-machine. W. G. White. No. 1,108,818; Aug. 25; Gaz. vol. 205; p. 1267.
Linotype-machine. W. E. Bertram. No. 1,108,828; Aug. 25; Gaz. vol. 205; p. 1271.
Linotype-machine. W. E. Bertram. No. 1,108,829; Aug. 25; Gaz. vol. 205; p. 1271.
Linotype-matrix. G. L. Hammond. No. 1,108,361; Aug. 25; Gaz. vol. 205; p. 1110.
Linotype-slugs, Device for trimming. J. Komancsek. No. 1,106,948; Aug. 11; Gaz. vol. 205; p. 521.
Liquid-dispenser. J. B. Hall. No. 1,107,299; Aug. 18; Gaz. vol. 205; p. 689.
Liquid-dispensing apparatus. E. R. Williams. No. 1,107,393; Aug. 18; Gaz. vol. 205; p. 723.
Liquid-fuel burner. A. Ewing. No. 1,108,728; Aug. 25; Gaz. vol. 205; p. 1237.
Liquid-fuel-burning apparatus. S. W. Price. No. 1,105,833; Aug. 4; Gaz. vol. 205; p. 86.
Liquid-package. G. A. Foster. No. 1,107,509; Aug. 18; Gaz. vol. 205; p. 765.
Liquids and gases, Apparatus for scrubbing or similarly treating. B. F. B. Sewell. No. 1,108,853; Aug. 25; Gaz. vol. 205; p. 1280.
Lithographic stones, Preparing. H. Busch and W. Schupbach. No. 1,108,695; Aug. 25; Gaz. vol. 205; p. 1226.
Loader. C. M. Wangsness. No. 1,106,171; Aug. 4; Gaz. vol. 205; p. 205.
Lock: *See* Coin-controlled lock; Combination-lock; Door-lock; Gearing-lock; Nut-lock; Padlock; Sash-lock; Whip-lock.

Lock. O. P. Driebusch. No. 1,105,632; Aug. 4; Gaz. vol. 205; p. 16.
Lock. W. Fields. No. 1,106,292; Aug. 4; Gaz. vol. 205; p. 243.
Lock. K. Umhauer. No. 1,106,599; Aug. 11; Gaz. vol. 205; p. 399.
Lock. E. M. Benham. No. 1,106,916; Aug. 11; Gaz. vol. 205; p. 509.
Lock. J. Grossmann. No. 1,107,297; Aug. 18; Gaz. vol. 205; p. 688.
Lock for portable articles. A. C. Terrill. No. 1,105,938; Aug. 4; Gaz. vol. 205; p. 123.
Lock mechanism and key therefor. K. G. Thiman. No. 1,107,376; Aug. 18; Gaz. vol. 205; p. 718.
Locks, Anticreep for wedge-. E. P. Kline. No. 1,108,374; Aug. 25; Gaz. vol. 205; p. 1116.
Locking device. C. L. Seeley. No. 1,106,521; Aug. 11; Gaz. vol. 205; p. 370.
Locomotive ash-pan. T. P. Madden. No. 1,107,682; Aug. 18; Gaz. vol. 205; p. 827.
Locomotive attachment. A. L. Stevens. No. 1,106,422; Aug. 11; Gaz. vol. 205; p. 333.
Locomotive cabs and tenders, Appliance for. H. H. Vaughan. No. 1,108,816; Aug. 25; Gaz. vol. 205; p. 1266.
Locomotive dump ash-pan. T. F. Cain and W. A. Skinner. No. 1,106,544; Aug. 11; Gaz. vol. 205; p. 379.
Locomotive-hoist, Screw-jack. F. A. Rundle. No. 1,107,706; Aug. 18; Gaz. vol. 205; p. 836.
Locomotive signaling apparatus, Automatic. J. Stanley. No. 1,108,015; Aug. 18; Gaz. vol. 205; p. 942.
Log-manipulating machine. C. W. Willette. No. 1,108,048; Aug. 18; Gaz. vol. 205; p. 954.
Log peeling-machine, Wood-. A. N. Andersen. No. 1,106,177; Aug. 4; Gaz. vol. 205; p. 207.
Log-raising device. R. Harris. No. 1,106,651; Aug. 11; Gaz. vol. 205; p. 417.
Logging-bunk. C. O. Dale. No. 1,105,827; Aug. 4; Gaz. vol. 205; p. 84.
Logging-bunk. H. L. Williams. No. 1,108,416; Aug. 25; Gaz. vol. 205; p. 1128.
Loom. H. W. Smith. No. 1,107,553; Aug. 18; Gaz. vol. 205; p. 779.
Loom, Filling-replenishing. O. Bernier. No. 1,107,400; Aug. 18; Gaz. vol. 205; p. 726.
Looms, Automatic weft-bobbin-exchange device for. A. G. Koechlin. No. 1,106,716; Aug. 11; Gaz. vol. 205; p. 439.
Looms for weaving cloth, Crank and tappet shaft of. J. J. Gregson. No. 1,105,648; Aug. 4; Gaz. vol. 205; p. 22.
Looms, Loose reed-motion for. F. Ott. No. 1,107,546; Aug. 18; Gaz. vol. 205; p. 777.
Lubricator: *See* Constant-level lubricator; Elevator-guide-rail lubricator; Force-feed lubricator; Spindle-skein lubricator; Wheel-flange lubricator.
Lubricator. E. A. Backus. No. 1,106,273; Aug. 4; Gaz. vol. 205; p. 237.
Lubricator. W. H. Vandenberg. No. 1,106,756; Aug. 11; Gaz. vol. 205; p. 453.
Lubricator. E. Reglin. No. 1,107,226; Aug. 11; Gaz. vol. 205; p. 617.
Lumber-stacker. G. H. Rice. No. 1,108,520; Aug. 25; Gaz. vol. 205; p. 1166.
Lunch carrier and heater, Combined. A. G. Wormser. No. 1,106,176; Aug. 4; Gaz. vol. 205; p. 206.
Machine-bench. F. Hardinge. No. 1,107,609; Aug. 18; Gaz. vol. 205; p. 801.
Machine safety-guard. W. D. Brock. No. 1,106,920; Aug. 11; Gaz. vol. 205; p. 511.
Machine-tools, Feed mechanism for. A. L. De Leeuw. No. 1,108,107; Aug. 18; Gaz. vol. 205; p. 975.
Magazine-handle. W. H. S. Moore. No. 1,105,818; Aug. 4; Gaz. vol. 205; p. 81.
Magneto-generator. R. G. Kirchner. No. 1,108,872; Aug. 25; Gaz. vol. 205; p. 1288.
Magnetos on gas-engines, Attachment for installing. W. G. Swift. No. 1,107,374; Aug. 18; Gaz. vol. 205; p. 717.
Mail-box. E. Anderson. No. 1,105,869; Aug. 4; Gaz. vol. 205; p. 99.
Mail-box, Combined. H. W. Habenicht. No. 1,106,376; Aug. 11; Gaz. vol. 205; p. 317.
Mail-box, Combined letter and parcel-post. J. A. Waugh. No. 1,105,730; Aug. 4; Gaz. vol. 205; p. 51.
Mail-marker. O. H. Smith. No. 1,107,630; Aug. 18; Gaz. vol. 205; p. 808.
Mailing-folder. G. M. Rand. No. 1,106,058; Aug. 4; Gaz. vol. 205; p. 165.
Manometer. F. Haas. No. 1,107,298; Aug. 18; Gaz. vol. 205; p. 689.
Manual start and stop motion. C. S. Batdorf. No. 1,107,878; Aug. 18; Gaz. vol. 205; p. 895.
Manure-spreader. A. C. Lindgren and G. G. Mandt. No. 1,107,329; Aug. 18; Gaz. vol. 205; p. 700.
Manure-spreader. A. L. Dudley and J. J. Schmidt. No. 1,108,150; Aug. 25; Gaz. vol. 205; p. 1037.
Map. M. Ewing. No. 1,108,159; Aug. 25; Gaz. vol. 205; p. 1040.
Marble, Manufacturing artificial. N. K. Andersen. No. 1,105,950; Aug. 4; Gaz. vol. 205; p. 127.
Marble-shooter. N. G. Nelson. No. 1,106,830; Aug. 11; Gaz. vol. 205; p. 479.
Massage apparatus, Vibratory. J. Sabatino. No. 1,106,893; Aug. 11; Gaz. vol. 205; p. 501.
Massage device, Hand. H. B. Bradshaw. No. 1,106,276; Aug. 4; Gaz. vol. 205; p. 238.
Master-wheel. J. E. Wood. No. 1,108,538; Aug. 25; Gaz. vol. 205; p. 1173.
Match-box. S. Stiglich and J. W. Schneller. No. 1,108,018; Aug. 18; Gaz. vol. 205; p. 943.
Match-box. B. vom Elgen. No. 1,108,429; Aug. 25; Gaz. vol. 205; p. 1133.
Match-container. H. J. Downey. No. 1,105,893; Aug. 4; Gaz. vol. 205; p. 107.
Match-making machine. H. A. Gsell. No. 1,107,060; Aug. 11; Gaz. vol. 205; p. 557.
Match-safe. A. J. Homburg. No. 1,106,218; Aug. 4; Gaz. vol. 205; p. 220.
Match-striker. C. Hill. No. 1,106,216; Aug. 4; Gaz. vol. 205; p. 219.
Matches in boxes, Apparatus for measuring off matches for machines for packing. H. A. Gsell. No. 1,107,059; Aug. 11; Gaz. vol. 205; p. 556.
Mattress. S. Bronstien. No. 1,107,753; Aug. 18; Gaz. vol. 205; p. 852.
Mattress, Bed-. F. Major. No. 1,106,659; Aug. 11; Gaz. vol. 205; p. 420.
Mattress for invalids, Reversible sanitary. I. E. Malark. No. 1,107,683; Aug. 18; Gaz. vol. 205; p. 828.
Measured quantities, Apparatus for supplying. D. Swarovski and H. Weis. No. 1,106,686; Aug. 11; Gaz. vol. 205; p. 429.
Measuring and feeding mechanism. W. E. Taylor. No. 1,106,012; Aug. 4; Gaz. vol. 205; p. 148.
Measuring device. G. W. Foster. No. 1,108,353; Aug. 25; Gaz. vol. 205; p. 1108.
Measuring instrument. W. H. Bristol. No. 1,106,341; Aug. 4; Gaz. vol. 205; p. 260.
Measuring-tool. W. G. Meyers. No. 1,107,436; Aug. 18; Gaz. vol. 205; p. 740.
Meat-curing device. B. Hiller. No. 1,108,755; Aug. 25; Gaz. vol. 205; p. 1246.
Meat-tenderer. L. J. Farland. No. 1,106,642; Aug. 11; Gaz. vol. 205; p. 414.
Mechanical movement. J. C. Kitton. No. 1,107,529; Aug. 18; Gaz. vol. 205; p. 771.
Mechanical movement. V. Kobler. No. 1,107,673; Aug. 18; Gaz. vol. 205; p. 824.
Mechanical movement. W. S. Livengood. No. 1,108,380; Aug. 25; Gaz. vol. 205; p. 1118.
Mechanical movement. H. F. Jacobs. No. 1,108,844; Aug. 25; Gaz. vol. 205; p. 1277.
Message register or memorandum-tablet, Autographic-. W. H. Jackson. No. 1,106,711; Aug. 11; Gaz. vol. 205; p. 436.
Metal-cutting tip. E. G. Luening. No. 1,106,724; Aug. 11; Gaz. vol. 205; p. 442.
Metal sheets, Making. E. Norton. No. 1,108,213; Aug. 25; Gaz. vol. 205; p. 1059.
Metal wheel. T. Clarkson and W. J. Morison. No. 1,107,263; Aug. 18; Gaz. vol. 205; p. 678.
Metal-working machine. J. G. Spear. No. 1,106,250; Aug. 4; Gaz. vol. 205; p. 230.
Metallurgical process. W. M. Johnson. No. 1,107,310; Aug. 18; Gaz. vol. 205; p. 693.
Meter: *See* Electric meter; Electric test meter; Gas and the like registering meter.
Meter. M. Cornine. No. 1,108,140; Aug. 25; Gaz. vol. 205; p. 1034.
Meter-box. H. M. Lofton. No. 1,107,532; Aug. 18; Gaz. vol. 205; p. 773.
Microscopes, Device for the fine adjustment of. F. Meyer. No. 1,106,956; Aug. 11; Gaz. vol. 205; p. 524.
Milk or cream sampling device. N. Erickson. No. 1,108,561; Aug. 25; Gaz. vol. 205; p. 1181.
Milk pasteurizing and cooling apparatus. S. Shapiro. No. 1,108,404; Aug. 25; Gaz. vol. 205; p. 1126.
Milking apparatus. O. G. Rieske. No. 1,106,846; Aug. 11; Gaz. vol. 205; p. 484.
Milking cows, Means for the prevention of kicking by. E. Wagner. No. 1,106,996; Aug. 11; Gaz. vol. 205; p. 535.
Milking-machine. J. C. Gordon. No. 1,106,202; Aug. 4; Gaz. vol. 205; p. 215.
Milking-machines, Suction-cup for. O. A. Moldenhauer. No. 1,105,681; Aug. 4; Gaz. vol. 205; p. 33.
Mill: *See* Cane-mill; Cane and like mill; Crushing-mill; Edging-mill; Grinding-mill; Rolling-mill; Wheel-forging mill.
Mill-lubricating system, Rotary-. P. Ogden. No. 1,107,830; Aug. 18; Gaz. vol. 205; p. 878.
Milling-machine, Portable universal. G. E. Miller and E. R. Cantrell. No. 1,107,221; Aug. 11; Gaz. vol. 205; p. 615.
Mine-door. J. F. Dillon. No. 1,107,045; Aug. 11; Gaz vol. 205; p. 551.
Mine drilling and channeling machine. L. J. Daft. No. 1,108,342; Aug. 25; Gaz. vol. 205; p. 1104.
Mine-ventilating apparatus. W. Clifford. No. 1,107,264; Aug. 18; Gaz. vol. 205; p. 678.
Mining-machine. H. A. Kuhn and W. W. Macfarren. No 1,107,239; Aug. 11; Gaz. vol. 205; p. 621.
Mirror, Adjustable. C. L. Fitchett. No. 1,106,503; Aug. 11; Gaz. vol. 205; p. 364.
Miter-box. J. Hellman. No. 1,106,044; Aug. 4; Gaz. vol. 205; p. 161.
Mixer: *See* Concrete-mixer; Gas and air mixer.

Mixing device. S. and E. A. Hoefer. No. 1,106,447; Aug. 11; Gaz. vol. 205; p. 342.
Mixing-machine. A. McKalg. No. 1,105,812; Aug. 4; Gaz. vol. 205; p. 79.
Model-building material for educational purposes and games. R. Röthig. No. 1,106,162; Aug. 4; Gaz. vol. 205; p. 202.
Mold: *See* Briquet-mold; Trap-mold; Typograph-mold; Wall-mold.
Mold. F. W. Case and W. H Burnworth. No. 1,106,625; Aug. 11; Gaz. vol. 205; p. 408.
Mold. F. P. Martin. No. 1,106,661; Aug. 11; Gaz. vol. 205; p. 421.
Mold. I. W. Kyle. No. 1,108,504; Aug. 25; Gaz. vol. 205; p. 1161.
Mold-wiper. E. F. Goddard. No. 1,108,358; Aug. 25; Gaz. vol. 205; p. 1109.
Molder's flask. W. Seidel. No. 1,108,630; Aug. 25; Gaz. vol. 205; p. 1204.
Molding apparatus, Multiplex. B. Keller. No. 1,105,911; Aug. 4; Gaz. vol. 205; p. 113.
Molding-flask guide. W. Partridge. No. 1,106,674; Aug. 11; Gaz. vol. 205; p. 425.
Molding-machine. J. Fülscher. No. 1,106,645; Aug. 11; Gaz. vol. 205; p. 415.
Monolithic constructor. G. E. Thompson. No. 1,107,377; Aug. 18; Gaz. vol. 205; p. 718.
Mop-holder. W. T. Carter. No. 1,106,362; Aug. 11; Gaz. vol. 205; p. 312.
Mortar made of lime and sand, Dressing. C. Siedentopf. No. 1,108,406; Aug. 25; Gaz. vol. 205; p. 1126.
Mortise-catch. J. M. Weaver. No. 1,106,760; Aug. 11; Gaz. vol. 205; p. 454.
Motion-transmitting mechanism. O. B. Shores. No. 1,106,006; Aug. 4; Gaz. vol. 205; p. 146.
Motor: *See* Electric motor; Fluid-motor; Gasolene motor; Spring-motor.
Motor control, Automatic. W. S. Mitchell. No. 1,106,469; Aug. 11; Gaz. vol. 205; p. 351.
Motor control system, Electric-. C. G. Tarkington. No. 1,107,355; Aug. 18; Gaz. vol. 205; p. 781.
Motor-controller. A. J. Horton. No. 1,108,439; Aug. 25; Gaz. vol. 205; p. 1137.
Motor-controller. C. T. Evans. No. 1,108,563; Aug. 25; Gaz. vol. 205; p. 1181.
Motor-locking mechanism. W. J. Sherry. No. 1,107,855; Aug. 18; Gaz. vol. 205; p. 887.
Motor-spirit. R. de Fazi. No. 1,108,351; Aug. 25; Gaz. vol. 205; p. 1107.
Motor-switch. O. B. Duncan. No. 1,106,639; Aug. 11; Gaz. vol. 205; p. 413.
Motors, Apparatus for governing the speed of. W. W. Dean. No. 1,107,914; Aug. 18; Gaz. vol. 205; p. 906.
Motors, Cooling attachment for explosive-. W. F. Thompson and J. Looney. No. 1,107,728; Aug. 18; Gaz. vol. 205; p. 843.
Mouthpiece-forming mechanism. S. I. Prescott. No. 1,105,832; Aug. 4; Gaz. vol. 205; p. 86.
Moving material. W. Cooper. No. 1,106,863; Aug. 11; Gaz. vol. 205; p. 491.
Mower. J. P. Forst. No. 1,106,374; Aug. 11; Gaz. vol. 205; p. 316.
Mower, Vertical. G. Wodtli. No. 1,108,536; Aug. 25; Gaz. vol. 205; p. 1172.
Mowing-machine. J. W. Bruce. No. 1,105,751; Aug. 4; Gaz. vol. 205; p. 58.
Mowing-machine. E. Caruthers. No. 1,108,132; Aug. 25; Gaz. vol. 205; p. 1031.
Mud-guard. T. L. Johnson. No. 1,108,759; Aug. 25; Gaz. vol. 205; p. 1247.
Mud-guard. J. Crues. No. 1,108,833; Aug. 25; Gaz. vol. 205; p. 1273.
Multi-indorsement mechanism. C. C. Abbott. No. 1,107,008; Aug. 11; Gaz. vol. 205; p. 539.
Music-generating and music-distributing apparatus. T. Cahill. No. 1,107,261; Aug. 18; Gaz. vol. 205; p. 677.
Music holder, Sheet-. V. Simmons. No. 1,106,851; Aug. 11; Gaz. vol. 205; p. 487.
Music-leaf turner. R. A. Gibson and J. B. Sartolou. (Reissue.) No. 13,789; Aug. 18; Gaz. vol. 205; p. 978.
Music player and other tracker-bar. R. A. Gally. No. 1,108,071; Aug. 18; Gaz. vol. 205; p. 962.
Music-player valve-action. R. A. Gally. No. 1,106,040; Aug. 4; Gaz. vol. 205; p. 159.
Music-playing devices, Accenting attachment for. W. J. Keeley. No. 1,107,801; Aug. 18; Gaz. vol. 205; p. 869.
Music-roll spool. J. C. Kohler. No. 1,107,314; Aug. 18; Gaz. vol. 205; p. 695.
Music-roll spool. E. Linder. No. 1,107,328; Aug. 18; Gaz. vol. 205; p. 700.
Music-roll winding and rewinding apparatus. R. A. Gally. No. 1,106,297; Aug. 4; Gaz. vol. 205; p. 244.
Music sheet or record. E. T. Turney. No. 1,107,560; Aug. 18; Gaz. vol. 205; p. 783.
Music sheet or record for playing attachments for musical instruments. E. T. Turney. No. 1,107,558; Aug. 18; Gaz. vol. 205; p. 782.
Music sheets or records, Winding and rewinding mechanism for. E. T. Turney. No. 1,107,559; Aug. 18; Gaz. vol. 205; p. 782.
Music sheets or records, Winding and rewinding mechanism for. E. T. Turney. No. 1,107,561; Aug. 18; Gaz. vol. 205; p. 783.
Music sheets or records, Winding and rewinding mechanism for. E. T. Turney. No. 1,107,562; Aug. 18; Gaz. vol. 205; p. 784.
Musical instrument, Automatic. W. F. Bayer. No. 1,107,571; Aug. 18; Gaz. vol. 205; p. 787.
Musical instrument, Automatic. L. H. Maier. No. 1,108,595; Aug. 25; Gaz. vol. 205; p. 1193.
Musical instrument, Automatic pneumatic. R. J. Bennett. No. 1,107,573; Aug. 18; Gaz. vol. 205; p. 788.
Musical instrument, Automatic pneumatic. R. J. Bennett. No. 1,107,575; Aug. 18; Gaz. vol. 205; p. 789.
Musical instrument, Electrically-operated. C. Coleman. No. 1,107,495; Aug. 18; Gaz. vol. 205; p. 761.
Musical-instrument-playing apparatus. J. F. Kelly. No. 1,106,819; Aug. 11; Gaz. vol. 205; p. 475.
Musical-instrument playing attachment. E. T. Turney. No. 1,107,557; Aug. 18; Gaz vol. 205; p. 782.
Musical-instrument playing attachment, Automatic-. R. J. Bennett. No. 1,107,572; Aug. 18; Gaz. vol. 205; p. 787.
Musical-instrument pneumatic playing attachment. R. J. Bennett. No. 1,107,574; Aug. 18; Gaz. vol. 205; p. 788.
Musical instrument, Pneumatically-operated. F. Moritz. No. 1,108,385; Aug. 25; Gaz. vol. 205; p. 1120.
Musical-instrument self-playing device. R. A. Gally. No. 1,106,296; Aug. 4; Gaz. vol. 205; p. 244.
Musical instruments, Control for self-playing. W. A. Watson. No. 1,106,998; Aug. 11; Gaz. vol. 205; p. 536.
Musical instruments, Pedaling mechanism for. L. H. Maier. No. 1,108,199; Aug. 25; Gaz. vol. 205; p. 1054.
Myringoscope. G. G. Carroll. No. 1,106,699; Aug. 11; Gaz. vol. 205; p. 433.
Nail-extracting claw. P. J. Leavens. No. 1,108,766; Aug. 25; Gaz. vol. 205; p. 1250.
Nail-extractor. G. Wodtli. No. 1,105,946; Aug. 4; Gaz. vol. 205; p. 126.
Nail or tack heading apparatus. A. H. Brigham. No. 1,105,613; Aug. 4; Gaz. vol. 205; p. 9.
Nail or tack heading apparatus. A. H. Brigham. No. 1,105,614; Aug. 4; Gaz. vol. 205; p. 9.
Napkin, Sanitary. G. Rinke. No. 1,107,447; Aug. 18; Gaz. vol. 205; p. 744.
Needle-case. A. F. Brabant. No. 1,106,773; Aug. 11; Gaz. vol. 205; p. 459.
Needle, Eyeless. P. R. Minahan. No. 1,106,667; Aug. 11; Gaz. vol. 205; p. 423.
Nest, Hen's. E. C. Mathews. No. 1,106,517; Aug. 11; Gaz. vol. 205; p. 369.
Nipple. P. Buehner. No. 1,106,542; Aug. 11; Gaz. vol. 205; p. 378.
Non-skid device. A. Slipcevic. No. 1,105,931; Aug. 4; Gaz. vol. 205; p. 121.
Non-skidding attachment for wheels. B. Jablonski. No. 1,107,953; Aug. 18; Gaz. vol. 205; p. 919.
Noodle-folding machine. A. Wild. No. 1,108,204; Aug. 25; Gaz. vol. 205; p. 1089.
Nozzle for pneumatic cleaners. J. F. Boyn. No. 1,106,695; Aug. 11; Gaz. vol. 205; p. 431.
Nozzle, Sand-blast. A. Carter. No. 1,107,244; Aug. 11; Gaz. vol. 205; p. 623.
Number-displaying device. G. A. Jenner. No. 1,107,525; Aug. 18; Gaz. vol. 205; p. 770.
Nursing device. W. M. Decker. No. 1,106,927; Aug. 11; Gaz. vol. 205; p. 513.
Nut. A. T. Crane. No. 1,106,082; Aug. 4; Gaz. vol. 205; p. 173.
Nut-cracking device. M. M. Gillam. No. 1,107,288; Aug. 18; Gaz. vol. 205; p. 686.
Nut-lock. H. W. Beach. No. 1,105,606; Aug. 4; Gaz. vol. 205; p. 6.
Nut-lock. J. W. S. Barger. No. 1,105,742; Aug. 4; Gaz. vol. 205; p. 55.
Nut-lock. W. H. Edwards. No. 1,105,763; Aug. 4; Gaz. vol. 205; p. 62.
Nut-lock. F. M. Simpson. No. 1,106,248; Aug. 4; Gaz. vol. 205; p. 229.
Nut-lock. I. Peyton. No. 1,106,316; Aug. 4; Gaz. vol. 205; p. 252.
Nut-lock. L. V. Pines. No. 1,107,106; Aug. 11; Gaz. vol. 205; p. 571.
Nut-lock. W. I. Heinbach. No. 1,107,213; Aug. 11; Gaz. vol. 205; p. 611.
Nut-lock. E. R. Anderson. No. 1,107,473; Aug. 18; Gaz. vol. 205; p. 753.
Nut-lock. J. D. Houston. No. 1,107,792; Aug. 18; Gaz. vol. 205; p. 866.
Nut-lock. E. Cathey. No. 1,107,897; Aug. 18; Gaz. vol. 205; p. 900.
Nut-lock. H. T. Craven. No. 1,108,832; Aug. 25; Gaz. vol. 205; p. 1273.
Nut-lock. E. B. Messner. No. 1,108,866; Aug. 25; Gaz. vol. 205; p. 1286.
Oar. E. J. Kerns. No. 1,107,169; Aug. 11; Gaz. vol. 205; p. 597.
Ocarinas, Pitch-regulating device for. F. D. Smenner. No. 1,106,249; Aug. 4; Gaz. vol. 205; p. 229.
Oil, Bleaching cotton-seed. C. Baskerville. No. 1,105,743; Aug. 4; Gaz. vol. 205; p. 55.
Oil-burner. W. M. Surface. No. 1,106,426; Aug. 11; Gaz. vol. 205; p. 334.
Oil-burner. T. P. Jarvis. No. 1,107,614; Aug. 18; Gaz. vol. 205; p. 803.
Oil burner, Fuel-. W. R. Cochran, Jr. No. 1,107,900; Aug. 18; Gaz. vol. 205; p. 901.

Oil-burners, Automatic cut-off mechanism for. J. H. Becker. No. 1,107,748; Aug. 18; Gaz. vol. 205; p. 851.
Oil-can. J. W. Teague. No. 1,108,022; Aug. 18; Gaz. vol. 205; p. 945.
Oil-can. W. Ashworth. No. 1,108,664; Aug. 25; Gaz. vol. 205; p. 1216.
Oil-press. N. W. L. Brown. No. 1,107,487; Aug. 18; Gaz. vol. 205; p. 758.
Oil-separator. A. Doble. No. 1,107,271; Aug. 18; Gaz. vol. 205; p. 680.
Oils, Refining vegetable and animal. C. Baskerville. No. 1,105,744; Aug. 4; Gaz. vol. 205; p. 55.
Oiling device. M. E. Brigham. No. 1,106,775; Aug. 11; Gaz. vol. 205; p. 459.
Oiling system. H. D. Furness. No. 1,107,601; Aug. 18; Gaz. vol. 205; p. 798.
Oleic and fatty acids derived from train or fish oils, Deodorizing. W. H. Hofmann. No. 1,106,509; Aug. 11; Gaz. vol. 205; p. 366.
Opera-chair. N. H. Miller. No. 1,105,990; Aug. 4; Gaz. vol. 205; p. 141.
Optical square. O. Eppenstein. No. 1,105,895; Aug. 4; Gaz. vol. 205; p. 107.
Orchard-heater. R. Peter. No. 1,108,471; Aug. 25; Gaz. vol. 205; p. 1148.
Orchard protective covering. L. T. Cadwallader and H. E. Anthony. No. 1,106,624; Aug. 11; Gaz. vol. 205; p. 408.
Ordnance ranging and pointing gear. A. T. Dawson and G. T. Buckham. No. 1,106,083; Aug. 4; Gaz. vol. 205; p. 174.
Ore-concentrating machine. G. W. Burnhart and A. Krieg. No. 1,106,923; Aug. 11; Gaz. vol. 205; p. 512.
Ore-concentrating tables, Operating. E. B. Kirby. No. 1,105,799; Aug. 4; Gaz. vol. 205; p. 74.
Ore-roasting furnace. G. P. Gibson. No. 1,107,604; Aug. 18; Gaz. vol. 205; p. 799.
Ores, Agitator and filter for treating. J. D. Fields. No. 1,107,922; Aug. 18; Gaz. vol. 205; p. 908.
Ores by means of peat, Reduction of. P. Anderson and E. E: son Odelstierna. No. 1,105,870; Aug. 4; Gaz. vol. 205; p. 100.
Ores, Treating. N. C. Christensen, Jr., and T. P. Holt. No. 1,107,240; Aug. 11; Gaz. vol. 205; p. 622.
Organ-action. J. T. Austin. No. 1,107,128; Aug. 11; Gaz. vol. 205; p. 579.
Organ-action. J. T. Austin. No. 1,107,130; Aug. 11; Gaz. vol. 205; p. 580.
Organ key and stop action. J. T. Austin. No. 1,107,129; Aug. 11; Gaz. vol. 205; p. 580.
Organs, Electric action for. J. T. Austin. No. 1,107,127; Aug. 11; Gaz. vol. 205; p. 579.
Oven. F. A. Gercich and J. Vaughn. No. 1,107,285; Aug. 18; Gaz. vol. 205; p. 685.
Oven. W. H. Wilder and F. E. White. No. 1,107,470; Aug. 18; Gaz. vol. 205; p. 752.
Oven, Baking-. W. S. Corby and J. L. Parsons, Jr. No. 1,107,195; Aug. 11; Gaz. vol. 205; p. 606.
Oven-door. L. Stockstrom. No. 1,108,810; Aug. 25; Gaz. vol. 205; p. 1264.
Oven-heating apparatus. W. S. Quigley. No. 1,107,353; Aug. 18; Gaz. vol. 205; p. 709.
Overalls, Belt-strap for. F. E. Day. No. 1,107,158; Aug. 11; Gaz. vol. 205; p. 594.
Overshoe. A. F. Kelly. No. 1,106,568; Aug. 11; Gaz. vol. 205; p. 388.
Ozone-producer. H. A. Thomson. No. 1,105,717; Aug. 4; Gaz. vol. 205; p. 47.
Package for use in sending fragile articles. I. A. Milliron. No. 1,107,339; Aug. 18; Gaz. vol. 205; p. 704.
Package-supporting device. A. H. Scott. No. 1,106,003; Aug. 4; Gaz. vol. 205; p. 146.
Packaging machine, Article-. C. Casey. No. 1,108,696; Aug. 25; Gaz. vol. 205; p. 1226.
Packeting-machine for filling or delivering granular or other materials into bags or the like. W. Rose. No. 1,107,114; Aug. 11; Gaz. vol. 205; p. 574.
Packing. W. N. Mears. No. 1,106,467; Aug. 11; Gaz. vol. 205; p. 350.
Packing. P. Chappeau. No. 1,107,032; Aug. 11; Gaz. vol. 205; p. 547.
Packing-machine. O. Hesser. No. 1,106,303; Aug. 4; Gaz. vol. 205; p. 246.
Packing-ring. G. W. Owens. No. 1,106,054; Aug. 4; Gaz. vol. 205; p. 164.
Packing-ring. J. F. Kytlica. No. 1,106,462; Aug. 11; Gaz. vol. 205; p. 848.
Packing-ring. R. Ragan. No. 1,106,678; Aug. 11; Gaz. vol. 205; p. 426.
Packing-ring, Piston. J. A. Berger. No. 1,106,539; Aug. 11; Gaz. vol. 205; p. 377.
Packing-rings, Apparatus for making piston. C. White. No. 1,107,005; Aug. 11; Gaz. vol. 205; p. 538.
Pad; *See* Collar-pad.
Pad-holder and paper-weight, Combined. J. J. Radley. No. 1,105,835; Aug. 4; Gaz. vol. 205; p. 87.
Padding, Making. D. F. Fowler. No. 1,108,354; Aug. 25; Gaz. vol. 205; p. 1108.
Padlock. A. A. Page. No. 1,106,400; Aug. 11; Gaz. vol. 205; p. 325.
Pail, Milking-. A. F. Demory. No. 1,107,413; Aug. 18; Gaz. vol. 205; p. 733.
Paint and varnish, Antifouling. L. Collardon. No. 1,105,619; Aug. 4; Gaz. vol. 205; p. 10.
Paint for protecting iron, wood, and the like from sea growths, Manufacture of. M. Rappard. No. 1,108,395; Aug. 25; Gaz. vol. 205; p. 1124.
Pan; *See* Dust-pan; Locomotive ash-pan; Locomotive dump ash-pan.
Paper, Apparatus for tearing or cutting off pieces from rolled-up. F. Schade. No. 1,107,848; Aug. 18; Gaz. vol. 205; p. 885.
Paper-bag charging and closing machine. O. Hesser. No. 1,106,304; Aug. 4; Gaz. vol. 205; p. 247.
Paper bottle and the like. W. L. Wright. No. 1,107,870; Aug. 18; Gaz. vol. 205; p. 892.
Paper box. T. L. Neumann. No. 1,106,831; Aug. 11; Gaz. vol. 205; p. 479.
Paper-box blank. J. Dunn. No. 1,107,048; Aug. 11; Gaz. vol. 205; p. 552.
Paper cigar-case. R. Rey. No. 1,108,006; Aug. 18; Gaz. vol. 205; p. 939.
Paper-cup-forming apparatus. L. W. Farmer. No. 1,107,506; Aug. 18; Gaz. vol. 205; p. 764.
Paper-cutting device, Wall-. W. Field. No. 1,108,161; Aug. 25; Gaz. vol. 205; p. 1041.
Paper-feeding apparatus. E. Jagenberg. No. 1,107,795; Aug. 18; Gaz. vol. 205; p. 867.
Paper-feeding machine. V. Garner. No. 1,108,569; Aug. 25; Gaz. vol. 205; p. 1184.
Paper, &c., from rolls, Fixture for supplying. A. Bagnall. No. 1,105,951; Aug. 4; Gaz. vol. 205; p. 127.
Paper-holder. H. J. Hick. No. 1,107,306; Aug. 18; Gaz. vol. 205; p. 692.
Paper-making machine, Corrugated-. J. T. Ferres. No. 1,106,502; Aug. 11; Gaz. vol. 205; p. 364.
Paper, Manufacturing bag or packing. G. Loebbecke. No. 1,107,807; Aug. 18; Gaz. vol. 205; p. 871.
Paper-material receptacle and the like. W. L. Wright. No. 1,107,869; Aug. 18; Gaz. vol. 205; p. 892.
Paper-plaiting machine. P. F. Cohen. No. 1,107,265; Aug. 18; Gaz. vol. 205; p. 678.
Paper receptacles, Machine for forming. H. F. Provandie. No. 1,107,225; Aug. 11; Gaz. vol. 205; p. 616.
Paper receptacles, Machine for the manufacture of. D. J. Jennings. No. 1,107,950; Aug. 18; Gaz. vol. 205; p. 920.
Paper-tube-rolling machine. W. Kellner. No. 1,106,714; Aug. 11; Gaz. vol. 205; p. 438.
Paper-weight and calendar-support, Combined. C. E. Preston. No. 1,107,349; Aug. 18; Gaz. vol. 205; p. 708.
Parachute. S. Banic. No. 1,108,484; Aug. 25; Gaz. vol. 205; p. 1154.
Parachute, Miniature. H. Manson-Olin. No. 1,108,596; Aug. 25; Gaz. vol. 205; p. 1193.
Parcel-closing-up machine. O. Hesser. No. 1,106,305; Aug. 4; Gaz. vol. 205; p. 247.
Parcel-rack. E. Posson. No. 1,105,830; Aug. 4; Gaz. vol. 205; p. 86.
Pasteurizing apparatus. W. J. Davis. No. 1,107,765; Aug. 18; Gaz. vol. 205; p. 857.
Pavements, Making. J. Y. McClintock. (Reissue.) No. 13,785; Aug. 4; Gaz. vol. 205; p. 266.
Pawl-and-ratchet mechanism. H. T. Verner and C. C. Ranson. No. 1,106,995; Aug. 11; Gaz. vol. 205; p. 535.
Pea, bean, and cow-pea huller. R. P. Scott. No. 1,107,207; Aug. 11; Gaz. vol. 205; p. 610.
Pea-huller. U. T. Hight. No. 1,107,424; Aug. 18; Gaz. vol. 205; p. 736.
Peat for manurial and other purposes, Treatment of. W. B. Bottomley. No. 1,106,275; Aug. 4; Gaz. vol. 205; p. 238.
Pen, Fountain-. A. Badini. No. 1,107,641; Aug. 18; Gaz. vol. 205; p. 813.
Pen holder, Fountain-. G. C. Beidler. No. 1,107,644; Aug. 18; Gaz. vol. 205; p. 814.
Pen, Self-filling fountain-. J. Gilbert. No. 1,108,743; Aug. 25; Gaz. vol. 205; p. 1243.
Penholder. E. A. Williams. No. 1,106,173; Aug. 4; Gaz. vol. 205; p. 205.
Pencil. H. Reiche. No. 1,106,160; Aug. 4; Gaz. vol. 205; p. 201.
Pencil-pointer. C. E. Lee. No. 1,108,590; Aug. 25; Gaz. vol. 205; p. 1192.
Pencil-sharpener. J. R. Searight. No. 1,108,478; Aug. 25; Gaz. vol. 205; p. 1151.
Pendant-adjuster, Flexible. R. J. Norton. No. 1,108,468; Aug. 25; Gaz. vol. 205; p. 1147.
Pendant, Ear-. H. F. Juergens. No. 1,106,388; Aug. 11; Gaz. vol. 205; p. 320.
Percolator. H. A. Heyne. No. 1,106,045; Aug. 4; Gaz. vol. 205; p. 161.
Percolator. G. E. Curtiss. No. 1,108,712; Aug. 25; Gaz. vol. 205; p. 1232.
Percolator, Coffee-. J. A. Watson. No. 1,108,288; Aug. 25; Gaz. vol. 205; p. 1086.
Percussive drill. J. G. Leyner. No. 1,106,332; Aug. 4; Gaz. vol. 205; p. 257.
Percussive firing mechanism. A. T. Dawson and G. T. Buckham. No. 1,105,626; Aug. 4; Gaz. vol. 205; p. 13.
Perforating apparatus, Band-. H. Drewell. No. 1,106,638; Aug. 11; Gaz. vol. 205; p. 412.
Perforating figured iron, Device for. H. Koepplinger. No. 1,105,800; Aug. 4; Gaz. vol. 205; p. 74.
Perforating-machines, Paper-feed for. E. G. Clark. No. 1,108,838; Aug. 25; Gaz. vol. 205; p. 1103.
Phase-transformation system. F. C. Green. No. 1,108,745; Aug. 25; Gaz. vol. 205; p. 1243.

Phonograph. N. H. Holland. No. 1,106,448; Aug. 11; Gaz. vol. 205; p. 342.
Phonograph. W. H. Miller. No. 1,108,208; Aug. 25; Gaz. vol. 205; p. 1057.
Phonograph-brake. L. H. Otto. No. 1,106,237; Aug. 4; Gaz. vol. 205; p. 225.
Photograph-printing device. F. H. Hammer. No. 1,106,143; Aug. 4; Gaz. vol. 205; p. 196.
Photographic developing-tank. L. H. Jeffries. No. 1,108,581; Aug. 25; Gaz. vol. 205; p. 1188.
Photographic-printing apparatus. N. J. Goldfarb. No. 1,108,744; Aug. 25; Gaz. vol. 205; p. 1243.
Photographic-printing frame. L. L. Campbell. No. 1,106,489; Aug. 11; Gaz. vol. 205; p. 359.
Photography, Color. F. E. Ives. No. 1,106,816; Aug. 11; Gaz. vol. 205; p. 474.
Piano fall-board. G. Lamblase. No. 1,105,802; Aug. 4; Gaz. vol. 205; p. 75.
Piano, Grand player-. W. J. Keeley. No. 1,107,802; Aug. 18; Gaz. vol. 205; p. 869.
Piano-key bushing. K. C. Rogers. No. 1,108,791; Aug. 25; Gaz. vol. 205; p. 1257.
Piano-players, Pedal mechanism for pneumatic. F. G. Lynde. No. 1,108,452; Aug. 25; Gaz. vol. 205; p. 1141.
Piano, Pneumatic. C. A. Lambert. No. 1,106,822; Aug. 11; Gaz. vol. 205; p. 476.
Piano pneumatic bellows, Player-. J. Knagge. No. 1,106,820; Aug. 11; Gaz. vol. 205; p. 475.
Pianos, Expression-controlling device for mechanically and manually operated player-. O. Johnson. No. 1,107,797; Aug. 18; Gaz. vol. 205; p. 868.
Pianofortes, Transposing attachment for. L. A. Goss. No. 1,107,783; Aug. 18; Gaz. vol. 205; p. 863.
Picker; *See* Cotton-picker.
Pickling and washing apparatus motive means. G. Mesta. No. 1,107,821; Aug. 18; Gaz. vol. 205; p. 875.
Picture-film carton, Motion-. A. N. Pierman. No. 1,106,676; Aug. 11; Gaz. vol. 205; p. 425.
Picture-frame hanger. W. Mehrmann. No. 1,107,686; Aug. 18; Gaz. vol. 205; p. 829.
Picture machine, Moving-. B. Borland. No. 1,106,076; Aug. 4; Gaz. vol. 205; p. 171.
Picture machine, Moving-. V. L. Duhem. No. 1,108,838; Aug. 25; Gaz. vol. 205; p. 1275.
Picture screen, Motion-. L. O. Rather. No. 1,106,111; Aug. 4; Gaz. vol. 205; p. 185.
Pictures, Process and article for producing moving. J. R. Bray. No. 1,107,193; Aug. 11; Gaz. vol. 205; p. 605.
Pigment, Composition of matter to be used as a. E. Euston. No. 1,108,562; Aug. 25; Gaz. vol. 205; p. 1181.
Piles, tubed shafts, and the like, Making firm foundations in the ground for. O. Wilhelmi. No. 1,106,606; Aug. 11; Gaz. vol. 205; p. 402.
Pin; *See* Clothes-pin; Cotter-pin; Hair-pin; Safety-pin.
Pincers. M. Brock. No. 1,106,360; Aug. 11; Gaz. vol. 205; p. 311.
Pincers, Flooring-. U. Ohlsen. No. 1,106,399; Aug. 11; Gaz. vol. 205; p. 324.
Pipe; *See* Blowpipe; Tobacco-pipe.
Pipe anchor, Train-. R. W. Burnett. No. 1,108,328; Aug. 25; Gaz. vol. 205; p. 1100.
Pipe-bending device. J. Huber. No. 1,108,179; Aug. 25; Gaz. vol. 205; p. 1046.
Pipe-cleaners, Packaging. W. R. Lee. No. 1,108,450; Aug. 25; Gaz. vol. 205; p. 1140.
Pipe connection. G. Cowles. No. 1,106,546; Aug. 11; Gaz. vol. 205; p. 380.
Pipe connection, Flexible. P. M. Peacock. No. 1,105,689; Aug. 4; Gaz. vol. 205; p. 36.
Pipe connection, Flexible metallic train-. L. J. Bordo. No. 1,106,918; Aug. 11; Gaz. vol. 205; p. 510.
Pipe-coupling. W. H. Perkins. No. 1,106,907; Aug. 11; Gaz. vol. 205; p. 527.
Pipe-coupling. F. Lewis. No. 1,107,327; Aug. 18; Gaz. vol. 205; p. 700.
Pipe-coupling clamping-ring. S. R. Dresser. No. 1,107,595; Aug. 18; Gaz. vol. 205; p. 796.
Pipe coupling, Train-. A. S. English. No. 1,106,354; Aug. 4; Gaz. vol. 205; p. 264.
Pipe coupling, Train-. J. Blackburn. No. 1,106,619; Aug. 11; Gaz. vol. 205; p. 406.
Pipe-covering. H. Schaperjahn. No. 1,105,844; Aug. 4; Gaz. vol. 205; p. 91.
Pipe-cutting appliance. W. H. Gallagher and L. E. Grimes. No. 1,107,511; Aug. 18; Gaz. vol. 205; p. 766.
Pipe-expanding machine. J. I. Pilston. No. 1,108,618; Aug. 25; Gaz. vol. 205; p. 1201.
Pipe-hanger. H. G. Carlson. No. 1,106,078; Aug. 4; Gaz. vol. 205; p. 172.
Pipe plug, Waste-. A. G. Schmidt. No. 1,107,363; Aug. 18; Gaz. vol. 205; p. 713.
Pipe, Treating old iron and steel. D. E. Phillips. No. 1,106,109; Aug. 4; Gaz. vol. 205; p. 184.
Pipe-wrench. T. Hinds. No. 1,105,782; Aug. 4; Gaz. vol. 205; p. 68.
Pipe-wrench. S. N. Hall. No. 1,107,937; Aug. 18; Gaz. vol. 205; p. 914.
Pipes, Apparatus for making lapweld-. W. M. Neckerman. No. 1,106,577; Aug. 11; Gaz. vol. 205; p. 391.
Pipes in an undulating line, Machine for cutting the ends of clay. J. K. Jensen. No. 1,108,845; Aug. 25; Gaz. vol. 205; p. 1277.
Pipes, Making welded. F. L. Pinkham. No. 1,108,393; Aug. 25; Gaz. vol. 205; p. 1123.
Pipes, rods, &c., Apparatus for bending. J. A. Miller. No. 1,105,914; Aug. 4; Gaz. vol. 205; p. 114.
Piston-ring-compressing device. A. L. Everett. No. 1,106,198; Aug. 4; Gaz. vol. 205; p. 214.
Piston-rod and cylinder therefor, Flexible. J. Desmond. No. 1,106,930; Aug. 11; Gaz. vol. 205; p. 515.
Pistons, Producing. A. Weber. No. 1,106,905; Aug. 11; Gaz. vol. 205; p. 505.
Placket-fastener. R. Dignan. No. 1,106,370; Aug. 11; Gaz. vol. 205; p. 315.
Plaiting-machine for producing textile fabrics resembling velvet. E. L. Ezbelent. No. 1,107,771; Aug. 18; Gaz. vol. 205; p. 859.
Planer. A. P. Haustetter. No. 1,107,787; Aug. 18; Gaz. vol. 205; p. 865.
Planer, Road-. W. S. Foster. No. 1,107,279; Aug. 18; Gaz. vol. 205; p. 683.
Planing machines, Chip-breaker for wood-. H. A. Perkins. No. 1,107,182; Aug. 11; Gaz. vol. 205; p. 601.
Planter. G. Leischner. No. 1,106,879; Aug. 11; Gaz. vol. 205; p. 496.
Planter. C. S. Perrine. No. 1,107,224; Aug. 11; Gaz. vol. 205; p. 616.
Planter. D. A. Blebinger. No. 1,107,249; Aug. 18; Gaz. vol. 205; p. 673.
Planter, Corn-. J. M. Jefferis. No. 1,105,665; Aug. 4; Gaz. vol. 205; p. 27.
Planter, Corn-. W. F. Engelman. No. 1,106,373; Aug. 11; Gaz. vol. 205; p. 316.
Planter, Cotton-. G. A. De Kay. No. 1,107,044; Aug. 11; Gaz. vol. 205; p. 551.
Planter, Seed-. I. D. Cantrell. No. 1,108,130; Aug. 25; Gaz vol. 205; p. 1030.
Planters, Furrow-opener for corn-. K. L. Hanson. No. 1,108,435; Aug. 25; Gaz. vol. 205; p. 1136.
Planting implement. E. A. Gross. No. 1,106,203; Aug. 4; Gaz. vol. 205; p. 216.
Planting-machine. C. E. Patric. No. 1,105,997; Aug. 4; Gaz. vol. 205; p. 144.
Plaster. A. H. Mitchell. No. 1,107,979; Aug. 18; Gaz. vol. 205; p. 929.
Plaster and the like from lime wastage, Making a retarder for. C. H. Campbell. No. 1,106,778; Aug. 11; Gaz. vol. 205; p. 461.
Plaster-retarder. C. H. Campbell. No. 1,106,777; Aug. 11; Gaz. vol. 205; p. 461.
Plastic masses, Manufacture of elastic. T. S. Wennagel. No. 1,107,003; Aug. 11; Gaz. vol. 205; p. 538.
Plate-edge joint. C. Bartels. No. 1,107,477; Aug. 18; Gaz. vol. 205; p. 755.
Plate-holding device. F. W. Weston. No. 1,108,646; Aug. 25; Gaz. vol. 205; p. 1209.
Platform-wheel. J. H. Carr. No. 1,107,492; Aug. 18; Gaz. vol. 205; p. 760.
Playing-ball. B. F. Shibe. No. 1,106,978; Aug. 11; Gaz. vol. 205; p. 530.
Pliers. H. A. Adams. No. 1,107,210; Aug. 11; Gaz. 205; p. 611.
Pliers. H. A. Adams. No. 1,107,243; Aug. 11; Gaz. vol. 205; p. 623.
Pliers, Orthodontia-. M. N. Federspiel. No. 1,108,493; Aug. 25; Gaz. vol. 205; p. 1157.
Plow. W. H. Bonkemeyer. No. 1,106,186; Aug. 4; Gaz. vol. 205; p. 210.
Plow. C. J. Tuseth. No. 1,106,526; Aug. 11; Gaz. vol. 205; p. 372.
Plow. J. M. Brasington. No. 1,107,403; Aug. 18; Gaz. vol. 205; p. 728.
Plow. C. E. Bogle. No. 1,107,482; Aug. 18; Gaz. vol. 205; p. 756.
Plow. E. W. Hollingsworth. No. 1,108,174; Aug. 25; Gaz. vol. 205; p. 1045.
Plow attachment. N. A. Roden. No. 1,107,628; Aug. 18; Gaz. vol. 205; p. 808.
Plow-beam. L. Racine. No. 1,106,582; Aug. 11; Gaz. vol. 205; p. 393.
Plow-beam. L. E. Waterman. No. 1,107,733; Aug. 18; Gaz. vol. 205; p. 845.
Plow-fender. C. L. Brumfield. No. 1,106,278; Aug. 4; Gaz. vol. 205; p. 239.
Plow, Gang-. W. Sobey. No. 1,106,119; Aug. 4; Gaz. vol. 205; p. 187.
Plow-guard attachment. C. R. Keck. No. 1,106,389; Aug. 11; Gaz. vol. 205; p. 321.
Plow jointer attachment. P. S. Sidell. No. 1,106,739; Aug. 11; Gaz. vol. 205; p. 447.
Plow lifting or elevating mechanism. E. W. Withnell. No. 1,106,766; Aug. 11; Gaz. vol. 205; p. 456.
Plow, Mechanically-propelled. F. M. Waller. No. 1,106,603; Aug. 11; Gaz. vol. 205; p. 400.
Plow, Motor-. W. L. Walton and J. Wagar. No. 1,106,529; Aug. 11; Gaz. vol. 205; p. 373.
Plow, Orchard-. D. Harvey. No. 1,106,213; Aug. 4; Gaz. vol. 205; p. 218.
Plow-stock. C. L. Easterling. No. 1,107,920; Aug. 18; Gaz. vol. 205; p. 908.
Plow, Wheel-. J. F. Hubler. No. 1,108,579; Aug. 25; Gaz. vol. 205; p. 1187.
Plows, Scraper attachment for wheel-. G. H. Huff. No. 1,107,952; Aug. 18; Gaz. vol. 205; p. 919.
Plowing-machine, Self-propelled. E. M. Quellennec. No. 1,108,787; Aug. 25; Gaz. vol. 205; p. 1256.
Pneumatic action. A. A. Steinhilber. No. 1,107,554; Aug. 18; Gaz. vol. 205; p. 780.

Pneumatic-despatch apparatus. R. G. Collins, Jr. No. 1,108,136; Aug. 25; Gaz. vol. 205; p. 1032.
Pneumatic-despatch apparatus, Apparatus for controlling the movement of carriers in. R. G. Collins, Jr. No. 1,108,137; Aug. 25; Gaz. vol. 205; p. 1032.
Pneumatic-despatch-tube apparatus. E. A. Fordyce. No. 1,106,346; Aug. 4; Gaz. vol. 205; p. 262.
Pneumatic-despatch-tube apparatus. A. W. Pearsall. No. 1,107,547; Aug. 18; Gaz. vol. 205; p. 777.
Pneumatic-despatch-tube apparatus. M. L. Emerson. No. 1,107,661; Aug. 18; Gaz. vol. 205; p. 820.
Pneumatic-despatch-tube selective system. F. G. Whittier. No. 1,108,293; Aug. 25; Gaz. vol. 205; p. 1088.
Pneumatic drier. J. M. Ward. No. 1,108,285; Aug. 25; Gaz. vol. 205; p. 1085.
Pneumatic spring. A. Sharp. No. 1,107,714; Aug. 18; Gaz. vol. 205; p. 839.
Pocket-book protector. T. O. Jorgensen. No. 1,107,958; Aug. 18; Gaz. vol. 205; p. 921.
Pocket-coupling. W. J. Geddert. No. 1,105,644; Aug. 4; Gaz. vol. 205; p. 21.
Pocket for men's trousers, Hip-. J. C. Ferry. No. 1,108,352; Aug. 25; Gaz. vol. 205; p. 1107.
Pocket, Safety-. M. Bloomenstein. No. 1,108,124; Aug. 25; Gaz. vol. 205; p. 1028.
Pointing-tool. H. L. Smith. No. 1,108,407; Aug. 25; Gaz. vol. 205; p. 1126.
Poke and weaner, Animal. W. D. Goff. No. 1,105,767; Aug. 4; Gaz. vol. 205; p. 64.
Pole-anchor. S. M. Crites. No. 1,105,884; Aug. 4; Gaz. vol. 205; p. 104.
Pool-ball. V. B. Hubbell. No. 1,108,441; Aug. 25; Gaz. vol. 205; p. 1137.
Porcelain-kiln. H. C. Kapelle. No. 1,108,585; Aug. 25; Gaz. vol. 205; p. 1190.
Portable elevator. T. S. McLendon. No. 1,108,771; Aug. 25; Gaz. vol. 205; p. 1251.
Portable elevator, Sectional. W. E. Bochck. No. 1,105,956; Aug. 4; Gaz. vol. 205; p. 129.
Portable beater. W. Lunham and W. Moore. No. 1,105,983; Aug. 4; Gaz. vol. 205; p. 139.
Portfolio and sheet-music turner, Combined. J. A. Henebergh. No. 1,106,941; Aug. 11; Gaz. vol. 205; p. 518.
Post: *See* Fence-post.
Post-anchor. P. T. Bailey. No. 1,107,016; Aug. 11; Gaz. vol. 205; p. 541.
Post-hole digger. H. E. Wendorf. No. 1,107,734; Aug. 18; Gaz. vol. 205; p. 845.
Post-hole digger, Automobile. F. Mueller. No. 1,108,102; Aug. 18; Gaz. vol. 205; p. 973.
Pot: *See* Dash-pot.
Potassium compounds from silicious minerals, Extracting. T. B. Stillman. No. 1,106,984; Aug. 11; Gaz. vol. 205; p. 532.
Potato digger. J. Moreau. No. 1,106,669; Aug. 11; Gaz. vol. 205; p. 423.
Poultry cooling and display rack. S. C. and J. E. Wolfe. No. 1,108,055; Aug. 18; Gaz. vol. 205; p. 957.
Poultry exerciser and feeder. J. M. Foster. No. 1,108,566; Aug. 25; Gaz. vol. 205; p. 1183.
Powder into spherical grains, Apparatus for forming explosive. F. I. Du Pont. No. 1,106,138; Aug. 4; Gaz. vol. 205; p. 194.
Powder into spherical grains, Forming explosive black. F. I. and E. Du Pont. No. 1,106,087; Aug. 4; Gaz. vol. 205; p. 175.
Power-press safety-guard. J. Wright. No. 1,107,395; Aug. 18; Gaz. vol. 205; p. 724.
Power-transmission means. L. W. Davis. No. 1,107,412; Aug. 18; Gaz. vol. 205; p. 732.
Power-transmission mechanism. E. A. Halbleib. No. 1,105,904; Aug. 4; Gaz. vol. 205; p. 110.
Power-transmission mechanism. M. J. G. Schoedelin. No. 1,106,246; Aug. 4; Gaz. vol. 205; p. 228.
Power-transmitting device. E. and L. C. Upton. No. 1,106,903; Aug. 11; Gaz. vol. 205; p. 505.
Power-transmitting device, Variable-speed. A. H. Jessen. No. 1,105,792; Aug. 4; Gaz. vol. 205; p. 71.
Preheater. G. H. Wilson. No. 1,108,051; Aug. 18; Gaz. vol. 205; p. 955.
Preserving compound. I. Brandeis. No. 1,107,892; Aug. 18; Gaz. vol. 205; p. 899.
Press: *See* Arbor-press; Baling-press; Brick-press; Embossing-press; Hay-press; Oil-press; Printing-press; Tandem press; Trousers-press.
Press. J. G. Breitenstein. No. 1,105,749; Aug. 4; Gaz. vol. 205; p. 57.
Press. W. Klocke. No. 1,108,187; Aug. 25; Gaz. vol. 205; p. 1050.
Press-box. C. M. Wall. No. 1,108,643; Aug. 25; Gaz. vol. 205; p. 1208.
Presses, Safety attachment for. F. M. Reimann. No. 1,105,695; Aug. 4; Gaz. vol. 205; p. 38.
Presser-foot. L. W. Moses. No. 1,105,819; Aug. 4; Gaz. vol. 205; p. 81.
Pressure-indicator. W. H. Sauvage. No. 1,106,681; Aug. 11; Gaz. vol. 205; p. 427.
Pressure-regulator. S. Udstad. No. 1,107,383; Aug. 18; Gaz. vol. 205; p. 720.
Priming charge. W. H. Buell. No. 1,106,343; Aug. 4; Gaz. vol. 205; p. 260.
Print-drier. B. Y. Morris. No. 1,106,670; Aug. 11; Gaz. vol. 205; p. 424.
Print-making machine, Blue-. F. S. Floeter. No. 1,106,504. Aug. 11; Gaz. vol. 205; p. 365.
Printer's block. F. H. Berold. No. 1,107,647; Aug. 18; Gaz. vol. 205; p. 815.
Printer's block. F. H. Berold. No. 1,107,648; Aug. 18; Gaz. vol. 205; p. 815.
Printer's chase, Adjustable. C. E. Clippinger and J. A. Smith. No. 1,105,758; Aug. 4; Gaz. vol. 205; p. 61.
Printer's galley. J. E. M. Brooke. No. 1,105,957; Aug. 4; Gaz. vol. 205; p. 130.
Printing-chases and the like, Rack for. E. F. W. Kaiser. No. 1,107,960; Aug. 18; Gaz. vol. 205; p. 921.
Printing clothing-tickets, Machine for. A. and E. Antoine. No. 1,106,178; Aug. 4; Gaz. vol. 205; p. 207.
Printing, Color-. P. Bonnier. No. 1,108,063; Aug. 18; Gaz. vol. 205; p. 959.
Printing-frame. H. Cohn. No. 1,108,707; Aug. 25; Gaz. vol. 205; p. 1230.
Printing-machine. B. B. West. No. 1,106,906; Aug. 11; Gaz. vol. 205; p. 506.
Printing-machine. E. Ocumpaugh, 2d. No. 1,107,829; Aug. 18; Gaz. vol. 205; p. 878.
Printing-machine, Can-. L. James. No. 1,106,712; Aug. 11; Gaz. vol. 205; p. 437.
Printing machine, Rotary lithographic-. R. P. and J. W. Payne. No. 1,108,223; Aug. 25; Gaz. vol. 205; p. 1063.
Printing machinery, Multicolor-. J. Murray. No. 1,106,313; Aug. 4; Gaz. vol. 205; p. 251.
Printing, Means for keeping margins clean in intaglio-. H. A. W. Wood. No. 1,106,067; Aug. 4; Gaz. vol. 205; p. 168.
Printing mechanism. G. E. Pancoast. No. 1,106,472; Aug. 11; Gaz. vol. 205; p. 352.
Printing on tarleton and other like fabrics. F. R. Clark. No. 1,106,364; Aug 11; Gaz. vol. 205; p. 313.
Printing plates or forms, Producing letter-press. G. R. Cornwall. No. 1,106,369; Aug. 11; Gaz. vol. 205; p. 314.
Printing-press. G. H. Miller. No. 1,105,816; Aug. 4; Gaz. vol. 205; p. 81.
Printing-press. G. R. Cornwall. No. 1,105,964; Aug. 4; Gaz. vol. 205; p. 132.
Printing-press. G. R. Cornwall. No. 1,105,965; Aug. 4; Gaz. vol. 205; p. 132.
Printing-press. G. R. Cornwall. No. 105,966; Aug. 4; Gaz. vol. 205; p. 133.
Printing-press. C. T. Blackford. No. 1,107,254; Aug. 18; Gaz. vol. 205; p. 674.
Printing-press. C. R. Fogwell. No. 1,107,772; Aug. 18; Gaz. vol. 205; p. 859.
Printing-press. J. L. Firm. No. 1,108,162; Aug. 25; Gaz. vol. 205; p. 1041.
Printing-press-feeding mechanism. S. M. Langston. No. 1,107,971; Aug. 18; Gaz. vol. 205; p. 926.
Printing-press ink-fountain. H. Pearce, T. R. G. Parker, and F. W. Wright. No. 1,105,690; Aug. 4; Gaz. vol. 205; p. 36.
Printing-press ink-fountain. B. W. Shallbetter and W. T. Abrams. No. 1,105,850; Aug. 4; Gaz. vol. 205; p. 92.
Printing-press inking device. W. B. Story. No. 1,105,861; Aug. 4; Gaz. vol. 205; p. 97.
Printing-press jogger. B. D. Stevens. No. 1,107,859; Aug. 18; Gaz. vol. 205; p. 889.
Printing-press sheet feeding and registering mechanism. G. E. Pancoast. No. 1,108,220; Aug. 25; Gaz. vol. 205; p. 1062.
Printing-press sheet-feeding mechanism. H. B. Green. No. 1,108,072; Aug. 18; Gaz. vol. 205; p. 962.
Printing-press sheet-gripping device. H. Lang. No. 1,108,193; Aug. 25; Gaz. vol. 205; p. 1052.
Printing-press trip mechanism. C. J. Robertsou. No. 1,107,843; Aug. 18; Gaz. vol. 205; p. 883.
Printing-presses, Compensating cylinder for. C. Henderson. No. 1,106,508; Aug. 11; Gaz. vol. 205; p. 366.
Printing-presses, Slip-sheet machine for. F. M. Turck. No. 1,107,556; Aug. 18; Gaz. vol. 205; p. 781.
Printing-presses, Trip mechanism of two-revolution. H. Pearce, T. R. G. Parker, and F. W. Wright. No. 1,106,402; Aug. 11; Gaz. vol. 205; p. 325.
Printing-presses, Trip mechanism of two-revolution. H. Pearce, T. R. G. Parker, and F. W. Wright. No. 1,106,403; Aug. 11; Gaz. vol. 205; p. 326.
Printing-surfaces, Machine for building up designs on cylindrical. L. J. R. Holst. No. 1,107,520; Aug. 18; Gaz. vol. 205; p. 769.
Printing tape, Apparatus for. A. H. Marshall and T. L. Richardson. No. 1,106,660; Aug. 11; Gaz. vol. 205; p. 420.
Projectile. J. B. Semple. No. 1,105,848; Aug. 4; Gaz. vol. 205; p. 92.
Projectile, Explosive. J. B. Semple. No. 1,105,849; Aug. 4; Gaz. vol. 205; p. 92.
Projectile, Luminous. F. Ziegenfuss. No. 1,108,654; Aug. 25; Gaz. vol. 205; p. 1212.
Projectile-tracer. K. Wieser. No. 1,108,820; Aug. 25; Gaz. vol. 205; p. 1268.
Propeller. G. Kovalevich. No. 1,105,801; Aug. 4; Gaz. vol. 205; p. 74.
Propeller. C. A. Parsons. No. 1,107,101; Aug. 11; Gaz. vol. 205; p. 570.
Protector. J. Zwilling. No. 1,106,911; Aug. 11; Gaz. vol. 205; p. 507.
Protractor. E. D. Moreton. No. 1,107,983; Aug. 18; Gaz. vol. 205; p. 930.
Pruning implement. S. O. Barron and G. W. Faulkner No. 1,108,670; Aug. 25; Gaz. vol. 205; p. 1217.

Pull-rod clamp, Universal. C. S. Wright. No. 1,106,856; Aug. 11; Gaz. vol. 205; p. 488.
Puller: *See* Beet-puller; Snake-puller; Stalk-puller; Stub-puller; Weed-puller.
Pulley and lock for cables. A. J. Hagan. No. 1,107,934; Aug. 18; Gaz. vol. 205; p. 913.
Pulley remover and replacer. W. R. Clayton and D. H. Jones. No. 1,108,135; Aug. 25; Gaz. vol. 205; p. 1032.
Pulp-screen, Centrifugal. A. J. Haug. No. 1,106,808; Aug. 11; Gaz. vol. 205; p. 471.
Pulverizer, Soil-. J. M. Briles. No. 1,107,891; Aug. 18; Gaz. vol. 205; p. 899.
Pump-anchor. C. L. Wood. No. 1,108,537; Aug. 25; Gaz. vol. 205; p. 1173.
Pump and stopper, Automatic reacting siphon air-. A. P. Goff. No. 1,106,937; Aug. 11; Gaz. vol. 205; p. 517.
Pump attachment for motor-vehicle engines. F. G. Folberth. No. 1,107,054; Aug. 11; Gaz. vol. 205; p. 554.
Pump, Centrifugal. M. B. Macneill. No. 1,105,807; Aug. 4; Gaz. vol. 205; p. 77.
Pump, Centrifugal. M. B. Macneill. No. 1,105,808; Aug. 4; Gaz. vol. 205; p. 78.
Pump construction. H. De Huff. No. 1,107,591; Aug. 18; Gaz. vol. 205; p. 795.
Pump, Deep-well. J. L. Sebastian. No. 1,106,850; Aug. 11; Gaz. vol. 205; p. 486.
Pump, Diver's air-. J. F. Deray. No. 1,107,414; Aug. 18; Gaz. vol. 205; p. 733.
Pump for conveying gases, Valveless. W. Hohagen. No. 1,107,425; Aug. 18; Gaz. vol. 205; p. 736.
Pump for wells. G. H. Albee. No. 1,108,856; Aug. 25; Gaz. vol. 205; p. 1282.
Pump, Fuel-. L. V. Stoeltzlen. No. 1,108,811; Aug. 25; Gaz. vol. 205; p. 1265.
Pump-governor. K. A. Kendrick. No. 1,108,183; Aug. 25; Gaz. vol. 205; p. 1048.
Pump, Hand-. A. C. Stiefel. No. 1,108,637; Aug. 25; Gaz. vol. 205; p. 1207.
Pump, Internal-combustion pressure-. R. Y. Bovee. No. 1,105,747; Aug. 4; Gaz. vol. 205; p. 56.
Pump-regulator. B. Krämer. No. 1,106,949; Aug. 11; Gaz. vol. 205; p. 521.
Pump-rod coupling. F. S. and G. W. Ballard. No. 1,107,876; Aug. 18; Gaz. vol. 205; p. 894.
Pump, Rotary elastic-fluid. J. Petermöller. No. 1,107,999; Aug. 18; Gaz. vol. 205; p. 936.
Pumps, Priming centrifugal. F. Lorenz. No. 1,107,533; Aug. 18; Gaz. vol. 205; p. 773.
Pumps, Valve for deep-well. R. E. L. Holmes. No. 1,107,426; Aug. 18; Gaz. vol. 205; p. 737.
Pumping mechanism, Centrifugal. M. B. Van Ness. No. 1,108,089; Aug. 18; Gaz. vol. 205; p. 908.
Pumping systems, Controlling device for. A. A. Bowser. No. 1,107,887; Aug. 18; Gaz. vol. 205; p. 897.
Punching and shearing apparatus. E. E. Slick. No. 1,106,740; Aug. 11; Gaz. vol. 205; p. 447.
Punching-bag hanger. G. Yoerger. No. 1,106,068; Aug. 4; Gaz. vol. 205; p. 168.
Punching-machine. L. M. Potts. No. 1,105,921; Aug. 4; Gaz. vol. 205; p. 117.
Purse-mirror. W. J. Payne. No. 1,106,315; Aug. 4; Gaz. vol. 205; p. 252.
Puzzle. A. Celus. No. 1,105,878; Aug. 4; Gaz. vol. 205; p. 1062.
Quartz bodies, Producing hollow. A. Voelker. No. 1,107,386; Aug. 18; Gaz. vol. 205; p. 721.
Quartz, Producing transparent. A. Voelker. No. 1,107,387; Aug. 18; Gaz. vol. 205; p. 722.
Quick-acting clamp. G. G. Hunt. No. 1,106,096; Aug. 4; Gaz. vol. 205; p. 180.
Quick-acting wrench. G. E. L. Semana. No. 1,106,117; Aug. 4; Gaz. vol. 205; p. 187.
Quilting-frame. O. B. Morgan. No. 1,107,542; Aug. 18; Gaz. vol. 205; p. 776.
Rack: *See* Clothes-rack; Display-rack; Index or information rack; Parcel-rack.
Radiator and radiator-sections for automobiles, motor-cars, and the like. F. A. Feldkamp. No. 1,108,494; Aug. 25; Gaz. vol. 205; p. 1158.
Radiator and radiator-sections therefor for automobiles and the like. F. A. Feldkamp. No. 1,108,495; Aug. 25; Gaz. vol. 205; p. 1158.
Radiator connection. C. H. Speckman. No. 1,106,981; Aug. 11; Gaz. vol. 205; p. 531.
Radiator, Electrically-heated. F. Kuhn. No. 1,107,319; Aug. 18; Gaz. vol. 205; p. 696.
Radiator-joint. A. W. Walker. No. 1,108,532; Aug. 25; Gaz. vol. 205; p. 1171.
Radil-averaging instrument. E. G. Balley. No. 1,107,740; Aug. 18; Gaz. vol. 205; p. 848.
Raft, Life-saving. W. Jacob. No. 1,105,976; Aug. 4; Gaz. vol. 205; p. 137.
Rail-anchor. T. B. Bowman. No. 1,107,484; Aug. 18; Gaz. vol. 205; p. 757.
Rail-anchor. H. G. Gillmor. No. 1,107,782; Aug. 18; Gaz. vol. 205; p. 863.
Rail-anchor. B. B. Betts. No. 1,108,121; Aug. 25; Gaz. vol. 205; p. 1027.
Rail-anchor. A. L. Stanford. No. 1,108,635; Aug. 25; Gaz. vol. 205; p. 1206.
Rail-anticreeping device. A. H. Smith and G. W. Nibbe. No. 1,108,525; Aug. 25; Gaz. vol. 205; p. 1168.
Rail-brace. R. N. Wilson. No. 1,106,433; Aug. 11; Gaz. vol. 205; p. 336.
Rail-chair. R. C. Morrow. No. 1,107,984; Aug. 18; Gaz. vol. 205; p. 931.
Rail-chair. K. Dombelek. No. 1,108,069; Aug. 18; Gaz. vol. 205; p. 961.
Rail chair and joint, Combined. H. T. Parks. No. 1,106,157; Aug. 4; Gaz. vol. 205; p. 200.
Rail, Compound. W. A. Seeley. No. 1,105,847; Aug. 4; Gaz. vol. 205; p. 92.
Rail connector, Guard-. C. T. Coates. No. 1,107,036; Aug. 11; Gaz. vol. 205; p. 548.
Rail-controller. W. H. Boyd. No. 1,108,688; Aug. 25; Gaz. vol. 205; p. 1223.
Rail-fastener. E. Miner. No. 1,108,776; Aug. 25; Gaz. vol. 205; p. 1253.
Rail fastening and gage. C. K. McDermott. No. 1,107,085; Aug. 11; Gaz. vol. 205; p. 565.
Rail-holding device. H. W. Young. No. 1,106,767; Aug. 11; Gaz. vol. 205; p. 457.
Rail indicator, Spreading-. E. Kaddatz. No. 1,106,876; Aug. 11; Gaz. vol. 205; p. 495.
Rail-joint. J. W. Reynolds. No. 1,105,697; Aug. 4; Gaz. vol. 205; p. 39.
Rail-joint. J. D. Young. No. 1,106,021; Aug. 4; Gaz. vol. 205; p. 152.
Rail-joint. E. L. Barnes. No. 1,107,017; Aug. 11; Gaz. vol. 205; p. 542.
Rail-joint. H. G. Gillmor. No. 1,107,419; Aug. 18; Gaz. vol. 205; p. 734.
Rail-joint. W. R. Fischer. No. 1,107,923; Aug. 18; Gaz. vol. 205; p. 909.
Rail-joint. H. E. Giddings. No. 1,107,930; Aug. 18; Gaz. vol. 205; p. 911.
Rail-joint. A. Mazur. No. 1,108,200; Aug. 25; Gaz. vol. 205; p. 1055.
Rail-joint. J. E. Boland. No. 1,108,324; Aug. 25; Gaz. vol. 205; p. 1099.
Rail-joint. A. C. Kelley and S. A. Murphy. No. 1,108,371; Aug. 25; Gaz. vol. 205; p. 1114.
Rail-joint. M. G. Helm. No. 1,108,841; Aug. 25; Gaz. vol. 205; p. 1276.
Rail-joint, Boltless. J. Marczl. No. 1,107,433; Aug. 18; Gaz. vol. 205; p. 739.
Rail-joint chair. W. J. McKenzie. No. 1,107,540; Aug. 18; Gaz. vol. 205; p. 776.
Rail-joint, Insulated. L. Griffith. No. 1,107,666; Aug. 18; Gaz. vol. 205; p. 822.
Rail-tie. C. Berg. No. 1,108,682; Aug. 25; Gaz. vol. 205; p. 1221.
Railway, Automobile-. J. A. Grose. No. 1,106,507; Aug. 11; Gaz. vol. 205; p. 366.
Railway-coaches, Auxiliary step for. B. F. Roberts. No. 1,106,972; Aug. 11; Gaz. vol. 205; p. 529.
Railway-construction machinery. J. B. Hoge. No. 1,108,578; Aug. 25; Gaz. vol. 205; p. 1186.
Railway-coupling, Automatic. A. Lanzdorf. No. 1,107,324; Aug. 18; Gaz. vol. 205; p. 698.
Railway cross-tie. A. L. Stevens. No. 1,106,423; Aug. 11; Gaz. vol. 205; p. 333.
Railway-crossing signal. W. P. and O. M. Adleta. No. 1,108,822; Aug. 25; Gaz. vol. 205; p. 1269.
Railway motor-coach. J. G. P. Thomas. No. 1,106,169; Aug. 4; Gaz. vol. 205; p. 204.
Railway-rail joint. J. Aho. No. 1,108,541; Aug. 25; Gaz. vol. 205; p. 1175.
Railway-rail joint. A. F. Golden. No. 1,108,571; Aug. 25; Gaz. vol. 205; p. 1184.
Railway-rail-supporting means. A. L. Stevens. No. 1,106,421; Aug. 11; Gaz. vol. 205; p. 332.
Railway safety appliance. C. A. Thorslend. No. 1,105,863; Aug. 4; Gaz. vol. 205; p. 97.
Railway signaling or train control. F. W. Prentice. No. 1,105,923; Aug. 4; Gaz. vol. 205; p. 118.
Railway-spike. J. Danculovich. No. 1,108,067; Aug. 18; Gaz. vol. 205; p. 961.
Railway, Suspended. B. Lindemann. No. 1,106,102; Aug. 4; Gaz. vol. 205; p. 182.
Railway-switch. J. Orbik. No. 1,105,996; Aug. 4; Gaz. vol. 205; p. 143.
Railway-switch. A. S. Brandock. No. 1,107,402; Aug. 18; Gaz. vol. 205; p. 727.
Railway-switch point. A. L. Pipes. No. 1,107,444; Aug. 18; Gaz. vol. 205; p. 743.
Railway switches and crossovers, Templet for drawing. H. W. McAll. No. 1,105,809; Aug. 4; Gaz. vol. 205; p. 78.
Railway-tie. P. J. Madden. No. 1,105,675; Aug. 4; Gaz. vol. 205; p. 31.
Railway-tie. W. P. and S. G. Thomson. No. 1,105,718; Aug. 4; Gaz. vol. 205; p. 47.
Railway-tie. W. P. and S. G. Thomson. No. 1,105,719; Aug. 4; Gaz. vol. 205; p. 47.
Railway-tie. W. P. and S. G. Thomson. No. 1,105,720; Aug. 4; Gaz. vol. 205; p. 48.
Railway-tie. J. O. Blake. No. 1,105,955; Aug. 4; Gaz. vol. 205; p. 129.
Railway-tie. G. H. Strand. No. 1,106,165; Aug. 4; Gaz. vol. 205; p. 203.
Railway-tie. M. T. Crittenden. No. 1,106,283; Aug. 4; Gaz. vol. 205; p. 240.
Railway-tie. S. Wall. No. 1,106,482; Aug. 11; Gaz. vol. 205; p. 356.
Railway-tie. L. A. Hamilton. No. 1,107,063; Aug. 11; Gaz. vol. 205; p. 558.
Railway-tie. C. Schaffer. No. 1,107,116; Aug. 11; Gaz. vol. 205; p. 575.

Railway-tie. S. S. Snyder. No. 1,107,459; Aug. 18; Gaz. vol. 205; p. 748.
Railway-tie. J. J. Redkey. No. 1,108,396; Aug. 25; Gaz. vol. 205; p. 1124.
Railway-tie and rail-chair. G. H. Shane. No. 1,106,415; Aug. 11; Gaz. vol. 205; p. 330.
Railway-tie and rail-fastening. J. A. Hyle and J. W. Herman. No. 1,108,370; Aug. 25; Gaz. vol. 205; p. 1114.
Railway-tie and rail-fastening, Metallic. J. A. Dobbs and R. Krebs, Jr. No. 1,106,636; Aug. 11; Gaz. vol. 205; p. 412.
Railway-track construction. M. Bartley. No. 1,107,018; Aug. 11; Gaz. vol. 205; p. 542.
Railway vehicle and track adaptable to change of gage. J. H. Newton. No. 1,108,467; Aug. 25; Gaz. vol. 205; p. 1147.
Railways, Automatic stop for. A. Zukor. No. 1,106,910; Aug. 11; Gaz. vol. 205; p. 507.
Rake and hoe. H. Milleman. No. 1,105,815; Aug. 4; Gaz. vol. 205; p. 80.
Rake attachment. A. L. Rumrill. No. 1,108,624; Aug. 25; Gaz. vol. 205; p. 1202.
Rake-cleaner. T. H. Cloke and L. J. Shearer. No. 1,107,035; Aug. 11; Gaz. vol. 205; p. 548.
Ranges, Water-heater for gas-. R. G. Whitehead. No. 1,107,565; Aug. 18; Gaz. vol. 205; p. 785.
Rat-trap. J. A. Beverly. No. 1,105,874; Aug. 4; Gaz. vol. 205; p. 101.
Ratchet-wrench. J. R. Shriver. No. 1,105,854; Aug. 4; Gaz. vol. 205; p. 94.
Ratchet-wrench, Socket. E. F. Camus. No. 1,106,545; Aug. 11; Gaz. vol. 205; p. 379.
Rawhide, Use of. P. Schmitz. No. 1,108,402; Aug. 25; Gaz. vol. 205; p. 1125.
Razor. S. W. Charles. No. 1,105,756; Aug. 4; Gaz. vol. 205; p. 60.
Razor. C. F. Ern, Jr. No. 1,107,662; Aug. 18; Gaz. vol. 205; p. 821.
Razor attachment. J. W. Foley. No. 1,108,839; Aug. 25; Gaz. vol. 205; p. 1276.
Razor, Safety-. T. E. McDermott. No. 1,107,538; Aug. 18; Gaz. vol. 205; p. 775.
Reamer. J. F. Herman. No. 1,107,304; Aug. 18; Gaz. vol. 205; p. 691.
Receptacle. F. Joachim. No. 1,106,946; Aug. 11; Gaz. vol. 205; p. 520.
Receptacle. G. C. Helm. No. 1,107,066; Aug. 11; Gaz. vol. 205; p. 559.
Receptacle-carrier. L. R. Steel. No. 1,108,016; Aug. 18; Gaz. vol. 205; p. 943.
Receptacle-carrier. C. P. Pollard. No. 1,108,229; Aug. 25; Gaz. vol. 205; p. 1065.
Receptacle-closure. A. Drewitz. No. 1,106,032; Aug. 4; Gaz. vol. 205; p. 157.
Receptacle-holder. R. D. and R. D. Mayo. No. 1,108,598; Aug. 25; Gaz. vol. 205; p. 1194.
Receptacle, Metal. A. L. Adams. No. 1,106,022; Aug. 4; Gaz. vol. 205; p. 152.
Receptacle, Sheet-metal. R. P. Stewart. No. 1,105,710; Aug. 4; Gaz. vol. 205; p. 44.
Recess-box. F. W. Van Ness. No. 1,108,283; Aug. 25; Gaz. vol. 205; p. 1084.
Reciprocating engine. W. A. Pitt. No. 1,107,837; Aug. 18; Gaz. vol. 205; p. 881.
Recorder. W. Hess, Jr. No. 1,105,906; Aug. 4; Gaz. vol. 205; p. 111.
Recording device. C. L. Jaeger. No. 1,106,944; Aug. 11; Gaz. vol. 205; p. 519.
Reel: *See* Clothes-line reel; Fence-wire reel; Film-reel; Tape-reel; Wire-reel.
Reel-fixture. E. D. Simons. No. 1,108,855; Aug. 25; Gaz. vol. 205; p. 1281.
Refractory article and manufacturing the same. T. B. Allen. No. 1,107,012; Aug. 11; Gaz. vol. 205; p. 540.
Refrigerating apparatus. L. K. Doelling. No. 1,106,287; Aug. 4; Gaz. vol. 205; p. 242.
Refrigerating system, Ammonia force-feed. W. Schliemann. No. 1,106,244; Aug. 4; Gaz. vol. 205; p. 227.
Refrigerator. G. Gárdonyi. No. 1,107,928; Aug. 18; Gaz. vol. 205; p. 911.
Register: *See* Autographic register; Cash-register; Message-register; Volume and pressure register.
Registering device. L. J. Tubbs. No. 1,106,257; Aug. 4; Gaz. vol. 205; p. 232.
Regulating device. J. M. Setzer. No. 1,108,255; Aug. 25; Gaz. vol. 205; p. 1075.
Regulator: *See* Damper-regulator; Draft-regulator; Gas-regulator; Pressure-regulator; Pump-regulator; Selenium-cell regulator; Speed-regulator; Temperature-regulator.
Regulator. E. J. Deegan. No. 1,108,146; Aug. 25; Gaz. vol. 205; p. 1036.
Regulator. W. Hodgson and E. J. Deegan. No. 1,108,173; Aug. 25; Gaz. vol. 205; p. 1044.
Relay. F. R. McBerty. No. 1,107,536; Aug. 18; Gaz. vol. 205; p. 774.
Relay sounder attachment. S. L. Dickson. No. 1,105,761; Aug. 4; Gaz. vol. 205; p. 62.
Replanter. Plant-. C. C. and R. C. Poucher. No. 1,106,405; Aug. 11; Gaz. vol. 205; p. 327.
Resilient wheel. W. S. Allyn. No. 1,105,600; Aug. 4; **Gaz. vol. 205; p. 4.**
Resilient wheel. C. H. Gunn. No. 1,105,650; Aug. 4; Gaz. vol. 205; p. 23.
Resinous composition. M. J. Callahan. No. 1,108,331; Aug. 25; Gaz. vol. 205; p. 1101.
Resinous composition and making the same. M. J. Callahan. No. 1,108,332; Aug. 25; Gaz. vol. 205; p. 1101.
Resinous condensation product. M. J. Callahan. No. 1,108,330; Aug. 25; Gaz. vol. 205; p. 1101.
Resistance element. C. N. Moore. No. 1,107,233; Aug. 11; Gaz. vol. 205; p. 619.
Resistance-indicator. J. V. Dorr. No. 1,106,865; Aug. 11; Gaz. vol. 205; p. 491.
Reversing mechanism. W. A. E. Henrici. No. 1,107,943; Aug. 18; Gaz. vol. 205; p. 916.
Revoluble office-chair. J. M. Germanson. No. 1,107,780; Aug. 18; Gaz. vol. 205; p. 862.
Rewinder. S. Poland. No. 1,108,619; Aug. 25; Gaz. vol. 205; p. 1201.
Rice hulling and polishing machine. E. C. Engelberg. No. 1,105,635; Aug. 4; Gaz. vol. 205; p. 17.
Rigging coupling-link. T. Chigris. No. 1,108,337; Aug. 25; Gaz. vol. 205; p. 1103.
Rim-contractor. G. P. Meyers. No. 1,108,774; Aug. 25; Gaz. vol. 205; p. 1252.
Rim, Demountable. S. E. Siggelkow. No. 1,106,980; Aug. 11; Gaz. vol. 205; p. 531.
Rim fixture, Detachable flush-. P. Haas. No. 1,107,515; Aug. 18; Gaz. vol. 205; p. 767.
Rim-retaining device, Demountable-. R. B. Robinson. No. 1,106,890; Aug. 11; Gaz. vol. 205; p. 500.
Ring: *See* Gymnasium-ring; Packing-ring; Pipe-coupling clamping-ring.
Ring attachment, Finger-. B. Holzel. No. 1,106,814; Aug. 11; Gaz. vol. 205; p. 473.
Ringer and secret-service device. J. G. and C. A. Neff. No. 1,108,847; Aug. 25; Gaz. vol. 205; p. 1278.
Rivet-cloth. J. T. Rutledge. No. 1,106,060; Aug. 4; Gaz. vol. 205; p. 166.
Rivet-holding device. D. C. Dowdy. No. 1,105,892; Aug. 4; Gaz. vol. 205; p. 106.
Rivet-set retainer. A. Levedahl and R. A. Norling. No. 1,105,669; Aug. 4; Gaz. vol. 205; p. 29.
Road-beds, Drainage plant for. K. Scheuermann. No. 1,108,852; Aug. 25; Gaz. vol. 205; p. 1280.
Road-dresser. H. L. Eggleston. No. 1,107,770; Aug. 18; Gaz. vol. 205; p. 859.
Road-machine. M. M. Sickler. No. 1,107,186; Aug. 11; Gaz. vol. 205; p. 602.
Road-wheel of automobiles and the like. G. W. and E. F. Goodyear. No. 1,105,646; Aug. 4; Gaz. vol. 205; p. 21.
Roasting-furnace. A. Zavelberg. No. 1,107,006; Aug. 11; Gaz. vol. 205; p. 538.
Rock-drill. G. J. Beaudin. No. 1,106,537; Aug. 11; Gaz. vol. 205; p. 376.
Rod: *See* Piston-rod.
Rod-extractor. F. S. James. No. 1,107,955; Aug. 18; Gaz. vol. 205; p. 919.
Rods, Attachment for cleaning-. C. P. Mickelson. No. 1,107,688; Aug. 18; Gaz. vol. 205; p. 829.
Rods, Forming headed. A. Bayton. No. 1,106,860; Aug. 11; Gaz. vol. 205; p. 490.
Roller: *See* Crushing-roller; Shade-roller.
Rolling-mill-adjusting mechanism, Cold-. P. R. Johnson and F. W. Lodding. No. 1,108,447; Aug. 25; Gaz. vol. 205; p. 1139.
Rolling-mill for sheet metal. J. M. Wetcke. No. 1,106,172; Aug. 4; Gaz. vol. 205; p. 205.
Roof for haystacks and the like and its manufacture, Protecting-. F. Adamec. No. 1,106,353; Aug. 4; Gaz. vol. 205; p. 264.
Roofing. A. P. Bamberger and W. S. Guistwhite. No. 1,107,568; Aug. 18; Gaz. vol. 205; p. 786.
Rope belt, rope band, and the like. A. Luckwell. No. 1,106,658; Aug. 11; Gaz. vol. 205; p. 420.
Rope carrier, Fall-. J. T. Horton. No. 1,108,368; Aug. 25; Gaz. vol. 205; p. 1113.
Rope-socket, Wire-line. J. Burns. No. 1,107,889; Aug. 18; Gaz. vol. 205; p. 898.
Rotary engine. F. Carter. No. 1,105,617; Aug. 4; Gaz. vol. 205; p. 10.
Rotary engine. T. W. Benson. No. 1,106,617; Aug. 11; Gaz. vol. 205; p. 405.
Rotary engine. S. E. Rose. No. 1,108,241; Aug. 25; Gaz. vol. 205; p. 1069.
Rotary engine, Hydraulic. W. F. Andrews. No. 1,106,023; Aug. 4; Gaz. vol. 205; p. 153.
Rotary gas-engine. O. F. Edqvist. No. 1,108,152; Aug. 25; Gaz. vol. 205; p. 1038.
Rotary internal-combustion engine. W. O. Miller. No. 1,106,666; Aug. 11; Gaz. vol. 205; p. 422.
Rotary steam-engine. J. C. Mathiesen. No. 1,106,882; Aug. 11; Gaz. vol. 205; p. 497.
Rotary steam-engine. B. O. Walker. No. 1,106,997; Aug. 11; Gaz. vol. 205; p. 535.
Roundabout for playgrounds. D. L. Newcomb. No. 1,108,080; Aug. 18; Gaz. vol. 205; p. 965.
Rubber gaskets, Machine for cutting. F. Sr. and F. Brelle, Jr. No. 1,107,404; Aug. 18; Gaz. vol. 205; p. 728.
Rudder, Foldable. A. A. Caille. No. 1,107,408; Aug. 18; Gaz. vol. 205; p. 730.
Rule, Dressmaker's. E. C. Watters. No. 1,108,040; Aug. 18; Gaz. vol. 205; p. 951.
Rule, Slide-. H. W. Tomlinson. No. 1,108,480; Aug. 25; Gaz. vol. 205; p. 1152.
Rule, square, and miter, Combination. C. M. McFarland. No. 1,106,232; Aug. 4; Gaz. vol. 205; p. 224.

Rule, Traveling. A. W. Moseley. No. 1,107,340; Aug. 18; Gaz. vol. 205; p. 705.
Running-gear escapement. H. Thiel. No. 1,106,253; Aug. 4; Gaz. vol. 205; p. 231.
Sacking and weighing machine, Automatic. C. P. Brumby. No. 1,105,752; Aug. 4; Gaz. vol. 205; p. 58.
Sad-iron. J. Gross. No. 1,106,649; Aug. 11; Gaz. vol. 205; p. 417.
Sad-iron, Gas. R. J. Myers. No. 1,108,868; Aug. 25; Gaz. vol. 205; p. 1286.
Sad-iron, Gas-heated. H. A. Koenig. No. 1,107,531; Aug. 18; Gaz. vol. 205; p. 772.
Saddle. L. Martin. No. 1,108,597; Aug. 25; Gaz. vol. 205; p. 1193.
Saddles, Front rigging for riding-. G. W. Graves. No. 1,106,648; Aug. 11; Gaz. vol 205; p. 416.
Safety-pin. J. M. Pyron. No. 1,108,786; Aug. 25; Gaz. vol. 205; p. 1256.
Salt-cellar. J. G. Lannoye. No. 1,108,376; Aug. 25; Gaz. vol. 205; p. 1116.
Sand and slime, Hydraulic classifier for separating. W. E. Darrow. No. 1,106,630; Aug. 11; Gaz. vol. 205; p. 410.
Sand screening and separating machine, Centrifugal. E. F. Anderson. No. 1,108,542; Aug. 25; Gaz. vol. 205; p. 1175.
Sandwich-machine. A. T. Maisch. No. 1,108,454; Aug. 25; Gaz. vol. 205; p. 1142.
Sanitary closet. H. N. A. McLean. No. 1,107,685; Aug. 18; Gaz. vol. 205; p. 829.
Sash connection, Swinging-. G. T. Eklund. No. 1,106,791; Aug. 11; Gaz. vol. 205; p. 465.
Sash construction. G. H. Forsyth. No. 1,105,970; Aug. 4; Gaz. vol. 205; p. 135.
Sash fastener, Window-. A. J. Sthay. No. 1,108,271; Aug. 25; Gaz. vol. 205; p. 1080.
Sash joint, Metal-. L. V. Middlesworth. No. 1,108,511; Aug. 25; Gaz. vol. 205; p. 1163.
Sash-lock. W. F. Gibbard. No. 1,107,418; Aug. 18; Gaz. vol. 205; 734.
Sash, Metal window-. J. T. Schlacks and P. L. Barter. No. 1,106,412; Aug. 11; Gaz. vol. 205; p. 329.
Sash, Window-. F. E. Brandt. No. 1,107,580; Aug. 18; Gaz. vol. 205; p. 791.
Sashes, Screen attachment for window-. R. H. Banning. No. 1,107,877; Aug. 18; Gaz. vol. 205; p. 895.
Satin-finish machine. J. F. Gall. No. 1,107,214; Aug. 11; Gaz. vol. 205; p. 612.
Sausage-stuffing machine. V. Pfibáň. No. 1,107,184; Aug. 11; Gaz. vol. 205; p. 602.
Saw, Chain. H. E. Martin. No. 1,107,535. Aug. 18; Gaz. vol. 205; p. 774.
Saw, Chain. H. E. Martin. No. 1,107,625; Aug. 18; Gaz. vol. 205; p. 807.
Saw, Combination-. E. Matson. No. 1,108,382; Aug. 25; Gaz. vol. 205; p. 1118.
Saw for working metal, Portable circular. A. A. Delaplanque. No. 1,108,093; Aug. 18; Gaz. vol. 205; p. 970.
Saw-gage. H. W. Wallace. No. 1,108,035; Aug. 18; Gaz. vol. 205; p. 949.
Saw handle, Crosscut-. C. Lindsey. No. 1,106,229; Aug. 4; Gaz. vol. 205; p. 223.
Saw, Power meat-. C. E. Brooks. No. 1,107,405; Aug. 18; Gaz. vol. 205; p. 728.
Saw, Rail-. G. Johnston. No. 1,105,794; Aug. 4; Gaz. vol. 205; p. 72.
Saw-set. W. C. Morrill. No. 1,106,829; Aug. 11; Gaz. vol. 205; p. 479.
Saw-set. G. W. and L. E. Gore. No. 1,107,514; Aug. 18; Gaz. vol. 205; p. 767.
Saw-tooth-rubbing machine. C. H. Douglas. No. 1,107,500; Aug. 18; Gaz. vol. 205; p. 763.
Sawing apparatus. W. R. Dawson. No. 1,108,718; Aug. 25; Gaz. vol. 205; p. 1234.
Scaffold-tie. D. P. Jones. No. 1,107,798; Aug. 18; Gaz. vol. 205; p. 868.
Scaffolding-support. F. Opelt. No. 1,107,098; Aug. 11; Gaz. vol. 205; p. 569.
Scale. W. N. Gilbert. No. 1,106,799; Aug. 11; Gaz. vol. 205; p. 467.
Scale, Computing-. W. F. Stimpson. No. 1,106,323; Aug. 4; Gaz. vol. 205; p. 254.
Scale-illuminating device, Computing-. C. B. Longstreth. No. 1,105,806; Aug. 4; Gaz. vol. 205; p. 76.
Scale, Steelyard dairy-. A. Vlig. No. 1,106,528; Aug. 11; Gaz. vol. 205; p. 373.
Scale Weighing-. H. G. Nordeen. No. 1,108,610; Aug. 25; Gaz. vol. 205; p. 1198.
Scalloper or concaver, Top-lift. G. T. McLeod. No. 1,107,820; Aug. 18; Gaz. vol. 205; p. 875.
Scissors, Grape-. A. L. Dawson. No. 1,108,112; Aug. 18; Gaz. vol. 205; p. 977.
Scotch-block with roller. E. Scholle. No. 1,108,627; Aug. 25; Gaz. vol. 205; p. 1203.
Scraper, Wheeled. W. H. Violett. No. 1,106,170; Aug. 4; Gaz. vol. 205; p. 204.
Scraper, Wheeled. J. E. Steele. No. 1,107,460; Aug. 18; Gaz. vol. 205; p. 748.
Scraping-machine. B. S. Loveland. No. 1,107,810; Aug. 18; Gaz. vol. 205; p. 872.
Screen: *See* Fly-screen; Picture-screen; Pulp-screen; Window-screen.
Screen-frame, Combination. J. E. Snook. No. 1,105,857; Aug. 4; Gaz. vol. 205; p. 95.
Screen-frame or the like hanger. E. F. Bodley. No. 1,108,323; Aug. 25; Gaz. vol. 205; p. 1099.
Screen or sieve. W. L. George. No. 1,106,201; Aug. 4; Gaz. vol. 205; p. 215.
Screening apparatus. J. W. Pettibone. No. 1,108,616; Aug. 25; Gaz. vol. 205; p. 1200.
Screw-fastening device. W. H. Bristol. No. 1,106,342; Aug. 4; Gaz. vol. 205; p. 200.
Screw-heads, Means for protecting countersunk. G. H. Holm. No. 1,105,658; Aug. 4; Gaz. vol. 205; p. 25.
Screw-jack. J. W. Snider. No. 1,106,009; Aug. 4; Gaz. vol. 205; p. 148.
Screw-jack. F. M. Patterson. No. 1,106,835; Aug. 11; Gaz. vol. 205; p. 481.
Screw, Set-. R. E. Noble. No. 1,107,177; Aug. 11; Gaz. vol. 205; p. 600.
Screw-retaining device. E. E. Greaves. No. 1,105,647; Aug. 4; Gaz. vol. 205; p. 22.
Seal for jolt ramming-machines, Liquid. E. H. Mumford. No. 1,106,671; Aug. 11; Gaz. vol. 205; p. 424.
Seal, Snap-. E. J. Brooks. No. 1,107,026; Aug. 11; Gaz. vol. 205; p. 545.
Sealing apparatus, Can-. A. K. Malmquist. No. 1,107,974; Aug. 18; Gaz. vol. 205; p. 927.
Search-light mechanism. J. L. Hall. No. 1,105,771; Aug. 4; Gaz. vol. 205; p. 65.
Seat: *See* Closet-seat; Cycle passenger-seat; Folding seat; Vehicle-seat.
Seat. H. F. Meyer. No. 1,107,090; Aug. 11; Gaz. vol. 205; p. 567.
Sectional boiler. G. F. Fuchs. No. 1,107,510; Aug. 18; Gaz. vol. 205; p. 765.
Sectional shears for metal bars. W. J. Bradley. No. 1,108,689; Aug. 25; Gaz. vol. 205; p. 1223.
Securing means. T. H. Willis. No. 1,106,691; Aug. 11; Gaz. vol. 205; p. 430.
Seed-drill. C. H. Pelton. No. 1,107,344; Aug. 18; Gaz. vol. 205; p. 707.
Seed-grading machine. E. W. Van Fleet. No. 1,108,282; Aug. 25; Gaz. vol. 205; p. 1084.
Seeder or pitter, Cherry. J. H. Stanfield. No. 1,105,858; Aug. 4; Gaz. vol. 205; p. 95.
Segmental block. H. E. Miller. No. 1,107,689; Aug. 18; Gaz. vol. 205; p. 830.
Seine, Drag-. E. E. Woodfield. No. 1,108,417; Aug. 25; Gaz. vol. 205; p. 1129.
Selective apparatus for systems of communication. E. E. Clement. No. 1,107,149; Aug. 11; Gaz. vol. 205; p. 589.
Selector. A. M. Bullard. No. 1,106,922; Aug. 11; Gaz. vol. 205; p. 511.
Selenium-cell regulator. M. Moskowitz. No. 1,107,438; Aug. 18; Gaz. vol. 205; p. 741.
Separating solid matter, more particularly cellular matter, from liquids, Apparatus for. B. Hofer. No. 1,108,095; Aug. 18; Gaz. vol. 205; p. 971.
Separator: *See* Beer and hop separator; Gasolene and water separator; Oil-separator.
Separator. J. M. Allen. No. 1,107,472; Aug. 18; Gaz. vol. 205; p. 753.
Separator. A. A. Bowser. No. 1,107,485; Aug. 18; Gaz. Vol. 205; p. 758.
Sequence-switch. F. R. McBerty. No. 1,105,811; Aug. 4; Gaz. vol. 205; p. 79.
Sewage-disposal plants, Controlling apparatus for. A. Hellmuth and S. Maulbeck. No. 1,107,788; Aug. 18; Gaz. vol. 205; p. 865.
Sewage-distributer. J. W. and C. J. Hartley. No. 1,106,212; Aug. 4; Gaz. vol. 205; p. 218.
Sewed articles, Seam for. C. M. Horton. No. 1,106,565; Aug. 11; Gaz. vol. 205; p. 387.
Sewer-inlet. J. H. MacDonald. No. 1,107,812; Aug. 18; Gaz. vol. 205; p. 872.
Sewers, Catch-basin for. M. Mulloy, Sr. No. 1,107,096; Aug. 11; Gaz. vol. 205; p. 568.
Sewerage system. L. Shone. No. 1,108,011; Aug. 18; Gaz. vol. 205; p. 941.
Sewing attachment, Button-. H. H. Holdaway. No. 1,108,074; Aug. 18; Gaz. vol. 205; p. 963.
Sewing looped fabrics, Machine for. W. Rieck and E. E. Randall. No. 1,107,704; Aug. 18; Gaz. vol. 205; p. 835.
Sewing-machine. L. Goddu. No. 1,106,800; Aug. 11; Gaz. vol. 205; p. 467.
Sewing-machine. J. Fink. No. 1,107,599; Aug. 18; Gaz. vol. 205; p. 797.
Sewing-machine. M. Druckerman. No. 1,108,347; Aug. 25; Gaz. vol. 205; p. 1106.
Sewing-machine. M. Druckerman. No. 1,108,348; Aug. 25; Gaz. vol. 205; p. 1106.
Sewing-machine-attachment holder. H. M. Greist. No. 1,107,931; Aug. 18; Gaz. vol. 205; p. 912.
Sewing machine, Buttonhole-. G. S. Hill. No. 1,106,810; Aug. 11; Gaz. vol. 205; p. 472.
Sewing-machine, Chain-stitch. M. Hemleb. No. 1,107,302; Aug. 18; Gaz. vol. 205; p. 690.
Sewing-machine, Chain-stitch. A. H. De Voe. No. 1,107,659; Aug. 18; Gaz. vol. 205; p. 820.
Sewing-machine feeding mechanism. A. D. Smith. No. 1,107,718; Aug. 18; Gaz. vol. 205; p. 840.
Sewing-machine folding attachment. D. Zeiser. No. 1,108,419; Aug. 25; Gaz. vol. 205; p. 1129.
Sewing-machine loop-taker mechanism. C. M. Horton. No. 1,107,308; Aug. 18; Gaz. vol. 205; p. 692.
Sewing-machine needle-lubricating device. A. E. Johnson. No. 1,108,445; Aug. 25; Gaz. vol. 205; p. 1139.
Sewing-machine needle-threading device. A. Anzelewitz. No. 1,107,873; Aug. 18; Gaz. vol. 205; p. 893.

Sewing-machine pull-off. P. Diehl and M. Hemleb. No. 1,105,968; Aug. 4; Gaz. vol. 205; p. 134.
Sewing-machine ruffler. H. M. Greist. No. 1,107,420; Aug. 18; Gaz. vol. 205; p. 735.
Sewing-machine ruffler. H. M. Greist. No. 1,107,421; Aug. 18; Gaz. vol. 205; p. 735.
Sewing machine, Shoe-. A. Eppler. No. 1,108,560; Aug. 25; Gaz. vol. 205; p. 1181.
Sewing-machine thread-drawing attachment. J. Holtzmann. No. 1,106,813; Aug. 11; Gaz. vol. 205; p. 473.
Shade adjuster, Window-. J. Henry. No. 1,106,870; Aug. 11; Gaz. vol. 205; p. 493.
Shade and curtain bracket. C. H. Koeker. No. 1,107,317; Aug. 18; Gaz. vol. 205; p. 696.
Shade and curtain bracket, Combination. A. C. Farley. No. 1,106,796; Aug. 11; Gaz. vol. 205; p. 466.
Shade hanger, Window-. G. Richter. No. 1,105,698; Aug. 4; Gaz. vol. 205; p. 39.
Shade-holder. G. B. Thomas. No. 1,106,254; Aug. 4; Gaz. vol. 205; p. 231.
Shade-holding mechanism. P. G. Emery. No. 1,108,559; Aug. 25; Gaz. vol. 205; p. 1180.
Shade roller, Curtain-. O. B. Laurent. No. 1,106,227; Aug. 4; Gaz. vol. 205; p. 223.
Shade support, Window-. J. A. Berchtold. No. 1,108,681; Aug. 25; Gaz. vol. 205; p. 1221.
Shade, Window-. J. P. Vandenorth. No. 1,106,601; Aug. 11; Gaz. vol. 205; p. 400.
Shaft-bearing. W. Rieser. No. 1,108,761; Aug. 25; Gaz. vol. 205; p. 1248.
Shaft-coupling. H. T. Hallowell. No. 1,107,606; Aug. 18; Gaz. vol. 205; p. 800.
Shaft-coupling sleeves, Making. H. T. Hollowell. No. 1,107,607; Aug. 18; Gaz. vol. 205; p. 800.
Shafts, Means for eliminating vibrations in rotary. L. H. Vold. No. 1,107,731; Aug. 18; Gaz. vol. 205; p. 844.
Sharpener and shaper, Picket. W. C. Hammond. No. 1,108,167; Aug. 25; Gaz. vol. 205; p. 1043.
Sharpener, Coal-pick. E. J. Davies. No. 1,107,912; Aug. 18; Gaz. vol. 205; p. 905.
Sharpener, Razor-. J. A. Kress. No. 1,106,717; Aug. 11; Gaz. vol. 205; p. 439.
Sharpener, Razor-. J. H. Milks. No. 1,107,626; Aug. 18; Gaz. vol. 205; p. 807.
Sharpening mechanism, Blade-. W. H. Crichton-Clarke. No. 1,106,548; Aug. 11; Gaz. vol. 205; p. 380.
Sheaf-loader. D. D. Henry. No. 1,106,652; Aug. 11; Gaz. vol. 205; p. 418.
Sheaf-shocker. W. H. Perrin. No. 1,105,999; Aug. 4; Gaz. vol. 205; p. 145.
Shears: *See* Grass-shears; Sectional shears.
Shearing machine, Sheet-. P. H. Lange and H. L. Weigel. No. 1,105,668; Aug. 4; Gaz. vol. 205; p. 28.
Sheath or scabbard. V. H. Jennings. No. 1,108,864; Aug. 25; Gaz. vol. 205; p. 1285.
Sheet-buckling tool. V. Thestrup. No. 1,108,024; Aug. 18; Gaz. vol. 205; p. 945.
Sheet-delivery mechanism. F. W. Vickery. No. 1,106,261; Aug. 4; Gaz. vol. 205; p. 233.
Sheet delivery mechanism. R. Miehle. No. 1,107,437; Aug. 18; Gaz. vol. 205; p. 741.
Sheet-feeding device. L. E. Morrison. No. 1,108,211; Aug. 25; Gaz. vol. 205; p. 1059.
Sheet material, Stretching. L. S. Lachman. No. 1,106,516; Aug. 11; Gaz. vol. 205; p. 369.
Sheet-metal can. I. E. Sexton. No. 1,107,854; Aug. 18; Gaz. vol. 205; p. 887.
Sheet, Protecting-. E. C. Wallace. No. 1,107,732; Aug. 18; Gaz. vol. 205; p. 845.
Sheet splitting and cutting machine. H. A. Cumfer. No. 1,107,762; Aug. 18; Gaz. vol. 205; p. 855.
Shelf-bracket. H. T. Aubry. No. 1,108,543; Aug. 25; Gaz. vol. 205; p. 1173.
Shelf, Folding. C. A. Kessler. No. 1,106,569; Aug. 11; Gaz. vol. 205; p. 388.
Shell-assembling machine. H. Talley. No. 1,105,937; Aug. 4; Gaz. vol. 205; p. 123.
Shell carrier and shuttle. H. Talley. No. 1,105,936; Aug. 4; Gaz. vol. 205; p. 123.
Sheller: *See* Bean-sheller.
Shingle-cutter. J. D. Kizer. No. 1,106,224; Aug. 4; Gaz. vol. 205; p. 222.
Shingle, Roofing-. H. M. Reynolds. No. 1,108,236; Aug. 25; Gaz. vol. 205; p. 1068.
Ship-table. S. Beker. No. 1,108,318; Aug. 25; Gaz. vol. 205; p. 1097.
Ships, Apparatus for raising sunken. S. Steiner. No. 1,106,983; Aug. 11; Gaz. vol. 105; p. 532.
Ships, Arrangement for closing leaks in. D. Lucka. No. 1,107,680; Aug. 18; Gaz. vol. 205; p. 827.
Shirt. H. C. Berryman. No. 1,107,021; Aug. 11; Gaz. vol. 205; p. 543.
Shirt protector, Laundried-. N. J. Goodman. No. 1,107,513; Aug. 18; Gaz. vol. 205; p. 767.
Shock-absorber. W. Bardsley. No. 1,105,603; Aug. 4; Gaz. vol. 205; p. 5.
Shock-absorber. R. R. Walker. No. 1,106,014; Aug. 4; Gaz. vol. 205; p. 149.
Shock-absorber. O. T. Bugg. No. 1,108,488; Aug. 25; Gaz. vol. 205; p. 1155.
Shock-absorber, Pneumatic. R. E. Bates. No. 1,105,953; Aug. 4; Gaz. vol. 205; p. 128.
Shock-absorbing spring for vehicles. J. B. King. No. 1,107,964; Aug. 18; Gaz. vol. 205; p. 923.
Shoe. W. J. Hoar. No. 1,106,811; Aug. 11; Gaz. vol. 205; p. 472.
Shoe-closure. J. Jürgens. No. 1,107,616; Aug. 18; Gaz. vol. 205; p. 804.
Shoe-dressing and making the same. T. Miyata and S. Kuwayama. No. 1,106,957; Aug. 11; Gaz. vol. 205; p. 524.
Shoe for roof-walking. G. F. Styche. No. 1,107,208; Aug. 11; Gaz. vol. 205; p. 610.
Shoe, Logging-. E. Jaworek. No. 1,106,098; Aug. 4; Gaz. vol. 205; p. 181.
Shoe machinery. H. Raab. No. 1,105,834; Aug. 4; Gaz. vol. 205; p. 87.
Shoe-stretcher. R. B. Codling. No. 1,107,037; Aug. 11; Gaz. vol. 205; p. 548.
Shoe-tree, External. A. L. Loomis. No. 1,106,465; Aug. 11; Gaz. vol. 205; p. 350.
Shoes, Fly-closer for button-. C. A. Bonney. No. 1,108,423; Aug. 25; Gaz. vol. 205; p. 1131.
Shoes, Inner pad for. R. M. Sanderson and C. P. Whisler. No. 1,106,114; Aug. 4; Gaz. vol. 205; p. 186.
Shoes, Manufacture of. J. Cavanagh. No. 1,106,780; Aug. 11; Gaz. vol. 205; p. 461.
Shovel. S. E. Burchell. No. 1,107,583; Aug. 18; Gaz. vol. 205; p. 792.
Show-case corner. D. C. Morris. No. 1,107,694; Aug. 18; Gaz. vol. 205; p. 832.
Shutter, Outside rolling window-. D. Higgins. No. 1,107,069; Aug. 11; Gaz. vol. 205; p. 559.
Shutties, Device to facilitate threading. J. D. Whyte. No. 1,105,733; Aug. 4; Gaz. vol. 205; p. 52.
Sickle-bar holder. J. Watkins. No. 1,108,039; Aug. 18; Gaz. vol. 205; p. 951.
Sifter, Ash-. A. F. Staples. No. 1,108,270; Aug. 25; Gaz. vol. 205; p. 1079.
Sign. J. A. Hanggi. No. 1,105,653; Aug. 4; Gaz. vol. 205; p. 24.
Sign. J. F. Burnam. No. 1,107,585; Aug. 18; Gaz. vol. 205; p. 792.
Sign, Display-. F. V. Walker. No. 1,107,125; Aug. 11; Gaz. vol. 205; p. 578.
Sign, Illuminated. J. L. Dawes. No. 1,106,135; Aug. 4; Gaz. vol. 205; p. 193.
Sign-letter, Illuminating. M. W. Askin. No. 1,107,875; Aug. 18; Gaz. vol. 205; p. 894.
Sign, Rotating. J. S. Kendall. No. 1,106,148; Aug. 4; Gaz. vol. 205; p. 197.
Signs, Device for forming display-. E. E. Bellamy. No. 1,106,340; Aug. 4; Gaz. vol. 205; p. 260.
Signal: *See* Automobile rear signal; Railway-crossing signal; Vehicle rear signal; Vehicle-signal.
Signal. O. W. Samnit. No. 1,108,398; Aug. 25; Gaz. vol. 205; p. 1124.
Signal apparatus. S. Borland. No. 1,108,860; Aug. 25; Gaz. vol. 205; p. 1284.
Signal device, Auxiliary. R. Ireland. No. 1,107,794; Aug. 18; Gaz. vol. 205; p. 867.
Signal-receiving device. C. S. Rhoads, Jr. No. 1,105,837; Aug. 4; Gaz. vol. 205; p. 88.
Signal-receiving device, Substation. H. O. Rugh. No. 1,106,680; Aug. 11; Gaz. vol. 205; p. 426.
Signal system. E. E. Mullvain. No. 1,107,697; Aug. 18; Gaz. vol. 205; p. 832.
Signaling apparatus. S. Danenhower. No. 1,106,788; Aug. 11; Gaz. vol. 205; p. 464.
Signaling apparatus, Substation. H. O. Rugh. No. 1,105,842; Aug. 4; Gaz. vol. 205; p. 90.
Signaling device. E. Rogers. No. 1,106,973; Aug. 11; Gaz. vol. 205; p. 529.
Signaling device, Automatic. P. C. Johnson. No. 1,105,793; Aug. 4; Gaz. vol. 205; p. 72.
Signaling mechanism. H. C. Crumrine. No. 1,106,441; Aug. 11; Gaz. vol. 205; p. 339.
Signaling mechanism, Electric. O. D. Plummer, G. H. Hausser, and E. A. Warner. No. 1,105,829; Aug. 4; Gaz. vol. 205; p. 85.
Signaling system. C. Stephens. No. 1,105,860; Aug. 4; Gaz. vol. 205; p. 96.
Silk fabrics, Equalizing device for. H. Goldberg and F. Ludwigs. No. 1,106,704; Aug. 11; Gaz. vol. 205; p. 434.
Silo. M. C. Frisbie. No. 1,106,868; Aug. 11; Gaz. vol. 205; p. 492.
Silo. E. M. Sellors. No. 1,106,897; Aug. 11; Gaz. vol. 205; p. 502.
Silo-door. J. H. Mayer. No. 1,106,662; Aug. 11; Gaz. vol. 205; p. 421.
Silo-roof. C. E. Martin. No. 1,106,150; Aug. 4; Gaz. vol. 205; p. 198.
Silo-roof. T. F. Meyer. No. 1,106,398; Aug. 11; Gaz. vol. 205; p. 324.
Silo-roof. E. E. Wells. No. 1,107,002; Aug. 11; Gaz. vol. 205; p. 547.
Silos, Stave-retaining device for. W. A. Holnagel. No. 1,106,383; Aug. 11; Gaz. vol. 205; p. 319.
Siphon-head. J. Baach, Jr. No. 1,107,738; Aug. 18; Gaz. vol. 205; p. 847.
Skewer-step mounting. C. A. Allen. No. 1,108,420; Aug. 25; Gaz. vol. 205; p. 1150.
Skimmer, Tank-. W. J. Welch. No. 1,107,391; Aug. 18; Gaz. vol. 205; p. 723.
Skirt. F. A. Kaufler. No. 1,106,818; Aug. 11; Gaz. vol. 205; p. 474.
Skirt-marker. C. E. and O. A. McIntosh. No. 1,106,152; Aug. 4; Gaz. vol. 205; p. 198.

Skirt-marker, bias-folder, and pattern-marker, Combination. B. S. Cramer. No. 1,108,143; Aug. 25; Gaz. vol. 205; p. 1035.
Skiving-machine. P. F. W. C. Krippendorf. No. 1,106,461; Aug. 11; Gaz. vol. 205; p. 348.
Slab cutting and separating machine. F. H. Merrell and W. K. Blackburn. No. 1,108,204; Aug. 25; Gaz. vol. 205; p. 1056.
Sled, Bob-. C. Board. No. 1,108,322; Aug. 25; Gaz. vol. 205; p. 1099.
Sleeve-lining. W. Abrahams. No. 1,106,912; Aug. 11; Gaz. vol. 205; p. 508.
Sleigh attachment for motor-vehicles. J. S. Thomson. No. 1,105,939; Aug. 4; Gaz. vol. 205; p. 124.
Sleigh-runner, Non-skid metal. T. J. Field and I. Simley. No. 1,108,160; Aug. 25; Gaz. vol. 205; p. 1041.
Slicer, Fruit and vegetable. F. G. Mower. No. 1,107,695; Aug. 18; Gaz. vol. 205; p. 832.
Slicing-machine. H. Stukart. No. 1,106,591; Aug. 11; Gaz. vol. 205; p. 396.
Slicing machine, Meat-. A. L. Gardner. No. 1,105,643; Aug. 4; Gaz. vol. 205; p. 20.
Sling-cutter. E. F. Barber. No. 1,106,026; Aug. 4; Gaz. vol. 205; p. 155.
Smelting-furnace. T. H. Holroyd. No. 1,108,175; Aug. 25; Gaz. vol. 205; p. 1045.
Smelting-furnace. W. E. Williams. No. 1,108,821; Aug. 25; Gaz. vol. 205; p. 1208.
Smoke-consuming device for heaters or boilers. E. C. Hock. No. 1,106,709; Aug. 11; Gaz. vol. 205; p. 436.
Smoke-jack. W. Reenstrom. No. 1,108,234; Aug. 25; Gaz. vol. 205; p. 1067.
Smoke-uptake. R. L. Paulson. No. 1,108,222; Aug. 25; Gaz. vol. 205; p. 1062.
Snake-puller. F. A. Thies. No. 1,108,025; Aug. 18; Gaz. vol. 205; p. 945.
Snap-fastener. J. G. Smith. No. 1,107,122; Aug. 11; Gaz. vol. 205; p. 577.
Snow gathering and melting machine. G. Schuler. No. 1,106,735; Aug. 11; Gaz. vol. 205; p. 446.
Soap-container. H. F. Prescott. No. 1,108,083; Aug. 18; Gaz. vol. 205; p. 966.
Soap-holder, Rotatable. P. E. Fischer. No. 1,107,278; Aug. 18; Gaz. vol. 205; p. 683.
Socket, Plural. F. E. Seeley. No. 1,107,120; Aug. 11; Gaz. vol. 205; p. 576.
Socket-shell. T. A. C. Both. No. 1,108,547; Aug. 25; Gaz. vol. 205; p. 1177.
Sofa or davenport and bed. S. Rusnak. No. 1,105,928; Aug. 4; Gaz. vol. 205; p. 120.
Soldering alloy. G. D. Long and E. W. Rapp. No. 1,107,082; Aug. 11; Gaz. vol. 205; p. 564.
Soldering caps to cans. B. Hausheer. No. 1,105,778; Aug. 4; Gaz. vol. 205; p. 68.
Soldering implement. L. Balogh and G. Széles. No. 1,106,357; Aug. 11; Gaz. vol. 205; p. 311.
Soldering-iron, Electric. J. C. Royce. No. 1,106,476; Aug. 11; Gaz. vol. 205; p. 354.
Soldering-iron, Self-heating. R. W. Marvell. No. 1,107,813; Aug. 18; Gaz. vol. 205; p. 872.
Soldering-iron, Self-heating. H. C. Balch. No. 1,108,666; Aug. 25; Gaz. vol. 205; p. 1216.
Sole-pressing machine. E. N. Preble. No. 1,108,472; Aug. 25; Gaz. vol. 205; p. 1149.
Soles for spring-heel shoes, Making. A. H. Prenzel. No. 1,105,694; Aug. 4; Gaz. vol. 205; p. 38.
Solids, Apparatus for liquid separation of. F. I. Du Pont. No. 1,106,195; Aug. 4; Gaz. vol. 205; p. 213.
Sound-operating mechanism. C. L. Metzger, J. A. Forster, and W. E. Kune. No. 1,106,664; Aug. 11; Gaz. vol. 205; p. 422.
Sound-producers, Control for mechanical. J. Gordon, Jr., and A. W. Stringham. No. 1,106,446; Aug. 11; Gaz. vol. 205; p. 341.
Sound-record. V. H. Emerson. No. 1,107,502; Aug. 18; Gaz. vol. 205; p. 763.
Sound-records, Production of disk. F. L. Capps. No. 1,107,491; Aug. 18; Gaz. vol. 205; p. 760.
Sound-reproducing machine. A. S. B. Little. No. 1,108,451; Aug. 25; Gaz. vol. 205; p. 1141.
Spark-arrester. R. M. Crosby. No. 1,108,710; Aug. 25; Gaz. vol. 205; p. 1231.
Spark-controlling device for magneto ignition. H. H. Lanning. No. 1,106,953; Aug. 11; Gaz. vol. 205; p. 523.
Spark-plug. H. S. Thomasson. No. 1,107,634; Aug. 18; Gaz. vol. 205; p. 810.
Spark-plug, primer, and indicator, Combined. A. P. Seiss and G. W. Robrig. No. 1,108,009; Aug. 18; Gaz. vol. 205; p. 940.
Spark-plug tester and terminal. H. Dalitz. No. 1,107,498; Aug. 18; Gaz. vol. 205; p. 762.
Spark-plugs, Terminal connector for. C. W. Beck. No. 1,108,674; Aug. 25; Gaz. vol. 205; p. 1219.
Sparking plug. O. Freiberg. No. 1,106,703; Aug. 11; Gaz. vol. 205; p. 434.
Speed-governor for prime movers. G. Rennerfelt. No. 1,105,696; Aug. 4; Gaz. vol. 205; p. 38.
Speed mechanism, Variable-. L. Huffman. No. 1,107,613; Aug. 18; Gaz. vol. 205; p. 802.
Speed mechanism, Variable-. J. Gell. No. 1,108,741; Aug. 25; Gaz. vol. 205; p. 1242.
Speed-regulator. H. L. Ogg. No. 1,106,156; Aug. 4; Gaz. vol. 205; p. 200.
Speed-regulator. E. E. Woodward. No. 1,106,434; Aug. 11; Gaz. vol. 205; p. 337.
Spherically, chromatically, astigmatically, and comatically corrected double objective. W. Zschokke. No. 1,108,307; Aug. 25; Gaz. vol. 205; p. 1093.
Spigot. F. W. Mennickhein, Jr. No. 1,107,435; Aug. 18; Gaz. vol. 205; p. 740.
Spike. G. M. Brox and H. S. Knight. No. 1,106,622; Aug. 11; Gaz. vol. 205; p. 407.
Spike. N. Abramson. No. 1,108,483; Aug. 25; Gaz. vol. 205; p. 1154.
Spindle-skein lubricator. J. M. Whitworth. No. 1,107,469; Aug. 18; Gaz. vol. 205; p. 752.
Spinning-frame stop-motion. E. G. Brookshire and H. G. Wiles. No. 1,108,127; Aug. 25; Gaz. vol. 205; p. 1029.
Spinning-frame tension device. R. G. Carle. No. 1,106,280; Aug. 4; Gaz. vol. 205; p. 239.
Splice-bar. W. J. Smith. No. 1,107,123; Aug. 11; Gaz. vol. 205; p. 577.
Split pins or cotter-pins, Machine for forming. I. J. Young. No. 1,106,484; Aug. 11; Gaz. vol. 205; p. 357.
Spoolers, Tension-controlling means for. P. H. Donnelly. No. 1,105,969; Aug. 4; Gaz. vol. 205; p. 134.
Spoon. W. H. Lechner. No. 1,108,767; Aug. 25; Gaz. vol. 205; p. 1250.
Spoon. A. J. Tartiss. No. 1,108,813; Aug. 25; Gaz. vol. 205; p. 1265.
Spout, Sap-directing. C. L. Krager. No. 1,107,969; Aug. 18; Gaz. vol. 205; p. 925.
Sprayer. H. S. Munson. No. 1,105,993; Aug. 4; Gaz. vol. 205; p. 142.
Spraying device, Multiple. A. E. Yerkes. No. 1,108,058; Aug. 18; Gaz. vol. 205; p. 958.
Spraying machine, Dust-. H. D. Babcock, F. C. Wells, and J. W. Brown. No. 1,107,015; Aug. 11; Gaz. vol. 205; p. 541.
Spring: *See* Automobile-spring; Auxiliary spring; Balance-spring; Chute-spring; Pneumatic spring; Vehicle-spring; Vehicle suspension-spring.
Spring. J. H. Athons. No. 1,107,567; Aug. 18; Gaz. vol. 205; p. 786.
Spring for spring-bearings. T. H. Miller. No. 1,107,690; Aug. 18; Gaz. vol. 205; p. 830.
Spring-forming device. B. A. Litchfield and L. Zimmermann. No. 1,105,982; Aug. 4; Gaz. vol. 205; p. 138.
Spring-motor. F. B. Marriott. No. 1,108,456; Aug. 25; Gaz. vol. 205; p. 1142.
Spring vehicle-wheel. W. H. Fahrney. No. 1,108,564; Aug. 25; Gaz. vol. 205; p. 1182.
Spring-wheel. E. Rammelsberg. No. 1,107,355; Aug. 18; Gaz. vol. 205; p. 710.
Spring-wheel. J. W. Nippert. No. 1,107,439; Aug. 18; Gaz. vol. 205; p. 741.
Springs, Spreader for the leaves of. C. F. Adamson. No. 1,108,111; Aug. 18; Gaz. vol. 205; p. 977.
Sprinkler: *See* Lawn-sprinkler.
Sprinkler-head. F. V. Sackett. No. 1,107,845; Aug. 18; Gaz. vol. 205; p. 884.
Sprinkler-head, Automatic. E. M. Long. No. 1,107,198; Aug. 11; Gaz. vol. 205; p. 607.
Sprinkler-head, Automatic. J. R. Hamilton. No. 1,108,362; Aug. 25; Gaz. vol. 205; p. 1111.
Square, Combination-. C. A. Kenworthy. No. 1,107,077; Aug. 11; Gaz. vol. 205; p. 562.
Square, Separable. H. E. Harris. No. 1,107,516; Aug. 18; Gaz. vol. 205; p. 768.
Squeegee. M. Bandringa. No. 1,107,131; Aug. 11; Aug. vol. 205; p. 581.
Stable mixture containing perborates. H. H. Wünsche. No. 1,105,739; Aug. 4; Gaz. vol. 205; p. 54.
Stack-fitting. J. H. Lonskey. No. 1,106,392; Aug. 11; Gaz. vol. 205; p. 322.
Stage-lighting device. A. W. Beuttell and J. A. Manners-Smith. No. 1,107,651; Aug. 18; Gaz. vol. 205; p. 816.
Stage-rain. Device for producing. N. Linton. No. 1,106,391; Aug. 11; Gaz. vol. 205; p. 321.
Stairways, Spring-tread for. C. Buellesbach. No. 1,105,877; Aug. 4; Gaz. vol. 205; p. 102.
Stalk-cutter. M. L. Adams. No. 1,105,949; Aug. 4; Gaz. vol. 205; p. 127.
Stalk-puller. R. W. Brooks. No. 1,108,325; Aug. 25; Gaz. vol. 205; p. 1099.
Stamp-affixing device. A. Fischer. No. 1,108,729; Aug. 25; Gaz. vol. 205; p. 1238.
Stamp, Pencil-. M. M. Anderson. No. 1,108,314; Aug. 25; Gaz. vol. 205; p. 1096.
Stanchion. J. N. Jensen. No. 1,106,713; Aug. 11; Gaz. vol. 205; p. 437.
Stanchion, Cattle-. W. F. Jacobs. No. 1,107,524; Aug. 18; Gaz. vol. 205; p. 770.
Stanchion for hand-rails. C. B. O'Connor. No. 1,105,685; Aug. 4; Gaz. vol. 205; p. 34.
Stand: *See* Switch-stand; Type-writer stand; Votive-offering stand; Washstand.
Stand. P. H. Kelleher. No. 1,105,910; Aug. 4; Gaz. vol. 205; p. 112.
Stannic chlorid from materials containing oxid of tin, Manufacturing. H. Goldschmidt. No. 1,105,902; Aug. 4; Gaz. vol. 205; p. 110.
Staple blank or strip. E. T. Greenfield. No. 1,106,938; Aug. 11; Gaz. vol. 205; p. 517.
Staple driver and puller. C. N. Richardson. No. 1,106,241; Aug. 4; Gaz. vol. 205; p. 227.
Staple-retainer. L. M. Vance. No. 1,106,600; Aug. 11; Gaz. vol. 205; p. 400.

Staple-setting and wire-stretching tool. E. R. Beadle and H. V. Etter. No. 1,106,861; Aug. 11; Gaz. vol. 205; p. 490.
Stave-jointing machine. E. F. Beugler. No. 1,105,609; Aug. 4; Gaz. vol. 205; p. 7.
Stay and clasp, Garment. J. M. Welsh. No. 1,108,534; Aug. 25; Gaz. vol. 205; p. 1171.
Stay, Garment-. D. Schuler. No. 1,106,477; Aug. 11; Gaz. vol. 205; p. 354.
Stay, Garment-. F. L. O. Wadsworth. No. 1,106,481; Aug. 11; Gaz. vol. 205; p. 356.
Stay, Garment-. D. Schuler. No. 1,108,251; Aug. 25; Gaz. vol. 205; p. 1073.
Stay, Garment-. D. Schuler. No. 1,108,252; Aug. 25; Gaz. vol. 205; p. 1074.
Steam-boiler. A. Fernández. No. 1,105,896; Aug. 4; Gaz. vol. 205; p. 107.
Steam-boiler and water-heater, Interconnected. H. B. Friedman. No. 1,106,037; Aug. 4; Gaz. vol. 205; p. 159.
Steam-engine. R. C. Stevens. No. 1,106,338; Aug. 4; Gaz. vol. 205; p. 259.
Steam-trap. G. U. Merrill. No. 1,108,603; Aug. 25; Gaz. vol. 205; p. 1195.
Steel banger-box, Pressed-. C. S. Lockwood. No. 1,107,677; Aug. 18; Gaz. vol. 205; p. 825.
Steering apparatus. S. Jacobson and F. E. Anderson. No. 1,107,073; Aug. 11; Gaz. vol. 205; p. 561.
Steering-gear, Automatic. J. F. Lundgren. No. 1,107,973; Aug. 18; Gaz. vol. 205; p. 927.
Stencil-machines, Sheet-attaching device for. E. A. Cox. No. 1,106,440; Aug. 11; Gaz. vol. 205; p. 339.
Step and step-operating mechanism. R. T. Senter. No. 1,105,705; Aug. 4; Gaz. vol. 205; p. 42.
Step form, Cement-. H. D. Cornelius. No. 1,106,627; Aug. 11; Gaz. vol. 205; p. 409.
Stereotype-matrix-drying machine, Electrically-operated. R. J. Gibbon. No. 1,106,936; Aug. 11; Gaz. vol. 205; p. 516.
Stereotyping, Producing paper matrices for half-tone. N. Bendixen. No. 1,108,677; Aug. 25; Gaz. vol. 205; p. 1219.
Sterilizing apparatus. M. P. Orr. No. 1,106,579; Aug. 11; Gaz. vol. 205; p. 392.
Stock and dies. H. K. Drawbaugh. No. 1,108,346; Aug. 25; Gaz. vol. 205; p. 1106.
Stocking-drying former. C. B. Upp. No. 1,106,260; Aug. 4; Gaz. vol. 205; p. 233.
Stocking, Reinforced. A. Hale. No. 1,106,208; Aug. 4; Gaz. vol. 205; p. 217.
Stoker, Automatic. E. A. and J. E. Jones. No. 1,107,217; Aug. 11; Gaz. vol. 205; p. 613.
Stoker, Mechanical. R. S. Riley. No. 1,107,842; Aug. 18; Gaz. vol. 205; p. 883.
Stone, Artificial. P. Kuhn. No. 1,105,979; Aug. 4; Gaz. vol. 205; p. 137.
Stone composition, Artificial-. W. Heslop. No. 1,105,905; Aug. 4; Gaz. vol. 205; p. 111.
Stone-gathering machine. J. B. Conine. No. 1,106,190; Aug. 4; Gaz. vol. 205; p. 211.
Stool, Milking-. A. J. Hood. No. 1,107,521; Aug. 18; Gaz. vol. 205; p. 769.
Stop mechanism, Automatic. J. Pedery. No. 1,107,343; Aug. 18; Gaz. vol. 205; p. 706.
Stopper: *See* Bottle-stopper.
Storage-case. A. P. Odell. No. 1,106,236; Aug. 4; Gaz. vol. 205; p. 225.
Store-service-credit-system apparatus. C. F. Kettering. No. 1,108,185; Aug. 25; Gaz. vol. 205; p. 1049.
Stove. C. A. Notman. No. 1,105,683; Aug. 4; Gaz. vol. 205; p. 33.
Stove. S. P. Smith. No. 1,105,856; Aug. 4; Gaz. vol. 205; p. 95.
Stove. W. E. Scripps. No. 1,107,712; Aug. 18; Gaz. vol. 205; p. 838.
Stove. A. L. Castle. No. 1,108,336; Aug. 25; Gaz. vol. 205; p. 1102.
Stove. C. A. Wilkinson. No. 1,108,648; Aug. 25; Gaz. vol. 205; p. 1210.
Stove automatic burner, Gas-. G. Bruton. No. 1,108,861; Aug. 25; Gaz. vol. 205; p. 1284.
Stove-door. A. L. Castle. No. 1,108,698; Aug. 25; Gaz. vol. 205; p. 1227.
Stove, Gas cooking-. C. E. Wills. No. 1,108,650; Aug. 25; Gaz. vol. 205; p. 1211.
Stove, Heating-. O. C. Williams. No. 1,105,944; Aug. 4; Gaz. vol. 205; p. 125.
Stove, Heating-. G. W. Howes. No. 1,106,871; Aug. 11; Gaz. vol. 205; p. 493.
Stove, Knockdown. L. B. and N. Goldberg. No. 1,106,555; Aug. 11; Gaz. vol. 205; p. 383.
Stoves and ranges, Water-heater for combination. P. A. Britt. No. 1,105,616; Aug. 4; Gaz. vol. 205; p. 10.
Strainer, Gasolene-. E. F. Daws. No. 1,107,766; Aug. 18; Gaz. vol. 205; p. 857.
Strap: *See* Elastic strap.
Strap-holder. H. L. Schroeder. No. 1,107,451; Aug. 18; Gaz. vol. 205; p. 745.
Street and station indicator. C. O. Young. No. 1,108,652; Aug. 25; Gaz. vol. 205; p. 1212.
Stretching device. B. O. Foulk. No. 1,108,732; Aug. 25; Gaz. vol. 205; p. 1239.
Strike-plate. A. D. Methven. No. 1,108,873; Aug. 25; Gaz. vol. 205; p. 1288.
Stub-puller. L. L. Zihler. No. 1,108,059; Aug. 18; Gaz. vol. 205; p. 958.
Subsoil attachment. D. D. Littlejohn. No. 1,106,312; Aug. 4; Gaz. vol. 205; p. 250.
Sucker-rod elevator. W. T. Clinger. No. 1,106,130; Aug. 4; Gaz. vol. 205; p. 192.
Suction-cleaner. G. C. Schmitz. No. 1,108,248; Aug. 25; Gaz. vol. 205; p. 1072.
Sugar-mill feed-roller mechanism. J. Ogg. No. 1,108,780; Aug. 25; Gaz. vol. 205; p. 1254.
Sugar, Refining. J. G. Kremers. No. 1,107,172; Aug. 11; Gaz. vol. 205; p. 598.
Sulfids of the alkalis or alkaline earths, Regeneration of. L. P. Wilson. No. 1,106,266; Aug. 4; Gaz. vol. 205; p. 235.
Superheater. G. H. Emerson and H. Yoerg. No. 1,105,633; Aug. 4; Gaz. vol. 205; p. 16.
Superheater. G. H. Emerson and H. Yoerg. No. 1,105,634; Aug. 4; Gaz. vol. 205; p. 17.
Superheater. E. H. Foster. No. 1,106,036; Aug. 4; Gaz. vol. 205; p. 158.
Superheater, Smoke-tube. W. Schmidt. No. 1,106,734; Aug. 11; Gaz. vol. 205; p. 445.
Superheaters, Apparatus for controlling steam-. R. C. Stevens. No. 1,106,337; Aug. 4; Gaz. vol. 205; p. 258.
Supporting-table. C. A. Puckett. No. 1,106,057; Aug. 4; Gaz. vol. 205; p. 165.
Surgical-bandage container. P. S. Bauer. No. 1,107,747; Aug. 18; Gaz. vol. 205; p. 850.
Surgical bandage or splint. L. H. Reuter. No. 1,107,357; Aug. 18; Gaz. vol. 205; p. 711.
Surgical instrument. G. Gajdos. No. 1,108,737; Aug. 25; Gaz. vol. 205; p. 1241.
Surgical-instrument-sterilizing apparatus. T. L. Perrin. No. 1,107,834; Aug. 18; Gaz. vol. 205; p. 880.
Surveying instrument. J. Wainwright. No. 1,108,034; Aug. 18; Gaz. vol. 205; p. 949.
Surveying instrument or range-finder. A. M. Bridges. No. 1,106,774; Aug. 11; Gaz. vol. 205; p. 459.
Suspender cast-off. G. O. Smith. No. 1,105,933; Aug. 4; Gaz. vol. 205; p. 122.
Suspension-fitting. R. B. Benjamin. No. 1,108,679; Aug. 25; Gaz. vol. 205; p. 1220.
Suspensory and protector, Combination. A. J. Sunden. No. 1,106,987; Aug. 11; Gaz. vol. 205; p. 533.
Swimming device. J. H. Picken. No. 1,108,392; Aug. 25; Gaz. vol. 205; p. 1122.
Swing. R. J. Oldneld. No. 1,107,341; Aug. 18; Gaz. vol. 205; p. 705.
Switch: *See* Automatic sectionalizing-switch; Automatically-operated switch; Centrifugal switch; Electric switch; Electromechanical switch; Motor-switch; Railway-switch; Sequence-switch; Time-switch.
Switch arrangement, Automatic. L. C. Nicholson. No. 1,105,823; Aug. 4; Gaz. vol. 205; p. 83.
Switch-box, Contact. S. R. Hipple and W. L. Conwell. No. 1,105,907; Aug. 4; Gaz. vol. 205; p. 111.
Switch-locking device. J. A. Nash. No. 1,106,154; Aug. 4; Gaz. vol. 205; p. 199.
Switch mechanism, Time-. J. A. Skinner. No. 1,106,416; Aug. 11; Gaz. vol. 205; p. 330.
Switch-operating device. E. von Böhlke. No. 1,106,274; Aug. 4; Gaz. vol. 205; p. 237.
Switch-operating device, Electric-. A. T. Ytterberg. No. 1,106,126; Aug. 4; Gaz. vol. 205; p. 190.
Switch-stand. T. A. Gerlach. No. 1,106,869; Aug. 11; Gaz. vol. 205; p. 493.
Switch-stand mechanism, Interlocking. F. C. Anderson. No. 1,106,533; Aug. 11; Gaz. vol. 205; p. 374.
Switch-stand target mechanism. F. C. Anderson. No. 1,108,659; Aug. 25; Gaz. vol. 205; p. 1214.
Switch-throw. W. A. Lines. No. 1,106,657; Aug. 11; Gaz. vol. 205; p. 419.
Switch-throwing device. E. J. Andrews. No. 1,108,662; Aug. 25; Gaz. vol. 205; p. 1215.
Switchboard-plug. L. H. Snyder. No. 1,106,118; Aug. 4; Gaz. vol. 205; p. 187.
Table: *See* Billiard-table; Concentrating-table; Extensible table; Extension-table; Ironing-table; Ship-table; Supporting-table.
Table attachment, Dining-. I. J. Burd. No. 1,108,692; Aug. 25; Gaz. vol. 205; p. 1224.
Tablet-machine. E. L. Richards. No. 1,105,838; Aug. 4; Gaz. vol. 205; p. 88.
Tack-driver. J. P. Gardner. No. 1,106,646; Aug. 11; Gaz. vol. 205; p. 415.
Tack-supplying mechanism. R. F. McFeely. No. 1,107,337; Aug. 18; Gaz. vol. 205; p. 703.
Tag. C. R. Dodge. No. 1,108,835; Aug. 25; Gaz. vol. 205; p. 1274.
Tag affixing and marking machine, Combined. C. R. Dodge. No. 1,108,837; Aug. 25; Gaz. vol. 205; p. 1275.
Tag former and affixer. C. R. Dodge. No. 1,108,836; Aug. 25; Gaz. vol. 205; p. 1274.
Tag-hook. W. L. Daly. No. 1,107,910; Aug. 18; Gaz. vol. 205; p. 904.
Tag or ticket making apparatus, Factory. C. H. Nichols. No. 1,105,995; Aug. 4; Gaz. vol. 205; p. 143.
Talking-machine. C. E. Woods. No. 1,106,269; Aug. 4; Gaz. vol. 205; p. 236.
Talking-machine. J. C. English. No. 1,107,597; Aug. 18; Gaz. vol. 205; p. 797.
Talking-machine. C. E. Woods. No. 1,108,301; Aug. 25; Gaz. vol. 205; p. 1091.

Talking-machine automatic stop. J. Kohn. No. 1,107,079; Aug. 11; Gaz. vol. 205; p. 563.
Talking-machine automatic stop. Q. A. and L. D. Atwood. No. 1,108,315; Aug. 25; Gaz. vol. 205; p. 1096.
Talking-machine tone-arm. C. E. Woods. No. 1,108,302; Aug. 25; Gaz. vol. 205; p. 1092.
Talking-machines, Repeating mechanism for. L. Abraham. No. 1,107,242; Aug. 11; Gaz. vol. 205; p. 622.
Tamp. J. F. McCoy. No. 1,107,976; Aug. 18; Gaz. vol. 205; p. 928.
Tandem press. A. J. Lewis. No. 1,106,571; Aug. 11; Gaz. vol. 205; p. 389.
Tank: *See* Cooling-tank; Flushing-tank; Photographic developing-tank.
Tank-bottom holder. W. O. Smith. No. 1,106,743; Aug. 11; Gaz. vol. 205; p. 448.
Tank-filling apparatus. A. A. Bowser. No. 1,107,886; Aug. 18; Gaz. vol. 205; p. 897.
Tank-gage. G. G. Dufloth. No. 1,106,552; Aug. 11; Gaz. vol. 205; p. 382.
Tank-indicator. H. N. Palmer. No. 1,106,106; Aug. 4; Gaz. vol. 205; p. 183.
Tanks, Means for preventing condensation of moisture in transformer-. F. C. Green. No. 1,108,746; Aug. 25; Gaz. vol. 205; p. 1244.
Tanning leather. J. C. Cleary. No. 1,107,759; Aug. 18; Gaz. vol. 205; p. 855.
Tanning liquors, Apparatus for preparing. J. Forster. No. 1,107,925; Aug. 18; Gaz. vol. 205; p. 910.
Tanning skins and making same, Compounds for. L. Pollak. No. 1,107,107; Aug. 11; Gaz. vol. 205; p. 572.
Tape, Loop-. G. B. Smith. No. 1,108,262; Aug. 25; Gaz. vol. 205; p. 1076.
Tape-reel. G. P. Putnam. No. 1,106,969; Aug. 11; Gaz. vol. 205; p. 528.
Teeth for practice-work in dental surgery, Set of. F. D. Weisse. No. 1,108,290; Aug. 25; Gaz. vol. 205; p. 1087.
Telegraph apparatus. G. P. Blessing. No. 1,108,545; Aug. 25; Gaz. vol. 205; p. 1176.
Telegraph, Electric writing. E. H. and K. A. Widegren. No. 1,106,762; Aug. 11; Gaz. vol. 205; p. 455.
Telegraph installation for aerial vessels, Wireless-. L. Rouzet. No. 1,106,729; Aug. 11; Gaz. vol. 205; p. 444.
Telegraph-pole and the like. B. Haskell. No. 1,105,776; Aug. 4; Gaz. vol. 205; p. 67.
Telegraph-pole and the like. B. Haskell. No. 1,105,777; Aug. 4; Gaz. vol. 205; p. 67.
Telegraph, Printing-. F. R. McBerty. No. 1,107,336; Aug. 18; Gaz. vol. 205; p. 703.
Telegraph, Printing-. C. E. Scribner and F. R. McBerty. No. 1,107,365; Aug. 18; Gaz. vol. 205; p. 713.
Telegraph, Printing-. D. S. Hulfish. No. 1,108,580; Aug. 25; Gaz. vol. 205; p. 1188.
Telegraph-receiver. C. E. Scribner. No. 1,107,366; Aug. 18; Gaz. vol. 205; p. 713.
Telegraph-receiver. C. E. Scribner. No. 1,107,367; Aug. 18; Gaz. vol. 205; p. 714.
Telegraph-repeater. G. L. Rawdon. No. 1,106,001; Aug. 4; Gaz. vol. 205; p. 145.
Telegraph system. B. F. Thompson. No. 1,106,750; Aug. 11; Gaz. vol. 205; p. 451.
Telegraph system. A. H. Adams and A. F. Dixon. No. 1,108,109; Aug. 18; Gaz. vol. 205; p. 976.
Telegraph system. C. R. Underhill. No. 1,108,529; Aug. 25; Gaz. vol. 205; p. 1169.
Telegraphy. L. M. Potts. No. 1,105,920; Aug. 4; Gaz. vol. 205; p. 116.
Telegraphy. L. M. Potts. No. 1,105,922; Aug. 4; Gaz. vol. 205; p. 117.
Telegraphy. P. B. Delany. No. 1,108,147; Aug. 25; Gaz. vol. 205; p. 1036.
Telegraphy. P. B. Delany. No. 1,108,148; Aug. 25; Gaz. vol. 205; p. 1036.
Telegraphy, Antenna for wireless. N. J. Jeffries. No. 1,106,945; Aug. 11; Gaz. vol. 205; p. 520.
Telemeter. O. Eppenstein and F. Eckardt. No. 1,107,503; Aug. 18; Gaz. vol. 205; p. 763.
Telemeter, Base-line. H. Jacob. No. 1,108,180; Aug. 25; Gaz. vol. 205; p. 1046.
Telephone. E. S. Pridham and P. L. Jensen. No. 1,105,924; Aug. 4; Gaz. vol. 205; p. 118.
Telephone. L. S. and O. E. Boyce. No. 1,107,024; Aug. 11; Gaz. vol. 205; p. 544.
Telephone call-bell or ringer. W. Kaisling. No. 1,106,655; Aug. 11; Gaz. vol. 205; p. 419.
Telephone, Call-registering. F. D. Fader, J. and J. W. Tibb. No. 1,106,501; Aug. 11; Gaz. vol. 205; p. 363.
Telephone-exchange system. E. E. Clement. No. 1,107,133; Aug. 11; Gaz. vol. 205; p. 581.
Telephone-exchange system. E. E. Clement. No. 1,107,134; Aug. 11; Gaz. vol. 205; p. 582.
Telephone-exchange system. E. E. Clement. No. 1,107,136; Aug. 11; Gaz. vol. 205; p. 583.
Telephone-exchange system. E. E. Clement. No. 1,107,137; Aug. 11; Gaz. vol. 205; p. 583.
Telephone-exchange system. E. E. Clement. No. 1,107,139; Aug. 11; Gaz. vol. 205; p. 584.
Telephone-exchange system. E. E. Clement. No. 1,107,140; Aug. 11; Gaz. vol. 205; p. 585.
Telephone-exchange system. E. E. Clement. No. 1,107,141; Aug. 11; Gaz. vol. 205; p. 585.
Telephone-exchange system. E. E. Clement. No. 1,107,142; Aug. 11; Gaz. vol. 205; p. 586.
Telephone-exchange system. E. E. Clement. No. 1,107,143; Aug. 11; Gaz. vol. 205; p. 586.
Telephone-exchange system. E. E. Clement. No. 1,107,145; Aug. 11; Gaz. vol. 205; p. 587.
Telephone-exchange system. E. E. Clement. No. 1,107,146; Aug. 11; Gaz. vol. 205; p. 588.
Telephone-exchange system. E. E. Clement. No. 1,107,147; Aug. 11; Gaz. vol. 205; p. 588.
Telephone-exchange system. E. E. Clement. No. 1,107,148; Aug. 11; Gaz. vol. 205; p. 589.
Telephone-exchange system. E. E. Clement. No. 1,107,150; Aug. 11; Gaz. vol. 205; p. 590.
Telephone-exchange system. E. E. Clement. No. 1,107,151; Aug. 11; Gaz. vol. 205; p. 590.
Telephone-exchange system. E. E. Clement. No. 1,107,152; Aug. 11; Gaz. vol. 205; p. 591.
Telephone-exchange system. E. E. Clement. No. 1,107,154; Aug. 11; Gaz. vol. 205; p. 592.
Telephone-exchange system. E. E. Clement. No. 1,107,155; Aug. 11; Gaz. vol. 205; p. 592.
Telephone-exchange system. E. E. Clement. No. 1,107,157; Aug. 11; Gaz. vol. 205; p. 593.
Telephone-exchange system. F. R. McBerty. No. 1,108,383; Aug. 25; Gaz. vol. 205; p. 1119.
Telephone-exchange system and apparatus. E. E. Clement. No. 1,107,135; Aug. 11; Gaz. vol. 205; p. 582.
Telephone-exchange system, Automatic. E. E. Clement. No. 1,107,138; Aug. 11; Gaz. vol. 205; p. 584.
Telephone-exchange system, Coin-controlled automatic. W. W. Leach. No. 1,108,194; Aug. 25; Gaz. vol. 205; p. 1052.
Telephone registering system. E. E. Clement. No. 1,107,156; Aug. 11; Gaz. vol. 205; p. 593.
Telephone set. Moisture-proof. C. E. Hague. No. 1,108,166; Aug. 25; Gaz. vol. 205; p. 1042.
Telephone signaling apparatus. D. D. Wright. No. 1,108,305; Aug. 25; Gaz. vol. 205; p. 1093.
Telephone system. F. E. Summers. No. 1,106,592; Aug. 11; Gaz. vol. 205; p. 397.
Telephone system. E. E. Clement. No. 1,107,144; Aug. 11; Gaz. vol. 205; p. 587.
Telephone system. C. A. Simpson. No. 1,107,371; Aug. 18; Gaz. vol. 205; p. 715.
Telephone system. C. S. Winston. No. 1,108,482; Aug. 25; Gaz. vol. 205; p. 1153.
Telephone systems, Apparatus for metering conversations in automatic. G. Grabe. No. 1,107,290; Aug. 18; Gaz. vol. 205; p. 686.
Telephone-transmitter. L. and H. L. Bradley. No. 1,107,255; Aug. 18; Gaz. vol. 205; p. 675.
Temperature-regulator. R. A. Crew. No. 1,107,761; Aug. 18; Gaz. vol. 205; p. 855.
Templet, Lettering-. H. W. McAll. No. 1,105,810; Aug. 4; Gaz. vol. 205; p. 79.
Tenon-cutter. M. Bohlig. No. 1,107,483; Aug. 18; Gaz. vol. 205; p. 757.
Testing-machine. H. E. Kuhner. No. 1,107,619; Aug. 18; Gaz. vol. 205; p. 805.
Thermal device, Valved. W. H. McNutt. No. 1,108,459; Aug. 25; Gaz. vol. 205; p. 1144.
Thermometer, Recording-. W. L. Friedman. No. 1,105,898; Aug. 4; Gaz. vol. 205; p. 108.
Thermostat. F. Kuhn and F. E. Shailor. No. 1,107,316; Aug. 18; Gaz. vol. 205; p. 696.
Thermostatic regulation for heated rollers. G. S. Witham, Sr., and A. Roesch. No. 1,107,737; Aug. 18; Gaz. vol. 205; p. 847.
Thread-rolling machine. C. T. Brennan. No. 1,108,425; Aug. 25; Gaz. vol. 205; p. 1132.
Threads from a warp, Apparatus for successively separating single. M. Wenzel. No. 1,105,867; Aug. 4; Gaz. vol. 205; p. 98.
Threading device. C. F. Schultis. No. 1,108,798; Aug. 25; Gaz. vol. 205; p. 1260.
Thresling-machine feeding attachment. C. M. Conrardy. No. 1,107,266; Aug. 18; Gaz. vol. 205; p. 679.
Threshing-machine self-feeder. M. L. Heineke. No. 1,107,517; Aug. 18; Gaz. vol. 205; p. 768.
Throttle and spark governor. V. Link. No. 1,108,198; Aug. 25; Gaz. vol. 205; p. 1054.
Throw device, Variable-. F. A. Hart. No. 1,105,774; Aug. 4; Gaz. vol. 205; p. 66.
Ticket, Transportation-. F. Batt. No. 1,107,743; Aug. 18; Gaz. vol. 205; p. 849.
Tie: *See* Railway-tie; Railway-crossing tie; Scaffold-tie.
Tie-plates, Manufacturing. E. H. Bell. No. 1,106,770; Aug. 11; Gaz. vol. 205; p. 458.
Tile and brick forming and cutting table. L. Warstler and P. F. Loichot. No. 1,108,287; Aug. 25; Gaz. vol. 205; p. 1086.
Tile machine, Cement-. W. E. and H. E. Dunn. No. 1,106,086; Aug. 4; Gaz. vol. 205; p. 175.
Tile-making machine. C. M. Eberling. No. 1,106,088; Aug. 4; Gaz. vol. 205; p. 176.
Tile-making-machine frame. F. S. Hartwell and L. C. Sears. No. 1,107,940; Aug. 18; Gaz. vol. 205; p. 915.
Tile structure. F. Thomas. No. 1,106,168; Aug. 4; Gaz. vol. 205; p. 204.
Timber-dolly. E. G. Drain. No. 1,105,631; Aug. 4; Gaz. vol. 205; p. 15.
Time-checking machine. T. Montgomery. No. 1,106,958; Aug. 11; Gaz. vol. 205; p. 524.
Time-stop, Automatic. L. V. Maddox. No. 1,107,332; Aug. 18; Gaz. vol. 205; p. 701.
Time-switch. M. Chiavetta. No. 1,106,281; Aug. 4; Gaz. vol. 205; p. 239.

Timing mechanism. H. C. Nicholaus. No. 1,107,176; Aug. 11; Gaz. vol. 205; p. 599.
Timepiece escapement mechanism. F. H. Corthell. No. 1,107,410; Aug. 18; Gaz. vol. 205; p. 731.
Tire, Automobile-. C. F. Kernen. No. 1,107,672; Aug. 18; Gaz. vol. 205; p. 824.
Tire-boot. W. F. O'Neil. No. 1,108,389; Aug. 25; Gaz. vol. 205; p. 1121.
Tire compound. H. Santrock. No. 1,108,399; Aug. 25; Gaz. vol. 205; p. 1124.
Tire-core, Expansible collapsible. L. Greenwald. No. 1,106,506; Aug. 11; Gaz. vol. 205; p. 366.
Tire-filling, Resilient. S. M. Beery. No. 1,106,769; Aug. 11; Gaz. vol. 205; p. 458.
Tire-holder. H. Tuttle. No. 1,106,755; Aug. 11; Gaz. vol. 205; p. 453.
Tire-holder. R. A. Hruby. No. 1,108,843; Aug. 25; Gaz. vol. 205; p. 1277.
Tire-inflating device to a road-vehicle wheel, Means for attaching a. R. Barnfather. No. 1,108,827; Aug. 25; Gaz. vol. 205; p. 1271.
Tire, Pneumatic. J. Stungo. No. 1,106,748; Aug. 11; Gaz. vol. 205; p. 450.
Tire, Resilient. T. C. Papadopoulos. No. 1,106,238; Aug. 4; Gaz. vol. 205; p. 226.
Tire, Resilient. W. M. Heina. No. 1,106,302; Aug. 4; Gaz. vol. 205; p. 246.
Tire, Resilient vehicle-. L. P. Flock. No. 1,107,508; Aug. 18; Gaz. vol. 205; p. 765.
Tire, Rubber. P. J. Ernenwein. No. 1,106,701; Aug. 11; Gaz. vol. 205; p. 433.
Tire-shoe. T. W. Cooper. No. 1,105,880; Aug. 4; Gaz. vol. 205; p. 102.
Tire, Supplemental. L. Zeman. No. 1,108,653; Aug. 25; Gaz. vol. 205; p. 1212.
Tire-tool. A. Pass. No. 1,106,888; Aug. 11; Gaz. vol. 205; p. 499.
Tire, Truck-. H. V. Hollings. No. 1,106,812; Aug. 11; Gaz. vol. 205; p. 473.
Tire-trunk. D. D. Minehart. No. 1,107,692; Aug. 18; Gaz. vol. 205; p. 831.
Tire, Vehicle-. M. D. Rucker. No. 1,106,113; Aug. 4; Gaz. vol. 205; p. 185.
Tire, Vehicle wheel-. E. B. Brown. No. 1,105,958; Aug. 4; Gaz. vol. 205; p. 130.
Tire, Vehicle wheel-. M. Clark. No. 1,108,702; Aug. 25; Gaz. vol. 205; p. 1228.
Tire, Vehicle wheel-. M. Clark. No. 1,108,703; Aug. 25; Gaz. vol. 205; p. 1228.
Tire, Wheel-. G. W. Clayville and D. W. Davis. No. 1,108,704; Aug. 25; Gaz. vol. 205; p. 1229.
Tires, Valve for pneumatic. J. W. Taylor. No. 1,108,640; Aug. 25; Gaz. vol. 205; p. 1208.
Titanic-oxid concentrate and producing the same. A. J. Rossi and L. E. Barton. No. 1,106,406; Aug. 11; Gaz. vol. 205; p. 327.
Titanic oxid, Concentrating. A. J. Rossi and L. E. Barton. No. 1,106,407; Aug. 11; Gaz. vol. 205; p. 328.
Titanic oxid from substances containing it and iron oxid, Concentrating. A. J. Rossi and L. E. Barton. No. 1,106,408; Aug. 11; Gaz. vol. 205; p. 328.
Titanic oxid, Obtaining. A. J. Rossi and L. E. Barton. No. 1,106,409; Aug. 11; Gaz. vol. 205; p. 328.
Titanic oxid, Obtaining. A. J. Rossi and L. E. Barton. No. 1,106,410; Aug. 11; Gaz. vol. 205; p. 328.
Toast-turner. H. B. Copeman. No. 1,108,552; Aug. 25; Gaz. vol. 205; p. 1178.
Toast-turner. L. G. Copeman. No. 1,108,553; Aug. 25; Gaz. vol. 205; p. 1179.
Toaster. L. G. Copeman.. No. 1,108,554; Aug. 25; Gaz. vol. 205; p. 1179.
Tobacco, Carding. N. and A. Du Briel. No. 1,107,047; Aug. 11; Gaz. vol. 205; p. 552.
Tobacco-cutter. J. E. Arrants. No. 1,106,858; Aug. 11; Gaz. vol. 205; p. 489.
Tobacco-pipe. E. E. Slaght. No. 1,107,716; Aug. 18; Gaz. vol. 205; p. 839.
Tobacco-pipe. M. Neuman. No. 1,107,988; Aug. 18; Gaz. vol. 205; p. 932.
Tobacco-pipe. F. H. A. Moehlenbrock. No. 1,108,604; Aug. 25; Gaz. vol. 205; p. 1195.
Tobacco-stemming machine. L. H. Gerding. No. 1,107,056; Aug. 11; Gaz. vol. 205; p. 555.
Toggle and clip combination. J. F. Schoellkopf. No. 1,106,414; Aug. 11; Gaz. vol. 205; p. 330.
Toilet article. D. O. Miller. No. 1,107,977; Aug. 18; Gaz. vol. 205; p. 928.
Toilet-bracket. H. Weder, Sr., and C. H. Wolff. No. 1,108,043; Aug. 18; Gaz. vol. 205; p. 952.
Toilet device. G. E. Graham. No. 1,106,300; Aug. 4; Gaz. vol. 205; p. 245.
Tones, Production of half-. J. V. Ranck. No. 1,108,849; Aug. 25; Gaz. vol. 205; p. 1279.
Tongs, Adjustable. A. Beyer. No. 1,105,875; Aug. 4; Gaz. vol. 205; p. 101.
Tongs or forceps, Locking device for. H. Matte. No. 1,106,518; Aug. 11; Gaz. vol. 205; p. 370.
Tool. W. Albert. No. 1,106,857; Aug. 11; Gaz. vol. 205; p. 489.
Tool attachment. F. W. White. No. 1,106,264; Aug. 4; Gaz. vol. 205; p. 234.
Tool, Combination-. H. P. Farrington. No. 1,107,276; Aug. 18; Gaz. vol. 205; p. 682.
Tool-driver, Spiral. G. Plein. No. 1,107,701; Aug. 18; Gaz. vol. 205; p. 834.
Tool-handle connection. R. E. Alcorn. No. 1,105,599; Aug. 4; Gaz. vol. 205; p. 4.
Tool-holder. A. H. Stevens. No. 1,106,745; Aug. 11; Gaz. vol. 205; p. 449.
Tool-holder. J. H. Franz. No. 1,108,733; Aug. 25; Gaz. vol. 205; p. 1239.
Tool, Pneumatic. G. Briegel. No. 1,105,876; Aug. 4; Gaz. vol. 205; p. 101.
Tool, Pneumatic. O. W. Norberg. No. 1,107,179; Aug. 11; Gaz. vol. 205; p. 600.
Tooth, Artificial. W. N. Kidder. No. 1,108,449; Aug. 25; Gaz. vol. 205; p. 1140.
Top-plate-lifting device. G. E. Pickup. No. 1,108,228; Aug. 25; Gaz. vol. 205; p. 1064.
Torch, Blow-. J. W. Johnston. No. 1,108,436; Aug. 25; Gaz. vol. 205; p. 1136.
Torches, Appliance for hand-. J. A. Bowyer. No. 1,107,023; Aug. 11; Gaz. vol. 205; p. 544.
Torpedo, Automobile. F. M. Leavitt. No. 1,108,196; Aug. 25; Gaz. vol. 205; p. 1053.
Torpedo, Fiber-case railway-. F. Dutcher. No. 1,107,051; Aug. 11; Gaz. vol. 205; p. 553.
Torpedo, Railway signal-. F. Dutcher. No. 1,107,050; Aug. 11; Gaz. vol. 205; p. 553.
Tote-box. W. G. Avery. No. 1,107,014; Aug. 11; Gaz. vol. 205; p. 541.
Toy. F. H. Hall. No. 1,105,652; Aug. 4; Gaz. vol. 205; p. 23.
Toy. E. J. Larson. No. 1,106,878; Aug. 11; Gaz. vol. 205; p. 496.
Toy. H. E. Poehlman. No. 1,107,183; Aug. 11; Gaz. vol. 205; p. 601.
Toy. A. M. Bollinger. No. 1,107,885; Aug. 18; Gaz. vol. 205; p. 897.
Toy. J. R. Duncan. No. 1,108,725; Aug. 25; Gaz. vol. 205; p. 1236.
Toy bank. C. Whitney. No. 1,108,046; Aug. 18; Gaz. vol. 205; p. 953.
Toy car. F. E. Seal. No. 1,108,628; Aug. 25; Gaz. vol. 205; p. 1203.
Toy fly-swatter. J. H. Stanfield. No. 1,108,269; Aug. 25; Gaz. vol. 205; p. 1079.
Toy gun. A. W. Hamaker. No. 1,106,706; Aug. 11; Gaz. vol. 205; p. 435.
Toy puzzle. W. Ludlum, Jr. No. 1,106,049; Aug. 4; Gaz. vol. 205; p. 102.
Toy theater. C. Catrevas. No. 1,107,757; Aug. 18; Gaz. vol. 205; p. 854.
Traction-engine. O. C. Houghton. No. 1,106,046; Aug. 4; Gaz. vol. 205; p. 102.
Traction-engine. O. C. Houghton. No. 1,107,791; Aug. 18; Gaz. vol. 205; p. 866.
Traction-machine. C. L. Tolles. No. 1,106,595; Aug. 11; Gaz. vol. 205; p. 398.
Traction-wheel. J. Porteous. No. 1,106,841; Aug. 11; Gaz. vol. 205; p. 483.
Traction-wheel. J. Porteous. No. 1,106,842; Aug. 11; Gaz. vol. 205; p. 483.
Tractor. R. E. Olds. No. 1,105,686; Aug. 4; Gaz. vol. 205; p. 35.
Tractor. W. Strait. No. 1,105,862; Aug. 4; Gaz. vol. 205; p. 97.
Tractor-propelling mechanism. C. E. Morris. No. 1,107,825; Aug. 18; Gaz. vol. 205; p. 877.
Tractor-wheel. J. Beard. No. 1,106,182; Aug. 4; Gaz. vol. 205; p. 209.
Train controlling and stopping system. G. R. Guild. No. 1,106,092; Aug. 4; Gaz. vol. 205; p. 178.
Train-controlling mechanism. F. T. Jones. No. 1,108,584; Aug. 25; Gaz. vol. 205; p. 1189.
Transformer, Compound. W. J. Williams. No. 1,108,050; Aug. 18; Gaz. vol. 205; p. 955.
Transits, Grade attachments for. C. A. Scott. No. 1,105,930; Aug. 4; Gaz. vol. 205; p. 120.
Trap: *See* Animal-trap; Drain-pipe trap; Fish-trap; Fly-trap; Steam-trap.
Trap. W. F. Alderman. No. 1,108,657; Aug. 25; Gaz. vol. 205; p. 1213.
Trap. J. F. Draper and J. J. Taglauer. No. 1,108,724; Aug. 25; Gaz. vol. 205; p. 1236.
Trap. E. B. Arnold. No. 1,108,870; Aug. 25; Gaz. vol. 205; p. 1287.
Trap-mold. J. B. and A. Lukomski. No. 1,107,681; Aug. 18; Gaz. vol. 205; p. 827.
Tray. J. Jones. No. 1,107,799; Aug. 18; Gaz. vol. 205; p. 868.
Tree: *See* Shoe-tree.
Tree. H. A. Ballard. No. 1,106,438; Aug. 11; Gaz. vol. 205; p. 338.
Triangle, Carpenter's. J. Grundstrom. No. 1,106,205; Aug. 4; Gaz. vol. 205; p. 216.
Trimmer: *See* Grass-trimmer.
Trimming-machine. F. H. Perry. No. 1,108,225; Aug. 25; Gaz. vol. 205; p. 1063.
Trolley. W. M. Learnad. No. 1,108,105; Aug. 25; Gaz. vol. 205; p. 1053.
Trolley-crossing, Insulated. F. C. Hornstein. No. 1,105,662; Aug. 4; Gaz. vol. 204; p. 27.
Trolley-guard. J. Lawton. No. 1,106,823; Aug. 11; Gaz. vol. 205; p. 477.
Trolley-guard. R. L. Queen. No. 1,108,394; Aug. 25; Gaz. vol. 205; p. 1123.
Trolley-harp. E. J. McCarty. No. 1,107,818; Aug. 18; Gaz. vol. 205; p. 874.

Trolley-retriever. P. N. Van Epp. No. 1,107,465; Aug. 18; Gaz. vol. 205; p. 750.
Trolley system, Agricultural. E. W. Sanderson. No. 1,107,228; Aug. 11; Gaz. vol. 205; p. 617.
Trough: *See* Feed-trough.
Trousers. I. Scheinman. No. 1,106,587; Aug. 11; Gaz. vol. 205; p. 395.
Trousers. E. C. Rethorn. No. 1,107,236; Aug. 11; Gaz. vol. 205; p. 620.
Trousers appliance. M. V. Hammack. No. 1,107,300; Aug. 18; Gaz. vol. 205; p. 689.
Trousers press and stretcher, Portable. A. B. Cruickshank. No. 1,106,550; Aug. 11; Gaz. vol. 205; p. 381.
Trousers-stretcher. W. E. Doyle. No. 1,106,137; Aug. 4; Gaz. vol. 205; p. 194.
Truck attachment for cultivators, &c., Caster-wheel. J. A. Smethers. No. 1,106,742; Aug. 11; Gaz. vol. 205; p. 448.
Truck brake, hand-. C. E. Badger and F. G. Halladay. No. 1,106,913; Aug. 11; Gaz. vol. 205; p. 508.
Truck brake, Six-wheel-car-. C. T. Westlake. No. 1,107,637; Aug. 18; Gaz. vol. 205; p. 811.
Truck brake, Six-wheel-car-. C. T. Westlake. No. 1,107,638; Aug. 18; Gaz. vol. 205; p. 811.
Truck brake, Six-wheel-car-. C. T. Westlake. No. 1,107,639; Aug. 18; Gaz. vol. 205; p. 812.
Truck, Car-. G. G. Floyd. No. 1,105,807; Aug. 4; Gaz. vol. 205; p. 108.
Truck, Car-. J. T. Halsey. No. 1,106,331; Aug. 4; Gaz. vol. 205; p. 256.
Truck, Car-. W. H. Stevenson and G. Gibbs. No. 1,106,339; Aug. 4; Gaz. vol. 205; p. 259.
Truck, Car-. J. A. Brooks. No. 1,106,621; Aug. 11; Gaz. vol. 205; p. 407.
Truck, Car-. A. F. H. Head. No. 1,107,301; Aug. 18; Gaz. vol. 205; p. 690.
Truck, Car-. W. S. Adams. No. 1,108,110; Aug. 18; Gaz. vol. 205; p. 976.
Truck, Equalizing car-. C. E. Smith. No. 1,107,857; Aug. 18; Gaz. vol. 205; p. 888.
Truck, Grip-. J. G. Whiteside. No. 1,105,943; Aug. 4; Gaz. vol. 205; p. 125.
Truck, Hand-. A. E. Bradley. No. 1,108,548; Aug. 25; Gaz. vol. 205; p. 1177.
Truck, Self-propelled. G. M. Hoag. No. 1,106,217; Aug. 4; Gaz. vol. 205; p. 219.
Truck side frame and journal-box, Car-. S. P. Bush. No. 1,107,890; Aug. 18; Gaz. vol. 205; p. 899.
Truck, Spring-equalized. F. L. Barber and E. W. Webb. No. 1,106,027; Aug. 4; Gaz. vol. 205; p. 155.
Truck, Tongue-. L. J. Welsh. No. 1,107,001; Aug. 11; Gaz. vol. 205; p. 537.
Truck, Tongue-. P. Roerig. No. 1,108,790; Aug. 25; Gaz. vol. 205; p. 1257.
Trucks, &c., Extension-body for. G. B. Marx. No. 1,106,104; Aug. 4; Gaz. vol. 205; p. 182.
Trucks, Suspension-spring for car-. C. E. Barba. No. 1,106,025; Aug. 4; Gaz. vol. 205; p. 154.
Truing and the like, Machine for. H. G. Carlson. No. 1,106,079; Aug. 4; Gaz. vol. 205; p. 172.
Trunk. M. J. Peppard. No. 1,106,581; Aug. 11; Gaz. vol. 205; p. 392.
Trunk, Wardrobe-. G. H. Wheary. (Reissue.) No. 13,792; Aug. 25; Gaz. vol. 205; p. 1291.
Truss. H. D. O'Brien. No. 1,106,314; Aug. 4; Gaz. vol. 205; p. 251.
Truss, Animal-. H. A. Brown No. 1,106,277; Aug. 4; Gaz. vol. 205; p. 238.
Tub: *See* Laundry-tub.
Tube coupling, Listening-. H. A. Yerkes. No. 1,107,471; Aug. 18; Gaz. vol. 205; p. 753.
Tube-expander. W. J. Frey. No. 1,106,798; Aug. 11; Gaz. vol. 205; p. 467.
Tube of variable diameter. H. H. Buffum. No. 1,108,128; Aug. 25; Gaz. vol. 205; p. 1029.
Tubing, Apparatus for making welded. W. C. Frick. No. 1,105,764; Aug. 4; Gaz. vol. 205; p. 62.
Tubing, Flexible. W. A. Johnston. No. 1,105,795; Aug. 4; Gaz. vol. 205; p. 73.
Tubing, Welded. L. S. Lachman. No. 1,108,191; Aug. 25; Gaz. vol. 205; p. 1051.
Tubing-welding apparatus. W. C. Frick. No. 1,105,765; Aug. 4; Gaz. vol. 205; p. 63.
Tuck-folding attachment, Multiple-. H. Corrall. No. 1,106,787; Aug. 11; Gaz. vol. 205; p. 463.
Turbine. E. Anderson. No. 1,105,602; Aug. 4; Gaz. vol. 205; p. 4.
Turbine. E. Mühl. No. 1,105,992; Aug. 4; Gaz. vol. 205; p. 142.
Turbine. A. Weber. No. 1,108,041; Aug. 18; Gaz. vol. 205; p. 951.
Turbine. J. H. Corthésy. No. 1,108,831; Aug. 25; Gaz. vol. 205; p. 1272.
Turbine-drill, Pneumatic. R. A. Norling. No. 1,105,825; Aug. 4; Gaz. vol. 205; p. 83.
Turbine, Elastic-fluid. S. A. Moss. No. 1,105,820; Aug. 4; Gaz. vol. 205; p. 82.
Turbine, Elastic-fluid. C. G. Curtis and L. D. Lovekin. No. 1,106,407; Aug. 11; Gaz. vol. 205; p. 362.
Turbine, Multiple-stage. G. O. Gridley. No. 1,108,407; Aug. 25; Gaz. vol. 205; p. 1159.
Turbines, Rotor for elastic-fluid. W. Kieser. No. 1,107,238; Aug. 11; Gaz. vol. 205; p. 621.
Turnstile. S. R. Marks. No. 1,107,975; Aug. 18; Gaz. vol. 205; p. 928.
Turpentine-hack. J. T. Worcester. No. 1,108,651; Aug. 25; Gaz. vol. 205; p. 1211.
Twine-holder, Reversible. H. B. Rich. No. 1,108,622; Aug. 25; Gaz. vol. 205; p. 1202.
Twisting-machine. W. G. Staples. No. 1,106,899; Aug. 11; Gaz. vol. 205; p. 503.
Twisting-machine. G. A. Anderegg. No. 1,108,312; Aug. 25; Gaz. vol. 205; p. 1095.
Type-casting machines, Pump-actuating means for. S. E. Sperry. No. 1,108,804; Aug. 25; Gaz. vol. 205; p. 1262.
Type-holder receptacle. E. H. Frey. No. 1,106,553; Aug. 11; Gaz. vol. 205; p. 382.
Type or matrix. A. L. Margach. No. 1,105,676; Aug. 4; Gaz. vol. 205; p. 31.
Type-writer. W. J. Giel. No. 1,108,742; Aug. 25; Gaz. vol. 205; p. 1243.
Type-writer attachment. C. J. Swaim. No. 1,106,120; Aug. 4; Gaz. vol. 205; p. 188.
Type-writer attachment. A. D. Avery. No. 1,106,612; Aug. 11; Gaz. vol. 205; p. 404.
Type-writer operator, Automatic. J. McTammany. No. 1,106,397; Aug. 11; Gaz. vol. 205; p. 323.
Type-writer stand, Pedestal. C. A. and C. S. Leopold. No. 1,106,311; Aug. 4; Gaz. vol. 205; p. 250.
Type-writers, Paper-positioning device for. C. D. Palmer. No. 1,108,612; Aug. 25; Gaz. vol. 205; p. 1198.
Type-writing machine. E. B. Hess. No. 1,105,657; Aug. 4; Gaz. vol. 205; p. 25.
Type-writing machine. H. H. Steele. No. 1,106,420; Aug. 11; Gaz. vol. 205; p. 332.
Type-writing machine. E. E. Strong. No. 1,106,424; Aug. 11; Gaz. vol. 205; p. 333.
Type-writing machine. C. B. Yaw. No. 1,106,435; Aug. 11; Gaz. vol. 205; p. 337.
Type-writing machine. H. H. Steele. No. 1,106,744; Aug. 11; Gaz. vol. 205; p. 449.
Type-writing machine. A. W. Smith. No. 1,106,898; Aug. 11; Gaz. vol. 205; p. 503.
Type-writing machine. H. A. Carhart. No. 1,106,924; Aug. 11; Gaz. vol. 205; p. 512.
Type-writing machine. A. S. Dennis. No. 1,106,929; Aug. 11; Gaz. vol. 205; p. 514.
Type-writing machine. A. G. F. Kurowski. No. 1,106,950; Aug. 11; Gaz. vol. 205; p. 521.
Type-writing machine. J. A. B. Smith. No. 1,107,372; Aug. 18; Gaz. vol. 205; p. 716.
Type-writing machine. H. L. Fisher. No. 1,107,664; Aug. 18; Gaz. vol. 205; p. 821.
Type-writing machine. L. A. Wernery. No. 1,108,415; Aug. 25; Gaz. vol. 205; p. 1128.
Type-writing machine. R. S. Blair. No. 1,108,485; Aug. 25; Gaz. vol. 205; p. 1154.
Type-writing machine. B. C. Stickney. No. 1,108,805; Aug. 25; Gaz. vol. 205; p. 1262.
Type-writing machine. R. J. Fisher. (Reissue.) No. 13,790; Aug. 25; Gaz. vol. 205; p. 1288.
Type-writing machine, Shorthand. G. K. Anderson. No. 1,108,660; Aug. 25; Gaz. vol. 205; p. 1215.
Type-writing machine, Shorthand. G. K. Anderson. No. 1,108,661; Aug. 25; Gaz. vol. 205; p. 1215.
Typograph-mold. W. A. Reade. No. 1,106,112; Aug. 4; Gaz. vol. 205; p. 185.
Typographical composing-machine. J. Pearson. No. 1,105,692; Aug. 4; Gaz. vol. 205; p. 37.
Typographical distributing mechanism. J. Pearson. No. 1,105,691; Aug. 4; Gaz. vol. 205; p. 36.
Typographical line-casting machine. C. A. Albrecht. No. 1,107,399; Aug. 18; Gaz. vol. 205; p. 726.
Typographical-line-casting-machine mold. M. H. Whittaker and C. Holliwell. No. 1,107,392; Aug. 18; Gaz. vol. 205; p. 723.
Typographical line in a line-producing machine, Means for alining the pieces of a. B. Bloch. No. 1,105,612; Aug. 4; Gaz. vol. 205; p. 8.
Typographical machine. D. S. Kennedy. No. 1,105,667; Aug. 4; Gaz. vol. 205; p. 28.
Typographical machine. K. Röger. No. 1,105,702; Aug. 4; Gaz. vol. 205; p. 40.
Typographical machine. H. A. Armstrong. No. 1,106,610; Aug. 11; Gaz. vol. 205; p. 403.
Typographical machine. W. S. Baldwin. No. 1,106,613; Aug. 11; Gaz. vol. 205; p. 404.
Typographical machine. D. S. Kennedy. No. 1,106,715; Aug. 11; Gaz. vol. 205; p. 438.
Umbrella. C. A. Skalstad. No. 1,105,709; Aug. 4; Gaz. vol. 205; p. 44.
Umbrella. E. R. Drohan. No. 1,107,415; Aug. 18; Gaz. vol. 205; p. 733.
Umbrella. J. O. Ostman. No. 1,108,217; Aug. 25; Gaz. vol. 205; p. 1061.
Umbrella-case. J. Rose. No. 1,108,240; Aug. 25; Gaz. vol. 205; p. 1069.
Umbrella, Folding. J. Peterson. No. 1,107,835; Aug. 18; Gaz. vol. 205; p. 880.
Undergarment. I. Gitenstein. No. 1,105,901; Aug. 4; Gaz. vol. 205; p. 109.
Undergarment, Lady's. L. Mayer. No. 1,106,663; Aug. 11; Gaz. vol. 205; p. 421.
Undergarment, Union. M. F. Robischon. No. 1,105,701; Aug. 4; Gaz. vol. 205; p. 40.
Underwear. R. S. Cooper. No. 1,106,133; Aug. 4; Gaz. vol. 205; p. 193.
Union suit. W. Marlow. No. 1,105,677; Aug. 4; Gaz. vol. 205; p. 31.

Union suit. G. W. Kelly. No. 1,106,310; Aug. 4; Gaz. vol. 205; p. 250.
Universal joint. W. R. Fox. No. 1,108,567; Aug. 25; Gaz. vol. 205; p. 1183.
Universal joint and system of lubrication therefor. A. Winton and H. B. Anderson. No. 1,106,325; Aug. 4; Gaz. vol. 205; p. 255.
Vacuum apparatus, Therapeutical. C. E. Buck. No. 1,107,888; Aug. 18; Gaz. vol. 205; p. 898.
Vacuum-cleaner. A. B. Marshall. No. 1,106,231; Aug. 4; Gaz. vol. 205; p. 224.
Vacuum-cleaner. J. W. Fulper. No. 1,106,329; Aug. 4; Gaz. vol. 205; p. 256.
Vacuum cleaning and heating system. F. J. Matchette and R. Raddatz. No. 1,106,349; Aug. 4; Gaz. vol. 205; p. 263.
Vacuum cleaning apparatus, Suction-creating mechanism for. J. Schirra. No. 1,106,682; Aug. 11; Gaz. vol. 205; p. 427.
Vacuum-producer. E. A. Schenck. No. 1,108,247; Aug. 25; Gaz. vol. 205; p. 1071.
Vacuum-producing apparatus. F. A. Weimann. No. 1,108,644; Aug. 25; Gaz. vol. 205; p. 1209.
Vacuum renovating apparatus. J. H. Templin. No. 1,108,275; Aug. 25; Gaz. vol. 205; p. 1081.
Vacuum street-sweeper. E. K. Ward. No. 1,107,564; Aug. 18; Gaz. vol. 205; p. 785.
Valve. O. Schlemmer. No. 1,106,002; Aug. 4; Gaz. vol. 205; p. 146.
Valve. C. E. Thompson. No. 1,106,064; Aug. 4; Gaz. vol. 205; p. 167.
Valve. A. J. Callaghan. No. 1,106,488; Aug. 11; Gaz. vol. 205; p. 358.
Valve. S. Block. No. 1,107,022; Aug. 11; Gaz. vol. 205; p. 343.
Valve. F. M. Patterson. No. 1,107,342; Aug. 18; Gaz. vol. 205; p. 705.
Valve and fitting therefor, Steam-. W. M. Jamieson. No. 1,108,500; Aug. 25; Gaz. vol. 205; p. 1160.
Valve, Automatic shut-off. J. C. Taylor. No. 1,106,427; Aug. 11; Gaz. vol. 205; p. 334.
Valve, Automatic stop-. L. W. Cooper. No. 1,107,760; Aug. 18; Gaz. vol. 205; p. 855.
Valve-bag. A. M. Bates. No. 1,107,879; Aug. 18; Gaz. vol. 205; p. 895.
Valve, Control-. F. W. Jennings. No. 1,106,454; Aug. 11; Gaz. vol. 205; p. 345.
Valve device, Pressure-retaining-. T. A. Hedendahl. No. 1,108,170; Aug. 25; Gaz. vol. 205; p. 1043.
Valve device, Triple-. W. V. Turner. No. 1,107,380; Aug. 18; Gaz. vol. 205; p. 719.
Valve, Electropneumatic brake-. E. H. Dewson. No. 1,108,149; Aug. 25; Gaz. vol. 205; p. 1037.
Valve for cornets, Spit-. F. A. Snyder. No. 1,107,458; Aug. 18; Gaz. vol. 205; p. 748.
Valve for internal-combustion engines, Inlet-. W. Spacke. No. 1,108,266; Aug. 25; Gaz. vol. 205; p. 1078.
Valve for locomotives, Drifting-. F. J. Cole. No. 1,106,081; Aug. 4; Gaz. vol. 205; p. 173.
Valve for motors. E. J. Cook. No. 1,107,903; Aug. 18; Gaz. vol. 205; p. 902.
Valve, Gate-. H. M. Lofton. No. 1,106,723; Aug. 11; Gaz. vol. 205; p. 441.
Valve gear for gas-engines. W. H. Schoonmaker. No. 1,108,249; Aug. 25; Gaz. vol. 205; p. 1072.
Valve-gear, Reversible. J. H. Earl. No. 1,106,866; Aug. 11; Gaz. vol. 205; p. 492.
Valve, Hydraulic. H. Woods. No. 1,105,947; Aug. 4; Gaz. vol. 205; p. 126.
Valve, Hydraulic back-pressure. O. G. Haedike and R. D. Braden. No. 1,108,863; Aug. 25; Gaz. vol. 205; p. 1285.
Valve-insulation casing, Removable. F. W. Franke. No. 1,108,840; Aug. 25; Gaz. vol. 205; p. 1276.
Valve, Lock-controlled. A. W. Joynes. No. 1,107,800; Aug. 18; Gaz. vol. 205; p. 868.
Valve-locking mechanism. J. A. Schneider. No. 1,108,477; Aug. 25; Gaz. vol. 205; p. 1151.
Valve, Main pressure-. F. Wagner. No. 1,106,757; Aug. 11; Gaz. vol. 205; p. 453.
Valve mechanism. F. Samuelson. No. 1,106,895; Aug. 11; Gaz. vol. 205; p. 502.
Valve mechanism for hydraulic transmission. H. Lentz. No. 1,107,675; Aug. 18; Gaz. vol. 205; p. 825.
Valve mechanism, Seed-chute. I. D. Cantrell. No. 1,108,131; Aug. 25; Gaz. vol. 205; p. 1030.
Valve, Radiator vent-. W. B. Poindexter. No. 1,106,475; Aug. 11; Gaz. vol. 205; p. 354.
Valve-releaser. C. S. Sapp. No. 1,108,476; Aug. 25; Gaz. vol. 205; p. 1151.
Valve, Rotary. R. B. Ransom. No. 1,108,002; Aug. 18; Gaz. vol. 205; p. 938.
Valve, Safety-. F. R. Parker. No. 1,106,108; Aug. 4; Gaz. vol. 205; p. 184.
Valve, Slide-. H. W. Lundquist. No. 1,105,913; Aug. 4; Gaz. vol. 205; p. 114.
Valve structure for air-compressors and the like. J. W. Gardner. No. 1,107,284; Aug. 18; Gaz. vol. 205; p. 684.
Valve, Tank-. J. Malquist. No. 1,108,455; Aug. 25; Gaz. vol. 205; p. 1142.
Valve, Throttle-. W. A. Denehie. No. 1,106,633; Aug. 11; Gaz. vol. 205; p. 411.
Valve, Throttle-. J. C. Rohe. No. 1,108,239; Aug. 25; Gaz. vol. 205; p. 1068.
Valves, Device for producing alterations in the movements of. P. Kind. No. 1,107,963; Aug. 18; Gaz. vol. 205; p. 922.
Valves for water-jacketed explosion-engines. M. Wagner. No. 1,107,635; Aug. 18; Gaz. vol. 205; p. 810.
Vaporizer. R. F. Ensign. No. 1,108,727; Aug. 25; Gaz. vol. 205; p. 1237.
Vaporizer and carbureter. P. M. Freer. No. 1,106,935; Aug. 11; Gaz. vol. 205; p. 516.
Vaporizer, Gasolene-. F. Ittner. No. 1,106,452; Aug. 11; Gaz. vol. 205; p. 344.
Varnish-kiln. C. A. Cutler. No. 1,105,623; Aug. 4; Gaz. vol. 205; p. 12.
Vats, Series of holding-. W. J. Davis. No. 1,107,764; Aug. 18; Gaz. vol. 205; p. 856.
Vault. W. Rees. No. 1,108,105; Aug. 18; Gaz. vol. 205; p. 974.
Vault, Burial-. L. D. Powers. No. 1,106,889; Aug. 11; Gaz. vol. 205; p. 500.
Vault-cover. R. A. Norton. No. 1,105,826; Aug. 4; Gaz. vol. 205; p. 84.
Vegetable and mineral matter by heat, Treating. A. G. Waterhouse and J. H. Van Mater. No. 1,105,729; Aug. 4; Gaz. vol. 205; p. 51.
Vehicle. T. A. Klenke. No. 1,107,311; Aug. 18; Gaz. vol. 205; p. 694.
Vehicle. J. F. Appleby. No. 1,107,874; Aug. 18; Gaz. vol. 205; p. 894.
Vehicle. A. W. Olson. No. 1,108,216; Aug. 25; Gaz. vol. 205; p. 1060.
Vehicle attachment. R. Fidler and P. Napier. No. 1,106,445; Aug. 11; Gaz. vol. 205; p. 341.
Vehicle back-stop or brake. W. Siverd. No. 1,106,321; Aug. 4; Gaz. vol. 205; p. 253.
Vehicle-bed. T. R. Edmondson. No. 1,107,596; Aug. 18; Gaz. vol. 205; p. 797.
Vehicle-brake. W. Say. No. 1,108,794; Aug. 25; Gaz. vol. 205; p. 1258.
Vehicle-bumper. T. A. Hoover. No. 1,105,974; Aug. 4; Gaz. vol. 205; p. 136.
Vehicle cushioning device. J. H. Clune. No. 1,106,496; Aug. 11; Gaz. vol. 205; p. 362.
Vehicle driving-gear, Motor-. T. F. Evans. No. 1,105,640; Aug. 4; Gaz. vol. 205; p. 19.
Vehicle driving mechanism, Motor-. H. P. Rhodes. No. 1,108,474; Aug. 25; Gaz. vol. 205; p. 1150.
Vehicle gear-shifter, Motor-. H. A. Myers. No. 1,107,827; Aug. 18; Gaz. vol. 205; p. 877.
Vehicle-heater. W. H. Miller. No. 1,108,513; Aug. 25; Gaz. vol. 205; p. 1164.
Vehicle hoisting device, Motor-. F. A. Simonds. No. 1,106,684; Aug. 11; Gaz. vol. 205; p. 428.
Vehicle, Interchangeable motor-. J. H. Venners. No. 1,106,689; Aug. 11; Gaz. vol. 205; p. 430.
Vehicle, Motor-. E. P. Cowles. No. 1,107,042; Aug. 11; Gaz. vol. 205; p. 550.
Vehicle, Motor-driven. L. F. E. Vondrachek. No. 1,107,563; Aug. 18; Gaz. vol. 205; p. 785.
Vehicle mud-guard, Motor-. W. H. Holland. No. 1,107,949; Aug. 18; Gaz. vol. 205; p. 918.
Vehicle mud-guard, Motor and other road-. F. Rawlins. No. 1,106,159; Aug. 4; Gaz. vol. 205; p. 201.
Vehicle, Passenger-. R. T. Senter. No. 1,105,706; Aug. 4; Gaz. vol. 205; p. 42.
Vehicle rear signal. M. F. Walsh. No. 1,108,036; Aug. 18; Gaz. vol. 205; p. 950.
Vehicle-seat. G. F. Murphy. No. 1,105,822; Aug. 4; Gaz. vol. 205; p. 82.
Vehicle-seat. M. A. Gaugh. No. 1,107,778; Aug. 18; Gaz. vol. 205; p. 862.
Vehicle, Self-lubricating wheeled. W. D. Stockly. No. 1,108,807; Aug. 25; Gaz. vol. 205; p. 1263.
Vehicle signal, Motor-. O. W. Cowgill. No. 1,106,134; Aug. 4; Gaz. vol. 205; p. 193.
Vehicle-spring. A. H. Fox. No. 1,105,971; Aug. 4; Gaz. vol. 205; p. 135.
Vehicle-spring. C. A. Boreham. No. 1,108,424; Aug. 25; Gaz. vol. 205; p. 1131.
Vehicle-spring. M. J. Smith. No. 1,108,479; Aug. 25; Gaz. vol. 205; p. 1152.
Vehicle spring and shock-absorber. O. A. Victel. No. 1,105,726; Aug. 4; Gaz. vol. 205; p. 50.
Vehicle spring-wheel. C. G. Smith. No. 1,105,932; Aug. 4; Gaz. vol. 205; p. 121.
Vehicle spring-wheel. J. F. and H. E. Sipe. No. 1,106,008; Aug. 4; Gaz. vol. 205; p. 147.
Vehicle spring-wheel. J. F. and H. E. Sipe. No. 1,108,632; Aug. 25; Gaz. vol. 205; p. 1205.
Vehicle steering apparatus. P. Hansmann. No. 1,106,806; Aug. 11; Gaz. vol. 205; p. 470.
Vehicle steering-gear. H. Schumacher. No. 1,106,589; Aug. 11; Gaz. vol. 205; p. 395.
Vehicle suspension. B. Liebowitz. No. 1,105,805; Aug. 4; Gaz. vol. 205; p. 75.
Vehicle suspension-spring. E. Bugatti. No. 1,107,027; Aug. 11; Gaz. vol. 205; p. 545.
Vehicle-top. H. Cohen. No. 1,106,131; Aug. 4; Gaz. vol. 205; p. 192.
Vehicle-wheel. L. R. Nutting. No. 1,106,963; Aug. 11; Gaz. vol. 205; p. 526.
Vehicle-wheel. W. Minnick. No. 1,107,093; Aug. 11; Gaz. vol. 205; p. 568.
Vehicle-wheel. A. Moon. No. 1,107,982; Aug. 18; Gaz. vol. 205; p. 930.

Vehicle-wheel. A. Ortengren. No. 1,108,219; Aug. 25; Gaz. vol. 205; p. 1061.
Vehicle-wheel. I. Bird. No. 1,108,683; Aug. 25; Gaz. vol. 205; p. 1221.
Vehicles, Apparatus for preventing side slip of motor road-. E. J. Buckingham. No. 1,107,256; Aug. 18; Gaz. vol. 205; p. 675.
Vehicles, Framework of double-decked. L. Splingler. No. 1,108,634; Aug. 25; Gaz. vol. 205; p. 1206.
Vehicles, Pneumatic-cushion bolster for. J. M. Lewis. No. 1,108,768; Aug. 25; Gaz. vol. 205; p. 1250.
Vehicles, Rail-contact for. E. Jenol and J. Stevenson. No. 1,106,387; Aug. 11; Gaz. vol. 205; p. 320.
Velocipede. H. H. Robbins. No. 1,108,789; Aug. 25; Gaz. vol. 205; p. 1257.
Velocipede and cart, Combination. F. B. Wells. No. 1,105,731; Aug. 4; Gaz. vol. 205; p. 51.
Velocipede, Collapsible. F. Gutmann. No. 1,106,939; Aug. 11; Gaz. vol. 205; p. 517.
Velocipede, Railway-. F. Brady. No. 1,107,579; Aug. 18; Gaz. vol. 205; p. 790.
Vending-machine. L. L. McLane. No. 1,105,679; Aug. 4; Gaz. vol. 205; p. 32.
Vending-machine. N. J. Shamroy. No. 1,105,708; Aug. 4; Gaz. vol. 205; p. 43.
Vending-machine. A. W. Roovers. No. 1,106,848; Aug. 11; Gaz. vol. 205; p. 485.
Vending-machine. H. D. Deshler. No. 1,107,270; Aug. 18; Gaz. vol. 205; p. 680.
Vending-machine. J. L. Taylor. No. 1,107,462; Aug. 18; Gaz. vol. 205; p. 749.
Vending-machine. F. P. Dunn. No. 1,107,660; Aug. 18; Gaz. vol. 205; p. 820.
Vending-machine, Coin-operated. W. S. Glines. No. 1,108,164; Aug. 25; Gaz. vol. 205; p. 1042.
Veneer lath. G. P. Crumbaugh. No. 1,107,907; Aug. 18; Gaz. vol. 205; p. 903.
Ventilator: *See* Adjustable ventilator; Car-ventilator; Window-ventilator.
Ventilator. F. R. and C. J. Weber. No. 1,106,123; Aug. 4; Gaz. vol. 205; p. 189.
Vessel brake, Marine-. E. E. Koltko. No. 1,107,968; Aug. 18; Gaz. vol. 205; p. 925.
Vessel, Unit-cargo. F. A. Bailin and E. H. Dodge. No. 1,107,741; Aug. 18; Gaz. vol. 205; p. 848.
Vessels, Boat-lowering apparatus for. W. Harbinger. No. 1,106,094; Aug. 4; Gaz. vol. 205; p. 179.
Vessels, Cleaning tubular and other. T. Rigby and N. Testrup. No. 1,106,161; Aug. 4; Gaz. vol. 205; p. 201.
Violin and other strings, Device for shipping. E. R. Schmidt. No. 1,106,413; Aug. 11; Gaz. vol. 205; p. 329.
Vise, Bench-. C. Pekat. No. 1,106,056; Aug. 4; Gaz. vol. 205; p. 164.
Vise for machines of the linotype class. T. S. Homans. No. 1,108,758; Aug. 25; Gaz. vol. 205; p. 1247.
Vise, Pipe-. D. W. Reese. No. 1,108,519; Aug. 25; Gaz. vol. 205; p. 1166.
Vise, Saw-. A. A. Page. No. 1,106,401; Aug. 11; Gaz. vol. 205; p. 325.
Vise, Swivel-. V. E. and P. H. D. Walker. No. 1,106,602; Aug. 11; Gaz. vol. 205; p. 400.
Volume and pressure register for fluids. T. B. Wylie. No. 1,105,740; Aug. 4; Gaz. vol. 205; p. 54.
Voting-machine. C. C. Abbott. No. 1,105,598; Aug. 4; Gaz. vol. 205; p. 3.
Voting-machine. J. McTammany. No. 1,108,384; Aug. 25; Gaz. vol. 205; p. 1119.
Voting-machine. W. H. Dana. No. 1,108,491; Aug. 25; Gaz. vol. 205; p. 1157.
Voting-machine voting mechanism. C. C. Abbott. No. 1,105,597; Aug. 4; Gaz. vol. 205; p. 3.
Votive-offering stand. G. B. Bohne. No. 1,108,062; Aug. 18; Gaz. vol. 205; p. 959.
Vulcanizer. M. W. Olson. No. 1,107,441; Aug. 18; Gaz. vol. 205; p. 742.
Wagon. H. C. Fiege. No. 1,106,139; Aug. 4; Gaz. vol. 205; p. 194.
Wagon. E. C. F. Becker. No. 1,106,358; Aug. 11; Gaz. vol. 205; p. 311.
Wagon. D. T. Seale. No. 1,107,118; Aug. 11; Gaz. vol. 205; p. 575.
Wagon. C. M. Haynes. No. 1,108,169; Aug. 25; Gaz. vol. 205; p. 1043.
Wagon-body. C. G. Streich. No. 1,106,524; Aug. 11; Gaz. vol. 205; p. 371.
Wagon-brake. G. M. Watt and J. E. Bryant. No. 1,108,533; Aug. 25; Gaz. vol. 205; p. 1171.
Wagon-brake, Automatic. C. O. Silver. No. 1,106,247; Aug. 4; Gaz. vol. 205; p. 229.
Wagon, Dump-. H. Pezzetti. No. 1,106,675; Aug. 11; Gaz. vol. 205; p. 425.
Wagon dump, Cut-under-. C. C. Crabb. No. 1,108,142; Aug. 25; Gaz. vol. 205; p. 1035.
Wagon or analogous container, Dumping-. C. G. Streich. No. 1,106,523; Aug. 11; Gaz. vol. 205; p. 371.
Wagon, Traveling-. J. Patterson. No. 1,108,614; Aug. 25; Gaz. vol. 205; p. 1199.
Waists, blouses, and corsets, Closing contrivance for ladies'. K. Bergner. No. 1,106,359; Aug. 11; Gaz. vol. 205; p. 311.
Walk-cleaner. H. M. Bodine. No. 1,106,620; Aug. 11; Gaz. vol. 205; p. 407.
Wall construction. H. G. Robbins. No. 1,106,584; Aug. 11; Gaz. vol. 205; p. 394.
Wall-coverings and similar purposes, Making plates for. E. Gersabeck. No. 1,107,286; Aug. 18; Gaz. vol. 205; p. 685.
Wall-fixture, Anchored. L. R. Zifferer. No. 1,106,909; Aug. 11; Gaz. vol. 205; p. 507.
Wall-mold. C. H. Harris. No. 1,108,073; Aug. 18; Gaz. vol. 205; p. 962.
Wall-socket. J. E. Ogden. No. 1,107,544; Aug. 18; Gaz. vol. 205; p. 777.
Washboard. L. Kalina. No. 1,107,168; Aug. 11; Gaz. vol. 205; p. 597.
Washer: *See* Clothes-washer.
Washing-cylinder. W. Bartholomew. No. 1,108,671; Aug. 25; Gaz. vol. 205; p. 1218.
Washing-machine. S. R. Roberts. No. 1,105,699; Aug. 4; Gaz. vol. 205; p. 40.
Washing-machine. R. E. Campbell. No. 1,107,653; Aug. 18; Gaz. vol. 205; p. 817.
Washing-machine. W. D. Whitney. No. 1,108,047; Aug. 18; Gaz. vol. 205; p. 954.
Washing-machine and gear. W. H. Voss. No. 1,108,531; Aug. 25; Gaz. vol. 205; p. 1170.
Washing-machine gearing. L. Thomas. No. 1,107,727; Aug. 18; Gaz. vol. 205; p. 843.
Washing-machine-operating device. H. C. Modlin. No. 1,106,827; Aug. 11; Gaz. vol. 205; p. 478.
Washstand. G. H. Bryant. No. 1,105,960; Aug. 4; Gaz. vol. 205; p. 130.
Washtub, Portable. E. M. J. Stubbs. No. 1,107,862; Aug. 18; Gaz. vol. 205; p. 890.
Wasteway. R. M. Wall. No. 1,106,015; Aug. 4; Gaz. vol. 205; p. 150.
Watch-charm. J. J. Holsen. No. 1,107,950; Aug. 18; Gaz. vol. 205; p. 918.
Watch, Stem-winding and stem-setting. W. E. Porter. No. 1,107,839; Aug. 18; Gaz. vol. 205; p. 882.
Water, Clarifying and sterilizing. C. Massatsch. No. 1,107,199; Aug. 11; Gaz. vol. 205; p. 607.
Water-closet. E. G. Watrous. No. 1,106,122; Aug. 4; Gaz. vol. 205; p. 189.
Water-closet. W. R. Mitchell. No. 1,107,094; Aug. 11; Gaz. vol. 205; p. 568.
Water-closet. J. H. Shortt. No. 1,108,799; Aug. 25; Gaz. vol. 205; p. 1260.
Water-distribution system. L. W. Chubb. No. 1,108,550; Aug. 25; Gaz. vol. 205; p. 1177.
Water-gage safety device. P. J. Connors. No. 1,107,902; Aug. 18; Gaz. vol. 205; p. 902.
Water-heater. J. McCloskey. No. 1,105,678; Aug. 4; Gaz. vol. 205; p. 31.
Water-heater. G. H. Klumph and J. E. Houston. No. 1,107,313; Aug. 18; Gaz. vol. 205; p. 695.
Water-heater. M. V. Fitzwater. No. 1,107,507; Aug. 18; Gaz. vol. 205; p. 765.
Water-heater. L. D. Lovekin. No. 1,107,534; Aug. 18; Gaz. vol. 205; p. 773.
Water-heater. C. L. Post. No. 1,107,548; Aug. 18; Gaz. vol. 205; p. 778.
Water-heater. J. B. Mowry. No. 1,108,607; Aug. 25; Gaz. vol. 205; p. 1196.
Water-heater construction. F. L. O. Wadsworth. No. 1,108,284; Aug. 25; Gaz. vol. 205; p. 1085.
Water-heater, Gas instantaneous. J. Shepheard. No. 1,107,370; Aug. 18; Gaz. vol. 205; p. 715.
Water-heaters, Water and gas controller for. E. T. Betker. No. 1,108,321; Aug. 25; Gaz. vol. 205; p. 1098.
Water, Softening. G. E. Bailey and B. A. Hatch. No. 1,108,544; Aug. 25; Gaz. vol. 205; p. 1175.
Water-supply systems, Device for preventing backflow in. W. E. Miller. No. 1,105,991; Aug. 4; Gaz. vol. 205; p. 141.
Water-tube boiler. D. S. Jacobus. No. 1,106,453; Aug. 11; Gaz. vol. 205; p. 345.
Water-wheel. J. H. Schneider. No. 1,105,846; Aug. 4; Gaz. vol. 205; p. 91.
Watering device. G. C. Eaton. No. 1,108,151; Aug. 25; Gaz. vol. 205; p. 1038.
Waterproofing porous surfaces, Composition of matter for. W. L. O'Kelly. No. 1,107,545; Aug. 18; Gaz. vol. 205; p. 777.
Waterways, Lock construction for. G. Guttenbrunner. No. 1,107,933; Aug. 18; Gaz. vol. 205; p. 912.
Wax, Bleaching bees-. G. F. Jeblicka. No. 1,106,221; Aug. 4; Gaz. vol. 205; p. 221.
Weaving apparatus, Vaporizing device for. L. E. A. Gillier. No. 1,106,299; Aug. 4; Gaz. vol. 205; p. 245.
Web-drying machine, Electric. J. C. Sherman. No. 1,106,683; Aug. 11; Gaz. vol. 205; p. 428.
Web-feeding mechanism. W. G. Kirchhoff. No. 1,108,501; Aug. 25; Gaz. vol. 205; p. 1160.
Web-folding apparatus. J. E. Wildman. No. 1,108,295; Aug. 25; Gaz. vol. 205; p. 1089.
Weed-killing device. J. Lytle, Jr. No. 1,105,674; Aug. 4; Gaz. vol. 205; p. 30.
Weed-puller. D. E. Nuttall. No. 1,105,684; Aug. 4; Gaz. vol. 205; p. 34.
Weeding device. J. B. Ruddy. No. 1,107,705; Aug. 18; Gaz. vol. 205; p. 836.
Weigher and measurer, Grain. A. B. Christianson. No. 1,105,618; Aug. 4; Gaz. vol. 205; p. 10.
Weighing-machine. A. C. Dodge. No. 1,105,891; Aug. 4; Gaz. vol. 205; p. 106.
Weighing-machine. H. G. Dewey. No. 1,107,592; Aug. 18; Gaz. vol. 205; p. 795.

Weighing machine, Pressure-. A. P. Phillips. No. 1,106,839; Aug. 11; Gaz. vol. 205; p. 482.
Welding copper. H. Suzuki. No. 1,107,865; Aug. 18; Gaz. vol. 205; p. 891.
Welding metals. J. C. Lincoln. No. 1,108,592; Aug. 25; Gaz. vol. 205; p. 1192.
Welding-tip. P. Pleiss. No. 1,107,346; Aug. 18; Gaz. vol. 205; p. 707.
Welding-tip. E. G. Luening. No. 1,107,429; Aug. 18; Gaz. vol. 205; p. 738.
Well capping device, Oil and gas. F. S. Gail. No. 1,106,295; Aug. 4; Gaz. vol. 205; p. 244.
Well-drilling machine. G. W. Slaughter, Jr. No. 1,106,322; Aug. 4; Gaz. vol. 205; p. 254.
Well-packer. C. S. Cameron. No. 1,108,333; Aug. 25; Gaz. vol. 205; p. 1101.
Well swab, Oil-. H. M. Anderson. No. 1,108,313; Aug. 25; Gaz. vol. 205; p. 1095.
Wells, Restoring and increasing the production of oil and gas. I. L. Dunn. No. 1,107,416; Aug. 18; Gaz. vol. 205; p. 734.
Wells, Tube-gripping apparatus for boring. H. C. Brewster. No. 1,107,025; Aug. 11; Gaz. vol. 205; p. 544.
Wheel: *See* Calf-wheel; Car-wheel; Elastic wheel; Grinding and polishing wheel; Irrigation-coil wheel; Master-wheel; Metal wheel; Platform-wheel; Resilient wheel; Road-wheel; Spring-wheel; Spring vehicle-wheel; Traction-wheel; Tractor-wheel; Vehicle-wheel; Vehicle spring-wheel; Water-wheel.
Wheel. A. J. Harlan, Sr. No. 1,108,749; Aug. 25; Gaz. vol. 205; p. 1244.
Wheel-chock, Vehicle. H. D. Ellis. No. 1,108,156; Aug. 25; Gaz. vol. 205; p. 1039.
Wheel-flange lubricator. J. H. Miner. No. 1,107,978; Aug. 18; Gaz. vol. 205; p. 929.
Wheel-forging mill. J. Slattery. No. 1,107,717; Aug. 18; Gaz. vol. 205; p. 840.
Wheel-guard. G. W. Halley. No. 1,106,209; Aug. 4; Gaz. vol. 205; p. 217.
Wheel-rim. F. B. Bosworth. No. 1,108,546; Aug. 25; Gaz. vol. 205; p. 1176.
Wheel-rim construction. H. M. Snyder. No. 1,107,719; Aug. 18; Gaz. vol. 205; p. 840.
Wheel-rim construction. H. M. Snyder. No. 1,107,720; Aug. 18; Gaz. vol. 205; p. 840.
Wheel-rim, Sectional. B. W. Miller. No. 1,107,092; Aug. 11; Gaz. vol. 205; p. 567.
Wheels, and resulting wheel, Making. W. C. and J. W. Johnson. No. 1,108,096; Aug. 18; Gaz. vol. 205; p. 971.
Wheels, Removable rim attachment for vehicle-. M. Küller. No. 1,107,080; Aug. 11; Gaz. vol. 205; p. 563.
Wheelwright apparatus. A. G. Slocum. No. 1,108,803; Aug. 25; Gaz. vol. 205; p. 1262.
Whip-lock. S. C. Kearney. No. 1,107,617; Aug. 18; Gaz. vol. 205; p. 804.
Whipping device. S. Kvam. No. 1,108,587; Aug. 25; Gaz. vol. 205; p. 1191.
Wind-shield-adjusting device. W. F. Roper. No. 1,106,892; Aug. 11; Gaz. vol. 205; p. 500.
Wind-shield joint. N. Sturdevant. No. 1,107,863; Aug. 18; Gaz. vol. 205; p. 890.
Wind-shield-ventilating device. G. M. Scott. No. 1,106,849; Aug. 11; Gaz. vol. 205; p. 486.
Winding-indicator. J. Mazer. No. 1,108,508; Aug. 25; Gaz. vol. 205; p. 1162.
Winding-indicator. J. Mazer. No. 1,108,509; Aug. 25; Gaz. vol. 205; p. 1163.
Winding-indicator. J. Mazer. No. 1,108,510; Aug. 25; Gaz. vol. 205; p. 1163.
Window. J. B. Pearson. No. 1,107,102; Aug. 11; Gaz. vol. 205; p. 570.
Window. C. T. Salvesen. No. 1,107,450; Aug. 18; Gaz. vol. 205; p. 745.
Window-cleaning device. S. S. Sigel and A. W. Johnson. No. 1,108,258; Aug. 25; Gaz. vol. 205; p. 1075.
Window drapery-support. G. Horváth. No. 1,106,308; Aug. 4; Gaz. vol. 205; p. 249.
Window-frame. M. Evenson. No. 1,107,504; Aug. 18; Gaz. vol. 205; p. 764.
Window-screen. P. Vincent. No. 1,107,385; Aug. 18; Gaz. vol. 205; p. 721.
Window-shield. F. Parker. No. 1,108,613; Aug. 25; Gaz. vol. 205; p. 1199.
Window, Vehicle-. J. T. Allmand. No. 1,107,189; Aug. 11; Gaz. vol. 205; p. 603.
Window-ventilator. G. K. and A. A. Larson. No. 1,108,505; Aug. 25; Gaz. vol. 205; p. 1161.
Window ventilator, Storm-. A. Hoersch. No. 1,105,784; Aug. 4; Gaz. vol. 205; p. 69.
Windows, Adjustable holder for casement-. L. Bukowski. No. 1,108,549; Aug. 25; Gaz. vol. 205; p. 1177.
Wines, liqueurs, and other vegetable extracts, Clarifying, aging, and refining. E. Monti. No. 1,108,777; Aug. 25; Gaz. vol. 205; p. 1253.
Wire-clamp. L. Mallory. No. 1,107,684; Aug. 18; Gaz. vol. 205; p. 828.
Wire-connector. G. S. Wills. No. 1,106,855; Aug. 11; Gaz. vol. 205; p. 488.
Wire fabric. F. P. Dooley. No. 1,106,551; Aug. 11; Gaz. vol. 205; p. 381.
Wire-reel. W. E. Eichhoff. No. 1,108,726; Aug. 25; Gaz. vol. 205; p. 1237.
Wire-rope-transmission carriage. A. Opsal. No. 1,106,471; Aug. 11; Gaz. vol. 205; p. 352.
Wire-stretcher. J. W. Coleman and A. Gorden. No. 1,107,039; Aug. 11; Gaz. vol. 205; p. 549.
Wire-stretcher and fence mender and tightener. F. N. Renfrow. No. 1,108,397; Aug. 25; Gaz. vol. 205; p. 1124.
Wireless apparatus. P. L. Jensen. No. 1,106,874; Aug. 11; Gaz. vol. 205; p. 494.
Wireless apparatus. P. L. Jensen and E. S. Pridham. No. 1,106,875; Aug. 11; Gaz. vol. 205; p. 495.
Wood-treating machine. C. F. Leatherbee. No. 1,107,623; Aug. 18; Gaz. vol. 205; p. 806.
Woodworking-machine. C. C. Sheeley and F. J. Gruenewald. No. 1,108,854; Aug. 25; Gaz. vol. 205; p. 1281.
Work-support. L. A. Casgrain. No. 1,108,133; Aug. 25; Gaz. vol. 205; p. 1031.
Wrapping-machine. A. J. Roedel. No. 1,107,360; Aug. 18; Gaz. vol. 205; p. 711.
Wrench: *See* Adjustable wrench; Pipe-wrench; Quick-acting wrench; Ratchet-wrench.
Wrench. J. Valind. No. 1,105,725; Aug. 4; Gaz. vol. 205; p. 49.
Wrench. E. B. Waddell, Jr. No. 1,106,262; Aug. 4; Gaz. vol. 205; p. 234.
Wrench. H. Munson and B. Hazeltine. No. 1,106,672; Aug. 11; Gaz. vol. 205; p. 424.
Wrench. C. A. Tornberg. No. 1,106,752; Aug. 11; Gaz. vol. 205; p. 452.
Wrench. R. Drummond. No. 1,106,932; Aug. 11; Gaz. vol. 205; p. 515.
Wrench. T. Caldwell. No. 1,107,029; Aug. 11; Gaz. vol. 205; p. 546.
Wrench. S. N. Hall. No. 1,107,936; Aug. 18; Gaz. vol. 205; p. 913.
Wrench. A. Pekkala. No. 1,107,996; Aug. 18; Gaz. vol. 205; p. 935.
Wrench. J. Sokolov. No. 1,108,264; Aug. 25; Gaz. vol. 205; p. 1077.
Wrench. K. Leissle and F. Bach. No. 1,108,591; Aug. 25; Gaz. vol. 205; p. 1192.
Wrench. O. A. Mentzer. No. 1,108,602; Aug. 25; Gaz. vol. 205; p. 1195.
Wrench bit, Adjustable socket-. V. D. Earl and F. E. Mangold. No. 1,107,769; Aug. 18; Gaz. vol. 205; p. 858.
Wringer: *See* Clothes-wringer.
Writing-pad holder and cover. C. L. Rockwell. No. 1,106,891; Aug. 11; Gaz. vol. 205; p. 500.
Yoke, Neck-. G. P. Smaagaard. No. 1,106,417; Aug. 11; Gaz. vol. 205; p. 331.
Zinc-blende and other metalliferous constituents from ore concentrates and slimes by flotation or granulation, Separation of. E. J. Horwood. No. 1,108,440; Aug. 25; Gaz. vol. 205; p. 1137.

ALPHABETICAL LIST OF DESIGNS.

Anvil, Bench-vise. C. E. Shields. No. 46,268; Aug. 11; Gaz. vol. 205; p. 631.
Article of manufacture. J. E. Marsden. Nos. 46,258–9; Aug. 11; Gaz. vol. 205; pp. 628–9.
Automobile-horn. E. Rubes. No. 46,294; Aug. 18; Gaz. vol. 205; p. 984.
Badge or similar article. R. W. Ritters. No. 46,292; Aug. 18; Gaz. vol. 205; p. 983.
Baker's peel. G. J. Kraushaar. No. 46,313; Aug. 25; Gaz. vol. 205; p. 1293.
Bank, Savings-. V. P. Cramer. No. 46,201; Aug. 4; Gaz. vol. 205; p. 268.
Bed-trimming. J. J. Nash. Nos. 46,317–18; Aug. 25; Gaz. vol. 205; p. 1294.
Bedstead corner-post, Metal-. W. Lies. No. 46,257; Aug. 11; Gaz. vol. 205; p. 628.
Bell-guide-post souvenir. A. S. C. and H. R. P. Forbes. No. 46,278; Aug. 18; Gaz. vol. 205; p. 980.
Border-section. G. A. Henckel. No. 42,209; Aug. 4; Gaz. vol. 205; p. 270.
Bottle. H. E. Pottelger. No. 46,265; Aug. 11; Gaz. 205; p. 630.
Bottle. D. E. Williamson. No. 46,271; Aug. 11; Gaz. vol. 205; p. 631.
Bottle-cap remover. N. L. Jacobus. No. 46,218; Aug. 4; Gaz. vol. 205; p. 271.
Bottle, Glass. T. Mackenzie. No. 46,285; Aug. 18; Gaz. vol. 205; p. 982.
Bottle-opener. J. L. Sommer. No. 46,298; Aug. 18; Gaz. vol. 205; p. 984.
Bottle-opener and pick. T. Harding. No. 46,311; Aug. 25; Gaz. vol. 205; p. 1293.
Bowl or similar article. A. J. Sanford. No. 46,321; Aug. 25; Gaz. vol. 205; p. 1295.
Bracelet. D. R. Dix. Nos. 46,203–6; Aug. 4; Gaz. vol. 205; p. 269.
Broiler-griddle. S. Biswanger. No. 46,309; Aug. 25; Gaz. vol. 205; p. 1292.
Brush handle, Shaving-. J. C. Morgan. No. 46,316; Aug. 25; Gaz. vol. 205; p. 1294.
Button. J. N. Whitehouse. Nos. 46,300–1; Aug. 18; Gaz. vol. 205; p. 985.
Button protector, Cuff-. R. B. Rogers. No. 46,237; Aug. 4; Gaz. vol. 205; p. 275.
Buttoner, Shoe-. F. J. Reynolds and D. Lenahan. No. 46,266; Aug. 11; Gaz. vol. 205; p. 630.
Cabinet, Jeweler's. E. F. Ashbrook. No. 46,307; Aug. 25; Gaz. vol. 205; p. 1292.
Calculating-machine casing. C. A. Mellicke. No. 46,261; Aug. 11; Gaz. vol. 205; p. 629.
Candlestick. A. J. Sanford. No. 46,319; Aug. 25; Gaz. vol. 205; p. 1294.
Carbid-container, Multiple. A. L. Hansen. No. 46,280; Aug. 18; Gaz. vol. 205; p. 981.
Casket handle, Burial-. C. Blesch. No. 46,242; Aug. 11; Gaz. vol. 205; p. 625.
Christmas-tree fence. M. L. Beistle. No. 46,308; Aug. 25; Gaz. vol. 205; p. 1292.
Clothes-line-fastening device. E. W. Steimer. No. 46,326; Aug. 25; Gaz. vol. 205; p. 1296.
Coat, Rain-. N. M. Bush. No. 46,244; Aug. 11; Gaz. vol. 205; p. 625.
Curtain fabric, Car-. C. J. Cronk. Nos. 46,274–5; Aug. 18; Gaz. vol. 205; p. 979.
Drawer-section. C. C. Curtiss. No. 46,247; Aug. 11; Gaz. vol. 205; p. 626.
Dynamo-casing. V. G. Apple. No. 46,306; Aug. 25; Gaz. vol. 205; p. 1292.
Emblem for a religious society. H. F. Erichsen. No. 46,207; Aug. 4; Gaz. vol. 205; p. 269.
Faucet. R. G. Savill. No. 46,238; Aug. 4; Gaz. vol. 205; p. 275.
Feeder. A. B. Moe. No. 46,288; Aug. 18; Gaz. vol. 205; p. 982.
Flooring, Tile. J. Hasbrouck. No. 46,251; Aug. 11; Gaz. vol. 205; p. 627.
Furniture, Sectional store. C. C. Curtiss. No. 46,248; Aug. 11; Gaz. vol. 205; p. 626.
Goblet or similar article. A. J. Sanford. No. 46,322; Aug. 25; Gaz. vol. 205; p. 1295.
Grip or bag, Traveler's. H. L. Kennedy. No. 46,312; Aug. 25; Gaz. vol. 205; p. 1293.
Insulator. C. L. Bundy. No. 46,243; Aug. 11; Gaz. vol. 205; p. 625.
Key-wrench, bottle-cap opener, and key-ring. W. T. Stewart. No. 46,269; Aug. 11; Gaz. vol. 205; p. 631.
Lamp. R. M. Newbold. No. 46,264; Aug. 11; Gaz. vol. 205; p. 630.
Lamp. W. C. Anklam. No. 46,272; Aug. 18; Gaz. vol. 205; p. 979.
Lamp, Electric hand-. J. H. Goehst. No. 46,279; Aug. 18; Gaz. vol. 205; p. 980.
Lamp, Tail-. R. H. Welles. No. 46,270; Aug. 11; Gaz. vol. 205; p. 631.
Latch-casing. L. A. Young. No. 46,305; Aug. 18; Gaz. vol. 205; p. 986.
Lathering implement. J. L. Erskine. No. 46,208; Aug. 4; Gaz. vol. 205; p. 270.
Light-reflecting-bowl clamp. C. E. Jones. No. 46,220; Aug. 4; Gaz. vol. 205; p. 272.
Light-reflecting-bowl hanger. C. E. Jones. No. 46,219; Aug. 4; Gaz. vol. 205; p. 271.
Light-shade. N. Kopp and R. E. Ewing. No. 46,253; Aug. 11; Gaz. vol. 205; p. 627.
Lighting-bracket. C. E. Jones. No. 46,221; Aug. 4; Gaz. vol. 205; p. 272.
Lighting-fixture. G. M. Beardslee and I. L. French. No. 46,196; Aug. 4; Gaz. vol. 205; p. 267.
Lighting-fixture. I. Mumma. No. 46,289; Aug. 18; Gaz. vol. 205; p. 983.
Linoleum, oil-cloth, or floor-covering. C. F. Humphreys. Nos. 46,210–17; Aug. 4; Gaz. vol. 205; pp. 270–1.
Loving-cup. H. De Vries. No. 46,249; Aug. 11; Gaz. vol. 205; p. 626.
Massage device, Hand-operated. B. L. Williams. No. 46,240; Aug. 4; Gaz. vol. 205; p. 275.
Medal. C. Kunze. No. 46,254; Aug. 11; Gaz. vol. 205; p. 628.
Medal. R. C. Thompson. No. 46,299; Aug. 18; Gaz. vol. 205; p. 985.
Mirror-support. J. Salomon and H. Shaw. No. 46,295; Aug. 18; Gaz. vol. 205; p. 984.
Newspaper-holder. L. W. Levy. No. 46,314; Aug. 25; Gaz. vol. 205; p. 1293.
Parasol. E. J. Doty. No. 46,250; Aug. 11; Gaz. vol. 205; p. 627.
Pillow-cover. S. Tanaka. No. 46,329; Aug. 25; Gaz. vol. 205; p. 1296.
Printing-wheel hand-stamp, Framework or head of a. C. W. Everson. No. 46,276; Aug. 18; Gaz. vol. 205; p. 980.
Pump casing, Power-. H. W. Kimes. No. 46,222; Aug. 4; Gaz. vol. 205; p. 272.
Roof snow-guard. A. Danzer. No. 46,202; Aug. 4; Gaz. vol. 205; p. 269.
Rope-clamp. R. E. McKee. No. 46,287; Aug. 18; Gaz. vol. 205; p. 982.
Rug. A. Petzold. Nos. 46,223–36; Aug. 4; Gaz. vol. 205; pp. 272–5.
Sad-iron, Self-heating. G. Finn. No. 46,277; Aug. 18; Gaz. vol. 205; p. 980.
Sanitary trap. J. W. Bragger. No. 46,197; Aug. 4; Gaz. vol. 205; p. 267.
Scale-dial. G. E. Chatillon. No. 46,245; Aug. 11; Gaz. vol. 205; p. 626.
Shade fastener and curtain-pole bracket, Combination window-. A. N. Smith. No. 46,297; Aug. 18; Gaz. vol. 205; p. 984.
Shade, reflector, or similar article. O. A. Mygatt. Nos. 46,290–1; Aug. 18; Gaz. vol. 205; p. 983.
Slipper. M. E. Schenke. No. 46,323; Aug. 25; Gaz. vol. 205; p. 1295.
Spoon, fork, or similar article. H. Hillbom. No. 46,281; Aug. 18; Gaz. vol. 205; p. 981.
Spoon, fork, or similar article. S. Stohr. No. 46,328; Aug. 25; Gaz. vol. 205; p. 1296.
Spoons, forks, or similar articles, Handle for. W. Codman. No. 46,199; Aug. 4; Gaz. vol. 205; p. 268.
Spoons, forks, or similar articles, Handle for. T. B. Lashar. No. 46,255; Aug. 11; Gaz. vol. 205; p. 628.
Stocking. R. W. Scott. Nos. 46,324–5; Aug. 25; Gaz. vol. 205; pp. 1295–6.
Stove, Electric. R. A. Whitney. No. 46,239; Aug. 4; Gaz. vol. 205; p. 275.
Surgical basin. C. W. Meinecke. No. 46,262; Aug. 11; Gaz. vol. 205; p. 629.
Talking-machine motor-board. C. E. Woods. Nos. 46,303–4; Aug. 18; Gaz. vol. 205; p. 986.
Talking-machine tone-arm. C. E. Woods. No. 46,302; Aug. 18; Gaz. vol. 205; p. 985.
Telephone casing, Hand-. M. Setter. No. 46,267; Aug. 11; Gaz. vol. 205; p. 630.
Ticket, Hosiery-. J. W. Mettler. No. 46,315; Aug. 25; Gaz. vol. 205; p. 1293.
Tile or paving block. C. S. Mangene. No. 46,286; Aug. 18; Gaz. vol. 205; p. 982.
Tire-casing. J. H. Christian. No. 46,273; Aug. 18; Gaz. vol. 205; p. 979.
Tire, Vehicle wheel-. M. D. Kuhlke. Nos. 46,282–4; Aug. 18; Gaz. vol. 205; p. 981.

Tool. C. H. Blantz. No. 46,310; Aug. 25; Gaz. vol. 205; p. 1293.
Toy. E. A. Lahlere. No. 46,256; Aug. 11; Gaz. vol. 205; p. 628.
Toy candy-box. E. J. Rowland. No. 46,293; Aug. 18; Gaz. vol. 205; p. 983.
Toy figure. E. Allison. No. 46,241; Aug. 11; Gaz. vol. 205; p. 625.
Tumbler. A. J. Sanford. No. 46,296; Aug. 18; Gaz. vol. 205; p. 984.
Tumbler or similar article. A. J. Sanford. No. 46,320; Aug. 25; Gaz. vol. 205; p. 1294.
Vehicle-body. J. S. Stephens. No. 46,327; Aug. 25; Gaz. vol. 205; p. 1296.
Vehicle front end, Motor-. E. J. Cook. No. 46,200; Aug. 4; Gaz. vol. 205; p. 268.
Water-bag. F. F. Brucker. No. 46,198; Aug. 4; Gaz. vol. 205; p. 268.
Water-heater body. H. S. Humphrey. No. 46,252; Aug. 11; Gaz. vol. 205; p. 627.
Wheels, Housing for hay-rack. L. R. Coty. No. 46,246; Aug. 11; Gaz. vol. 205; p. 626.
Wrench, Spanner-. C. A. Martin. No. 46,260; Aug. 11; Gaz. vol. 205; p. 629.

ALPHABETICAL LIST OF TRADE-MARKS.

Abrasive wheels, blocks, powders, fabrics, and papers. Ste. Ame. "le Boro Carbone." Nos. 99,124–5; Aug. 18; Gaz. vol. 205; p. 1016.
Abrasives in comminuted form. Alden Speare's Sons Co. Nos. 98,728–9; Aug. 4; Gaz. vol. 205; p. 297.
Advertising and informative pamphlets. C. A. Tower. No. 98,834; Aug. 4; Gaz. vol. 205; p. 300.
Alcoholic liquors, Certain named distilled. David Nicholson Grocer Company. No. 98,888; Aug. 4; Gaz. vol. 205; p. 301.
Alimentary paste products. S. Bartolotta & Co. No. 99,035; Aug. 11; Gaz. vol. 205; p. 658.
Alloys for welding and repairing aluminum castings, &c. The Chemical Specialties Co. No. 98,856; Aug. 4; Gaz. vol. 205; p. 300.
Antiseptic for cleaning, &c. A. V. Rhodes. No. 99,402; Aug. 25; Gaz. vol. 205; p. 1321.
Antiseptic liquid. North American Pharmacal Co. No. 98,964; Aug. 11; Gaz. vol. 205; p. 656.
Antiseptic solution. T. W. Bradley. No. 98,743; Aug. 4; Gaz. vol. 205; p. 297.
Antiseptics, salves, &c. Hammer Remedy Co. No. 99,390; Aug. 25; Gaz. vol. 205; p. 1321.
Antisyphilitic. The Bayer Company. No. 98,740; Aug. 4; Gaz. vol. 205; p. 297.
Apples, Fresh. Spokane Fruit Growers' Co. No. 99,251; Aug. 25; Gaz. vol. 205; p. 1316.
Application for the relief of goiter, External. F. H. Desjardins. No. 99,144; Aug. 18; Gaz. vol. 205; p. 1017.
Aprons, rompers, wrappers, &c. Lancaster Mills. No. 98,956; Aug. 11; Gaz. vol. 205; p. 656.
Asbestos jointing and packing. Hall & Hall. No. 99,208; Aug. 25; Gaz. vol. 205; p. 1315.
Automobile-horns. Standard Motor Parts Mfg. Co. No. 98,828; Aug. 4; Gaz. vol. 205; p. 300.
Automobiles. Maxwell Motor Company. No. 99,164; Aug. 18; Gaz. vol. 205; p. 1017.
Bags, Ladies' hand-. Morris, Mann & Reilly. No. 98,802; Aug. 4; Gaz. vol. 205; p. 299.
Barrels, boxes, and lockers, Metal. Lyon Metallic Manufacturing Company. No. 99,326; Aug. 25; Gaz. vol. 205; p. 1319.
Baskets, Paper or fiber. Rochester Carrier Co. No. 99,173; Aug. 18; Gaz. vol. 205; p. 1018.
Batteries, Electric. National Carbon Company. No. 99,166; Aug. 18; Gaz. vol. 205; p. 1017.
Beer. Böhmische Pilsner Brauerei Aktien-Gesellschaft in Pilsen. No. 98,741; Aug. 4; Gaz. vol. 205; p. 297.
Beer. Mission Brewing Company. No. 98,801; Aug. 4; Gaz. vol. 205; p. 299.
Beer. Conrad Seipp Brewing Company. Nos. 98,822–3; Aug. 4; Gaz. vol. 205; p. 299.
Beer. G. Heileman Brewing Co. No. 99,098; Aug. 18; Gaz. vol. 205; p. 1015.
Beer. Lone Star Brewing Co. No. 99,228; Aug. 25; Gaz. vol. 205; p. 1316.
Beverage and syrup, Non-alcoholic carbonated. M. Q. Gassaway. No. 99,092; Aug. 18; Gaz. vol. 205; p. 1015.
Beverage and syrup, Non-alcoholic carbonated. J. C. O'Dell. No. 99,353; Aug. 25; Gaz. vol. 205; p. 1320.
Beverage, Grape tonic. G. W. Steiger. No. 99,367; Aug. 25; Gaz. vol. 205; p. 1320.
Beverages and syrups, Non-intoxicating tonic. Friedland Bros. Bottling Works. No. 99,045; Aug. 11; Gaz. vol. 205; p. 659.
Beverages, Certain named non-alcoholic. American Distilled Water Company. No. 98,916; Aug. 11; Gaz. vol. 205; p. 655.
Beverages, Non-alcoholic. Liebenthal Bros. & Co. No. 99,320; Aug. 25; Gaz. vol. 205; p. 1319.
Beverages, Non-intoxicating carbonated tonic. K. P. Ham. No. 99,047; Aug. 11; Gaz. vol. 205; p. 659.
Beverages, Non-intoxicating tonic. E. Diehl. Nos. 98,936–7; Aug. 11; Gaz. vol. 205; p. 655.
Biscuit. National Biscuit Company. No. 98,883; Aug. 4; Gaz. vol. 205; p. 301.
Biscuit. National Biscuit Company. Nos. 99,334–6; Aug. 25; Gaz. vol. 205; p. 1319.
Biscuit, sugar wafers, and candy. National Biscuit Company. No. 98,884; Aug. 4; Gaz. vol. 205; p. 301.
Bitters, Tonic. W. R. Reeve. No. 99,119; Aug. 18; Gaz. vol. 205; p. 1016.
Blankets. Firm of A. O. Meyer. No. 99,113; Aug. 18; Gaz. vol. 205; p. 1016.
Blouses, rompers, shirt-waists, and children's frocks. K. & E. Blouse Makers. No. 98,998; Aug. 11; Gaz. vol. 205; p. 657.
Boat-oars. Anchor Sawmills Company. Nos. 98,733–5; Aug. 4; Gaz. vol. 205; p. 297.
Boot, shoe, and leather dressing and polish. J. J. Eckhard. No. 98,757; Aug. 4; Gaz. vol. 205; p. 298.
Boots and shoes. A. E. Little & Company. No. 99,323; Aug. 25; Gaz. vol. 205; p. 1319.
Boots and shoes, Leather. The Riley Shoe Manufacturing Company. No. 98,968; Aug. 11; Gaz. vol. 205; p. 656.
Boots and shoes, Leather. Bartels & Thelen Company. No. 98,995; Aug. 11; Gaz. vol. 205; p. 657.
Boots and shoes, Leather and rubber. A. O. Meyer. No. 99,959; Aug. 11; Gaz. vol. 205; p. 656.
Boots, shoes, and slippers. John Kelly, Inc. No. 99,316; Aug. 25; Gaz. vol. 205; p. 1318.
Bottles, Aluminum hot-water. Geo. Borgfeldt & Co. No. 98,742; Aug. 4; Gaz. vol. 205; p. 297.
Brake-band lining. Essex Rubber Company. No. 99,147; Aug. 18; Gaz. vol. 205; p. 1017.
Brake-linings and clutch-facings. Standard Woven Fabric Company. No. 99,184; Aug. 18; Gaz. vol. 205; p. 1018.
Bread. F. Tilney. No. 98,903; Aug. 4; Gaz. vol. 205; p. 302.
Bread. J. P. Murray. No. 99,232; Aug. 25; Gaz. vol. 205; p. 1316.
Bread. Schulze Baking Company. No. 99,405; Aug. 25; Gaz. vol. 205; p. 1321.
Bricks. Dover Fire Brick Company. No. 99,292; Aug. 25; Gaz. vol. 205; p. 1318.
Bridges and like structures, Certain named. Deutsche Maschinenfabrik Aktien Gesellschaft. No. 99,145; Aug. 18; Gaz. vol. 205; p. 1017.
Brooms. Plattsburg Broom Co. No. 99,171; Aug. 18; Gaz. vol. 205; p. 1018.
Brushes. Hibbard, Spencer, Bartlett & Co. No. 99,152; Aug. 18; Gaz. vol. 205; p. 1017.
Brushes. The Manufacturers Brush Company. No. 99,162; Aug. 18; Gaz. vol. 205; p. 1017.
Brushes, Tooth-. A. C. Booth. No. 99,139; Aug. 18; Gaz. vol. 205; p. 1017.
Buffing and polishing compound. The Hill & Griffith Co. No. 99,100; Aug. 18; Gaz. vol. 205; p. 1015.
Building blocks and tiles, Terra-cotta hollow. National Fire Proofing Company. No. 99,337; Aug. 25; Gaz. vol. 205; p. 1319.
Butter. S. S. Lard. No. 98,877; Aug. 4; Gaz. vol. 205; p. 301.
Butter and butter compounds and substitutes. V. Lopez & Company. No. 99,057; Aug. 11; Gaz. vol. 205; p. 659.
Buttons, studs, vest-buttons, and cuff-links, Cuff-. Krementz & Co. No. 99,055; Aug. 11; Gaz. vol. 205; p. 659.
Buttons to shoes, Machinery for constructing machines for attaching. H. J. MacDonald. No. 99,328; Aug. 25; Gaz. vol. 205; p. 1319.
Calcium chlorid. Carbondale Calcium Co. No. 99,383; Aug. 25; Gaz. vol. 205; p. 1321.
Candies. F. X. Kuchler & Son. No. 99,056; Aug. 11; Gaz. vol. 205; p. 659.
Candies. W. Brownley. No. 99,276; Aug. 25; Gaz. vol. 205; p. 1317.
Candies. The Golden Pheasant. No. 99,299; Aug. 25; Gaz. vol. 205; p. 1318.
Candy. F. F. Shmidt. No. 98,899; Aug. 4; Gaz. vol. 205; p. 302.
Candy. J. Einzig & Co. No. 99,043; Aug. 11; Gaz. vol. 205; p. 659.
Candy. Imperial Candy Co. No. 99,216; Aug. 25; Gaz. vol. 205; p. 1315.
Candy. Quaker City Chocolate and Confectionery Company. No. 99,240; Aug. 25; Gaz. vol. 205; p. 1316.
Candy. The Rood Candy Co. No. 99,244; Aug. 25; Gaz. vol. 205; p. 1316.
Candy. J. H. Moran. No. 99,333; Aug. 25; Gaz. vol. 205; p. 1319.
Canned and preserved fruits and vegetables. Golden Gate Packing Co. No. 98,866; Aug. 4; Gaz. vol. 205; p. 301.
Canned blueberries. E. M. Frye & Co. No. 99,046; Aug. 11; Gaz. vol. 205; p. 659.
Canned cherries, peaches, pears, tomatoes, &c. Pratt-Low Preserving Co. No. 98,892; Aug. 4; Gaz. vol. 205; p. 302.
Canned, dried, and evaporated fruits and jellies. Yakima Valley Fruit Growers' Association. No. 99,412; Aug. 25; Gaz. vol. 205; p. 1321.
Canned fish. Premier Packing Co. No. 99,063; Aug. 11; Gaz. vol. 205; p. 659.
Canned fruits, vegetables, and fish. West Side Wholesale Grocery Company. No. 98,910; Aug. 4; Gaz. vol. 205; p. 302.
Canned fruits, vegetables, and oysters. McCready & Webster. No. 99,058; Aug. 11; Gaz. vol. 205; p. 659.
Canned fruits, vegetables, and salmon, and tomato catsup. Diehm-Fansler Grocer Co. No. 99,040; Aug. 11; Gaz. vol. 205; p. 658.
Canned pineapple. Hawaiian Pineapple Co. Nos. 99,210–13; Aug. 25; Gaz. vol. 205; p. 1315.

Canned pineapple. Hawaiian Pineapple Co. No. 99,304; Aug. 25; Gaz. vol. 205; p. 1318.
Canned salmon. The Macleay Estate Co. No. 99,229; Aug. 25; Gaz. vol. 205; p. 1316.
Canned vegetables. Grand River Canning Company. No. 99,389; Aug. 25; Gaz. vol. 205; p. 1321.
Canned vegetables and evaporated milk. The H. T. Lange Co. No. 99,226; Aug. 25; Gaz. vol. 205; p. 1316.
Cans and buckets, Tin. The Heekin Can Company. No. 99,305; Aug. 25; Gaz. vol. 205; p. 1318.
Carbons, carbon specialties, &c., Certain named. C. Conradty. No. 99,283; Aug. 25; Gaz. vol. 205; p. 1317.
Caskets and coffins. Peetz Brothers Livery & Undertaking Company. No. 99,356; Aug. 25; Gaz. vol. 205; p. 1320.
Cements for rubber, &c., glue, library-paste, and sealing-wax. The R. M. Hollingshead Co. No. 98,778; Aug. 4; Gaz. vol. 205; p. 298.
Chains, Power-transmission. Brown Brothers. No. 98,922; Aug. 11; Gaz. vol. 205; p. 655.
Chandelier and lighting-fixture socket-covers, body-shells, &c. J. H. White Mfg. Co. No. 99,266; Aug. 25; Gaz. vol. 205; p. 1317.
Cheese. H. Roethlisberger. No. 99,065; Aug. 11; Gaz. vol. 205; p. 659.
Cheese. A. Linke. No. 99,227; Aug. 25; Gaz. vol. 205; p. 1316.
Chemicals, medicines, and pharmaceutical preparations, Certain named. Brame Drug Company. No. 98,744; Aug. 4; Gaz. vol. 205; p. 297.
Chocolates. Quaker City Chocolate and Confectionery Company. No. 99,239; Aug. 25; Gaz. vol. 205; p. 1316.
Chocolates, Sweet. Klein Chocolate Company. No. 99,219; Aug. 25; Gaz. vol. 205; p. 1316.
Cider. J. Cima y Garcia. No. 98,760; Aug. 4; Gaz. vol. 205; p. 298.
Cigarette papers and holders, pipes, cigar-holders, &c. Société Job, Anciens Etablissements Bardou-Job et Paulilhac. No. 99,362; Aug. 25; Gaz. vol. 205; p. 1320.
Cigarettes. The Camp Importation Co. No. 98,748; Aug. 4; Gaz. vol. 205; p. 297.
Cigars. L. Cohen. No. 99,197; Aug. 25; Gaz. vol. 205; p. 1315.
Cigars. H. Manekin. No. 99,230; Aug. 25; Gaz. vol. 205; p. 1316.
Cigars and cigarettes. S. J. Georgeades. No. 98,762; Aug. 4; Gaz. vol. 205; p. 298.
Cigars, cigarettes, cheroots, and cut tobacco. R. Sadl. No. 99,246; Aug. 25; Gaz. vol. 205; p. 1316.
Cleaners, Electric vacuum-. The Cleveland Suction Cleaner Co. No. 99,001; Aug. 11; Gaz. vol. 205; p. 657.
Cleaners, Vacuum-. The Rotor Vacuum Cleaner Company. No. 99,066; Aug. 11; Gaz. vol. 205; p. 659.
Cleaning and polishing substance. American Cleanser Company No. 99,073; Aug. 18; Gaz. vol. 205; p. 1015.
Cleaning-machines and parts thereof, Electrical vacuum. The Premier Vacuum Cleaner Company. No. 99,018; Aug. 11; Gaz. vol. 205; p. 658.
Closet seats, Water-. The Brunswick-Balke-Collender Co. No. 99,277; Aug. 25; Gaz. vol. 205; p. 1317.
Clothing, Certain named. Union Special Machine Company. No. 98,836; Aug. 4; Gaz. vol. 205; p. 300.
Clothing for men and boys, Certain named. Rogers Peet Company. No. 99,019; Aug. 11; Gaz. vol. 205; p. 658.
Clothing for men and boys, Certain named. J. Adler. No. 99,033; Aug. 11; Gaz. vol. 205; p. 658.
Clothing, Men's. The Old Woolen Mills Co. No. 99,017; Aug. 11; Gaz. vol. 205; p. 658.
Coal. E. R. Norton. No. 99,234; Aug. 25; Gaz. vol. 205; p. 1316.
Coal-cutters, rock and hammer drills, and parts thereof. International Channelling Machines. No. 99,053; Aug. 11; Gaz. vol. 205; p. 659.
Coal-tar-creosote compound, Emulsifiable. Samuel Cabot, Incorporated. No. 99,000; Aug. 11; Gaz. vol. 205; p. 657.
Coating composed of certain named ingredients, Liquid protective. Bayway Chemical Company. No. 99,272; Aug. 25; Gaz. vol. 205; p. 1317.
Coats and capes. A. Beller & Co. No. 99,077; Aug. 18; Gaz. vol. 205; p. 1015.
Coats and suits. Bischof Sterne & Stein. No. 99,127; Aug. 18; Gaz. vol. 205; p. 1016.
Coats, cloaks, wraps, and capes. The Salt's Textile Manufacturing Company. Nos. 99,020–3; Aug. 11; Gaz. vol. 205; p. 658.
Coats, Outer. H. Cohen. No. 99,082; Aug. 18; Gaz. vol. 205; p. 1015.
Coconnut-oil product. Puritan Coconut Butter Co. No. 99,359; Aug. 25; Gaz. vol. 205; p. 1320.
Coffee. The Haserot Company. No. 98,871; Aug. 4; Gaz. vol. 205; p. 301.
Coffee. J. R. Newberry Co. No. 98,887; Aug. 4; Gaz. vol. 205; p. 301.
Coffee. J. R. Newberry Co. No. 98,903; Aug. 11; Gaz. vol. 205; p. 656.
Coffee. Cheek-Neal Coffee Co. No. 99,196; Aug. 25; Gaz. vol. 205; p. 1315.
Coffee. Johnson-Layne Coffee Co. No. 99,217; Aug. 25; Gaz. vol. 205; p. 1316.
Coffee, Imitation. Holzhauser & Kenney. No. 99,214; Aug. 25; Gaz. vol. 205; p. 1315.
Coffee substitute. T. Wolfram. No. 98,912; Aug. 4; Gaz. vol. 205; p. 302.
Coffee substitute. C. F. Blanke Tea & Coffee Company. No. 98,921; Aug. 11; Gaz. vol. 205; p. 655.
Collars and cuffs. Nurses Outfitting Association. No. 99,115; Aug. 18; Gaz. vol. 205; p. 1016.
Colors, Ceramic. The Schmidt Ceramic Chemical Company. No. 99,179; Aug. 18; Gaz. vol. 205; p. 1018.
Combs. J. W. Walton Sons. No. 99,041; Aug. 11; Gaz. vol. 205; p. 658.
Combs, Toilet-. Noyes Comb Company. No. 99,352; Aug. 25; Gaz. vol. 205; p. 1320.
Comforts, Cotton. The R. Blankenburg Company. No. 98,855; Aug. 4; Gaz. vol. 205; p. 300.
Concrete hardening, filling, and bonding materials. The Master Builders Company. No. 99,163; Aug. 18; Gaz. vol. 205; p. 1017.
Condensers used with cameras, and motion-picture-projecting machines. Kleine Optical Company. No. 99,317; Aug. 25; Gaz. vol. 205; p. 1318.
Confection of popcorn and peanuts. G. E. Clark. No. 99,081; Aug. 18; Gaz. vol. 205; p. 1015.
Confectionery, Certain paste-like mass used as an article of. S. F. Whitman & Son. No. 99,374; Aug. 25; Gaz. vol. 205; p. 1320.
Construction materials, Certain named. Huttig Sash & Door Co. No. 99,312; Aug. 25; Gaz. vol. 205; p. 1318.
Conveying mechanism and parts thereof. Robins Conveying Belt Company. No. 98,896; Aug. 4; Gaz. vol. 205; p. 302.
Cordial. Société Anonyme de la Distillerie de la Liqueur Benedictine de l'Abbaye de Fecamp. No. 99,363; Aug. 25; Gaz. vol. 205; p. 1320.
Corn, Evaporated sweet. E. B. Hostetter. No. 99,311; Aug. 25; Gaz. vol. 205; p. 1318.
Corn-remover and court-plaster, Liquid. E. H. Niemoeller. No. 98,807; Aug. 4; Gaz. vol. 205; p. 299.
Corset fabrics. E. E. Goodwin. No. 99,093; Aug. 18; Gaz. vol. 205; p. 1015.
Corsets. Derby Corset Company. No. 99,086; Aug. 18; Gaz. vol. 205; p. 1015.
Cotton and linen piece goods. Turtle Brothers. No. 98,904; Aug. 4; Gaz. vol. 205; p. 302.
Cotton and linen piece goods. Trippe, Barker & Co. No. 99,071; Aug. 11; Gaz. vol. 205; p. 659.
Cotton duck. Wellington, Sears & Company. No. 98,906; Aug. 4; Gaz. vol. 205; p. 302.
Cotton-duck cloth. West Point Manufacturing Co. No. 98,909; Aug. 4; Gaz. vol. 205; p. 302.
Cotton piece, dress, and bed-covering goods. Lancaster Mills. No. 99,107; Aug. 18; Gaz. vol. 205; p. 1016.
Cotton piece goods. Amoskeag Manufacturing Company. No. 98,850; Aug. 4; Gaz. vol. 205; p. 300.
Cotton piece goods. Appleton Company. No. 99,076; Aug. 18; Gaz. vol. 205; p. 1015.
Cotton piece goods. King Philip Mills. No. 99,103; Aug. 18; Gaz. vol. 205; p. 1016.
Crackers. Johnson Educator Food Co. No. 98,874; Aug. 4; Gaz. vol. 205; p. 301.
Cream, Skin-. The Spalding Chemical Co. No. 99,406; Aug. 25; Gaz. vol. 205; p. 1321.
Croustades. The F. Beaumont National-Croustade Manufacturing Company. Nos. 99,190–1; Aug. 25; Gaz. vol. 205; p. 1315.
Cultivator-shovels. M. Shrimplin. No. 98,900; Aug. 4; Gaz. vol. 205; p. 302.
Cultures of nodule bacteria. The Albert Dickinson Company. No. 99,039; Aug. 11; Gaz. vol. 205; p. 658.
Curtain, portière, and stair rods and fixtures therefor, Metal. Kirsch Manufacturing Company. No. 98,875; Aug. 4; Gaz. vol. 205; p. 301.
Cutlery and parts thereof, Certain named. Harrington Cutlery Co. No. 99,151; Aug. 18; Gaz. vol. 205; p. 1017.
Cutlery, tools, and parts thereof, Certain named. Lewis & Bennett Hardware Co. No. 98,878; Aug. 4; Gaz. vol. 205; p. 301.
Dates. Hills Brothers Company. No. 99,309; Aug. 25; Gaz. vol. 205; p. 1318.
Dentifrice, Liquid. W. H. Dewender. No. 98,754; Aug. 4; Gaz. vol. 205; p. 297.
Dentifrices. J. F. Steen. No. 99,126; Aug. 18; Gaz. vol. 205; p. 1016.
Digestive ferment. J. K. Neagley. No. 98,805; Aug. 4; Gaz. vol. 205; p. 299.
Dishes made of wood, pulp, and paper, Butter, &c. Northern Bag & Plate Co. No. 99,167; Aug. 18; Gaz. vol. 205; p. 1018.
Dolls and stuffed animal toys. Fair and Carnival Trading Co. No. 99,294; Aug. 25; Gaz. vol. 205; p. 1318.
Dolls and toys. D. Wolf. No. 98,846; Aug. 4; Gaz. vol. 205; p. 300.
Dress-banding. The American Mills Company. No. 99,074; Aug. 18; Gaz. vol. 205; p. 1015.
Dress-shields. I. B. Kleinert Rubber Company. Nos. 98,786–8; Aug. 4; Gaz. vol. 205; p. 298.
Dress-shields. I. B. Kleinert Rubber Company. No. 98,876; Aug. 4; Gaz. vol. 205; p. 301.
Dress-shields. I. B. Kleinert Rubber Company. Nos. 99,104–6; Aug. 18; Gaz. vol. 205; p. 1016.
Dress-shields. I. B. Kleinert Rubber Company. Nos. 99,158–60; Aug. 18; Gaz. vol. 205; p. 1017.
Dresses, nurses' and waitresses' uniforms, Ladies' tub and house. Henry A. Dix & Sons Company. No. 99,087; Aug. 18; Gaz. vol. 205; p. 1015.

Drill-chucks. Automatic Drill Chuck Corporation. No. 99,138; Aug. 18; Gaz. vol. 205; p. 1017.
Drilling. Wellington, Sears & Company. No. 98,907; Aug. 4; Gaz. vol. 205; p. 302.
Duck. Firm of A. O. Meyer. No. 98,882; Aug. 4; Gaz. vol. 205; p. 301.
Eczema and skin eruptions. Dermin Mfg. Co. No. 98,753; Aug. 4; Gaz. vol. 205; p. 297.
Eggs. L. S. Bache. No. 99,189; Aug. 25; Gaz. vol. 205; p. 1315.
Eggs. The Fox River Butter Company. No. 99,205; Aug. 25; Gaz. vol. 205; p. 1315.
Eggs, and white and yolk of eggs. L. Prenzlau's Fabrikwerke. No. 98,893; Aug. 4; Gaz. vol. 205; p. 302.
Eggs, dressed poultry, and butter. Fear-Campbell Company. No. 99,044; Aug. 11; Gaz. vol. 205; p. 659.
Elastic textiles. J. Einstein, Inc. No. 99,089; Aug. 18; Gaz. vol. 205; p. 1015.
Electric-wiring cleats. E. W. Buffinton. No. 98,999; Aug. 11; Gaz. vol. 205; p. 657.
Electrical and galvanic carbons. C. Conradty. No. 99,284; Aug. 25; Gaz. vol. 205; p. 1317.
Electrical apparatus and supplies, Certain named. Siemens Gebrüder & Company. No. 99,181; Aug. 18; Gaz. vol. 205; p. 1018.
Electrical apparatus and supplies, Certain named. Federal Sign System (Electric). No. 99,295; Aug. 25; Gaz. vol. 205; p. 1318.
Electrical fuses. Schweitzer and Conrad. No. 98,898; Aug. 4; Gaz. vol. 205; p. 302.
Enamel paint. The Japanol Enamel Company. No. 99,155; Aug. 18; Gaz. vol. 205; p. 1017.
Enamels, paints, varnishes, and varnish-removers. Standard Varnish Works. No. 99,183; Aug. 18; Gaz. vol. 205; p. 1018.
Enamels, stains, and carriage-colors. Gerstendorfer Bros. No. 98,947; Aug. 11; Gaz. vol. 205; p. 656.
Evaporators, pans, and bucket-covers. True & Blanchard Co. No. 99,186; Aug. 18; Gaz. vol. 205; p. 1018.
Extracts, &c., used in soda-water and carbonated beverages. Astra Products Co. No. 99,135; Aug. 18; Gaz. vol. 205; p. 1017.
Eyelets, Metallic. Edwin B. Stimpson Company. No. 99,368; Aug. 25; Gaz. vol. 205; p. 1320.
Fabrics, Certain named textile. Faulkner & Colony Manufg. Co. No. 98,864; Aug. 4; Gaz. vol. 205; p. 301.
Feed, Stock. National Starch Co. No. 98,962; Aug. 11; Gaz. vol. 205; p. 656.
Felts. The Felters Company. Nos. 99,296–7; Aug. 25; Gaz. vol. 205; p. 1318.
Fertilizers. American Agricultural Chemical Co. No. 98,732; Aug. 4; Gaz. vol. 205; p. 297.
Fertilizers. The Atlantic Chemical Corporation. Nos. 98,919–20; Aug. 11; Gaz. vol. 205; p. 655.
Fertilizers. Columbia Guano Co. Nos. 98,926–34; Aug. 11; Gaz. vol. 205; p. 655.
Fertilizers. F. S. Royster Guano Co. Nos. 98,969–83; Aug. 11; Gaz. vol. 205; pp. 656–7.
Fertilizers. F. S. Royster Guano Co. No. 99,067; Aug. 11; Gaz. vol. 205; p. 659.
Fertilizers. F. S. Royster Guano Co. Nos. 99,122–3; Aug. 18; Gaz. vol. 205; p. 1016.
Fertilizers. The Atlantic Chemical Corporation. No. 99,136; Aug. 18; Gaz. vol. 205; p. 1017.
Fertilizers. F. S. Royster Guano Co. Nos. 99,177–8; Aug. 18; Gaz. vol. 205; p. 1018.
Figs. Guggenhime & Company. No. 99,206; Aug. 25; Gaz. vol. 205; p. 1315.
Finish, mixed paint, &c., Fender-. Hibbard, Spencer, Bartlett & Co. No. 99,308; Aug. 25; Gaz. vol. 205; p. 1318.
Fire-extinguishers, Hand. Richmond Chemical Co. No. 98,895; Aug. 4; Gaz. vol. 205; p. 302.
Fire-extinguishing compounds. Pyrene Manufacturing Co. No. 98,812; Aug. 4; Gaz. vol. 205; p. 299.
Fireworks. Consolidated Fire Works Company of America. No. 99,285; Aug. 25; Gaz. vol. 205; p. 1317.
Fish. Armour & Company. No. 99,034; Aug. 11; Gaz. vol. 205; p. 658.
Fishing-bait, Artificial. The Enterprise Manufacturing Company. Nos. 98,758–9; Aug. 4; Gaz. vol. 205; p. 298.
Flavoring extracts for foods and tea. The Heekin Spice Company. No. 98,872; Aug. 4; Gaz. vol. 205; p. 301.
Flour, Pancake-. Northern Light Milling Co. No. 99,233; Aug. 25; Gaz. vol. 205; p. 1316.
Flour, Self-rising wheat-. The Birkett Mills. No. 99,036; Aug. 11; Gaz. vol. 205; p. 658.
Flour, Self-rising wheat-. Ansted & Burk Co. No. 99,188; Aug. 25; Gaz. vol. 205; p. 1315.
Flour, Self-rising wheat-. J. Allen Smith & Company. Nos. 99,249–50; Aug. 25; Gaz. vol. 205; p. 1316.
Flour, Self-rising wheat-. G. W. Ziebold. No. 99,377; Aug. 25; Gaz. vol. 205; p. 1320.
Flour, Wheat-. Red Wing Milling Company. No. 98,813; Aug. 4; Gaz. vol. 205; p. 299.
Flour, Wheat-. Columbia Star Milling Co. No. 98,857; Aug. 4; Gaz. vol. 205; p. 300.
Flour, Wheat-. Valier and Spies Milling Co. No. 98,905; Aug. 4; Gaz. vol. 205; p. 302.
Flour, Wheat-. J. W. Vance. No. 99,072; Aug. 11; Gaz. vol. 205; p. 659.
Flour, Wheat-. The Dunlop Milling Co. No. 99,202; Aug. 25; Gaz. vol. 205; p. 1315.
Flour, Wheat-. The Harter Milling Co. No. 99,209; Aug. 25; Gaz. vol. 205; p. 1315.
Flour, Wheat-. Rea & Page Milling Co. No. 99,241; Aug. 25; Gaz. vol. 205; p. 1316.
Flour, Wheat-. The Scott County Milling Company. No. 99,248; Aug. 25; Gaz. vol. 205; p. 1316.
Flour, Wheat-. Stahl and Jaeger. No. 99,253; Aug. 25; Gaz. vol. 205; p. 1317.
Flour, Wheat-. Valier & Spies Milling Co. Nos. 99,257–60; Aug. 25; Gaz. vol. 205; p. 1317.
Flowers. Penn The Florist. No. 99,237; Aug. 25; Gaz. vol. 205; p. 1316.
Food and food ingredient. Oko Company. No. 98,890; Aug. 4; Gaz. vol. 205; p. 301.
Food compound, Certain. McIlhenny Company. No. 99,231; Aug. 25; Gaz. vol. 205; p. 1316.
Food preparation for poultry and birds. Spratt's Patent (America). No. 99,252; Aug. 25; Gaz. vol. 205; p. 1316.
Food, Prepared stock. M. C. Peters. No. 99,116; Aug. 18; Gaz. vol. 205; p. 1016.
Food product. Workman Packing Company. No. 99,267; Aug. 25; Gaz. vol. 205; p. 1317.
Foods, Certain named. Cross, Abbott Co. No. 99,038; Aug. 11; Gaz. vol. 205; p. 658.
Foods, Certain named. L. S. Donaldson Company. No. 99,384; Aug. 25; Gaz. vol. 205; p. 1321.
Foods, Certain named. J. H. Newbarer & Co. No. 99,398; Aug. 25; Gaz. vol. 205; p. 1321.
Foods for infants and invalids, Prepared. Dr. Theinhardt's Nährmittel-Gesellschaft G. m. b. H. No. 99,070; Aug. 11; Gaz. vol. 205; p. 659.
Foods, Poultry. Darling & Company. No. 98,859; Aug. 4; Gaz. vol. 205; p. 301.
Foundry-facings, charcoal, graphite, and plumbago. S. Obermayer Company. No. 98,808; Aug. 4; Gaz. vol. 205; p. 299.
Foundry-riddles. The American Implement Company. No. 98,993; Aug. 11; Gaz. vol. 205; p. 657.
Freezers and beverage-coolers. Cordley & Hayes. No. 98,752; Aug. 4; Gaz. vol. 205; p. 297.
Fruits, Dried. P. A. Pincoffs. No. 99,358; Aug. 25; Gaz. vol. 205; p. 1320.
Fruits, Fresh. Mosier Fruit Growers Association. No. 99,059; Aug. 11; Gaz. vol. 205; p. 659.
Fruits, grapes, and berries, Fresh citrus and deciduous green. Penryn Fruit Company. No. 99,357; Aug. 25; Gaz. vol. 205; p. 1320.
Furniture-polish. Channell Chemical Company. No. 99,142; Aug. 18; Gaz. vol. 205; p. 1017.
Furniture, &c., polish. F. H. Steere. No. 99,185; Aug. 18; Gaz. vol. 205; p. 1018.
Furniture-polish. E. H. Fowler. No. 99,298; Aug. 25; Gaz. vol. 205; p. 1318.
Furniture-polish. T. Lowry. No. 99,325; Aug. 25; Gaz. vol. 205; p. 1319.
Fuses and torpedoes. Central Railway Signal Co. No. 99,141; Aug. 18; Gaz. vol. 205; p. 1017.
Game apparatus. G. H. Howard. No. 98,780; Aug. 4; Gaz. vol. 205; p. 298.
Games. Milton Bradley Co. No. 99,275; Aug. 25; Gaz. vol. 205; p. 1317.
Games, Card. Parker Brothers. No. 99,354; Aug. 25; Gaz. vol. 205; p. 1320.
Garment-fasteners. G. Gray. No. 98,867; Aug. 4; Gaz. vol. 205; p. 301.
Garters and armbands. Kabo Corset Company. No. 99,314; Aug. 25; Gaz. vol. 205; p. 1318.
Gas and oil burners. Stuart-American Products Company. No. 99,256; Aug. 25; Gaz. vol. 205; p. 1317.
Gas-mantle with attachments. Glühstrumpffabrik Basel. No. 98,766; Aug. 4; Gaz. vol. 205; p. 298.
Ginger-beer. H. J. Middleton. No. 98,799; Aug. 4; Gaz. vol. 205; p. 299.
Guano and fertilizers. The Home Guano Company. No. 99,153; Aug. 18; Gaz. vol. 205; p. 1017.
Gum, Shellac. Berry Brothers. No. 99,192; Aug. 25; Gaz. vol. 205; p. 1315.
Hair-nets. Ehlerman Brothers Co. No. 98,863; Aug. 4; Gaz. vol. 205; p. 301.
Hair-nets. Marlowe Manufacturing Company. Nos. 98,880–1; Aug. 4; Gaz. vol. 205; p. 301.
Hair-nets and face-chamois. K. Landau & Co. No. 99,108; Aug. 18; Gaz. vol. 205; p. 1016.
Hair-pins and hair-ornaments. The Viscoloid Company. No. 99,029; Aug. 11; Gaz. vol. 205; p. 658.
Hair rolls and puffs. The Hairlight Company. No. 98,868; Aug. 4; Gaz. vol. 205; p. 301.
Hair-tonic. M. Geveshausen. No. 98,948; Aug. 11; Gaz. vol. 205; p. 656.
Hair tonic and dye, cold and massage creams, &c. Warshaw Brothers. No. 98,838; Aug. 4; Gaz. vol. 205; p. 300.
Hardware and plumbing supplies, Certain named. Felten & Guilleaume Carlswerk Actien-Gesellschaft. No. 98,944; Aug. 11; Gaz. vol. 205; p. 656.
Hardware and supplies, Certain named. Watrous Mfg. Co. No. 99,372; Aug. 25; Gaz. vol. 205; p. 1320.
Harmonium-tongues. Gebr. Dlx. No. 98,755; Aug. 4; Gaz. vol. 205; p. 297.
Hats, bonnets, and caps. Frankel, Frank & Co. No. 98,865; Aug. 4; Gaz. vol. 205; p. 301.
Hats, Ladies'. G. Rawak. No. 99,118; Aug. 18; Gaz. vol. 205; p. 1016.
Headache-powder. R. J. Fritz. No. 98,945; Aug. 11; Gaz. vol. 205; p. 656.

Honey and cane-syrup. G. Preston. No. 99,238; Aug. 25; Gaz. vol. 205; p. 1316.
Hooks and eyes. S. Kann Sons & Co. No. 99,102; Aug. 18; Gaz. vol. 205; p. 1016.
Hose. Thieme Bros. Co. No. 99,028; Aug. 11; Gaz. vol. 205; p. 658.
Hose and packing. Hudson & Thurber Co. No. 99,215; Aug. 25; Gaz. vol. 205; p. 1315.
Hosiery. Durham Hosiery Mills. No. 98,938; Aug. 11; Gaz. vol. 205; p. 655.
Hosiery. Tryon Hosiery Company. No. 99,131; Aug. 18; Gaz. vol. 205; p. 1016.
Hosiery. H. H. Condit. No. 99,282; Aug. 25; Gaz. vol. 205; p. 1317.
Hosiery, sweaters, knit underwear, &c. Wellworth Mills Company. No. 98,908; Aug. 4; Gaz. vol. 205; p. 302.
Ink-ribbons for time-printing machines. Calculagraph Company. No. 99,080; Aug. 18; Gaz. vol. 205; p. 1015.
Inks. B. Heller & Co. No. 98,773; Aug. 4; Gaz. vol. 205; p. 298.
Inks, Edge, leather, and writing. R. M. Hollingshead Co. No. 99,049; Aug. 11; Gaz. vol. 205; p. 659.
Insecticide. F. McGarrett. No. 98,796; Aug. 4; Gaz. vol. 205; p. 299.
Insecticide. A. Laver. No. 99,111; Aug. 18; Gaz. vol. 205; p. 1016.
Insecticide-powder. J. R. L. Gauvreau. No. 98,946; Aug. 11; Gaz. vol. 205; p. 656.
Insecticides and fungicides. Hemingway's London Purple Company. No. 99,010; Aug. 11; Gaz. vol. 205; p. 658.
Insects, Preparation for the extermination of. P. Goldberg. No. 99,150; Aug. 18; Gaz. vol. 205; p. 1017.
Iron ingots, bars, pigs, castings, and forgings, steel, and alloys of iron and steel. The Pennsylvania Steel Company. No. 98,891; Aug. 4; Gaz. vol. 205; p. 301.
Jar or bottle, &c., metal caps, Glass. Paragon Metal Cap Company. No. 99,230; Aug. 25; Gaz. vol. 205; p. 1316.
Jars, Fruit-. Pacific Coast Glass Works. No. 99,235; Aug. 25; Gaz. vol. 205; p. 1316.
Jewelry. Hallam-Rice Co. No. 99,095; Aug. 18; Gaz. vol. 205; p. 1015.
Kid, Glazed. M. van Loon. No. 99,261; Aug. 25; Gaz. vol. 205; p. 1317.
Kinematographic films. C. Levi. No. 98,925; Aug. 11; Gaz. vol. 205; p. 655.
Knit and woven underwear. Indera Mills. No. 98,955; Aug. 11; Gaz. vol. 205; p. 656.
Knitting-wools. Baldwin & Walker. No. 99,269; Aug. 25; Gaz. vol. 205; p. 1317.
Knives and die-blocks, Shear-. Heppenstall Forge & Knife Company. Nos. 98,774–5; Aug. 4; Gaz. vol. 205; p. 298.
Lamp and lantern burners. R. E. Dietz Company. No. 99,201; Aug. 25; Gaz. vol. 205; p. 1315.
Lamp-chimneys. Standard Oil Company of New York. No. 99,255; Aug. 25; Gaz. vol. 205; p. 1317.
Lamps, lanterns, ignition apparatus, &c. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 99,263; Aug. 25; Gaz. vol. 205; p. 1317.
Lard. The Hull & Dillon Pkg. Co. No. 99,051; Aug. 11; Gaz. vol. 205; p. 659.
Laxative. A. A. Kurrasch. No. 98,789; Aug. 4; Gaz. vol. 205; p. 298.
Laxatives. F. Schindler-Barnay. No. 99,404; Aug. 25; Gaz. vol. 205; p. 1321.
Leather footwear to increase the wear, Preparation to be applied to. W. A. Eggers. No. 99,088; Aug. 18; Gaz. vol. 205; p. 1015.
Leather substitute. Pearce Bros. Leather Co. No. 98,810; Aug. 4; Gaz. vol. 205; p. 299.
Liniment and colic remedy, White. Georgia Medicine Co. No. 99,388; Aug. 25; Gaz. vol. 205; p. 1321.
Liquors. Figli di Sebastiano Giusiana. No. 98,764; Aug. 4; Gaz. vol. 205; p. 298.
Lotion, Skin-. F. T. Hopkins & Son. No. 98,954; Aug. 11; Gaz. vol. 205; p. 656.
Lubricants. A. C. Buzby. No. 99,279; Aug. 25; Gaz. vol. 205; p. 1317.
Macaroni. L. Verna. No. 99,371; Aug. 25; Gaz. vol. 205; p. 1320.
Macaroni, spaghetti, vermicelli, &c. Dallas Macaroni & Paste Manufacturing Co. Nos. 99,198–9; Aug. 25; Gaz. vol. 205; p. 1315.
Machinery and engines, not electrical, Certain named. Armstrong Mfg. Co. No. 98,851; Aug. 4; Gaz. vol. 205; p. 301.
Magazines, Weekly. W. H. Scheetz. No. 99,247; Aug. 25; Gaz. vol. 205; p. 1316.
Magnets, electric furnaces and controlling apparatus, &c., Lifting-. Deutsche Maschinenfabrik Aktien Gesellschaft. No. 99,289; Aug. 25; Gaz. vol. 205; p. 1318.
Medical compounds for the digestive organs. Dr. Lonergan's. No. 98,792; Aug. 4; Gaz. vol. 205; p. 299.
Medical preparations for certain named uses. R. E. McInturff. No. 98,797; Aug. 4; Gaz. vol. 205; p. 299.
Medicated lozenges for throat, &c., affections. Daggett & Miller Company. No. 99,002; Aug. 11; Gaz. vol. 205; p. 657.
Medicinal oil. Brinser Remedy Company. No. 98,745; Aug. 4; Gaz. vol. 205; p. 297.
Medicinal preparation for certain named diseases. C. W. Seignious. No. 98,821; Aug. 4; Gaz. vol. 205; p. 299.
Medicinal preparation for diabetes. Sanin-Gesellschaft m. b. H. Fabrik chem. pharmac. Praeparate. No. 99,024; Aug. 11; Gaz. vol. 205; p. 658.
Medicinal preparation for the treatment of certain named diseases. Sanin-Gesellschaft m. b. H. Fabrik chem. pharmac. Praeparate. No. 99,025; Aug. 11; Gaz. vol. 205; p. 658.
Medicinal tonic. H. T. Dewey & Sons Co. No. 98,935; Aug. 11; Gaz. vol. 205; p. 655.
Medicine for pyorrhea alveolaris, &c. N. Spears. No. 98,985; Aug. 11; Gaz. vol. 205; p. 657.
Medicine, Headache and neuralgia. Rowland Drug Co. No. 98,818; Aug. 4; Gaz. vol. 205; p. 299.
Medicines for constipation, hepatic torpor, &c. The Anderson-Brown Company. No. 98,917; Aug. 11; Gaz. vol. 205; p. 655.
Metal sheets and plates, tin and terne plates, Rolled. American Sheet & Tin Plate Company. No. 99,133; Aug. 18; Gaz. vol. 205; p. 1016.
Milk, Condensed. Borden's Condensed Milk Company. No. 99,194; Aug. 25; Gaz. vol. 205; p. 1315.
Milk, Desiccated. The Dry Milk Company. No. 99,042; Aug. 11; Gaz. vol. 205; p. 659.
Milk, Evaporated. Crary Pure Food Company. No. 99,037; Aug. 11; Gaz. vol. 205; p. 658.
Motor-bodies, mud-guards, wind-shields, &c. "Carrosserie Van den Plas," Sté. en nom collectif. No. 98,749; Aug. 4; Gaz. vol. 205; p. 297.
Mouse-traps. Oneida Community. No. 98,809; Aug. 4; Gaz. vol. 205; p. 298.
Mufflers. Frank & Meyer Neckwear Company. No. 99,091; Aug. 18; Gaz. vol. 205; p. 1015.
Musical-instrument bows. E. Sartory. No. 98,820; Aug. 4; Gaz. vol. 205; p. 299.
Muslin. Converse & Company. No. 99,084; Aug. 18; Gaz. vol. 205; p. 1015.
Muslins, Bleached and unbleached. Wheeler & Motter Mercantile Company. Nos. 98,839–43; Aug. 4; Gaz. vol. 205; p. 300.
Muslins, Bleached and unbleached. Wheeler & Motter Mercantile Company. Nos. 99,264–5; Aug. 25; Gaz. vol. 205; p. 1317.
Needles, Spring and solid eye sack, burlap, bag, hop, &c. Barr Bros. Co. No. 98,852; Aug. 4; Gaz. vol. 205; p. 300.
Oil, being a medicinal oil, Haarlem. Naamlooze Vennootschap Maatschappij tot Voortzetting der Zaken Gedreven onder den Naam Klass Tilly. No. 98,961; Aug. 11; Gaz. vol. 205; p. 656.
Oil for the hair and head. G. S. Morgan. No. 99,397; Aug. 25; Gaz. vol. 205; p. 1321.
Oil, Floor and furniture. Tampa Varnish Company. No. 99,369; Aug. 25; Gaz. vol. 205; p. 1320.
Oil, Furniture-polishing. Radio Company. No. 98,967; Aug. 11; Gaz. vol. 205; p. 656.
Oil, Leather-. Wm. C. Robinson & Son Co. No. 98,816; Aug. 4; Gaz. vol. 205; p. 299.
Oil, Linseed-. Firm of A. O. Meyer. No. 99,331; Aug. 25; Gaz. vol. 205; p. 1319.
Oil, Olive-. Alberti Importing and Exporting Co. No. 98,848; Aug. 4; Gaz. vol. 205; p. 300.
Oil to animals, Machines for applying. The Hog-Joy Company. No. 98,776; Aug. 4; Gaz. vol. 205; p. 298.
Oils, Illuminating-. Standard Oil Co. of New York. No. 98,986; Aug. 11; Gaz. vol. 205; p. 657.
Oils, Lubricating-. A. W. Harris Oil Co. No. 98,870; Aug. 4; Gaz. vol. 205; p. 301.
Oils, Lubricating-. A. W. Harris Oil Co. Nos. 99,096–7; Aug. 18; Gaz. vol. 205; p. 1015.
Oils, Lubricating-. A. W. Harris. No. 99,302; Aug. 25; Gaz. vol. 205; p. 1318.
Oilstones, whetstones, rubbing-bricks, &c. Norton Company. No. 98,889; Aug. 4; Gaz. vol. 205; p. 301.
Ointment. E. L. Marr Bros. Co. No. 99,395; Aug. 25; Gaz. vol. 205; p. 1321.
Ointment and medicinal preparation for rheumatism, &c., Medicated. M. C. Kane. No. 98,783; Aug. 4; Gaz. vol. 205; p. 298.
Ointment for certain named ailments. W. C. Arnold. No. 98,994; Aug. 11; Gaz. vol. 205; p. 657.
Oranges, lemons, limes, and grape-fruit, Fresh. Elephant Orchards. No. 99,203; Aug. 25; Gaz. vol. 205; p. 1315.
Overcoats. A. Decker & Cohn. No. 99,085; Aug. 18; Gaz. vol. 205; p. 1015.
Packing, Composite rod-. C. A. Daniel. No. 99,287; Aug. 25; Gaz. vol. 205; p. 1318.
Paint, Dry. American Cement Paint Co. No. 99,268; Aug. 25; Gaz. vol. 205; p. 1317.
Paints, Bituminous. C. M. Allaire. No. 98,914; Aug. 11; Gaz. vol. 205; p. 655.
Paints for ships' bottoms. American Veneziani Company. No. 99,134; Aug. 18; Gaz. vol. 205; p. 1017.
Paints, Gold. L. Hemmerdinger. No. 98,873; Aug. 4; Gaz. vol. 205; p. 301.
Paints, Oil-. W. M. Harris. No. 98,869; Aug. 4; Gaz. vol. 205; p. 301.
Paints, varnishes, and lacquers. Maatschappij Vereenigde Van der Burg's Japanlak Fabrieken (United Van der Burg's Japanlac- and Varnish Works). No. 99,327; Aug. 25; Gaz. vol. 205; p. 1319.
Paints, varnishes, stains, &c. The R. M. Hollingshead Co. No. 99,310; Aug. 25; Gaz. vol. 205; p. 1318.
Paper and cloth and certain named drawing materials, Blue-print. New York Blue Print Paper Co. No. 98,886; Aug. 4; Gaz. vol. 205; p. 301.
Paper, Cover, bond, writing, and printing. The Central Ohio Paper Co. No. 98,750; Aug. 4; Gaz. vol. 205; p. 297.

Paper for printing purposes. The Taylor-Burt Co. No. 98,832; Aug. 4; Gaz. vol. 205; p. 300.
Paper, paper towels, napkins, and table-cloths, Toilet-. Richards-Glover Company. No. 98,815; Aug. 4; Gaz. vol. 205; p. 299.
Paper, Positive black print-. A. Bertsch. No. 99,273; Aug. 25; Gaz. vol. 205; p. 1317.
Paper, Printing and writing. Graham Paper Company. No. 98,768; Aug. 4; Gaz. vol. 205; p. 298.
Paper, Toilet-. Standard Paper Company. No. 99,068; Aug. 11; Gaz. vol. 205; p. 659.
Paper, Writing-. Peyton Paper Company. No. 99,061; Aug. 11; Gaz. vol. 205; p. 659.
Paste, Millinery-. E. J. Reilly. No. 98,814; Aug. 4; Gaz. vol. 205; p. 299.
Peanut-butter, spices, coffee, tea, &c. The Royal Tea Company. No. 99,245; Aug. 25; Gaz. vol. 205; p. 1316.
Pencils. Eagle Pencil Company. No. 98,939; Aug. 11; Gaz. vol. 205; p. 655.
Pencils. Eagle Pencil Company. Nos. 98,941–2; Aug. 11; Gaz. vol. 205; p. 655.
Pencils, lead-pencil holders, penholders, &c., Lead and colored. J. Grasser. No. 98,949; Aug. 11; Gaz. vol. 205; p. 656.
Pens, Fountain-. Eagle Pencil Company. No. 98,940; Aug. 11; Gaz. vol. 205; p. 655.
Pens, Steel. G. W. Hughes. No. 99,050; Aug. 11; Gaz. vol. 205; p. 659.
Perfumery, face and talcum powders. Peninsular Chemical Co. No. 99,400; Aug. 25; Gaz. vol. 205; p. 1321.
Perfumes. E. W. Austen. No. 99,137; Aug. 18; Gaz. vol. 205; p. 1017.
Periodical, Monthly. Vickery and Hill Publishing Company. No. 99,262; Aug. 25; Gaz. vol. 205; p. 1317.
Periodicals, Monthly. Wilmer Atkinson Co. No. 98,738; Aug. 4; Gaz. vol. 205; p. 297.
Petroleum for illuminating, heating, and power purposes, Refined. Standard Oil Company of New York. Nos. 99,365–6; Aug. 25; Gaz. vol. 205; p. 1320.
Pharmaceutical preparations, Certain named. Harriet Hubbard Ayer. No. 98,739; Aug. 4; Gaz. vol. 205; p. 297.
Pharmaceutical preparations, Certain named. C. I. Whitlock. No. 98,844; Aug. 4; Gaz. vol. 205; p. 300.
Pharmaceutical preparations, Certain named. C. F. Young. No. 99,187; Aug. 18; Gaz. vol. 205; p. 1018.
Photographic lenses and shutters. Wollensak Optical Company. No. 99,375; Aug. 25; Gaz. vol. 205; p. 1320.
Pianos. Grinnell Bros. No. 98,769; Aug. 4; Gaz. vol. 205; p. 298.
Pianos. I. S. Purcell. No. 99,064; Aug. 11; Gaz. vol. 205; p. 659.
Pianos, Player-. Henry F. Miller & Sons Piano Company. No. 99,114; Aug. 18; Gaz. vol. 205; p. 1016.
Picture films, Motion-. Life-Photo Film Corporation. No. 99,014; Aug. 11; Gaz. vol. 205; p. 658.
Picture films, Moving-. Essanay Film Manufacturing Co. No. 99,293; Aug. 25; Gaz. vol. 205; p. 1318.
Pictures, Motion-. Klaw & Erlanger. No. 99,157; Aug. 18; Gaz. vol. 205; p. 1017.
Piece goods, Certain named. Rogers & Thompson. Nos. 99,174–6; Aug. 18; Gaz. vol. 205; p. 1018.
Pineapples. Buhl-Mills Company. No. 99,195; Aug. 25; Gaz. vol. 205; p. 1315.
Planters, Cotton-. S. R. White's Sons. No. 99,373; Aug. 25; Gaz. vol. 205; p. 1320.
Plated flat, hollow, and toilet ware. The Mount Vernon Company—Silversmiths. No. 98,960; Aug. 11; Gaz. vol. 205; p. 656.
Plushes and velvets. Sidney Blumenthal & Company. No. 99,078; Aug. 18; Gaz. vol. 205; p. 1015.
Polish and cleaning preparation. W. Holland. No. 98,777; Aug. 4; Gaz. vol. 205; p. 298.
Polishing-cloth. H. H. von Schlick. No. 98,837; Aug. 4; Gaz. vol. 205; p. 300.
Porcelain articles, Certain named. A. B. Leonard. No. 99,319; Aug. 25; Gaz. vol. 205; p. 1319.
Poultry hatching and rearing apparatus, Standard Electric Incubator Co. No. 99,254; Aug. 25; Gaz. vol. 205; p. 1317.
Poultry tonics and insecticides, &c. The S. R. Feil Company. No. 99,386; Aug. 25; Gaz. vol. 205; p. 1321.
Powder, ammunition, shells, guns, &c., Sporting-. The William R. Burkhard Co. No. 99,278; Aug. 25; Gaz. vol. 205; p. 1317.
Powder, Artificial-tooth. E. B. Keighley & Co. No. 99,156; Aug. 18; Gaz. vol. 205; p. 1017.
Powder intended to build up the human organs. E. Handl. No. 99,391; Aug. 25; Gaz. vol. 205; p. 1321.
Powder, Smokeless rifle-. Hercules Powder Company. No. 99,306; Aug. 25; Gaz. vol. 205; p. 1318.
Powder, Talcum, sachet, face, and bath. Lazell, Perfumer. No. 99,161; Aug. 18; Gaz. vol. 205; p. 1017.
Powder, Toilet. The Gordon-Thorne Co. No. 98,767; Aug. 4; Gaz. vol. 205; p. 298.
Powders and rouge, Complexion and rice. The J. A. Pozzoni Pharmacal Co. No. 99,401; Aug. 25; Gaz. vol. 205; p. 1321.
Powders, Douche-. B. P. Thom. No. 98,988; Aug. 11; Gaz. vol. 205; p. 657.
Powders, Headache-. C. A. Walker. No. 99,408; Aug. 25; Gaz. vol. 205; p. 1321.
Powders used in preparing whipped cream, eggs, &c. Cremolite Manufacturing Co. No. 98,858; Aug. 4; Gaz. vol. 205; p. 301.
Precious and imitation stones, Certain named. The Low-Taussig-Karpeles Co. No. 98,793; Aug. 4; Gaz. vol. 205; p. 299.
Precious metal, Certain named articles made of or plated with. Mason, Howard & Co. No. 99,112; Aug. 18; Gaz. vol. 205; p. 1016.
Preparation for relief of certain named diseases. Luyties Pharmacy Company. No. 98,794; Aug. 4; Gaz. vol. 205; p. 299.
Preparation for the treatment of asthma. F. D. Strader. No. 98,829; Aug. 4; Gaz. vol. 205; p. 300.
Preparation for the treatment of certain named diseases. T. H. McNamee. No. 98,957; Aug. 11; Gaz. vol. 205; p. 656.
Preparation for treating certain ailments of man and live stock. C. C. Hudkins. No. 99,393; Aug. 25; Gaz. vol. 205; p. 1321.
Preparations for the treatment of headache, catarrh, piles, &c. C. B. Robinson Chemical Co. No. 99,172; Aug. 18; Gaz. vol. 205; p. 1018.
Preparations for the treatment of rheumatism. Shango Remedy Co. No. 99,180; Aug. 18; Gaz. vol. 205; p. 1018.
Preparations for the treatment of the scalp and hair. The Slaughter System. No. 99,182; Aug. 18; Gaz. vol. 205; p. 1018.
Prints and publications. J. O. C. Union. No. 98,835; Aug. 4; Gaz. vol. 205; p. 300.
Publications, Tree-surgery. The Davey Tree Expert Company. No. 99,200; Aug. 25; Gaz. vol. 205; p. 1315.
Puddings. W. Haigh. No. 99,207; Aug. 25; Gaz. vol. 205; p. 1315.
Pumps. The Deming Company. No. 99,003; Aug. 11; Gaz. vol. 205; p. 657.
Pumps and well-heads. International Steam Pump Company. No. 99,013; Aug. 11; Gaz. vol. 205; p. 658.
Puncture-proofing substances. Live Air Company. No. 99,324; Aug. 25; Gaz. vol. 205; p. 1319.
Radish extract for relieving indigestion. Dr. L. Naumann. No. 98,804; Aug. 4; Gaz. vol. 205; p. 299.
Rain-coats and overcoats. The London Waterproof Co. No. 99,016; Aug. 11; Gaz. vol. 205; p. 658.
Razors. Koken Barbers' Supply Company. Nos. 99,220–4; Aug. 25; Gaz. vol. 205; p. 1316.
Razors. A. Spagna and L. Clinco. No. 99,364; Aug. 25; Gaz. vol. 205; p. 1320.
Razors. Young Safety Razor Company. No. 99,376; Aug. 25; Gaz. vol. 205; p. 1320.
Reflectoscope. Shomescope Manufacturing Co. No. 99,026; Aug. 11; Gaz. vol. 205; p. 658.
Refrigerating apparatus. The Iceless Refrigeration Company. No. 98,781; Aug. 4; Gaz. vol. 205; p. 298.
Remedies for certain named diseases. American Remedial Co. No. 99,075; Aug. 18; Gaz. vol. 205; p. 1017.
Remedies, Poultry. Wonder Manufacturing Co. No. 98,990; Aug. 11; Gaz. vol. 205; p. 657.
Remedy, Eczema and skin. L. Hennenhoefer. No. 99,011; Aug. 11; Gaz. vol. 205; p. 658.
Remedy for anemic conditions. A. Sclavo. No. 98,913; Aug. 11; Gaz. vol. 205; p. 655.
Remedy for asthma and hay-fever. Capital Drug Company. No. 99,140; Aug. 18; Gaz. vol. 205; p. 1017.
Remedy for certain named diseases. F. S. Dickinson. No. 99,146; Aug. 18; Gaz. vol. 205; p. 1017.
Remedy for chills, fever, and malaria. J. A. Gay. No. 98,761; Aug. 4; Gaz. vol. 205; p. 298.
Remedy for chills, fever, and malaria. W. C. Irvin. No. 99,394; Aug. 25; Gaz. vol. 205; p. 1321.
Remedy for cholera, roup, limberneck, &c. R. H. Miller. No. 99,396; Aug. 25; Gaz. vol. 205; p. 1321.
Remedy for diseases of the blood and skin. S. B. Payne. No. 99,170; Aug. 18; Gaz. vol. 205; p. 1018.
Remedy for foot ailments. A. P. Foose. No. 99,387; Aug. 25; Gaz. vol. 205; p. 1321.
Remedy for gonorrhea. J. D. Burke. Nos. 99,381–2; Aug. 25; Gaz. vol. 205; p. 1320.
Remedy for habitual constipation, headache, &c., and cough-balsam. L. Wolpow. No. 99,410; Aug. 25; Gaz. vol. 205; p. 1321.
Remedy for headache, toothache, and neuralgia. Remedy Sales Corporation. No. 99,120; Aug. 18; Gaz. vol. 205; p. 1016.
Remedy for hog-cholera. F. Kurth. No. 98,790; Aug. 4; Gaz. vol. 205; p. 298.
Remedy for seasickness. R. D. Hamilton. No. 98,951; Aug. 11; Gaz. vol. 205; p. 656.
Remedy for the relief of certain named diseases, Salts. Salcura Company. No. 99,403; Aug. 25; Gaz. vol. 205; p. 1321.
Remedy for the treatment of diseases of the air-passages. Pneumo-Vapo-Tone Co. No. 98,811; Aug. 4; Gaz. vol. 205; p. 299.
Remedy, Throat and lung. E. Woodruff. No. 99,411; Aug. 25; Gaz. vol. 205; p. 1321.
Ribbons. B. Altman & Co. Nos. 98,730–1; Aug. 4; Gaz. vol. 205; p. 297.
Rice. Otto L. Kuehn Co. No. 99,225; Aug. 25; Gaz. vol. 205; p. 1316.
Roach and vermin powder. I. Sklamberg. No. 98,826; Aug. 4; Gaz. vol. 205; p. 309.
Roofing, roof-coating, &c., Certain named. The Texas Company. No. 99,130; Aug. 18; Gaz. vol. 205; p. 1016.
Roofings, Prepared. Barrett Manufacturing Company. No. 99,271; Aug. 25; Gaz. vol. 205; p. 1317.

Rosaries. The H. M. H. Company. No. 98,771; Aug. 4; Gaz. vol. 205; p. 298.
Rouge and face-powder. The Owl Drug Company. No. 99,399; Aug. 25; Gaz. vol. 205; p. 1321.
Rouge, Toilet. J. F. Dorrance. No. 99,385; Aug. 25; Gaz. vol. 205; p. 1321.
Rubber boots and shoes. Goodyear's India Rubber Glove Mfg. Co. No. 99,301; Aug. 25; Gaz. vol. 205; p. 1318.
Rubber cleaning and softening compound. The Resilia Corporation. No. 99,121; Aug. 18; Gaz. vol. 205; p. 1016.
Rubber heel-pads and tips for boots and shoes. Phillips Patents. No. 99,117; Aug. 18; Gaz. vol. 205; p. 1016.
Rubber-products preservative. J. M. Munyon, Jr. No. 99,060; Aug. 11; Gaz. vol. 205; p. 659.
Rubberized fabrics. Rosenwald & Weil. No. 98,817; Aug. 4; Gaz. vol. 205; p. 299.
Rugs, Textile. R. H. Macy & Co. No. 98,879; Aug. 4; Gaz. vol. 205; p. 301.
Rum. Charles Kinloch & Company. No. 98,785; Aug. 4; Gaz. vol. 205; p. 298.
Safety-pins. Consolidated Safety Pin Co. No. 99,083; Aug. 18; Gaz. vol. 205; p. 1015.
Salve. A. Lehmann. No. 98,791; Aug. 4; Gaz. vol. 205; p. 298.
Salve. Pyrography Art Company. No. 98,966; Aug. 11; Gaz. vol. 205; p. 656.
Salve. A. J. Bates. No. 98,996; Aug. 11; Gaz. vol. 205; p. 657.
Salve, Medicated. J. E. Guess. No. 98,770; Aug. 4; Gaz. vol. 205; p. 298.
Salve, Medicated. W. A. Welliver. No. 99,409; Aug. 25; Gaz. vol. 205; p. 1321.
Salves. C. N. Holmes. No. 98,779; Aug. 4; Gaz. vol. 205; p. 298.
Sash locks and lifts, door hangers and pulls, &c. Allith-Prouty Company. No. 98,849; Aug. 4; Gaz. vol. 205; p. 300.
Sash, Metallic. Detroit Steel Products Co. No. 99,288; Aug. 25; Gaz. vol. 205; p. 1318.
Sauce for oysters, shell-fish, salad-dressings, and foodstuffs. F. Reusser. No. 99,242; Aug. 25; Gaz. vol. 205; p. 1316.
Sauces and canned fruits and vegetables. J. F. Pyle & Son. No. 99,360; Aug. 25; Gaz. vol. 205; p. 1320.
Saws and machine-knives. Simonds Manufacturing Company. No. 99,027; Aug. 11; Gaz. vol. 205; p. 658.
Scientific appliances and supplies therefor, Certain named. Compagnie Générale des Établissements Pathé Frères, Phonographe et Cinematographe. No. 99,281; Aug. 25; Gaz. vol. 205; p. 1317.
Seed and fertilizer mixture. The Kalaka Company. No. 99,218; Aug. 25; Gaz. vol. 205; p. 1316.
Seeds, Certain named. A. E. Shultz. No. 98,825; Aug. 4; Gaz. vol. 205; p. 300.
Seeds, Grass-. D. I. Bushnell & Co. No. 98,747; Aug. 4; Gaz. vol. 205; p. 297.
Serums and vaccines for lung diseases and for hog-cholera. A. Bruschettini. No. 99,380; Aug. 25; Gaz. vol. 205; p. 1320.
Shampoo, Head-. Seelye-Myers Co. No. 98,984; Aug. 11; Gaz. vol. 205; p. 657.
Shirts. Doyle-Kidd Dry Goods Co. No. 99,004; Aug. 11; Gaz. vol. 205; p. 657.
Shirts, Men's outer. Carson, Pirie, Scott & Co. No. 98,924; Aug. 11; Gaz. vol. 205; p. 655.
Shirts, Negligée and sporting. J. Gerhardt & Co. No. 99,008; Aug. 11; Gaz. vol. 205; p. 657.
Shirts, undershirts, drawers, and pajamas. Wilson Brothers. No. 99,032; Aug. 11; Gaz. vol. 205; p. 658.
Shirts, underwear, night-shirts, pajamas, collars, and cuffs. Tim & Co. No. 99,129; Aug. 18; Gaz. vol. 205; p. 1016.
Shoe-polish. The Hermes Company. No. 99,099; Aug. 18; Gaz. vol. 205; p. 1015.
Shoes, Leather. Brown Shoe Company. No. 98,923; Aug. 11; Gaz. vol. 205; p. 655.
Signs and placards. W. A. Anderson & Company. No. 98,736; Aug. 4; Gaz. vol. 205; p. 297.
Signs, Show-window. The Advertogram Co. No. 98,727; Aug. 4; Gaz. vol. 205; p. 297.
Silk, Sewing-. J. Pearsall & Co. No. 99,355; Aug. 25; Gaz. vol. 205; p. 1320.
Silver flat ware. P. Latzke. Nos. 99,109–10; Aug. 18; Gaz. vol. 205; p. 1016.
Silver-plated hollow ware and tableware. The Middletown Silver Company. No. 98,800; Aug. 4; Gaz. vol. 205; p. 299.
Sized and stiffened cloth. The Holliston Mills. No. 99,012; Aug. 11; Gaz. vol. 205; p. 658.
Skin-coating compound, Nitrocellulose. Ambroid Company. No. 98,915; Aug. 11; Gaz. vol. 205; p. 655.
Snap-fasteners. The De Long Hook and Eye Company. No. 98,860; Aug. 4; Gaz. vol. 205; p. 301.
Soap. Durham Duplex Razor Company. No. 98,756; Aug. 4; Gaz. vol. 205; p. 298.
Soap. C. I. Whitlock. No. 98,911; Aug. 4; Gaz. vol. 205; p. 302.
Soap. F. L. Faick & Co. No. 99,090; Aug. 18; Gaz. vol. 205; p. 1015.
Soap, Glycerin toilet. Millhens & Kropff. No. 98,803; Aug. 4; Gaz. vol. 205; p. 299.
Soap, Scouring-. The Bon Ami Co. No. 99,079; Aug. 18; Gaz. vol. 205; p. 1015.
Soap, Shaving-. Johnson & Johnson. No. 99,101; Aug. 18; Gaz. vol. 205; p. 1016.
Soap, Toilet. Swift and Company. Nos. 98,830–1; Aug. 4; Gaz. vol. 205; p. 300.
Soaps and soap powders. Colgate & Co. No. 98,751; Aug. 4; Gaz. vol. 205; p. 297.
Soldering-iron handles, Wooden. J. Donoghue. No. 99,291; Aug. 25; Gaz. vol. 205; p. 1318.
Sound-boxes for sound-reproducing instruments, Devices for. The Stetson Manufacturing Company. No. 99,128; Aug. 18; Gaz. vol. 205; p. 1016.
Spark-plugs and parts. D. B. Mills. No. 99,165; Aug. 18; Gaz. vol. 205; p. 1017.
Spectacles. A. J. Harrison. No. 99,303; Aug. 25; Gaz. vol. 205; p. 1318.
Spectacles, eyeglasses, ophthalmoscopes, and retinoscopes. The J. E. Limeburner Company. No. 99,322; Aug. 25; Gaz. vol. 205; p. 1319.
Spices and flavoring extracts, Certain named. Arbuckle Brothers. No. 98,737; Aug. 4; Gaz. vol. 205; p. 297.
Spraying apparatus. Air-tight Steel Tank Co. No. 98,847; Aug. 4; Gaz. vol. 205; p. 300.
Stains, varnishes, and a combined stain and varnish. Perry Brothers. No. 98,997; Aug. 11; Gaz. vol. 205; p. 657.
Starches, softener and finishing compounds for cotton, &c., fibers. Chas. S. Tanner Company. No. 99,407; Aug. 25; Gaz. vol. 205; p. 1321.
Steel castings, Manganese-. The Frog Switch & Manufacturing Company. No. 98,007; Aug. 11; Gaz. vol. 205; p. 657.
Steel, Specially-treated. The National Malleable Castings Company. No. 98,885; Aug. 4; Gaz. vol. 205; p. 301.
Stencil-duplicating apparatus and papers used therewith. D. Gestetner. No. 98,763; Aug. 4; Gaz. vol. 205; p. 298.
Stills, Water-. A. P. Link. No. 99,015; Aug. 11; Gaz. vol. 205; p. 658.
Sugar. Firm of W. Henderson. No. 99,048; Aug. 11; Gaz. vol. 205; p. 659.
Sugar substitute for use in diabetes, gout, &c. A. Beauvais. No. 99,379; Aug. 25; Gaz. vol. 205; p. 1320.
Suits, Children's play-. Goldenbergs. No. 99,300; Aug. 25; Gaz. vol. 205; p. 1318.
Suits, Juvenile. A. Shuman & Co. No. 98,901; Aug. 4; Gaz. vol. 205; p. 302.
Syringes for fire-extinguishing compounds. Pyrene Manufacturing Co. No. 98,965; Aug. 11; Gaz. vol. 205; p. 656.
Tablets, Stomach and breath. A. B. Hunt. No. 99,154; Aug. 18; Gaz. vol. 205; p. 1017.
Tablets, Writing-. Peyton Paper Company. No. 99,062; Aug. 11; Gaz. vol. 205; p. 659.
Tea and coffee. C. F. Blanke Tea & Coffee Company. No. 98,854; Aug. 4; Gaz. vol. 205; p. 300.
Teeth, Artificial. International Tooth Company. No. 98,782; Aug. 4; Gaz. vol. 205; p. 298.
Test-tubes for clinical diagnosis, Glass. Fletcher, Fletcher & Co. No. 99,204; Aug. 25; Gaz. vol. 205; p. 1315.
Thermostat, &c., metallic strips. Driver-Harris Wire Co. No. 99,005; Aug. 11; Gaz. vol. 205; p. 657.
Thread, Sewing-. Eastern Thread Company. No. 98,862; Aug. 4; Gaz. vol. 205; p. 298.
Tire-fillers. J. A. Burgess. No. 98,746; Aug. 4; Gaz. vol. 205; p. 297.
Tires and tubing, Inner tubes and cases, valve-patches, Rubber. Lee Tire & Rubber Co. No. 99,318; Aug. 25; Gaz. vol. 205; p. 1319.
Tobacco and cigarettes, Smoking-. Alexander Boguslavsky Limited. No. 99,193; Aug. 25; Gaz. vol. 205; p. 1315.
Tonic for cleansing and purifying the system. J. M. Heltsley. No. 98,952; Aug. 11; Gaz. vol. 205; p. 656.
Tonic laxative preparation. J. T. Wellington. Nos. 99,030–1; Aug. 11; Gaz. vol. 205; p. 658.
Tonic, Organic food. C. Bardos, Jr. No. 99,378; Aug. 25; Gaz. vol. 205; p. 1320.
Tonics, Blood-. C. W. Entzminger. No. 99,006; Aug. 11; Gaz. vol. 205; p. 657.
Tools, parts thereof, cutlery, &c., Certain named. A. O. Meyer. No. 98,958; Aug. 11; Gaz. vol. 205; p. 656.
Tooth-paste. Manhattan Drug Co. No. 98,795; Aug. 4; Gaz. vol. 205; p. 299.
Tooth-paste. Herson Chemical Company. No. 98,953; Aug. 11; Gaz. vol. 205; p. 656.
Toy spring-gun. Parker Brothers. No. 99,169; Aug. 18; Gaz. vol. 205; p. 1018.
Trees, Peach-. C. R. Hancock. No. 98,772; Aug. 4; Gaz. vol. 205; p. 298.
Twine. T. L. O'Neil. No. 99,168; Aug. 18; Gaz. vol. 205; p. 1018.
Type-setting machines. The Unitype Company. No. 99,370; Aug. 25; Gaz. vol. 205; p. 1320.
Type-writer cases, boxes, bags, &c. Wanderer-Werke vorm. Winklhofer & Jaenicke Aktiengesellschaft. No. 98,989; Aug. 11; Gaz. vol. 205; p. 657.
Type-writer ribbons and carbon-paper. The Stenography & Reporting Company. No. 99,069; Aug. 11; Gaz. vol. 205; p. 659.
Type-writers, Practice. W. P. Cosper. No. 99,286; Aug. 25; Gaz. vol. 205; p. 1318.
Undergarments, Ladies' and children's muslin. A. Ratner. No. 98,894; Aug. 4; Gaz. vol. 205; p. 302.
Underwear, Certain named woven and knitted. N. Hatch. No. 99,009; Aug. 11; Gaz. vol. 205; p. 657.
Underwear, Knit and woven. Indera Mills. No. 99,052; Aug. 11; Gaz. vol. 205; p. 659.

Valves, water-closets, and parts thereof, Metallic. Sloan Valve Company. No. 99,361; Aug. 25; Gaz. vol. 205; p. 1320.
Vapor-condensers, steam-separators, &c. The Griscom-Russell Company. No. 98,950; Aug. 11; Gaz. vol. 205; p. 656.
Varnish, Waterproof. C. A. Woolsey Paint & Color Co. No. 98,991; Aug. 11; Gaz. vol. 205; p. 657.
Varnishes. Tousey Varnish Company. No. 98,833; Aug. 4; Gaz. vol. 205; p. 300.
Varnishes, paints, and colors ground in oil. Evansville Paint & Varnish Co. No. 98,943; Aug. 11; Gaz. vol. 205; p. 655.
Vehicles and wheelbarrows for children's use, Certain named hand and foot propelled. A. Mecky & Co. No. 98,798; Aug. 4; Gaz. vol. 205; p. 299.
Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 98,819; Aug. 4; Gaz. vol. 205; p. 299.
Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 98,897; Aug. 4; Gaz. vol. 205; p. 302.
Vermifuge. Wright's Indian Vegetable Pill Company. No. 98,992; Aug. 11; Gaz. vol. 205; p. 657.
Veterinary medicines. W. L. Keltner. No. 98,784; Aug. 4; Gaz. vol. 205; p. 298.
Wall and ceiling composition board. H. W. Johns-Manville Co. No. 99,313; Aug. 25; Gaz. vol. 205; p. 1318.
Washboards. National Washboard Company. Nos. 99,338–50; Aug. 25; Gaz. vol. 205; pp. 1319–20.
Washboards and wringers and clothes-washers. Hibbard, Spencer, Bartlett & Co. No. 99,307; Aug. 25; Gaz. vol. 205; p. 1318.
Washing-machines and washing-machine wringers. Globe Manufacturing Company. No. 98,765; Aug. 4; Gaz. vol. 205; p. 298.
Watches and clocks. E. Klenzle. No. 99,054; Aug. 11; Gaz. vol. 205; p. 659.
Watches, clocks, and chronometers. Waltham Watch Company. No. 99,132; Aug. 18; Gaz. vol. 205; p. 1016.
Water and ginger-ale, Mineral. N. F. Shivar. No. 98,824; Aug. 4; Gaz. vol. 205; p. 299.
Water, Carbonated mineral. I. Merkel & Son. No. 99,330; Aug. 25; Gaz. vol. 205; p. 1519.
Waters, Mineral. Sol Duc Hot Springs Company. No. 98,827; Aug. 4; Gaz. vol. 205; p. 300.
Waterproof coats. C. A. Annis. No. 98,918; Aug. 11; Gaz. vol. 205; p. 655.
Welding-torches and apparatus for cutting metals, &c. O. Rincheval. No. 99,243; Aug. 25; Gaz. vol. 205; p. 1316.
Whips. Cargill, Cleveland & Company. No. 99,280; Aug. 25; Gaz. vol. 205; p. 1317.
Whiskies, Straight, blended, compounded, and imitation. Stone Hill Wine Company. No. 98,987; Aug. 11; Gaz. vol. 205; p. 657.
Whisky. C. P. Moorman & Company. No. 99,332; Aug. 25; Gaz. vol. 205; p. 1319.
Whisky, brandy, and gin. W. C. Dittus. No. 99,290; Aug. 25; Gaz. vol. 205; p. 1318.
Whisky, gin, and rock and rye. David Nicholson Grocer Company. No. 99,351; Aug. 25; Gaz. vol. 205; p. 1320.
Wine. Wilhelmi, Hock & Co. No. 98,845; Aug. 4; Gaz. vol. 205; p. 300.
Wines. E. Fucini. No. 99,149; Aug. 18; Gaz. vol. 205; p. 1017.
Wines, Certain named. David Nicholson Grocer Company. No. 98,806; Aug. 4; Gaz. vol. 205; p. 299.
Wines, Sweet table-. Liebenthal Bros. & Co. No. 99,321; Aug. 25; Gaz. vol. 205; p. 1319.
Wood-finish. F. P. Doerr. No. 98,861; Aug. 4; Gaz. vol. 205; p. 301.
Wool-fat. The Corona Mfg. Co. No. 99,143; Aug. 18; Gaz. vol. 205; p. 1017.
Wool, worsted, and hair piece goods. Kafka, Rothenstein Co. No. 99,315; Aug. 25; Gaz. vol. 205; p. 1318.
Woolen piece goods. Haas Brothers. No. 99,094; Aug. 18; Gaz. vol. 205; p. 1015.
Wrenches. H. A. Smith. No. 98,902; Aug. 4; Gaz. vol. 205; p. 302.
Wrenches. Bonney Vise & Tool Works. No. 99,274; Aug. 25; Gaz. vol. 205; p. 1317.
Yarns, Woolen and worsted. Baldwin & Walker. No. 99,270; Aug. 25; Gaz. vol. 205; p. 1317.
Yellow, Ceramic titanium. Foote Mineral Co. No. 99,148; Aug. 18; Gaz. vol. 205; p. 1017.

ALPHABETICAL LIST OF LABELS.

"A. H. Coller Lilien Gesichtsalbe." (For Face-Pomade.) A. H. Coller. No. 17,904; Aug. 18; Gaz. vol. 205; p. 1019.

"'American Beauties' Favorite Face Cream." (For Face-Cream.) The August Company. No. 17,931; Aug. 18; Gaz. vol. 205; p. 1019.

"Arbeiter's Vermindeath." (For Vermin-Destroyer.) P. J. Arbeiter. No. 17,901; Aug. 18; Gaz. vol. 205; p. 1019.

"Aunt Jemima's Buckwheat Flour." (For Flour.) Aunt Jemima Mills Company. No. 17,894; Aug. 11; Gaz. vol. 205; p. 660.

"B & H." (For Cigars.) Berninger & Henry. No. 17,902; Aug. 18; Gaz. vol. 205; p. 1019.

"Bobs." (For Candy-Coated Chewing-Gum.) Frank H. Fleer Corporation. No. 17,907; Aug. 18; Gaz. vol. 205; p. 1019.

"Britanica." (For Cigars.) F. Siska. No. 17,893; Aug. 4; Gaz. vol. 205; p. 303.

"Chas. Eichbaum's Minisink Club Frozen Ginger Ale." (For Ginger-Ale.) C. Eichbaum. No. 17,883; Aug. 4; Gaz. vol. 205; p. 303.

"Consumer's Bond." (For Cigars.) A. C. Henschel & Co. No. 17,913; Aug. 18; Gaz. vol. 205; p. 1019.

"Cream Nut." (For Bread.) E. E. Brubaker. No. 17,881; Aug. 4; Gaz. vol. 205; p. 303.

"Delaware Punch." (For a Drink.) The Pioneer Vinegar Works. No. 17,932; Aug. 18; Gaz. vol. 205; p. 1019.

"Delicious Sapphire Oats." (For Oats.) Montana Flour Mills Company. No. 17,922; Aug. 18; Gaz. vol. 205; p. 1019.

"Diamond Liniment." (For a Liniment.) R. W. Blaisdell. No. 17,880; Aug. 4; Gaz. vol. 205; p. 303.

"Double Master Vibrator." (For Double Master-Vibrators.) The Alday Mfg. Co. No. 17,879; Aug. 4; Gaz. vol. 205; p. 303.

"Double Shield." (For Paints.) The United Paint Co. No. 17,933; Aug. 18; Gaz. vol. 205; p. 1019.

"18 Karat Floor Varnish." (For Varnish.) C. Goldschmitt. No. 17,909; Aug. 18; Gaz. vol. 205; p. 1019.

"Elsemann's Klondike Head Rub Grain Alcohol 50 Per Cent. Most Delightful; Cooling and Invigorating. Allays Itching of the Scalp and relieves Headaches." (For Head-Rub.) P. Elsemann. No. 17,905; Aug. 18; Gaz. vol. 205; p. 1019.

"Engine Food." (For a Preparation for Mixing with Gasolene to Increase the Explosive Nature Thereof.) J. C. Engine Food Co. No. 17,906; Aug. 18; Gaz. vol. 205; p. 1019.

"Fancy Print Butter." (For Butter.) W. Gordon. No. 17,895; Aug. 11; Gaz. vol. 205; p. 660.

"French Restaurant." (For Coffee and Chicory.) Importers Coffee Co. No. 17,886; Aug. 4; Gaz. vol. 205; p. 303.

"Gloriously Good." (For Cigars.) Kraus & Co. No. 17,916; Aug. 18; Gaz. vol. 205; p. 1019.

"Hair-A-Gain." (For a Scalp and Hair Food.) Hair-A-Gain Company. No. 17,884; Aug. 4; Gaz. vol. 205; p. 303.

"Hofmunter." (For Beer.) Gutsch Brewing Co. No. 17,910; Aug. 18; Gaz. vol. 205; p. 1019.

"Irish Lace." (For Whisky.) T. E. Pollard. No. 17,924; Aug. 18; Gaz. vol. 205; p. 1019.

"It Has The Old Style Sweetness." (For Meal.) Shannon & Mott Company. No. 17,929; Aug. 18; Gaz. vol. 205; p. 1019.

"It's The Oats." (For Rolled Oats.) Montana Flour Mills Company. No. 17,923; Aug. 18; Gaz. vol. 205; p. 1019.

"Jaeger Bräu." (For Beer.) Ruff Brewing Co. No. 17,926; Aug. 18; Gaz. vol. 205; p. 1019.

"Kebart's." (For Clothes.) J. J. Kebart. No. 17,887; Aug. 4; Gaz. vol. 205; p. 303.

"Lanzon." (For Cigars.) Jose Llanza Company. No. 17,921; Aug. 18; Gaz. vol. 205; p. 1019.

"Lewis-Ideal." (For Cigars.) F. P. Lewis Cigar Co. No. 17,920; Aug. 18; Gaz. vol. 205; p. 1019.

"Magic Balm." (For a Medicinal Preparation.) S. J. Keyes. No. 17,914; Aug. 18; Gaz. vol. 205; p. 1019.

"Melco." (For Confections.) Harris, Woodson Co. No. 17,896; Aug. 11; Gaz. vol. 205; p. 660.

"Mermaid Brand Pure Artesian Water." (For Artesian Water.) Holton Power Company. No. 17,885; Aug. 4; Gaz. vol. 205; p. 303.

"Mona Lisa's Smile Chocolates." (For Chocolates.) Park & Tilford. No. 17,897; Aug. 11; Gaz. vol. 205; p. 660.

"Natura Natures Medicine." (For Mineral Water.) G. E. Keeler. No. 17,888; Aug. 4; Gaz. vol. 205; p. 303.

"Nutrito." (For a Grape Tonic.) G. W. Steiger. No. 17,892; Aug. 4; Gaz. vol. 205; p. 303.

"O-Cedar Polish Mop." (For Mops.) Channell Chemical Company. No. 17,903; Aug. 18; Gaz. vol. 205; p. 1019.

"Pineisle Beauties." (For Pineapples.) H. B. Kopf. No. 17,889; Aug. 4; Gaz. vol. 205; p. 303.

"Prof. Ernst Haeckel." (For Cigars.) A. C. Henschel & Co. No. 17,912; Aug. 18; Gaz. vol. 205; p. 1019.

"Pure Reliance Baking Powder." (For Baking-Powder.) Reliance Manufacturing Company. No. 17,925; Aug. 18; Gaz. vol. 205; p. 1019.

"Quit-Tobac." (For Quit-Tobac.) Dillehay Bros. No. 17,882; Aug. 4; Gaz. vol. 205; p. 303.

"Red Label S. S. S." (For Cigars.) Kraus & Co. No. 17,919; Aug. 18; Gaz. vol. 205; p. 1019.

"Red Lion." (For Beer.) Gutsch Brewing Co. No. 17,911; Aug. 18; Gaz. vol. 205; p. 1019.

"Rising Sun." (For Canned Pickles.) North American Mercantile Co. No. 17,890; Aug. 4; Gaz. vol. 205; p. 303.

"Russell's Ideal Sanitary Unfermented Individual Grape Juice Cupette." (For a Grape-Juice Product.) W. H. Russell. No. 17,891; Aug. 4; Gaz. vol. 205; p. 303.

"Saginaw Creamery Co. Dairy Products." (For Butter.) Saginaw Creamery Company. No. 17,927; Aug. 18; Gaz. vol. 205; p. 1019.

"Six Days." (For Cigars.) Kraus & Co. No. 17,917; Aug. 18; Gaz. vol. 205; p. 1019.

"Spar-Ite." (For Varnish.) Adams & Elting Company. No. 17,900; Aug. 18; Gaz. vol. 205; p. 1019.

"Spring-Root." (For Candy-Coated Chewing-Gum.) Frank H. Fleer Corporation. No. 17,908; Aug. 18; Gaz. vol. 205; p. 1019.

"Sun Flower." (For Cigars.) Kraus & Co. No. 17,915; Aug. 18; Gaz. vol. 205; p. 1019.

"Tango Chocolates." (For Chocolates.) Park & Tilford. No. 17,898; Aug. 11; Gaz. vol. 205; p. 660.

"Taylor's Best Blood Medicine." (For Medicine.) M. M. Taylor. No. 17,930; Aug. 18; Gaz. vol. 205; p. 1019.

"The Peregoy & Moore Co. Perfectos." (For Cigars.) Kraus & Co. No. 17,918; Aug. 18; Gaz. vol. 205; p. 1019.

"U. S. Tireless Spinner Top." (For Tops.) Schmidt Bros. Machine Works. No. 17,928; Aug. 18; Gaz. vol. 205; p. 1019.

"Weber's Ointment." (For Ointment.) A. Weber. No. 17,899; Aug. 11; Gaz. vol. 205; p. 660.

PRINTS.

"Arbuckle Brand Teas." (For Teas.) Arbuckle Brothers. No. 3,693; Aug. 18; Gaz. vol. 205; p. 1020.

"Arrow Silk Shirts." (For Arrow Silk Shirts.) Cluett, Peabody & Co. No. 3,696; Aug. 18; Gaz. vol. 205; p. 1020.

"Bobs." (For Candy-Coated Chewing-Gum.) Frank H. Fleer Corporation. No. 3,702; Aug. 18; Gaz. vol. 205; p. 1020.

"Boost some joy smoke into your system!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,714; Aug. 18; Gaz. vol. 205; p. 1020.

"Centralene Oils. 'Power In Every Drop.'" (For Oils.) Centralene Oil Company. No. 3,694; Aug. 18; Gaz. vol. 205; p. 1020.

"Gotham Tango Girdle." (For Girdles.) Gotham Garter and Novelty Company. No. 3,703; Aug. 18; Gaz. vol. 205; p. 1020.

"Inner Strap." (For Mattresses.) Dixie Cotton Felt Mattress Company. No. 3,699; Aug. 18; Gaz. vol. 205; p. 1020.

"Jumbo A Big Mattress for a Little Money." (For Mattresses.) Dixie Cotton Felt Mattress Company. No. 3,700; Aug. 18; Gaz. vol. 205; p. 1020.

"Load-Bearing Tile." (For Load-Bearing Tile.) Mason City Brick and Tile Company. No. 3,704; Aug. 18; Gaz. vol. 205; p. 1020.

"Luco." (For a Silver-Polish.) W. Knappmann. No. 3,691; Aug. 4; Gaz. vol. 205; p. 303.

"No, Sah! Ah don't want no 'Stubstute.' Ah want Cream o' Wheat." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 3,697; Aug. 18; Gaz. vol. 205; p. 1020.

"Oh, Man! Get This Right and Sit In." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,708; Aug. 18; Gaz. vol. 205; p. 1020.

"Our Lights Shine Everywhere." (For Lighting-Fixtures.) The C. J. Netting Co. No. 3,706; Aug. 18; Gaz. vol. 205; p. 1020.

"P. A. is a double header!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,712; Aug. 18; Gaz. vol. 205; p. 1020.

"P. A. just tickles us all." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,709; Aug. 18; Gaz. vol. 205; p. 1020.

"P. A. sure does set the clip." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,713; Aug. 18; Gaz. vol. 205; p. 1020.

"Pippins." (For Cigars.) L. Ettinger. No. 3,701; Aug. 18; Gaz. vol. 205; p. 1020.

"She's solved her troubles for heels and toes." (For Ladies' Hosiery.) S. S. Miller. No. 3,705; Aug. 18; Gaz. vol. 205; p. 1020.

"'Standish' the new Arrow Collar." (For Collars.) Cluett, Peabody & Co. No. 3,695; Aug. 18; Gaz. vol. 205; p. 1020.

"The Bulge Protects the Edge." (For Drinking-Glasses.) Albert Pick & Company. No. 3,707; Aug. 18; Gaz. vol. 205; p. 1020.

"Tight as a Jug." (For Silos.) W. S. Dickey. No. 3,692; Aug. 11; Gaz. vol. 205; p. 660.

"Watch Your Step!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,710; Aug. 18; Gaz. vol. 205; p. 1020.

"When We Put It Up to George." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 3,711; Aug. 18; Gaz. vol. 205; p. 1020.

"Witchal." (For Witch-Hazel.) E. E. Dickinson. No. 3,698; Aug. 18; Gaz. vol. 205; p. 1020.

DISCLAIMER.

Bait, Artificial. J. E. Pflueger. No. 954,691; date of patent Apr. 12, 1910; disclaimer filed Aug. 6, 1914; Gaz. vol. 205; p. 669.